FCC TEST REPORT
FCC ID:XUJS4006

Report Number.....:	ZKT-260724L1721E-2
Date of Test.....:	Mar. 23, 2026 to Aug. 27, 2026
Date of issue.....:	Aug. 27, 2026
Total number of pages..... :	92
Test Result ..... :	PASS
Testing Laboratory.....:	**Shenzhen ZKT Technology Co., Ltd.**
Address ..... :	1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China
Applicant's name .....:	Launch Tech Co., Ltd.
Address ..... :	No.4012, Launch Industrial Park, North Wuhe Rd, Bantian Street, Longgang District, Shenzhen, China
Manufacturer's name .....:	Launch Tech Co., Ltd.
Address ..... :	No.4012, Launch Industrial Park, North Wuhe Rd, Bantian Street, Longgang District, Shenzhen, China
Test specification:	
Standard.....:	FCC CFR Title 47 Part 15 Subpart C Section 15.247 ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024
Test procedure..... :	/
Non-standard test method .....:	N/A
Test Report Form No.....:	TRF-EL-111_V0
Test Report Form(s) Originator..... :	ZKT Testing
Master TRF .....:	Dated: 2020-01-06

This device described above has been tested by ZKT, and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.
This report shall not be reproduced except in full, without the written approval of ZKT, this document may be altered or revised by ZKT, personal only, and shall be noted in the revision of the document.

Product name.....:	Remote Diagnosis Interface
Trademark .....:	LAUNCH
Model/Type reference..... :	S4006
Ratings..... :	Input: 8-36VDC (powered by 12V or 24V car battery), ≤1A

Testing procedure and testing location:

Testing Laboratory..... :	Shenzhen ZKT Technology Co., Ltd.
Address..... :	1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China
Tested by (name + signature)..... :	Jim Liu
Reviewer (name + signature)..... :	Jackson Fang
Approved (name + signature)..... :	Lake Xie

Table of Contents **Page**

1. VERSION **5**

2. SUMMARY OF TEST RESULTS **6**

2.1 TEST FACILITY **7**

2.2 MEASUREMENT UNCERTAINTY **7**

3. GENERAL INFORMATION **8**

3.1 GENERAL DESCRIPTION OF EUT **8**

3.2 DESCRIPTION OF TEST MODES **9**

3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED **10**

3.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE) **11**

3.5 EQUIPMENTS LIST FOR ALL TEST ITEMS **12**

4. EMC EMISSION TEST **14**

4.1 CONDUCTED EMISSION MEASUREMENT **14**

4.1.1 POWER LINE CONDUCTED EMISSION LIMITS **14**

4.1.2 TEST PROCEDURE **14**

4.1.3 DEVIATION FROM TEST STANDARD **14**

4.1.4 TEST SETUP **15**

4.1.5 EUT OPERATING CONDITIONS **15**

4.1.6 TEST RESULTS **16**

4.2 RADIATED EMISSION MEASUREMENT **18**

4.2.1 RADIATED EMISSION LIMITS **18**

4.2.2 TEST PROCEDURE **19**

4.2.3 DEVIATION FROM TEST STANDARD **19**

4.2.4 TEST SETUP **19**

4.2.5 EUT OPERATING CONDITIONS **20**

4.2.6 TEST RESULTS **21**

5. EMISSIONS AT RESTRICTED BAND **51**

5.1 TEST REQUIREMENT **51**

5.2 TEST PROCEDURE **52**

5.3 DEVIATION FROM TEST STANDARD **52**

5.4 TEST SETUP **53**

5.5 EUT OPERATING CONDITIONS **53**

5.6 TEST RESULTS **54**

6. POWER SPECTRAL DENSITY TEST **55**

6.1 APPLIED PROCEDURES / LIMIT **55**

6.2 TEST PROCEDURE **55**

6.3 DEVIATION FROM STANDARD **55**

Table of Contents **Page**

6.4 TEST SETUP 55
6.5 EUT OPERATION CONDITIONS 55
6.6 TEST RESULTS 55
7.1 APPLIED PROCEDURES / LIMIT 56
7.2 TEST PROCEDURE 56
7.3 DEVIATION FROM STANDARD 56
7.4 TEST SETUP 56
7.5 EUT OPERATION CONDITIONS 56
7.6 TEST RESULTS 56
8. PEAK OUTPUT POWER TEST 57
8.1 APPLIED PROCEDURES / LIMIT 57
8.2 TEST PROCEDURE 57
8.3 DEVIATION FROM STANDARD 57
8.4 TEST SETUP 57
8.5 EUT OPERATION CONDITIONS 57
8.6 TEST RESULTS 57
9. CONDUCTED BAND EDGE AND SPURIOUS EMISSION 58
9.1 APPLICABLE STANDARD 58
9.2 TEST PROCEDURE 58
9.3 DEVIATION FROM STANDARD 59
9.4 TEST SETUP 59
9.5 EUT OPERATION CONDITIONS 59
9.6 TEST RESULTS 59
10. DUTY CYCLE 60
10.1 APPLIED PROCEDURES / LIMIT 60
10.2 DEVIATION FROM STANDARD 60
10.3 TEST SETUP 60
10.4 EUT OPERATION CONDITIONS 60
10.5 TEST RESULTS 60
11. ANTENNA REQUIREMENT 61
12. APPENDIX 1-TEST DATA 62
13. TEST SETUP PHOTO 92
14. EUT CONSTRUCTIONAL DETAILS 92

1. VERSION

Report No.	Version	Description	Approved
ZKT-260724L1721E-2	Rev.01	Initial issue of report	Aug. 27, 2026

2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

FCC Part15 (15.247) , Subpart C			
Standard Section	Test Item	Judgment	Remark
FCC part 15.203/15.247(c)	Antenna requirement	PASS	
FCC part 15.207	AC Power Line Conducted Emission	PASS	
FCC part 15.247 (b)(3)	Conducted Peak Output Power	PASS	
FCC part 15.247 (a)(2)	6DB Occupied Bandwidth	PASS	
FCC part 15.247 (e)	Power Spectral Density	PASS	
FCC part 15.247 (d)	Conducted Band Edge & Unwanted Spurious Emission	PASS	
FCC part 15.205/15.209	Radiated Band Edge & Unwanted Spurious Emission	PASS	
ANSI C63.10-2020+Cor. 1-2023+C63.10a-2024 + Errata to C63.10a-2024	Duty Cycle	PASS	

NOTE:

1) “N/A” denotes test is not applicable in this Test Report

2.1 TEST FACILITY

Shenzhen ZKT Technology Co., Ltd.

Add. : 1/F, No. 101, Building B, No. 6, Tangwei Community Industrial Avenue, Fuhai Street, Bao'an District, Shenzhen, China

FCC Test Firm Registration Number: 927491

Designation Number: CN1431

IC Registered No.: 27033

CAB identifier: CN0110

Designation Number: CN0110

2.2 MEASUREMENT UNCERTAINTY

The reported uncertainty of measurement y ± 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 %.

No.	Item	Uncertainty
1	3m camber Radiated spurious emission (9KHz-30MHz)	U=4.5dB
2	3m camber Radiated spurious emission (30MHz-1GHz)	U=4.8dB
3	3m chamber Radiated spurious emission (1GHz-6GHz)	U=4.9dB
4	3m chamber Radiated spurious emission (6GHz-40GHz)	U=5.0dB
5	Conducted Disturbance	U=3.2dB
6	RF Band Edge	U=1.68dB
7	RF Power Conducted	U=1.86dB
8	RF Conducted Spurious Emission	U=2.2dB
9	RF Occupied Bandwidth	U=1.8MHz
10	RF Power Spectral Density	U=1.75dB
11	Humidity Uncertainty	U=5.3%
12	Temperature Uncertainty	U=0.59℃

3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Product Name:	Remote Diagnosis Interface
Trade Mark:	LAUNCH
Model No.:	S4006
Serial No.:	X-431 SmartLink C HD V2, X-431 SmartLink C HD LITE V2
Model Different.:	The S4006 is equipped with black and green rubber sleeves. X-431 SmartLink C HD V2, X-431 SmartLink C HD LITE V2 and S4006 share the same main body, with differences only in the model names on the nameplates
Hardware Version:	V16
Software Version:	N/A
Sample Number	260724L1721-1
Sample(s) Status:	Engineer sample
Operation Frequency:	2402MHz~2480MHz
Channel Numbers:	40 Channels
Channel Spacing:	2MHz
Modulation Technology:	GFSK
Antenna Type:	FPC Antenna
Antenna Gain:	2.6dBi
Power Supply:	Input: 8-36VDC (powered by 12V or 24V car battery), ≤1A
Battery Capacity:	N/A

Note1: For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

Note2: The EUT's all information provided by client.

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2402 MHz	11	2422 MHz	21	2442 MHz	31	2462 MHz
2	2404 MHz	12	2424 MHz	22	2444 MHz	32	2464 MHz
3	2406 MHz	13	2426 MHz	23	2446 MHz	33	2466 MHz
4	2408 MHz	14	2428 MHz	24	2448 MHz	34	2468 MHz
5	2410 MHz	15	2430 MHz	25	2450 MHz	35	2470 MHz
6	2412 MHz	16	2432 MHz	26	2452 MHz	36	2472 MHz
7	2414 MHz	17	2434 MHz	27	2454 MHz	37	2474 MHz
8	2416 MHz	18	2436 MHz	28	2456 MHz	38	2476 MHz
9	2418 MHz	19	2438 MHz	29	2458 MHz	39	2478 MHz
10	2420 MHz	20	2440 MHz	30	2460 MHz	40	2480 MHz

Note:
In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

Channel	Frequency
The lowest channel	2402MHz
The middle channel	2440MHz
The Highest channel	2480MHz

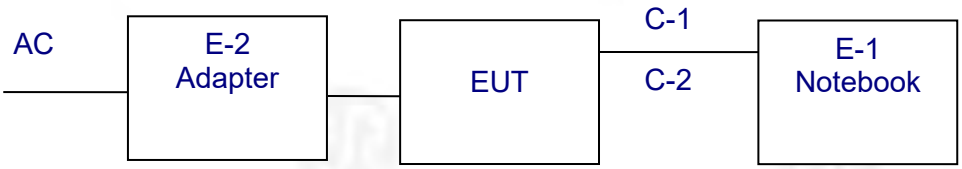
3.2 DESCRIPTION OF TEST MODES

Transmitting mode	Keep the EUT in continuously transmitting mode
Remark: During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data. For battery operated equipment, the equipment tests shall be performed using a new battery.	

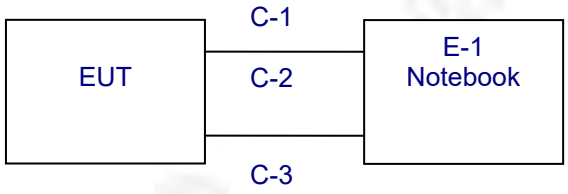
Test Software & Version	CMD
Mode	Power setting
BLE 2M - GFSK	2.6

3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

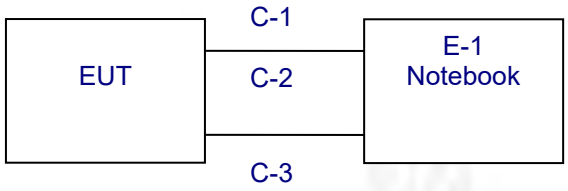
Conducted Emission



Radiated Emission



Conducted Spurious



3.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Note
E-1	Notebook	HP	ST-2	N/A
E-2	Adapter	UGREEN	X569	N/A
C-1	Serial port board	WAVGAT	CH340G	N/A
C-2	USB Cable	UGREEN	A88E6	N/A
C-3	USB Cable	ZTC	NB-A515A	N/A

Item	Equipment	Mfr/Brand	Length	Note
C-2	Shielded	NO	150cm	N/A
C-3	Shielded	NO	100cm	N/A

Note:

(1) The support equipment was authorized by Declaration of Confirmation.

(2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.

3.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Conduction Emissions Test

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	LISN	R&S	ENV216	101471	N/A	Sep. 23, 2025	Sep. 22, 2026
2	LISN	CYBERTEK	EM5040A	E1850400149	N/A	Sep. 19, 2025	Sep. 18, 2026
3	Test Cable	N/A	C-01	N/A	N/A	May 25, 2025	May 24, 2026
						May 25, 2026	May 24, 2027
4	EMI Test Receiver	R&S	ESCI3	101393	4.42 SP3	Oct. 24, 2025	Oct. 23, 2026
5	EMC Software	Frad	EZ-EMC	Ver.EMC-CON 3A1.1	N/A	\	\

Radiation Emissions & Radiation Spurious Emissions Test

Item	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	KEYSIGHT	N9020A	MY55370835	A.17.05	Sep. 20, 2025	Sep. 19, 2026
2	Spectrum Analyzer (10kHz-39.9GHz)	R&S	FSV40-N	100363	1.71 SP2	Sep. 20, 2025	Sep. 19, 2026
3	EMI Test Receiver (9kHz-7GHz)	R&S	ESCI7	100969	4.32	Oct. 24, 2025	Oct. 23, 2026
4	Bilog Antenna (30MHz-1500MHz)	Schwarzbeck	VULB9168	00877	N/A	Sep. 20, 2025	Sep. 19, 2026
5	Horn Antenna (1GHz-18GHz)	Agilent	AH-118	071145	N/A	Sep. 20, 2025	Sep. 19, 2026
6	Horn Antenna (15GHz-40GHz)	A.H.System	SAS-574	588	N/A	Sep. 30, 2025	Sep. 29, 2026
7	Loop Antenna	TESEQ	HLA6121	58357	N/A	Sep. 20, 2025	Sep. 19, 2026
8	Amplifier (30-1000MHz)	EM Electronics	EM330 Amplifier	60747	N/A	Sep. 19, 2025	Sep. 18, 2026
9	Amplifier (1GHz-26.5GHz)	HuiPu	8449B	3008A00315	N/A	Sep. 19, 2025	Sep. 18, 2026
10	Amplifier (500MHz-40GHz)	QuanJuDa	DLE-161	097	N/A	Oct. 24, 2025	Oct. 23, 2026
11	Test Cable	N/A	R-01	N/A	N/A	May 25, 2025	May 24, 2026
						May 25, 2026	May 24, 2027
12	Test Cable	N/A	R-02	N/A	N/A	May 25, 2025	May 24, 2026
						May 25, 2026	May 24, 2027
13	Test Cable	N/A	R-03	N/A	N/A	May 25, 2025	May 24, 2026
						May 25, 2026	May 24, 2027
14	D.C. Power Supply	LongWei	TPR-6405D	N/A	N/A	\	\
15	EMC Software	Frad	EZ-EMC	Ver.EMC-CON 3A1.1	N/A	\	\
16	Turntable	MF	MF-7802BS	N/A	N/A	\	\
17	Antenna tower	MF	MF-7802BS	N/A	N/A	\	\

RF Conducted Test

Item	Equipment	Manufacturer	Type No.	Serial No.	Firmware Version	Last calibration	Calibrated until
1	Spectrum Analyzer (9kHz-26.5GHz)	KEYSIGHT	N9020A	MY55370835	A.17.05	Sep. 20, 2025	Sep. 19, 2026
2	Spectrum Analyzer (10kHz-39.9GHz)	R&S	FSV40-N	100363	1.71 SP2	Sep. 20, 2025	Sep. 19, 2026
3	Test Cable	N/A	RF-01	N/A	N/A	May 25, 2025	May 24, 2026
						May 25, 2026	May 24, 2027
4	Test Cable	N/A	RF-02	N/A	N/A	May 25, 2025	May 24, 2026
						May 25, 2026	May 24, 2027
5	Test Cable	N/A	RF-03	N/A	N/A	May 25, 2025	May 24, 2026
						May 25, 2026	May 24, 2027
6	ESG Signal Generator	Agilent	E4421B	GB40051203	B.03.84	Sep. 19, 2025	Sep. 18, 2026
7	Signal Generator	Agilent	N5182A	MY47420215	A.01.87	Sep. 20, 2025	Sep. 19, 2026
8	Magnetic Field Probe Tester	Narda	ELT-400	0-0344	N/A	Sep. 25, 2025	Sep. 24, 2026
9	SHIELD BOX	TESCOM	TC-5970C	5970C015553	N/A	Dec. 18, 2025	Dec. 17, 2026
10	Wideband Radio Communication Test	R&S	CMW500	106504	V 3.7.22	Sep. 28, 2025	Sep. 27, 2026
11	MWRF Power Meter Test system	MW	MW100-RFCB	10371	N/A	Sep. 19, 2025	Sep. 18, 2026
12	MWRF Power Sensor	MW	MW100-PSB	10371	N/A	Sep. 19, 2025	Sep. 18, 2026
13	Power Meter	KEYSIGHT	N1912AP	926431	A.05.00	Sep. 19, 2025	Sep. 18, 2026
14	D.C. Power Supply	LongWei	TPR-6405D	GQ7516	N/A	Sep. 19, 2025	Sep. 18, 2026
15	Attenuators	XINQY	XQY-SMAJKS-12-2W	N/A	N/A	Sep. 19, 2025	Sep. 18, 2026
16	RF Software	MW	MTS8310	V2.0.0.0	N/A	\	\

4. EMC EMISSION TEST

4.1 CONDUCTED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Erratato C63.10a-2024
Test Frequency Range:	150KHz to 30MHz
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto

4.1.1 POWER LINE CONDUCTED EMISSION LIMITS

FREQUENCY (MHz)	Limit (dBuV)		Standard
	Quas-peak	Average	
0.15 -0.5	66 - 56 *	56 - 46 *	FCC
0.50 -5.0	56.00	46.00	FCC
5.0 -30.0	60.00	50.00	FCC

Note:

(1) *Decreases with the logarithm of the frequency.

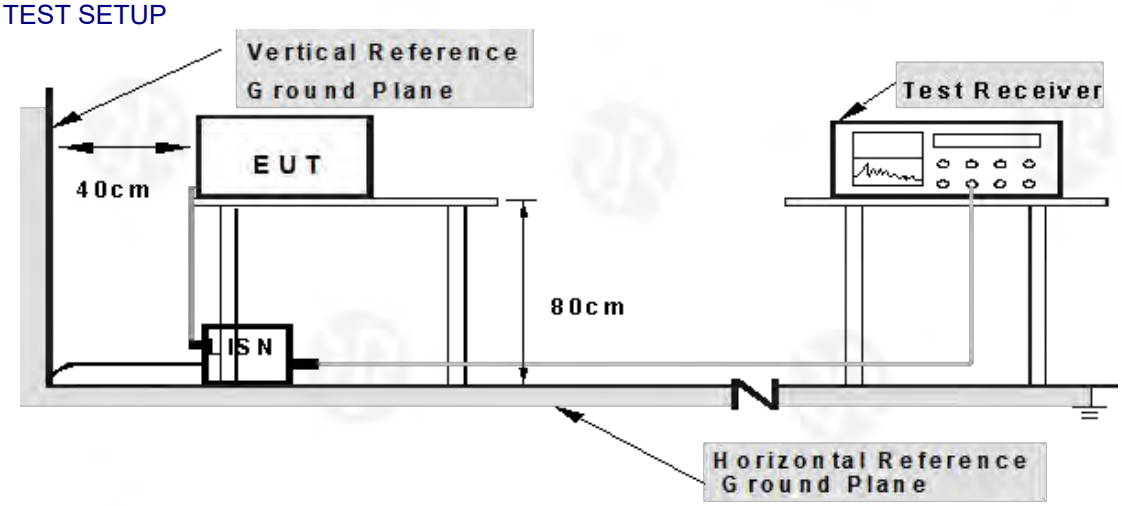
4.1.2 TEST PROCEDURE

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

4.1.3 DEVIATION FROM TEST STANDARD

No deviation

4.1.4 TEST SETUP



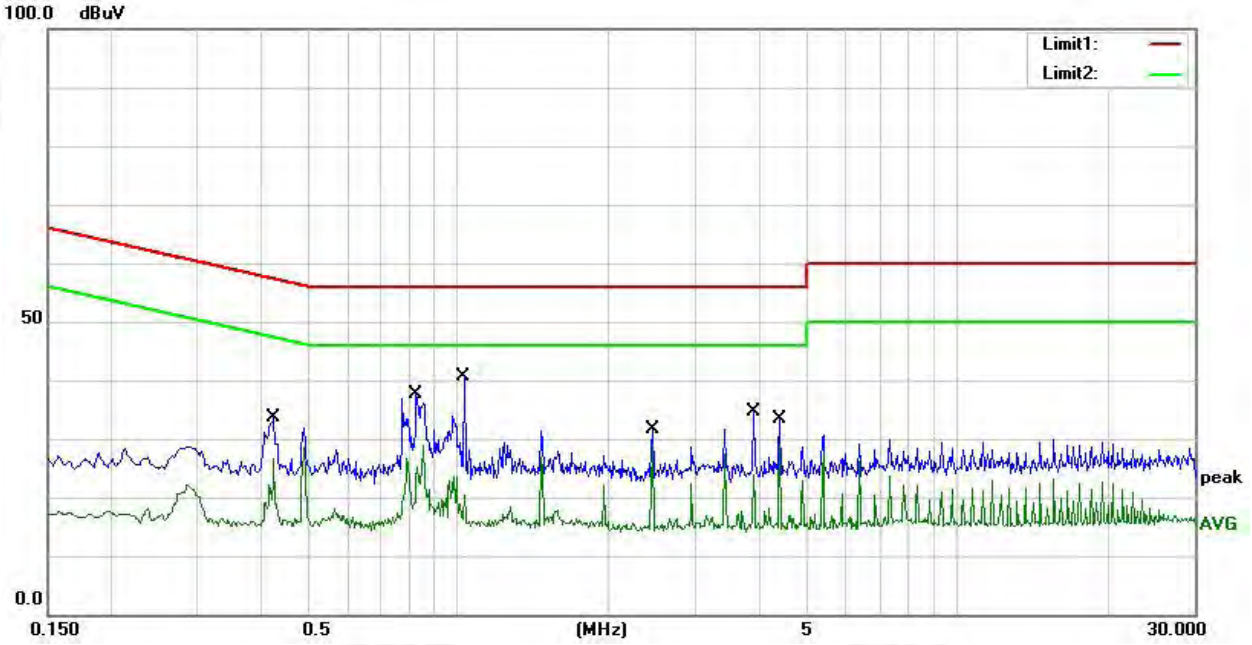
Note: 1.Support units were connected to second LISN.
2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

4.1.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

4.1.6 TEST RESULTS

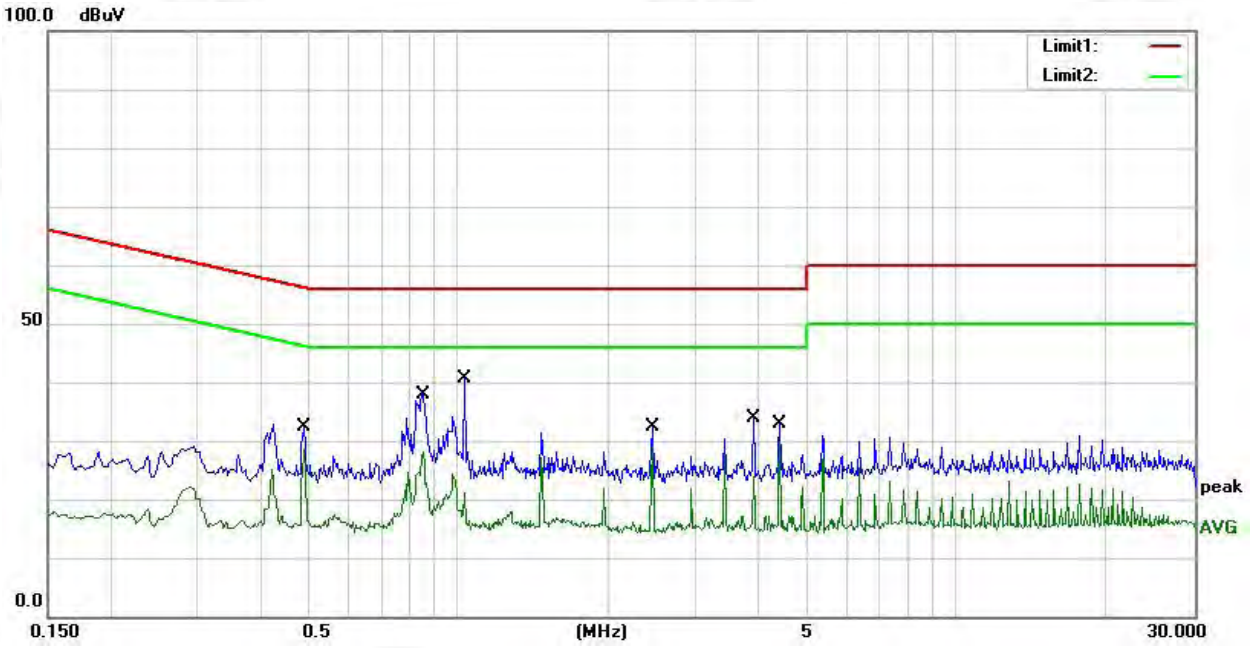
Temperature:	25.6℃	Relative Humidity:	60.7%
Pressure:	101 kPa	Polarization:	L
Test Voltage:	AC 120V/60Hz	Test Mode:	TX GFSK - 2402MHz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB)	(dBuV)	(dBuV)	(dB)	
1	0.4260	14.27	19.39	33.66	57.33	-23.67	QP
2	0.4260	9.23	19.39	28.62	47.33	-18.71	AVG
3	0.8260	18.22	19.36	37.58	56.00	-18.42	QP
4	0.8260	9.57	19.36	28.93	46.00	-17.07	AVG
5	1.0300	21.20	19.35	40.55	56.00	-15.45	QP
6	1.0300	7.61	19.35	26.96	46.00	-19.04	AVG
7	2.4500	12.32	19.37	31.69	56.00	-24.31	QP
8	2.4500	9.86	19.37	29.23	46.00	-16.77	AVG
9	3.9220	15.22	19.41	34.63	56.00	-21.37	QP
10	3.9220	4.45	19.41	23.86	46.00	-22.14	AVG
11	4.4140	14.01	19.42	33.43	56.00	-22.57	QP
12	4.4140	9.66	19.42	29.08	46.00	-16.92	AVG

Notes:
1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Reading level + Correct Factor.
4. Correct Factor= Lisn factor+ Cable loss factor + limiter factor.
5. Margin= Measurement Level-Limit.
6. The test data shows only the worst case GFSK 2402MHz.

Temperature:	25.6℃	Relative Humidity:	60.7%
Pressure:	101 kPa	Polarization:	N
Test Voltage:	AC 120V/60Hz	Test Mode:	TX GFSK - 2402MHz



	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB)	(dBuV)	(dBuV)	(dB)	
1	0.4900	13.04	19.34	32.38	56.17	-23.79	QP
2	0.4900	9.17	19.34	28.51	46.17	-17.66	AVG
3	0.8500	18.40	19.40	37.80	56.00	-18.20	QP
4	0.8500	8.67	19.40	28.07	46.00	-17.93	AVG
5	1.0300	21.13	19.39	40.52	56.00	-15.48	QP
6	1.0300	5.08	19.39	24.47	46.00	-21.53	AVG
7	2.4500	12.85	19.42	32.27	56.00	-23.73	QP
8	2.4500	7.72	19.42	27.14	46.00	-18.86	AVG
9	3.9220	14.52	19.46	33.98	56.00	-22.02	QP
10	3.9220	8.17	19.46	27.63	46.00	-18.37	AVG
11	4.4100	13.40	19.47	32.87	56.00	-23.13	QP
12	4.4100	10.31	19.47	29.78	46.00	-16.22	AVG

Notes:
1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Reading level + Correct Factor.
4. Correct Factor= Lisn factor+ Cable loss factor + limiter factor.
5. Margin= Measurement Level-Limit.
6. The test data shows only the worst case GFSK 2402MHz.

4.2 RADIATED EMISSION MEASUREMENT

Test Requirement:	FCC Part15 C Section 15.209
Test Method:	ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Erratato C63.10a-2024
Test Frequency Range:	9kHz to 25GHz
Test site:	Measurement Distance: 3m
Receiver setup:	

Frequency	Detector	RBW	VBW	Value
9KHz-150KHz	Quasi-peak	200Hz	600Hz	Quasi-peak
150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
30MHz-1GHz	Quasi-peak	120KHz	300KHz	Quasi-peak
Above 1GHz	Peak	1MHz	3MHz	Peak
	Average	1MHz	3MHz	Average

4.2.1 RADIATED EMISSION LIMITS

Frequencies (MHz)	Field Strength (micorvolts/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

LIMITS OF RADIATED EMISSION MEASUREMENT

Frequency (MHz)	Limit (dBuV/m) (at 3M)	
	Peak	Average
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

4.2.2 TEST PROCEDURE

a. The measuring distance of at 3 m shall be used for measurements at frequency up to 25GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-chamber test. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8m; above 1GHz, the height was 1.5m, the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f. For the actual test configuration, please refer to the related Item –EUT Test Photos.
g. For the radiated emission test above 1GHz:
Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response.
The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
Note:

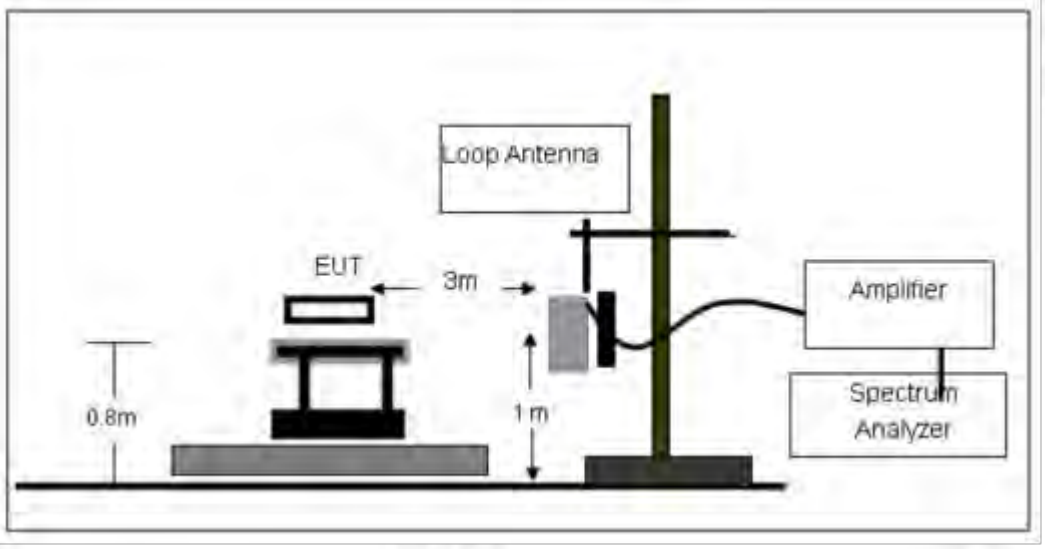
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

4.2.3 DEVIATION FROM TEST STANDARD

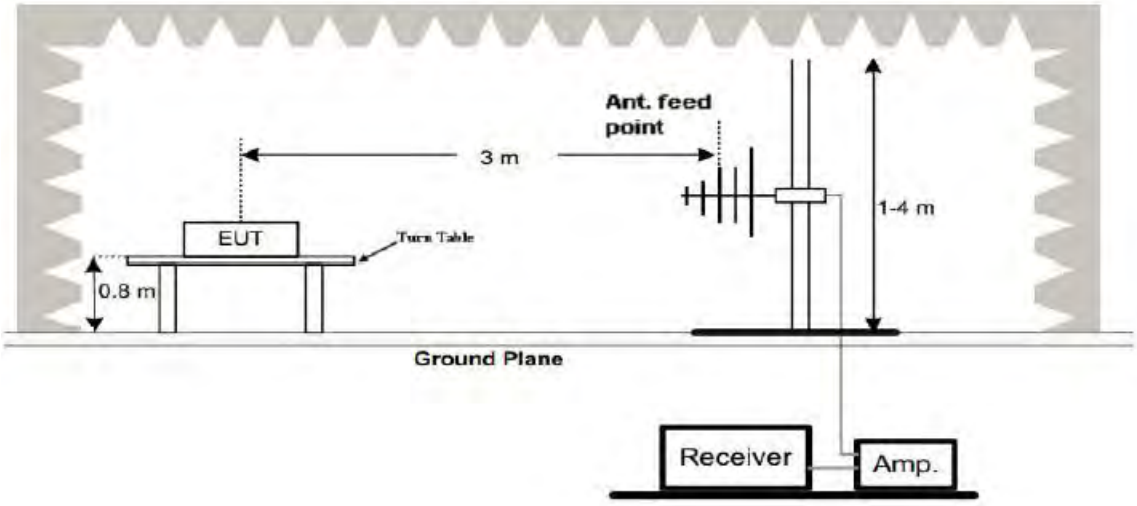
No deviation

4.2.4 TEST SETUP

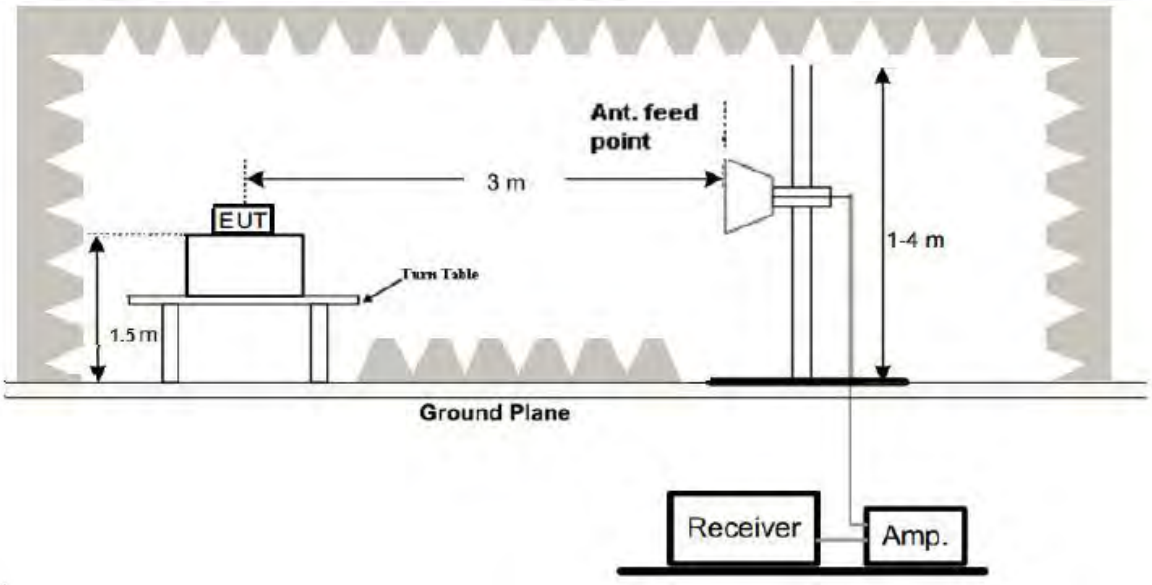
（A）Radiated Emission Test-Up Frequency Below 30MHz



（B）Radiated Emission Test-Up Frequency 30MHz~1GHz



（C）Radiated Emission Test-Up Frequency Above 1GHz



4.2.5 EUT OPERATING CONDITIONS

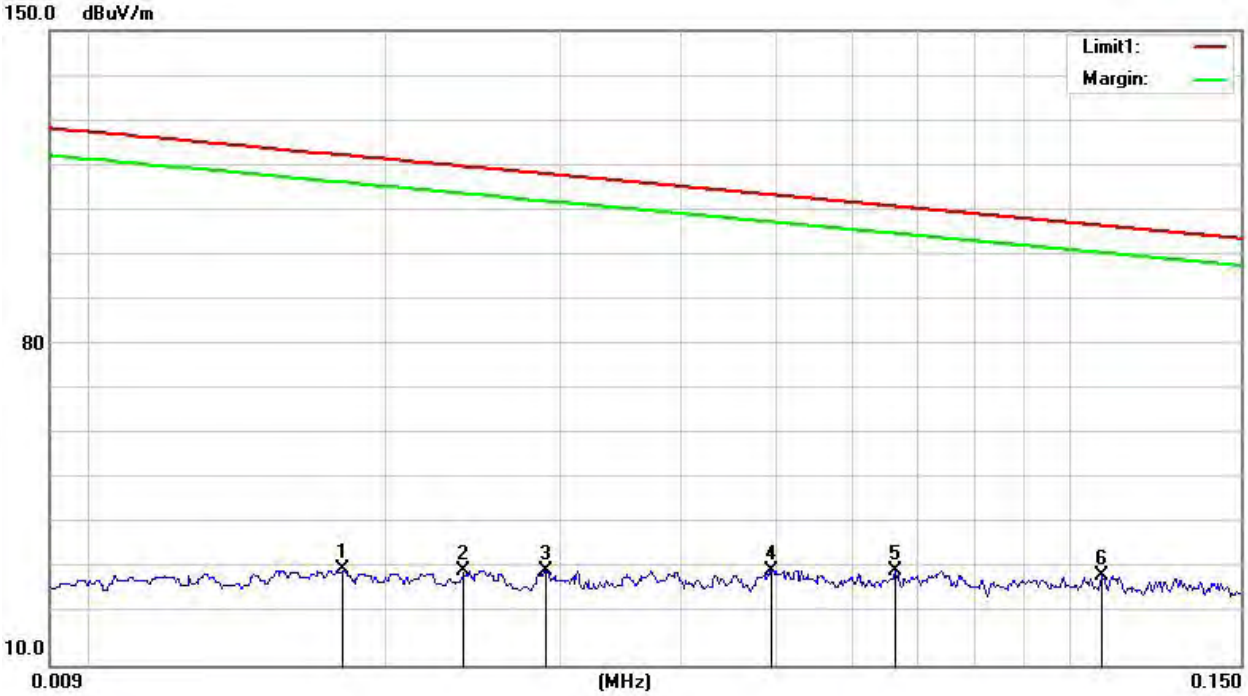
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

4.2.6 TEST RESULTS

a, Between 9KHz – 30 MHz

Temperature:	23.7℃	Relative Humidtity:	54%
Test Voltage:	DC 12V	Polarization:	Coxial
Test Mode:	GFSK-2402MHz		

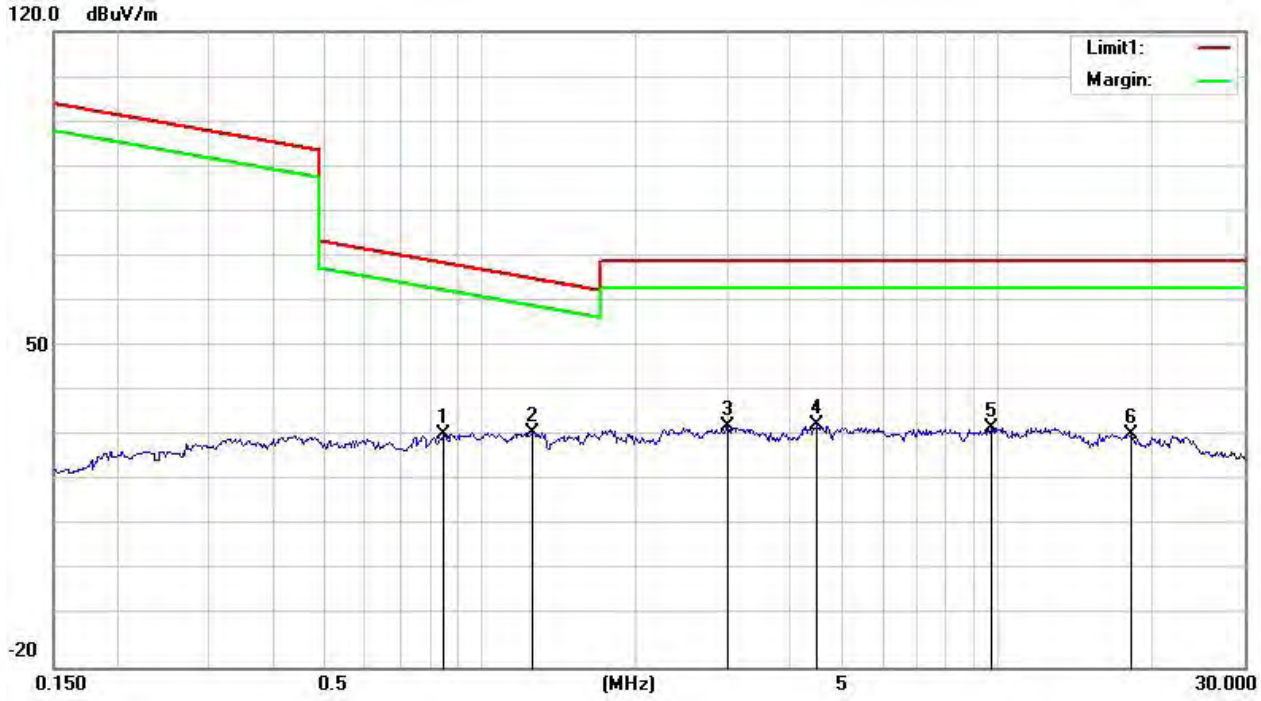
9K-150K



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	0.0180	11.14	19.95	31.09	122.50	-91.41	AVG
2	0.0240	10.68	20.02	30.70	120.00	-89.30	AVG
3	0.0291	10.90	19.92	30.82	118.33	-87.51	AVG
4	0.0495	11.44	19.51	30.95	113.71	-82.76	AVG
5	0.0663	11.85	19.04	30.89	111.17	-80.28	QP
6	0.1080	12.18	17.58	29.76	106.94	-77.18	AVG

Notes:
1. Distance extrapolation factor =40 log (specific distance/test distance)(dB);
2. Limit line = specific limits (dBuv) + distance extrapolation factor.
3. Both modes of BLE 1Mpbs and 2Mpbs were tested at Low, Middle, and High channel and recorded worst mode at 2402MHz of BLE 2Mpbs.

150K-30M

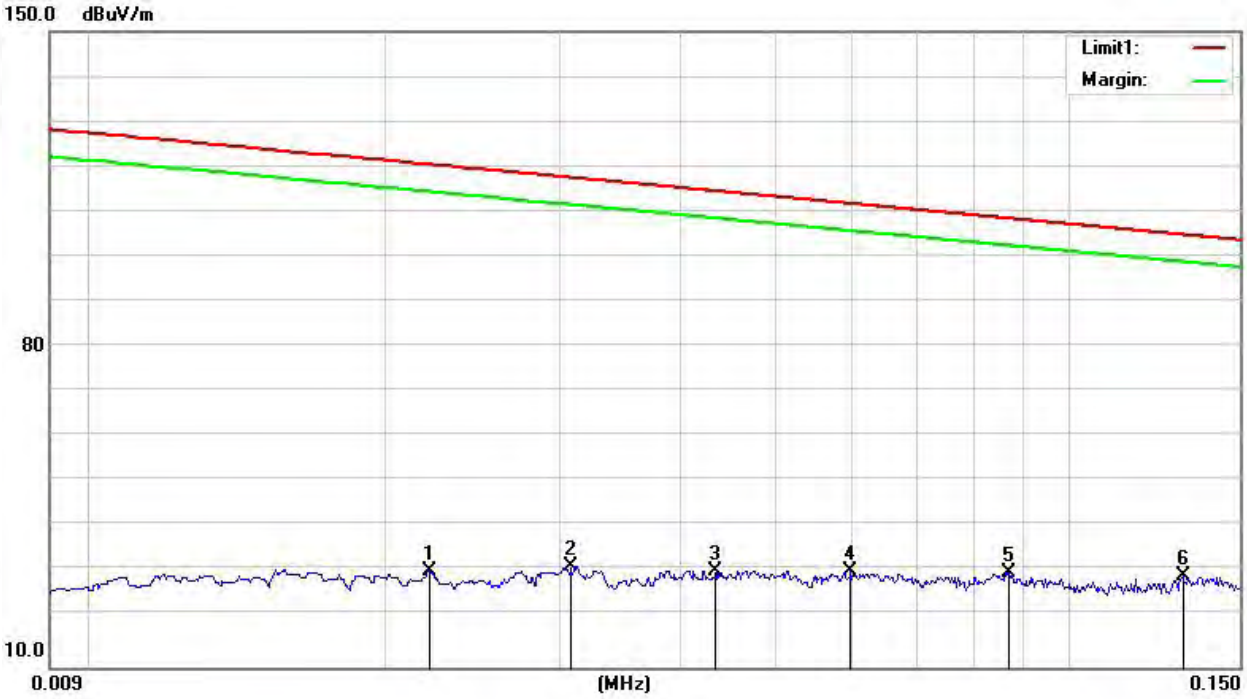


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.8483	11.09	20.26	31.35	69.03	-37.68	QP
2	1.2620	11.36	20.25	31.61	65.58	-33.97	QP
3	3.0156	12.90	20.10	33.00	69.50	-36.50	QP
4	4.4782	12.80	20.45	33.25	69.50	-36.25	QP
5	9.7317	12.38	20.22	32.60	69.50	-36.90	QP
6	18.2090	9.14	22.07	31.21	69.50	-38.29	QP

Notes:
1. Distance extrapolation factor =40 log (specific distance/test distance)(dB);
2. Limit line = specific limits (dBuv) + distance extrapolation factor.
3. Both modes of BLE 1Mpbs and 2Mpbs were tested at Low, Middle, and High channel and recorded worst mode at 2402MHz of BLE 2Mpbs.

Temperature:	23.7℃	Relative Humidtity:	54%
Test Voltage:	DC 12V	Polarization:	Coplanar
Test Mode:	GFSK-2402MHz		

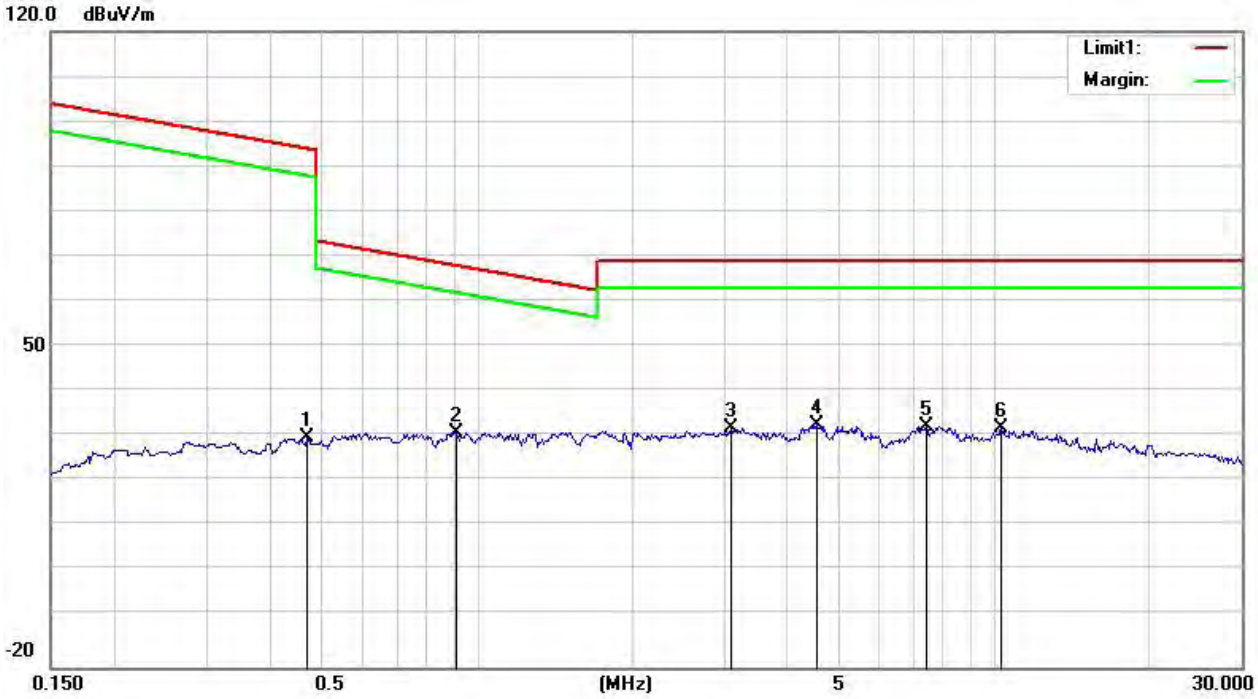
9K-150K



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	0.0221	11.21	20.06	31.27	120.72	-89.45	AVG
2	0.0310	12.35	19.88	32.23	117.78	-85.55	AVG
3	0.0434	11.60	19.63	31.23	114.85	-83.62	AVG
4	0.0597	11.87	19.23	31.10	112.08	-80.98	AVG
5	0.0870	12.65	18.22	30.87	108.81	-77.94	AVG
6	0.1310	12.51	17.54	30.05	105.26	-75.21	AVG

Notes:
1. Distance extrapolation factor =40 log (specific distance/test distance)(dB);
2. Limit line = specific limits (dBuv) + distance extrapolation factor.
3. Both modes of BLE 1Mpbs and 2Mpbs were tested at Low, Middle, and High channel and recorded worst mode at 2402MHz of BLE 2Mpbs.

150K-30M



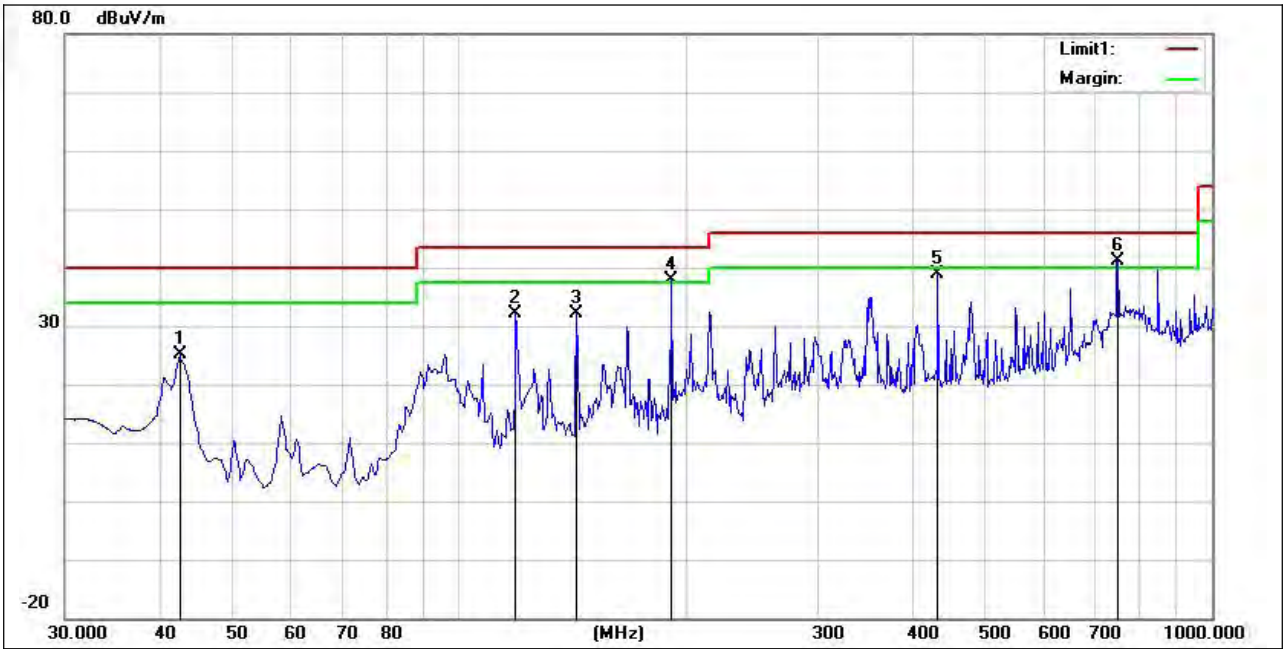
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.4686	10.40	20.19	30.59	94.19	-63.60	AVG
2	0.9082	11.36	20.24	31.60	68.44	-36.84	QP
3	3.1051	12.54	20.13	32.67	69.50	-36.83	QP
4	4.5380	13.03	20.45	33.48	69.50	-36.02	QP
5	7.3737	12.57	20.36	32.93	69.50	-36.57	QP
6	10.2990	12.27	20.27	32.54	69.50	-36.96	QP

Notes:
1. Distance extrapolation factor =40 log (specific distance/test distance)(dB);
2. Limit line = specific limits (dBuv) + distance extrapolation factor.
3. Both modes of BLE 1Mpbs and 2Mpbs were tested at Low, Middle, and High channel and recorded worst mode at 2402MHz of BLE 2Mpbs.

.

Between 30MHz – 1GHz

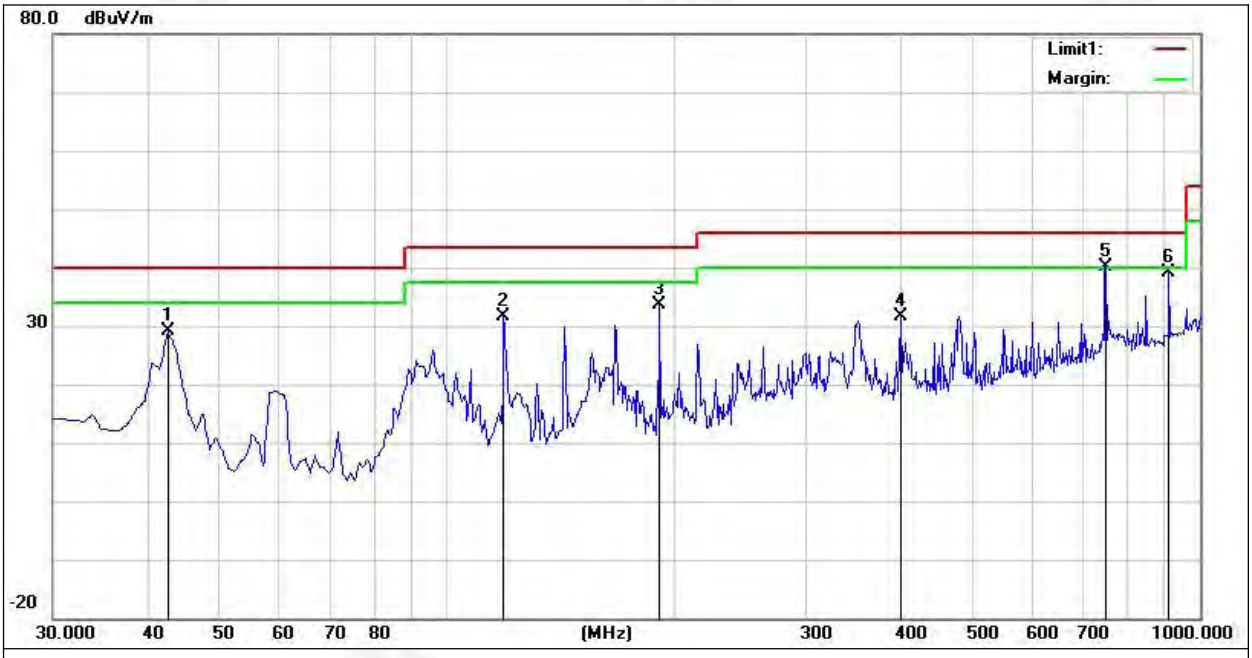
Temperature:	23.4℃	Relative Humidtity:	60%
Pressure:	101 kPa	Polarization:	Horizontal
Test Voltage:	DC 12V	Test Mode :	TX GFSK - 2402MHz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	42.6100	44.49	-19.44	25.05	40.00	-14.95	QP
2	119.2400	50.43	-18.38	32.05	43.50	-11.45	QP
3	143.4900	50.32	-18.23	32.09	43.50	-11.41	QP
4	191.9900	58.89	-21.04	37.85	43.50	-5.65	QP
5	433.5200	49.11	-10.13	38.98	46.00	-7.02	QP
6	750.7100	43.31	-2.16	41.15	46.00	-4.85	QP

Notes:
1. An initial pre-scan was performed on the peak detector.
2. Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
3. The emission levels of other frequencies are very lower than the limit and not show in test report.
4. Final Level = Reading level + Correct Factor.
5. Correct Factor= Antenna factor+ Cable loss factor - Amplifier factor.
6. Margin= Measurement Level-Limit.
7. Both modes of BLE 1Mpbs and 2Mpbs were tested at Low, Middle, and High channel and recorded worst mode at 2402MHz of BLE 2Mpbs.

Temperature:	23.4℃	Relative Humidtity:	60%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	DC 12V	Test Mode :	TX GFSK - 2402MHz

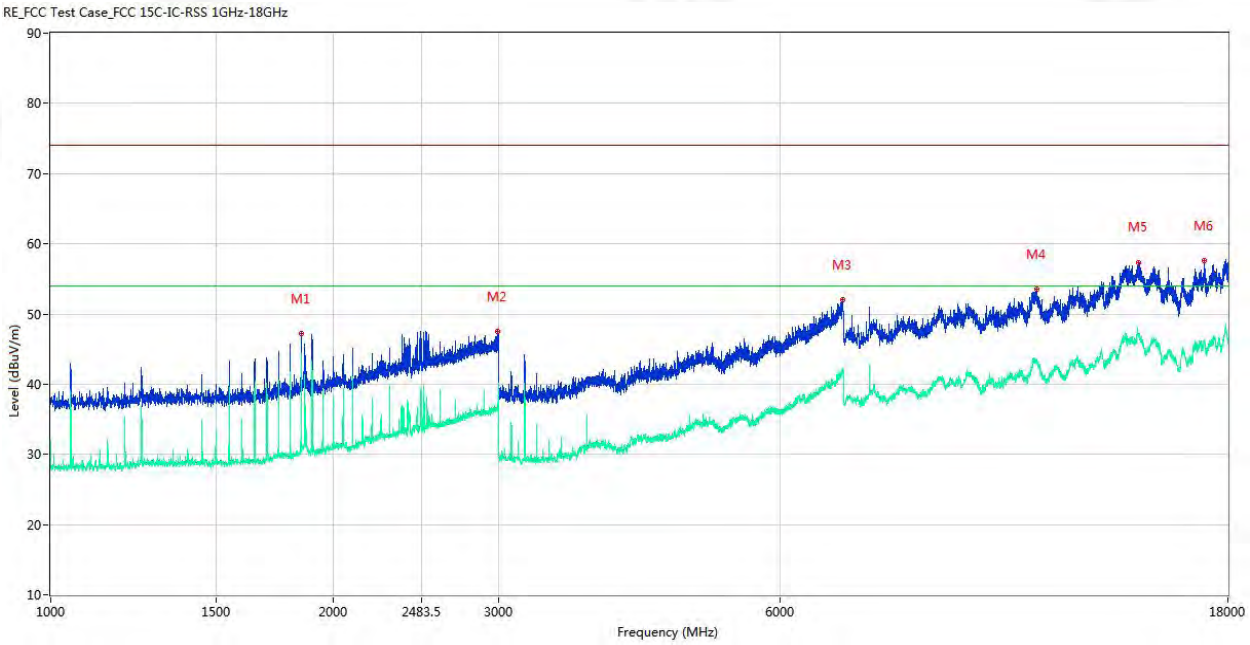


No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	42.6100	48.51	-19.44	29.07	40.00	-10.93	QP
2	119.2400	50.10	-18.38	31.72	43.50	-11.78	QP
3	191.9900	54.55	-21.04	33.51	43.50	-9.99	QP
4	400.5400	42.72	-11.11	31.61	46.00	-14.39	QP
5	750.7100	42.31	-2.16	40.15	46.00	-5.85	QP
6	910.7600	39.41	-0.17	39.24	46.00	-6.76	QP

Notes:
1. An initial pre-scan was performed on the peak detector.
2. Quasi-Peak measurement were performed at the frequencies with maximized peak emission.
3. The emission levels of other frequencies are very lower than the limit and not show in test report.
4. Final Level = Reading level + Correct Factor.
5. Correct Factor= Antenna factor+ Cable loss factor - Amplifier factor.
6. Margin= Measurement Level-Limit.
7. Both modes of BLE 1Mpbs and 2Mpbs were tested at Low, Middle, and High channel and recorded worst mode at 2402MHz of BLE 2Mpbs.

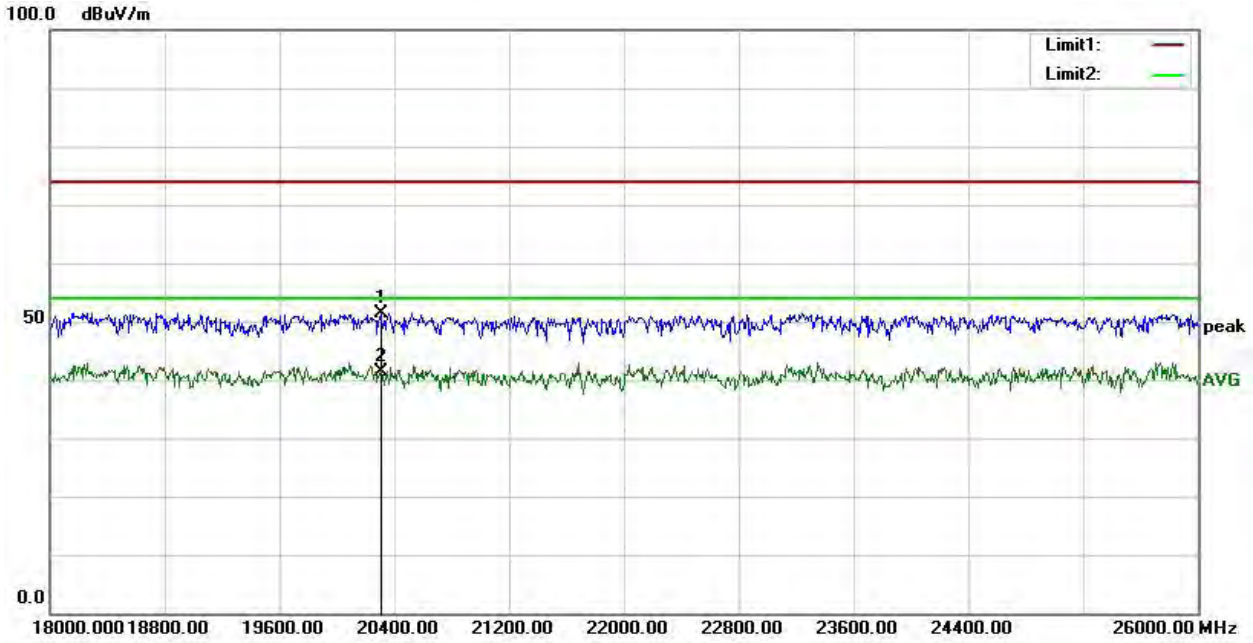
Above 1GHz

1M PHY- GFSK
Low Channel
Horizontal



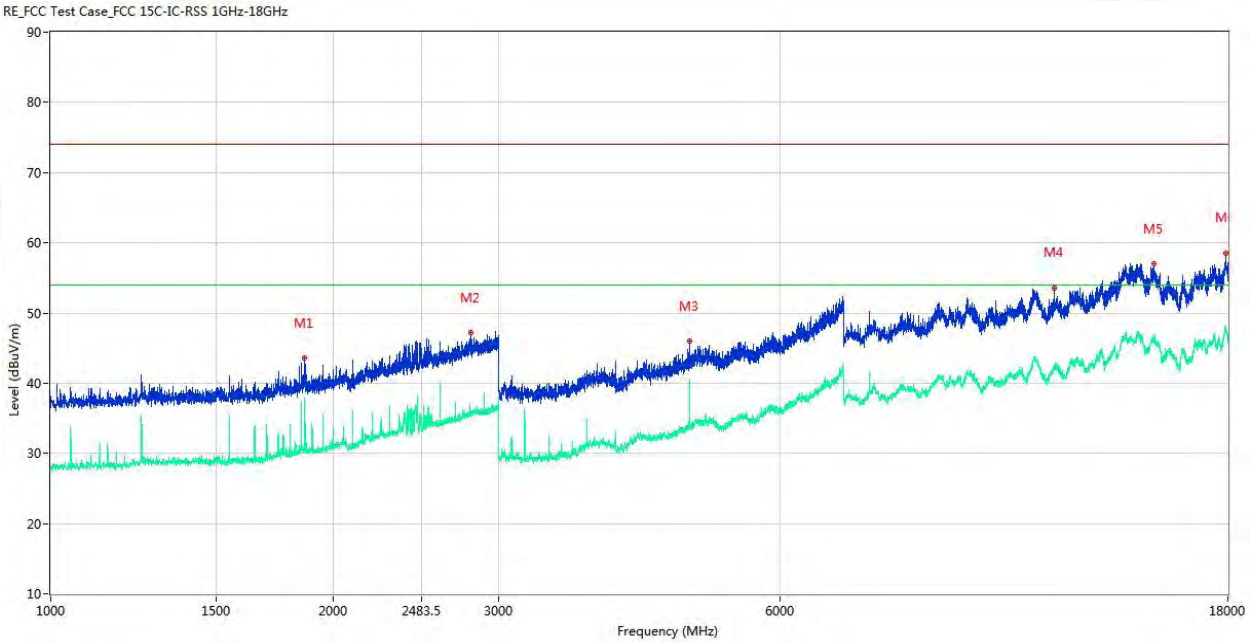
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Antenna	Verdict
1	1850.000	47.22	-0.06	74.0	-26.78	Peak	132.50	Horizontal	Pass
1**	1850.000	44.35	-0.06	54.0	-9.65	AV	132.50	Horizontal	Pass
2	2995.000	47.49	5.44	74.0	-26.51	Peak	300.90	Horizontal	Pass
2**	2995.000	36.58	5.44	54.0	-17.42	AV	300.90	Horizontal	Pass
3	6991.000	52.06	1.25	74.0	-21.94	Peak	310.20	Horizontal	Pass
3**	6991.000	41.91	1.25	54.0	-12.09	AV	310.20	Horizontal	Pass
4	11246.000	53.48	2.46	74.0	-20.52	Peak	3.00	Horizontal	Pass
4**	11246.000	43.55	2.46	54.0	-10.45	AV	3.00	Horizontal	Pass
5	14444.250	57.37	6.68	74.0	-16.63	Peak	279.90	Horizontal	Pass
5**	14444.250	46.89	6.68	54.0	-7.11	AV	279.90	Horizontal	Pass
6	17004.500	57.61	5.54	74.0	-16.39	Peak	316.40	Horizontal	Pass
6**	17004.500	45.68	5.54	54.0	-8.32	AV	316.40	Horizontal	Pass

18GHz-26GHz



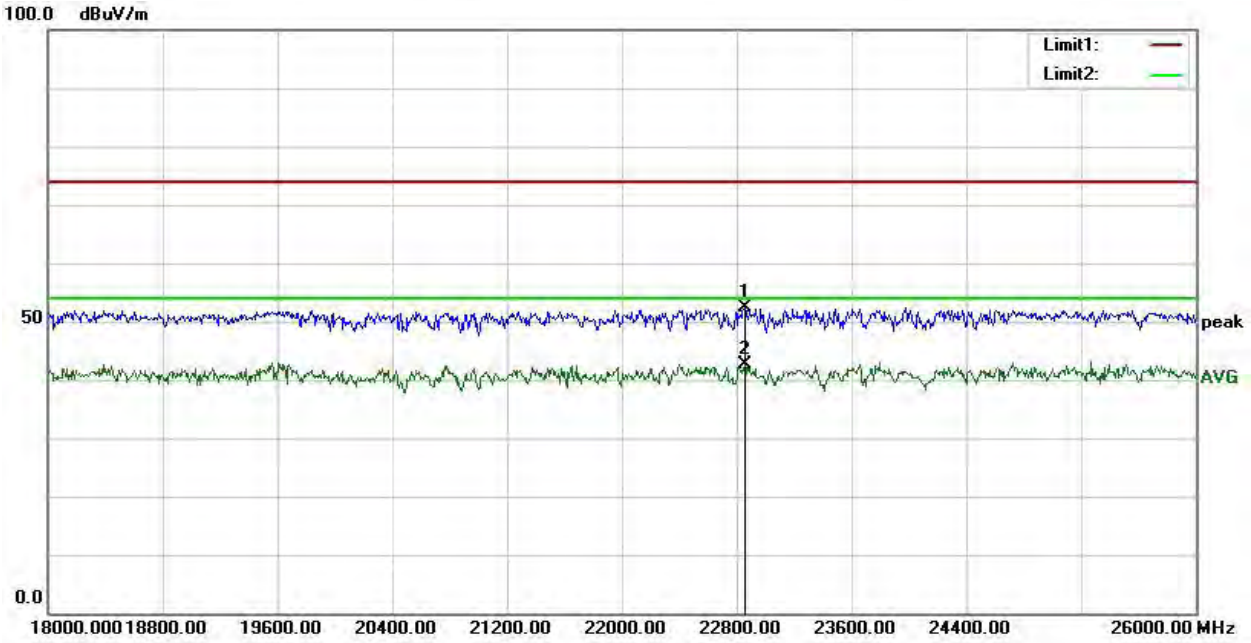
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	20304.000	49.34	2.06	51.40	74.00	-22.60	peak
2	20304.000	39.32	2.06	41.38	54.00	-12.62	AVG

Vertical
1GHz-18GHz



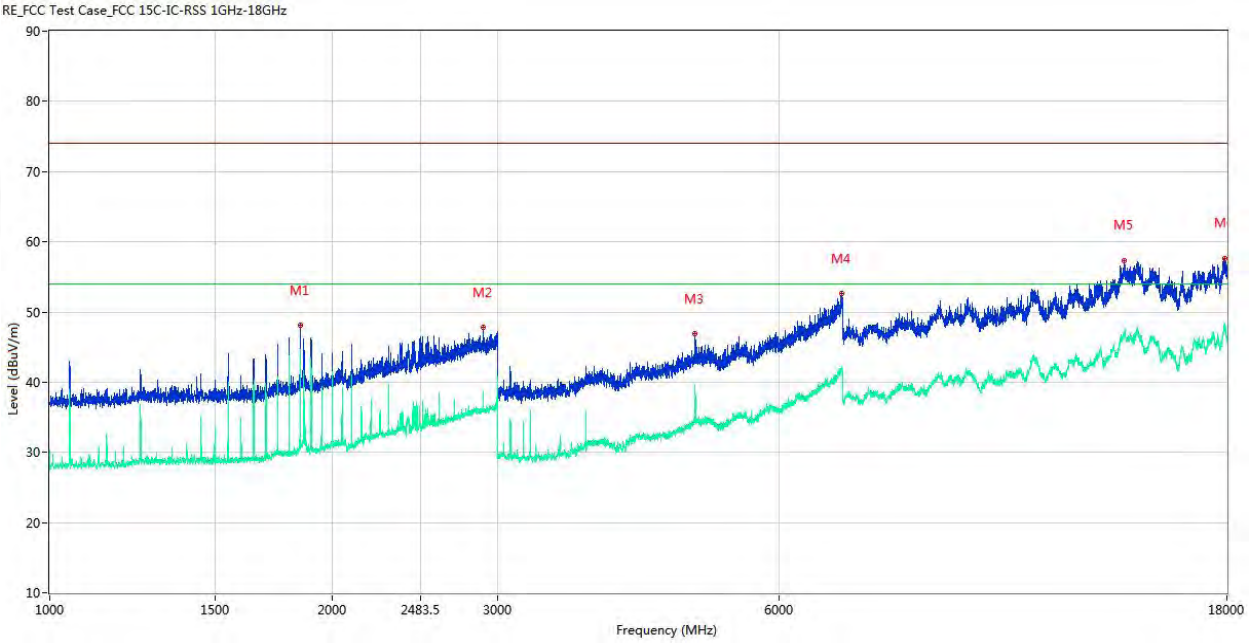
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Antenna	Verdict
1	1866.000	43.64	-0.09	74.0	-30.36	Peak	31.80	Vertical	Pass
1**	1866.000	37.86	-0.09	54.0	-16.14	AV	31.80	Vertical	Pass
2	2806.500	47.19	4.78	74.0	-26.81	Peak	220.90	Vertical	Pass
2**	2806.500	35.71	4.78	54.0	-18.29	AV	220.90	Vertical	Pass
3	4804.000	45.99	-7.11	74.0	-28.01	Peak	189.90	Vertical	Pass
3**	4804.000	40.52	-7.11	54.0	-13.48	AV	189.90	Vertical	Pass
4	11757.500	53.61	1.90	74.0	-20.39	Peak	234.60	Vertical	Pass
4**	11757.500	42.17	1.90	54.0	-11.83	AV	234.60	Vertical	Pass
5	14994.250	57.04	5.47	74.0	-16.96	Peak	118.20	Vertical	Pass
5**	14994.250	45.86	5.47	54.0	-8.14	AV	118.20	Vertical	Pass
6	17906.500	58.57	7.19	74.0	-15.43	Peak	3.20	Vertical	Pass
6**	17906.500	48.07	7.19	54.0	-5.93	AV	3.20	Vertical	Pass

18GHz-26GHz



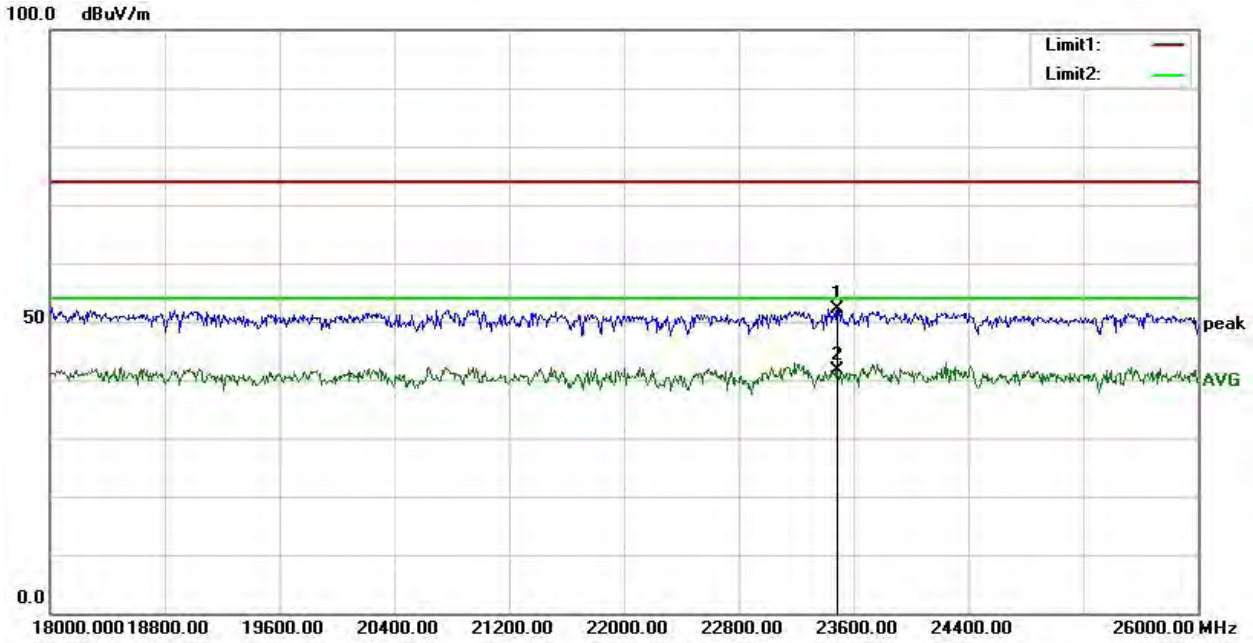
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	22856.000	48.68	3.72	52.40	74.00	-21.60	peak
2	22856.000	38.82	3.72	42.54	54.00	-11.46	AVG

Mid Channel
Horizontal
1GHz-18GHz



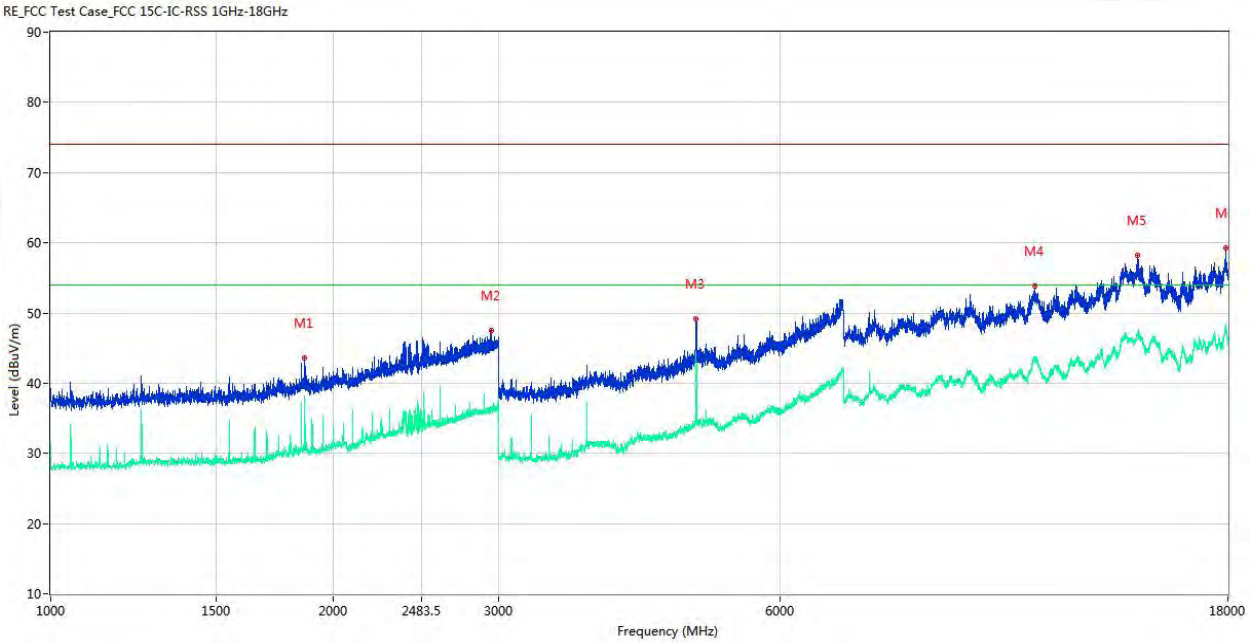
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Antenna	Verdict
1	1850.000	48.09	-0.06	74.0	-25.91	Peak	125.70	Horizontal	Pass
1**	1850.000	44.68	-0.06	54.0	-9.32	AV	125.70	Horizontal	Pass
2	2900.000	47.84	4.90	74.0	-26.16	Peak	113.10	Horizontal	Pass
2**	2900.000	38.76	4.90	54.0	-15.24	AV	113.10	Horizontal	Pass
3	4880.000	46.86	-6.29	74.0	-27.14	Peak	360.20	Horizontal	Pass
3**	4880.000	39.66	-6.29	54.0	-14.34	AV	360.20	Horizontal	Pass
4	6998.000	52.58	1.30	74.0	-21.42	Peak	358.60	Horizontal	Pass
4**	6998.000	42.00	1.30	54.0	-12.00	AV	358.60	Horizontal	Pass
5	14004.250	57.37	8.38	74.0	-16.63	Peak	291.30	Horizontal	Pass
5**	14004.250	47.37	8.38	54.0	-6.63	AV	291.30	Horizontal	Pass
6	17898.250	57.66	7.22	74.0	-16.34	Peak	105.80	Horizontal	Pass
6**	17898.250	47.90	7.22	54.0	-6.10	AV	105.80	Horizontal	Pass

18GHz-26GHz



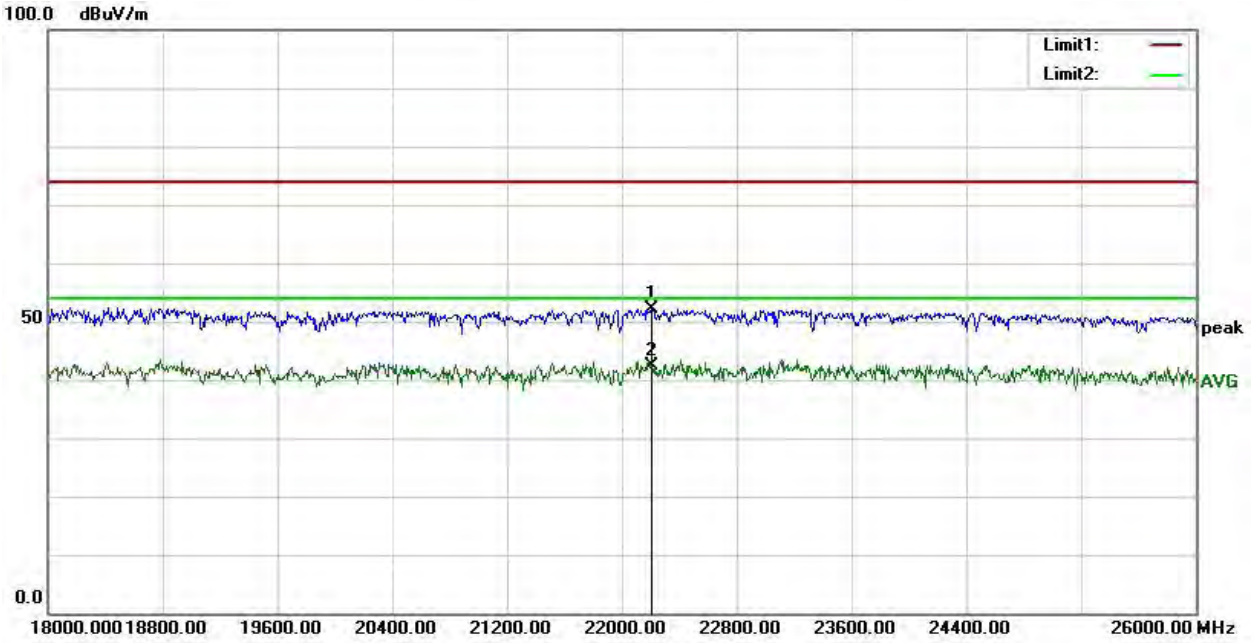
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	23488.000	47.95	4.12	52.07	74.00	-21.93	peak
2	23488.000	37.42	4.12	41.54	54.00	-12.46	AVG

Vertical
1GHz-18GHz



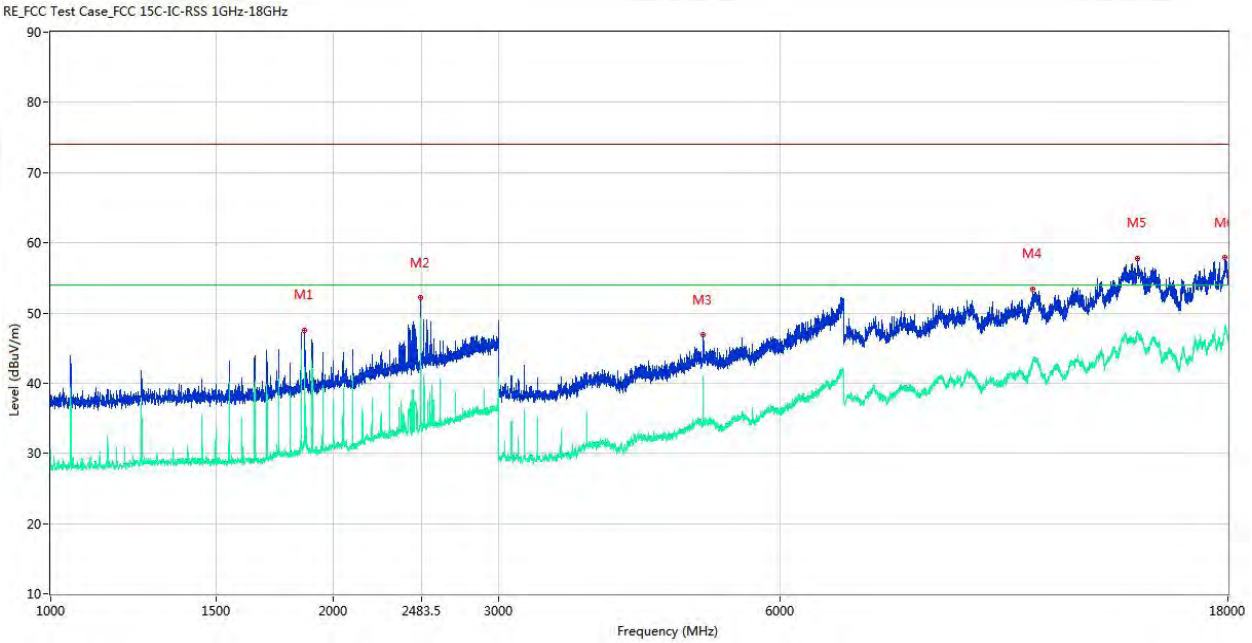
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Antenna	Verdict
1	1865.500	43.55	-0.09	74.0	-30.45	Peak	191.80	Vertical	Pass
1**	1865.500	36.58	-0.09	54.0	-17.42	AV	191.80	Vertical	Pass
2	2948.500	47.48	5.21	74.0	-26.52	Peak	125.20	Vertical	Pass
2**	2948.500	36.39	5.21	54.0	-17.61	AV	125.20	Vertical	Pass
3	4880.000	49.19	-6.29	74.0	-24.81	Peak	216.80	Vertical	Pass
3**	4880.000	44.43	-6.29	54.0	-9.57	AV	216.80	Vertical	Pass
4	11210.250	53.77	2.59	74.0	-20.23	Peak	152.70	Vertical	Pass
4**	11210.250	43.50	2.59	54.0	-10.50	AV	152.70	Vertical	Pass
5	14405.750	58.19	6.95	74.0	-15.81	Peak	59.00	Vertical	Pass
5**	14405.750	47.21	6.95	54.0	-6.79	AV	59.00	Vertical	Pass
6	17906.500	59.25	7.19	74.0	-14.75	Peak	30.30	Vertical	Pass
6**	17906.500	48.38	7.19	54.0	-5.62	AV	30.30	Vertical	Pass

18GHz-26GHz



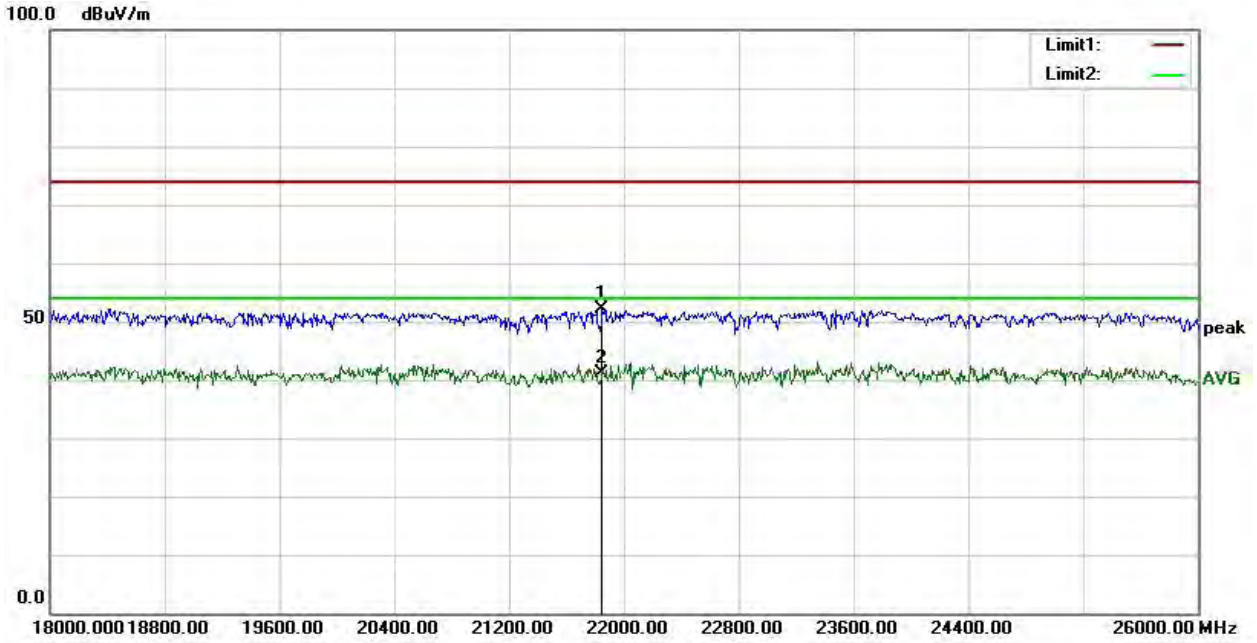
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	22208.000	48.61	3.62	52.23	74.00	-21.77	peak
2	22208.000	38.77	3.62	42.39	54.00	-11.61	AVG

High Channel
Horizontal
1GHz-18GHz



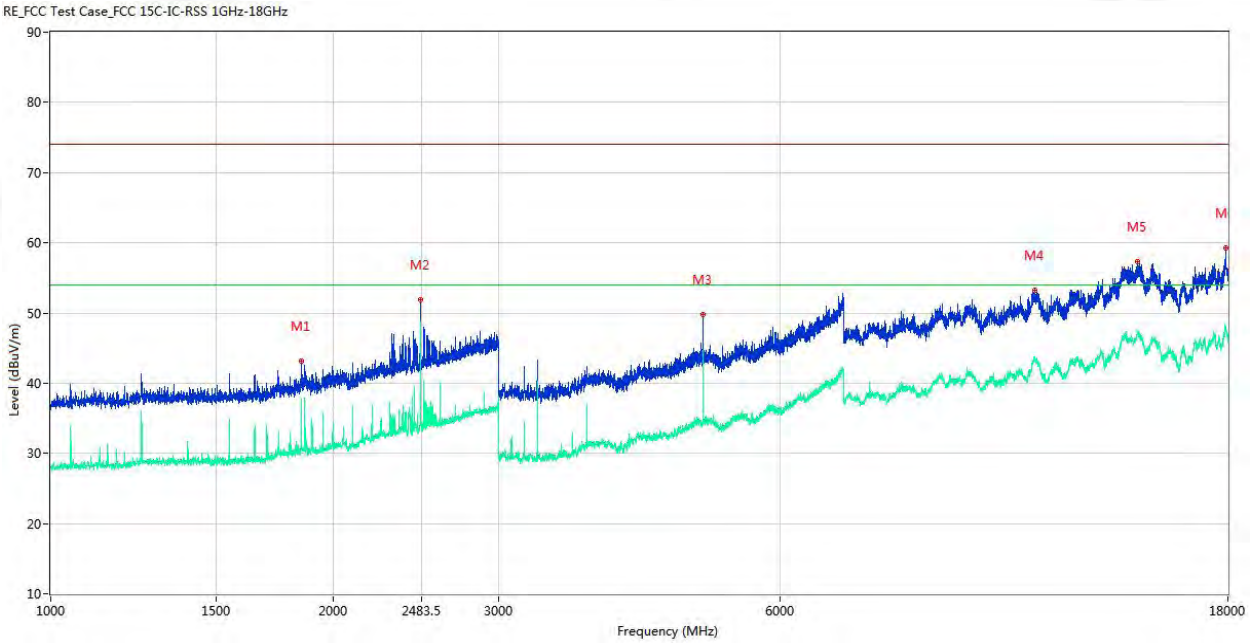
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Antenna	Verdict
1	1865.500	47.56	-0.09	74.0	-26.44	Peak	119.60	Horizontal	Pass
1**	1865.500	39.93	-0.09	54.0	-14.07	AV	119.60	Horizontal	Pass
2	2480.000	52.12	3.18	74.0	-21.88	Peak	258.40	Horizontal	Pass
2**	2480.000	49.31	3.18	54.0	-4.69	AV	258.40	Horizontal	Pass
3	4960.000	46.90	-5.99	74.0	-27.10	Peak	358.80	Horizontal	Pass
3**	4960.000	40.89	-5.99	54.0	-13.11	AV	358.80	Horizontal	Pass
4	11152.500	53.44	2.36	74.0	-20.56	Peak	124.10	Horizontal	Pass
4**	11152.500	43.11	2.36	54.0	-10.89	AV	124.10	Horizontal	Pass
5	14416.750	57.83	6.87	74.0	-16.17	Peak	1.90	Horizontal	Pass
5**	14416.750	47.11	6.87	54.0	-6.89	AV	1.90	Horizontal	Pass
6	17881.750	57.95	7.08	74.0	-16.05	Peak	315.70	Horizontal	Pass
6**	17881.750	47.72	7.08	54.0	-6.28	AV	315.70	Horizontal	Pass

18GHz-26GHz



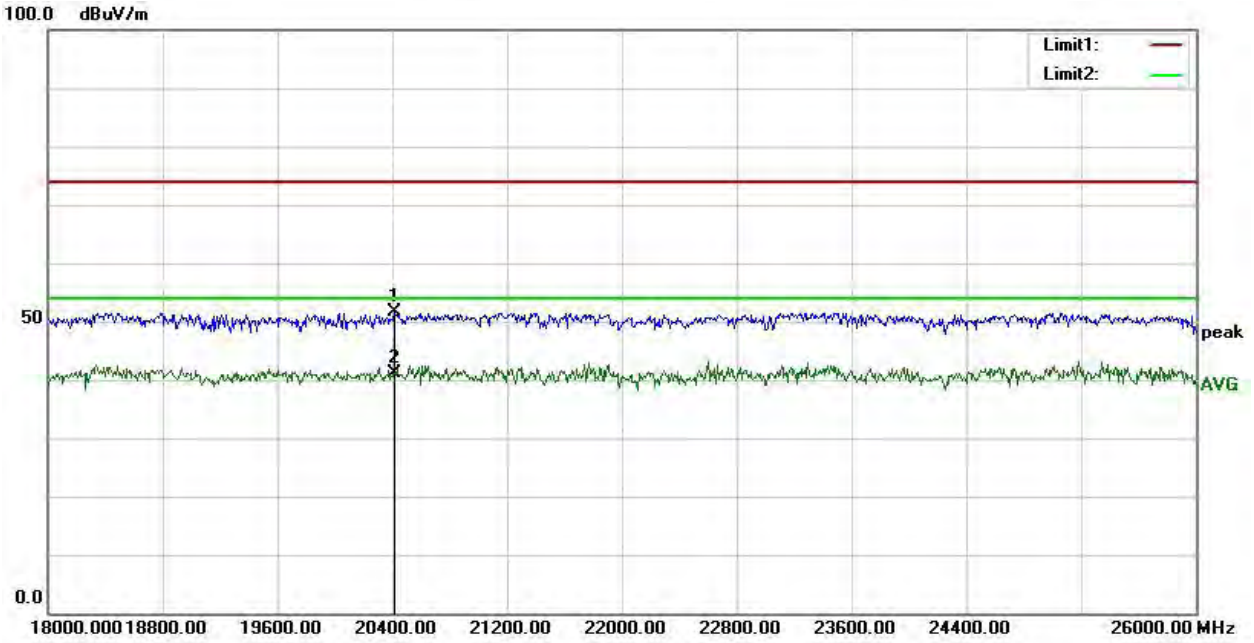
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	21848.000	48.86	3.27	52.13	74.00	-21.87	peak
2	21848.000	37.77	3.27	41.04	54.00	-12.96	AVG

Vertical
1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Antenna	Verdict
1	1849.500	43.15	-0.07	74.0	-30.85	Peak	84.80	Vertical	Pass
1**	1849.500	35.69	-0.07	54.0	-18.31	AV	84.80	Vertical	Pass
2	2480.500	51.89	3.18	74.0	-22.11	Peak	271.80	Vertical	Pass
2**	2480.500	47.64	3.18	54.0	-6.36	AV	271.80	Vertical	Pass
3	4961.000	49.71	-5.99	74.0	-24.29	Peak	208.90	Vertical	Pass
3**	4961.000	41.46	-5.99	54.0	-12.54	AV	208.90	Vertical	Pass
4	11191.000	53.23	2.57	74.0	-20.77	Peak	261.60	Vertical	Pass
4**	11191.000	43.46	2.57	54.0	-10.54	AV	261.60	Vertical	Pass
5	14422.250	57.26	6.83	74.0	-16.74	Peak	157.20	Vertical	Pass
5**	14422.250	47.48	6.83	54.0	-6.52	AV	157.20	Vertical	Pass
6	17906.500	59.22	7.19	74.0	-14.78	Peak	152.70	Vertical	Pass
6**	17906.500	47.92	7.19	54.0	-6.08	AV	152.70	Vertical	Pass

18GHz-26GHz

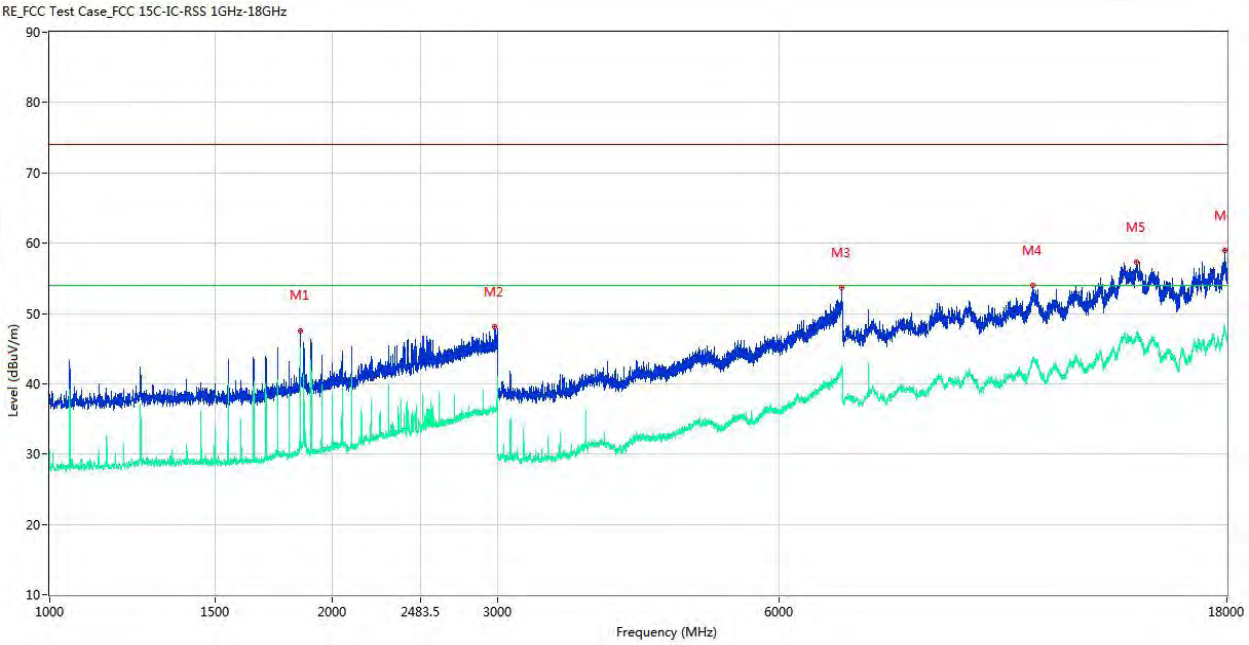


No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	20416.000	49.45	2.16	51.61	74.00	-22.39	peak
2	20416.000	38.87	2.16	41.03	54.00	-12.97	AVG

Note:

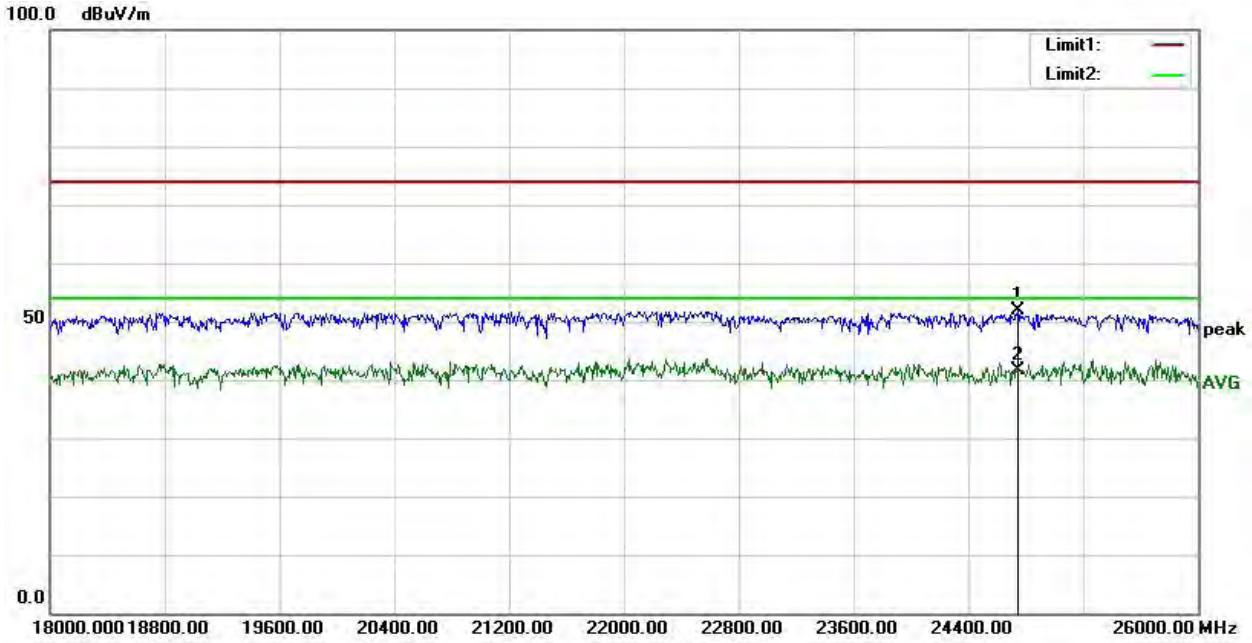
1) Factor = Antenna Factor + Cable Loss – Pre-amplifier.
   Emission Level = Reading + Factor.
2) The frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise.

2M PHY
Low Channel
Horizontal



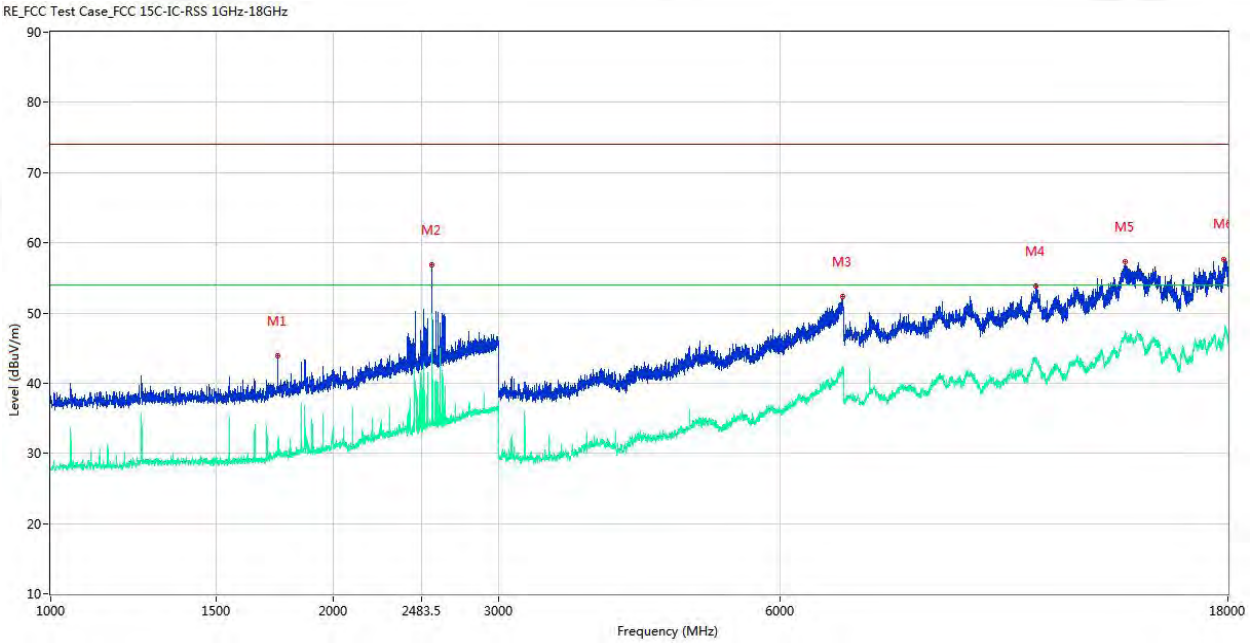
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Antenna	Verdict
1	1850.000	47.57	-0.06	74.0	-26.43	Peak	122.30	Horizontal	Pass
1**	1850.000	45.12	-0.06	54.0	-8.88	AV	122.30	Horizontal	Pass
2	2978.000	48.14	5.35	74.0	-25.86	Peak	246.90	Horizontal	Pass
2**	2978.000	36.17	5.35	54.0	-17.83	AV	246.90	Horizontal	Pass
3	6992.000	53.64	1.26	74.0	-20.36	Peak	245.40	Horizontal	Pass
3**	6992.000	41.83	1.26	54.0	-12.17	AV	245.40	Horizontal	Pass
4	11166.250	54.03	2.44	74.0	-19.97	Peak	122.70	Horizontal	Pass
4**	11166.250	43.25	2.44	54.0	-10.75	AV	122.70	Horizontal	Pass
5	14422.250	57.28	6.83	74.0	-16.72	Peak	358.00	Horizontal	Pass
5**	14422.250	47.04	6.83	54.0	-6.96	AV	358.00	Horizontal	Pass
6	17906.500	59.00	7.19	74.0	-15.00	Peak	244.60	Horizontal	Pass
6**	17906.500	47.93	7.19	54.0	-6.07	AV	244.60	Horizontal	Pass

18GHz-26GHz



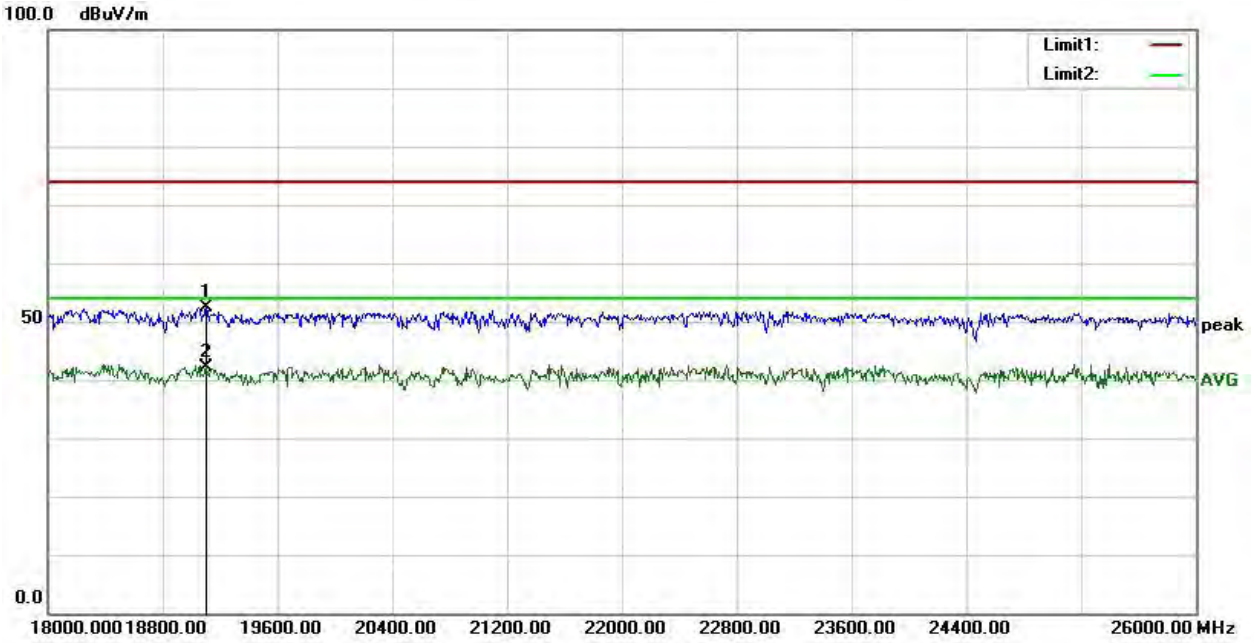
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	24744.000	46.93	5.00	51.93	74.00	-22.07	peak
2	24744.000	36.72	5.00	41.72	54.00	-12.28	AVG

Vertical
1GHz-18GHz



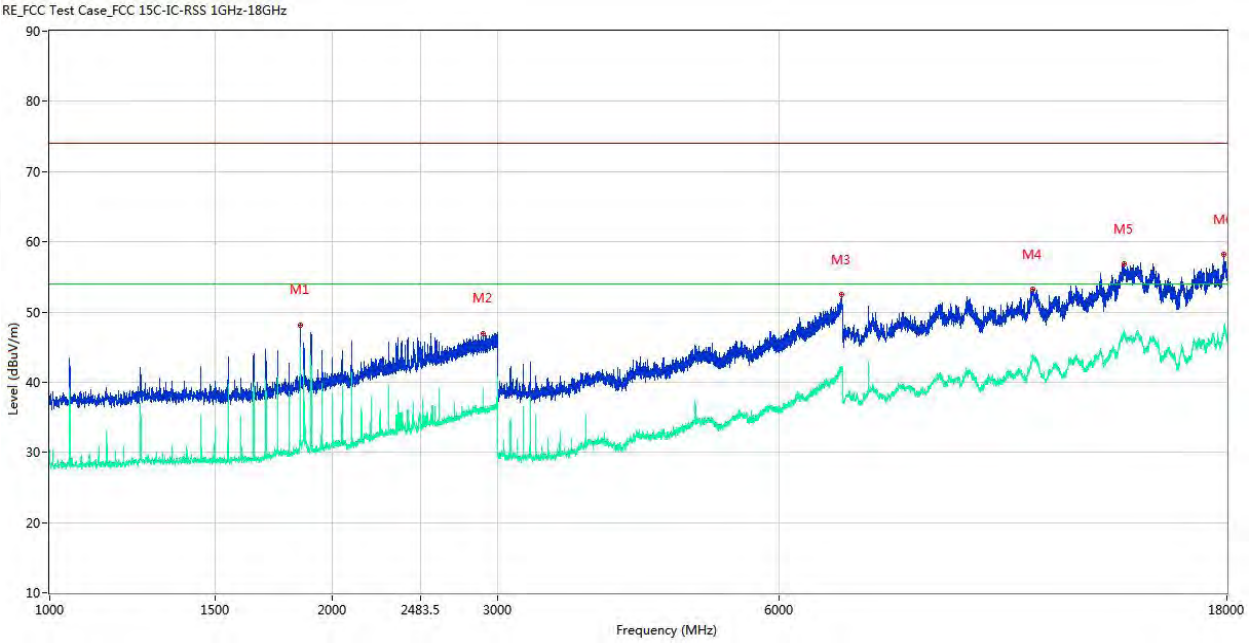
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Antenna	Verdict
1	1747.000	43.94	-0.55	74.0	-30.06	Peak	138.60	Vertical	Pass
1**	1747.000	31.47	-0.55	54.0	-22.53	AV	138.60	Vertical	Pass
2	2551.000	56.79	3.55	74.0	-17.21	Peak	240.60	Vertical	Pass
2**	2551.000	49.94	3.55	54.0	-4.06	AV	240.60	Vertical	Pass
3	6998.000	52.38	1.30	74.0	-21.62	Peak	7.00	Vertical	Pass
3**	6998.000	41.79	1.30	54.0	-12.21	AV	7.00	Vertical	Pass
4	11221.250	53.85	2.55	74.0	-20.15	Peak	67.60	Vertical	Pass
4**	11221.250	43.55	2.55	54.0	-10.45	AV	67.60	Vertical	Pass
5	14001.500	57.25	8.43	74.0	-16.75	Peak	160.20	Vertical	Pass
5**	14001.500	46.74	8.43	54.0	-7.26	AV	160.20	Vertical	Pass
6	17826.750	57.66	6.61	74.0	-16.34	Peak	233.10	Vertical	Pass
6**	17826.750	46.65	6.61	54.0	-7.35	AV	233.10	Vertical	Pass

18GHz-26GHz



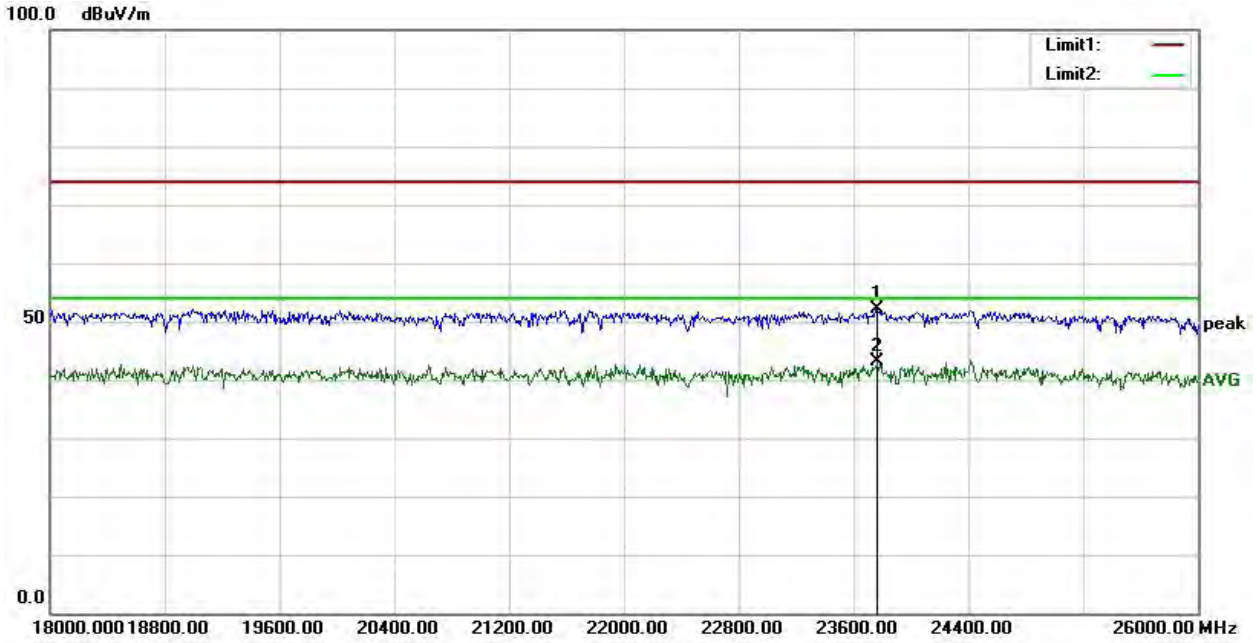
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	19104.000	50.75	1.69	52.44	74.00	-21.56	peak
2	19104.000	40.43	1.69	42.12	54.00	-11.88	AVG

Mid Channel
Horizontal
1GHz-18GHz



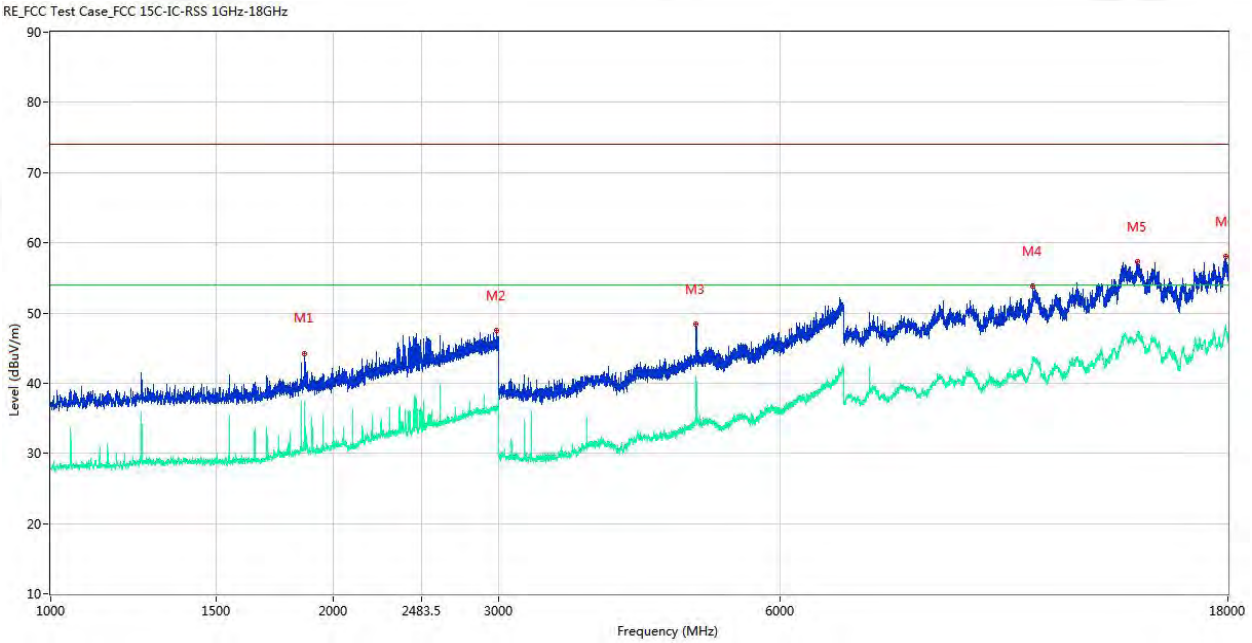
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Antenna	Verdict
1	1850.000	48.18	-0.06	74.0	-25.82	Peak	194.50	Horizontal	Pass
1**	1850.000	44.91	-0.06	54.0	-9.09	AV	194.50	Horizontal	Pass
2	2900.500	46.88	4.90	74.0	-27.12	Peak	261.40	Horizontal	Pass
2**	2900.500	38.63	4.90	54.0	-15.37	AV	261.40	Horizontal	Pass
3	6998.000	52.47	1.30	74.0	-21.53	Peak	225.70	Horizontal	Pass
3**	6998.000	42.29	1.30	54.0	-11.71	AV	225.70	Horizontal	Pass
4	11166.250	53.28	2.44	74.0	-20.72	Peak	280.10	Horizontal	Pass
4**	11166.250	43.26	2.44	54.0	-10.74	AV	280.10	Horizontal	Pass
5	13996.000	56.89	8.40	74.0	-17.11	Peak	243.70	Horizontal	Pass
5**	13996.000	46.87	8.40	54.0	-7.13	AV	243.70	Horizontal	Pass
6	17867.999	58.17	6.96	74.0	-15.83	Peak	353.80	Horizontal	Pass
6**	17867.999	47.88	6.96	54.0	-6.12	AV	353.80	Horizontal	Pass

18GHz-26GHz



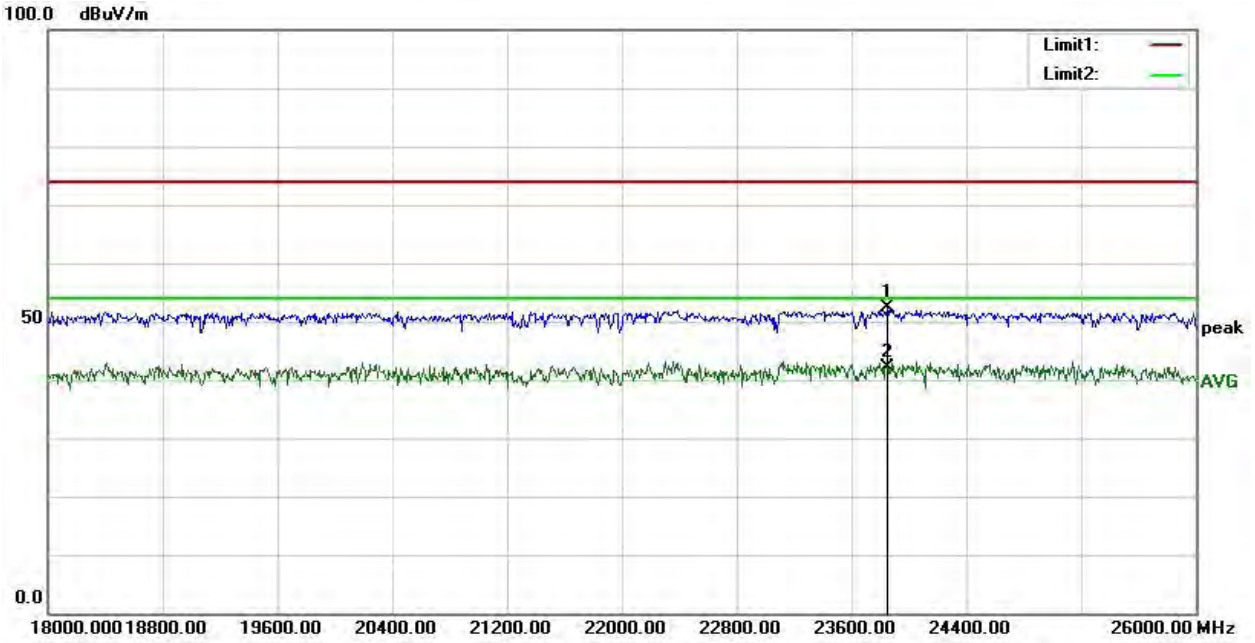
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	23768.000	47.80	4.39	52.19	74.00	-21.81	peak
2	23768.000	38.76	4.39	43.15	54.00	-10.85	AVG

Vertical
1GHz-18GHz



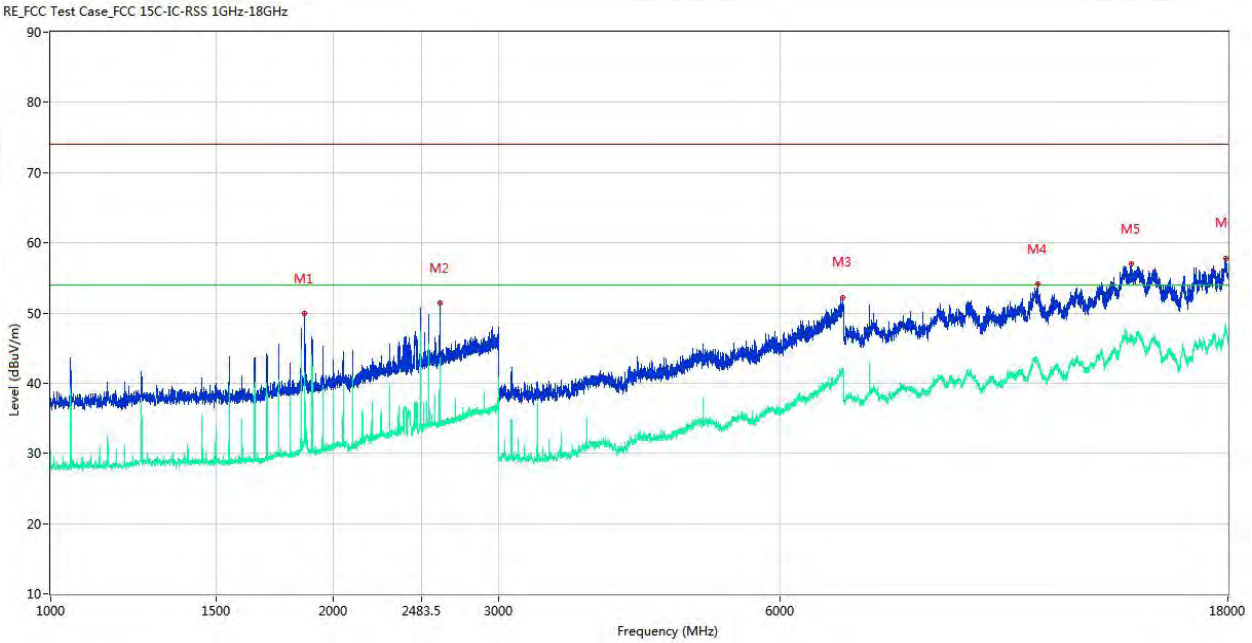
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Antenna	Verdict
1	1865.500	44.26	-0.09	74.0	-29.74	Peak	274.80	Vertical	Pass
1**	1865.500	36.35	-0.09	54.0	-17.65	AV	274.80	Vertical	Pass
2	2988.500	47.48	5.40	74.0	-26.52	Peak	165.10	Vertical	Pass
2**	2988.500	36.45	5.40	54.0	-17.55	AV	165.10	Vertical	Pass
3	4879.000	48.43	-6.30	74.0	-25.57	Peak	191.30	Vertical	Pass
3**	4879.000	40.98	-6.30	54.0	-13.02	AV	191.30	Vertical	Pass
4	11138.750	53.84	2.29	74.0	-20.16	Peak	47.50	Vertical	Pass
4**	11138.750	42.70	2.29	54.0	-11.30	AV	47.50	Vertical	Pass
5	14416.750	57.28	6.87	74.0	-16.72	Peak	187.40	Vertical	Pass
5**	14416.750	47.02	6.87	54.0	-6.98	AV	187.40	Vertical	Pass
6	17914.751	58.03	7.13	74.0	-15.97	Peak	266.60	Vertical	Pass
6**	17914.751	48.02	7.13	54.0	-5.98	AV	266.60	Vertical	Pass

18GHz-26GHz



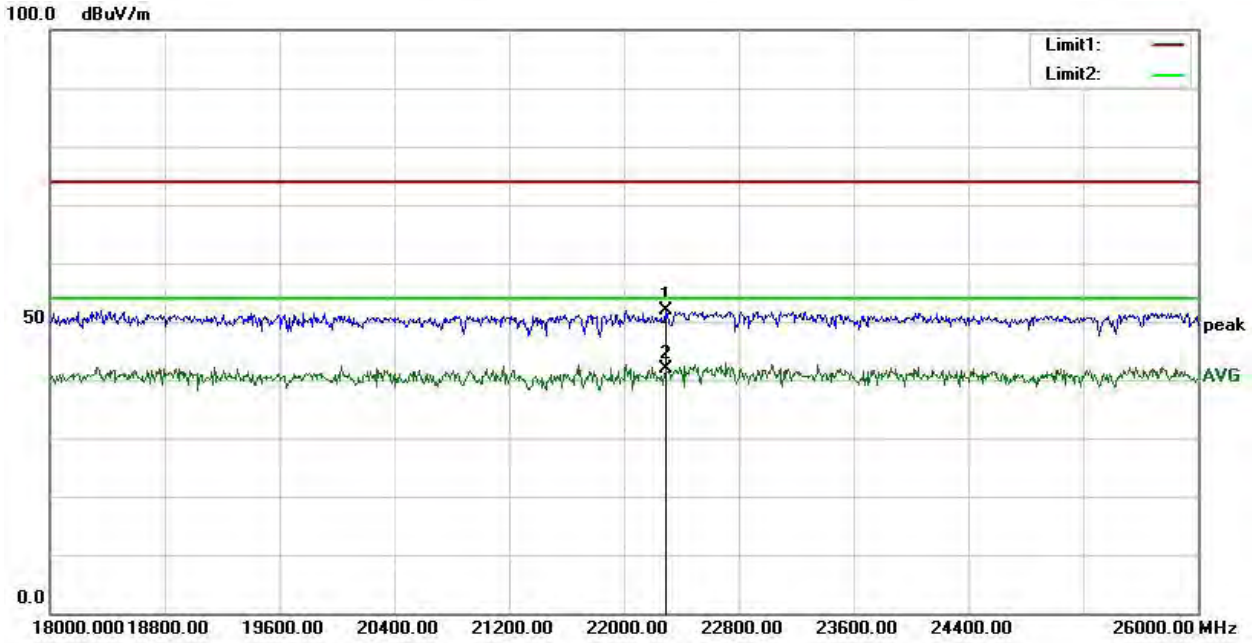
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	23848.000	47.84	4.48	52.32	74.00	-21.68	peak
2	23848.000	37.55	4.48	42.03	54.00	-11.97	AVG

High Channel
Horizontal
1GHz-18GHz



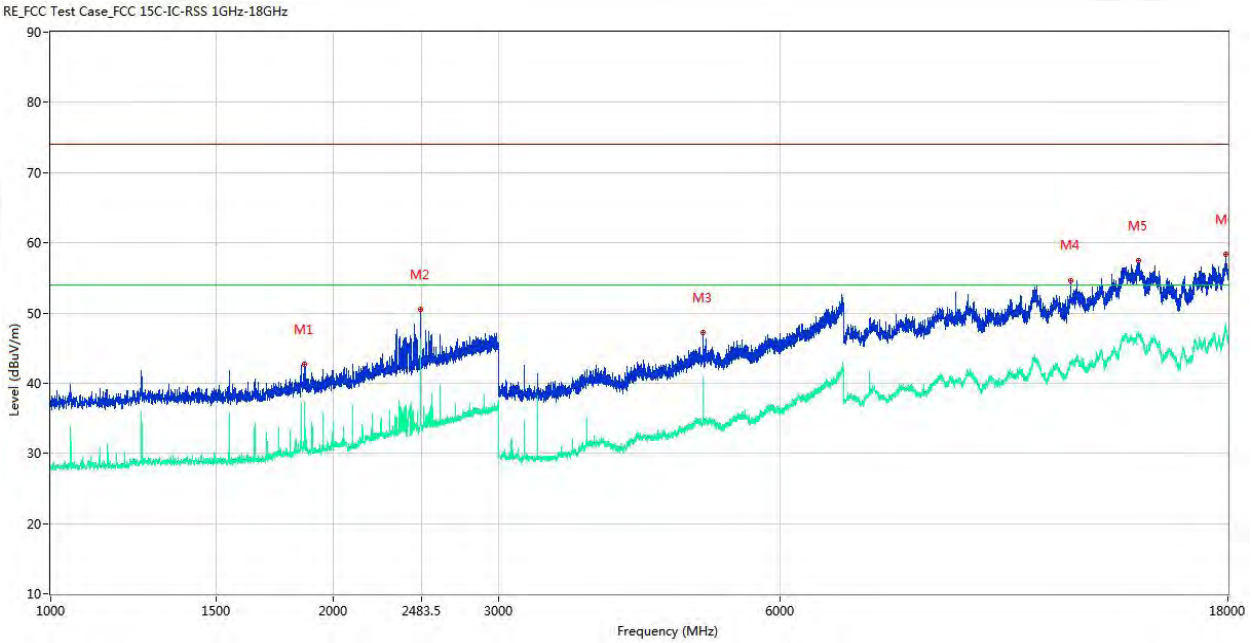
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Antenna	Verdict
1	1865.000	49.92	-0.09	74.0	-24.08	Peak	218.60	Horizontal	Pass
1**	1865.000	36.18	-0.09	54.0	-17.82	AV	218.60	Horizontal	Pass
2	2601.500	51.43	3.46	74.0	-22.57	Peak	2.40	Horizontal	Pass
2**	2601.500	42.11	3.46	54.0	-11.89	AV	2.40	Horizontal	Pass
3	6989.000	52.25	1.23	74.0	-21.75	Peak	34.60	Horizontal	Pass
3**	6989.000	41.77	1.23	54.0	-12.23	AV	34.60	Horizontal	Pass
4	11295.500	54.16	2.30	74.0	-19.84	Peak	80.20	Horizontal	Pass
4**	11295.500	42.73	2.30	54.0	-11.27	AV	80.20	Horizontal	Pass
5	14196.750	57.00	6.96	74.0	-17.00	Peak	357.20	Horizontal	Pass
5**	14196.750	46.17	6.96	54.0	-7.83	AV	357.20	Horizontal	Pass
6	17917.499	57.81	7.11	74.0	-16.19	Peak	285.20	Horizontal	Pass
6**	17917.499	48.12	7.11	54.0	-5.88	AV	285.20	Horizontal	Pass

18GHz-26GHz



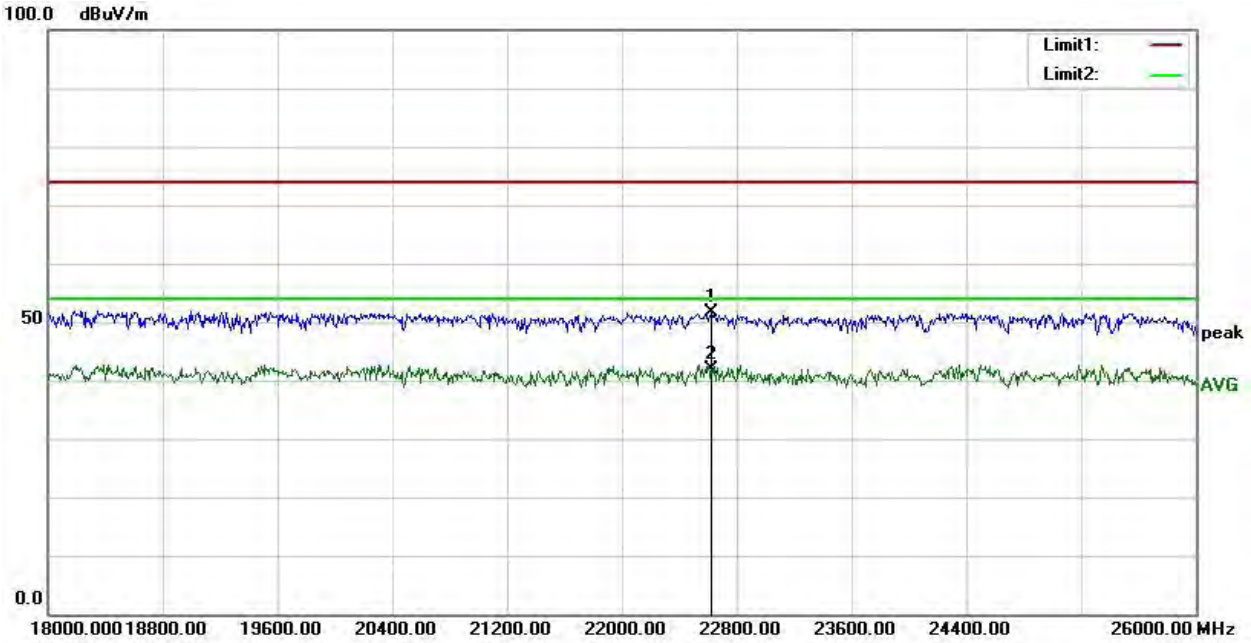
No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	22288.000	48.18	3.71	51.89	74.00	-22.11	peak
2	22288.000	38.17	3.71	41.88	54.00	-12.12	AVG

Vertical
1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB/m)	Limit (dBuV/m)	Margin (dB)	Detector	Table (Degree)	Antenna	Verdict
1	1866.500	42.72	-0.09	74.0	-31.28	Peak	23.80	Vertical	Pass
1**	1866.500	35.28	-0.09	54.0	-18.72	AV	23.80	Vertical	Pass
2	2480.000	50.56	3.18	74.0	-23.44	Peak	303.00	Vertical	Pass
2**	2480.000	46.24	3.18	54.0	-7.76	AV	303.00	Vertical	Pass
3	4959.000	47.19	-5.99	74.0	-26.81	Peak	232.40	Vertical	Pass
3**	4959.000	40.73	-5.99	54.0	-13.27	AV	232.40	Vertical	Pass
4	12241.500	54.66	2.86	74.0	-19.34	Peak	111.20	Vertical	Pass
4**	12241.500	43.05	2.86	54.0	-10.95	AV	111.20	Vertical	Pass
5	14441.500	57.39	6.70	74.0	-16.61	Peak	158.50	Vertical	Pass
5**	14441.500	46.71	6.70	54.0	-7.29	AV	158.50	Vertical	Pass
6	17890.001	58.30	7.15	74.0	-15.70	Peak	197.90	Vertical	Pass
6**	17890.001	48.57	7.15	54.0	-5.43	AV	197.90	Vertical	Pass

18GHz-26GHz



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	22624.000	47.84	3.85	51.69	74.00	-22.31	peak
2	22624.000	38.02	3.85	41.87	54.00	-12.13	AVG

Note:

1) Factor = Antenna Factor + Cable Loss – Pre-amplifier.
   Emission Level = Reading + Factor.
2) The frequency emission of peak points that did not show above the forms are at least 20dB below the limit, the frequency emission is mainly from the environment noise.

5. EMISSIONS AT RESTRICTED BAND

5.1 TEST REQUIREMENT

FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (MHz)	FREQUENCY (GHz)
0.090-0.110	16.42-16.423	399.9-410	4.5-5.15
0.495-0.505	16.69475-16.69525	608-614	5.35-5.46
2.1735-2.1905	16.80425-16.80475	960-1240	7.25-7.75
4.125-4.128	25.5-25.67	1300-1427	8.025-8.5
4.17725-4.17775	37.5-38.25	1435-1626.5	9.0-9.2
4.20725-4.20775	73-74.6	1645.5-1646.5	9.3-9.5
6.215-6.218	74.8-75.2	1660-1710	10.6-12.7
6.26775-6.26825	108-121.94	1718.8-1722.2	13.25-13.4
6.31175-6.31225	123-138	2200-2300	14.47-14.5
8.291-8.294	149.9-150.05	2310-2390	15.35-16.2
8.362-8.366	156.52475-156.52525	2483.5-2500	17.7-21.4
8.37625-8.38675	156.7-156.9	2690-2900	22.01-23.12
8.41425-8.41475	162.0125-167.17	3260-3267	23.6-24.0
12.29-12.293	167.72-173.2	3332-3339	31.2-31.8
12.51975-12.52025	240-285	3345.8-3358	36.43-36.5
12.57675-12.57725	322-335.4	3600-4400	Above 38.6
13.36-13.41			

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

Frequency (MHz)	Limit (dBuV/m) (at 3M)	
	Peak	Average
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

5.2 TEST PROCEDURE

According to ANSI C63.10 Field Strength Approach (linear terms):

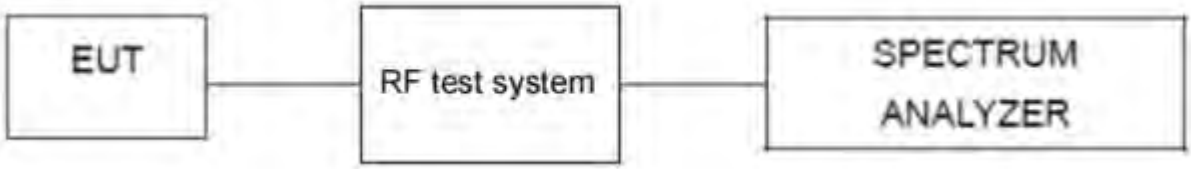
$$E = EIRP - 20 \log d + 104.8$$

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Remove the antenna from the EUT and then connect to a low loss RF cable from the antenna port to an EMI test receiver, then turn on the EUT and make it operate in transmitting mode. Then set it to Low Channel and High Channel within its operating range, and make sure the instrument is operated in its linear range.
3. Set both RBW and VBW of spectrum analyzer to 100 kHz with a convenient frequency span including 100kHz bandwidth from band edge, for Radiated emissions restricted band RBW=1MHz, VBW=3MHz for peak detector and RBW=1MHz, VBW=3 MHz for AVG detector, Max Hold=Average, Trace=100times for AV test.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.
6. Measure the conducted output power (in dBm) using the detector specified by the appropriate regulatory agency for guidance regarding measurement procedures for determining quasi-peak, peak, and average conducted output power, respectively).
7. Add the maximum transmit antenna gain (in dBi) to the measured output power level to determine the EIRP level (see 12.2.5 for guidance on determining the applicable antenna gain)
8. Add the appropriate maximum ground reflection factor to the EIRP level (6 dB for frequencies ≤ 30 MHz, 4.7 dB for frequencies between 30 MHz and 1000 MHz, inclusive and 0 dB for frequencies > 1000 MHz).
9. For devices with multiple antenna-ports, measure the power of each individual chain and sum the EIRP of all chains in linear terms (e.g., Watts, mW).
10. Compare the resultant electric field strength level to the applicable regulatory limit.
11. Perform radiated spurious emission test duress until all measured frequencies were complete.

5.3 DEVIATION FROM TEST STANDARD

No deviation

5.4 TEST SETUP



5.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

5.6 TEST RESULTS

Notes: The test data please refer to APPENDIX 1.

Remark:

1. Test results including cable loss;
2. Measured at difference Packet Type for each mode and recorded worst case for each mode.
3. “---“means that the fundamental frequency not for RSS GEN limits requirement.
4. The other emission levels were very low against the limit.
5. The average measurement was not performed when the peak measured data under the limit of average detection.
6. Detector AV is setting spectrum/receiver. RBW=1MHz/VBW=3MHz/Sweep time=Auto/Detector=RMS, Max Hold=Average, Trace=100times.
7. Since the out-of-band characteristics of the EUT transmit antenna will often be unknown, the use of a conservative antenna gain value is necessary. Thus, when determining the EIRP based on the measured conducted power, the upper bound on antenna gain for a device with a single RF output shall be selected as the maximum in-band gain of the antenna across all operating bands, or 2 dBi, whichever is greater. However, for devices that operate in multiple frequency bands while using the same transmit antenna, the highest gain of the antenna within the operating band nearest in frequency to the restricted band emission being measured may be used in lieu of the overall highest gain when the emission is at a frequency that is within 20 percent of the nearest band edge frequency, but in no case shall a value less than 2 dBi be used.

6. POWER SPECTRAL DENSITY TEST

Test Requirement:	FCC Part15 C Section 15.247 (e)
Test Method:	KDB558074 D01 15.247 Meas Guidance v05r02

6.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range	Result
15.247 (e)	Power Spectral Density	8dBm/3kHz	2400-2483.5(MHz)	PASS

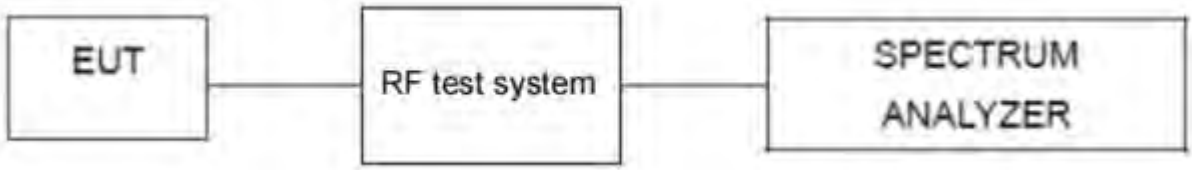
6.2 TEST PROCEDURE

1. Set analyzer center frequency to DTS channel center frequency.
2. Set the span to 1.5 times the DTS bandwidth.
3. Set the RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
4. Set the VBW ≥ 3 x RBW.
5. Detector = peak.
6. Sweep time = auto couple.
7. Trace mode = max hold.
8. Allow trace to fully stabilize.
9. Use the peak marker function to determine the maximum amplitude level within the RBW.
10. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of chapter 3, Unless otherwise a special operating condition is specified in the follows during the testing.

6.6 TEST RESULTS

Note: The test data please refer to APPENDIX 1.

7. 6DB Occupied Bandwidth

Test Requirement:	FCC Part15 C Section 15.247 (a)(2)
Test Method:	KDB558074 D01 15.247 Meas Guidance v05r02

7.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range	Result
15.247(a)(2)	Bandwidth	≥ 500kHz (6dB Occupied Bandwidth)	2400-2483.5 (MHz)	PASS

7.2 TEST PROCEDURE

The steps for 6dB Bandwidth are as follows:

a) Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.

b) Set the VBW ≥ [3 × RBW].

c) Detector = peak.

d) Trace mode = max-hold.

e) Sweep = No faster than coupled (auto) time.

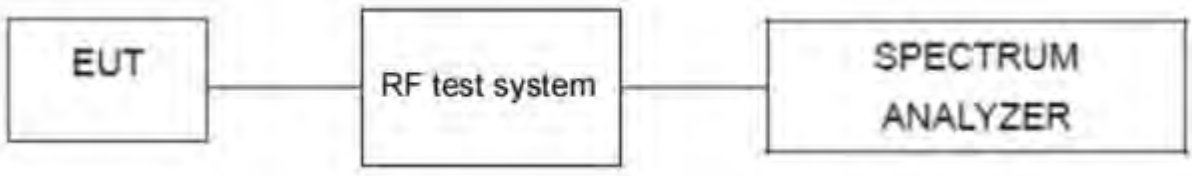
f) Allow the trace to stabilize.

g) Measure the maximum width with SA automatic 6dB bandwidth down setting, Record the final DTS bandwidth (6dB down bandwidth) result.

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP



7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of chapter 3, Unless otherwise a special operating condition is specified in the follows during the testing.

7.6 TEST RESULTS

Note: The test data please refer to APPENDIX 1.

8. PEAK OUTPUT POWER TEST

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)
Test Method:	KDB558074 D01 15.247 Meas Guidance v05r02

8.1 APPLIED PROCEDURES / LIMIT

FCC Part15 (15.247) , Subpart C				
Section	Test Item	Limit	Frequency Range	Result
15.247(b)(3)	Peak Output Power	1 watt or 30dBm	2400-2483.5 (MHz)	PASS

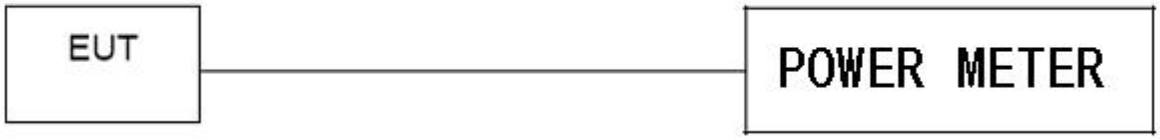
8.2 TEST PROCEDURE

a. The EUT was directly connected to the Power meter

8.3 DEVIATION FROM STANDARD

No deviation.

8.4 TEST SETUP



8.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of chapter 3, Unless otherwise a special operating condition is specified in the follows during the testing.

8.6 TEST RESULTS

Note: The test data please refer to APPENDIX 1.

9. CONDUCTED BAND EDGE AND SPURIOUS EMISSION

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	KDB558074 D01 15.247 Meas Guidance v05r02

9.1 APPLICABLE STANDARD

Typical regulatory requirements specify that in any 100 khz bandwidth outside of the authorized frequency band, the power shall be attenuated according to the following conditions[89]:
The maximum peak conducted output power procedure was used to determine compliance as described in 11.9.1, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 20 dBc).

9.2 TEST PROCEDURE

A. Reference level measurement, establish a reference level by using the following procedure:

a) Set instrument center frequency to DTS channel center frequency.
b) Set the span to ≥ 1.5 times the DTS bandwidth.
c) Set the RBW = 100 kHz.
d) Set the VBW ≥ [3 × RBW].
e) Detector = peak.
f) Sweep time = auto couple.
g) Trace mode = max hold.
h) Allow trace to fully stabilize.
i) Use the peak marker function to determine the maximum PSD level.

Note that the channel found to contain the maximum PSD level can be used to establish the reference level.

B. Emission level measurement, establish an emission level by using the following procedure:

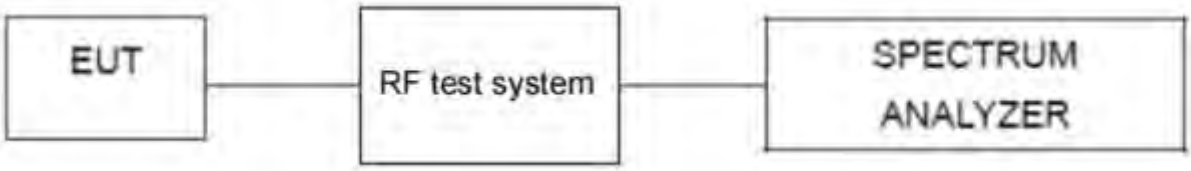
a) Set the center frequency and span to encompass frequency range to be measured.
b) Set the RBW = 100 kHz.
c) Set the VBW ≥ [3 × RBW].
d) Detector = peak.
e) Sweep time = auto couple.
f) Trace mode = max hold.
g) Allow trace to fully stabilize.
h) Use the peak marker function to determine the maximum amplitude level.

Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.

9.3 DEVIATION FROM STANDARD

No deviation.

9.4 TEST SETUP



9.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of chapter 3, Unless otherwise a special operating condition is specified in the follows during the testing.

9.6 TEST RESULTS

Note:

1. The test data please refer to APPENDIX 1.
2. Input compensation coefficient (dB) = Cable Loss (dB).
3. For Conducted spurious emissions plots from 30MHz to 26.5GHz, the worst cable loss and attenuator factors have been set in the 'Input Correction' of the Spectrum Analyzer during the test.

10. DUTY CYCLE

Test Method:	ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Erratato C63.10a-2024

10.1 APPLIED PROCEDURES / LIMIT

Measurements of duty cycle and transmission duration shall be performed using one of the following techniques:

a) A diode detector and an oscilloscope that together have a sufficiently short response time to permit accurate measurements of the ON and OFF times of the transmitted signal.

b) The zero-span mode on a spectrum analyzer or EMI receiver if the response time and spacing between bins on the sweep are sufficient to permit accurate measurements of the ON and OFF times of the transmitted signal:

1) Set the center frequency of the instrument to the center frequency of the transmission.

2) Set RBW ≥ OBW if possible; otherwise, set RBW to the largest available value.

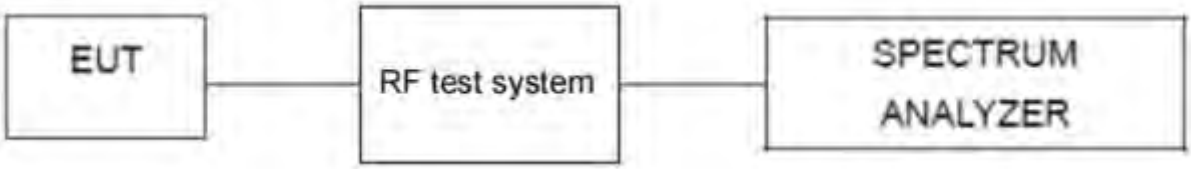
3) Set VBW ≥ RBW. Set detector = peak or average.

4) The zero-span measurement method shall not be used unless both RBW and VBW are > 50/*T* and the number of sweep points across duration *T* exceeds 100. (For example, if VBW and/or RBW are limited to 3 MHz, then the zero-span method of measuring the duty cycle shall not be used if $T \leq 16.7$ µs.)

10.2 DEVIATION FROM STANDARD

No deviation.

10.3 TEST SETUP



10.4 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of chapter 3, Unless otherwise a special operating condition is specified in the follows during the testing.

10.5 TEST RESULTS

Note: The test data please refer to APPENDIX 1.

11. ANTENNA REQUIREMENT

Standard requirement:	FCC Part15 C Section 15.203 /247(c)
15.203 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(c) (1)(i) requirement: (i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.	
EUT Antenna:	
The antenna is FPC antenna, the best case gain of the antennas is 2.6dBi, reference to the appendix II for details.	

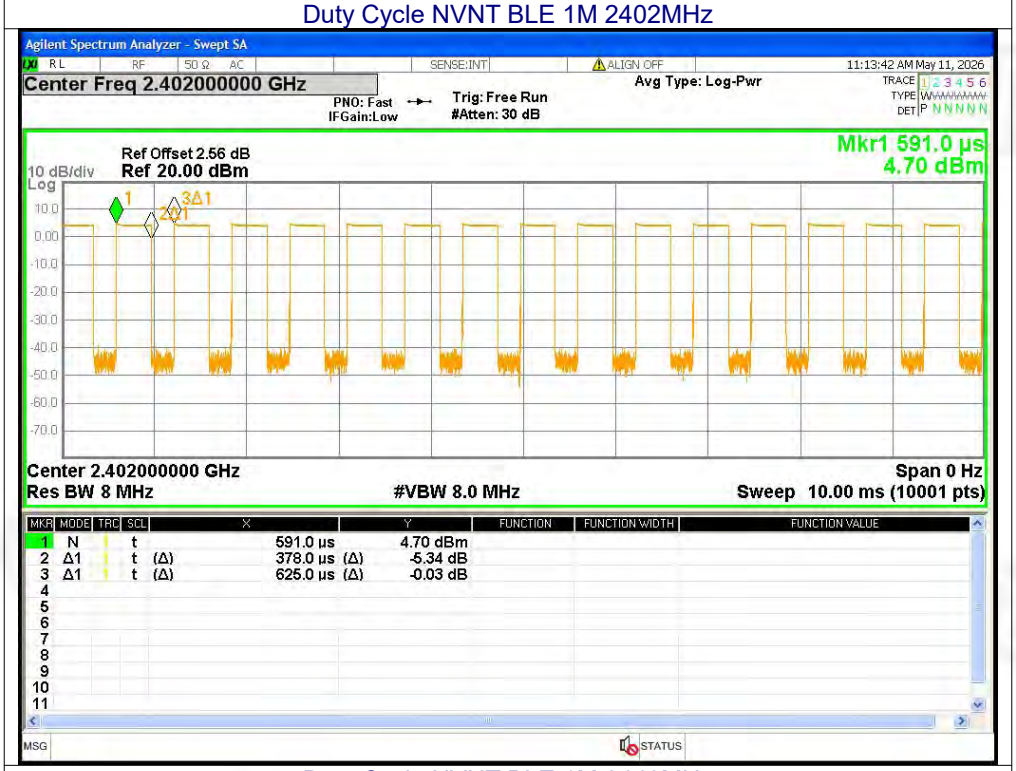
12. APPENDIX 1-TEST DATA

Duty Cycle

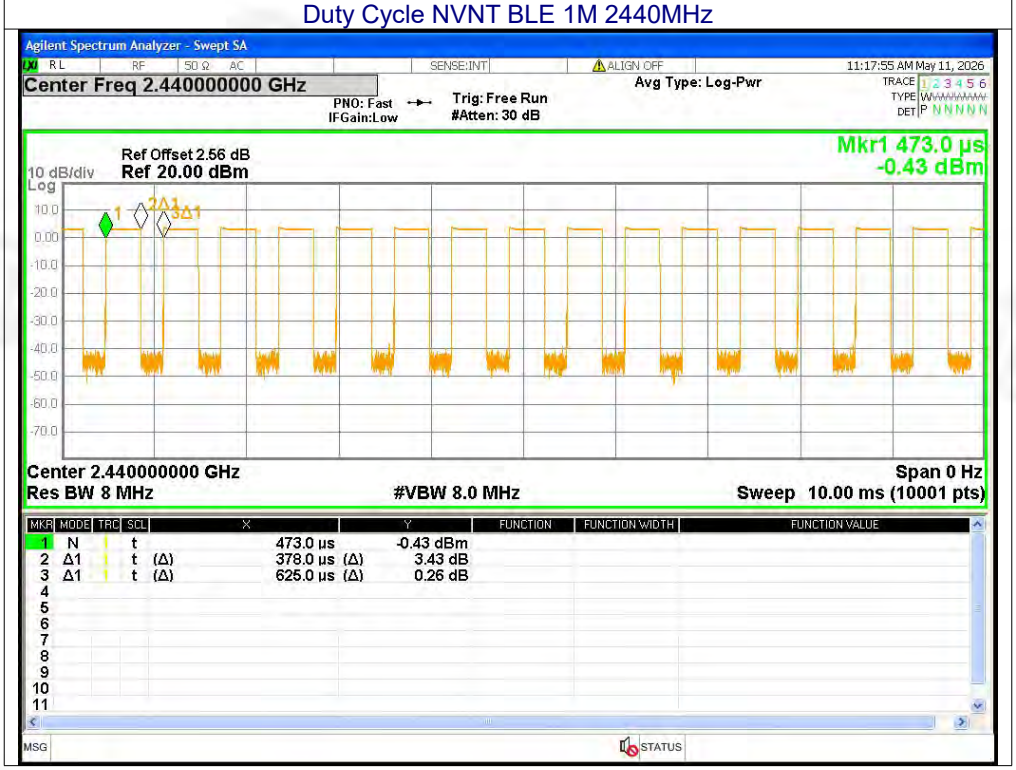
Condition	Mode	Frequency (MHz)	On Time (ms)	Period (ms)	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	0.378	0.625	60.48	2.18	2.65
NVNT	BLE 1M	2440	0.378	0.625	60.48	2.18	2.65
NVNT	BLE 1M	2480	0.378	0.625	60.48	2.18	2.65
NVNT	BLE 2M	2402	0.195	0.625	31.2	5.06	5.13
NVNT	BLE 2M	2440	0.195	0.625	31.2	5.06	5.13
NVNT	BLE 2M	2480	0.195	0.625	31.2	5.06	5.13

Test Graphs

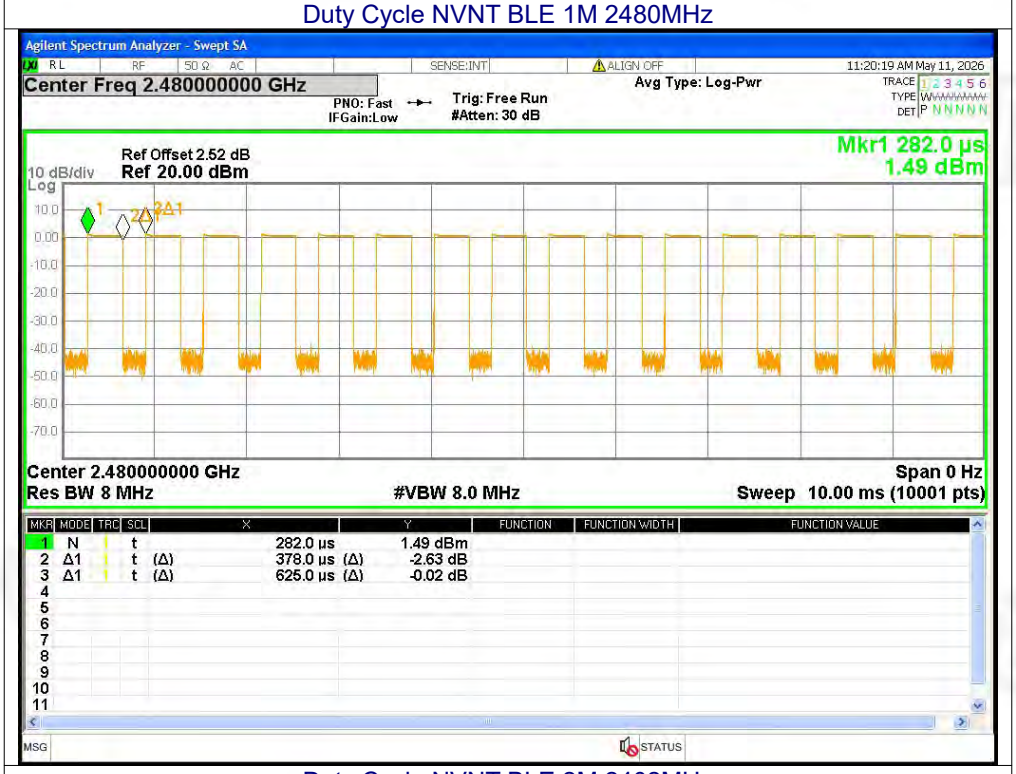
Duty Cycle NVNT BLE 1M 2402MHz



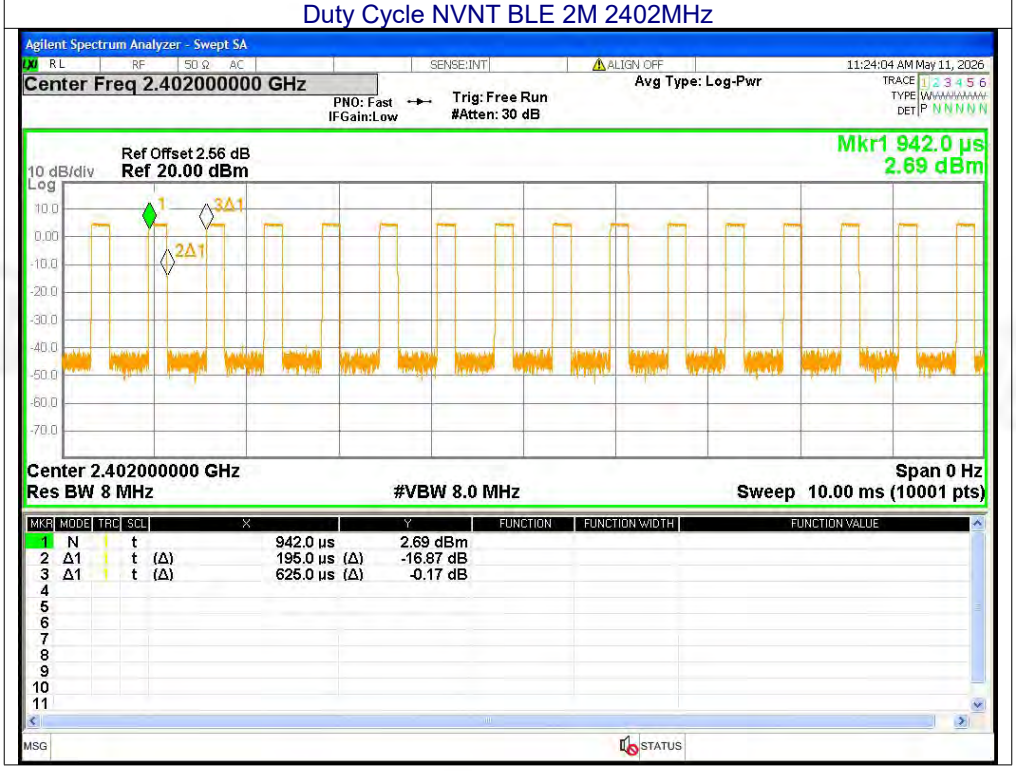
Duty Cycle NVNT BLE 1M 2440MHz



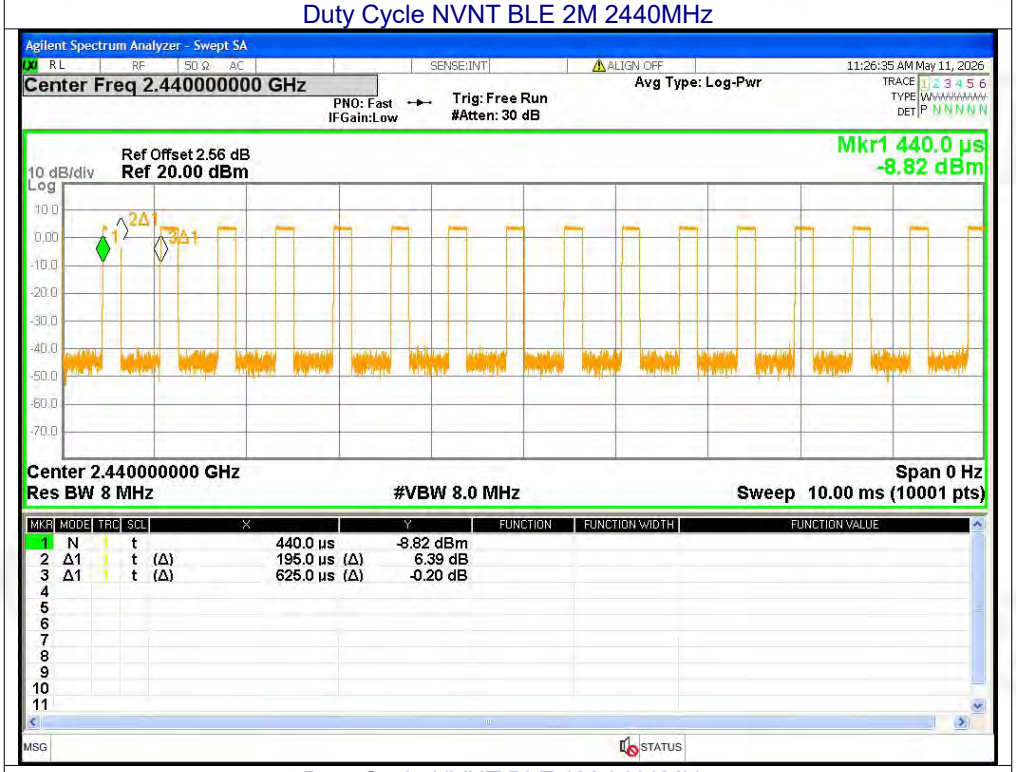
Duty Cycle NVNT BLE 1M 2480MHz



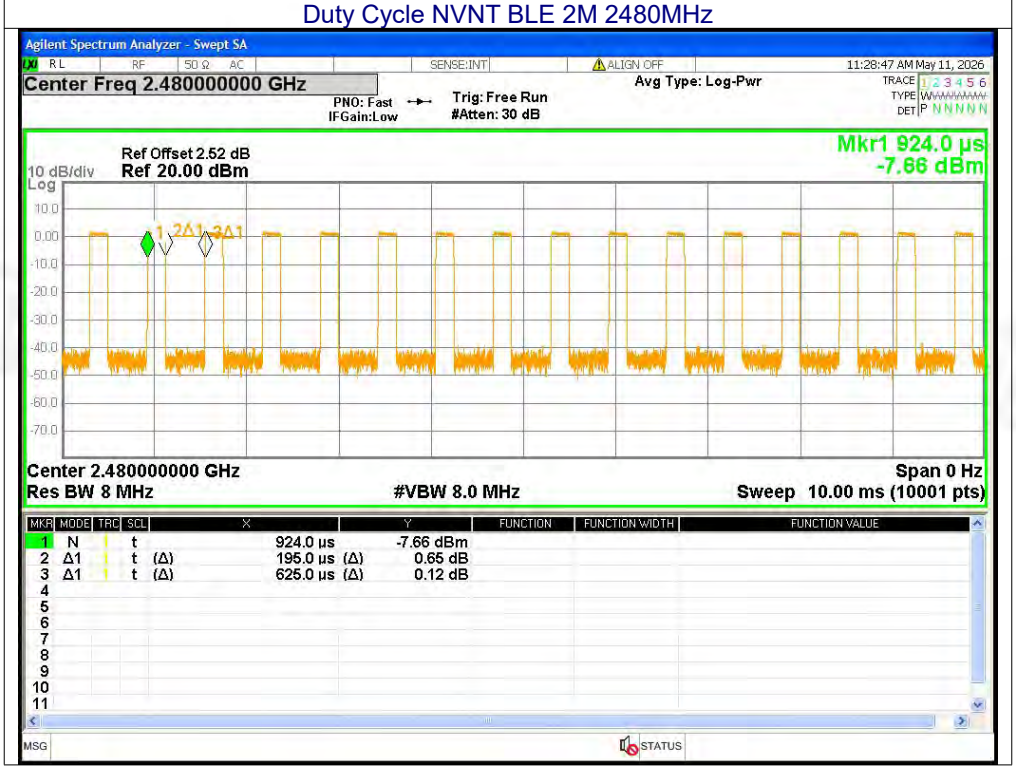
Duty Cycle NVNT BLE 2M 2402MHz



Duty Cycle NVNT BLE 2M 2440MHz



Duty Cycle NVNT BLE 2M 2480MHz



Maximum Peak Conducted Output Power

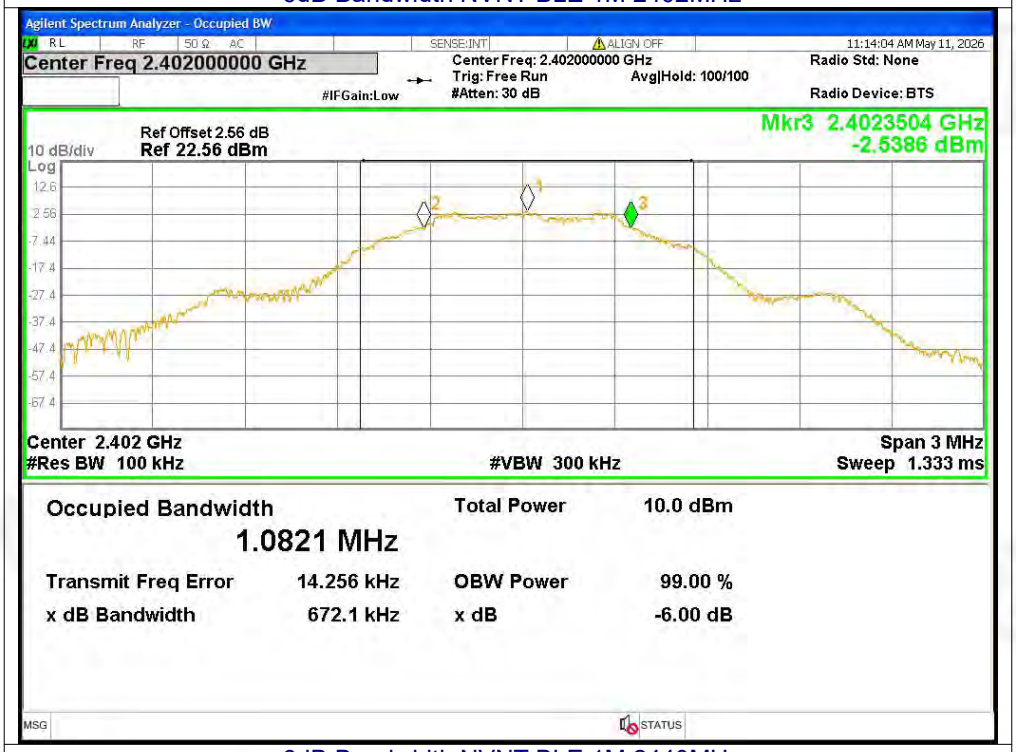
Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	4.77	<=30	Pass
NVNT	BLE 1M	2440	3.96	<=30	Pass
NVNT	BLE 1M	2480	1.52	<=30	Pass
NVNT	BLE 2M	2402	4.89	<=30	Pass
NVNT	BLE 2M	2440	4.11	<=30	Pass
NVNT	BLE 2M	2480	1.73	<=30	Pass

-6dB Bandwidth

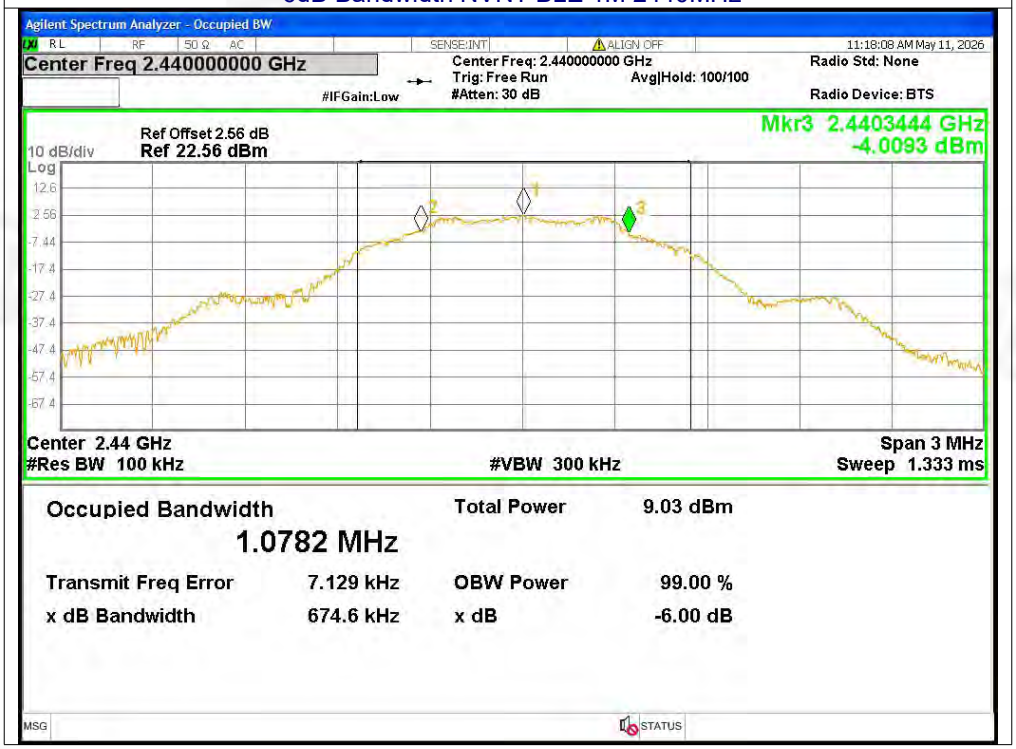
Condition	Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	0.6721	>=0.5	Pass
NVNT	BLE 1M	2440	0.6746	>=0.5	Pass
NVNT	BLE 1M	2480	0.6748	>=0.5	Pass
NVNT	BLE 2M	2402	1.366	>=0.5	Pass
NVNT	BLE 2M	2440	1.386	>=0.5	Pass
NVNT	BLE 2M	2480	1.372	>=0.5	Pass

Test Graphs

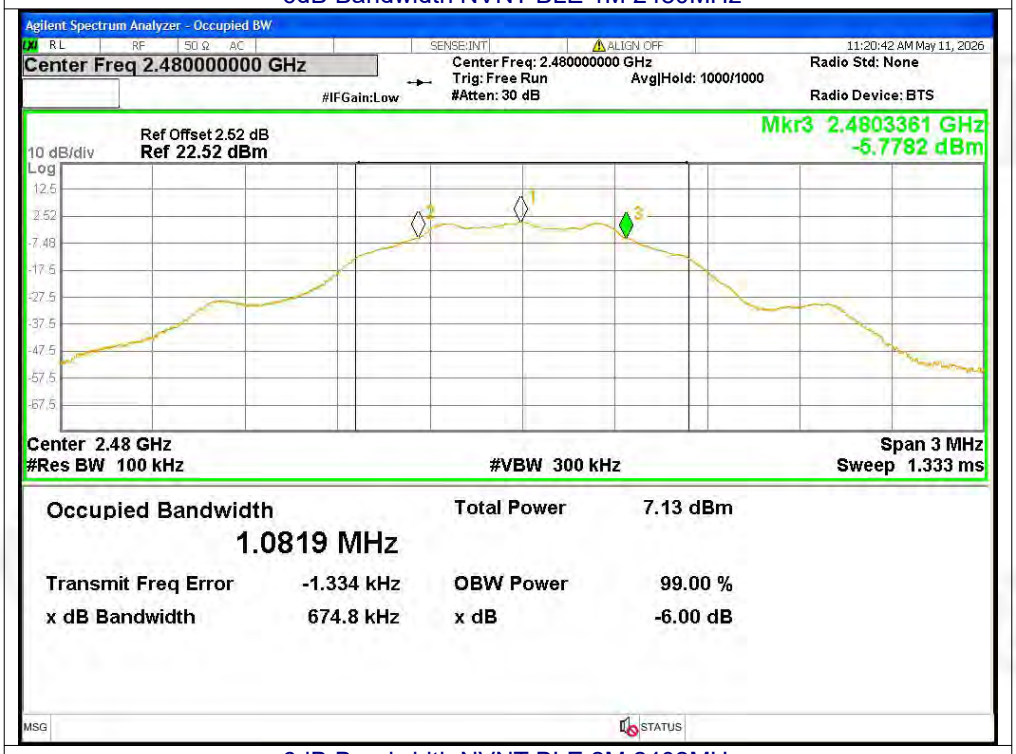
-6dB Bandwidth NVNT BLE 1M 2402MHz



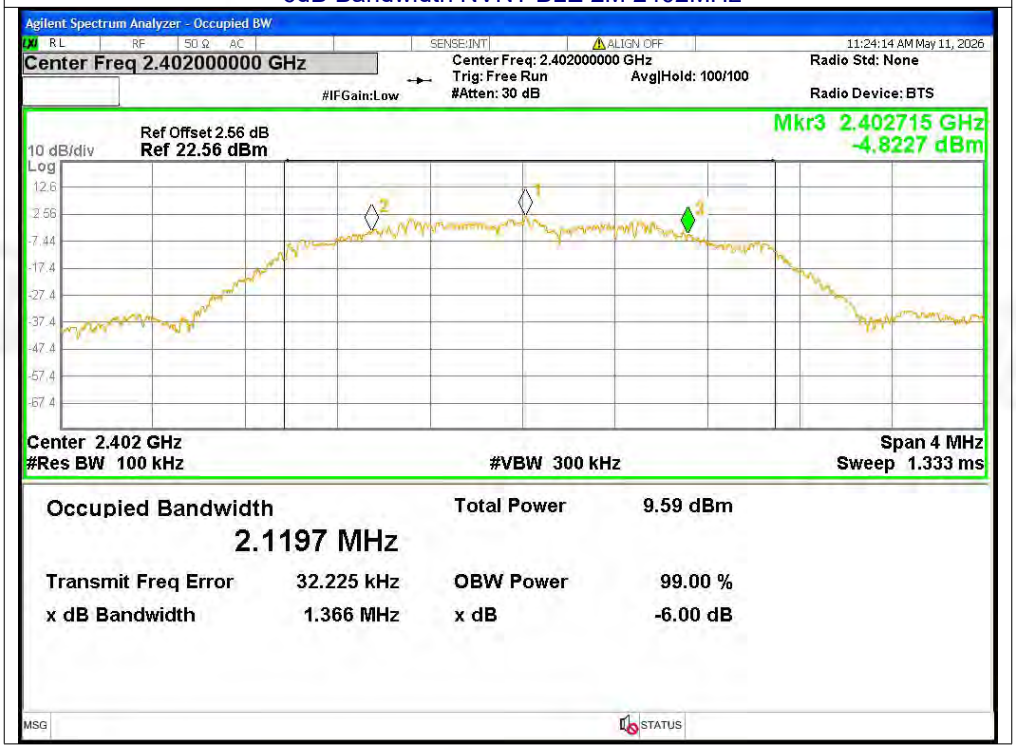
-6dB Bandwidth NVNT BLE 1M 2440MHz



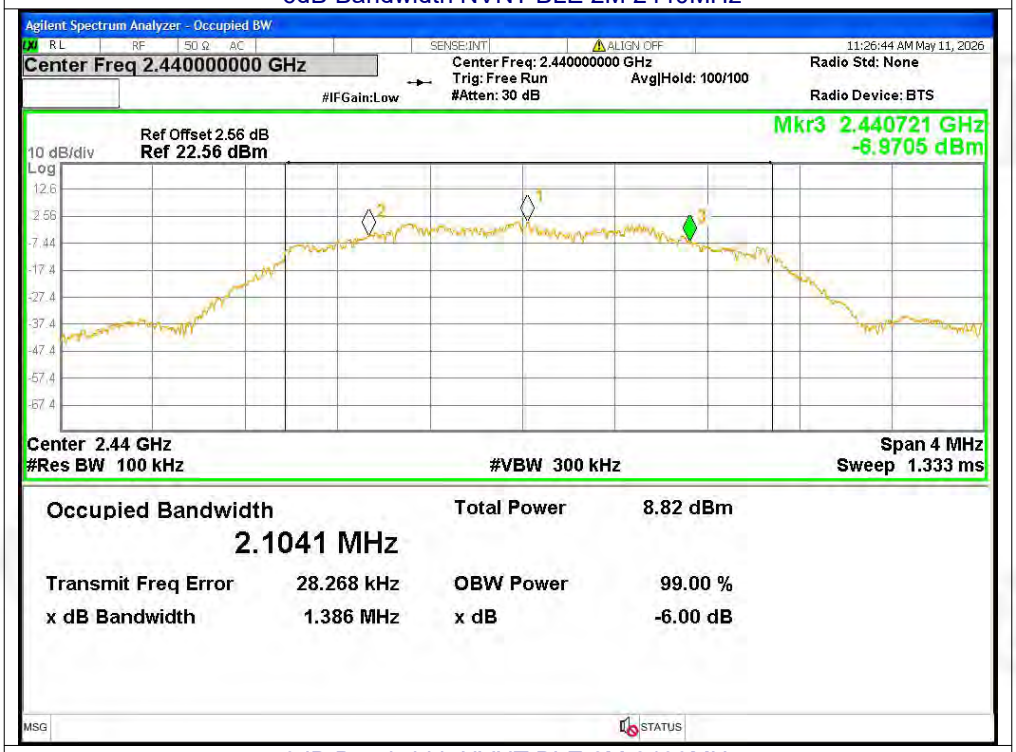
-6dB Bandwidth NVNT BLE 1M 2480MHz



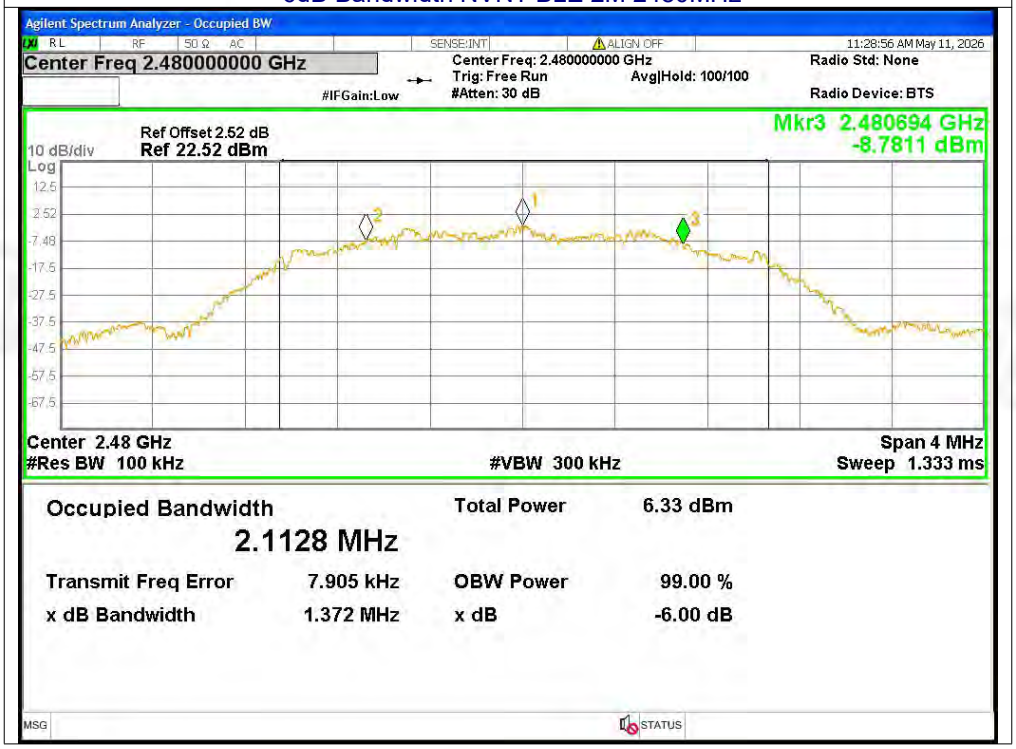
-6dB Bandwidth NVNT BLE 2M 2402MHz



-6dB Bandwidth NVNT BLE 2M 2440MHz



-6dB Bandwidth NVNT BLE 2M 2480MHz

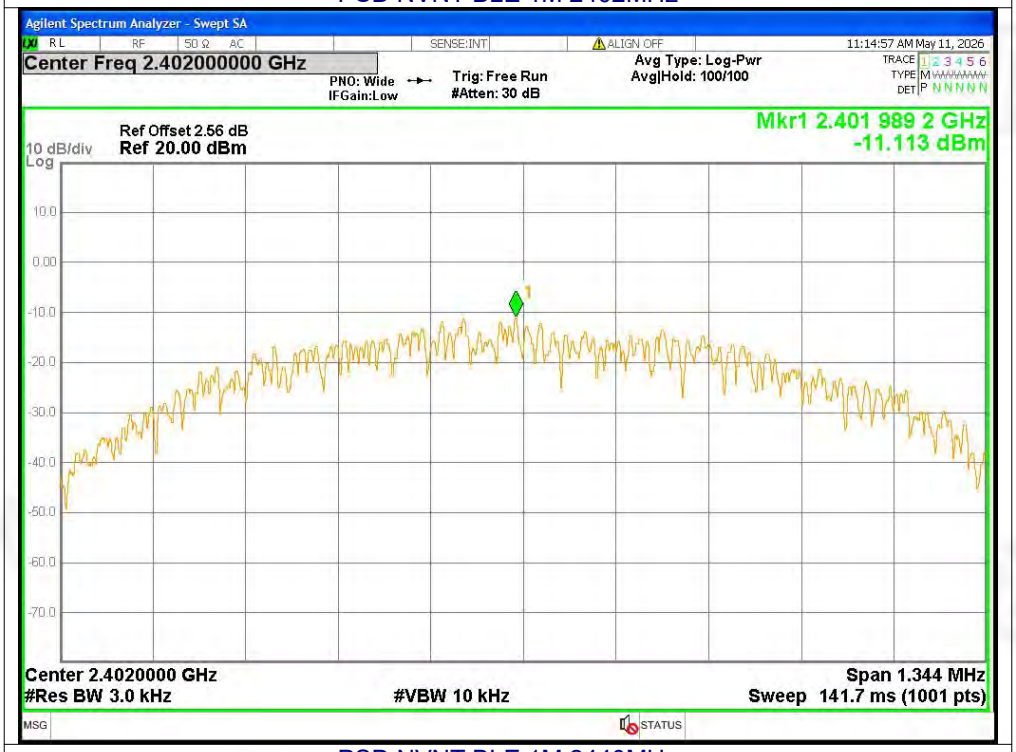


Maximum Power Spectral Density Level

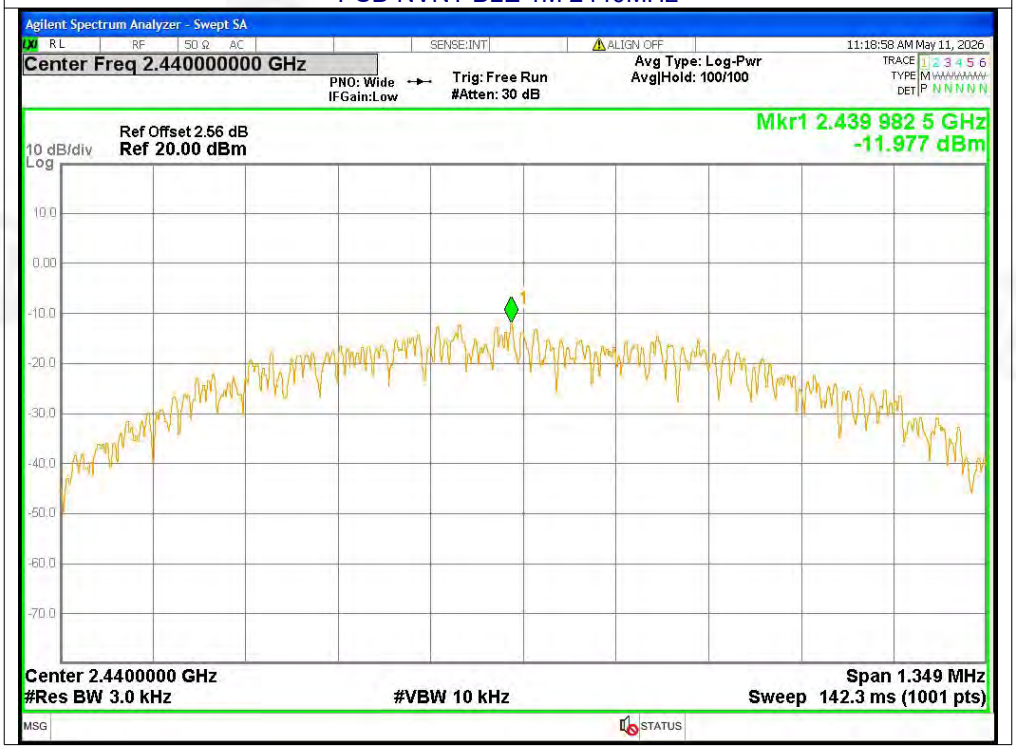
Condition	Mode	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	-11.11	<=8	Pass
NVNT	BLE 1M	2440	-11.98	<=8	Pass
NVNT	BLE 1M	2480	-14.36	<=8	Pass
NVNT	BLE 2M	2402	-14.15	<=8	Pass
NVNT	BLE 2M	2440	-15.09	<=8	Pass
NVNT	BLE 2M	2480	-17.6	<=8	Pass

Test Graphs

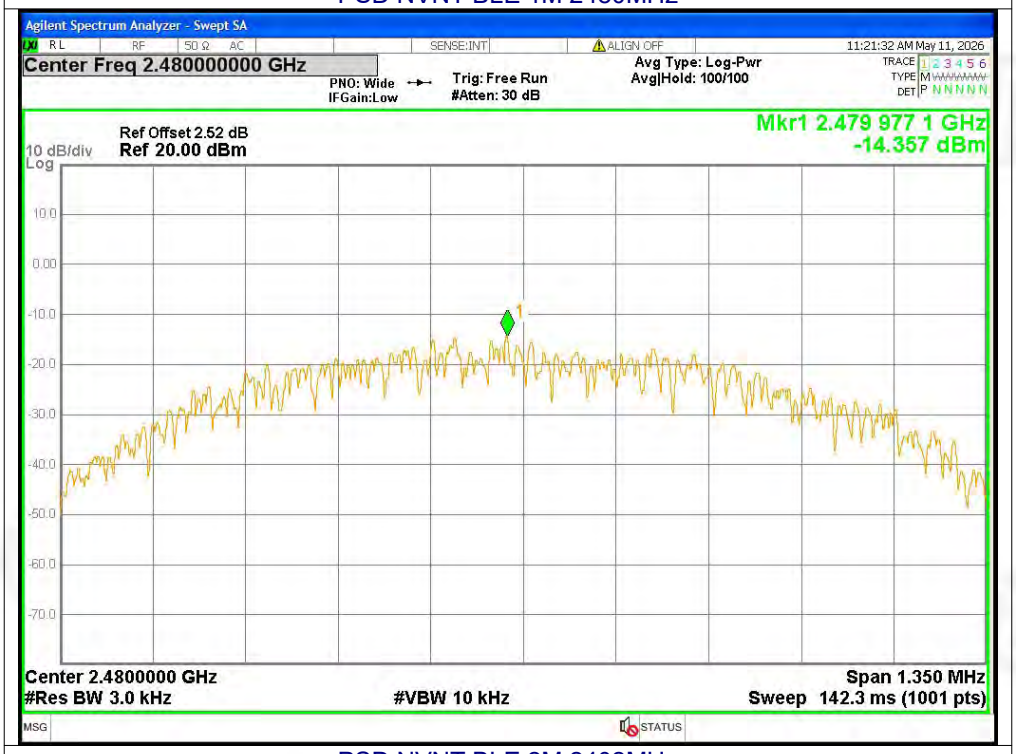
PSD NVNT BLE 1M 2402MHz



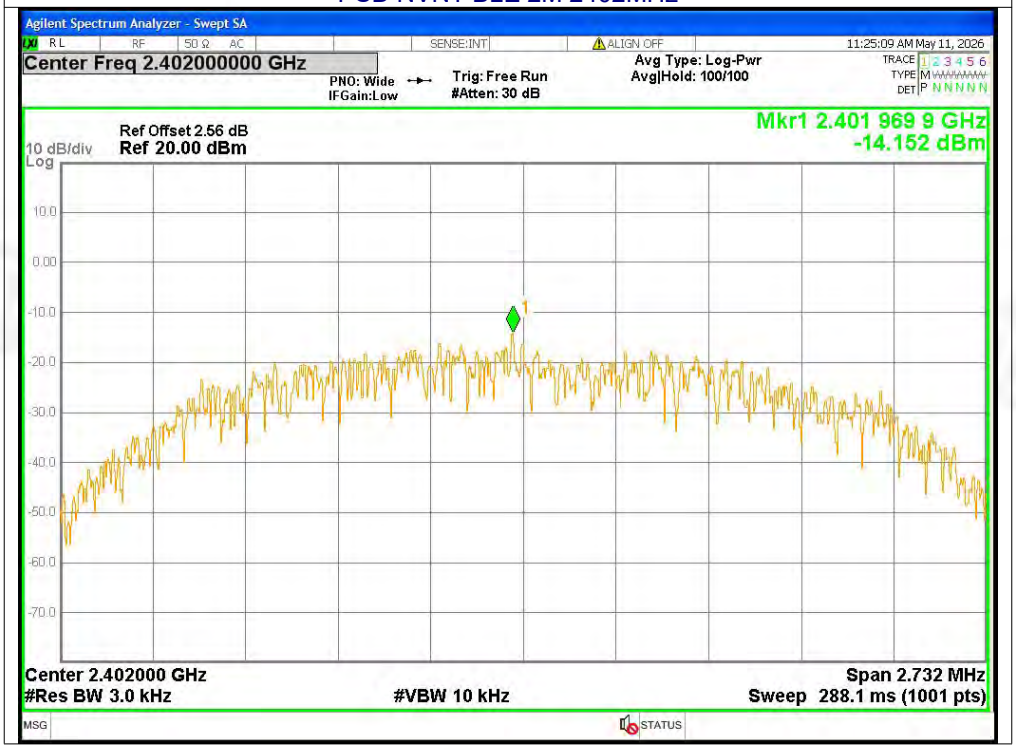
PSD NVNT BLE 1M 2440MHz



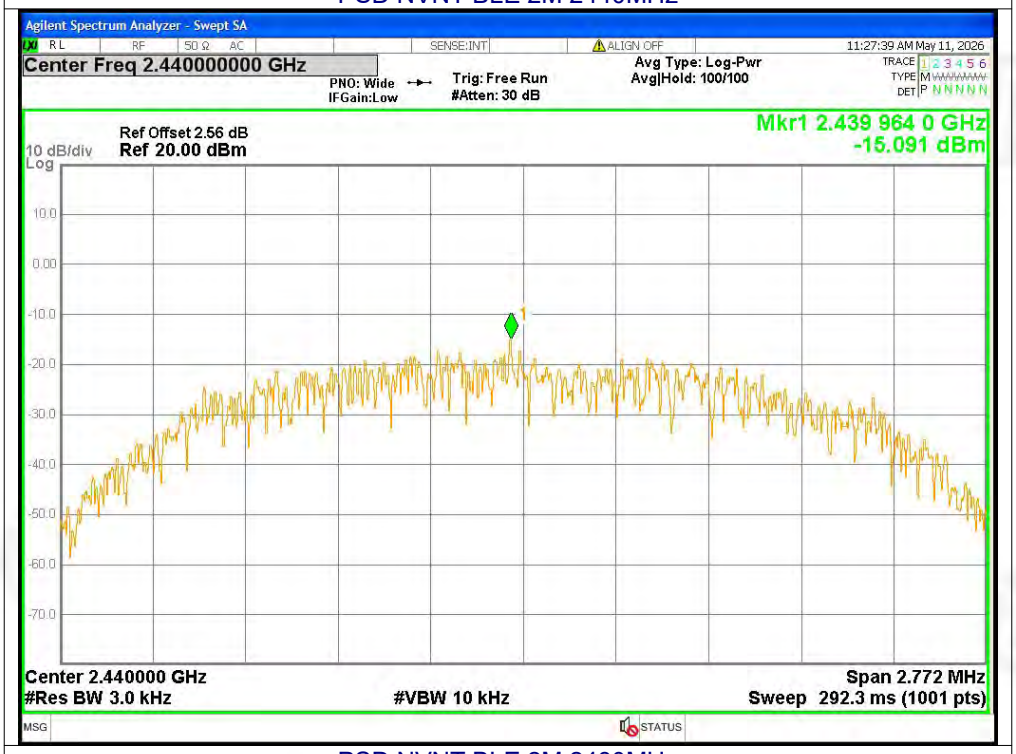
PSD NVNT BLE 1M 2480MHz



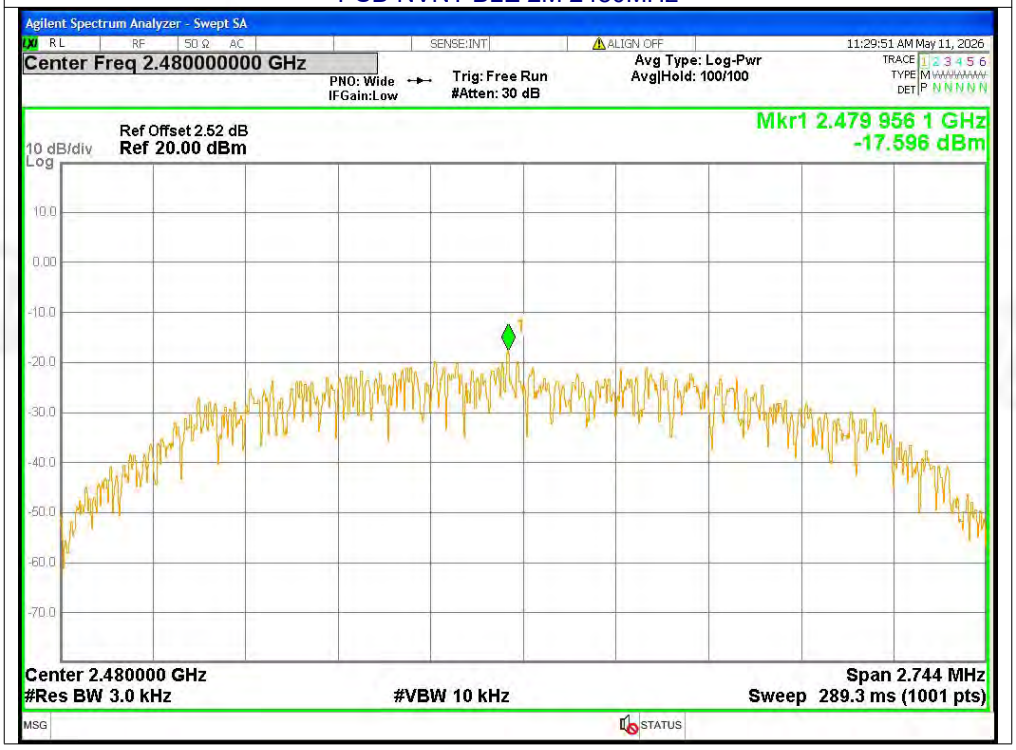
PSD NVNT BLE 2M 2402MHz



PSD NVNT BLE 2M 2440MHz



PSD NVNT BLE 2M 2480MHz

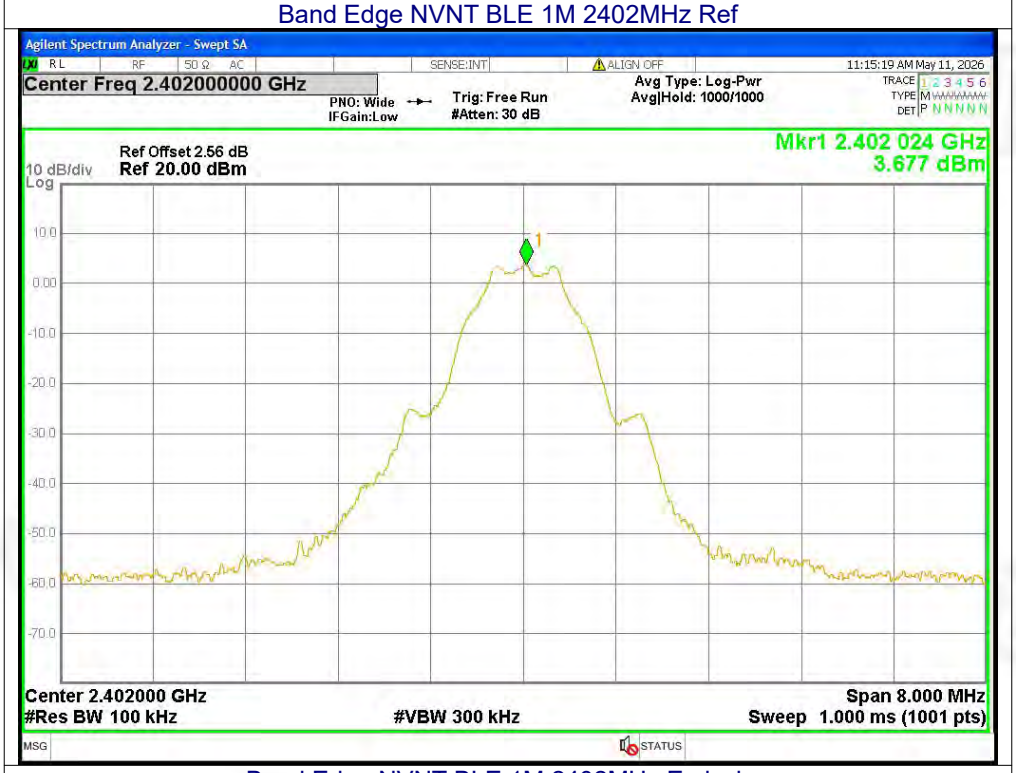


Band Edge

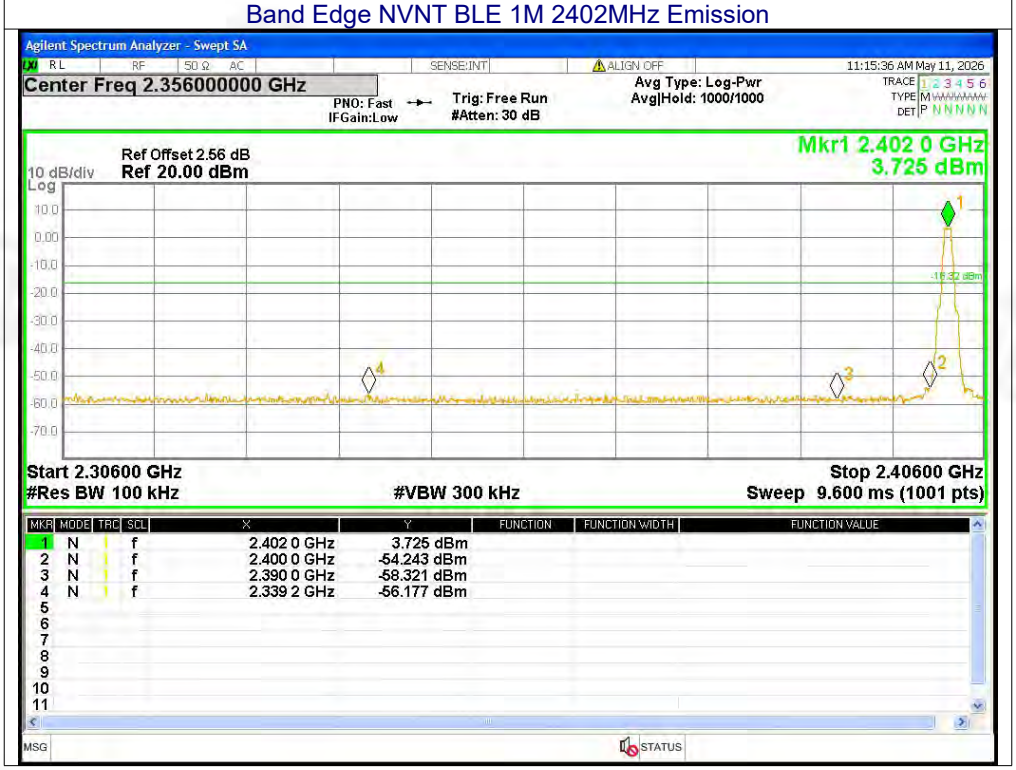
Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	-59.85	<=-20	Pass
NVNT	BLE 1M	2480	-55.79	<=-20	Pass
NVNT	BLE 2M	2402	-59.87	<=-20	Pass
NVNT	BLE 2M	2480	-54.87	<=-20	Pass

Test Graphs

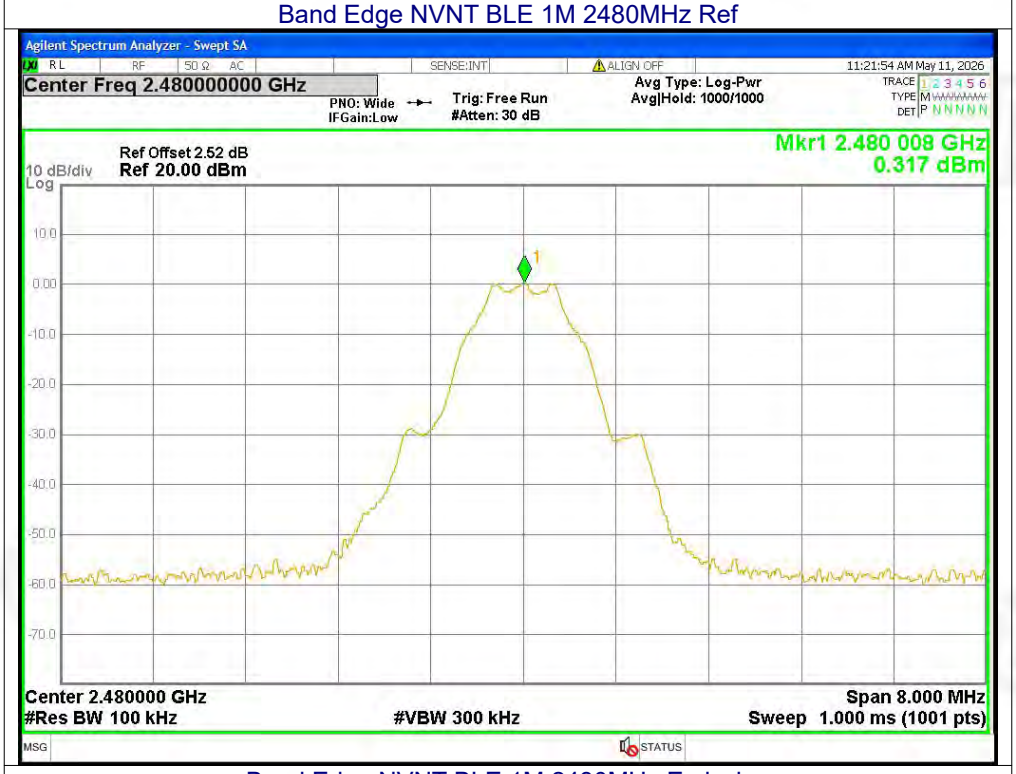
Band Edge NVNT BLE 1M 2402MHz Ref



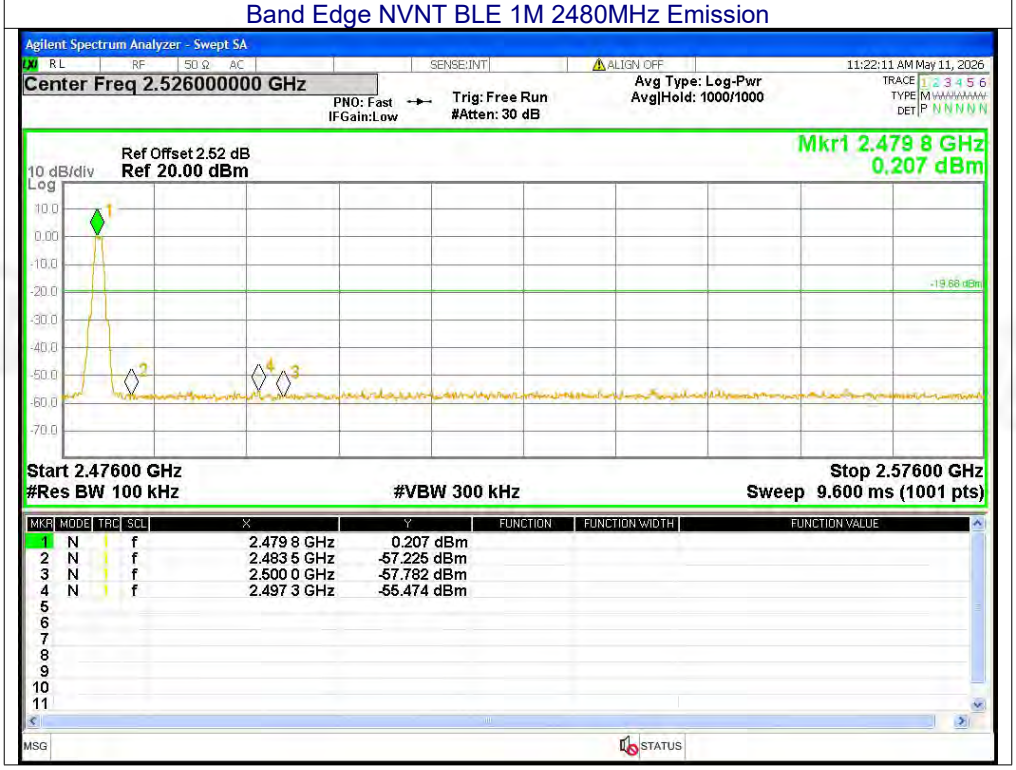
Band Edge NVNT BLE 1M 2402MHz Emission



Band Edge NVNT BLE 1M 2480MHz Ref

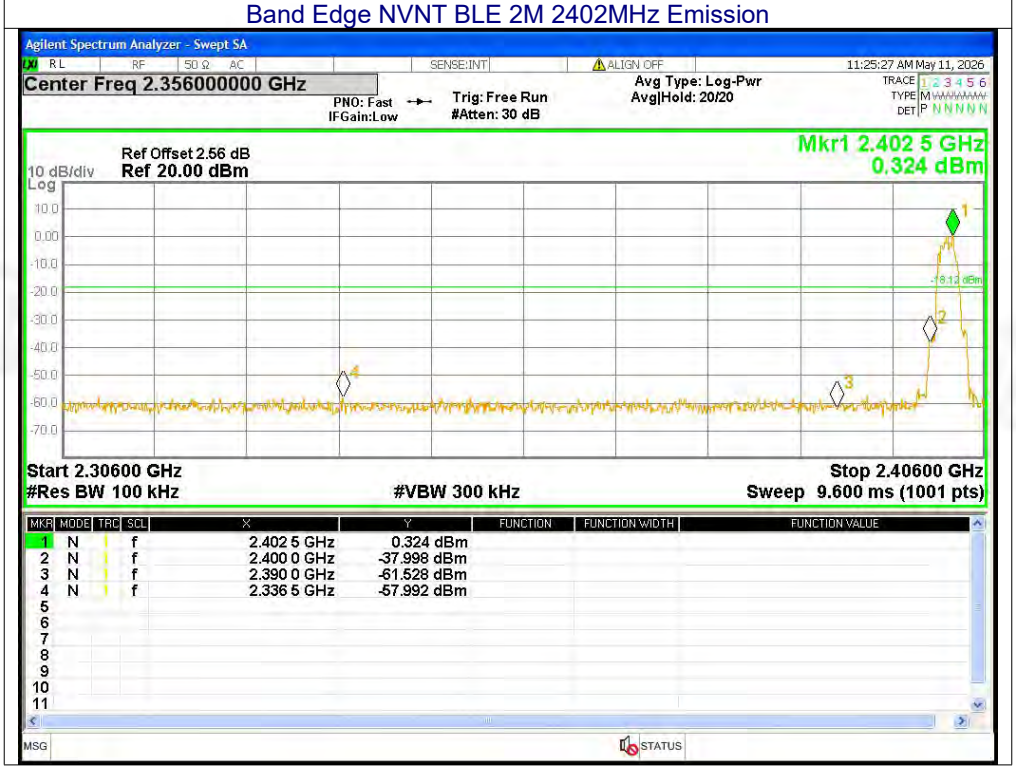


Band Edge NVNT BLE 1M 2480MHz Emission



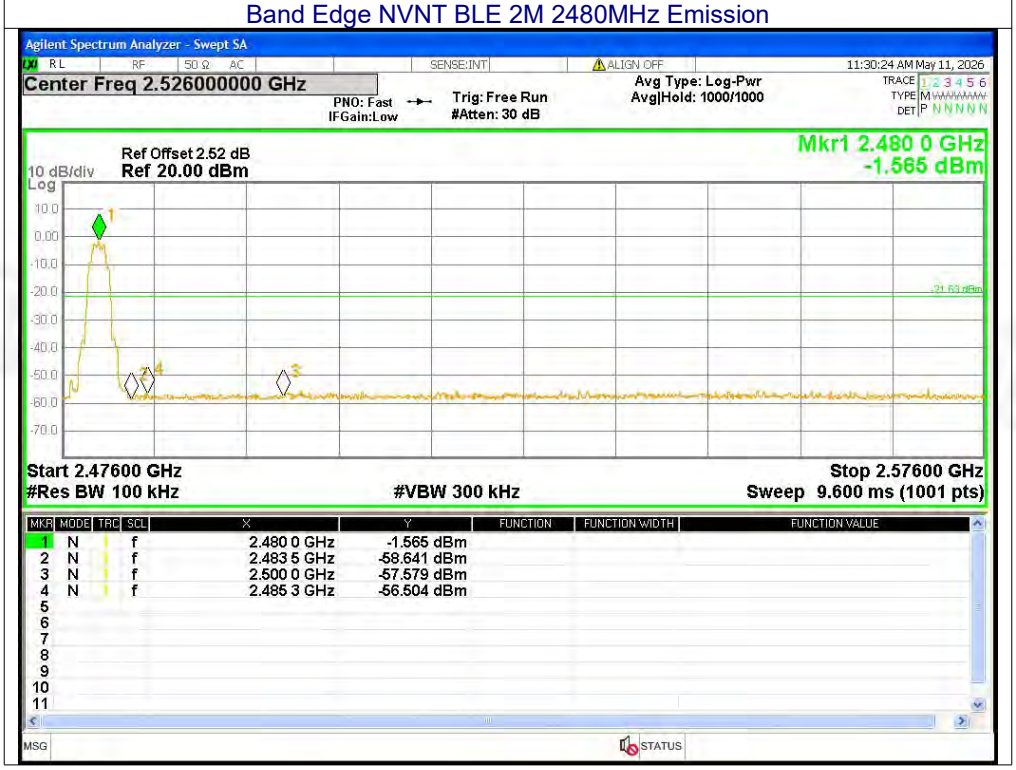
Band Edge NVNT BLE 2M 2402MHz Ref

Band Edge NVNT BLE 2M 2402MHz Emission



Band Edge NVNT BLE 2M 2480MHz Ref

Band Edge NVNT BLE 2M 2480MHz Emission

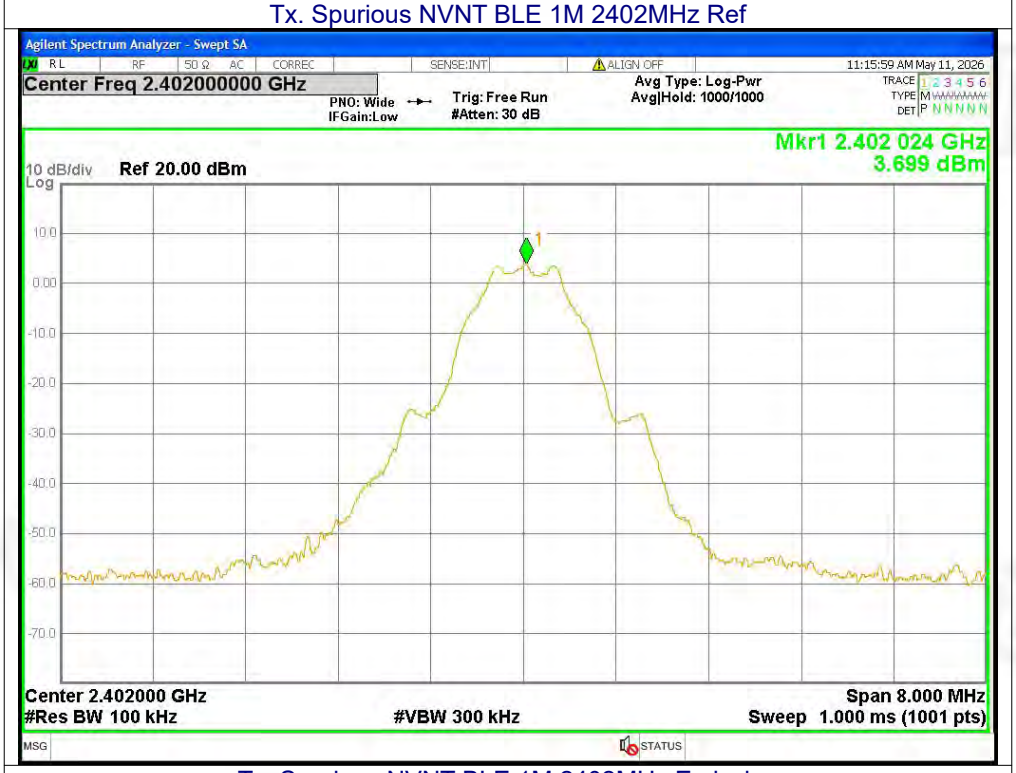


Conducted RF Spurious Emission

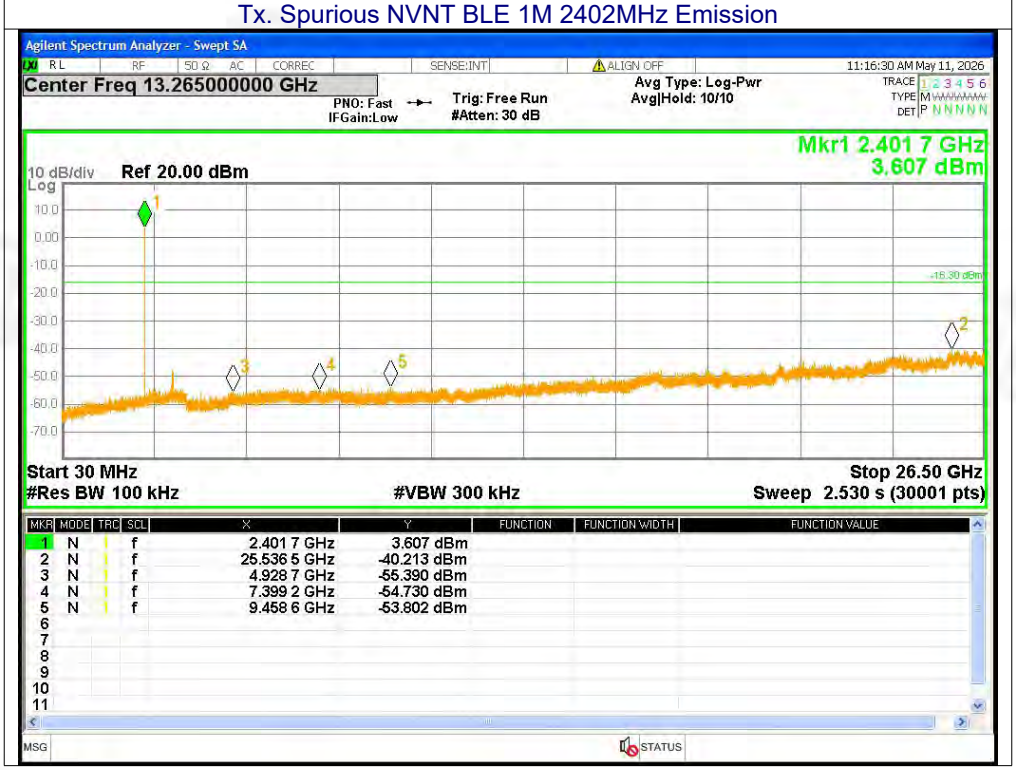
Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	-43.91	<=-20	Pass
NVNT	BLE 1M	2440	-43.24	<=-20	Pass
NVNT	BLE 1M	2480	-40.76	<=-20	Pass
NVNT	BLE 2M	2402	-41.84	<=-20	Pass
NVNT	BLE 2M	2440	-41.17	<=-20	Pass
NVNT	BLE 2M	2480	-39.31	<=-20	Pass

Test Graphs

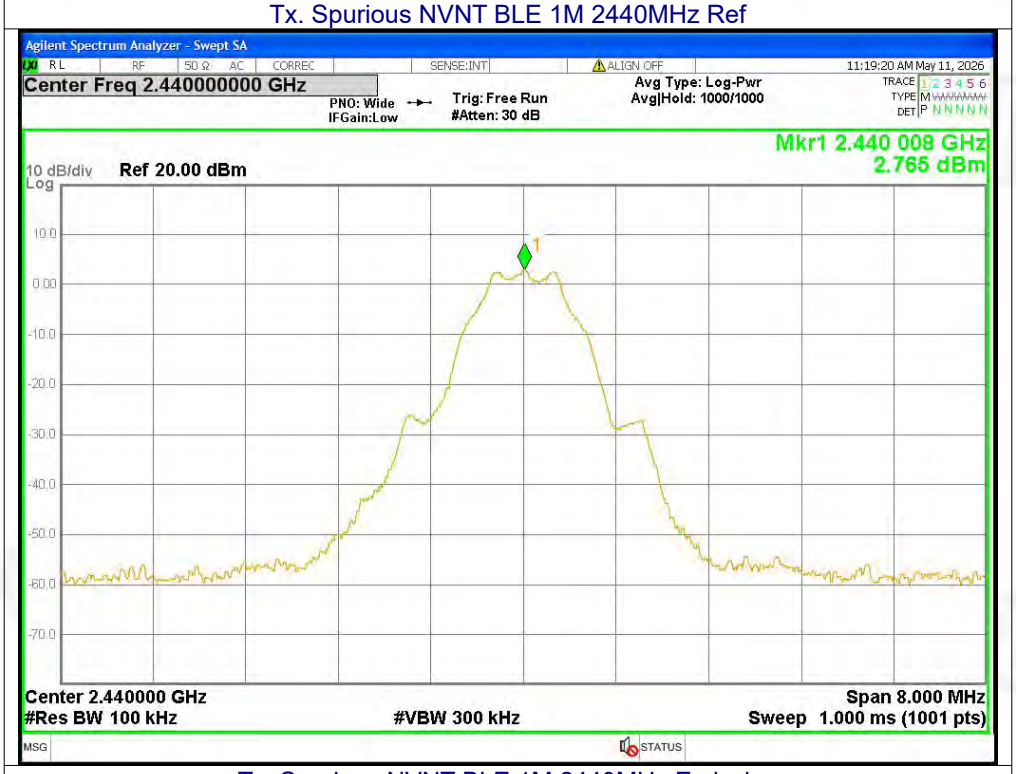
Tx. Spurious NVNT BLE 1M 2402MHz Ref



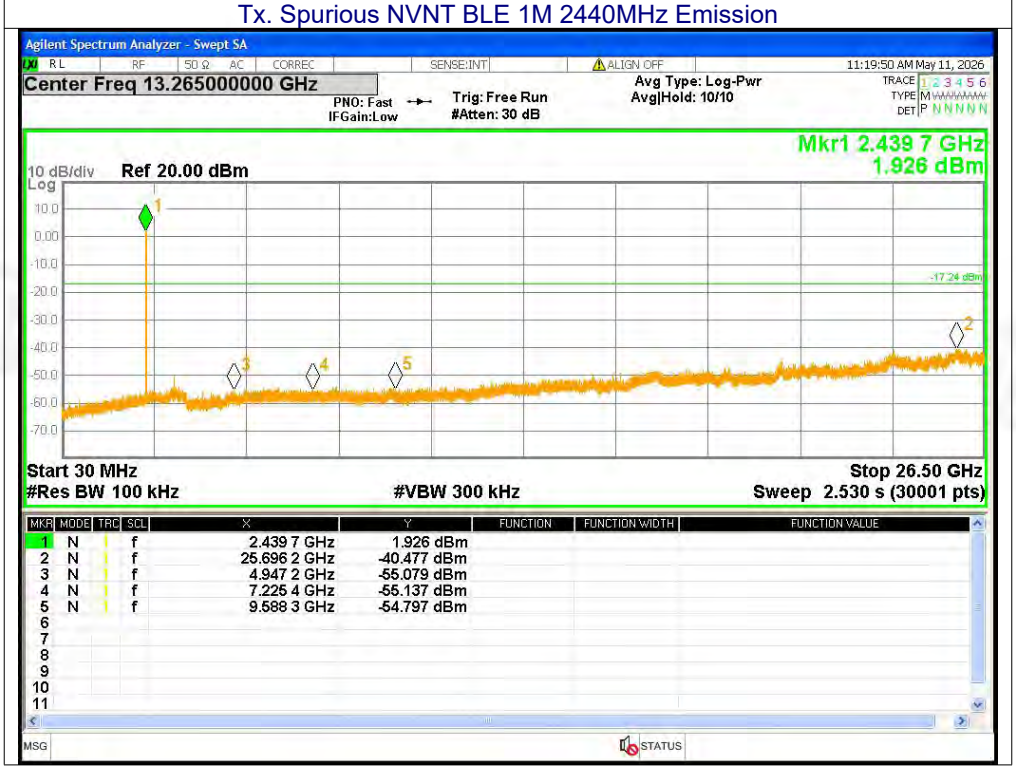
Tx. Spurious NVNT BLE 1M 2402MHz Emission



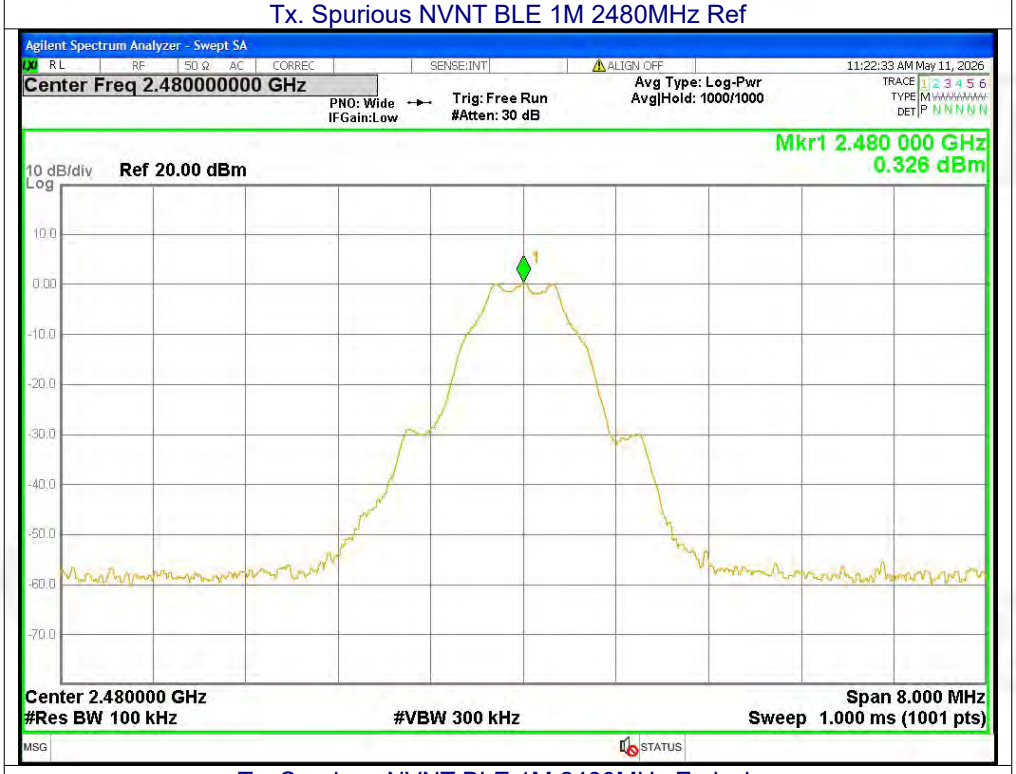
Tx. Spurious NVNT BLE 1M 2440MHz Ref



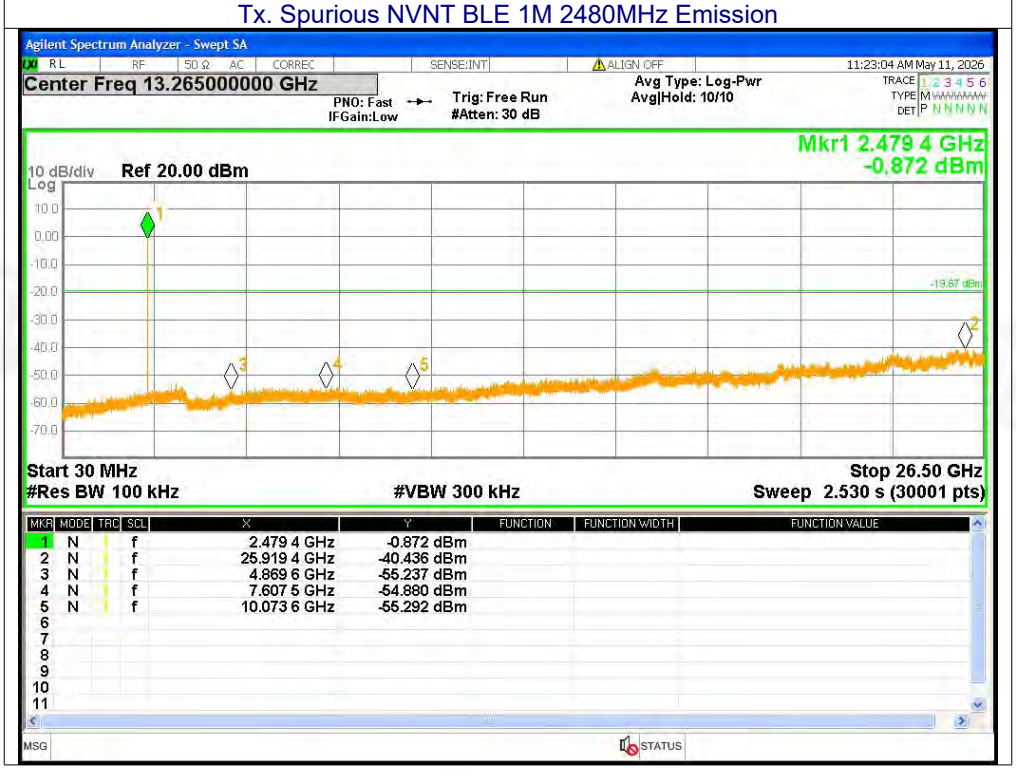
Tx. Spurious NVNT BLE 1M 2440MHz Emission



Tx. Spurious NVNT BLE 1M 2480MHz Ref

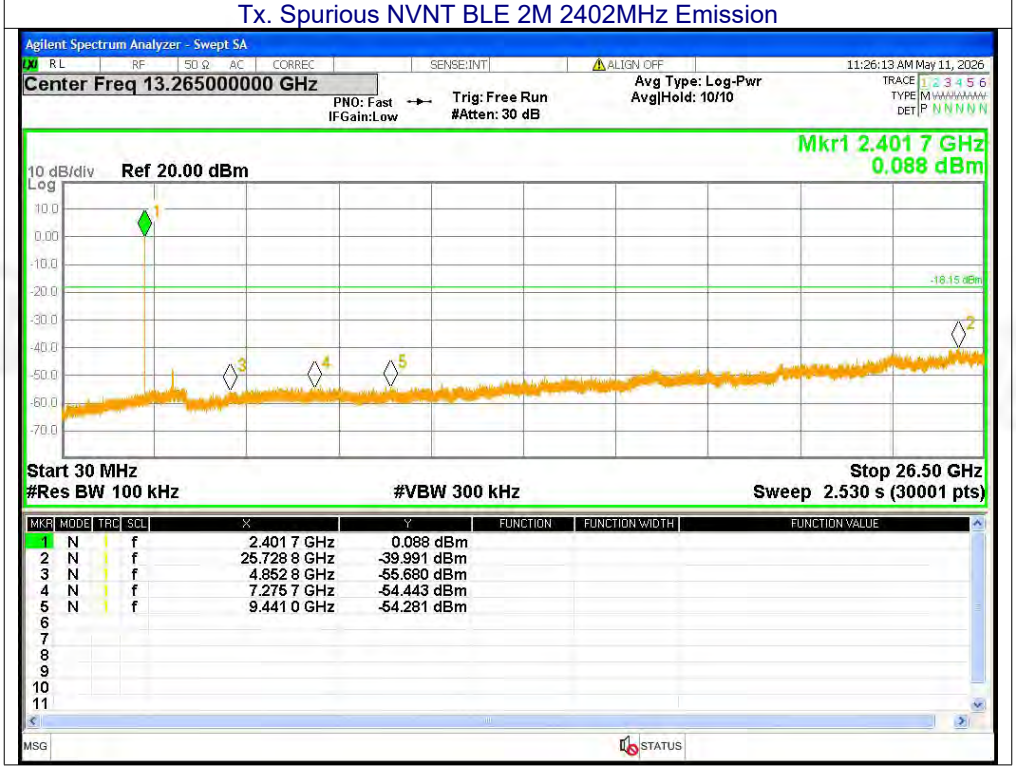


Tx. Spurious NVNT BLE 1M 2480MHz Emission



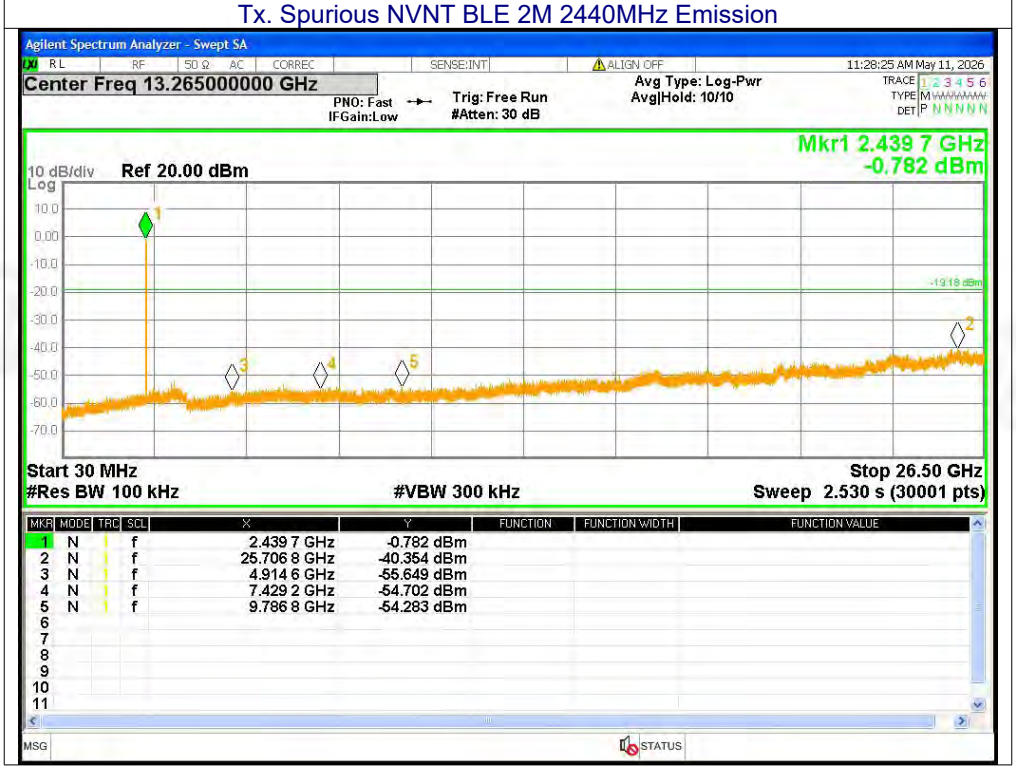
Tx. Spurious NVNT BLE 2M 2402MHz Ref

Tx. Spurious NVNT BLE 2M 2402MHz Emission

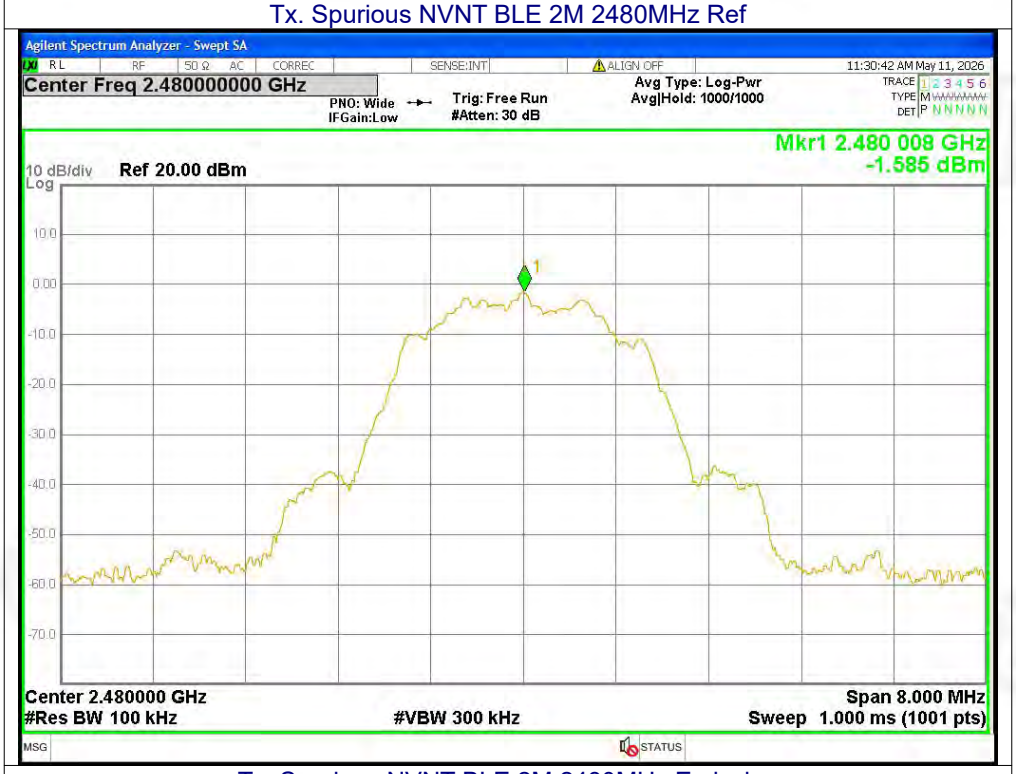


Tx. Spurious NVNT BLE 2M 2440MHz Ref

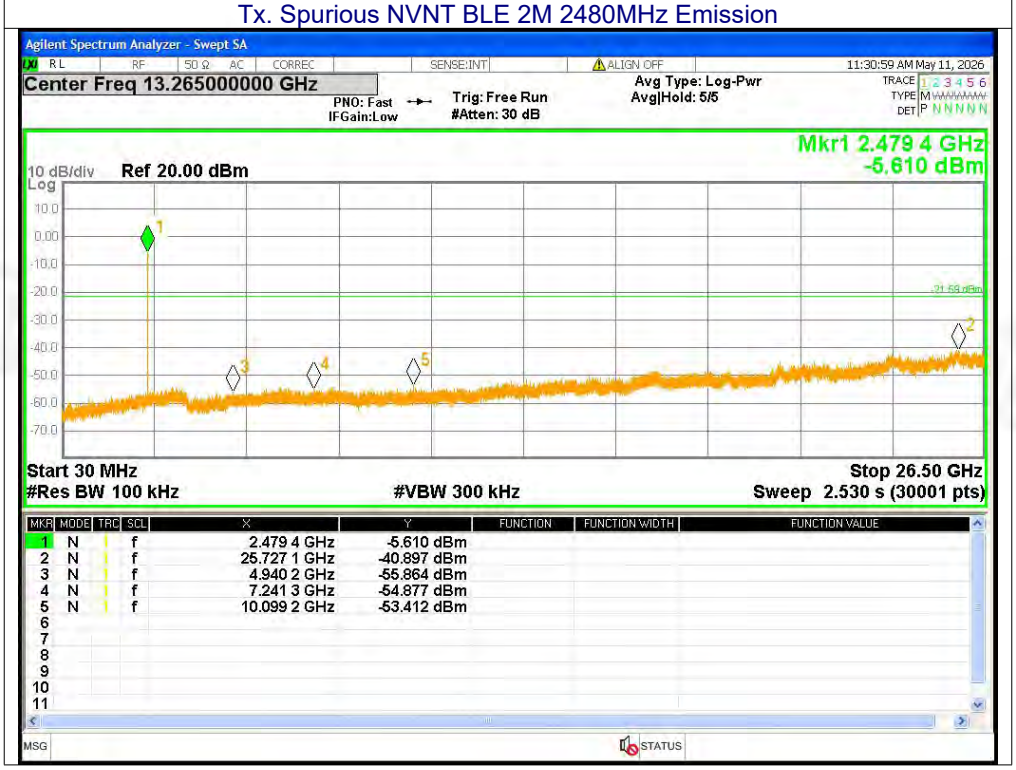
Tx. Spurious NVNT BLE 2M 2440MHz Emission



Tx. Spurious NVNT BLE 2M 2480MHz Ref



Tx. Spurious NVNT BLE 2M 2480MHz Emission



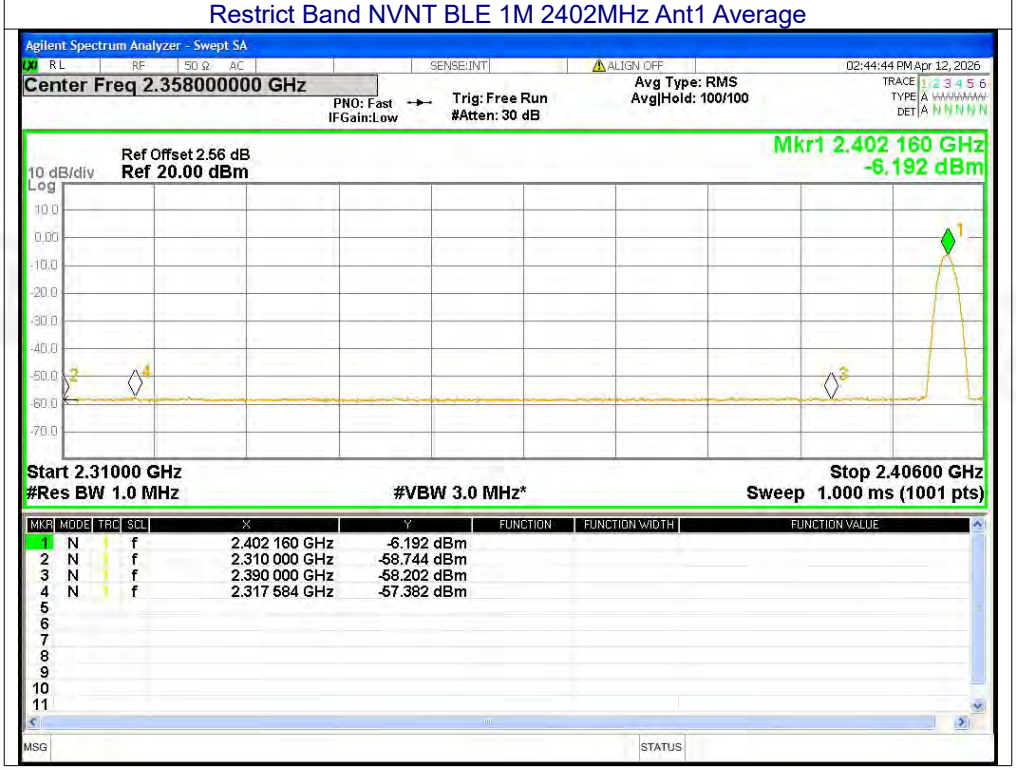
Restrict Band

Mode	Frequency (MHz)	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
BLE 1M	2402	2310	-51.54	2.6	0	46.32	Peak	<=74	Pass
BLE 1M	2402	2310	-58.74	2.6	2.18	41.3	Average	<=54	Pass
BLE 1M	2402	2319.984	-46.96	2.6	0	50.9	Peak	<=74	Pass
BLE 1M	2402	2317.584	-57.38	2.6	2.18	42.66	Average	<=54	Pass
BLE 1M	2402	2390	-50.21	2.6	0	47.65	Peak	<=74	Pass
BLE 1M	2402	2390	-58.2	2.6	2.18	41.84	Average	<=54	Pass
BLE 1M	2480	2483.5	-48.96	2.6	0	48.9	Peak	<=74	Pass
BLE 1M	2480	2483.5	-57.16	2.6	2.18	42.88	Average	<=54	Pass
BLE 1M	2480	2497.96	-46.56	2.6	0	51.3	Peak	<=74	Pass
BLE 1M	2480	2497.864	-56.72	2.6	2.18	43.32	Average	<=54	Pass
BLE 1M	2480	2500	-47.88	2.6	0	49.98	Peak	<=74	Pass
BLE 1M	2480	2500	-58.54	2.6	2.18	41.5	Average	<=54	Pass
BLE 2M	2402	2310	-49.89	2.6	0	47.97	Peak	<=74	Pass
BLE 2M	2402	2310	-58.25	2.6	5.06	44.67	Average	<=54	Pass
BLE 2M	2402	2368.848	-46.8	2.6	0	51.06	Peak	<=74	Pass
BLE 2M	2402	2323.536	-57.38	2.6	5.06	45.54	Average	<=54	Pass
BLE 2M	2402	2390	-50.15	2.6	0	47.71	Peak	<=74	Pass
BLE 2M	2402	2390	-58.5	2.6	5.06	44.42	Average	<=54	Pass
BLE 2M	2480	2483.5	-45.25	2.6	0	52.61	Peak	<=74	Pass
BLE 2M	2480	2483.5	-57.94	2.6	5.06	44.98	Average	<=54	Pass
BLE 2M	2480	2483.632	-40.62	2.6	0	57.24	Peak	<=74	Pass
BLE 2M	2480	2497.84	-56.52	2.6	5.06	46.4	Average	<=54	Pass
BLE 2M	2480	2500	-48.19	2.6	0	49.67	Peak	<=74	Pass
BLE 2M	2480	2500	-57.89	2.6	5.06	45.03	Average	<=54	Pass

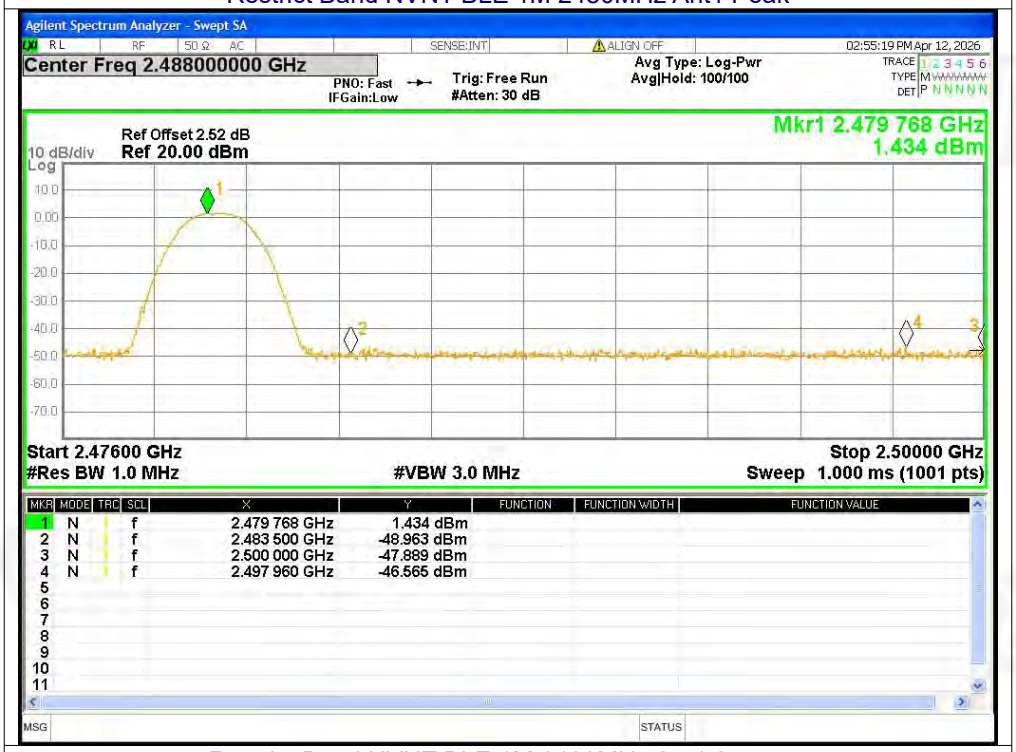
Test Graphs

Restrict Band NVNT BLE 1M 2402MHz Ant1 Peak

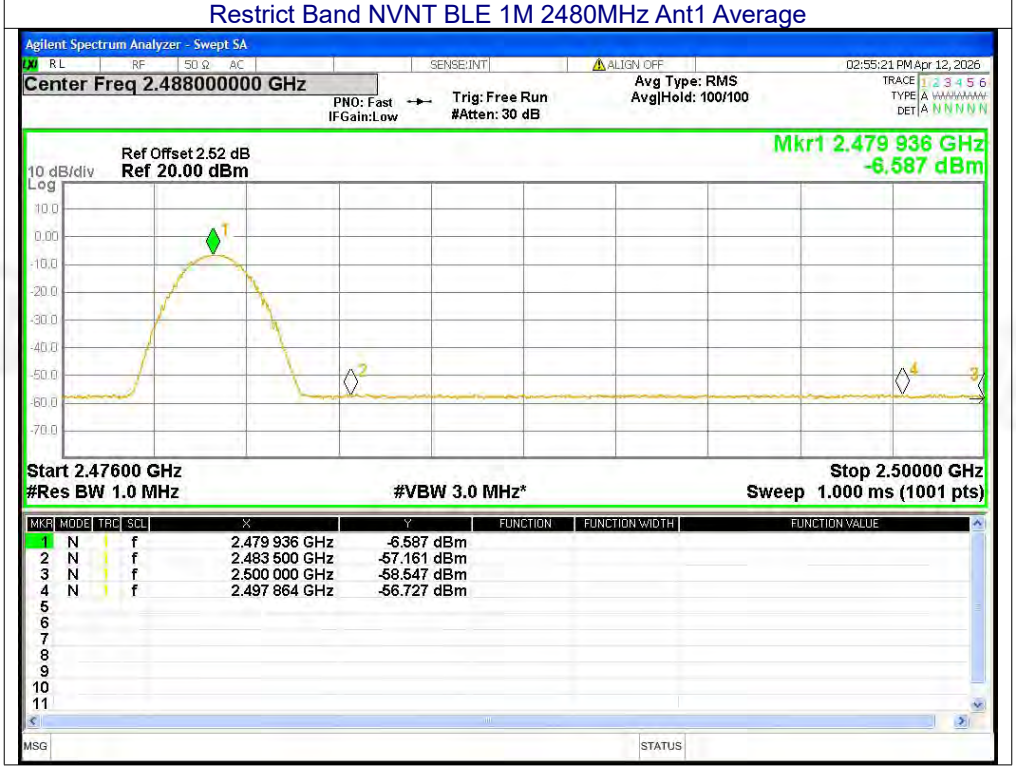
Restrict Band NVNT BLE 1M 2402MHz Ant1 Average



Restrict Band NVNT BLE 1M 2480MHz Ant1 Peak

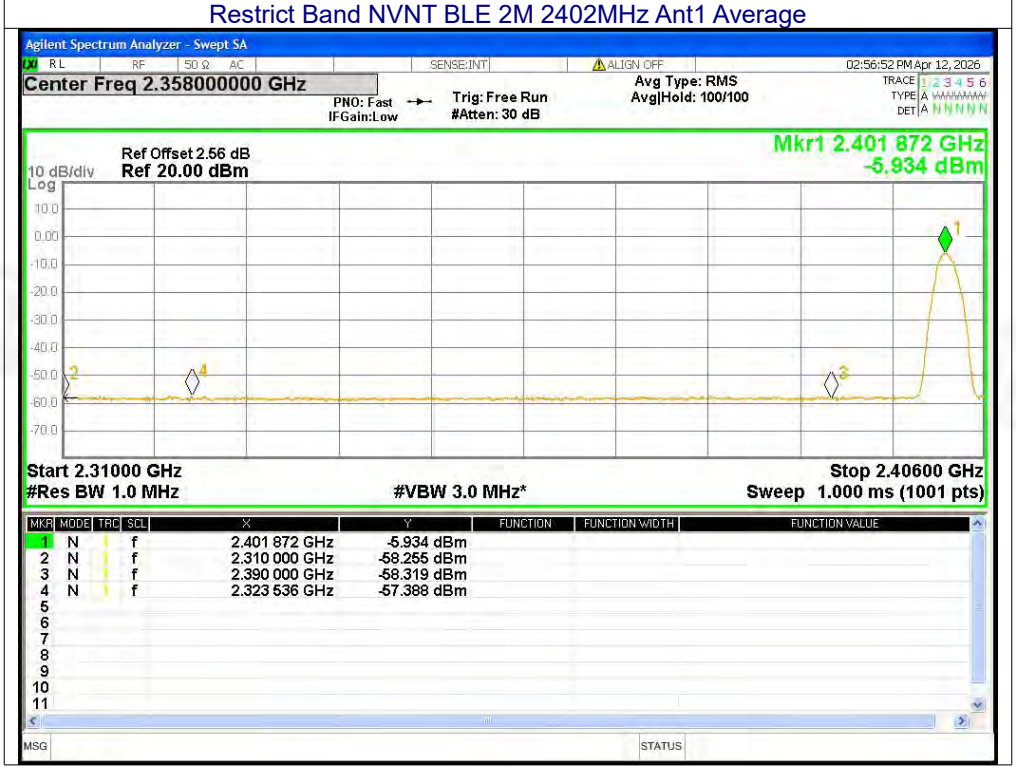


Restrict Band NVNT BLE 1M 2480MHz Ant1 Average

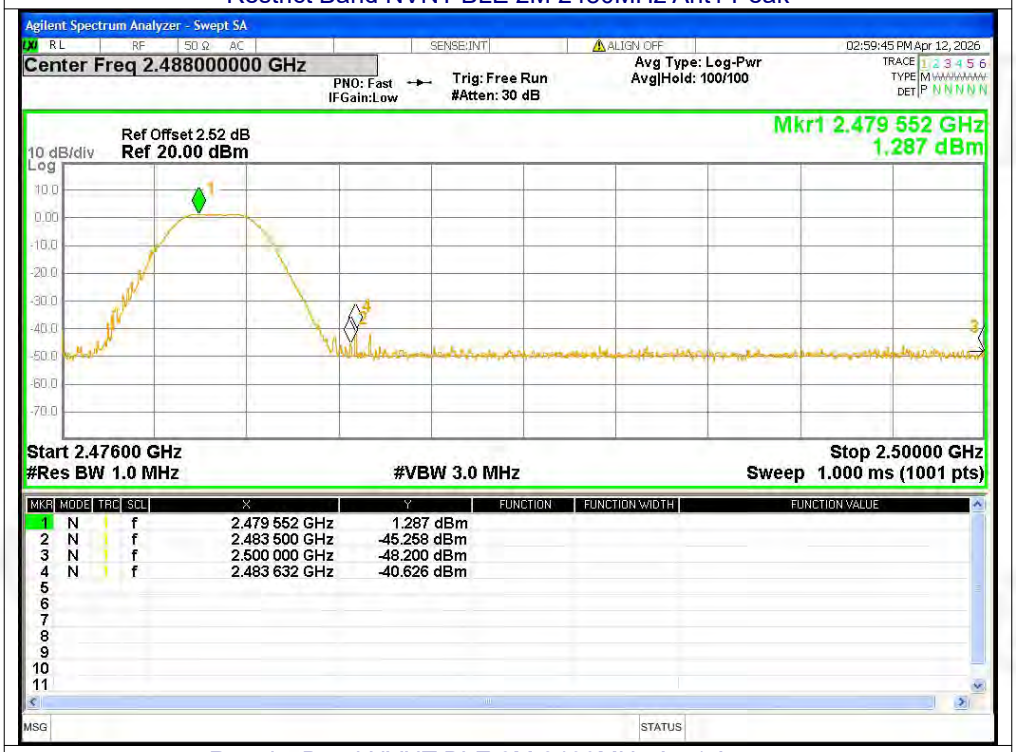


Restrict Band NVNT BLE 2M 2402MHz Ant1 Peak

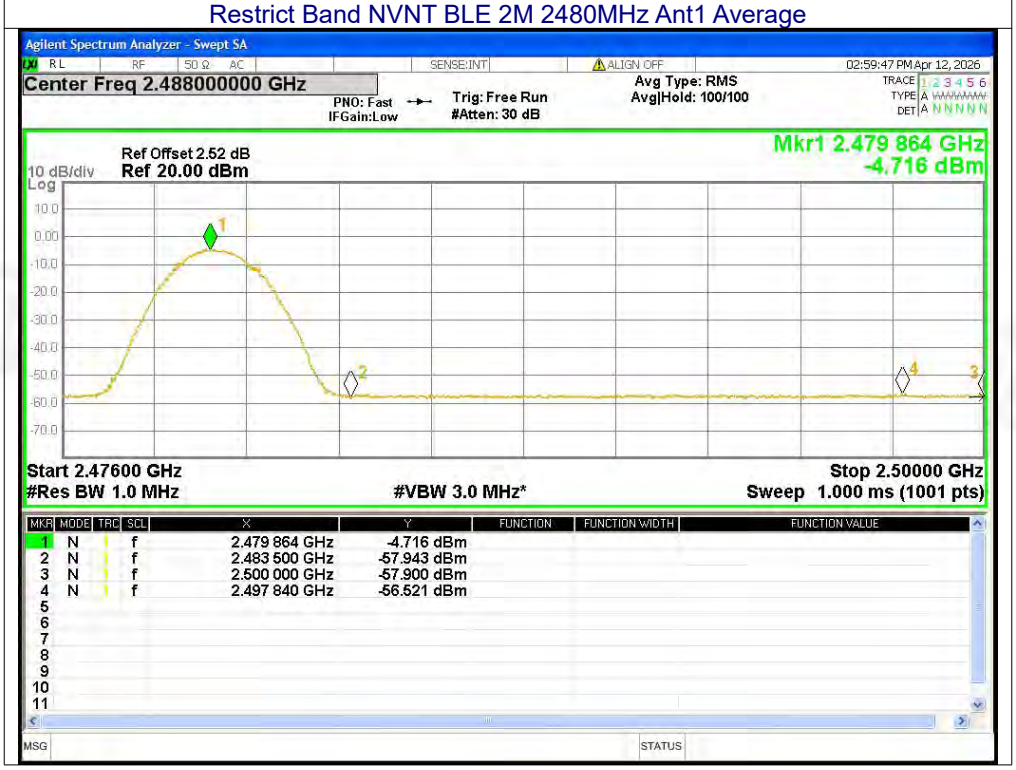
Restrict Band NVNT BLE 2M 2402MHz Ant1 Average



Restrict Band NVNT BLE 2M 2480MHz Ant1 Peak



Restrict Band NVNT BLE 2M 2480MHz Ant1 Average



13. TEST SETUP PHOTO

Reference to the appendix I for details.

14. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

※※※※※ **END OF REPORT** ※※※※※