



CERTIFICATION TEST REPORT

Report Number. : 12132879-E2V3

Applicant : SONY MOBILE COMMUNICATIONS, INC.
4-12-3 HIGASHI-SHINAGAWA,
SHINAGAWA -KU, TOKYO, 140-0002, JAPAN

FCC ID : PY7-70663E

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

Test Standard(s) : FCC 47 CFR PART 15 SUBPART C

Date Of Issue:

April 2, 2018

Prepared by:

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REPORT REVISION HISTORY

Rev.	Issue Date	Revisions	Revised By
V1	03/20/18	Initial Issue	Dan Coronio
V2	03/23/18	Updated Section 5.5 & 9	Kiya Kedida
V2	04/2/18	Updated Section 9	Kiya Kedida

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: SONY MOBILE COMMUNICATIONS, INC.
4-12-3 HIGASHI-SHINAGAWA,
SHINAGAWA -KU, TOKYO, 140-0002, JAPAN

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

SERIAL NUMBER: BH9000ARBG; BH9000JPBG (RADIATED)
BH9000BCBC; BH9000HPBC (CONDUCTED)

DATE TESTED: February 17 – March 01, 2018

APPLICABLE STANDARDS	
STANDARD	TEST RESULTS
CFR 47 Part 15 Subpart C	Complies

UL Verification Services Inc. 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 Verification Services Inc. 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 Verification Services Inc. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL Verification Services Inc. 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 NVLAP, NIST, any agency of the Federal Government, or any agency of the U.S. government.

Approved & Released For
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Reviewed By:



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CONSUMER TECHNOLOGY DIVISION
Operations Leader
UL Verification Services Inc.



Kiya Kedida
CONSUMER TECHNOLOGY DIVISION
Project Engineer
UL Verification Services Inc.

2. TEST METHODOLOGY

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

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 47173 and 47266 Benicia Street, Fremont, California, USA. Line conducted emissions are measured only at the 47173 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.

47173 Benicia Street	47266 Benicia Street
☒ Chamber A (ISED:2324B-1)	☐ Chamber D (ISED:22541-1)
☒ Chamber B (ISED:2324B-2)	☐ Chamber E (ISED:22541-2)
☐ Chamber C (ISED:2324B-3)	☐ Chamber F (ISED:22541-3)
	☐ Chamber G (ISED:22541-4)
	☒ Chamber H (ISED:22541-5)

The above test sites and facilities are covered under FCC Test Firm Registration # 208313. Chambers A through C are covered under ISED company address code 2324B with site numbers 2324B -1 through 2324B-3, respectively. Chambers D through H are covered under ISED Canada company address code 22541 with site numbers 22541 -1 through 22541-5, respectively.

UL Verification Services Inc. is accredited by NVLAP, Laboratory Code 200065-0. The full scope of accreditation can be viewed at <http://ts.nist.gov/standards/scopes/2000650.htm>.

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
Worst Case Conducted Disturbance, 9KHz to 0.15 MHz	3.84 dB
Worst Case Conducted Disturbance, 0.15 to 30 MHz	3.65 dB
Worst Case Radiated Disturbance, 9KHz to 30 MHz	3.15 dB
Worst Case Radiated Disturbance, 30 to 1000 MHz	5.36 dB
Worst Case Radiated Disturbance, 1000 to 18000 MHz	4.32 dB
Worst Case Radiated Disturbance, 18000 to 26000 MHz	4.45 dB
Worst Case Radiated Disturbance, 26000 to 40000 MHz	5.24 dB

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

5. EQUIPMENT UNDER TEST

5.1. EUT DESCRIPTION

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

5.2. MAXIMUM OUTPUT POWER

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

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2402 - 2480	Basic GFSK	11.32	13.55
2402 - 2480	Enhanced 8PSK	9.35	8.61

Note: GFSK, DQPSK, 8PSK average Power are all investigated, The GFSK & 8PSK Power are the worst case. Testing is based on these modes to showing compliance.

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The radio utilizes a loop antenna, with a maximum gain of -2.65 dBi.

5.4. SOFTWARE AND FIRMWARE

The firmware installed in the EUT during testing was s_atp_XXX_0_00375_A_19
The test utility software used during testing was Tera Term Ver 4.79

5.5. WORST-CASE CONFIGURATION AND MODE

Radiated emissions below 30MHz, below 1GHz, and above 18GHz, and AC power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

Band edge Harmonics and Radiated Emissions between 1GHz and 18GHz were performed with the EUT set to transmit at the low, middle and high channels.

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

Worst-case data rates as provided by the client were:

GFSK mode: DH5

8PSK mode: 3-DH5

DQPSK mode has been verified to have the lowest power.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	Manufacturer	Model	Serial Number	FCC ID
Laptop	Lenovo	20B7S0A200	PC015REW	NA
AC Adapter	SONY	UCH12	4016W40310044	NA
DC Power Supply	Ametek	XT 15-4	T463	N/A

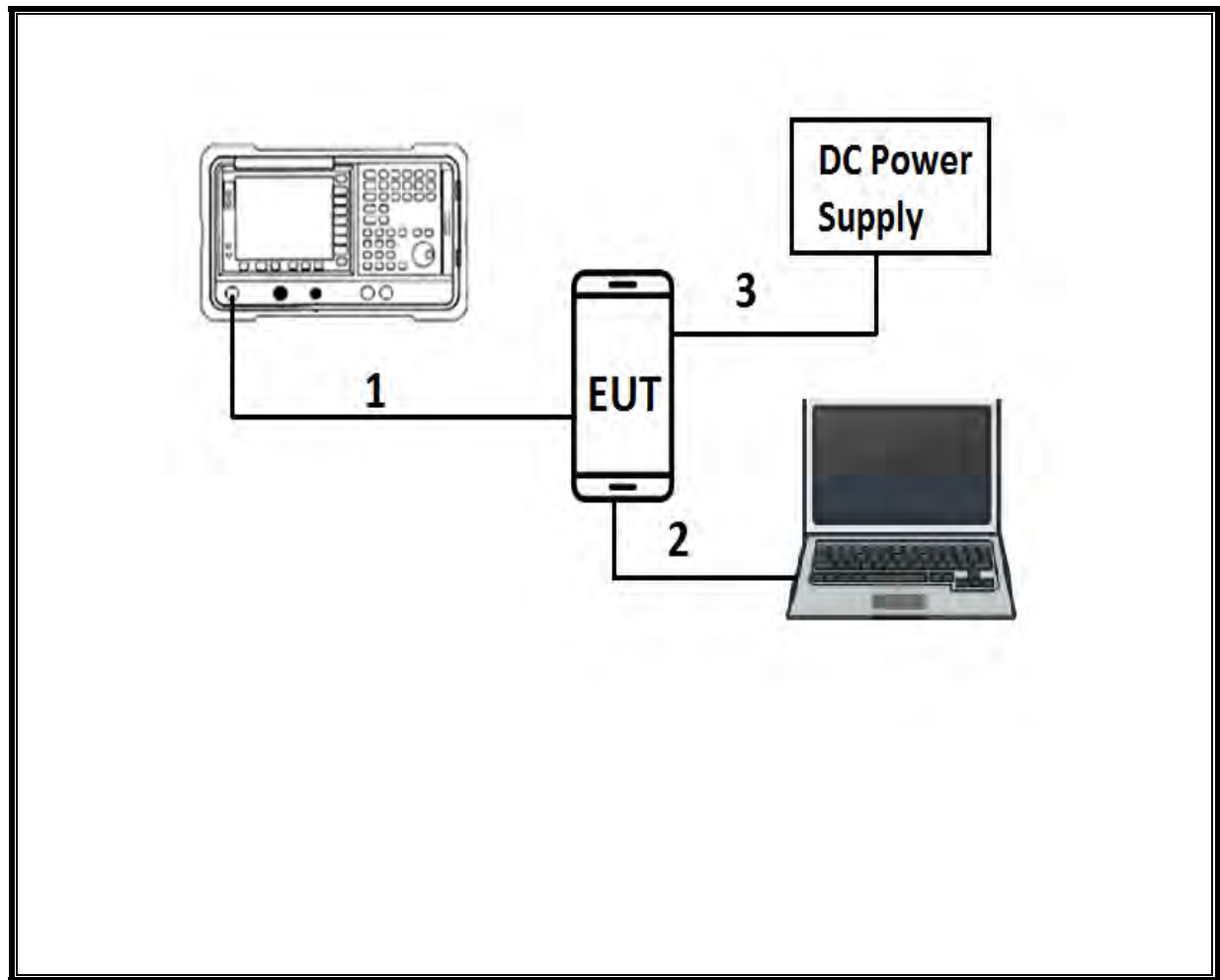
I/O CABLES (CONDUCTED TEST)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	Antenna	1	RF	Shielded	0.2	To spectrum Analyzer
2	USB	1	USB	Shielded	1	N/A
3	DC	1	DC	Shielded	0.3	N/A

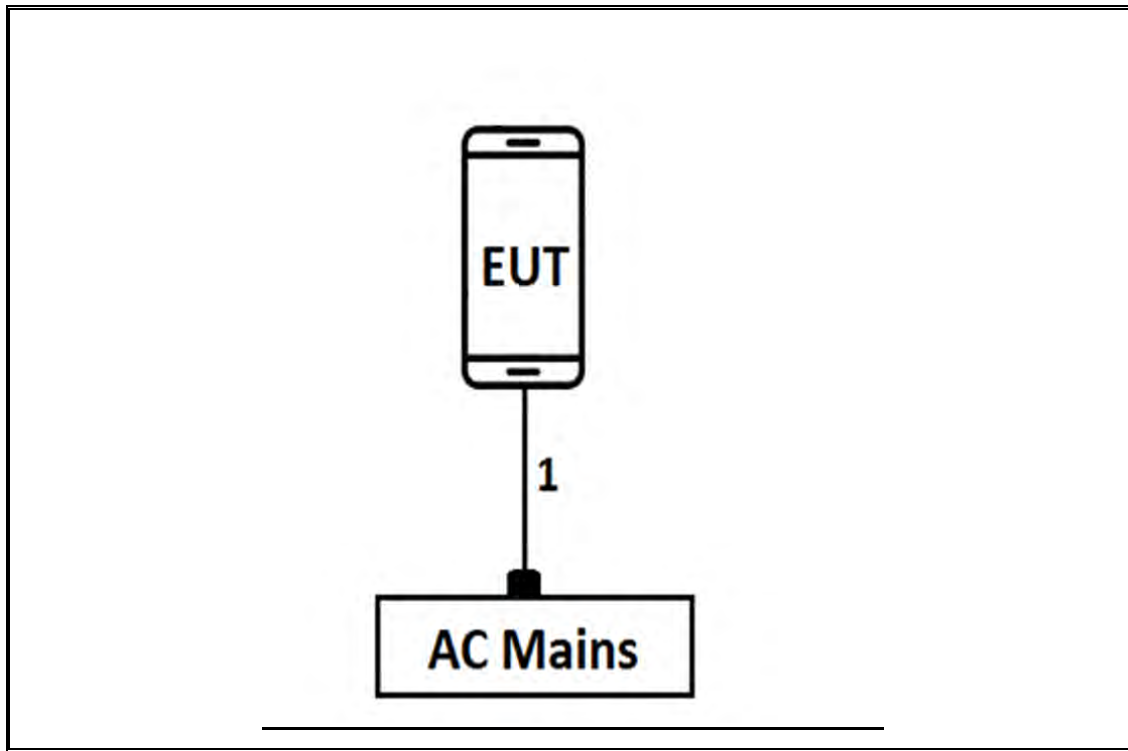
I/O CABLES (RADIATED AND CONDUCTED EMISSIONS)

I/O Cable List						
Cable No	Port	# of identical ports	Connector Type	Cable Type	Cable Length (m)	Remarks
1	USB	1	USB	Shielded	3	N/A

CONDCUTED TEST SETUP DIAGRAM



RADIATED AND AC LINE CONDUCTED EMISSIONS SETUP DIAGRAM



6. MEASUREMENT METHODS

On Time and Duty Cycle: ANSI C63.10-2013 Section 11.6

Occupied BW (20dB): ANSI C63.10-2013 Section 6.9.2

Occupied BW (99%): ANSI C63.10-2013 Section 6.9.3

Carrier Frequency Separation: ANSI C63.10-2013 Section 7.8.2

Number of Hopping Frequencies: ANSI C63.10-2013 Section 7.8.3

Time of Occupancy (Dwell Time): ANSI C63.10-2013 Section 7.8.4

Peak Output Power: ANSI C63.10-2013 Section 7.8.5

Conducted Spurious Emissions: ANSI C63.10-2013 Section 7.8.8

Conducted Band-Edge: ANSI C63.10-2013 Section 6.10.4

Radiated Spurious Emissions 30-1000MHz: ANSI C63.10-2013 Section 6.3 and 6.5

Radiated Spurious Emissions above 1GHz: ANSI C63.10-2013 Section 6.3 and 6.6

Radiated Band-edge: ANSI C63.10-2013 Section 6.10.5

AC Power-line conducted emissions: ANSI C63.10-2013, Section 6.2.

7. 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	ID Num	Cal Due	Last Cal
Amplifier, 1 - 18GHz	Miteq	AFS42-00101800-25-S-42	T493	06/23/2018	06/23/2017
Amplifier, 1 - 18GHz	Miteq	AFS42-00101800-25-S-42	T1165	11/25/2018	11/25/2017
RF Preamplifier, 1 - 26GHz	Agilent	8449B	T404	07/23/2018	07/23/2017
Amplifier, 10KHz to 1GHz, 32dB	Sonoma Instrument	310N	T835	06/24/2018	06/24/2017
Antenna, Broadband Hybrid 30MHz to 2000MHz	Sunol Science	JB1	T185	03/30//2018	03/30/2017
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	T863	06/09/2018	06/09/2017
Antenna, Horn 1-18GHz	ETS-Lindgren	3117	T862	06/09/2018	06/09/2017
Antenna, Horn 18-26.5GHz	ARA	MWH-1826	T449	01/04/2019	01/04/2018
Power Meter, P-series single channel	Agilent (Keysight) Technologies	N1911A	T1269	03/29/2018	03/29/2017
Power Sensor, P - series, 50MHz to 18GHz, Wideband	All	N1921A	T1224	03/29/2018	03/29/2017
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T1113	12/21/2018	12/21/2017
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T1466	04/11/2018	04/11/2017
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T1454	01/08/2019	01/08/2018
Spectrum Analyzer, PXA, 3Hz to 44GHz	Agilent (Keysight) Technologies	N9030A	T917	06/09/2018	06/09/2017
Antenna, Active Loop 9kHz-30MHz	Com-Power Corp.	AL-130R	T1866	10/10/2018	10/10/2017
Test Receiver, EMI, 10Hz-7GHz	Rhode&Schwarz	ESR	T1436	01/06/2019	01/06/2018
LISN	FISCHER	FCC-LISN-50/250-25-2-01	T1310	01/17/2019	01/17/2018

Test Software List			
Description	Manufacturer	Model	Version
Radiated Software	UL	UL EMC	Ver 9.5, December 1, 2016
Antenna Port Software	UL	UL RF	Ver 9.1, January 25, 2018

8. ANTENNA PORT TEST RESULTS

8.1. ON TIME AND DUTY CYCLE

LIMITS

None; for reporting purposes only.

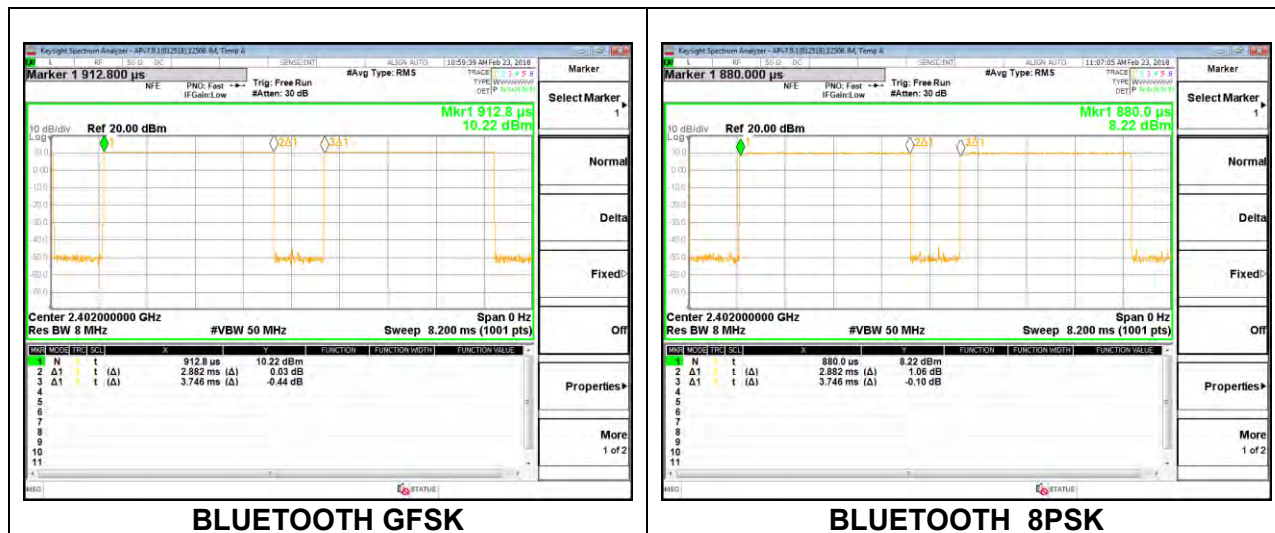
PROCEDURE

KDB 789033 Zero-Span Spectrum Analyzer Method.

ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T Minimum VBW (kHz)
Bluetooth GFSK	2.88	3.75	0.769	76.9%	1.14	0.347
Bluetooth 8PSK	2.88	3.75	0.769	76.9%	1.14	0.347

DUTY CYCLE PLOTS



8.2. 20 dB AND 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

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

8.2.1. BLUETOOTH BASIC DATA RATE GFSK MODULATION

Channel	Frequency (MHz)	20dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	2402	0.885	0.827
Mid	2441	0.885	0.829
High	2480	0.886	0.827



8.2.2. BLUETOOTH ENCHANCED DATA RATE 8PSK MODULATION

Channel	Frequency (MHz)	20dB Bandwidth (MHz)	99% Bandwidth (MHz)
Low	2402	1.272	1.184
Mid	2441	1.269	1.184
High	2480	1.273	1.184



8.3. HOPPING FREQUENCY SEPARATION

LIMITS

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.

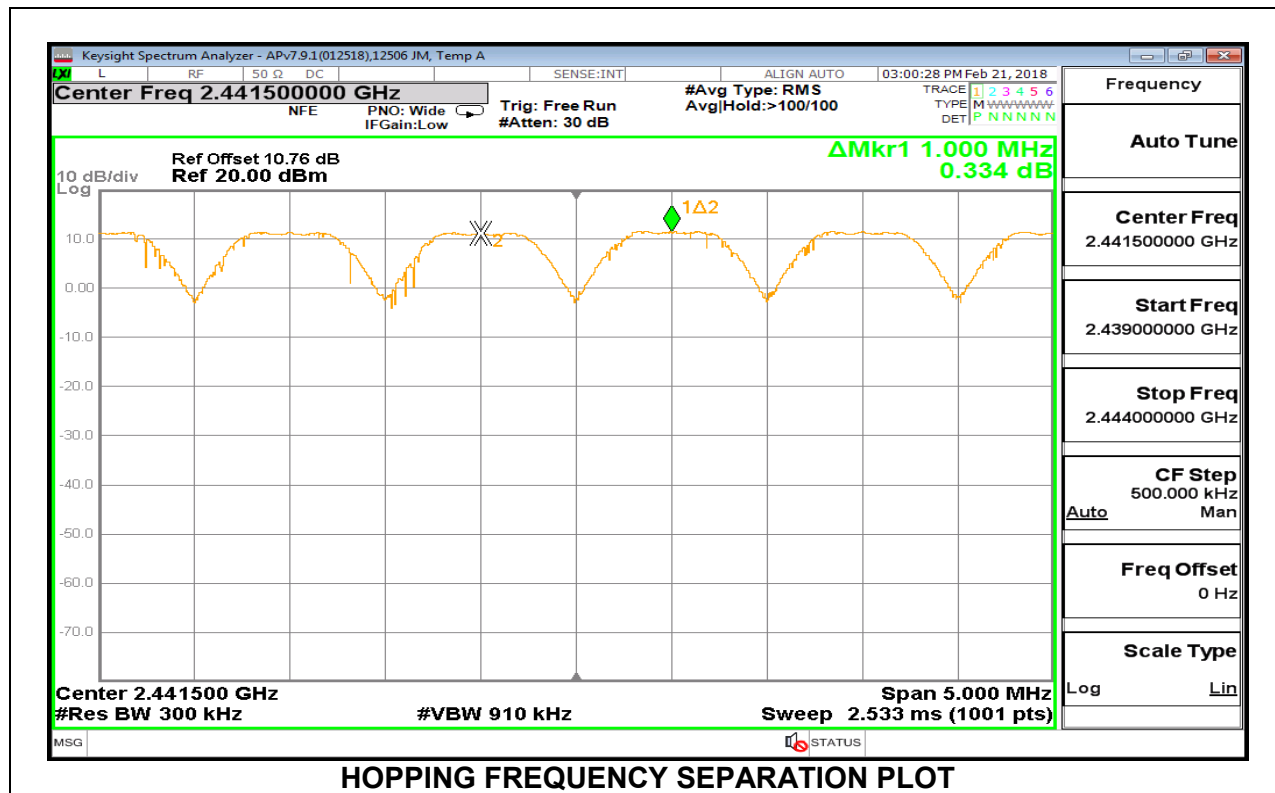
Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than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

TEST PROCEDURE

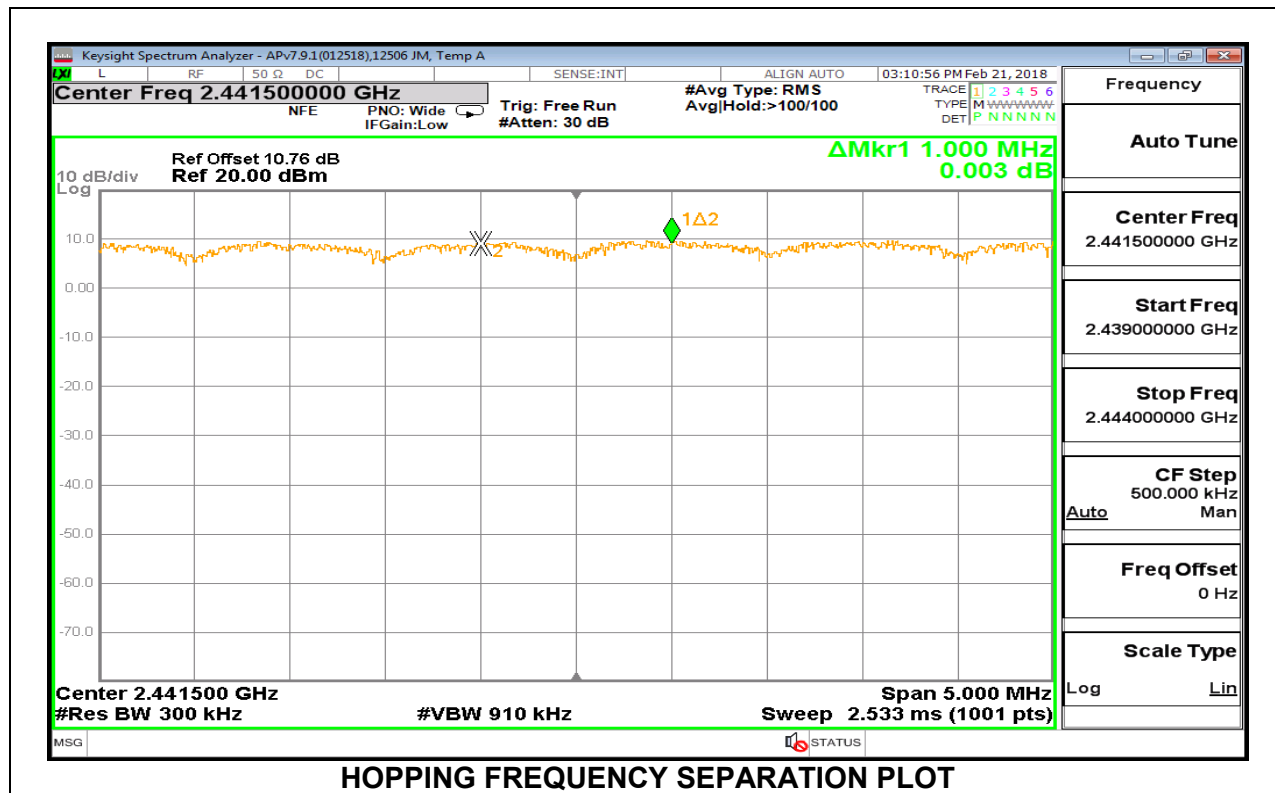
The transmitter output is connected to a spectrum analyzer. The RBW is set to 300 kHz and the VBW is set to 910 kHz. The sweep time is coupled.

RESULTS

8.3.1. BLUETOOTH BASIC DATA RATE GFSK MODULATION



8.3.2. BLUETOOTH ENCHANCED DATA RATE 8PSK MODULATION



8.4. NUMBER OF HOPPING CHANNELS

LIMITS

FCC §15.247 (a) (1) (iii)

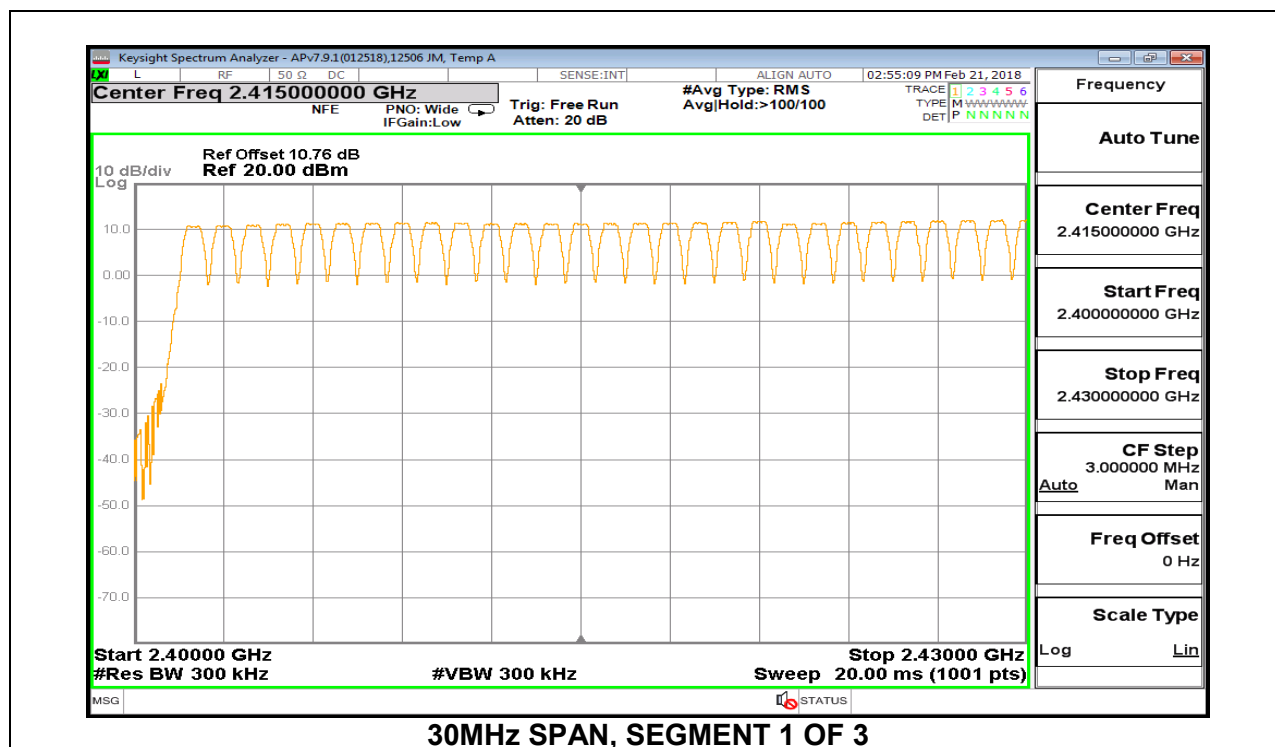
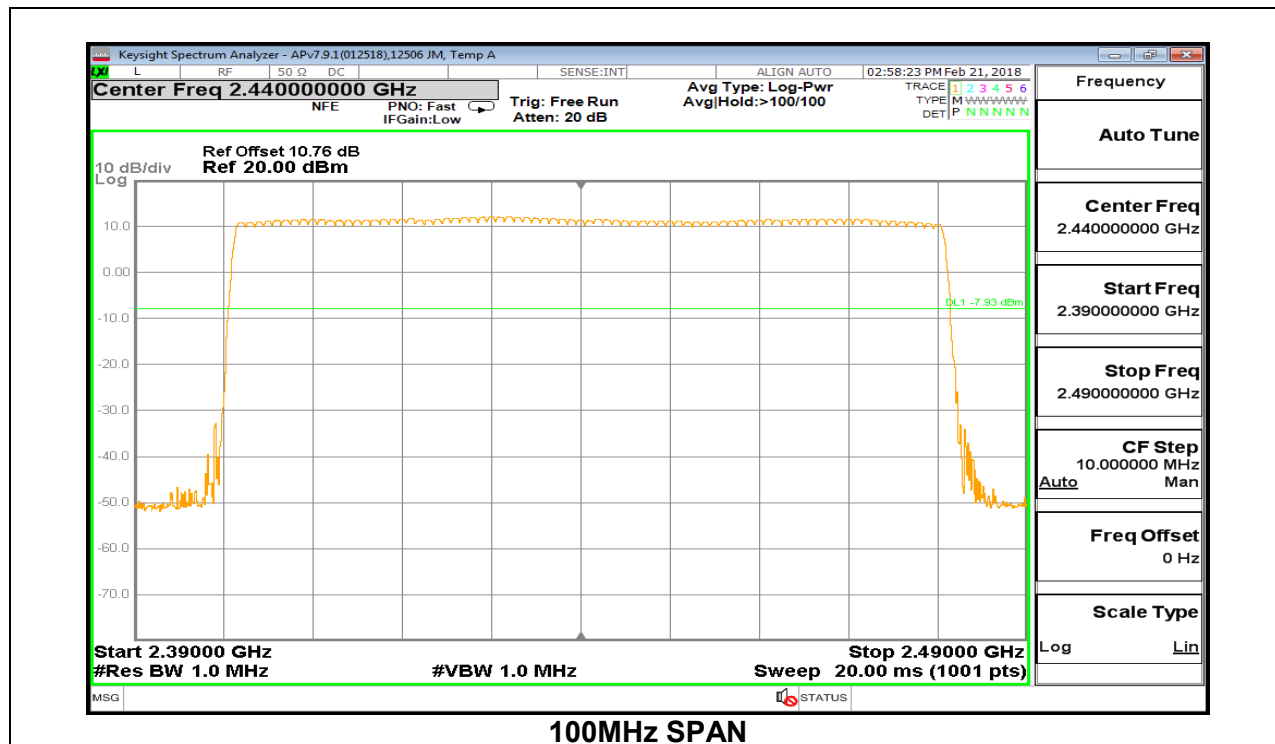
Frequency hopping systems in the 2400 – 2483.5 MHz band shall use at least 15 non-overlapping channels.

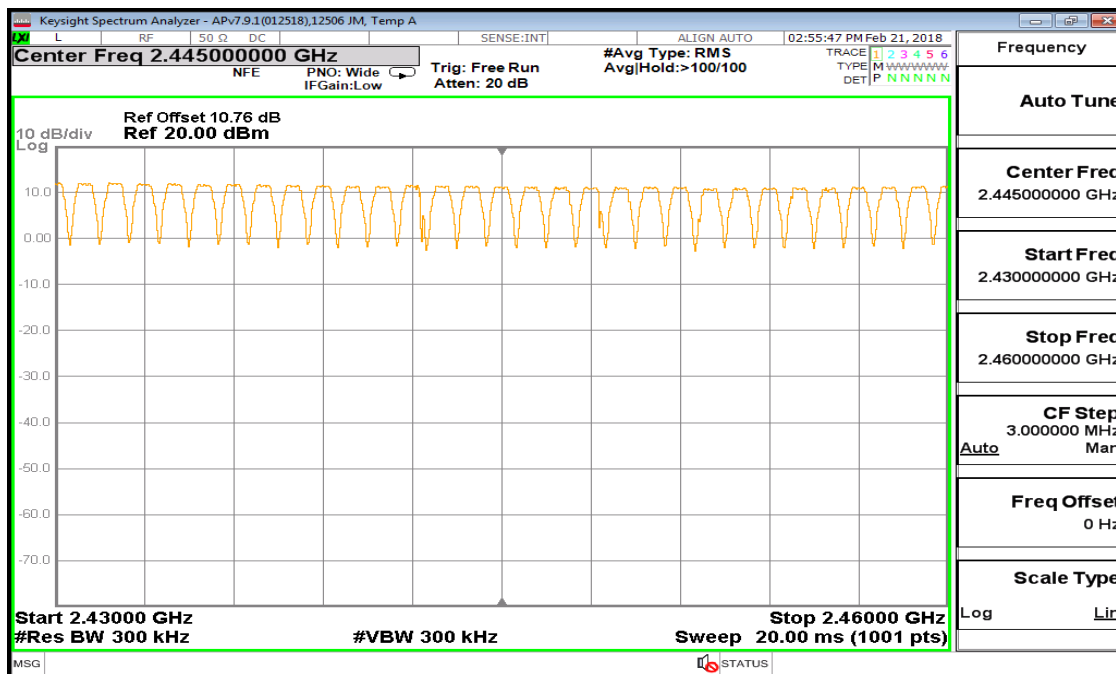
TEST PROCEDURE

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.

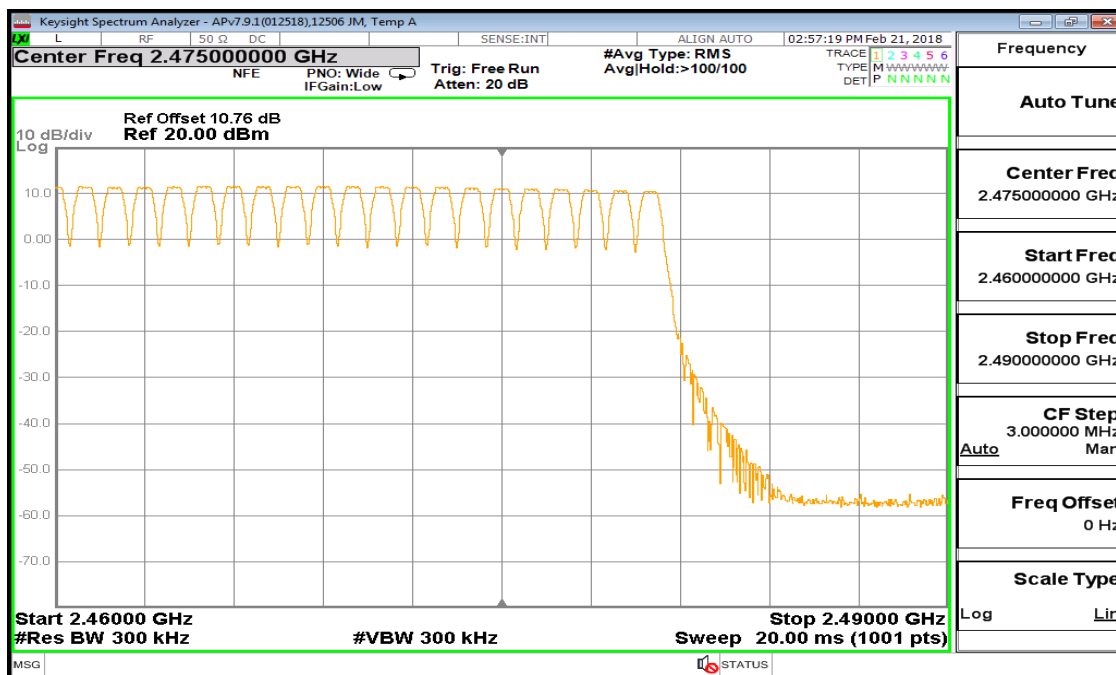
RESULTS

8.4.1. BLUETOOTH BASIC DATA RATE GFSK MODULATION



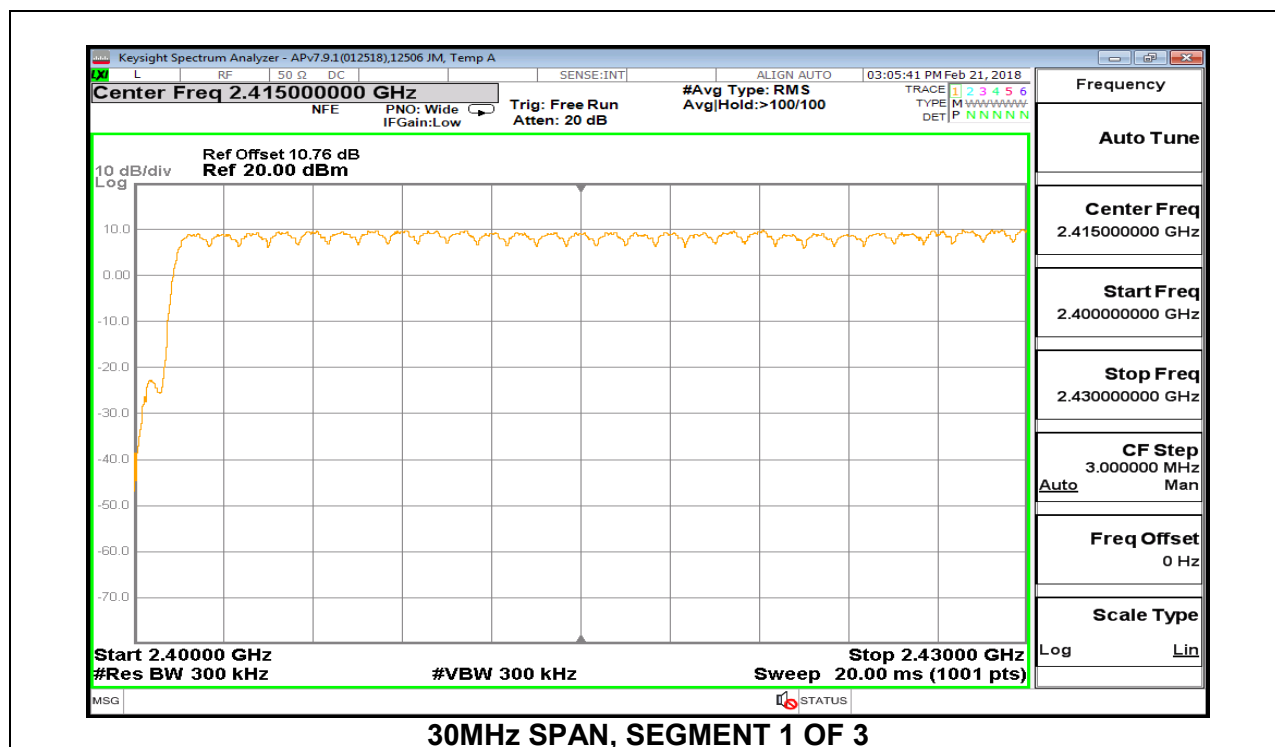
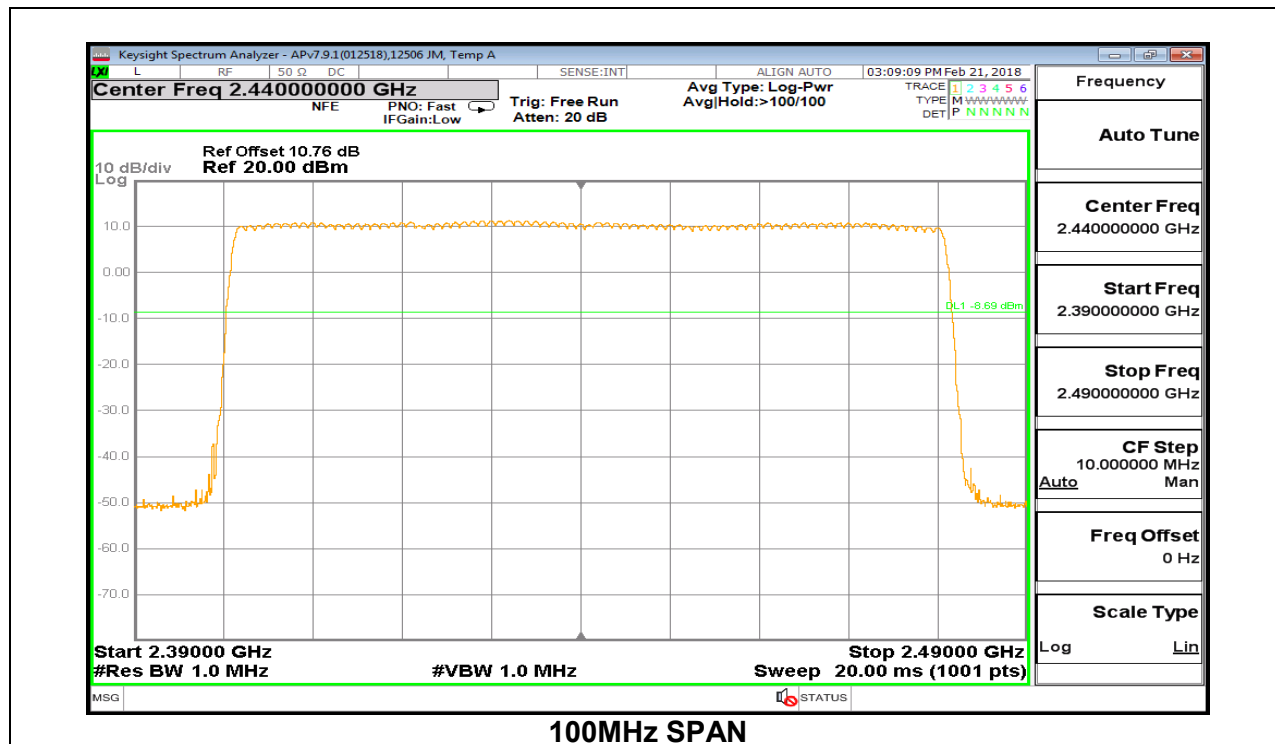


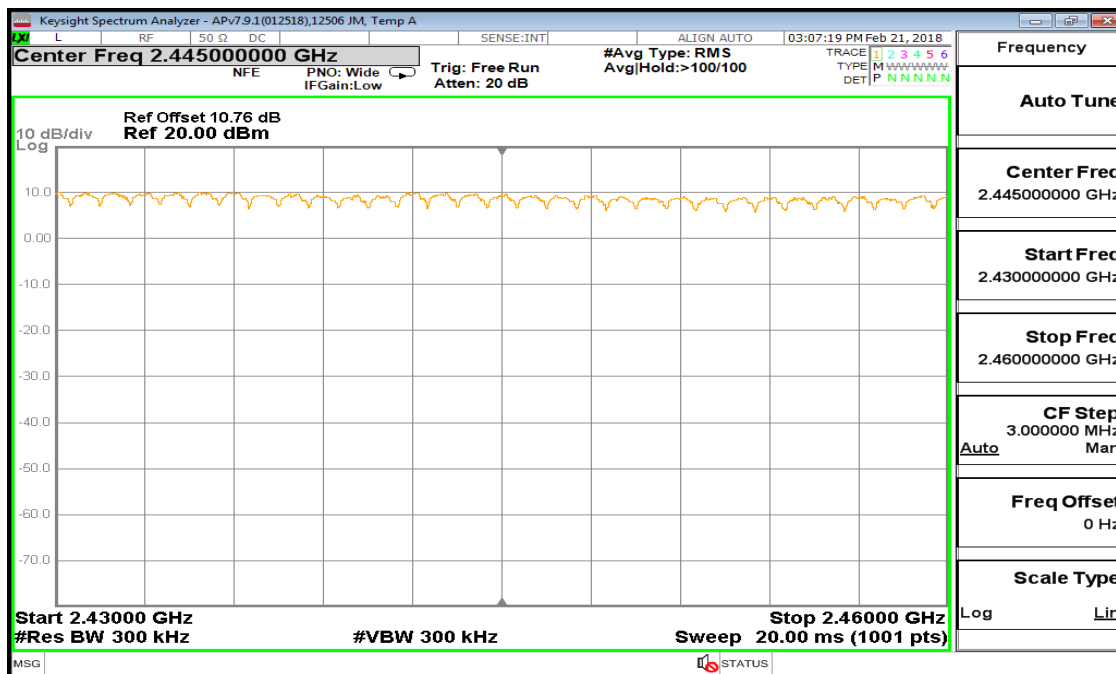
30MHz SPAN, SEGMENT 2 OF 3



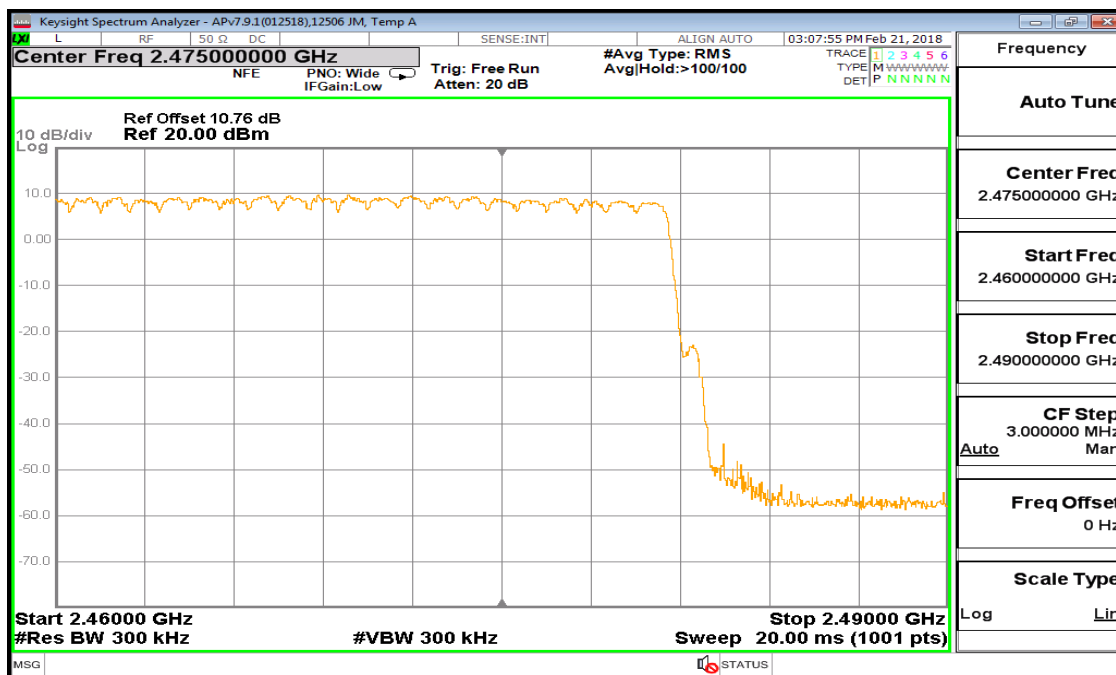
30MHz SPAN, SEGMENT 3 OF 3

8.4.2. BLUETOOTH ENCHANCED DATA RATE 8PSK MODULATION





30MHz SPAN, SEGMENT 2 OF 3



30MHz SPAN, SEGMENT 3 OF 3

8.5. AVERAGE TIME OF OCCUPANCY

LIMITS

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.

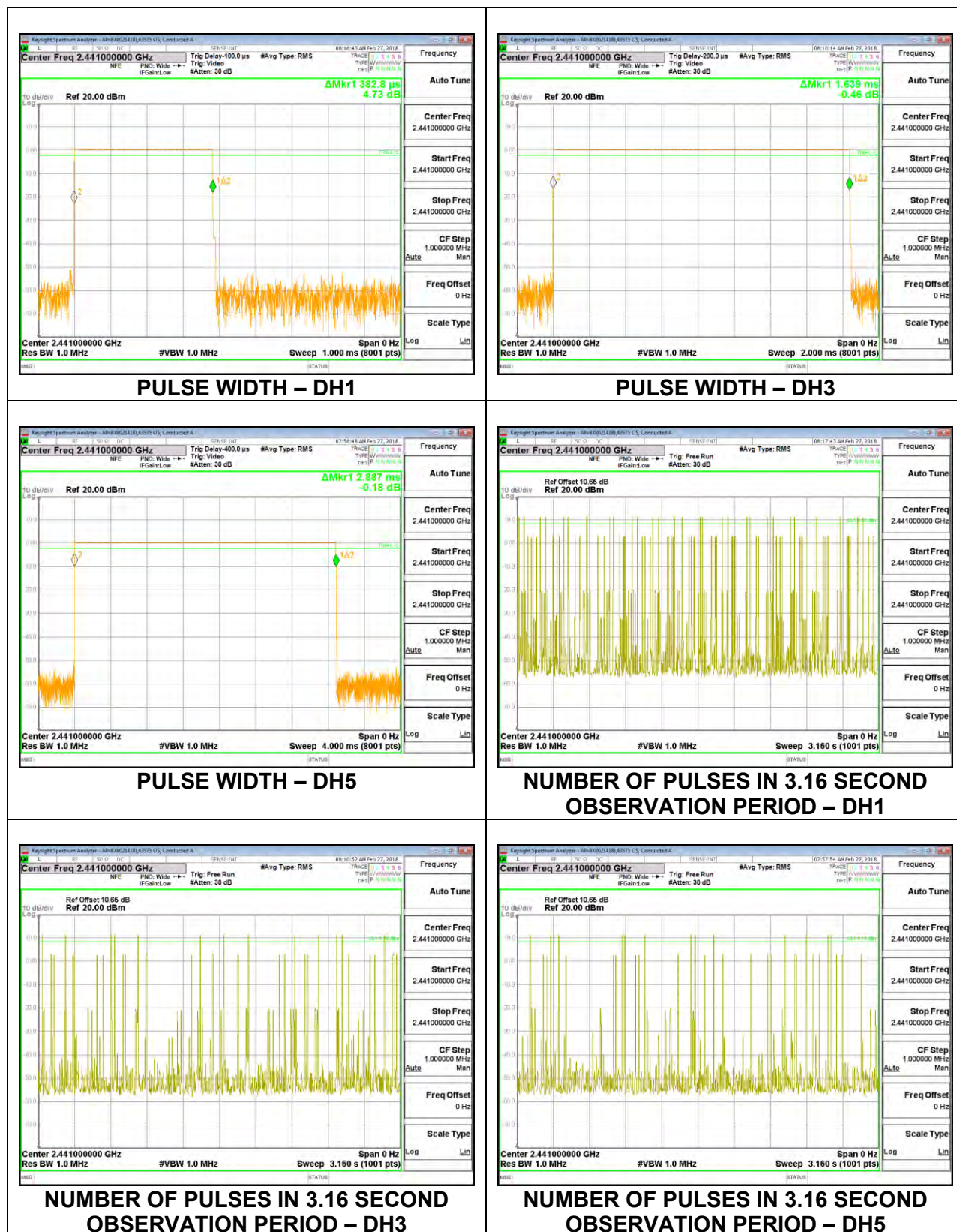
The average time of occupancy in the specified 3.16 second period (79 channels * 0.4 s) is equal to $10 * (\# \text{ of pulses in } 3.16 \text{ s}) * \text{pulse width}$.

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

8.5.1. BLUETOOTH BASIC DATA RATE GFSK MODULATION

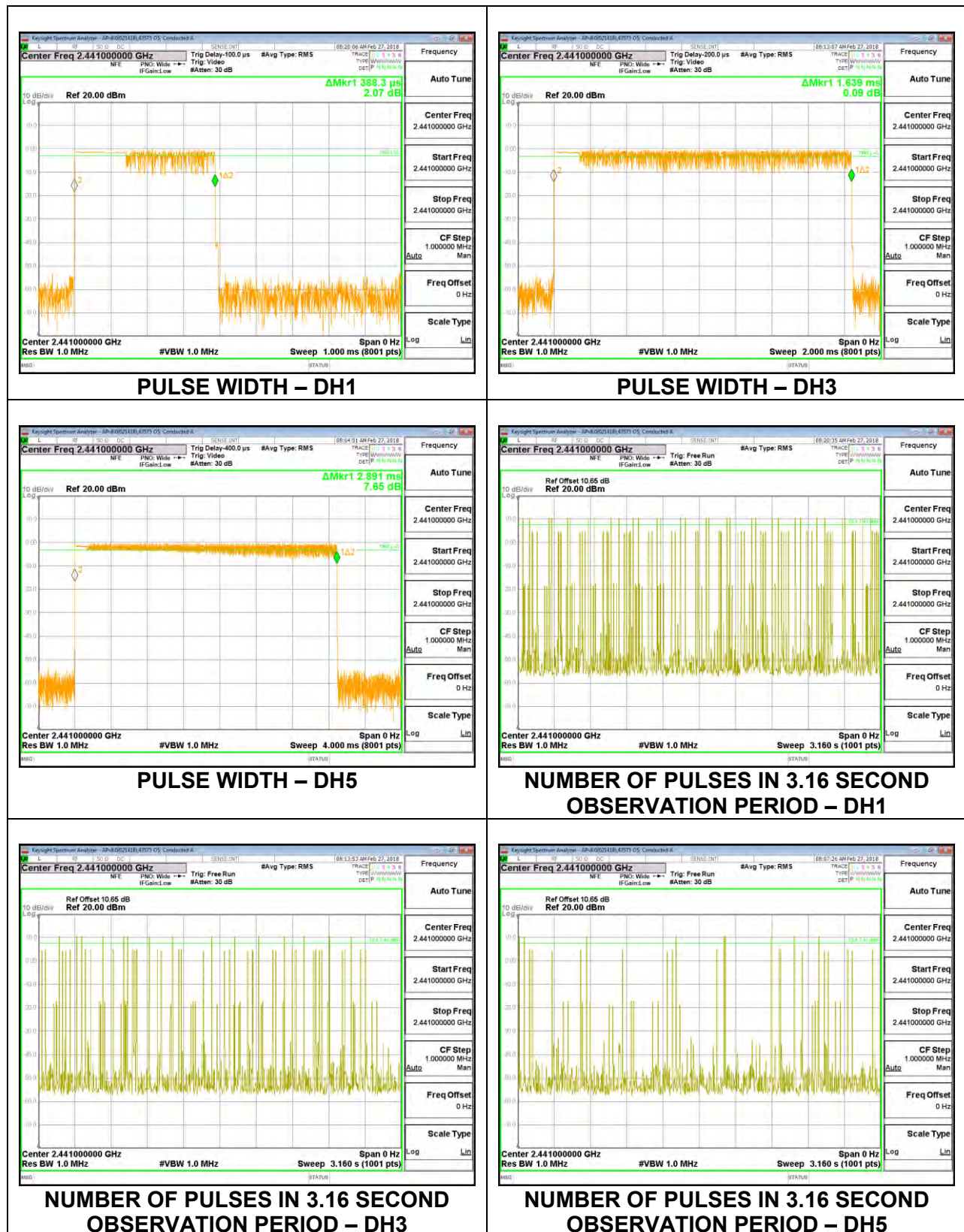
DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
GFSK Normal Mode					
DH1	0.383	31	0.1187	0.4	-0.2813
DH3	1.639	13	0.2131	0.4	-0.1869
DH5	2.887	13	0.3753	0.4	-0.0247
DH Packet	Pulse Width (sec)	Number of Pulses in 0.8 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
GFSK AFH Mode					
DH1	0.383	7.75	0.02968	0.4	-0.3703
DH3	1.639	3.25	0.05327	0.4	-0.3467
DH5	2.887	3.25	0.09383	0.4	-0.3062



8.5.2. BLUETOOTH ENHANCED DATA RATE 8PSK MODULATION

DH Packet	Pulse Width (msec)	Number of Pulses in 3.16 seconds	Average Time of Occupancy (sec)	Limit (sec)	Margin (sec)
8PSK Normal Mode					
DH1	0.388	32	0.12416	0.4	-0.27584
DH3	1.639	15	0.24585	0.4	-0.15415
DH5	2.89	9	0.2601	0.4	-0.1399

Note: for AFH (8PSK) mode, please refer to the results of AFH(GFSK) mode; the channel selection and hopping rate are the same for both EDR and Basic Rate operation, data for Basic Rate in section 4.5.1 demonstrates compliance with channel occupancy when AFH is employed.



8.6. OUTPUT POWER

LIMITS

§15.247 (b) (1)

For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels the limit shall not be greater than 30dBm. For all other frequency hopping systems in the 2400-2483.5 MHz band the limit shall not be greater than 21dBm.

TEST PROCEDURE

The transmitter output is connected to a power meter. The cable assembly insertion loss was entered as an offset in the power meter to allow for a gated peak reading of power.

RESULTS

8.6.1. BLUETOOTH BASIC DATA RATE GFSK MODULATION

Tested By:	GE43578
Date:	2/17/2018

Channel	Frequency (MHz)	Output Peak Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	10.95	30	-19.05
Middle	2441	11.32	30	-18.68
High	2480	10.39	30	-19.61

8.6.2. BLUETOOTH ENCHANCED DATA RATE 8PSK MODULATION

Tested By:	GE43578
Date:	2/17/2018

Channel	Frequency (MHz)	Output Peak Power (dBm)	Limit (dBm)	Margin (dB)
Low	2402	8.94	21	-12.06
Middle	2441	9.35	21	-11.65
High	2480	8.43	21	-12.57

8.7. AVERAGE POWER

LIMITS

None; for reporting purposes only

TEST PROCEDURE

The transmitter output is connected to a power meter. The cable assembly insertion loss was entered as an offset in the power meter to allow for a gated Average reading of power.

RESULTS

8.7.1. BLUETOOTH BASIC DATA RATE GFSK MODULATION

Tested By:	GE43578
Date	2/17/2018

Channel	Frequency (MHz)	Average Power (dBm)
Low	2402	10.71
Middle	2441	11.07
High	2480	10.27

8.7.2. BLUETOOTH ENCHANCED DATA RATE 8PSK MODULATION

Tested By:	GE43578
Date	2/17/2018

Channel	Frequency (MHz)	Average Power (dBm)
Low	2402	8.17
Middle	2441	8.71
High	2480	7.96

8.8. 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.

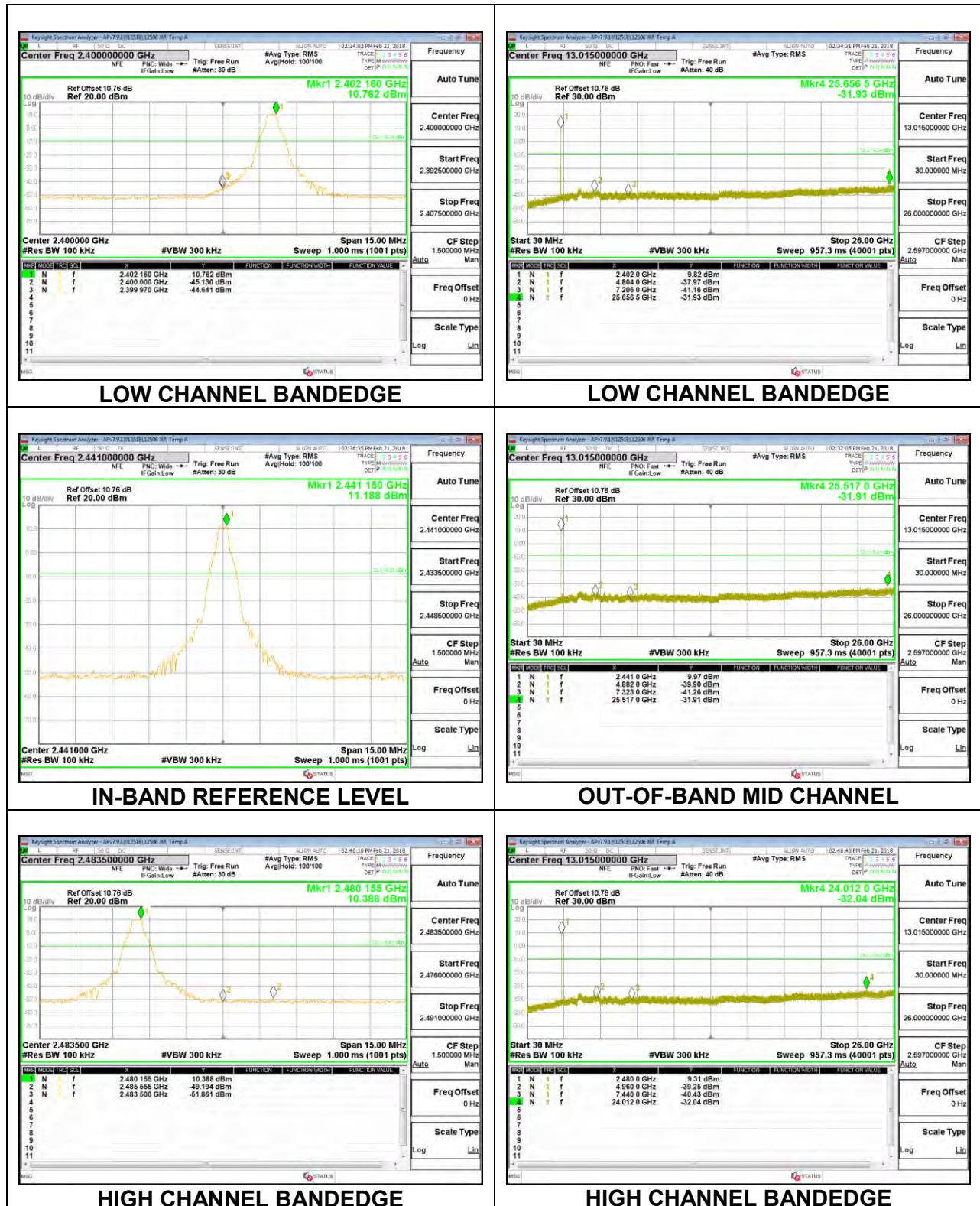
The spectrum from 30 MHz to 26 GHz is investigated with the transmitter set to the lowest, middle, and highest channels.

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

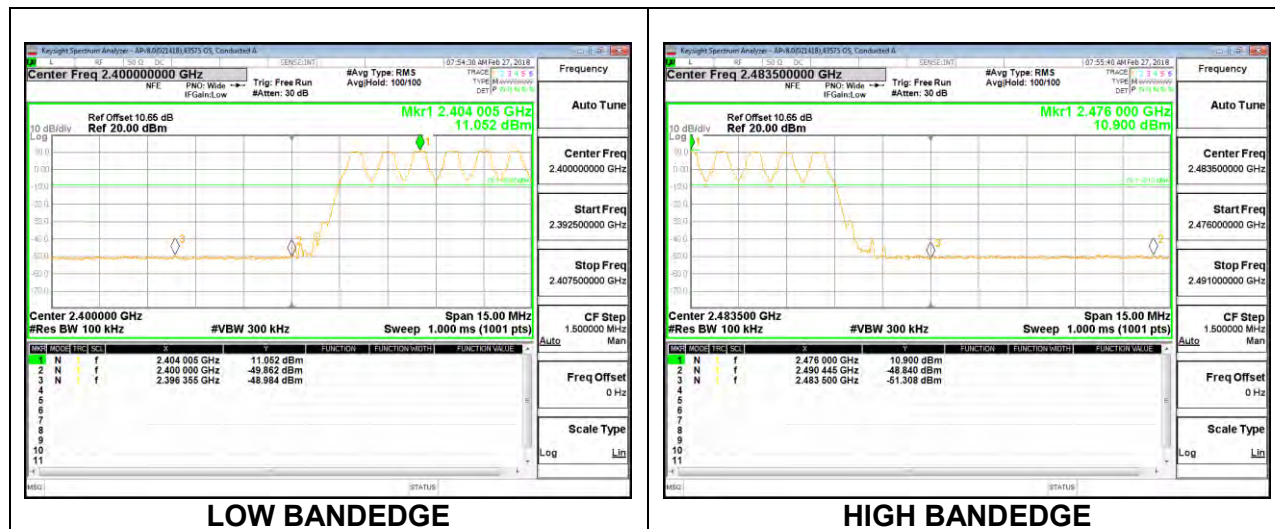
RESULTS

8.8.1. BLUETOOTH BASIC DATA RATE GFSK MODULATION

SPURIOUS EMISSIONS, NON-HOPPING

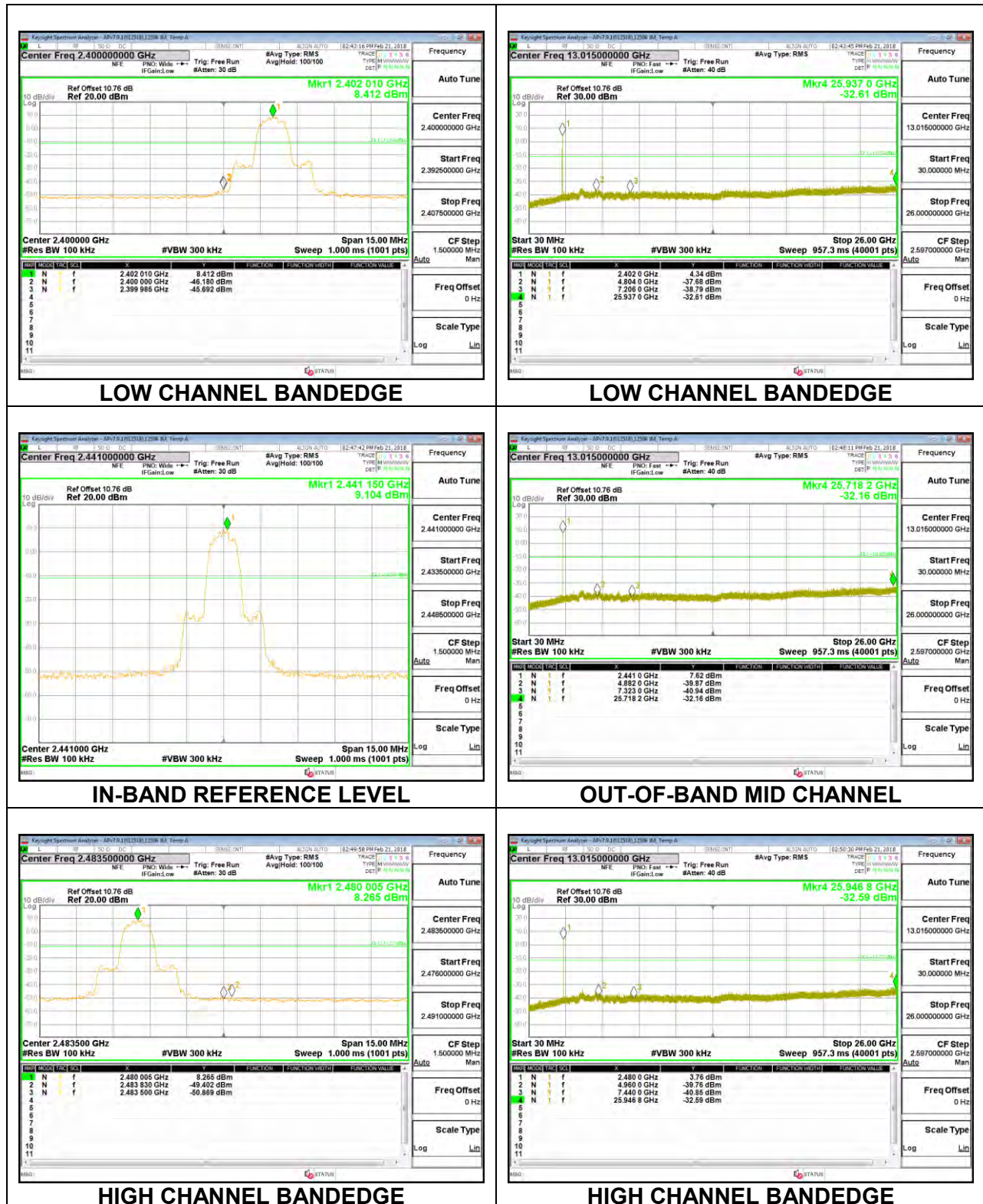


SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON

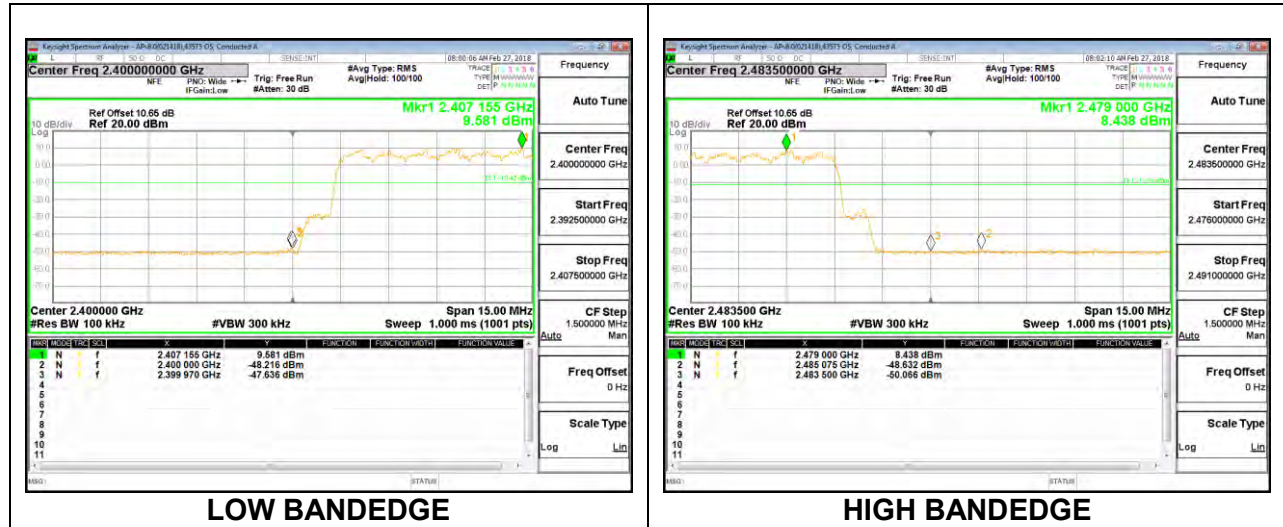


8.8.2. BLUETOOTH ENHANCED DATA RATE 8PSK MODULATION

SPURIOUS EMISSIONS, NON-HOPPING



SPURIOUS BANDEDGE EMISSIONS WITH HOPPING ON



9. RADIATED TEST RESULTS

LIMITS

FCC §15.205 and §15.209

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
0.009-0.490	2400/F(kHz) @ 300 m	-
0.490-1.705	24000/F(kHz) @ 30 m	-
1.705 - 30	30 @ 30m	-
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

TEST PROCEDURE

The EUT is placed on a non-conducting table 80 cm above the ground plane for measurement below 1GHz; 1.5 m above the ground plane for measurement above 1GHz. The antenna to EUT distance is 3 meters. The EUT is configured in accordance with ANSI C63.10. The EUT is set to transmit in a continuous mode.

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

For measurements above 1 GHz the resolution bandwidth is set to 1 MHz, then the video bandwidth is set to 3 MHz for peak measurements and 1 MHz resolution bandwidth with 1/T (360 Hz) video bandwidth with peak detector for average measurements.

The spectrum from 1 GHz to 18 GHz is investigated with the transmitter set to the lowest, middle, and highest channels in each applicable band. Below 30MHz, below 1GHz and above 18GHz emissions, the channel with the highest output power was tested.

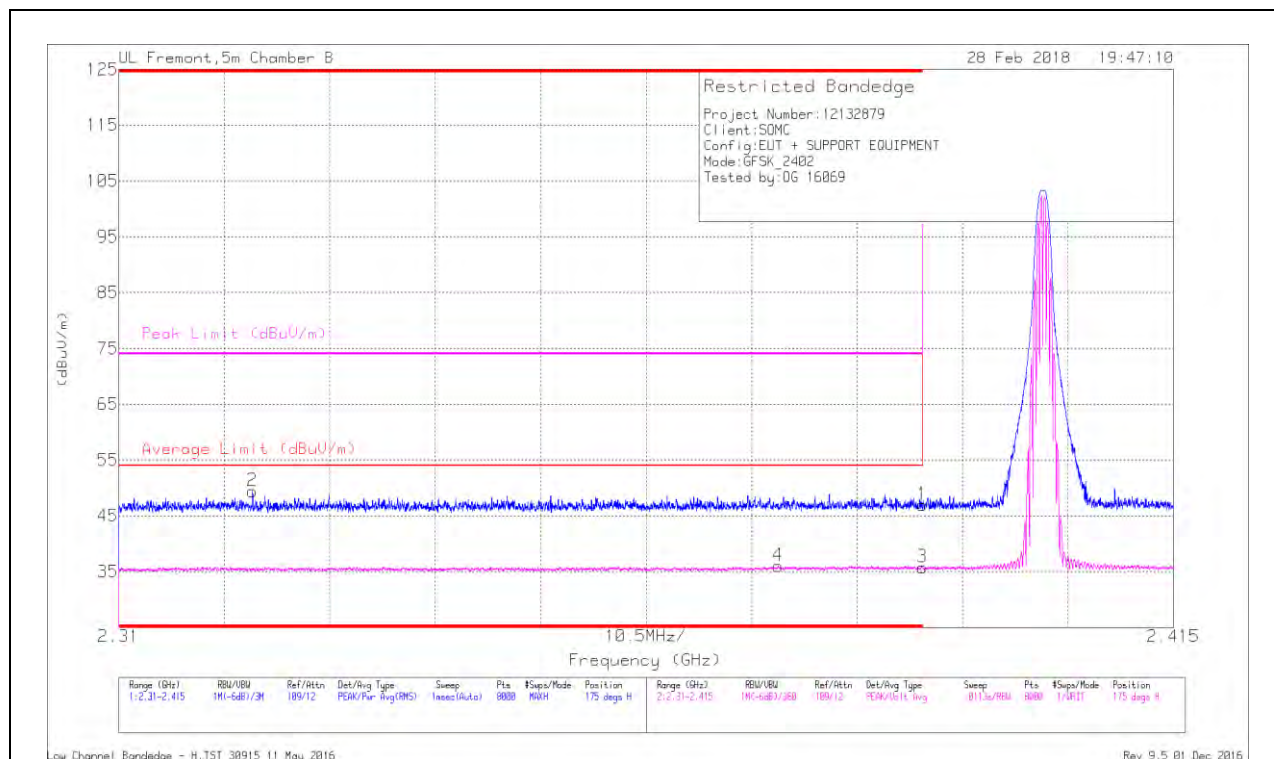
The frequency range of interest is monitored at a fixed antenna height and EUT azimuth. The EUT is rotated through 360 degrees to maximize emissions received. The antenna is scanned from 1 to 4 meters above the ground plane to further maximize the emission. Measurements are made with the antenna polarized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

9.1. TRANSMITTER ABOVE 1 GHz

9.1.1. BLUETOOTH BASIC DATA RATE GFSK MODULATION

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



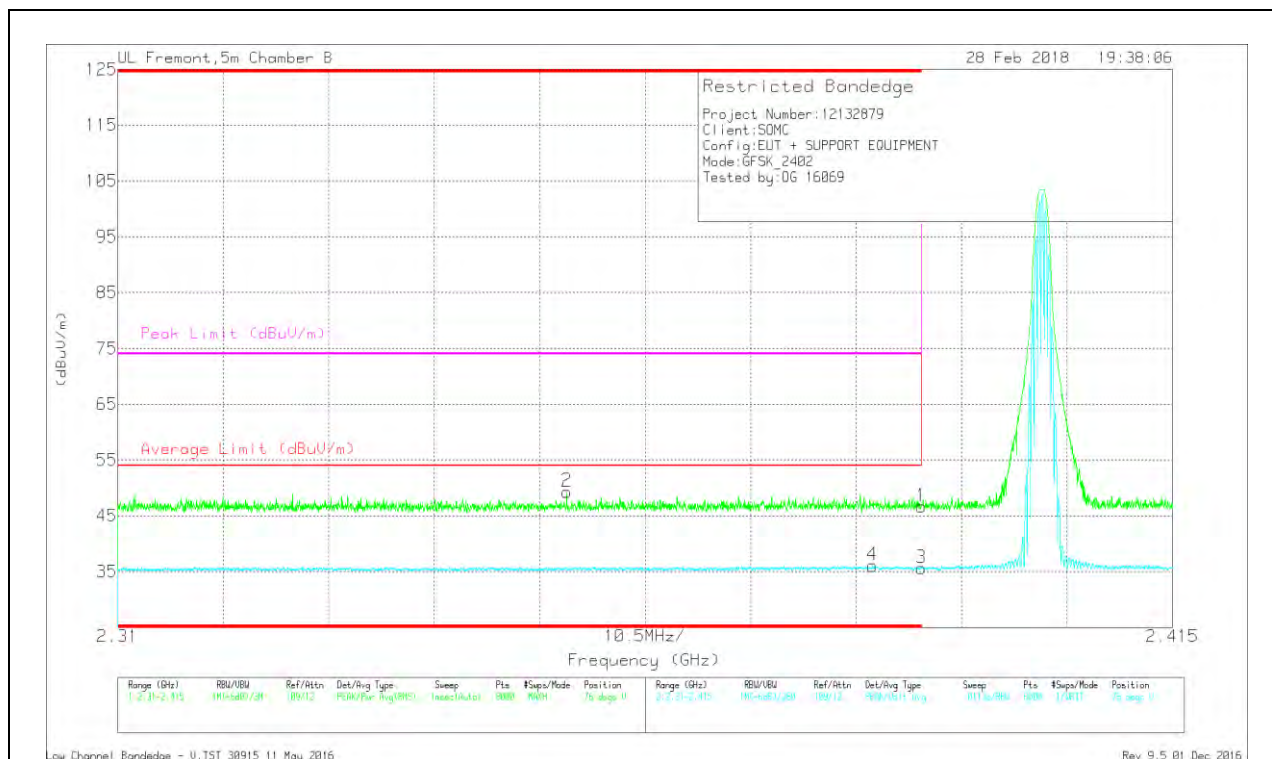
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fitr/P ad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	36.25	Pk	32	-21.3	46.95	-	-	74	-27.05	175	275	H
2	* 2.323	38.82	Pk	31.9	-21.3	49.42	-	-	74	-24.58	175	275	H
3	* 2.39	25.04	VA1T	32	-21.3	35.74	54	-18.26	-	-	175	275	H
4	* 2.376	25.43	VA1T	31.9	-21.3	36.03	54	-17.97	-	-	175	275	H

* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

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

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fitr/P ad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	35.95	Pk	32	-21.3	46.65	-	-	74	-27.35	76	168	V
2	* 2.355	38.76	Pk	31.9	-21.3	49.36	-	-	74	-24.64	76	168	V
3	* 2.39	24.95	VA1T	32	-21.3	35.65	54	-18.35	-	-	76	168	V
4	* 2.385	25.38	VA1T	32	-21.3	36.08	54	-17.92	-	-	76	168	V

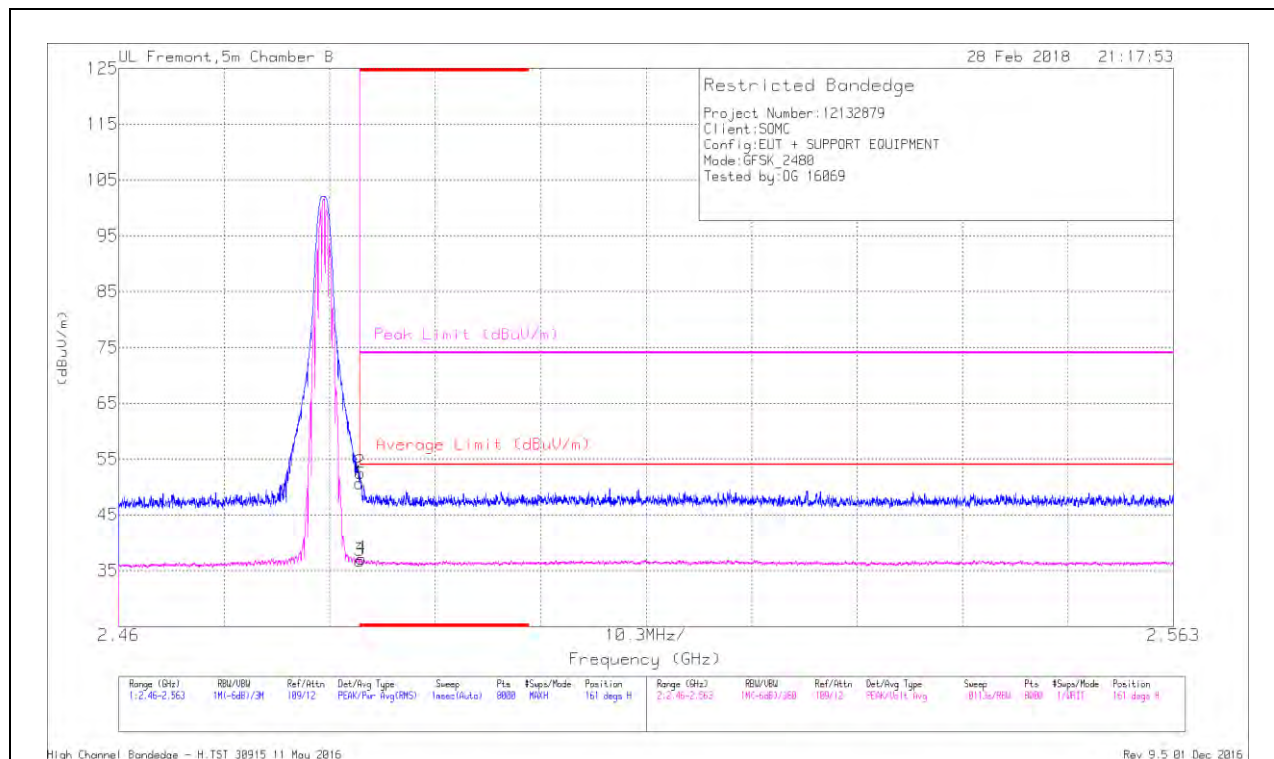
* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

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

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



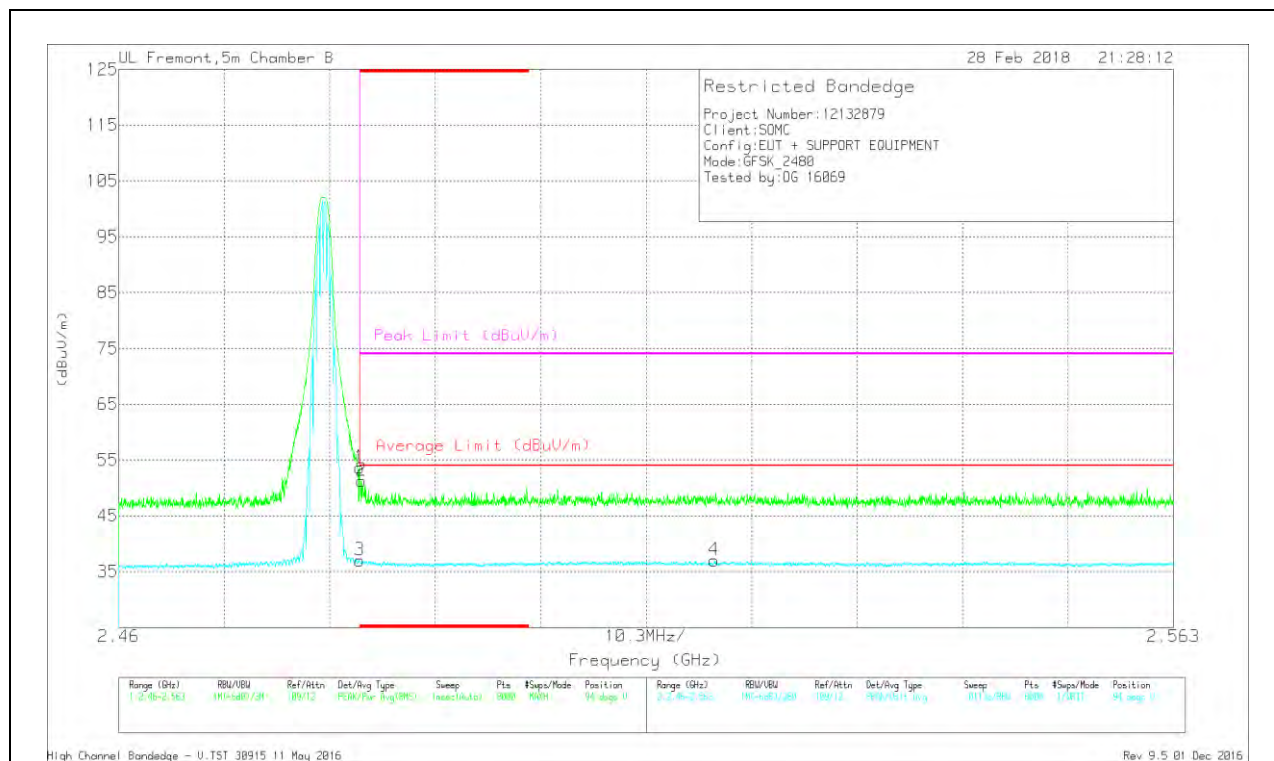
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fitr/P ad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	39.43	Pk	32.5	-21.3	50.63	-	-	74	-23.37	161	223	H
2	* 2.484	41.27	Pk	32.5	-21.3	52.47	-	-	74	-21.53	161	223	H
3	* 2.484	25.55	VA1T	32.5	-21.3	36.75	54	-17.25	-	-	161	223	H
4	* 2.484	25.93	VA1T	32.5	-21.3	37.13	54	-16.87	-	-	161	223	H

* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

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

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dBm)	Amp/Cbl/Filt/P ad (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	42.4	Pk	32.5	-21.3	53.6	-	-	74	-20.4	94	196	V
2	* 2.484	40.04	Pk	32.5	-21.3	51.24	-	-	74	-22.76	94	196	V
3	* 2.484	25.81	VA1T	32.5	-21.3	37.01	54	-16.99	-	-	94	196	V
4	2.518	25.46	VA1T	32.6	-21.1	36.96	54	-17.04	-	-	94	196	V

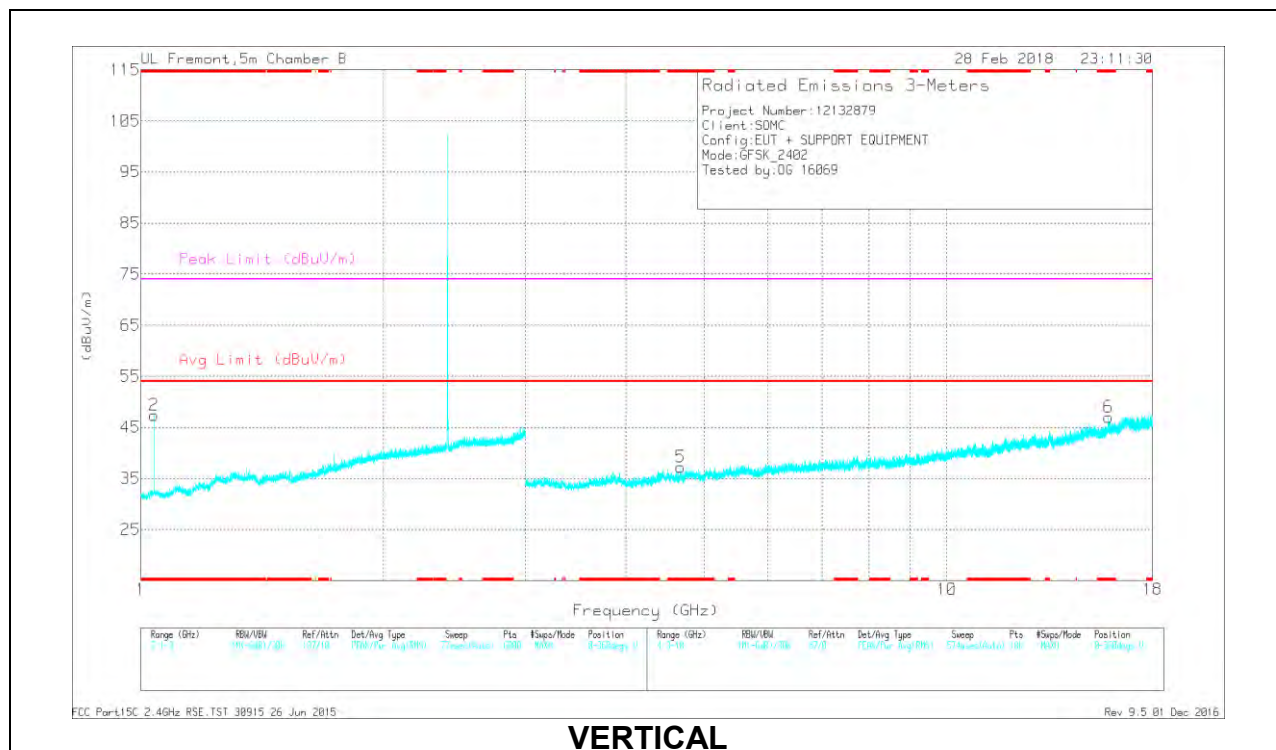
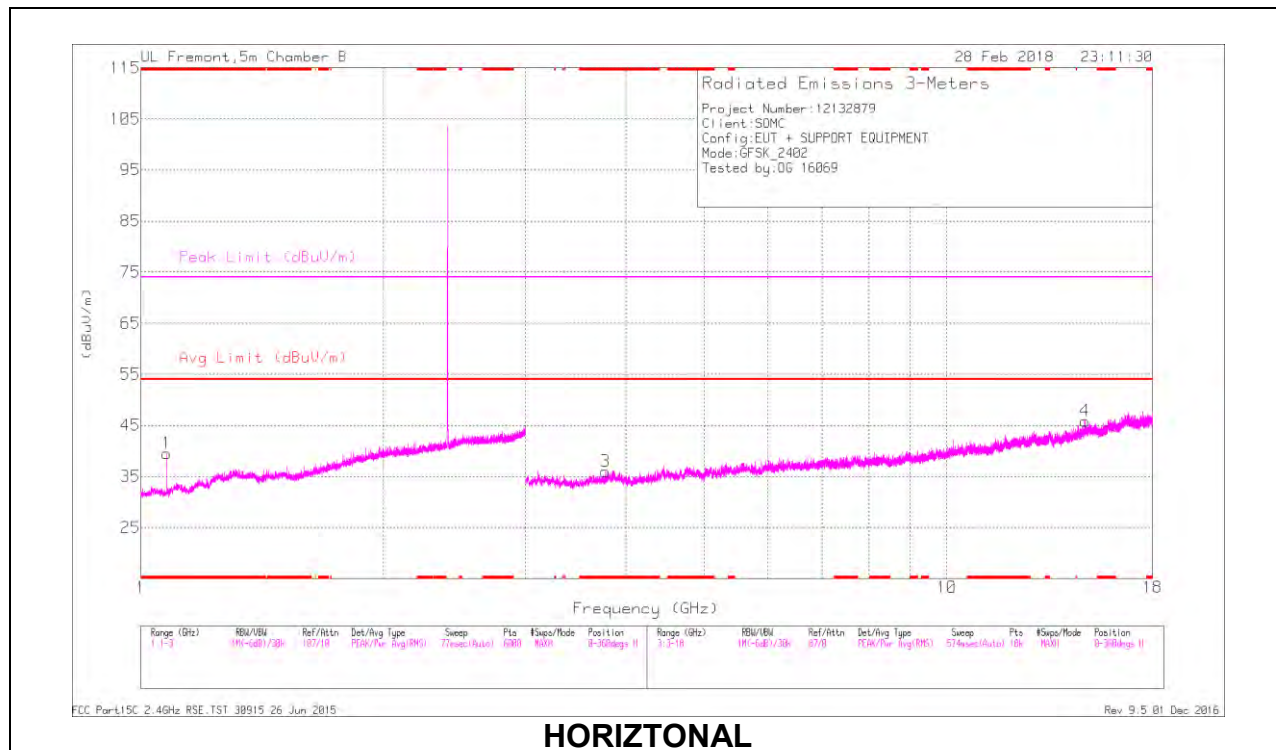
* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

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

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



RADIATED EMISSIONS

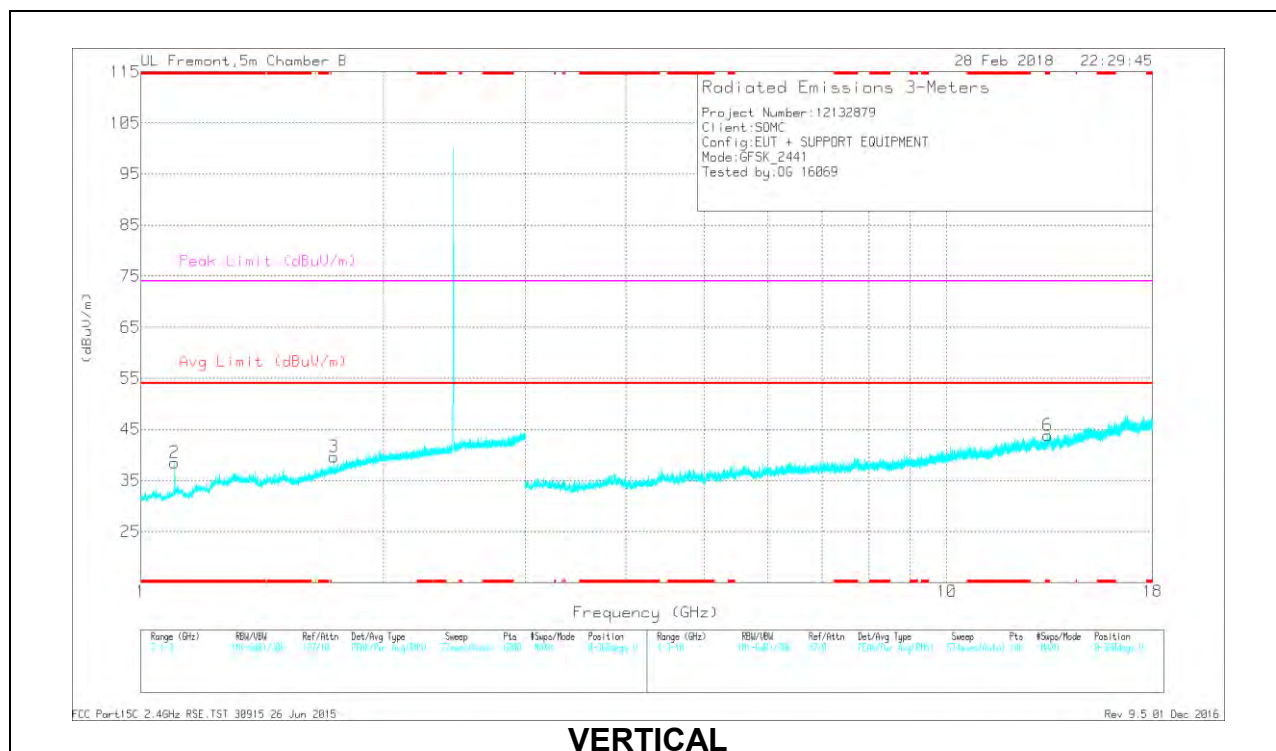
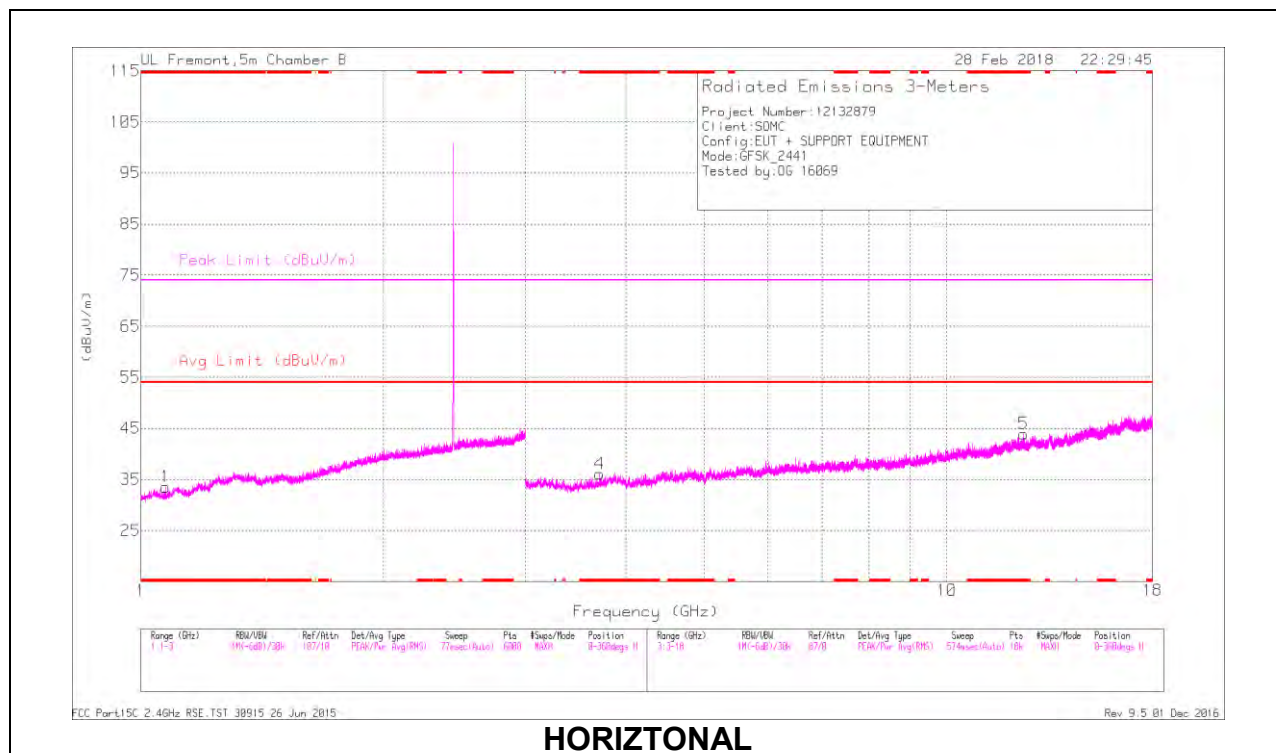
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Filtr/P ad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.074	32.38	PKFH	27.3	-23	36.68	-	-	74	-37.32	27	281	H
1	* 1.075	21.83	VA1T	27.3	-23.1	26.03	54	-27.97	-	-	27	281	H
2	* 1.039	34.11	PKFH	27.1	-23.2	38.01	-	-	74	-35.99	205	363	V
2	* 1.04	22.64	VA1T	27.1	-23.3	26.44	54	-27.56	-	-	205	363	V
3	* 3.773	38.34	PKFH	33.4	-31.5	40.24	-	-	74	-33.76	119	347	H
3	* 3.773	27.45	VA1T	33.4	-31.5	29.35	54	-24.65	-	-	119	347	H
5	* 4.672	37.73	PKFH	34.3	-30.8	41.23	-	-	74	-32.77	48	170	V
5	* 4.674	27.06	VA1T	34.3	-30.9	30.46	54	-23.54	-	-	48	170	V
6	* 15.865	31.09	PKFH	41	-20.9	51.19	-	-	74	-22.81	0	186	V
6	* 15.864	19.63	VA1T	41	-20.9	39.73	54	-14.27	-	-	0	186	V
4	14.833	31.7	PKFH	40.6	-23.5	48.8	-	-	-	-	15	205	H

* - indicates frequency in CFR47 Pt 15 Restricted Band

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

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

MID CHANNEL RESULTS



RADIATED EMISSIONS

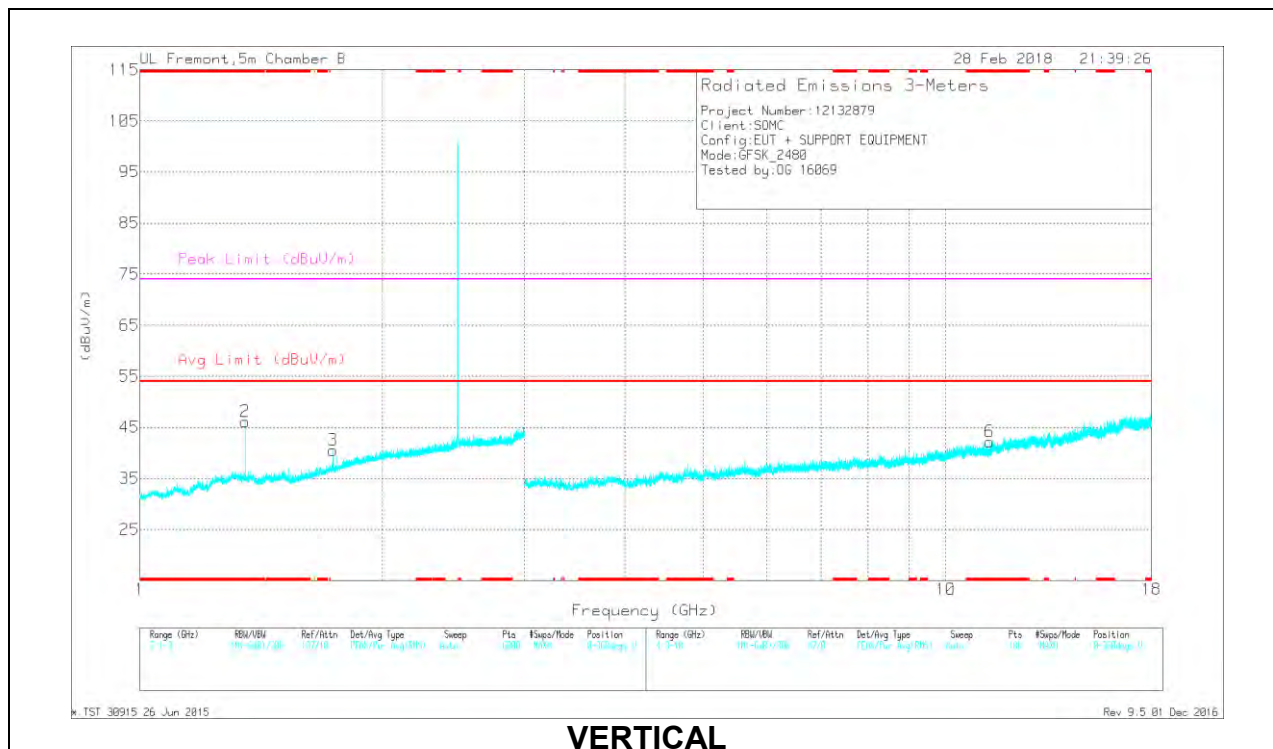
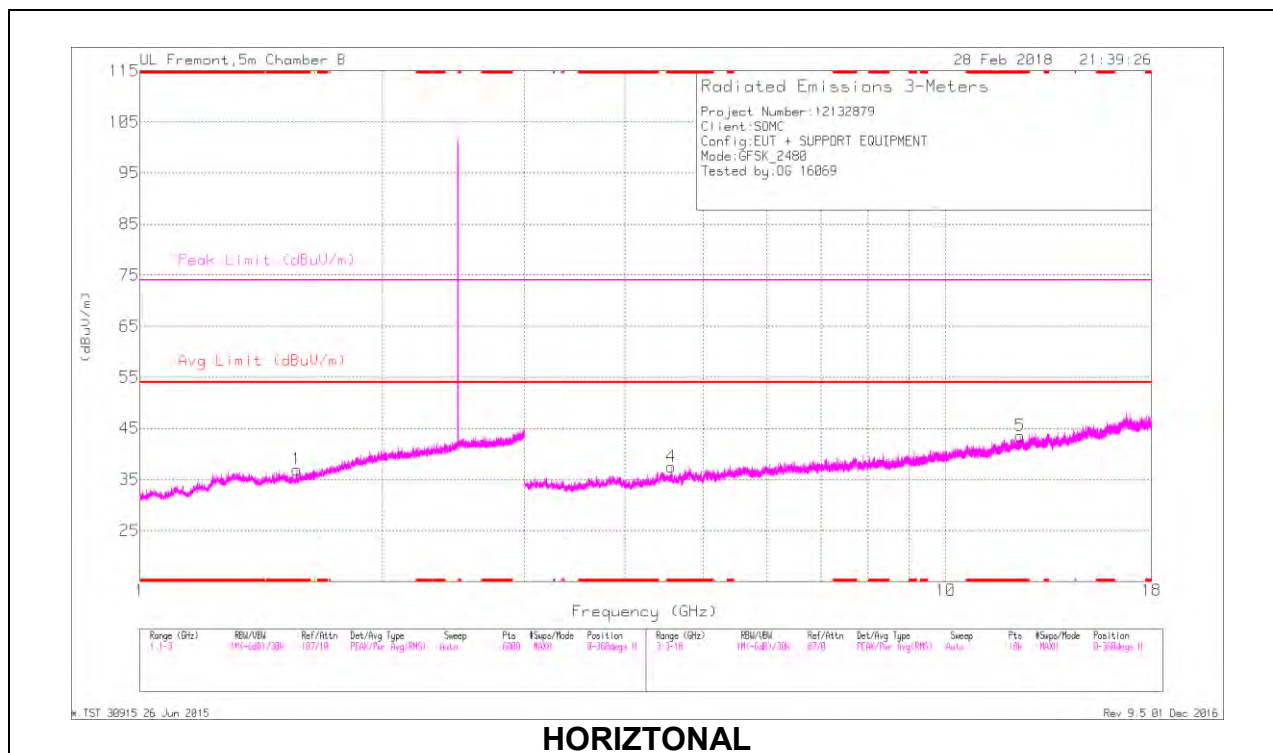
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Filtr/P ad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.071	32.22	PKFH	27.3	-23.2	36.32	-	-	74	-37.68	245	200	H
1	* 1.071	21.89	VA1T	27.3	-23.2	25.99	54	-28.01	-	-	245	200	H
2	* 1.102	33.45	PKFH	27.7	-22.8	38.35	-	-	74	-35.65	95	325	V
2	* 1.102	22.3	VA1T	27.7	-22.8	27.2	54	-26.8	-	-	95	325	V
4	* 3.711	38.02	PKFH	33.3	-31.5	39.82	-	-	74	-34.18	189	350	H
4	* 3.709	27.43	VA1T	33.3	-31.5	29.23	54	-24.77	-	-	189	350	H
5	* 12.453	32.76	PKFH	39	-23.8	47.96	-	-	74	-26.04	209	255	H
5	* 12.452	21.35	VA1T	39	-23.8	36.55	54	-17.45	-	-	209	255	H
6	* 13.339	32.73	PKFH	39.3	-24	48.03	-	-	74	-25.97	360	176	V
6	* 13.337	21.57	VA1T	39.3	-24	36.87	54	-17.13	-	-	360	176	V
3	1.738	39.09	PKFH	29.5	-21.1	47.49	-	-	-	-	23	240	V

* - indicates frequency in CFR47 Pt 15 Restricted Band

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

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

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Filtr/P ad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.567	33.28	PKFH	27.9	-21.3	39.88	-	-	74	-34.12	205	116	H
1	* 1.565	22.05	VA1T	27.9	-21.3	28.65	54	-25.35	-	-	205	116	H
2	* 1.349	32.89	PKFH	28.9	-21.8	39.99	-	-	74	-34.01	188	338	V
2	* 1.352	22	VA1T	28.9	-21.8	29.1	54	-24.9	-	-	188	338	V
4	* 4.565	37.64	PKFH	34.2	-31.1	40.74	-	-	74	-33.26	111	256	H
4	* 4.566	27.17	VA1T	34.2	-31.1	30.27	54	-23.73	-	-	111	256	H
5	* 12.365	32.57	PKFH	39	-24.2	47.37	-	-	74	-26.63	126	356	H
5	* 12.366	21.32	VA1T	39	-24.2	36.12	54	-17.88	-	-	126	356	H
6	* 11.325	32.52	PKFH	37.9	-24.7	45.72	-	-	74	-28.28	200	210	V
6	* 11.323	21.54	VA1T	37.9	-24.7	34.74	54	-19.26	-	-	200	210	V
3	1.735	33.91	PKFH	29.5	-21.3	42.11	-	-	-	-	342	381	V

* - indicates frequency in CFR47 Pt 15 Restricted Band

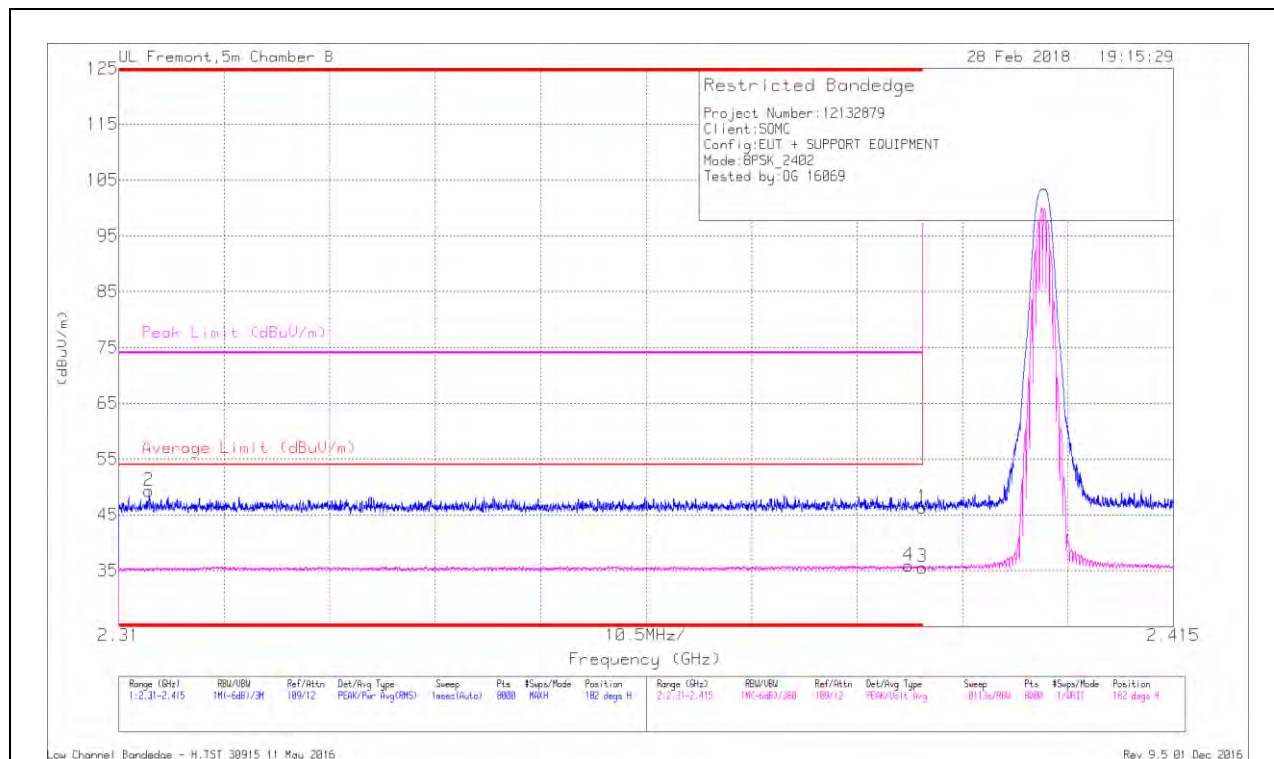
PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

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

9.1.2. BLUETOOTH ENHANCED DATA RATE 8PSK MODULATION

BANDEDGE (LOW CHANNEL)

HORIZONTAL RESULT



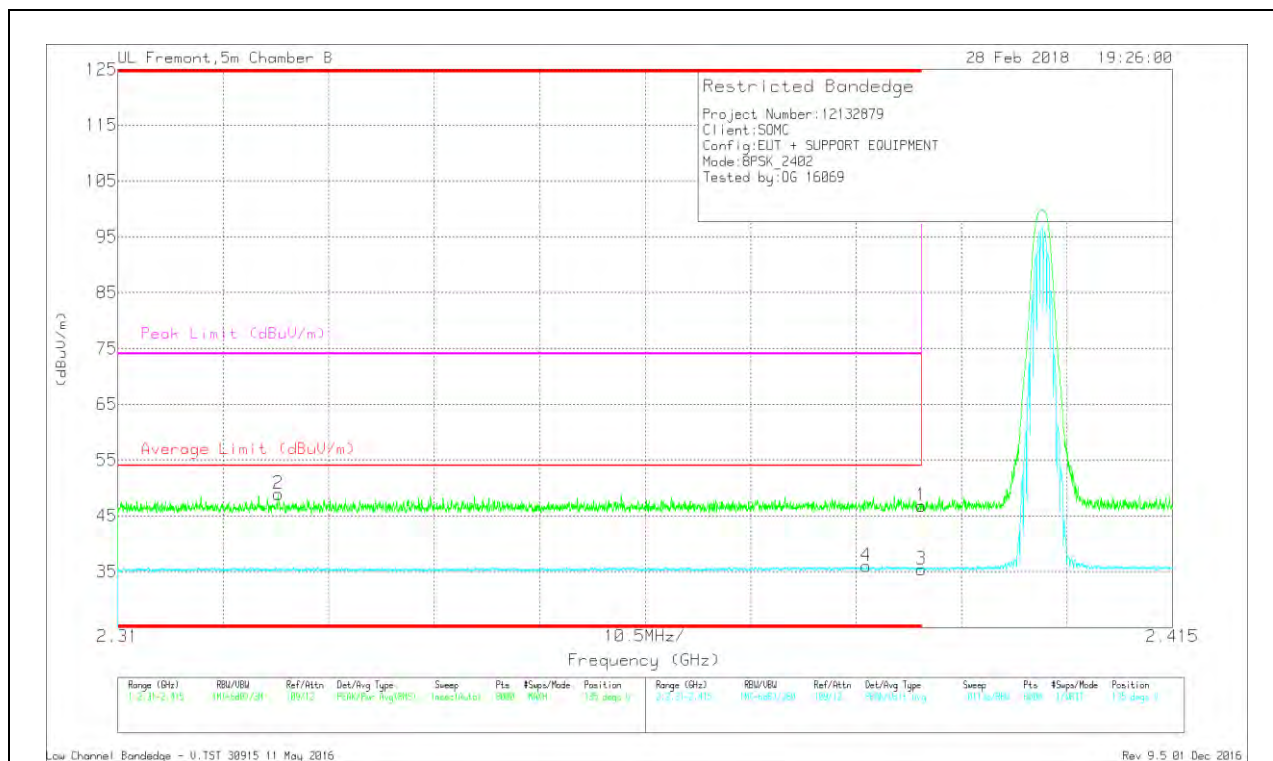
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Filtr/P ad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.39	35.62	Pk	32	-21.3	46.32	-	-	74	-27.68	182	221	H
2	* 2.313	38.65	Pk	31.9	-21.3	49.25	-	-	74	-24.75	182	221	H
3	* 2.39	24.88	VA1T	32	-21.3	35.58	54	-18.42	-	-	182	221	H
4	* 2.389	25.23	VA1T	32	-21.3	35.93	54	-18.07	-	-	182	221	H

* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

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

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Filtr/P ad (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	36.15	Pk	32	-21.3	46.85	-	-	74	-27.15	135	178	V
2	* 2.326	38.34	Pk	31.9	-21.3	48.94	-	-	74	-25.06	135	178	V
3	* 2.39	24.65	VA1T	32	-21.3	35.35	54	-18.65	-	-	135	178	V
4	* 2.385	25.26	VA1T	32	-21.3	35.96	54	-18.04	-	-	135	178	V

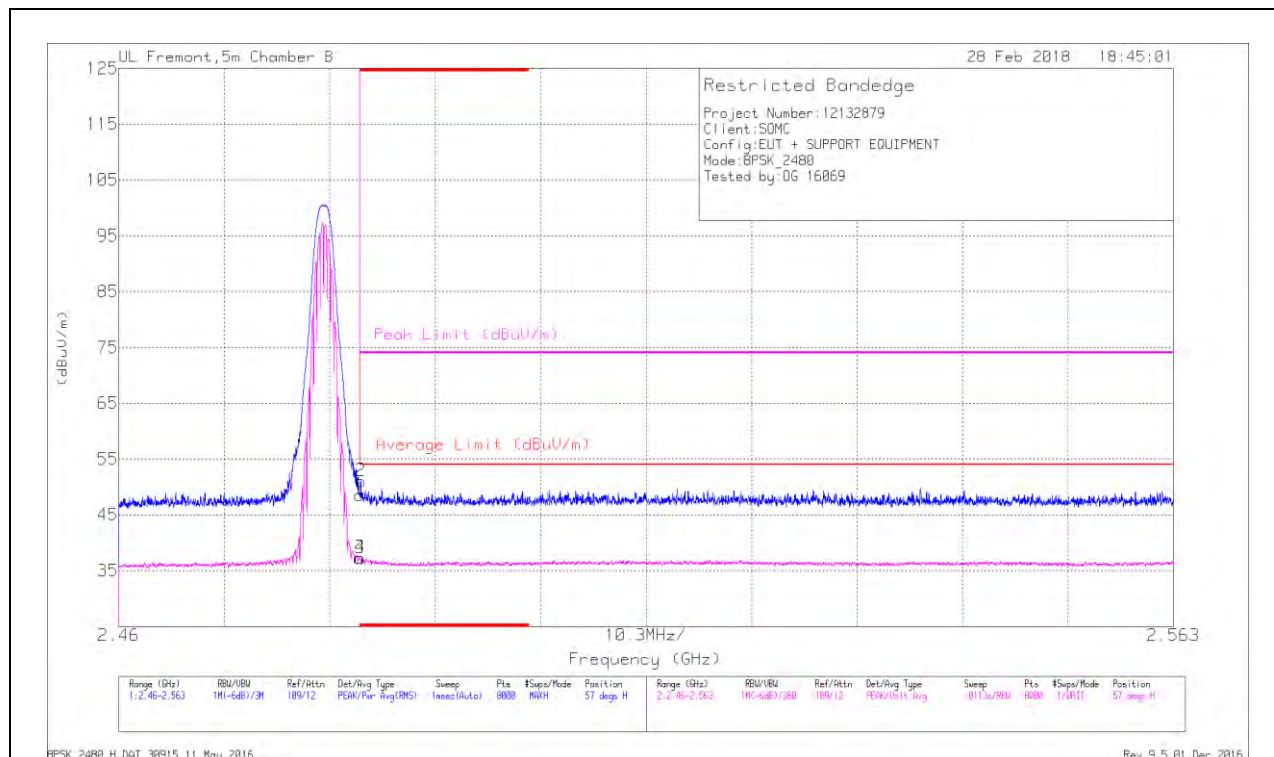
* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

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

BANDEDGE (HIGH CHANNEL)

HORIZONTAL RESULT



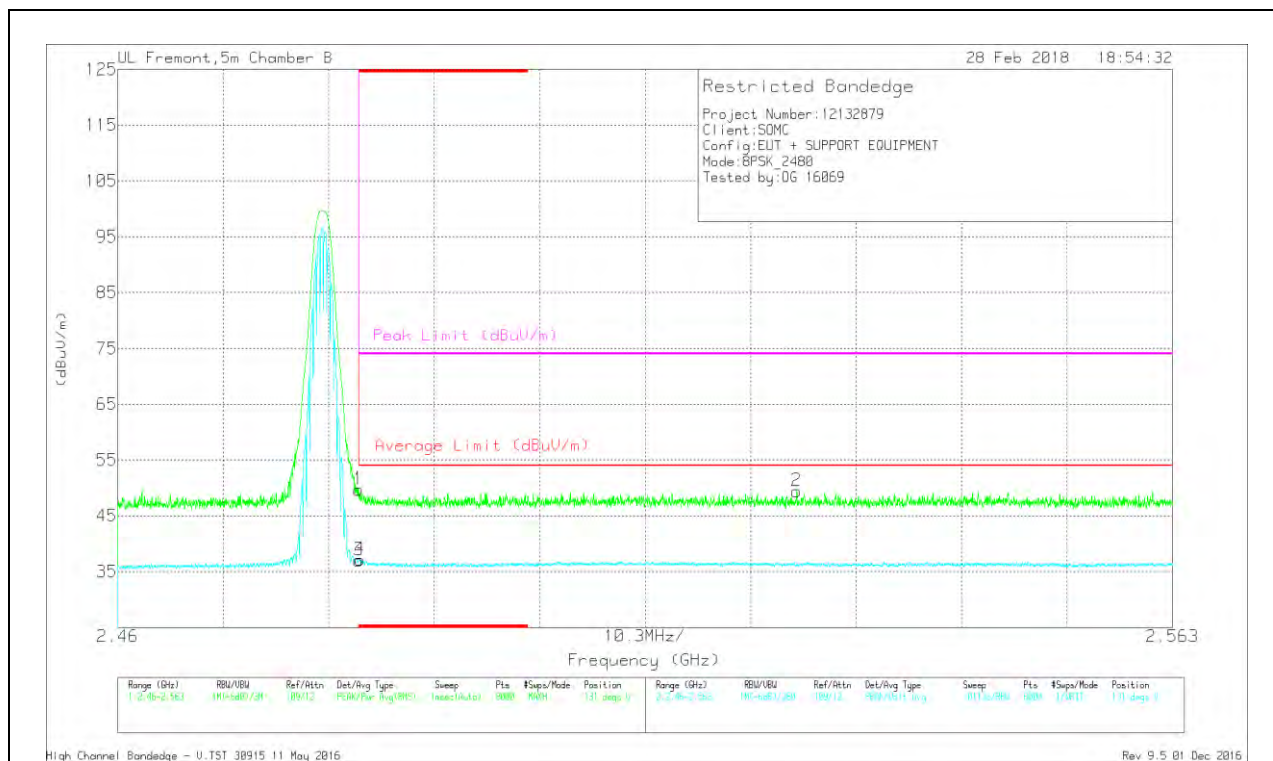
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Fitr/P ad (dB)	Corrected Reading (dBuV/m)	Average Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.484	37.33	Pk	32.5	-21.3	48.53	-	-	74	-25.47	57	109	H
2	* 2.484	39.82	Pk	32.5	-21.3	51.02	-	-	74	-22.98	57	109	H
3	* 2.484	26.09	VA1T	32.5	-21.3	37.29	54	-16.71	-	-	57	109	H
4	* 2.484	26.11	VA1T	32.5	-21.3	37.31	54	-16.69	-	-	57	109	H

* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

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

VERTICAL RESULT



Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Filtr/P ad (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	38.43	Pk	32.5	-21.3	49.63	-	-	74	-24.37	131	151	V
3	* 2.484	25.75	VA1T	32.5	-21.3	36.95	54	-17.05	-	-	131	151	V
4	* 2.484	25.92	VA1T	32.5	-21.3	37.12	54	-16.88	-	-	131	151	V
2	2.526	38.17	Pk	32.5	-21.2	49.47	-	-	74	-24.53	131	151	V

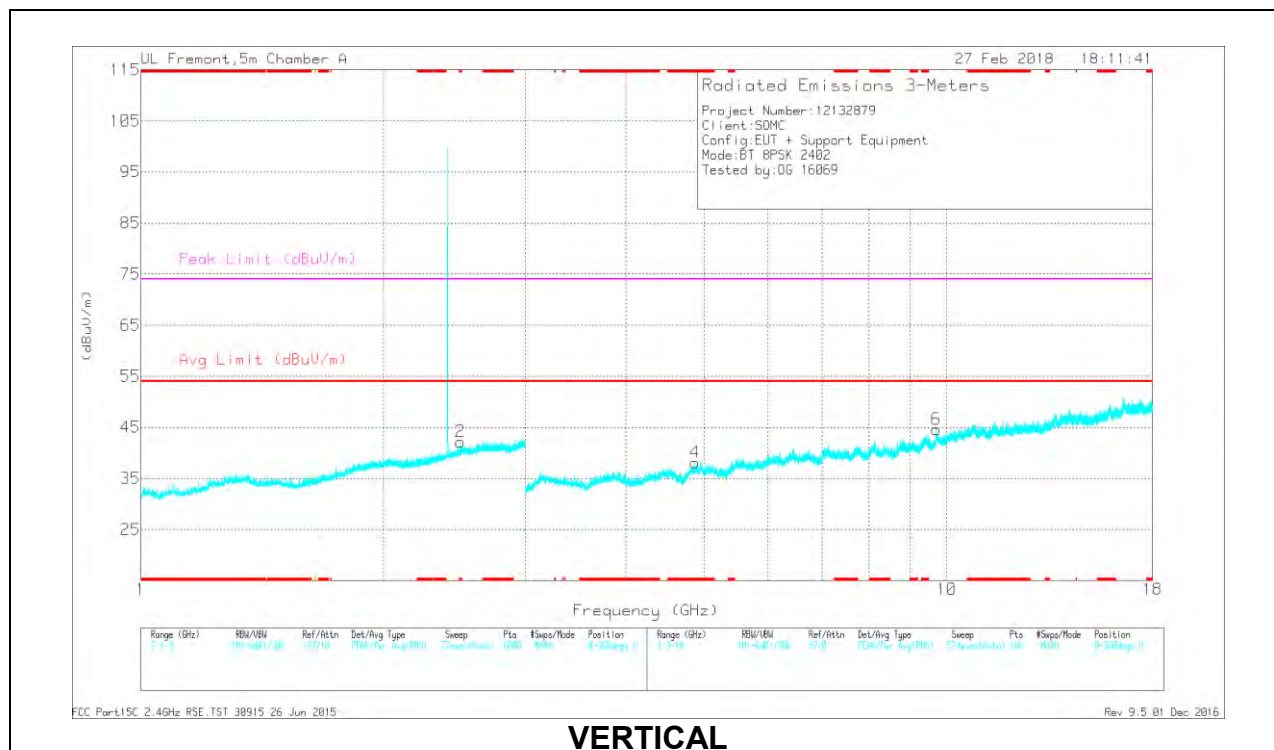
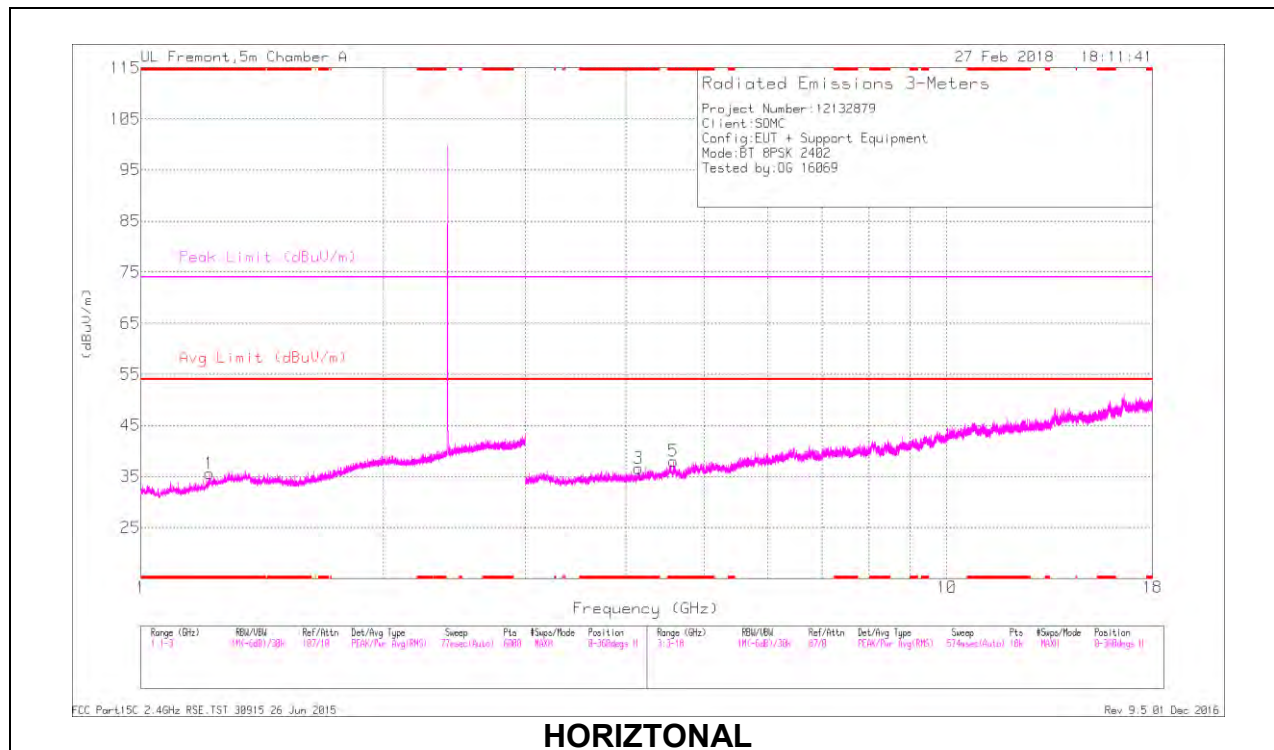
* - indicates frequency in CFR47 Pt 15 Restricted Band

Pk - Peak detector

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

HARMONICS AND SPURIOUS EMISSIONS

LOW CHANNEL RESULTS



RADIATED EMISSIONS

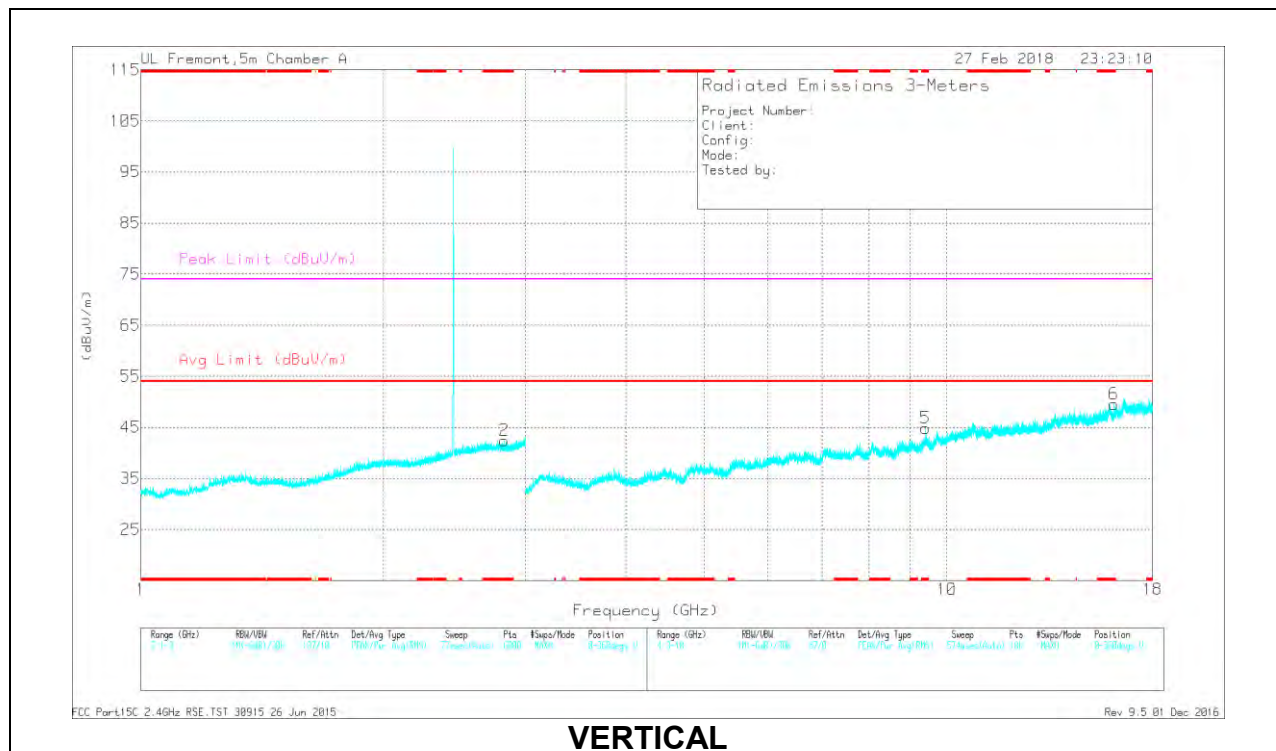
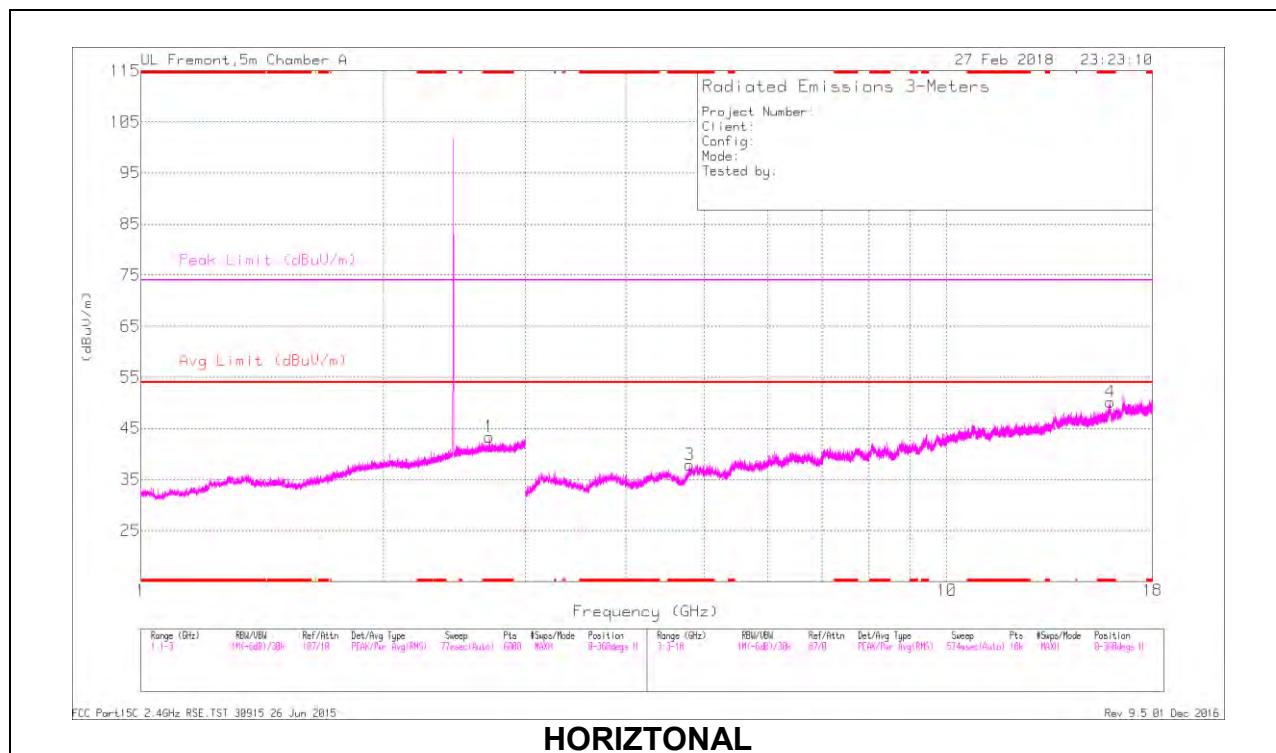
Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Fitr/P ad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
* 1.217	34.38	PKFH	28.5	-23.7	39.18	-	-	74	-34.82	119	204	H
* 1.215	23.39	VA1T	28.5	-23.8	28.09	54	-25.91	-	-	119	204	H
* 2.491	35.75	PKFH	32.4	-23.4	44.75	-	-	74	-29.25	108	139	V
* 2.49	24.63	VA1T	32.4	-23.4	33.63	54	-20.37	-	-	108	139	V
* 4.147	34.96	PKFH	33.4	-28.5	39.86	-	-	74	-34.14	163	183	H
* 4.146	23.73	VA1T	33.4	-28.5	28.63	54	-25.37	-	-	163	183	H
* 4.576	34.43	PKFH	34.1	-27.7	40.83	-	-	74	-33.17	174	366	H
* 4.578	23.5	VA1T	34.1	-27.6	30	54	-24	-	-	174	366	H
* 4.871	35.04	PKFH	34.1	-26.5	42.64	-	-	74	-31.36	221	112	V
* 4.873	23.79	VA1T	34.1	-26.4	31.49	54	-22.51	-	-	221	112	V

* - indicates frequency in CFR47 Pt 15 Restricted Band

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

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

MID CHANNEL RESULTS



RADIATED EMISSIONS

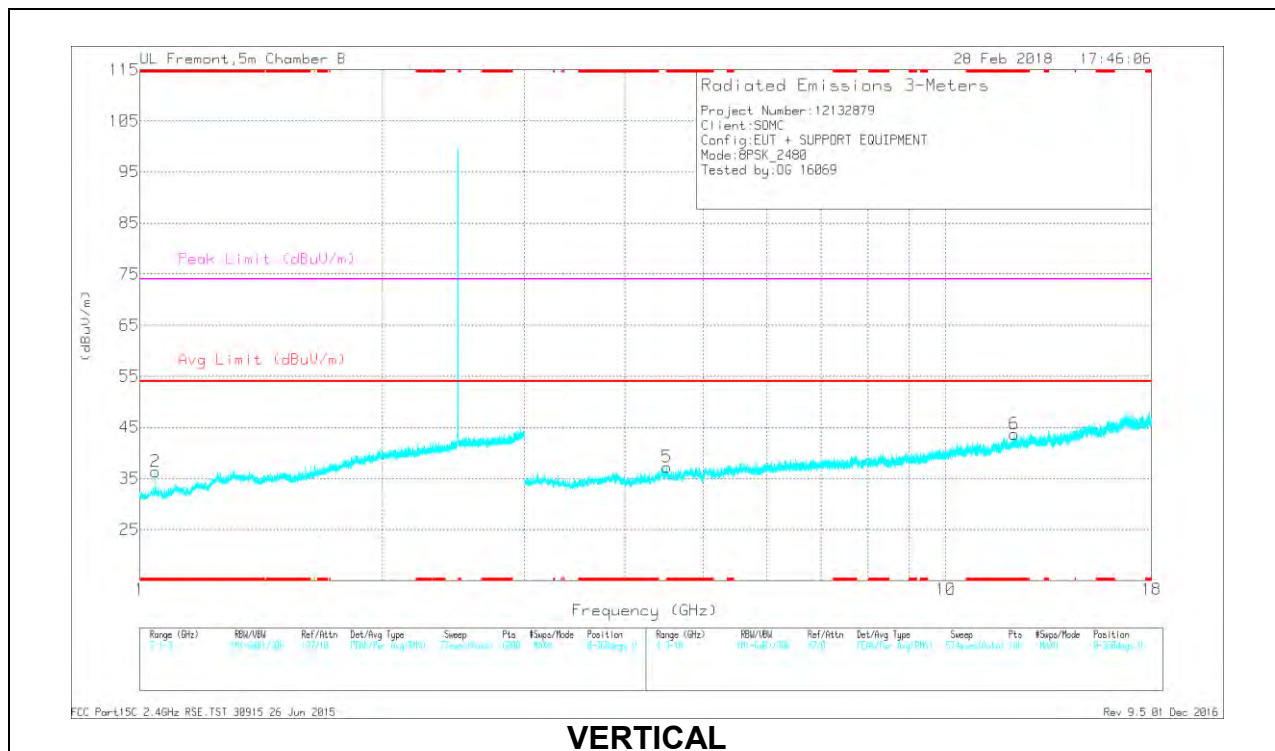
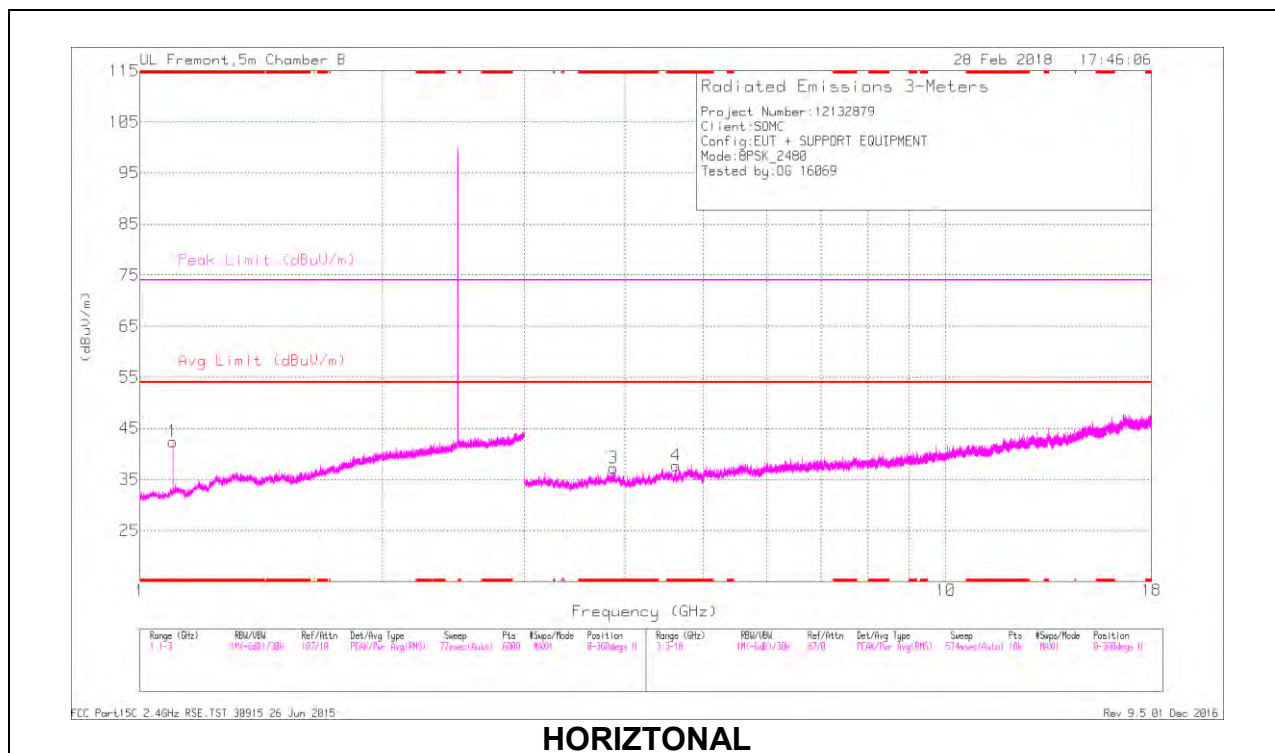
Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T862 (dB/m)	Amp/Cbl/Filtr/P ad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 2.705	36.27	PKFH	32.5	-22.8	45.97	-	-	74	-28.03	220	316	H
1	* 2.704	24.64	VA1T	32.5	-22.8	34.34	54	-19.66	-	-	220	316	H
2	* 2.826	36.06	PKFH	32.2	-22.3	45.96	-	-	74	-28.04	65	268	V
2	* 2.825	24.43	VA1T	32.2	-22.4	34.23	54	-19.77	-	-	65	268	V
3	* 4.793	34.83	PKFH	34.2	-27.2	41.83	-	-	74	-32.17	236	166	H
3	* 4.794	23.95	VA1T	34.2	-27.2	30.95	54	-23.05	-	-	236	166	H
4	* 15.943	30.17	PKFH	40.4	-16.6	53.97	-	-	74	-20.03	256	101	H
4	* 15.944	19.64	VA1T	40.4	-16.6	43.44	54	-10.56	-	-	256	101	H
5	* 9.419	32.43	PKFH	36.6	-20.4	48.63	-	-	74	-25.37	3	211	V
5	* 9.416	20.63	VA1T	36.6	-20.4	36.83	54	-17.17	-	-	3	211	V
6	* 16.12	31.18	PKFH	40.6	-18.9	52.88	-	-	74	-21.12	83	101	V
6	* 16.122	20.43	VA1T	40.6	-18.7	42.33	54	-11.67	-	-	83	101	V

* - indicates frequency in CFR47 Pt 15 Restricted Band

PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

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

HIGH CHANNEL RESULTS



RADIATED EMISSIONS

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	AF T863 (dB/m)	Amp/Cbl/Filtr/P ad (dB)	Corrected Reading (dBuV/m)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	* 1.101	34.13	PKFH	27.7	-22.9	38.93	-	-	74	-35.07	283	370	H
1	* 1.1	22.37	VA1T	27.7	-23	27.07	54	-26.93	-	-	283	370	H
2	* 1.046	33.04	PKFH	27	-23.2	36.84	-	-	74	-37.16	212	307	V
2	* 1.046	22.46	VA1T	27	-23.2	26.26	54	-27.74	-	-	212	307	V
3	* 3.868	37.25	PKFH	33.5	-30.4	40.35	-	-	74	-33.65	344	231	H
3	* 3.868	27.25	VA1T	33.5	-30.4	30.35	54	-23.65	-	-	344	231	H
4	* 4.631	38.32	PKFH	34.3	-31.4	41.22	-	-	74	-32.78	8	116	H
4	* 4.629	27.22	VA1T	34.3	-31.4	30.12	54	-23.88	-	-	8	116	H
5	* 4.506	37.7	PKFH	34	-29.9	41.8	-	-	74	-32.2	112	146	V
5	* 4.506	26.7	VA1T	34	-29.9	30.8	54	-23.2	-	-	112	146	V
6	* 12.152	32.3	PKFH	39	-23.9	47.4	-	-	74	-26.6	300	106	V
6	* 12.155	21.53	VA1T	39	-23.9	36.63	54	-17.37	-	-	300	106	V

* - indicates frequency in CFR47 Pt 15 Restricted Band

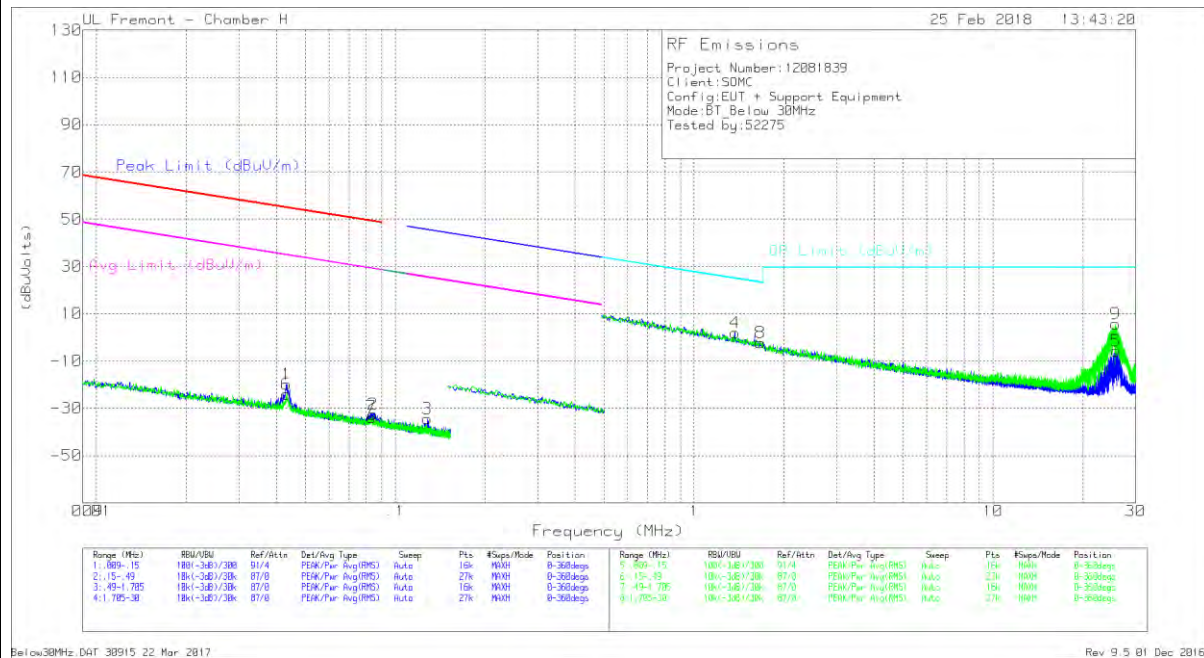
PKFH - FHSS: RB=100k/1MHz VB=3 x RB, Peak

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

9.1. WORST-CASE BELOW 30 MHz

SPURIOUS EMISSIONS BELOW 30 MHz (WORST-CASE CONFIGURATION)

HORIZONTAL AND VERTICAL PLOTS



NOTE: KDB 414788 OATS and Chamber Correlation Justification

- Based on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.
- OATs and chamber correlation testing had been performed and chamber measured test result is the worst case test result.

Trace Markers

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cables (dB)	Dist Corr 300m	Corrected Reading (dBuVolts)	Peak Limit (dBuV/m)	Margin (dB)	Avg Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
1	.04327	47.58	Pk	12.6	0	-80	-19.82	54.86	-74.68	34.86	-54.68	0-360
6	.04334	43.36	Pk	12.6	0	-80	-24.04	54.85	-78.89	34.85	-58.89	0-360
7	.08339	34.42	Pk	11.8	0	-80	-33.78	49.16	-82.94	29.16	-62.94	0-360
2	.08409	35.69	Pk	11.8	0	-80	-32.51	49.09	-81.6	29.09	-61.6	0-360
3	.12783	33.9	Pk	11.6	0	-80	-34.5	45.49	-79.99	25.49	-59.99	0-360

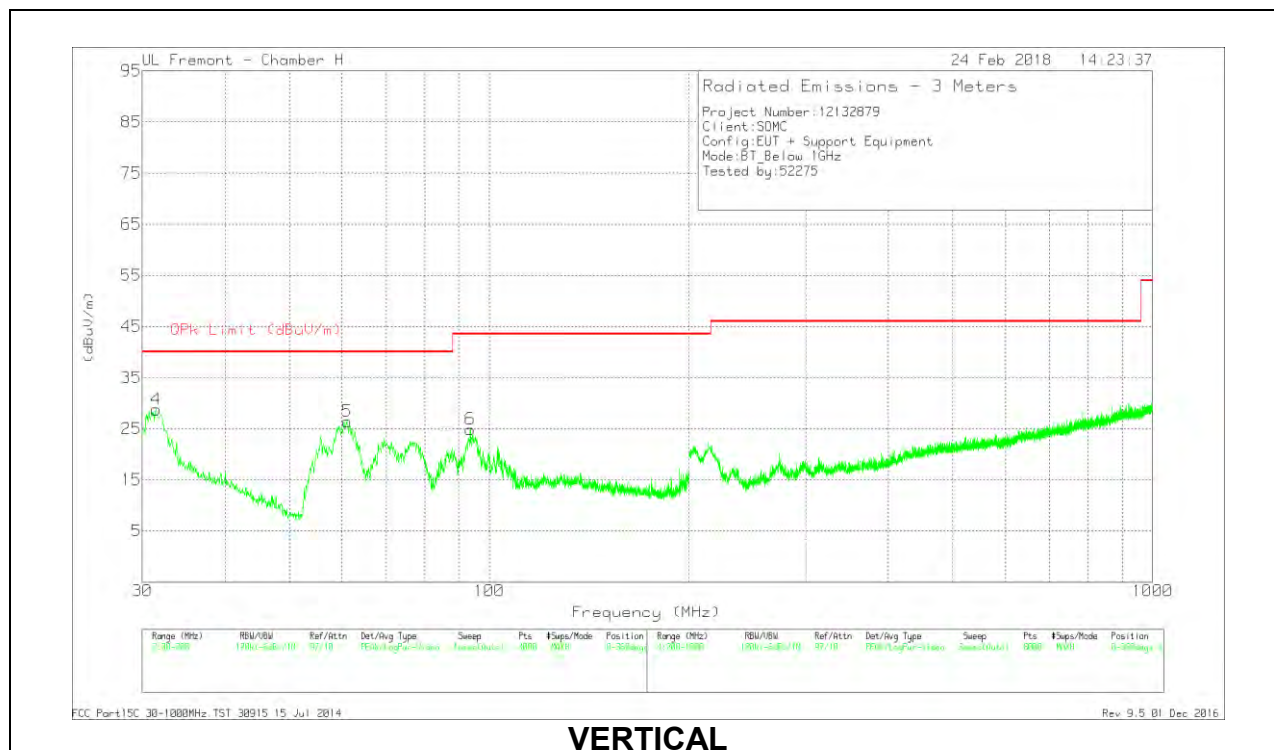
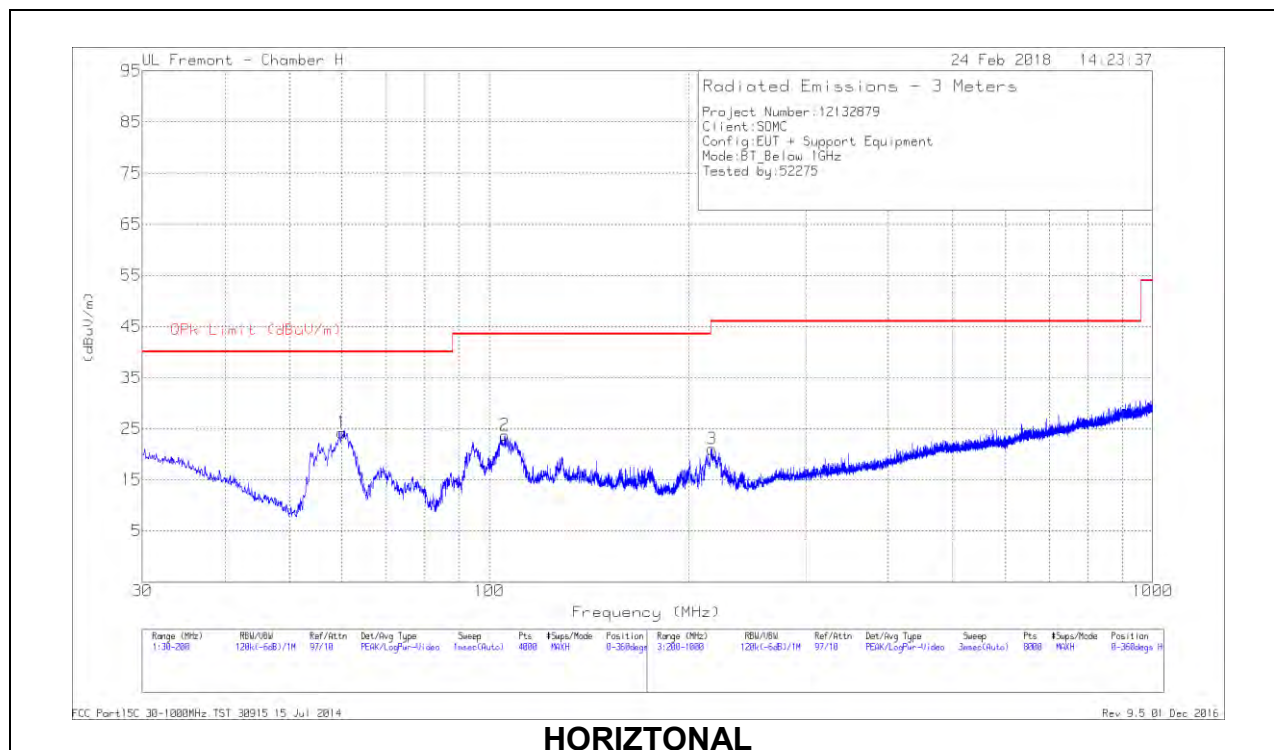
Pk - Peak detector

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	Loop Antenna (dB/m)	Cables (dB)	Dist Corr (dB) 40Log	Corrected Reading (dBuVolts)	QP Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)
4	1.3713	30.16	Pk	11.6	.1	-40	1.86	24.89	-23.03	0-360
8	1.66766	25.86	Pk	11.7	.1	-40	-2.34	23.19	-25.53	0-360
9	25.72516	36.24	Pk	8.9	.6	-40	5.74	29.5	-23.76	0-360
5	25.83834	24.84	Pk	8.9	.6	-40	-5.66	29.5	-35.16	0-360

Pk - Peak detector

9.2. WORST-CASE BELOW 1 GHz

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



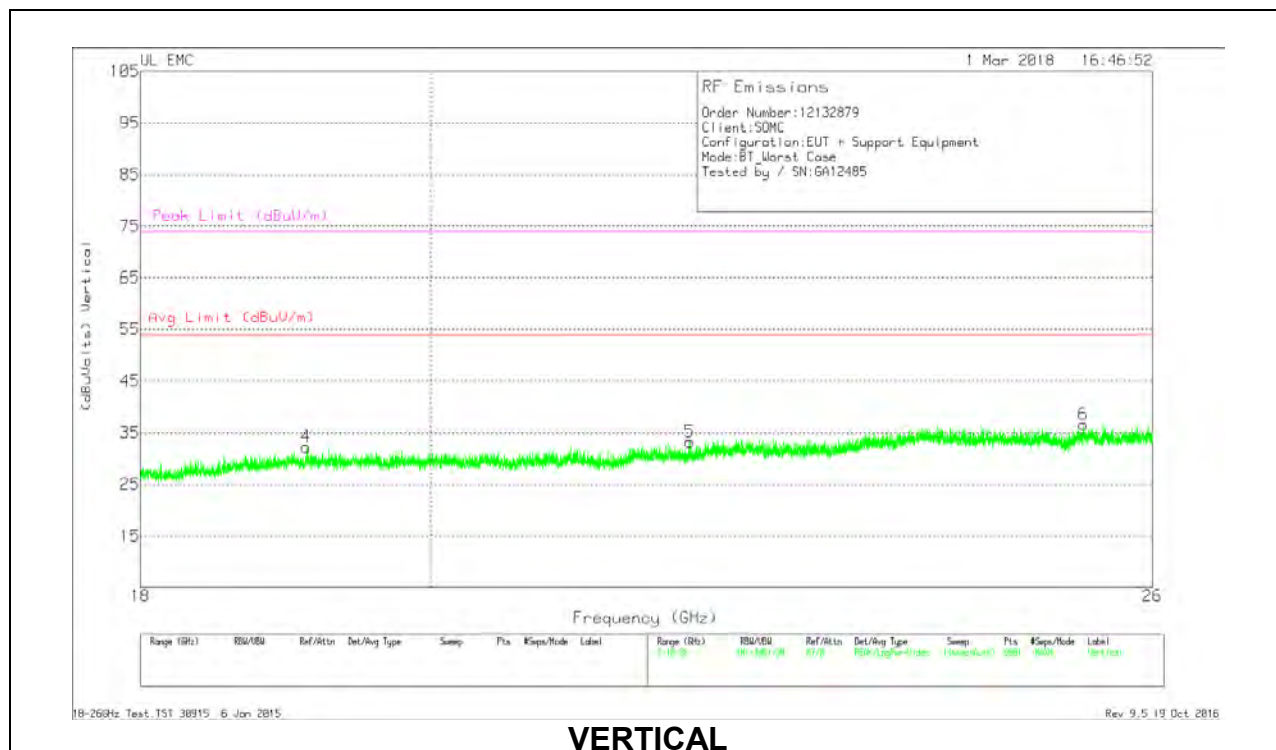
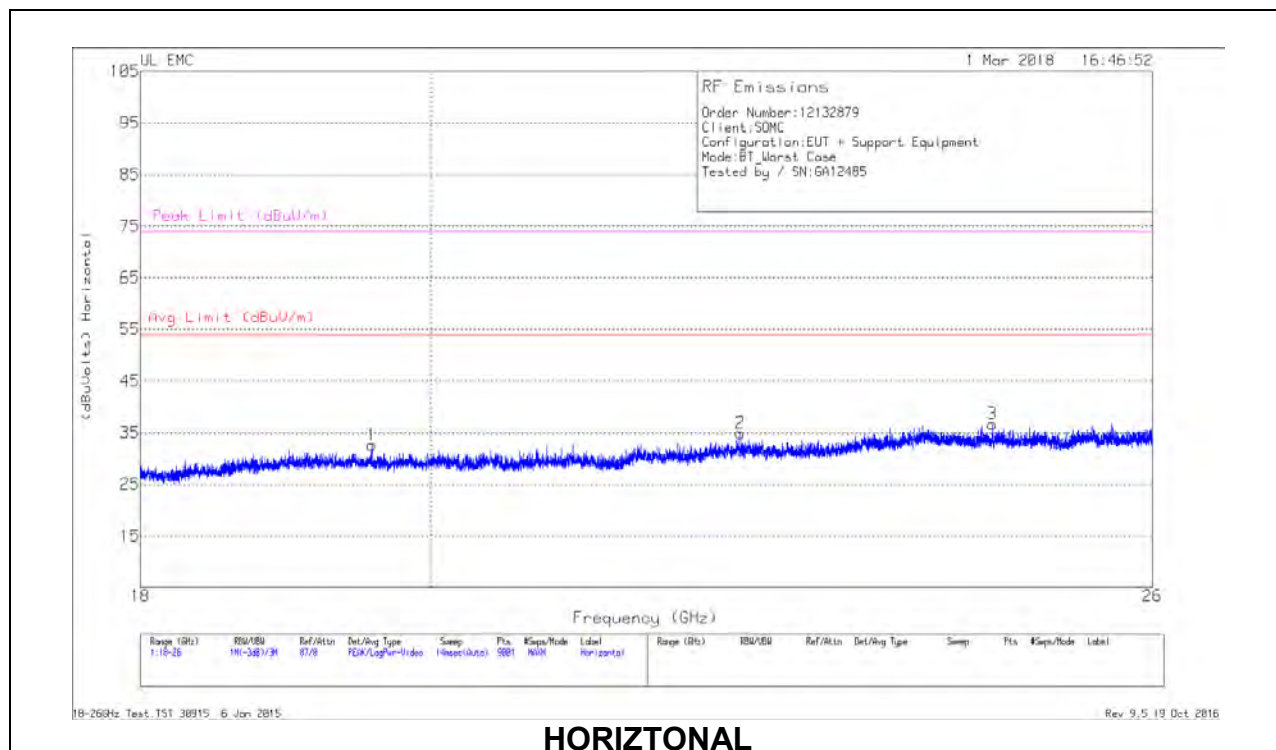
Below 1GHz Data

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	AF T185 (dB/m)	Amp/Cbl (dB)	Corrected Reading (dBuV/m)	QPk Limit (dBuV/m)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	31.4879	37.27	Pk	22.8	-31.3	28.77	40	-11.23	0-360	100	V
1	59.9703	43.83	Pk	11.3	-30.9	24.23	40	-15.77	0-360	399	H
5	61.0755	46	Pk	11.4	-31	26.4	40	-13.6	0-360	100	V
6	93.6815	42.88	Pk	12.5	-30.5	24.88	43.52	-18.64	0-360	100	V
2	105.5846	38.74	Pk	15.5	-30.5	23.74	43.52	-19.78	0-360	299	H
3	216.6022	36.16	Pk	14.5	-29.6	21.06	46.02	-24.96	0-360	100	H

Pk - Peak detector

9.3. WORST-CASE 18-26 GHz

SPURIOUS EMISSIONS 18-26 GHz (WORST-CASE CONFIGURATION)



Trace Markers

Marker	Frequency (GHz)	Meter Reading (dBuV)	Det	T449 AF (dB/m)	Amp/Cbl (dB)	Dist Corr (dB)	Corrected Reading (dBuVolts)	Avg Limit (dBuV/m)	Margin (dB)	Peak Limit (dBuV/m)	PK Margin (dB)
1	19.58	34.65	Pk	32.7	-25.2	-9.5	32.65	54	-21.35	74	-41.35
2	22.386	35.7	Pk	33.5	-24.8	-9.5	34.9	54	-19.1	74	-39.1
3	24.53	36.38	Pk	34	-24.2	-9.5	36.68	54	-17.32	74	-37.32
4	19.117	33.82	Pk	32.5	-24.6	-9.5	32.22	54	-21.78	74	-41.78
5	21.975	34.44	Pk	33.4	-25.1	-9.5	33.24	54	-20.76	74	-40.76
6	25.355	36.49	Pk	34.3	-24.7	-9.5	36.59	54	-17.41	74	-37.41

Pk - Peak detector

10. AC POWER LINE CONDUCTED EMISSIONS

LIMITS

FCC §15.207 (a)

RSS-Gen 8.8

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 C63.4.

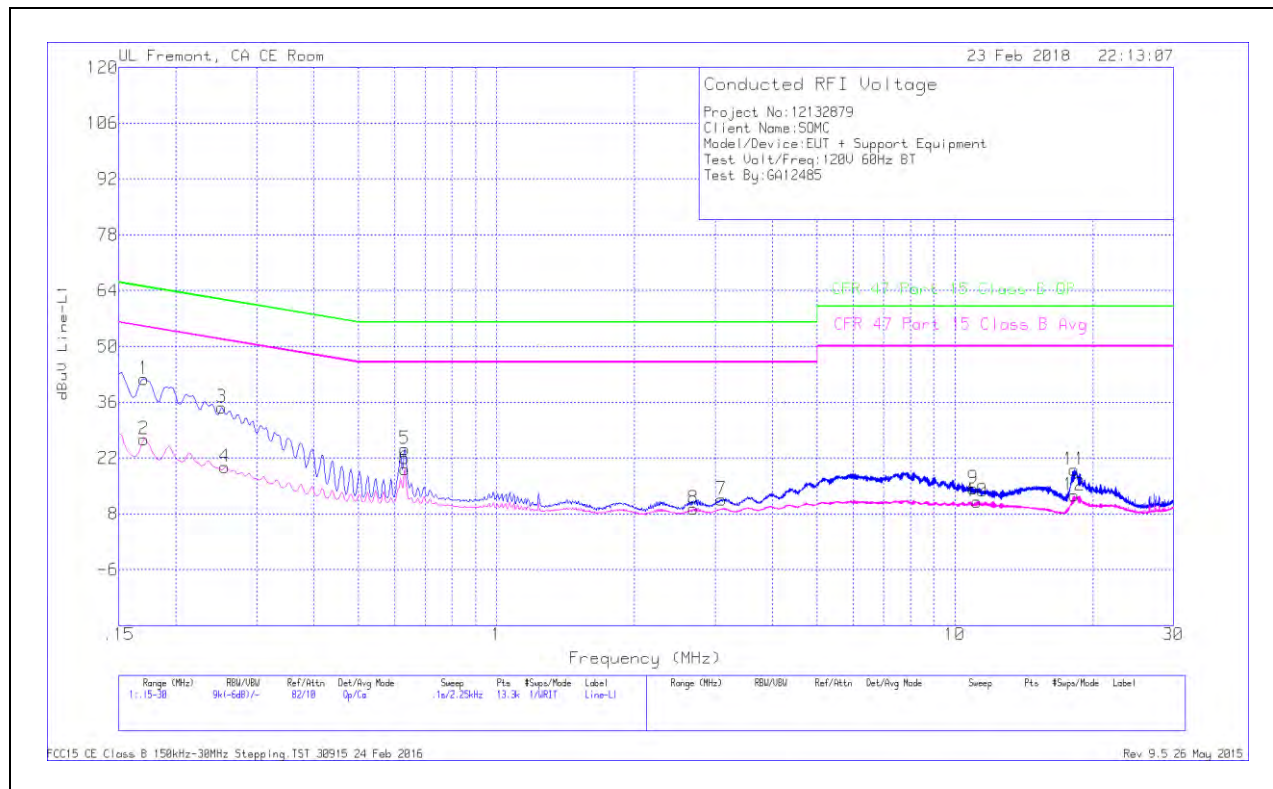
The receiver is set to a resolution bandwidth of 9 kHz. Peak detection is used unless otherwise noted as quasi-peak or average.

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

RESULTS

10.1.1. AC Power Line Norm

LINE 1 RESULTS



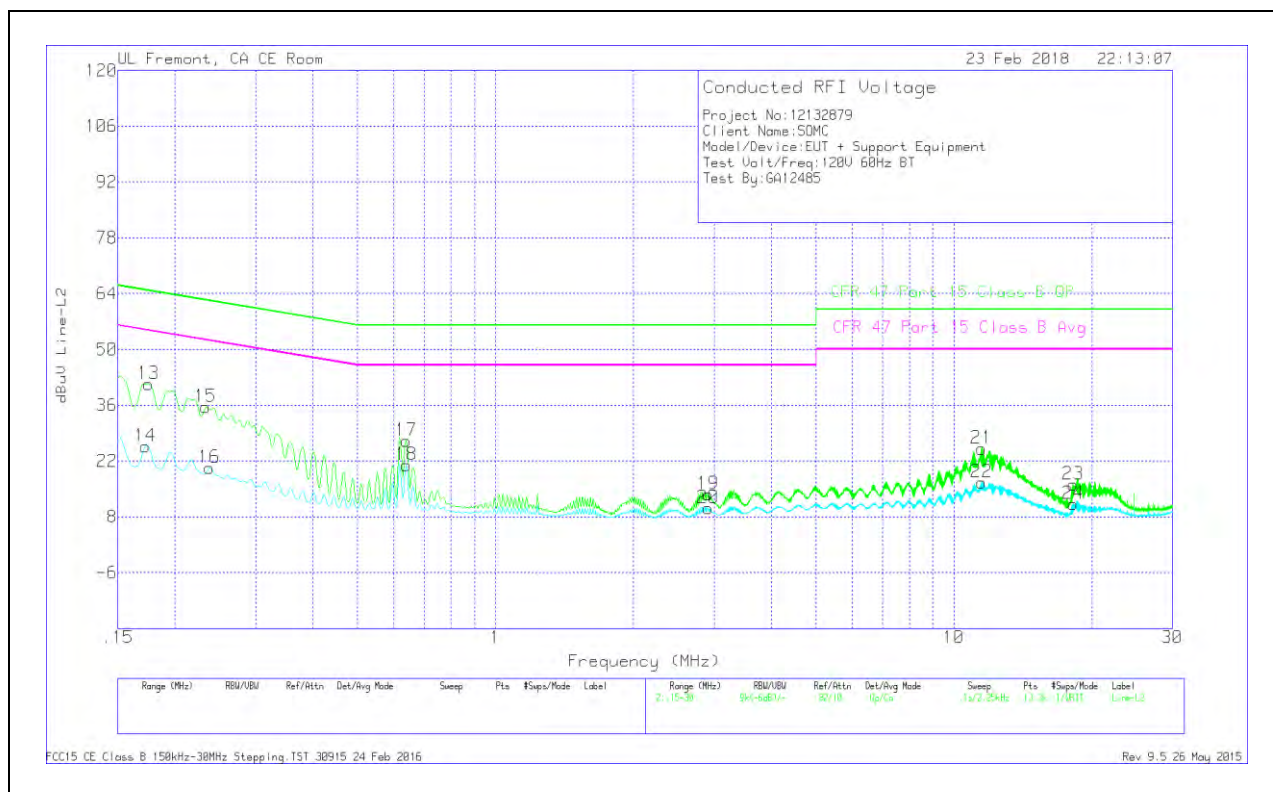
Range 1: Line-L1 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L1	LC Cables C1&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR) Margin (dB)
1	.17025	31.68	Qp	0	0	10.1	41.78	64.95	-23.17	-	-
2	.17025	16.54	Ca	0	0	10.1	26.64	-	-	54.95	-28.31
3	.25125	24.59	Qp	0	0	10.1	34.69	61.72	-27.03	-	-
4	.25575	9.61	Ca	0	0	10.1	19.71	-	-	51.57	-31.86
5	.6315	14.12	Qp	0	0	10.1	24.22	56	-31.78	-	-
6	.6315	9.06	Ca	0	0	10.1	19.16	-	-	46	-26.84
7	3.09525	1.41	Qp	0	.1	10.1	11.61	56	-44.39	-	-
8	2.6925	-.89	Ca	0	.1	10.1	9.31	-	-	46	-36.69
9	10.968	4.02	Qp	0	.2	10.2	14.42	60	-45.58	-	-
10	11.1885	.67	Ca	0	.2	10.2	11.07	-	-	50	-38.93
11	18.249	8.42	Qp	0	.3	10.3	19.02	60	-40.98	-	-
12	18.249	2.03	Ca	0	.3	10.3	12.63	-	-	50	-37.37

Qp - Quasi-Peak detector

Ca - CISPR average detection

LINE 2 RESULTS



Range 2: Line-L2 .15 - 30MHz

Marker	Frequency (MHz)	Meter Reading (dBuV)	Det	LISN L2	LC Cables C2&C3	Limiter (dB)	Corrected Reading dBuV	CFR 47 Part 15 Class B QP	QP Margin (dB)	CFR 47 Part 15 Class B Avg	Av(CISPR) Margin (dB)
13	.17475	31.26	Qp	0	0	10.1	41.36	64.73	-23.37	-	-
14	.1725	15.62	Ca	0	0	10.1	25.72	-	-	54.84	-29.12
15	.23325	25.54	Qp	0	0	10.1	35.64	62.33	-26.69	-	-
16	.23775	10.22	Ca	0	0	10.1	20.32	-	-	52.17	-31.85
17	.63825	16.98	Qp	0	0	10.1	27.08	56	-28.92	-	-
18	.63825	10.85	Ca	0	0	10.1	20.95	-	-	46	-25.05
19	2.91075	3.42	Qp	0	.1	10.1	13.62	56	-42.38	-	-
20	2.91075	.04	Ca	0	.1	10.1	10.24	-	-	46	-35.76
21	11.50125	14.66	Qp	0	.2	10.2	25.06	60	-34.94	-	-
22	11.5035	6.25	Ca	0	.2	10.2	16.65	-	-	50	-33.35
23	18.231	5.43	Qp	0	.3	10.3	16.03	60	-43.97	-	-
24	18.22875	.64	Ca	0	.3	10.3	11.24	-	-	50	-38.76

Qp - Quasi-Peak detector

Ca - CISPR average detection