



**FCC CFR47 PART 15 SUBPART C
INDUSTRY CANADA RSS-247 ISSUE 1**

C2PC CERTIFICATION TEST REPORT

FOR

Bluetooth/BLE and DTS/UNII a/b/g/n/ac and ANT+ Tablet

MODEL NUMBER : SM-T710

FCC ID: A3LSMT710

IC ID: 649E-SMT710

REPORT NUMBER: 15K21322-E3

ISSUE DATE: JUL 17, 2015

Prepared for

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Revision History

Rev.	Issue Date	Revisions	Revised By
--	07/17/15	Initial issue	Junwhan Lee

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.
EUT DESCRIPTION: Bluetooth/BLE, DTS/UNII a/b/g/n/ac and ANT+ Tablet
MODEL NUMBER: SM-T710
SERIAL NUMBER: R32G600QTEA (RADIATED); R32G600Q1KE (CONDUCTED)
DATE TESTED: JUL 08 - JUL 16, 2015

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Pass
IC RSS-247 Issue 1	Pass

UL Korea, Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL Korea, Ltd. based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL Korea, Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Korea, Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by IAS, any agency of the Federal Government, or any agency of any government.

Approved & Released For
UL Korea, Ltd. By:



CY Choi
Suwon Lab Engineer
UL Korea, Ltd.

Tested By:



Junwhan Lee
Suwon Lab Engineer
UL Korea, Ltd.

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.10-2009, FCC CFR 47 Part 2, FCC CFR 47 Part 15, RSS-247 Issue 1.

ANSI C63.10-2013 Deviation: Radiated spurious emission above 1GHz EUT height is 0.8m not 1.5m.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 443-823, Korea. Line conducted emissions are measured only at the 218 address. The following table identifies which facilities were utilized for radiated emission measurements documented in this report. Specific facilities are also identified in the test results sections.

218 Maeyeong-ro
☒ Chamber 1
☒ Chamber 2

UL Korea, Ltd. is accredited by IAS, Laboratory Code TL-637. The full scope of accreditation can be viewed at <http://www.iasonline.org/PDF/TL/TL-637.pdf>.

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:

$$\begin{aligned} \text{Field Strength (dBuV/m)} &= \text{Measured Voltage (dBuV)} + \text{Antenna Factor (dB/m)} + \\ &\text{Cable Loss (dB)} - \text{Preamp Gain (dB)} \\ 36.5 \text{ dBuV} + 18.7 \text{ dB/m} + 0.6 \text{ dB} - 26.9 \text{ dB} &= 28.9 \text{ dBuV/m} \end{aligned}$$

4.3. MEASUREMENT UNCERTAINTY

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

PARAMETER	UNCERTAINTY
Conducted Disturbance, 0.15 to 30 MHz	2.32 dB
Radiated Disturbance, Below 1GHz	4.14 dB
Radiated Disturbance, Above 1 GHz	5.97 dB

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

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a Bluetooth/BLE, DTS/UNII a/b/g/n/ac and ANT+ Tablet.
This test report addresses the DSS (BT) operational mode.

5.2. MAXIMUM OUTPUT POWER (From Original)

The transmitter has a maximum conducted output power as follows:

Frequency Range [MHz]	Mode	Output Power [dBm]	Output Power [mW]
2402 - 2480	Basic GFSK	8.77	7.53
	Enhanced Pi/4-DPSK	5.66	3.68
	Enhanced 8PSK	5.78	3.78

Note: GFSK, Pi/4-DQPSK, 8PSK average Power are all investigated, The GFSK & 8PSK Power are the worst case. Testing is based on this mode to showing compliance.

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of -0.32 dBi.

5.4. WORST-CASE CONFIGURATION AND MODE

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

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

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Charger	SAMSUNG	EP-TA12EWE	N/A	N/A
Data Cable	SAMSUNG	ECB-DG925UWE	N/A	N/A
Earphone	SAMSUNG	GH59-11129H	N/A	N/A

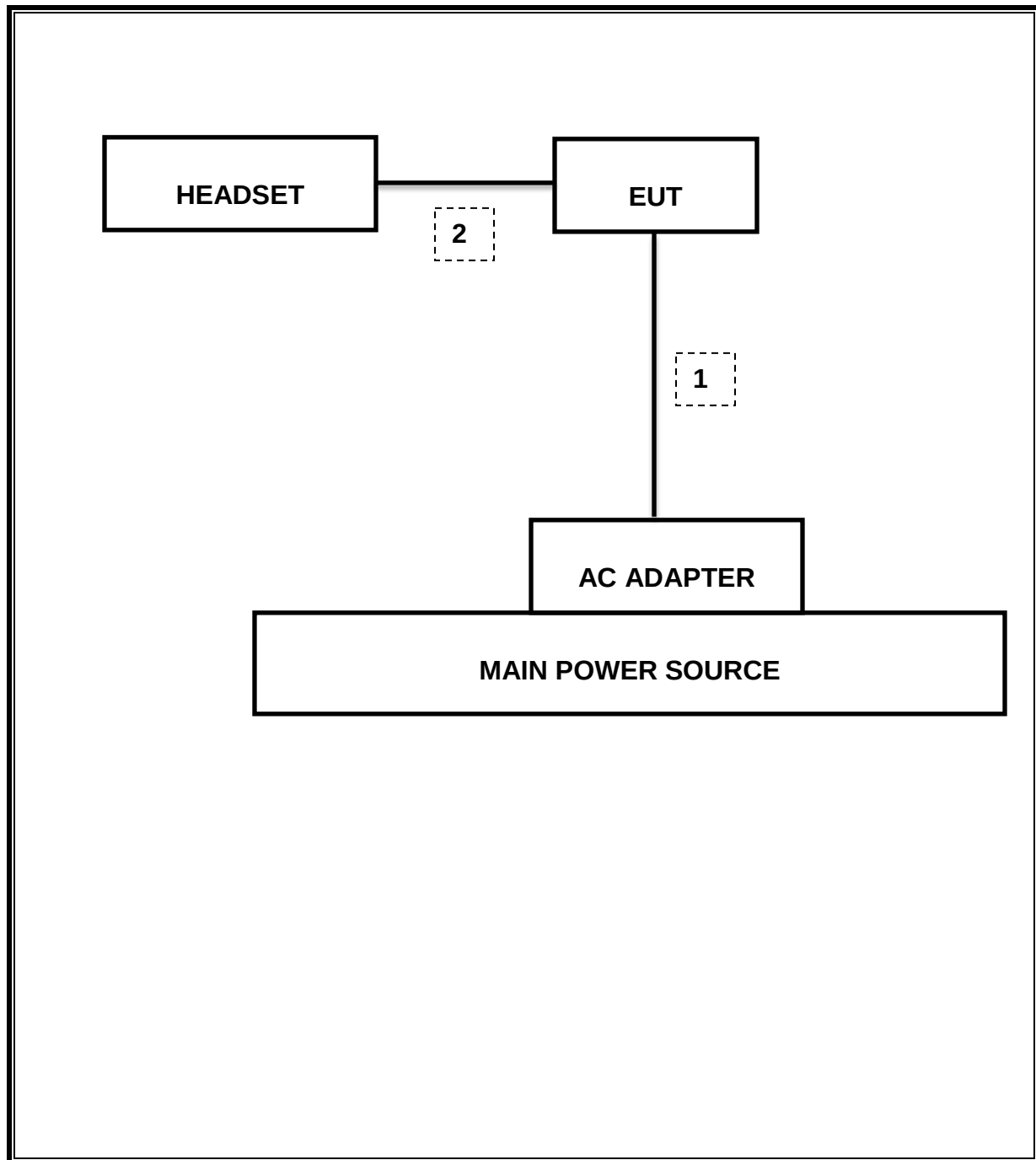
I/O CABLES

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	0.8m	N/A
2	Audio	1	Mini-Jack	Unshielded	1.0m	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 BT 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:

Test Equipment List				
Description	Manufacturer	Model	S/N	Cal Due
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	950	11-17-15
Antenna, Horn, 18 GHz	ETS	3115	00167211	09-20-15
Antenna, Horn, 40 GHz	ETS	3116C	00166255	09-23-15
Antenna, Horn, 40 GHz	ETS	3116C-PA	00168841	09-29-15
Preamplifier, 1000 MHz	Sonoma	310N	341282	11-17-15
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1876511	11-18-15
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54170614	09-23-15
Bluetooth Tester	TESCOM	TC-3000C	3000C000546	11-17-15
Average Power Sensor	R&S	NRZ-Z91	102681	11-17-15
Average Power Sensor	Agilent / HP	U2000	MY54270007	09-23-15
EMI Test Receive, 40 GHz	R&S	ESU40	100439	11-17-15
EMI Test Receive, 3 GHz	R&S	ESR3	101832	11-17-15
Attenuator / Switch driver	HP	11713A	3748A04272	N/A
Low Pass Filter 3GHz	Micro-Tronics	LPS17541	009	11-17-15
High Pass Filter 5GHz	Micro-Tronics	HPS17542	009	11-17-15
High Pass Filter 6GHz	Micro-Tronics	HPM17543	010	11-17-15
LISN	R&S	ENV-216	101836	04-09-16
LISN	R&S	ENV-216	101837	04-09-16

7. SUMMARY TABLE

FCC Part Section	IC Section	Test Description	Test Limit	Test Condition	Test Result	Worst Case
2.1049	RSS-GEN 4.6	Occupied Band width (99%)	N/A	Conducted	Pass	See Original
2.1051, 15.247 (d)	RSS-247 5.1(2)	Band Edge / Conducted Spurious Emission	-20dBc		Pass	See Original
15.247 (b)(1)	RSS-247 5.1(2)	TX conducted output power	<21dBm		Pass	See Original
15.247 (a)(1)	RSS-247 5.1(2)	Hopping frequency separation	> 25KHz		Pass	See Original
15.247 (a)(1)(iii)	RSS-247 5.1(4)	Number of Hopping channels	More than 15 non-overlapping channels		Pass	See Original
15.247 (a)(1)(iii)	RSS-247 5.1(4)	Avg Time of Occupancy	< 0.4sec		Pass	See Original
15.207 (a)	RSS-GEN Clause 8.8	AC Power Line conducted emissions	Section 10	Power Line conducted	Pass	See Original
15.205, 15.209	RSS-GEN Clause 7 & 8.9	Radiated Spurious Emission	< 54dBuV/m	Radiated	Pass	50.75 dBuV/m (AV)

8. RADIATED TEST RESULTS

8.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

IC RSS-GEN Clause 8.9 (Transmitter)

IC RSS-GEN Clause 7 (Receiver)

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. 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 band edge 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 1/T (on time) for average measurement.

$$\text{GFSK} = 1/T = 1 / 0.0029\text{S} = 350\text{Hz}.$$

The spectrum from 1GHzHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.

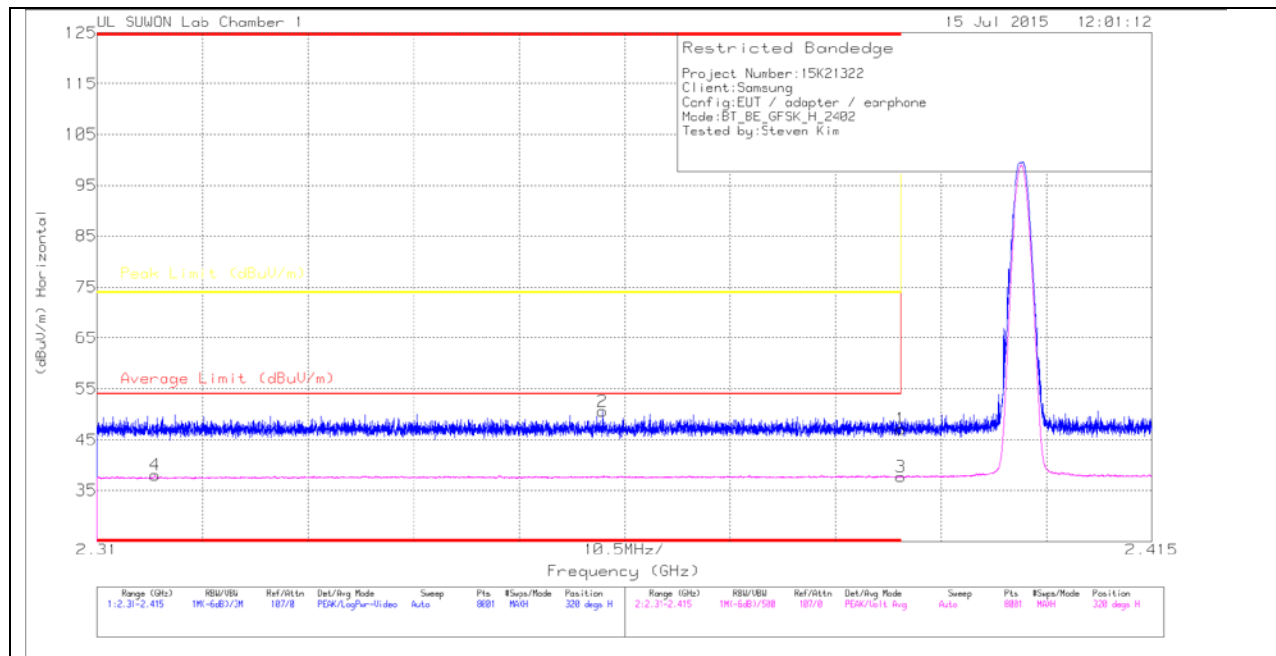
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

8.2. TRANSMITTER ABOVE 1 GHz

8.2.1. BASIC DATA RATE GFSK MODULATION

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

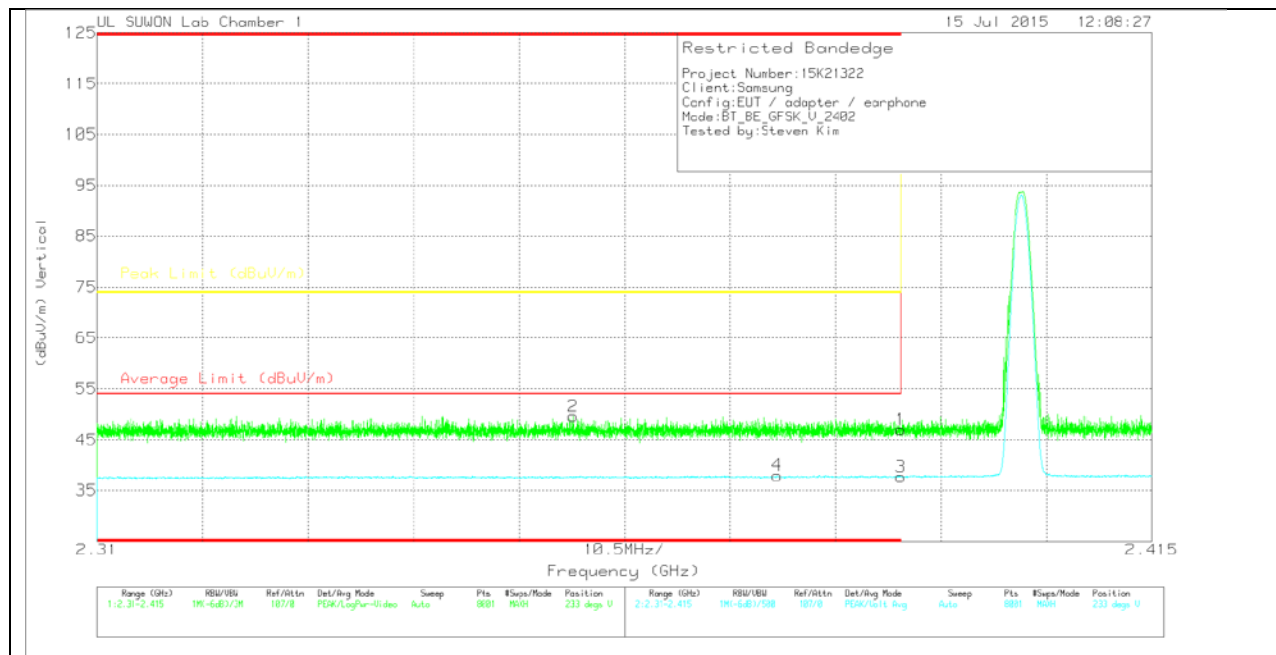
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_150 619	Path_2_10 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	38.13	Pk	31.8	-22.8	47.13	-	-	74	-26.87	320	122	H
2	* 2.36	41.71	Pk	31.7	-22.8	50.61	-	-	74	-23.39	320	122	H
3	* 2.39	28.76	V1TV	31.8	-22.8	37.76	54	-16.24	-	-	320	122	H
4	* 2.316	29.23	V1TV	31.7	-22.9	38.03	54	-15.97	-	-	320	122	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

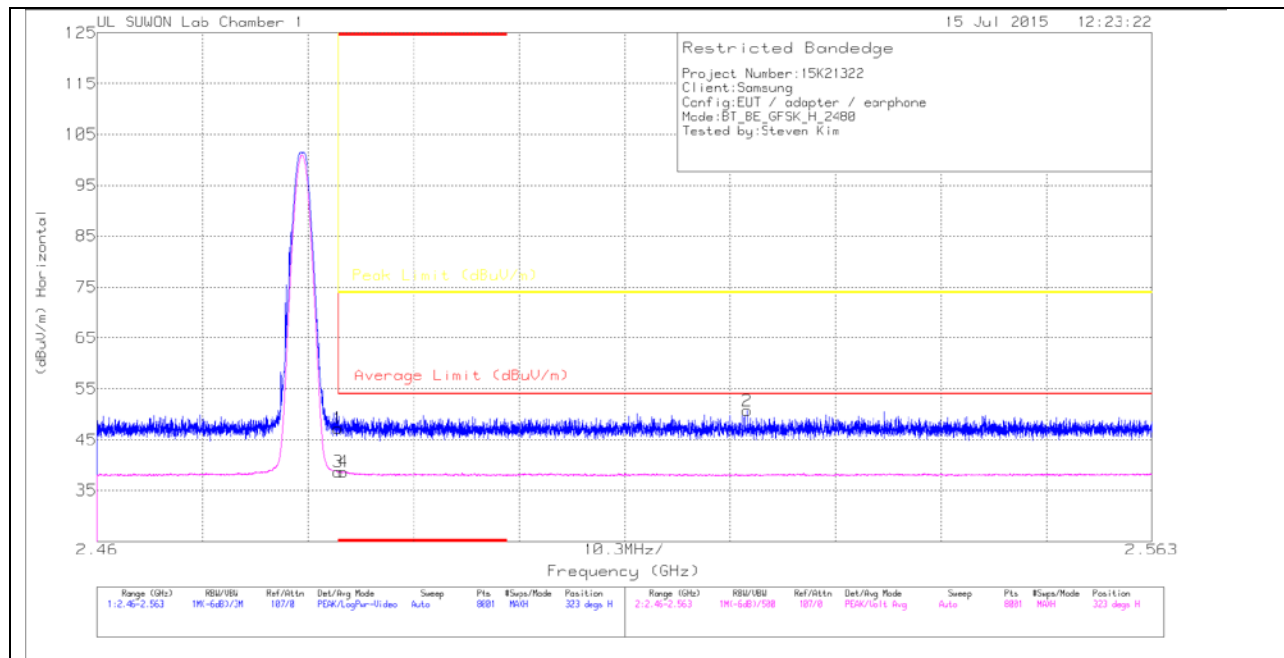
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_150 619	Path_2_10 dB	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	37.95	Pk	31.8	-22.8	46.95	-	-	74	-27.05	233	105	V
2	* 2.357	40.7	Pk	31.7	-22.8	49.6	-	-	74	-24.4	233	105	V
3	* 2.39	28.7	V1TV	31.8	-22.8	37.7	54	-16.3	-	-	233	105	V
4	* 2.378	29.02	V1TV	31.8	-22.8	38.02	54	-15.98	-	-	233	105	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

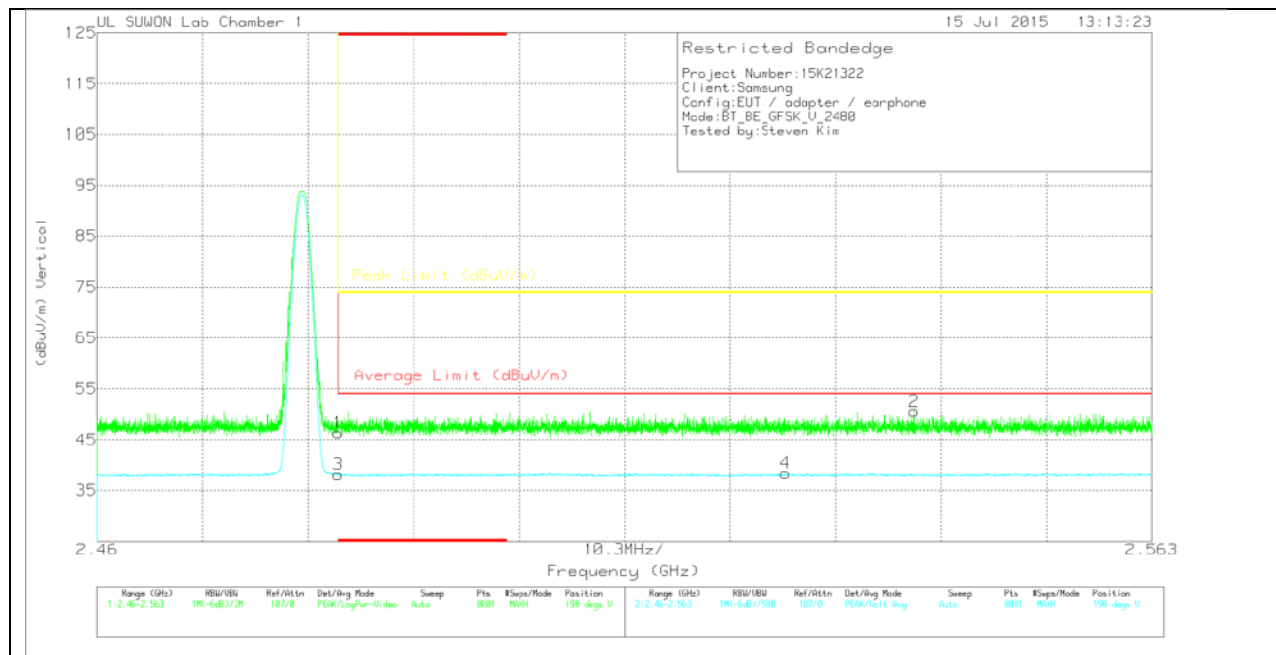
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_150 619	Path_2_10 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	37.8	Pk	32	-22.6	47.2	-	-	74	-26.8	323	102	H
2	2.523	41.27	Pk	32	-22.6	50.67	-	-	74	-23.33	323	102	H
3	* 2.484	29.26	V1TV	32	-22.6	38.66	54	-15.34	-	-	323	102	H
4	* 2.484	29.34	V1TV	32	-22.6	38.74	54	-15.26	-	-	323	102	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

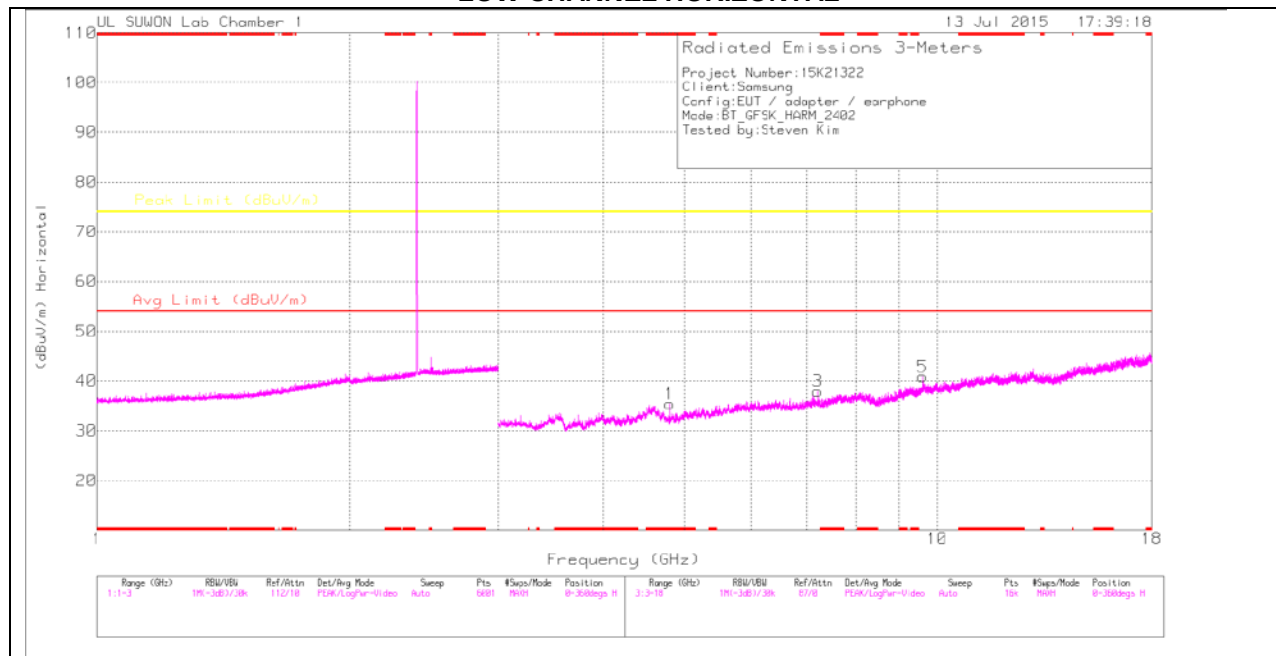
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_150 619	Path_2_10 dB	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	36.96	Pk	32	-22.6	46.36	-	-	74	-27.64	198	108	V
2	2.54	41.17	Pk	32	-22.6	50.57	-	-	74	-23.43	198	108	V
3	* 2.484	28.82	V1TV	32	-22.6	38.22	54	-15.78	-	-	198	108	V
4	2.527	29.05	V1TV	32	-22.6	38.45	54	-15.55	-	-	198	108	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

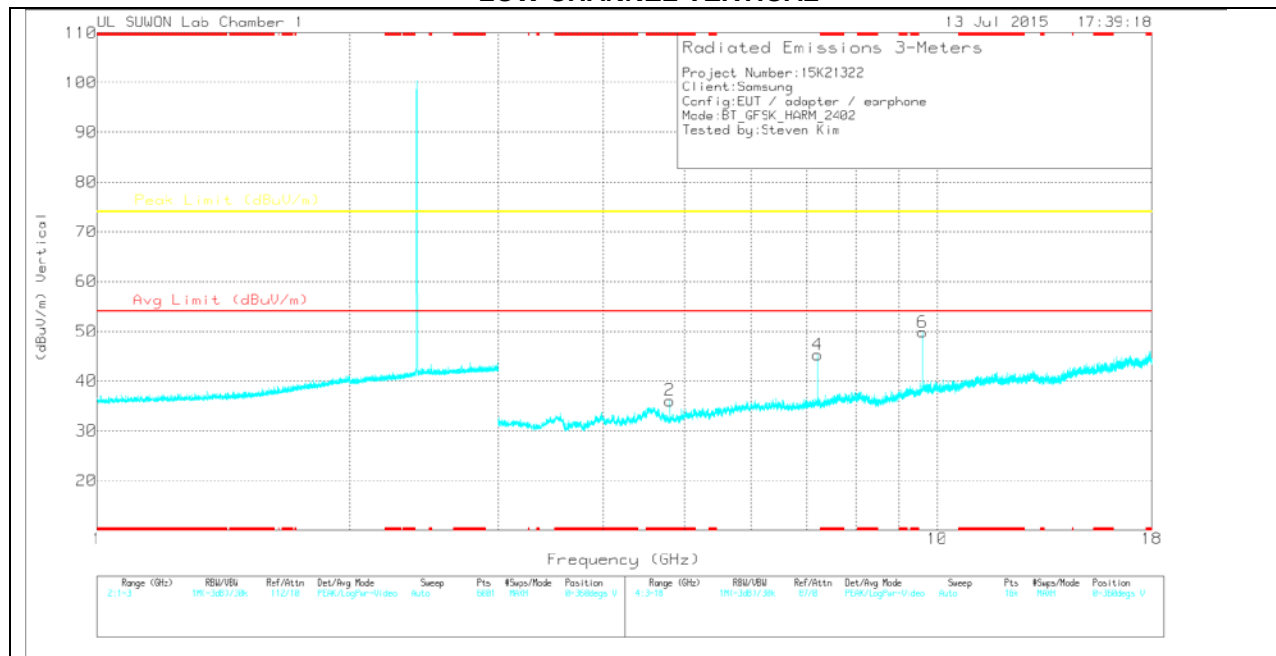
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



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

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_150 619	Path_3_3G HP	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.804	31.25	PK	34	-29.8	35.45	-	-	74	-38.55	0-360	200	H
3	7.206	27.66	PK	35.7	-25.4	37.96	-	-	74	-36.04	0-360	200	H
5	9.608	24.83	PK	37	-21	40.83	-	-	74	-33.17	0-360	200	H
2	* 4.804	31.93	PK	34	-29.8	36.13	-	-	74	-37.87	0-360	100	V
4	7.205	34.98	PK	35.7	-25.4	45.28	-	-	74	-28.72	0-360	100	V
6	9.608	33.79	PK	37	-21	49.79	-	-	74	-24.21	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

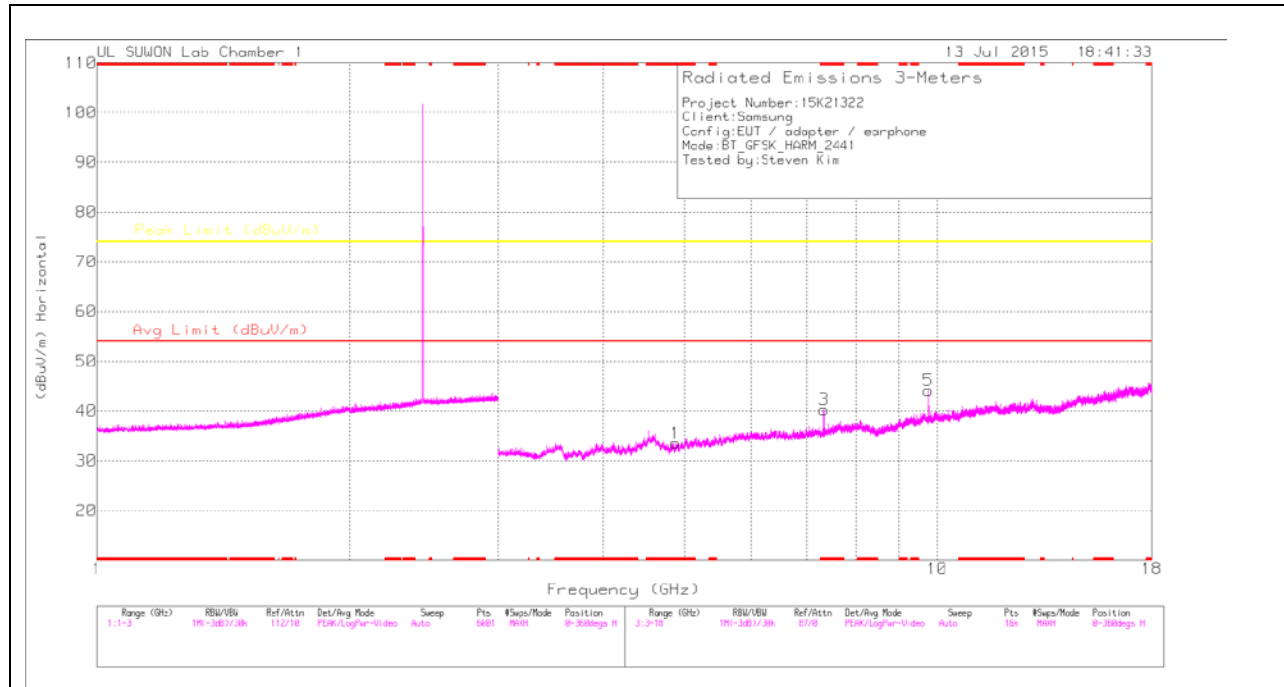
Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_150 619	Path_3_3G HP	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.804	31.82	VA1T	34	-29.8	36.02	54	-17.98	-	-	193	313	H
7.206	26.45	VA1T	35.7	-25.4	36.75	-	-	-	-	24	299	H
9.608	28.94	VA1T	37	-21	44.94	-	-	-	-	268	316	H
* 4.804	29	VA1T	34	-29.8	33.2	54	-20.8	-	-	110	200	V
7.206	34.94	VA1T	35.7	-25.4	45.24	-	-	-	-	174	103	V
9.608	31.83	VA1T	37	-21	47.83	-	-	-	-	214	101	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

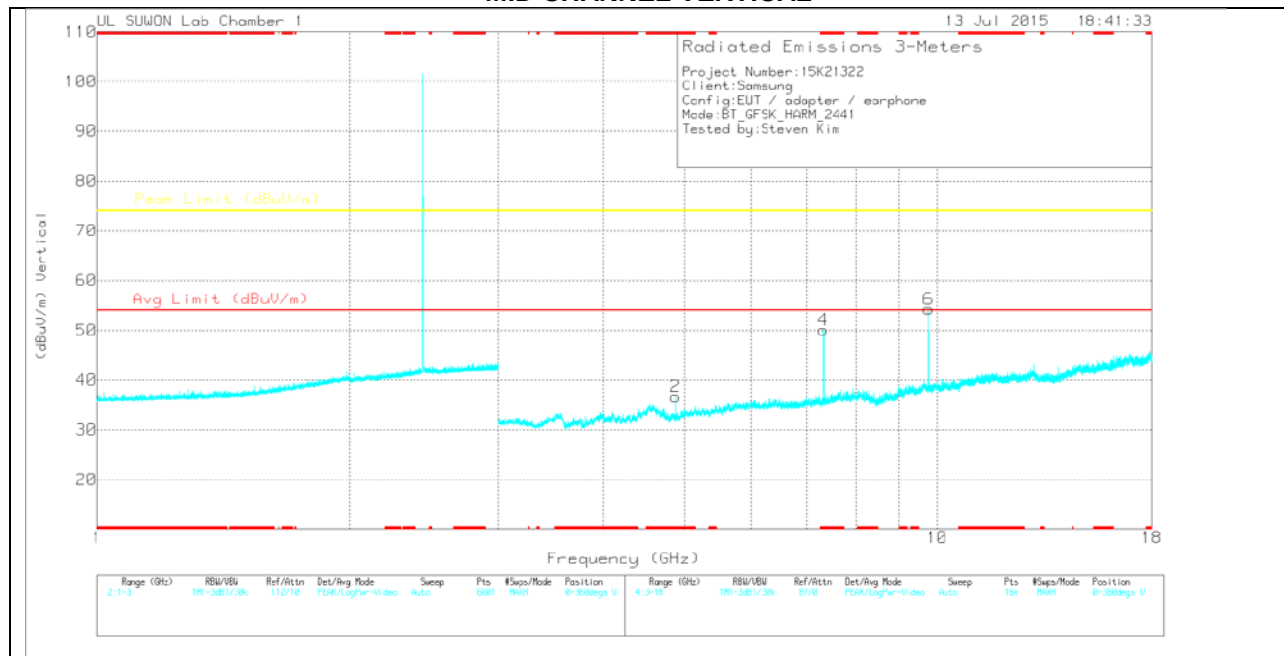
V1TV - U-NII: VB=1/Ton, Linear Voltage Average where: Ton is packet duration

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



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

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_150 619	Path_3_3G HP	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.881	28.65	PK	34	-29.1	33.55	-	-	74	-40.45	0-360	100	H
3	* 7.323	30.1	PK	35.8	-25.6	40.3	-	-	74	-33.7	0-360	200	H
5	9.764	29	PK	37.2	-22	44.2	-	-	74	-29.8	0-360	200	H
2	* 4.881	31.78	PK	34	-29.1	36.68	-	-	74	-37.32	0-360	200	V
4	* 7.323	39.93	PK	35.8	-25.6	50.13	-	-	74	-23.87	0-360	100	V
6	9.765	39.02	PK	37.2	-22	54.22	-	-	74	-19.78	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

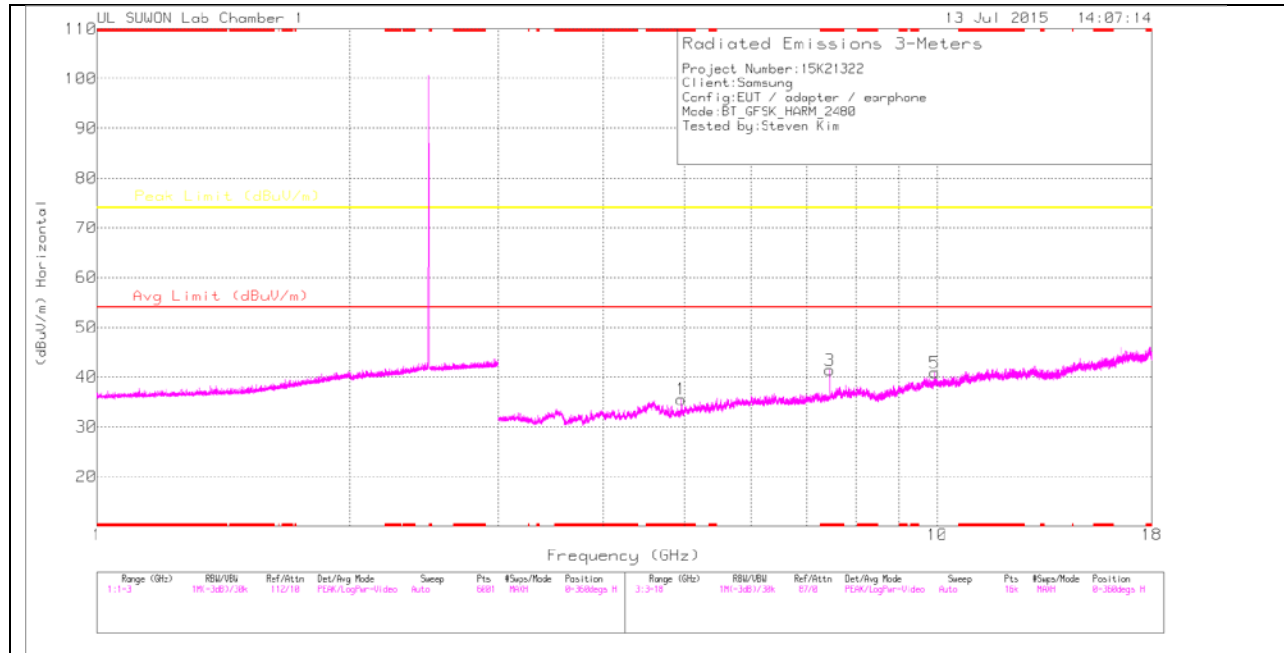
Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_150 619	Path_3_3G HP	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.882	26.59	VA1T	34	-29.1	31.49	54	-22.51	-	-	164	115	H
* 7.323	35.15	VA1T	35.8	-25.6	45.35	54	-8.65	-	-	70	238	H
9.764	27.57	VA1T	37.2	-22	42.77	-	-	-	-	281	312	H
* 4.882	29.21	VA1T	34	-29.1	34.11	54	-19.89	-	-	112	378	V
* 7.323	40.55	VA1T	35.8	-25.6	50.75	54	-3.25	-	-	168	100	V
9.764	36.68	VA1T	37.2	-22	51.88	-	-	-	-	205	101	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

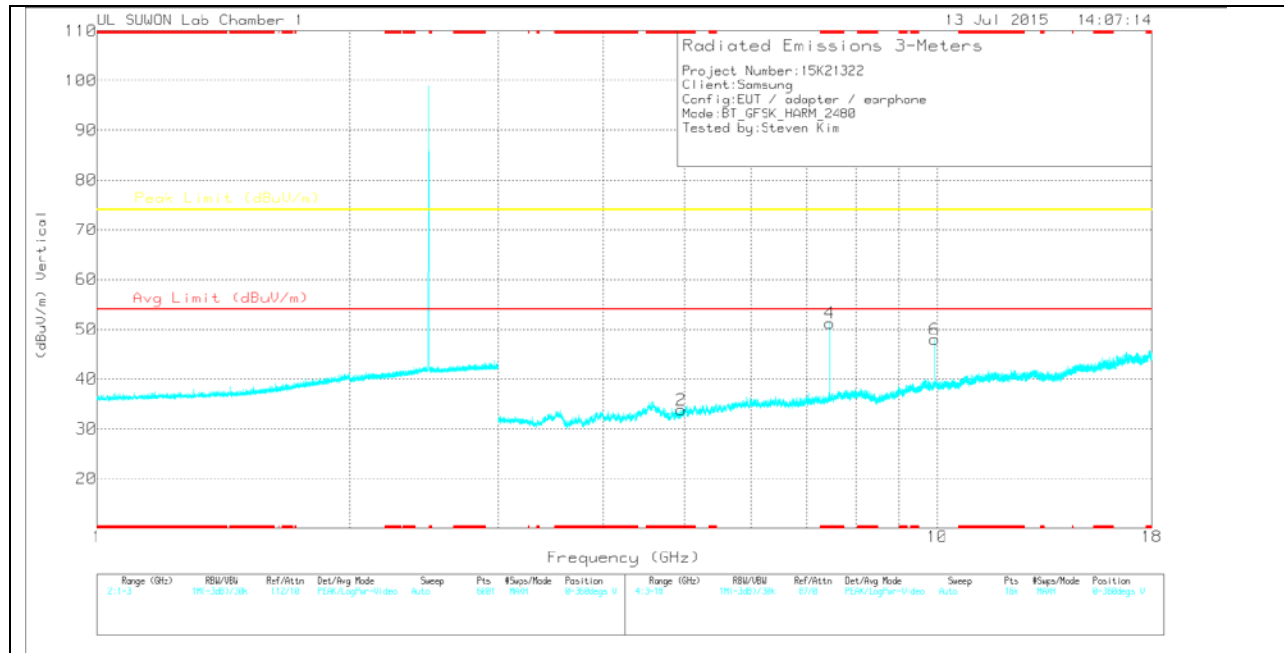
V1TV - U-NII: VB=1/Ton, Linear Voltage Average where: Ton is packet duration

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



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

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_150 619	Path_3_3G HP	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.96	30.45	PK	34	-28.9	35.55	-	-	74	-38.45	0-360	100	H
3	* 7.44	30.43	PK	35.8	-24.8	41.43	-	-	74	-32.57	0-360	200	H
5	9.919	23.86	PK	37.4	-20.4	40.86	-	-	74	-33.14	0-360	200	H
2	* 4.959	28.66	PK	34	-28.9	33.76	-	-	74	-40.24	0-360	100	V
4	* 7.441	40.25	PK	35.8	-24.8	51.25	-	-	74	-22.75	0-360	100	V
6	9.92	30.99	PK	37.4	-20.4	47.99	-	-	74	-26.01	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

Radiated Emissions

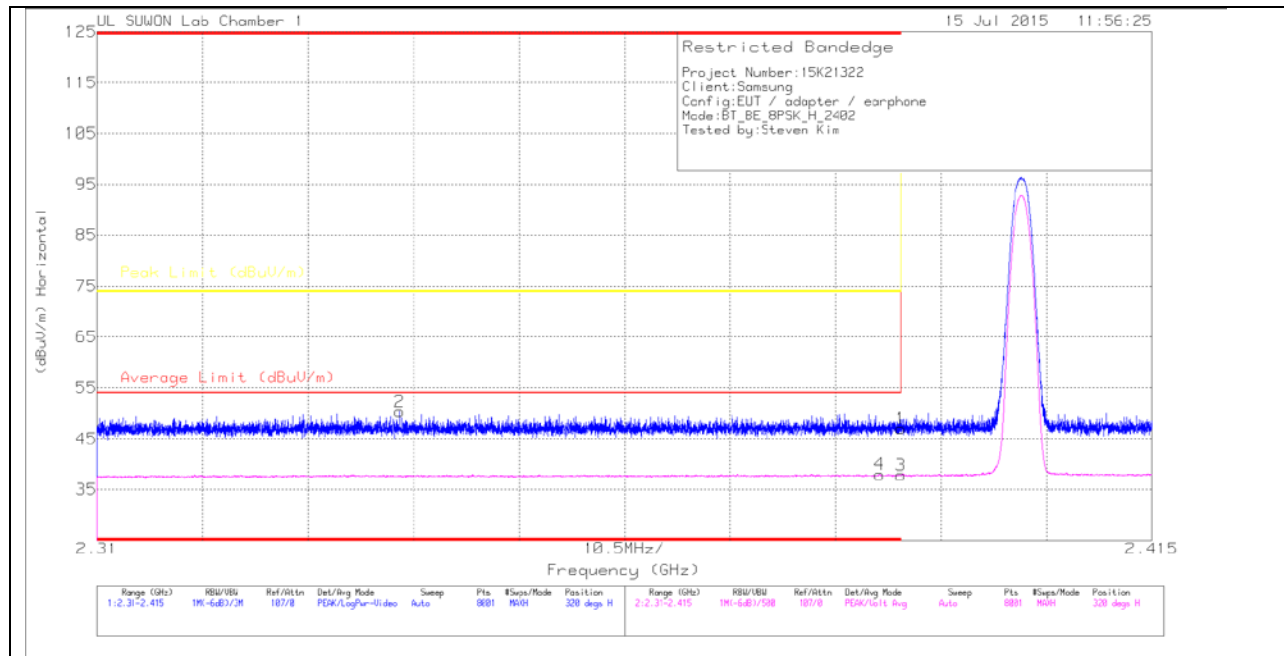
Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_150 619	Path_3_3G HP	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.96	27.38	VA1T	34	-28.9	32.48	54	-21.52	-	-	347	319	H
* 7.44	33.07	VA1T	35.8	-24.8	44.07	54	-9.93	-	-	62	341	H
9.92	20.86	VA1T	37.4	-20.4	37.86	-	-	-	-	169	373	H
7.236	42.62	PK2	35.7	-25.5	52.82	-	-	74	-21.18	78	102	V
7.235	34.7	MAv1	35.7	-25.5	44.9	-	-	-	-	78	102	V
9.648	34.93	PK2	37.1	-20.8	51.23	-	-	74	-22.77	87	397	H
9.648	36.17	PK2	37.1	-20.8	52.47	-	-	74	-21.53	209	102	V
* 4.96	28.87	VA1T	34	-28.9	33.97	54	-20.03	-	-	300	330	V
* 7.44	38	VA1T	35.8	-24.8	49	54	-5	-	-	170	100	V
9.92	29.19	VA1T	37.4	-20.4	46.19	-	-	-	-	201	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

V1TV - U-NII: VB=1/Ton, Linear Voltage Average where: Ton is packet duration

VA1T - FHSS: Linear Voltage Average VB=1/Ton where: Ton is transmit duration

8.2.2. ENHANCED DATA RATE 8PSK MODULATION RESTRICTED BANDEDGE (LOW CHANNEL)



HORIZONTAL DATA

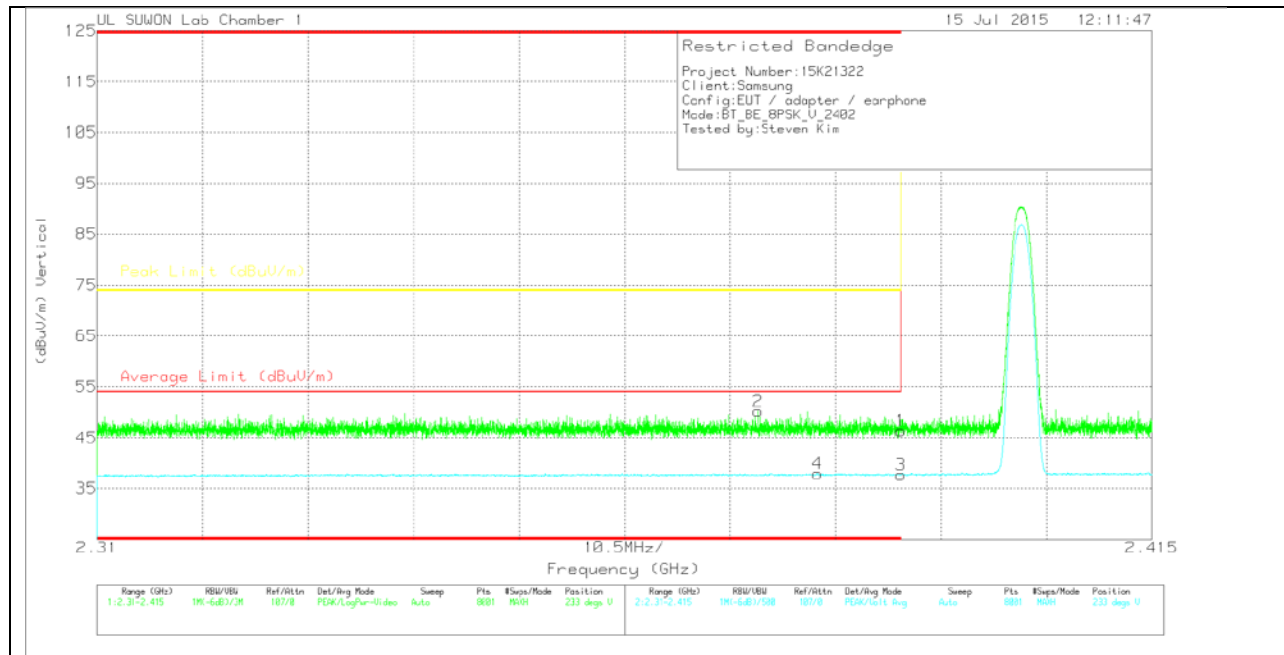
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBUV)	Det	3117(0016 8717)_150 619	Path_2_10 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	38.03	Pk	31.8	-22.8	47.03	-	-	74	-26.97	320	122	H
2	* 2.34	41.49	Pk	31.7	-22.9	50.29	-	-	74	-23.71	320	122	H
3	* 2.39	28.87	V1TV	31.8	-22.8	37.87	54	-16.13	-	-	320	122	H
4	* 2.388	29.02	V1TV	31.8	-22.8	38.02	54	-15.98	-	-	320	122	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

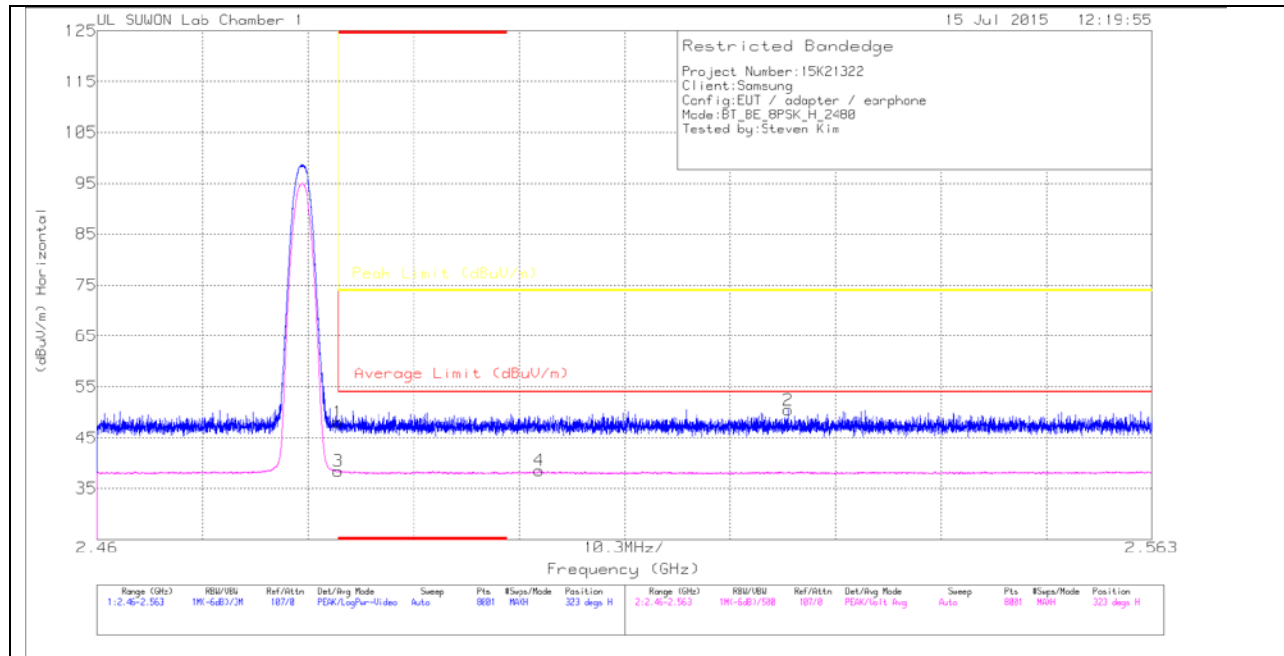
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_150 619	Path_2_10 dB	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	37.39	Pk	31.8	-22.8	46.39	-	-	74	-27.61	233	105	V
2	* 2.376	41.21	Pk	31.8	-22.8	50.21	-	-	74	-23.79	233	105	V
3	* 2.39	28.73	V1TV	31.8	-22.8	37.73	54	-16.27	-	-	233	105	V
4	* 2.382	29	V1TV	31.8	-22.8	38	54	-16	-	-	233	105	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

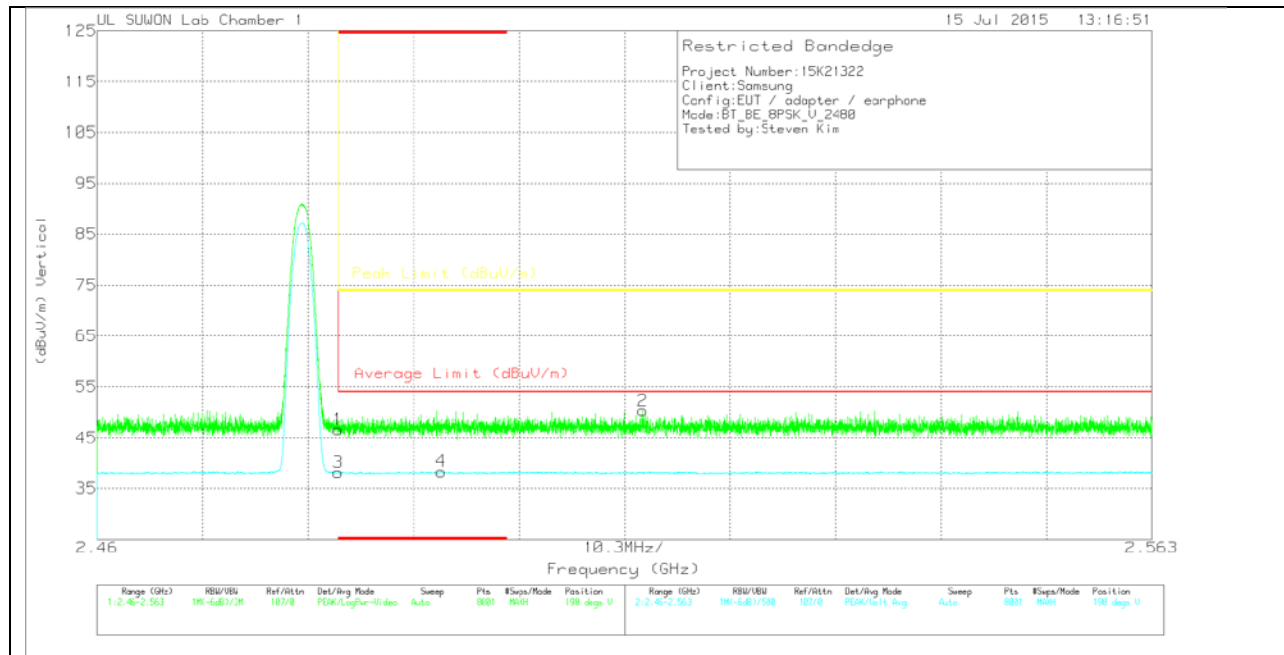
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_150 619	Path_2_10 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	38.67	Pk	32	-22.6	48.07	-	-	74	-25.93	323	102	H
2	2.527	41.02	Pk	32	-22.6	50.42	-	-	74	-23.58	323	102	H
3	* 2.484	29.02	V1TV	32	-22.6	38.42	54	-15.58	-	-	323	102	H
4	2.503	29.15	V1TV	32	-22.6	38.55	54	-15.45	-	-	323	102	H

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

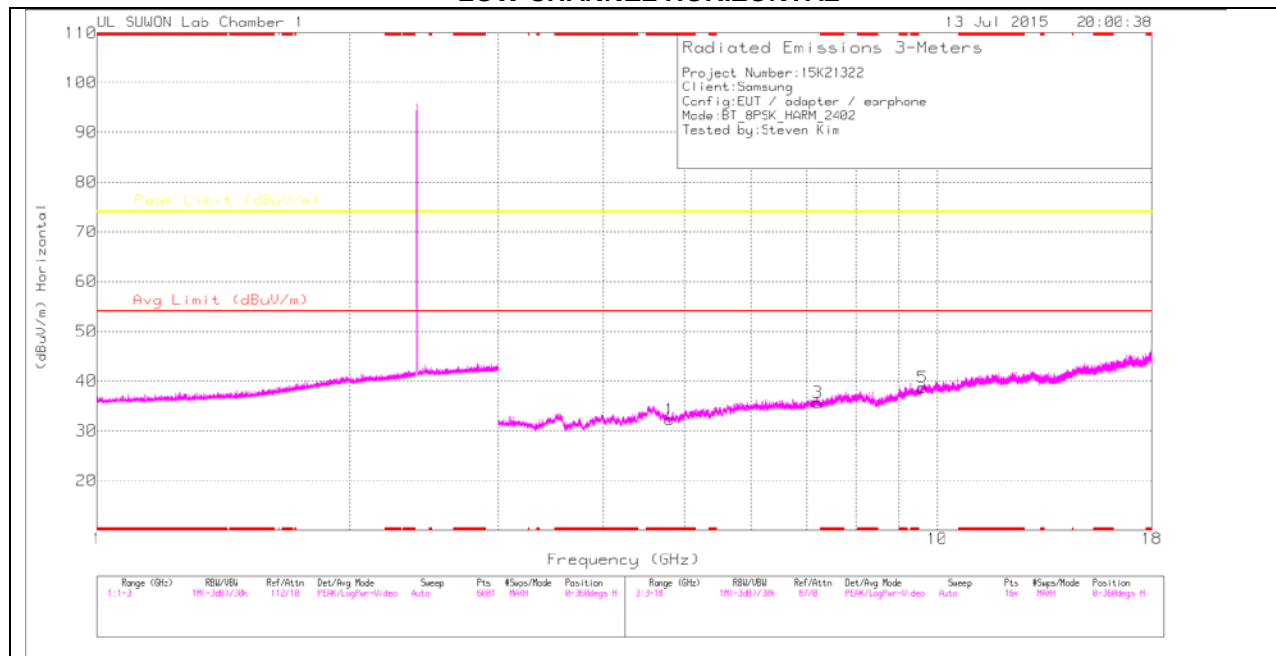
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_150 619	Path_2_10 dB	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	37.2	Pk	32	-22.6	46.6	-	-	74	-27.4	198	108	V
2	2.513	40.94	Pk	32	-22.6	50.34	-	-	74	-23.66	198	108	V
3	* 2.484	28.75	V1TV	32	-22.6	38.15	54	-15.85	-	-	198	108	V
4	* 2.494	28.99	V1TV	32	-22.6	38.39	54	-15.61	-	-	198	108	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

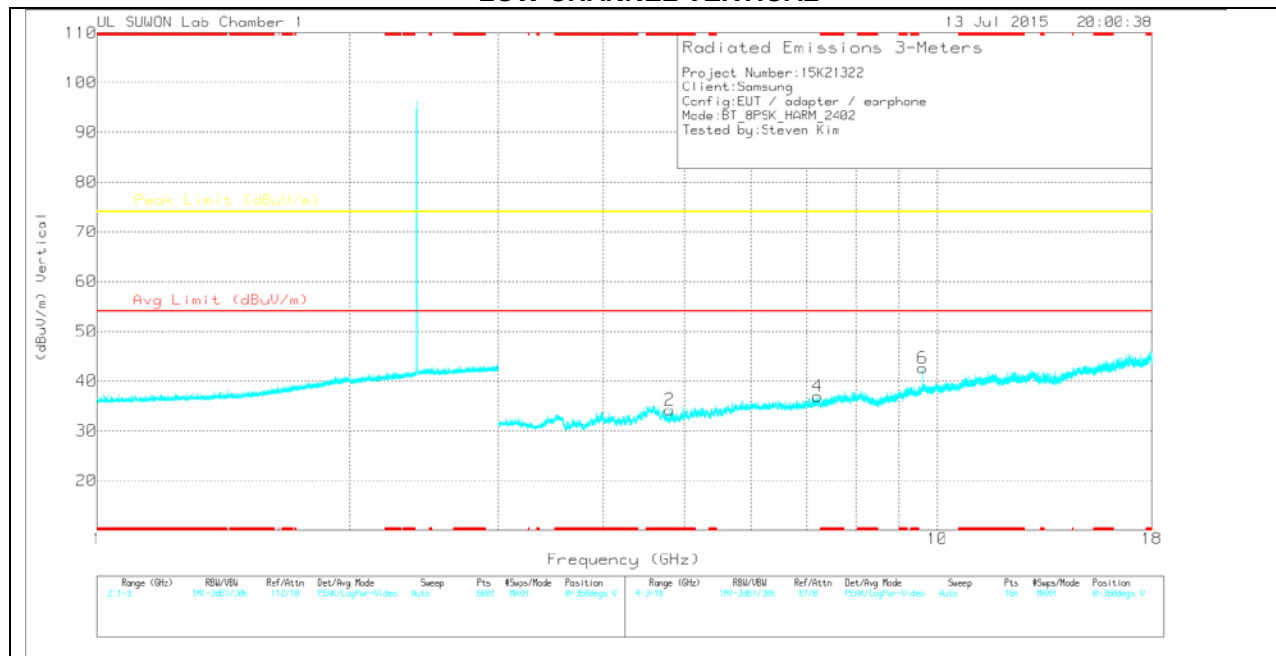
Pk - Peak detector

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL HORIZONTAL



LOW CHANNEL VERTICAL



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

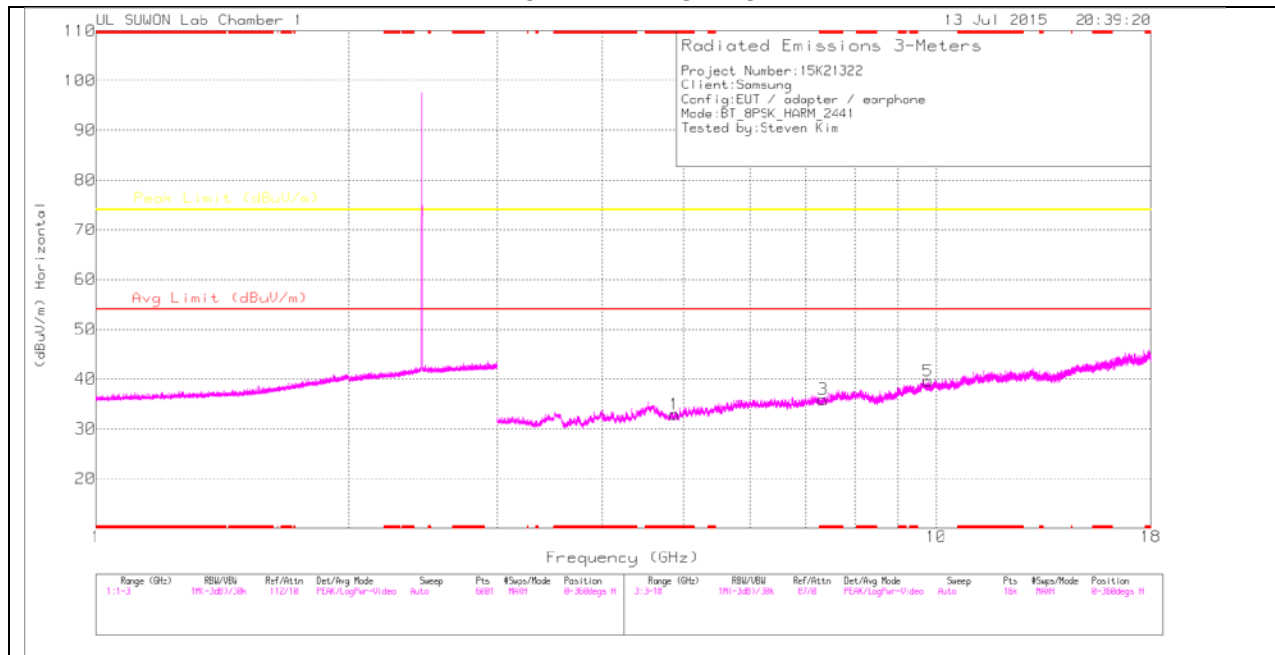
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_150 619	Path_3_3G HP	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.805	28.02	PK	34	-29.8	32.22	-	-	74	-41.78	0-360	200	H
3	7.207	25.37	PK	35.7	-25.4	35.67	-	-	74	-38.33	0-360	200	H
5	9.606	22.75	PK	37	-21	38.75	-	-	74	-35.25	0-360	200	H
2	* 4.804	30.03	PK	34	-29.8	34.23	-	-	74	-39.77	0-360	100	V
4	7.205	26.64	PK	35.7	-25.4	36.94	-	-	74	-37.06	0-360	100	V
6	9.608	26.61	PK	37	-21	42.61	-	-	74	-31.39	0-360	100	V

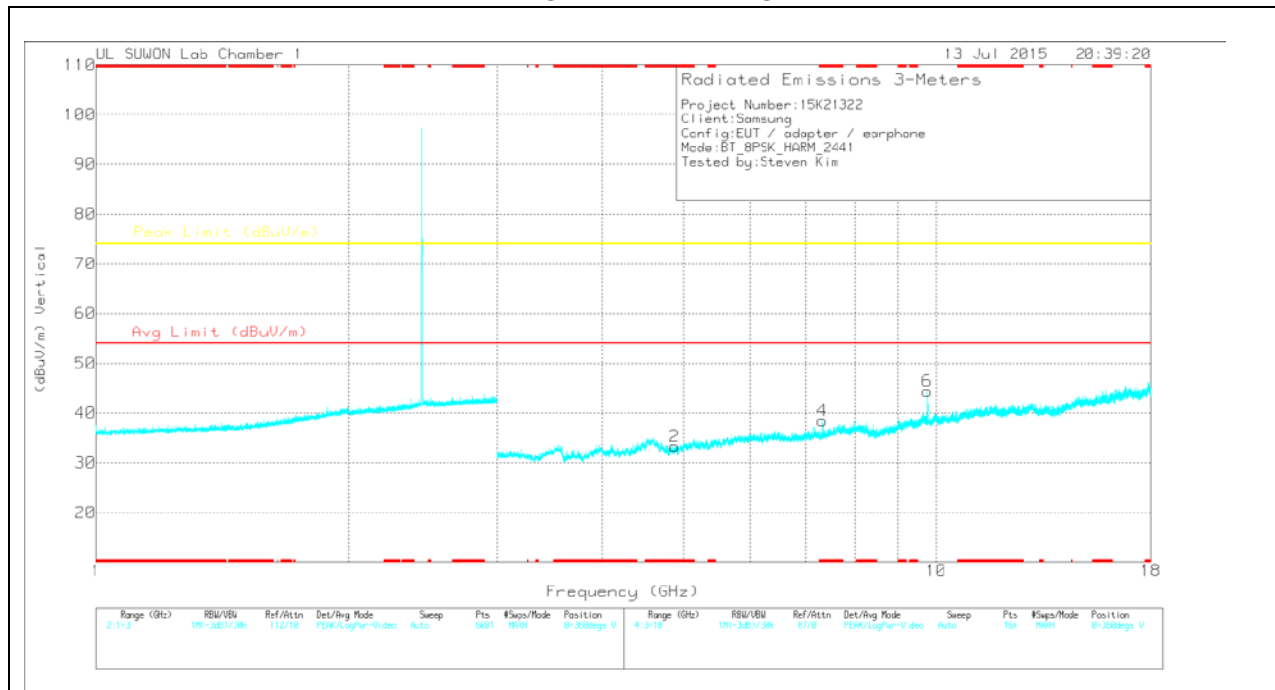
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

MID CHANNEL HORIZONTAL



MID CHANNEL VERTICAL



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

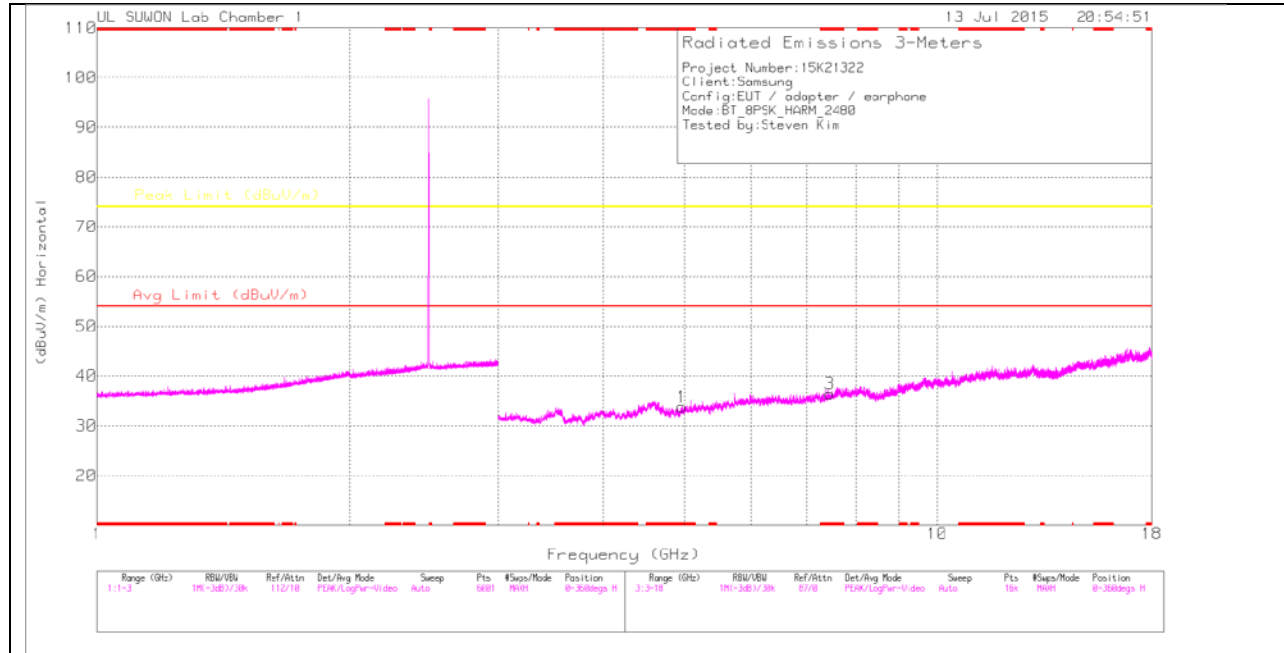
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_150 619	Path_3_3G HP	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.883	27.95	PK	34	-29.1	32.85	-	-	74	-41.15	0-360	200	H
3	* 7.323	25.79	PK	35.8	-25.6	35.99	-	-	74	-38.01	0-360	100	H
5	9.766	24.47	PK	37.2	-22.1	39.57	-	-	74	-34.43	0-360	100	H
2	* 4.881	28.33	PK	34	-29.1	33.23	-	-	74	-40.77	0-360	100	V
4	* 7.323	28.22	PK	35.8	-25.6	38.42	-	-	74	-35.58	0-360	100	V
6	9.764	29.22	PK	37.2	-22	44.42	-	-	74	-29.58	0-360	100	V

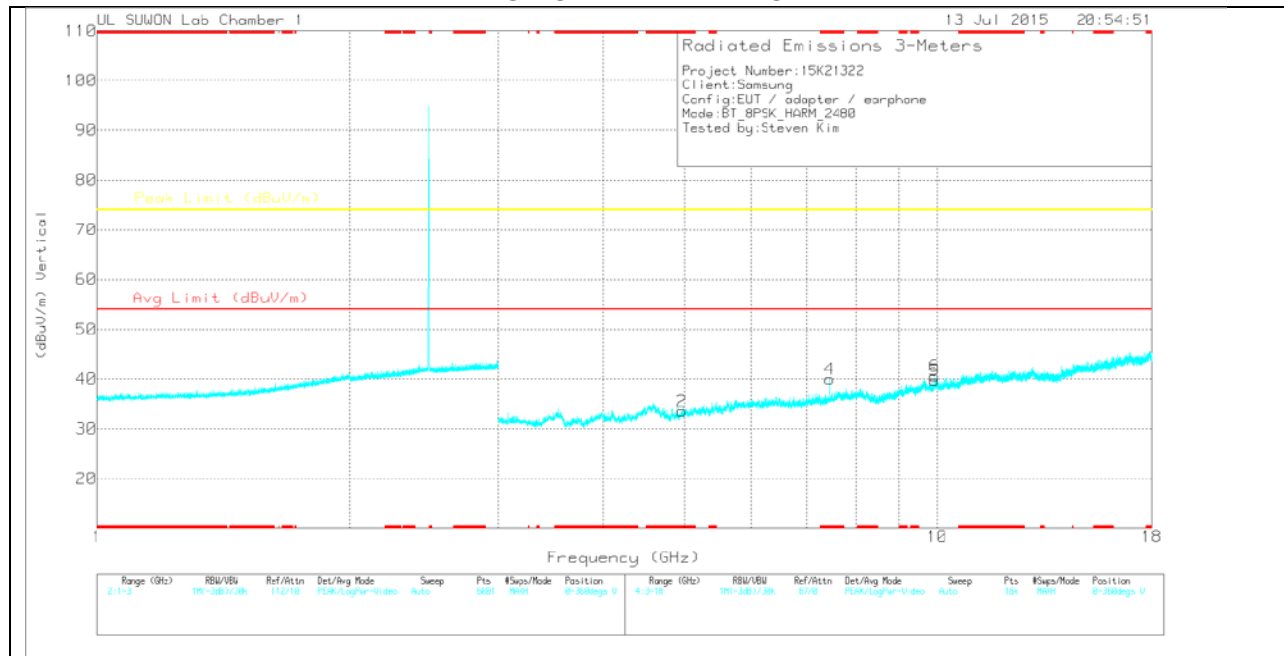
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

HIGH CHANNEL HORIZONTAL



HIGH CHANNEL VERTICAL



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

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8717)_150 619	Path_3_3G HP	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.964	28.74	PK	34	-28.9	33.84	-	-	74	-40.16	0-360	100	H
3	* 7.44	25.4	PK	35.8	-24.8	36.4	-	-	74	-37.6	0-360	200	H
2	* 4.963	28.45	PK	34	-28.9	33.55	-	-	74	-40.45	0-360	200	V
4	* 7.44	28.98	PK	35.8	-24.8	39.98	-	-	74	-34.02	0-360	100	V
5	9.921	22.71	PK	37.4	-20.4	39.71	-	-	74	-34.29	0-360	100	V
6	9.919	23.56	PK	37.4	-20.4	40.56	-	-	74	-33.44	0-360	100	V

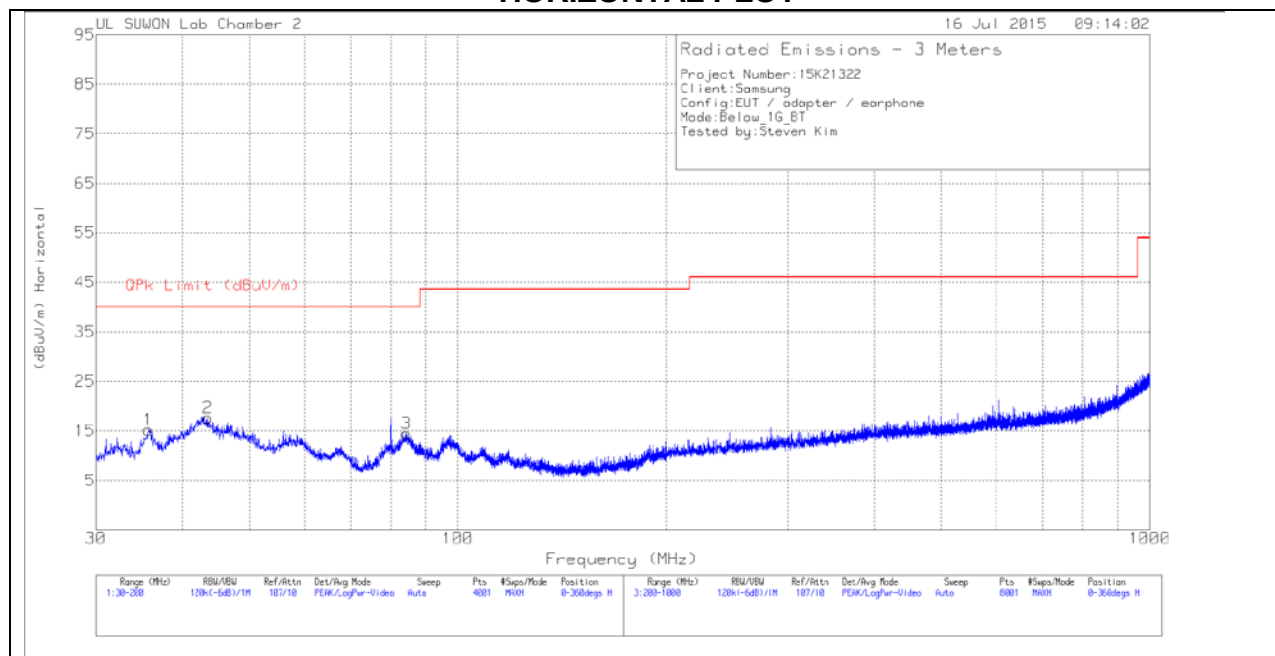
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak detector

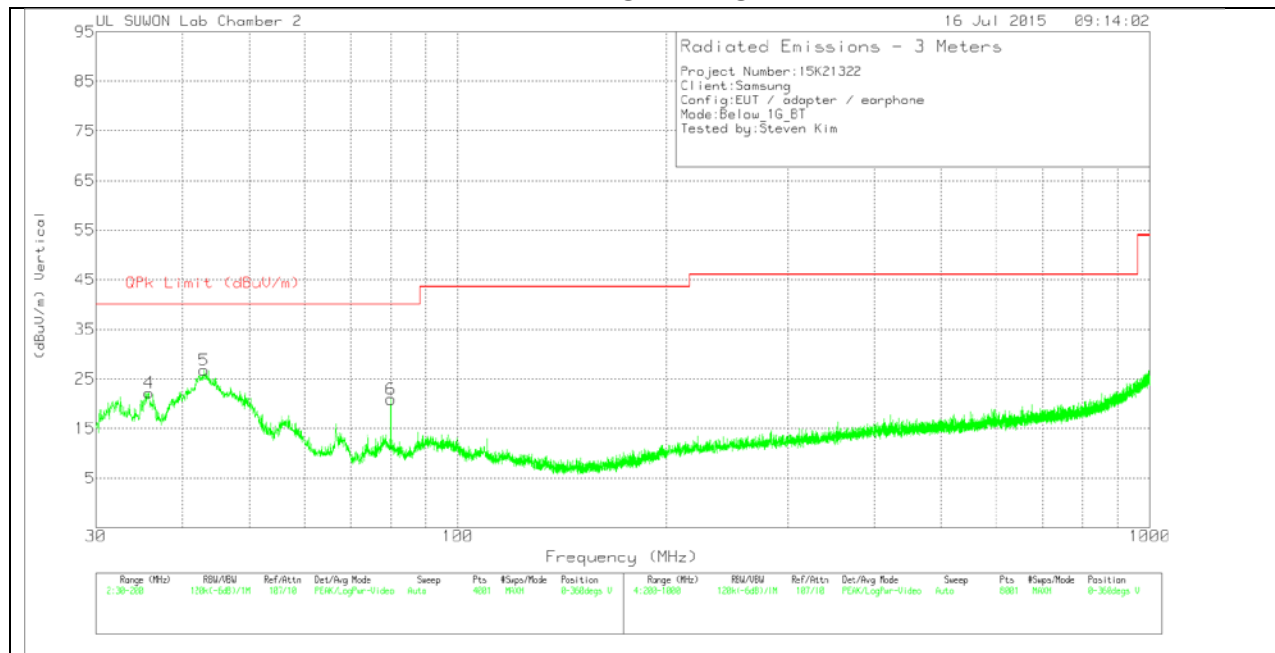
8.3. WORST-CASE BELOW 1 GHz

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

HORIZONTAL PLOT



VERTICAL PLOT



BELOW 1 GHz TABLE

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	VULB9163-749	Below_1G	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	35.7375	34.79	Pk	11.1	-30.7	15.19	40	-24.81	0-360	400	H
2	43.5575	34.79	Pk	13.5	-30.7	17.59	40	-22.41	0-360	400	H
3	84.3575	36.86	Pk	8.2	-30.6	14.46	40	-25.54	0-360	200	H
4	35.78	41.84	Pk	11.1	-30.7	22.24	40	-17.76	0-360	100	V
5	43.0475	44.06	Pk	13.4	-30.7	26.76	40	-13.24	0-360	100	V
6	79.98	44.38	Pk	7.1	-30.6	20.88	40	-19.12	0-360	100	V

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector