FCC CFR47 PART 15 SUBPART C

BLUETOOTH LOW ENERGY

CERTIFICATION TEST REPORT

FOR

GSM/WCDMA/LTE Phone with BT, DTS/UNII a/b/g/n/ac & NFC

FCC ID: PY7-PM0944

REPORT NUMBER: R11139405A-E7V2

ISSUE DATE: 4/25/2016

Prepared for
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Revision History

Rev.	Issue Date	Revisions	Revised By
V1	4/20/2016	Initial issue	C. OOI
V1	4/25/2016	Updated the Output Power, Device Serial Number and Section 6.	C. OOI

TABLE OF CONTENTS

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SONY MOBILE COMMUNICATIONS, INC.

EUT DESCRIPTION: GSM/WCDMA/LTE Phone with BT, DTS/UNII a/b/g/n/ac & NFC

SERIAL NUMBER: Z0ZW, CB5129YMBE, CB5129YM7A

DATE TESTED: APRIL 18 - 20, 2016

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	Pass

UL LLC reports apply only to the specific samples tested under stated test conditions. All samples tested were in good operating condition throughout the entire test program. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical components. UL LLC shall have no liability for any deductions, inferences or generalizations drawn by the client or others from UL LLC issued reports. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

This report may contain test results that are not covered by the NVLAP or A2LA accreditation. The scope of accreditation is limited to the specific tests that are listed on the NVLAP and/or A2LA websites referenced at the end of this report.

Approved & Released For
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WiSE PROJECT LEAD

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2013 for FCC, FCC CFR 47 Part 2, and FCC CFR 47 Part 15.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 12 Laboratory Dr., Research Triangle Park, NC 27709, USA and 2800 Suite B, Perimeter Park Drive, Morrisville, NC 27560.

12 Laboratory Dr., RTP, NC 27709
☐ Chamber A
☐ Chamber C

2800 Suite B Perimeter Park Dr., Morrisville, NC 27560
☐ Chamber NORTH
☒ Chamber SOUTH

The onsite chambers are covered under Industry Canada company address code 2180C with site numbers 2180C -1 through 2180C-4, respectively.

UL LLC (RTP) is accredited by NVLAP, Laboratory Code 200246-0. The full scope of accreditation can be viewed at http://www.nist.gov/nvlap/

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Where relevant, the following sample calculation is provided:

Field Strength (dBuV/m) = Measured Voltage (dBuV) + Antenna Factor (dB/m) + Cable Loss (dB) – Preamp Gain (dB)

36.5 dBuV + 18.7 dB/m + 0.6 dB – 26.9 dB = 28.9 dBuV/m

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

PARAMETER		UNCERTAINTY
Total RF power, conducted	+/-	0.45
RF power density, conducted	+/-	1.50
Spurious emissions, conducted	+/-	2.94
All emissions, radiated up to 26 GHz	+/-	5.36
Temperature	+/-	0.07
Humidity	+/-	2.26
DC and low frequency voltages	+/-	1.27
Conducted Disturbance, 0.15 to 30 MHz	+/-	2.37

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a GSM/WCDMA/LTE Phone with BT, DTS/UNII a/b/g/n/ac & NFC.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2402-2480	BLE	6.200	4.17

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes intergrated antenna, with a maximum as below:

Frequency (MHz)	Antenna Gain (dBi)
2.402	-7.0
2.441	-6.2
2.480	-6.9

5.4. SOFTWARE AND FIRMWARE

The firmware/SW installed in the EUT during testing was SONY, s_atp_xxxx_1_600_7_9

The hardware version was A

The test utility software used during testing was Tera Term, rev 4.8.3(SVN#5602)

5.5. WORST-CASE CONFIGURATION AND MODE

Radiated emission and power line conducted emission were performed with the EUT set to transmit on the channel with higher output power as worst-case scenario.

The fundamental of the EUT was investigated in three orthogonal orientations X, Y, Z it was determined that Z orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in Z orientation.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
AC Adapter	SONY	UCH 20 1295-70821	N/A	N/A
Earphone	SONY	MH410C	N/A	N/A
Laptop	Lenovo	T450	PC-0A2UQU	N/A
Laptop AC Adapter	Lenovo	ADLX65NLC2A	11S45N0263Z1ZS995256HR	N/A

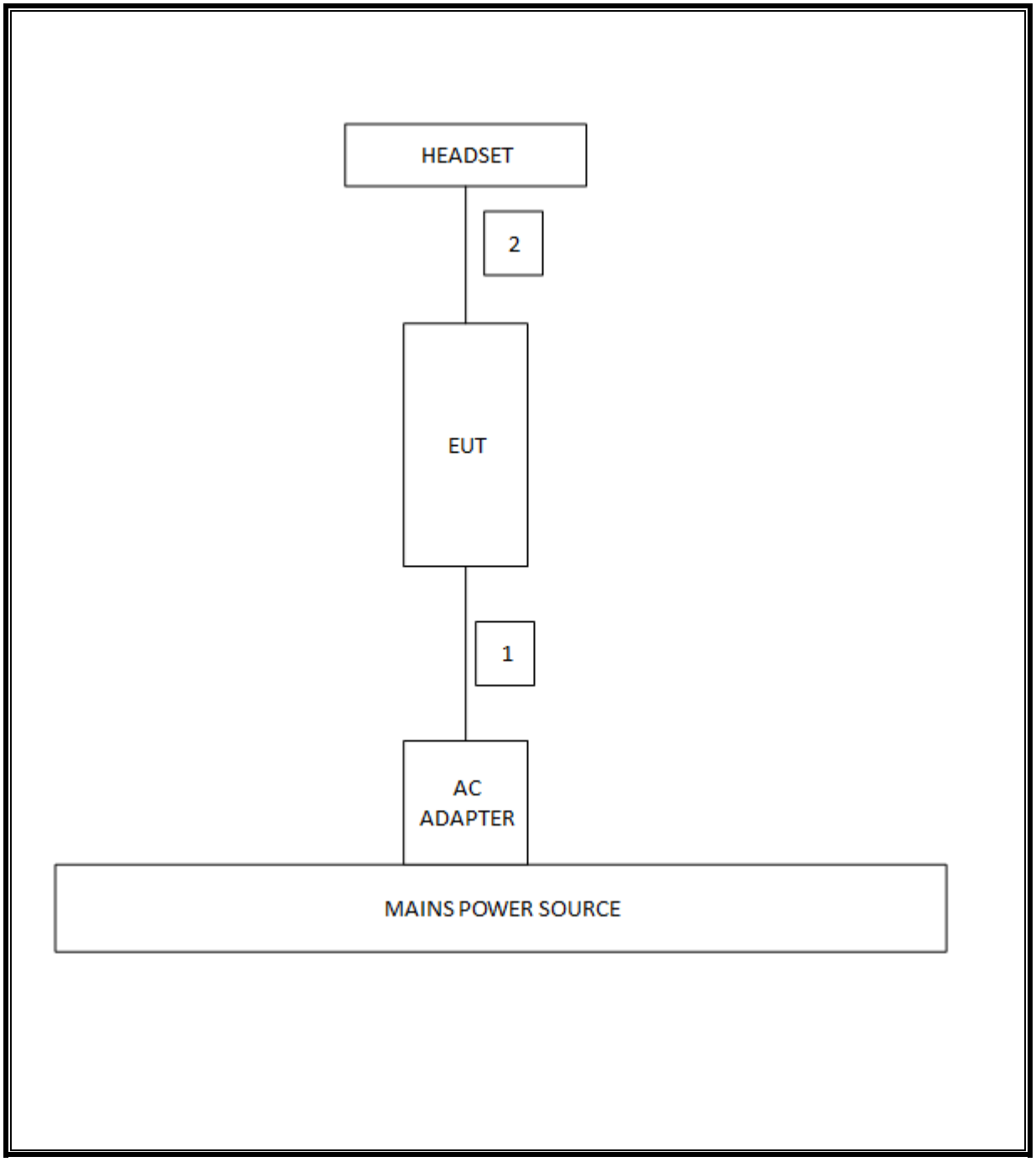
I/O CABLES

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	DC Power	1	Mini-USB	Shielded	1m	N/A
2	Audio	1	Mini-Jack	Unshielded	1.5m	N/A

TEST SETUP

The EUT is continuously communicating to the Bluetooth tester during the tests.
EUT was set in the Hidden menu mode to enable BLE communications.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Equip. ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	0.009-30MHz	**(Loop Ant.)**			
AT0079	Active Loop Antenna	ETS-Lindgren	6502	2015-12-08	2016-12-31
	30-1000 MHz				
AT0074	Hybrid Broadband Antenna	Sunol Sciences Corp.	JB3	2015-06-10	2016-06-30
	1-18 GHz				
AT0067 (02/28-03/17/2016)	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2015-03-12	2016-03-31
AT0069 (As of 03/18/2016)	Double-Ridged Waveguide Horn Antenna, 1 to 18 GHz	ETS Lindgren	3117	2016-03-07	2017-03-31
	18-40 GHz				
AT0076	Horn Antenna, 18-26.5GHz	ARA	MWH-1826/B	2015-08-27	2016-08-31
AT0077	Horn Antenna, 26-40GHz	ARA	MWH-2640/B	2015-08-27	2016-08-31
	Tuned Dipole Set				
AT0013-AT0016	Four Dipole Antenna Set, 30 to 1000 MHz	EMCO	3121C-DB-1, -2, -3, -4	2015-05-06	2016-05-31
	Gain-Loss Chains				
S-SAC01	Gain-loss string: 0.009-30MHz	Various	Various	2015-10-07	2016-10-31
S-SAC02	Gain-loss string: 30-1000MHz	Various	Various	2015-06-09	2016-06-30
S-SAC03	Gain-loss string: 1-18GHz	Various	Various	2015-08-22	2016-08-31
S-SAC04	Gain-loss string: 18-40GHz	Various	Various	2016-02-29	2017-02-28
	Receiver & Software				
SA0025	Spectrum Analyzer	Agilent	N9030A	2016-03-17	2017-03-31
SA0026 (18-40GHz RSE)	Spectrum Analyzer	Agilent	N9030A	2016-02-24	2017-02-28
SOFTEMI	EMI Software	UL	Version 9.5	NA	NA
	Additional Equipment used				
HI0050	Temp/Humid/Pressure Meter	Cole-Parmer	99760-00	2015-07-01	2016-07-31

Equipment ID	Description	Manufacturer	Model Number	Last Cal.	Next Cal.
	Conducted Room 1				
SA0019	Spectrum Analyzer	Agilent Technologies	E4446A	2015-09-02	2016-09-30
PWM004	RF Power Meter	Keysight Technologies	N1911A	2015-06-08	2016-06-08
PWS004	Peak and Avg Power Sensor, 50MHz to 6GHz	Keysight Technologies	E9323A	2015-06-05	2016-06-05
HI0079	Temp/Humid/Pressure Meter	Springfield	PreciseTemp	2015-07-1	2016-07-31
MM0167	True RMS Multimeter	Agilent	U1232A	2015-08-17	2016-08-31
76022	DC Regulated Power Supply	CircuitSpecialists.Com	CSI3005X5	NA	NA
T1023	EMPower USB RF Power Sensor, 10MHz to 6GHz	ETS Lindgren	7002-006	2015-10-01	2016-10-01

Test Software List			
Description	**Manufacturer**	**Model**	**Version**
Radiated Software	UL	UL EMC	Ver 9.5, Aug 20, 2015
Conducted Software	UL	UL EMC	Ver 9.5, Aug 20, 2015
Antenna Port Software	UL	UL RF	Ver 4.3, Mar 16, 2016

7. SUMMARY TABLE

FCC Part Section	RSS Section(s)	Test Description	Test Limit	Test Condition	Test Result
15.247 (a)(2)	RSS-247 5.2.1	Occupied Bandwidth (6dB)	>500KHz	Conducted	Pass
2.1051, 15.247 (d)	RSS-247 5.5	Band Edge / Conducted Spurious Emission	-20dBc		Pass
15.247	RSS-247 5.4.4	TX conducted output power	<30dBm		Pass
15.247	RSS-247 5.2.2	PSD	<8dBm		Pass
15.207 (a)	RSS-GEN 8.8	AC Power Line conducted emissions	Section 10	Radiated	Pass
15.205, 15.209, 15.247(d)	RSS-GEN 8.9/7	Radiated Spurious Emission	< 54dBuV/m		Pass

8. ANTENNA PORT TEST RESULTS

8.1. ON TIME, DUTY CYCLE

LIMITS

None; for reporting purposes only

PROCEDURE

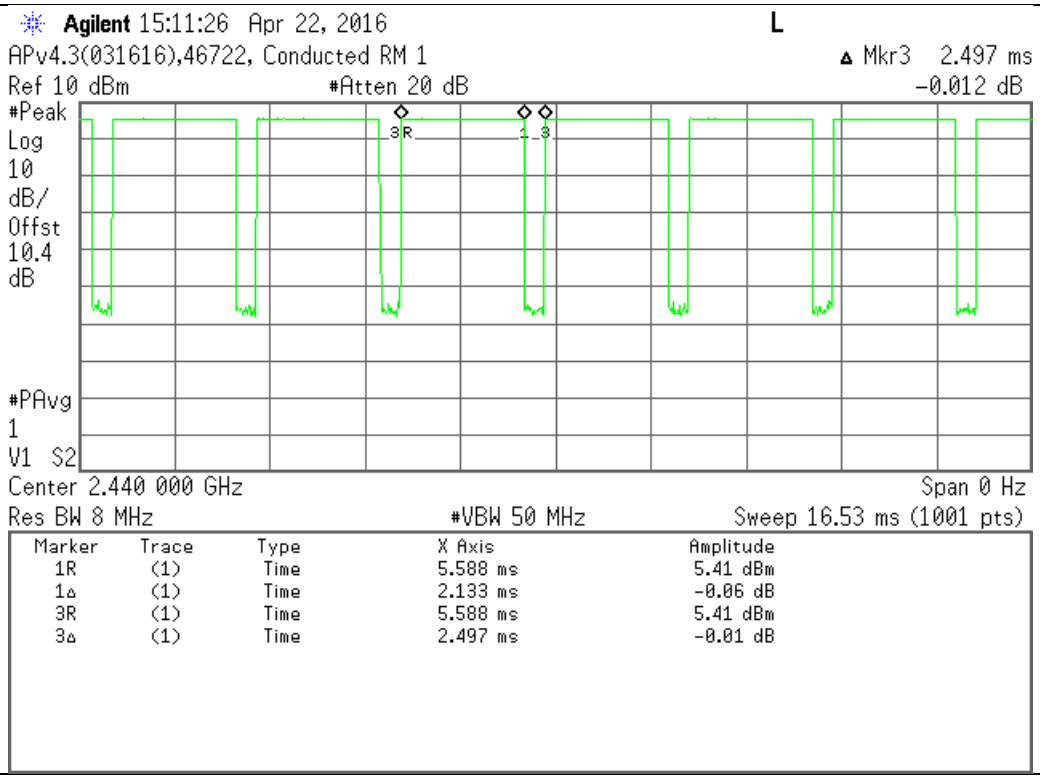
KDB 558074 Zero-Span Spectrum Analyzer Method

RESULTS

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)
BLE	2.133	2.497	0.854	85.42%	0.69	0.469

DUTY CYCLE PLOTS



NOTE: --

8.2. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

The minimum 6 dB bandwidth shall be at least 500 kHz.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The RBW is set to 100 kHz and the VBW is set to 300 kHz. The sweep time is coupled.

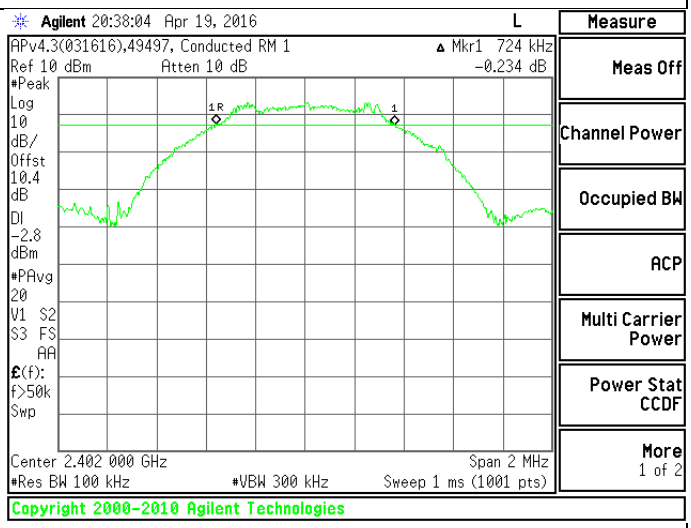
RESULTS

8.2.1. 6 dB BANDWIDTH PLOTS AND TABLE

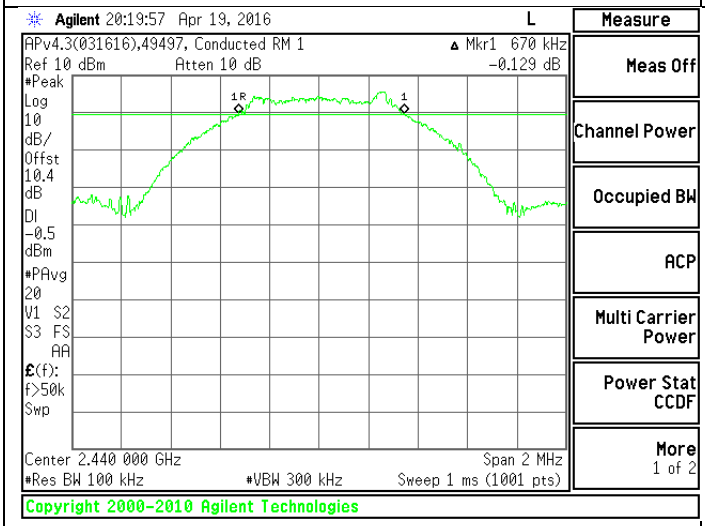
TEST RESULT TABLE

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)
Low	2402	0.724
Middle	2440	0.670
High	2480	0.726

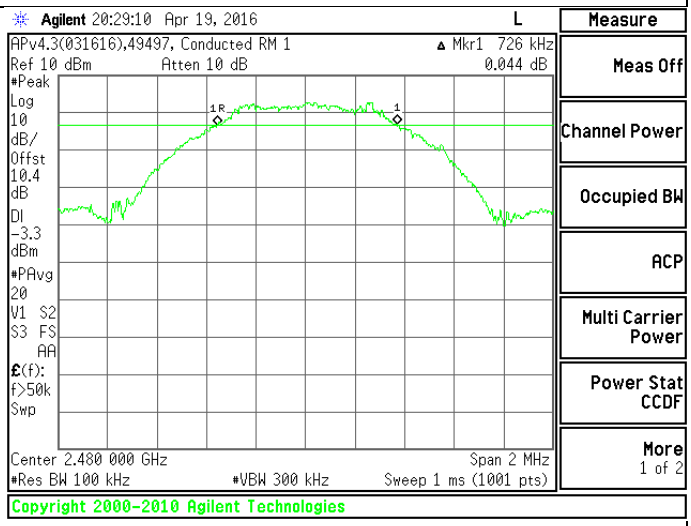
LOW CHANNEL



MID CHANNEL



HIGH CHANNEL



8.3. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

Refer to KDB558074 D01 DTS Meas Guidance v03r05: The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth and to 1% of the span. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

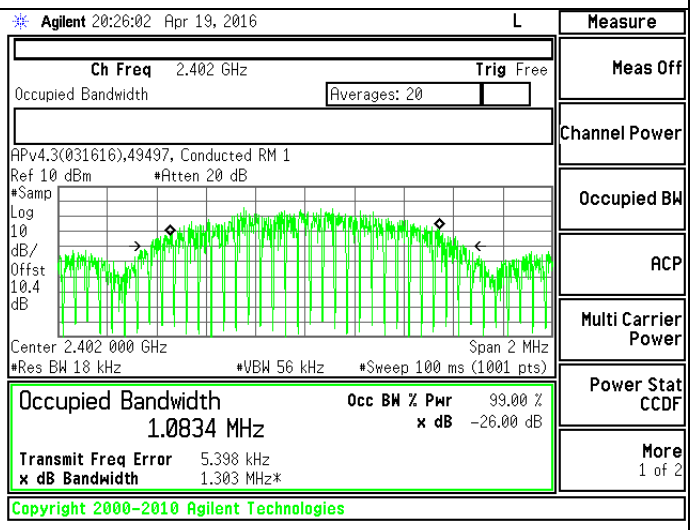
RESULTS

8.3.1. 99% BANDWIDTH PLOTS AND TABLE

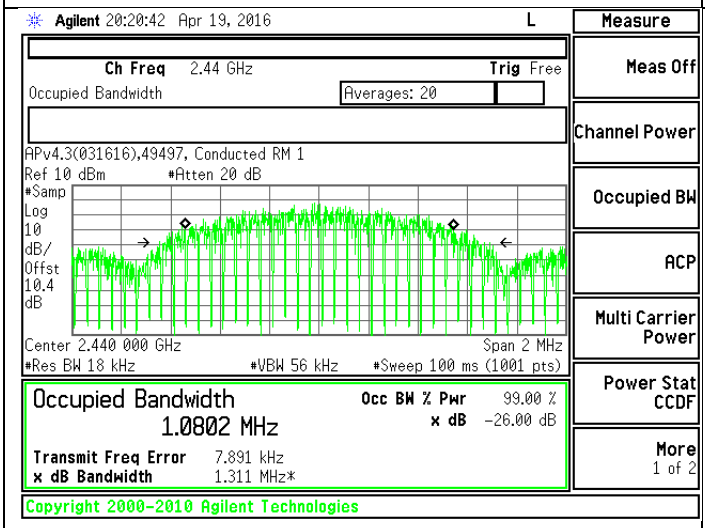
TEST RESULT TABLE

Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2402	1.0834
Middle	2440	1.0802
High	2480	1.0807

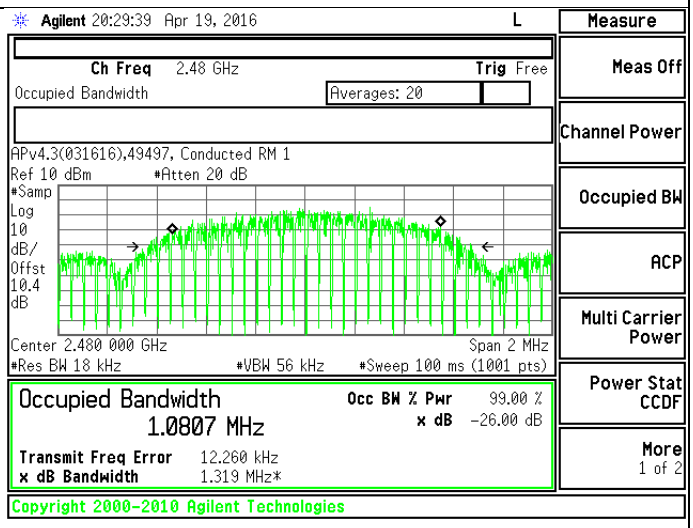
LOW CHANNEL



MID CHANNEL



HIGH CHANNEL



8.4. OUTPUT POWER

LIMITS

FCC §15.247 (b)

The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

TEST PROCEDURE

Peak power is measured using KDB558074 D01 DTS Meas Guidance v03r05 RF power meter.

RESULTS

Channel	Frequency (MHz)	Output Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	4.670	30	-25.33
Middle	2440	6.200	30	-23.80
High	2480	4.730	30	-25.27

NOTE: --

8.5. AVERAGE POWER

LIMITS

None; for reporting purpose only.

TEST PROCEDURE

Peak power is measured using KDB558074 D01 DTS Meas Guidance v03r05 RF power meter.

RESULTS

Channel	Frequency (MHz)	Average Power (dBm)
Low	2402	4.450
Middle	2440	6.070
High	2480	4.530

NOTE: --

8.6. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

TEST PROCEDURE

Power Spectral Density was performed utilizing the “Method PKPSD (Peak PSD)” under KDB558074 D01 DTS Meas Guidance v03r05.

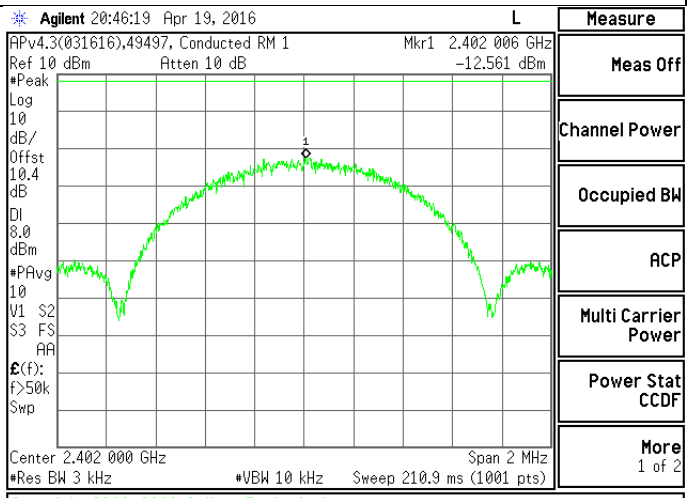
RESULTS

8.6.1. POWER SPECTRAL DENSITY PLOTS AND TABLE

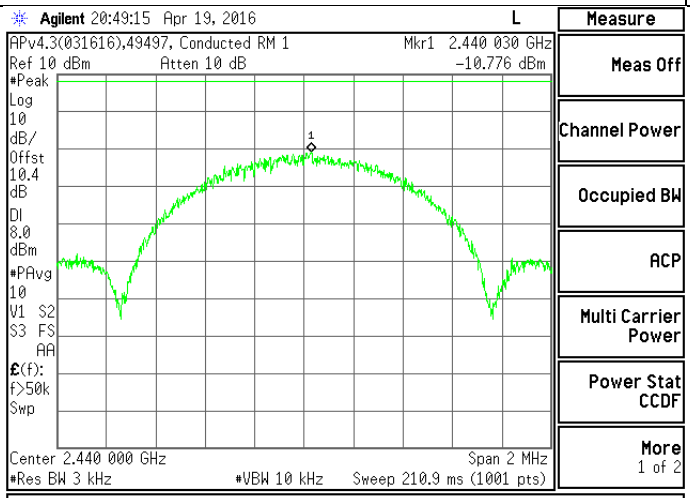
TEST RESULT TABLE

Channel	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2402	-12.56	8	-20.561
Middle	2440	-10.776	8	-18.776
High	2480	-12.805	8	-20.805

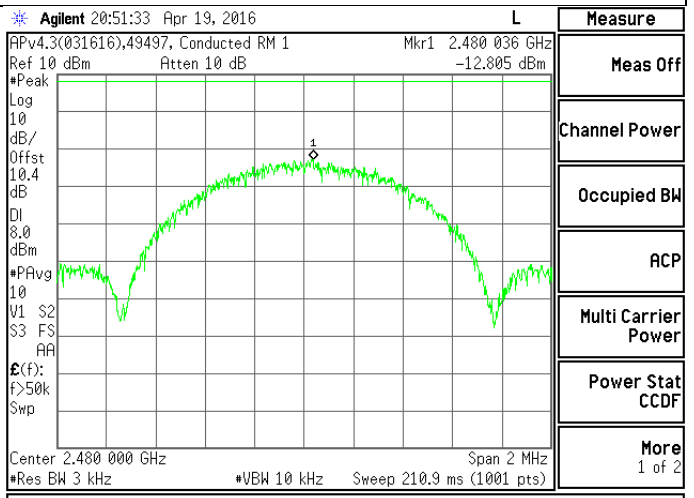
LOW CHANNEL



MID CHANNEL



HIGH CHANNEL



NOTE:

8.7. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

TEST PROCEDURE

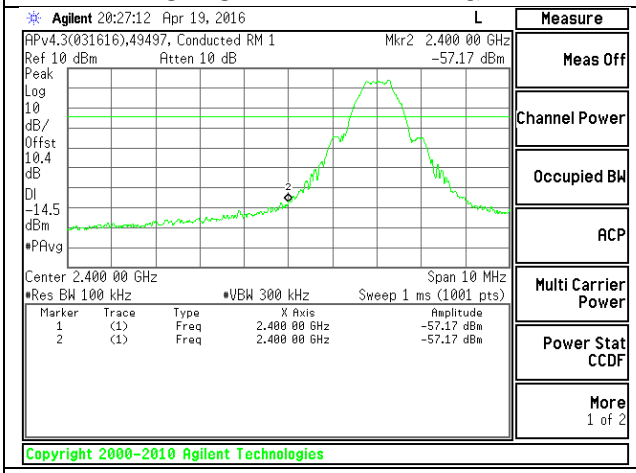
The transmitter output is connected to a spectrum analyzer. The resolution bandwidth is set to 100 kHz. The video bandwidth is set to 300 kHz.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

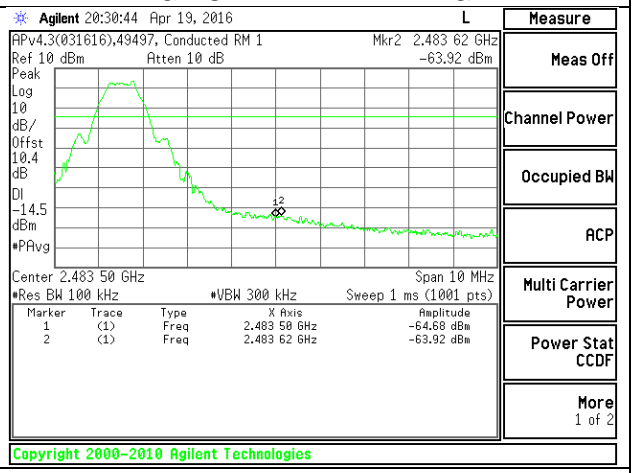
RESULTS

8.7.1. BANDEDGE AND SPURIOUS EMISSIONS PLOTS

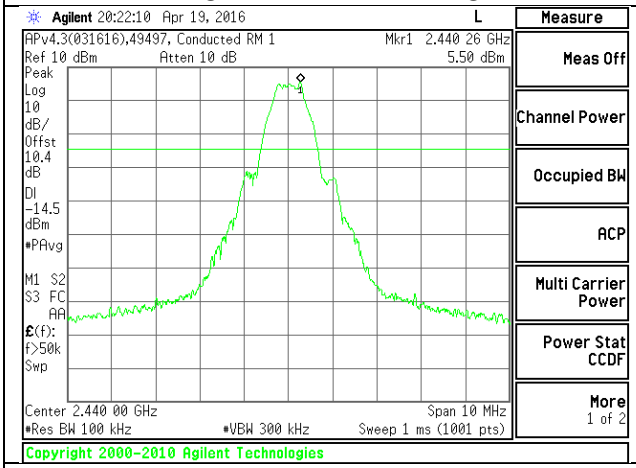
LOW CHANNEL BANDEDGE



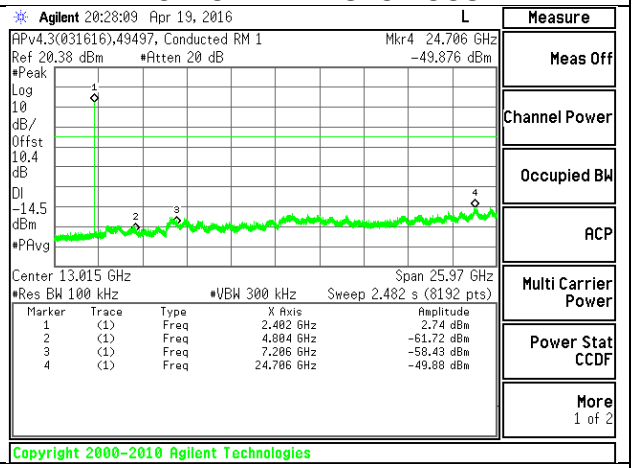
HIGH CHANNEL BANDEDGE



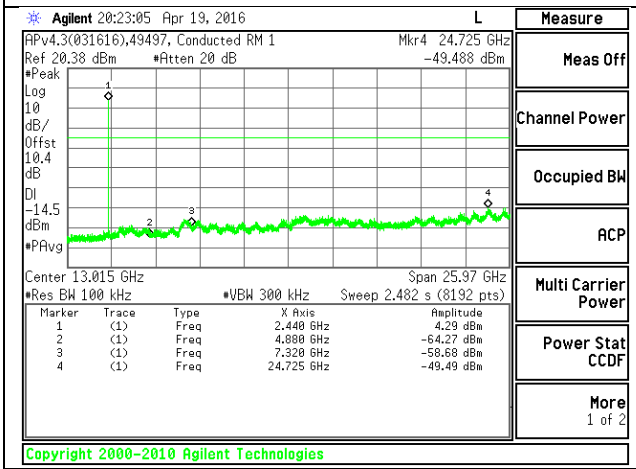
MID CHANNEL REFERENCE



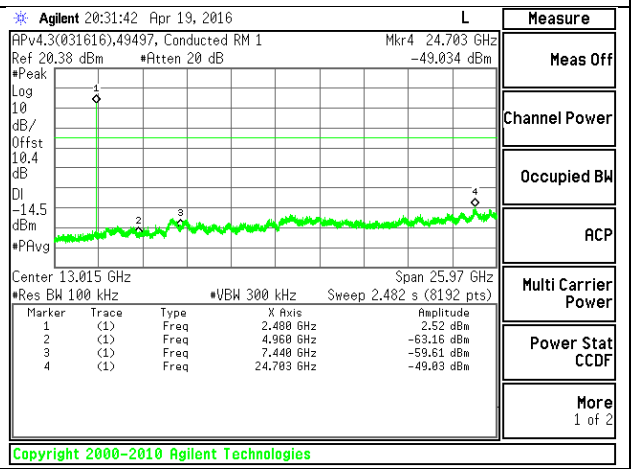
LOW CHANNEL SPURIOUS



MID CHANNEL SPURIOUS



HIGH CHANNEL SPURIOUS



NOTE:--

9. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz and 150cm for above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

For measurements below 1 GHz the resolution bandwidth is set to 100 kHz for peak detection measurements or 120 kHz for quasi-peak detection measurements. Peak detection is used unless otherwise noted as quasi-peak.

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 1 MHz for peak measurements and add duty cycle factor for average measurements. Please refer to test report section 8.1 for duty cycle factor information.

The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

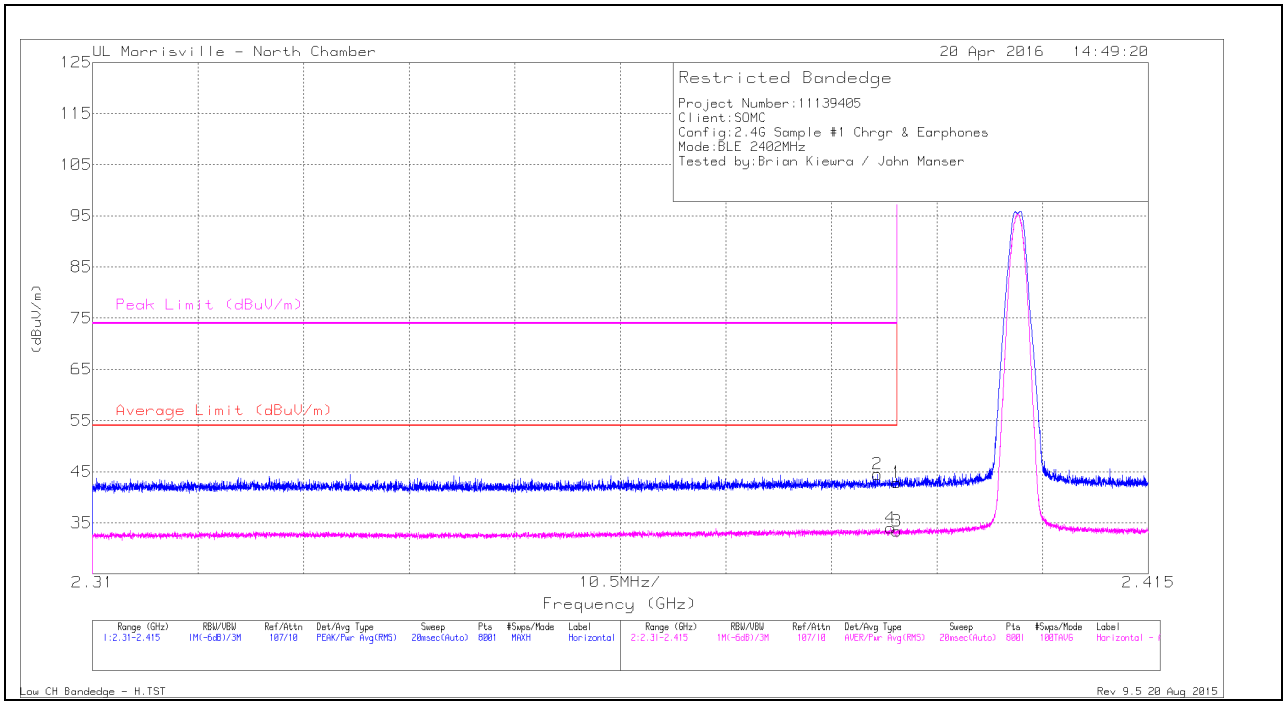
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized in both the vertical and the horizontal positions.

RESULTS

9.1. TRANSMITTER ABOVE 1 GHz

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

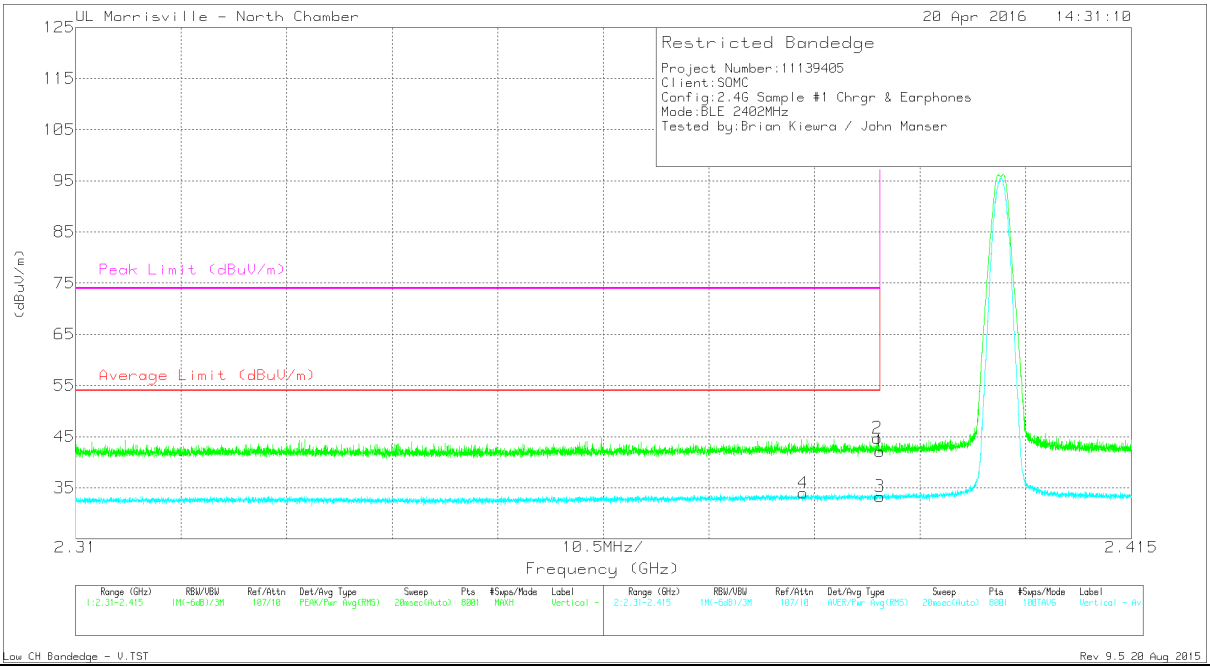
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0072 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	35.58	Pk	32.1	-24.8	0	42.88	-	-	74	-31.12	288	188	H
2	* 2.388	37.21	Pk	32.1	-24.8	0	44.51	-	-	74	-29.49	288	188	H
3	* 2.39	24.9	RMS	32.1	-24.8	0.69	33.42	54	-21.11	-	-	288	188	H
4	* 2.389	25.5	RMS	32.1	-24.8	0.69	33.49	54	-20.51	-	-	288	188	H

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0072 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	34.87	Pk	32.1	-24.8	0	42.17	-	-	74	-31.83	8	203	V
2	* 2.39	37.43	Pk	32.1	-24.8	0	44.73	-	-	74	-29.27	8	203	V
3	* 2.39	24.8	RMS	32.1	-24.8	0.69	33.32	54	-21.21	-	-	8	203	V
4	* 2.382	25.47	RMS	32.1	-24.8	0.69	33.45	54	-20.54	-	-	8	203	V

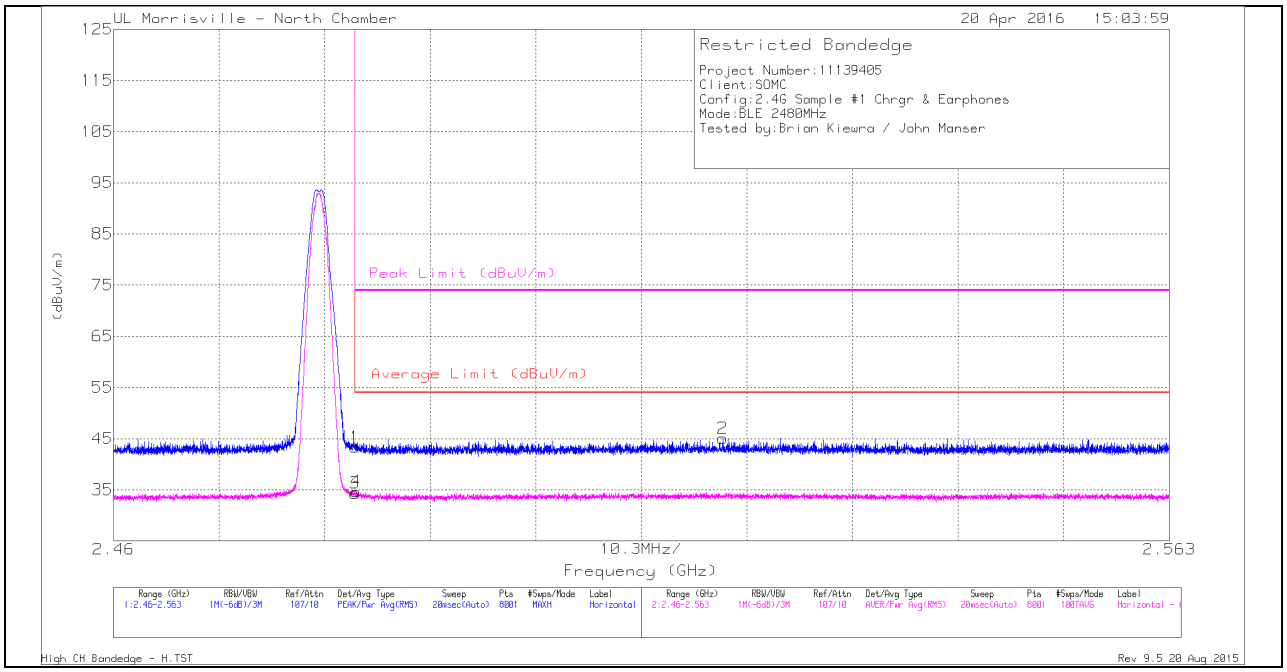
* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

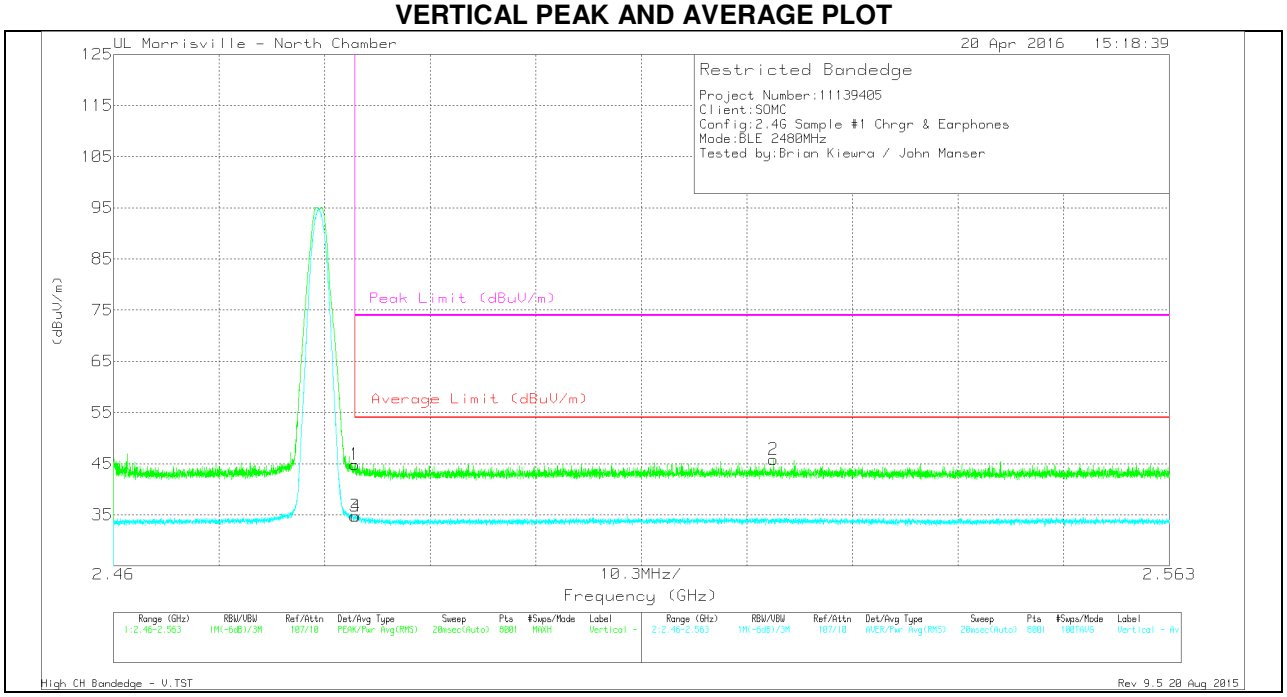
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0072 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	35.82	Pk	32.3	-24.8	0	43.32	-	-	74	-30.68	287	162	H
3	* 2.484	25.6	RMS	32.3	-24.8	0.69	33.79	54	-20.21	-	-	287	162	H
4	* 2.484	25.96	RMS	32.3	-24.8	0.69	34.15	54	-19.85	-	-	287	162	H
2	2.519	37.38	Pk	32.3	-24.6	0	45.08	-	-	74	-28.92	287	162	H

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0072 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	37.36	Pk	32.3	-24.8	0	44.86	-	-	74	-29.14	8	150	V
3	* 2.484	26.08	RMS	32.3	-24.8	0.69	34.27	54	-19.73	-	-	8	150	V
4	* 2.484	26.03	RMS	32.3	-24.8	0.69	34.22	54	-19.78	-	-	8	150	V
2	2.524	38.13	Pk	32.3	-24.6	0	45.83	-	-	74	-28.17	8	150	V

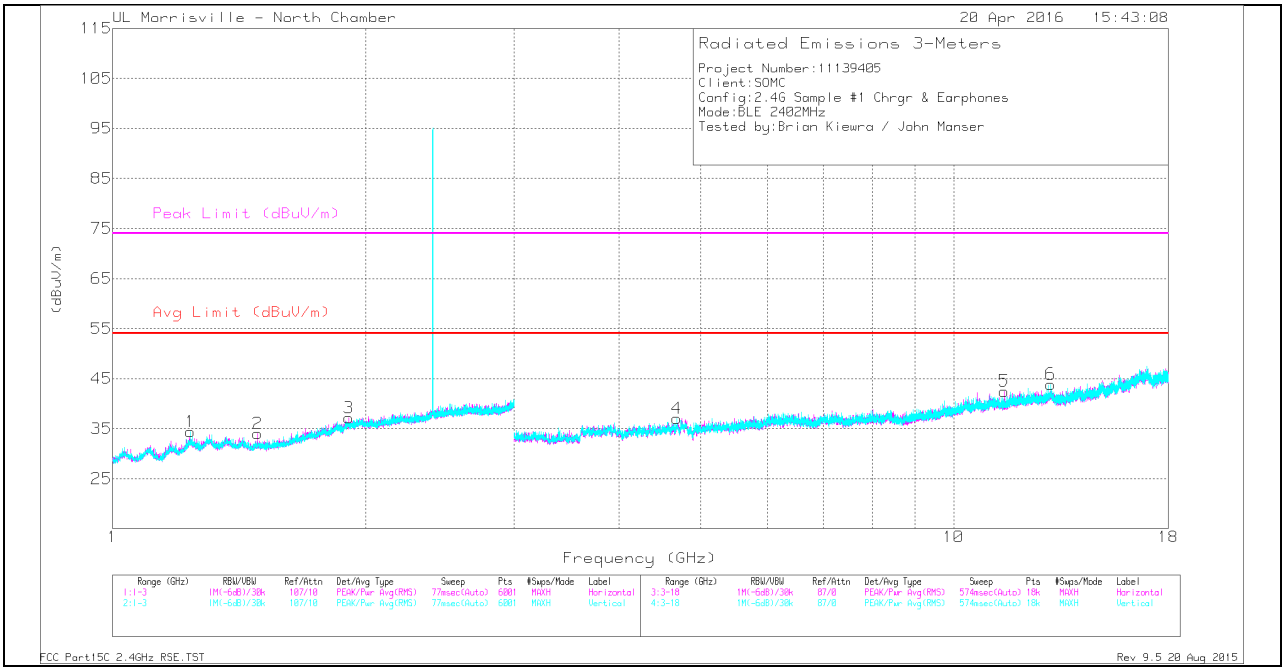
* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

RMS - RMS detection

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

LOW CHANNEL DATA

Radiated Emissions

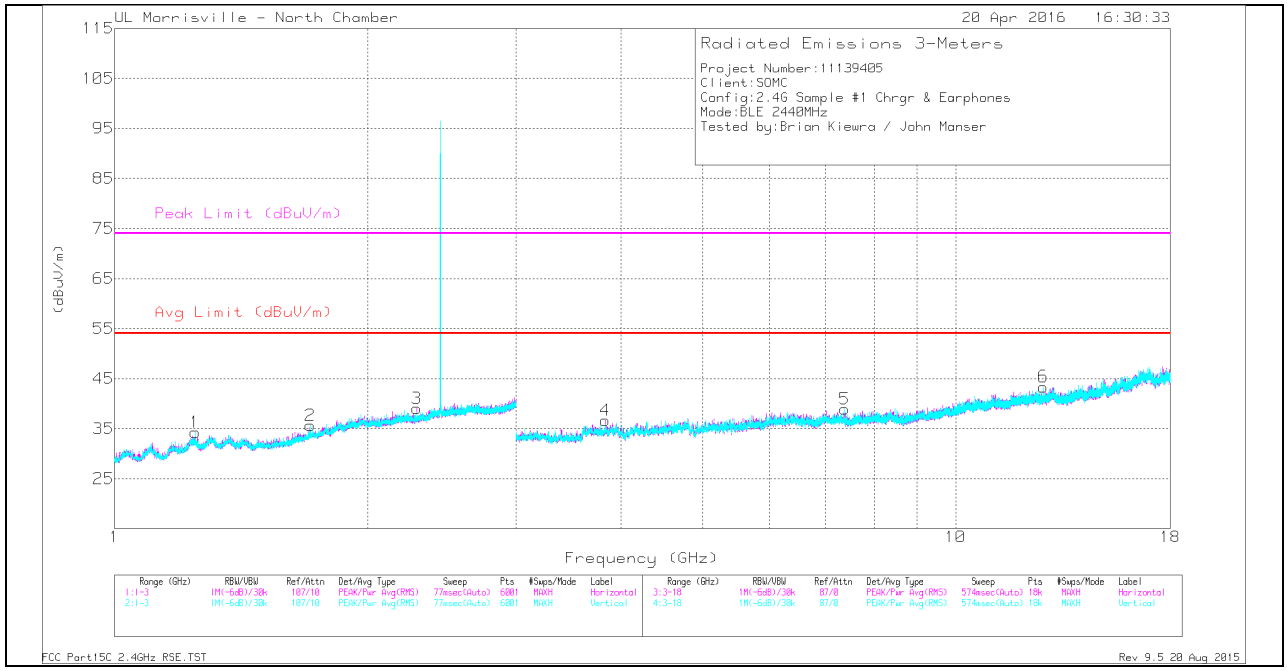
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0072 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
2	* 1.49	36.14	PK2	27.9	-25.2	0	38.84	-	-	74	-35.16	141	272	H
	* 1.487	24.18	MAv1	27.9	-25.2	0.69	27.57	54	-26.43	-	-	141	272	H
1	* 1.237	37.45	PK2	29	-26.2	0	40.25	-	-	74	-33.75	114	399	V
	* 1.237	24.91	MAv1	29	-26.2	0.69	28.40	54	-25.60	-	-	114	399	V
5	* 11.489	35.44	PK2	38.2	-26.8	0	46.84	-	-	74	-27.16	280	303	H
	* 11.486	23.94	MAv1	38.2	-26.8	0.69	36.03	54	-17.97	-	-	280	303	H
4	* 4.684	42.28	PK2	34.1	-33.2	0	43.18	-	-	74	-30.82	353	243	V
	* 4.685	30.24	MAv1	34.1	-33.2	0.69	31.83	54	-22.17	-	-	353	243	V
3	1.908	30.64	Pk	31.2	-24.7	0	37.14	-	-	-	-	0-360	200	H
6	13.053	31.08	Pk	39.2	-26.4	0	43.88	-	-	-	-	0-360	101	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

MID CHANNEL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

MID CHANNEL DATA

Radiated Emissions

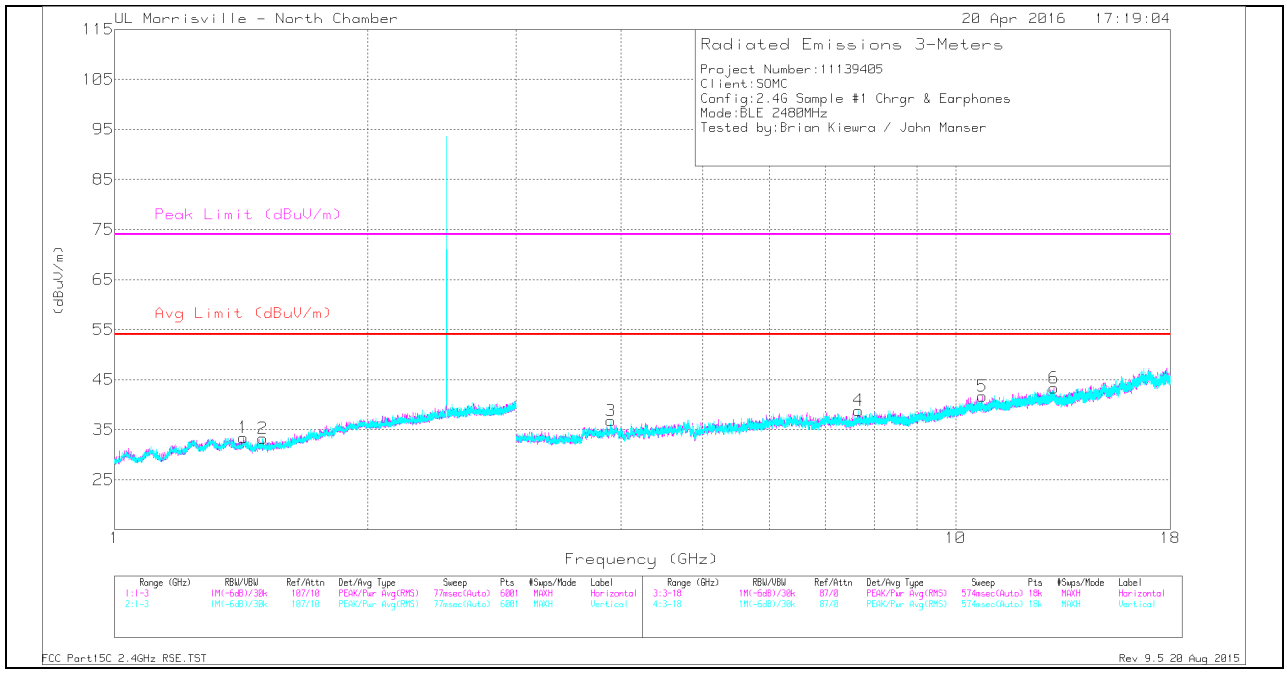
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0072 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
3	* 2.287	36.97	PK2	31.7	-24.8	0	43.87	-	-	74	-30.13	55	113	H
	* 2.284	24.76	MAv1	31.7	-24.8	0.69	32.35	54	-21.65	-	-	55	113	H
1	* 1.245	36.27	PK2	29.1	-26.2	0	39.17	-	-	74	-34.83	267	110	V
	* 1.246	24.36	MAv1	29.1	-26.2	0.69	27.95	54	-26.05	-	-	267	110	V
2	* 1.685	36.32	PK2	29	-24.8	0	40.52	-	-	74	-33.48	292	354	V
	* 1.661	24.02	MAv1	28.7	-24.8	0.69	28.61	54	-25.39	-	-	292	354	V
4	* 3.834	41.22	PK2	33.4	-33.1	0	41.52	-	-	74	-32.48	261	178	H
	* 3.834	29.9	MAv1	33.4	-33.1	0.69	30.89	54	-23.11	-	-	261	178	H
5	* 7.38	38.09	PK2	35.5	-30.2	0	43.39	-	-	74	-30.61	303	114	V
	* 7.379	26.44	MAv1	35.5	-30.2	0.69	32.43	54	-21.57	-	-	303	114	V
6	12.708	31.78	Pk	39.2	-27.6	0	43.38	-	-	-	-	0-360	101	V

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

HIGH CHANNEL



Note: Emission was scanned up to 26GHz; No emissions were detected above the noise floor which was at least 20dB below the specification limit.

HIGH CHANNEL DATA

Radiated Emissions

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF AT0072 (dB/m)	Amp/Cbl/Fltr/Pad (dB)	DC Corr (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.423	36.59	PK2	28.6	-25.5	0	39.69	-	-	74	-34.31	257	306	H
	* 1.423	24.24	MAv1	28.6	-25.5	0.69	28.03	54	-25.97	-	-	257	306	H
2	* 1.502	36.38	PK2	27.8	-25.2	0	38.98	-	-	74	-35.02	211	202	V
	* 1.501	23.88	MAv1	27.8	-25.2	0.69	27.17	54	-26.83	-	-	211	202	V
5	* 10.757	34.93	PK2	37.7	-26.3	0	46.33	-	-	74	-27.67	33	235	H
	* 10.755	23.68	MAv1	37.7	-26.3	0.69	35.77	54	-18.23	-	-	33	235	H
3	* 3.892	41.57	PK2	33.5	-32.4	0	42.67	-	-	74	-31.33	345	V
	* 3.894	29.65	MAv1	33.5	-32.5	0.69	31.34	54	-22.66	-	-	71	345	V
4	* 7.663	38.01	PK2	35.6	-29.9	0	43.71	-	-	74	-30.29	235	389	V
	* 7.663	26.6	MAv1	35.6	-29.9	0.69	32.99	54	-21.01	-	-	235	389	V
6	13.087	30.88	Pk	39.1	-26.7	0	43.28	-	-	-	-	0-360	101	H

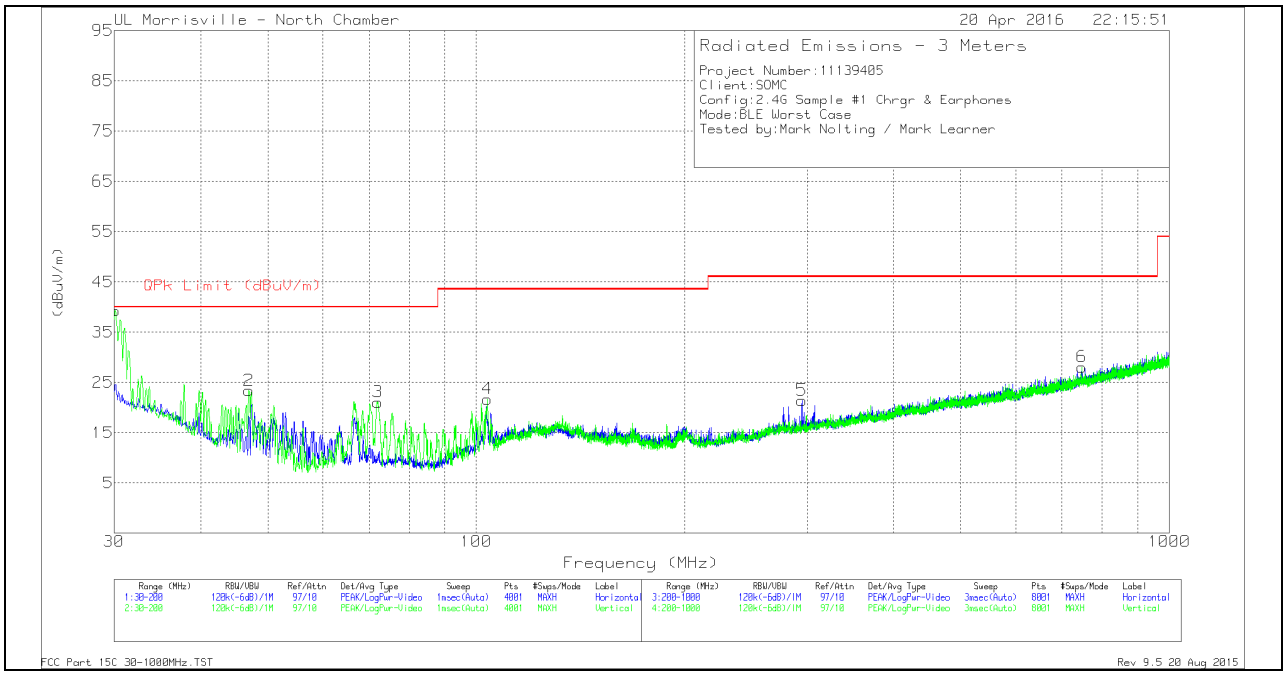
* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

PK2 - KDB558074 Method: Maximum Peak

MAv1 - KDB558074 Option 1 Maximum RMS Average

9.2. WORST-CASE BELOW 1 GHz

SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION)



BELOW 1 GHz TABLE

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AT0073 AF (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	30.0015	37.95	Qp	26.1	-31.6	32.45	40	-7.55	87	104	V
2	46.9575	40.77	Pk	14	-31.4	23.37	40	-16.63	0-360	102	V
3	72.075	39.79	Pk	12.4	-31.1	21.09	40	-18.91	0-360	102	V
4	103.7375	37.01	Pk	15.5	-30.8	21.71	43.52	-21.81	0-360	102	V
5	295	32.94	Pk	18	-29.5	21.44	46.02	-24.58	0-360	102	H
6	747.6	30.39	Pk	25.5	-27.8	28.09	46.02	-17.93	0-360	199	V

Trace Markers

* - indicates frequency in CFR15.205/IC 8.10 Restricted Band

Pk - Peak detector

10. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

Frequency of Emission (MHz)	Conducted Limit (dBuV)	
	Quasi-peak	Average
0.15 – 0.5	66 to 56	56 to 46
0.5 - 5	56	46
5 - 30	60	50

TEST PROCEDURE

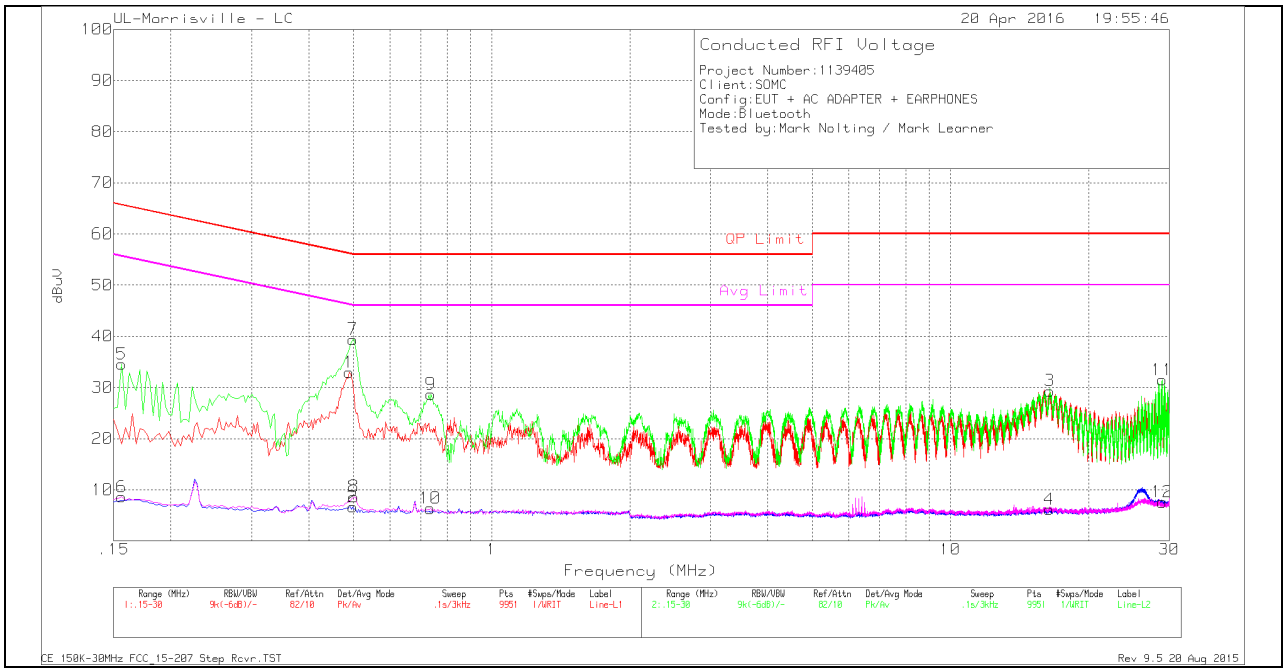
The EUT is placed on a non-conducting table 40 cm from the vertical ground plane and 80 cm above the horizontal ground plane. The EUT is configured in accordance with ANSI C63.10.

The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

Line conducted data is recorded for both NEUTRAL and HOT lines.

RESULTS

6 WORST EMISSIONS



LINE 1 RESULT

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN VCF [dB]	Cbl/Limiter (dB)	Corrected Reading dBuV	QP Limit	Margin (dB)	Avg Limit	Margin (dB)
Range 1 (Line 1)										
1	.489	22.88	Pk	.1	10	32.98	56.18	-23.2	-	-
2	.498	-3.42	Av	.1	10	6.68	-	-	46.03	-39.35
3	16.467	18.64	Pk	.2	10.5	29.34	60	-30.66	-	-
4	16.401	-4.54	Av	.2	10.5	6.16	-	-	50	-43.84
Range 2 (Line 2)										
5	.156	24.34	Pk	.2	10	34.54	65.67	-31.13	-	-
6	.156	-1.58	Av	.2	10	8.62	-	-	55.67	-47.05
7	.498	29.31	Pk	.1	10	39.41	56.03	-16.62	-	-
8	.501	-1.33	Av	0	10	8.67	-	-	46	-37.33
9	.738	18.7	Pk	0	10	28.7	56	-27.3	-	-
10	.735	-3.64	Av	0	10	6.36	-	-	46	-39.64
11	28.956	20.46	Pk	.3	10.7	31.46	60	-28.54	-	-
12	28.956	-3.41	Av	.3	10.7	7.59	-	-	50	-42.41

Pk - Peak detector
Av - Average detection