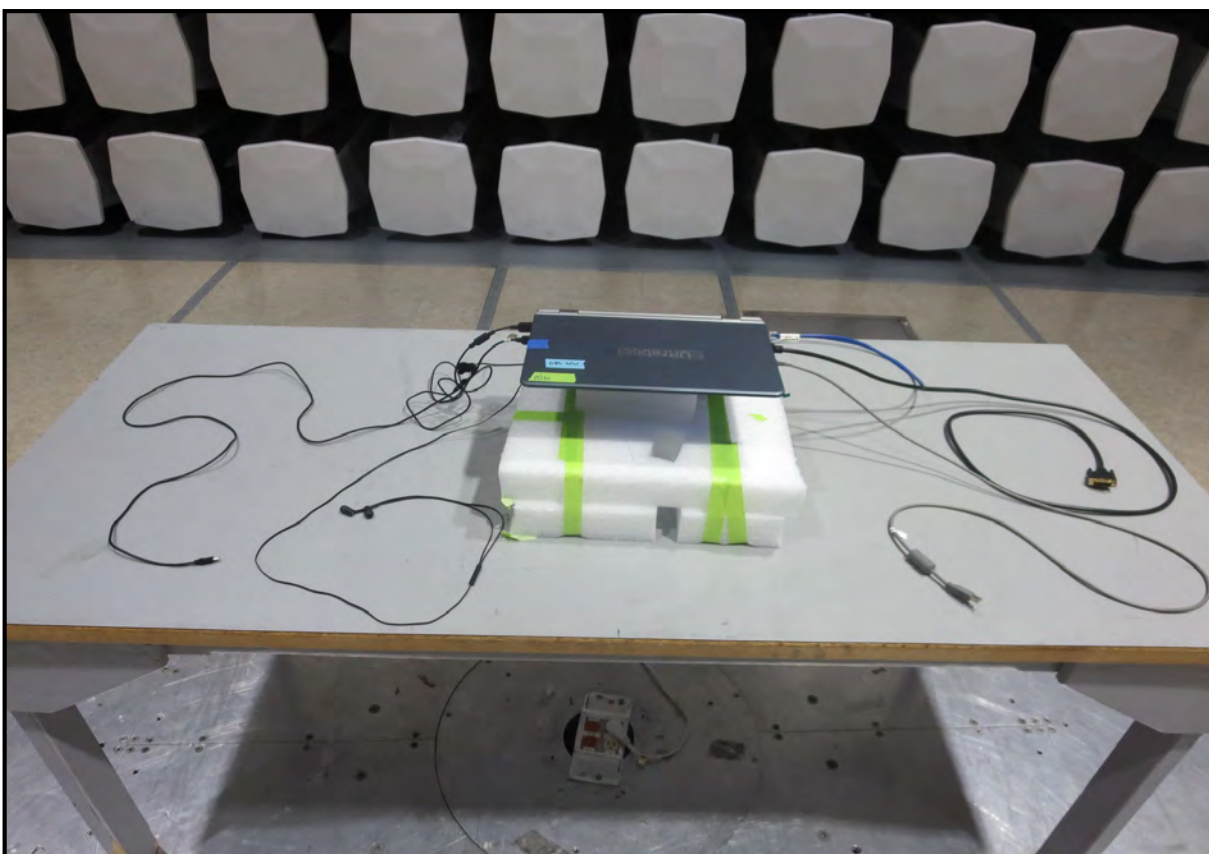
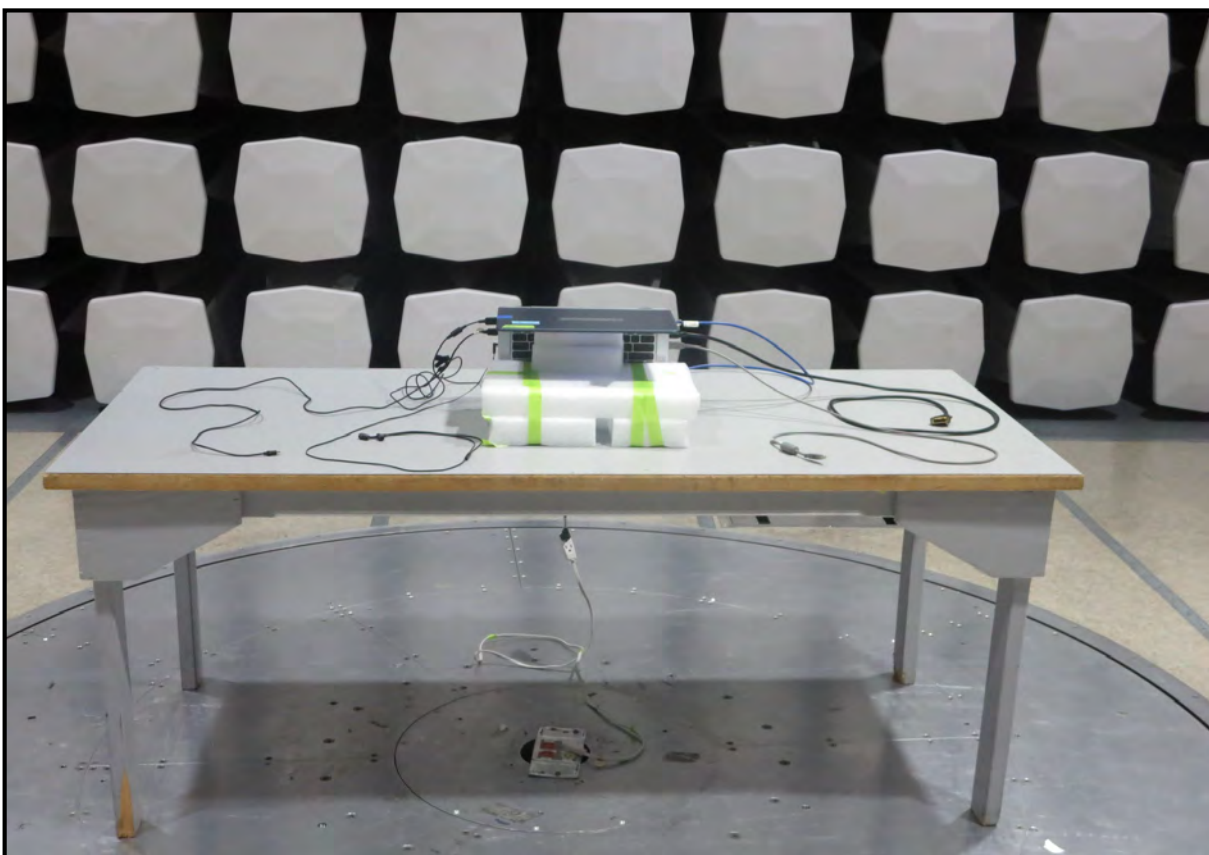
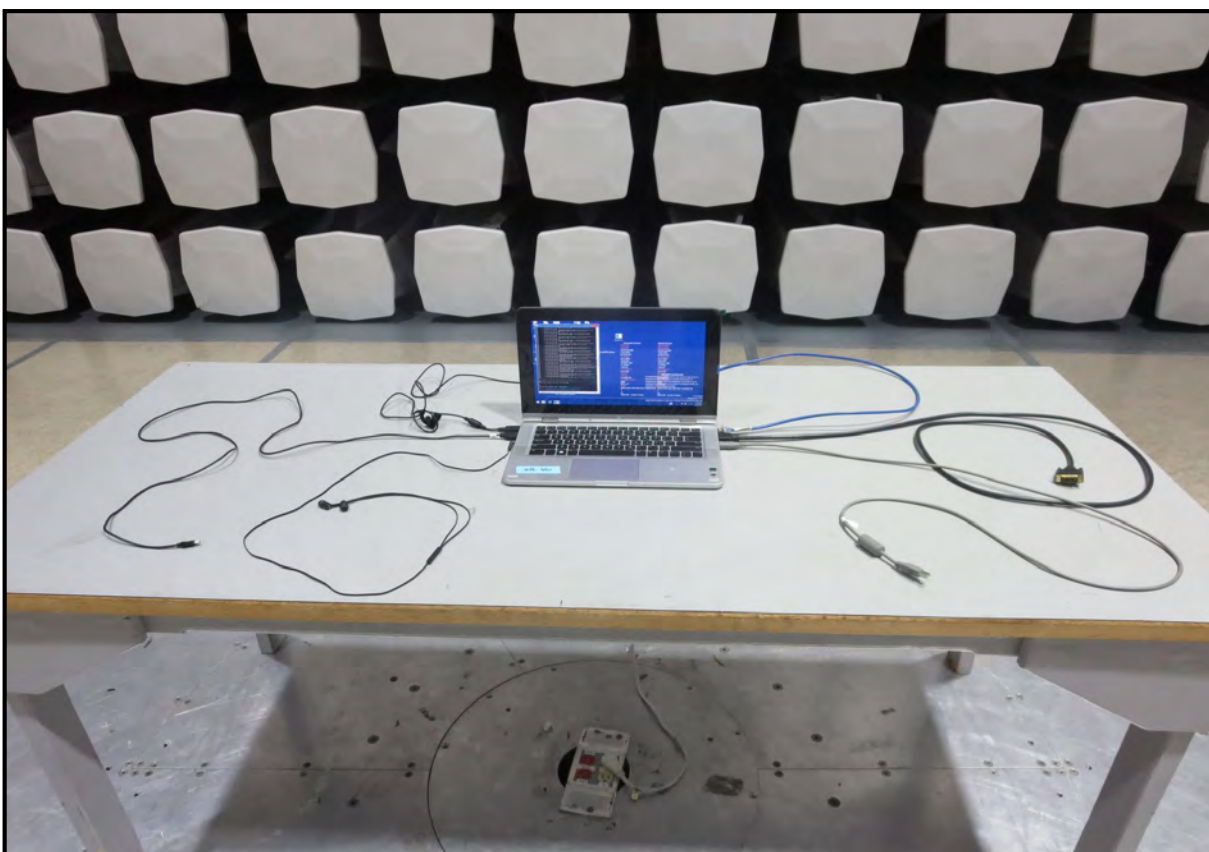
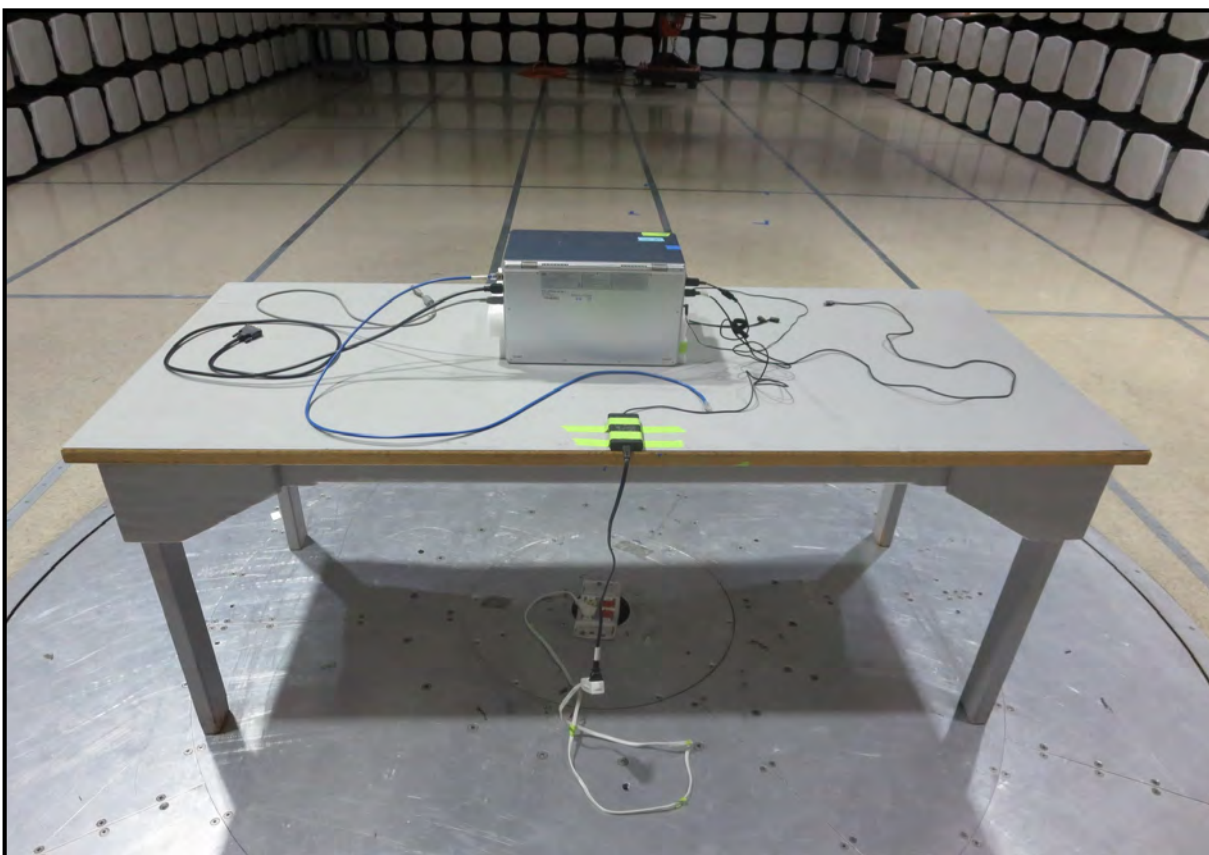
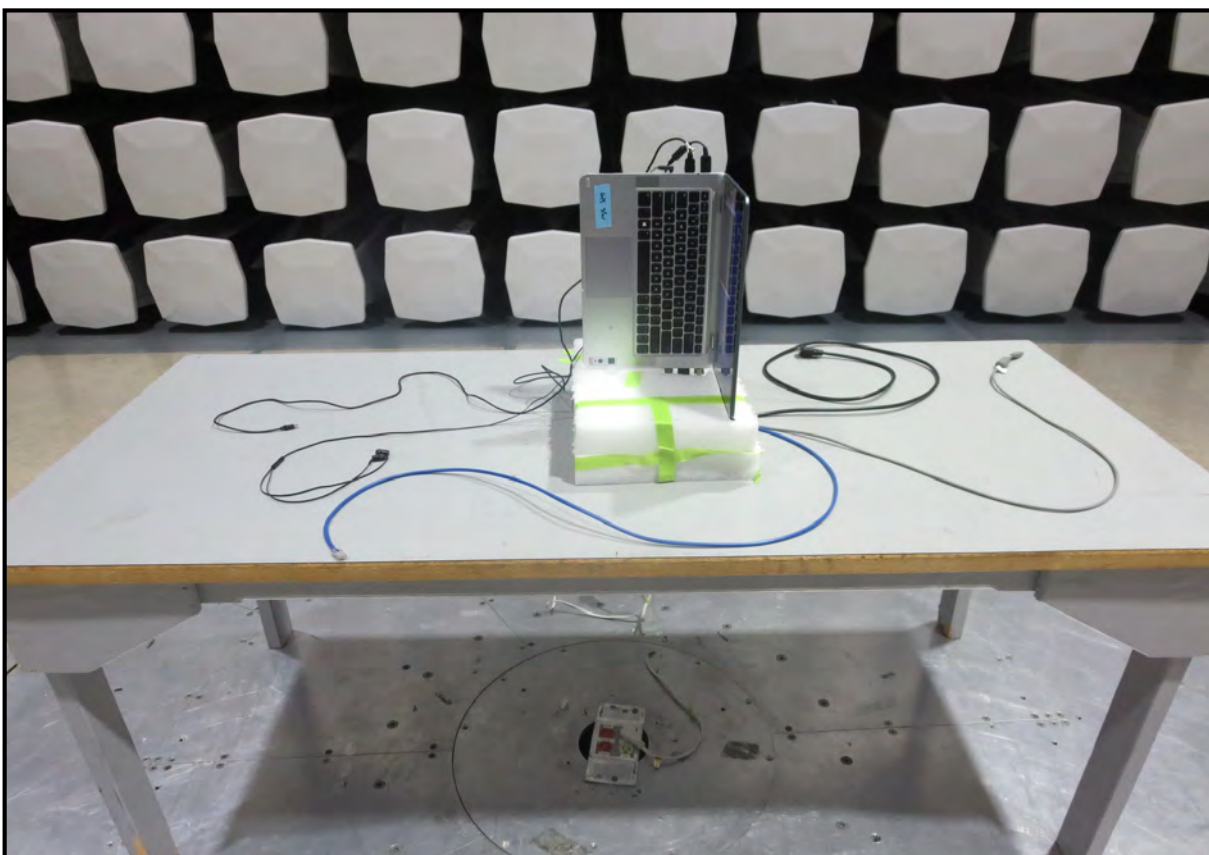








Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

Tx, NFC 13.56 MHz

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

INTE5437 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency	490 kHz	Stop Frequency	30 MHz
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SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
EV11 Cables	N/A	3m Test Distance Cables	EVM	2/13/2014	12 mo
Antenna, Loop	EMCO	6502	AOA	6/28/2011	36 mo
EV11 Cables	N/A	10m Test Distance Cables	EVL	9/3/2013	12 mo
Spectrum Analyzer	Agilent	E4443A	AFB	2/12/2014	24 mo

MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

TEST DESCRIPTION

The antennas to be used with the EUT were tested. The EUT was continuously transmitting while set to the channel specified.

While scanning, emissions from the EUT were maximized by rotating the EUT, adjusting the measurement antenna height and orientation in 3 orthogonal planes, the EUT and/or associated antenna is positioned in 3 orthogonal planes (per ANSI C63.10). An active loop antenna was used for this test in order to provide sufficient measurement sensitivity.

As outlined in 15.209(e) and 15.31(f)(2), measurements may be performed at a distance closer than what is specified with the limit. The limit at the specified distance is shown on the data sheet. Measurements are made at a closer distance and the data is adjusted using a distance correction factor of 40dB/decade for comparison to the limit.



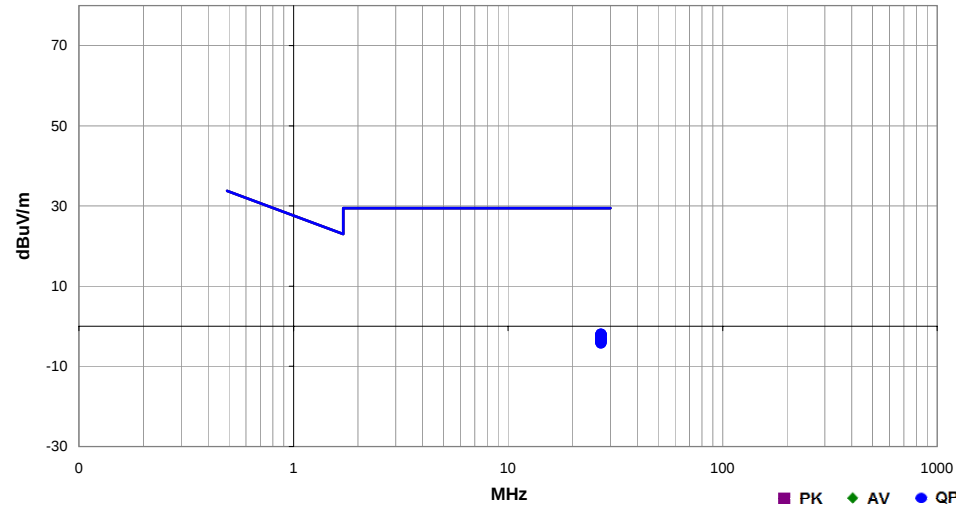
FIELD STRENGTH OF SPURIOUS
EMISSIONS < 30MHz

PSA-ESCI 2014.02.19
EmiR5 2014.02.04

Work Order:	INTE5437	Date:	04/14/14		
Project:	None	Temperature:	22.7 °C		
Job Site:	EV11	Humidity:	31.7% RH		
Serial Number:	FZWC41000016	Barometric Pres.:	1018.1 mbar	Tested by:	Jared Ison
EUT: WSBUB-SDS					
Configuration:	1				
Customer:	Intel Corporation				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Tx, NFC 13.56 MHz				
Deviations:	None				
Comments:	The EUT is in the laptop configuration.				

Test Specifications	Test Method
FCC 15.225:2014	ANSI C63.10:2009

Run #	3	Test Distance (m)	10	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
27.119	7.4	9.7	1.0	240.0	10.0	0.0	Horz	QP	-19.1	-2.0	29.5	-31.5	Mod. Type B, 424Mbps, EUT Vert, Ant Perp to EUT/Ant Perp to Gnd
27.119	7.3	9.7	1.0	66.0	10.0	0.0	Horz	QP	-19.1	-2.1	29.5	-31.6	Mod. Type F, 212Mbps, EUT Vert, Ant Perp to EUT/Ant Perp to Gnd
27.120	7.3	9.7	1.0	222.0	10.0	0.0	Horz	QP	-19.1	-2.1	29.5	-31.6	Mod. Type F, 424Mbps, EUT Vert, Ant Perp to EUT/Ant Perp to Gnd
27.120	7.3	9.7	1.0	58.0	10.0	0.0	Horz	QP	-19.1	-2.1	29.5	-31.6	Mod. Type B, 106Mbps, EUT Vert, Ant Perp to EUT/Ant Perp to Gnd
27.121	7.1	9.7	1.0	98.0	10.0	0.0	Horz	QP	-19.1	-2.3	29.5	-31.8	Mod. Type B, 848Mbps, EUT Vert, Ant Perp to EUT/Ant Perp to Gnd
27.120	6.9	9.7	1.0	201.0	10.0	0.0	Horz	QP	-19.1	-2.5	29.5	-32.0	Mod. Type B, 212Mbps, EUT Vert, Ant Perp to EUT/Ant Perp to Gnd
27.120	6.7	9.7	1.0	364.0	10.0	0.0	Horz	QP	-19.1	-2.7	29.5	-32.2	Mod. Type A, 106Mbps, EUT Vert, Ant Perp to EUT/Ant Perp to Gnd
27.121	6.4	9.7	1.0	39.0	10.0	0.0	Horz	QP	-19.1	-3.0	29.5	-32.5	Mod. Type A, 212Mbps, EUT Vert, Ant Perp to EUT/Ant Perp to Gnd
27.120	6.3	9.7	1.0	342.0	10.0	0.0	Horz	QP	-19.1	-3.1	29.5	-32.6	Mod. Type A, 848Mbps, EUT Vert, Ant Perp to EUT/Ant Perp to Gnd
27.121	6.3	9.7	1.0	168.0	10.0	0.0	Horz	QP	-19.1	-3.1	29.5	-32.6	Mod. Type F, 424Mbps, EUT On Side, Ant Perp to EUT/Ant Perp to Gnd
27.119	6.1	9.7	1.0	175.0	10.0	0.0	Horz	QP	-19.1	-3.3	29.5	-32.8	Mod. Type F, 424Mbps, EUT Horz, Ant Perp to EUT/Ant Perp to Gnd
27.121	6.0	9.7	1.0	196.0	10.0	0.0	Horz	QP	-19.1	-3.4	29.5	-32.9	Mod. Type A, 424Mbps, EUT Horz, Ant Perp to EUT/Ant Perp to Gnd
27.119	5.8	9.7	1.0	364.0	10.0	0.0	Horz	QP	-19.1	-3.6	29.5	-33.1	Mod. Type F, 424Mbps, EUT Horz, Ant Para to EUT/Ant Perp to Gnd
27.121	5.7	9.7	1.0	234.0	10.0	0.0	Horz	QP	-19.1	-3.7	29.5	-33.2	Mod. Type F, 424Mbps, EUT Vert, Ant Perp to EUT/Ant Para to Gnd
27.071	5.4	9.7	1.0	-3.0	10.0	0.0	Horz	QP	-19.1	-4.0	29.5	-33.5	Mod. Type F, 424Mbps, EUT Horz, Ant Perp to EUT/Ant Para to Gnd
27.155	5.4	9.7	1.0	137.0	10.0	0.0	Horz	QP	-19.1	-4.0	29.5	-33.5	Mod. Type F, 424Mbps, EUT On Side, Ant Perp to EUT/Ant Para to Gnd
27.166	5.3	9.7	1.0	90.0	10.0	0.0	Horz	QP	-19.1	-4.1	29.5	-33.6	Mod. Type F, 424Mbps, EUT Vert, Ant Para to EUT/Ant Perp to Gnd
27.150	5.2	9.7	1.0	107.0	10.0	0.0	Horz	QP	-19.1	-4.2	29.5	-33.7	Mod. Type F, 424Mbps, EUT On Side, Ant Para to EUT/Ant Perp to Gnd

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

Continuous Transmit at 13.56 MHz, Type A

Continuous Transmit at 13.56 MHz, Type B

Continuous Transmit at 13.56 MHz, Type F

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

INTE5437 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency	30 MHz	Stop Frequency	1000 MHz
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SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
EV01 Cables	N/A	Bilog Cables	EVA	2/18/2014	12 mo
Pre-Amplifier	Miteq	AM-1616-1000	AOL	2/18/2014	12 mo
Antenna, Biconilog	EMCO	3141	AXG	4/10/2012	36 mo
Spectrum Analyzer	Agilent	E4440	AFE	11/4/2013	24 mo

MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

TEST DESCRIPTION

The antennas to be used with the EUT were tested. The EUT was transmitting while set at the operating channel.

While scanning, emissions from the EUT were maximized by rotating the EUT, adjusting the measurement antenna height and polarization, and manipulating the EUT antenna in 3 orthogonal planes (per ANSI C63.10:2009).



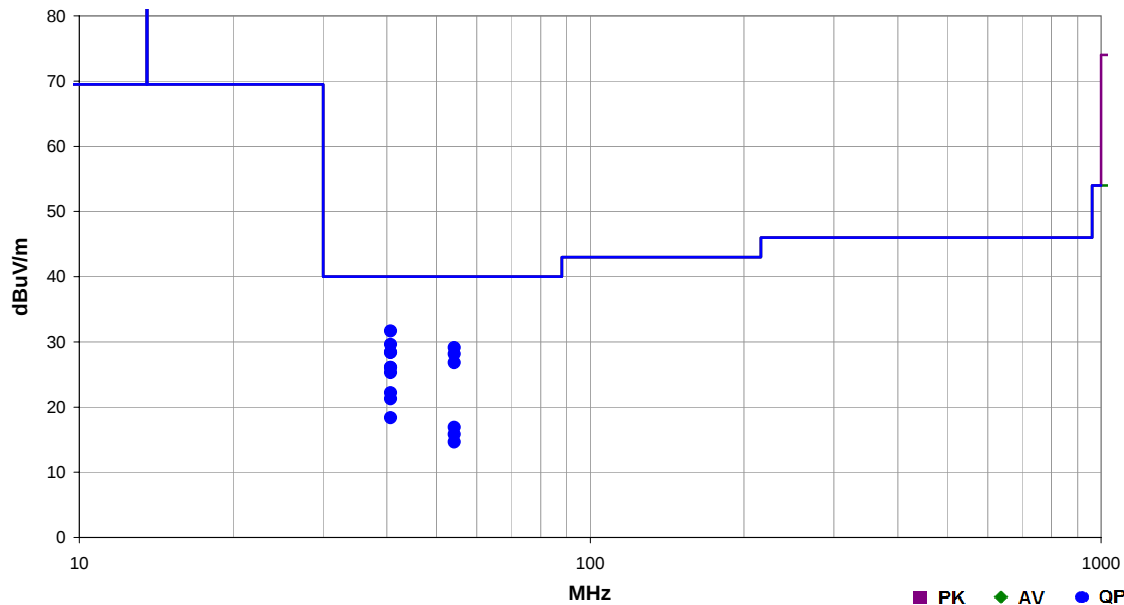
FIELD STRENGTH OF SPURIOUS EMISSIONS > 30 MHz

PSA-ESCI 2014.02.19
EmiR5 2014.02.04

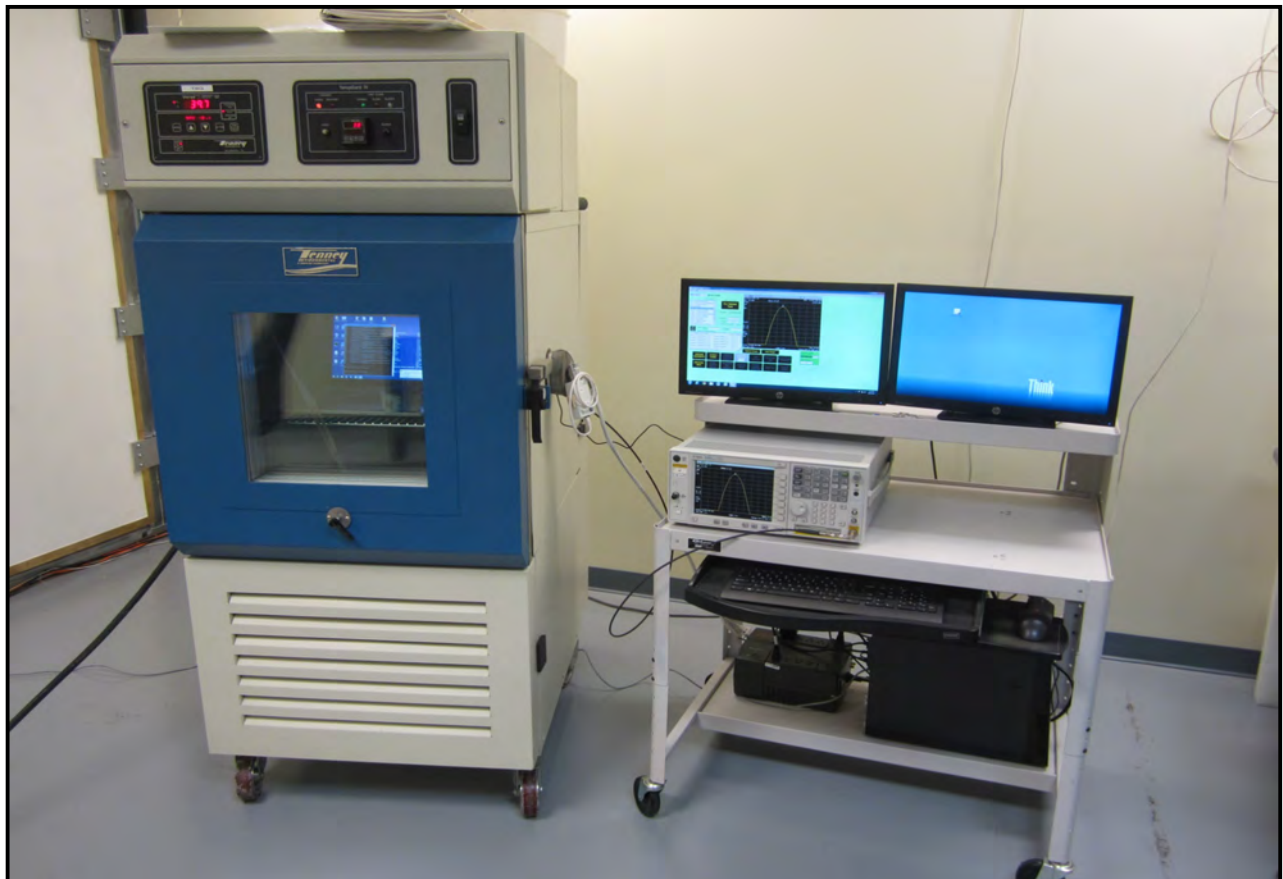
Work Order:	INTE5437	Date:	04/24/14	
Project:	None	Temperature:	21.6 °C	
Job Site:	EV01	Humidity:	39.3% RH	
Serial Number:	FZWC41000016	Barometric Pres.:	1013.3 mbar	
Tested by: Jared Ison				
EUT:	WSBUB-SDS			
Configuration:	1			
Customer:	Intel Corporation			
Attendees:	None			
EUT Power:	110VAC/60Hz			
Operating Mode:	Continuous transmit.			
Deviations:	None			
Comments:	None			

Test Specifications	Test Method
FCC 15.225:2014	ANSI C63.10.2009

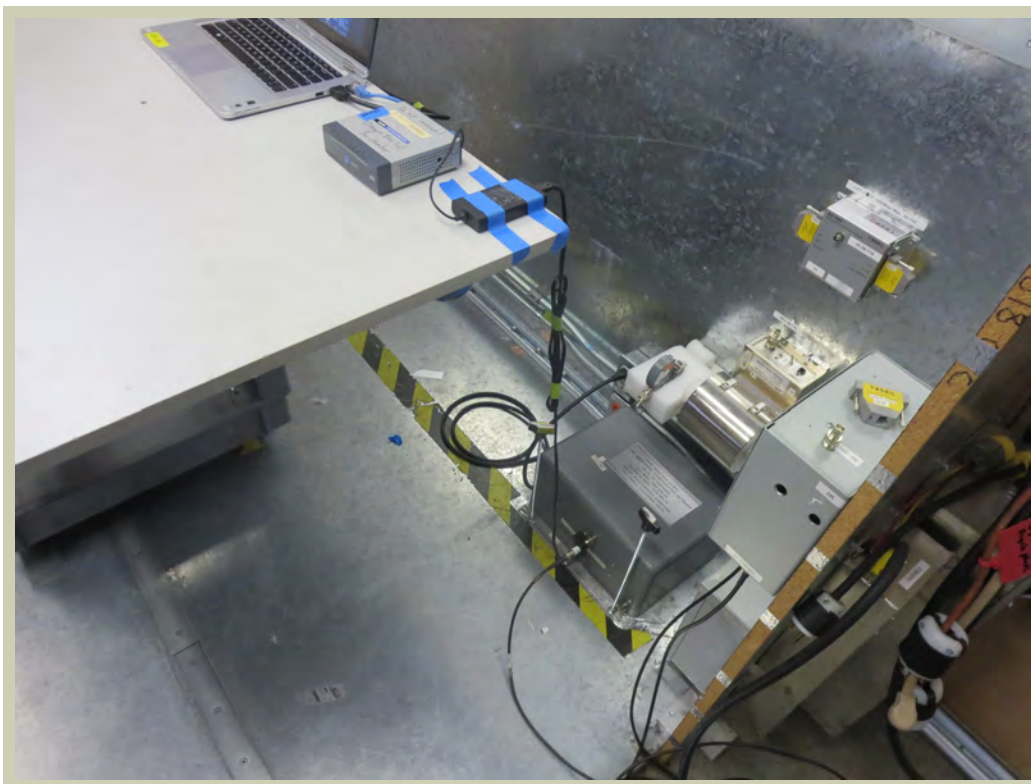
Run #	2	Test Distance (m)	3	Antenna Height(s)	1-4m	Results	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
40.684	34.3	-2.6	1.0	273.0	3.0	0.0	Vert	QP	0.0	31.7	40.0	-8.3	Mod. Type F, 424kbps, EUT Horz
40.684	32.2	-2.6	1.0	265.0	3.0	0.0	Vert	QP	0.0	29.6	40.0	-10.4	Mod. Type B, 424kbps, EUT Horz
54.247	36.1	-7.0	1.0	287.0	3.0	0.0	Vert	QP	0.0	29.1	40.0	-10.9	Mod. Type A, 424kbps, EUT Horz
40.684	31.0	-2.6	1.0	274.0	3.0	0.0	Vert	QP	0.0	28.4	40.0	-11.6	Mod. Type F, 424kbps, EUT Vert
40.686	31.0	-2.6	3.8	173.0	3.0	0.0	Horz	QP	0.0	28.4	40.0	-11.6	Mod. Type F, 424kbps, EUT Horz
54.242	35.1	-7.0	1.0	170.0	3.0	0.0	Vert	QP	0.0	28.1	40.0	-11.9	Mod. Type B, 424kbps, EUT Horz
54.243	33.8	-7.0	1.0	337.0	3.0	0.0	Vert	QP	0.0	26.8	40.0	-13.2	Mod. Type F, 424kbps, EUT Horz
40.684	28.7	-2.6	3.8	180.0	3.0	0.0	Horz	QP	0.0	26.1	40.0	-13.9	Mod. Type F, 424kbps, EUT Vert
40.684	28.7	-2.6	3.7	164.0	3.0	0.0	Horz	QP	0.0	26.1	40.0	-13.9	Mod. Type B, 424kbps, EUT Horz
40.684	27.9	-2.6	1.0	25.0	3.0	0.0	Vert	QP	0.0	25.3	40.0	-14.7	Mod. Type F, 424kbps, EUT On Side
40.684	24.8	-2.6	1.0	87.0	3.0	0.0	Vert	QP	0.0	22.2	40.0	-17.8	Mod. Type A, 424kbps, EUT Horz
40.684	23.9	-2.6	3.6	137.0	3.0	0.0	Horz	QP	0.0	21.3	40.0	-18.7	Mod. Type F, 424kbps, EUT On Side
40.684	21.0	-2.6	3.8	305.0	3.0	0.0	Horz	QP	0.0	18.4	40.0	-21.6	Mod. Type A, 424kbps, EUT Horz
54.244	23.9	-7.0	3.2	22.0	3.0	0.0	Horz	QP	0.0	16.9	40.0	-23.1	Mod. Type A, 424kbps, EUT Horz
54.243	22.8	-7.0	2.5	360.0	3.0	0.0	Horz	QP	0.0	15.8	40.0	-24.2	Mod. Type F, 424kbps, EUT Horz
54.240	21.6	-7.0	1.4	207.0	3.0	0.0	Horz	QP	0.0	14.6	40.0	-25.4	Mod. Type B, 424kbps, EUT Horz



AC POWERLINE CONDUCTED EMISSIONS



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