Test Report

FCC ID: 2AZNZGKP1
IC: 27206-GKP1

FCC Rule Part: 15.247
ISED Canada Radio Standards Specification: RSS-247

Report Number: AT72168870-1C1

Manufacturer: Tier One, Inc.
Model: Gimme Key Pro

Test Begin Date: May 24, 2021
Test End Date: June 15, 2021

Report Issue Date: August 6, 2021

FOR THE SCOPE OF ACCREDITATION UNDER Certificate Number: 2955.09

This report must not be used by the client to claim product certification, approval, or endorsement by A2LA, NIST, or any agency of the Federal Government.

Prepared By:

Divya Adusumilli
Senior Wireless Engineer

TÜV SÜD America Inc.

Reviewed by:

Kirby Munroe
Wireless / EMC Technical and Certification Manager, North America
TÜV SÜD America Inc.

This report contains 27 pages

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1 GENERAL

1.1 Purpose

The purpose of this report is to demonstrate compliance with Part 15 Subpart C of the FCC's Code of Federal Regulations and Innovation, Science and Economic Development Canada's Radio Standards Specification RSS-247 for the tests documented herein for modular approval.

1.2 Applicant Information

Tier One, Inc.
1111 Alderman Dr Suite 200
Alpharetta, GA 30005

1.3 Product Description

BLE Serial transceiver, operated by a CR2477 lithium coin cell (3V). Plugs into a vending machine or storefront inventory system via a ¼" stereo jack. Transmits data over BLE link.

Technical Details:

Detail	Description
Frequency Range (MHz)	2402 – 2480
Number of Channels	40
Channel Spacing	1 MHz
Modulation Format	GFSK
Data Rates	1Mbps
Operating Voltage	3Vdc
Antenna Type(s) / Gain(s)	PCB Antenna / 0dBi

Test Sample Serial Number(s): Not Labeled

Test Sample Condition: The equipment was provided in good condition without any physical damage.

1.4 Test Methodology and Considerations

For radiated emissions, the EUT was evaluated in three orthogonal orientations. The worst-case orientation was the X-orientation.

For antenna port conducted emissions, a temporary SMA connector was soldered to the PCB to directly connect the DUT to the measuring equipment through suitable attenuation.

Power setting during test: 0dBm

2 TEST FACILITIES

2.1 Location

The radiated and conducted emissions test sites are located at the following addresses:

TÜV SÜD America, Inc.
5945 Cabot Pkwy, Suite 100
Alpharetta, GA 30005
Phone: (678) 341-5900

2.2 Laboratory Accreditations/Recognitions/Certifications

TÜV SÜD America, Inc. is accredited to ISO/IEC 17025 by the American Association for Laboratory Accreditation/A2LA accreditation program and has been issued certificate number 2955.09 in recognition of this accreditation.

Unless otherwise specified, all test methods described within this report are covered under the ISO/IEC 17025 scopes of accreditation.

The Semi-Anechoic Chamber Test Sites and Conducted Emissions Sites have been fully described, submitted to, and accepted by the FCC, ISED Canada and the Japanese Voluntary Control Council for Interference by information technology equipment.

FCC Designation Accreditation Number:	US1233
FCC Test Site Registration Number:	967699
ISED Canada Lab Code:	23932
VCCI Member Number:	1831
• VCCI Registration Number	A-0295

2.3 Radiated Emissions Test Site Description

2.3.1 Semi-Anechoic Chamber Test Site – Chamber A

The Semi-Anechoic Chamber Test Site consists of a 20' x 30' x 18' shielded enclosure. The chamber is lined with Toyo Ferrite Grid Absorber, model number FFG-1000. The ferrite tile grid is 101 x 101 x 19mm thick and weighs approximately 550 grams. These tiles are mounted on steel panels and installed directly on the inner walls of the chamber.

The turntable is 5' in diameter and is located 5'6" from the back wall of the chamber. The chamber is grounded via 1 - 8' copper ground rod, installed at the center of the back wall, it is bound to the ground plane using 3/4" stainless steel braided cable.

The turntable is all steel, flush mounted EMCO Model 1060 installed in an all steel frame. The table is remotely operated from inside the control room located 25' from the range. The turntable is electrically bonded to the surrounding ground plane via steel fingers installed on the edge of the turn table. The steel fingers make constant contact with the ground plane during operation.

Behind the turntable is a 3' x 6' x 4' deep shielded pit used for support equipment if necessary. The pit is equipped with 1 - 4" PVC chase from the turntable to the pit that allows for cabling to the EUT if necessary. The underside of the turntable can be accessed from the pit so cables can be supplied to the EUT from the pit.

The chamber rear wall is covered with a mixture of Siepel pyramidal absorber. The side walls of the chamber are partially covered with Siepel pyramidal absorber.

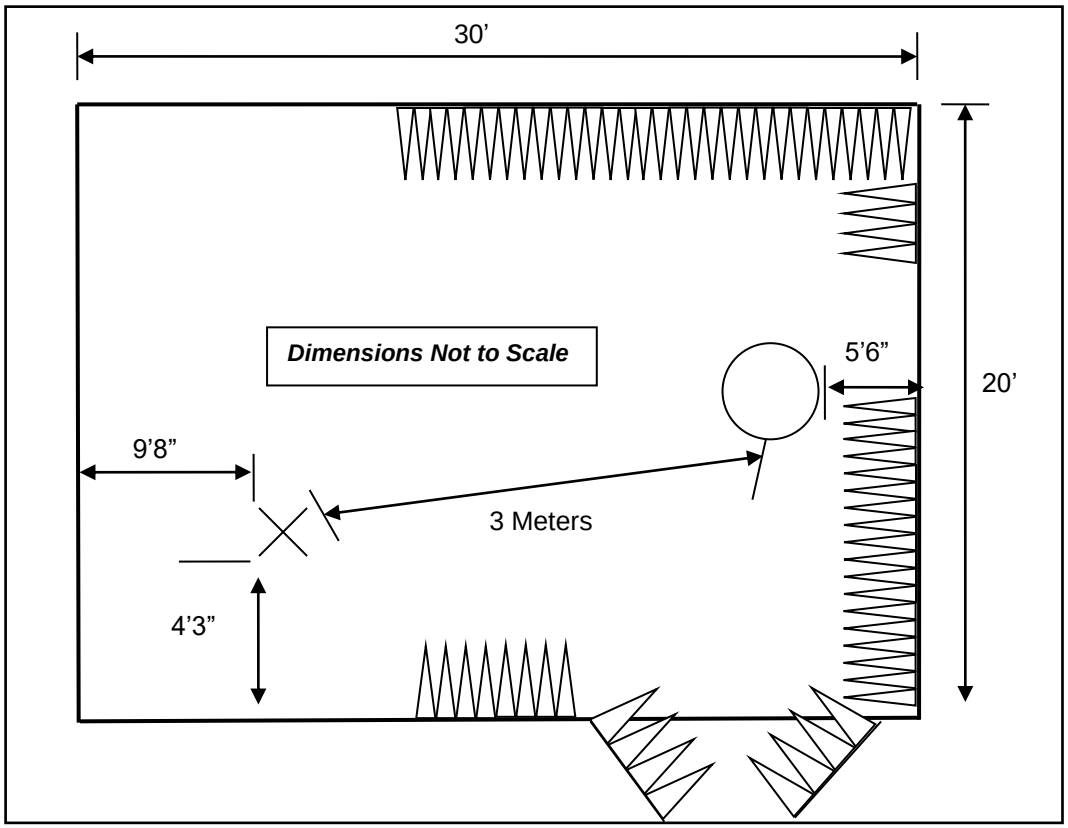


Figure 2.3.1-1: Semi-Anechoic Chamber Test Site – Chamber A

2.3.2 Semi-Anechoic Chamber Test Site – Chamber B

The Semi-Anechoic Chamber Test Site consists of a 20'W x 30'L x 20'H shielded enclosure. The chamber is lined with ETS-Lindgren Ferrite Absorber, model number FT-1500. The ferrite tile 600 mm x 600 mm (2.62 in x 23.62 in) panels and are mounted directly on the inner walls of the chamber shield.

The specular regions of the chamber are lined with additional ETS-Lindgren PS-600 hybrid absorber to extend its frequency range up to 18GHz and beyond.

The turntable is a 2m ETS-Lindgren Model 2170 and installed off the center axis is located 5'6" from the back wall of the chamber. The chamber is grounded via 1 - 8' copper ground rod, installed at the center of the back wall, it is bound to the shield using #8 solid copper wire.

The antenna mast is an EMCO 1060 and is remotely controlled from the control room for both antenna height and polarization.

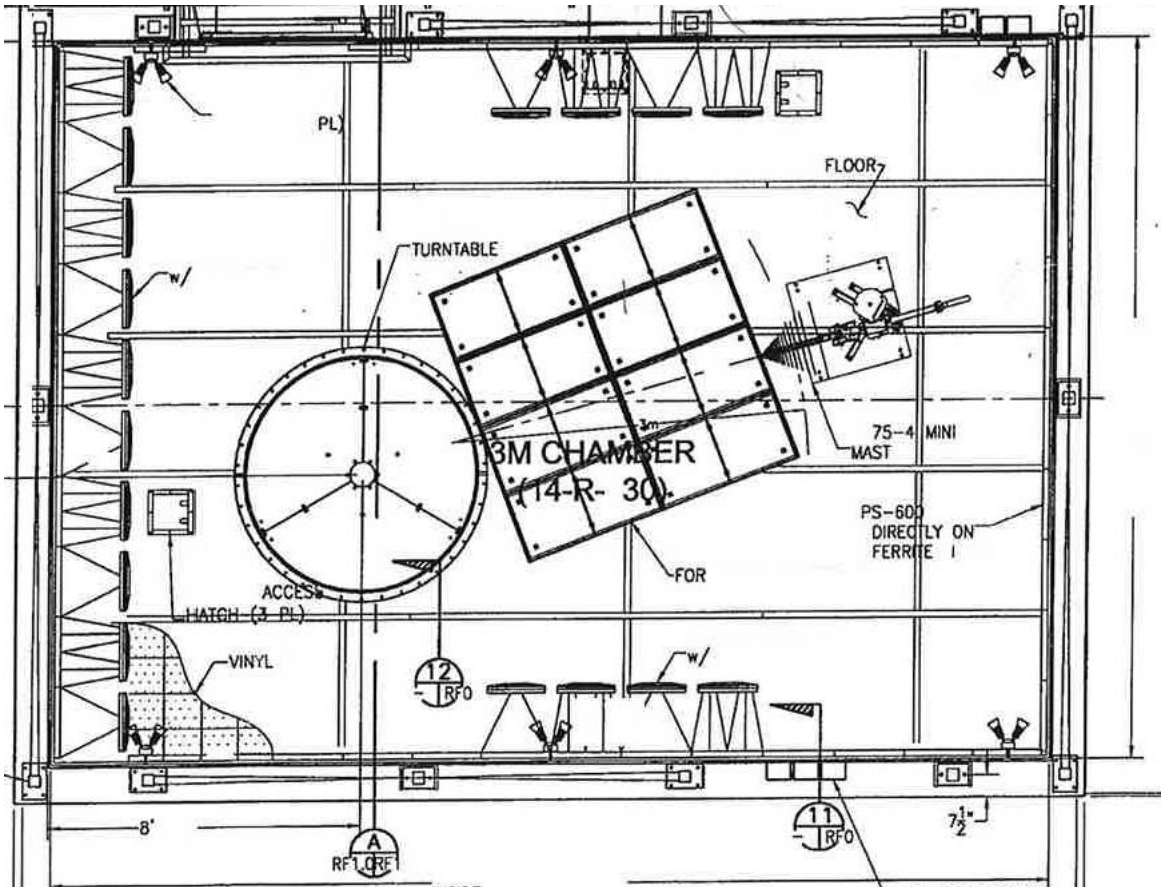


Figure 2.3.2-1: Semi-Anechoic Chamber Test Site – Chamber B

2.4 Conducted Emissions Test Site Description

2.4.1 Conducted Emissions Test Site

The AC mains conducted EMI site is located in the main EMC lab. It consists of a 12' x 10' horizontal coupling plane (HCP) as well as a 12'x8' vertical coupling plane (VCP). The HGP is constructed of 4' x 10' sheets of particle board sandwiched by galvanized steel sheets. These panels are bonded using 11AWG 1/8" x 2" by 10' galvanized sheet steel secured to the panels via by screws. The VCP is constructed of three 4'x8' sheets of 11AWG solid aluminum.

The HCP and VCP are electrically bonded together using 1"x1" angled aluminum secured with screws.

The site is of sufficient size to test tabletop and floor standing equipment in accordance with section 6.1.4 of ANSI C63.10.

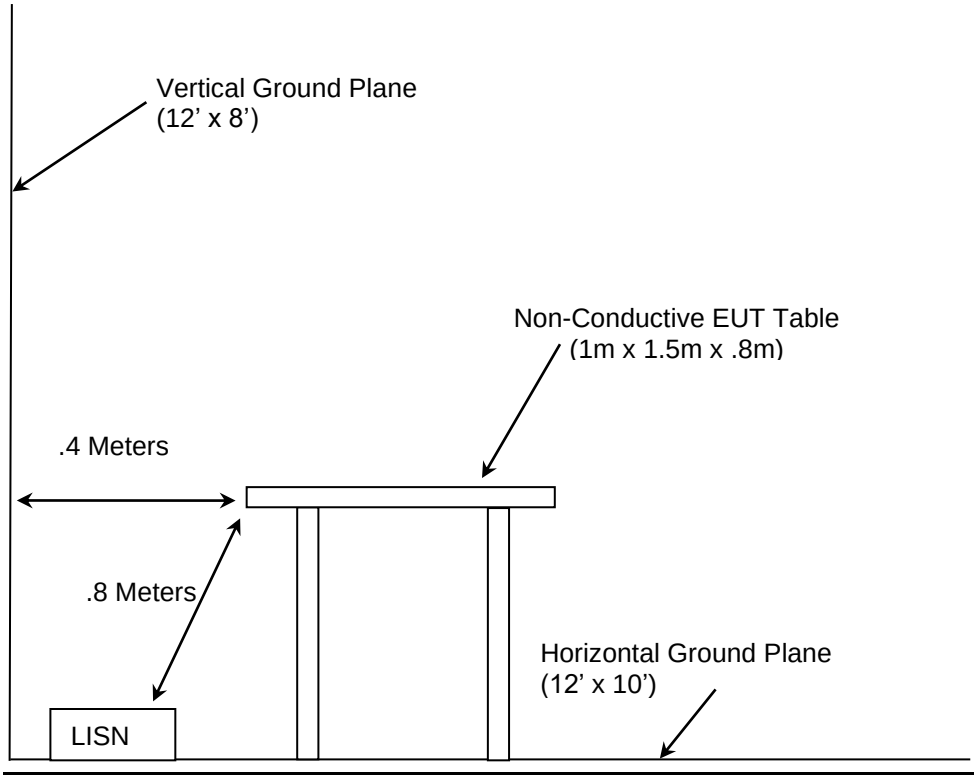


Figure 2.4.1-1: AC Mains Conducted EMI Site

3 APPLICABLE STANDARD REFERENCES

The following standards were used:

- ANSI C63.10-2013: American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.
- US Code of Federal Regulations (CFR): Title 47, Part 2, Subpart J: Equipment Authorization Procedures, 2021
- US Code of Federal Regulations (CFR): Title 47, Part 15, Subpart C: Radio Frequency Devices, Intentional Radiators, 2021
- FCC KDB 558074 D01 DTS Meas Guidance v05r02 - Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS), Frequency Hopping Spread Spectrum System, and Hybrid System Devices Operating Under §15.247 of the FCC rules, April 2, 2019
- ISED Canada Radio Standards Specification: RSS-247 – Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and License-Exempt Local Area Network (LE-LAN) Devices, Issue 2, February 2017.
- ISED Canada Radio Standards Specification: RSS-GEN – General Requirements for Compliance of Radio Apparatus, Issue 5, Amendment 1 (March 2019), Amendment 2 (February 2021)

4 LIST OF TEST EQUIPMENT

The calibration interval of test equipment is annually or the manufacturer's recommendations. Where the calibration interval deviates from the annual cycle based on the instrument manufacturer's recommendations, it shall be stated below.

Table 4-1: Test Equipment

Asset ID	Manufacturer	Model	Equipment Type	Serial Number	Last Calibration Date	Calibration Due Date
622	Rohde & Schwarz	FSV40 (v3.40)	FSV Signal Analyzer 10Hz to 40GHz	101338	08/24/2020	08/24/2021
697	Hewlett Packard	6622A	System DC Power Supply	3448A03980	NCR	NCR
638	Rohde & Schwarz	OSP 120	Open Switch and Control Unit	101229	06/11/2019	06/11/2021
638	Rohde & Schwarz	OSP 120	Open Switch and Control Unit	101229	7/5/2021	7/5/2023
827	Rohde & Schwarz	TS8997 Rack Cable Set	TS8997 Rack Cable Set	N/A	09/04/2020	09/04/2021
857	ETS Lindgren	3117	Horn Antenna 1-18GHz	00153608	11/12/2019	11/12/2021
432	Microwave Circuits	H3G020G4	Highpass Filter	264066	06/09/2020	06/09/2021
432	Microwave Circuits	H3G020G4	Highpass Filter	264066	6/9/2021	6/9/2022
3161	Teseq; Huber+Suhner	CBL6112D;6804-17-A	Bilog Antenna; Attenuator	51323;01252019A	3/19/2021	3/19/2022
22	Hewlett Packard	8449B	High Frequency Pre-Amp	3008A00526	10/19/2020	10/19/2021
628	EMCO	6502	Active Loop Antenna 10kHz-30MHz	9407-2877	02/11/2019	05/11/2021
628	EMCO	6502	Active Loop Antenna 10kHz-30MHz	9407-2877	6/8/2021	6/8/2023
335	Suhner	SF-102A	Cable (40GHZ)	882/2A	06/23/2020	06/23/2021
345	Suhner Sucoflex	102A	Cable 42(GHZ)	1077/2A	06/23/2020	06/23/2021
882	Rohde & Schwarz	ESW44	ESW44 EMI TEST RECEIVER	101961	07/28/2020	5/7/2021
882	Rohde & Schwarz	ESW44	ESW44 EMI TEST RECEIVER	101961	6/24/2021	6/24/2022
334	Rohde & Schwarz	3160-09	HF 18 - 26.5GHz	49404	4/25/2020	4/25/2022
213	TEC	PA 102	Low Freq Pre-Amp	44927	7/30/2020	7/30/2021
836	ETS Lindgren	SAC Cable set	SAC Cable set includes 620, 837, 838	N/A	5/11/2021	5/11/2022

NCR = No Calibration Required
NOTE: All test equipment was used only during active calibration cycles as reported above.

5 SUPPORT EQUIPMENT

Table 5-1: Support Equipment

Item	Equipment Type	Manufacturer	Model Number	Serial Number
1	EUT with temporary SMA connector	Tier One, Inc	Gimme Key	2109-0414
2	Battery Powered EUT	Tier One, Inc	Gimme Key	2109-0133
3	DC Power Supply	Hewlett Packard	6622A	N/A

Table 5-2: Cable Description

Item	Cable Type	Length	Shield
A	DC Power Cable	15 cm	Yes

6 EQUIPMENT UNDER TEST SETUP BLOCK DIAGRAM

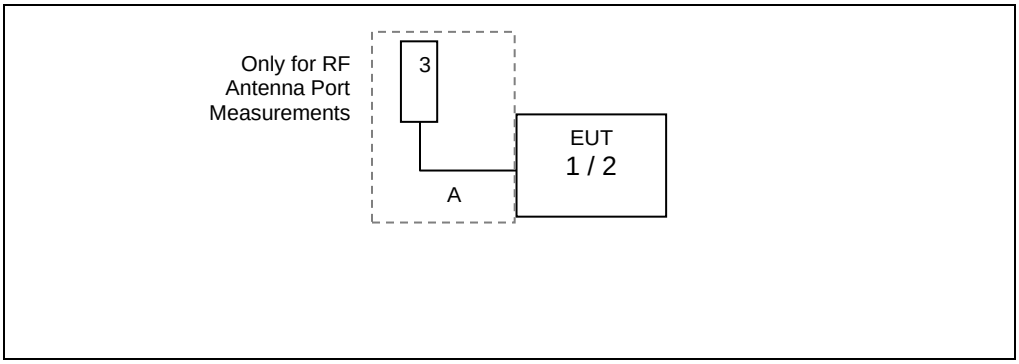


Figure 6-1: Test Setup Block Diagram

7 SUMMARY OF TESTS

Along with the tabular data shown below, plots were taken of all signals deemed important enough to document.

7.1 Antenna Requirement – FCC: 15.203

The EUT utilizes PCB Antenna which is permanently affixed to the module.

7.2 Power Line Conducted Emissions – FCC: 15.207, ISED Canada: RSS-Gen 8.8

7.2.1 Measurement Procedure

Conducted emissions were performed from 150kHz to 30MHz with the spectrum analyzer's resolution bandwidth set to 9kHz and the video bandwidth set to 30kHz. The calculation for the conducted emissions is as follows:

Corrected Reading = Analyzer Reading + LISN Loss + Cable Loss
Margin = Corrected Reading - Applicable Limit

7.2.2 Measurement Results

The EUT is a battery powered device with no provision for connection to the public utility mains, therefore AC Power Line Conducted Emissions is not applicable.

7.3 6dB / 99% Bandwidth – FCC: 15.247(a)(2), ISED Canada: RSS-247 5.2(a), RSS-GEN 6.7

7.3.1 Measurement Procedure

The 6dB bandwidth was measured in accordance with the Subclause 11.8 of ANSI C63.10. The Resolution Bandwidth (RBW) of the spectrum analyzer was set to 100 kHz. The Video Bandwidth (VBW) was set to ≥ 3 times the RBW. The trace was set to max hold with a peak detector active. The marker-delta function of the spectrum analyzer was utilized to determine the 6dB bandwidth of the emission.

The occupied bandwidth measurement function of the spectrum analyzer was used to measure the 99% bandwidth. The span of the analyzer was set to capture all products of the modulation process, including the emission sidebands. The resolution bandwidth was set from 1% to 5% of the occupied bandwidth and the video bandwidth set to at least 3 times the resolution bandwidth. A peak detector was used.

7.3.2 Measurement Results

Performed by: Divya Adusumilli

Table 7.3.2-1: 6dB / 99% Bandwidth

Modulation	Frequency [MHz]	6dB Bandwidth [kHz]	99% Bandwidth [kHz]
GFSK / 1Mbps	2402	514.852	920.000
	2440	514.852	895.000
	2480	514.852	900.000

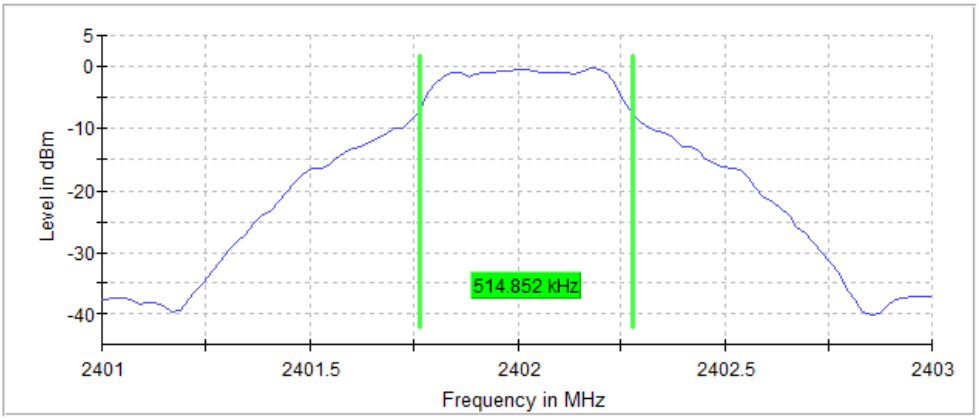


Figure 7.3.2-1: Sample Plot - 6dB BW

Table 7.3.2-2: Sample Measurement Settings (6dB BW)

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	100.000 kHz	~ 100.000 kHz
VBW	300.000 kHz	~ 300.000 kHz
SweepPoints	101	~ 40
Sweeptime	18.938 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	10 / max. 150	max. 150
Stable	5 / 5	5
Max Stable Difference	0.05 dB	0.50 dB

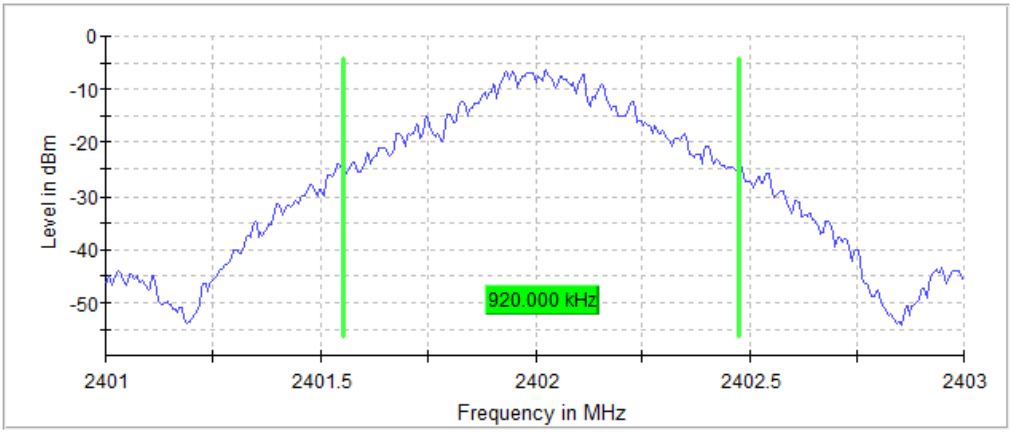


Figure 7.3.2-2: Sample Plot - 99% OBW

Table 7.3.2-3: Sample Measurement Settings (OBW)

Setting	Instrument Value	Target Value
Start Frequency	2.40100 GHz	2.40100 GHz
Stop Frequency	2.40300 GHz	2.40300 GHz
Span	2.000 MHz	2.000 MHz
RBW	10.000 kHz	>= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	400	~ 400
Sweeptime	189.648 µs	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.30 dB	0.30 dB
Run	10 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.19 dB	0.30 dB

7.4 Fundamental Emission Output Power – FCC: 15.247(b)(3), ISED Canada: RSS-247 5.4(d)

7.4.1 Measurement Procedure

The maximum conducted output power was measured in accordance with ANSI C63.10 Section 11.9.1.1 utilizing the RBW ≥ DTS Bandwidth method. The RF output of the equipment under test was directly connected to the input of the analyzer applying suitable attenuation.

7.4.2 Measurement Results

Performed by: Divya Adusumilli

Table 7.4.2-1: Conducted Output Power

Modulation	Frequency [MHz]	Peak Power [dBm]
GFSK / 1Mbps	2402	-0.4
	2440	-0.2
	2480	-0.2

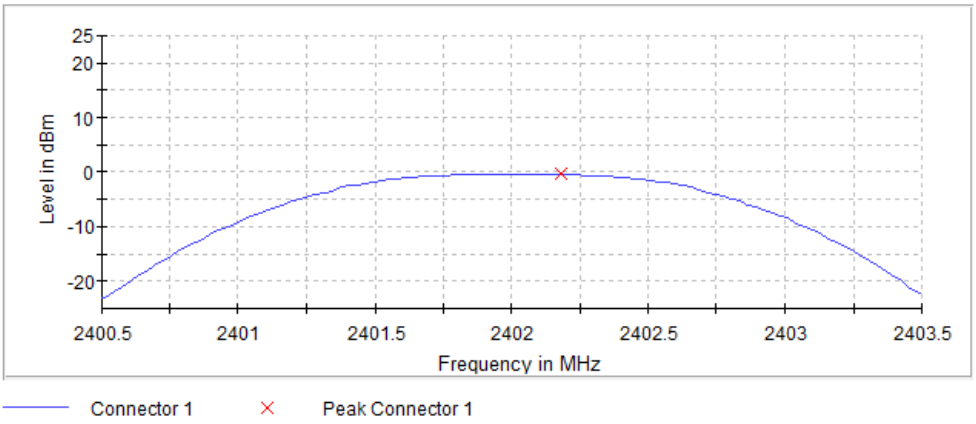


Figure 7.4.2-1: Sample Plot

Table 7.4.2-2: Sample Measurement Settings

Setting	Instrument Value	Target Value
Start Frequency	2.40050 GHz	2.40050 GHz
Stop Frequency	2.40350 GHz	2.40350 GHz
Span	3.000 MHz	3.000 MHz
RBW	1.000 MHz	>= 514.853 kHz
VBW	3.000 MHz	>= 3.000 MHz
SweepPoints	101	~ 101
Sweeptime	1.907 µs	AUTO
Reference Level	0.000 dBm	0.000 dBm
Attenuation	20.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	FFT	AUTO
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	4 / max. 150	max. 150
Stable	3 / 3	3
Max Stable Difference	0.02 dB	0.50 dB

7.5 Emission Levels

7.5.1 Emissions into Non-restricted Frequency Bands – FCC: 15.247(d); ISED Canada: RSS-247 5.5

7.5.1.1 Measurement Procedure

The unwanted emissions into non-restricted bands were measured conducted in accordance with ANSI C63.10 Section 11.11. The RF output of the equipment under test was directly connected to the input of the spectrum analyzer applying suitable attenuation. The Resolution Bandwidth (RBW) of the spectrum analyzer was set to 100 kHz. The Video Bandwidth (VBW) was set to ≥ 300 kHz. The resulting spectrum analyzer peak level was used to determine the reference level with respect to the 20 dBc limit at the band edges. The spectrum span was then adjusted for the measurement of spurious emissions from 30MHz to 26GHz, 10 times the highest fundamental frequency.

7.5.1.2 Measurement Results

Performed by: Divya Adusumilli

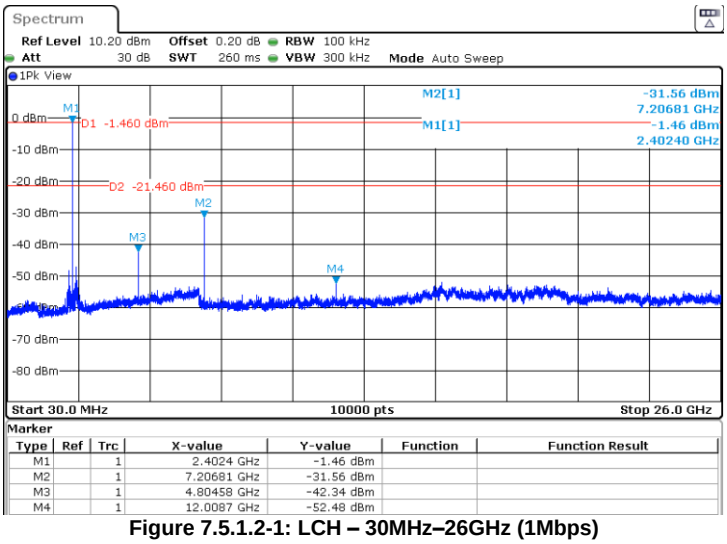


Figure 7.5.1.2-1: LCH – 30MHz–26GHz (1Mbps)

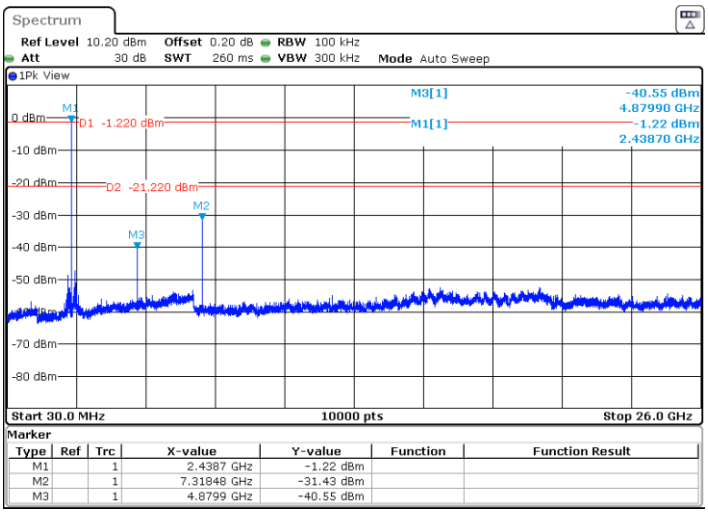


Figure 7.5.1.2-2: MCH – 30MHz–26GHz (1Mbps)

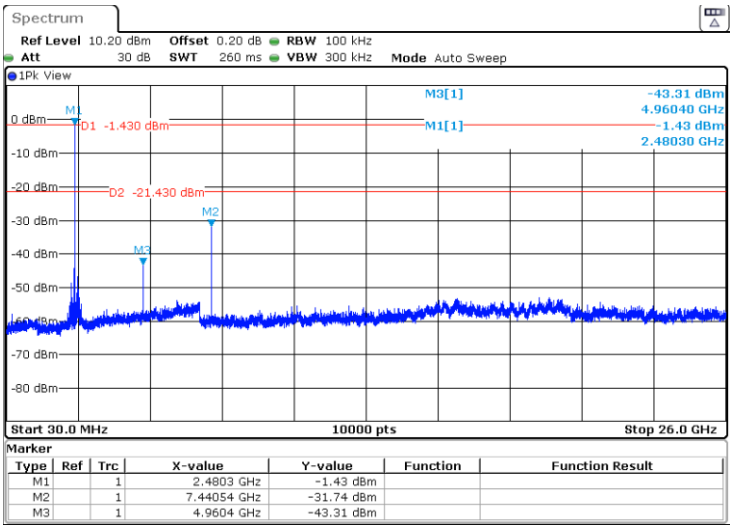


Figure 7.5.1.2-3: HCH – 30MHz–26GHz (1Mbps)

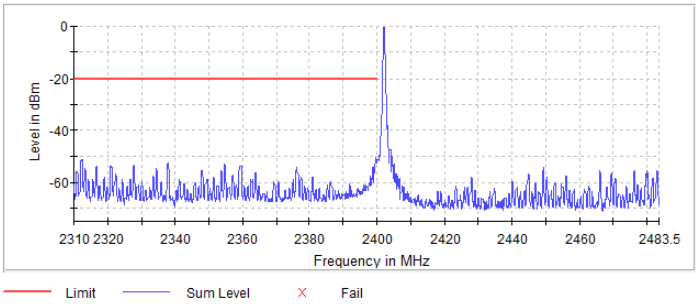


Figure 7.5.1.2-4: Lower Band-edge (1Mbps)

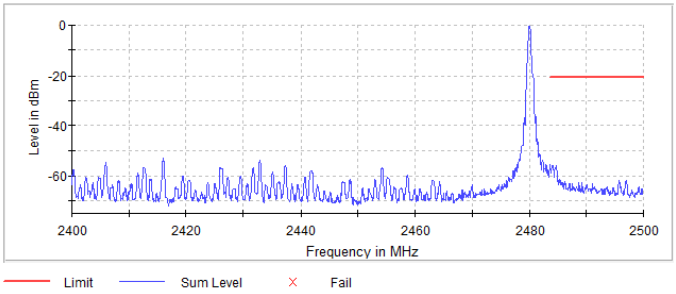


Figure 7.5.1.2-5: Upper Band-edge (1Mbps)

Table 7.5.1.2-1: Lower Band-edge- Low Channel (1Mbps)

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2399.575000	-50.7	30.3	-20.4	PASS
2312.025000	-50.9	30.5	-20.4	PASS
2312.175000	-50.9	30.5	-20.4	PASS
2399.625000	-50.9	30.5	-20.4	PASS
2399.525000	-50.9	30.6	-20.4	PASS
2312.375000	-51.1	30.7	-20.4	PASS
2312.225000	-51.1	30.7	-20.4	PASS
2312.325000	-51.2	30.8	-20.4	PASS
2312.125000	-51.2	30.8	-20.4	PASS
2312.275000	-51.3	30.9	-20.4	PASS
2399.675000	-51.4	31.1	-20.4	PASS
2312.075000	-51.5	31.2	-20.4	PASS
2399.975000	-51.7	31.3	-20.4	PASS
2311.975000	-51.7	31.4	-20.4	PASS
2399.875000	-51.9	31.5	-20.4	PASS

Table 7.5.1.2-2: Upper Band-edge – High Channel (1Mbps)

Frequency (MHz)	Level (dBm)	Margin (dB)	Limit (dBm)	Result
2483.575000	-55.2	34.8	-20.5	PASS
2483.525000	-55.3	34.9	-20.5	PASS
2483.625000	-55.3	34.9	-20.5	PASS
2484.575000	-55.7	35.3	-20.5	PASS
2484.625000	-55.8	35.4	-20.5	PASS
2484.125000	-56.0	35.5	-20.5	PASS
2483.975000	-56.0	35.5	-20.5	PASS
2484.075000	-56.0	35.6	-20.5	PASS
2484.175000	-56.0	35.6	-20.5	PASS
2484.225000	-56.0	35.6	-20.5	PASS
2483.925000	-56.1	35.7	-20.5	PASS
2483.675000	-56.2	35.8	-20.5	PASS
2484.525000	-56.2	35.8	-20.5	PASS
2484.025000	-56.3	35.8	-20.5	PASS
2484.275000	-56.6	36.1	-20.5	PASS

7.5.2 Emissions into Restricted Frequency Bands – FCC: 15.205, 15.209; ISED Canada: RSS-Gen 8.9 / 8.10

7.5.2.1 Measurement Procedure

The unwanted emissions into restricted bands were measured radiated over the frequency range of 30MHz to 25GHz, 10 times the highest fundamental frequency.

The EUT was rotated through 360° and the receive antenna height was varied from 1 meter to 4 meters so that the maximum radiated emissions level would be detected. For frequencies below 1000 MHz, quasi-peak measurements were made using a resolution bandwidth RBW of 120 kHz and a video bandwidth VBW of 300 kHz. For frequencies above 1000 MHz, peak and average measurements were made with RBW and VBW of 1 MHz and 3 MHz respectively.

Each emission found to be in a restricted band as defined by section 15.205, including any emission at the operational band-edge, was compared to the radiated emission limits as defined in section 15.209.

7.5.2.2 Measurement Results

Performed by: Paul Villarreal

Table 7.5.2.2-1: Radiated Spurious Emissions Tabulated Data – 1Mbps

Frequency (MHz)	Level (dBuV)		Antenna Polarity	Correction Factors	Corrected Level (dBuV/m)		Limit (dBuV/m)		Margin (dB)	
	pk	Qpk/Avg	(H/V)	(dB)	pk	Qpk/Avg	pk	Qpk/Avg	pk	Qpk/Avg
Low Channel										
2390	42.50	27.40	H	4.83	47.33	32.23	74.0	54.0	26.7	21.8
2390	42.60	27.40	V	4.83	47.43	32.23	74.0	54.0	26.6	21.8
Middle Channel										
No Spurious emissions detected within 20 dB of the limit.										
High Channel										
2483.5	42.00	27.60	H	4.95	46.95	32.55	74.0	54.0	27.1	21.5
2483.5	42.10	27.60	V	4.95	47.05	32.55	74.0	54.0	27.0	21.5

7.6 Maximum Power Spectral Density in the Fundamental Emission – FCC: 15.247(e) ISED Canada: RSS-247 5.2(b)

7.6.1 Measurement Procedure

The power spectral density was measured in accordance with the ANSI C63.10 Section 11.10. The RF output of the equipment under test was directly connected to the input of the spectrum analyzer applying suitable attenuation. The Resolution Bandwidth (RBW) of the spectrum analyzer was set to 10 kHz. The Video Bandwidth (VBW) was set to 30 kHz. Span was set to 1.5 times the channel bandwidth. The trace was set to max hold with the peak detector active.

7.6.2 Measurement Results

Performed by: Divya Adusumilli

Table 7.6.2-1: Power Spectral Density

Modulation	Frequency [MHz]	PSD [dBm]
GFSK / 1Mbps	2402	-6.292
	2440	-1.10
	2480	-0.74

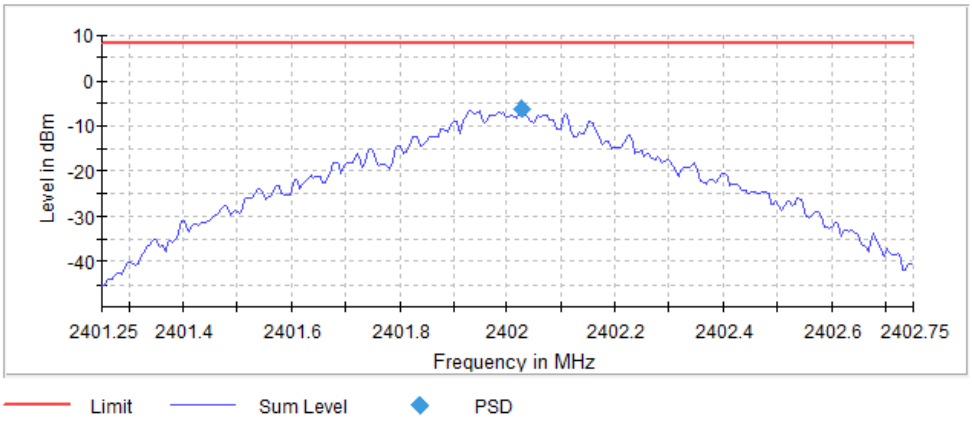


Figure 7.6.2-1: Sample PSD Plot

Table 7.6.2-2: Sample Measurement Settings (PSD)

Setting	Instrument Value	Target Value
Start Frequency	2.40125 GHz	2.40125 GHz
Stop Frequency	2.40275 GHz	2.40275 GHz
Span	1.500 MHz	1.500 MHz
RBW	10.000 kHz	<= 10.000 kHz
VBW	30.000 kHz	>= 30.000 kHz
SweepPoints	300	~ 300
Sweeptime	1.500 ms	AUTO
Reference Level	-10.000 dBm	-10.000 dBm
Attenuation	10.000 dB	AUTO
Detector	MaxPeak	MaxPeak
SweepCount	100	100
Filter	3 dB	3 dB
Trace Mode	Max Hold	Max Hold
Sweeptype	Sweep	Sweep
Preamp	off	off
Stablemode	Trace	Trace
Stablevalue	0.50 dB	0.50 dB
Run	5 / max. 150	max. 150
Stable	2 / 2	2
Max Stable Difference	0.38 dB	0.50 dB

8 ESTIMATION OF MEASUREMENT UNCERTAINTY

The expanded laboratory measurement uncertainty figures (U_{Lab}) provided below correspond to an expansion factor (coverage factor) k = 1.96 which provide confidence levels of 95%.

Table 8-1: Estimation of Measurement Uncertainty

Parameter	U_{lab}
Occupied Channel Bandwidth	± 0.009 %
RF Conducted Output Power	± 0.349 dB
Power Spectral Density	± 0.372 dB
Antenna Port Conducted Emissions	± 1.264 dB
Radiated Emissions ≤ 1 GHz	± 5.814 dB
Radiated Emissions > 1 GHz	± 4.318 dB
Temperature	± 0.860 °C
Radio Frequency	± 2.832 x 10^{-8}

9 CONCLUSION

In the opinion of TUV SUD the Gimme Key Pro, manufactured by Tier one, Inc. meets the requirements of FCC Part 15 subpart C and ISED Canada's Radio Standards Specification RSS-247 for the tests documented herein.

Appendix A: Plots

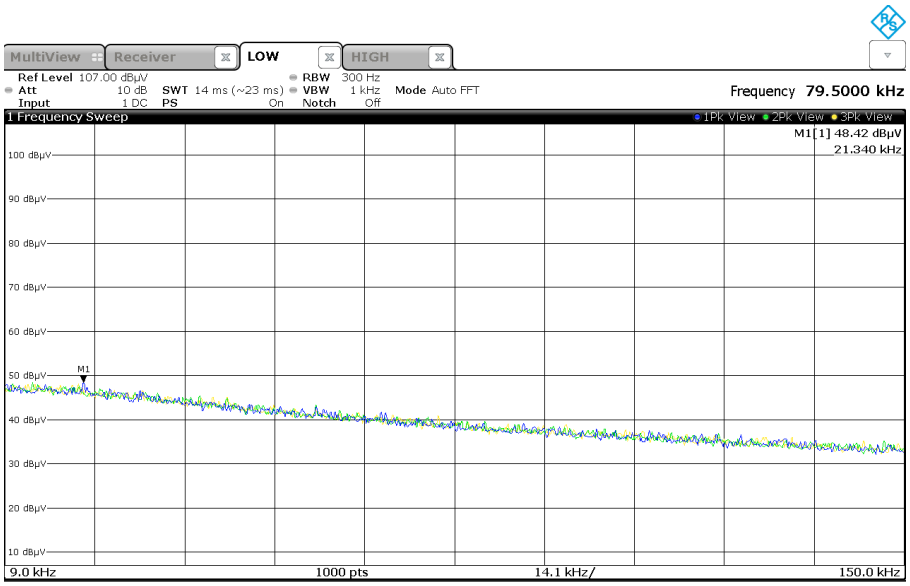
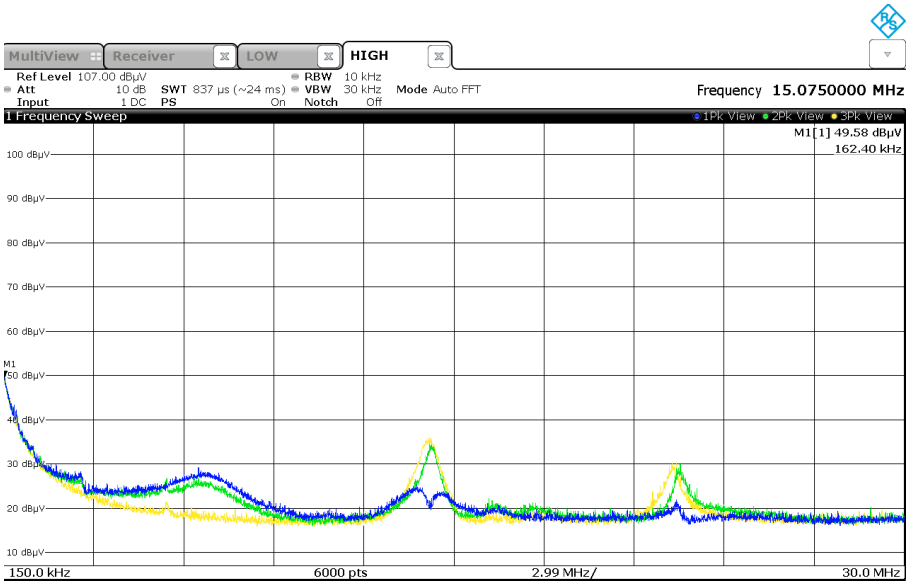


Figure A-1: 9kHz-150kHz



Note: Emissions above the noise floor are ambient noise and not associated with the DUT.

Figure A-2: 150kHz-30MHz

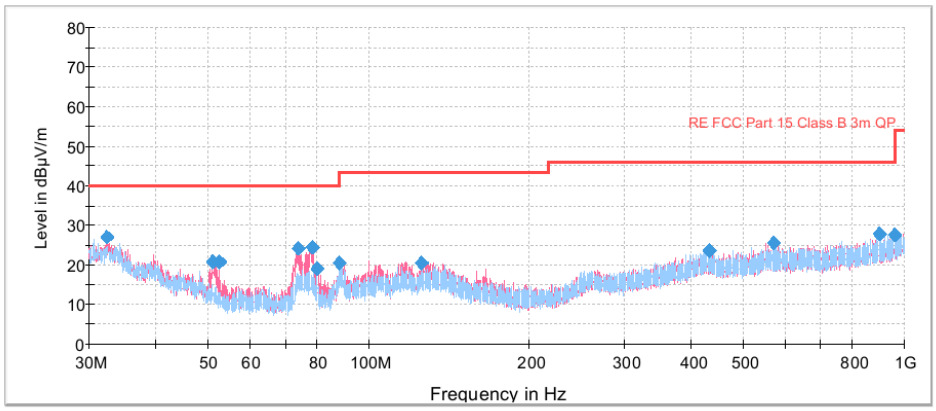


Figure A-3: 30MHz-1GHz

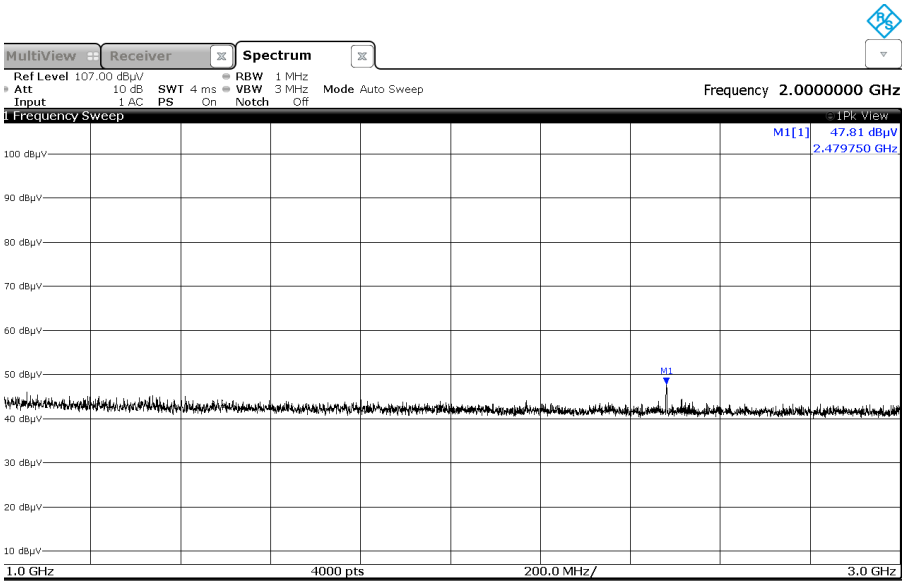


Figure A-4: 1GHz-3GHz

Note: Emissions above the noise floor are ambient noise and not associated with the DUT.

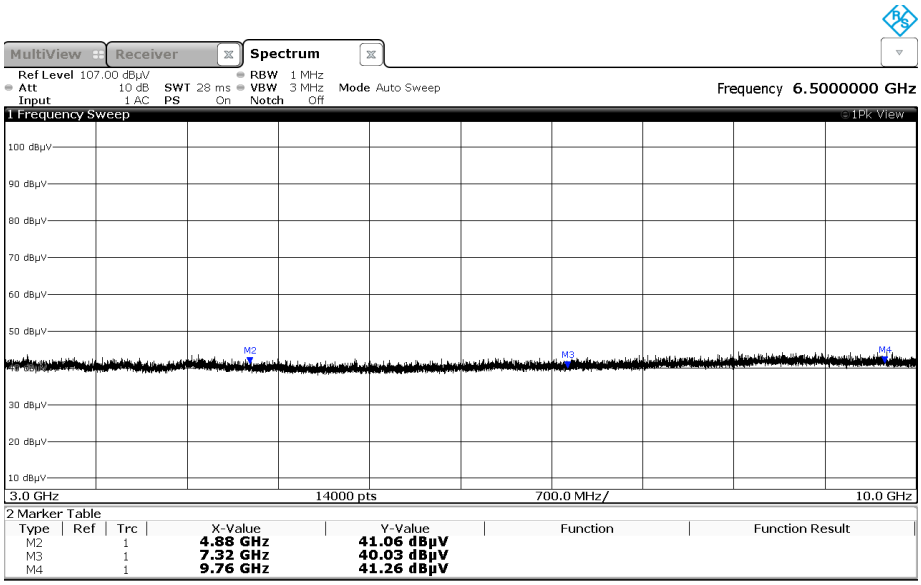


Figure A-5: 3GHz-10GHz

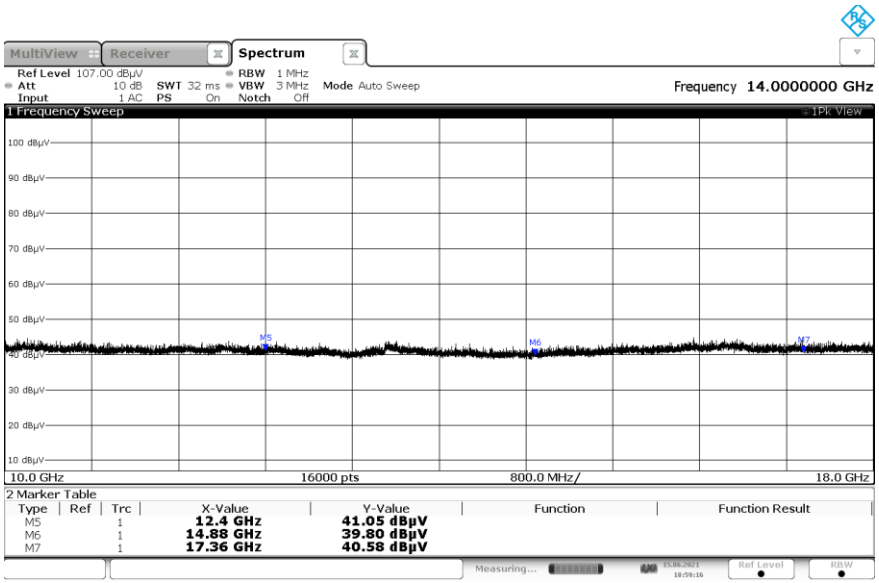


Figure A-6: 10GHz-18GHz

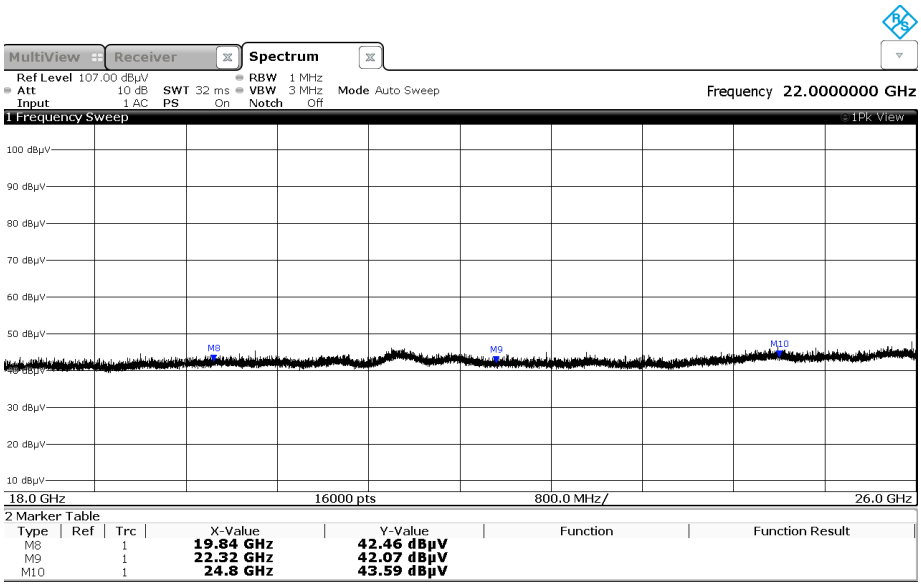


Figure A-7: 18GHz-26GHz

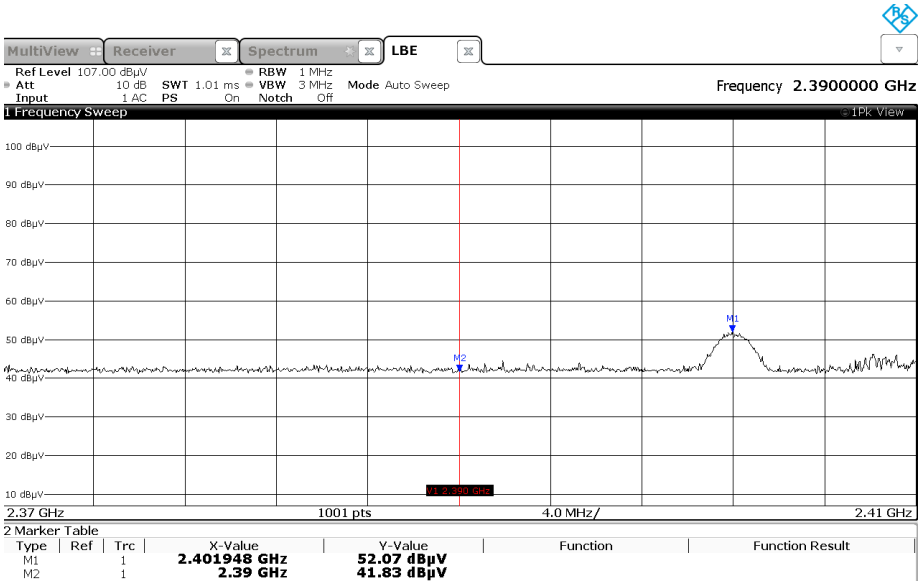


Figure A-7: Restricted Band Edge Low – 2402MHz

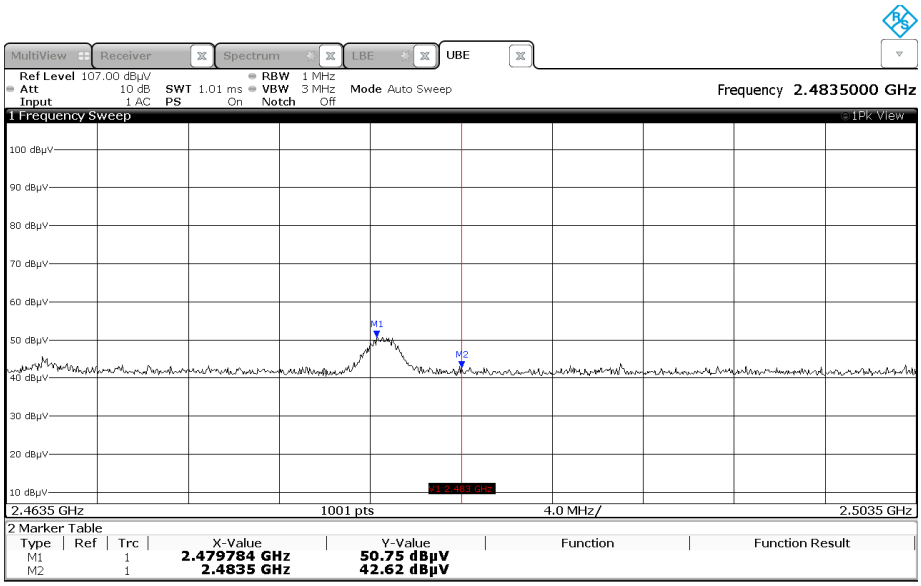


Figure A-8: Restricted Band Edge High– 2480MHz

END REPORT