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ELECTROMAGNETIC COMPATIBILITY TEST REPORT

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Laboratory Accreditations (per ISO/IEC 17025:2005)

American Association for Laboratory Accreditation Certificate Number: 3657.02

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Manufacturer:	**Blackline Safety Corp.**
Address:	Unit 100, 803 24 Avenue SE Calgary, AB Canada, T2G 1P5
Phone:	+1 587 325 9764
Equipment Tested:	**G7C**
Model Number(s):	G7C-NA2
Applicable Test Standards:	FCC Title 47 CFR Part 15: Subpart B FCC Title 47 CFR Part 15: Subpart C - §15.215, 15.247 RSS-247 Issue 2, RSS-Gen Issue 5 ICES-003 Issue 6

REVISION HISTORY

Date	Report Number	Details	Author's Initials
February 20, 2020	E10995-1901-Blackline-G7C_NA2 Devices-**Rev-1.1**	Final (Typo)	AN
November 21, 2019	E10995-1901-Blackline-G7C_NA2 Devices-**Rev-1.0**	Final	AN
October 22, 2019	E10995-1901-Blackline-G7C_NA2 Devices-**Rev-0.0**	Draft	AN
All previous versions of this report have been superseded by the latest dated revision as listed in the above table. Please dispose of all previous electronic and paper printed revisions accordingly.			

REPORT AUTHORIZATION

The data documented in this report is for the test equipment provided by the manufacturer. The tests were conducted on the sample equipment as requested by the manufacturer for the purpose of demonstrating compliance with the standards outlined in Section I of this report as agreed upon by the Manufacturer under the quote 19MZ08281.

The Manufacturer is responsible for the tested product configurations, continued product compliance, and for the appropriate auditing of subsequent products as required.

This report may comprise a partial list of tests that are required for FCC and ISED. Declaration of Conformity can only be produced by the manufacturer.
This is to certify that the following report is true and correct to the best of our knowledge.

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and Report writing by
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QAI EMC ACCREDITATION

QAI EMC is your one-stop regulatory compliance partner for electromagnetic compatibility (EMC) and electromagnetic interference (EMI). Products are tested to the latest and applicable EMC/EMI requirements for domestic and international markets. QAI EMC goes above and beyond being a testing facility—we are your regulatory compliance partner. QAI EMC has the capability to perform RF Emissions and Immunity for all types of electronics manufacturing including Industrial, Scientific, Medical, Information Technology, Telecom, Wireless, Automotive, Marine and Avionics.

EMC Laboratory Location	FCC Designation (3m SAC)	IC Registration (3m SAC)	A2LA Certificate
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EMC Facility Burnaby BC, Canada

TABLE OF CONTENTS

Section I: Executive Summary

1.1 Purpose

The purpose of this report is to demonstrate and document the compliance of G7C Device as per Sections 1.2 & 1.3.

1.2 Scope

The information documented in this report is based on the test methods and levels as per Quote:

- FCC Title 47 Part 15 - Radio Frequency Devices, Subpart C – Intentional Radiators.
  - 15.247 Operation within the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz.
- CFR Title 47 FCC Part 15 - Radio Frequency Devices, Subpart B – Unintentional Radiators.
- RSS-247 Issue 2 – Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and License-Exempt Local Area Network (LE-LAN) Devices
- RSS-Gen Issue 5 – General Requirements and Information for the Certification of Radio Apparatus
- ICES-003 Issue 6 – Information Technology Equipment (Including Digital Apparatus) – Limits and Methods of Measurement

The tests documented in this report were performed in accordance with ANSI C63.4-2014, ANSI C63.10-2013, and FCC KDB 558074 D01 DTS Meas Guidance v05.

1.3 Summary of Results

The following tests were performed pursuant to the FCC/IC Unintentional Radiated Emissions, Intentional Radiated Emissions, and Radio Testing Standards:

No.	Test Description	Standard Clause	Result
1	Antenna Requirement	FCC 47 CFR Part 15.203 IC RSS-Gen Issue 5 Section 7.1.2	Complies
2	RF Peak Power Output	FCC Title 47 CFR Part 15: Subpart C - §15.247 (b)(1) RSS-247 Issue 2	Complies
3	Radiated Spurious Emissions	RSS-247-Issue 2, RSS-Gen Issue 5 FCC Subpart C §15.205, §15.209 & §15.247	Complies
4	20 dB Bandwidth	RSS-247-Issue 2, RSS-Gen Issue 5 FCC Subpart C §15.247	Complies
5	99% Bandwidth	RSS-247 Issue 2, RSS-Gen Issue 5	Complies
6	Out-of-Band Emissions (Band Edge)	FCC Title 47 CFR Part 15: Subpart C - §15.247 (d) RSS-247-Issue 2	Complies
7	Channel Separation	FCC Title 47 CFR Part 15: Subpart C - §15.247 (a)(1) RSS-247-Issue 2	Complies
8	Number of Hopping Channels	FCC Title 47 CFR Part 15: Subpart C - §15.247 RSS-247-Issue 2	Complies
9	Dwell Time and Time Occupancy Per Frequency	FCC Title 47 CFR Part 15: Subpart C - §15.247 (a)(1)(iii) RSS-247-Issue 2	Complies
10	Unintentional Radiated Emissions	FCC Title 47 CFR Part 15: Subpart B - §15.109 ICES-003 Issue 6	Complies
11	AC Mains Conducted Emissions	FCC Title 47 CFR Part 15: Subpart B - §15.109 ICES-003 Issue 6	Complies
12	Frequency Stability	FCC Title 47 CFR Part 2.1055, Part 15: Subpart C – 15.215(c) RSS Gen Iss.5 (8.8)	Complies

Section II: GENERAL INFORMATION

2.1 Product Description

The information provided in this section is for the Equipment Under Test (EUT) and the corresponding Auxiliary Equipment needed to perform the tests as a complete system.

Equipment Under Test (EUT) Information

EUT	G7C Device
Functional Description	G7C is a wireless gas monitor
Operating Frequency	2400MHz to 2483.5MHz
FCC ID	Host Product: W77G7C2, Contains: XPY1EIQ24NN
IC Certification Number	Host Product: 8225A-G7C2, Contains: 8595A-1EIQ24NN
Manufacturer	Blackline Safety Corp.

Equipment Under Test (EUT)

Auxiliary Equipment	Power Supply
Model Number	8AW08D-050-1000UB
Input	100 -240V, 50/60Hz, 0.3A
Output	5Vdc, 1A

2.2 Environmental Conditions

The equipment under test was operated and tested under the following environmental conditions:

Parameter	Conditions
Location	Indoors
Temperature	21ºC
Relative Humidity	79.4%
Atmospheric Pressure	101 kPa

2.3 Measurement Uncertainty

Parameter	Uncertainty
Radiated Emissions, 30MHz-1GHz	± 2.40 dB
Radiated Emissions, 1GHz-40GHz	± 2.48 dB
Radio Frequency	±1.5 x 10-5 MHz
Total RF Power Conducted	±1.36 dB
Spurious Emissions, Conducted	±1.36 dB
RF Power Density, Conducted	±1.36 dB
Temperature	±1ºC
Humidity	±5 %
DC and low frequency voltages	±3 %

2.4 Worst Test Case

Worst-case orientation was determined during the preliminary testing.
The final radiated emissions were performed in the worst-case orientation.

2.5 Sample Calculations of Emissions Data

Radiated and conducted emissions were performed using EMC32 software developed by Rohdes & Schwarz. Transducer factors like Antenna factors, Cable Losses and Amplifier gains were stored in the test templates which are used to perform the emissions measurements. After test is finished, data is generated from the EMC32 consisting of product details, emission plots and final data tables as shown below.

Frequency (MHz)	Q-Peak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Ant. Ht. (cm)	Pol	Turntable Position (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
42.663900	33.0	1000.000	120.000	100.0	H	70.0	13.2	7.5	40.5

Quasi-Peak reading shown in the table above is already corrected by the software using correction factor shown in column "Corr." The correction factor listed under "Corr." table calculated as:

Corr.(dB) = Antenna factor + Cable loss

Or

Corr.(dB) = Antenna factor + Cable Loss - Amp gain (if pre-amplifier was used)

The final Quasi peak reading shown in the data is calculated by the software using following equation:

Corrected Quasi-Peak (dBµV/m) = Raw Quasi-Peak Reading + Antenna factor + Cable loss

To obtain the final Quasi-Peak or Average reading during power line conducted emissions, transducer factors are included in the final measurement as shown below.

Frequency (MHz)	Q-Peak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150	44.3	1000.000	9.000	GND	0.6	21.7	66.0

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	PE	Corr. (dB)	Margin (dB)	Limit (dBµV)
0.150	27.2	1000.000	9.000	GND	0.6	28.8	56.0

Quasi Peak or Average reading shown in above table is already corrected by the software using the correction factor shown in column "Corr." The correction factor listed under "Corr." table calculated as:

Corr.(dB) = Antenna factor + Cable loss

The final Quasi-peak or Average reading shown in the data is calculated by the software using following equation:

Corr. Quasi-Peak/Average Reading (dBµV) = Raw Quasi-Peak/Average Reading + Antenna factor + Cable loss

The allowable margin from the limits, as per the standards, were calculated for both radiated and conducted emissions:

Margin(dB) = Limit – Quasi-Peak or Average reading

2.6 Test Equipment List

The tables below contain all the equipment used by QAI Laboratories in conducting all tests on the Equipment Under Test (EUT) as per Section 1.

Emissions Test Equipment

Sl. NO.	Manufacturer	Model	Description	Serial No.	S/W Version	Calibration Due Date
1	Sunol Sciences	SM46C	Turntable	051204-2	N/A	N/A
2	Sunol Sciences	TWR95	Mast	TREML0001	N/A	N/A
3	Sunol Sciences	JB1	Biconilog Antenna 30MHz – 2GHz	A070209	N/A	2020-Aug-16
4	Sunol Sciences	DRH-118	Horn Antenna 1GHz-18GHz	A050905	N/A	2020-Mar-10
5	ETS Lindgren	2165	Turntable	00043677	N/A	N/A
6	ETS Lindgren	2125	Mast	00077487	N/A	N/A
7	Rohde & Schwarz	ESU40	EMI Receiver	100011	EMC32 v10.35.10/ FV 4.73 SP4	2020-Dec-01
8	EMCO	3825/2	LISN (150kHz-30MHz)	9002-1601	N/A	2020-Aug-25
9	ETS Lindgren	S201	5-meter Semi-Anechoic Chamber	1030	N/A	N/A
10	AH Systems	PAM118	Amplifier (10KHz-18GHz)	189	N/A	Conditional Use
11	California Instruments	PACS-1	Harmonics and flicker analyzer	52117	CTS3.0 v3.2.0.35	2020-May-23
12	California Instruments	OMNI 1-18 I	Programmable Impedance Flicker test	--	N/A	2020-May-23
13	California Instruments	3001ix	Power supply	HK52117	N/A	2020-May-23

Note: Equipment listed above have 3 years calibration interval.

Immunity Testing Equipment

Sl. No.	Manufacturer	Model	Description	Serial No.	S/W Version	Calibration Due Date
1	Ophir	5048FE	RF Amplifier 0.15-230 MHz	1035	N/A	N/A
2	Ophir	5125FE	RF Amplifier 20-1000 MHz	1030	N/A	N/A
3	Ophir	5163FE	RF Amplifier 0.8-4.2 GHz	1044	N/A	N/A
4	Amplifier Research	FP2080	Isotropic Field Probe 80 MHz to 40 GHz	17905/12002493-1/2	N/A	2020-Oct-11
5	Chase	emCELL	RF Immunity Chamber	1016	N/A	N/A
6	ETS Lindgren	S201	5-meter Semi-Anechoic Chamber	1030	N/A	N/A
7	HP	8648C	Signal Generator	3623A03622	N/A	2020-Feb-17
8	ThermoScientific	MiniZap	ESD Simulator:	0402265	N/A	2020-Oct-07
9	EMC Partner	CN-EFT1000	Capacitive Clamp	#408	N/A	2020-Jan-29
10	FCC	F-120-9A	Bulk Injection Clamp	399	N/A	N/A
11	Teseq	NSG 3060	EMC multifunction Generator 6kV with CDN and INA	184	WIN3000 v1.3.2 / FV V2.20	2020-March-05
12	Teseq	CDN 3061	Surge CDN	184	N/A	2020-March-05
13	Teseq	INA 6502-CIB	Step up Transformer	124	N/A	2020-March-05

Note: Equipment listed above have 3 years calibration interval.

Measurement Software List

Sl. No.	Manufacturer	Model	Version	Description
1	Rhode & Schwarz	EMC 32	6.20.0	Emissions Test Software
2	VI Automation	Via EMC Immunity Executive	1.0.308	Radiated and Conducted Immunity Test Program
3	TESEQ	WIN 3000	1.2.0	Surge, EFT & Voltage Dips Immunity Test Program
4	Thurlby Thandar Instruments	HA-PC Link Version	2.02	Harmonics and Flicker Test Program

Section III: TEST RESULTS

3.1 Antenna Requirements

- **Date Performed:**
  - October 15, 2019

- **Test Standard:**
  - FCC 47 CFR Part 15.203 and IC RSS-Gen Issue 6 Section 7.1.2

- **Applicable Regulation:**
  - "An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited." … "the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this Part are not exceeded."

- **Modifications:**
  - No modification was required to comply for this test.
- **Result:**
  - An integrated antenna is used on this product and it is not field replaceable.

3.2 RF Peak Power Output

- **Date Performed:**
  - October 15, 2019

- **Test Standard:**
  - FCC Title 47 CFR Part 15: Subpart C - §15.247 (b)(1), RSS-247 Issue 2

- **Test Requirement:**
  - For frequency hopping systems operating in the 2400–2483.5 MHz band employing at least 75 non-overlapping hopping channels: 1 watt.

- **Result:**
  - The EUT complies with the applicable standard.

- **Measurement Data:**

Mode Alireza RBW 1MHz	Carrier Frequency	Raw Peak @ 3m	Ant. Pol.	Ant. Factor	System Loss	Corr. Peak @ 3m	EIRP	Ant. Gain	Peak Conducted Output Power	Limit	Margin
	MHz	dBµV	V or H	dB/m	dB	dBµV/m	dBm	dB	dBm	dBm	dB
Bluetooth, GFSK	2402	63.8	V	32.5	5.28	101.58	6.35	2.2	4.15	30	25.85
		69.7	H	32.5	5.28	107.48	12.25	2.2	10.05	30	19.95
	2441	61.9	V	32.5	6	100.4	5.17	2.2	2.97	30	27.03
		69.7	H	32.5	6	108.2	12.97	2.2	10.77	30	19.23
	2480	60.1	V	32.5	6.4	99	3.77	2.2	1.57	30	28.43
		70.2	H	32.5	6.4	109.1	13.87	2.2	11.67	30	18.33
Bluetooth, QPSK	2402	58.6	V	32.5	5.28	96.38	1.15	2.2	-1.05	30	31.05
		68.7	H	32.5	5.28	106.48	11.25	2.2	9.05	30	20.95
	2441	59.3	V	32.5	6	97.8	2.57	2.2	0.37	30	29.63
		69.8	H	32.5	6	108.3	13.07	2.2	10.87	30	19.13
	2480	59.1	V	32.5	6.4	98	2.77	2.2	0.57	30	29.43
		68.2	H	32.5	6.4	107.1	11.87	2.2	9.67	30	20.33
Bluetooth, 8-PSK	2402	60.1	V	32.5	5.28	97.88	2.65	2.2	0.45	30	29.55
		69.7	H	32.5	5.28	107.48	12.25	2.2	10.05	30	19.95
	2441	60.23	V	32.5	6	98.73	3.5	2.2	1.3	30	28.7
		68.56	H	32.5	6	107.06	11.83	2.2	9.63	30	20.37
	2480	58.4	V	32.5	6.4	97.3	2.07	2.2	-0.13	30	30.13
		69.27	H	32.5	6.4	108.17	12.94	2.2	10.74	30	19.26

Note: Corr. Peak@3m = Raw Peak@3m + Ant. Factor + System Loss
EIPR = Corr. Peak@3m - 95.26
Peak Conducted Output Power = EIPR - Ant. Gain

3.3 Radiated Spurious Emissions

- **Date Performed:** October 10, 2019
- **Test Standard:** RSS-247-Issue 2, RSS-Gen Issue 5
  FCC Subpart C §15.205, 15.209 & 15.247

- **Required Limits:**

1) Radiated emission limits; general requirements.
The emissions from an intentional radiator shall not exceed the field strength levels specified in the following table:

Frequency, *f* (MHz)	Field strength (dBµV/m)
0.009 – 0.490	(20*log(2400/*f* (kHz))) + 40 dB
0.490 – 1.705	(20*log(24000/*f* (kHz))) + 20 dB
1.705 – 30.0	49.5
30 – 88	40.0
88 – 216	43.5
216 – 960	46.0
above 960	54.0

Note 1: The above field strength limits are specified at a distance of 3 meters. The tighter limits apply at the band edges.
Note 2: The emissions limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector.

2) Restricted bands of operation.
Unwanted emissions that fall into the restricted bands specified on the table below shall comply with the limits specified on the table limits above as per §15.209 and Clause 8.9 of RSS-Gen.

IC Restricted Bands:

MHz	MHz	GHz
0.090 - 0.110	149.9 - 150.05	9.0 - 9.2
0.495 - 0.505	156.52475 - 156.52525	9.3 - 9.5
2.1735 - 2.1905	156.7 - 156.9	10.6 - 12.7
3.020 - 3.026	162.0125 - 167.17	13.25 - 13.4
4.125 - 4.128	167.72 - 173.2	14.47 - 14.5
4.17725 - 4.17775	240 - 285	15.35 - 16.2
4.20725 - 4.20775	322 - 335.4	17.7 - 21.4
5.677 - 5.683	399.9 - 410	22.01 - 23.12
6.215 - 6.218	608 - 614	23.6 - 24.0
6.26775 - 6.26825	960 - 1427	31.2 - 31.8
6.31175 - 6.31225	1435 - 1626.5	36.43 - 36.5
8.291 - 8.294	1645.5 - 1646.5	Above 38.6
8.362 - 8.366	1660 - 1710	
8.37625 - 8.38675	1718.8 - 1722.2	
8.41425 - 8.41475	2200 - 2300	
12.29 - 12.293	2310 - 2390	
12.51975 - 12.52025	2483.5 - 2500	
12.57675 - 12.57725	2655 - 2900	
13.36 - 13.41	3260 - 3267	
16.42 - 16.423	3332 - 3339	
16.69475 - 16.69525	3345.8 - 3358	
16.80425 - 16.80475	3500 - 4400	
25.5 - 25.67	4500 - 5150	
37.5 - 38.25	5350 - 5460	
73 - 74.6	7250 - 7750	
74.8 - 75.2	8025 - 8500	
108 - 138	--	

* Certain frequency bands listed in table 7 and in bands above 38.6 GHz are designated for licence-exempt applications. These frequency bands and the requirements that apply to related devices are set out in the 200 and 300 series of RSSs.

FCC Restricted Bands:

MHz	MHz	MHz	GHz
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
[1]0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	([2])
13.36-13.41			

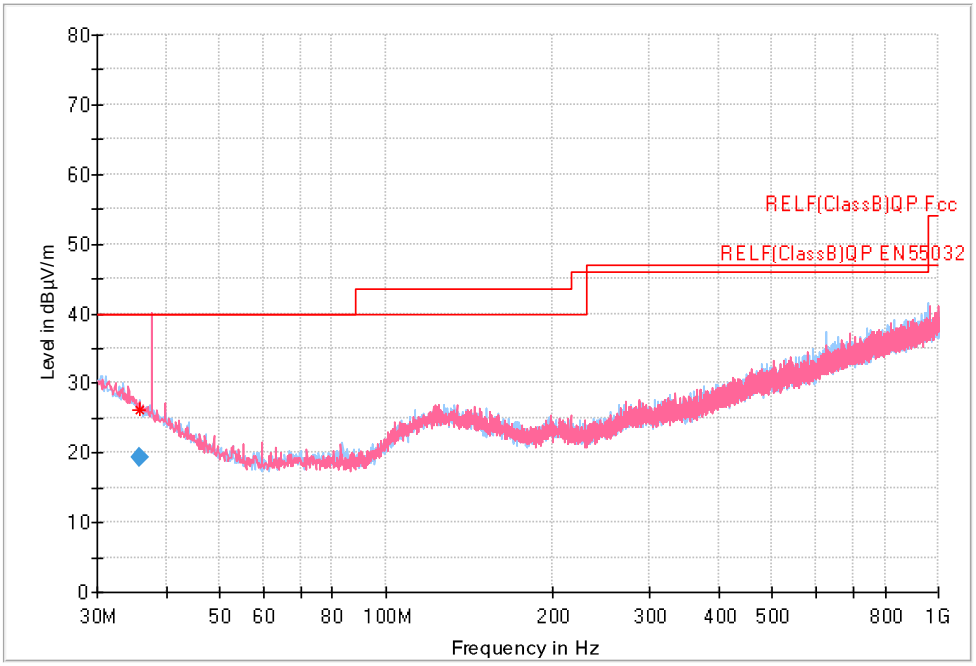
3) §15.247 (d) In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in § 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in § 15.205(a), must also comply with the radiated emission limits specified in § 15.209(a) (see § 15.205(c)).

Method of Measurement:

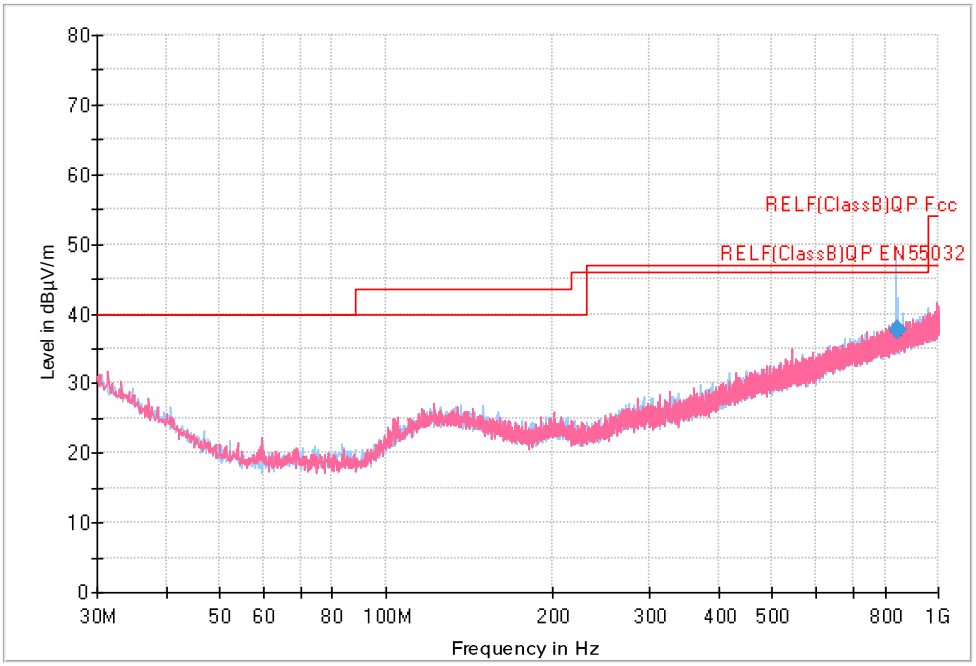
The EUT was tested in our 3 m SAC and was positioned on the center of the turntable. The transmitter was set for continuous transmission. The operating frequency of the device was measured for all radiated emissions 10 kHz to 4 GHz up to the 10th harmonic of the highest fundamental frequency. The EUT was pre-scanned in 3 different orthogonal orientations and was found to radiate highest when placed flat on the tabletop as indicated in the test photos.

Result: The EUT complies with the applicable standard.

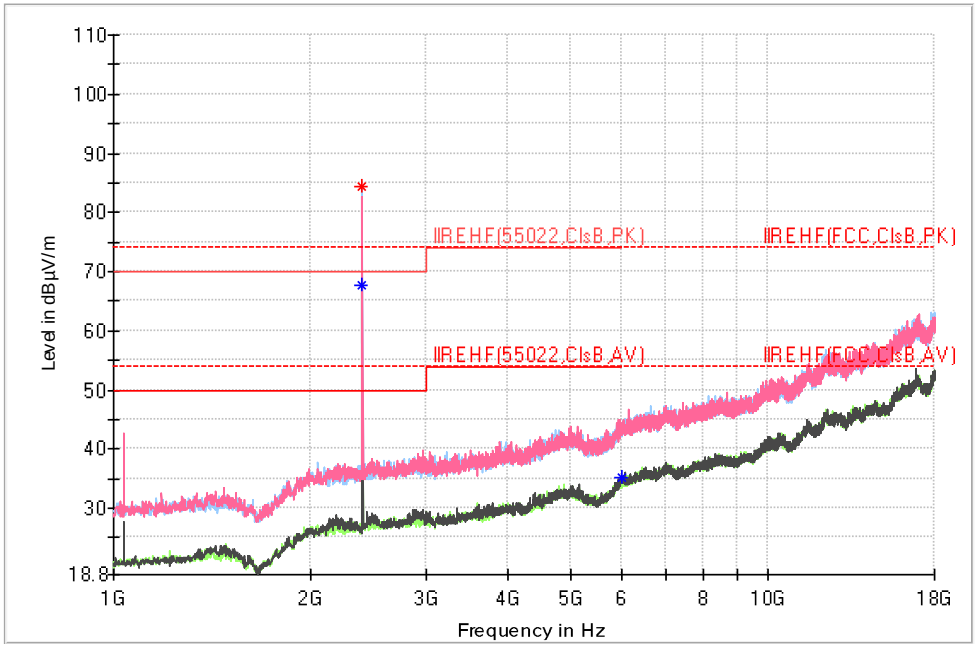
Measurement Data and Plot:



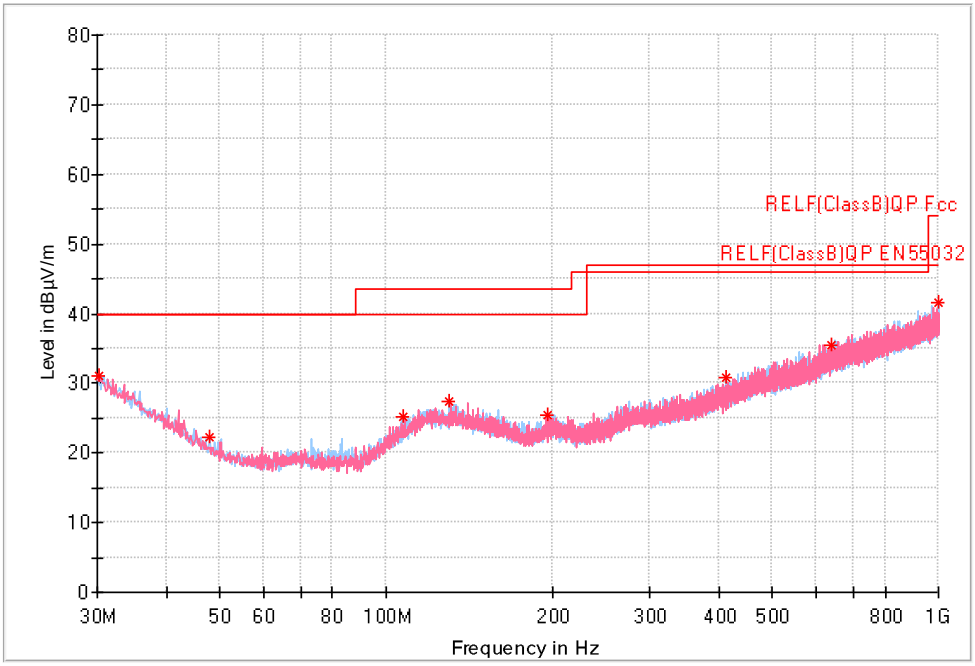
Radiated Spurious Emissions, 30M – 1G Hz, Bluetooth GFSK, Battery Mode



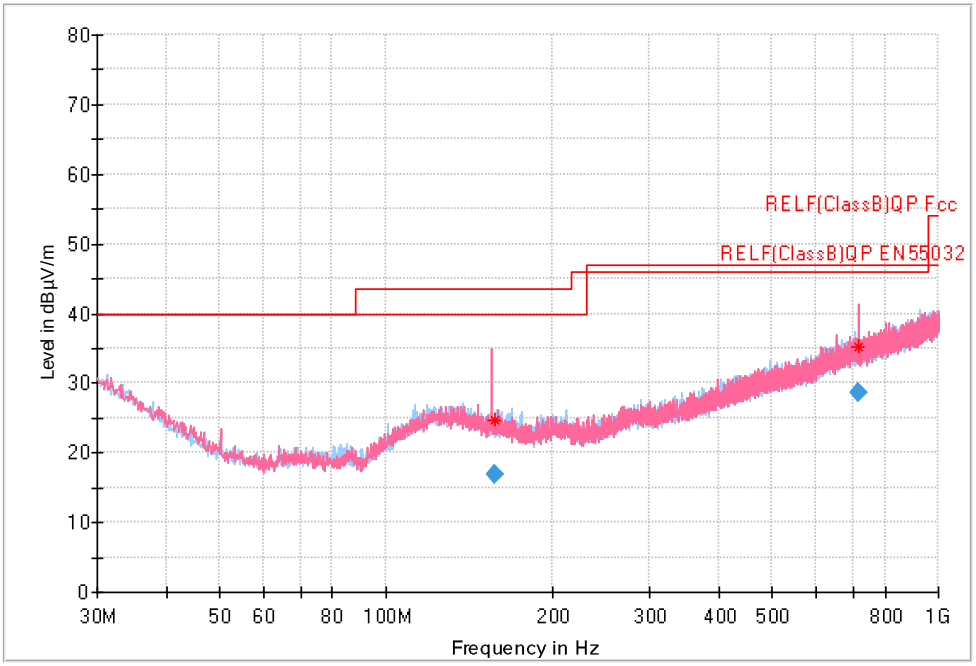
Radiated Spurious Emissions, 30M – 1G Hz, Bluetooth GFSK, Charging Mode



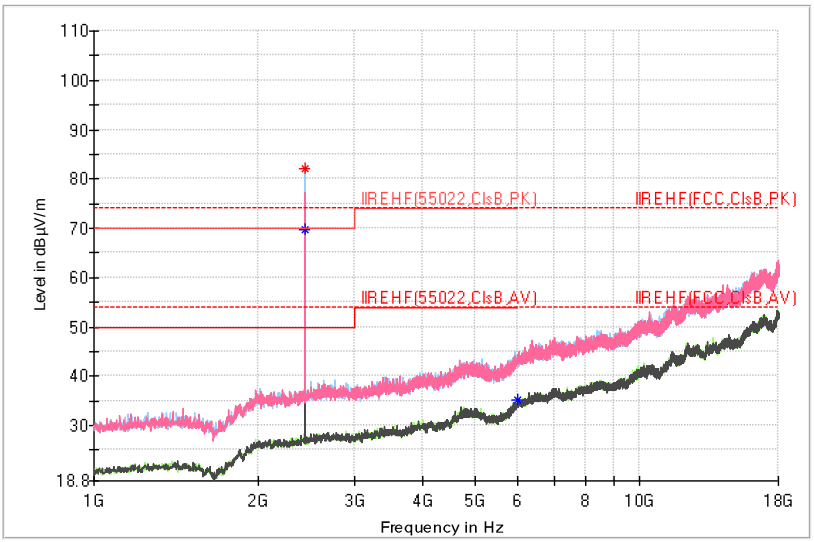
Radiated Spurious Emissions, 1G – 18G Hz, Bluetooth GFSK, Charging Mode



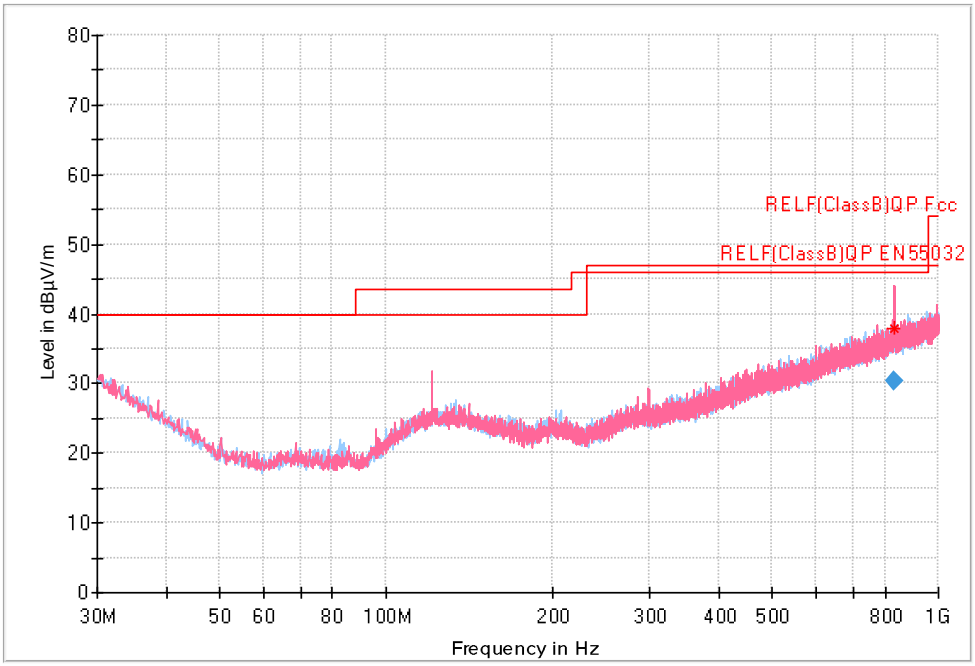
Radiated Spurious Emissions, 30M – 1G Hz, Bluetooth QPSK, Battery Mode



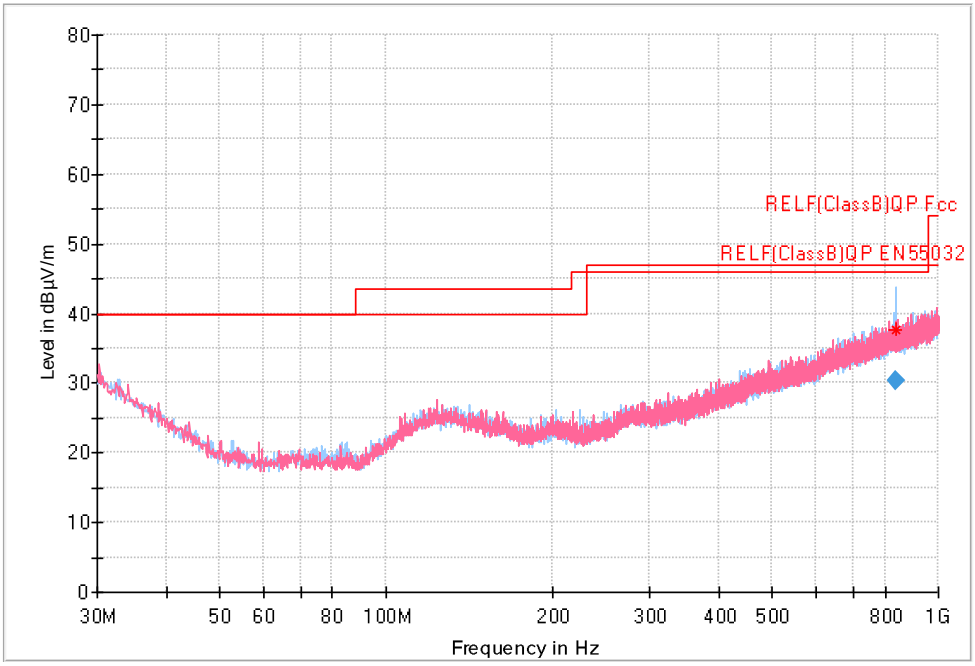
Radiated Spurious Emissions, 30M – 1G Hz, Bluetooth QPSK, Charging Mode



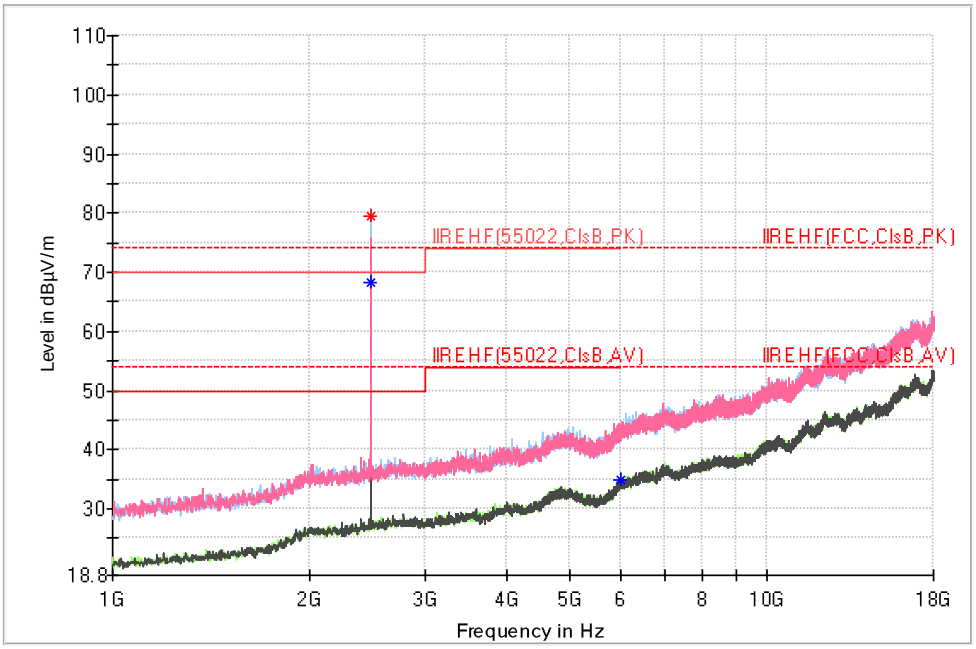
Radiated Spurious Emissions, 1G – 18G Hz, Bluetooth QPSK, Charging Mode



Radiated Spurious Emissions, 30M – 1G Hz, Bluetooth 8PSK, Battery Mode



Radiated Spurious Emissions, 30M – 1G Hz, Bluetooth 8PSK, Charging Mode



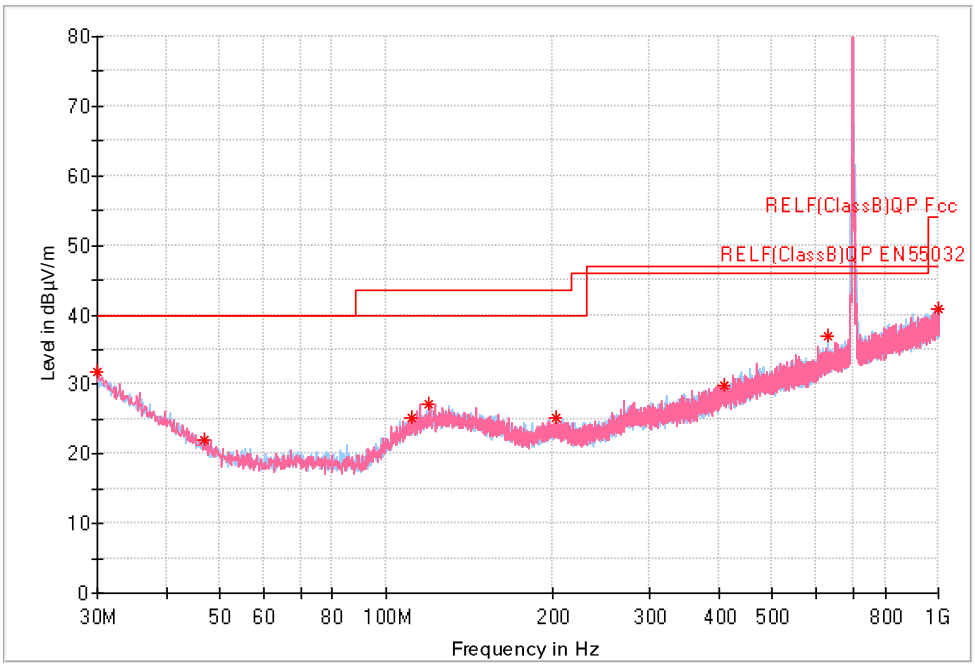
Radiated Spurious Emissions, 1G – 18G Hz, Bluetooth 8PSK, Charging Mode

Data, Spurious Emissions of Harmonics

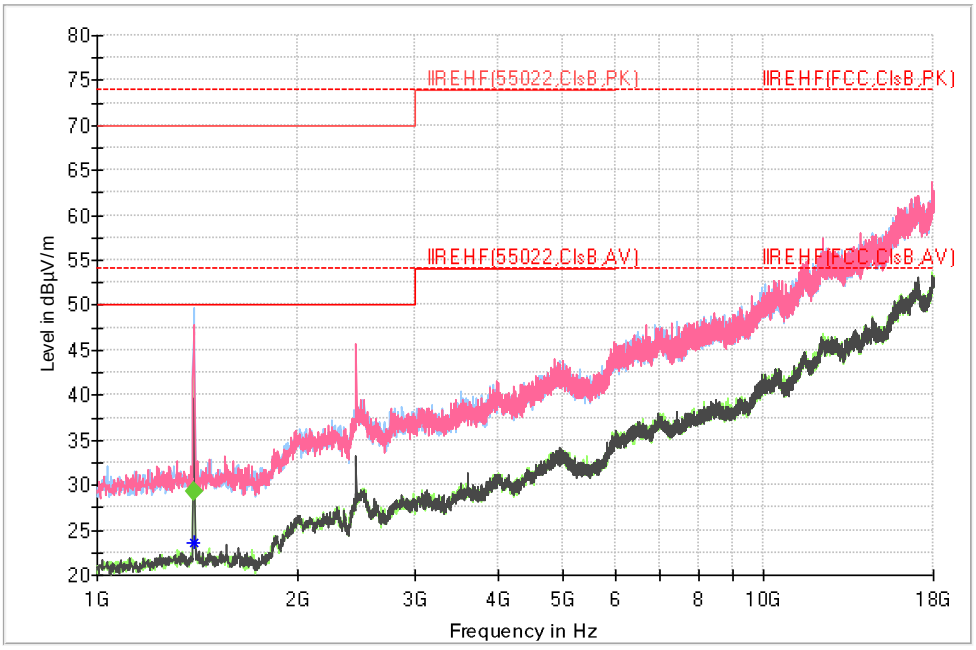
Modulation	Freq.	Peak Raw	Avg. Raw	Pol.	Gain/ Loss	Antenna. factor	Peak Corr.	Avg. Corr.	Peak Limit	Avg. Limit
	MHz	dBuV	dBuV	V/H	dB	dB/m	dBuV/m	dBuV/m	dBuV/m	dBuV/m
Bluetooth GFSK, Low channel	4804	49.8	42.1	H	-26.14	34.1	57.76	50.06	74	54
	7206	45.8	32.5	V	-22.97	35.6	58.43	45.13	<20dBC	<20dBC
Bluetooth GFSK, Mid channel	4882	45.7	36.8	H	-26.15	34.1	53.65	44.75	74	54
	7323	44.3	34.5	V	-22.53	35.6	57.37	47.57	74	54
Bluetooth GFSK, High channel	4960	46.5	37.9	H	-26.14	34.1	54.46	45.86	74	54
	7440	47.1	36.1	V	-22.97	35.6	59.73	48.73	74	54
Bluetooth QPSK, Low channel	4804	47.2	36.5	H	-26.15	34.1	55.15	44.45	74	54
	7206	42	29.5	V	-22.53	35.6	55.07	42.57	<20dBC	<20dBC
Bluetooth QPSK, Mid channel	4882	43.5	31.2	H	-26.14	34.1	51.46	39.16	74	54
	7323	42.5	29.3	V	-22.97	35.6	55.13	41.93	74	54
Bluetooth QPSK, High channel	4960	46.2	34.1	H	-26.15	34.1	54.15	42.05	74	54
	7440	44.1	33.2	V	-22.53	35.6	57.17	46.27	74	54
Bluetooth 8-PSK, Low channel	4804	47.2	36.2	H	-26.14	34.1	55.16	44.16	74	54
	7206	43.8	30.5	V	-22.97	35.6	56.43	43.13	<20dBC	<20dBC
Bluetooth 8-PSK, Mid channel	4882	42.8	30.5	H	-26.15	34.1	50.75	38.45	74	54
	7323	43.1	30.5	V	-22.53	35.6	56.17	43.57	74	54
Bluetooth 8-PSK, High channel	4960	47	35.1	H	-26.14	34.1	54.96	43.06	74	54
	7440	47.1	32.5	V	-22.97	35.6	59.73	45.13	74	54

Spurious Emissions of Radio Collocation Data:

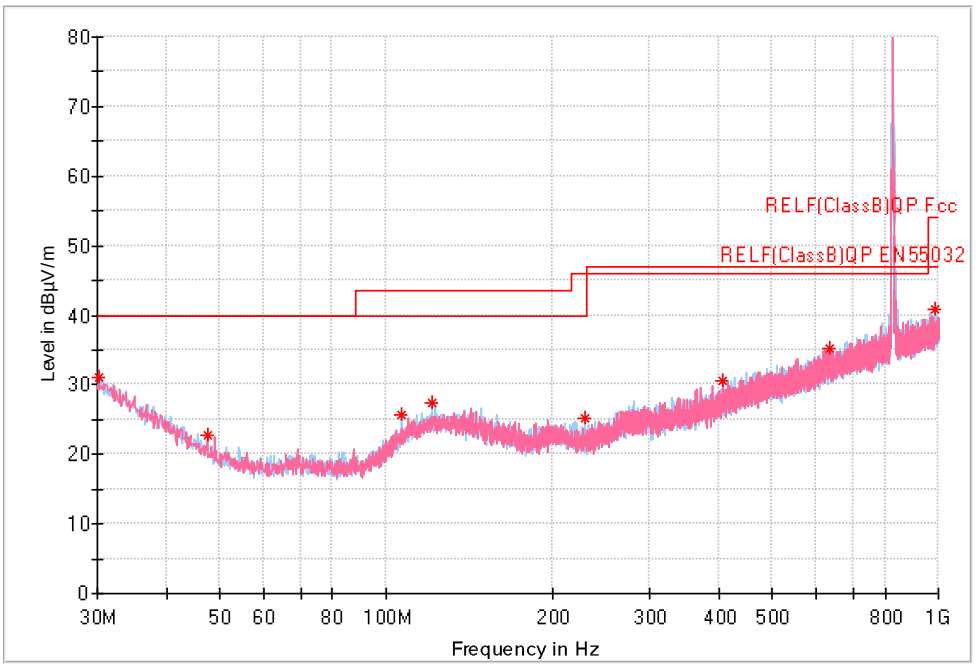
There were no intermodulation frequencies detected during the simultaneous transmission of the two radio modules. Peaks showing in the plots are harmonics of the fundamental frequencies, which are at least 20 dB below the limits.



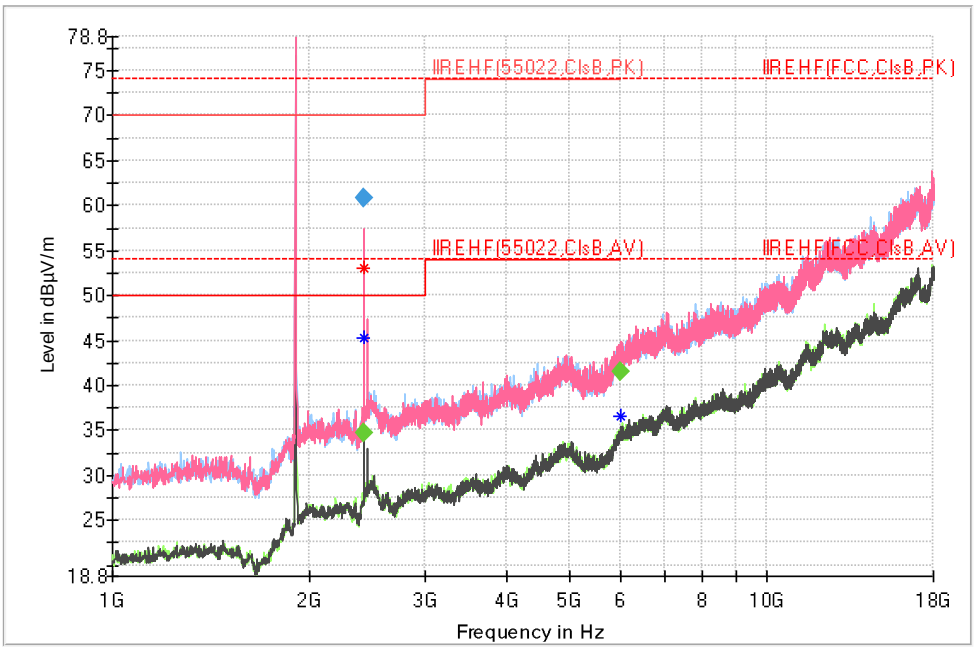
Spurious Emissions of Radio Collocation, 30M – 1G Hz, Bluetooth & 4G Tx on



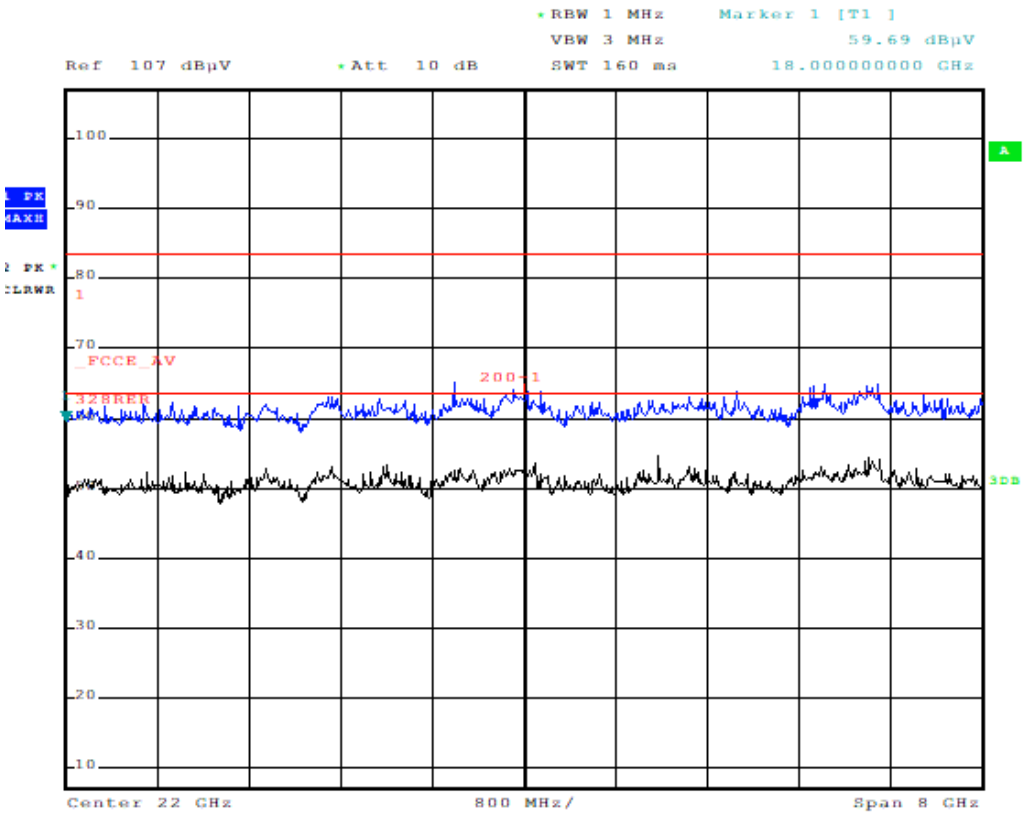
Spurious Emissions of Radio Collocation, 1G– 18G Hz, Bluetooth & 4G Tx on



Spurious Emissions of Radio Collocation, 30M – 1G Hz, Bluetooth & 3G Tx on



Spurious Emissions of Radio Collocation, 1G– 18G Hz, Bluetooth & 3G (1907p6) Tx on



Spurious Emissions of Radio Collocation, 18G– 25G Hz, Tx on

Note: Max-peak limit 83.5 dBuV/m at 1 meter, and Average limit 63.5 dBuV/m at 1 meter. There is not any signal from the EUT in the frequency range of 18 GHz to 25 GHz.

3.4 20dB Bandwidth

- **Date Performed:** October 17, 2019
- **Test Standard:** RSS-247-Issue 2, RSS-Gen Issue 5; FCC Subpart C §15.247
- **Test Method:** ANSI C63.10:2013
- **Test Requirement:** The value of 20 dB bandwidth is not specified in the above standards. The bandwidth is measured and reported.
- **Measurement Method:** As called in ANSI C63.10-2013.
- **Result:** The EUT performed as expected.

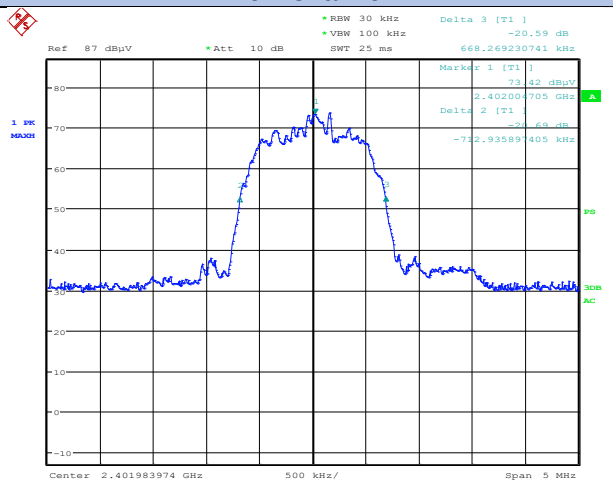
Measurement Data and Plot:

20 dB Occupied Bandwidth, Bluetooth_8PSK

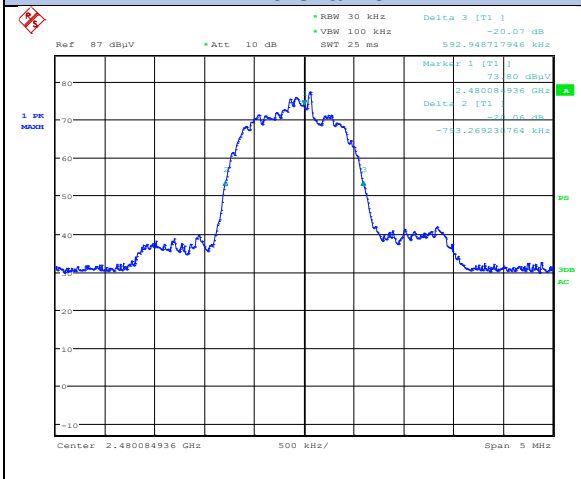
Data

Channel	Frequency	Bandwidth	Result
	MHz	kHz	
Low	2402	1381	Complies
Mid	2441	1386	Complies
High	2480	1355	Complies

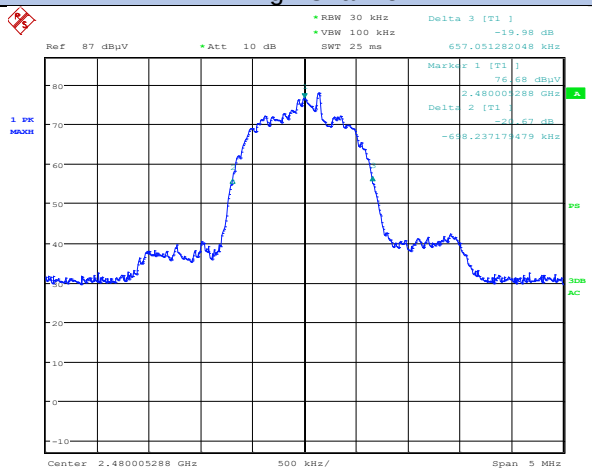
Low Channel



Mid Channel



High Channel

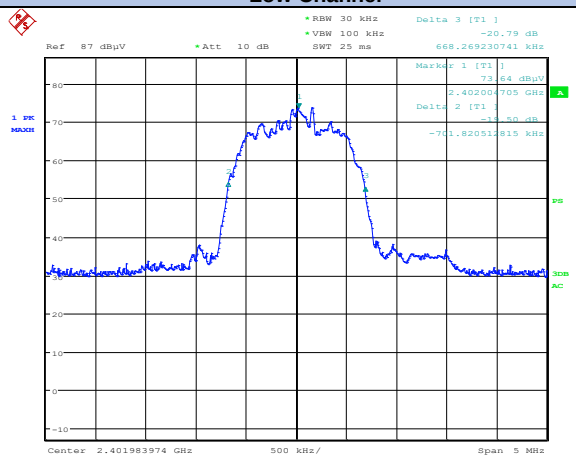


20 dB Occupied Bandwidth, Bluetooth QPSK

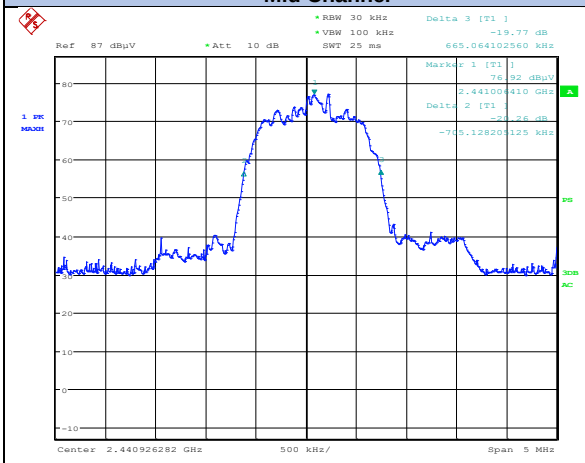
Data

Channel	Frequency	Bandwidth	Result
	MHz	kHz	
Low	2402	1369	Complies
Mid	2441	1369	Complies
High	2480	1381	Complies

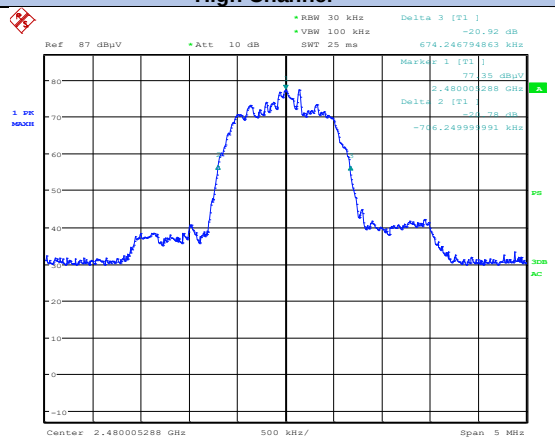
Low Channel



Mid Channel



High Channel

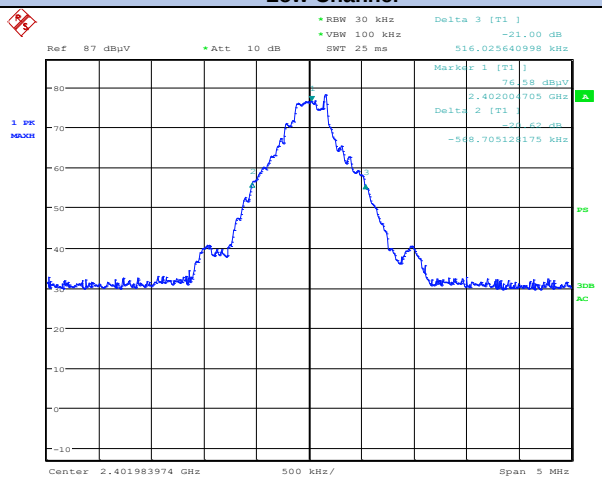


20 dB Occupied Bandwidth, Bluetooth GFSK

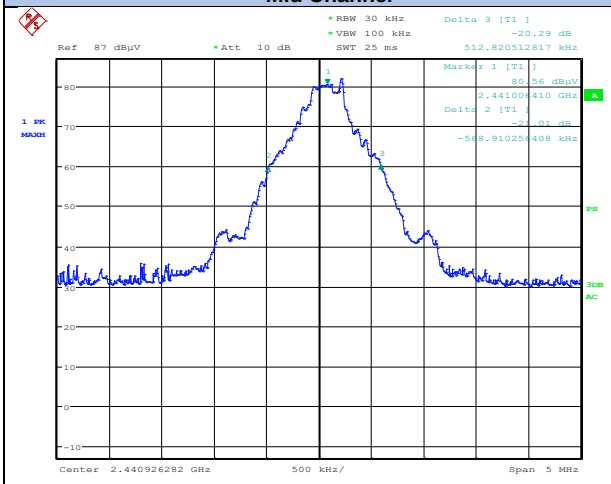
Data

Channel	Frequency	Bandwidth	Result
	MHz	kHz	
Low	2402	1084	Complies
Mid	2441	1081	Complies
High	2480	1078	Complies

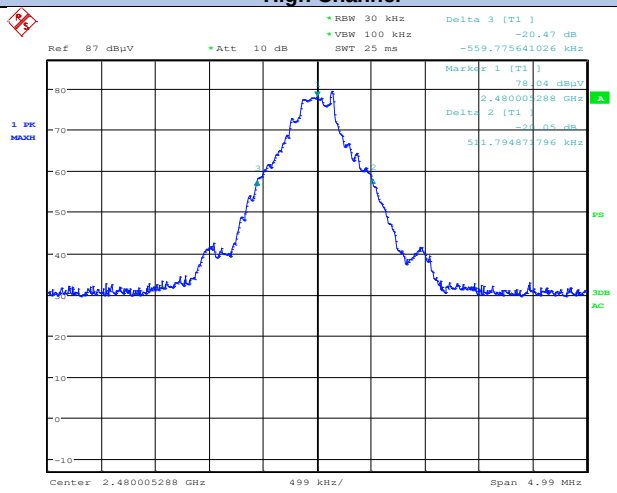
Low Channel



Mid Channel



High Channel



3.5 99% Bandwidth

- **Date Performed:** October 15, 2019
- **Test Standard:** RSS-247 Issue 2, RSS-Gen Issue 5
- **Minimum Requirement:** The Occupied Channel Bandwidth is the bandwidth that contains 99 % of the power of the signal. The bandwidth shall fall completely within the frequency range specified by the standard.
- **Measurement Method:** As called in ANSI C63.10-2013.
- **Result:** The EUT complies with the applicable standard.

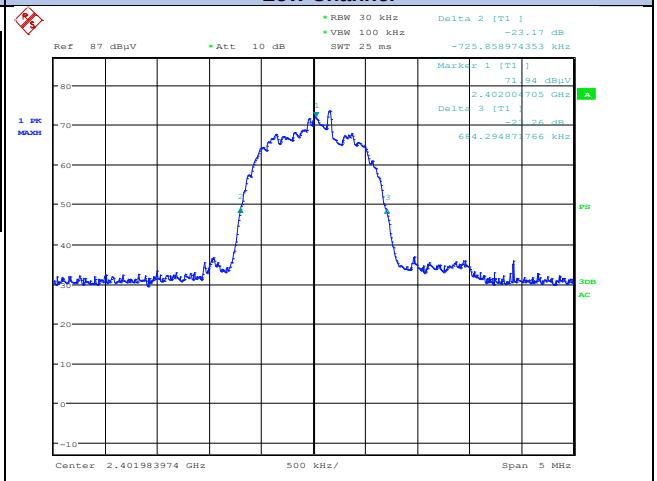
Measurement Data and Plot:

99% Occupied Bandwidth, Bluetooth 8PSK

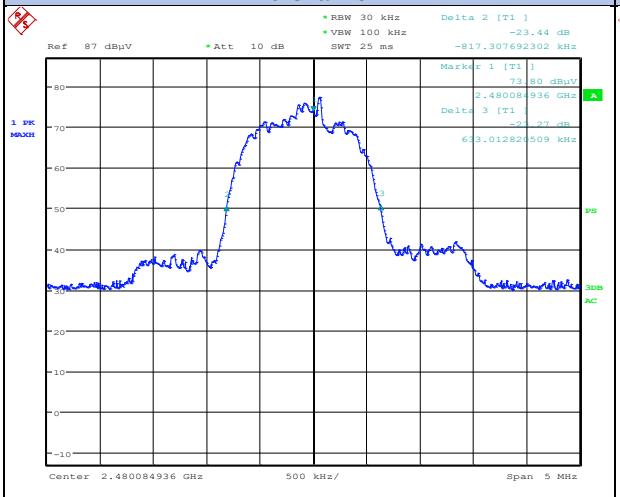
Data

Channel	Frequency	Bandwidth	Result
	MHz	kHz	
Low	2402	1410	Complies
Mid	2441	1449	Complies
High	2480	1411	Complies

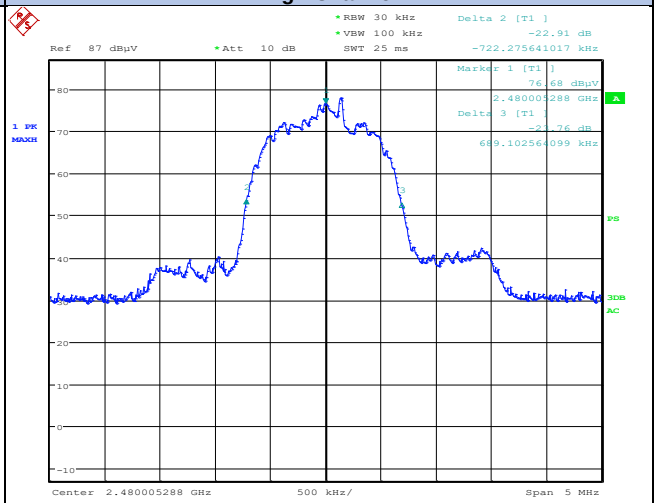
Low Channel



Mid Channel



High Channel

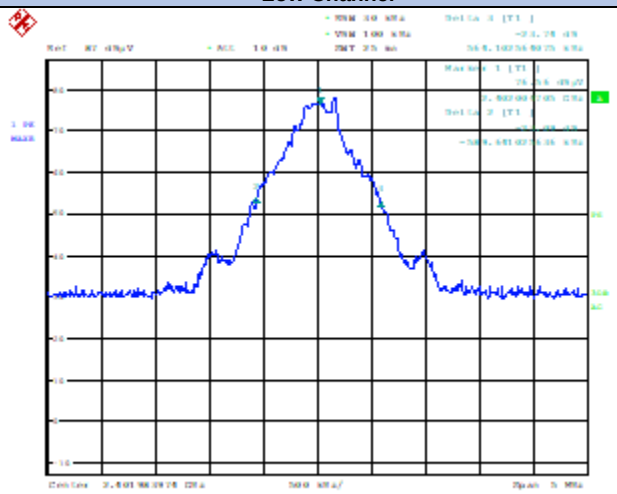


99% Occupied Bandwidth, Bluetooth GFSK

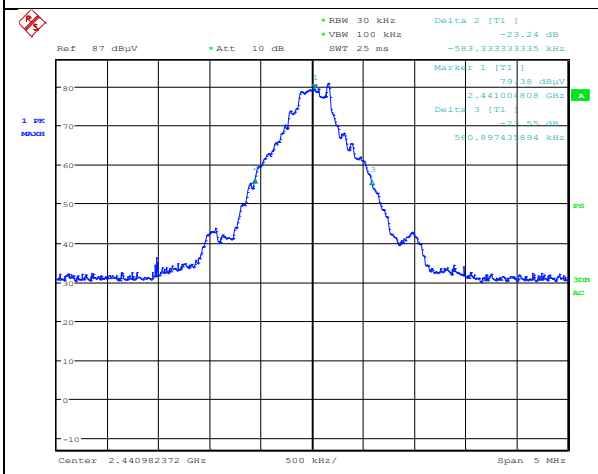
Data

Channel	Frequency	Bandwidth	Result
	MHz	kHz	
Low	2402	1153	Complies
Mid	2441	1142	Complies
High	2480	1143	Complies

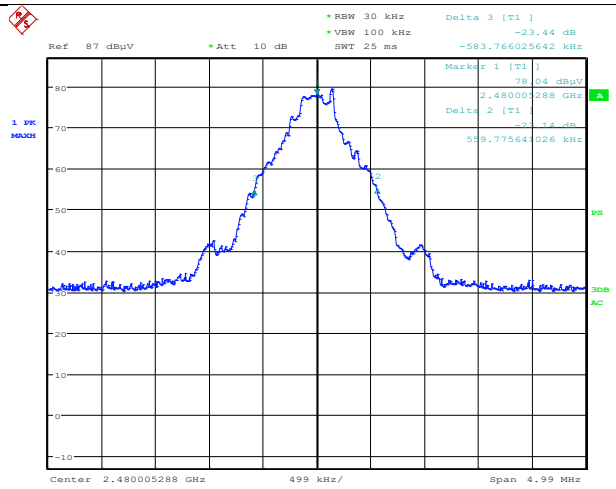
Low Channel



Mid Channel



High Channel

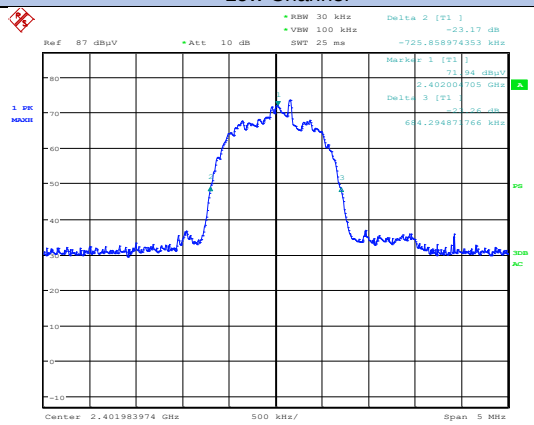


99% Occupied Bandwidth, Bluetooth QPSK

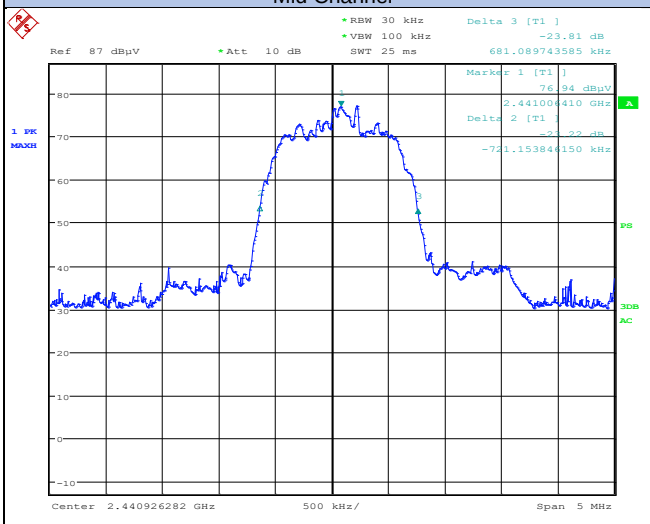
Data

Channel	Frequency	Bandwidth	Result
	MHz	kHz	
Low	2402	1409	Complies
Mid	2441	1403	Complies
High	2480	1405	Complies

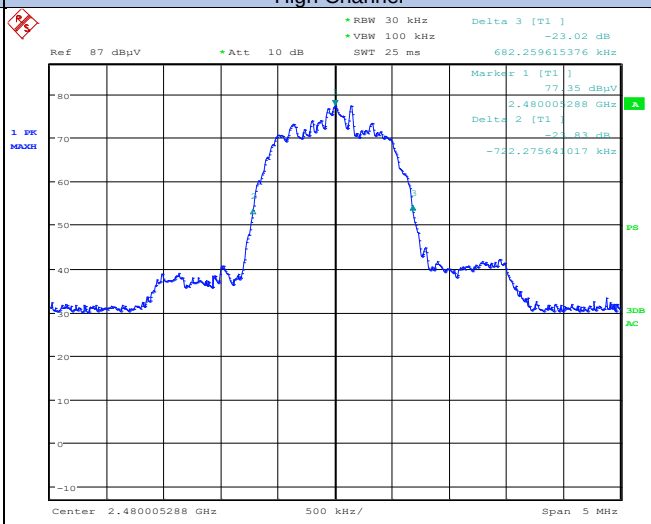
Low Channel



Mid Channel



High Channel



3.6 Out of Band Emissions (Band Edge)

- **Date Performed:** October 16, 2019
- **Test Standard:** RSS-247-Issue 2, FCC Title 47 CFR Part 15: Subpart C - §15.247 (d)
- **Test Method:** ANSI C63.10:2013

Test Requirement:

In any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced shall be at least 20 dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under Section A8.4 (4), the attenuation required shall be 30 dB instead of 20dB.

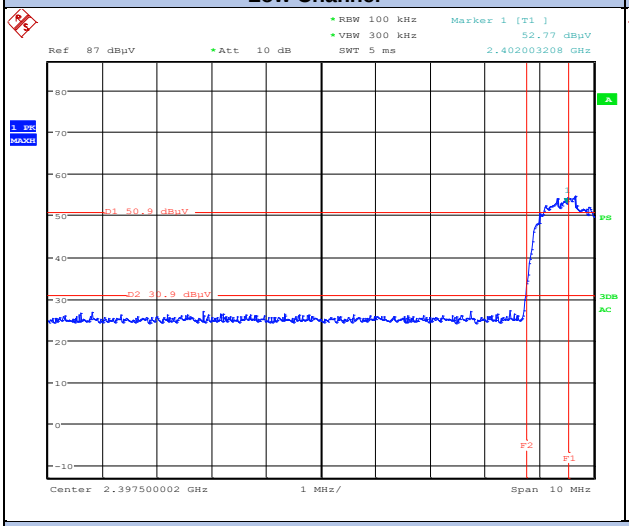
Result:

The EUT complies with the applicable standard.

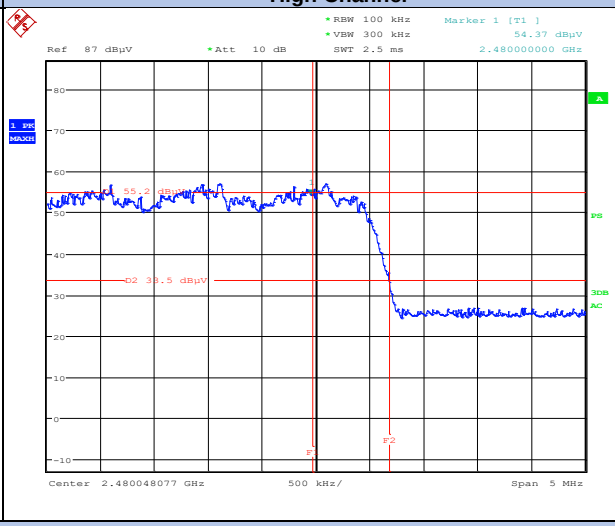
Measurement Data and Plot:

Bluetooth 8PSK (Hopping Mode)

Low Channel

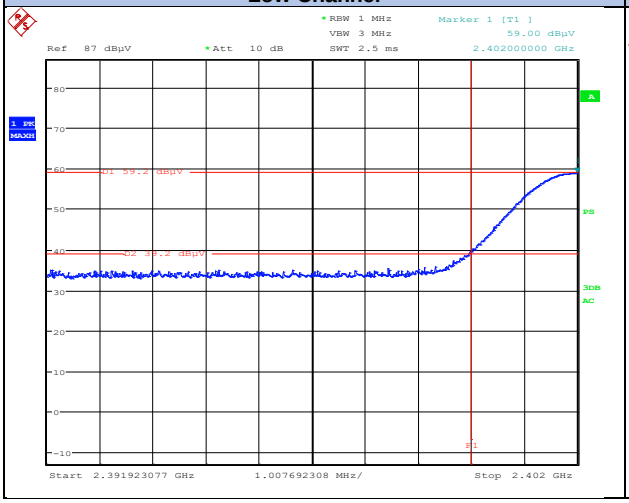


High Channel

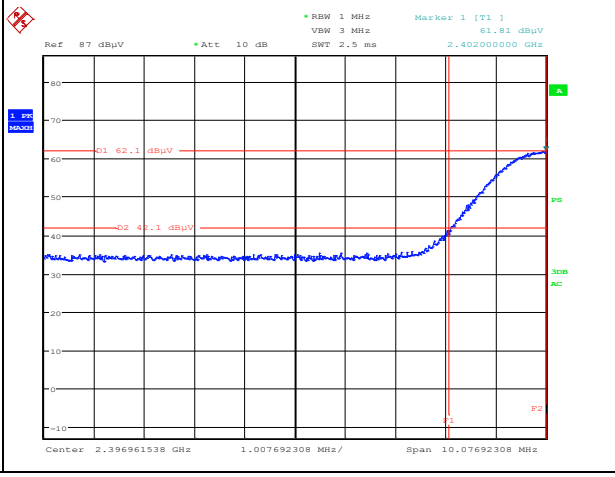


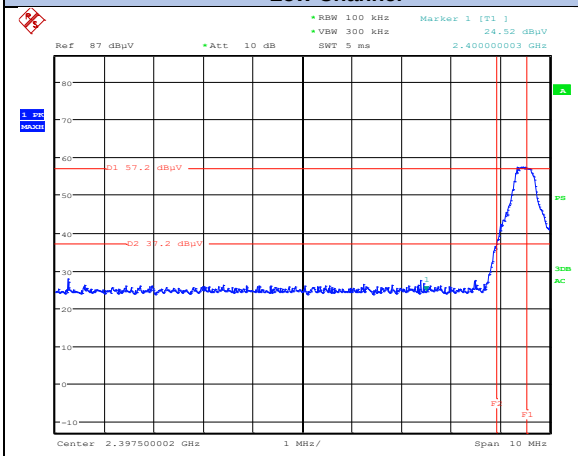
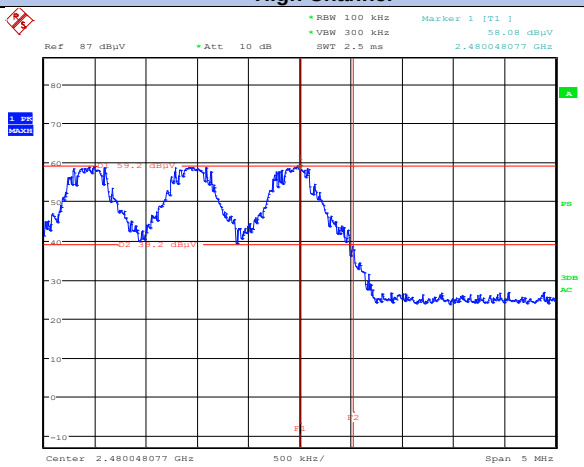
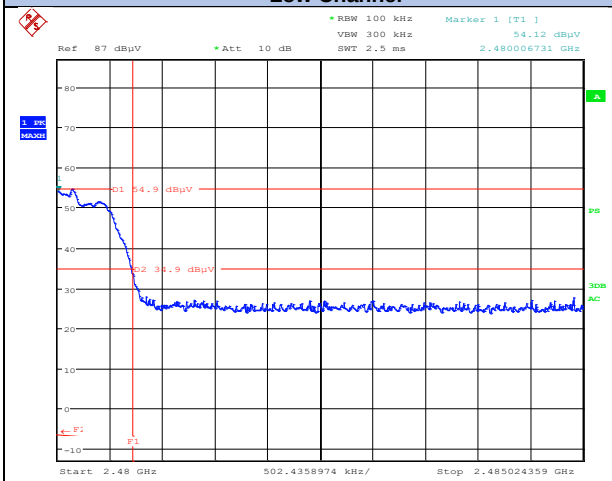
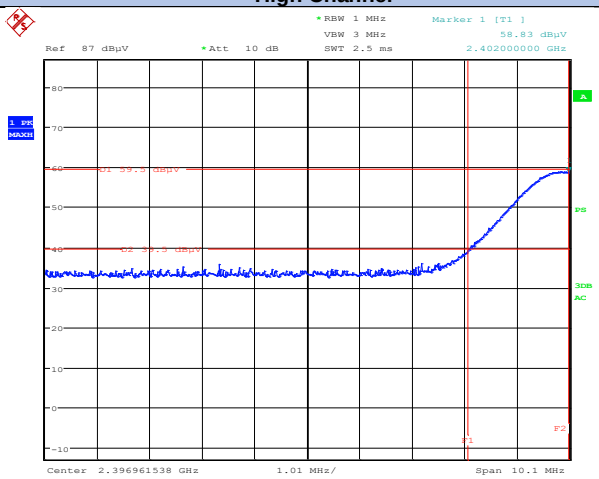
Bluetooth 8PSK (Single Channels)

Low Channel



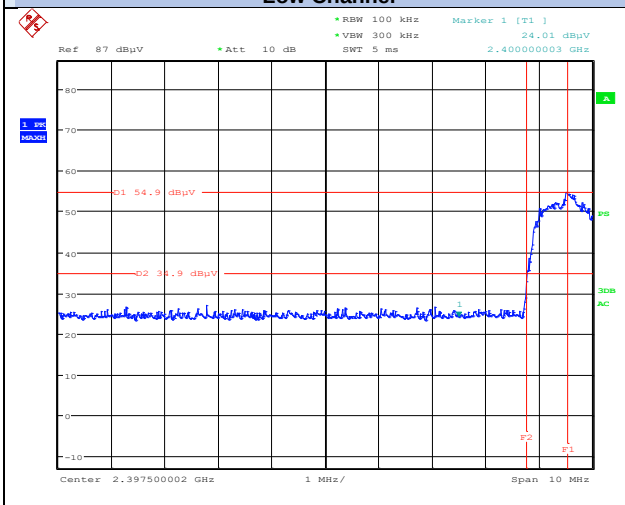
High Channel



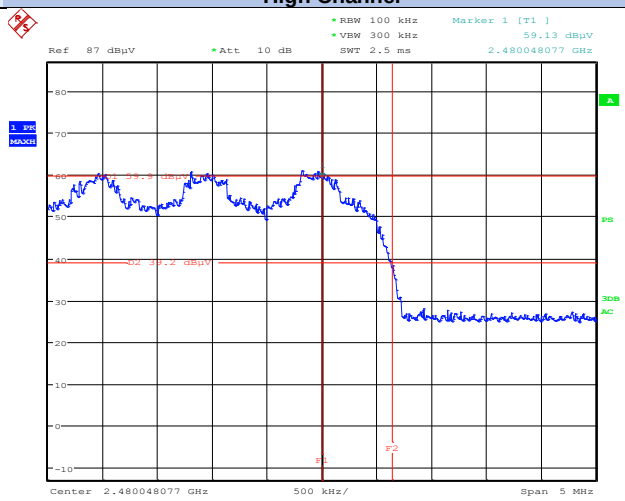
Bluetooth GFSK (Hopping Mode)	
Low Channel	**High Channel**
	
Bluetooth GFSK (Single Channels)	
Low Channel	**High Channel**
	

Bluetooth QPSK (Hopping Mode)

Low Channel

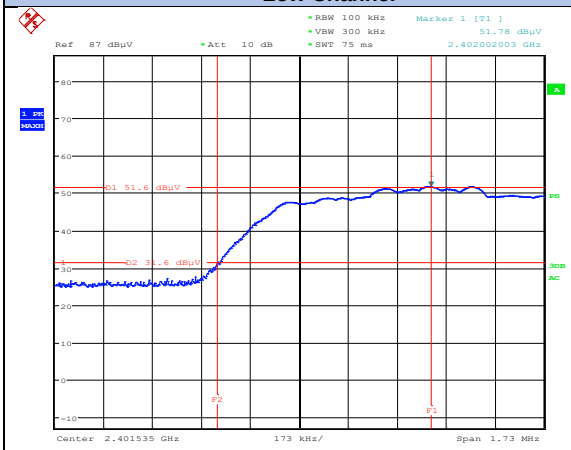


High Channel

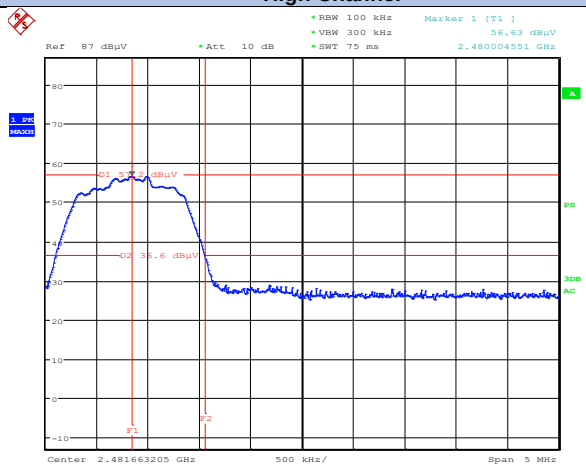


Bluetooth QPSK (Single Channels)

Low Channel



High Channel



3.7 Channel Separation

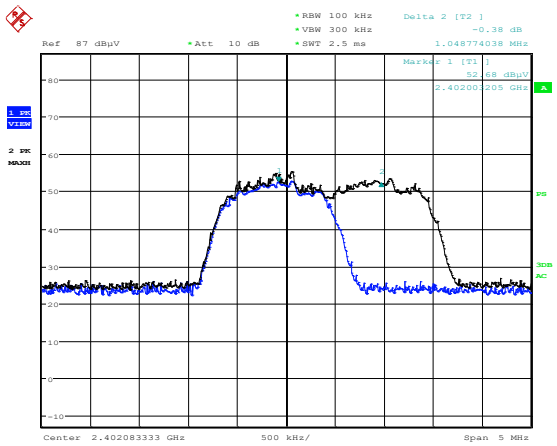
- **Date Performed:** October 17, 2019
- **Test Standard:** FCC Title 47 CFR Part 15: Subpart C - §15.247 (a)(1), RSS-247-Issue 2
- **Test Method:** ANSI C63.10:2013
- **Test Requirement:** Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20dB 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.
- **Measurement Method:** As called in ANSI C63.10-2013.
- **Result:** The EUT complies with the applicable standard.

Measurement Data and Plot:

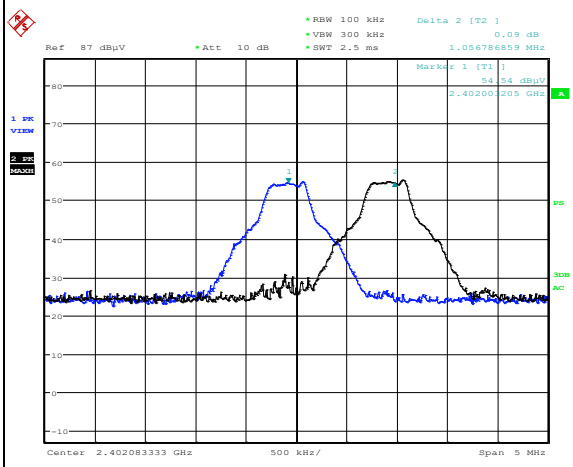
Channel Separation

Channel	Channel Separation	20 dB Bandwidth	two-thirds of the 20 dB bandwidth
	kHz	kHz	kHz
8PSK	1005	1388	925
GFSK	1006	1080	720
QPSK	1080	1369	912

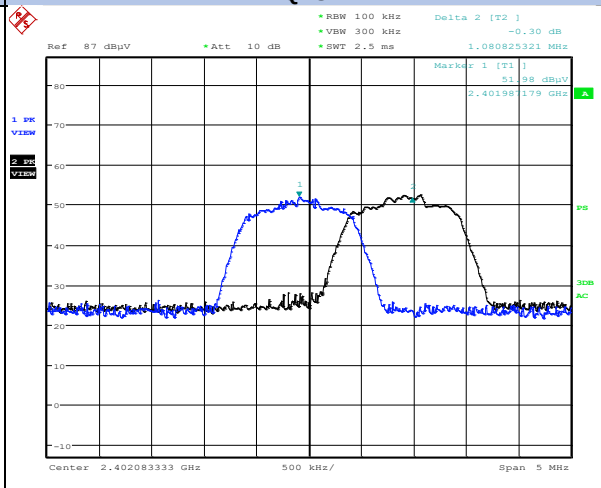
8PSK



GFSK



QPSK

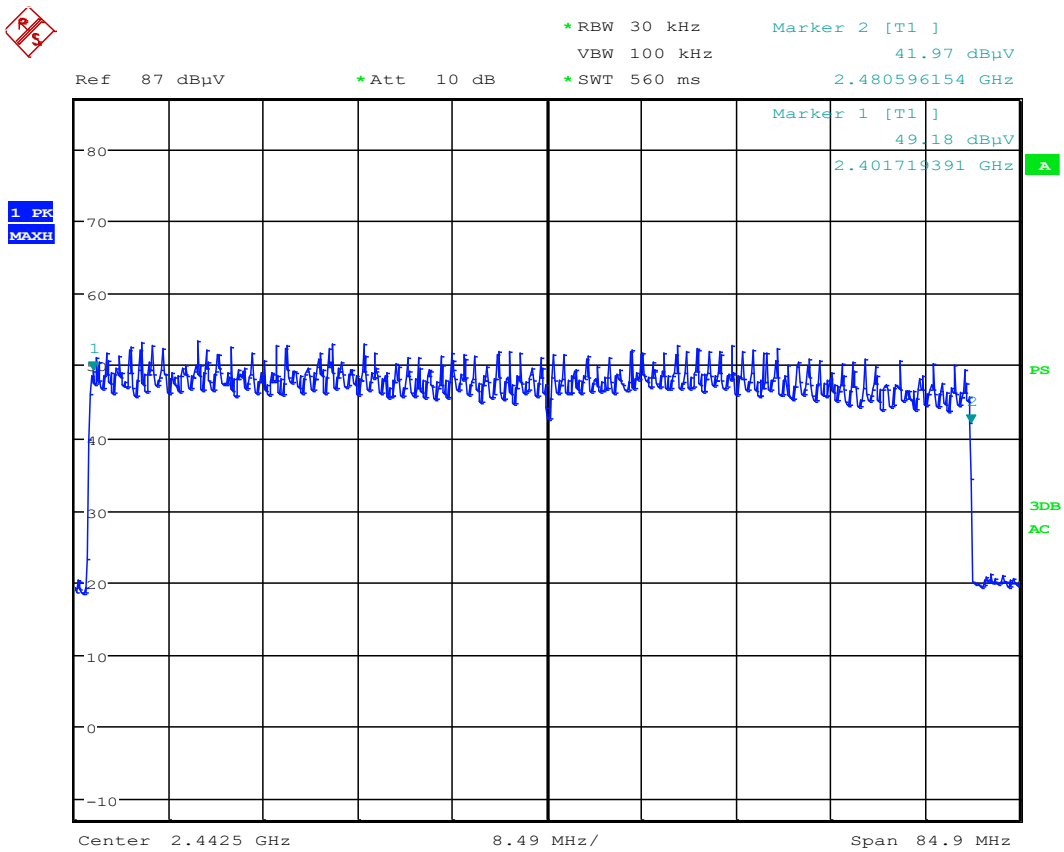


3.8 Number of Hopping Channels

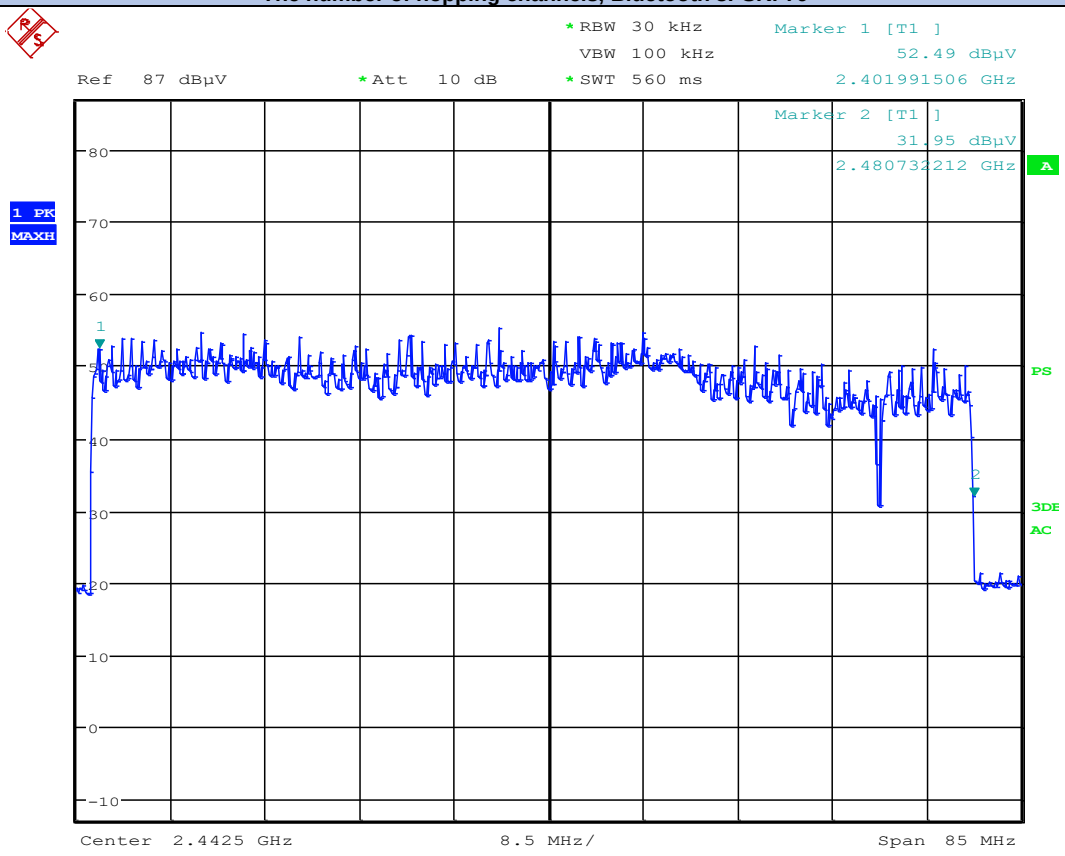
- **Date Performed:**
- October 17, 2019
- **Test Standard:**
- FCC Title 47 CFR Part 15: Subpart C - §15.247, RSS-247-Issue 2
- **Test Method:**
- ANSI C63.10:2013
- **Test Requirement:**
- The number of Hopping Channels is measured and reported.
- **Measurement Method:**
- As called in ANSI C63.10-2013.
- **Result:**
- The EUT complies with the applicable standard.

Measurement Data and Plot:

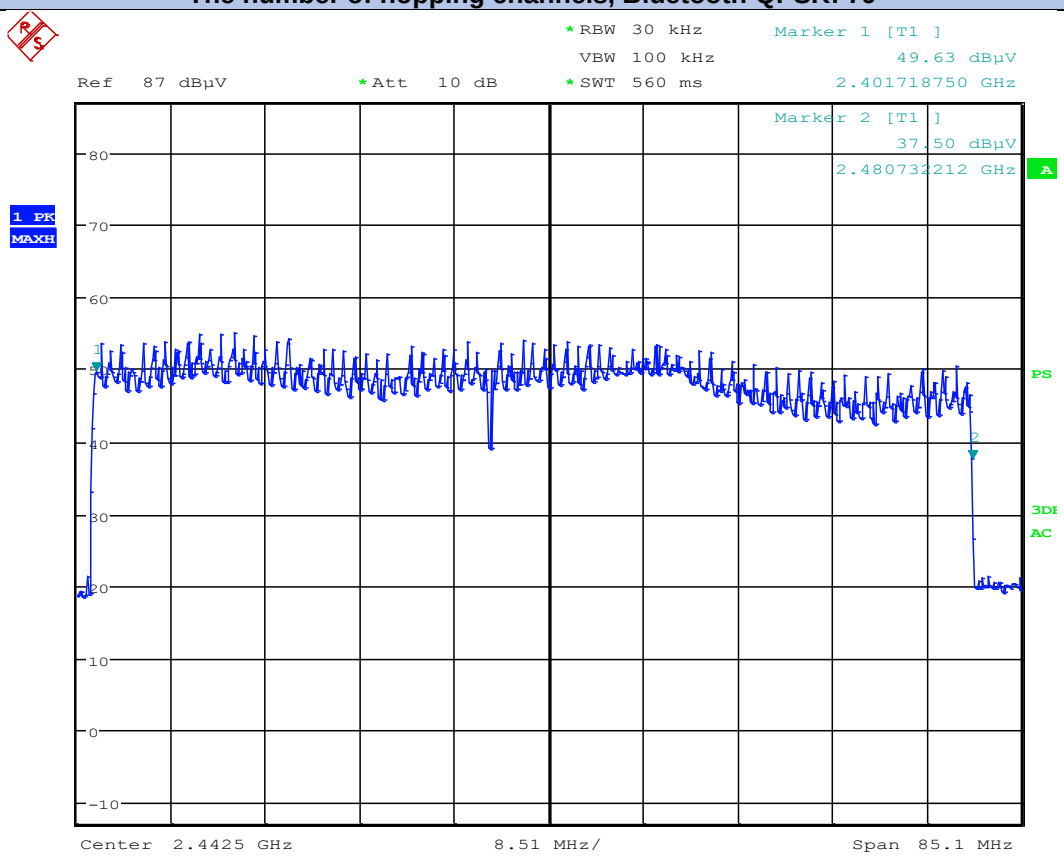
The number of hopping channels, Bluetooth GFSK: 79



The number of hopping channels, Bluetooth 8PSK: 79



The number of hopping channels, Bluetooth QPSK: 79



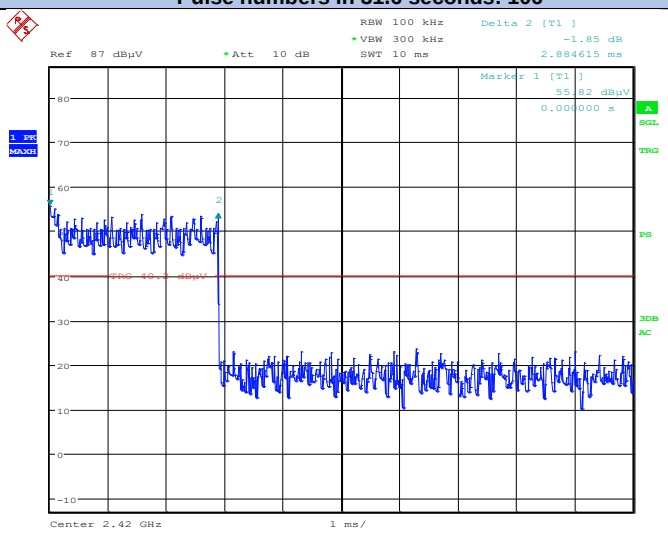
3.9 Dwell Time and Time Occupancy Per Frequency

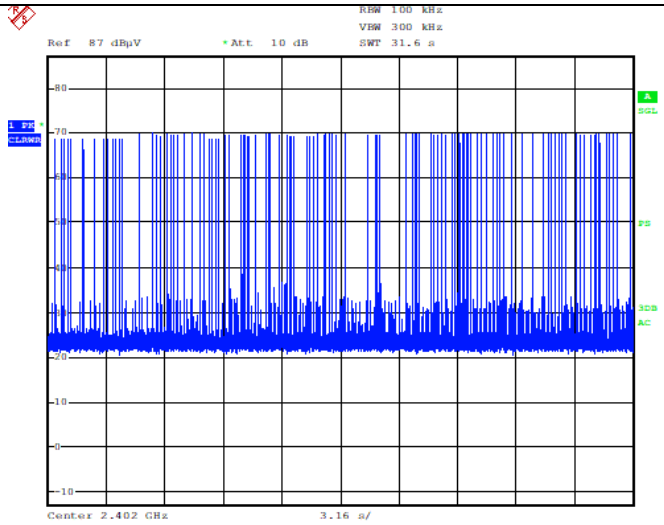
- **Date Performed:** October 10, 2019
- **Test Standard:** FCC Title 47 CFR Part 15: Subpart C - §15.247 (a)(1)(iii), RSS-247-Issue 2
- **Test Method:** ANSI C63.10:2013
- **Test Requirement:** Frequency hopping systems in the 2400–2483.5 MHz band shall use at least 15 channels. The average time of 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. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.
- **Measurement Method:** As called in ANSI C63.10-2013.
- **Result:** The EUT complies with the applicable standard.

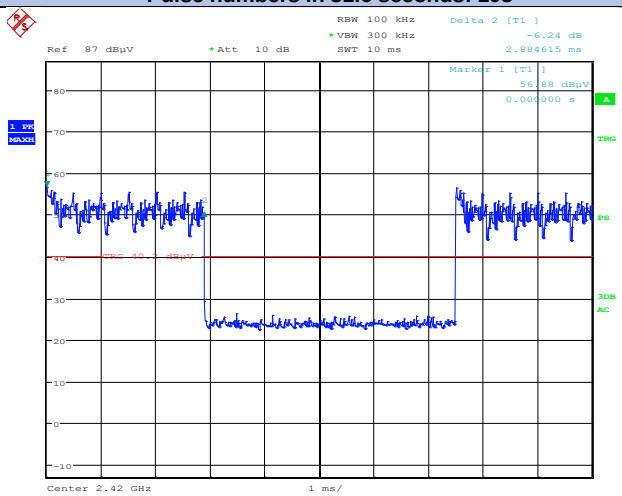
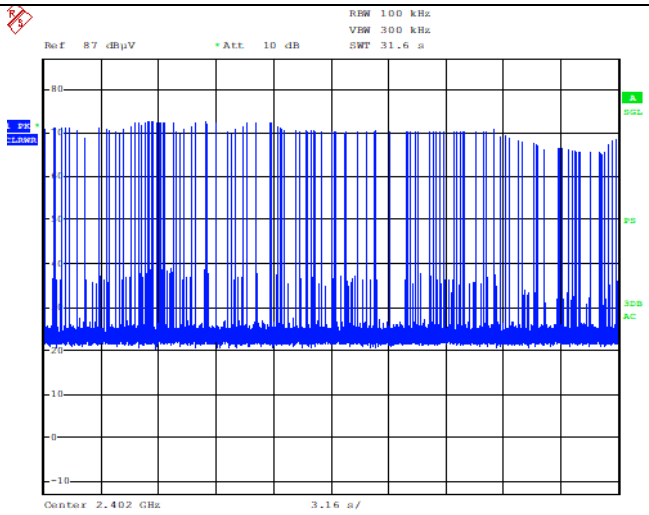
Measurement Data and Plot:

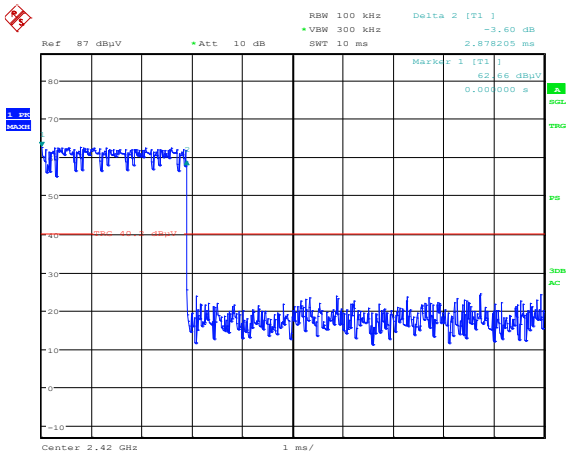
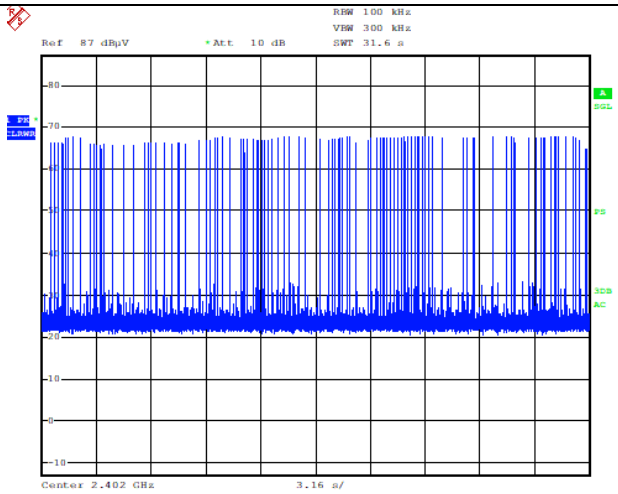
Dwell Time and Time Occupancy Per Frequency, 8PSK: 308ms

Pulse numbers in 31.6 seconds: 106





Dwell Time and Time Occupancy Per Frequency, GFSK: 297ms
Pulse numbers in 31.6 seconds: 103



Dwell Time and Time Occupancy Per Frequency, QPSK:290ms Pulse numbers in 31.6 seconds: 101



3.10 Unintentional Radiated Emissions

- **Date Performed:**
- October 10, 2019

- **Test Standard:**
- FCC Title 47 CFR Part 15: Subpart B - §15.109
- ICES-003 Issue 6

- **Test Method:**
- ANSI C63.4-2014

- **Required Limit:**

The field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

Frequency (MHz)	Field strength (dBµV/m)
30 – 88	40.0
88 – 216	43.5
216 – 960	46.0
above 960	54.0
Note 1: The above field strength limits are specified at a distance of 3 meters. The tighter limits apply at the band edges. **Note 2:** The emissions limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz and above 1000 MHz Radiated emission limits in these three bands are based on measurements employing an average detector.	

Method of Measurement:

The EUT was positioned in the center of the turntable in the SAC. The EUT was then measured for all the radiated emissions in the frequency range of 30MHz – 1GHz. Measurements were made using the spectrum analyzer and receiver using the appropriate antennas, amplifiers, attenuators, and filters.

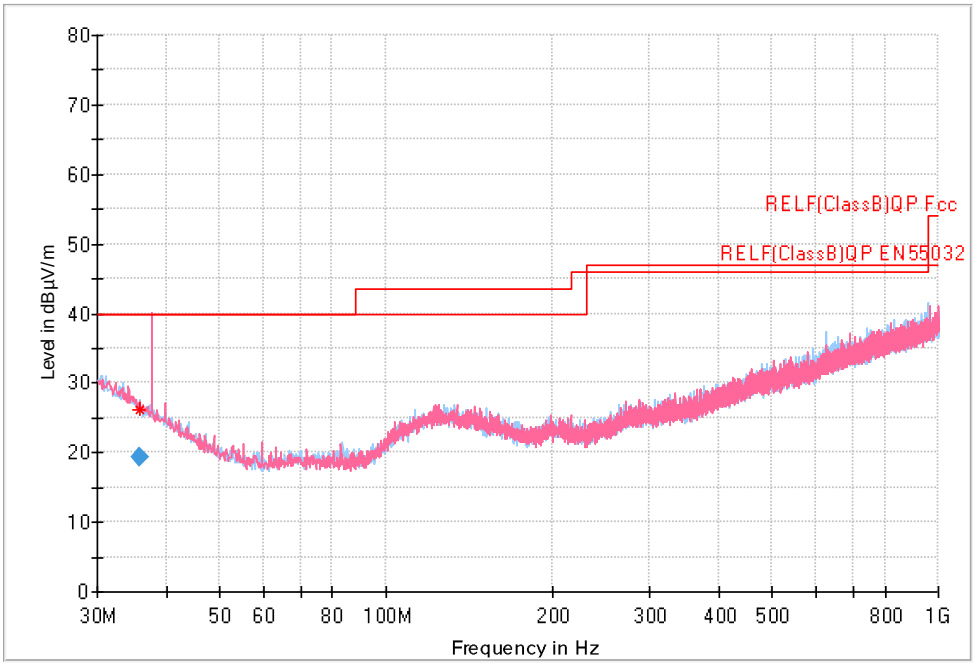
Emissions in both horizontal and vertical polarizations were measured while rotating the Equipment Under Test (EUT) on the turntable to maximize signal strength. In the case of high ambient noises, the measurements are performed at a closer distance and the limit is adjusted per the equation below. The result is added or subtracted to the required emission level to ensure compliance at the new distance.

$$20 \log\left(\frac{D1}{D2}\right);$$ Where D1 = Current Distance
D2 = Required Distance

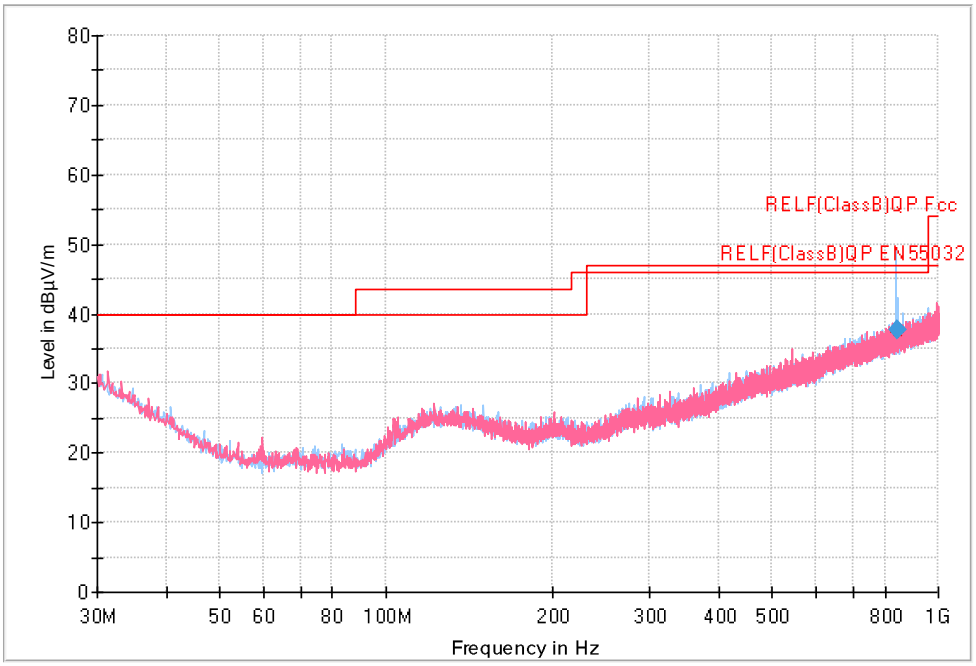
Result:

The EUT complies with the applicable standard.

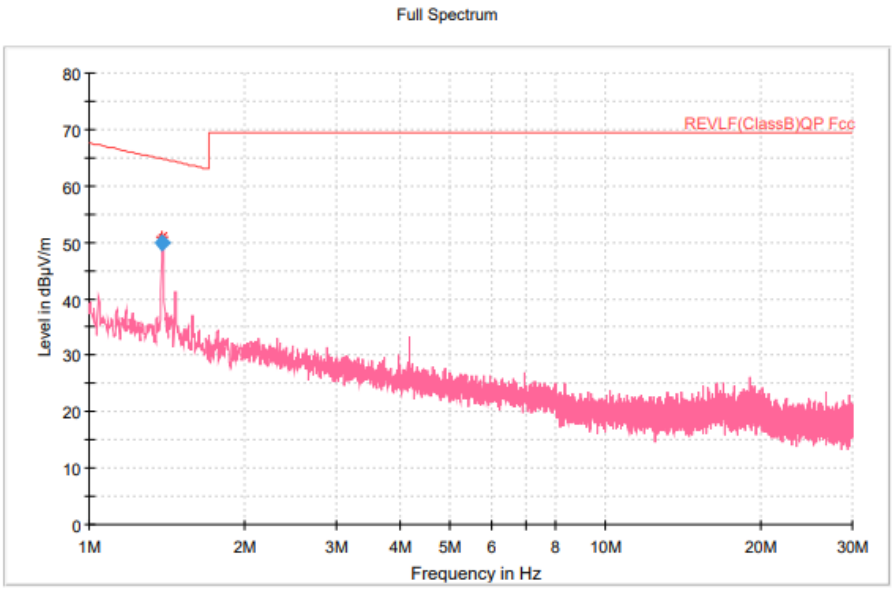
Measurement Data and Plot:



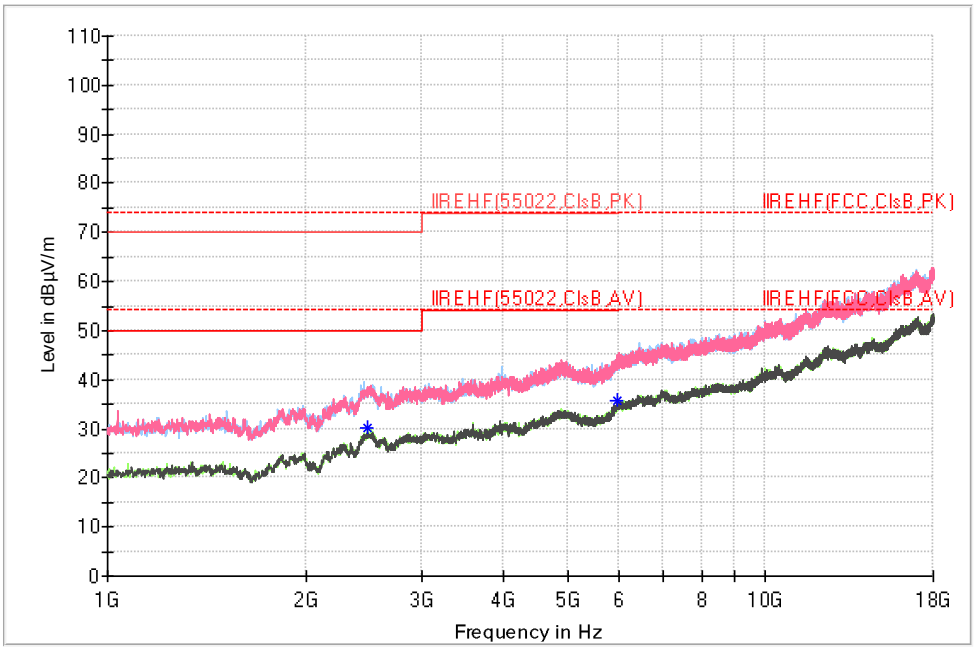
30MHz – 1GHz Unintentional Radiated Emissions scanned at 3m SAC, Battery Mode, Class B limit, and Unintentional radiated spurious emissions measurement data



30MHz – 1GHz Unintentional Radiated Emissions scanned at 3m SAC, Charging Mode, Class B limit, and Unintentional radiated spurious emissions measurement data



Radiated Emissions – 1 MHz to 30MHz



Radiated Emissions– 1 GHz to 18GHz

Radiated Emissions Data – 1 GHz to 18GHz

Frequency (MHz)	Max Peak (dBµV/m)	Average (dBµV/m)	Limit (dBµV/m)	Margin (dB)	Height (cm)	Pol	Azimuth (deg)	Corr. (dB)
2489.200000	---	30.02	50.00	19.98	250.0	H	63.0	1.0
5960.600000	---	35.57	54.00	18.43	250.0	H	331.0	8.5

3.11 AC Mains Conducted Emissions

- **Date Performed:**
- October 11, 2019

- **Test Standard:**

- FCC Title 47 CFR Part 15: Subpart B - §15.109
- ICES-003 Issue 6

- **Test Method:**
- ANSI C63.4-2014

Required Limit:

The radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the following limits

Frequency (MHz)	Conducted Limit (dBµV)	
	Quasi-Peak	Average
0.15 – 0.50	66 to 56	56 to 46
0.50 – 5	56	46*
5.0 – 30.0	60	50
Note 1: *The lower limit shall apply at the transition frequencies.*		

Method of Measurement:

Measurements were made using a test receiver with 9kHz bandwidth, CISPR Quasi-Peak and Average detector.

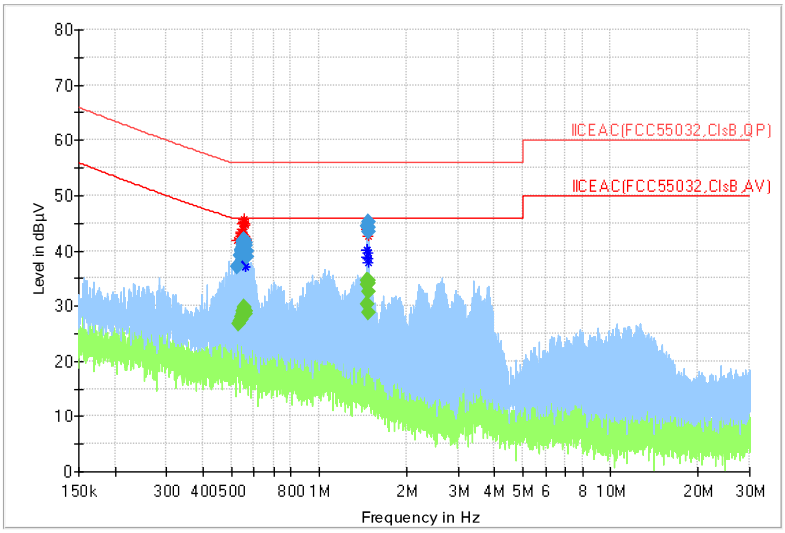
Modifications:

No modification was required to comply for this test.

Result:

The EUT complies with the applicable standard.

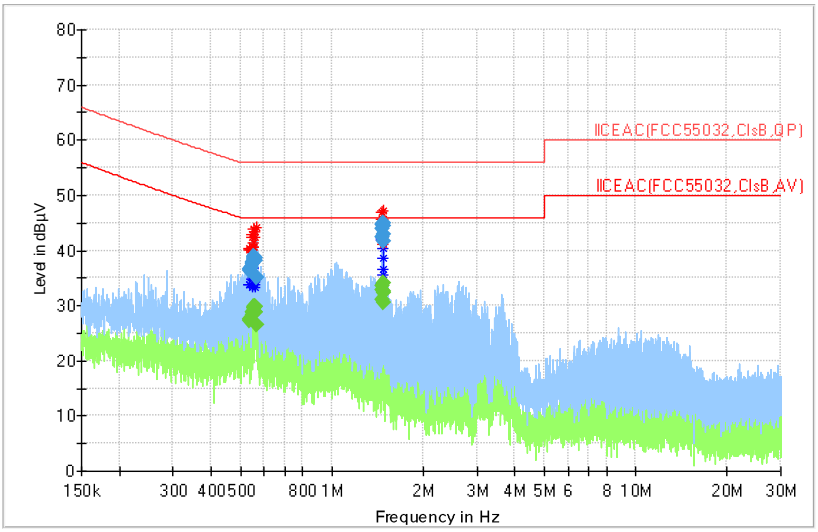
Measurement Data and Plot:



Conducted Emissions – Line 1, 120Vac/60Hz

Conducted Emissions Data – Line 1, 120Vac/60Hz

Frequency (MHz)	Quasi Peak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	PE	Corr. (dB)
0.526000	37.01	---	56.00	18.99	1000.0	9.000	L1	GND	10.1
0.530400	---	26.80	46.00	19.20	1000.0	9.000	L1	GND	10.1
0.534600	---	27.26	46.00	18.74	1000.0	9.000	L1	GND	10.1
0.534600	39.03	---	56.00	16.97	1000.0	9.000	L1	GND	10.1
0.541000	39.87	---	56.00	16.13	1000.0	9.000	L1	GND	10.1
0.541000	---	27.59	46.00	18.41	1000.0	9.000	L1	GND	10.1
0.543200	---	27.94	46.00	18.06	1000.0	9.000	L1	GND	10.1
0.543200	40.17	---	56.00	15.83	1000.0	9.000	L1	GND	10.1
0.544200	40.21	---	56.00	15.79	1000.0	9.000	L1	GND	10.1
0.545400	40.70	---	56.00	15.30	1000.0	9.000	L1	GND	10.1
0.545400	---	28.13	46.00	17.87	1000.0	9.000	L1	GND	10.1
0.547400	41.10	---	56.00	14.90	1000.0	9.000	L1	GND	10.1
0.547400	---	28.52	46.00	17.48	1000.0	9.000	L1	GND	10.1
0.549600	---	29.13	46.00	16.87	1000.0	9.000	L1	GND	10.1
0.549600	41.65	---	56.00	14.35	1000.0	9.000	L1	GND	10.1
0.551800	41.93	---	56.00	14.07	1000.0	9.000	L1	GND	10.1
0.551800	---	29.39	46.00	16.61	1000.0	9.000	L1	GND	10.1
0.552800	41.88	---	56.00	14.12	1000.0	9.000	L1	GND	10.1
0.553800	---	29.69	46.00	16.31	1000.0	9.000	L1	GND	10.1
0.553800	41.89	---	56.00	14.11	1000.0	9.000	L1	GND	10.1
0.556000	41.83	---	56.00	14.17	1000.0	9.000	L1	GND	10.1
0.556000	---	29.55	46.00	16.45	1000.0	9.000	L1	GND	10.1
0.558200	41.28	---	56.00	14.72	1000.0	9.000	L1	GND	10.1
0.558200	---	29.11	46.00	16.89	1000.0	9.000	L1	GND	10.1
0.559200	---	29.06	46.00	16.94	1000.0	9.000	L1	GND	10.1
0.561400	40.85	---	56.00	15.15	1000.0	9.000	L1	GND	10.1
0.561600	---	28.64	46.00	17.36	1000.0	9.000	L1	GND	10.1
0.563600	39.99	---	56.00	16.01	1000.0	9.000	L1	GND	10.1
0.565800	38.85	---	56.00	17.16	1000.0	9.000	L1	GND	10.1
1.466000	---	30.32	46.00	15.68	1000.0	9.000	L1	GND	10.3
1.468200	---	33.74	46.00	12.26	1000.0	9.000	L1	GND	10.3
1.469200	44.54	---	56.00	11.46	1000.0	9.000	L1	GND	10.3
1.469200	---	34.68	46.00	11.32	1000.0	9.000	L1	GND	10.3
1.470400	45.26	---	56.00	10.74	1000.0	9.000	L1	GND	10.3
1.470400	---	34.54	46.00	11.46	1000.0	9.000	L1	GND	10.3
1.471400	---	34.16	46.00	11.84	1000.0	9.000	L1	GND	10.3
1.471400	44.24	---	56.00	11.76	1000.0	9.000	L1	GND	10.3
1.472400	---	32.64	46.00	13.36	1000.0	9.000	L1	GND	10.3
1.472400	43.50	---	56.00	12.50	1000.0	9.000	L1	GND	10.3
1.474600	---	28.84	46.00	17.16	1000.0	9.000	L1	GND	10.3



Conducted Emissions – Line 2, 120Vac/60Hz

Conducted Emissions Data – Line 2, 120Vac/60Hz

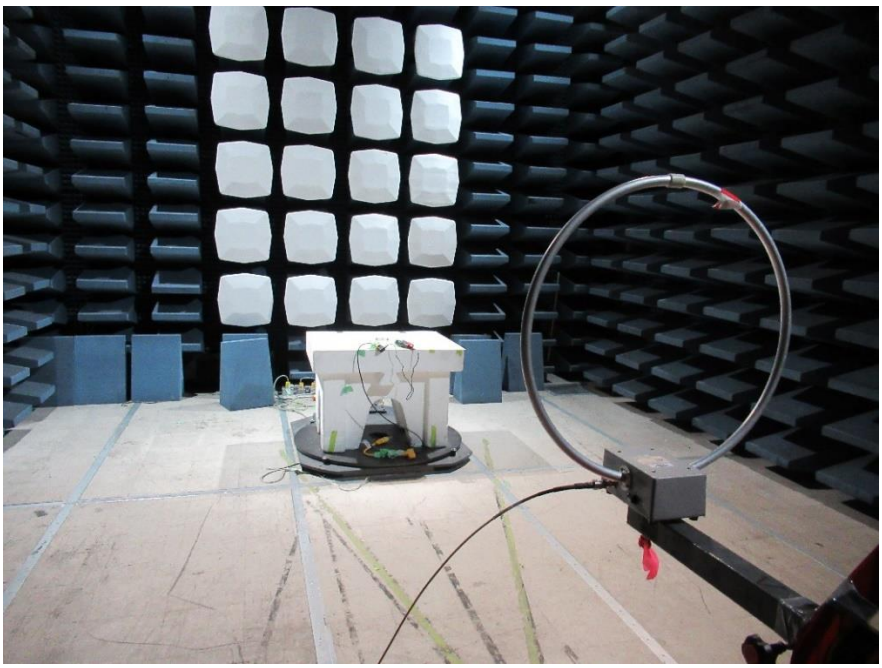
Frequency (MHz)	Quasi Peak (dBµV)	Average (dBµV)	Limit (dBµV)	Margin (dB)	Meas. Time (ms)	Bandwidth (kHz)	Line	PE	Corr. (dB)
0.534200	40.20	---	56.00	15.80	1000.0	9.000	L2	GND	10.1
0.536200	---	33.88	46.00	12.12	1000.0	9.000	L2	GND	10.1
0.538400	40.28	---	56.00	15.72	1000.0	9.000	L2	GND	10.1
0.538400	---	33.78	46.00	12.22	1000.0	9.000	L2	GND	10.1
0.540600	40.24	---	56.00	15.76	1000.0	9.000	L2	GND	10.1
0.544800	---	37.29	46.00	8.71	1000.0	9.000	L2	GND	10.1
0.544800	42.96	---	56.00	13.04	1000.0	9.000	L2	GND	10.1
0.545800	40.06	---	56.00	15.94	1000.0	9.000	L2	GND	10.1
0.547000	42.43	---	56.00	13.57	1000.0	9.000	L2	GND	10.1
0.547000	---	34.77	46.00	11.23	1000.0	9.000	L2	GND	10.1
0.548000	---	33.36	46.00	12.64	1000.0	9.000	L2	GND	10.1
0.551200	43.88	---	56.00	12.12	1000.0	9.000	L2	GND	10.1
0.551200	---	36.79	46.00	9.21	1000.0	9.000	L2	GND	10.1
0.553400	---	34.50	46.00	11.50	1000.0	9.000	L2	GND	10.1
0.553400	41.36	---	56.00	14.64	1000.0	9.000	L2	GND	10.1
0.554400	---	34.96	46.00	11.04	1000.0	9.000	L2	GND	10.1
0.554400	40.54	---	56.00	15.46	1000.0	9.000	L2	GND	10.1
0.555400	40.67	---	56.00	15.33	1000.0	9.000	L2	GND	10.1
0.556600	---	33.72	46.00	12.28	1000.0	9.000	L2	GND	10.1
0.557600	---	33.33	46.00	12.67	1000.0	9.000	L2	GND	10.1
0.557600	43.46	---	56.00	12.54	1000.0	9.000	L2	GND	10.1
0.561000	---	35.37	46.00	10.63	1000.0	9.000	L2	GND	10.1
0.561000	42.36	---	56.00	13.64	1000.0	9.000	L2	GND	10.1
0.562000	---	34.64	46.00	11.36	1000.0	9.000	L2	GND	10.1
0.567400	---	34.76	46.00	11.24	1000.0	9.000	L2	GND	10.1
0.567400	44.05	---	56.00	11.95	1000.0	9.000	L2	GND	10.1
1.467200	---	42.11	46.00	3.89	1000.0	9.000	L2	GND	10.3
1.467200	45.67	---	56.00	10.33	1000.0	9.000	L2	GND	10.3
1.468400	---	33.97	46.00	12.03	1000.0	9.000	L2	GND	10.3
1.468400	44.70	---	56.00	11.30	1000.0	9.000	L2	GND	10.3
1.469400	---	41.90	46.00	4.10	1000.0	9.000	L2	GND	10.3
1.469400	47.02	---	56.00	8.98	1000.0	9.000	L2	GND	10.3
1.470400	---	40.32	46.00	5.68	1000.0	9.000	L2	GND	10.3
1.470400	47.31	---	56.00	8.69	1000.0	9.000	L2	GND	10.3
1.471600	---	35.58	46.00	10.42	1000.0	9.000	L2	GND	10.3
1.471600	45.72	---	56.00	10.28	1000.0	9.000	L2	GND	10.3
1.472600	---	38.52	46.00	7.48	1000.0	9.000	L2	GND	10.3
1.472600	42.33	---	56.00	13.67	1000.0	9.000	L2	GND	10.3
1.473600	41.16	---	56.00	14.84	1000.0	9.000	L2	GND	10.3
1.473600	---	36.57	46.00	9.43	1000.0	9.000	L2	GND	10.3

3.12 Frequency Stability

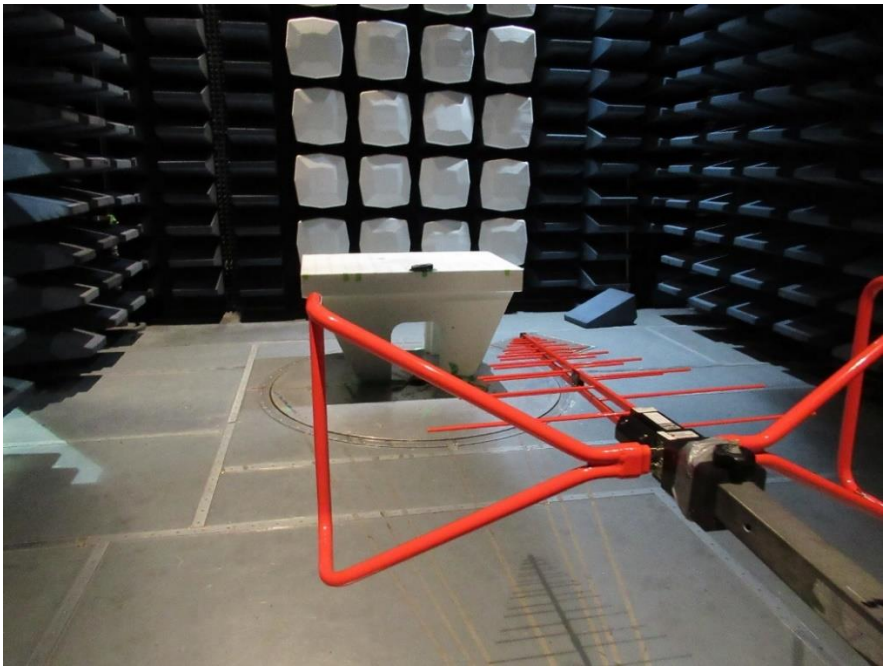
- **DATE:** October 10, 2019
- **TEST STANDARD:** FCC Part 15.215 (c), RSS Gen Iss.5 (8.8)
- **MINIMUM STANDARD:** Carrier frequency stability shall be maintained to ±0.01% (±100 ppm).
- **OBSERVATIONS:** The EUT performed as expected.
- **PERFORMANCE:** Complies with Standard.

Temperature (C)	Frequency (MHz)	Deviation (ppm)	Deviation Rounded (ppm)
-20	2401990800.00	3.8	4
-10	2401988888.00	4.6	5
0	2401994500.00	2.3	2
10	2401997888.00	0.9	1
20	2402000000.00	0.0	0
30	2402008500.00	3.5	4
40	2402012000.00	5.0	5

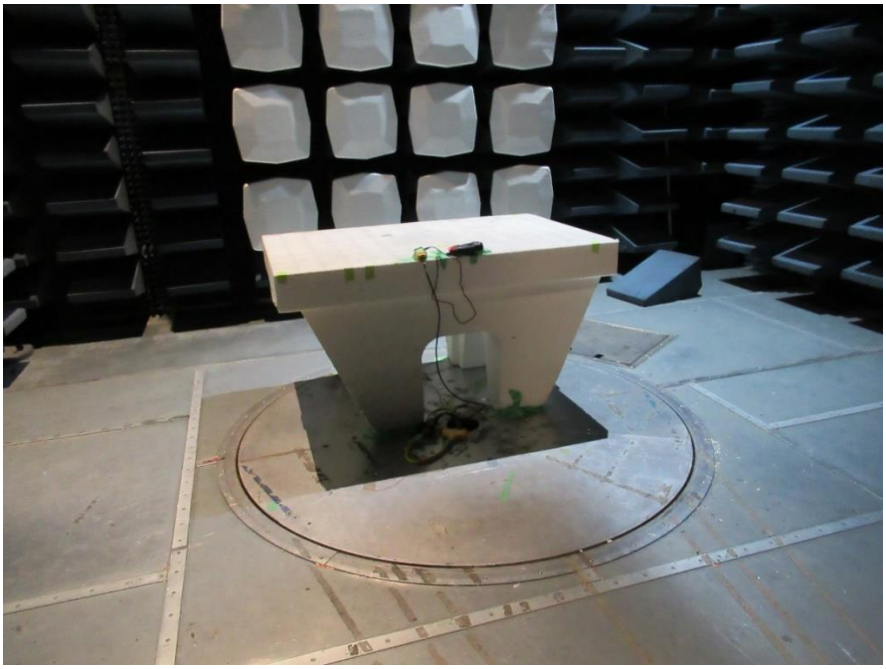
Appendix A: TEST SETUP PHOTOS



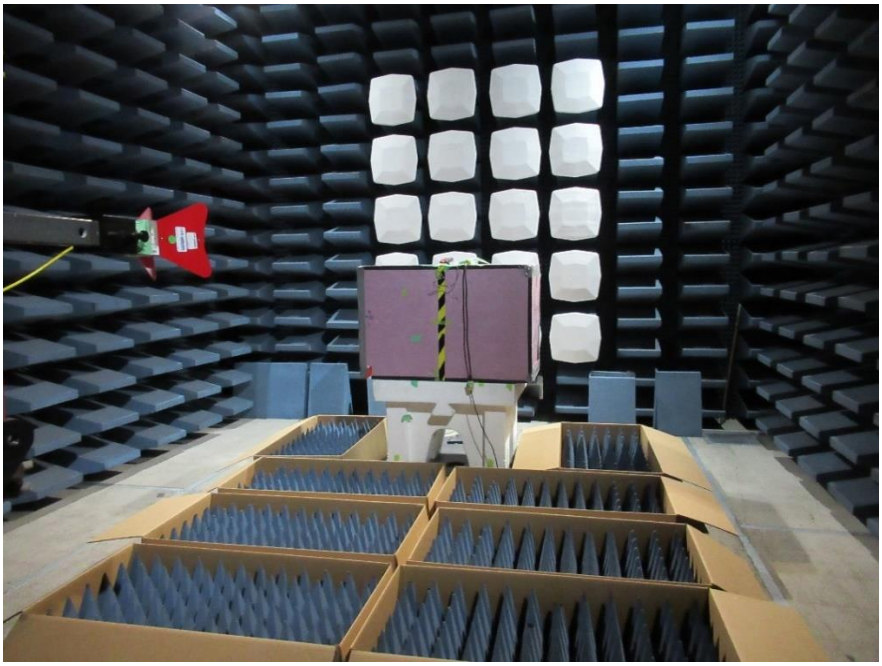
Radiated Emissions performed at the 3m SAC, 150kHz – 30MHz



Radiated Emissions performed at the 3m SAC (charging and Battery modes)

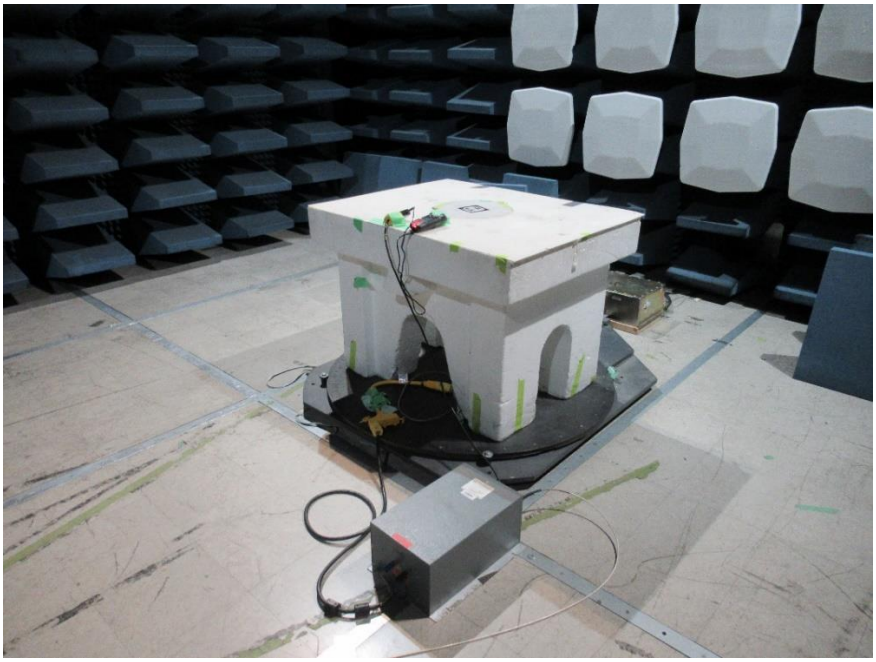


Radiated Emissions performed at the 3m SAC (charging and Battery modes)

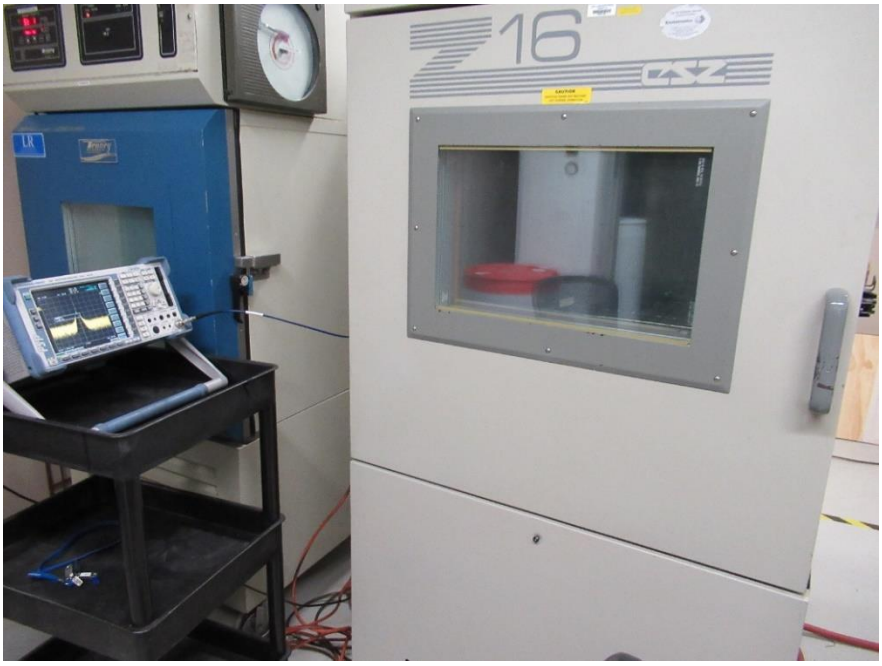


Radiated Emissions performed at the 3m, 1 -18 GHz

Radiated Emissions performed at the 1m, above 18 -25 GHz



Conducted Emissions performed at the 3m SAC



Frequency Stability setup performed in environmental chamber

Appendix B: ABBREVIATIONS

Abbreviation	Definition
AC	Alternating Current
AM	Amplitude Modulation
CE	European Conformity
CISPR	Comité International Spécial des Perturbations Radioélectriques (International Special Committee on Radio Interference)
DC	Direct Current
EFT	Electrical Fast Transient
EMC	Electro Magnetic Compatibility
EMI	Electro Magnetic Interference
ESD	Electrostatic Discharge
EUT	Equipment Under Test
FCC	Federal Communications Commission
IC	Industry Canada
ICES	Interference Causing Equipment Standard
IEC	International Electrotechnical Commission
LISN	Line Impedance Stabilizing Network
OATS	Open Area Test Site
RF	Radio Frequency
RMS	Root-Mean-Square
SAC	Semi-Anechoic Chamber

END OF REPORT