



FCC CFR47 PART 15 SUBPART C

Bluetooth

CERTIFICATION TEST REPORT

FOR

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

MODEL NUMBER : SM-G600S

FCC ID: A3LSMG600S

REPORT NUMBER: 16K23462-E3V2

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Revision History

Rev.	Issue Date	Revisions	Revised By
V1	05/31/16	Initial issue	Junwhan Lee
V2	06/02/16	Added Note on section 9	Junwhan Lee

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SAMSUNG ELECTRONICS CO., LTD.

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

MODEL NUMBER: SM-G600S

SAMPLE IMEI NUMBER: 3599 3607 0010 94, 3599 3607 0010 97 (RADIATED);
3599 3607 0010 96 (CONDUCTED)

DATE TESTED: MAY 11, 2016 - MAY 24, 2016

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 C63.10-2009, 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:

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

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 GSM/WCDMA/LTE Phone + BT/BLE, DTS b/g/n, 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	11.16	13.05
		Peak	11.28	13.44
	Enhanced Pi/4-DPSK	Average	8.93	7.81
		Peak	11.42	13.86
	Enhanced 8PSK	Average	8.93	7.82
		Peak	11.82	15.22

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.

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes an FPCB antenna, with a maximum gain of -2.41 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 X 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-TA50KWK	DK1GB23VS/A-E	N/A
Data Cable	SAMSUNG	EP-DG920UWE	N/A	N/A
Earphone	SAMSUNG	EHS64AVFWE	N/A	N/A

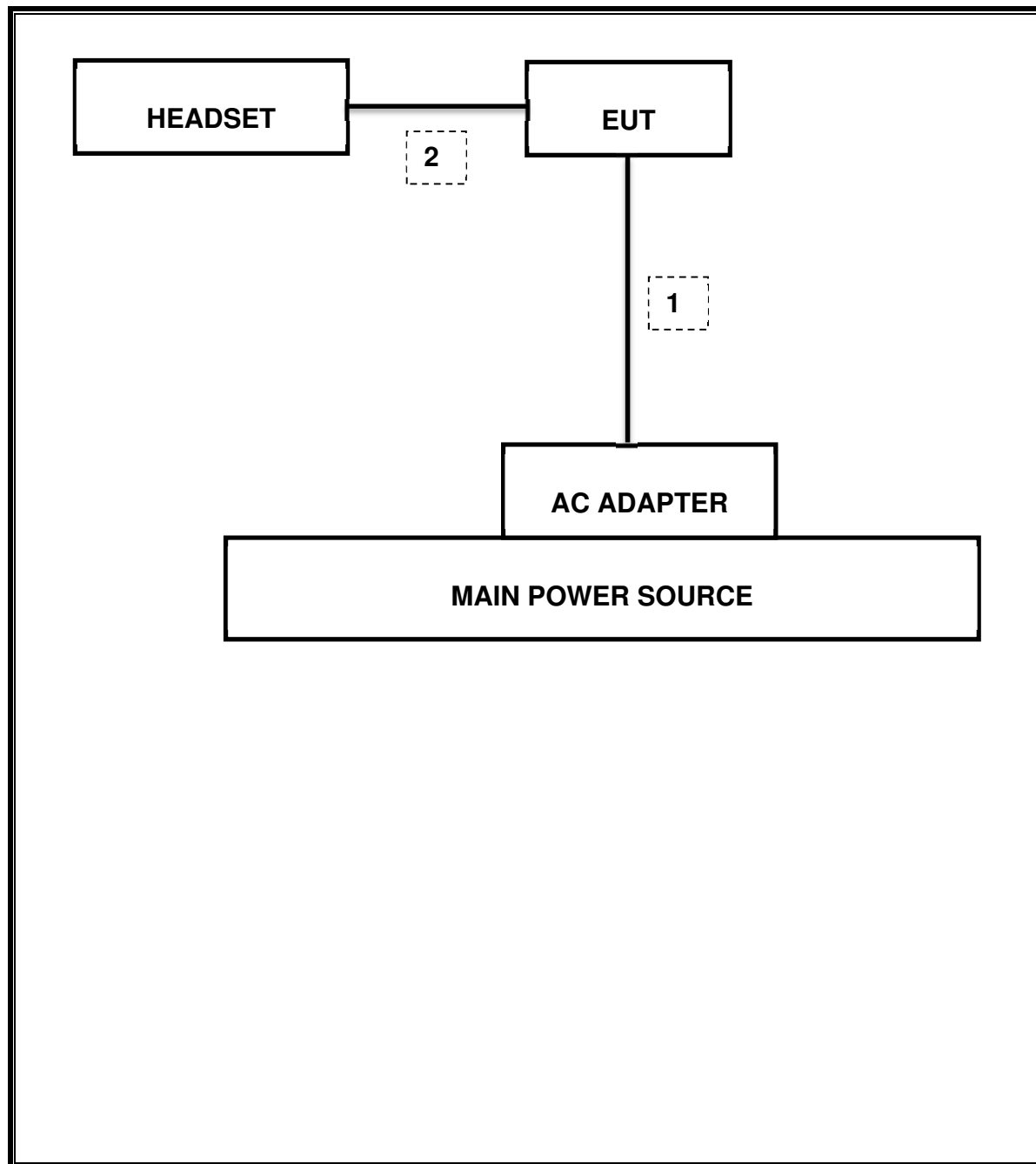
I/O CABLES

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
1	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	11-17-16
Antenna, Bilog, 30MHz-1GHz	SCHWARZBECK	VULB9163	749	04-25-17
Antenna, Horn, 18 GHz	ETS	3115	00167211	09-20-16
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
Preamplifier, 1000 MHz	Sonoma	310N	341282	08-18-16
Preamplifier, 1000 MHz	Sonoma	310N	351741	08-18-16
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1876511	08-18-16
Preamplifier, 18 GHz	Miteq	AFS42-00101800-25-S-42	1896138	08-18-16
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54170614	08-19-16
Spectrum Analyzer, 44 GHz	Agilent / HP	N9030A	MY54490312	08-19-16
Bluetooth Tester	TESCOM	TC-3000C	3000C000546	08-18-16
Average Power Sensor	R&S	NRZ-Z91	102681	08-18-16
Average Power Sensor	Agilent / HP	U2000	MY54270007	08-18-16
EMI Test Receive, 40 GHz	R&S	ESU40	100439	08-19-16
EMI Test Receive, 40 GHz	R&S	ESU40	100457	08-19-16
EMI Test Receive, 3 GHz	R&S	ESR3	101832	08-19-16
Attenuator / Switch driver	HP	11713A	3748A04272	N/A
Low Pass Filter 3GHz	Micro-Tronics	LPS17541	009	08-18-16
Low Pass Filter 3GHz	Micro-Tronics	LPS17541	015	08-18-16
High Pass Filter 5GHz	Micro-Tronics	HPS17542	009	08-18-16
High Pass Filter 6GHz	Micro-Tronics	HPM17543	010	08-18-16
High Pass Filter 5GHz	Micro-Tronics	HPS17542	016	08-18-16
High Pass Filter 6GHz	Micro-Tronics	HPM17543	015	08-18-16
LISN	R&S	ENV-216	101836	08-19-16
LISN	R&S	ENV-216	101837	08-19-16
Combiner	WEINSCHEL	1575	2152	08-20-16

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	-37.177 dBm
15.247 (b)(1)	TX conducted output power	<21dBm		Pass	11.823 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	0.34584 sec
15.207 (a)	AC Power Line conducted emissions	Section 10	Power Line conducted	Pass	44.76 dBuV (PK)
15.205, 15.209	Radiated Spurious Emission	< 54dBuV/m	Radiated	Pass	51.89 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	943.400	893.840
Mid	2441	887.500	895.280
High	2480	971.500	865.370
Worst		971.500	895.280

8.1.2. ENHANCED DATA RATE Pi/4-DQPSK MODULATION

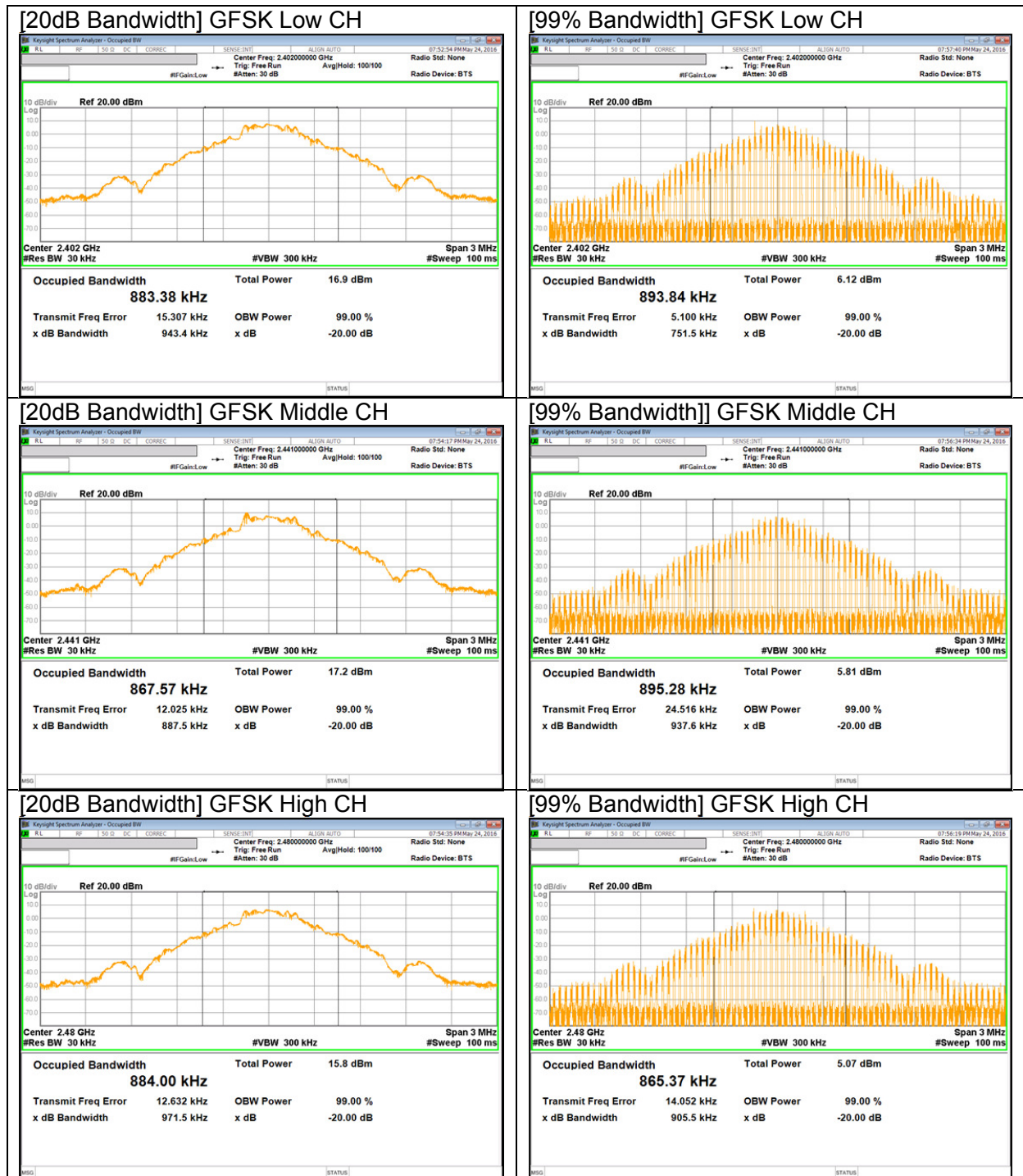
Channel	Frequency [MHz]	20 dB Bandwidth [MHz]	99% Bandwidth [MHz]
Low	2402	1.231	1.164
Mid	2441	1.229	1.162
High	2480	1.229	1.163
Worst		1.231	1.164

8.1.3. ENHANCED DATA RATE 8PSK MODULATION

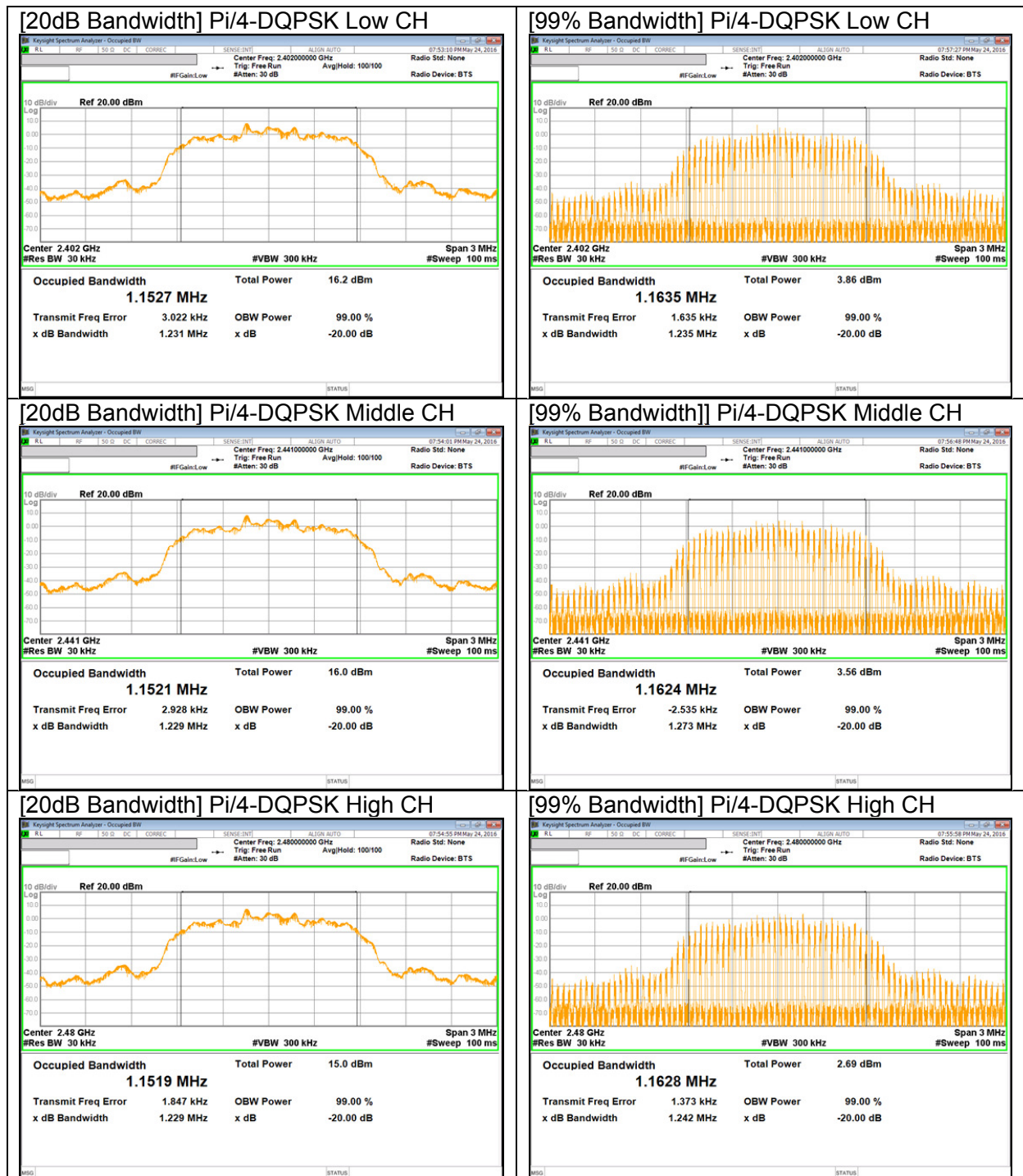
Channel	Frequency [MHz]	20 dB Bandwidth [MHz]	99% Bandwidth [MHz]
Low	2402	1.255	1.161
Mid	2441	1.260	1.160
High	2480	1.261	1.162
Worst		1.261	1.162

8.1.4. 20 dB AND 99% BANDWIDTH PLOTS

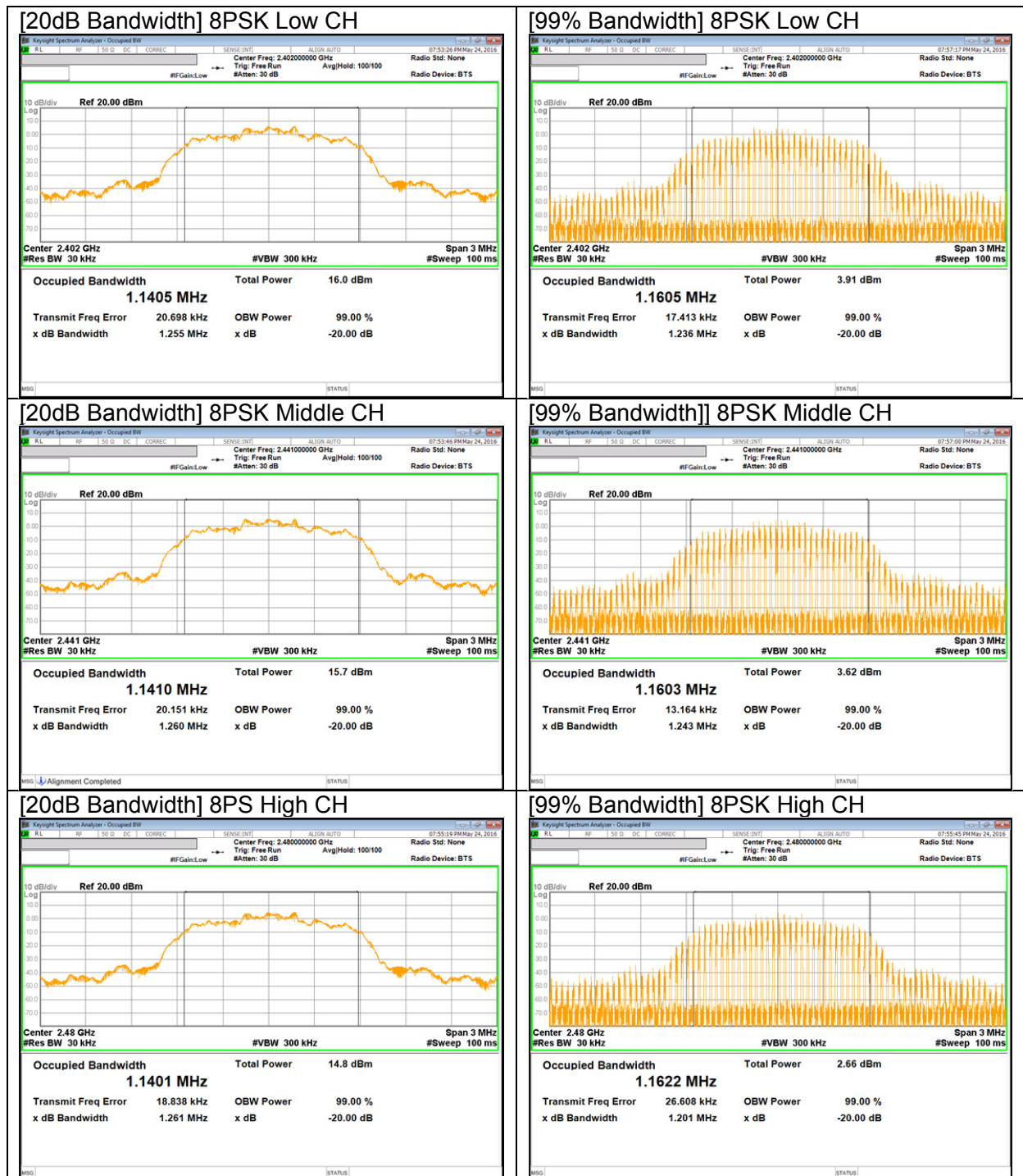
GFSK BANDWIDTH



Pi/4-DQPSK BANDWIDTH



8PSK BANDWIDTH



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

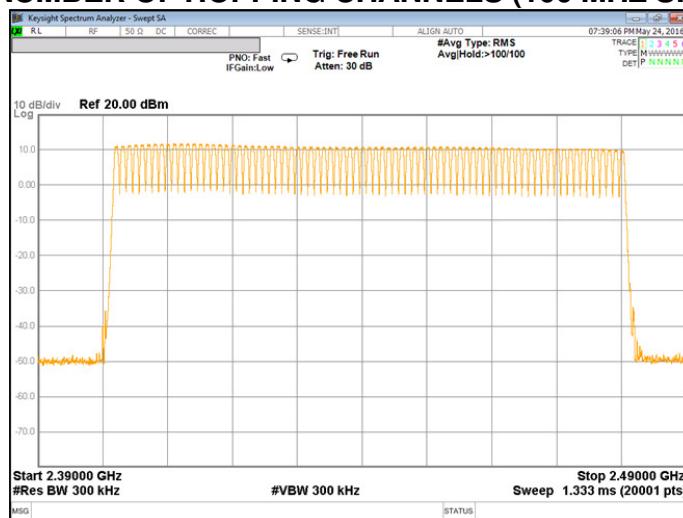
DA 00-705: The transmitter output is connected to a spectrum analyzer. The span is set to cover the entire authorized band, in either a single sweep or in multiple contiguous sweeps. The RBW is set to a maximum of 1 % of the span. The analyzer is set to Max Hold.

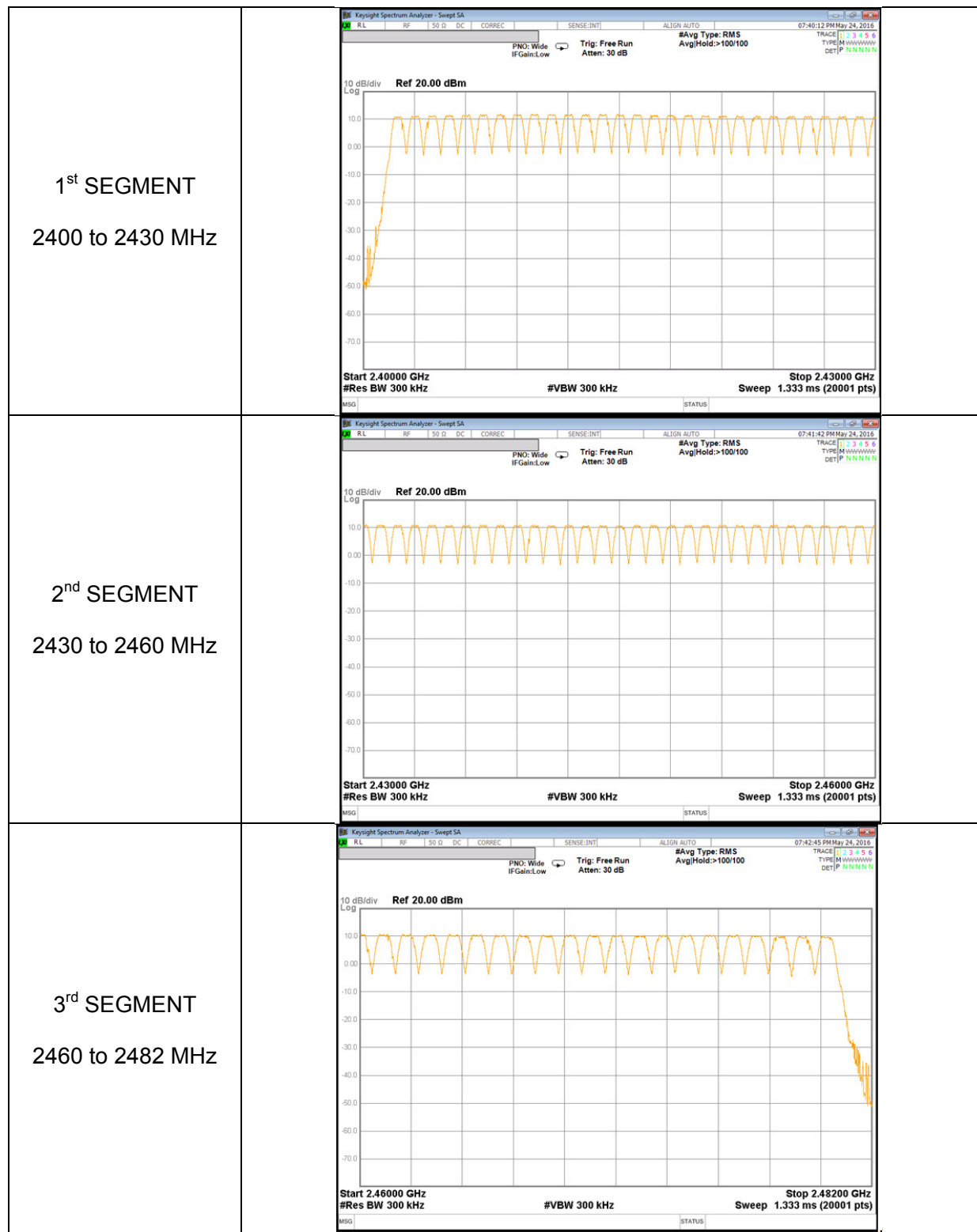
RESULTS

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.

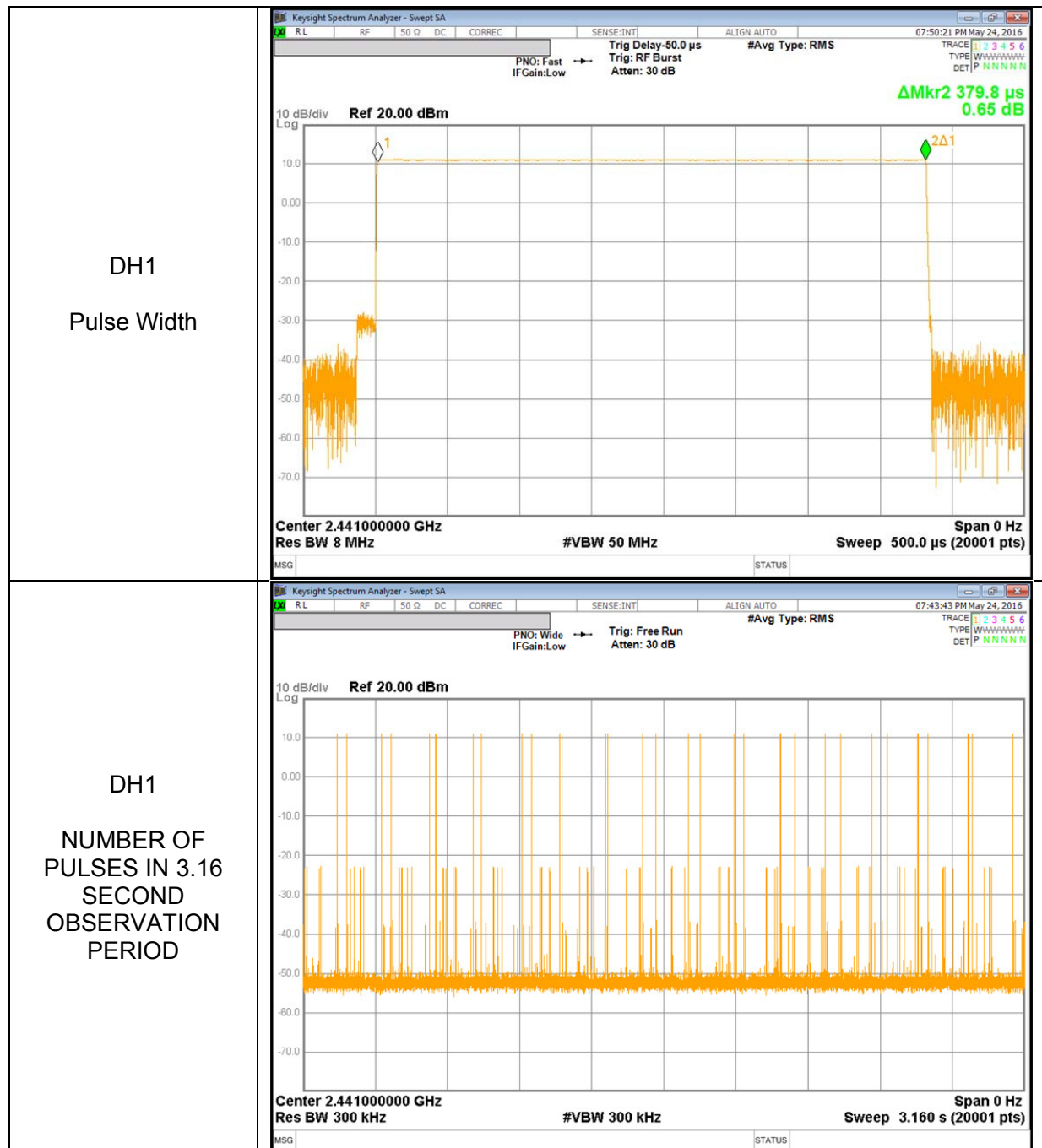
The average time of occupancy in the specified 31.6 second period (79 channels * 0.4 s) is equal to $10 * (\# \text{ of pulses in } 3.16 \text{ s}) * \text{pulse width}$.

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	0.380	32	0.121536	0.4	-0.2785
DH3	1.636	17	0.278120	0.4	-0.1219
DH5	2.882	12	0.345840	0.4	-0.0542
DH Packet	Pulse Width [msec]	Number of Pulses in 0.8 seconds	Average Time of Occupancy [sec]	Limit [sec]	Margin [sec]
GFSK AFH					
DH1	0.380	8	0.030384	0.4	-0.36962
DH3	1.636	4.25	0.069530	0.4	-0.33047
DH5	2.882	3	0.086460	0.4	-0.31354

DH1



DH3

Keyight Spectrum Analyzer - Swept SA

RL RF 50 Ω DC CORREC SENSE:INT ALIGN AUTO 07:49:35 PM May 24, 2016

PNO: Fast IF Gain: Low Trig Delay: 200.0 μ s #Avg Type: RMS
Trig: RF Burst Atten: 30 dB

TRACE 1 2 3 4 5 6
TYPE W W W W W W W W
DET P N N N N N

Δ Mkr2 1.636 ms
0.20 dB

10 dB/div Log Ref 20.00 dBm

Center 2.441000000 GHz Span 0 Hz
Res BW 8 MHz #VBW 50 MHz Sweep 2.000 ms (20001 pts)

MSG STATUS

Keyight Spectrum Analyzer - Swept SA

RL RF 50 Ω DC CORREC SENSE:INT ALIGN AUTO 07:47:06 PM May 24, 2016

PNO: Wide IF Gain: Low Trig: Free Run #Avg Type: RMS
Atten: 30 dB

TRACE 1 2 3 4 5 6
TYPE W W W W W W W W
DET P N N N N N

10 dB/div Log Ref 20.00 dBm

Center 2.441000000 GHz Span 0 Hz
Res BW 300 kHz #VBW 300 kHz Sweep 3.160 s (20001 pts)

MSG STATUS

DH5

Keyight Spectrum Analyzer - Swept SA

RL RF 50 Ω DC CORREC SENSE:INT ALIGN AUTO 07:48:52 PM May 24, 2016

PNO: Fast IFGain:Low Trig Delay:300.0 μ s #Avg Type: RMS
Trig: RF Burst Atten: 30 dB

TRACE 1 2 3 4 5 6
TYPE W W W W W W W W
DET P N N N N N

Δ Mkr2 2.882 ms
-0.04 dB

10 dB/div Log Ref 20.00 dBm

Center 2.441000000 GHz Res BW 8 MHz #VBW 50 MHz Span 0 Hz Sweep 3.500 ms (20001 pts)

MSG STATUS

Keyight Spectrum Analyzer - Swept SA

RL RF 50 Ω DC CORREC SENSE:INT ALIGN AUTO 07:47:46 PM May 24, 2016

PNO: Wide IFGain:Low Trig: Free Run Atten: 30 dB

#Avg Type: RMS

TRACE 1 2 3 4 5 6
TYPE W W W W W W W W
DET P N N N N N

10 dB/div Log Ref 20.00 dBm

Center 2.441000000 GHz Res BW 300 kHz #VBW 300 kHz Span 0 Hz Sweep 3.160 s (20001 pts)

MSG STATUS

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	11.284	21	-9.716
Middle	2441	11.229	21	-9.771
High	2480	10.194	21	-10.806
Worst		11.284	21	-9.716

8.5.2. ENHANCED DATA RATE Pi/4-DPSK MODULATION

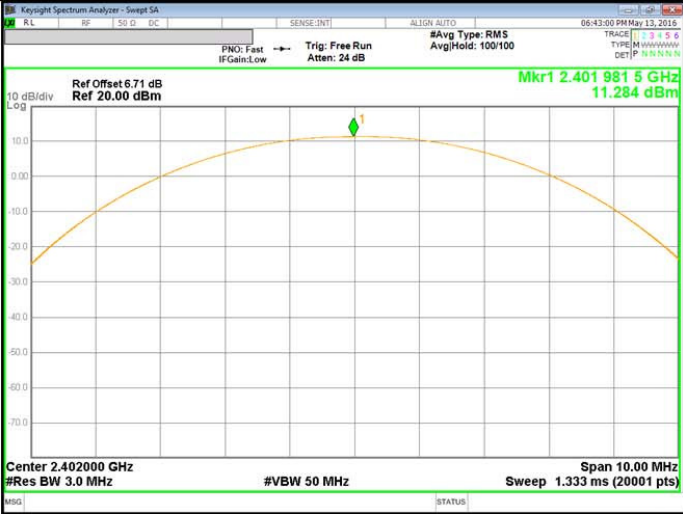
Channel	Frequency [MHz]	Output Power [dBm]	Limit [dBm]	Margin [dB]
Low	2402	11.417	21	-9.583
Middle	2441	11.282	21	-9.718
High	2480	10.224	21	-10.776
Worst		11.417	21	-9.583

8.5.3. ENHANCED DATA RATE 8PSK MODULATION

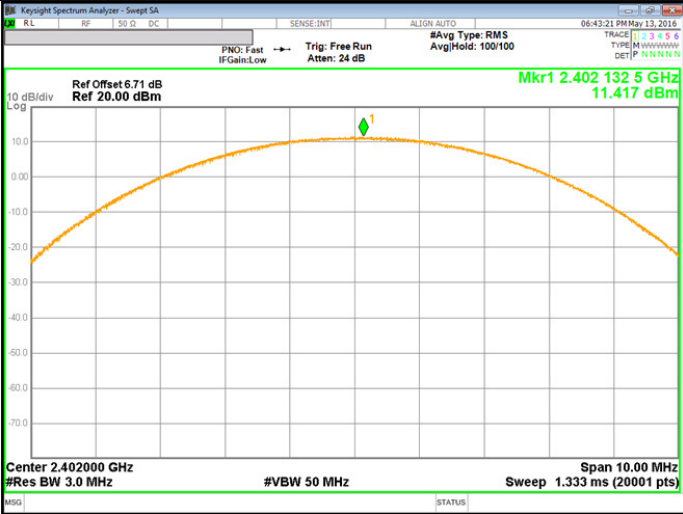
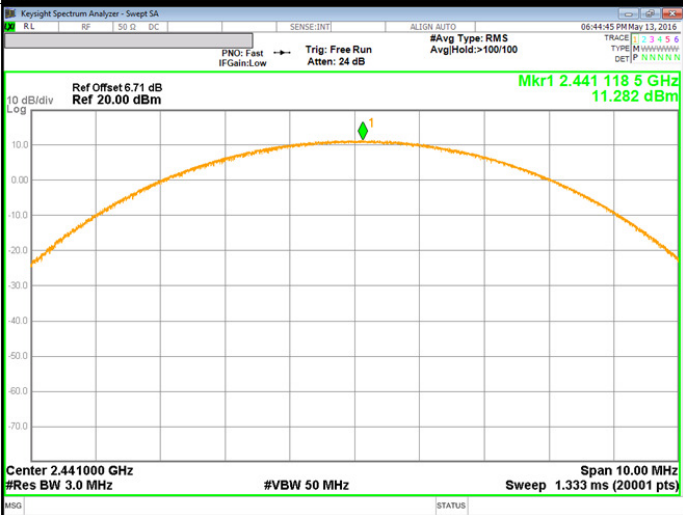
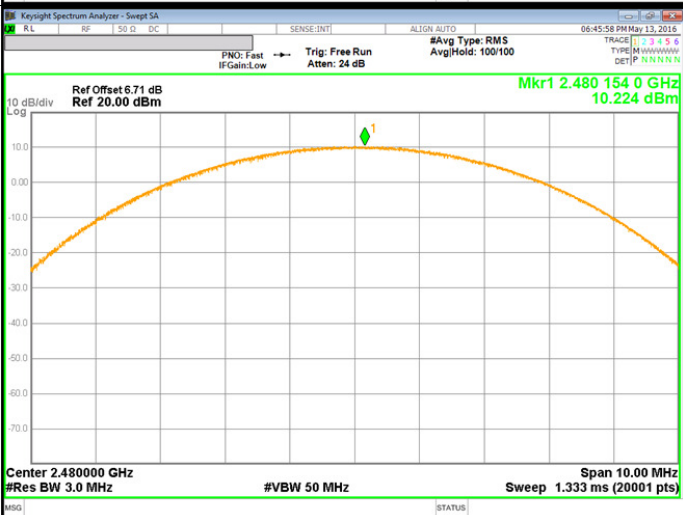
Channel	Frequency [MHz]	Output Power [dBm]	Limit [dBm]	Margin [dB]
Low	2402	11.823	21	-9.177
Middle	2441	11.714	21	-9.286
High	2480	10.694	21	-10.306
Worst		11.823	21	-9.177

8.5.4. OUTPUT POWER PLOTS

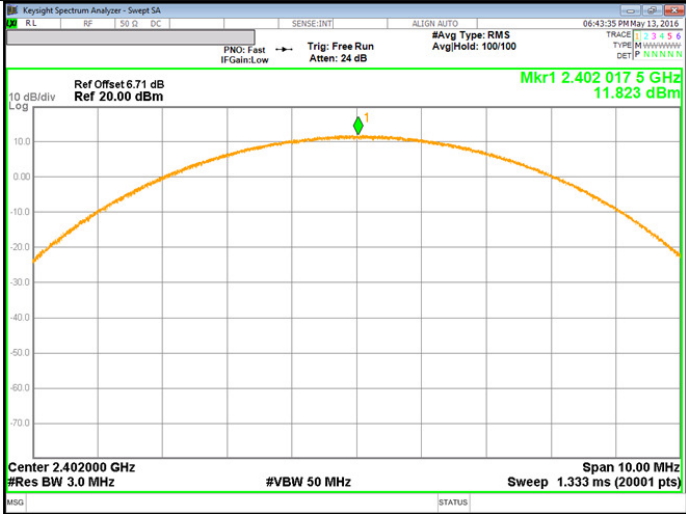
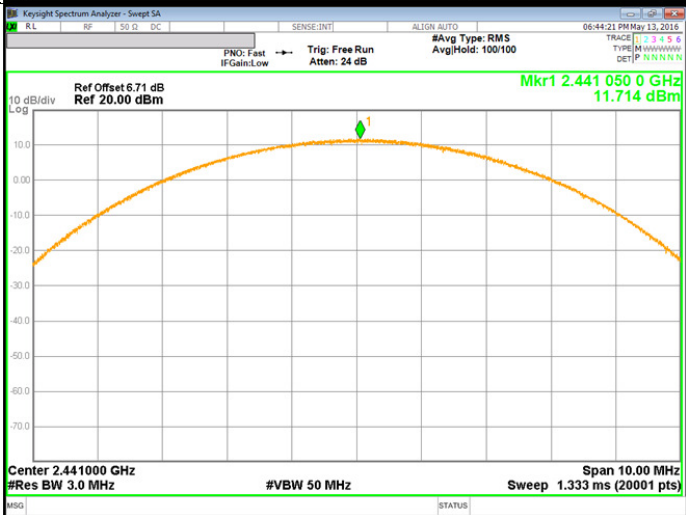
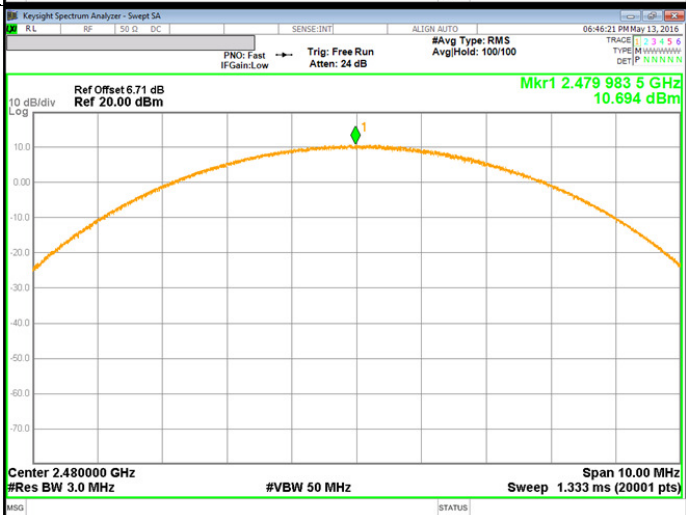
GFSK OUTPUT POWER

GFSK Low CH	
GFSK Middle CH	
GFSK High CH	

Pi/4-DPSK OUTPUT POWER

Pi/4-DPSK Low CH	
Pi/4-DPSK Middle CH	
Pi/4-DPSK High CH	

8PSK OUTPUT POWER

8PSK Low CH	
8PSK Middle CH	
8PSK High CH	

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	11.157	13.05
Middle	2441	11.046	12.72
High	2480	10.023	10.05

8.6.2. DATA RATE PI/4-DQPSK MODULATION

Channel	Frequency [MHz]	AV power [dBm]	AV power [mW]
Low	2402	8.925	7.81
Middle	2441	8.789	7.57
High	2480	7.784	6.00

8.6.3. ENHANCED DATA RATE 8PSK MODULATION

Channel	Frequency [MHz]	AV power [dBm]	AV power [mW]
Low	2402	8.931	7.82
Middle	2441	8.793	7.57
High	2480	7.796	6.02

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.

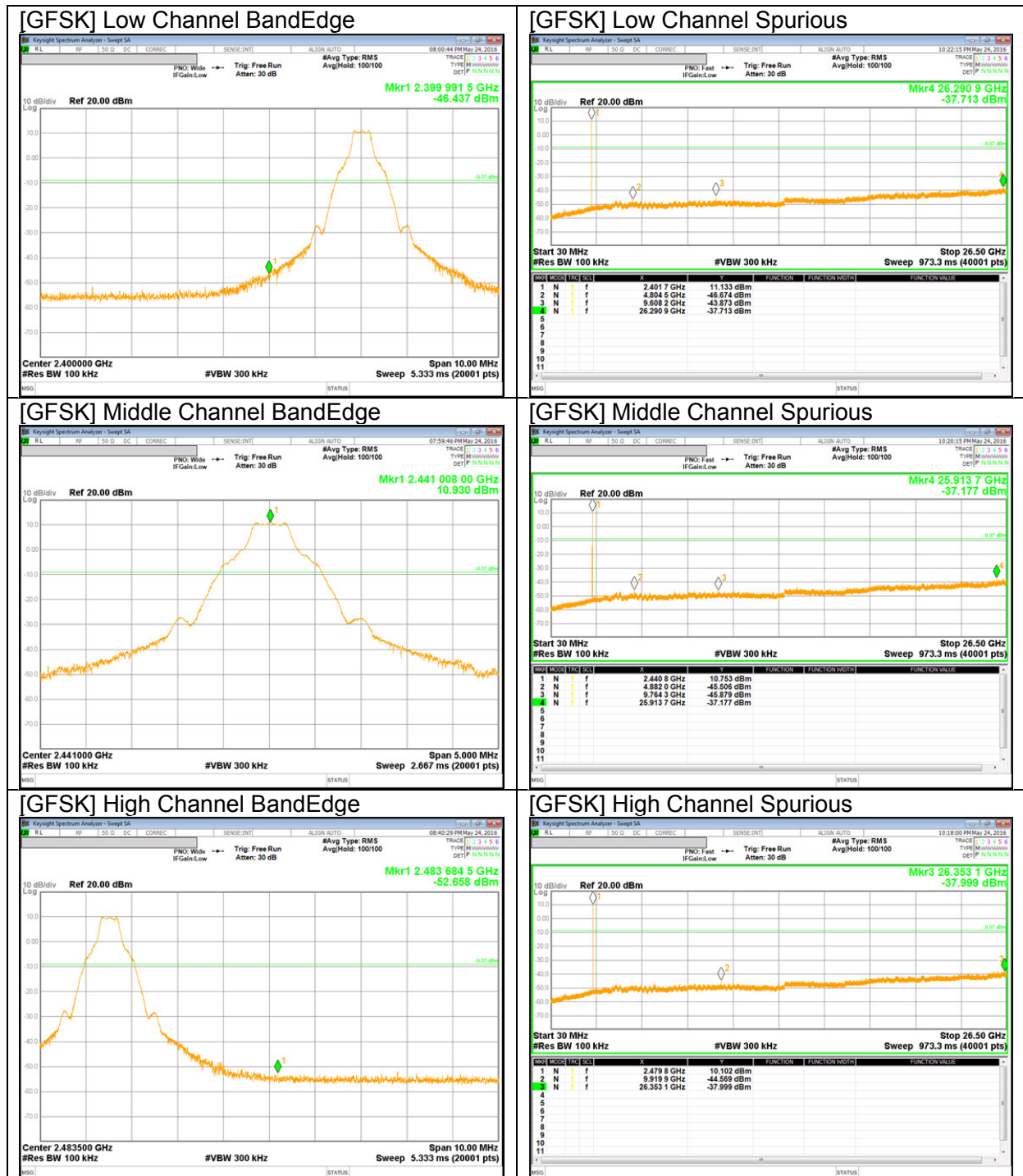
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

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

RESULTS

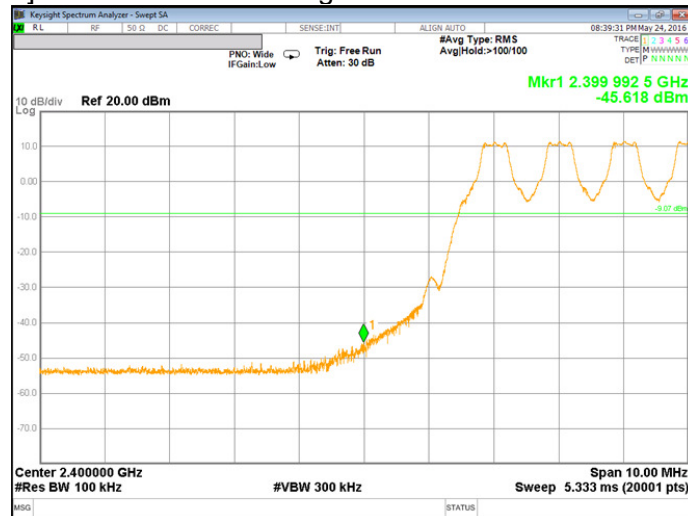
8.7.1. BASIC DATA RATE GFSK MODULATION

GFSK Mode

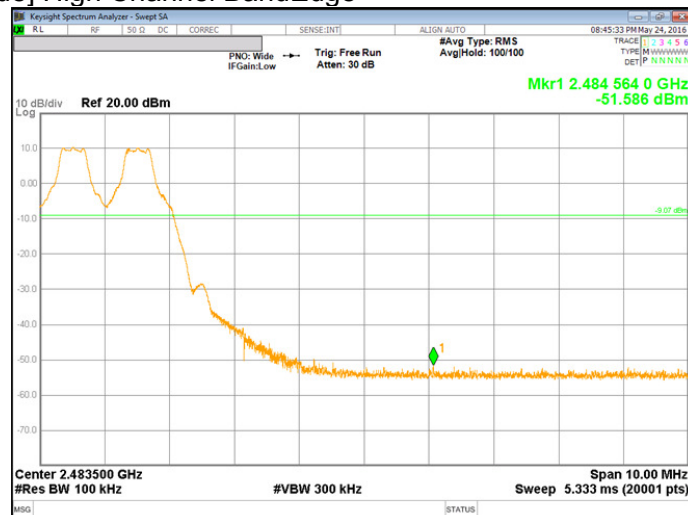


BandEdge Emission at GFSK Hopping Mode

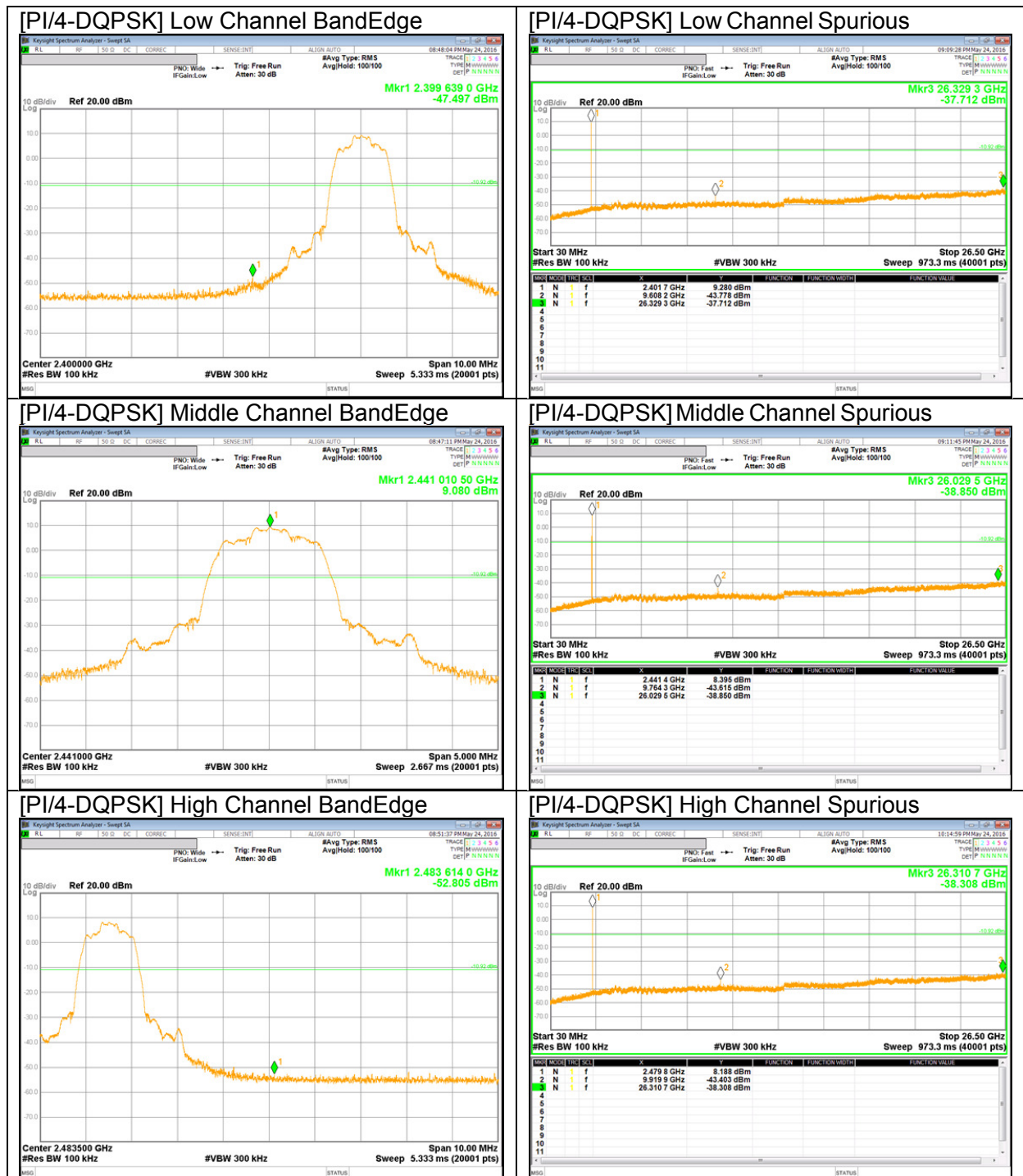
[GFSK Hopping Mode] Low Channel BandEdge



[GFSK Hopping Mode] High Channel BandEdge

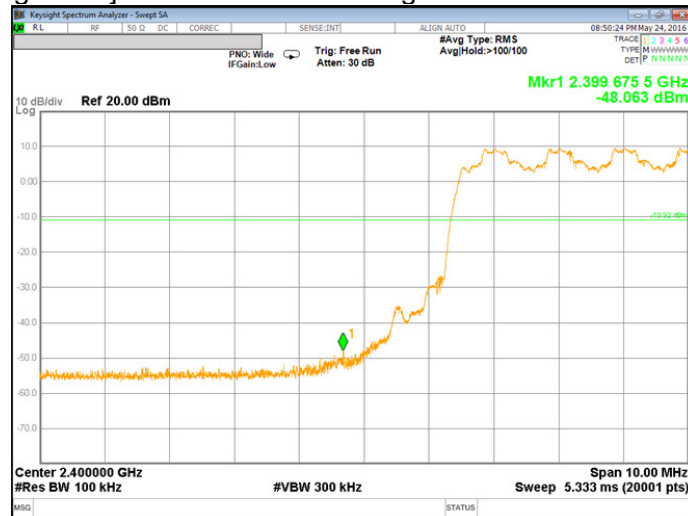


PI/4-DQPSK Mode



BandEdge Emission at PI/4-DQPSK Hopping Mode

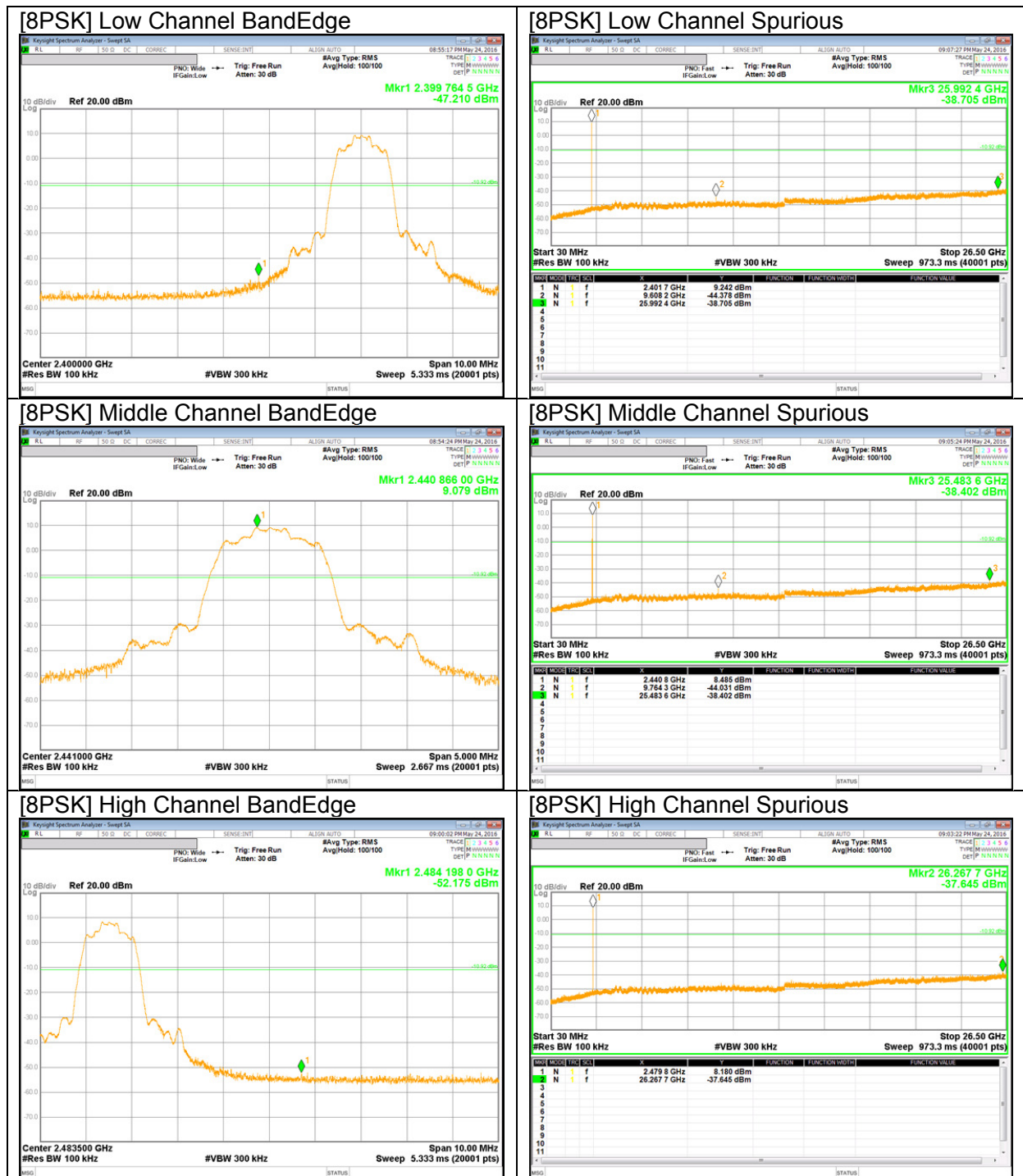
[PI/4-DQPSK Hopping Mode] Low Channel BandEdge



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



8PSK Mode

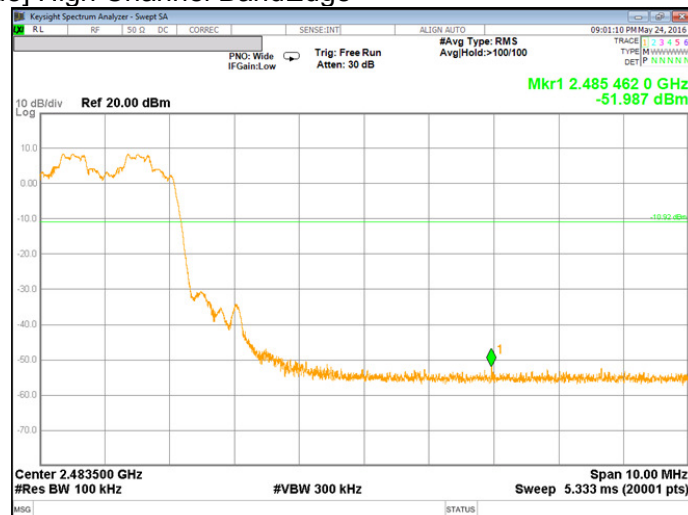


BandEdge Emission at 8PSK Hopping Mode

[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

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.

$GFSK = 1/T = 1 / 0.0029S = 350Hz$.

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.

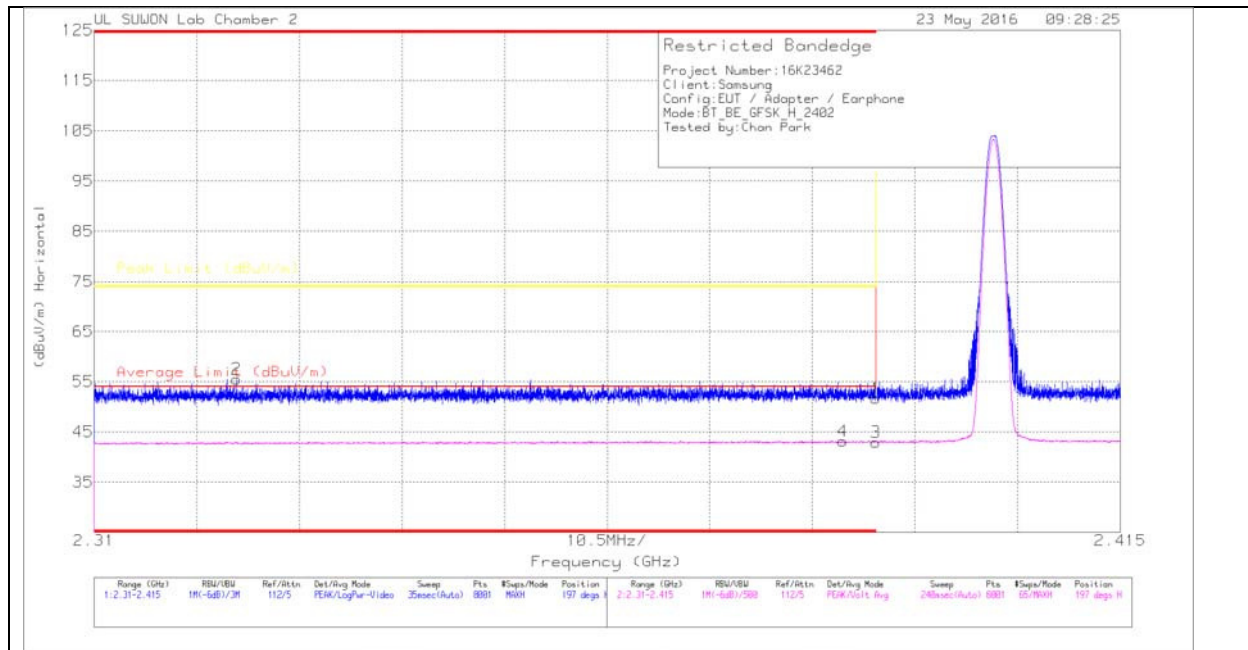
Note : Emission was pre-scanned from 9KHz to 30MHz; No emissions were detected which was at least 20dB below the specification limit. Per FCC part 15.31(o), test results were not reported.

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

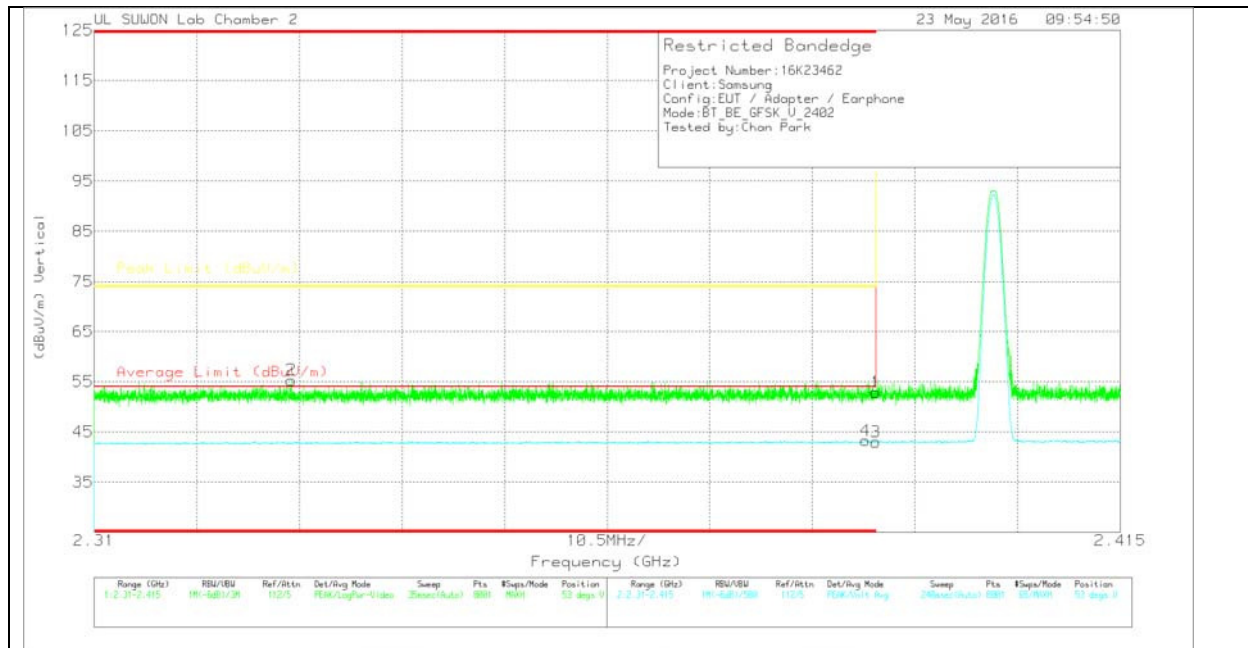
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	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	39.5	Pk	31.7	-19.5	51.7	-	-	74	-22.3	197	304	H
2	* 2.325	43.62	Pk	31.6	-19.7	55.52	-	-	74	-18.48	197	304	H
3	* 2.39	30.75	V1TV	31.7	-19.5	42.95	54	-11.05	-	-	197	304	H
4	* 2.387	30.99	V1TV	31.7	-19.5	43.19	54	-10.81	-	-	197	304	H

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

Pk - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

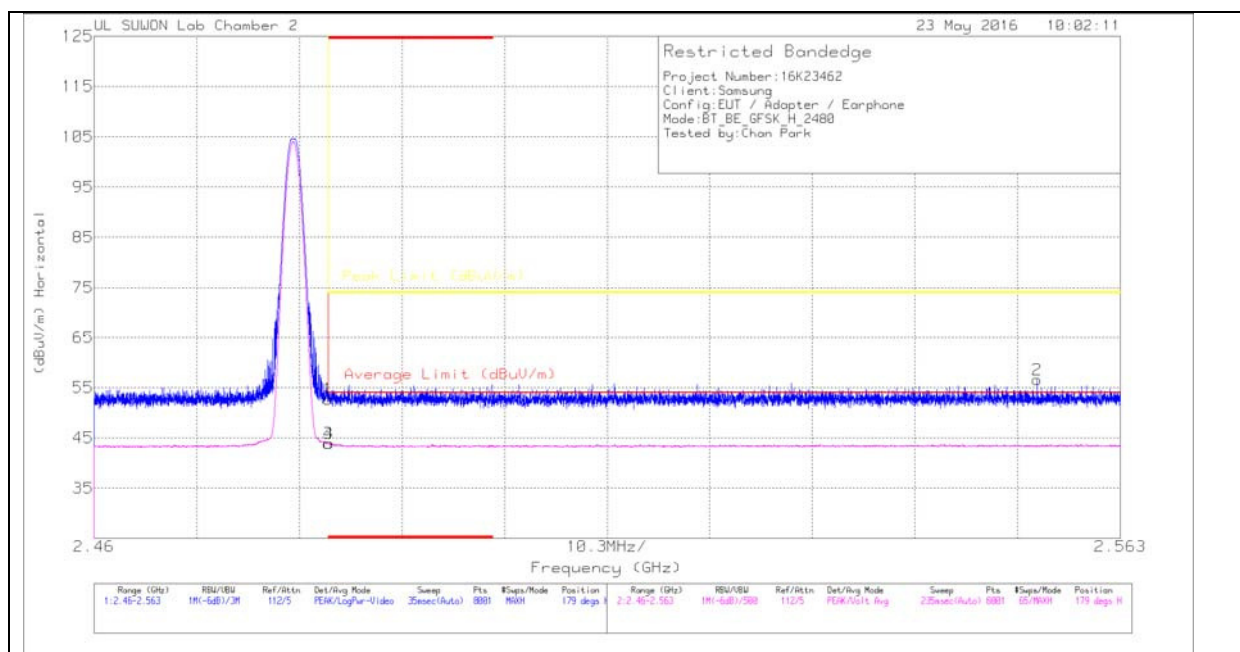
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	Path_2_10 dB	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	40.68	Pk	31.7	-19.5	52.88	-	-	74	-21.12	53	160	V
2	* 2.33	43.39	Pk	31.6	-19.7	55.29	-	-	74	-18.71	53	160	V
3	* 2.39	30.82	V1TV	31.7	-19.5	43.02	54	-10.98	-	-	53	160	V
4	* 2.389	31.09	V1TV	31.7	-19.5	43.29	54	-10.71	-	-	53	160	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

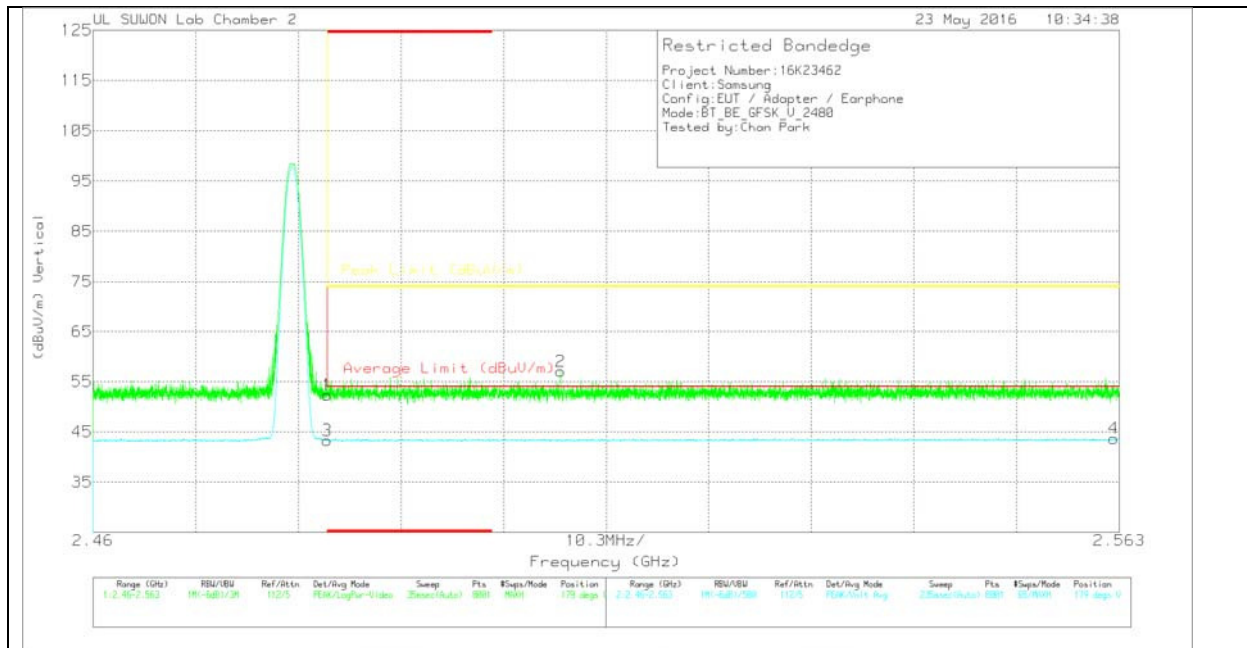
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_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	40.33	Pk	31.8	-19.4	52.73	-	-	74	-21.27	179	353	H
2	2.555	43.94	Pk	31.9	-19.3	56.54	-	-	74	-17.46	179	353	H
3	* 2.484	31.51	V1TV	31.8	-19.4	43.91	54	-10.09	-	-	179	353	H
4	* 2.484	31.48	V1TV	31.8	-19.4	43.88	54	-10.12	-	-	179	353	H

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

Pk - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

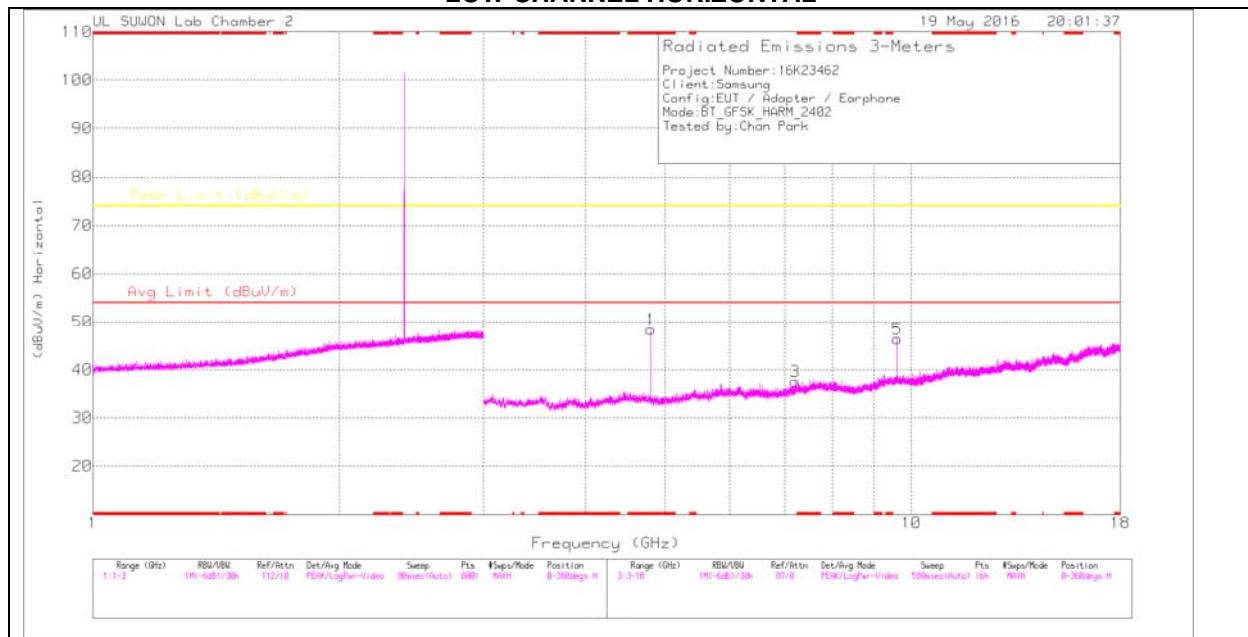
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	Path_2_10 dB	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	39.96	Pk	31.8	-19.4	52.36	-	-	74	-21.64	179	359	V
2	2.507	44.44	Pk	31.9	-19.3	57.04	-	-	74	-16.96	179	359	V
3	* 2.484	30.92	V1TV	31.8	-19.4	43.32	54	-10.68	-	-	179	359	V
4	2.562	31.13	V1TV	31.9	-19.3	43.73	54	-10.27	-	-	179	359	V

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

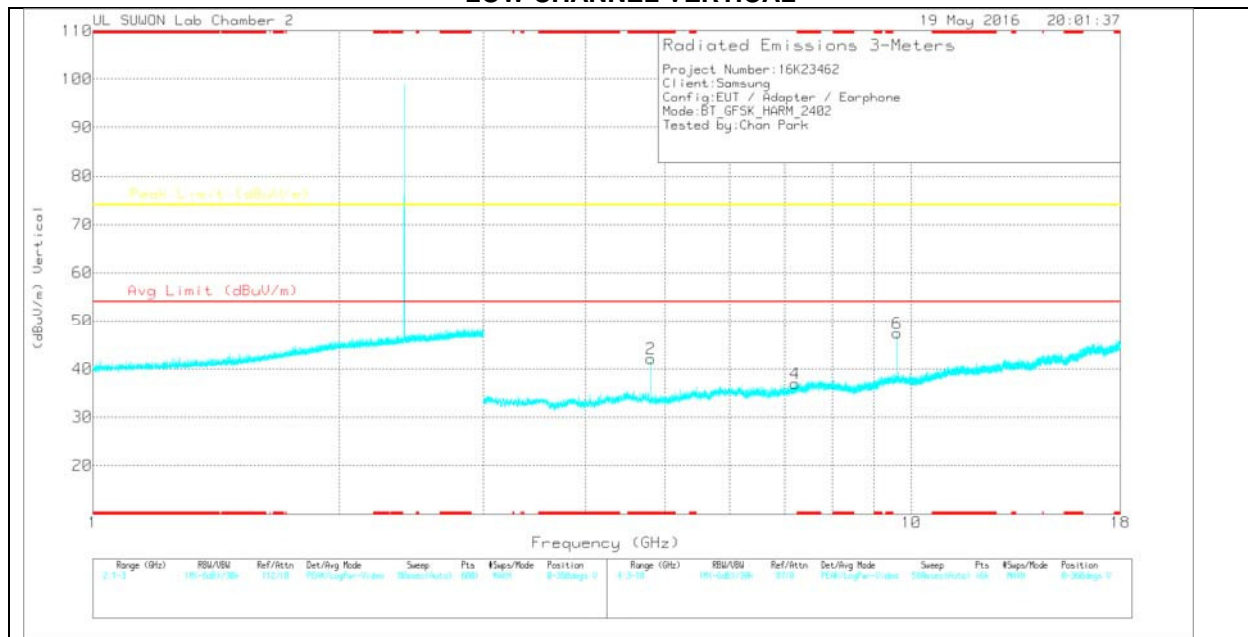
Pk - Peak detector

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(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.804	39.83	PK	33.9	-25.3	48.43	-	-	74	-25.57	0-360	200	H
3	7.206	24.8	PK	35.8	-23	37.6	-	-	74	-36.4	0-360	100	H
5	9.608	28.58	PK	36.9	-19.1	46.38	-	-	74	-27.62	0-360	100	H
2	* 4.804	33.56	PK	33.9	-25.3	42.16	-	-	74	-31.84	0-360	200	V
4	7.205	24.02	PK	35.8	-22.9	36.92	-	-	74	-37.08	0-360	100	V
6	9.608	29.67	PK	36.9	-19.1	47.47	-	-	74	-26.53	0-360	200	V

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

PK – Peak detector

Radiated Emissions

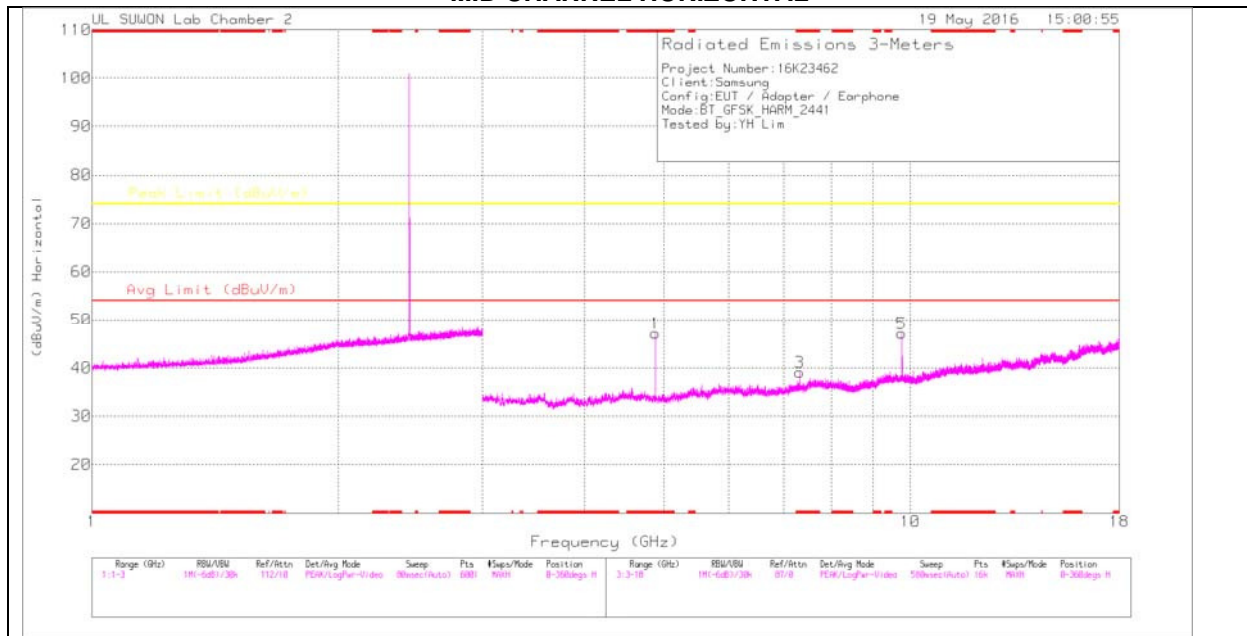
Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.804	47.33	PK2	33.9	-25.3	55.93	-	-	74	-18.07	328	384	H
* 4.804	43.29	VA1T	33.9	-25.3	51.89	54	-2.11	-	-	328	384	H
9.608	33.09	PK2	36.9	-19.1	50.89	-	-	74	-23.11	0	378	H
* 4.804	44.7	PK2	33.9	-25.3	53.3	-	-	74	-20.7	239	351	V
* 4.804	40.44	VA1T	33.9	-25.3	49.04	54	-4.96	-	-	239	351	V
9.608	33.06	PK2	36.9	-19.1	50.86	-	-	74	-23.14	294	296	V

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

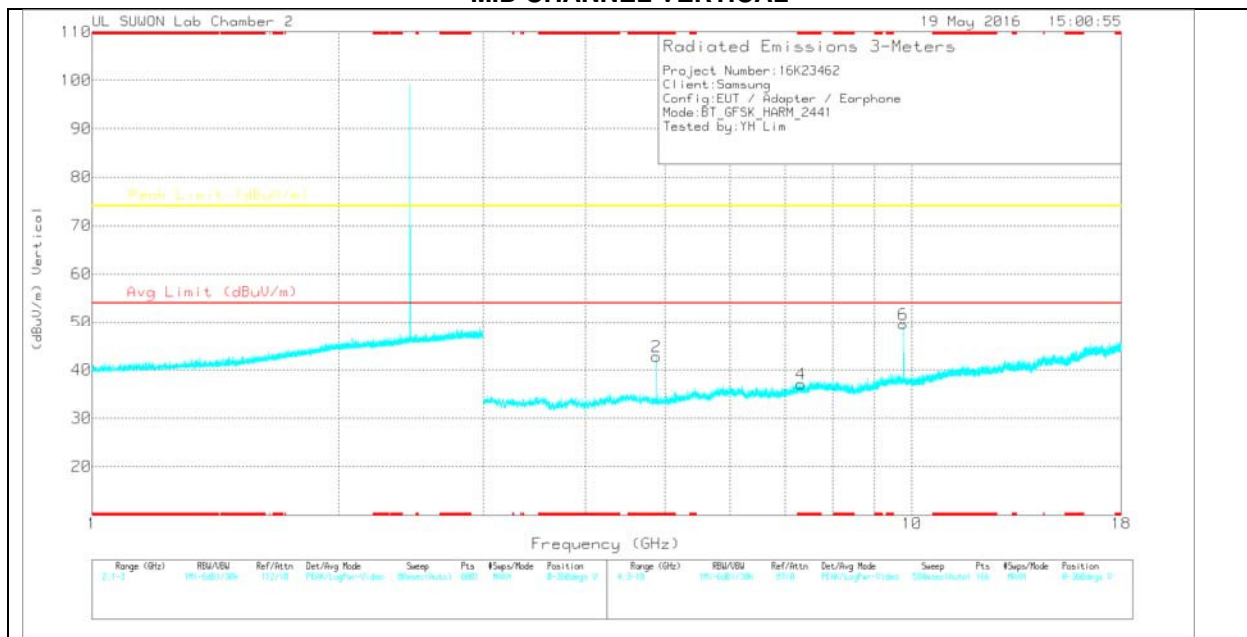
PK2 - Maximum Peak

VA1T - FHSS: Linear Voltage Average $V_B = 1/T_{on}$ where: T_{on} 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(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.881	38.47	PK	33.9	-25.2	47.17	-	-	74	-26.83	0-360	100	H
3	* 7.323	25.75	PK	35.9	-22.5	39.15	-	-	74	-34.85	0-360	200	H
5	9.764	29.52	PK	37	-19.3	47.22	-	-	74	-26.78	0-360	200	H
2	* 4.881	34.08	PK	33.9	-25.2	42.78	-	-	74	-31.22	0-360	200	V
4	* 7.323	23.62	PK	35.9	-22.5	37.02	-	-	74	-36.98	0-360	100	V
6	9.764	31.89	PK	37	-19.3	49.59	-	-	74	-24.41	0-360	200	V

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

PK – Peak detector

Radiated Emissions

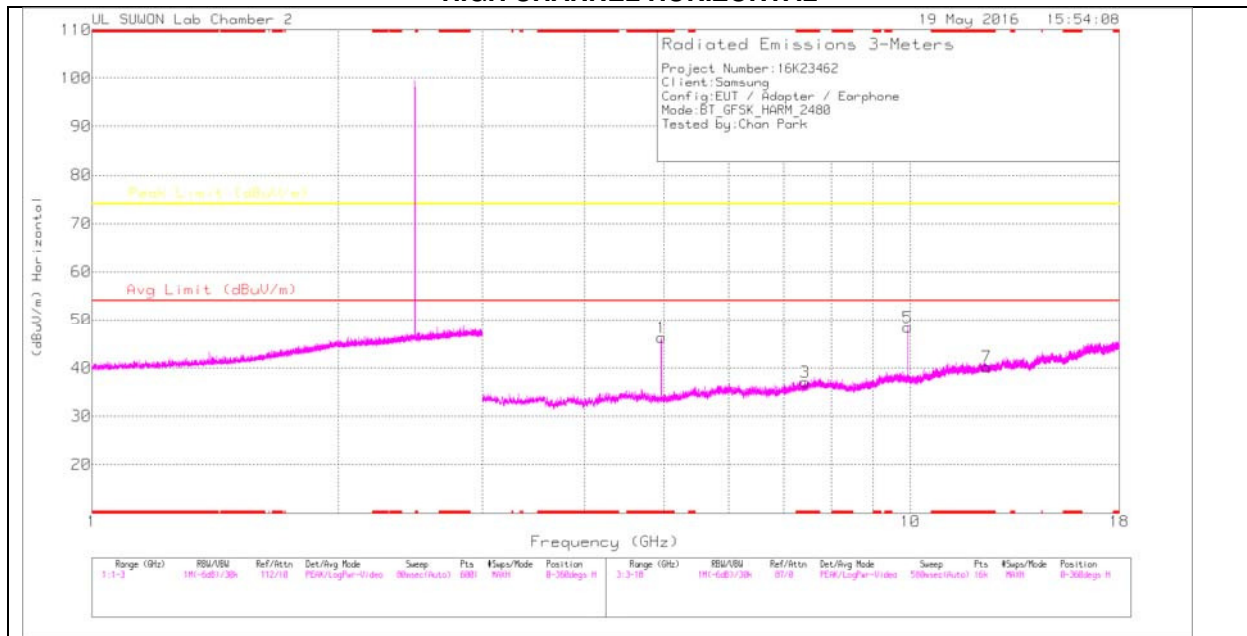
Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.882	46.18	PK2	33.9	-25.2	54.88	-	-	74	-19.12	332	378	H
* 4.882	41.61	VA1T	33.9	-25.2	50.31	54	-3.69	-	-	332	378	H
* 7.323	35.9	PK2	35.9	-22.5	49.3	-	-	74	-24.7	53	233	H
* 7.323	23.19	VA1T	35.9	-22.5	36.59	54	-17.41	-	-	53	233	H
9.764	35.84	PK2	37	-19.3	53.54	-	-	74	-20.46	354	369	H
* 4.882	41.31	PK2	33.9	-25.2	50.01	-	-	74	-23.99	86	365	V
* 4.882	34.58	VA1T	33.9	-25.2	43.28	54	-10.72	-	-	86	365	V
9.764	33.83	PK2	37	-19.3	51.53	-	-	74	-22.47	315	304	V

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

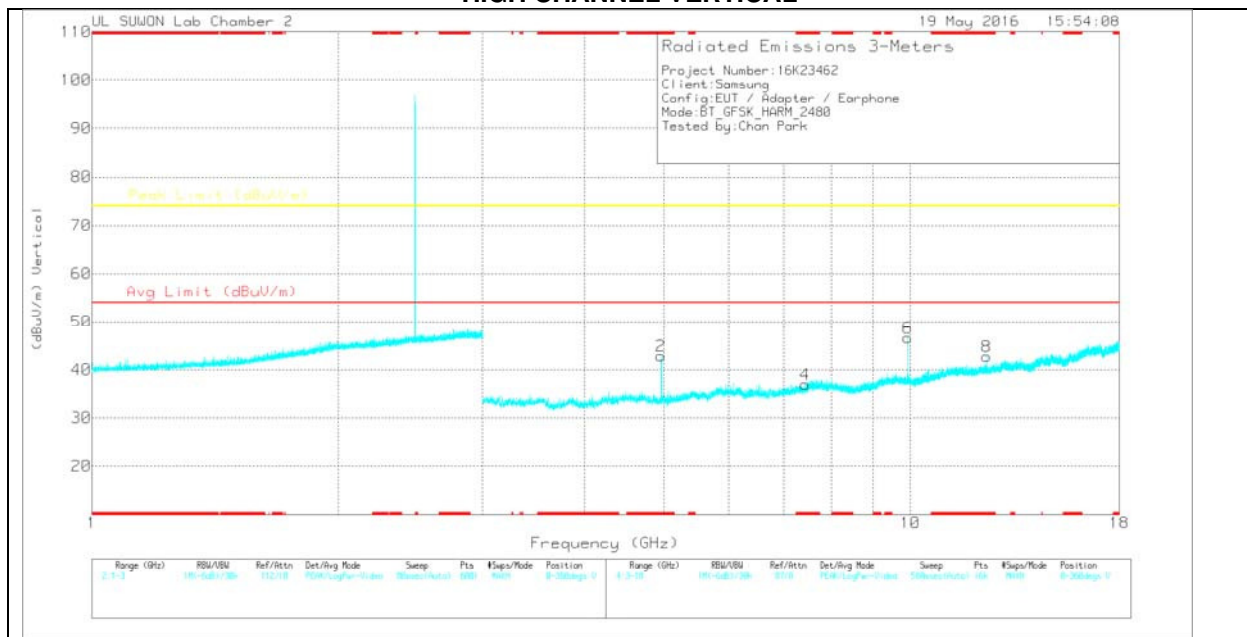
PK2 - Maximum Peak

VA1T - FHSS: Linear Voltage Average $V_B = 1/T_{on}$ where: T_{on} 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(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.96	37.36	PK	33.9	-25	46.26	-	-	74	-27.74	0-360	100	H
3	* 7.44	23.19	PK	36	-22.1	37.09	-	-	74	-36.91	0-360	200	H
5	9.92	30.36	PK	37.1	-19	48.46	-	-	74	-25.54	0-360	100	H
7	* 12.4	18.77	PK	38.8	-17.3	40.27	-	-	74	-33.73	0-360	200	H
2	* 4.959	34.02	PK	33.9	-25	42.92	-	-	74	-31.08	0-360	200	V
4	* 7.44	23.04	PK	36	-22.1	36.94	-	-	74	-37.06	0-360	100	V
6	9.92	28.59	PK	37.1	-19	46.69	-	-	74	-27.31	0-360	200	V
8	* 12.401	21.28	PK	38.8	-17.3	42.78	-	-	74	-31.22	0-360	200	V

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

PK – Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.96	44.82	PK2	33.9	-25	53.72	-	-	74	-20.28	345	362	H
* 4.96	39.16	VA1T	33.9	-25	48.06	54	-5.94	-	-	345	362	H
9.92	36.03	PK2	37.1	-19	54.13	-	-	74	-19.87	358	397	H
* 4.96	39.55	PK2	33.9	-25	48.45	-	-	74	-25.55	44	284	V
* 4.96	29.83	VA1T	33.9	-25	38.73	54	-15.27	-	-	44	284	V
9.92	36.56	PK2	37.1	-19	54.66	-	-	74	-19.34	315	267	V
* 12.4	29.86	PK2	38.8	-17.3	51.36	-	-	74	-22.64	191	106	V
* 12.4	17.03	VA1T	38.8	-17.3	38.53	54	-15.47	-	-	191	106	V

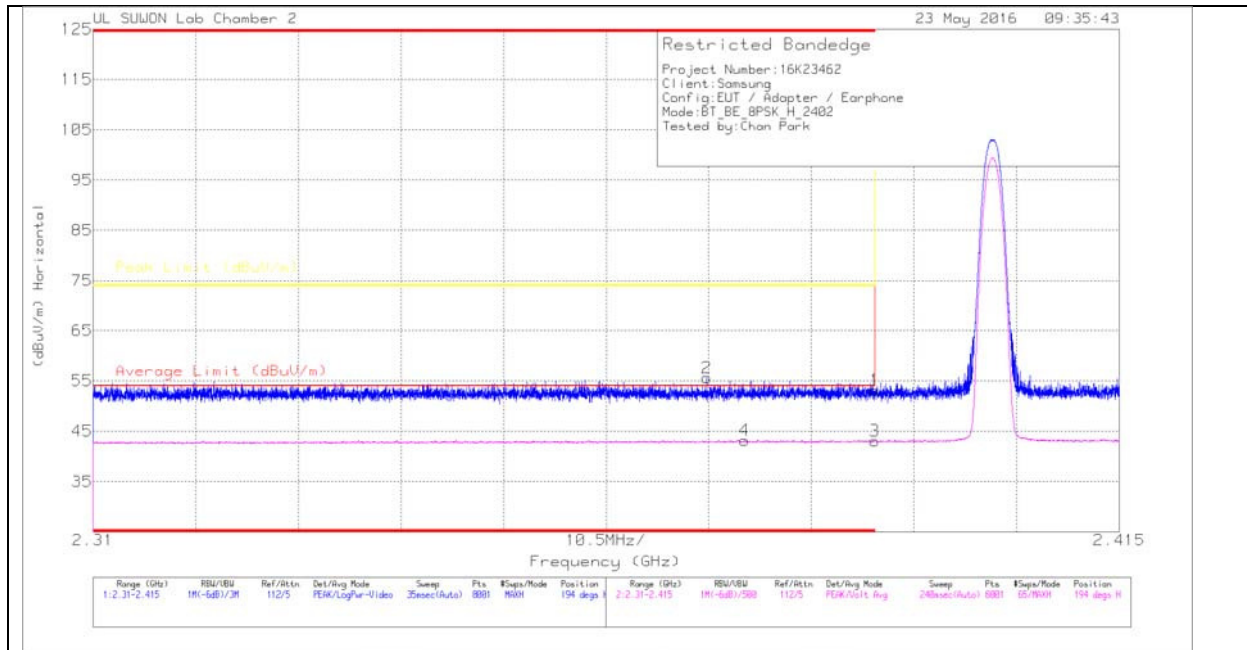
* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK2 - Maximum Peak

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

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

HORIZONTAL PEAK AND AVERAGE PLOT



HORIZONTAL DATA

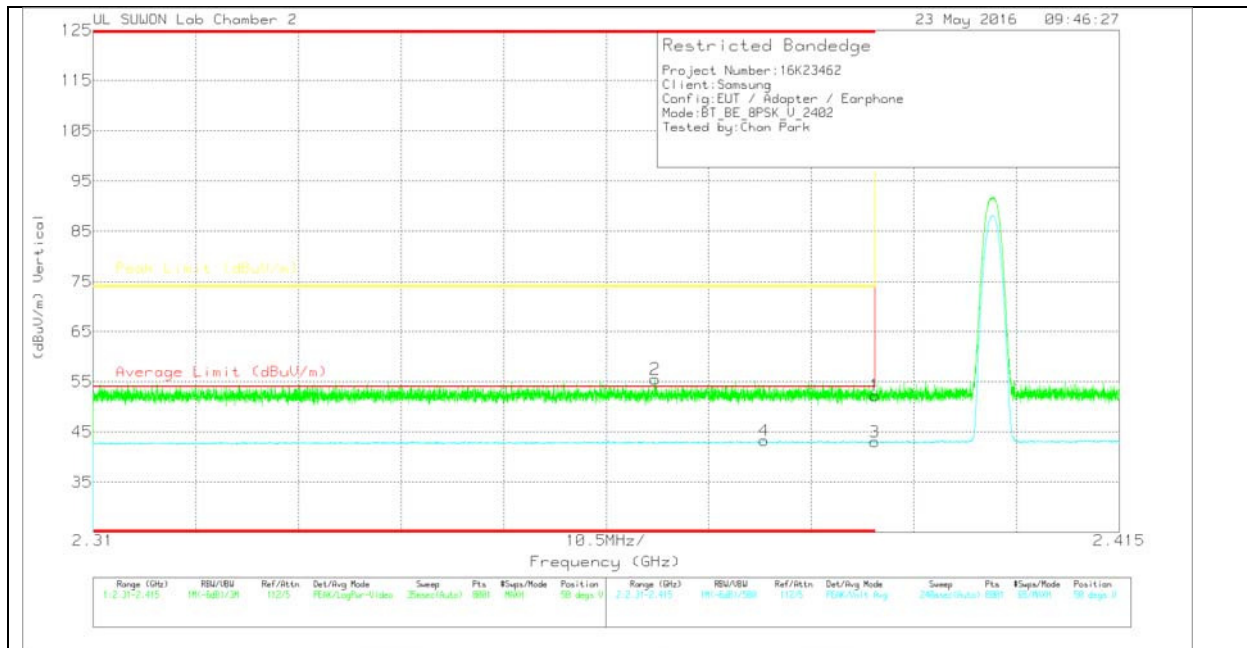
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	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	40.98	Pk	31.7	-19.5	53.18	-	-	74	-20.82	194	313	H
2	* 2.373	43.5	Pk	31.7	-19.6	55.6	-	-	74	-18.4	194	313	H
3	* 2.39	30.88	V1TV	31.7	-19.5	43.08	54	-10.92	-	-	194	313	H
4	* 2.377	31.11	V1TV	31.7	-19.6	43.21	54	-10.79	-	-	194	313	H

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

Pk - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

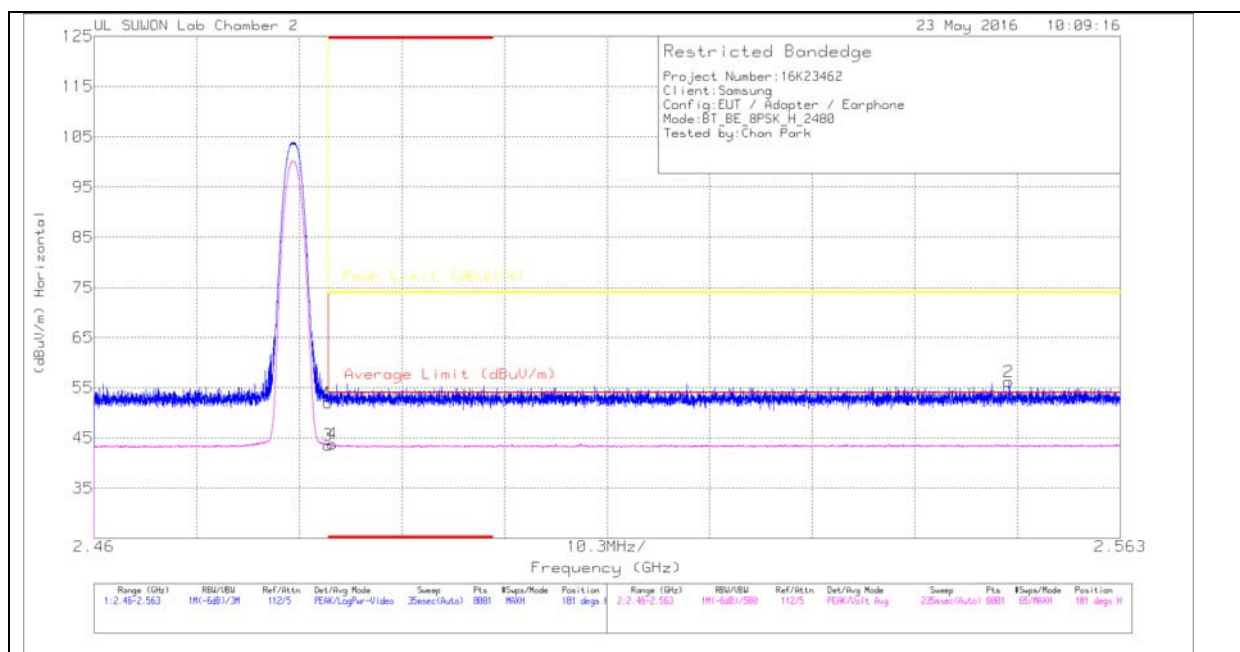
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	Path_2_10 dB	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	40.03	Pk	31.7	-19.5	52.23	-	-	74	-21.77	50	160	V
2	* 2.368	43.39	Pk	31.7	-19.6	55.49	-	-	74	-18.51	50	160	V
3	* 2.39	30.85	V1TV	31.7	-19.5	43.05	54	-10.95	-	-	50	160	V
4	* 2.379	31.21	V1TV	31.7	-19.6	43.31	54	-10.69	-	-	50	160	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

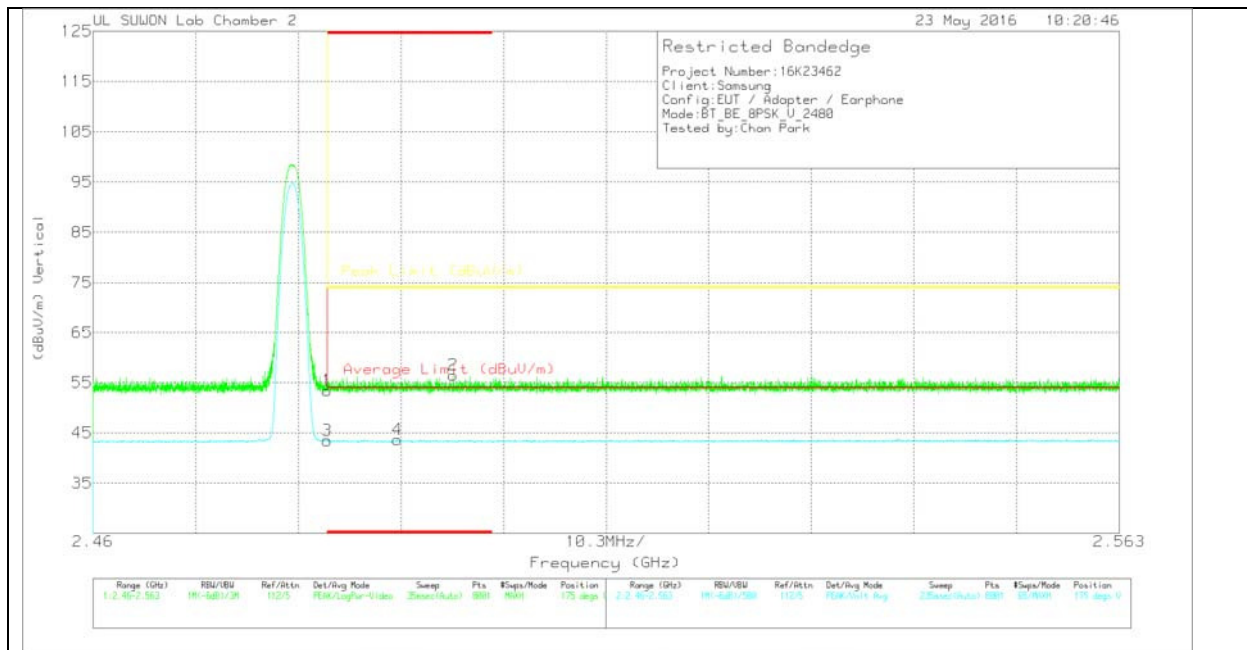
Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_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	39.62	Pk	31.8	-19.4	52.02	-	-	74	-21.98	181	291	H
2	2.552	43.61	Pk	31.9	-19.3	56.21	-	-	74	-17.79	181	291	H
3	* 2.484	31.19	V1TV	31.8	-19.4	43.59	54	-10.41	-	-	181	291	H
4	* 2.484	31.42	V1TV	31.8	-19.4	43.82	54	-10.18	-	-	181	291	H

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

Pk - Peak detector

VERTICAL PEAK AND AVERAGE PLOT



VERTICAL DATA

Trace Markers

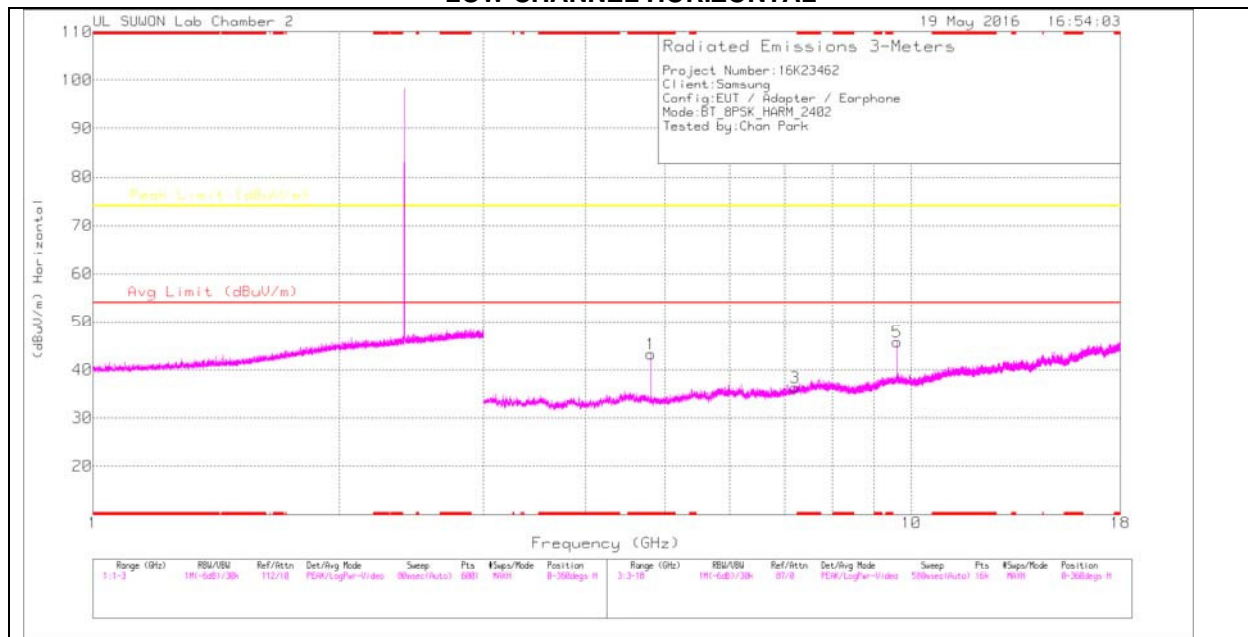
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	3117(0016 8724)_150 619	Path_2_10 dB	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	41.04	Pk	31.8	-19.4	53.44	-	-	74	-20.56	175	353	V
2	* 2.496	44.01	Pk	31.8	-19.3	56.51	-	-	74	-17.49	175	353	V
3	* 2.484	31.09	V1TV	31.8	-19.4	43.49	54	-10.51	-	-	175	353	V
4	* 2.491	31.3	V1TV	31.8	-19.4	43.7	54	-10.3	-	-	175	353	V

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

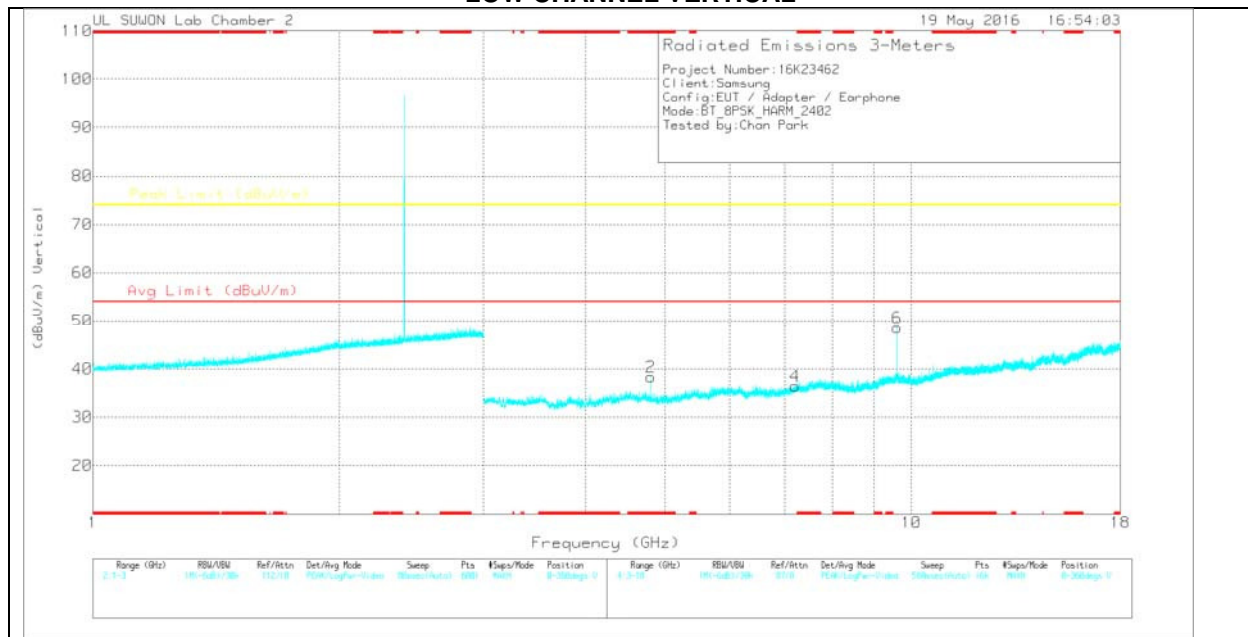
Pk - Peak detector

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(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.804	34.7	PK	33.9	-25.3	43.3	-	-	74	-30.7	0-360	200	H
3	7.206	23.52	PK	35.8	-23	36.32	-	-	74	-37.68	0-360	100	H
5	9.608	27.99	PK	36.9	-19.1	45.79	-	-	74	-28.21	0-360	100	H
2	* 4.804	29.76	PK	33.9	-25.3	38.36	-	-	74	-35.64	0-360	100	V
4	7.207	23.64	PK	35.8	-23	36.44	-	-	74	-37.56	0-360	200	V
6	9.608	30.8	PK	36.9	-19.1	48.6	-	-	74	-25.4	0-360	200	V

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

PK – Peak detector

Radiated Emissions

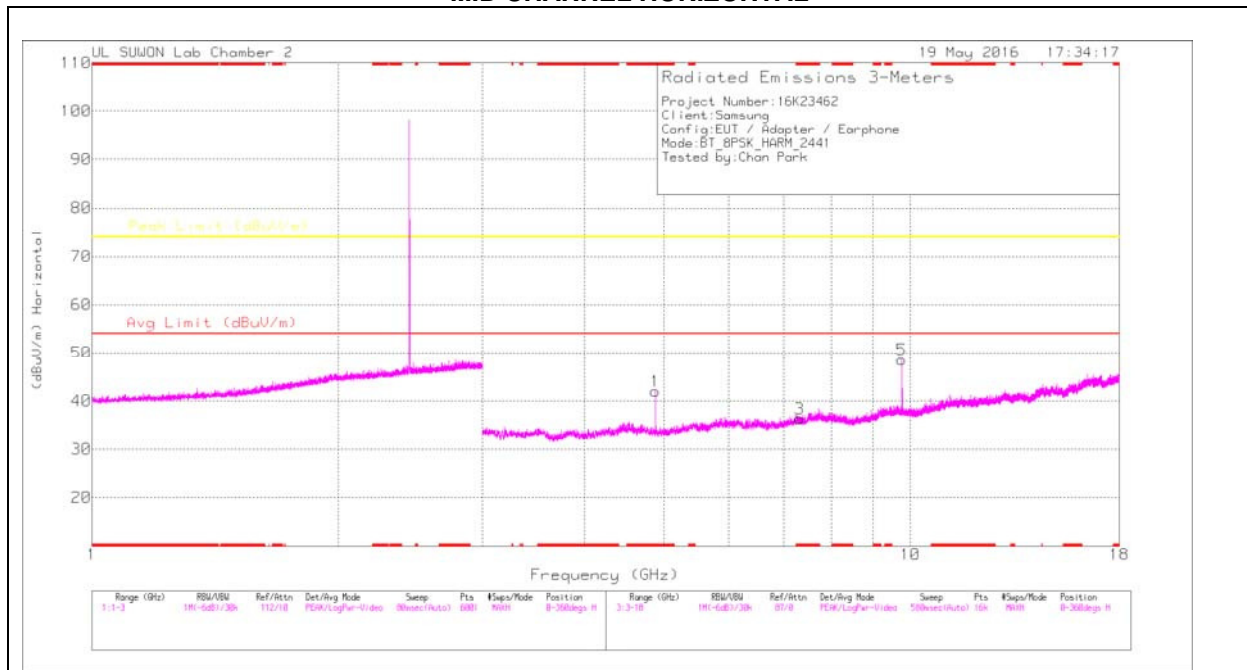
Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.804	45.59	PK2	33.9	-25.3	54.19	-	-	74	-19.81	351	391	H
* 4.804	35.04	VA1T	33.9	-25.3	43.64	54	-10.36	-	-	351	391	H
9.608	35.1	PK2	36.9	-19.1	52.9	-	-	74	-21.1	358	378	H
* 4.804	41.18	PK2	33.9	-25.3	49.78	-	-	74	-24.22	42	301	V
* 4.804	29.76	VA1T	33.9	-25.3	38.36	54	-15.64	-	-	42	301	V
9.608	36.27	PK2	36.9	-19.1	54.07	-	-	74	-19.93	281	243	V

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

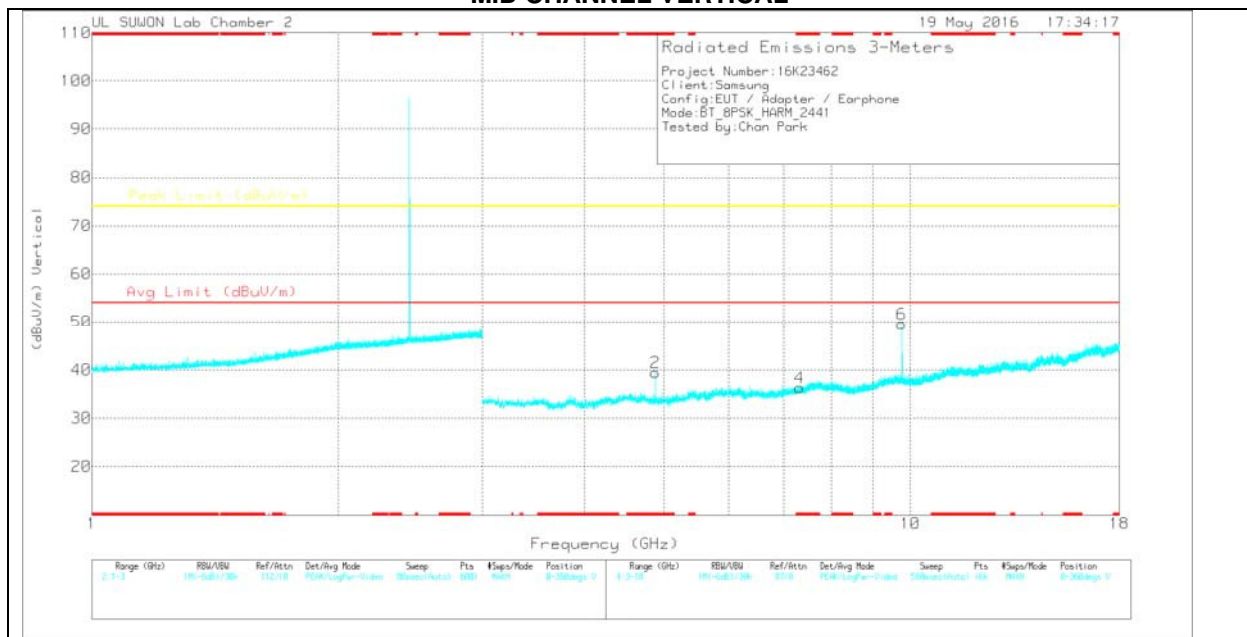
PK2 - Maximum Peak

VA1T - FHSS: Linear Voltage Average $V_B = 1/T_{on}$ where: T_{on} 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(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.881	33.33	PK	33.9	-25.2	42.03	-	-	74	-31.97	0-360	100	H
3	* 7.322	22.88	PK	35.9	-22.5	36.28	-	-	74	-37.72	0-360	100	H
5	9.764	30.87	PK	37	-19.3	48.57	-	-	74	-25.43	0-360	200	H
2	* 4.881	30.75	PK	33.9	-25.2	39.45	-	-	74	-34.55	0-360	200	V
4	* 7.324	22.96	PK	35.9	-22.5	36.36	-	-	74	-37.64	0-360	100	V
6	9.764	31.85	PK	37	-19.3	49.55	-	-	74	-24.45	0-360	200	V

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

PK – Peak detector

Radiated Emissions

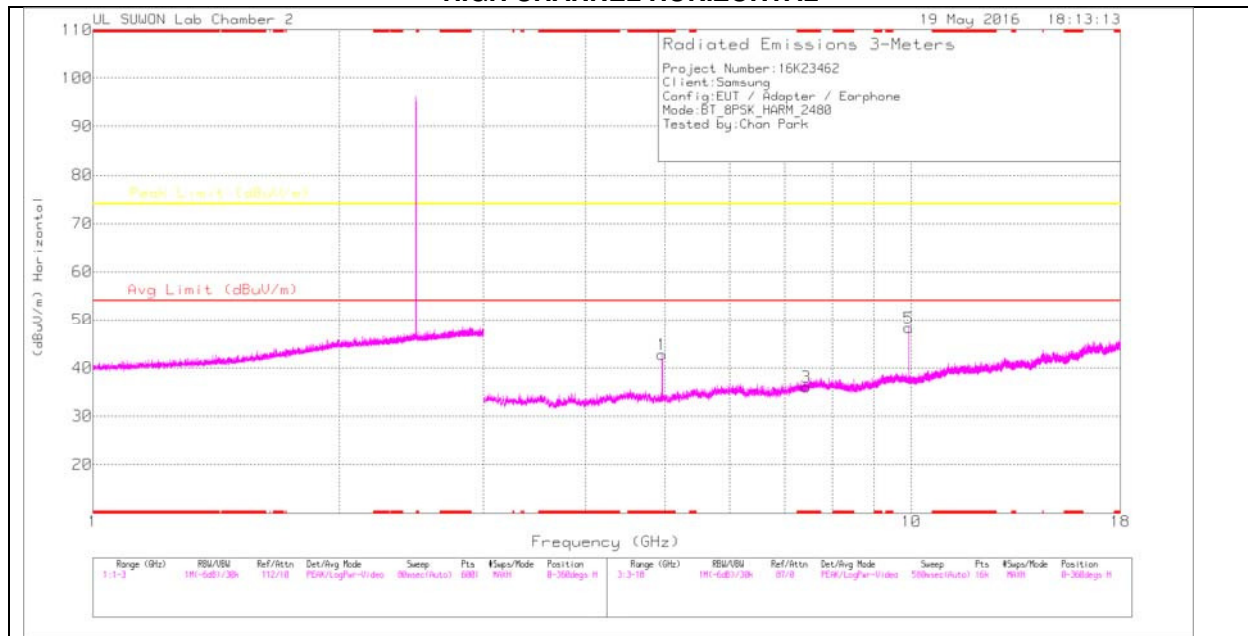
Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.882	45.28	PK2	33.9	-25.2	53.98	-	-	74	-20.02	347	374	H
* 4.882	34.54	VA1T	33.9	-25.2	43.24	54	-10.76	-	-	347	374	H
9.764	35.75	PK2	37	-19.3	53.45	-	-	74	-20.55	358	390	H
* 4.882	40.47	PK2	33.9	-25.2	49.17	-	-	74	-24.83	84	371	V
* 4.882	28.5	VA1T	33.9	-25.2	37.2	54	-16.8	-	-	84	371	V
9.764	35.75	PK2	37	-19.3	53.45	-	-	74	-20.55	317	362	V

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

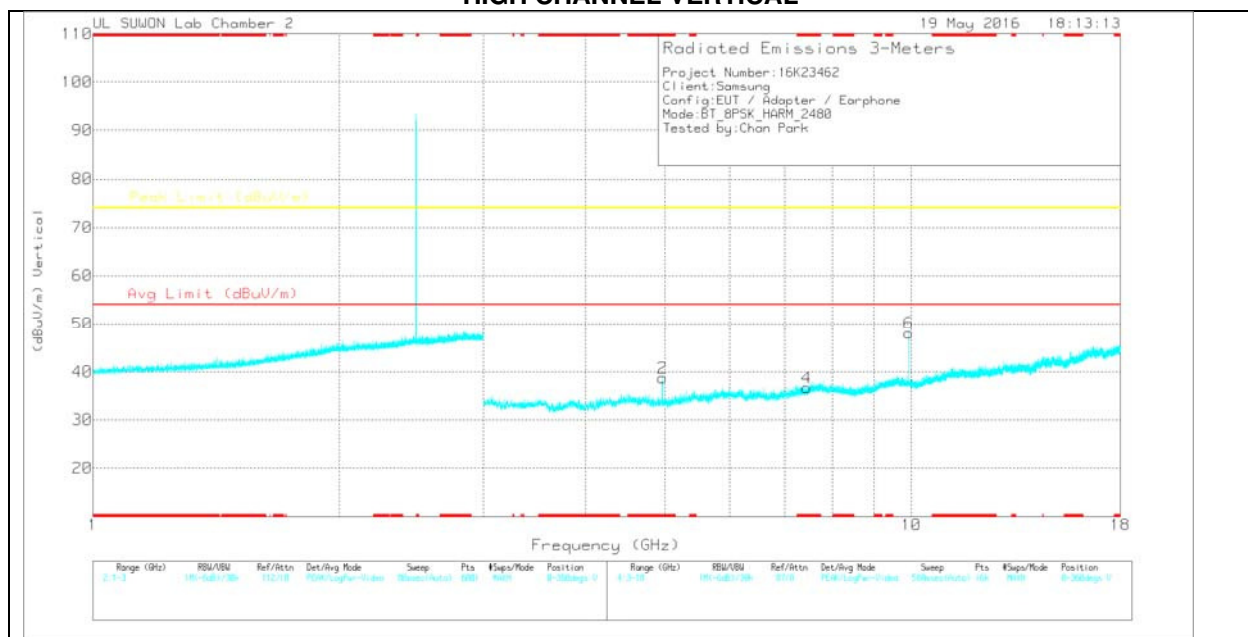
PK2 - Maximum Peak

VA1T - FHSS: Linear Voltage Average $V_B = 1/T_{on}$ where: T_{on} 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(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 4.959	33.85	PK	33.9	-25	42.75	-	-	74	-31.25	0-360	100	H
3	* 7.441	22.15	PK	36	-22.1	36.05	-	-	74	-37.95	0-360	100	H
5	9.92	30.24	PK	37.1	-19	48.34	-	-	74	-25.66	0-360	100	H
2	* 4.96	29.81	PK	33.9	-25	38.71	-	-	74	-35.29	0-360	200	V
4	* 7.443	22.84	PK	36	-22.1	36.74	-	-	74	-37.26	0-360	200	V
6	9.92	29.92	PK	37.1	-19	48.02	-	-	74	-25.98	0-360	200	V

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

PK – Peak detector

Radiated Emissions

Frequency (GHz)	Meter Reading (dBuV)	Det	3117(00168 724)_15061 9	Path_3	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 4.96	43.41	PK2	33.9	-25	52.31	-	-	74	-21.69	356	363	H
* 4.96	32.9	VA1T	33.9	-25	41.8	54	-12.2	-	-	356	363	H
9.92	36.11	PK2	37.1	-19	54.21	-	-	74	-19.79	357	400	H
* 4.96	39.7	PK2	33.9	-25	48.6	-	-	74	-25.4	98	378	V
* 4.96	27.45	VA1T	33.9	-25	36.35	54	-17.65	-	-	98	378	V
9.92	32.55	PK2	37.1	-19	50.65	-	-	74	-23.35	312	267	V

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

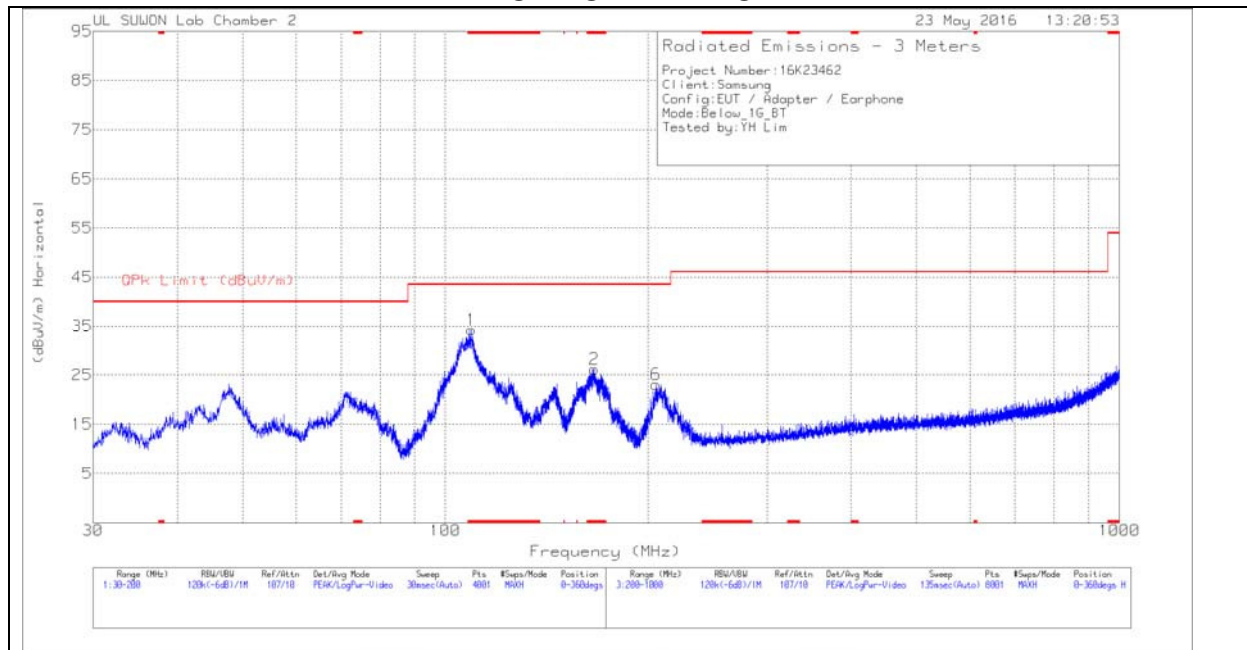
PK2 - Maximum Peak

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

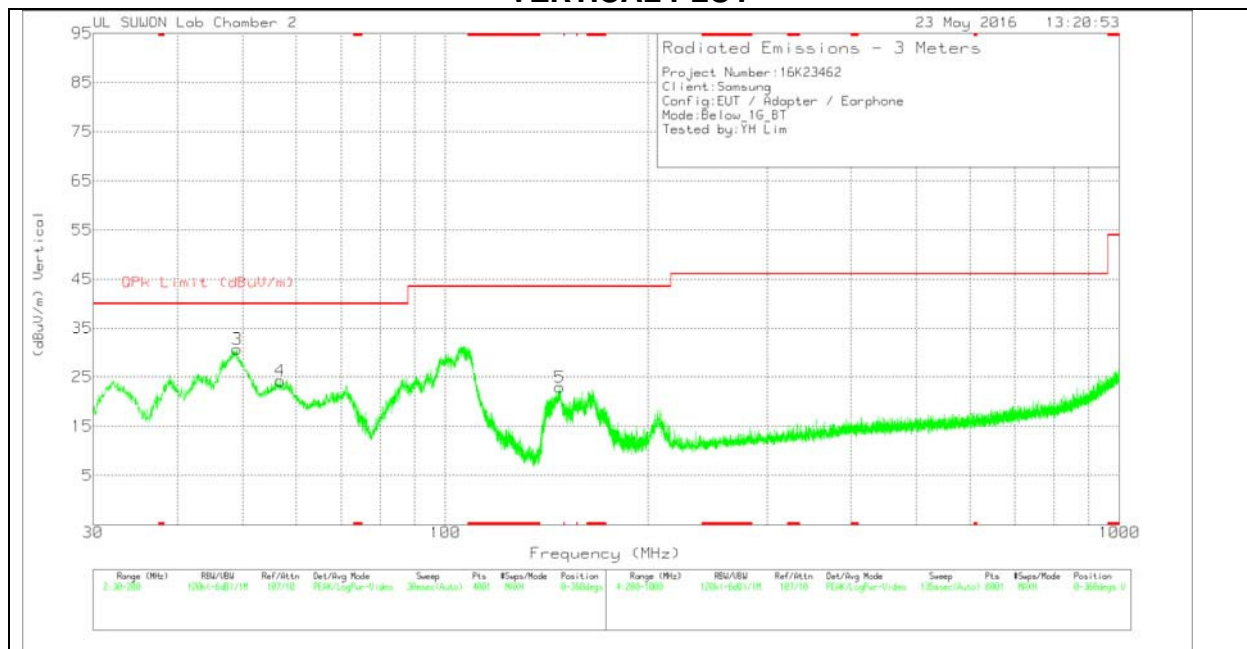
9.3. WORST-CASE BELOW 1 GHz

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	Below_1G	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 109.2625	53.99	Pk	10.8	-30.5	34.29	43.52	-9.23	0-360	300	H
2	* 166.2975	47.79	Pk	8.8	-30.4	26.19	43.52	-17.33	0-360	100	H
3	49.0825	47.27	Pk	14.1	-30.7	30.67	40	-9.33	0-360	100	V
4	56.86	41.75	Pk	13.2	-30.7	24.25	40	-15.75	0-360	100	V
5	147.81	45.12	Pk	8.2	-30.4	22.92	43.52	-20.6	0-360	100	V
6	205.5	41.9	Pk	11.5	-30.3	23.1	43.52	-20.42	0-360	200	H

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

* 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.

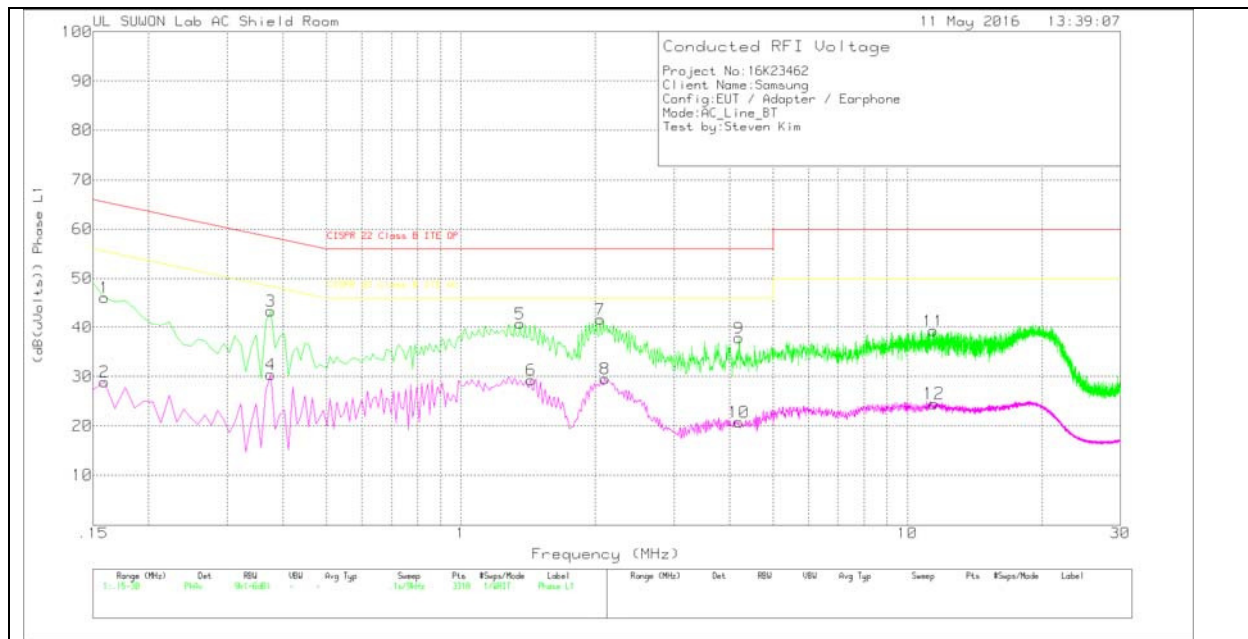
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

6 WORST EMISSIONS

LINE 1 PLOT



LINE 1 RESULTS

Trace Markers

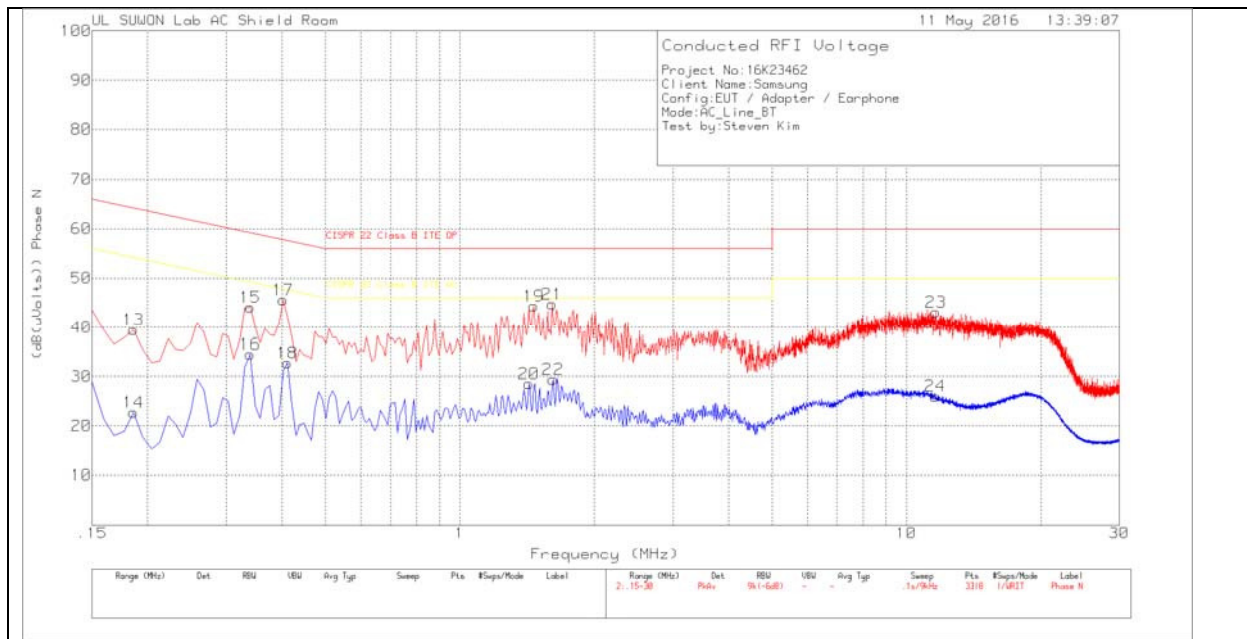
Phase L1 .15 - 30MHz

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	.159	36.08	Pk	10	0	46.08	65.52	-19.44	-	-
2	.159	18.91	Av	10	0	28.91	-	-	55.52	-26.61
3	.375	33.32	Pk	10.1	0	43.42	58.39	-14.97	-	-
4	.375	20.35	Av	10.1	0	30.45	-	-	48.39	-17.94
5	1.356	30.89	Pk	9.8	.1	40.79	56	-15.21	-	-
6	1.437	19.34	Av	9.8	.1	29.24	-	-	46	-16.76
7	2.049	31.81	Pk	9.8	.1	41.71	56	-14.29	-	-
8	2.103	19.67	Av	9.8	.1	29.57	-	-	46	-16.43
9	4.2	27.96	Pk	9.8	.1	37.86	56	-18.14	-	-
10	4.2	10.87	Av	9.8	.1	20.77	-	-	46	-25.23
11	11.427	29.16	Pk	10	.2	39.36	60	-20.64	-	-
12	11.463	14.32	Av	10	.2	24.52	-	-	50	-25.48

Pk - Peak detector

Av - Average detection

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	.186	29.54	Pk	10	0	39.54	64.21	-24.67	-	-
14	.186	12.69	Av	10	0	22.69	-	-	54.21	-31.52
15	.339	34.18	Pk	10	0	44.18	59.23	-15.05	-	-
16	.339	24.54	Av	10	0	34.54	-	-	49.23	-14.69
17	.402	35.53	Pk	10.1	0	45.63	57.81	-12.18	-	-
18	.411	22.69	Av	10.1	0	32.79	-	-	47.63	-14.84
19	1.464	34.43	Pk	9.8	.1	44.33	56	-11.67	-	-
20	1.428	18.64	Av	9.8	.1	28.54	-	-	46	-17.46
21	1.608	34.86	Pk	9.8	.1	44.76	56	-11.24	-	-
22	1.617	19.5	Av	9.8	.1	29.4	-	-	46	-16.6
23	11.643	32.89	Pk	10.1	.2	43.19	60	-16.81	-	-
24	11.598	15.71	Av	10.1	.2	26.01	-	-	50	-23.99

Pk - Peak detector

Av - Average detection