



FCC Test Report

Equipment : Genie Air
Brand Name : AT&T DIRECTV
Model No. : HS17-100
FCC ID : G95HS17
Standard : 47 CFR FCC Part 15.247
Operating Band : 2400 MHz – 2483.5 MHz
Function : ☒ Point-to-multipoint; ☐ Point-to-point
Applicant : Technicolor Connected Home USA LLC
5030 Sugarloaf Parkway Building 6 Lawrenceville
Georgia United States 30044
Manufacturer : Technicolor Connected Home USA LLC
5030 Sugarloaf Parkway Building 6 Lawrenceville
Georgia United States 30044

The product sample received on Nov. 03, 2016 and completely tested on Nov. 30, 2016. We, SPORTON, would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.10-2013 and shown compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC., the test report shall not be reproduced except in full.


Sam Chen
SPORTON INTERNATIONAL INC.



Table of Contents

| | | |
|--|---|-----------|
| 1 | GENERAL DESCRIPTION | 5 |
| 1.1 | Information..... | 5 |
| 1.2 | Testing Applied Standards | 8 |
| 1.3 | Testing Location Information | 8 |
| 1.4 | Measurement Uncertainty | 9 |
| 2 | TEST CONFIGURATION OF EUT | 10 |
| 2.1 | Test Channel Mode | 10 |
| 2.2 | The Worst Case Measurement Configuration..... | 11 |
| 2.3 | EUT Operation during Test | 12 |
| 2.4 | Accessories | 12 |
| 2.5 | Support Equipment..... | 12 |
| 2.6 | Test Setup Diagram | 13 |
| 3 | TRANSMITTER TEST RESULT | 16 |
| 3.1 | AC Power-line Conducted Emissions | 16 |
| 3.2 | DTS Bandwidth | 18 |
| 3.3 | Maximum Conducted Output Power | 19 |
| 3.4 | Power Spectral Density | 21 |
| 3.5 | Emissions in Non-restricted Frequency Bands | 23 |
| 3.6 | Emissions in Restricted Frequency Bands..... | 24 |
| 4 | TEST EQUIPMENT AND CALIBRATION DATA | 28 |
| APPENDIX A. TEST RESULTS OF AC POWER-LINE CONDUCTED EMISSIONS | | |
| APPENDIX B. TEST RESULTS OF DTS BANDWIDTH | | |
| APPENDIX C. TEST RESULTS OF MAXIMUM CONDUCTED OUTPUT POWER | | |
| APPENDIX D. TEST RESULTS OF POWER SPECTRAL DENSITY | | |
| APPENDIX E. TEST RESULTS OF EMISSIONS IN NON-RESTRICTED FREQUENCY BANDS | | |
| APPENDIX F. TEST RESULTS OF EMISSIONS IN RESTRICTED FREQUENCY BANDS | | |
| APPENDIX G. TEST PHOTOS | | |

Summary of Test Result

| Conformance Test Specifications | | | | |
|---------------------------------|------------------|---|-----------------------------------|----------|
| Report Clause | Ref. Std. Clause | Description | Limit | Result |
| 1.1.2 | 15.203 | Antenna Requirement | FCC 15.203 | Complied |
| 3.1 | 15.207 | AC Power-line Conducted Emissions | FCC 15.207 | Complied |
| 3.2 | 15.247(a) | DTS Bandwidth | ≥500kHz | Complied |
| 3.3 | 15.247(b) | Maximum Conducted Output Power | Power [dBm]:30 | Complied |
| 3.4 | 15.247(e) | Power Spectral Density | PSD [dBm/3kHz]:8 | Complied |
| 3.5 | 15.247(d) | Emissions in Non-restricted Frequency Bands | Non-Restricted Bands: > 30 dBc | Complied |
| 3.6 | 15.247(d) | Emissions in Restricted Frequency Bands | Restricted Bands: FCC 15.209 | Complied |

Revision History

[illegible]

1 General Description

1.1 Information

1.1.1 RF General Information

| Frequency Range (MHz) | IEEE Std. | Ch. Frequency (MHz) | Channel Number |
|-----------------------|-----------|---------------------|----------------|
| 2400-2483.5 | 802.15.4 | 2425-2475 | 15-25 [11] |

| Band | Mode | BWch (MHz) | Nant |
|------|--------|------------|------|
| 2.4G | Zigbee | 5 | 1 |

Note:

- ♦ 2.4G is the 2.4GHz Band (2.4-2.4835GHz).
- ♦ Zigbee uses a O-QPSK (250kbps) modulation for DSSS.
- ♦ BWch is the nominal channel bandwidth.
- ♦ Nss-Min is the minimum number of spatial streams.
- ♦ Nant is the number of outputs. e.g., 2(2,3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

1.1.2 Antenna Information

| Ant. | Chain | Brand | P/N | Antenna Type | Connector |
|------|-------|---------|------------------|-----------------|-----------|
| 1 | 1 | Airgain | N24X2B2T1YE-W70U | PIFA Antenna | U.FL |
| 2 | 2 | Airgain | N24X2BTYN-B120U | PIFA Antenna | U.FL |
| 3 | 3 | Airgain | N5X35BYN-E125U | PIFA Antenna | U.FL |
| 4 | 4 | Airgain | N5X35B2YN-R110U | PIFA Antenna | U.FL |
| 5 | 5 | Airgain | N5X35BYN-A110U | PIFA Antenna | U.FL |
| 6 | 6 | Airgain | N5X35BT2YW-G120U | PIFA Antenna | U.FL |
| 7 | 7 | - | - | PCB printed IFA | - |
| 8 | 8 | - | - | PCB printed IFA | - |

| Frequency (MHz) | Antenna Gain (dBi) | | | |
|-----------------|--------------------|--------|--------|--------|
| | Ant. 1 | Ant. 2 | Ant. 7 | Ant. 8 |
| 2.4G | 4.60 | 4.60 | - | - |
| Zigbee | - | - | 4.00 | 4.00 |

| Frequency (MHz) | Composite Gain (dBi) | | | | Max Composite Gain (dBi) | | | |
|-----------------|----------------------|--------|--------|--------|--------------------------|------|------|------|
| | Ant. 3 | Ant. 4 | Ant. 5 | Ant. 6 | 4T1S | 4T2S | 4T3S | 4T4S |
| UNII-1 | 2.69 | 2.86 | 4.02 | 4.30 | 6.82 | 3.96 | 2.23 | 1.26 |
| UNII-3 | 2.48 | 2.24 | 2.49 | 2.50 | 6.13 | 3.12 | 2.06 | 0.29 |

Note1: The EUT has eight antennas.

Note2: Ant. 1~Ant. 8 connect to chain 1~chain 8.

For 2.4GHz WLAN function:
For IEEE 802.11b/g mode (1TX/1RX)

The EUT supports the antenna with TX and RX diversity functions.

Both Chain 1 and Chain 2 support transmit and receive functions, but only one of them will be used at one time.

The Chain 1 generated the worst case, so it was selected to test and record in the report.

For IEEE 802.11n mode (2TX/2RX)

Chain 1 and Chain 2 can be used as transmitting/receiving antenna.

Chain 1 and Chain 2 could transmit/receive simultaneously.

For 5GHz WLAN function:

For IEEE 802.11n/ac mode (4TX/4RX)

Chain 3, Chain 4, Chain 5 and Chain 6 can be used as transmitting/receiving antenna.

Chain 3, Chain 4, Chain 5 and Chain 6 could transmit/receive simultaneously.

For Zigbee function:

For Zigbee mode (1TX/1RX)

The EUT supports the antenna with TX and RX diversity functions.

Both Chain 7 and Chain 8 support transmit and receive functions, but only one of them will be used at one time.

The Chain 8 generated the worst case, so it was selected to test and record in the report.

1.1.3 Mode Test Duty Cycle

| Mode | DC | T(s) | VBW(Hz) $\geq 1/T$ |
|--------|----|----------------------|----------------------|
| Zigbee | 1 | n/a (DC \geq 0.98) | n/a (DC \geq 0.98) |

1.1.4 EUT Operational Condition

| | | | |
|-----------------------------|-------------------------------------|---|--|
| EUT Power Type | From Power Adapter | | |
| Beamforming Function | <input checked="" type="checkbox"/> | With beamforming for 802.11n/ac in 5GHz | <input type="checkbox"/> Without beamforming |

1.2 Testing Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR FCC Part 15
- ♦ ANSI C63.10-2013
- ♦ FCC KDB 558074 D01 v03r05
- ♦ FCC KDB 662911 D01 v02r01
- ♦ FCC KDB 412172 D01 v01

1.3 Testing Location Information

| Testing Location | | | | |
|-------------------------------------|--------|--|----------------------|----------------------|
| <input type="checkbox"/> | HWA YA | ADD : No. 52, Hwa Ya 1st Rd., Kwei-Shan Hsiang, Tao Yuan Hsien, Taiwan, R.O.C. | TEL : 886-3-327-3456 | FAX : 886-3-318-0055 |
| <input checked="" type="checkbox"/> | JHUBEI | ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. | TEL : 886-3-656-9065 | FAX : 886-3-656-9085 |

| Test Condition | Test Site No. | Test Engineer | Test Environment | Test Date |
|----------------|---------------|---|------------------|------------------------------|
| RF Conducted | TH01-CB | Andy Tsai | 25°C / 60% | Nov. 29, 2016 |
| Radiated | 03CH01-CB | Jeff Wu / Steven Liang / Welson Chen / Nyle Chang / Paul Chen | 25°C / 60% | Nov. 06, 2016 ~Nov. 30, 2016 |
| AC Conduction | CO01-CB | Da Deng | 23°C / 61% | Nov. 29, 2016 |

Test site Designation No. TW0006 with FCC.

Test site registered number IC 4086D with Industry Canada.

1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

| Test Items | Uncertainty | Remark |
|--------------------------------------|-------------|--------------------------|
| Conducted Emission (150kHz ~ 30MHz) | 3.2 dB | Confidence levels of 95% |
| Radiated Emission (30MHz ~ 1,000MHz) | 3.6 dB | Confidence levels of 95% |
| Radiated Emission (1GHz ~ 18GHz) | 3.7 dB | Confidence levels of 95% |
| Radiated Emission (18GHz ~ 40GHz) | 3.5 dB | Confidence levels of 95% |
| Conducted Emission | 1.7 dB | Confidence levels of 95% |

2 Test Configuration of EUT

2.1 Test Channel Mode

| Band | Mode | BWch (MHz) | Nss-Min | Nant | Ch. (MHz) | Range | Power Setting |
|------|--------|------------|---------|------|-----------|-------|---------------|
| 2.4G | Zigbee | 5 | 1 | 1(2) | 2425 | L | 7 |
| 2.4G | Zigbee | 5 | 1 | 1(2) | 2450 | M | 7 |
| 2.4G | Zigbee | 5 | 1 | 1(2) | 2475 | H | 7 |

Note:

- ♦ Test range channel consist of L (Low Ch.), M (Middle Ch.), H (High Ch.), S (Single Ch.) and C (Straddle Band Ch.).

2.2 The Worst Case Measurement Configuration

| The Worst Case Mode for Following Conformance Tests | |
|---|--|
| Tests Item | AC power-line conducted emissions |
| Condition | AC power-line conducted measurement for line and neutral |
| Operating Mode | CTX |
| 1 | EUT in Y axis - Zigbee function |
| 2 | EUT in Y axis - WLAN 2.4G function |
| 3 | EUT in Y axis - WLAN 5G function |
| For operating mode 3 is the worst case and it was record in this test report. | |

| The Worst Case Mode for Following Conformance Tests | |
|---|--|
| Tests Item | DTS Bandwidth Maximum Conducted Output Power Power Spectral Density Emissions in Non-restricted Frequency Bands |
| Test Condition | Conducted measurement at transmit chains |

| The Worst Case Mode for Following Conformance Tests | |
|---|---|
| Tests Item | Emissions in Restricted Frequency Bands |
| Test Condition | Radiated measurement If EUT consist of multiple antenna assembly (multiple antenna are used in EUT regardless of spatial multiplexing MIMO configuration), the radiated test should be performed with highest antenna gain of each antenna type. |
| Operating Mode < 1GHz | CTX |
| 1 | EUT in Y axis - Zigbee function |
| 2 | EUT in Y axis - WLAN 2.4G function |
| 3 | EUT in Y axis - WLAN 5G function |
| For operating mode 2 is the worst case and it was record in this test report. | |
| Operating Mode > 1GHz | CTX |
| 1 | EUT in Y axis |

| The Worst Case Mode for Following Conformance Tests | |
|--|---|
| Tests Item | Simultaneous Transmission Analysis |
| Operating Mode | |
| 1 | WLAN 2.4GHz function + WLAN 5GHz function + Zigbee function |
| Refer to Sporton Test Report No.: FA6O2141 for Co-location RF Exposure Evaluation. | |

2.3 EUT Operation during Test

The EUT was programmed to be in continuously transmitting mode.

2.4 Accessories

| Accessories | | | |
|----------------|------------|------------|--|
| Equipment Name | Brand Name | Model Name | Rating |
| AC Adapter | DIRECTV | EPS17R0-15 | INPUT: 120V~1.8A 60Hz OUTPUT: 25.2V-2.86A 72W |
| Other | | | |
| Equipment Name | Brand Name | Model Name | Remark |
| Hard Drive | SEAGATE | 1ET64-671 | 2TB |

2.5 Support Equipment

For Test Site No: CO01-CB

| Support Equipment | | | | |
|-------------------|---------------|------------|------------|--------|
| No. | Equipment | Brand Name | Model Name | FCC ID |
| 1 | NB | DELL | E6430 | DoC |
| 2 | Flash disk3.0 | ADATA | C103 | DoC |
| 3 | SIM Card | DIRECTV | NA | DoC |

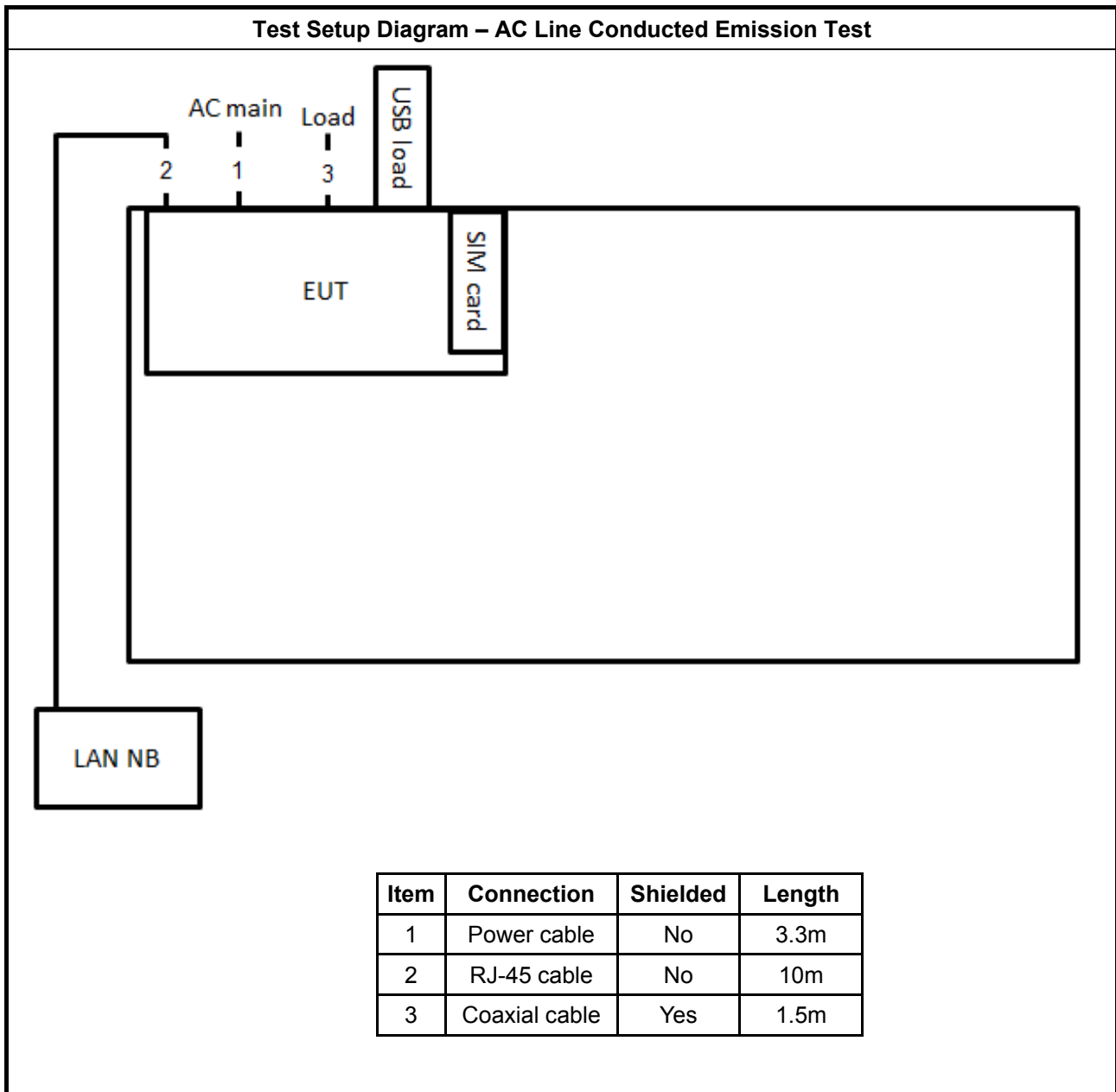
For Test Site No: 03CH01-CB (above 1GHz)

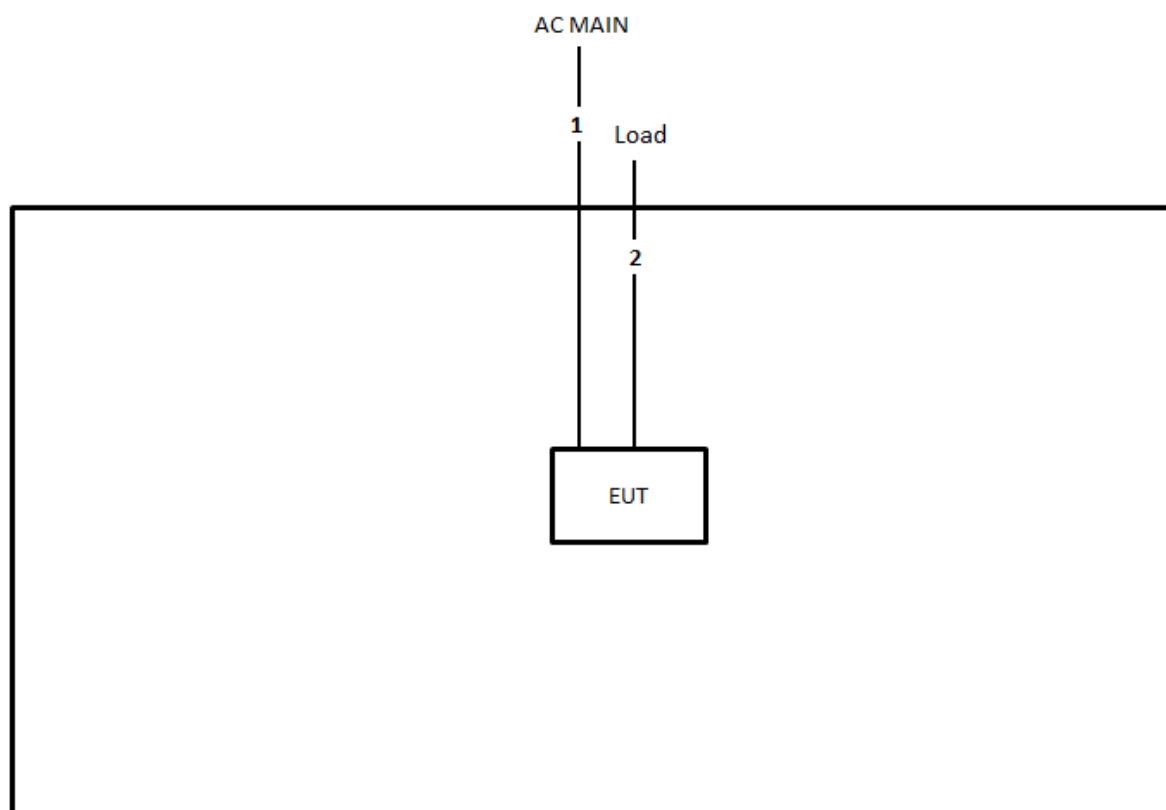
| Support Equipment | | | | |
|-------------------|-----------|------------|------------|--------|
| No. | Equipment | Brand Name | Model Name | FCC ID |
| 1 | NB | DELL | E4300 | DoC |

For Test Site No: TH01-CB

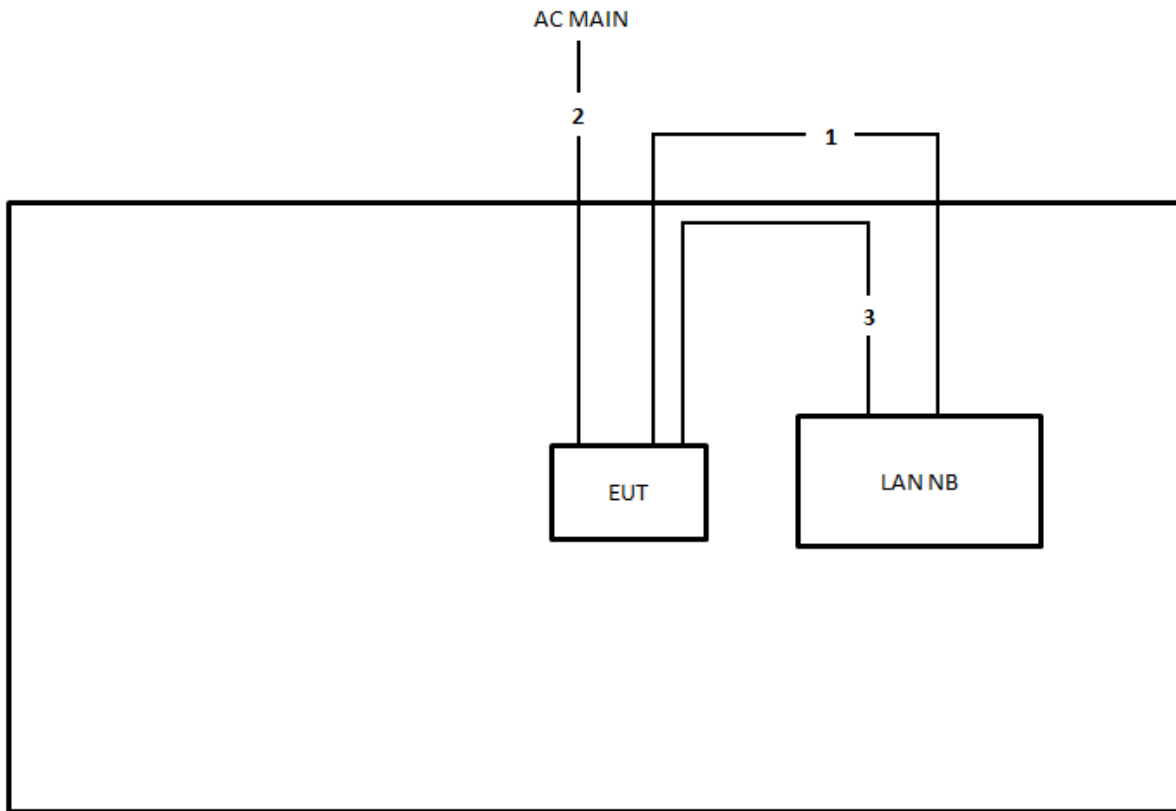
| Support Equipment | | | | |
|-------------------|-----------|------------|------------|--------|
| No. | Equipment | Brand Name | Model Name | FCC ID |
| 1 | NB | DELL | E4300 | DoC |

2.6 Test Setup Diagram



Test Setup Diagram - Radiated Test < 1GHz


| Item | Connection | Shielded | Length |
|------|---------------|----------|--------|
| 1 | Power cable | No | 3.3m |
| 2 | Coaxial cable | Yes | 10m |

Test Setup Diagram - Radiated Test > 1GHz


| Item | Connection | Shielded | Length |
|------|---------------|----------|--------|
| 1 | RJ-45 cable | No | 3m |
| 2 | Power cable | No | 3.3m |
| 3 | console cable | Yes | 2.1m |

3 Transmitter Test Result

3.1 AC Power-line Conducted Emissions

3.1.1 AC Power-line Conducted Emissions Limit

| AC Power-line Conducted Emissions Limit | | |
|---|------------|-----------|
| Frequency Emission (MHz) | Quasi-Peak | Average |
| 0.15-0.5 | 66 - 56 * | 56 - 46 * |
| 0.5-5 | 56 | 46 |
| 5-30 | 60 | 50 |

Note 1: * Decreases with the logarithm of the frequency.

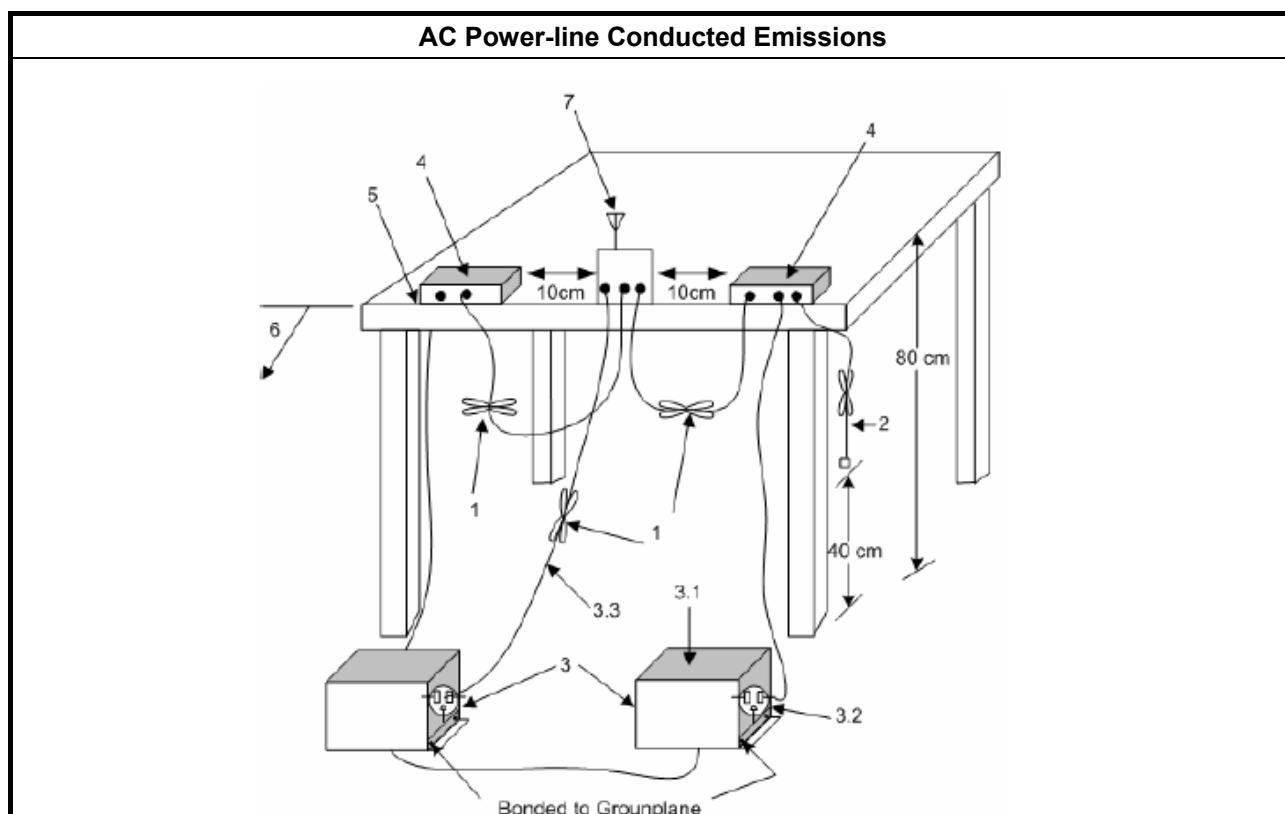
3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.1.3 Test Procedures

| Test Method |
|--|
| <input checked="" type="checkbox"/> Refer as ANSI C63.10-2013, clause 6.2 for AC power-line conducted emissions. |

3.1.4 Test Setup





3.1.5 Test Result of AC Power-line Conducted Emissions

Refer as Appendix A

3.2 DTS Bandwidth

3.2.1 6dB Bandwidth Limit

| 6dB Bandwidth Limit | |
|---|--------------------------------|
| Systems using digital modulation techniques: | |
| ▪ | 6 dB bandwidth \geq 500 kHz. |

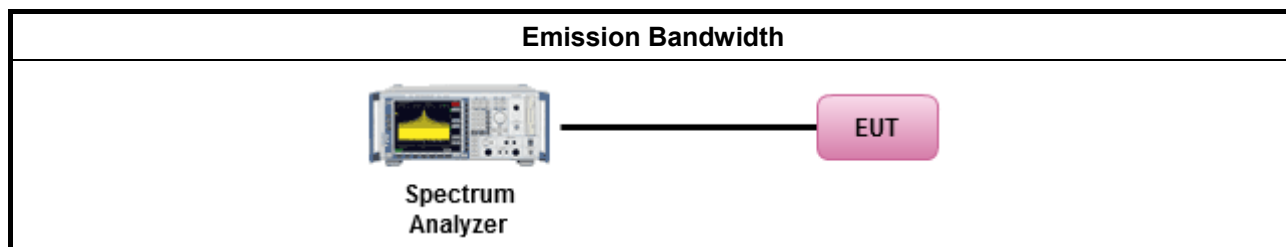
3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.2.3 Test Procedures

| Test Method | |
|-------------------------------------|--|
| ▪ | For the emission bandwidth shall be measured using one of the options below: |
| <input checked="" type="checkbox"/> | Refer as FCC KDB 558074, clause 8.1 Option 1 for 6 dB bandwidth measurement. |
| <input type="checkbox"/> | Refer as FCC KDB 558074, clause 8.2 Option 2 for 6 dB bandwidth measurement. |
| <input type="checkbox"/> | Refer as ANSI C63.10, clause 6.9.1 for occupied bandwidth testing. |

3.2.4 Test Setup



3.2.5 Test Result of Emission Bandwidth

Refer as Appendix B

3.3 Maximum Conducted Output Power

3.3.1 Maximum Conducted Output Power Limit

| Maximum Conducted Output Power Limit | |
|---|--|
| | ▪ If $G_{TX} \leq 6$ dBi, then $P_{Out} \leq 30$ dBm (1 W) |
| | ▪ Point-to-multipoint systems (P2M): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)$ dBm |
| | ▪ Point-to-point systems (P2P): If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm |
| | ▪ Smart antenna system (SAS): |
| | - Single beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm |
| | - Overlap beam: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3$ dBm |
| | - Aggregate power on all beams: If $G_{TX} > 6$ dBi, then $P_{Out} = 30 - (G_{TX} - 6)/3 + 8$ dB dBm |
| P_{Out} = maximum peak conducted output power or maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi. | |

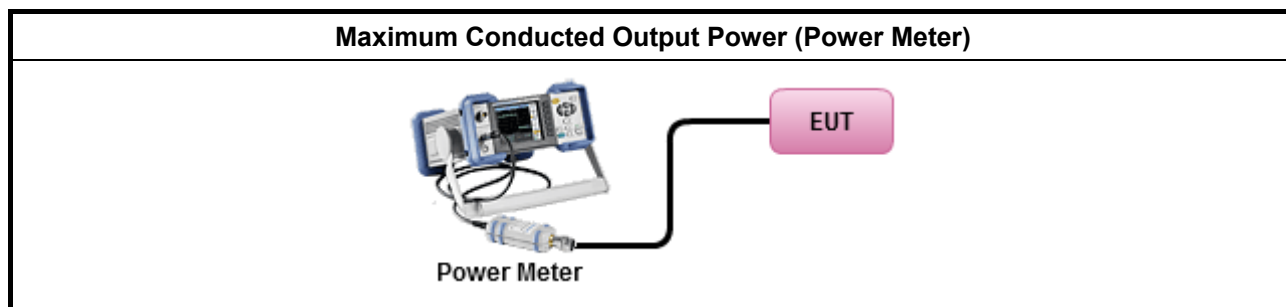
3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.3.3 Test Procedures

| Test Method | |
|--|---|
| <ul style="list-style-type: none"> Maximum Peak Conducted Output Power | |
| <input type="checkbox"/> | Refer as FCC KDB 558074, clause 9.1.1 Option 1 (RBW ≥ EBW method). |
| <input type="checkbox"/> | Refer as FCC KDB 558074, clause 9.1.2 Option 2 (peak power meter for VBW ≥ DTS BW) |
| <ul style="list-style-type: none"> Maximum Conducted Output Power | |
| [duty cycle ≥ 98% or external video / power trigger] | |
| <input type="checkbox"/> | Refer as FCC KDB 558074, clause 9.2.2.2 Method AVGSA-1 (spectral trace averaging). |
| <input type="checkbox"/> | Refer as FCC KDB 558074, clause 9.2.2.3 Method AVGSA-1 Alt. (slow sweep speed) |
| duty cycle < 98% and average over on/off periods with duty factor | |
| <input type="checkbox"/> | Refer as FCC KDB 558074, clause 9.2.2.4 Method AVGSA-2 (spectral trace averaging). |
| <input type="checkbox"/> | Refer as FCC KDB 558074, clause 9.2.2.5 Method AVGSA-2 Alt. (slow sweep speed) |
| RF power meter and average over on/off periods with duty factor or gated trigger | |
| <input checked="" type="checkbox"/> | Refer as FCC KDB 558074, clause 9.2.3 Method AVGPM-G (using an RF average power meter). |
| <ul style="list-style-type: none"> For conducted measurement. | |
| <ul style="list-style-type: none"> If the EUT supports multiple transmit chains using options given below: Refer as FCC KDB 662911, In-band power measurements. Using the measure-and-sum approach, measured all transmit ports individually. Sum the power (in linear power units e.g., mW) of all ports for each individual sample and save them. | |
| <ul style="list-style-type: none"> If multiple transmit chains, EIRP calculation could be following as methods: $P_{total} = P_1 + P_2 + \dots + P_n$ (calculated in linear unit [mW] and transfer to log unit [dBm]) $EIRP_{total} = P_{total} + DG$ | |

3.3.4 Test Setup



3.3.5 Test Result of Maximum Conducted Output Power

Refer as Appendix C

3.4 Power Spectral Density

3.4.1 Power Spectral Density Limit

| Power Spectral Density Limit |
|---|
| <ul style="list-style-type: none"> Power Spectral Density (PSD) ≤ 8 dBm/3kHz |

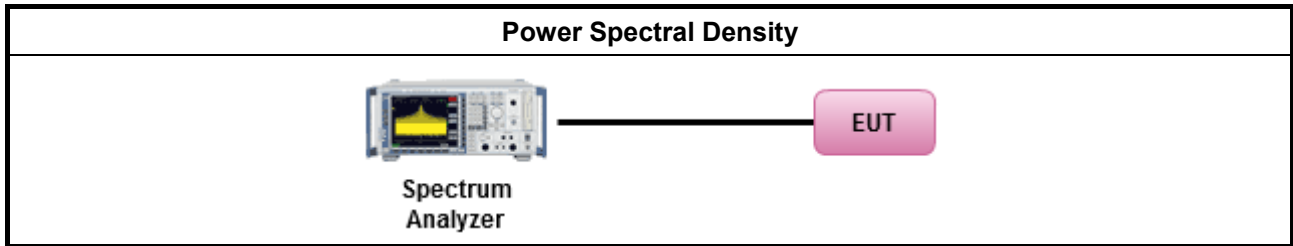
3.4.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.4.3 Test Procedures

| Test Method |
|--|
| <ul style="list-style-type: none"> Peak power spectral density procedures that the same method as used to determine the conducted output power. If maximum peak conducted output power was measured to demonstrate compliance to the output power limit, then the peak PSD procedure below (Method PKPSD) shall be used. If maximum conducted output power was measured to demonstrate compliance to the output power limit, then one of the average PSD procedures shall be used, as applicable based on the following criteria (the peak PSD procedure is also an acceptable option). |
| <input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 10.2 Method PKPSD (RBW=3-100kHz; Detector=peak). [duty cycle $\geq 98\%$ or external video / power trigger] |
| <input type="checkbox"/> Refer as FCC KDB 558074, clause 10.3 Method AVGPS-1 (spectral trace averaging). |
| <input type="checkbox"/> Refer as FCC KDB 558074, clause 10.4 Method AVGPS-2 (slow sweep speed) |
| duty cycle $< 98\%$ and average over on/off periods with duty factor |
| <input type="checkbox"/> Refer as FCC KDB 558074, clause 10.5 Method AVGPS-1 Alt (spectral trace averaging). |
| <input type="checkbox"/> Refer as FCC KDB 558074, clause 10.6 Method AVGPS-2 Alt. (slow sweep speed) |
| <ul style="list-style-type: none"> For conducted measurement. |
| <ul style="list-style-type: none"> If The EUT supports multiple transmit chains using options given below: |
| <input checked="" type="checkbox"/> Option 1: Measure and sum the spectra across the outputs. Refer as FCC KDB 662911, In-band power spectral density (PSD). Sample all transmit ports simultaneously using a spectrum analyzer for each transmit port. Where the trace bin-by-bin of each transmit port summing can be performed. (i.e., in the first spectral bin of output 1 is summed with that in the first spectral bin of output 2 and that from the first spectral bin of output 3, and so on up to the NTX output to obtain the value for the first frequency bin of the summed spectrum.). Add up the amplitude (power) values for the different transmit chains and use this as the new data trace. |
| <input type="checkbox"/> Option 2: Measure and sum spectral maxima across the outputs. With this technique, spectra are measured at each output of the device at the required resolution bandwidth. The maximum value (peak) of each spectrum is determined. These maximum values are then summed mathematically in linear power units across the outputs. These operations shall be performed separately over frequency spans that have different out-of-band or spurious emission limits, |
| <input type="checkbox"/> Option 3: Measure and add 10 log(N) dB, where N is the number of transmit chains. Refer as FCC KDB 662911, In-band power spectral density (PSD). Performed at each transmit chains and each transmit chains shall be compared with the limit have been reduced with 10 log(N). Or each transmit chains shall be add 10 log(N) to compared with the limit. |

3.4.4 Test Setup



3.4.5 Test Result of Power Spectral Density

Refer as Appendix D

3.5 Emissions in Non-restricted Frequency Bands

3.5.1 Emissions in Non-restricted Frequency Bands Limit

| Un-restricted Band Emissions Limit | |
|---|------------|
| RF output power procedure | Limit (dB) |
| Peak output power procedure | 20 |
| Average output power procedure | 30 |
| <p>Note 1: If the peak output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the peak conducted output power measured within any 100 kHz outside the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum measured in-band peak PSD level.</p> <p>Note 2: If the average output power procedure is used to measure the fundamental emission power to demonstrate compliance to requirements, then the power in any 100 kHz outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum measured in-band average PSD level.</p> | |

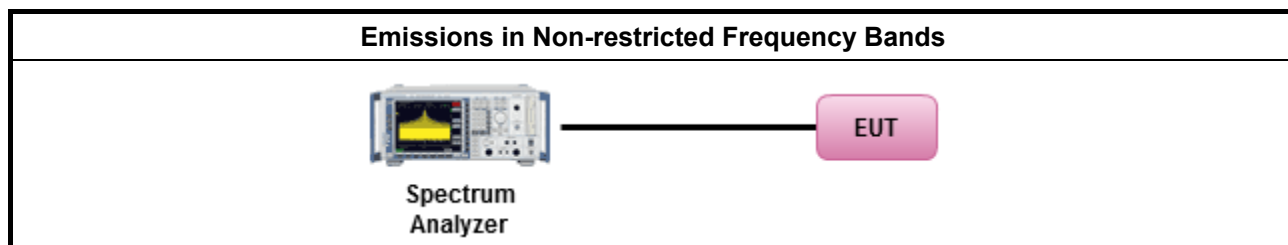
3.5.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

3.5.3 Test Procedures

| Test Method |
|--|
| <ul style="list-style-type: none"> Refer as FCC KDB 558074, clause 11 for unwanted emissions into non-restricted bands. |

3.5.4 Test Setup



3.5.5 Test Result of Emissions in Non-restricted Frequency Bands

Refer as Appendix E

3.6 Emissions in Restricted Frequency Bands

3.6.1 Emissions in Restricted Frequency Bands Limit

| Restricted Band Emissions Limit | | | |
|---------------------------------|-----------------------|-------------------------|----------------------|
| Frequency Range (MHz) | Field Strength (uV/m) | Field Strength (dBuV/m) | Measure Distance (m) |
| 0.009~0.490 | 2400/F(kHz) | 48.5 - 13.8 | 300 |
| 0.490~1.705 | 24000/F(kHz) | 33.8 - 23 | 30 |
| 1.705~30.0 | 30 | 29 | 30 |
| 30~88 | 100 | 40 | 3 |
| 88~216 | 150 | 43.5 | 3 |
| 216~960 | 200 | 46 | 3 |
| Above 960 | 500 | 54 | 3 |

Note 1: Test distance for frequencies at or above 30 MHz, measurements may be performed at a distance other than the limit distance provided they are not performed in the near field and the emissions to be measured can be detected by the measurement equipment. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse of linear distance for field-strength measurements, inverse of linear distance-squared for power-density measurements).

Note 2: Test distance for frequencies at below 30 MHz, measurements may be performed at a distance closer than the EUT limit distance; however, an attempt should be made to avoid making measurements in the near field. When performing measurements below 30 MHz at a closer distance than the limit distance, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two or more distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade). The test report shall specify the extrapolation method used to determine compliance of the EUT.

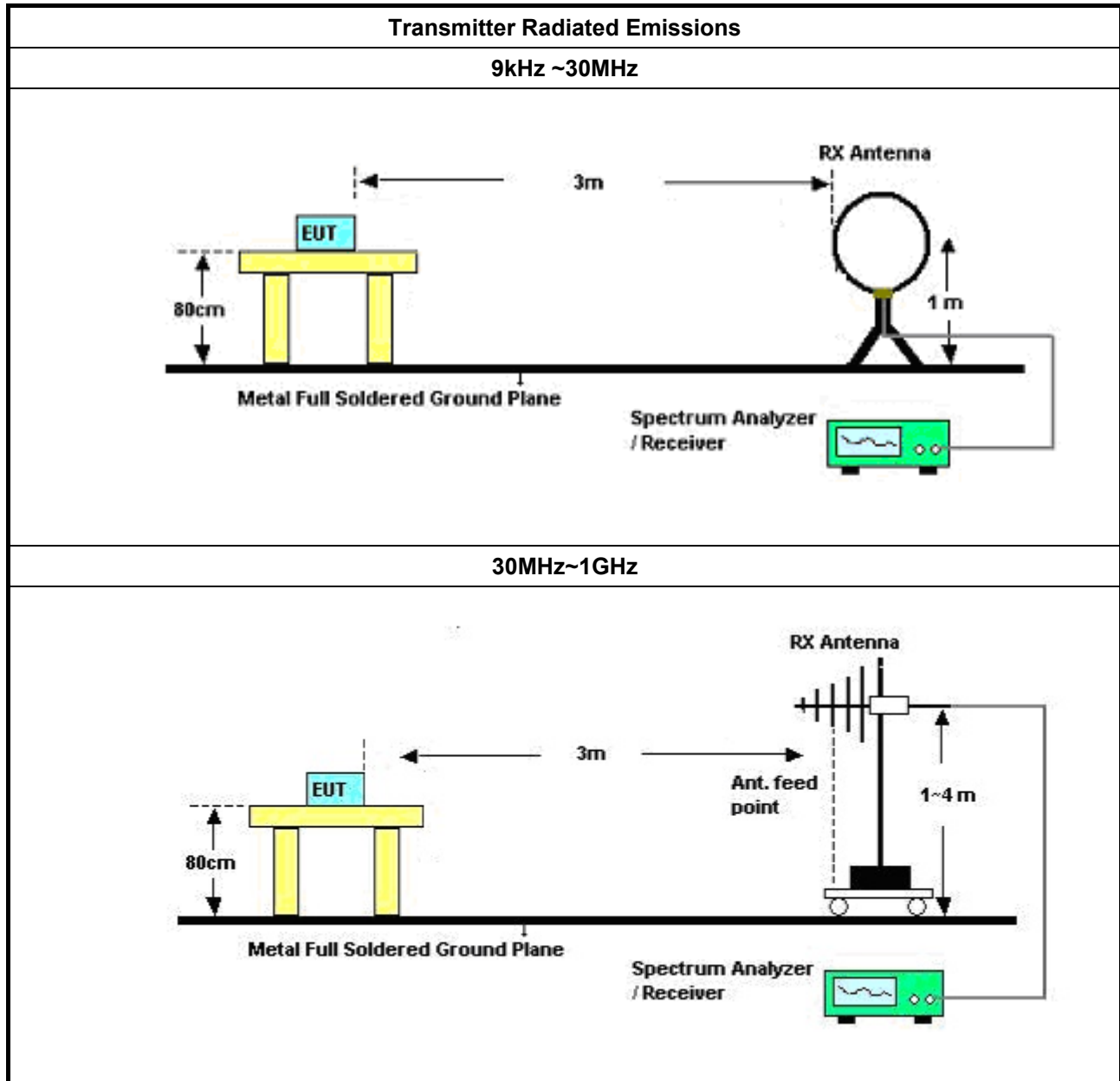
3.6.2 Measuring Instruments

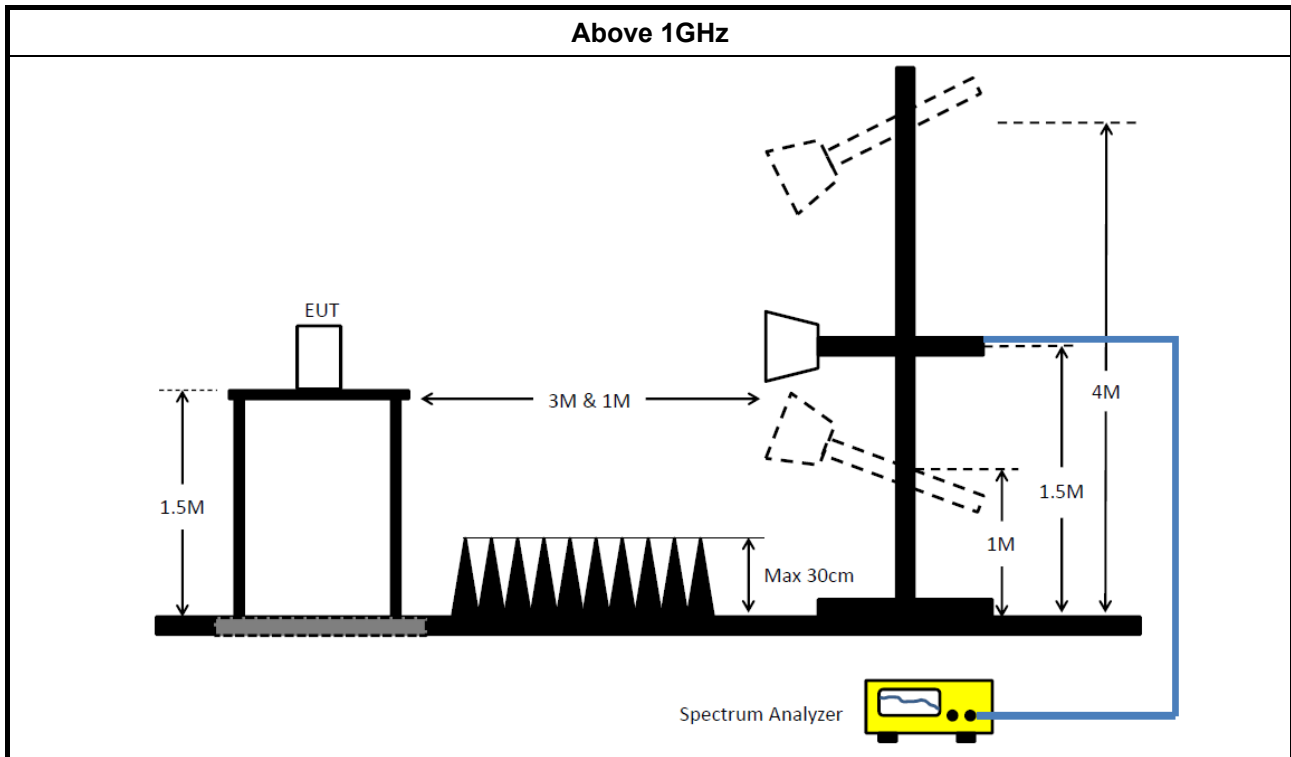
Refer a test equipment and calibration data table in this test report.

3.6.3 Test Procedures

| Test Method | |
|--|--|
| <ul style="list-style-type: none"> The average emission levels shall be measured in [duty cycle ≥ 98 or duty factor]. | |
| <ul style="list-style-type: none"> Refer as ANSI C63.10, clause 6.9.2.2 band-edge testing shall be performed at the lowest frequency channel and highest frequency channel within the allowed operating band. | |
| <ul style="list-style-type: none"> For the transmitter unwanted emissions shall be measured using following options below: | |
| | <ul style="list-style-type: none"> Refer as FCC KDB 558074, clause 12 for unwanted emissions into restricted bands. |
| | <input type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.5.1 Option 1 (trace averaging for duty cycle $\geq 98\%$) |
| | <input type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.5.2 Option 2 (trace averaging + duty factor). |
| | <input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.5.3 Option 3 (Reduced VBW $\geq 1/T$). |
| | <input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.3 (Reduced VBW). VBW $\geq 1/T$, where T is pulse time. |
| | <input type="checkbox"/> Refer as ANSI C63.10, clause 4.2.3.2.4 average value of pulsed emissions. |
| | <input checked="" type="checkbox"/> Refer as FCC KDB 558074, clause 12.2.4 measurement procedure peak limit. |
| <ul style="list-style-type: none"> For the transmitter band-edge emissions shall be measured using following options below: | |
| | <ul style="list-style-type: none"> Refer as FCC KDB 558074 clause 13.1, When the performing peak or average radiated measurements, emissions within 2 MHz of the authorized band edge may be measured using the marker-delta method described below. |
| | <ul style="list-style-type: none"> Refer as FCC KDB 558074, clause 13.2 (ANSI C63.10, clause 6.9.3) for marker-delta method for band-edge measurements. |
| | <ul style="list-style-type: none"> Refer as FCC KDB 558074, clause 13.3 for narrower resolution bandwidth (100kHz) using the band power and summing the spectral levels (i.e., 1 MHz). |
| <ul style="list-style-type: none"> For conducted and cabinet radiation measurement, refer as FCC KDB 558074, clause 12.2.2. | |
| | <ul style="list-style-type: none"> For conducted unwanted emissions into restricted bands (absolute emission limits). Devices with multiple transmit chains using options given below: (1) Measure and sum the spectra across the outputs or (2) Measure and add $10 \log(N)$ dB |
| | <ul style="list-style-type: none"> For FCC KDB 662911 The methodology described here may overestimate array gain, thereby resulting in apparent failures to satisfy the out-of-band limits even if the device is actually compliant. In such cases, compliance may be demonstrated by performing radiated tests around the frequencies at which the apparent failures occurred. |

3.6.4 Test Setup





3.6.5 Transmitter Radiated Unwanted Emissions (Below 30MHz)

All amplitude of spurious emissions that are attenuated by more than 20 dB below the permissible value has no need to be reported.

3.6.6 Test Result of Transmitter Radiated Unwanted Emissions

Refer as Appendix F

4 Test Equipment and Calibration Data

| Instrument | Manufacturer | Model No. | Serial No. | Characteristics | Calibration Date | Remark |
|-----------------------------------|--------------|-------------------|------------------|-----------------|------------------|-----------------------|
| EMI Receiver | Agilent | N9038A | My52260123 | 9kHz ~ 8.45GHz | Jan. 27, 2016 | Conduction (CO01-CB) |
| LISN | F.C.C. | FCC-LISN-50-16-2 | 04083 | 150kHz ~ 100MHz | Dec. 08, 2015 | Conduction (CO01-CB) |
| LISN | Schwarzbeck | NSLK 8127 | 8127647 | 9kHz ~ 30MHz | Dec. 23, 2015 | Conduction (CO01-CB) |
| COND Cable | Woken | Cable | 01 | 150kHz ~ 30MHz | May 24, 2016 | Conduction (CO01-CB) |
| Software | Audix | E3 | 6.120210n | - | N.C.R. | Conduction (CO01-CB) |
| BILOG ANTENNA with 6dB Attenuator | TESEQ & EMC1 | CBL6112D & N-6-06 | 37880 & AT-N0609 | 20MHz ~ 2GHz | Aug. 30, 2016 | Radiation (03CH01-CB) |
| Horn Antenna | EMCO | 3115 | 00075790 | 750MHz ~ 18GHz | Nov. 10, 2016 | Radiation (03CH01-CB) |
| Horn Antenna | Schwarzbeck | BBHA 9170 | BBHA9170252 | 15GHz ~ 40GHz | Jul. 25, 2016 | Radiation (03CH01-CB) |
| Pre-Amplifier | Agilent | 8447D | 2944A10991 | 0.1MHz ~ 1.3GHz | Mar. 15, 2016 | Radiation (03CH01-CB) |
| Pre-Amplifier | Agilent | 8449B | 3008A02310 | 1GHz ~ 26.5GHz | Jan. 18, 2016 | Radiation (03CH01-CB) |
| Pre-Amplifier | MITEQ | TTA1840-35-HG | 1864479 | 18GHz ~ 40GHz | Jun. 28, 2016 | Radiation (03CH01-CB) |
| Spectrum Analyzer | R&S | FSP40 | 100056 | 9kHz ~ 40GHz | Nov. 21, 2016 | Radiation (03CH01-CB) |
| EMI Test | R&S | ESCS | 100355 | 9kHz ~ 2.75GHz | May 16, 2016 | Radiation (03CH01-CB) |
| RF Cable-low | Woken | Low Cable-1 | N/A | 30 MHz ~ 1 GHz | Oct. 24, 2016 | Radiation (03CH01-CB) |
| RF Cable-high | Woken | High Cable-16 | N/A | 1 GHz ~ 18 GHz | Oct. 24, 2016 | Radiation (03CH01-CB) |
| RF Cable-high | Woken | High Cable-17 | N/A | 1 GHz ~ 18 GHz | Oct. 24, 2016 | Radiation (03CH01-CB) |
| RF Cable-high | Woken | High Cable-40G-1 | N/A | 18GHz ~ 40 GHz | Oct. 24, 2016 | Radiation (03CH01-CB) |
| RF Cable-high | Woken | High Cable-40G-2 | N/A | 18GHz ~ 40 GHz | Oct. 24, 2016 | Radiation (03CH01-CB) |
| Test Software | Audix | E3 | 6.2009-I0-7 | N/A | N/A | Radiation (03CH01-CB) |
| Spectrum analyzer | R&S | FSV40 | 100979 | 9kHz~40GHz | Dec. 09, 2015 | Conducted (TH01-CB) |

**FCC Test Report****Report No. : FR602141AC**

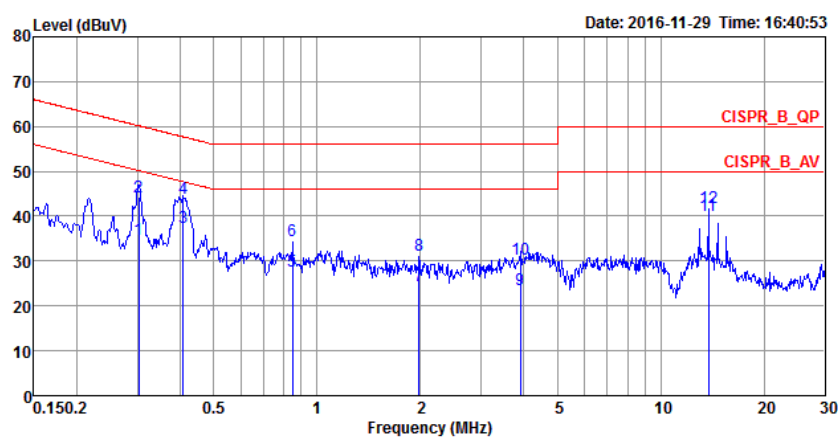
| Instrument | Manufacturer | Model No. | Serial No. | Characteristics | Calibration Date | Remark |
|---------------|---------------------|-----------|---------------|------------------|------------------|---------------------|
| RF Cable-high | Woken | RG402 | High Cable-6 | 1 GHz – 26.5 GHz | Oct. 24, 2016 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-7 | 1 GHz – 26.5 GHz | Oct. 24, 2016 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-8 | 1 GHz – 26.5 GHz | Oct. 24, 2016 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-9 | 1 GHz – 26.5 GHz | Oct. 24, 2016 | Conducted (TH01-CB) |
| RF Cable-high | Woken | RG402 | High Cable-10 | 1 GHz – 26.5 GHz | Oct. 24, 2016 | Conducted (TH01-CB) |
| Cable | Marvelous Microwave | n/a | Cable-REF-1 | 9k-1GHz | Oct. 21, 2016 | Conducted (TH01-CB) |
| Power Sensor | Agilent | U2021XA | MY54320014 | 50MHz~18GHz | Apr. 20, 2016 | Conducted (TH01-CB) |

Note: Calibration Interval of instruments listed above is one year.

N.C.R. means Non-Calibration required.

AC Power-line Conducted Emissions Result

| | | | |
|--------------------|--------------------------|-------------|---------|
| Operating Mode | 3 | Power Phase | Neutral |
| Operating Function | CTX - WLAN 5GHz function | | |

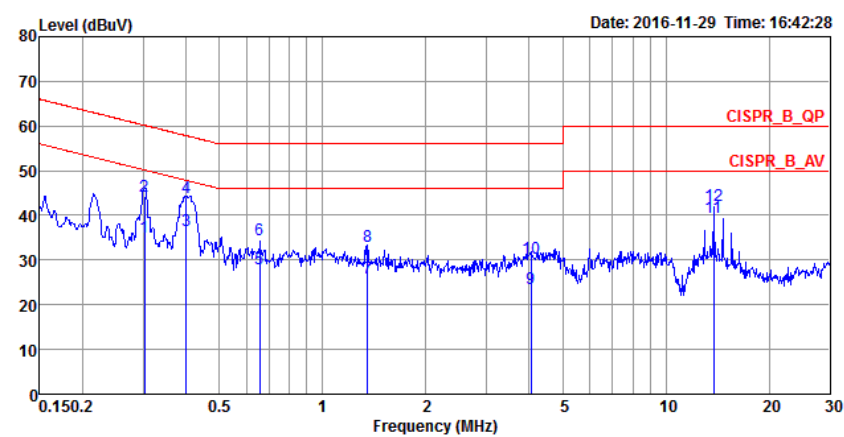


| | Freq | Level | Over | Limit | Read | LISN | Cable | Pol/Phase | Remark |
|----|---------|-------|--------|-------|-------|--------|-------|-----------|---------|
| | MHz | dBuV | Limit | Line | Level | Factor | Loss | | |
| | | | dB | dBuV | dBuV | dB | dB | | |
| 1 | 0.3035 | 34.88 | -15.27 | 50.15 | 24.88 | 9.92 | 0.08 | NEUTRAL | Average |
| 2 | 0.3035 | 44.14 | -16.01 | 60.15 | 34.14 | 9.92 | 0.08 | NEUTRAL | QP |
| 3 | 0.4083 | 37.43 | -10.25 | 47.68 | 27.49 | 9.92 | 0.02 | NEUTRAL | Average |
| 4 | 0.4083 | 44.06 | -13.62 | 57.68 | 34.12 | 9.92 | 0.02 | NEUTRAL | QP |
| 5 | 0.8483 | 27.66 | -18.34 | 46.00 | 17.13 | 9.93 | 0.60 | NEUTRAL | Average |
| 6 | 0.8483 | 34.56 | -21.44 | 56.00 | 24.03 | 9.93 | 0.60 | NEUTRAL | QP |
| 7 | 1.9801 | 24.44 | -21.56 | 46.00 | 14.41 | 9.96 | 0.07 | NEUTRAL | Average |
| 8 | 1.9801 | 31.37 | -24.63 | 56.00 | 21.34 | 9.96 | 0.07 | NEUTRAL | QP |
| 9 | 3.9014 | 23.63 | -22.37 | 46.00 | 13.55 | 9.99 | 0.09 | NEUTRAL | Average |
| 10 | 3.9014 | 30.45 | -25.55 | 56.00 | 20.37 | 9.99 | 0.09 | NEUTRAL | QP |
| 11 | 13.7800 | 40.29 | -9.71 | 50.00 | 29.88 | 10.21 | 0.20 | NEUTRAL | Average |
| 12 | 13.7800 | 42.04 | -17.96 | 60.00 | 31.63 | 10.21 | 0.20 | NEUTRAL | QP |

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

AC Power-line Conducted Emissions Result

| | | | |
|--------------------|--------------------------|-------------|------|
| Operating Mode | 3 | Power Phase | Line |
| Operating Function | CTX - WLAN 5GHz function | | |



| | Freq | Level | Over | Limit | Read | LISN | Cable | Pol/Phase | Remark |
|----|---------|-------|--------|-------|-------|--------|-------|-----------|---------|
| | MHz | dBuV | Limit | Line | Level | Factor | Loss | | |
| | | | dB | dBuV | dBuV | dB | dB | | |
| 1 | 0.3035 | 35.13 | -15.02 | 50.15 | 25.13 | 9.92 | 0.08 | LINE | Average |
| 2 | 0.3035 | 44.30 | -15.85 | 60.15 | 34.30 | 9.92 | 0.08 | LINE | QP |
| 3 | 0.3997 | 36.48 | -11.38 | 47.86 | 26.55 | 9.92 | 0.01 | LINE | Average |
| 4 | 0.3997 | 43.86 | -14.00 | 57.86 | 33.93 | 9.92 | 0.01 | LINE | QP |
| 5 | 0.6543 | 27.93 | -18.07 | 46.00 | 17.60 | 9.93 | 0.40 | LINE | Average |
| 6 | 0.6543 | 34.58 | -21.42 | 56.00 | 24.25 | 9.93 | 0.40 | LINE | QP |
| 7 | 1.3521 | 26.10 | -19.90 | 46.00 | 15.71 | 9.95 | 0.44 | LINE | Average |
| 8 | 1.3521 | 32.96 | -23.04 | 56.00 | 22.57 | 9.95 | 0.44 | LINE | QP |
| 9 | 4.0489 | 23.75 | -22.25 | 46.00 | 13.67 | 9.99 | 0.09 | LINE | Average |
| 10 | 4.0489 | 30.51 | -25.49 | 56.00 | 20.43 | 9.99 | 0.09 | LINE | QP |
| 11 | 13.7793 | 39.67 | -10.33 | 50.00 | 29.26 | 10.21 | 0.20 | LINE | Average |
| 12 | 13.7793 | 42.32 | -17.68 | 60.00 | 31.91 | 10.21 | 0.20 | LINE | QP |

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)



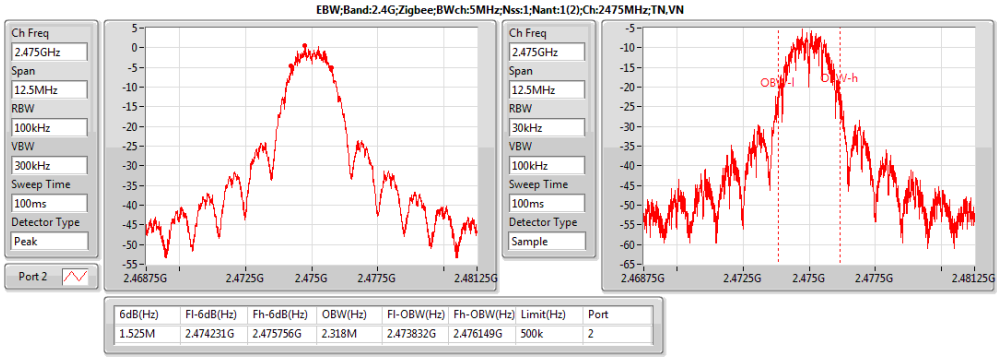
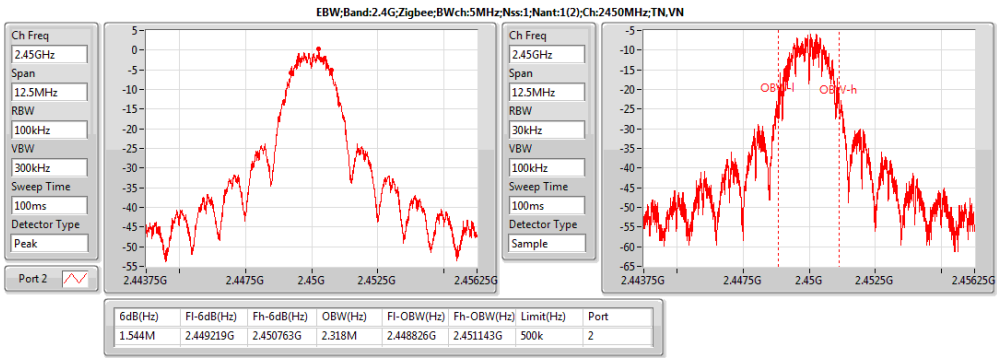
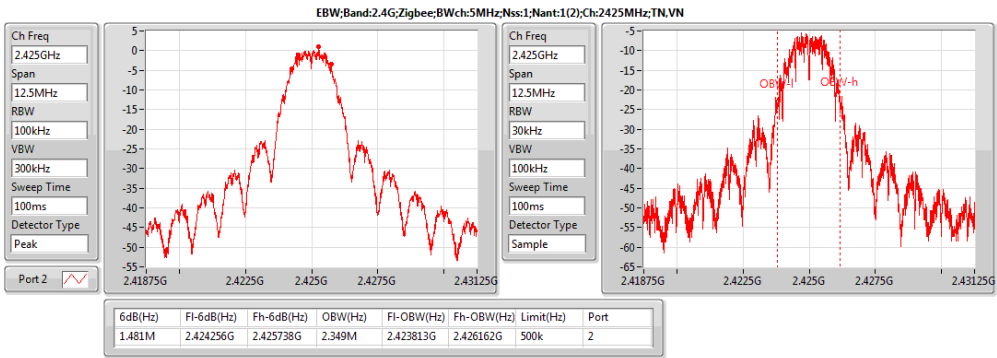
Summary

| Mode | Max-N dB (Hz) | Max-OBW (Hz) | ITU-Code | Min-N dB (Hz) | Min-OBW (Hz) |
|--------------------------|------------------|-----------------|----------|------------------|-----------------|
| 2.4G;Zigbee;Nss1;Ntx1(2) | 1.544M | 2.349M | 2M35G1D | 1.481M | 2.318M |



Result

| Mode | Result | Limit (Hz) | P2-N dB (Hz) | P2-OBW (Hz) |
|-------------------------------|--------|---------------|-----------------|----------------|
| 2.4G;Zigbee;Nss1:Ntx1(2);2425 | Pass | 500k | 1.481M | 2.349M |
| 2.4G;Zigbee;Nss1:Ntx1(2);2450 | Pass | 500k | 1.544M | 2.318M |
| 2.4G;Zigbee;Nss1:Ntx1(2);2475 | Pass | 500k | 1.525M | 2.318M |





Summary

| Mode | Sum (dBm) | Sum (W) | EIRP (dBm) | EIRP (W) |
|-----------------------------|--------------|------------|---------------|-------------|
| 2.4G; Zigbee; Nss1; Ntx1(2) | 6.00 | 0.00398 | 10.00 | 0.01 |



Result

| Mode | Result | DG (dBi) | Sum (dBm) | Sum Lim. (dBm) | EIRP (dBm) | EIRP Lim. (dBm) | P2 (dBm) |
|-------------------------------|--------|-------------|--------------|-------------------|---------------|--------------------|-------------|
| 2.4G;Zigbee;Nss1:Ntx1(2);2425 | Pass | 4.00 | 6.00 | 30.00 | 10.00 | 36.00 | 6.00 |
| 2.4G;Zigbee;Nss1:Ntx1(2);2450 | Pass | 4.00 | 5.01 | 30.00 | 9.01 | 36.00 | 5.01 |
| 2.4G;Zigbee;Nss1:Ntx1(2);2475 | Pass | 4.00 | 5.25 | 30.00 | 9.25 | 36.00 | 5.25 |



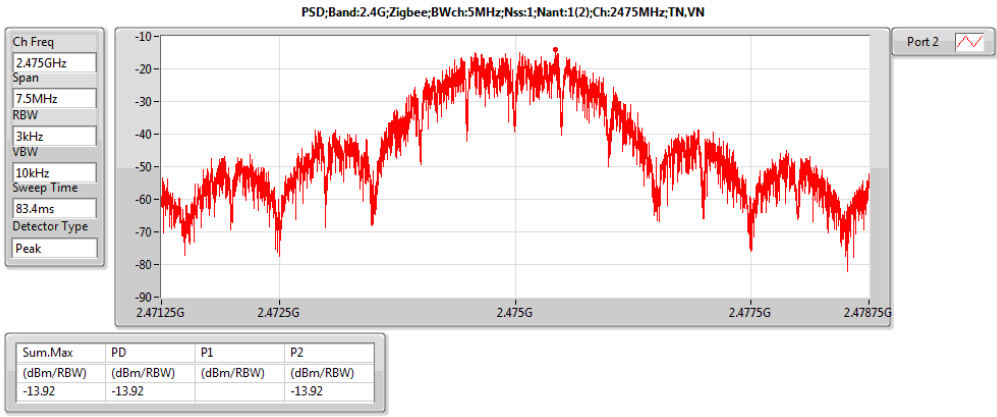
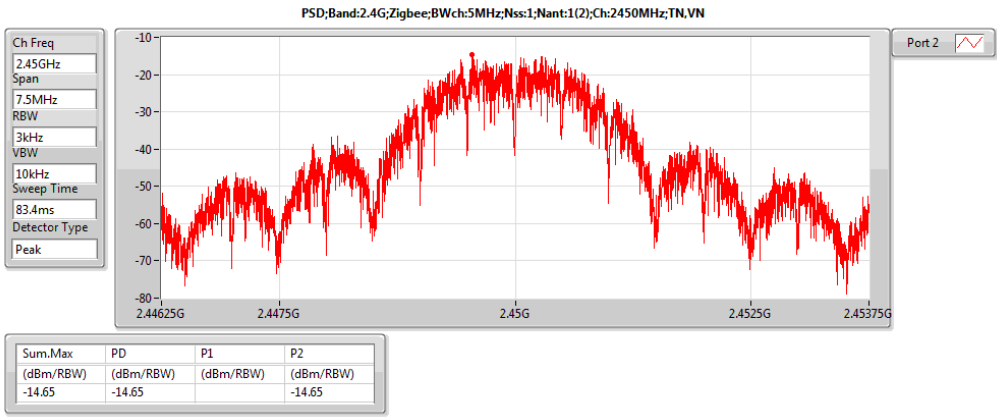
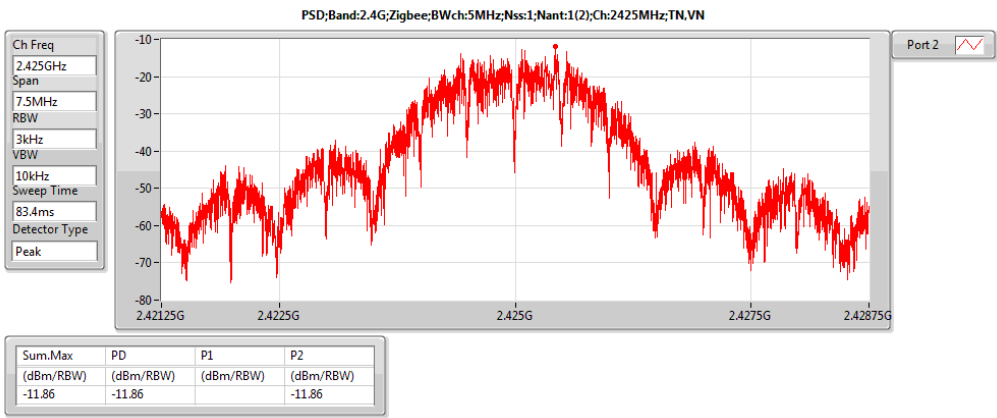
Summary

| Mode | PD (dBm/RBW) | EIRP.PD (dBm/RBW) |
|--------------------------|-----------------|----------------------|
| 2.4G;Zigbee;Nss1;Ntx1(2) | -11.86 | -7.86 |



Result

| Mode | Result | DG (dBi) | PD (dBm/RBW) | PD.Limit (dBm/RBW) | P2 (dBm/RBW) |
|-------------------------------|--------|-------------|-----------------|-----------------------|-----------------|
| 2.4G;Zigbee;Nss1;Ntx1(2);2425 | Pass | 4.00 | -11.86 | 8.00 | -11.86 |
| 2.4G;Zigbee;Nss1;Ntx1(2);2450 | Pass | 4.00 | -14.65 | 8.00 | -14.65 |
| 2.4G;Zigbee;Nss1;Ntx1(2);2475 | Pass | 4.00 | -13.92 | 8.00 | -13.92 |





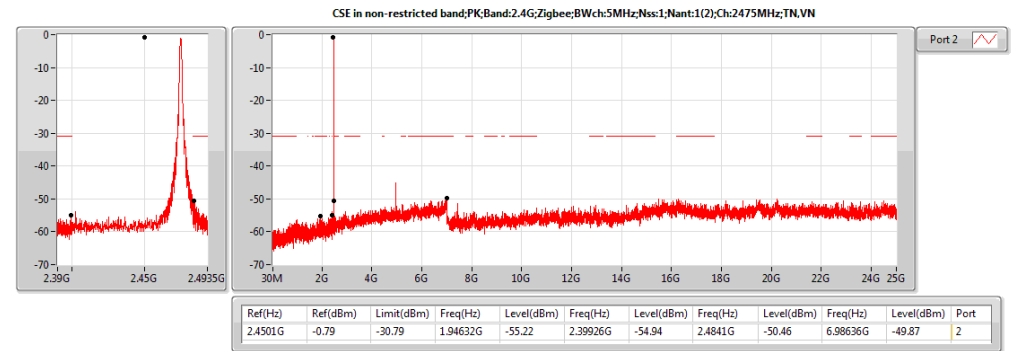
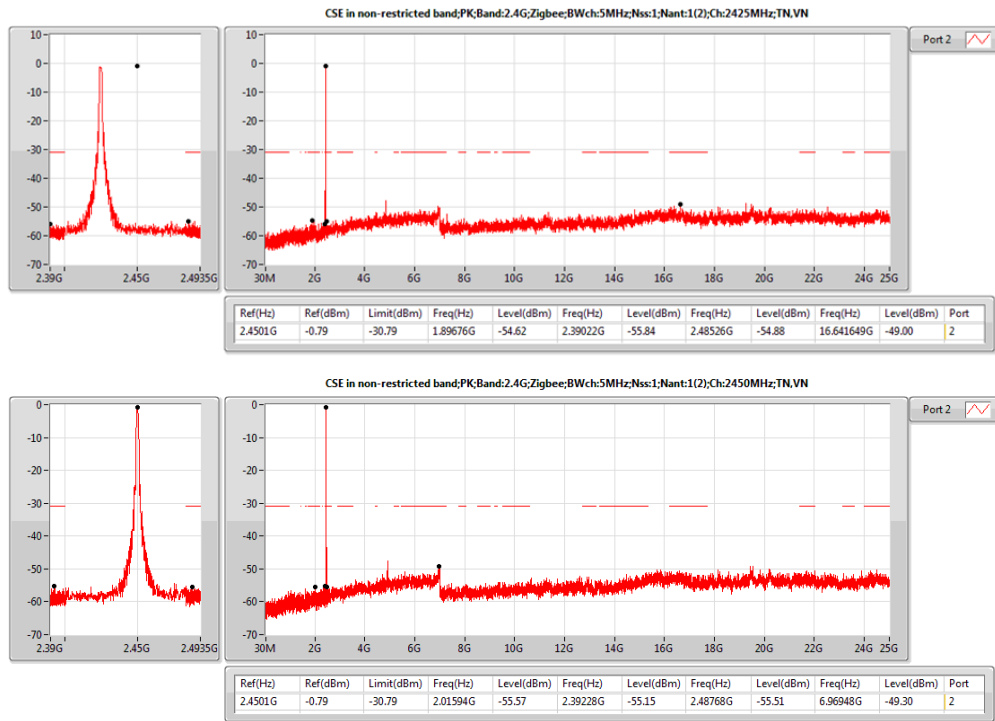
Summary

| Mode | Result | Ref (Hz) | Ref (dBm) | Limit (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Port |
|-------------------------------|--------|-------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|------|
| 2.4G:Zigbee:Nss1:Nlx1(2);2425 | Pass | 2.4501G | -0.79 | -30.79 | 1.89676G | -54.62 | 2.39022G | -55.84 | 2.48526G | -54.88 | 16.641649G | -49.00 | 2 |



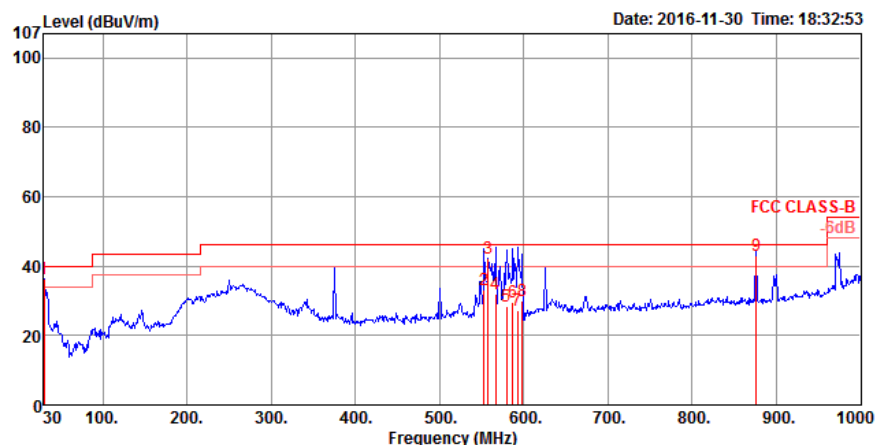
Result

| Mode | Result | Ref (Hz) | Ref (dBm) | Limit (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Freq (Hz) | Level (dBm) | Port |
|-------------------------------|--------|-------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|--------------|----------------|------|
| 2.4G;Zigbee;Nss1:Ntx1(2);2425 | Pass | 2.4501G | -0.79 | -30.79 | 1.89676G | -54.62 | 2.39022G | -55.84 | 2.48526G | -54.88 | 16.641649G | -49.00 | 2 |
| 2.4G;Zigbee;Nss1:Ntx1(2);2450 | Pass | 2.4501G | -0.79 | -30.79 | 2.01594G | -55.57 | 2.39228G | -55.15 | 2.48768G | -55.51 | 6.96948G | -49.30 | 2 |
| 2.4G;Zigbee;Nss1:Ntx1(2);2475 | Pass | 2.4501G | -0.79 | -30.79 | 1.94632G | -55.22 | 2.39926G | -54.94 | 2.4841G | -50.46 | 6.98636G | -49.87 | 2 |



RSE below 1GHz Result

| | | | |
|--------------------|----------------------------|--------------|------------|
| Operating Mode | 2 | Polarization | Horizontal |
| Operating Function | CTX - WLAN 2.4GHz function | | |

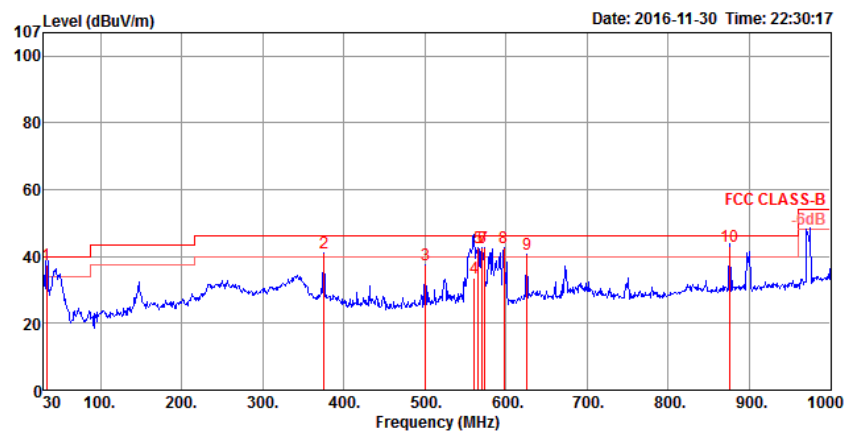


| | Freq | Level | Limit | Over | Read | CableAntenna | Preamp | A/Pos | T/Pos | Remark | Pol/Phase |
|---|--------|--------|--------|--------|-------|--------------|--------|-------|-------|----------|------------|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | |
| 1 | 30.00 | 36.26 | 40.00 | -3.74 | 41.60 | 0.53 | 25.60 | 31.47 | 100 | 22 Peak | HORIZONTAL |
| 2 | 552.83 | 32.99 | 46.00 | -13.01 | 39.00 | 1.85 | 24.52 | 32.38 | 258 | 258 QP | HORIZONTAL |
| 3 | 557.68 | 42.36 | 46.00 | -3.64 | 48.33 | 1.86 | 24.55 | 32.38 | 125 | 308 Peak | HORIZONTAL |
| 4 | 566.41 | 32.12 | 46.00 | -13.88 | 38.00 | 1.88 | 24.63 | 32.39 | 229 | 334 QP | HORIZONTAL |
| 5 | 579.99 | 28.45 | 46.00 | -17.55 | 34.20 | 1.90 | 24.75 | 32.40 | 136 | 246 QP | HORIZONTAL |
| 6 | 586.78 | 29.51 | 46.00 | -16.49 | 35.20 | 1.91 | 24.80 | 32.40 | 137 | 70 QP | HORIZONTAL |
| 7 | 592.60 | 27.36 | 46.00 | -18.64 | 33.00 | 1.92 | 24.85 | 32.41 | 151 | 62 QP | HORIZONTAL |
| 8 | 598.42 | 29.92 | 46.00 | -16.08 | 35.50 | 1.93 | 24.90 | 32.41 | 214 | 110 QP | HORIZONTAL |
| 9 | 875.84 | 43.04 | 46.00 | -2.96 | 46.00 | 2.38 | 27.15 | 32.49 | 146 | 216 QP | HORIZONTAL |

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)

RSE below 1GHz Result

| | | | |
|--------------------|----------------------------|-------------|----------|
| Operating Mode | 2 | Power Phase | Vertical |
| Operating Function | CTX - WLAN 2.4GHz function | | |



| | Freq | Level | Limit | Over | Read | CableAntenna | Preamp | A/Pos | T/Pos | Remark | Pol/Phase |
|----|--------|--------|--------|--------|-------|--------------|--------|-------|-------|----------|-----------|
| | MHz | dBuV/m | dBuV/m | dB | dBuV | dB | dB/m | dB | cm | deg | |
| 1 | 33.88 | 37.37 | 40.00 | -2.63 | 45.20 | 0.53 | 23.21 | 31.57 | 100 | 323 QP | VERTICAL |
| 2 | 375.32 | 41.06 | 46.00 | -4.94 | 49.95 | 1.50 | 21.73 | 32.12 | 150 | 256 Peak | VERTICAL |
| 3 | 500.45 | 37.35 | 46.00 | -8.65 | 44.18 | 1.76 | 23.73 | 32.32 | 100 | 302 Peak | VERTICAL |
| 4 | 560.59 | 33.56 | 46.00 | -12.44 | 39.50 | 1.87 | 24.58 | 32.39 | 100 | 141 QP | VERTICAL |
| 5 | 565.44 | 42.48 | 46.00 | -3.52 | 48.38 | 1.87 | 24.62 | 32.39 | 175 | 142 Peak | VERTICAL |
| 6 | 570.29 | 42.60 | 46.00 | -3.40 | 48.44 | 1.88 | 24.67 | 32.39 | 125 | 120 Peak | VERTICAL |
| 7 | 573.20 | 42.70 | 46.00 | -3.30 | 48.52 | 1.89 | 24.68 | 32.39 | 100 | 207 Peak | VERTICAL |
| 8 | 597.45 | 42.81 | 46.00 | -3.19 | 48.41 | 1.93 | 24.88 | 32.41 | 100 | 73 Peak | VERTICAL |
| 9 | 625.58 | 40.85 | 46.00 | -5.15 | 46.17 | 1.97 | 25.16 | 32.45 | 100 | 163 Peak | VERTICAL |
| 10 | 875.84 | 43.14 | 46.00 | -2.86 | 46.10 | 2.38 | 27.15 | 32.49 | 100 | 170 QP | VERTICAL |

Note 1: ">20dB" means emission levels that exceed the level of 20 dB below the applicable limit.
Note 2: "N/F" means Nothing Found emissions (No emissions were detected.)



Summary

| Mode | Result | Type | Freq (Hz) | Level (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Factor (dB) | Dist (m) | Pol. (H/V) | Azimuth (°) | Height (m) | Comments |
|-------------------------------|--------|------|--------------|-------------------|-------------------|----------------|----------------|-------------|---------------|----------------|---------------|----------|
| 2.4G;Zigbee;Nss1;Ntx1;2425;TX | Pass | AV | 2.484G | 49.22 | 54.00 | -4.78 | 32.25 | 3 | V | 26 | 2.76 | - |

