



FCC CFR47 PART 15 SUBPART C

Bluetooth

CERTIFICATION TEST REPORT

FOR

GSM/WCDMA/LTE Phone + BT/BLE, DTS/UNII a/b/g/n/ac , ANT+ and NFC

MODEL NUMBER : SM-C900F/DS

FCC ID: A3LSMC900F

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Revision History

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V1	01/06/17	Initial issue	Junwhan Lee
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TABLE OF CONTENTS

1. ATTESTATION OF TEST RESULTS.....	5
2. TEST METHODOLOGY	6
3. FACILITIES AND ACCREDITATION.....	6
4. CALIBRATION AND UNCERTAINTY	6
4.1. MEASURING INSTRUMENT CALIBRATION	6
4.2. SAMPLE CALCULATION.....	6
4.3. MEASUREMENT UNCERTAINTY	6
5. EQUIPMENT UNDER TEST	7
5.1. DESCRIPTION OF EUT.....	7
5.2. MAXIMUM OUTPUT POWER.....	7
5.3. DESCRIPTION OF AVAILABLE ANTENNAS	7
5.4. WORST-CASE CONFIGURATION AND MODE.....	7
5.5. DESCRIPTION OF TEST SETUP	8
6. TEST AND MEASUREMENT EQUIPMENT	10
7. SUMMARY TABLE	11
8. ANTENNA PORT TEST RESULTS	12
8.1. 20 dB AND 99% BANDWIDTH.....	12
8.1.1. BASIC DATA RATE GFSK MODULATION.....	12
8.1.2. ENHANCED DATA RATE PI/4-DQPSK MODULATION	12
8.1.3. ENHANCED DATA RATE 8PSK MODULATION	12
8.1.4. 20 dB AND 99% BANDWIDTH PLOTS.....	13
8.2. HOPPING FREQUENCY SEPARATION	16
8.3. NUMBER OF HOPPING CHANNELS.....	17
8.4. AVERAGE TIME OF OCCUPANCY.....	19
8.5. OUTPUT POWER.....	23
8.5.1. BASIC DATA RATE GFSK MODULATION.....	23
8.5.2. ENHANCED DATA RATE PI/4-DPSK MODULATION	23
8.5.3. ENHANCED DATA RATE 8PSK MODULATION	23
8.5.4. OUTPUT POWER PLOTS	24
8.6. AVERAGE POWER.....	27
8.6.1. BASIC DATA RATE GFSK MODULATION.....	27
8.6.2. DATA RATE PI/4-DQPSK MODULATION	27
8.6.3. ENHANCED DATA RATE 8PSK MODULATION	27
8.7. CONDUCTED SPURIOUS EMISSIONS.....	28
8.7.1. BASIC DATA RATE GFSK MODULATION.....	29

9. RADIATED TEST RESULTS	41
9.1. LIMITS AND PROCEDURE	41
9.2. TRANSMITTER ABOVE 1 GHz	43
9.2.1. BASIC DATA RATE GFSK MODULATION.....	43
9.2.2. ENHANCED DATA RATE 8PSK MODULATION.....	53
9.3. WORST-CASE BELOW 1 GHz.....	63
10. AC POWER LINE CONDUCTED EMISSIONS	65
11. SETUP PHOTOS	70

1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.

EUT DESCRIPTION: GSM/WCDMA/LTE Phone + BT/BLE, DTS/UNII a/b/g/n/ac , ANT+ and NFC

MODEL NUMBER: SM-C900F/DS

SERIAL NUMBER: R38HC075C7W, 2651b8f6 (RADIATED);
R38HC075DFM (CONDUCTED)

DATE TESTED: DEC 19, 2016 - JAN 11, 2017

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	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 C63.10-2013, FCC CFR 47 Part 2, FCC CFR 47 Part 15.

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, 16675, 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 GSM/WCDMA/LTE Phone + BT/BLE, DTS/UNII a/b/g/n/ac , ANT+ and NFC.
This test report addresses the DSS (BT) operational mode.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum conducted output power as follows:

Frequency Range [MHz]	Mode	Power Mode	Output Power [dBm]	Output Power [mW]
2402 - 2480	Basic GFSK	Average	9.399	8.708
		Peak	9.870	9.705
	Enhanced Pi/4-DPSK	Average	7.108	5.138
		Peak	9.849	9.658
	Enhanced 8PSK	Average	7.108	5.138
		Peak	10.152	10.356

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of 1.12 dBi.

5.4. WORST-CASE CONFIGURATION AND MODE

Radiated emission below 1GHz and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

Radiated emission above 1GHz was performed with the EUT set to transmit low/mid/high channels.

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

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. For average power data please refer to section 8.6.

5.5. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Charger	SAMSUNG	EP-TA20IWE	R37FC5T1661SE3	N/A
Data Cable	SAMSUNG	DP-DN930CWE	N/A	N/A
Earphone	SAMSUNG	EHS64AVFWE	N/A	N/A

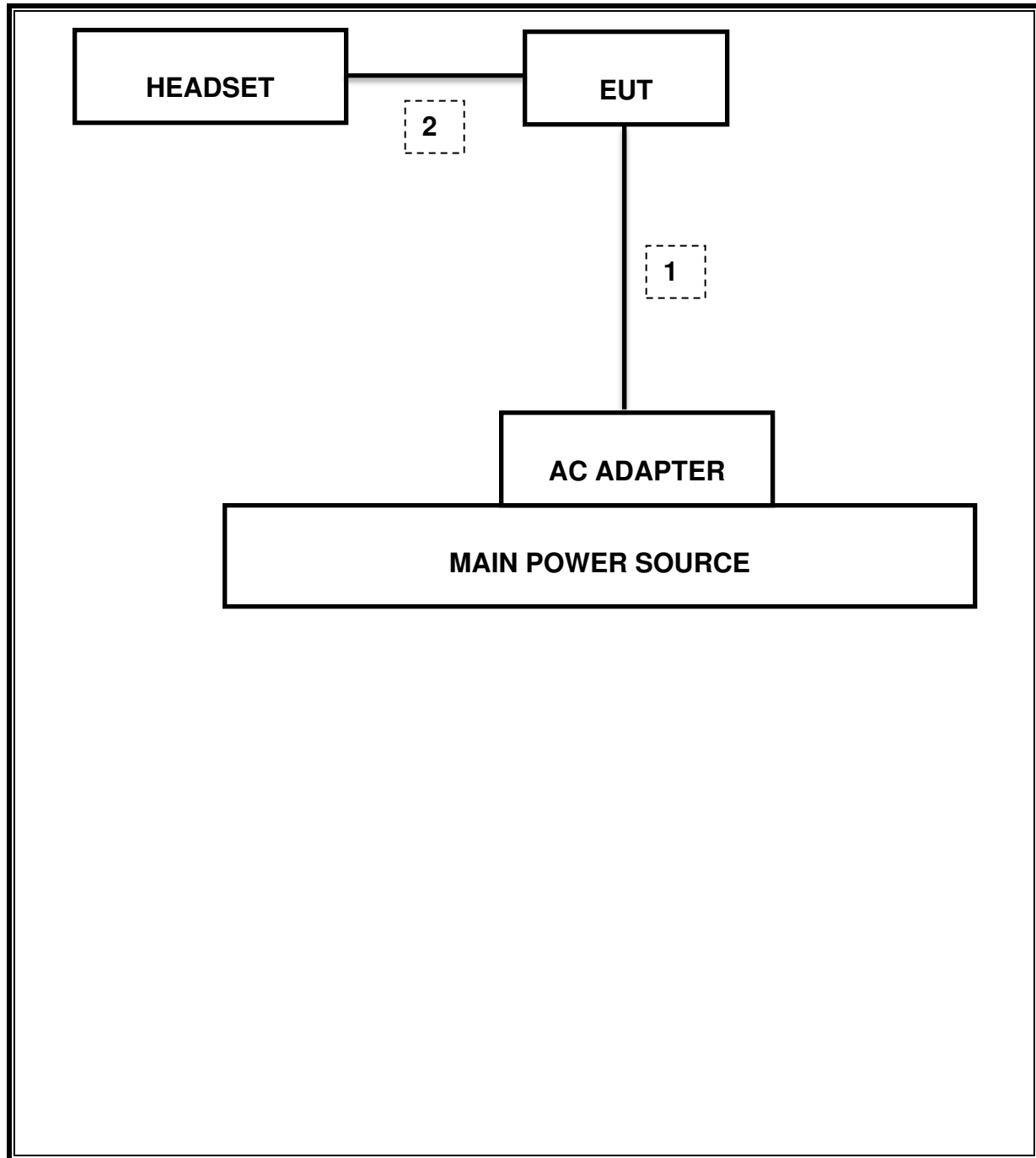
I/O CABLES

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	750	10-14-18
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	749	04-25-17
Antenna, Horn, 18 GHz	ETS	3115	00167211	10-14-18
Antenna, Horn, 18 GHz	ETS	3115	00161451	05-17-17
Antenna, Horn, 18 GHz	ETS	3117	00168724	06-17-17
Antenna, Horn, 18 GHz	ETS	3117	00168717	06-17-17
Antenna, Horn, 40 GHz	ETS	3116C	00166155	11-30-17
Antenna, Horn, 40 GHz	ETS	3116C-PA	00168841	12-15-17
Antenna, Loop, 9kHz-30MHz	R&S	HFH2-Z2	100418	11-25-17
Preamplifier, 1000 MHz	Sonoma	310N	341282	08-17-17
Preamplifier, 1000 MHz	Sonoma	310N	351741	08-16-17
Preamplifier	ETS	3115-PA	00167475	08-17-17
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1896138	08-16-17
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54170614	08-17-17
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54490312	08-16-17
Bluetooth Tester	TESCOM	TC-3000C	3000C000546	08-18-17
Average Power Sensor	R&S	NRP-Z91	102681	08-16-17
Average Power Sensor	Agilent / HP	U2000	MY54270007	08-17-17
EMI Test Receive, 40 GHz	R&S	ESU40	100439	08-17-17
EMI Test Receive, 40 GHz	R&S	ESU40	100457	08-16-17
EMI Test Receive, 3 GHz	R&S	ESR3	101832	08-16-17
Attenuator / Switch driver	HP	11713A	3748A04272	N/A
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	009	08-17-17
Low Pass Filter 5GHz	Micro-Tronics	LPS17541	015	08-16-17
High Pass Filter 3GHz	Micro-Tronics	HPM17543	010	08-17-17
High Pass Filter 3GHz	Micro-Tronics	HPM17543	015	08-16-17
High Pass Filter 6GHz	Micro-Tronics	HPM17542	009	08-17-17
High Pass Filter 6GHz	Micro-Tronics	HPM17542	016	08-16-17
LISN	R&S	ENV-216	101836	08-16-17
LISN	R&S	ENV-216	101837	08-16-17
Attenuator	PASTERNAK	PE7087-10	A009	08-16-17
Combiner	WEINSCHEL	1575	2152	08-16-17

7. SUMMARY TABLE

FCC Part Section	Test Description	Test Limit	Test Condition	Test Result	Worst Case
2.1049	Occupied Band width (99%)	N/A	Conducted	Pass	1.164 MHz
2.1051, 15.247 (d)	Band Edge / Conducted Spurious Emission	-20dBc		Pass	-37.622 dBm
15.247 (b)(1)	TX conducted output power	<21dBm		Pass	10.152 dBm (Peak)
15.247 (a)(1)	Hopping frequency separation	> 25KHz		Pass	1 MHz
15.247 (a)(1)(iii)	Number of Hopping channels	More than 15 non-overlapping channels		Pass	79
15.247 (a)(1)(iii)	Avg Time of Occupancy	< 0.4sec		Pass	0.3744 sec
15.207 (a)	AC Power Line conducted emissions	Section 10	Power Line conducted	Pass	44.62 dBuV (Qp)
15.205, 15.209	Radiated Spurious Emission	< 54dBuV/m	Radiated	Pass	45.18 dBuV/m (Av)

8. ANTENNA PORT TEST RESULTS

8.1. 20 dB AND 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

DA 00-705: The transmitter output is connected to a spectrum analyzer. The RBW is set to $\geq 1\%$ of the 20 dB bandwidth. The VBW is set to $\geq$ RBW. The sweep time is coupled.

RESULTS

8.1.1. BASIC DATA RATE GFSK MODULATION

Channel	Frequency [MHz]	20 dB Bandwidth [KHz]	99% Bandwidth [KHz]
Low	2402	965.5	895.280
Mid	2441	888.9	899.080
High	2480	965.2	866.190
Worst		965.5	899.080

8.1.2. ENHANCED DATA RATE Pi/4-DQPSK MODULATION

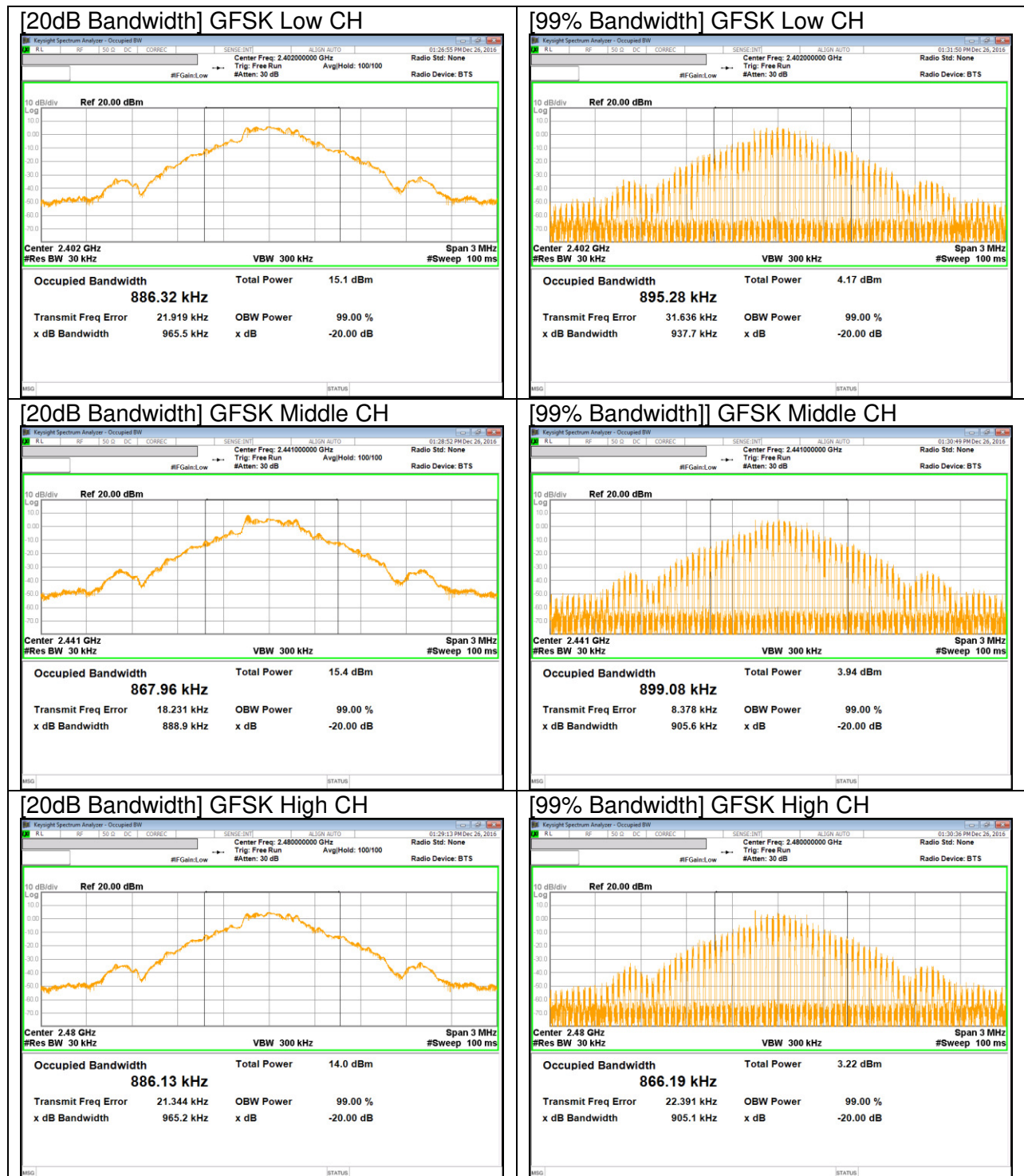
Channel	Frequency [MHz]	20 dB Bandwidth [MHz]	99% Bandwidth [MHz]
Low	2402	1.233	1.164
Mid	2441	1.291	1.162
High	2480	1.231	1.162
Worst		1.291	1.164

8.1.3. ENHANCED DATA RATE 8PSK MODULATION

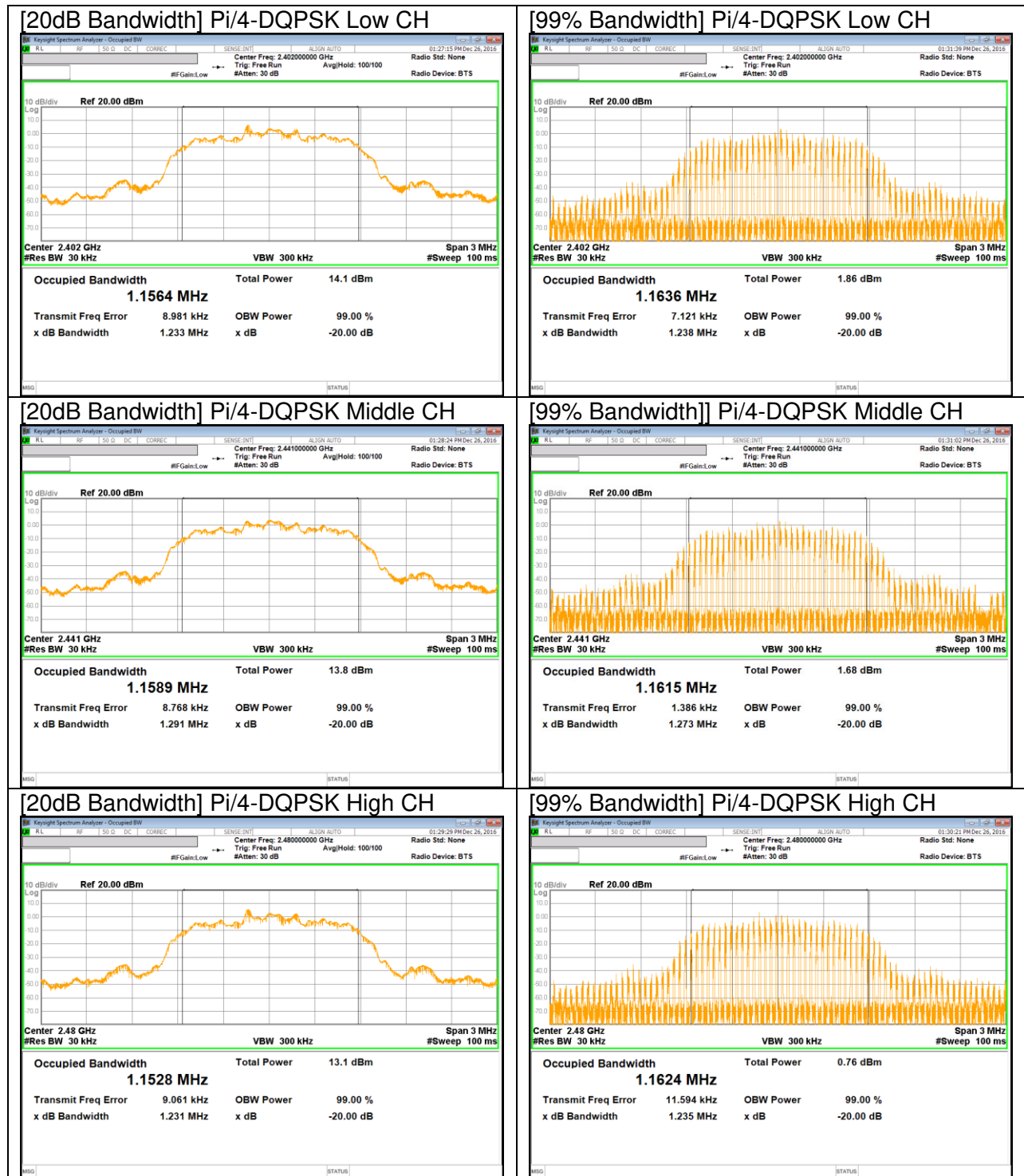
Channel	Frequency [MHz]	20 dB Bandwidth [MHz]	99% Bandwidth [MHz]
Low	2402	1.262	1.162
Mid	2441	1.262	1.161
High	2480	1.258	1.159
Worst		1.262	1.162

8.1.4. 20 dB AND 99% BANDWIDTH PLOTS

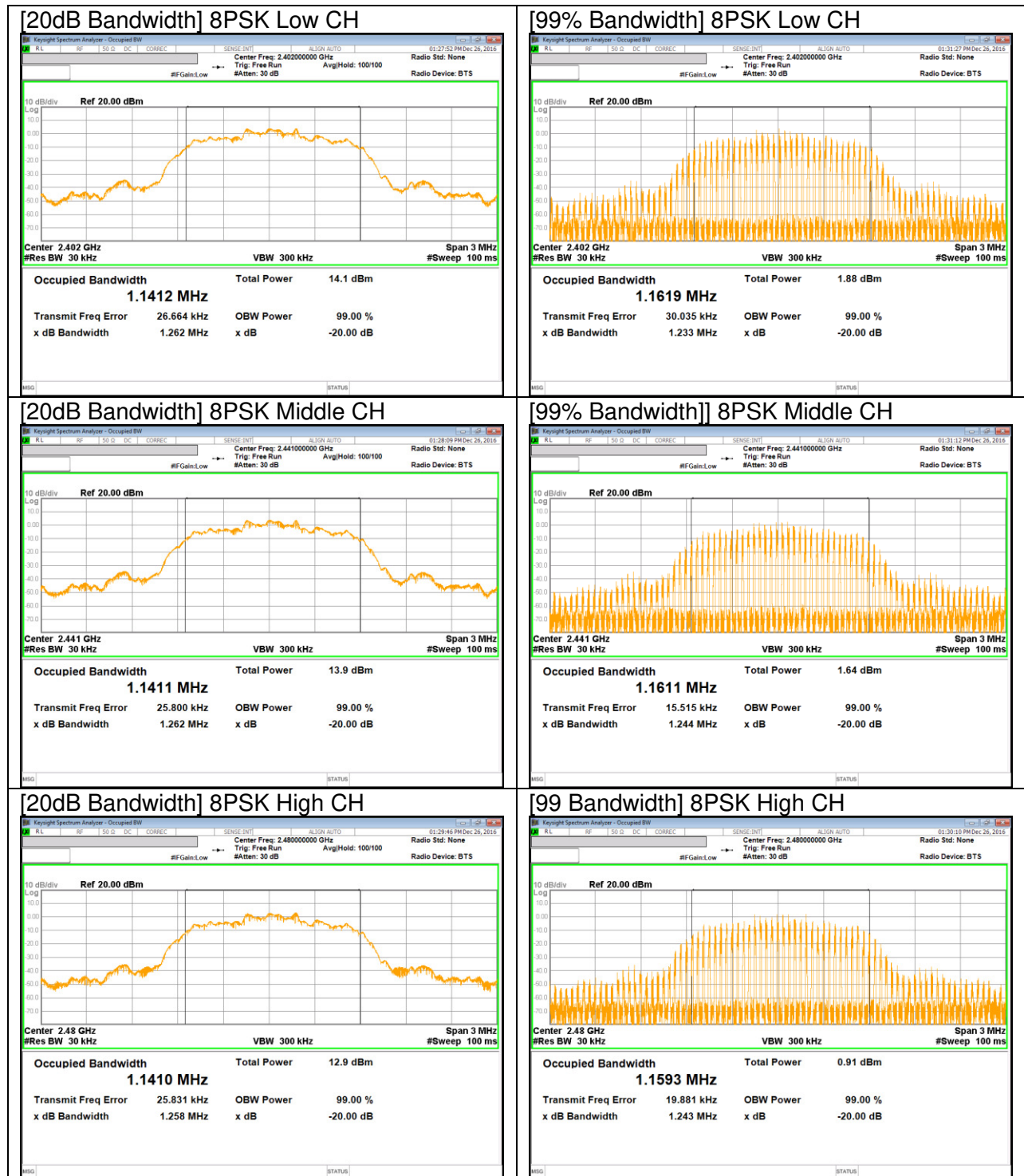
GFSK BANDWIDTH



Pi/4-DQPSK BANDWIDTH



8PSK BANDWIDTH



8.2. HOPPING FREQUENCY SEPARATION

LIMIT

FCC §15.247 (a) (1)

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

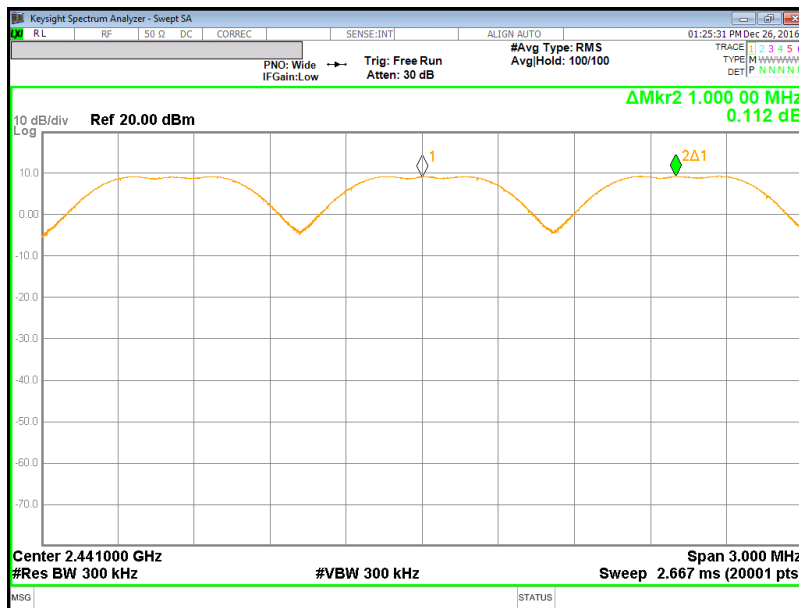
Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

TEST PROCEDURE

DA 00-705: The transmitter output is connected to a spectrum analyzer. The RBW is set to 300 kHz and the VBW is set to 300 kHz. The sweep time is coupled.

RESULTS

HOPPING FREQUENCY SEPARATION PLOT



8.3. NUMBER OF HOPPING CHANNELS

LIMIT

FCC §15.247 (a) (1) (iii)

Frequency hopping systems in the 2400 – 2483.5 MHz band shall use at least 15 non-overlapping channels.

TEST PROCEDURE

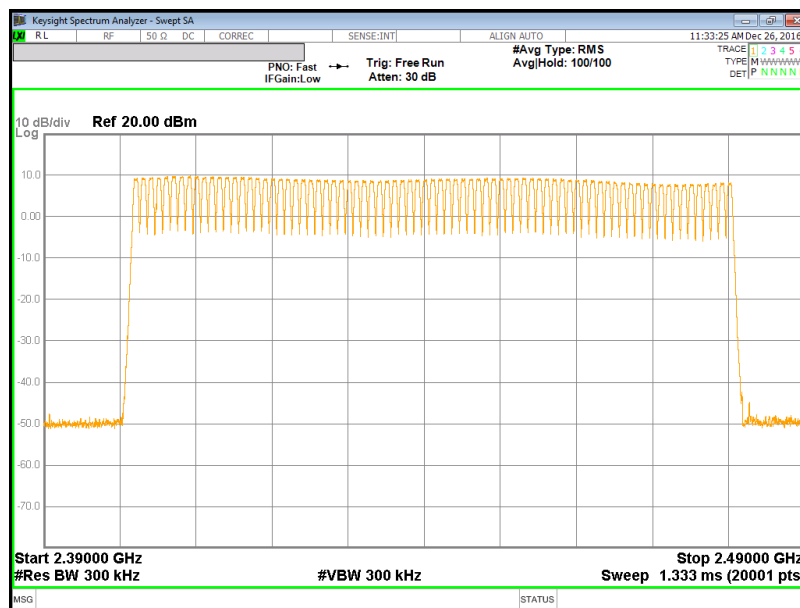
DA 00-705: The transmitter output is connected to a spectrum analyzer. The span is set to cover the entire authorized band, in either a single sweep or in multiple contiguous sweeps. The RBW is set to a maximum of 1 % of the span. The analyzer is set to Max Hold.

RESULTS

Normal Mode: 79 Channels observed.

NUMBER OF HOPPING CHANNELS PLOTS

NUMBER OF HOPPING CHANNELS (100 MHZ SPAN)





8.4. AVERAGE TIME OF OCCUPANCY

LIMIT

FCC §15.247 (a) (1) (iii)

The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed.

TEST PROCEDURE

The transmitter output is connected to a spectrum analyzer. The span is set to 0 Hz, centered on a single, selected hopping channel. The width of a single pulse is measured in a fast scan. The number of pulses is measured in a 3.16 second scan, to enable resolution of each occurrence.

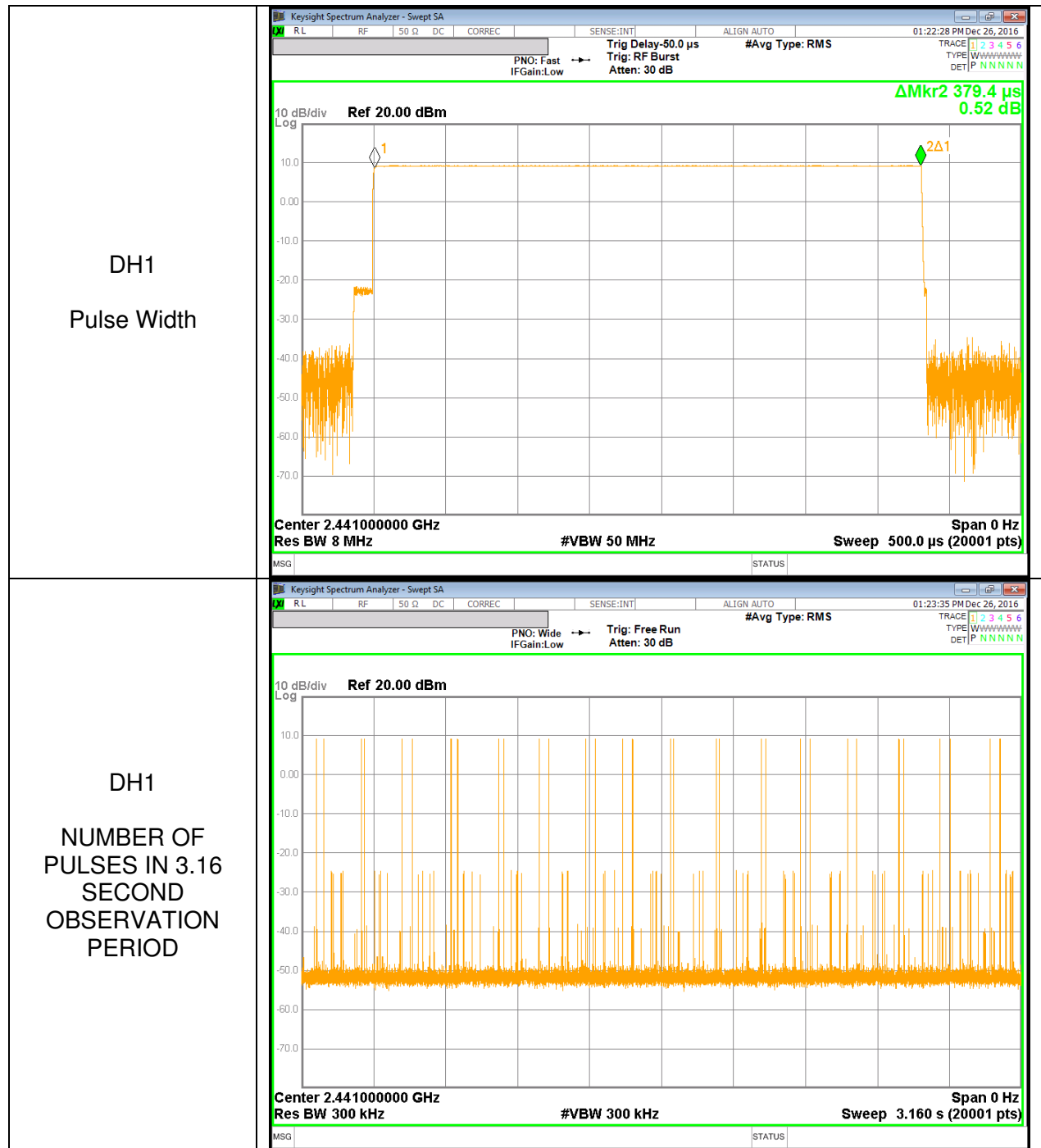
The average time of occupancy in the specified 31.6 second period (79 channels * 0.4 s) is equal to $10 * (\# \text{ of pulses in } 3.16 \text{ s}) * \text{pulse width}$.

For AFH mode, the average time of occupancy in the specified 8 second period (20 channels * 0.4 seconds) is equal to $10 * (\# \text{ of pulses in } 0.8 \text{ s}) * \text{pulse width}$.

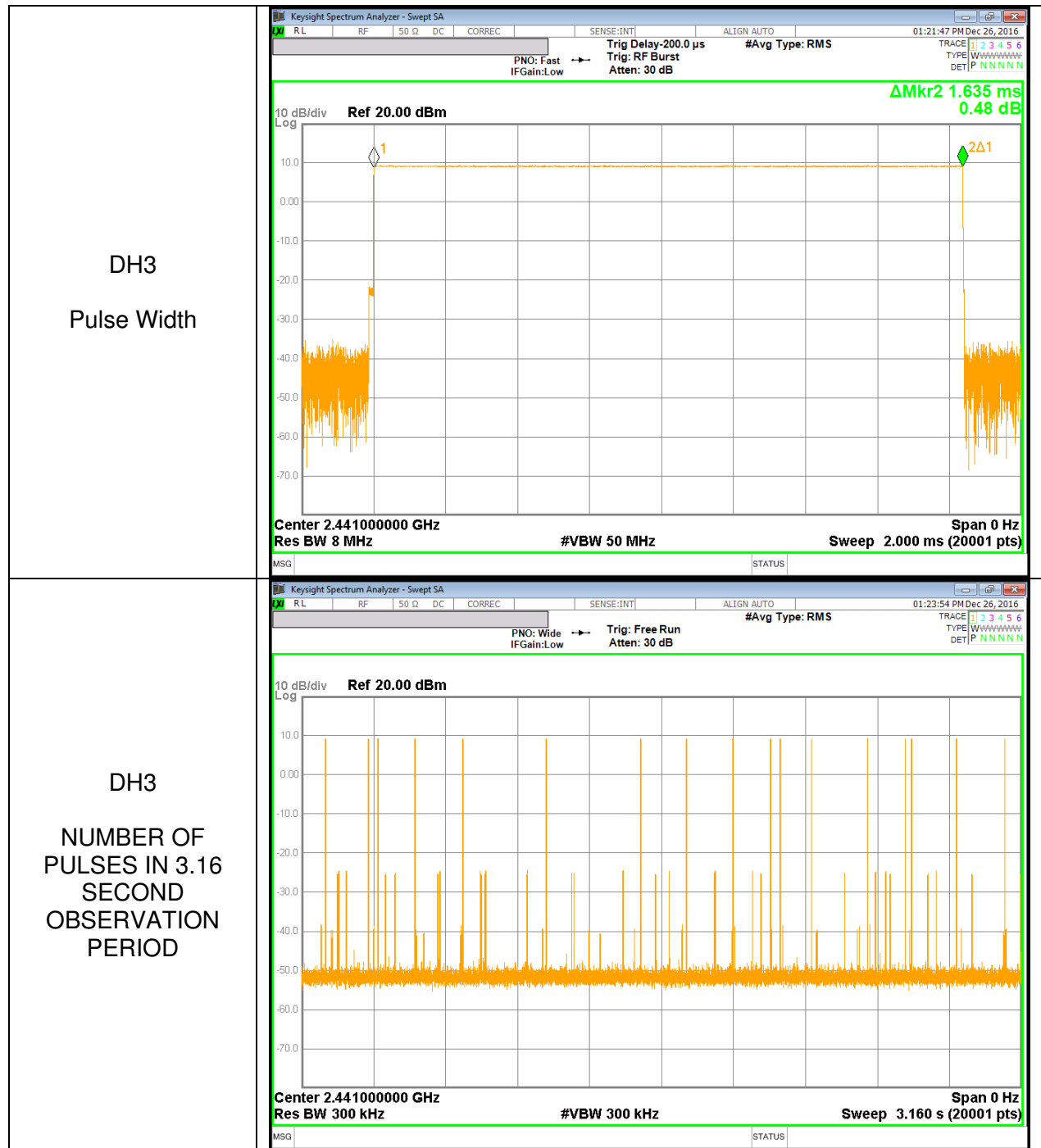
RESULTS

DH Packet	Pulse Width [msec]	Number of Pulses in 3.16 seconds	Average Time of Occupancy [sec]	Limit [sec]	Margin [sec]
GFSK Normal					
DH1	0.379	32	0.121408	0.4	-0.2786
DH3	1.635	17	0.277950	0.4	-0.1221
DH5	2.88	13	0.374400	0.4	-0.0256
DH Packet	Pulse Width [msec]	Number of Pulses in 0.8 seconds	Average Time of Occupancy [sec]	Limit [sec]	Margin [sec]
GFSK AFH					
DH1	0.379	8	0.030352	0.4	-0.36965
DH3	1.635	4.25	0.069488	0.4	-0.33051
DH5	2.88	3.25	0.093600	0.4	-0.3064

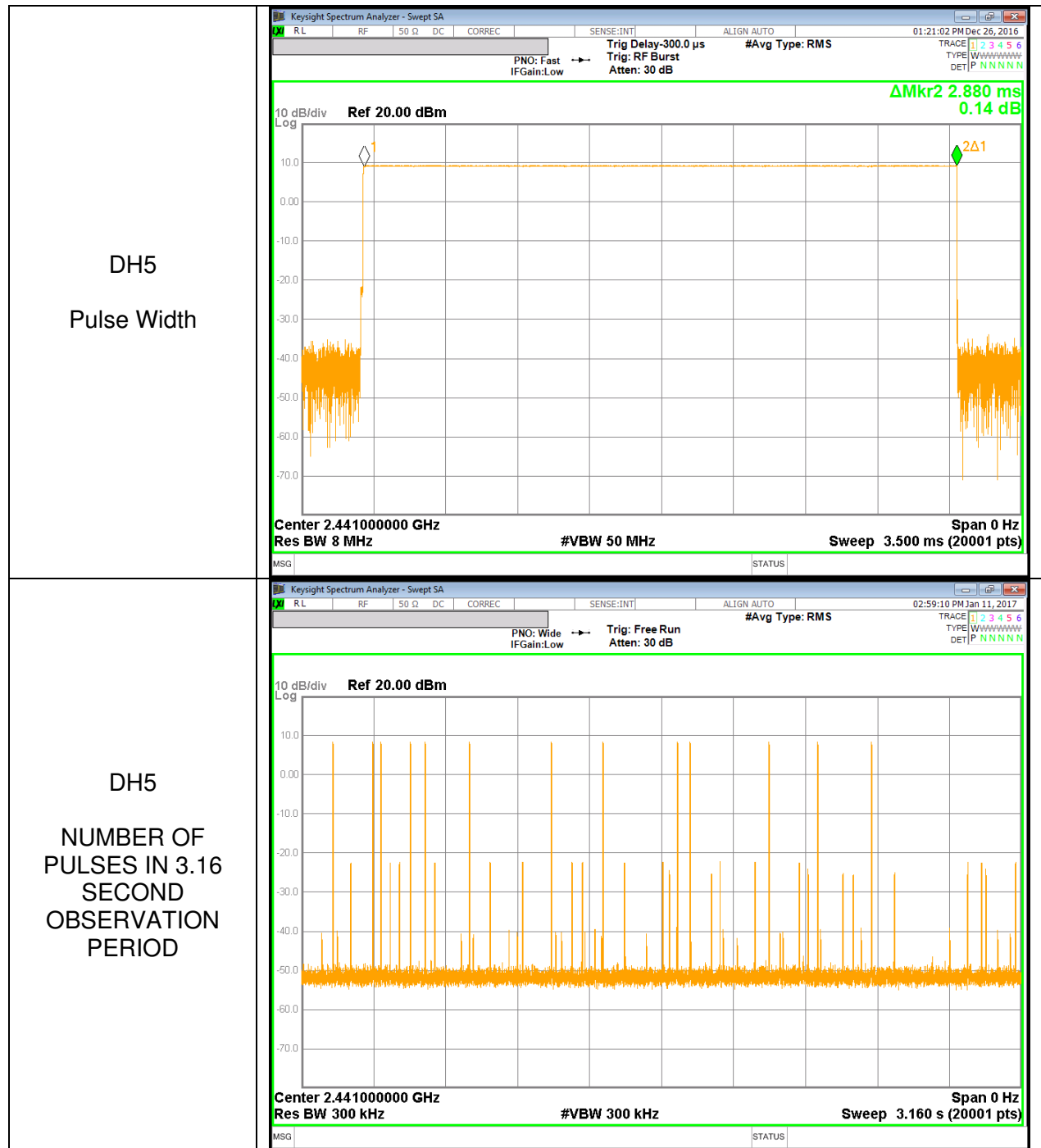
DH1



DH3



DH5



8.5. OUTPUT POWER

LIMIT

§15.247 (b) (1)

The maximum antenna gain is less than 6 dBi, therefore the limit is 21 dBm.

TEST PROCEDURE

DA 00-705: The transmitter output is connected to a spectrum analyzer the analyzer bandwidth is set to a value greater than the 20 dB bandwidth of the EUT.

RESULTS

8.5.1. BASIC DATA RATE GFSK MODULATION

Channel	Frequency [MHz]	Output Power [dBm]	Limit [dBm]	Margin [dB]
Low	2402	9.870	21	-11.13
Middle	2441	9.739	21	-11.261
High	2480	8.901	21	-12.099
Worst		9.870	21	-11.13

8.5.2. ENHANCED DATA RATE Pi/4-DPSK MODULATION

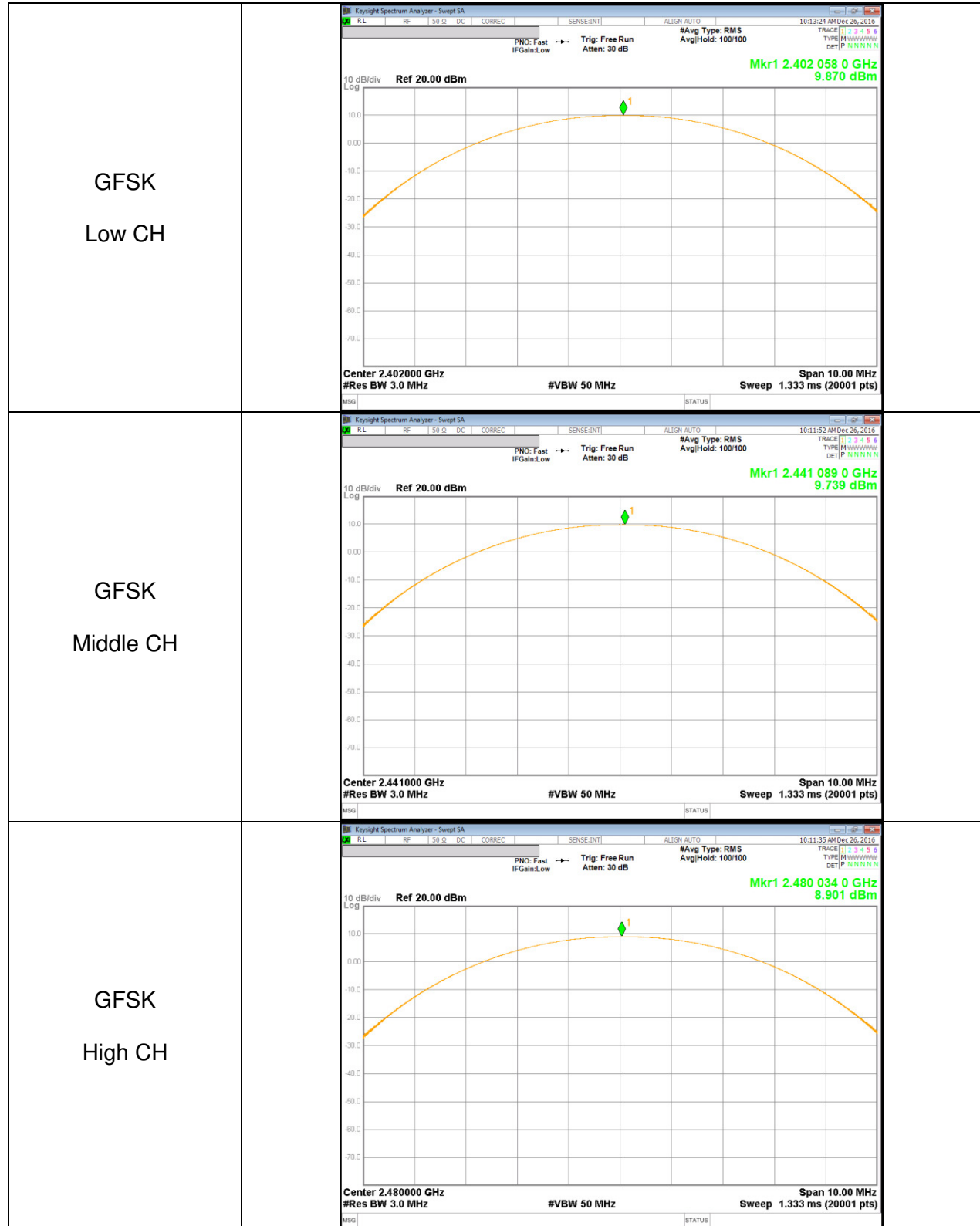
Channel	Frequency [MHz]	Output Power [dBm]	Limit [dBm]	Margin [dB]
Low	2402	9.849	21	-11.151
Middle	2441	9.704	21	-11.296
High	2480	8.866	21	-12.134
Worst		9.849	21	-11.151

8.5.3. ENHANCED DATA RATE 8PSK MODULATION

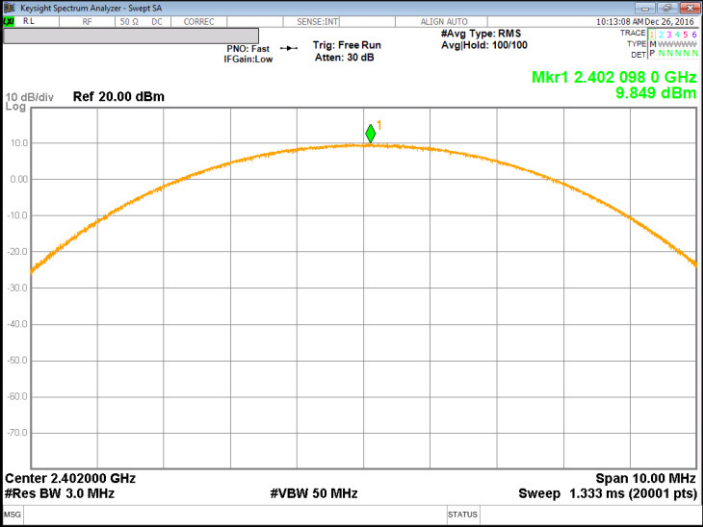
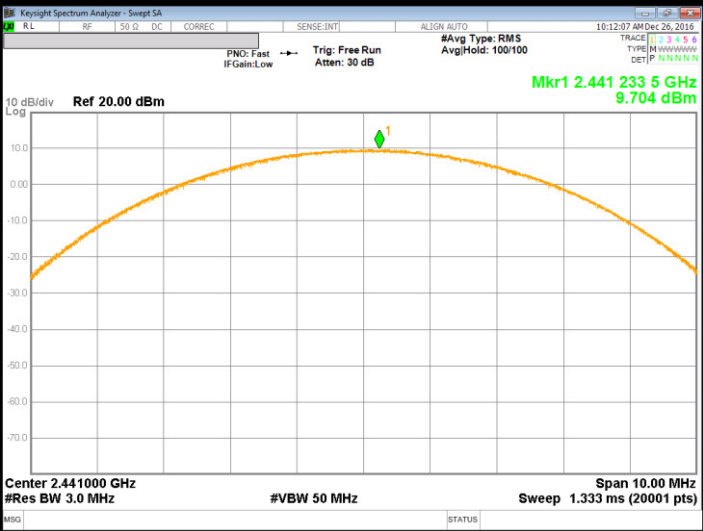
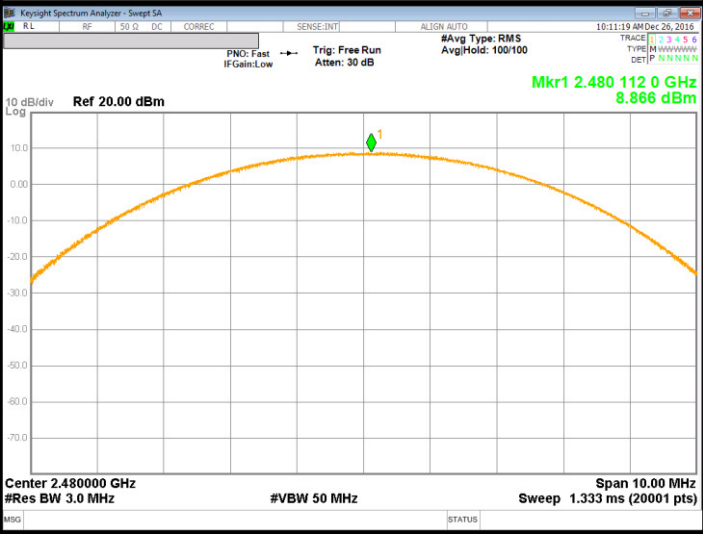
Channel	Frequency [MHz]	Output Power [dBm]	Limit [dBm]	Margin [dB]
Low	2402	10.152	21	-10.848
Middle	2441	10.009	21	-10.991
High	2480	9.171	21	-11.829
Worst		10.152	21	-10.848

8.5.4. OUTPUT POWER PLOTS

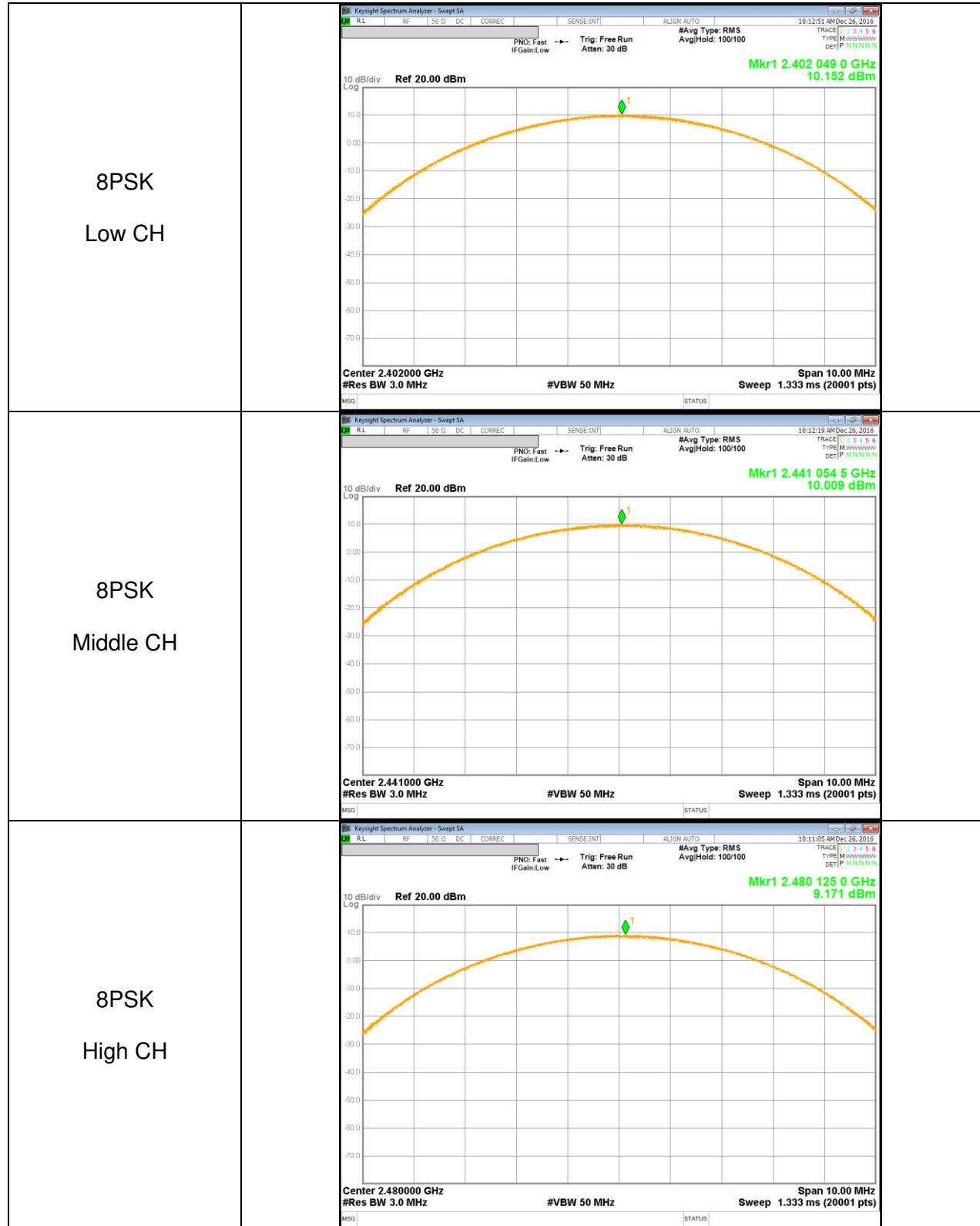
GFSK OUTPUT POWER



Pi/4-DPSK OUTPUT POWER

Pi/4-DPSK Low CH	 KeySight Spectrum Analyzer - Swept SA 10:33:08 AM Dec 26, 2016 #Avg Type: RMS AvgHold: 100/100 Trig: Free Run Atten: 30 dB PNO: Fast IF Gain: Low Mkr1 2.402 098 0 GHz 9.849 dBm Ref 20.00 dBm 10 dB/div Log Center 2.402000 GHz #Res BW 3.0 MHz #VBW 50 MHz Span 10.00 MHz Sweep 1.333 ms (20001 pts)
Pi/4-DPSK Middle CH	 KeySight Spectrum Analyzer - Swept SA 10:32:07 AM Dec 26, 2016 #Avg Type: RMS AvgHold: 100/100 Trig: Free Run Atten: 30 dB PNO: Fast IF Gain: Low Mkr1 2.441 233 5 GHz 9.704 dBm Ref 20.00 dBm 10 dB/div Log Center 2.441000 GHz #Res BW 3.0 MHz #VBW 50 MHz Span 10.00 MHz Sweep 1.333 ms (20001 pts)
Pi/4-DPSK High CH	 KeySight Spectrum Analyzer - Swept SA 10:31:19 AM Dec 26, 2016 #Avg Type: RMS AvgHold: 100/100 Trig: Free Run Atten: 30 dB PNO: Fast IF Gain: Low Mkr1 2.480 112 0 GHz 8.866 dBm Ref 20.00 dBm 10 dB/div Log Center 2.480000 GHz #Res BW 3.0 MHz #VBW 50 MHz Span 10.00 MHz Sweep 1.333 ms (20001 pts)

8PSK OUTPUT POWER



8.6. AVERAGE POWER

LIMIT

None; for reporting purposes only.

TEST PROCEDURE

DA 00-705: The transmitter output is connected to a power meter.

RESULTS

The cable assembly insertion loss of 10.1 dB (including 10 dB pad and 0.1 dB cable) was entered as an offset in the power meter to allow for direct reading of power.

8.6.1. BASIC DATA RATE GFSK MODULATION

Channel	Frequency [MHz]	AV power [dBm]	AV power [mW]
Low	2402	9.399	8.71
Middle	2441	9.337	8.58
High	2480	8.498	7.08

8.6.2. DATA RATE PI/4-DQPSK MODULATION

Channel	Frequency [MHz]	AV power [dBm]	AV power [mW]
Low	2402	7.108	5.14
Middle	2441	7.025	5.04
High	2480	6.177	4.15

8.6.3. ENHANCED DATA RATE 8PSK MODULATION

Channel	Frequency [MHz]	AV power [dBm]	AV power [mW]
Low	2402	7.108	5.14
Middle	2441	7.030	5.05
High	2480	6.180	4.15

8.7. CONDUCTED SPURIOUS EMISSIONS

LIMITS

FCC §15.247 (d)

Limit = -20 dBc

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.

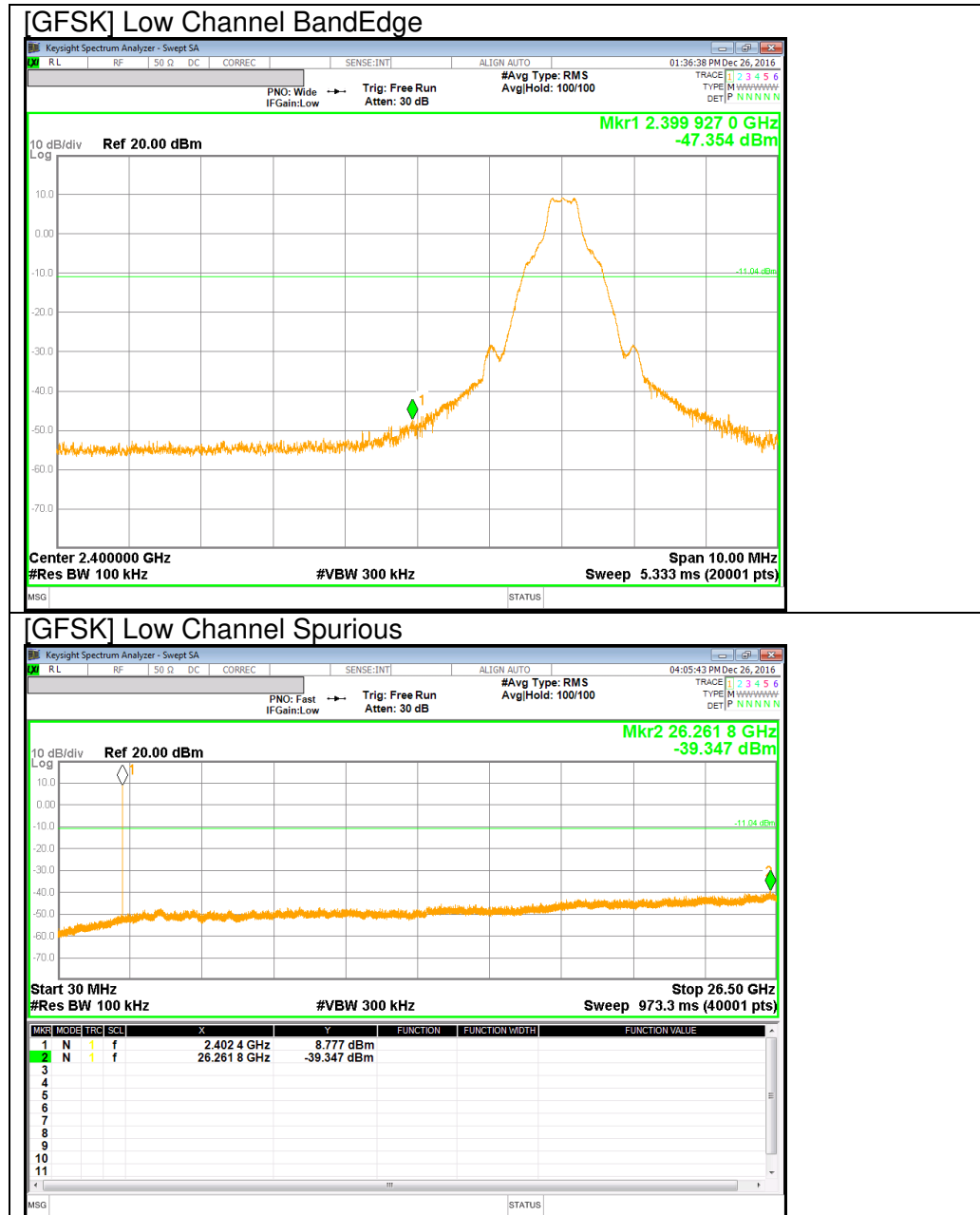
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

The bandedges at 2.4 and 2.4835 GHz are investigated with the transmitter set to the normal hopping mode.

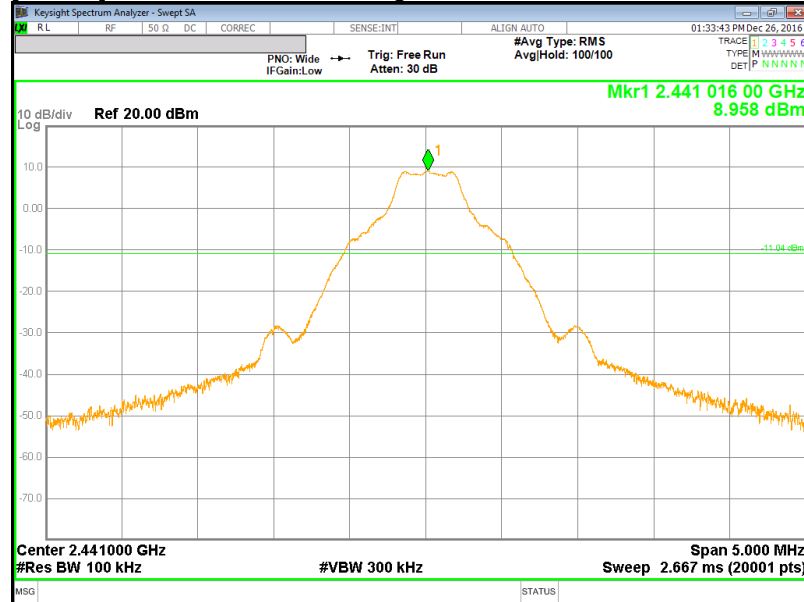
RESULTS

8.7.1. BASIC DATA RATE GFSK MODULATION

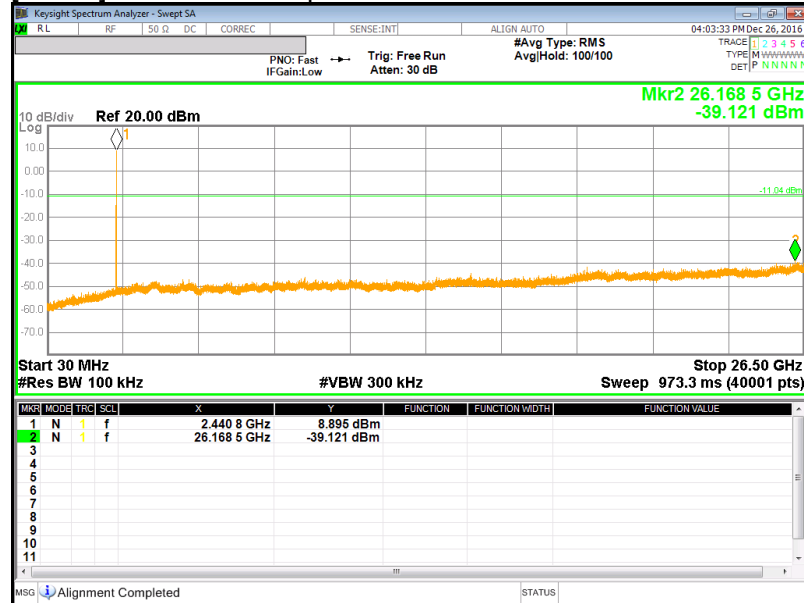
GFSK Mode

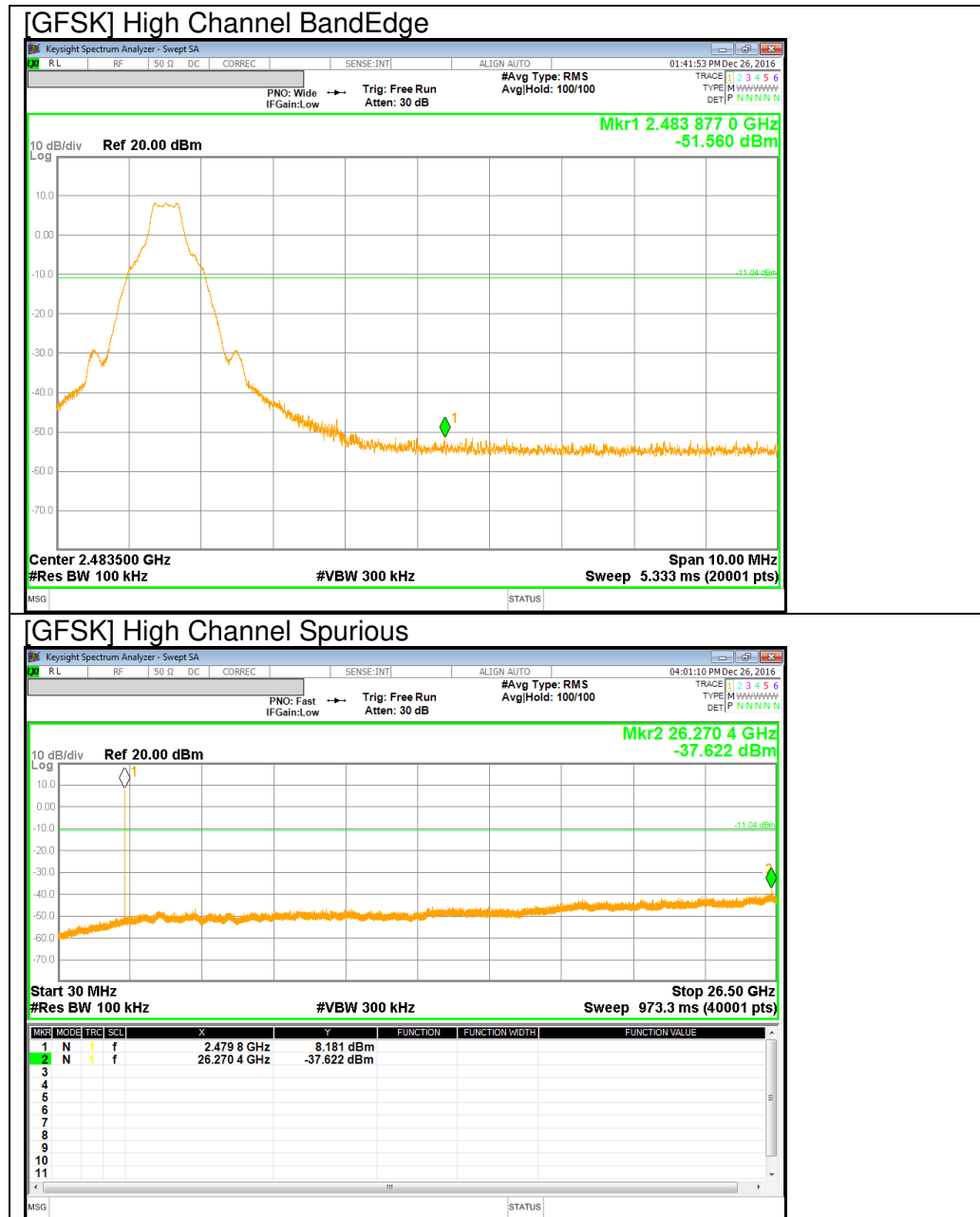


[GFSK] Mid Channel BandEdge

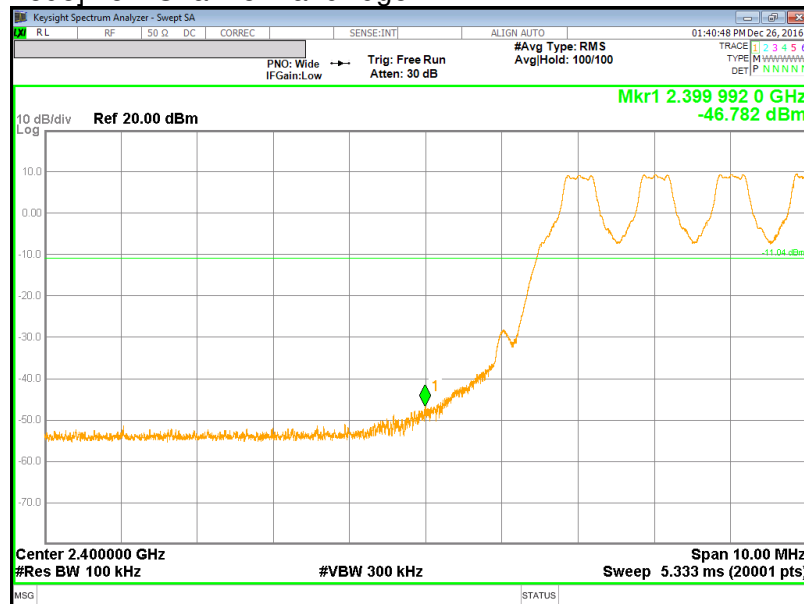


[GFSK] Mid Channel Spurious



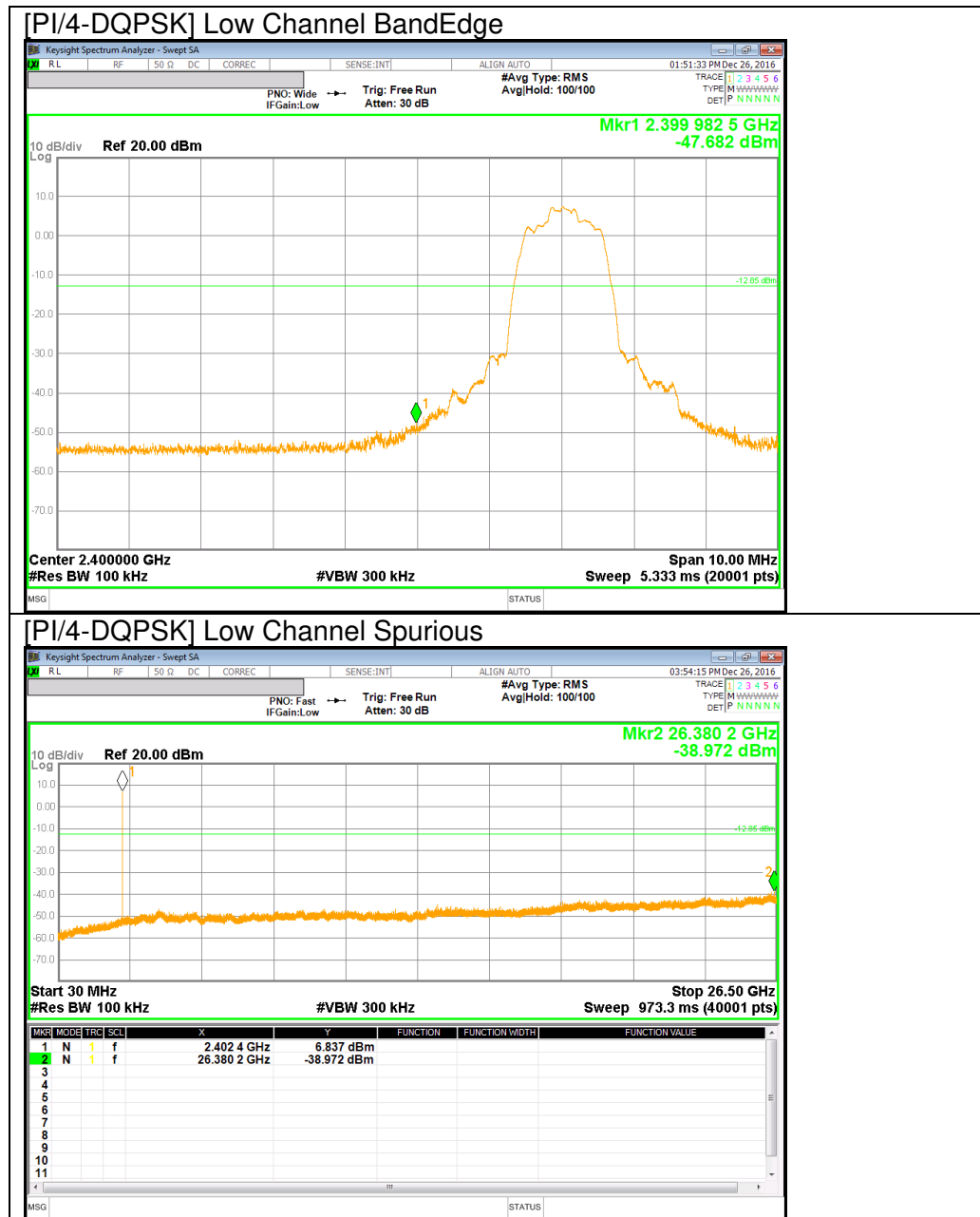


[GFSK Hopping Mode] Low Channel BandEdge

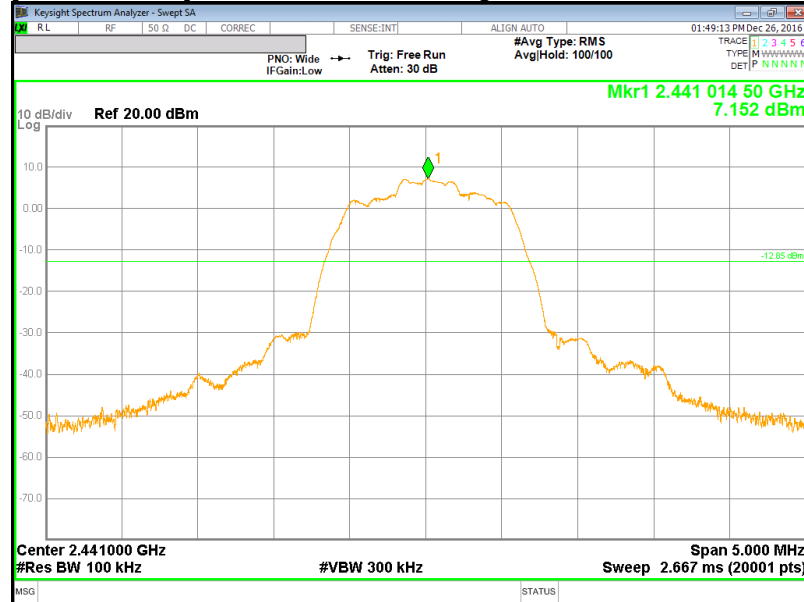


The screenshot shows a Keysight Spectrum Analyzer interface. The main plot displays a spectrum with two prominent peaks around 2.48 GHz. A green horizontal line indicates the noise floor at -11.04 dBm. A measurement point '1' is marked on the noise floor at approximately -51.939 dBm. The top status bar includes various settings: PNO: Wide IF Gain: Low, Trig: Free Run Atten: 30 dB, #Avg Type: RMS, Avg/Hold: 100/100. The bottom status bar shows Center 2.483500 GHz, Res BW 100 kHz, Span 10.00 MHz, Sweep 5.333 ms (20001 pts).

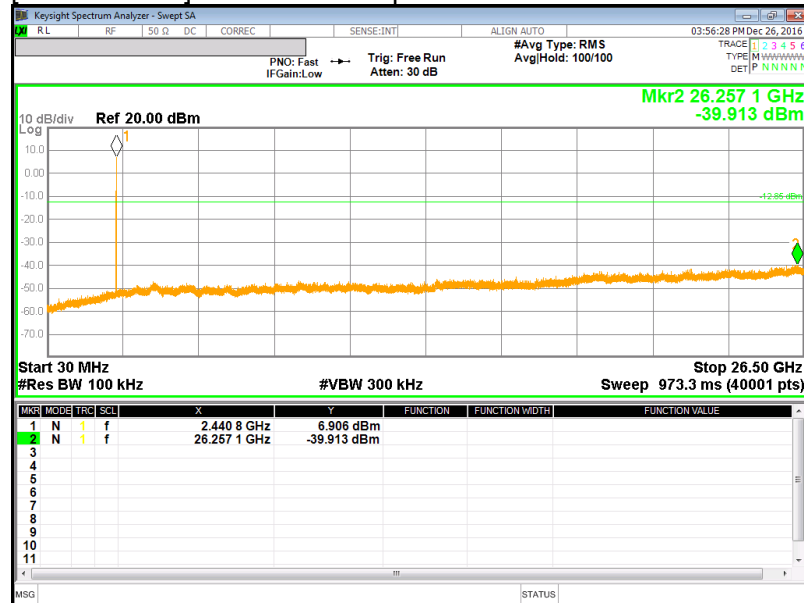
PI/4-DQPSK Mode



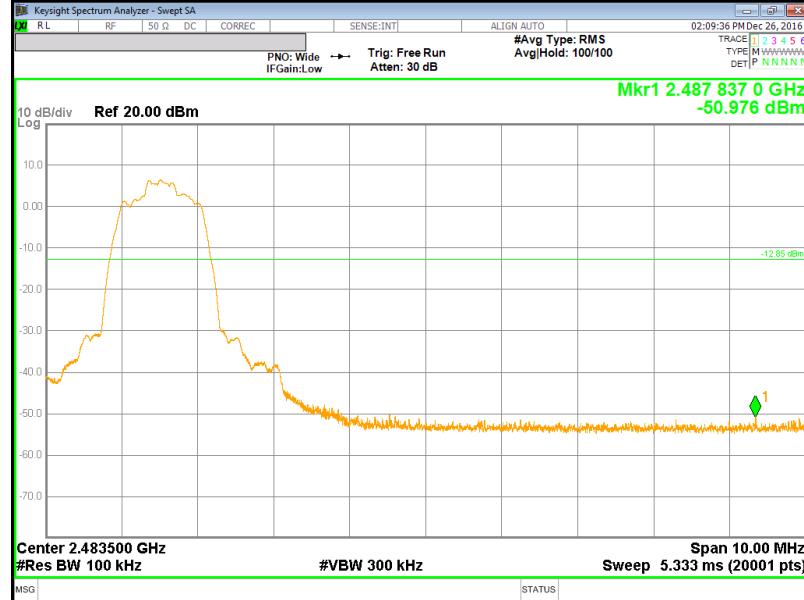
[PI/4-DQPSK] Mid Channel BandEdge



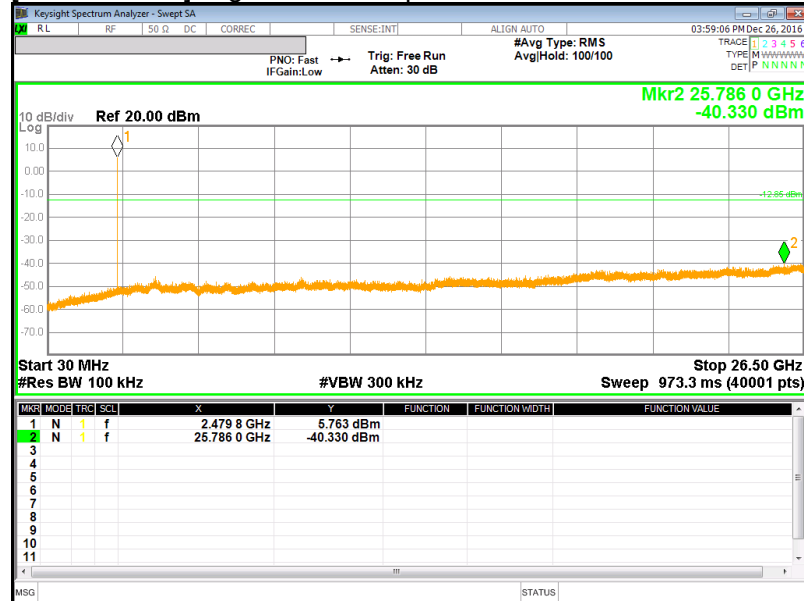
[PI/4-DQPSK] Mid Channel Spurious



[PI/4-DQPSK] High Channel BandEdge

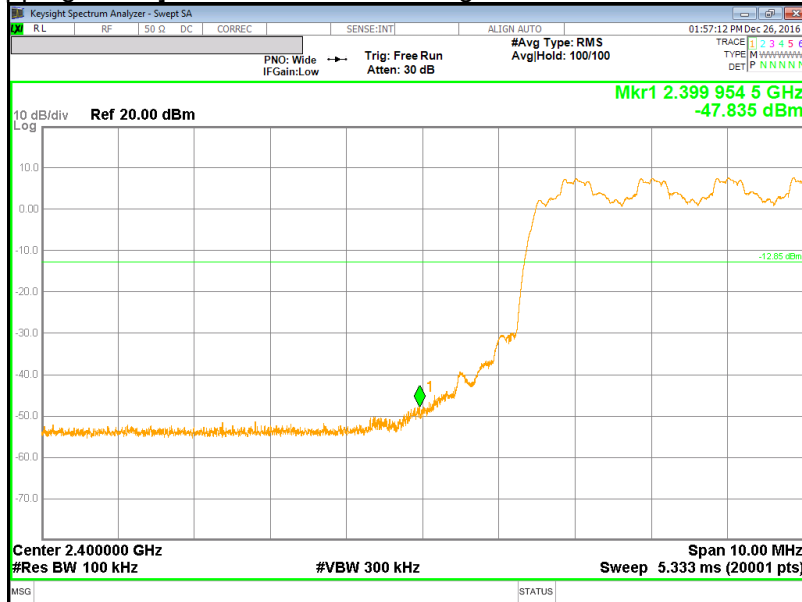


[PI/4-DQPSK] High Channel Spurious

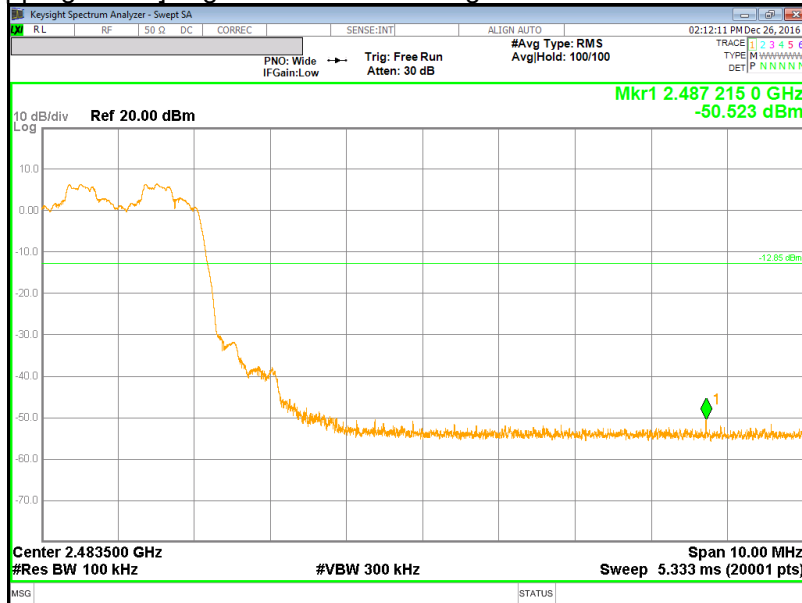


BandEdge Emission at PI/4-DQPSK Hopping Mode

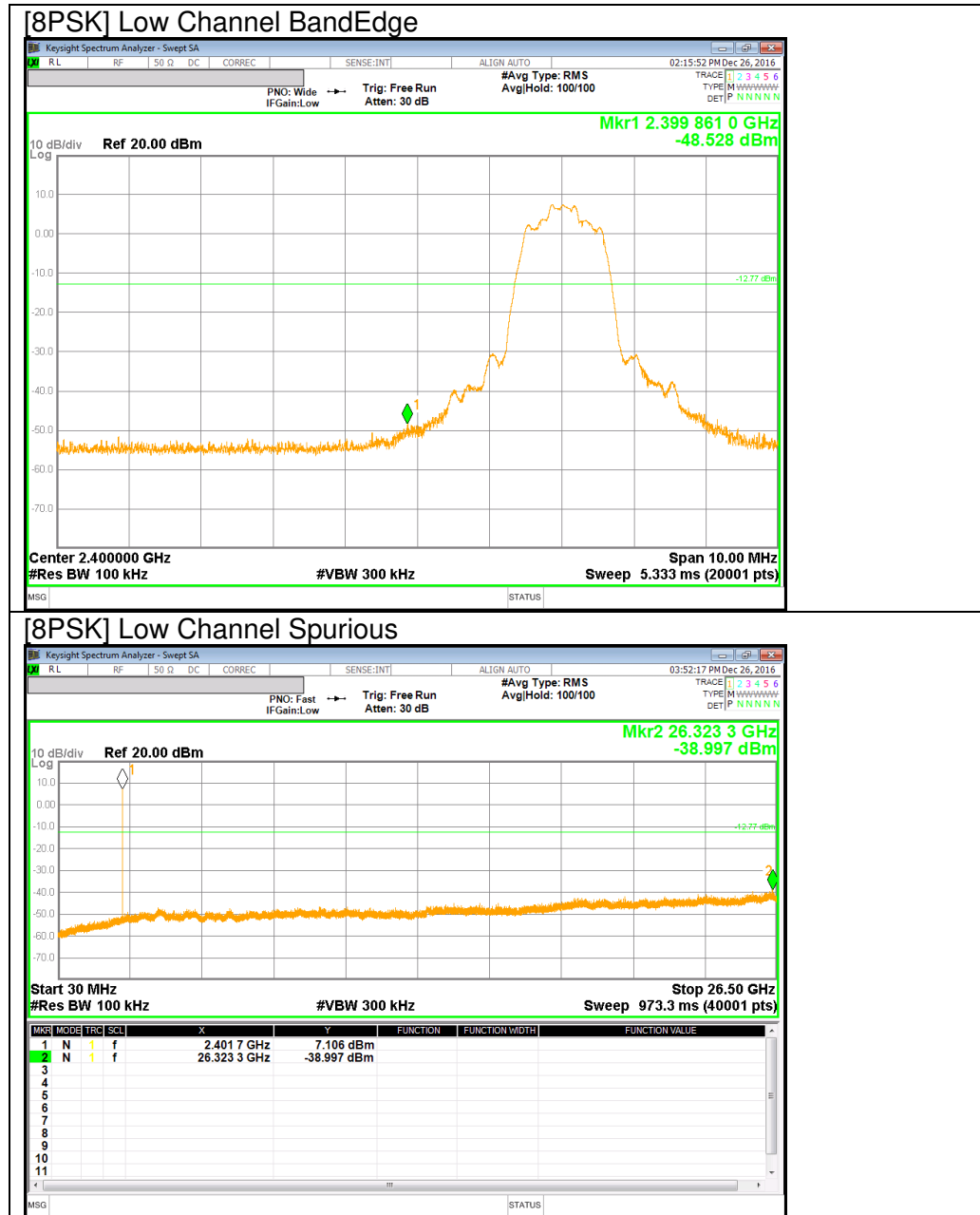
[PI/4-DQPSK Hopping Mode] Low Channel BandEdge



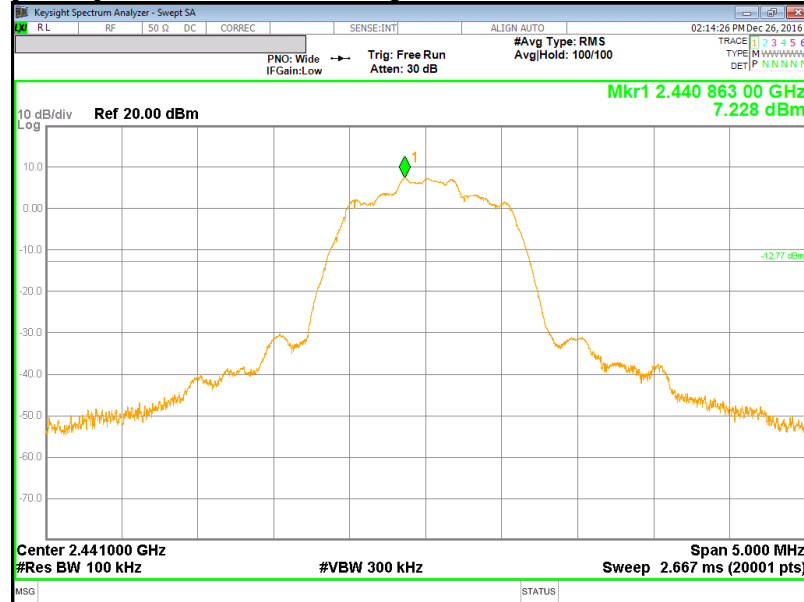
[PI/4-DQPSK Hopping Mode] High Channel BandEdge



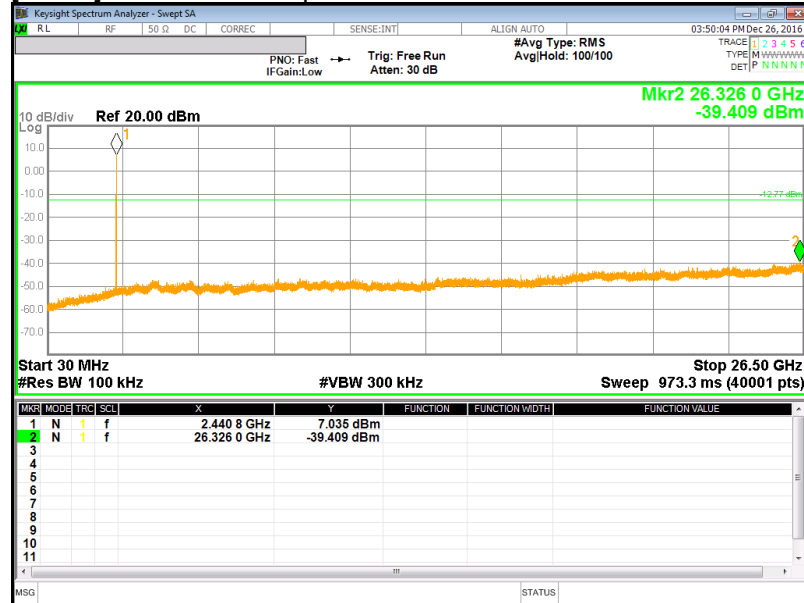
8PSK Mode



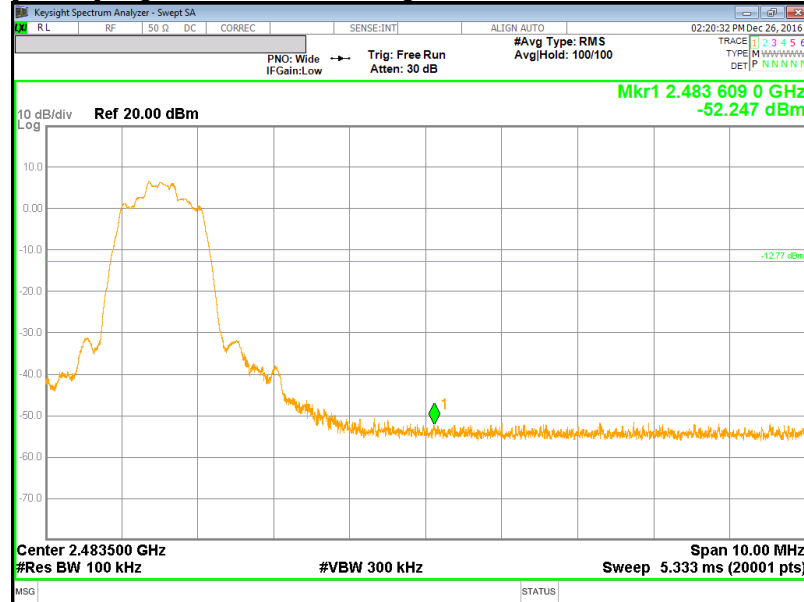
[8PSK] Mid Channel BandEdge



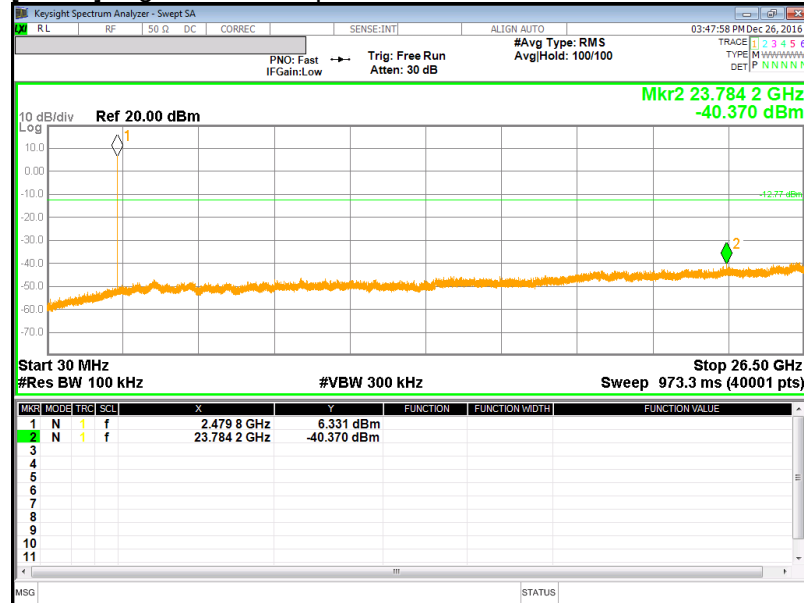
[8PSK] Mid Channel Spurious



[8PSK] High Channel BandEdge

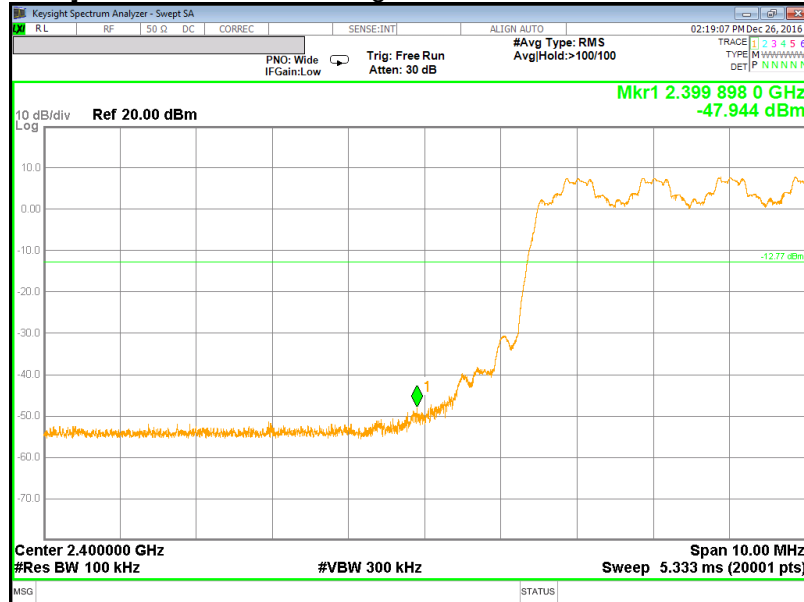


[8PSK] High Channel Spurious

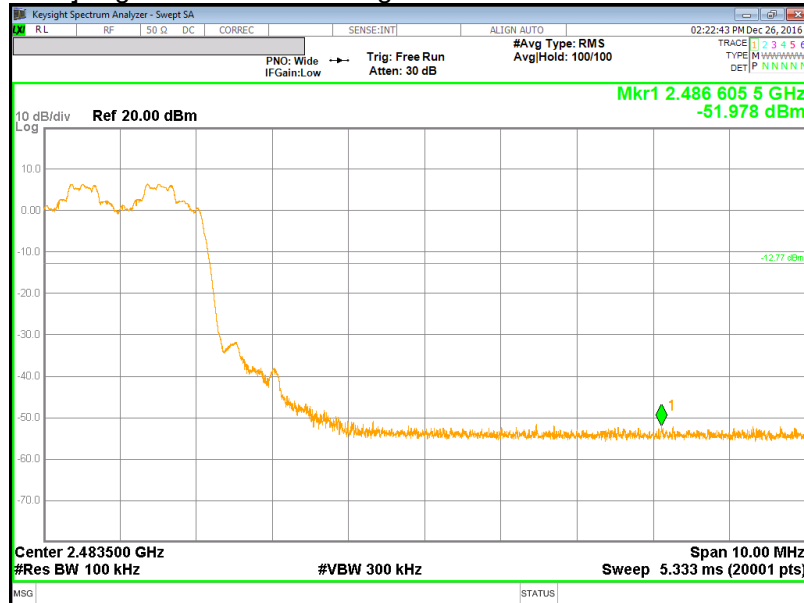


BandEdge Emission at 8PSK Hopping Mode

[8PSK Hopping Mode] Low Channel BandEdge



[8PSK Hopping Mode] High Channel BandEdge



9. RADIATED TEST RESULTS

9.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

Limits for radiated disturbance of an intentional radiator		
Frequency range (MHz)	Limits (μV/m)	Measurement Distance (m)
0.009 – 0.490	2400 / F (kHz)	300
0.490 – 1.705	24000 / F (kHz)	30
1.705 – 30.0	30	30
30 – 88	100**	3
88 - 216	150**	3
216 – 960	200**	3
Above 960	500	3

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within these frequency bands is permitted under other sections of this part, e.g. §§ 15.231 and 15.241.

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for below 1GHz and 150 cm for above 1GHz. 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; the video bandwidth is set to 3 MHz for peak measurements.(Pre-scans to detect harmonic and spurious emissions, the resolution bandwidth is set to 1 MHz; the video bandwidth is set to 30 KHz for peak measurements.)

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 minimum VBW was 350Hz, but test receiver(ESU40) couldn't set value 350Hz. Due to this reason, testing VBW was set to 500Hz(Worst cases).

The spectrum from 1GHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in the 2.4 GHz band.
(From 30MHz to 1GHz, test was performed with the EUT set to transmit at the channel with highest output power)

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.

Note : Emission was pre-scanned from 9KHz to 30MHz; No emissions were detected which was at least 20dB below the specification limit (consider distance correction factor).
Per FCC part 15.31(o), test results were not reported.

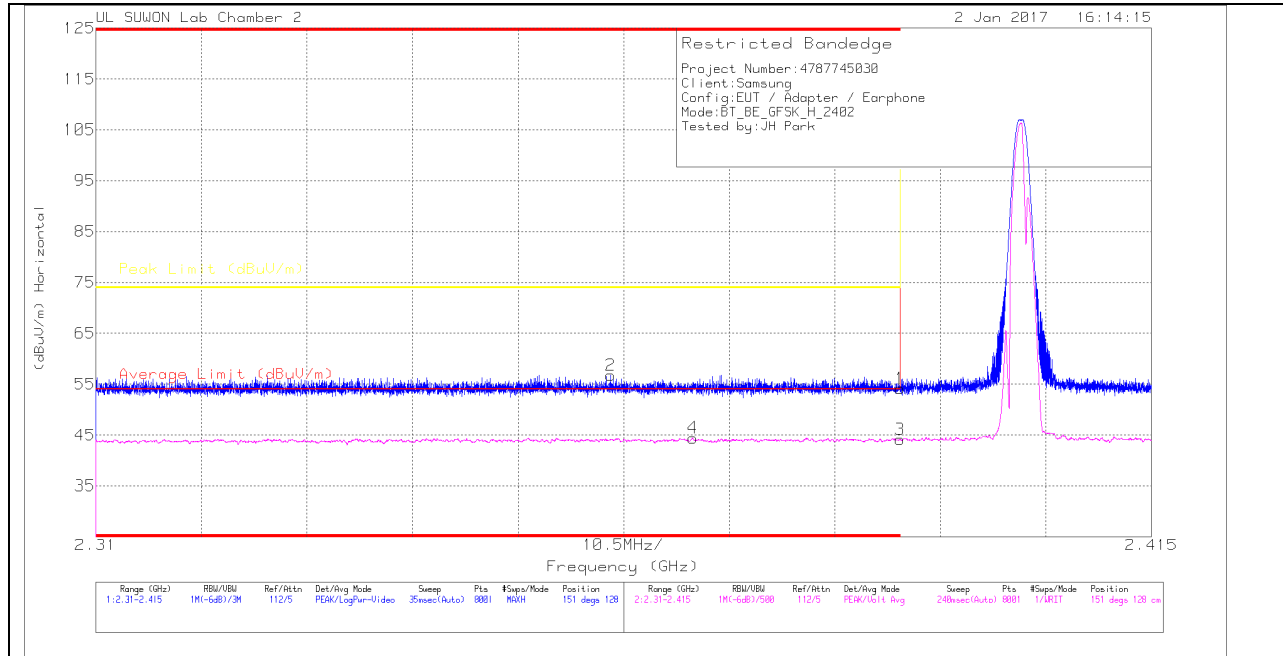
Formula for converting the filed strength from uV/m to dBuV/m is:
Limit (dBuV/m) = 20 log limit (uV/m)

9.2. TRANSMITTER ABOVE 1 GHz

9.2.1. BASIC DATA RATE GFSK MODULATION

RESTRICTED BANDEDGE (LOW CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

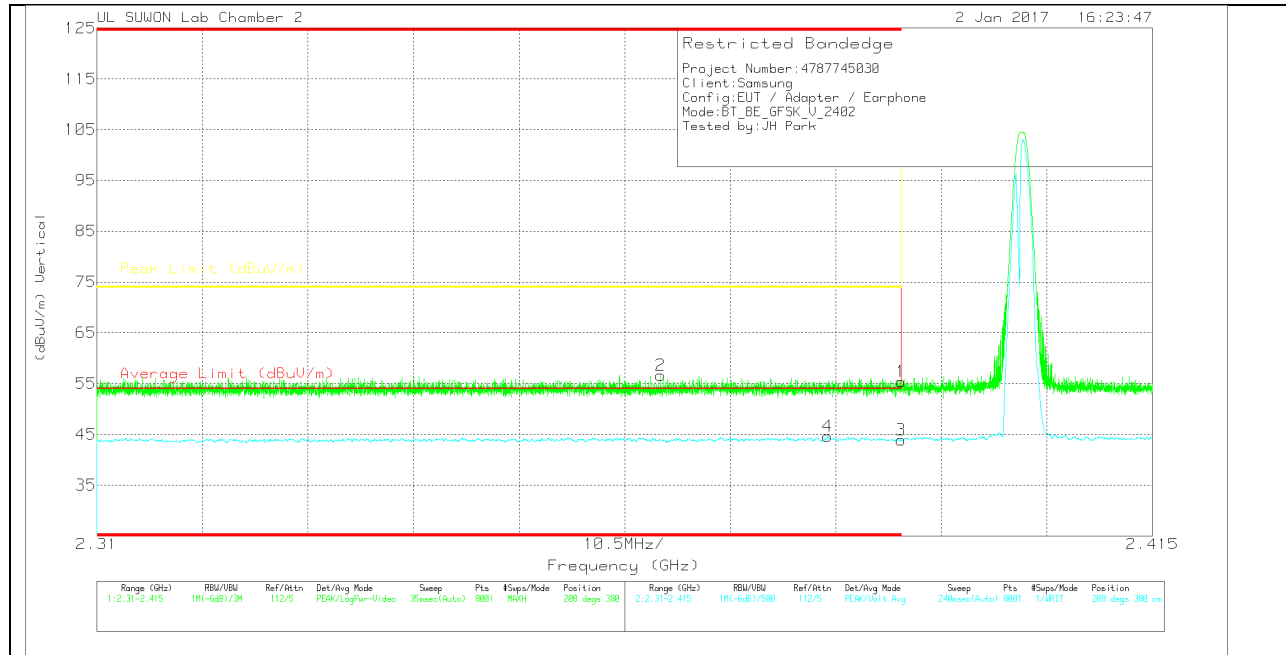
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	10dB[dB]	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	40.61	Pk	31.7	-18.2	54.11	-	-	74	-19.89	151	128	H
2	* 2.361	43.39	Pk	31.7	-18.3	56.79	-	-	74	-17.21	151	128	H
3	* 2.39	30.62	VA1T	31.7	-18.2	44.12	54	-9.88	-	-	151	128	H
4	* 2.369	31.05	VA1T	31.7	-18.3	44.45	54	-9.55	-	-	151	128	H

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

Pk - Peak detector

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

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	10dB[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	41.93	Pk	31.7	-18.2	55.43	-	-	74	-18.57	208	380	V
2	* 2.366	43.29	Pk	31.7	-18.3	56.69	-	-	74	-17.31	208	380	V
3	* 2.39	30.35	VA1T	31.7	-18.2	43.85	54	-10.15	-	-	208	380	V
4	* 2.383	31.17	VA1T	31.7	-18.2	44.67	54	-9.33	-	-	208	380	V

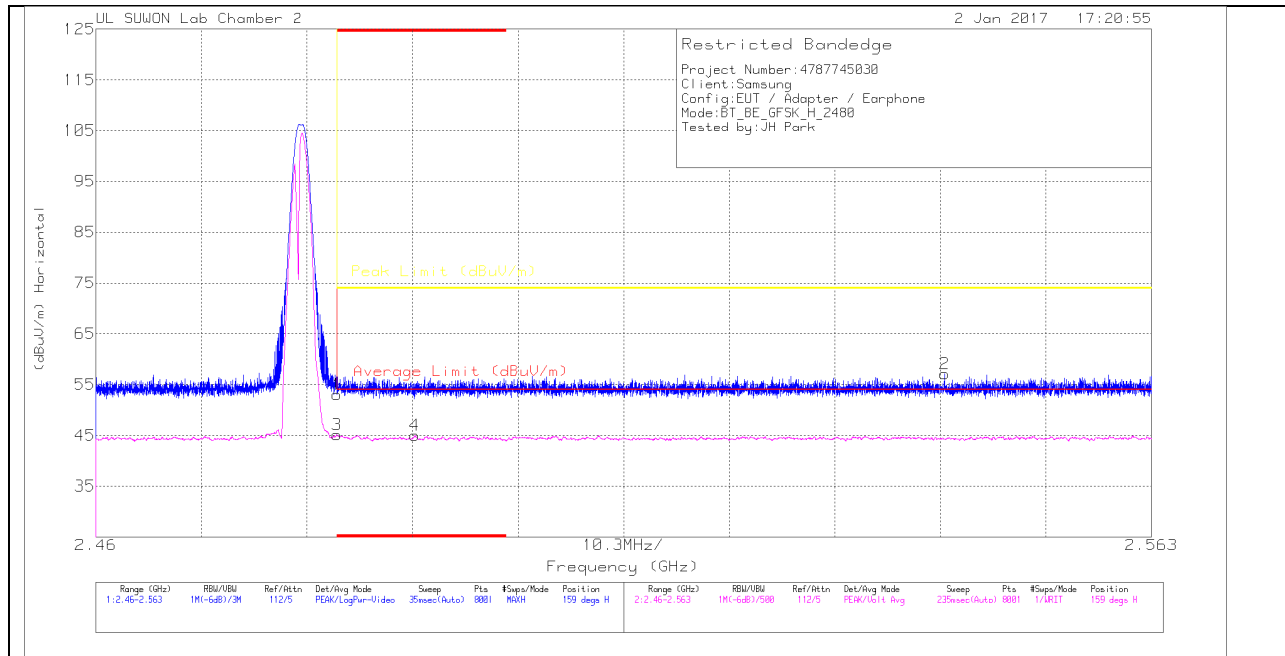
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

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

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

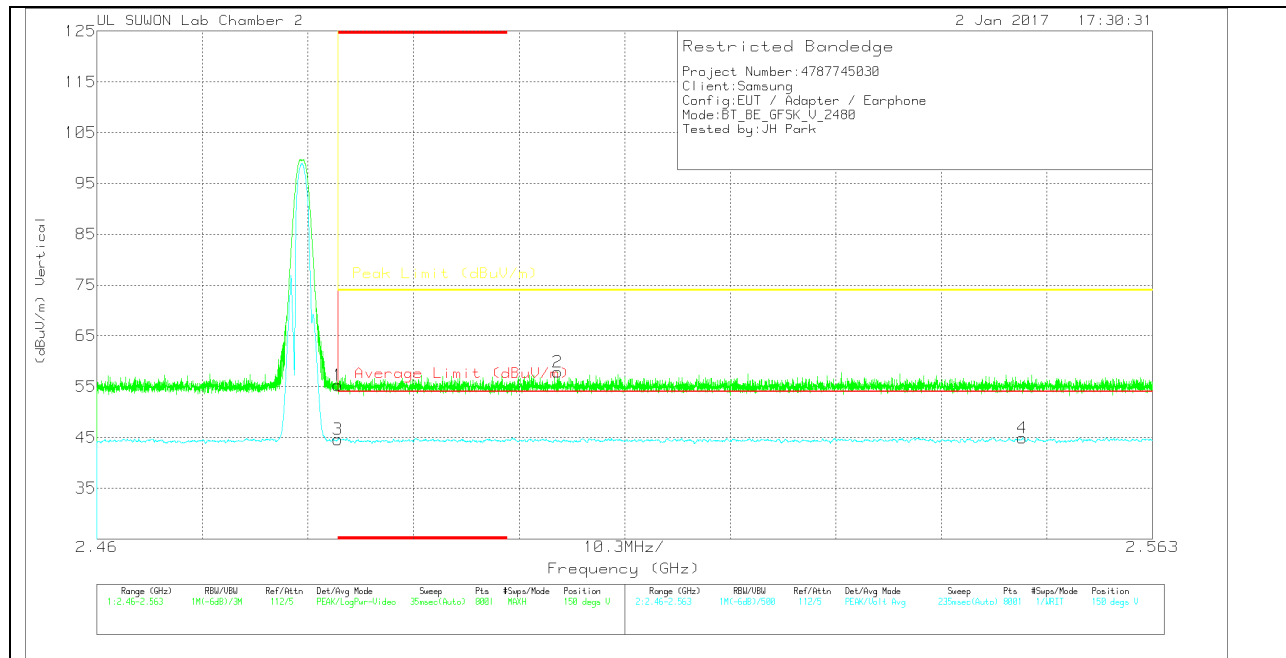
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	10dB[dB]	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	39.23	Pk		-18	53.03	-	-	74	-20.97	159	148	H
2	2.543	43.21	Pk		-18	57.11	-	-	74	-16.89	159	148	H
3	* 2.484	31.38	VA1T		-18	45.18	54	-8.82	-	-	159	148	H
4	* 2.491	31.16	VA1T		-18	44.96	54	-9.04	-	-	159	148	H

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

Pk - Peak detector

VA1T - FHSS: Linear Voltage Average $V_B = 1/T_{on}$ where: T_{on} is transmit duration

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	10dB[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	41.45	Pk	31.8	-18	55.25	-	-	74	-18.75	150	100	V
2	2.505	43.95	Pk	31.9	-18	57.85	-	-	74	-16.15	150	100	V
3	* 2.484	30.78	VA1T	31.8	-18	44.58	54	-9.42	-	-	150	100	V
4	2.55	31.04	VA1T	31.9	-18	44.94	54	-9.06	-	-	150	100	V

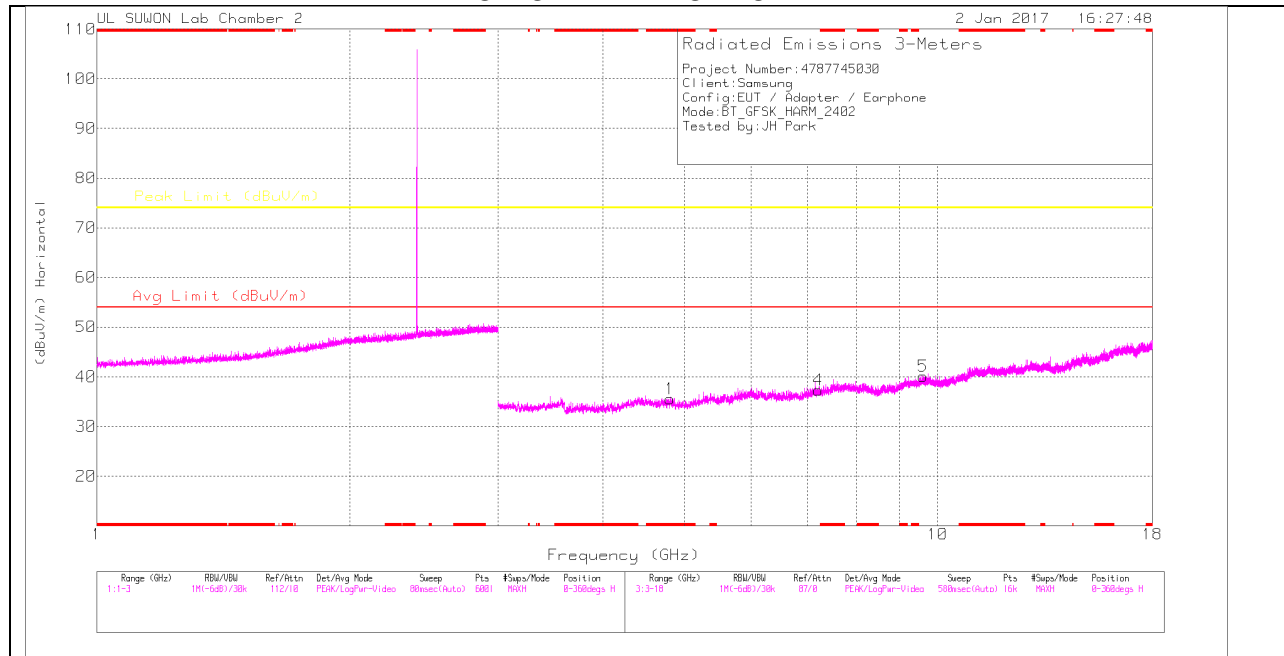
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

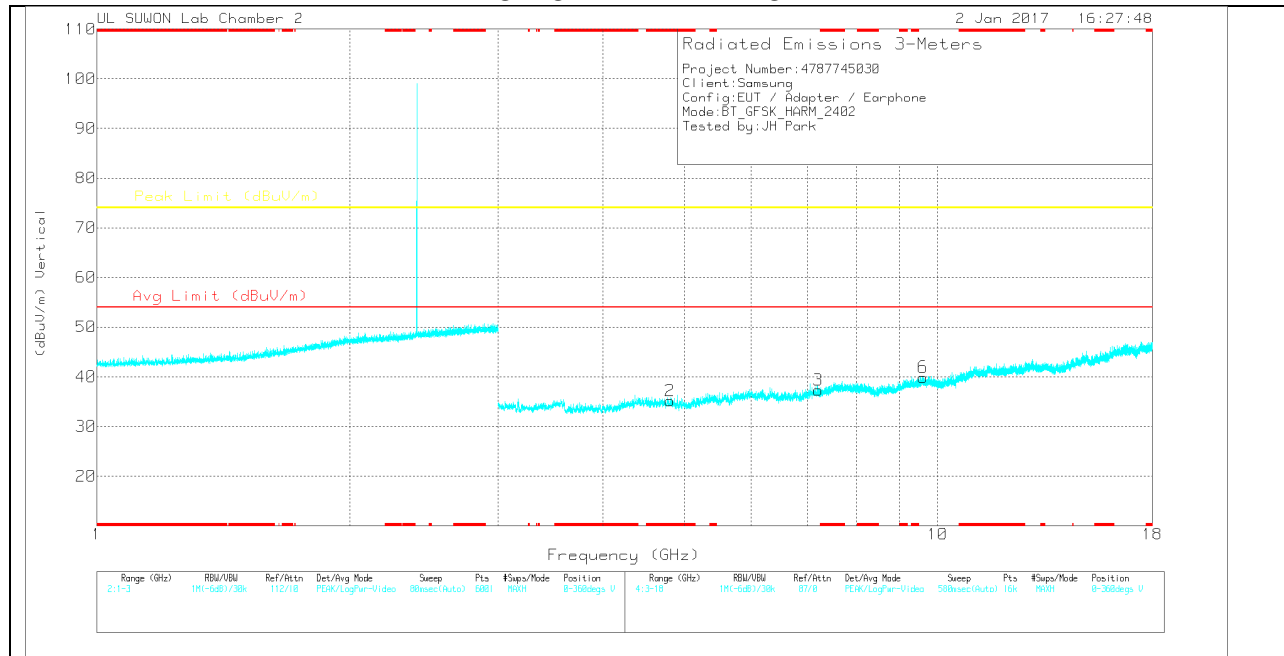
VA1T - FHSS: Linear Voltage Average $VB=1/Ton$ where: Ton is transmit duration

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

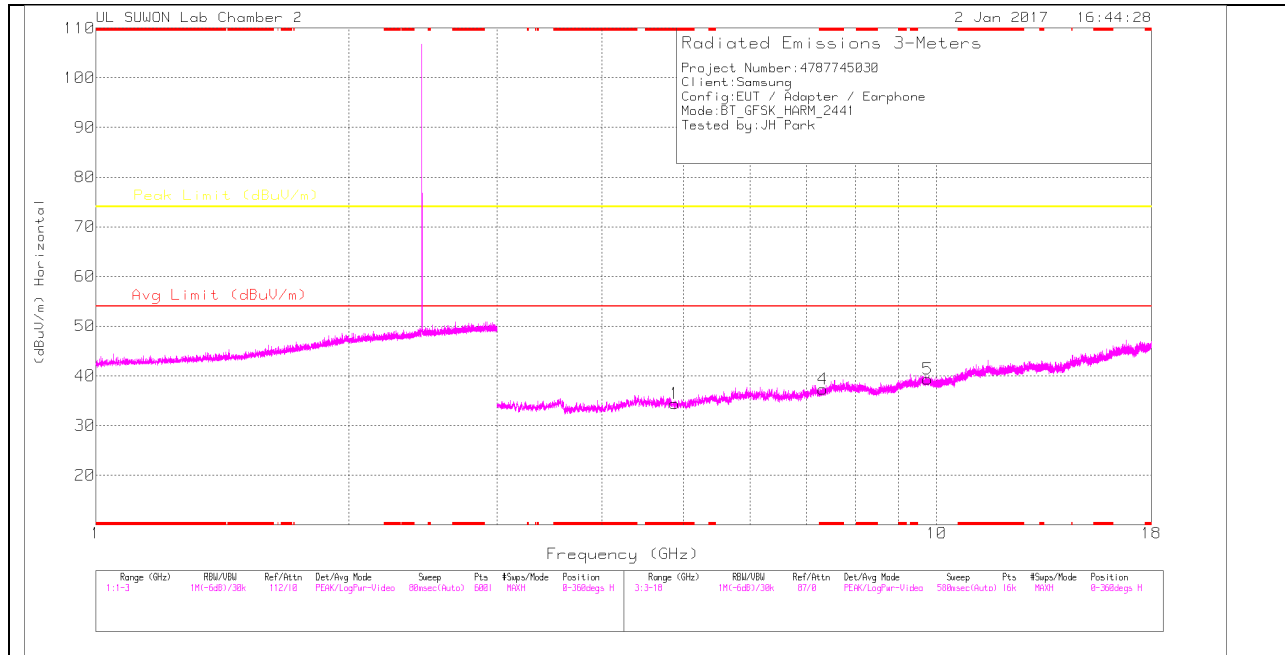
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	3dB[dB]	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.802	25.93	PK	33.9	-24.3	35.53	-	-	74	-38.47	0-360	250	H
4	7.206	23.28	PK	35.8	-21.7	37.38	-	-	74	-36.62	0-360	250	H
5	9.609	21.66	PK	36.9	-18.4	40.16	-	-	74	-33.84	0-360	150	H
2	* 4.804	25.59	PK	33.9	-24.3	35.19	-	-	74	-38.81	0-360	150	V
3	7.209	23.21	PK	35.8	-21.7	37.31	-	-	74	-36.69	0-360	150	V
6	9.603	21.42	PK	36.9	-18.4	39.92	-	-	74	-34.08	0-360	250	V

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

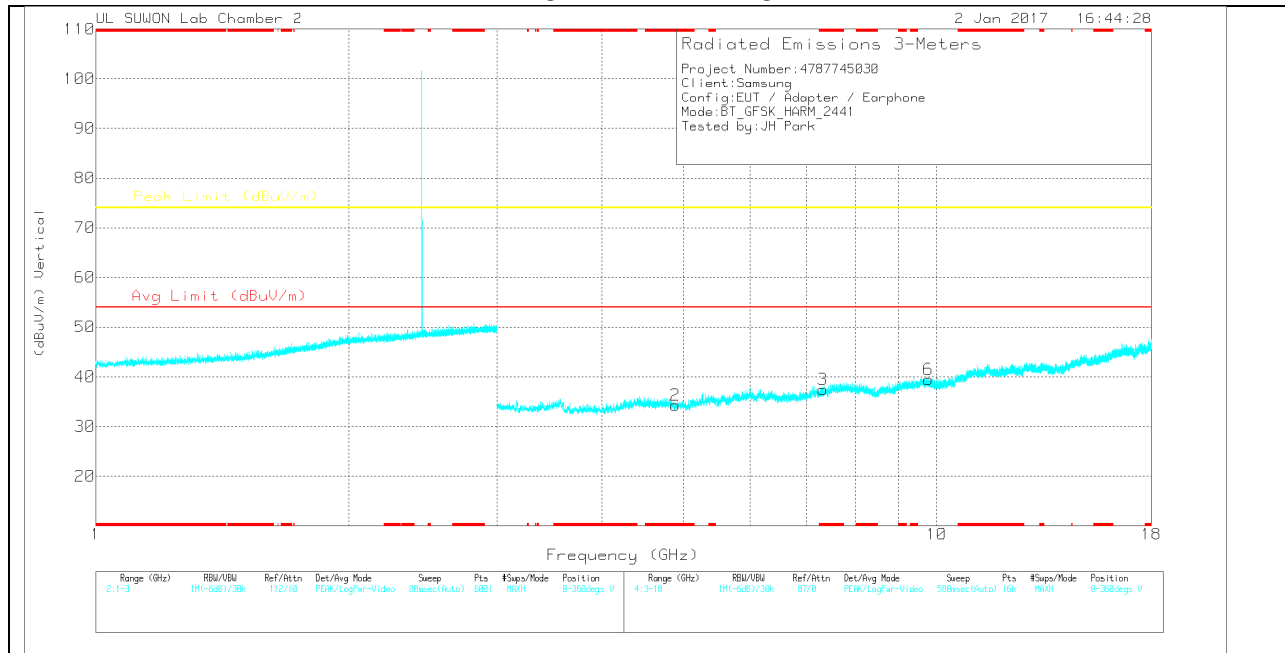
PK – Peak Detector

Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

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

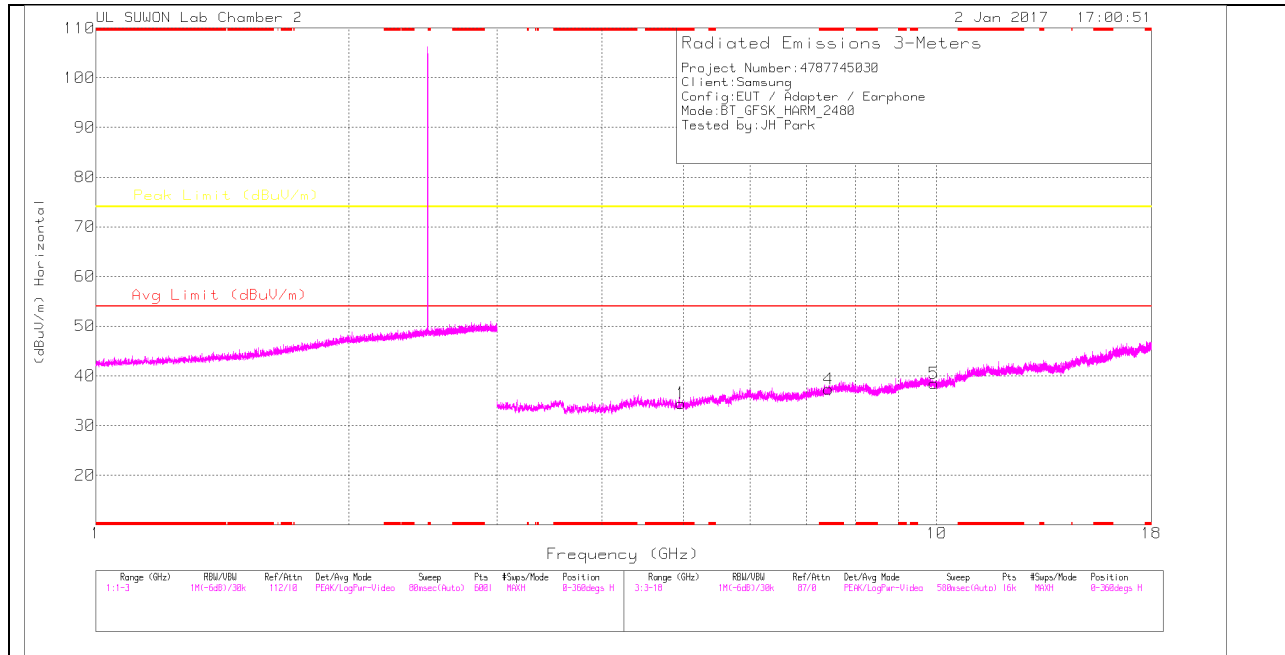
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	3dB[dB]	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.882	25.07	PK	33.9	-24.6	34.37	-	-	74	-39.63	0-360	150	H
4	* 7.321	23.48	PK	35.9	-22	37.38	-	-	74	-36.62	0-360	250	H
5	9.763	20.4	PK	37	-18	39.4	-	-	74	-34.6	0-360	150	H
2	* 4.887	24.95	PK	33.9	-24.6	34.25	-	-	74	-39.75	0-360	250	V
3	* 7.325	23.45	PK	35.9	-21.9	37.45	-	-	74	-36.55	0-360	150	V
6	9.768	20.45	PK	37	-18	39.45	-	-	74	-34.55	0-360	150	V

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

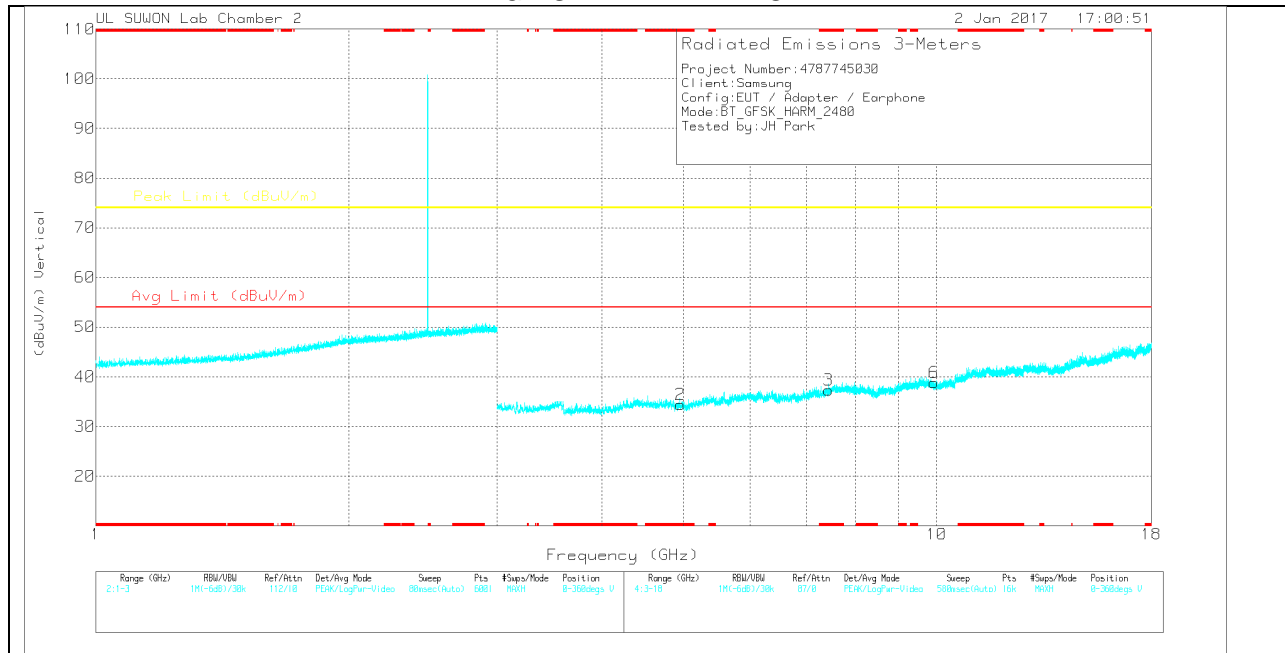
PK – Peak Detector

Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

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 8724)_150 619	3dB[dB]	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.96	25.28	PK	33.9	-24.7	34.48	-	-	74	-39.52	0-360	250	H
4	* 7.436	22.38	PK	36	-21	37.38	-	-	74	-36.62	0-360	250	H
5	9.922	19.28	PK	37.2	-18	38.48	-	-	74	-35.52	0-360	150	H
2	* 4.956	25.24	PK	33.9	-24.7	34.44	-	-	74	-39.56	0-360	250	V
3	* 7.441	22.31	PK	36	-21	37.31	-	-	74	-36.69	0-360	250	V
6	9.921	19.7	PK	37.2	-18	38.9	-	-	74	-35.1	0-360	150	V

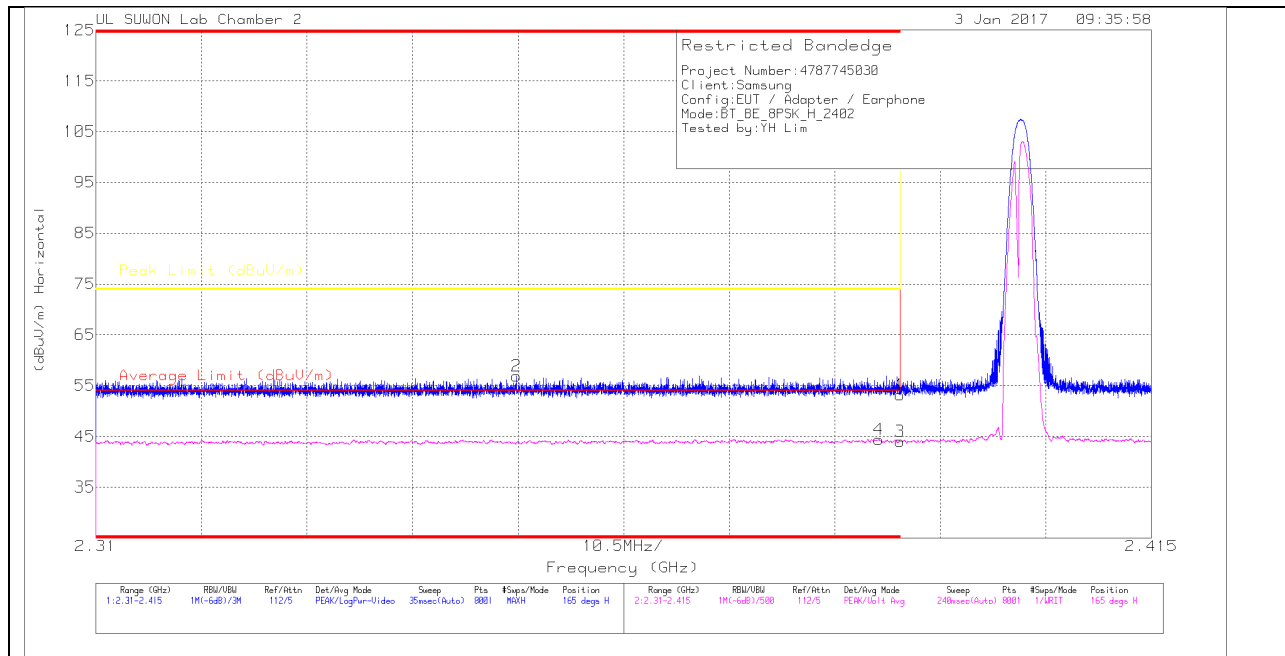
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK – Peak Detector

Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

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

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

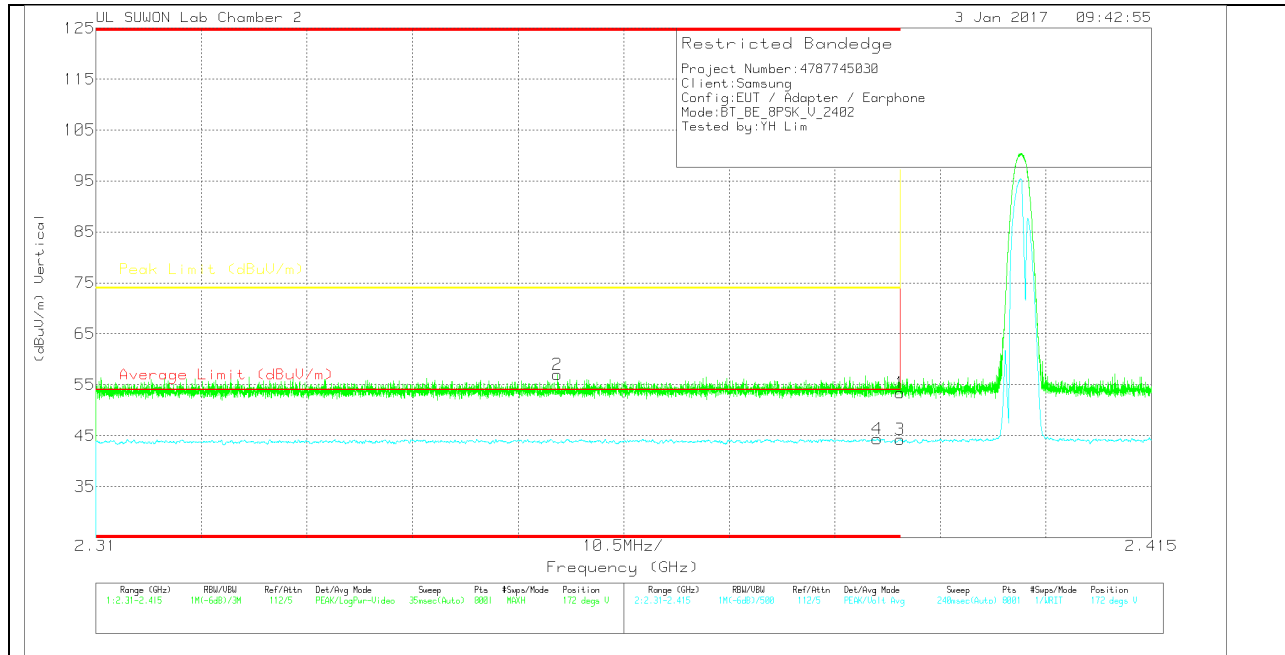
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	10dB[dB]	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	39.68	Pk	31.7	-18.2	53.18	-	-	74	-20.82	165	157	H
2	* 2.352	43.63	Pk	31.6	-18.3	56.93	-	-	74	-17.07	165	157	H
3	* 2.39	30.51	VA1T	31.7	-18.2	44.01	54	-9.99	-	-	165	157	H
4	* 2.388	30.94	VA1T	31.7	-18.2	44.44	54	-9.56	-	-	165	157	H

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

Pk - Peak detector

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

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	10dB[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	39.94	Pk	31.7	-18.2	53.44	-	-	74	-20.56	172	378	V
2	* 2.356	43.66	Pk	31.7	-18.3	57.06	-	-	74	-16.94	172	378	V
3	* 2.39	30.72	VA1T	31.7	-18.2	44.22	54	-9.78	-	-	172	378	V
4	* 2.388	30.87	VA1T	31.7	-18.2	44.37	54	-9.63	-	-	172	378	V

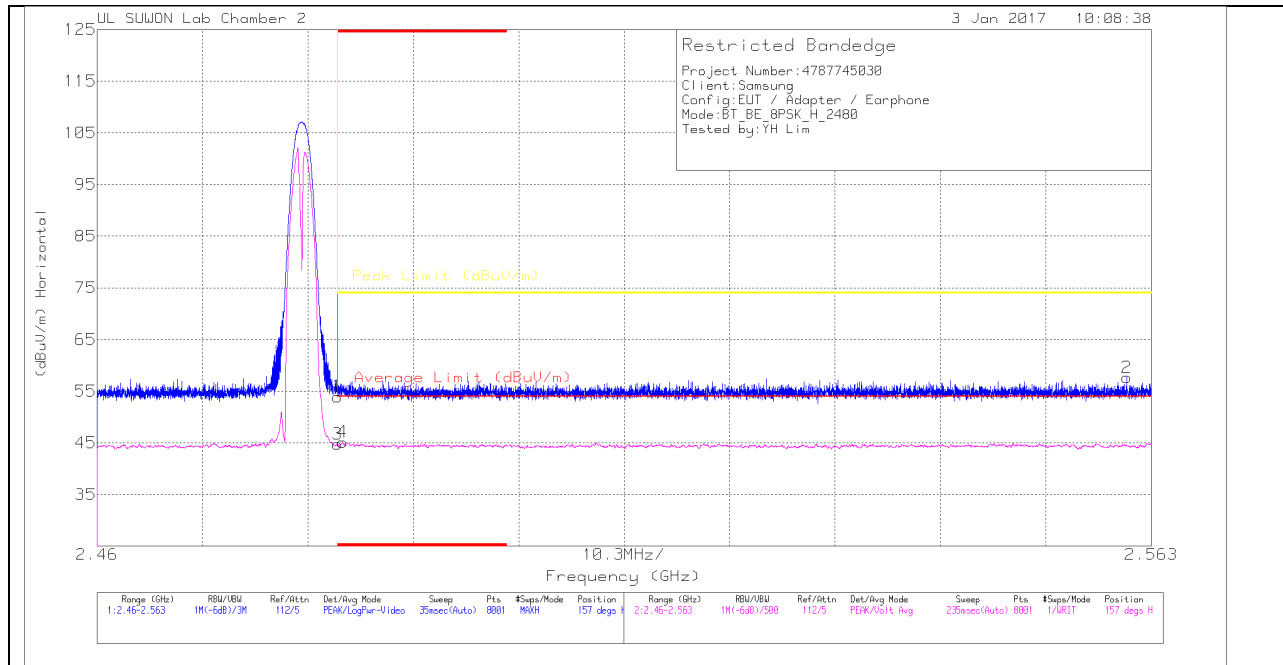
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

VA1T - FHSS: Linear Voltage Average $VB=1/T_{on}$ where: T_{on} is transmit duration

AUTHORIZED BANDEDGE (HIGH CHANNEL)

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

Trace Markers

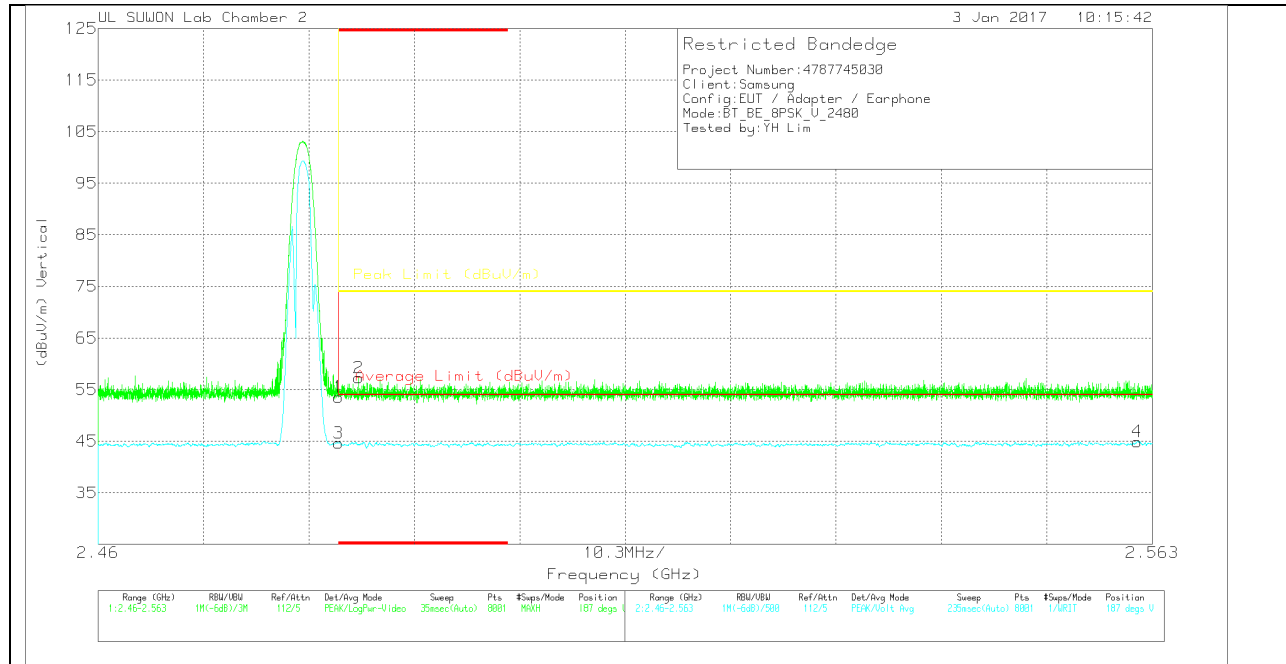
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	10dB[dB]	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	40.12	Pk	31.8	-18	53.92	-	-	74	-20.08	157	151	H
2	2.561	43.74	Pk	31.9	-18	57.64	-	-	74	-16.36	157	151	H
3	* 2.484	30.94	VA1T	31.8	-18	44.74	54	-9.26	-	-	157	151	H
4	* 2.484	31.35	VA1T	31.8	-18	45.15	54	-8.85	-	-	157	151	H

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

Pk - Peak detector

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

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	10dB[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	39.76	Pk	31.8	-18	53.56	-	-	74	-20.44	187	389	V
2	* 2.485	43.51	Pk	31.8	-18	57.31	-	-	74	-16.69	187	389	V
3	* 2.484	30.83	VA1T	31.8	-18	44.63	54	-9.37	-	-	187	389	V
4	2.562	31.03	VA1T	31.9	-18	44.93	54	-9.07	-	-	187	389	V

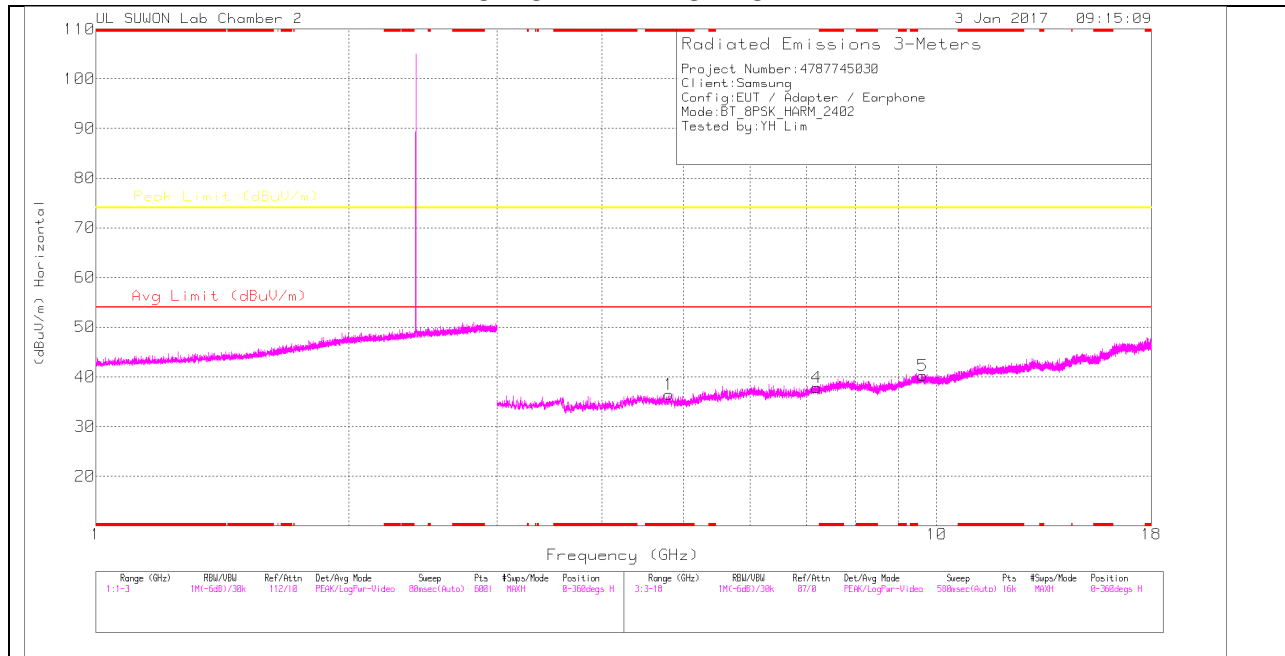
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

Pk - Peak detector

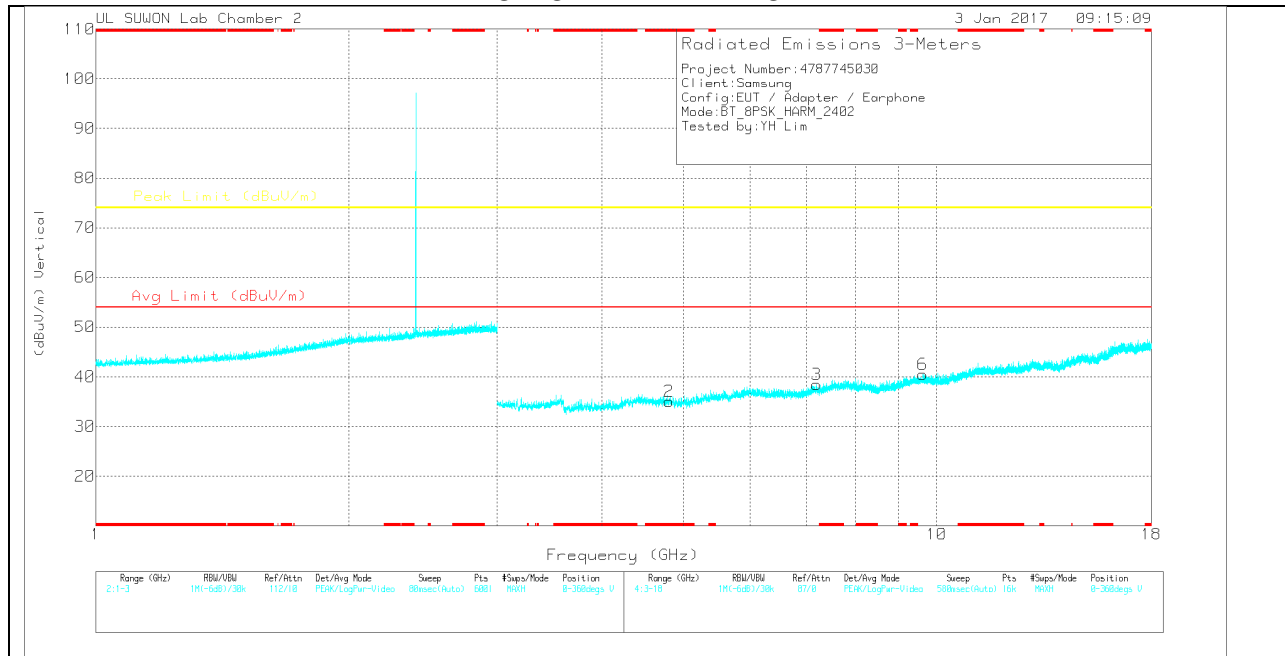
VA1T - FHSS: Linear Voltage Average $V_B = 1/T_{on}$ where: T_{on} is transmit duration

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

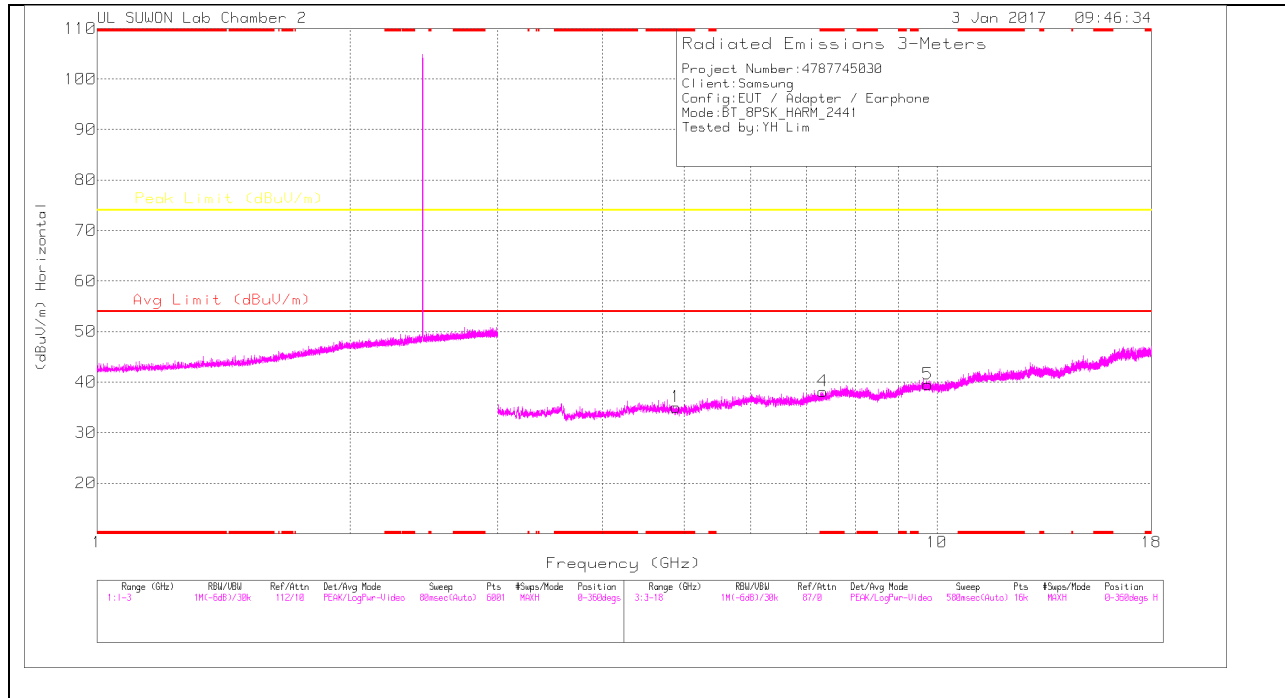
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	3dB[dB]	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.801	26.84	Pk	33.9	-24.3	36.44	-	-	74	-37.56	0-360	250	H
4	7.198	23.78	Pk	35.7	-21.6	37.88	-	-	74	-36.12	0-360	250	H
5	9.622	21.64	Pk	36.9	-18.3	40.24	-	-	74	-33.76	0-360	150	H
2	* 4.806	25.41	Pk	33.9	-24.3	35.01	-	-	74	-38.99	0-360	150	V
3	7.201	24.34	Pk	35.7	-21.6	38.44	-	-	74	-35.56	0-360	150	V
6	9.621	21.86	Pk	36.9	-18.3	40.46	-	-	74	-33.54	0-360	250	V

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

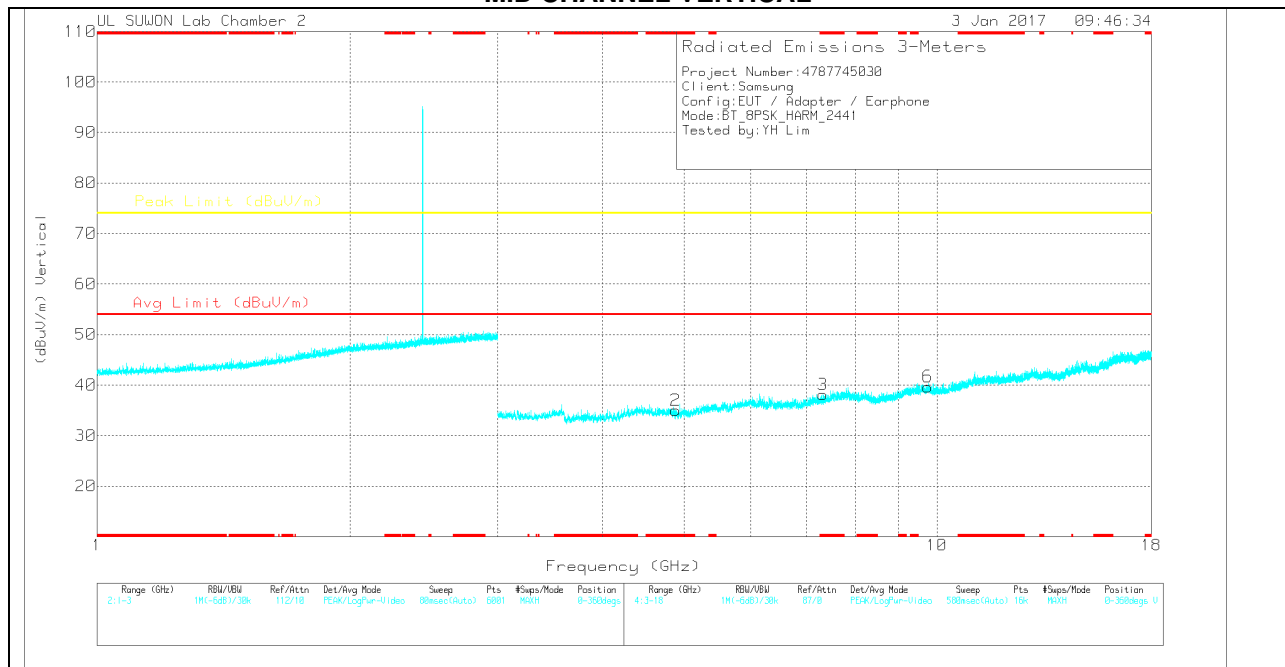
Pk – Peak detector

Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

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

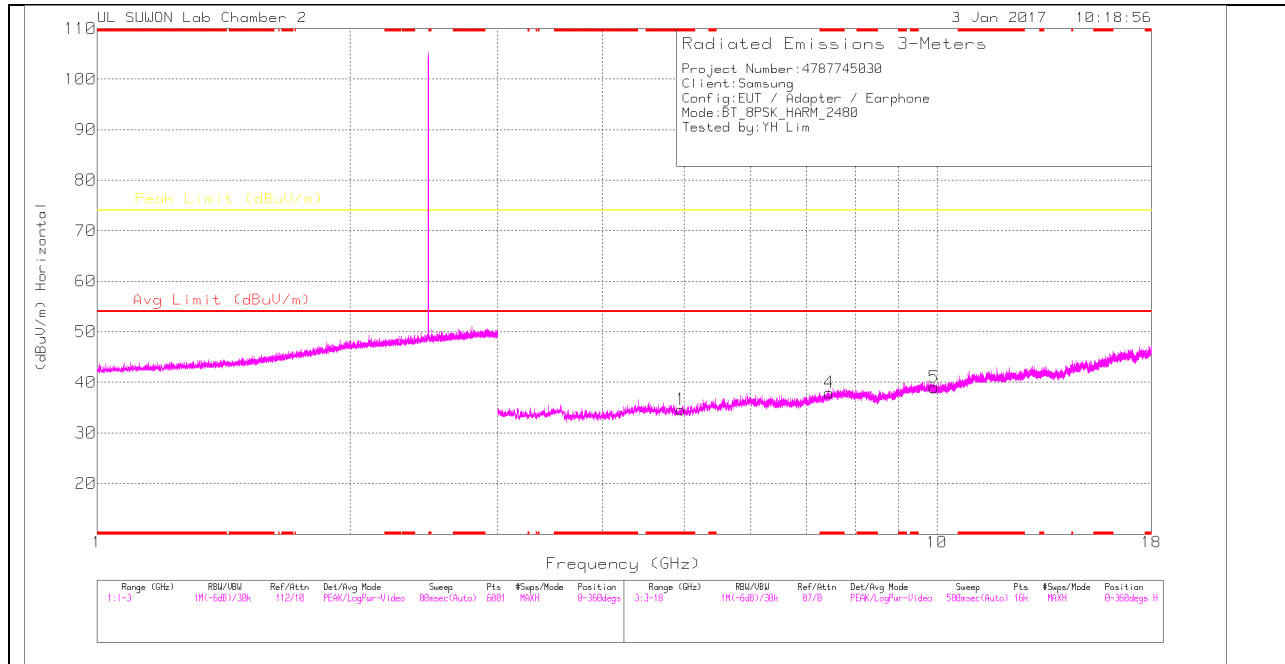
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	3dB[dB]	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.887	25.77	Pk	33.9	-24.6	35.07	-	-	74	-38.93	0-360	250	H
4	* 7.316	24.28	Pk	35.9	-22	38.18	-	-	74	-35.82	0-360	250	H
5	9.756	20.55	Pk	37	-18	39.55	-	-	74	-34.45	0-360	150	H
2	* 4.885	25.68	Pk	33.9	-24.6	34.98	-	-	74	-39.02	0-360	150	V
3	* 7.32	24.21	Pk	35.9	-22	38.11	-	-	74	-35.89	0-360	250	V
6	9.757	20.67	Pk	37	-18	39.67	-	-	74	-34.33	0-360	150	V

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

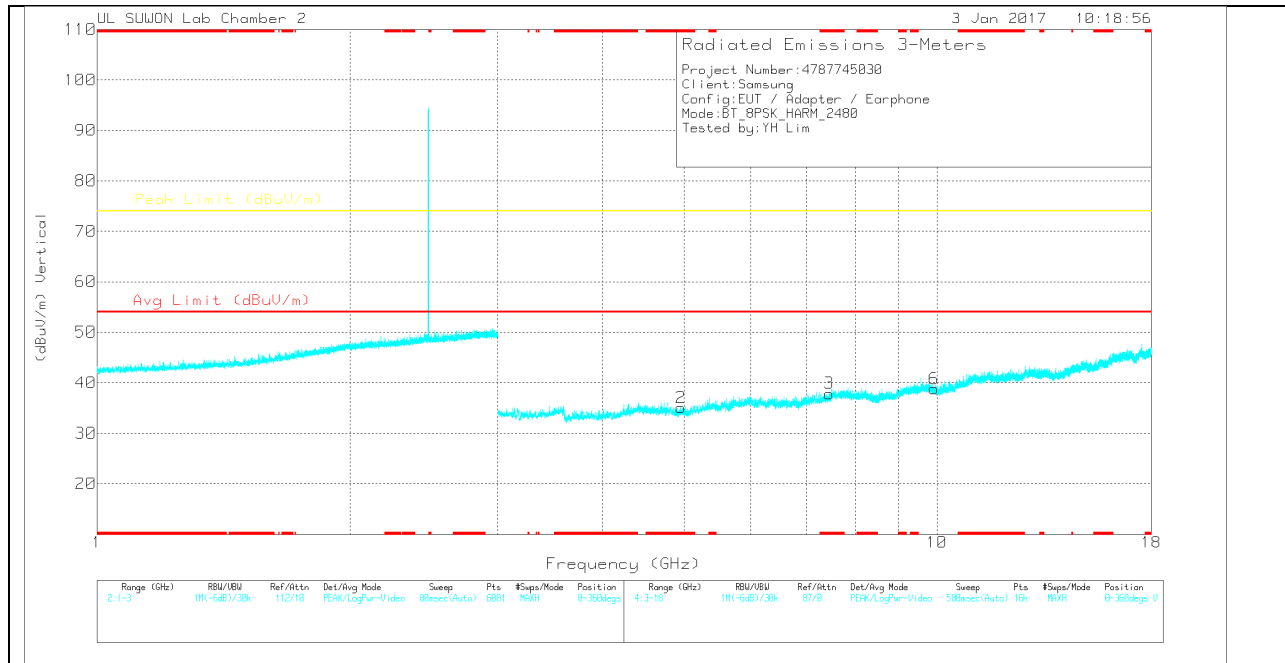
Pk – Peak detector

Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

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 8724)_150 619	3dB[dB]	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.961	25.42	Pk	33.9	-24.7	34.62	-	-	74	-39.38	0-360	150	H
4	* 7.439	22.96	Pk	36	-21	37.96	-	-	74	-36.04	0-360	150	H
5	9.917	19.91	Pk	37.1	-18	39.01	-	-	74	-34.99	0-360	250	H
2	* 4.96	25.84	Pk	33.9	-24.7	35.04	-	-	74	-38.96	0-360	150	V
3	* 7.441	22.86	Pk	36	-21	37.86	-	-	74	-36.14	0-360	150	V
6	9.92	19.68	Pk	37.1	-18	38.78	-	-	74	-35.22	0-360	150	V

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

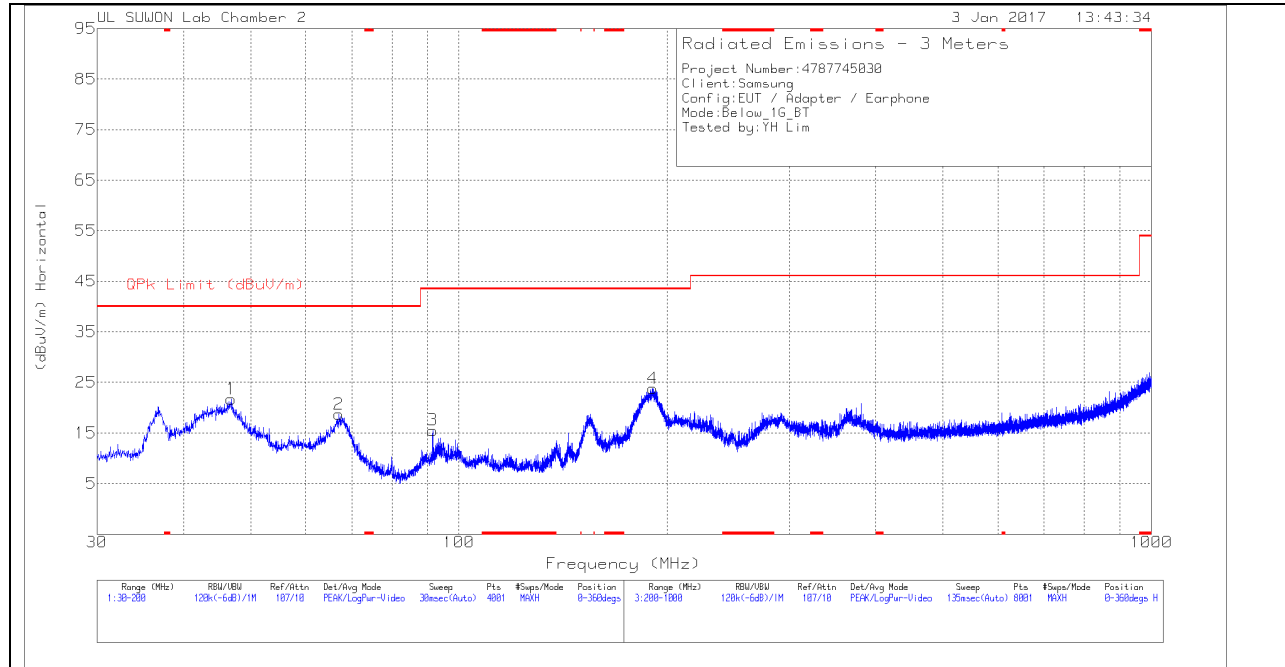
Pk – Peak detector

Note: Only peak measurement was performed. Because peak measurement result of unwanted emission is less than average limit (54dBuV/m).

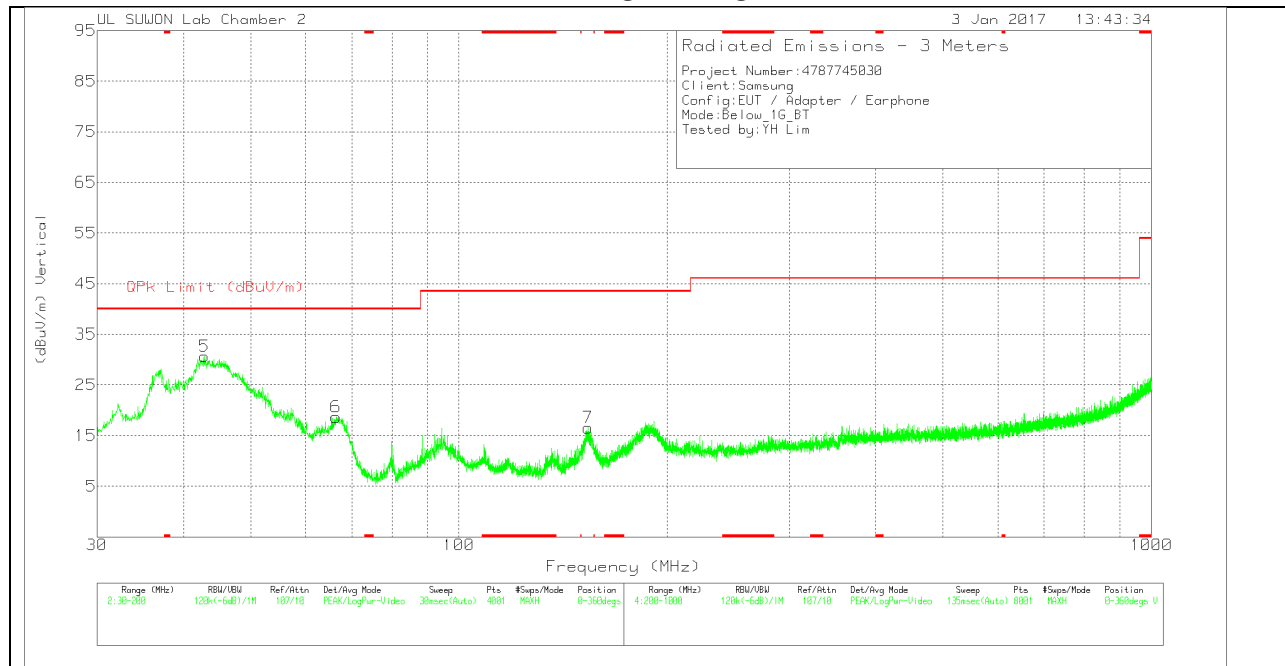
9.3. WORST-CASE BELOW 1 GHz

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	30-1000MHz[dB]	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	46.8725	39.22	Pk	14	-31.5	21.72	40	-18.28	0-360	400	H
2	67.06	39.37	Pk	10.6	-31.3	18.67	40	-21.33	0-360	300	H
3	91.625	36.73	Pk	9.9	-31.1	15.53	43.52	-27.99	0-360	200	H
4	190.395	43.88	Pk	10.5	-30.6	23.78	43.52	-19.74	0-360	200	H
5	42.8775	48.72	Pk	13.4	-31.5	30.62	40	-9.38	0-360	100	V
6	66.4225	39.16	Pk	10.8	-31.3	18.66	40	-21.34	0-360	300	V
7	153.59	38.84	Pk	8.4	-30.7	16.54	43.52	-26.98	0-360	100	V

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

* Decreases with the logarithm of the frequency.

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.

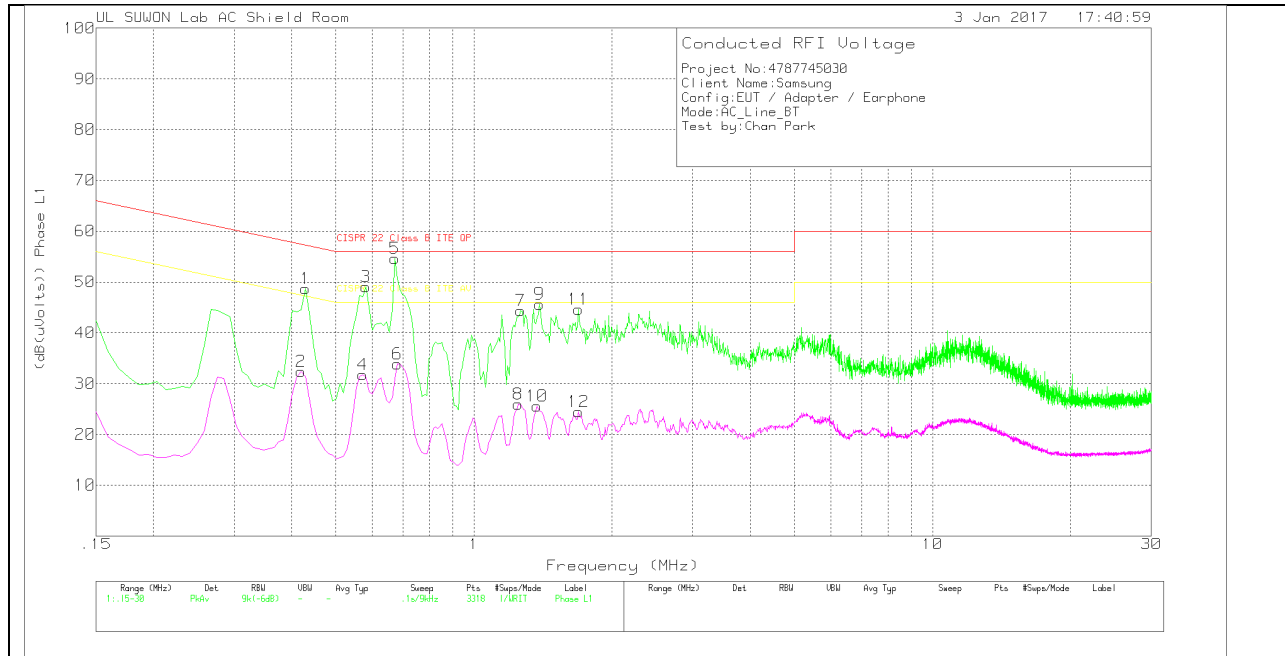
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

6 WORST EMISSIONS

LINE 1 PLOT



LINE 1 RESULTS

Trace Markers

Phase L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101837_w ith ex- cord_L1	CE Shield Room	Corrected Reading (dB(uVolts))	CISPR 22 Class B ITE QP	Margin (dB)	CISPR 22 Class B ITE AV	Margin (dB)
1	.429	38.65	Pk	10.1	0	48.75	57.27	-8.52	-	-
2	.42	22.3	Av	10.1	0	32.4	-	-	47.45	-15.05
3	.582	38.94	Pk	10.1	0	49.04	56	-6.96	-	-
4	.573	21.61	Av	10.1	0	31.71	-	-	46	-14.29
5	.672	44.51	Pk	10.1	0	54.61	56	-1.39	-	-
6	.681	23.81	Av	10.1	0	33.91	-	-	46	-12.09
7	1.266	34.35	Pk	9.9	.1	44.35	56	-11.65	-	-
8	1.248	15.97	Av	9.9	.1	25.97	-	-	46	-20.03
9	1.392	35.77	Pk	9.8	.1	45.67	56	-10.33	-	-
10	1.374	15.68	Av	9.8	.1	25.58	-	-	46	-20.42
11	1.689	34.7	Pk	9.8	.1	44.6	56	-11.4	-	-
12	1.689	14.52	Av	9.8	.1	24.42	-	-	46	-21.58

Pk - Peak detector

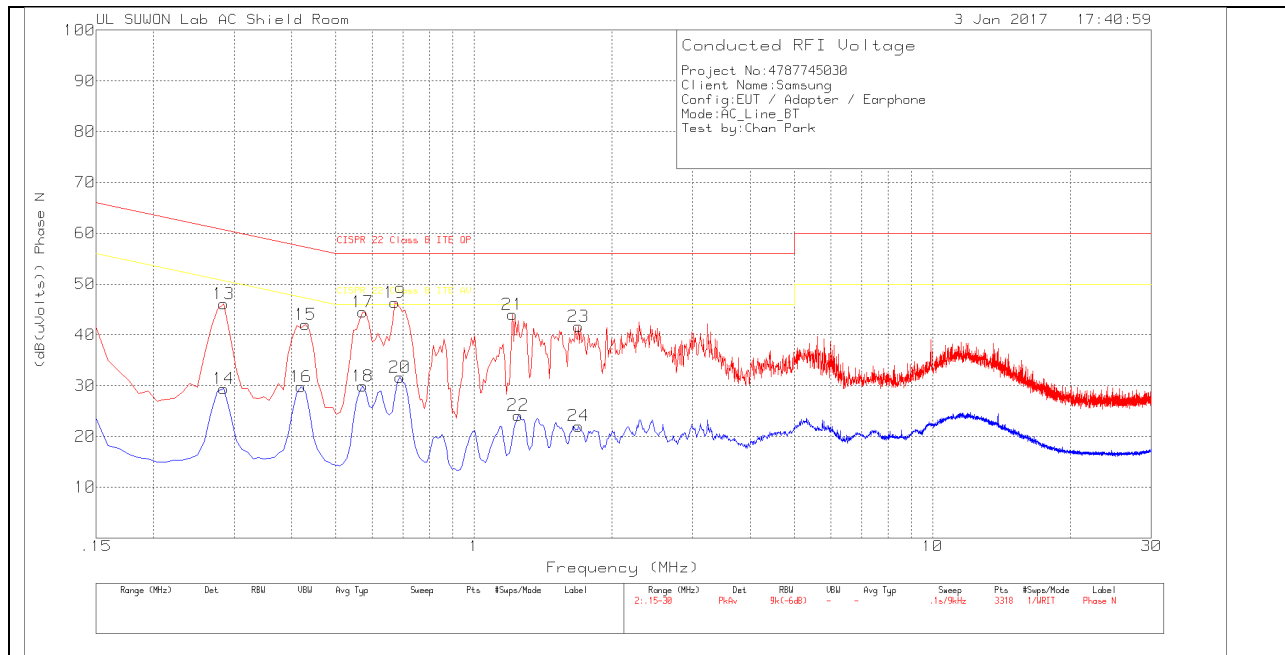
Av - Average detection

Phase L1 .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101837_wit h ex-cord_L1	CE Shield Room	Corrected Reading (dB(uVolts))	CISPR 22 Class B ITE QP	Margin (dB)	CISPR 22 Class B ITE AV	Margin (dB)
.4245	30.9	Qp	10.1	0	41	57.36	-16.36	-	-
.5775	32.36	Qp	10.1	0	42.46	56	-13.54	-	-
.6765	34.52	Qp	10.1	0	44.62	56	-11.38	-	-
1.2705	28.17	Qp	9.9	.1	38.17	56	-17.83	-	-
1.3875	26.64	Qp	9.8	.1	36.54	56	-19.46	-	-
1.689	25.23	Qp	9.8	.1	35.13	56	-20.87	-	-

Qp - Quasi-Peak detector

LINE 2 PLOT



LINE 2 RESULTS

Trace Markers

Phase N .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	101837_w ith ex- cord_N	CE Shield Room	Corrected Reading (dB(uVolts))	CISPR 22 Class B ITE QP	Margin (dB)	CISPR 22 Class B ITE AV	Margin (dB)
13	.285	36.27	Pk	9.8	0	46.07	60.67	-14.6	-	-
14	.285	19.61	Av	9.8	0	29.41	-	-	50.67	-21.26
15	.429	31.98	Pk	10.1	0	42.08	57.27	-15.19	-	-
16	.42	19.64	Av	10.1	0	29.74	-	-	47.45	-17.71
17	.573	34.4	Pk	10.1	0	44.5	56	-11.5	-	-
18	.573	19.82	Av	10.1	0	29.92	-	-	46	-16.08
19	.672	36.37	Pk	10	0	46.37	56	-9.63	-	-
20	.69	21.68	Av	10	0	31.68	-	-	46	-14.32
21	1.212	34.15	Pk	9.8	.1	44.05	56	-11.95	-	-
22	1.248	14.25	Av	9.8	.1	24.15	-	-	46	-21.85
23	1.689	31.73	Pk	9.8	.1	41.63	56	-14.37	-	-
24	1.689	12.15	Av	9.8	.1	22.05	-	-	46	-23.95

Pk - Peak detector

Av - Average detection

Phase N .15 - 30MHz

Frequency (MHz)	Meter Reading (dBuV)	Det	101837_wit h ex-cord_N	CE Shield Room	Corrected Reading (dB(uVolts))	CISPR 22 Class B ITE QP	Margin (dB)	CISPR 22 Class B ITE AV	Margin (dB)
.2832	28.75	Qp	9.8	0	38.55	60.72	-22.17	-	-
.4272	27.68	Qp	10.1	0	37.78	57.31	-19.53	-	-
.5748	28.9	Qp	10.1	0	39	56	-17	-	-
.6765	30.82	Qp	10	0	40.82	56	-15.18	-	-
1.212	21.66	Qp	9.8	.1	31.56	56	-24.44	-	-
1.6908	23.44	Qp	9.8	.1	33.34	56	-22.66	-	-

Qp - Quasi-Peak detector