TEST REPORT

Application No.:	SUCR2601000057WM
FCC ID:	2BEPUFMP204
Applicant:	FCNT LLC.
Address of Applicant:	Sanki Yamato Bldg. 3F, 7-10-1, Chuorinkan, Yamato-shi, Kanagawa, 242-0007, Japan
Manufacturer:	FCNT LLC.
Address of Manufacturer:	Sanki Yamato Bldg. 3F, 7-10-1, Chuorinkan, Yamato-shi, Kanagawa, 242-0007, Japan
Equipment Under Test (EUT):	
EUT Name:	Mobile Cellular Phone
Model No.:	F-52G,M09 ♣
♣	Please refer to section 2 of this report which indicates which model was actually tested and which were electrically identical.
Trade Mark:	arrows We3
Standard(s) :	47 CFR Part 15, Subpart C 15.247
Date of Receipt:	2026-01-22
Date of Test:	2026-01-23 to 2026-02-05
Date of Issue:	2026-03-23
Test Result:	**Pass***

* In the configuration tested, the EUT complied with the standards specified above.

Revision Record			
Version	**Description**	***Date***	***Remark***
00	Original	2026-02-27	/
01	1.Update test date This report is an updated version, replacing the report issued on February 27, 2026.	2026-03-23	/

Authorized for issue by:				
Tested By		Nature Shen **Nature Shen/Project Engineer**		
Approved By		Cedar cheng **Cedar Cheng /Reviewer**		

2 Test Summary

Radio Spectrum Technical Requirement				
Item	**Standard**	**Method**	**Requirement**	**Result**
Antenna Requirement	47 CFR Part 15, Subpart C 15.247	N/A	47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)	Pass

Radio Spectrum Matter Part				
Item	**Standard**	**Method**	**Requirement**	**Result**
Conducted Emissions at AC Power Line (150kHz-30MHz)	47 CFR Part 15, Subpart C 15.247	ANSI C63.10 (2020) Section 6.2	47 CFR Part 15, Subpart C 15.207	Pass
Radiated Emissions which fall in the restricted bands		ANSI C63.10 (2020) Section 6.10.5 & 11.12	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Radiated Spurious Emissions Below 1GHz		ANSI C63.10 (2020) Section 6.4,6.5	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Radiated Spurious Emissions Above 1GHz		ANSI C63.10 (2020) Section 6.6 & 11.12	47 CFR Part 15, Subpart C 15.205 & 15.209	Pass
Maximum Conducted Output Power		ANSI C63.10 (2020) Section 11.9.1	47 CFR Part 15, Subpart C 15.247(b)(3)	Pass
Minimum 6dB Bandwidth		ANSI C63.10 (2020) Section 11.8.1	47 CFR Part 15, Subpart C 15.247a(2)	Pass
Power Spectral Density		ANSI C63.10 (2020) Section 11.10.2	47 CFR Part 15, Subpart C 15.247(e)	Pass
Conducted Band Edges Measurement		ANSI C63.10 (2020) Section 6.10.4	47 CFR Part 15, Subpart C 15.247(d)	Pass
Conducted Spurious Emissions		ANSI C63.10 (2020) Section 11.11	47 CFR Part 15, Subpart C 15.247(d)	Pass

Remark: F-52G and M09 are the same product with identical prototypes, and only different model names are used for adaptation to different operators. This test involves two samples, and the differences between the prototypes can be referred to the Operational Description of Product Equality Declaration submitted separately. We selected Sample 1 to conduct a full test and completed the verification of Sample 2 against the differential points.

3 Contents

4 General Information

4.1 Details of E.U.T.

Hardware Version:	DVT2
Software Version:	sbuya_jp_sys-userdebug 16 W3WG36.28 0b7a4-0a61df intcfg,test-keys MW-368
IMEI:	Sample 1:355156190039348,355156190040122 Sample 2:355156190062142
Power supply:	5V
Operation Frequency:	2402MHz to 2480MHz
Bluetooth Version:	V5.4 LE
Modulation Type:	GFSK
Number of Channels:	40
Channel Spacing:	125kHz/500kHz/1MHz/2MHz
Antenna Type:	PIFA Antenna
Antenna Gain:	0.7dBi (Provided by the manufacturer)
Antenna Number:	1
Note:Bluetooth LE 125k/500k/1Mbps uses the same modulation, and 1Mbps was found to be the worst case scenario which was performed full test and recorded in this test report.	

4.2 Environment Parameter

Environment Parameter	Selected Values During Tests	
Relative Humidity	Ambient	
Value	Temperature(°C)	Voltage(V)
NTNV	25	3.91
Note: NV:Normal Voltage NT:Normal Temperature		

4.3 Description of Support Units

Description	Manufacturer	Model No.	Serial No.
Computer	Lenovo	T14	2YK6GR
Mouse	Lenovo	3D optical Mouse	N/A

4.4 Measurement Uncertainty & Decision Rule

No.	Item	Measurement Uncertainty
1	Radio Frequency	± 7.25 x 10^{-8}
2	Duty cycle	± 0.37%
3	Occupied Bandwidth	± 3%
4	Conduction emission	± 3.0dB (150kHz to 30MHz)
5	RF conducted power	± 0.75dB
6	RF power density	± 2.84dB
7	Conducted Spurious emissions	± 0.75dB
8	RF Radiated power	±1.56dB (9KHz-30MHz)
		±4.80dB (30MHz-1GHz)
		±4.80dB (1GHz-18GHz)
		±4.80dB (18GHz-40GHz)
9	Temperature test	± 1°C
10	Humidity test	± 3%
11	Supply voltages	± 1%
12	Time	± 3%

Remark:
The U_{lab} (lab Uncertainty) is less than $U_{cispr/ETSI}$ (CISPR/ETSI Uncertainty), so the test results
– compliance is deemed to occur if no measured disturbance level exceeds the disturbance limit;
– non-compliance is deemed to occur if any measured disturbance level exceeds the disturbance limit.

4.5 Test Location

All tests were performed at:

SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.

South of No. 6 Plant, No. 1, Runsheng Road, Suzhou Industrial Park, Suzhou Area, China (Jiangsu) Pilot Free Trade Zone

No tests were sub-contracted.

Note:

1.SGS is not responsible for wrong test results due to incorrect information (e.g., max. internal working frequency, antenna gain, cable loss, etc) is provided by the applicant. (If applicable).

2.SGS is not responsible for the authenticity, integrity and the validity of the conclusion based on results of the data provided by applicant. (If applicable).

3. Sample source: sent by customer.

4.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

• A2LA (Certificate No. 6336.01)

SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd.is accredited by the American Association for Laboratory Accreditation (A2LA).

• FCC (Designation Number: CN1312)

SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd. has been recognized as an accredited testing laboratory. Test Firm Registration Number:717327

• ISED (CAB Identifier: CN0120)

SGS-CSTC Standards Technical Services (Suzhou) Co., Ltd. has been recognized by Innovation, Science and Economic Development Canada (ISED) as an accredited testing laboratory.

Company Number: 27594

4.7 Deviation from Standards

None

4.8 Abnormalities from Standard Conditions

None

5 Equipment List

Item	Equipment	Manufacturer	Model	Inventory No	Cal Date	Cal. Due Date
Conducted Emission at Mains Terminals						
1	EMI Test Receive	R&S	ESR7	SUWI-01-10-01	1/14/2026	1/13/2027
2	LISN	R&S	ENV216	SUWI-01-19-03	5/8/2025	5/7/2026
3	LISN	Schwarzbeck	ENV216	SUWI-01-19-04	5/8/2025	5/7/2026
4	Test Software	Tonscend	JS32-CE_4.0.0.2	SUWI-02-09-05	N.C.R	N.C.R
RF Conducted Test						
1	Signal Analyzer	ROHDE&SCHWARZ	FSW43	SUWI-01-02-04	1/14/2026	1/13/2027
2	Signal Analyzer	KEYSIGHT	N9020A	SUWI-01-02-15	11/21/2025	11/20/2026
3	MXG Vector signal genitor	KEYSIGHT	N5182B	SUWI-01-38-01	1/14/2026	1/13/2027
4	Signal Generator	ROHDE&SCHWARZ	SMW200A	SUWI-01-07-08	1/14/2026	1/13/2027
5	Signal Generator	ROHDE&SCHWARZ	SMW100A	SUWI-01-08-01	1/14/2026	1/13/2027
6	MXG Vector Signal Generator	ROHDE&SCHWARZ	SMR20	SUWI-01-33-01	11/21/2025	11/20/2026
7	Wideband Radio Communication Tester	ROHDE&SCHWARZ	CMW500	SUWI-01-16-13	5/8/2025	5/7/2026
8	Wideband Radio Communication Test Station	Anritsu	MT8000A	SUWI-01-34-02	11/21/2025	11/20/2026
9	Wideband Radio Communication Tester	Anritsu	MT8821C	SUWI-01-26-03	11/21/2025	11/20/2026
10	Power meter	Anritsu	ML2495A	SUWI-01-31-01	11/21/2025	11/20/2026
11	Pulse power sensor	Anritsu	MA2411B	SUWI-01-32-01	11/21/2025	11/20/2026
12	DC Power Supply	HYELEC	HY3005B	SUWI-01-18-01	1/14/2026	1/13/2027
13	Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-07	2/13/2025	2/12/2026
14	Temperature Chamber	GIANT FORCE	ICT-017-40-SP-SD	SUWI-01-13-02	5/7/2025	5/6/2026
15	Measurement Software	TST	TST 272 V2.02	SUWI-03-55-03	NCR	NCR
16	RF Control unit	TST	TSCB3023R2	SUWI-02-20-01	NCR	NCR
17	RFCables	Tonscend	NA	SUWI-01-03-01	NCR	NCR
RF Radiated Test						
1	Semi-Anechoic Chamber	Brilliant-emc	N/A	SUWI-04-02-01	6/3/2023	6/2/2026
2	Signal Analyzer	ROHDE&SCHWARZ	FSW43	SUWI-01-02-04	1/14/2026	1/13/2027

3	Signal Analyzer	KEYSIGHT	N9020A	SUWI-01-02-09	11/21/2025	11/20/2026
4	Test receiver	ROHDE&SCHWARZ	ESR7	SUWI-01-10-01	1/14/2026	1/13/2027
5	Signal Generator	ROHDE&SCHWARZ	SMW100A	SUWI-01-18-01	1/14/2026	1/13/2027
6	Receiving antenna	SCHWRZBECK MESS-ELEKTRONIK	VULB 9168	SUWI-01-11-04	9/10/2025	9/9/2027
7	Receiving antenna	SCHWRZBECK MESS-ELEKTRONIK	BBHA 9120D	SUWI-01-11-02	5/7/2025	5/6/2027
8	Receiving antenna	SCHWRZBECK MESS-ELEKTRONIK	BBHA 9170	SUWI-01-11-03	5/7/2025	5/6/2027
9	Active Loop Antenna	SCHWRZBECK MESS-ELEKTRONIK	FMZB 1519B	SUWI-01-21-01	5/7/2025	5/6/2027
10	Amplifier	Tonscend	TAP9K3G40	SUWI-01-14-01	1/14/2026	1/13/2027
11	Amplifier	Tonscend	TAP01018050	SUWI-01-14-02	1/14/2026	1/13/2027
12	Amplifier	Tonscend	TAP18040048	SUWI-01-14-03	1/14/2026	1/13/2027
13	Wideband Radio Communication Tester	Anritsu	MT8820C	SUWI-01-26-01	11/21/2025	11/20/2026
14	Wideband Radio Communication Tester	Anritsu	MT8821C	SUWI-01-26-03	8/25/2025	8/24/2026
15	Wideband Radio Communication Tester	ROHDE&SCHWARZ	CMW500	SUWI-01-16-09	8/26/2025	8/25/2026
16	Radio Communication Analyzer	StarPoint	SP9500E	SUWI-01-28-02	11/21/2025	11/20/2026
17	Signal Generator	ROHDE&SCHWARZ	SMB100A	SUWI-01-08-01	1/14/2026	1/13/2027
18	DC Power Supply	HYELEC	HY3005B	SUWI-01-18-01	1/14/2026	1/13/2027
19	Temperature and humidity meter	MingGao	TH101B	SUWI-01-01-05	2/13/2025	2/12/2026
20	Measurement Software	Tonscend	JS32-RE 4.0.0.0	SUWI-02-09-06	NCR	NCR
21	RF Control unit	Tonscend	JS0806-1	SUWI-02-20-01	NCR	NCR
22	RFCables	Tonscend	NA	SUWI-01-03-02	NCR	NCR

6 Radio Spectrum Technical Requirement

6.1 Antenna Requirement

6.1.1 Test Requirement:

47 CFR Part 15, Subpart C 15.203 & 15.247(b)(4)

6.1.2 Conclusion

Standard Requirement: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, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.15.247(b) (4) requirement:The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:

The antenna is PIFA Antenna and no consideration of replacement. The best case gain of the antenna is 0.7dBi.

Antenna location: Refer to internal photo.

7 Radio Spectrum Matter Test Results

7.1 Conducted Emissions at AC Power Line (150kHz-30MHz)

Test Requirement 47 CFR Part 15, Subpart C 15.207

Test Method: ANSI C63.10 (2020) Section 6.2

Limit:

Frequency of emission(MHz)	Conducted limit(dBμV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50
*Decreases with the logarithm of the frequency.		
Detector: Peak for pre-scan (9kHz resolution bandwidth) 0.15M to 30MHz		

7.1.1 E.U.T. Operation

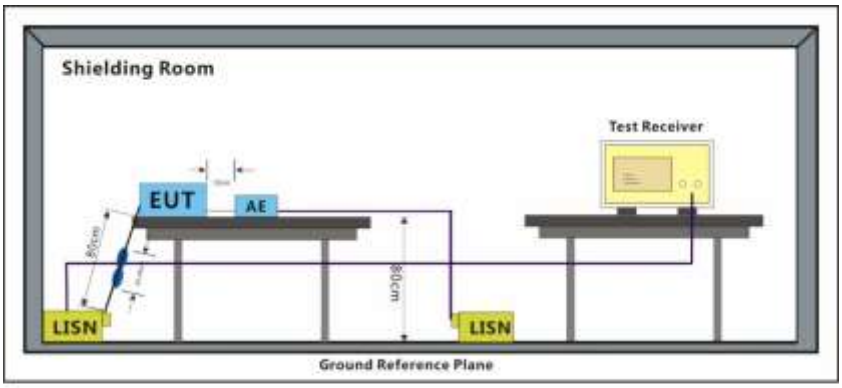
Operating Environment:

Temperature: 23 °C Humidity: 44 % RH Atmospheric Pressure: 1001 mbar

7.1.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode(1Mbps)_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.
Pre-scan	05	TX mode(2Mbps)_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.

7.1.3 Test Setup Diagram



7.1.4 Measurement Procedure and Data

1) The mains terminal disturbance voltage test was conducted in a shielded room.

2) The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a 50ohm/50μH + 5ohm linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.

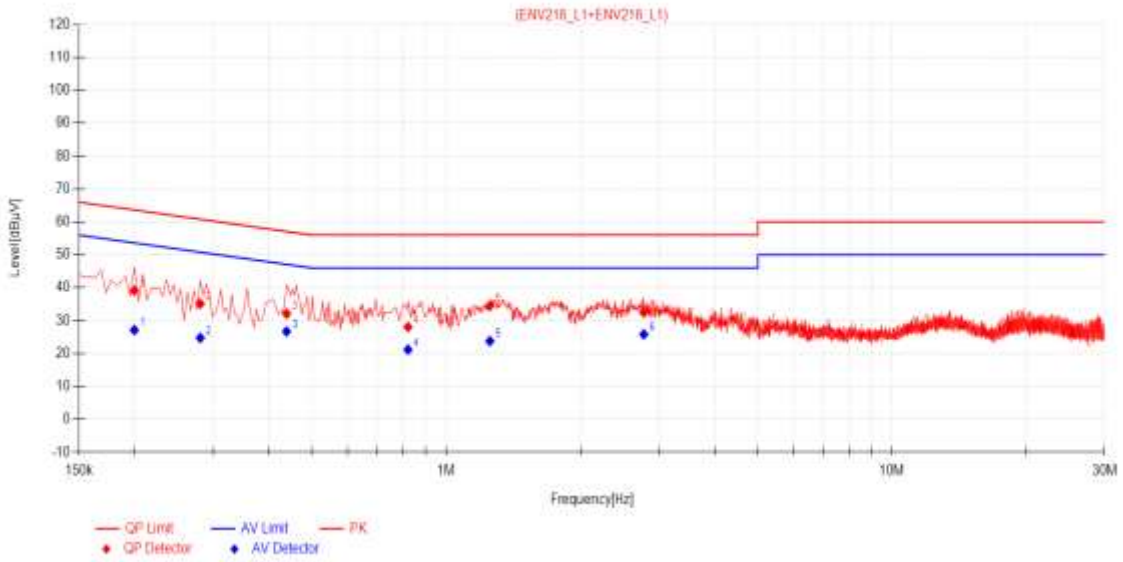
3) The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane.

4) The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0.4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0.8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0.8 m from the LISN 2.

5) In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10 on conducted measurement.

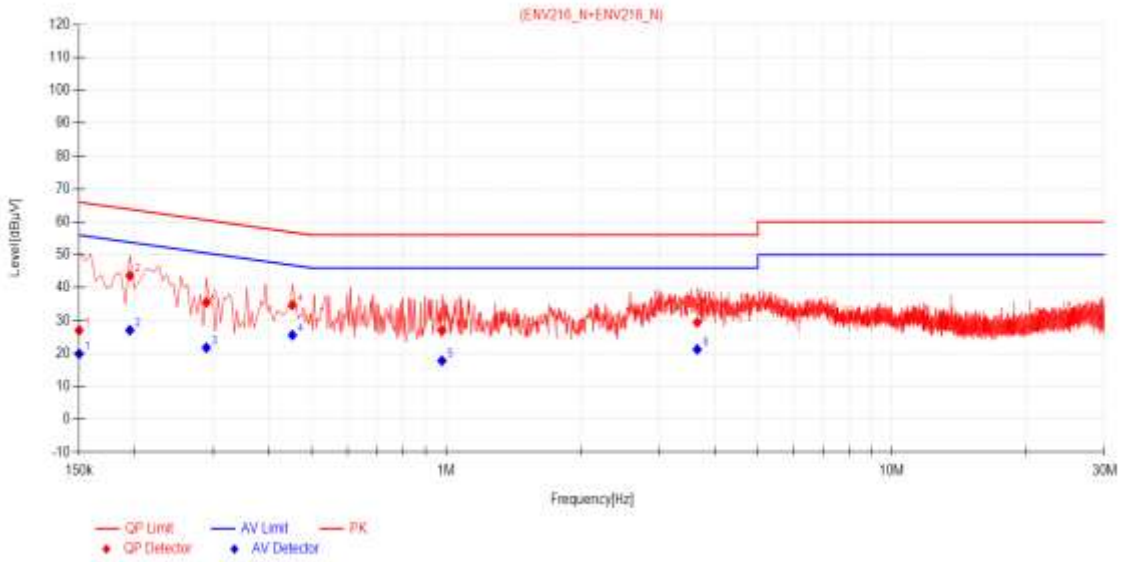
Remark : Level=Read Level+ Cable Loss+ LISN Factor

Test Mode: 04; Line: Live line



Final Data List											
NO.	Frequency [MHz]	Factor [dB]	QP Reading [dBµV]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Reading [dBµV]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Verdict
1	0.1995	9.97	29.15	39.12	63.63	24.51	17.18	27.15	53.63	26.48	PASS
2	0.2805	9.96	25.20	35.16	60.80	25.64	14.79	24.75	50.80	26.05	PASS
3	0.4380	9.95	22.17	32.12	57.10	24.98	16.77	26.72	47.10	20.38	PASS
4	0.8205	9.91	18.18	28.09	56.00	27.91	11.27	21.18	46.00	24.82	PASS
5	1.2525	9.89	24.61	34.50	56.00	21.50	13.89	23.78	46.00	22.22	PASS
6	2.7735	9.91	22.56	32.47	56.00	23.53	15.92	25.83	46.00	20.17	PASS

Test Mode: 04; Line: Neutral Line



Final Data List											
NO.	Frequency [MHz]	Factor [dB]	QP Reading [dBµV]	QP Value [dBµV]	QP Limit [dBµV]	QP Margin [dB]	AV Reading [dBµV]	AV Value [dBµV]	AV Limit [dBµV]	AV Margin [dB]	Verdict
1	0.1500	9.95	17.09	27.04	66.00	38.96	9.96	19.91	56.00	36.09	PASS
2	0.1950	9.94	33.70	43.64	63.82	20.18	17.15	27.09	53.82	26.73	PASS
3	0.2895	9.99	25.53	35.52	60.54	25.02	11.78	21.77	50.54	28.77	PASS
4	0.4515	9.94	24.73	34.67	56.85	22.18	15.67	25.61	46.85	21.24	PASS
5	0.9780	9.94	17.05	26.99	56.00	29.01	7.88	17.82	46.00	28.18	PASS
6	3.6555	9.93	19.52	29.45	56.00	26.55	11.35	21.28	46.00	24.72	PASS

7.2 Radiated Emissions which fall in the restricted bands

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209

Test Method: ANSI C63.10 (2020) Section 6.10.5 & 11.12

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3
Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.		

7.2.1 E.U.T. Operation

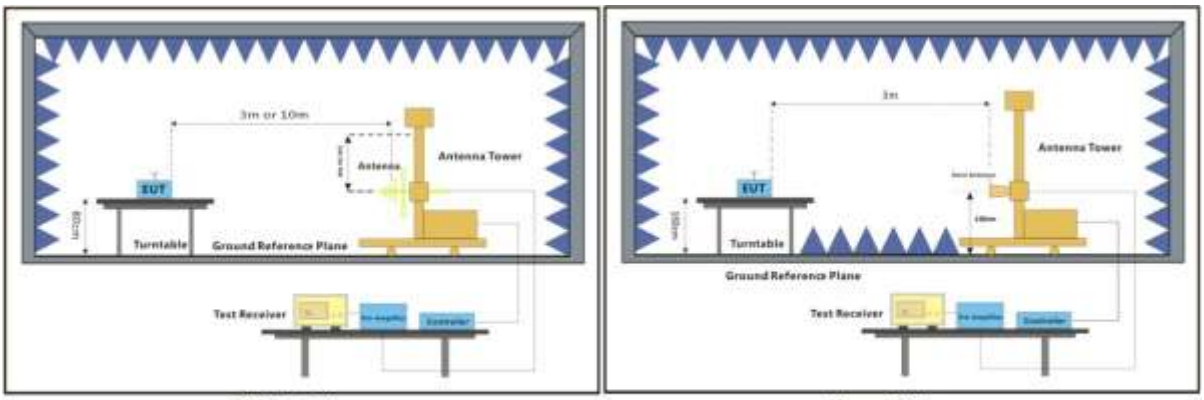
Operating Environment:

Temperature: 23 °C Humidity: 44 % RH Atmospheric Pressure: 1001 mbar

7.2.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode(1Mbps)_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.
Final test	05	TX mode(2Mbps)_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.

7.2.3 Test Setup Diagram



30MHz-1GHz　　Above 1GHz

7.2.4 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 or 10 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

c. The EUT was set 3 or 10 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

d. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

f. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

g. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

h. Test the EUT in the lowest channel, the middle channel, the Highest channel.

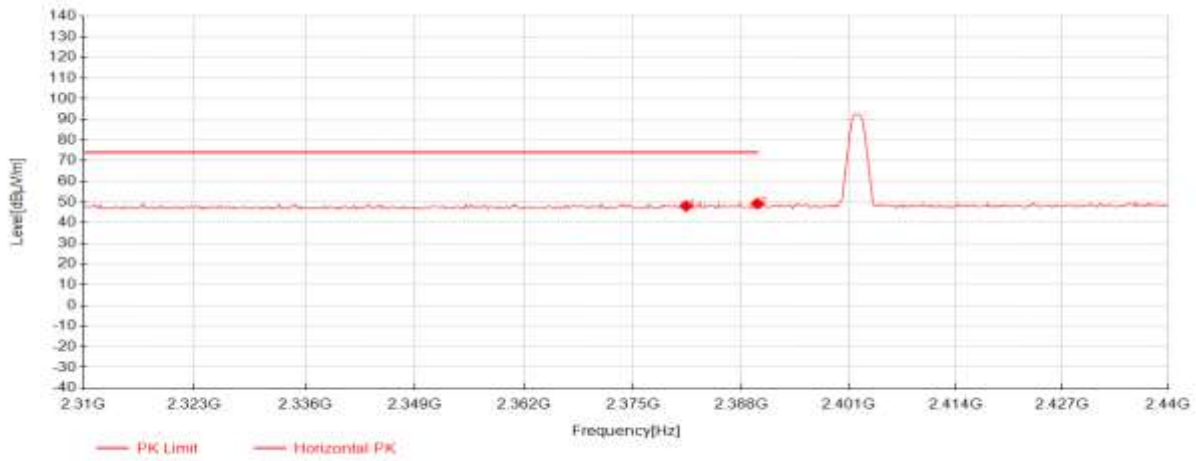
i. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

j. Repeat above procedures until all frequencies measured was complete.

Remark 1: Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor

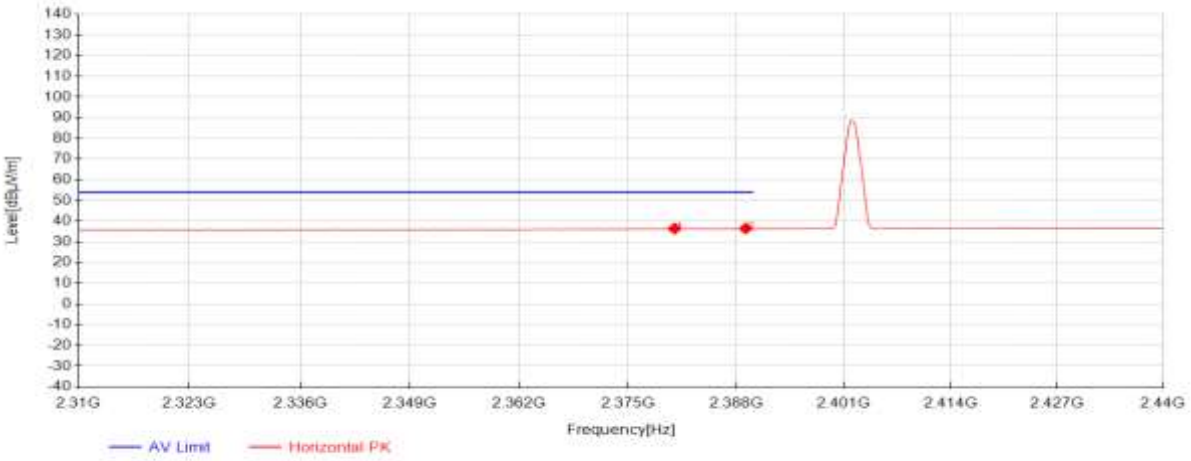
Remark 2: For frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

BLE_1M_TX_CH_00_Horizontal_Peak



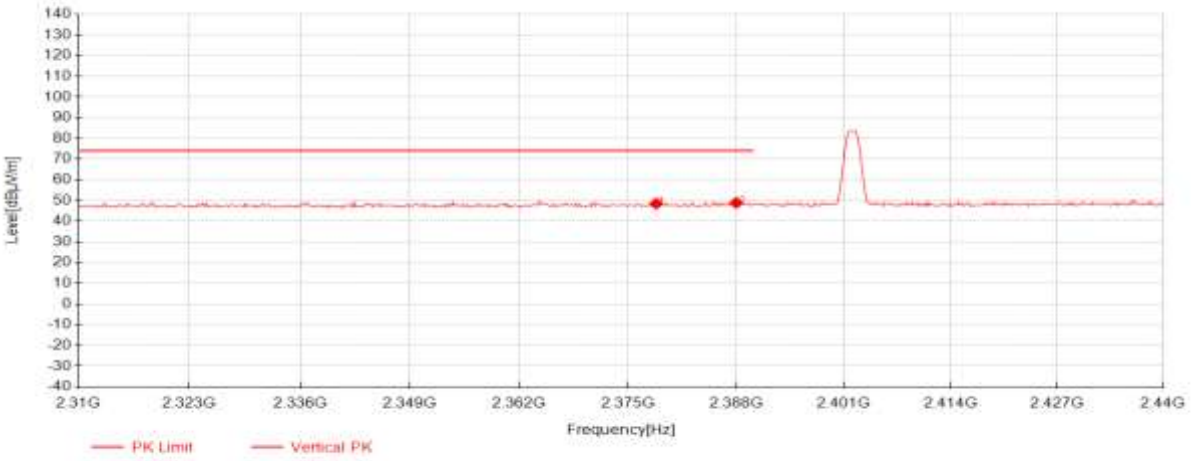
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2381.37	45.70	27.27	-24.82	48.14	74.00	25.86	Horizontal
2	2389.95	46.78	27.29	-24.82	49.25	74.00	24.75	Horizontal

BLE_1M_TX_CH_00_Horizontal_Average



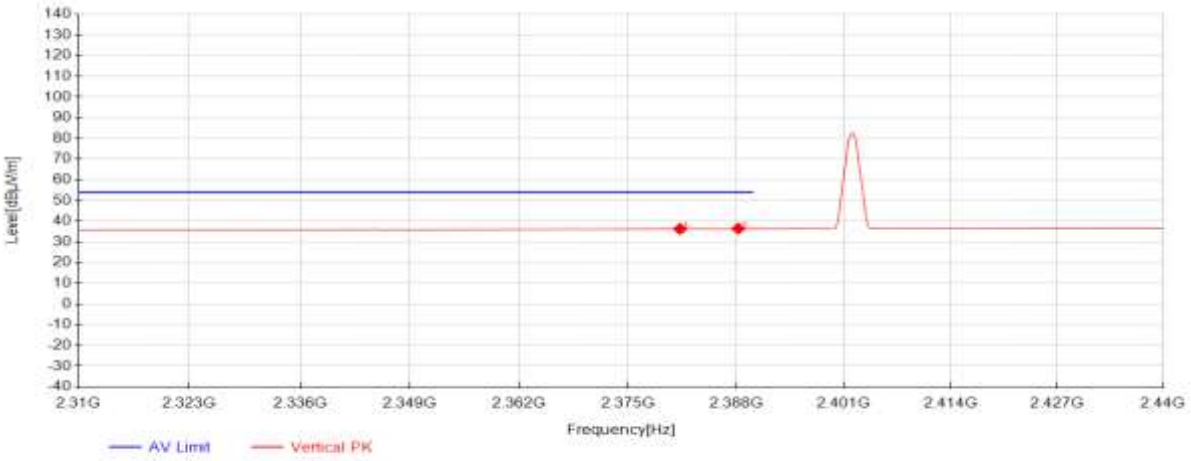
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2380.59	33.97	27.27	-24.82	36.41	54.00	17.59	Horizontal
2	2389.17	34.05	27.29	-24.82	36.52	54.00	17.48	Horizontal

BLE_1M_TX_CH_00_Vertical_Peak



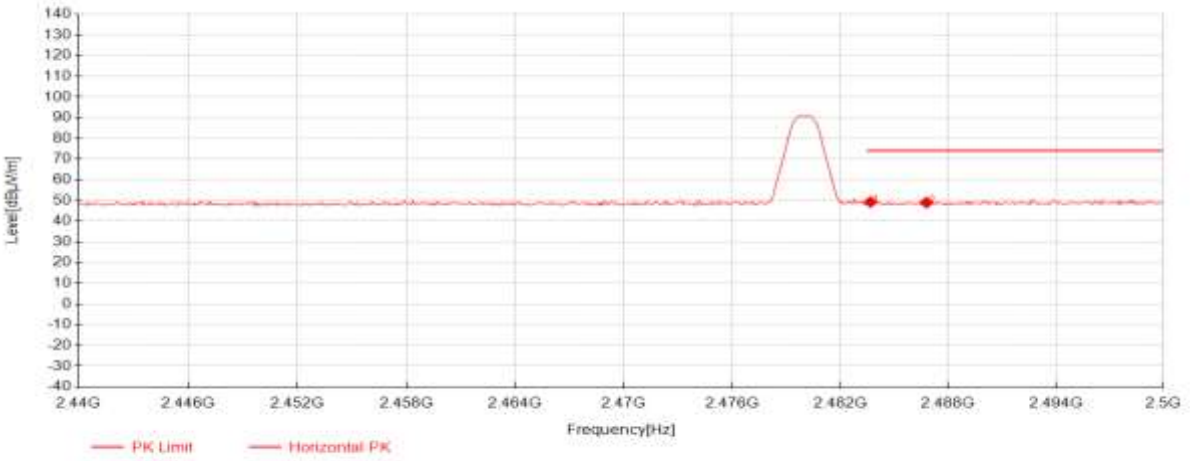
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2378.38	46.06	27.26	-24.83	48.49	74.00	25.51	Vertical
2	2388	46.42	27.29	-24.82	48.89	74.00	25.11	Vertical

BLE_1M_TX_CH_00_Vertical_Average



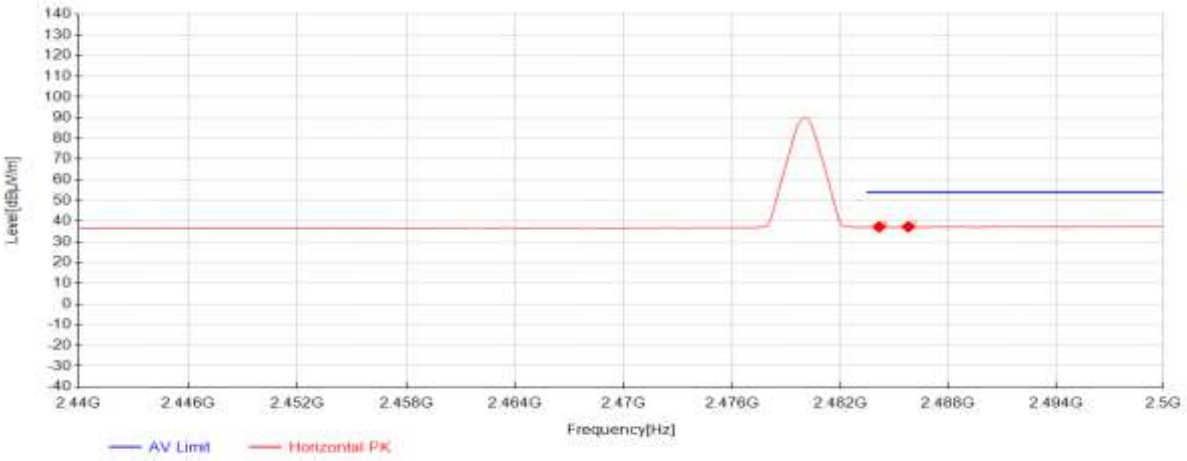
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2381.24	33.85	27.27	-24.82	36.29	54.00	17.71	Vertical
2	2388.26	33.99	27.29	-24.82	36.46	54.00	17.54	Vertical

BLE_1M_TX_CH_39_Horizontal_Peak



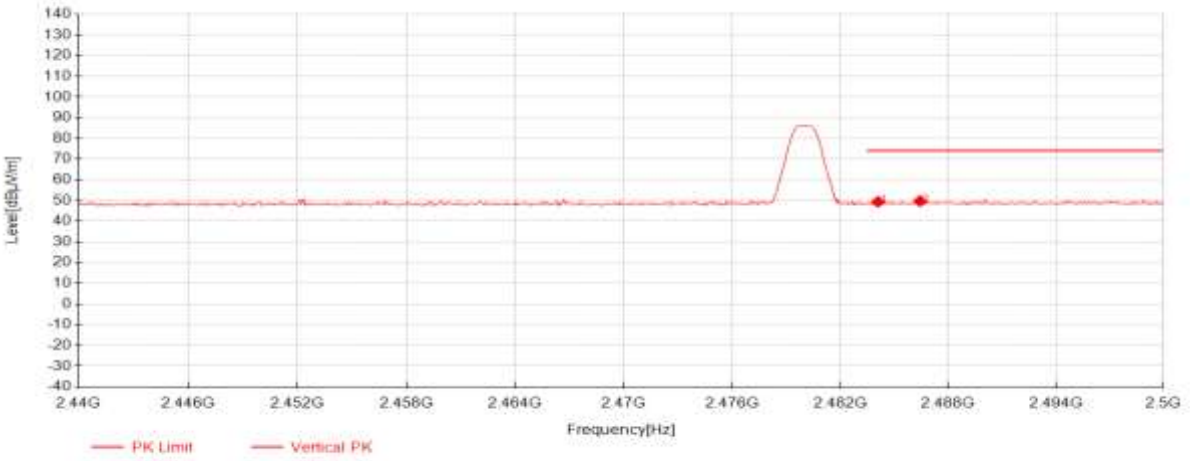
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2483.68	46.36	27.55	-24.63	49.28	74.00	24.72	Horizontal
2	2486.8	46.07	27.56	-24.63	49.01	74.00	24.99	Horizontal

BLE_1M_TX_CH_39_Horizontal_Average



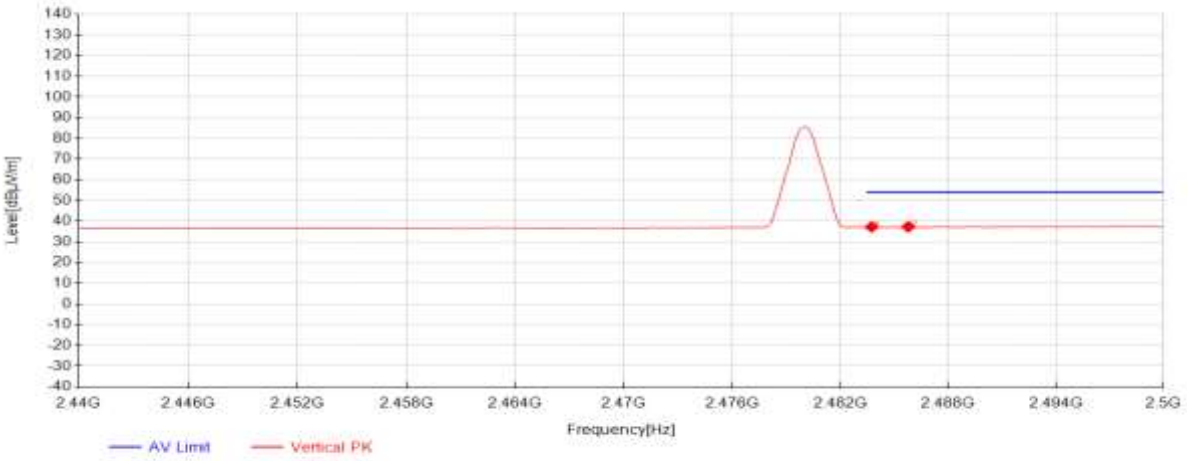
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2484.16	34.38	27.56	-24.63	37.30	54.00	16.70	Horizontal
2	2485.78	34.40	27.56	-24.63	37.33	54.00	16.67	Horizontal

BLE_1M_TX_CH_39_Vertical_Peak



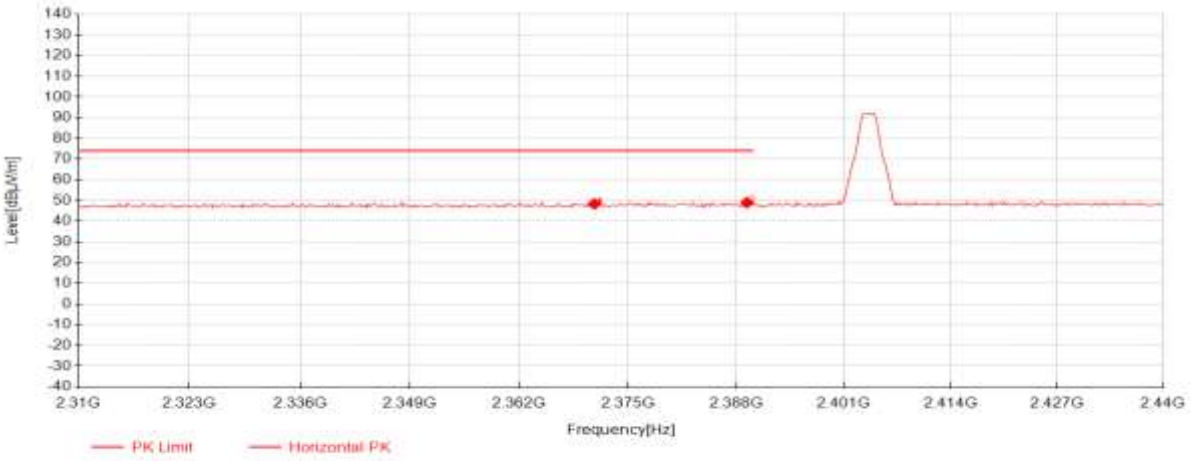
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2484.1	46.46	27.56	-24.63	49.38	74.00	24.62	Vertical
2	2486.44	46.80	27.56	-24.63	49.73	74.00	24.27	Vertical

BLE_1M_TX_CH_39_Vertical_Average



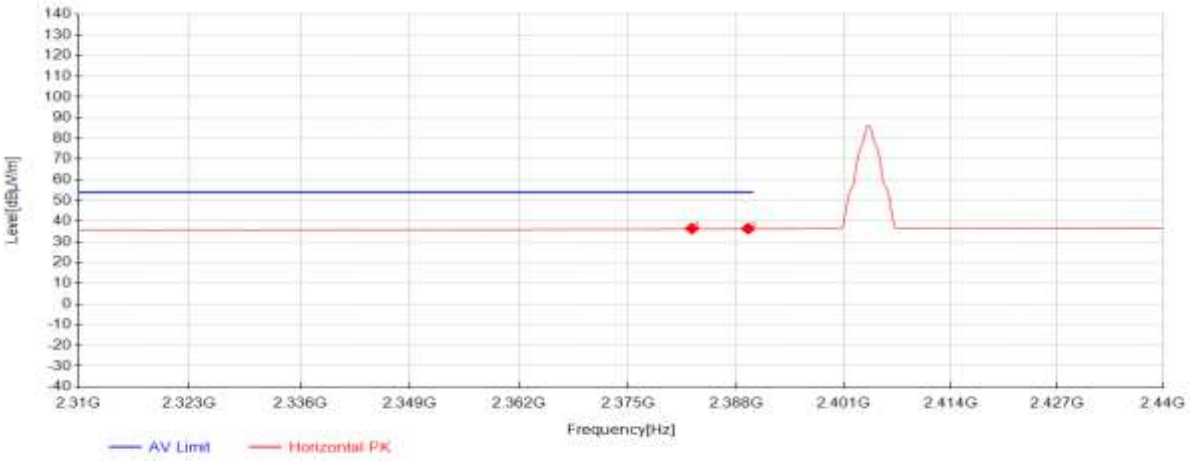
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2483.74	34.35	27.55	-24.63	37.27	54.00	16.73	Vertical
2	2485.78	34.38	27.56	-24.63	37.31	54.00	16.69	Vertical

BLE_2M_TX_CH_01_Horizontal_Peak



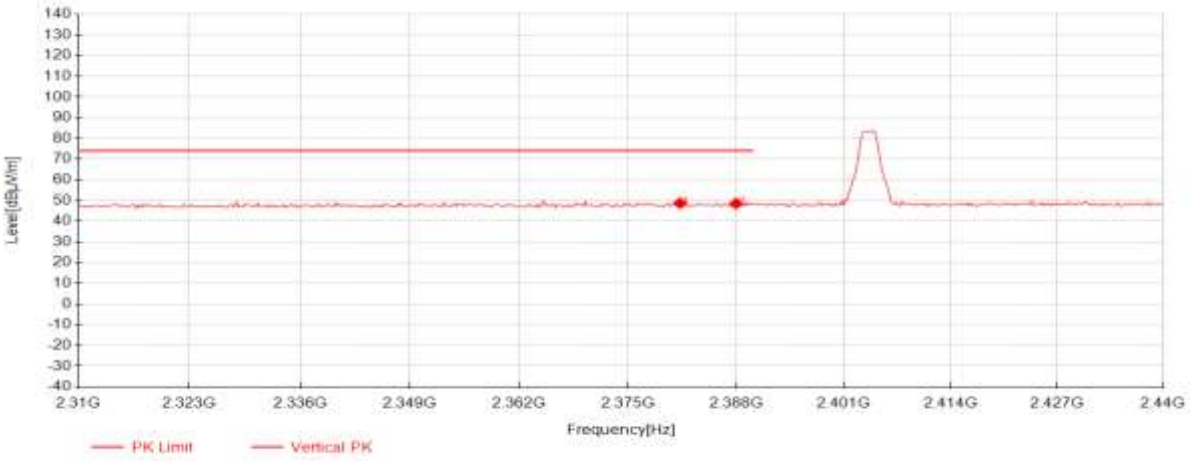
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2370.97	45.95	27.24	-24.83	48.36	74.00	25.64	Horizontal
2	2389.3	46.50	27.29	-24.82	48.97	74.00	25.03	Horizontal

BLE_2M_TX_CH_01_Horizontal_Average



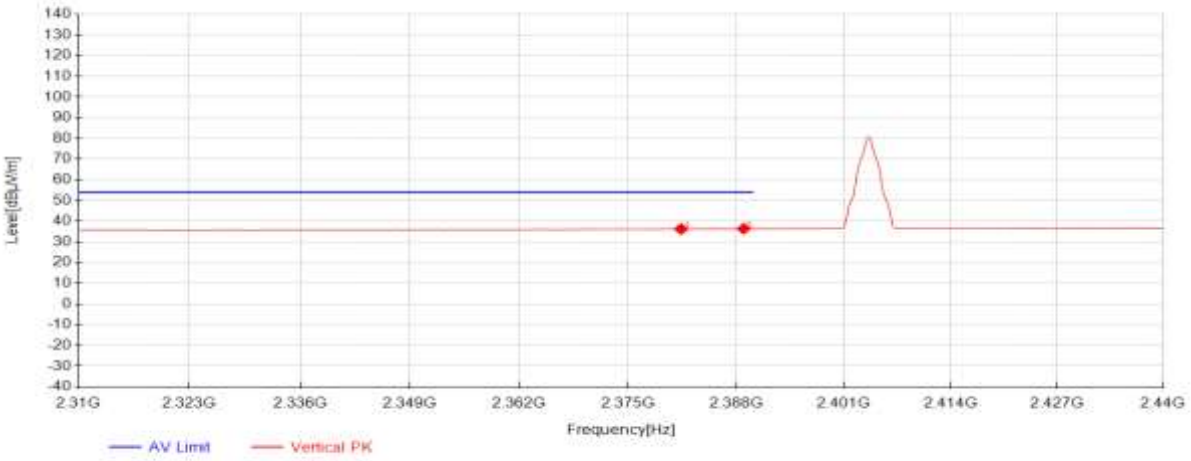
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2382.67	33.98	27.27	-24.82	36.43	54.00	17.57	Horizontal
2	2389.43	33.92	27.29	-24.82	36.39	54.00	17.61	Horizontal

BLE_2M_TX_CH_01_Vertical_Peak



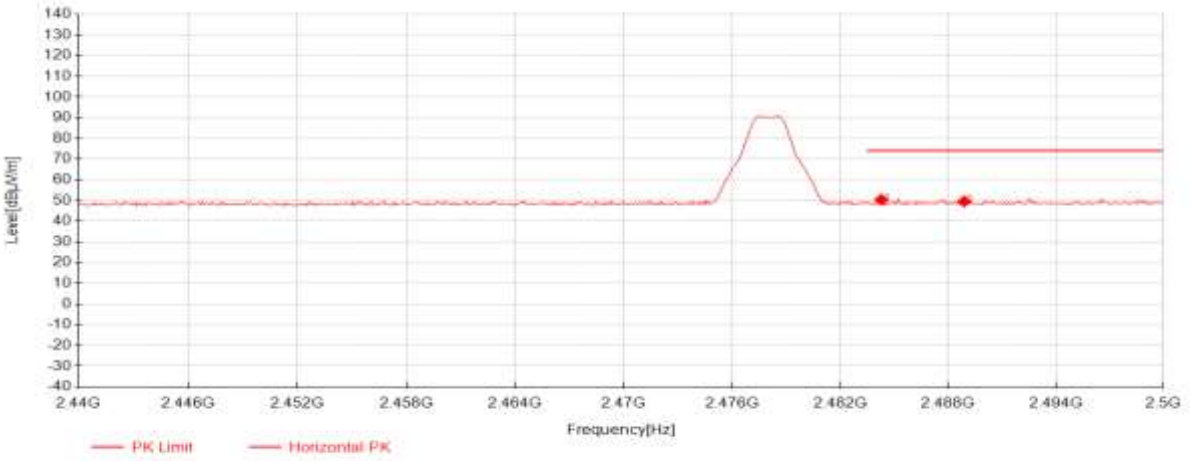
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2381.24	46.24	27.27	-24.82	48.68	74.00	25.32	Vertical
2	2388	46.08	27.29	-24.82	48.55	74.00	25.45	Vertical

BLE_2M_TX_CH_01_Vertical_Average



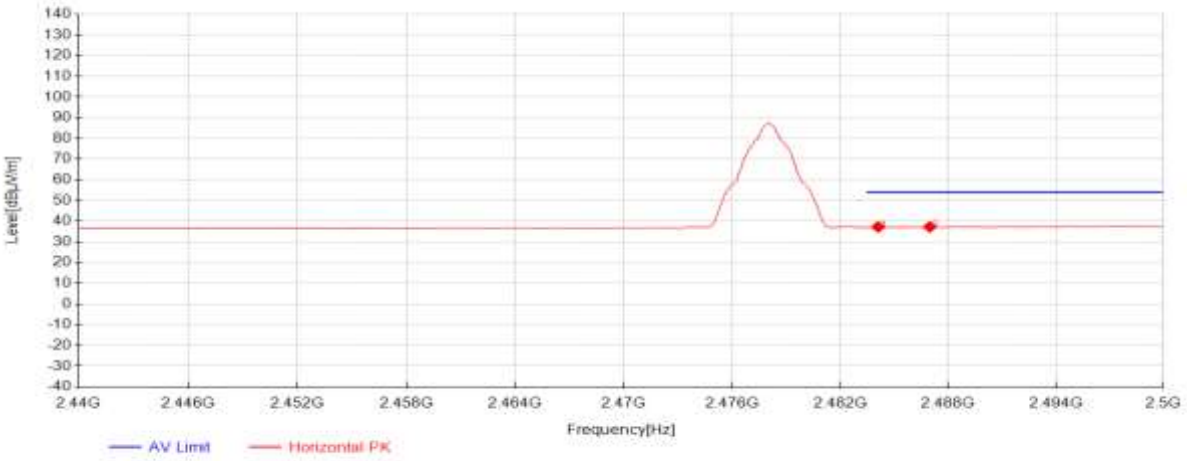
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2381.37	33.81	27.27	-24.82	36.25	54.00	17.75	Vertical
2	2388.91	33.94	27.29	-24.82	36.41	54.00	17.59	Vertical

BLE_2M_TX_CH_38_Horizontal_Peak



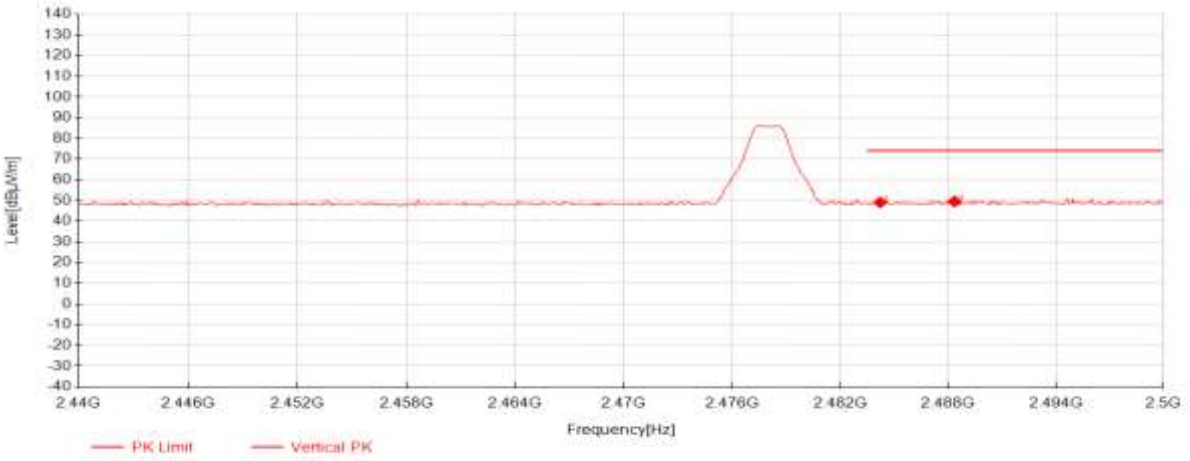
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2484.28	47.46	27.56	-24.63	50.38	74.00	23.62	Horizontal
2	2488.9	46.60	27.57	-24.62	49.55	74.00	24.45	Horizontal

BLE_2M_TX_CH_38_Horizontal_Average



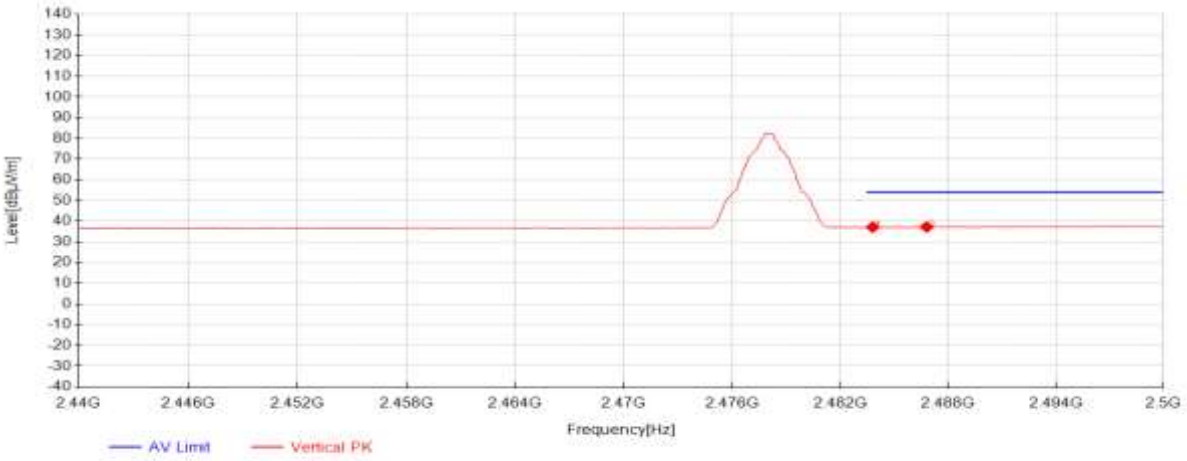
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2484.1	34.36	27.56	-24.63	37.28	54.00	16.72	Horizontal
2	2486.98	34.31	27.56	-24.63	37.25	54.00	16.75	Horizontal

BLE_2M_TX_CH_38_Vertical_Peak



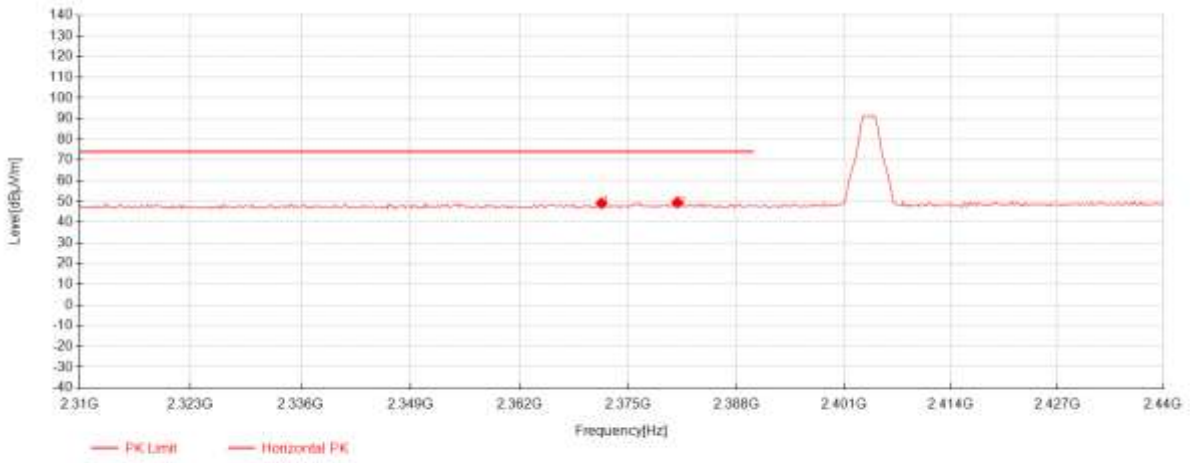
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2484.22	46.15	27.56	-24.63	49.07	74.00	24.93	Vertical
2	2488.36	46.59	27.57	-24.62	49.53	74.00	24.47	Vertical

BLE_2M_TX_CH_38_Vertical_Average



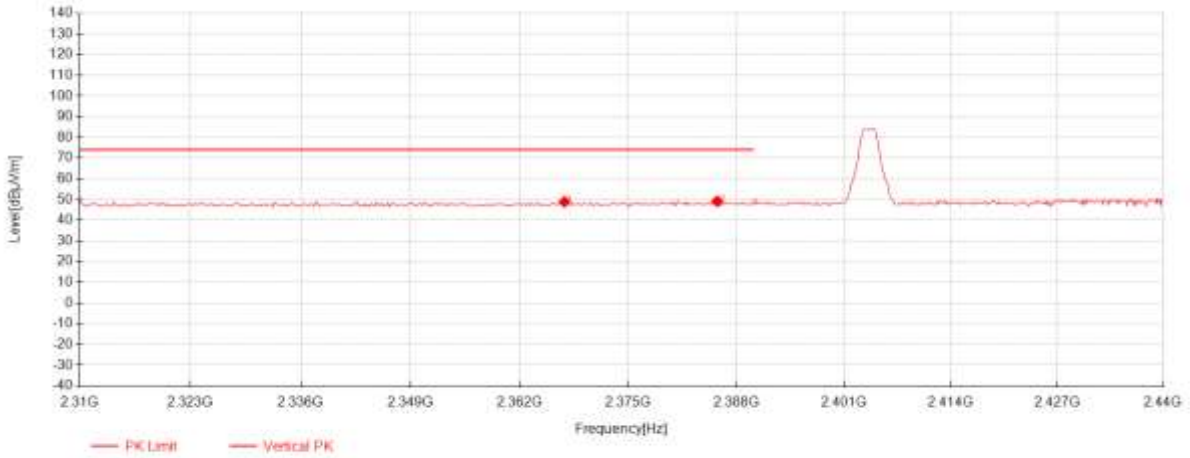
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2483.8	34.22	27.55	-24.63	37.14	54.00	16.86	Vertical
2	2486.8	34.28	27.56	-24.63	37.22	54.00	16.78	Vertical

Spot check worst mode_Sample 2
BLE_2M_TX_CH_01_ Horizontal _Peak



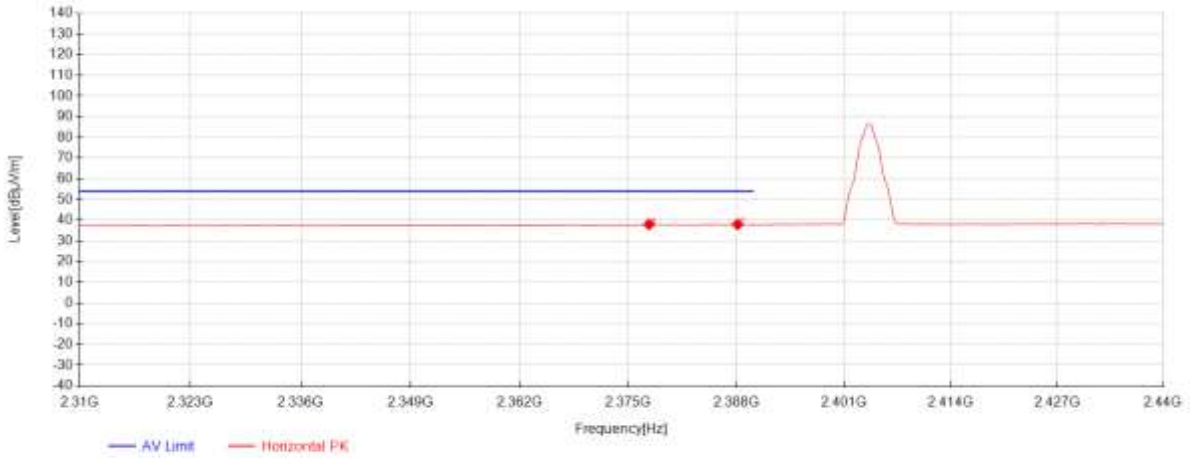
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2371.75	46.81	27.24	-24.83	49.22	74.00	24.78	Horizontal
2	2380.85	47.13	27.27	-24.82	49.57	74.00	24.43	Horizontal

BLE_2M_TX_CH_01_ Vertical _Peak



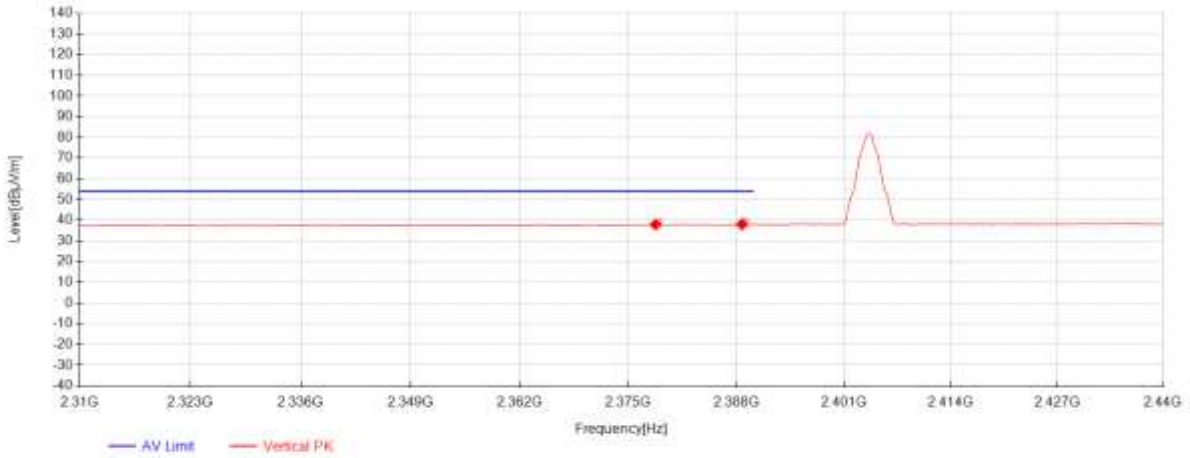
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2367.33	46.49	27.23	-24.83	48.89	74.00	25.11	Vertical
2	2385.66	46.68	27.28	-24.82	49.14	74.00	24.86	Vertical

BLE_2M_TX_CH_01_ Horizontal _ Average



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2377.47	35.57	27.26	-24.83	38.00	54.00	16.00	Horizontal
2	2388.13	35.53	27.29	-24.82	38.00	54.00	16.00	Horizontal

BLE_2M_TX_CH_01_ Vertical _ Average



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	2378.25	35.49	27.26	-24.83	37.92	54.00	16.08	Vertical
2	2388.65	35.60	27.29	-24.82	38.07	54.00	15.93	Vertical

7.3 Radiated Spurious Emissions Below 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209

Test Method: ANSI C63.10 (2020) Section 6.4,6.5

Limit:

Frequency (MHz)	Field strength (microvolts/meter)	Measurement distance (meters)	Field strength (dBμV/m@3m)
0.009-0.490	2400/F(kHz)	300	128.5 to 93.8
0.490-1.705	24000/F(kHz)	30	73.8 to 62.9
1.705-30.0	30	30	69.60
30-88	100	3	40.0
88-216	150	3	43.5
216-960	200	3	46.0
960-1000	500	3	54.0

Note :The emission limits for the range 9-90 kHz and 110-490 kHz are based on measurements employing a linear average detector.

7.3.1 E.U.T. Operation

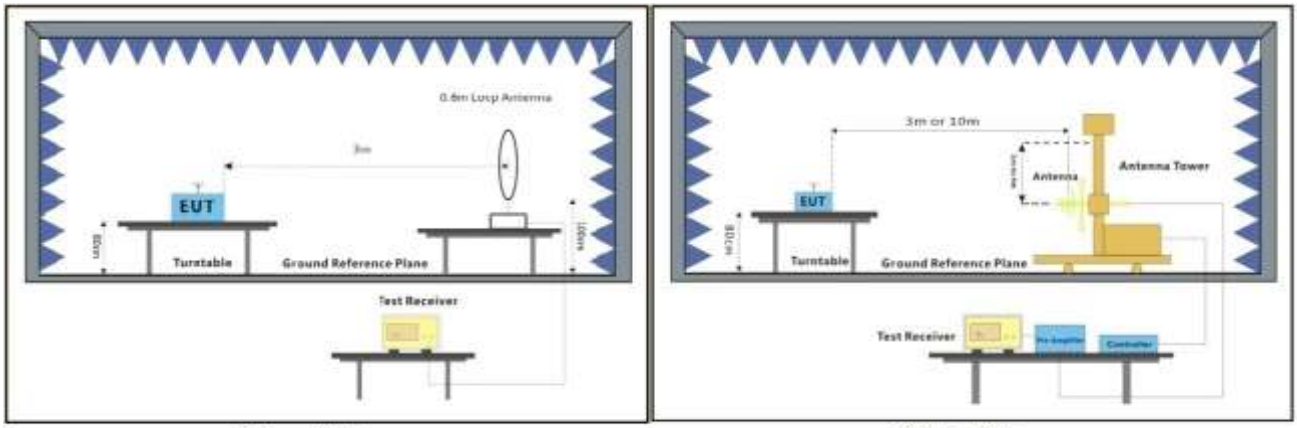
Operating Environment:

Temperature: 23 °C Humidity: 43 % RH Atmospheric Pressure: 1001 mbar

7.3.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode(1Mbps)_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.
Pre-scan	05	TX mode(2Mbps)_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.

7.3.3 Test Setup Diagram



Below 30MHz　　30MHz-1GHz

7.3.4 Measurement Procedure and Data

a. For below 1GHz, the EUT was placed on the top of a rotating table 0.8m above the ground at a semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3m or 10m away from the interference-receiving antenna, which was mounted on the variable-height antenna tower.

c. The antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1m to 4m (for the test frequency of below 30MHz, the antenna was tuned to heights 1m) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using quasi-peak method as specified and then reported in a data sheet.

g. Test the EUT in the lowest channel, the middle channel, the Highest channel.

h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

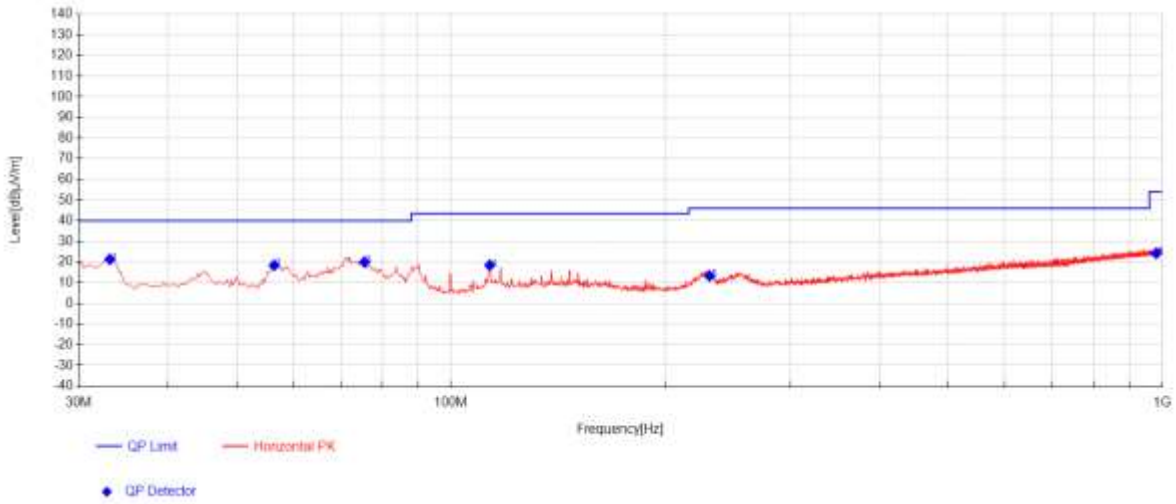
i. Repeat above procedures until all frequencies measured was complete.

Remark:

1. Scan from 9kHz to 30MHz, the disturbance below 30MHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only below points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

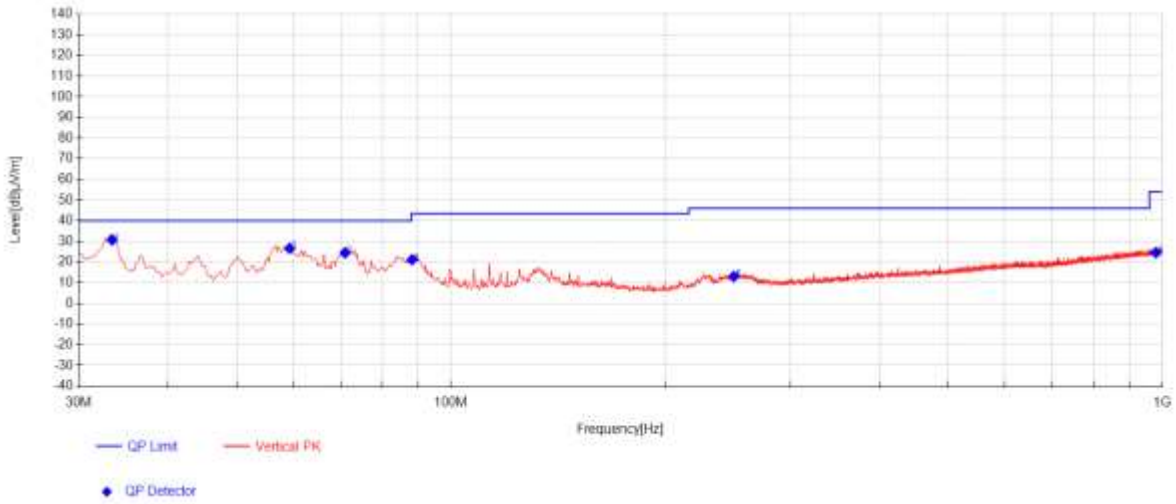
2. The disturbance below 1GHz was very low and the harmonics were the highest point could be found when testing, so only the worst-case test curve is displayed.

Test Mode: 04; Polarity: Horizontal



Final Data List										
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	33.1525	42.64	12.69	-33.98	21.35	40.00	18.65	111	78	Horizontal
2	56.4325	39.31	12.73	-33.60	18.43	40.00	21.57	133	341	Horizontal
3	75.59	43.67	9.70	-33.38	19.99	40.00	20.01	165	87	Horizontal
4	113.42	40.71	10.74	-32.96	18.49	43.50	25.01	184	172	Horizontal
5	231.0325	34.15	11.23	-32.09	13.28	46.00	32.72	172	341	Horizontal
6	981.3275	27.84	24.35	-27.97	24.22	54.00	29.78	139	133	Horizontal

Test Mode: 04; Polarity: Vertical



Final Data List										
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	QP Value [dBµV/m]	QP Limit [dBµV/m]	QP Margin [dB]	Height [cm]	Angle [°]	Polarity
1	33.395	51.97	12.70	-33.97	30.70	40.00	9.30	159	104	Vertical
2	59.3425	47.79	12.38	-33.56	26.61	40.00	13.39	135	158	Vertical
3	70.9825	47.78	10.11	-33.41	24.48	40.00	15.52	154	119	Vertical
4	88.2	45.43	8.97	-33.27	21.13	43.50	22.37	116	348	Vertical
5	249.9475	33.23	11.80	-31.97	13.06	46.00	32.94	139	328	Vertical
6	980.3575	28.18	24.34	-27.97	24.55	54.00	29.45	182	41	Vertical

7.4 Radiated Spurious Emissions Above 1GHz

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209

Test Method: ANSI C63.10 (2020) Section 6.6 & 11.12

Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
Above 1000	500	3

Note:

At Above 18GHz, measurements may be performed at a distance shorter than that specified in the regulations

Level= Read Level+ Cable Loss+ Antenna Factor- Preamp Factor+ Aux Factor (if applicable)

The aux factor needs to be added when measurements are performed at a distance other than the limit distance provided.

EX. Above 18GHz, Aux Factor = 20 dB/decade of distance, the aux factor is 20log(1/3) = -9.54dB (for 1m test distance).

7.4.1 E.U.T. Operation

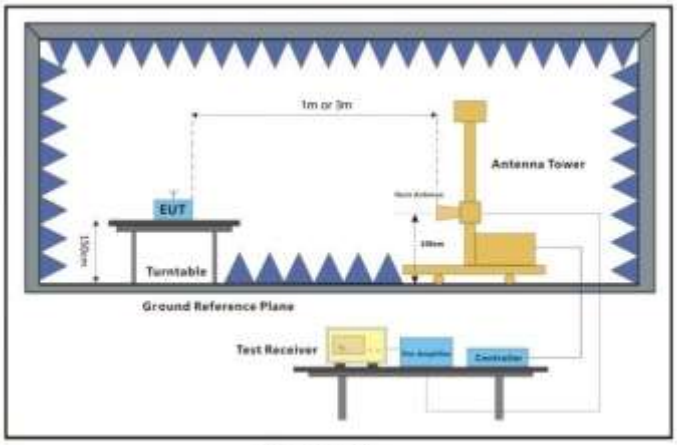
Operating Environment:

Temperature: 23 °C Humidity: 43 % RH Atmospheric Pressure: 1001 mbar

7.4.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode(1Mbps)_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.
Final test	05	TX mode(2Mbps)_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.

7.4.3 Test Setup Diagram



Above 1GHz

7.4.4 Measurement Procedure and Data

a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5m above the ground at a 3m fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3m away from the interference-receiving antenna from 1GHz to 18GHz, and 1m away from the interference-receiving antenna above 18GHz.

b. The interference-receiving antenna was mounted on the variable-height antenna tower, with its boresight facing the EUT throughout the test.

c. The antenna height is varied from 1m to 4m above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1m to 4m and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.

f. Test the EUT in the lowest channel, the middle channel, the Highest channel.

g. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case.

h. Repeat above procedures until all frequencies measured was complete.

Remark:

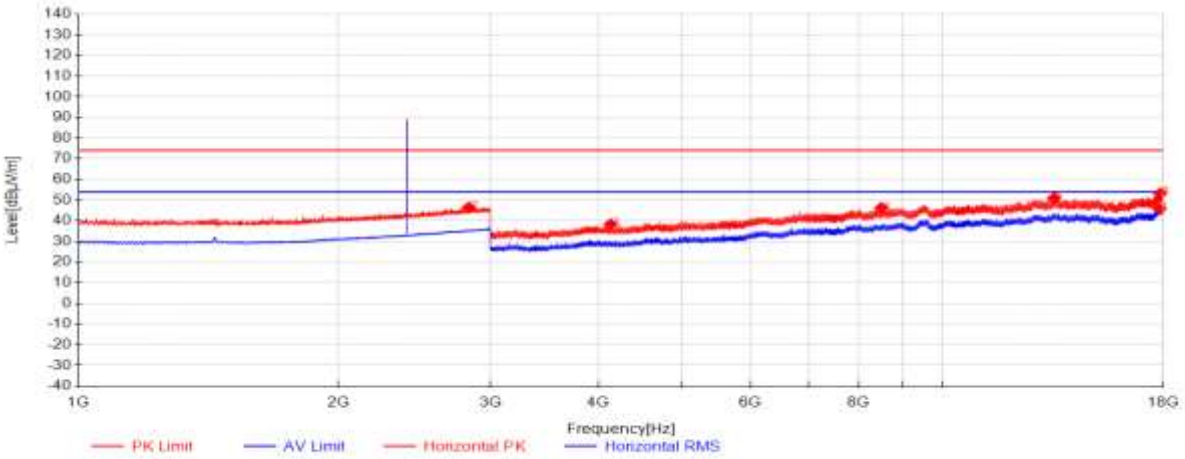
1. Scan from 18GHz to 10th harmonic of the highest frequency or 40 GHz, whichever is lower.

2. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

3. For the frequency above 18GHz, testing had been executed under all test modes, only the worst-case test curve is displayed in the report.

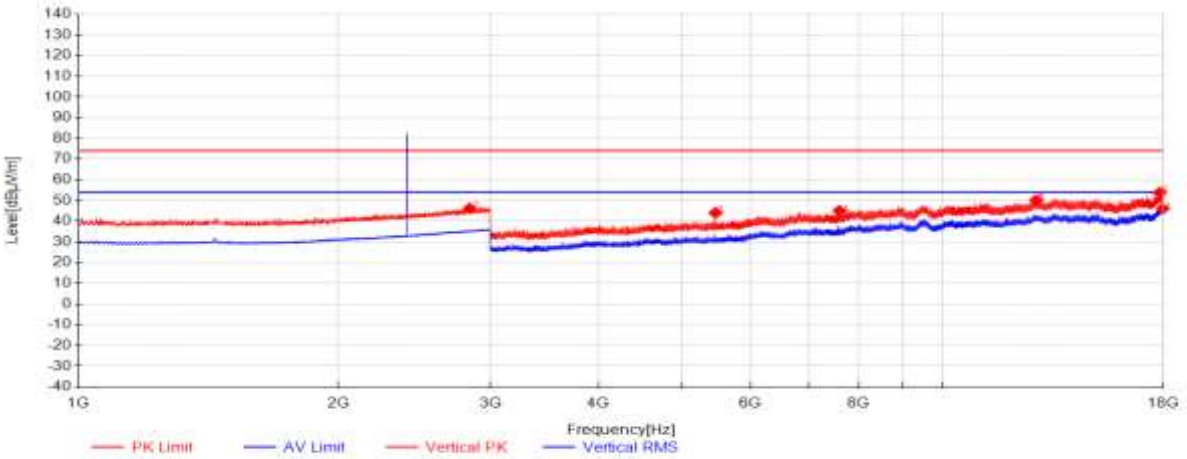
4. For devices with multiple operating modes, measurements on the middle channel is used to determine the worst-case mode(s). Only the worst-case mode with the highest output power and the mode with the highest output power spectral density for each modulation family (e.g., OFDM and direct sequence spread spectrum) is recorded in the test report.

BLE_1M_TX_CH_00_Horizontal



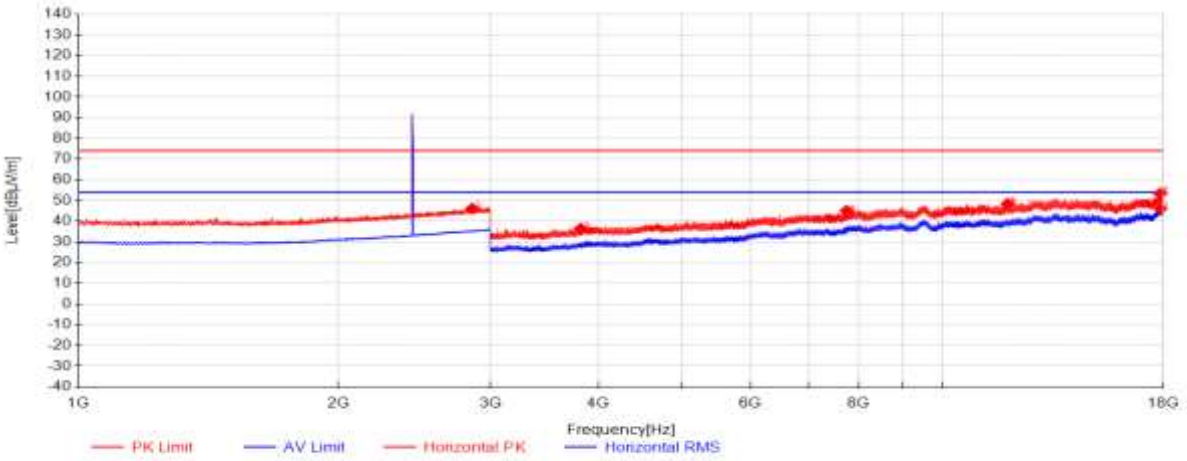
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	17839.5	35.27	41.23	-30.73	45.77	54.00	8.23	Horizontal
2	2832	41.47	28.93	-23.93	46.47	74.00	27.53	Horizontal
3	4131	52.09	31.31	-45.05	38.35	74.00	35.65	Horizontal
4	8501.625	49.08	37.65	-40.42	46.31	74.00	27.69	Horizontal
5	13469.25	45.63	40.13	-34.79	50.98	74.00	23.02	Horizontal
6	17871	42.87	41.33	-30.93	53.27	74.00	20.73	Horizontal

BLE_1M_TX_CH_00_Vertical



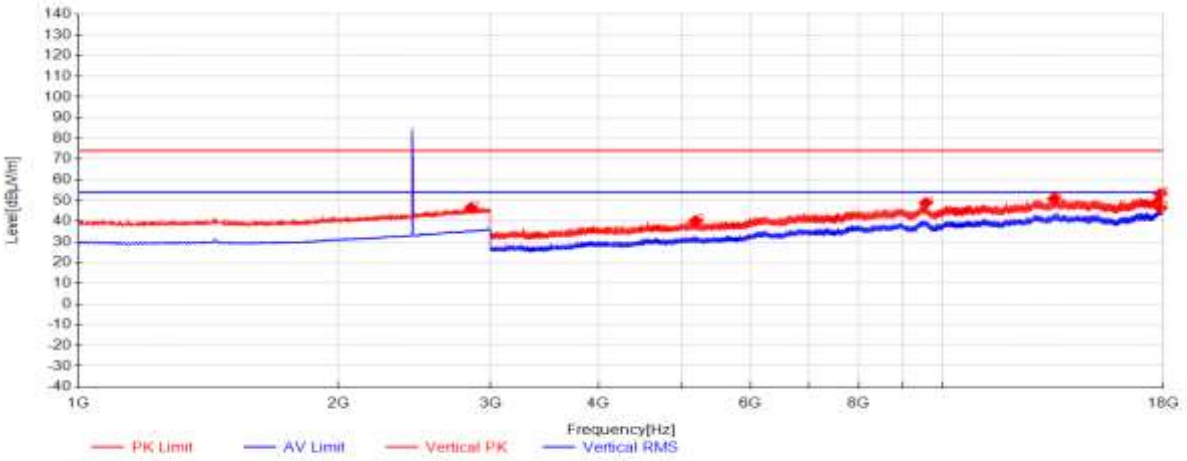
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	17989.5	35.38	41.67	-31.03	46.02	54.00	7.98	Vertical
2	2837.5	41.15	28.95	-23.90	46.21	74.00	27.79	Vertical
3	5461.5	55.56	33.01	-44.54	44.03	74.00	29.97	Vertical
4	7597.875	50.36	36.50	-41.80	45.06	74.00	28.94	Vertical
5	12839.25	45.36	39.71	-34.98	50.09	74.00	23.91	Vertical
6	17839.125	43.28	41.23	-30.73	53.78	74.00	20.22	Vertical

BLE_1M_TX_CH_19_Horizontal



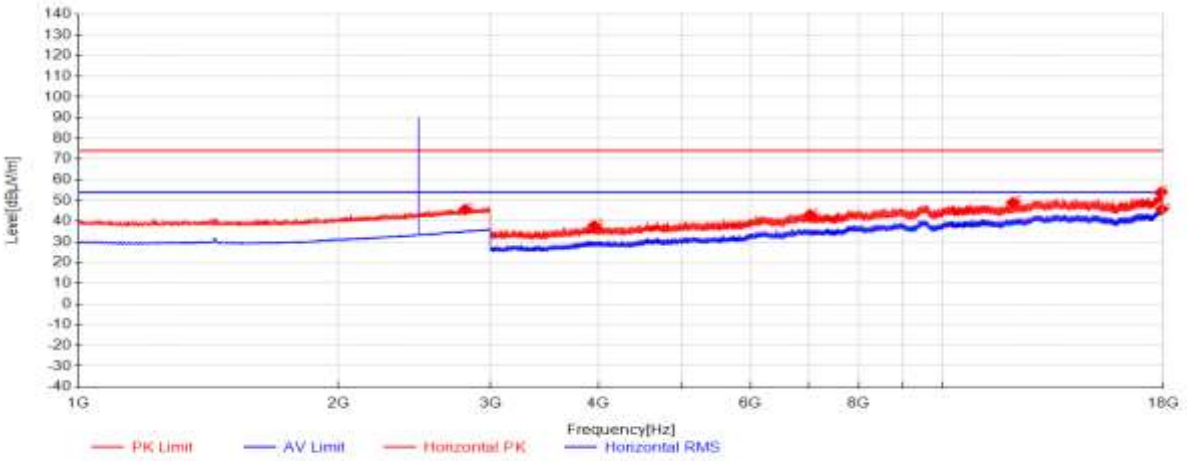
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	17876.625	35.70	41.34	-30.97	46.08	54.00	7.92	Horizontal
2	2856	40.86	29.02	-23.78	46.10	74.00	27.90	Horizontal
3	3816	51.00	30.44	-44.95	36.49	74.00	37.51	Horizontal
4	7749.75	49.82	36.80	-41.51	45.11	74.00	28.89	Horizontal
5	11899.125	45.01	38.76	-35.26	48.51	74.00	25.49	Horizontal
6	17868	42.99	41.32	-30.91	53.40	74.00	20.60	Horizontal

BLE_1M_TX_CH_19_Vertical



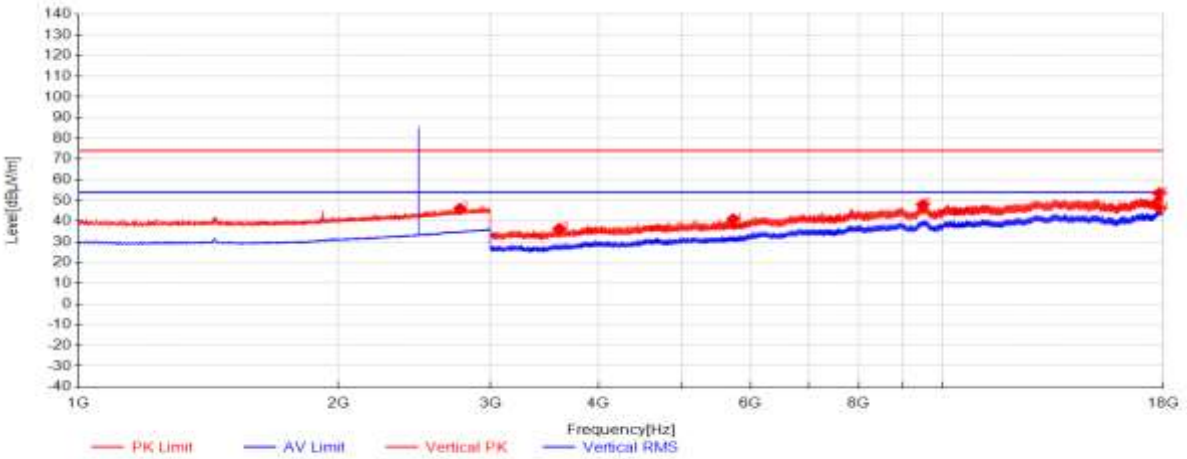
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	17887.875	36.05	41.37	-31.03	46.39	54.00	7.61	Vertical
2	2847.5	41.36	28.99	-23.84	46.52	74.00	27.48	Vertical
3	5181.75	51.97	33.06	-44.74	40.30	74.00	33.70	Vertical
4	9569.625	49.20	38.06	-38.38	48.87	74.00	25.13	Vertical
5	13466.25	45.66	40.13	-34.81	50.98	74.00	23.02	Vertical
6	17868.75	42.86	41.32	-30.92	53.26	74.00	20.74	Vertical

BLE_1M_TX_CH_39_Horizontal



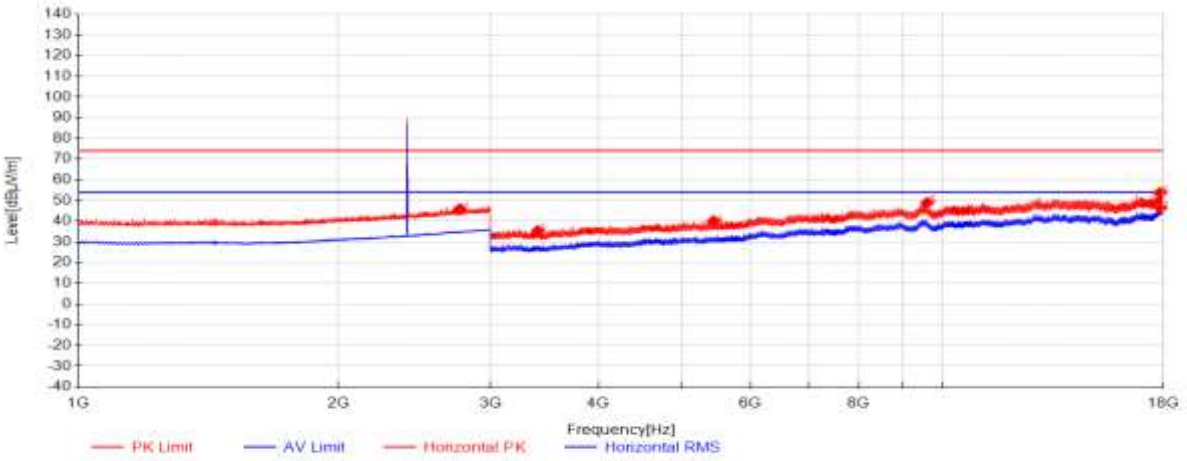
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	17956.875	35.32	41.57	-31.06	45.84	54.00	8.16	Horizontal
2	2804	40.92	28.82	-24.10	45.64	74.00	28.36	Horizontal
3	3952.5	51.93	30.93	-45.05	37.81	74.00	36.19	Horizontal
4	7025.25	49.95	36.30	-43.07	43.18	74.00	30.82	Horizontal
5	12068.25	45.54	38.78	-35.34	48.98	74.00	25.02	Horizontal
6	17892	43.47	41.39	-31.06	53.80	74.00	20.20	Horizontal

BLE_1M_TX_CH_39_Vertical



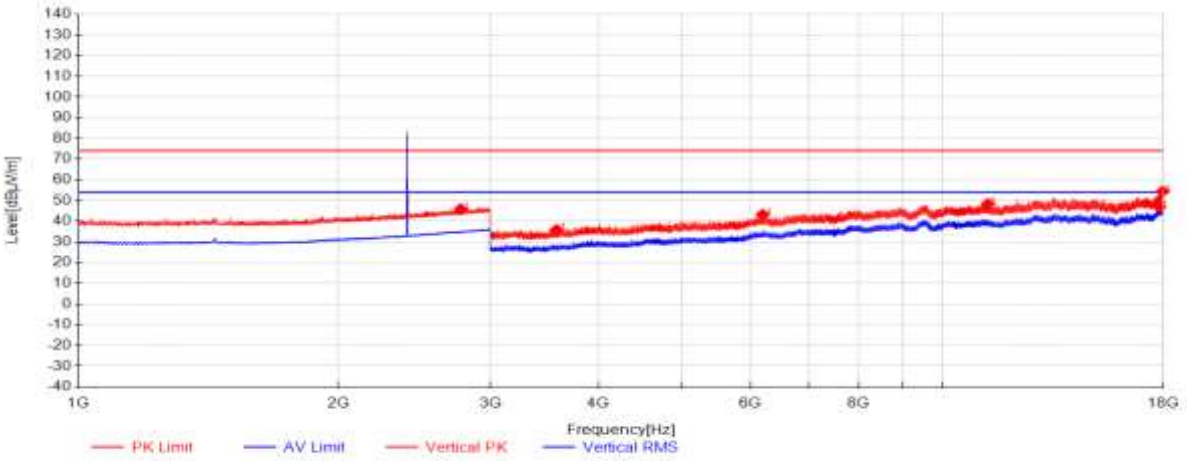
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	17854.875	35.82	41.28	-30.83	46.27	54.00	7.73	Vertical
2	2765	41.61	28.66	-24.18	46.09	74.00	27.91	Vertical
3	3603	51.43	29.67	-44.71	36.39	74.00	37.61	Vertical
4	5725.875	51.39	33.68	-44.04	41.03	74.00	32.97	Vertical
5	9489.75	48.62	38.05	-38.69	47.98	74.00	26.02	Vertical
6	17814.75	43.01	41.16	-30.58	53.59	74.00	20.41	Vertical

BLE_2M_TX_CH_01_Horizontal



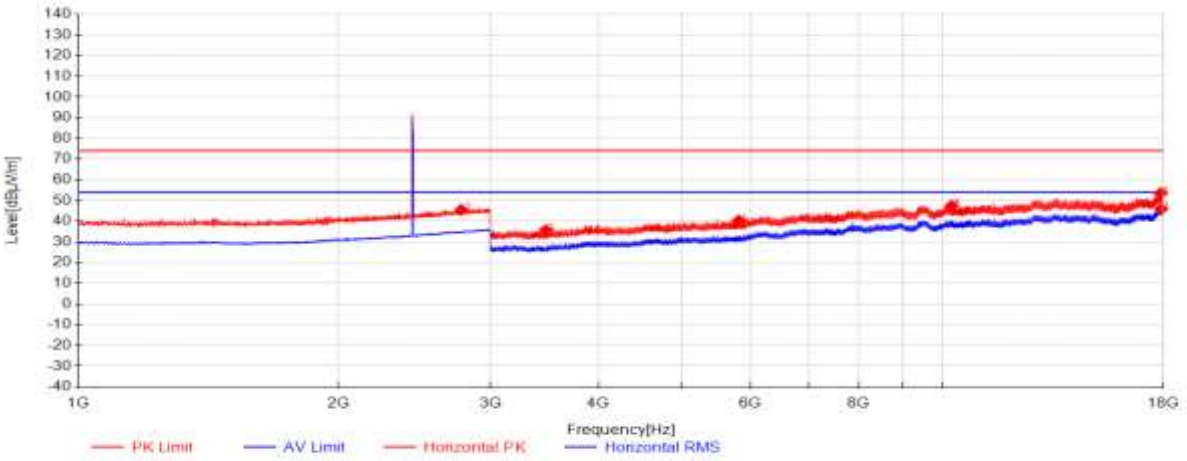
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	17887.875	36.08	41.37	-31.03	46.42	54.00	7.58	Horizontal
2	2764	41.40	28.66	-24.18	45.87	74.00	28.13	Horizontal
3	3402.375	51.75	29.36	-45.80	35.31	74.00	38.69	Horizontal
4	5436	51.68	33.01	-44.59	40.10	74.00	33.90	Horizontal
5	9601.5	49.15	38.06	-38.26	48.95	74.00	25.05	Horizontal
6	17855.25	43.27	41.28	-30.83	53.72	74.00	20.28	Horizontal

BLE_2M_TX_CH_01_Vertical



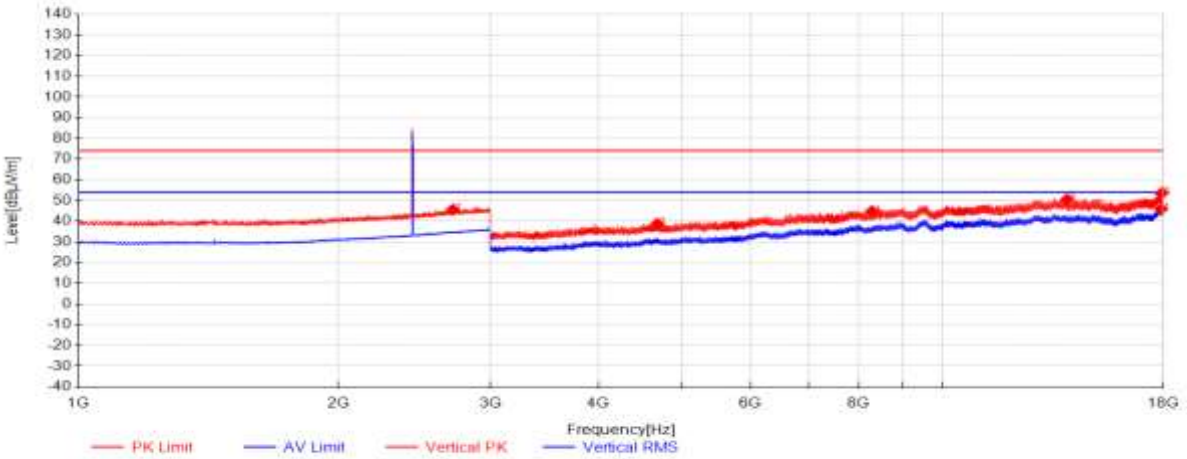
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	17816.625	36.25	41.17	-30.59	46.83	54.00	7.17	Vertical
2	2770.5	41.37	28.68	-24.17	45.88	74.00	28.12	Vertical
3	3576.75	51.17	29.58	-44.87	35.88	74.00	38.12	Vertical
4	6192	52.09	34.88	-43.78	43.20	74.00	30.80	Vertical
5	11284.5	45.09	39.13	-35.86	48.36	74.00	25.64	Vertical
6	17978.625	43.81	41.64	-31.04	54.41	74.00	19.59	Vertical

BLE_2M_TX_CH_19_Horizontal



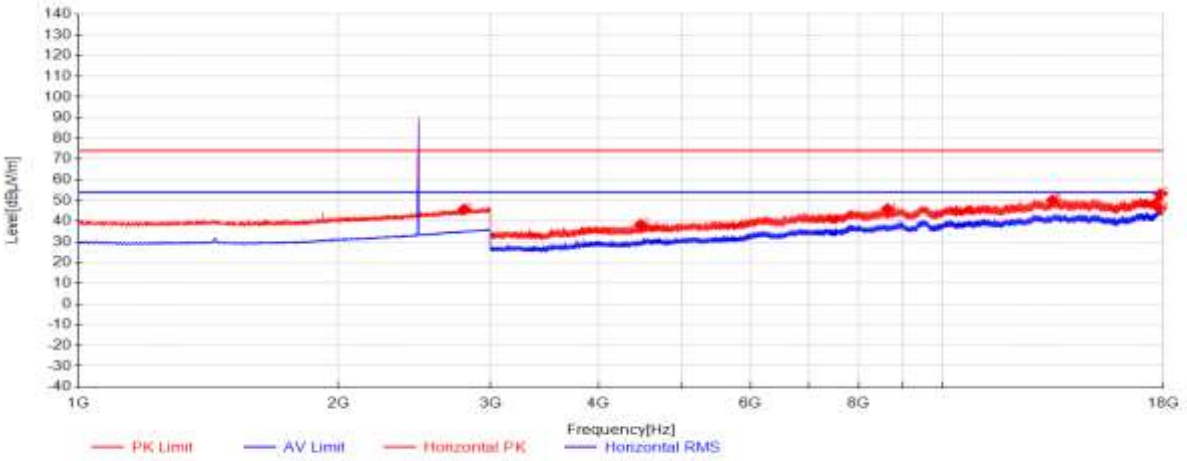
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	17914.875	35.58	41.45	-31.10	45.94	54.00	8.06	Horizontal
2	2774.5	41.01	28.70	-24.16	45.54	74.00	28.46	Horizontal
3	3475.875	51.95	29.31	-45.54	35.73	74.00	38.27	Horizontal
4	5812.5	50.67	33.94	-44.20	40.41	74.00	33.59	Horizontal
5	10250.25	46.21	38.40	-37.13	47.48	74.00	26.52	Horizontal
6	17887.5	43.21	41.37	-31.03	53.55	74.00	20.45	Horizontal

BLE_2M_TX_CH_19_Vertical



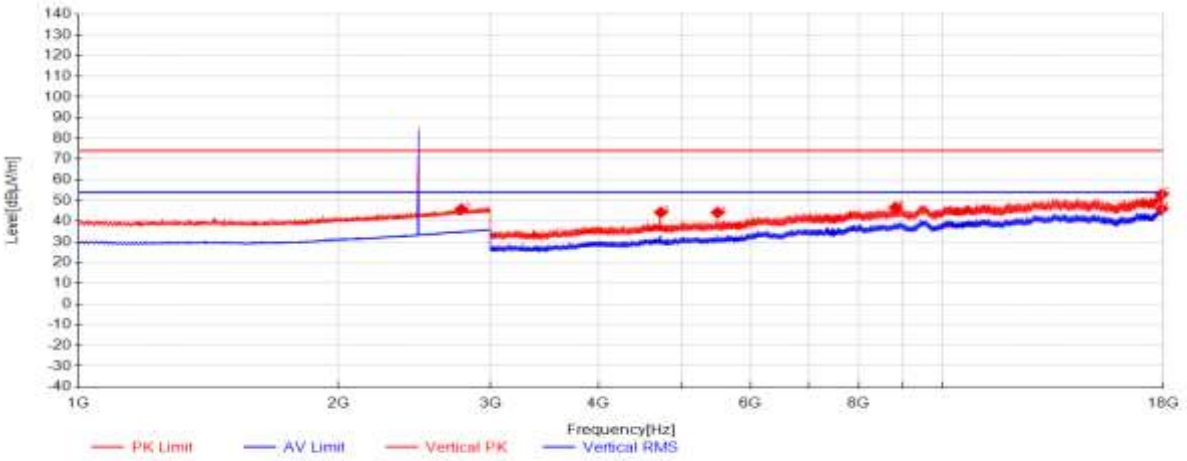
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	17906.25	35.60	41.43	-31.10	45.92	54.00	8.08	Vertical
2	2713.5	41.48	28.45	-24.27	45.67	74.00	28.33	Vertical
3	4677.375	51.28	32.33	-44.88	38.72	74.00	35.28	Vertical
4	8291.25	48.13	37.50	-40.74	44.90	74.00	29.10	Vertical
5	13936.875	44.96	40.37	-34.87	50.45	74.00	23.55	Vertical
6	17941.875	43.08	41.53	-31.07	53.54	74.00	20.46	Vertical

BLE_2M_TX_CH_38_Horizontal



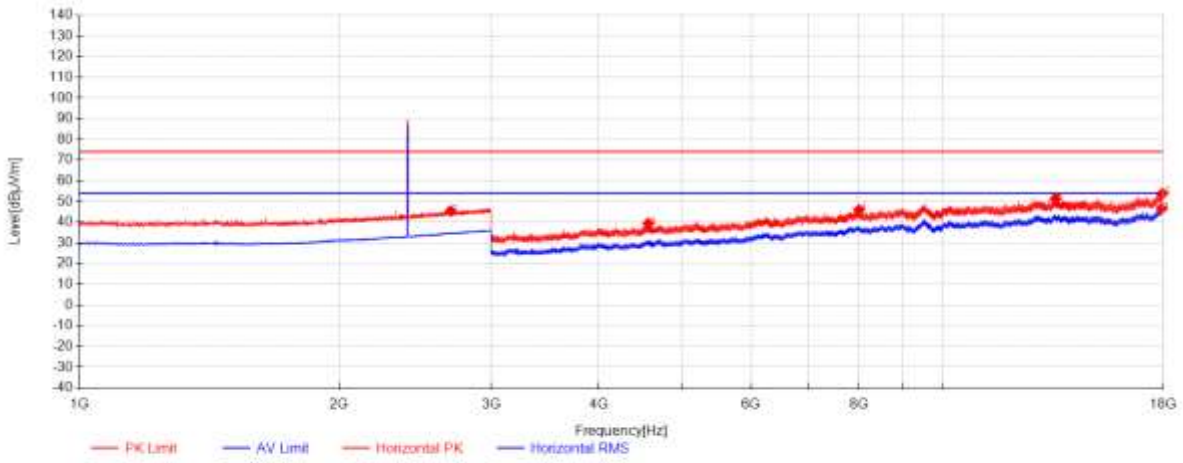
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	17852.25	35.74	41.27	-30.81	46.20	54.00	7.80	Horizontal
2	2796.5	41.06	28.79	-24.13	45.72	74.00	28.28	Horizontal
3	4474.5	51.71	31.86	-45.28	38.29	74.00	35.71	Horizontal
4	8637	48.18	37.75	-40.01	45.91	74.00	28.09	Horizontal
5	13415.25	45.31	40.11	-35.30	50.11	74.00	23.89	Horizontal
6	17873.625	42.69	41.33	-30.95	53.08	74.00	20.92	Horizontal

BLE_2M_TX_CH_38_Vertical



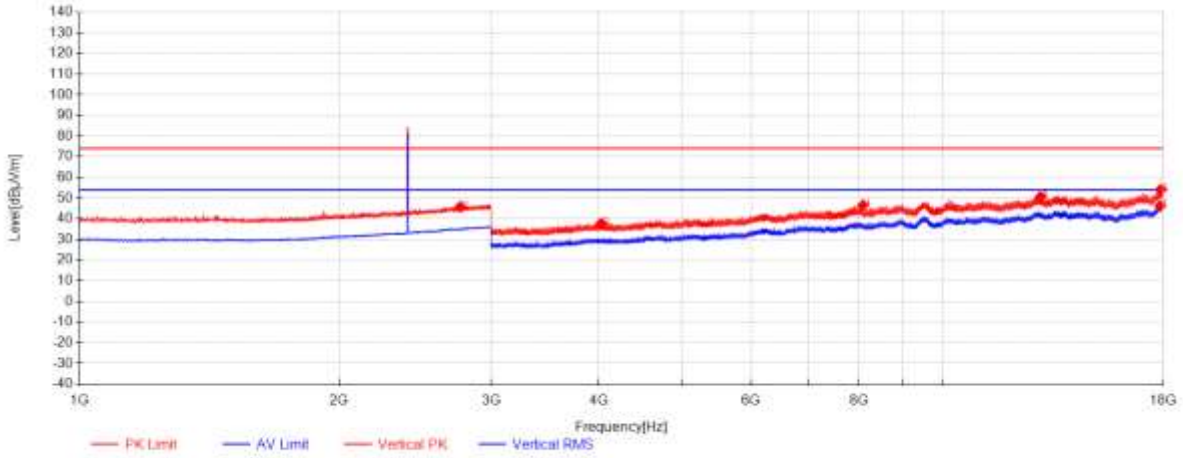
Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	17941.875	35.59	41.53	-31.07	46.05	54.00	7.95	Vertical
2	2775.5	41.26	28.70	-24.16	45.80	74.00	28.20	Vertical
3	4722.75	56.70	32.43	-44.91	44.23	74.00	29.77	Vertical
4	5493.375	55.65	33.00	-44.47	44.18	74.00	29.82	Vertical
5	8826	48.61	37.88	-39.85	46.64	74.00	27.36	Vertical
6	17935.5	42.44	41.51	-31.08	52.87	74.00	21.13	Vertical

Spot check worst mode_Sample 2
BLE_2M_TX_CH_01_ Horizontal



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	17941.5	36.19	41.53	-31.07	46.65	54.00	7.35	Horizontal
2	2693	41.36	28.37	-24.30	45.43	74.00	28.57	Horizontal
3	4560.375	52.50	32.04	-45.14	39.41	74.00	34.59	Horizontal
4	8002.5	49.89	37.30	-41.22	45.98	74.00	28.02	Horizontal
5	13513.5	45.80	40.16	-34.58	51.38	74.00	22.62	Horizontal
6	17955.75	43.22	41.57	-31.06	53.73	74.00	20.27	Horizontal

BLE_2M_TX_CH_01_Vertical



Data List								
NO.	Frequency [MHz]	Reading [dBµV]	AF [dB/m]	Factor [dB]	Level [dBµV/m]	Limit [dBµV/m]	Margin [dB]	Polarity
1	17862	35.79	41.30	-30.87	46.22	54.00	7.78	Vertical
2	2763.5	41.31	28.65	-24.18	45.78	74.00	28.22	Vertical
3	4022.625	51.76	31.14	-45.15	37.74	74.00	36.26	Vertical
4	8087.25	50.29	37.36	-41.10	46.55	74.00	27.45	Vertical
5	12984.375	46.03	39.88	-35.31	50.60	74.00	23.40	Vertical
6	17881.5	43.63	41.36	-31.00	53.99	74.00	20.01	Vertical

7.5 Maximum Conducted Output Power

Test Requirement 47 CFR Part 15, Subpart C 15.247(b)(3)
Test Method: ANSI C63.10 (2020) Section 11.9.1

Limit:

Frequency range(MHz)	Output power of the intentional radiator(watt)
902-928	1 for ≥50 hopping channels
	0.25 for 25≤ hopping channels <50
	1 for digital modulation
2400-2483.5	1 for ≥75 non-overlapping hopping channels
	0.125 for all other frequency hopping systems
	1 for digital modulation
5725-5850	1 for frequency hopping systems and digital modulation

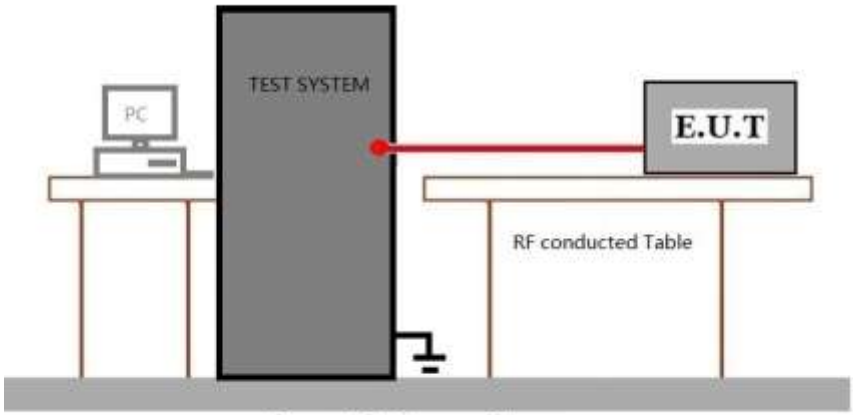
7.5.1 E.U.T. Operation

Operating Environment:
Temperature: 22.9 °C Humidity: 55.6 % RH Atmospheric Pressure: 1001 mbar

7.5.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	02	TX mode(125K)_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.
Final test	03	TX mode(500K)_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.
Final test	04	TX mode(1Mbps)_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.
Final test	05	TX mode(2Mbps)_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.

7.5.3 Test Setup Diagram



7.5.4 Measurement Procedure and Data

Note: Since the verify power the same operating range bandwidth and smaller power can be covered by the higher power.

Please Refer to Appendix for Details

7.6 Minimum 6dB Bandwidth

Test Requirement 47 CFR Part 15, Subpart C 15.247a(2)
Test Method: ANSI C63.10 (2020) Section 11.8.1

Limit:

≥500 kHz

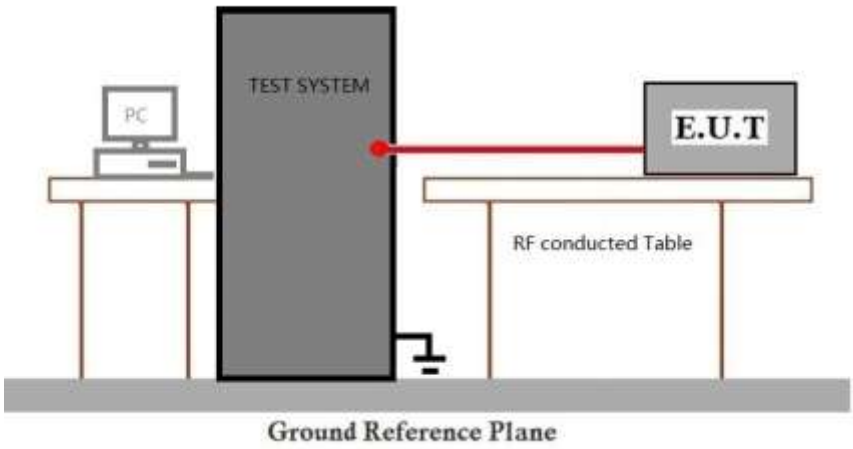
7.6.1 E.U.T. Operation

Operating Environment:
Temperature: 22.9 °C Humidity: 55.6 % RH Atmospheric Pressure: 1001 mbar

7.6.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode(1Mbps)_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.
Final test	05	TX mode(2Mbps)_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.

7.6.3 Test Setup Diagram



7.6.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.7 Power Spectral Density

Test Requirement 47 CFR Part 15, Subpart C 15.247(e)
Test Method: ANSI C63.10 (2020) Section 11.10.2

Limit:
≤8dBm in any 3 kHz band during any time interval of continuous transmission

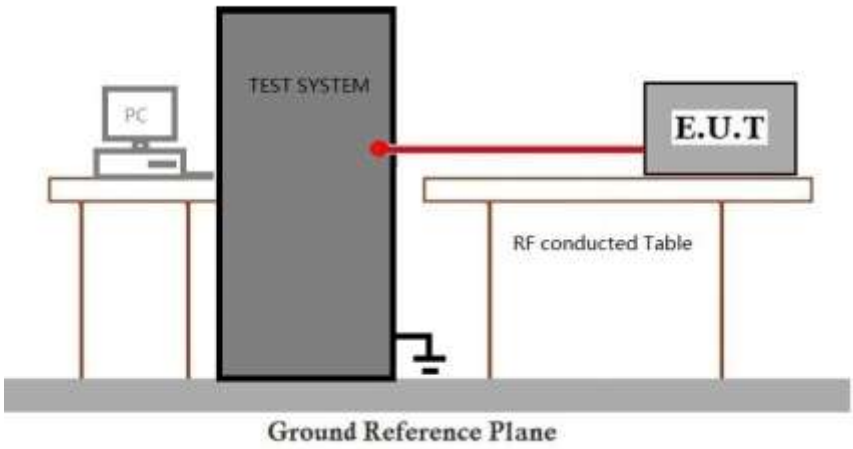
7.7.1 E.U.T. Operation

Operating Environment:
Temperature: 22.9 °C Humidity: 55.6 % RH Atmospheric Pressure: 1001 mbar

7.7.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode(1Mbps)_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.
Final test	05	TX mode(2Mbps)_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.

7.7.3 Test Setup Diagram



7.7.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.8 Conducted Band Edges Measurement

Test Requirement 47 CFR Part 15, Subpart C 15.247(d)

Test Method: ANSI C63.10 (2020) Section 6.10.4

Limit:

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).

7.8.1 E.U.T. Operation

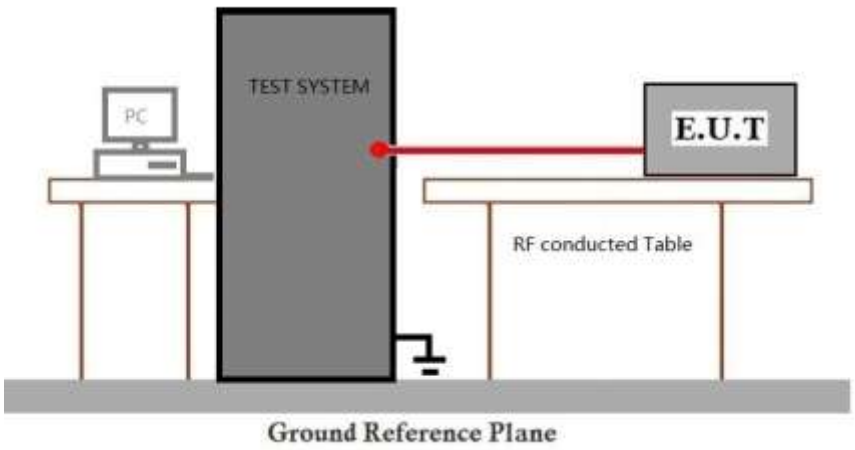
Operating Environment:

Temperature: 22.9 °C Humidity: 55.6 % RH Atmospheric Pressure: 1001 mbar

7.8.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode(1Mbps)_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.
Final test	05	TX mode(2Mbps)_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.

7.8.3 Test Setup Diagram



7.8.4 Measurement Procedure and Data

Please Refer to Appendix for Details

7.9 Conducted Spurious Emissions

Test Requirement 47 CFR Part 15, Subpart C 15.247(d)

Test Method: ANSI C63.10 (2020) Section 11.11

Limit:

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).

7.9.1 E.U.T. Operation

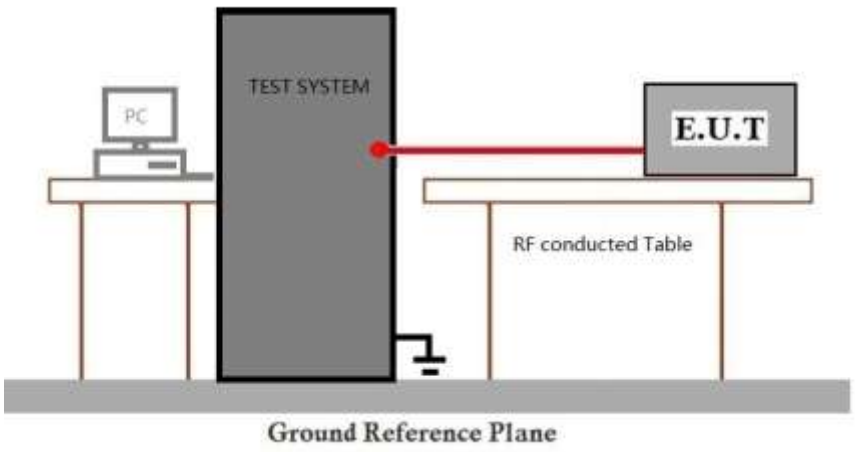
Operating Environment:

Temperature: 22.9 °C Humidity: 55.6 % RH Atmospheric Pressure: 1001 mbar

7.9.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Final test	04	TX mode(1Mbps)_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.
Final test	05	TX mode(2Mbps)_Keep the EUT in charging and continuously transmitting mode with GFSK modulation.

7.9.3 Test Setup Diagram



7.9.4 Measurement Procedure and Data

Please Refer to Appendix for Details

8 Test Setup Photo

Refer to Appendix - Test Setup Photo for SUCR2601000057WM

9 EUT Constructional Details (EUT Photos)

Refer to External and Internal Photos for SUCR2601000057WM

10 Appendix

1. Duty Cycle

1.1 Test Result

1.1.1 Ant1

Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
S8	SISO	2402	3.096	3.751	82.54	0.83	0.03
S2	SISO	2402	1.062	1.875	56.64	2.47	0.03
1M	SISO	2402	0.385	0.625	61.60	2.10	0.00
2M	SISO	2404	0.200	0.625	32.00	4.95	0.00

2. Bandwidth

2.1 Test Result

2.1.1 OBW

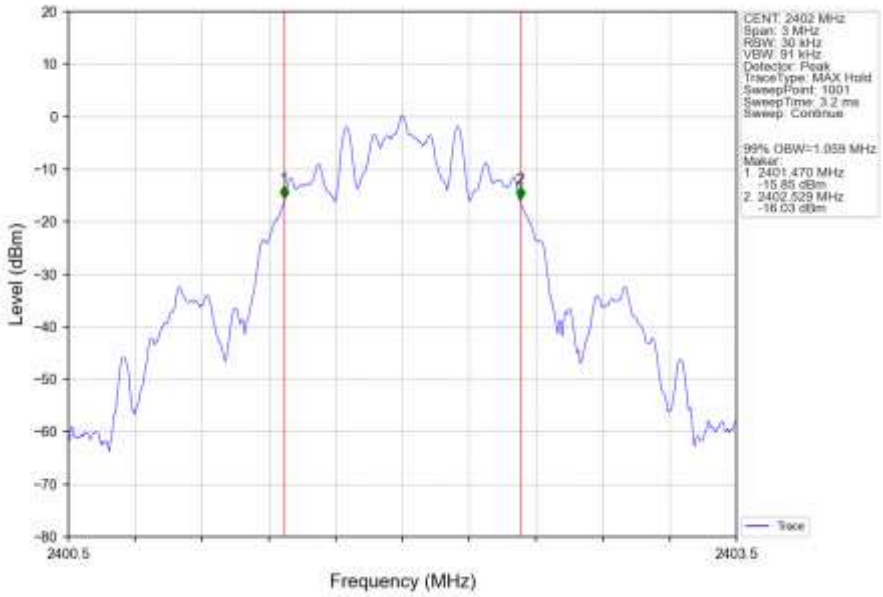
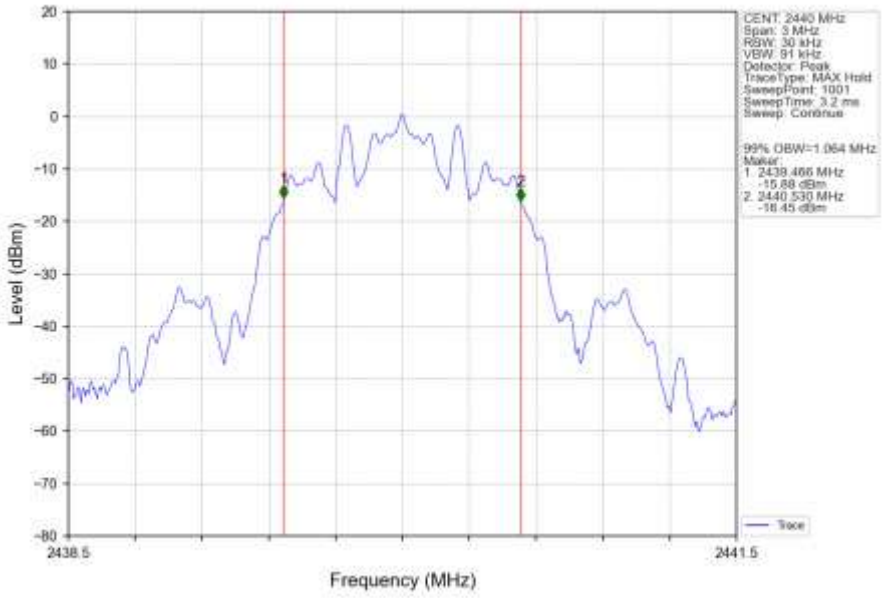
Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
S8	SISO	2402	1	1.059	/	Pass
		2440	1	1.064	/	Pass
		2480	1	1.062	/	Pass
S2	SISO	2402	1	1.025	/	Pass
		2440	1	1.025	/	Pass
		2480	1	1.029	/	Pass
1M	SISO	2402	1	1.050	/	Pass
		2440	1	1.049	/	Pass
		2480	1	1.050	/	Pass
2M	SISO	2404	1	2.082	/	Pass
		2440	1	2.084	/	Pass
		2478	1	2.090	/	Pass

2.1.2 6dB BW

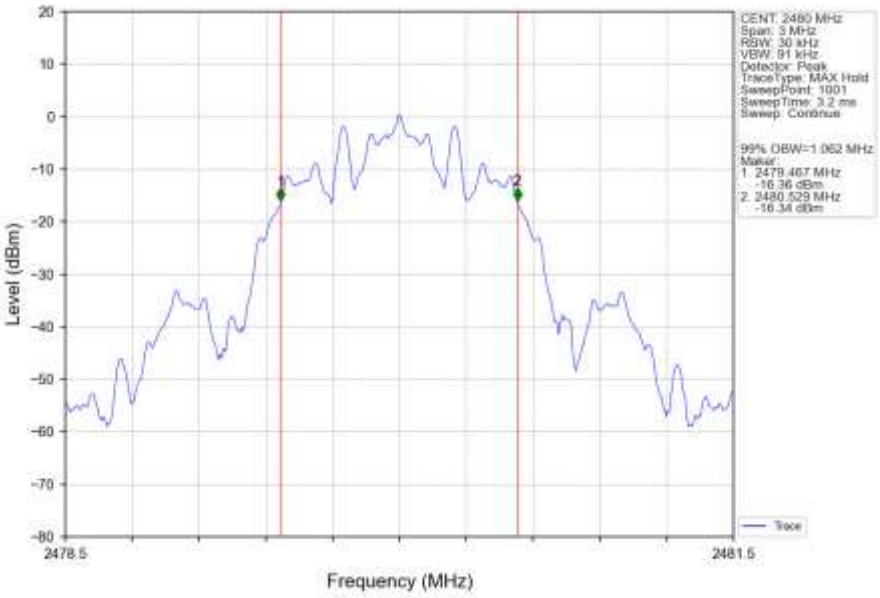
Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
S8	SISO	2402	1	0.694	>=0.5	Pass
		2440	1	0.691	>=0.5	Pass
		2480	1	0.692	>=0.5	Pass
S2	SISO	2402	1	0.668	>=0.5	Pass
		2440	1	0.670	>=0.5	Pass
		2480	1	0.667	>=0.5	Pass
1M	SISO	2402	1	0.698	>=0.5	Pass
		2440	1	0.702	>=0.5	Pass
		2480	1	0.689	>=0.5	Pass
2M	SISO	2404	1	1.180	>=0.5	Pass
		2440	1	1.186	>=0.5	Pass
		2478	1	1.191	>=0.5	Pass

2.2 Test Graph

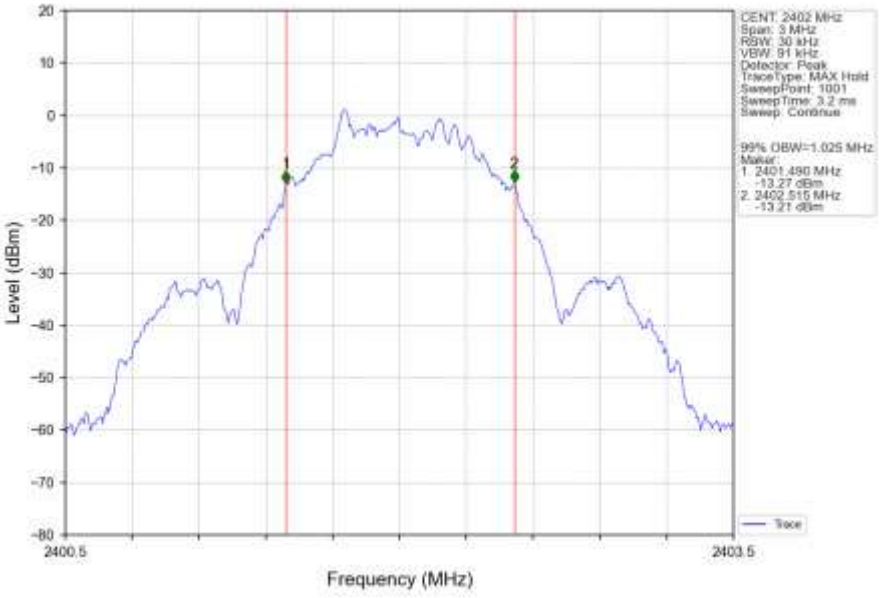
2.2.1 OBW

S8_LCH_2402MHz_Ant1_NTNV

S8_MCH_2440MHz_Ant1_NTNV


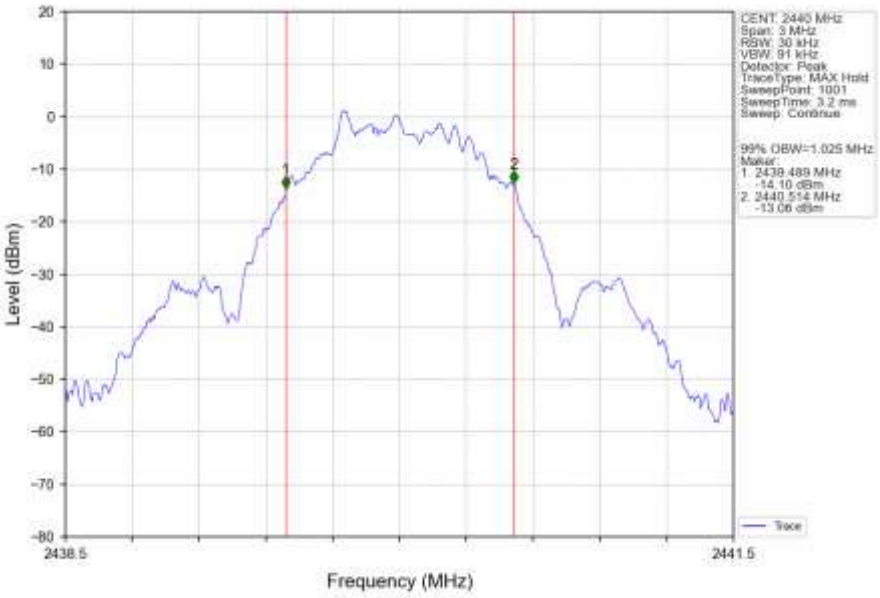
S8_HCH_2480MHz_Ant1_NTNV



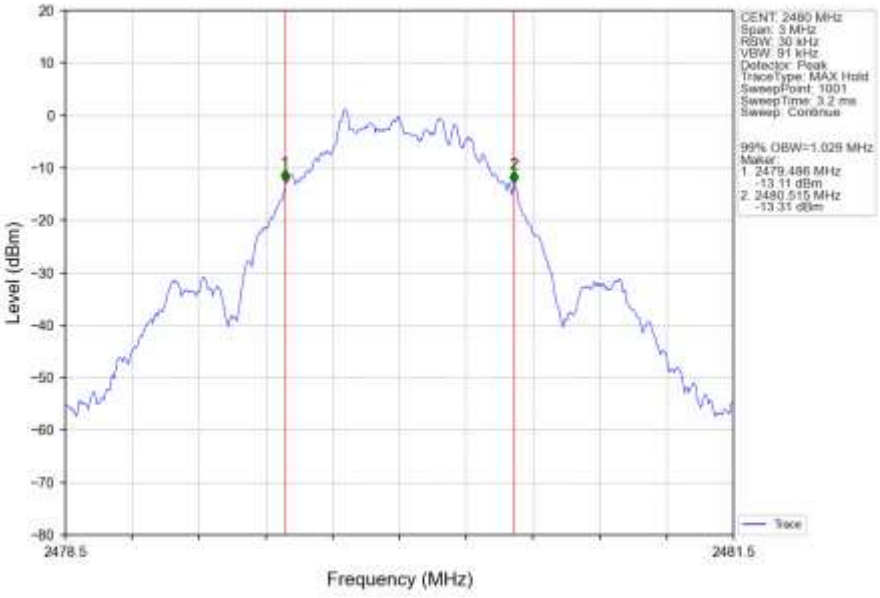
S2_LCH_2402MHz_Ant1_NTNV

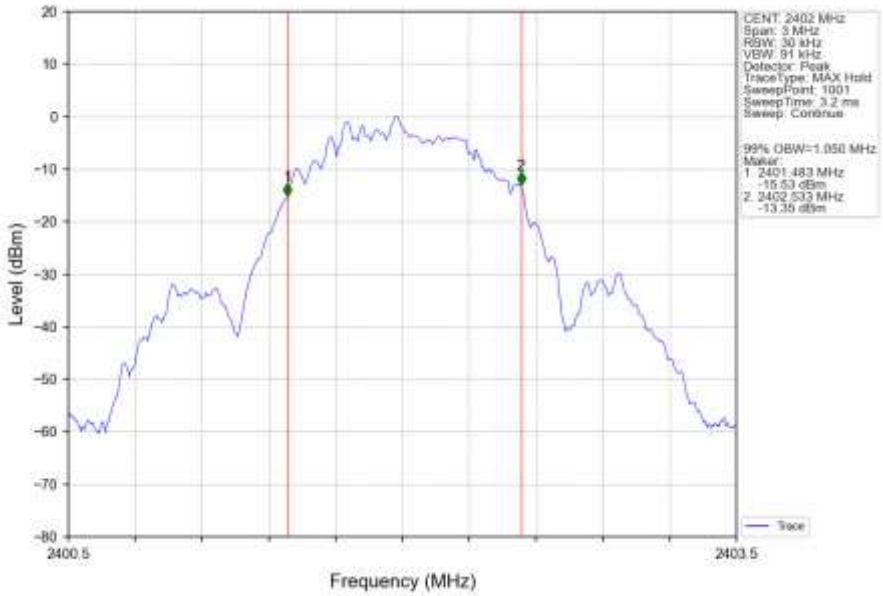
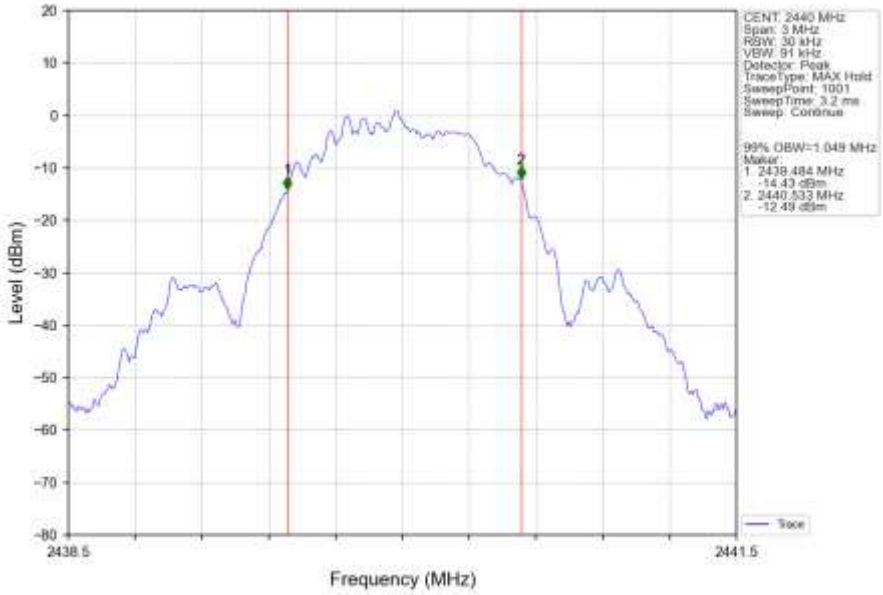


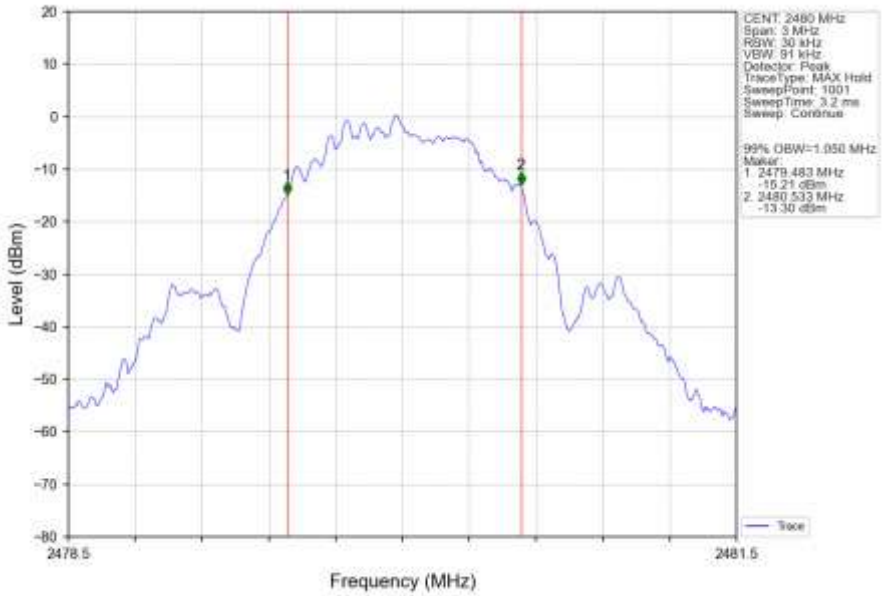
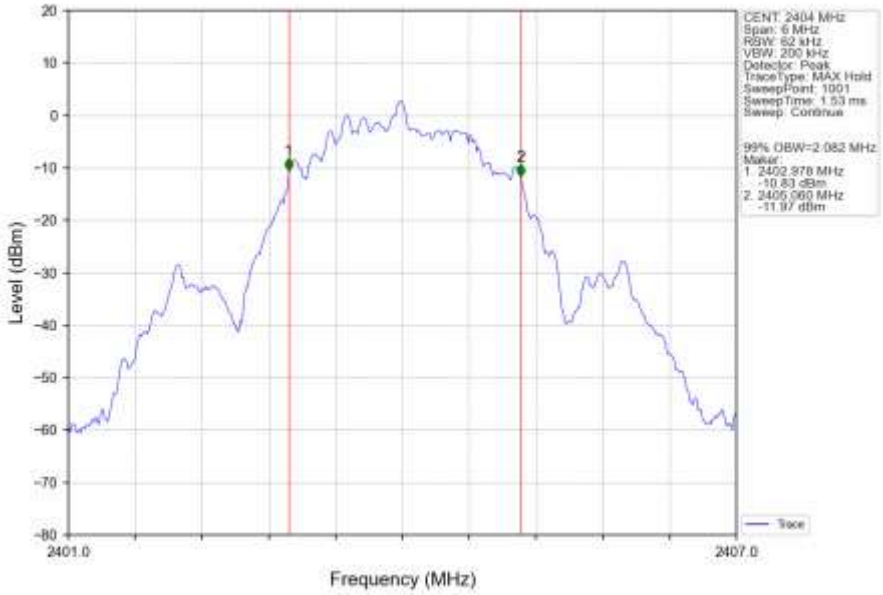
S2_MCH_2440MHz_Ant1_NTNV

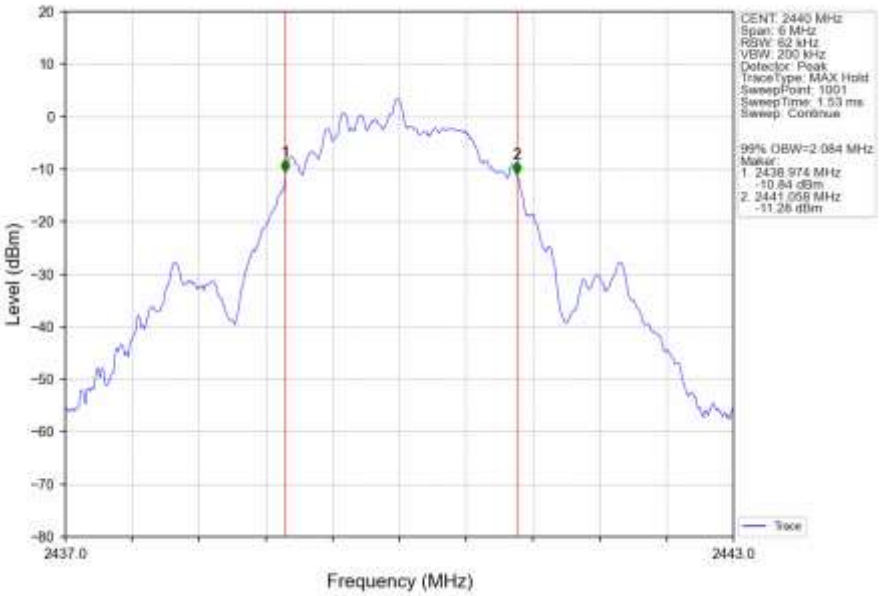
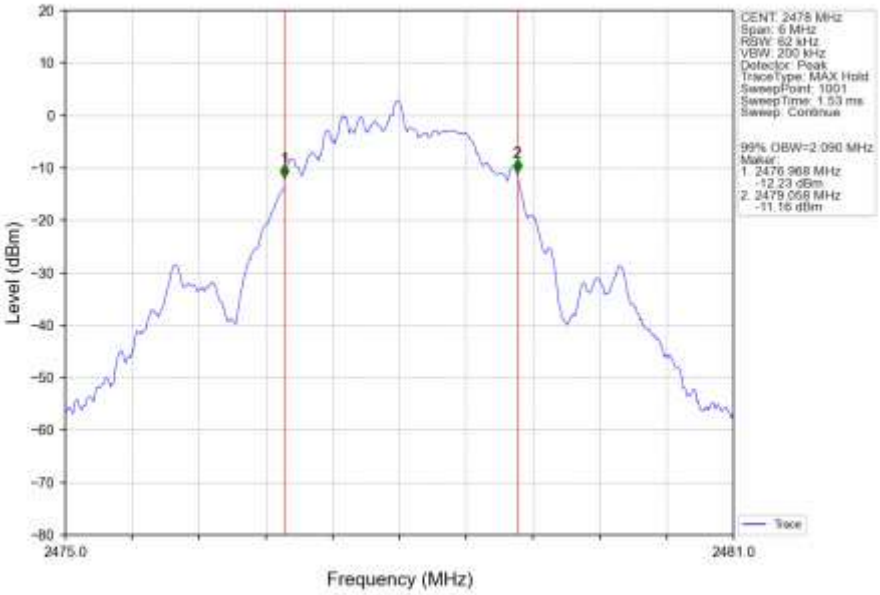


S2_HCH_2480MHz_Ant1_NTNV



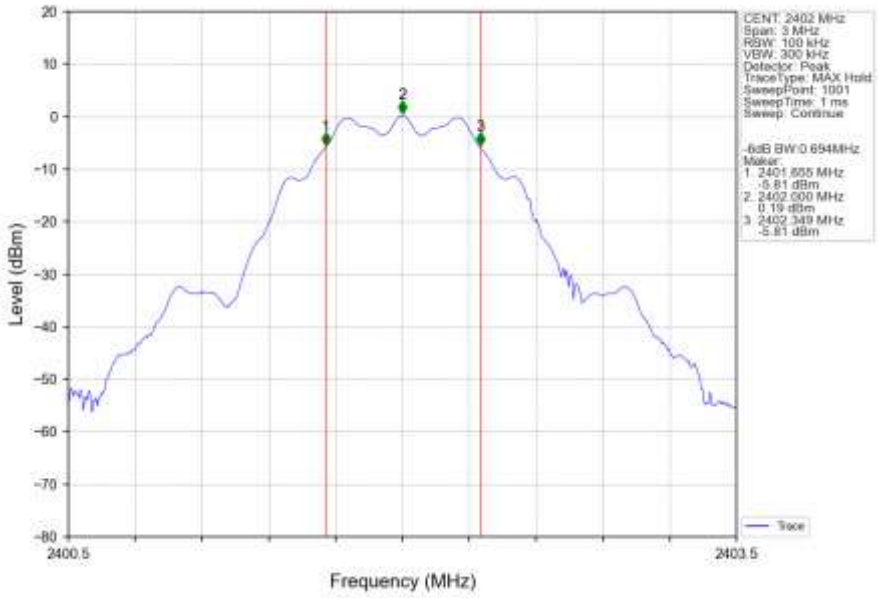
1M_LCH_2402MHz_Ant1_NTNV

1M_MCH_2440MHz_Ant1_NTNV


1M_HCH_2480MHz_Ant1_NTNV

2M_LCH_2404MHz_Ant1_NTNV


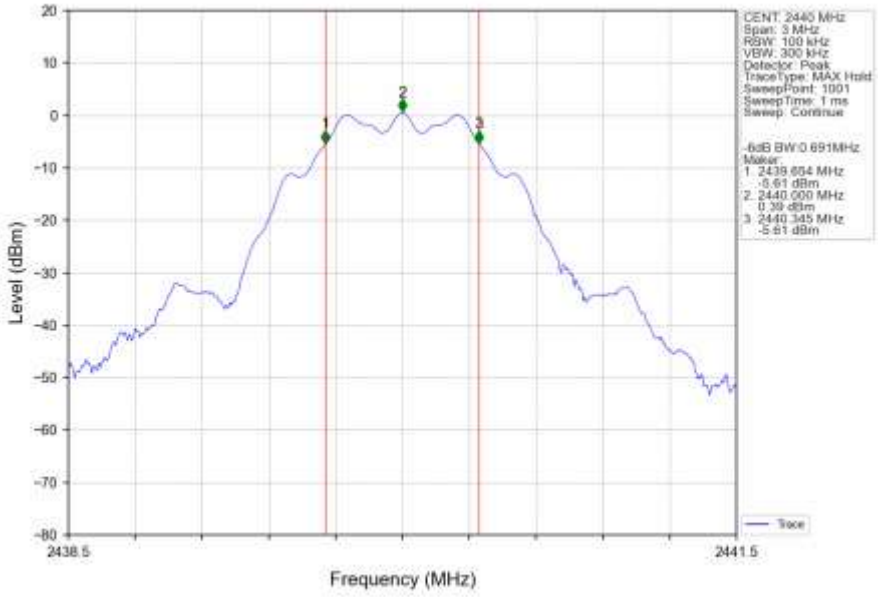
2M_MCH_2440MHz_Ant1_NTNV

2M_HCH_2478MHz_Ant1_NTNV


2.2.2 6dB BW

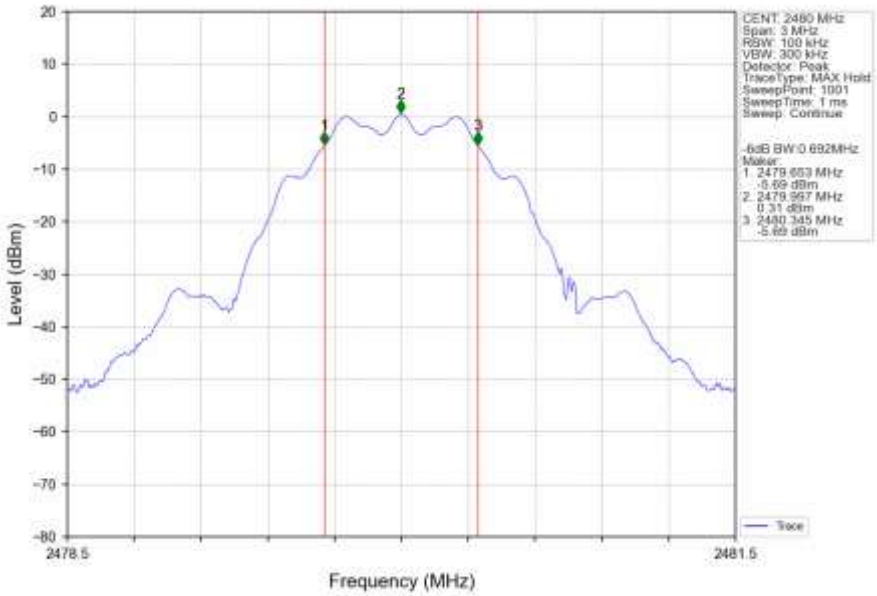
S8_LCH_2402MHz_Ant1_NTNV



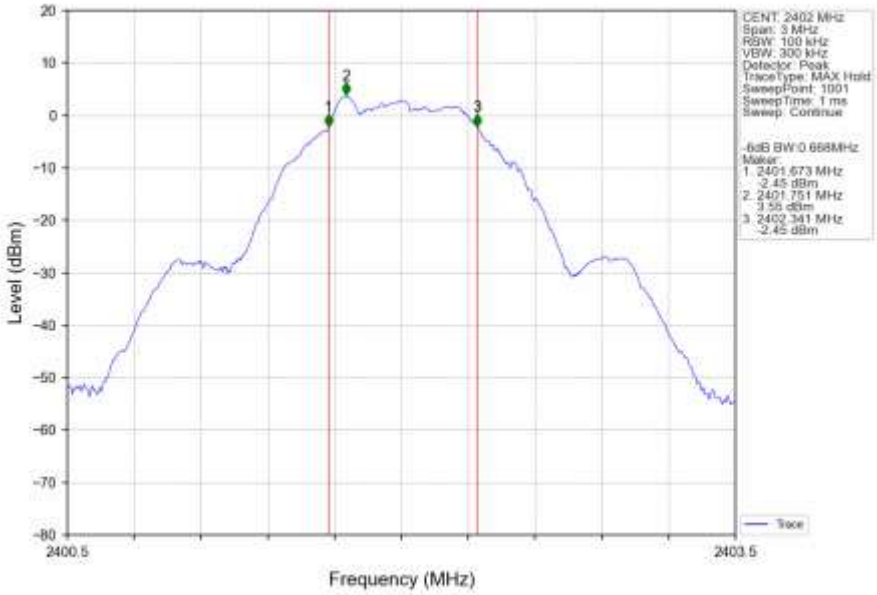
S8_MCH_2440MHz_Ant1_NTNV



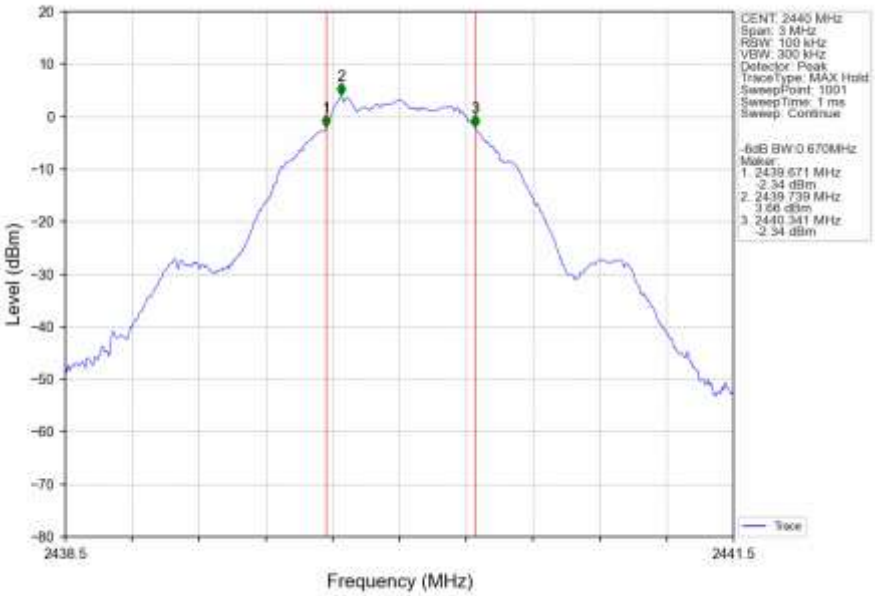
S8_HCH_2480MHz_Ant1_NTNV



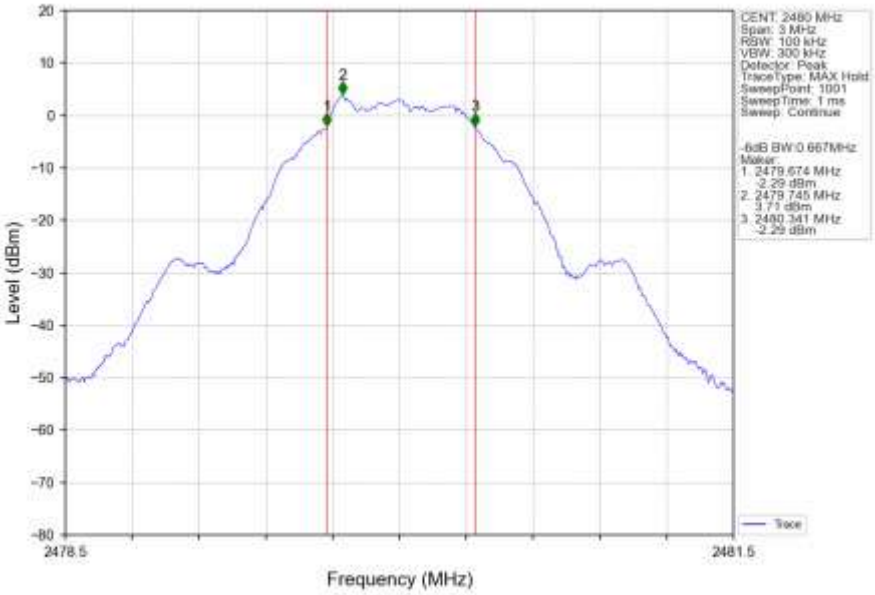
S2_LCH_2402MHz_Ant1_NTNV

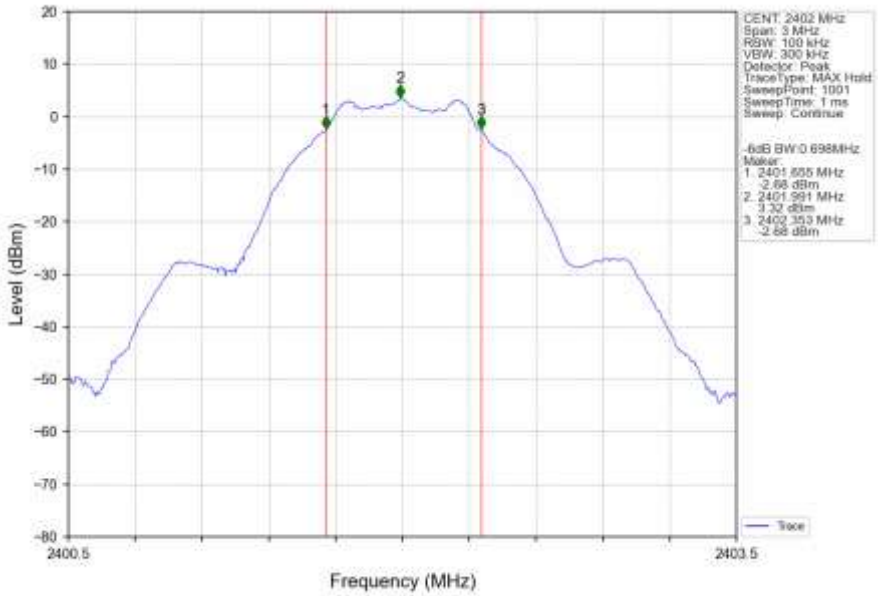
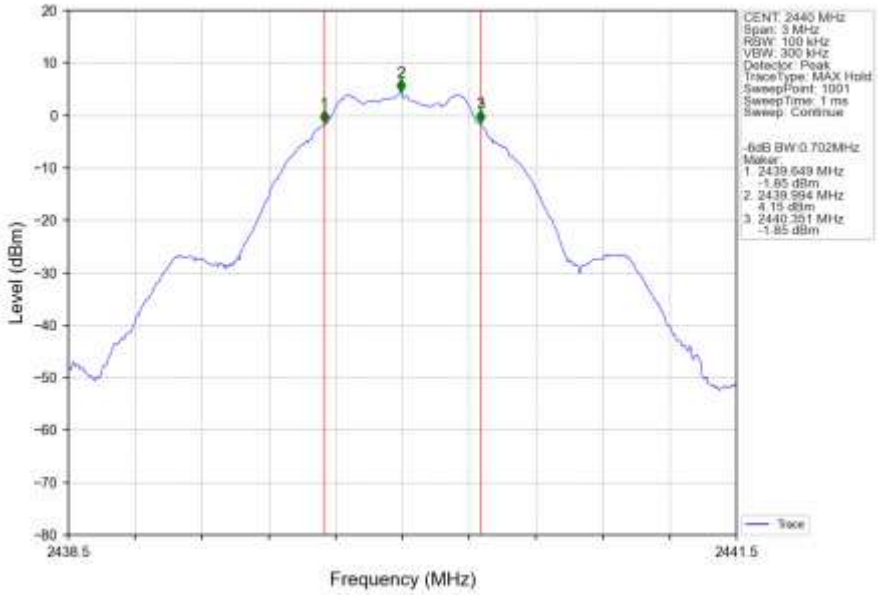


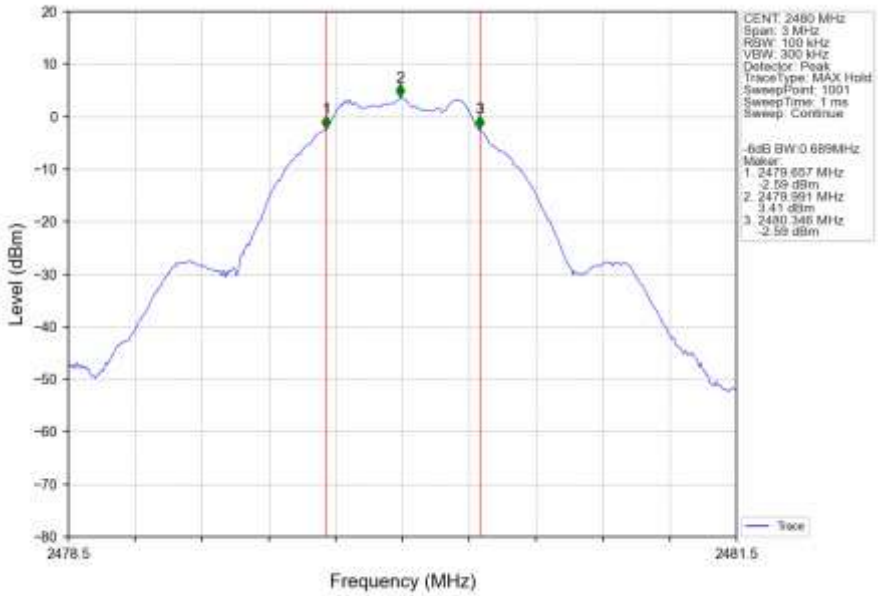
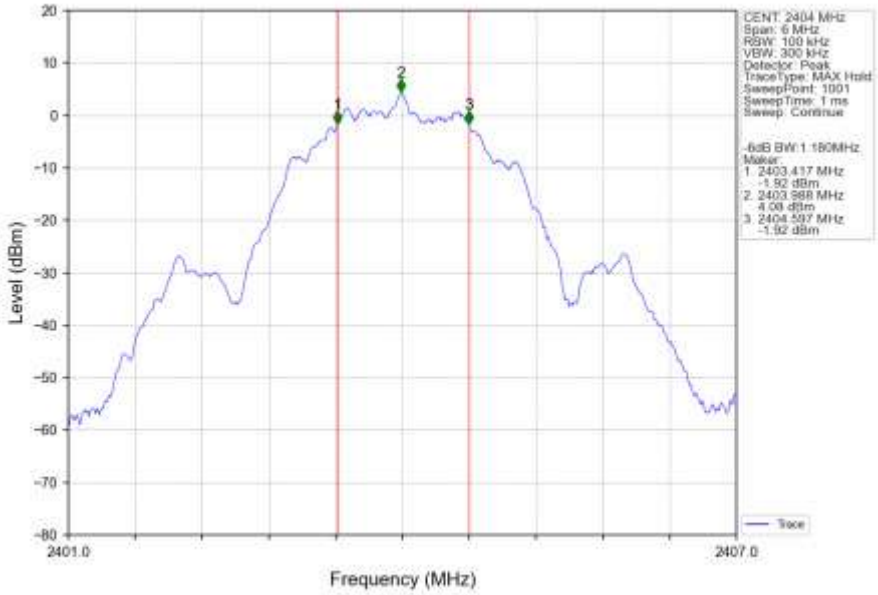
S2_MCH_2440MHz_Ant1_NTNV



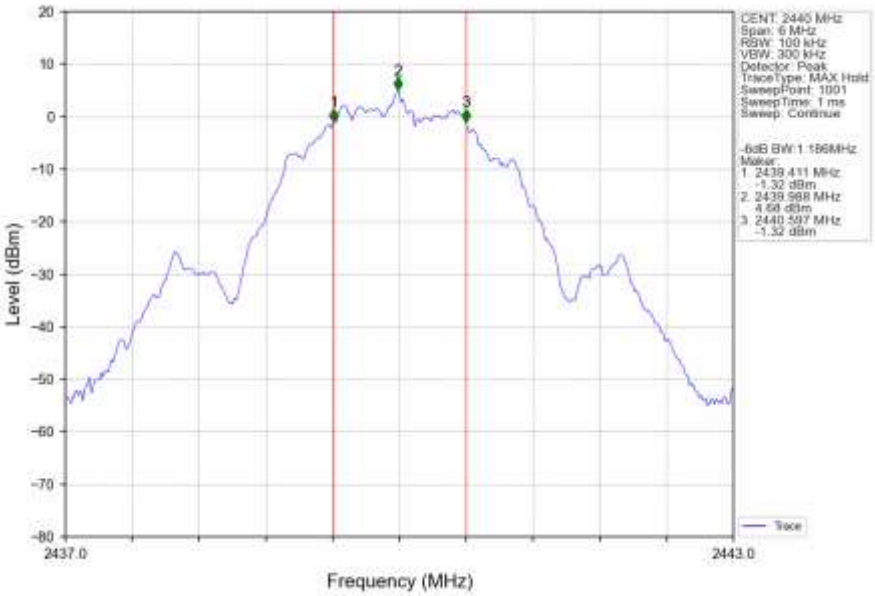
S2_HCH_2480MHz_Ant1_NTNV



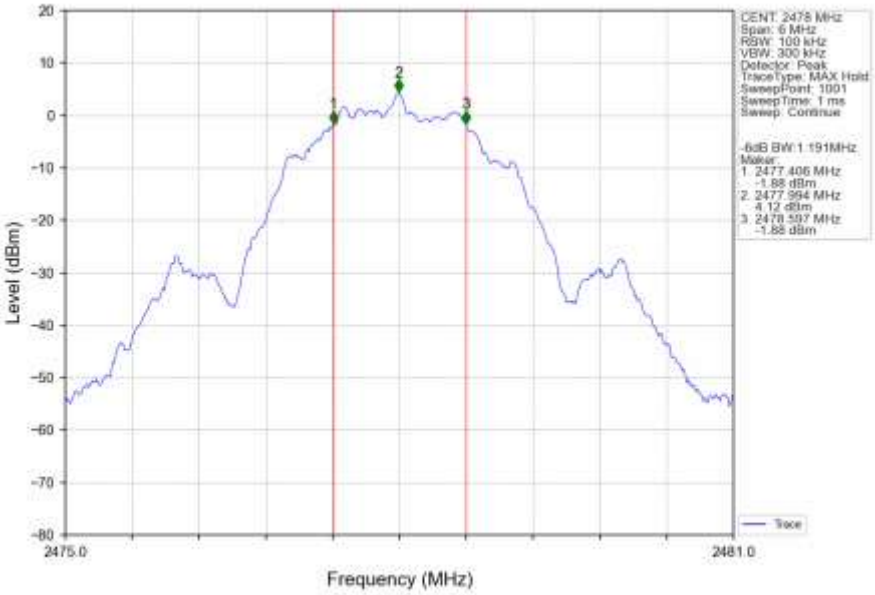
1M_LCH_2402MHz_Ant1_NTNV

1M_MCH_2440MHz_Ant1_NTNV


1M_HCH_2480MHz_Ant1_NTNV

2M_LCH_2404MHz_Ant1_NTNV


2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2478MHz_Ant1_NTNV



3. Maximum Conducted Output Power

3.1 Test Result

3.1.1 Power-Peak

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
S8	SISO	2402	3.81	<=30	Pass
		2440	3.99	<=30	Pass
		2480	3.89	<=30	Pass
S2	SISO	2402	3.89	<=30	Pass
		2440	4.10	<=30	Pass
		2480	3.96	<=30	Pass
1M	SISO	2402	4.11	<=30	Pass
		2440	4.93	<=30	Pass
		2480	4.21	<=30	Pass
2M	SISO	2404	5.05	<=30	Pass
		2440	5.67	<=30	Pass
		2478	5.09	<=30	Pass
Note1: Antenna Gain: Ant1: 0.70dBi;					

3.1.2 Power-Average

Mode	TX Type	Frequency (MHz)	Average Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
S8	SISO	2402	2.22	<=30	Pass
		2440	2.38	<=30	Pass
		2480	2.46	<=30	Pass
S2	SISO	2402	2.12	<=30	Pass
		2440	2.34	<=30	Pass
		2480	2.44	<=30	Pass
1M	SISO	2402	2.84	<=30	Pass
		2440	2.96	<=30	Pass
		2480	3.02	<=30	Pass
2M	SISO	2404	2.65	<=30	Pass
		2440	2.86	<=30	Pass
		2478	2.97	<=30	Pass
Note1: Antenna Gain: Ant1: 0.70dBi;					

4. Maximum Power Spectral Density

4.1 Test Result

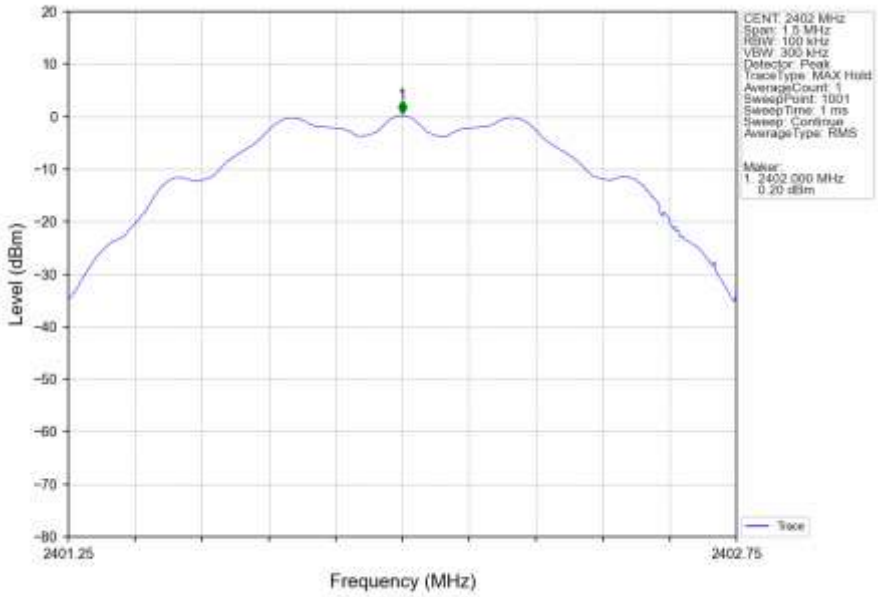
4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (dBm)		Verdict
			ANT1	Limit	
S8	SISO	2402	0.20	<=8	Pass
		2440	0.40	<=8	Pass
		2480	0.32	<=8	Pass
S2	SISO	2402	3.55	<=8	Pass
		2440	3.83	<=8	Pass
		2480	3.76	<=8	Pass
1M	SISO	2402	3.30	<=8	Pass
		2440	4.15	<=8	Pass
		2480	3.41	<=8	Pass
2M	SISO	2404	4.03	<=8	Pass
		2440	4.63	<=8	Pass
		2478	4.05	<=8	Pass
Note1: Antenna Gain: Ant1: 0.70dBi;					

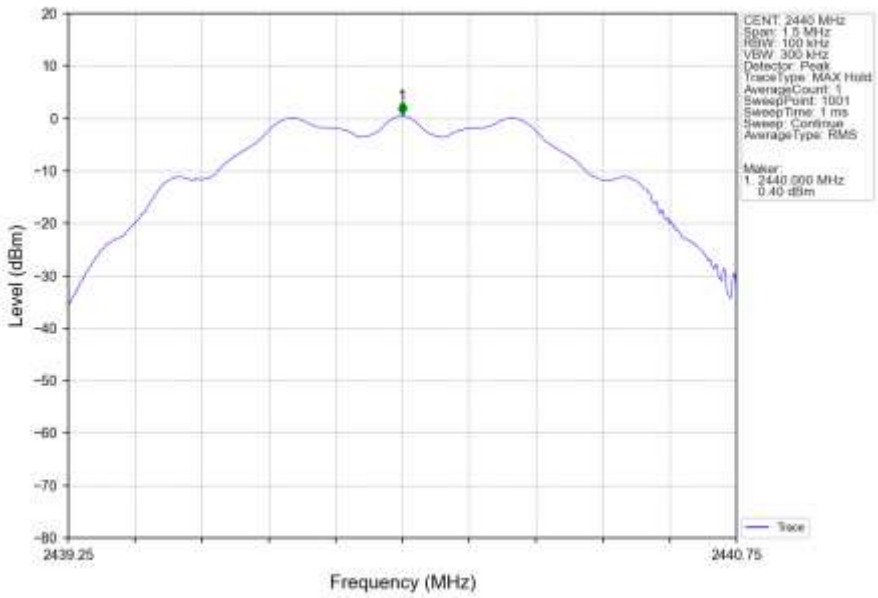
4.2 Test Graph

4.2.1 PSD

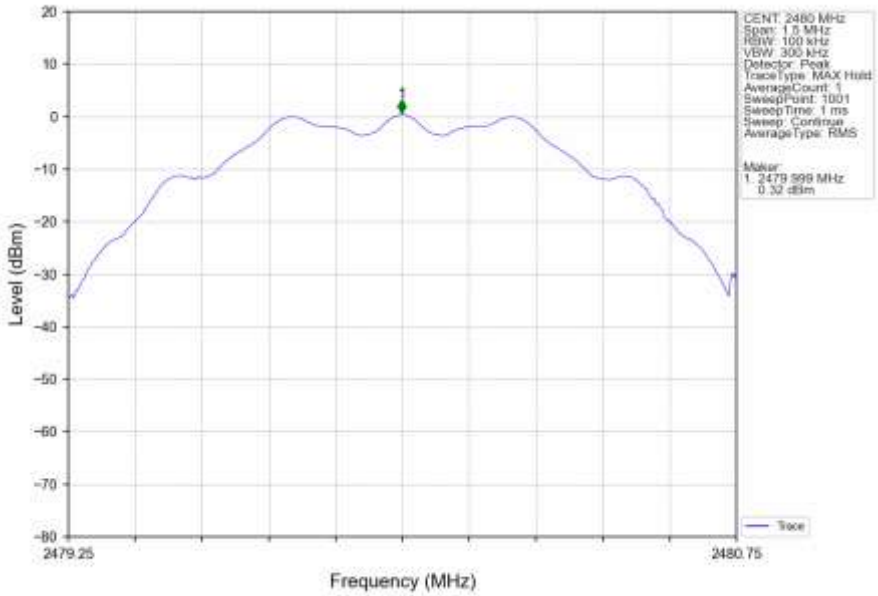
S8_LCH_2402MHz_Ant1_NTNV



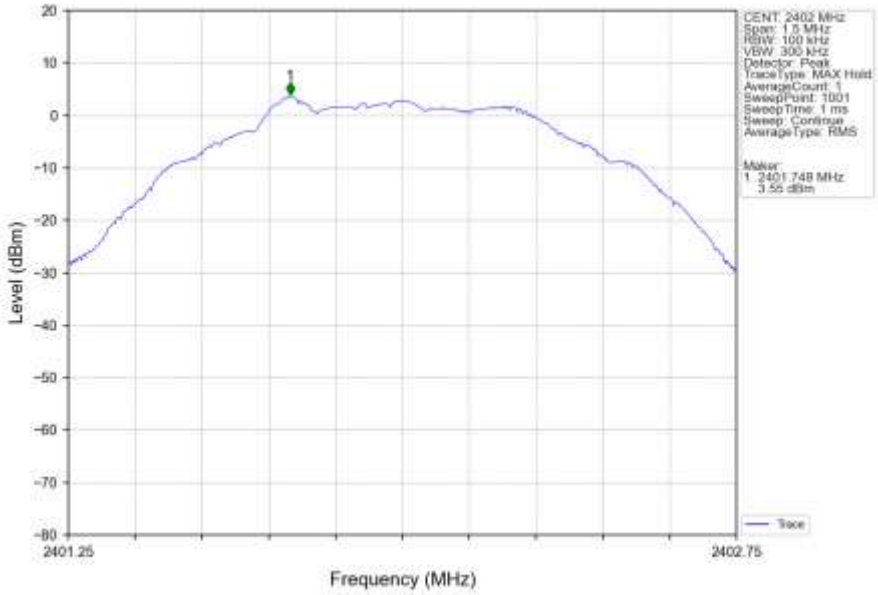
S8_MCH_2440MHz_Ant1_NTNV



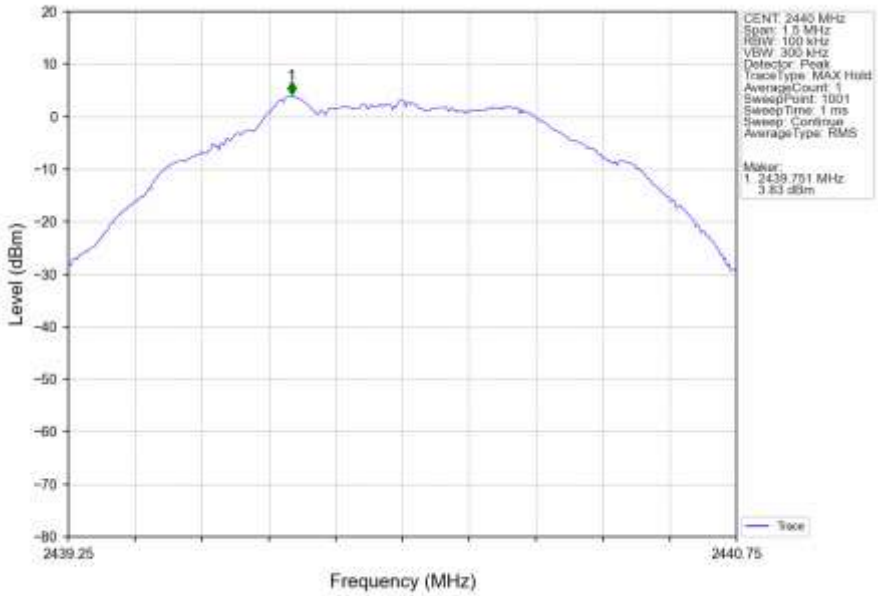
S8_HCH_2480MHz_Ant1_NTNV



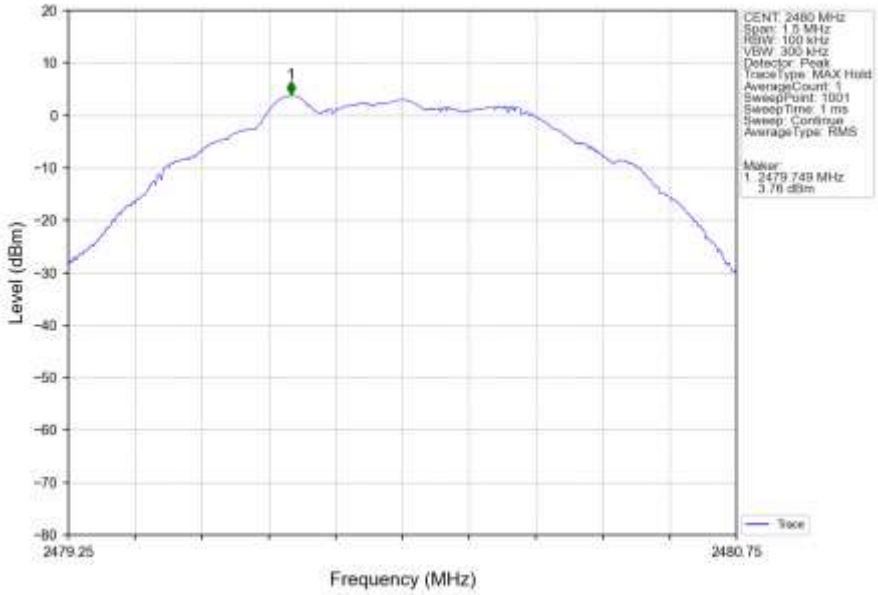
S2_LCH_2402MHz_Ant1_NTNV

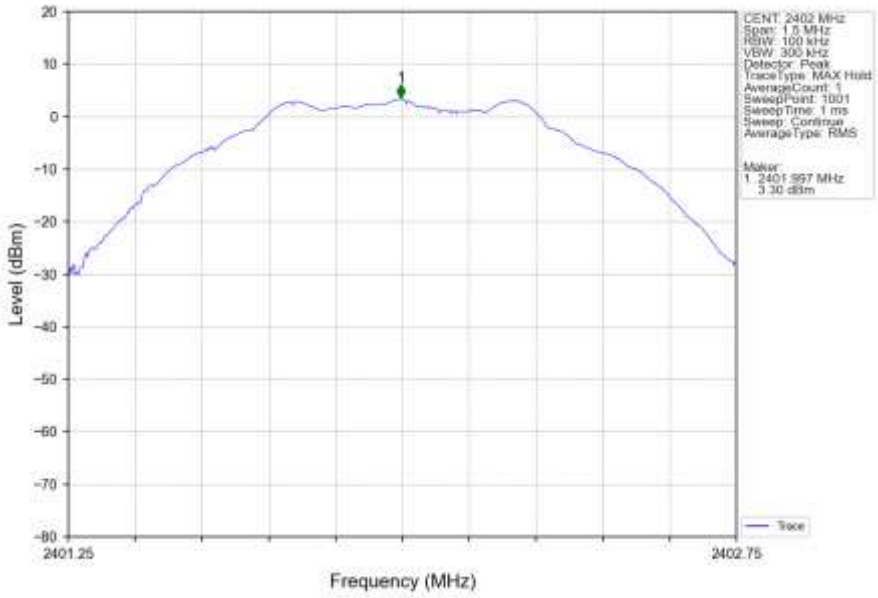
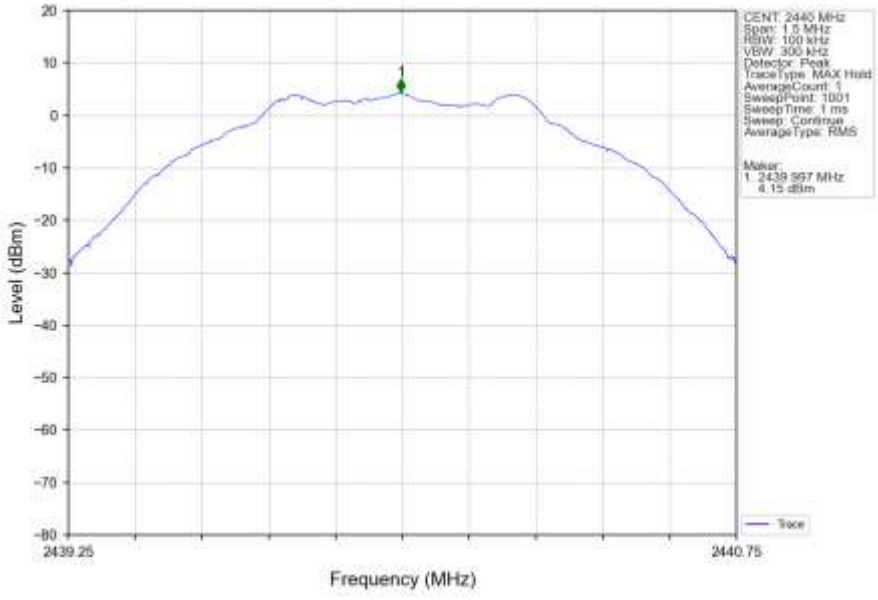


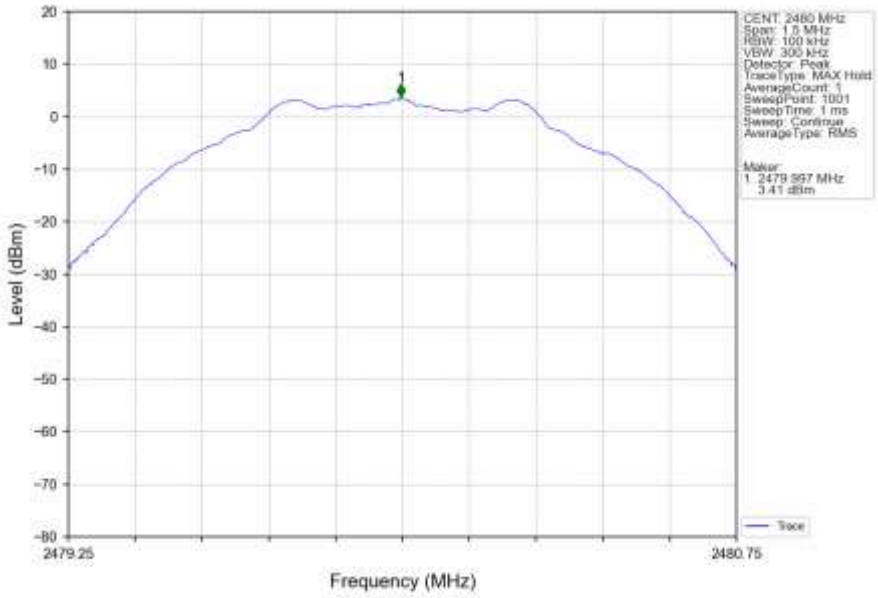
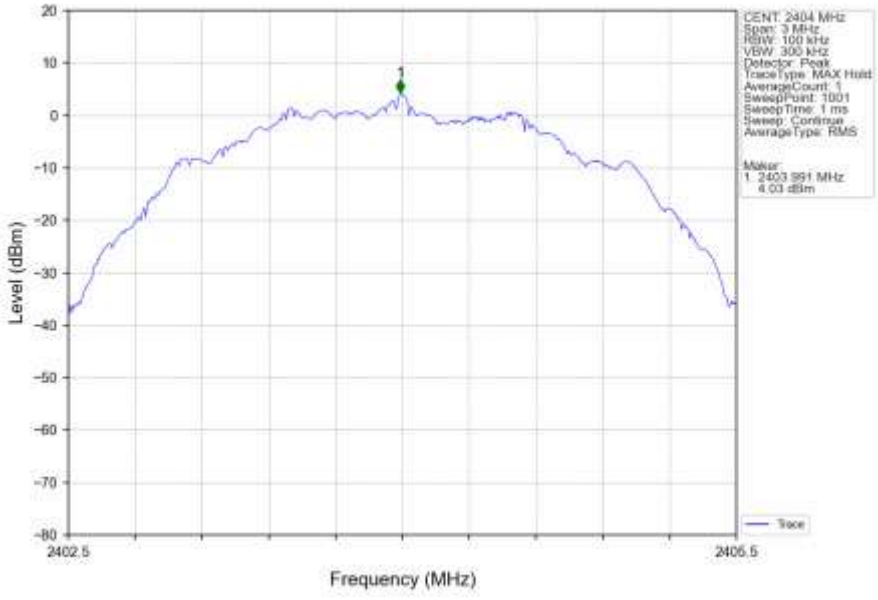
S2_MCH_2440MHz_Ant1_NTNV

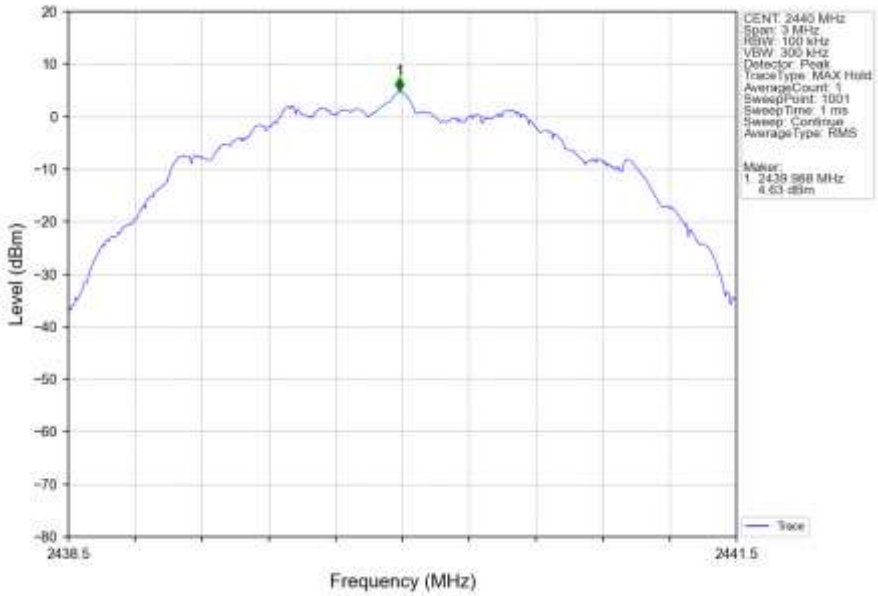
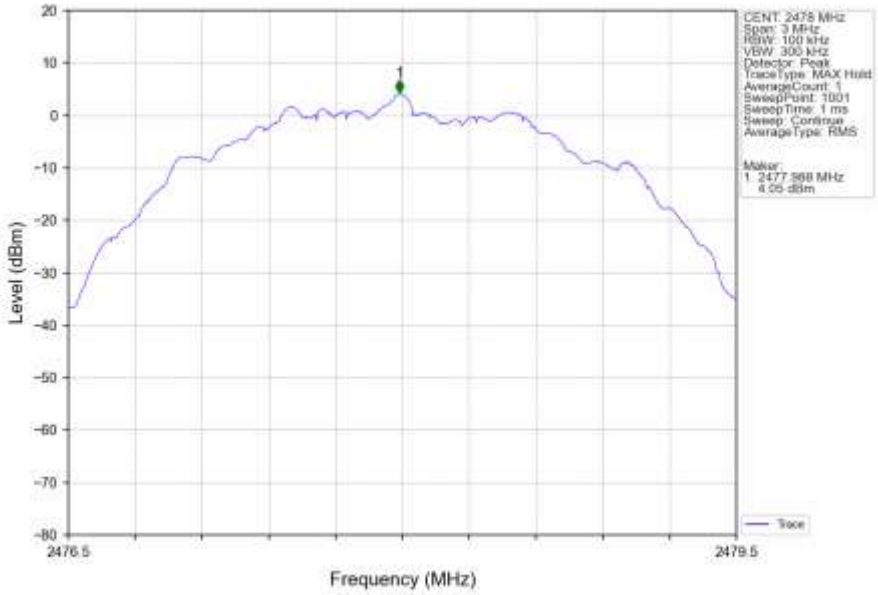


S2_HCH_2480MHz_Ant1_NTNV



1M_LCH_2402MHz_Ant1_NTNV

1M_MCH_2440MHz_Ant1_NTNV


1M_HCH_2480MHz_Ant1_NTNV

2M_LCH_2404MHz_Ant1_NTNV


2M_MCH_2440MHz_Ant1_NTNV

2M_HCH_2478MHz_Ant1_NTNV


5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 Test Result

5.1.1 Ref

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
S8	SISO	2402	1	-0.43
		2440	1	**0.40**
		2480	1	-0.32
S2	SISO	2402	1	2.89
		2440	1	**3.83**
		2480	1	3.12
1M	SISO	2402	1	1.69
		2440	1	**2.53**
		2480	1	1.76
2M	SISO	2404	1	2.40
		2440	1	**2.98**
		2478	1	2.40
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.				

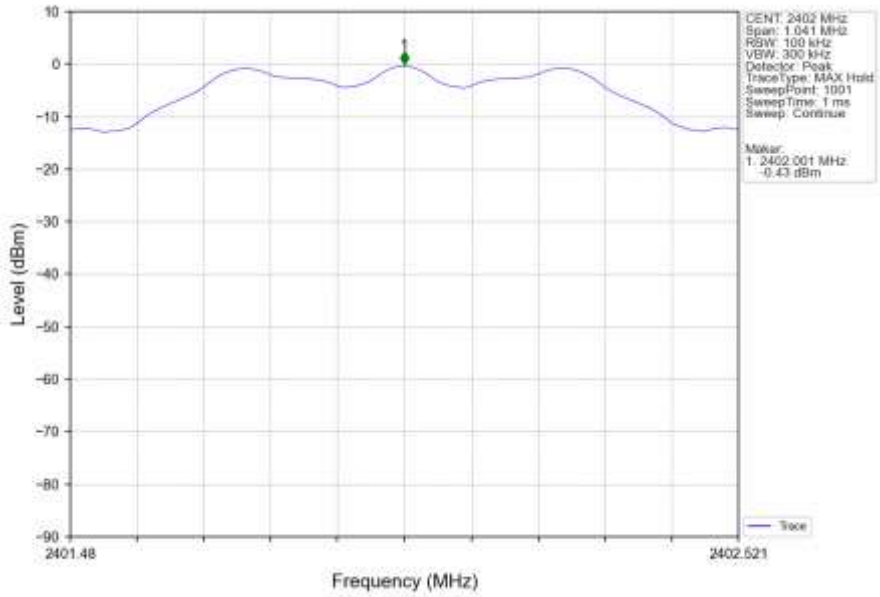
5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
S8	SISO	2402	1	0.40	-19.60	Pass
		2440	1	0.40	-19.60	Pass
		2480	1	0.40	-19.60	Pass
S2	SISO	2402	1	3.83	-16.17	Pass
		2440	1	3.83	-16.17	Pass
		2480	1	3.83	-16.17	Pass
1M	SISO	2402	1	3.16	-16.84	Pass
		2440	1	3.16	-16.84	Pass
		2480	1	3.16	-16.84	Pass
2M	SISO	2404	1	3.61	-16.39	Pass
		2440	1	3.61	-16.39	Pass
		2478	1	3.61	-16.39	Pass
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2020, the channel contains the maximum PSD level was used to establish the reference level.						

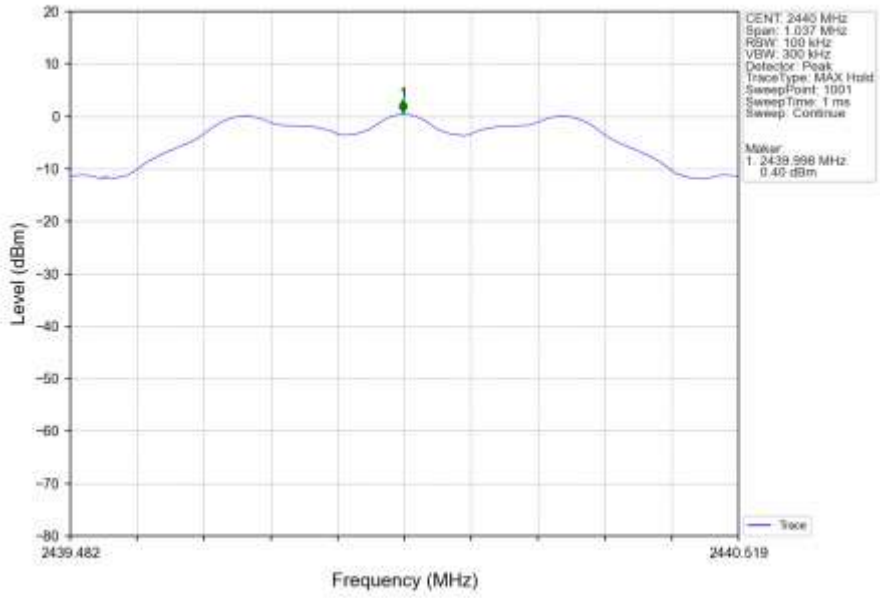
5.2 Test Graph

5.2.1 Ref

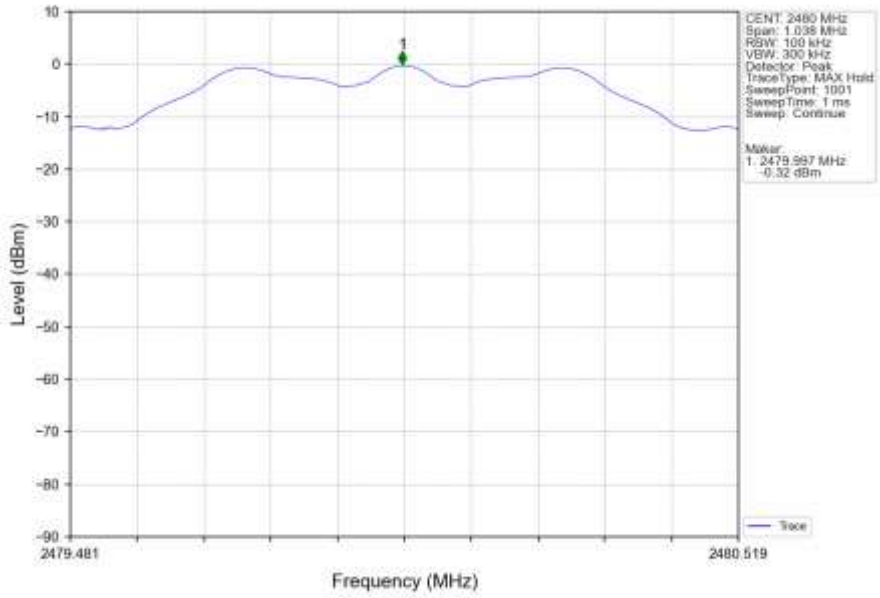
S8_LCH_2402MHz_Ant1_NTNV



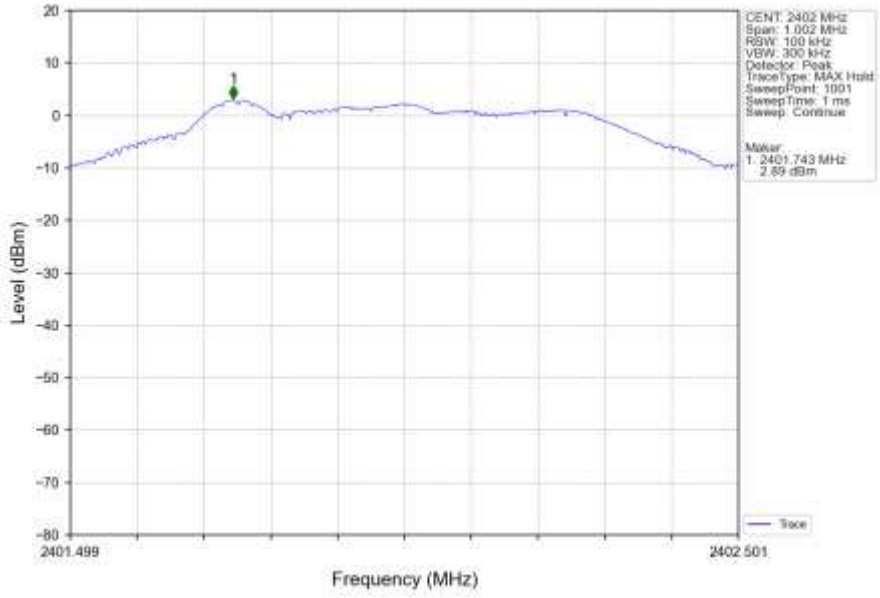
S8_MCH_2440MHz_Ant1_NTNV



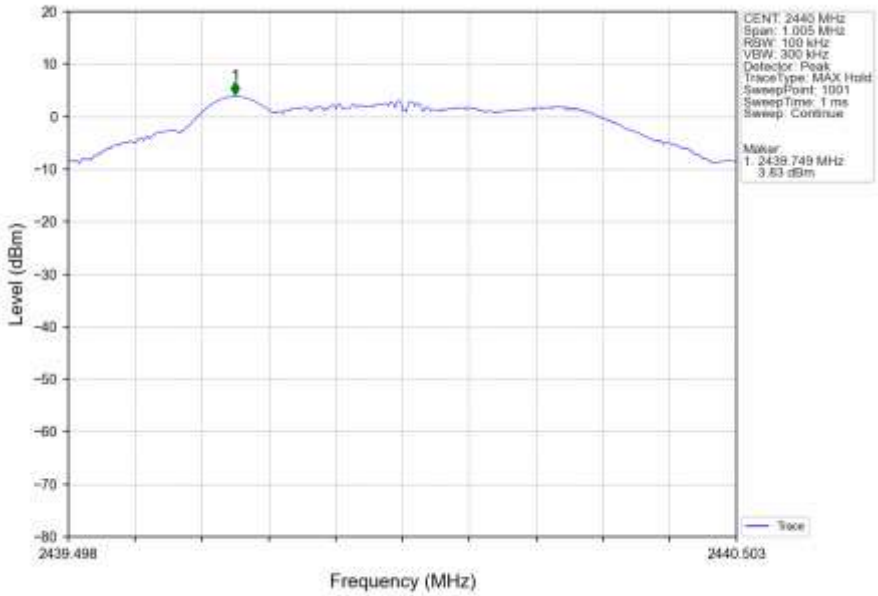
S8_HCH_2480MHz_Ant1_NTNV



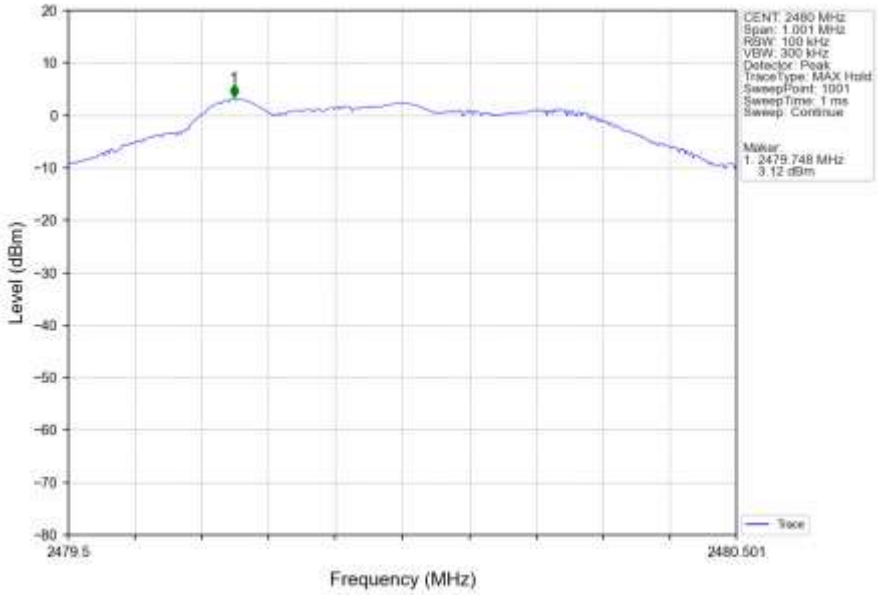
S2_LCH_2402MHz_Ant1_NTNV

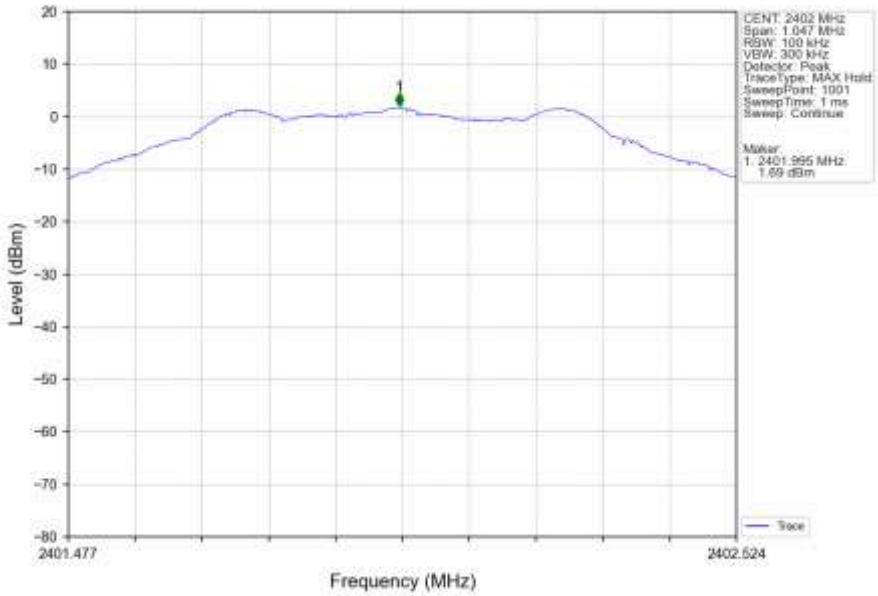


S2_MCH_2440MHz_Ant1_NTNV



S2_HCH_2480MHz_Ant1_NTNV



1M_LCH_2402MHz_Ant1_NTNV

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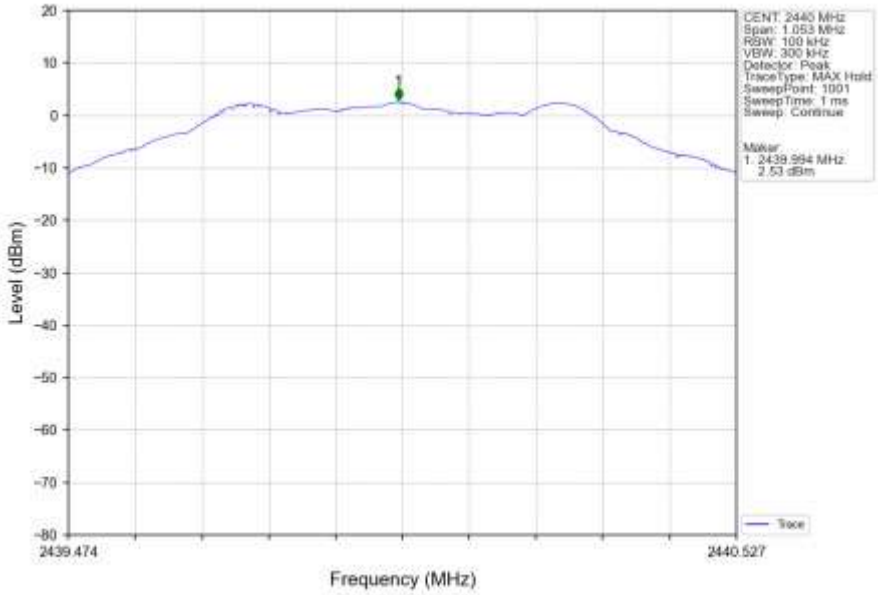

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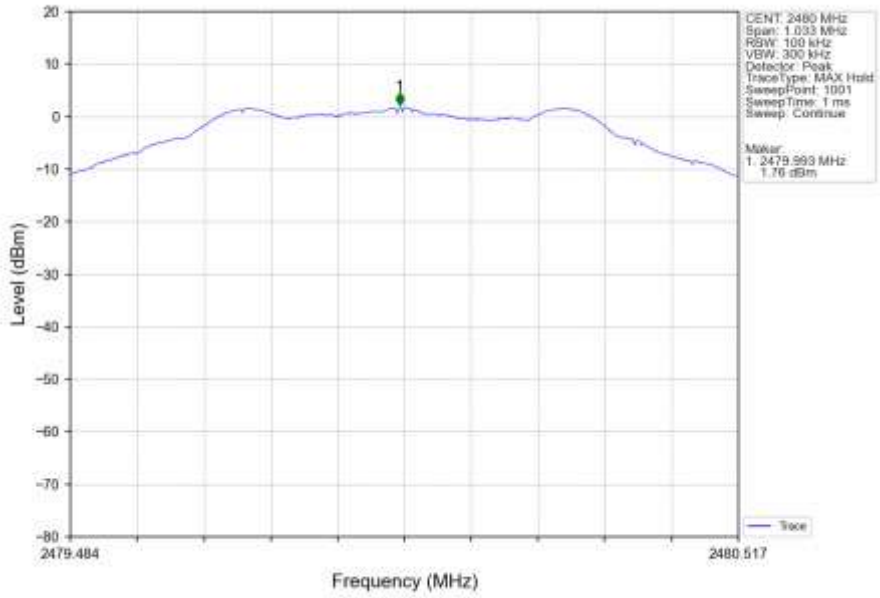
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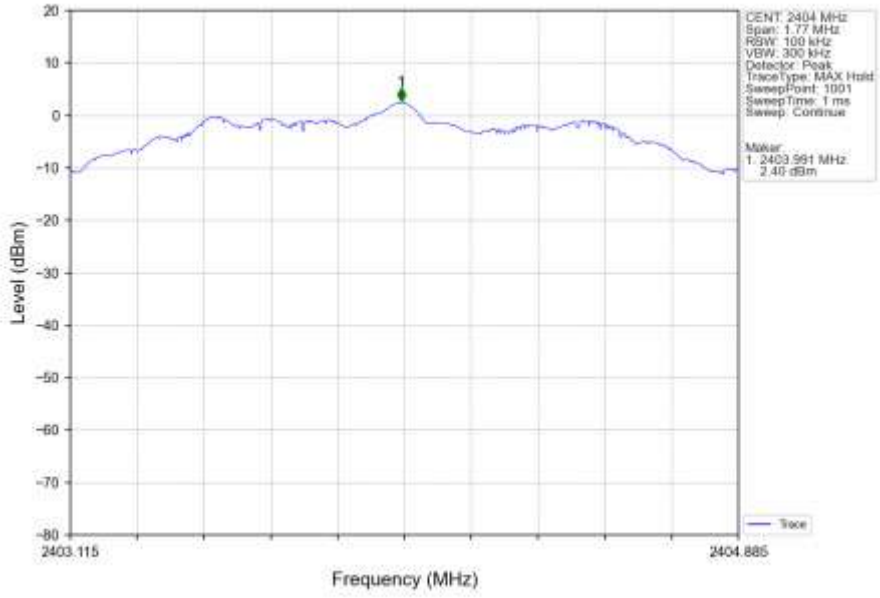

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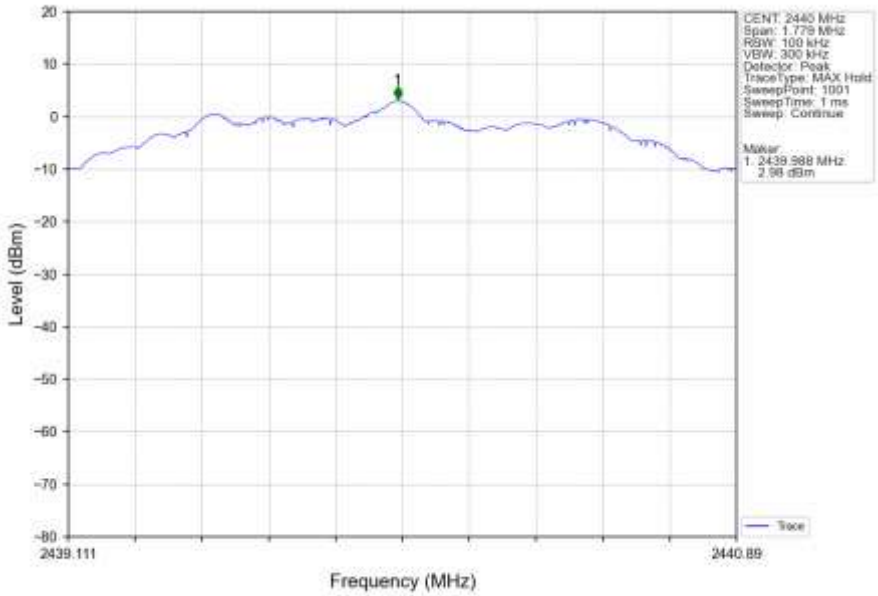

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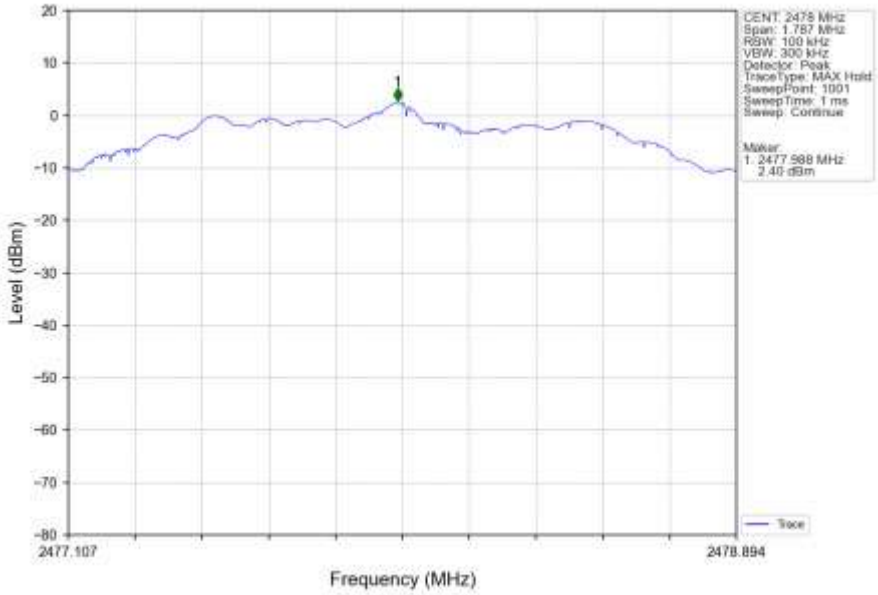

5.2.2 CSE

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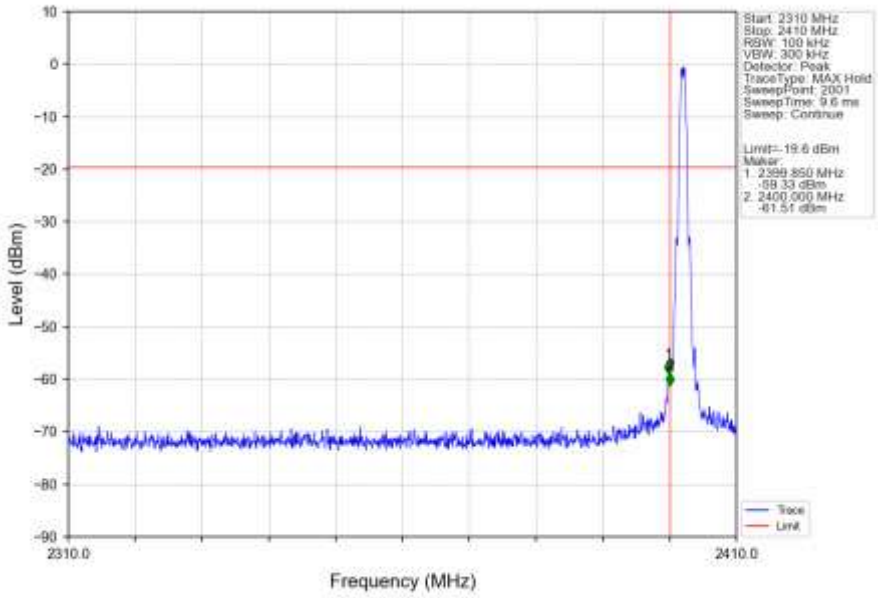
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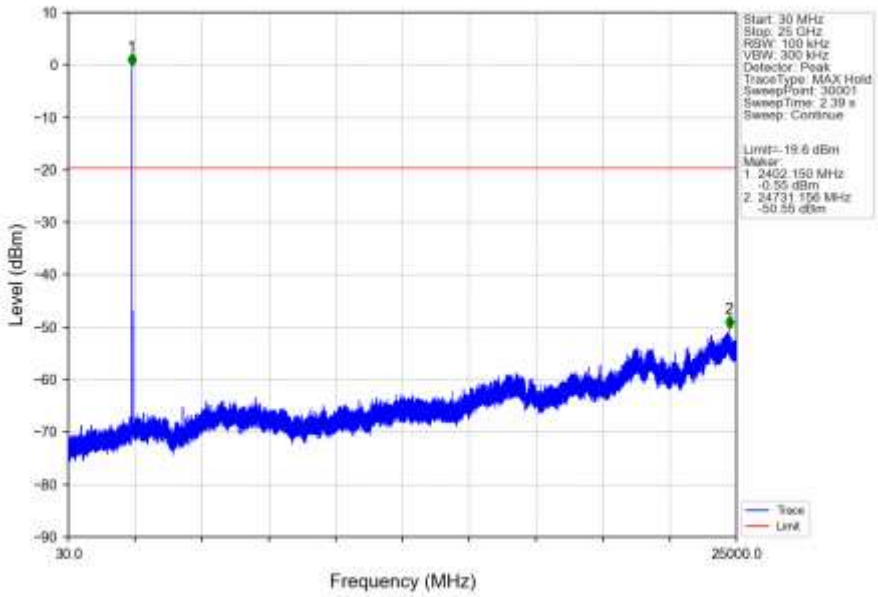

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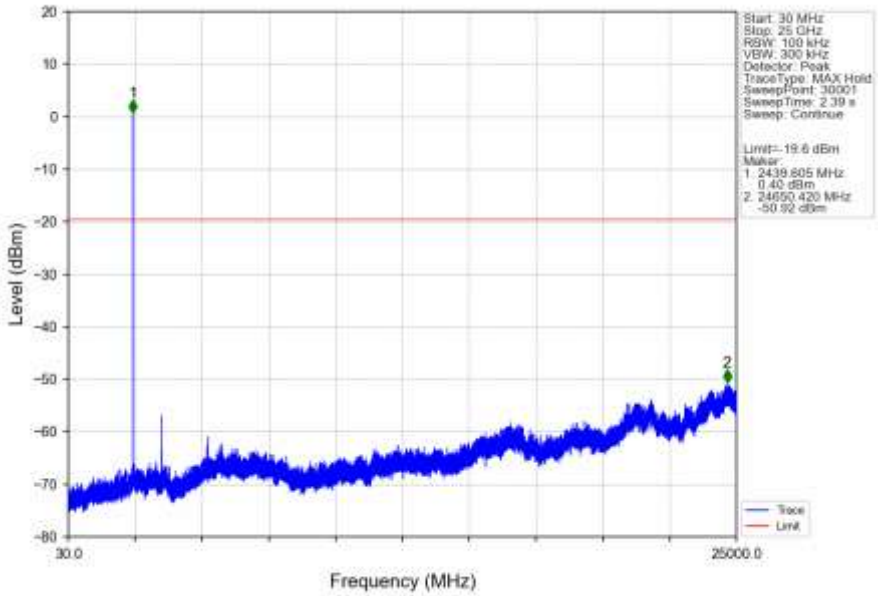

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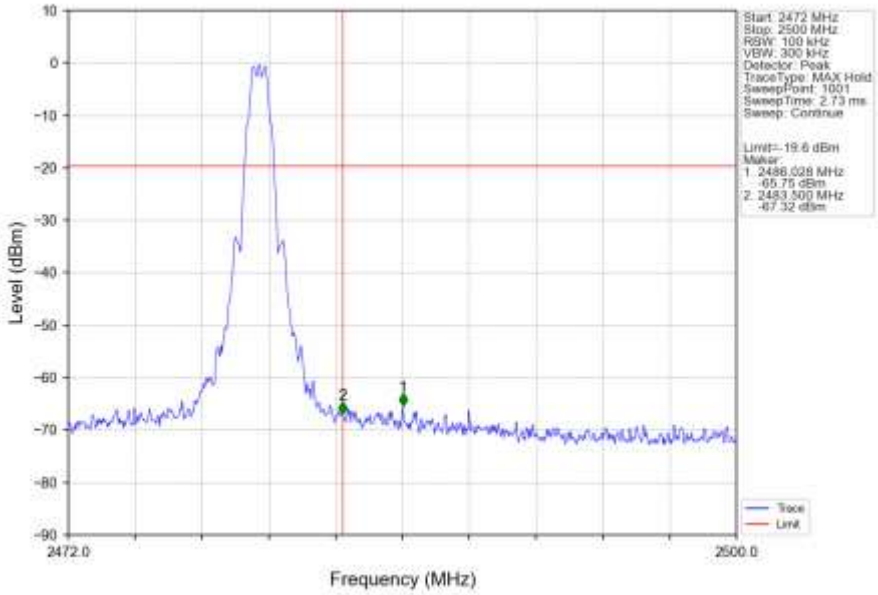

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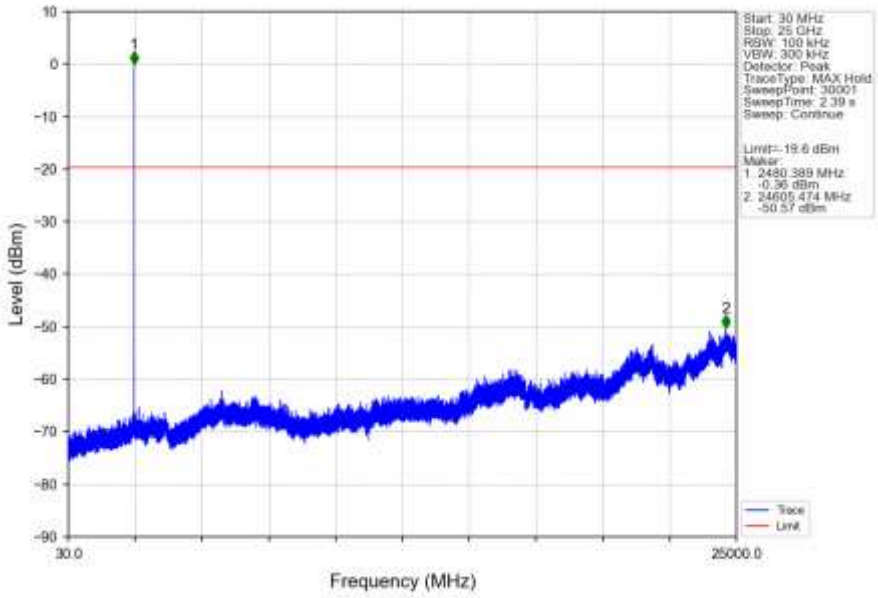

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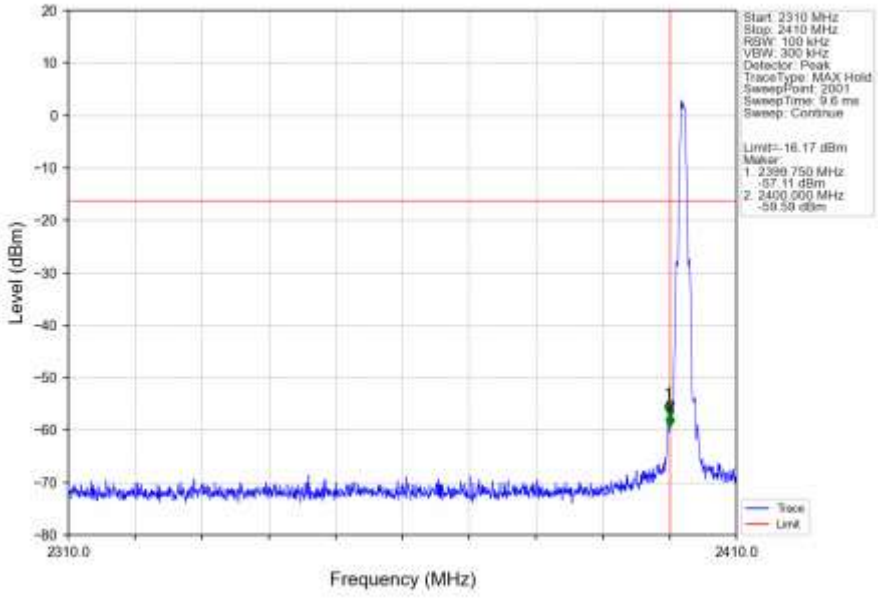

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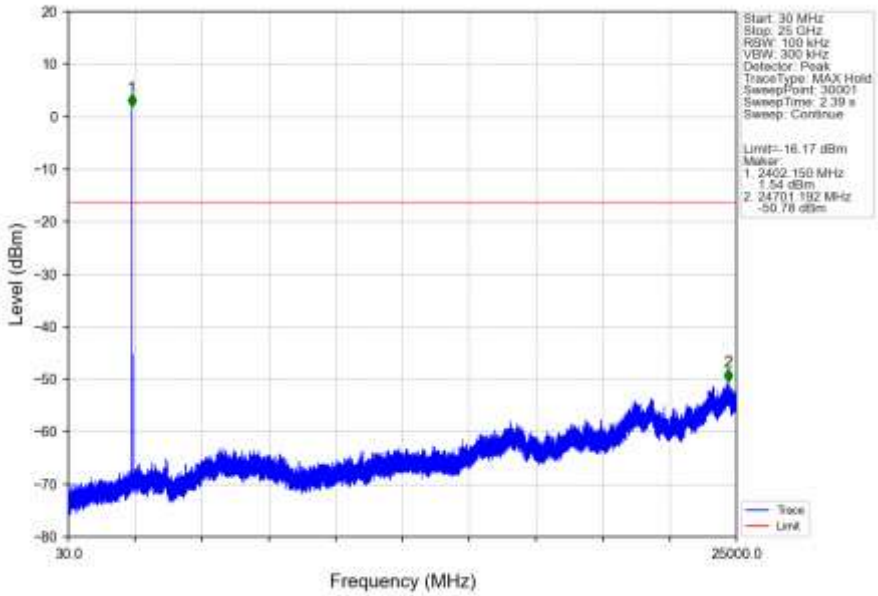

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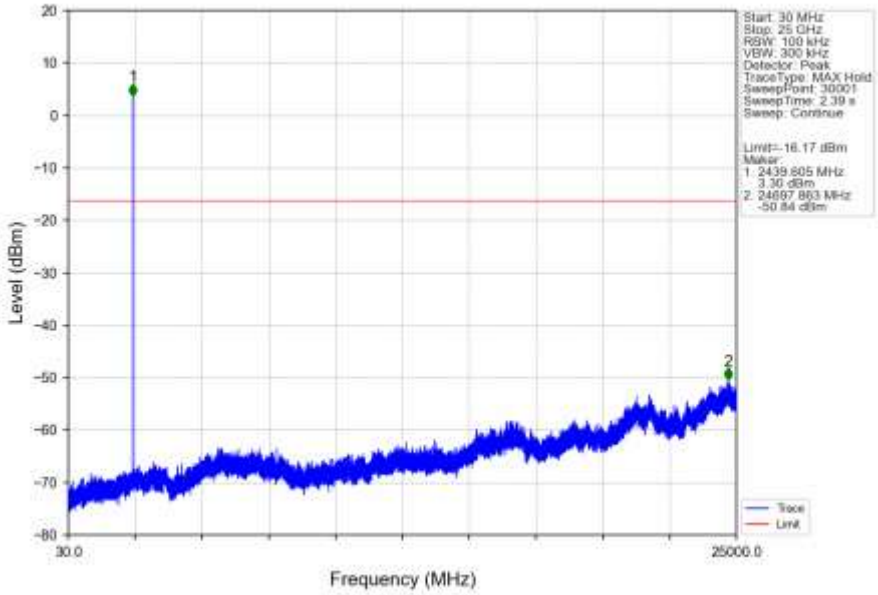

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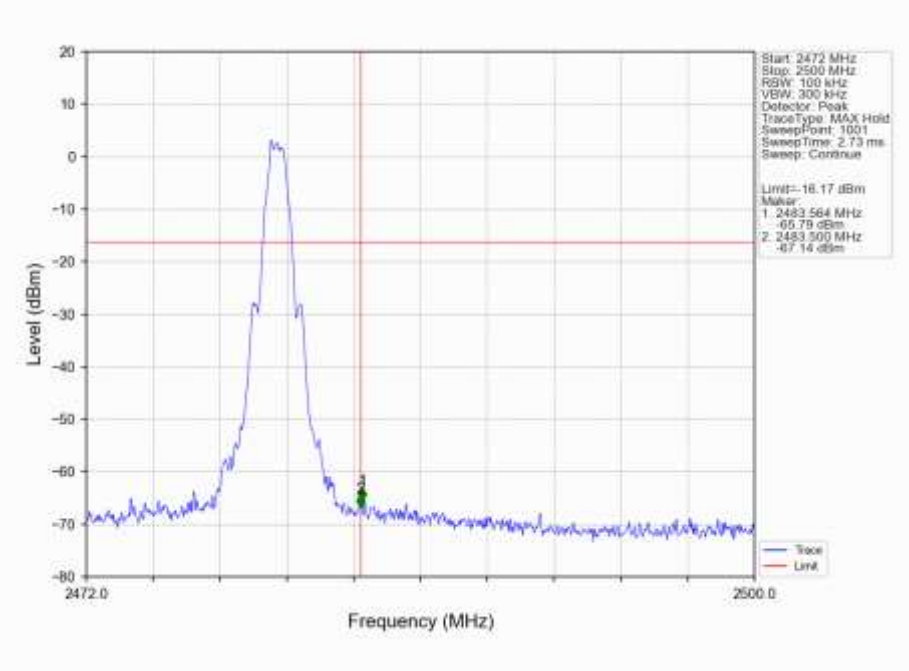

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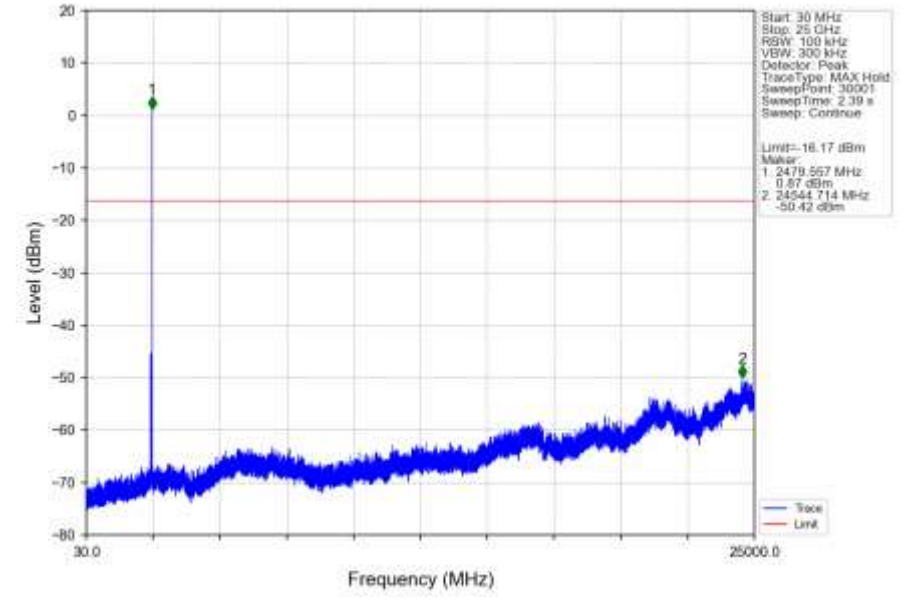

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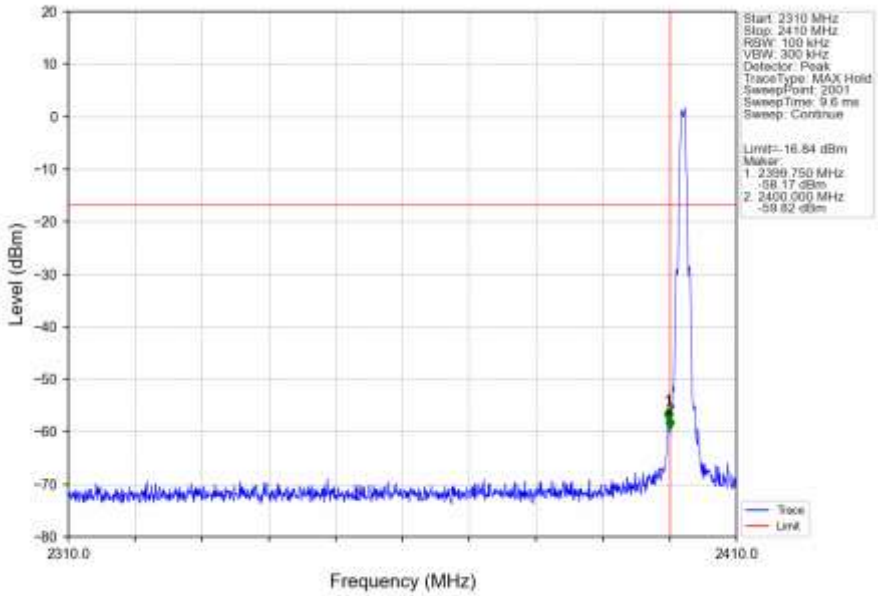
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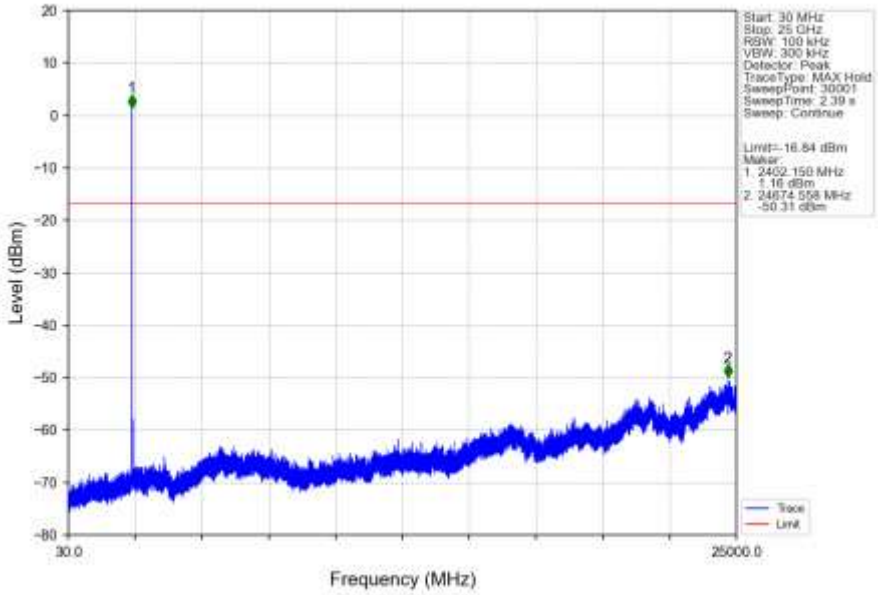

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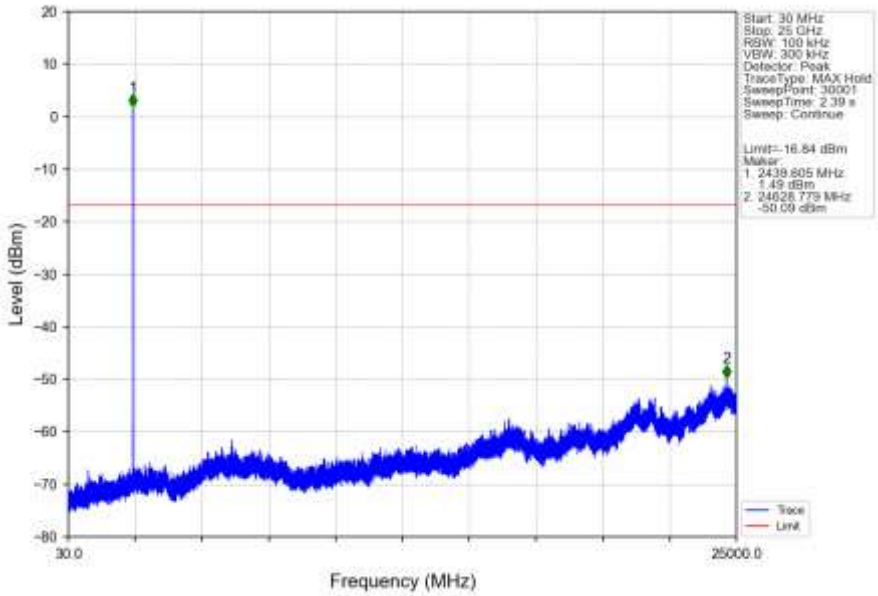
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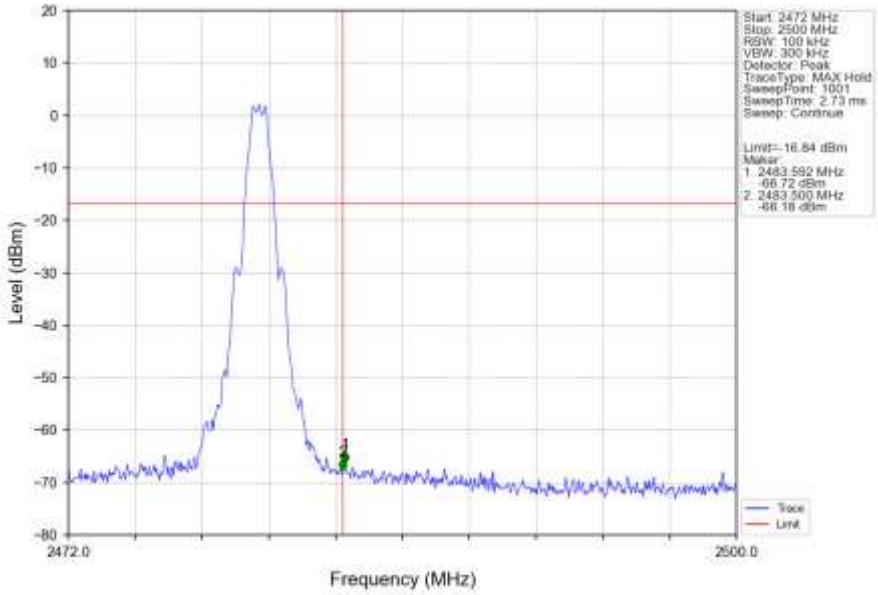

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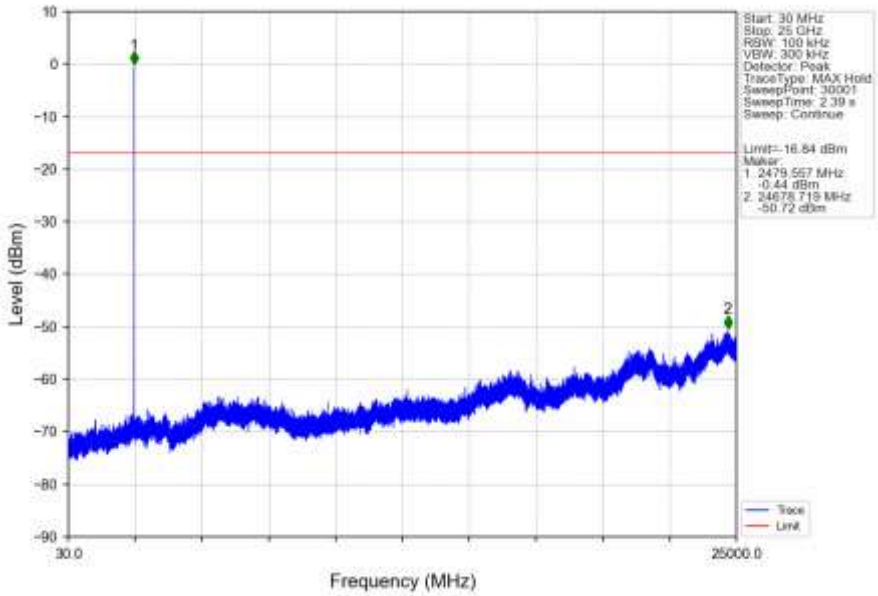
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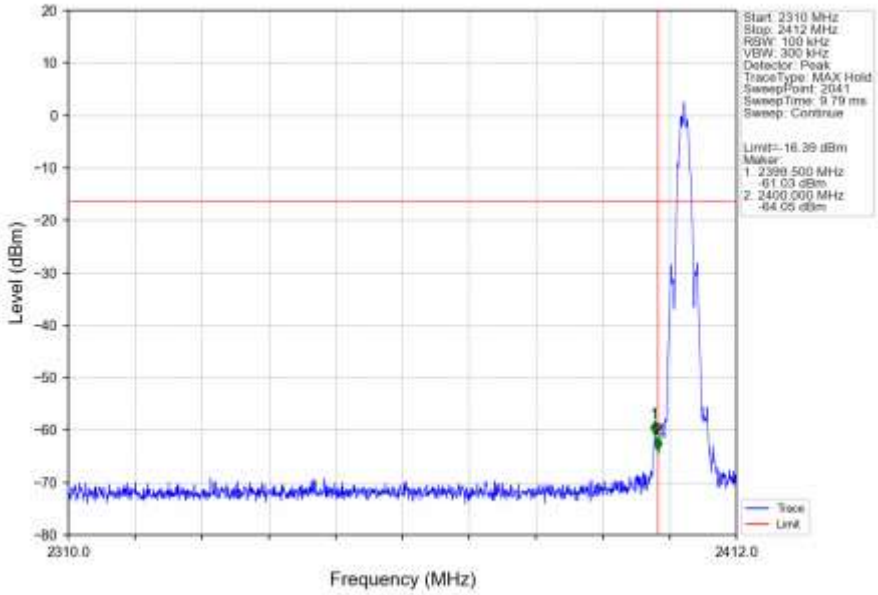

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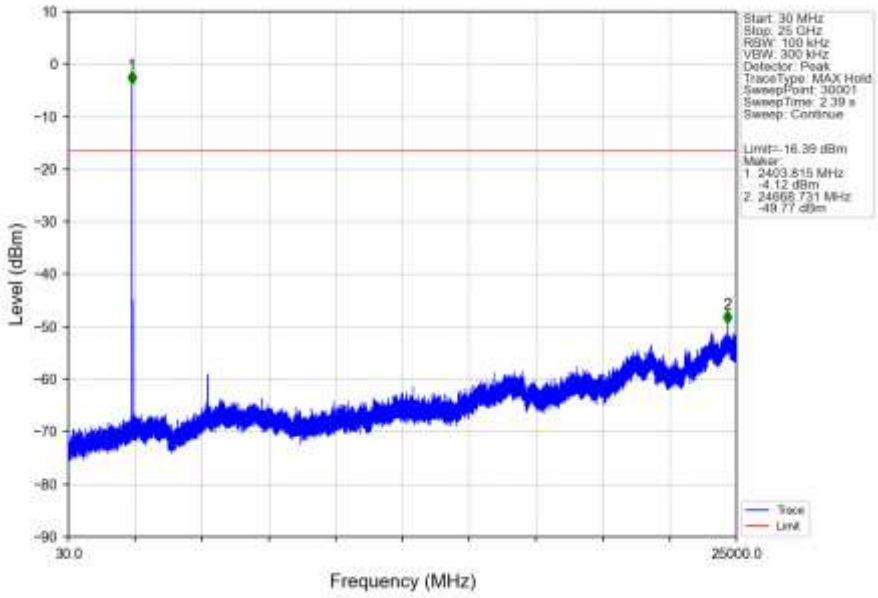
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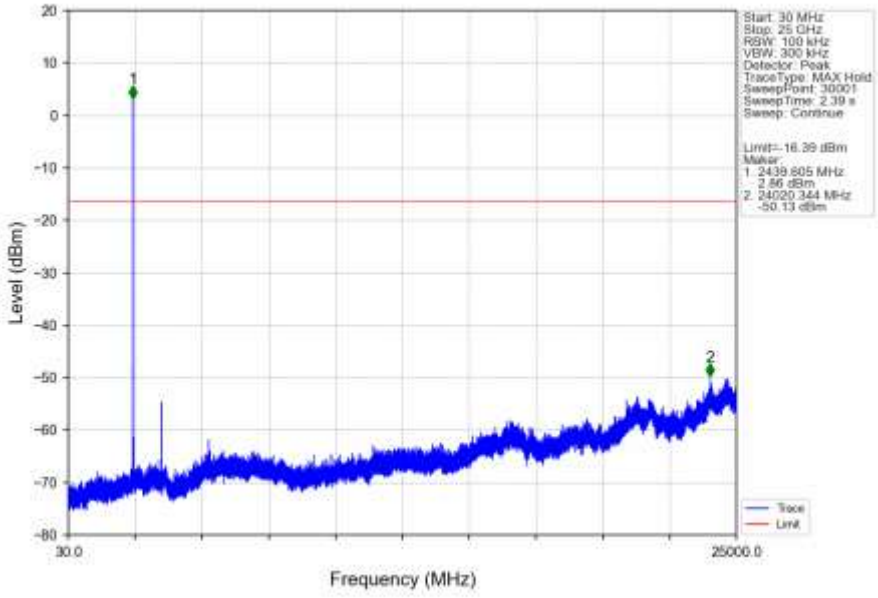

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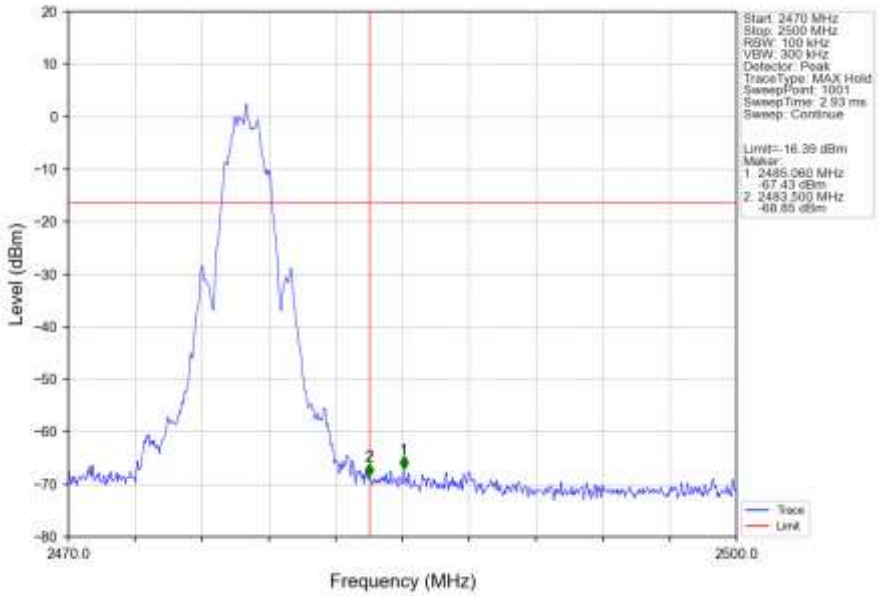
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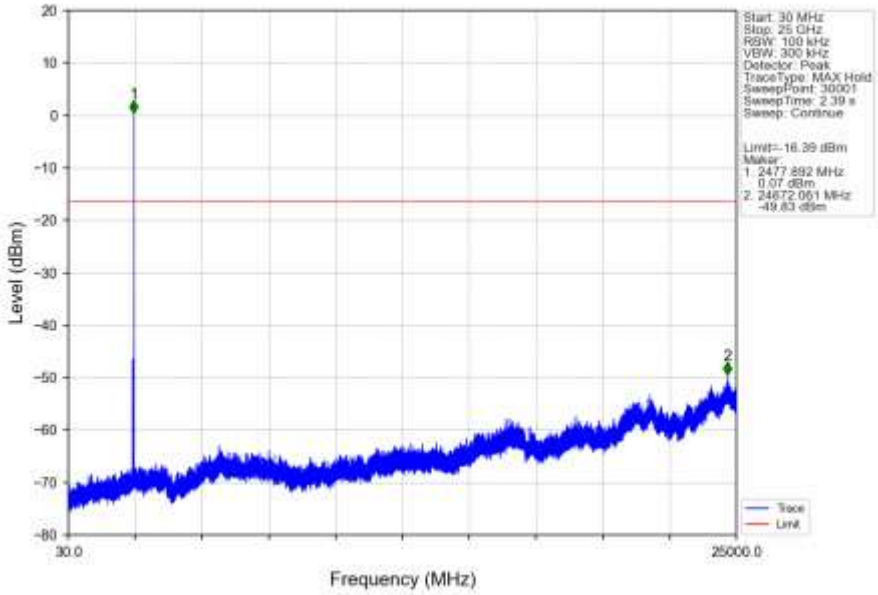

- End of the Report -