

TEST REPORT

Product Name : MINI PC
Brand Name : N/A
Model : MS-03-S386H
Series Model : See page 6
FCC ID : 2A49R-MS-03-S386H
Applicant : **MICRO COMPUTER (HK) TECH LIMITED**
Address : RM 18, 28/F, Shui On Centre, 6-8 Harbour Road, WaterfRont,
Wan Chai, HK
Manufacturer : **MICRO COMPUTER (HK) TECH LIMITED**
Address : RM 18, 28/F, Shui On Centre, 6-8 Harbour Road, WaterfRont,
Wan Chai, HK
Standard(s) : FCC CFR Title 47 Part 15 Subpart C Section 15.247
Date of Receipt : April 29, 2026
Date of Test : April 29, 2026~ June 22, 2026
Issued Date : June 23, 2026

Issued By: **Dongguan Yaxu (AiT) Technology Limited**
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Note: This device has been tested and found to comply with the standard(s) listed, this test report merely corresponds to the test sample. It is not permitted to copy extracts of these test result without the written permission of the test laboratory. This report shall not be reproduced except in full, without the written approval of Dongguan Yaxu (AiT) Technology Limited. If there is a need to alter or revise this document, the right belongs to Dongguan Yaxu (AiT) Technology Limited, and it should give a prior written notice of the revision document. This test report must not be used by the client to claim product endorsement.



Report Revise Record

Report Version	Issued Date	Notes
M0	June 23, 2026	Initial Release

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1 TEST SUMMARY

1.1 Test Standards

The tests were performed according to following standards:

[FCC Rules Part 15.247](#): Frequency Hopping, Direct Spread Spectrum and Hybrid Systems that are in operation within the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz

[ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024](#): American National Standard for Testing Unlicensed Wireless Devices

[KDB558074 D01 15.247 Meas Guidance v05r02](#): Guidance for Compliance Measurements on Digital Transmission System, Frequency Hopping Spread Spectrum System, and Hybrid System Devices Operating Under Section 15.247 of the FCC Rules

1.2 Test Summary

Test Item	Section in 47 CFR	Result
Antenna requirement	§15.203	Pass
On Time and Duty Cycle	/	/
AC Power Line Conducted Emission	§ 15.207(a)	Pass
Conducted Peak Output Power	§15.247 (b)(3)	Pass*
Channel Bandwidth	§15.247 (a)(2)	Pass*
Power Spectral Density	§15.247 (e)	Pass*
Transmitter Radiated Spurious Emission	§15.205/15.209	Pass
Restricted Bands	§15.205/15.209	Pass
Conducted Unwanted emissions and Bandedge	§15.205, §15.247(d)	Pass*

Note: * means that this item refers to module report for FCC ID:PD9BE211NGW.

1.3 Test Facility

Test Laboratory: Dongguan Yaxu (AiT) Technology Limited

No.22, Jinqianling 3rd Street, Jitigang, Huangjiang, Dongguan, Guangdong, China

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

CNAS-Registration No: L6177

Dongguan Yaxu (AiT) technology Limited is accredited to ISO/IEC 17025:2017 general Requirements for the competence of testing and calibration laboratories (CNAS-CL01 Accreditation Criteria for the competence of testing and calibration laboratories) on April 18, 2022

FCC-Registration No.: 703111 Designation Number: CN1313

Dongguan Yaxu (AiT) Technology Limited has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files.

IC-Registration No.: 6819A CAB identifier: CN0122

The 3m Semi-anechoic chamber of Dongguan Yaxu (AiT) Technology Limited has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 6819A

A2LA-Lab Cert. No.: 6317.01

Dongguan Yaxu (AiT) Technology Limited has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2017 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

1.4 Measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report according to CISPR 16 - 4"Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements" and is documented in the Dongguan Yaxu (AiT) Technology Limited's quality system according to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for Yaxu (AiT) laboratory is reported:

Test	Measurement Uncertainty	Notes
Power Line Conducted Emission	9KHz~30MHz ± 1.20 dB	(1)
Radiated Emission	9KHz~30MHz ± 3.10 dB	(1)
Radiated Emission	30MHz~1GHz ± 3.75 dB	(1)
Radiated Emission	1GHz~18GHz ± 3.88 dB	(1)
Radiated Emission	18GHz-40GHz ± 3.88 dB	(1)
RF power, conducted	30MHz~7.5GHz ± 0.16 dB	(1)
RF power density, conducted	± 0.24 dB	(1)
Spurious emissions, conducted	± 0.21 dB	(1)
Temperature	$\pm 1^{\circ}\text{C}$	(1)
Humidity	$\pm 3\%$	(1)
DC and low frequency voltages	$\pm 1.5\%$	(1)
Time	$\pm 2\%$	(1)
Duty cycle	$\pm 2\%$	(1)

The report uncertainty of measurement $y \pm U$, where expended uncertainty U is based on a standard uncertainty Multiplied by a coverage factor of $k=2$, providing a level of confidence of approximately 95%.

2 GENERAL INFORMATION

2.1 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Normal Temperature:	25°C
Relative Humidity:	55 %
Air Pressure:	101 kPa

2.2 General Description of EUT

Product Name:	MINI PC
Model/Type reference:	MS-03-S386H
Serial Model:	MS-03-S**** (where*="0-9","A-Z""a-z", ".", blank space, no character difference between each model is only due to the different model naming methods for different sales regions, other circuit principles, safety structures and key components are all the same, and the difference not affect the safety and electromagnetic compatibility performance of the product.)
Power Ratings:	Input: 19V=12.63A
Adapter information:	Model: SOY-1901263-244-B Input: 100-240V~ 50/60Hz 3.0A Max. Output: 19.0V=12.63A 239.97W
Hardware Version:	N/A
Software Version:	N/A
Sample(s) Status:	AiTDG-260429021-1(Normal sample) AiTDG-260429021-2(Engineer sample)
Bluetooth LE:	
Supported type:	Bluetooth Low Energy
Modulation:	GFSK
Operation frequency:	2402MHz~2480MHz
Channel number:	40
Channel separation:	2MHz
Antenna type:	FPC antenna
Antenna gain:	Antenna 1(A:2.41Bi, Antenna 2(B):2.29dBi
Remark:	
- The device used tow antenna and all transmit signals are completely uncorrelated with each other, Directional gain =$10 \cdot \log[(10^{G1/10} + 10^{G2/10})/N_{ANT}] = 10 \cdot \log[(10^{2.41/10} + 10^{2.29/10})/2] = 2.35\text{dBi}$. - The above DUT's information was declared by manufacturer. For more detailed features description, please refer to the manufacturer's specifications or the User's Manual.	

2.3 Description of Test Modes and Test Frequency

There are 40 channels provided to the EUT and Channel 00/19/39 were selected to test.

Operation Frequency List:

Channel	Frequency (MHz)
00	2402
02	2404
03	2406
⋮	⋮
19	2440
⋮	⋮
37	2476
38	2478
39	2480

Note: The line display in grey were the channel selected for testing

Power setting during the test:

During testing, Channel & Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Power Parameters:

Test Software Version	DRTU		
Frequency	2402MHz	2440MHz	2480MHz
BLE	default	default	default

2.4 Special Accessories

Follow auxiliary equipment(s) test with EUT that provided by the manufacturer or laboratory is listed as follow:

Description	Manufacturer	Model	Serial No.	Provided by	Other
/	/	/	/	/	/
/	/	/	/	/	/
/	/	/	/	/	/
/	/	/	/	/	/

2.5 Equipment List for the Test

Conducted Emission measurement						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due
☒ 1	EMI Test Receiver	R&S	ESCI	100124	2025.09.25	2026.09.24
☒ 2	LISN	R&S	ESH3-Z5	892785/016	2025.09.26	2026.09.25
☒ 3	LISN	KYORITSU	KNW-242	8-837-4	2025.09.26	2026.09.25
☒ 4	Pulse Limiter	R&S	ESH3-Z2	03578810.54	2025.09.25	2026.09.24
☒ 5	CE Software	EZ	EZ-EMC_CE	Ver.AIT-03A	N/A	N/A

Radiation Emission measurement						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due
☒ 1	Spectrum Analyzer	R&S	FSV40	101470	2025.09.26	2026.09.25
☒ 2	EMI Measuring Receiver	R&S	ESPI	100773	2025.09.25	2026.09.24
☒ 3	Low Noise Pre Amplifier	HP	HP8447E	1937A01855	2025.09.25	2026.09.24
☒ 4	Low Noise Pre Amplifier	Tsj	MLA-0120-A02-34	2648A04738	2025.09.25	2026.09.24
☒ 5	Passive Loop	ETS	6512	00165355	2024.09.04	2026.09.03
☒ 6	TRILOG Super Broadband test Antenna	SCHWARZBEC K	VULB-9160	9160-3206	2024.08.29	2026.08.28
☒ 7	Broadband Horn Antenna	SCHWARZBEC K	BBHA 9120D	452	2024.08.29	2026.08.28
☒ 8	SHF-EHF Horn Antenna 15-40GHz	SCHWARZBEC K	BBHA9170	BBHA9170367	2023.09.12	2026.09.11
☒ 9	6dB Attenuator	JFW	50FPE-006	4360846-949-1	2025.09.23	2026.09.22
☒ 10	Filter	COM-MW	ZBSF6-C2400-2483.5-1079	1079	2025.09.23	2026.09.22
☒ 11	Radiated Cable(9K-1G)	HUBER+SUHNER	9K-1G	001	2025.09.25	2026.09.24
☒ 12	Radiated Cable(1G-18G)	HUBER+SUHNER	1G-18G	002	2025.09.25	2026.09.24
☒ 13	Radiated Cable(18G-40G)	HUBER+SUHNER	18G-40G	003	2025.09.25	2026.09.24
☒ 14	RE Software	EZ	EZ-EMC_RE	Ver.AIT-03A	N/A	N/A

RF Conducted measurement						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Cal.Due
☐ 1	Spectrum Analyzer	Agilent	N9020A	MY53421570	2025.09.23	2026.09.22
☐ 2	Power Sensor	Agilent	U2021XA	MY54110007	2025.09.23	2026.09.22
☐ 3	Signal Generator	Agilent	N5182A	MY50143009	2025.09.26	2026.09.25
☐ 4	Analog signal generator	Agilent	E8257	MY51554256	2025.09.23	2026.09.22
☐ 5	Pro.Temp&Humi.chamber	MENTEK	MHP-150-1C	MAA08112501	2025.09.25	2026.09.24
☐ 6	Wideband Radio communication tester	R&S	CMW500	135866	2025.09.23	2026.09.22
☐ 7	DC power supply	ZHAOXIN	RXN-305D-2	28070002559	N/A	N/A
☐ 8	RF Test box	TST	TSTPASS	21033016	2025.09.23	2026.09.22
☐ 9	RF Software	TST	TSTPASS	Version 2.0	N/A	N/A

Note: ☐ is not applicable in this Test Report. ☒ is applicable in this Test Report.

3 TEST CONDITIONS AND RESULTS

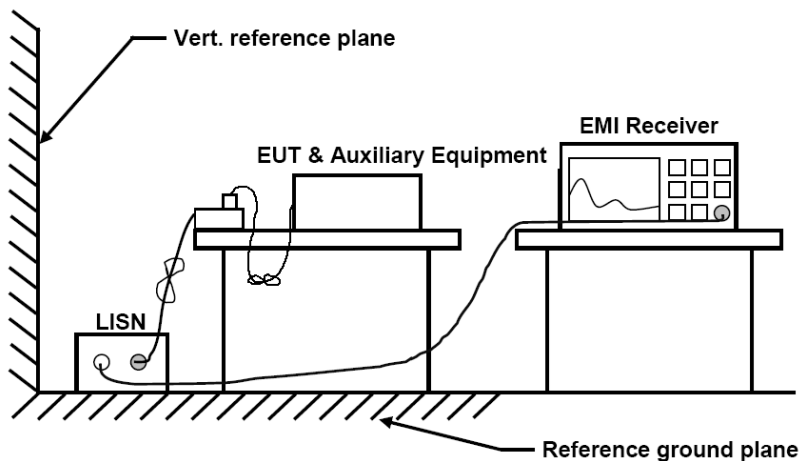
3.1 Conducted Emissions Test

LIMIT

Frequency range (MHz)	Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST CONFIGURATION



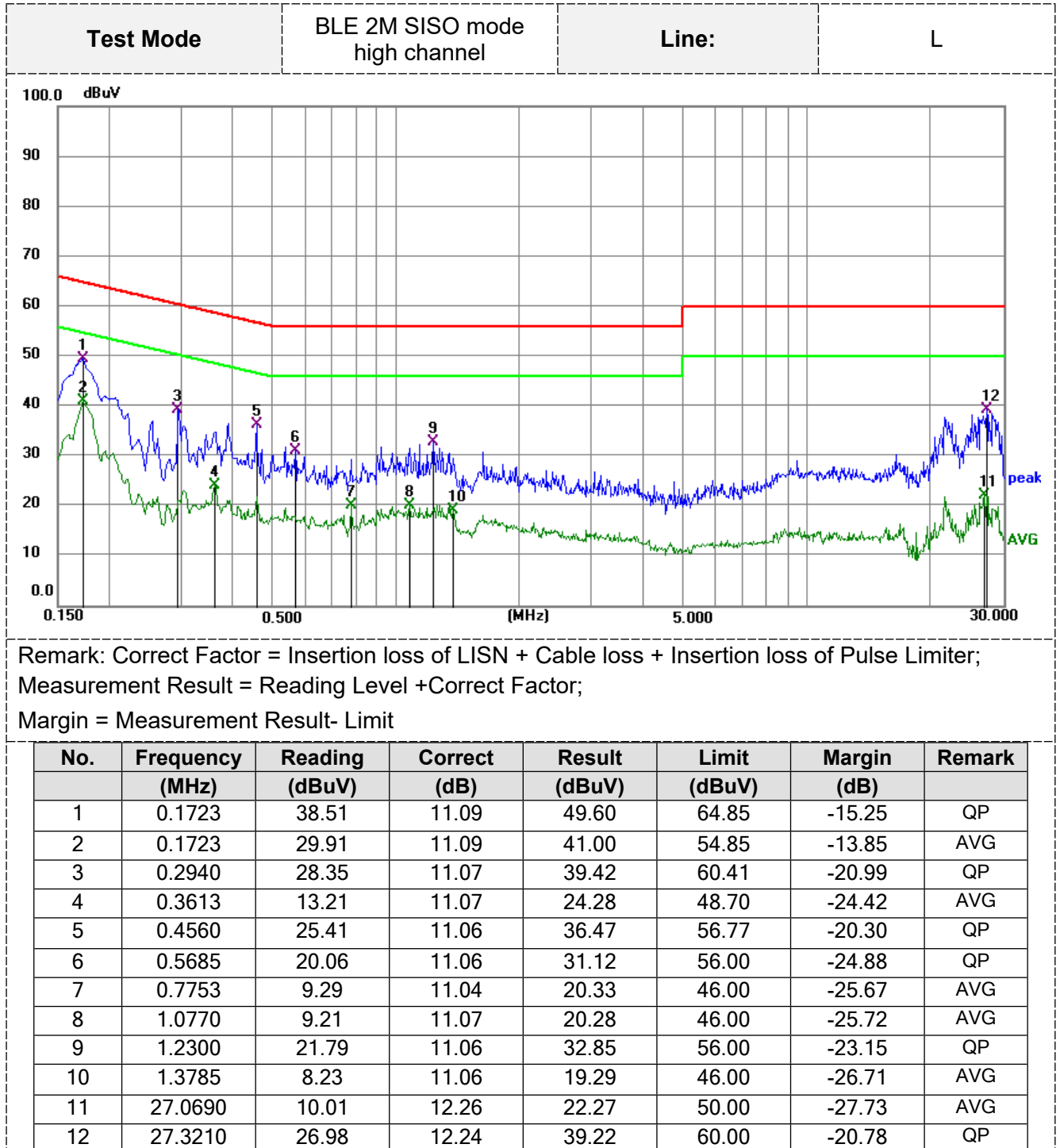
TEST PROCEDURE

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system; a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.10.
2. Support equipment, if needed, was placed as per ANSI C63.10.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.10.
4. The adapter received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5. All support equipments received AC power from a second LISN, if any.
6. The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
8. During the above scans, the emissions were maximized by cable manipulation.

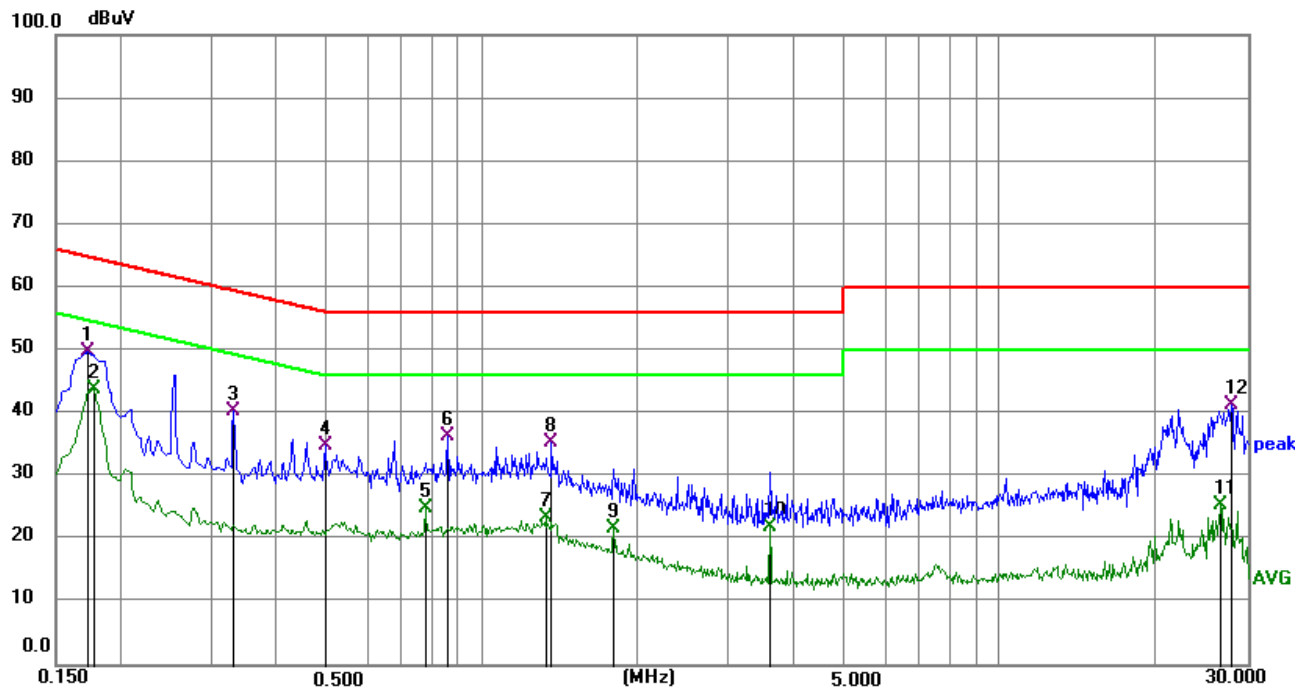
TEST RESULTS

Remark:

1. Pre-scan all BLE operation modes at Low, Middle, and High channel; only the worst result of BT 2M SISO mode high channel at antenna 2 was reported as below:
2. Both 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz power supply have been tested, only the worst result of 120 VAC, 60 Hz was reported as below:



Test Mode	BLE 2M SISO mode high channel	Line:	N
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Remark: Correct Factor = Insertion loss of LISN + Cable loss + Insertion loss of Pulse Limiter;

Measurement Result = Reading Level + Correct Factor;

Margin = Measurement Result- Limit

No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1725	38.76	10.99	49.75	64.84	-15.09	QP
2	0.1770	32.75	10.98	43.73	54.63	-10.90	AVG
3	0.3300	29.32	10.99	40.31	59.45	-19.14	QP
4	0.4965	23.91	11.00	34.91	56.06	-21.15	QP
5	0.7755	13.87	10.99	24.86	46.00	-21.14	AVG
6	0.8610	25.32	11.00	36.32	56.00	-19.68	QP
7	1.3290	12.53	10.99	23.52	46.00	-22.48	AVG
8	1.3650	24.32	10.99	35.31	56.00	-20.69	QP
9	1.7970	10.80	10.99	21.79	46.00	-24.21	AVG
10	3.5925	10.81	11.09	21.90	46.00	-24.10	AVG
11	26.5830	13.19	12.13	25.32	50.00	-24.68	AVG
12	27.8610	29.21	11.99	41.20	60.00	-18.80	QP

3.2 Radiated Emissions and Band Edge

Limit

For intentional device, according to § 15.209(a), the general requirement of field strength of radiated emission out of authorized band shall not exceed the following table at a 3 meters measurement distance.

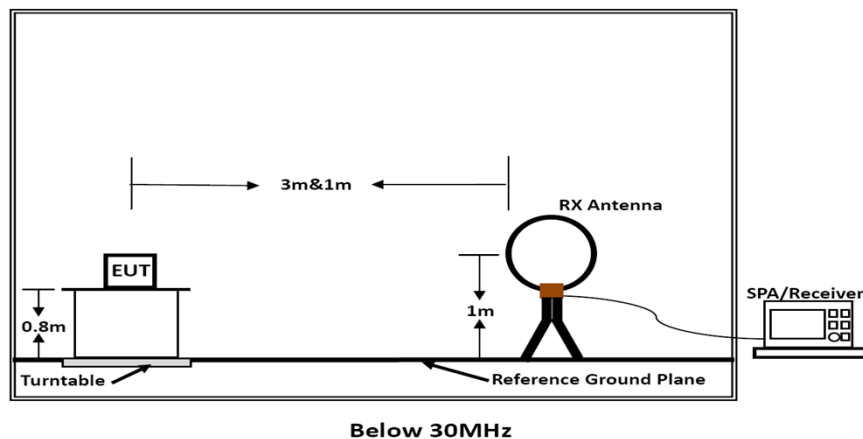
In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a)

Radiated emission limits

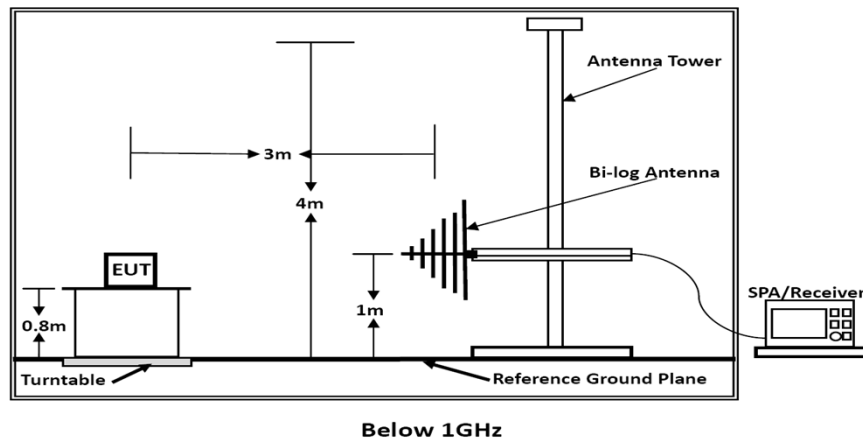
Frequency (MHz)	Distance (Meters)	Radiated (dBμV/m)	Radiated (μV/m)
0.009-0.49	3	$20\log(2400/F(\text{KHz}))+40\log(300/3)$	$2400/F(\text{KHz})$
0.49-1.705	3	$20\log(24000/F(\text{KHz}))+40\log(30/3)$	$24000/F(\text{KHz})$
1.705-30	3	$20\log(30)+40\log(30/3)$	30
30-88	3	40.0	100
88-216	3	43.5	150
216-960	3	46.0	200
Above 960	3	54.0	500

TEST CONFIGURATION

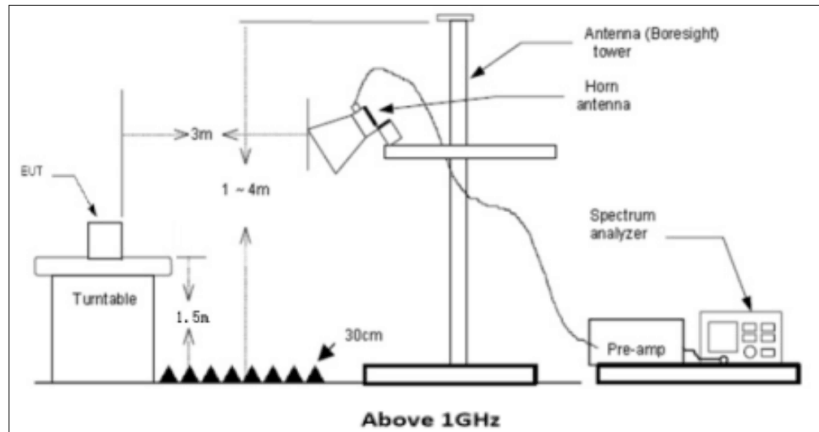
(A) Radiated Emission Test Set-Up, Frequency Below 30MHz



(B) Radiated Emission Test Set-Up, Frequency below 1000MHz



(C) Radiated Emission Test Set-Up, Frequency above 1000MHz



Test Procedure

- Below 1GHz measurement the EUT is placed on a turntable which is 0.8m above ground plane, and above 1GHz measurement EUT was placed on a low permittivity and low loss tangent turn table which is 1.5m above ground plane.
- Maximum procedure was performed by raising the receiving antenna from 1m to 4m and rotating the turn table from 0°C to 360°C to acquire the highest emissions from EUT
- And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- Repeat above procedures until all frequency measurements have been completed.
- Radiated emission test frequency band from 9KHz to 26.5.
- The distance between test antenna and EUT as following table states:

Test Frequency range	Test Antenna Type	Test Distance
9KHz-30MHz	Active Loop Antenna	3
30MHz-1GHz	Bilog Antenna	3
1GHz-26.5GHz	Horn Antenna	3

- Setting test receiver/spectrum as following table states:

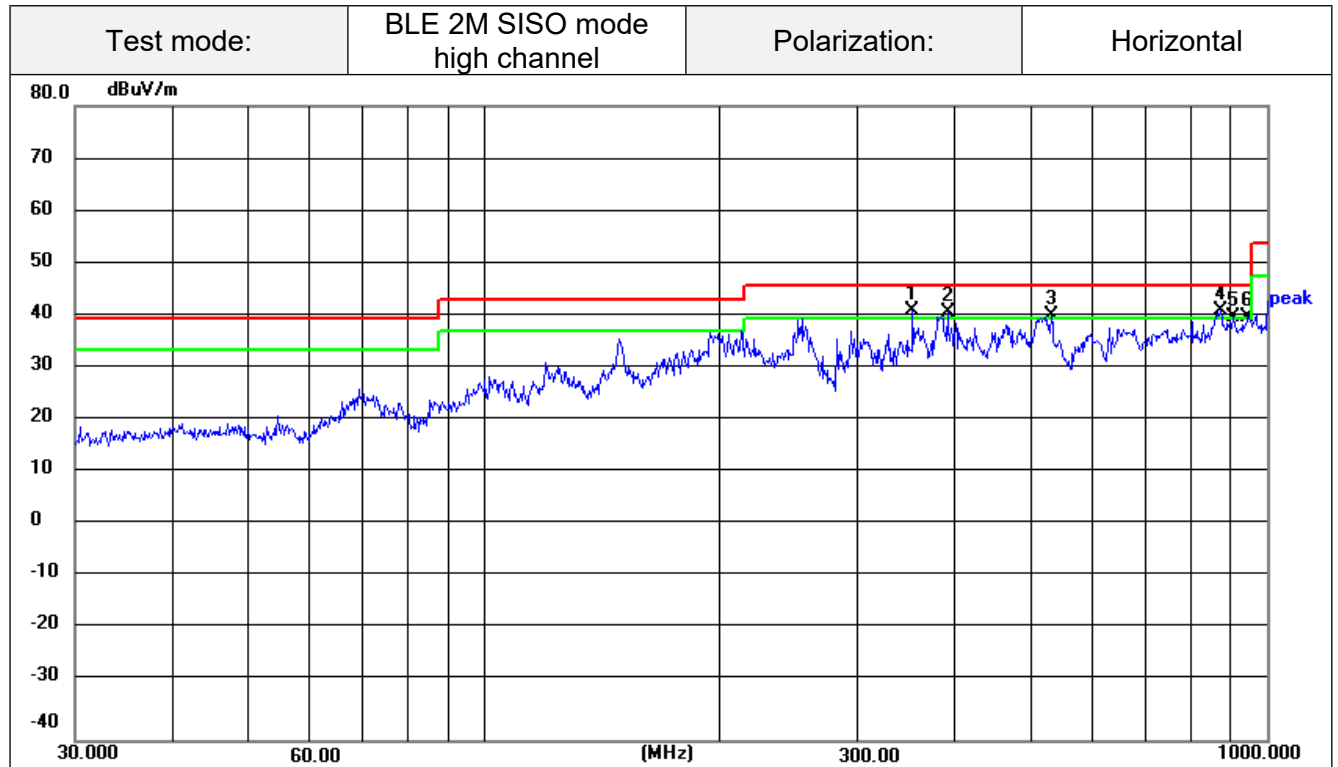
Test Frequency range	Test Receiver/Spectrum Setting	Detector
9KHz-150KHz	RBW=200Hz/VBW=3KHz, Sweep time=Auto	QP
150KHz-30MHz	RBW=9KHz/VBW=100KHz, Sweep time=Auto	QP
30MHz-1GHz	RBW=120KHz/VBW=1000KHz, Sweep time=Auto	QP
1GHz-26.5GHz	Peak Value: RBW=1MHz/VBW=3MHz, Sweep time=Auto Average Value: RBW=1MHz/VBW=10Hz, Sweep time=Auto	Peak

TEST RESULTS

Remark: Radiated emission test from 9 KHz to 26.5GHz, and The emission levels from 9kHz to 30MHz are attenuated 20dB below the limit and not recorded in report.

For 30MHz-1GHz

Remark: Pre-scan all BLE operation modes at Low, Middle, and High channel; only the worst result of BLE 2M SISO mode high channel at antenna 2 was reported for 30MHz-1GHz test as below:



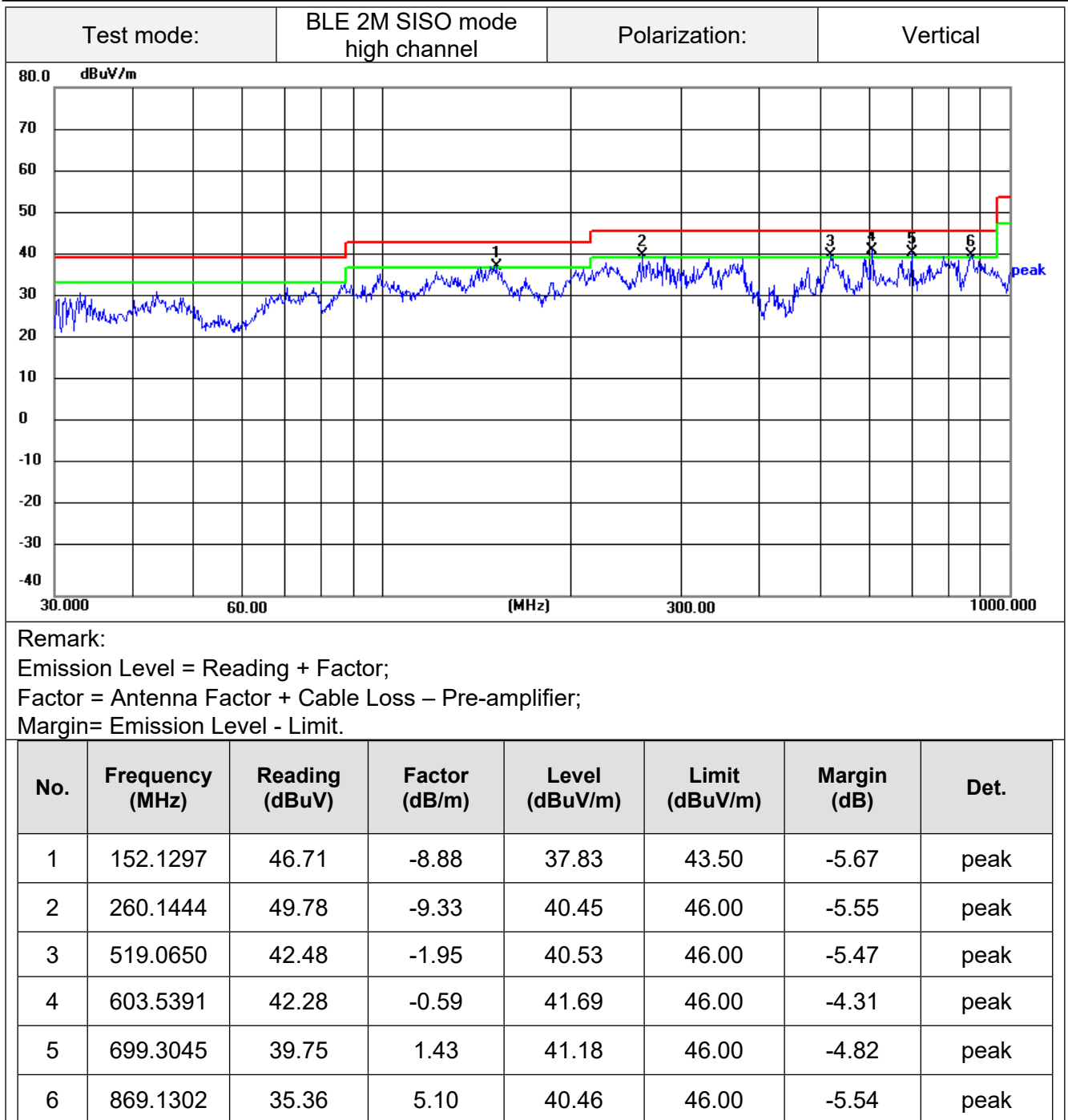
Remark:

Emission Level = Reading + Factor;

Factor = Antenna Factor + Cable Loss – Pre-amplifier;

Margin= Emission Level - Limit.

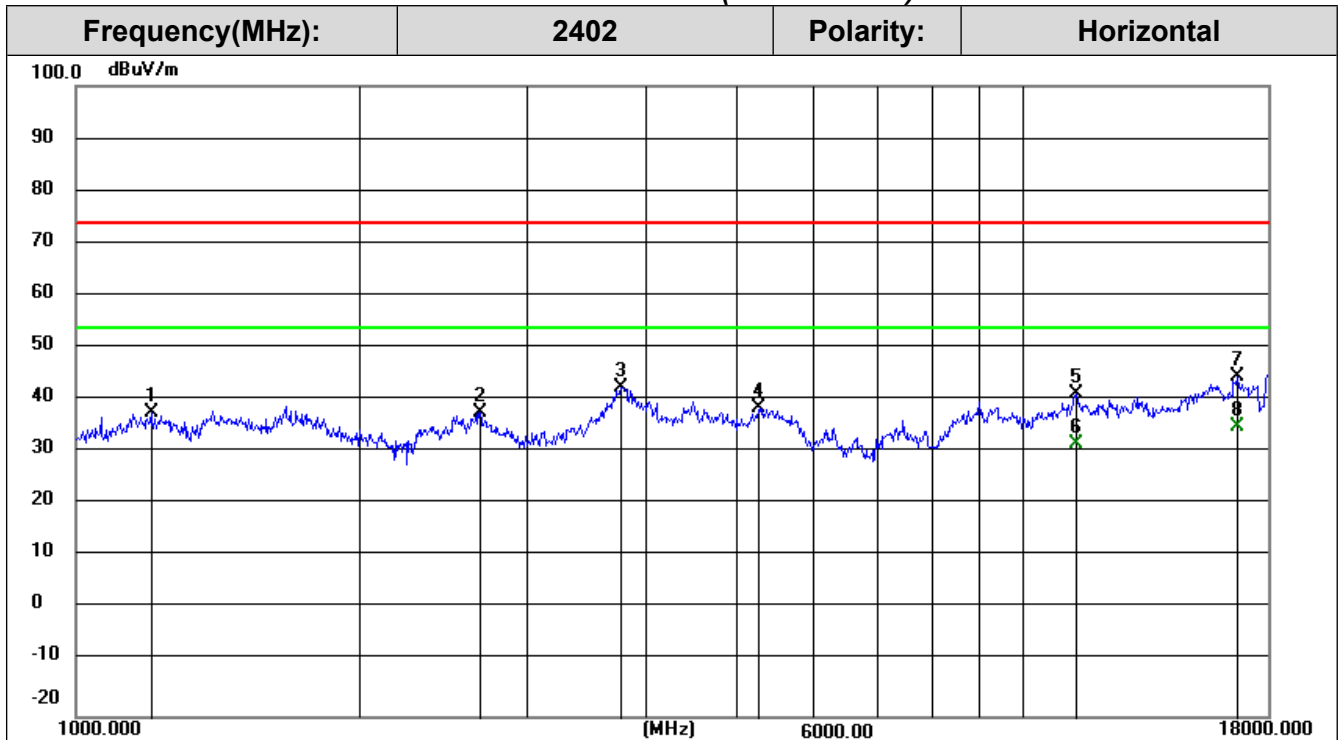
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Det.
1	352.9433	47.78	-6.42	41.36	46.00	-4.64	peak
2	390.7225	46.56	-5.56	41.00	46.00	-5.00	peak
3	530.1013	42.43	-2.09	40.34	46.00	-5.66	peak
4	872.1832	36.36	5.06	41.42	46.00	-4.58	peak
5	906.4823	35.41	4.73	40.14	46.00	-5.86	peak
6	945.4400	34.37	5.81	40.18	46.00	-5.82	peak



For 1GHz to 18GHz

Note: Pre-scan BLE operation mode, only worse case BLE 2M MIMO mode is reported as bellow:

BLE 2M GFSK MIMO (1GHz-18GHz)



Remark:

Filter is used

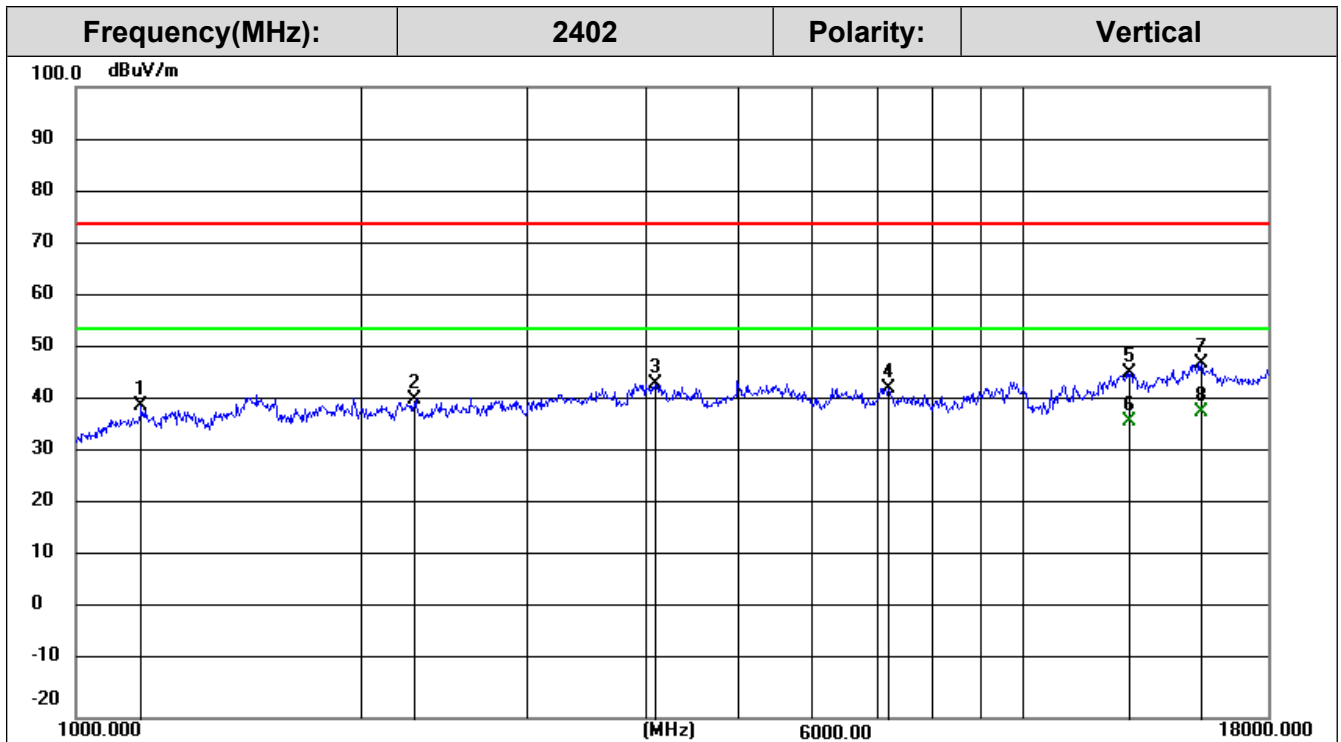
Emission Level = Reading + Factor;

Factor = Antenna Factor + Cable Loss – Pre-amplifier;

Margin= Emission Level - Limit.

No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1203.895	63.74	-25.70	38.04	74.00	-35.96	peak
2	2671.731	58.66	-20.80	37.86	74.00	-36.14	peak
3	3754.380	60.64	-17.91	42.73	74.00	-31.27	peak
4	5260.518	51.72	-12.81	38.91	74.00	-35.09	peak
5	11302.477	42.58	-1.19	41.39	74.00	-32.61	peak
6	11302.477	33.04	-1.19	31.85	54.00	-22.15	AVG
7	16750.054	45.30	-0.67	44.63	74.00	-29.37	peak
8	16750.054	35.85	-0.67	35.18	54.00	-18.82	AVG

Note:A filter was used to exclude fundamental during the test to prevent overloading the testing equipment.



Remark:

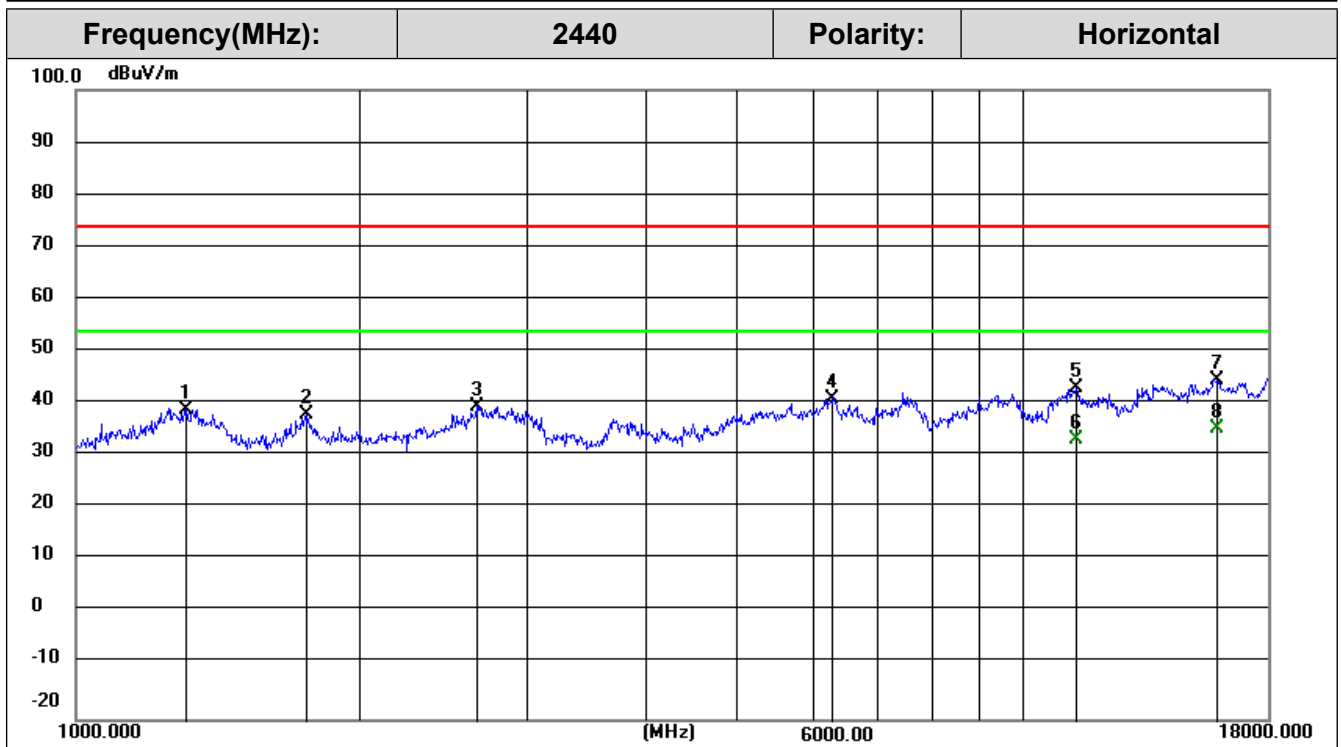
Emission Level = Reading + Factor;

Factor = Antenna Factor + Cable Loss – Pre-amplifier;

Margin= Emission Level - Limit.

No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1173.999	65.11	-25.69	39.42	74.00	-34.58	peak
2	2287.623	62.83	-22.17	40.66	74.00	-33.34	peak
3	4079.102	60.56	-16.86	43.70	74.00	-30.30	peak
4	7200.309	50.27	-7.53	42.74	74.00	-31.26	peak
5	12947.068	47.98	-2.23	45.75	74.00	-28.25	peak
6	12947.068	38.66	-2.23	36.43	54.00	-17.57	AVG
7	15349.951	48.00	-0.59	47.41	74.00	-26.59	peak
8	15349.951	38.74	-0.59	38.15	54.00	-15.85	AVG

Note: A filter was used to exclude fundamental during the test to prevent overloading the testing equipment.



Remark:

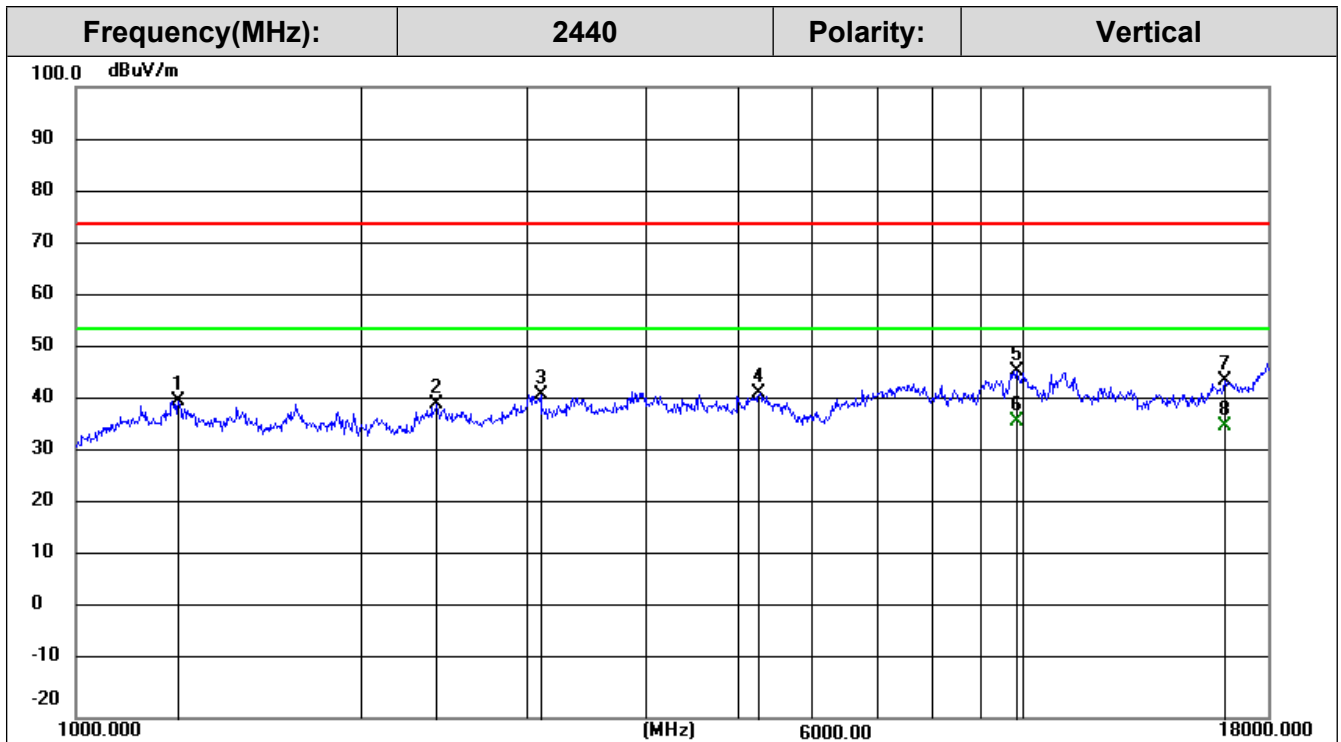
Emission Level = Reading + Factor;

Factor = Antenna Factor + Cable Loss – Pre-amplifier;

Margin= Emission Level - Limit.

No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1311.807	65.04	-25.85	39.19	74.00	-34.81	peak
2	1759.567	62.43	-24.20	38.23	74.00	-35.77	peak
3	2659.403	60.70	-20.87	39.83	74.00	-34.17	peak
4	6292.967	51.61	-10.31	41.30	74.00	-32.70	peak
5	11302.477	44.58	-1.19	43.39	74.00	-30.61	peak
6	11302.477	34.68	-1.19	33.49	54.00	-20.51	AVG
7	15923.882	45.38	-0.55	44.83	74.00	-29.17	peak
8	15923.882	35.97	-0.55	35.42	54.00	-18.58	AVG

Note: A filter was used to exclude fundamental during the test to prevent overloading the testing equipment.



Remark:

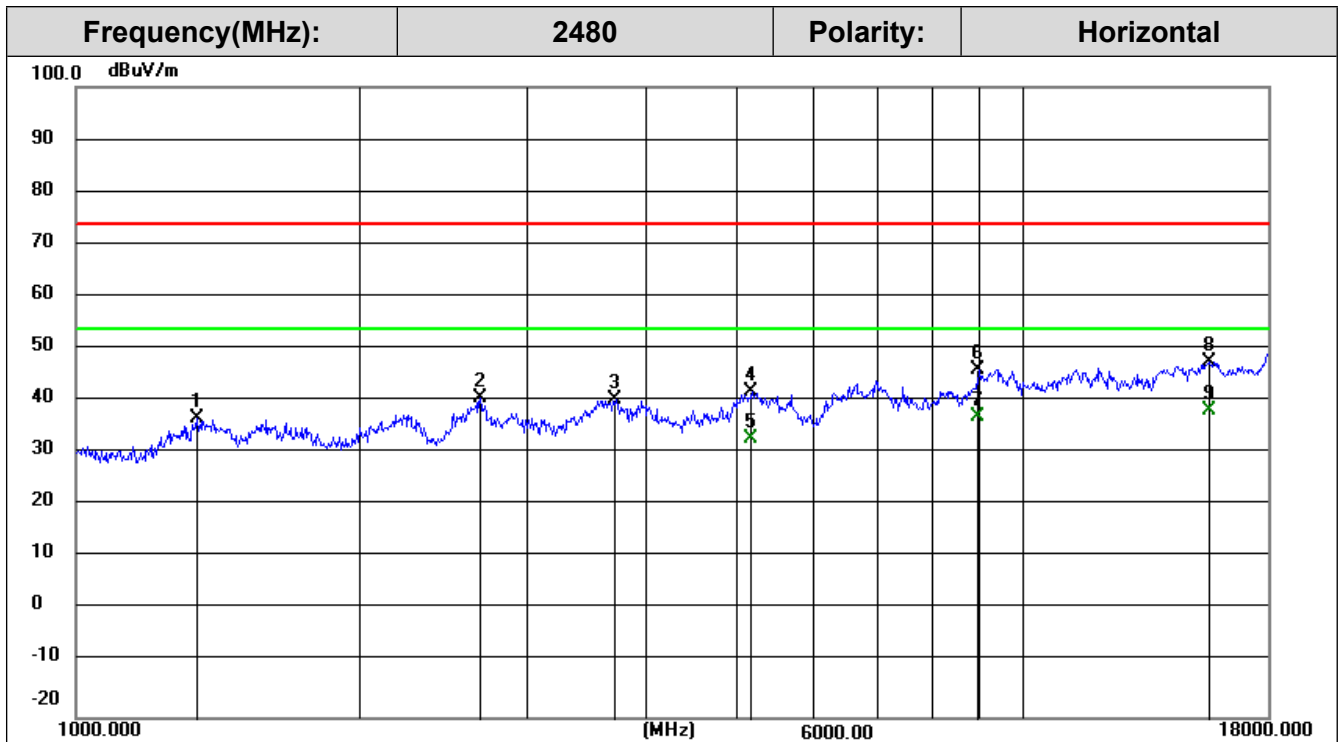
Emission Level = Reading + Factor;

Factor = Antenna Factor + Cable Loss – Pre-amplifier;

Margin= Emission Level - Limit.

No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1285.533	66.24	-25.81	40.43	74.00	-33.57	peak
2	2408.398	61.50	-21.82	39.68	74.00	-34.32	peak
3	3090.711	60.82	-19.29	41.53	74.00	-32.47	peak
4	5260.518	54.73	-12.81	41.92	74.00	-32.08	peak
5	9801.413	49.26	-3.25	46.01	74.00	-27.99	peak
6	9801.413	39.74	-3.25	36.49	54.00	-17.51	AVG
7	16282.255	44.78	-0.58	44.20	74.00	-29.80	peak
8	16282.255	36.00	-0.58	35.42	54.00	-18.58	AVG

Note: A filter was used to exclude fundamental during the test to prevent overloading the testing equipment.



Remark:

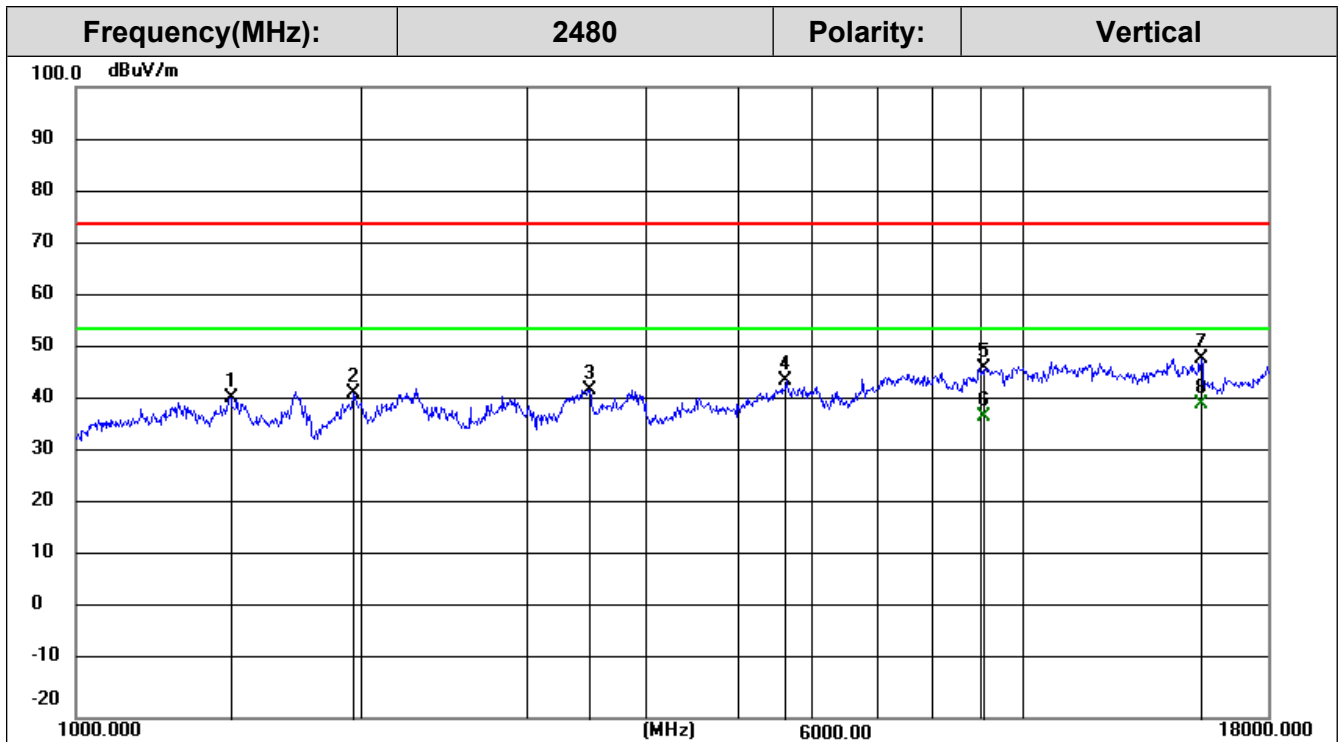
Emission Level = Reading + Factor;

Factor = Antenna Factor + Cable Loss – Pre-amplifier;

Margin= Emission Level - Limit.

No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1346.380	63.01	-25.90	37.11	74.00	-36.89	peak
2	2671.731	61.66	-20.80	40.86	74.00	-33.14	peak
3	3710.151	58.71	-18.06	40.65	74.00	-33.35	peak
4	5165.594	55.17	-13.02	42.15	74.00	-31.85	peak
5	5165.594	46.21	-13.02	33.19	54.00	-20.81	AVG
6	8956.208	50.61	-4.24	46.37	74.00	-27.63	peak
7	8956.208	41.70	-4.24	37.46	54.00	-16.54	AVG
8	15659.157	48.35	-0.56	47.79	74.00	-26.21	peak
9	15659.157	38.93	-0.56	38.37	54.00	-15.63	AVG

Note: A filter was used to exclude fundamental during the test to prevent overloading the testing equipment.



Remark:

Emission Level = Reading + Factor;

Factor = Antenna Factor + Cable Loss – Pre-amplifier;

Margin= Emission Level - Limit.

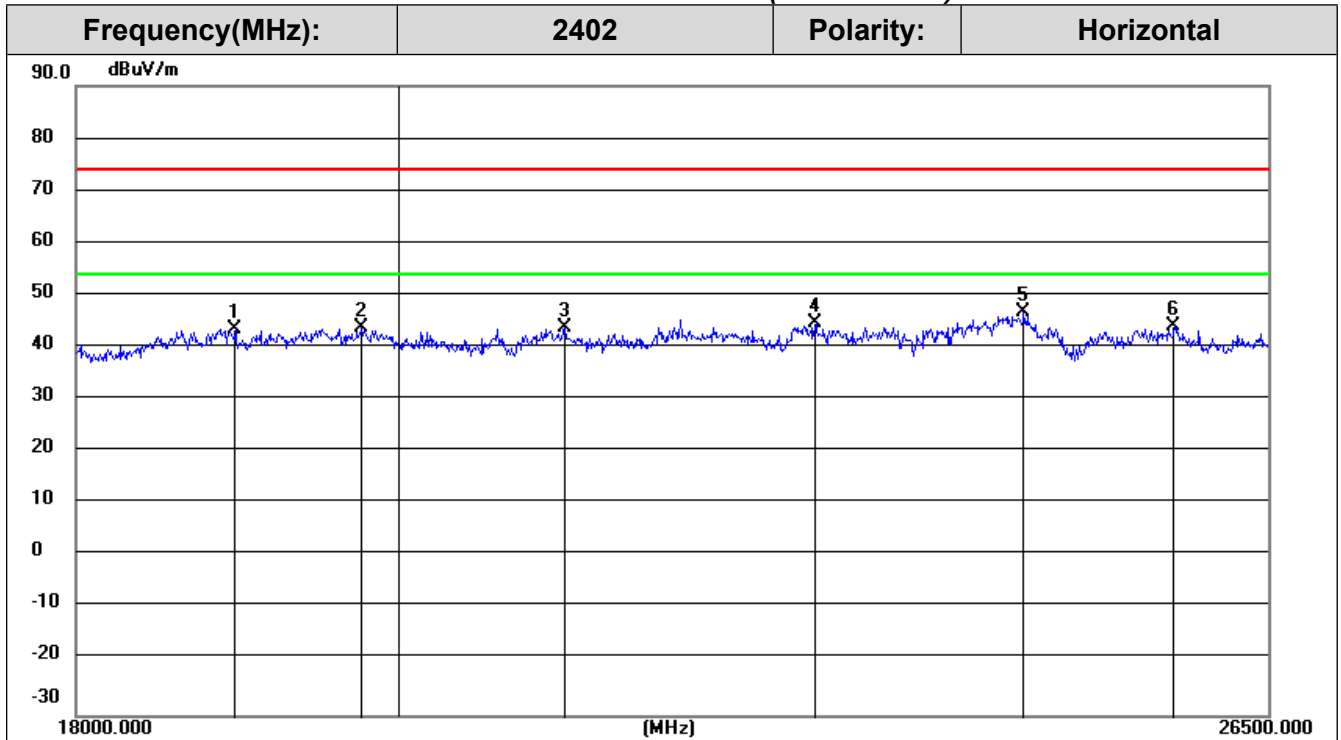
No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	1459.030	66.67	-25.63	41.04	74.00	-32.96	peak
2	1971.233	64.96	-23.15	41.81	74.00	-32.19	peak
3	3481.574	61.30	-18.78	42.52	74.00	-31.48	peak
4	5605.889	56.17	-12.15	44.02	74.00	-29.98	peak
5	9099.723	50.61	-3.96	46.65	74.00	-27.35	peak
6	9099.723	41.39	-3.96	37.43	54.00	-16.57	AVG
7	15349.951	49.00	-0.59	48.41	74.00	-25.59	peak
8	15349.951	40.43	-0.59	39.84	54.00	-14.16	AVG

Note: A filter was used to exclude fundamental during the test to prevent overloading the testing equipment.

For above 18GHz

Remark: Pre-scan all BLE operation modes on lowest, middle and highest channel, and no spurious found, only one channel plots recorded below represent the worst scenario.

GFSK BLE 2M MIMO mode (above 1GHz)



Remark:

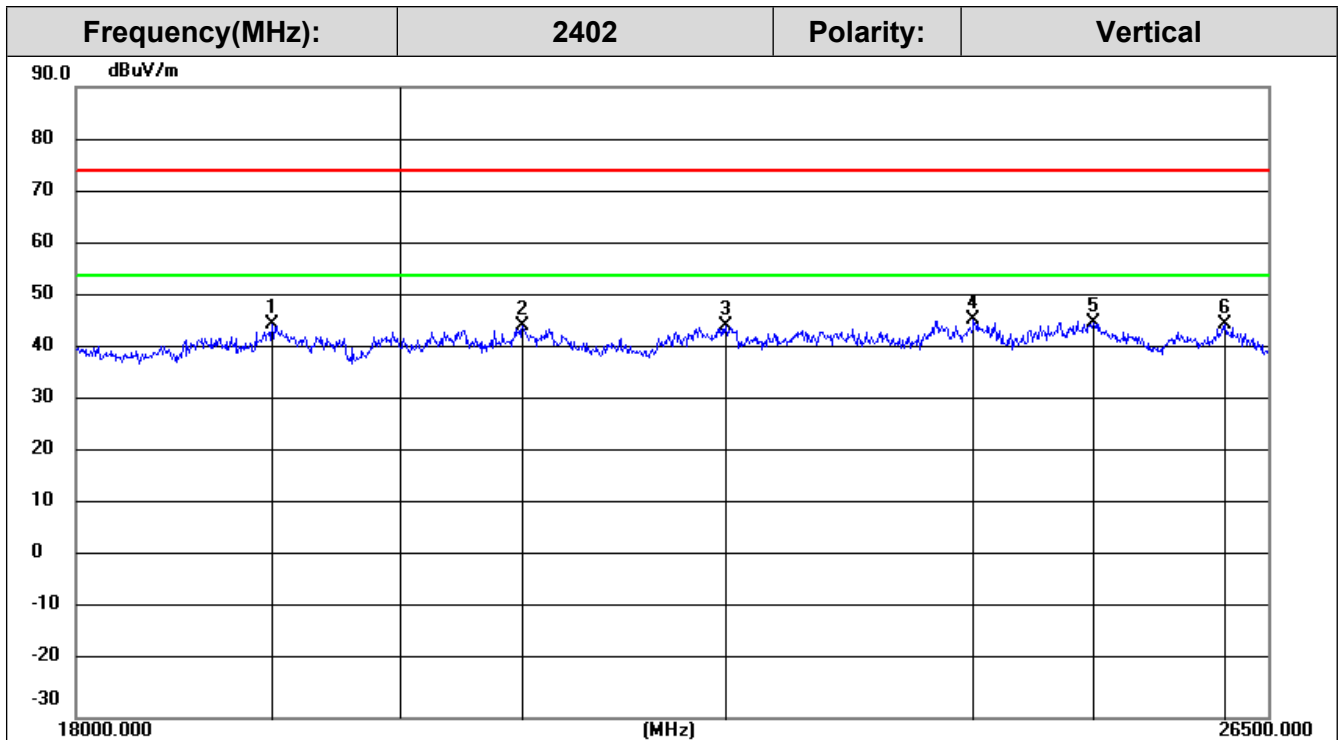
Filter is used

Emission Level = Reading + Factor;

Factor = Antenna Factor + Cable Loss – Pre-amplifier;

Margin= Emission Level - Limit.

No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	18959.694	61.65	-17.90	43.75	74.00	-30.25	peak
2	19755.448	61.12	-17.04	44.08	74.00	-29.92	peak
3	21094.789	60.63	-16.52	44.11	74.00	-29.89	peak
4	22889.397	62.01	-17.22	44.79	74.00	-29.21	peak
5	24488.518	63.07	-15.95	47.12	74.00	-26.88	peak
6	25721.431	60.22	-16.01	44.21	74.00	-29.79	peak



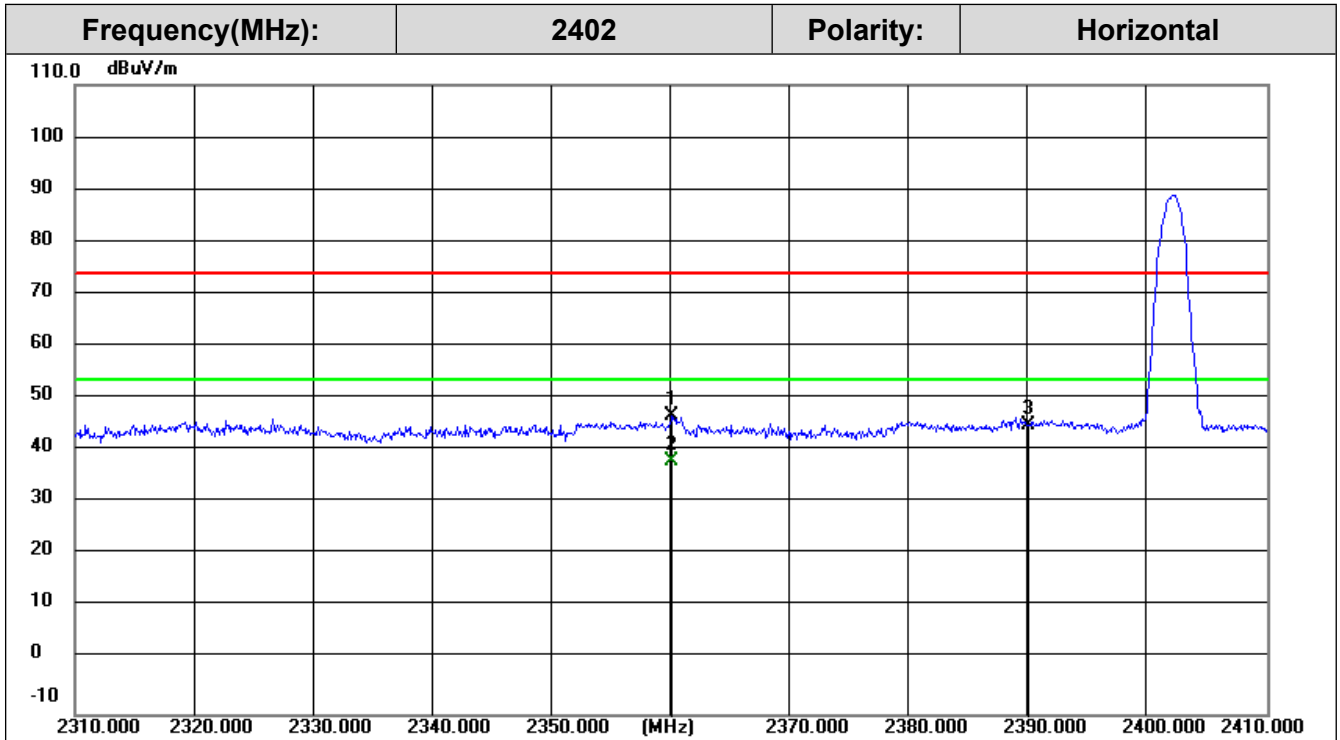
Remark:

Emission Level = Reading + Factor;

Factor = Antenna Factor + Cable Loss – Pre-amplifier;

Margin= Emission Level - Limit.

No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	19192.842	62.63	-17.66	44.97	74.00	-29.03	peak
2	20816.787	61.04	-16.43	44.61	74.00	-29.39	peak
3	22227.222	61.64	-17.10	44.54	74.00	-29.46	peak
4	24094.861	61.21	-15.57	45.64	74.00	-28.36	peak
5	25047.948	61.82	-16.68	45.14	74.00	-28.86	peak
6	26139.641	60.40	-15.46	44.94	74.00	-29.06	peak

Radiation Restricted band
BLE 1M MIMO mode GFSK


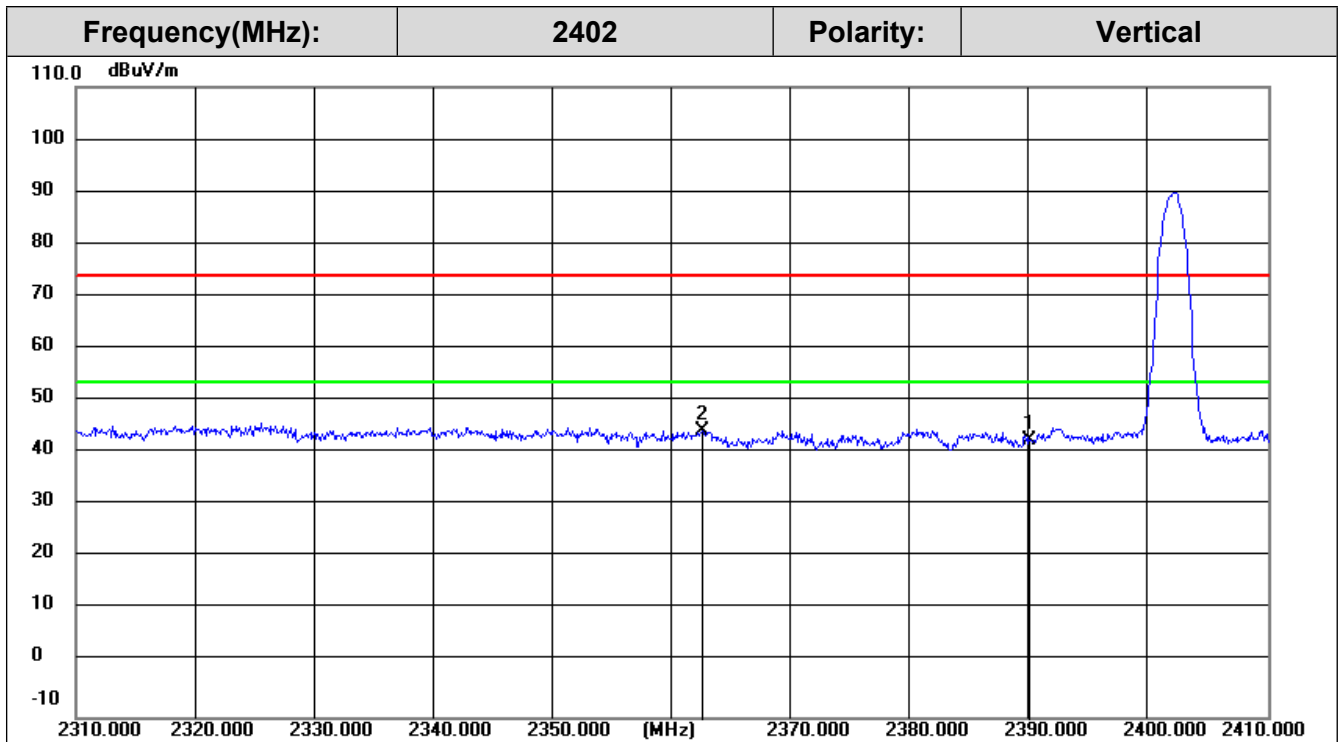
Remark:

Emission Level = Reading + Factor;

Factor = Antenna Factor + Cable Loss – Pre-amplifier;

Margin= Emission Level - Limit.

No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2360.100	59.06	-11.96	47.10	74.00	-26.90	peak
2	2360.100	50.45	-11.96	38.49	54.00	-15.51	AVG
3	2390.000	57.10	-11.87	45.23	74.00	-28.77	peak



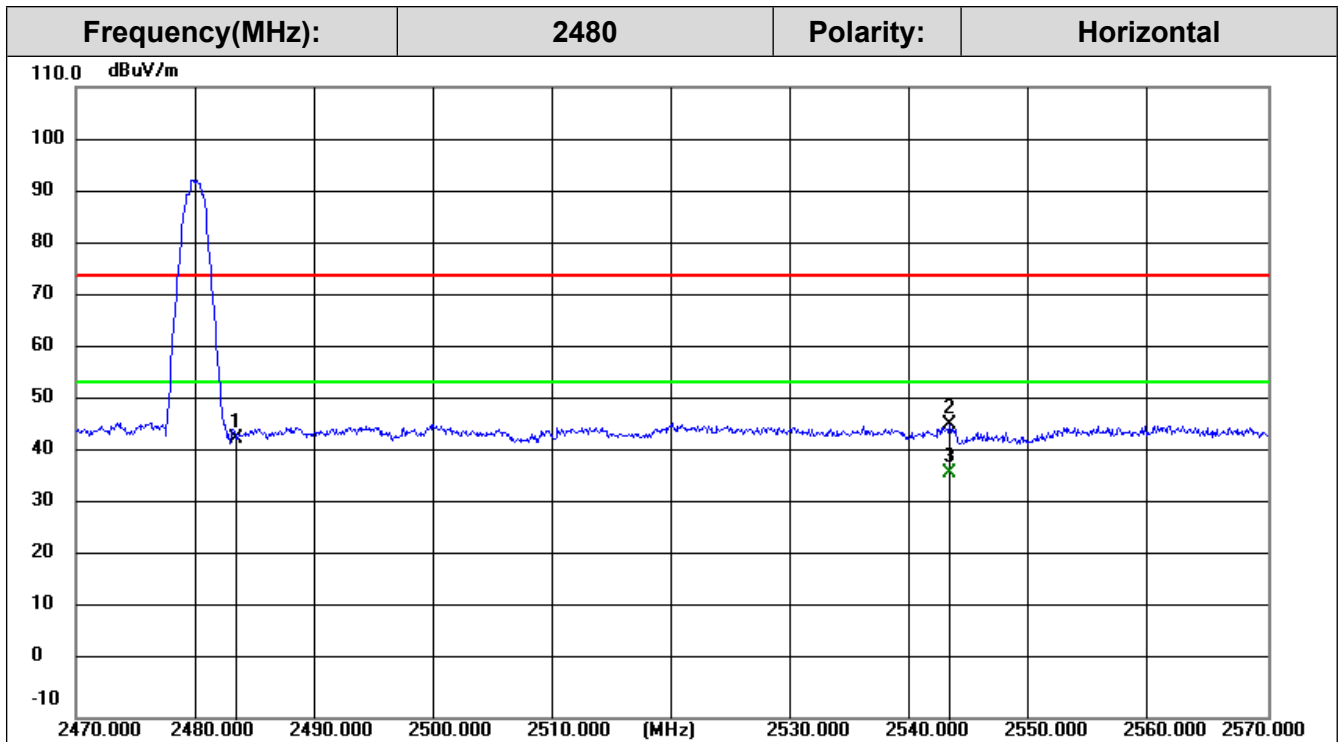
Remark:

Emission Level = Reading + Factor;

Factor = Antenna Factor + Cable Loss – Pre-amplifier;

Margin= Emission Level - Limit.

No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2390.000	54.85	-11.87	42.98	74.00	-31.02	peak
2	2362.500	56.64	-11.95	44.69	74.00	-29.31	peak



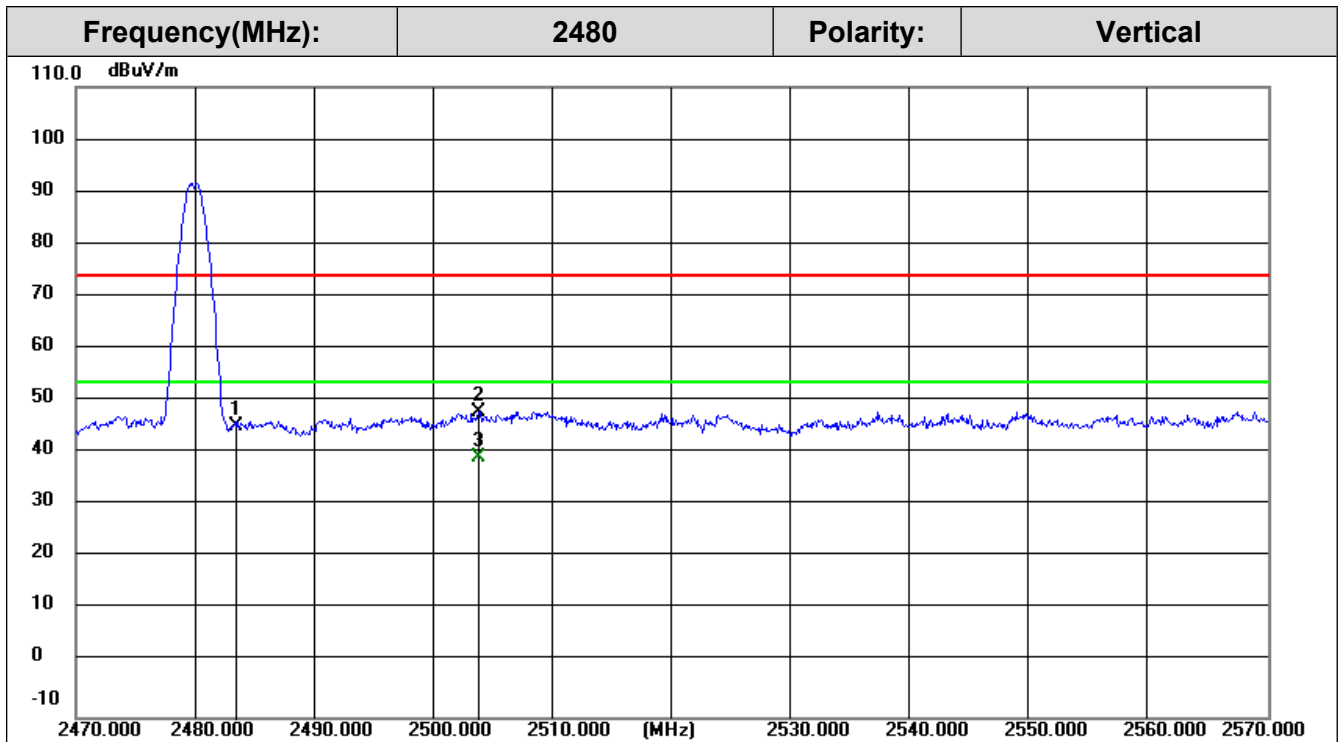
Remark:

Emission Level = Reading + Factor;

Factor = Antenna Factor + Cable Loss – Pre-amplifier;

Margin= Emission Level - Limit.

No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	54.90	-11.60	43.30	74.00	-30.70	peak
2	2543.300	57.07	-11.37	45.70	74.00	-28.30	peak
3	2543.300	48.09	-11.37	36.72	54.00	-17.28	AVG



Remark:

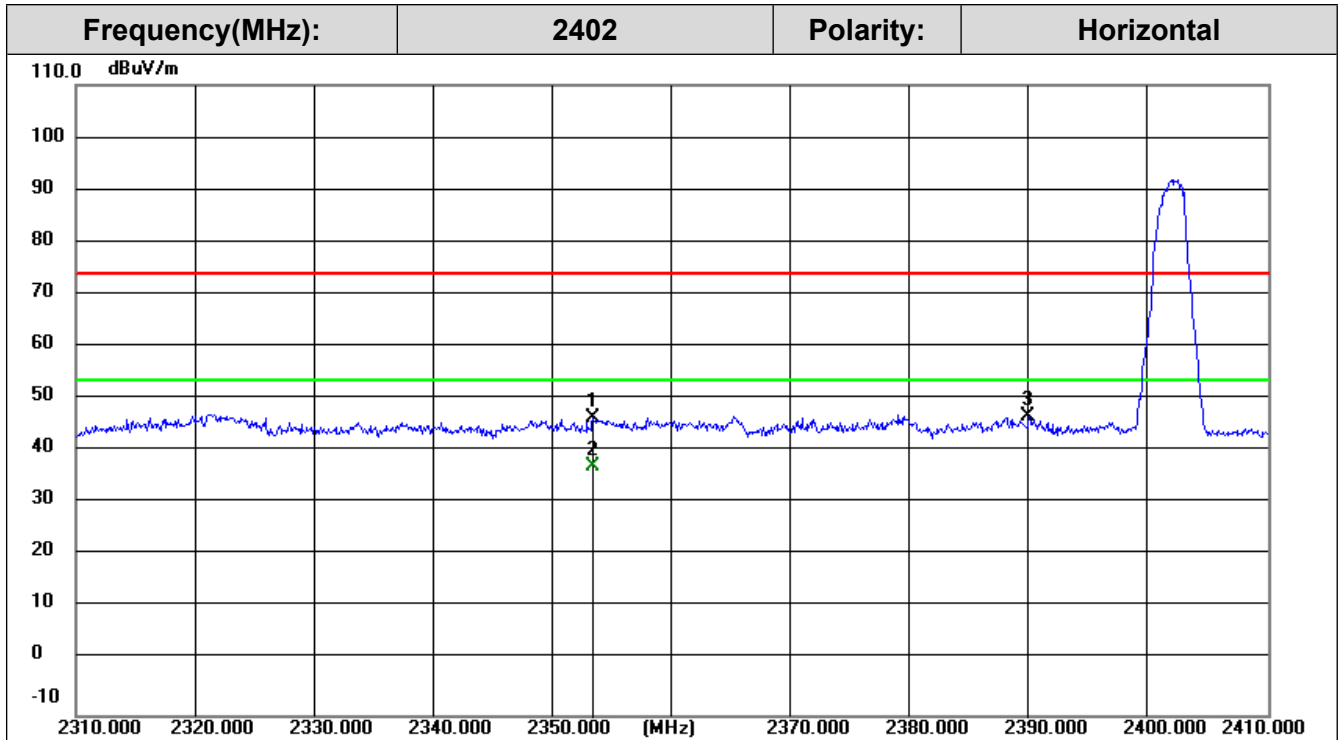
Emission Level = Reading + Factor;

Factor = Antenna Factor + Cable Loss – Pre-amplifier;

Margin= Emission Level - Limit.

No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	57.09	-11.60	45.49	74.00	-28.51	peak
2	2503.800	59.79	-11.54	48.25	74.00	-25.75	peak
3	2503.800	51.21	-11.54	39.67	54.00	-14.33	AVG

BLE 2M MIMO mode GFSK



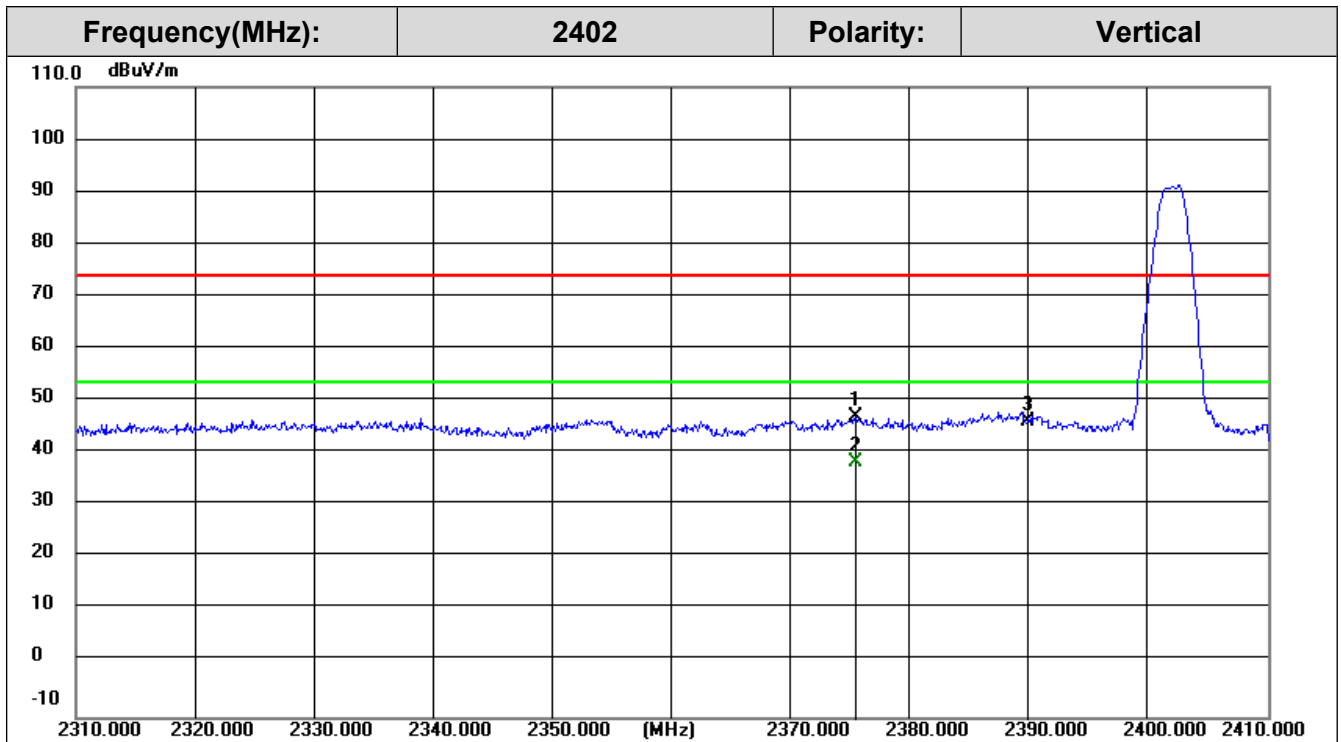
Remark:

Emission Level = Reading + Factor;

Factor = Antenna Factor + Cable Loss – Pre-amplifier;

Margin= Emission Level - Limit.

No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2353.400	58.73	-11.97	46.76	74.00	-27.24	peak
2	2353.400	49.43	-11.97	37.46	54.00	-16.54	AVG
3	2390.000	58.92	-11.87	47.05	74.00	-26.95	peak



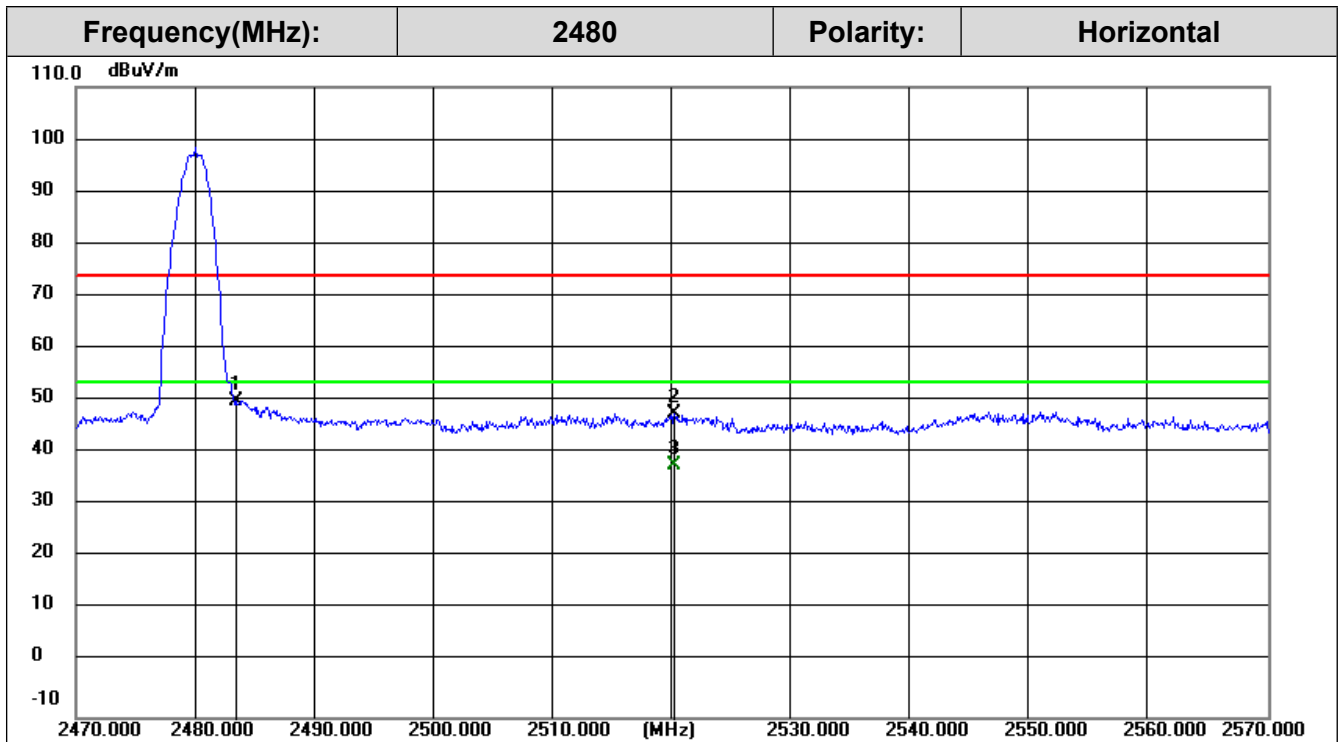
Remark:

Emission Level = Reading + Factor;

Factor = Antenna Factor + Cable Loss – Pre-amplifier;

Margin= Emission Level - Limit.

No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2375.417	59.12	-11.91	47.21	74.00	-26.79	peak
2	2375.417	50.63	-11.91	38.72	54.00	-15.28	AVG
3	2390.000	58.35	-11.87	46.48	74.00	-27.52	peak



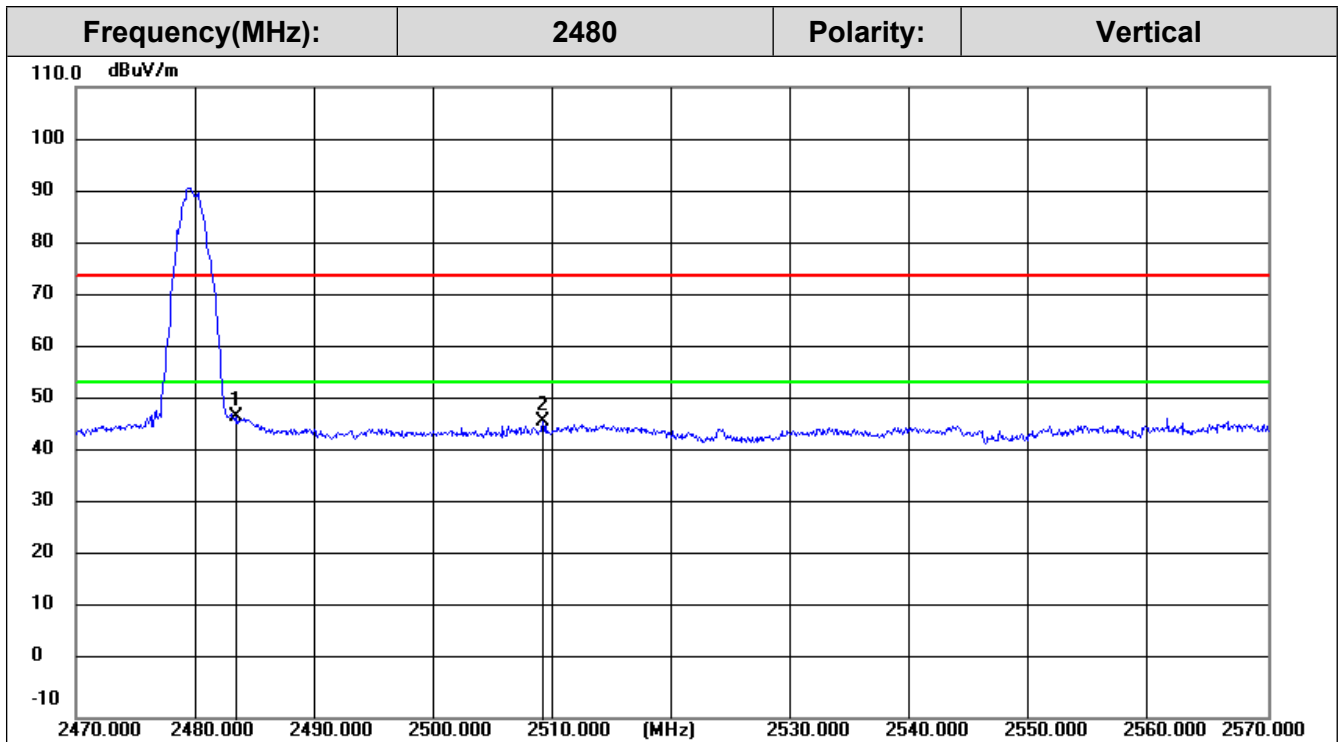
Remark:

Emission Level = Reading + Factor;

Factor = Antenna Factor + Cable Loss – Pre-amplifier;

Margin= Emission Level - Limit.

No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	61.80	-11.60	50.20	74.00	-23.80	peak
2	2520.280	59.38	-11.47	47.91	74.00	-26.09	peak
3	2520.280	49.51	-11.47	38.04	54.00	-15.96	AVG



Remark:

Emission Level = Reading + Factor;

Factor = Antenna Factor + Cable Loss – Pre-amplifier;

Margin= Emission Level - Limit.

No.	Frequency (MHz)	Reading (dBuV/m)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	59.04	-11.60	47.44	74.00	-26.56	peak
2	2509.200	57.86	-11.52	46.34	74.00	-27.66	peak

3.3 Antenna Requirement

Standard Applicable

For intentional device, according to FCC 47 CFR Section 15.203:

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

FCC CFR Title 47 Part 15 Subpart C Section 15.247(b) (4):

(4) 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.

Test Result

The device used a 50Ω FPC Antenna, the maximum gain of antenna is 2.41dBi. There is no consideration of replacement the antenna.

4 Test Setup Photographs of EUT

Please refer to separated files for Test Setup Photos of the EUT.

5 External Photographs of EUT

Please refer to separated files for External Photos of the EUT.

6 Internal Photographs of EUT

Please refer to separated files for Internal Photos of the EUT.

***** **End of Report** *****