

Test Report No.: RF260904B002

FCC TEST REPORT

(Part 15, Subpart C)

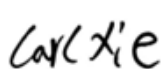
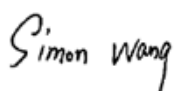
Applicant:	Barrot Technology, Co.,Ltd.
Address:	A1009, Block A, Jia Hua Building, No.9 Shangdisanjie St, Haidian District, Beijing, China

Manufacturer or Supplier:	Barrot Technology, Co.,Ltd.
Address:	2nd Floor, Building 14, Fuqingshan, Tangtou No.3 Industrial Zone, Shiyan Subdistrict, Bao'an District, Shenzhen City, China
Product:	Bluetooth Module
Brand Name:	BARROT
Model Name:	i1552-s
FCC ID:	2AOXV-I1552-S
Date of tests:	Sep.4, 2026 ~ Sep.8, 2026

The tests have been carried out according to the requirements of the following standard:

- ☒ **FCC Part 15, Subpart C, Section 15.247**
- ☒ **ANSI C63.10-2020**

CONCLUSION: The submitted sample was found to COMPLY with the test requirement

Prepared by Carl Xie Engineer / Mobile Department	Approved by Simon Wang Manager / Mobile Department
 Date: Sep.8, 2026	 Date: Sep.8, 2026

Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. Statements of conformity are based on simple acceptance criteria without taking measurement uncertainty into account, unless otherwise requested in writing. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty, provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute your unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



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RELEASE CONTROL RECORD

ISSUE NO.	REASON FOR CHANGE	DATE ISSUED
RF260904B002	Original release	Sep.8, 2026



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1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

APPLIED STANDARD: FCC PART 15, SUBPART C (SECTION 15.247)		
STANDARD SECTION	TEST TYPE AND LIMIT	RESULT
15.207	AC Power Conducted Emission	N/A
15.205 15.209	Radiated Emissions	Compliance
15.247(d)	Out of band Emission Measurement	Compliance
15.247(a)(2)	6dB bandwidth	Compliance
15.247(b)	Conducted Output power	Compliance
15.247(e)	Power Spectral Density	Compliance
15.203	Antenna Requirement	Compliance

*Test Lab Information Reference

Lab A:

BOOMWAVE TEST (SHENZHEN) CO., LTD.

Lab Address:

Room B38, Warehouse A5(Chiwan No.1), No.3 Chiwan 4th Road, Chiwan Community, Zhaoshang Street, Nanshan District, Shenzhen, Guangdong, P.R. CHINA

Accredited Test Lab Cert 7607.01

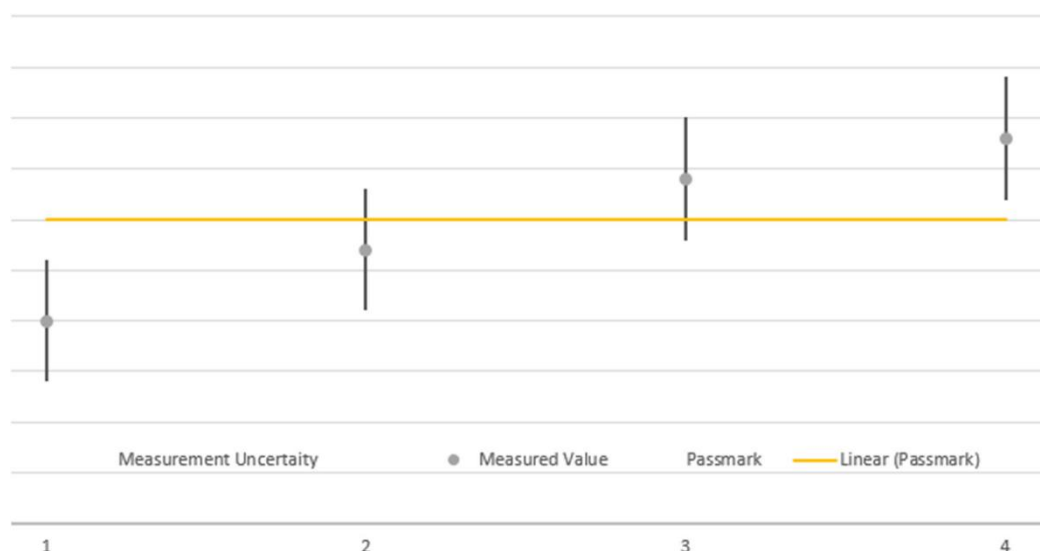
The FCC Site Registration No. is 646781; The Designation No. is CN1429.

1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

MEASUREMENT	UNCERTAINTY
AC Power Conducted emissions	$\pm 2.70\text{dB}$
Radiated emissions (9KHz~30MHz)	$\pm 2.68\text{dB}$
Radiated emissions (30MHz~1GHz)	$\pm 4.98\text{dB}$
Radiated emissions (1GHz ~6GHz)	$\pm 4.70\text{dB}$
Radiated emissions (6GHz ~18GHz)	$\pm 4.60\text{dB}$
Radiated emissions (18GHz ~40GHz)	$\pm 4.12\text{dB}$
Conducted emissions	$\pm 4.01\text{dB}$
Occupied Channel Bandwidth	$\pm 43.58\text{KHz}$
Conducted Output power	$\pm 2.06\text{dB}$
Power Spectral Density	$\pm 0.85\text{ dB}$

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



The verdicts in this test report are given according the above diagram:

Case	Measured Value	Uncertainty Range	Verdict
1	below pass mark	below pass mark	Passed
2	below pass mark	within pass mark	Passed
3	above pass mark	within pass mark	Failed
4	above pass mark	above pass mark	Failed

That means, the laboratory applies, as decision rule (see ISO/IEC 17025:2017), the so-called shared risk principle.

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

PRODUCT	Bluetooth Module
BRAND NAME	BARROT
NOMINAL VOLTAGE	3.3Vdc(adapter or host equipment)
MODULATION	GFSK
TRANSMISSION RATE	BT_LE: 1 Mbps/2 Mbps
OPERATING FREQUENCY	2402-2480MHz for BT-LE(GFSK)
MAX. OUTPUT POWER	BT-LE: 5.4 mW (Maximum)
ANTENNA TYPE	Dual-Band WiFi Terminal Rubber Antenna
ANTENNA GAIN	☒ Provided by client
	with 2.60dBi gain
HW VERSION	V1.2
SW VERSION	BARROTV1.0
I/O PORTS	Refer to user's manual
EXTREME TEMPERATURE	-40~85°C
EXTREME VOLTAGE*	3.14V~3.46V

NOTE:

- For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- The EUT incorporates a SISO function. Physically, the EUT provides one transmitter and one receiver.

MODULATION MODE	TX/RX FUNCTION
BT_LE(1MHz)	1TX /1RX
BT_LE(2MHz)	1TX /1RX

- For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.



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4. Antenna gain and EUT conducted cable loss are provided by the customer, and the laboratory will record the results based on these items that involve these two parameters.
5. **List of Accessory:**N/A



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2.2 DESCRIPTION OF TEST MODES

40 channels are provided for BT-LE (GFSK):

CHANNEL	FREQ. (MHZ)	CHANNEL	FREQ. (MHZ)	CHANNEL	FREQ. (MHZ)	CHANNEL	FREQ. (MHZ)
0	2402	10	2422	20	2442	30	2462
1	2404	11	2424	21	2444	31	2464
2	2406	12	2426	22	2446	32	2466
3	2408	13	2428	23	2448	33	2468
4	2410	14	2430	24	2450	34	2470
5	2412	15	2432	25	2452	35	2472
6	2414	16	2434	26	2454	36	2474
7	2416	17	2436	27	2456	37	2476
8	2418	18	2438	28	2458	38	2478
9	2420	19	2440	29	2460	39	2480

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2.2.1 CONFIGURATION OF SYSTEM UNDER TEST

Please see section 4 photographs of the test configuration for reference.

2.2.2 TEST MODE APPLICABILITY AND TESTED CHANNEL DETAIL

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports. The worst case was found when positioned on Y axis for radiated emission. Following test modes were selected for the final test, and the final worst case is marked in boldface and recorded in the report:

EUT CONFIGURE MODE	APPLICABLE TO				MODE
	RE<1G	RE≥1G	PLC	APCM	
-	√	√	N/A	√	-

Where **RE<1G**: Radiated Emission below 1GHz

RE≥1G: Radiated Emission above 1GHz

PLC: Power Line Conducted Emission

APCM: Antenna Port Conducted Measurement

NOTE: No need to concern of Conducted Emission due to the EUT is powered by USB.

RADIATED EMISSION TEST (BELOW 1GHz):

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ The following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
BT-LE	0 to 39	39	GFSK	1.0



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RADIATED EMISSION TEST (ABOVE 1GHz):

☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

☒ The following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
BT-LE	0 to 39	0,19, 39	GFSK	1.0
BT-LE	1 to 38	1,19, 38	GFSK	2.0



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POWER LINE CONDUCTED EMISSION TEST

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ The following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
BT-LE	0 to 39	0,19, 39	GFSK	1.0

BANDEDGE MEASUREMENT:

- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ The following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
BT-LE	0 to 39	0,19, 39	GFSK	1.0
BT-LE	1 to 38	1,19, 38	GFSK	2.0



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ANTENNA PORT CONDUCTED MEASUREMENT:

- ☒ This item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- ☒ Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).
- ☒ The following channel(s) was (were) selected for the final test as listed below.

MODE	AVAILABLE CHANNEL	TESTED CHANNEL	MODULATION	DATA RATE (Mbps)
BT-LE	0 to 39	0,19, 39	GFSK	1.0
BT-LE	1 to 38	1,19, 38	GFSK	2.0



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TEST CONDITION:

APPLICABLE TO	ENVIRONMENTAL CONDITIONS	TEST VOLTAGE	TESTED BY
RE<1G	23deg. C, 70%RH	DC 3.46V By DC Supply	Carl Xie
RE≥1G	23deg. C, 70%RH	DC 3.46V By DC Supply	Carl Xie
PLC	25deg. C, 52%RH	DC 3.46V By DC Supply	Carl Xie
APCM	25deg. C, 60%RH	DC 3.3V By DC Supply	Alan Yu



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2.3 DUTY CYCLE OF TEST SIGNAL

Please Refer to Appendix1 Of this test report.

2.4 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF Product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

FCC Part 15, Subpart C, Section 15.247

KDB 558074 D01 DTS Meas Guidance v05r02

ANSI C63.10-2020

Note :

1. All test items have been performed and recorded as per the above standards.
2. The EUT is also considered as a kind of computer peripheral, because the connection to computer is necessary for typical use. It has been verified to comply with the requirements of FCC Part 15, Subpart B, Class B (Certification). The test report has been issued separately.



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2.5 DESCRIPTION OF SUPPORT UNITS

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

NO.	PRODUCT	BRAND	MODEL NO.	SERIAL NO.	FCC ID
1	Laptop	Lenovo	Thinkpad E14	SL10W47313	N/A

NO.	SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS
1	AC Line: Unshielded, Detachable 1.5m
2	AC Line: Unshielded, Detachable 1.5m
3	AC Line: Unshielded, Detachable 1.5m

3 TEST TYPES AND RESULTS

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 LIMITS OF CONDUCTED EMISSION MEASUREMENT

FREQUENCY OF EMISSION (MHz)	CONDUCTED LIMIT (dBμV)	
	Quasi-peak	Average
0.15 ~ 0.5	66 to 56	56 to 46
0.5 ~ 5	56	46
5 ~ 30	60	50

- NOTE:**
1. The lower limit shall apply at the transition frequencies.
 2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.
 3. All emanations from a class A/B digital device or system, including any network of conductors and apparatus connected thereto, shall not exceed the level of field strengths specified above.

3.1.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Pulse limiter	SCHWARZBECK	VTSD 9561F	01579	2026/7/22	2027/7/21
ESR.EMI TEST RECEIVER	Rohde&SCHWARZ	ESR	101405	2026/6/30	2027/6/29
LISN	SCHWARZBECK	NSLK 8127	01216	2026/8/27	2027/8/26
Cable	Tonscend	/	/	2026/7/22	2027/7/21

NOTE:

1. The test was performed in CE shielded room.
2. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.



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3.1.3 TEST PROCEDURES

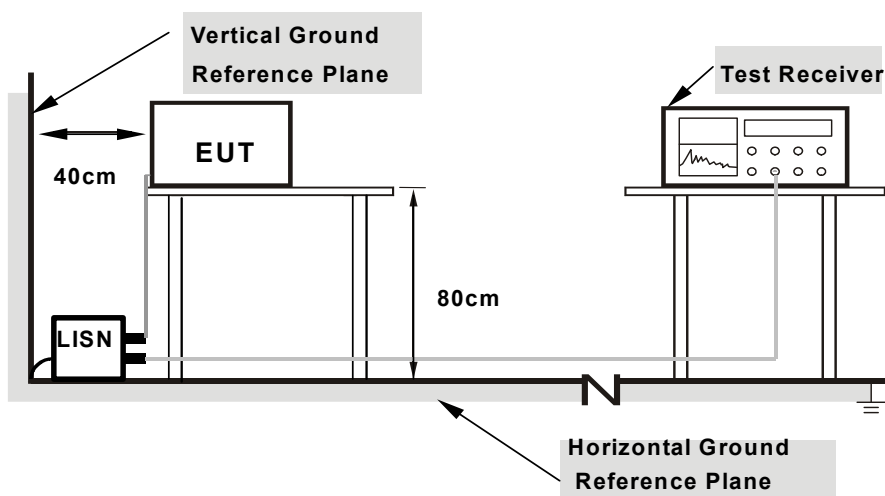
- a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
- c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE: All modes of operation were investigated and the worst-case emissions are reported.

3.1.4 DEVIATION FROM TEST STANDARD

No deviation.

3.1.5 TEST SETUP



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

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.1.6 EUT OPERATING CONDITIONS

- Turned on the power and connected of all equipment.
- EUT was operated according to the type used was description in manufacturer's specifications or the User's Manual.

3.1.7 TEST RESULTS

N/A

3.2 RADIATED EMISSION MEASUREMENT

3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

Radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a).

FREQUENCIES (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

NOTE:

1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.



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3.2.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
3m Semi-anechoic Chamber	ETS-LINDGREN	9m*6m*6m	Euroshieldpn-CT0001143-1216	2026/7/3	2027/7/2
BiConiLog Antenna	ETS-LINDGREN	3143B	161965	2026/7/17	2027/7/16
Horn Antenna	SCHWARZBECK	BBHA9120D	3297	2025/9/27	2026/9/26
Horn Antenna	STEATITE	QWH-SL-18-40-K-SG QMS-00361	15433	2026/7/19	2027/7/18
Preamplifier	Tonscend	TPA184045	AP24L8060388	2026/7/3	2027/7/2
MXE EMI Receiver	keysight	N9038B	MY50018017	2026/7/1	2027/6/30
MXG Vector Signal Generator	Keysight	N5183B	MY59100137	2026/6/30	2027/6/29
Preamplifier	Tonscend	TPA001330	806JSAPO40804251015	2026/6/30	2027/6/29
Preamplifier	Tonscend	TPA011845	AP24L8060392	2026/6/30	2027/6/29
Attenuator 6DB	SHX	TS2-6-6-A	230927166	2026/6/30	2027/6/29
Attenuator 6DB	SHX	TS2-6-6-A	230927165	2026/6/30	2027/6/29
Active Receive Loop Antenna	SCHWARZBECK	FMZB 1519 B	00173	2026/6/30	2027/6/29
Temp. & Humi. Recorder	Kejian	HTC-01	157246	2026/7/2	2027/7/1
HIGH pass FILTER_1-18	EWT	EWT-57-0222	EWT-57-0222	2026/6/30	2027/6/29
HIGH pass FILTER_7-18	EWT	EWT-57-0223	EWT-57-0223	2026/6/30	2027/6/29
HIGH pass FILTER_3-18	EWT	EWT-57-0221	EWT-57-0221	2026/6/30	2027/6/29
DC~1GHz Lowpass Filter	EWT	EWT-56-0649	EWT-56-0649	2026/7/3	2027/7/2
Cable 1	N/A	N/A	N/A	2025/9/28	2026/9/27
Cable 2	N/A	N/A	N/A	2025/9/28	2026/9/27
Cable 3	N/A	N/A	N/A	2025/9/28	2026/9/27

NOTE:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in 3m Chamber.
3. The FCC Site Registration No. is 646781; The Designation No. is CN1429.

BOOMWAVE TEST (SHENZHEN)
CO., LTD.

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Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com

3.2.3 TEST PROCEDURES

- a. The EUT was placed on the top of a rotating table 0.8 meters (for below 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, For battery operated equipment, the equipment tests shall be perform using fresh batteries. The turntable was rotated to maximize the emission level.

Note:

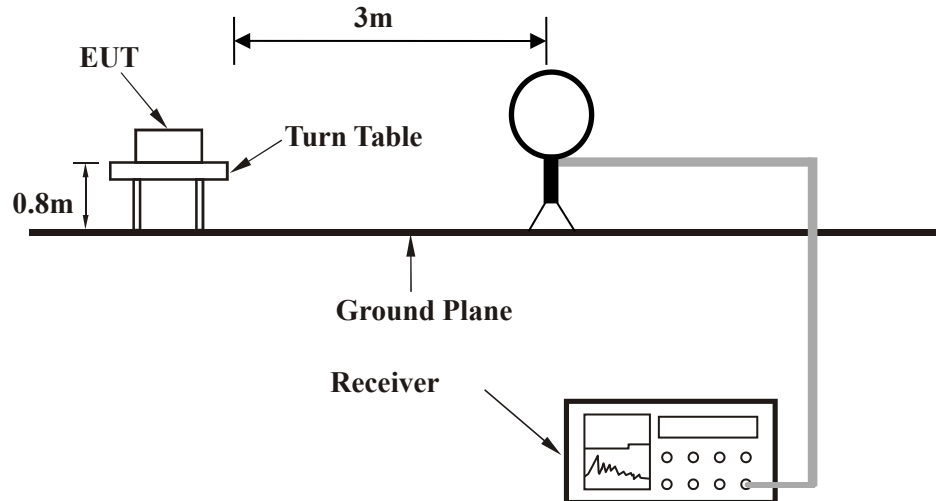
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
2. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
3. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 3MHz for RMS Average (Duty cycle < 98%) for Average detection (AV) at frequency above 1GHz, then the measurement results was added to a correction factor ($10 \log(1/\text{duty cycle})$).
4. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is 10Hz (Duty cycle $\geq 98\%$) for Average detection (AV) at frequency above 1GHz.
5. All modes of operation were investigated and the worst-case emissions are reported.

3.2.4 DEVIATION FROM TEST STANDARD

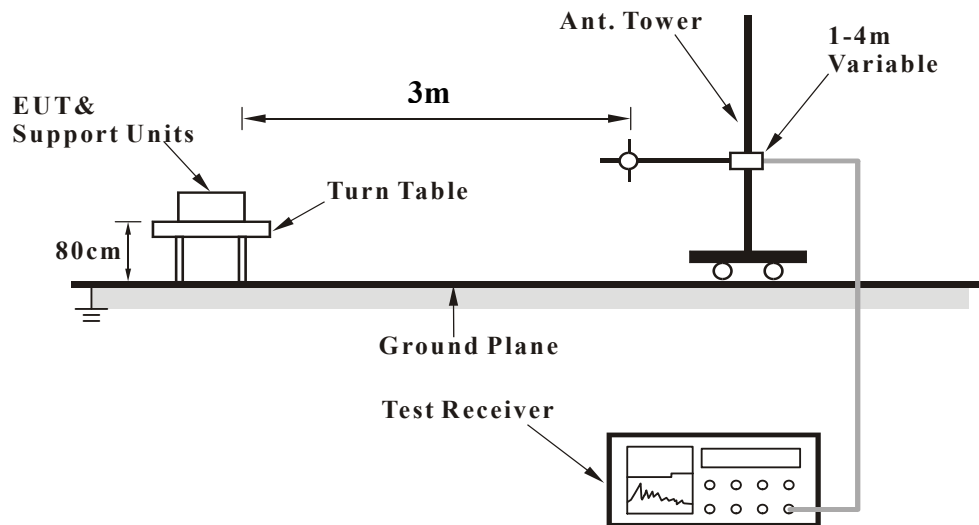
No deviation

3.2.5 TEST SETUP

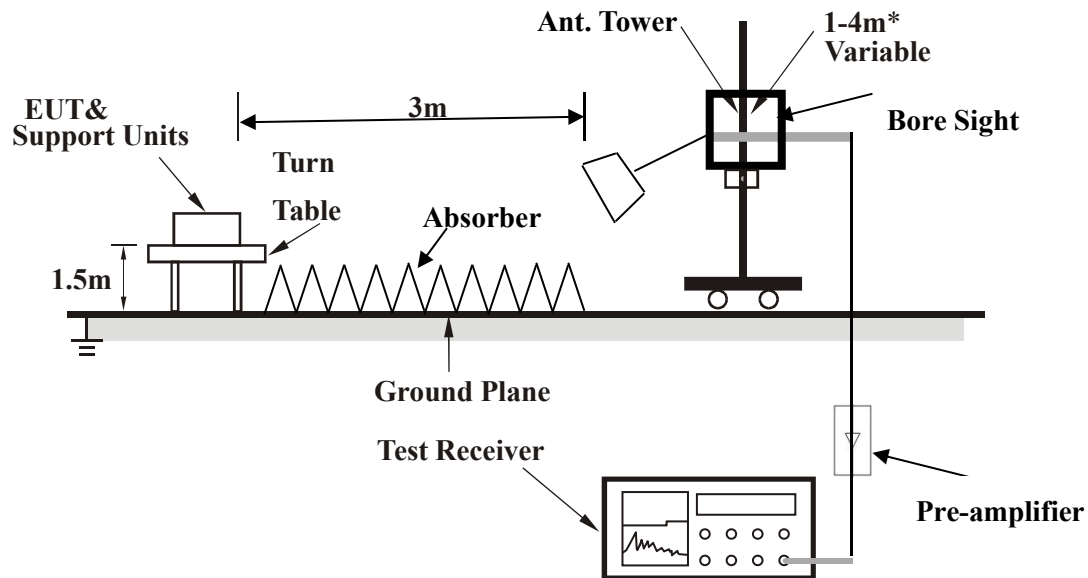
<Frequency Range 9KHz~30MHz >



< Frequency Range 30MHz~1GHz >



<Frequency Range above 1GHz>



Note: Above 1G is a directional antenna

Depends on the EUT height and the antenna 3dB beamwidth both, refer to section 7.3 of CISPR 16-2-3.

For the actual test configuration, please refer to the attached file (Test Setup Photo).

3.2.6 EUT OPERATING CONDITIONS

- Set the EUT under full load condition and placed them on a testing table.
- Set the transmitter part of EUT under transmission condition continuously at specific channel frequency.
- The necessary accessories enable the EUT in full functions.

3.2.7 TEST RESULTS

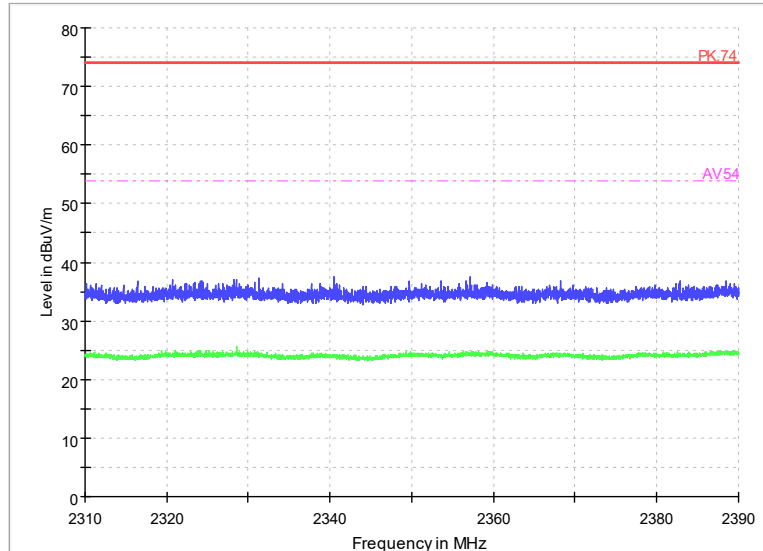
Note 1: Both horizontal and vertical polarizations of the antenna are set to make the measurement.

Note 2: Three-axis equipment has been evaluated in test.

Note 3: The relevant tests have been performed in order to verify in which mode would have the worst features, the result show above is the worst case (Channel, Mode, Rate, Chain...).

Test Report No.: RF260904B002

Radiated Emission Band Edge for BLE

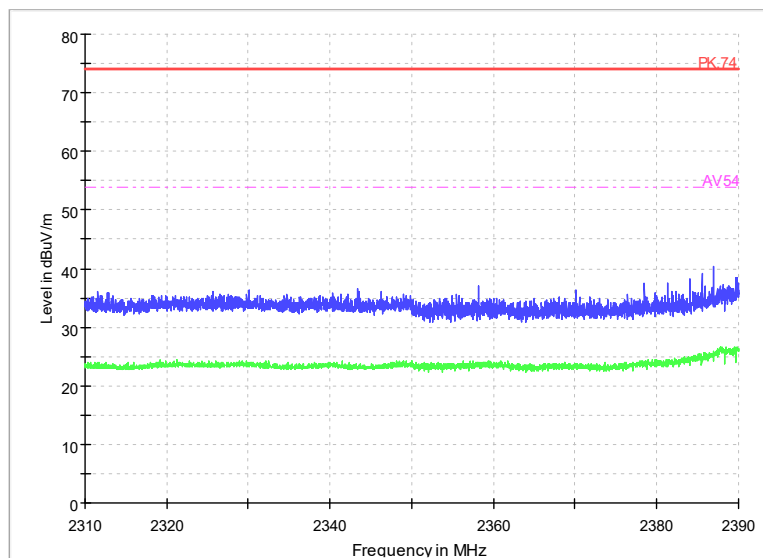


Carrier frequency (MHz): 2402

Channel No.:0

Test Mode: GFSK (LE 1Mbps)

Polarity: Vertical



Carrier frequency (MHz): 2402

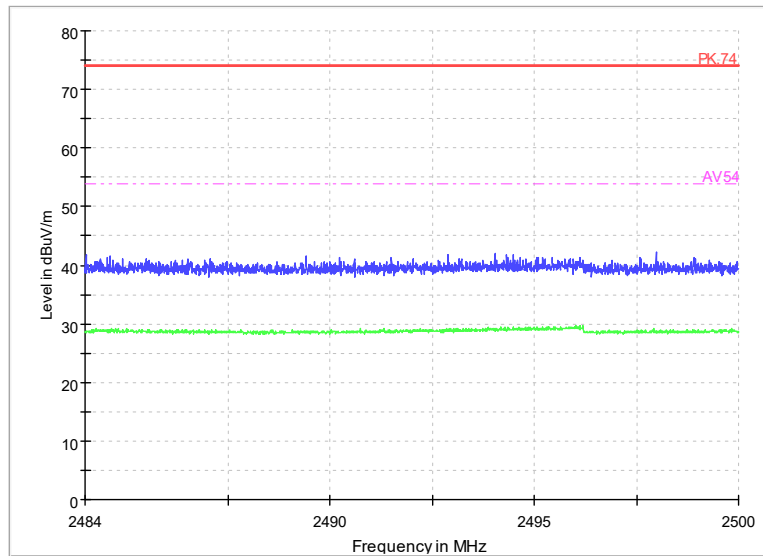
Channel No.:0

Test Mode: GFSK (LE 1Mbps)

Polarity: Horizontal



Test Report No.: RF260904B002

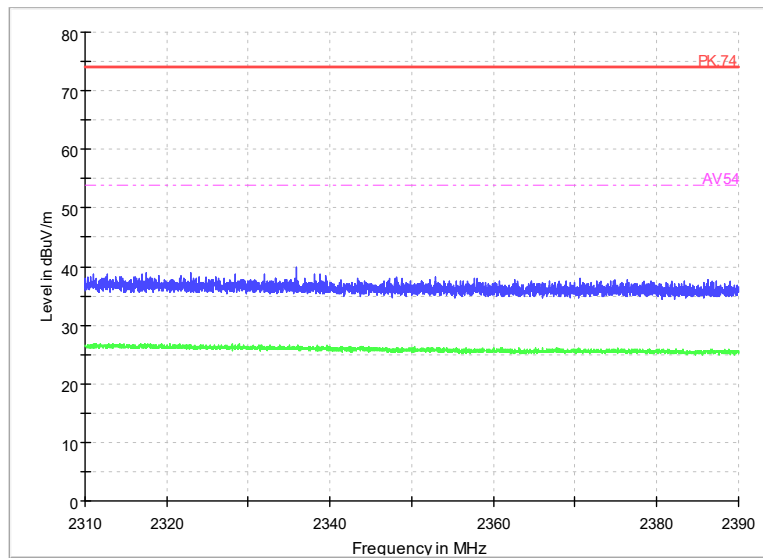


Carrier frequency (MHz): 2480

Channel No.:39

Test Mode: GFSK (LE 1Mbps)

Polarity: Vertical



Carrier frequency (MHz): 2480

Channel No.:39

Test Mode: GFSK (LE 1Mbps)

Polarity: Horizontal

BOOMWAVE TEST (SHENZHEN)
CO., LTD.

Room B38, Warehouse A5(Chiwan No.1), No.3 Chiwan 4th
Road, Chiwan Community, Zhaoshang Street, Nanshan
District, Shenzhen, Guangdong, P.R. CHINA

Mobile: +86 15118052731
Email:shimin.wang@boomwavelab.com



Test Report No.: RF260904B002

Radiated Emission for BLE

After comparison, the worst case attitude is EUT lay down.

Determining Spurious Emissions Levels

A “reference path loss” is established and the A_{Rpl} is the attenuation of “reference path loss”, and including the gain of receive antenna, the gain of the preamplifier, the cable loss.

The measurement results are obtained as described below:

$$\text{Result} = P_{\text{mea}} + A_{Rpl}$$

For GFSK (LE 1Mbps)

Channel No.:0

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
34.8985	22.18	-14.8	36.98	Vertical	40	17.82
66.472	14.18	-15.5	29.68	Vertical	40	25.82
103.0895	12.31	-14.1	26.41	Vertical	43.5	31.19
204.794	21.06	-13.7	34.76	Vertical	43.5	22.44
548.4165	17.64	-4.4	22.04	Vertical	46	28.36
916.3375	21.94	1.6	20.34	Vertical	46	24.06

Channel No.:19

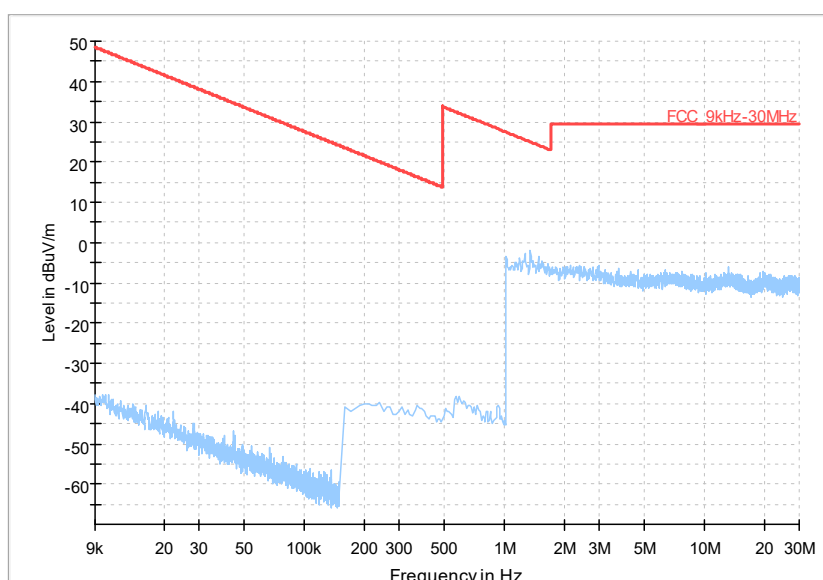
Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
34.8985	22.14	-14.8	36.94	Vertical	40	17.86
67.151	14.01	-15.7	29.71	Vertical	40	25.99
114.972	10.35	-15.2	25.55	Vertical	43.5	33.15
207.6555	19.47	-13.6	33.07	Vertical	43.5	24.03
457.5275	17.43	-6.6	24.03	Vertical	46	28.57
835.973	22.87	0.1	22.77	Vertical	46	23.13

Test Report No.: RF260904B002

Channel No.:39

Frequency (MHz)	Result (dBuV/m)	ARpl (dB)	Pmea (dBuV/m)	Polarity	Limit (dBuV/m)	Margin (dB)
33.5405	22.16	-15.2	37.36	Vertical	40	17.84
56.0445	13.88	-13.2	27.08	Vertical	40	26.12
103.041	11.41	-14.1	25.51	Vertical	43.5	32.09
203.921	20.84	-13.7	34.54	Vertical	43.5	22.66
441.7165	16.52	-7.1	23.62	Vertical	46	29.48
834.421	24.21	0.1	24.11	Vertical	46	21.79

Full Spectrum



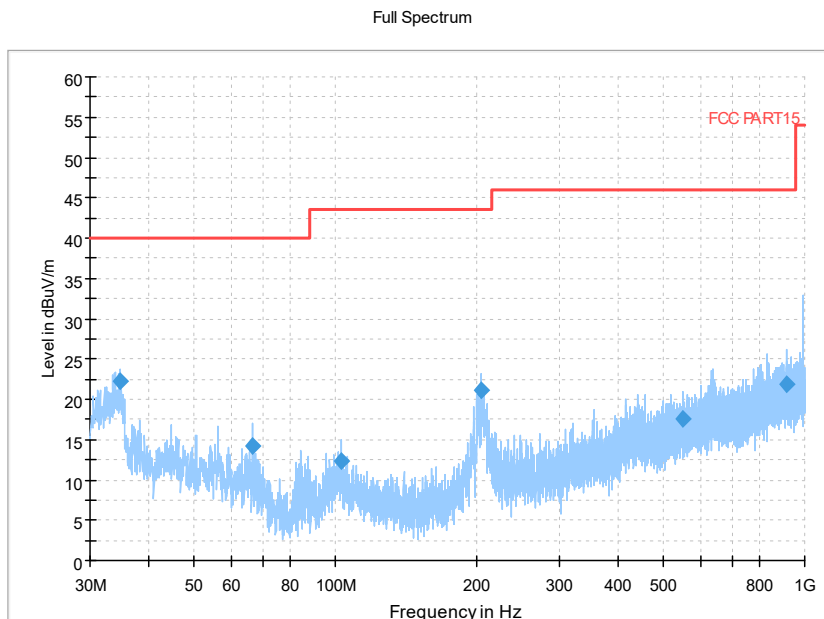
Frequency Range: 9kHz -30MHz

Detector: QP mode

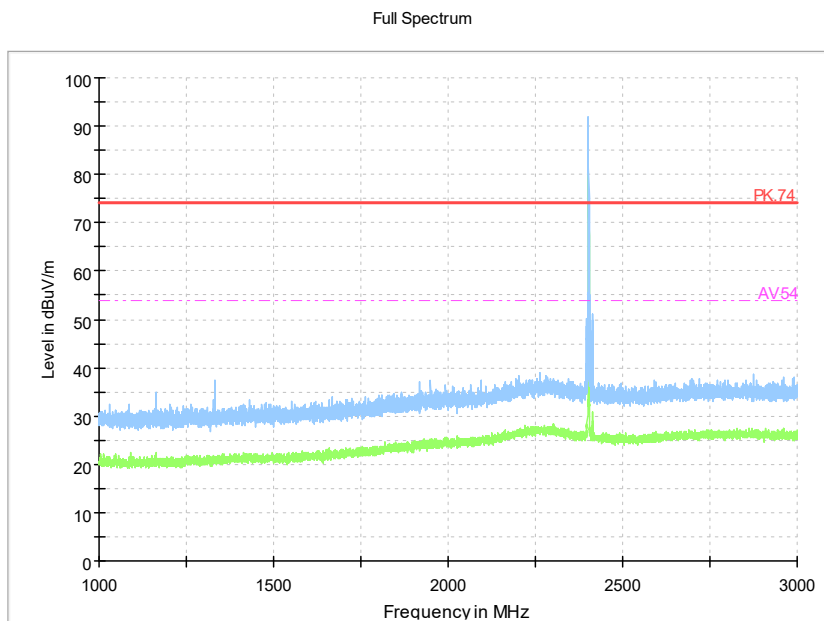
Note : The relevant tests have been performed in order to verify in which mode would have the worst features, the result show above is the worst case.



Test Report No.: RF260904B002
Channel No.:0

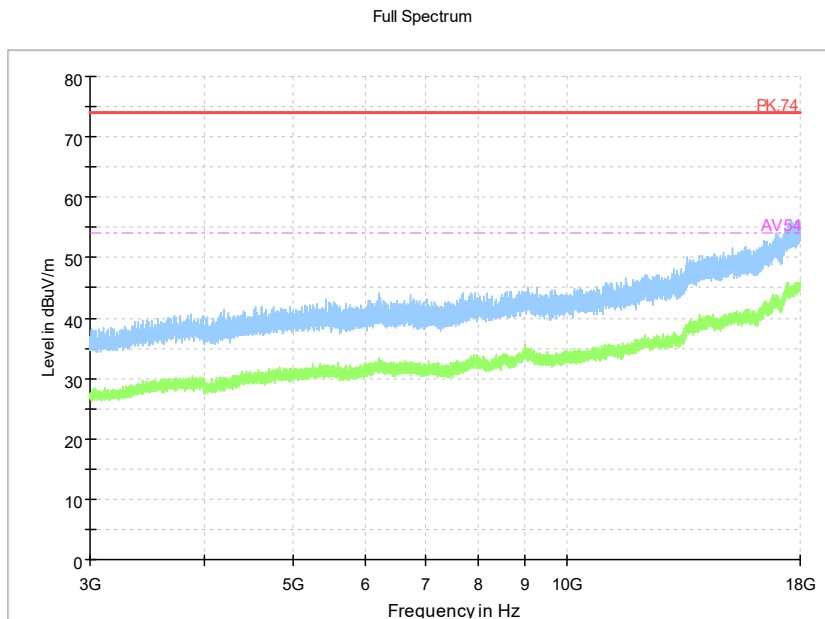


Frequency Range: 30MHz-1GHz
Detector: QP mode
Modulation type: GFSK (LE 1Mbps)

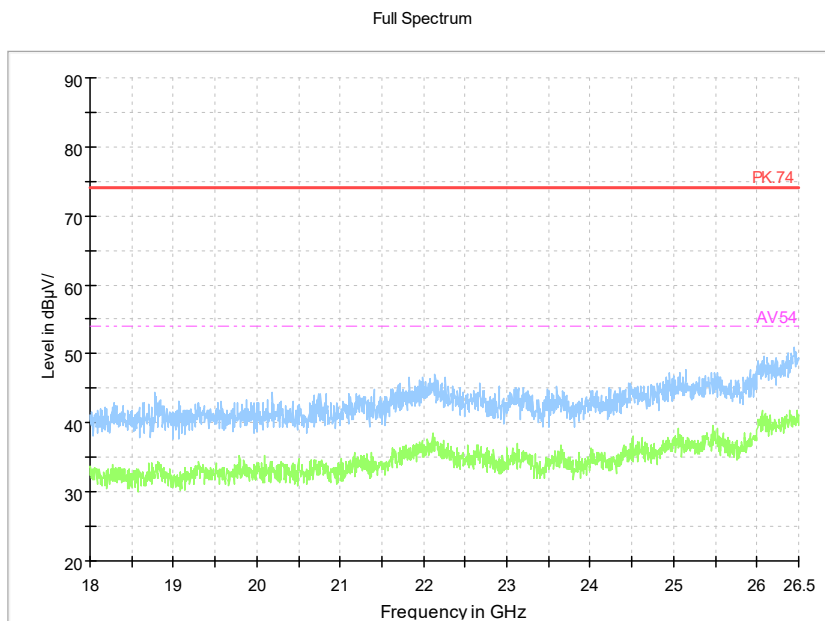


Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 1Mbps)

Test Report No.: RF260904B002



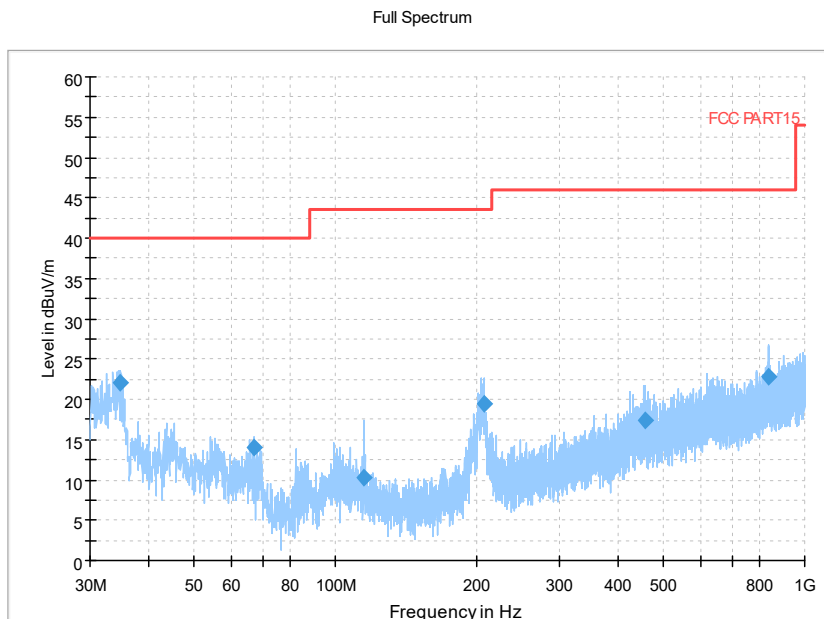
Frequency Range: 3GHz-18GHz
 Detector: Av mode and PK mode
 Modulation type: GFSK (LE 1Mbps)



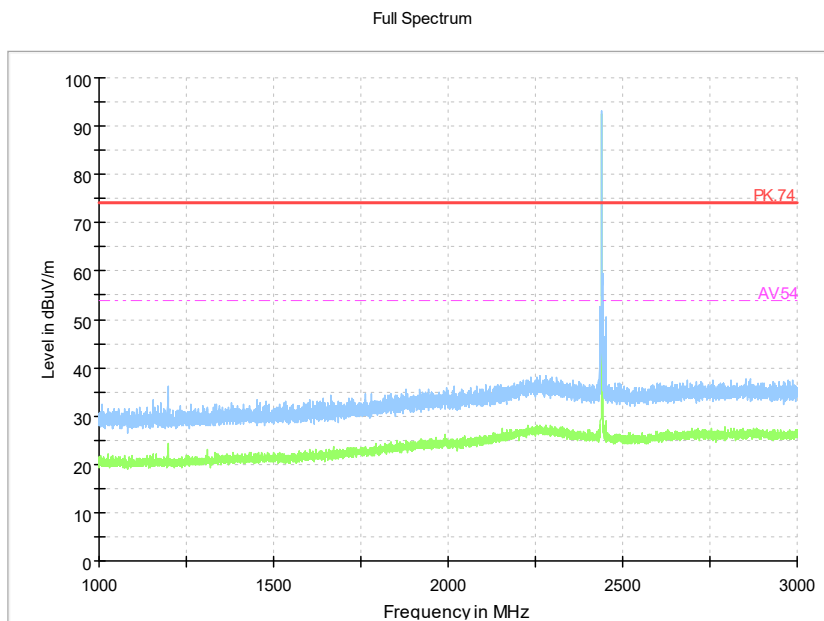
Frequency Range: 18GHz-26GHz
 Detector: Av mode and PK mode
 Modulation type: GFSK (LE 1Mbps)



Test Report No.: RF260904B002
Channel No.:19

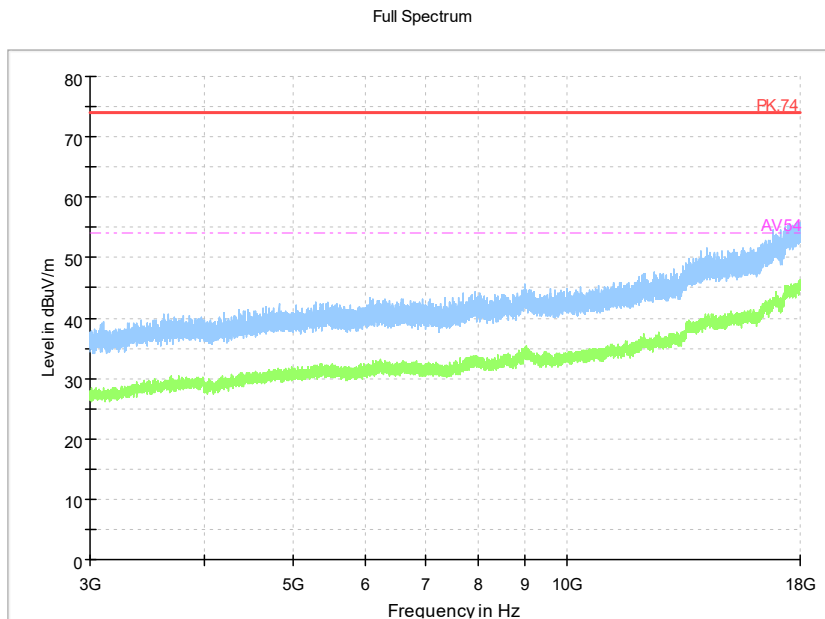


Frequency Range: 30MHz-1GHz
Detector: QP mode
Modulation type: GFSK (LE 1Mbps)

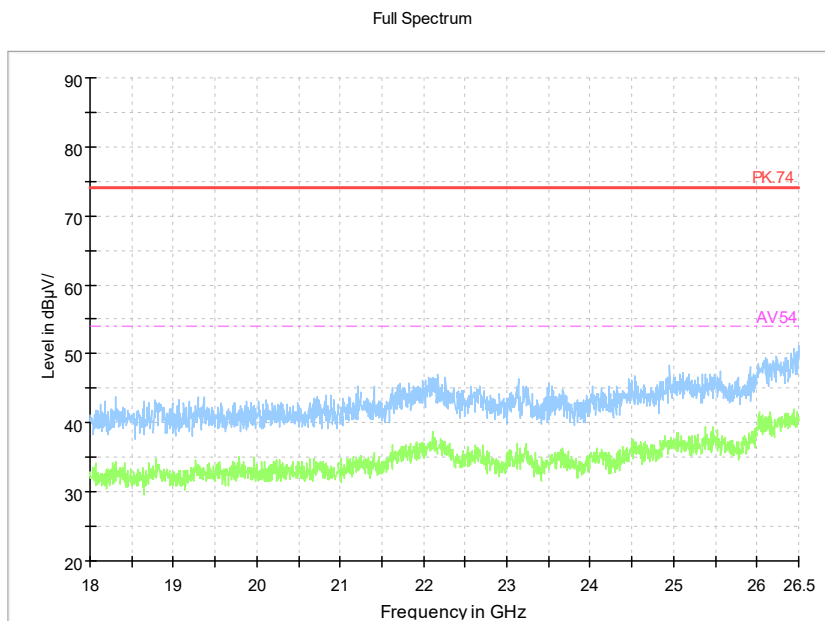


Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 1Mbps)

Test Report No.: RF260904B002



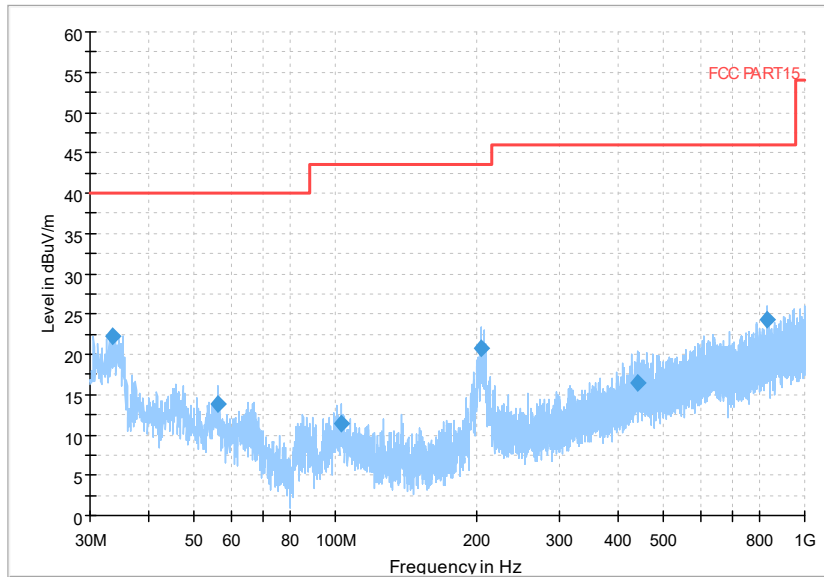
Frequency Range: 3GHz-18GHz
 Detector: Av mode and PK mode
 Modulation type: GFSK (LE 1Mbps)



Frequency Range: 18GHz-26GHz
 Detector: Av mode and PK mode
 Modulation type: GFSK (LE 1Mbps)

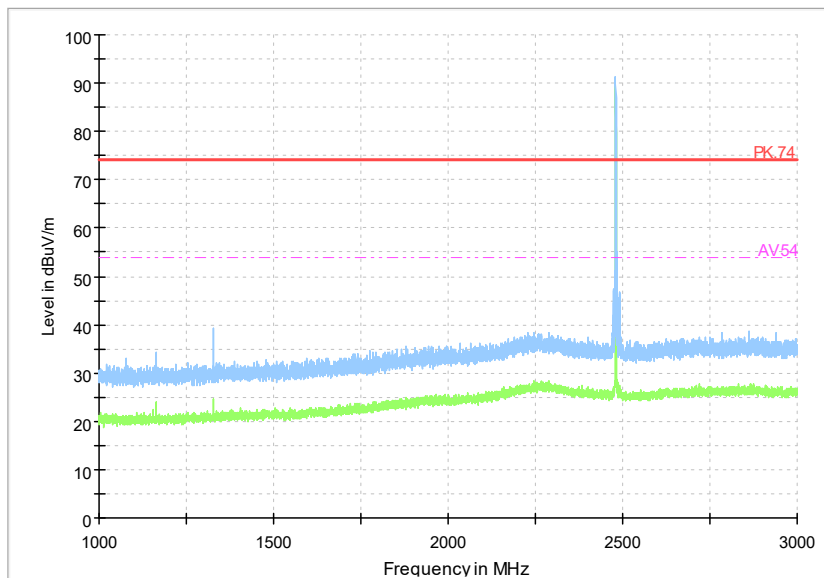
Test Report No.: RF260904B002
Channel No.:39

Full Spectrum



Frequency Range: 30MHz-1GHz
Detector: QP mode
Modulation type: GFSK (LE 1Mbps)

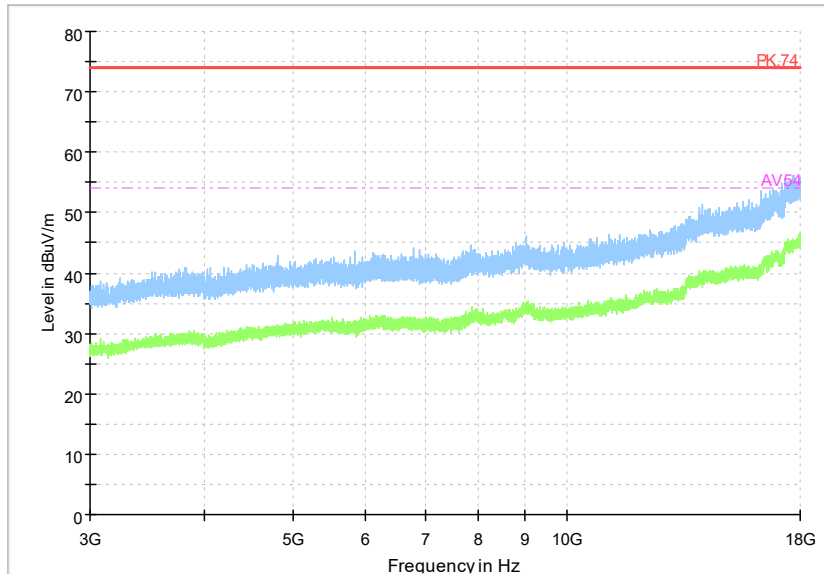
Full Spectrum



Frequency Range: 1GHz-3GHz
Detector: Av mode and PK mode
Modulation type: GFSK (LE 1Mbps)

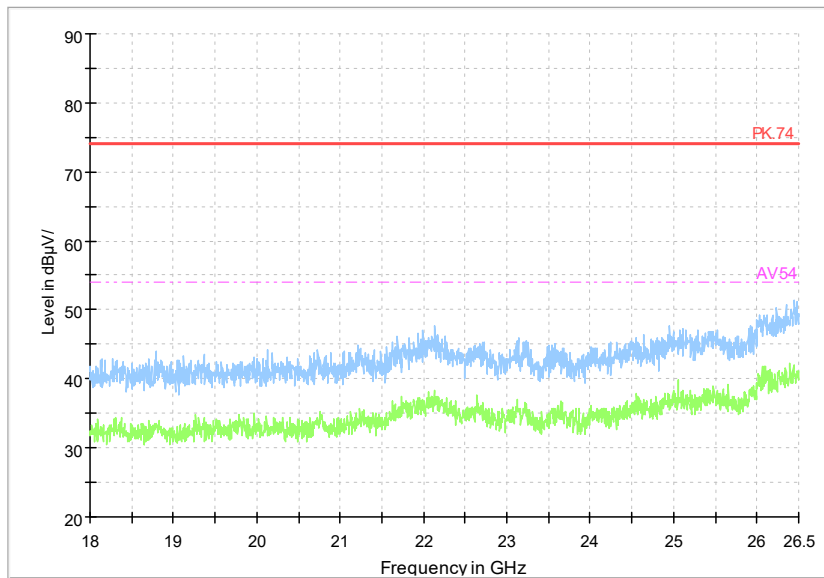
Test Report No.: RF260904B002

Full Spectrum



Frequency Range: 3GHz-18GHz
 Detector: Av mode and PK mode
 Modulation type: GFSK (LE 1Mbps)

Full Spectrum



Frequency Range: 18GHz-26GHz
 Detector: Av mode and PK mode
 Modulation type: GFSK (LE 1Mbps)

Test Report No.: RF260904B002

3.3 6 dB BANDWIDTH MEASUREMENT

3.3.1 LIMITS OF 6dB BANDWIDTH MEASUREMENT

The minimum of 6dB Bandwidth Measurement is 0.5 MHz.

3.3.2 TEST INSTRUMENTS

Equipment	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
Wireless communication integrated tester	Rohde&Schwarz	CMW500	166205	2026/6/30	2027/6/29
MXA Signal Analyzer	KEYSIGHT	N9020B	MY60112669	2026/8/27	2027/8/26
WiFi 7GHz Band Extender	Tonscend	TS-WF7U2	806WF7U003305251003	2026/1/17	2027/1/16
RF Control Unit	Tonscend	JS0806-2	806JS2X020201251002	2026/1/17	2027/1/16
PSG Analog Signal Generator	Agilent	E8257D	MY51111397	2026/7/01	2027/6/30
MXG Vector Signal Generator	KEYSIGHT	N5182B	MY61250150	2026/1/15	2027/1/14
DC Power Supply	AGILENT	HMP2020	100598	2026/7/01	2027/6/30
10dB attenuator	JFW INDUSTRIES INC	50HF-010-SMA	50HF-010-SMA-1	2026/6/30	2027/6/29
10dB attenuator	JFW INDUSTRIES INC	50HF-010-SMA	50HF-010-SMA-2	2026/6/30	2027/6/29
hygrothermograph	Anymeters	----	TH101B	2026/7/22	2027/7/21
Temperature Box	zhongkemeiqi	MA22040172	MQ-DTH50F-2	2026/7/01	2027/6/30
power divider	WOKEN	71688	204-003180-01	2026/6/30	2027/6/29

NOTE:

1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.
2. The test was performed in RF Oven room.

3.3.3 TEST PROCEDURE

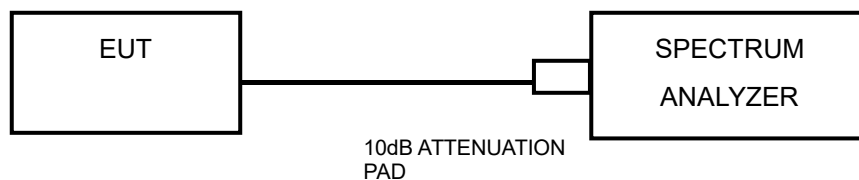
In accordance with ANSI C63.10-2020 11.8.1 Option 2:

- a) Set RBW = shall be in the range of 1% to 5% of the OBW but not less than 100kHz.
- b) Set the VBW $\geq [3 \times \text{RBW}]$.
- c) Detector = peak.
- d) Trace mode = max-hold.
- e) Sweep = No faster than coupled (auto) time.
- f) Allow the trace to stabilize.
- g) The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB

3.3.4 DEVIATION FROM TEST STANDARD

No deviation.

3.3.5 TEST SETUP



3.3.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

3.3.7 TEST RESULTS

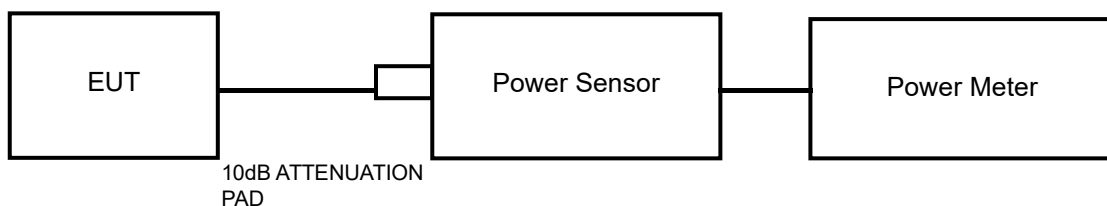
Please Refer to Appendix1 Of this test report.

3.4 CONDUCTED OUTPUT POWER

3.4.1 LIMITS OF CONDUCTED OUTPUT POWER MEASUREMENT

For systems using digital modulation in the 2400–2483.5 MHz band: 1 Watt (30dBm)

3.4.2 TEST SETUP



3.4.3 TEST INSTRUMENTS

Refer to section 3.3.2 to get information of above instrument.

3.4.4 TEST PROCEDURES

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

3.4.5 DEVIATION FROM TEST STANDARD

No deviation.

3.4.6 EUT OPERATING CONDITIONS

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.



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3.4.7 TEST RESULTS

3.4.7.1 MAXIMUM PEAK OUTPUT POWER

Please Refer to Appendix1 Of this test report.

3.4.7.2 AVERAGE OUTPUT POWER (FOR REFERENCE)

The average power sensor was used on the output port of the EUT. A power meter was used to read the response of the power sensor. Record the power level.

Please Refer to Appendix1 Of this test report.

3.5 POWER SPECTRAL DENSITY MEASUREMENT

3.5.1 LIMITS OF POWER SPECTRAL DENSITY MEASUREMENT

The Maximum of Power Spectral Density Measurement is 8dBm/3KHz.

3.5.2 TEST SETUP



3.5.3 TEST INSTRUMENTS

Refer to section 3.3.2 to get information of above instrument.

3.5.4 TEST PROCEDURE

1. Set the span to 1.5 times the DTS bandwidth
2. Set the RBW = 3 kHz, VBW $\geq 3 \times$ RBW, Detector = peak.
3. Sweep time = auto couple, Trace mode = max hold, allow trace to fully stabilize.
4. Use the peak marker function to determine the maximum amplitude level.

3.5.5 DEVIATION FROM TEST STANDARD

No deviation.

3.5.6 EUT OPERATING CONDITION

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

3.5.7 TEST RESULTS

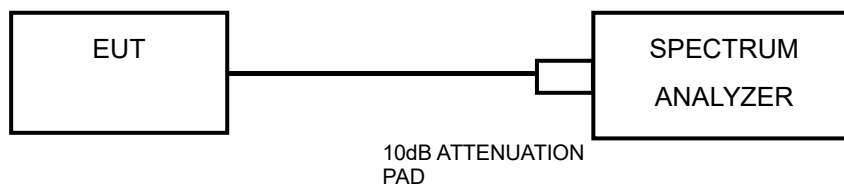
Please Refer to Appendix1 Of this test report.

3.6 OUT OF BAND EMISSION MEASUREMENT

3.6.1 LIMITS OF OUT OF BAND EMISSION MEASUREMENT

Below -20dB of the highest emission level of operating band (in 100kHz Resolution Bandwidth).

3.6.2 TEST SETUP



3.6.3 TEST INSTRUMENTS

Refer to section 3.3.2 to get information of above instrument.

3.6.4 TEST PROCEDURE

MEASUREMENT PROCEDURE REF

1. Set the RBW = 100 kHz.
2. Set the VBW $\geq$ 300 kHz.
3. Detector = peak.
4. Sweep time = auto couple.
5. Trace mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.



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MEASUREMENT PROCEDURE OOB

1. Set RBW = 100 kHz.
2. Set VBW $\geq$ 300 kHz.
3. Set span to encompass the spectrum to be examined
4. Detector = peak.
5. Trace Mode = max hold.
6. Sweep = auto couple.

3.6.5 DEVIATION FROM TEST STANDARD

No deviation.

3.6.6 EUT OPERATING CONDITION

The software provided by client to enable the EUT under transmission condition continuously at lowest, middle and highest channel frequencies individually.

3.6.7 TEST RESULTS

The spectrum plots are attached on the following images. D1 line indicates the highest level. D2 line indicates the 20dB offset below D1. It shows compliance to the requirement.

Please Refer to Appendix1 Of this test report.



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3.7 ANTENNA REQUIREMENTS

3.7.1 STANDARD APPLICABLE

If transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.7.2 ANTENNA CONNECTED CONSTRUCTION

An embedded-in antenna design is used.

3.7.3 ANTENNA GAIN

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit and PSD limit.

4 PHOTOGRAPHS OF THE TEST CONFIGURATION

Please refer to the attached file (Test Setup Photo).

5 MODIFICATIONS RECORDERS FOR ENGINEERING CHANGES TO THE EUT BY THE LAB

No any modifications are made to the EUT by the lab during the test.

6 APPENDIX BLE

1. Duty Cycle

1.1 TEST RESULT

1.1.1 ANT1

Ant1							
Mode	TX Type	Frequency (MHz)	T_on (ms)	Period (ms)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	Max. DC Variation (%)
1M	SISO	2402	0.400	0.625	64.00	1.94	0.03
		2440	0.400	0.625	64.00	1.94	0.03
		2480	0.401	0.625	64.16	1.93	0.03
2M	SISO	2402	0.216	0.625	34.56	4.61	0.03
		2440	0.216	0.625	34.56	4.61	0.03
		2480	0.216	0.625	34.56	4.61	0.03

2. Bandwidth

2.1 TEST RESULT

2.1.1 OBW

Mode	TX Type	Frequency (MHz)	ANT	99% Occupied Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	0.992	/	Pass
		2440	1	0.996	/	Pass
		2480	1	1.010	/	Pass
2M	SISO	2402	1	1.864	/	Pass
		2440	1	1.872	/	Pass
		2480	1	1.882	/	Pass

2.1.2 6DB BW

Mode	TX Type	Frequency (MHz)	ANT	6dB Bandwidth (MHz)		Verdict
				Result	Limit	
1M	SISO	2402	1	0.649	≥ 0.5	Pass
		2440	1	0.645	≥ 0.5	Pass
		2480	1	0.640	≥ 0.5	Pass
2M	SISO	2402	1	1.094	≥ 0.5	Pass
		2440	1	1.097	≥ 0.5	Pass
		2480	1	1.116	≥ 0.5	Pass

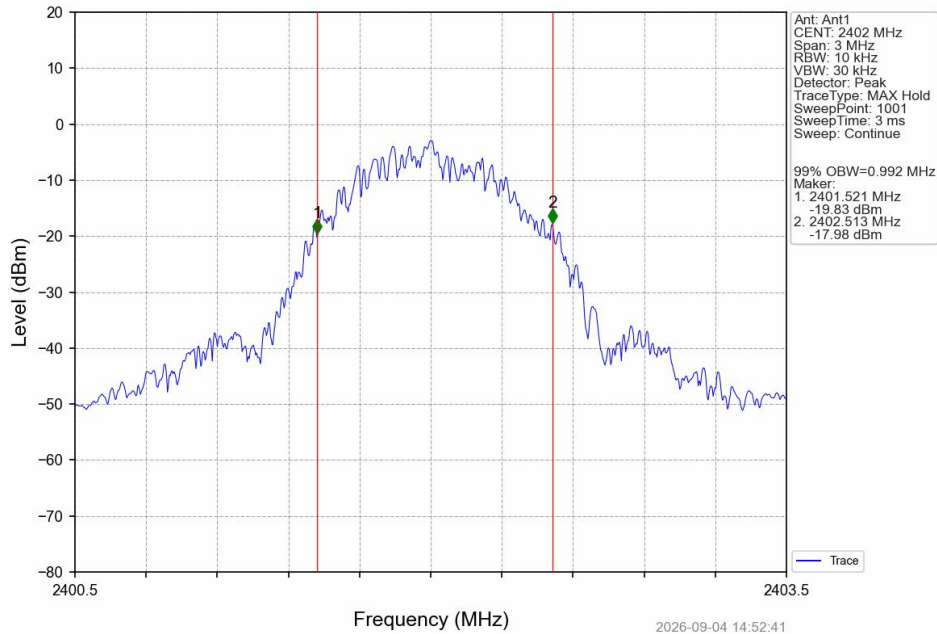
2.2 TEST GRAPH



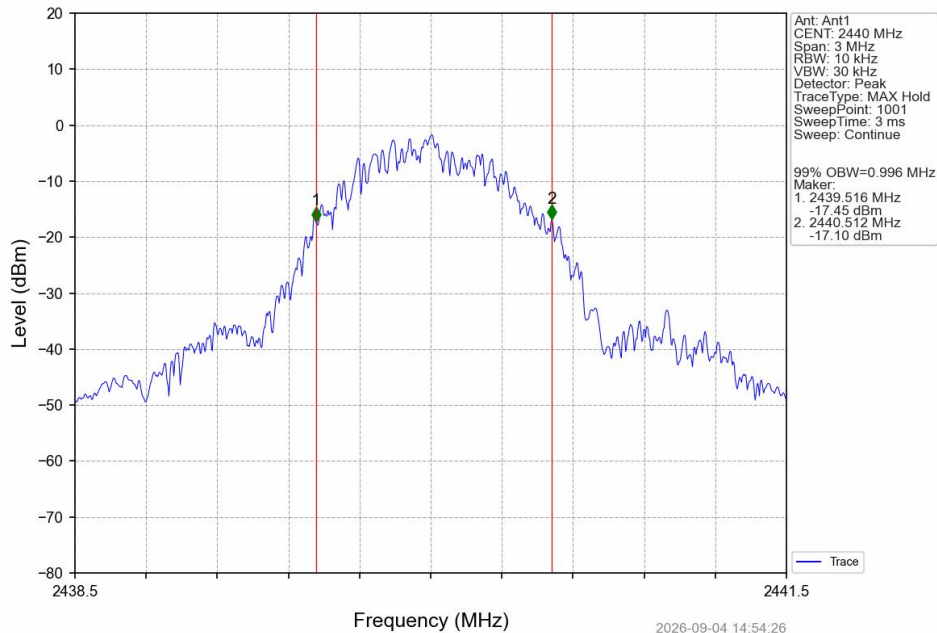
Test Report No.: RF260904B002

2.2.1 OBW

1M_LCH_2402MHz_Ant1_NTNV



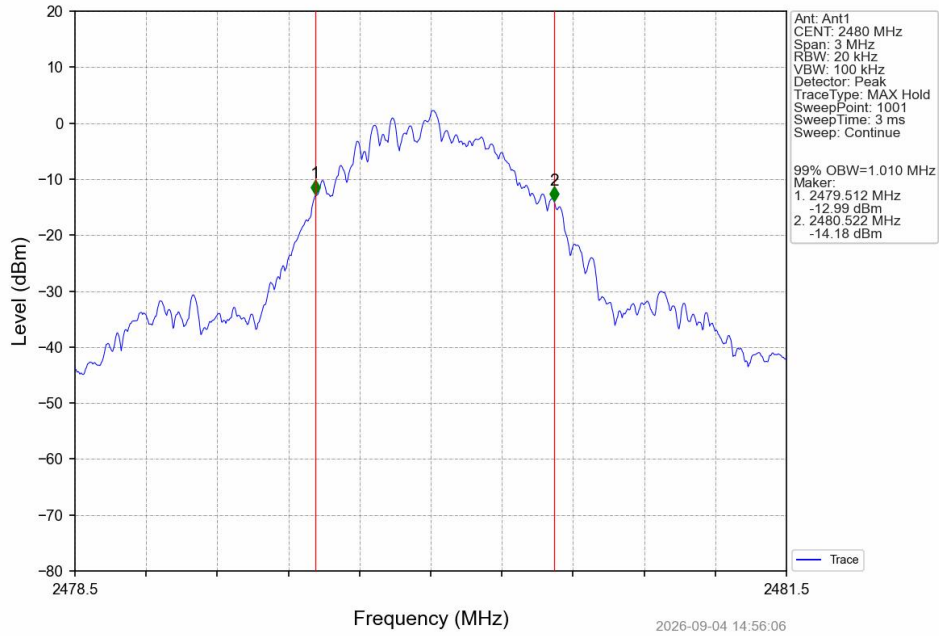
1M_MCH_2440MHz_Ant1_NTNV



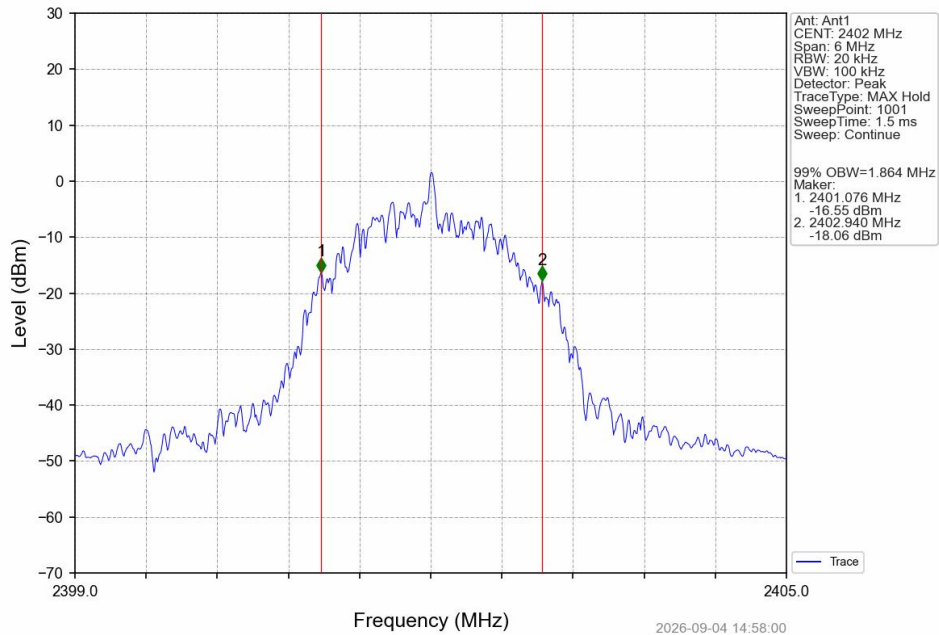


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1M_HCH_2480MHz_Ant1_NTNV

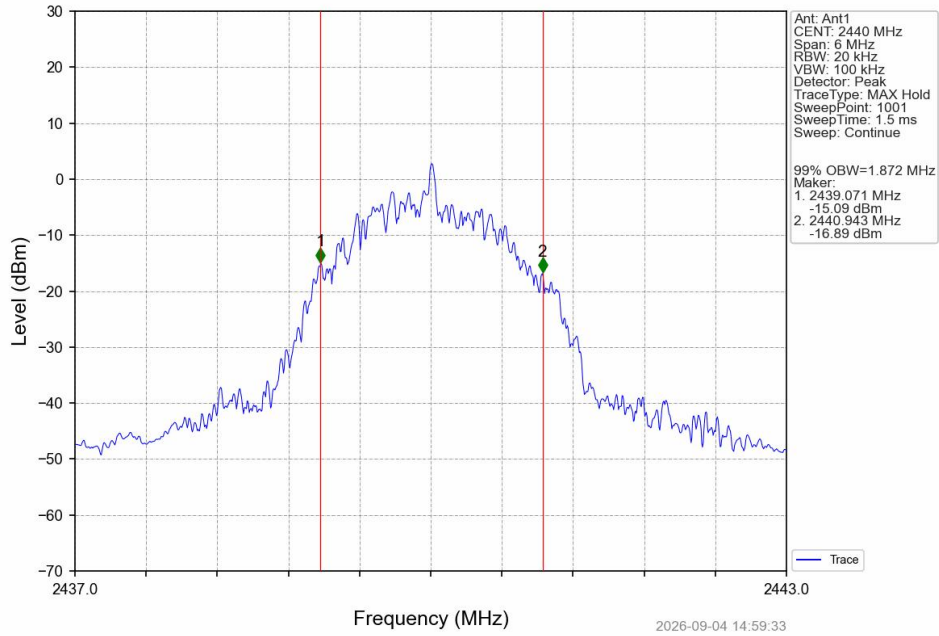


2M_LCH_2402MHz_Ant1_NTNV

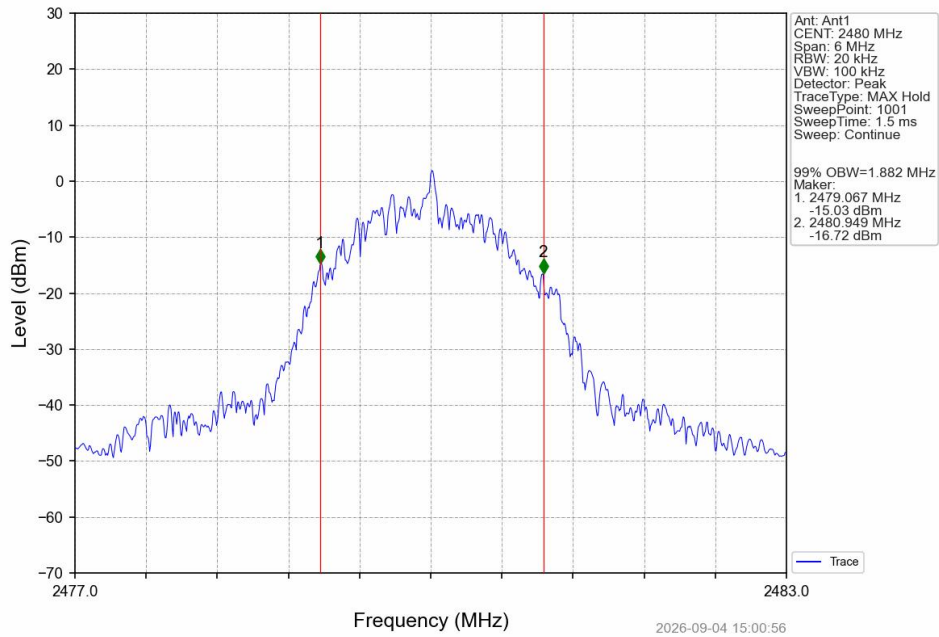


Test Report No.: RF260904B002

2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV

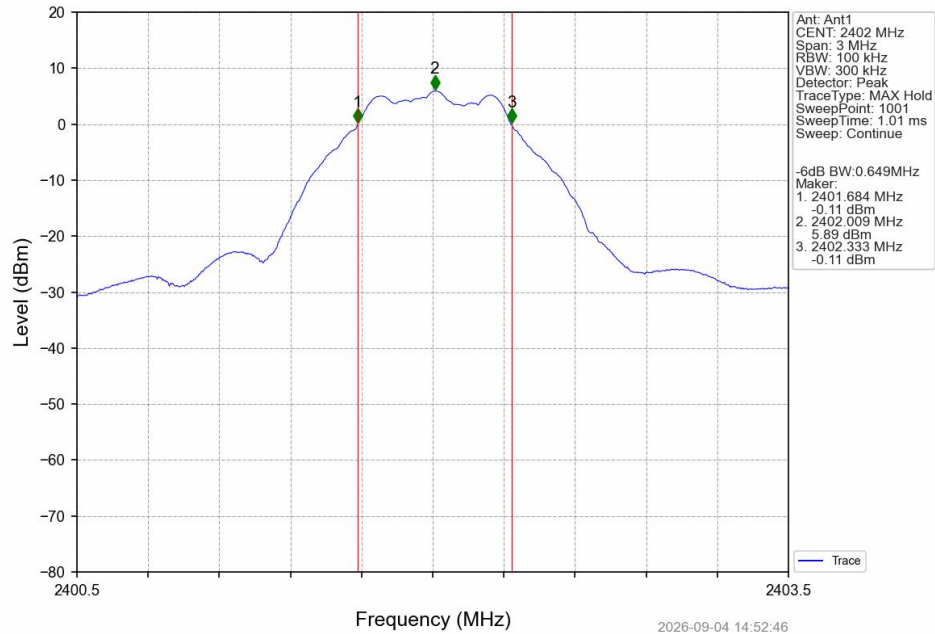




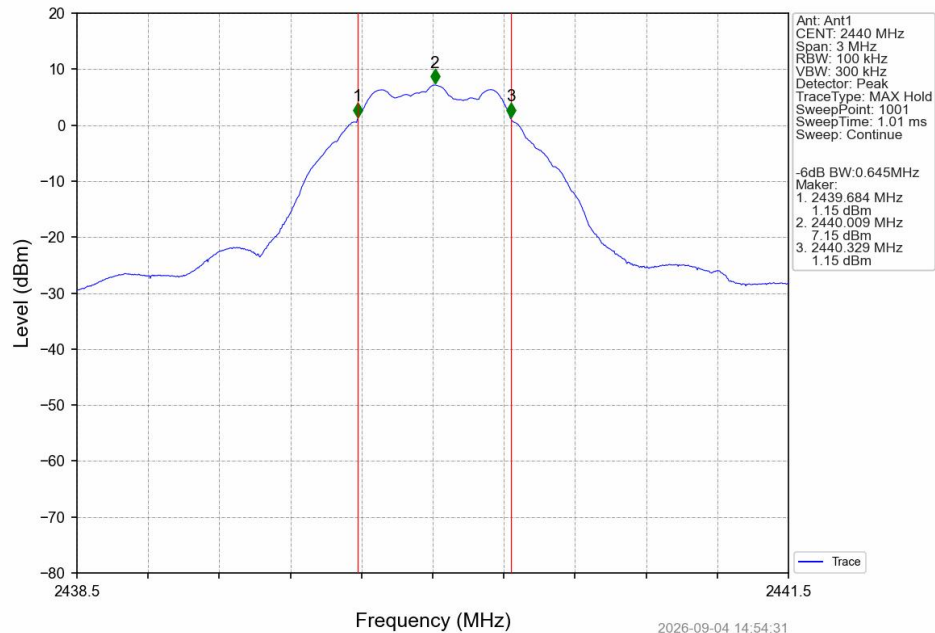
Test Report No.: RF260904B002

2.2.2 6DB BW

1M_LCH_2402MHz_Ant1_NTNV



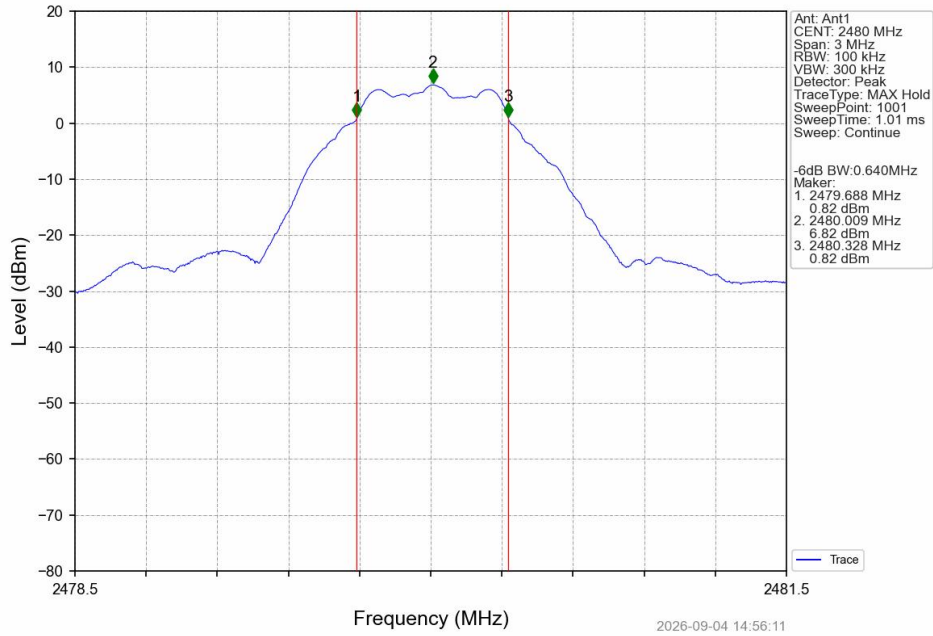
1M_MCH_2440MHz_Ant1_NTNV



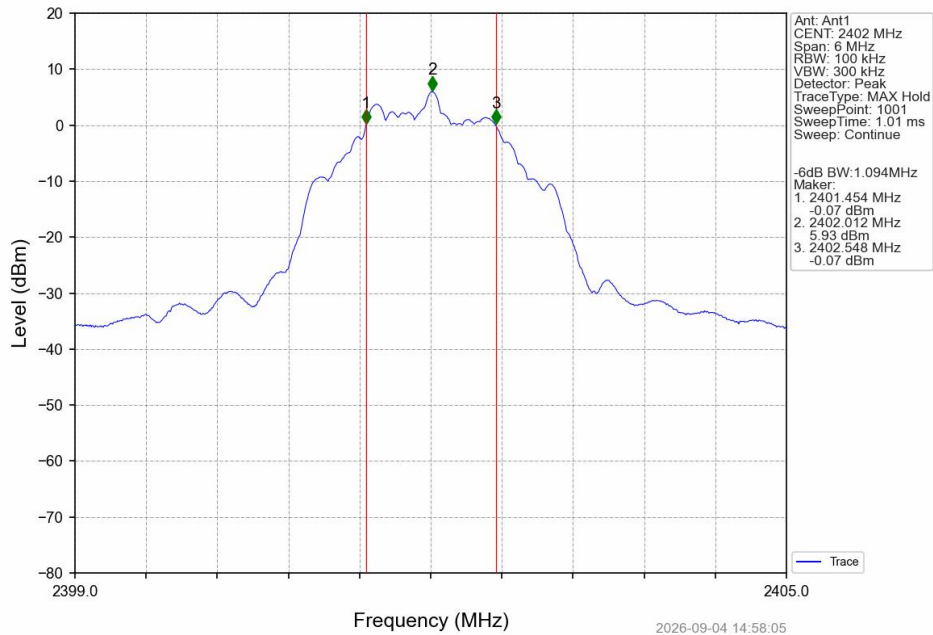


Test Report No.: RF260904B002

1M_HCH_2480MHz_Ant1_NTNV

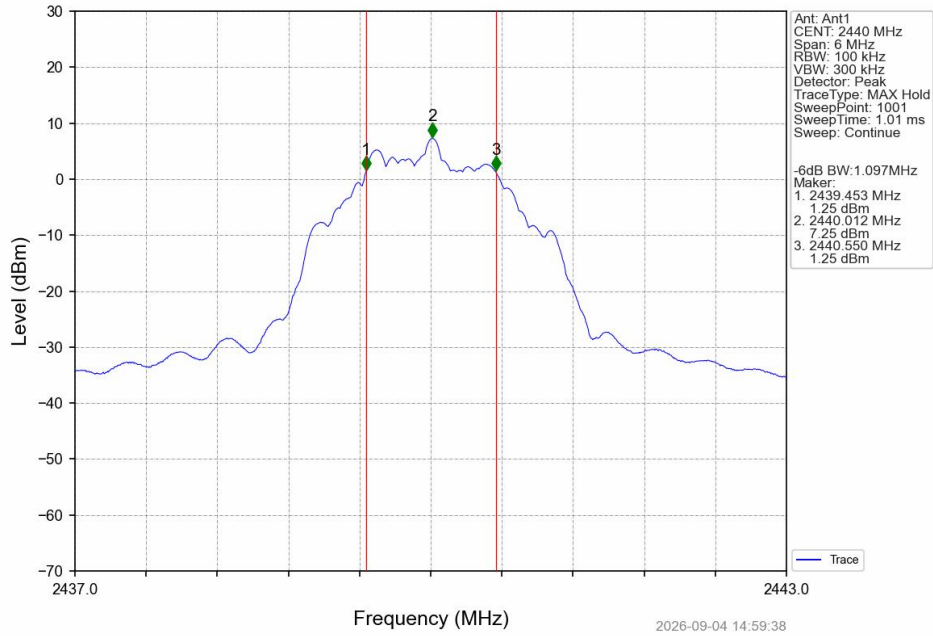


2M_LCH_2402MHz_Ant1_NTNV

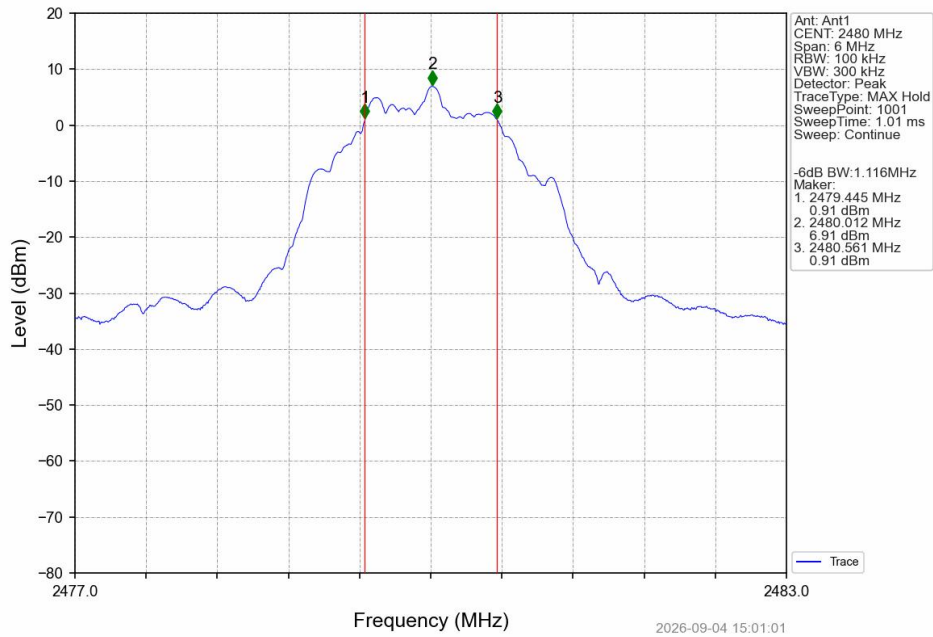


Test Report No.: RF260904B002

2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV





Test Report No.: RF260904B002

3. Maximum Conducted Output Power

3.1 TEST RESULT

3.1.1 POWER

Mode	TX Type	Frequency (MHz)	Maximum Peak Conducted Output Power (dBm)		Verdict
			ANT1	Limit	
1M	SISO	2402	6.14	<=30	Pass
		2440	7.25	<=30	Pass
		2480	6.91	<=30	Pass
2M	SISO	2402	6.14	<=30	Pass
		2440	7.29	<=30	Pass
		2480	6.94	<=30	Pass
Note1: Antenna Gain: Ant1: 2.60dBi;					



Test Report No.: RF260904B002

4. Maximum Power Spectral Density

4.1 TEST RESULT

4.1.1 PSD

Mode	TX Type	Frequency (MHz)	Maximum PSD (ANT1)			Verdict
			dBm/100KHz	dBm/3KHz	Limit(dBm/3kHz)	
1M	SISO	2402	5.87	-9.36	<=8	Pass
		2440	7.14	-8.09	<=8	Pass
		2480	6.82	-8.41	<=8	Pass
2M	SISO	2402	5.88	-9.35	<=8	Pass
		2440	7.18	-8.05	<=8	Pass
		2480	6.84	-8.39	<=8	Pass

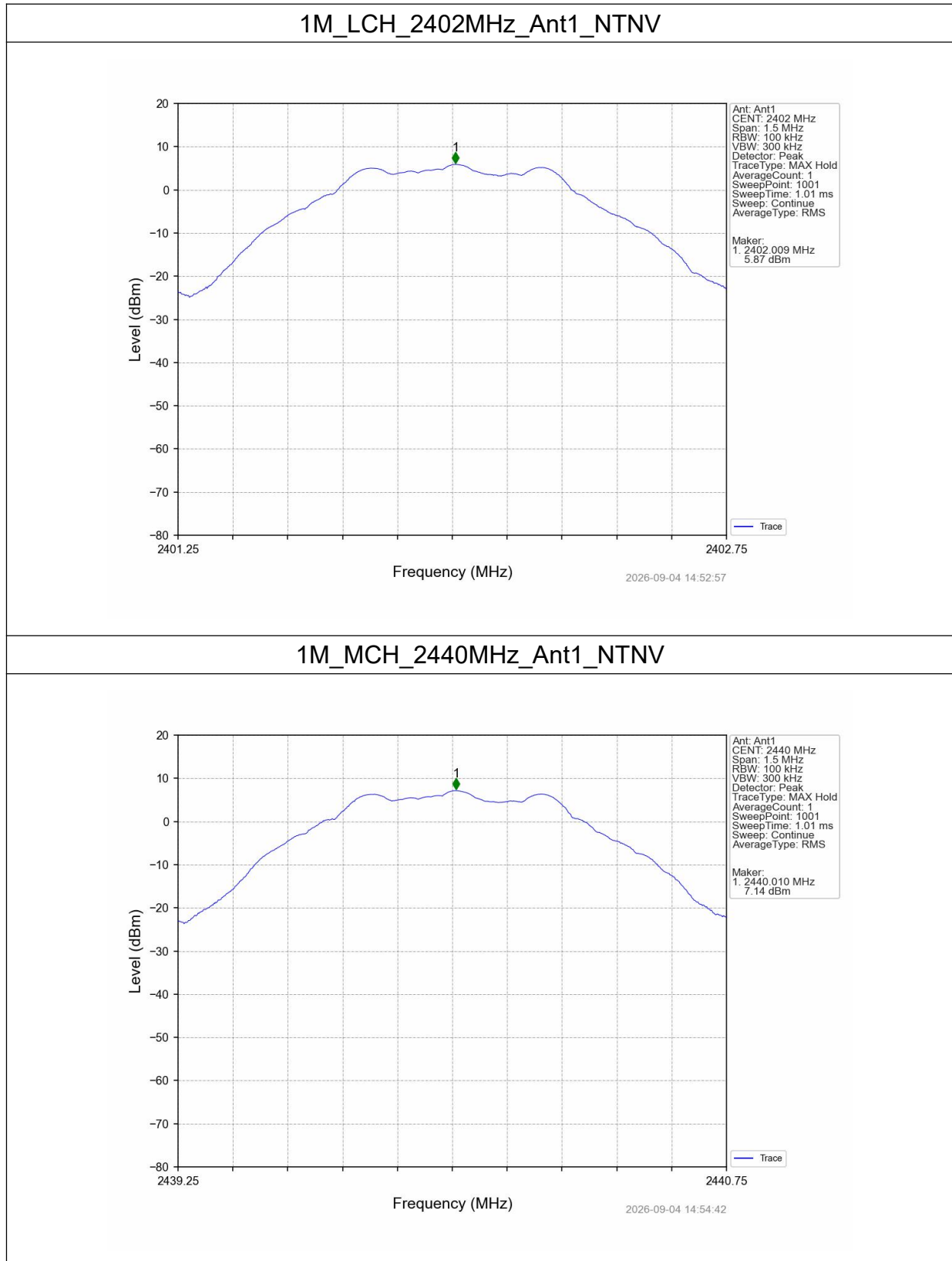
Note1: Antenna Gain: Ant1: 2.60dBi;

4.2 TEST GRAPH



Test Report No.: RF260904B002

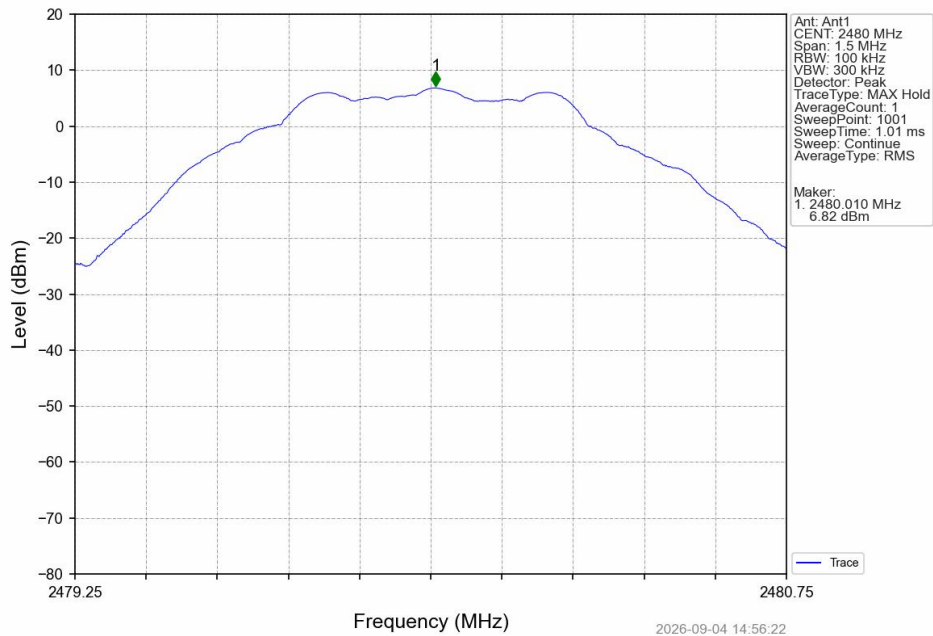
4.2.1 PSD



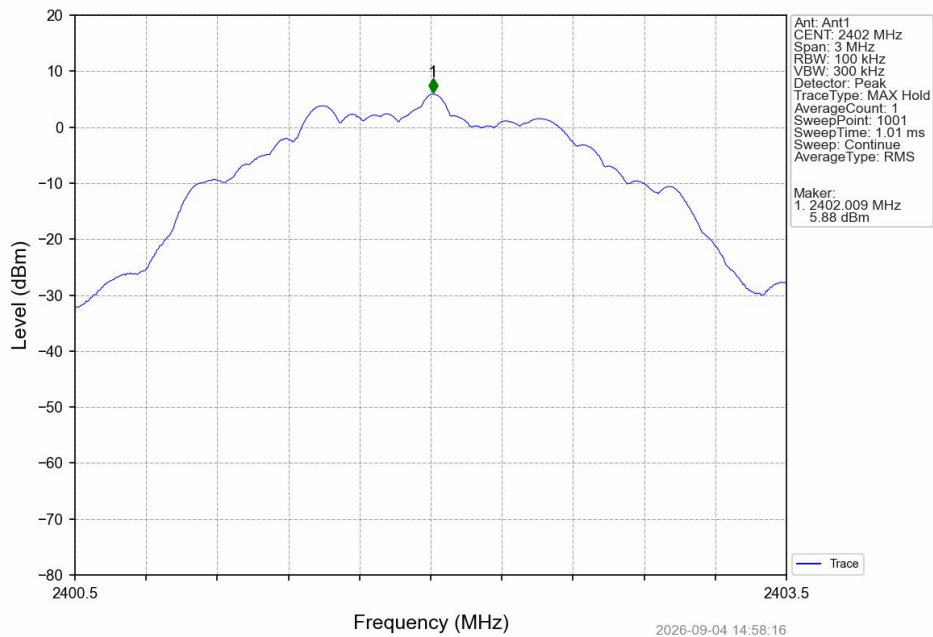


Test Report No.: RF260904B002

1M_HCH_2480MHz_Ant1_NTNV



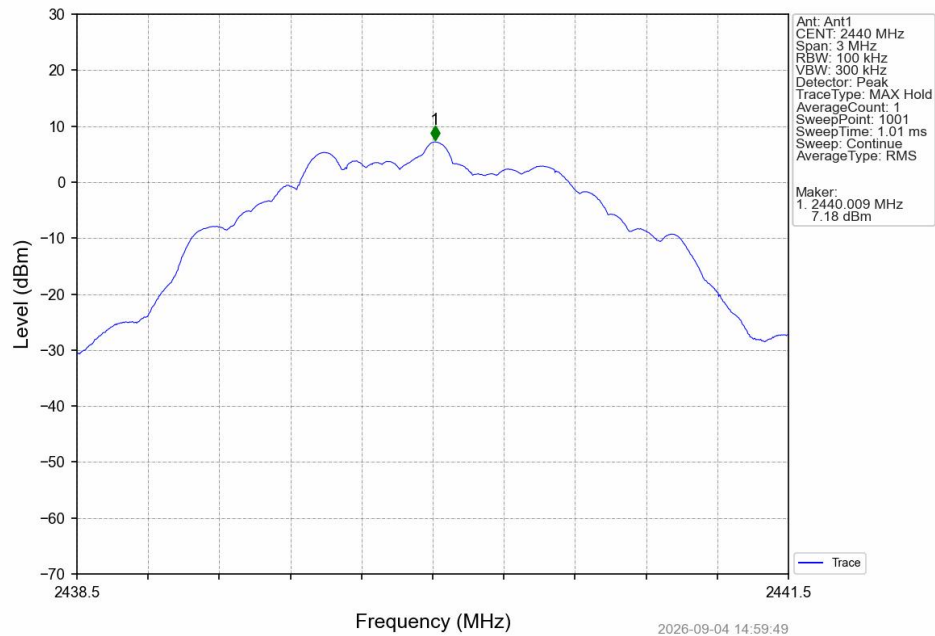
2M_LCH_2402MHz_Ant1_NTNV



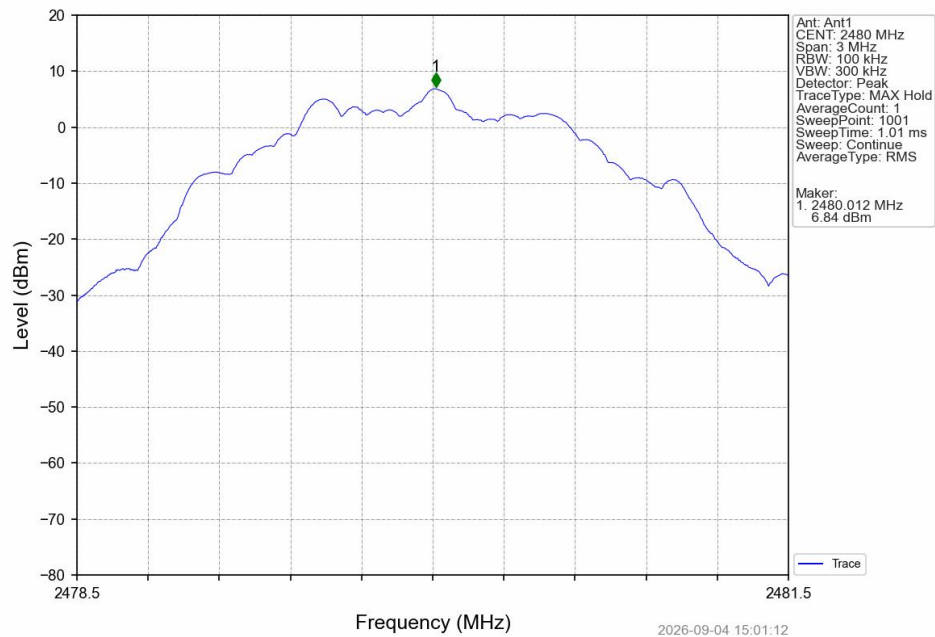


Test Report No.: RF260904B002

2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV



5. Unwanted Emissions In Non-restricted Frequency Bands

5.1 TEST RESULT

5.1.1 REF

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)
1M	SISO	2402	1	5.87
		2440	1	7.14
		2480	1	6.81
2M	SISO	2402	1	5.90
		2440	1	7.20
		2480	1	6.86

5.1.2 CSE

Mode	TX Type	Frequency (MHz)	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
1M	SISO	2402	1	7.14	-12.86	Pass
		2440	1	7.14	-12.86	Pass
		2480	1	7.14	-12.86	Pass
2M	SISO	2402	1	7.20	-12.80	Pass
		2440	1	7.20	-12.80	Pass
		2480	1	7.20	-12.80	Pass

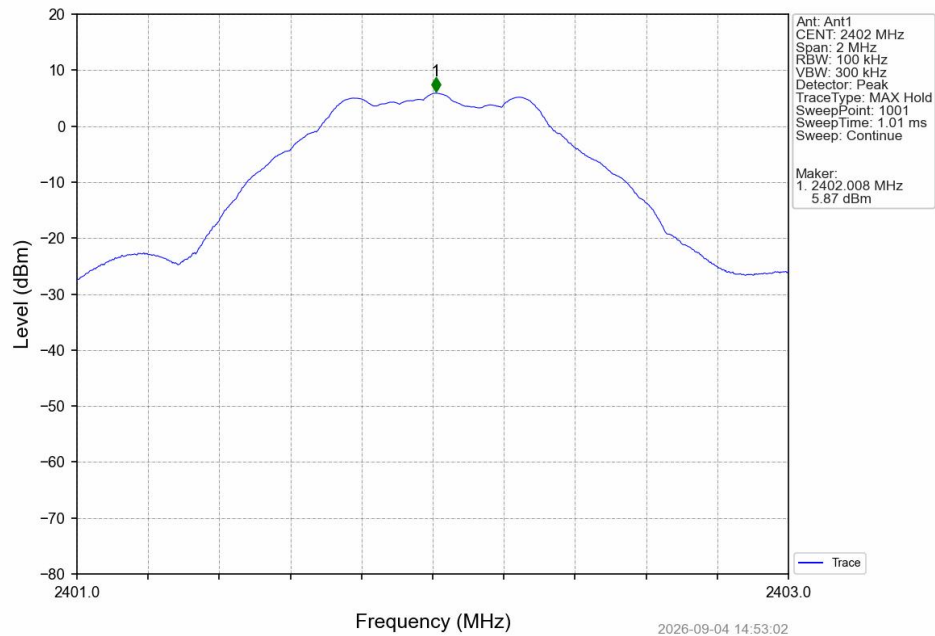
5.2 TEST GRAPH



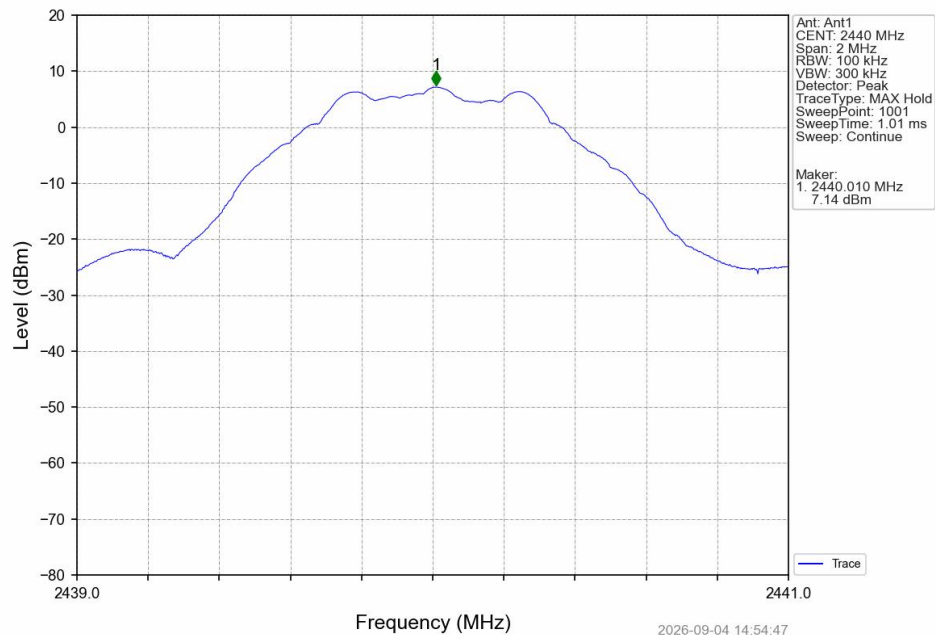
Test Report No.: RF260904B002

5.2.1 REF

1M_LCH_2402MHz_Ant1_NTNV



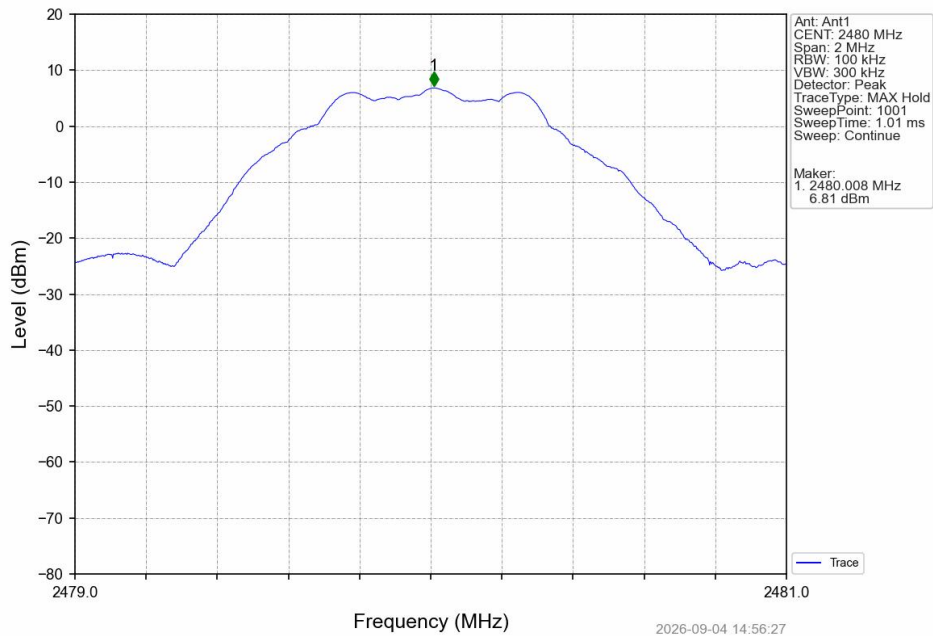
1M_MCH_2440MHz_Ant1_NTNV



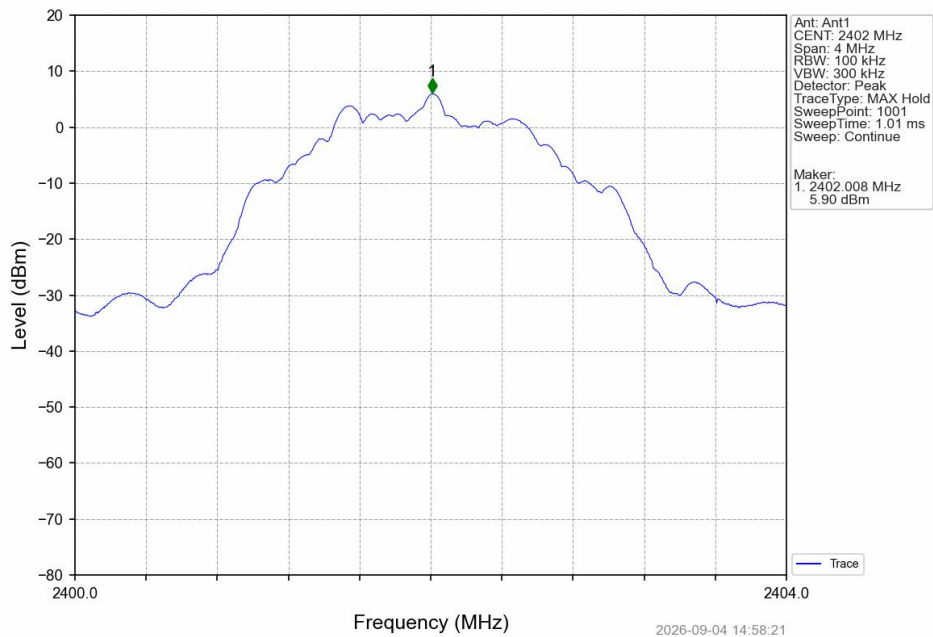


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1M_HCH_2480MHz_Ant1_NTNV



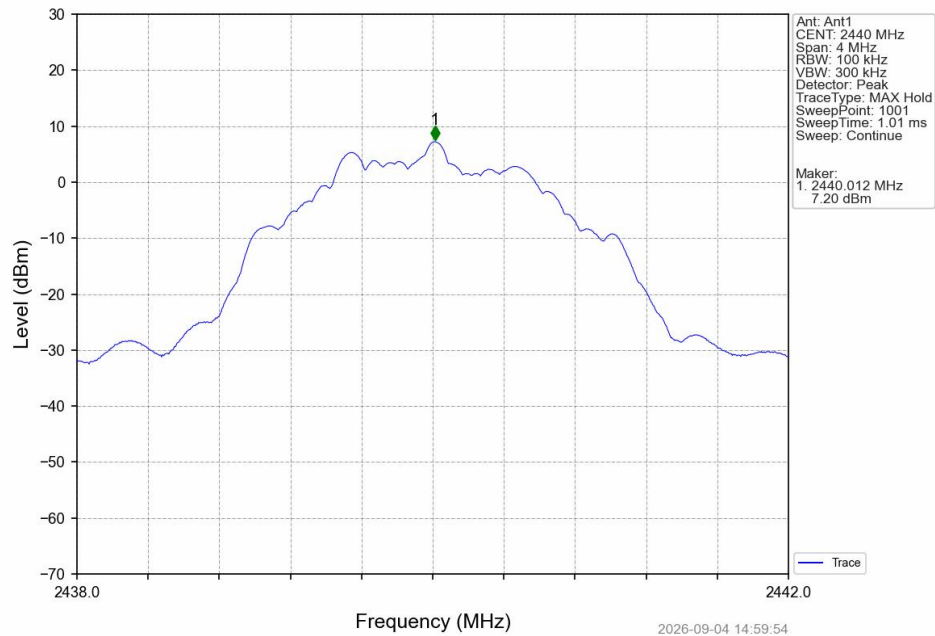
2M_LCH_2402MHz_Ant1_NTNV



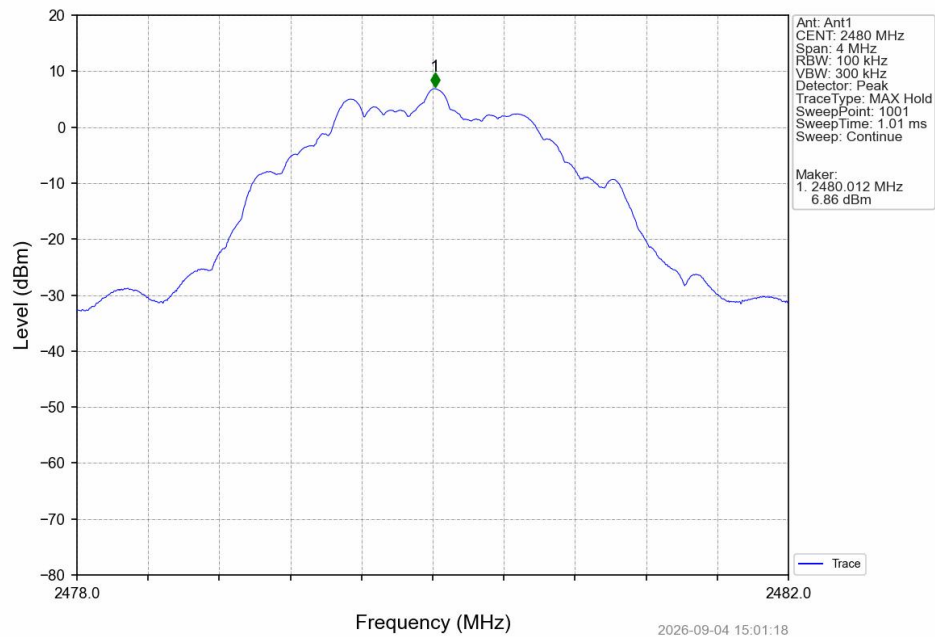


Test Report No.: RF260904B002

2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV

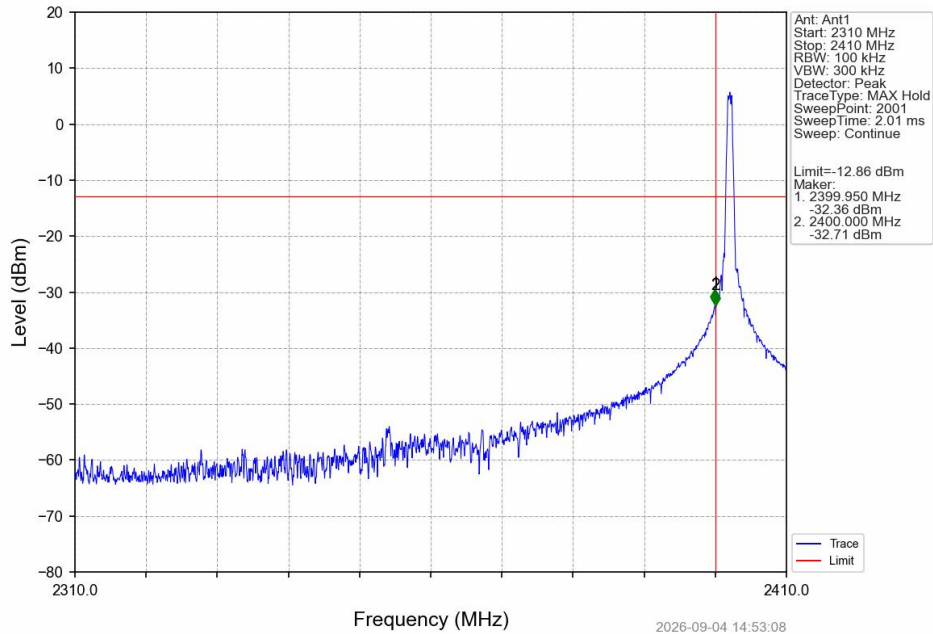




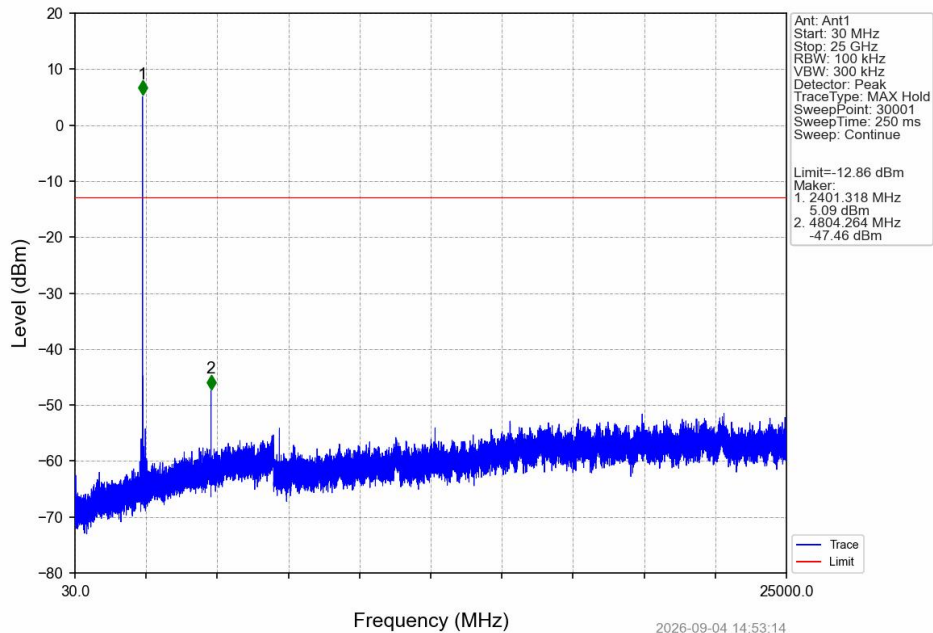
Test Report No.: RF260904B002

5.2.2 CSE

1M_LCH_2402MHz_Ant1_NTNV

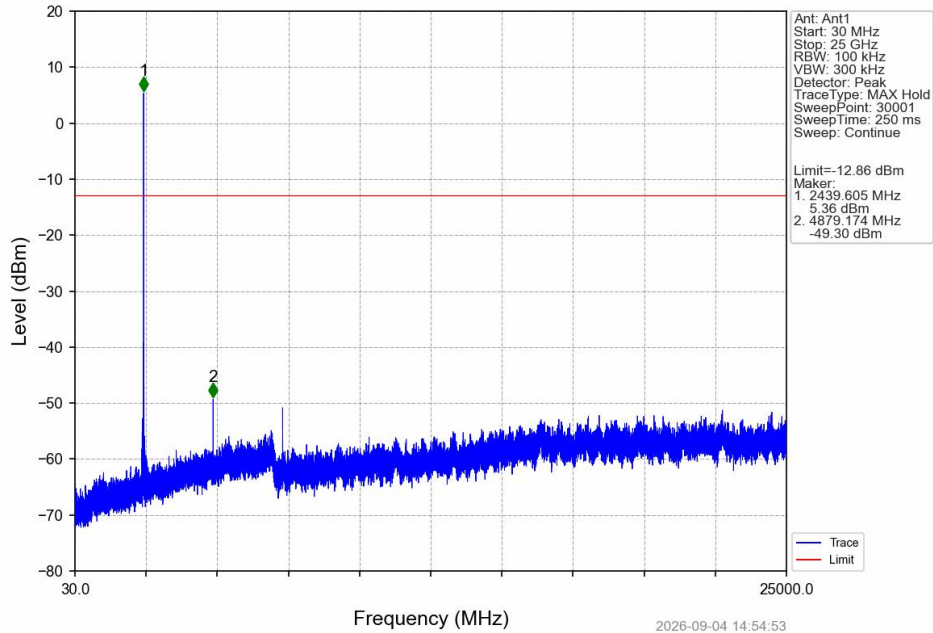


1M_LCH_2402MHz_Ant1_NTNV

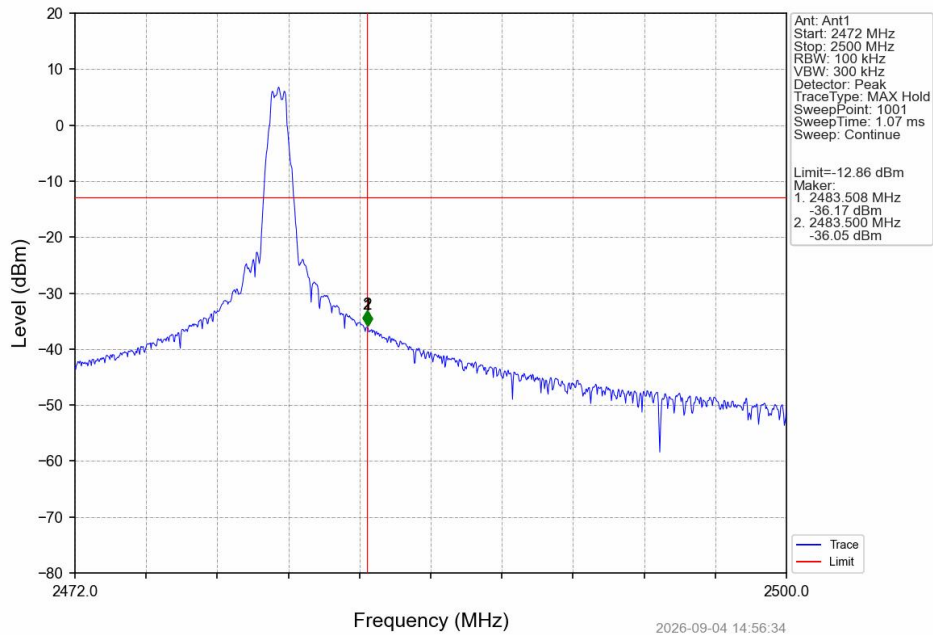


Test Report No.: RF260904B002

1M_MCH_2440MHz_Ant1_NTNV



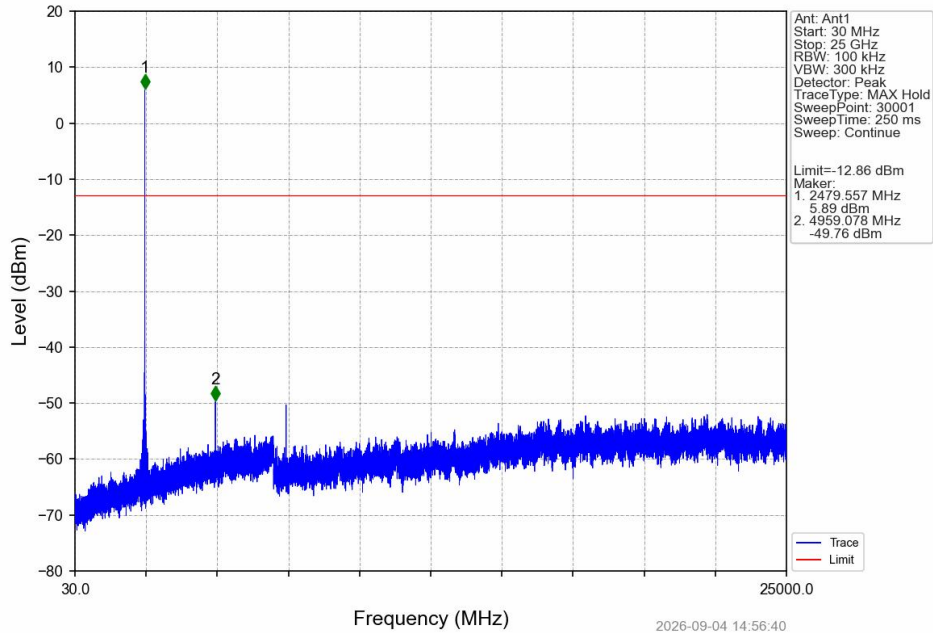
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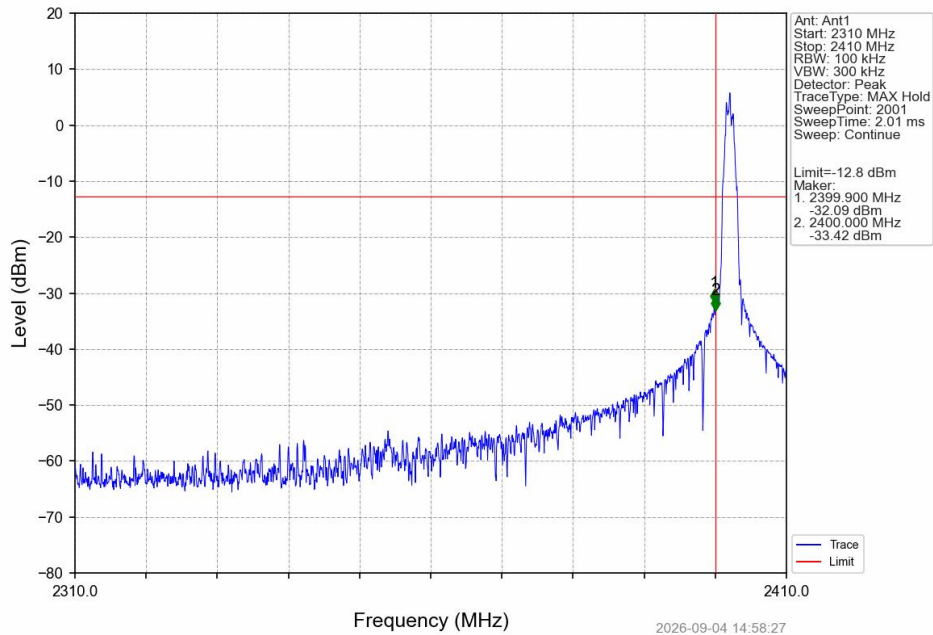


Test Report No.: RF260904B002

1M_HCH_2480MHz_Ant1_NTNV



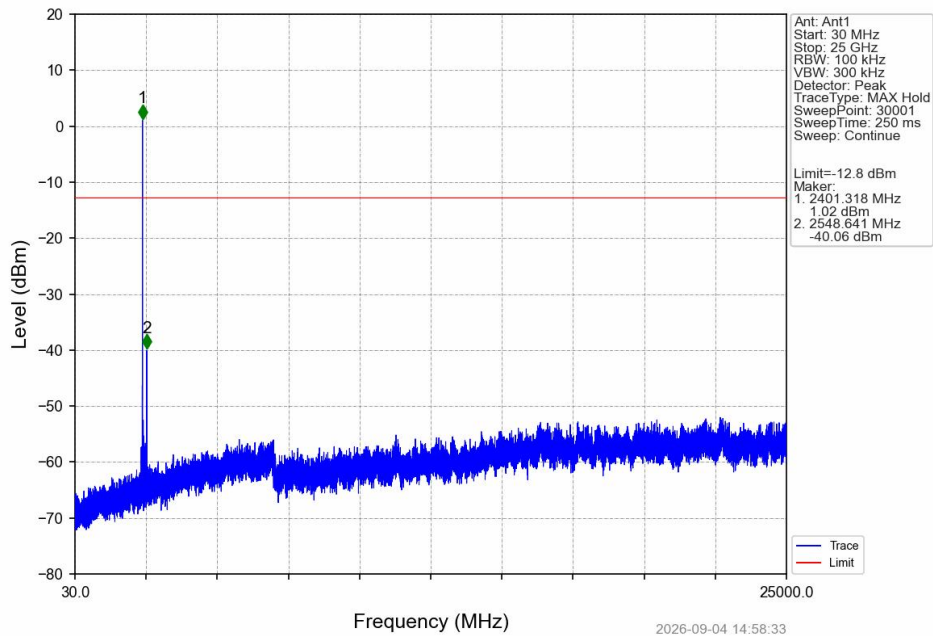
2M_LCH_2402MHz_Ant1_NTNV



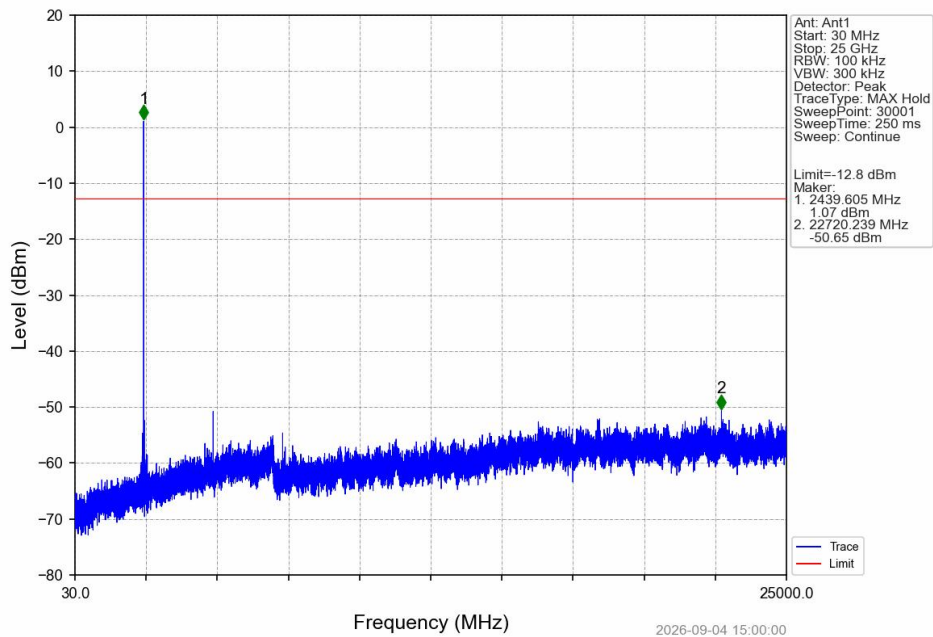


Test Report No.: RF260904B002

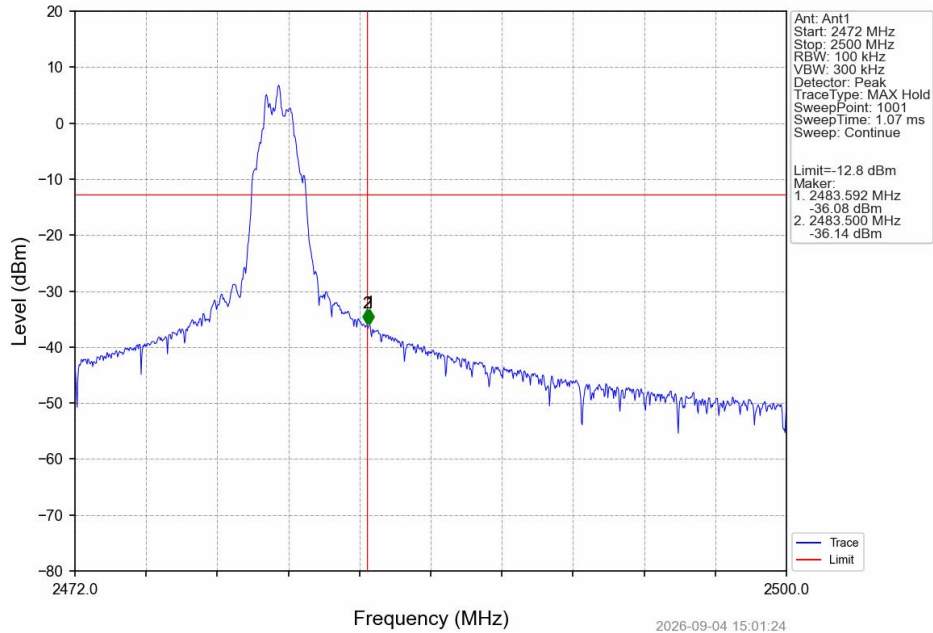
2M_LCH_2402MHz_Ant1_NTNV



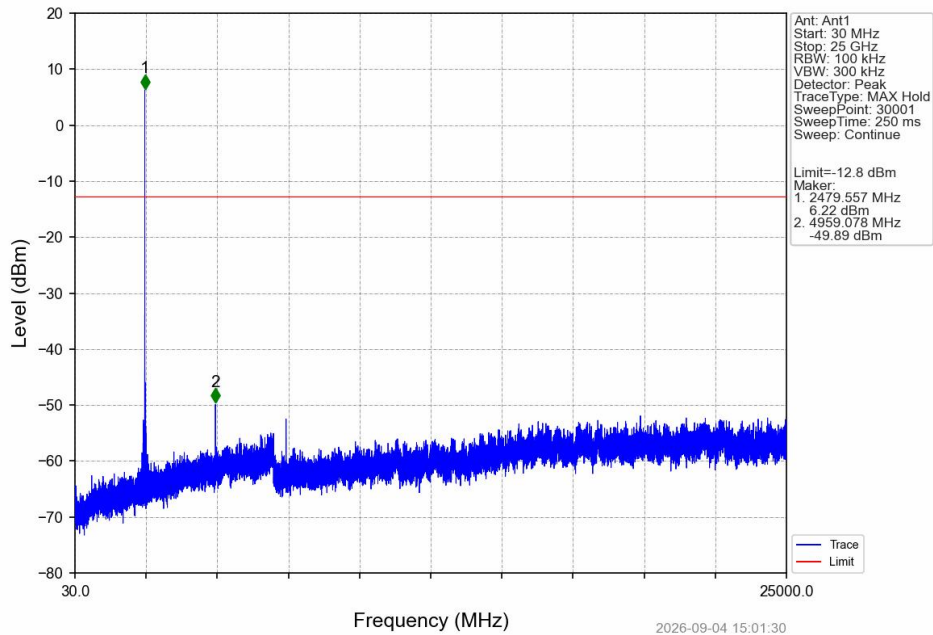
2M_MCH_2440MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV



2M_HCH_2480MHz_Ant1_NTNV





Test Report No.: RF260904B002

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