



FCC TEST REPORT

FCC ID:UU8-ROBAI28

Report Number..... : ZKT-260730L2047E-01

Date of Test..... : Apr. 29, 2026 to May 22, 2026

Date of issue..... : May 22, 2026

Total number of pages..... : 73

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 : Lexibook America

Address : C/O Pramex International 1251 Avenue of the Americas, 3rd Fl., New York United States

Manufacturer's name : Lexibook America

Address : C/O Pramex International 1251 Avenue of the Americas, 3rd Fl., New York United States

Test specification:

Standard..... : FCC CFR Title 47 Part 15 Subpart C Section 15.247
ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Erratato
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.

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Product name..... : ELO POWERMAN ADVANCE A.I.

Trademark : LEXIBOOK

Model/Type reference..... : ROBAI28EN
ROBAI28FR

Ratings..... : Input: DC 5V 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





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1. VERSION

Report No.	Version	Description	Approved
ZKT-260730L2047E-01	Rev.01	Initial issue of report	May 22, 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 + Erratato 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 $y \pm U$, where expanded 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 chamber Radiated spurious emission (9KHz-30MHz)	U=4.5dB
2	3m chamber 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°C



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Product Name:	ELO POWERMAN ADVANCE A.I.
Trade Mark:	LEXIBOOK
Model No.:	ROBAI28EN
Serial No.:	ROBAI28FR
Model Different.:	Only the model names are different.
Hardware Version:	V1.0
Software Version:	V1.12.26
Sample(s) Status:	Engineer sample
Operation Frequency:	2402MHz~2480MHz
Channel Numbers:	40 Channels
Channel Spacing:	1MHz
Modulation Technology:	GFSK
Antenna Type:	FPC
Antenna Gain:	0.88dBi
Power Supply:	Input: DC 5V 1A
Battery Capacity:	Rated Voltage: 3.7V Capacity: 1200mAh

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

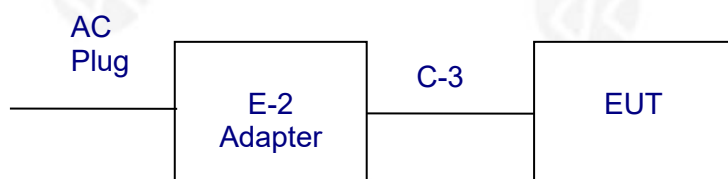
Transmitting mode	Keep the EUT in continuously transmitting mode
Remark: During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data. For battery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

Test Software & Version	Wifi_Test_Tool_V1.7.8.1
Mode	Power setting
BLE 1M - GFSK	50

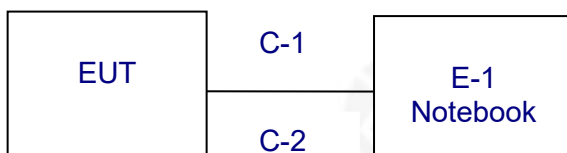


3.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

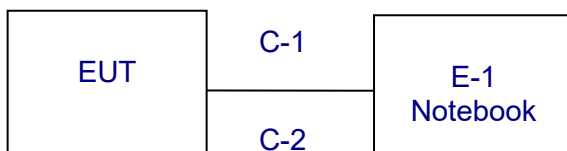
Conducted Emission



Radiated Emission



RF Conducted Spurios



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	ST2	N/A
E-2	Adapter	UGREEN	X569	N/A
C-1	Serial port board	XES	WTYZK	N/A
C-2	USB Cable	MI	RYEW3A	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 23, 2025	May 22, 2026
						May 22, 2026	May 21, 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 26, 2025	May 25, 2026
12	Test Cable	N/A	R-02	N/A	N/A	May 26, 2025	May 25, 2026
13	Test Cable	N/A	R-03	N/A	N/A	May 26, 2025	May 25, 2026
14	D.C. Power Supply	LongWei	TPR-6405D	N/A	N/A	\	\
15	EMC Software	Frad	EZ-EMC	Ver.EMC-CO N 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 26, 2025	May 25, 2026
4	Test Cable	N/A	RF-02	N/A	N/A	May 26, 2025	May 25, 2026
5	Test Cable	N/A	RF-03	N/A	N/A	May 26, 2025	May 25, 2026
6	ESG Signal Generator	Agilent	E4421B	N/A	B.03.84	Sep. 19, 2025	Sep. 18, 2026
7	Signal Generator	Agilent	N5182A	N/A	A.01.87	Sep. 20, 2025	Sep. 19, 2026
8	Magnetic Field Probe Tester	Narda	ELT-400	0-0344/M-1752	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-RF CB	N/A	N/A	Sep. 19, 2025	Sep. 18, 2026
12	D.C. Power Supply	LongWei	TPR-6405 D	N/A	N/A	\	\
13	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

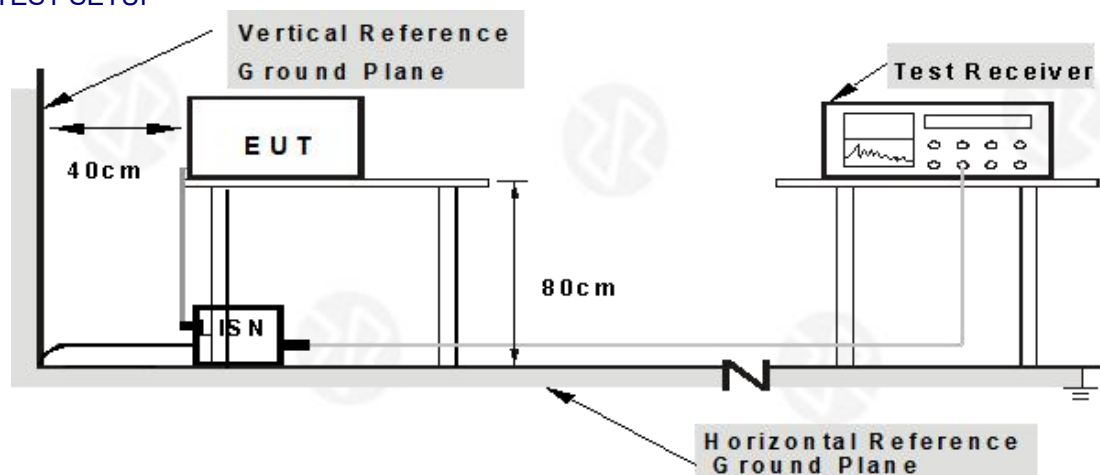
- The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- 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.
- 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.
- LISN at least 80 cm from nearest part of EUT chassis.
- 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

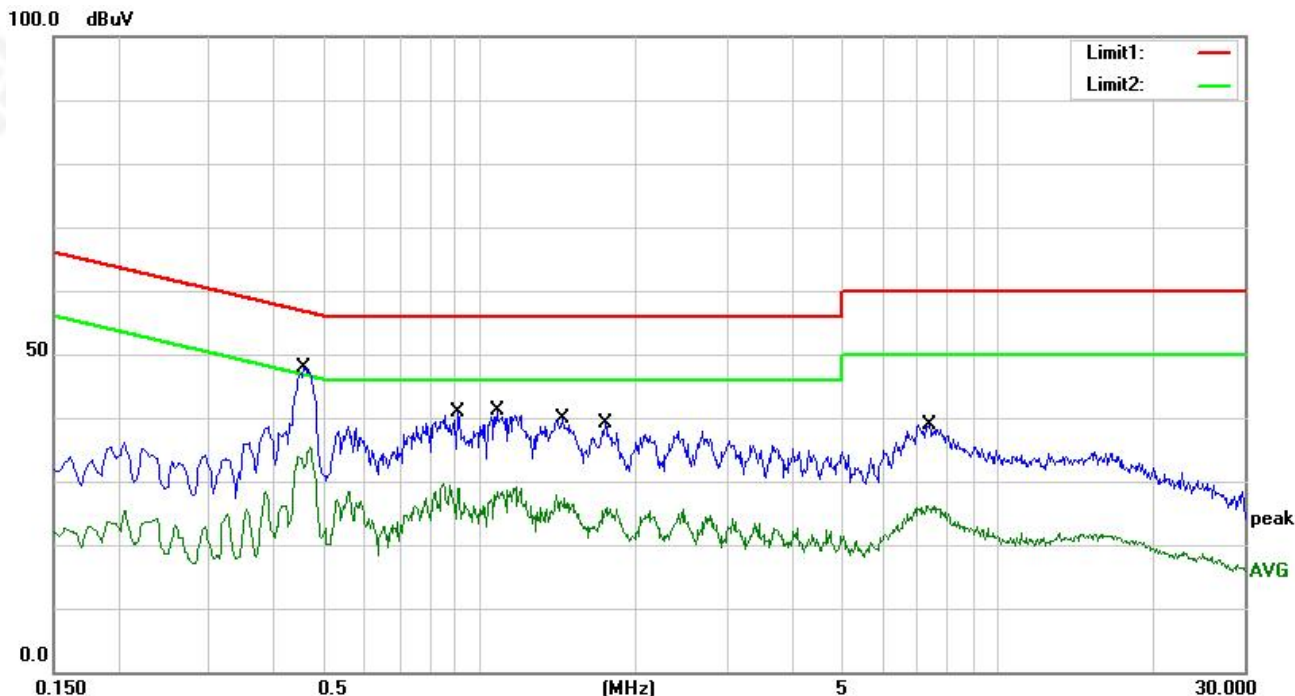
4.1.5 EUT OPERATING CONDITIONS

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 RESULT

Temperature:	26°C	Relative Humidity:	62.1%
Pressure:	101 kPa	Polarization:	L
Test Voltage:	AC 120V/60Hz	Test Mode:	TX GFSK - 2480MHz



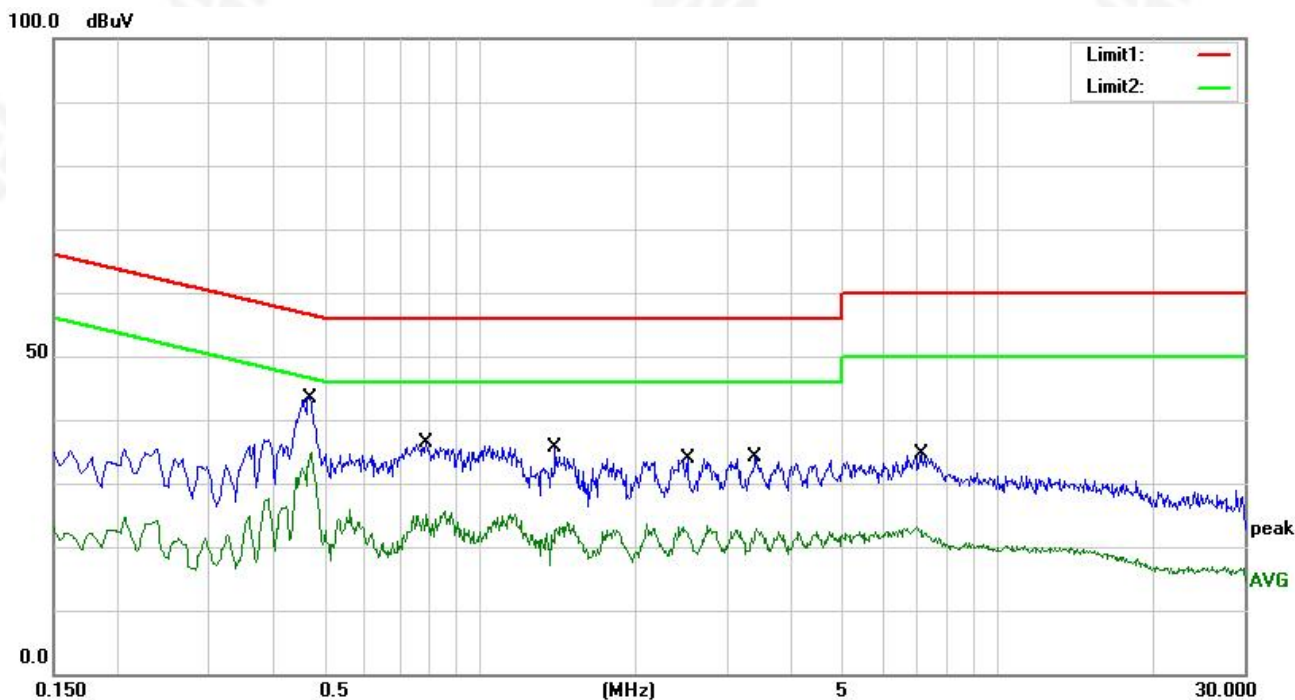
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.4580	28.38	19.39	47.77	56.73	-8.96	QP
2	0.4580	15.99	19.39	35.38	46.73	-11.35	AVG
3	0.9060	21.47	19.35	40.82	56.00	-15.18	QP
4	0.9060	10.27	19.35	29.62	46.00	-16.38	AVG
5	1.0780	21.80	19.34	41.14	56.00	-14.86	QP
6	1.0780	9.70	19.34	29.04	46.00	-16.96	AVG
7	1.4420	20.49	19.36	39.85	56.00	-16.15	QP
8	1.4420	8.51	19.36	27.87	46.00	-18.13	AVG
9	1.7500	19.87	19.37	39.24	56.00	-16.76	QP
10	1.7500	6.50	19.37	25.87	46.00	-20.13	AVG
11	7.4020	19.44	19.52	38.96	60.00	-21.04	QP
12	7.4020	6.71	19.52	26.23	50.00	-23.77	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 = Liscn factor+ Cable loss factor + limiter factor.
- 5.Margin = Measurement Level-Limit.
- 6.The test data shows only the worst case TX GFSK - 2480MHz.



Temperature:	26°C	Relative Humidity:	62.1%
Pressure:	101 kPa	Polarization:	N
Test Voltage:	AC 120V/60Hz	Test Mode:	TX GFSK - 2480MHz



	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB)	(dBuV)	(dBuV)	(dB)	
1	0.4700	23.94	19.39	43.33	56.51	-13.18	QP
2	0.4700	15.45	19.39	34.84	46.51	-11.67	AVG
3	0.7900	17.03	19.35	36.38	56.00	-19.62	QP
4	0.7900	6.37	19.35	25.72	46.00	-20.28	AVG
5	1.4020	16.15	19.36	35.51	56.00	-20.49	QP
6	1.4020	4.59	19.36	23.95	46.00	-22.05	AVG
7	2.5180	14.45	19.41	33.86	56.00	-22.14	QP
8	2.5180	3.84	19.41	23.25	46.00	-22.75	AVG
9	3.4060	14.65	19.44	34.09	56.00	-21.91	QP
10	3.4060	3.56	19.44	23.00	46.00	-23.00	AVG
11	7.1180	15.21	19.50	34.71	60.00	-25.29	QP
12	7.1180	3.12	19.50	22.62	50.00	-27.38	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 = Lish factor+ Cable loss factor + limiter factor.
- 5.Margin = Measurement Level-Limit.
- 6.The test data shows only the worst case TX GFSK - 2480MHz.



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 (microvolt/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

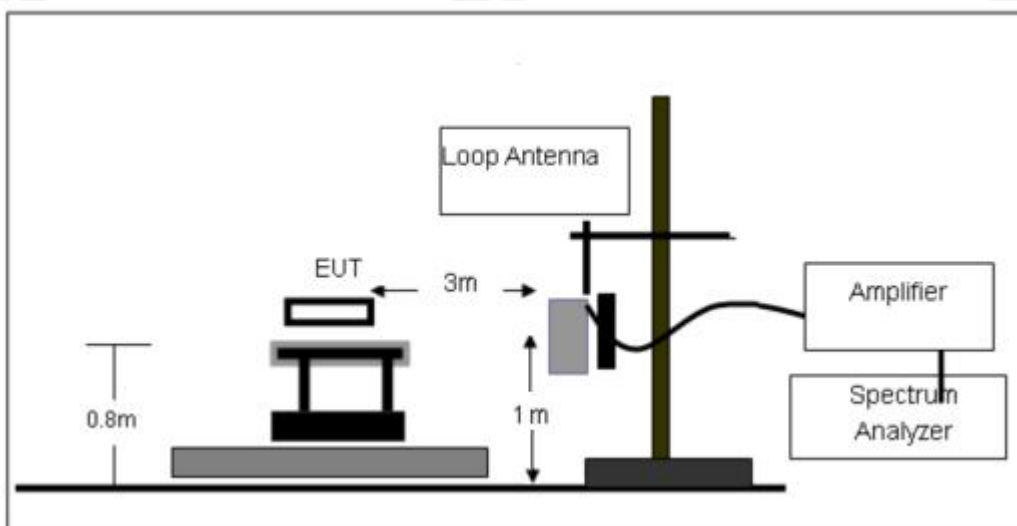
- a. The measuring distance of at 3 m shall be used for measurements at frequency up to 25GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-chamber test. The table was rotated 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

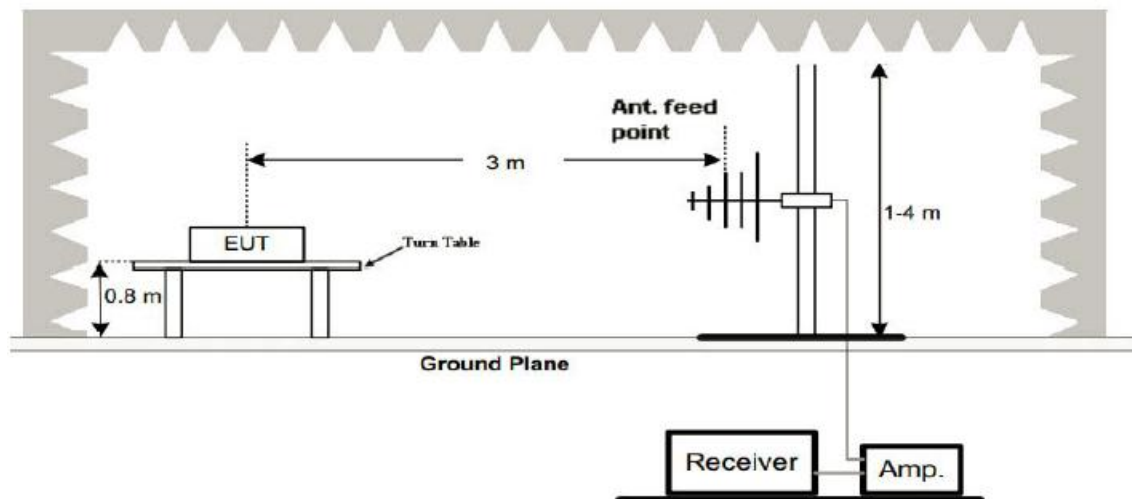
4.2.4 TEST SETUP

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

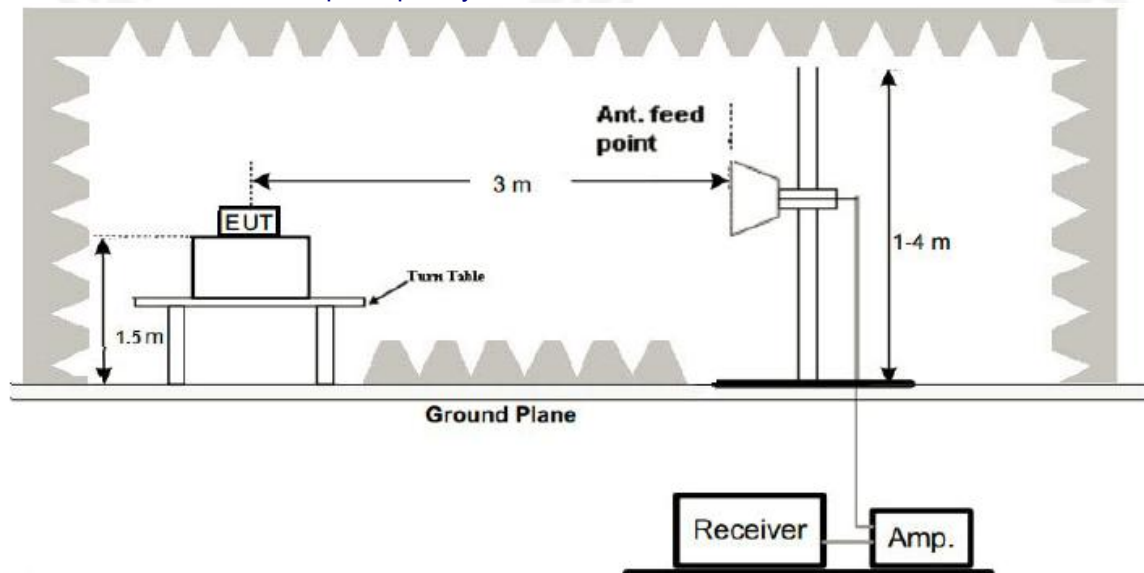




(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(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.

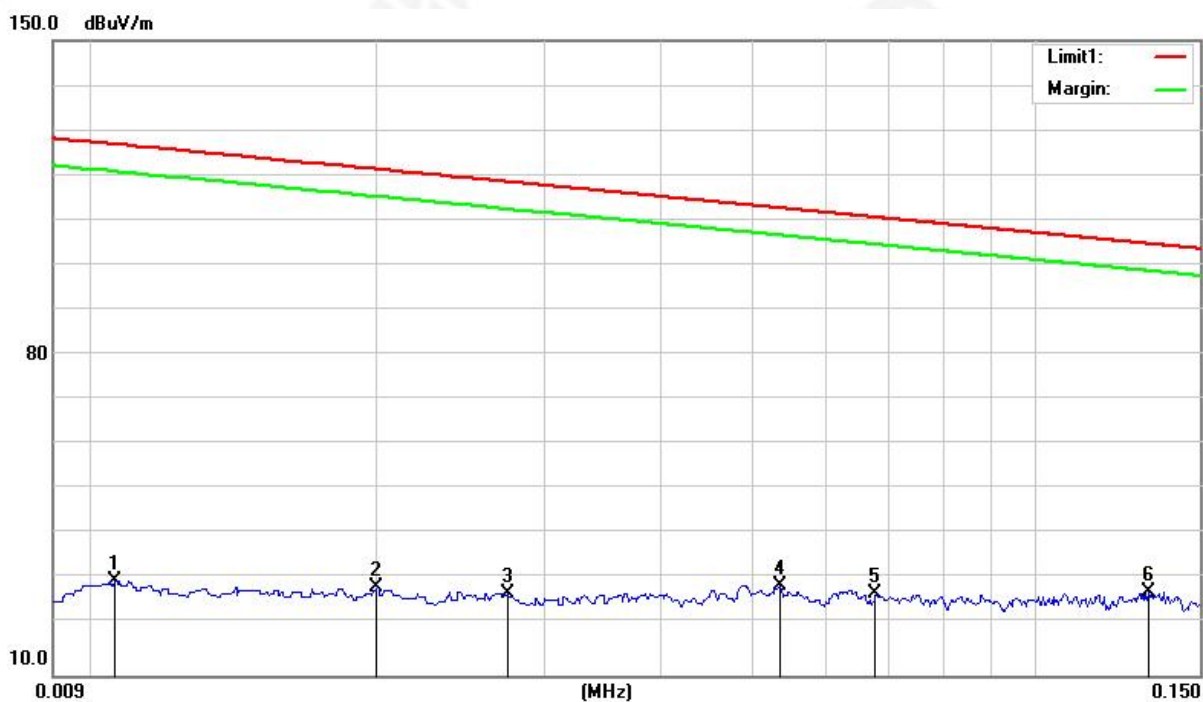
4.2.6 TEST RESULTS



a, Between 9KHz – 30 MHz

Temperature:	23.4℃	Relative Humidity:	60%
Test Voltage:	DC 3.7V	Polarization:	--
Test Mode:	TX GFSK - 2480MHz		

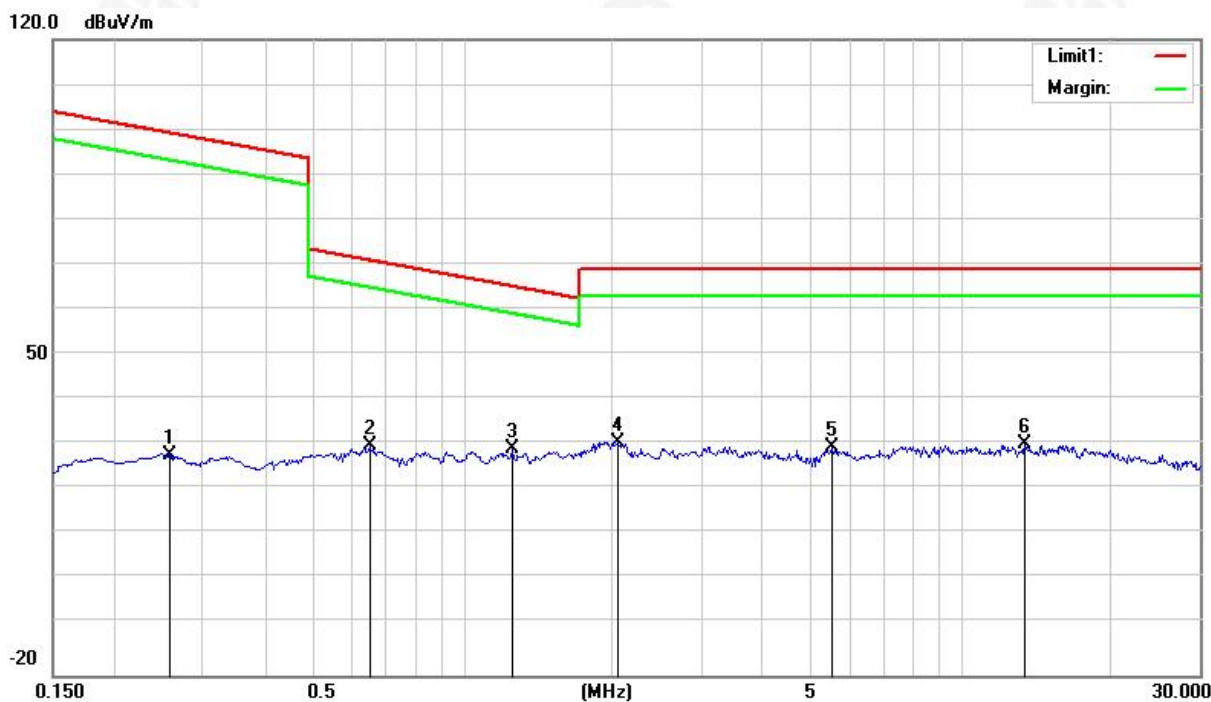
Coxial
9K-150K



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0105	11.45	19.41	30.86	127.18	-96.32	AVG
2	0.0200	9.16	20.10	29.26	121.58	-92.32	AVG
3	0.0274	8.20	19.95	28.15	118.85	-90.70	AVG
4	0.0536	10.28	19.40	29.68	113.02	-83.34	AVG
5	0.0675	8.99	19.01	28.00	111.02	-83.02	AVG
6	0.1322	10.74	17.54	28.28	105.18	-76.90	AVG



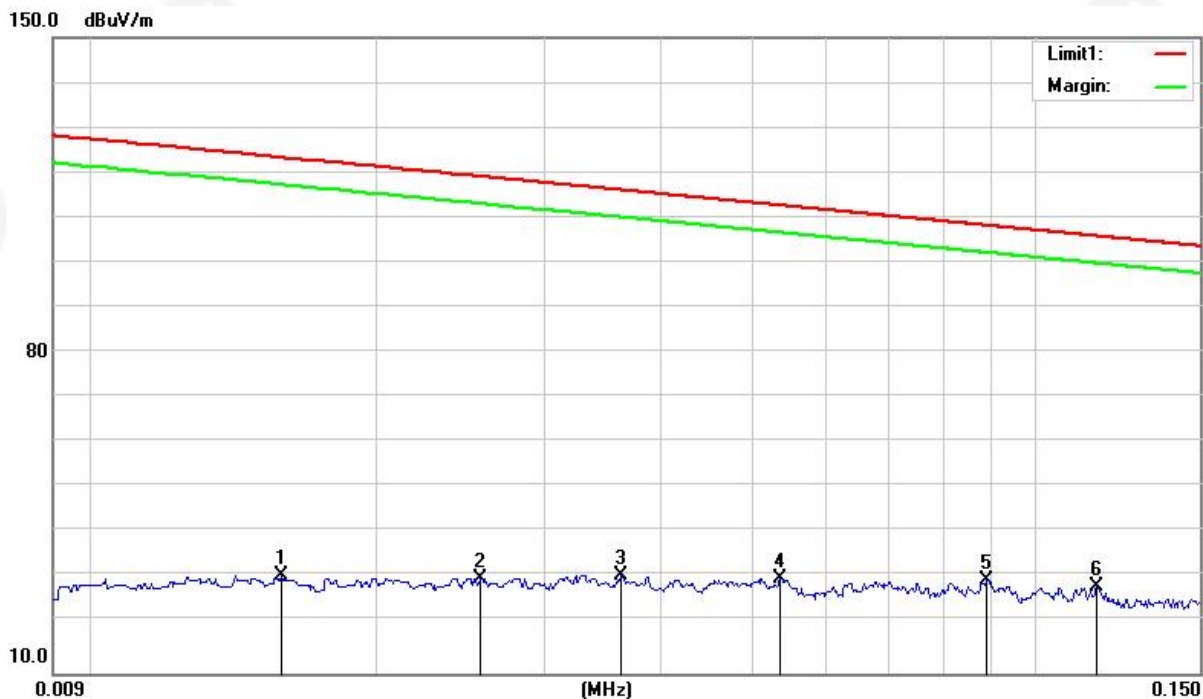
150K-30M



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.2575	8.55	20.10	28.65	99.39	-70.74	AVG
2	0.6471	10.21	20.26	30.47	71.38	-40.91	QP
3	1.2541	9.68	20.25	29.93	65.64	-35.71	QP
4	2.0333	11.05	20.39	31.44	69.50	-38.06	QP
5	5.4931	9.90	20.47	30.37	69.50	-39.13	QP
6	13.3437	9.88	20.94	30.82	69.50	-38.68	QP



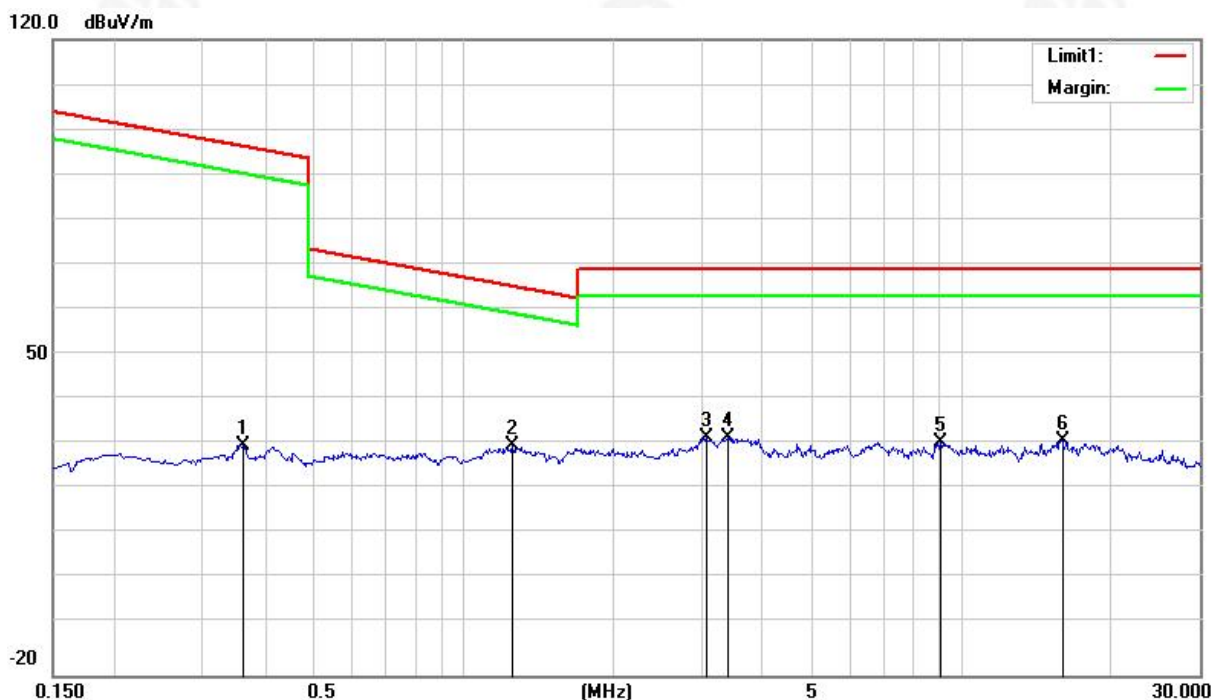
Coplanar
9K-150K



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0158	11.73	19.79	31.52	123.63	-92.11	AVG
2	0.0257	10.88	19.99	30.87	119.41	-88.54	AVG
3	0.0362	11.79	19.78	31.57	116.43	-84.86	AVG
4	0.0536	11.33	19.40	30.73	113.02	-82.29	AVG
5	0.0890	12.40	18.13	30.53	108.62	-78.09	AVG
6	0.1165	11.35	17.57	28.92	106.28	-77.36	AVG



150K-30M



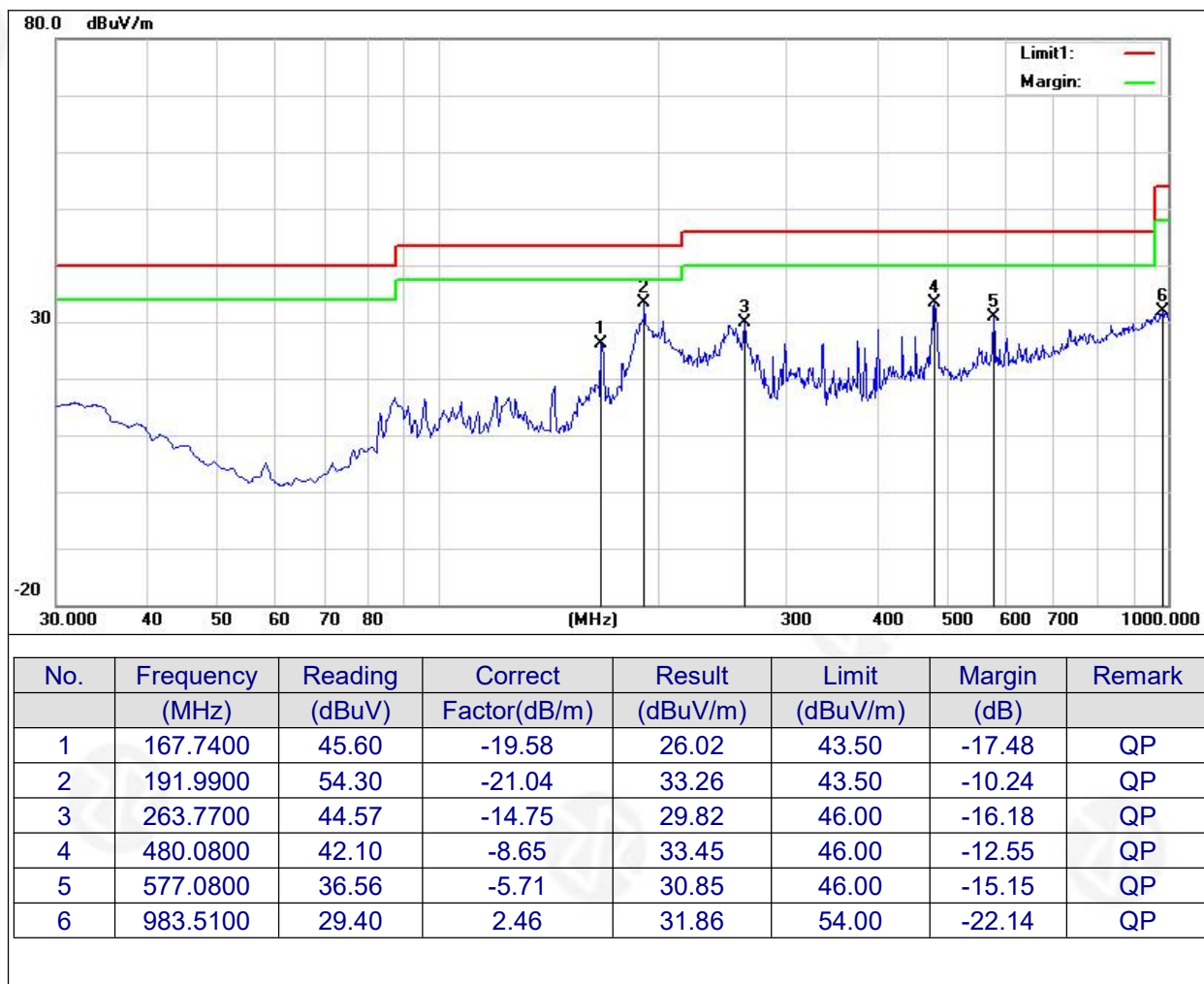
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.3613	10.60	20.14	30.74	96.45	-65.71	AVG
2	1.2540	10.18	20.25	30.43	65.64	-35.21	QP
3	3.0752	12.09	20.12	32.21	69.50	-37.29	QP
4	3.3814	12.01	20.21	32.22	69.50	-37.28	QP
5	9.1050	11.03	20.25	31.28	69.50	-38.22	QP
6	15.9108	10.05	21.52	31.57	69.50	-37.93	QP

Note:
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits (dBuv) + distance extrapolation factor.



b. Between 30MHz – 1GHz

Temperature:	23.4°C	Relative Humidity:	60%
Pressure:	101 kPa	Polarization:	Horizontal
Test Voltage:	DC 3.7V	Test Mode :	TX GFSK - 2480MHz

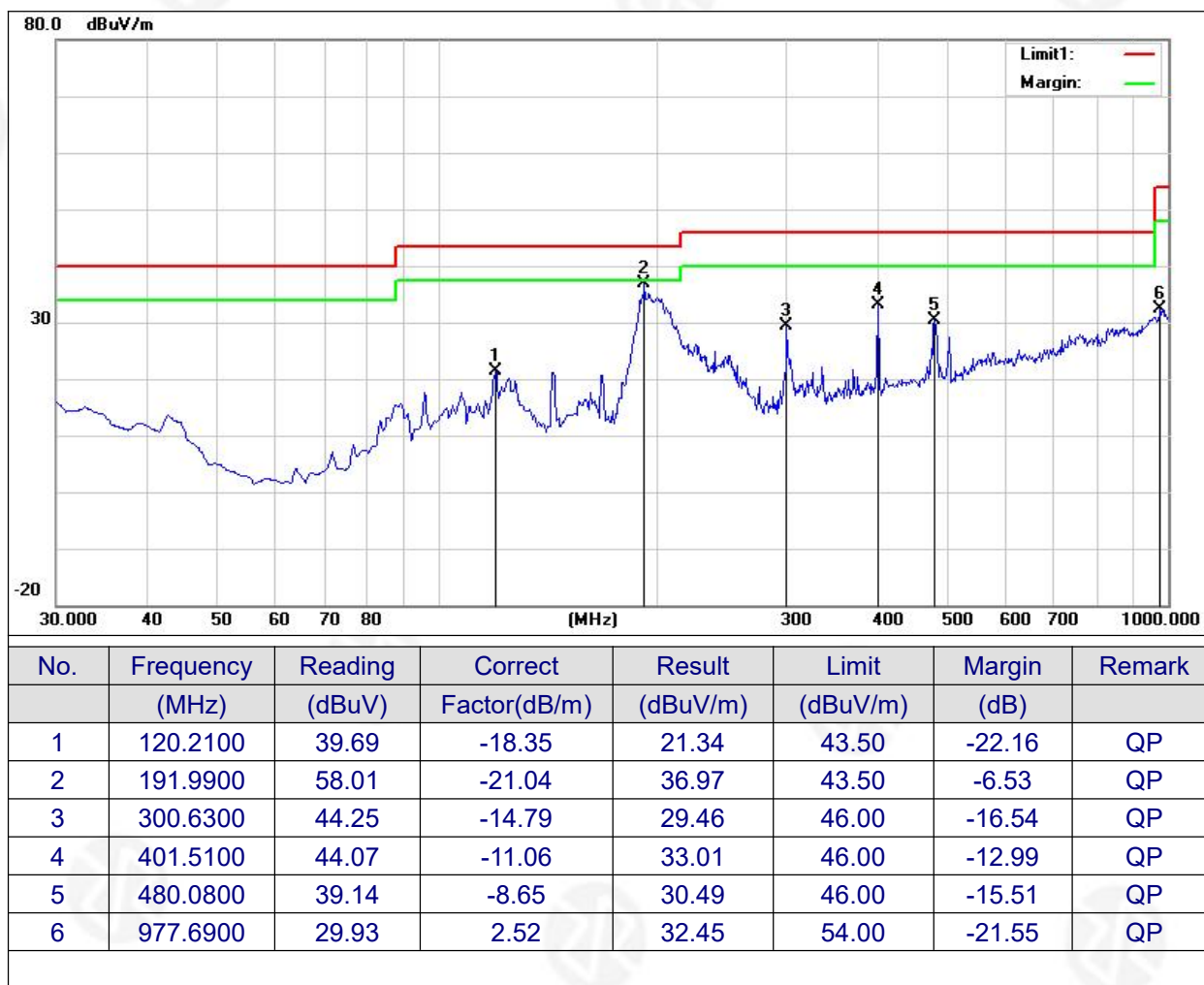


Remarks:

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. The test data shows only the worst case TX GFSK - 2480MHz.



Temperature:	23.7°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	DC 3.7V	Test Mode :	TX GFSK - 2480MHz



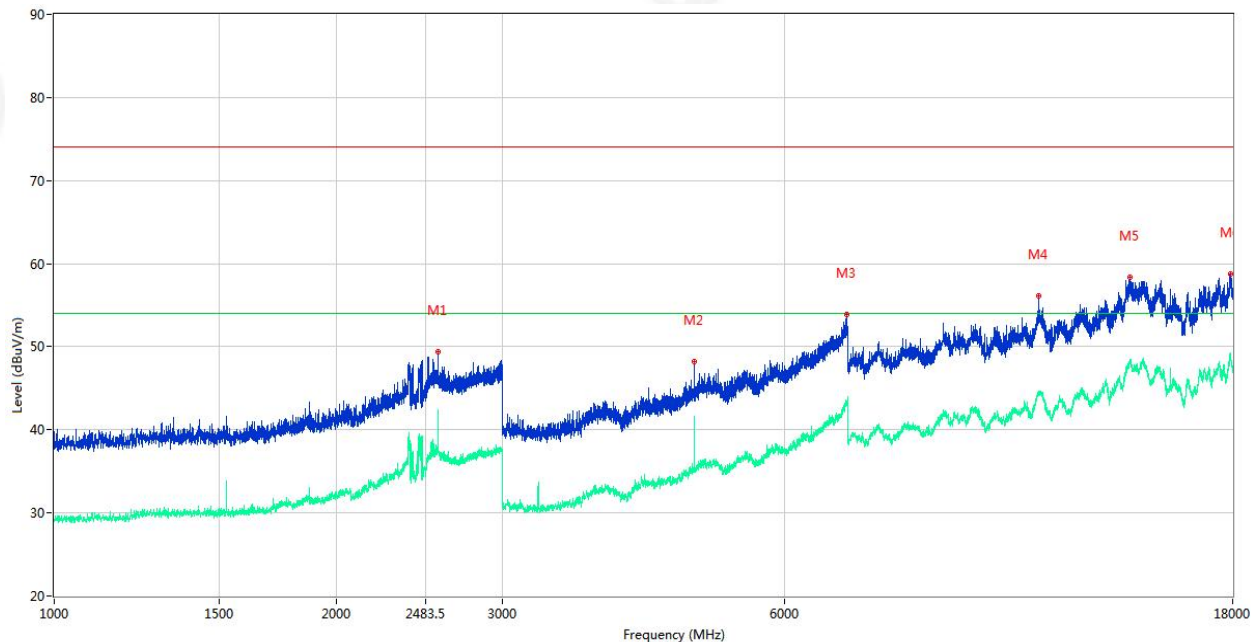
Remarks:

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. The test data shows only the worst case TX GFSK - 2480MHz.



1GHz~25GHz

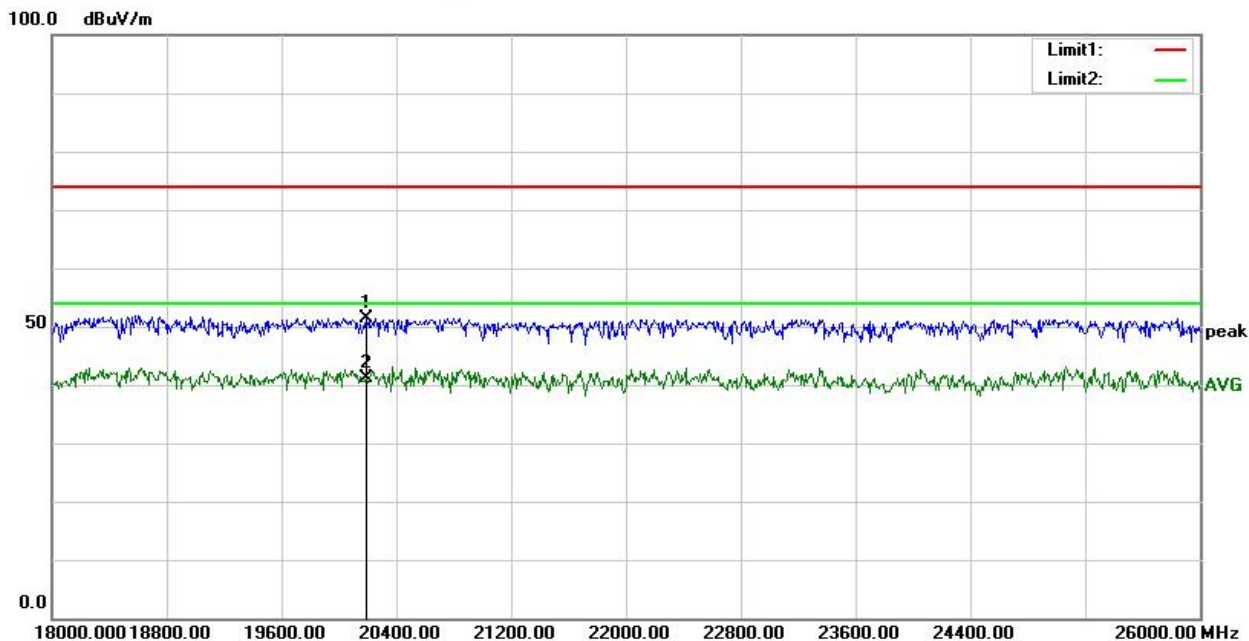
Worst mode (GFSK)
Low Channel
Horizontal



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Antenna	Verdict
1	2561.500	49.44	3.53	74.0	-24.56	Peak	8.10	Horizontal	Pass
1**	2561.500	39.90	3.53	54.0	-14.10	AV	8.10	Horizontal	Pass
2	4804.000	48.27	-7.11	74.0	-25.73	Peak	332.10	Horizontal	Pass
2**	4804.000	41.64	-7.11	54.0	-12.36	AV	332.10	Horizontal	Pass
3	6984.000	53.90	1.19	74.0	-20.10	Peak	323.10	Horizontal	Pass
3**	6984.000	43.22	1.19	54.0	-10.78	AV	323.10	Horizontal	Pass
4	11185.500	56.07	2.54	74.0	-17.93	Peak	12.90	Horizontal	Pass
4**	11185.500	44.60	2.54	54.0	-9.40	AV	12.90	Horizontal	Pass
5	13982.250	58.31	8.23	74.0	-15.69	Peak	234.80	Horizontal	Pass
5**	13982.250	47.99	8.23	54.0	-6.01	AV	234.80	Horizontal	Pass
6	17912.001	58.75	7.15	74.0	-15.25	Peak	315.80	Horizontal	Pass
6**	17912.001	48.69	7.15	54.0	-5.31	AV	315.80	Horizontal	Pass



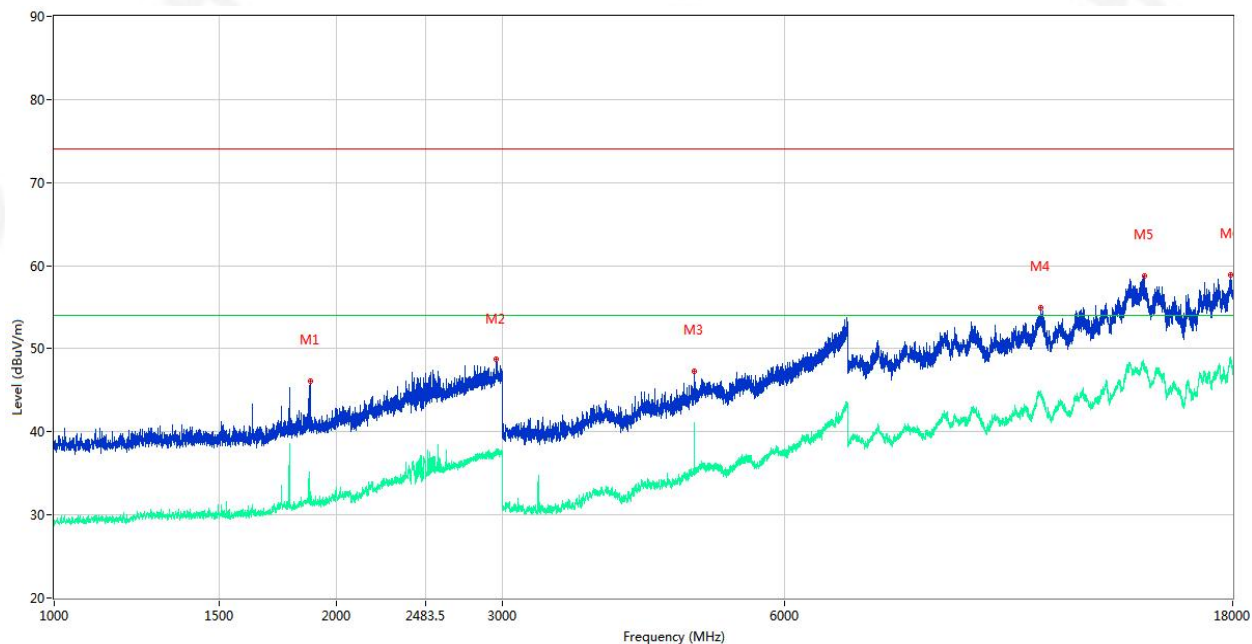
18GHz-26GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/ m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	20192.000	49.50	1.97	51.47	74.00	-22.53	peak
2	20192.000	39.23	1.97	41.20	54.00	-12.80	AVG



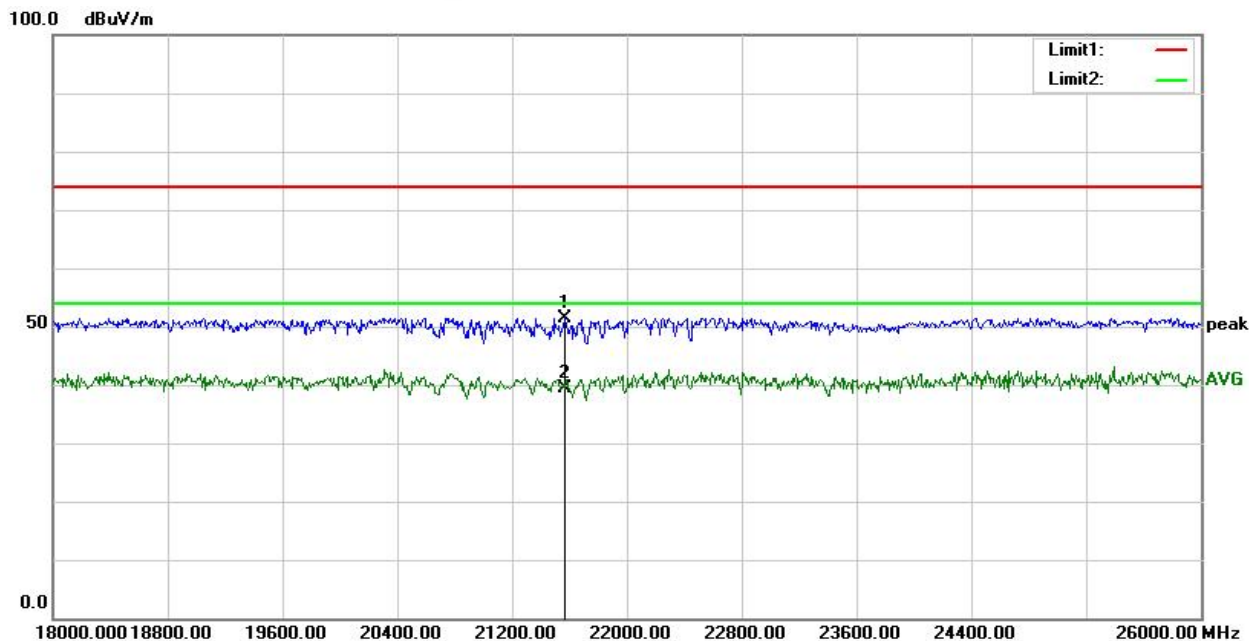
Vertical
1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Antenna	Verdict
1	1874.500	46.16	-0.11	74.0	-27.84	Peak	147.90	Vertical	Pass
1**	1874.500	32.75	-0.11	54.0	-21.25	AV	147.90	Vertical	Pass
2	2955.500	48.68	5.24	74.0	-25.32	Peak	258.40	Vertical	Pass
2**	2955.500	37.12	5.24	54.0	-16.88	AV	258.40	Vertical	Pass
3	4804.000	47.26	-7.11	74.0	-26.74	Peak	42.00	Vertical	Pass
3**	4804.000	41.07	-7.11	54.0	-12.93	AV	42.00	Vertical	Pass
4	11235.000	54.93	2.50	74.0	-19.07	Peak	219.70	Vertical	Pass
4**	11235.000	44.91	2.50	54.0	-9.09	AV	219.70	Vertical	Pass
5	14485.500	58.71	6.38	74.0	-15.29	Peak	42.60	Vertical	Pass
5**	14485.500	47.85	6.38	54.0	-6.15	AV	42.60	Vertical	Pass
6	17895.500	58.84	7.20	74.0	-15.16	Peak	325.40	Vertical	Pass
6**	17895.500	48.94	7.20	54.0	-5.06	AV	325.40	Vertical	Pass



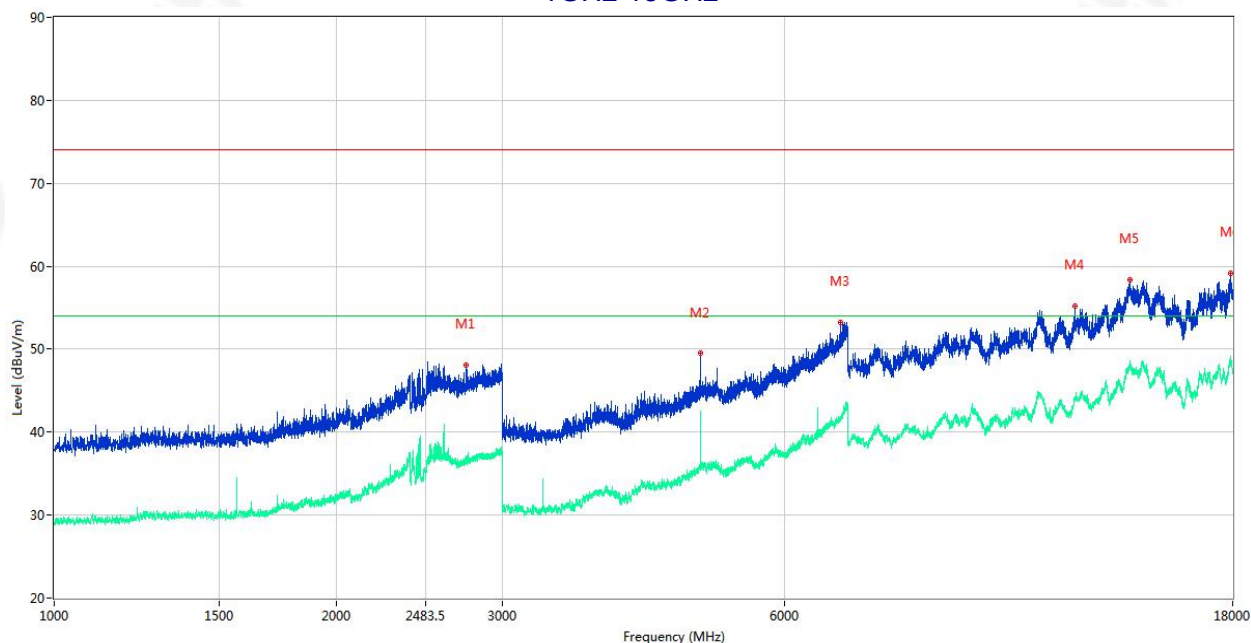
18GHz-26GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	21568.000	48.50	3.00	51.50	74.00	-22.50	peak
2	21568.000	36.42	3.00	39.42	54.00	-14.58	AVG



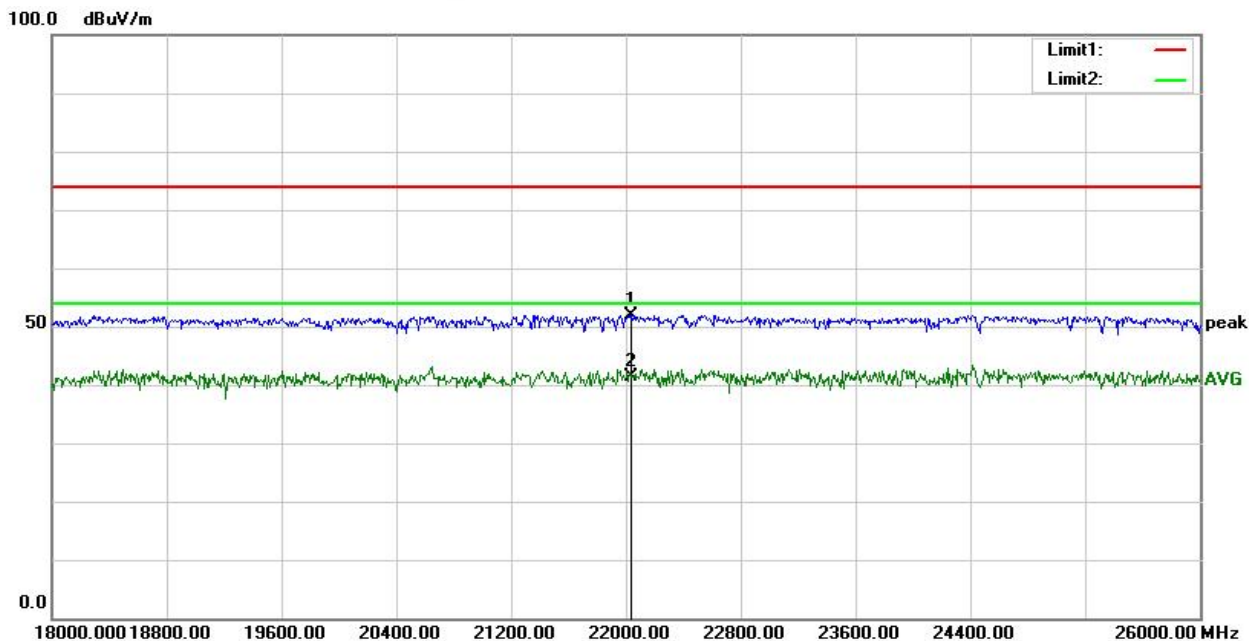
Mid Channel
Horizontal
1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Antenna	Verdict
1	2746.000	48.06	4.39	74.0	-25.94	Peak	209.30	Horizontal	Pass
1**	2746.000	36.22	4.39	54.0	-17.78	AV	209.30	Horizontal	Pass
2	4880.000	49.47	-6.29	74.0	-24.53	Peak	324.30	Horizontal	Pass
2**	4880.000	42.55	-6.29	54.0	-11.45	AV	324.30	Horizontal	Pass
3	6880.000	53.17	0.40	74.0	-20.83	Peak	102.10	Horizontal	Pass
3**	6880.000	41.75	0.40	54.0	-12.25	AV	102.10	Horizontal	Pass
4	12216.750	55.18	2.80	74.0	-18.82	Peak	171.60	Horizontal	Pass
4**	12216.750	44.23	2.80	54.0	-9.77	AV	171.60	Horizontal	Pass
5	13996.000	58.43	8.40	74.0	-15.57	Peak	190.90	Horizontal	Pass
5**	13996.000	48.11	8.40	54.0	-5.89	AV	190.90	Horizontal	Pass
6	17898.250	59.21	7.22	74.0	-14.79	Peak	27.70	Horizontal	Pass
6**	17898.250	48.89	7.22	54.0	-5.11	AV	27.70	Horizontal	Pass



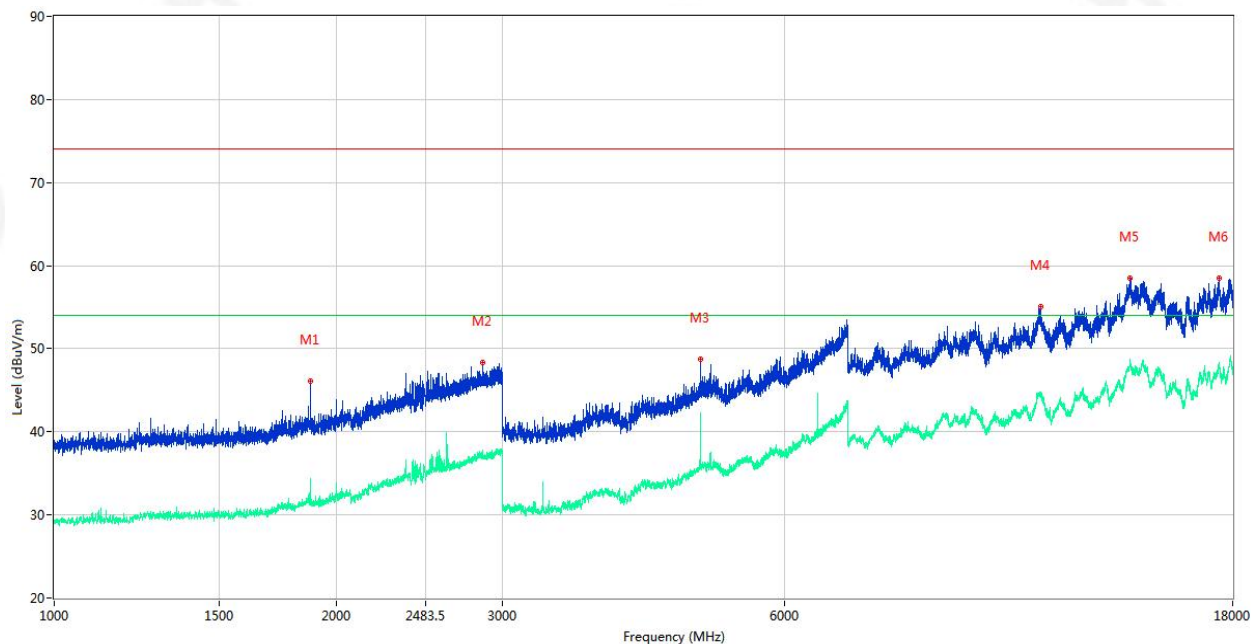
18GHz-26GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	22040.000	48.53	3.46	51.99	74.00	-22.01	peak
2	22040.000	37.92	3.46	41.38	54.00	-12.62	AVG



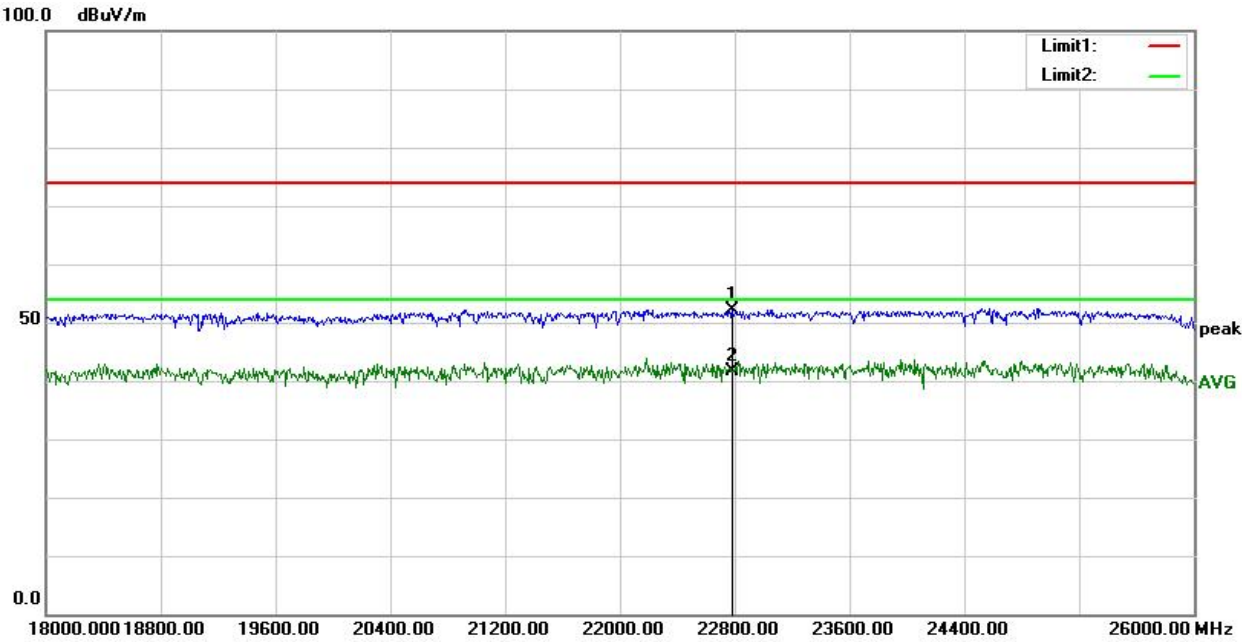
Vertical
1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Antenna	Verdict
1	1874.000	46.11	-0.11	74.0	-27.89	Peak	56.80	Vertical	Pass
1**	1874.000	34.31	-0.11	54.0	-19.69	AV	56.80	Vertical	Pass
2	2860.500	48.41	4.98	74.0	-25.59	Peak	356.60	Vertical	Pass
2**	2860.500	37.06	4.98	54.0	-16.94	AV	356.60	Vertical	Pass
3	4880.000	48.70	-6.29	74.0	-25.30	Peak	52.90	Vertical	Pass
3**	4880.000	42.27	-6.29	54.0	-11.73	AV	52.90	Vertical	Pass
4	11251.500	55.12	2.44	74.0	-18.88	Peak	284.50	Vertical	Pass
4**	11251.500	44.42	2.44	54.0	-9.58	AV	284.50	Vertical	Pass
5	13998.750	58.49	8.43	74.0	-15.51	Peak	155.80	Vertical	Pass
5**	13998.750	48.34	8.43	54.0	-5.66	AV	155.80	Vertical	Pass
6	17411.500	58.53	6.78	74.0	-15.47	Peak	299.70	Vertical	Pass
6**	17411.500	48.11	6.78	54.0	-5.89	AV	299.70	Vertical	Pass



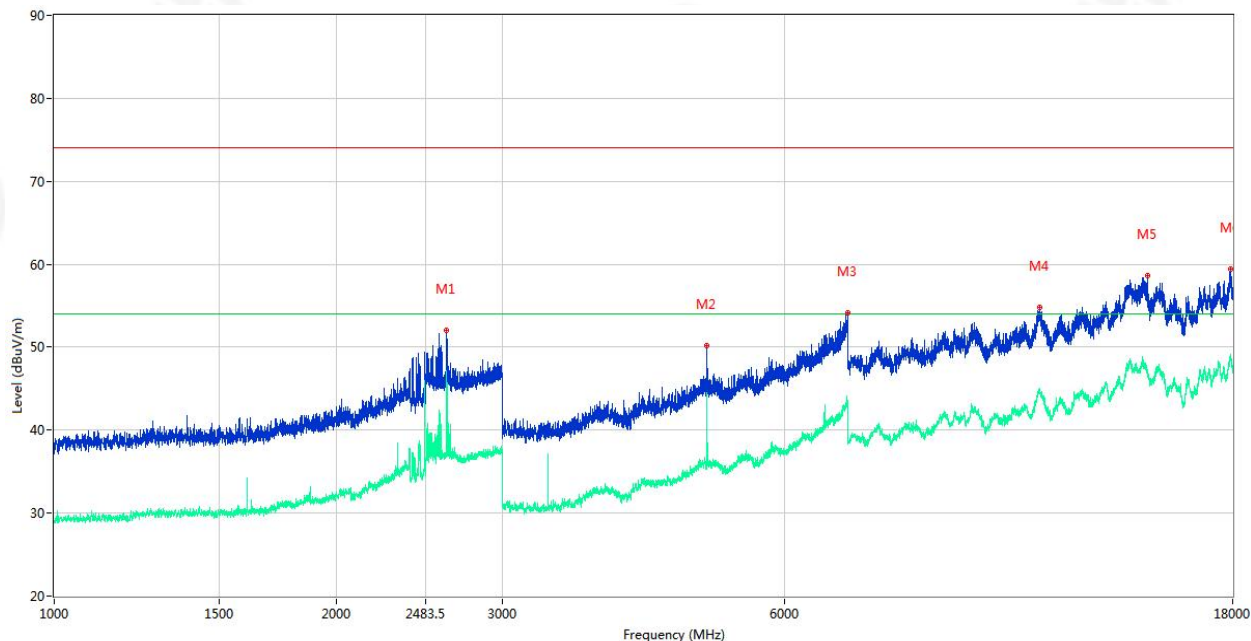
18GHz-26GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	22784.000	48.41	3.75	52.16	74.00	-21.84	peak
2	22784.000	37.91	3.75	41.66	54.00	-12.34	AVG



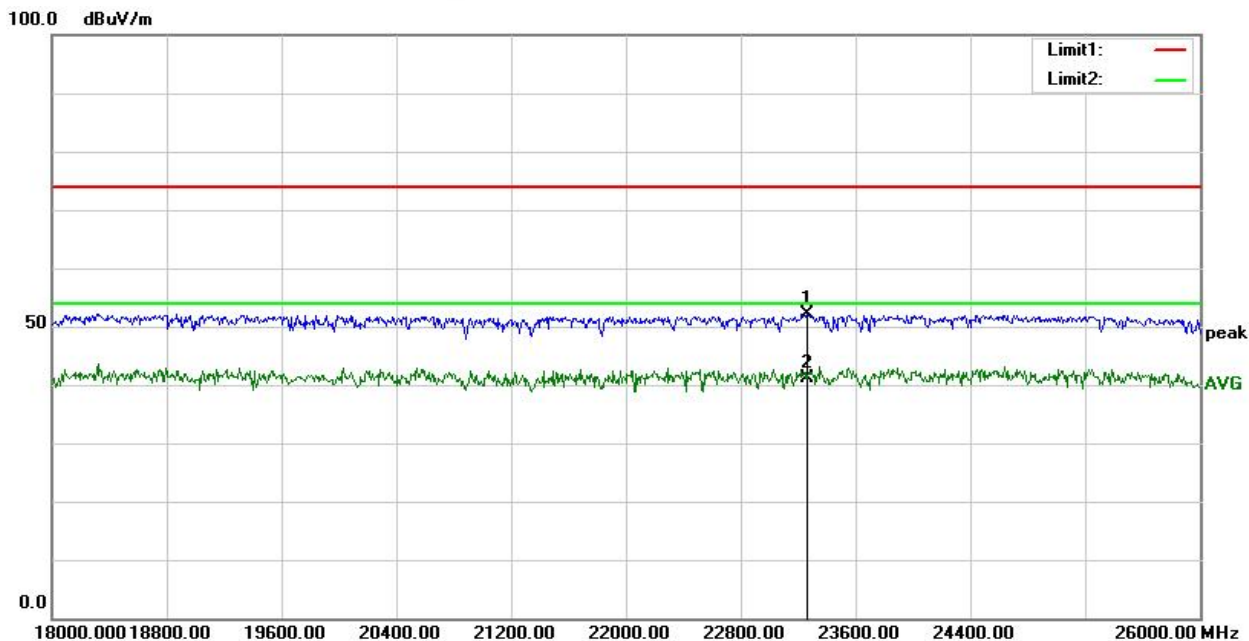
High Channel
Horizontal
1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Antenna	Verdict
1	2619.000	52.09	3.64	74.0	-21.91	Peak	275.90	Horizontal	Pass
1**	2619.000	46.99	3.64	54.0	-7.01	AV	275.90	Horizontal	Pass
2	4960.000	50.22	-5.99	74.0	-23.78	Peak	223.50	Horizontal	Pass
2**	4960.000	44.51	-5.99	54.0	-9.49	AV	223.50	Horizontal	Pass
3	6996.000	54.18	1.29	74.0	-19.82	Peak	75.10	Horizontal	Pass
3**	6996.000	43.18	1.29	54.0	-10.82	AV	75.10	Horizontal	Pass
4	11213.000	54.80	2.58	74.0	-19.20	Peak	221.20	Horizontal	Pass
4**	11213.000	44.40	2.58	54.0	-9.60	AV	221.20	Horizontal	Pass
5	14609.250	58.61	6.29	74.0	-15.39	Peak	232.00	Horizontal	Pass
5**	14609.250	47.05	6.29	54.0	-6.95	AV	232.00	Horizontal	Pass
6	17903.749	59.41	7.21	74.0	-14.59	Peak	33.30	Horizontal	Pass
6**	17903.749	48.88	7.21	54.0	-5.12	AV	33.30	Horizontal	Pass



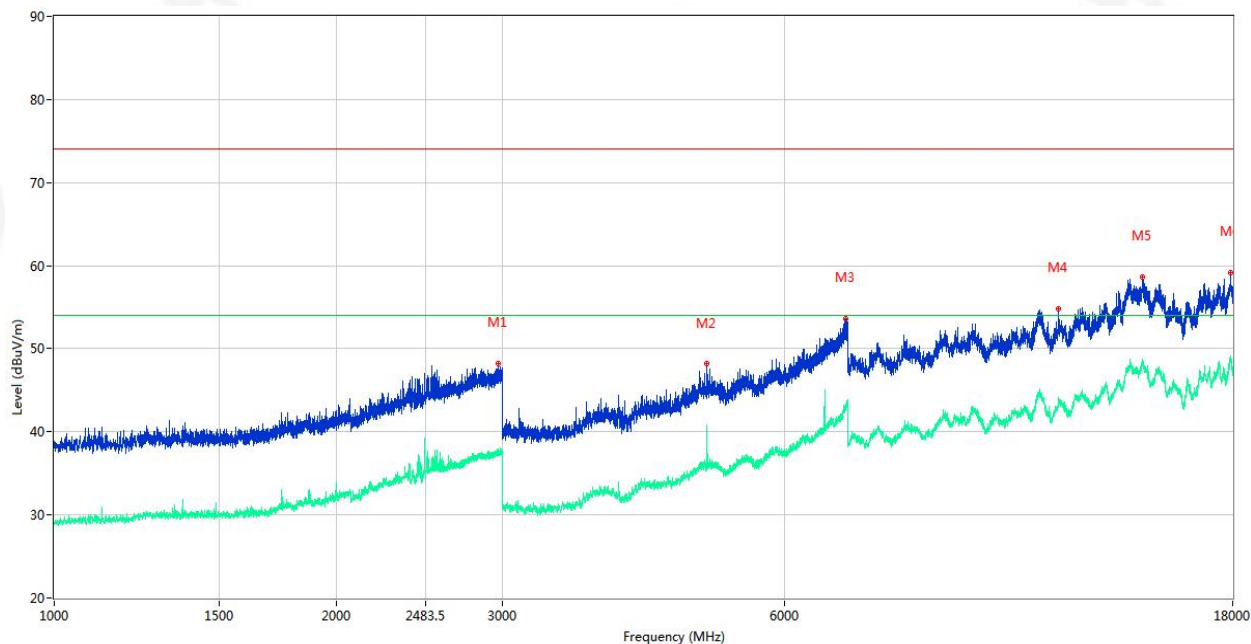
18GHz-26GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	23264.000	48.18	3.90	52.08	74.00	-21.92	peak
2	23264.000	37.17	3.90	41.07	54.00	-12.93	AVG



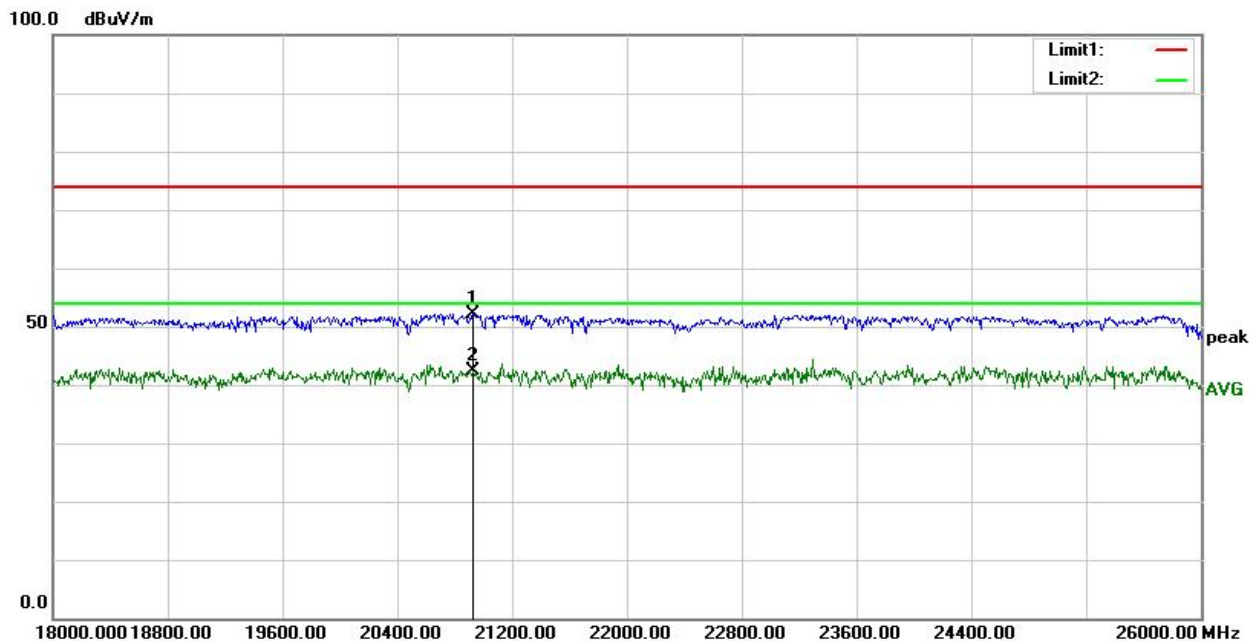
Vertical
1GHz-18GHz



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB/m)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (Degree)	Antenna	Verdict
1	2971.000	48.16	5.32	74.0	-25.84	Peak	24.90	Vertical	Pass
1**	2971.000	37.57	5.32	54.0	-16.43	AV	24.90	Vertical	Pass
2	4960.000	48.15	-5.99	74.0	-25.85	Peak	359.10	Vertical	Pass
2**	4960.000	40.83	-5.99	54.0	-13.17	AV	359.10	Vertical	Pass
3	6960.000	53.56	1.00	74.0	-20.44	Peak	341.40	Vertical	Pass
3**	6960.000	42.80	1.00	54.0	-11.20	AV	341.40	Vertical	Pass
4	11735.500	54.79	1.76	74.0	-19.21	Peak	285.00	Vertical	Pass
4**	11735.500	43.41	1.76	54.0	-10.59	AV	285.00	Vertical	Pass
5	14411.250	58.59	6.91	74.0	-15.41	Peak	358.20	Vertical	Pass
5**	14411.250	47.88	6.91	54.0	-6.12	AV	358.20	Vertical	Pass
6	17909.250	59.21	7.17	74.0	-14.79	Peak	0.30	Vertical	Pass
6**	17909.250	48.90	7.17	54.0	-5.10	AV	0.30	Vertical	Pass



18GHz-26GHz



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	20928.000	49.64	2.60	52.24	74.00	-21.76	peak
2	20928.000	39.82	2.60	42.42	54.00	-11.58	AVG

Note:

- Factor = Antenna Factor + Cable Loss – Pre-amplifier.
Emission Level = Reading + Factor.
- 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. RADIATED BAND EMISSION MEASUREMENT

5.1 TEST REQUIREMENT

Test Requirement:	FCC Part15 C Section 15.209 and 15.205				
Test Method:	ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Erratato C63.10a-2024				
Test Frequency Range:	All of the restrict bands were tested, only the worst band's (2310MHz to 2500MHz) data was showed.				
Test site:	Measurement Distance: 3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Value
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Average	1MHz	3MHz	Average

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).

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	2310MHz
Stop Frequency	2500MHz
RB / VB (emission in restricted band)	1 MHz / 3 MHz for Peak, 1 MHz / 3MHz for Average

5.2 TEST PROCEDURE

Above 1GHz test procedure as below:

- The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation.
- The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading.
- The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.



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

Note:

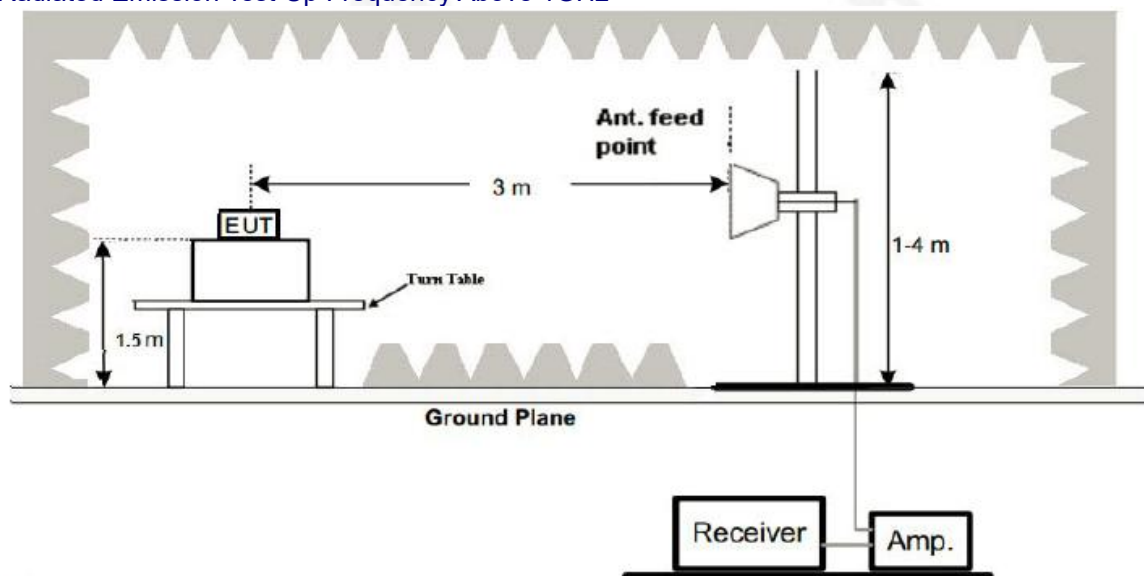
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

5.3 DEVIATION FROM TEST STANDARD

No deviation

5.4 TEST SETUP

Radiated Emission Test-Up Frequency Above 1GHz



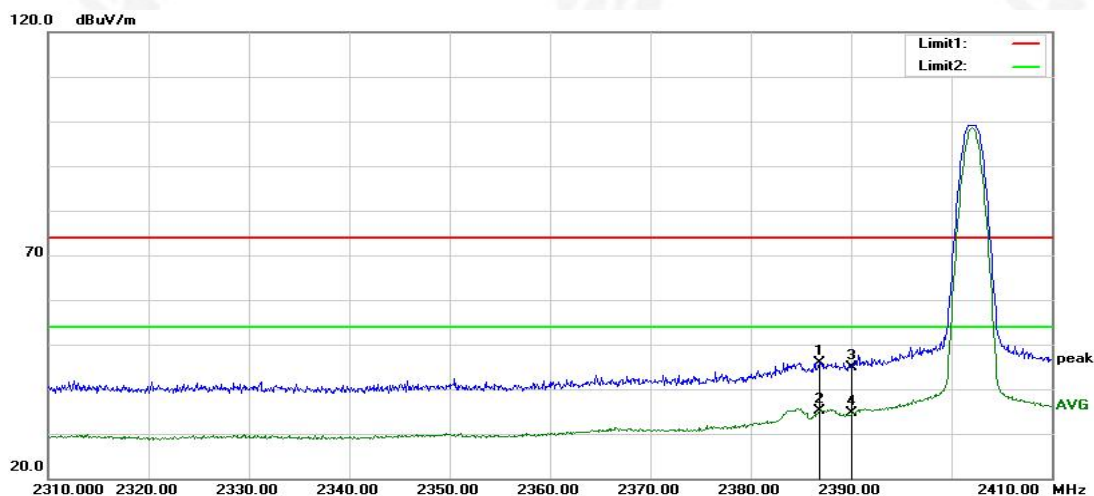
5.5 EUT OPERATING CONDITIONS

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 RESULT

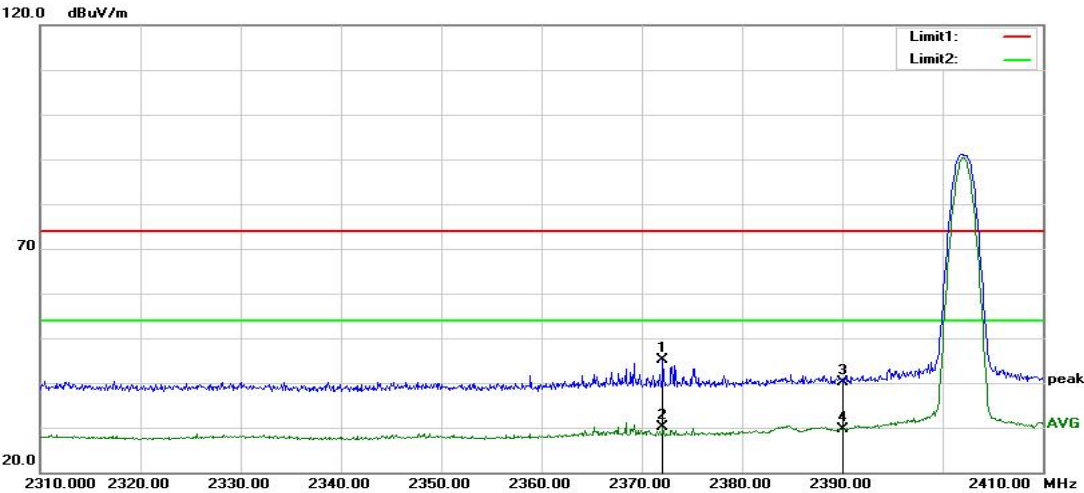
GFSK-Low Horizontal



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2386.800	45.17	0.79	45.96	74.00	-28.04	peak
2	2386.800	34.41	0.79	35.20	54.00	-18.80	AVG
3	2390.000	43.97	0.81	44.78	74.00	-29.22	peak
4	2390.000	33.70	0.81	34.51	54.00	-19.49	AVG



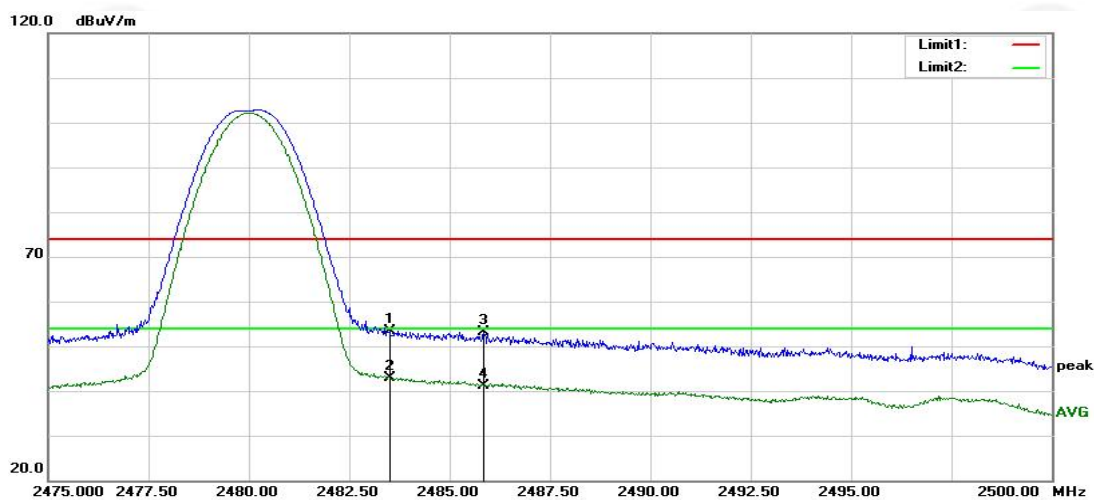
Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2372.100	44.39	0.68	45.07	74.00	-28.93	peak
2	2372.100	29.48	0.68	30.16	54.00	-23.84	AVG
3	2390.000	39.26	0.81	40.07	74.00	-33.93	peak
4	2390.000	28.85	0.81	29.66	54.00	-24.34	AVG



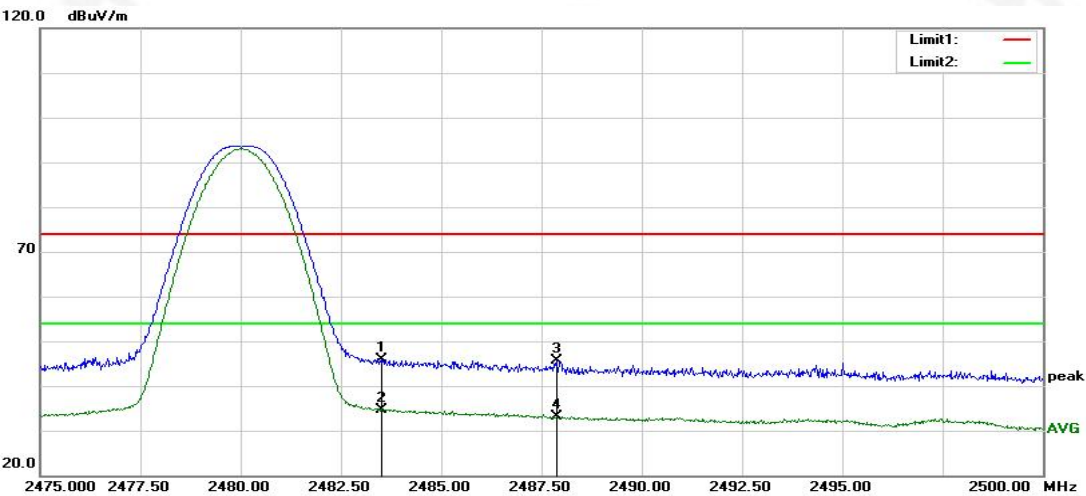
GFSK-High
Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor (dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	52.28	1.02	53.30	74.00	-20.70	peak
2	2483.500	41.83	1.02	42.85	54.00	-11.15	AVG
3	2485.850	52.05	1.02	53.07	74.00	-20.93	peak
4	2485.850	40.10	1.02	41.12	54.00	-12.88	AVG



Vertical



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	2483.500	44.93	1.02	45.95	74.00	-28.05	peak
2	2483.500	33.65	1.02	34.67	54.00	-19.33	AVG
3	2487.875	44.63	1.03	45.66	74.00	-28.34	peak
4	2487.875	32.02	1.03	33.05	54.00	-20.95	AVG



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

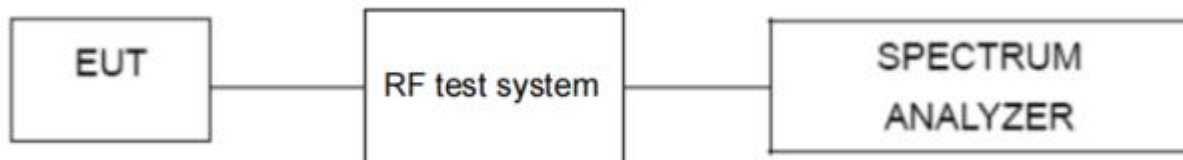
6.2 TEST PROCEDURE

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: $3\text{ kHz} \leq \text{RBW} \leq 100\text{ kHz}$.
4. Set the VBW $\geq 3 \times \text{RBW}$.
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



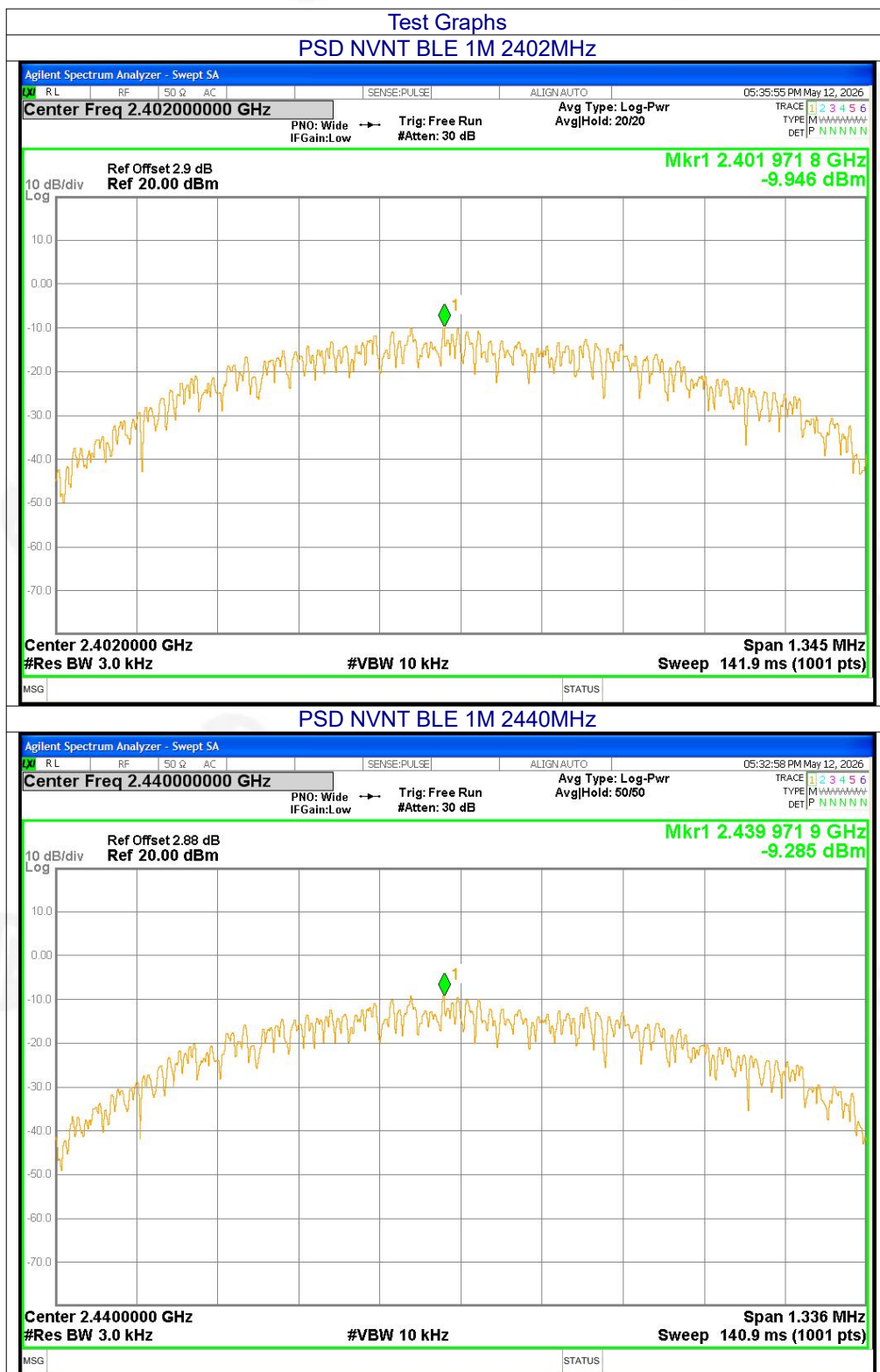
6.5 EUT OPERATION CONDITIONS

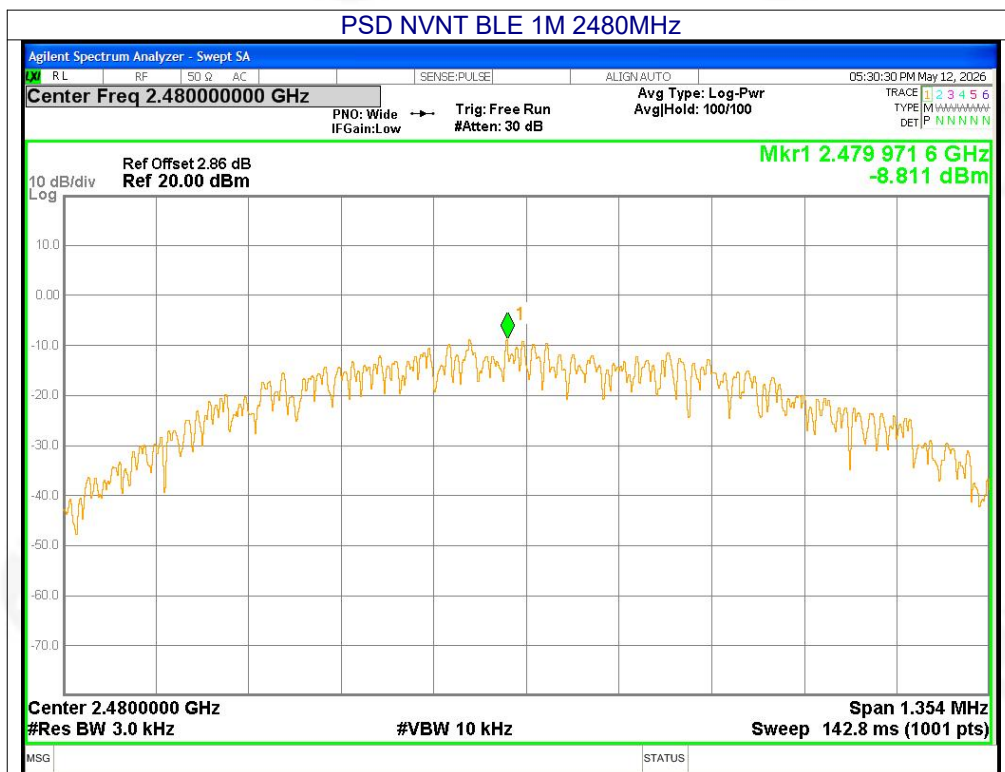
The EUT tested system was configured as the statements of chapter 3, Unless otherwise a special operating condition is specified in the follows during the testing.



6.6 TEST RESULT

Condition	Mode	Frequency (MHz)	PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	BLE 1M	2402	-9.95	<=8	Pass
NVNT	BLE 1M	2440	-9.29	<=8	Pass
NVNT	BLE 1M	2480	-8.81	<=8	Pass







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	$\geq 500\text{kHz}$ (6dB Occupied Bandwidth)	2400-2483.5 (MHz)	PASS

7.2 TEST PROCEDURE

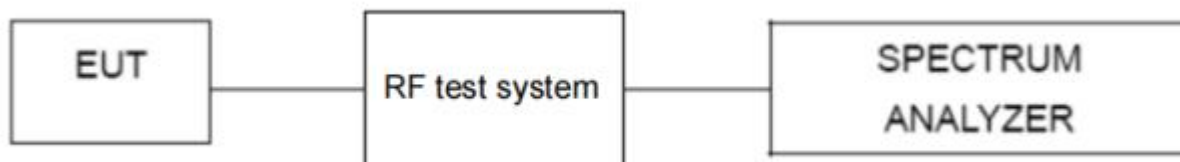
The steps for 6dB Bandwidth are as follows:

- Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100 kHz.
- Set the VBW $\geq [3 \times \text{RBW}]$.
- Detector = peak.
- Trace mode = max-hold.
- Sweep = No faster than coupled (auto) time.
- Allow the trace to stabilize.
- 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



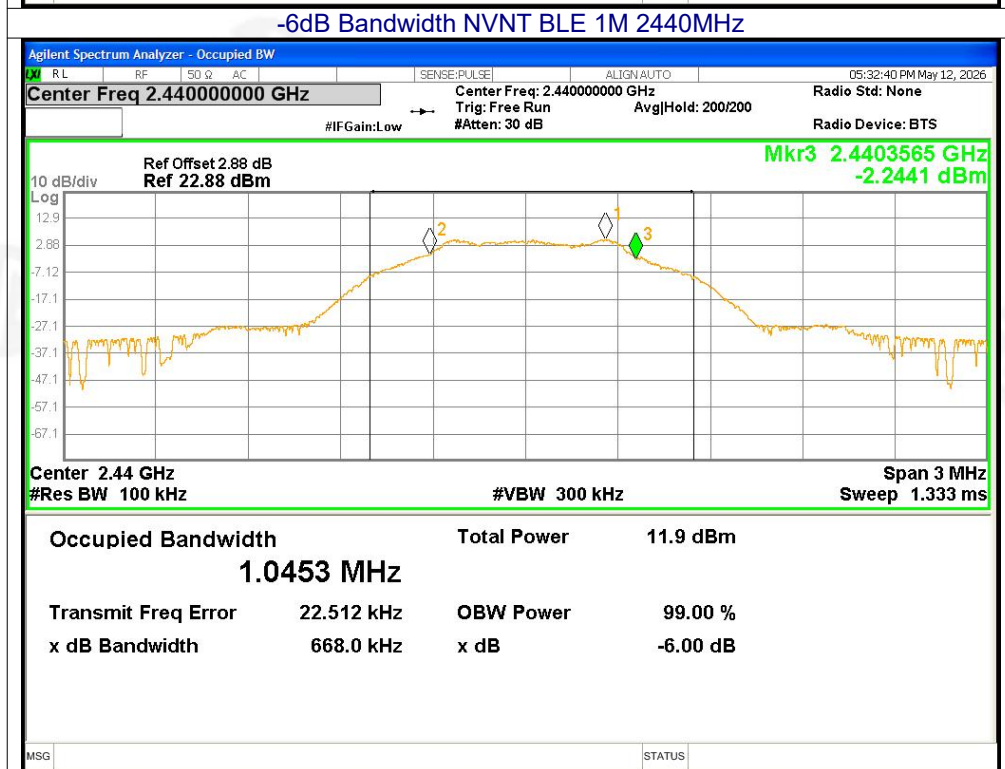
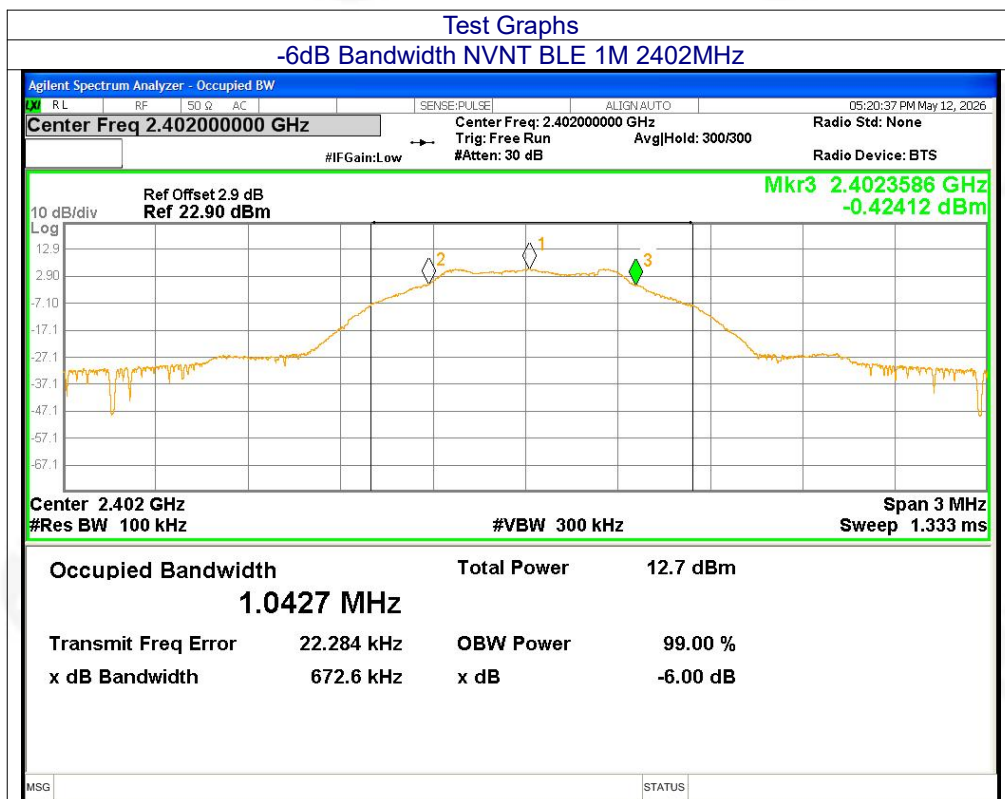
7.5 EUT OPERATION CONDITIONS

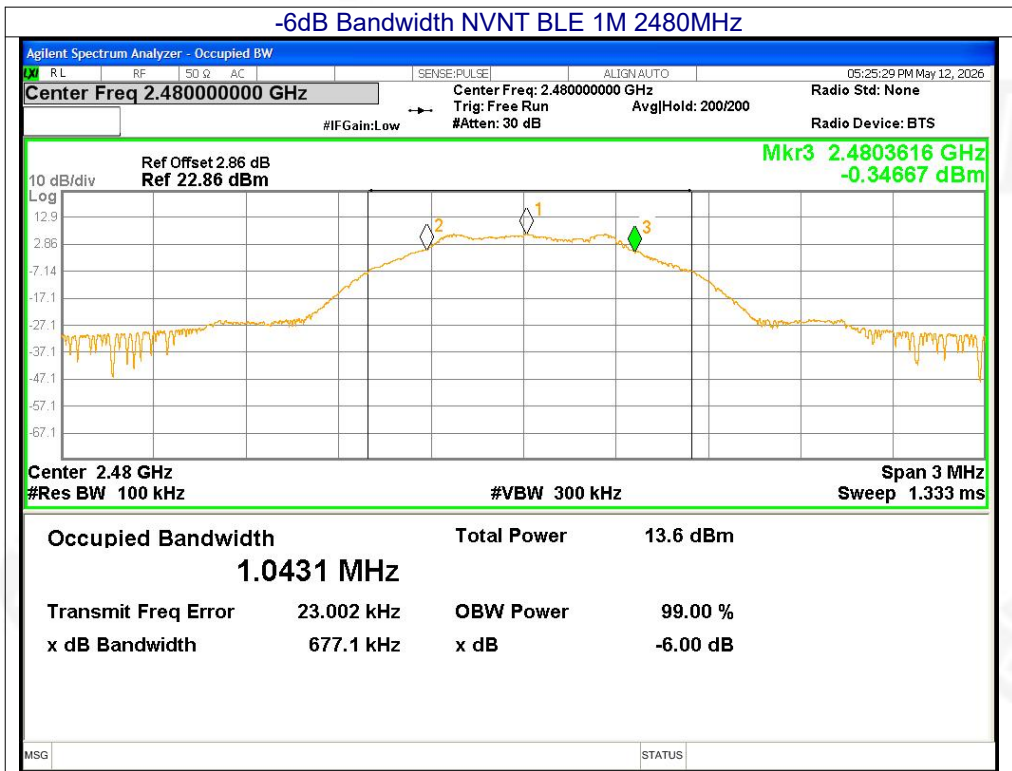
The EUT tested system was configured as the statements of chapter 3, Unless otherwise a special operating condition is specified in the follows during the testing.



7.6 TEST RESULT

Condition	Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1M	2402	0.6726	≥ 0.5	Pass
NVNT	BLE 1M	2440	0.668	≥ 0.5	Pass
NVNT	BLE 1M	2480	0.6771	≥ 0.5	Pass







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



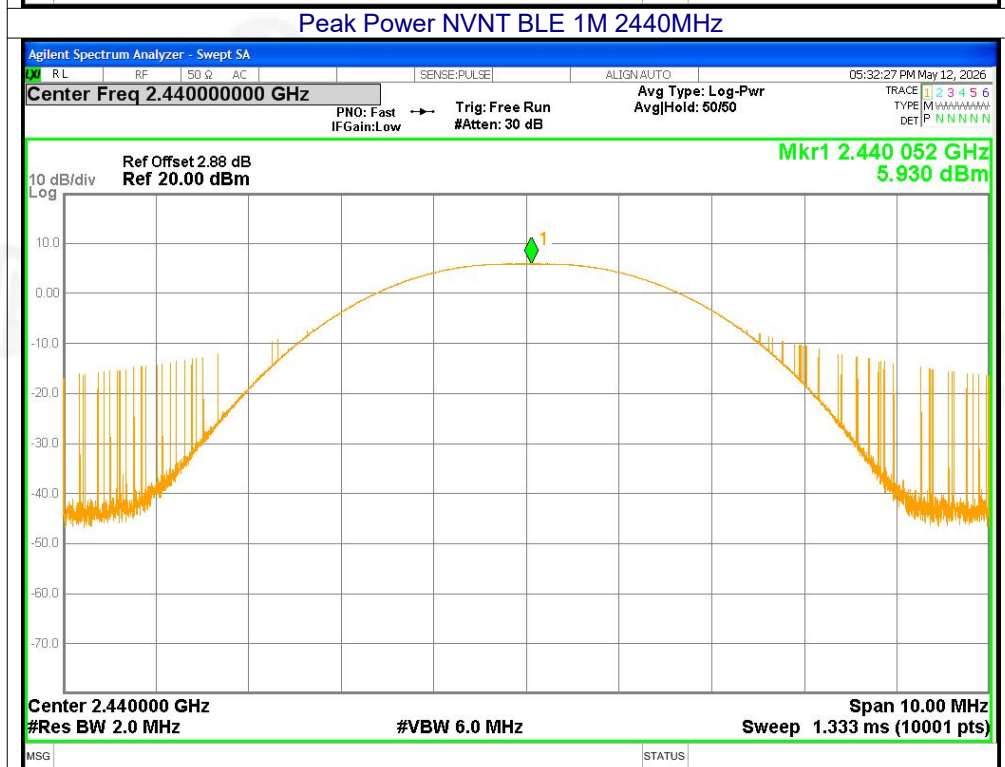
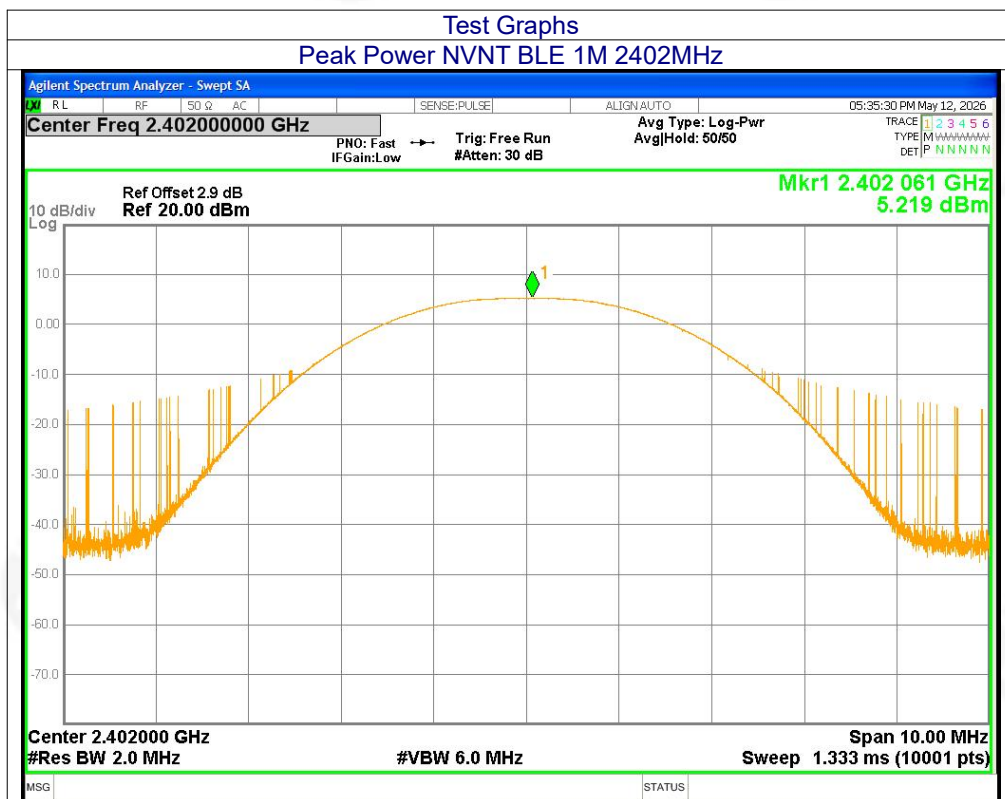
8.5 EUT OPERATION CONDITIONS

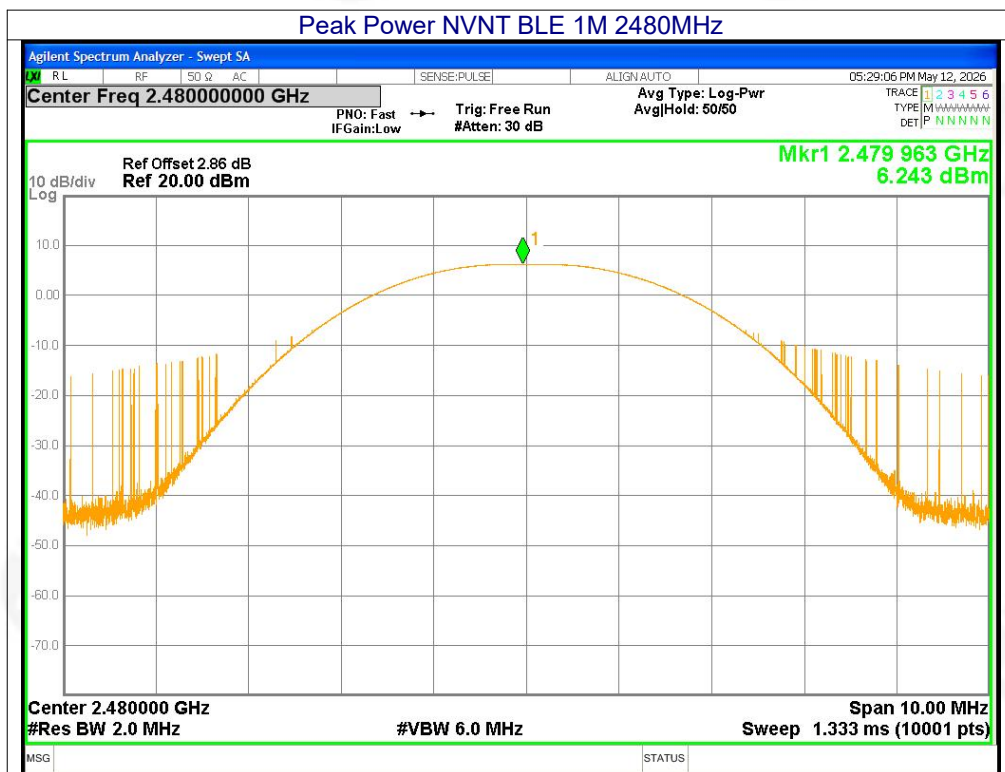
The EUT tested system was configured as the statements of chapter 3, Unless otherwise a special operating condition is specified in the follows during the testing.



8.6 TEST RESULT

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	5.22	<=30	Pass
NVNT	BLE 1M	2440	5.93	<=30	Pass
NVNT	BLE 1M	2480	6.24	<=30	Pass







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 conditions⁸⁹:

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:

- Set instrument center frequency to DTS channel center frequency.
- Set the span to ≥ 1.5 times the DTS bandwidth.
- Set the RBW = 100 kHz.
- Set the VBW $\geq [3 \times \text{RBW}]$.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- 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:

- Set the center frequency and span to encompass frequency range to be measured.
- Set the RBW = 100 kHz.
- Set the VBW $\geq [3 \times \text{RBW}]$.
- Detector = peak.
- Sweep time = auto couple.
- Trace mode = max hold.
- Allow trace to fully stabilize.
- Use the peak marker function to determine the maximum amplitude level.

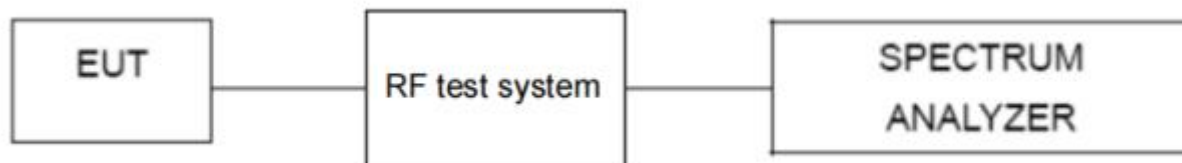
Ensure that the amplitude of all unwanted emissions outside of the authorized frequency band (excluding restricted frequency bands) is attenuated by at least the minimum requirements specified in 11.11. Report the three highest emissions relative to the limit.



9.3 DEVIATION FROM STANDARD

No deviation.

9.4 TEST SETUP



9.5 EUT OPERATION CONDITIONS

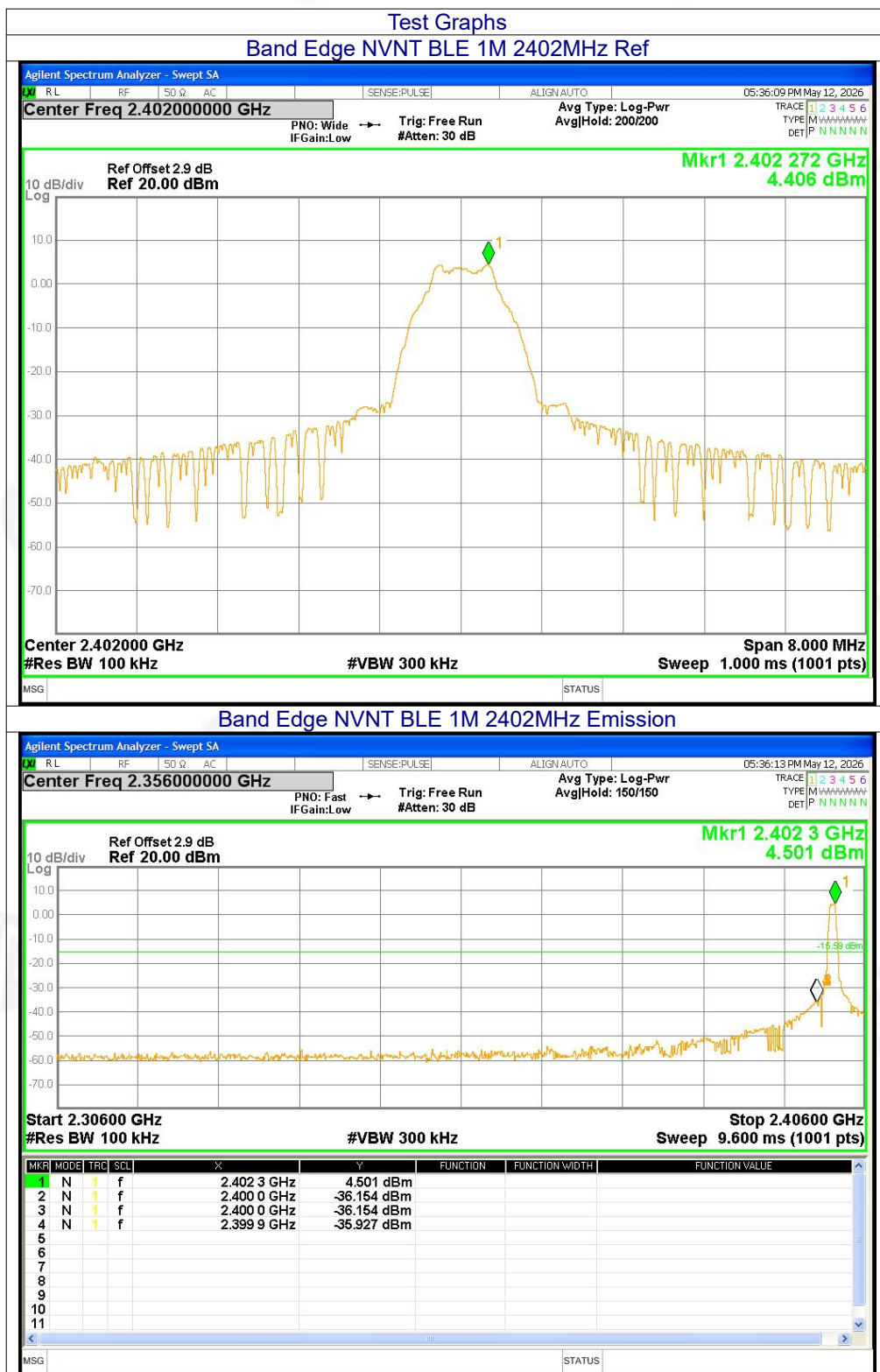
The EUT tested system was configured as the statements of chapter 3, Unless otherwise a special operating condition is specified in the follows during the testing.

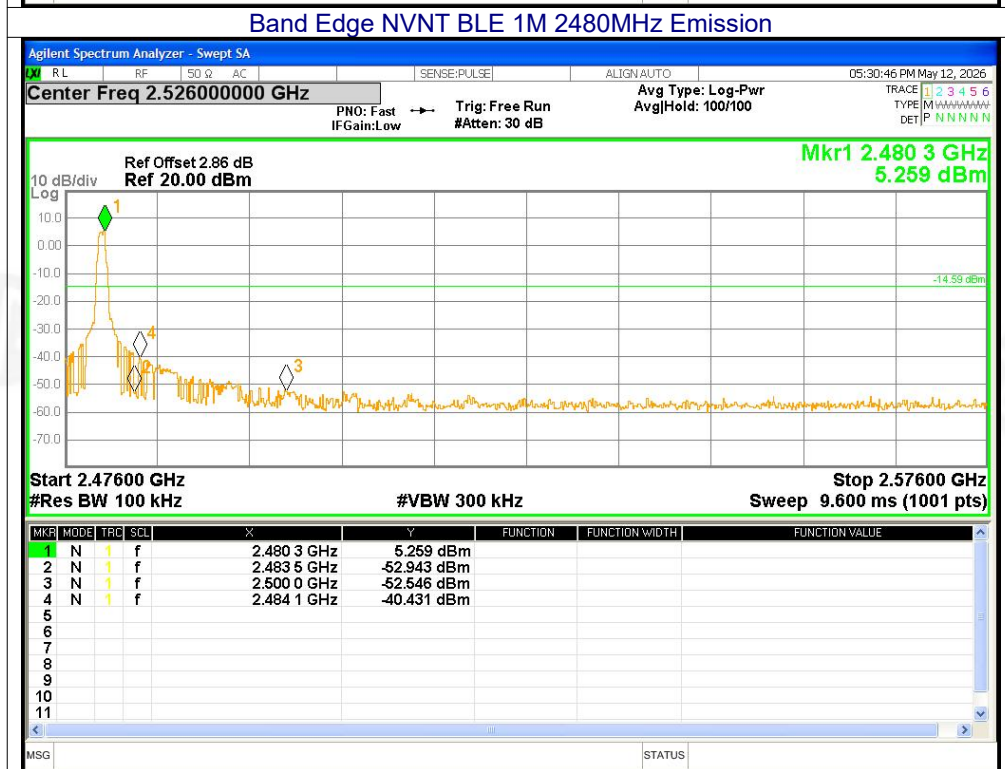
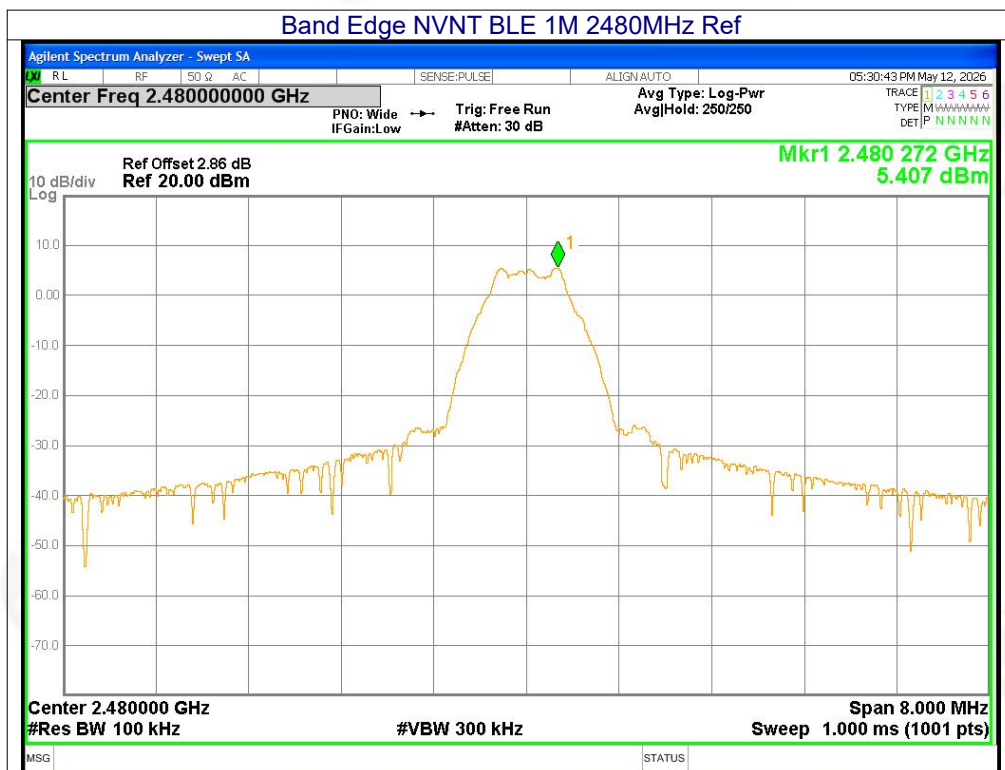


9.6 TEST RESULTS

Band Edge

Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	-40.33	<=-20	Pass
NVNT	BLE 1M	2480	-45.84	<=-20	Pass

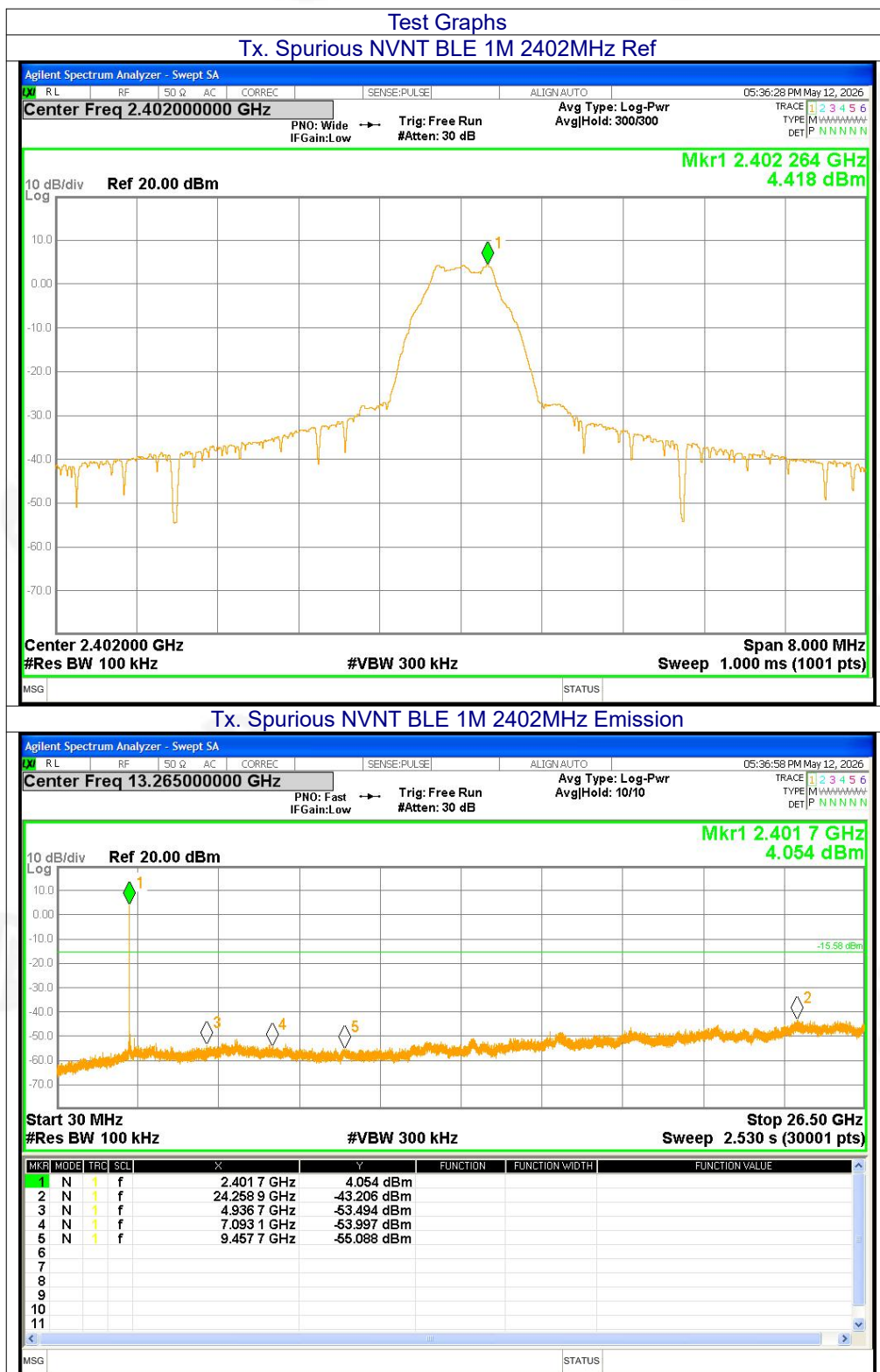


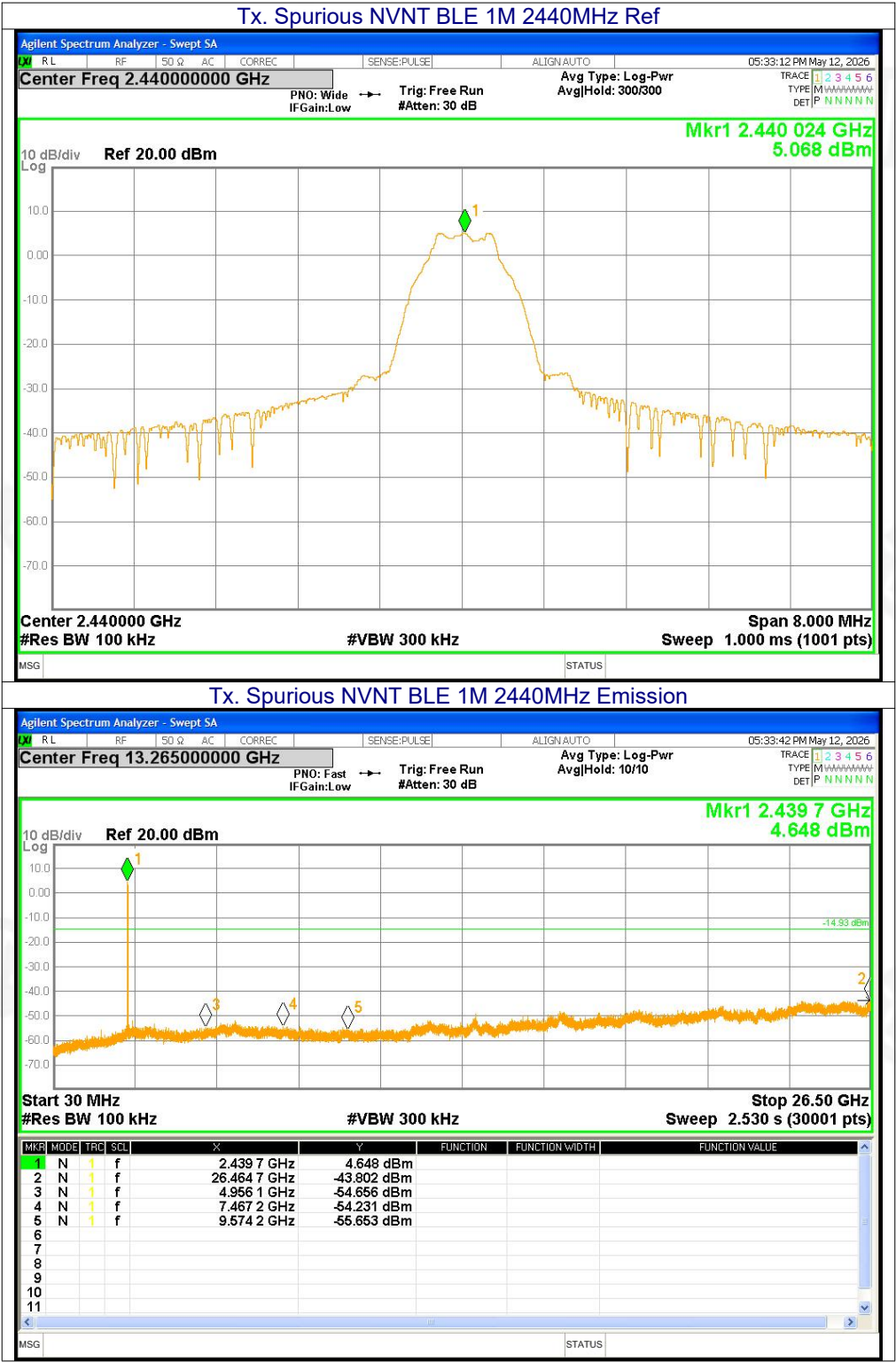


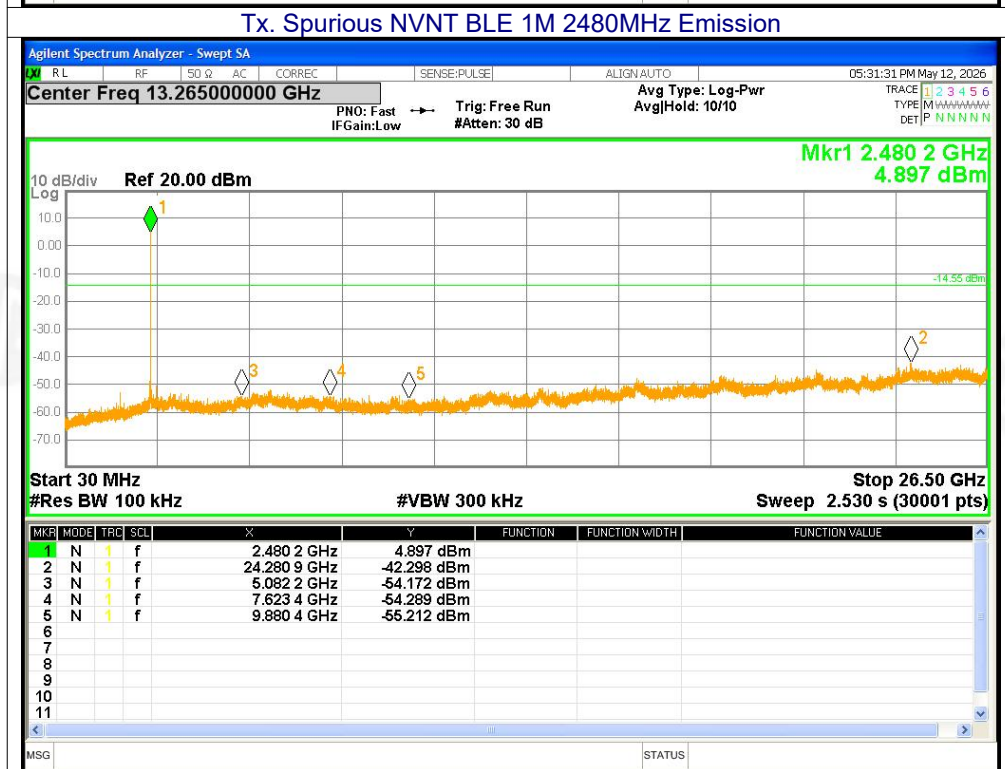
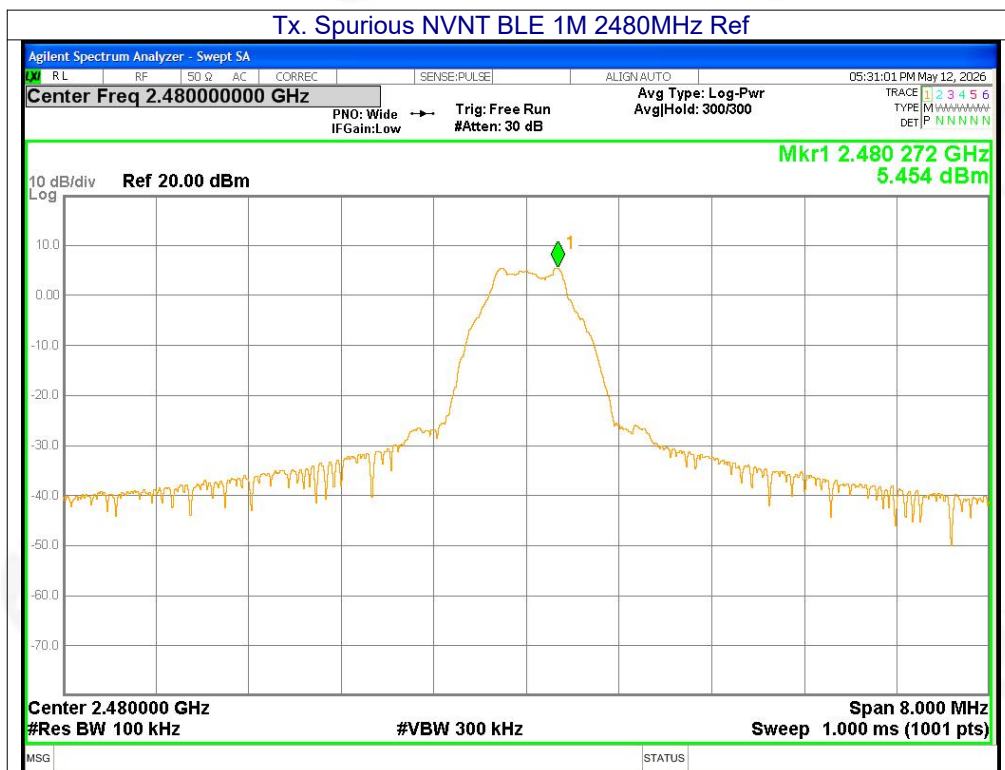


Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1M	2402	-47.62	<=-20	Pass
NVNT	BLE 1M	2440	-48.87	<=-20	Pass
NVNT	BLE 1M	2480	-47.74	<=-20	Pass









10. DUTY CYCLE

Test Method:	ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Erratato C63.10a-2024
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10.1 APPLIED PROCEDURES / LIMIT

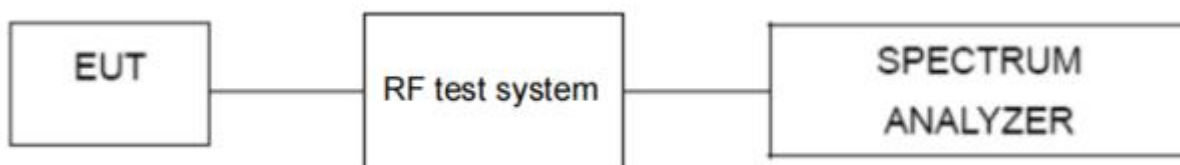
Measurements of duty cycle and transmission duration shall be performed using one of the following techniques:

- 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 $RBW \geq OBW$ if possible; otherwise, set RBW to the largest available value.
 - 3) Set $VBW \geq RBW$. 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 $T \leq 16.7 \mu s$.)

10.2 DEVIATION FROM STANDARD

No deviation.

10.3 TEST SETUP



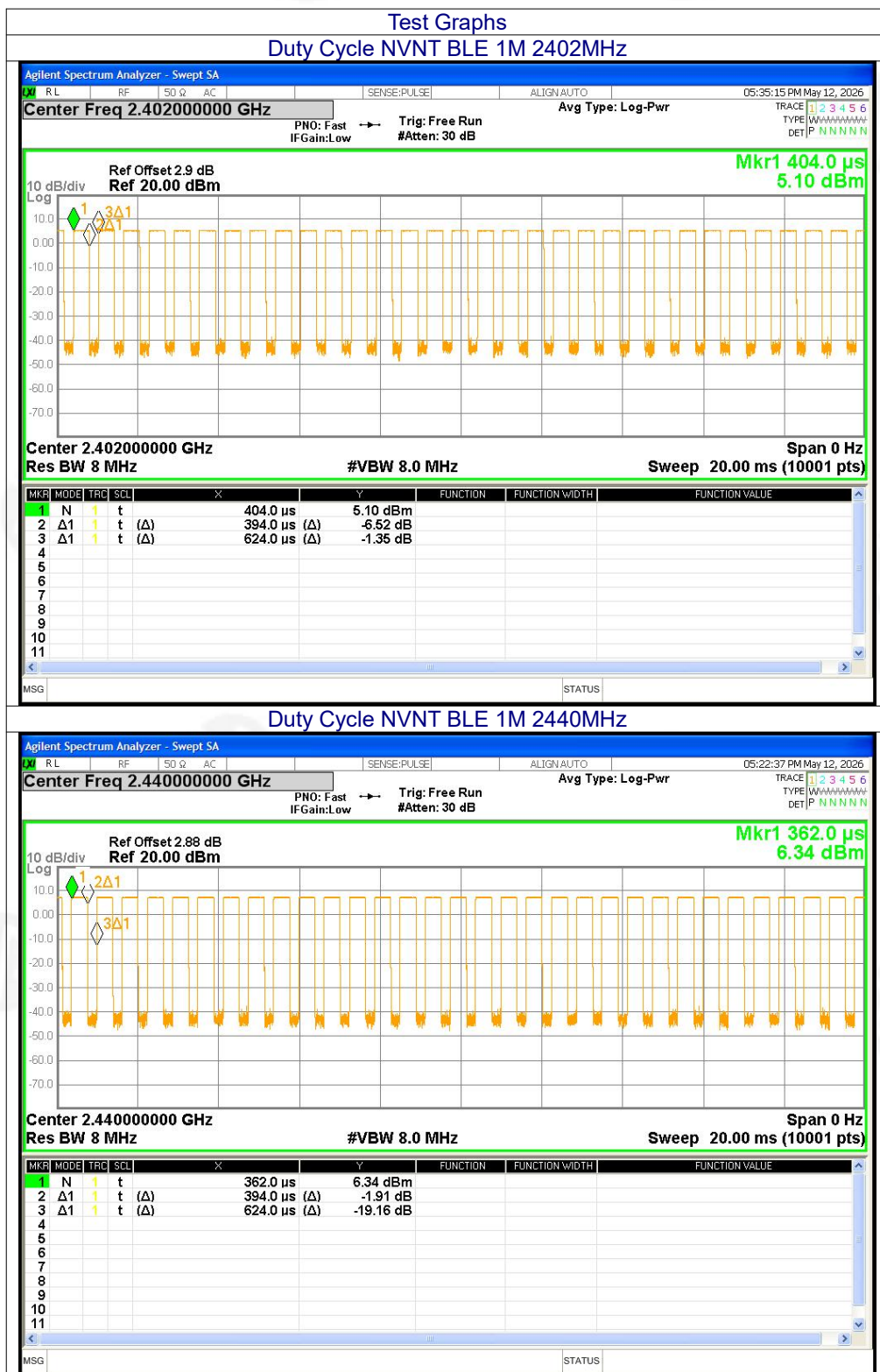
10.4 EUT OPERATION CONDITIONS

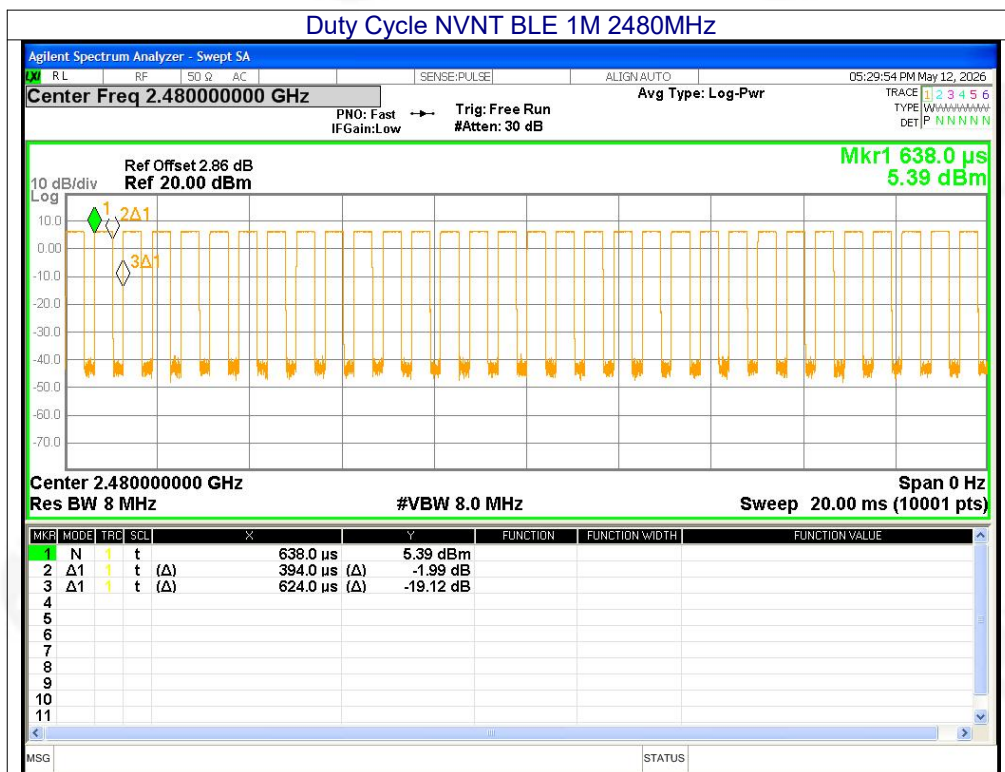
The EUT tested system was configured as the statements of chapter 3, Unless otherwise a special operating condition is specified in the follows during the testing.



10.5 TEST RESULTS

Condition	Mode	Frequency (MHz)	On Time (ms)	Period (ms)	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	0.394	0.624	63.14	2	2.54
NVNT	BLE 1M	2440	0.394	0.624	63.14	2	2.54
NVNT	BLE 1M	2480	0.394	0.624	63.14	2	2.54

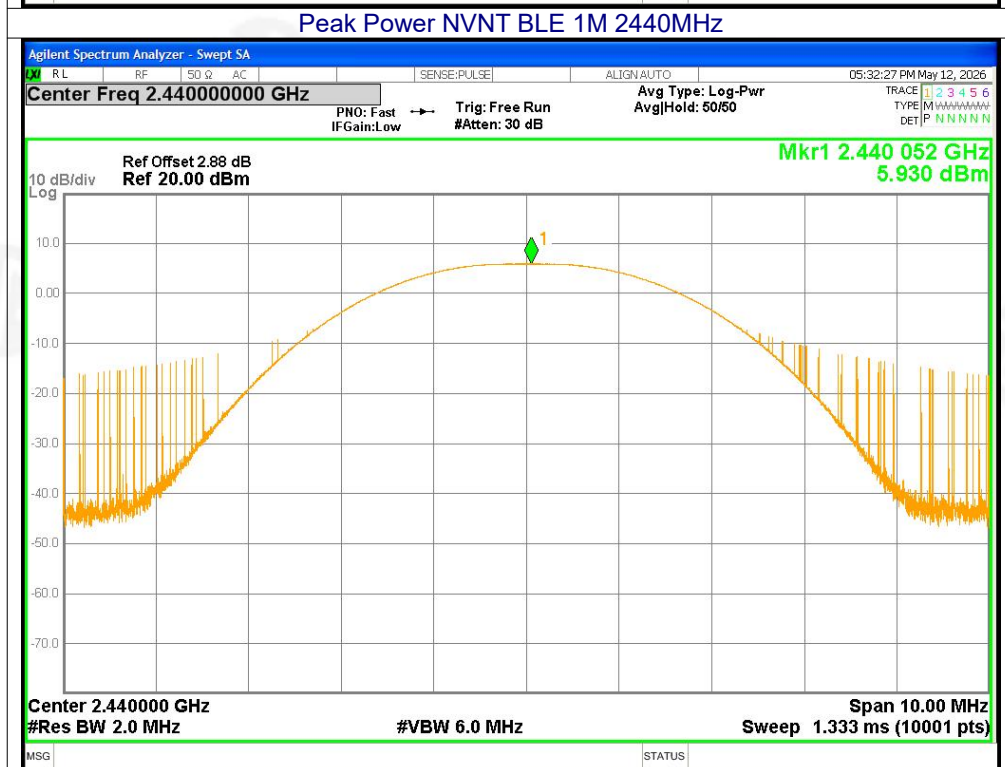
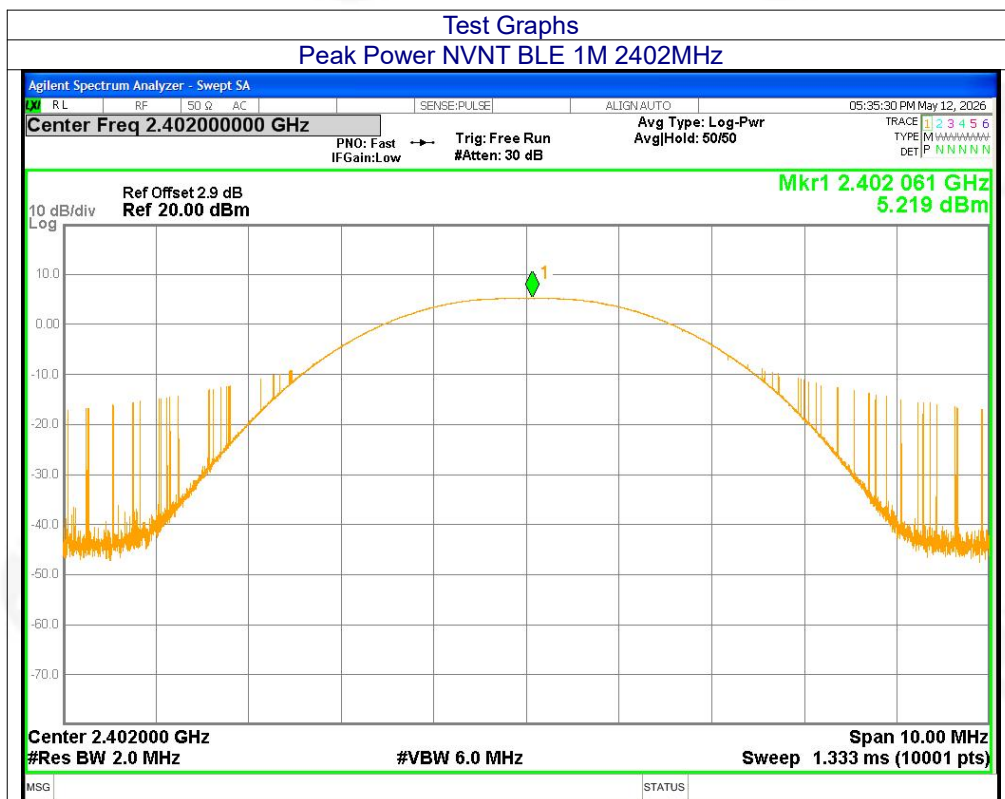


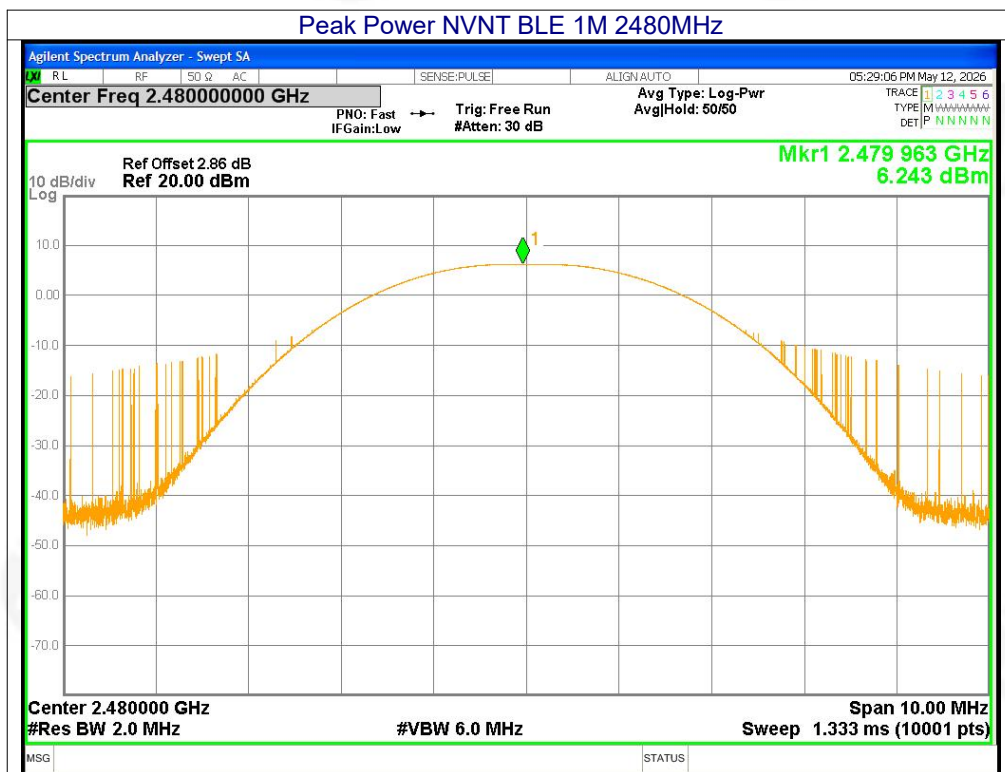




Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	BLE 1M	2402	5.22	<=30	Pass
NVNT	BLE 1M	2440	5.93	<=30	Pass
NVNT	BLE 1M	2480	6.24	<=30	Pass







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 0.88dBi, reference to the appendix II for details.	



12. TEST SETUP PHOTO

Reference to the appendix I for details.

13. EUT CONSTRUCTIONAL DETAILS

Reference to the appendix II for details.

***** END OF REPORT *****