

FCC & ISED Radio Test Report**FCC ID: XGB-CWBB0029****IC: 3879A-CWBB0029****The report concerns: Original Grant**

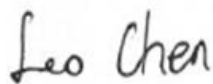
Report Reference No.....: 25EFSB08003 09271
Date Sample(s) Received.....: 2025-07-31
Date of Tested.....: From 2025-08-01 to 2025-08-11
Date of issue.....: 2025-08-26
Testing Laboratory: DongGuan ShuoXin Electronic Technology Co., Ltd.
Zone A, 1F, No. 6, XinGang Road YuanGang Street,
Address: XinAn District, ChangAn Town, DongGuan City,
GuangDong, China

Applicant's name: Voyetra Turtle Beach, Inc.
Address: 44 South Broadway, 4th Floor, White Plains NY
10601, USA

Equipment.....: NSW2 Afterglow Wireless Controller
Trade Mark: /
Model: CWBB0029
Ratings: I/P: 5VDC 500mA (Provided by USB-C)
3.7VDC 900mAh (Provided by the battery)

Test Engineer:

Jelena OuYang

Responsible Engineer :

Leo Chen

Authorized Signatory:

Smile Wang

Table of Contents	Page
1 TEST REPORT DECLARE	5
2 SUMMARY OF TEST RESULTS	6
2.1 MEASUREMENT UNCERTAINTY	7
3 GENERAL INFORMATION	8
3.1 GENERAL DESCRIPTION OF EUT	8
3.2 DESCRIPTION OF TEST MODES	10
3.3 PARAMETERS OF TEST SOFTWARE	11
3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED	11
3.5 SUPPORT UNITS	11
3.6 TEST ENVIRONMENT CONDITIONS	12
4 AC POWER LINE CONDUCTED EMISSIONS TEST	13
4.1 LIMIT	13
4.2 TEST PROCEDURE	13
4.3 MEASUREMENT INSTRUMENTS LIST	13
4.4 TEST SETUP	14
4.5 EUT OPERATING CONDITIONS	14
4.6 TEST RESULTS	15
5 RADIATED EMISSION TEST	17
5.1 LIMIT	17
5.2 TEST PROCEDURE AND SETTING	18
5.3 MEASUREMENT INSTRUMENTS LIST	19
5.4 TEST SETUP	19
5.5 EUT OPERATING CONDITIONS	20
5.6 TEST RESULTS - 9 KHZ TO 30MHZ	21
5.7 TEST RESULTS- 30 MHZ TO 1000MHZ	22
5.8 TEST RESULTS - ABOVE 1000MHZ (BAND EDGE)	24
5.9 TEST RESULTS - ABOVE 1000MHZ (HARMONIC)	32
6 NUMBER OF HOPPING FREQUENCY	44
6.1 LIMIT	44
6.2 TEST PROCEDURE AND SETTING	44
6.3 MEASUREMENT INSTRUMENTS LIST	44
6.4 TEST SETUP	44

Table of Contents	Page
6.5 EUT OPERATION CONDITIONS	44
6.6 TEST RESULTS	45
7 AVERAGE TIME OF OCCUPANCY	46
7.1 LIMIT	46
7.2 TEST PROCEDURE AND SETTING	46
7.3 MEASUREMENT INSTRUMENTS LIST	46
7.4 TEST SETUP	46
7.5 EUT OPERATION CONDITIONS	46
7.6 TEST RESULTS	47
8 HOPPING CHANNEL SEPARATION MEASUREMENT	48
8.1 LIMIT	48
8.2 TEST PROCEDURE AND SETTING	48
8.3 MEASUREMENT INSTRUMENTS LIST	48
8.4 TEST SETUP	48
8.5 EUT OPERATION CONDITIONS	48
8.6 TEST RESULTS	49
9 BANDWIDTH TEST	50
9.1 LIMIT	50
9.2 TEST PROCEDURE AND SETTING	50
9.3 MEASUREMENT INSTRUMENTS LIST	50
9.4 TEST SETUP	50
9.5 EUT OPERATION CONDITIONS	50
9.6 TEST RESULTS	51
10 MAXIMUM OUTPUT POWER	52
10.1 LIMIT	52
10.2 TEST PROCEDURE AND SETTING	52
10.3 MEASUREMENT INSTRUMENTS LIST	52
10.4 TEST SETUP	52
10.5 EUT OPERATION CONDITIONS	52
10.6 TEST RESULTS	53
11 CONDUCTED SPURIOUS EMISSION	56
11.1 LIMIT	56
11.2 TEST PROCEDURE AND SETTING	56
11.3 MEASUREMENT INSTRUMENTS LIST	56

Table of Contents	Page
11.4 TEST SETUP	56
11.5 EUT OPERATION CONDITIONS	56
11.6 TEST RESULTS	57
12 FREQUENCY STABILITY MEASUREMENT	59
12.1 LIMIT	59
12.2 TEST PROCEDURE	59
12.3 MEASUREMENT INSTRUMENTS LIST	59
12.4 TEST SETUP	59
12.5 EUT OPERATION CONDITIONS	59
12.6 TEST RESULTS	60

1 TEST REPORT DECLARE

Applicant for FCC	Voyetra Turtle Beach, Inc
Address for FCC	44 South Broadway, 4th Floor, White Plains NY 10601, USA
Manufacturer	Voyetra Turtle Beach, Inc
Address	44 South Broadway, 4th Floor, White Plains NY 10601, USA
Factory	1. SHENZHEN MYGT CO., LTD. 2. Hank Electronics Vietnam Ltd.
Address	1. D3. Tongfuyu Industrial Area Street Community of Shajing Town, BaoAn 518104Shenzhen PEOPLE'S REPUBLIC OF CHINA 2. Lot 74B/75A, No.55, Road 11,VSIP Bac Ninh industrial, Urban, and Service Park, Dai Dong Commune,Tien Du District,16353 Bac Ninh Province,VIETNAM
Equipment	NSW2 Afterglow Wireless Controller
Model No.	CWBB0029
Trade Mark	/
Standard	FCC Part15, Subpart C (15.247) RSS-247 Issue 4 July 2025 RSS-Gen Issue 5 February 2021 ANSI C63.10-2020+Cor.1-2023

We Declare:

The equipment described above is tested by DongGuan ShuoXin Electronic Technology Co., Ltd(ATT). and in the configuration tested the equipment complied with the standards specified above. The test results are contained in this test report and DongGuan ShuoXin Electronic Technology Co., Ltd.(ATT) is assumed of full responsibility for the accuracy and completeness of these tests.

ATT is not responsible for the sampling stage, so the results only apply to the sample as received.

ATT's reports apply only to the specific samples tested under conditions. It is manufacture's responsibility to ensure that additional production units of this model are manufactured with the identical electrical and mechanical components. ATT shall have no liability for any declarations, inferences or generalizations drawn by the client or others from ATT issued reports.

2 SUMMARY OF TEST RESULTS

The EUT have been tested according to the applicable standards as referenced below:

Standard(s) Section		Test Item	Judgment	Remark
FCC	ISED			
15.207	RSS-Gen 8.8	AC Power Line Conducted Emissions	PASS	-----
15.247(d) 15.205(a) 15.209(a)	RSS-247 7.3 RSS-Gen 7.3 RSS-Gen 8.9 RSS-Gen 8.10	Radiated Emission	PASS	-----
15.247(a)(1)(iii)	RSS-247 6.2.3.1 (b)	Number of Hopping Frequency	PASS	-----
15.247(a)(1)(iii)	RSS-247 6.2.3.1 (b)	Average Time Of Occupancy	PASS	-----
15.247(a)(1)	RSS-247 6.2.3.1 (a)	Hopping Channel Separation	PASS	-----
15.247(a)(1)	RSS-247 6.2.3.1 (a) RSS-Gen 6.7	Bandwidth	PASS	-----
15.247(a)(1)	RSS-247 6.2.3.1 (a)	Maximum Output Power	PASS	-----
15.247(d)	RSS-247 6.6	Conducted Spurious Emission	PASS	-----
-	RSS-Gen 6.11	Frequency Stability	PASS	-----
15.203	-	Antenna Requirement	PASS	Note(2)

Note:

- (1) "N/A" denotes test is not applicable in this test report
- (2) The device what use a permanently attached antenna were considered sufficient to comply with the provisions of 15.203.

2.1 MEASUREMENT UNCERTAINTY

Test Item	Uncertainty
Uncertainty for Conduction emission test (9kHz-150kHz)	3.7 dB
Uncertainty for Conduction emission test (150kHz-30MHz)	3.3 dB
Uncertainty for Radiation Emission test (30MHz-200MHz)	4.60 dB (Polarize: V)
	4.60 dB (Polarize: H)
Uncertainty for Radiation Emission test (200MHz-1GHz)	6.10 dB (Polarize: V)
	5.08 dB (Polarize: H)
Uncertainty for Radiation Emission test (1GHz-6GHz)	5.01 dB (Polarize: V)
	5.01 dB (Polarize: H)
Uncertainty for Radiation Emission test (6GHz-18GHz)	5.26 dB (Polarize: V)
	5.26 dB (Polarize: H)
Uncertainty for Radiation Emission test (18GHz-40GHz)	5.06 dB (Polarize: V)
	5.06 dB (Polarize: H)
Uncertainty for radio frequency	$\pm 0.048\text{kHz}$
Uncertainty for conducted RF Power	$\pm 0.32\text{dB}$

Note:

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of $k=2$.

Test Facility:

The Test site used by DongGuan ShuoXin Electronic Technology Co., Ltd. to collect test data is located on the Zone A, 1F, No. 6, XinGang Road YuanGang Street, XinAn District, ChangAn Town, DongGuan City, GuangDong, China

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

Item	Registration No.	Expiration Date
CNAS	L3098	2030-08-27
A2LA	4893.01	2026-06-30
Innovation, Science and Economic Development Canada (ISED)	11033A CAB identifier: CN0083	2026-06-30
Federal Communications Commission (FCC)	171688 Designation No.: CN1235	2026-06-30

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	NSW2 Afterglow Wireless Controller	
Brand Name	/	
Test Model	CWBB0029	
Series Model	N/A	
Model Difference(s)	N/A	
Hardware Version	1.0	
Software Version	1.0	
Power Source	Supplied from USB-C or Battery	
Power Rating	5VDC 500mA (Provided by USB-C); 3.7VDC 900mAh (Provided by the battery)	
Operation Frequency	2402 MHz ~ 2480 MHz	
Modulation Technology	GFSK, $\pi/4$ -DQPSK, 8-DPSK	
Bit Rate of Transmitter	1Mbps /2Mbps /3Mbps	
Antenna Information	Antenna Type: PCB	Maximum Peak Gain: 1.63dBi
Max. Output Power	1Mbps: 1.109dBm (0.001291W) 2Mbps: 3.045dBm (0.002016W) 3Mbps: 3.447dBm (0.002212W)	
Max. EIRP	1Mbps: 2.739dBm (0.001833W) 2Mbps: 4.675dBm (0.002934W) 3Mbps: 5.077dBm (0.003219W)	

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.

2. Channel List:

Channel	Frequency (MHz)	Channel	Frequency (MHz)	Channel	Frequency (MHz)
00	2402	27	2429	54	2456
01	2403	28	2430	55	2457
02	2404	29	2431	56	2458
03	2405	30	2432	57	2459
04	2406	31	2433	58	2460
05	2407	32	2434	59	2461
06	2408	33	2435	60	2462
07	2409	34	2436	61	2463
08	2410	35	2437	62	2464
09	2411	36	2438	63	2465
10	2412	37	2439	64	2466
11	2413	38	2440	65	2467
12	2414	39	2441	66	2468
13	2415	40	2442	67	2469
14	2416	41	2443	68	2470
15	2417	42	2444	69	2471
16	2418	43	2445	70	2472
17	2419	44	2446	71	2473
18	2420	45	2447	72	2474
19	2421	46	2448	73	2475
20	2422	47	2449	74	2476
21	2423	48	2450	75	2477
22	2424	49	2451	76	2478
23	2425	50	2452	77	2479
24	2426	51	2453	78	2480
25	2427	52	2454		
26	2428	53	2455		

3.2 DESCRIPTION OF TEST MODES

The test system was pre-tested based on the consideration of all possible combinations of EUT operation mode.

Pretest Mode	Description
Mode 1	TX ModeNOTE (1)
Mode 2	TX Mode Channel 01_3Mbps

Following mode(s) was (were) found to be the worst case(s) and selected for the final test.

AC power line conducted emissions test	
Final Test Mode	Description
Mode 2	TX Mode Channel 01_3Mbps

Radiated emissions test - Below 1GHz	
Final Test Mode	Description
Mode 2	TX Mode Channel 01_3Mbps

Radiated emissions test - Above 1GHz	
Final Test Mode	Description
Mode 1	TX ModeNOTE (1)

Conducted test	
Final Test Mode	Description
Mode 1	TX ModeNOTE (1)

Note:

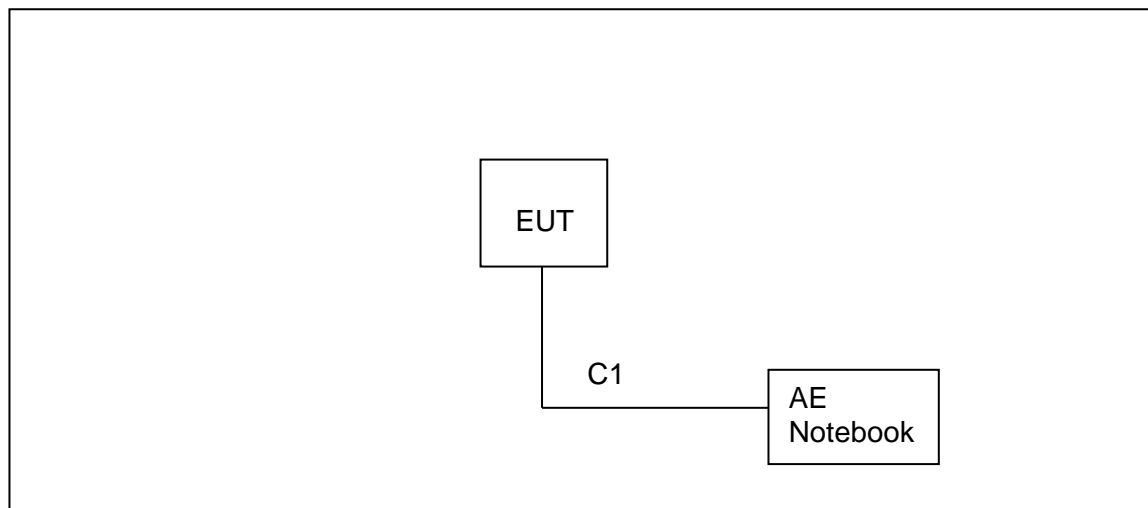
- (1) The measurements are performed at the high, middle, low available channels.
- (2) The measurements for Hopping Channel Separation, Bandwidth and Maximum Output Power were tested during 1Mbps, 2Mbps and 3Mbps, the worst case are 1Mbps and 3Mbps, only worst case was documented.

3.3 PARAMETERS OF TEST SOFTWARE

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

Test Software	CyBlueTool		
Frequency (MHz)	2402	2441	2480
Parameters(1Mbps)	Default	Default	Default
Parameters(3Mbps)	Default	Default	Default

3.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED



3.5 SUPPORT UNITS

Item	Equipment	Brand	Model No.	Series No.
AE	Notebook	Lenovo	/	/

Item	Cable Type	Shielded Type	Ferrite Core	Length
C1	USB-C Cable	NO	NO	1.0m

3.6 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage
AC Power Line Conducted Emissions	24.1°C	55.1%	DC 5V (AC 120V/60Hz)
Radiated Emissions-9K-30MHz	25.0°C	60%	DC 5V
Radiated Emissions-30 MHz to 1GHz	25.5°C	68.2%	DC 5V
Radiated Emissions-Above 1000 MHz	25.5°C	68.2%	DC 5V
Number of Hopping Frequency	24.8°C	40.9%	DC 5V
Average Time Of Occupancy	24.8°C	40.9%	DC 5V
Hopping Channel Separation	24.8°C	40.9%	DC 5V
Bandwidth	25.5°C	68.2%	DC 5V
Maximum Output Power	24.8°C	40.9%	DC 5V
Conducted Spurious Emission	24.8°C	40.9%	DC 5V

4 AC POWER LINE CONDUCTED EMISSIONS TEST

4.1 LIMIT

Frequency of Emission (MHz)	Limit (dB μ V)	
	Quasi-peak	Average
0.15 - 0.50	66 to 56*	56 to 46*
0.50 - 5.0	56	46
5.0 - 30.0	60	50

Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

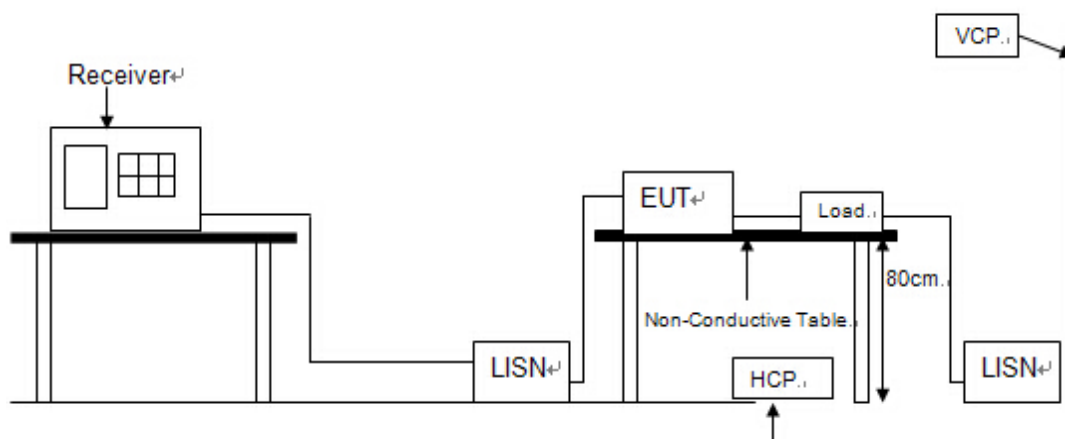
4.2 TEST PROCEDURE

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

4.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Pulse Limiter	MTS-systemtechnik	MTS-IMP-136	261115-010-0024	11/17/2025
2	EMI Test Receiver	R&S	ESCI	101308	05/20/2026
3	LISN	AFJ	LS16	16011103219	05/20/2026
4	LISN	Schwarzbeck	NSLK 8127	8127-432	05/20/2026
5	Measurement Software	Farad	EZ-EMC (Ver.ATT-03A)	N/A	N/A

4.4 TEST SETUP

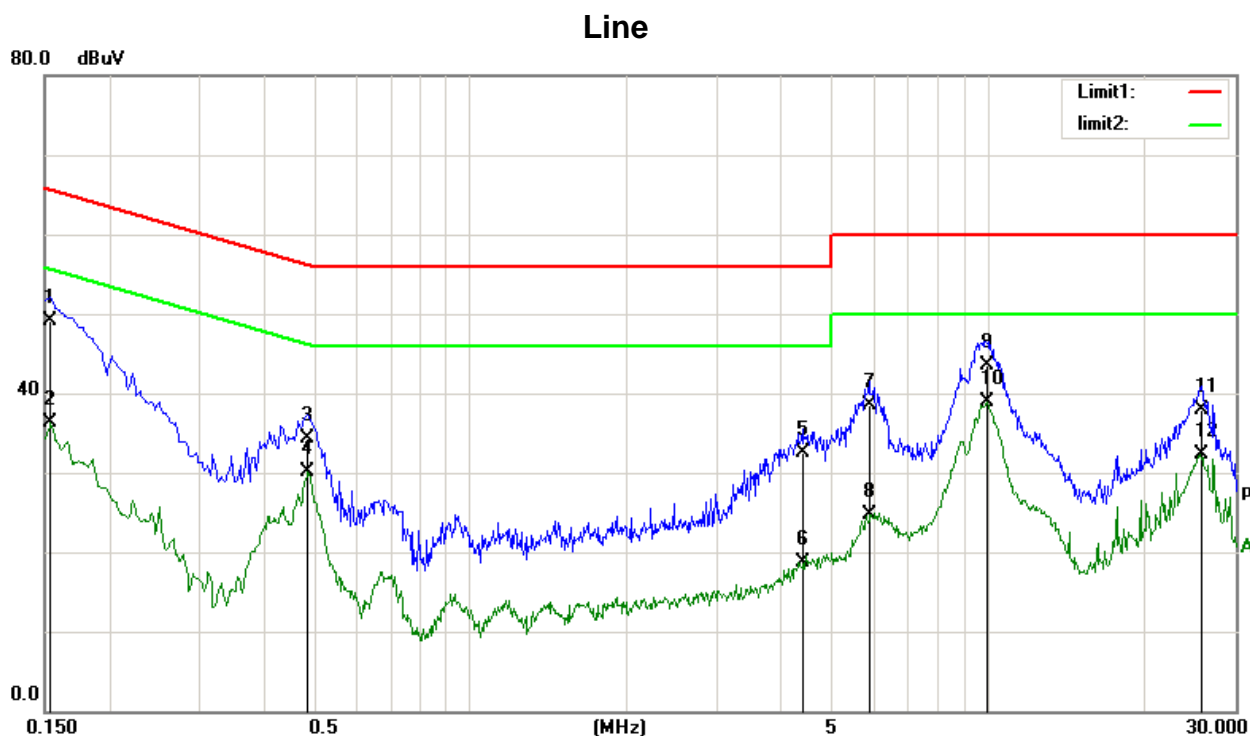


4.5 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical function (as a customer would normally use it), EUT was programmed to be in continuously transmitting data or hopping on mode.

4.6 TEST RESULTS

Test Mode: TX Mode Channel 01 _3Mbps



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1539	38.35	10.82	49.17	65.78	-16.61	QP
2	0.1539	25.46	10.82	36.28	55.78	-19.50	AVG
3	0.4860	23.59	10.77	34.36	56.24	-21.88	QP
4	0.4860	19.24	10.77	30.01	46.24	-16.23	AVG
5	4.3699	21.72	10.87	32.59	56.00	-23.41	QP
6	4.3699	7.84	10.87	18.71	46.00	-27.29	AVG
7	5.9019	27.17	11.24	38.41	60.00	-21.59	QP
8	5.9019	13.40	11.24	24.64	50.00	-25.36	AVG
9	9.9419	30.65	12.87	43.52	60.00	-16.48	QP
10	9.9419	26.09	12.87	38.96	50.00	-11.04	AVG
11	25.6940	20.88	17.00	37.88	60.00	-22.12	QP
12	25.6940	15.22	17.00	32.22	50.00	-17.78	AVG

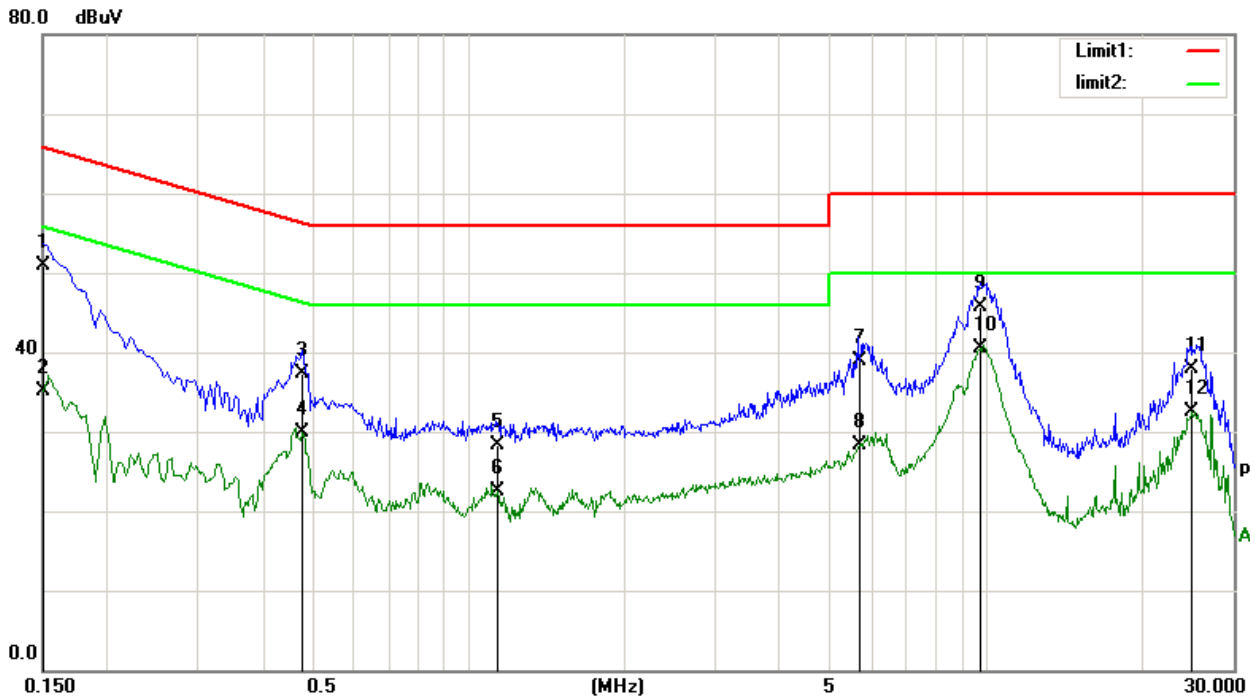
Remarks:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode: TX Mode Channel 01 _3Mbps

Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1500	39.97	10.86	50.83	65.99	-15.16	QP
2	0.1500	24.21	10.86	35.07	55.99	-20.92	AVG
3	0.4779	26.58	10.77	37.35	56.38	-19.03	QP
4	0.4779	19.04	10.77	29.81	46.38	-16.57	AVG
5	1.1379	17.66	10.68	28.34	56.00	-27.66	QP
6	1.1379	11.75	10.68	22.43	46.00	-23.57	AVG
7	5.7019	27.71	11.13	38.84	60.00	-21.16	QP
8	5.7019	17.09	11.13	28.22	50.00	-21.78	AVG
9	9.7538	32.92	12.81	45.73	60.00	-14.27	QP
10	9.7538	27.76	12.81	40.57	50.00	-9.43	AVG
11	25.0380	21.13	16.75	37.88	60.00	-22.12	QP
12	25.0380	15.80	16.75	32.55	50.00	-17.45	AVG

Remarks:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

5 RADIATED EMISSION TEST

5.1 LIMIT

In case the emission fall within the restricted band specified on 15.205(a) & RSS-Gen 8.10, then the 15.209(a) & RSS-Gen 8.9 limit in the table below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (9 kHz-1000MHz)

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (9 kHz-30 MHz)

Frequency (MHz)	Magnetic field strength (H-Field) ($\mu\text{A/m}$)	Measurement Distance (meters)
0.009-0.490	6.37/F(kHz)	300
0.490-1.705	6.37/F(kHz)	30
1.705-30.0	0.08	30

LIMITS OF RADIATED EMISSION MEASUREMENT (30 MHz-1000MHz)

Frequency (MHz)	Field Strength ($\mu\text{V/m}$ at 3m)
30-88	100
88-216	150
216-960	200
Above 960	500

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

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

Note:

- (1) The limit for radiated test was performed according to FCC PART 15C and RSS-247.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

5.2 TEST PROCEDURE AND SETTING

- a. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 0.8 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(below 1GHz)
- b. The measuring distance of 3 m shall be used for measurements. The EUT was placed on the top of a rotating table 1.5 meter above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.(above 1GHz)
- c. The height of the equipment or of the substitution antenna shall be 0.8m or 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. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights find the maximum reading (used Bore sight function).
- e. The receiver system was set to peak and average detect function and specified bandwidth with maximum hold mode when the test frequency is above 1GHz.
- f. The initial step in collecting radiated emission data is a receiver peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- g. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform. (below 1GHz)
- h. All readings are Peak Mode value unless otherwise stated AVG in column of Note. If the Peak Mode Measured value compliance with the Peak Limits and lower than AVG Limits, the EUT shall be deemed to meet both Peak & AVG Limits and then only Peak Mode was measured, but AVG Mode didn't perform. (above 1GHz)
- i. The test result is calculated as the following:
 - (1) Result = Reading + Correct Factor
 - (2) Correct Factor = Antenna Factor + Cable Loss – Amplifier Gain + Attenuator
 - (3) Margin = Result - Limit

Spectrum Parameter	Setting
Attenuation	Auto
Start Frequency	1000 MHz
Stop Frequency	10th carrier harmonic
RBW / VBW (Emission in restricted band)	RBW 1MHz VBW 3MHz peak detector for Pk value RMS detector for AV value

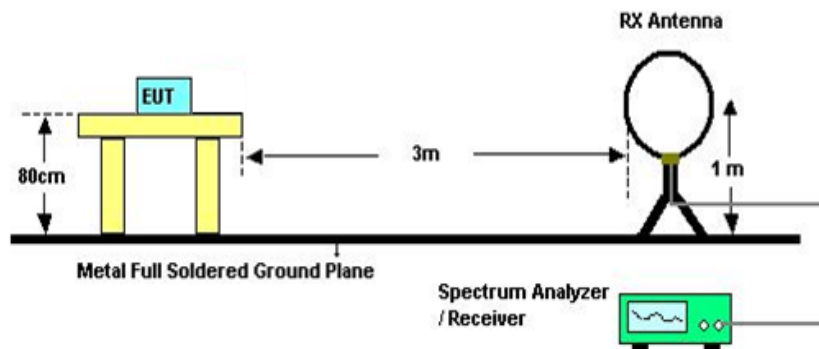
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9 kHz~90 kHz for PK/AVG detector
Start ~ Stop Frequency	90 kHz~110 kHz for QP detector
Start ~ Stop Frequency	110 kHz~490 kHz for PK/AVG detector
Start ~ Stop Frequency	490 kHz~30 MHz for QP detector
Start ~ Stop Frequency	30MHz~1000MHz for QP detector

5.3 MEASUREMENT INSTRUMENTS LIST

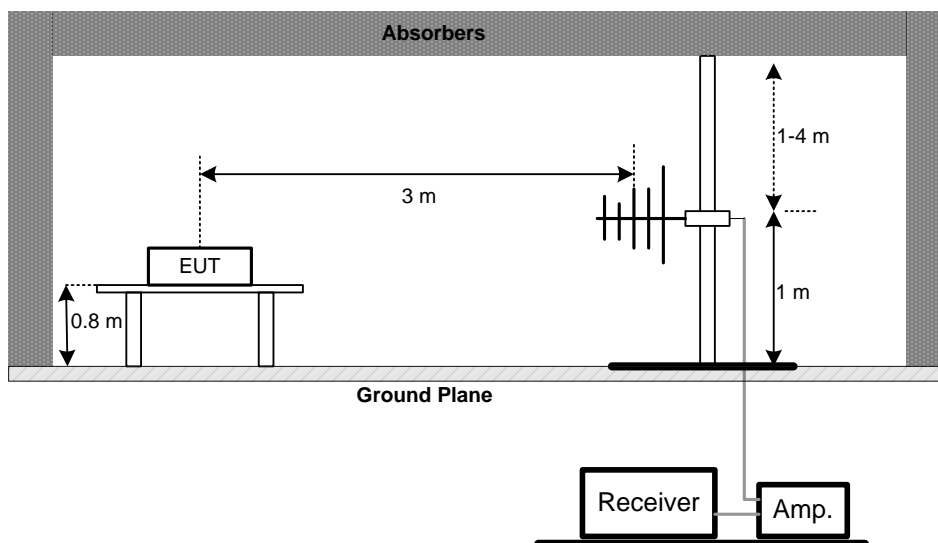
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	EMI Test Receiver	R&S	ESCI	101307	05/20/2026
2	Spectrum Analyzer	Agilent	E4407B	US40240708	11/17/2025
3	Loop antenna	SCHWARZBECK K	FMZB1519	1519-062	04/01/2028
4	Broadband antenna	SCHWARZBECK	VULB9168	VULB9168-192	03/28/2026
5	HORN ANTENNA	SCHWARZBECK	BBHA9120D	9120D 1065	03/27/2026
6	Preamplifier Amplifier	HP	8447F	3113A05680	11/17/2025
7	PRE-AMPLIFIER	EMEC	EM01G26G	980136	03/27/2026
8	RF Cable	R&S	Test Cable 4	4	11/17/2025
9	RF Cable	R&S	Test Cable 5	5	11/17/2025
10	RF Cable	R&S	Test Cable 9	9	03/27/2026
11	RF Cable	R&S	Test Cable 10	10	03/27/2026
12	Measurement Software	Farad	EZ-EMC (Ver.ATT-03A)	N/A	N/A

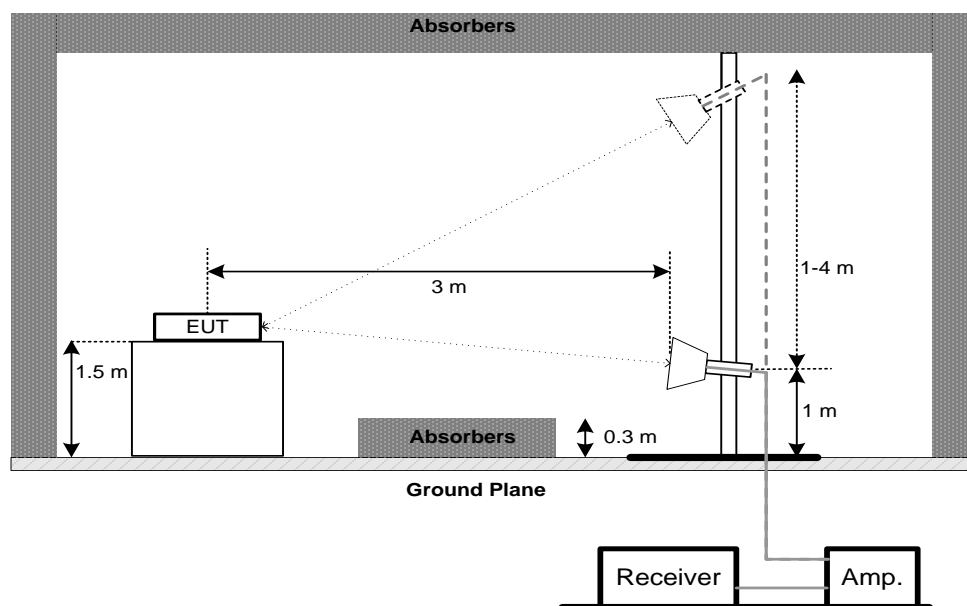
5.4 TEST SETUP

9 kHz-30 MHz



30 MHz to 1 GHz



Above 1 GHz**5.5 EUT OPERATING CONDITIONS**

The EUT was programmed to be in continuously transmitting mode.

5.6 TEST RESULTS - 9 kHz TO 30MHz

Test Mode:	TX Mode Channel 01 _3Mbps
------------	---------------------------

Freq.	Reading	Limit	Margin	State
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F
--	--	--	--	P
--	--	--	--	P

Note:

The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

Distance extrapolation factor = $20 \log (\text{specific distance/test distance})(\text{dB})$;

Limit line = specific limits(dBuv) + distance extrapolation factor

5.7 TEST RESULTS- 30 MHz TO 1000MHz

Test Mode: TX Mode Channel 01 _3Mbps

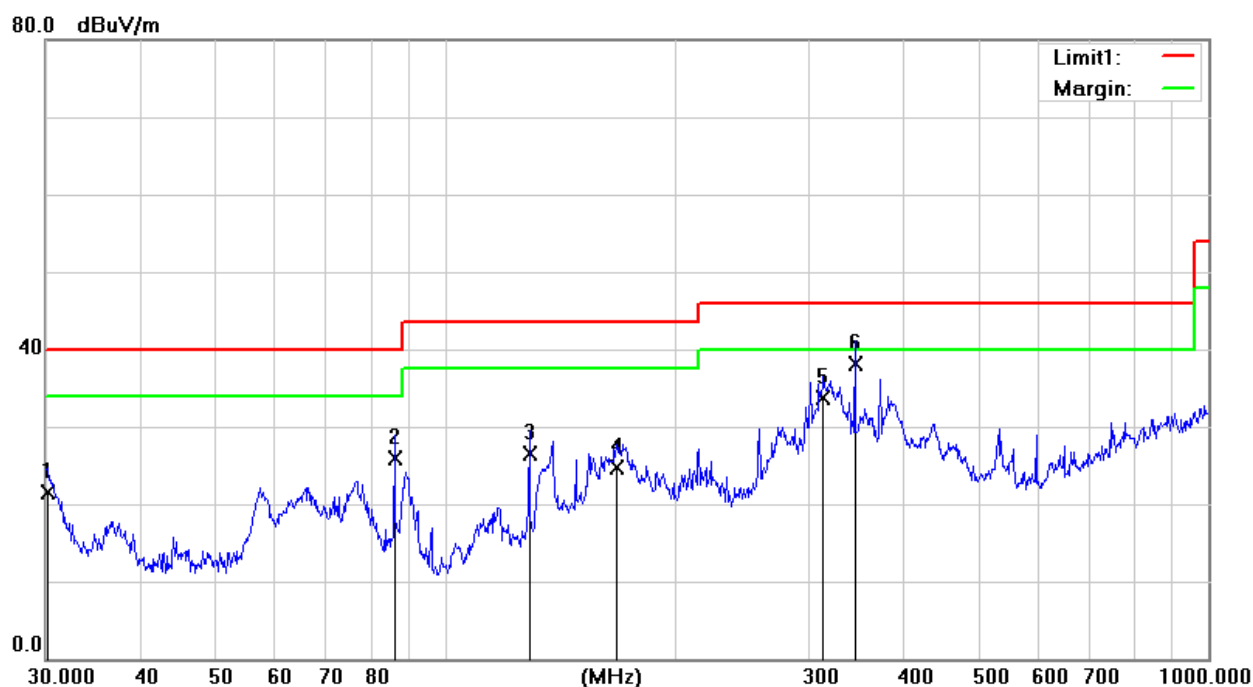
Vertical



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dB/m	dB	cm	degree	Comment
1	*	30.0000	48.89	-14.57	34.32	40.00	-5.68	QP	100	321
2		36.3814	44.79	-14.38	30.41	40.00	-9.59	QP	100	289
3		56.9911	39.52	-13.82	25.70	40.00	-14.30	QP	100	193
4		89.5899	41.97	-16.21	25.76	43.50	-17.74	QP	100	89
5		129.0146	45.27	-12.67	32.60	43.50	-10.90	QP	100	137
6		171.9945	41.72	-12.13	29.59	43.50	-13.91	QP	100	206

Test Mode: TX Mode Channel 01 _3Mbps

Horizontal

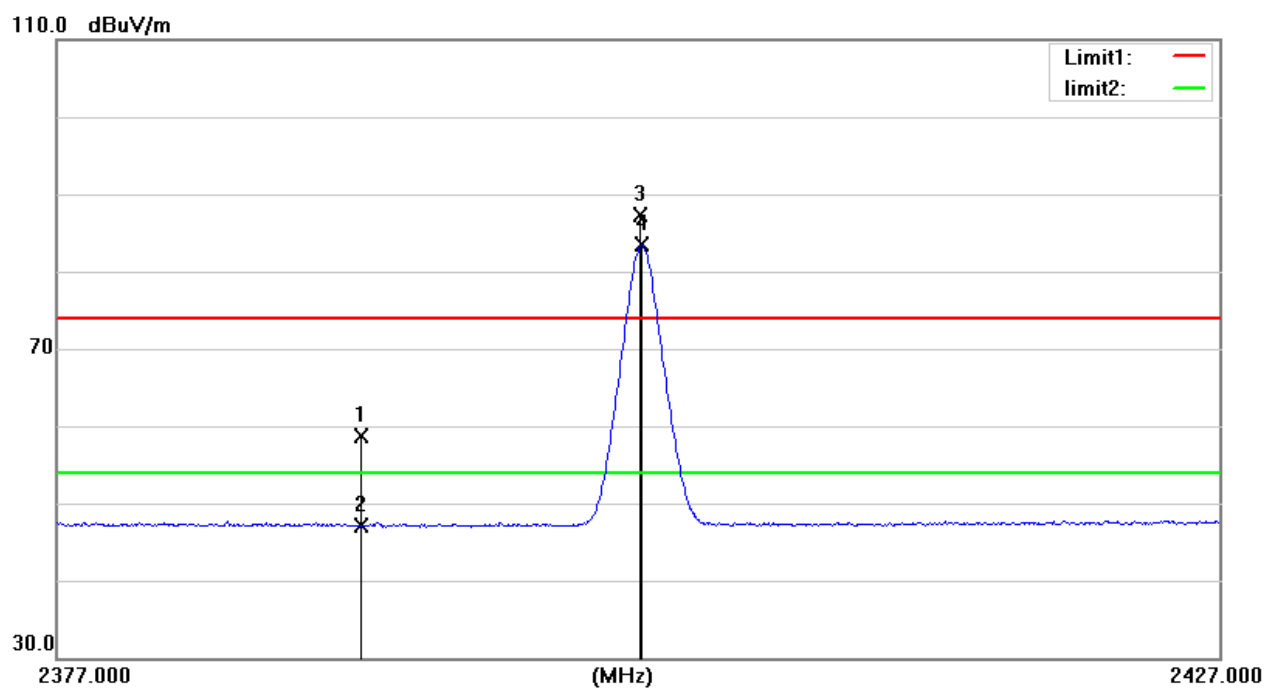


No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dB/m	dB	cm	degree	Comment
1		30.2110	36.19	-14.63	21.56	40.00	-18.44	QP	100	230
2		85.8984	42.01	-16.14	25.87	40.00	-14.13	QP	100	311
3		129.0146	39.26	-12.67	26.59	43.50	-16.91	QP	100	237
4		167.8242	36.14	-11.47	24.67	43.50	-18.83	QP	100	176
5		313.2760	43.58	-9.94	33.64	46.00	-12.36	QP	100	125
6	*	344.3855	47.04	-8.99	38.05	46.00	-7.95	QP	100	327

5.8 TEST RESULTS - ABOVE 1000MHz (BAND EDGE)

Test Mode: TX 2402 MHz_CH00_1Mbps

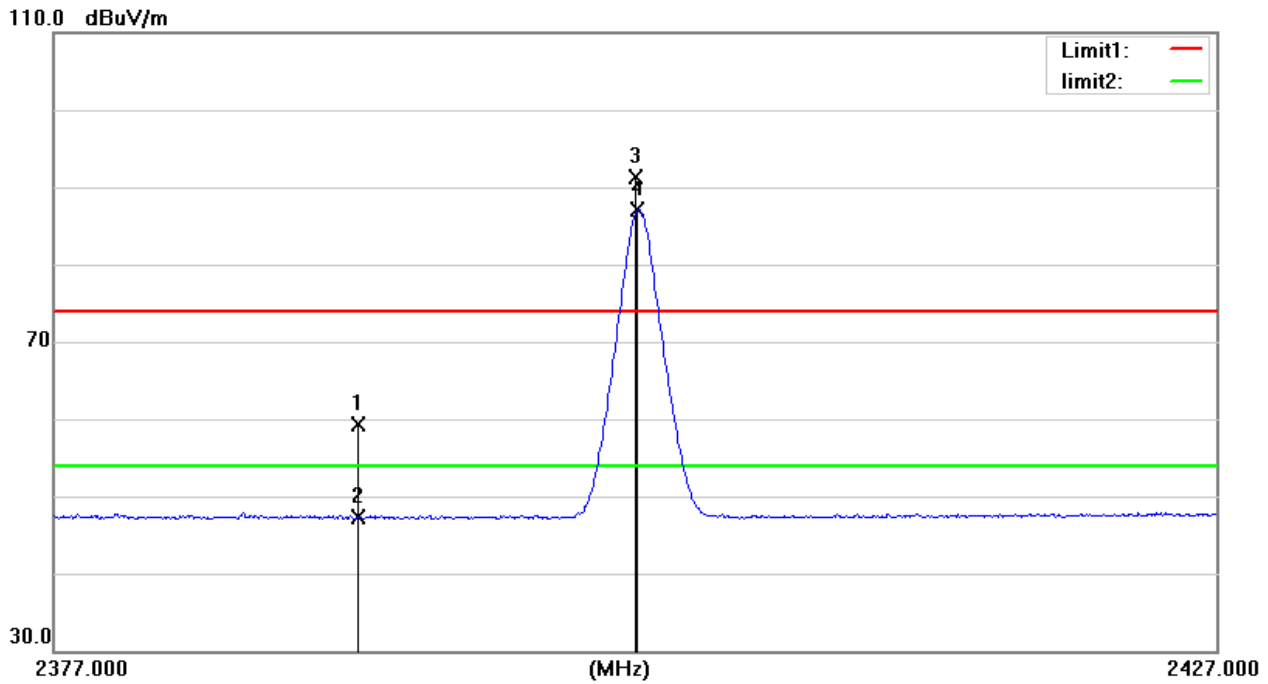
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	cm	degree	Comment
1		2390.000	27.44	31.30	58.74	74.00	-15.26	peak	150	192
2		2390.000	15.88	31.30	47.18	54.00	-6.82	AVG	150	192
3	X	2401.950	56.08	31.26	87.34	74.00	13.34	peak	150	192 No Limit
4	*	2402.050	52.15	31.26	83.41	54.00	29.41	AVG	150	192 No Limit

Test Mode: TX 2402 MHz_CH00_1Mbps

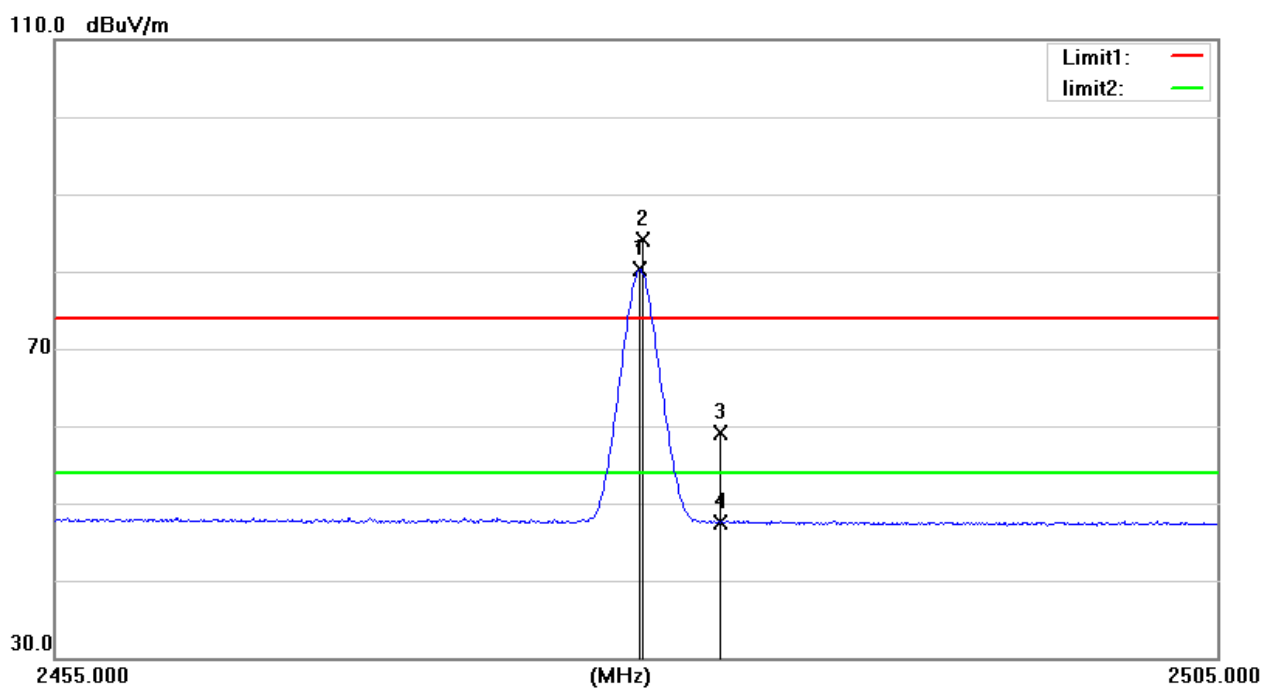
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	cm	degree	Comment
1		2390.000	28.03	31.30	59.33	74.00	-14.67	peak	150	231
2		2390.000	16.02	31.30	47.32	54.00	-6.68	AVG	150	231
3	X	2401.900	60.13	31.26	91.39	74.00	17.39	peak	150	231 No Limit
4	*	2402.000	55.89	31.26	87.15	54.00	33.15	AVG	150	231 No Limit

Test Mode: TX 2480 MHz_CH78_1Mbps

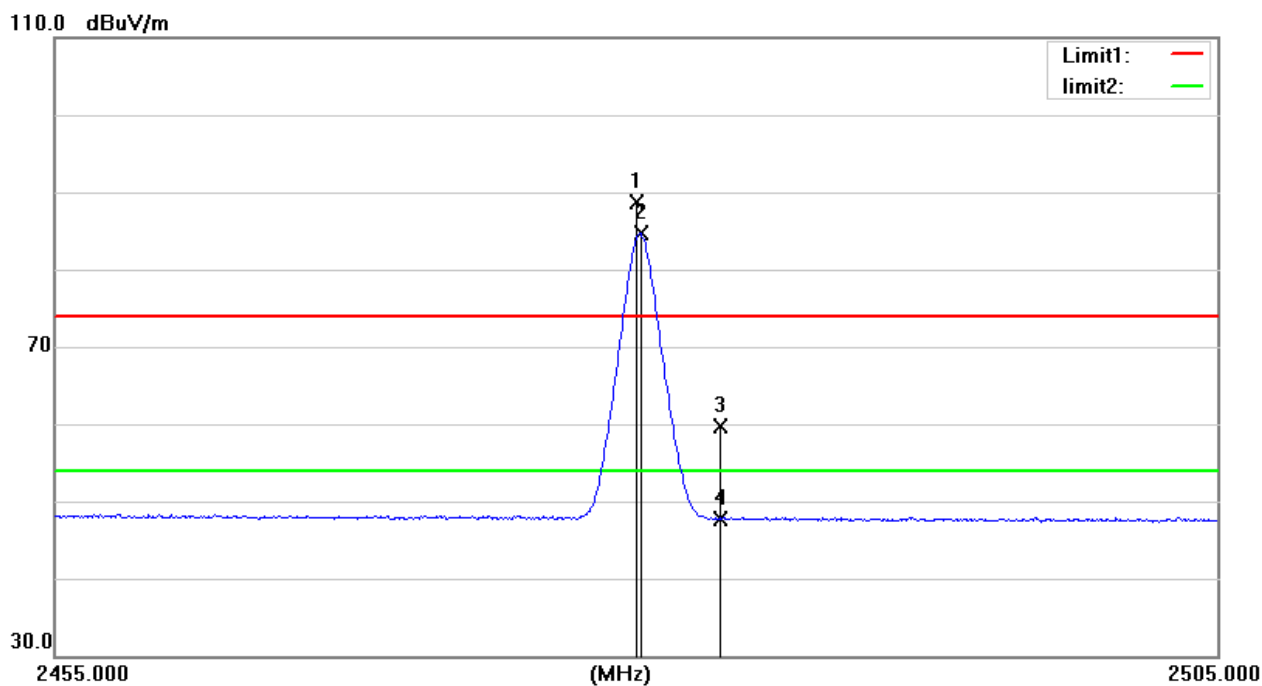
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree		
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1	*	2480.050	49.07	31.19	80.26	54.00	26.26	AVG	150	205	No Limit
2	X	2480.200	52.88	31.19	84.07	74.00	10.07	peak	150	205	No Limit
3		2483.500	27.90	31.14	59.04	74.00	-14.96	peak	150	205	
4		2483.500	16.39	31.14	47.53	54.00	-6.47	AVG	150	205	

Test Mode: TX 2480 MHz_CH78_1Mbps

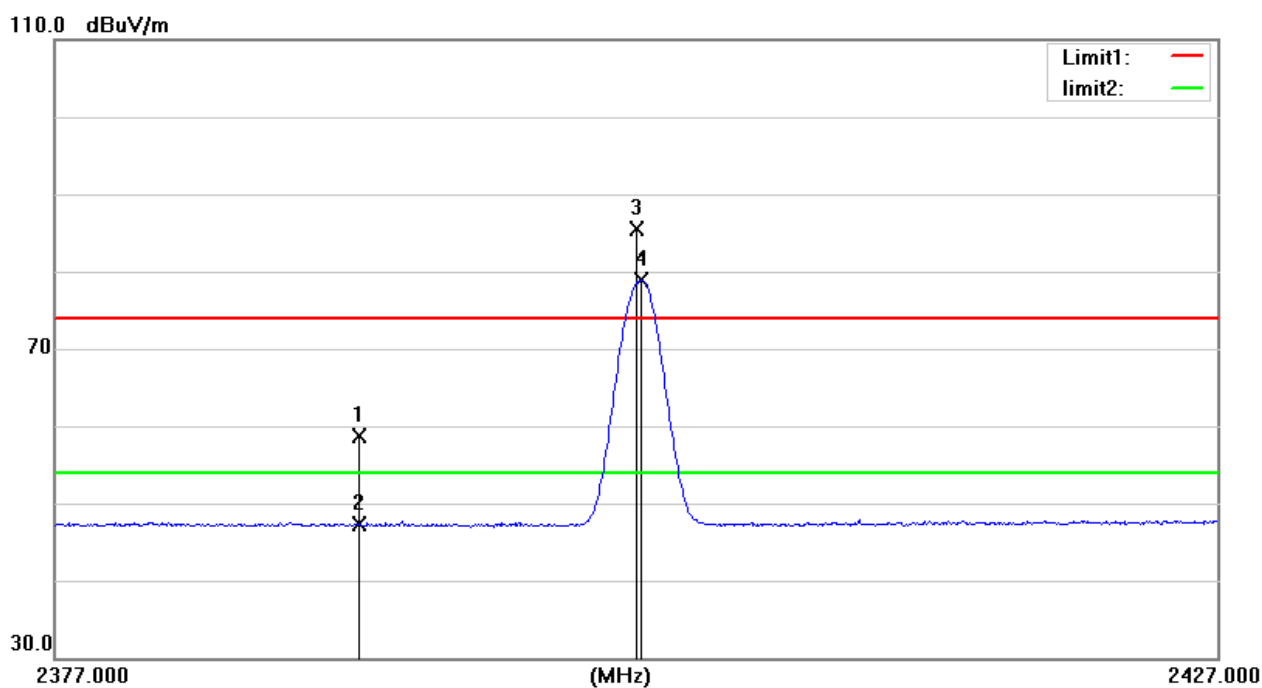
Horizontal



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree
1	X	2479.900	57.45	31.19	88.64	74.00	14.64	peak	150	247
2	*	2480.100	53.50	31.19	84.69	54.00	30.69	AVG	150	247
3		2483.500	28.53	31.14	59.67	74.00	-14.33	peak	150	247
4		2483.500	16.56	31.14	47.70	54.00	-6.30	AVG	150	247

Test Mode: TX 2402 MHz_CH00_3Mbps

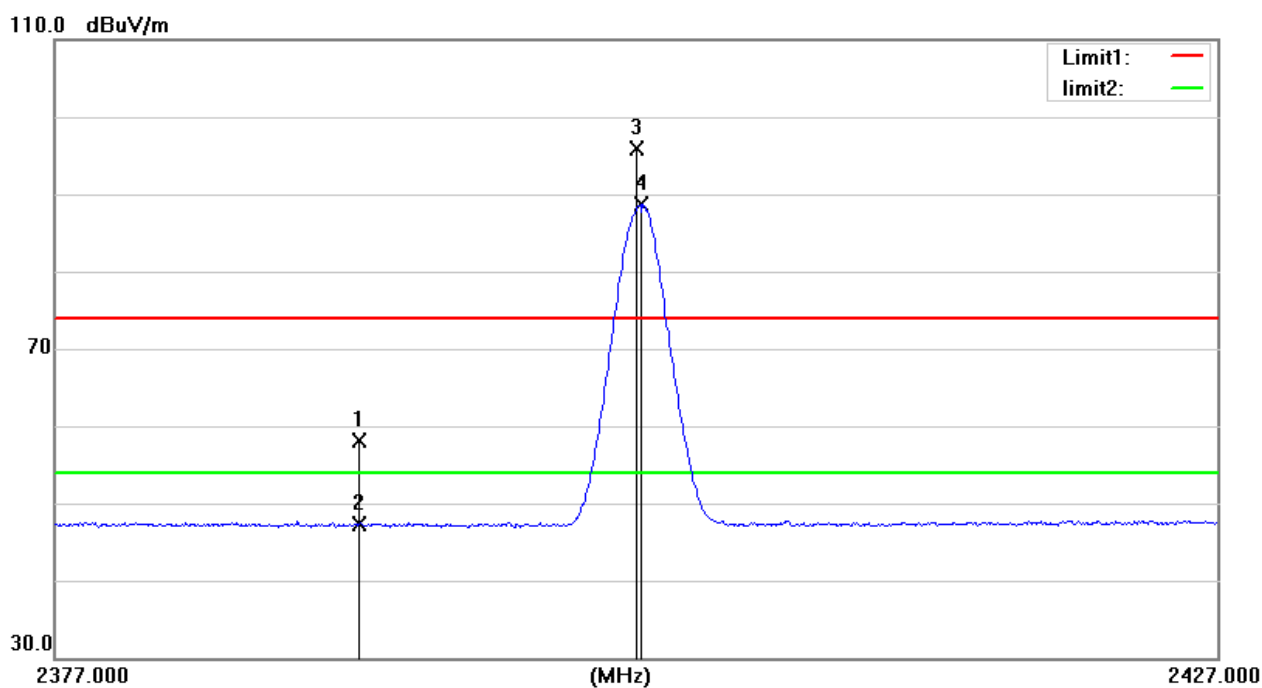
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Antenna Height cm	Table Degree	Comment
1		2390.000	27.39	31.30	58.69	74.00	-15.31	peak	150	211
2		2390.000	16.01	31.30	47.31	54.00	-6.69	AVG	150	211
3	X	2401.900	54.34	31.26	85.60	74.00	11.60	peak	150	211 No Limit
4	*	2402.100	47.66	31.26	78.92	54.00	24.92	AVG	150	211 No Limit

Test Mode: TX 2402 MHz_CH00_3Mbps

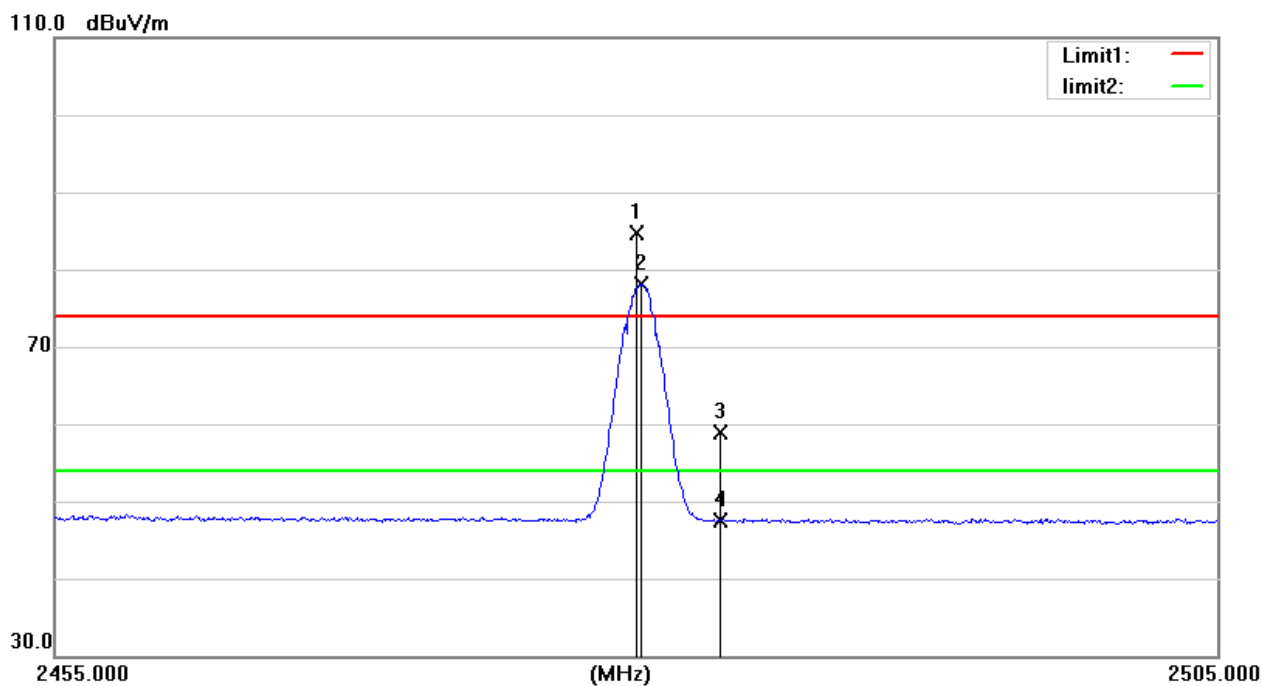
Horizontal



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dB/m	dB	cm	degree	Comment
1		2390.000	26.79	31.30	58.09	74.00	-15.91	peak	150	201
2		2390.000	15.92	31.30	47.22	54.00	-6.78	AVG	150	201
3	X	2401.900	64.63	31.26	95.89	74.00	21.89	peak	150	201 No Limit
4	*	2402.100	57.39	31.26	88.65	54.00	34.65	AVG	150	201 No Limit

Test Mode: TX 2480 MHz_CH78_3Mbps

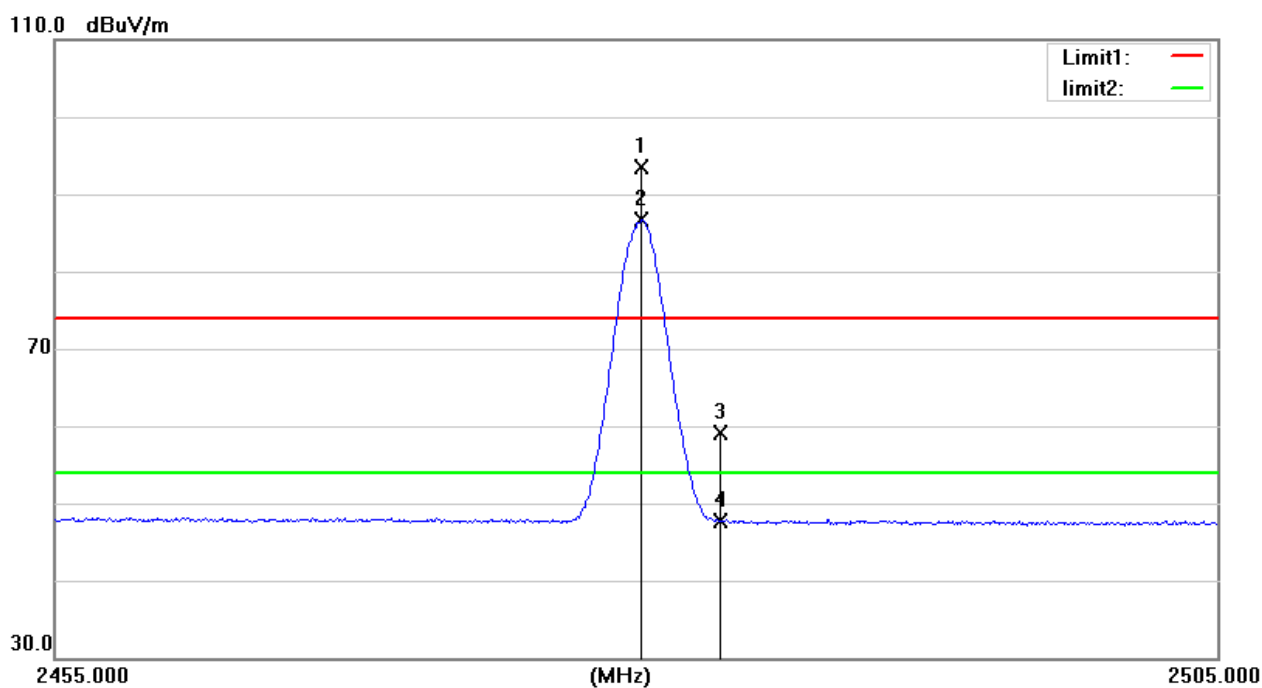
Vertical



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree
1	X	2479.900	53.47	31.19	84.66	74.00	10.66	peak	150	298
2	*	2480.150	46.96	31.19	78.15	54.00	24.15	AVG	150	298
3		2483.500	27.69	31.14	58.83	74.00	-15.17	peak	150	298
4		2483.500	16.36	31.14	47.50	54.00	-6.50	AVG	150	298

Test Mode: TX 2480 MHz_CH78_3Mbps

Horizontal

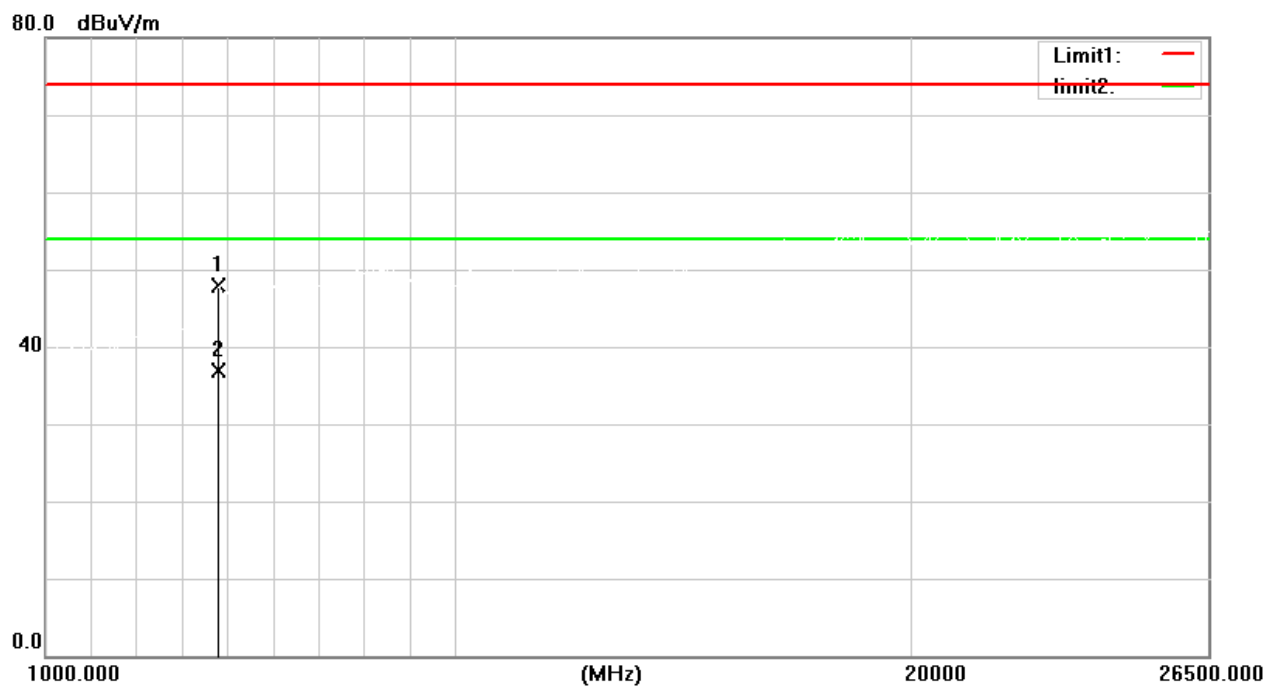


No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree		
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1	X	2480.100	62.33	31.19	93.52	74.00	19.52	peak	150	230	No Limit
2	*	2480.150	55.47	31.19	86.66	54.00	32.66	AVG	150	230	No Limit
3		2483.500	28.00	31.14	59.14	74.00	-14.86	peak	150	230	
4		2483.500	16.61	31.14	47.75	54.00	-6.25	AVG	150	230	

5.9 TEST RESULTS - ABOVE 1000MHz (HARMONIC)

Test Mode: TX 2402 MHz_CH00_1Mbps

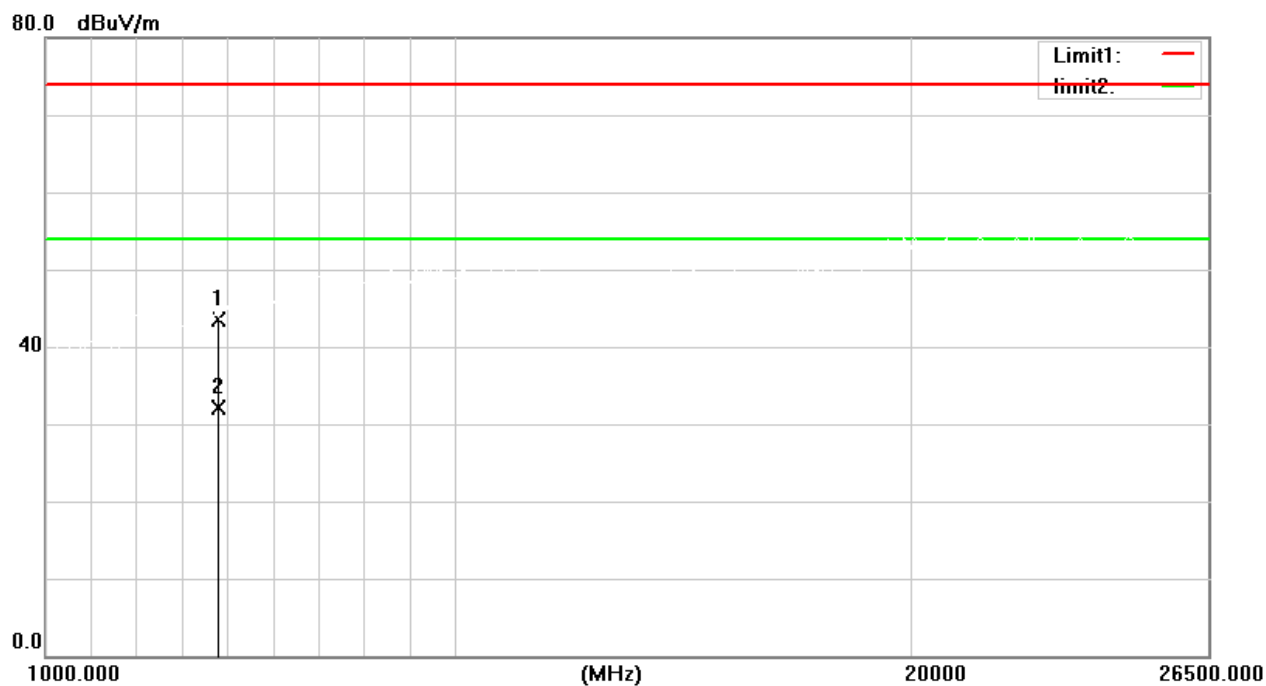
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	cm	degree	Comment
1		4804.000	51.30	-3.39	47.91	74.00	-26.09	peak	150	158
2	*	4804.000	40.30	-3.39	36.91	54.00	-17.09	AVG	150	158

Test Mode: TX 2402 MHz_CH00_1Mbps

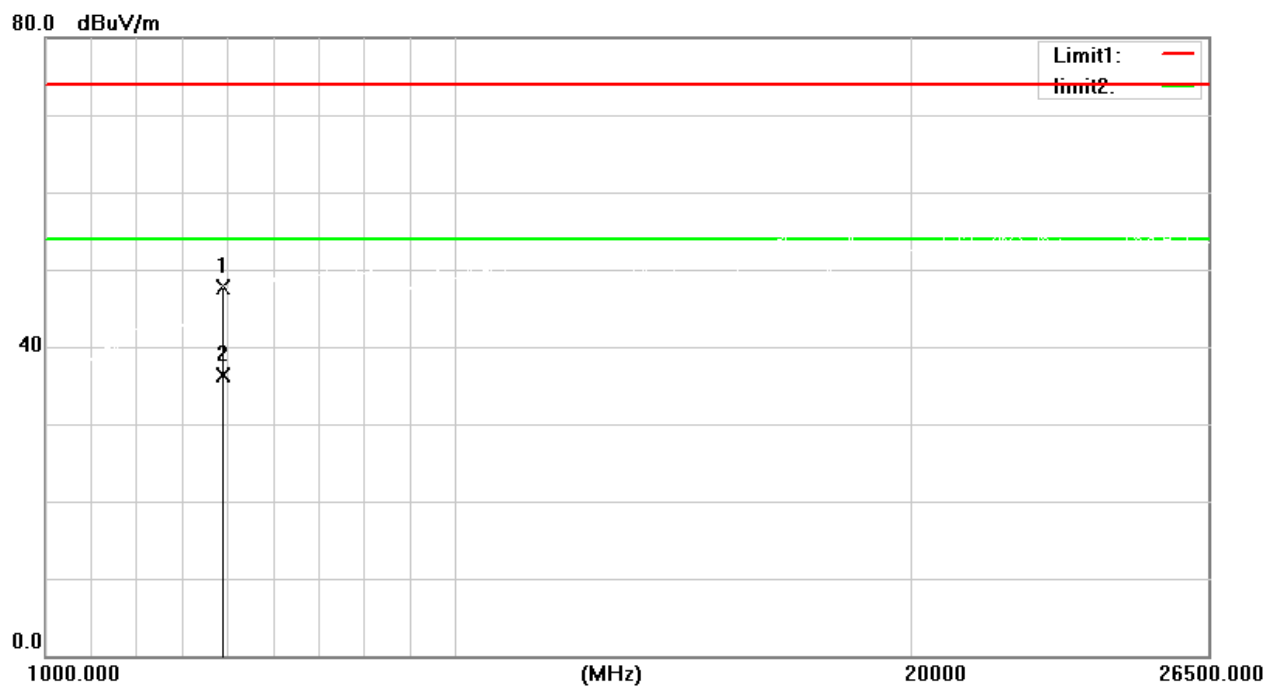
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	cm	degree	Comment
1		4804.000	46.93	-3.39	43.54	74.00	-30.46	peak	150	49
2	*	4804.000	35.54	-3.39	32.15	54.00	-21.85	AVG	150	49

Test Mode: TX 2441 MHz_CH39_1Mbps

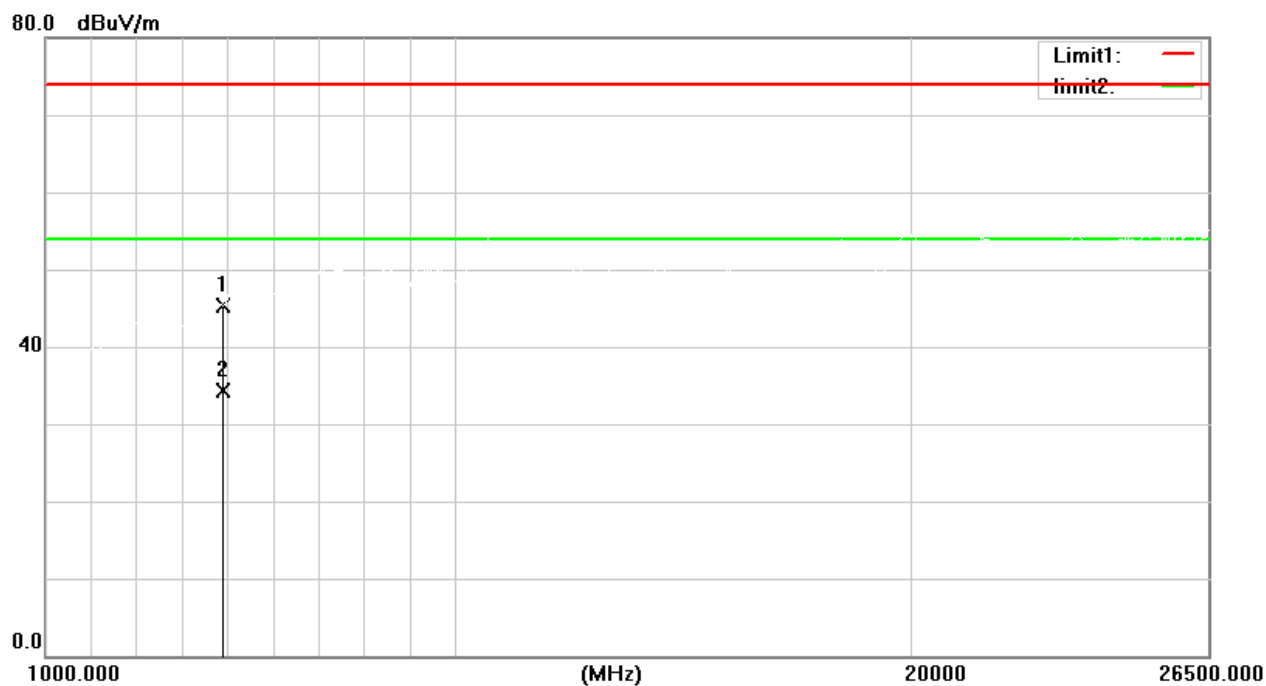
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	cm	degree	Comment
1		4882.000	50.75	-3.13	47.62	74.00	-26.38	peak	150	66
2	*	4882.000	39.40	-3.13	36.27	54.00	-17.73	AVG	150	66

Test Mode: TX 2441 MHz_CH39_1Mbps

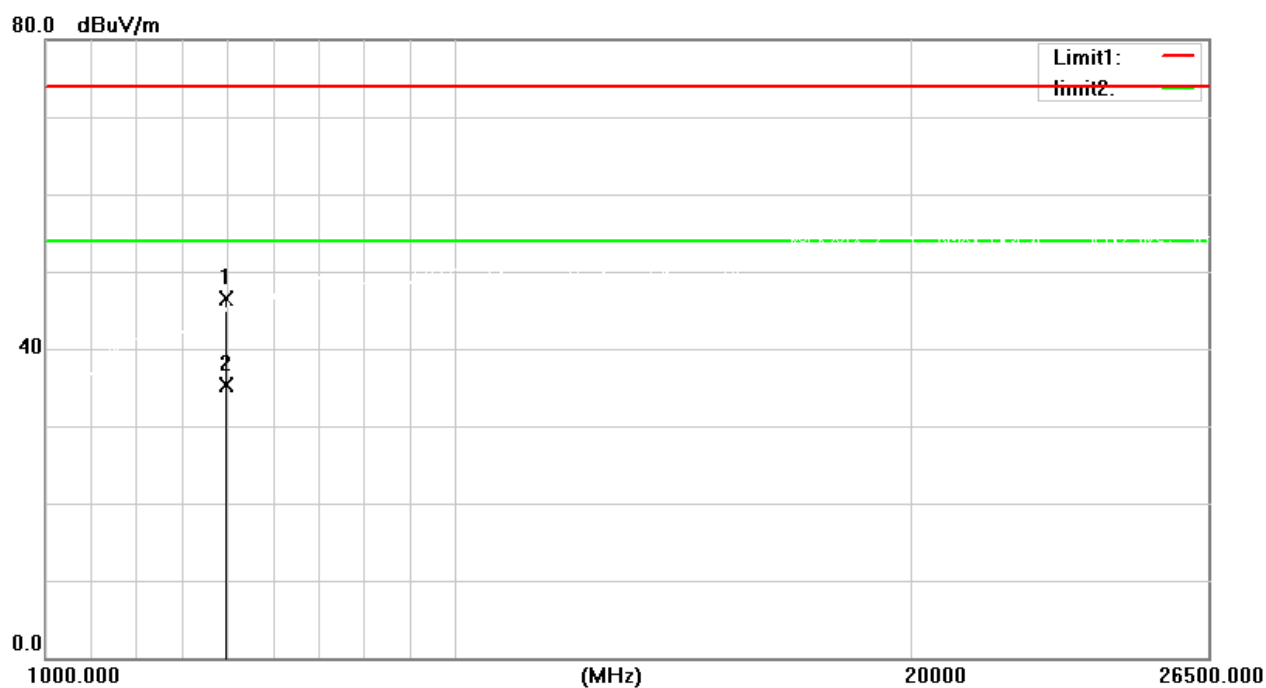
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	cm	degree	Comment
1		4882.000	48.35	-3.13	45.22	74.00	-28.78	peak	150	87
2	*	4882.000	37.41	-3.13	34.28	54.00	-19.72	AVG	150	87

Test Mode: TX 2480 MHz_CH78_1Mbps

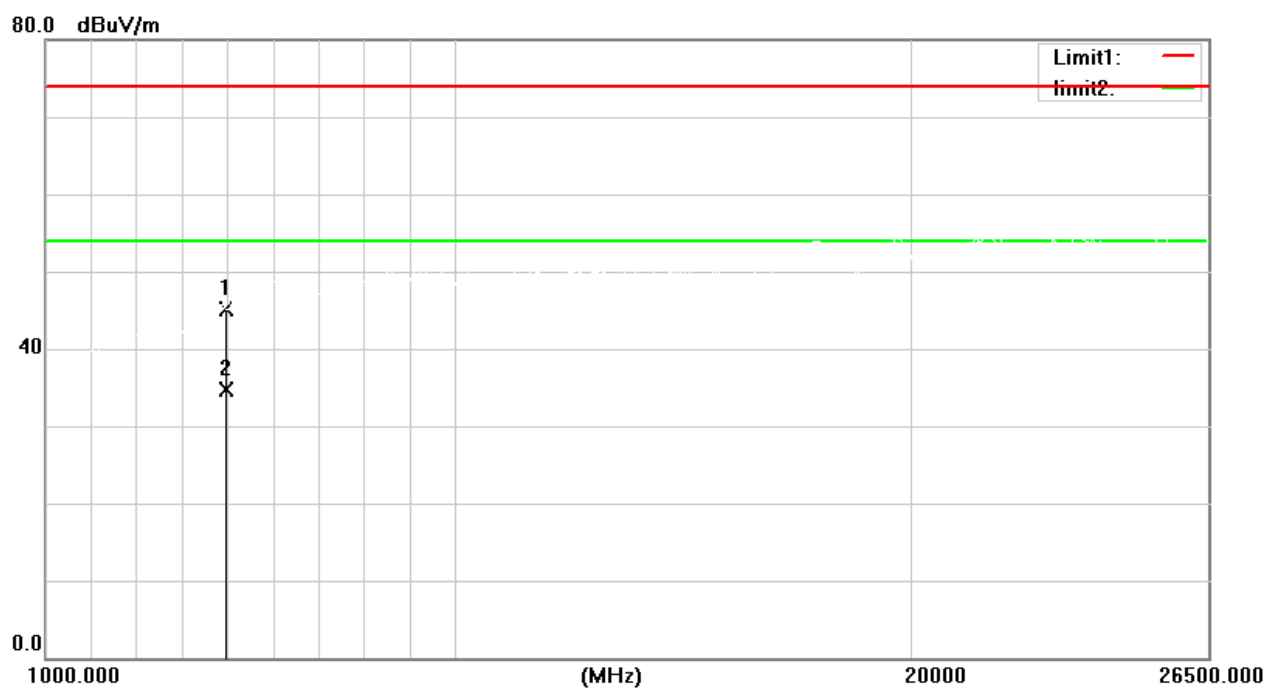
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	cm	degree	Comment
1		4960.000	49.72	-3.21	46.51	74.00	-27.49	peak	150	126
2	*	4960.000	38.43	-3.21	35.22	54.00	-18.78	AVG	150	126

Test Mode: TX 2480 MHz_CH78_1Mbps

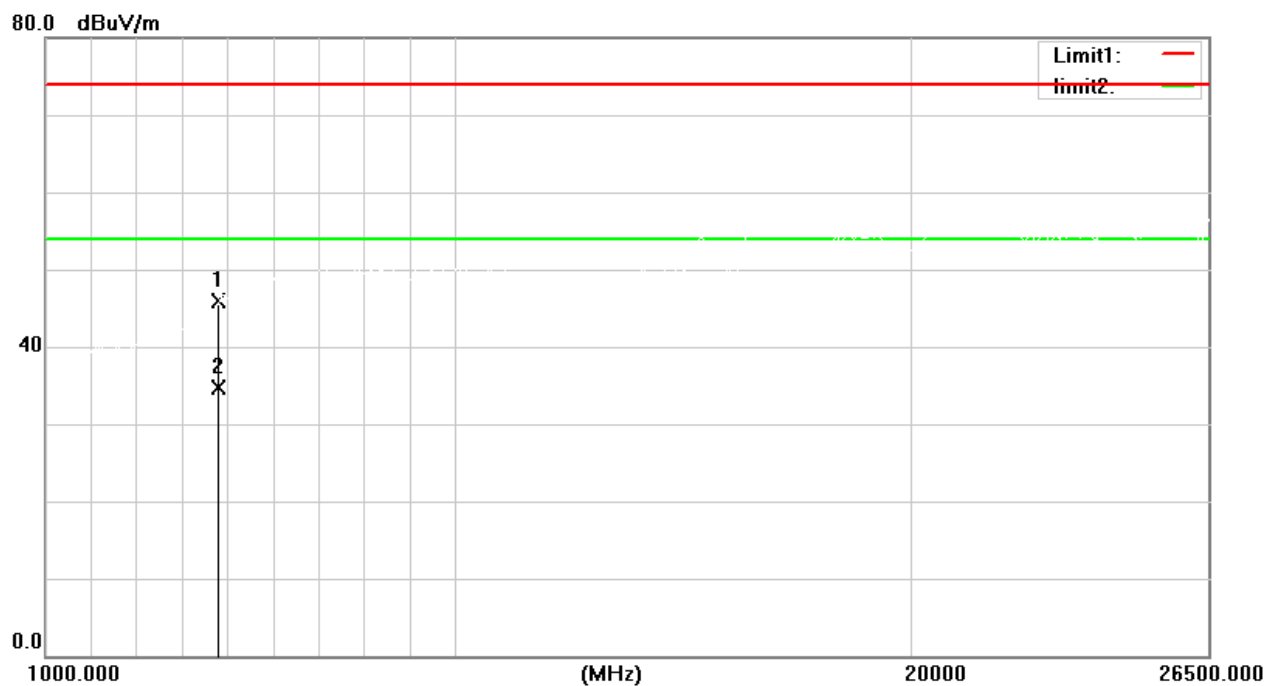
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree
1		4960.000	48.37	-3.21	45.16	74.00	-28.84	peak	150	42
2	*	4960.000	37.87	-3.21	34.66	54.00	-19.34	AVG	150	42

Test Mode: TX 2402 MHz_CH00_3Mbps

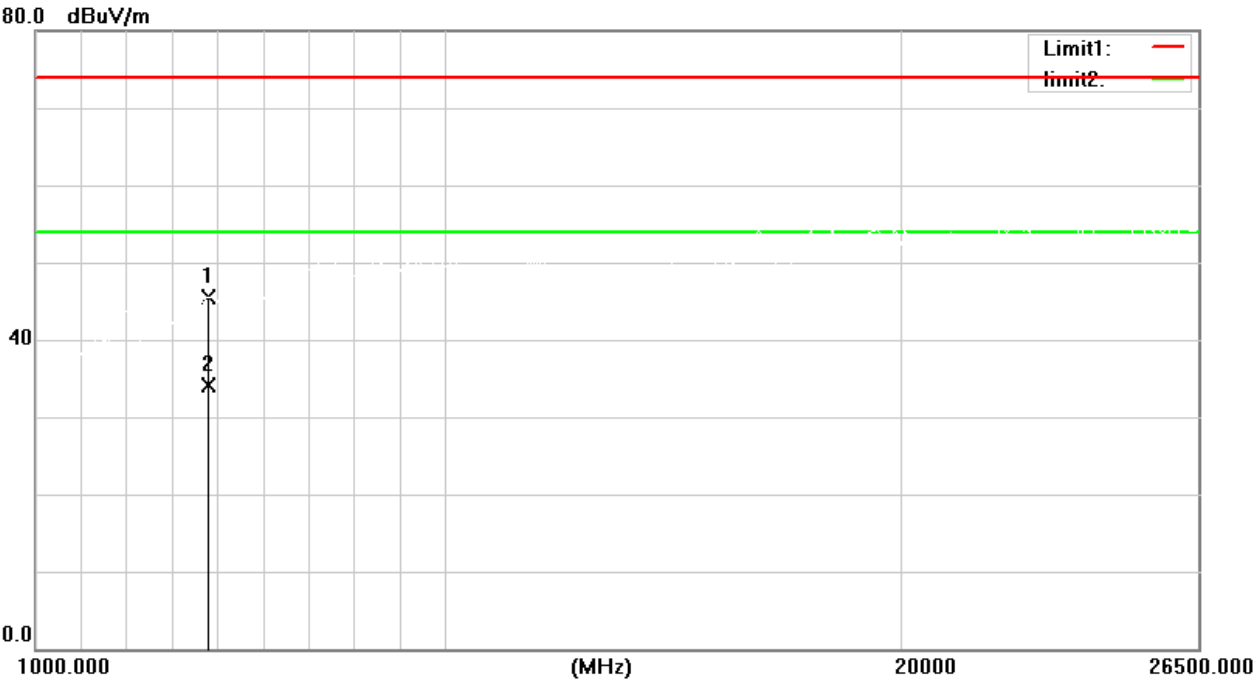
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	cm	degree	Comment
1		4804.000	49.30	-3.39	45.91	74.00	-28.09	peak	150	95
2	*	4804.000	38.01	-3.39	34.62	54.00	-19.38	AVG	150	95

Test Mode: TX 2402 MHz_CH00_3Mbps

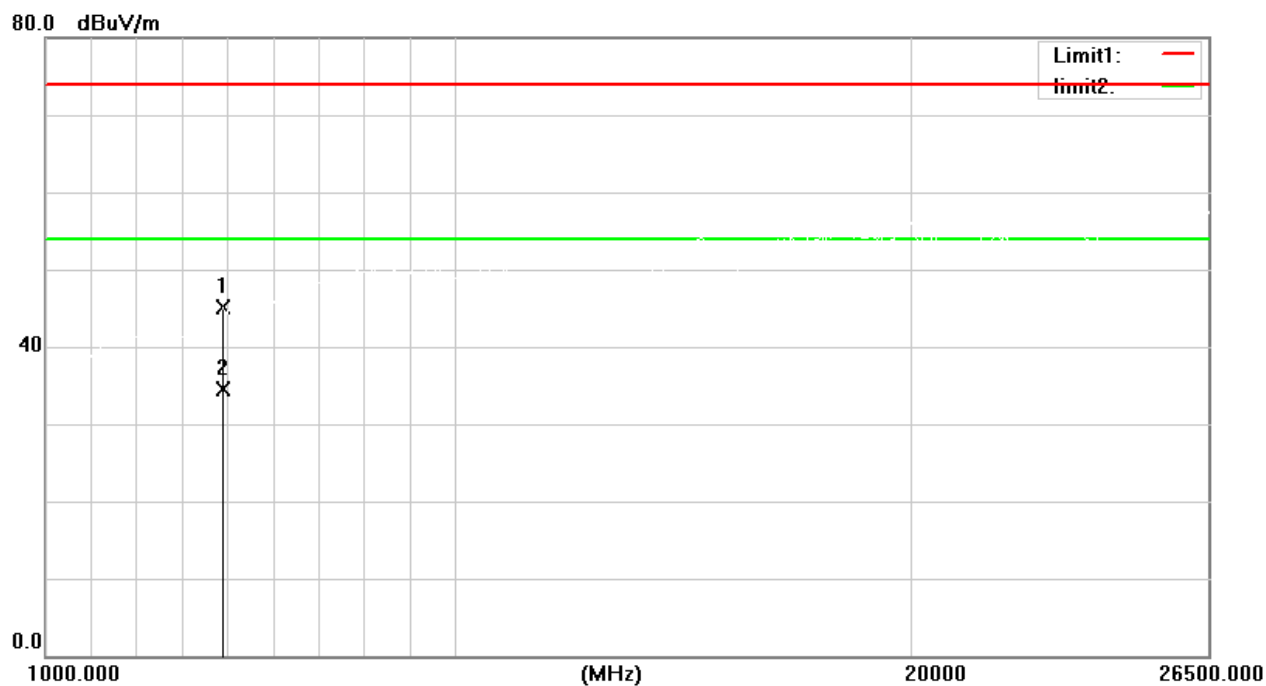
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree
1		4804.000	48.93	-3.39	45.54	74.00	-28.46	peak	150	48
2	*	4804.000	37.51	-3.39	34.12	54.00	-19.88	AVG	150	48

Test Mode: TX 2441 MHz_CH39_3Mbps

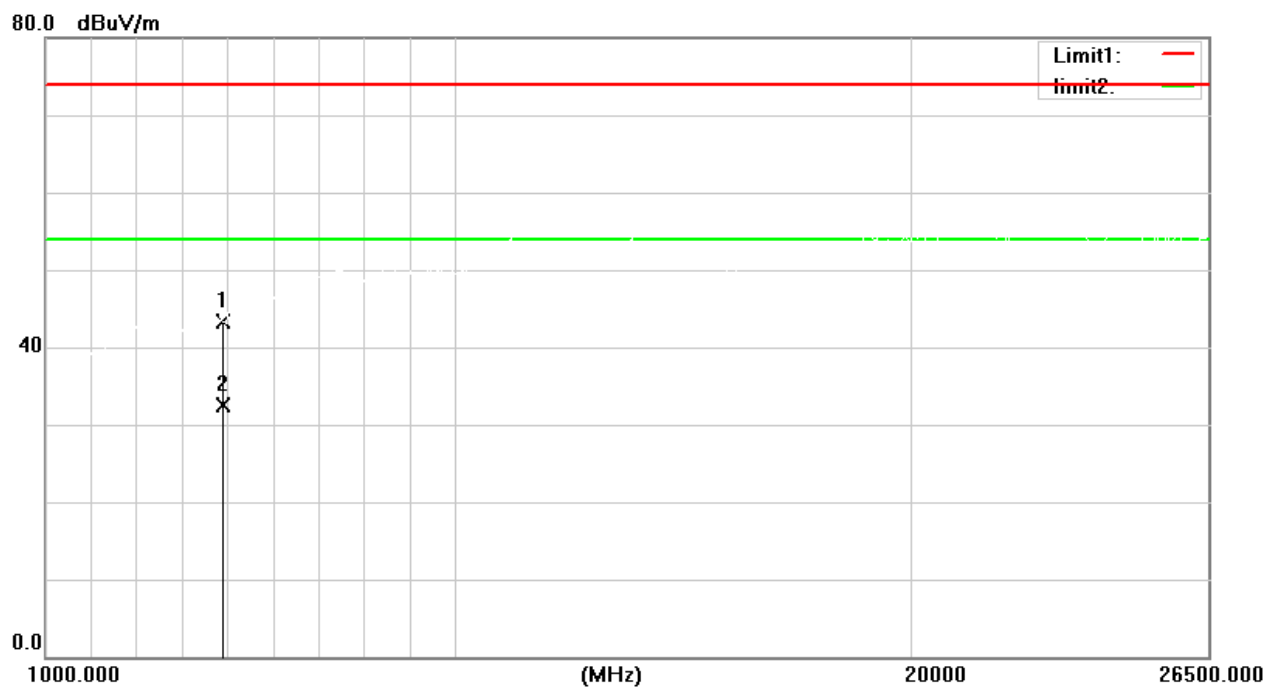
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree
1		4882.000	48.25	-3.13	45.12	74.00	-28.88	peak	150	72
2	*	4882.000	37.69	-3.13	34.56	54.00	-19.44	AVG	150	72

Test Mode: TX 2441 MHz_CH39_3Mbps

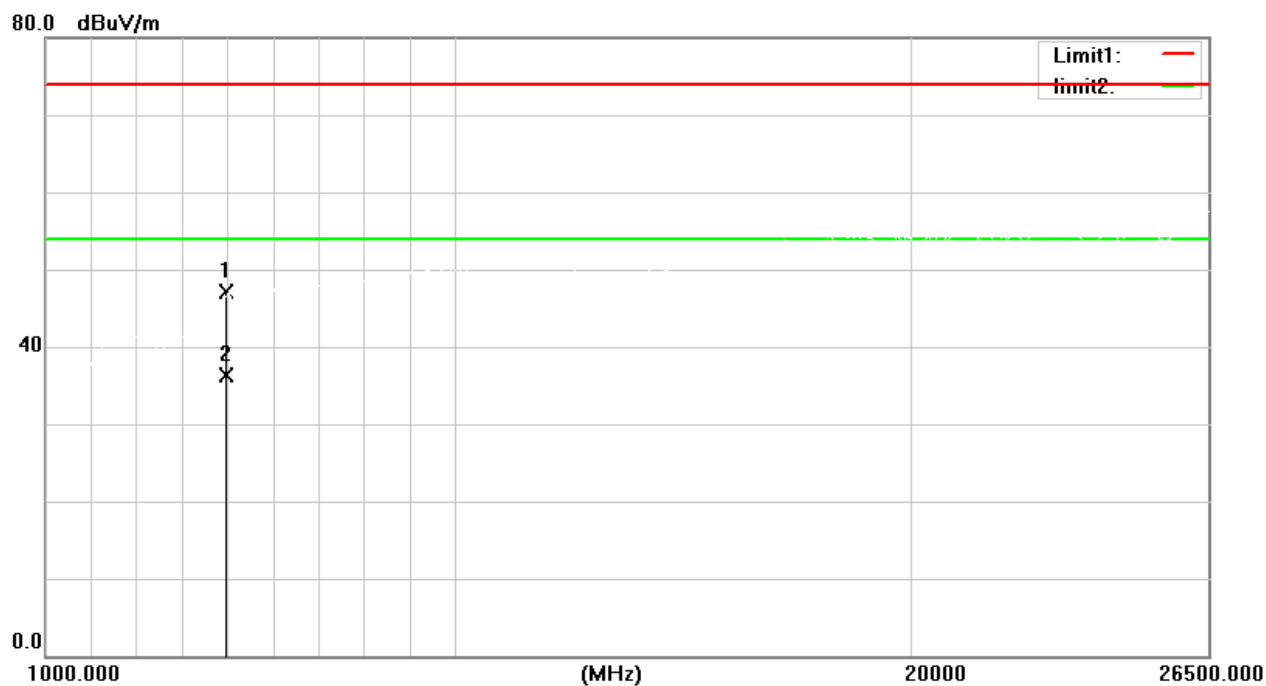
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree
1		4882.000	46.35	-3.13	43.22	74.00	-30.78	peak	150	152
2	*	4882.000	35.70	-3.13	32.57	54.00	-21.43	AVG	150	152

Test Mode: TX 2480 MHz_CH78_3Mbps

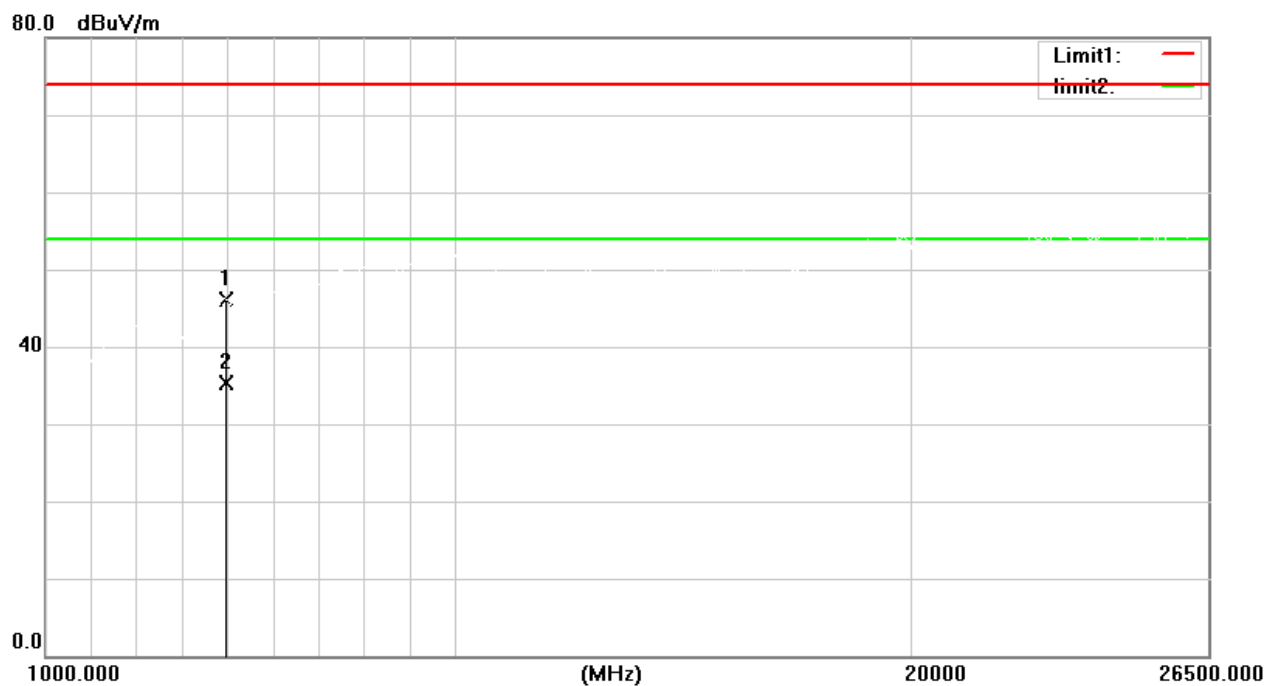
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree
1		4960.000	50.22	-3.21	47.01	74.00	-26.99	peak	150	147
2	*	4960.000	39.48	-3.21	36.27	54.00	-17.73	AVG	150	147

Test Mode: TX 2480 MHz_CH78_3Mbps

Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	cm	degree	Comment
1		4960.000	49.37	-3.21	46.16	74.00	-27.84	peak	150	33
2	*	4960.000	38.53	-3.21	35.32	54.00	-18.68	AVG	150	33

6 NUMBER OF HOPPING FREQUENCY

6.1 LIMIT

FCC Part15, Subpart C (15.247) & RSS-247	
Section	Test Item
15.247(a)(1)(iii) RSS-247 6.2.3.1 (b)	Number of Hopping Frequency

6.2 TEST PROCEDURE AND SETTING

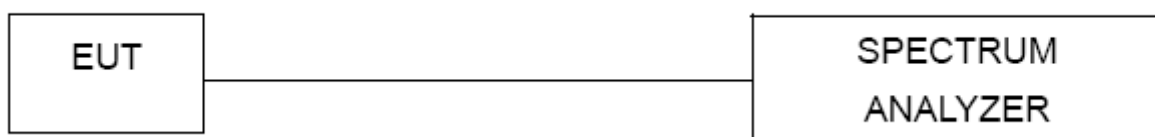
- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- Spectrum Setting: RBW=100 kHz, VBW=300 kHz, Sweep time = Auto.

Spectrum Parameters	Setting
Attenuation	Auto
Span Frequency	> Operating Frequency Range
RBW	100kHz
VBW	300kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

6.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2026/05/15
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Mi-cable	C10-01-01-1	100309	N/A

6.4 TEST SETUP

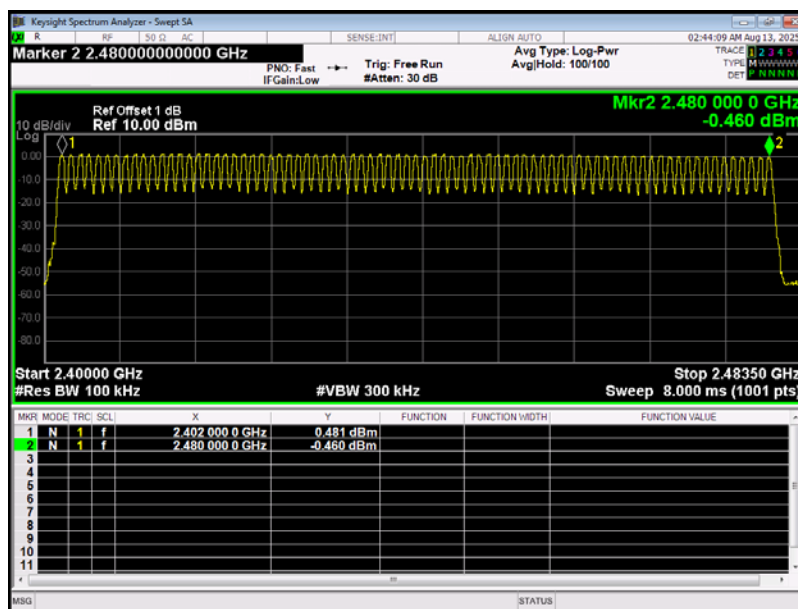


6.5 EUT OPERATION CONDITIONS

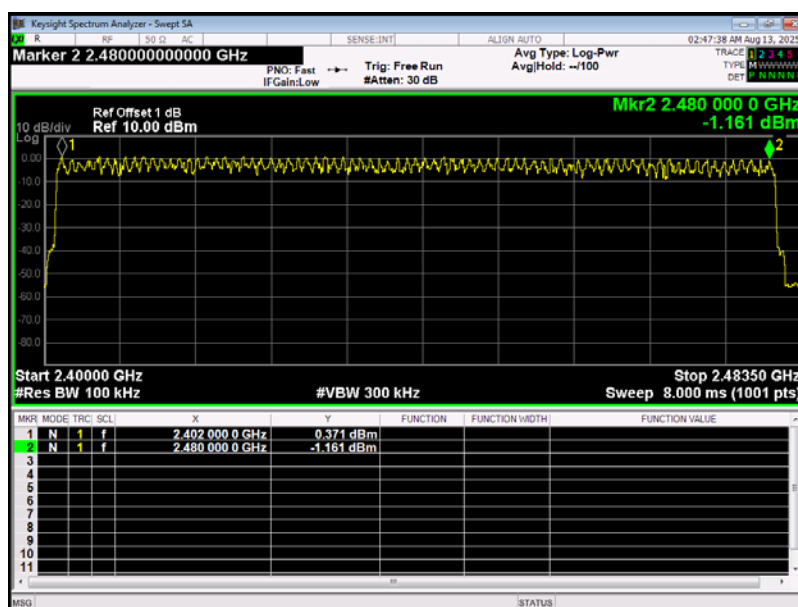
The EUT tested system was configured as the statements of 4.5 unless otherwise a special operating condition is specified in the follows during the testing.

6.6 TEST RESULTS

Hopping Mode_1Mbps		
Number of Hopping Frequency	Measurement result(CH)	Limit(CH)
	79	≥ 15



Hopping Mode_3Mbps		
Number of Hopping Frequency	Measurement result(CH)	Limit(CH)
	79	≥ 15



7 AVERAGE TIME OF OCCUPANCY

7.1 LIMIT

FCC Part15, Subpart C (15.247) & RSS-247		
Section	Test Item	Limit
15.247(a)(1)(iii) RSS-247 6.2.3.1 (b)	Average Time of Occupancy	0.4sec

7.2 TEST PROCEDURE AND SETTING

- The transmitter output (antenna port) was connected to the spectrum analyzer
- Set RBW of spectrum analyzer to 1MHz and VBW to 1MHz
- Use a video trigger with the trigger level set to enable triggering only on full pulses
- Sweep Time is more than once pulse time
- Set the center frequency on any frequency would be measure and set the frequency span to zero span
- Measure the maximum time duration of one single pulse
- Set the EUT for DH1, DH3 and DH5 packet transmitting
- Measure the maximum time duration of one single pulse
- DH1 Packet permit maximum $1600 / 79 / 2 = 10.12$ hops per second in each channel (1 time slot TX, 1 time slot RX). So, the dwell time is the time duration of the pulse times $10.12 \times 31.6 = 320$ within 31.6 seconds
- DH3 Packet permit maximum $1600 / 79 / 4 = 5.06$ hops per second in each channel (3 time slots TX, 1 time slot RX). So, the dwell time is the time duration of the pulse times $5.06 \times 31.6 = 160$ within 31.6 seconds
- DH5 Packet permit maximum $1600 / 79 / 6 = 3.37$ hops per second in each channel (5 time slots TX, 1 time slot RX). So, the dwell time is the time duration of the pulse times $3.37 \times 31.6 = 106.6$ within 31.6 seconds

7.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2026/05/15
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Mi-cable	C10-01-01-1	100309	N/A

7.4 TEST SETUP



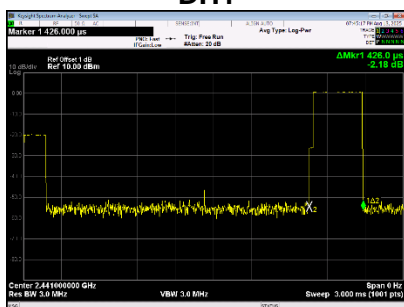
7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.5 unless otherwise a special operating condition is specified in the follows during the testing.

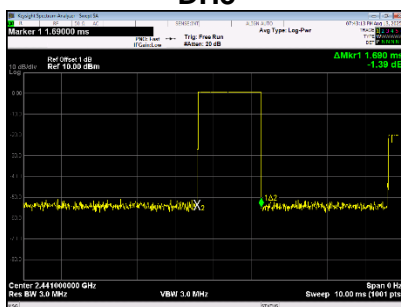
7.6 TEST RESULTS

TX Mode_1Mbps				
Mode	Channel Frequency (MHz)	Pulse Time (ms)	Dwell Time (ms)	Limit (ms)
DH1	2441	0.426	136.3	400
DH3	2441	1.690	270.4	400
DH5	2441	3.000	319.8	400

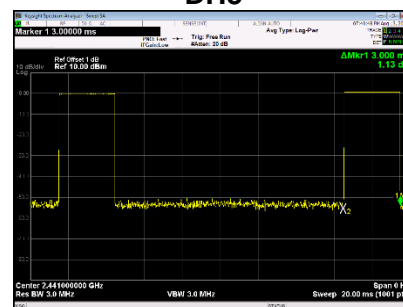
DH1



DH3



DH5



TX Mode_3Mbps				
Mode	Channel Frequency (MHz)	Pulse Time (ms)	Dwell Time (ms)	Limit (ms)
3DH1	2441	0.432	138.2	400
3DH3	2441	1.730	276.8	400
3DH5	2441	3.000	319.8	400

3DH1



3DH3



3DH5



8 HOPPING CHANNEL SEPARATION MEASUREMENT

8.1 LIMIT

Frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

8.2 TEST PROCEDURE AND SETTING

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Span = wide enough to capture the peaks of two adjacent channels
 Resolution (or IF) Bandwidth (RBW) \geq 1% of the span
 Video (or Average) Bandwidth (VBW) \geq RBW
 Sweep = Auto
 Detector function = Peak
 Trace = Max Hold

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	> Measurement Bandwidth or Channel Separation
RBW	10 kHz
VBW	30 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

8.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2026/05/15
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Mi-cable	C10-01-01-1	100309	N/A

8.4 TEST SETUP

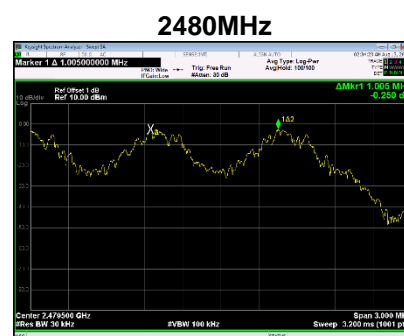
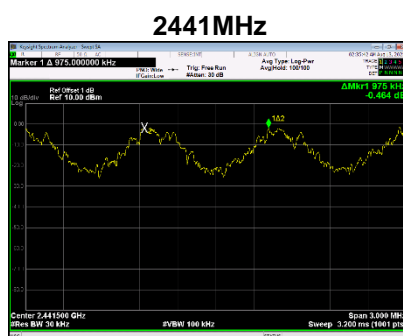


8.5 EUT OPERATION CONDITIONS

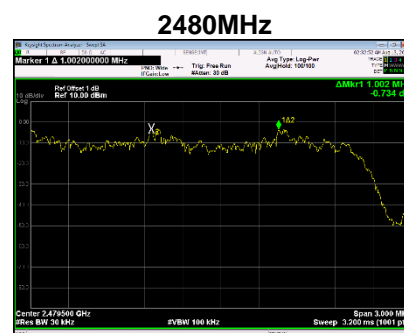
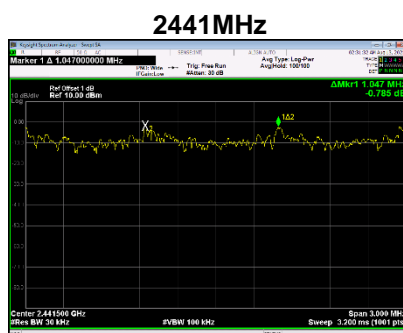
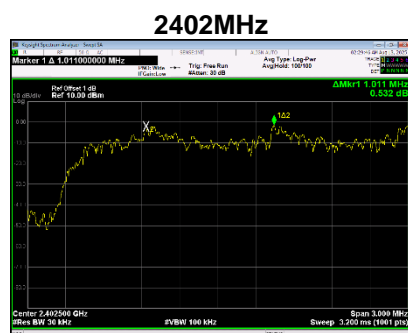
The EUT tested system was configured as the statements of 4.5 unless otherwise a special operating condition is specified in the follows during the testing.

8.6 TEST RESULTS

TX Mode_1Mbps				
Channel	Frequency (MHz)	Channel Separation(MHz)	Limit (MHz)	Result
CH00	2402	0.996	>(25KHz or 2/3*20dB Bandwidth)	PASS
CH39	2441	0.975	>(25KHz or 2/3*20dB Bandwidth)	PASS
CH78	2480	1.005	>(25KHz or 2/3*20dB Bandwidth)	PASS



TX Mode_3Mbps				
Channel	Frequency (MHz)	Channel Separation(MHz)	Limit (MHz)	Result
CH00	2402	1.011	>(25KHz or 2/3*20dB Bandwidth)	PASS
CH39	2441	1.047	>(25KHz or 2/3*20dB Bandwidth)	PASS
CH78	2480	1.002	>(25KHz or 2/3*20dB Bandwidth)	PASS



9 BANDWIDTH TEST

9.1 LIMIT

FCC Part15, Subpart C (15.247) & RSS-247	
Section	Test Item
15.247(a)(1) RSS-Gen 6.7 RSS-247 6.2.3.1 (a)	Bandwidth

9.2 TEST PROCEDURE AND SETTING

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting: RBW= 30 kHz, VBW=100 kHz, Sweep Time = Auto.

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	> Measurement Bandwidth
RBW	30kHz
VBW	100kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

9.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2026/05/15
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Mi-cable	C10-01-01-1	100309	N/A

9.4 TEST SETUP



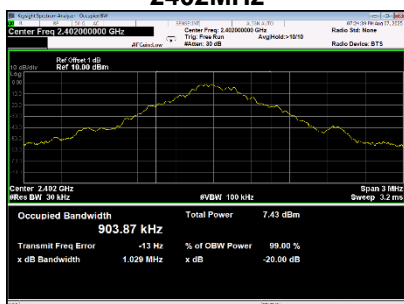
9.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.5 unless otherwise a special operating condition is specified in the follows during the testing.

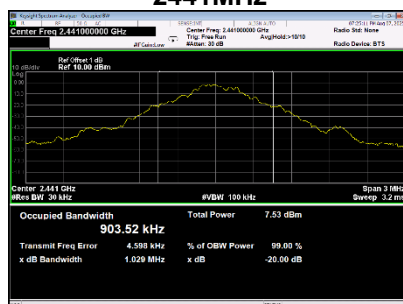
9.6 TEST RESULTS

TX Mode_1Mbps				
Channel	Frequency	20dB Bandwidth	99 % Emission Bandwidth	Result
	(MHz)	(MHz)	(MHz)	
CH00	2402	1.029	0.9038	PASS
CH39	2441	1.029	0.9035	PASS
CH78	2480	1.028	0.9036	PASS

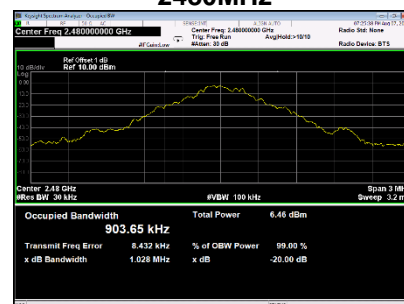
2402MHz



2441MHz

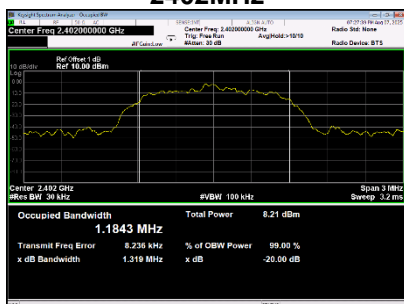


2480MHz

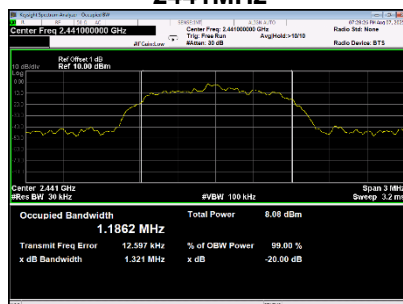


TX Mode_3Mbps				
Channel	Frequency	20dB Bandwidth	99 % Emission Bandwidth	Result
	(MHz)	(MHz)	(MHz)	
CH00	2402	1.319	1.1843	PASS
CH39	2441	1.321	1.1862	PASS
CH78	2480	1.319	1.1855	PASS

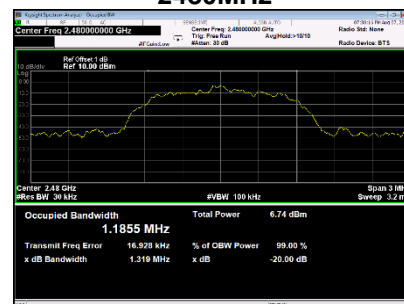
2402MHz



2441MHz



2480MHz



10 MAXIMUM OUTPUT POWER

10.1 LIMIT

FCC Part15, Subpart C (15.247) & RSS-247		
Section	Test Item	Limit
15.247(a)(1) RSS-247 6.2.3.1 (a)	Maximum Output Power	0.125Watt or 21dBm

Note:

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

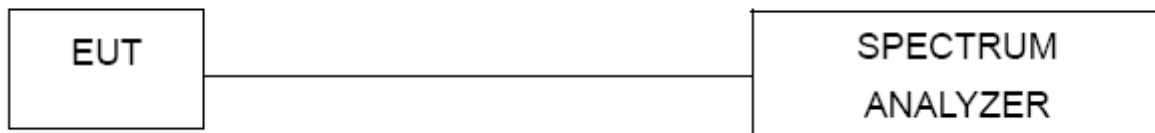
10.2 TEST PROCEDURE AND SETTING

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- Spectrum Setting: RBW= 1MHz/3MHz, VBW= 1MHz/3MHz, Sweep time = Auto.

10.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2026/05/15
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Mi-cable	C10-01-01-1	100309	N/A

10.4 TEST SETUP



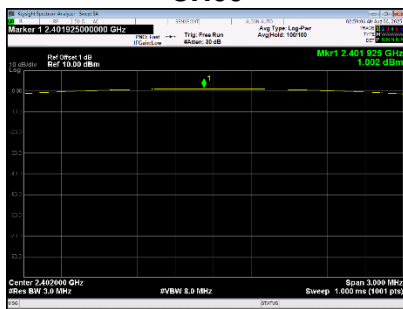
10.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.5 unless otherwise a special operating condition is specified in the follows during the testing.

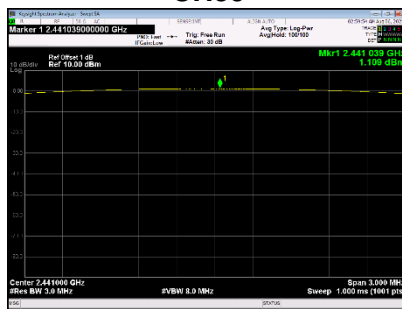
10.6 TEST RESULTS

TX Mode_1Mbps						
Gain	1.63dBi					
Channel	Frequency	Output Power	EIRP		Limit	Verdict
	(MHz)	(dBm)	(dBm)	(W)	(W)	
CH00	2402	1.002	2.632	0.001833	0.125	PASS
CH39	2441	1.109	2.739	0.001879	0.125	PASS
CH78	2480	0.031	1.661	0.001466	0.125	PASS

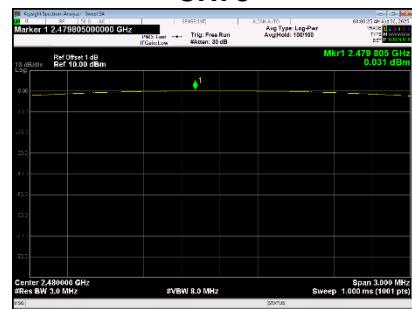
CH00



CH39

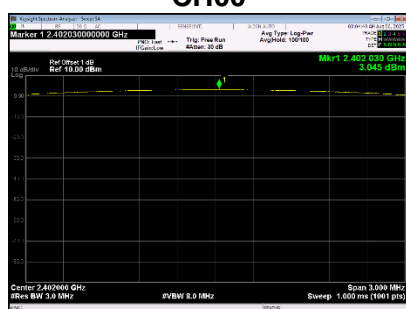


CH78

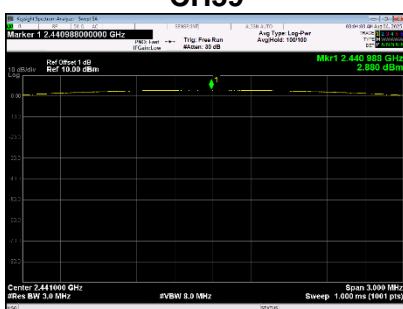


TX Mode_2Mbps						
Gain	1.63dBi					
Channel	Frequency	Output Power	EIRP		Limit	Verdict
	(MHz)	(dBm)	(dBm)	(W)	(W)	
CH00	2402	3.045	4.675	0.002934	0.125	PASS
CH39	2441	2.880	4.510	0.002825	0.125	PASS
CH78	2480	1.586	3.216	0.002097	0.125	PASS

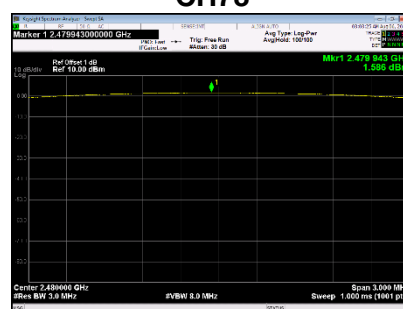
CH00



CH39

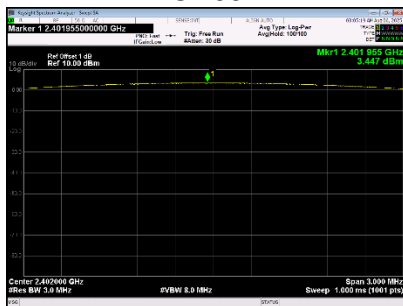


CH78

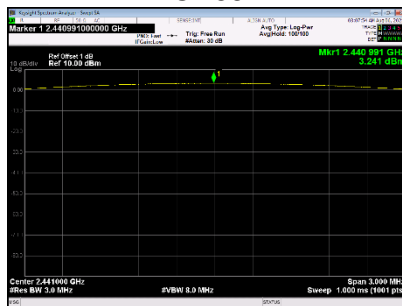


TX Mode_3Mbps						
Gain	1.63dBi					
Channel	Frequency	Output Power	EIRP		Limit	Verdict
	(MHz)	(dBm)	(dBm)	(W)	(W)	
CH00	2402	3.447	5.077	0.003219	0.125	PASS
CH39	2441	3.241	4.871	0.003070	0.125	PASS
CH78	2480	1.971	3.601	0.002291	0.125	PASS

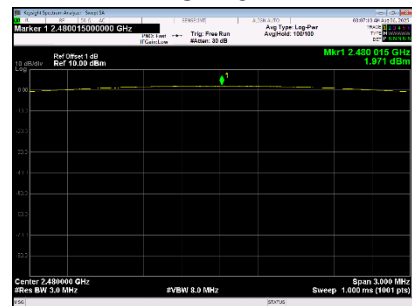
CH00



CH39



CH78



11 CONDUCTED SPURIOUS EMISSION

11.1 LIMIT

For FCC

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 Output Power limits. If the transmitter complies with the Output 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 Section 15.209(a) is not required.

For ISSED

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that the transmitter demonstrates compliance with the peak Output Power limits. If the transmitter complies with the Output Power limits based on the use of root-mean-square averaging over a time interval, as permitted under section 5.4(d), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

11.2 TEST PROCEDURE AND SETTING

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting: RBW= 100 kHz, VBW=300 kHz, Sweep time = Auto.

11.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2026/05/15
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Mi-cable	C10-01-01-1	100309	N/A

11.4 TEST SETUP



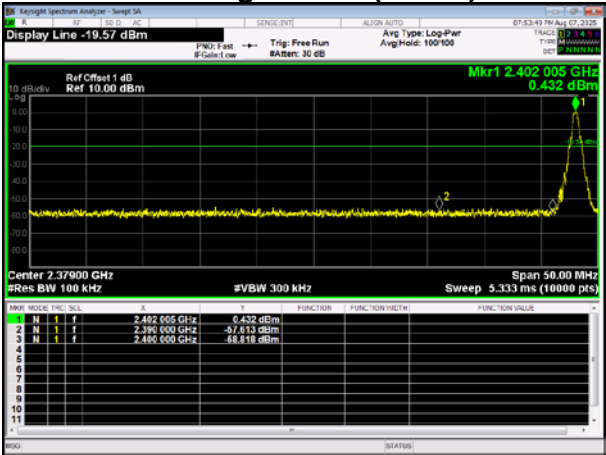
11.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.5 unless otherwise a special operating condition is specified in the follows during the testing.

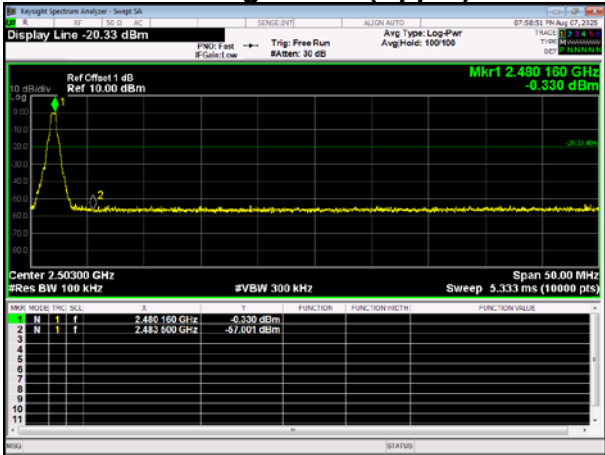
11.6 TEST RESULTS

TX Mode_1Mbps

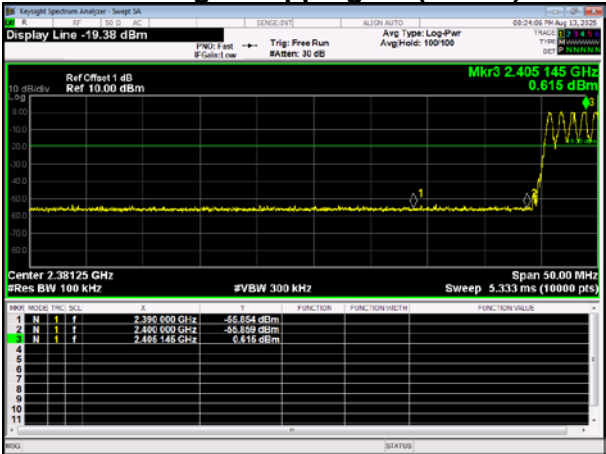
Bandedge- CH00 (Lower)



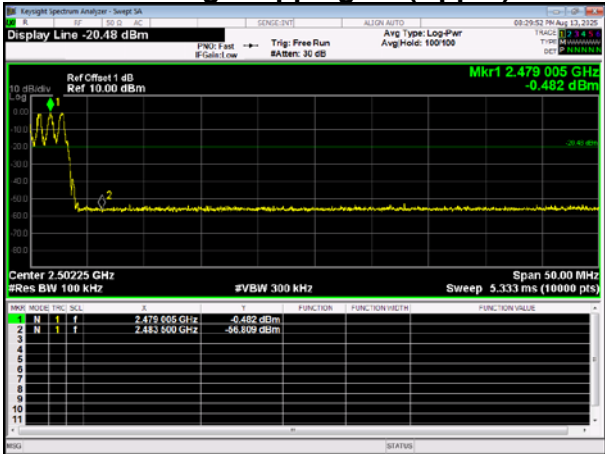
Bandedge CH78 (Upper)



Bandedge- Hopping on (Lower)

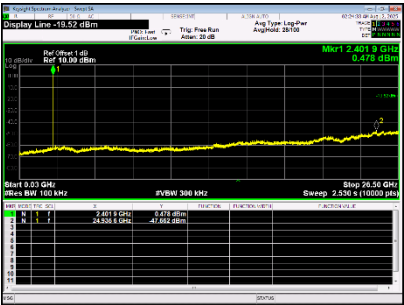


BandedgeHopping on (Upper)

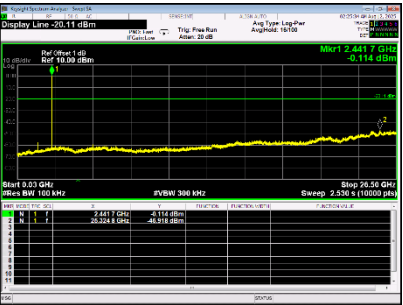


10th Harmonic of the fundamental frequency

CH00



CH39

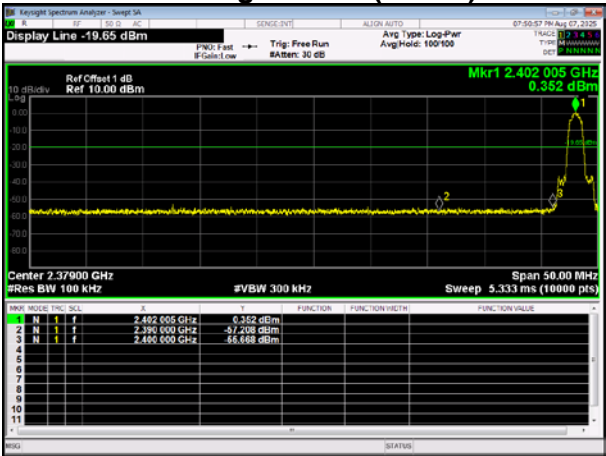


CH78

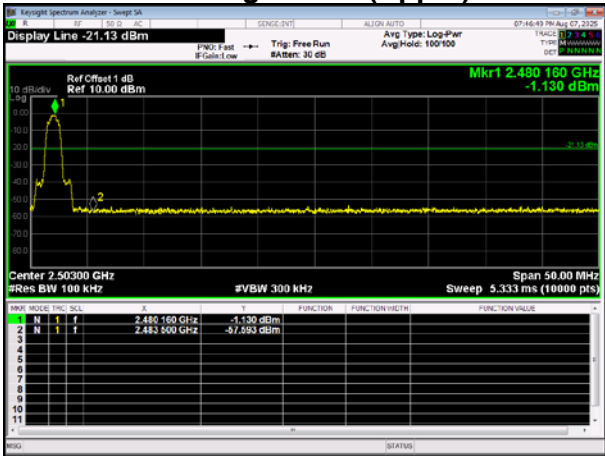


TX Mode_3Mbps

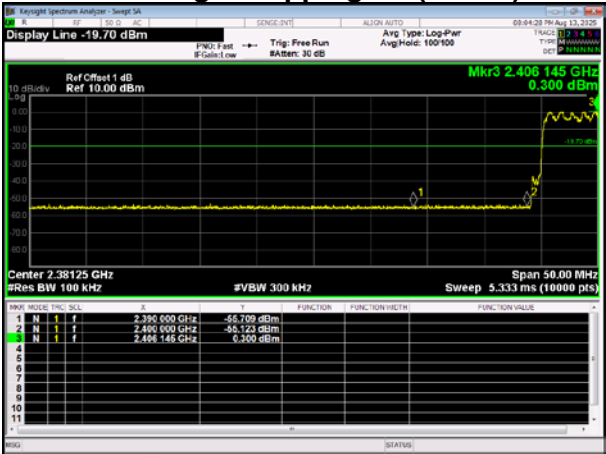
Bandedge- CH00 (Lower)



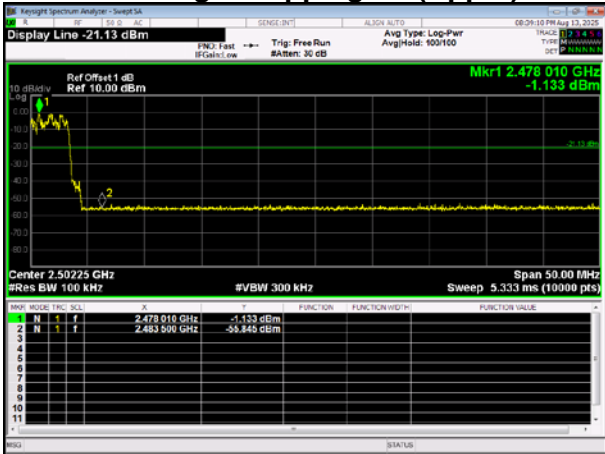
Bandedge CH78 (Upper)



Bandedge- Hopping on (Lower)

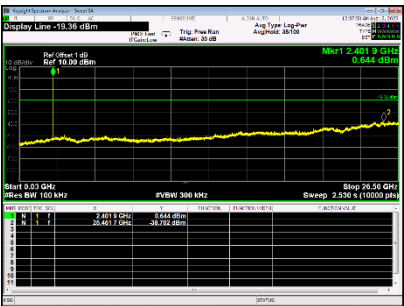


Bandedge- Hopping on (Upper)

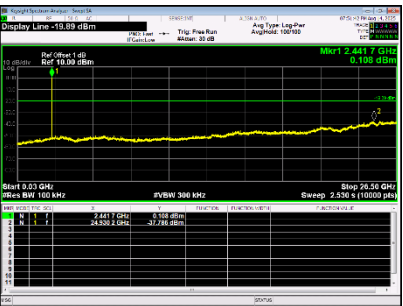


10th Harmonic of the fundamental frequency

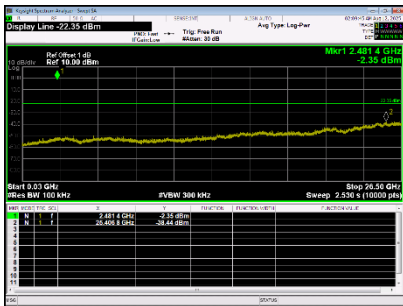
CH00



CH39



CH78



12 FREQUENCY STABILITY MEASUREMENT

12.1 LIMIT

RSS-Gen			
Section	Test Item	Limit	Frequency Range (MHz)
RSS-Gen 6.11	Frequency Stability	Specified in the user's manual	2402-2480

12.2 TEST PROCEDURE

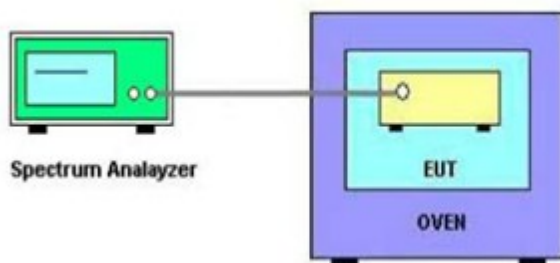
- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting:

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Entire absence of modulation emissions bandwidth
RBW	3 kHz
VBW	10 kHz
Sweep Time	Auto

12.3 MEASUREMENT INSTRUMENTS LIST

Item	Kind of Equipment	Manufacturer	Type No.	Serial No.	Calibrated until
1	Spectrum analyzer	KEYSIGHT	N9010A	MY55150427	2026/05/15
2	Attenuator	Mini-Circuits	BW-S10W2	101109	N/A
3	RF Cable	Mi-cable	C10-01-01-1	100309	N/A
4	Temperature conditioning	Guan Jian.HTH1000	-20-130°C	GJ1000-10D001	N/A
5	DC Power Supply	G.KE	IPR-10010D	010931954	N/A

12.4 TEST SETUP



12.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

12.6 TEST RESULTS

	Temperature vs. Frequency Stability	
Voltage	Temperature	Measurement Frequency (MHz)
3.7V	(°C)	2402
	-20	2401.9997
	+20	2401.9993
	+50	2401.9994
2.9V	+20	2401.9994
Max. Deviation (MHz)		-0.0007
Max. Deviation (ppm)		-0.291

Note: 2.9V is the end point voltage, and products below 2.9V will cease working.

END OF TEST REPORT