



FCC TEST REPORT

FCC ID:2BVD7-RPM001X4

Report Number.....: ZKT-260805L0263E-3

Date of Test..... May 29, 2026 to Aug. 18, 2026

Date of issue.....: Aug. 18, 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: WUXI YONGHUA INFORMATION TECHNOLOGY CO.LTD

Address: 101 ROOM, No.5 BUILDING, No.2 FENGWEI RD, XISHAN DISTRICT, WUXI CITY, JIANGSU PROVINCE, CHINA

Manufacturer's name: WUXI YONGHUA INFORMATION TECHNOLOGY CO.LTD

Address: 101 ROOM, No.5 BUILDING, No.2 FENGWEI RD, XISHAN DISTRICT, WUXI CITY, JIANGSU PROVINCE, 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 + Erratato C63.10a-2024

Test procedure.....: /

Non-standard test method: N/A

Test Report Form No.....: TRF-EL-112_V0

Test Report Form(s) Originator.....: ZKT Testing

Master TRF: Dated: 2021-04-22

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.....: Multi-person intercom smart Bluetooth device

Trademark: RPM

Model/Type reference.....: RPM001
RPM002, RPM003, RPM004

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-260805L0263E-03	Rev.01	Initial issue of report	Aug. 18, 2026



2. TEST SUMMARY

Test procedures according to the technical standards:

FCC Part15 (15.247) , Subpart C			
Standard Section	Test Item	Result	Remark
15.203/15.247 (c)	Antenna Requirement	PASS	
15.207	AC Power Line Conducted Emission	PASS	
15.247 (b)(1)	Conducted Peak Output Power	PASS	
15.247 (a)(1)	20dB Occupied Bandwidth	PASS	
15.247 (a)(1)	Carrier Frequencies Separation	PASS	
15.247 (a)(1)(iii)	Hopping Channel Number	PASS	
15.247 (a)(1)(iii)	Dwell Time	PASS	
15.205/15.209	Radiated Emission and Restricted Band	PASS	
15.247(d)	Conducted Unwanted emissions and Band Edge	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

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=1.93dB
7	RF power conducted	U=1.93dB
8	RF conducted Spurious Emission	U=1.96dB
9	RF Occupied Bandwidth	U=3.11kHz
10	RF Power Spectral Density	U=1.93dB
11	humidity uncertainty	U=2.3%
12	Temperature uncertainty	U=0.3℃



3. GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Product Name:	Multi-person intercom smart Bluetooth device
Trade Mark:	RPM
Model No.:	RPM001
Serial No.:	RPM002, RPM003, RPM004
Model Different.:	Only different in model name and appearance Colors.
Hardware Version:	V2.0
Software Version:	V1.0
Sample(s) Status:	Engineer sample
Sample Number:	260805L0263-1
Channel numbers:	40
Operation Frequency:	2402MHz~2480MHz
Modulation technology:	GFSK
Antenna Type:	FPC
Antenna gain:	1.65dBi
Power Supply:	Input: DC 5V 1A
Battery:	Model: 603045 Brand: N/A Rated Voltage: 3.7V Charge Limit Voltage: 4.2V Capacity: 950mAh Manufacturer: Sun King Energy Technology Co., Ltd.

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:

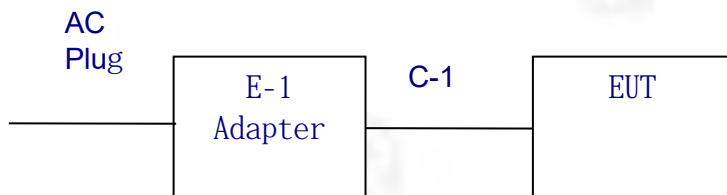
In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

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

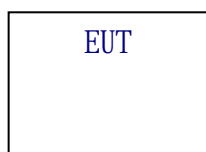


3.2 TEST SETUP CONFIGURATION

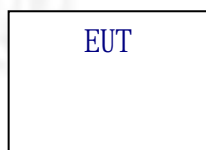
Conducted Emission



Radiated Emission



RF Conducted Spurious



3.3 SUPPORT EQUIPMENT

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	AC Adapter	UGREEN	X569	N/A
C-1	USB Cable	UGREEN	A88E6	N/A

Item	Equipment	Mfr/Brand	Length	Note
C-1	Shielded	NO	150cm	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.



3.4 TEST MODE

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.	

Test Software	nRF Connect
Power level setup	0



3.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

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	ESC17	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, 2026	May 24, 2027
12	Test Cable	N/A	R-02	N/A	N/A	May 25, 2026	May 24, 2027
13	Test Cable	N/A	R-03	N/A	N/A	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-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 25, 2026	May 24, 2027
4	Test Cable	N/A	RF-02	N/A	N/A	May 25, 2026	May 24, 2027
5	Test Cable	N/A	RF-03	N/A	N/A	May 25, 2026	May 24, 2027
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 EMISSIONS

Test Requirement:	FCC Part15 C Section 15.207
Test Method:	ANSI C63.10:2020+Cor 1:2023
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
	Quasi-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

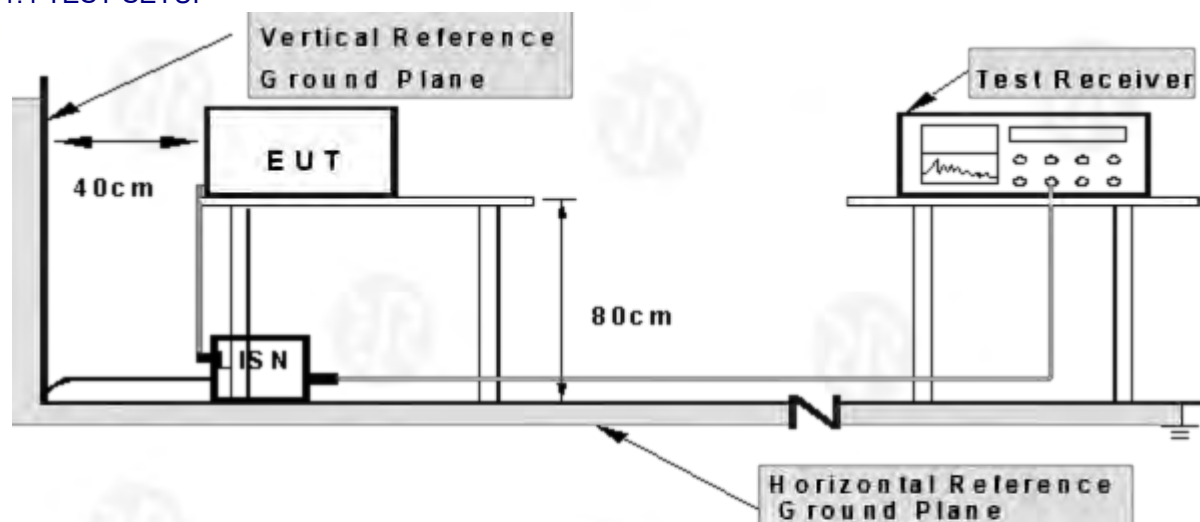
- The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.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

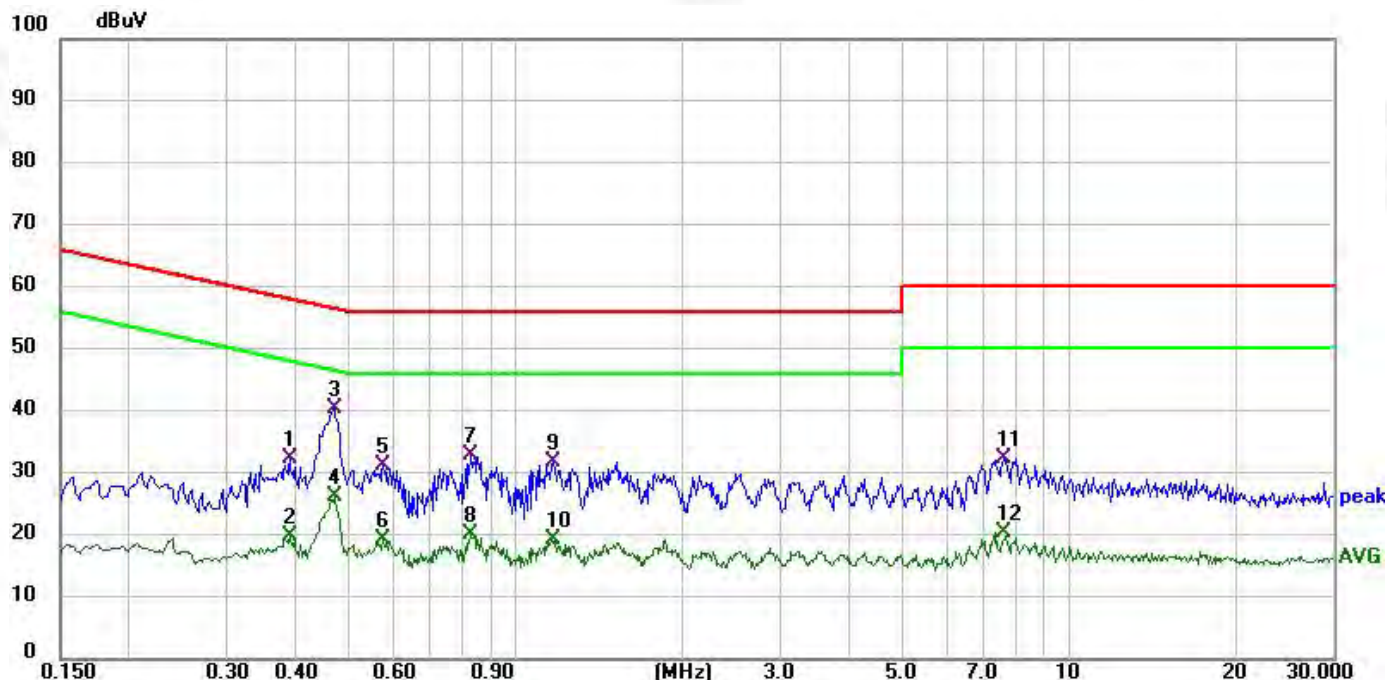
4.1.5 EUT OPERATING CONDITIONS

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 RESULTS

Temperature:	26.5°C	Relative Humidity:	61.3%
Pressure:	101 kPa	Polarization:	L
Test Voltage:	AC 120V/60Hz	Test Mode:	GFSK 2440MHz



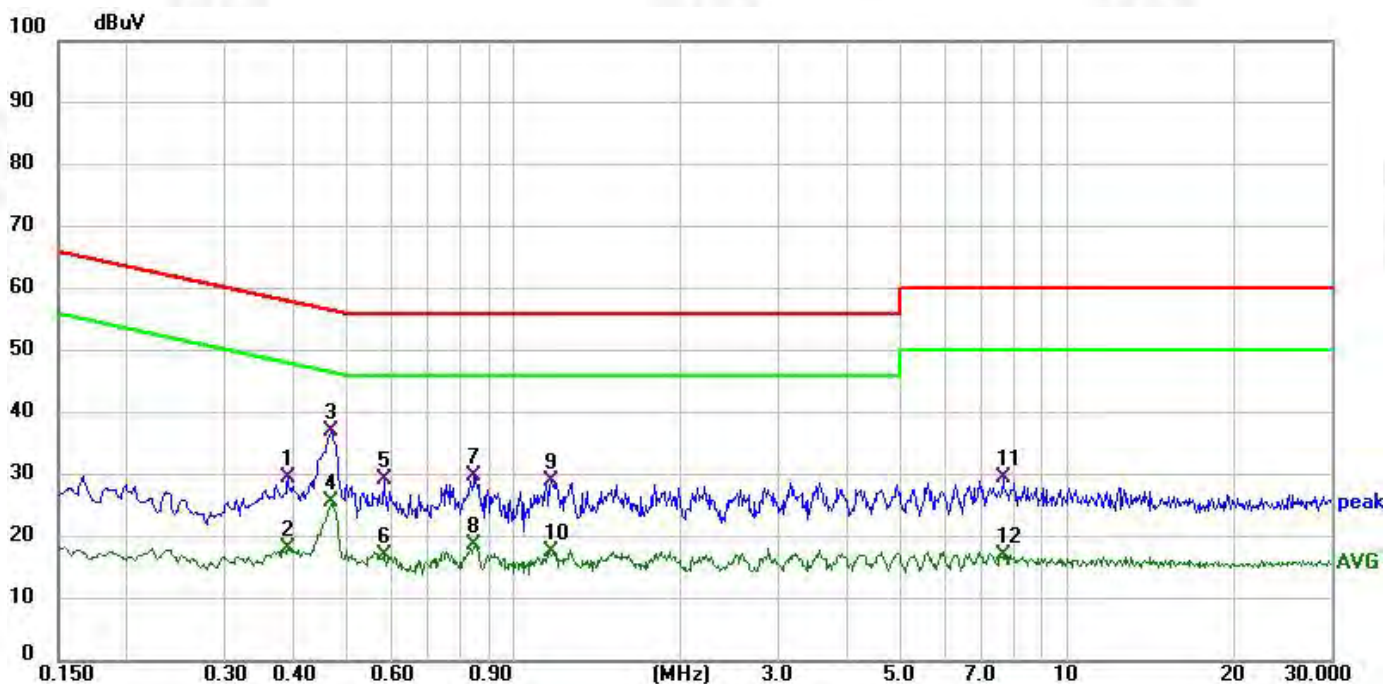
No.	Frequency (MHz)	Reading Level(dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Pass/Fail
1	0.3899	13.06	19.38	32.44	58.07	-25.63	QP	Pass
2	0.3899	0.49	19.38	19.87	48.07	-28.20	AVG	Pass
3 *	0.4700	21.12	19.39	40.51	56.51	-16.00	QP	Pass
4	0.4700	6.75	19.39	26.14	46.51	-20.37	AVG	Pass
5	0.5740	11.97	19.39	31.36	56.00	-24.64	QP	Pass
6	0.5740	-0.19	19.39	19.20	46.00	-26.80	AVG	Pass
7	0.8260	13.58	19.36	32.94	56.00	-23.06	QP	Pass
8	0.8260	0.84	19.36	20.20	46.00	-25.80	AVG	Pass
9	1.1620	12.47	19.35	31.82	56.00	-24.18	QP	Pass
10	1.1620	-0.01	19.35	19.34	46.00	-26.66	AVG	Pass
11	7.5980	12.84	19.49	32.33	60.00	-27.67	QP	Pass
12	7.5980	0.83	19.49	20.32	50.00	-29.68	AVG	Pass

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= Liss factor+ Cable loss factor + limiter factor.
5. Margin= Measurement Level-Limit.
6. The test data shows only the worst case GFSK 2440MHz.



Temperature:	26.5℃	Relative Humidity:	61.3%
Pressure:	101 kPa	Polarization:	N
Test Voltage:	AC 120V/60Hz	Test Mode:	GFSK 2440MHz



No.	Frequency (MHz)	Reading Level(dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	Pass/Fail
1	0.3899	10.35	19.36	29.71	58.07	-28.36	QP	Pass
2	0.3899	-1.17	19.36	18.19	48.07	-29.88	AVG	Pass
3 *	0.4660	17.67	19.34	37.01	56.58	-19.57	QP	Pass
4	0.4660	6.30	19.34	25.64	46.58	-20.94	AVG	Pass
5	0.5820	9.96	19.36	29.32	56.00	-26.68	QP	Pass
6	0.5820	-2.36	19.36	17.00	46.00	-29.00	AVG	Pass
7	0.8460	10.44	19.40	29.84	56.00	-26.16	QP	Pass
8	0.8460	-0.76	19.40	18.64	46.00	-27.36	AVG	Pass
9	1.1620	9.76	19.39	29.15	56.00	-26.85	QP	Pass
10	1.1620	-1.87	19.39	17.52	46.00	-28.48	AVG	Pass
11	7.6180	10.00	19.50	29.50	60.00	-30.50	QP	Pass
12	7.6180	-2.43	19.50	17.07	50.00	-32.93	AVG	Pass

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= Lissn factor+ Cable loss factor + limiter factor.
5. Margin= Measurement Level-Limit.
6. The test data shows only the worst case GFSK 2440MHz.



4.2 RADIATED EMISSIONS

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	MX5Hz	Quasi-peak
	150KHz-30MHz	Quasi-peak	9KHz	30KHz	Quasi-peak
	30MHz-1GHz	Quasi-peak	100KHz	300KHz	Quasi-peak
	Above 1GHz	Peak	1MHz	3MHz	Peak
		Peak	1MHz	10Hz	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

Below 1GHz test procedure as below:

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.



- c. 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.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.

Above 1GHz test procedure as below:

- g. Different between above is the test site, change from Semi- Anechoic Chamber to fully Anechoic Chamber and change form table 0.8 metre to 1.5 metre(Above 18GHz the distance is 1 meter and table is 1.5 metre).
- h. Test the EUT in the lowest channel ,the middle channel ,the Highest channel

Note:

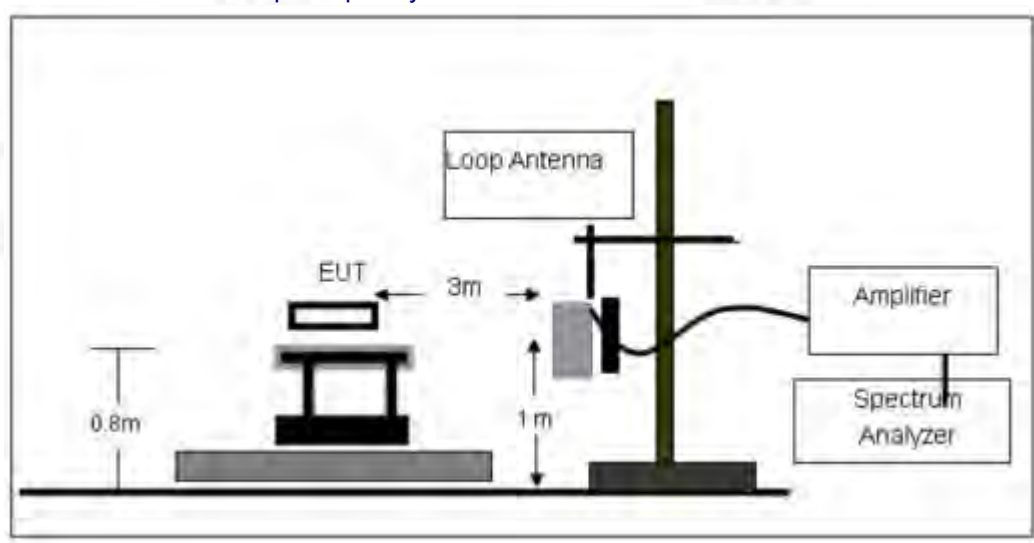
Both horizontal and vertical antenna polarities were tested
and performed pretest to three orthogonal axis. The worst case emissions were reported

4.2.3 DEVIATION FROM TEST STANDARD

No deviation

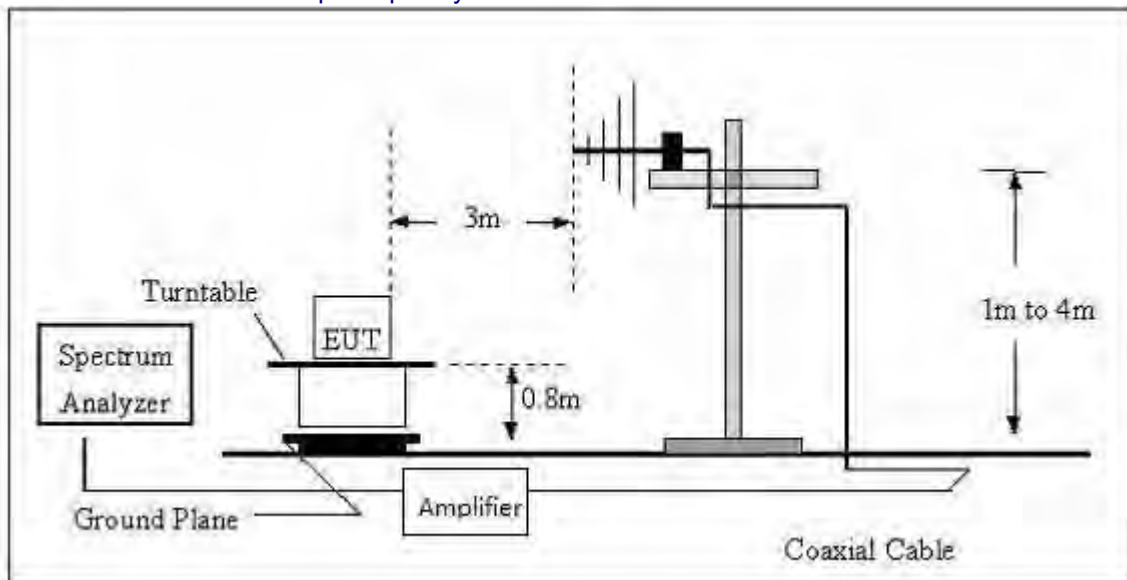
4.2.4 TEST SETUP

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

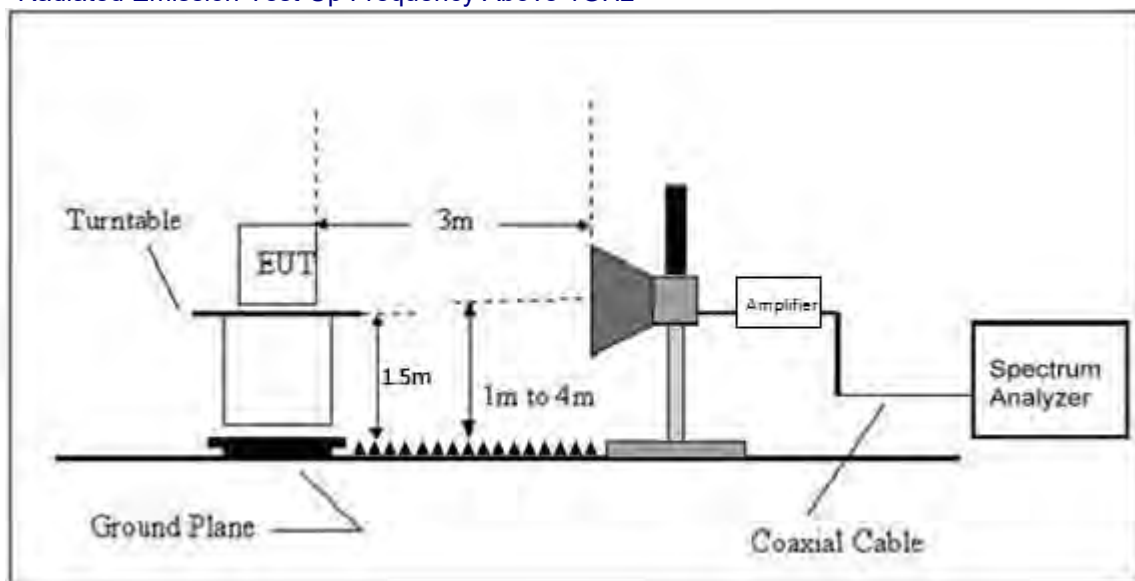




(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



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



4.2.5 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.



4.2.6 TEST RESULTS

Between 9KHz – 30MHz

Temperature:	24.1℃	Relative Humidity:	62%
Pressure:	101 kPa	Polarization:	Coxial
Test Voltage:	DC 3.7V	Test Frequency:	GFSK 2440MHz



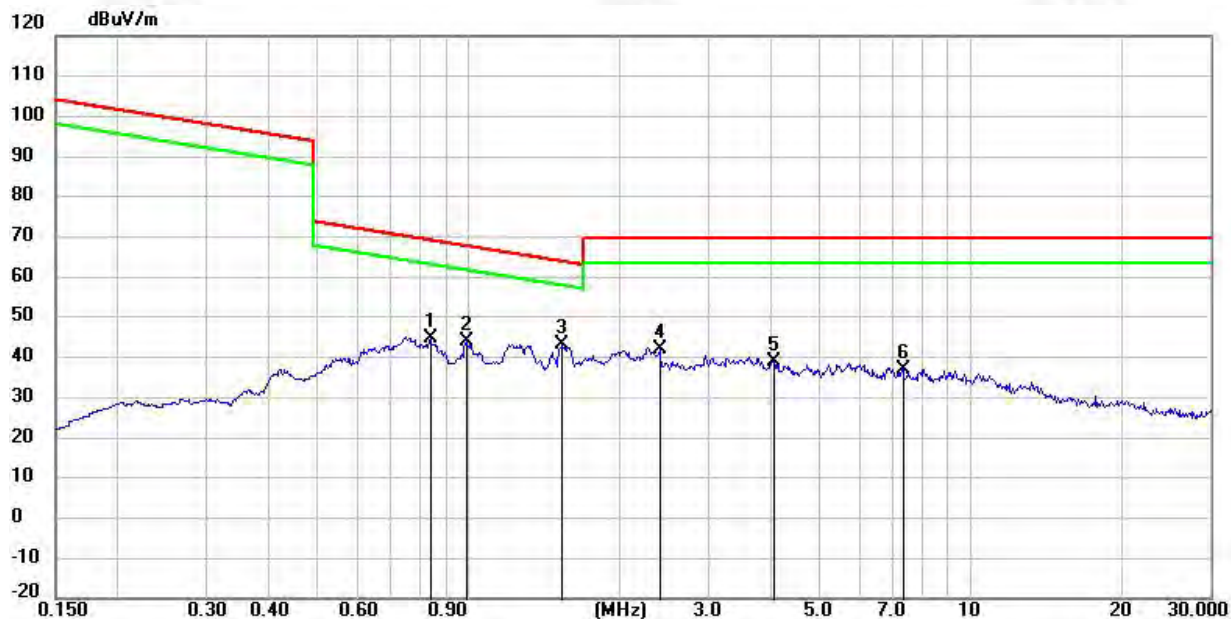
No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.0280	4.68	19.94	24.62	118.66	-94.04	AVG
2	0.0362	4.46	19.78	24.24	116.43	-92.19	AVG
3	0.0446	4.84	19.61	24.45	114.62	-90.17	AVG
4	0.0580	5.09	19.27	24.36	112.34	-87.98	AVG
5	0.0714	6.67	18.90	25.57	110.53	-84.96	AVG
6 *	0.0994	6.41	17.63	24.04	107.66	-83.62	QP

Notes:

1. Distance extrapolation factor = $40 \log (\text{specific distance}/\text{test distance})$ (dB);
2. Limit line = specific limits (dBuV) + distance extrapolation factor.
3. Mode of Mesh were tested at Low, Middle, and High channel and recorded worst mode at 2440MHz of Mesh



150K-30M



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
1	0.8366	24.50	20.27	44.77	69.15	-24.38	QP
2	0.9858	23.92	20.21	44.13	67.73	-23.60	QP
3 *	1.5274	22.73	20.30	43.03	63.93	-20.90	QP
4	2.3887	21.56	20.28	41.84	69.50	-27.66	QP
5	4.0304	18.39	20.40	38.79	69.50	-30.71	QP
6	7.3140	16.73	20.36	37.09	69.50	-32.41	QP

Notes:

1. Distance extrapolation factor = $40 \log (\text{specific distance}/\text{test distance})$ (dB) ;
2. Limit line = specific limits (dBuV) + distance extrapolation factor.
3. Mode of Mesh were tested at Low, Middle, and High channel and recorded worst mode at 2440MHz of Mesh.



Between 30MHz – 1GHz

Temperature:	26℃	Relative Humidity:	54%
Pressure:	101 kPa	Polarization:	Horizontal
Test Voltage:	DC 3.7V	Test Mode :	GFSK 2440MHz



No.	Frequency (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	55.4147	60.44	-25.10	35.34	40.00	-4.66	QP
2	147.3700	49.63	-18.42	31.21	43.50	-12.29	QP
3	200.6880	57.14	-21.06	36.08	43.50	-7.42	QP
4	323.9100	51.11	-13.88	37.23	46.00	-8.77	QP
5	664.3800	43.19	-4.71	38.48	46.00	-7.52	QP
6	897.1800	36.11	-0.52	35.59	46.00	-10.41	QP

Note:

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. Mode of Mesh were tested at Low, Middle, and High channel and recorded worst mode at 2440MHz of Mesh.



Temperature:	26°C	Relative Humidity:	54%
Pressure:	101kPa	Polarization:	Vertical
Test Voltage:	DC 3.7V	Test Mode :	GFSK 2440MHz



No.	Frequency (MHz)	Reading (dBuV/m)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1 *	53.5052	60.65	-24.53	36.12	40.00	-3.88	QP
2	71.0802	54.78	-24.67	30.11	40.00	-9.89	QP
3	200.6880	54.16	-21.06	33.10	43.50	-10.40	QP
4	328.7600	48.88	-13.74	35.14	46.00	-10.86	QP
5	666.3200	38.01	-4.66	33.35	46.00	-12.65	QP
6	913.6700	36.12	-0.13	35.99	46.00	-10.01	QP

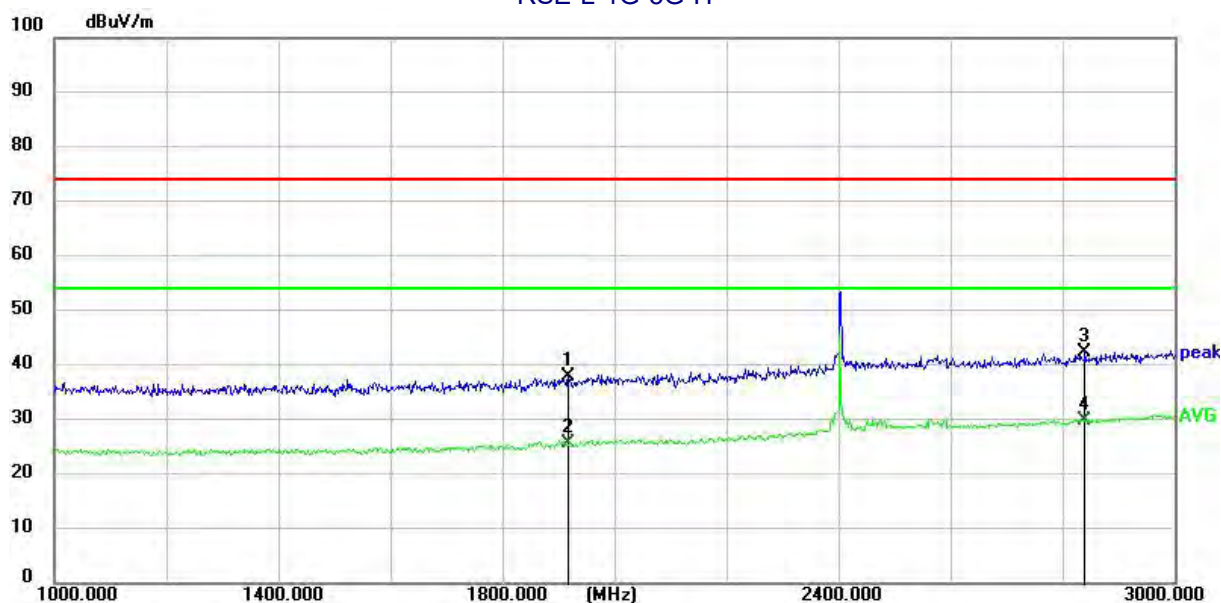
Note:

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. Mode of Mesh were tested at Low, Middle, and High channel and recorded worst mode at 2440MHz of Mesh.



Above 1GHz

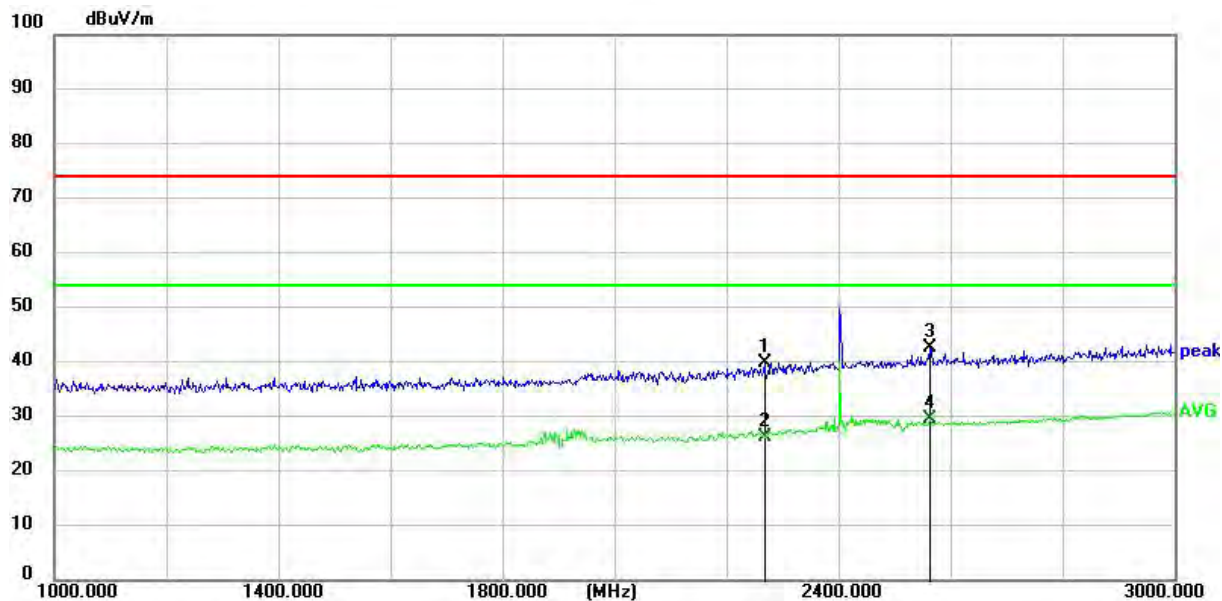
RSE-L-1G-3G-H



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	1918.0000	39.71	-1.87	37.84	74.00	-36.16	peak	Pass
2	1918.0000	27.53	-1.87	25.66	54.00	-28.34	AVG	Pass
3	2840.0000	39.98	2.52	42.50	74.00	-31.50	peak	Pass
4 *	2840.0000	27.34	2.52	29.86	54.00	-24.14	AVG	Pass



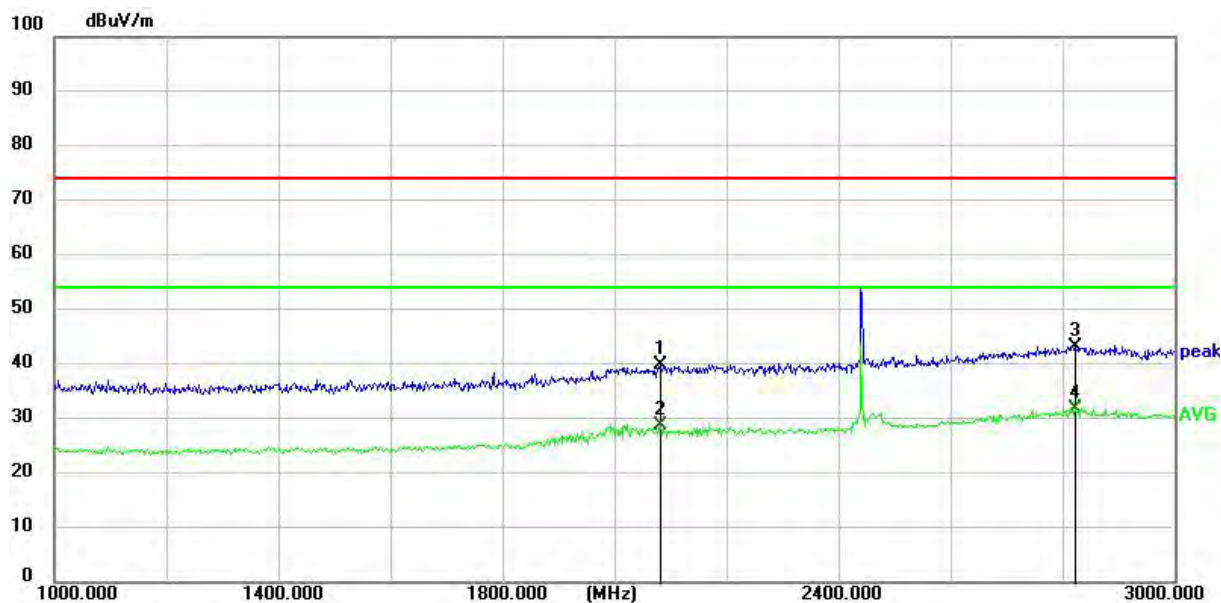
RSE-L-1G-3G-V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	2268.0000	40.04	-0.08	39.96	74.00	-34.04	peak	Pass
2	2268.0000	26.32	-0.08	26.24	54.00	-27.76	AVG	Pass
3	2564.0000	41.45	1.21	42.66	74.00	-31.34	peak	Pass
4 *	2564.0000	28.42	1.21	29.63	54.00	-24.37	AVG	Pass



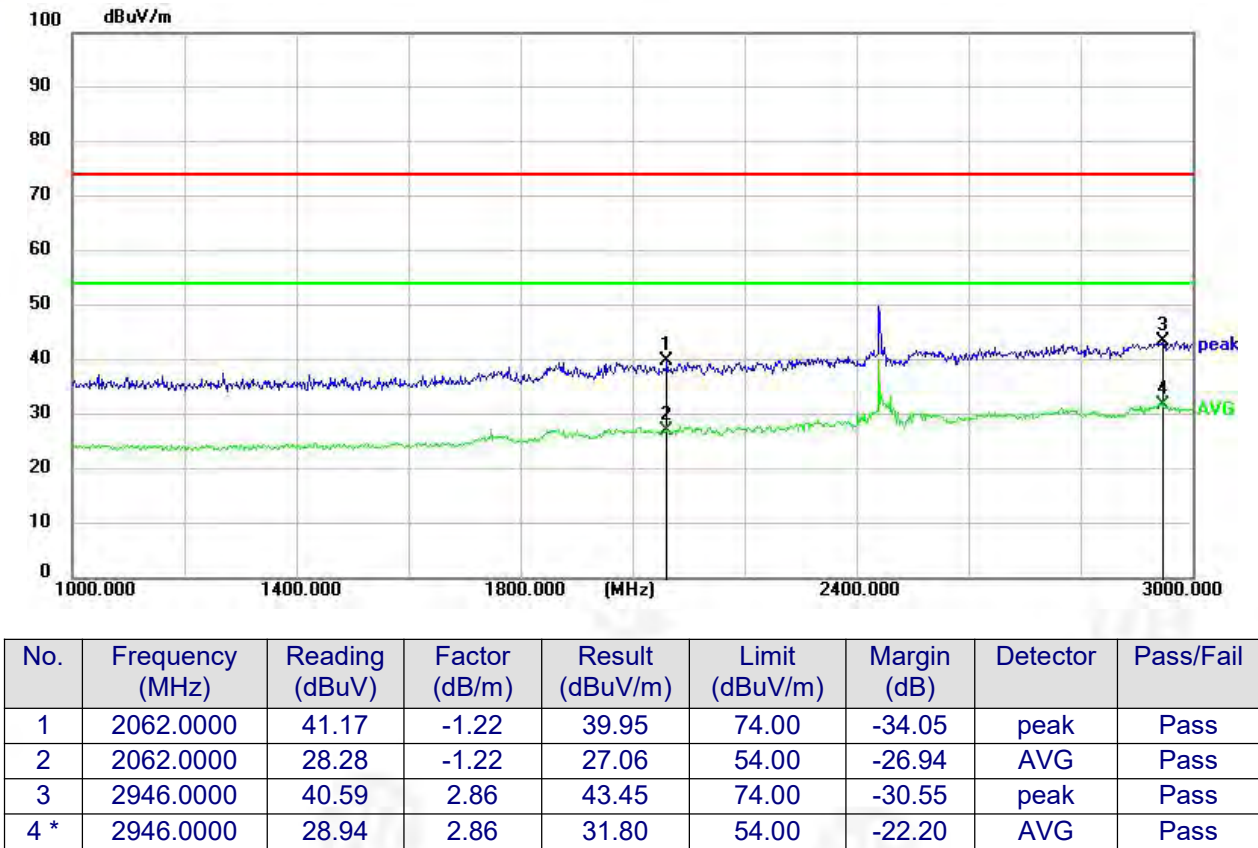
RSE-M-1G-3G-H



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	2082.0000	40.85	-1.12	39.73	74.00	-34.27	peak	Pass
2	2082.0000	29.76	-1.12	28.64	54.00	-25.36	AVG	Pass
3	2824.0000	40.83	2.48	43.31	74.00	-30.69	peak	Pass
4 *	2824.0000	29.24	2.48	31.72	54.00	-22.28	AVG	Pass

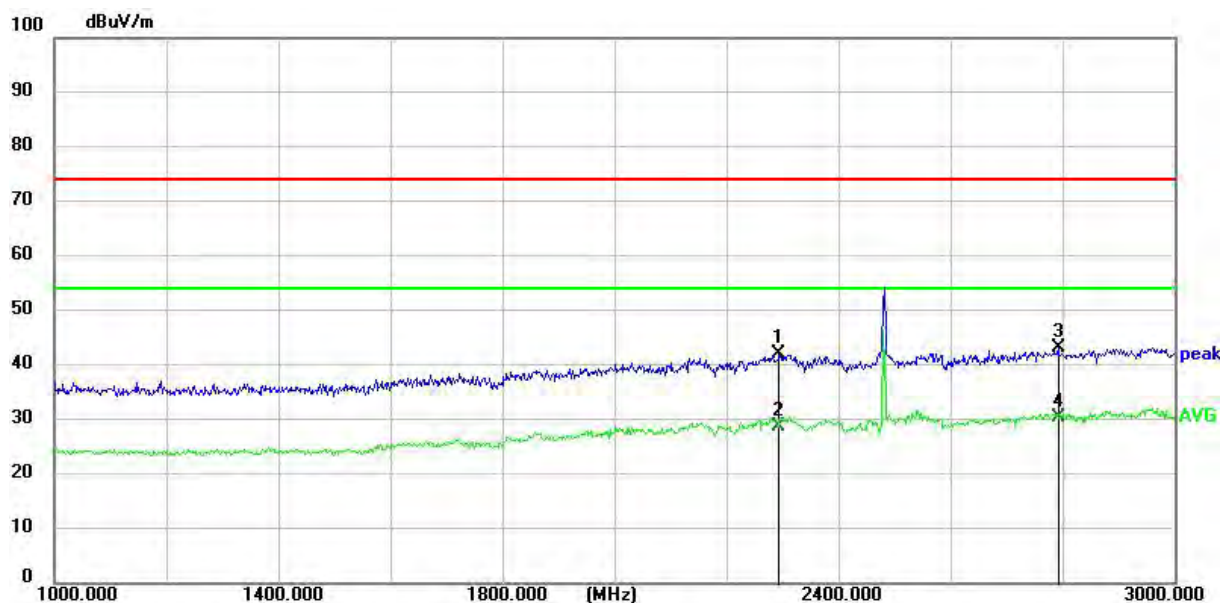


RSE-M-1G-3G-V





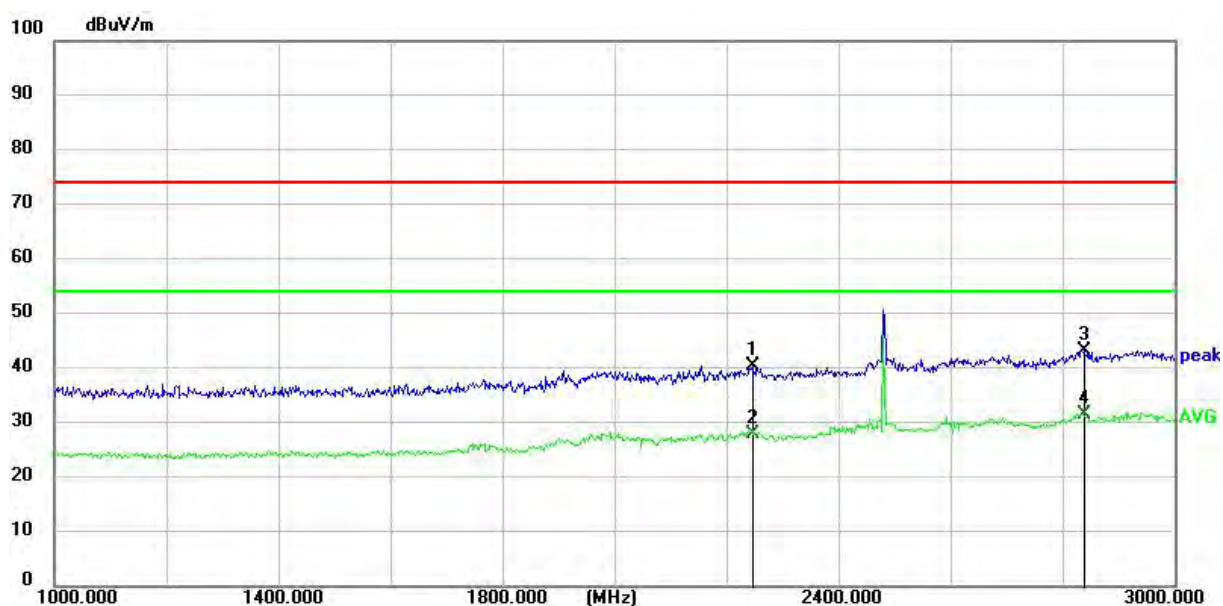
RSE-H-1G-3G-H



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	2294.0000	41.90	0.11	42.01	74.00	-31.99	peak	Pass
2	2294.0000	28.56	0.11	28.67	54.00	-25.33	AVG	Pass
3	2792.0000	40.87	2.36	43.23	74.00	-30.77	peak	Pass
4 *	2792.0000	28.17	2.36	30.53	54.00	-23.47	AVG	Pass



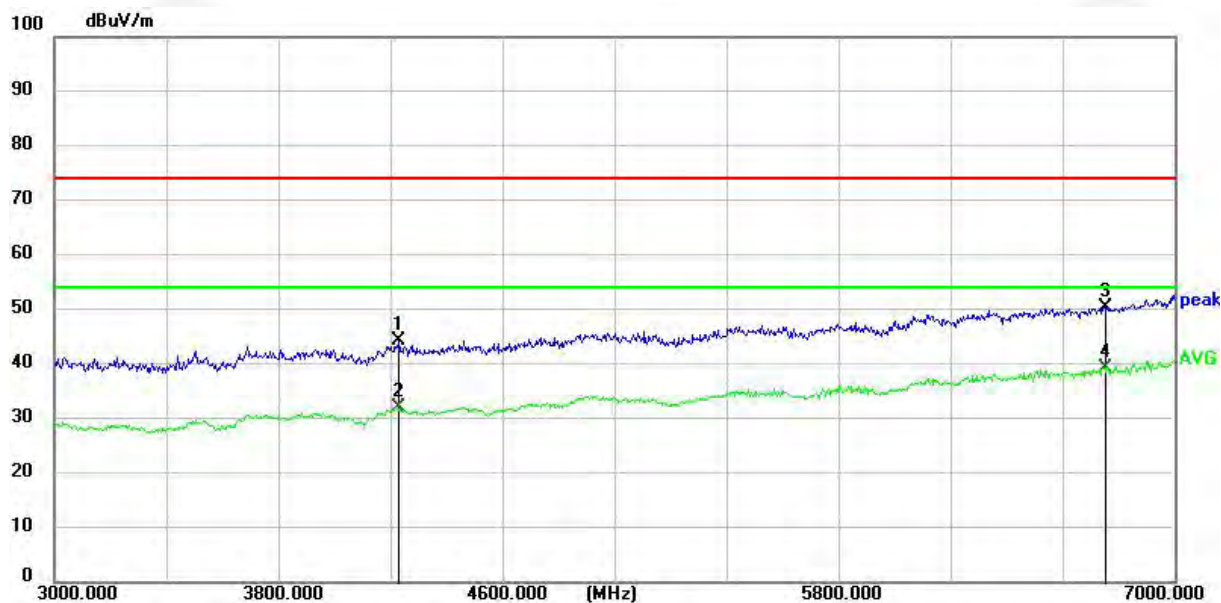
RSE-H-1G-3G-V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	2246.0000	40.63	-0.23	40.40	74.00	-33.60	peak	Pass
2	2246.0000	28.26	-0.23	28.03	54.00	-25.97	AVG	Pass
3	2838.0000	40.56	2.52	43.08	74.00	-30.92	peak	Pass
4 *	2838.0000	28.94	2.52	31.46	54.00	-22.54	AVG	Pass



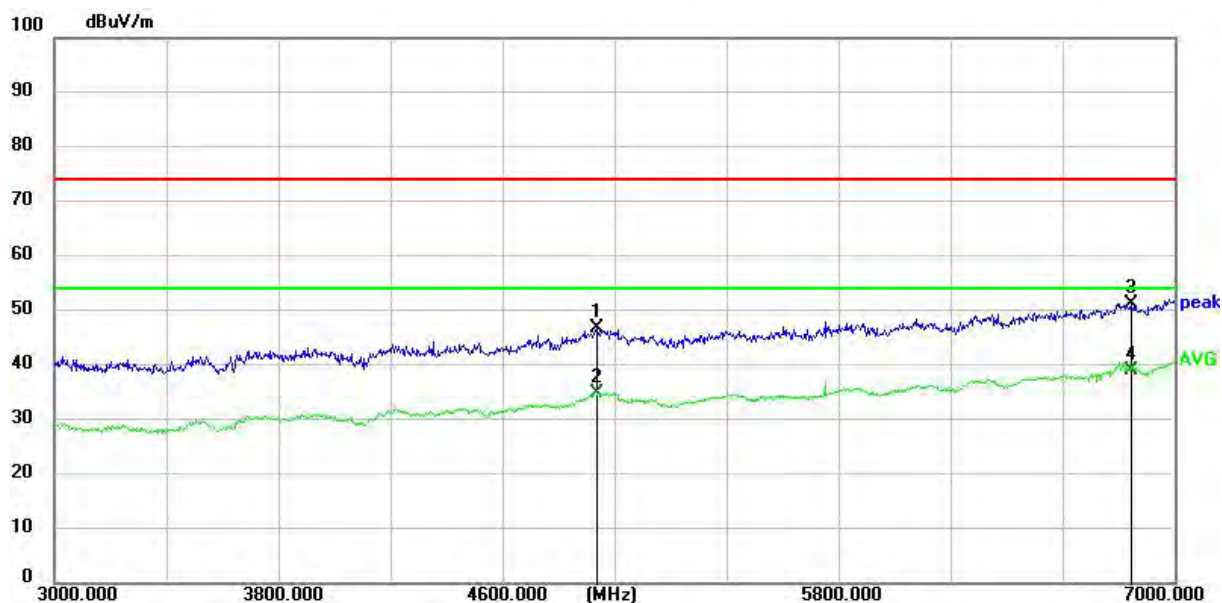
RSE-L-3G-7G-H



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	4232.0000	52.79	-8.42	44.37	74.00	-29.63	peak	Pass
2	4232.0000	40.45	-8.42	32.03	54.00	-21.97	AVG	Pass
3	6752.0000	50.67	-0.25	50.42	74.00	-23.58	peak	Pass
4 *	6752.0000	39.47	-0.25	39.22	54.00	-14.78	AVG	Pass



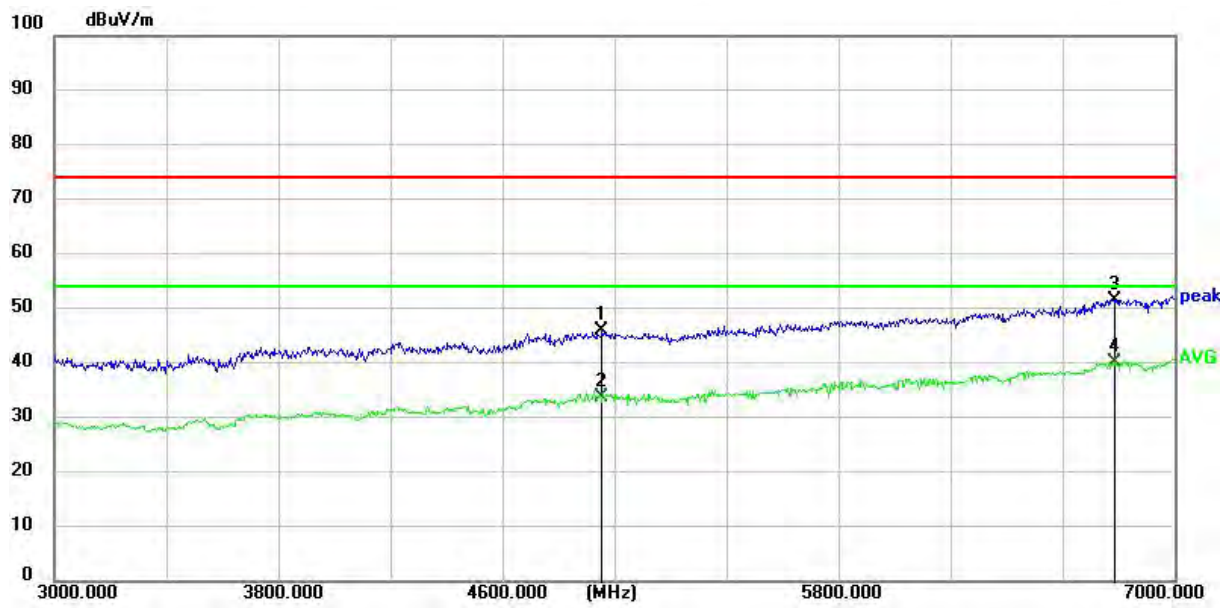
RSE-L-3G-7G-V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	4936.0000	52.81	-6.03	46.78	74.00	-27.22	peak	Pass
2	4936.0000	40.90	-6.03	34.87	54.00	-19.13	AVG	Pass
3	6844.0000	51.03	0.21	51.24	74.00	-22.76	peak	Pass
4 *	6844.0000	38.68	0.21	38.89	54.00	-15.11	AVG	Pass



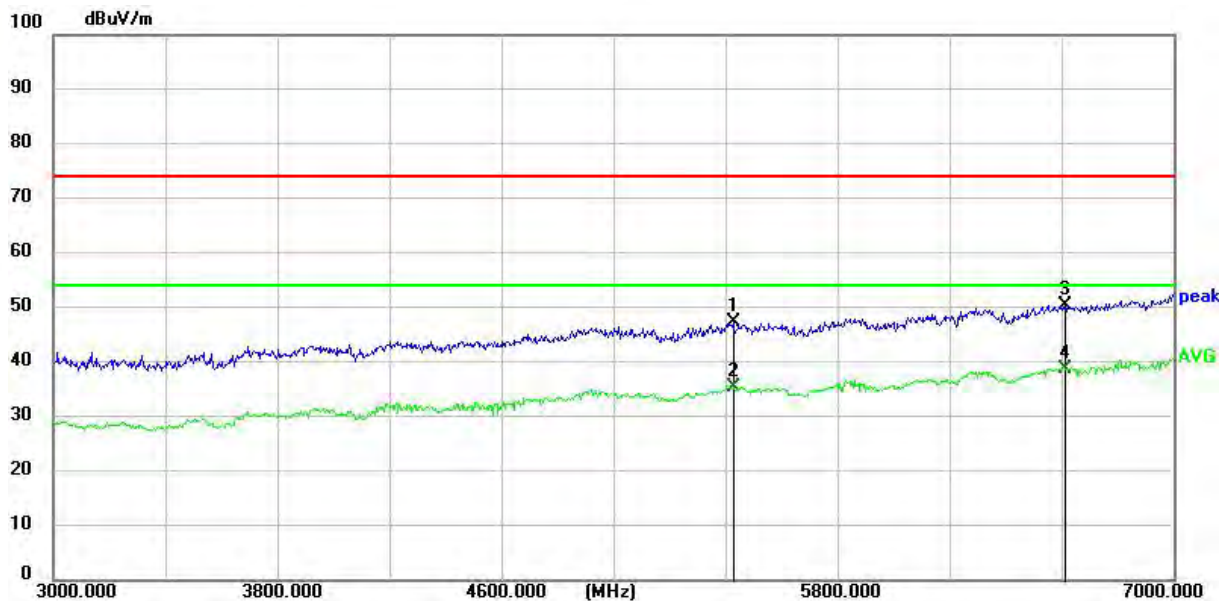
RSE-M-3G-7G-H



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	4956.0000	51.85	-6.00	45.85	74.00	-28.15	peak	Pass
2	4956.0000	39.83	-6.00	33.83	54.00	-20.17	AVG	Pass
3	6784.0000	51.65	-0.09	51.56	74.00	-22.44	peak	Pass
4 *	6784.0000	40.19	-0.09	40.10	54.00	-13.90	AVG	Pass



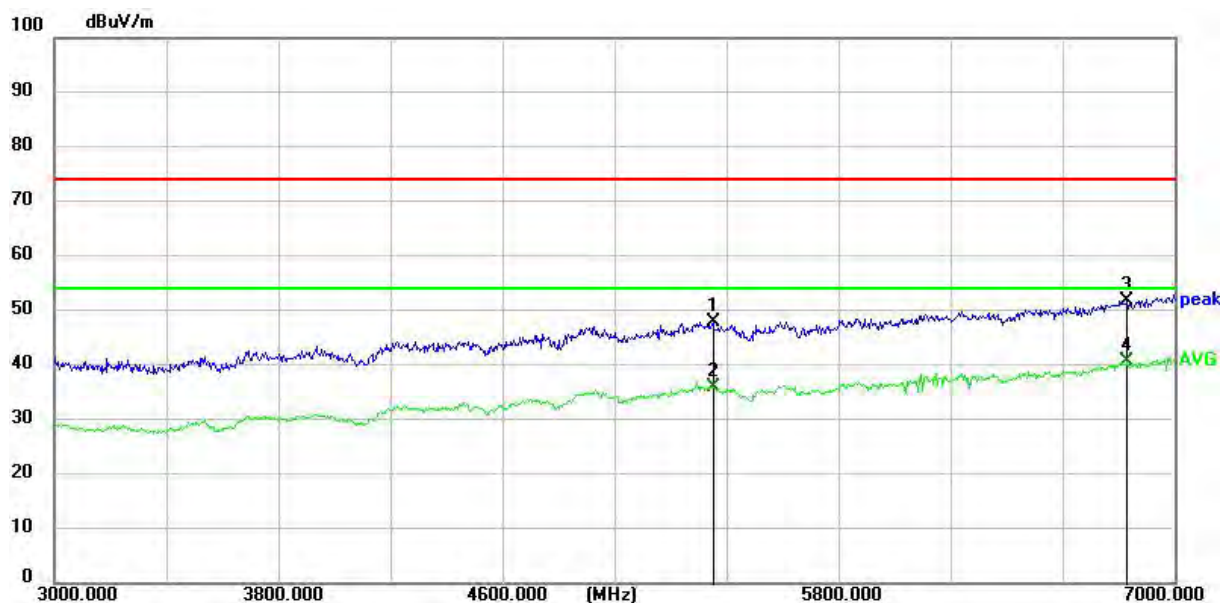
RSE-M-3G-7G-V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	5428.0000	52.33	-4.97	47.36	74.00	-26.64	peak	Pass
2	5428.0000	40.42	-4.97	35.45	54.00	-18.55	AVG	Pass
3	6612.0000	51.37	-0.95	50.42	74.00	-23.58	peak	Pass
4 *	6612.0000	39.68	-0.95	38.73	54.00	-15.27	AVG	Pass



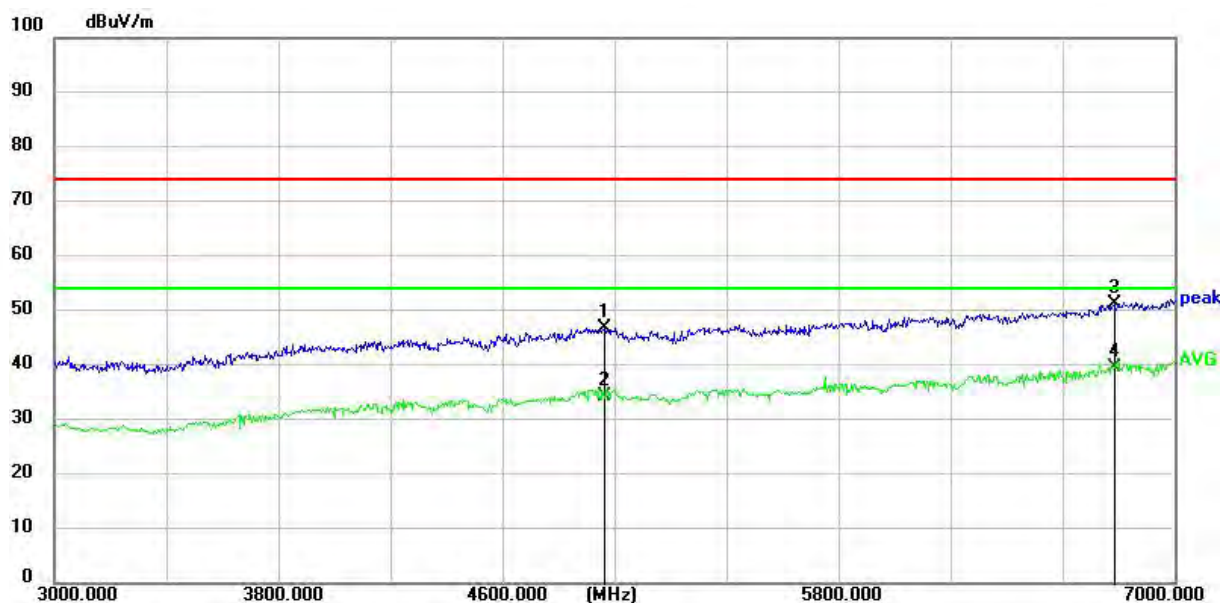
RSE-H-3G-7G-H



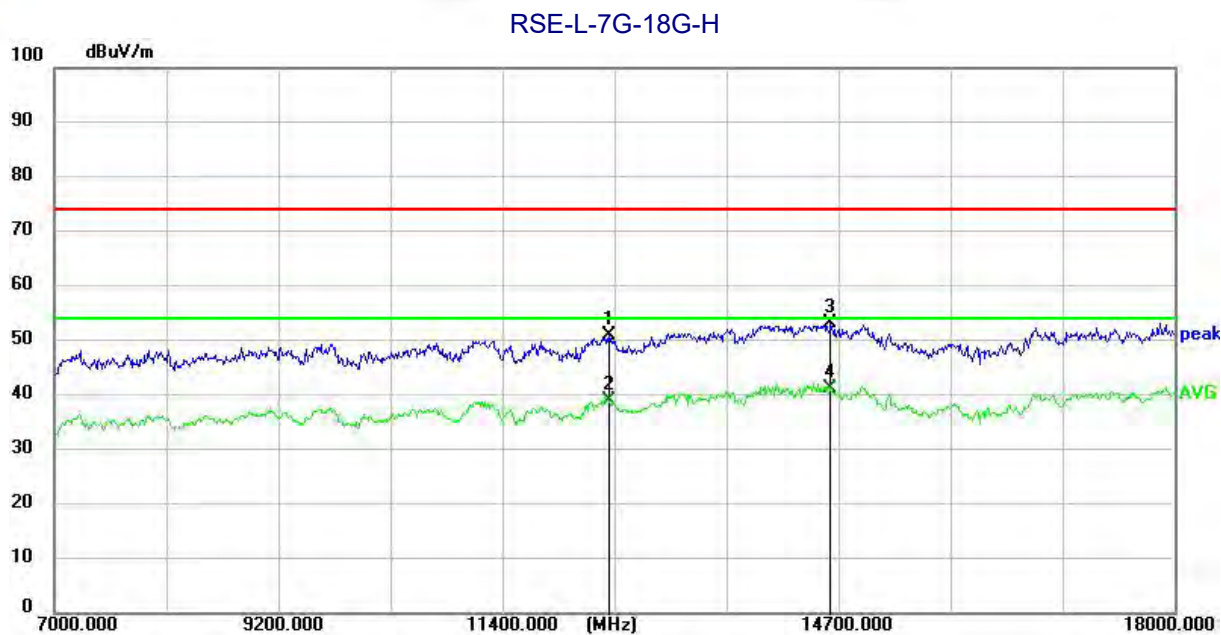
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	5352.0000	53.20	-5.32	47.88	74.00	-26.12	peak	Pass
2	5356.0000	41.35	-5.31	36.04	54.00	-17.96	AVG	Pass
3	6832.0000	51.71	0.15	51.86	74.00	-22.14	peak	Pass
4 *	6832.0000	40.50	0.15	40.65	54.00	-13.35	AVG	Pass



RSE-H-3G-7G-V



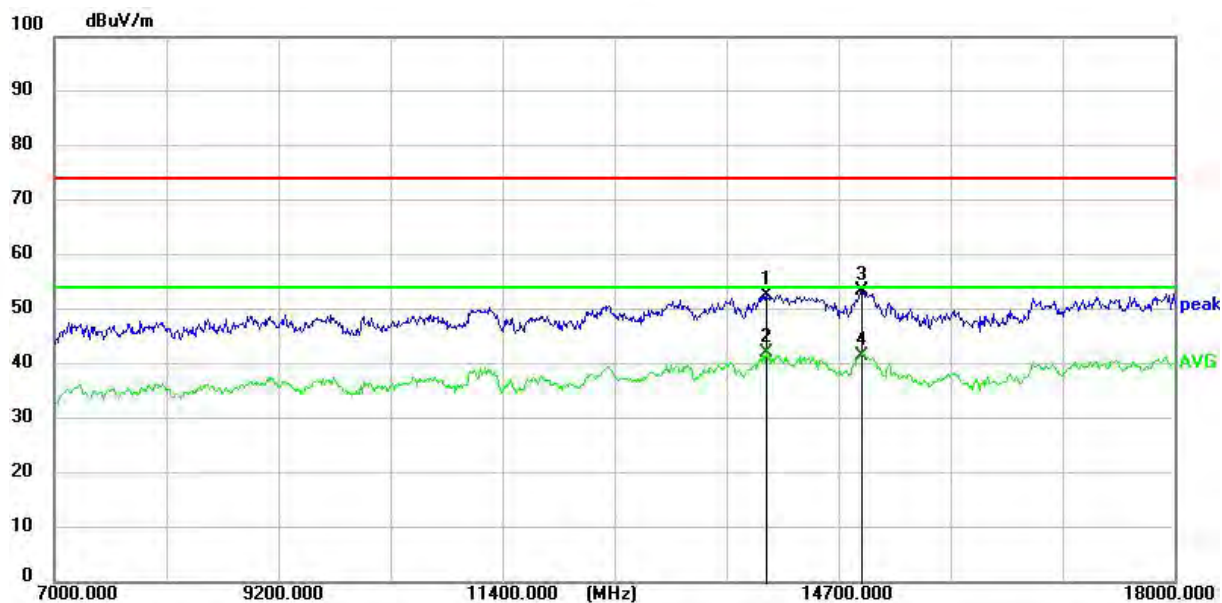
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	4964.0000	52.89	-5.98	46.91	74.00	-27.09	peak	Pass
2	4964.0000	40.16	-5.98	34.18	54.00	-19.82	AVG	Pass
3	6788.0000	51.23	-0.07	51.16	74.00	-22.84	peak	Pass
4 *	6788.0000	39.63	-0.07	39.56	54.00	-14.44	AVG	Pass



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	12445.0000	48.12	2.72	50.84	74.00	-23.16	peak	Pass
2	12445.0000	36.25	2.72	38.97	54.00	-15.03	AVG	Pass
3	14623.0000	46.85	6.24	53.09	74.00	-20.91	peak	Pass
4 *	14623.0000	34.93	6.24	41.17	54.00	-12.83	AVG	Pass



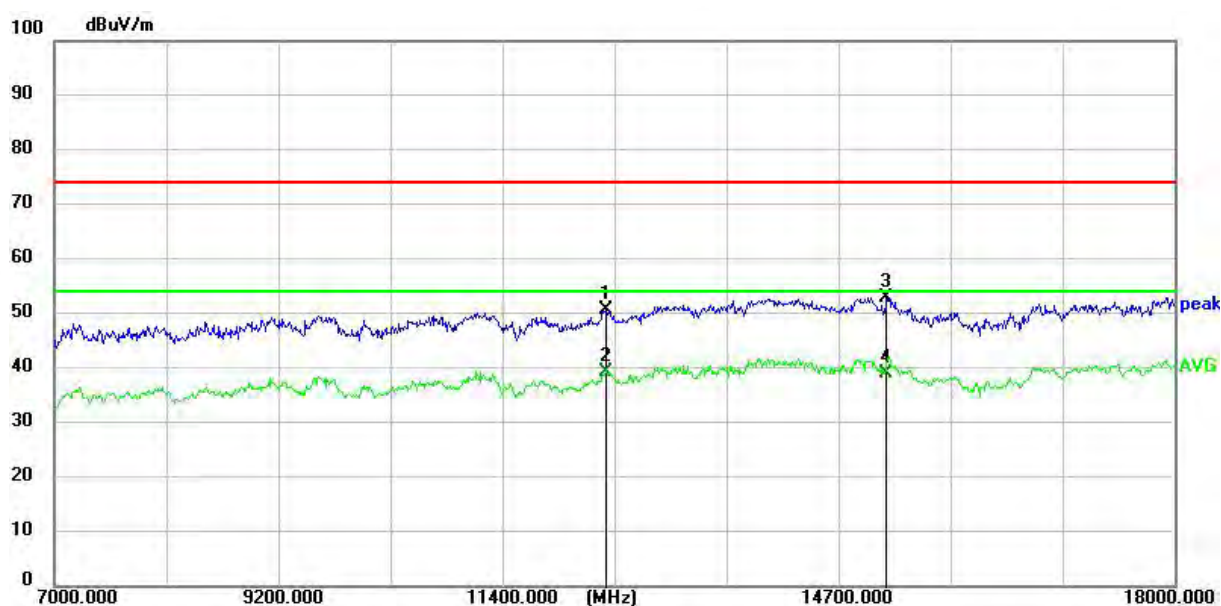
RSE-L-7G-18G-V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	13996.0000	44.27	8.40	52.67	74.00	-21.33	peak	Pass
2 *	13996.0000	33.59	8.40	41.99	54.00	-12.01	AVG	Pass
3	14931.0000	48.10	5.39	53.49	74.00	-20.51	peak	Pass
4	14931.0000	36.25	5.39	41.64	54.00	-12.36	AVG	Pass



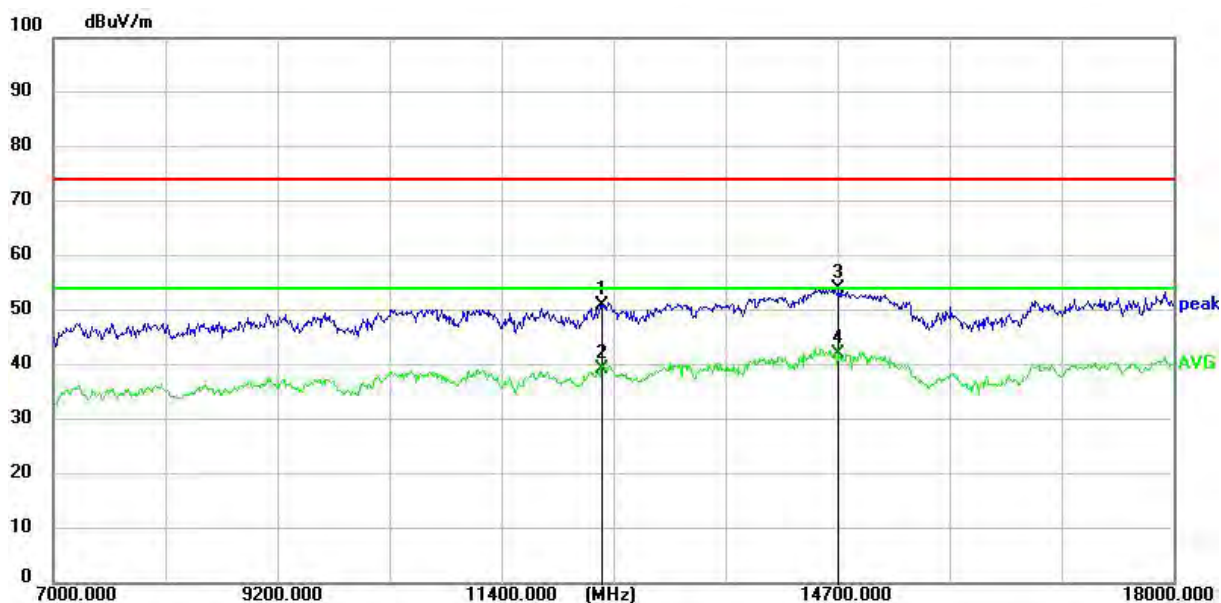
RSE-M-7G-18G-H



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	12423.0000	47.73	2.95	50.68	74.00	-23.32	peak	Pass
2 *	12423.0000	36.34	2.95	39.29	54.00	-14.71	AVG	Pass
3	15173.0000	47.57	5.45	53.02	74.00	-20.98	peak	Pass
4	15173.0000	33.51	5.45	38.96	54.00	-15.04	AVG	Pass



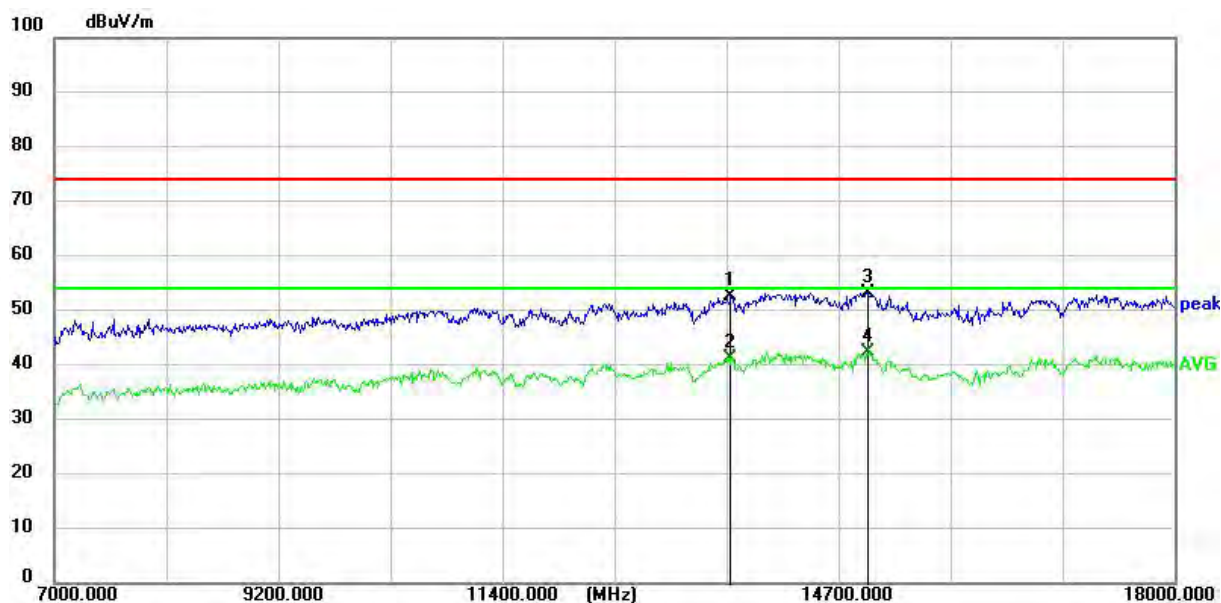
RSE-M-7G-18G-V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	12390.0000	47.88	3.16	51.04	74.00	-22.96	peak	Pass
2	12390.0000	36.22	3.16	39.38	54.00	-14.62	AVG	Pass
3	14711.0000	48.09	5.91	54.00	74.00	-20.00	peak	Pass
4 *	14711.0000	36.20	5.91	42.11	54.00	-11.89	AVG	Pass



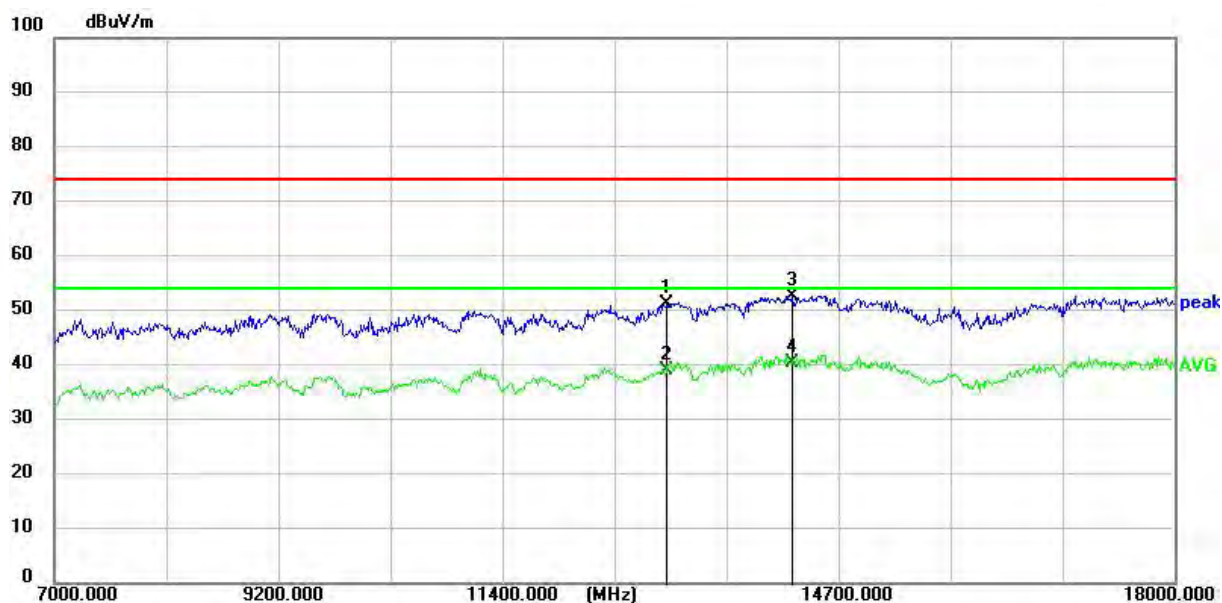
RSE-H-7G-18G-H



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	13644.0000	46.92	5.73	52.65	74.00	-21.35	peak	Pass
2	13644.0000	35.39	5.73	41.12	54.00	-12.88	AVG	Pass
3	14997.0000	47.79	5.47	53.26	74.00	-20.74	peak	Pass
4 *	14997.0000	36.82	5.47	42.29	54.00	-11.71	AVG	Pass



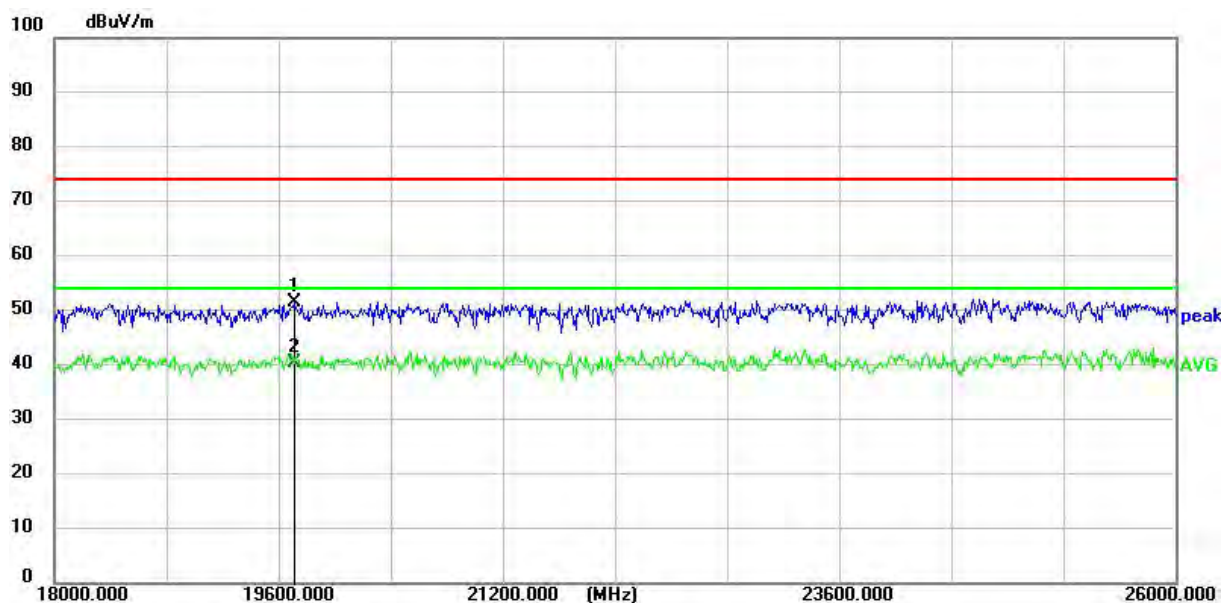
RSE-H-7G-18G-V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	13017.0000	47.17	4.16	51.33	74.00	-22.67	peak	Pass
2	13017.0000	34.84	4.16	39.00	54.00	-15.00	AVG	Pass
3	14249.0000	45.81	6.92	52.73	74.00	-21.27	peak	Pass
4 *	14249.0000	33.42	6.92	40.34	54.00	-13.66	AVG	Pass



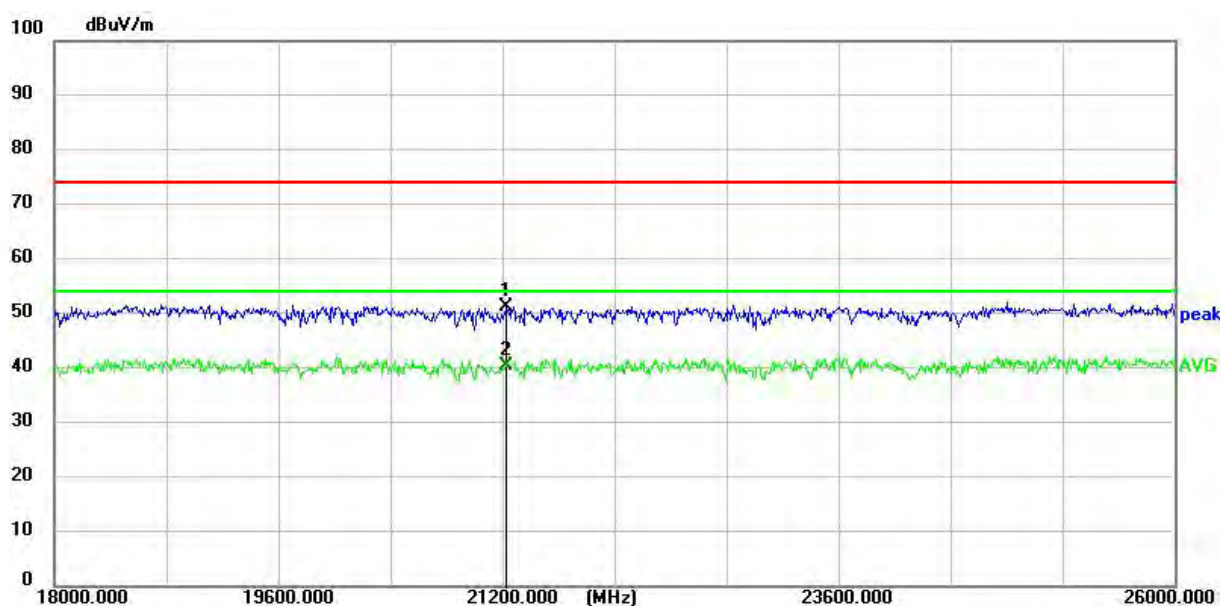
RSE-L-18G-26G-H



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	19712.0000	49.79	1.61	51.40	74.00	-22.60	peak	Pass
2 *	19712.0000	38.78	1.61	40.39	54.00	-13.61	AVG	Pass



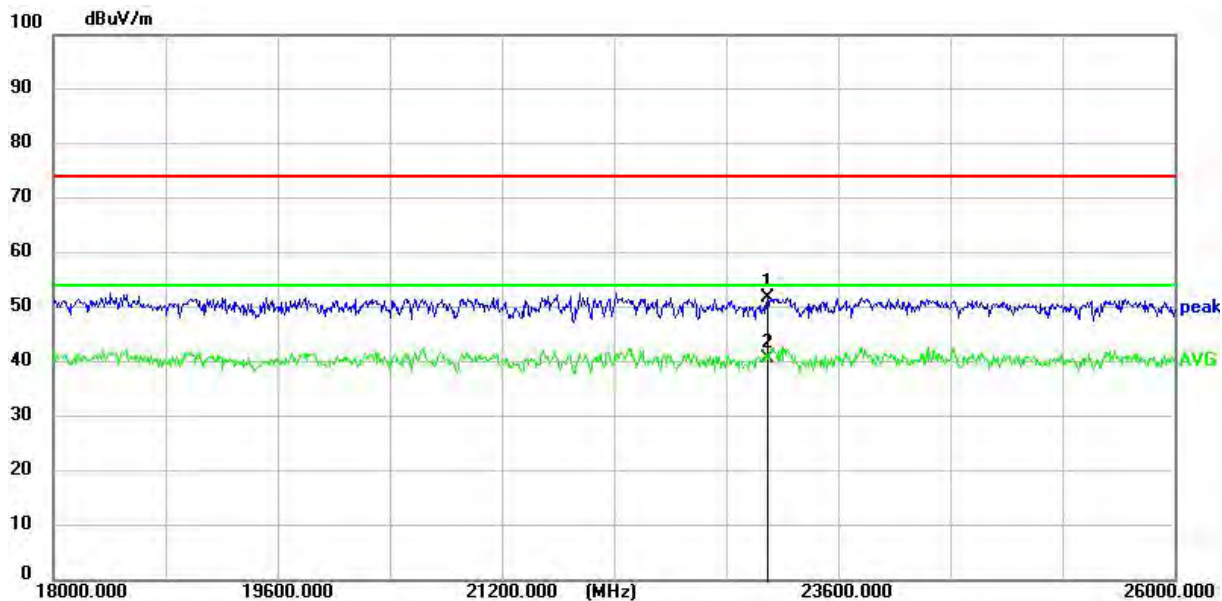
RSE-L-18G-26G-V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	21232.0000	48.57	2.79	51.36	74.00	-22.64	peak	Pass
2 *	21232.0000	37.71	2.79	40.50	54.00	-13.50	AVG	Pass



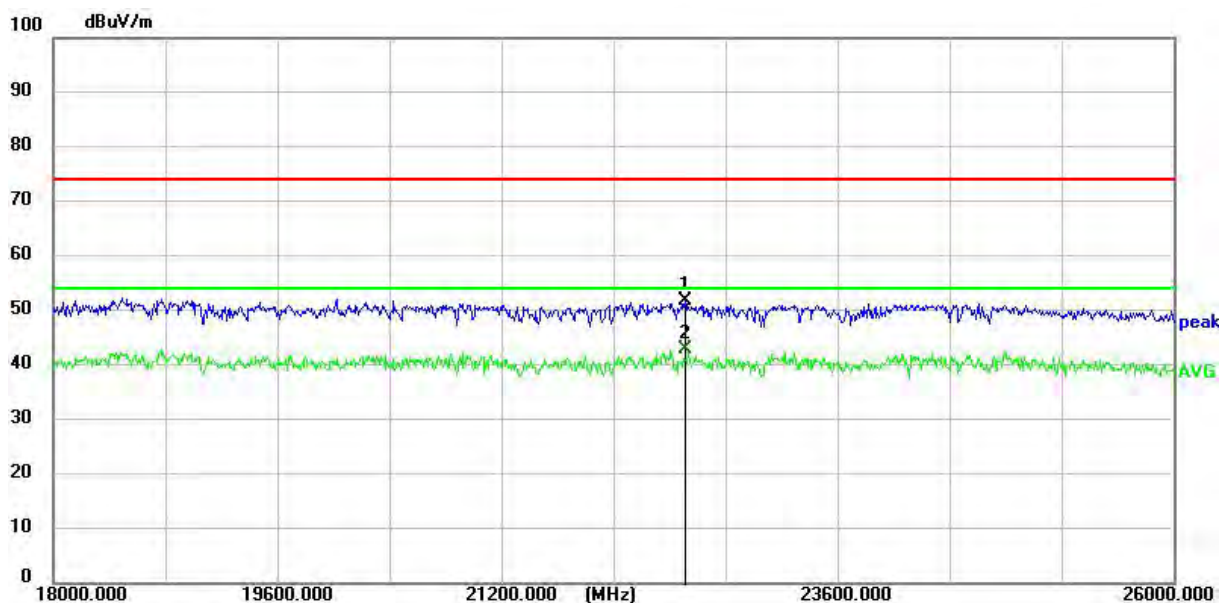
RSE-M-18G-26G-H



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	23096.0000	48.02	3.73	51.75	74.00	-22.25	peak	Pass
2 *	23096.0000	37.00	3.73	40.73	54.00	-13.27	AVG	Pass



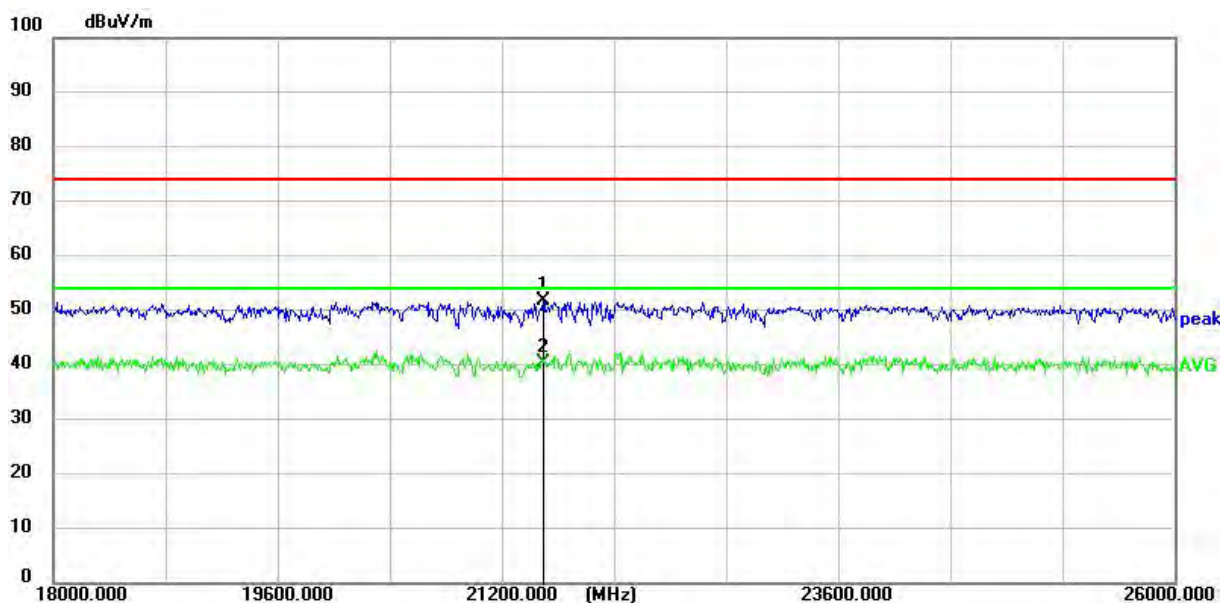
RSE-M-18G-26G-V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	22512.0000	47.93	3.91	51.84	74.00	-22.16	peak	Pass
2 *	22512.0000	38.94	3.91	42.85	54.00	-11.15	AVG	Pass



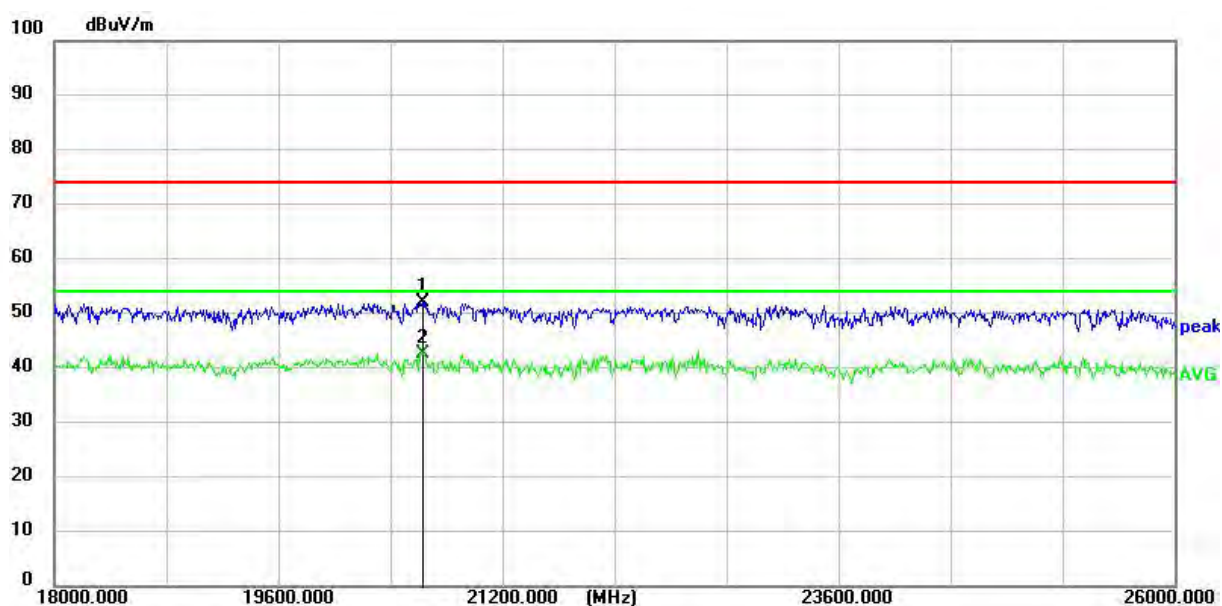
RSE-H-18G-26G-H



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	21496.0000	48.75	2.94	51.69	74.00	-22.31	peak	Pass
2 *	21496.0000	37.55	2.94	40.49	54.00	-13.51	AVG	Pass



RSE-H-18G-26G-V



No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Pass/Fail
1	20632.0000	49.63	2.35	51.98	74.00	-22.02	peak	Pass
2 *	20632.0000	40.30	2.35	42.65	54.00	-11.35	AVG	Pass

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. 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):

$$E = \text{EIRP} - 20 \log d + 104.8$$

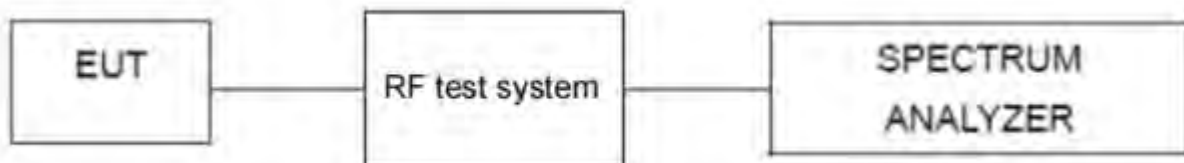
1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Remove the antenna from the EUT and then connect to a low loss RF cable from the antenna port to an EMI test receiver, then turn on the EUT and make it operate in 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. CONDUCTED BAND EDGE AND SPURIOUS EMISSION

Test Requirement:	FCC Part15 C Section 15.247 (d)
Test Method:	KDB558074 D0115.247 Meas Guidancev05r02

6.1 LIMIT

Regulation 15.247 (d), In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

6.2 TEST SETUP



30

6.3 TEST PROCEDURE

Using the following spectrum analyzer setting:

- A) Set the RBW = 100KHz.
- B) Set the VBW = 300KHz.
- C) Sweep time = auto couple.
- D) Detector function = peak.
- E) Trace mode = max hold.
- F) Allow trace to fully stabilize.

6.4 DEVIATION FROM STANDARD

No deviation.

6.5 TEST RESULTS

Note:

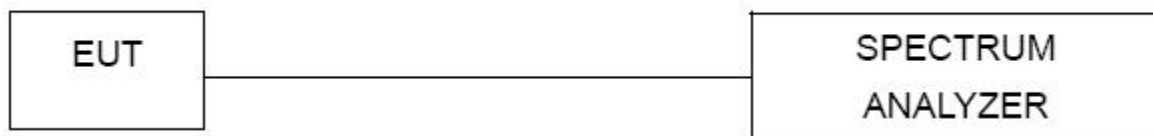
- 1. The test data please refer to APPENDIX 1.
- 2. Input compensation coefficient (dB) = Cable Loss (dB).
- 3. For Conducted spurious emissions plots from 30MHz to 26.5GHz, the worst cable loss and attenuator factors have been set in the 'Input Correction' of the Spectrum Analyzer during the test.



7. 20DB BANDWIDTH

Test Requirement:	FCC Part15 C Section 15.247 (a)(1)
Test Method:	ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Erratato C63.10a-2024

7.1 TEST SETUP



7.2 LIMIT

N/A

7.3 TEST PROCEDURE

1. Set RBW = 30 kHz.
2. Set the video bandwidth (VBW) $\geq 3 \times$ RBW.
3. Detector = Peak.
4. Trace mode = max hold.
5. Sweep = auto couple.
6. Allow the trace to stabilize.
7. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 20 dB relative to the maximum level measured in the fundamental emission.

7.4 DEVIATION FROM STANDARD

No deviation.

7.5 TEST RESULTS

Note: The test data please refer to APPENDIX 1.



8. MAXIMUM PEAK OUTPUT POWER

Test Requirement:	FCC Part15 C Section 15.247 (b)(1)
Test Method:	ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Erratato C63.10a-2024
Limit:	GFSK:20.97 dBm

8.1 BLOCK DIAGRAM OF TEST SETUP



8.2 LIMIT

For frequency hopping systems operating in the 2400-2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725-5850 MHz band: 1 watt. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.

For FHSs operating in the band 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1.0 W if the hopset uses 75 or more hopping channels; the maximum peak conducted output power shall not exceed 0.125 W if the hopset uses less than 75 hopping channels.

8.3 TEST PROCEDURE

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 2MHz. VBW =6MHz. Sweep = auto; Detector Function = Peak.
3. Keep the EUT in transmitting at lowest, medium and highest channel individually. Record the max value.

8.4 DEVIATION FROM STANDARD

No deviation.

8.5 TEST RESULTS

Note: The test data please refer to APPENDIX 1.



9. HOPPING CHANNEL SEPARATION

Test Requirement:	FCC Part15 C Section 15.247 (a)(1)
Test Method:	ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Erratato C63.10a-2024
Receiver setup:	RBW=30KHz, VBW=100KHz, detector=Peak
Limit:	GFSK: 20dB bandwidth

9.1 TEST SETUP



9.2 TEST PROCEDURE

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 30kHz. VBW = 100kHz , Span = 2.0MHz. Sweep = auto; Detector Function = Peak. Trace = Max hold.
3. Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels. The limit is specified in one of the subparagraphs of this Section Submit this plot.

9.3 DEVIATION FROM STANDARD

No deviation.

9.4 TEST RESULTS

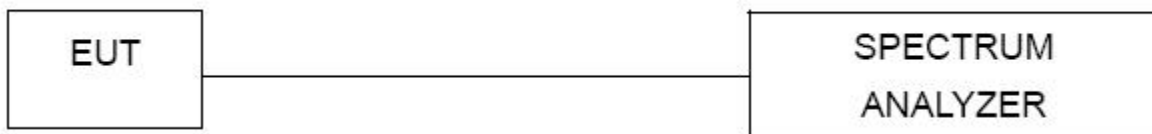
Note: The test data please refer to APPENDIX 1.



10.NUMBER OF HOPPING FREQUENCY

Test Requirement:	FCC Part15 C Section 15.247 (a)(1)(iii)
Test Method:	ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Erratato C63.10a-2024
Receiver setup:	RBW=100kHz, VBW=300kHz, Frequency range=2400MHz-2483.5MHz, Detector=Peak
Limit:	GFSK 40 channels

10.1 TEST SETUP



10.2 TEST PROCEDURE

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set the spectrum analyzer: RBW = 100kHz. VBW = 300kHz. Sweep = auto; Detector Function = Peak. Trace = Max hold.
3. Allow the trace to stabilize. It may prove necessary to break the span up to sections. in order to clearly show all of the hopping frequencies. The limit is specified in one of the subparagraphs of this Section.
4. Set the spectrum analyzer: Start Frequency = 2.4GHz, Stop Frequency = 2.4835GHz. Sweep=auto;

10.3 DEVIATION FROM STANDARD

No deviation.

10.4 TEST RESULTS

Note: The test data please refer to APPENDIX 1.



11. DWELL TIME

Test Requirement:	FCC Part15 C Section 15.247 (a)(1)(iii)
Test Method:	ANSI C63.10-2020 + Cor.1-2023 + C63.10a-2024 + Erratato C63.10a-2024
Receiver setup:	RBW=1MHz, VBW=3MHz, Span=0Hz, Detector=Peak
Limit:	0.4 Second

11.1 TEST SETUP



11.2 TEST PROCEDURE

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum.
2. Set spectrum analyzer span = 0Hz;
3. Set RBW = 1MHz and VBW = 3MHz. Sweep = as necessary to capture the entire dwell time per hopping channel. Set the EUT for GFSK packet transmitting.
4. Use the marker-delta function to determine the dwell time. If this value varies with different modes of operation (e.g.. data rate. modulation format. etc.). repeat this test for each variation. The limit is specified in one of the subparagraphs of this Section. Submit this plot(s).

11.3 DEVIATION FROM STANDARD

No deviation.

11.4 TEST RESULTS

Note: The test data please refer to APPENDIX 1.



12. 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 PIFA antenna, the best case gain of the antennas is 1.65 dBi, reference to the appendix II for details.	



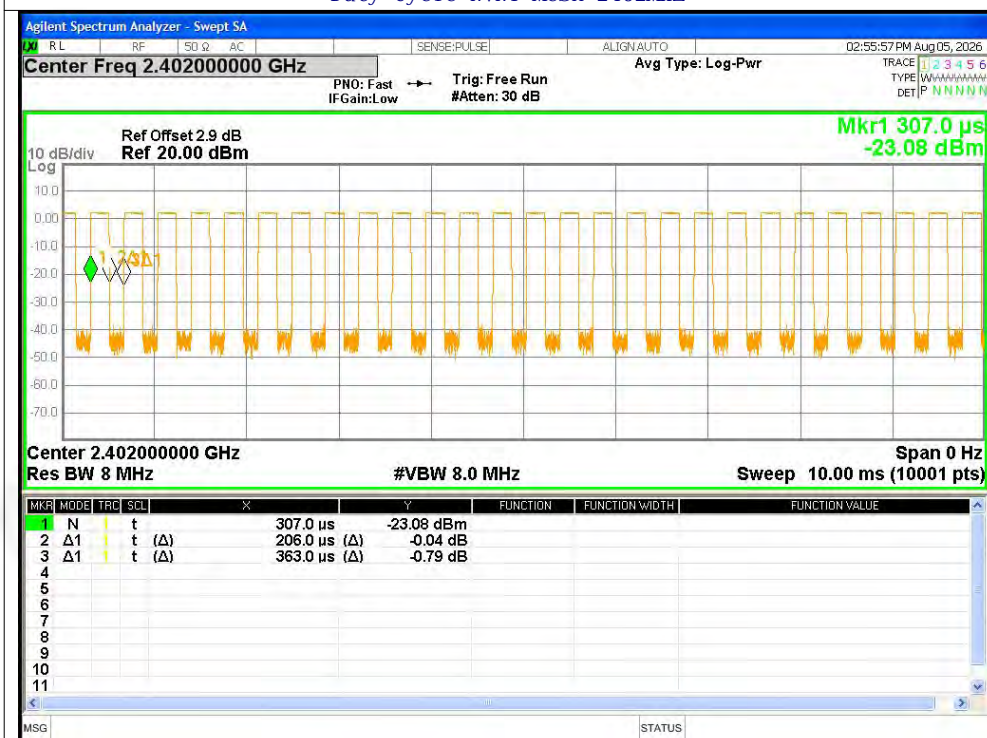
13. APPENDIX 1-TEST DATA

Duty Cycle

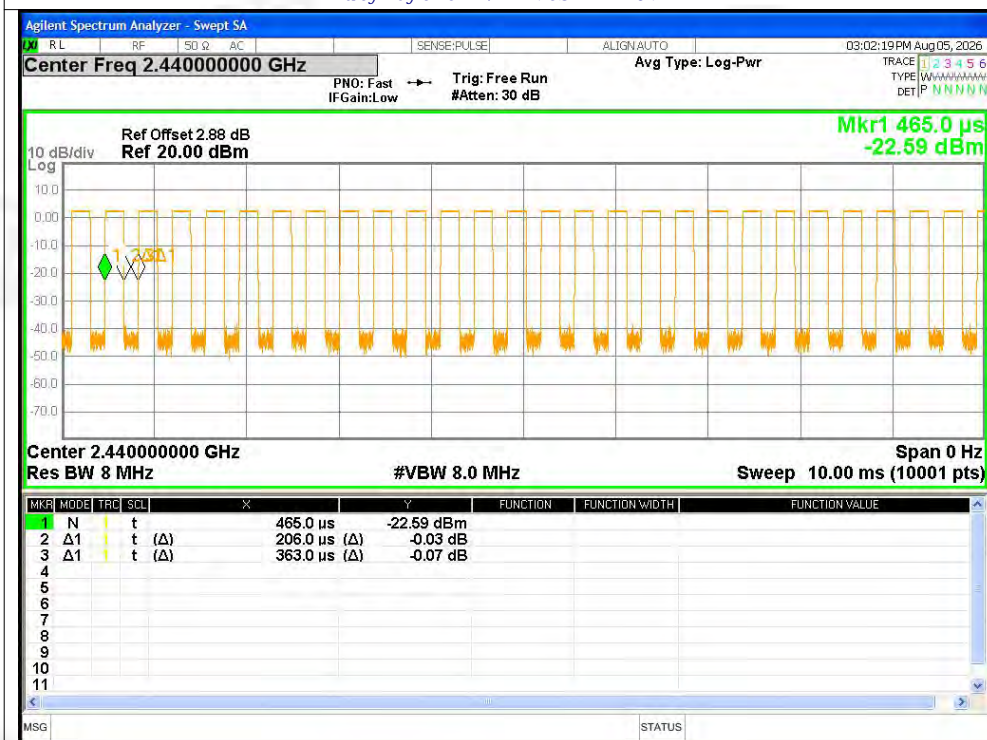
Condition	Mode	Frequency (MHz)	On Time (ms)	Period (ms)	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	Mesh	2402	0.206	0.363	56.75	2.46	4.85
NVNT	Mesh	2440	0.206	0.363	56.75	2.46	4.85
NVNT	Mesh	2480	0.206	0.363	56.75	2.46	4.85

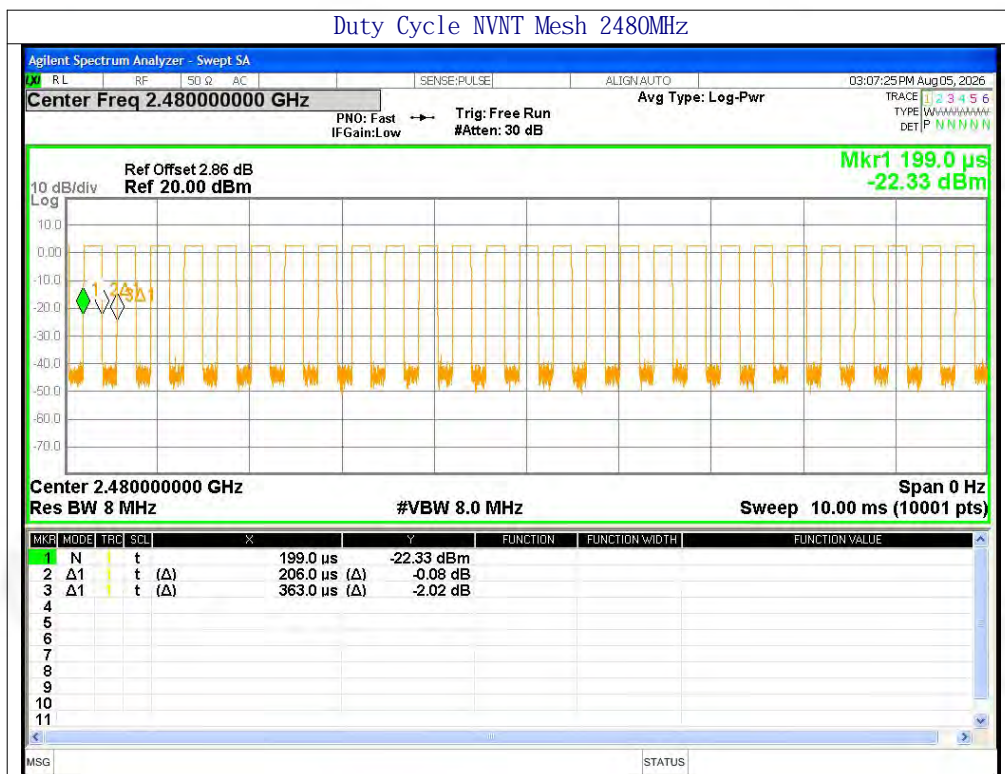


Test Graphs
Duty Cycle NVNT Mesh 2402MHz



Duty Cycle NVNT Mesh 2440MHz

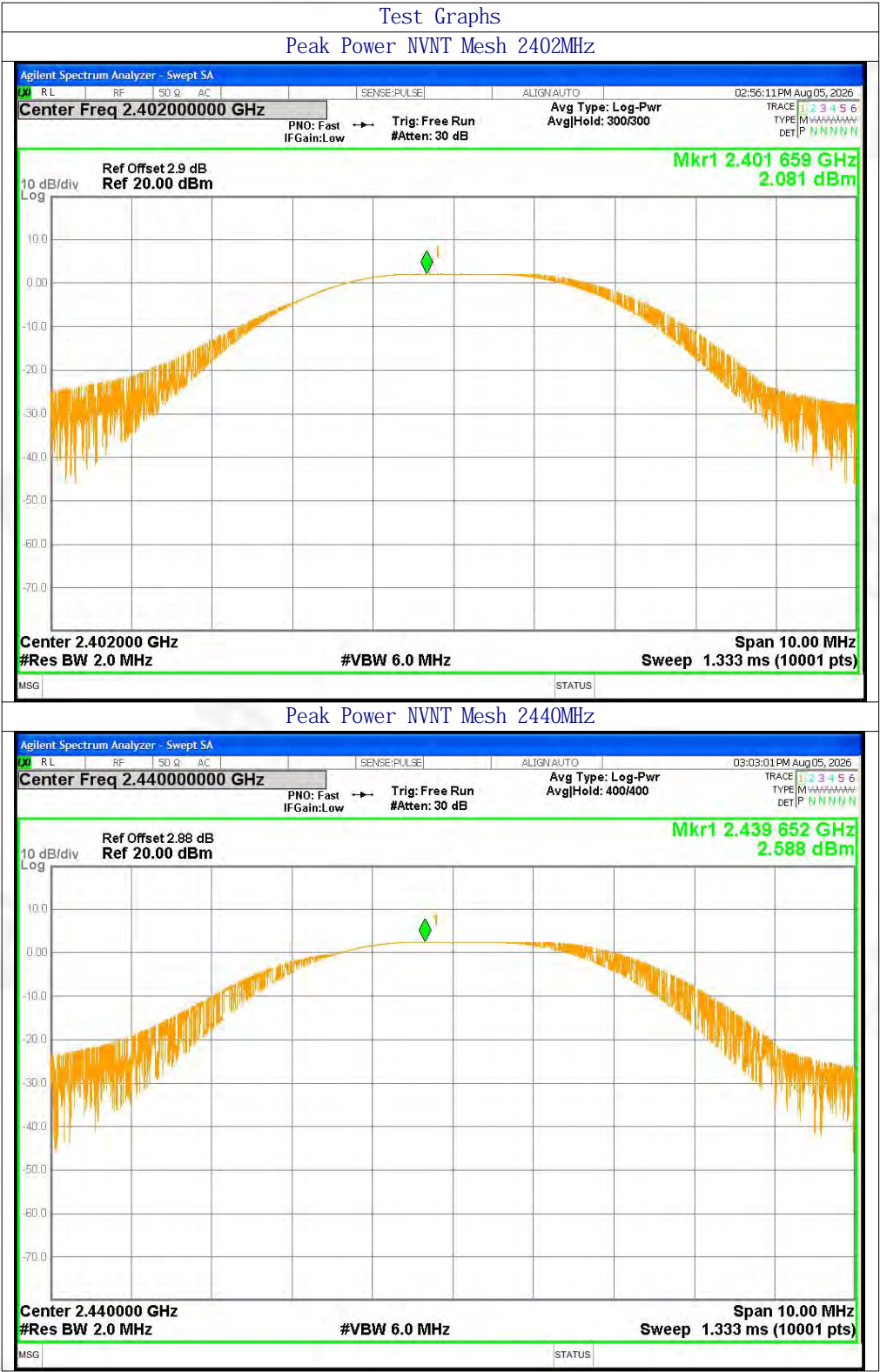


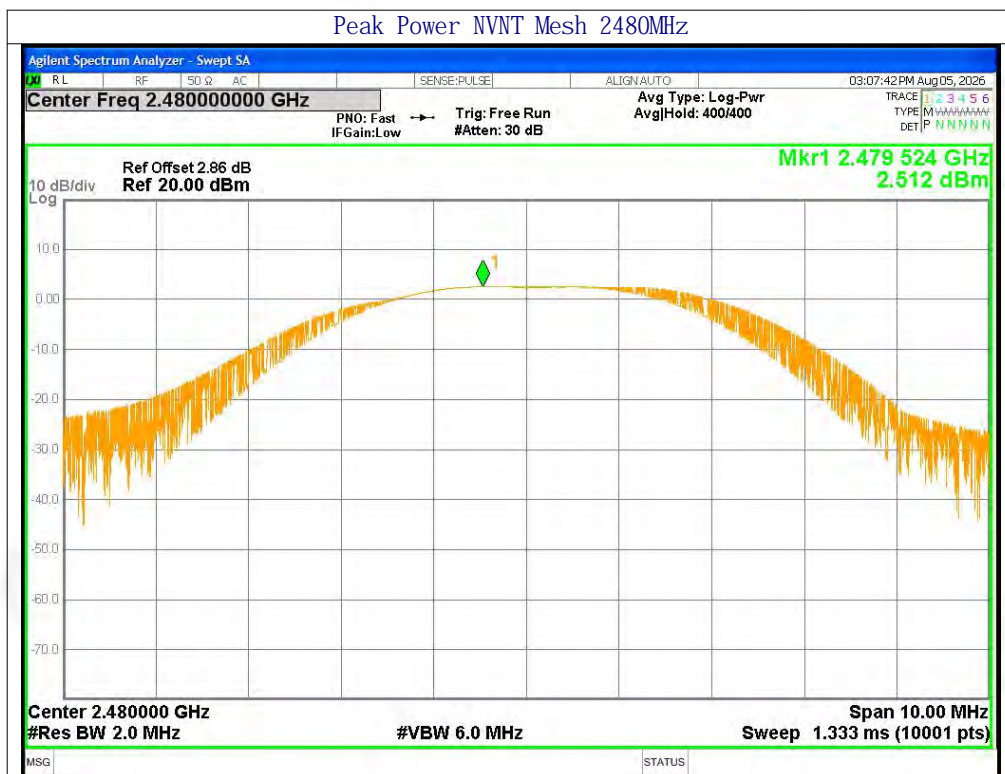




Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	Mesh	2402	2.08	<=20.97	Pass
NVNT	Mesh	2440	2.59	<=20.97	Pass
NVNT	Mesh	2480	2.51	<=20.97	Pass







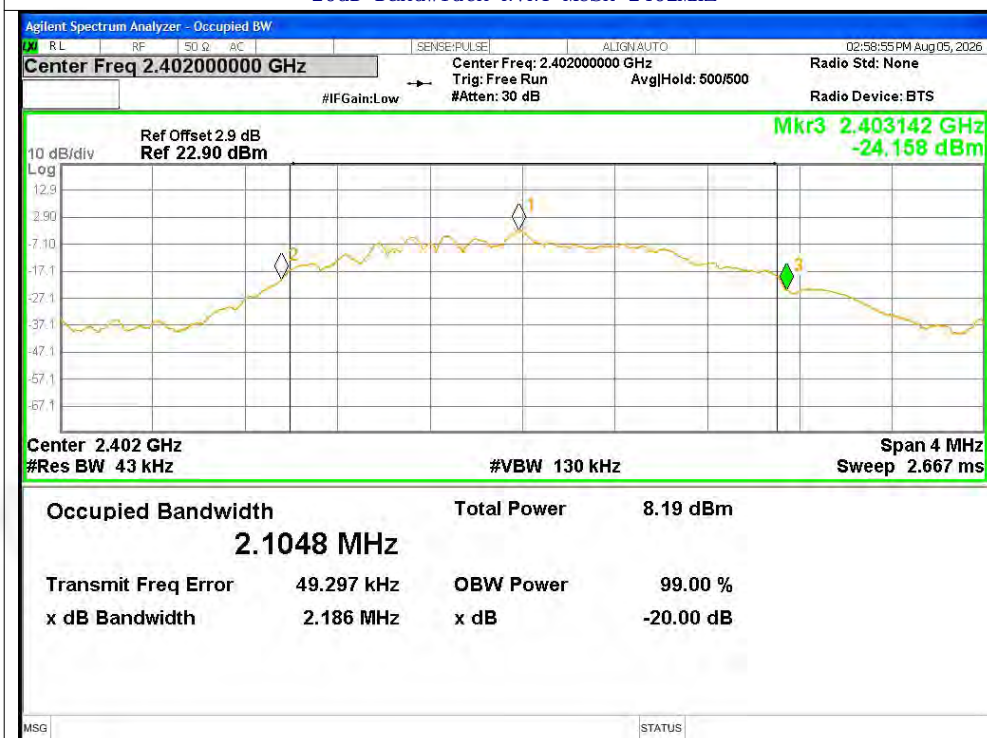
-20dB Bandwidth

Condition	Mode	Frequency (MHz)	-20 dB Bandwidth (MHz)	Verdict
NVNT	Mesh	2402	2.186	Pass
NVNT	Mesh	2440	2.288	Pass
NVNT	Mesh	2480	2.275	Pass



Test Graphs

-20dB Bandwidth NVNT Mesh 2402MHz



-20dB Bandwidth NVNT Mesh 2440MHz





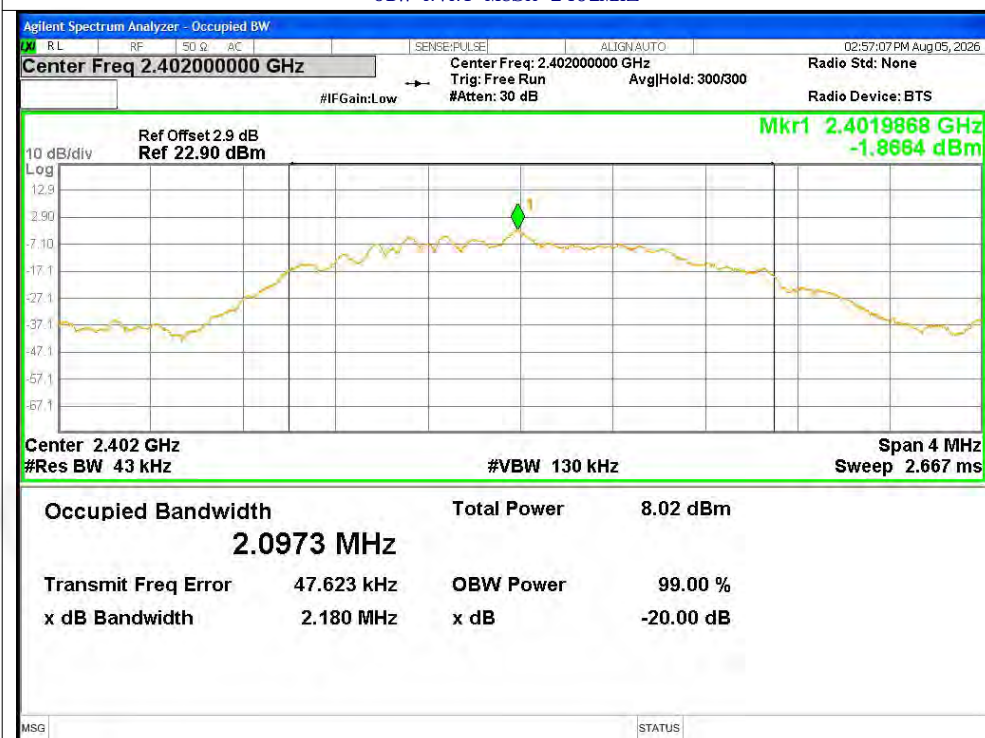


Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	99% OBW (MHz)
NVNT	Mesh	2402	2.0973
NVNT	Mesh	2440	2.2389
NVNT	Mesh	2480	2.2015



Test Graphs
OBW NVNT Mesh 2402MHz



OBW NVNT Mesh 2440MHz





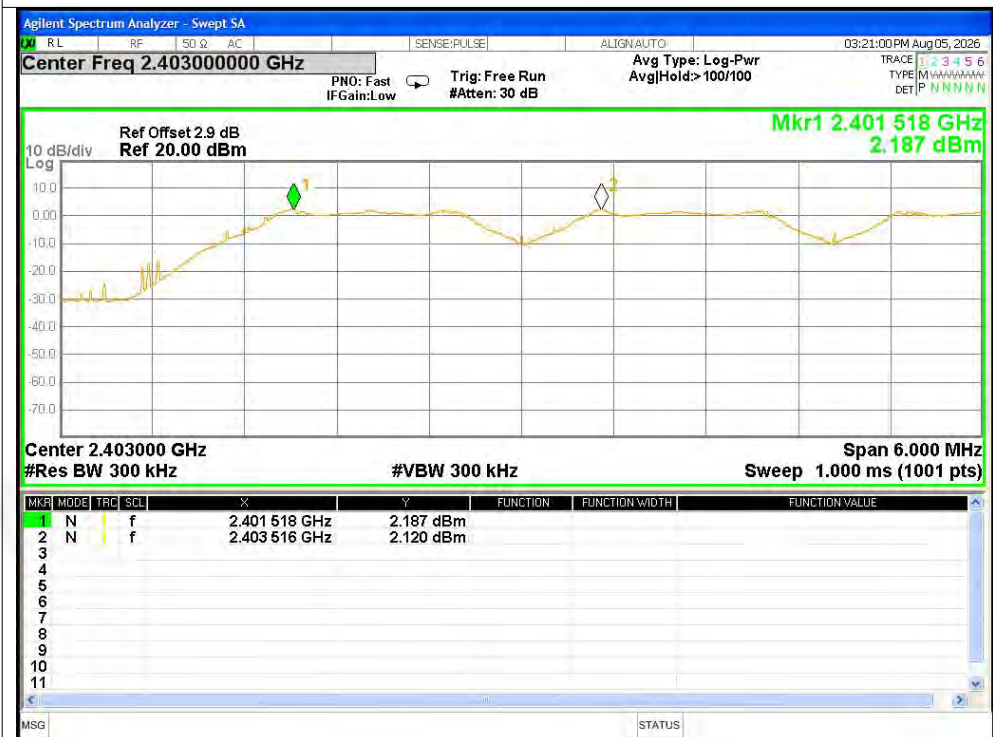


Carrier Frequencies Separation

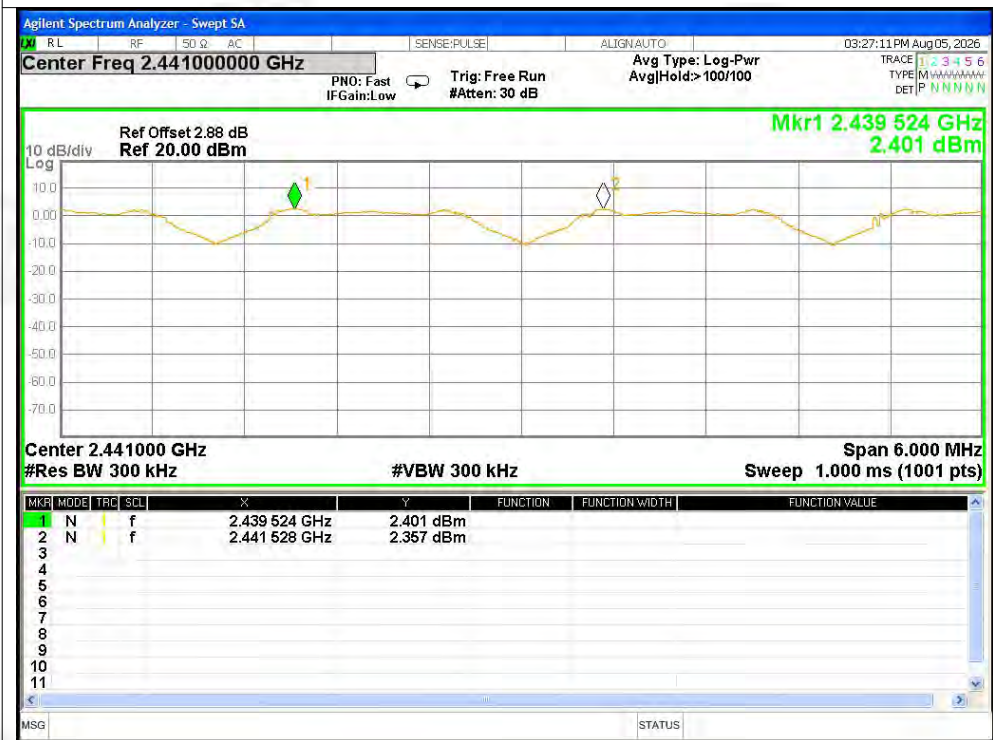
Condition	Mode	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	Mesh	2401.518	2403.516	1.998	≥ 1.457	Pass
NVNT	Mesh	2439.524	2441.528	2.004	≥ 1.525	Pass
NVNT	Mesh	2477.524	2479.516	1.992	≥ 1.517	Pass

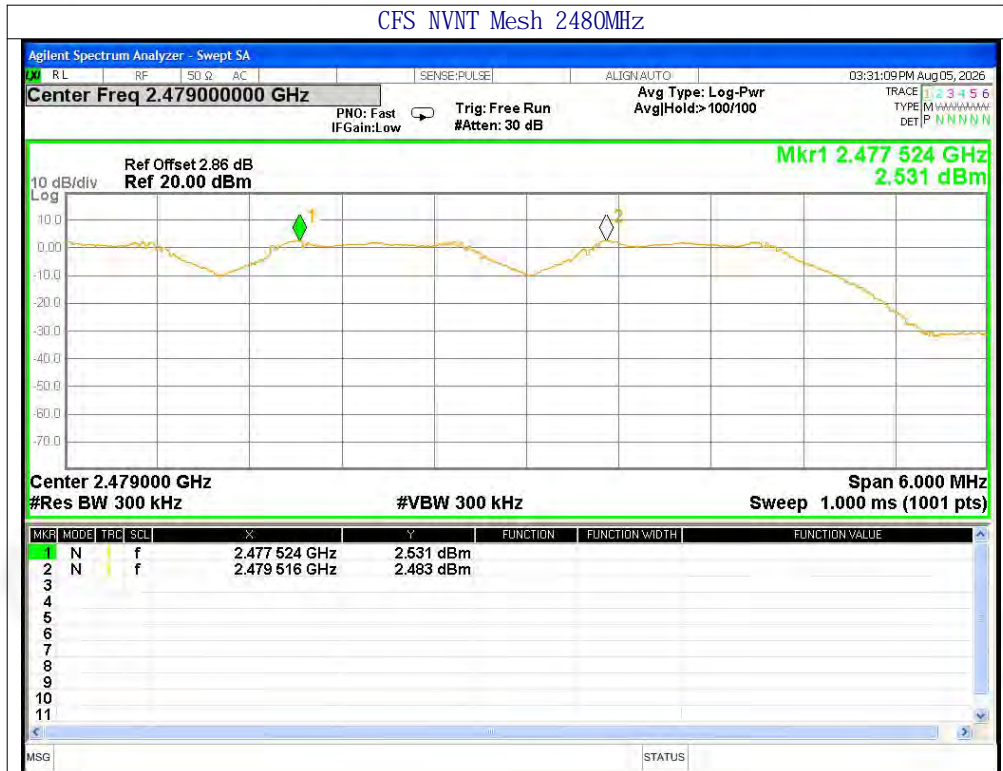


Test Graphs
CFS NVNT Mesh 2402MHz



CFS NVNT Mesh 2440MHz

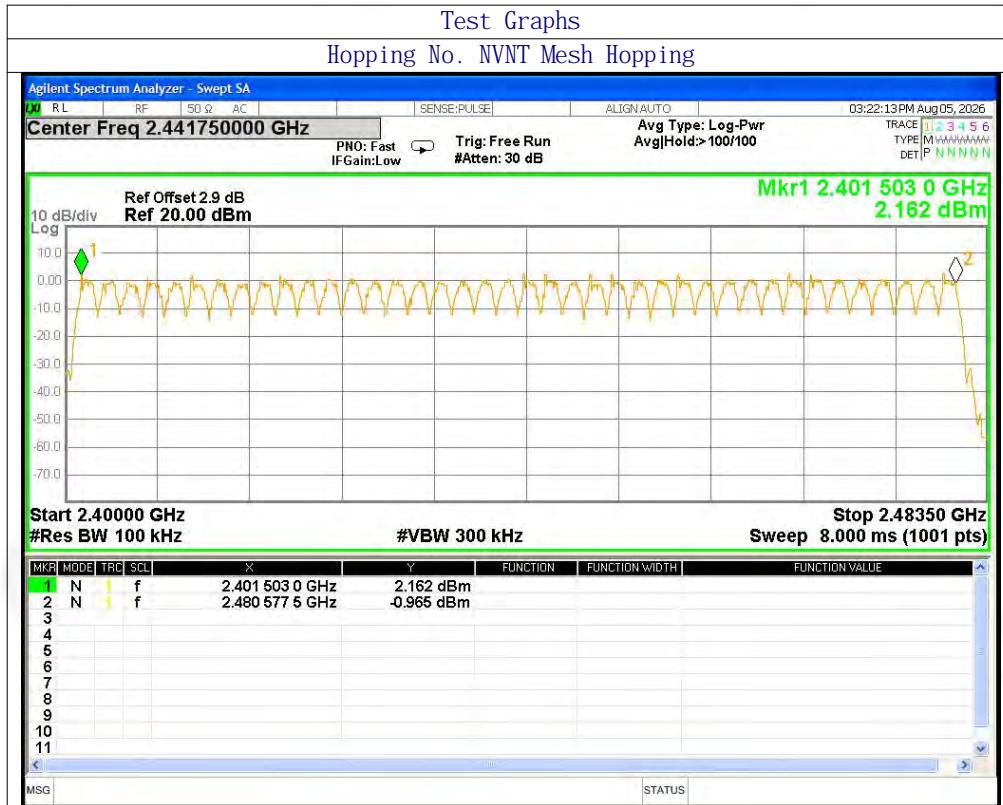






Number of Hopping Channel

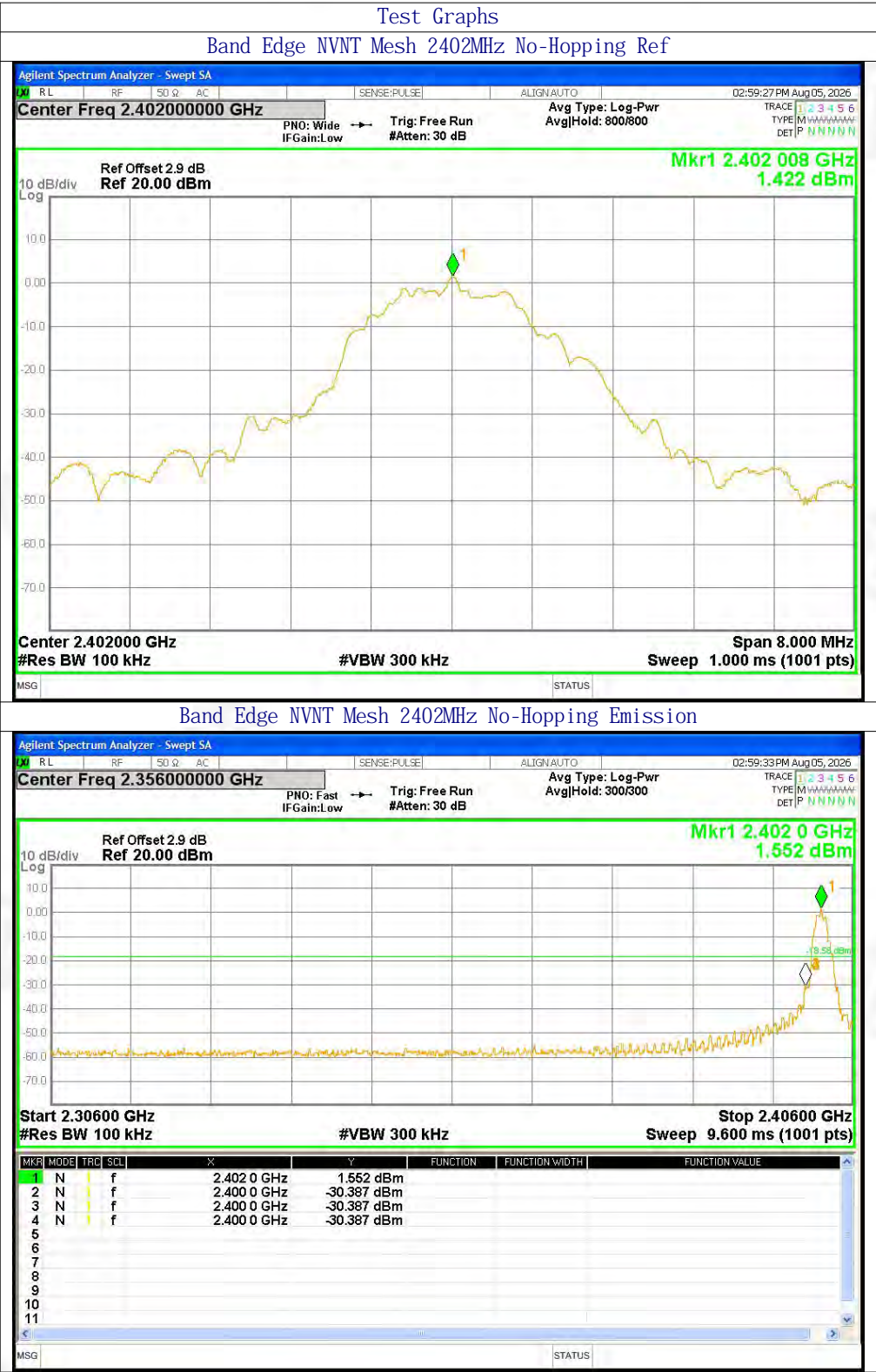
Condition	Mode	Hopping Number	Limit	Verdict
NVNT	Mesh	40	>=15	Pass





Band Edge

Condition	Mode	Frequency (MHz)	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	Mesh	2402	No-Hopping	-31.8	<=-20	Pass
NVNT	Mesh	2480	No-Hopping	-46.05	<=-20	Pass

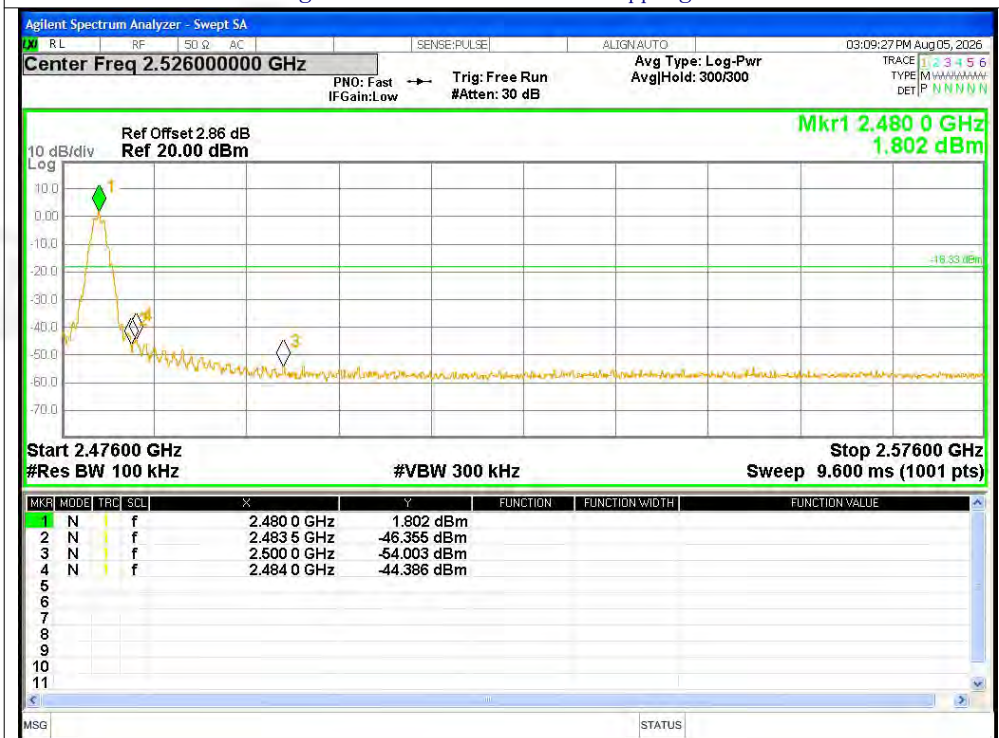




Band Edge NVNT Mesh 2480MHz No-Hopping Ref



Band Edge NVNT Mesh 2480MHz No-Hopping Emission





Band Edge(Hopping)

Condition	Mode	Frequency (MHz)	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	Mesh	2402	Hopping	-55.51	<=-20	Pass
NVNT	Mesh	2480	Hopping	-52.37	<=-20	Pass

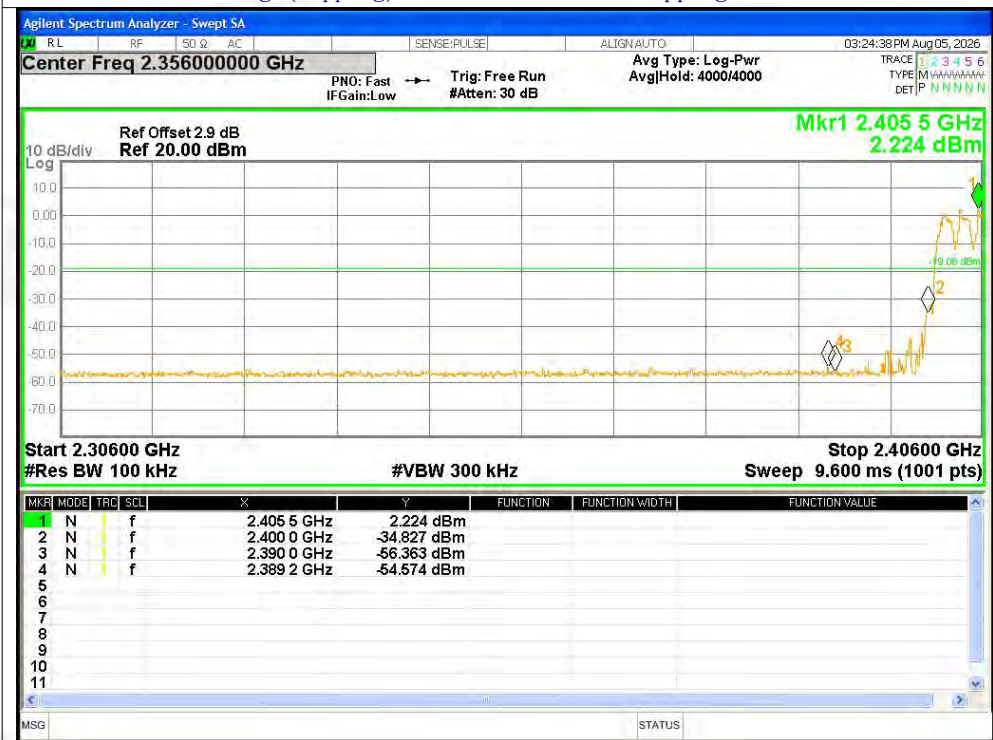


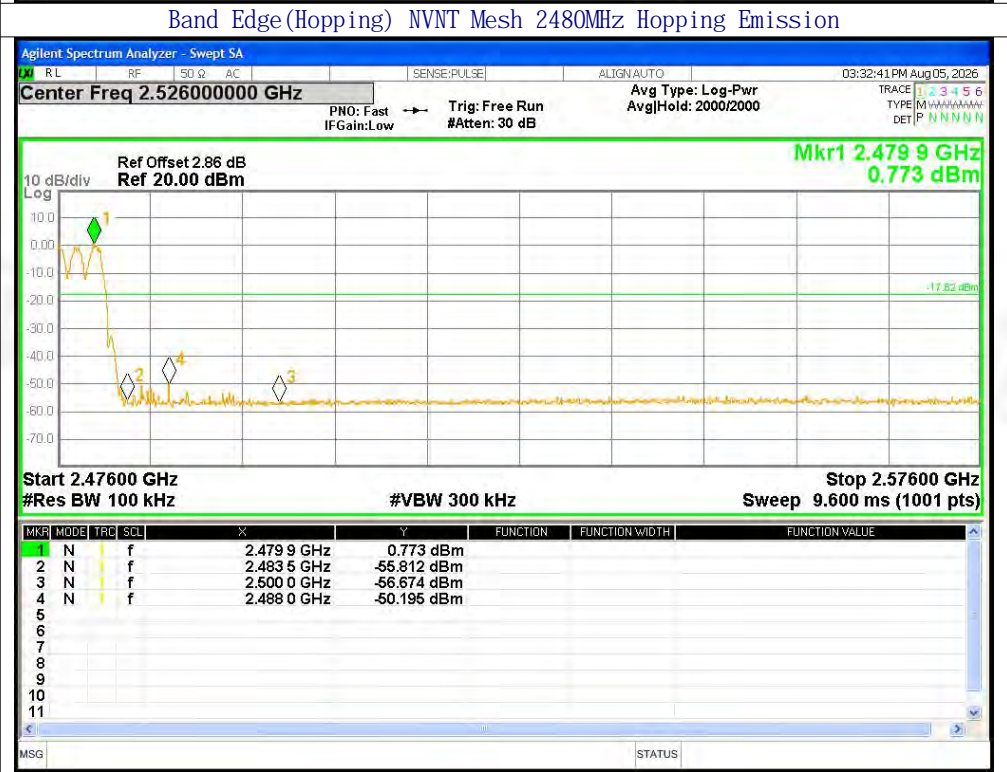
Test Graphs

Band Edge(Hopping) NVNT Mesh 2402MHz Hopping Ref



Band Edge(Hopping) NVNT Mesh 2402MHz Hopping Emission







Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	Mesh	2402	-43.11	<=-20	Pass
NVNT	Mesh	2440	-39.82	<=-20	Pass
NVNT	Mesh	2480	-41.73	<=-20	Pass



Agilent Spectrum Analyzer - Swept SA

RL RF SO Q AC CORRE SENSE/PULSE ALIGN AUTO 03:06:00 PM Aug 05, 2026

Center Freq 2.40200000 GHz

PNO: Wide IF Gain: Low Trig: Free Run #Atten: 30 dB

Avg Type: Log-Pwr Avg/Hold: 500/500

TRACE 1 2 3 4 5 6
TYPE M W W W W W W W
DET P N N N N N N

10 dB/div Ref 20.00 dBm

Mkr1 2.402 016 GHz
1.421 dBm

Center 2.402000 GHz #Res BW 100 kHz #VBW 300 kHz Span 8.000 MHz Sweep 1.000 ms (1001 pts)

MSG STATUS

Agilent Spectrum Analyzer - Swept SA

03:06:30 PM Aug 05, 2026

Center Freq 13.26500000 GHz

PNO: Fast IFGain:Low Trig: Free Run #Atten: 30 dB

Avg Type: Log-Pwr AvgHld: 10/10

TRACE 1 2 3 4 5 6
TYPE M H L S P
DET P N N N N N

10 dB/div Log Ref 20.00 dBm

Mkr1 2.401 7 GHz -1.443 dBm

Start 30 MHz #Res BW 100 kHz #VBW 300 kHz Stop 26.50 GHz Sweep 2.530 s (30001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f	f	2.401 7 GHz	-1.443 dBm			
2	N	f	f	4.803 4 GHz	-41.695 dBm			
3	N	f	f	4.803 4 GHz	-41.695 dBm			
4	N	f	f	7.207 8 GHz	-51.080 dBm			
5	N	f	f	9.563 6 GHz	-53.985 dBm			
6								
7								
8								
9								
10								
11								

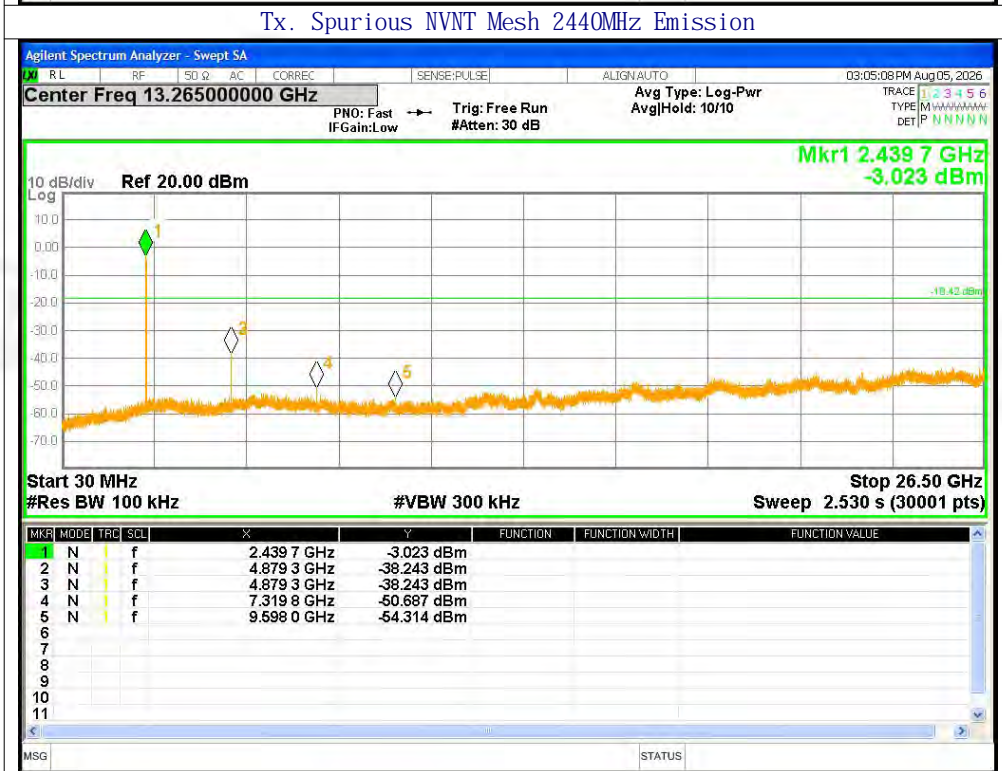
MSG STATUS



Tx. Spurious NVNT Mesh 2440MHz Ref



Tx. Spurious NVNT Mesh 2440MHz Emission

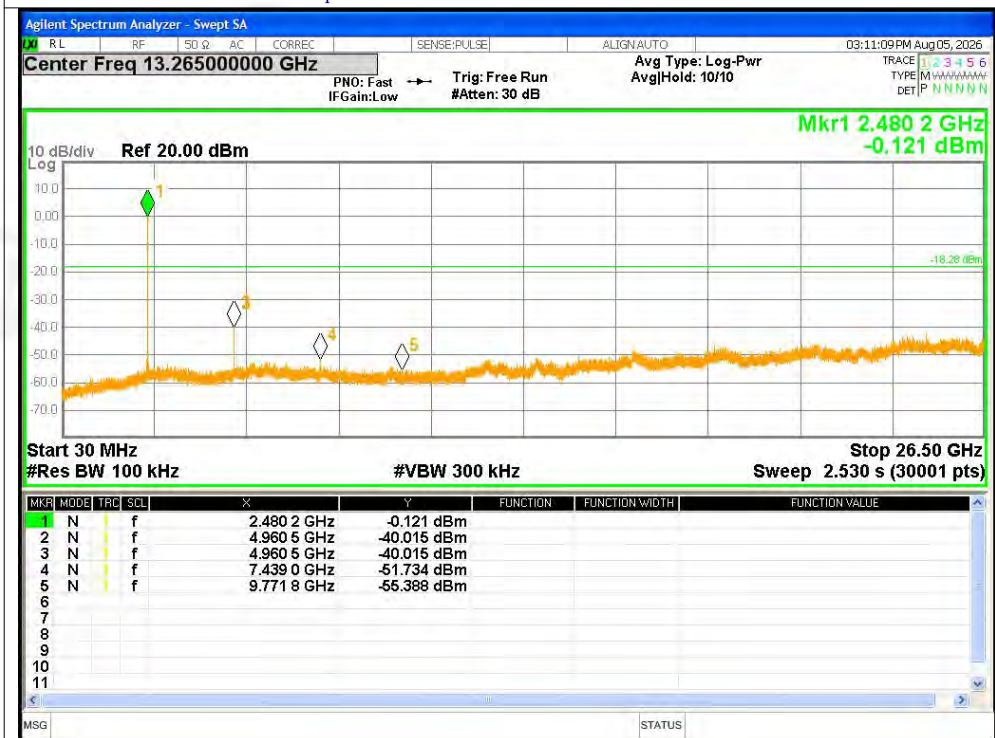




Tx. Spurious NVNT Mesh 2480MHz Ref



Tx. Spurious NVNT Mesh 2480MHz Emission





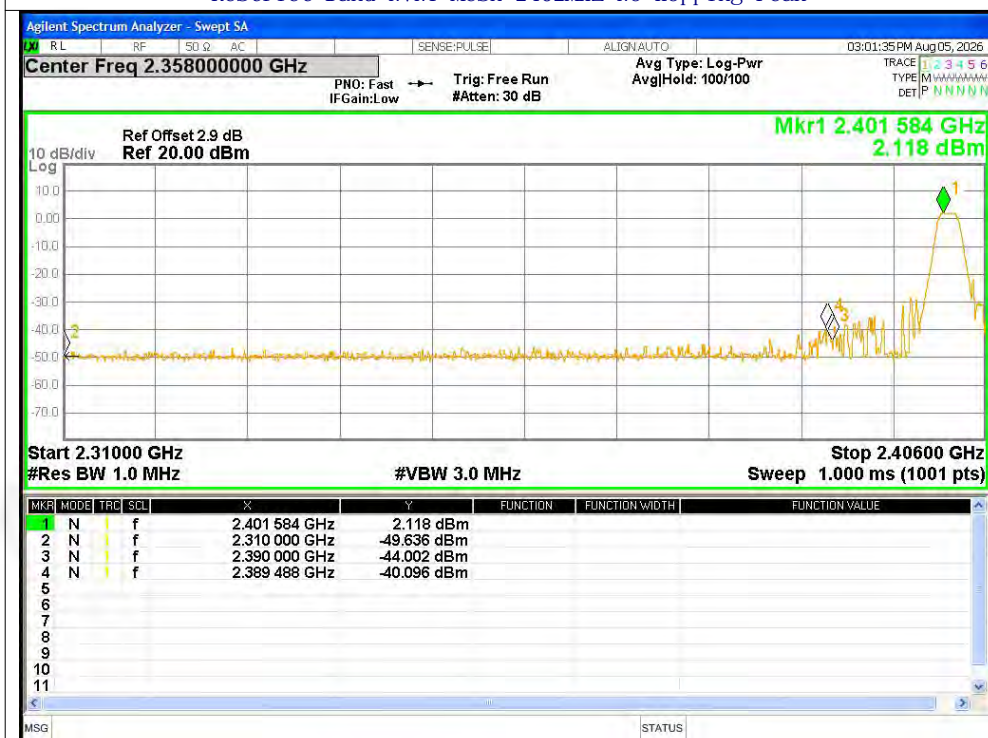
Restrict Band

Condition	Mode	Frequency (MHz)	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	Mesh	2402	No-Hopping	2310	-49.63	2	0	47.63	Peak	<=74	Pass
NVNT	Mesh	2402	No-Hopping	2310	-57.52	2	2.46	42.2	Average	<=54	Pass
NVNT	Mesh	2402	No-Hopping	2389.488	-40.09	2	0	57.17	Peak	<=74	Pass
NVNT	Mesh	2402	No-Hopping	2388.912	-55.57	2	2.46	44.15	Average	<=54	Pass
NVNT	Mesh	2402	No-Hopping	2390	-46.92	2	0	50.34	Peak	<=74	Pass
NVNT	Mesh	2402	No-Hopping	2390	-56.97	2	2.46	42.75	Average	<=54	Pass
NVNT	Mesh	2480	No-Hopping	2483.5	-30.59	2	0	66.67	Peak	<=74	Pass
NVNT	Mesh	2480	No-Hopping	2483.5	-46.17	2	2.46	53.55	Average	<=54	Pass
NVNT	Mesh	2480	No-Hopping	2483.896	-29.7	2	0	67.56	Peak	<=74	Pass
NVNT	Mesh	2480	No-Hopping	2483.512	-46.17	2	2.46	53.55	Average	<=54	Pass
NVNT	Mesh	2480	No-Hopping	2500	-49.23	2	0	48.03	Peak	<=74	Pass
NVNT	Mesh	2480	No-Hopping	2500	-56.81	2	2.46	42.91	Average	<=54	Pass

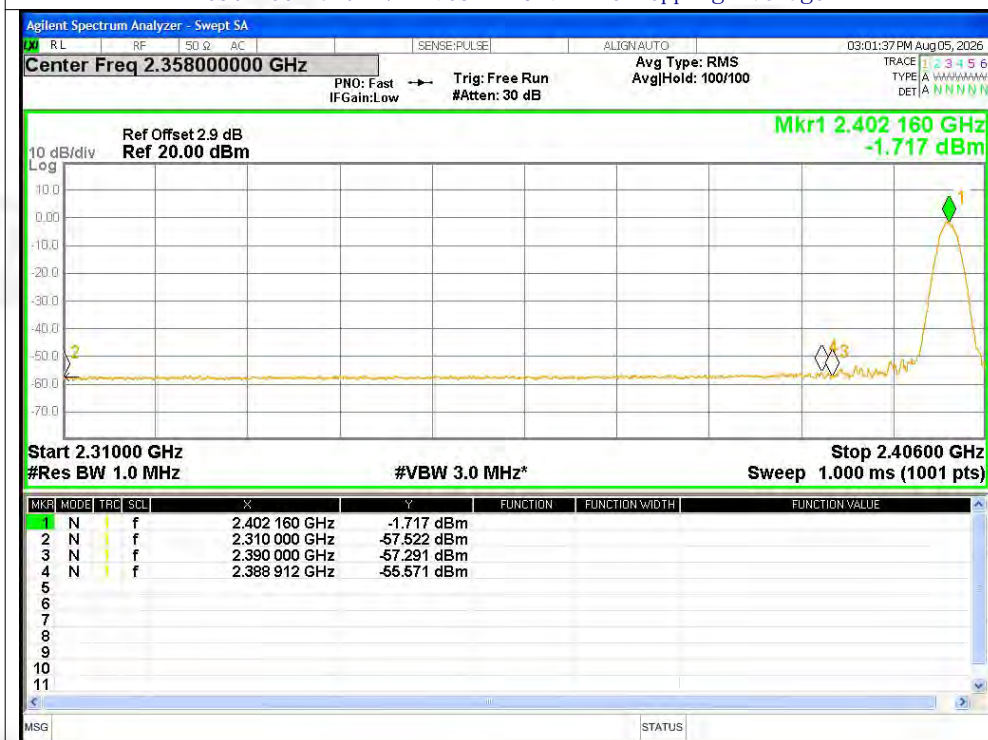


Test Graphs

Restrict Band NVNT Mesh 2402MHz No-Hopping Peak

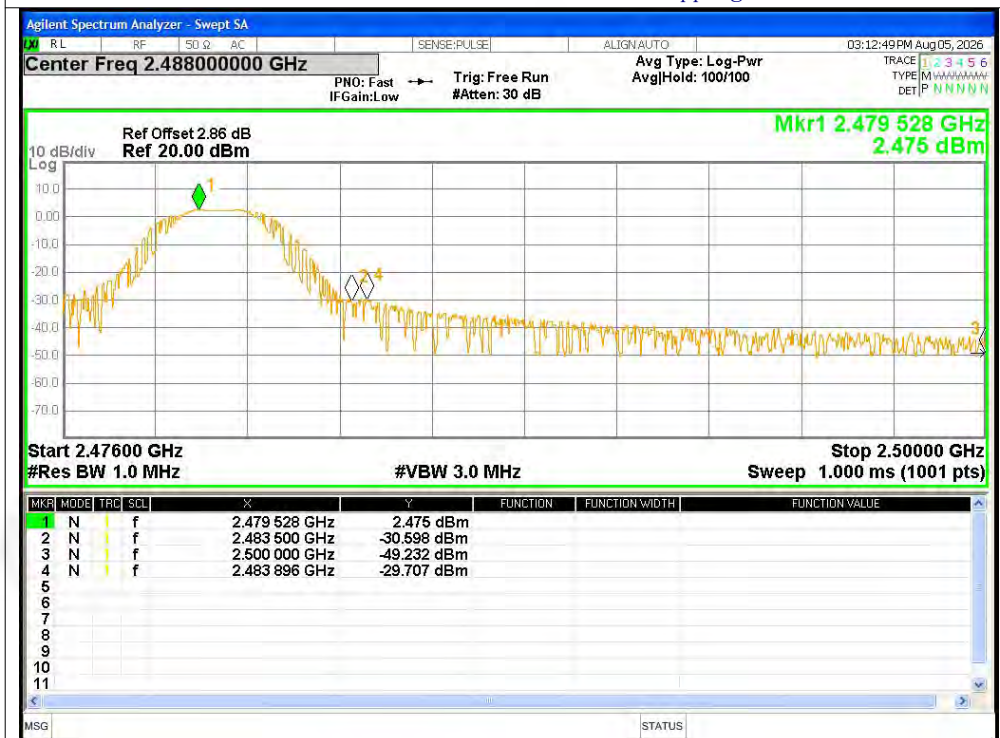


Restrict Band NVNT Mesh 2402MHz No-Hopping Average

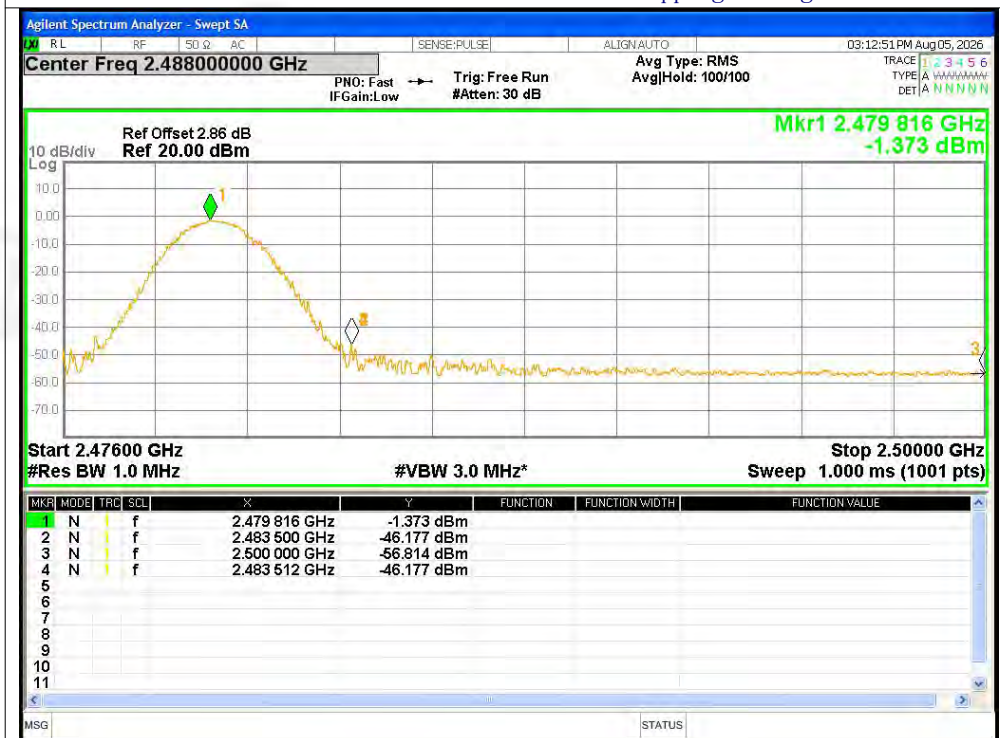




Restrict Band NVNT Mesh 2480MHz No-Hopping Peak



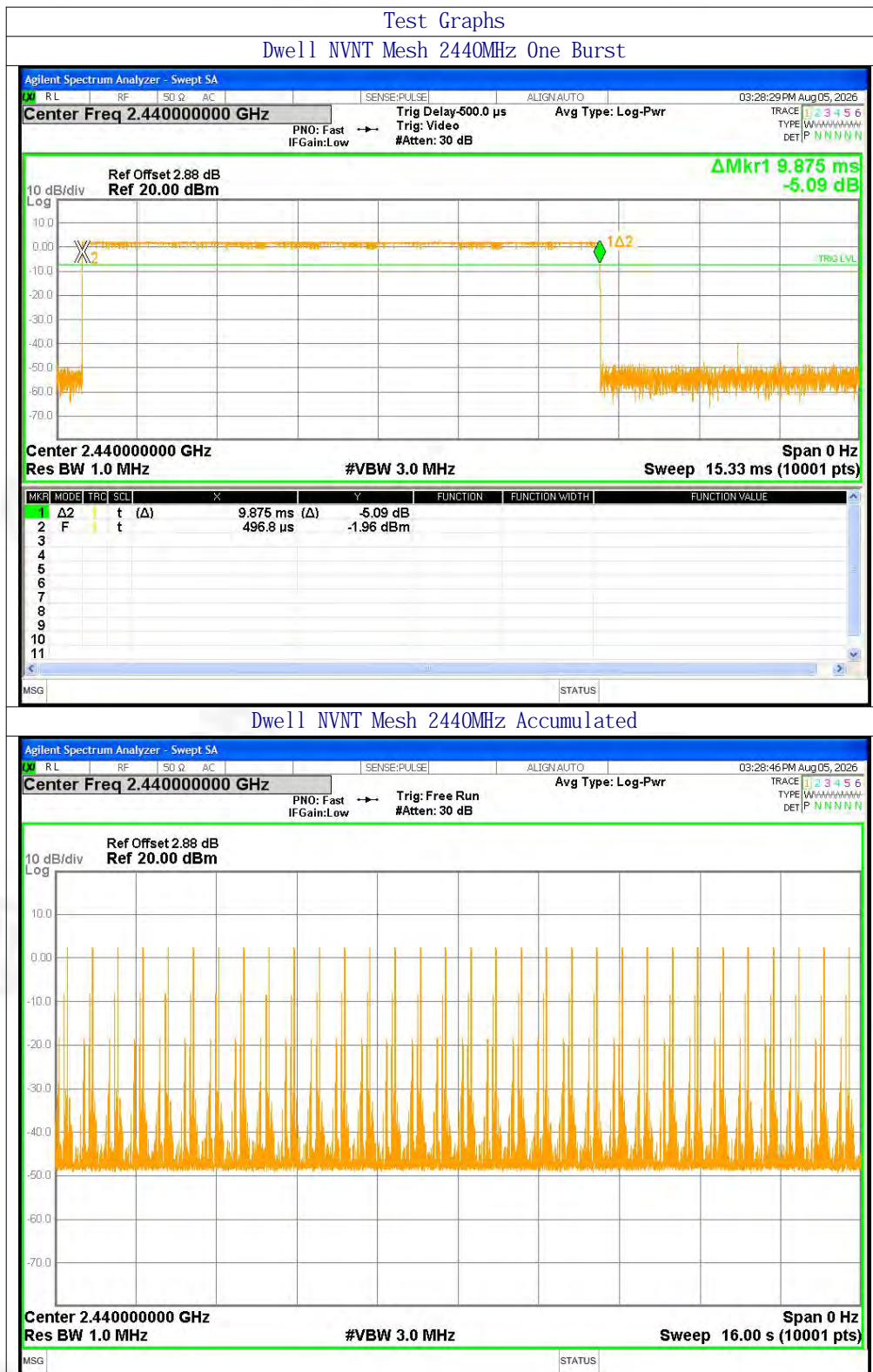
Restrict Band NVNT Mesh 2480MHz No-Hopping Average





Dwell Time

Condition	Mode	Frequency (MHz)	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	Mesh	2440	9.875	316	32	16000	<=400	Pass



14. Test Setup Photo



Reference to the appendix I for details.

15. EUT Constructional Details

Reference to the appendix II for details.

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