



EMC Test Data

| | | | |
|------------------------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| | | Account Manager: | Dean Eriksen |
| Contact: | Robert Paxman | | - |
| Emissions Standard(s): | FCC | Class: | - |
| Immunity Standard(s): | - | Environment: | - |

EMC Test Data

For The

Intel Corporation

Model

533AN-MMW(MMC)

Date of Last Test: 4/24/2008



EMC Test Data

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|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS, 2400 - 2483.5 MHz) Band Edge Field Strength 802.11b Ethertronics Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Config. Used: 1
Config Change: None
Host Unit Voltage 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 19 °C
Rel. Humidity: 43 %

Summary of Results

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|--------------------|---------------|---------------|----------------|-----------------------------------|------------------------------|-----------------------------------|
| 1a | 802.11b Chain A | 1 2412MHz | 25.0 | 16.8 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 49.4 dBuV/m @ 2389.3 MHz (-4.6dB) |
| 1b | 802.11b Chain A | 11 2462MHz | 25.5 | 16.8 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 48.7 dBuV/m @ 2484.7 MHz (-5.3dB) |
| 2a | 802.11b Chain B | 1 2412MHz | 25.0 | 17.4 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 49.7 dBuV/m @ 2389.2 MHz (-4.3dB) |
| 2b | 802.11b Chain B | 11 2462MHz | 26.0 | 17.7 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 51.5 dBuV/m @ 2488.2 MHz (-2.5dB) |
| 3a | 802.11b Chain C | 1 2412MHz | 23.0 | 16.5 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 51.9 dBuV/m @ 2386.2 MHz (-2.1dB) |
| 3b | 802.11b Chain C | 11 2462MHz | 24.5 | 16.9 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 51.1 dBuV/m @ 2488.2 MHz (-2.9dB) |

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| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Run #1: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11b - Chain A

Date of Test: 3/27/2008

Test Engineer: Peter Sales

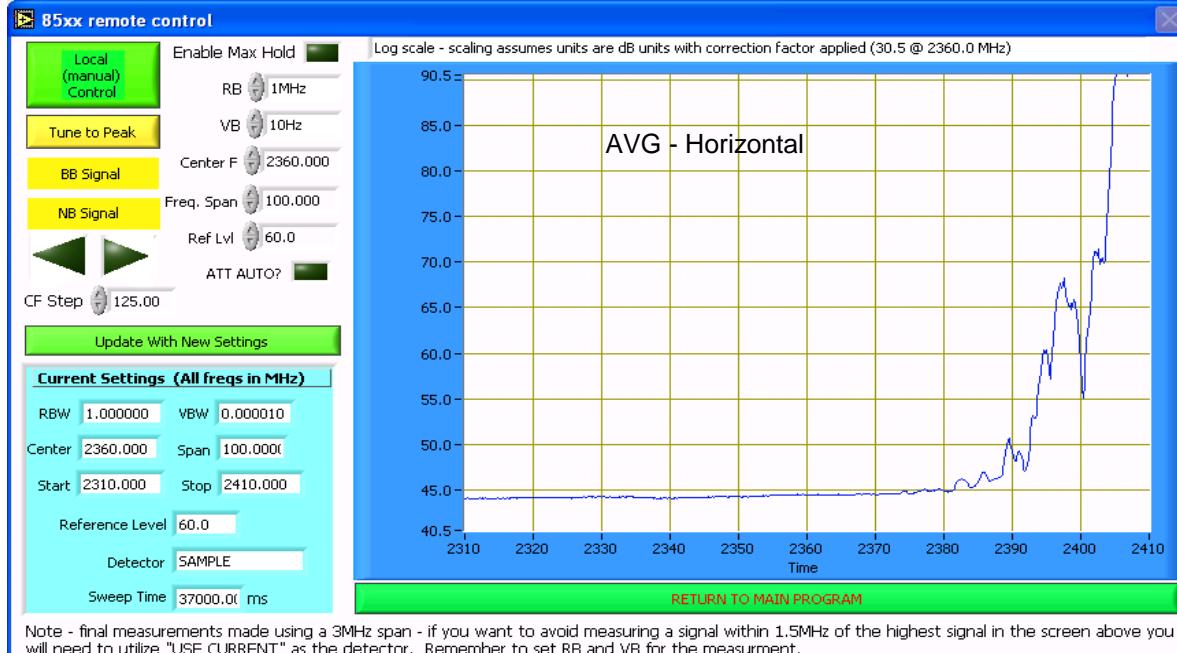
Test Location: Fremont Chamber #5

Run #1a: Low Channel @ 2412 MHz

Power Setting: 25.0 Average power: 16.8 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2410.590 | 101.4 | V | - | - | AVG | 202 | 1.0 |
| 2410.590 | 104.4 | V | - | - | PK | 202 | 1.0 |
| 2412.650 | 106.3 | H | - | - | AVG | 253 | 1.0 |
| 2412.650 | 109.3 | H | - | - | PK | 253 | 1.0 |



Plot of band edge, average measurement ... for reference only



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|--|-------------------|-----|-----------------|----------|------------------|--------------|----------|
| Model: | 533AN-MMW(MMC) | | | | T-Log Number: | T71133 | |
| Contact: | Robert Paxman | | | | Account Manager: | Dean Eriksen | |
| Standard: | FCC | | | | Class: | N/A | |
| Band Edge Signal Field Strength | | | | | | | |
| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.000 | 59.4 | H | 74.0 | -14.6 | PK | 251 | 1.0 |
| 2389.250 | 49.4 | H | 54.0 | -4.6 | AVG | 251 | 1.0 |
| 2389.270 | 54.5 | H | 54.0 | 0.5 | AVG | 251 | 1.0 |
| 2389.370 | 58.8 | H | 74.0 | -15.2 | PK | 251 | 1.0 |
| 2389.160 | 46.4 | H | 54.0 | -7.6 | AVG | 251 | 1.0 |
| GC: 25.0 , AP : 16.8 | | | | | | | |
| GC: 25.0 , AP : 16.8 | | | | | | | |

Run #1b: High Channel @ 2462 MHz

Power Setting: 25.5 Average power: 16.8 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|----------------------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2464.770 | 102.6 | V | 54.0 | 48.6 | AVG | 241 | 1.3 |
| 2464.770 | 105.6 | V | 74.0 | 31.6 | PK | 241 | 1.3 |
| 2462.940 | 105.2 | H | 54.0 | 51.2 | AVG | 241 | 1.5 |
| 2462.940 | 108.1 | H | 74.0 | 34.1 | PK | 241 | 1.5 |
| RB = 1MHz, VB = 10Hz | | | | | | | |
| RB = VB = 100kHz | | | | | | | |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|----------------------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2484.320 | 59.4 | V | 74.0 | -14.6 | PK | 241 | 1.3 |
| 2484.680 | 46.8 | V | 54.0 | -7.2 | AVG | 241 | 1.3 |
| 2484.690 | 48.7 | H | 54.0 | -5.3 | AVG | 241 | 1.5 |
| 2485.260 | 59.6 | H | 74.0 | -14.4 | PK | 241 | 1.5 |
| 2485.120 | 62.4 | H | 74.0 | -11.6 | PK | 241 | 1.5 |
| 2484.740 | 54.9 | H | 54.0 | 0.9 | AVG | 241 | 1.5 |
| 2485.410 | 57.7 | H | 74.0 | -16.3 | PK | 241 | 1.0 |
| 2484.520 | 45.5 | H | 54.0 | -8.5 | AVG | 241 | 1.0 |
| GC: 25.5 , AP : 16.8 | | | | | | | |
| GC: 25.5 , AP : 16.8 | | | | | | | |

Note 2: Results for information only - used to determine highest power level at which devices complies.



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| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11b - Chain B

Date of Test: 3/28/2008
Test Engineer: Ben Jing
Test Location: FT Chamber # 5

Run #2a: Low Channel @ 2412 MHz

Power Setting: 24.5 Average power: 16.7 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2410.900 | 107.6 | H | - | - | AVG | 157 | 1.0 |
| 2410.900 | 110.7 | H | - | - | PK | 157 | 1.0 |
| 2412.660 | 101.9 | V | - | - | AVG | 78 | 1.0 |
| 2412.660 | 104.8 | V | - | - | PK | 78 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.340 | 60.5 | H | 74.0 | -13.5 | PK | 156 | 1.0 |
| 2389.160 | 49.7 | H | 54.0 | -4.3 | AVG | 156 | 1.0 |
| 2389.880 | 57.5 | H | 74.0 | -16.5 | PK | 172 | 1.0 |
| 2389.700 | 46.9 | H | 54.0 | -7.1 | AVG | 162 | 1.0 |
| 2389.380 | 63.1 | H | 74.0 | -10.9 | PK | 158 | 1.0 |
| 2389.190 | 55.1 | H | 54.0 | 1.1 | AVG | 158 | 1.0 |

Run #2b: High Channel @ 2462 MHz

Power Setting: 25 Average power: 16.5 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2463.010 | 101.1 | V | - | - | AVG | 85 | 1.0 |
| 2463.010 | 104.0 | V | - | - | PK | 85 | 1.0 |
| 2462.950 | 107.2 | H | - | - | AVG | 103 | 1.0 |
| 2462.950 | 110.0 | H | - | - | PK | 103 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2488.090 | 61.9 | H | 74.0 | -12.1 | PK | 113 | 1.0 |
| 2488.150 | 51.5 | H | 54.0 | -2.5 | AVG | 115 | 1.0 |
| 2487.820 | 45.4 | V | 54.0 | -8.6 | AVG | 88 | 1.0 |
| 2488.060 | 47.8 | H | 54.0 | -6.2 | AVG | 115 | 1.0 |

Note 2: Results for information only - used to determine highest power level at which devices complies.



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| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11b - Chain C

Date of Test: 3/28/2008

Test Engineer: Ben Jing

Test Location: FT Chamber # 5

Run #3a: Low Channel @ 2412 MHz

Power Setting: 23 Average power: 16.5 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2412.880 | 99.1 | V | - | - | AVG | 178 | 1.0 |
| 2412.880 | 102.1 | V | - | - | PK | 178 | 1.0 |
| 2411.060 | 110.5 | H | - | - | AVG | 120 | 1.0 |
| 2411.060 | 113.3 | H | - | - | PK | 120 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2386.020 | 62.6 | H | 74.0 | -11.4 | PK | 119 | 1.0 |
| 2386.160 | 51.9 | H | 54.0 | -2.1 | AVG | 118 | 1.0 |

Run #3b: High Channel @ 2462 MHz

Power Setting: 24 Average power: 16.5 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2460.640 | 99.1 | V | - | - | AVG | 297 | 1.0 |
| 2460.640 | 102.1 | V | - | - | PK | 297 | 1.0 |
| 2460.650 | 108.5 | H | - | - | AVG | 119 | 1.0 |
| 2460.650 | 111.5 | H | - | - | PK | 119 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2488.890 | 60.9 | H | 74.0 | -13.1 | PK | 123 | 1.0 |
| 2488.240 | 51.1 | H | 54.0 | -2.9 | AVG | 121 | 1.0 |
| 2488.090 | 59.2 | H | 74.0 | -14.8 | PK | 135 | 1.0 |
| 2487.890 | 49.4 | H | 54.0 | -4.6 | AVG | 123 | 1.0 |

Note 2: Results for information only - used to determine highest power level at which devices complies.



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| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS, 2400 - 2483.5 MHz) Radiated Spurious Emissions 802.11b Ethertronics Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Config. Used: 1
Config Change: None
Host Unit Voltage 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 20 °C
Rel. Humidity: 34 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.



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| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Summary of Results

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|--------------------|-----------|---------------|----------------|-----------------------------------|---------------------------------|---|
| 1a | 802.11b Chain A | 1 (2412) | 24. 5 | 16. 7 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 48.8dB μ V/m @ 9647.9MHz (-5.2dB) |
| 1b | 802.11b Chain A | 6 (2437) | 24. 5 | 16. 6 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 49.9dB μ V/m @ 4874.0MHz (-4.1dB) |
| 1c | 802.11b Chain A | 11 (2462) | 25. 0 | 16. 5 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 51.6dB μ V/m @ 9847.9MHz (-2.4dB) |
| 2a | 802.11b Chain B | 1 (2412) | 24. 0 | 16. 5 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 57.8dB μ V/m @ 9647.9MHz (-16.2dB) |
| 2b | 802.11b Chain B | 6 (2437) | 24. 5 | 16. 5 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 46.9dB μ V/m @ 4874.0MHz (-7.1dB) |
| 2c | 802.11b Chain B | 11 (2462) | 25. 0 | 16. 7 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 47.8dB μ V/m @ 4924.0MHz (-6.2dB) |
| 3a | 802.11b Chain C | 1 (2412) | 23. 0 | 16. 7 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 48.6dB μ V/m @ 9648.1MHz (-5.4dB) |
| 3b | 802.11b Chain C | 6 (2437) | 23. 0 | 16. 5 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 48.3dB μ V/m @ 9748.0MHz (-5.7dB) |
| 3c | 802.11b Chain C | 11 (2462) | 23. 5 | 16. 5 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 50.9dB μ V/m @ 9848.0MHz (-3.1dB) |



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| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, 1000 - 26000 MHz. Operating Mode: 802.11b Chain A

Run # 1a : Low Channel @ 2412 MHz

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|--------|-----------|---------|--------|------------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 2412.520 | 107.5 | H | - | - | Pk | 206 | 1.0 | RB = VB = 100kHz |
| 2411.490 | 101.6 | V | - | - | Pk | 271 | 1.0 | RB = VB = 100kHz |

Fundamental emission level @ 3m in 100kHz RBW: 102.2 dB μ V/m

Limit for emissions outside of restricted bands: 72.2 dB μ V/m

Limit is -30dBc (UNII power measurement)

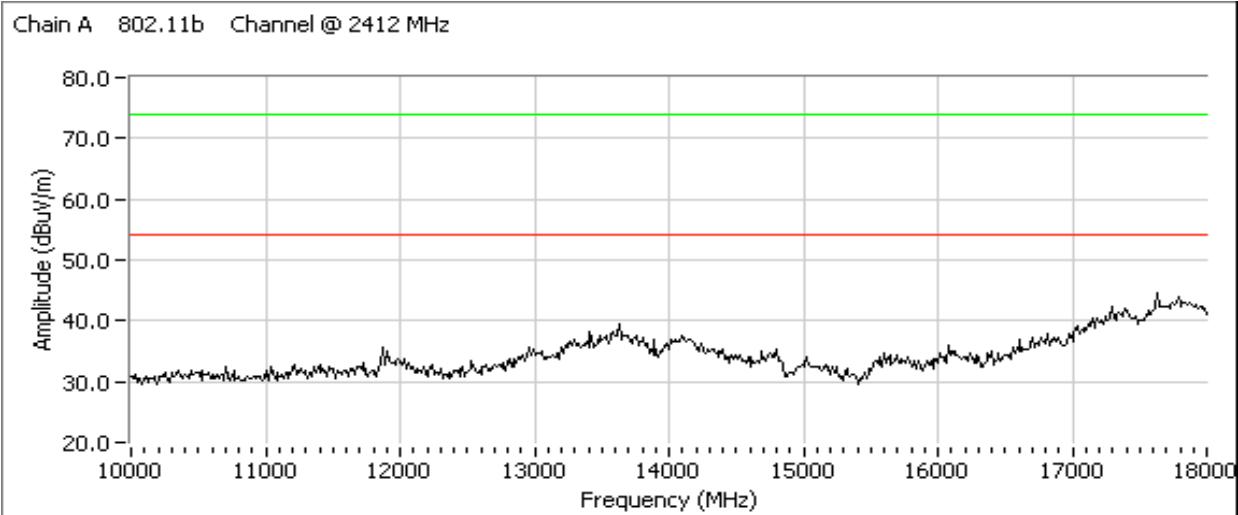
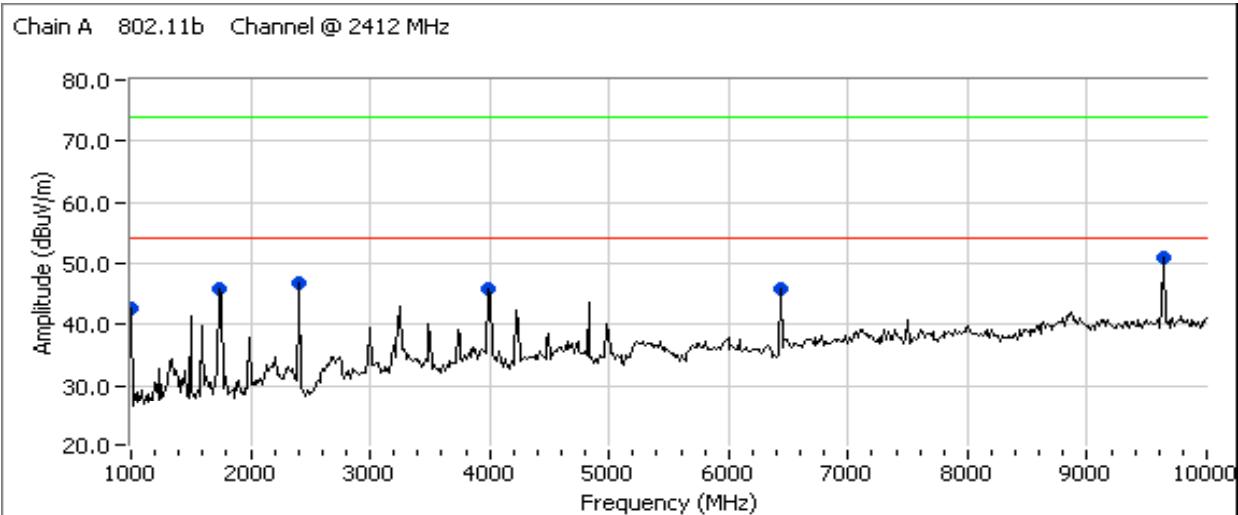
Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|--------|-----------|---------|--------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1748.120 | 34.9 | V | 54.0 | -19.1 | AVG | 297 | 1.5 | Note 2 |
| 3994.070 | 34.6 | V | 54.0 | -19.4 | AVG | 284 | 1.5 | |
| 6431.960 | 46.3 | V | 54.0 | -7.7 | AVG | 165 | 1.5 | Note 2 |
| 9647.890 | 48.8 | V | 54.0 | -5.2 | AVG | 205 | 1.5 | Note 2 |
| 1748.120 | 55.3 | V | 74.0 | -18.7 | PK | 297 | 1.5 | Note 2 |
| 3994.070 | 54.7 | V | 74.0 | -19.3 | PK | 284 | 1.5 | |
| 6431.960 | 50.1 | V | 74.0 | -23.9 | PK | 165 | 1.5 | Note 2 |
| 9647.890 | 53.5 | V | 54.0 | -20.5 | PK | 205 | 1.5 | Note 2 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

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| Standard: FCC | Class: N/A |





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| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run # 1b : Center Channel @ 2437 MHz

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2437.860 | 102.2 | V | - | - | Pk | 271 | 1.0 |
| 2437.770 | 103.7 | H | - | - | Pk | 271 | 1.0 |

Fundamental emission level @ 3m in 100kHz RBW: 102.2 dB μ V/m

Limit for emissions outside of restricted bands: 72.2 dB μ V/m

Limit is -30dBc (UNII power measurement)

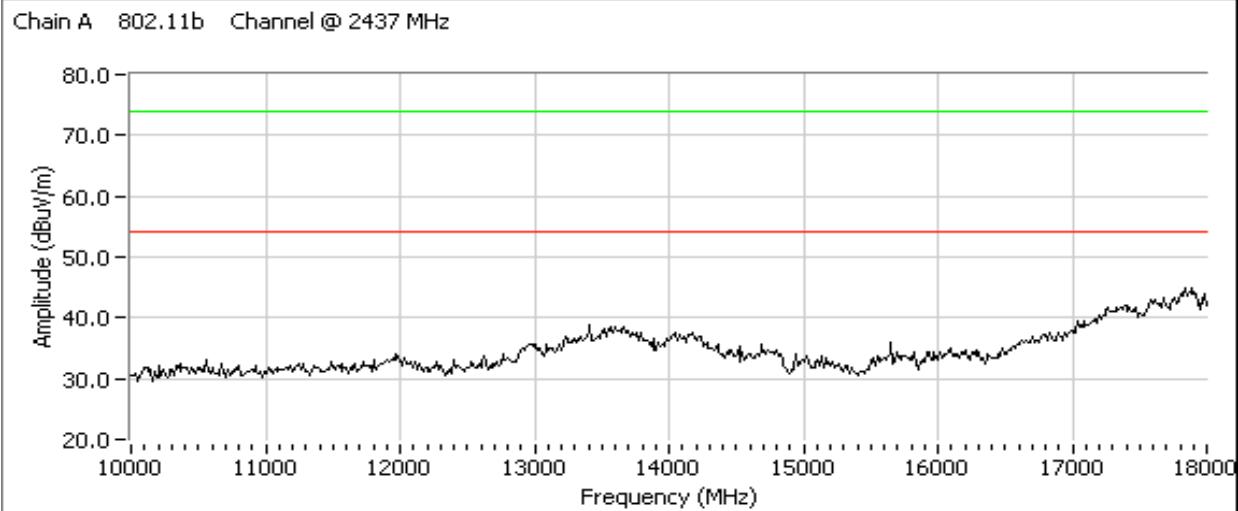
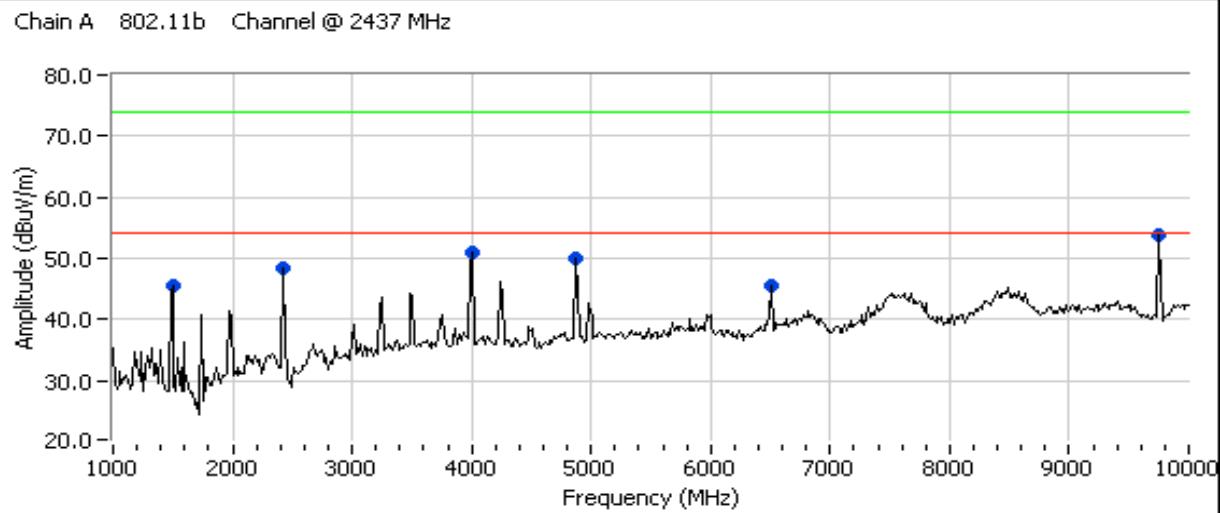
Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-----------------|-------------|------------|------------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1497.660 | 34.9 | H | 54.0 | -17.1 | AVG | 248 | 1.0 |
| 3995.750 | 35.8 | H | 54.0 | -18.2 | AVG | 255 | 1.0 |
| 4873.990 | 49.9 | V | 54.0 | -4.1 | AVG | 167 | 1.0 |
| 6498.610 | 47.0 | V | 54.0 | -7.0 | AVG | 180 | 1.0 |
| 9747.990 | 55.1 | V | 72.2 | -18.6 | AVG | 166 | 1.5 |
| 1497.660 | 52.1 | H | 74.0 | -21.9 | PK | 248 | 1.0 |
| 3995.750 | 58.7 | H | 74.0 | -15.3 | PK | 255 | 1.0 |
| 4873.990 | 52.3 | V | 74.0 | -21.7 | PK | 167 | 1.0 |
| 6498.610 | 50.4 | V | 74.0 | -23.6 | PK | 180 | 1.0 |
| 9747.990 | 57.2 | V | 74.0 | -16.8 | PK | 166 | 1.5 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

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| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC | Class: N/A |





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| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run # 1C : High Channel @ 2462 MHz

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2460.990 | 102.3 | V | - | - | Pk | 208 | 1.0 |
| 2463.030 | 105.3 | H | - | - | Pk | 205 | 1.0 |

Fundamental emission level @ 3m in 100kHz RBW: 102.2 dB μ V/m

Limit for emissions outside of restricted bands: 72.2 dB μ V/m

Limit is -30dBc (UNII power measurement)

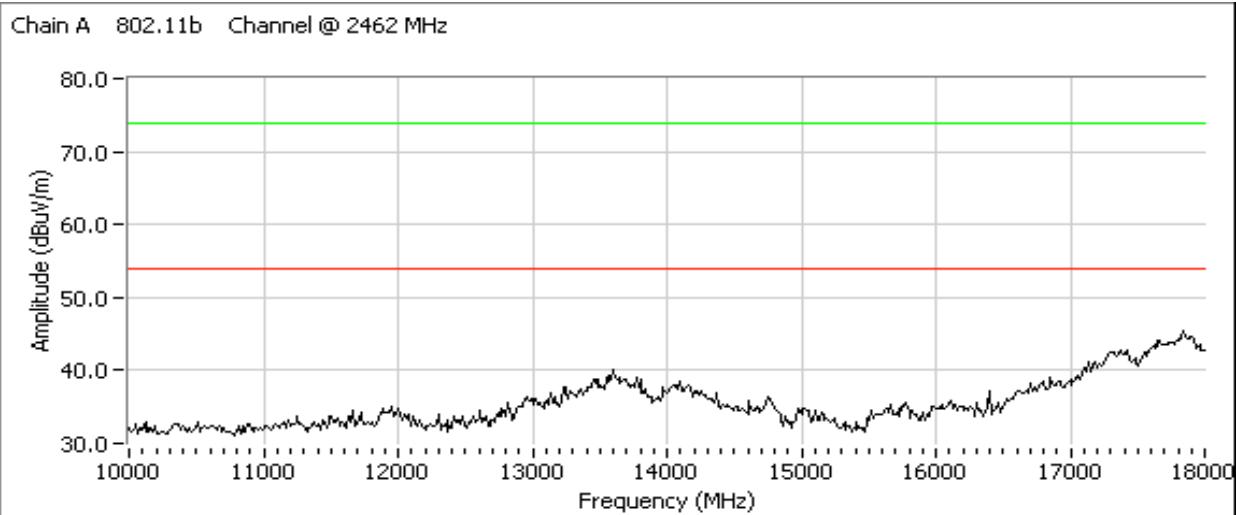
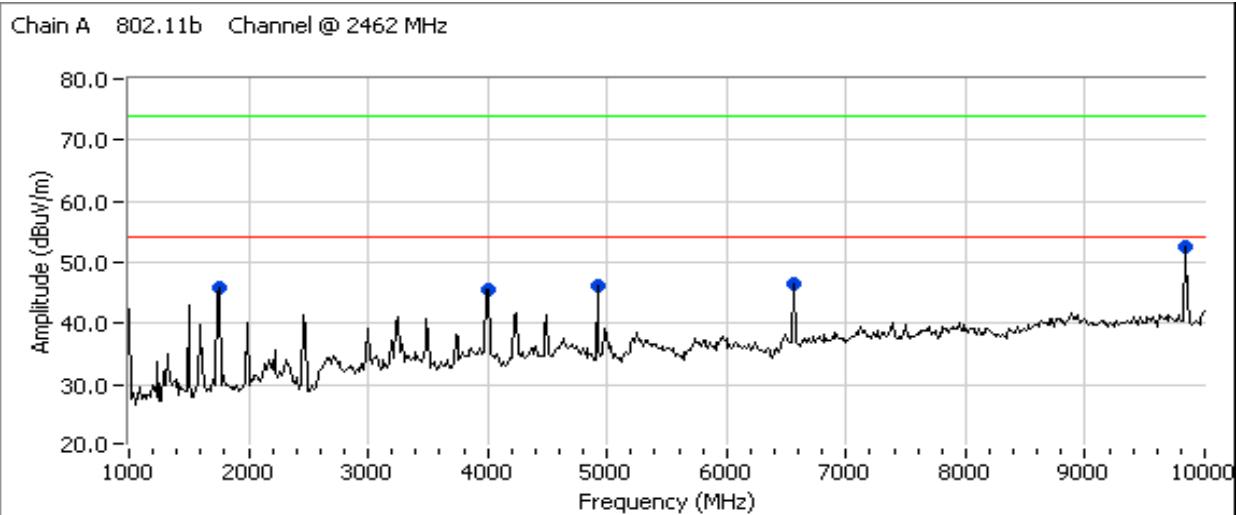
Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-----------------|-------------|------------|------------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1747.420 | 34.5 | V | 54.0 | -19.5 | AVG | 298 | 1.0 |
| 3996.790 | 33.8 | V | 54.0 | -20.2 | AVG | 286 | 1.5 |
| 4923.970 | 46.3 | H | 54.0 | -7.7 | AVG | 243 | 1.5 |
| 6565.290 | 47.6 | V | 54.0 | -6.4 | AVG | 153 | 1.0 |
| 9847.910 | 51.6 | V | 54.0 | -2.4 | AVG | 190 | 1.0 |
| 1747.420 | 54.7 | V | 74.0 | -19.3 | PK | 298 | 1.0 |
| 3996.790 | 54.0 | V | 74.0 | -20.0 | PK | 286 | 1.5 |
| 4923.970 | 50.0 | H | 74.0 | -24.0 | PK | 243 | 1.5 |
| 6565.290 | 51.3 | V | 74.0 | -22.7 | PK | 153 | 1.0 |
| 9847.910 | 55.7 | V | 74.0 | -18.3 | PK | 190 | 1.0 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

| | |
|---------------------------|-------------------------------|
| Client: Intel Corporation | Job Number: J70976 |
| Model: 533AN-MMW(MMC) | T-Log Number: T71133 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC | Class: N/A |



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11b Chain B

Run # 2a : Low Channel @ 2412 MHz

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2410.500 | 99.2 | V | - | - | Pk | 80 | 1.0 |
| 2411.480 | 106.2 | H | - | - | Pk | 112 | 1.0 |

Fundamental emission level @ 3m in 100kHz RBW: 102.2 dB μ V/m

Limit for emissions outside of restricted bands: 72.2 dB μ V/m

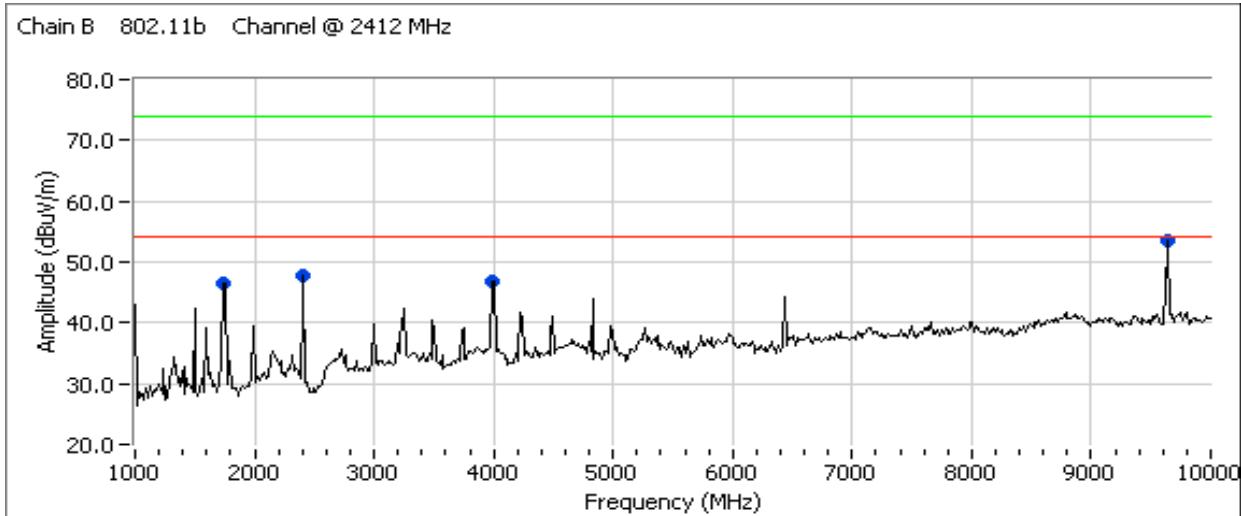
Limit is -30dBc (UNII power measurement)

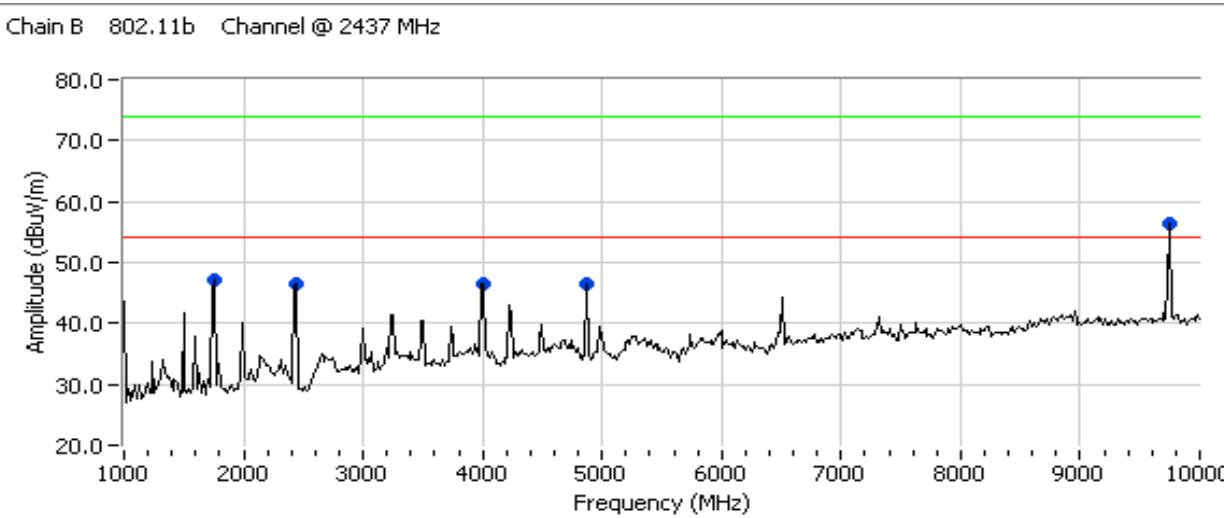
Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1748.190 | 34.8 | V | 54.0 | -19.2 | AVG | 297 | 1.0 |
| 3986.500 | 34.7 | V | 54.0 | -19.3 | AVG | 284 | 1.5 |
| 9647.920 | 55.3 | V | 72.2 | -16.9 | AVG | 178 | 2.0 |
| 1748.190 | 54.4 | V | 74.0 | -19.6 | PK | 297 | 1.0 |
| 3986.500 | 55.4 | V | 74.0 | -18.6 | PK | 284 | 1.5 |
| 9647.920 | 57.8 | V | 74.0 | -16.2 | PK | 178 | 2.0 |

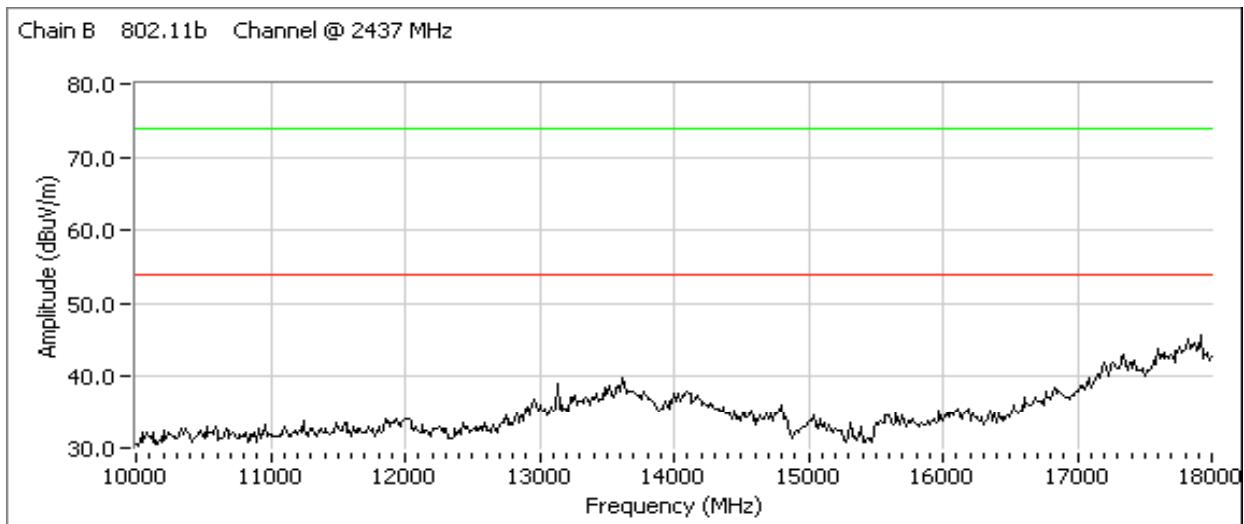
Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.



| | | | | | | | | | | | | | |
|--|---|-----|-----------------|----------|------------------|--|----------|--|--|--|--|--|--|
| Client: | Intel Corporation | | | | Job Number: | J70976 | | | | | | | |
| Model: | 533AN-MMW(MMC) | | | | T-Log Number: | T71133 | | | | | | | |
| Contact: | Robert Paxman | | | | Account Manager: | Dean Eriksen | | | | | | | |
| Standard: | FCC | | | | Class: | N/A | | | | | | | |
| Run # 2b : Center Channel @ 2437 MHz | | | | | | | | | | | | | |
| Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz | | | | | | | | | | | | | |
| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments | | | | | | |
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | | | | | | |
| 2436.000 | 99.8 | V | - | - | Pk | 212 | 1.0 | | | | | | |
| 2435.500 | 108.1 | H | - | - | Pk | 110 | 1.0 | | | | | | |
| Fundamental emission level @ 3m in 100kHz RBW: | | | | 99.8 | dB μ V/m | | | | | | | | |
| Limit for emissions outside of restricted bands: | | | | 69.8 | dB μ V/m | Limit is -30dBc (UNII power measurement) | | | | | | | |
| Spurious Emissions | | | | | | | | | | | | | |
| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments | | | | | | |
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | | | | | | |
| 1747.270 | 35.1 | V | 54.0 | -18.9 | AVG | 297 | 1.5 | | | | | | |
| 3993.680 | 35.2 | V | 54.0 | -18.8 | AVG | 283 | 1.5 | | | | | | |
| 4873.950 | 46.9 | V | 54.0 | -7.1 | AVG | 144 | 2.0 | | | | | | |
| 9747.880 | 55.3 | V | 69.8 | -14.5 | AVG | 178 | 1.5 | | | | | | |
| 1747.270 | 55.4 | V | 74.0 | -18.6 | PK | 297 | 1.5 | | | | | | |
| 3993.680 | 56.2 | V | 74.0 | -17.8 | PK | 283 | 1.5 | | | | | | |
| 4873.950 | 50.0 | V | 74.0 | -24.0 | PK | 144 | 2.0 | | | | | | |
| 9747.880 | 57.9 | V | 74.0 | -16.1 | PK | 178 | 1.5 | | | | | | |
| Note 1: | For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz. | | | | | | | | | | | | |
| Note 2: | Signal is not in a restricted band but the more stringent restricted band limit was used. | | | | | | | | | | | | |
| Chain B 802.11b Channel @ 2437 MHz  | | | | | | | | | | | | | |

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run # 2c : High Channel @ 2462 MHz
Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2461.020 | 101.4 | V | - | - | Pk | 171 | 1.0 |
| 2463.500 | 108.0 | H | - | - | Pk | 112 | 1.0 |

Fundamental emission level @ 3m in 100kHz RBW: 101.4 dB μ V/m

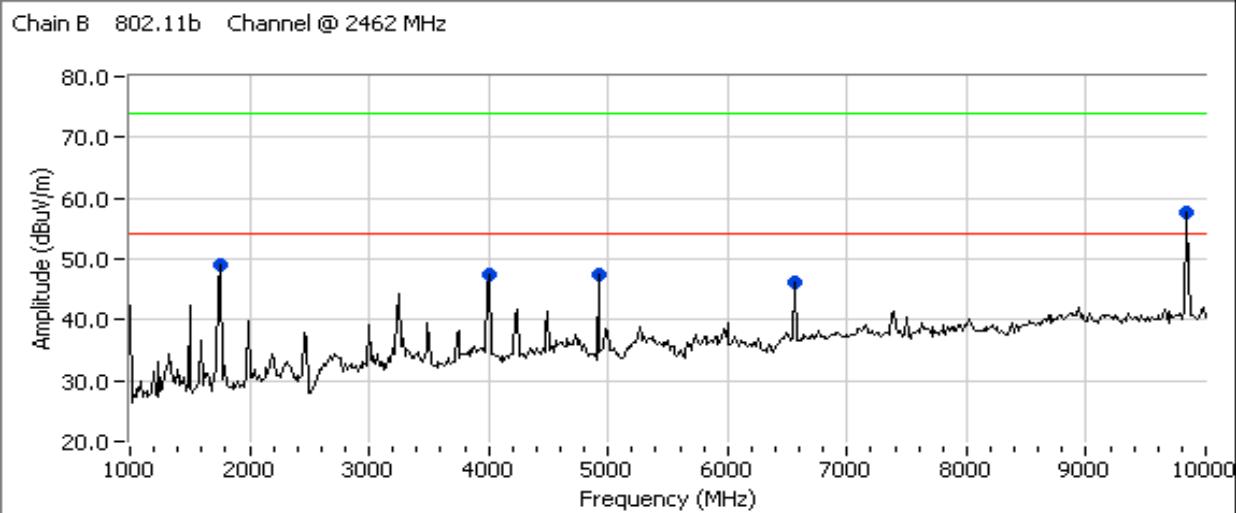
Limit for emissions outside of restricted bands: 71.4 dB μ V/m Limit is -30dBc (UNII power measurement)

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-----------------|-------------|------------|------------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1747.710 | 31.8 | V | 54.0 | -22.2 | AVG | 325 | 1.0 |
| 3996.920 | 35.0 | V | 54.0 | -19.0 | AVG | 285 | 1.5 |
| 4924.020 | 47.8 | V | 54.0 | -6.2 | AVG | 144 | 2.0 |
| 6565.290 | 45.4 | V | 54.0 | -8.6 | AVG | 124 | 1.0 |
| 9847.880 | 56.9 | V | 71.4 | -14.5 | AVG | 160 | 2.0 |
| 1747.710 | 48.9 | V | 74.0 | -25.1 | PK | 325 | 1.0 |
| 3996.920 | 55.8 | V | 74.0 | -18.2 | PK | 285 | 1.5 |
| 4924.020 | 50.6 | V | 74.0 | -23.4 | PK | 144 | 2.0 |
| 6565.290 | 49.9 | V | 74.0 | -24.1 | PK | 124 | 1.0 |
| 9847.880 | 59.1 | V | 74.0 | -14.9 | PK | 160 | 2.0 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11b Chain C

Run #3a : Low Channel @ 2412 MHz

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2413.030 | 99.2 | V | - | - | Pk | 52 | 1.0 |
| 2412.530 | 107.7 | H | - | - | Pk | 110 | 1.0 |

Fundamental emission level @ 3m in 100kHz RBW: 102.2 dB μ V/m

Limit for emissions outside of restricted bands: 72.2 dB μ V/m

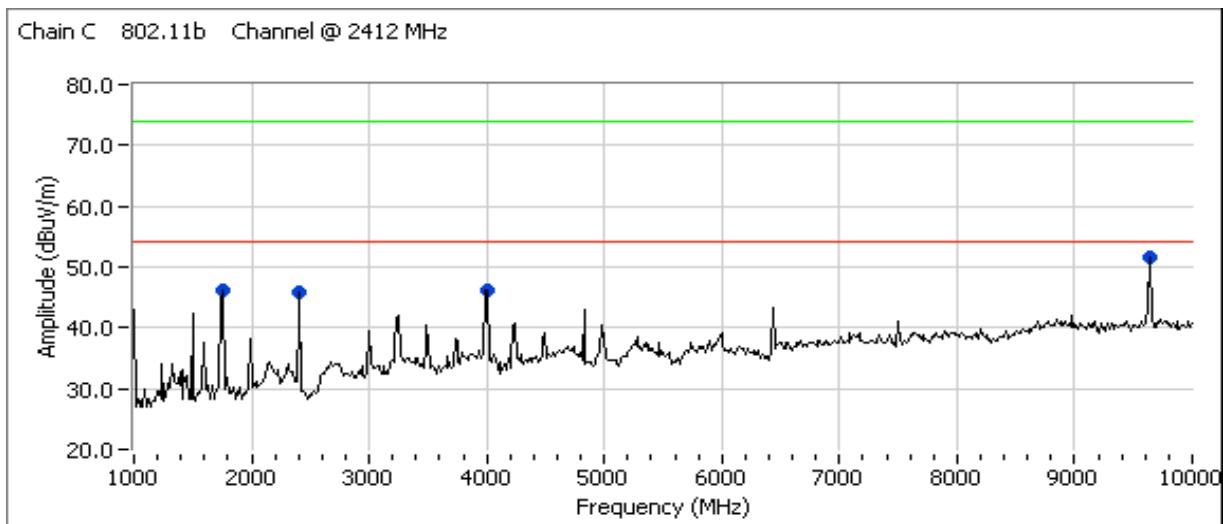
Limit is -30dBc (UNII power measurement)

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-----------------|-------------|------------|------------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1745.340 | 32.8 | V | 54.0 | -21.2 | AVG | 289 | 1.0 |
| 3997.250 | 35.0 | V | 54.0 | -19.0 | AVG | 288 | 1.5 |
| 9648.060 | 48.6 | V | 54.0 | -5.4 | AVG | 160 | 2.0 |
| 1745.340 | 51.8 | V | 74.0 | -22.2 | PK | 289 | 1.0 |
| 3997.250 | 56.3 | V | 74.0 | -17.7 | PK | 288 | 1.5 |
| 9648.060 | 53.2 | V | 74.0 | -20.8 | PK | 160 | 2.0 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

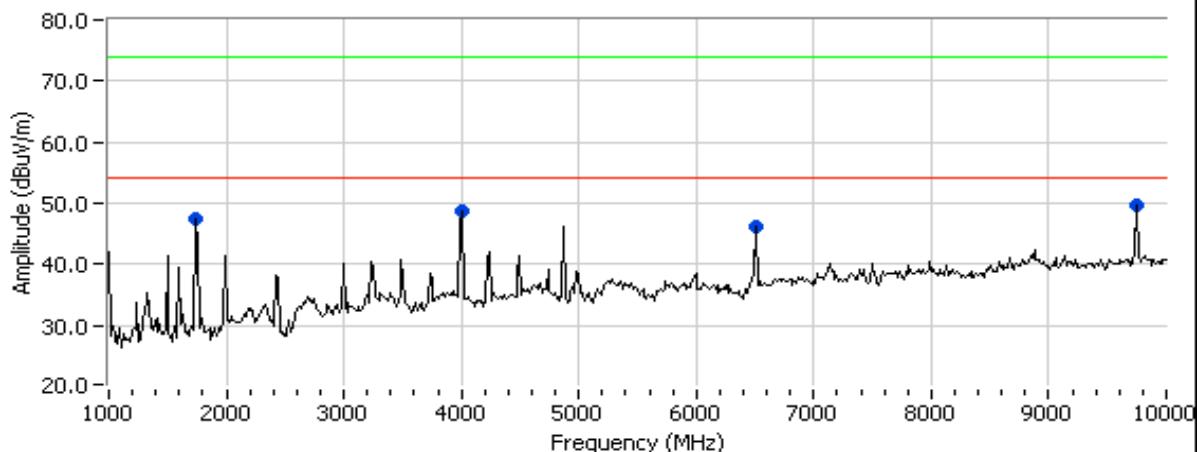
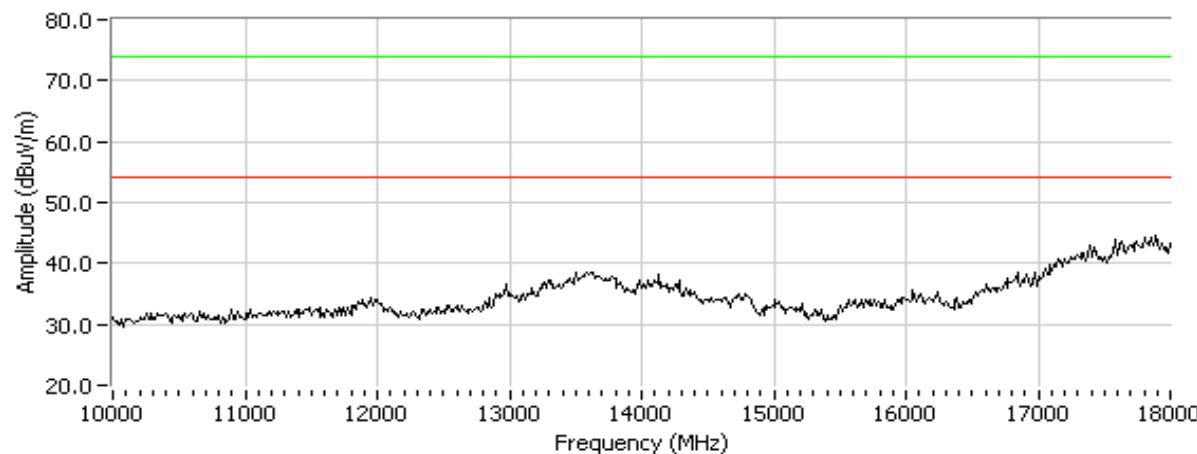




EMC Test Data

| Client: | Intel Corporation | | | | Job Number: | J70976 | | | | | | | |
|---|--|----------|-----------------|------------------|------------------|--|------------|--|--|--|--|--|--|
| Model: | 533AN-MMW(MMC) | | | | T-Log Number: | T71133 | | | | | | | |
| Contact: | Robert Paxman | | | | Account Manager: | Dean Eriksen | | | | | | | |
| Standard: | FCC | | | | Class: | N/A | | | | | | | |
| Run # 3b : Center Channel @ 2437 MHz | | | | | | | | | | | | | |
| Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz | | | | | | | | | | | | | |
| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments | | | | | | |
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | | | | | | |
| 2436.520 | 99.4 | V | - | - | Pk | 89 | 1.0 | | | | | | |
| 2436.470 | 107.0 | H | - | - | Pk | 103 | 1.0 | | | | | | |
| Fundamental emission level @ 3m in 100kHz RBW: | | | | dB μ V/m | | | | | | | | | |
| Limit for emissions outside of restricted bands: | | | | -30 dB μ V/m | | Limit is -30dBc (UNII power measurement) | | | | | | | |
| Spurious Emissions | | | | | | | | | | | | | |
| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments | | | | | | |
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | | | | | | |
| 1747.830 | 35.0 | V | 54.0 | -19.0 | AVG | 296 | 1.5 | | | | | | |
| 3996.740 | 34.7 | V | 54.0 | -19.3 | AVG | 284 | 1.5 | | | | | | |
| 6498.640 | 45.9 | V | 54.0 | -8.1 | AVG | 185 | 1.5 | | | | | | |
| 9747.980 | 48.3 | V | 54.0 | -5.7 | AVG | 188 | 1.5 | | | | | | |
| 1747.830 | 54.9 | V | 74.0 | -19.1 | PK | 296 | 1.5 | | | | | | |
| 3996.740 | 55.8 | V | 74.0 | -18.2 | PK | 284 | 1.5 | | | | | | |
| 6498.640 | 50.2 | V | 74.0 | -23.8 | PK | 185 | 1.5 | | | | | | |
| 9747.980 | 53.0 | V | 74.0 | -21.0 | PK | 188 | 1.5 | | | | | | |
| Note 1: | For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the | | | | | | | | | | | | |
| Note 2: | Signal is not in a restricted band but the more stringent restricted band limit was used. | | | | | | | | | | | | |

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Chain C 802.11b Channel @ 2437 MHz

Chain C 802.11b Channel @ 2437 MHz


| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run # 3c : High Channel @ 2462 MHz
Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2460.500 | 99.8 | V | - | - | Pk | 61 | 1.0 |
| 2461.000 | 106.6 | H | - | - | Pk | 103 | 1.0 |

Fundamental emission level @ 3m in 100kHz RBW: 102.2 dB μ V/m

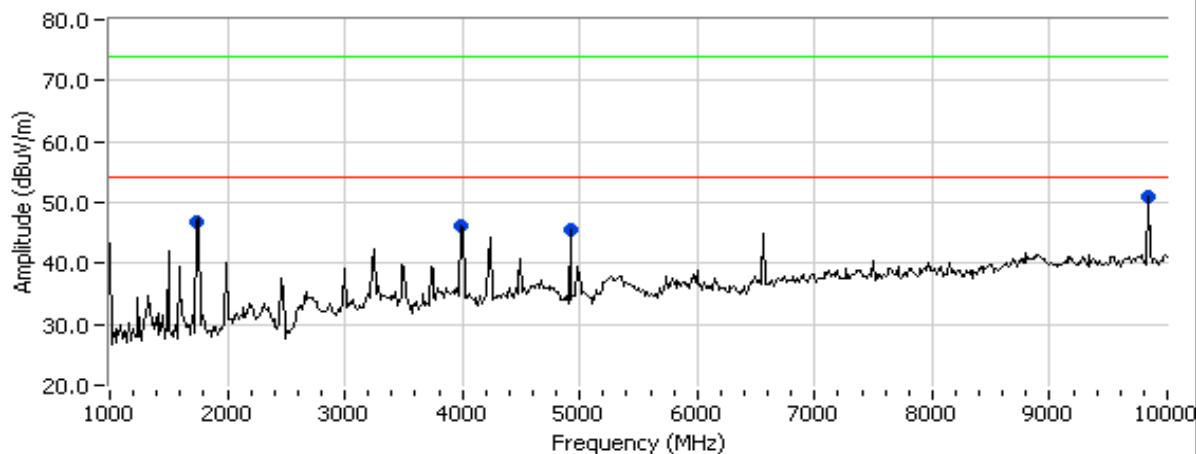
Limit for emissions outside of restricted bands: 72.2 dB μ V/m Limit is -30dBc (UNII power measurement)

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-----------------|-------------|------------|------------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1747.280 | 31.9 | V | 54.0 | -22.1 | AVG | 324 | 1.0 |
| 3996.610 | 34.2 | V | 54.0 | -19.8 | AVG | 290 | 1.5 |
| 4923.880 | 45.5 | V | 54.0 | -8.5 | AVG | 170 | 2.0 |
| 9847.960 | 50.9 | V | 54.0 | -3.1 | AVG | 167 | 1.5 |
| 1747.280 | 51.2 | V | 74.0 | -22.8 | PK | 324 | 1.0 |
| 3996.610 | 54.2 | V | 74.0 | -19.8 | PK | 290 | 1.5 |
| 4923.880 | 48.9 | V | 74.0 | -25.1 | PK | 170 | 2.0 |
| 9847.960 | 54.6 | V | 74.0 | -19.4 | PK | 167 | 1.5 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Chain C 802.11b Channel @ 2462 MHz




EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS, 2400 - 2483.5 MHz) Band Edge Field Strength 802.11g Ethertronics Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 20 °C
Rel. Humidity: 55 %

Summary of Results

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|--------------------|---------------|---------------|----------------|-----------------------------------|-----------------------------|--|
| 1a | 802.11g Chain A | 1 2412MHz | 24.5 | 12.9 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 72.3dB _u V/m @ 2389.3MHz (-1.7dB) |
| 1b | 802.11g Chain A | 11 2462MHz | 28.0 | 15.8 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 52.1dB _u V/m @ 2510.8MHz (-1.9dB) |
| 2a | 802.11g Chain B | 1 2412MHz | 28.5 | 16.4 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 52.8dB _u V/m @ 2361.4MHz (-1.2dB) |
| 2b | 802.11g Chain B | 11 2462MHz | 26.0 | 14.5 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 72.9 dB _u V/m @ 2483.6 MHz (-1.1dB) |
| 3a | 802.11g Chain C | 1 2412MHz | 22.5 | 12.3 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 72.2 dB _u V/m @ 2389.9MHz (-1.8dB) |
| 3b | 802.11g Chain C | 11 2462MHz | 24.5 | 13.5 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 72.6 dB _u V/m @ 2483.8 MHz (-1.4dB) |

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11g - Chain A

Date of Test: 3/25/2008

Test Engineer: Suhaila Khushzad

Test Location: FT Chamber # 4

Run #1a: Low Channel @ 2412 MHz

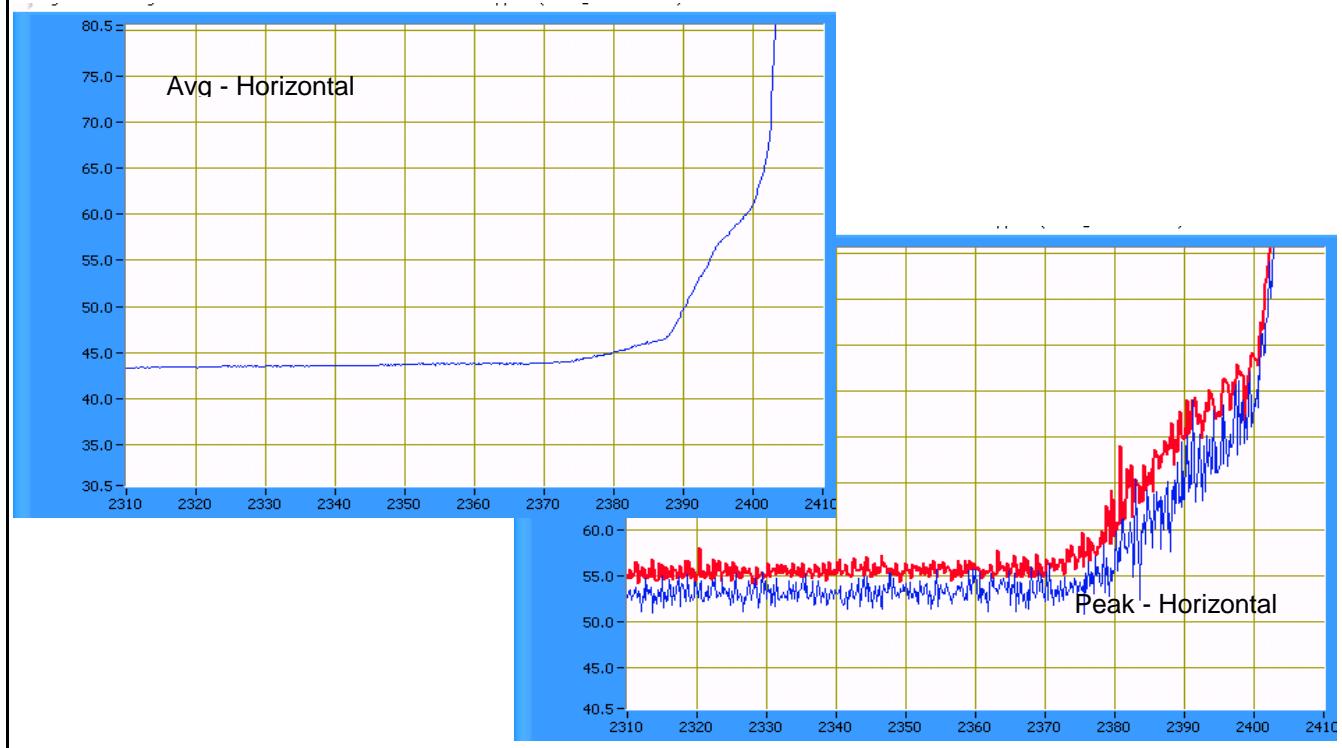
Power Setting: 24.5 Average power: 12.9 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2409.330 | 100.6 | H | - | - | AVG | 250 | 1.1 |
| 2409.330 | 110.0 | H | - | - | PK | 250 | 1.1 |
| 2414.830 | 94.4 | V | - | - | AVG | 261 | 1.0 |
| 2414.830 | 102.8 | V | - | - | PK | 261 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.250 | 72.3 | H | 74.0 | -1.7 | Pk | 250 | 1.1 |
| 2389.960 | 49.9 | H | 54.0 | -4.1 | Avg | 250 | 1.1 |
| 2389.890 | 45.9 | V | 54.0 | -8.1 | Avg | 261 | 1.0 |
| 2389.880 | 65.4 | V | 74.0 | -8.6 | Pk | 261 | 1.0 |





EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11g - Chain A

Run #1b: High Channel @ 2462 MHz

Power Setting: 28 Average power: 15.8 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2460.720 | 106.2 | H | - | - | AVG | 243 | 1.0 |
| 2460.720 | 114.2 | H | - | - | PK | 243 | 1.0 |
| 2463.310 | 105.8 | V | - | - | AVG | 246 | 1.0 |
| 2463.310 | 114.4 | V | - | - | PK | 246 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2509.790 | 51.0 | V | 54.0 | -3.0 | AVG | 204 | 1.0 |
| 2509.790 | 64.4 | V | 74.0 | -9.6 | PK | 204 | 1.0 |
| 2510.770 | 52.1 | H | 54.0 | -1.9 | AVG | 247 | 1.0 |
| 2510.770 | 67.0 | H | 74.0 | -7.0 | PK | 247 | 1.0 |



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11g - Chain B

Run #2a: Low Channel @ 2412 MHz

Date of Test: 3/26/2008

Test Engineer: Joseph Cadigal

Test Location: FT Chamber # 5

Power Setting: 28.5 Average power: 16.4 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2413.340 | 99.3 | V | - | - | AVG | 50 | 1.0 |
| 2413.340 | 107.3 | V | - | - | PK | 50 | 1.0 |
| 2413.290 | 105.6 | H | - | - | AVG | 102 | 1.0 |
| 2413.290 | 114.0 | H | - | - | PK | 102 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2361.370 | 52.8 | H | 54.0 | -1.2 | AVG | 107 | 1.0 |
| 2361.370 | 69.8 | H | 74.0 | -4.2 | PK | 107 | 1.0 |
| 2361.450 | 50.7 | V | 54.0 | -3.3 | AVG | 78 | 1.0 |
| 2361.450 | 65.1 | V | 74.0 | -8.9 | PK | 78 | 1.0 |

Run #2b: High Channel @ 2462 MHz

Date of Test: 3/26/2008

Test Engineer: Ben Jing

Test Location: FT Chamber # 3

Power Setting: 26 Average power: 14.5 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2460.500 | 97.7 | V | - | - | AVG | 55 | 1.0 |
| 2460.500 | 105.9 | V | - | - | PK | 55 | 1.0 |
| 2460.520 | 104.2 | H | - | - | AVG | 99 | 1.0 |
| 2460.520 | 112.4 | H | - | - | PK | 99 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2483.610 | 72.9 | H | 74.0 | -1.1 | PK | 97 | 1.0 |
| 2483.600 | 50.6 | H | 54.0 | -3.4 | AVG | 98 | 1.0 |
| 2483.660 | 67.8 | V | 74.0 | -6.2 | PK | 55 | 1.0 |
| 2483.600 | 47.6 | V | 54.0 | -6.4 | AVG | 55 | 1.0 |



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11g - Chain C

Date of Test: 3/26/2008

Test Engineer: Ben Jing

Test Location: FT Chamber # 3

Run #3a: Low Channel @ 2412 MHz

Power Setting: 22.5 Average power: 12.3 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2410.730 | 104.5 | H | - | - | AVG | 110 | 1.0 |
| 2410.730 | 112.6 | H | - | - | PK | 110 | 1.0 |
| 2413.080 | 96.0 | V | - | - | AVG | 65 | 1.0 |
| 2413.080 | 104.6 | V | - | - | PK | 65 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.880 | 72.2 | H | 74.0 | -1.8 | PK | 113 | 1.0 |
| 2389.860 | 49.3 | H | 54.0 | -4.7 | AVG | 109 | 1.0 |
| 2389.870 | 65.4 | V | 74.0 | -8.6 | PK | 77 | 1.0 |
| 2389.860 | 45.2 | V | 54.0 | -8.8 | AVG | 74 | 1.0 |

Run #3b: High Channel @ 2462 MHz

Power Setting: 24.5 Average power: 14.1 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2460.600 | 104.5 | H | - | - | PK AVG vertical | 116 | 1.0 |
| 2460.600 | 112.7 | H | - | - | PK | 116 | 1.0 |
| 2460.510 | 96.0 | V | - | - | AVG | 73 | 1.0 |
| 2460.510 | 103.8 | V | - | - | PK | 73 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2483.800 | 72.6 | H | 74.0 | -1.4 | ?? | 110 | 1.0 |
| 2483.500 | 48.3 | H | 54.0 | -5.7 | ?? | 108 | 1.0 |
| 2483.680 | 62.9 | V | 74.0 | -11.1 | ?? | 79 | 1.0 |
| 2483.600 | 44.6 | V | 54.0 | -9.4 | ?? | 79 | 1.0 |



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS, 2400 - 2483.5 MHz) Radiated Spurious Emissions 802.11g Ethertronics Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 20.1 °C
Rel. Humidity: 43 %

Summary of Results

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|--------------------|-----------|---------------|----------------|-----------------------------------|---------------------------------|---|
| 1 | 802.11g Chain A | 1 (2412) | 27.5 | 16.3 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 43.4dB μ V/m @ 6498.6MHz (-10.6dB) |
| | | 6 (2437) | 27.5 | 16.2 | | | |
| | | 11 (2462) | 28 | 16.2 | | | |
| 2 | 802.11g Chain B | 1 (2412) | 27.5 | 16.4 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 46.3dB μ V/m @ 6565.4MHz (-7.7dB) |
| | | 6 (2437) | 27.5 | 16.2 | | | |
| | | 11 (2462) | 28 | 16.4 | | | |
| 3 | 802.11g Chain C | 1 (2412) | 27 | 16.4 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 42.7dB μ V/m @ 6498.6MHz (-11.3dB) |
| | | 6 (2437) | 28 | 16.4 | | | |
| | | 11 (2462) | 27 | 16.4 | | | |

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11g Chain A

Date of Test: 3/27/2008

Test Engineer: Joseph Cadigal

Test Location: FT Chamber # 3

Run #1a: Low Channel @ 2412 MHz

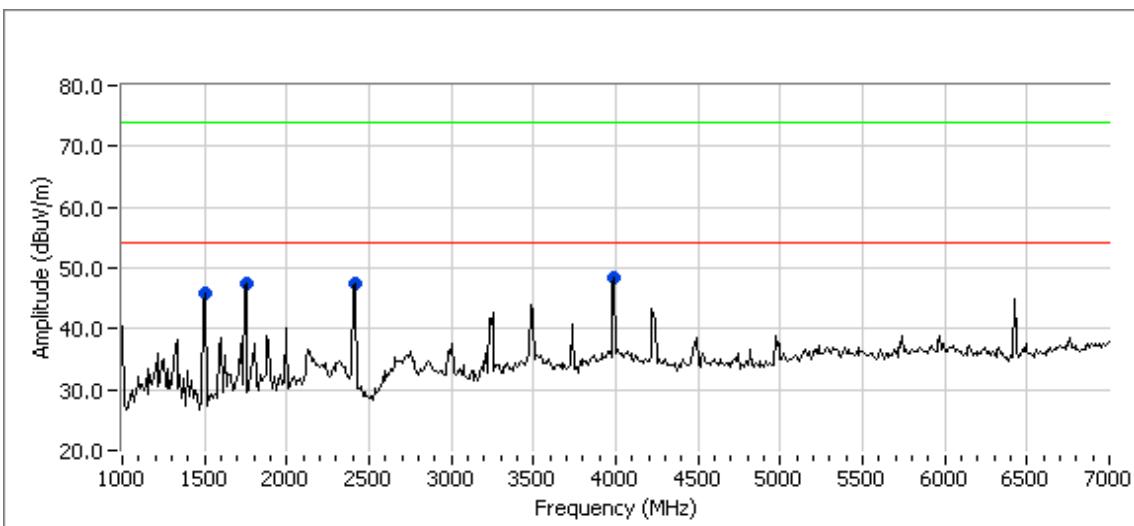
GP = 27.5 AP = 16.3

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-----------------|--------------|------------|------------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1497.910 | 37.0 | H | 54.0 | -17.0 | AVG | 179 | 1.0 |
| 1747.840 | 34.5 | V | 54.0 | -19.5 | AVG | 68 | 1.0 |
| 3996.350 | 34.9 | V | 54.0 | -19.1 | AVG | 104 | 1.3 |
| 9629.650 | 37.3 | V | 54.0 | -16.7 | AVG | 158 | 1.9 |
| 1497.910 | 52.0 | H | 74.0 | -22.0 | PK | 179 | 1.0 |
| 1747.840 | 53.8 | V | 74.0 | -20.2 | PK | 68 | 1.0 |
| 3996.350 | 55.5 | V | 74.0 | -18.5 | PK | 104 | 1.3 |
| 9629.650 | 51.5 | V | 74.0 | -22.5 | PK | 158 | 1.9 |

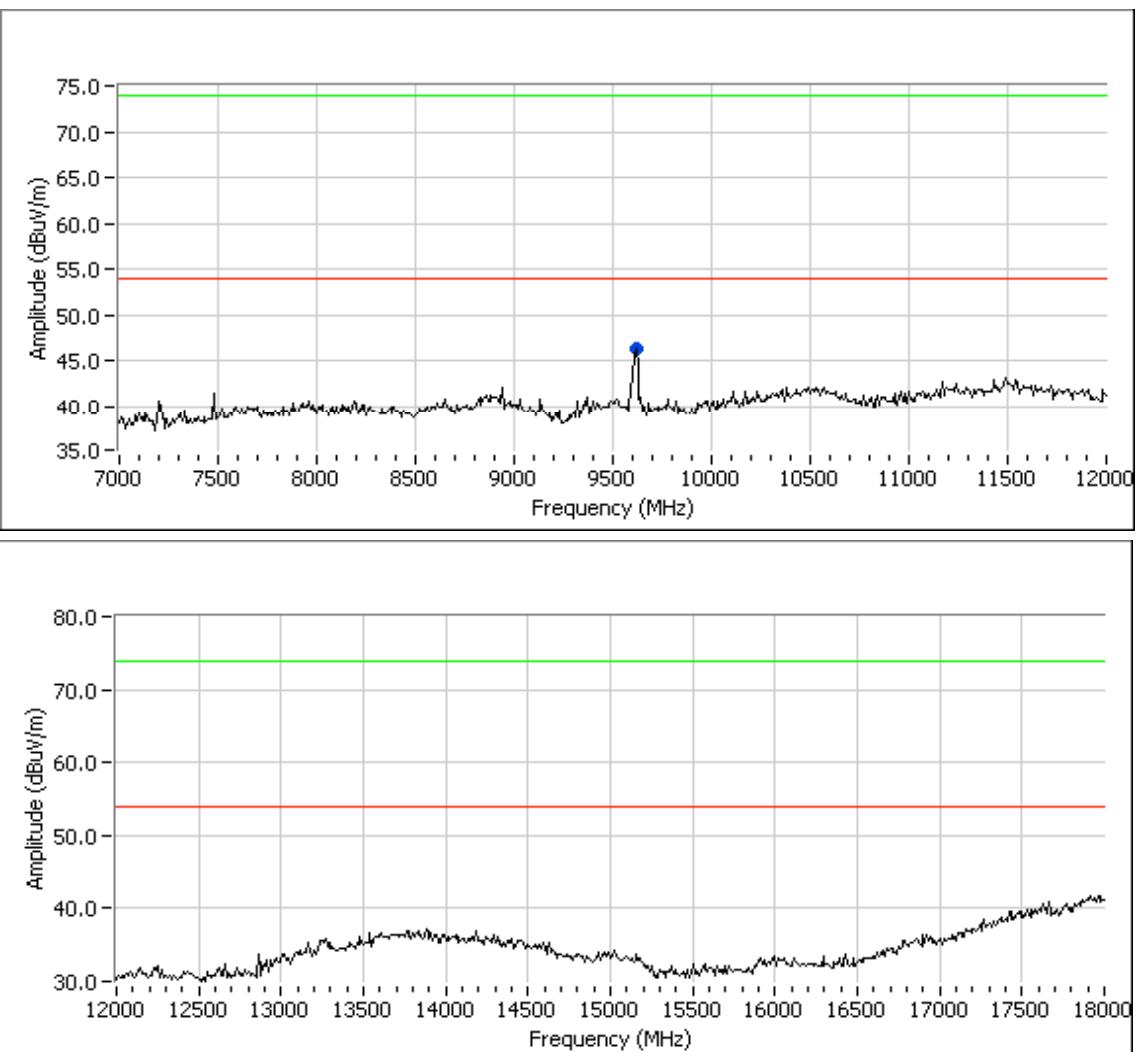
Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1a: Low Channel @ 2412 MHz



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1b: Center Channel @ 2437 MHz

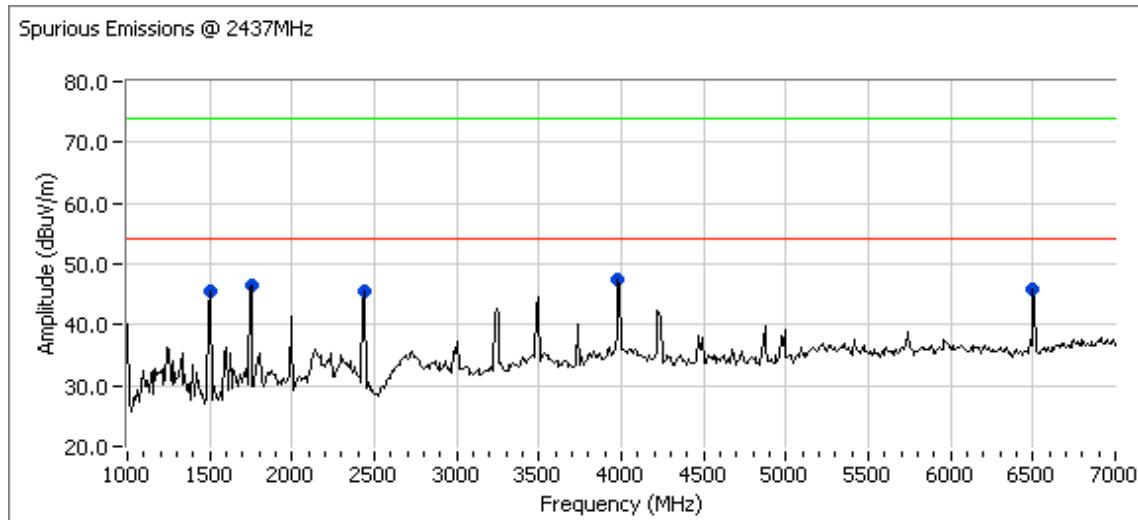
GP = 27.5 AP = 16.2

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-----------------|--------------|------------|------------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1498.210 | 37.3 | H | 54.0 | -16.7 | AVG | 177 | 1.0 |
| 1747.420 | 32.7 | V | 54.0 | -21.3 | AVG | 180 | 2.2 |
| 3983.000 | 34.4 | H | 54.0 | -19.6 | AVG | 148 | 2.2 |
| 6498.630 | 43.4 | V | 54.0 | -10.6 | AVG | 209 | 1.9 |
| 9704.670 | 34.7 | V | 54.0 | -19.3 | AVG | 171 | 1.9 |
| 1498.210 | 52.3 | H | 74.0 | -21.7 | PK | 177 | 1.0 |
| 1747.420 | 51.3 | V | 74.0 | -22.7 | PK | 180 | 2.2 |
| 3983.000 | 55.4 | H | 74.0 | -18.6 | PK | 148 | 2.2 |
| 6498.630 | 48.0 | V | 74.0 | -26.0 | PK | 209 | 1.9 |
| 9704.670 | 46.1 | V | 74.0 | -27.9 | PK | 171 | 1.9 |

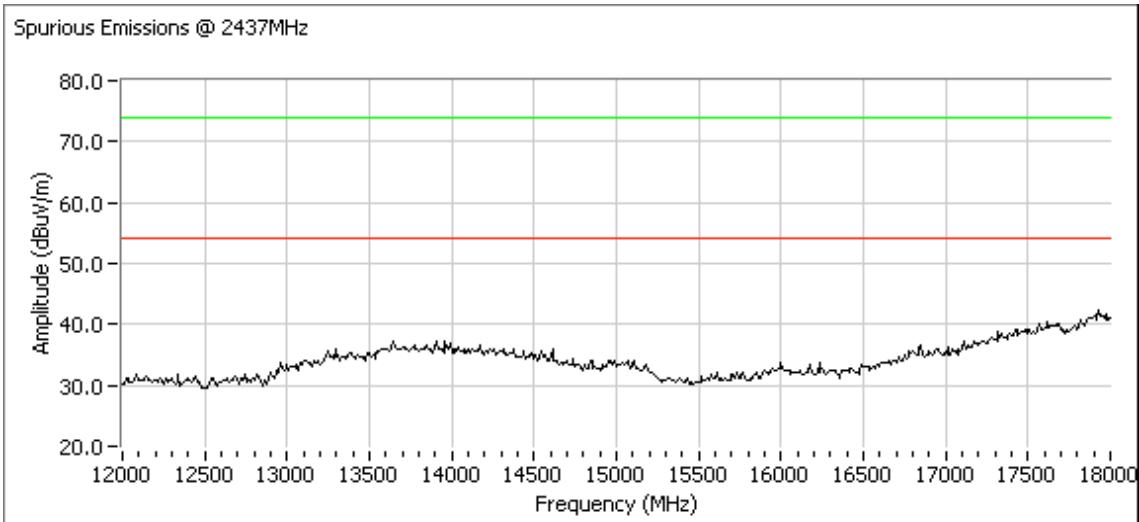
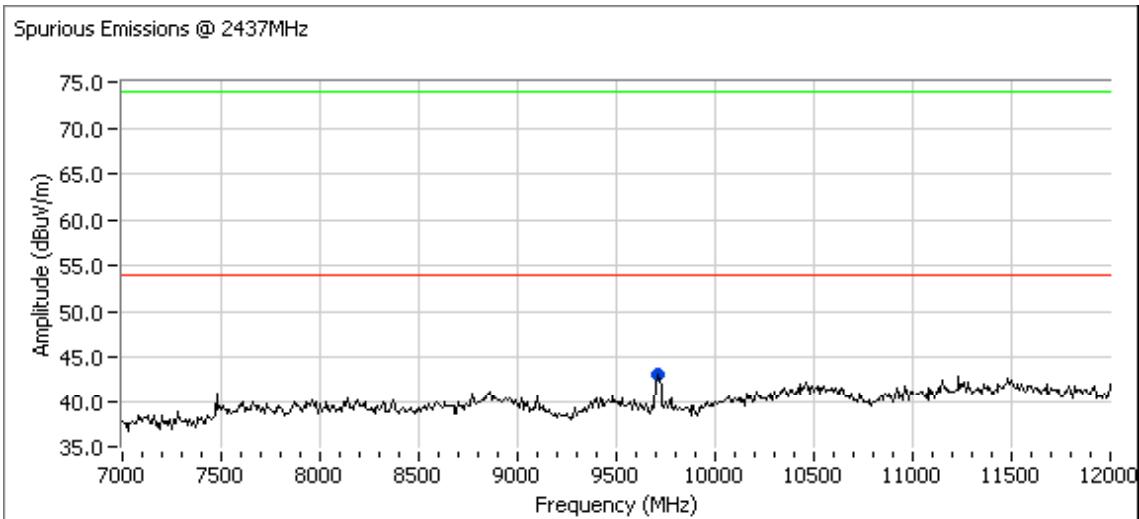
Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1b: Center Channel @ 2437 MHz



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1c: High Channel @ 2462 MHz

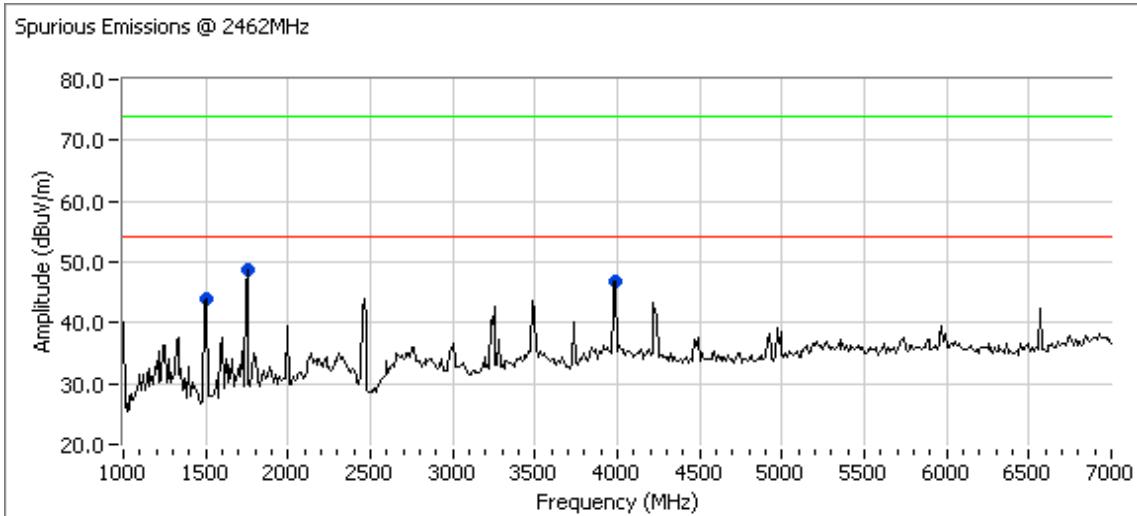
GP = 28 AP = 16.2

Spurious Emissions

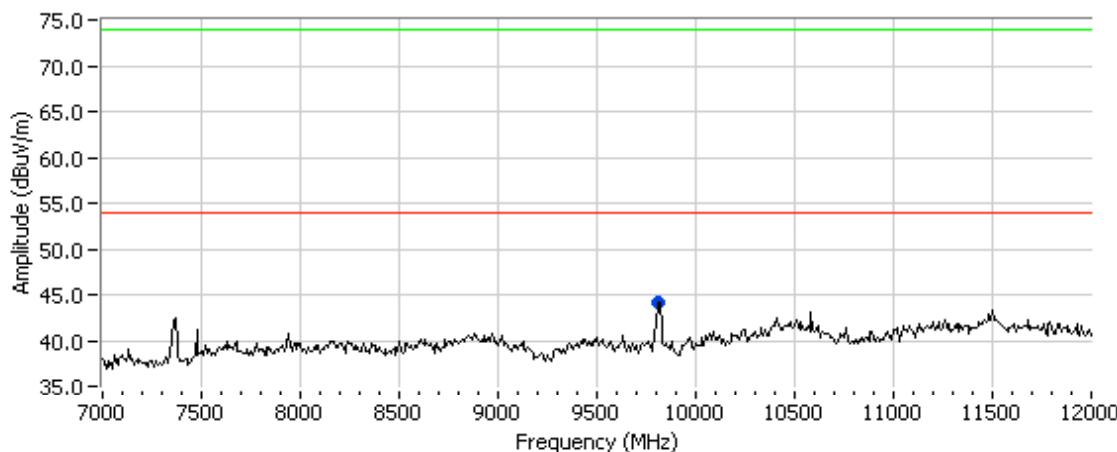
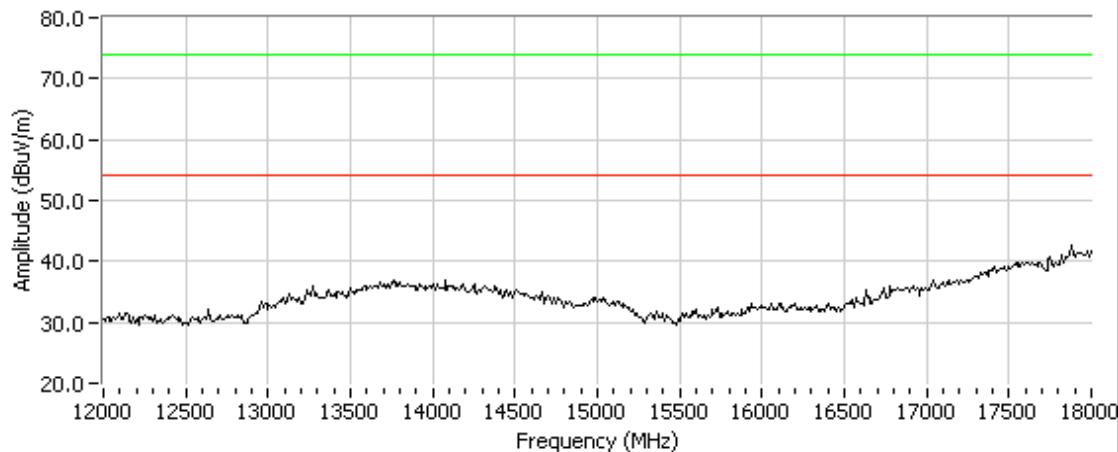
| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1497.800 | 28.1 | H | 54.0 | -25.9 | AVG | 178 | 1.0 |
| 1747.900 | 27.3 | V | 54.0 | -26.7 | AVG | 109 | 1.0 |
| 3982.930 | 24.5 | V | 54.0 | -29.5 | AVG | 103 | 1.3 |
| 9807.030 | 25.5 | V | 54.0 | -28.5 | AVG | 176 | 1.3 |
| 1497.800 | 43.5 | H | 74.0 | -30.5 | PK | 178 | 1.0 |
| 1747.900 | 46.1 | V | 74.0 | -27.9 | PK | 109 | 1.0 |
| 3982.930 | 44.1 | V | 74.0 | -29.9 | PK | 103 | 1.3 |
| 9807.030 | 37.4 | V | 74.0 | -36.6 | PK | 176 | 1.3 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.



| | |
|---------------------------|-------------------------------|
| Client: Intel Corporation | Job Number: J70976 |
| Model: 533AN-MMW(MMC) | T-Log Number: T71133 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC | Class: N/A |

Spurious Emissions @ 2462MHz

Spurious Emissions @ 2462MHz


| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11g Chain B

Date of Test: 3/27/2008

Test Engineer: Joseph Cadigal

Test Location: FT Chamber # 3

Run #2a: Low Channel @ 2412 MHz

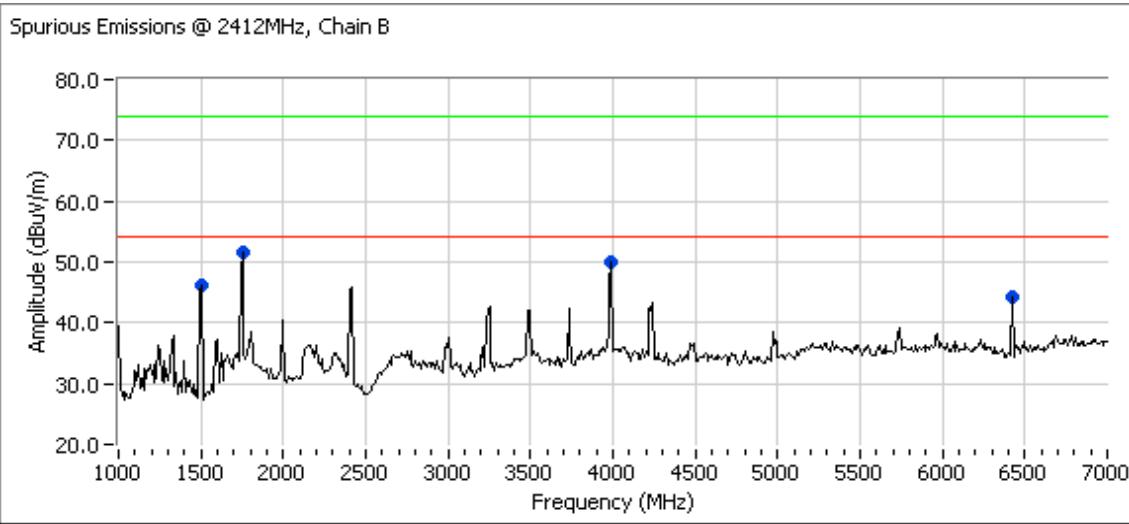
GP = 27.5 AP = 16.4

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1497.760 | 28.3 | H | 54.0 | -25.7 | AVG | 179 | 1.0 |
| 1743.030 | 29.1 | V | 54.0 | -24.9 | AVG | 179 | 1.3 |
| 3996.450 | 25.0 | V | 54.0 | -29.0 | AVG | 143 | 1.3 |
| 6431.900 | 33.8 | V | 54.0 | -20.2 | AVG | 230 | 1.6 |
| 7221.790 | 28.2 | V | 54.0 | -25.8 | AVG | 188 | 1.9 |
| 9605.050 | 25.2 | V | 54.0 | -28.8 | AVG | 192 | 2.2 |
| 1497.760 | 43.5 | H | 74.0 | -30.5 | PK | 179 | 1.0 |
| 1743.030 | 48.0 | V | 74.0 | -26.0 | PK | 179 | 1.3 |
| 3996.450 | 44.7 | V | 74.0 | -29.3 | PK | 143 | 1.3 |
| 6431.900 | 39.0 | V | 74.0 | -35.0 | PK | 230 | 1.6 |
| 7221.790 | 45.6 | V | 74.0 | -28.4 | PK | 188 | 1.9 |
| 9605.050 | 36.3 | V | 74.0 | -37.7 | PK | 192 | 2.2 |

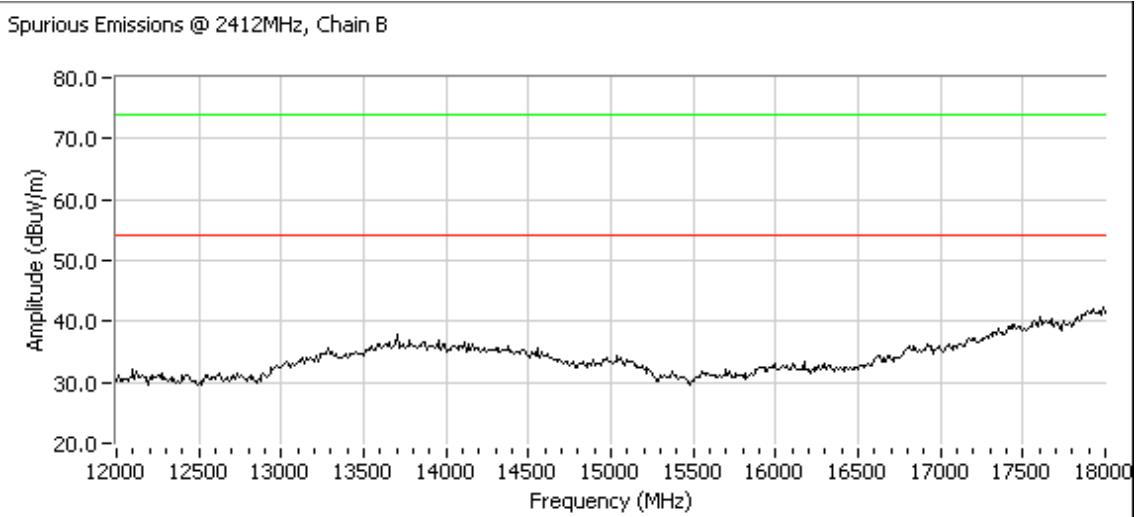
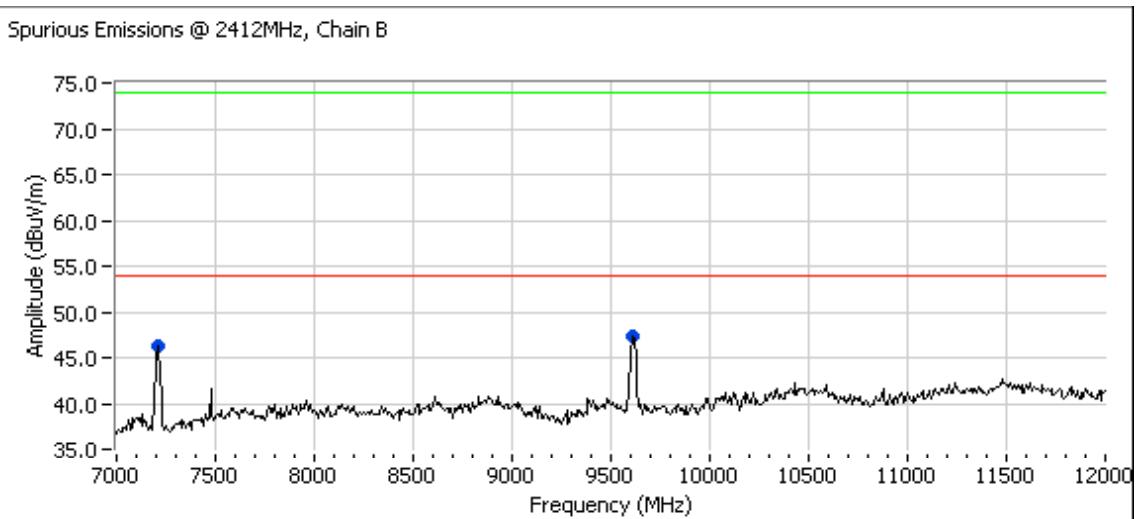
Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.



| | |
|---------------------------|-------------------------------|
| Client: Intel Corporation | Job Number: J70976 |
| Model: 533AN-MMW(MMC) | T-Log Number: T71133 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC | Class: N/A |

Run #2a: Low Channel @ 2412 MHz



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2b: Center Channel @ 2437 MHz

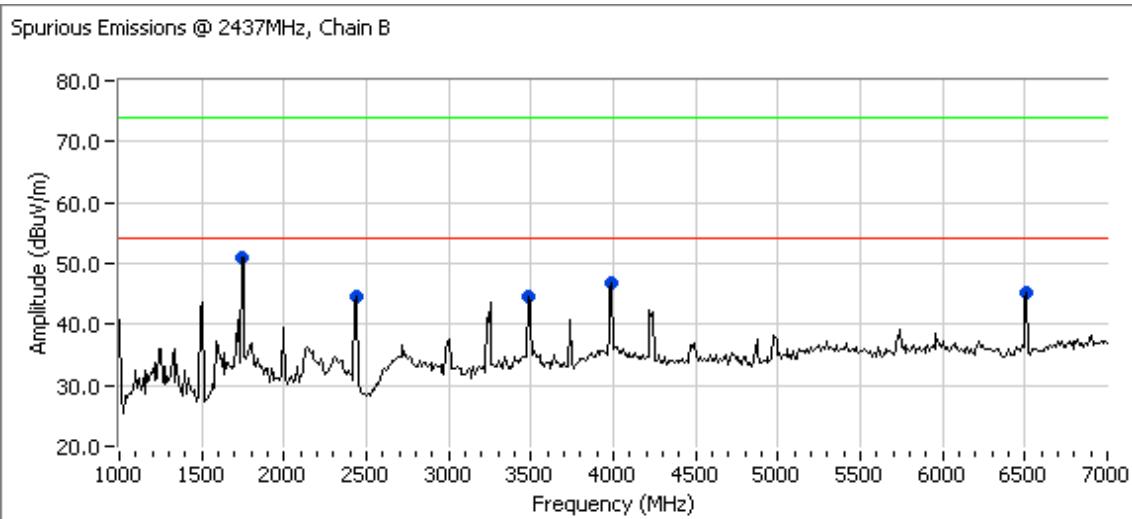
GP = 27.5 AP = 16.2

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-----------------|--------------|------------|------------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1747.760 | 38.6 | V | 54.0 | -15.4 | AVG | 104 | 1.0 |
| 3486.300 | 34.4 | V | 54.0 | -19.6 | AVG | 156 | 1.0 |
| 3996.970 | 34.6 | H | 54.0 | -19.4 | AVG | 141 | 2.2 |
| 6498.550 | 40.7 | V | 54.0 | -13.3 | AVG | 216 | 1.6 |
| 7283.250 | 33.5 | V | 54.0 | -20.5 | AVG | 180 | 1.9 |
| 9716.030 | 35.1 | V | 54.0 | -18.9 | AVG | 205 | 1.6 |
| 1747.760 | 59.2 | V | 74.0 | -14.8 | PK | 104 | 1.0 |
| 3486.300 | 53.3 | V | 74.0 | -20.7 | PK | 156 | 1.0 |
| 3996.970 | 55.5 | H | 74.0 | -18.5 | PK | 141 | 2.2 |
| 6498.550 | 46.3 | V | 74.0 | -27.7 | PK | 216 | 1.6 |
| 7283.250 | 46.3 | V | 74.0 | -27.7 | PK | 180 | 1.9 |
| 9716.030 | 46.7 | V | 74.0 | -27.3 | PK | 205 | 1.6 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

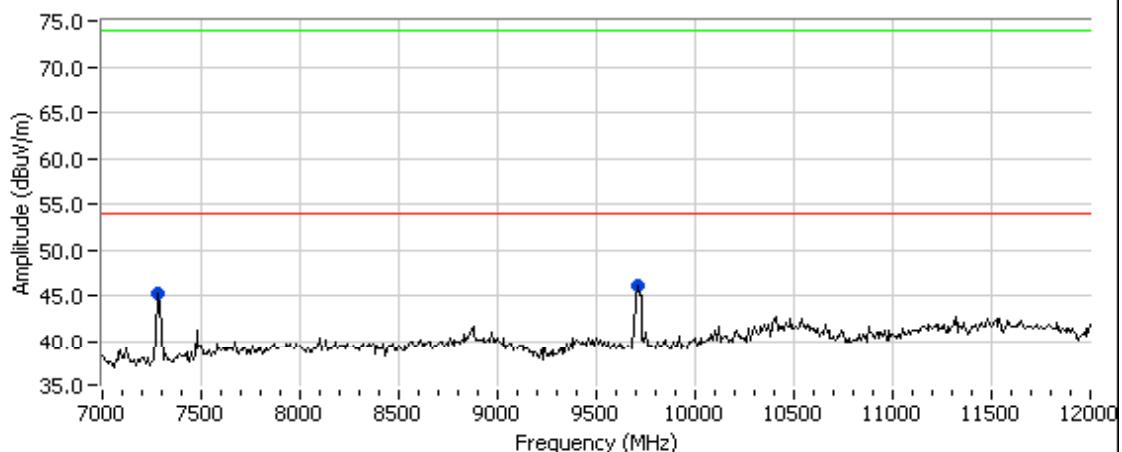
Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.



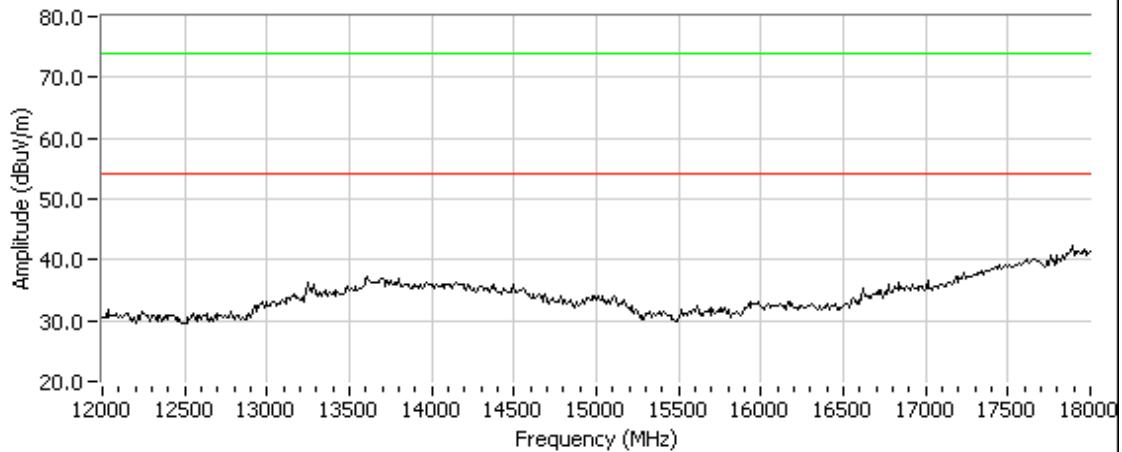
| | |
|---------------------------|-------------------------------|
| Client: Intel Corporation | Job Number: J70976 |
| Model: 533AN-MMW(MMC) | T-Log Number: T71133 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC | Class: N/A |

Run #2b: Center Channel @ 2437 MHz

Spurious Emissions @ 2437MHz, Chain B



Spurious Emissions @ 2437MHz, Chain B



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2c: High Channel @ 2462 MHz

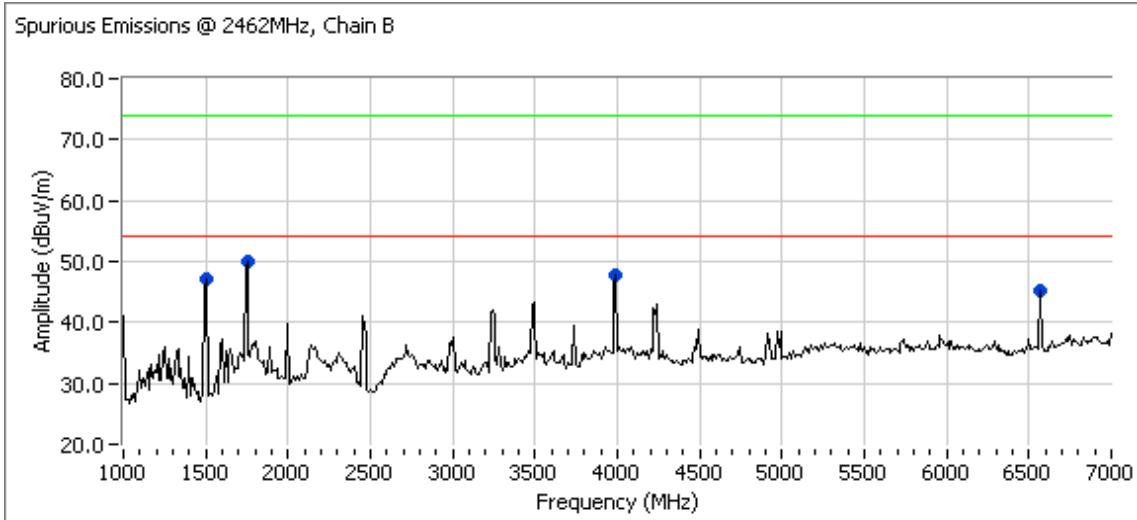
GP = 28 AP = 16.4

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-----------------|-------------|------------|------------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1498.140 | 38.6 | H | 54.0 | -15.4 | AVG | 173 | 1.0 |
| 1747.440 | 39.1 | V | 54.0 | -14.9 | AVG | 178 | 1.3 |
| 3997.340 | 34.3 | H | 54.0 | -19.7 | AVG | 135 | 2.2 |
| 6565.410 | 46.3 | V | 54.0 | -7.7 | AVG | 218 | 1.6 |
| 7369.710 | 36.2 | V | 54.0 | -17.8 | AVG | 200 | 1.6 |
| 9830.090 | 38.0 | V | 54.0 | -16.0 | AVG | 199 | 1.9 |
| 1498.140 | 54.1 | H | 74.0 | -19.9 | PK | 173 | 1.0 |
| 1747.440 | 57.9 | V | 74.0 | -16.1 | PK | 178 | 1.3 |
| 3997.340 | 54.3 | H | 74.0 | -19.7 | PK | 135 | 2.2 |
| 6565.410 | 49.9 | V | 74.0 | -24.1 | PK | 218 | 1.6 |
| 7369.710 | 54.5 | V | 74.0 | -19.5 | PK | 200 | 1.6 |
| 9830.090 | 52.4 | V | 74.0 | -21.6 | PK | 199 | 1.9 |

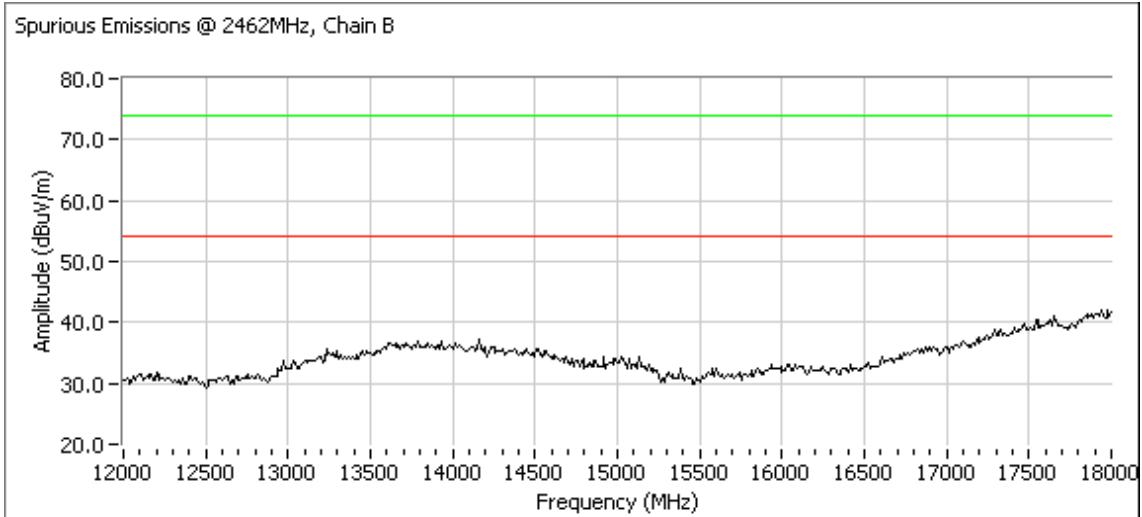
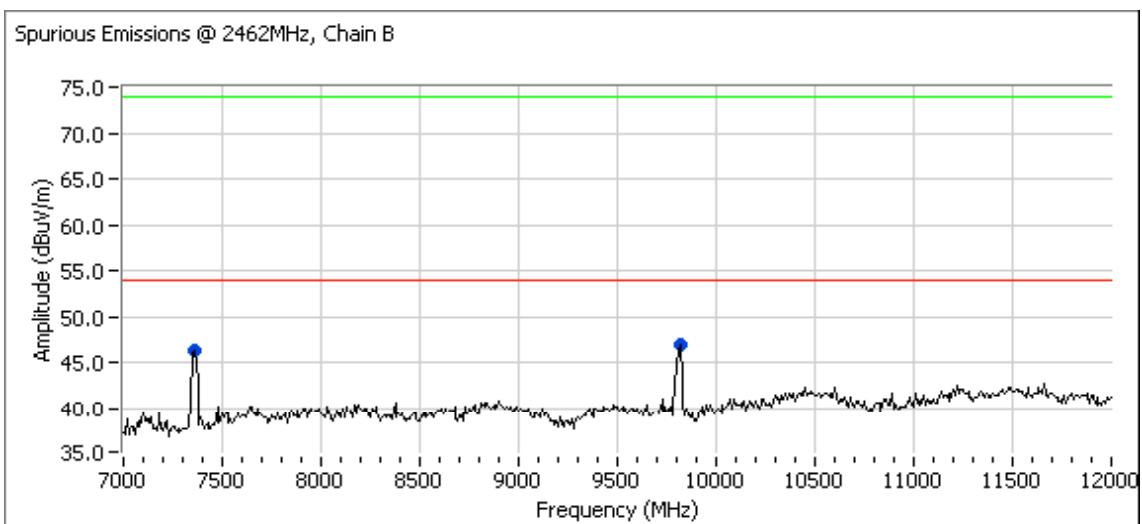
Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2c: High Channel @ 2462 MHz





EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11g Chain C

Run #3a: Low Channel @ 2412 MHz

GP = 27 AP = 16.4

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|--------|-----------|---------|--------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1747.840 | 20.6 | V | 54.0 | -33.4 | AVG | 182 | 1.3 | |
| 2409.970 | 35.9 | H | 54.0 | -18.1 | AVG | 112 | 1.0 | |
| 3982.860 | 23.8 | V | 54.0 | -30.2 | AVG | 92 | 1.3 | |
| 7500.080 | 31.4 | V | 54.0 | -22.6 | AVG | 141 | 1.0 | |
| 8328.680 | 27.5 | V | 54.0 | -26.5 | AVG | 157 | 1.3 | |
| 1747.840 | 42.4 | V | 74.0 | -31.6 | PK | 182 | 1.3 | |
| 2409.970 | 44.4 | H | 74.0 | -29.6 | PK | 112 | 1.0 | |
| 3982.860 | 43.7 | V | 74.0 | -30.3 | PK | 92 | 1.3 | |
| 7500.080 | 40.8 | V | 74.0 | -33.2 | PK | 141 | 1.0 | |
| 8328.680 | 39.1 | V | 74.0 | -34.9 | PK | 157 | 1.3 | |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

Run #3b: Center Channel @ 2437 MHz

GP = 27.5 AP = 16.3

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|--------|-----------|---------|--------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1747.100 | 33.7 | V | 54.0 | -20.3 | AVG | 176 | 1.3 | Note 2 |
| 3983.130 | 33.8 | H | 54.0 | -20.2 | AVG | 140 | 1.9 | |
| 3986.460 | 34.1 | H | 54.0 | -19.9 | AVG | 140 | 1.9 | |
| 6498.600 | 42.7 | V | 54.0 | -11.3 | AVG | 237 | 1.0 | Note 2 |
| 7501.550 | 38.5 | V | 54.0 | -15.5 | AVG | 98 | 1.0 | |
| 1747.100 | 55.9 | V | 74.0 | -18.1 | PK | 176 | 1.3 | Note 2 |
| 2430.410 | 55.6 | H | 74.0 | -18.4 | PK | 108 | 1.0 | |
| 3983.130 | 56.6 | H | 74.0 | -17.4 | PK | 140 | 1.9 | |
| 3986.460 | 56.1 | H | 74.0 | -17.9 | PK | 140 | 1.9 | |
| 6498.600 | 48.1 | V | 74.0 | -25.9 | PK | 237 | 1.0 | Note 2 |
| 7501.550 | 50.0 | V | 74.0 | -24.0 | PK | 98 | 1.0 | |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3c: High Channel @ 2462 MHz

Date of Test: 3/27/2008

Test Engineer: Joseph Cadigal

Test Location: FT Chamber # 3

GP = 27 AP = 16.4

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1497.700 | 27.5 | H | 54.0 | -26.5 | AVG | 184 | 1.0 |
| 1747.920 | 28.9 | V | 54.0 | -25.1 | AVG | 102 | 1.0 |
| 2454.860 | 32.6 | H | 54.0 | -21.4 | AVG | 119 | 1.0 |
| 3983.070 | 24.7 | H | 54.0 | -29.3 | AVG | 116 | 1.3 |
| 9818.120 | 25.4 | V | 54.0 | -28.6 | AVG | 194 | 1.6 |
| 1497.700 | 43.0 | H | 74.0 | -31.0 | PK | 184 | 1.0 |
| 1747.920 | 49.3 | V | 74.0 | -24.7 | PK | 102 | 1.0 |
| 2454.860 | 40.8 | H | 74.0 | -33.2 | PK | 119 | 1.0 |
| 3983.070 | 44.9 | H | 74.0 | -29.1 | PK | 116 | 1.3 |
| 9818.120 | 37.0 | V | 74.0 | -37.0 | PK | 194 | 1.6 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS, 2400 - 2483.5 MHz) Band Edge Field Strength 802.11n20 Ethertronics Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 19.4 °C
Rel. Humidity: 43 %

Summary of Results

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|------------------------|---------------|---------------|----------------|-----------------------------------|-----------------------------|---------------------------------------|
| 1a | 802.11n20 Chain A | 1 2412MHz | 23.5 | 13.2 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 71.9dB μ V/m @ 2388.6MHz (-2.1dB) |
| 1b | 802.11n20 Chain A | 11 2462MHz | 25.5 | 13.9 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 72.9dB μ V/m @ 2485.1MHz (-1.1dB) |
| 2a | 802.11n20 Chain B | 1 2412MHz | 23.5 | 12.3 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 72.2dB μ V/m @ 2389.9MHz (-1.8dB) |
| 2b | 802.11n20 Chain B | 11 2462MHz | 25.5 | 14.0 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 71.8dB μ V/m @ 2483.8MHz (-2.2dB) |
| 3a | 802.11n20 Chain C | 1 2412MHz | 22.5 | 12.8 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 72.4dB μ V/m @ 2389.8MHz (-1.6dB) |
| 3b | 802.11n20 Chain C | 11 2462MHz | 24.5 | 14.1 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 71.9dB μ V/m @ 2485.0MHz (-2.1dB) |
| 4a | 802.11n20 Chain A+B | 1 2412MHz | 26, 26 | 13.9, 14 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 53.0dB μ V/m @ 2389.9MHz (-1.0dB) |
| 4b | 802.11n20 Chain A+B | 11 2462MHz | 26, 26 | 13.3, 13.5 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 70.9dB μ V/m @ 2484.1MHz (-3.1dB) |
| 5a | 802.11n20 Chain A+C | 1 2412MHz | 24, 24.5 | 11.1, 13 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 53.0dB μ V/m @ 2389.9MHz (-1.0dB) |
| 5b | 802.11n20 Chain A+C | 11 2462MHz | 26.5, 25.5 | 13.6, 13.4 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 52.0dB μ V/m @ 2483.5MHz (-2.0dB) |



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|------------------------|---------------|-------------------|---------------------|-----------------------------------|------------------------------|---------------------------------------|
| 6a | 802.11n20 Chain B+C | 1 2412MHz | 25, 24 | 12.2, 12.4 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 52.7dB μ V/m @ 2390.0MHz (-1.3dB) |
| 6b | 802.11n20 Chain B+C | 11 2462MHz | 26.5, 25.5 | 13.8, 13.6 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 69.9dB μ V/m @ 2484.6MHz (-4.1dB) |
| 7a | 802.11n20 A+B+C | 1 2412MHz | 25, 25.5, 24.5 | 12, 12, 12.2 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 50.4dB μ V/m @ 2390.0MHz (-3.6dB) |
| 7b | 802.11n20 A+B+C | 11 2462MHz | 26, 26, 25 | 12.2, 12.4, 12.1 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 46.6dB μ V/m @ 2483.5MHz (-7.4dB) |

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (20 MHz Channel) - Chain A

Date of Test: 3/21/2008

Test Engineer: Rafael Varelas

Test Location: FT Chamber #3

Run #1a: Low Channel @ 2412 MHz

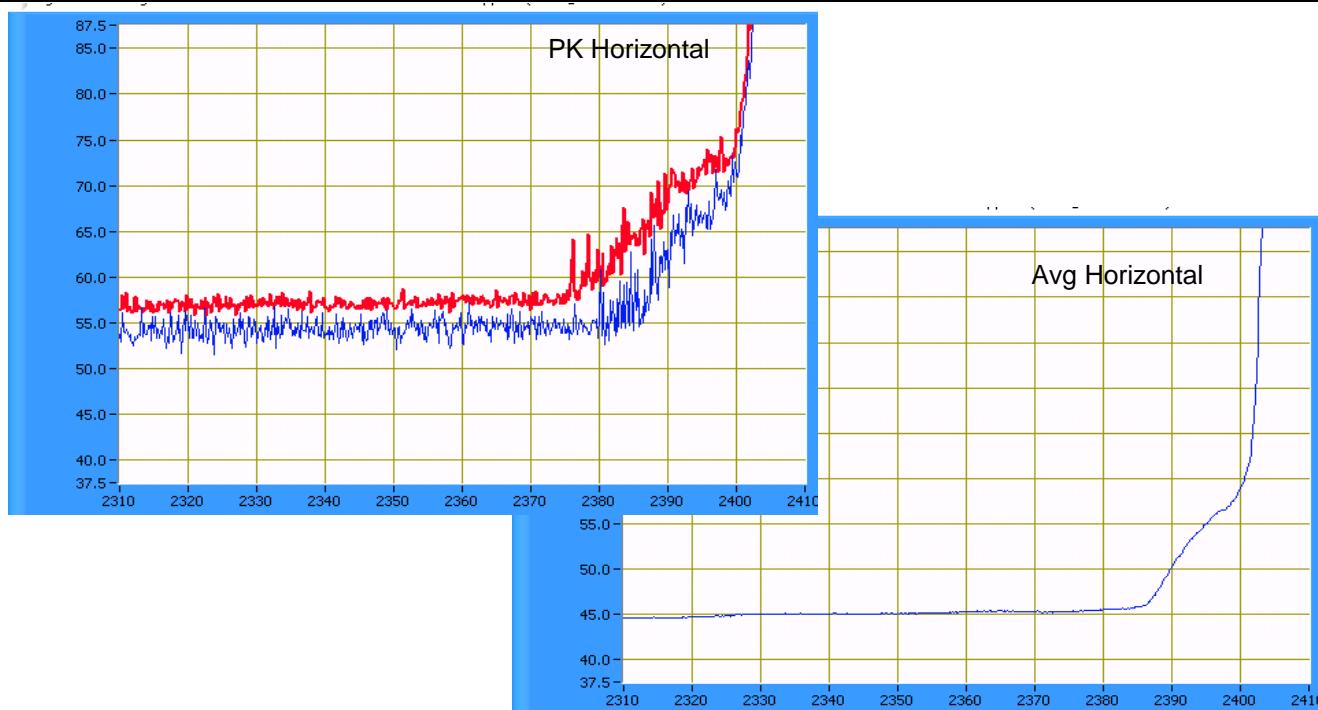
Power Setting: 23.5 Average power: 13.2 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2415.630 | 99.6 | H | - | - | AVG | 244 | 1.0 |
| 2415.630 | 108.7 | H | - | - | PK | 244 | 1.0 |
| 2413.360 | 94.7 | V | - | - | AVG | 265 | 1.0 |
| 2413.360 | 102.9 | V | - | - | PK | 265 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|--|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| Setting for Passing Data : 23.5 | | | | | | | |
| 2388.570 | 71.9 | H | 74.0 | -2.1 | PK | 244 | 1.0 |
| 2389.940 | 50.9 | H | 54.0 | -3.1 | Avg | 244 | 1.0 |
| 2389.920 | 47.9 | V | 54.0 | -6.1 | Avg | 265 | 1.0 |
| 2387.170 | 66.4 | V | 74.0 | -7.6 | PK | 265 | 1.0 |



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (20 MHz Channel) - Chain A

Run #1b: High Channel @ 2462 MHz

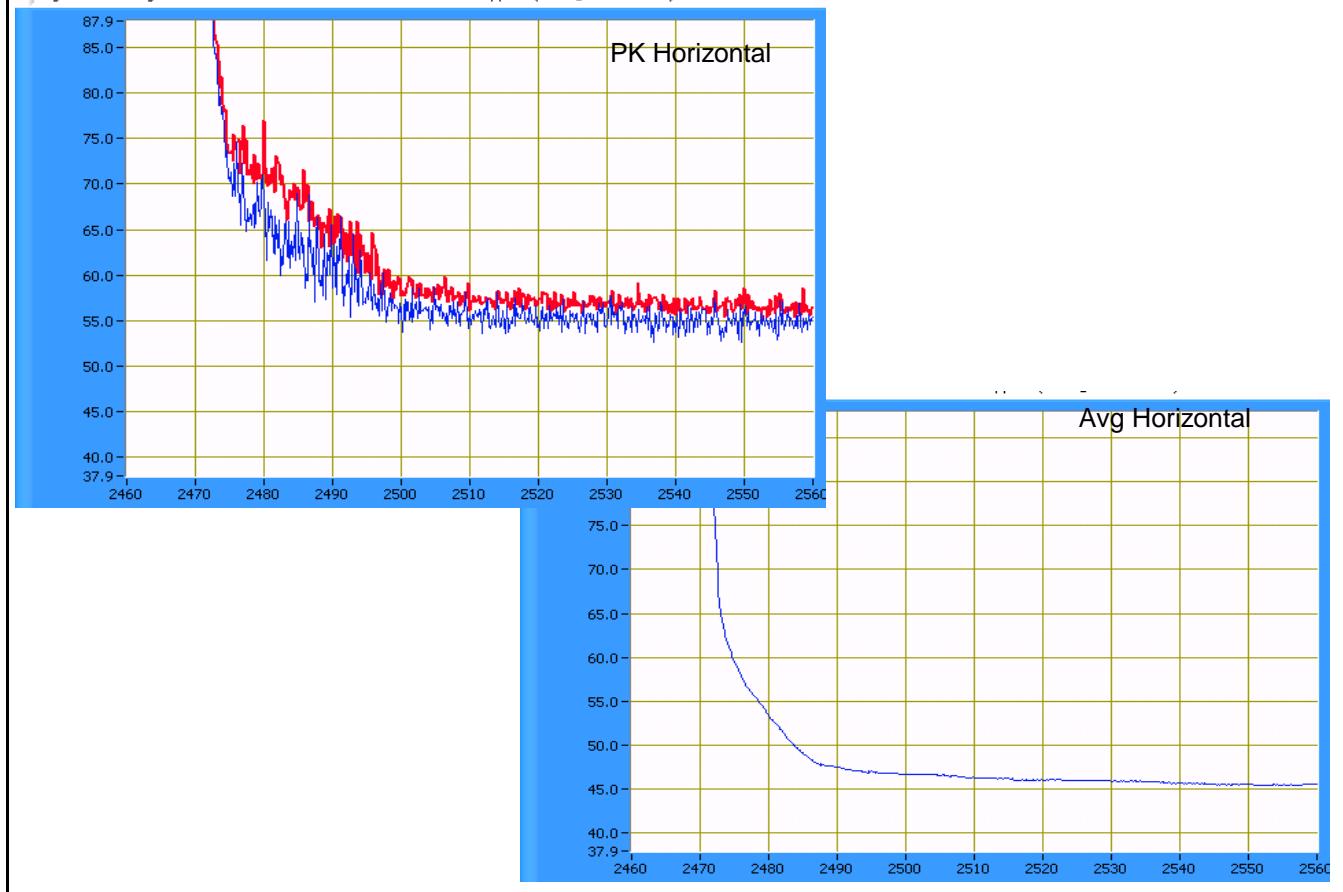
Power Setting: 25.5 Average power: 13.9 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2454.230 | 100.7 | H | - | - | AVG | 249 | 1.0 |
| 2454.230 | 108.7 | H | - | - | PK | 249 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2485.090 | 72.9 | H | 74.0 | -1.1 | PK | 249 | 1.0 |
| 2483.500 | 50.0 | H | 54.0 | -4.0 | Avg | 249 | 1.0 |
| 2483.520 | 67.7 | V | 74.0 | -6.3 | PK | 269 | 1.0 |
| 2483.540 | 47.4 | V | 54.0 | -6.6 | Avg | 269 | 1.0 |



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (20 MHz Channel) - Chain B

Date of Test: 3/21/2008

Test Engineer: Rafael Varelas

Test Location: FT Chamber #3

Run #2a: Low Channel @ 2412 MHz

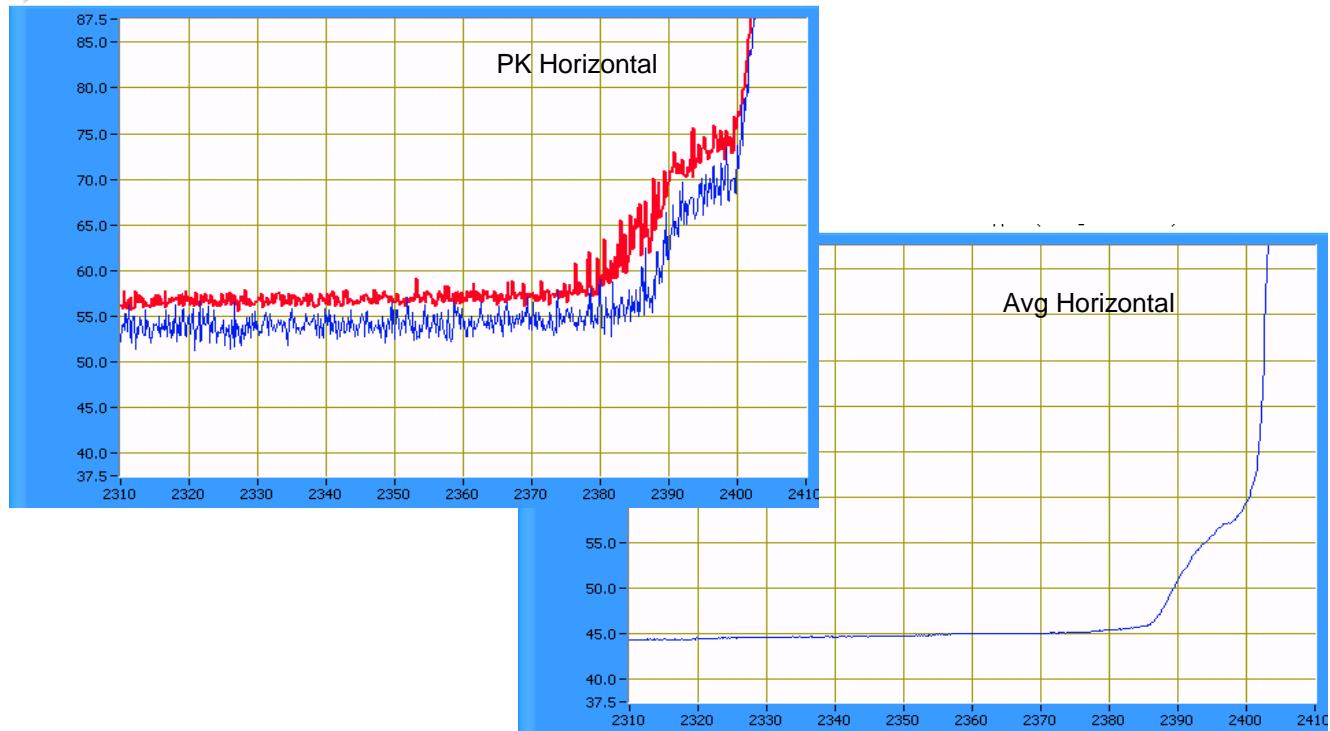
Power Setting: 23.5 Average power: 12.3 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2417.230 | 100.2 | H | - | - | AVG | 154 | 1.2 |
| 2417.230 | 109.9 | H | - | - | PK | 154 | 1.2 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|--|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| Setting for Passing Data : 23.5 | | | | | | | |
| 2389.900 | 72.2 | H | 74.0 | -1.8 | PK | 154 | 1.2 |
| 2389.980 | 51.3 | H | 54.0 | -2.7 | Avg | 154 | 1.2 |
| 2389.940 | 47.9 | V | 54.0 | -6.1 | Avg | 25 | 1.0 |
| 2389.420 | 67.7 | V | 74.0 | -6.3 | PK | 25 | 1.0 |



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2b: High Channel @ 2462 MHz

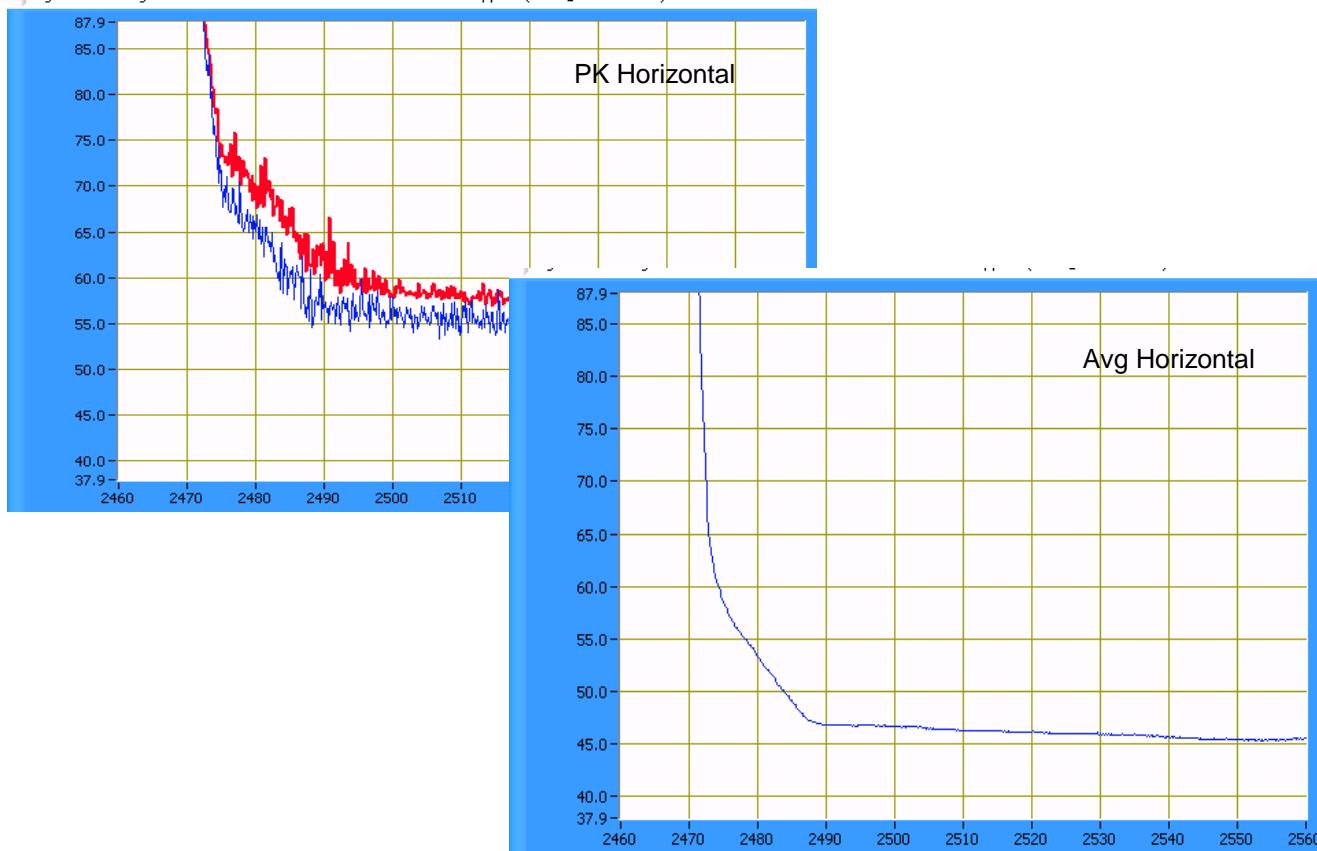
Power Setting: 25.5 Average power: 14.0 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2454.930 | 100.0 | H | - | - | AVG | 113 | 1.7 |
| 2454.930 | 108.5 | H | - | - | PK | 113 | 1.7 |
| 2454.430 | 94.3 | V | - | - | AVG | 48 | 1.0 |
| 2454.430 | 102.2 | V | - | - | PK | 48 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2483.830 | 71.8 | H | 74.0 | -2.2 | PK | 113 | 1.7 |
| 2483.500 | 50.4 | H | 54.0 | -3.6 | Avg | 113 | 1.7 |
| 2485.320 | 65.0 | V | 74.0 | -9.0 | PK | 48 | 1.0 |
| 2483.500 | 47.8 | V | 54.0 | -6.2 | Avg | 48 | 1.0 |



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (20 MHz Channel) - Chain C

Date of Test: 3/21/2008

Test Engineer: Rafael Varelas

Test Location: FT Chamber #3

Run #3a: Low Channel @ 2412 MHz

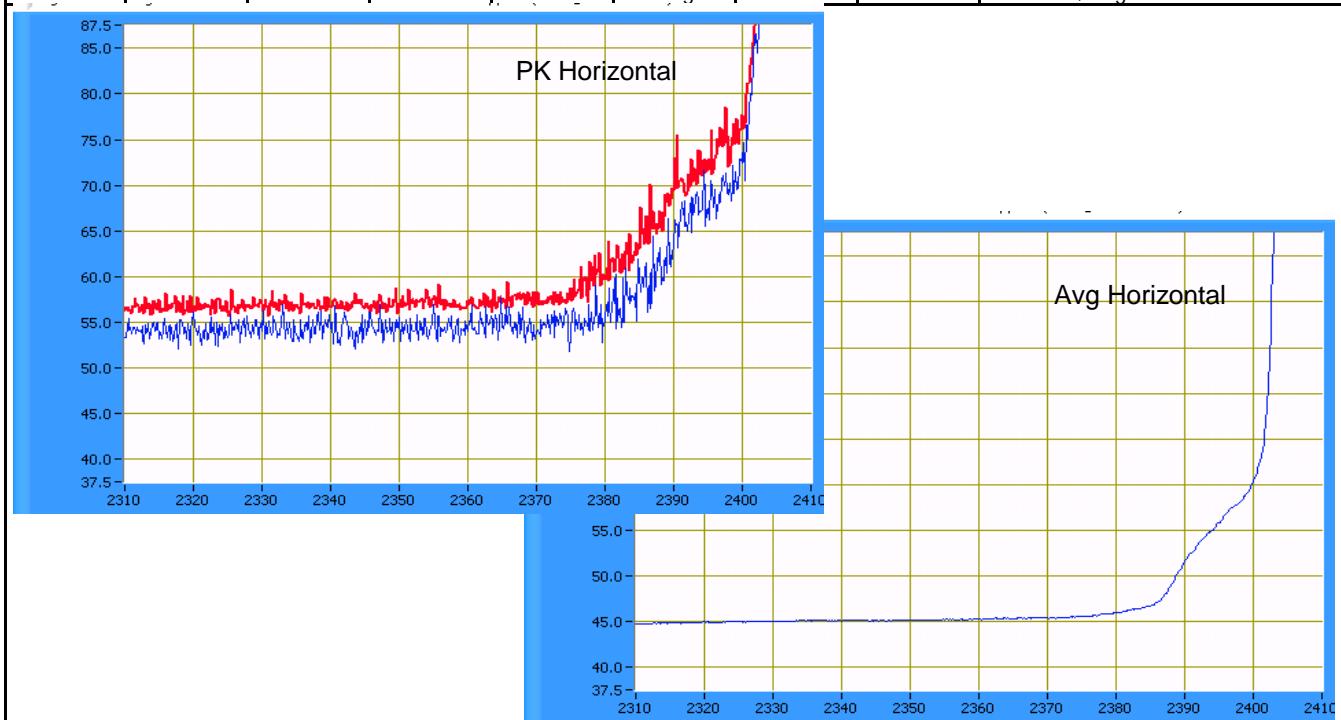
Power Setting: 22.5 Average power: 12.8 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2419.300 | 101.0 | H | - | - | AVG | 132 | 1.7 |
| 2419.300 | 109.1 | H | - | - | PK | 132 | 1.7 |
| 2419.470 | 95.6 | V | - | - | AVG | 61 | 1.0 |
| 2419.470 | 103.8 | V | - | - | PK | 61 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|--|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| Setting for Passing Data : 22.5 | | | | | | | |
| 2389.800 | 72.4 | H | 74.0 | -1.6 | PK | 132 | 1.7 |
| 2389.990 | 52.0 | H | 54.0 | -2.0 | Avg | 132 | 1.7 |
| 2388.100 | 70.1 | V | 74.0 | -3.9 | PK | 61 | 1.0 |
| 2389.940 | 48.7 | V | 54.0 | -5.3 | Avg | 61 | 1.0 |



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3b: High Channel @ 2462 MHz

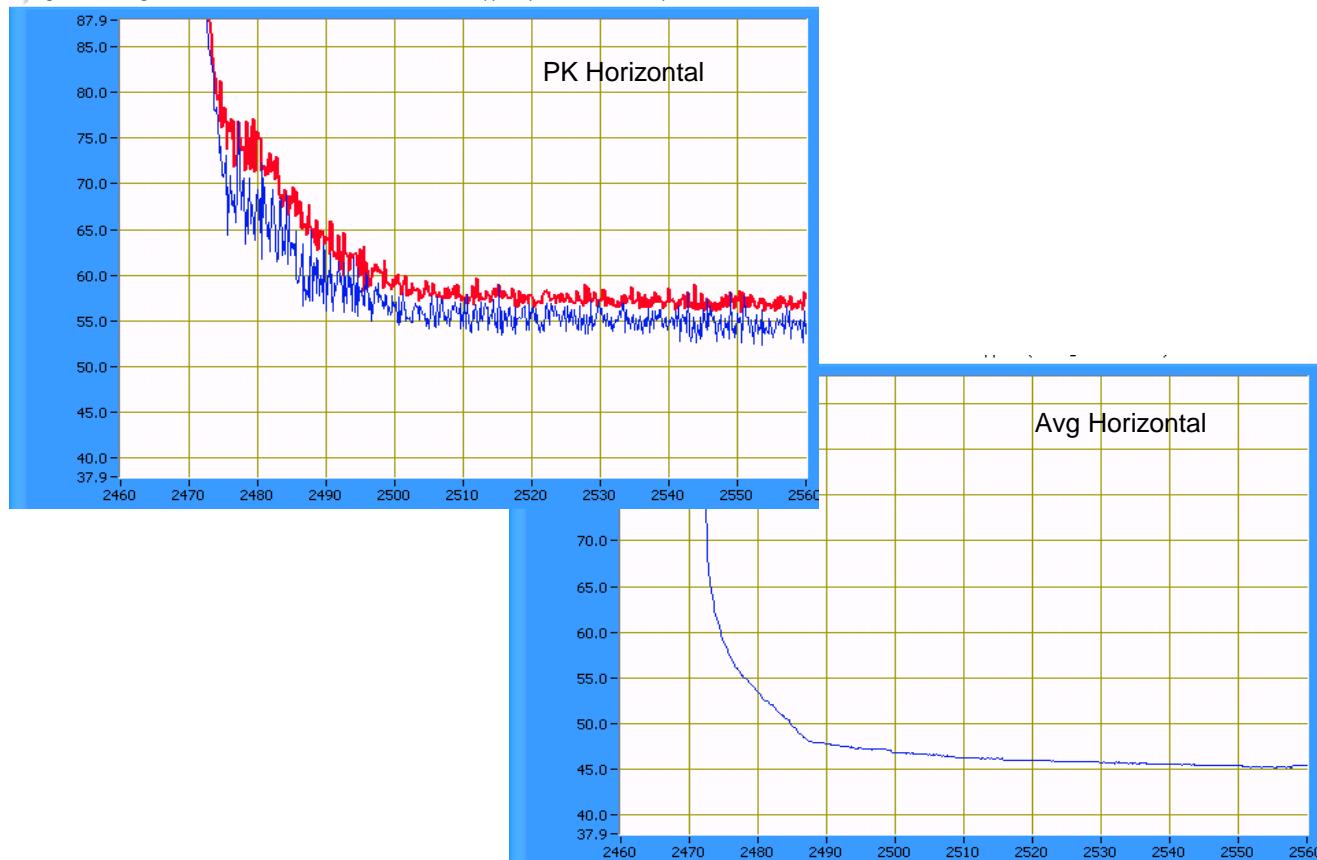
Power Setting: 24.5 Average power: 14.1 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2469.530 | 100.9 | H | - | - | AVG | 103 | 1.1 |
| 2469.530 | 109.3 | H | - | - | PK | 103 | 1.1 |
| 2455.130 | 96.1 | V | - | - | AVG | 62 | 1.0 |
| 2455.130 | 104.6 | V | - | - | PK | 62 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2484.960 | 71.9 | H | 74.0 | -2.1 | PK | 103 | 1.1 |
| 2483.500 | 50.8 | H | 54.0 | -3.2 | Avg | 103 | 1.1 |
| 2485.280 | 68.4 | V | 74.0 | -5.6 | PK | 62 | 1.0 |
| 2483.500 | 48.6 | V | 54.0 | -5.4 | Avg | 62 | 1.0 |



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run # 4: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (20 MHz Channel) - Chain A+B

Date of Test: 3/30/2008

Test Engineer: Suhaila Khushzad

Test Location: Chamber # 4

Run #4a: Low Channel @ 2412 MHz

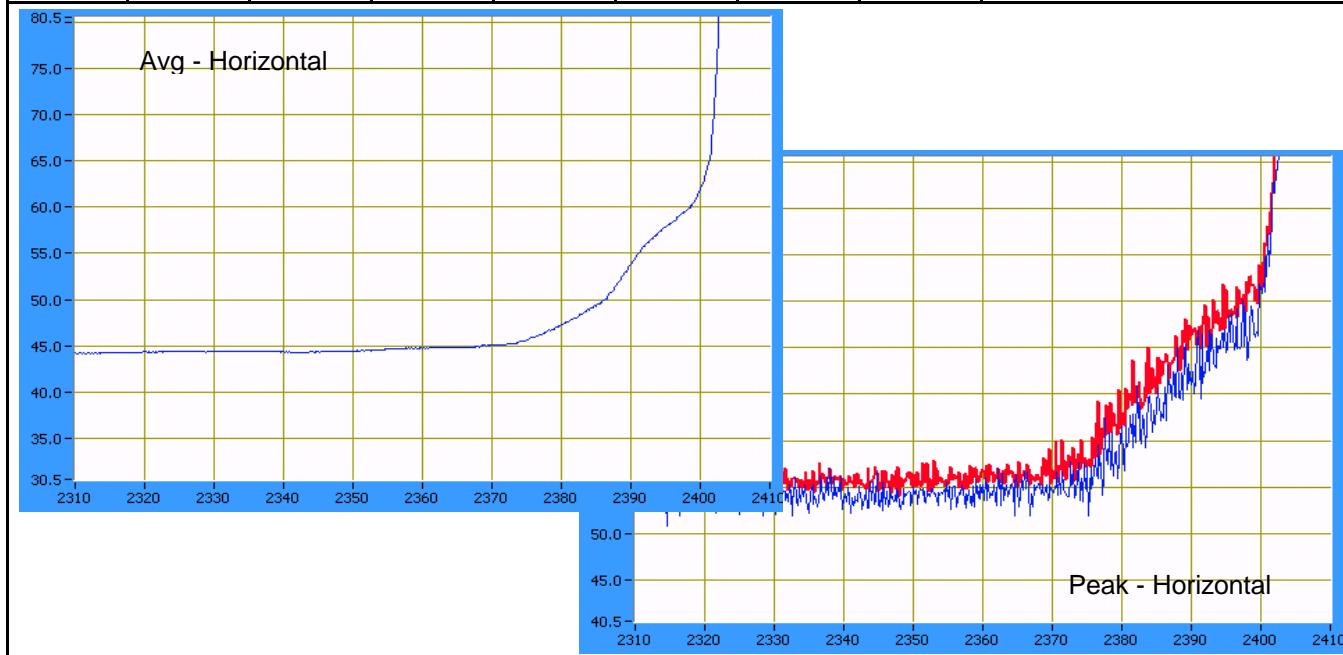
| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|-----|---------|-----|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 26.0 | 13.9 | 26.0 | 14 | | |

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2415.330 | 99.5 | H | - | - | AVG | 240 | 1.0 |
| 2415.330 | 109.6 | H | - | - | PK | 240 | 1.0 |
| 2419.330 | 97.0 | V | - | - | AVG | 215 | 1.0 |
| 2419.330 | 107.0 | V | - | - | PK | 215 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.930 | 53.0 | H | 54.0 | -1.0 | AVG | 240 | 1.0 |
| 2389.890 | 71.5 | H | 74.0 | -2.5 | PK | 240 | 1.0 |
| 2389.910 | 50.4 | V | 54.0 | -3.6 | AVG | 215 | 1.0 |
| 2388.100 | 69.8 | V | 74.0 | -4.2 | PK | 215 | 1.0 |



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run # 4: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (20 MHz Channel) - Chain A+B

Run #4b: High Channel @ 2462 MHz

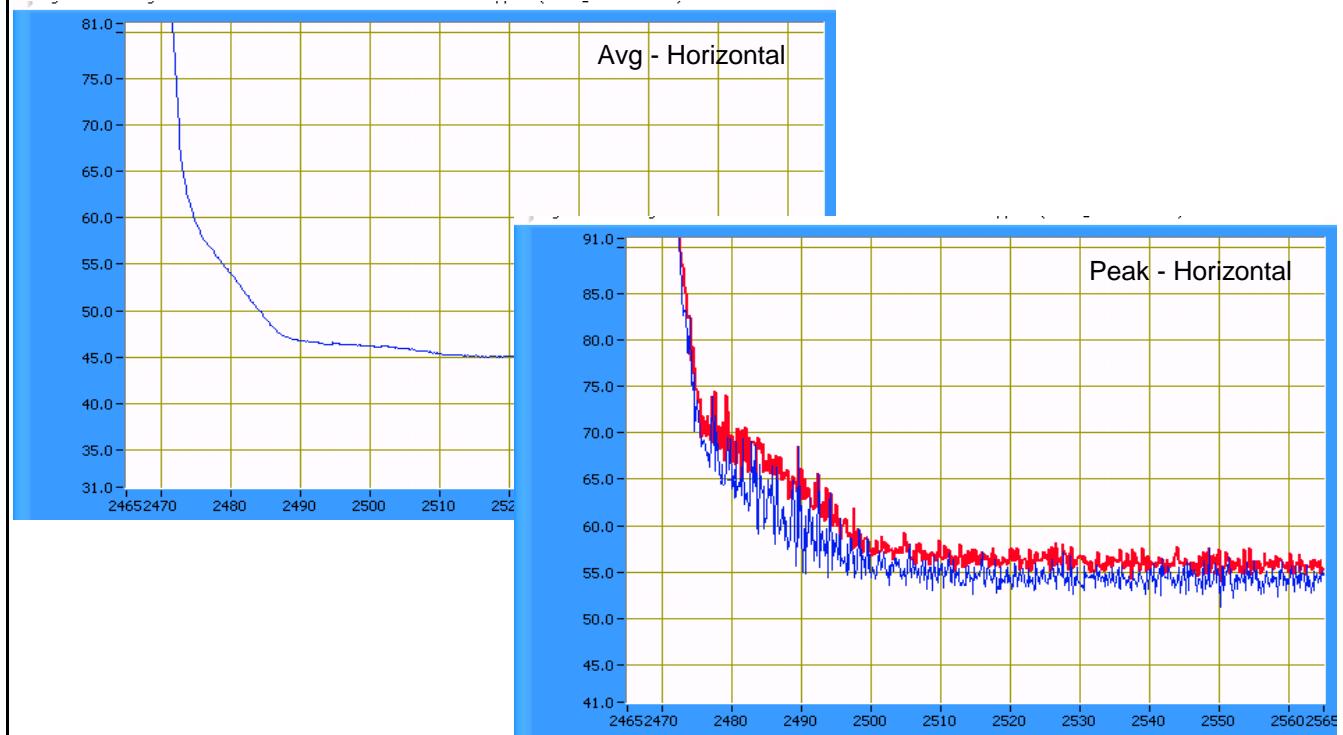
| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|-----|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 26.0 | 13.3 | 26.0 | 13.5 | | |

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2467.500 | 101.0 | H | - | - | AVG | 249 | 1.0 |
| 2467.500 | 111.3 | H | - | - | PK | 249 | 1.0 |
| 2470.750 | 95.2 | V | - | - | AVG | 65 | 1.0 |
| 2470.750 | 105.3 | V | - | - | PK | 65 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2484.050 | 70.9 | H | 74.0 | -3.1 | PK | 249 | 1.0 |
| 2483.500 | 50.6 | H | 54.0 | -3.4 | AVG | 249 | 1.0 |
| 2483.510 | 47.5 | V | 54.0 | -6.5 | AVG | 65 | 1.0 |
| 2484.940 | 68.5 | V | 74.0 | -5.5 | PK | 65 | 1.0 |



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #5: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (20 MHz Channel) - Chain A+C

Date of Test: 3/30/2008

Test Engineer: Suhaila Khushzad

Test Location: Chamber # 4

Run #5a: Low Channel @ 2412 MHz

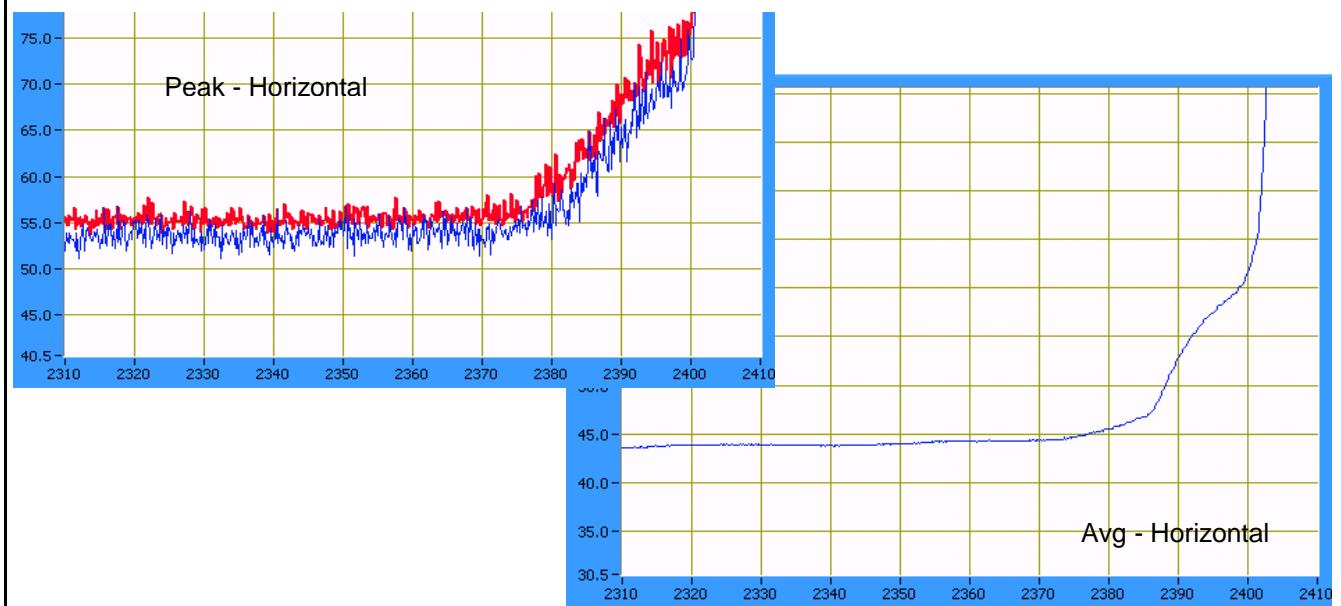
| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|-----|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 24.0 | 11.1 | | | 24.5 | 13.0 |

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2413.300 | 101.4 | H | - | - | AVG | 249 | 1.0 |
| 2413.300 | 111.4 | H | - | - | PK | 249 | 1.0 |
| 2415.750 | 94.0 | V | - | - | AVG | 237 | 1.0 |
| 2415.750 | 104.8 | V | - | - | PK | 237 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.940 | 53.0 | H | 54.0 | -1.0 | AVG | 249 | 1.0 |
| 2389.520 | 71.4 | H | 74.0 | -2.6 | PK | 249 | 1.0 |
| 2389.920 | 46.7 | V | 54.0 | -7.3 | AVG | 237 | 1.0 |
| 2389.330 | 60.9 | V | 74.0 | -13.1 | PK | 237 | 1.0 |



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #5b: High Channel @ 2462 MHz

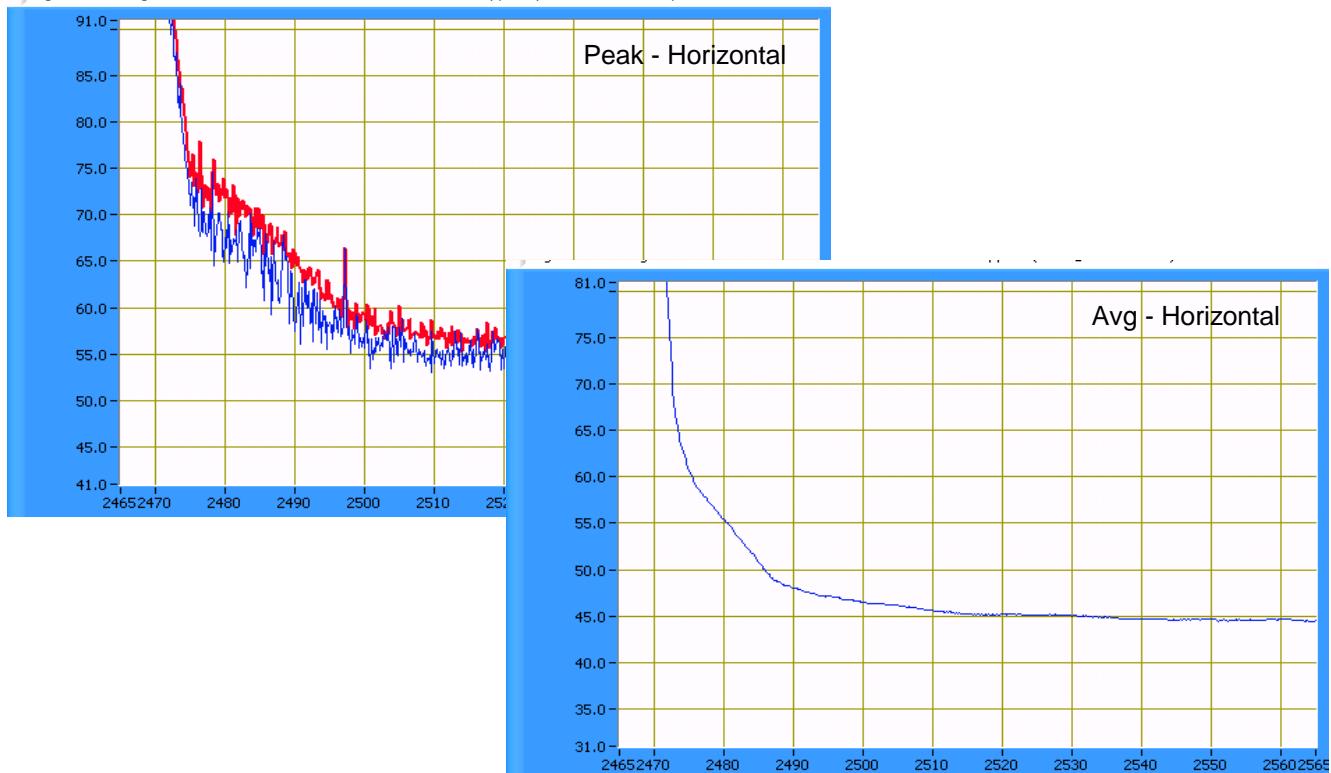
| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|-----|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 26.5 | 13.6 | | | 25.5 | 13.4 |

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2470.670 | 102.8 | H | - | - | AVG | 247 | 1.0 |
| 2470.670 | 112.2 | H | - | - | PK | 247 | 1.0 |
| 2466.080 | 95.4 | V | - | - | AVG | 222 | 1.0 |
| 2466.080 | 105.5 | V | - | - | PK | 222 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2483.530 | 52.0 | H | 54.0 | -2.0 | AVG | 247 | 1.0 |
| 2485.460 | 71.8 | H | 74.0 | -2.2 | PK | 247 | 1.0 |
| 2483.500 | 48.3 | V | 54.0 | -5.7 | AVG | 222 | 1.0 |
| 2483.950 | 68.8 | V | 74.0 | -5.2 | PK | 222 | 1.0 |



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #6: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (20 MHz Channel) - Chain B+C

Date of Test: 3/30/2008

Test Engineer: Suhaila Khushzad

Test Location: Chamber # 4

Run #6a: Low Channel @ 2412 MHz

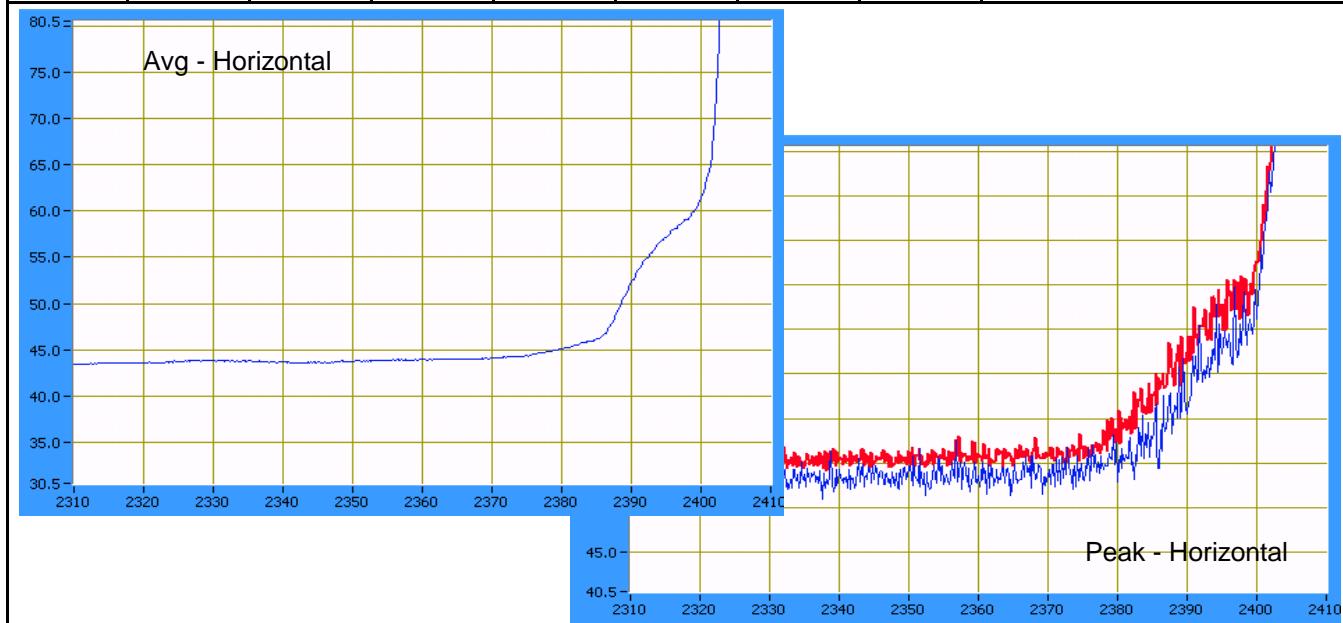
| Power Setting and average measurement (for reference) | | | | | |
|---|-----|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| | | 25.0 | 12.2 | 24.0 | 12.4 |

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2411.430 | 100.4 | H | - | - | AVG | 107 | 1.0 |
| 2411.430 | 111.1 | H | - | - | PK | 107 | 1.0 |
| 2415.500 | 95.9 | V | - | - | AVG | 61 | 1.1 |
| 2415.500 | 106.2 | V | - | - | PK | 61 | 1.1 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.990 | 52.7 | H | 54.0 | -1.3 | AVG | 107 | 1.0 |
| 2389.910 | 68.8 | H | 74.0 | -5.2 | PK | 107 | 1.0 |
| 2389.980 | 48.2 | V | 54.0 | -5.8 | AVG | 61 | 1.1 |
| 2389.890 | 64.5 | V | 74.0 | -9.5 | PK | 61 | 1.1 |



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #6: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (20 MHz Channel) - Chain B+C

Date of Test: 4/9/2008

Test Engineer: Suhaila Khushzad

Test Location: FT Chamber #3

Run #6b: High Channel @ 2462 MHz

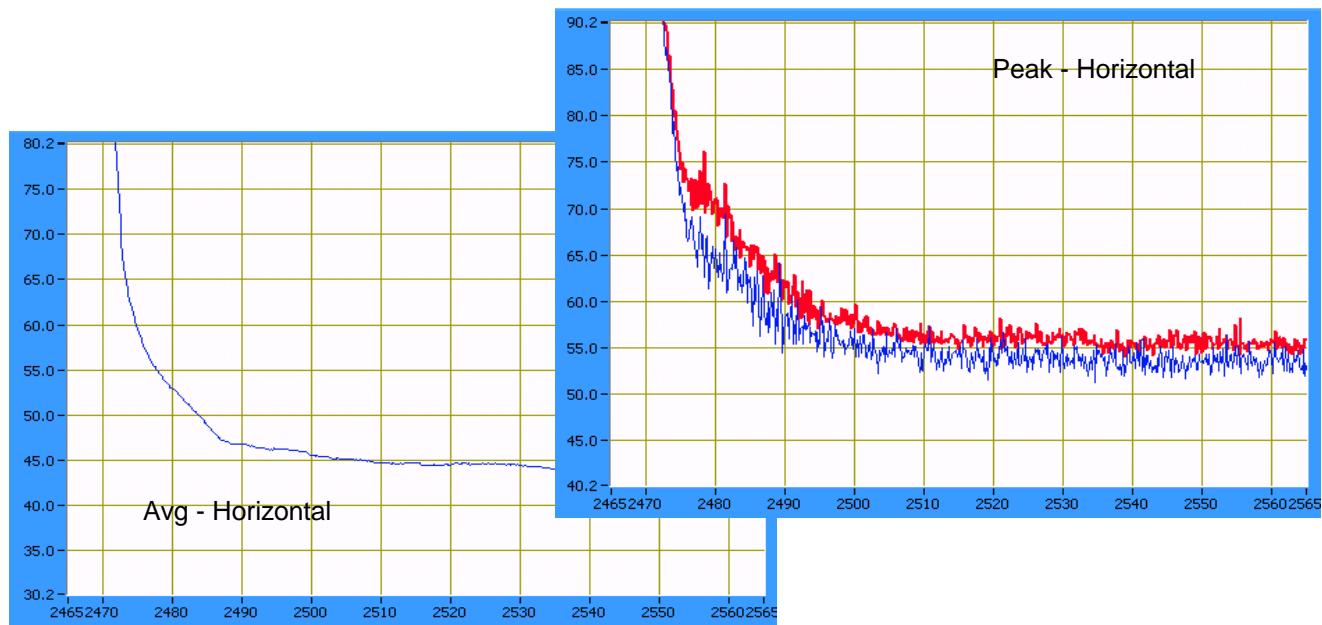
| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| | 26.5 | | 13.8 | | 25.5 |
| | | | | | 13.6 |

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2468.170 | 102.5 | H | - | - | AVG | 107 | 1.0 |
| 2468.170 | 112.6 | H | - | - | PK | 107 | 1.0 |
| 2467.920 | 95.7 | V | - | - | AVG | 52 | 1.2 |
| 2467.920 | 106.1 | V | - | - | PK | 52 | 1.2 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2484.610 | 69.9 | H | 74.0 | -4.1 | Pk | 107 | 1.0 |
| 2483.510 | 49.6 | H | 54.0 | -4.4 | Avg | 107 | 1.0 |
| 2484.650 | 63.0 | V | 74.0 | -11.0 | Pk | 52 | 1.2 |
| 2483.500 | 45.6 | V | 54.0 | -8.4 | Avg | 52 | 1.2 |



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #7: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (20 MHz Channel) - Chain A+B+C

Date of Test: 4/9/2008

Test Engineer: Suhaila Khushzad

Test Location: FT Chamber #3

Run #7a: Low Channel @ 2412 MHz

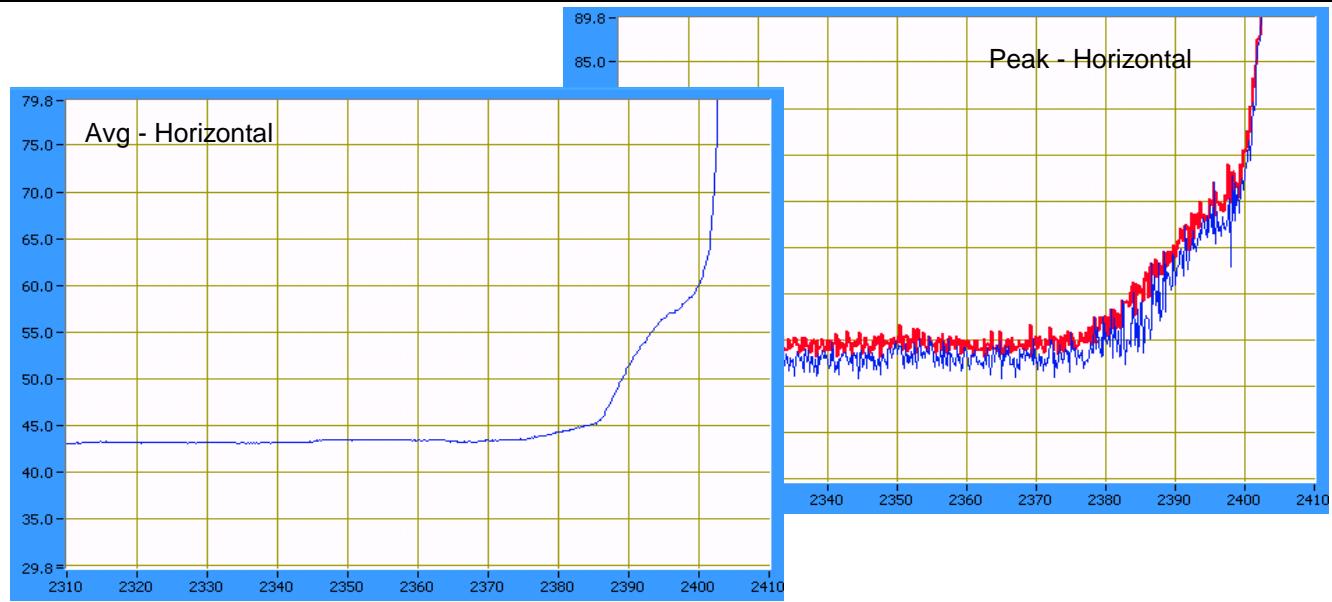
| Power Setting and average measurement (for reference) | | | | | |
|---|-----|---------|-----|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 25 | 12 | 25.5 | 12 | 24.5 | 12.2 |

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2413.170 | 98.4 | H | - | - | AVG | 100 | 1.1 |
| 2413.170 | 109.2 | H | - | - | PK | 100 | 1.1 |
| 2409.500 | 93.8 | V | - | - | AVG | 64 | 1.0 |
| 2409.500 | 103.9 | V | - | - | PK | 64 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.980 | 50.4 | H | 54.0 | -3.6 | Avg | 100 | 1.1 |
| 2389.600 | 66.5 | H | 74.0 | -7.5 | Pk | 100 | 1.1 |
| 2389.970 | 46.9 | V | 54.0 | -7.1 | Avg | 64 | 1.0 |
| 2388.850 | 62.6 | V | 74.0 | -11.4 | Pk | 64 | 1.0 |





EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #7: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (20 MHz Channel) - Chain A+B+C

Run #7b: High Channel @ 2462 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 26 | 12.2 | 26 | 12.4 | 25 | 12.1 |

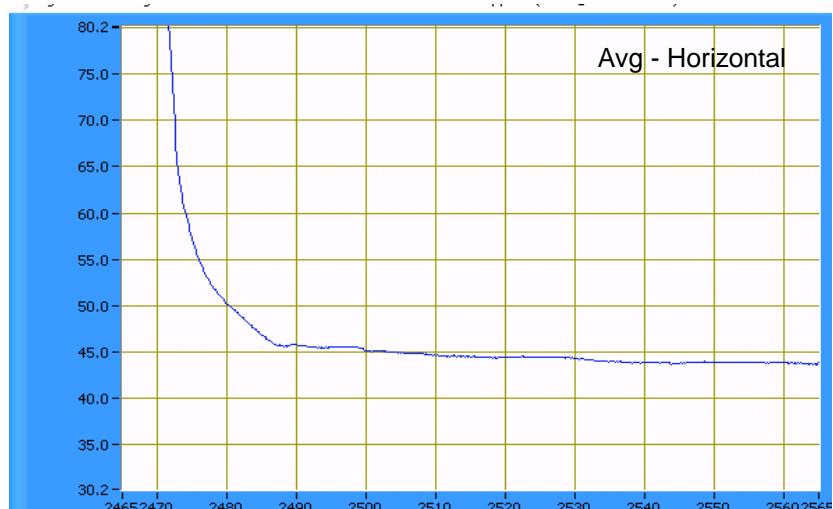
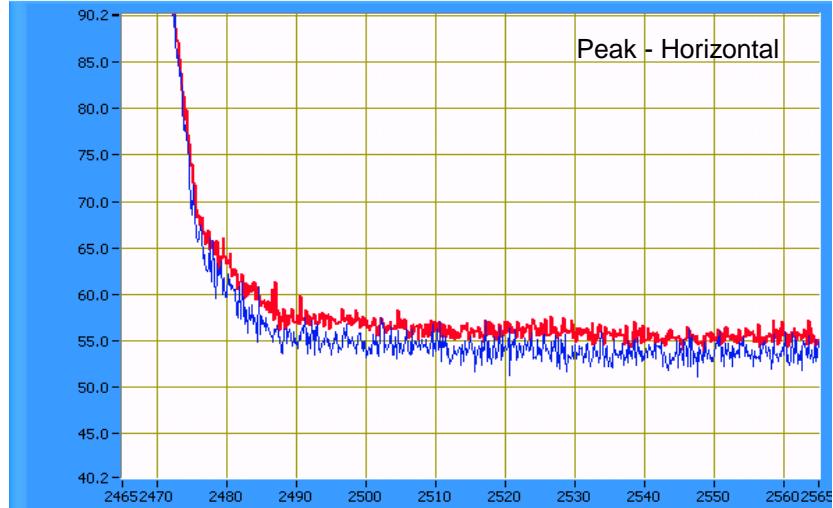
Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2469.420 | 100.3 | H | - | - | AVG | 105 | 1.0 |
| 2469.420 | 111.1 | H | - | - | PK | 105 | 1.0 |
| 2466.830 | 95.2 | V | - | - | AVG | 66 | 1.2 |
| 2466.830 | 106.4 | V | - | - | PK | 66 | 1.2 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2483.510 | 46.6 | H | 54.0 | -7.4 | Avg | 105 | 1.0 |
| 2483.880 | 62.0 | H | 74.0 | -12.0 | Pk | 105 | 1.0 |
| 2483.500 | 45.1 | V | 54.0 | -8.9 | Avg | 66 | 1.2 |
| 2485.730 | 60.2 | V | 74.0 | -13.8 | Pk | 66 | 1.2 |

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |





EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS, 2400 - 2483.5 MHz) Radiated Spurious Emissions 802.11n20 Ethertronics Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 4/1/2008

Config. Used: 1

Test Engineer: Ben Jing

Config Change: None

Test Location: Chamber # 5

Host Unit Voltage 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 20 °C
Rel. Humidity: 34 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Summary of Results

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|--|-----------------------------------|--|----------------|-----------------------------------|---------------------------------|---|
| 1 | Chain A Chain B Chain C | 6 (2437) | 28.0 27.5 26.5 | 16.5 dBm | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 41.2dB μ V/m @ 1497.9MHz (-12.8dB) |
| 2 | 802.11n20 Chains A+B+C | 1 (2412) 6 (2437) 11 (2462) | Power set to single chain settings from run 1, 2 and 3 | | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 44.8dB μ V/m @ 9746.8MHz (-9.2dB) |
| - | 802.11n20 Dual Chain modes (A+B, A+C, B+C) | | | | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | Covered by tests on chains A+B+C |

Single chain measurements on center channel demonstrated that 802.11b single-chain mode was worst case.



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, 1000 - 26000 MHz. Operating Mode: 802.11n 20MHz Chain A

Run #1a: Center Channel @ 2437 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|-----|---------|-----|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 28.0 | 16.6 | | | | |

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2438.290 | 101.4 | V | - | - | Pk | 277 | 1.0 |
| 2438.300 | 103.6 | H | - | - | Pk | 213 | 1.0 |

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1497.920 | 41.2 | V | 54.0 | -12.8 | AVG | 105 | 1.0 |
| 3986.320 | 34.3 | V | 54.0 | -19.7 | AVG | 292 | 1.0 |
| 1497.920 | 57.2 | V | 74.0 | -16.8 | PK | 105 | 1.0 |
| 1744.270 | 52.5 | V | 73.6 | -21.1 | PK | 294 | 1.5 |
| 3986.320 | 54.3 | V | 74.0 | -19.7 | PK | 292 | 1.0 |
| 6498.620 | 49.3 | V | 73.6 | -24.3 | PK | 217 | 1.0 |
| | | | | | | | Note 2 |

Run #1b: Center Channel @ 2437 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|-----|---------|------|---------|-----|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| | | 27.5 | 16.5 | | |

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2435.700 | 98.6 | V | - | - | Pk | 74 | 1.0 |
| 2435.720 | 106.8 | H | - | - | Pk | 112 | 1.0 |

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 6498.540 | 48.0 | H | 76.8 | -28.8 | PK | 290 | 1.5 |
| 6498.550 | 50.2 | V | 76.8 | -26.6 | PK | 134 | 1.0 |
| 6498.560 | 50.7 | V | 76.8 | -26.1 | PK | 219 | 1.0 |
| 6498.560 | 49.6 | H | 76.8 | -27.2 | PK | 33 | 1.0 |
| | | | | | | | Note 2 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1c: Center Channel @ 2437 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|-----|---------|-----|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| | | | | 26.5 | 16.5 |

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2438.310 | 99.5 | V | - | - | Pk | 58 | 1.0 |
| 2438.280 | 106.3 | H | - | - | Pk | 114 | 1.0 |

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1494.810 | 39.0 | V | 54.0 | -15.0 | AVG | 105 | 1.0 |
| 3983.560 | 35.2 | V | 54.0 | -18.8 | AVG | 286 | 1.5 |
| 1494.810 | 56.5 | V | 74.0 | -17.5 | PK | 105 | 1.0 |
| 1747.280 | 54.7 | V | 76.3 | -21.6 | PK | 328 | 1.0 |
| 3983.560 | 56.9 | V | 74.0 | -17.1 | PK | 286 | 1.5 |
| 6498.650 | 48.7 | V | 76.3 | -27.6 | PK | 240 | 1.0 |
| | | | | | | | Note 2 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band.



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2: Radiated Spurious Emissions, 1000 - 26000 MHz. Operating Mode: 802.11n 20MHz Chains A+B+C

These tests run at a power setting equal to the highest single-chain settings to cover all possible dual- and triple-chain operating modes.

Run #2a: Low Channel @ 2412 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 29.5 | 16.5 | 30.5 | 16.5 | 29.5 | 16.5 |

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2413.320 | 110.8 | H | - | - | Pk | 111 | 1.0 |
| 2410.760 | 104.4 | V | - | - | Pk | 79 | 1.0 |

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-----------------|--------------|------------|------------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1744.620 | 37.2 | V | 54.0 | -16.8 | AVG | 77 | 1.5 |
| 7233.500 | 41.4 | V | 54.0 | -12.6 | AVG | 136 | 2.0 |
| 9650.190 | 42.2 | V | 54.0 | -11.8 | AVG | 177 | 1.5 |
| 1744.620 | 59.8 | V | 74.0 | -14.2 | PK | 77 | 1.5 |
| 7233.500 | 57.7 | V | 74.0 | -16.3 | PK | 136 | 2.0 |
| 9650.190 | 54.2 | V | 74.0 | -19.8 | PK | 177 | 1.5 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2b: Center Channel @ 2437 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 30.0 | 16.5 | 30.5 | 16.6 | 29.5 | 16.6 |

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

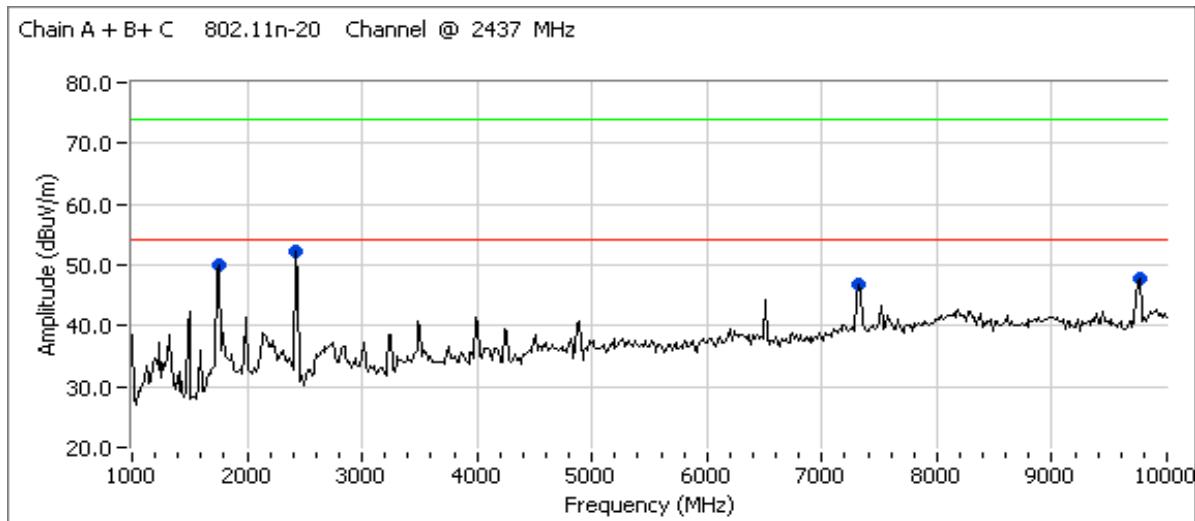
| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2438.330 | 105.2 | V | - | - | Pk | 64 | 1.0 |
| 2438.040 | 104.5 | H | - | - | Pk | 44 | 1.0 |

Spurious Emissions

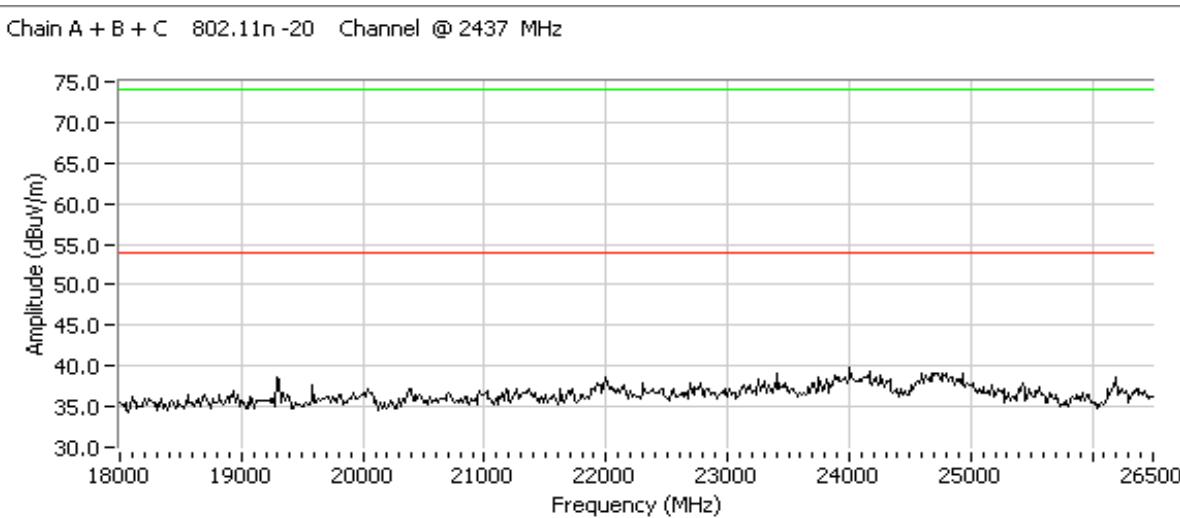
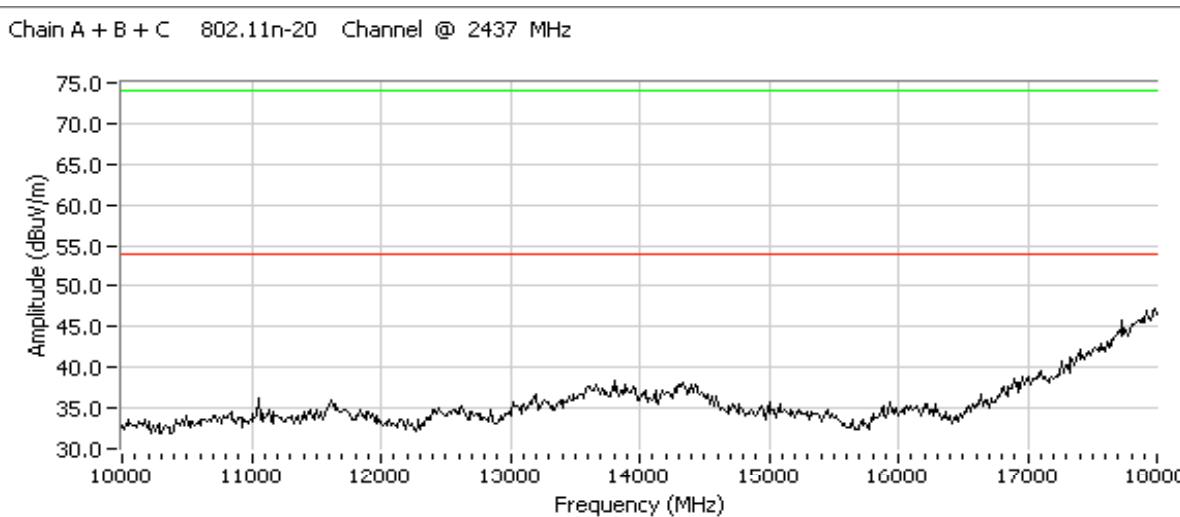
| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-----------------|-------------|------------|------------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1747.970 | 36.3 | V | 54.0 | -17.7 | AVG | 81 | 1.5 |
| 7311.050 | 38.7 | V | 54.0 | -15.3 | AVG | 179 | 1.5 |
| 9746.750 | 44.8 | V | 54.0 | -9.2 | AVG | 181 | 2.0 |
| 1747.970 | 59.2 | V | 74.0 | -14.8 | PK | 81 | 1.5 |
| 7311.050 | 53.1 | V | 74.0 | -20.9 | PK | 179 | 1.5 |
| 9746.750 | 56.7 | V | 74.0 | -17.3 | PK | 181 | 2.0 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |





EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2c: High Channel @ 2462 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 30.5 | 16.5 | 31.0 | 16.6 | 30.0 | 16.5 |

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2460.740 | 105.5 | V | - | - | Pk | 79 | 1.0 |
| 2463.300 | 110.4 | H | - | - | Pk | 118 | 1.0 |

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-----------------|--------------|-----------|-----------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1744.410 | 36.7 | V | 54.0 | -17.3 | AVG | 79 | 1.5 |
| 7408.540 | 36.2 | V | 54.0 | -17.8 | AVG | 151 | 1.5 |
| 1744.410 | 58.7 | V | 74.0 | -15.3 | PK | 79 | 1.5 |
| 7408.540 | 51.0 | V | 74.0 | -23.0 | PK | 151 | 1.5 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS, 2400 - 2483.5 MHz) Band Edge Field Strength 802.11n40 Ethertronics Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 19 °C
Rel. Humidity: 44 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Summary of Results

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|------------------------|---------------|----------------------------------|----------------------------------|-----------------------------------|------------------------------|--|
| 1a | 802.11n40 Chain A | 1 2422MHz | 23.0 | 12.0 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 52.1dB μ V/m @ 2390.0MHz (-1.9dB) |
| 1b | 802.11n40 Chain A | 11 2452MHz | 25.0 | 13.7 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 72.6dB μ V/m @ 2485.1MHz (-1.4dB) |
| 2a | 802.11n40 Chain B | 1 2422MHz | 23.5 | 12.6 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 52.5dB μ V/m @ 2389.8MHz (-1.5dB) |
| 2b | 802.11n40 Chain B | 11 2452MHz | 25.5 | 14.3 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 52.2dB μ V/m @ 2483.5MHz (-1.8dB) |
| 3a | 802.11n40 Chain C | 1 2422MHz | 21.0 | 11.5 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 52.7dB μ V/m @ 2389.9MHz (-1.3dB) |
| 3b | 802.11n40 Chain C | 11 2452MHz | 24.0 | 13.9 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 72.6dB μ V/m @ 2485.6MHz (-1.4dB) |
| 4a | 802.11n40 Chain A+B | 1 2422MHz | A : 23.5 B : 23.5 | A : 11.3 B : 11.4 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 52.1dB μ V/m @ 2389.7MHz (-1.9dB) |
| 4b | 802.11n40 Chain A+B | 11 2452MHz | A : 26.0 B : 26.5 | A : 13.8 B : 14.1 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 53.0dB μ V/m @ 2484.9MHz (-1.0dB) |
| 5a | 802.11n40 Chain A+C | 1 2422MHz | A : 24.5 C : 22.5 | A : 12.1 C : 11.8 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 52.7dB μ V/m @ 2389.7MHz (-1.3dB) |
| 5b | 802.11n40 Chain A+C | 11 2452MHz | A : 26.5 C : 25.5 | A : 13.9 C : 14.1 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 72.3dB μ V/m @ 2485.6MHz (-1.7dB) |
| 6a | 802.11n40 Chain B+C | 1 2422MHz | B : 23.5 C : 21.0 | B : 11.1 C : 10.2 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 52.7dB μ V/m @ 2388.2MHz (-1.3dB) |
| 6b | 802.11n40 Chain B+C | 11 2452MHz | B : 25.5 C : 24.5 | B : 13.5 C : 13.6 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 72.4 dB μ V/m @ 2485.6MHz (-1.6dB) |
| 7a | 802.11n40 A+B+C | 1 2422MHz | A : 23.0 B : 22.5 C : 21.0 | A : 10.2 B : 10.1 C : 10.0 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 52.5dB μ V/m @ 2386.8MHz (-1.5dB) |
| 7b | 802.11n40 A+B+C | 11 2452MHz | A : 26.0 B : 26.0 C : 25.5 | A : 12.8 B : 12.8 C : 12.9 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 52.5dB μ V/m @ 2483.5MHz (-1.5dB) |

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (40 MHz Channel) - Chain A

Date of Test: 3/24/2008

Test Engineer: Suhaila Khushzad

Test Location: Chamber # 5

Run #1a: Low Channel @ 2422 MHz

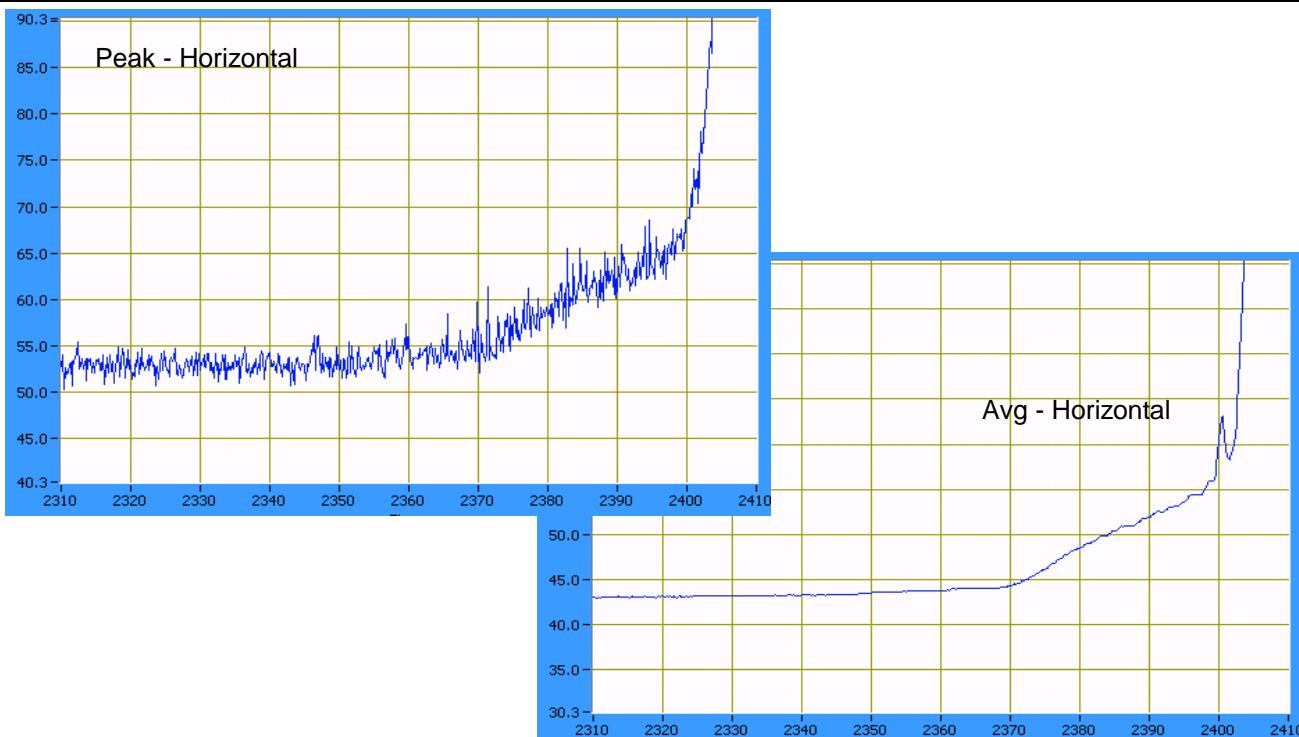
Power Setting: 23 Average power: 12 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2420.540 | 94.6 | H | - | - | AVG | 252 | 1.0 |
| 2420.540 | 103.0 | H | - | - | PK | 252 | 1.0 |
| 2437.870 | 91.0 | V | - | - | AVG | 176 | 1.3 |
| 2437.870 | 99.6 | V | - | - | PK | 176 | 1.3 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.970 | 52.1 | H | 54.0 | -1.9 | Avg | 252 | 1.0 |
| 2387.920 | 70.1 | H | 74.0 | -3.9 | Pk | 252 | 1.0 |
| 2389.640 | 47.4 | V | 54.0 | -6.6 | Avg | 176 | 1.3 |
| 2387.570 | 64.1 | V | 74.0 | -9.9 | Pk | 176 | 1.3 |



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (40 MHz Channel) - Chain A

Run #1b: High Channel @ 2452 MHz

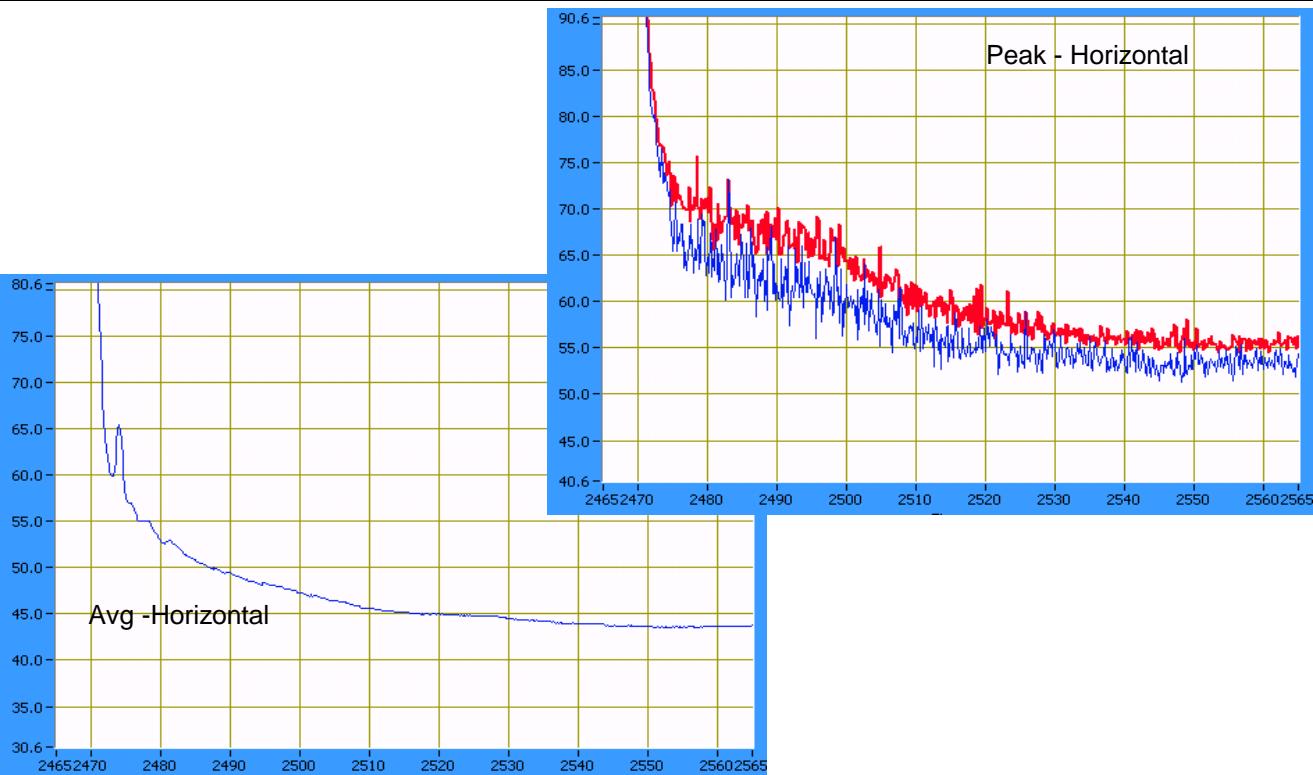
Power Setting: 25 Average power: 13.7 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|--------|-----------|---------|--------|---------------------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 2436.670 | 99.9 | H | - | - | AVG | 250 | 1.0 | GC: 27.5, Avg Power: 16.5 |
| 2436.670 | 108.7 | H | - | - | PK | 250 | 1.0 | GC: 27.5, Avg Power: 16.6 |
| 2436.370 | 98.1 | H | - | - | AVG | 250 | 1.0 | GC: 25, Avg Power: 13.7 |
| 2436.370 | 107.0 | H | - | - | PK | 250 | 1.0 | GC: 25, Avg Power: 13.7 |
| 2468.000 | 93.4 | V | - | - | AVG | 241 | 1.5 | GC: 25, Avg Power: 13.7 |
| 2468.000 | 101.7 | V | - | - | PK | 241 | 1.5 | GC: 25, Avg Power: 13.7 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|--------|-----------|---------|--------|-------------------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 2485.050 | 72.6 | H | 74.0 | -1.4 | Pk | 250 | 1.0 | GC: 25, Avg Power: 13.7 |
| 2483.510 | 51.3 | H | 54.0 | -2.7 | Avg | 250 | 1.0 | GC: 25, Avg Power: 13.7 |
| 2484.770 | 70.6 | V | 74.0 | -3.4 | Avg | 241 | 1.5 | GC: 25, Avg Power: 13.7 |
| 2483.530 | 48.8 | V | 54.0 | -5.2 | Pk | 241 | 1.5 | GC: 25, Avg Power: 13.7 |



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (40 MHz Channel) - Chain B

Date of Test: 3/24/2008

Test Engineer: Suhaila Khushzad

Test Location: Chamber # 5

Run #2a: Low Channel @ 2422 MHz

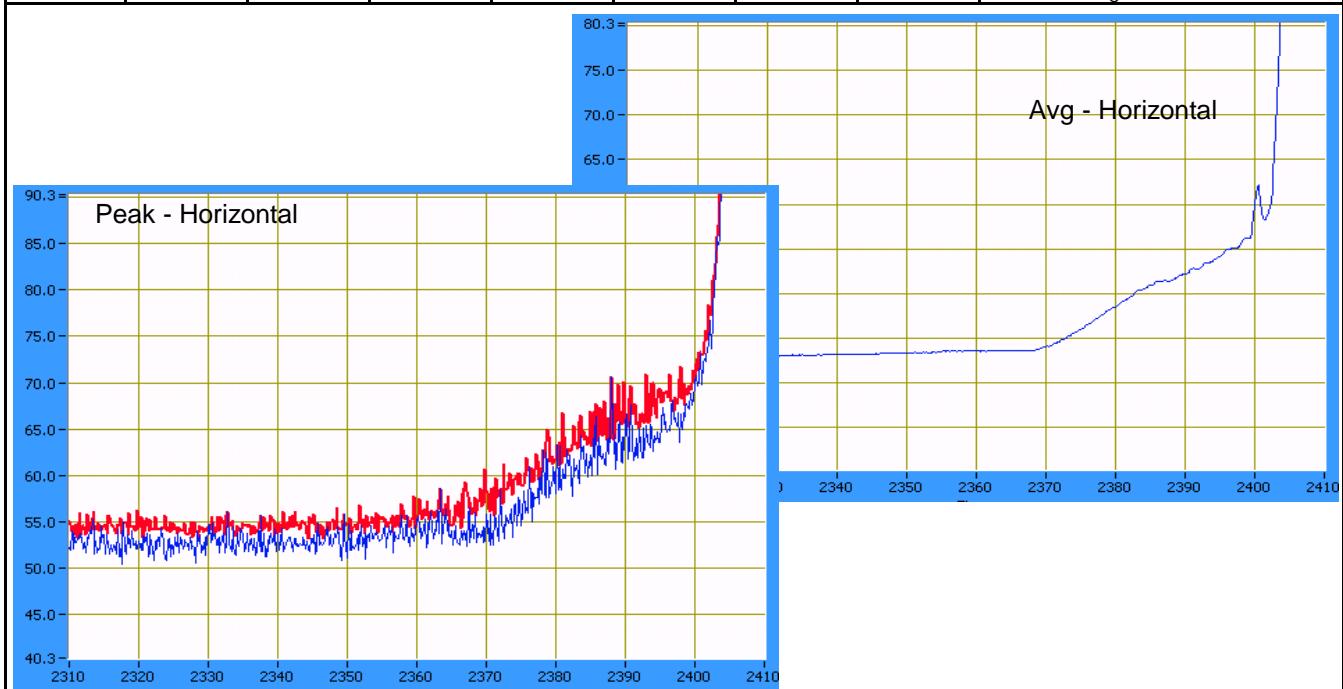
Power Setting: 23.5 Average power: 12.6 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|--------|-----------|---------|--------|---------------------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 2406.400 | 97.9 | H | - | - | AVG | 107 | 1.0 | GC: 27, Avg Power: 16.6 |
| 2406.400 | 106.9 | H | - | - | PK | 107 | 1.0 | GC: 27, Avg Power: 16.6 |
| 2423.090 | 92.1 | H | - | - | AVG | 107 | 1.0 | GC: 23.5, Avg Power: 12.6 |
| 2423.090 | 100.5 | H | - | - | PK | 107 | 1.0 | GC: 23.5, Avg Power: 12.6 |
| 2437.730 | 91.0 | V | - | - | AVG | 50 | 1.0 | GC: 23.5, Avg Power: 12.6 |
| 2437.730 | 99.4 | V | - | - | PK | 50 | 1.0 | GC: 23.5, Avg Power: 12.6 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|--------|-----------|---------|--------|---------------------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 2389.770 | 52.5 | H | 54.0 | -1.5 | Avg | 107 | 1.0 | GC: 23.5, Avg Power: 12.6 |
| 2388.170 | 71.4 | H | 74.0 | -2.6 | Pk | 107 | 1.0 | GC: 23.5, Avg Power: 12.6 |
| 2389.840 | 48.5 | V | 54.0 | -5.5 | Avg | 50 | 1.0 | GC: 23.5, Avg Power: 12.6 |
| 2388.270 | 66.4 | V | 74.0 | -7.6 | Pk | 50 | 1.0 | GC: 23.5, Avg Power: 12.6 |



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (40 MHz Channel) - Chain B

Run #2b: High Channel @ 2452 MHz

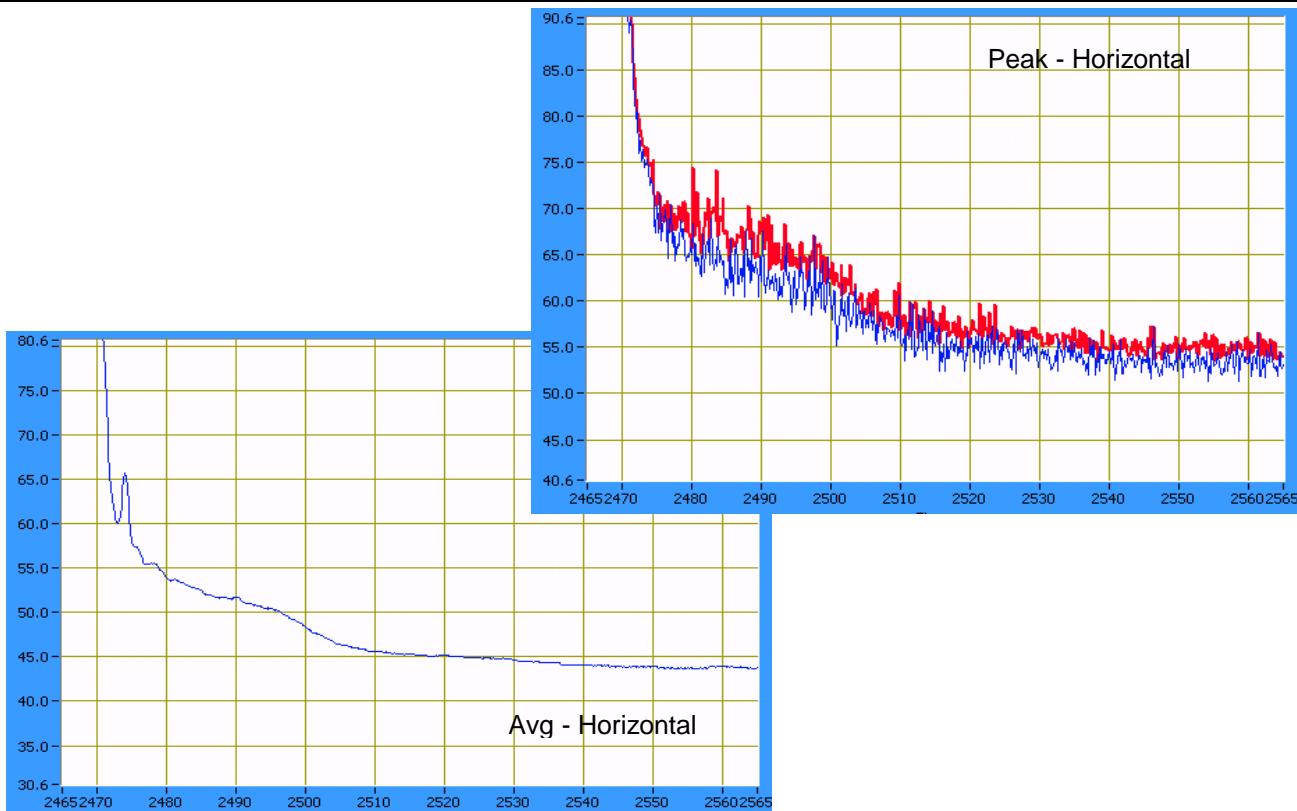
Power Setting: 25.5 Average power: 14.3 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2436.500 | 97.1 | H | - | - | AVG | 112 | 1.0 |
| 2436.500 | 106.2 | H | - | - | PK | 112 | 1.0 |
| 2440.330 | 92.6 | V | - | - | AVG | 53 | 1.0 |
| 2440.330 | 101.7 | V | - | - | PK | 53 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|--|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| Setting for Passing Data : 25.5 | | | | | | | |
| 2483.500 | 52.2 | H | 54.0 | -1.8 | Avg | 112 | 1.0 |
| 2485.770 | 73.0 | H | 74.0 | -1.0 | Pk | 112 | 1.0 |
| 2483.500 | 47.0 | V | 54.0 | -7.0 | Avg | 53 | 1.0 |
| 2484.400 | 66.4 | V | 74.0 | -7.6 | Pk | 53 | 1.0 |





EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (40 MHz Channel) - Chain C

Date of Test: 3/24/2008

Test Engineer: Suhaila Khushzad

Test Location: Chamber # 5

Run #3a: Low Channel @ 2422 MHz

Power Setting: 21 Average power: 11.5 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2423.500 | 94.1 | H | - | - | AVG | 113 | 1.0 |
| 2423.500 | 102.4 | H | - | - | PK | 113 | 1.0 |
| 2405.750 | 88.7 | V | - | - | AVG | 54 | 1.0 |
| 2405.750 | 97.5 | V | - | - | PK | 54 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.860 | 52.7 | H | 54.0 | -1.3 | Avg | 113 | 1.0 |
| 2388.030 | 70.7 | H | 74.0 | -3.3 | Pk | 113 | 1.0 |
| 2389.810 | 46.6 | V | 54.0 | -7.4 | Avg | 54 | 1.0 |
| 2388.720 | 61.8 | V | 74.0 | -12.2 | Pk | 54 | 1.0 |

Run #3b: High Channel @ 2452 MHz

Power Setting: 24 Average power: 13.9 (for reference purposes)

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2436.250 | 99.3 | H | - | - | AVG | 117 | 1.0 |
| 2436.250 | 107.7 | H | - | - | PK | 117 | 1.0 |
| 2436.500 | 90.7 | V | - | - | AVG | 91 | 1.0 |
| 2436.500 | 99.1 | V | - | - | PK | 91 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2485.640 | 72.6 | H | 74.0 | -1.4 | Pk | 117 | 1.0 |
| 2483.640 | 51.1 | H | 54.0 | -2.9 | Avg | 117 | 1.0 |
| 2483.510 | 45.9 | V | 54.0 | -8.1 | Avg | 91 | 1.0 |
| 2485.340 | 64.7 | V | 74.0 | -9.3 | Pk | 91 | 1.0 |



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #4: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (40 MHz Channel) - Chain A+B

Date of Test: 4/21/2008

Test Engineer: Ben Jing

Test Location: Chamber # 4

Run #4a: Low Channel @ 2422 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|-----|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 23.5 | 11.3 | 23.5 | 11.4 | | |

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2423.410 | 94.6 | H | - | - | AVG | 115 | 1.0 |
| 2423.410 | 105.7 | H | - | - | PK | 115 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.700 | 52.1 | H | 54.0 | -1.9 | AVG | 111 | 1.0 |
| 2389.720 | 67.3 | H | 74.0 | -6.7 | PK | 111 | 1.0 |
| 2389.750 | 66.2 | V | 74.0 | -7.8 | PK | 206 | 1.0 |
| 2389.710 | 51.7 | V | 54.0 | -2.3 | AVG | 206 | 1.0 |

Run #4b: High Channel @ 2452 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|-----|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 26.0 | 13.8 | 26.5 | 14.1 | | |

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2450.560 | 94.5 | H | - | - | AVG | 116 | 1.0 |
| 2450.560 | 104.6 | H | - | - | PK | 116 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2484.880 | 53.0 | H | 54.0 | -1.0 | AVG | 115 | 1.0 |
| 2485.490 | 72.2 | H | 74.0 | -1.8 | PK | 115 | 1.0 |
| 2483.610 | 65.4 | V | 74.0 | -8.6 | PK | 84 | 1.0 |
| 2483.420 | 47.6 | V | 54.0 | -6.4 | AVG | 64 | 1.0 |



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #5: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (40 MHz Channel) - Chain A+C

Run #5a: Low Channel @ 2422 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|-----|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 24.5 | 12.1 | | | 22.5 | 11.8 |

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|--------|-----------|---------|--------|----------------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 2420.900 | 94.1 | H | - | - | AVG | 128 | 1.0 | RB = 1MHz, VB = 10Hz |
| 2420.900 | 104.0 | H | - | - | PK | 128 | 1.0 | RB = VB = 1MHz |
| 2420.530 | 83.0 | V | - | - | AVG | 64 | 1.0 | RB = 1MHz, VB = 10Hz |
| 2420.530 | 93.5 | V | - | - | PK | 64 | 1.0 | RB = VB = 1MHz |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|--------|-----------|---------|--------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 2389.720 | 52.7 | H | 54.0 | -1.3 | AVG | 119 | 1.0 | |
| 2389.750 | 70.5 | H | 74.0 | -3.5 | PK | 114 | 1.0 | |
| 2389.760 | 62.0 | V | 74.0 | -12.0 | PK | 72 | 1.0 | |
| 2389.700 | 45.8 | V | 54.0 | -8.2 | AVG | 70 | 1.0 | |

Run #5b: High Channel @ 2452 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|-----|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 26.5 | 13.9 | | | 25.5 | 14.1 |

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|--------|-----------|---------|--------|----------------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 2450.700 | 96.3 | H | - | - | AVG | 118 | 1.0 | RB = 1MHz, VB = 10Hz |
| 2450.700 | 106.5 | H | - | - | PK | 118 | 1.0 | RB = VB = 1MHz |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|--------|-----------|---------|--------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 2485.570 | 72.3 | H | 74.0 | -1.7 | PK | 134 | 1.0 | |
| 2484.420 | 49.1 | H | 54.0 | -4.9 | AVG | 126 | 1.0 | |
| 2484.380 | 67.4 | V | 74.0 | -6.6 | PK | 67 | 1.0 | |
| 2484.380 | 45.2 | V | 54.0 | -8.8 | AVG | 62 | 1.0 | |



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #6: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (40 MHz Channel) - Chain B+C

Run #6a: Low Channel @ 2422 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|-----|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| | | 23.5 | 11.1 | 21.0 | 10.2 |

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2423.480 | 96.2 | H | - | - | AVG | 117 | 1.0 |
| 2423.480 | 106.6 | H | - | - | PK | 117 | 1.0 |
| 2423.220 | 89.5 | V | - | - | AVG | 66 | 1.0 |
| 2423.220 | 99.7 | V | - | - | PK | 66 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2388.240 | 52.7 | H | 54.0 | -1.3 | AVG | 113 | 1.0 |
| 2388.230 | 68.8 | H | 74.0 | -5.2 | PK | 111 | 1.0 |
| 2388.530 | 64.3 | V | 74.0 | -9.7 | PK | 64 | 1.0 |
| 2388.400 | 47.6 | V | 54.0 | -6.4 | AVG | 62 | 1.0 |

Run #6b: High Channel @ 2452 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|-----|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| | | 25.5 | 13.5 | 24.5 | 13.6 |

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2450.760 | 99.6 | H | - | - | AVG | 115 | 1.0 |
| 2450.760 | 110.2 | H | - | - | PK | 115 | 1.0 |
| 2450.560 | 93.0 | V | - | - | AVG | 63 | 1.0 |
| 2450.560 | 103.0 | V | - | - | PK | 63 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2484.520 | 51.7 | H | 54.0 | -2.3 | AVG | 114 | 1.0 |
| 2485.570 | 72.4 | H | 74.0 | -1.6 | PK | 110 | 1.0 |
| 2484.320 | 65.1 | V | 74.0 | -8.9 | PK | 58 | 1.0 |
| 2484.540 | 47.5 | V | 54.0 | -6.5 | AVG | 68 | 1.0 |



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #7: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (40 MHz Channel) - Chain A+B+C

Run #7a: Low Channel @ 2422 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 23.0 | 10.2 | 22.5 | 10.1 | 21.0 | 10.0 |

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2423.120 | 96.4 | H | - | - | AVG | 115 | 1.0 |
| 2423.120 | 108.0 | H | - | - | PK | 115 | 1.0 |
| 2420.610 | 90.0 | V | - | - | AVG | 181 | 1.0 |
| 2420.610 | 100.6 | V | - | - | PK | 181 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2386.810 | 52.5 | H | 54.0 | -1.5 | AVG | 109 | 1.0 |
| 2386.650 | 67.8 | H | 74.0 | -6.2 | PK | 117 | 1.0 |
| 2389.860 | 65.2 | V | 74.0 | -8.8 | PK | 182 | 1.0 |
| 2389.800 | 48.8 | V | 54.0 | -5.2 | AVG | 186 | 1.0 |

Run #7b: High Channel @ 2452 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 26.0 | 12.8 | 26.0 | 12.8 | 25.5 | 12.9 |

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2450.540 | 97.5 | H | - | - | AVG | 116 | 1.0 |
| 2450.540 | 108.6 | H | - | - | PK | 116 | 1.0 |
| 2450.950 | 92.0 | V | - | - | AVG | 63 | 1.0 |
| 2450.950 | 102.7 | V | - | - | PK | 63 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2483.500 | 52.5 | H | 54.0 | -1.5 | AVG | 108 | 1.0 |
| 2483.660 | 69.0 | H | 74.0 | -5.0 | PK | 116 | 1.0 |
| 2483.620 | 62.9 | V | 74.0 | -11.1 | PK | 57 | 1.0 |
| 2483.600 | 49.0 | V | 54.0 | -5.0 | AVG | 59 | 1.0 |



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS, 2400 - 2483.5 MHz) Radiated Spurious Emissions 802.11n 40MHz Ethertronics Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 4/2/2008
Test Engineer: Ben Jing
Test Location: Chamber #5

Config. Used: 1
Config Change: None
Host Unit Voltage 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 20 °C
Rel. Humidity: 33 %

Summary of Results

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|------------------------|----------------------------------|---------------|-------------------|--------------------------------|-----------------------------|--|
| 1 | 802.11n40 Chains A+B+C | 3 (2422) 6 (2437) 9 (2452) | | 16.5dBm per chain | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 41.8dB μ V/m @ 7274.6MHz (-12.2dB) |

Measurements made to demonstrate that 802.11n 20-MHz mode had higher emissions than the n-40MHz mode.

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, 1000 - 26,000 MHz. Operating Mode: 802.11n 40MHz Chain A+B+C at Max power

Run #1a: Low Channel @ 2422 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 29.5 | 16.5 | 30.0 | 16.5 | 28.5 | 16.5 |

<--- highest power setting for single channel

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2422.670 | 97.8 | V | - | - | Pk | 86 | 1.0 |
| 2422.640 | 104.9 | H | - | - | Pk | 119 | 1.0 |

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|---|--------------|----------|-----------------|--------------|------------|------------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1744.210 | 36.0 | V | 54.0 | -18.0 | AVG | 316 | 1.0 |
| 7274.600 | 41.8 | V | 54.0 | -12.2 | AVG | 151 | 1.5 |
| 9687.990 | 41.2 | V | 54.0 | -12.8 | AVG | 118 | 1.5 |
| 1744.210 | 56.0 | V | 74.0 | -18.0 | PK | 316 | 1.0 |
| 7274.600 | 55.4 | V | 74.0 | -18.6 | PK | 151 | 1.5 |
| 9687.990 | 53.8 | V | 74.0 | -20.2 | PK | 118 | 1.5 |
| Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used. | | | | | | | |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1b: Center Channel @ 2437 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 30.0 | 16.5 | 30.0 | 16.6 | 29.0 | 16.6 |

<--- highest power setting for single channel

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2437.670 | 105.6 | H | - | - | Pk | 116 | 1.0 |
| 2436.020 | 98.2 | V | - | - | Pk | 70 | 1.0 |

Fundamental emission level @ 3m in 100kHz RBW: dB μ V/m

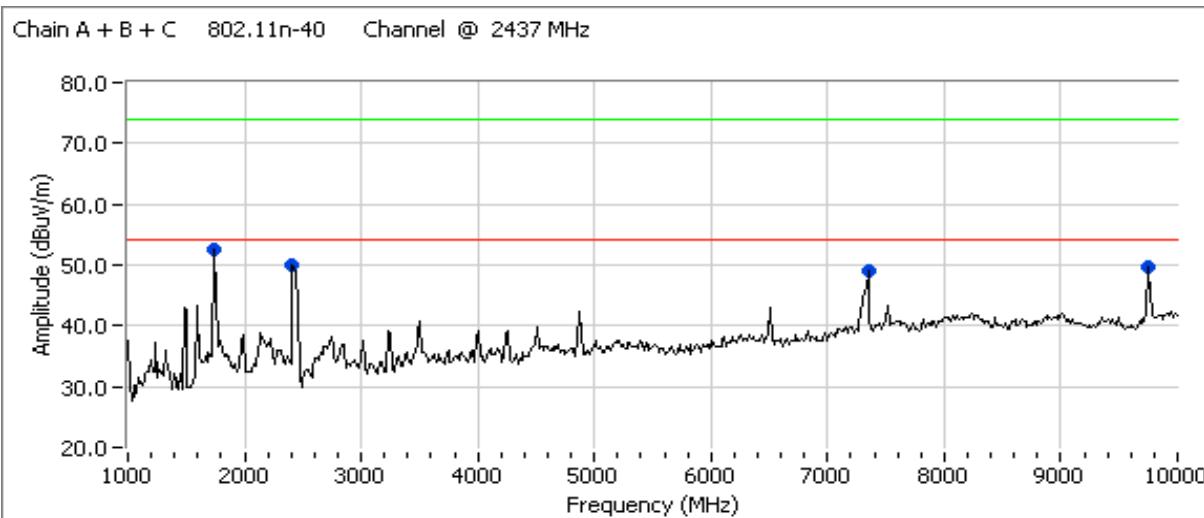
Limit for emissions outside of restricted bands: -30 dB μ V/m Limit is -30dBc (UNII power measurement)

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|---|--------------|----------|-----------------|--------------|------------|------------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1748.760 | 37.3 | V | 54.0 | -16.7 | AVG | 17 | 1.0 |
| 7306.410 | 39.9 | V | 54.0 | -14.1 | AVG | 148 | 1.0 |
| 9750.390 | 39.9 | V | 54.0 | -14.1 | AVG | 166 | 2.0 |
| 1748.760 | 58.2 | V | 74.0 | -15.8 | PK | 17 | 1.0 |
| 7306.410 | 54.1 | V | 74.0 | -19.9 | PK | 148 | 1.0 |
| 9750.390 | 52.5 | V | 74.0 | -21.5 | PK | 166 | 2.0 |
| Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used. | | | | | | | |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

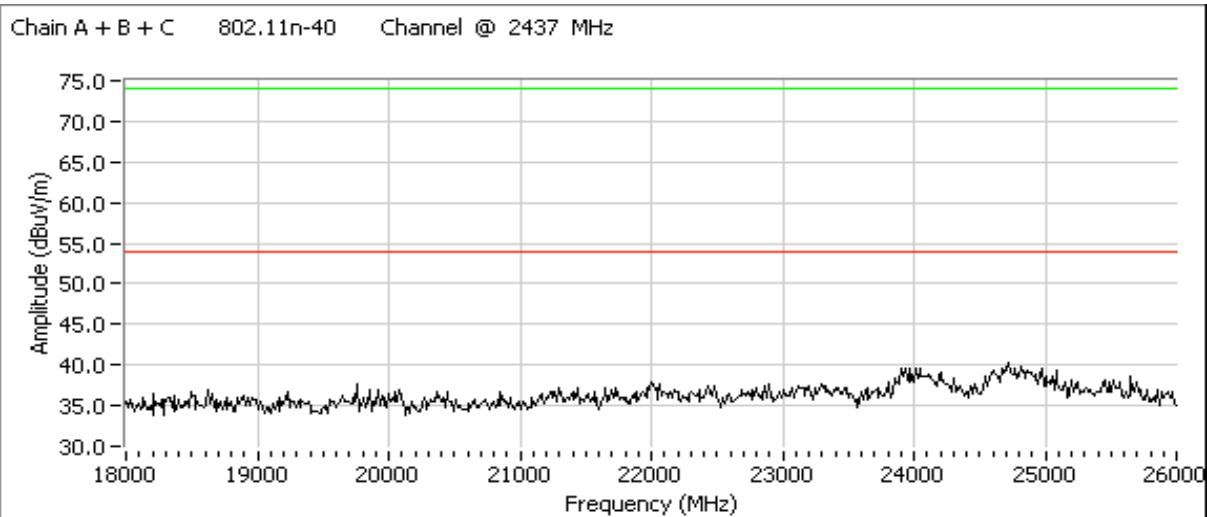
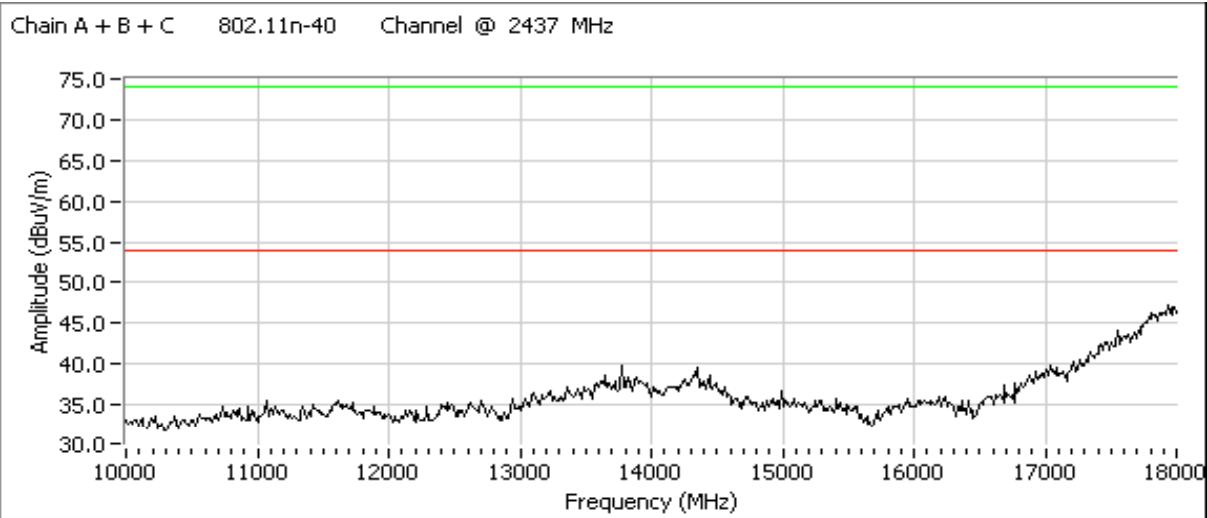
Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used.





EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |





EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1c: High Channel @ 2452 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 30.5 | 16.6 | 30.0 | 16.6 | 29.5 | 16.6 |

<--- highest power setting for single channel

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2452.920 | 98.9 | V | - | - | Pk | 68 | 1.0 |
| 2450.770 | 104.1 | H | - | - | Pk | 118 | 1.0 |

Fundamental emission level @ 3m in 100kHz RBW: dB μ V/m

Limit for emissions outside of restricted bands: -30 dB μ V/m

Limit is -30dBc (UNII power measurement)

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|---|--------------|----------|-----------------|--------------|------------|------------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1743.980 | 35.3 | V | 54.0 | -18.7 | AVG | 49 | 1.0 |
| 7361.280 | 41.3 | V | 54.0 | -12.7 | AVG | 146 | 1.0 |
| 9810.570 | 39.4 | V | 54.0 | -14.6 | AVG | 149 | 2.0 |
| 1743.980 | 53.9 | V | 74.0 | -20.1 | PK | 49 | 1.0 |
| 7361.280 | 54.5 | V | 74.0 | -19.5 | PK | 146 | 1.0 |
| 9810.570 | 51.9 | V | 74.0 | -22.1 | PK | 149 | 2.0 |
| Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz. | | | | | | | |
| Note 2: Signal is not in a restricted band but the more stringent restricted band limit was used. | | | | | | | |



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS, 5725 - 5850 MHz) Radiated Spurious Emissions 802.11a Ethertronics Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 4/2/2008

Config. Used: 1

Test Engineer: Ben Jing

Config Change: -

Test Location: Chamber # 4

Host Unit Voltage 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions:

Temperature: 20 °C

Rel. Humidity: 33 %

Summary of Results

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|--------------------|----------|---------------|----------------|-----------------------------------|---------------------------------|---|
| 1 | 802.11a Chain A | 5745 MHz | 26.0 | 16.7 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 51.3dB μ V/m @ 11571.7MHz (-2.7dB) |
| | | 5785 MHz | 26.0 | 16.6 | | | |
| | | 5825 MHz | 26.5 | 16.7 | | | |
| 2 | 802.11a Chain B | 5745 MHz | 25.0 | 16.6 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 49.6dB μ V/m @ 11650.6MHz (-4.4dB) |
| | | 5785 MHz | 25.5 | 16.6 | | | |
| | | 5825 MHz | 26.0 | 16.7 | | | |
| 3 | 802.11a Chain C | 5745 MHz | 25.5 | 16.6 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 46.9dB μ V/m @ 11649.7MHz (-7.1dB) |
| | | 5785 MHz | 26.0 | 16.7 | | | |
| | | 5825 MHz | 26.5 | 16.7 | | | |

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11a Chain A

Run #1a: Low Channel @ 5745 MHz

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 5743.740 | 99.9 | V | - | - | Pk | 144 | 1.0 |
| 5743.750 | 93.1 | H | - | - | Pk | 258 | 1.0 |

Fundamental emission level @ 3m in 100kHz RBW: 99.9 dB μ V/m

Limit for emissions outside of restricted bands: 69.9 dB μ V/m

Limit is -30dBc (UNII power measurement)

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 11481.330 | 48.3 | V | 54.0 | -5.7 | AVG | 141 | 1.0 |
| 11481.330 | 60.5 | V | 74.0 | -13.5 | PK | 141 | 1.0 |
| 1747.270 | 59.1 | V | 69.9 | -10.8 | PK | 360 | 1.0 |
| 1498.210 | 32.2 | V | 54.0 | -21.8 | AVG | 115 | 1.0 |
| 1498.210 | 50.1 | V | 74.0 | -23.9 | PK | 115 | 1.0 |
| 7659.900 | 47.6 | V | 69.9 | -22.3 | PK | 150 | 1.0 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band.

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1b: Center Channel @ 5785 MHz

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 5786.250 | 99.4 | V | - | - | Pk | 148 | 1.0 |
| 5786.290 | 94.0 | H | - | - | Pk | 264 | 1.0 |

Fundamental emission level @ 3m in 100kHz RBW: 99.4 dB μ V/m

Limit for emissions outside of restricted bands: 69.4 dB μ V/m Limit is -30dBc (UNII power measurement)

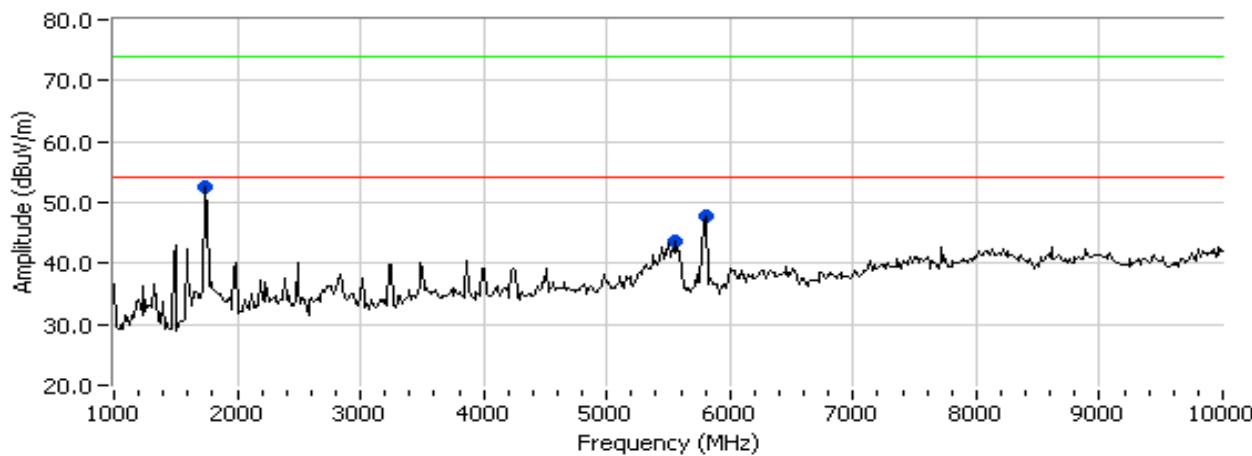
Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 11571.720 | 51.3 | V | 54.0 | -2.7 | AVG | 195 | 1.0 |
| 11571.720 | 63.3 | V | 74.0 | -10.7 | PK | 195 | 1.0 |
| 1743.460 | 59.1 | V | 69.4 | -10.3 | PK | 0 | 1.0 |
| 5578.410 | 51.9 | V | 69.4 | -17.5 | PK | 163 | 1.5 |

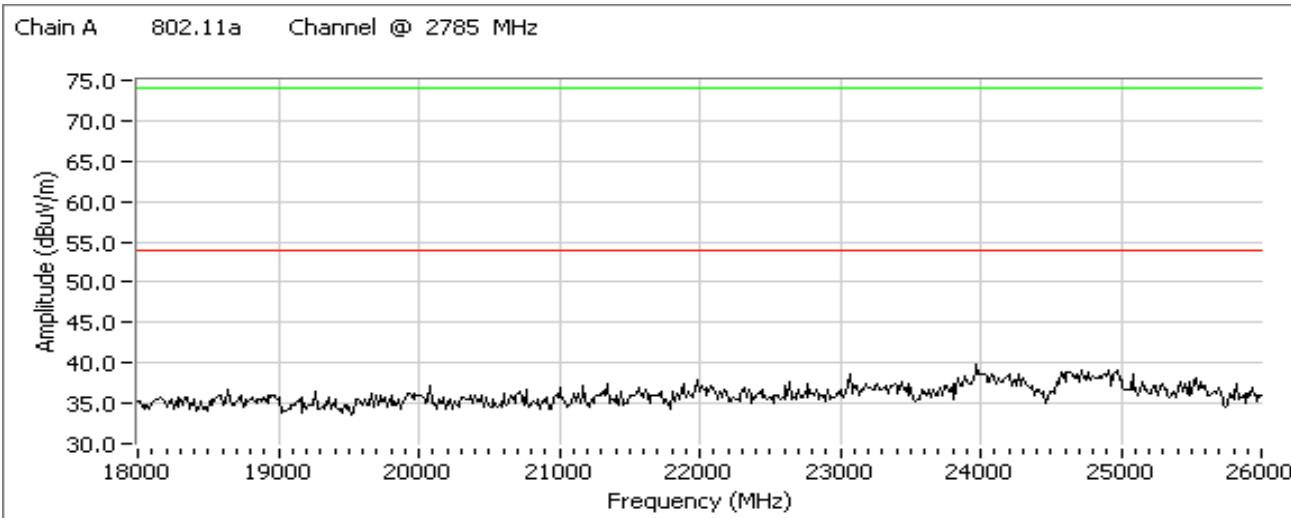
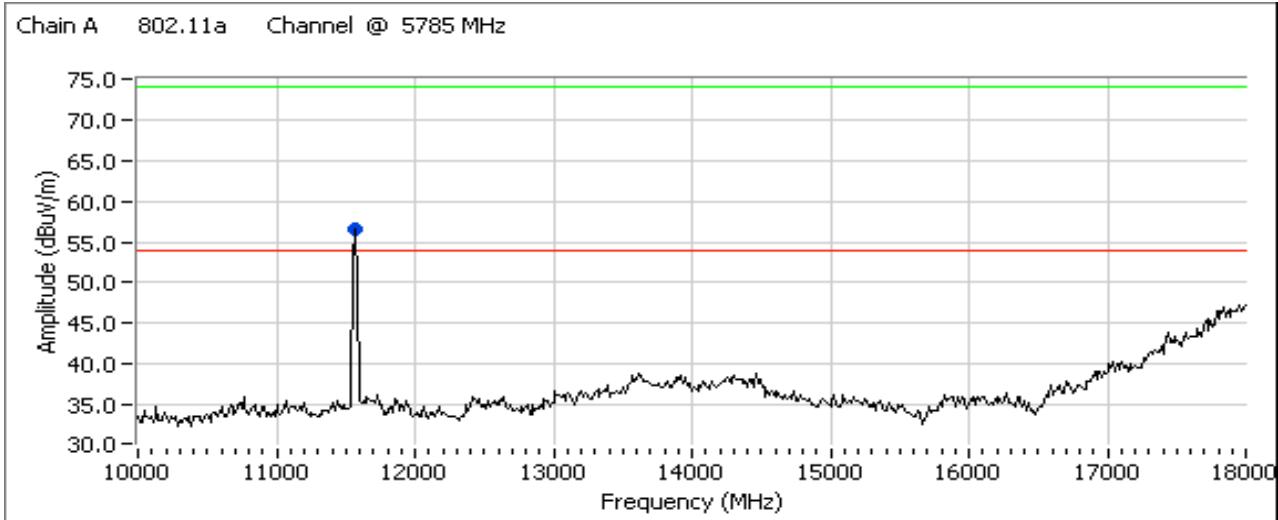
Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band.

Chain A 802.11a Channel @ 5785 MHz



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |





EMC Test Data

| Client: | Intel Corporation | | | | | Job Number: | J70976 | | | | | |
|--|---|-----|-----------------|----------|--------------|--|--------------|--|--|--|--|--|
| Model: | 533AN-MMW(MMC) | | | | | T-Log Number: | T71133 | | | | | |
| Contact: | Robert Paxman | | | | | Account Manager: | Dean Eriksen | | | | | |
| Standard: | FCC | | | | | Class: | N/A | | | | | |
| Run #1c: High Channel @ 5825 MHz | | | | | | | | | | | | |
| Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz | | | | | | | | | | | | |
| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments | | | | | |
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | | | | | |
| 5826.270 | 99.8 | V | - | - | Pk | 145 | 1.0 | | | | | |
| 5823.750 | 94.0 | H | - | - | Pk | 261 | 1.0 | | | | | |
| Fundamental emission level @ 3m in 100kHz RBW: | | | | 99.8 | dB μ V/m | | | | | | | |
| Limit for emissions outside of restricted bands: | | | | 69.8 | dB μ V/m | Limit is -30dBc (UNII power measurement) | | | | | | |
| Spurious Emissions | | | | | | | | | | | | |
| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments | | | | | |
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | | | | | |
| 11641.420 | 49.5 | V | 54.0 | -4.5 | AVG | 156 | 1.0 | | | | | |
| 11641.420 | 62.3 | V | 74.0 | -11.7 | PK | 156 | 1.0 | | | | | |
| 1743.280 | 59.4 | V | 69.8 | -10.4 | PK | 24 | 1.0 | | | | | |
| 5578.060 | 48.5 | V | 69.8 | -21.3 | PK | 143 | 1.0 | | | | | |
| Note 1: | For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz. | | | | | | | | | | | |
| Note 2: | Signal is not in a restricted band. | | | | | | | | | | | |



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11a Chain B

Run #2a: Low Channel @ 5745 MHz

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 5743.720 | 102.4 | V | - | - | Pk | 167 | 1.0 |
| 5746.250 | 94.2 | H | - | - | Pk | 174 | 1.0 |

Fundamental emission level @ 3m in 100kHz RBW: 102.4 dB μ V/m

Limit for emissions outside of restricted bands: 72.4 dB μ V/m

Limit is -30dBc (UNII power measurement)

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 7660.040 | 46.7 | V | 54.0 | -7.3 | AVG | 117 | 1.0 |
| 11484.250 | 43.6 | V | 54.0 | -10.4 | AVG | 171 | 1.0 |
| 1743.810 | 59.3 | V | 72.4 | -13.1 | PK | 23 | 1.0 |
| 11484.250 | 55.6 | V | 74.0 | -18.4 | PK | 171 | 1.0 |
| 7660.040 | 51.5 | V | 74.0 | -22.5 | PK | 117 | 1.0 |

Run #2b: Center Channel @ 5785 MHz

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 5786.290 | 101.1 | V | - | - | Pk | 219 | 1.0 |
| 5783.730 | 93.7 | H | - | - | Pk | 175 | 1.0 |

Fundamental emission level @ 3m in 100kHz RBW: 101.1 dB μ V/m

Limit for emissions outside of restricted bands: 71.1 dB μ V/m

Limit is -30dBc (UNII power measurement)

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 7713.380 | 44.6 | V | 54.0 | -9.4 | AVG | 160 | 1.0 |
| 11570.290 | 43.7 | V | 54.0 | -10.3 | AVG | 85 | 1.0 |
| 11570.290 | 56.6 | V | 74.0 | -17.4 | PK | 85 | 1.0 |
| 1744.230 | 56.0 | V | 71.1 | -15.1 | PK | 8 | 1.5 |
| 7713.380 | 49.5 | V | 74.0 | -24.5 | PK | 160 | 1.0 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band.



EMC Test Data

| Client: | Intel Corporation | | | | | Job Number: | J70976 | | | | | |
|--|---|-----|-----------------|----------|--------------|--|--------------|--|--|--|--|--|
| Model: | 533AN-MMW(MMC) | | | | | T-Log Number: | T71133 | | | | | |
| Contact: | Robert Paxman | | | | | Account Manager: | Dean Eriksen | | | | | |
| Standard: | FCC | | | | | Class: | N/A | | | | | |
| Run #2c: High Channel @ 5825 MHz | | | | | | | | | | | | |
| Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz | | | | | | | | | | | | |
| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments | | | | | |
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | | | | | |
| 5826.280 | 95.8 | H | - | - | Pk | 173 | 1.0 | | | | | |
| 5826.270 | 99.9 | V | - | - | Pk | 219 | 1.0 | | | | | |
| Fundamental emission level @ 3m in 100kHz RBW: | | | | 99.9 | dB μ V/m | | | | | | | |
| Limit for emissions outside of restricted bands: | | | | 69.9 | dB μ V/m | Limit is -30dBc (UNII power measurement) | | | | | | |
| Spurious Emissions | | | | | | | | | | | | |
| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments | | | | | |
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | | | | | |
| 11650.630 | 49.6 | V | 54.0 | -4.4 | AVG | 244 | 1.0 | | | | | |
| 11650.630 | 61.6 | V | 74.0 | -12.4 | PK | 244 | 1.0 | | | | | |
| 1743.810 | 58.7 | V | 69.9 | -11.2 | PK | 5 | 1.0 | | | | | |
| 7766.640 | 49.5 | V | 69.9 | -20.4 | PK | 118 | 1.0 | | | | | |
| Note 1: | For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz. | | | | | | | | | | | |
| Note 2: | Signal is not in a restricted band. | | | | | | | | | | | |



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Date of Test: 4/3/2008
Test Engineer: Ben Jing
Test Location: Chamber # 3

Run #3: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11a Chain C

Run #3a: Low Channel @ 5745 MHz

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 5746.260 | 101.6 | V | - | - | Pk | 189 | 1.0 |
| 5746.270 | 98.9 | H | - | - | Pk | 96 | 1.0 |

| | | |
|--|-------|--------------|
| Fundamental emission level @ 3m in 100kHz RBW: | 101.6 | dB μ V/m |
| Limit for emissions outside of restricted bands: | 71.6 | dB μ V/m |

Limit is -30dBc (UNII power measurement)

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 11490.170 | 44.8 | V | 54.0 | -9.2 | AVG | 232 | 1.0 |
| 1747.660 | 58.1 | V | 71.6 | -13.5 | PK | 287 | 1.5 |
| 11490.170 | 57.0 | V | 74.0 | -17.0 | PK | 232 | 1.0 |
| 3484.920 | 53.1 | V | 71.6 | -18.5 | PK | 229 | 1.0 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band.



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3b: Center Channel @ 5785 MHz

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 5786.250 | 100.4 | V | - | - | Pk | 191 | 1.0 |
| 5783.730 | 97.9 | H | - | - | Pk | 97 | 1.0 |

Fundamental emission level @ 3m in 100kHz RBW: 100.4 dB μ V/m

Limit for emissions outside of restricted bands: 70.4 dB μ V/m Limit is -30dBc (UNII power measurement)

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 11569.830 | 44.5 | V | 54.0 | -9.5 | AVG | 234 | 1.0 |
| 1748.060 | 57.1 | H | 70.4 | -13.3 | PK | 329 | 1.5 |
| 11569.830 | 56.1 | V | 74.0 | -17.9 | PK | 234 | 1.0 |
| 3487.730 | 49.6 | V | 70.4 | -20.8 | PK | 231 | 1.0 |
| | | | | | | | Note 2 |

Run #3c: High Channel @ 5825 MHz

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 5826.230 | 99.9 | V | - | - | Pk | 196 | 1.0 |
| 5823.750 | 98.7 | H | - | - | Pk | 99 | 1.0 |

Fundamental emission level @ 3m in 100kHz RBW: 99.9 dB μ V/m

Limit for emissions outside of restricted bands: 69.9 dB μ V/m Limit is -30dBc (UNII power measurement)

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 11649.690 | 46.9 | V | 54.0 | -7.1 | AVG | 232 | 1.0 |
| 11649.690 | 58.8 | V | 74.0 | -15.2 | PK | 232 | 1.0 |
| 1747.110 | 56.8 | H | 69.9 | -13.1 | PK | 312 | 2.0 |
| 1996.860 | 49.0 | V | 69.9 | -20.9 | PK | 232 | 1.0 |
| | | | | | | | Note 2 |
| | | | | | | | Note 2 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band.



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS, 5725 - 5850 MHz) Radiated Spurious Emissions 802.11n20 Ethertronics Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 4/3/2008

Config. Used: 1

Test Engineer: Ben Jing

Config Change: None

Test Location: Chamber # 3

Host Unit Voltage 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions:

Temperature: 20 °C

Rel. Humidity: 33 %

Summary of Results

Note - emissions from 18-40GHz covered by testing all three chains transmitting at highest power.

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|--|----------------------------------|---------------|----------------|--------------------------------|------------------------------|--|
| 4 | 802.11n20 Chain A+B+C | 5745 MHz 5785 MHz 5825 MHz | | | Radiated Emissions, 1 - 40 GHz | FCC Part 15.209 / 15.247(c) | 52.7dB μ V/m @ 11649.1MHz (-1.3dB) |
| - | 802.11n20 Chain A | 5745 MHz 5785 MHz 5825 MHz | | | Radiated Emissions, 1 - 40 GHz | FCC Part 15.209 / 15.247(c) | By measuring triple-chain mode at full power we also cover single- and dual-chain modes. |
| - | 802.11n20 Dual Chain modes (A+B, A+C, B+C) | | | | Radiated Emissions, 1 - 40 GHz | FCC Part 15.209 / 15.247(c) | |

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11n 20MHz Chains A+B+C

These tests run at a power setting equal to the highest single-chain settings to cover all possible dual- and triple-chain operating modes.

Run #1a: Low Channel @ 5745 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 31.5 | 16.5 | 30.5 | 16.5 | 31.0 | 16.6 |

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 5746.290 | 104.2 | V | - | - | Pk | 207 | 1.0 |
| 5746.310 | 101.1 | H | - | - | Pk | 250 | 1.0 |

Fundamental emission level @ 3m in 100kHz RBW: 104.2 dB μ V/m

Limit for emissions outside of restricted bands: 74.2 dB μ V/m

Limit is -30dBc (UNII power measurement)

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 11489.860 | 51.1 | V | 54.0 | -2.9 | AVG | 236 | 1.0 |
| 1748.070 | 58.0 | H | 74.2 | -16.2 | PK | 248 | 1.0 |
| 11489.860 | 61.6 | V | 74.0 | -12.4 | PK | 236 | 1.0 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band.

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1b: Center Channel @ 5785 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 32.0 | 16.6 | 31.0 | 16.6 | 31.5 | 16.6 |

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 5783.750 | 106.9 | V | - | - | Pk | 200 | 1.0 |
| 5783.750 | 100.2 | H | - | - | Pk | 100 | 1.0 |

Fundamental emission level @ 3m in 100kHz RBW: 106.9 dB μ V/m

Limit for emissions outside of restricted bands: 76.9 dB μ V/m

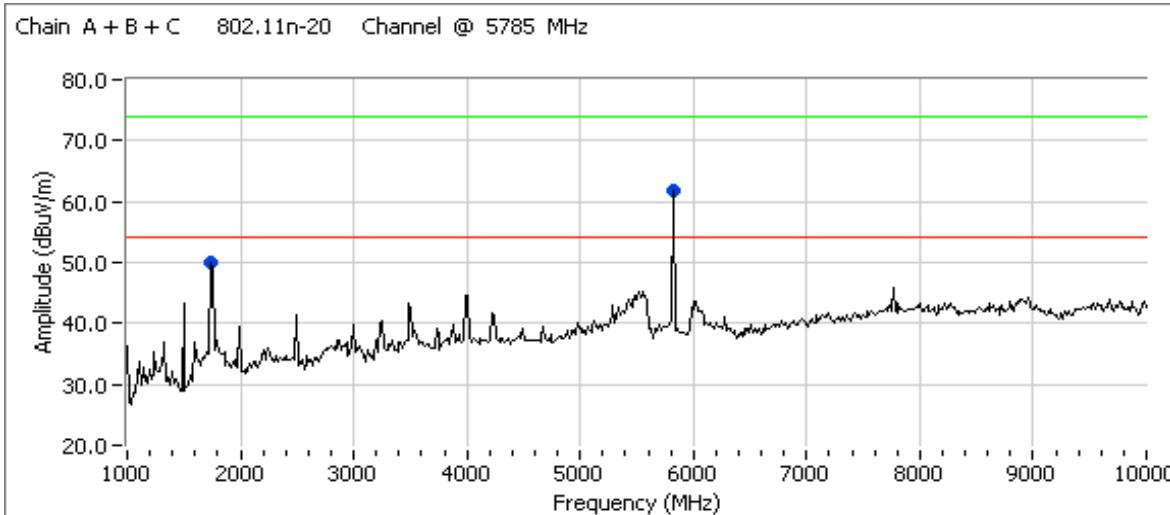
Limit is -30dBc (UNII power measurement)

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 11570.260 | 51.2 | V | 54.0 | -2.8 | AVG | 161 | 1.0 |
| 1744.260 | 57.8 | H | 76.9 | -19.1 | PK | 301 | 1.0 |
| 11570.260 | 62.4 | V | 74.0 | -11.6 | PK | 161 | 1.0 |

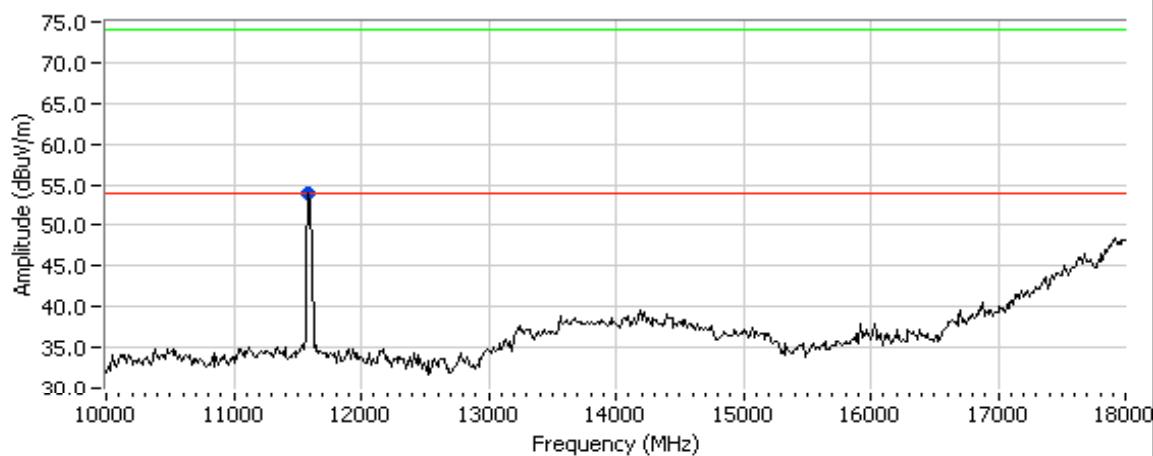
Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band.

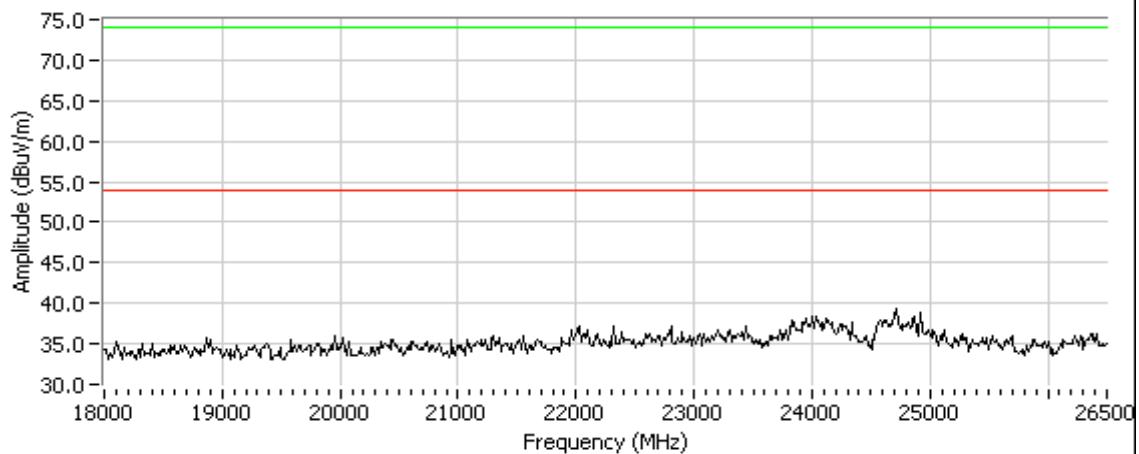


| | |
|---------------------------|-------------------------------|
| Client: Intel Corporation | Job Number: J70976 |
| Model: 533AN-MMW(MMC) | T-Log Number: T71133 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC | Class: N/A |

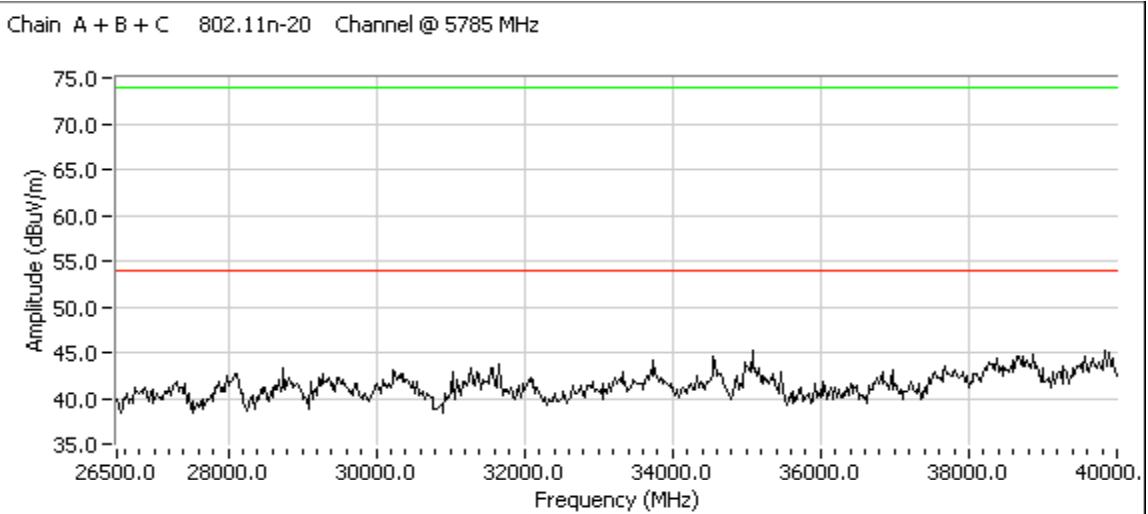
Chain A + B + C 802.11n-20 Channel @ 5785 MHz



Chain A + B + C 802.11n-20 Channel @ 5785 MHz



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |


Run #1c: High Channel @ 5825 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 32.5 | 16.6 | 31.0 | 16.5 | 32.0 | 16.6 |

Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 5826.270 | 105.8 | H | - | - | Pk | 255 | 1.0 |
| 5826.290 | 109.7 | V | - | - | Pk | 202 | 1.0 |

Fundamental emission level @ 3m in 100kHz RBW: 109.7 dB μ V/m

Limit for emissions outside of restricted bands: 79.7 dB μ V/m Limit is -30dBc (UNII power measurement)

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|------------------|--------------|----------|-----------------|-------------|------------|------------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 3996.480 | 35.6 | V | 54.0 | -18.4 | AVG | 295 | 2.0 |
| 11649.050 | 52.7 | V | 54.0 | -1.3 | AVG | 231 | 1.0 |
| 1747.390 | 57.8 | H | 74.0 | -16.2 | PK | 243 | 1.0 |
| 3996.480 | 53.6 | V | 74.0 | -20.4 | PK | 295 | 2.0 |
| 11649.050 | 63.3 | V | 74.0 | -10.7 | PK | 231 | 1.0 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band.



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 Receiver Spurious Emissions - Ethertronics Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 15-25 °C
Rel. Humidity: 35-55 %

Summary of Results

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|----------------|----------|---------------|----------------|-------------------------------|-------------------|--|
| 1a | Chain A RX | 2437 MHz | - | - | Radiated Emissions, 1 - 8GHz | RSS 210 / RSS GEN | 45.9dB μ V/m @ 6498.7MHz (-8.1dB) |
| 1b | Chain A RX | 5785 MHz | - | - | Radiated Emissions, 1 - 18GHz | RSS 210 / RSS GEN | 45.7dB μ V/m @ 7713.4MHz (-8.3dB) |
| 2a | Chain B RX | 2437 MHz | - | - | Radiated Emissions, 1 - 8GHz | RSS 210 / RSS GEN | 45.5dB μ V/m @ 6498.6MHz (-8.5dB) |
| 2b | Chain B RX | 5785 MHz | - | - | Radiated Emissions, 1 - 18GHz | RSS 210 / RSS GEN | 46.5dB μ V/m @ 7713.4MHz (-7.5dB) |
| 3a | Chain C RX | 2437 MHz | - | - | Radiated Emissions, 1 - 8GHz | RSS 210 / RSS GEN | 43.6dB μ V/m @ 6498.6MHz (-10.4dB) |
| 3b | Chain C RX | 5785 MHz | - | - | Radiated Emissions, 1 - 18GHz | RSS 210 / RSS GEN | 45.0dB μ V/m @ 7713.4MHz (-9.0dB) |
| 4a | Chain A+B+C RX | 2437 MHz | - | - | Radiated Emissions, 1 - 8GHz | RSS 210 / RSS GEN | 43.8dB μ V/m @ 7500.1MHz (-10.2dB) |
| 4b | Chain A+B+C RX | 5785 MHz | - | - | Radiated Emissions, 1 - 18GHz | RSS 210 / RSS GEN | 50.1dB μ V/m @ 7713.3MHz (-3.9dB) |

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run # 1: Chain A Rx Radiated Spurious Emissions, 1000 - 18000 MHz

Date of Test: 4/24/2008

Config. Used: 1

Test Engineer: Ben Jing

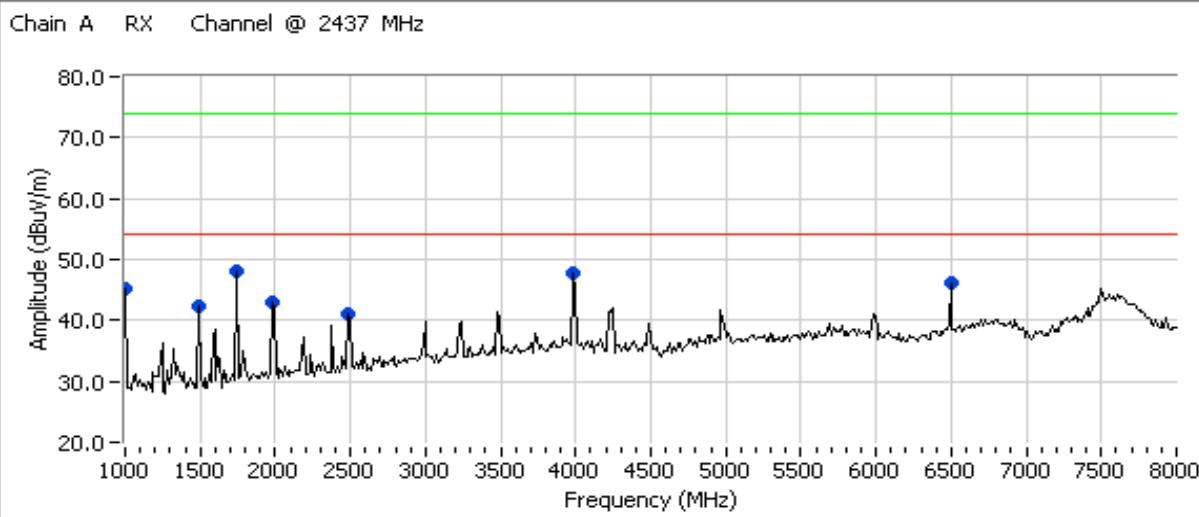
Config Change: None

Test Location: FT Chamber # 3

EUT Voltage: Powered From Host System

Run # 1a: Rx Radiated Spurious Emissions, 1000 - 7500 MHz. Receiver at 2437 MHz, Chain A

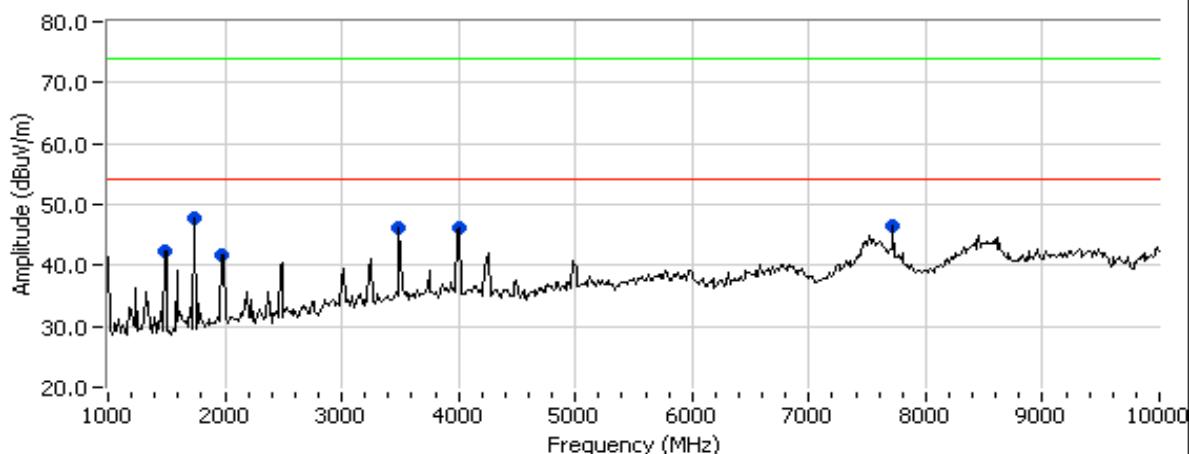
| Frequency | Level | Pol | RSS GEN | | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-------------|-------------|------------|------------|------------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1498.180 | 30.8 | V | 54.0 | -23.2 | AVG | 358 | 1.5 | |
| 1748.310 | 32.0 | V | 54.0 | -22.0 | AVG | 15 | 1.0 | |
| 1996.780 | 34.3 | V | 54.0 | -19.7 | AVG | 246 | 1.0 | |
| 2497.430 | 30.1 | H | 54.0 | -23.9 | AVG | 302 | 2.0 | |
| 3996.420 | 33.2 | V | 54.0 | -20.8 | AVG | 263 | 1.5 | |
| 6498.680 | 45.9 | V | 54.0 | -8.1 | AVG | 199 | 1.5 | |
| 1498.180 | 46.2 | V | 74.0 | -27.8 | PK | 358 | 1.5 | |
| 1748.310 | 53.1 | V | 74.0 | -20.9 | PK | 15 | 1.0 | |
| 1996.780 | 50.4 | V | 74.0 | -23.6 | PK | 246 | 1.0 | |
| 2497.430 | 50.1 | H | 74.0 | -23.9 | PK | 302 | 2.0 | |
| 3996.420 | 54.2 | V | 74.0 | -19.8 | PK | 263 | 1.5 | |
| 6498.680 | 49.9 | V | 74.0 | -24.1 | PK | 199 | 1.5 | |



| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run # 1b: Rx Radiated Spurious Emissions, 1000 - 18000 MHz. Receiver at 5785 MHz, Chain A

| Frequency | Level | Pol | RSS GEN | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|---------|--------|-----------|---------|--------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1497.740 | 33.1 | V | 54.0 | -20.9 | AVG | 0 | 1.0 | |
| 1747.260 | 31.1 | V | 54.0 | -22.9 | AVG | 23 | 1.0 | |
| 1996.820 | 33.4 | V | 54.0 | -20.6 | AVG | 246 | 1.0 | |
| 3495.310 | 31.8 | V | 54.0 | -22.2 | AVG | 232 | 1.0 | |
| 3995.470 | 33.3 | H | 54.0 | -20.7 | AVG | 281 | 1.5 | |
| 7713.370 | 45.7 | V | 54.0 | -8.3 | AVG | 112 | 1.5 | |
| 11569.980 | 36.5 | V | 54.0 | -17.5 | AVG | 130 | 1.0 | |
| 1497.740 | 47.2 | V | 74.0 | -26.8 | PK | 0 | 1.0 | |
| 1747.260 | 51.8 | V | 74.0 | -22.2 | PK | 23 | 1.0 | |
| 1996.820 | 49.7 | V | 74.0 | -24.3 | PK | 246 | 1.0 | |
| 3495.310 | 52.5 | V | 74.0 | -21.5 | PK | 232 | 1.0 | |
| 3995.470 | 53.8 | H | 74.0 | -20.2 | PK | 281 | 1.5 | |
| 7713.370 | 51.5 | V | 74.0 | -22.5 | PK | 112 | 1.5 | |
| 11569.980 | 43.0 | V | 74.0 | -31.0 | PK | 130 | 1.0 | |

Chain A RX Channel @ 5785 MHz


Scan from 10-18GHz not included as no signals observed



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2: Chain B Rx Radiated Spurious Emissions, 1000 - 18000 MHz

Run #2a: Rx Radiated Spurious Emissions, 1000 - 7500 MHz. Receiver at 2437 MHz, Chain B

| Frequency | Level | Pol | RSS GEN | | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-------------|-------------|------------|------------|------------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1497.650 | 31.9 | H | 54.0 | -22.1 | AVG | 154 | 1.5 | |
| 1748.070 | 33.4 | V | 54.0 | -20.6 | AVG | 241 | 1.5 | |
| 1996.950 | 33.9 | V | 54.0 | -20.1 | AVG | 247 | 1.0 | |
| 3495.340 | 31.5 | V | 54.0 | -22.5 | AVG | 232 | 1.0 | |
| 3986.350 | 33.4 | V | 54.0 | -20.6 | AVG | 266 | 1.0 | |
| 6498.610 | 45.5 | V | 54.0 | -8.5 | AVG | 231 | 1.0 | |
| 1497.650 | 46.4 | H | 74.0 | -27.6 | PK | 154 | 1.5 | |
| 1748.070 | 55.6 | V | 74.0 | -18.4 | PK | 241 | 1.5 | |
| 1996.950 | 49.7 | V | 74.0 | -24.3 | PK | 247 | 1.0 | |
| 3495.340 | 53.6 | V | 74.0 | -20.4 | PK | 232 | 1.0 | |
| 3986.350 | 54.3 | V | 74.0 | -19.7 | PK | 266 | 1.0 | |
| 6498.610 | 49.4 | V | 74.0 | -24.6 | PK | 231 | 1.0 | |

Run #2b: Rx Radiated Spurious Emissions, 1000 - 18000 MHz. Receiver at 5785 MHz, Chain B

| Frequency | Level | Pol | RSS GEN | | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-------------|-------------|------------|------------|------------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1497.590 | 32.6 | V | 54.0 | -21.4 | AVG | 14 | 1.0 | |
| 1747.150 | 32.7 | V | 54.0 | -21.3 | AVG | 237 | 1.5 | |
| 3485.760 | 31.9 | V | 54.0 | -22.1 | AVG | 233 | 1.0 | |
| 3992.720 | 32.4 | H | 54.0 | -21.6 | AVG | 221 | 1.5 | |
| 4243.330 | 31.5 | V | 54.0 | -22.5 | AVG | 280 | 1.5 | |
| 7713.390 | 46.5 | V | 54.0 | -7.5 | AVG | 231 | 1.0 | |
| 11569.980 | 41.7 | V | 54.0 | -12.3 | AVG | 178 | 1.0 | |
| 1497.590 | 47.9 | V | 74.0 | -26.1 | PK | 14 | 1.0 | |
| 1747.150 | 54.8 | V | 74.0 | -19.2 | PK | 237 | 1.5 | |
| 3485.760 | 54.0 | V | 74.0 | -20.0 | PK | 233 | 1.0 | |
| 3992.720 | 52.0 | H | 74.0 | -22.0 | PK | 221 | 1.5 | |
| 4243.330 | 49.5 | V | 74.0 | -24.5 | PK | 280 | 1.5 | |
| 7713.390 | 52.6 | V | 74.0 | -21.4 | PK | 231 | 1.0 | |
| 11569.980 | 45.8 | V | 74.0 | -28.2 | PK | 178 | 1.0 | |



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3: Chain C Rx Radiated Spurious Emissions, 1000 - 18000 MHz

Run #3a: Rx Radiated Spurious Emissions, 1000 - 7500 MHz. Receiver at 2437 MHz, Chain C

| Frequency | Level | Pol | RSS GEN | | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-------------|--------------|------------|------------|------------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1747.330 | 31.8 | V | 54.0 | -22.2 | AVG | 230 | 1.0 | |
| 2491.920 | 29.2 | V | 54.0 | -24.8 | AVG | 246 | 1.0 | |
| 3497.300 | 31.9 | V | 54.0 | -22.1 | AVG | 232 | 1.0 | |
| 3985.340 | 32.9 | V | 54.0 | -21.1 | AVG | 258 | 1.0 | |
| 6498.630 | 43.6 | V | 54.0 | -10.4 | AVG | 198 | 1.5 | |
| 7500.080 | 42.2 | V | 54.0 | -11.8 | AVG | 100 | 1.5 | |
| 1747.330 | 52.6 | V | 74.0 | -21.4 | PK | 230 | 1.0 | |
| 2491.920 | 48.2 | V | 74.0 | -25.8 | PK | 246 | 1.0 | |
| 3497.300 | 53.2 | V | 74.0 | -20.8 | PK | 232 | 1.0 | |
| 3985.340 | 53.0 | V | 74.0 | -21.0 | PK | 258 | 1.0 | |
| 6498.630 | 49.0 | V | 74.0 | -25.0 | PK | 198 | 1.5 | |
| 7500.080 | 50.8 | V | 74.0 | -23.2 | PK | 100 | 1.5 | |

Date of Test: 4/28/2008

Test Engineer: Ben Jing

Test Location: FT Chamber # 4

Run #3b: Rx Radiated Spurious Emissions, 1000 - 18000 MHz. Receiver at 5785 MHz, Chain C

| Frequency | Level | Pol | RSS GEN | | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-------------|--------------|------------|------------|------------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1497.700 | 31.6 | V | 54.0 | -22.4 | AVG | 42 | 1.0 | |
| 1747.980 | 33.5 | V | 54.0 | -20.5 | AVG | 245 | 1.5 | |
| 2490.520 | 30.3 | V | 54.0 | -23.7 | AVG | 252 | 1.0 | |
| 3994.440 | 33.0 | H | 54.0 | -21.0 | AVG | 256 | 1.5 | |
| 7713.390 | 45.0 | V | 54.0 | -9.0 | AVG | 112 | 1.0 | |
| 11569.980 | 41.5 | V | 54.0 | -12.5 | AVG | 219 | 1.0 | |
| 1497.700 | 48.0 | V | 74.0 | -26.0 | PK | 42 | 1.0 | |
| 1747.980 | 54.7 | V | 74.0 | -19.3 | PK | 245 | 1.5 | |
| 2490.520 | 50.5 | V | 74.0 | -23.5 | PK | 252 | 1.0 | |
| 3994.440 | 52.2 | H | 74.0 | -21.8 | PK | 256 | 1.5 | |
| 7713.390 | 51.5 | V | 74.0 | -22.5 | PK | 112 | 1.0 | |
| 11569.980 | 45.7 | V | 74.0 | -28.3 | PK | 219 | 1.0 | |



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #4: Chain A+B+C Rx Radiated Spurious Emissions, 1000 - 18000 MHz

Run #4a: Rx Radiated Spurious Emissions, 1000 - 7500 MHz. Receiver at 2437 MHz, Chain A+B+C

| Frequency | Level | Pol | RSS GEN | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|---------|--------|-----------|---------|--------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1497.600 | 31.8 | H | 54.0 | -22.2 | AVG | 285 | 1.0 | |
| 1746.930 | 33.5 | V | 54.0 | -20.5 | AVG | 222 | 1.0 | |
| 2497.990 | 29.8 | V | 54.0 | -24.2 | AVG | 258 | 1.5 | |
| 3236.920 | 31.8 | V | 54.0 | -22.2 | AVG | 193 | 1.0 | |
| 3993.230 | 33.0 | H | 54.0 | -21.0 | AVG | 261 | 1.5 | |
| 7500.100 | 43.8 | V | 54.0 | -10.2 | AVG | 245 | 1.5 | |
| 1497.600 | 49.0 | H | 74.0 | -25.0 | PK | 285 | 1.0 | |
| 1746.930 | 54.1 | V | 74.0 | -19.9 | PK | 222 | 1.0 | |
| 2497.990 | 48.1 | V | 74.0 | -25.9 | PK | 258 | 1.5 | |
| 3236.920 | 49.6 | V | 74.0 | -24.4 | PK | 193 | 1.0 | |
| 3993.230 | 52.2 | H | 74.0 | -21.8 | PK | 261 | 1.5 | |
| 7500.100 | 51.6 | V | 74.0 | -22.4 | PK | 245 | 1.5 | |

Run #4b: Rx Radiated Spurious Emissions, 1000 - 18000 MHz. Receiver at 5785 MHz, Chain A+B+C

| Frequency | Level | Pol | RSS GEN | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|---------|--------|-----------|---------|--------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1497.950 | 32.3 | V | 54.0 | -21.7 | AVG | 71 | 1.3 | |
| 1746.940 | 33.4 | V | 54.0 | -20.6 | AVG | 213 | 1.0 | |
| 3237.050 | 31.5 | V | 54.0 | -22.5 | AVG | 177 | 1.0 | |
| 3990.100 | 32.9 | V | 54.0 | -21.1 | AVG | 267 | 1.3 | |
| 7713.320 | 50.1 | V | 54.0 | -3.9 | AVG | 134 | 1.3 | |
| 11569.960 | 43.3 | V | 54.0 | -10.7 | AVG | 222 | 1.0 | |
| 1497.950 | 48.7 | V | 74.0 | -25.3 | PK | 71 | 1.3 | |
| 1746.940 | 53.9 | V | 74.0 | -20.1 | PK | 213 | 1.0 | |
| 3237.050 | 48.3 | V | 74.0 | -25.7 | PK | 177 | 1.0 | |
| 3990.100 | 53.0 | V | 74.0 | -21.0 | PK | 267 | 1.3 | |
| 7713.320 | 54.1 | V | 74.0 | -19.9 | PK | 134 | 1.3 | |
| 11569.960 | 46.7 | V | 74.0 | -27.3 | PK | 222 | 1.0 | |



EMC Test Data

| | | | |
|------------------------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| | | Account Manager: | Dean Eriksen |
| Contact: | Robert Paxman | | - |
| Emissions Standard(s): | FCC | Class: | - |
| Immunity Standard(s): | - | Environment: | - |

EMC Test Data DTS Radiated Emissions, Universe Antenna

For The

Intel Corporation

Model

533AN-MMW(MMC)

Date of Last Test: 6/16/2008



EMC Test Data

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS, 2400 - 2483.5 MHz) Band Edge Field Strength 802.11b Universe Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Config. Used: 1
Config Change: None
Host Unit Voltage 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 19 °C
Rel. Humidity: 43 %

Summary of Results

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|--------------------|---------------|---------------|----------------|-----------------------------------|------------------------------|---|
| 1a | 802.11b Chain A | 1 2412MHz | 24.0 | 16. 8 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 49.4dB μ V/m @ 2389.3MHz (-4.6dB) |
| 1b | 802.11b Chain A | 11 2462MHz | 24.0 | 16. 8 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 43.9dB μ V/m @ 2440.9MHz (-10.1dB) |
| 2a | 802.11b Chain B | 1 2412MHz | 25. 0 | 17. 4 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 44.5dB μ V/m @ 2389.4MHz (-9.5dB) |
| 2b | 802.11b Chain B | 11 2462MHz | 26. 0 | 17. 7 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 46.6 dB μ V/m @ 2484.7 MHz (-7.4dB) |
| 3a | 802.11b Chain C | 1 2412MHz | 23. 0 | 16. 5 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 47.4dB μ V/m @ 2389.2MHz (-6.6dB) |
| 3b | 802.11b Chain C | 11 2462MHz | 24. 5 | 16. 9 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 47.2 dB μ V/m @ 2487.8 MHz (-6.8dB) |



EMC Test Data

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Run #1: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11b - Chain A

Sample ID: 0016EA02D660

Date of Test: 6/13/2008

Test Engineer: Peter Sales

Test Location: Fremont Chamber #4

Run #1a: Low Channel @ 2412 MHz

Power Setting: 24.0 Average power: 16.8 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2408.100 | 93.2 | V | 74.0 | 19.2 | PK | 312 | 2.2 |
| 2408.370 | 96.3 | H | 74.0 | 22.3 | PK | 76 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.050 | 58.9 | V | 74.0 | -15.1 | PK | 313 | 2.2 |
| 2389.300 | 47.9 | V | 54.0 | -6.1 | AVG | 313 | 2.2 |
| 2389.690 | 58.9 | H | 74.0 | -15.1 | PK | 76 | 1.0 |
| 2389.270 | 49.4 | H | 54.0 | -4.6 | AVG | 76 | 1.0 |

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1b: High Channel @ 2462 MHz

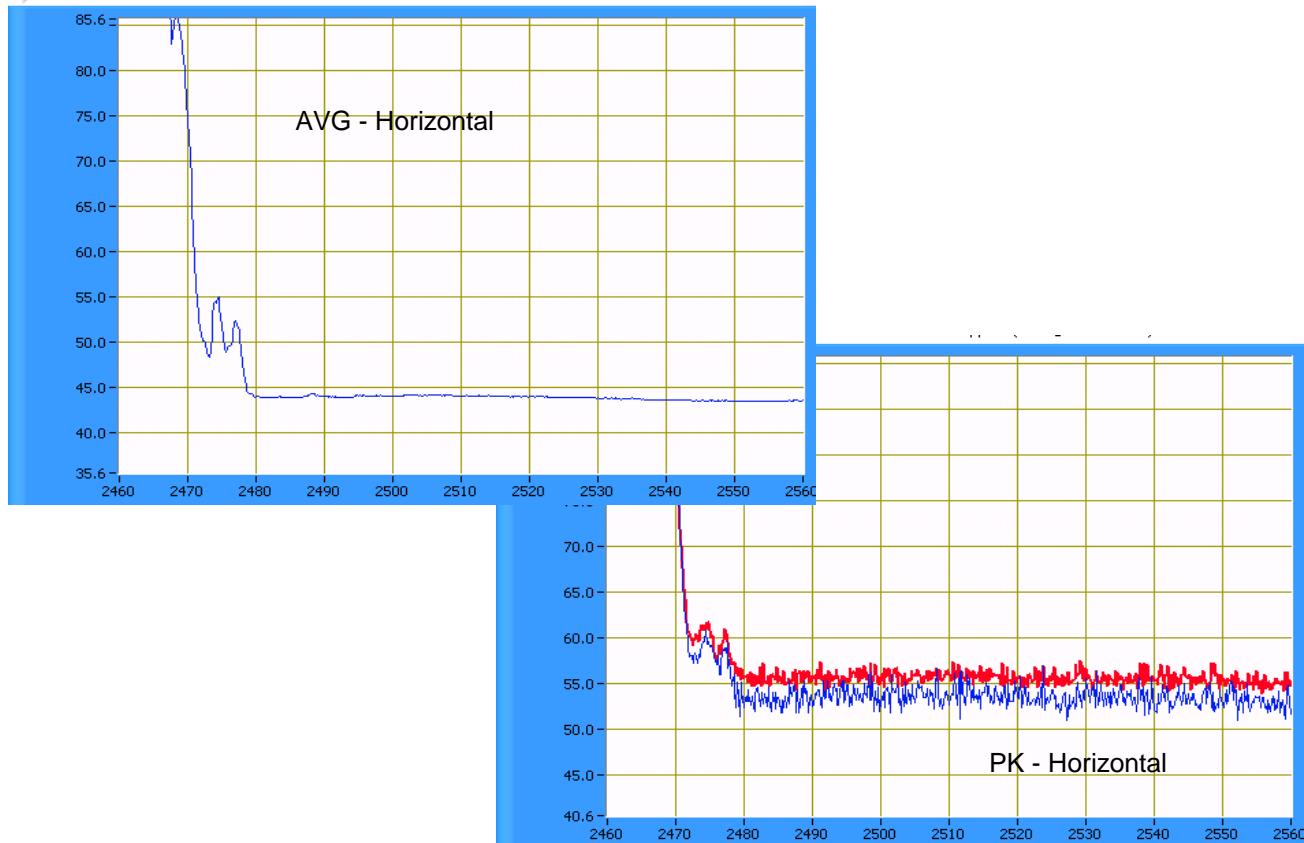
Power Setting: 24.0 Average power: 16.8 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2463.210 | 97.1 | H | 74.0 | 23.1 | PK | 63 | 1.8 |
| 2464.920 | 96.3 | V | 74.0 | 22.3 | PK | 360 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2441.110 | 56.3 | H | 74.0 | -17.7 | PK | 60 | 1.8 |
| 2440.920 | 43.9 | H | 54.0 | -10.1 | AVG | 60 | 1.8 |
| 2441.370 | 56.5 | V | 74.0 | -17.5 | PK | 360 | 1.0 |
| 2440.810 | 43.9 | V | 54.0 | -10.1 | AVG | 360 | 1.0 |





EMC Test Data

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11b - Chain B

Sample ID: 0016EA02D660

Date of Test: 6/14/2008

Test Engineer: Peter Sales

Test Location: Fremont Chamber #4

Run #2a: Low Channel @ 2412 MHz

Power Setting: 25.0 Average power: 17.4 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2412.670 | 97.6 | H | - | - | PK | 238 | 1.0 |
| 2409.270 | 95.9 | V | - | - | PK | 314 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.440 | 56.4 | V | 74.0 | -17.6 | PK | 314 | 1.0 |
| 2389.440 | 44.4 | V | 54.0 | -9.6 | AVG | 314 | 1.0 |
| 2389.690 | 56.2 | H | 74.0 | -17.8 | PK | 236 | 1.0 |
| 2389.430 | 44.5 | H | 54.0 | -9.5 | AVG | 239 | 1.0 |

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Sample ID: 0016EA02D660

Date of Test: 6/14/2008

Test Engineer: Ben Jing

Test Location: Fremont Chamber #4

Run #2b: High Channel @ 2462 MHz

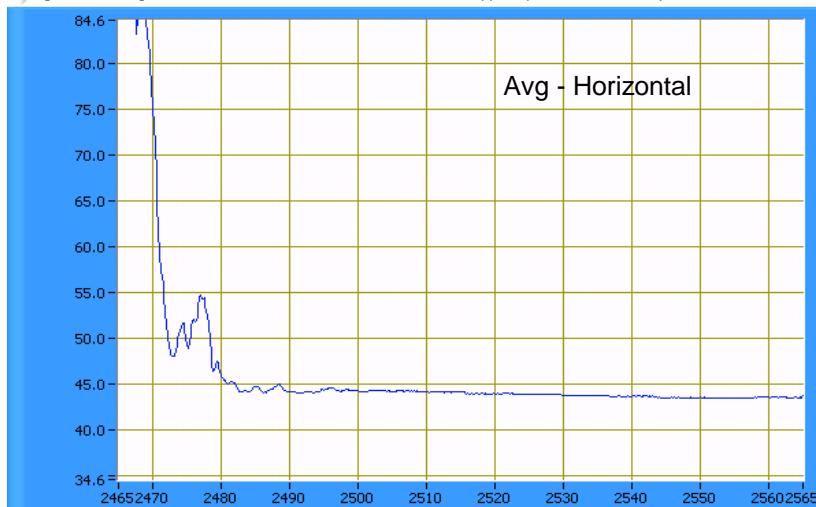
Power Setting: 26.0 Average power: 17.7 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2460.500 | 97.6 | V | - | - | PK | 137 | 1.0 |
| 2463.060 | 97.6 | H | - | - | PK | 264 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2484.900 | 45.3 | V | 54.0 | -8.7 | AVG | 140 | 1.0 |
| 2484.710 | 58.0 | V | 74.0 | -16.0 | PK | 135 | 1.0 |
| 2484.650 | 46.6 | H | 54.0 | -7.4 | AVG | 260 | 1.0 |
| 2484.730 | 58.3 | H | 74.0 | -15.7 | PK | 261 | 1.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11b - Chain C

Sample ID: 0016EA02D660

Date of Test: 6/14/2008

Test Engineer: Ben Jing

Test Location: Fremont Chamber #4

Run #3a: Low Channel @ 2412 MHz

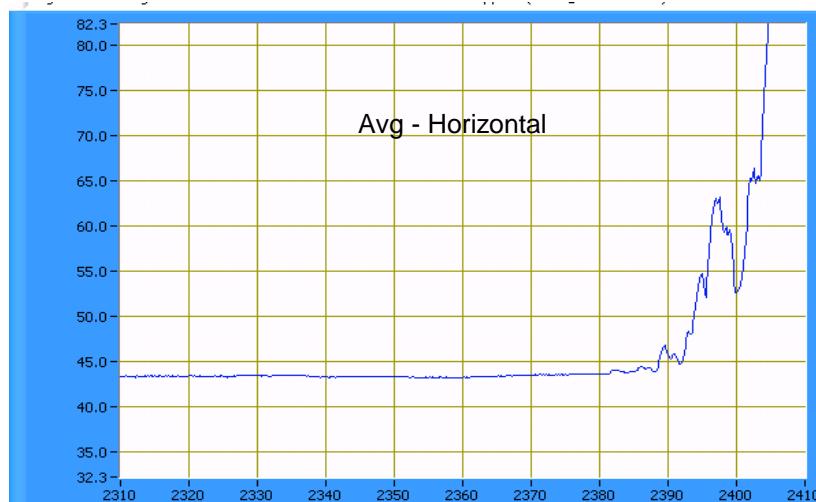
Power Setting: 23.0 Average power: 16.5 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|--------|-----------|---------|--------|------------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 2413.030 | 95.7 | V | - | - | PK | 163 | 1.1 | RB = VB = 100kHz |
| 2413.020 | 100.0 | H | - | - | PK | 221 | 1.0 | RB = VB = 100kHz |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|--------|-----------|---------|--------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 2389.200 | 47.4 | H | 54.0 | -6.6 | AVG | 219 | 1.0 | |
| 2389.570 | 57.6 | H | 74.0 | -16.4 | PK | 219 | 1.0 | |
| 2389.170 | 44.9 | V | 54.0 | -9.1 | AVG | 162 | 1.0 | |
| 2388.750 | 57.1 | V | 74.0 | -16.9 | PK | 160 | 1.0 | |





EMC Test Data

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3b: High Channel @ 2462 MHz

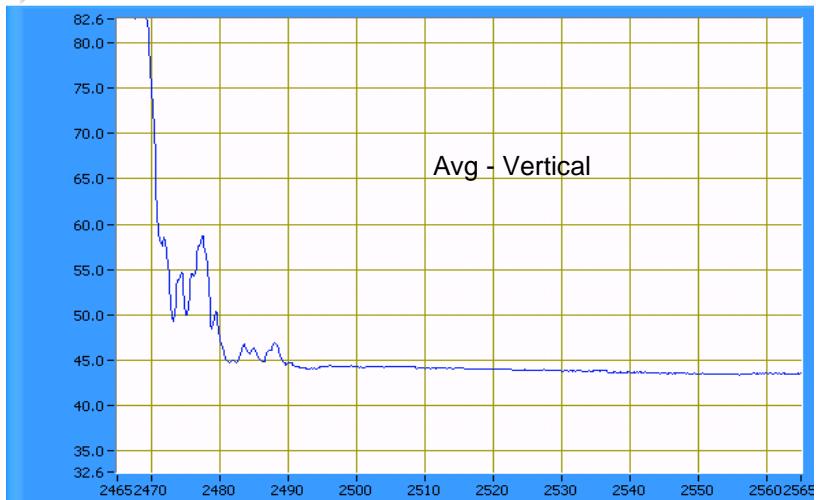
Power Setting: 24.5 Average power: 16.9 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2462.530 | 95.9 | V | - | - | PK | 164 | 1.0 |
| 2461.030 | 95.9 | H | - | - | PK | 258 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2487.850 | 47.0 | H | 54.0 | -7.0 | AVG | 257 | 1.0 |
| 2487.820 | 58.8 | H | 74.0 | -15.2 | PK | 256 | 1.0 |
| 2487.790 | 47.2 | V | 54.0 | -6.8 | AVG | 160 | 1.0 |
| 2487.980 | 59.0 | V | 74.0 | -15.0 | PK | 184 | 1.0 |





EMC Test Data

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS, 2400 - 2483.5 MHz) Radiated Spurious Emissions 802.11b Universe Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Config. Used: 1
Config Change: None
Host Unit Voltage 3.3V DC

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 20 °C
Rel. Humidity: 34 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.



EMC Test Data

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Summary of Results

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|--------------------|-----------|---------------|----------------|-----------------------------------|---------------------------------|--|
| 1a | 802.11b Chain A | 1 (2412) | 24.5 | 16.7 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 31.7dB μ V/m @ 1000.1MHz (-22.3dB) |
| 1b | 802.11b Chain A | 6 (2437) | 24.5 | 16.6 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 38.3dB μ V/m @ 4874.0MHz (-15.7dB) |
| 1c | 802.11b Chain A | 11 (2462) | 25.0 | 16.5 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 47.4dB μ V/m @ 4924.0MHz (-6.6dB) |
| 2a | 802.11b Chain B | 1 (2412) | 24.0 | 16.5 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 36.4dB μ V/m @ 1494.6MHz (-17.6dB) |
| 2b | 802.11b Chain B | 6 (2437) | 24.5 | 16.5 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 39.1dB μ V/m @ 4873.9MHz (-14.9dB) |
| 2c | 802.11b Chain B | 11 (2462) | 25.0 | 16.7 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 36.5dB μ V/m @ 1494.2MHz (-17.5dB) |
| 3a | 802.11b Chain C | 1 (2412) | 23.0 | 16.7 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 32.9dB μ V/m @ 1494.5MHz (-21.1dB) |
| 3b | 802.11b Chain C | 6 (2437) | 23.0 | 16.5 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 32.5dB μ V/m @ 1493.8MHz (-21.5dB) |
| 3c | 802.11b Chain C | 11 (2462) | 23.5 | 16.5 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 46.1 dB μ V/m @ 4924.0 MHz (-7.9dB) |

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, 1000 - 26000 MHz. Operating Mode: 802.11b Chain A

Sample tested: 0016EA02D660

Date of Test: 6/16/2008

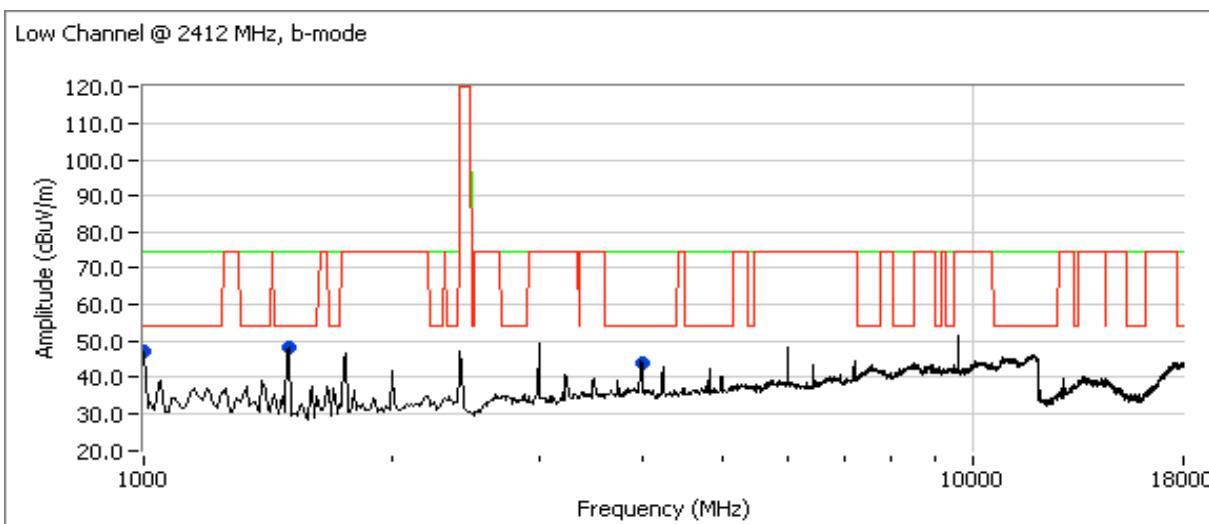
Test Engineer: Suhaila Khushzad

Test Location: Chamber # 5

Config. Used: 1

Config Change: None

Host Unit Voltage 120V/60Hz (EUT 3.3V DC)

Run # 1a : Low Channel @ 2412 MHz

Spurious Emissions

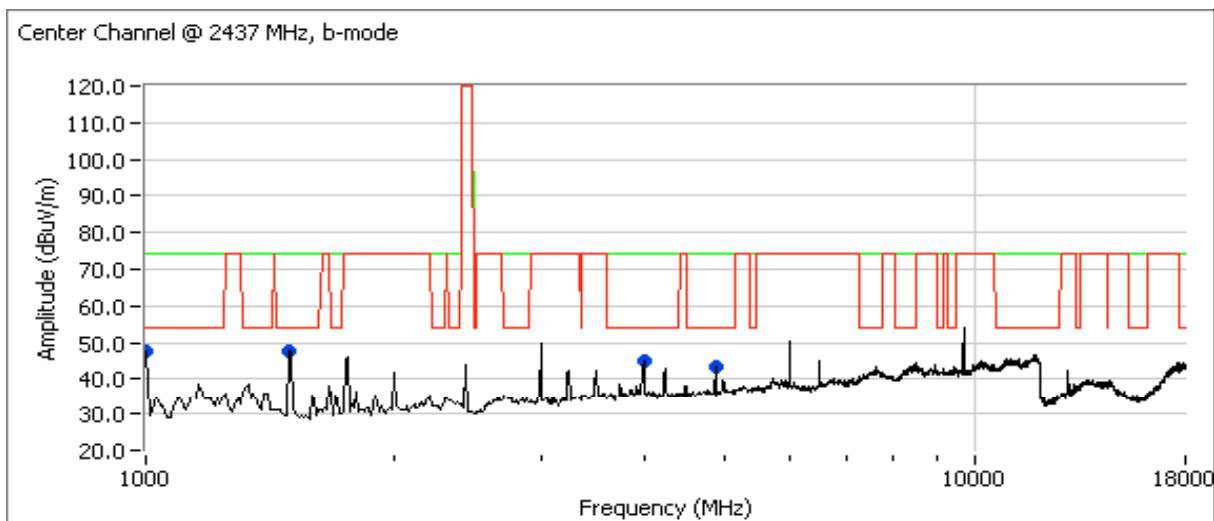
| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1000.110 | 31.7 | V | 54.0 | -22.3 | AVG | 135 | 1.0 |
| 1494.480 | 30.1 | H | 54.0 | -23.9 | AVG | 159 | 1.0 |
| 3994.770 | 25.3 | H | 54.0 | -28.7 | AVG | 142 | 1.6 |
| 1000.110 | 47.7 | V | 74.0 | -26.3 | PK | 135 | 1.0 |
| 1494.480 | 50.3 | H | 74.0 | -23.7 | PK | 159 | 1.0 |
| 3994.770 | 46.1 | H | 74.0 | -27.9 | PK | 142 | 1.6 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, 1000 - 26000 MHz. Operating Mode: 802.11b Chain A

Run # 1b : Center Channel @ 2437 MHz



Spurious Emissions

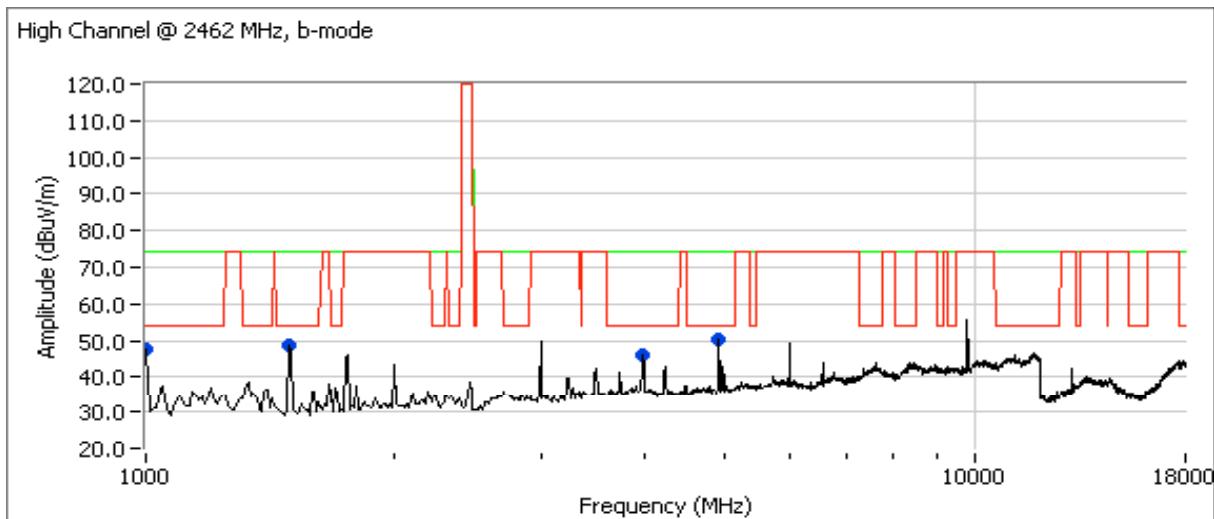
| Frequency | Level | Pol | 15.209 / 15.247 | | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-----------------|--------------|------------|------------|------------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 999.963 | 25.5 | V | 54.0 | -28.5 | AVG | 166 | 1.0 | |
| 1494.210 | 37.7 | H | 54.0 | -16.3 | AVG | 159 | 1.0 | |
| 3981.540 | 33.8 | H | 54.0 | -20.2 | AVG | 174 | 1.3 | |
| 4874.020 | 38.3 | V | 54.0 | -15.7 | AVG | 202 | 1.0 | |
| 999.963 | 40.5 | V | 74.0 | -33.5 | PK | 166 | 1.0 | |
| 1494.210 | 55.0 | H | 74.0 | -19.0 | PK | 159 | 1.0 | |
| 3981.540 | 50.9 | H | 74.0 | -23.1 | PK | 174 | 1.3 | |
| 4874.020 | 46.0 | V | 74.0 | -28.0 | PK | 202 | 1.0 | |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, 1000 - 26000 MHz. Operating Mode: 802.11b Chain A

Run #1c : High Channel @ 2462 MHz



Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-----------------|-------------|------------|------------|------------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 999.991 | 24.9 | V | 54.0 | -29.1 | AVG | 167 | 1.0 | |
| 1494.810 | 37.5 | H | 54.0 | -16.5 | AVG | 165 | 1.0 | |
| 3983.900 | 34.5 | V | 54.0 | -19.5 | AVG | 142 | 1.0 | |
| 4923.960 | 47.4 | V | 54.0 | -6.6 | AVG | 155 | 1.3 | |
| 999.991 | 37.5 | V | 74.0 | -36.5 | PK | 167 | 1.0 | |
| 1494.810 | 54.4 | H | 74.0 | -19.6 | PK | 165 | 1.0 | |
| 3983.900 | 51.1 | V | 74.0 | -22.9 | PK | 142 | 1.0 | |
| 4923.960 | 51.1 | V | 74.0 | -22.9 | PK | 155 | 1.3 | |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11b Chain B

Sample tested: 0016EA02D660

Date of Test: 6/16/2008

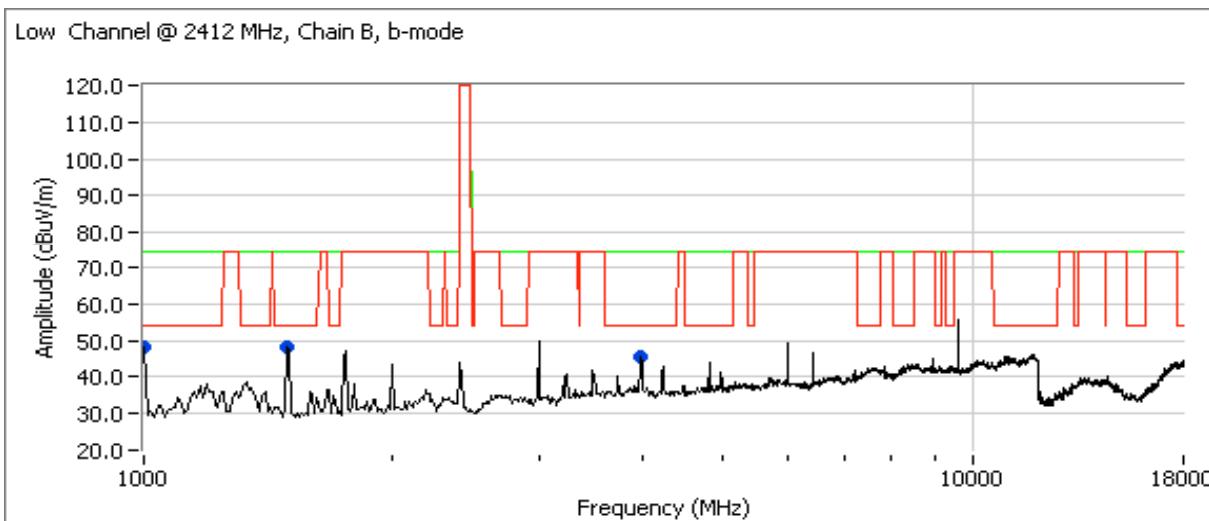
Config. Used: 1

Test Engineer: Suhaila Khushzad

Config Change: None

Test Location: Chamber # 5

Host Unit Voltage 120V/60Hz (EUT 3.3V DC)

Run # 2a : Low Channel @ 2412 MHz

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-----------------|--------------|------------|------------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1000.000 | 26.6 | V | 54.0 | -27.4 | AVG | 163 | 1.0 |
| 1494.570 | 36.4 | H | 54.0 | -17.6 | AVG | 164 | 1.0 |
| 3984.990 | 34.4 | H | 54.0 | -19.6 | AVG | 145 | 1.6 |
| 1000.000 | 39.4 | V | 74.0 | -34.6 | PK | 163 | 1.0 |
| 1494.570 | 53.9 | H | 74.0 | -20.1 | PK | 164 | 1.0 |
| 3984.990 | 51.7 | H | 74.0 | -22.3 | PK | 145 | 1.6 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Client: Intel Corporation

Job Number: J70976

Model: 533AN-MMW(MMC)

T-Log Number: T71851 Band Edge

Contact: Robert Paxman

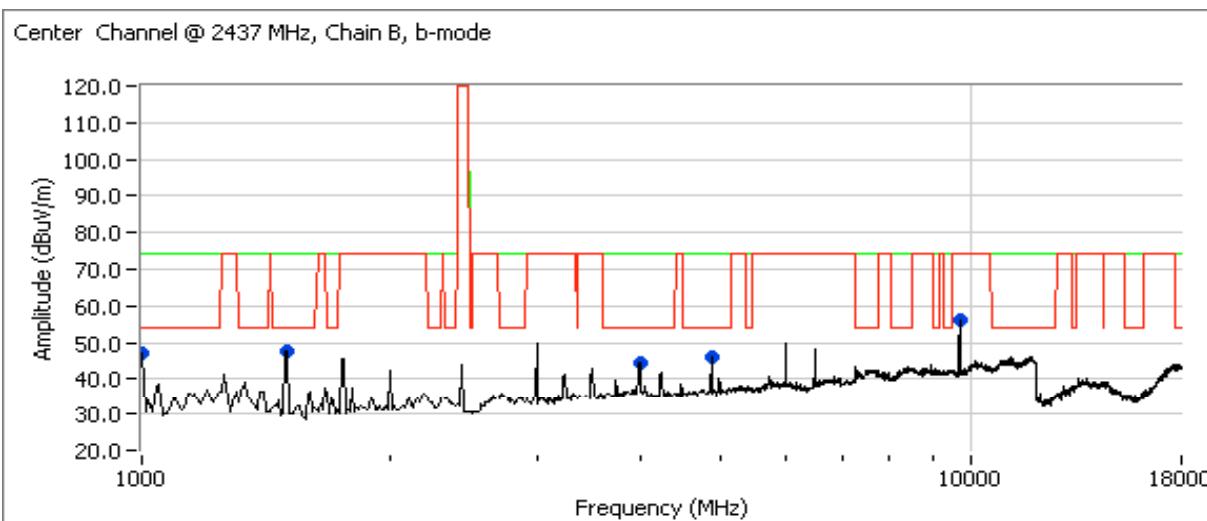
Account Manager: Dean Eriksen

Standard: FCC

Class: N/A

Run #2: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11b Chain B

Run # 2b : Center Channel @ 2437 MHz



Spurious Emissions

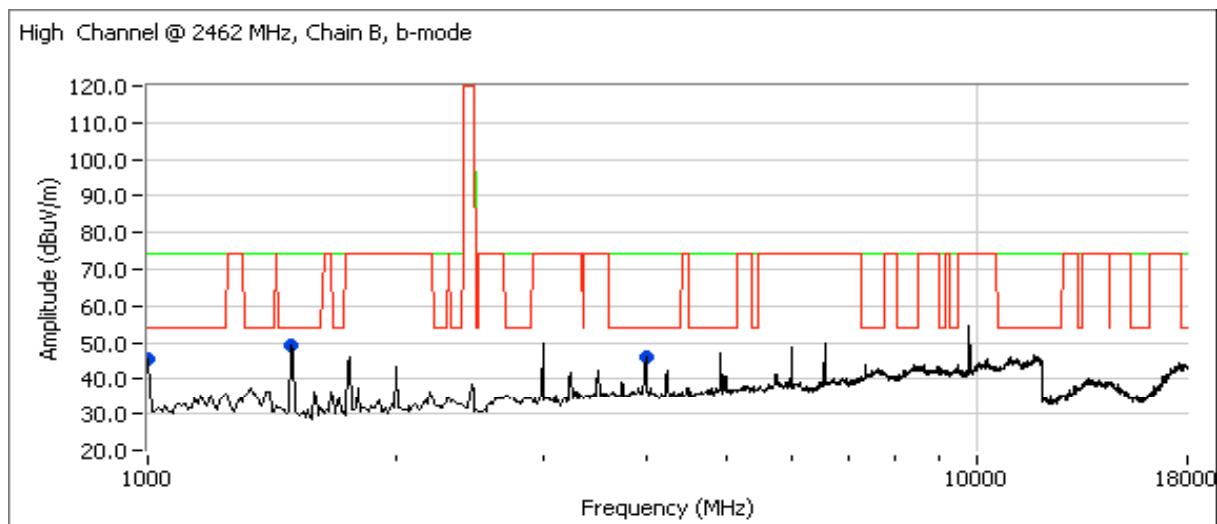
| Frequency | Level | Pol | 15.209 / 15.247 | | Detector | Azimuth | Height | Comments |
|-----------------|-------------|----------|-----------------|--------------|------------|------------|------------|----------|
| MHz | dBµV/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1000.000 | 19.0 | H | 54.0 | -35.0 | AVG | 76 | 1.0 | |
| 1497.180 | 31.0 | H | 54.0 | -23.0 | AVG | 156 | 1.0 | |
| 3984.440 | 25.0 | H | 54.0 | -29.0 | AVG | 146 | 1.6 | |
| 4873.940 | 39.1 | V | 54.0 | -14.9 | AVG | 157 | 1.6 | |
| 9747.820 | 44.4 | V | 74.0 | -29.6 | AVG | 157 | 1.9 | |
| 1000.000 | 34.5 | H | 74.0 | -39.5 | PK | 76 | 1.0 | |
| 1497.180 | 50.3 | H | 74.0 | -23.7 | PK | 156 | 1.0 | |
| 3984.440 | 43.4 | H | 74.0 | -30.6 | PK | 146 | 1.6 | |
| 4873.940 | 42.2 | V | 74.0 | -31.8 | PK | 157 | 1.6 | |
| 9747.820 | 47.5 | V | 74.0 | -26.5 | PK | 157 | 1.9 | |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11b Chain B

Run # 2c : High Channel @ 2462 MHz



Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------------|-------------|----------|-----------------|--------------|------------|------------|------------|
| MHz | dBµV/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 999.953 | 29.8 | V | 54.0 | -24.2 | AVG | 132 | 1.1 |
| 1494.220 | 36.5 | H | 54.0 | -17.5 | AVG | 161 | 1.0 |
| 3985.090 | 34.7 | H | 54.0 | -19.3 | AVG | 145 | 1.6 |
| 999.953 | 45.0 | V | 74.0 | -29.0 | PK | 132 | 1.1 |
| 1494.220 | 54.0 | H | 74.0 | -20.0 | PK | 161 | 1.0 |
| 3985.090 | 52.2 | H | 74.0 | -21.8 | PK | 145 | 1.6 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11b Chain C

Sample tested: 0016EA02D660

Date of Test: 6/17/2008

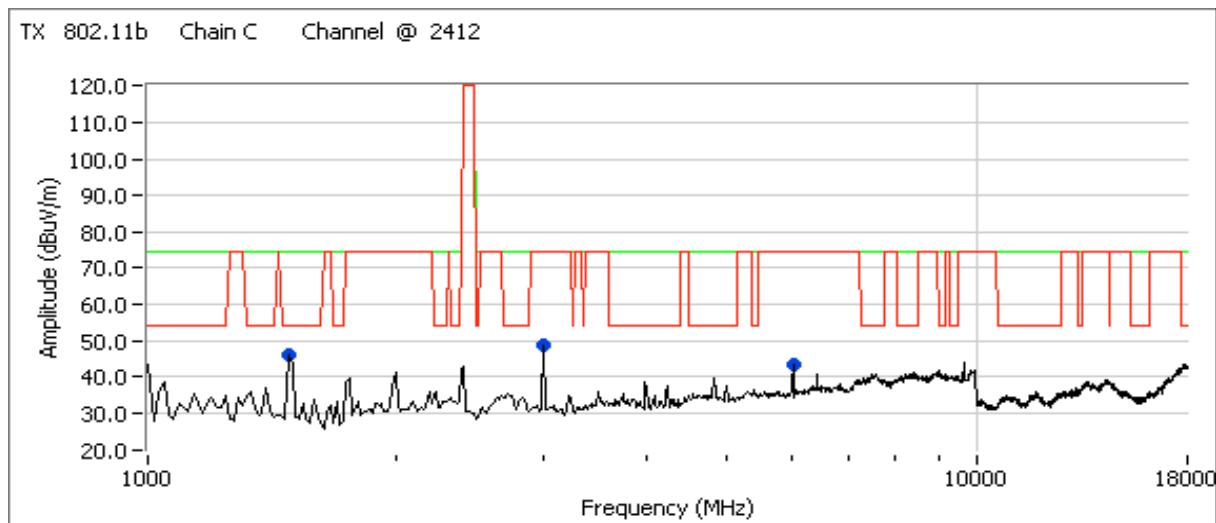
Config. Used: 1

Test Engineer: Ben Jing

Config Change: None

Test Location: Chamber # 4

Host Unit Voltage 120V/60Hz (EUT 3.3V DC)

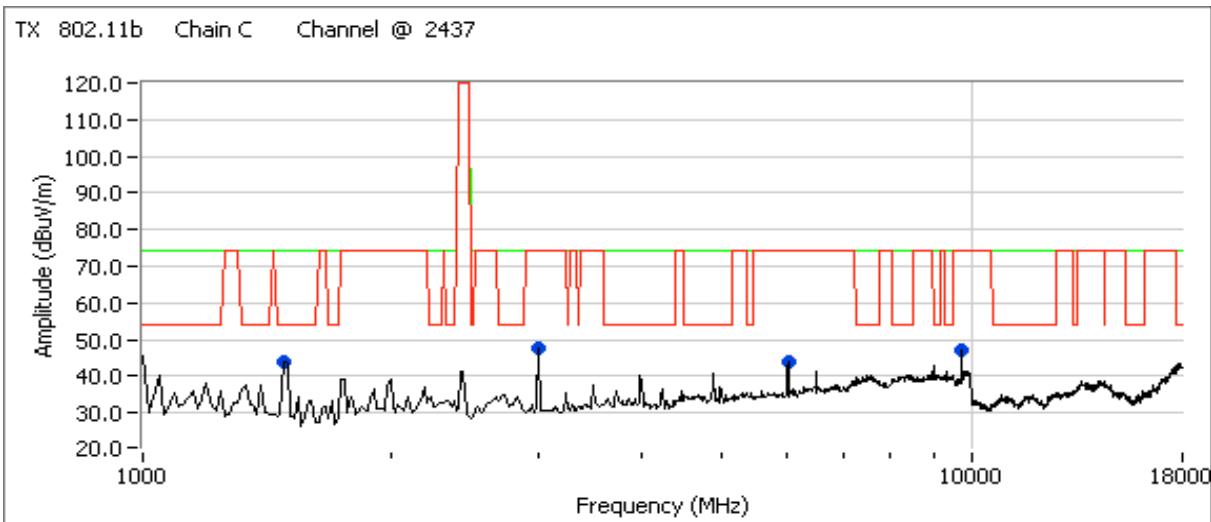
Run #3a : Low Channel @ 2412 MHz

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1494.450 | 32.9 | V | 54.0 | -21.1 | AVG | 92 | 1.0 |
| 3000.410 | 47.9 | V | 74.0 | -26.1 | AVG | 271 | 1.0 |
| 6000.810 | 43.8 | V | 74.0 | -30.2 | AVG | 110 | 1.0 |
| 1494.450 | 50.5 | V | 74.0 | -23.5 | PK | 92 | 1.0 |
| 3000.410 | 51.4 | V | 74.0 | -22.6 | PK | 271 | 1.0 |
| 6000.810 | 48.0 | V | 74.0 | -26.0 | PK | 110 | 1.0 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3b : Center Channel @ 2437 MHz



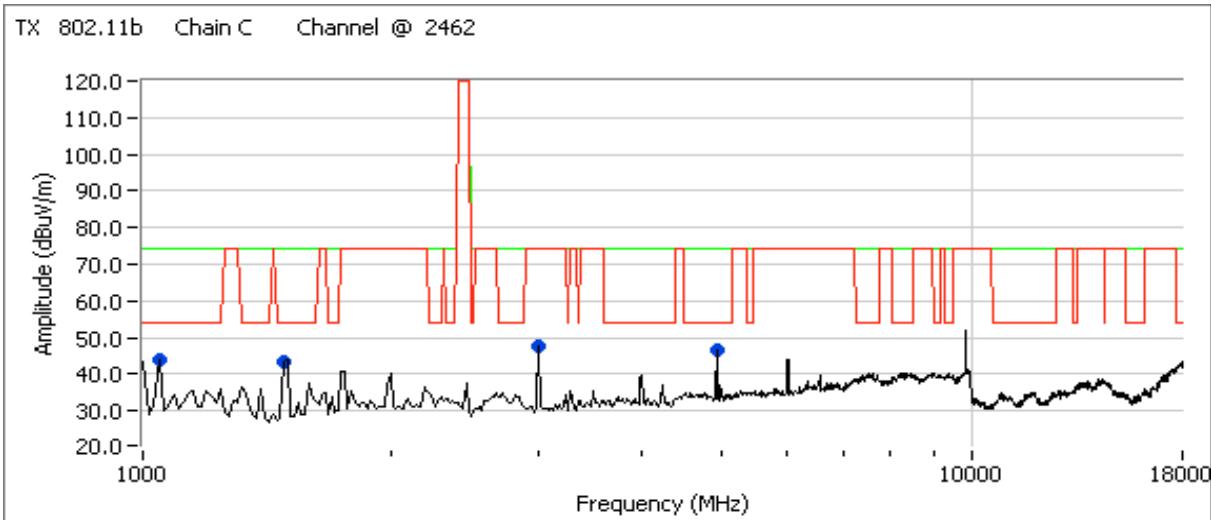
Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1493.840 | 32.5 | V | 54.0 | -21.5 | AVG | 93 | 1.0 |
| 3000.310 | 48.1 | V | 74.0 | -25.9 | AVG | 273 | 1.0 |
| 6000.690 | 44.5 | V | 74.0 | -29.5 | AVG | 108 | 1.0 |
| 9748.010 | 46.5 | V | 74.0 | -27.5 | AVG | 189 | 1.6 |
| 1493.840 | 50.8 | V | 74.0 | -23.2 | PK | 93 | 1.0 |
| 3000.310 | 51.7 | V | 74.0 | -22.3 | PK | 273 | 1.0 |
| 6000.690 | 48.2 | V | 74.0 | -25.8 | PK | 108 | 1.0 |
| 9748.010 | 50.5 | V | 74.0 | -23.5 | PK | 189 | 1.6 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3c : High Channel @ 2462 MHz



Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-----------------|-------------|------------|------------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1055.995 | 28.7 | H | 54.0 | -25.3 | AVG | 193 | 1.0 |
| 1498.380 | 31.9 | V | 54.0 | -22.1 | AVG | 91 | 1.0 |
| 4924.030 | 46.1 | V | 54.0 | -7.9 | AVG | 165 | 1.3 |
| 1055.995 | 39.5 | H | 74.0 | -34.5 | PK | 193 | 1.0 |
| 1498.380 | 49.9 | V | 74.0 | -24.1 | PK | 91 | 1.0 |
| 4924.030 | 48.6 | V | 74.0 | -25.4 | PK | 165 | 1.3 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.



EMC Test Data

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS, 2400 - 2483.5 MHz) Band Edge Field Strength 802.11g Universe Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 20 °C
Rel. Humidity: 55 %

Summary of Results

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|--------------------|---------------|---------------|----------------|-----------------------------------|------------------------------|---|
| 1a | 802.11g Chain A | 1 2412MHz | 24.5 | 12.9 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 72.3 dB μ V/m @ 2389.8 MHz (-1.7dB) |
| 1b | 802.11g Chain A | 11 2462MHz | 27.0 | 15.8 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 73.0 dB μ V/m @ 2483.7 MHz (-1.0dB) |
| 2a | 802.11g Chain B | 1 2412MHz | 28.0 | 16.4 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 48.7dB μ V/m @ 2389.8MHz (-5.3dB) |
| 2b | 802.11g Chain B | 11 2462MHz | 26.0 | 14.6 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 46.4dB μ V/m @ 2483.5MHz (-7.6dB) |
| 3a | 802.11g Chain C | 1 2412MHz | 23.0 | 12.4 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 45.2dB μ V/m @ 2389.9MHz (-8.8dB) |
| 3b | 802.11g Chain C | 11 2462MHz | 24.5 | 13.6 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 46.758.9 @ 2483.62483.9 (-7.3dB) |

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11g - Chain A

Sample ID: 0016EA02D660

Date of Test: 6/14/2008

Test Engineer: Ben Jing

Test Location: Fremont Chamber #4

Run #1a: Low Channel @ 2412 MHz

Power Setting: 24.5 Average power: 12.9 (for reference purposes)

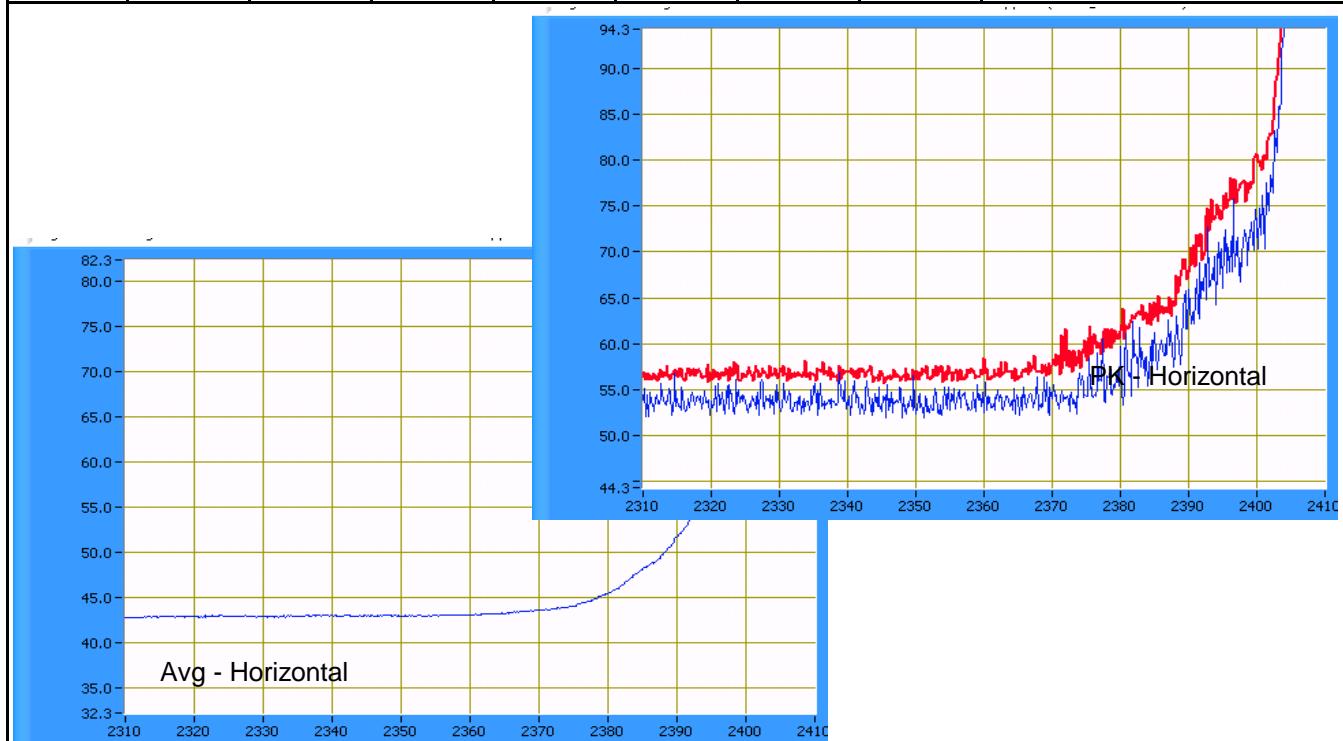
Fundamental Signal Field Strength: Peak and average values measured in 1 MHz, and peak value measured in 100kHz

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2413.300 | 94.0 | V | - | - | PK | 169 | 1.0 |
| 2410.750 | 95.3 | H | - | - | PK | 210 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.890 | 51.9 | H | 54.0 | -2.1 | AVG | 212 | 1.0 |
| 2389.840 | 72.3 | H | 74.0 | -1.7 | PK | 211 | 1.0 |
| 2391.270 | 50.5 | V | 54.0 | -3.5 | AVG | 158 | 1.0 |
| 2389.690 | 70.8 | V | 74.0 | -3.2 | PK | 161 | 1.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1b: High Channel @ 2462 MHz

Power Setting: 27.0 Average power: 15.8 (for reference purposes)

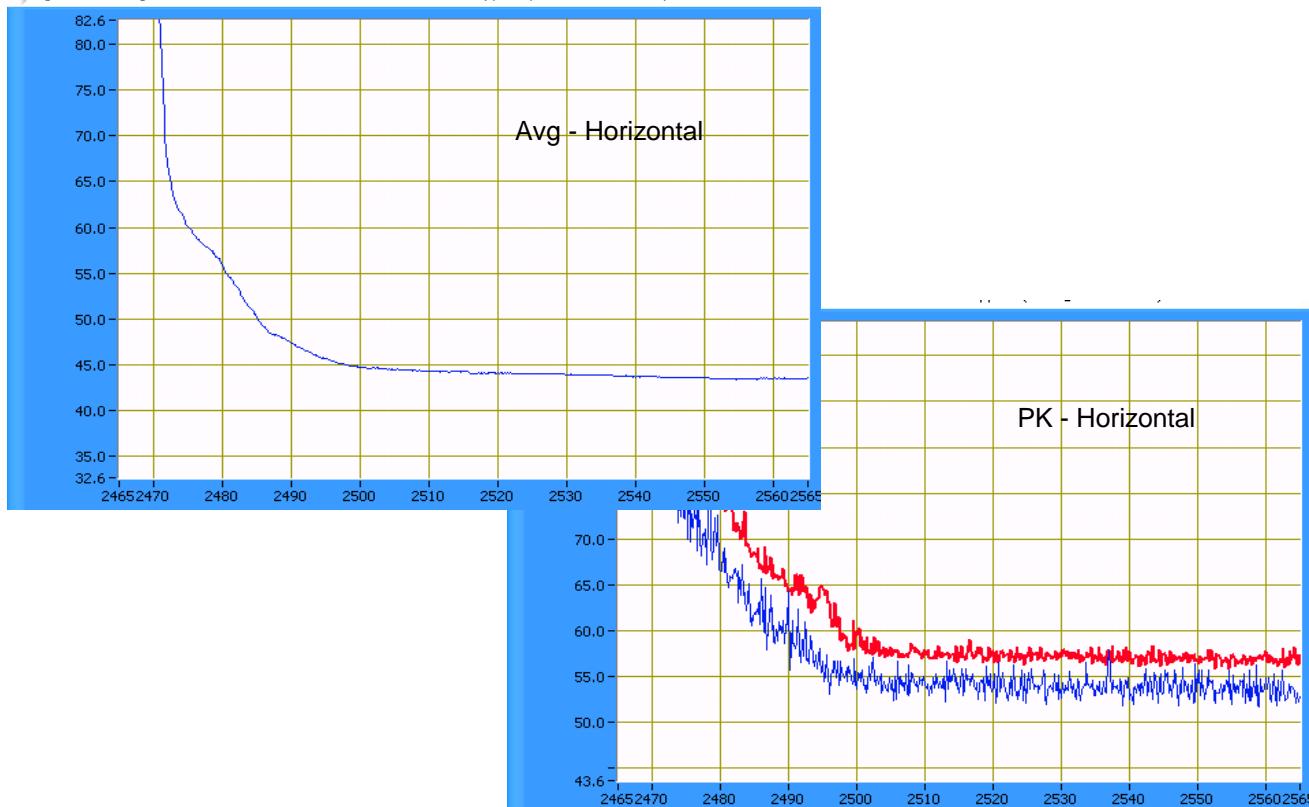
Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2463.310 | 96.5 | V | - | - | PK | 195 | 1.0 |
| 2460.780 | 97.3 | H | - | - | PK | 207 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2483.610 | 52.2 | H | 54.0 | -1.8 | AVG | 210 | 1.2 |
| 2483.680 | 73.0 | H | 74.0 | -1.0 | PK | 208 | 1.2 |
| 2483.630 | 50.1 | V | 54.0 | -3.9 | AVG | 196 | 1.0 |
| 2483.700 | 69.2 | V | 74.0 | -4.8 | PK | 195 | 1.0 |

Note 1 Target GC = 28.0 , AP = 15.8 dBm ; Passing Setting GC = 27.0 , AP = 15.8 dBm ;



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11g - Chain B

Sample ID: 0016EA02D660

Date of Test: 6/14/2008

Test Engineer: Ben Jing

Test Location: Fremont Chamber #4

Run #2a: Low Channel @ 2412 MHz

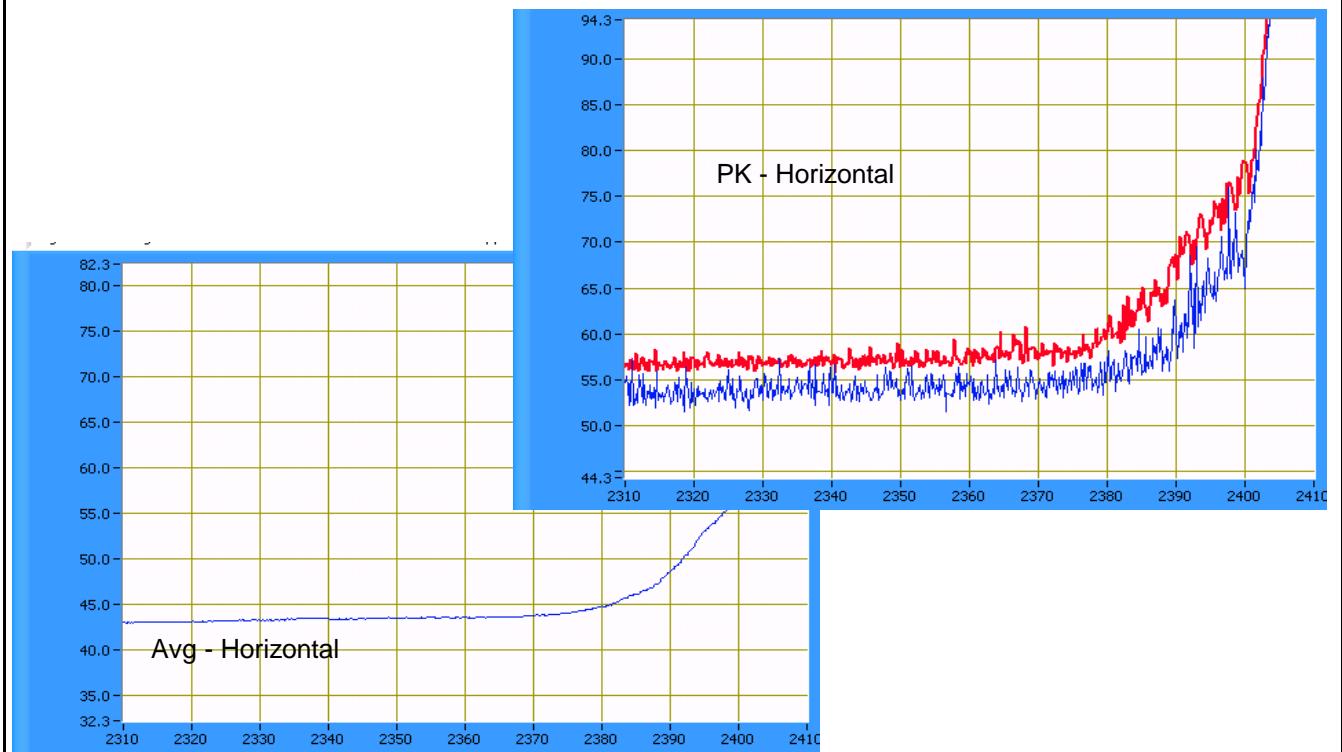
Power Setting: 28.0 Average power: 16.4 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2410.740 | 94.0 | V | - | - | PK | 228 | 1.0 |
| 2410.770 | 96.6 | H | - | - | PK | 239 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.830 | 48.7 | H | 54.0 | -5.3 | AVG | 240 | 1.0 |
| 2389.860 | 66.3 | H | 74.0 | -7.7 | PK | 236 | 1.0 |
| 2389.720 | 47.4 | V | 54.0 | -6.6 | AVG | 226 | 1.0 |
| 2389.790 | 65.9 | V | 74.0 | -8.1 | PK | 228 | 1.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2b: High Channel @ 2462 MHz

Sample ID: 0016EA02D660

Date of Test: 6/16/2008

Test Engineer: Rafael Varelas

Test Location: Fremont Chamber #4

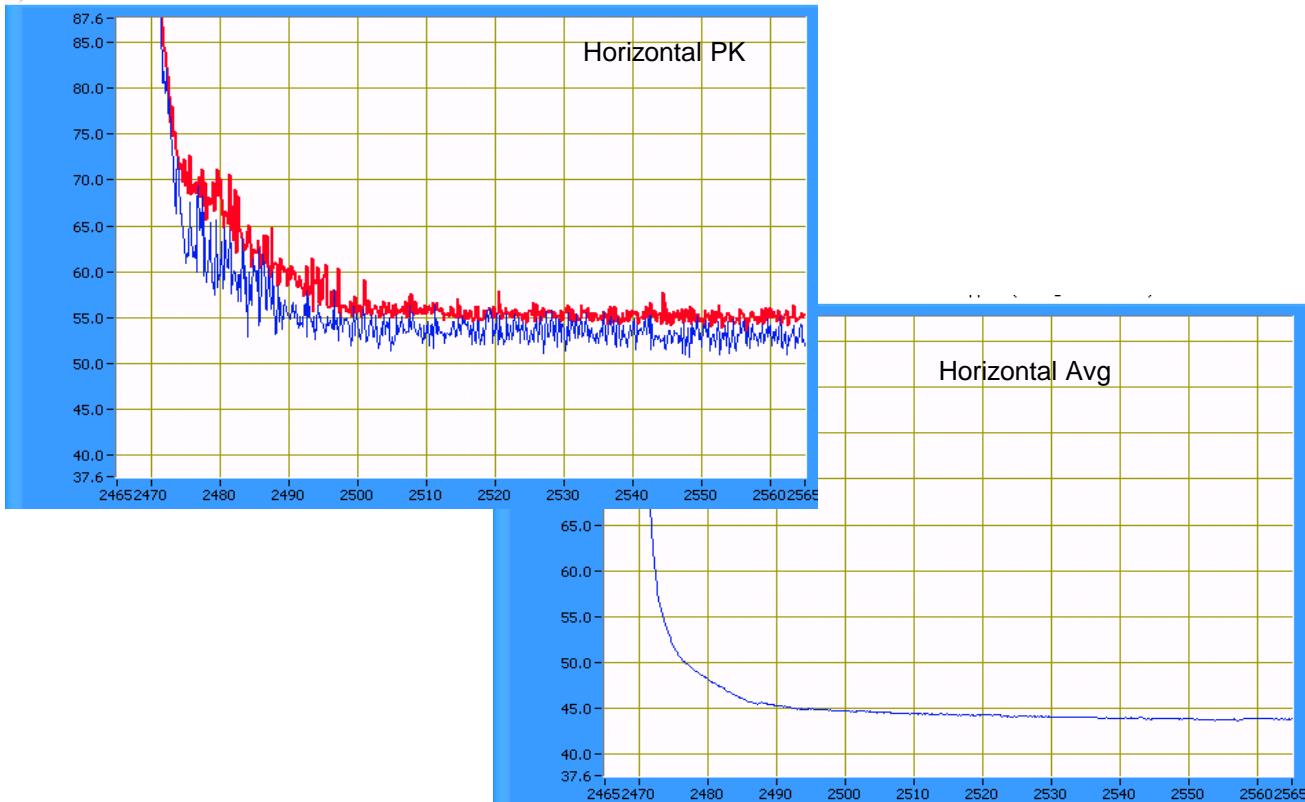
Power Setting: 26 Average power: 14.6 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2454.600 | 91.8 | V | 74.0 | 17.8 | PK | 179 | 1.0 |
| 2469.770 | 93.2 | H | 74.0 | 19.2 | PK | 270 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2483.510 | 46.3 | V | 54.0 | -7.7 | Avg | 179 | 1.0 |
| 2483.860 | 65.1 | V | 74.0 | -8.9 | PK | 179 | 1.0 |
| 2483.500 | 46.4 | H | 54.0 | -7.6 | Avg | 270 | 1.0 |
| 2484.720 | 66.4 | H | 74.0 | -7.6 | PK | 270 | 1.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11g - Chain C

Sample ID: 0016EA02D660

Date of Test: 6/16/2008

Test Engineer: Rafael Varelas

Test Location: Fremont Chamber #4

Run #3a: Low Channel @ 2412 MHz

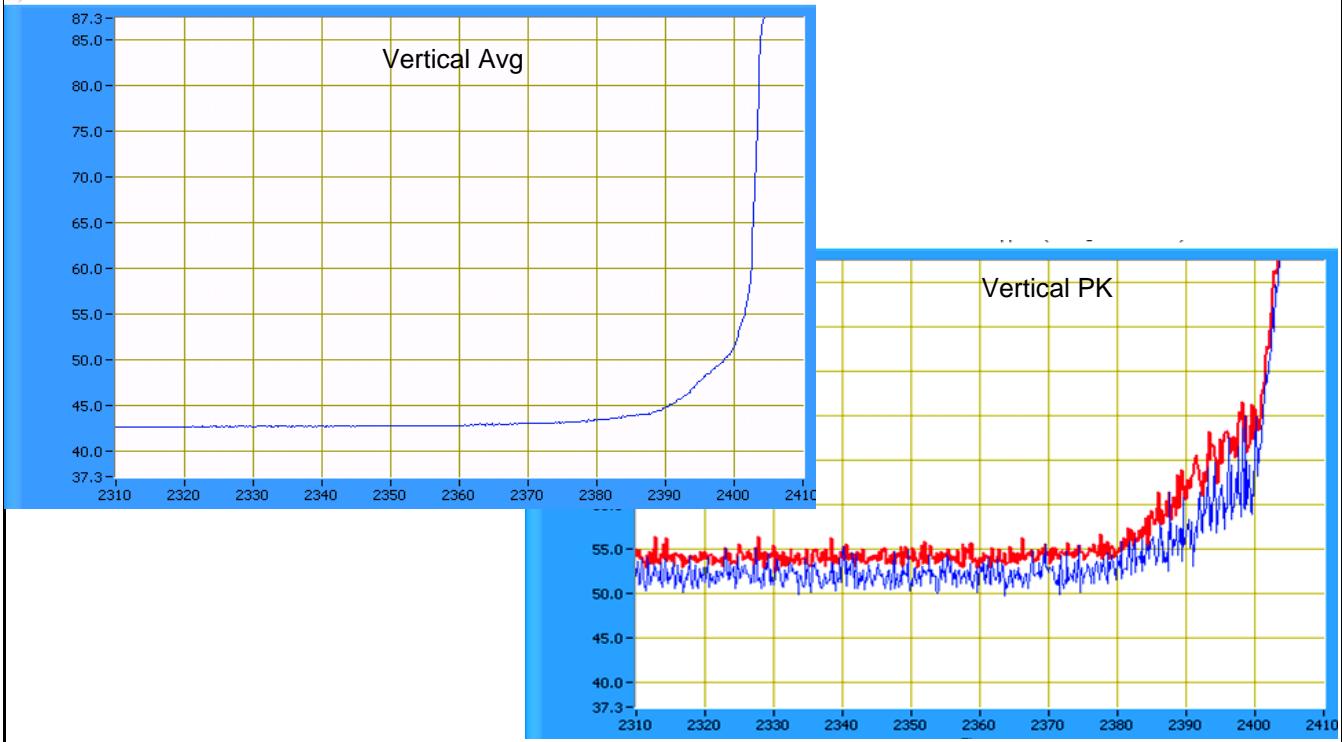
Power Setting: 23 Average power: 12.4 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2408.370 | 92.0 | V | - | - | PK | 137 | 1.1 |
| 2405.830 | 90.2 | H | - | - | PK | 188 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.870 | 45.2 | V | 54.0 | -8.8 | Avg | 137 | 1.1 |
| 2389.990 | 63.5 | V | 74.0 | -10.5 | PK | 137 | 1.1 |
| 2389.750 | 44.4 | H | 54.0 | -9.6 | Avg | 188 | 1.0 |
| 2388.370 | 62.1 | H | 74.0 | -11.9 | PK | 188 | 1.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3b: High Channel @ 2462 MHz

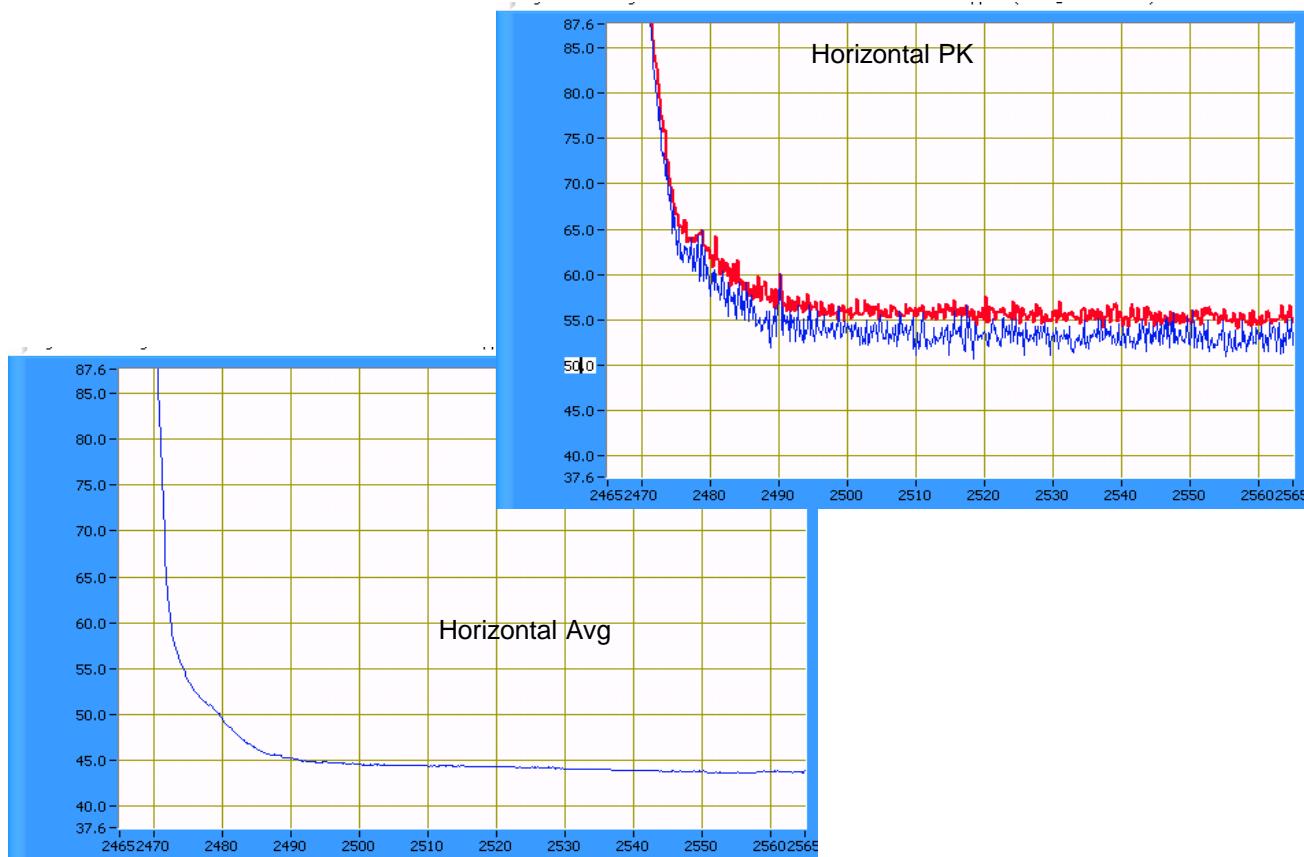
Power Setting: 24.5 Average power: 13.6 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2468.530 | 92.6 | V | - | - | PK | 210 | 1.0 |
| 2468.270 | 94.4 | H | - | - | PK | 250 | 1.6 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2483.500 | 45.4 | V | 54.0 | -8.6 | Avg | 210 | 1.0 |
| 2483.900 | 58.9 | V | 74.0 | -15.1 | PK | 210 | 1.0 |
| 2483.580 | 46.7 | H | 54.0 | -7.3 | Avg | 250 | 1.5 |
| 2484.470 | 60.3 | H | 74.0 | -13.7 | PK | 250 | 1.5 |





EMC Test Data

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS, 2400 - 2483.5 MHz) Radiated Spurious Emissions 802.11g Universe Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 20.1 °C
Rel. Humidity: 43 %

Summary of Results

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|--------------------|-----------|---------------|----------------|-----------------------------------|---------------------------------|--|
| 1 | 802.11g Chain A | 1 (2412) | 27.5 | 16.3 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | Testing with the ethertronics antenna showed that 802.11b mode had higher emissions than 802.11g mode. 802.11b results cover both legacy modes. |
| | | 6 (2437) | 27.5 | 16.2 | | | |
| | | 11 (2462) | 28 | 16.2 | | | |
| 2 | 802.11g Chain B | 1 (2412) | 27.5 | 16.4 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | Testing with the ethertronics antenna showed that 802.11b mode had higher emissions than 802.11g mode. 802.11b results cover both legacy modes. |
| | | 6 (2437) | 27.5 | 16.2 | | | |
| | | 11 (2462) | 28 | 16.4 | | | |
| 3 | 802.11g Chain C | 1 (2412) | 27 | 16.4 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | Testing with the ethertronics antenna showed that 802.11b mode had higher emissions than 802.11g mode. 802.11b results cover both legacy modes. |
| | | 6 (2437) | 28 | 16.4 | | | |
| | | 11 (2462) | 27 | 16.4 | | | |

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.



EMC Test Data

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS, 2400 - 2483.5 MHz) Band Edge Field Strength 802.11n20MHz Universe Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 22 °C
Rel. Humidity: 36 %

Summary of Results

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|------------------------|---------------|---------------|----------------|-----------------------------------|-----------------------------|---|
| 1a | 802.11n20 Chain A | 1 2412MHz | 22.0 | 11.4 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 72.6dB μ V/m @ 2389.6MHz (-1.4dB) |
| 1b | 802.11n20 Chain A | 11 2462MHz | 25.0 | 13.9 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 50.0 dB μ V/m @ 2483.6 MHz (-4.0dB) |
| 2a | 802.11n20 Chain B | 1 2412MHz | 23.5 | 12.3 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 48.6dB μ V/m @ 2389.6MHz (-5.4dB) |
| 2b | 802.11n20 Chain B | 11 2462MHz | 25.5 | 14.0 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 49.6 dB μ V/m @ 2483.6 MHz (-4.4dB) |
| 3a | 802.11n20 Chain C | 1 2412MHz | 23.5 | 12.8 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 72.9dB μ V/m @ 2389.6MHz (-1.1dB) |
| 3b | 802.11n20 Chain C | 11 2462MHz | 24.5 | 14.1 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 52.1dB μ V/m @ 2483.6MHz (-1.9dB) |
| 4a | 802.11n20 Chain A+B | 1 2412MHz | 25.5, 25.5 | 13.0, 12.4 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 51.4dB μ V/m @ 2390.0MHz (-2.6dB) |
| 4b | 802.11n20 Chain A+B | 11 2462MHz | 25.5, 26.5 | 13.3, 13.6 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 48.9dB μ V/m @ 2483.9MHz (-5.1dB) |
| 5a | 802.11n20 Chain A+C | 1 2412MHz | 23.5, 25.0 | 11.1, 13 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 47.9dB μ V/m @ 2389.6MHz (-6.1dB) |
| 5b | 802.11n20 Chain A+C | 11 2462MHz | 26, 26 | 13.8, 14.2 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 48.5dB μ V/m @ 2484.8MHz (-5.5dB) |



EMC Test Data

| Client: | Intel Corporation | | | | Job Number: | J70976 | |
|-----------|------------------------|---------------|-------------------|---------------------|-----------------------------------|------------------------------|---------------------------------------|
| Model: | 533AN-MMW(MMC) | | | | T-Log Number: | T71851 Band Edge | |
| Contact: | Robert Paxman | | | | Account Manager: | Dean Eriksen | |
| Standard: | FCC | | | | Class: | N/A | |
| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
| 6a | 802.11n20 Chain B+C | 1 2412MHz | 25, 24 | 12.2, 12.4 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 45.4dB μ V/m @ 2389.9MHz (-8.6dB) |
| 6b | 802.11n20 Chain B+C | 11 2462MHz | 26.5, 25.5 | 13.8, 13.6 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 47.4dB μ V/m @ 2441.4MHz (-6.6dB) |
| 7a | 802.11n20 A+B+C | 1 2412MHz | 25, 25.5, 24.5 | 12, 12, 12.2 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 47.5dB μ V/m @ 2390.0MHz(-6.5dB) |
| 7b | 802.11n20 A+B+C | 11 2462MHz | 26, 26, 25 | 12.2, 12.4, 12.1 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 47.1dB μ V/m @ 2441.4MHz (-6.9dB) |

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Sample ID:
Date of Test: 6/11/2008
Test Engineer: Ben Jing
Test Location: FT Chamber # 4

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Sample ID: 0016EA02D660

Date of Test: 6/11/2008

Test Engineer: Ben Jing

Test Location: FT Chamber # 4

Run #1: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (20 MHz Channel) - Chain A
Run #1a: Low Channel @ 2412 MHz

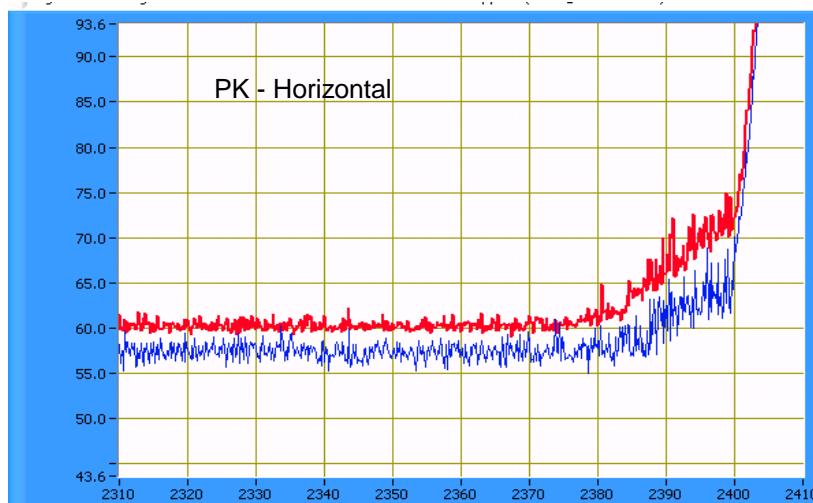
Power Setting: 22.0 Average power: 11.4 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2410.730 | 94.4 | V | - | - | PK | 163 | 1.0 |
| 2410.720 | 96.0 | H | - | - | PK | 245 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.620 | 72.6 | H | 74.0 | -1.4 | PK | 247 | 1.0 |
| 2389.690 | 50.1 | H | 54.0 | -3.9 | AVG | 245 | 1.0 |
| 2389.630 | 65.3 | V | 74.0 | -8.7 | PK | 162 | 1.0 |
| 2389.600 | 48.9 | V | 54.0 | -5.1 | AVG | 164 | 1.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1b: High Channel @ 2462 MHz

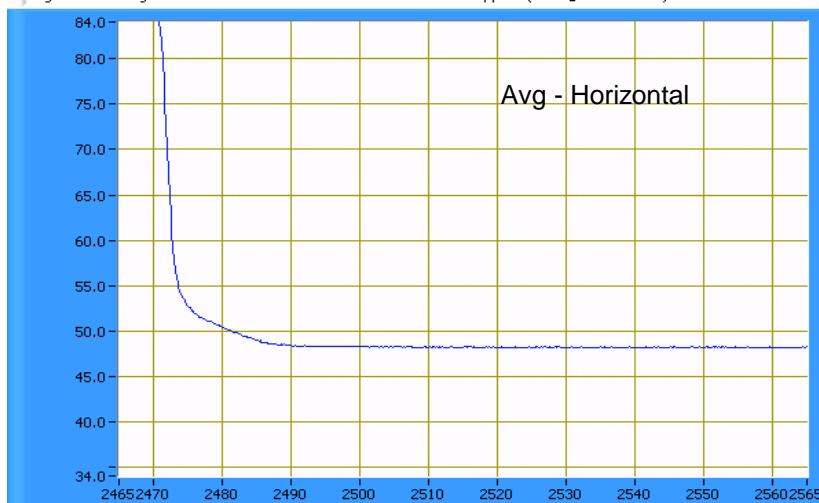
Power Setting: 25.0 Average power: 13.9 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2463.310 | 94.4 | V | - | - | PK | 162 | 1.0 |
| 2463.290 | 94.6 | H | - | - | PK | 209 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2483.740 | 65.0 | H | 74.0 | -9.0 | PK | 209 | 1.0 |
| 2483.600 | 50.0 | H | 54.0 | -4.0 | AVG | 234 | 1.0 |
| 2483.730 | 63.7 | V | 74.0 | -10.3 | PK | 164 | 1.0 |
| 2483.600 | 49.0 | V | 54.0 | -5.0 | AVG | 165 | 1.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (20 MHz Channel) - Chain B

Run #2a: Low Channel @ 2412 MHz

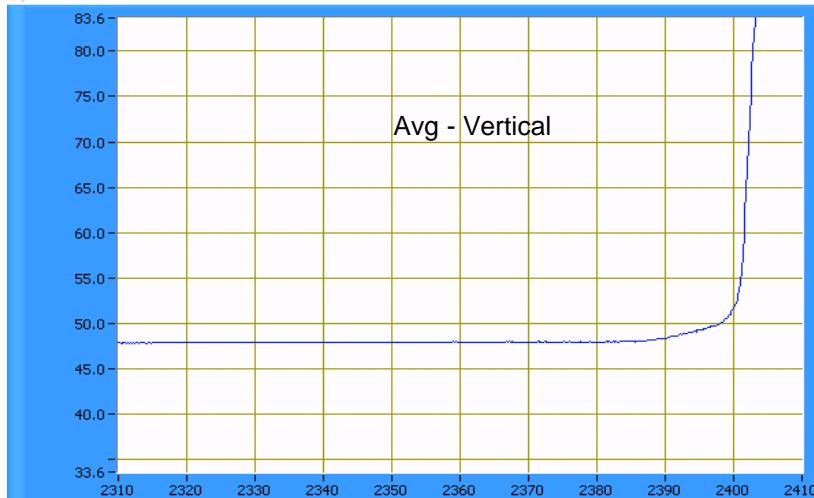
Power Setting: 23.5 Average power: 12.3 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2413.300 | 91.5 | V | - | - | PK | 129 | 1.0 |
| 2413.280 | 89.9 | H | - | - | PK | 277 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.640 | 48.6 | V | 54.0 | -5.4 | AVG | 130 | 1.0 |
| 2389.780 | 62.1 | V | 74.0 | -11.9 | PK | 130 | 1.0 |
| 2389.680 | 60.6 | H | 74.0 | -13.4 | PK | 321 | 1.0 |
| 2389.600 | 48.2 | H | 54.0 | -5.8 | AVG | 267 | 1.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2b: High Channel @ 2462 MHz

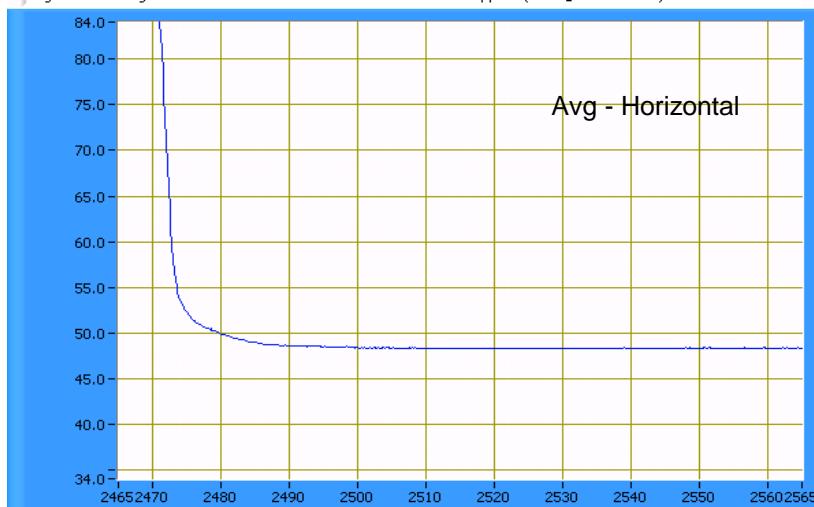
Power Setting: 25.5 Average power: 14.0 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2463.290 | 92.3 | V | - | - | PK | 132 | 1.0 |
| 2461.020 | 92.7 | H | - | - | PK | 236 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2483.600 | 68.6 | H | 74.0 | -5.4 | PK | 216 | 1.0 |
| 2483.600 | 49.6 | H | 54.0 | -4.4 | AVG | 214 | 1.0 |
| 2483.760 | 64.5 | V | 74.0 | -9.5 | PK | 130 | 1.0 |
| 2483.600 | 49.0 | V | 54.0 | -5.0 | AVG | 130 | 1.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (20 MHz Channel) - Chain C

Run #3a: Low Channel @ 2412 MHz

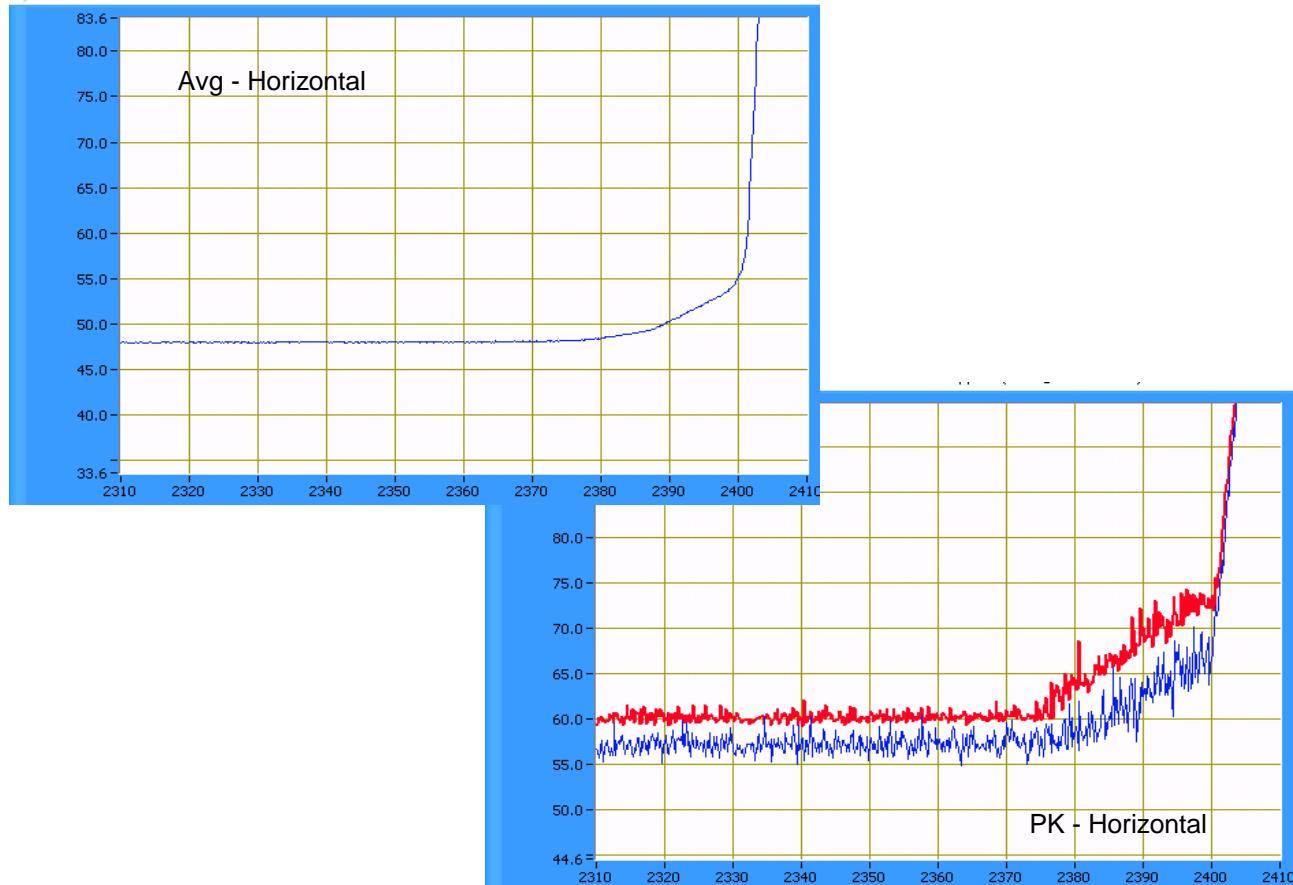
Power Setting: 23.5 Average power: 12.8 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2413.310 | 92.4 | V | 74.0 | 18.4 | PK | 218 | 1.0 |
| 2410.760 | 93.3 | H | 74.0 | 19.3 | PK | 112 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.640 | 72.9 | H | 74.0 | -1.1 | PK | 111 | 1.0 |
| 2389.610 | 50.4 | H | 54.0 | -3.6 | AVG | 112 | 1.0 |
| 2389.630 | 70.3 | V | 74.0 | -3.7 | PK | 217 | 1.0 |
| 2389.600 | 49.7 | V | 54.0 | -4.3 | AVG | 217 | 1.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3b: High Channel @ 2462 MHz

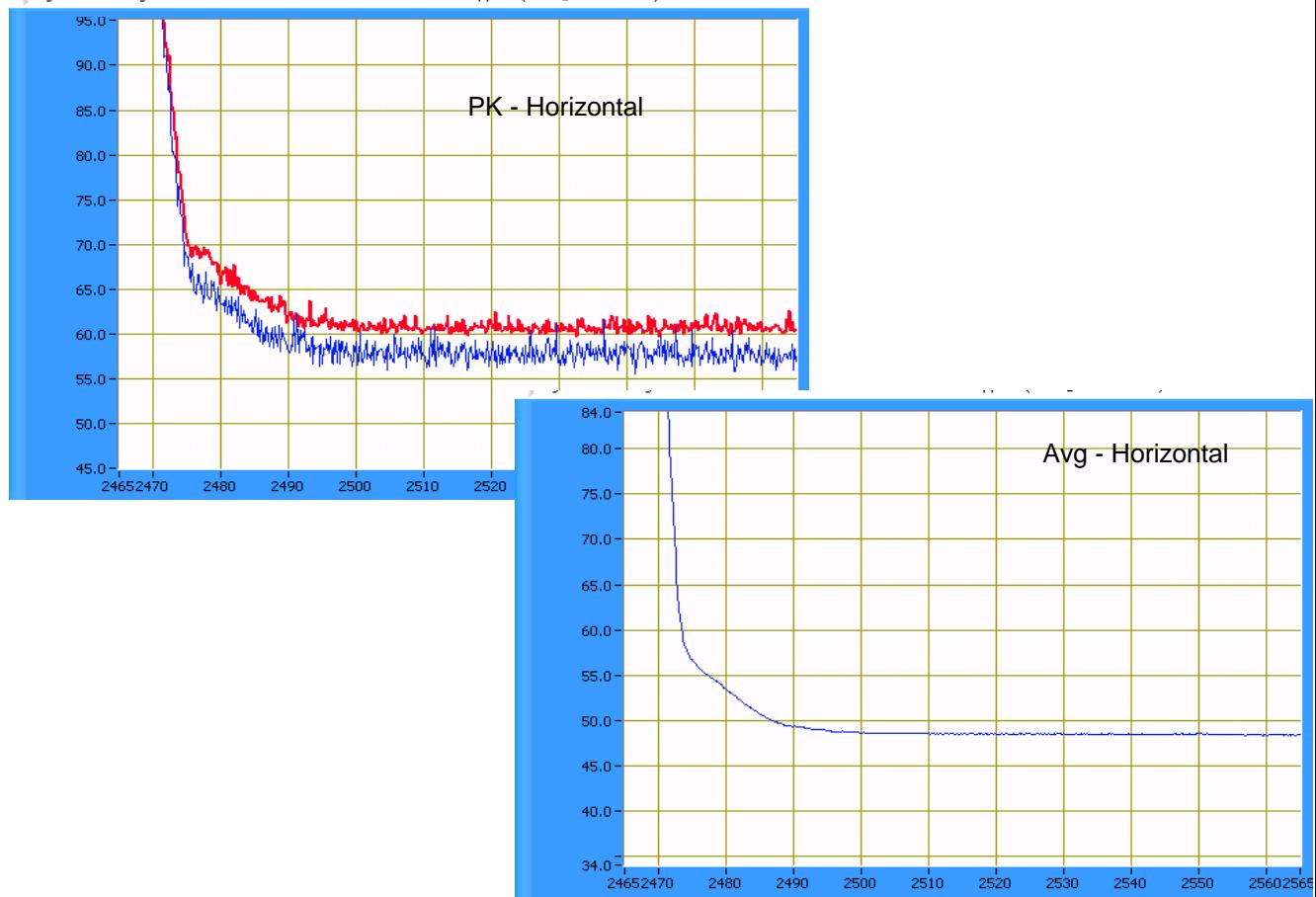
Power Setting: 24.5 Average power: 14.1 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2460.720 | 90.7 | V | - | - | PK | 172 | 1.0 |
| 2460.760 | 96.8 | H | - | - | PK | 237 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2483.600 | 52.1 | H | 54.0 | -1.9 | AVG | 239 | 1.2 |
| 2483.620 | 65.8 | H | 74.0 | -8.2 | PK | 238 | 1.2 |
| 2483.610 | 62.5 | V | 74.0 | -11.5 | PK | 172 | 1.0 |
| 2483.600 | 49.3 | V | 54.0 | -4.7 | AVG | 176 | 1.2 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run # 4: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (20 MHz Channel) - Chain A+B

Run #4a: Low Channel @ 2412 MHz

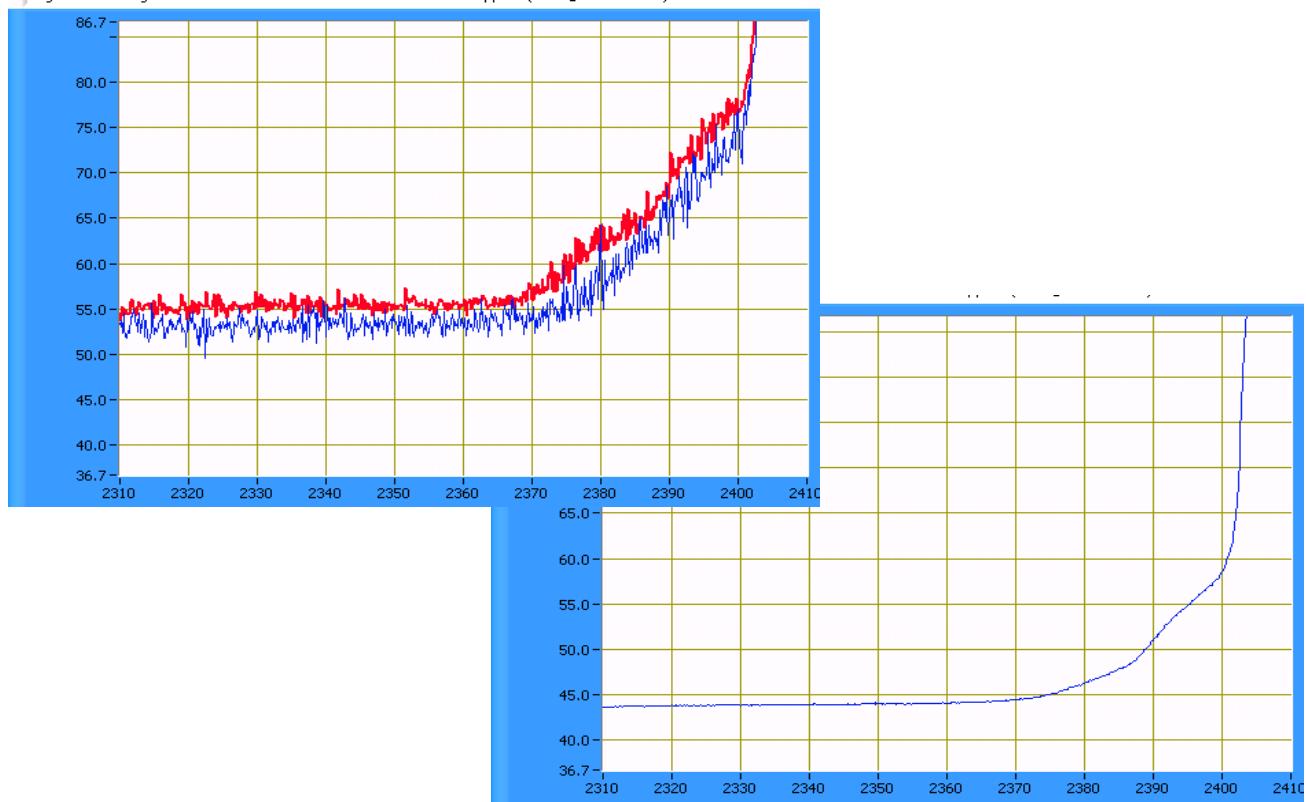
| Power Setting and average measurement (for reference) | | | | | |
|---|-----|---------|------|---------|-----|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 25.5 | 13 | 25.5 | 12.4 | | |

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2404.630 | 99.2 | H | - | - | PK | 249 | 1.1 |
| 2408.400 | 96.9 | V | - | - | PK | 171 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.870 | 47.4 | H | 54.0 | -6.6 | Avg | 171 | 1.0 |
| 2389.230 | 64.5 | H | 74.0 | -9.5 | PK | 171 | 1.0 |
| 2389.970 | 51.4 | H | 54.0 | -2.6 | Avg | 249 | 1.1 |
| 2389.920 | 70.3 | H | 74.0 | -3.7 | PK | 249 | 1.1 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Sample ID: 0016EA02D660

Date of Test: 6/13/2008

Test Engineer: John Caizzi

Test Location: FT #4

Run #4b: High Channel @ 2462 MHz

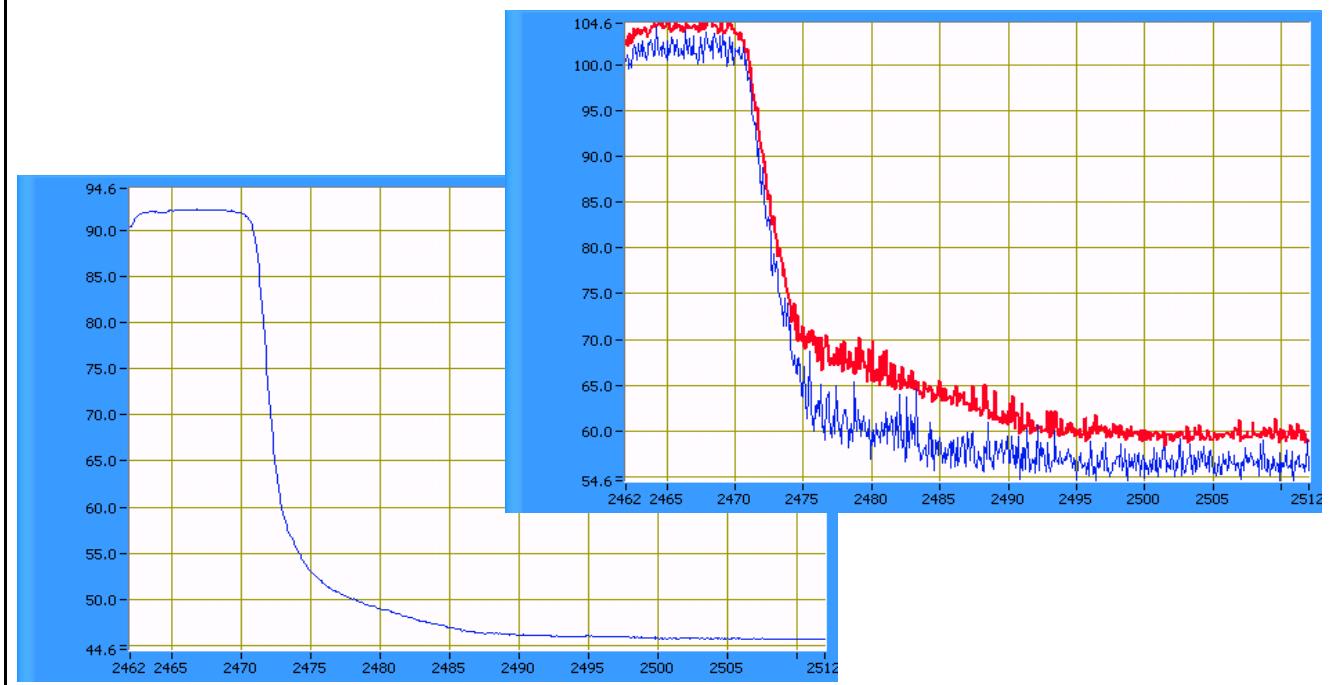
| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|-----|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 25.5 | 13.3 | 26.5 | 13.6 | | |

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2467.330 | 98.1 | H | - | - | Pk | 249 | 1.3 |
| 2466.170 | 94.9 | V | - | - | Pk | 158 | 1.2 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2483.850 | 48.9 | H | 54.0 | -5.1 | AVG | 250 | 1.3 |
| 2484.080 | 47.2 | V | 54.0 | -6.8 | AVG | 158 | 1.2 |
| 2483.850 | 65.3 | H | 74.0 | -8.7 | PK | 250 | 1.3 |
| 2484.080 | 60.9 | V | 74.0 | -13.1 | PK | 158 | 1.2 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #5: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (20 MHz Channel) - Chain A+C

Sample ID: 0016EA02D660

Date of Test: 6/13/2008

Test Engineer: John Caizzi

Test Location: FT #4

Run #5a: Low Channel @ 2412 MHz

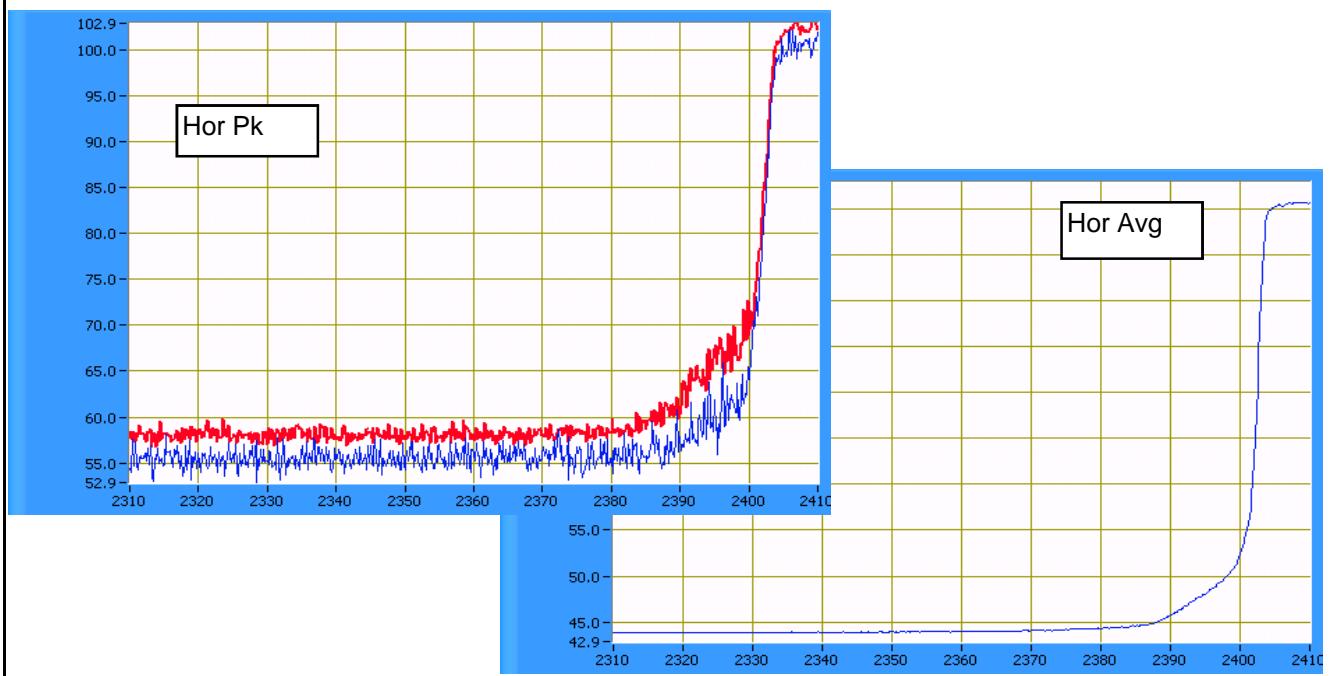
| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|-----|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 23.5 | 11.1 | | | 25.0 | 13.0 |

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2414.750 | 94.3 | H | | | Pk | 253 | 2.1 |
| 2406.000 | 94.4 | V | | | Pk | 155 | 1.1 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.590 | 47.9 | H | 54.0 | -6.1 | AVG | 253 | 2.1 |
| 2388.130 | 47.4 | V | 54.0 | -6.6 | AVG | 155 | 1.1 |
| 2389.590 | 64.3 | H | 74.0 | -9.7 | PK | 253 | 2.1 |
| 2388.130 | 64.0 | V | 74.0 | -10.0 | PK | 155 | 1.1 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #5b: High Channel @ 2462 MHz

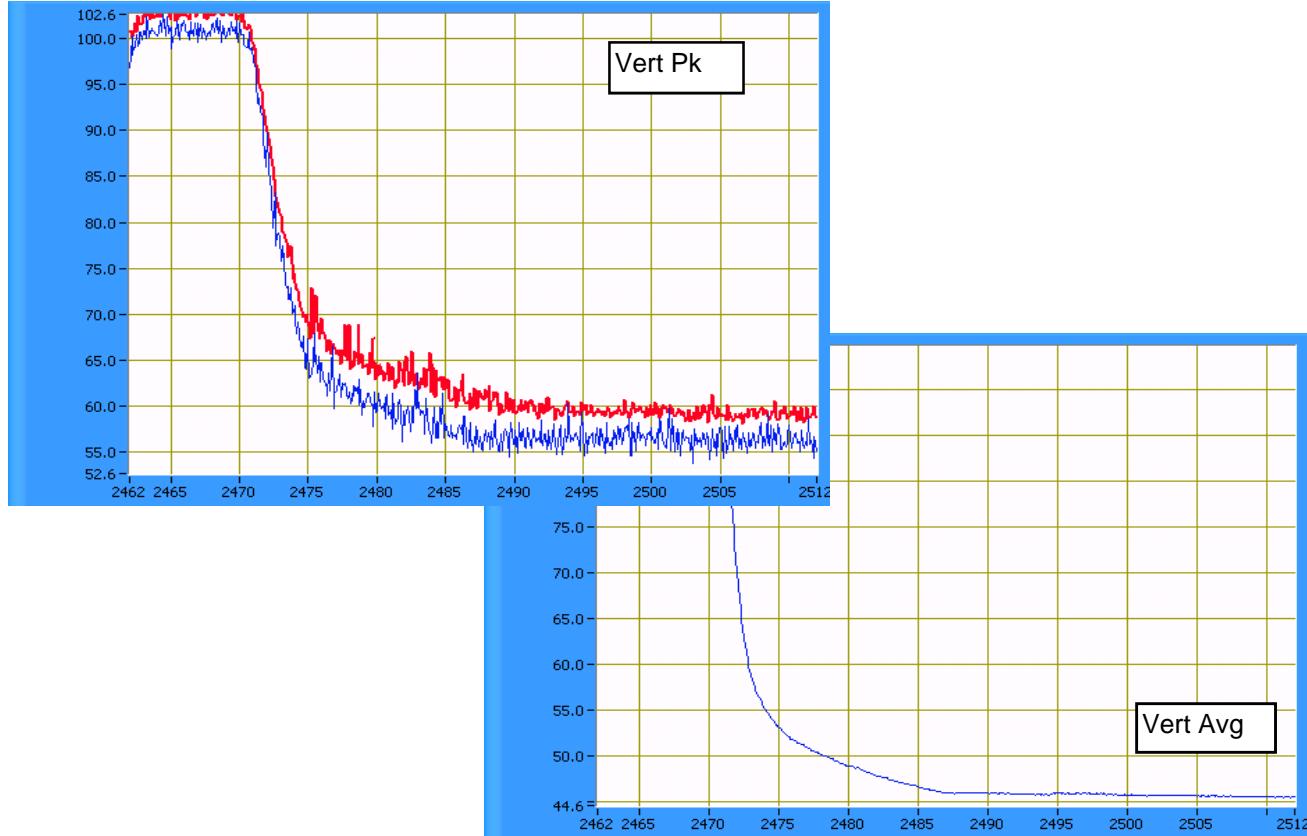
| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|-----|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 26.0 | 13.8 | | | 26.0 | 14.2 |

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2470.080 | 94.6 | H | - | - | Pk | 250 | 2.0 |
| 2467.500 | 94.5 | V | - | - | Pk | 155 | 1.2 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2484.780 | 48.5 | V | 54.0 | -5.5 | AVG | 154 | 1.2 |
| 2484.570 | 47.1 | H | 54.0 | -6.9 | AVG | 250 | 2.0 |
| 2484.780 | 63.6 | V | 74.0 | -10.4 | PK | 154 | 1.2 |
| 2484.570 | 61.2 | H | 74.0 | -12.8 | PK | 250 | 2.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #6: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (20 MHz Channel) - Chain B+C

Sample ID: 0016EA02D660

Date of Test: 6/13/2008

Test Engineer: Peter Sales

Test Location: Fremont Chamber #4

Run #6a: Low Channel @ 2412 MHz

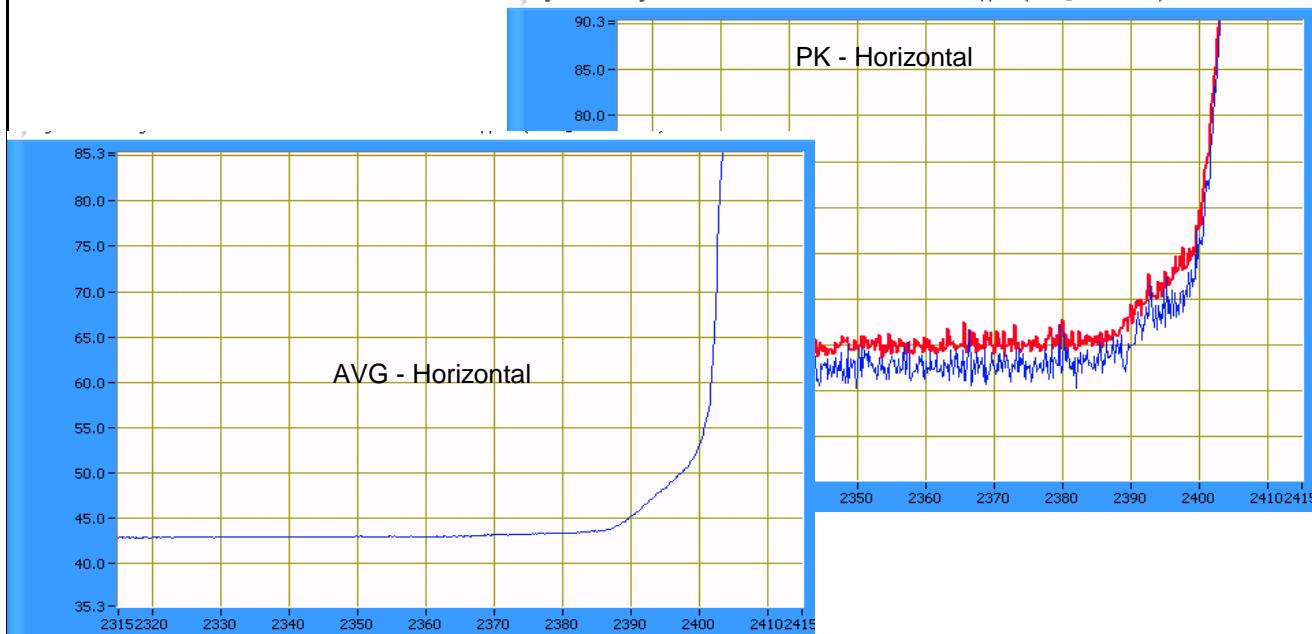
| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|-----|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 25.0 | 12.2 | 24.0 | 12.4 | | |

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2419.730 | 90.9 | V | 74.0 | 16.9 | PK | 305 | 1.0 |
| 2407.070 | 95.0 | H | 74.0 | 21.0 | PK | 329 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2388.940 | 59.9 | H | 74.0 | -14.1 | PK | 329 | 1.0 |
| 2389.940 | 45.4 | H | 54.0 | -8.6 | AVG | 329 | 1.0 |
| 2387.670 | 59.2 | V | 74.0 | -14.8 | PK | 303 | 1.0 |
| 2389.760 | 45.4 | V | 54.0 | -8.6 | AVG | 306 | 1.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #6b: High Channel @ 2462 MHz

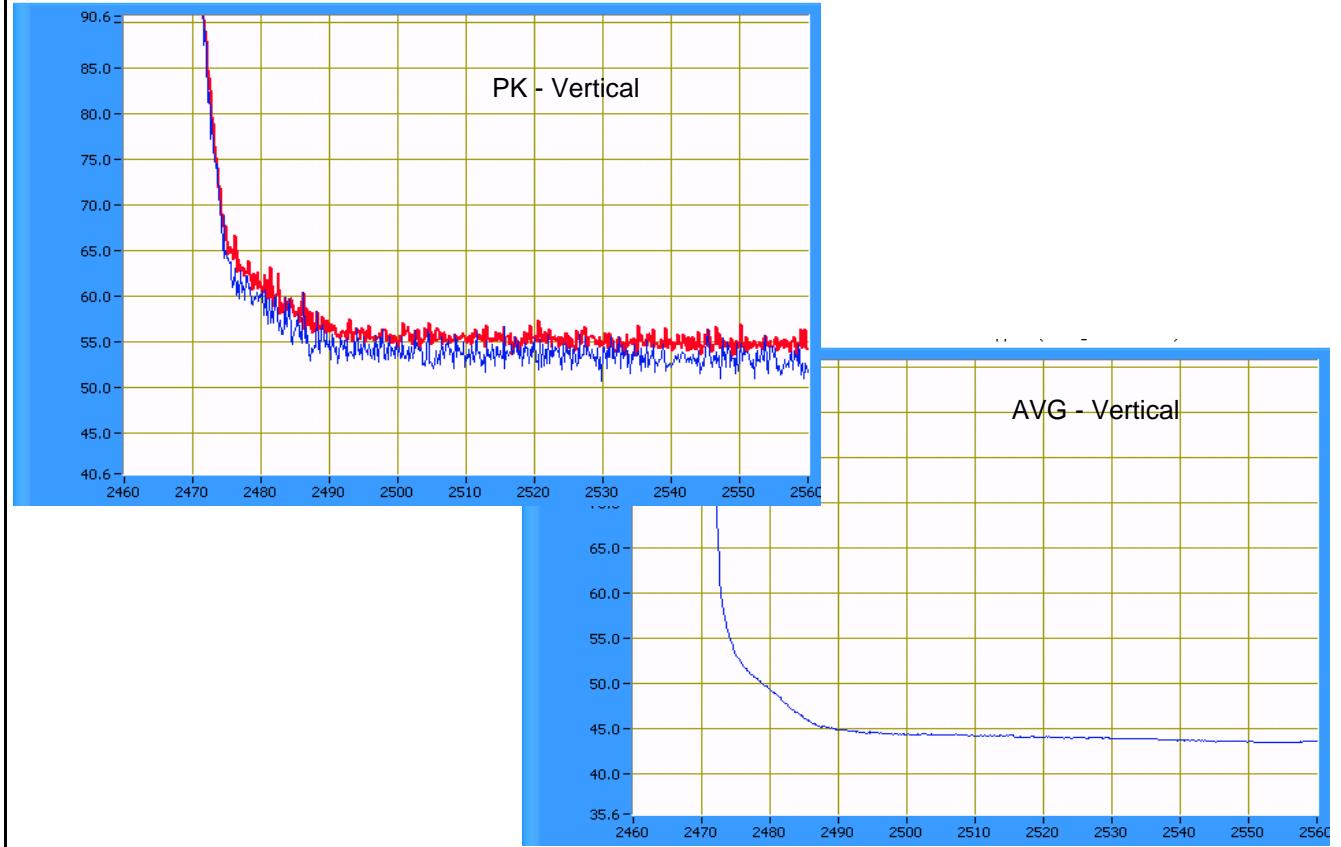
| Power Setting and average measurement (for reference) | | | | | |
|---|-----|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| | | 26.5 | 13.8 | 25.5 | 13.6 |

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2469.800 | 94.3 | V | - | - | PK | 34 | 1.0 |
| 2460.900 | 94.3 | H | - | - | PK | 55 | 2.5 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2440.900 | 64.3 | V | 74.0 | -9.7 | PK | 32 | 1.0 |
| 2441.380 | 47.4 | V | 54.0 | -6.6 | AVG | 35 | 1.0 |
| 2441.480 | 63.5 | H | 74.0 | -10.5 | PK | 55 | 2.5 |
| 2441.360 | 47.3 | H | 54.0 | -6.7 | AVG | 55 | 2.5 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #7: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (20 MHz Channel) - Chain A+B+C

Sample ID: 0016EA02D660

Date of Test: 6/13/2008

Test Engineer: Peter Sales

Test Location: Fremont Chamber #4

Run #7a: Low Channel @ 2412 MHz

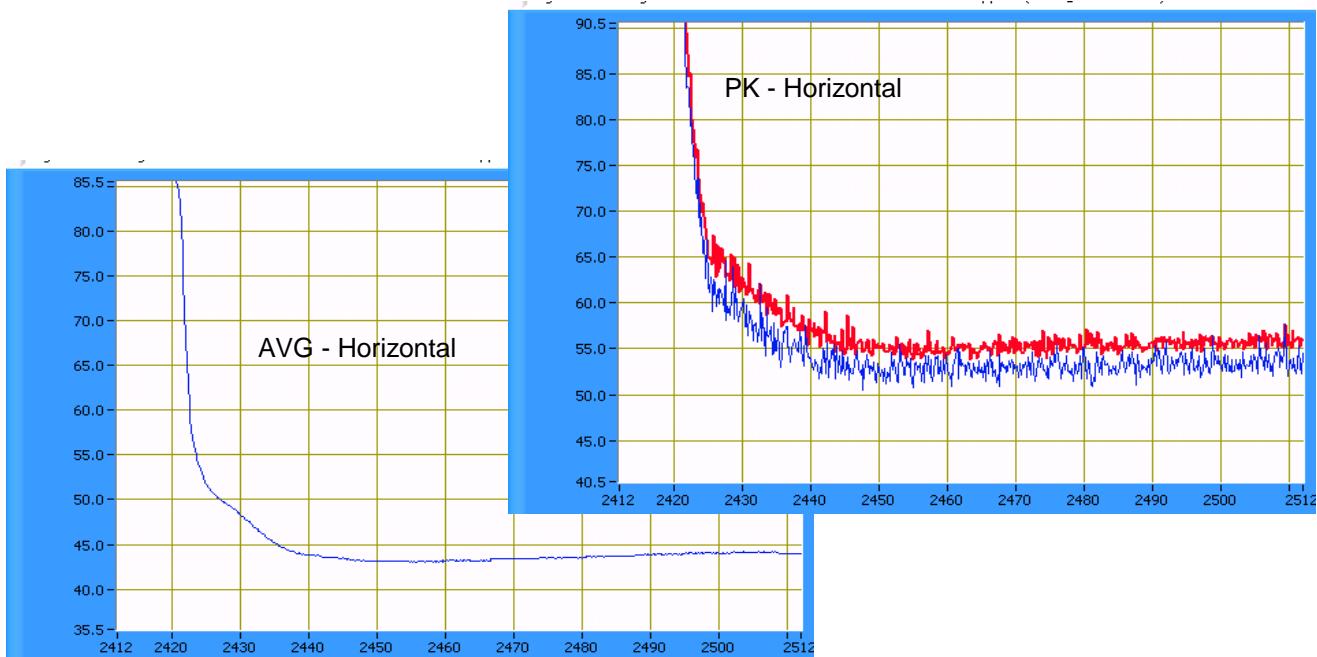
| Power Setting and average measurement (for reference) | | | | | |
|---|-----|---------|-----|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 25.0 | 12 | 25.5 | 12 | 24.5 | 12.2 |

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2407.070 | 94.9 | V | - | - | PK | 308 | 1.0 |
| 2407.100 | 99.4 | H | - | - | PK | 65 | 1.1 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.710 | 61.2 | V | 74.0 | -12.8 | PK | 309 | 1.0 |
| 2389.990 | 46.4 | V | 54.0 | -7.6 | AVG | 309 | 1.0 |
| 2389.740 | 66.9 | H | 74.0 | -7.1 | PK | 65 | 1.1 |
| 2389.970 | 47.5 | H | 54.0 | -6.5 | AVG | 65 | 1.1 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #7b: High Channel @ 2462 MHz

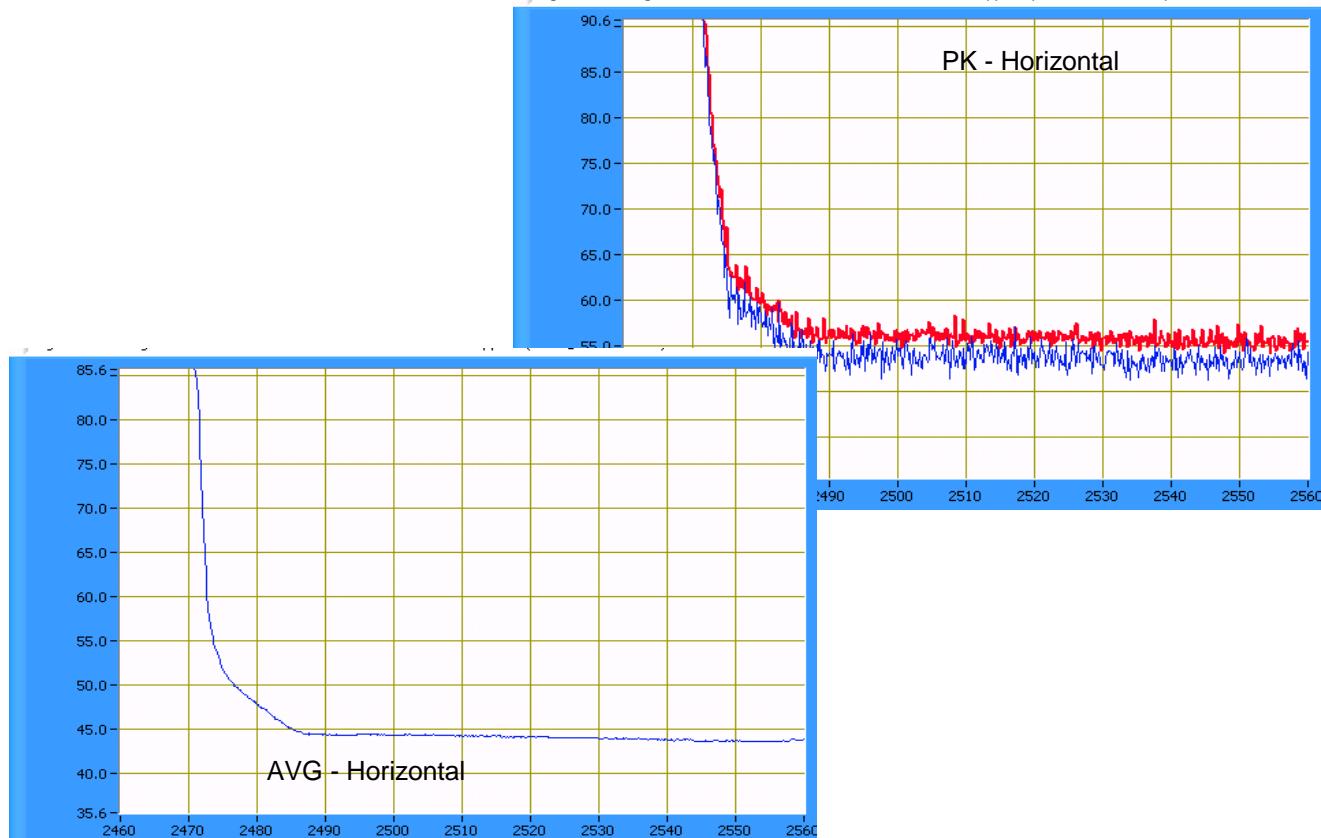
| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 26.0 | 12.2 | 26.0 | 12.4 | 25.0 | 12.1 |

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2463.500 | 93.8 | V | 74.0 | 19.8 | PK | 8 | 1.0 |
| 2455.830 | 95.9 | H | 74.0 | 21.9 | PK | 61 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2441.380 | 61.2 | V | 74.0 | -12.8 | PK | 6 | 1.0 |
| 2441.480 | 47.0 | V | 54.0 | -7.0 | AVG | 9 | 1.0 |
| 2441.370 | 63.2 | H | 74.0 | -10.8 | PK | 61 | 1.0 |
| 2441.410 | 47.1 | H | 54.0 | -6.9 | AVG | 61 | 1.0 |





EMC Test Data

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS, 2400 - 2483.5 MHz) Radiated Spurious Emissions 802.11n 20MHz Universe Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 22 °C
Rel. Humidity: 36 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

Summary of Results

Note - emissions from 18-26GHz covered by testing all three chains transmitting at highest power.

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|--------|--|----------|-------------------------------|-----------------------------------|-----------------------------------|-------------------------------------|--|
| 1 | Chain A Chain B Chain C | 6 (2437) | 28.0 27.5 26.5 | 16.5 dBm | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | Covered by 802.11b mode as worst case in single chain mode |
| 2a,b,c | 802.11n20 Chains A+B+C | 2412 MHz | A: 30.5 B: 30.5 C: 29.5 | A: 16.5 B: 16.5 C: 16.5 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 33.5dB μ V/m @ 1498.4MHz (-20.5dB) |
| | | 2437 MHz | A: 31.0 B: 31.0 C: 30.0 | A: 16.5 B: 16.5 C: 16.5 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 40.0dB μ V/m @ 7309.0MHz (-14.0dB) |
| | | 2462 MHz | A: 31.5 B: 31.5 C: 30.5 | A: 16.5 B: 16.5 C: 16.5 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 44.5dB μ V/m @ 7392.0MHz (-9.5dB) |
| - | 802.11n20 Dual Chain modes (A+B, A+C, B+C) | | | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | Covered by tests on chains A+B+C | |

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, 1000 - 26000 MHz. Operating Mode: 802.11n 20MHz, Single Chain

Covered by measurements on 802.11b mode which represents the worst-case mode

Also covered by tests on triple-chain with all three chains operating at the higher single-chain power setting.

Run #2: Radiated Spurious Emissions, 1000 - 26000 MHz. Operating Mode: 802.11n 20MHz Chains A+B+C

These tests run at a power setting equal to the highest **single-chain** settings to cover all possible dual- and triple-chain operating modes.

Sample tested: 0016EA02D660

Date of Test: 6/17/2008

Config. Used: 1

Test Engineer: Ben Jing

Config Change: None

Test Location: Chamber # 4

Host Unit Voltage 120V/60Hz

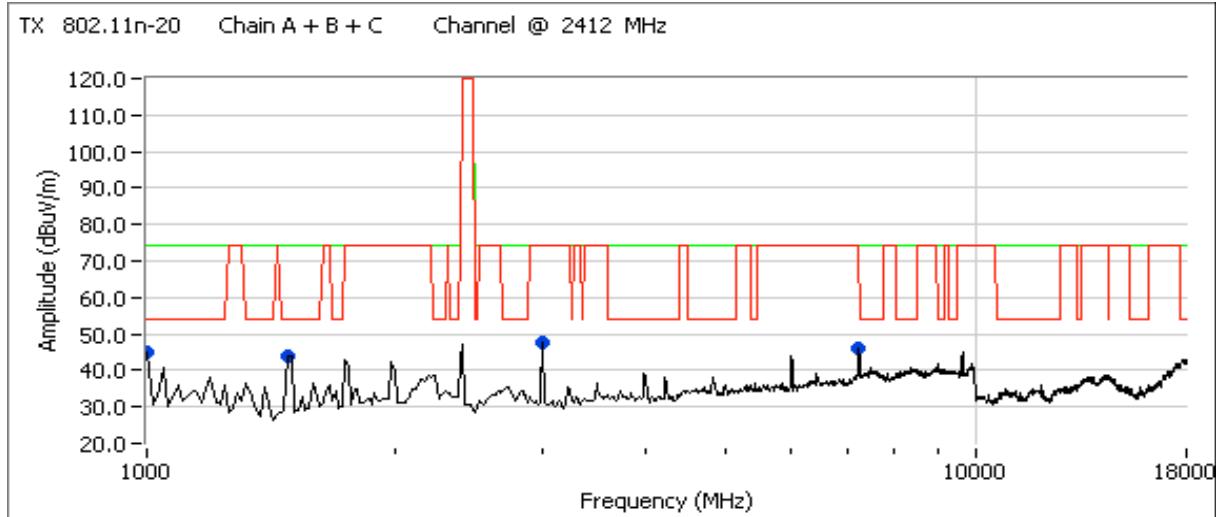
Run #2a: Low Channel @ 2412 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 30.5 | 16.5 | 30.5 | 16.5 | 29.5 | 16.5 |

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1498.400 | 33.5 | V | 54.0 | -20.5 | AVG | 69 | 1.0 |
| 1498.400 | 51.9 | V | 74.0 | -22.1 | PK | 69 | 1.0 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz (level =99.4dB μ V/m, limit = 69.4dB μ V/m).



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2b: Center Channel @ 2437 MHz

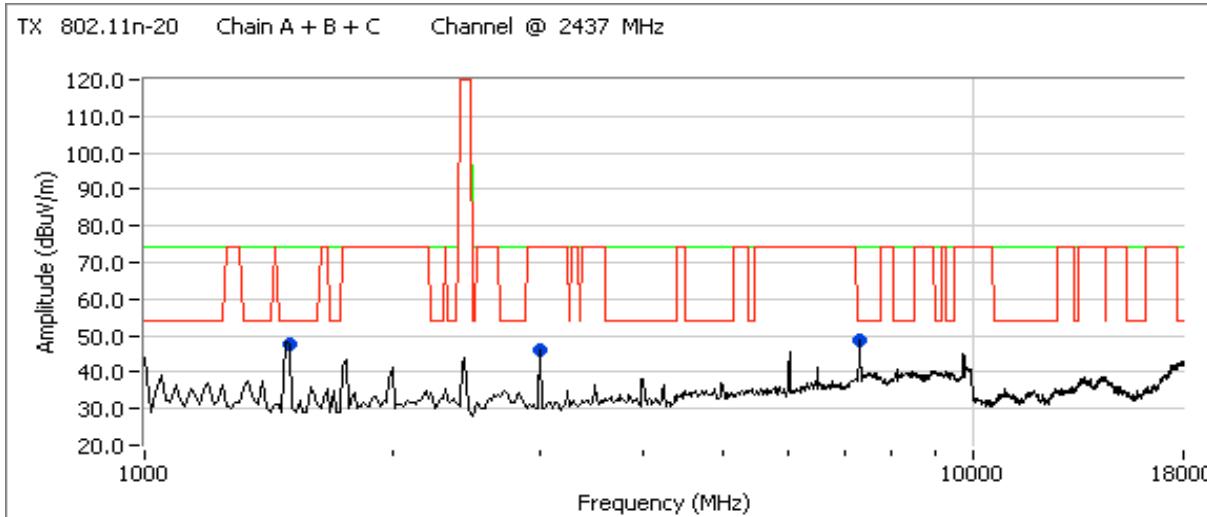
| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 31.0 | 16.5 | 31.0 | 16.5 | 30.0 | 16.5 |

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1493.940 | 33.2 | V | 54.0 | -20.8 | AVG | 67 | 1.0 |
| 7308.990 | 40.0 | V | 54.0 | -14.0 | AVG | 229 | 1.6 |
| 1493.940 | 54.0 | V | 74.0 | -20.0 | PK | 67 | 1.0 |
| 7308.990 | 52.0 | V | 74.0 | -22.0 | PK | 229 | 1.6 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band.



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2c: High Channel @ 2462 MHz

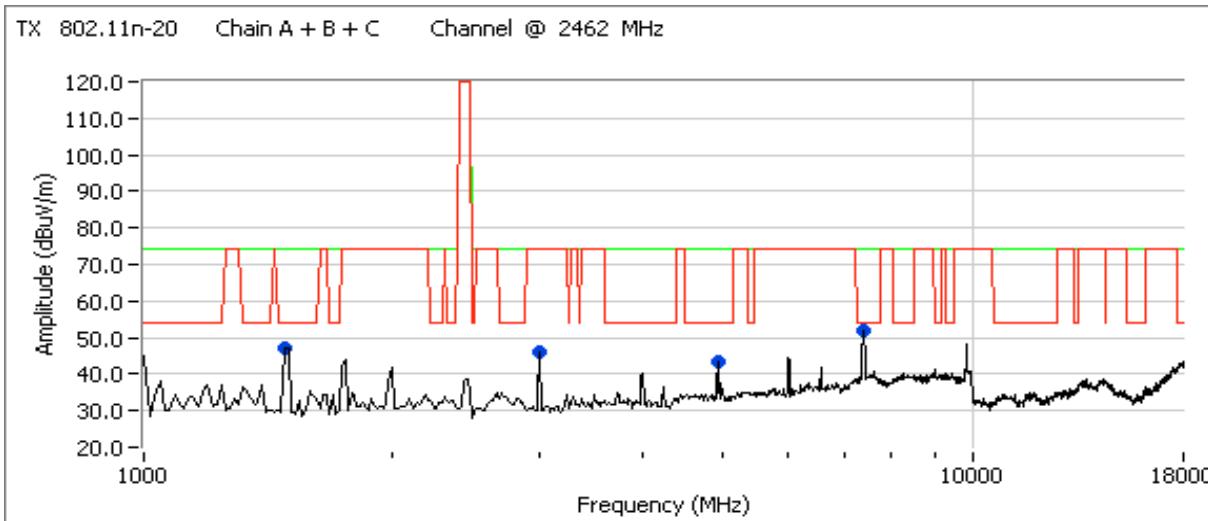
| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 31.5 | 16.5 | 31.5 | 16.5 | 31.5 | 16.5 |

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-----------------|-------------|------------|------------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1493.950 | 33.1 | V | 54.0 | -20.9 | AVG | 68 | 1.0 |
| 4924.210 | 34.8 | V | 54.0 | -19.2 | AVG | 165 | 1.3 |
| 7391.960 | 44.5 | V | 54.0 | -9.5 | AVG | 194 | 1.3 |
| 1493.950 | 54.4 | V | 74.0 | -19.6 | PK | 68 | 1.0 |
| 3000.330 | 51.2 | V | 65.9 | -14.7 | PK | 271 | 1.0 |
| 4924.210 | 46.7 | V | 74.0 | -27.3 | PK | 165 | 1.3 |
| 7391.960 | 60.4 | V | 74.0 | -13.6 | PK | 194 | 1.3 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz (fundamental was 95.9dB μ V/m, limit = 65.9dB μ V/m).

Note 2: Signal is not in a restricted band.





EMC Test Data

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| | | Account Manager: | Dean Eriksen |
| Contact: | Robert Paxman | | |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS, 2400 - 2483.5 MHz) Band Edge Field Strength 802.11n40MHz Universe Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 19 °C
Rel. Humidity: 44 %

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.



EMC Test Data

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Summary of Results

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|------------------------|---------------|----------------------------------|----------------------------------|-----------------------------------|------------------------------|---------------------------------------|
| 1a | 802.11n40 Chain A | 1 2422MHz | 22.0 | 12.0 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 50.9dB μ V/m @ 2390.8MHz (-3.1dB) |
| 1b | 802.11n40 Chain A | 11 2452MHz | 24.5 | 13.9 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 51.3dB μ V/m @ 2485.7MHz (-2.7dB) |
| 2a | 802.11n40 Chain B | 1 2422MHz | 23.0 | 12.6 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 51.1dB μ V/m @ 2389.1MHz (-2.9dB) |
| 2b | 802.11n40 Chain B | 11 2452MHz | 25.5 | 14.3 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 50.2 dBuV/m @ 2483.6 MHz (-3.8dB) |
| 3a | 802.11n40 Chain C | 1 2422MHz | 21.0 | 11.5 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 49.0 dBuV/m @ 2389.7 MHz (-5.0dB) |
| 3b | 802.11n40 Chain C | 11 2452MHz | 24.0 | 13.9 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 51.6 dBuV/m @ 2483.6 MHz (-2.4dB) |
| 4a | 802.11n40 Chain A+B | 1 2422MHz | A : 22.5 B : 23.5 | A : 11.3 B : 11.4 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 50.1 dBuV/m @ 2389.7 MHz (-3.9dB) |
| 4b | 802.11n40 Chain A+B | 11 2452MHz | A : 25.5 B : 26.5 | A : 13.8 B : 14.1 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 51.0 dBuV/m @ 2483.6 MHz (-3.0dB) |
| 5a | 802.11n40 Chain A+C | 1 2422MHz | A : 23.0 C : 22.5 | A : 11.8 C : 11.8 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 52.9dB μ V/m @ 2388.6MHz (-1.1dB) |
| 5b | 802.11n40 Chain A+C | 11 2452MHz | A : 25.0 C : 24.5 | A : 13.4 C : 13.2 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 52.8dB μ V/m @ 2483.6MHz (-1.2dB) |
| 6a | 802.11n40 Chain B+C | 1 2422MHz | B : 23.5 C : 21.0 | B : 11.1 C : 10.2 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 51.2 dBuV/m @ 2389.8 MHz (-2.8dB) |
| 6b | 802.11n40 Chain B+C | 11 2452MHz | B : 25.5 C : 24.5 | B : 13.5 C : 13.6 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 53.1 dBuV/m @ 2483.6 MHz (-0.9dB) |
| 7a | 802.11n40 A+B+C | 1 2422MHz | A : 22.5 B : 23.0 C : 22.0 | A : 10.2 B : 10.1 C : 10.0 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 51.9 dBuV/m @ 2389.7 MHz (-2.1dB) |
| 7b | 802.11n40 A+B+C | 11 2452MHz | A : 24.5 B : 25.5 C : 24.5 | A : 11.7 B : 11.7 C : 11.6 | Band Edge radiated field strength | FCC Part 15.209 / 15.247(c) | 52.9dB μ V/m @ 2483.6MHz (-1.1dB) |

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (40 MHz Channel) - Chain A

Sample ID: 0016EA02D660

Date of Test: 6/9/2008

Test Engineer: John Caizzi

Test Location: FT Chamber #4

Run #1a: Low Channel @ 2422 MHz

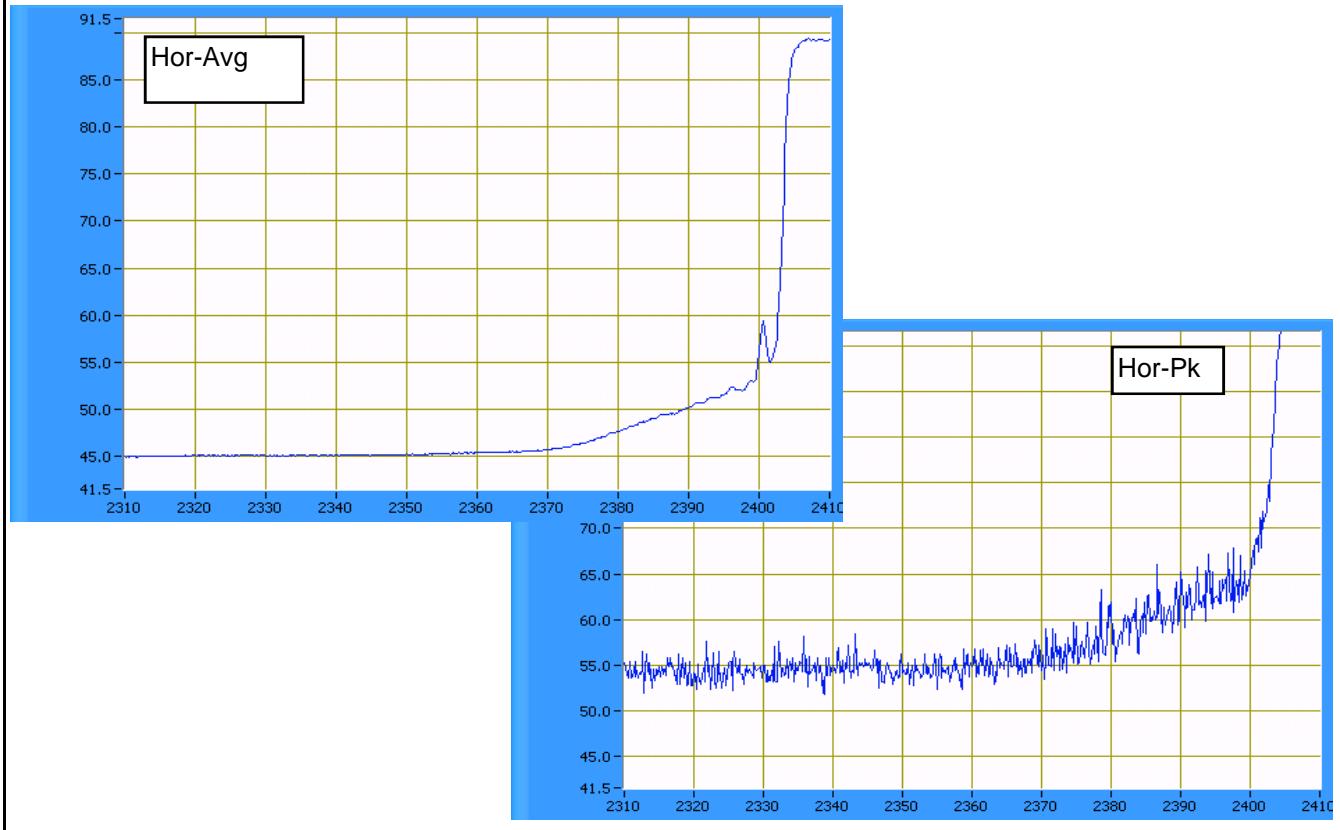
 Power Setting: **22** Average power: 12.2 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2407.330 | 89.5 | V | 120.0 | -30.5 | PK | 324 | 1.0 |
| 2437.500 | 92.2 | H | 120.0 | -27.8 | PK | 64 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2390.790 | 50.9 | H | 54.0 | -3.1 | Avg | 64 | 1.0 |
| 2386.050 | 69.7 | H | 74.0 | -4.3 | Pk | 64 | 1.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Sample ID: 0016EA02D660

Date of Test: 6/9/2008

Test Engineer: Peter Salse

Test Location: FT Chamber #4

Run #1b: High Channel @ 2452 MHz

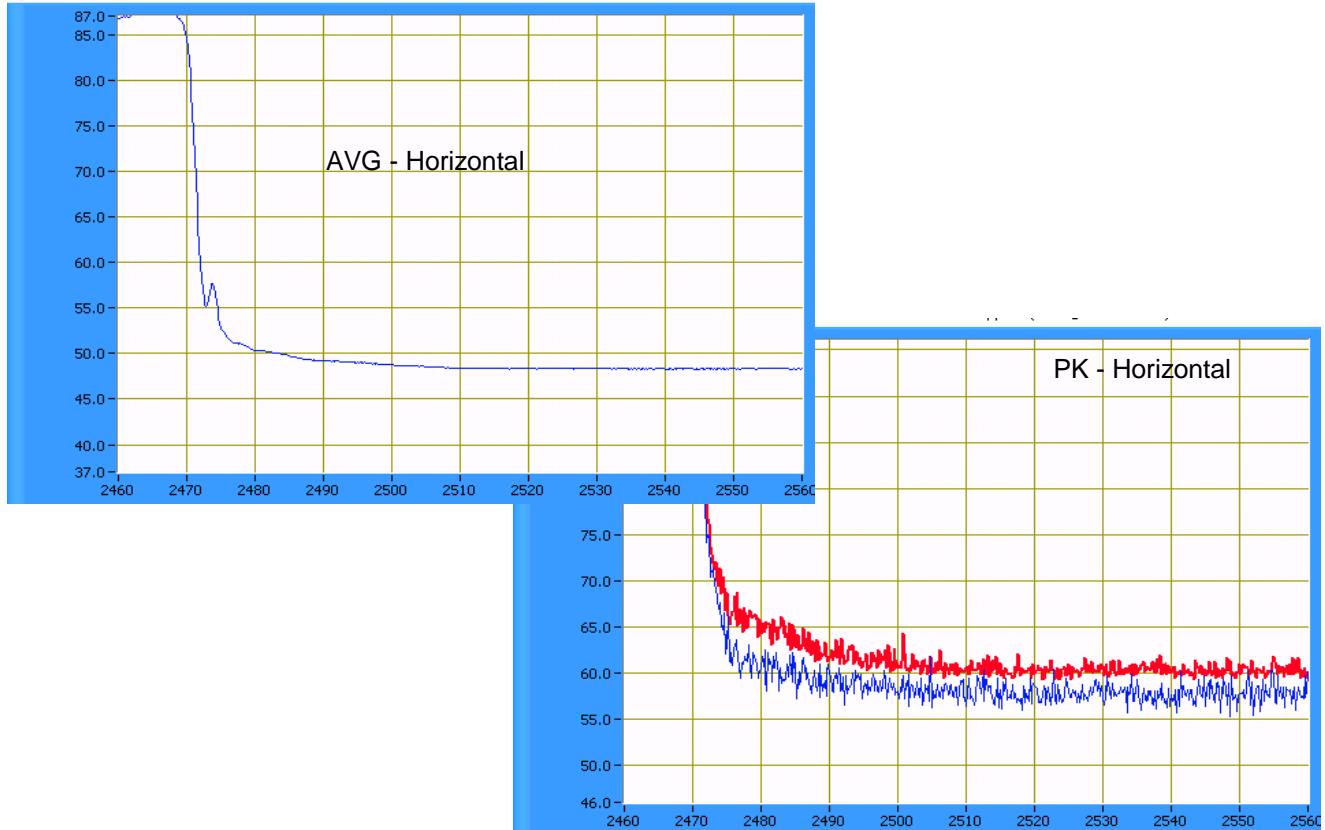
 Power Setting: **24.5** Average power: 13.9 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2440.800 | 89.6 | V | - | - | PK | 141 | 1.0 |
| 2437.000 | 91.3 | H | - | - | PK | 212 | 2.3 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2485.740 | 51.3 | H | 54.0 | -2.7 | AVG | 212 | 2.3 |
| 2485.740 | 66.5 | H | 74.0 | -7.5 | PK | 212 | 2.3 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (40 MHz Channel) - Chain B

Sample ID: 0016EA02D660

Date of Test: 6/10/2008

Test Engineer: Peter Sales

Test Location: Fremont Chamber #3

Run #2a: Low Channel @ 2422 MHz

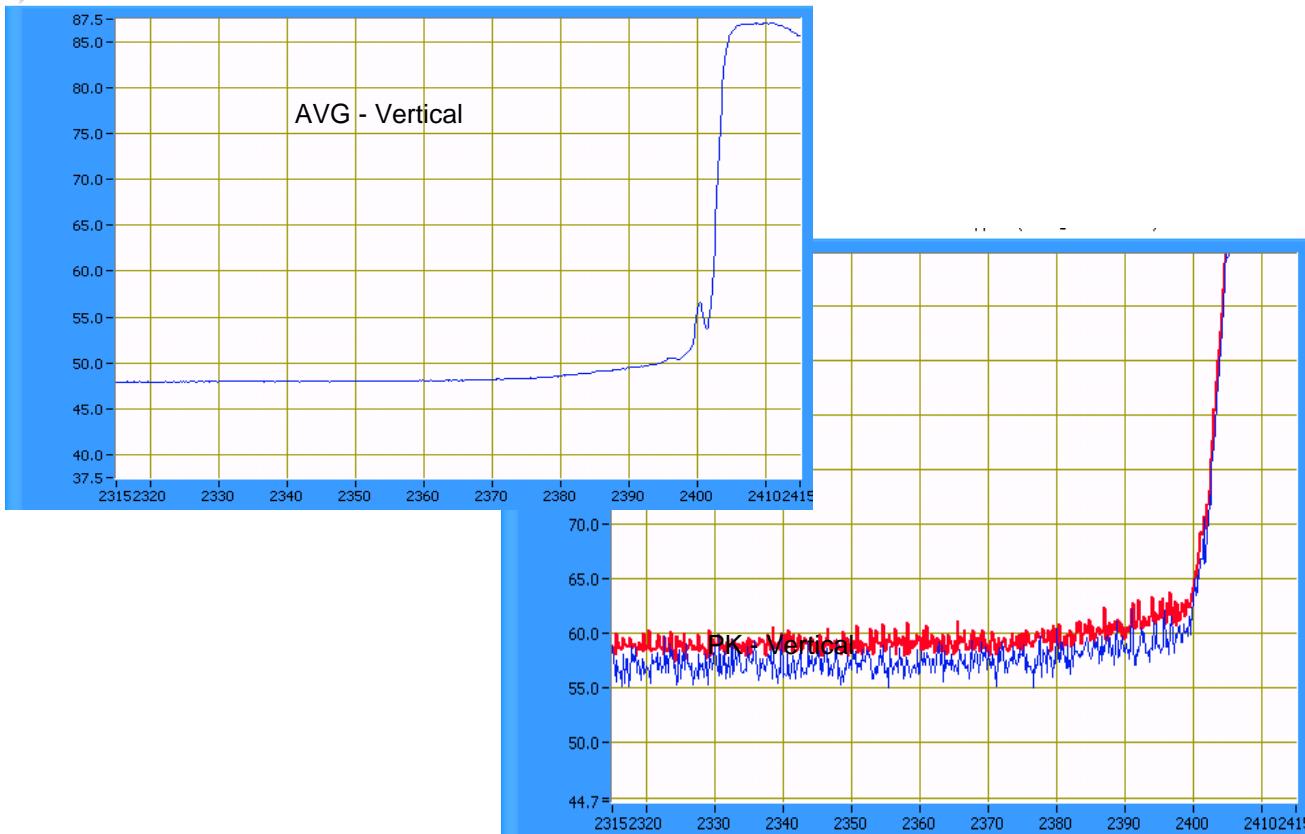
Power Setting: 23.0 Average power: 12.8 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2431.000 | 88.6 | H | - | - | PK | 238 | 1.0 |
| 2410.800 | 91.1 | V | - | - | PK | 167 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.060 | 51.1 | V | 54.0 | -2.9 | AVG | 167 | 1.0 |
| 2389.060 | 63.2 | V | 74.0 | -10.8 | PK | 167 | 1.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2b: High Channel @ 2452 MHz

Sample ID: 0016EA02D660

Date of Test: 6/9/2008

Test Engineer: Ben Jing

Test Location: Fremont Chamber #3

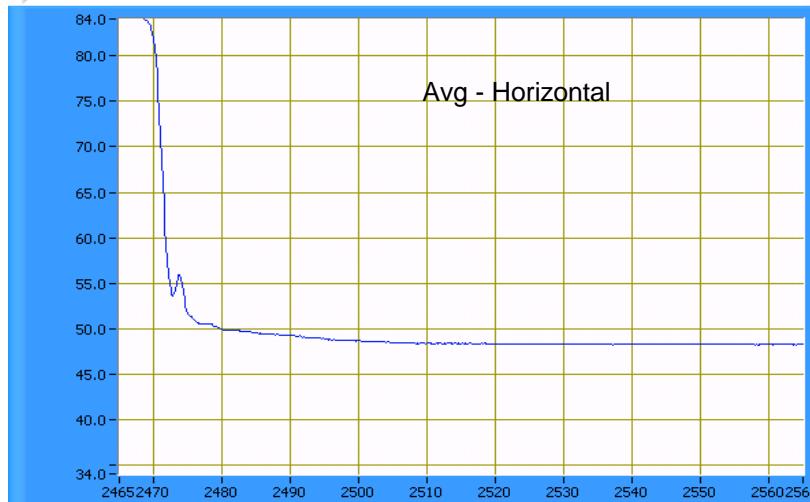
Power Setting: 25.5 Average power: 14.3 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2453.050 | 88.0 | H | - | - | PK | 236 | 1.0 |
| 2453.030 | 85.3 | V | - | - | PK | 162 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2483.790 | 61.0 | V | 74.0 | -13.0 | PK | 172 | 2.3 |
| 2483.550 | 50.0 | V | 54.0 | -4.0 | AVG | 162 | 2.3 |
| 2483.560 | 50.2 | H | 54.0 | -3.8 | AVG | 236 | 1.0 |
| 2483.650 | 63.1 | H | 74.0 | -10.9 | PK | 242 | 1.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (40 MHz Channel) - Chain C

Sample ID: 0016EA02D660

Date of Test: 6/9/2008

Test Engineer: Ben Jing

Test Location: Fremont Chamber #3

Run #3a: Low Channel @ 2422 MHz

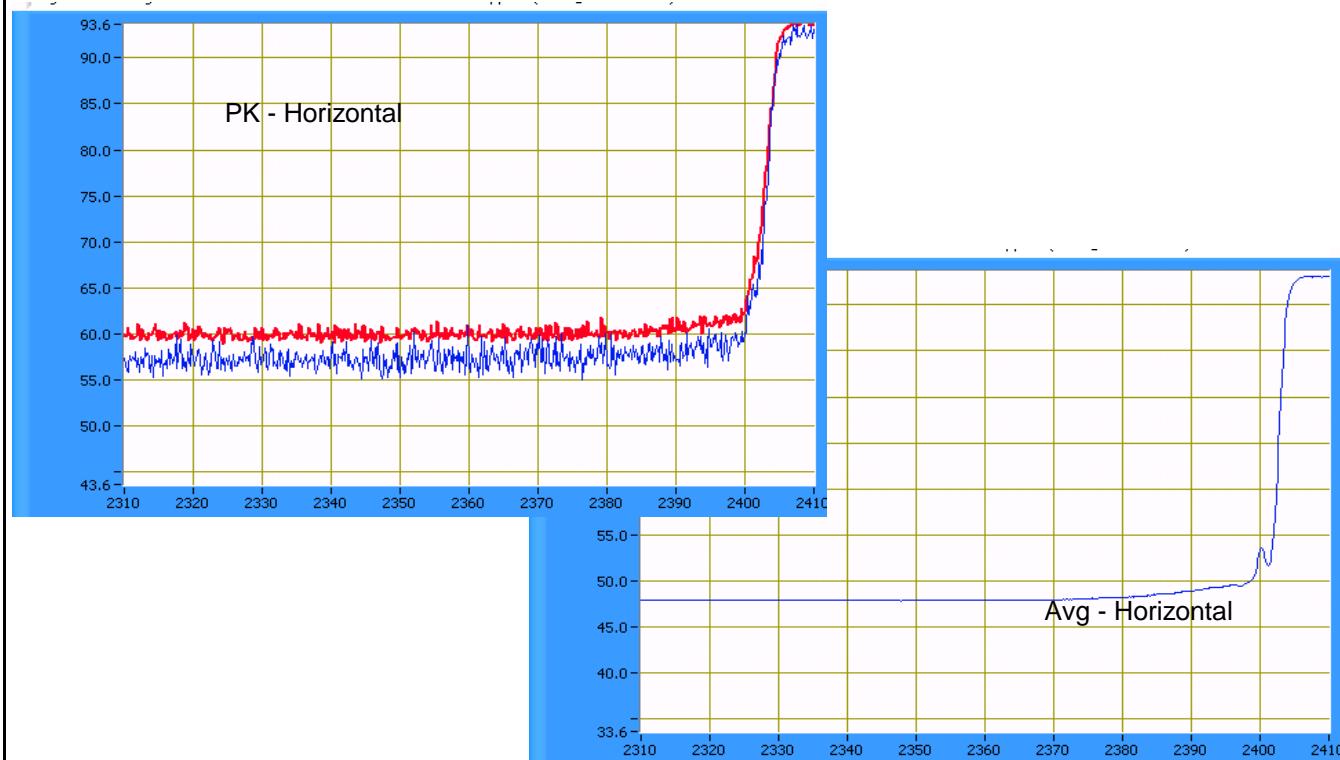
Power Setting: 21.0 Average power: 11.5 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2423.070 | 83.9 | V | - | - | PK | 209 | 1.0 |
| 2423.070 | 82.1 | H | - | - | PK | 140 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.860 | 62.3 | H | 74.0 | -11.7 | PK | 143 | 1.1 |
| 2389.700 | 49.0 | H | 54.0 | -5.0 | AVG | 141 | 1.1 |
| 2389.760 | 62.2 | V | 74.0 | -11.8 | PK | 215 | 1.1 |
| 2389.700 | 48.4 | V | 54.0 | -5.6 | AVG | 251 | 1.1 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3b: High Channel @ 2452 MHz

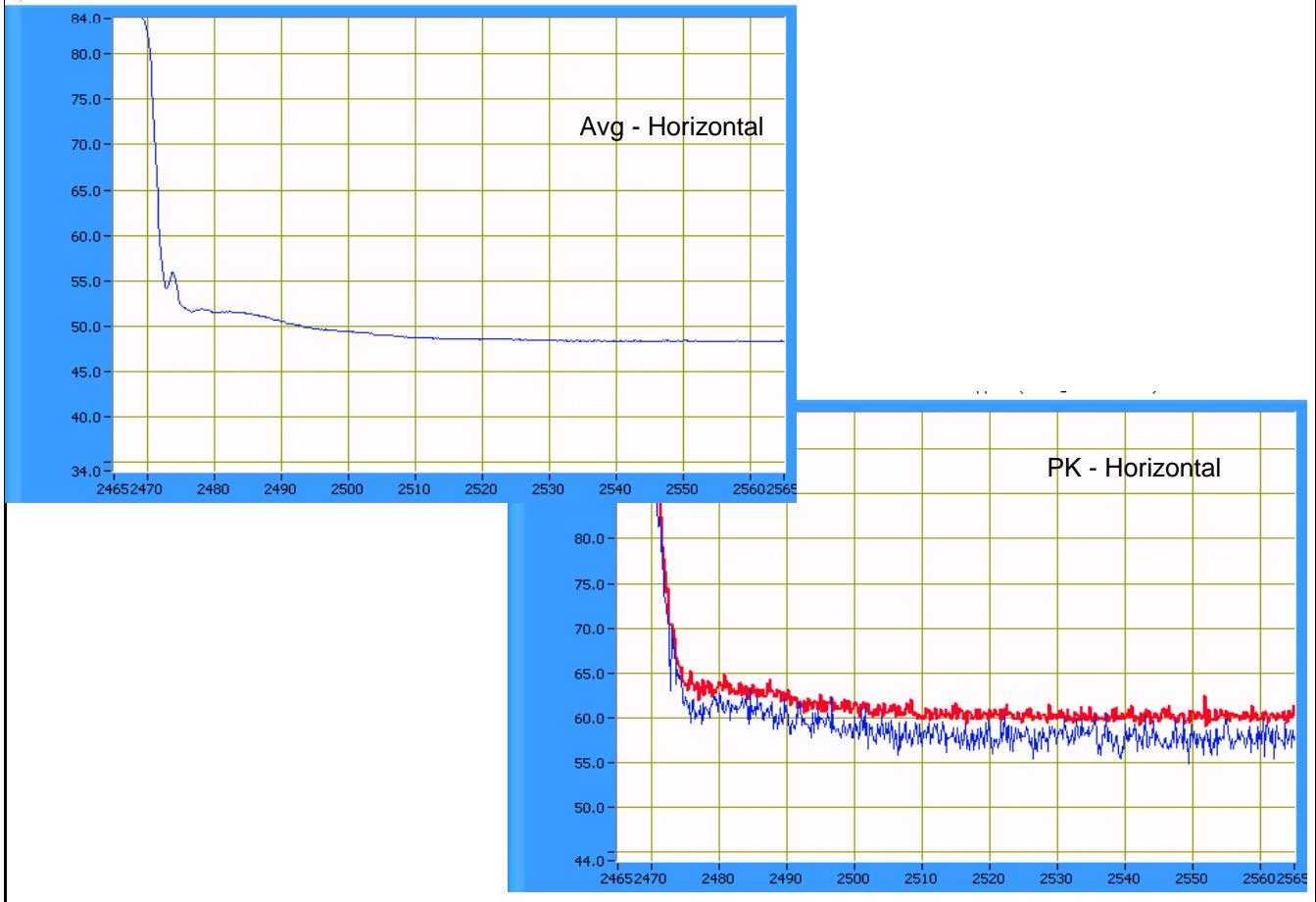
Power Setting: 24.0 Average power: 13.9 (for reference purposes)

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2453.280 | 86.2 | V | - | - | PK | 214 | 1.0 |
| 2453.050 | 87.2 | H | - | - | PK | 243 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2483.670 | 64.1 | H | 74.0 | -9.9 | PK | 245 | 1.0 |
| 2483.600 | 51.6 | H | 54.0 | -2.4 | AVG | 246 | 1.0 |
| 2483.600 | 50.6 | V | 54.0 | -3.4 | AVG | 215 | 1.0 |
| 2483.600 | 63.2 | V | 74.0 | -10.8 | PK | 218 | 1.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #4: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (40 MHz Channel) - Chain A+B

Sample ID: 0016EA02D660

Date of Test: 6/9/2008

Test Engineer: Ben Jing

Test Location: Fremont Chamber #3

Run #4a: Low Channel @ 2422 MHz

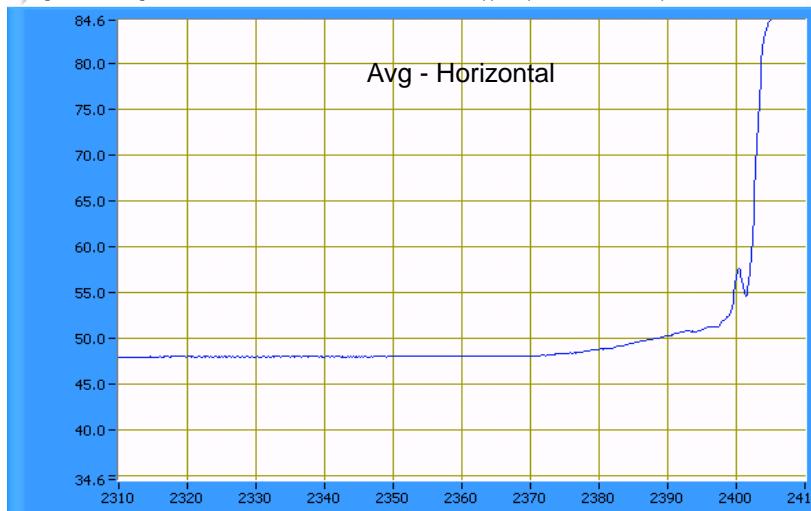
| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|-----|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 22.5 | 11.3 | 23.5 | 11.4 | | |

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2423.290 | 89.0 | H | - | - | PK | 251 | 1.0 |
| 2420.740 | 86.8 | V | - | - | PK | 166 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.830 | 64.2 | H | 74.0 | -9.8 | PK | 252 | 1.1 |
| 2389.700 | 50.1 | H | 54.0 | -3.9 | AVG | 237 | 1.1 |
| 2389.890 | 62.6 | V | 74.0 | -11.4 | PK | 166 | 1.1 |
| 2389.880 | 49.1 | V | 54.0 | -4.9 | AVG | 168 | 1.1 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #4b: High Channel @ 2452 MHz

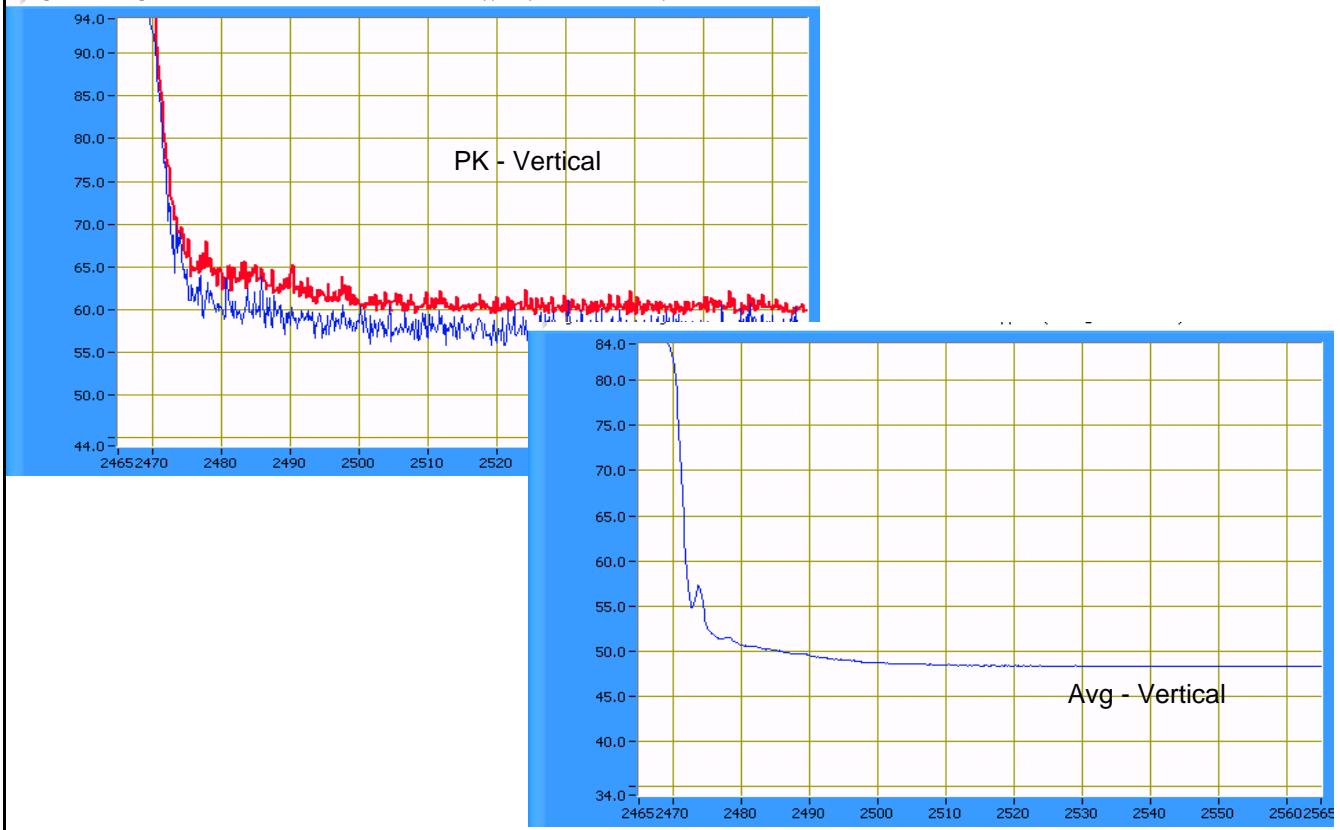
| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|-----|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 25.5 | 13.8 | 26.5 | 14.1 | | |

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2451.160 | 89.5 | H | - | - | PK | 214 | 1.0 |
| 2450.750 | 89.2 | V | - | - | PK | 180 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2483.690 | 64.7 | H | 74.0 | -9.3 | PK | 234 | 1.0 |
| 2483.670 | 50.5 | H | 54.0 | -3.5 | AVG | 234 | 1.0 |
| 2483.620 | 65.4 | V | 74.0 | -8.6 | PK | 172 | 1.0 |
| 2483.600 | 51.0 | V | 54.0 | -3.0 | AVG | 183 | 1.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #5: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (40 MHz Channel) - Chain A+C

Sample ID:

Date of Test: 6/10/2008

Test Engineer: Ben Jing

Test Location: Fremont Chamber # 5

Run #5a: Low Channel @ 2422 MHz

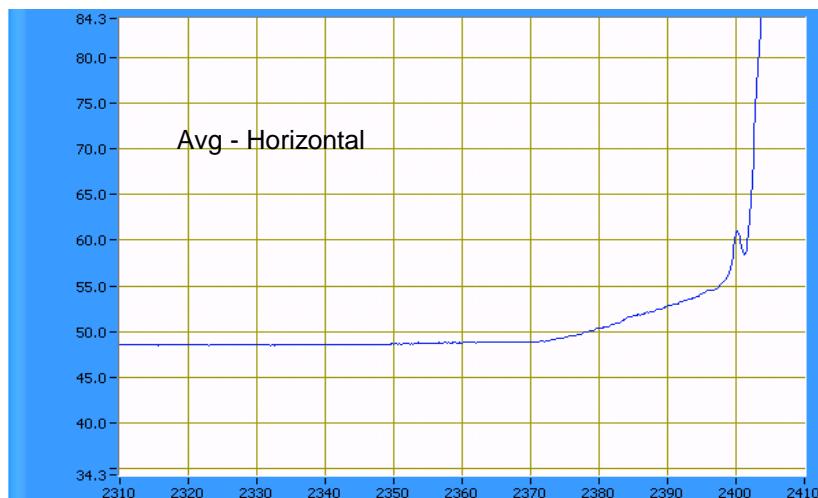
| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|-----|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 23.0 | 11.8 | | | 22.5 | 11.8 |

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2423.300 | 89.9 | V | - | - | PK | 134 | 1.0 |
| 2420.560 | 93.3 | H | - | - | PK | 246 | 1.2 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2388.610 | 52.9 | H | 54.0 | -1.1 | AVG | 236 | 1.2 |
| 2389.290 | 70.1 | H | 74.0 | -3.9 | PK | 243 | 1.3 |
| 2389.380 | 64.4 | V | 74.0 | -9.6 | PK | 137 | 1.0 |
| 2389.340 | 50.1 | V | 54.0 | -3.9 | AVG | 137 | 1.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #5b: High Channel @ 2452 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|-----|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 25.0 | 13.4 | | | 24.5 | 13.2 |

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2453.330 | 89.7 | V | - | - | PK | 140 | 1.0 |
| 2453.270 | 94.5 | H | - | - | PK | 242 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2483.550 | 52.8 | H | 54.0 | -1.2 | AVG | 243 | 1.0 |
| 2483.830 | 67.6 | H | 74.0 | -6.4 | PK | 239 | 1.0 |
| 2484.500 | 63.5 | V | 74.0 | -10.5 | PK | 136 | 1.0 |
| 2483.550 | 50.7 | V | 54.0 | -3.3 | AVG | 134 | 1.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #6: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (40 MHz Channel) - Chain B+C

Sample ID: 0016EA02D660

Date of Test: 6/10/2008

Test Engineer: Ben Jing

Test Location: Fremont Chamber # 5

Run #6a: Low Channel @ 2422 MHz

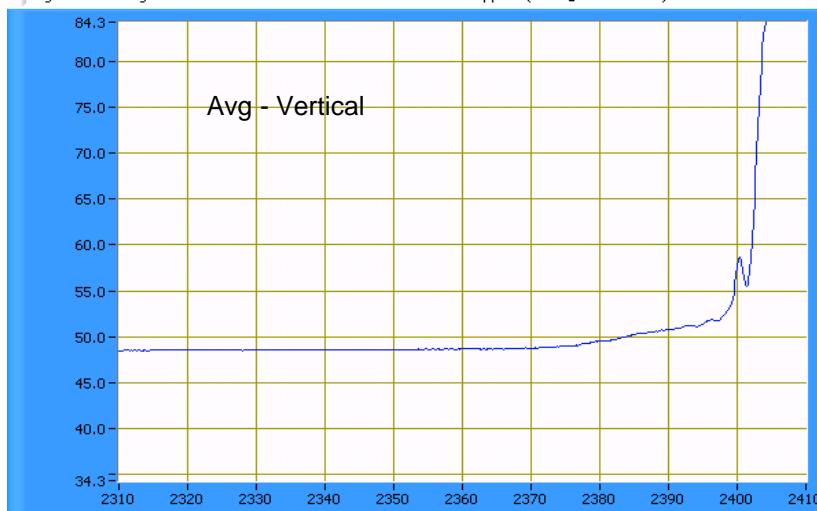
| Power Setting and average measurement (for reference) | | | | | |
|---|-----|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| | | 23.5 | 11.1 | 21.0 | 10.2 |

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2423.320 | 89.3 | V | - | - | PK | 207 | 1.0 |
| 2420.760 | 89.4 | H | - | - | PK | 239 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.740 | 64.6 | H | 74.0 | -9.4 | PK | 239 | 1.0 |
| 2389.720 | 50.9 | H | 54.0 | -3.1 | AVG | 238 | 1.0 |
| 2389.850 | 64.4 | V | 74.0 | -9.6 | PK | 201 | 1.1 |
| 2389.780 | 51.2 | V | 54.0 | -2.8 | AVG | 209 | 1.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #6b: High Channel @ 2452 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|-----|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| | | 25.5 | 13.5 | 24.5 | 13.6 |

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2450.730 | 88.5 | V | - | - | PK | 238 | 1.0 |
| 2453.300 | 92.4 | H | - | - | PK | 234 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2483.610 | 66.0 | H | 74.0 | -8.0 | PK | 232 | 1.0 |
| 2483.610 | 53.1 | H | 54.0 | -0.9 | AVG | 241 | 1.0 |
| 2483.600 | 50.9 | V | 54.0 | -3.1 | AVG | 232 | 1.0 |
| 2483.680 | 63.2 | V | 74.0 | -10.8 | PK | 272 | 1.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #7: Radiated Spurious Emissions, Band Edges. Operating Mode: 802.11n (40 MHz Channel) - Chain A+B+C

Run #7a: Low Channel @ 2422 MHz

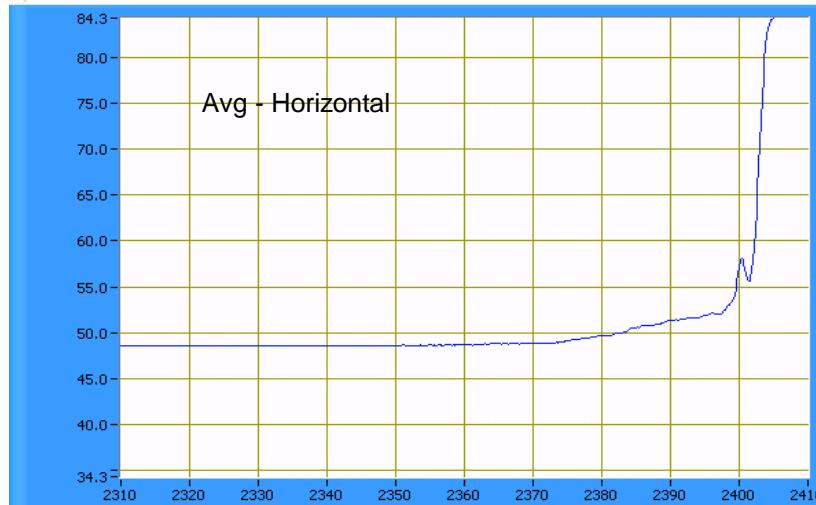
| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 22.5 | 10.2 | 23.0 | 10.1 | 22.0 | 10.0 |

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2423.050 | 90.9 | V | - | - | PK | 205 | 1.0 |
| 2422.920 | 90.4 | H | - | - | PK | 252 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2389.710 | 50.9 | V | 54.0 | -3.1 | AVG | 193 | 1.0 |
| 2389.770 | 65.9 | V | 74.0 | -8.1 | PK | 193 | 1.1 |
| 2389.700 | 51.9 | H | 54.0 | -2.1 | AVG | 251 | 1.0 |
| 2389.710 | 68.0 | H | 74.0 | -6.0 | PK | 253 | 1.0 |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #7b: High Channel @ 2452 MHz

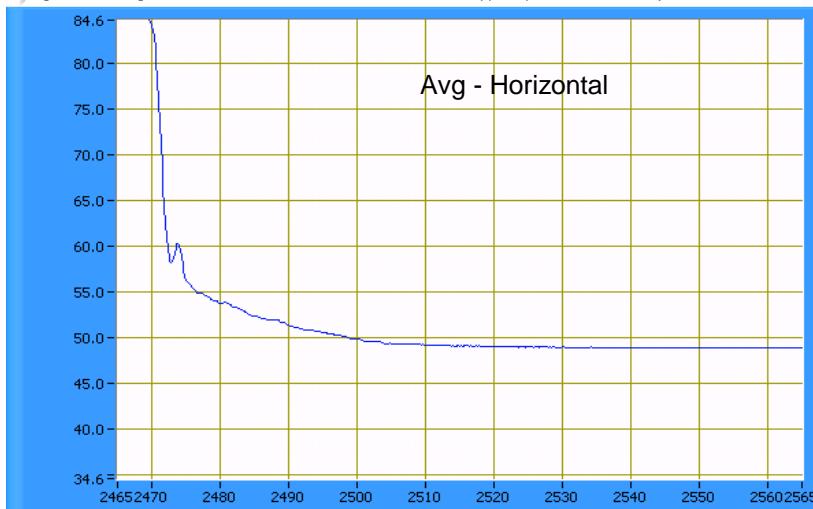
| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 24.5 | 11.7 | 25.5 | 11.7 | 24.5 | 11.6 |

Fundamental Signal Field Strength: Peak value measured in 100kHz

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2450.750 | 89.6 | V | - | - | PK | 141 | 1.0 |
| 2451.400 | 93.1 | H | - | - | PK | 225 | 1.0 |

Band Edge Signal Field Strength

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 2483.600 | 52.9 | H | 54.0 | -1.1 | AVG | 245 | 1.0 |
| 2483.640 | 66.1 | H | 74.0 | -7.9 | PK | 244 | 1.0 |
| 2483.620 | 50.3 | V | 54.0 | -3.7 | AVG | 136 | 1.0 |
| 2483.620 | 62.9 | V | 74.0 | -11.1 | PK | 135 | 1.0 |





EMC Test Data

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS, 2400 - 2483.5 MHz) Radiated Spurious Emissions 802.11n 40MHz Universe Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Sample tested: 0016EA02D660

Date of Test: 6/17/2008

Test Engineer: Ben Jing

Test Location: Chamber # 4

Config. Used: 1

Config Change: None

Host Unit Voltage 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions:

Temperature: 22 °C

Rel. Humidity: 36 %

Summary of Results

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|------------------------|----------|-------------------------------|-------------------------------|--------------------------------|------------------------------|-----------------------------------|
| 1 | 802.11n40 Chains A+B+C | 2437 MHz | A: 30.5 B: 30.5 C: 29.5 | A: 16.5 B: 16.5 C: 16.5 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 46.0 dBuV/m @ 7300.6 MHz (-8.0dB) |

Measurements made to demonstrate that 802.11n 40-MHz mode emissions are not significantly different to 802.11n 20MHz mode.

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, 1000 - 26,000 MHz. Operating Mode: 802.11n 40MHz Chain A+B+C at Max power Center Channel @ 2437 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 30.5 | 16.5 | 30.5 | 16.6 | 29.5 | 16.6 |

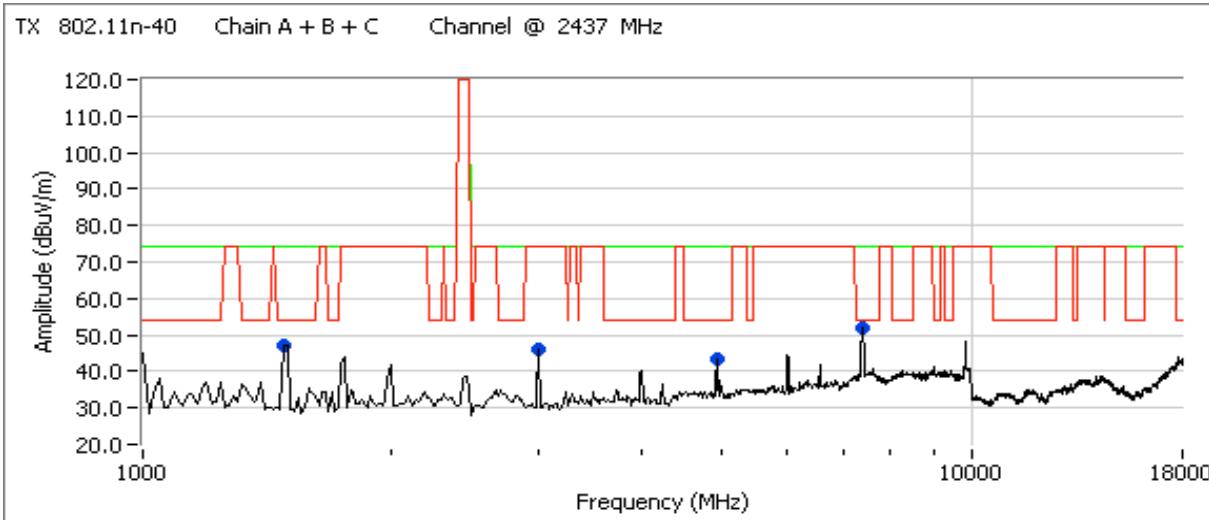
<--- highest power setting for single channel

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-----------------|-------------|------------|------------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1494.410 | 37.1 | V | 54.0 | -16.9 | AVG | 82 | 1.0 |
| 1747.970 | 33.0 | V | 74.0 | -41.0 | AVG | 87 | 1.0 |
| 3995.560 | 30.9 | V | 54.0 | -23.1 | AVG | 81 | 1.0 |
| 7300.560 | 46.0 | V | 54.0 | -8.0 | AVG | 159 | 1.0 |
| 1494.410 | 60.7 | V | 74.0 | -13.3 | PK | 82 | 1.0 |
| 1747.970 | 56.0 | V | 74.0 | -18.0 | PK | 87 | 1.0 |
| 3995.560 | 54.5 | V | 74.0 | -19.5 | PK | 81 | 1.0 |
| 7300.560 | 58.8 | V | 74.0 | -15.2 | PK | 159 | 1.0 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band.





EMC Test Data

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS, 5725 - 5850 MHz)
Radiated Spurious Emissions 802.11a Universe Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 6/18/2008 Config. Used: 1
Test Engineer: Suhaila Khushzad Config Change: -
Test Location: Chamber # 3 Host Unit Voltage 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 20 °C
Rel. Humidity: 33 %

Summary of Results

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|--------------------|----------|---------------|----------------|-----------------------------------|--------------------------------|---|
| 1 | 802.11a Chain A | 5745 MHz | 26.0 | 16.7 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 50.3dB μ V/m @ 11490.9MHz (-3.7dB) |
| | | 5785 MHz | 26.0 | 16.6 | | | |
| | | 5825 MHz | 26.5 | 16.7 | | | |
| 2 | 802.11a Chain B | 5745 MHz | 25.0 | 16.6 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 46.4dB μ V/m @ 11650.1MHz (-7.6dB) |
| | | 5785 MHz | 25.5 | 16.6 | | | |
| | | 5825 MHz | 26.0 | 16.7 | | | |
| 3 | 802.11a Chain C | 5745 MHz | 25.5 | 16.6 | Radiated Emissions, 1 - 26 GHz | FCC Part 15.209 / 15.247(c) | 43.5dB μ V/m @ 7713.3MHz (-10.5dB) |
| | | 5785 MHz | 26.0 | 16.7 | | | |
| | | 5825 MHz | 26.5 | 16.7 | | | |

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11a Chain A

Run #1a: Low Channel @ 5745 MHz

Sample tested: 0016EA02D660

Date of Test: 6/18/2008

Config. Used: 1

Test Engineer: Suhaila Khushzad

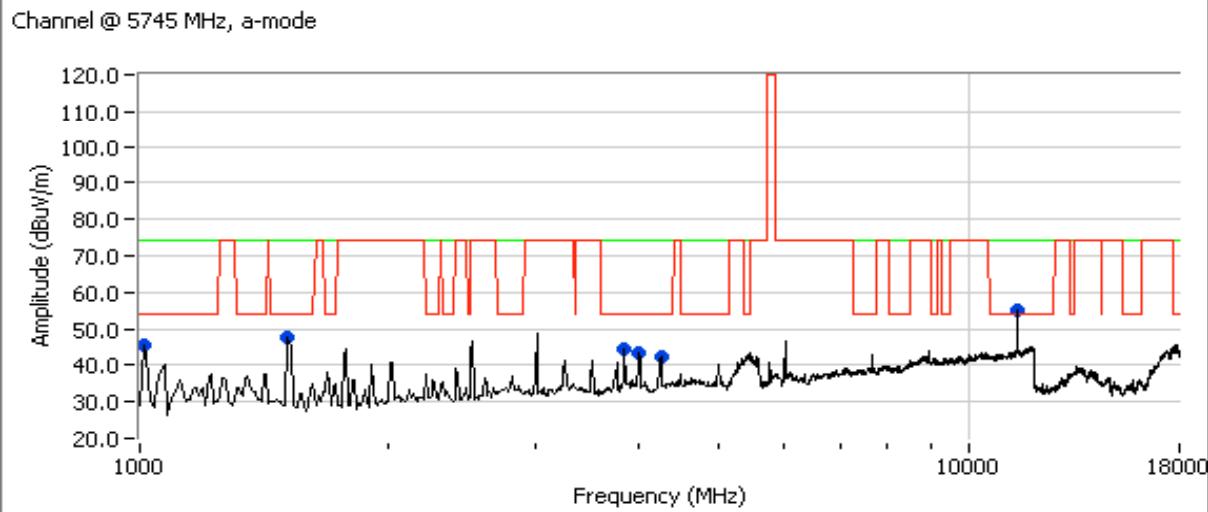
Config Change: None

Test Location: Chamber # 3

Host Unit Voltage 120V/60Hz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|-----|---------|-----|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 26.0 | 16.7 | | | | |

<--- highest power setting for single channel



Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|---------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dBm/V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1000.019 | 36.2 | H | 54.0 | -17.8 | AVG | 161 | 1.3 |
| 1498.780 | 35.1 | H | 54.0 | -18.9 | AVG | 160 | 1.0 |
| 3829.870 | 43.2 | V | 54.0 | -10.8 | AVG | 179 | 1.0 |
| 3995.020 | 32.9 | V | 54.0 | -21.1 | AVG | 133 | 1.0 |
| 4249.130 | 31.6 | V | 54.0 | -22.4 | AVG | 87 | 1.0 |
| 11490.920 | 50.3 | V | 54.0 | -3.7 | AVG | 228 | 1.3 |
| 1000.019 | 49.7 | H | 74.0 | -24.3 | PK | 161 | 1.3 |
| 1498.780 | 52.3 | H | 74.0 | -21.7 | PK | 160 | 1.0 |
| 3829.870 | 50.8 | V | 74.0 | -23.2 | PK | 179 | 1.0 |
| 3995.020 | 51.1 | V | 74.0 | -22.9 | PK | 133 | 1.0 |
| 4249.130 | 48.8 | V | 74.0 | -25.2 | PK | 87 | 1.0 |
| 11490.920 | 61.7 | V | 74.0 | -12.3 | PK | 228 | 1.3 |

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11a Chain A

Run #1b: Center Channel @ 5785 MHz

Sample tested: 0016EA02D660

Date of Test: 6/18/2008

Config. Used: 1

Test Engineer: Suhaila Khushzad

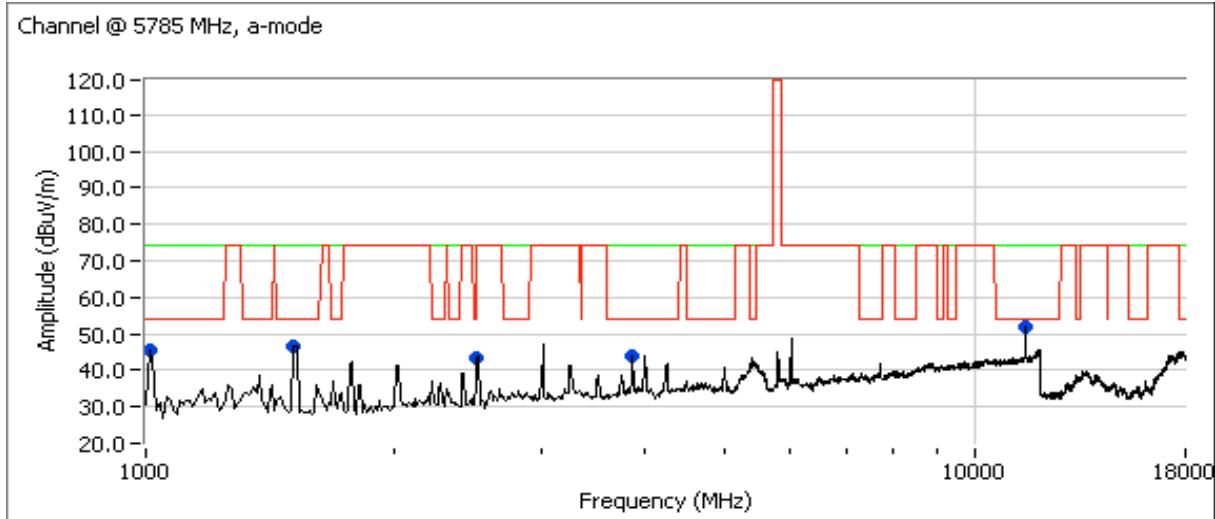
Config Change: None

Test Location: Chamber # 3

Host Unit Voltage 120V/60Hz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|-----|---------|-----|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 26.0 | 16.6 | | | | |

<--- highest power setting for single channel



Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------------|-------------|----------|-----------------|--------------|------------|------------|------------|
| MHz | dBmV/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1000.003 | 37.1 | H | 54.0 | -16.9 | AVG | 161 | 1.0 |
| 1498.190 | 36.9 | V | 54.0 | -17.1 | AVG | 144 | 1.0 |
| 2491.190 | 32.9 | V | 54.0 | -21.1 | AVG | 151 | 1.3 |
| 3856.610 | 43.0 | V | 54.0 | -11.0 | AVG | 171 | 1.0 |
| 11524.880 | 38.7 | H | 54.0 | -15.3 | AVG | 243 | 1.2 |
| 1000.003 | 50.4 | H | 74.0 | -23.6 | PK | 161 | 1.0 |
| 1498.190 | 54.1 | V | 74.0 | -19.9 | PK | 144 | 1.0 |
| 2491.190 | 51.6 | V | 74.0 | -22.4 | PK | 151 | 1.3 |
| 3856.610 | 49.2 | V | 74.0 | -24.8 | PK | 171 | 1.0 |
| 11524.880 | 49.8 | H | 74.0 | -24.2 | PK | 243 | 1.2 |

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1c: High Channel @ 5825 MHz

Sample tested: 0016EA02D660

Date of Test: 6/18/2008

Config. Used: 1

Test Engineer: Suhaila Khushzad

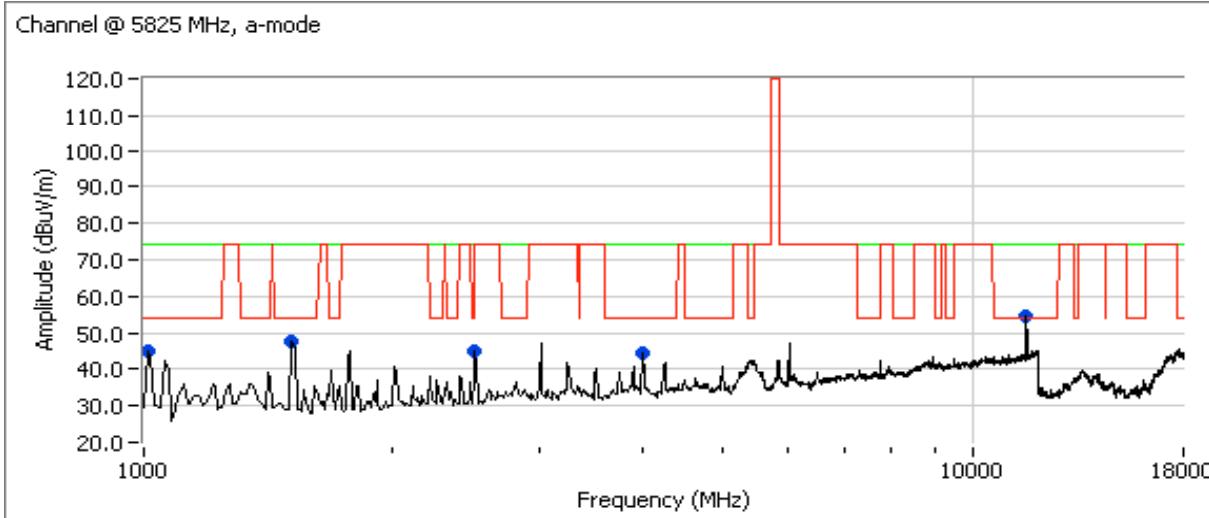
Config Change: None

Test Location: Chamber # 3

Host Unit Voltage 120V/60Hz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|-----|---------|-----|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 26.5 | 16.7 | | | | |

<--- highest power setting for single channel


Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dBmV/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 999.997 | 26.2 | H | 54.0 | -27.8 | AVG | 163 | 1.0 |
| 1494.280 | 36.6 | V | 54.0 | -17.4 | AVG | 147 | 1.0 |
| 2489.870 | 32.8 | V | 54.0 | -21.2 | AVG | 161 | 1.0 |
| 3997.630 | 31.8 | H | 54.0 | -22.2 | AVG | 143 | 1.3 |
| 11649.960 | 45.9 | V | 54.0 | -8.1 | AVG | 159 | 1.6 |
| 999.997 | 42.1 | H | 74.0 | -31.9 | PK | 163 | 1.0 |
| 1494.280 | 54.8 | V | 74.0 | -19.2 | PK | 147 | 1.0 |
| 2489.870 | 51.5 | V | 74.0 | -22.5 | PK | 161 | 1.0 |
| 3997.630 | 48.7 | H | 74.0 | -25.3 | PK | 143 | 1.3 |
| 11649.960 | 57.5 | V | 74.0 | -16.5 | PK | 159 | 1.6 |

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11a Chain B

Run #2a: Low Channel @ 5745 MHz

Sample tested: 0016EA02D660

Date of Test: 6/18/2008

Config. Used: 1

Test Engineer: Suhaila Khushzad

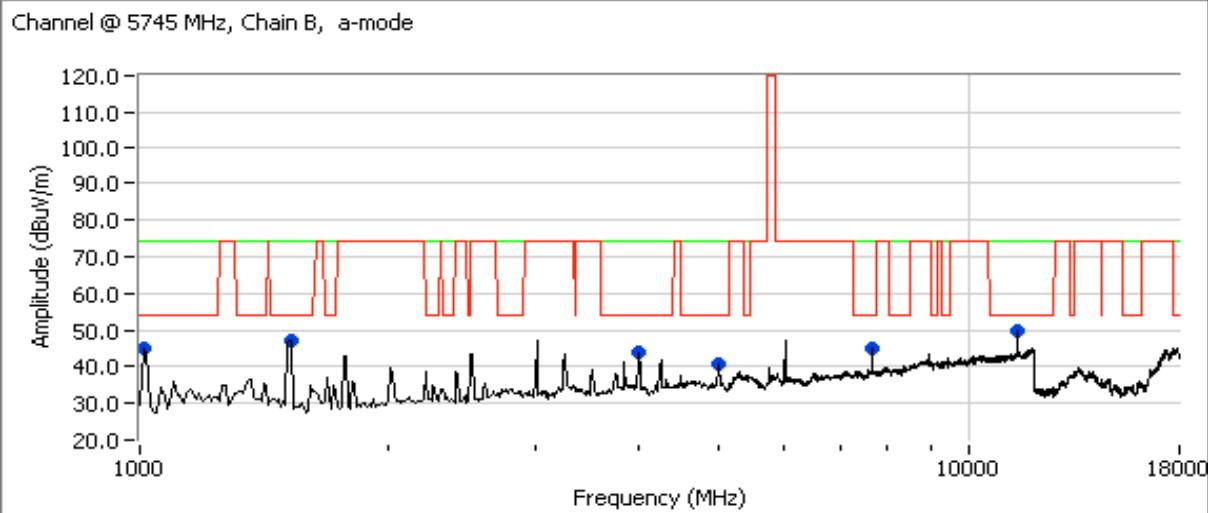
Config Change: None

Test Location: Chamber # 3

Host Unit Voltage 120V/60Hz

| Power Setting and average measurement (for reference) | | | | | |
|---|-----|---------|------|---------|-----|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| | | 25.0 | 16.7 | | |

<--- highest power setting for single channel



Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dBmV/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1000.036 | 36.4 | H | 54.0 | -17.6 | AVG | 160 | 1.0 |
| 1498.210 | 36.2 | V | 54.0 | -17.8 | AVG | 148 | 1.0 |
| 3996.880 | 31.8 | H | 54.0 | -22.2 | AVG | 140 | 1.3 |
| 4995.880 | 33.1 | V | 54.0 | -20.9 | AVG | 160 | 1.0 |
| 7659.960 | 44.2 | V | 54.0 | -9.8 | AVG | 243 | 1.0 |
| 11490.150 | 44.4 | V | 54.0 | -9.6 | AVG | 166 | 1.2 |
| 1000.036 | 49.7 | H | 74.0 | -24.3 | PK | 160 | 1.0 |
| 1498.210 | 54.2 | V | 74.0 | -19.8 | PK | 148 | 1.0 |
| 3996.880 | 48.4 | H | 74.0 | -25.6 | PK | 140 | 1.3 |
| 4995.880 | 49.6 | V | 74.0 | -24.4 | PK | 160 | 1.0 |
| 7659.960 | 49.7 | V | 74.0 | -24.3 | PK | 243 | 1.0 |
| 11490.150 | 56.7 | V | 74.0 | -17.3 | PK | 166 | 1.2 |

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11a Chain B

Run #2b: Center Channel @ 5785 MHz

Sample tested: 0016EA02D660

Date of Test: 6/18/2008

Config. Used: 1

Test Engineer: Suhaila Khushzad

Config Change: None

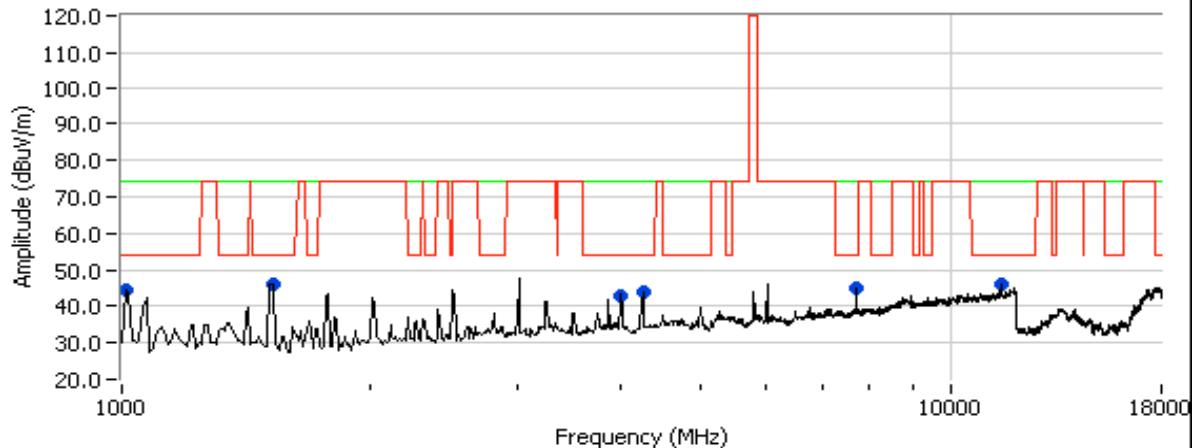
Test Location: Chamber # 3

Host Unit Voltage 120V/60Hz

| Power Setting and average measurement (for reference) | | | | | |
|---|-----|---------|------|---------|-----|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| | | 25.5 | 16.7 | | |

<--- highest power setting for single channel

Channel @ 5785 MHz, Chain B, a-mode



Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dBmV/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1000.102 | 35.5 | H | 54.0 | -18.5 | AVG | 126 | 1.0 |
| 1497.450 | 36.6 | V | 54.0 | -17.4 | AVG | 170 | 1.3 |
| 3984.100 | 32.0 | V | 54.0 | -22.0 | AVG | 107 | 1.0 |
| 4245.280 | 32.2 | V | 54.0 | -21.8 | AVG | 118 | 1.0 |
| 7713.310 | 43.3 | V | 54.0 | -10.7 | AVG | 246 | 1.0 |
| 11570.620 | 43.2 | V | 54.0 | -10.8 | AVG | 223 | 1.0 |
| 1000.102 | 48.1 | H | 74.0 | -25.9 | PK | 126 | 1.0 |
| 1497.450 | 52.8 | V | 74.0 | -21.2 | PK | 170 | 1.3 |
| 3984.100 | 52.3 | V | 74.0 | -21.7 | PK | 107 | 1.0 |
| 4245.280 | 48.9 | V | 74.0 | -25.1 | PK | 118 | 1.0 |
| 7713.310 | 49.6 | V | 74.0 | -24.4 | PK | 246 | 1.0 |
| 11570.620 | 54.4 | V | 74.0 | -19.6 | PK | 223 | 1.0 |

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11a Chain B

Run #2c: High Channel @ 5825 MHz

Sample tested: 0016EA02D660

Date of Test: 6/18/2008

Config. Used: 1

Test Engineer: Suhaila Khushzad

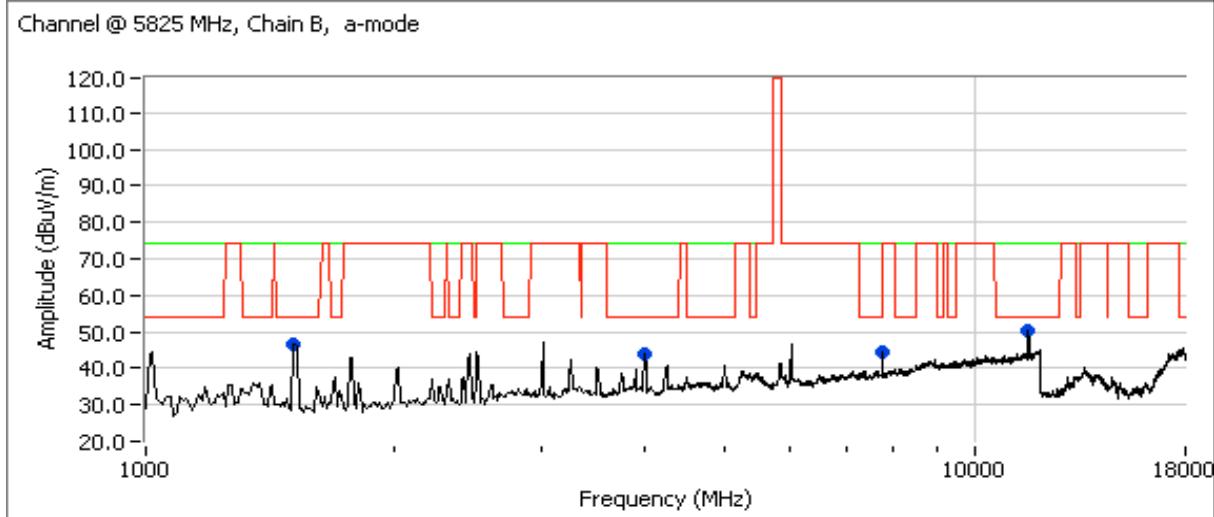
Config Change: None

Test Location: Chamber # 3

Host Unit Voltage 120V/60Hz

| Power Setting and average measurement (for reference) | | | | | |
|---|-----|---------|------|---------|-----|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| | | 26.0 | 16.7 | | |

<--- highest power setting for single channel



Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dBmV/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1495.190 | 36.9 | V | 54.0 | -17.1 | AVG | 143 | 1.0 |
| 3985.350 | 32.2 | H | 54.0 | -21.8 | AVG | 134 | 1.5 |
| 7766.570 | 42.7 | V | 74.0 | -31.3 | AVG | 160 | 1.0 |
| 11650.050 | 46.4 | V | 54.0 | -7.6 | AVG | 164 | 1.4 |
| 1495.190 | 54.4 | V | 74.0 | -19.6 | PK | 143 | 1.0 |
| 3985.350 | 49.2 | H | 74.0 | -24.8 | PK | 134 | 1.5 |
| 7766.570 | 48.6 | V | 74.0 | -25.4 | PK | 160 | 1.0 |
| 11650.050 | 58.8 | V | 74.0 | -15.2 | PK | 164 | 1.4 |

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11a Chain C

Run #3a: Low Channel @ 5745 MHz

Sample tested:

Date of Test: 6/18/2008

Config. Used: 1

Test Engineer: Peter Sales

Config Change: None

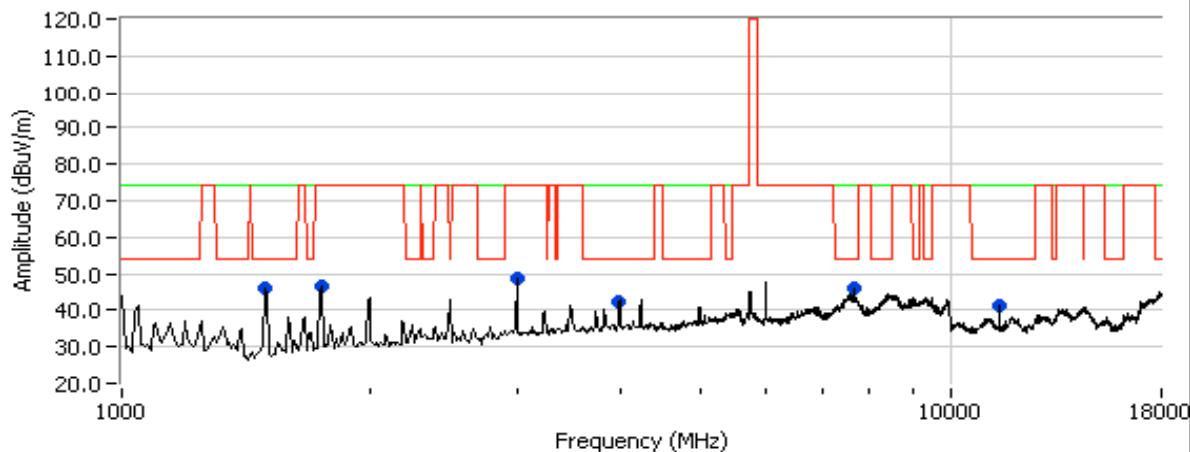
Test Location: Fremont Chamber #4

Host Unit Voltage 120V/60Hz

| Power Setting and average measurement (for reference) | | | | | |
|---|-----|---------|-----|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| | | | | 25.5 | 16.7 |

<--- highest power setting for single channel

Channel @ 5745 MHz, Chain C, a-mode



Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | | Detector | Azimuth | Height | Comments |
|-----------------|-------------|----------|-----------------|--------------|------------|------------|------------|----------|
| MHz | dBmV/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1496.750 | 33.8 | H | 54.0 | -20.2 | AVG | 327 | 1.0 | |
| 3994.730 | 32.7 | V | 54.0 | -21.3 | AVG | 259 | 1.0 | |
| 7659.960 | 43.4 | V | 54.0 | -10.6 | AVG | 356 | 1.6 | |
| 11489.960 | 35.6 | V | 54.0 | -18.4 | AVG | 356 | 1.3 | |
| 1749.640 | 46.4 | H | 74.0 | -27.6 | Peak | 331 | 1.3 | Note 2 |
| 3000.250 | 48.7 | V | 74.0 | -25.3 | Peak | 62 | 1.0 | Note 2 |
| 1496.750 | 54.6 | H | 74.0 | -19.4 | PK | 327 | 1.0 | |
| 3994.730 | 53.2 | V | 74.0 | -20.8 | PK | 259 | 1.0 | |
| 7659.960 | 50.7 | V | 74.0 | -23.3 | PK | 356 | 1.6 | |
| 11489.960 | 46.4 | V | 74.0 | -27.6 | PK | 356 | 1.3 | |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band.

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3b: Center Channel @ 5785 MHz

Sample tested:

Date of Test: 6/18/2008

Config. Used: 1

Test Engineer: Peter Sales

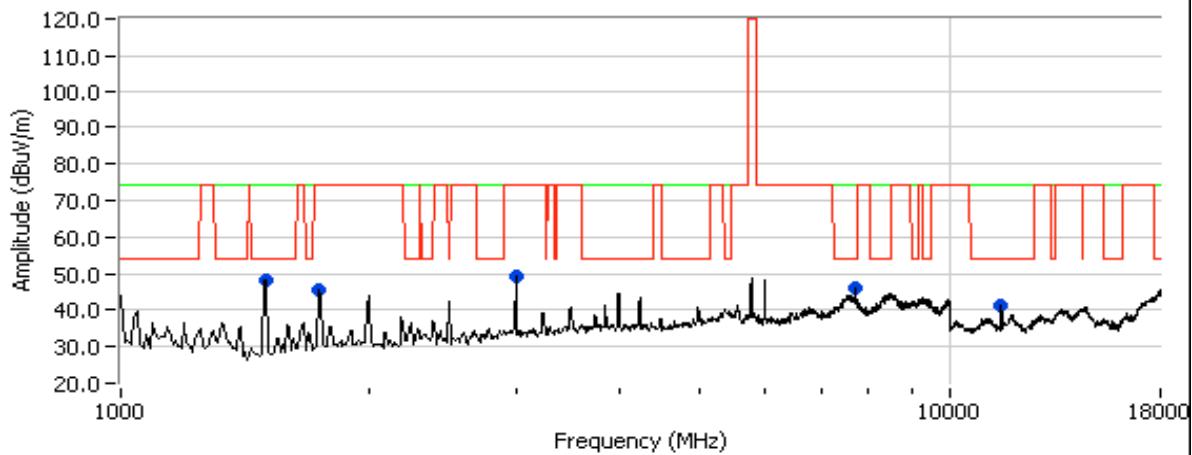
Config Change: None

Test Location: Fremont Chamber #4

Host Unit Voltage 120V/60Hz

| Power Setting and average measurement (for reference) | | | | | |
|---|-----|---------|-----|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| | | | | 26.0 | 16.7 |

<--- highest power setting for single channel

Channel @ 5785 MHz, Chain C, a-mode

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dBmV/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1497.360 | 32.6 | H | 54.0 | -21.4 | AVG | 329 | 1.0 |
| 7713.300 | 43.5 | V | 54.0 | -10.5 | AVG | 335 | 1.3 |
| 11569.940 | 36.5 | H | 54.0 | -17.5 | AVG | 64 | 1.3 |
| 1749.890 | 45.5 | H | 74.0 | -28.5 | Peak | 324 | 1.3 |
| 3000.250 | 49.2 | V | 74.0 | -24.8 | Peak | 89 | 1.0 |
| 1497.360 | 56.0 | H | 74.0 | -18.0 | PK | 329 | 1.0 |
| 7713.300 | 50.1 | V | 74.0 | -23.9 | PK | 335 | 1.3 |
| 11569.940 | 48.3 | H | 74.0 | -25.7 | PK | 64 | 1.3 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band.

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3c: High Channel @ 5785 MHz

Sample tested:

Date of Test: 6/18/2008

Config. Used: 1

Test Engineer: Peter Sales

Config Change: None

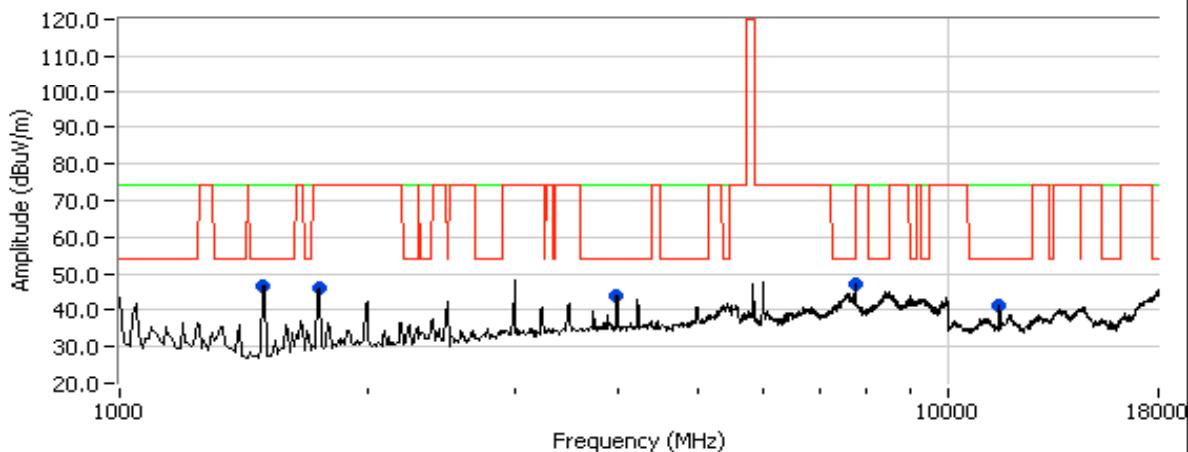
Test Location: Fremont Chamber #4

Host Unit Voltage 120V/60Hz

| Power Setting and average measurement (for reference) | | | | | |
|---|-----|---------|-----|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| | | | | 26.5 | 16.7 |

<--- highest power setting for single channel

Channel @ 5785 MHz, Chain C, a-mode


Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | | Detector | Azimuth | Height | Comments |
|-----------|--------|-----|-----------------|--------|-----------|---------|--------|----------|
| MHz | dBmV/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1497.430 | 32.5 | H | 54.0 | -21.5 | AVG | 326 | 1.0 | |
| 3992.310 | 32.6 | V | 54.0 | -21.4 | AVG | 307 | 1.0 | |
| 11650.300 | 41.9 | H | 54.0 | -12.1 | AVG | 51 | 1.0 | |
| 1743.230 | 46.3 | V | 74.0 | -27.7 | Peak | 324 | 1.3 | Note 2 |
| 7761.990 | 47.1 | V | 74.0 | -26.9 | Peak | 347 | 1.6 | Note 2 |
| 1497.430 | 55.1 | H | 74.0 | -18.9 | PK | 326 | 1.0 | |
| 3992.310 | 52.3 | V | 74.0 | -21.7 | PK | 307 | 1.0 | |
| 11650.300 | 53.9 | H | 74.0 | -20.1 | PK | 51 | 1.0 | |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band.



EMC Test Data

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS, 5725 - 5850 MHz) Radiated Spurious Emissions 802.11n20MHz Universe Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Date of Test: 6/19/2008

Config. Used: 1

Test Engineer: Peter Sales

Config Change: None

Test Location: Fremont Chamber #5

Host Unit Voltage 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions:

Temperature: 20 °C

Rel. Humidity: 33 %

Summary of Results

n20 testing covers both n20 and n40 modes

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|--|----------------------------------|----------------------------|-------------------------------|-----------------------------------|---------------------------------|---|
| 1a | 802.11n20 Chain A+B+C | 5745 MHz | A:29.0 B:30.5 C:29.5 | A: 16.5 B: 16.5 C: 16.5 | Radiated Emissions, 1 - 40 GHz | FCC Part 15.209 / 15.247(c) | 48.1dB μ V/m @ 7660.0MHz (-5.9dB) |
| 1b | 802.11n20 Chain A+B+C | 5785 MHz | A:30.0 B:31.0 C:29.5 | A: 16.5 B: 16.5 C: 16.5 | Radiated Emissions, 1 - 40 GHz | FCC Part 15.209 / 15.247(c) | 47.7dB μ V/m @ 7713.3MHz (-6.3dB) |
| 1c | 802.11n20 Chain A+B+C | 5825 MHz | A:30.0 B:31.0 C:31.0 | A: 16.5 B: 16.5 C: 16.5 | Radiated Emissions, 1 - 40 GHz | FCC Part 15.209 / 15.247(c) | 47.8dB μ V/m @ 11649.8MHz (-6.2dB) |
| - | 802.11n20 Chain A, B, C | 5745 MHz 5785 MHz 5825 MHz | | | Radiated Emissions, 1 - 40 GHz | FCC Part 15.209 / 15.247(c) | By measuring triple- chain mode at full power we also cover single- and dual-chain modes. |
| - | 802.11n20 Dual Chain modes (A+B, A+C, B+C) | | | | Radiated Emissions, 1 - 40 GHz | FCC Part 15.209 / 15.247(c) | |

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11n 20MHz Chains A+B+C

These tests run at a power setting equal to the highest single-chain settings to cover all possible dual- and triple-chain operating modes.

Run #1a: Low Channel @ 5745 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 29.0 | 16.5 | 30.5 | 16.5 | 29.5 | 16.6 |

Sample tested:

Date of Test: 6/18/2008

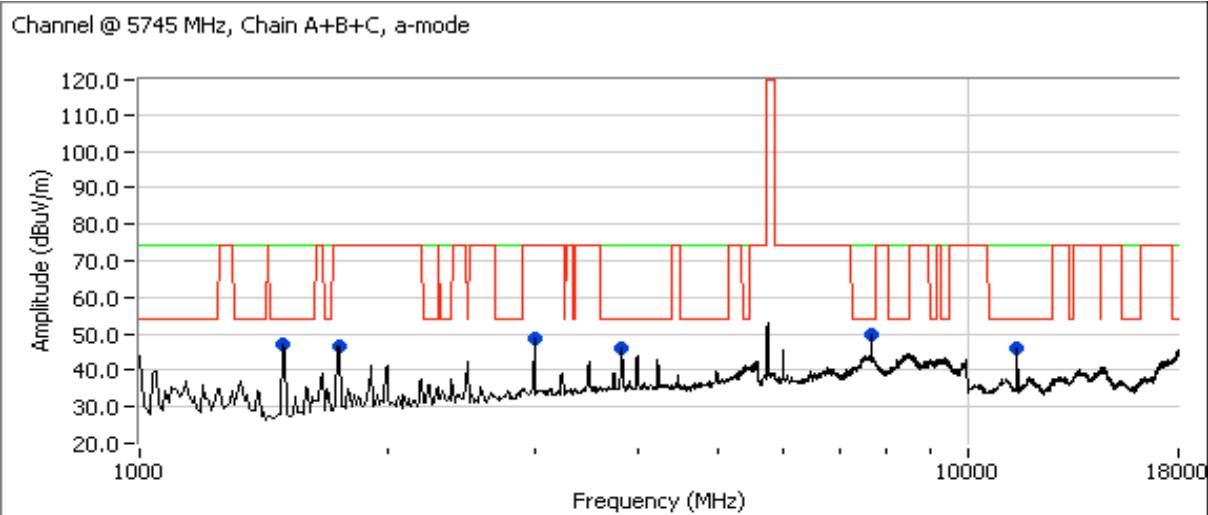
Config. Used: 1

Test Engineer: Peter Sales

Config Change: None

Test Location: Fremont Chamber #4

Host Unit Voltage 120V/60Hz



Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-----------------|--------------|------------|------------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1496.810 | 32.5 | H | 54.0 | -21.5 | AVG | 328 | 1.0 |
| 3829.960 | 43.9 | V | 54.0 | -10.1 | AVG | 317 | 1.0 |
| 7660.020 | 48.1 | V | 54.0 | -5.9 | AVG | 349 | 1.6 |
| 11490.030 | 40.8 | H | 54.0 | -13.2 | AVG | 354 | 1.3 |
| 1496.810 | 55.6 | H | 74.0 | -18.4 | PK | 328 | 1.0 |
| 3829.960 | 51.1 | V | 74.0 | -22.9 | PK | 317 | 1.0 |
| 7660.020 | 52.9 | V | 74.0 | -21.1 | PK | 349 | 1.6 |
| 11490.030 | 51.8 | H | 74.0 | -22.2 | PK | 354 | 1.3 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band.

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1b: Center Channel @ 5785 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 30.0 | 16.6 | 31.0 | 16.6 | 29.5 | 16.6 |

Sample tested:

Date of Test: 6/19/2008

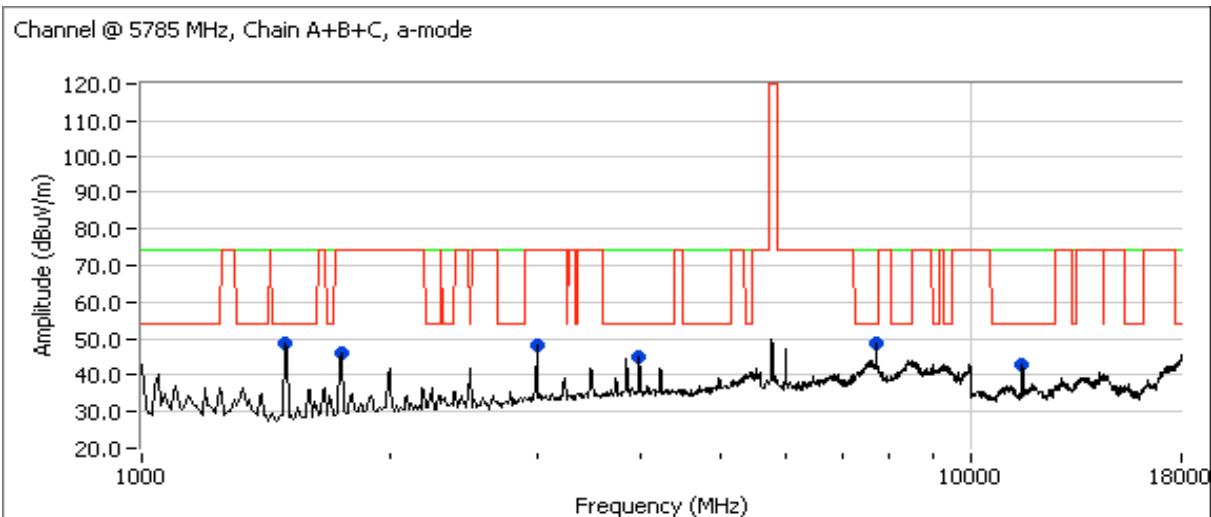
Config. Used: 1

Test Engineer: Peter Sales

Config Change: None

Test Location: Fremont Chamber #4

Host Unit Voltage 120V/60Hz


Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|----------|-----------|---------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1496.910 | 33.4 | H | 54.0 | -20.6 | AVG | 328 | 1.0 |
| 7713.300 | 47.7 | V | 54.0 | -6.3 | AVG | 331 | 1.3 |
| 3998.850 | 45.1 | V | 54.0 | -8.9 | Peak | 311 | 1.0 |
| 11574.780 | 43.0 | V | 54.0 | -11.0 | Peak | 298 | 1.0 |
| 1496.910 | 55.6 | H | 74.0 | -18.4 | PK | 328 | 1.0 |
| 7713.300 | 52.5 | V | 74.0 | -21.5 | PK | 331 | 1.3 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band.

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1c: High Channel @ 5825 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 30.0 | 16.6 | 31.0 | 16.5 | 31.0 | 16.6 |

Sample tested:

Date of Test: 6/19/2008

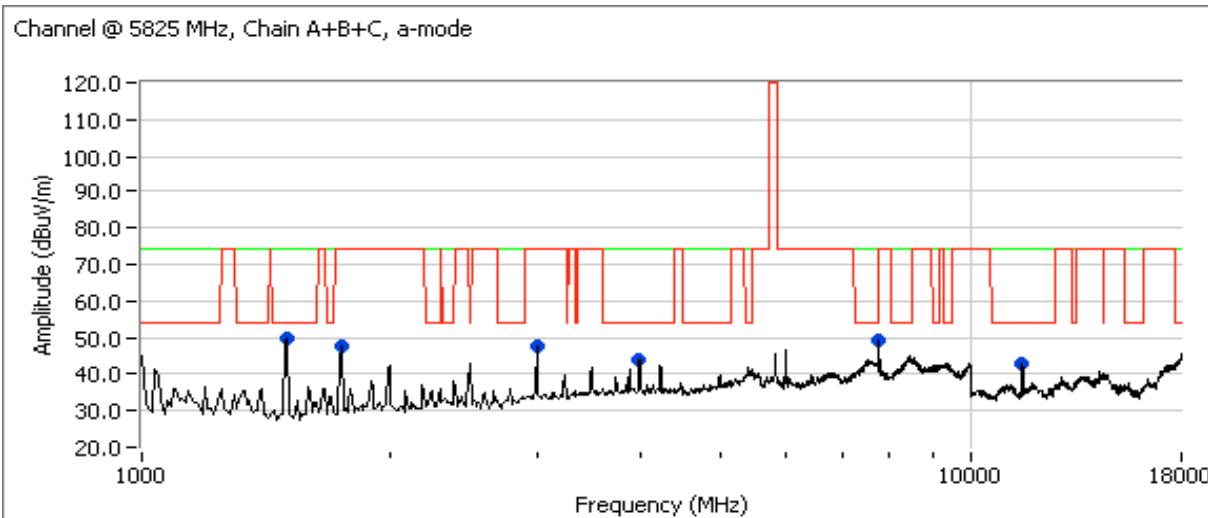
Config. Used: 1

Test Engineer: Peter Sales

Config Change: None

Test Location: Fremont Chamber #4

Host Unit Voltage 120V/60Hz


Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|-----------------|--------|-----------|---------|--------|----------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1495.380 | 33.2 | H | 54.0 | -20.8 | AVG | 325 | 1.0 | |
| 3993.050 | 32.3 | V | 54.0 | -21.7 | AVG | 310 | 1.0 | |
| 7766.670 | 48.6 | V | 74.0 | -25.4 | AVG | 347 | 1.6 | |
| 11649.800 | 47.8 | V | 54.0 | -6.2 | AVG | 27 | 1.0 | |
| 1495.380 | 56.4 | H | 74.0 | -17.6 | PK | 325 | 1.0 | |
| 3993.050 | 52.2 | V | 74.0 | -21.8 | PK | 310 | 1.0 | |
| 7766.670 | 52.9 | V | 74.0 | -21.1 | PK | 347 | 1.6 | |
| 11649.800 | 59.2 | V | 74.0 | -14.8 | PK | 27 | 1.0 | |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band.



EMC Test Data

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS, 5725 - 5850 MHz) Radiated Spurious Emissions 802.11n40MHz Universe Antenna

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

Config. Used: 1
Config Change: None
Host Unit Voltage 120V/60Hz

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing. All remote support equipment was located approximately 30 meters from the EUT with all I/O connections running on top of the groundplane.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 20 °C
Rel. Humidity: 33 %

Summary of Results

n20 testing covers both n20 and n40 modes

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|--|----------------------------------|----------------------|-------------------------------|-----------------------------------|---------------------------------|---|
| 1a | 802.11n40 Chain A+B+C | 5755 MHz | A:29 B:30 C:29 | A: 16.5 B: 16.5 C: 16.5 | Radiated Emissions, 1 - 40 GHz | FCC Part 15.209 / 15.247(c) | 43.4dB μ V/m @ 11510.0MHz (-10.6dB) |
| 1b | 802.11n40 Chain A+B+C | 5795 MHz | A:30 B:28 C:29 | A: 16.5 B: 16.5 C: 16.5 | Radiated Emissions, 1 - 40 GHz | FCC Part 15.209 / 15.247(c) | 38.7dB μ V/m @ 11590.1MHz (-15.3dB) |
| - | 802.11n40 Chain A, B, C | 5745 MHz 5785 MHz 5825 MHz | | | Radiated Emissions, 1 - 40 GHz | FCC Part 15.209 / 15.247(c) | By measuring triple- chain mode at full power we also cover single- and dual-chain modes. |
| - | 802.11n40 Dual Chain modes (A+B, A+C, B+C) | | | | Radiated Emissions, 1 - 40 GHz | FCC Part 15.209 / 15.247(c) | |

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: Radiated Spurious Emissions, 1000 - 18000 MHz. Operating Mode: 802.11n 40MHz Chains A+B+C

These tests run at a power setting equal to the highest **single-chain** settings to cover all possible dual- and triple-chain operating modes.

Sample tested: 0016EA02D660

Date of Test: 6/20/2008

Test Engineer: Joseph Cadigal

Test Location: Chamber # 3

Config. Used: 1

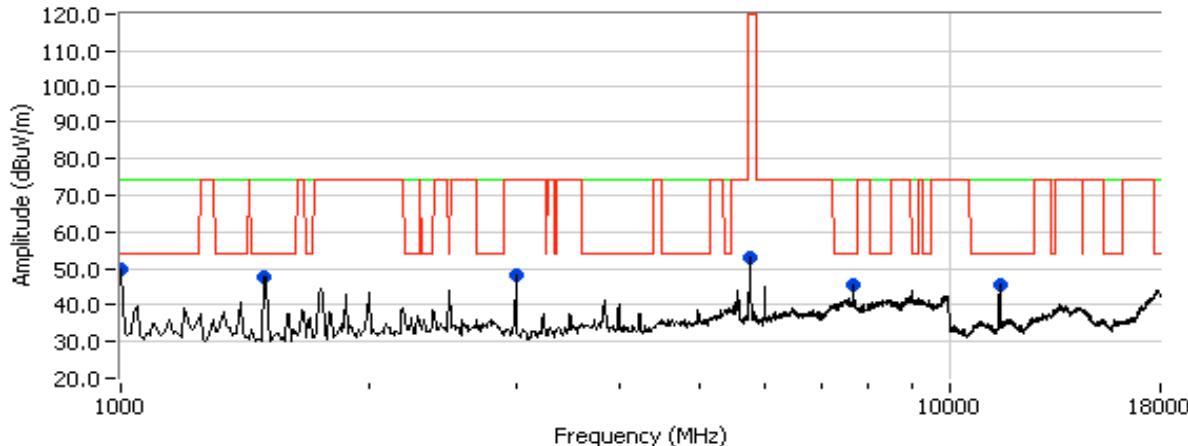
Config Change: None

Host Unit Voltage 120V/60Hz

Run #1a: Low Channel @ 5755 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 29.0 | 16.5 | 30.0 | 16.5 | 29.0 | 16.5 |

Channel @ 5755MHz, Chain A+B+C, n 40 mode


Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|------------------|--------------|----------|-----------------|--------------|------------|-----------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1000.000 | 20.4 | H | 54.0 | -33.6 | AVG | 358 | 1.0 |
| 1494.990 | 23.8 | H | 54.0 | -30.2 | AVG | 5 | 1.0 |
| 3000.440 | 38.5 | V | 74.0 | -35.5 | AVG | 84 | 1.3 |
| 7673.370 | 32.3 | V | 54.0 | -21.7 | AVG | 359 | 1.6 |
| 11510.030 | 43.4 | H | 54.0 | -10.6 | AVG | 67 | 1.6 |
| 1000.000 | 34.6 | H | 74.0 | -39.4 | PK | 358 | 1.0 |
| 1494.990 | 45.8 | H | 74.0 | -28.2 | PK | 5 | 1.0 |
| 3000.440 | 42.1 | V | 74.0 | -31.9 | PK | 84 | 1.3 |
| 7673.370 | 38.7 | V | 74.0 | -35.3 | PK | 359 | 1.6 |
| 11510.030 | 50.6 | H | 74.0 | -23.4 | PK | 67 | 1.6 |

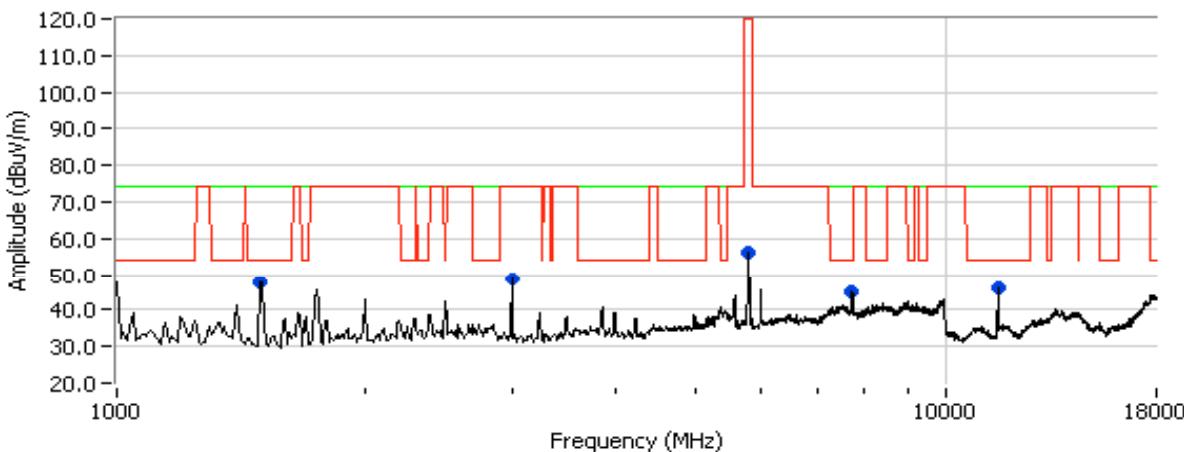
Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band.

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1b: High Channel @ 5795 MHz

| Power Setting and average measurement (for reference) | | | | | |
|---|------|---------|------|---------|------|
| Chain A | | Chain B | | Chain C | |
| Setting | Avg | Setting | Avg | Setting | Avg |
| 30.0 | 16.5 | 28.0 | 16.5 | 29.0 | 16.5 |

Channel @ 5795MHz, Chain A+B+C, n 40 mode

Spurious Emissions

| Frequency | Level | Pol | 15.209 / 15.247 | Detector | Azimuth | Height | Comments |
|------------------|--------------|----------|-----------------|--------------|------------|------------|------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters |
| 1497.930 | 23.8 | H | 54.0 | -30.2 | AVG | 312 | 1.3 |
| 3000.340 | 38.1 | V | 74.0 | -35.9 | AVG | 94 | 1.3 |
| 7726.720 | 33.5 | V | 54.0 | -20.5 | AVG | 358 | 1.6 |
| 11590.050 | 38.7 | V | 54.0 | -15.3 | AVG | 309 | 1.3 |
| 1497.930 | 44.9 | H | 74.0 | -29.1 | PK | 312 | 1.3 |
| 3000.340 | 41.9 | V | 74.0 | -32.1 | PK | 94 | 1.3 |
| 7726.720 | 39.1 | V | 74.0 | -34.9 | PK | 358 | 1.6 |
| 11590.050 | 45.0 | V | 74.0 | -29.0 | PK | 309 | 1.3 |

Note 1: For emissions in restricted bands, the limit of 15.209 was used. For all other emissions, the limit was set 30dB below the level of the fundamental and measured in 100kHz.

Note 2: Signal is not in a restricted band.



EMC Test Data

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

RSS 210 and FCC 15.247 (DTS) Radiated Spurious Emissions

Test Specific Details

Objective: The objective of this test session is to perform final qualification testing of the EUT with respect to the specification listed above.

General Test Configuration

The EUT and all local support equipment were located on the turntable for radiated spurious emissions testing.

For radiated emissions testing the measurement antenna was located 3 meters from the EUT.

Ambient Conditions: Temperature: 15-25 °C
Rel. Humidity: 35-55 %

Summary of Results

| Run # | Mode | Channel | Power Setting | Measured Power | Test Performed | Limit | Result / Margin |
|-------|----------------|----------|---------------|----------------|-------------------------------|-------------------|--|
| 1a | Chain A RX | 2437 MHz | - | - | Radiated Emissions, 1 - 8GHz | RSS 210 / RSS GEN | 47.2dB μ V/m @ 3000.41MHz (-6.8dB) |
| 1b | Chain A RX | 5785 MHz | - | - | Radiated Emissions, 1 - 18GHz | RSS 210 / RSS GEN | 47.8dB μ V/m @ 3000.42MHz (-6.2dB) |
| 2a | Chain B RX | 2437 MHz | - | - | Radiated Emissions, 1 - 8GHz | RSS 210 / RSS GEN | 47.8dB μ V/m @ 3000.41MHz (-6.2dB) |
| 2b | Chain B RX | 5785 MHz | - | - | Radiated Emissions, 1 - 18GHz | RSS 210 / RSS GEN | 48.1dB μ V/m @ 3000.31MHz (-5.9dB) |
| 3a | Chain C RX | 2437 MHz | - | - | Radiated Emissions, 1 - 8GHz | RSS 210 / RSS GEN | 48.3dB μ V/m @ 3000.41MHz (-5.7dB) |
| 3b | Chain C RX | 5785 MHz | - | - | Radiated Emissions, 1 - 18GHz | RSS 210 / RSS GEN | 47.7dB μ V/m @ 3000.41MHz (-6.3dB) |
| 4a | Chain A+B+C RX | 2437 MHz | - | - | Radiated Emissions, 1 - 8GHz | RSS 210 / RSS GEN | 48.3dB μ V/m @ 3000.41MHz (-5.7dB) |
| 4b | Chain A+B+C RX | 5785 MHz | - | - | Radiated Emissions, 1 - 18GHz | RSS 210 / RSS GEN | 48dB μ V/m @ 3000.41MHz (-6.0dB) |

Modifications Made During Testing

No modifications were made to the EUT during testing

Deviations From The Standard

No deviations were made from the requirements of the standard.

| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run # 1: Chain A Rx Radiated Spurious Emissions, 1000 - 18000 MHz
Run # 1a: Rx Radiated Spurious Emissions, 1000 - 7500 MHz. Receiver at 2437 MHz, Chain A

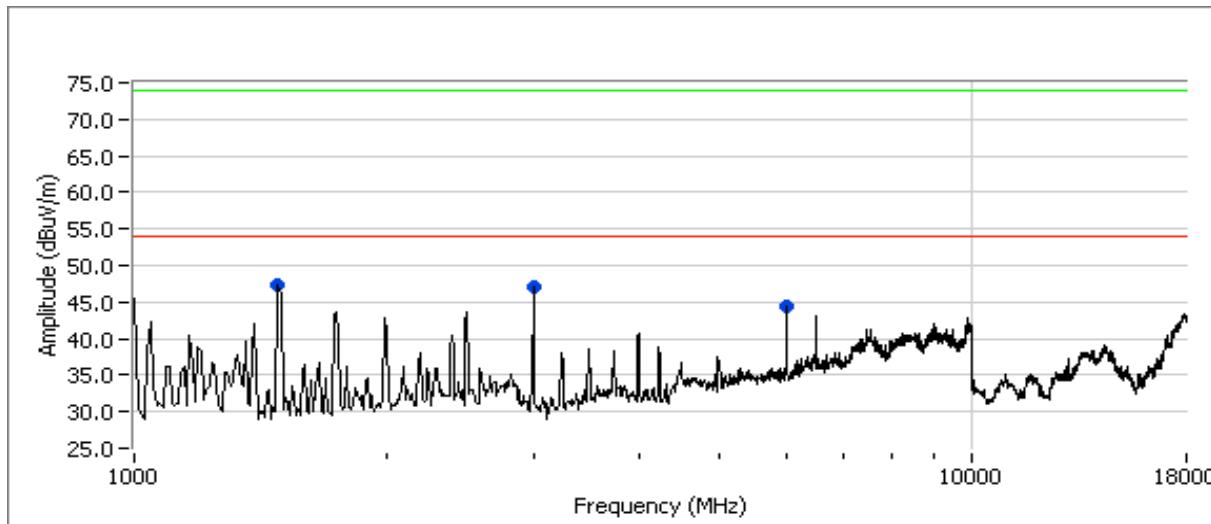
Sample tested: 0016EA02D660

Date of Test: 6/19/2008

Test Engineer: Rafael Varelas

Test Location: Chamber # 4

| Frequency | Level | Pol | RSS GEN | | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-------------|-------------|------------|------------|------------|---------------------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1494.750 | 32.6 | V | 54.0 | -21.4 | AVG | 183 | 1.0 | |
| 3000.400 | 47.2 | H | 54.0 | -6.8 | AVG | 169 | 1.0 | |
| 5995.830 | 44.3 | V | 54.0 | -9.7 | Peak | 273 | 2.0 | Pk measurement, avg limit |
| 1494.750 | 53.0 | V | 74.0 | -21.0 | PK | 183 | 1.0 | |
| 3000.400 | 51.4 | H | 74.0 | -22.6 | PK | 169 | 1.0 | |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run # 1b: Rx Radiated Spurious Emissions, 1000 - 18000 MHz. Receiver at 5785 MHz, Chain A

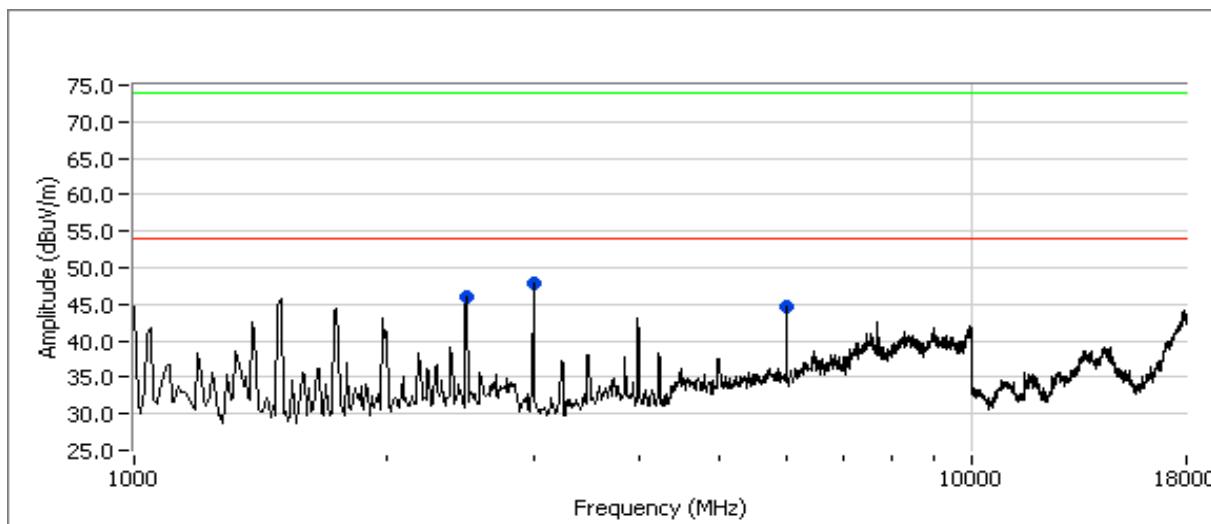
Sample tested: 0016EA02D660

Date of Test: 6/19/2008

Test Engineer: Rafael Varelas

Test Location: Chamber # 4

| Frequency | Level | Pol | RSS GEN | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|---------|--------|-----------|---------|--------|---------------------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 2490.610 | 30.3 | H | 54.0 | -23.7 | AVG | 144 | 1.0 | |
| 3000.410 | 47.8 | V | 54.0 | -6.2 | AVG | 259 | 1.3 | |
| 5995.830 | 44.6 | V | 54.0 | -9.4 | Peak | 96 | 1.0 | Pk measurement, avg limit |
| 2490.610 | 50.9 | H | 74.0 | -23.1 | PK | 144 | 1.0 | |
| 3000.410 | 51.2 | V | 74.0 | -22.8 | PK | 259 | 1.3 | |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2: Chain B Rx Radiated Spurious Emissions, 1000 - 18000 MHz

Run #2a: Rx Radiated Spurious Emissions, 1000 - 7500 MHz. Receiver at 2437 MHz, Chain B

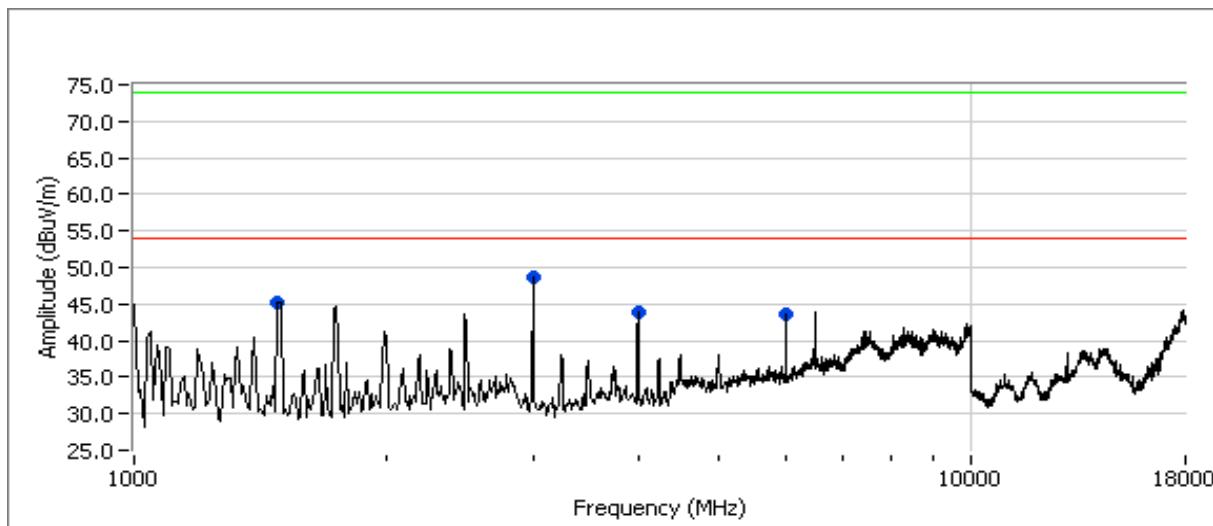
Sample tested: 0016EA02D660

Date of Test: 6/19/2008

Test Engineer: Rafael Varelas

Test Location: Chamber # 4

| Frequency | Level | Pol | RSS GEN | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|---------|--------|-----------|---------|--------|---------------------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1497.790 | 32.8 | V | 54.0 | -21.2 | AVG | 252 | 1.3 | |
| 3000.400 | 47.8 | V | 54.0 | -6.2 | AVG | 259 | 1.3 | |
| 3997.500 | 43.8 | V | 54.0 | -10.2 | Peak | 128 | 1.0 | Pk measurement, avg limit |
| 5995.830 | 43.6 | V | 54.0 | -10.4 | Peak | 98 | 1.0 | Pk measurement, avg limit |
| 1497.790 | 49.6 | V | 74.0 | -24.4 | PK | 252 | 1.3 | |
| 3000.400 | 51.1 | V | 74.0 | -22.9 | PK | 259 | 1.3 | |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #2b: Rx Radiated Spurious Emissions, 1000 - 18000 MHz. Receiver at 5785 MHz, Chain B

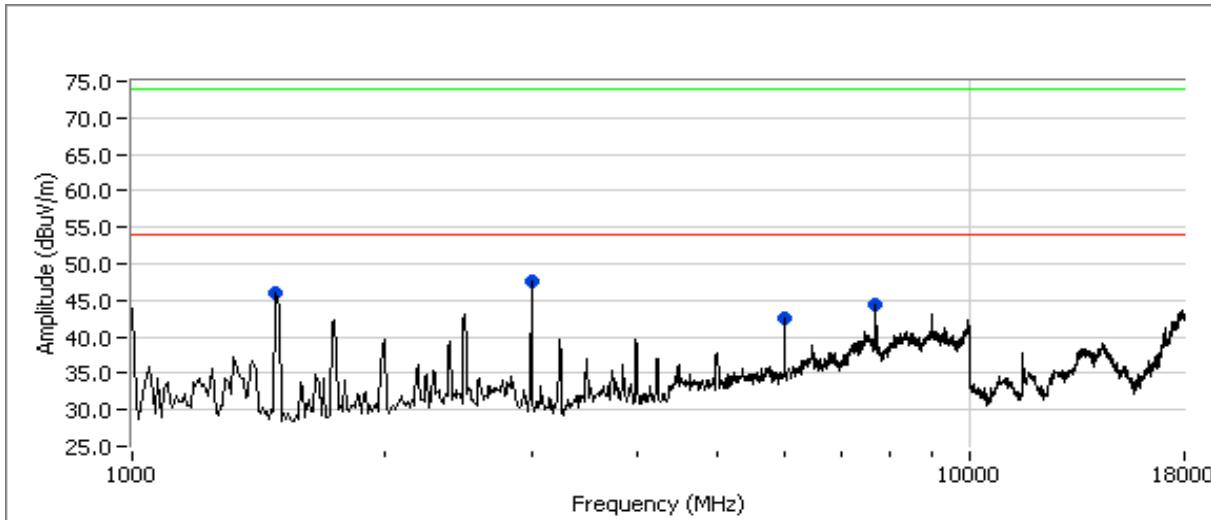
Sample tested: 0016EA02D660

Date of Test: 6/19/2008

Test Engineer: Rafael Varelas

Test Location: Chamber # 4

| Frequency | Level | Pol | RSS GEN | | Detector | Azimuth | Height | Comments |
|-----------------|--------------|----------|-------------|-------------|------------|------------|------------|---------------------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1494.410 | 33.6 | H | 54.0 | -20.4 | AVG | 163 | 1.0 | |
| 3000.340 | 48.1 | V | 54.0 | -5.9 | AVG | 262 | 1.3 | |
| 5995.830 | 42.5 | V | 54.0 | -11.5 | Peak | 263 | 1.3 | Pk measurement, avg limit |
| 7713.330 | 44.4 | V | 54.0 | -9.6 | Peak | 255 | 1.6 | Pk measurement, avg limit |
| 1494.410 | 53.6 | H | 74.0 | -20.4 | PK | 163 | 1.0 | |
| 3000.340 | 51.6 | V | 74.0 | -22.4 | PK | 262 | 1.3 | |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3: Chain C Rx Radiated Spurious Emissions, 1000 - 18000 MHz

Run #3a: Rx Radiated Spurious Emissions, 1000 - 7500 MHz. Receiver at 2437 MHz, Chain C

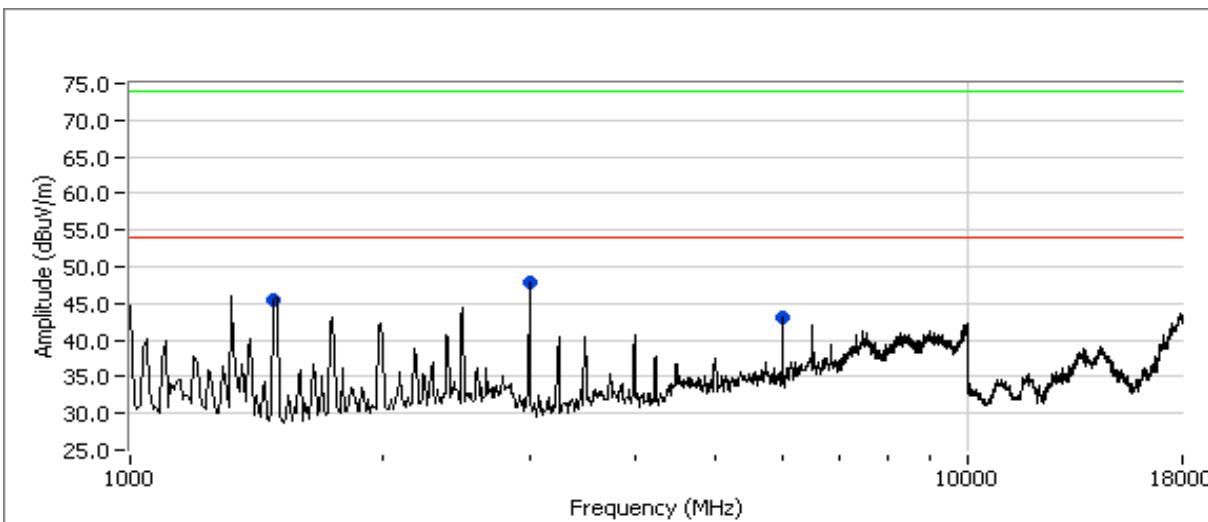
Sample tested: 0016EA02D660

Date of Test: 6/19/2008

Test Engineer: Rafael Varelas

Test Location: Chamber # 4

| Frequency | Level | Pol | RSS GEN | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|---------|--------|-----------|---------|--------|---------------------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1494.200 | 33.8 | H | 54.0 | -20.2 | AVG | 164 | 1.0 | |
| 3000.440 | 48.3 | V | 54.0 | -5.7 | AVG | 261 | 1.3 | |
| 5995.830 | 43.1 | V | 54.0 | -10.9 | Peak | 103 | 1.3 | Pk measurement, avg limit |
| 1494.200 | 53.9 | H | 74.0 | -20.1 | PK | 164 | 1.0 | |
| 3000.440 | 51.4 | V | 74.0 | -22.6 | PK | 261 | 1.3 | |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #3b: Rx Radiated Spurious Emissions, 1000 - 18000 MHz. Receiver at 5785 MHz, Chain C

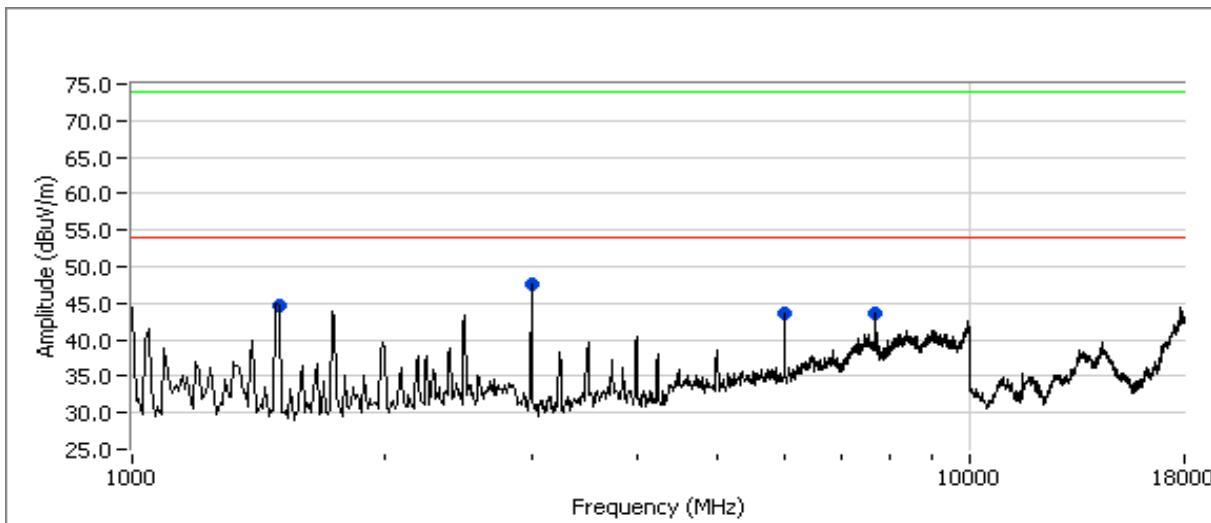
Sample tested: 0016EA02D660

Date of Test: 6/19/2008

Test Engineer: Rafael Varelas

Test Location: Chamber # 4

| Frequency | Level | Pol | RSS GEN | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|---------|--------|-----------|---------|--------|---------------------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1497.560 | 32.2 | V | 54.0 | -21.8 | AVG | 182 | 1.6 | |
| 3000.360 | 47.7 | V | 54.0 | -6.3 | AVG | 261 | 1.3 | |
| 5995.830 | 43.6 | V | 54.0 | -10.4 | Peak | 106 | 1.3 | Pk measurement, avg limit |
| 7713.330 | 43.5 | V | 54.0 | -10.5 | Peak | 253 | 1.6 | Pk measurement, avg limit |
| 1497.560 | 51.8 | V | 74.0 | -22.2 | PK | 182 | 1.6 | |
| 3000.360 | 50.8 | V | 74.0 | -23.2 | PK | 261 | 1.3 | |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #4: Chain A+B+C Rx Radiated Spurious Emissions, 1000 - 18000 MHz

Run #4a: Rx Radiated Spurious Emissions, 1000 - 7500 MHz. Receiver at 2437 MHz, Chain A+B+C

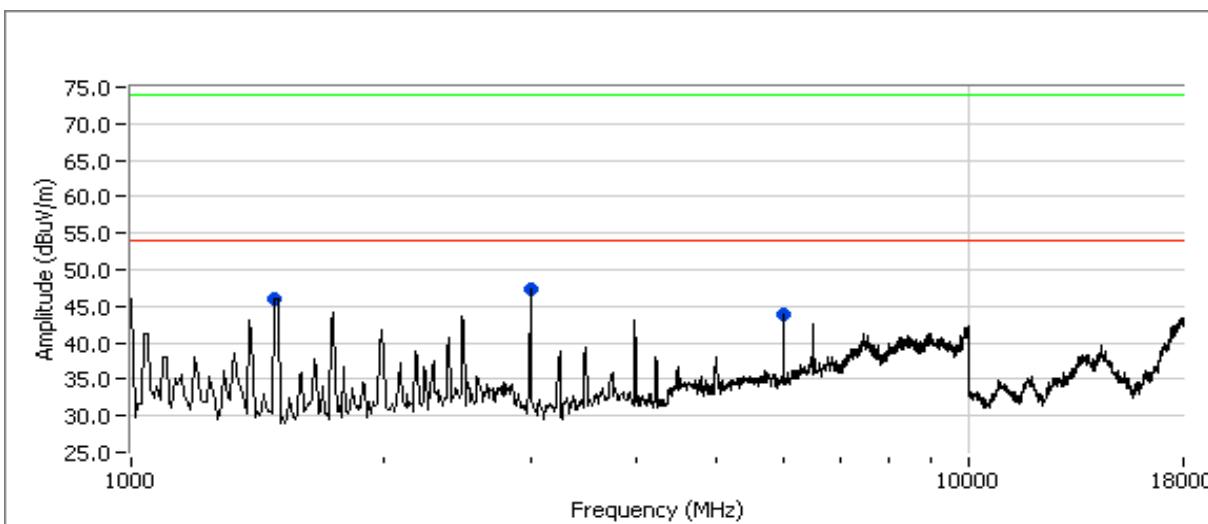
Sample tested: 0016EA02D660

Date of Test: 6/19/2008

Test Engineer: Rafael Varelas

Test Location: Chamber # 4

| Frequency | Level | Pol | RSS GEN | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|---------|--------|-----------|---------|--------|---------------------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1494.670 | 33.9 | H | 54.0 | -20.1 | AVG | 168 | 1.0 | |
| 3000.350 | 48.3 | V | 54.0 | -5.7 | AVG | 258 | 1.3 | |
| 5995.830 | 43.8 | V | 54.0 | -10.2 | Peak | 105 | 1.3 | Pk measurement, avg limit |
| 1494.670 | 53.5 | H | 74.0 | -20.5 | PK | 168 | 1.0 | |
| 3000.350 | 51.8 | V | 74.0 | -22.2 | PK | 258 | 1.3 | |



| | | | |
|-----------|-------------------|------------------|------------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71851 Band Edge |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #4b: Rx Radiated Spurious Emissions, 1000 - 18000 MHz. Receiver at 5785 MHz, Chain A+B+C

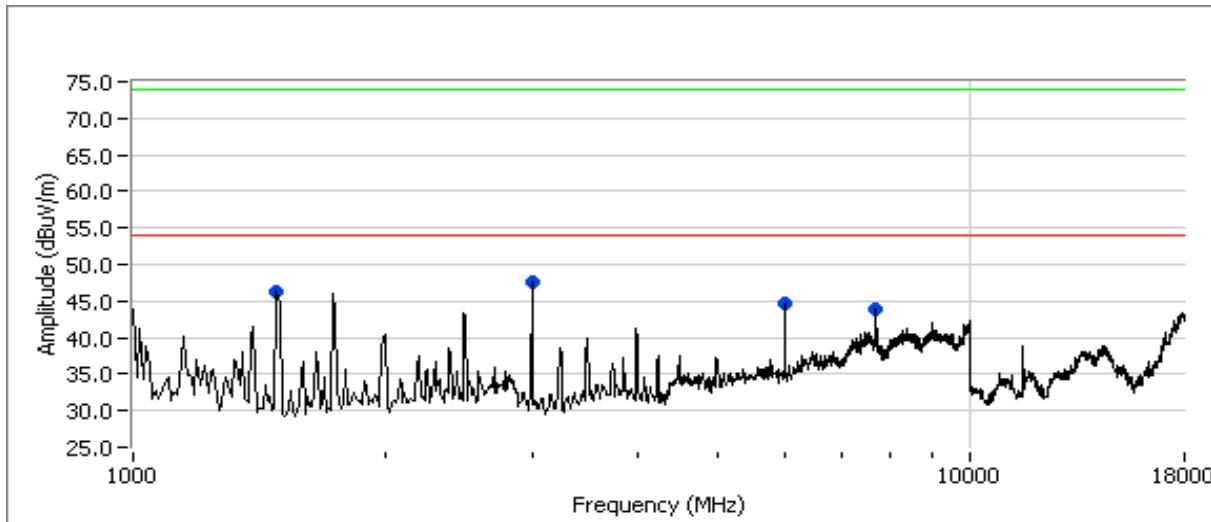
Sample tested: 0016EA02D660

Date of Test: 6/19/2008

Test Engineer: Rafael Varelas

Test Location: Chamber # 4

| Frequency | Level | Pol | RSS GEN | | Detector | Azimuth | Height | Comments |
|-----------|--------------|-----|---------|--------|-----------|---------|--------|---------------------------|
| MHz | dB μ V/m | v/h | Limit | Margin | Pk/QP/Avg | degrees | meters | |
| 1498.200 | 33.1 | H | 54.0 | -20.9 | AVG | 162 | 1.0 | |
| 3000.370 | 48.0 | V | 54.0 | -6.0 | AVG | 257 | 1.3 | |
| 5995.830 | 44.8 | V | 54.0 | -9.2 | Peak | 95 | 1.0 | Pk measurement, avg limit |
| 7713.330 | 43.9 | V | 54.0 | -10.1 | Peak | 252 | 1.6 | Pk measurement, avg limit |
| 1498.200 | 52.9 | H | 74.0 | -21.1 | PK | 162 | 1.0 | |
| 3000.370 | 51.4 | V | 74.0 | -22.6 | PK | 257 | 1.3 | |





EMC Test Data

| | | | |
|------------------------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| | | Account Manager: | Dean Eriksen |
| Contact: | Robert Paxman | | - |
| Emissions Standard(s): | FCC | Class: | - |
| Immunity Standard(s): | - | Environment: | - |

EMC Test Data

For The

Intel Corporation

Model

533AN-MMW(MMC)

Date of Last Test: 5/5/2008



EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Conducted Emissions

(Elliott Laboratories Fremont Facility, Semi-Anechoic Chamber)

Test Specific Details

Objective: The objective of this test session is to perform engineering evaluation testing of the EUT with respect to the specification listed above.

Date of Test: 5/5/2008

Config. Used: 1

Test Engineer: Ben Jing

Config Change: None

Test Location: Fremont Chamber #4

EUT Voltage: 120V/60Hz

General Test Configuration

For tabletop equipment, the EUT and host system was located on a wooden table inside the semi-anechoic chamber, 40 cm from a vertical coupling plane and 80cm from the LISN. A second LISN was used for all local support equipment. Remote support equipment was located outside of the semi-anechoic chamber. Any cables running to remote support equipment were routed through metal conduit and when possible passed through a ferrite clamp upon exiting the chamber.

Ambient Conditions:

Temperature: 21 °C

Rel. Humidity: 36 %

Summary of Results

| Run # | Test Performed | Limit | Result | Margin |
|------------|------------------------|----------------------|--------|---------------------------------------|
| 1 (DTS) | CE, AC Power,120V/60Hz | FCC 15.207 / RSS GEN | Pass | 47.4dB μ V @ 0.522MHz (-8.6dB) |
| 2 (UNII) | CE, AC Power,120V/60Hz | FCC 15.207 / RSS GEN | Pass | 47.4dB μ V @ 0.524MHz (-8.6dB) |

Modifications Made During Testing

No modifications were made to the EUT during testing

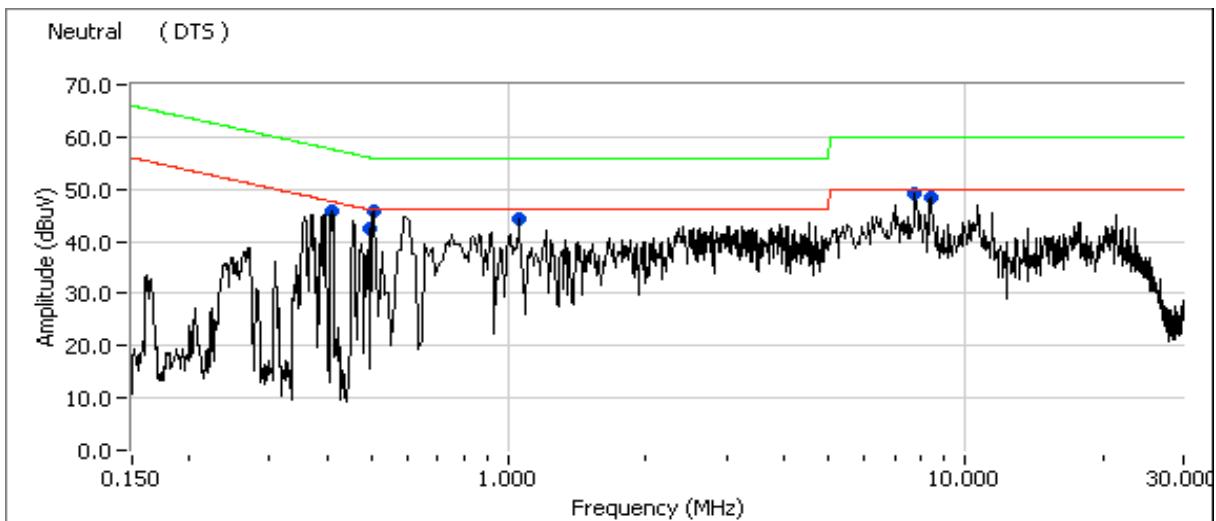
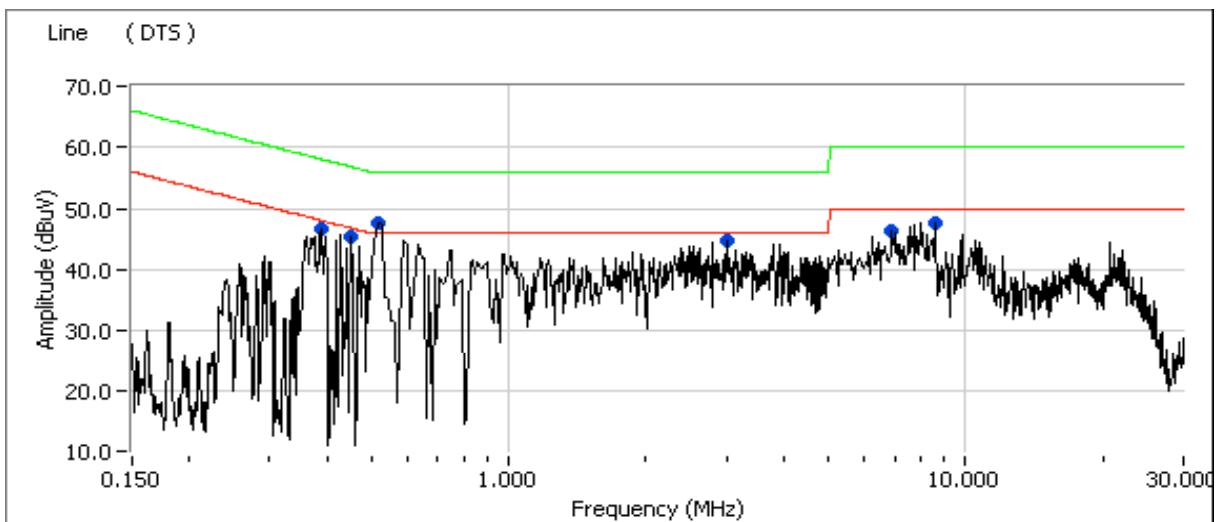
Deviations From The Standard

No deviations were made from the requirements of the standard.

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Run #1: DTS AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz

Target power ; All chains active .





EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Preliminary peak readings captured during pre-scan (peak readings vs. average limit)

| Frequency MHz | Level dB μ V | AC Line | FCC 15.207 Limit | Detector QP/Ave | Comments |
|------------------|---------------------|------------|---------------------|--------------------|----------|
| 0.524 | 47.8 | Line | 46.0 | 1.8 | Peak |
| 0.522 | 45.9 | Neutral | 46.0 | -0.1 | Peak |
| 7.733 | 49.1 | Neutral | 50.0 | -0.9 | Peak |
| 3.013 | 44.7 | Line | 46.0 | -1.3 | Peak |
| 0.389 | 46.6 | Line | 48.1 | -1.5 | Peak |
| 0.450 | 45.3 | Line | 46.9 | -1.6 | Peak |
| 1.047 | 44.4 | Neutral | 46.0 | -1.6 | Peak |
| 0.413 | 45.9 | Neutral | 47.6 | -1.7 | Peak |
| 8.393 | 48.3 | Neutral | 50.0 | -1.7 | Peak |
| 8.500 | 47.8 | Line | 50.0 | -2.2 | Peak |
| 6.918 | 46.4 | Line | 50.0 | -3.6 | Peak |
| 0.497 | 42.4 | Neutral | 46.1 | -3.7 | Peak |

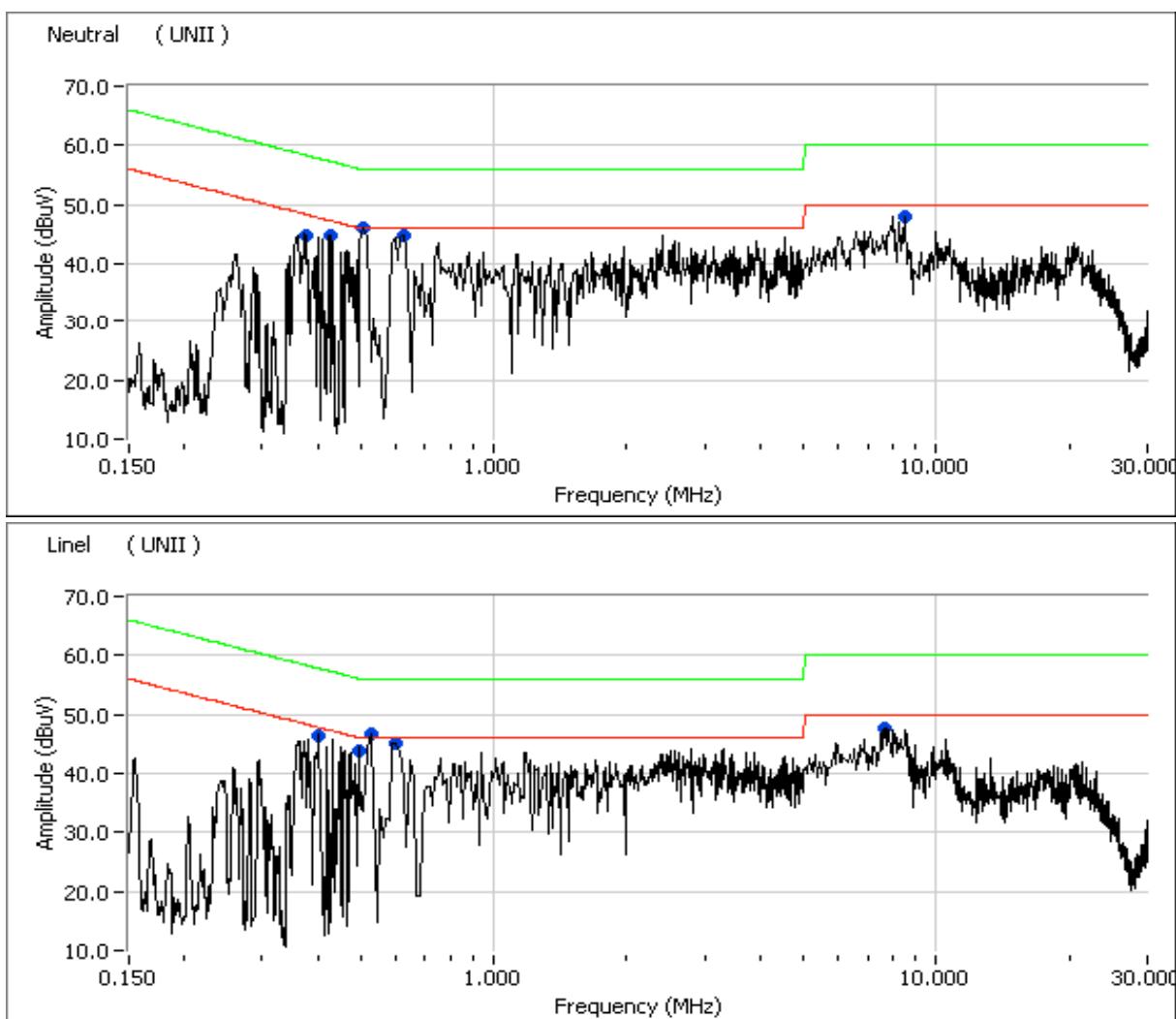
Final quasi-peak and average readings

| Frequency MHz | Level dB μ V | AC Line | FCC 15.207 Limit | Detector QP/Ave | Comments |
|------------------|---------------------|------------|---------------------|--------------------|----------|
| 0.522 | 47.4 | Neutral | 56.0 | -8.6 | QP |
| 0.524 | 46.8 | Line | 56.0 | -9.2 | QP |
| 0.450 | 44.9 | Line | 56.9 | -12.0 | QP |
| 0.497 | 43.9 | Neutral | 56.0 | -12.1 | QP |
| 0.389 | 44.5 | Line | 58.1 | -13.6 | QP |
| 0.413 | 42.5 | Neutral | 57.6 | -15.1 | QP |
| 1.047 | 40.7 | Neutral | 56.0 | -15.3 | QP |
| 3.013 | 38.0 | Line | 56.0 | -18.0 | QP |
| 8.500 | 41.4 | Line | 60.0 | -18.6 | QP |
| 0.522 | 27.0 | Neutral | 46.0 | -19.0 | AVG |
| 8.393 | 40.9 | Neutral | 60.0 | -19.1 | QP |
| 0.497 | 26.5 | Neutral | 46.0 | -19.5 | AVG |
| 8.500 | 30.3 | Line | 50.0 | -19.7 | AVG |
| 7.733 | 40.2 | Neutral | 60.0 | -19.8 | QP |
| 8.393 | 29.9 | Neutral | 50.0 | -20.1 | AVG |
| 6.918 | 39.7 | Line | 60.0 | -20.3 | QP |
| 3.013 | 25.3 | Line | 46.0 | -20.7 | AVG |
| 0.524 | 25.0 | Line | 46.0 | -21.0 | AVG |
| 7.733 | 29.0 | Neutral | 50.0 | -21.0 | AVG |
| 0.389 | 27.0 | Line | 48.1 | -21.1 | AVG |
| 1.047 | 23.9 | Neutral | 46.0 | -22.1 | AVG |
| 0.450 | 24.2 | Line | 46.9 | -22.7 | AVG |
| 6.918 | 27.0 | Line | 50.0 | -23.0 | AVG |
| 0.413 | 19.8 | Neutral | 47.6 | -27.8 | AVG |

| | |
|---------------------------|-------------------------------|
| Client: Intel Corporation | Job Number: J70976 |
| Model: 533AN-MMW(MMC) | T-Log Number: T71133 |
| Contact: Robert Paxman | Account Manager: Dean Eriksen |
| Standard: FCC | Class: N/A |

Run #2: UNII AC Power Port Conducted Emissions, 0.15 - 30MHz, 120V/60Hz

Target power ; All chains active .





EMC Test Data

| | | | |
|-----------|-------------------|------------------|--------------|
| Client: | Intel Corporation | Job Number: | J70976 |
| Model: | 533AN-MMW(MMC) | T-Log Number: | T71133 |
| Contact: | Robert Paxman | Account Manager: | Dean Eriksen |
| Standard: | FCC | Class: | N/A |

Preliminary peak readings captured during pre-scan (peak readings vs. average limit)

| Frequency MHz | Level dB μ V | AC Line | FCC 15.207 | | Detector QP/Ave | Comments |
|------------------|---------------------|------------|------------|--------|--------------------|----------|
| | | | Limit | Margin | | |
| 0.524 | 46.7 | Line | 46.0 | 0.7 | Peak | |
| 0.500 | 46.1 | Neutral | 46.0 | 0.1 | Peak | |
| 0.592 | 45.0 | Line | 46.0 | -1.0 | Peak | |
| 0.624 | 44.9 | Neutral | 46.0 | -1.1 | Peak | |
| 0.403 | 46.4 | Line | 47.8 | -1.4 | Peak | |
| 8.516 | 48.0 | Neutral | 50.0 | -2.0 | Peak | |
| 0.499 | 43.9 | Line | 46.0 | -2.1 | Peak | |
| 7.668 | 47.7 | Line | 50.0 | -2.3 | Peak | |
| 0.427 | 44.9 | Neutral | 47.3 | -2.4 | Peak | |
| 0.375 | 44.9 | Neutral | 48.4 | -3.5 | Peak | |

Final quasi-peak and average readings

| Frequency MHz | Level dB μ V | AC Line | FCC 15.207 | | Detector QP/Ave | Comments |
|------------------|---------------------|------------|------------|--------|--------------------|----------|
| | | | Limit | Margin | | |
| 0.524 | 47.4 | Line | 56.0 | -8.6 | QP | |
| 0.499 | 45.5 | Line | 56.0 | -10.5 | QP | |
| 0.500 | 45.2 | Neutral | 56.0 | -10.8 | QP | |
| 0.624 | 43.4 | Neutral | 56.0 | -12.6 | QP | |
| 0.375 | 44.7 | Neutral | 58.4 | -13.7 | QP | |
| 0.403 | 43.7 | Line | 57.8 | -14.1 | QP | |
| 0.592 | 41.8 | Line | 56.0 | -14.2 | QP | |
| 0.427 | 41.0 | Neutral | 57.3 | -16.3 | QP | |
| 0.592 | 28.6 | Line | 46.0 | -17.4 | AVG | |
| 0.375 | 30.3 | Neutral | 48.4 | -18.1 | AVG | |
| 8.516 | 41.0 | Neutral | 60.0 | -19.0 | QP | |
| 0.500 | 26.9 | Neutral | 46.0 | -19.1 | AVG | |
| 0.524 | 26.7 | Line | 46.0 | -19.3 | AVG | |
| 0.624 | 26.6 | Neutral | 46.0 | -19.4 | AVG | |
| 0.499 | 26.6 | Line | 46.0 | -19.4 | AVG | |
| 7.668 | 40.3 | Line | 60.0 | -19.7 | QP | |
| 8.516 | 29.8 | Neutral | 50.0 | -20.2 | AVG | |
| 7.668 | 29.6 | Line | 50.0 | -20.4 | AVG | |
| 0.403 | 21.5 | Line | 47.8 | -26.3 | AVG | |
| 0.427 | 18.0 | Neutral | 47.3 | -29.3 | AVG | |