



Electromagnetic Compatibility Test Report

Test Report No: LIF 110521 Rev.2

Issued on: October 17, 2021

Product Name
BCone Pool Unit

Tested According to
FCC 47 CFR, Part 15, Subparts C
Industry Canada ICES-003:07

Tests Performed for
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Report Approved By: _____



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EMC Lab. Manager
QualiTech EMC Laboratory

Test Report details:

Test commencement date: 15.11.2020
Test completion date: 31.12.2020
Customer's Representative: Yuval Tepper
Issued on: 17.10.2021

Revision details:

Version	Date	Details/Reasons
Rev. 1	11.05.2021	-
Rev.2	17.10.2021	Test report updated to include correct model name and IC Canada ID

Assessment information:

This report contains an assessment of the EUT against Electromagnetic Compatibility based upon tests carried out on the samples submitted. The results contained in this report relate only to the items tested. Manufactured products will not necessarily give identical results due to production and measurement tolerances. QualiTech, EMC Lab does not assume responsibility for any conclusion and generalization drawn from the test results with regards to other specimens or samples of type of the equipment represented by test item.

The EUT was setup and exercised using the configuration, modes of operation and arrangements defined in this report only.

Modifications:

Modifications made to the EUT

None

Modifications made to the Test Standard

None

Summary of Compliance Status

The EUT was tested according to the following test methods.

Test results are given in full in section 4.

Test Case	Test Spec. Clause	Remarks
6dB Bandwidth	47 CFR §15.247 (a) (2), ANSI C63.10 Subclause 11.8.2 Option 2	Pass
Maximum Peak Output Power	47 CFR §15.247 (b) (3), ANSI C63.10 Subclause 11.9.1.1	Pass
DTS maximum power spectral density level in the fundamental emission	47 CFR §15.247 (e) (1), ANSI C63.10 Subclause 11.10.2	Pass
Conducted Spurious Emission in non-restricted frequency bands	47 CFR §15.247 (d), ANSI C63.10 Subclause 11.11.1(a)	Pass
Radiated Spurious Emissions, Restricted Bands	47 CFR §15.247 (d), §15.205, §15.209(a), ANSI C63.10. Subclause 11.12.1	Pass
Band-edge compliance of RF Conducted Emission	47 CFR §15.247 (d), ANSI C63.10. Subclause 11.13.2	Pass
Antenna Connector Requirements	47 CFR §15.203	Pass
Power line Emission measurements	47 CFR §15.207	N/A



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1. General

1.1. Referenced documents:

FCC Part 15	Code of Federal Regulations (Washington, DC: Federal Communications Commission), Title 47, Part 15, Subpart C
ANSI C63.10:2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices
ICES-003	Industry Canada

1.2. General Description

BCone Pool Unit model: LBPABCPU01

BCone Pool Unit FCC ID: 2AOXNBCPU1

BCone Pool Unit IC Canada ID: 27681-BCPU1

EUT Description

The Pool Unit consists of a RF transceiver, motion sensor and siren.

When the pool unit senses motion in the pool that can be related to a child fall into the pool, it triggers the siren and send an RF message over 433Mhz to the Home Unit.

Description:

Maximum Radiated Peak Output Power: 57.68 mW.

Frequency range: 2400-2483.5 GHz

Type of Modulation:

Protocol	Modulation
Bluetooth	2GFSK

Antenna Specification:

Type:

Antenna Gain: 2dBi in the range 2.4 – 2.5 GHz

2. Method of Measurements

2.1. Radiated Emissions Measurements in the restricted bands:

For radiated emissions, which fall in the restricted bands the spectrum from 9 kHz to 25GHz was investigated following the guidelines in ANSI C63.10-2013, with the transmitter set to the lowest, middle and highest channel frequencies. Measurements were performed with peak detector and repeated averaged with VBW=10Hz. Only Peak detection plots are presented.

2.2. Radiated Emission measurements:

Measurements were performed at a 3-meter measurement distance in the semi-anechoic chamber in order to evaluate the radiated electromagnetic interference characteristics of the EUT. The EUT was placed on a non-metallic table/support, 0.8m for frequency below 1GHz and 1.5m for frequency above 1GHz above the turntable, was configured, arranged and operated in a manner consistent with typical application and load conditions. The test program of exercising the equipment ensured that various parts of the EUT were exercised to permit detection of all EUT disturbances.

An appropriate antenna depending upon the frequency range, per ANSI C63.10-2013 was used. While the turntable was being rotated, the height of the antenna was scanned from 1 to 4m. The highest radiated emission was detected by manipulating the system cables to the worst-case position. This process was repeated for both antenna polarizations. The spectrum up to 40GHz was investigated for spurious emissions, using a band-reject filter where appropriate.

The amplitudes of worst-case emission were measured with the detector modes and resolution bandwidths over various frequency ranges according to the requirements of ANSI C63.10-2013.

2.3. Power Line Emission measurements:

N/A

The EUT is battery operated.

3. Test Facility & Uncertainty of Measurement

3.1. Accreditation/ Registration reference:

3.2. Accreditation/ Registration reference:

- A2LA Certificate Number: 1633.01
- FCC Designation Number :IL1006
- Industry Canada File Number: IC4808A-1

3.3. Test Facility description

The tests were performed at the EMC Laboratory, QualiTech Division, ECI Telecom

Address: 30, Hasivim St., Petah Tikva, Israel.

Tel: +972-52-4006068

Semi Anechoic Configuration:

Measurement distance	3m
Chamber dimensions	9.5m x 6.5m x 5.2m
Antenna height	1 - 4m
Shielding Effectiveness	Magnetic field ≥ 80 dB at 15 kHz ≥ 90 dB at 100 kHz Electric field > 120 dB from 1MHz to 1GHz > 110 dB from 1GHz to 10GHz
Absorbing material	Ferrite tiles on the walls and ceiling Emerson and Cuming absorbing material in selected positions on the walls
Normalized Site Attenuation measured at 5 positions	± 3.9 dB, 30MHz to 200MHz ± 3 dB, 200MHz to 1000MHz
Transmission Loss measured at 5 positions, at 1.5m height	± 3 dB, 1GHz to 18GHz

3.4. The measurement software used:

Software Name	Software Version
Test Software "TILE"	Version 7.1.4.1

4. BLE: Report of Measurements and examinations

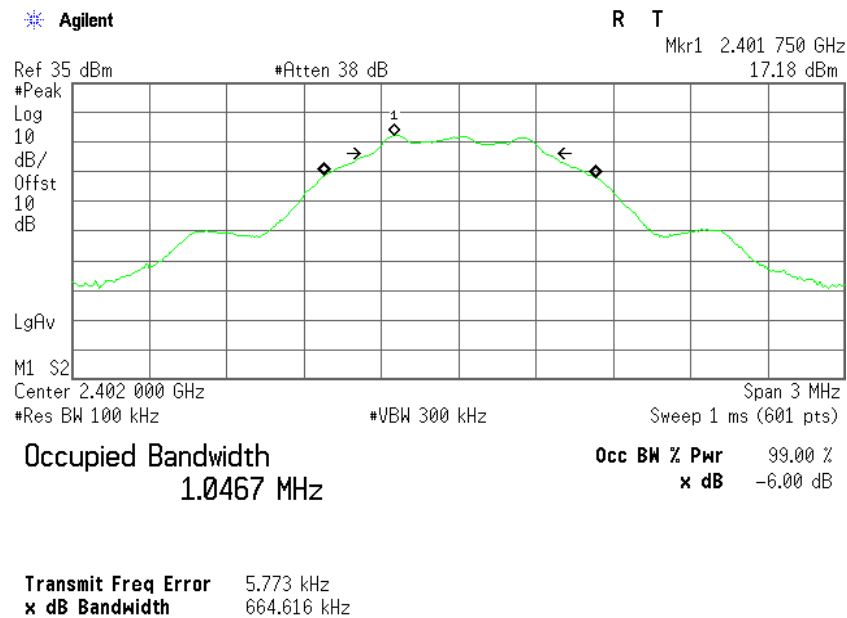
4.1. The minimum 6dB DTS bandwidth

Reference document:	47 CFR §15.247 (a) (2), ANSI C63.10 Subclause 11.8.2 Option 2		
Test Requirements:	The minimum 6dB Bandwidth of DTS		
Operating conditions:	Under normal test conditions	Pass	
Method of testing:	Radiated		
S.A. Settings:	RBW: 100kHz, VBW: 300kHz, Span: 3MHz		
Hopping function:	Disabled		
Environment conditions:	Ambient Temperature: 24.3 °C	Relative Humidity: 49.8%	Atmospheric Pressure: 1011.4 hPa
Test Result:	See below	See Plot 4.1.1 – 4.1.3	

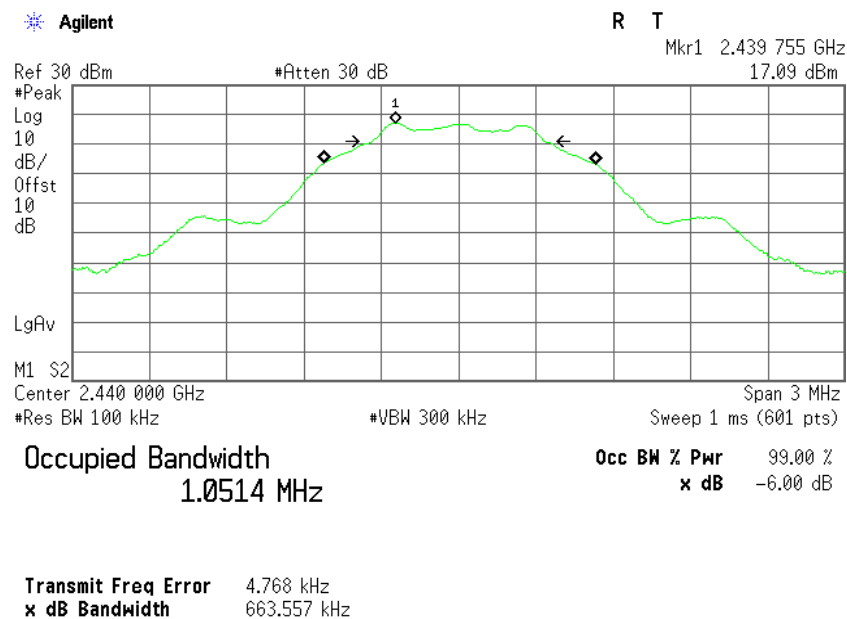
Test results:

Channel	Frequency, [MHz]	6dB BW, [kHz]	LIMIT([kHz]	Margin	Pass/Fail
Low	2402	664.616	>500	164.616	Pass
Mid	2440	663.557	>500	163.557	Pass
High	2480	663.273	>500	163.273	Pass

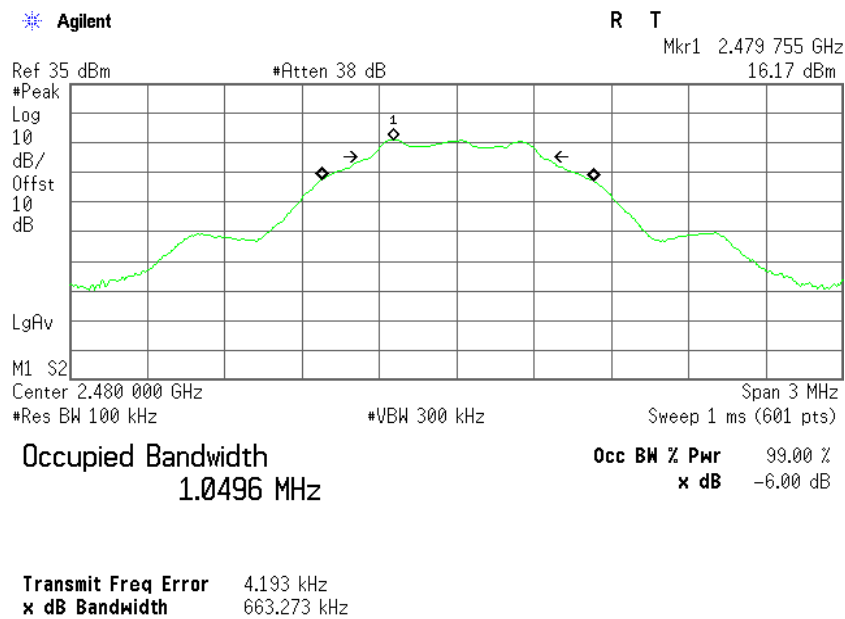
Plot 4.1.1: 6 dB bandwidth test results, 2GFSK, channel 0 (Low) power setting 190, PHY 1M



Plot 4.1.2: 6 dB bandwidth test results, 2GFSK, channel 19 (MID) power setting 190, PHY 1M



Plot 4.1.3: 6dB bandwidth test results, 2GFSK, channel 39 (HIGH) power setting 190, PHY 1M



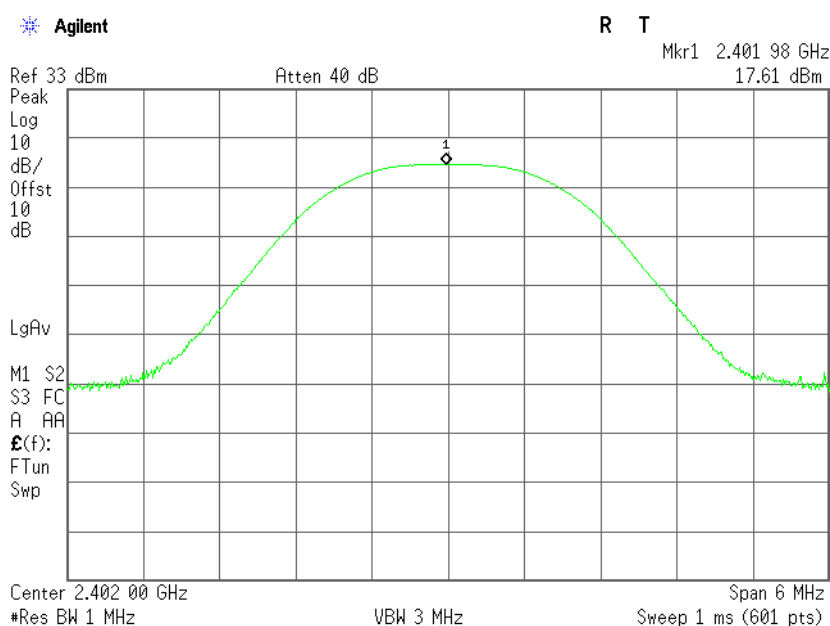
4.2. Maximum Peak Output Power

Reference document:	47 CFR §15.247 (b) (1), ANSI C63.10 Subclause 11.9.1.1		
Test Requirements:	The maximum peak output power shall not exceed 1Watt (30dBm)		
Operating conditions:	Under normal test conditions	Pass	
Method of testing:	Conducted		
S.A. Settings:	RBW: 1MHz, VBW: 3MHz,		
Hopping function:	Disabled		
Environment conditions:	Ambient Temperature: 24.9°C	Relative Humidity: 50.1%	Atmospheric Pressure: 1011.4 hPa
Test Result:	See below	See Plot 4.2.1 – Plot 4.2.3	

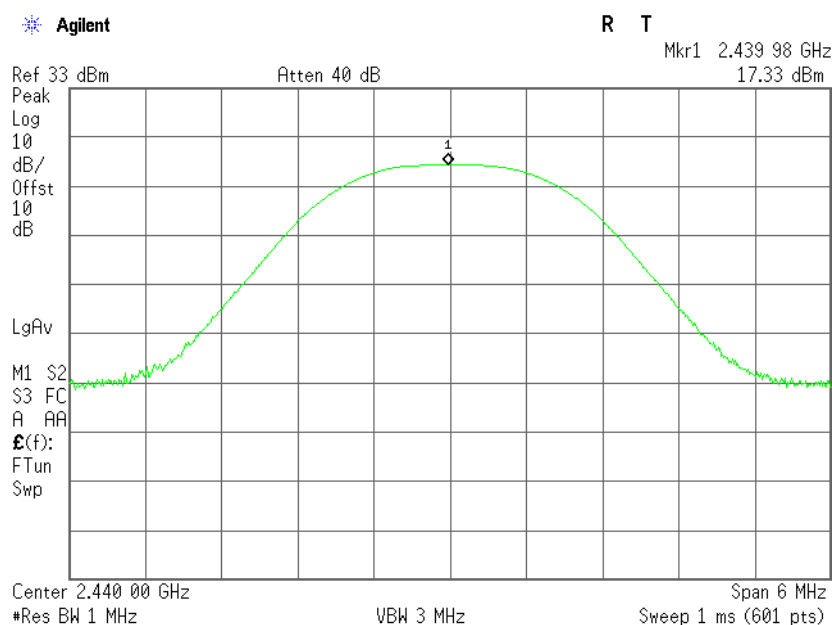
Test results:

Type of Modulation	Channel	Frequency, [MHz]	Max. Peak Conducted Output power [dBm]	Limit, [dBm]	Delta, [dB]	Pass/ Fail
2GFSK/BLE	Low 0	2.402	17.61	30.00	-12.39	Pass
	Mid 19	2.440	17.33	30.00	-12.67	Pass
	High 39	2.480	17.01	30.00	-12.99	Pass

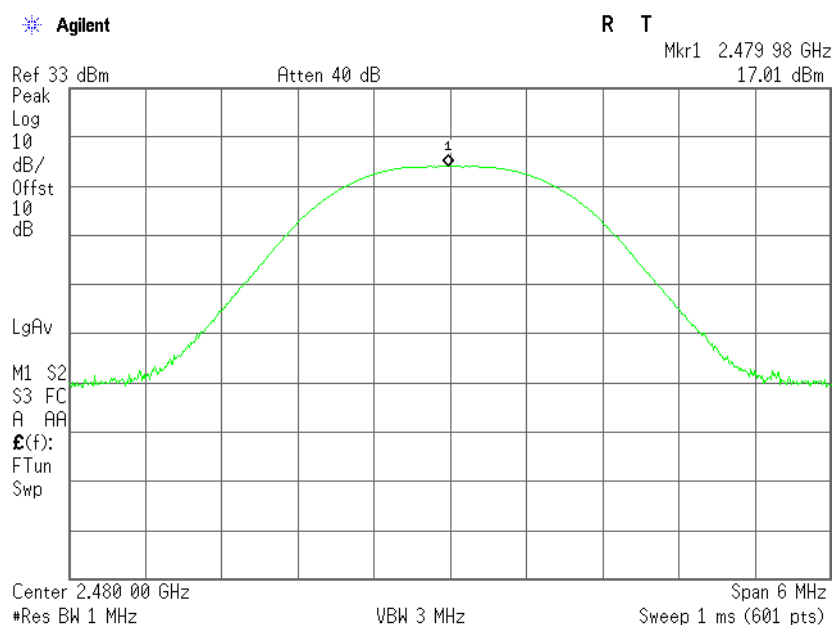
Plot 4.2.1: Maximum Peak Output Power test results, 2GFSK, channel 0 power setting 190, PHY 1M



Plot 4.2.2: Maximum Peak Output Power test results, 2GFSK, channel 19 power setting 190, PHY 1M



Plot 4.2.3: Maximum Peak Output Power test results, 2GFSK, channel 39 power setting 190, PHY 1M



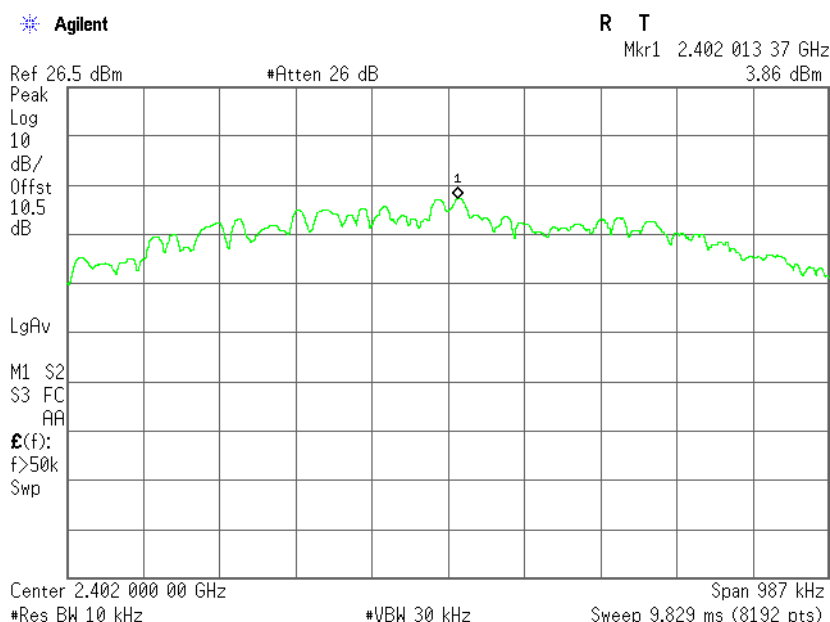
4.3. DTS maximum power spectral density level in the fundamental emission

Reference document:	47 CFR §15.247 (e) (1), ANSI C63.10 Subclause 11.10.2		
Test Requirements:	DTS maximum power spectral density level in the fundamental emission		
Operating conditions:	Under normal test conditions	Pass	
Method of testing:	Radiated		
S.A. Settings:	RBW: 3KHz, VBW: 9.1KHz,		
Hopping function:	Disabled		
Environment conditions:	Ambient Temperature: 24.9°C	Relative Humidity: 50.1%	Atmospheric Pressure: 1011.4 hPa
Test Result:	See below	See Plot 4.3.1 – Plot 4.3.3	

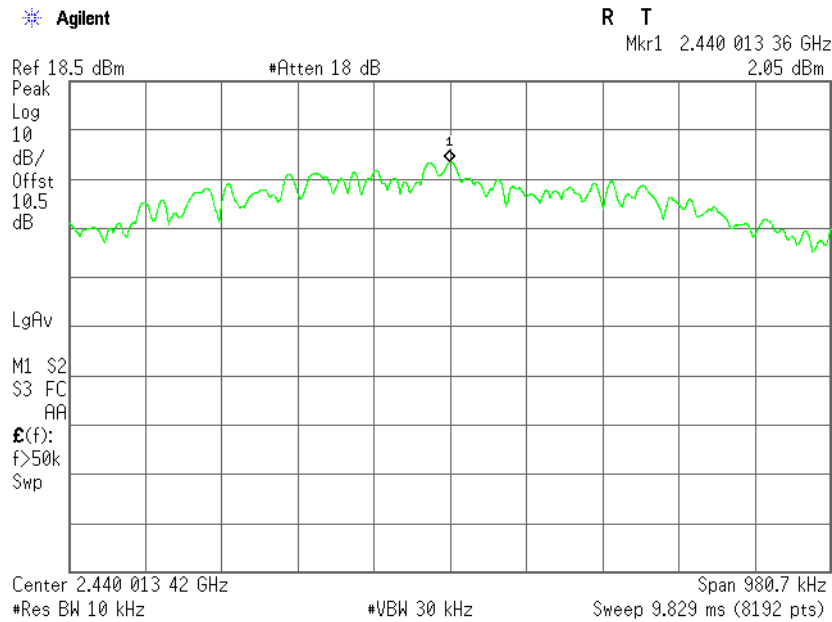
Test results:

Channel	Frequency, [MHz]	Max conducted power spectral density [dBm]	Limit, [dBm]	Delta, [dB]	Pass/ Fail
Low	2.402	3.86	8.00	-4.14	Pass
Mid	2.440	2.05	8.00	-5.95	Pass
High	2.480	1.52	8.00	-6.48	Pass

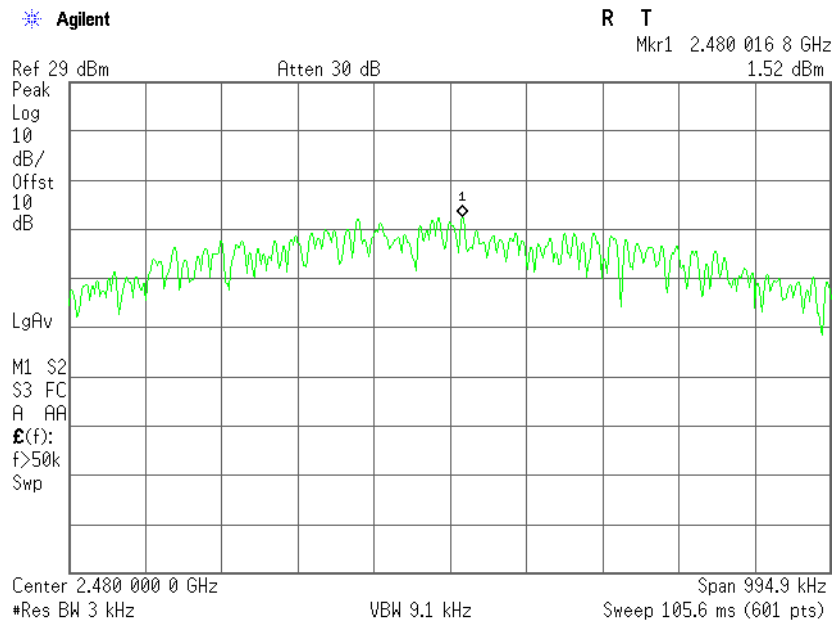
Plot 4.3.1: DTS maximum power spectral density level in the fundamental emission, channel 0 power setting 190, PHY 1M



Plot 4.3.2: DTS maximum power spectral density level in the fundamental emission, channel 19



Plot 4.3.3: DTS maximum power spectral density level in the fundamental emission, channel 39



4.4. Spurious Emissions Conducted Measurements

Reference document:	47 CFR §15.247 (d), ANSI C63.10 Subclause 11.11.1(a)		
Test Requirements:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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. Attenuation below the general limits specified in Section 15.209(a) is not required.		
Operating conditions:	Under normal test conditions	Pass	
Method of testing:	Conducted		
S.A. Settings:	f > 1GHz: Peak: RBW= 1MHz, VBW= 3MHz, Average: VBW= 1 kHz f < 1GHz: RBW: 100kHz, VBW: 300kHz		
Hopping function:	Disabled (lowest, middle, and highest channels to be investigated)		
Environment conditions:	Ambient Temperature: 24.9°C	Relative Humidity: 50.1%	Atmospheric Pressure: hPa
Test Result:	See below	Plots 4.4.1 – Plot 4.4.10	

Test results below 1GHz:

Channel	Emission Frequency [MHz]	Detector Type	Antenna Polarization	Emission Level, [dBμV/m]	Ref.level, [dBμV/m]	Delta [dBc]	Limit, [dBc]	Pass/Fail
Low	All the emission are more 20dB below the limit						-20.0	Pass
Mid								
High								

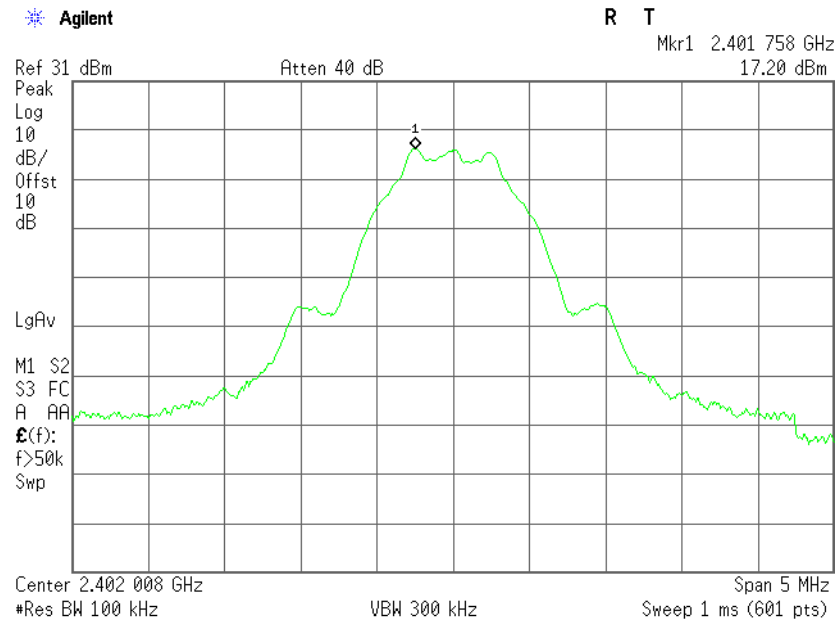
Test results above 1GHz:

Channel	Emission Frequency [GHz]	Detector Type	Antenna Polarization	Emission Level, [dBμV/m]	Reference Level, [dBμV/m]	Delta, [dBc]	Limit Delta, [dBc]	Pass/Fail
Low	All the emissions are more 20dB below the limit						-20.0	Pass
Mid								
High								

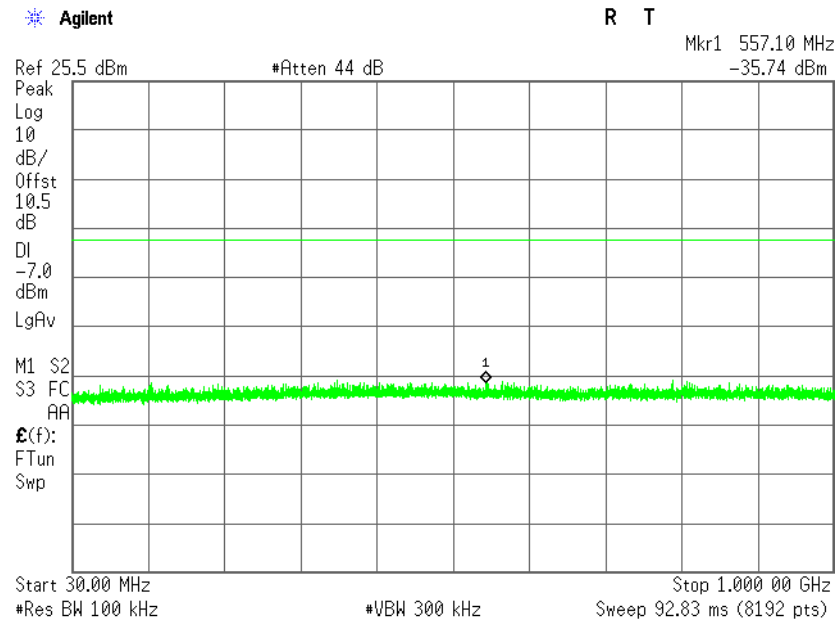
Note: Emission Level [dBμV/m] = Measured Emission [dBμV] + Correction-factor [dB (1/m)]

Correction Factor = Antenna factor + Cable Loss + Filter I/L

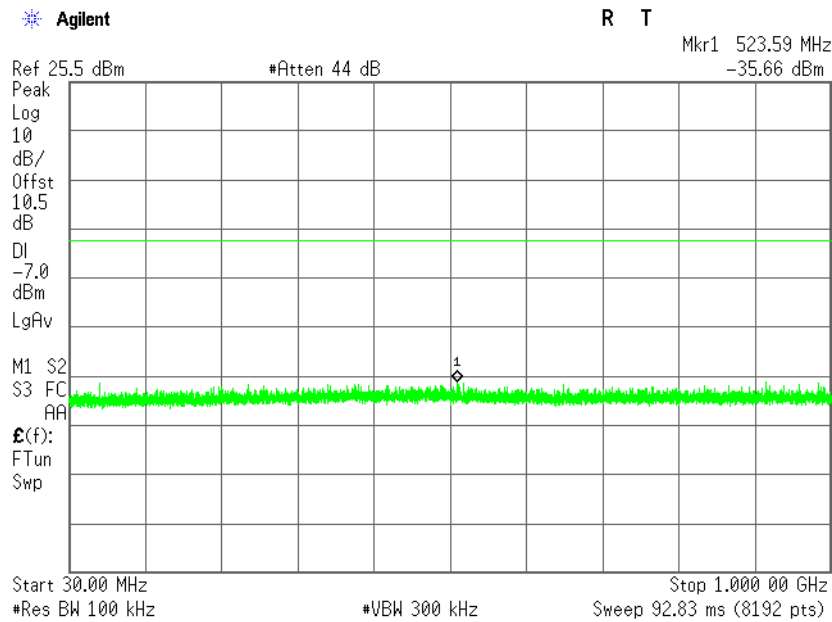
Plot 4.4.1: The maximum PSD Reference level Vertical Polarization



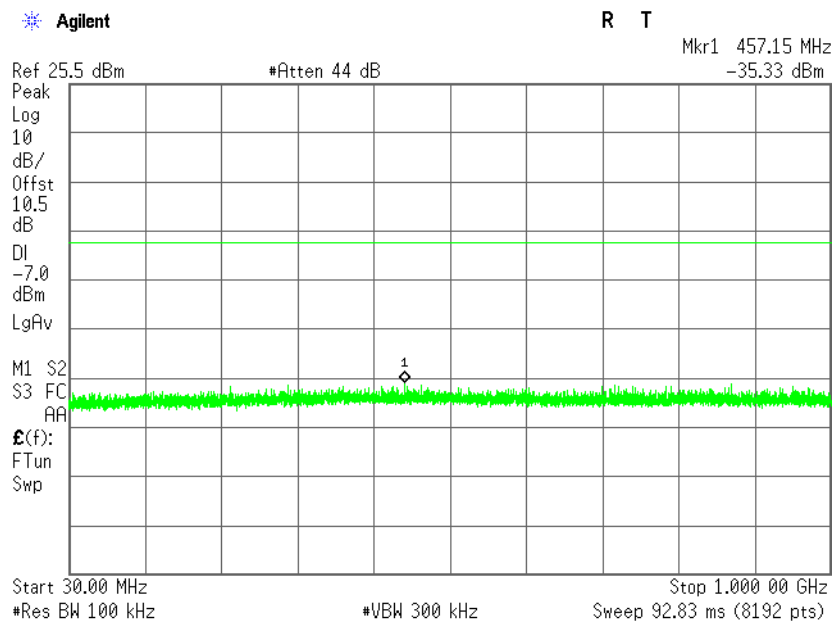
Plot 4.4.2: Radiated Spurious Emission in 30 MHz – 1 GHz range, $F_c = 2402$ MHz,



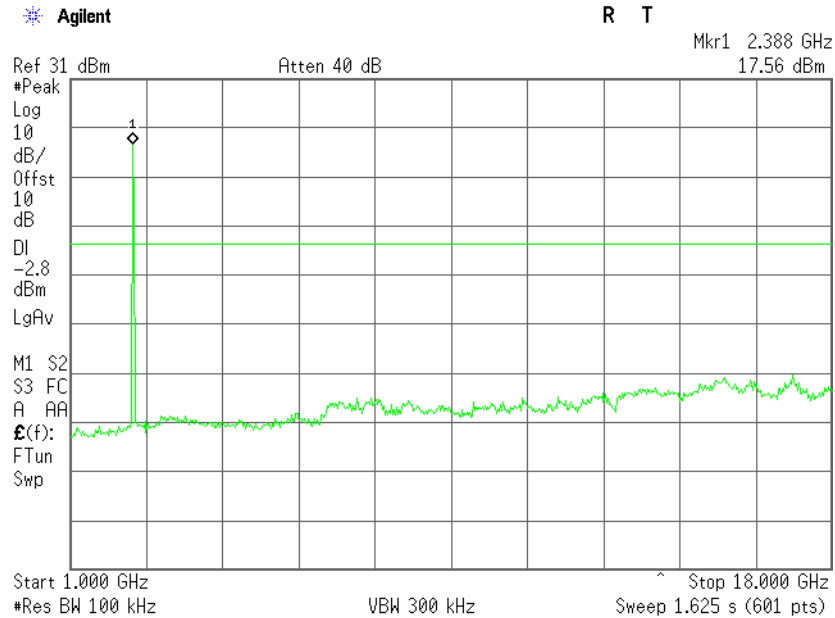
Plot 4.4.3: Radiated Spurious Emission in 30 MHz – 1 GHz range, $F_c = 2440$ MHz,



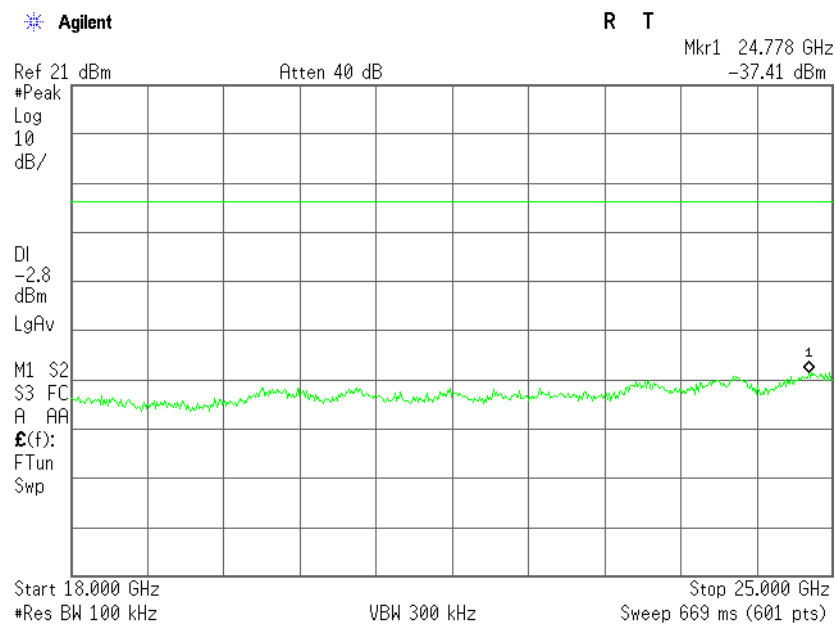
Plot 4.4.4: Radiated Spurious Emission in 30 MHz – 1 GHz range, $F_c = 2480$ MHz,



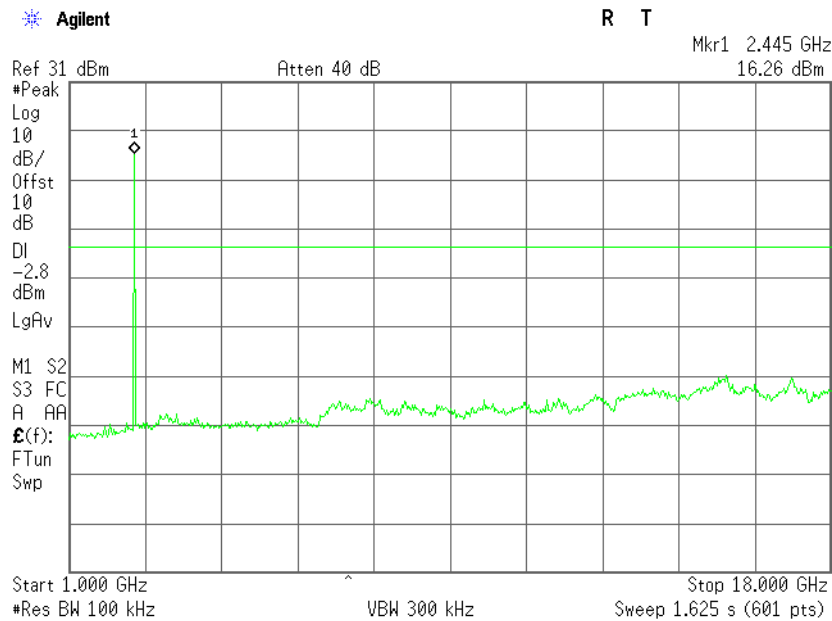
Plot 4.4.5 Radiated Spurious Emission in 1 – 18 GHz range, $F_c = 2402$ MHz



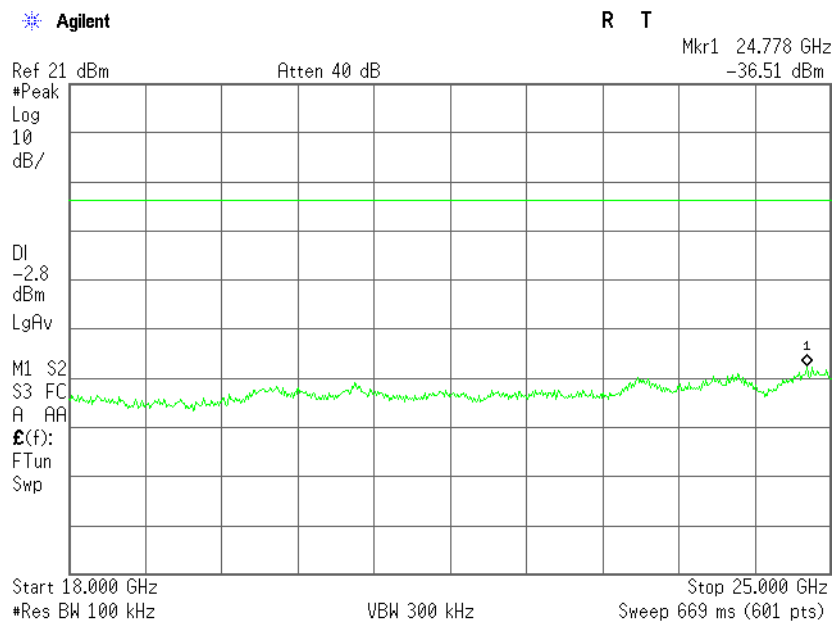
Plot 4.4.6: Radiated Spurious Emission in 18 – 25 GHz range, $F_c = 2402$ MHz,



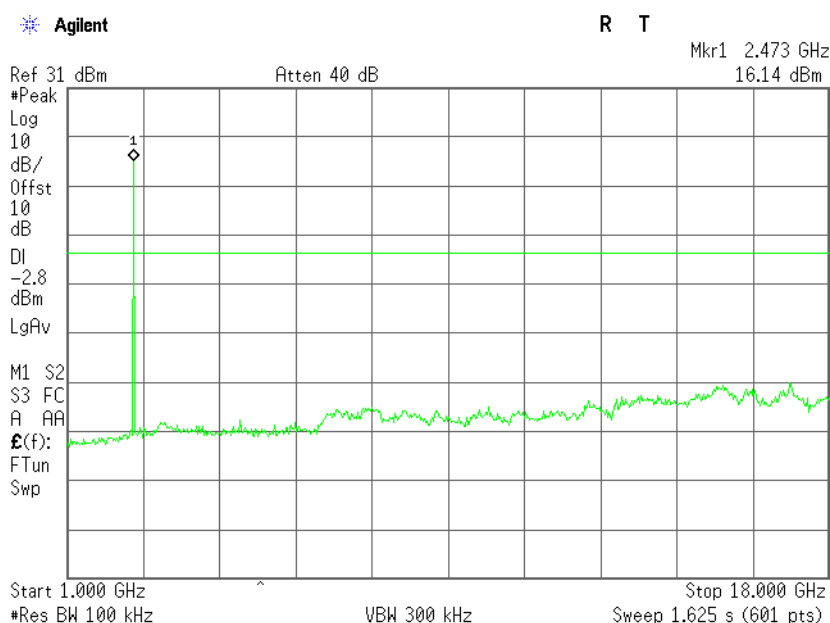
Plot 4.4.7: Radiated Spurious Emission in 1 – 18 GHz range, $F_c = 2440$ MHz, Peak



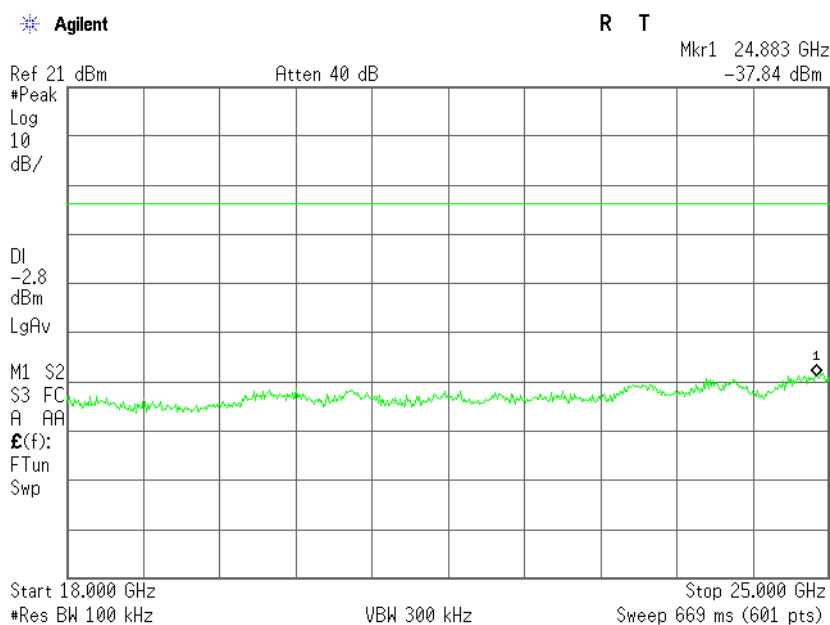
Plot 4.4.8: Radiated Spurious Emission in 18 – 25 GHz range, $F_c = 2440$ MHz,



Plot 4.4.9: Radiated Spurious Emission in 1 – 18 GHz range, $F_c = 2480$ MHz



Plot 4.4.10: Radiated Spurious Emission in 18 – 25 GHz range, $F_c = 2480$ MHz, Horizontal Polarization



4.5. Spurious Emissions in Restricted Bands Radiated Measurements

Reference document:	47 CFR §15.247 (d) & §15.205& §15.209(a), ANSI C63.10. Subclause 11.12.1		
Test Requirements:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in section 15.209(a) (See section 15.205(c).		
Operating conditions:	Under normal test conditions	Pass	
Method of testing:	Radiated		
S.A. Settings:	f >1GHz: Peak: RBW= 1MHz, VBW= 3MHz, Average: VBW= 1 kHz f<1GHz: RBW: 100kHz, VBW: 300kHz		
Hopping function:	Disabled/Enabled		
Environment conditions:	Ambient Temperature: 23.8°C	Relative Humidity: 51.6%	Atmospheric Pressure: hPa
Test Result:	See below	See Plot 4.5.1 – Plot 4.5.25	

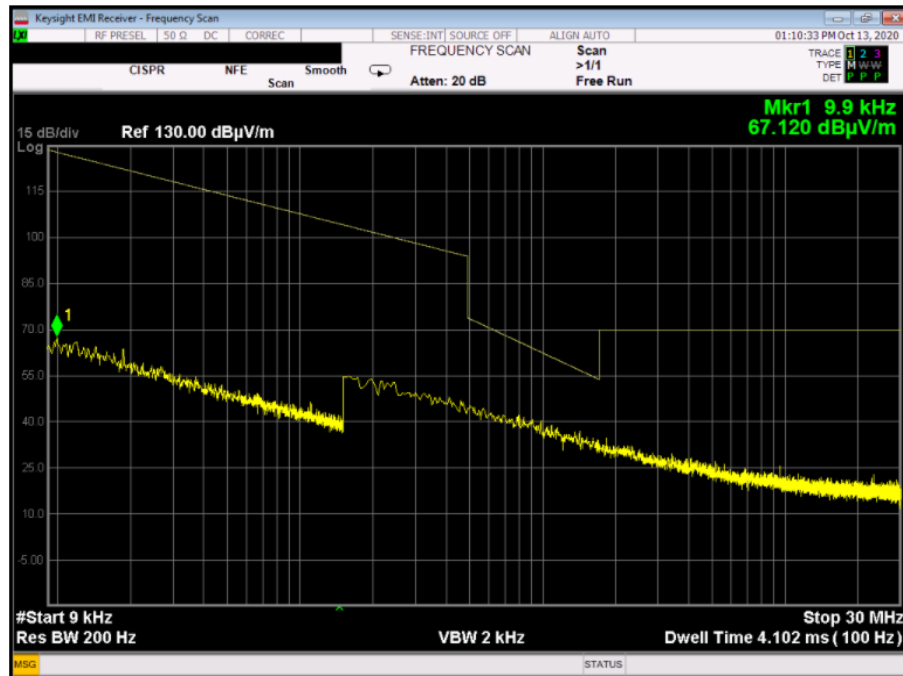
Test results:

Channel	Emission Frequency, [GHz]	Detector Type	Antenna Polarization,	Emission Level, [dBμV/m]	Limit, [dBμV/m]	Delta, [dB]	Pass/Fail
Low	4.8039	Peak	H	48.41	74.00	-25.59	Pass
		Average	H	43.05	54.00	-10.96	Pass
	9.607	Peak	H	41.99	74.00	-32.01	Pass
		Average	H	41.99	54.00	-12.01	Pass
	4.8039	Peak	V	48.77	74.00	-25.23	Pass
		Average	V	43.80	54.00	-10.21	Pass
	9.607	Peak	V	43.00	74.00	-31.00	Pass
		Average	V	43.00	54.00	-11.00	Pass
Mid	4.8799	Peak	H	48.40	74.00	-25.60	Pass
		Average	H	44.15	54.00	-9.85	Pass
	4.8799	Peak	V	46.94	74.00	-27.06	Pass
		Average	V	43.93	54.00	-10.07	Pass
High	4.9597	Peak	H	48.71	74.00	-25.29	Pass
		Average	H	44.90	54.00	-9.10	Pass
	4.960	Peak	V	46.99	74.00	-27.01	Pass
		Average	V	43.28	54.00	-10.72	Pass

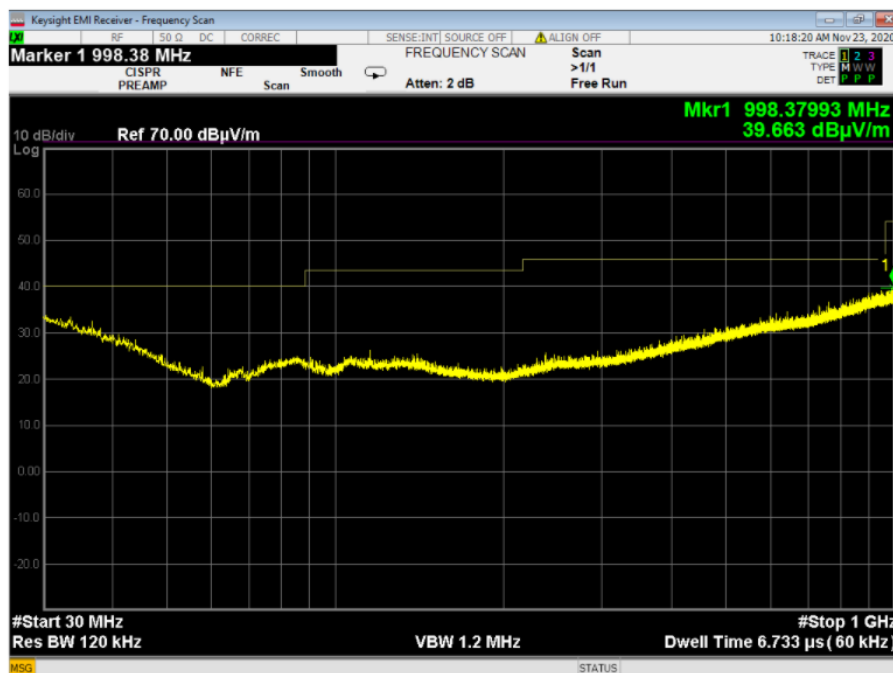
Note: Radiated Emission [dBμV/m] = Measured Emission [dBμV] + Correction-factor [dB (1/m)]

Correction Factor = Antenna factor + Cable Loss

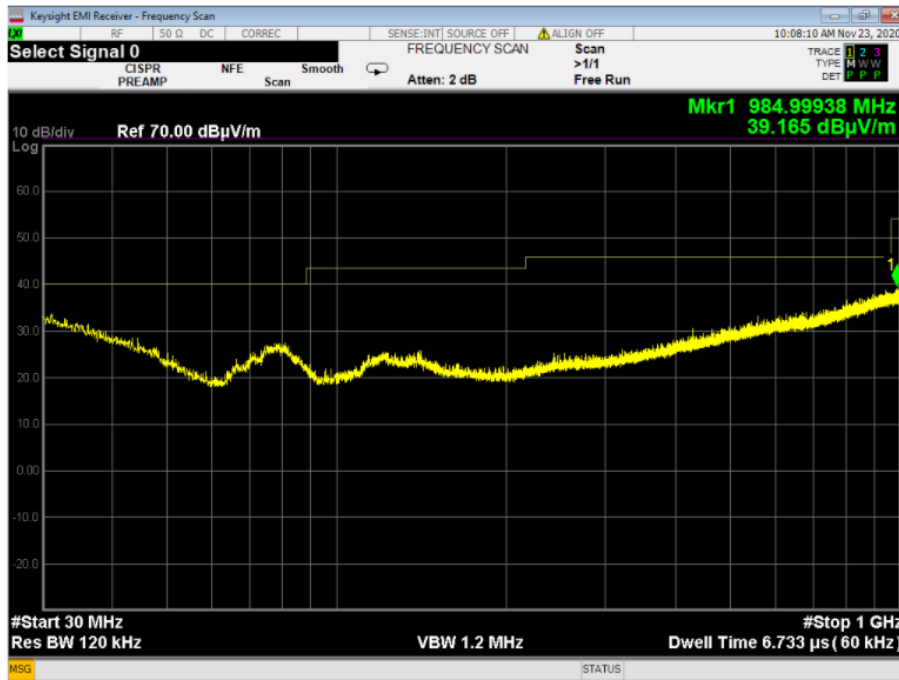
Plot 4.5.1: Spurious Emissions in Restricted Bands, 9 k-30 MHz



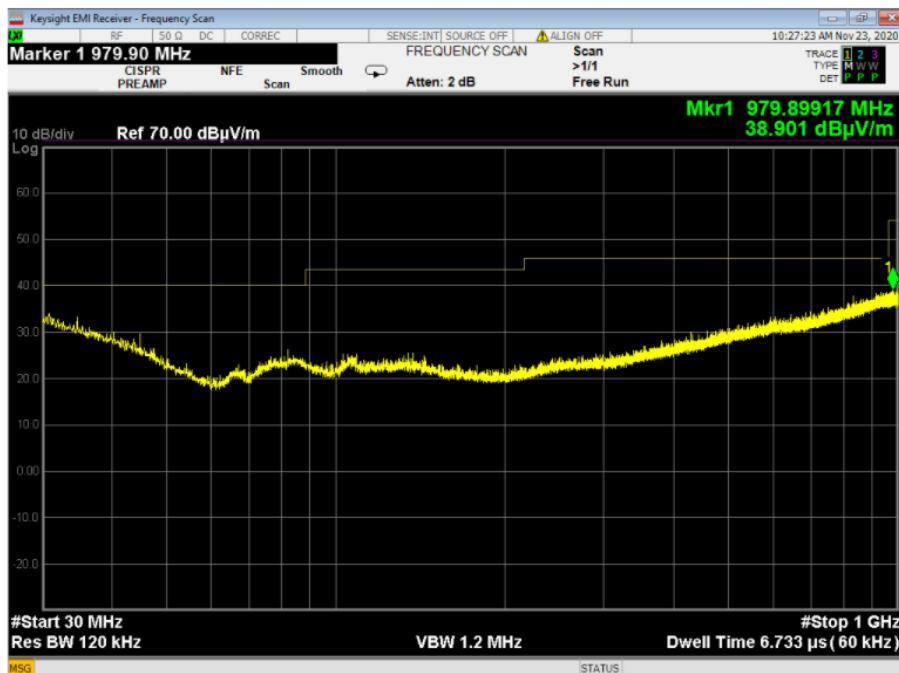
Plot 4.5.2: Spurious Emissions in Restricted Bands, Single mode, $F_c = 2402\text{MHz}$, Horizontal Polarization, 30-1000MHz



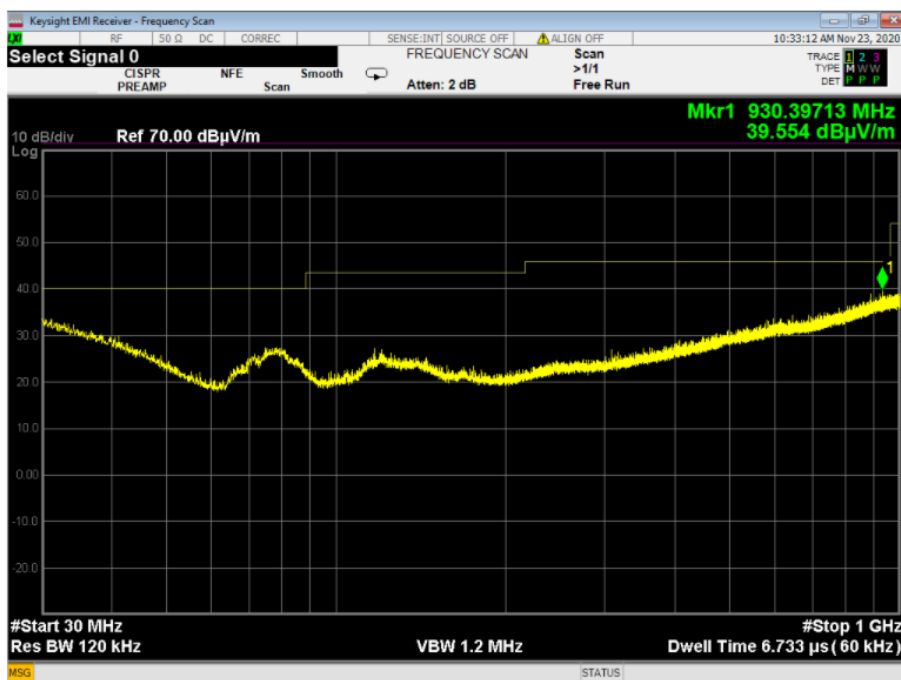
Plot 4.5.3: Spurious Emissions in Restricted Bands, Single mode, $F_c = 2402\text{MHz}$, Vertical Polarization 30-1000MHz



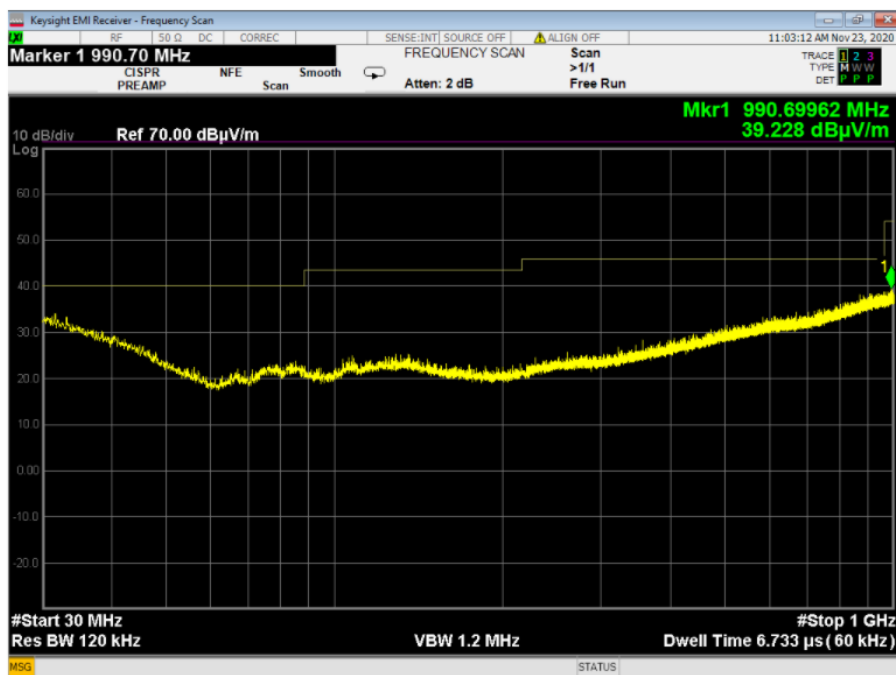
Plot 4.5.4: Spurious Emissions in Restricted Bands, Single mode, $F_c = 2440\text{MHz}$, Horizontal Polarization, 30-1000MHz



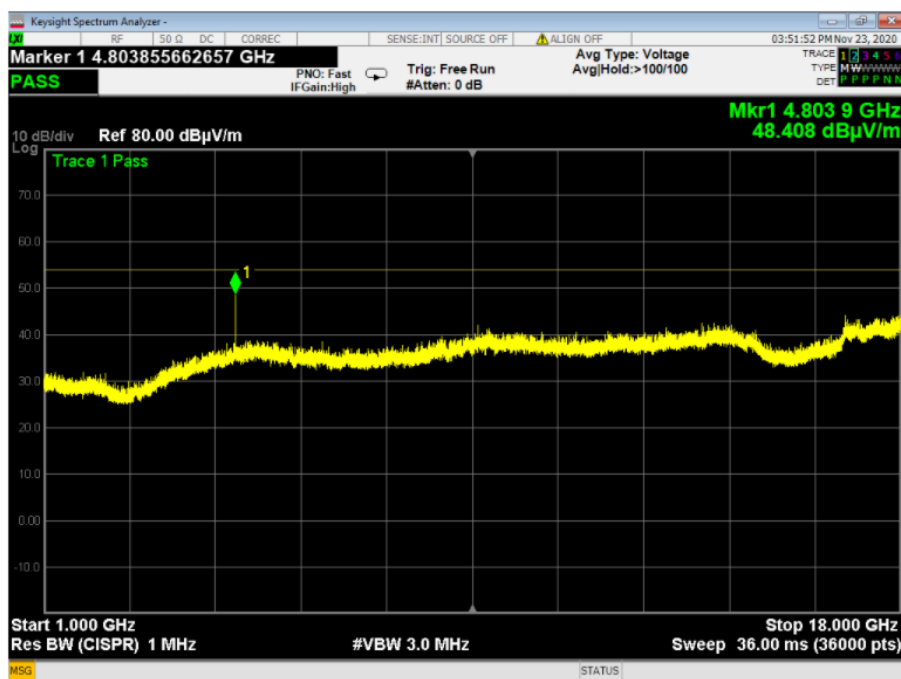
Plot 4.5.5: Spurious Emissions in Restricted Bands, Single mode, $F_c = 2440\text{MHz}$, Vertical Polarization 30-1000MHz



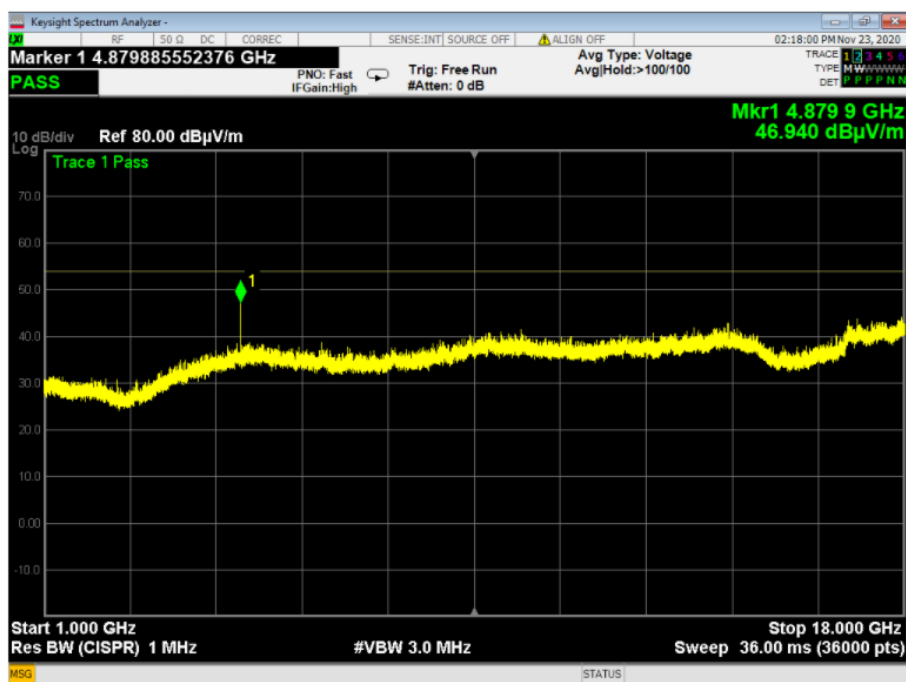
Plot 4.5.6: Spurious Emissions in Restricted Bands, Single mode, $F_c = 2480\text{MHz}$, Horizontal Polarization, 30-1000MHz



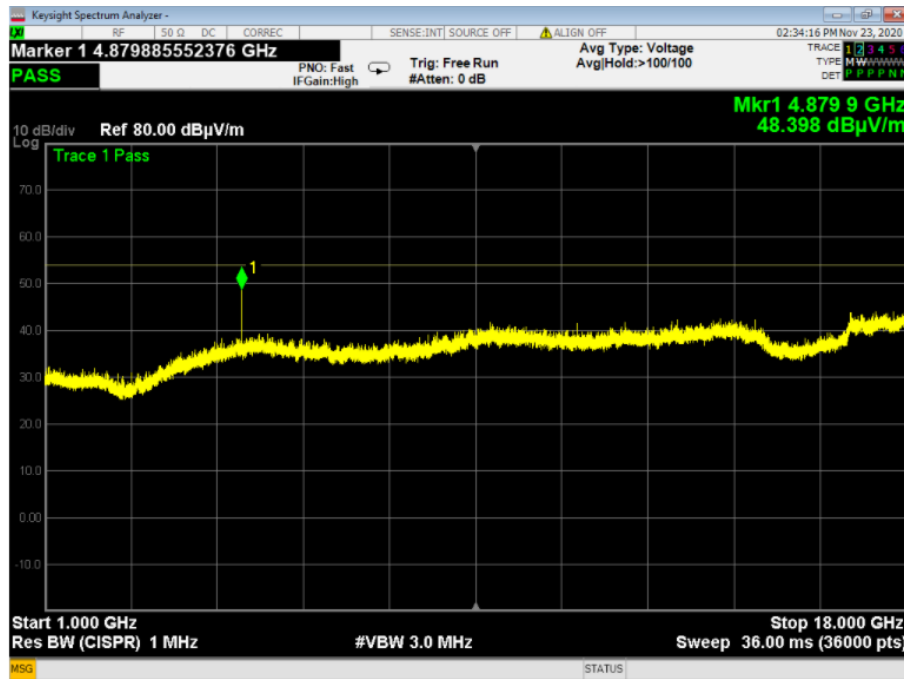
Plot 3.5.9 Transmitter unwanted emissions in the spurious domain in 1.0 GHz – 18 GHz, Horizontal polarization BLE Fc=2402 MHz,



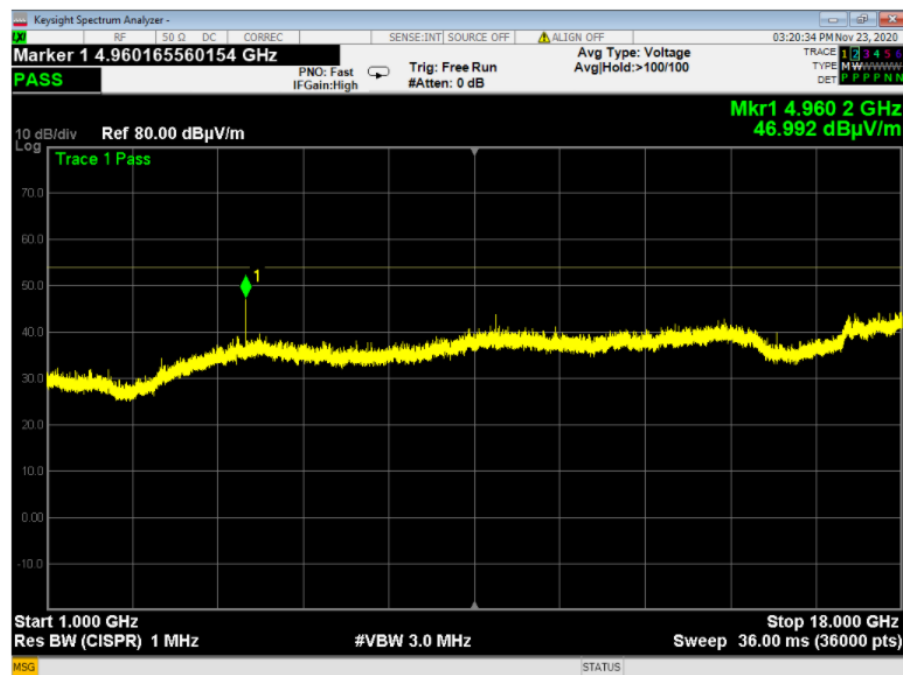
Plot 3.5.10 Transmitter unwanted emissions in the spurious domain in 1.0 GHz – 18 GHz, Vertical polarization BLE Fc=2440 MHz,



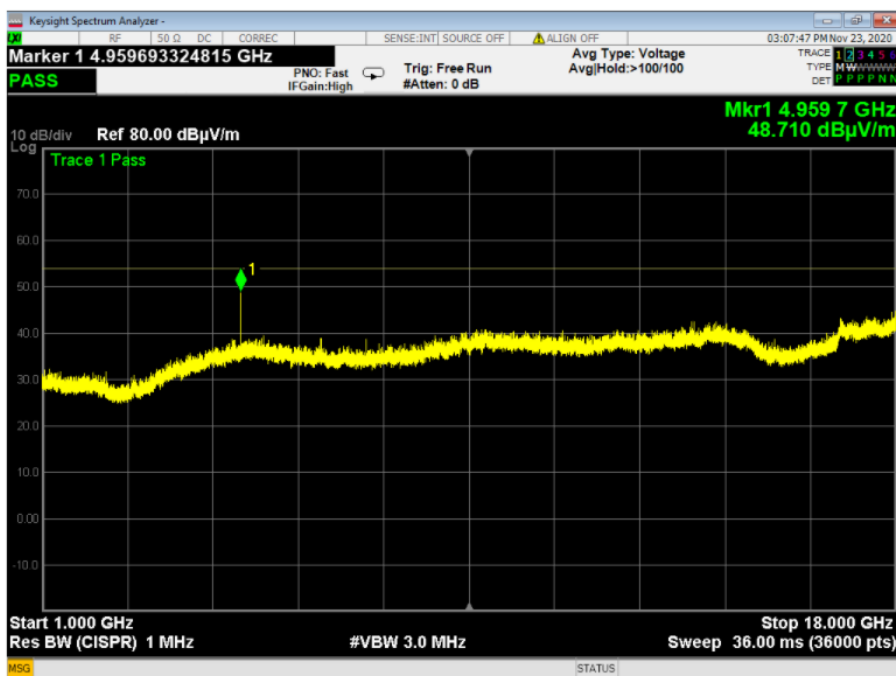
**Plot 3.5.11 Transmitter unwanted emissions in the spurious domain in 1.0 GHz – 18 GHz,
Horizontal polarization BLE Fc=2440 MHz,**



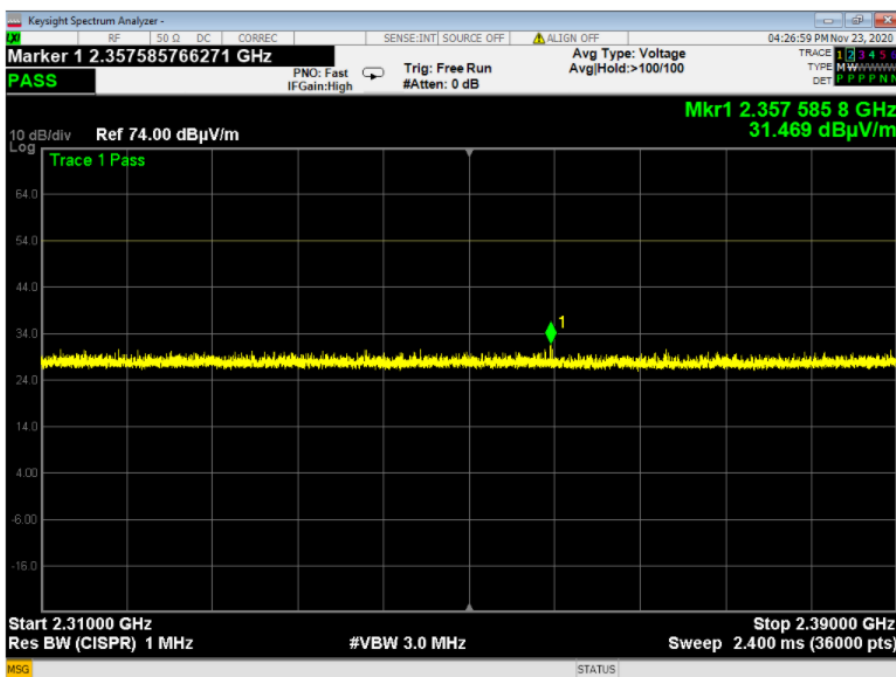
**Plot 3.5.12 Transmitter unwanted emissions in the spurious domain in 1.0 GHz – 18GHz, Vertical
polarization BLE Fc=2480 MHz,**



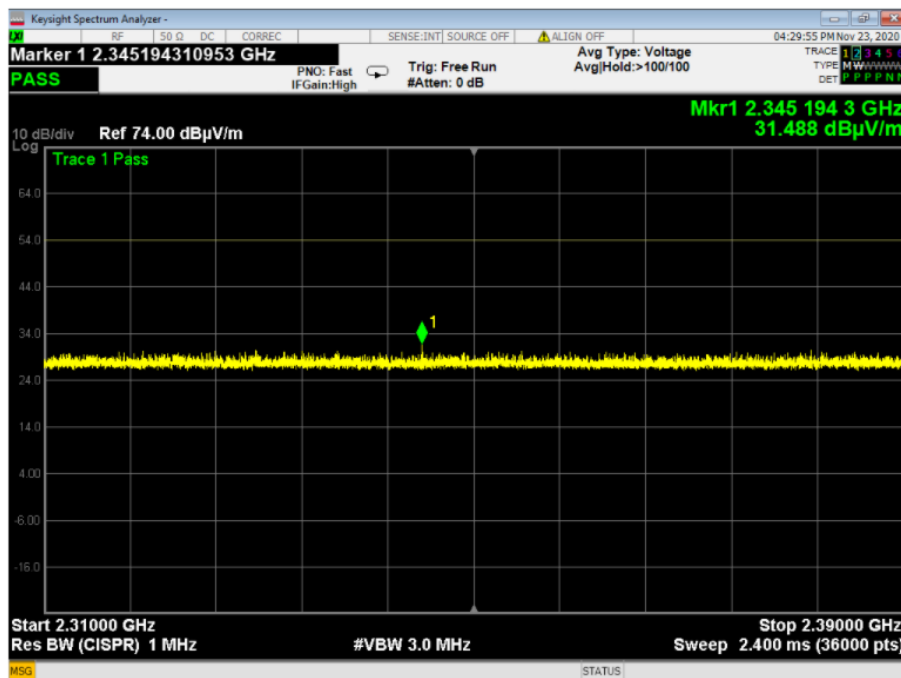
**Plot 3.5.13 Transmitter unwanted emissions in the spurious domain in 1.0 GHz – 18 GHz,
Horizontal polarization- BLE Fc=2480 MHz,**



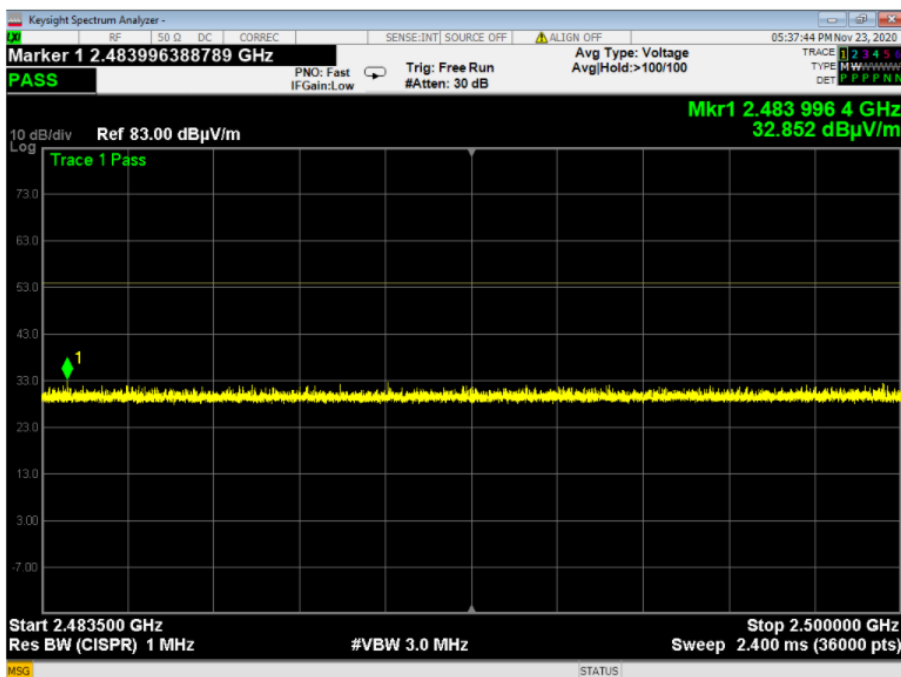
**Plot 4.5.14: Spurious Emissions in Restricted Bands, Single mode, Fc = 2402MHz,
Horizontal Polarization, 2310-2390MHz**



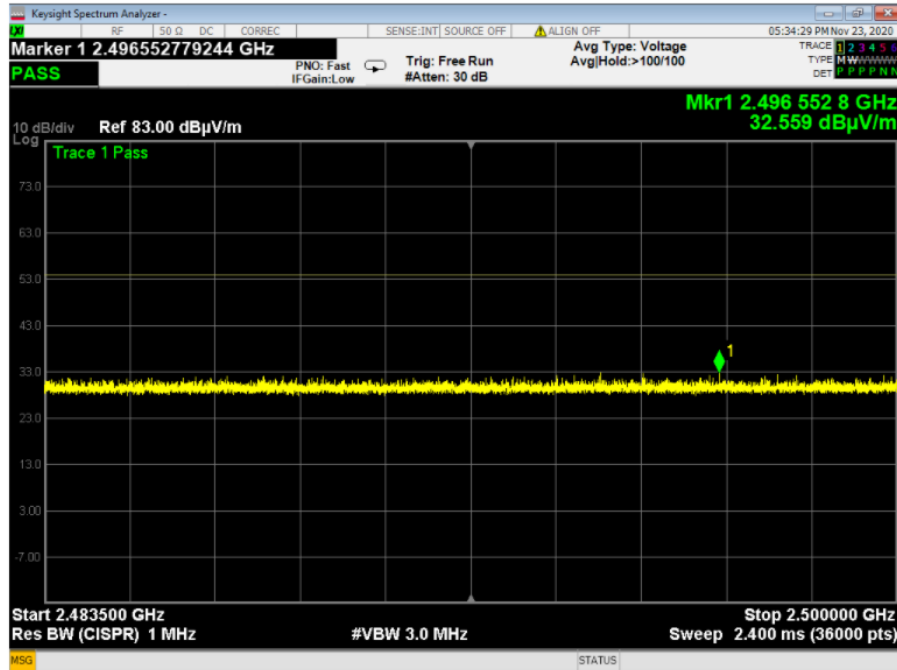
Plot 4.5.15: Spurious Emissions in Restricted Bands, Single mode, Fc = 2402MHz, Vertical Polarization 2310-2390MHz



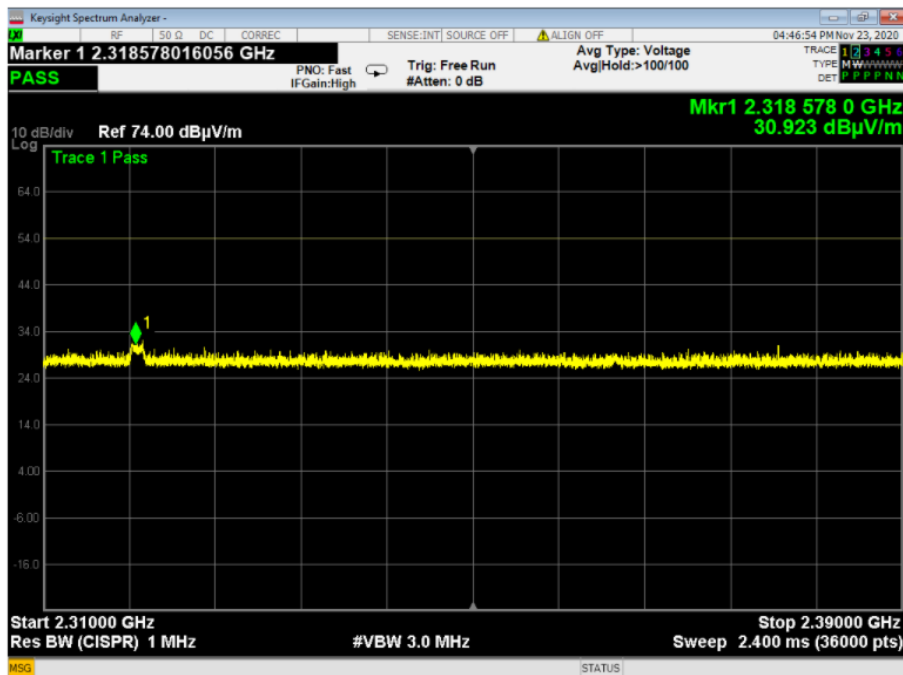
Plot 4.5.16: Spurious Emissions in Restricted Bands, Single mode, Fc = 2402MHz, Horizontal Polarization, 2483.5-2500MHz



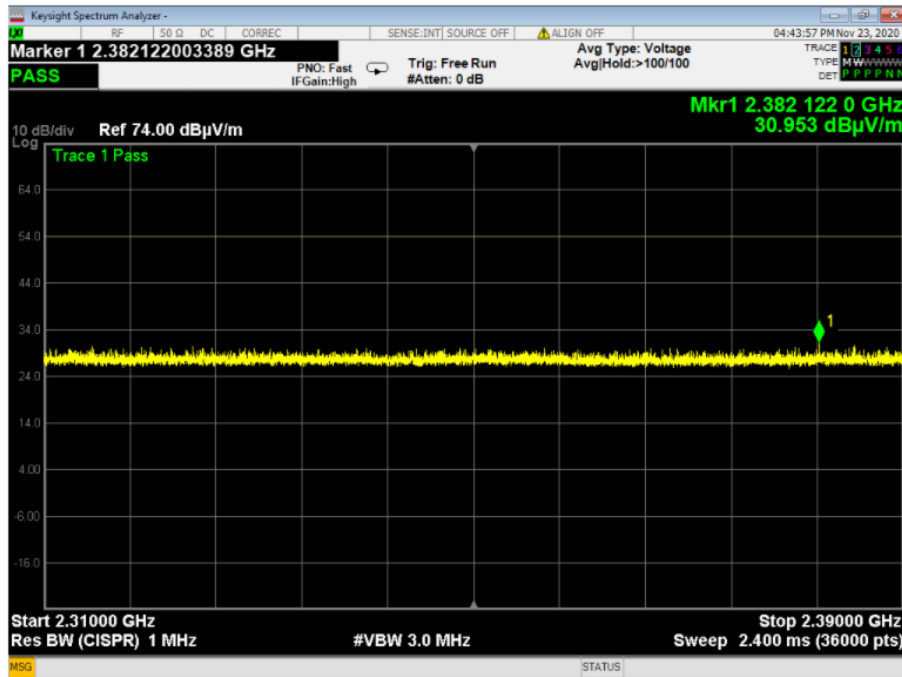
Plot 4.5.17: Spurious Emissions in Restricted Bands, Single mode, $F_c = 2402\text{MHz}$, Vertical Polarization 2483.5-2500MHz



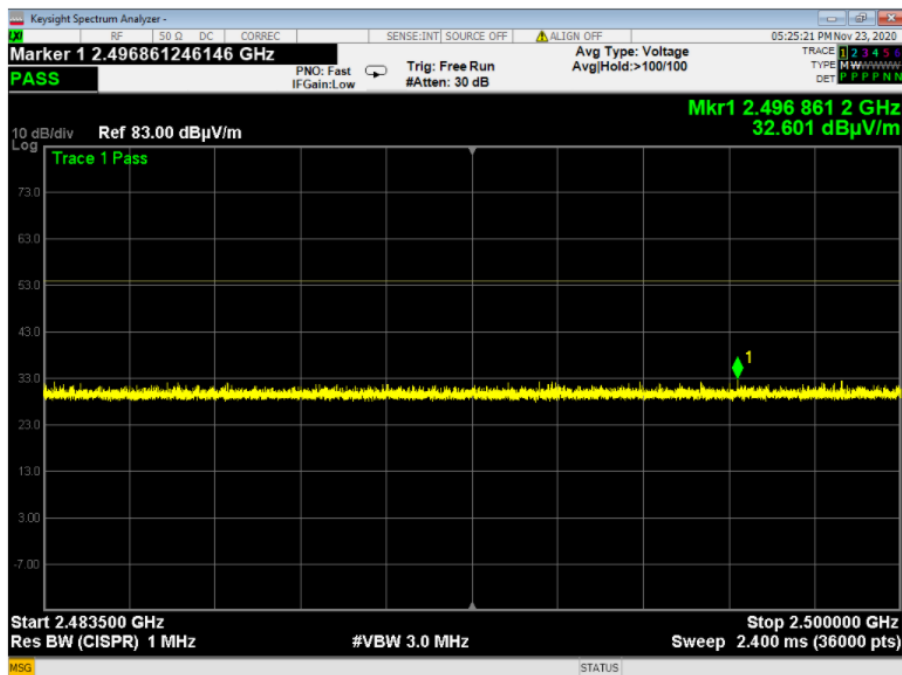
Plot 4.5.18 Spurious Emissions in Restricted Bands, Single mode, $F_c = 2440\text{MHz}$, Horizontal Polarization, 2310-2390MHz



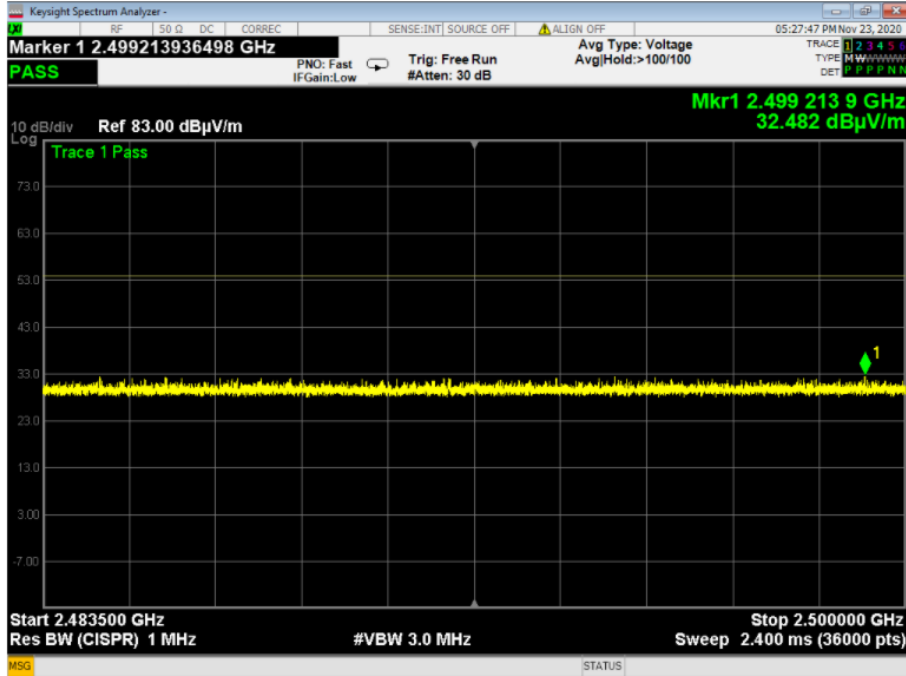
Plot 4.5.19: Spurious Emissions in Restricted Bands, Single mode, $F_c = 2440\text{MHz}$, Vertical Polarization 2310-2390MHz



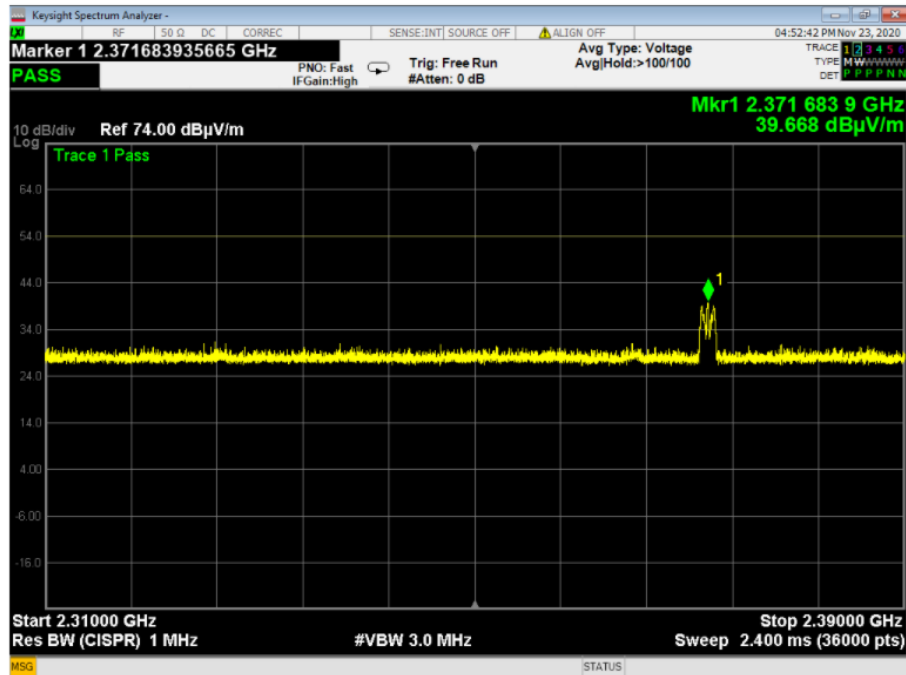
Plot 4.5.20: Spurious Emissions in Restricted Bands, Single mode, $F_c = 2440\text{MHz}$, Horizontal Polarization, 2483.5-2500MHz



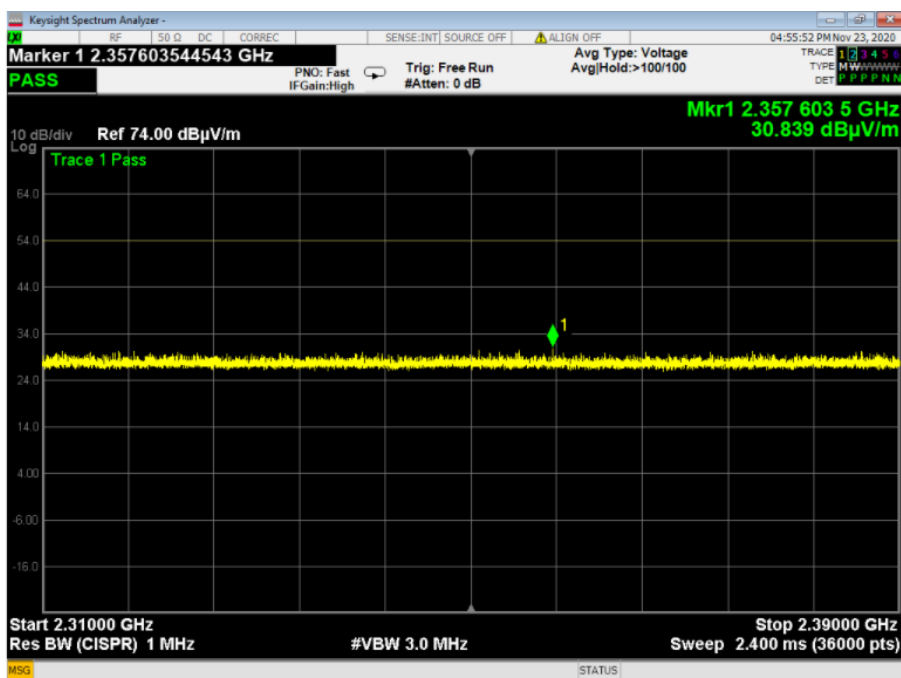
Plot 4.5.21: Spurious Emissions in Restricted Bands, Single mode, $F_c = 2440\text{MHz}$, Vertical Polarization 2483.5-2500MHz



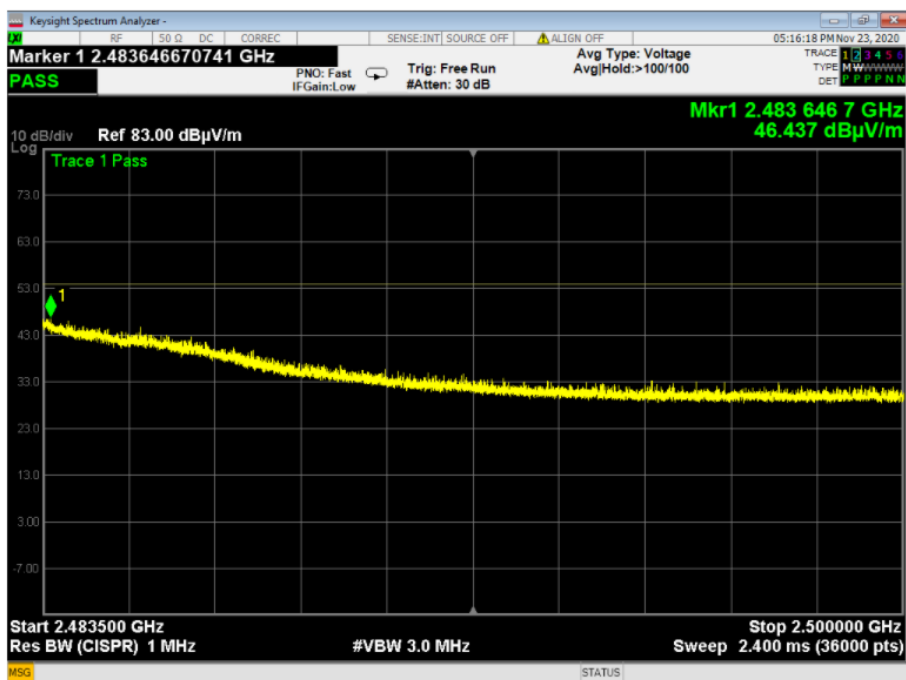
Plot 4.5.22: Spurious Emissions in Restricted Bands, Single mode, $F_c = 2480\text{MHz}$, Horizontal Polarization, 2310-2390MHz



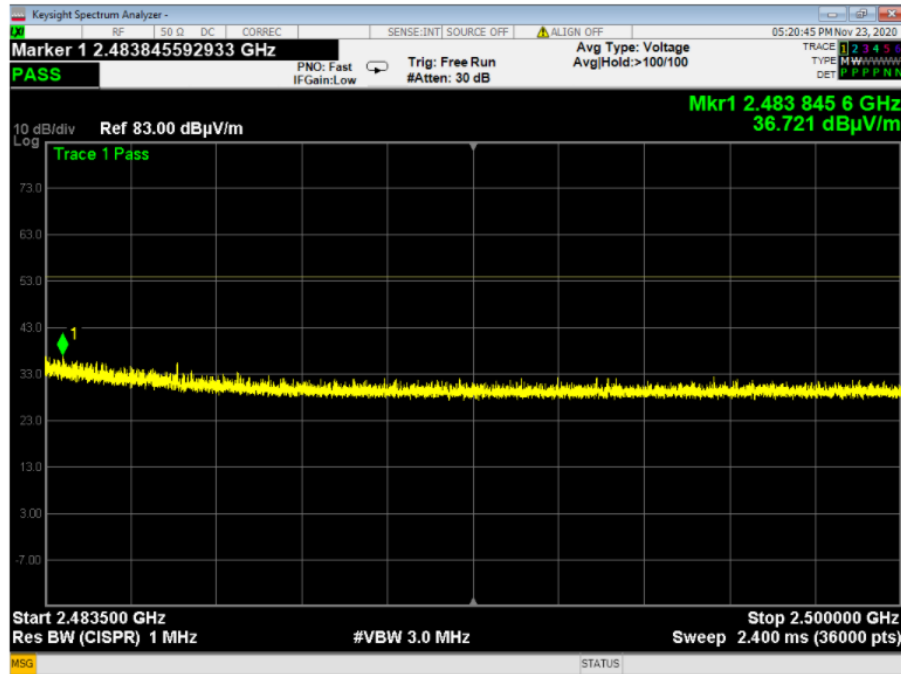
Plot 4.5.23: Spurious Emissions in Restricted Bands, Single mode, Fc = 2480MHz, Vertical Polarization 2310-2390MHz



Plot 4.5.24: Spurious Emissions in Restricted Bands, Single mode, $F_c = 2480\text{MHz}$, Horizontal Polarization, 2483.5-2500MHz



Plot 4.5.25: Spurious Emissions in Restricted Bands, Single mode, $F_c = 2480\text{MHz}$, Vertical Polarization 2483.5-2500MHz



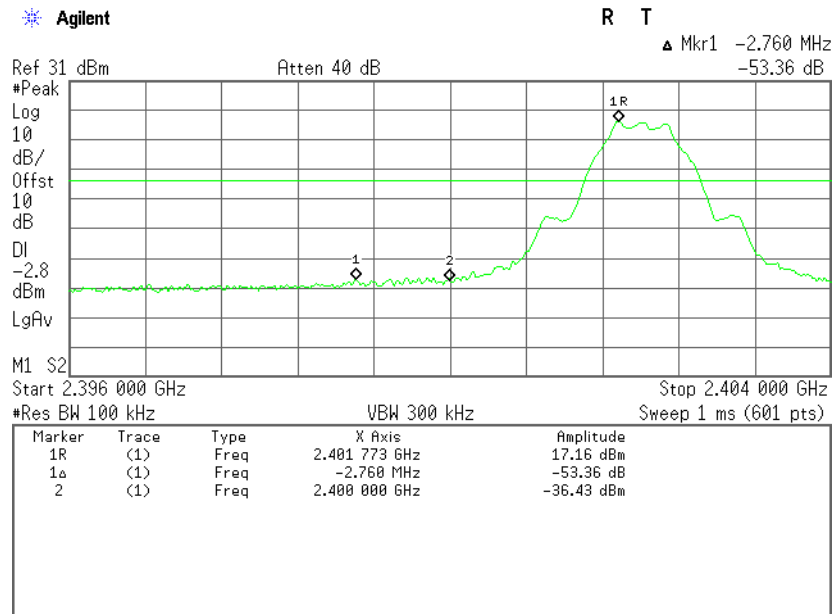
4.6. Band-edge compliance of RF conducted Emission

Reference document:	47 CFR §15.247 (d), ANSI C63.10:2013 section 11.13.2		
Test Requirements and limit:	In any 100 kHz bandwidth outside the frequency band in which the digitally modulated 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 30dB instead of 20dB. Attenuation below the general limits specified in Section §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)).		
Operating conditions:	Under normal test conditions	Pass	
Method of testing:	Radiated		
S.A. Settings:	RBW: 100kHz, VBW: 300kHz		
Hopping function:	NO		
Environment conditions:	Ambient Temperature: 23.6°C	Relative Humidity: 49.1%	Atmospheric Pressure: 1011.4 hPa
Test Result:	See below	See Plot 4.6.1 – Plot 4.6.2	

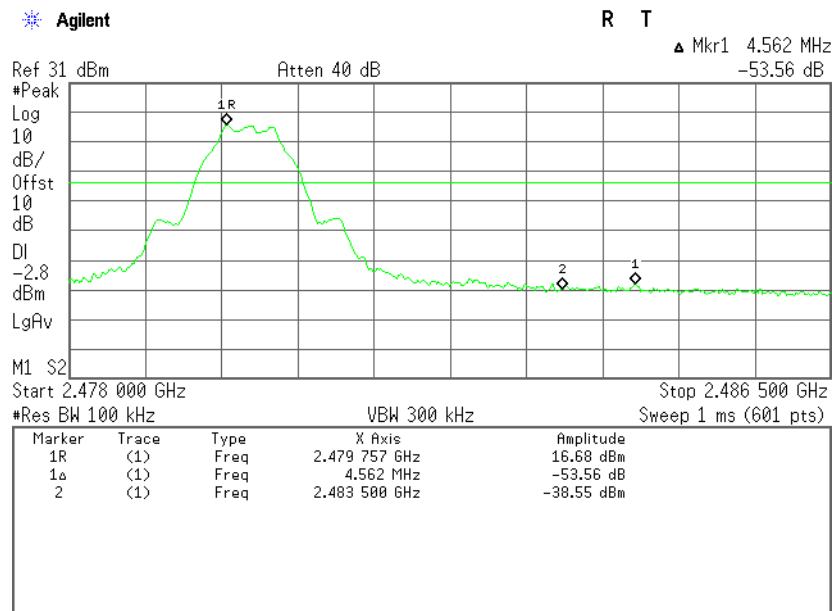
Test results

Channel	Measured emission, [dBc]	Limit, [dBc]	Margin(db)	Result
Low	53.36	20.00	33.36	Pass
High	53.56	20.00	33.56	Pass

Plot 4.6.1: Band-edge test results, GFSK, channel 0



Plot 4.6.2: Band-edge test results, GFSK, channel 39



4.7. Antenna Connector Requirements

Reference document:	47 CFR §15.203 RSS-Gen, Section 7.1.4
Test Requirements:	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 provisions of this section.
Verdict	Integral Antenna -Comply

5. Appendix

Appendix A: Test Photographs

Photograph 1: Radiated Emission Testing



Photograph 2: Radiated Emission Testing



Photograph 3: Radiated Emission Testing



Photograph 4: Conducted Emission Testing



Appendix B: List of Measuring Equipment used:

Description	Manufacturer	Model	Serial No.	Last Cal	Cal Due
Temp & Hum Meter	Zico	Zi-9622	141101658	20-02-2020	20-08-2021
Anechoic new (large) chamber	-----	-----	-----	11-02-2020	11-02-2022
Antenna, loop, 10 kHz to 30 MHz	EMCO	6502	3424	10-03-2020	10-03-2022
Bilog Antenna 30MHz - 1000MHz	Teseq	CBL 6141B	34119	18-03-2019	18-03-2022
Horn Antenna (EMM) 1-18GHz	A.R.A	DRG-118/A	17188	07-10-2020	07-10-2021
LNA 1-18GHz (New)	Spacek Labs	SL1018-56-5	17J29	08-01-2020	08-01-2021
MXE EMI RECEIVER 3Hz-44GHz	Keysight Technologies	N9038A	MY55420200	07-11-2019	07-08-2021
Spectrum Analyzer 3Hz-44GHz	Agilent	E4446A	MY43360126	14/01/2020	14/01/2022

Appendix C: Accreditation Certificate



Accredited Laboratory

A2LA has accredited

QUALITECH

Petah-Tikva, Israel

for technical competence in the field of

Electrical Testing

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 *General requirements for the competence of testing and calibration laboratories*. This accreditation demonstrates technical competence for a defined scope and the operation of a laboratory quality management system (refer to joint ISO-ILAC-IAF Communiqué dated April 2017).



Presented this 22nd day of December 2020.



Trace McInturf, Vice President, Accreditation Services
For the Accreditation Council
Certificate Number 1633.01
Valid to June 30, 2022

For the tests to which this accreditation applies, please refer to the laboratory's Electrical Scope of Accreditation.



End of the Test Report