

FCC & ISED Radio Test Report**FCC ID: 2BKM7-VS5SERIES****IC: 28455-VS5SERIES****The report concerns: Original Grant**

Report Reference No.....: 25EFSS05045 07011
Date Sample(s) Received.....: 2025-05-20
Date of Tested.....: From 2025-05-25 to 2025-06-04
Date of issue.....: 2025-06-11
Testing Laboratory: DongGuanShuoXin 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: Gibson, Inc.
Address: 209 10th Avenue South, Suite 460, Nashville, TN
USA 37203

Equipment.....: PROFESSIONAL MONITORING SYSTEM
Trade Mark: 
Model: V4S5, V6S5, V8S5
Ratings: I/P: 100-240V~ 60/50Hz 325W MAX

Test Engineer:

Jelena OuYang

Responsible Engineer :

Leo Chen

Authorized Signatory:

Smile Wang

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1 TEST REPORT DECLARE

Applicant for FCC	Gibson, Inc.
Address for FCC	209 10th Avenue South, Suite 460, Nashville, TN USA 37203
Manufacturer	Gibson, Inc.
Address	209 10th Avenue South, Suite 460, Nashville, TN USA 37203
Factory	EVERVICTORY ELECTRONIC COMPANY LIMITED
Address	Chu Chi Management District, Hu Men Town, Dong-Guan City, Guang-Dong Province, P.R. China
Equipment	PROFESSIONAL MONITORING SYSTEM
Model No.	V4S5, V6S5, V8S5
Trade Mark	
Standard	FCC Part15, Subpart C (15.247) RSS-247 Issue 3, Aug. 2023 RSS-Gen Issue 5 Mar. 2019 ANSI C63.10-2013

We Declare:

The equipment described above is tested by DongGuanShuoXin 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 DongGuanShuoXin 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-Gen8.8	AC Power Line Conducted Emissions	PASS	-----
15.247(d) 15.205(a) 15.209(a)	RSS-247 5.5 RSS-Gen8.9 RSS-Gen8.10	Radiated Emissions	PASS	-----
15.247(a)(2)	RSS-247 5.2 (a) RSS-Gen6.7	Bandwidth	PASS	-----
15.247(b)(3)	RSS-247 5.4 (d)	Maximum Output Power	PASS	-----
15.247(d)	RSS-247 5.5	ConductedSpurious Emission	PASS	-----
15.247(e)	RSS-247 5.2 (b)	Power Spectral Density	PASS	-----
-	RSS-Gen 6.11	Frequency Stability	PASS	-----
15.203	-	Antenna Requirement	PASS	Note(2)

Note:

- (1) "N/A" denotes test is not applicable to this device.
- (2) The device what use a permanently attached antenna were considered sufficient tocomply 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 DongGuanShuoXin 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	2026-06-30
Federal Communications Commission (FCC)	171688 Designation No.:CN1235	2026-06-30

3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

Equipment	PROFESSIONAL MONITORING SYSTEM	
Brand Name		
Test Model	V6S5	
Series Model	V4S5, V6S5, V8S5	
Model Difference(s)	All models are identical to each other except for the model name and Appearance size.	
Hardware Version	1.0	
Software Version	1.0	
Power Source	AC main	
Power Rating	I/P: 100-240V~ 60/50Hz 325W MAX	
Operation Frequency	2402 MHz ~ 2480 MHz	
Modulation Technology	GFSK	
Bit Rate of Transmitter	1Mbps /2Mbps	
Antenna Information	Antenna Type: FPC	Maximum Peak Gain: 0.44dBi
Max. Output power	1Mbps: 3.577dBm (0.002279W) 2Mbps: 3.598dBm (0.002290W)	
Max. EIRP	1Mbps: 4.017dBm (0.002522W) 2Mbps: 4.038dBm (0.002534W)	

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)
00	2402	20	2442
01	2404	21	2444
02	2406	22	2446
03	2408	23	2448
04	2410	24	2450
05	2412	25	2452
06	2414	26	2454
07	2416	27	2456
08	2418	28	2458
09	2420	29	2460
10	2422	30	2462
11	2424	31	2464
12	2426	32	2466
13	2428	33	2468
14	2430	34	2470
15	2432	35	2472
16	2434	36	2474
17	2436	37	2476
18	2438	38	2478
19	2440	39	2480

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	BLE 1M TX ModeNOTE (1)
Mode 2	BLE 2M TX ModeNOTE (1)
Mode 3	BLE 2M TX Mode Channel 39

Following mode(s) as (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 3	BLE 2M TX Mode Channel 39

Radiated emissions test - Below 1GHz	
Final Test Mode	Description
Mode 3	BLE 2M TX Mode Channel 39

Radiated emissions test - Above 1GHz	
Final Test Mode	Description
Mode 1	BLE 1M TX ModeNOTE (1)
Mode 2	BLE 2M TX ModeNOTE (1)

Conducted test	
Final Test Mode	Description
Mode 1	BLE 1M TX ModeNOTE (1)
Mode 2	BLE 2M TX ModeNOTE (1)

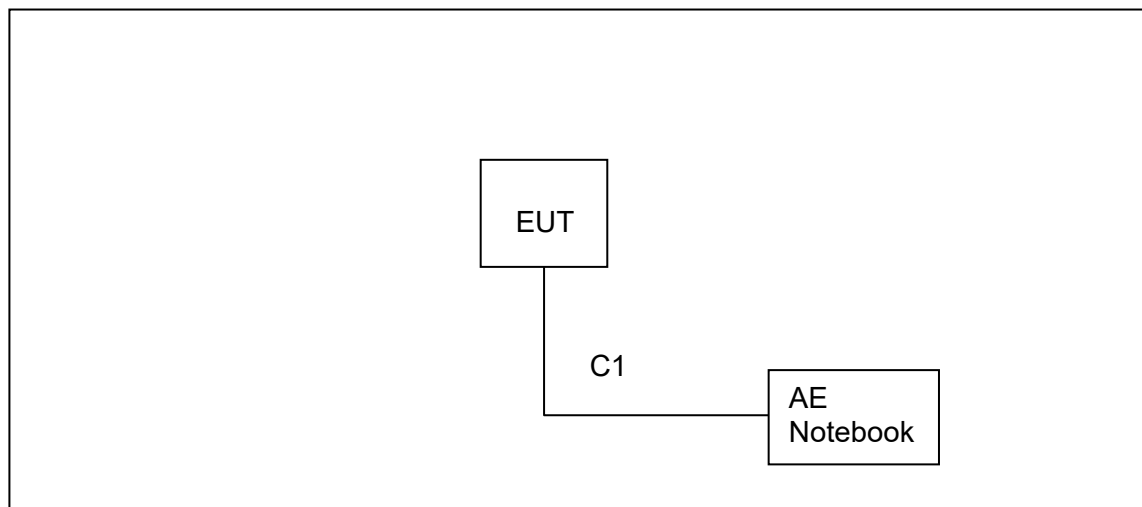
Note:

(1) The measurements are performed at the high, middle, low available channels.

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 BT LE

Test Software	Simplicity Studio.exe		
Frequency (MHz)	2402	2440	2480
Parameters-1Mbps	Default	Default	Default
Parameters-2Mbps	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	DC Cable	NO	NO	0.8m

3.6 TEST ENVIRONMENT CONDITIONS

Test Item	Temperature	Humidity	Test Voltage
AC Power Line Conducted Emissions	25.6°C	69%	AC 120V 60Hz
Radiated Emissions-9K-30MHz	23°C	60%	AC 120V 60Hz
Radiated Emissions-30 MHz to 1GHz	21.5°C	67%	AC 120V 60Hz
Radiated Emissions-Above 1000 MHz	21.5°C	67%	AC 120V 60Hz
Bandwidth	25°C	60%	AC 120V 60Hz
Maximum Output Power	25°C	60%	AC 120V 60Hz
Conducted Spurious Emission	25°C	60%	AC 120V 60Hz
Power Spectral Density	25°C	60%	AC 120V 60Hz

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

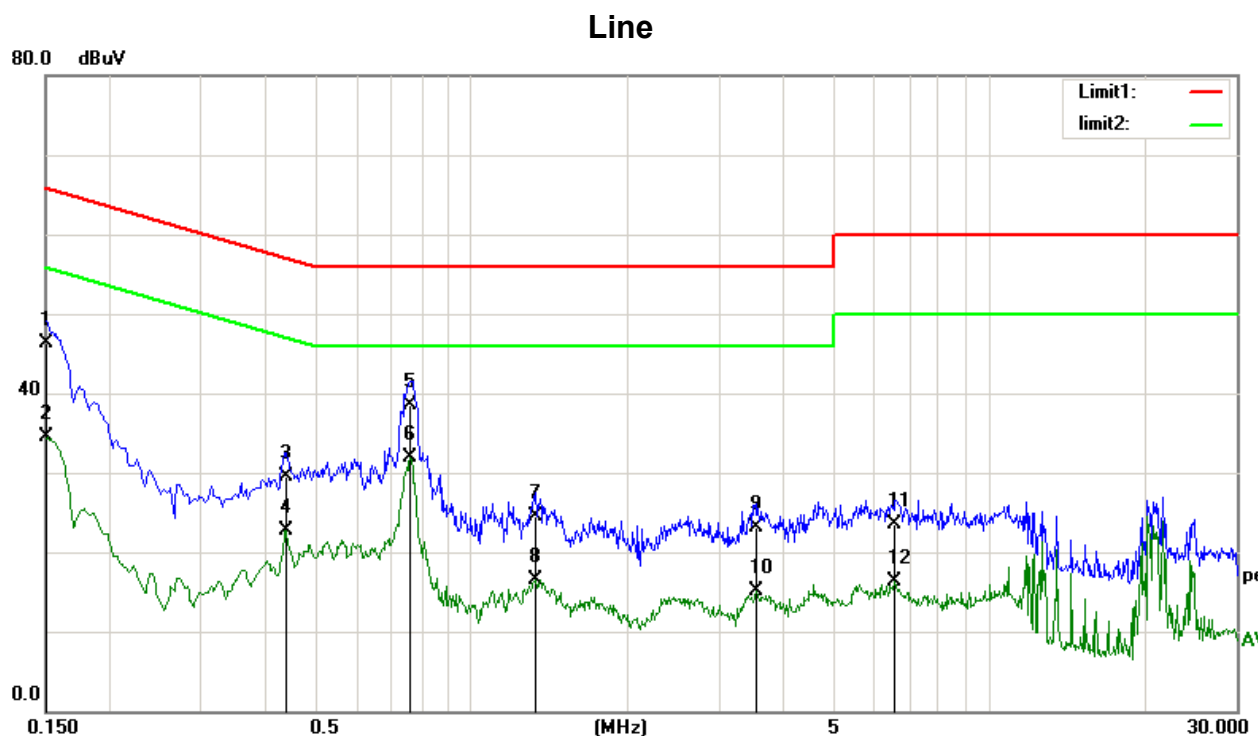
- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipment powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the groundplane 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

4.6 TEST RESULTS

Test Mode: BLE 2M TX Mode Channel 39



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1500	35.52	10.88	46.40	65.99	-19.59	QP
2	0.1500	23.54	10.88	34.42	55.99	-21.57	AVG
3	0.4380	18.75	10.80	29.55	57.10	-27.55	QP
4	0.4380	11.99	10.80	22.79	47.10	-24.31	AVG
5	0.7620	27.81	10.73	38.54	56.00	-17.46	QP
6	0.7620	21.23	10.73	31.96	46.00	-14.04	AVG
7	1.3260	13.76	10.68	24.44	56.00	-31.56	QP
8	1.3260	5.79	10.68	16.47	46.00	-29.53	AVG
9	3.5340	12.35	10.80	23.15	56.00	-32.85	QP
10	3.5340	4.26	10.80	15.06	46.00	-30.94	AVG
11	6.5699	12.66	10.87	23.53	60.00	-36.47	QP
12	6.5699	5.43	10.87	16.30	50.00	-33.70	AVG

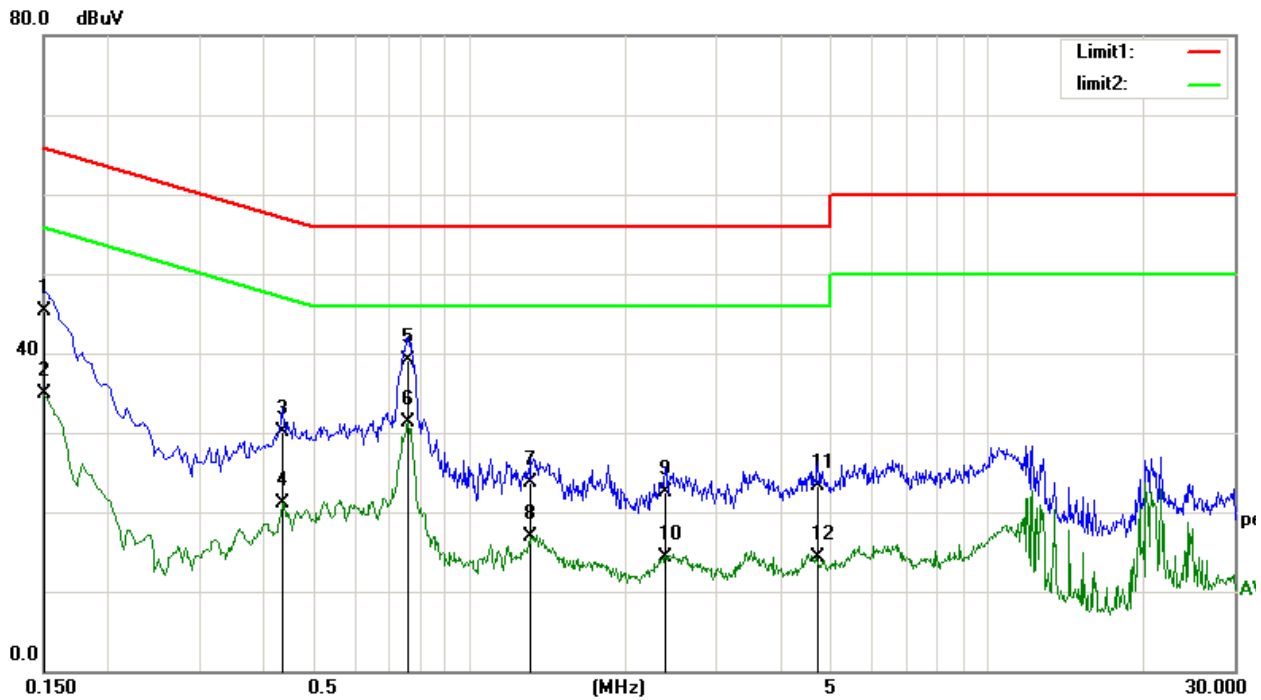
Remarks:

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

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

Test Mode: BLE 2M TX Mode Channel 39

Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1500	34.35	10.88	45.23	65.99	-20.76	QP
2	0.1500	24.08	10.88	34.96	55.99	-21.03	AVG
3	0.4340	19.39	10.80	30.19	57.18	-26.99	QP
4	0.4340	10.37	10.80	21.17	47.18	-26.01	AVG
5	0.7620	28.29	10.73	39.02	56.00	-16.98	QP
6	0.7620	20.63	10.73	31.36	46.00	-14.64	AVG
7	1.3099	13.03	10.67	23.70	56.00	-32.30	QP
8	1.3099	6.20	10.67	16.87	46.00	-29.13	AVG
9	2.3940	11.67	10.87	22.54	56.00	-33.46	QP
10	2.3940	3.53	10.87	14.40	46.00	-31.60	AVG
11	4.7099	12.53	10.77	23.30	56.00	-32.70	QP
12	4.7099	3.50	10.77	14.27	46.00	-31.73	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) and RSS-Gen 8.10, then the 15.209(a) and 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) (μ 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 (μ 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

- 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 or 1.5m 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

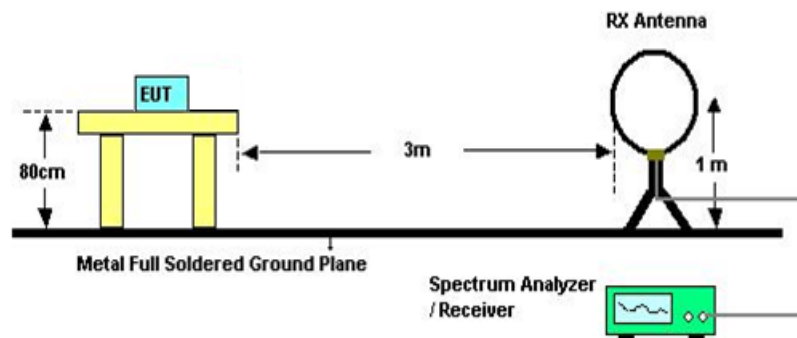
Receiver Parameter	Setting
Attenuation	Auto
Start ~ Stop Frequency	9 kHz~90 kHz for PK/AVG detector
Start ~ Stop Frequency	90 kHz~110 kHz for QP detector
Start ~ Stop Frequency	110 kHz~490 kHz for PK/AVG detector
Start ~ Stop Frequency	490 kHz~30 MHz for QP detector
Start ~ Stop Frequency	30MHz~1000MHz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

5.3 MEASUREMENT INSTRUMENTS LIST

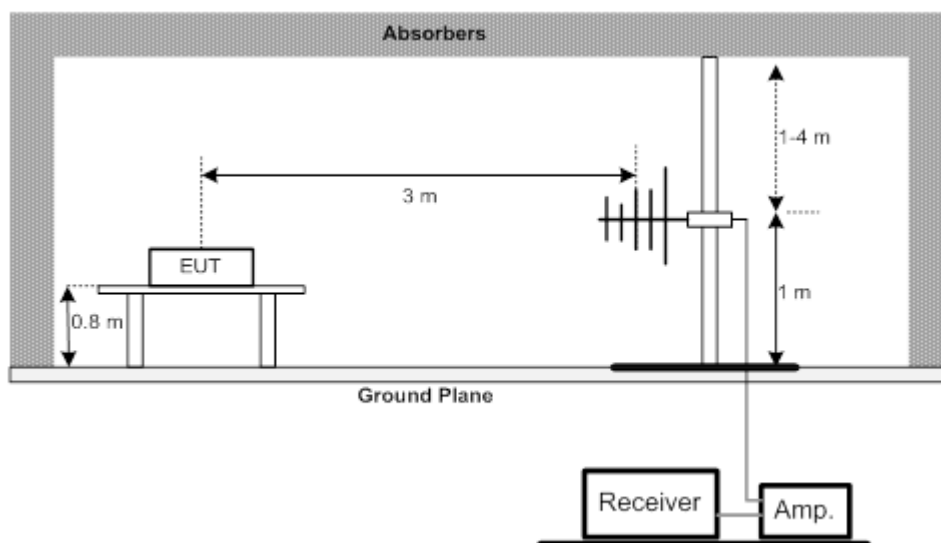
Item	Equipment	Manufacturer	Model No.	Serial No.	Calibrated until
1	EMI Test Receiver	R&S	ESCI	101307	05/20/2026
2	Spectrum Analyzer	Agilent	E4407B	US40240708	11/17/2025
3	Loop antenna	SCHWARZBECK K	FMZB1519	1519-062	04/01/2028
4	Broadband antenna	SCHWARZBECK	VULB9168	VULB9168-192	03/28/2026
5	HORN ANTENNA	SCHWARZBECK	BBHA9120D	9120D 1065	03/27/2026
6	Preamplifier Amplifier	HP	8447F	3113A05680	11/17/2025
7	PRE-AMPLIFIER	EMEC	EM01G26G	60679	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

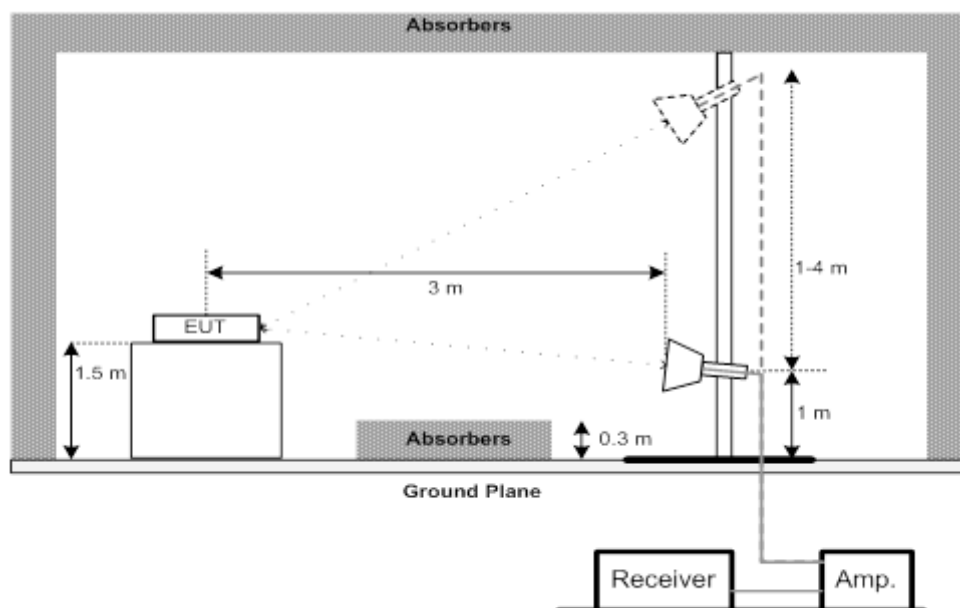
5.4 TESTSETUP

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 RESULT- 9kHz TO 30MHz

Test Mode:	BLE 2M TX Mode Channel 39
------------	---------------------------

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.

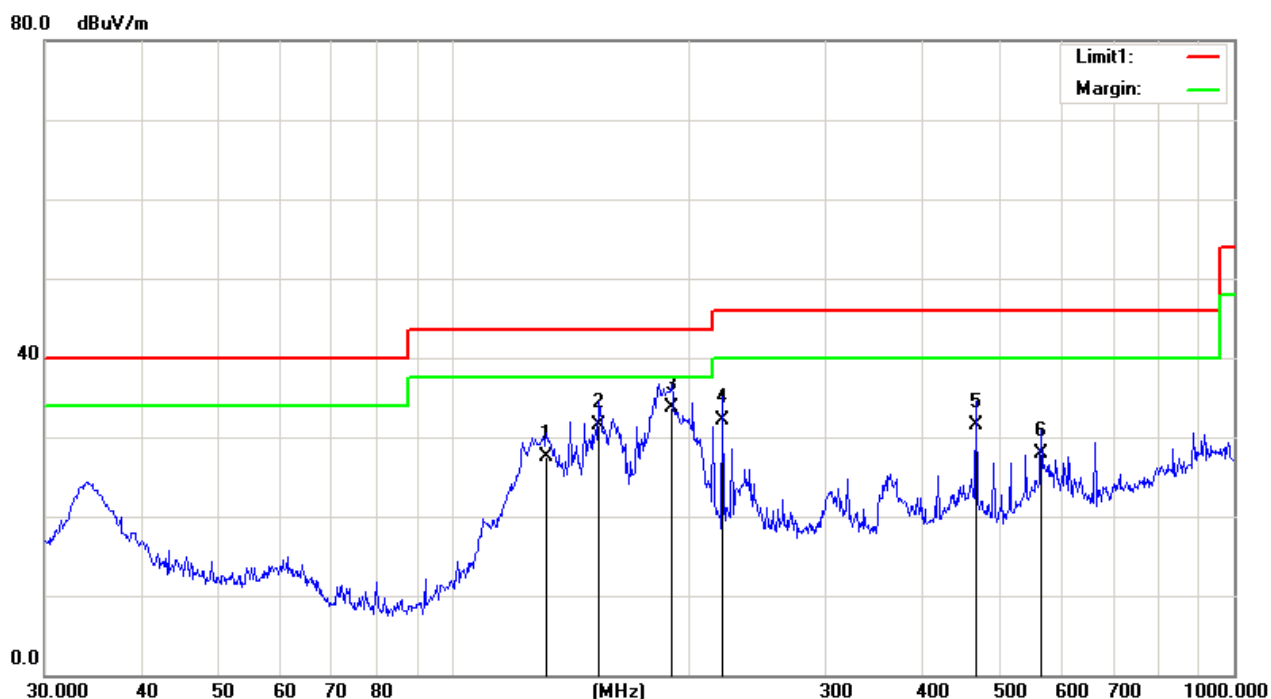
Distance extrapolation factor = $20 \log (\text{specific distance/test distance})(\text{dB})$;

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

5.7 TEST RESULT- 30MHz TO 1000MHz

Test Mode : BLE 2M TX Mode Channel 39

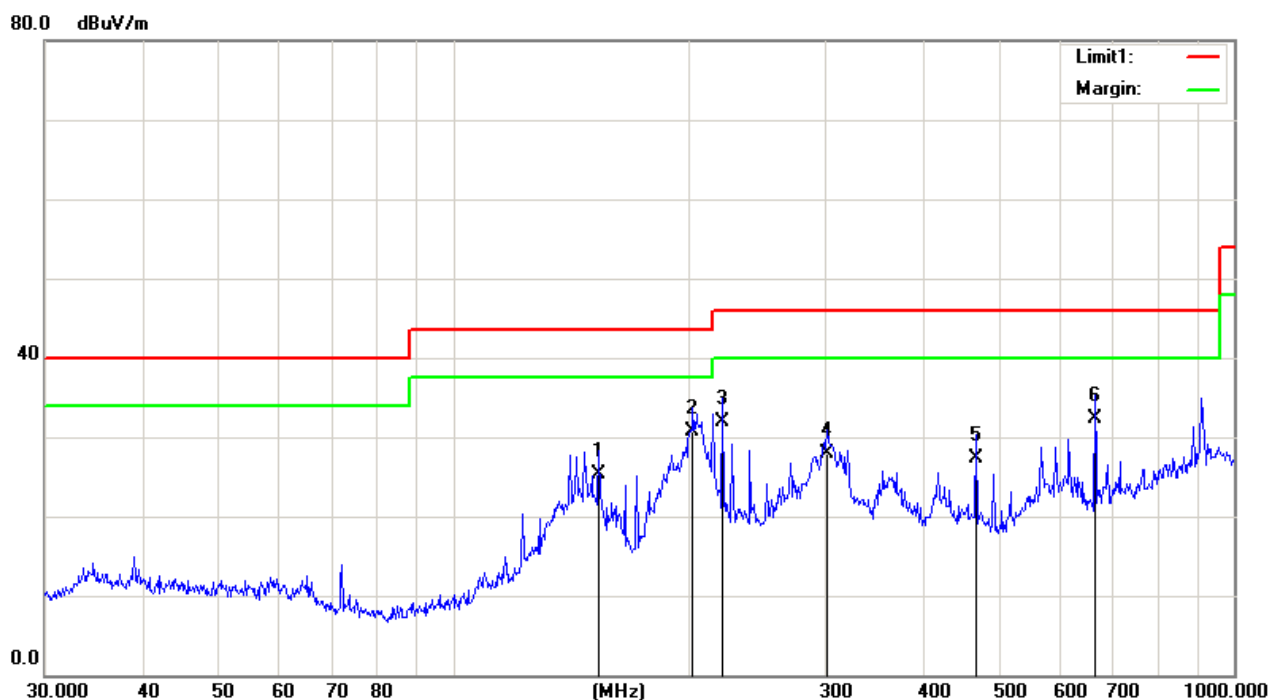
Vertical



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		131.7575	40.42	-12.98	27.44	43.50	-16.06	QP	100	25
2		153.7384	42.23	-10.70	31.53	43.50	-11.97	QP	300	129
3	*	190.4050	47.47	-13.68	33.79	43.50	-9.71	QP	100	236
4		221.3919	45.36	-13.17	32.19	46.00	-13.81	QP	100	24
5		467.2348	38.54	-7.11	31.43	46.00	-14.57	QP	200	20
6		566.6221	32.61	-4.73	27.88	46.00	-18.12	QP	100	112

Test Mode : BLE 2M TX Mode Channel 39

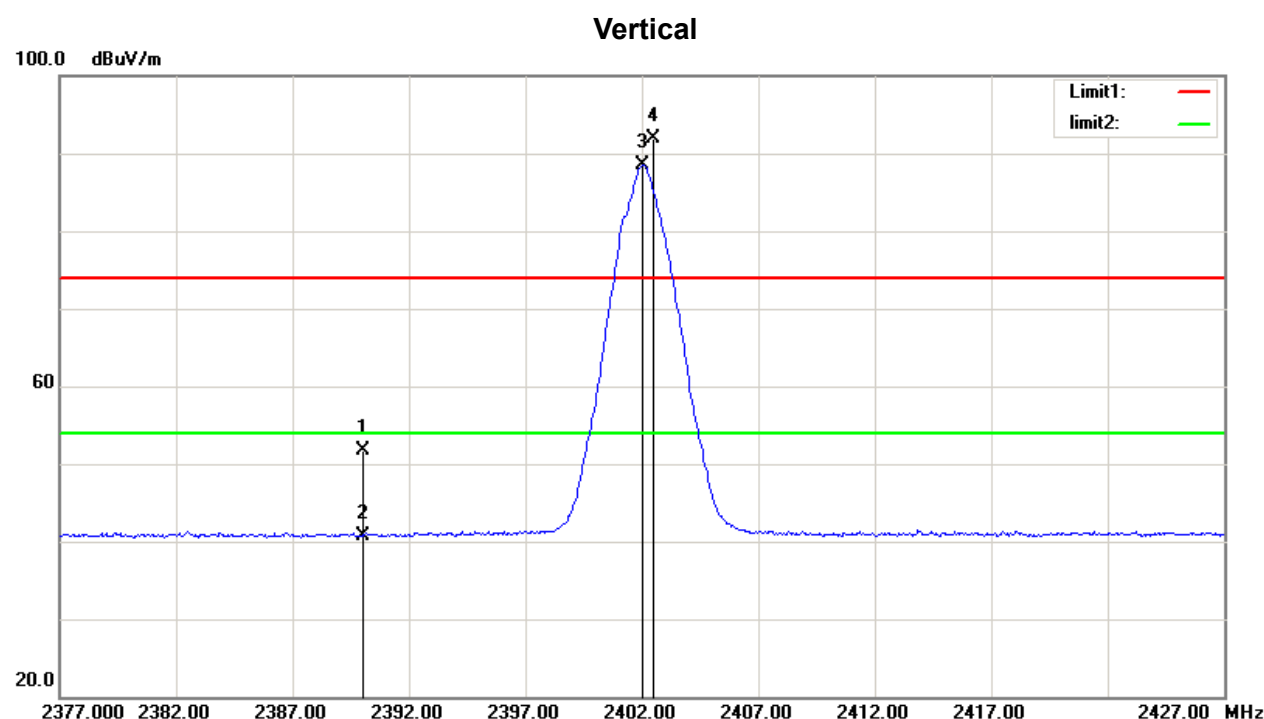
Horizontal



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		153.7384	35.97	-10.70	25.27	43.50	-18.23	QP	100	145
2	*	202.8103	44.13	-13.36	30.77	43.50	-12.73	QP	200	254
3		221.3919	45.11	-13.17	31.94	46.00	-14.06	QP	100	226
4		301.4223	37.55	-9.66	27.89	46.00	-18.11	QP	300	12
5		467.2348	34.47	-7.11	27.36	46.00	-18.64	QP	100	326
6		663.4728	36.99	-4.76	32.23	46.00	-13.77	QP	100	2

5.8 TEST RESULT- ABOVE 1000MHz (BAND EDGE)

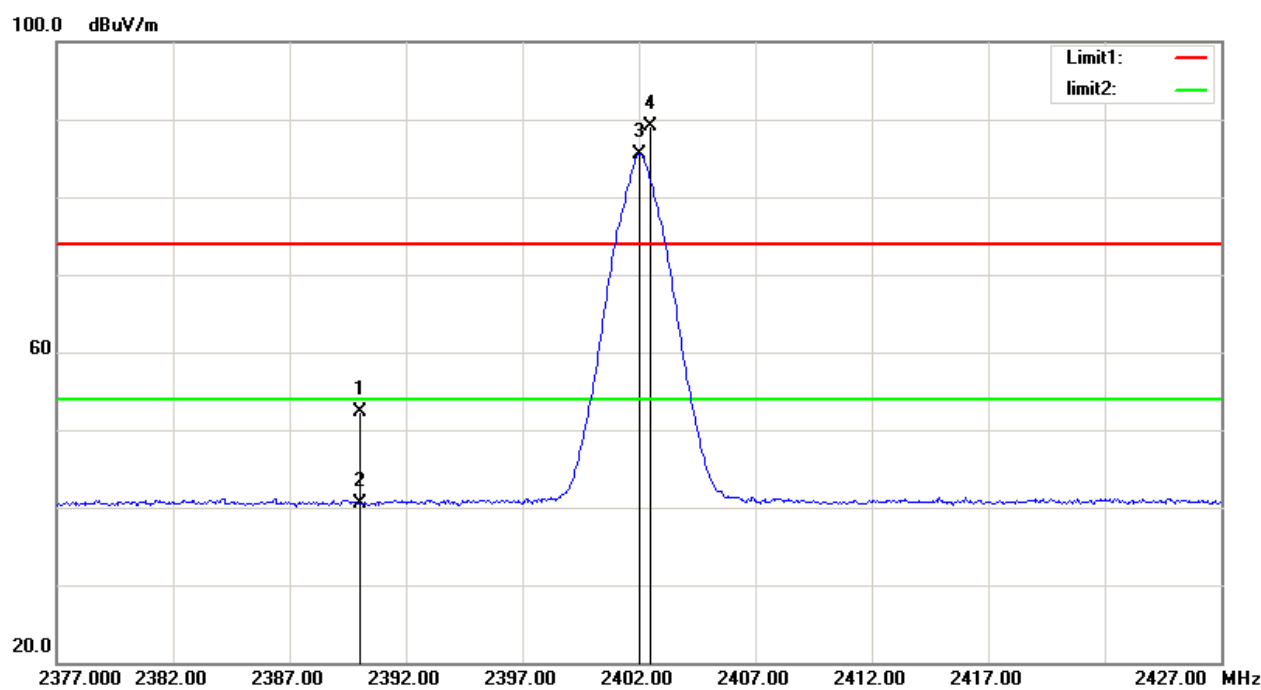
Test Mode: TX 2402 MHz_CH00_1Mbps



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	21.47	30.14	51.61	74.00	-22.39	peak	150	229
2		2390.000	10.58	30.14	40.72	54.00	-13.28	AVG	150	229
3	*	2402.000	58.34	30.15	88.49	54.00	34.49	AVG	150	229 No Limit
4	X	2402.500	61.80	30.15	91.95	74.00	17.95	peak	150	229 No Limit

Test Mode: TX 2402 MHz_CH00_1Mbps

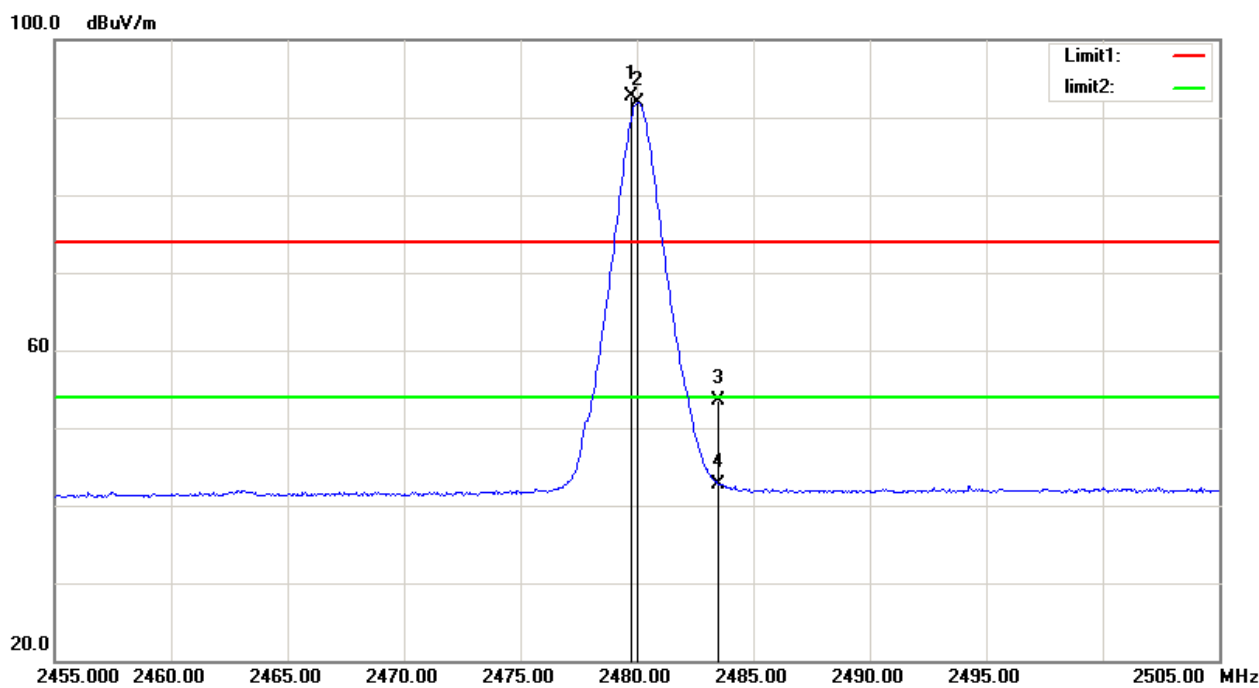
Horizontal



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	22.18	30.14	52.32	74.00	-21.68	peak	150	250
2		2390.000	10.43	30.14	40.57	54.00	-13.43	AVG	150	250
3	*	2402.050	55.45	30.15	85.60	54.00	31.60	AVG	150	250 No Limit
4	X	2402.500	58.95	30.15	89.10	74.00	15.10	peak	150	250 No Limit

Test Mode: TX 2480 MHz_CH39_1Mbps

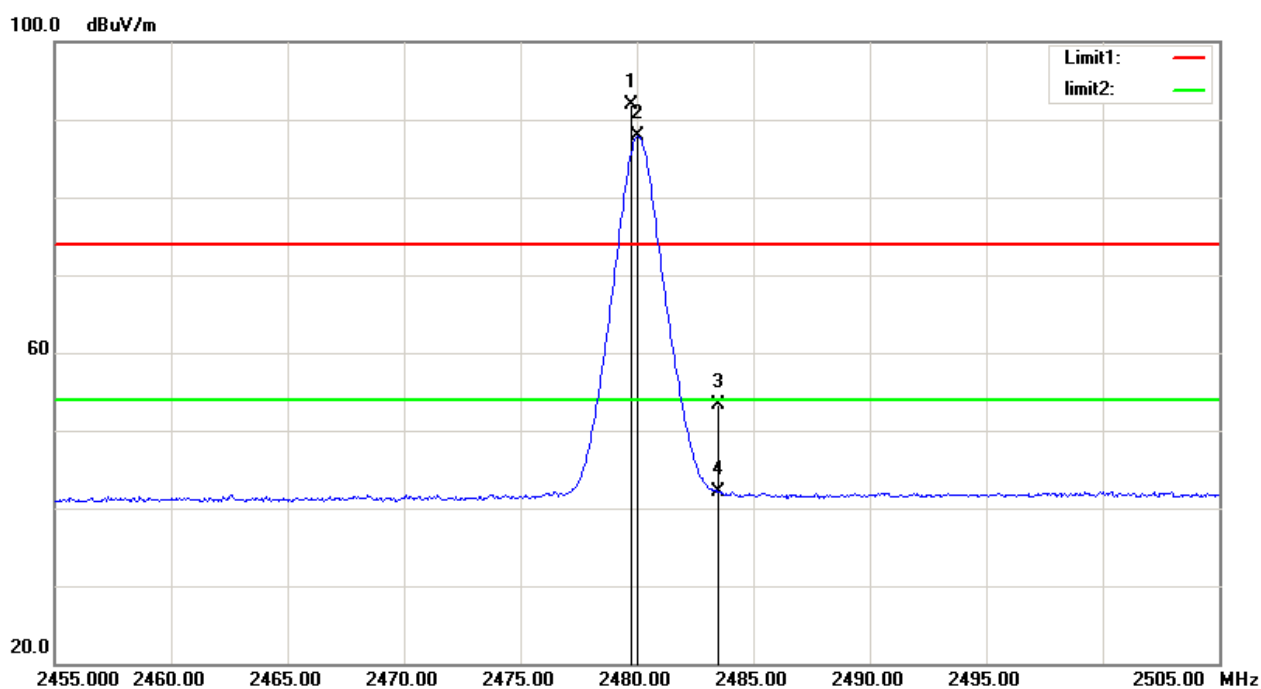
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Detector	Antenna Height cm	Table Degree	Comment
1	X	2479.750	62.05	30.67	92.72	74.00	18.72	peak	150	228	No Limit
2	*	2480.050	61.21	30.67	91.88	54.00	37.88	AVG	150	228	No Limit
3		2483.500	22.78	30.71	53.49	74.00	-20.51	peak	150	228	
4		2483.500	12.06	30.71	42.77	54.00	-11.23	AVG	150	228	

Test Mode: TX 2480 MHz_CH39_1Mbps

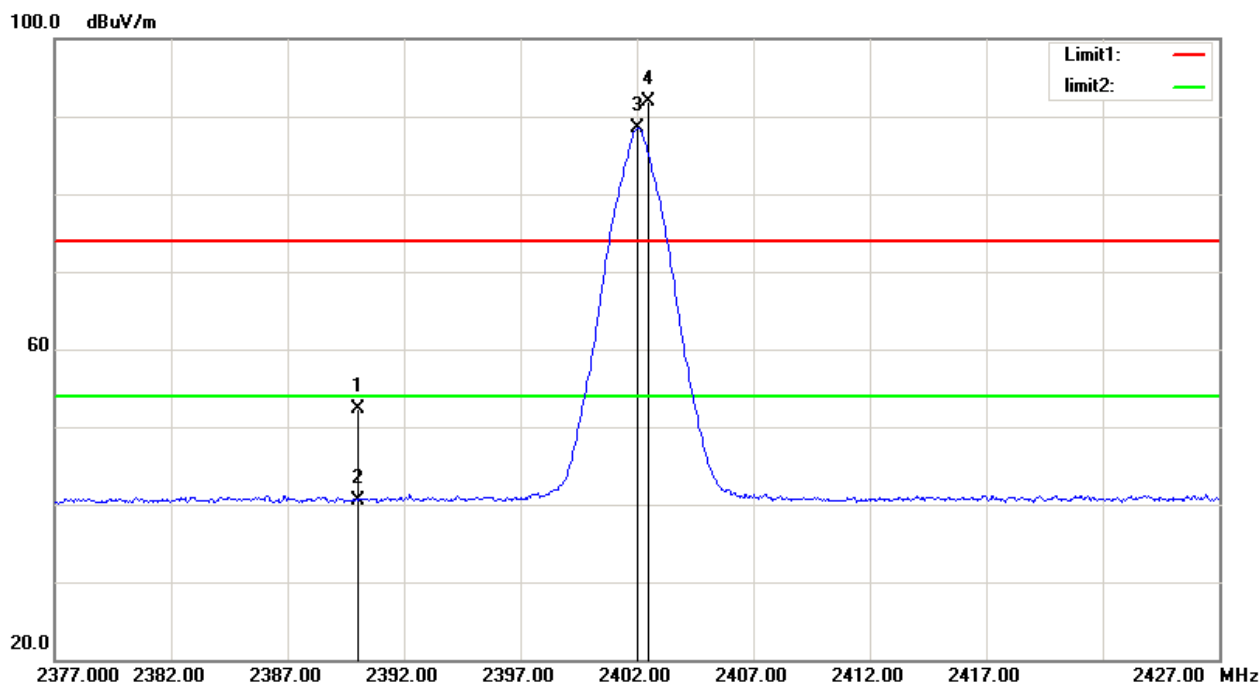
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree		
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree	Comment
1	X	2479.750	61.32	30.67	91.99	74.00	17.99	peak	150	250	No Limit
2	*	2480.050	57.14	30.67	87.81	54.00	33.81	AVG	150	250	No Limit
3		2483.500	22.51	30.71	53.22	74.00	-20.78	peak	150	250	
4		2483.500	11.32	30.71	42.03	54.00	-11.97	AVG	150	250	

Test Mode: TX 2402 MHz_CH00_2Mbps

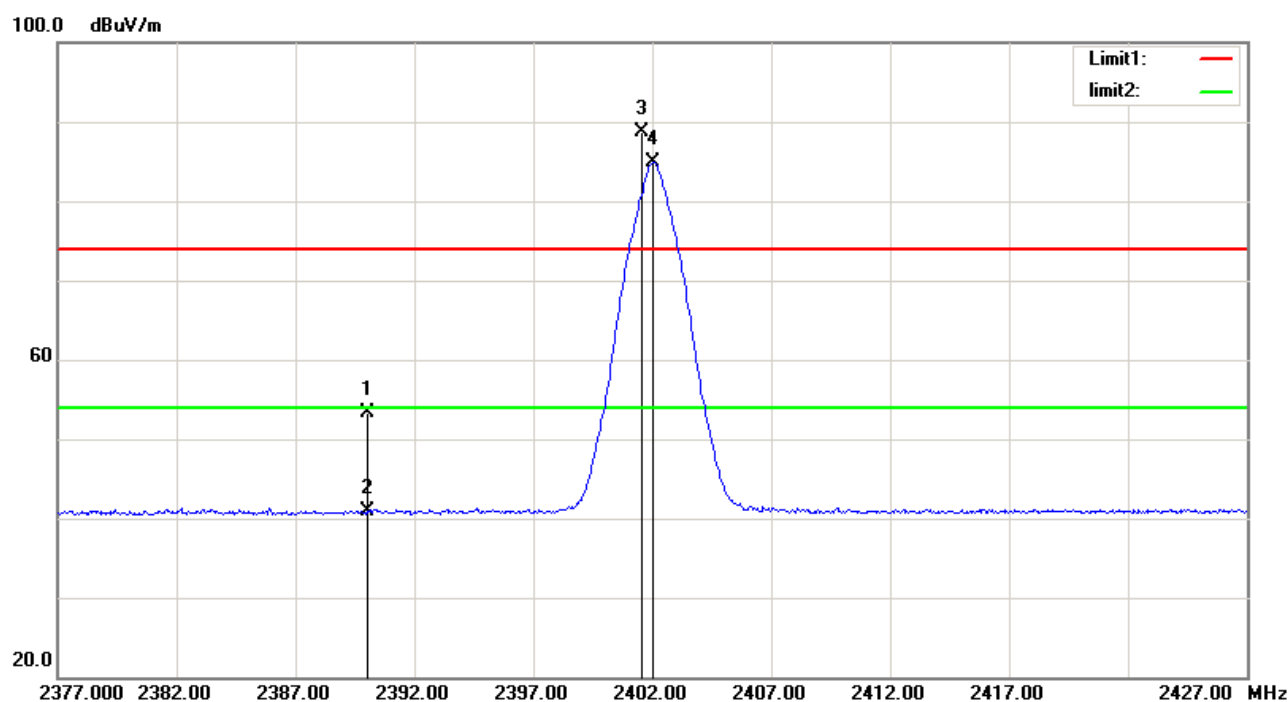
Vertical



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	22.17	30.14	52.31	74.00	-21.69	peak	150	229
2		2390.000	10.31	30.14	40.45	54.00	-13.55	AVG	150	229
3	*	2402.050	58.33	30.15	88.48	54.00	34.48	AVG	150	229 No Limit
4	X	2402.500	61.78	30.15	91.93	74.00	17.93	peak	150	229 No Limit

Test Mode: TX 2402 MHz_CH00_2Mbps

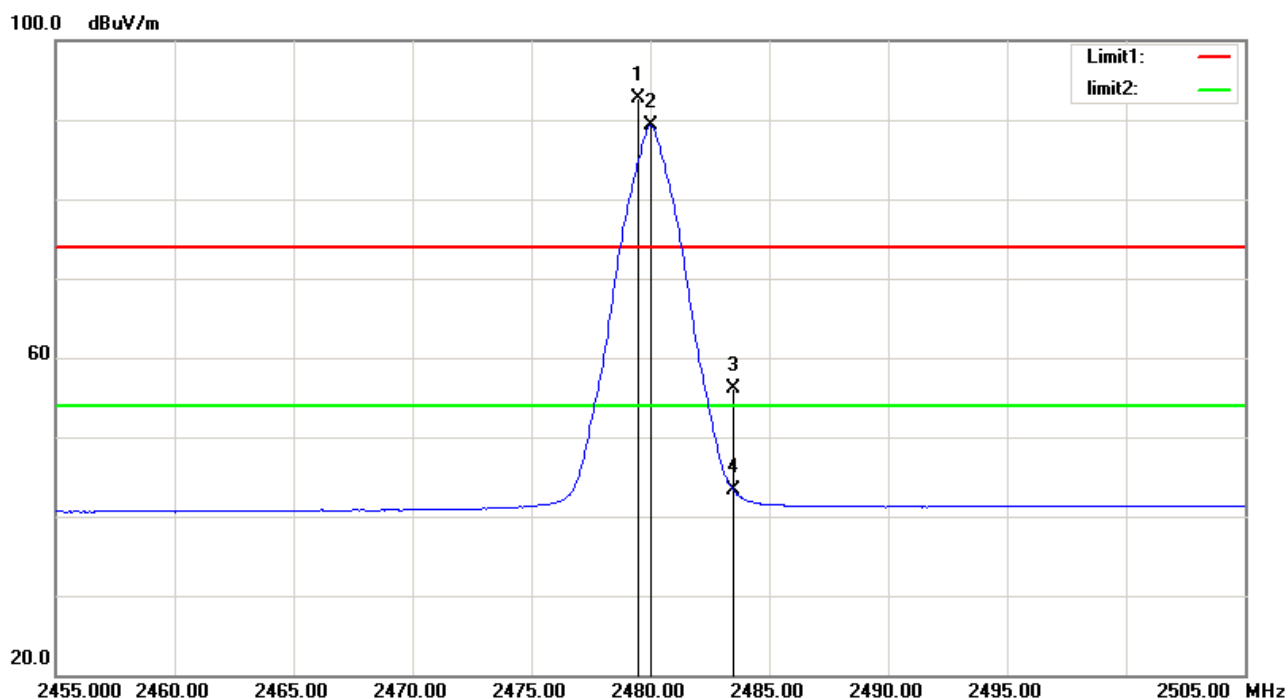
Horizontal



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	23.09	30.14	53.23	74.00	-20.77	peak	150	259
2		2390.000	10.69	30.14	40.83	54.00	-13.17	AVG	150	259
3	X	2401.600	58.51	30.15	88.66	74.00	14.66	peak	150	259 No Limit
4	*	2402.050	54.76	30.15	84.91	54.00	30.91	AVG	150	259 No Limit

Test Mode: TX 2480 MHz_CH39_2Mbps

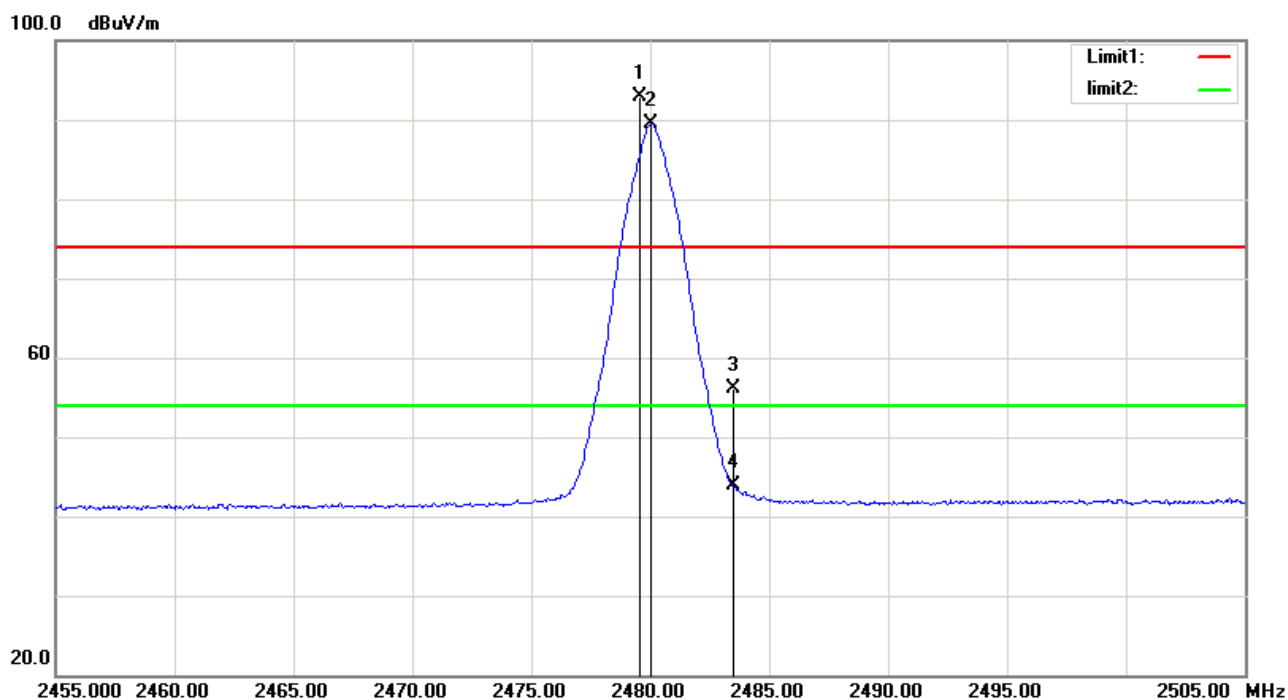
Vertical



No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV/m	Limit dB/m	Over dB	Detector	Antenna Height cm	Table Degree	Comment
1	X	2479.500	62.09	30.66	92.75	74.00	18.75	peak	150	238	No Limit
2	*	2480.000	58.57	30.67	89.24	54.00	35.24	AVG	150	238	No Limit
3		2483.500	25.43	30.71	56.14	74.00	-17.86	peak	150	238	
4		2483.500	12.53	30.71	43.24	54.00	-10.76	AVG	150	238	

Test Mode: TX 2480 MHz_CH39_2Mbps

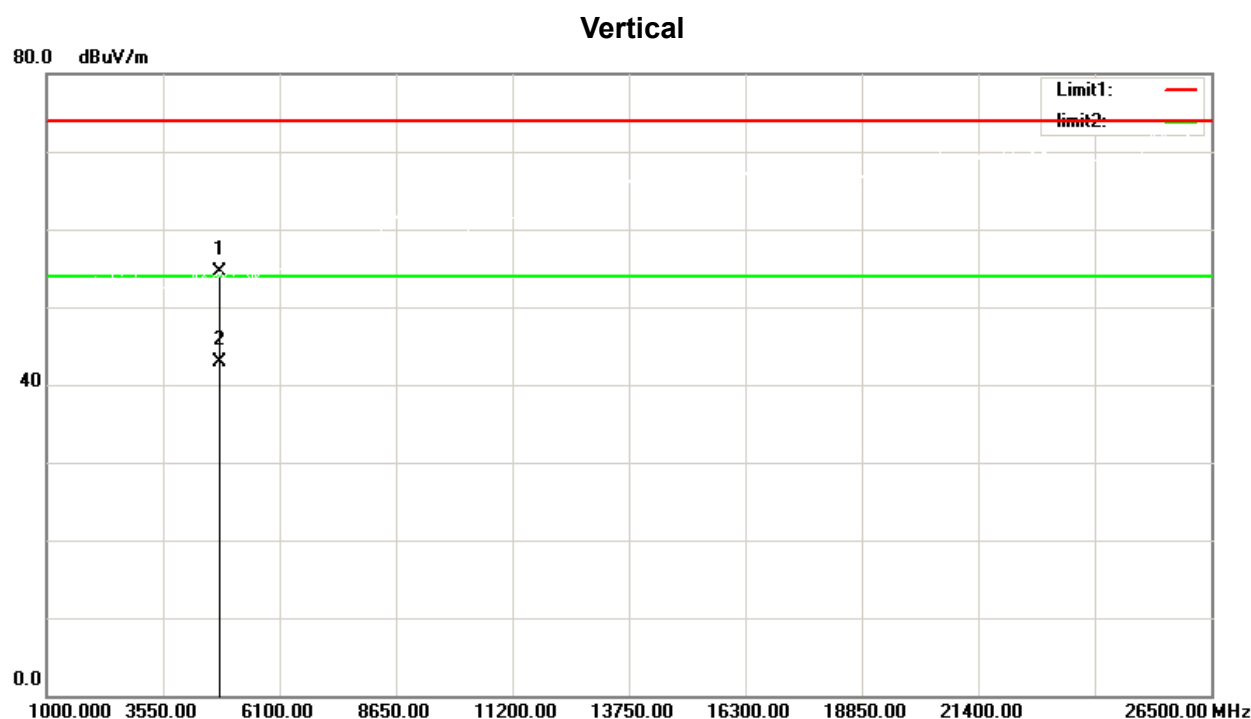
Horizontal



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	2479.550	62.31	30.66	92.97	74.00	18.97	peak	150	259	No Limit
2	*	2480.050	58.85	30.67	89.52	54.00	35.52	AVG	150	259	No Limit
3		2483.500	25.48	30.71	56.19	74.00	-17.81	peak	150	259	
4		2483.500	13.17	30.71	43.88	54.00	-10.12	AVG	150	259	

5.9 TEST RESULTS - ABOVE 1000MHz (HARMONIC)

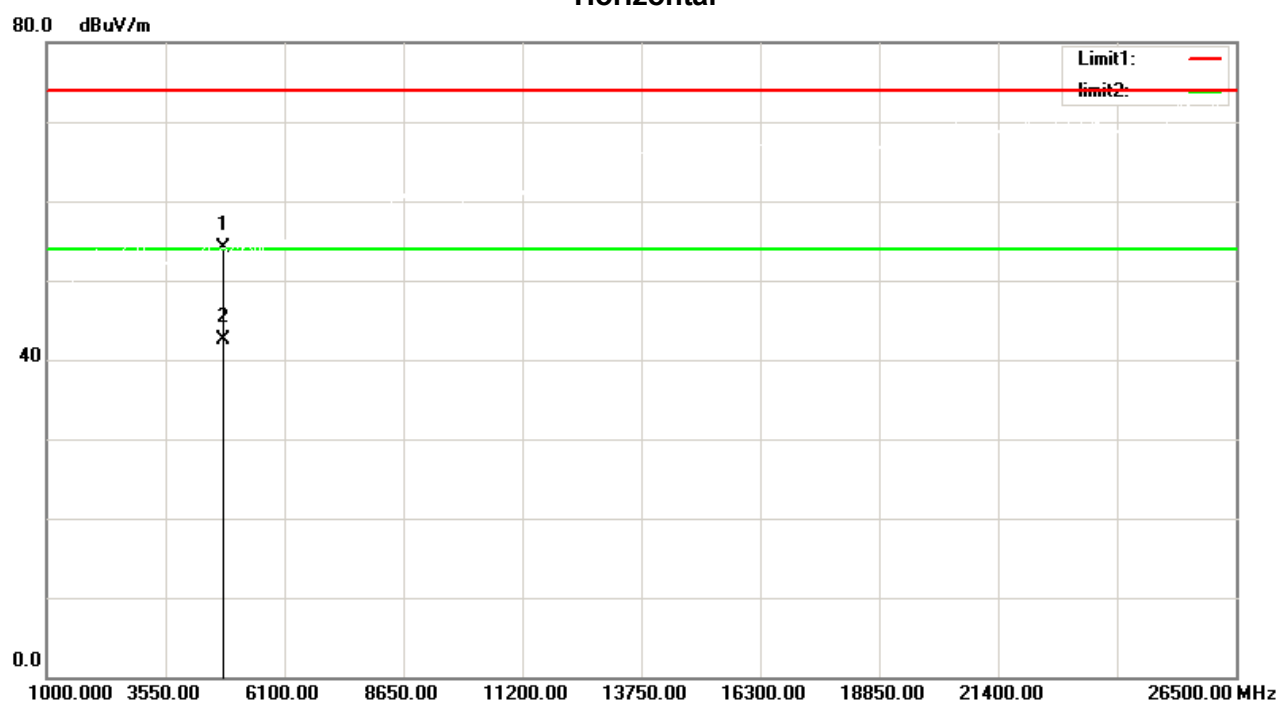
Test Mode: TX 2402 MHz_CH00_1Mbps



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	56.41	-1.90	54.51	74.00	-19.49	peak	150	148
2	*	4804.000	44.87	-1.90	42.97	54.00	-11.03	AVG	150	148

Test Mode: TX 2402 MHz_CH00_1Mbps

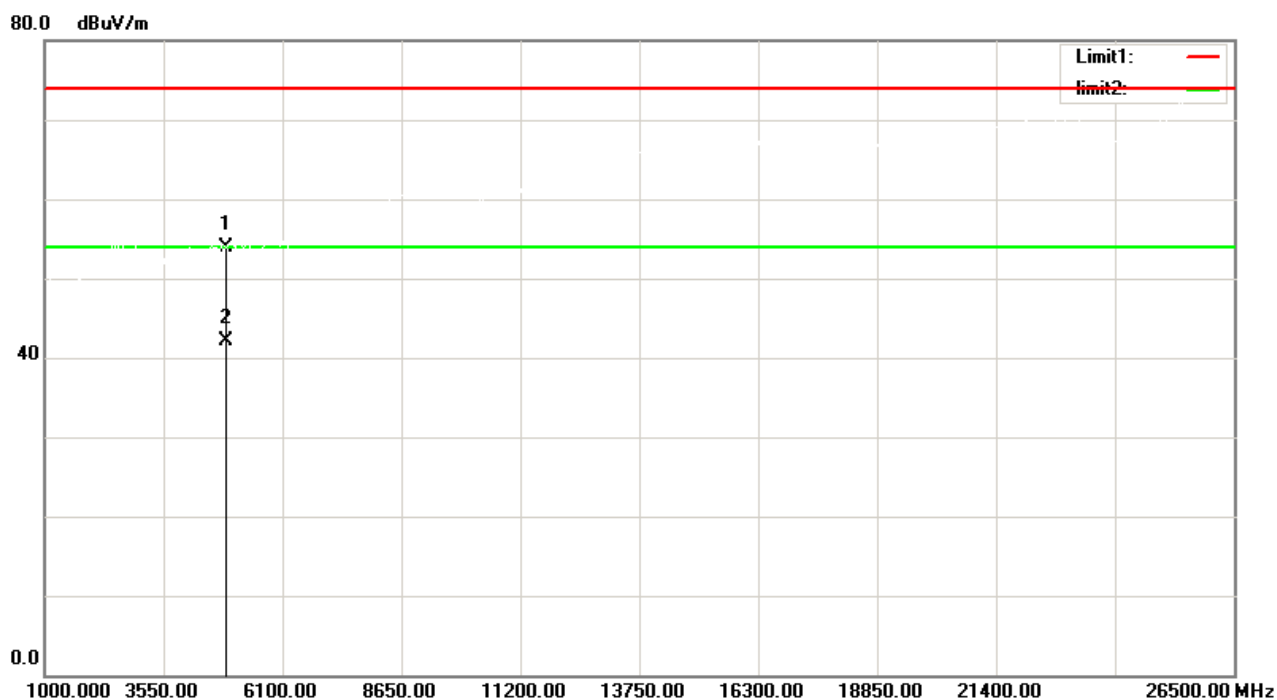
Horizontal



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	55.99	-1.90	54.09	74.00	-19.91	peak	150	33
2	*	4804.000	44.47	-1.90	42.57	54.00	-11.43	AVG	150	33

Test Mode: TX 2440 MHz_CH19_1Mbps

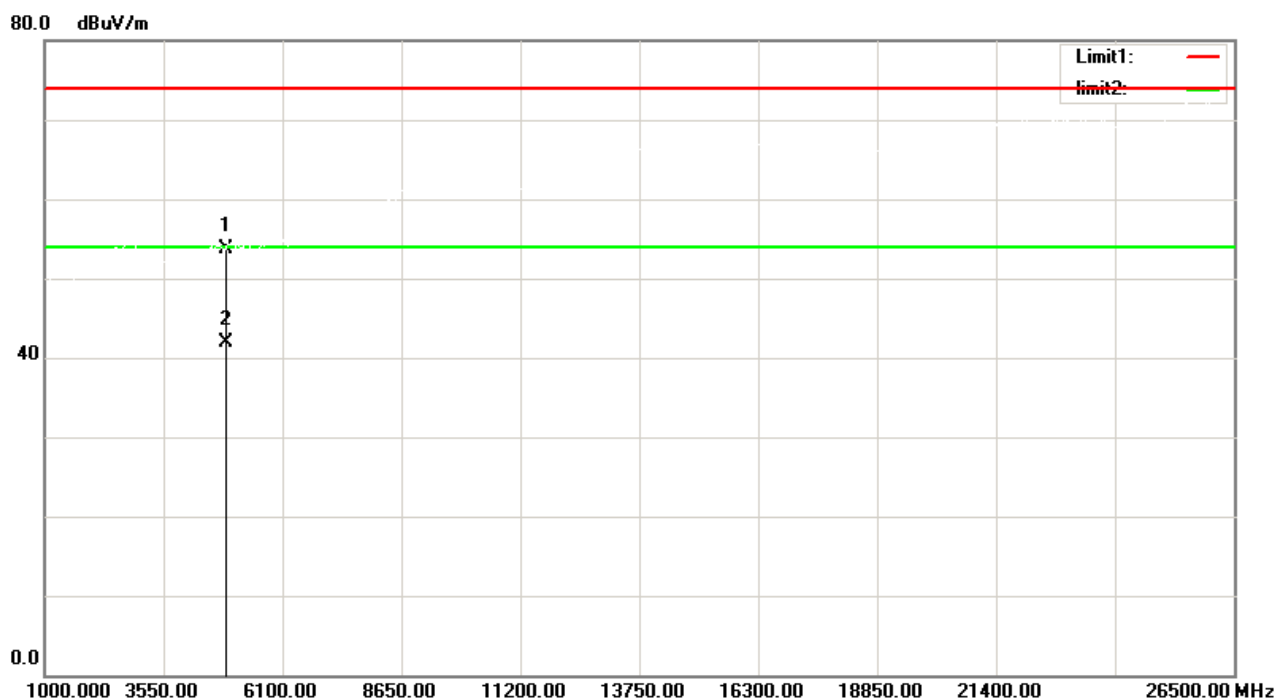
Vertical



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
1		4880.000	56.04	-2.18	53.86	74.00	-20.14	peak	150	38
2	*	4880.000	44.33	-2.18	42.15	54.00	-11.85	AVG	150	38

Test Mode: TX 2440 MHz_CH19_1Mbps

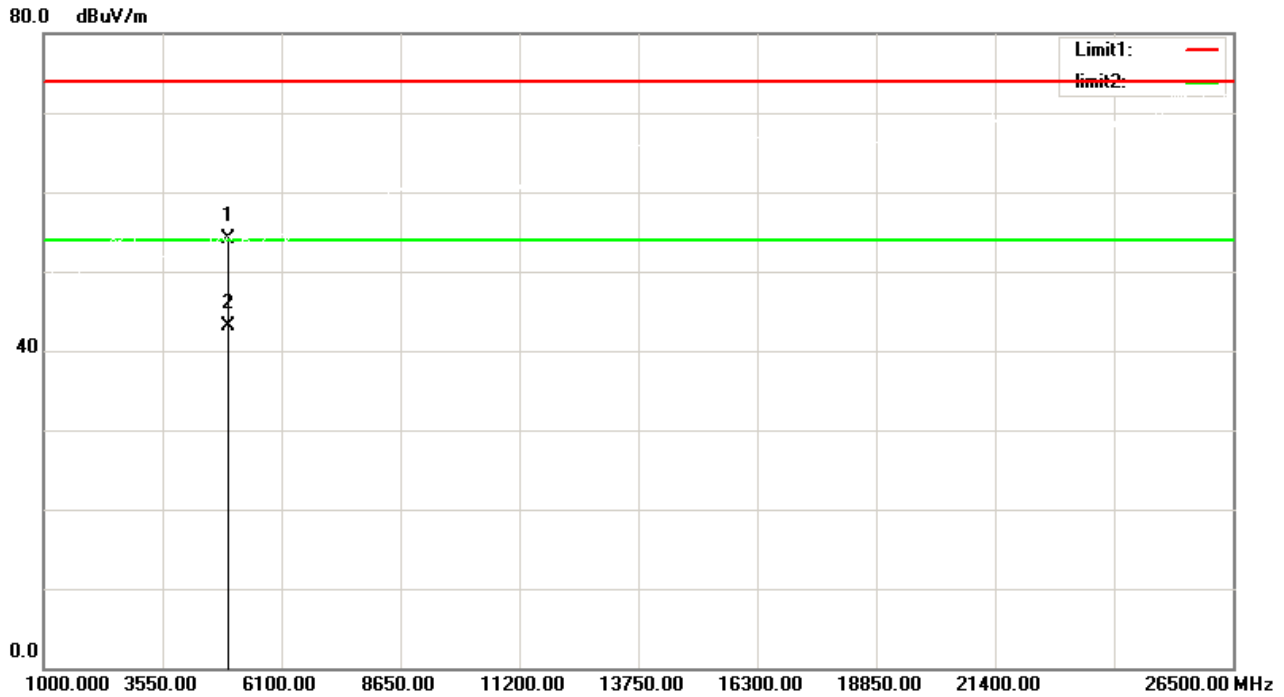
Horizontal



No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	Antenna	Table	
		MHz	Level	Factor	ment			Height	Degree	
			dBuV	dB	dBuV/m	dB/m	dB	cm	degree	Comment
1		4880.000	55.95	-2.18	53.77	74.00	-20.23	peak	150	198
2	*	4880.000	44.03	-2.18	41.85	54.00	-12.15	AVG	150	198

Test Mode: TX 2480 MHz_CH39_1Mbps

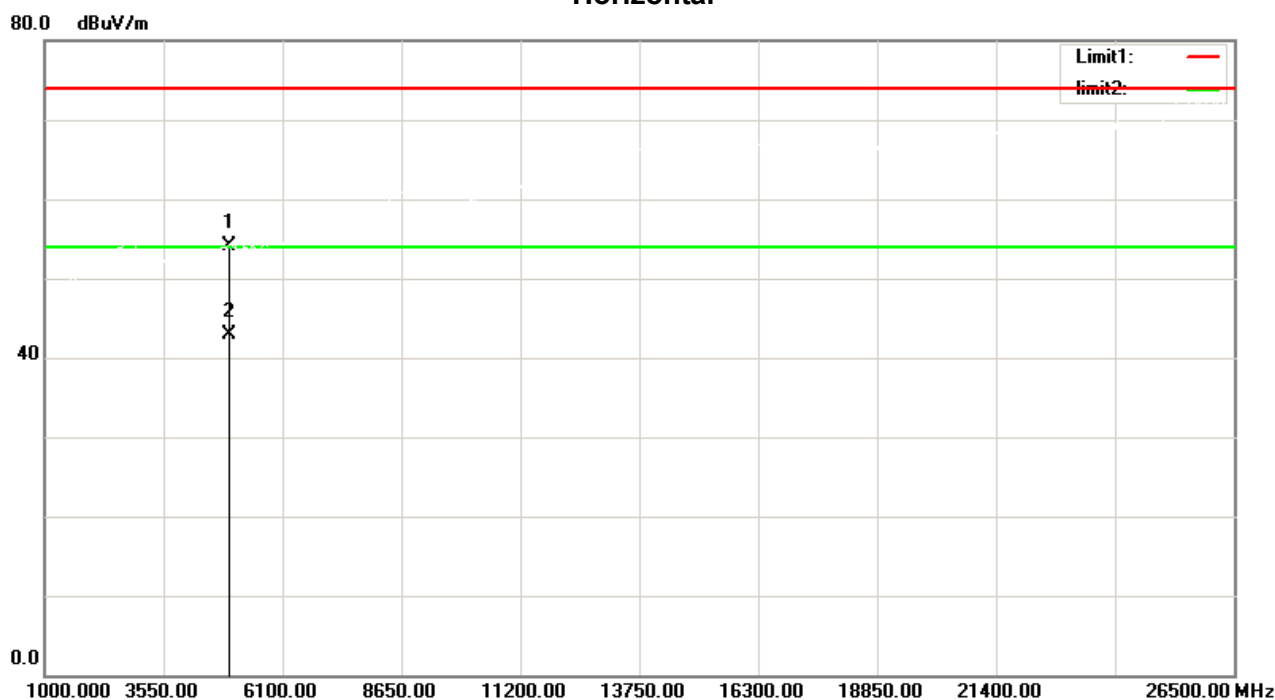
Vertical



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree
1		4960.000	55.90	-1.76	54.14	74.00	-19.86	peak	150	214
2	*	4960.000	44.92	-1.76	43.16	54.00	-10.84	AVG	150	214

Test Mode: TX 2480 MHz_CH39_1Mbps

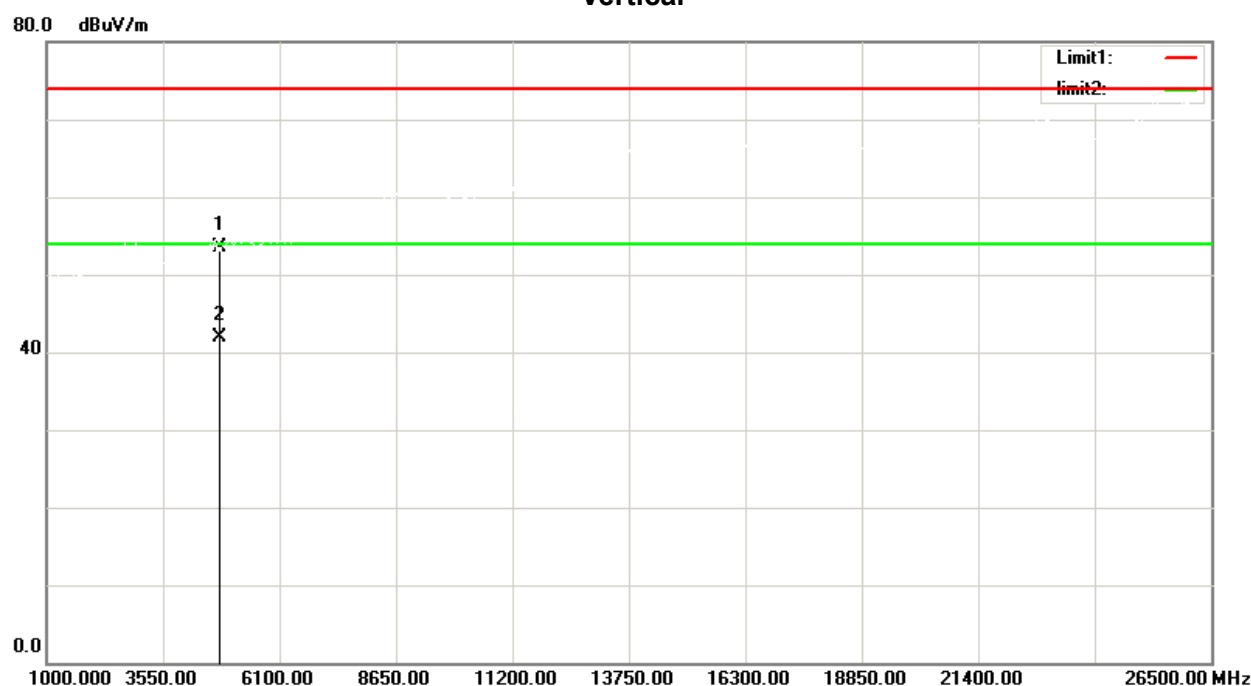
Horizontal



No.	Mk.	Freq.	Reading Level	Correct Factor	Measure-ment	Limit	Over	Antenna Height	Table Degree	
		MHz	dBuV	dB	dBuV/m	dB/m	dB	Detector	cm	degree
1		4960.000	55.93	-1.76	54.17	74.00	-19.83	peak	150	126
2	*	4960.000	44.63	-1.76	42.87	54.00	-11.13	AVG	150	126

Test Mode: TX 2402 MHz_CH00_2Mbps

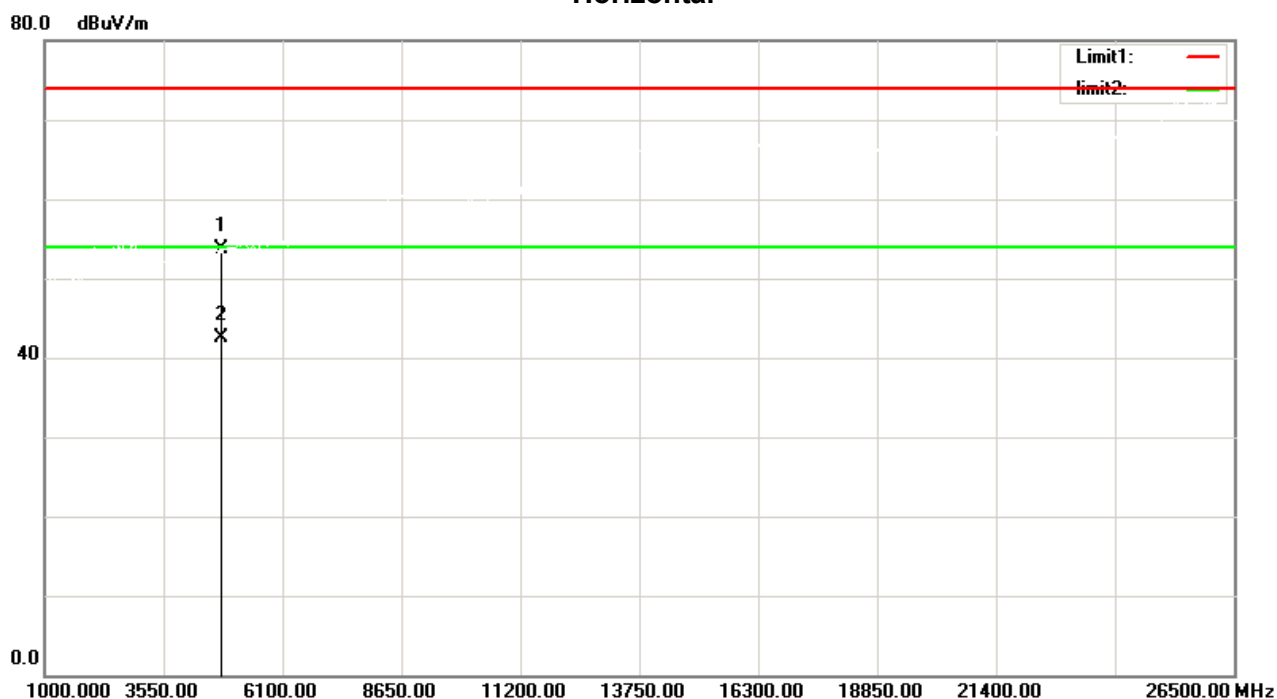
Vertical



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		4804.000	55.42	-1.90	53.52	74.00	-20.48	peak	150	48
2	*	4804.000	43.86	-1.90	41.96	54.00	-12.04	AVG	150	48

Test Mode: TX 2402 MHz_CH00_2Mbps

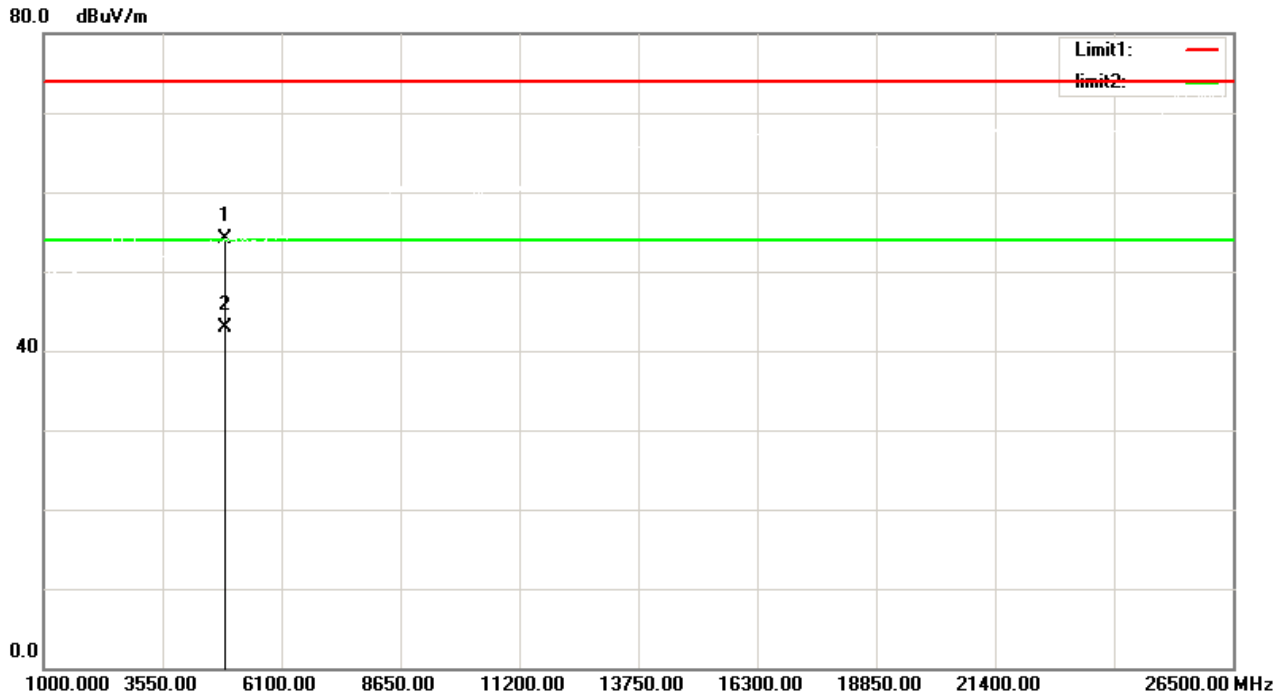
Horizontal



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		4804.000	55.64	-1.90	53.74	74.00	-20.26	peak	150	79
2	*	4804.000	44.46	-1.90	42.56	54.00	-11.44	AVG	150	79

Test Mode: TX 2440 MHz_CH19_2Mbps

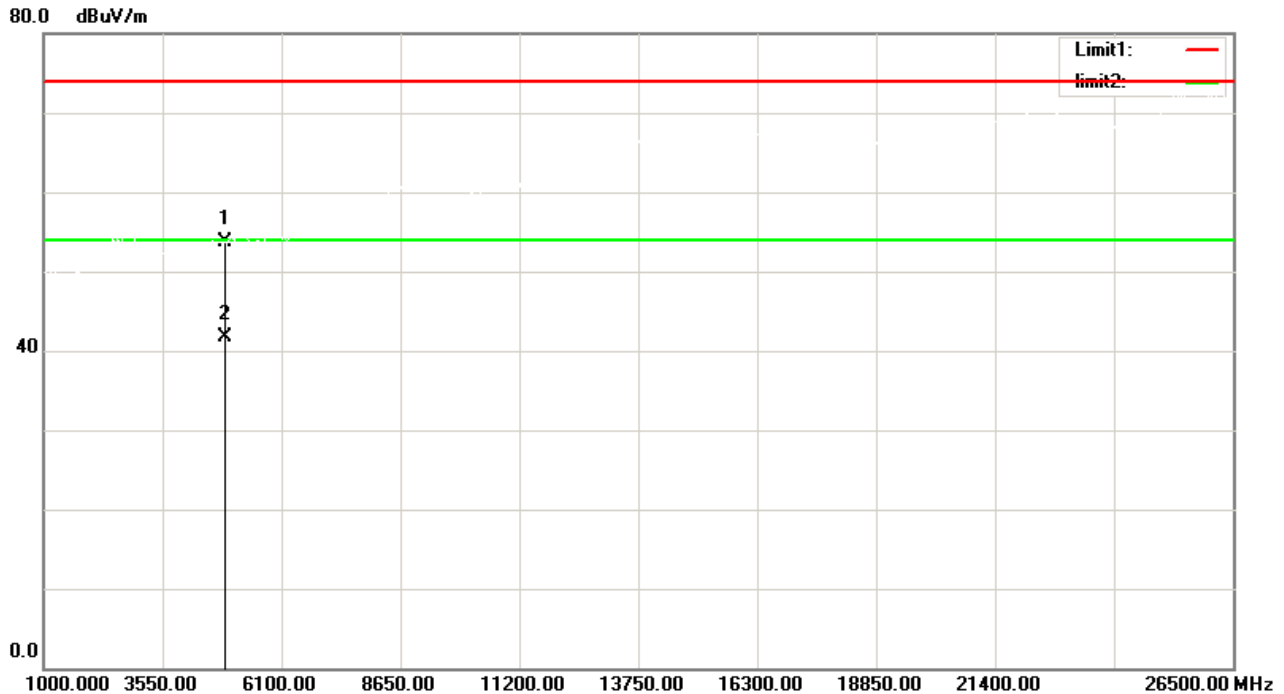
Vertical



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		4880.000	56.28	-2.18	54.10	74.00	-19.90	peak	150	2
2	*	4880.000	45.05	-2.18	42.87	54.00	-11.13	AVG	150	2

Test Mode: TX 2440 MHz_CH19_2Mbps

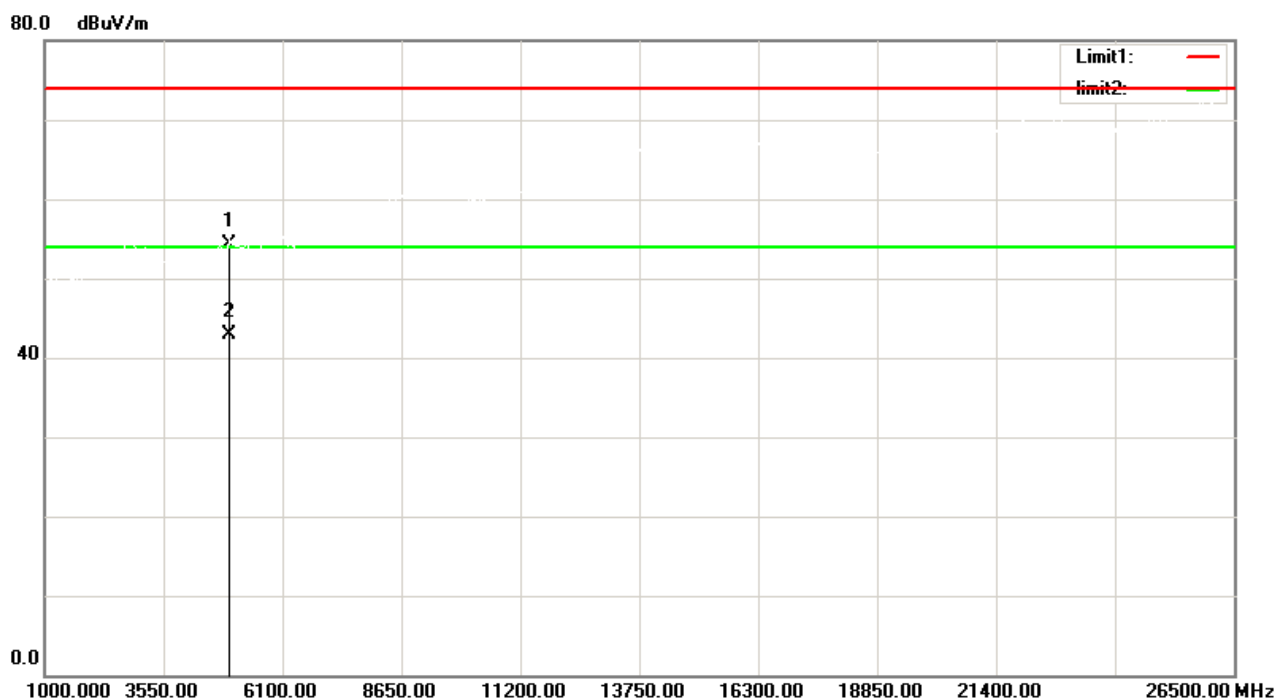
Horizontal



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		4880.000	55.79	-2.18	53.61	74.00	-20.39	peak	150	96
2	*	4880.000	43.89	-2.18	41.71	54.00	-12.29	AVG	150	96

Test Mode: TX 2480 MHz_CH39_2Mbps

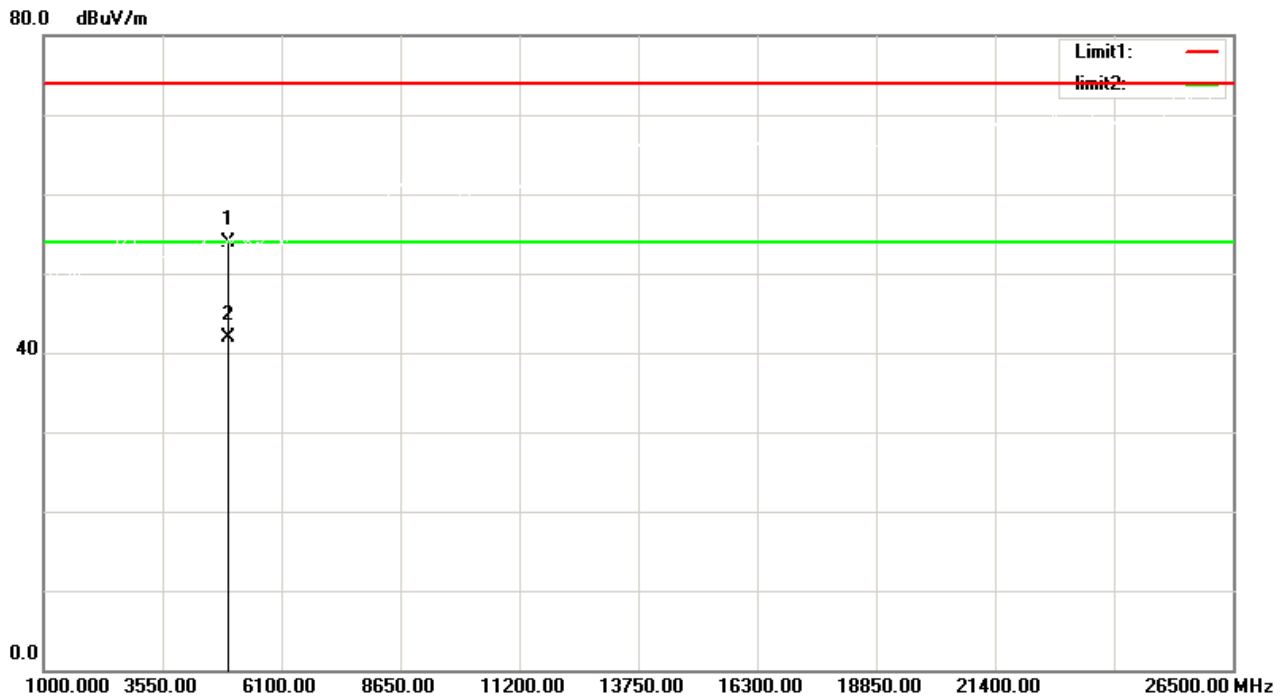
Vertical



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	55.98	-1.76	54.22	74.00	-19.78	peak	150	54
2	*	4960.000	44.74	-1.76	42.98	54.00	-11.02	AVG	150	54

Test Mode: TX 2480 MHz_CH39_2Mbps

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		4960.000	55.72	-1.76	53.96	74.00	-20.04	peak	150	21
2	*	4960.000	43.63	-1.76	41.87	54.00	-12.13	AVG	150	21

6 BANDWIDTH TEST

6.1 LIMIT

FCC Part15, Subpart C (15.247)& RSS-Gen/ RSS-247		
Section	Test Item	Limit
15.247(a)(2) RSS-Gen6.7 RSS-247 5.2 (a)	Bandwidth	≥ 500 kHz (6dB bandwidth)

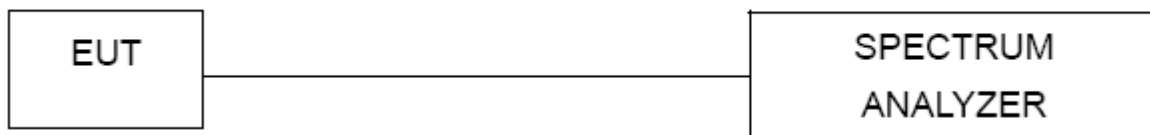
6.2 TEST PROCEDURE AND SETTING

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting:
 For 6dB Bandwidth RBW= 100 kHz, VBW=300 kHz, Sweep time =Auto.
 For 99% Bandwidth RBW=30kHz, VBW=100kHz, Sweep time =Auto for 1Mbps.
 RBW=100kHz, VBW=300kHz, Sweep time =Auto for 2Mbps.

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



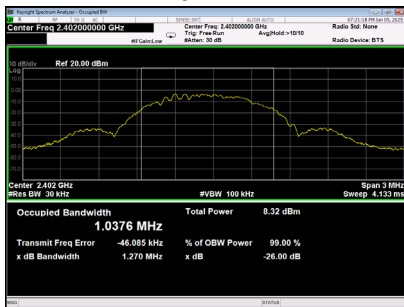
6.5 EUT OPERATION CONDITIONS

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.

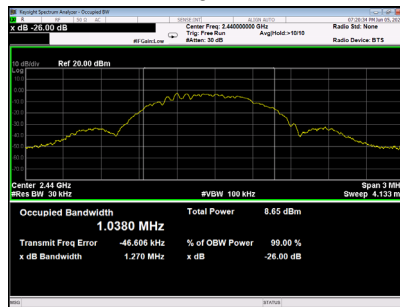
6.6 TESTRESULTS

TX Mode_1Mbps				
Channel	Frequency (MHz)	6 dB bandwidth (MHz)	99%OBW (MHz)	Result
CH00	2402	0.711	1.0376	PASS
CH19	2440	0.708	1.0380	PASS
CH39	2480	0.706	1.0383	PASS

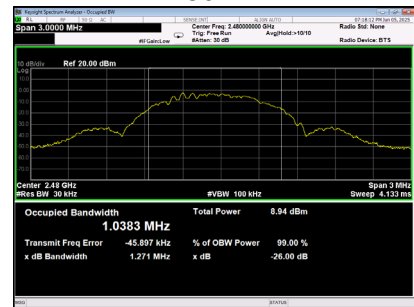
2402MHz



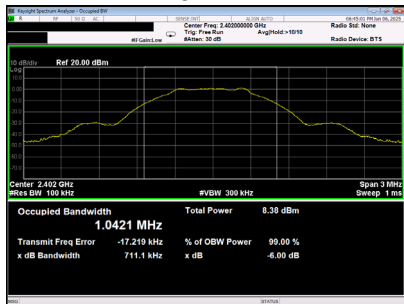
**99%
2440MHz**



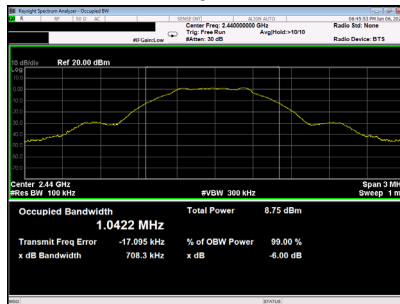
2480MHz



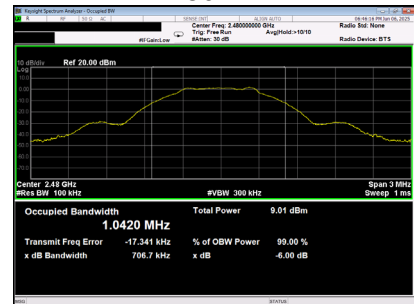
2402MHz



**6dB
2440MHz**

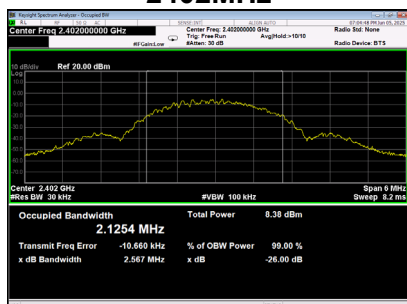


2480MHz

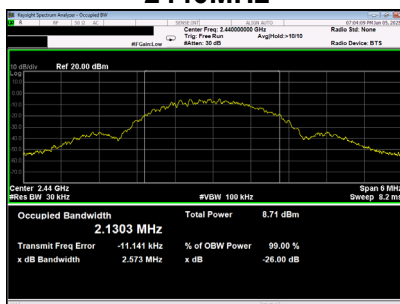


TX Mode_2Mbps				
Channel	Frequency (MHz)	6 dB bandwidth (MHz)	99%OBW (MHz)	Result
CH00	2402	1.354	2.1254	PASS
CH19	2440	1.356	2.1303	PASS
CH39	2480	1.355	2.1349	PASS

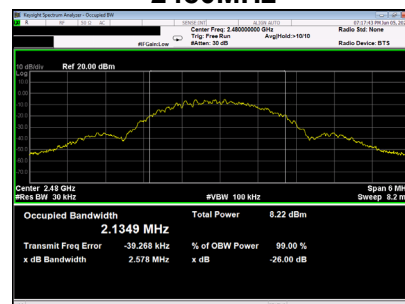
2402MHz



2440MHz

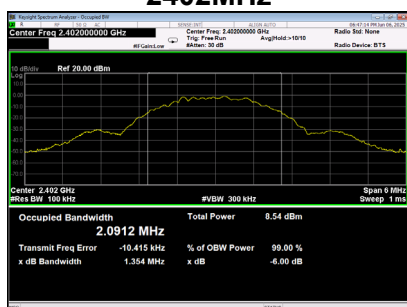


2480MHz

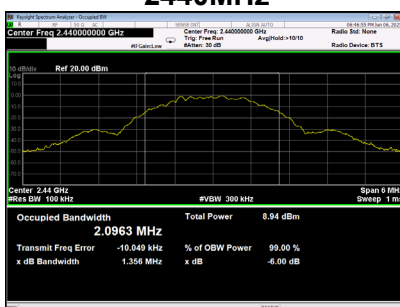


6dB

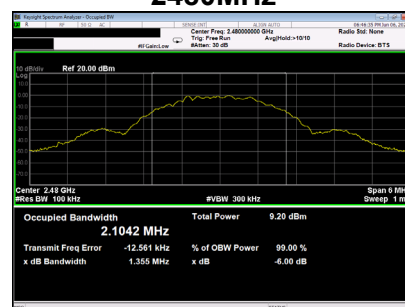
2402MHz



2440MHz



2480MHz



7 MAXIMUM OUTPUT POWER

7.1 LIMIT

FCC Part15, Subpart C (15.247)&RSS-247		
Section	Test Item	Limit
15.247(b)(3) RSS-2475.4 (d)	Maximum Output Power	1 watt or 30dBm

7.2 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- The maximum conducted output power was performed in accordance with method 11.9.1.3(for peak power)ofANSI C63.10-2013.

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



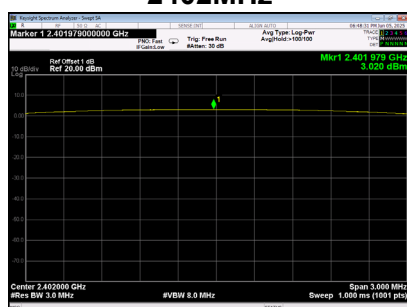
7.5 EUT OPERATION CONDITIONS

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.

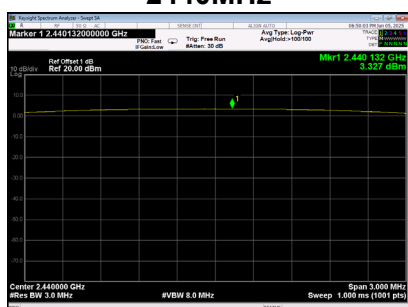
7.6 TEST RESULTS

TX Mode_1Mbps						
Gain	0.44dBi					
Channel	Frequency	Output Power	EIRP		Limit	Verdict
	(MHz)	(dBm)	(dBm)	(W)	(W)	
CH00	2402	3.020	3.460	0.002218	1.0	PASS
CH19	2440	3.327	3.767	0.002381	1.0	PASS
CH39	2480	3.577	4.017	0.002522	1.0	PASS

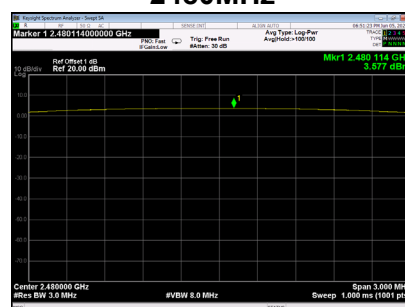
2402MHz



2440MHz

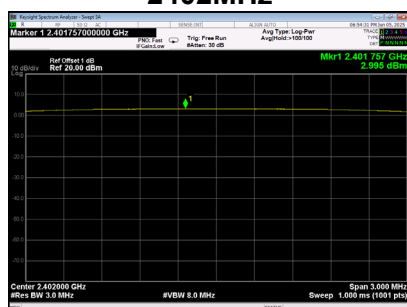


2480MHz

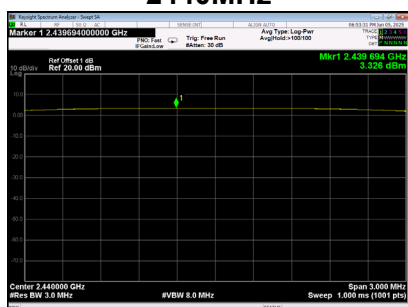


TX Mode_2Mbps						
Gain	0.44dBi					
Channel	Frequency	Output Power	EIRP		Limit	Verdict
	(MHz)	(dBm)	(dBm)	(W)	(W)	
CH00	2402	2.995	3.435	0.002205	1.0	PASS
CH19	2440	3.326	3.766	0.002380	1.0	PASS
CH39	2480	3.598	4.038	0.002534	1.0	PASS

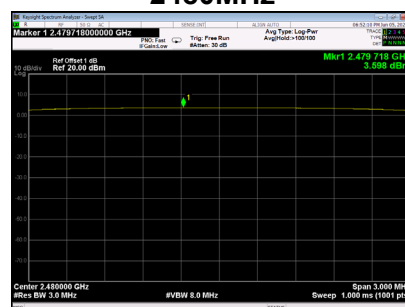
2402MHz



2440MHz



2480MHz



8 CONDUCTED SPURIOUS EMISSION

8.1 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.

8.2 TEST PROCEDURE

- 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.

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



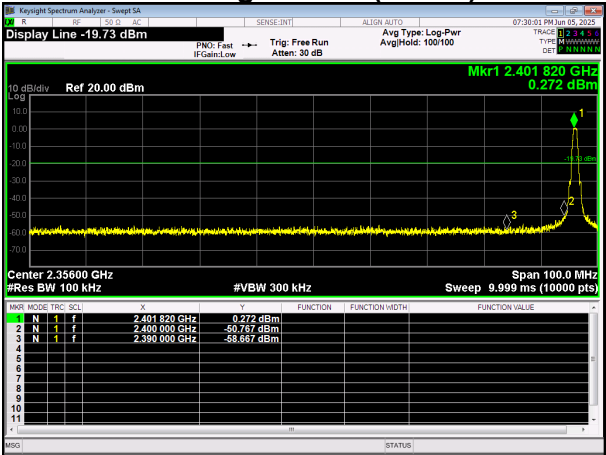
8.5 EUT OPERATION CONDITIONS

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.

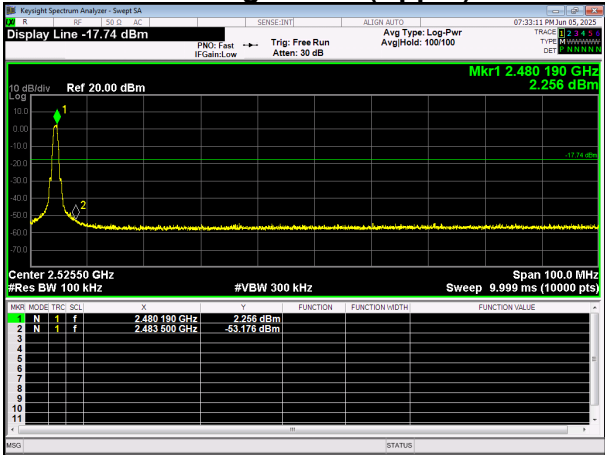
8.6 TEST RESULTS

TX Mode_1Mbps

Bandedge- CH00 (Lower)

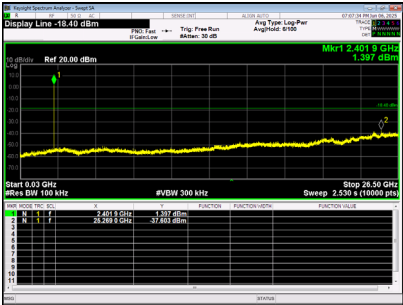


Bandedge CH39 (Upper)

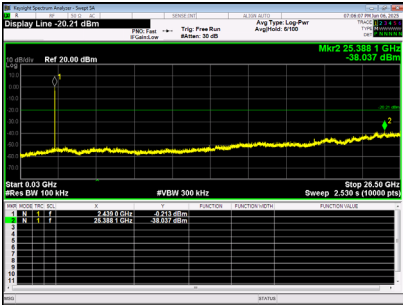


CH00 – 10th Harmonic of the fundamental frequency

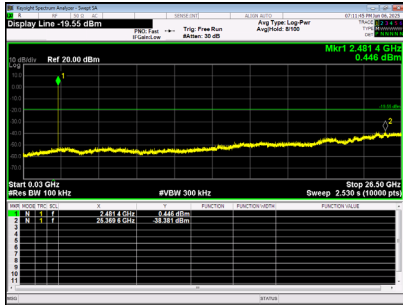
2402MHz



2440MHz

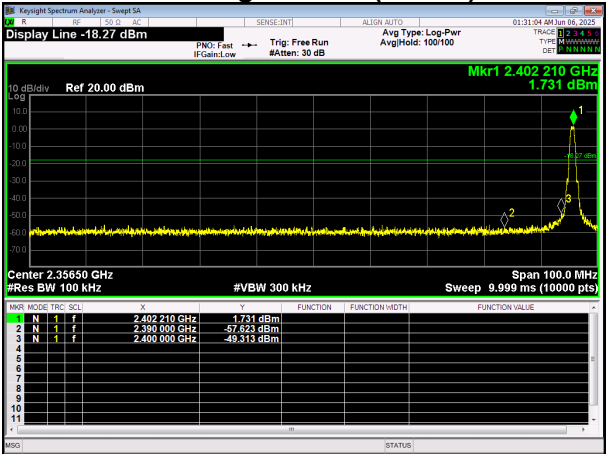


2480MHz

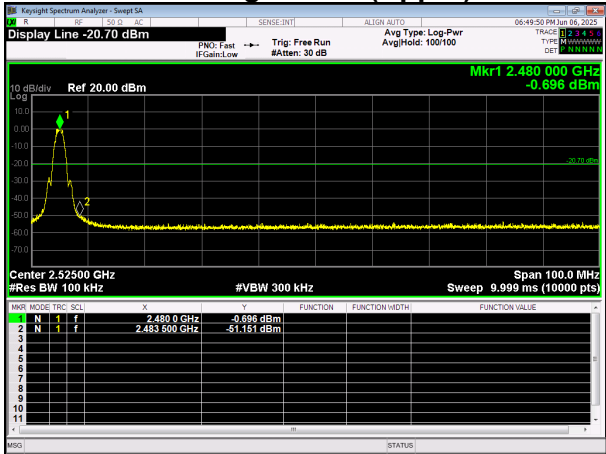


TX Mode_2Mbps

Bandedge- CH00 (Lower)

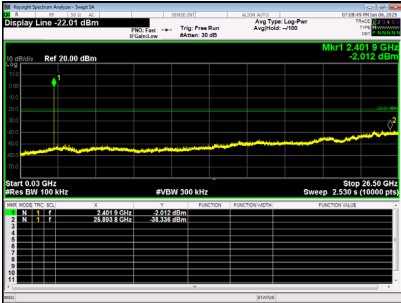


Bandedge CH39 (Upper)

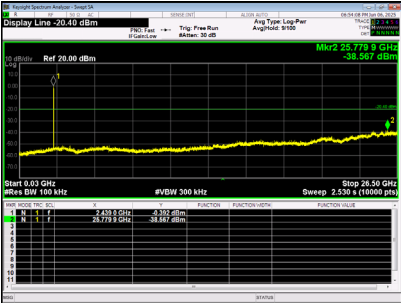


CH00 – 10th Harmonic of the fundamental frequency

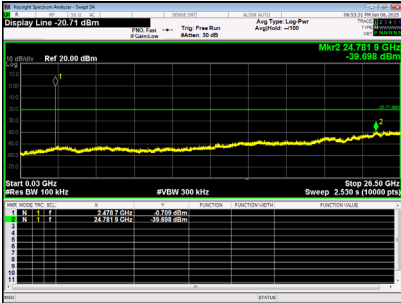
2402MHz



2440MHz



2480MHz



9 POWER SPECTRAL DENSITY TEST

9.1 LIMIT

FCC Part15, Subpart C (15.247)&RSS-247		
Section	Test Item	Limit
15.247(e) RSS-2475.2 (b)	Power Spectral Density	8 dBm (in any 3 kHz)

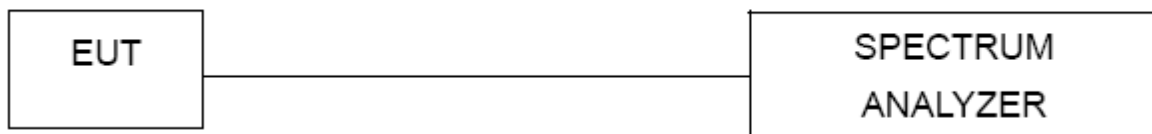
9.2 TEST PROCEDURE

- The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- Spectrum Setting: RBW=3 kHz, VBW=10kHz, 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



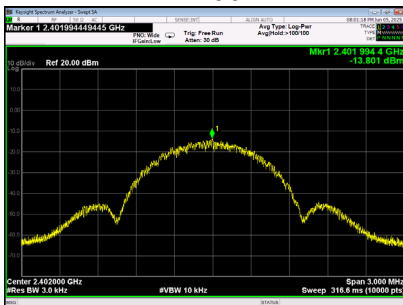
9.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 3.5 unless otherwise a special operating condition is specified in the follows during the testing.

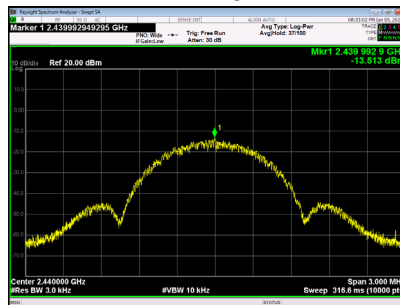
9.6 TEST RESULTS

TX Mode_1Mbps				
Channel	Frequency (MHz)	Power SpectralDensity (dBm/3 kHz)	Limit: <dBm/3kHz	Result
CH00	2402	-13.801	8	PASS
CH19	2440	-13.513	8	PASS
CH39	2480	-13.198	8	PASS

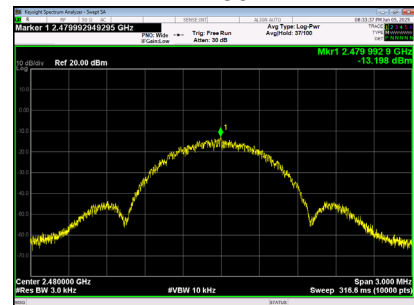
CH00



CH19

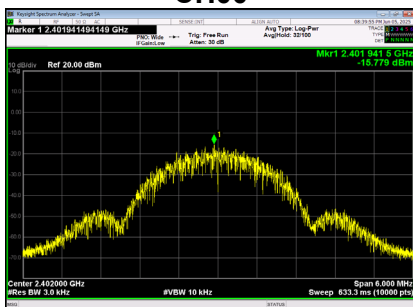


CH39

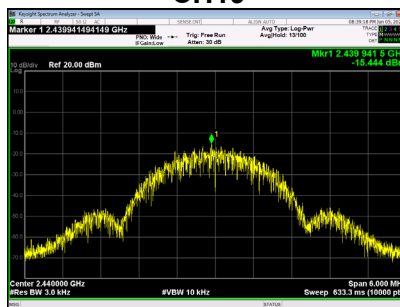


TX Mode_2Mbps				
Channel	Frequency (MHz)	Power SpectralDensity (dBm/3 kHz)	Limit: <dBm/3kHz	Result
CH00	2402	-15.779	8	PASS
CH19	2440	-15.444	8	PASS
CH39	2480	-16.859	8	PASS

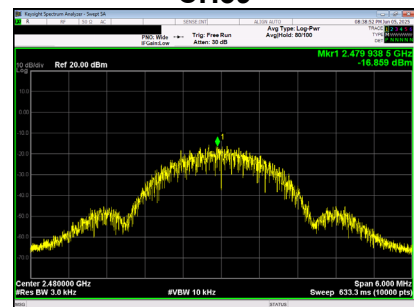
CH00



CH19



CH39



10 FREQUENCY STABILITY MEASUREMENT

10.1 LIMIT

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

10.2 TEST PROCEDURE

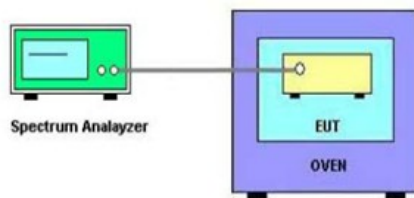
- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below.
- b. Spectrum Setting:

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	Entire absence of modulationemissionsbandwidth
RBW	10 kHz
VBW	10kHz
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
4	Temperature conditioning	Guan Jian.HTH1000	-20-130℃	GJ1000-10D001	N/A
5	DC Power Supply	G.KE	IPR-10010D	010931954	N/A

10.4 TEST SETUP



10.5 EUT OPERATION CONDITIONS

The EUT was programmed to be in continuously transmitting mode.

10.6 TEST RESULTS

	Temperature vs. Frequency Stability	
Voltage	Temperature	Measurement Frequency (MHz)
120Vac	(°C)	2480
	-20	2479.9794
	+20	2479.9794
	+50	2479.9794
81Vac	+20	2479.9794
Max. Deviation (MHz)		-0.0206
Max. Deviation (ppm)		-8.306

Note: 81Vac is the end point voltage, and products below 81Vac will cease working.

END OF TEST REPORT