RADIO TESTREPORT

MIC Public Notice 88

Sample : Multi Button(BT)

Trade Mark : N/A

Main Model : BT-B

Additional Model : N/A

Report No. : UNIA26031102ER-91

Prepared for

LinkJapan Inc.

3F, Daiyon Tamachi Building, 2-17-12 Shibaura, Minato-ku, Tokyo, Japan

Prepared by

Shenzhen United Testing Technology Co., Ltd.

D101&D401, No. 107, Kaicheng High-Tech Park, Taoyuan Community, Dalang Sub-District, Longhua District, Shenzhen, Guangdong, China

TEST RESULT CERTIFICATION

Applicant	:	LinkJapan Inc.
Address	:	3F, Daiyon Tamachi Building, 2-17-12 Shibaura, Minato-ku, Tokyo, Japan
Manufacturer	:	Hangzhou BroadLink Technology Co., Ltd.
Address	:	Building C, 57 Jiang'er Road, Binjiang District, Hangzhou, China

Product description

Product	:	Multi Button(BT)
Trade Mark	:	N/A
Model Name	:	BT-B
Standards	:	MIC Public Notice 88:2004, annex 1 and annex 43 Ordinance Article 2 paragraph 1 item (19)

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Date of Test

Date (s) of performance of tests	:	Mar. 16, 2026 ~ Mar. 17, 2026
Date of Issue	:	Mar. 18, 2026
Test Result	:	Pass

Edited by: Abe Yang

Reviewed by: Kelly Cheng

Approved by: Liuze

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1 TEST SUMMARY

1.1 TEST PROCEDURES AND RESULTS

Test procedures according to the technical standards:

Rule Section	Description of Test	Result
Transmitter Parameters		
Article 5	Frequency Error	Complies
Article 6	Occupied Bandwidth (99%)	Complies
Article 7	Unwanted Emission Intensity	Complies
Article 49.20 & Article 14	Antenna Power Error	Complies
Article 49.20	Transmission Antenna Gain (EIRP Antenna Power)	Complies
Article 49.20	Transmission Radiation Angle Width (3dBBandwidth)	N/A
Article 9.4	Radio Interference Prevention Capability	Complies
Receiver Parameters		
Article 24	Limitation of Collateral Emission of Receiver	Complies

NOTE:
1)" N/A" denotes test is not applicable in this Test Report.
2) MIC Public Notice 88:2004, annex 1 and annex 43.
3) MIC Ordinance Regulating Radio Equipment Section 4.17 of Article 49.20.

1.2 TEST FACILITY

Test Firm : Shenzhen United Testing Technology Co., Ltd.

Address : D101&D401, No. 107, Kaicheng High-Tech Park, Taoyuan Community, Dalang Sub-District, Longhua District, Shenzhen, Guangdong, China

1.3 MEASUREMENT UNCERTAINTY

For the test methods, according to the present document, the measurement uncertainty figures shall be calculated in accordance with TR100028-1 [2] and shall correspond to an expansion factor (coverage factor) K=1.96 or K=2 (which provide confidence levels of respectively 95% and 95.5% in the case where the distributions characterizing the actual measurement uncertainties are normal.

Parameter	Uncertainty
Frequency error / 99%&90% bandwidth	$\pm 1.62*10^{-6}$
Total RF power, conducted	±0.8dB
Spurious emissions, conducted	±0.8dB
DC and low frequency voltages	±0.05%
Humidity	±5%
Temperature	±1℃

1.4 ENVIRONMENTAL CONDITIONS

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15~35 °C
Relative Humidity:	30~60 %
Air Pressure:	950~1050 hPa

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Product:	Multi Button(BT)
Trade Mark:	N/A
Main Model:	BT-B
Additional Model:	N/A
Model Difference:	N/A
Firmware Version:	V1.0
Software Version:	V1.0
Antenna Type:	PCB Antenna
Antenna Gain:	2.23dBi
Frequency Range:	2402MHz~2480MHz
Number of Channels:	40CH
Modulation Type:	GFSK
Battery:	DC 3.3V
Power Source:	DC 3.3V from battery
Adapter:	N/A

Note: For more detailed features description, please refer to the manufacturer’s specifications or the User's Manual.

2.2 DESCRIPTION OF TEST MODES

The EUT has been tested under typical operating condition. The Applicant provides communication tools software to control the EUT for staying in continuous transmitting and receiving mode for testing.

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

Note: Test performed at the lowest/middle/highest frequencies selected in the list above for EUT supported while working on specified mode.

Tested mode, channel, and data rate information		
Mode	Channel	Frequency (MHz)
Carrier Tx Mode	CH00	2402
	CH19	2440
	CH39	2480
Tx Mode	CH00	2402
	CH19	2440
	CH39	2480
Rx Mode	CH00	2402
	CH19	2440
	CH39	2480

2.3 ENVIRONMENTAL CONDITIONS

During the measurement the environmental conditions were within the listed ranges:

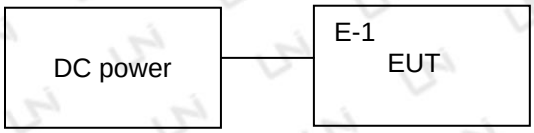
Voltage	Normal Voltage	DC 3.3V
	High Voltage	DC 3.63V
	Low Voltage	DC 2.97V
Other	Normal Temperature	25°C
	Relative Humidity	55 %
	Air Pressure	989 hPa

Note: During the input supply voltage to the EUT from the external power source is varied by +/- 10%, if output voltage had been confirmed that the fluctuation of power supply to the RF circuit of EUT (excluding power source) is equal to or less than +/-1%. Exempt extremely high and low supply voltage condition test, EUT only operated in normal voltage to test all regulations.

NOTE: 1. All modes were test at Normal Voltage, High Voltage, and Low Voltage, only the worst results of Normal Voltage was reported in the test report.

2.4 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Transmitting mode



2.5 DESCRIPTION OF SUPPORT UNITS (CONDUCTED MODE)

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

Item	Equipment	Mfr/Brand	Model/Type No.	Note
E-1	Multi Button(BT)	N/A	BT-B	EUT

Note:

1. The support equipment was authorized by Declaration of Confirmation.
2. All the above equipment/cables were placed in worse case positions to maximize emission signals during emission test.

2.6 MEASUREMENT EQUIPMENT LIST

Item	Equipment	Manufacturer	Model No.	Serial No.	Calibration agency	Calibrated until
1	Horn Antenna	Sunol	DRH-118	A101415	LiSai	2027.03.27
2	Broadband Hybrid Antenna	Sunol	JB1	A090215	LiSai	2027.03.27
3	PREAMP	HP	8449B	3008A00160	Jingheng	2026.03.29
4	PREAMP	HP	8447D	2944A07999	Jingheng	2026.03.25
5	EMI Test Receiver	Rohde&Schwarz	ESR3	101891	Branch of Ti	2026.03.25
6	MXA Signal Analyzer	Agilent	N9020A	MY50510140	Jingheng	2026.03.25
7	MXA Signal Analyzer	Agilent	N9020A	MY51110104	Jingheng	2026.03.25
8	RF Power Sensor	DARE	RPR3006W	15I00041SNO88	Branch of Ti	2026.03.26
9	RF Power Sensor	DARE	RPR3006W	15I00041SNO89	Branch of Ti	2026.03.26
10	RF Power Divider	Anritsu	K241B	992289	Jingheng	2026.03.26
11	Signal Generator	Agilent	E4421B	MY4335105	Jingheng	2026.03.25
12	VECTOR Signal Generator	Rohde&Schwarz	SMU200A	101521	Jingheng	2026.03.25
13	Wideband Radio Communication Tester	Rohde&Schwarz	CMW500	154987	Jingheng	2026.03.25
14	Active Loop Antenna	Com-Power	AL-130R	10160009	LiSai	2026.05.26
15	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-1680	LiSai	2026.03.27
16	Horn Antenna	A-INFOMW	LB-180400-KF	J211060660	Branch of Ti	2026.03.27
17	Microwave Broadband Preamplifier	Schwarzbeck	BBV 9721	100472	Branch of Ti	2026.03.27
18	Signal Generator	Agilent	N5183A	MY47420153	Branch of Ti	2026.03.27
19	Spctrum Analyzer	Rohde&Schwarz	FSP 40	100501	Branch of Ti	2026.03.27
20	Power Meter	KEYSIGHT	N1911A	MY50520168	Branch of Ti	2026.03.27
21	Frequency Meter	VICTOR	VC2000	997406086	Branch of Ti	2026.03.27
22	DC Power Source	HYELEC	HY5020E	055161818	Branch of Ti	2026.03.27
23	Low-noise Amplifier	WSC	DLNA-9K-1000	WCSLNA240816A	LiSai	2026.03.25
24	Spctrum Analyzer	Rohde&Schwarz	FSV40-N	101798	LiSai	2026.03.25
25	MTS 8310	MW	Copyright MWRFtest 2017	V2.0.0.0	--	N/A

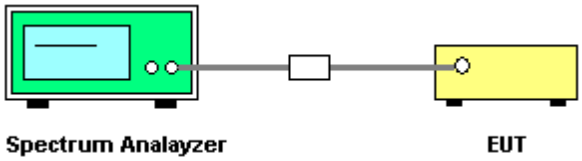
Note: The calibration agency listed on the table corresponds to item ii c) of Article 24-2 paragraph 4.

3 FREQUENCY TOLERANCE

3.1 LIMIT

Item	Limits
Frequency Tolerance	-50ppm≦Frequency Error≦50ppm

3.2 TEST SETUP



3.3 TEST PROCEDURE

1. Frequency accuracy of SA shall be less than 10% of limits tolerance (5ppm)
2. Setting of SA is following as: RB:10kHz / VB: 10kHz / SPAN: 1MHz
3. Center Frequency: The center frequency of testing for EUT
4. Sweep time: Auto
5. Sweep mode: Continuous sweep
6. Detect mode: Positive peak
7. EUT have transmitted absence of modulation signal and fixed channelize. if is using the mark cursor to mark the peak frequency value, fc is declaring of channel frequency.
   Then the frequency error formula is (fc-f)/fc×10^6ppm and the limit is less than ±50ppm

3.4 EUT OPERATION DURING TEST

The EUT was placed on the test table and programmed in un-modulation function.

3.5 TEST RESULT

BLE 1M:

Test Data of Frequency Error					
Test Mode	Test Frequency (MHz)	Measure Frequency (MHz)	Frequency Error (ppm)	Limit (ppm)	Result
un-modulation	2402	2402.015	6.24	±50	Pass
	2440	2440.017	6.97	±50	Pass
	2480	2480.019	7.66	±50	Pass

BLE 1M:

2402MHz

2440MHz

Agilent Spectrum Analyzer - Swept SA
Marker 1 2.480019000000 GHz
PNO: Wide
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
05:28:15 PM Mar 17, 2026
Ref Offset 1 dB
10 dB/div
Ref 21.00 dBm
Log
Mkr1 2.480 019 GHz
2.541 dBm
11.0
1.00
-9.00
-19.0
-29.0
-39.0
-49.0
-59.0
-69.0
Center 2.4800000 GHz
#Res BW 10 kHz
#VBW 10 kHz
Span 1.000 MHz
Sweep 12.07 ms (1001 pts)
MSG
STATUS

2480MHz

4 ANTENNA POWERERROR MEASUREMENT

4.1 LIMIT

Item	Limits
Antenna Power Density	≦10mW/MHz
Antenna Power Error	+20% (Base on manufacturer declare antenna power density)

4.2 MEASURING INSTRUMENTS AND SETTING

The following table is the setting of spectrum analyzer.

Spectrum Parameter	Setting
RB / VB	3 MHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

4.3 TEST PROCEDURES

Step 1:

Connect the UUT to the spectrum analyzer as TEST CONFIGURATION and use the following settings:

•Centre Frequency: The center frequency of the channel under test.

•Span: 4MHz

•RBW: 3MHz

•VBW: 3MHz

•Sweep time: Auto

•Sweep Mode: Continuous sweep

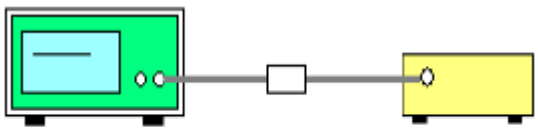
•Trace Mode: Max Hold

•Detect mode: Positive peak

Step 2:

When the trace is complete, record the peak value of the power envelope.

4.4 TEST SETUP LAYOUT



4.5 TEST DEVIATION

There is no deviation with the original standard.

4.6 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

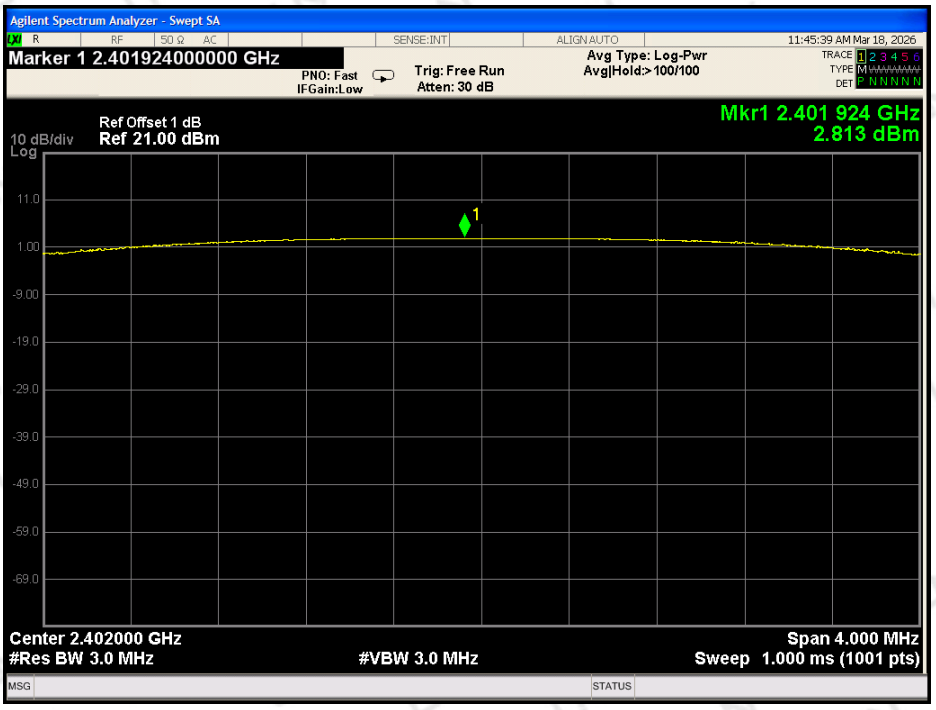
4.7 TEST RESULT OF ANTENNA POWER ERROR

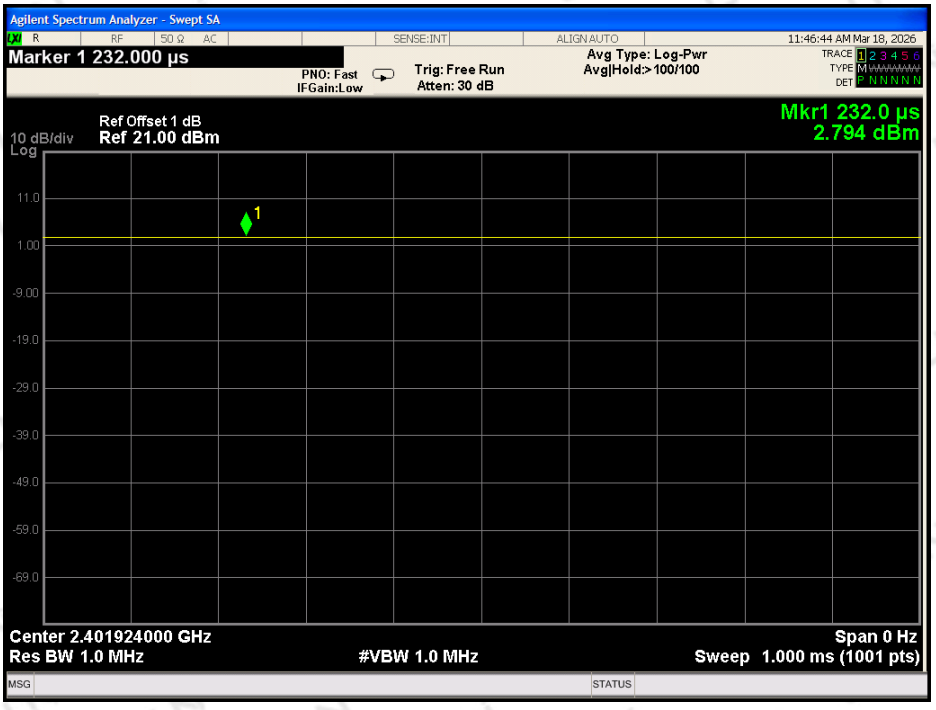
BLE 1M:

Test Data of Antenna Power Error								
Test Mode	Test Frequency (MHz)	Average burst power(dBm)	Output power (mW)	Limit (mW)	Rated power density (mW)	Antenna Power Error (%)	Limit (%)	Result
GFSK	2402	2.794	1.903	10	2	-4.85	20	Pass
	2440	2.642	1.837	10	2	-8.15	20	Pass
	2480	2.701	1.863	10	2	-6.85	20	Pass

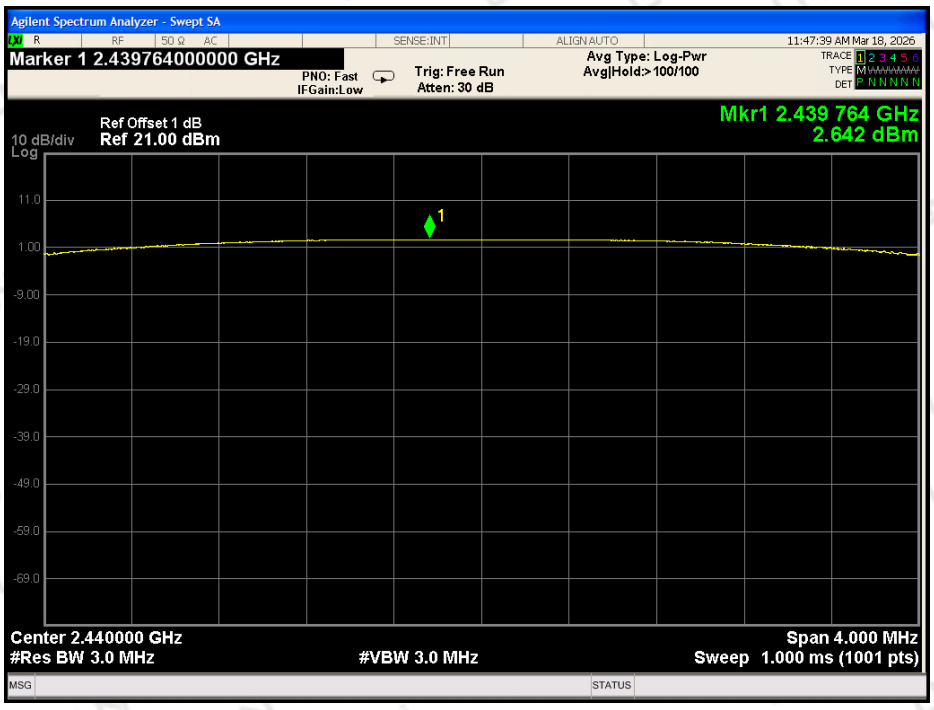
Test Graphs of Antenna Power

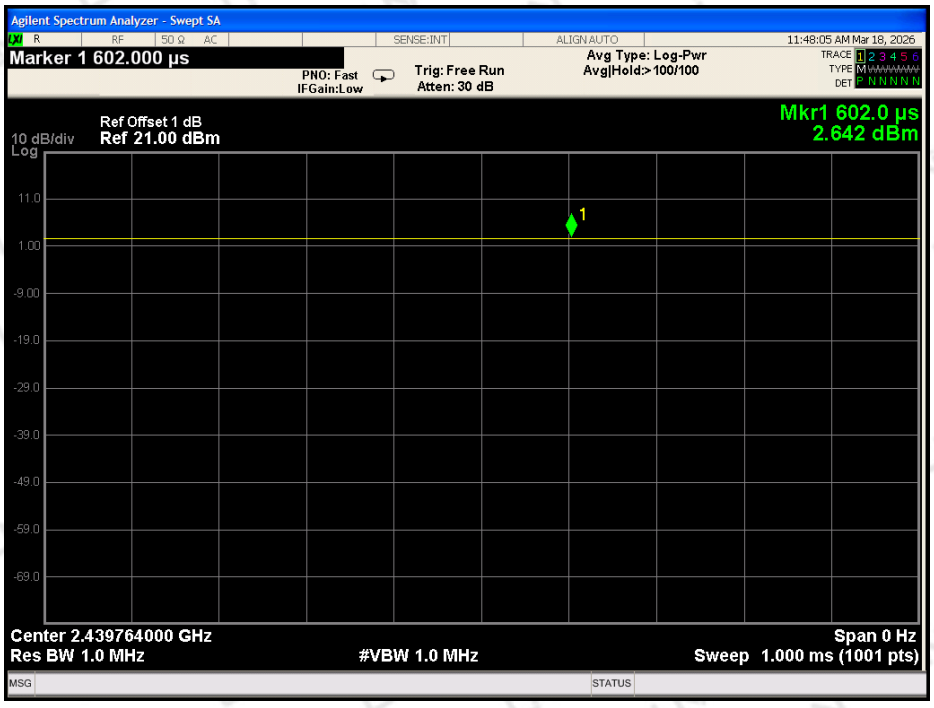
BLE 1M:



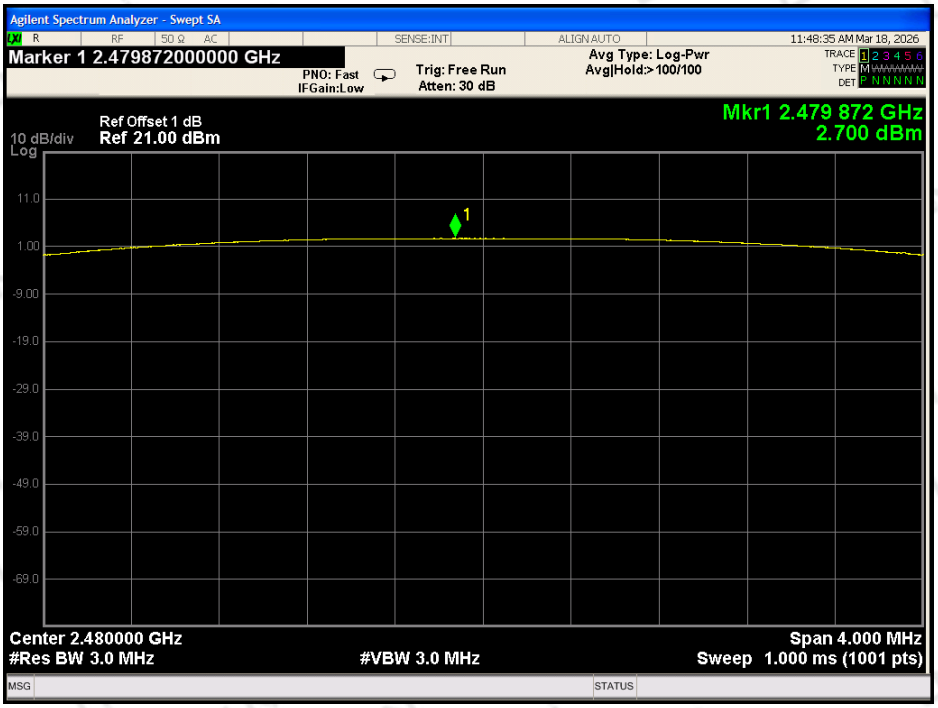


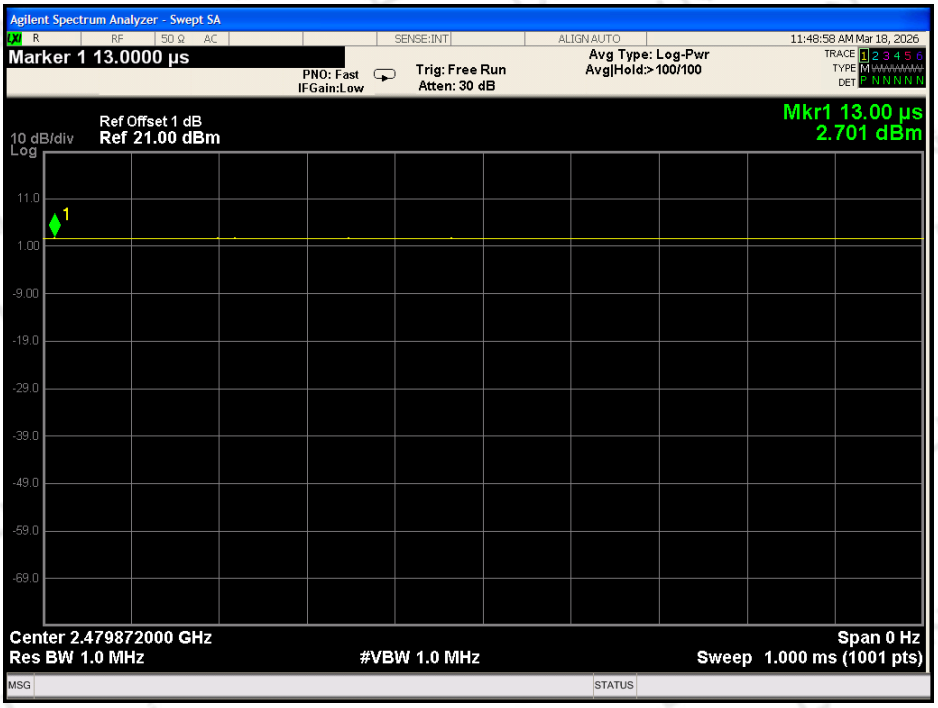
2402MHz


Agilent Spectrum Analyzer - Swept SA
Marker 1 2.439764000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
11:47:39 AM Mar 18, 2026
Ref Offset 1 dB
10 dB/div
Log
Ref 21.00 dBm
Mkr1 2.439 764 GHz
2.642 dBm
Center 2.440000 GHz
#Res BW 3.0 MHz
#VBW 3.0 MHz
Span 4.000 MHz
Sweep 1.000 ms (1001 pts)


Agilent Spectrum Analyzer - Swept SA
Marker 1 602.000 µs
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
11:48:05 AM Mar 18, 2026
Ref Offset 1 dB
10 dB/div
Log
Ref 21.00 dBm
Mkr1 602.0 µs
2.642 dBm
Center 2.439764000 GHz
Res BW 1.0 MHz
#VBW 1.0 MHz
Span 0 Hz
Sweep 1.000 ms (1001 pts)

2440MHz


Agilent Spectrum Analyzer - Swept SA
Marker 1 2.479872000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
11:48:35 AM Mar 18, 2026
Ref Offset 1 dB
10 dB/div
Ref 21.00 dBm
Log
Mkr1 2.479 872 GHz
2.700 dBm
Center 2.480000 GHz
#Res BW 3.0 MHz
#VBW 3.0 MHz
Span 4.000 MHz
Sweep 1.000 ms (1001 pts)


Agilent Spectrum Analyzer - Swept SA
Marker 1 13.0000 µs
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 30 dB
Avg Type: Log-Pwr
Avg|Hold:>100/100
11:48:58 AM Mar 18, 2026
Ref Offset 1 dB
10 dB/div
Ref 21.00 dBm
Log
Mkr1 13.00 µs
2.701 dBm
Center 2.479872000 GHz
Res BW 1.0 MHz
#VBW 1.0 MHz
Span 0 Hz
Sweep 1.000 ms (1001 pts)

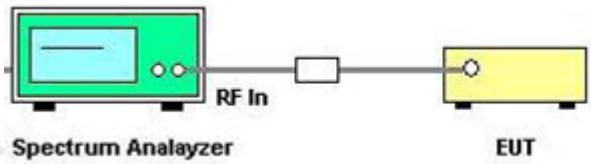
2480MHz

5 OCCUPIED BANDWIDTH

5.1 LIMIT

Item	Limits
Occupied Bandwidth	Others≦26MHz

5.2 TEST SETUP



5.3 TEST PROCEDURE

1. Setting of SA is following as: RB: 300kHz / VB: 300kHz / SPAN: 4MHz / AT: 10dB
   Ref: 21dBm / Sweep time: Auto / Sweep Mode: Continuous sweep / Detect mode: Positive peak / Trace mode: Max hold
2. EUT have transmitted the maximum modulation signal and fixed channelize.
   SA set to 99% of occupied bandwidth to measure occupied bandwidth.
   The limit is less than 26MHz.

5.4 TEST DEVIATION

There is no deviation with the original standard.

5.5 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

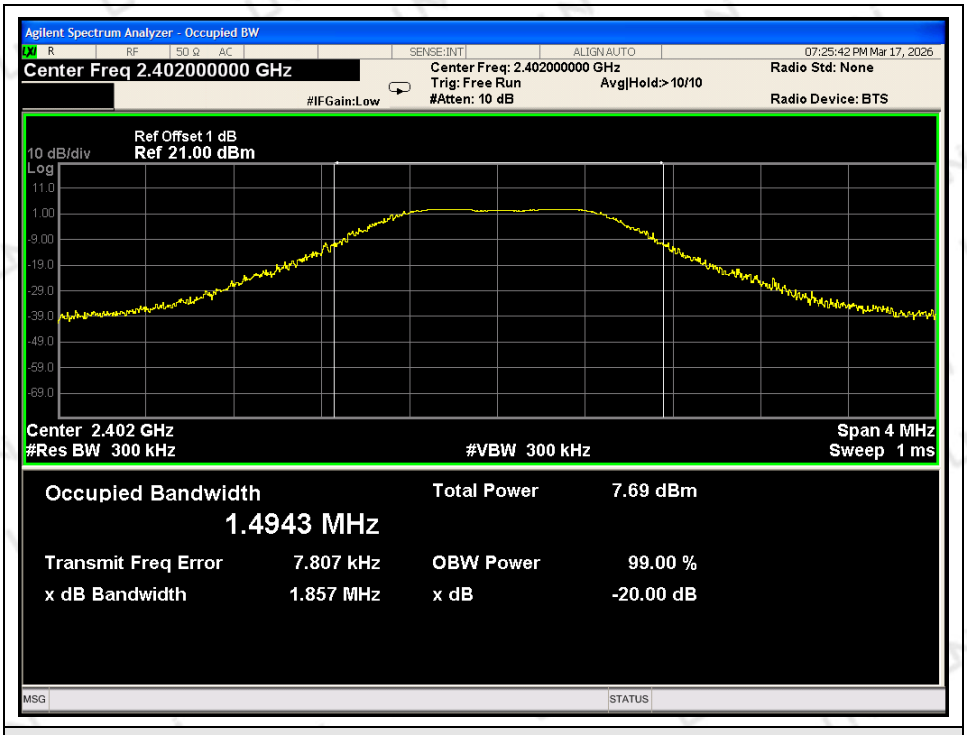
5.6 RESULTS OF OCCUPIED BANDWIDTH

BLE 1M:

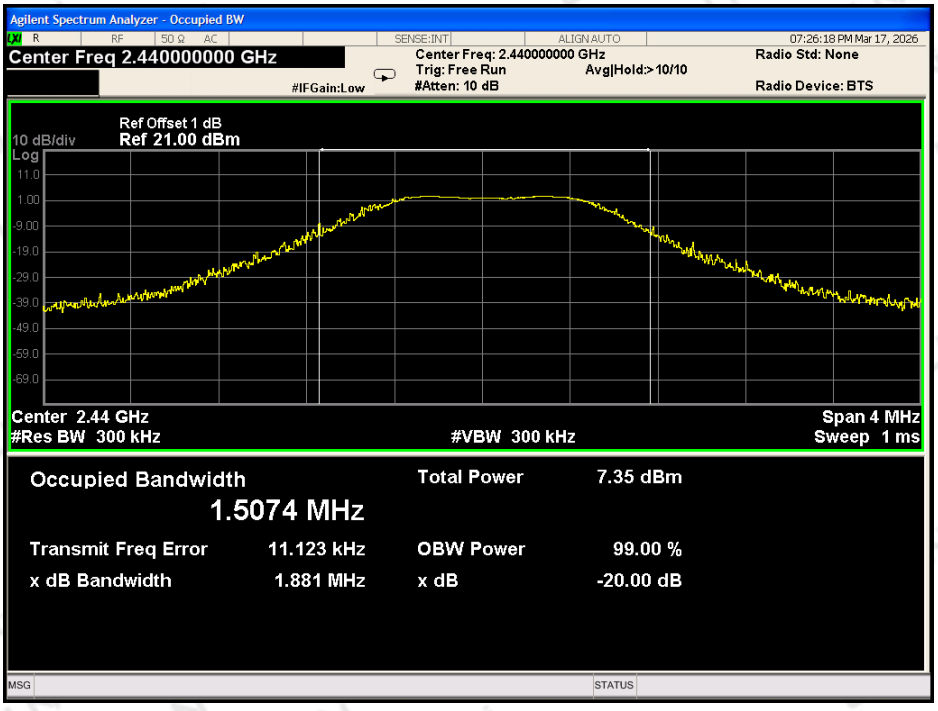
Test Data of Occupied Bandwidth				
Test Mode	Test Frequency (MHz)	Occupied Bandwidth (MHz)	Limit(MHz)	Result
GFSK	2402	1.4943	<26	Pass
	2440	1.5074	<26	Pass
	2480	1.4033	<26	Pass

Test Graphs of Occupied Bandwidth

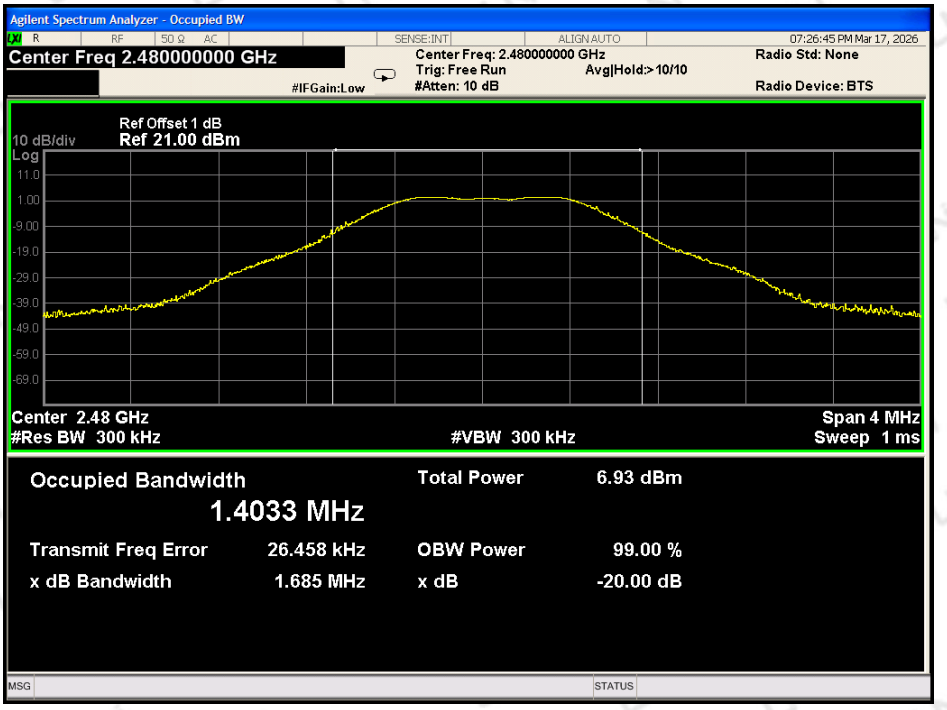
BLE 1M:



2402MHz



2440MHz


Agilent Spectrum Analyzer - Occupied BW
Center Freq 2.480000000 GHz
Center Freq: 2.480000000 GHz
Trig: Free Run
Avg|Hold:>10/10
#Atten: 10 dB
#IFGain:Low
Radio Std: None
Radio Device: BTS
07:26:45 PM Mar 17, 2026
Ref Offset 1 dB
10 dB/div
Ref 21.00 dBm
Log
11.0
1.00
-9.00
-19.0
-29.0
-39.0
-49.0
-59.0
-69.0
Center 2.48 GHz
#Res BW 300 kHz
#VBW 300 kHz
Span 4 MHz
Sweep 1 ms
Occupied Bandwidth
1.4033 MHz
Total Power 6.93 dBm
Transmit Freq Error 26.458 kHz
OBW Power 99.00 %
x dB Bandwidth 1.685 MHz
x dB -20.00 dB
MSG
STATUS

2480MHz

6 TRANSMISSION ANTENNA GAIN (EIRP ANTENNA POWER) MEASUREMENT

6.1 LIMIT

Item	Limits
EIRP Power Density	≦6.91dBm/MHz (FH) ≦12.14dBm/MHz (FH system from 2400 to 2427MHz and from 2470.75 to 2483.5MHz, OFDM, DS 20MHz system) ≦12.14dBm (Others) ≦9.13dBm/MHz (OFDM 40MHz system)
Note: This test item is not applied for radio equipment with equivalent isotropic radiation power lower than 12.14dBm, but Antenna Power (Conducted) limit is 10mW (10dBm), So the test item will not be applied to the transmission antenna which has a gain of 2.14dBi or less	

6.2 MEASURING INSTRUMENTS AND SETTING

The following table is the setting of spectrum analyzer.

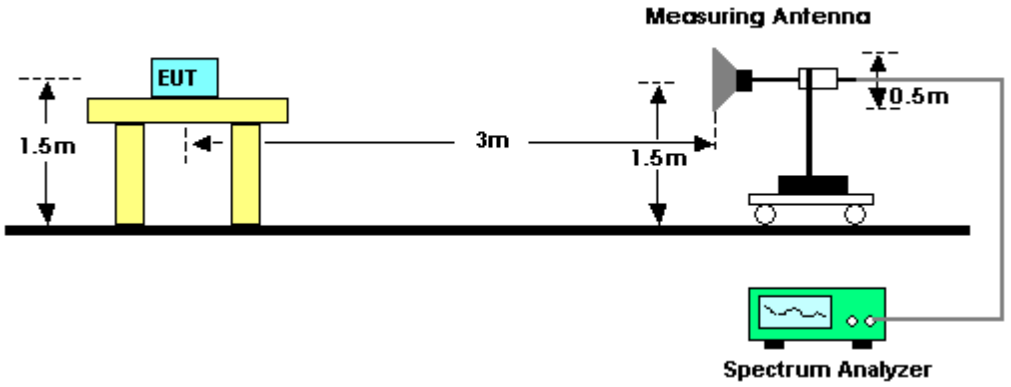
Spectrum Parameter	Setting
Attenuation	Auto
RB/VB	1 MHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

6.3 TEST PROCEDURES

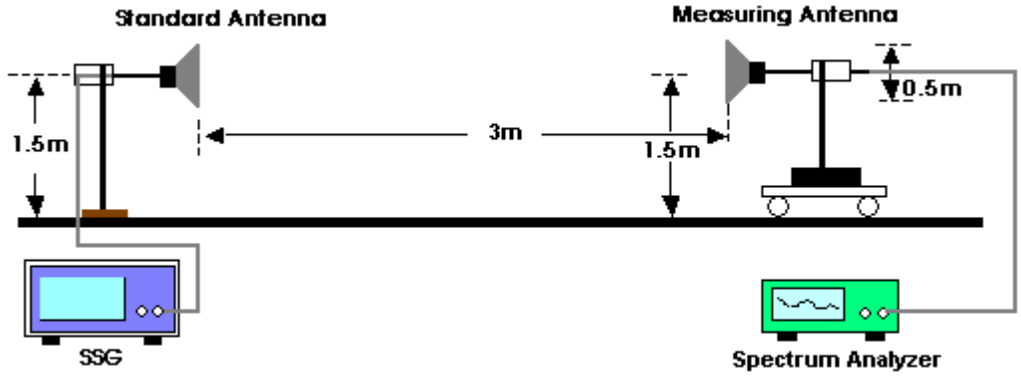
1. Set EUT ad measuring antenna at the same height and roughly facing each other.
2. Move the measuring antenna height up and down within ± 50cm of EUT height and swing it to find the maximum output of the measuring antenna. The output level at the spectrum analyzer is read sa “E“.
3. Remove the EUT from the turn table and put the replacing antenna facing to measuring antenna at same height. Set the standard signal generator (SSG) at same frequency and transmit on then receive the signal
4. Swing the replacing antenna give a maximum receiving level.
5. Move the measuring antenna height up and down within ± 50cm of replacing antenna height and swing it to find the maximum receiving level.
6. Set SSG output power at Pt to give the equivalent output level of “E” or calculate Pt with SSG output which gives the nearest of “E” and difference (± 1dB). Record the Pt.
7. Calculate EIRP by the formula below EIRP = Gt – L + Pt.
   Gt: gain of replacing antenna (dBi)
   L: feeder loss between SSG and replacing antenna
   Pt: Output power of the SSG
8. If the antenna for the EUT has circular polarization, sum of V-field and H-field will be result if measuring antenna is linear polarization.

6.4 TEST SETUP LAYOUT

For EUT radiation measurement



For standard antenna measurement



6.5 TEST DEVIATION

There is no deviation with the original standard.

6.6 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

6.7 RESULTS OF TRANSMISSION ANTENNA GAIN

BLE 1M:

TEST CONDITION	EIRP Power dBm/MHz
Normal Voltage (DC 3.3V)	2.944
Normal Voltage +10% (DC 3.63V)	2.691
Normal Voltage -10%(DC 2.97V)	2.541
Remarks: Low/Mid/High of test frequency range; Limit ≦ 16.37mW/MHz (12.14dBm/MHz)	

7 TRANSMISSION RADIATION ANGLE WIDTH (3DB BEAMWIDTH) MEASUREMENT

7.1 LIMIT

Item	Limits
3dB antenna beam width	360/A (If A<1; then A=1) A = {EIRP Power [mW] / 16.36 for DS, OFDM} or A = {EIRP Power [mW] / 4.9 for FH}
Note: This test item is not applied for radio equipment with equivalent isotropic radiation power lower than 12.14dBm, but Antenna Power (Conducted) limit is 10mW (10dBm), So the test item will not be applied to the transmission antenna which has a gain of2.14dBi or less	

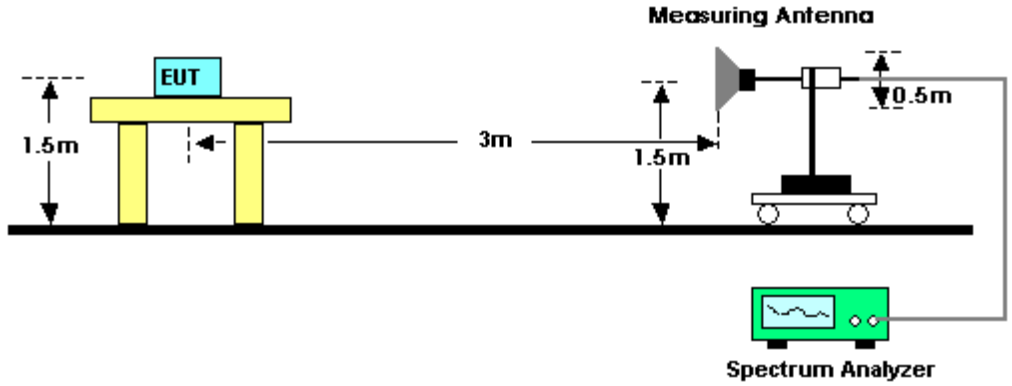
7.2 MEASURING INSTRUMENTS AND SETTING

Spectrum Parameter	Setting
Attenuation	Auto
Span Frequency	0 MHz
RB	1 MHz
VB	1 kHz
Detector	Peak
Trace	Max Hold
Sweep Time	Auto

7.3 TEST PROCEDURES

1. Set EUT and measuring antenna at the same height and roughly facing each other.
2. Set spectrum analyzer with condition in section 4.7.2 and tune reference level to observe receiving signal position.
3. Rotate directions of the EUT horizontally and vertically to find the maximum receiving power.
4. Move the measuring antenna height up and down within ± 50cm of EUT height and swing it to find the maximum output of measuring antenna. The output level at the spectrum analyzer is read as “E”
5. Calculate permitted radiation angle in horizontal and vertical using EIRP measured in another test method.
6. Calculate 3dB antenna beam width by the formula below 360/A (If A<1; then A=1).
   A = {EIRP Power [mW] / 16.36 for DS, OFDM} or
   A = {EIRP Power [mW] / 4.9 for FH}

7.4 TEST SETUP LAYOUT



7.5 TEST DEVIATION

There is no deviation with the original standard.

7.6 EUT OPERATION DURING TEST

The EUT was programmed to be in continuously transmitting mode.

7.7 TEST RESULT OF TRANSMISSION RADIATION ANGLE WIDTH (3DB BEAMWIDTH)

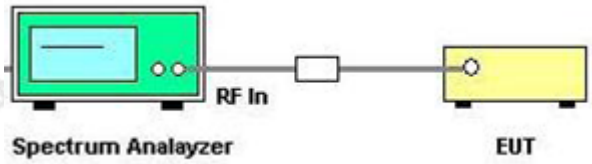
Note: This test item is not applied for radio equipment with equivalent isotropic radiation power lower than 12.14dBm.

8 UNWANTED EMISSION INTENSITY MEASUREMENT

8.1 LIMIT

Item	Limits
TX Spurious Emission(2400~2483.5MHz)	≦ 2.5μW(-26dBm) (30MHz≦f≦1000MHz)
	≦2.5μW(-26dBm) (1000MHz<f≦2387MHz)
	≦25μW(-16dBm) (2387MHz<f≦2400MHz)
	≦25μW(-16dBm) (2483.5MHz≦f<2496.5MHz)
	≦2.5μW(-26dBm) (2496.5MHz≦f<12500MHz)

8.2 TEST SETUP



8.3 TEST PROCEDURE

The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

EUT Condition: modulation

Spectrum Condition:

Frequency: 30MHz-13GHz

RBW: 100 KHz (30MHz-1GHz), 1MHz (1GHz-13GHz)

VBW:100 KHz (30MHz-1GHz), 1MHz (1GHz-13GHz)

Sweep time: Auto

Detector mode: Positive peak

Indication mode: Max hold

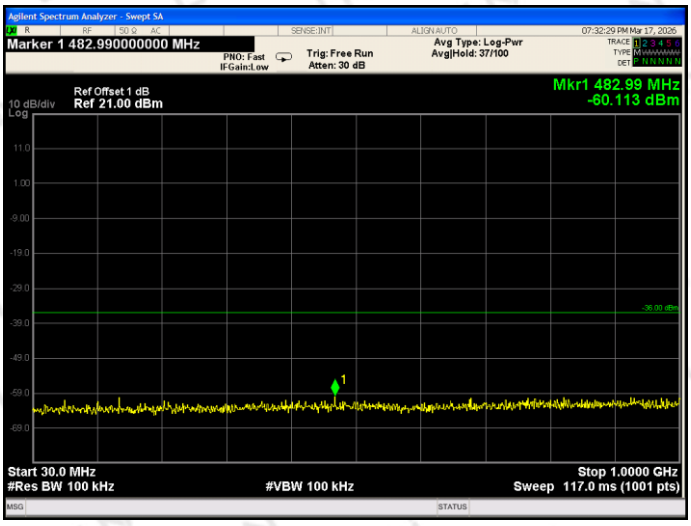
8.4 TEST RESULT

BLE 1M:

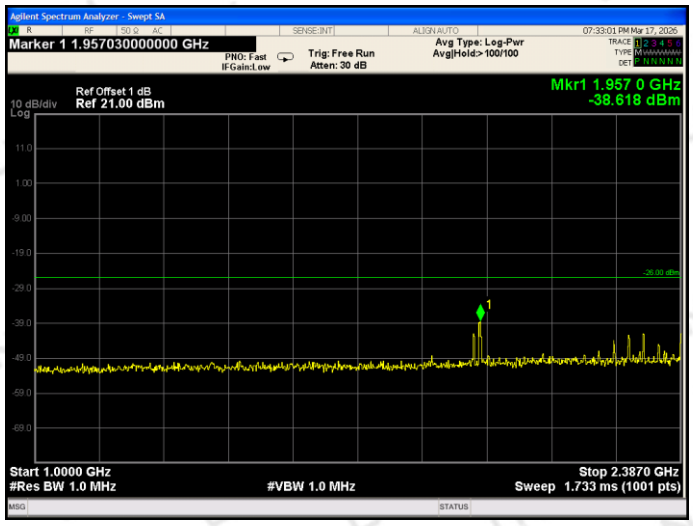
Test freq. [MHz]	Test freq. range [MHz]	Freq. [MHz]	Result [(dBm/ 100kHz)]	Result [dBm/MHz]	Result [μW/MHz]	Limit [μW/MHz]	Result
2402	30-1000	482.99	-70.113	-60.113	0.00097	≤2.5	PASS
	1000-2387	1957	/	-38.618	0.13747	≤2.5	PASS
	2387-2400	2400	/	-29.116	1.22574	≤25	PASS
	2483.5-2496.5	2487.075	/	-46.649	0.02163	≤25	PASS
	2496.5-12500	2527	/	-40.244	0.09454	≤2.5	PASS
2440	30-1000	869.05	-69.491	-59.491	0.00112	≤2.5	PASS
	1000-2387	2345.4	/	-41.649	0.06841	≤2.5	PASS
	2387-2400	2392.369	/	-46.294	0.02347	≤25	PASS
	2483.5-2496.5	2492.509	/	-45.658	0.02718	≤25	PASS
	2496.5-12500	2567	/	-40.222	0.09502	≤2.5	PASS
2480	30-1000	890.39	-70.121	-60.121	0.00097	≤2.5	PASS
	1000-2387	2353.7	/	-41.601	0.06917	≤2.5	PASS
	2387-2400	2399.675	/	-47.264	0.01878	≤25	PASS
	2483.5-2496.5	2483.682	/	-39.937	0.10146	≤25	PASS
	2496.5-12500	2517	/	-38.831	0.13089	≤2.5	PASS

BLE 1M:

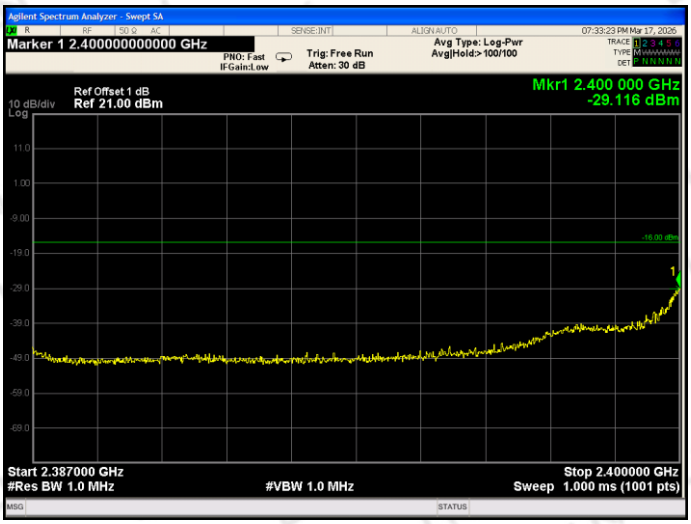
TX Mode 2402MHz



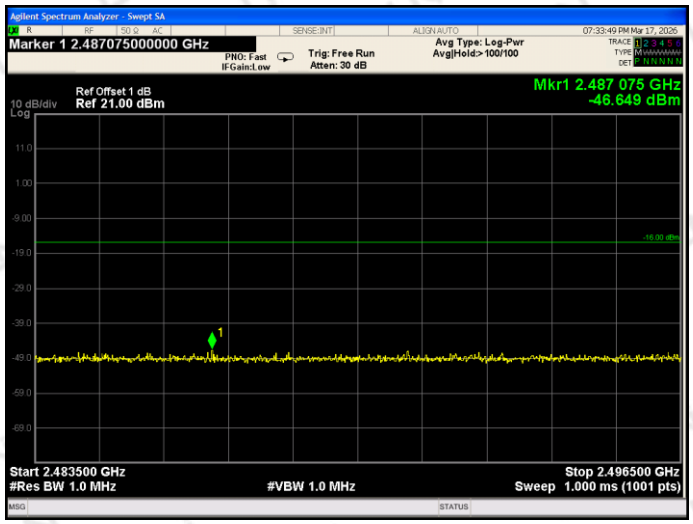
30MHz~1GHz



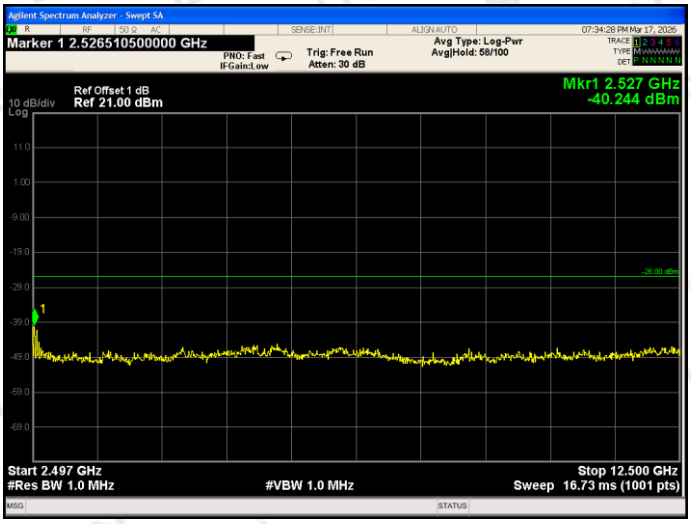
1GHz~2.387GHz



2.387GHz~2.4GHz

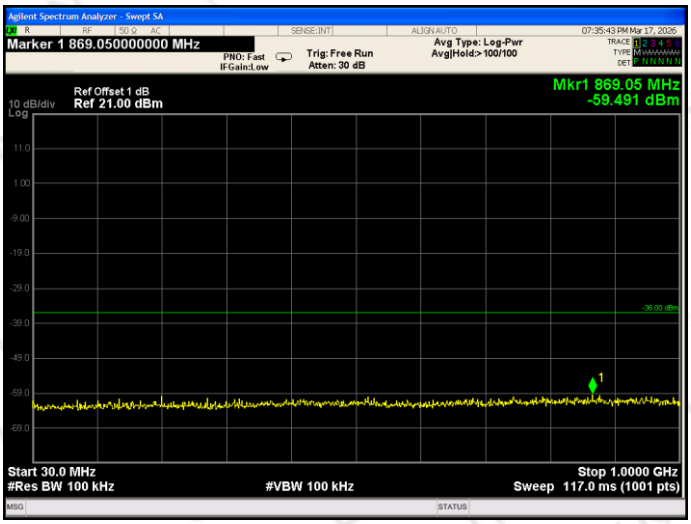


2.4835GHz~2.4965GHz

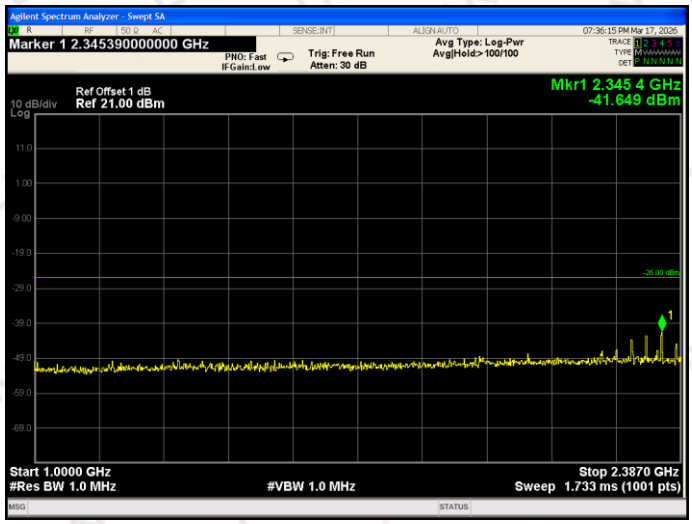


2.4965GHz~12.5GHz

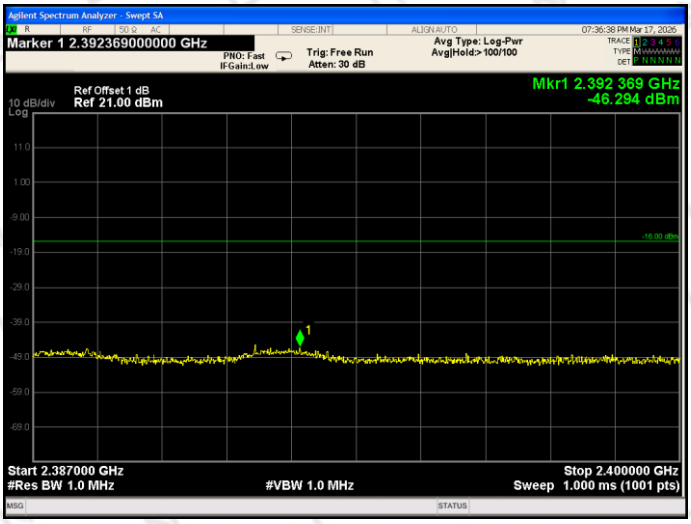
TX Mode 2440MHz



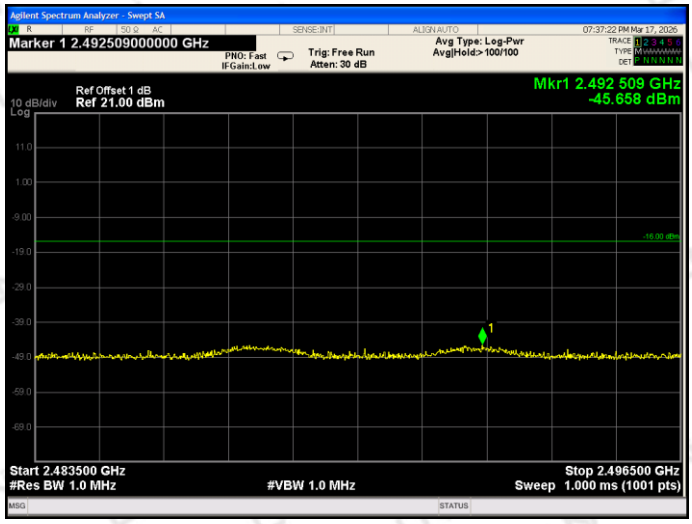
30MHz~1GHz



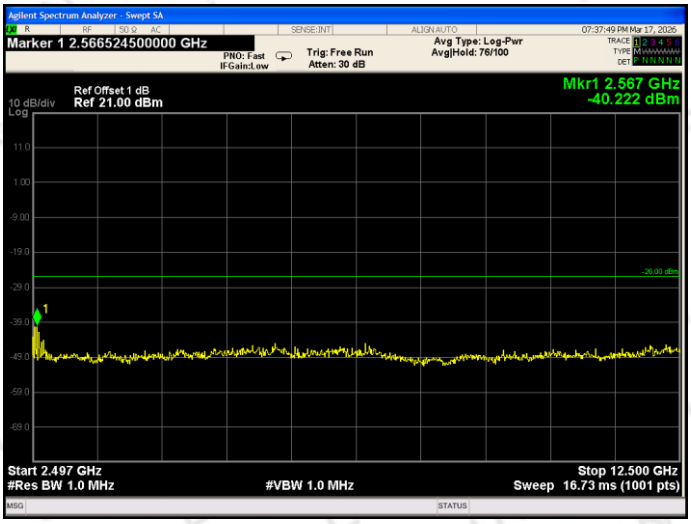
1GHz~2.387GHz



2.387GHz~2.4GHz

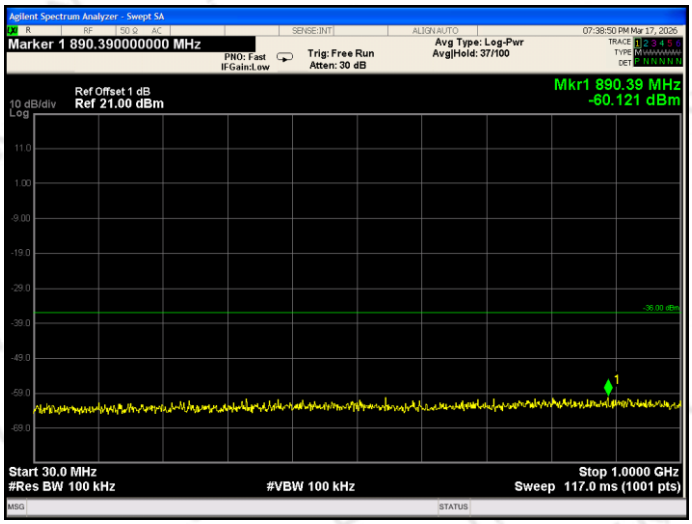


2.4835GHz~2.4965GHz

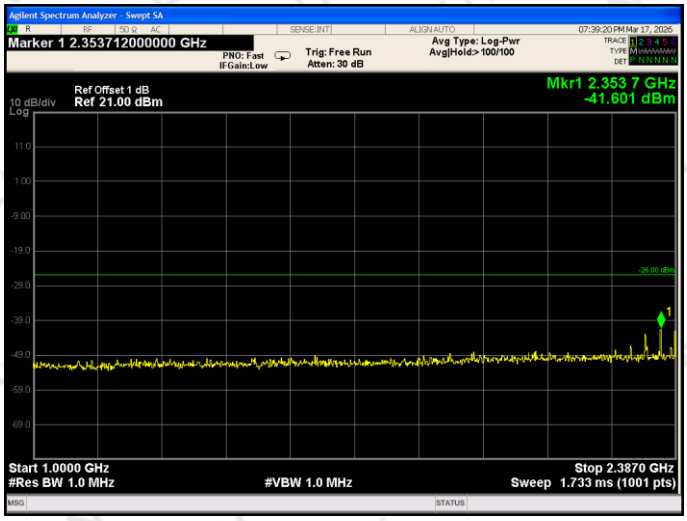


2.4965GHz~12.5GHz

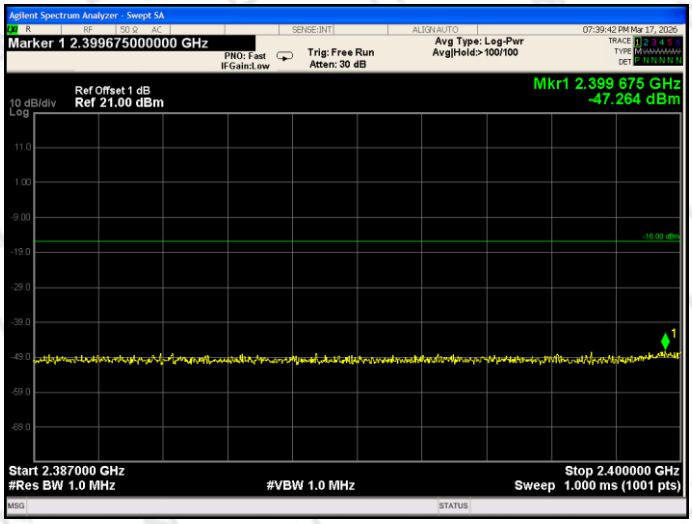
TX Mode 2480MHz



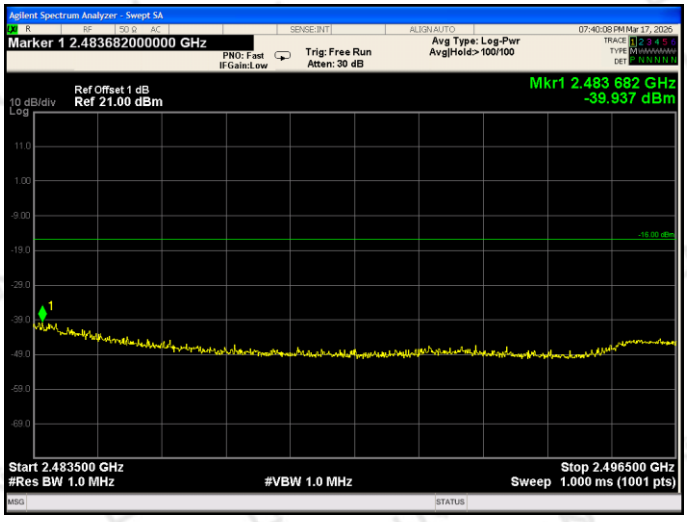
30MHz~1GHz



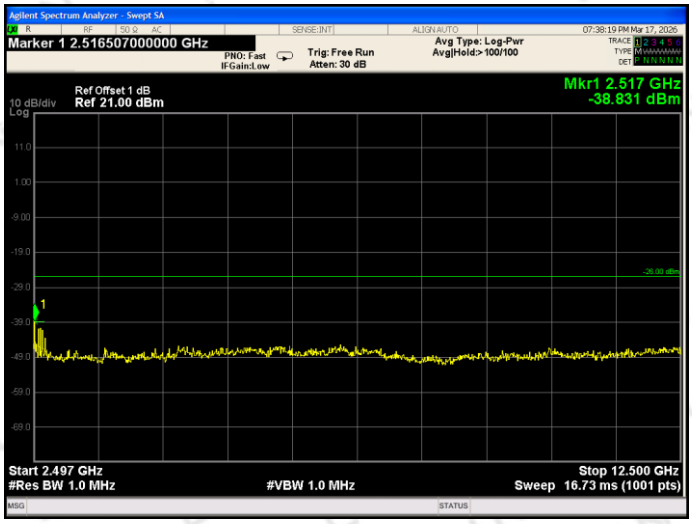
1GHz~2.387GHz



2.387GHz~2.4GHz



2.4835GHz~2.4965GHz



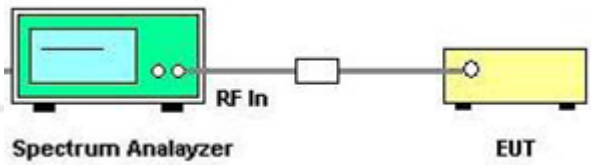
2.4965GHz~12.5GHz

9 LIMITATION OF COLLATERAL EMISSION OF RECEIVER

9.1 LIMIT

Item	Limits
RX Spurious Emission	≦4nW(-54dBm) (f<1GHz)
	≦20nW(-47dBm) (1GHz≦f)

9.2 TEST SETUP



9.3 TEST PROCEDURE

The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram as TEST CONFIGURATION shows.

EUT Condition: modulation

Spectrum Condition:

Frequency: 30MHz-13GHz

RBW: 100 KHz (30MHz-1GHz), 1MHz (1GHz-13GHz)

VBW:100 KHz (30MHz-1GHz), 1MHz (1GHz-13GHz)

Sweep time: Auto

Detector mode: Positive peak

Indication mode: max hold

9.4 TEST RESULT

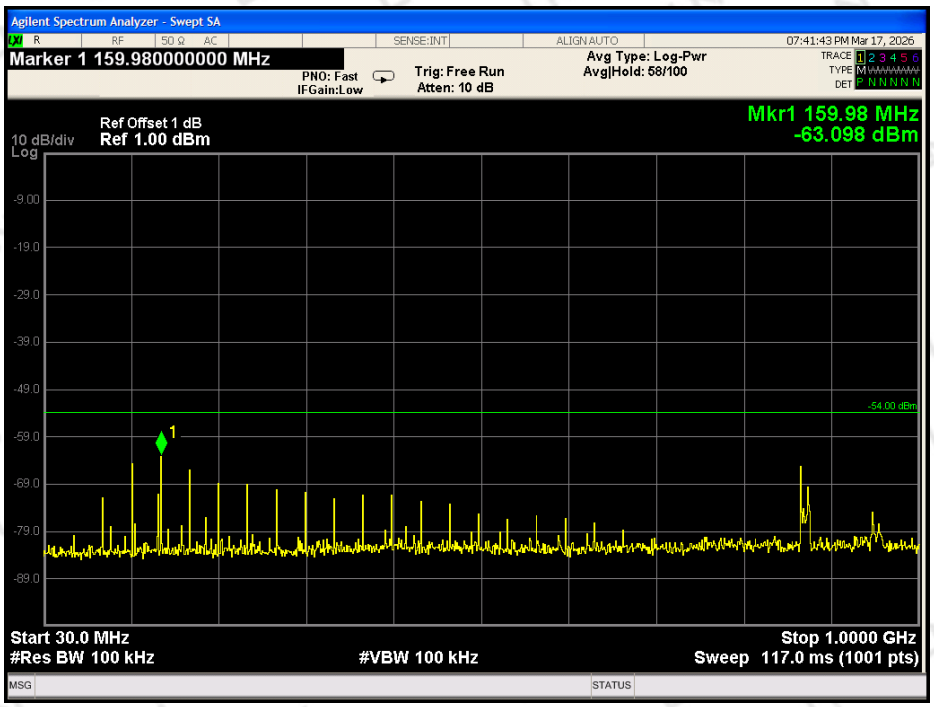
BLE 1M:

Test freq. [MHz]	Test freq. range [MHz]	Freq. [MHz]	Result [dBm]	Limit [dBm]	Result [μW]	Limit [μW]	Result
2402	30-1000	159.98	-63.098	≤-54.00	0.00049	≤4	PASS
	1000-12500	1943	-52.958	≤-47.00	0.00506	≤20	PASS

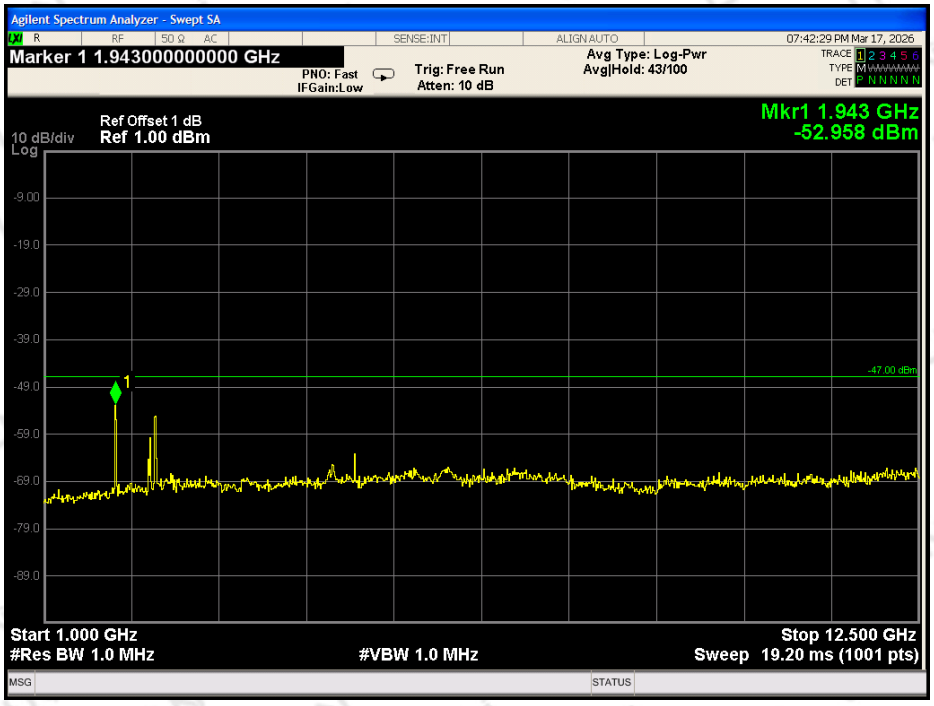
Note: The receiving mode for GFSK Low channel is the worst case, and only the data of the worst case recorded in this test report.

Test Graphs of Receiver Spurious

BLE 1M:



30~1000MHz



1000~12500MHz

10 INTERFERENCE PREVENTION FUNCTION

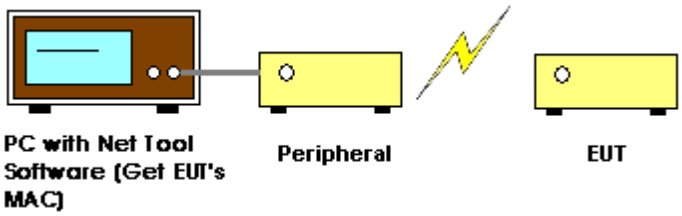
10.1 LIMIT

Item	Limits
Identification code	≧48 bits

10.2 MEASURING ID CODE SOFTWARE

Item	Limits
MAC IP List	MAC Scan

10.3 TEST SETUP



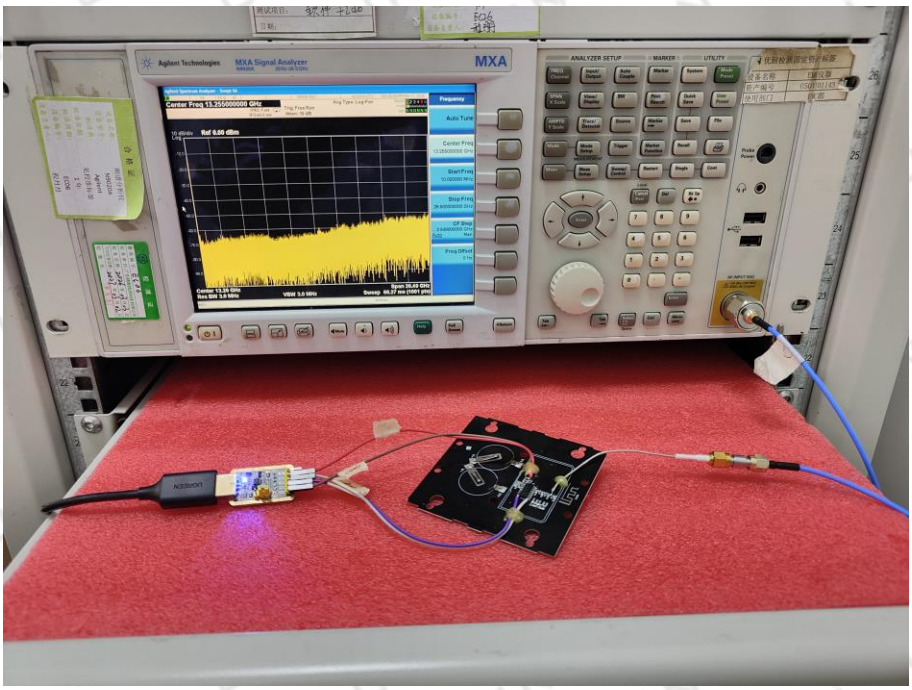
10.4 TEST PROCEDURE

(1) In the case that the EUT has the function of automatically transmitting the identification code:
a. Transmit the predetermined identification codes form EUT.
b. Check the transmitted identification codes with the demodulator.
(2) In the case of receiving the identification code:
a. Transmit the predetermined identification codes form the counterpart.
b. Check if communication is normal.
c. Transmit the signals other than predetermined ID codes form the counterpart.
d. check if the EUT stops the transmission, or if it displays that identification codes are different from the predetermined ones.

10.5 Test Result

Test result of radio interference prevention capability		
Item	**MAC address**	**Test result**
Identification code	2C-F3-44-F8-3B-65	Good

11 TEST SETUP PHOTOS OF EUT



Statement

1. This report must have the signature of the authorized signatory and the special seal of the report, otherwise it will be considered invalid. If there is no anti-counterfeiting electronic seal of the laboratory in the report in PDF format or it is displayed as "×", the report is invalid.
2. This report shall not be modified, added or deleted without authorization. The antenna gain in the report is provided by the customer.
3. The results of this report are only valid for the EUT provided by Applicant to our laboratory for inspection (That is, EUT received by our laboratory. Without special explanation, it refers to the samples presented in the report "PHOTO OF EUT").
4. If there is any objection to the test data and conclusions of this report, please submit it in writing within 10 working days after the date of issuance of the report.
5. Without the written consent of the laboratory, this report shall not be copied (except for full copy), nor shall it be used as publicity materials or advertising.
6. The cover of the report is for decoration only, not included in the body of the report.
7. The paper report issued by our laboratory has the same effect as the electronic report. In case of any difference between the two, the electronic report shall prevail.
8. The Chinese and English reports issued by our laboratory have the same effect. In case of any difference in understanding, the Chinese version shall prevail.
9. Please provide the complete report documents issued by our laboratory when inquiring the report.
10. For cases where compliance is determined based on test values, when relevant specifications, standards, documents, and customers have no relevant requirements and no other special instructions, the test report issued by this laboratory is carried out in full value and adopts ILAC-G8:09 /2019 "Simple Acceptance Rule" for judgment.
11. In the People's Republic of China, when there is no CMA Accredited Symbol in this report, the report is only for scientific research, teaching or internal quality control activities.

End of Report