

TEST REPORT

Applicant Name: Astera LED Technology GmbH
Address: Schatzbogen 60, 81829 Munich, Germany
Report Number: 2501Z87387E-RF-07A

Test Standard (s)

Item 19 of Article 2 Paragraph 1

Sample Description

Product Type: QuikBeam
Model No.: AST-QUKBM-STD
Multiple Model(s) No.: AST-QUKBM
Trade Mark: ASTERA
Date Received: 2025-12-18
Issue Date: 2026-02-02

Test Result:

Pass▲

▲ In the configuration tested, the EUT complied with the standards above.

Prepared and Checked By:

Ekko Wu

Ekko Wu
RF Engineer

Approved By:

Nancy Wang

Nancy Wang
RF Supervisor

Note: The information marked * is provided by the applicant, the laboratory is not responsible for its authenticity and this information can affect the validity of the result in the test report. Customer model name, addresses, names, trademarks etc. are included.
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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	2501Z87387E-RF-07A	Original Report	2026-02-02

GENERAL INFORMATION

Product Description for Equipment under Test (EUT)

Product		QuikBeam
Test Model		AST-QUKBM-STD
Multiple Model(s)		AST-QUKBM
Radio Type		BLE
Technical Parameters	Modulation Type	GFSK
	Frequency Range	2402-2480MHz
	Rated Output Power	1.0mW for BLE 1M/2M
	Antenna Gain[#]	1.0dBi (It is provided by the applicant)
Nominal Power Supply		DC 10.9V from battery
Sample serial number		3EDM-1 (Assigned by BACL, Shenzhen)
Sample/EUT Status		Good condition
Adapter Information		N/A
Note: The Multiple models are electrically identical with the test model except for model name and battery. Please refer to the declaration letter [#] for more detail, which was provided by manufacturer.		

Objective

The objective of the manufacturer is to demonstrate compliance with Certification Ordinance Article 2-1-19, rules and limits for this device including:

- Frequency Error
- Occupied Bandwidth
- Transmitter Spurious Emission and Unwanted Emission Intensity
- Antenna Output Power And Output Power Tolerance
- Receiver Spurious Emission Strength
- Interference Prevention Function
- Construction Protection Confirmation

Test Method

MIC Notice No.88 of Jan. 26, 2004, Appendix No.43 (Latest version: MIC Notice No.373 of Nov. 8, 2023)

Measurement Uncertainty

Item	Expanded Measurement uncertainty
Frequency error	81.235Hz(k=1.96, 95% level of confidence)
Occupied Channel Bandwidth	52.29kHz(k=1.96, 95% level of confidence)
RF output power, conducted	1.57dB(k=1.96, 95% level of confidence)
Unwanted Emission, conducted	2.48dB(k=1.96, 95% level of confidence)
Duty Cycle	±1%
Temperature	±0.4°C
Supply voltages	DC±0.4%;AC±1%
Humidity	±2%

Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 5F(B-West) , 6F, 7F, the 3rd Phase of Wan Li Industrial Building D, Shihua Rd, FuTian Free Trade Zone, Shenzhen, China.

Each test item follows test standards and with no deviation.

EUT TEST CONFIGURATION

Description of Test Configuration

The system was configured for testing in a testing mode by some software.

For BLE mode, 40 channels are provided for testing:

Channel	Frequency(MHz)	Channel	Frequency(MHz)
0	2402	20	2442
1	2404	21	2444
...	...	...	...
...	...	...	...
...	...	...	...
18	2438	38	2478
19	2440	39	2480

EUT was tested with channel 0, 19 and 39.

Normal/Extreme Voltage Condition [#]		
NV	Normal Voltage	10.9V _{DC}
LV	Low Voltage	9.8V _{DC}
HV	High Voltage	12.0V _{DC}

Note: extreme voltage test conditions were declared by manufacturer.

The EUT powered by battery, power deviation of the RF circuit is less than 1% when extreme voltage supplied, therefore the test only performed at normal condition.

Voltage Condition	Input (V _{DC})	RF System Voltage (V _{DC})
NV	10.9	3.3
LV	9.8	3.3
HV	12.0	3.3

EUT Exercise Software

Exercise Software [#]	EspRFTTestTool-V4.2-Manual.exe		
Power Level [#]			
Mode	Low Channel	Middle Channel	High Channel
BLE 1M	8	8	8
BLE 2M	8	8	8

Equipment Modifications

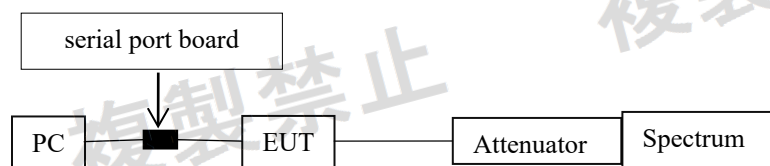
No modification was made to the EUT tested.

Support Equipment List and Details

Manufacturer	Description	Model	Serial Number
DELL	PC	DESKTOP-1630AQ3	Unknown
Unknown	serial port board	Unknown	Unknown

External I/O Cable

Cable Description	Length(m)	From/Port	To
Un-shielding Detachable USB Cable	1.0	PC	serial port board
Un-shielding Detachable Data Cable	0.2	EUT	serial port board

Configuration of Test Setup

SUMMARY OF TEST RESULTS

MIC Notice No.88 Appendix No.43 Article 2, Paragraph 1, Item 19	Description of Test	Result
1	Frequency Error	Compliant
2	Occupied Bandwidth	Compliant
3	Transmitter Spurious Emission and Unwanted Emission Intensity	Compliant
4	Antenna Output Power and Output Power Tolerance	Compliant
5	Receiver Spurious Emission and Unwanted Emission Intensity	Compliant
6	Transmission Antenna Gain	Not Applicable
7	Carrier sense capability	Not Applicable**
8	Transmission Radiation Angle Width	Not Applicable
9	Frequency Hopping Dwell Time	Not Applicable*
10	Interference Prevention Function	Compliant
11	Construction Protection Confirmation	Compliant

Not Applicable* -Testing is only required for FHSS system devices.

Not Applicable**-The OBW of EUT is less than 26 MHz.

Not Applicable - This test item was not required for the output power less than 12.14 dBm (E.I.R.P)

TEST EQUIPMENT LIST

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date	Calibration Authority	Calibration Method
Rohde & Schwarz	Spectrum Analyzer	FSU26	200982	2025/08/12	2026/08/11	BACL Cal	c)
Rohde & Schwarz	Wideband Radio Communication Tester	CMW500	146520	2025/09/18	2026/09/17	CCIC	c)
ANRITSU	Microwave peak power sensor	MA24418A	12622	2025/09/01	2026/08/31	CCIC	c)
instek	DC Power Supply	GPS-3030DD	EM832096	NCR	NCR	/	c)
Fluke	Digital Multimeter	287	19000011	2025/04/29	2026/04/28	BACL Cal	c)
Unknown	10dB Attenuator	Unknown	F-03-EM190	2025/06/26	2026/06/25	BACL SZ	d)

Note: Calibration Method

a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) or a designated calibration agency under Article 102-18 paragraph (1)

b) Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Law (Law No. 51 of 1992) ~Japan Calibration Service System~

c) Calibration conducted in foreign countries, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1)

d) Calibration conducted by using other equipment that listed above from a) to c)

*** Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

REQUIREMENTS AND TEST PROCEDURES

Frequency Error

Limit

50 ppm or below

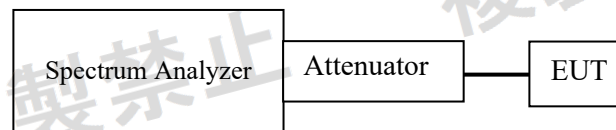
Test Procedure

Set the EUT to the measurement frequency without modulation.
Setting of SA is following as:

- Center Frequency: Frequency to measure
- RBW: 1 kHz, VBW: 3 kHz
- Span: 300 kHz
- Sweep time: Auto
- Log scale: 10dB/Div, Data points: 400 points or more
- Reference level: Enough level for maximum dynamic range
- Detection: Positive Peak
- Sweep mode: Single Sweep
- Marker: Spot

Record the peak spot frequency.

If the EUT can't set at un-modulation mode, measure the 10dBc center frequency.



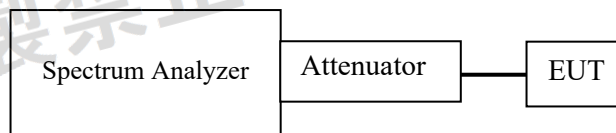
Occupied Bandwidth

Limit

- Occupied bandwidth: FH $\leq$ 83.5 MHz; OFDM, DS $\leq$ 26 MHz; Others $\leq$ 26 MHz

Test Procedure

1. Setting of SA is following as:
 - Center Frequency: Frequency to measure
 - RBW: 30 kHz, VBW: 30 kHz
 - Sweep time: Auto
 - Log scale: 10dB/Div, Data points: 400 points or more
 - Reference level: Enough level for maximum dynamic range
 - Detection: Positive Peak
 - Sweep mode: Continuous Sweep
 - Marker: Spot
2. EUT have transmitted the maximum modulation signal and fixed channelize. SA set to 99% of occupied bandwidth to measure occupied bandwidth.



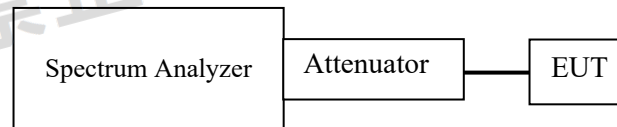
Transmitter Spurious Emission Strength and Unwanted Emission Intensity

Limit

- $f < 2387 \text{ MHz}$, $f > 2496.5 \text{ MHz}$: $\leq 2.5 \mu\text{W/MHz}$
- $2387 \text{ MHz} \leq f \leq 2400 \text{ MHz}$; $2483.5 \text{ MHz} < f \leq 2496.5 \text{ MHz}$: $\leq 25 \mu\text{W/MHz}$

Test Procedure

Measurement System Diagram



Conditions of Application Equipment (EUT)

- The modulation state shall be in continuously transmitting mode.

Spectrum Analyzer Conditions

- Span: Measuring Frequency Range
- RBW: 1MHz (frequency range; 1GHz over), 100kHz (frequency range; 30MHz to 1GHz)
- VBW: Same as RBW (1MHz or 100kHz)
- Sweep time: Auto (Minimum time to ensure measurement accuracy.)
- Data points : 400 points or more
- Reference level: Enough level for maximum dynamic range
- Detection: Positive Peak

If the measured value is under the technical standard value, do not need to measure more detail.

Note: $2.5 \mu\text{W/MHz} = 0.25 \mu\text{W}/100\text{kHz}$

Antenna Output Power and Antenna Power Tolerance

Limit

Antenna power:

- $\leq 10 \text{ mW/MHz}$ (OFDM, DSSS from 2400-2483.5 MHz)
- $\leq 10 \text{ mW}$ (other from 2400-2483.5 MHz)

The Output Power Tolerance must be within +20%, -80%.

E.i.r.p:

- $\leq 12.14 \text{ dBm/MHz}$ (OFDM (20MHz system), DSSS form 2400-2483.5MHz)
- $\leq 9.13 \text{ dBm/MHz}$ (OFDM(40MHz system) from 2400-2483.5MHz)
- $\leq 12.14 \text{ dBm}$ (other from 2400-2483.5MHz)

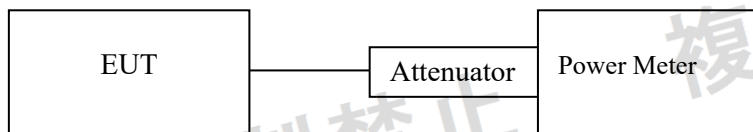
Test Procedure

Step 1: Measure the total power by Power Meter

Step 2: If it's the burst wave, set the power meter to measure averaging across the burst transmit on period.

Step 3: Record the reading on power meter as antenna output power.

Test Setup Block diagram



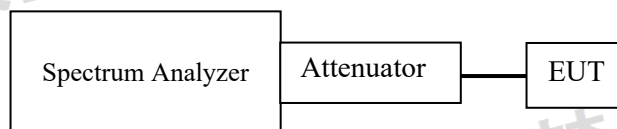
Receiver Spurious Emission and Unwanted Emission Intensity

Limit

- $\leq 4\text{nW}$ ($30\text{ MHz} \leq f \leq 1000\text{ MHz}$)
- $\leq 20\text{ nW}$ ($f \geq 1\text{ GHz}$)

Test Procedure

Measurement System Diagram



Conditions of Application Equipment (EUT)

- The modulation state shall be “continuous receiving mode”.

Spectrum Analyzer Conditions

- Start Frequency: Start Frequency of frequency range to measure (30MHz or 1GHz)
- Stop Frequency: Stop Frequency of frequency range to measure (1GHz or 12.5GHz)
- Span: AUTO (Measurement Range)
- RBW: 100 kHz, VBW: 100 kHz for Frequency < 1 GHz
- RBW: 1MHz, VBW: 1MHz for Frequency > 1 GHz
- Sweep time: AUTO or more
- Sweep mode: Auto Sweep
- Detection: Positive Peak
- Reference Level: Enough level for maximum dynamic range

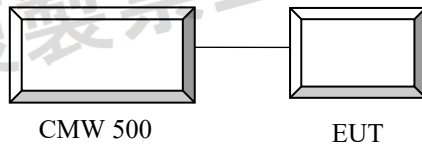
Interference Prevention Function

Requirement

The EUT shall have the interference prevention capability to transmit or to receive the identification automatically, so that sender and receiver shall exclude other equipment.

Test Procedure

Measurement System Diagram



In the case that the EUT has the function of automatically transmitting the identification code:

1. Transmit the predetermined identification codes from EUT
2. Check the transmitted identification codes with the demodulator.

In the case of receiving the identification codes:

1. Transmit the predetermined identification codes from the counterpart.
2. Check if communication is normal
3. Transmit the signal other than predetermined ID codes from the counterpart.
4. Check if the EUT stops the transmission, or if it displays that identification codes are different from the predetermined ones.

TEST DATA AND RESULTS**Frequency Error****Test Information:**

Sample No.:	3EDM-1	Test Date:	2026/01/08
Test Site:	RF	Test Mode:	Transmitting
Tester:	Cheeb Huang	Test Result:	Pass

Environmental Conditions:

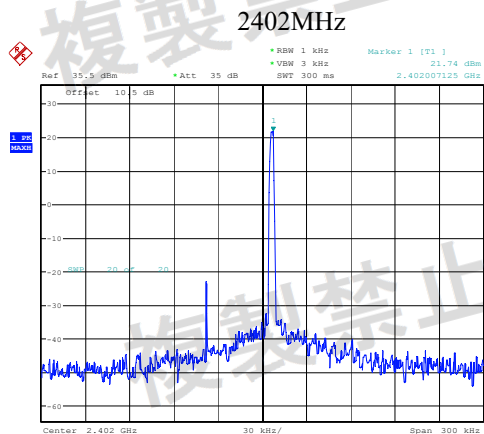
Temperature: (°C)	23	Relative Humidity: (%)	49	ATM Pressure: (kPa)	101
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Test Condition: NV

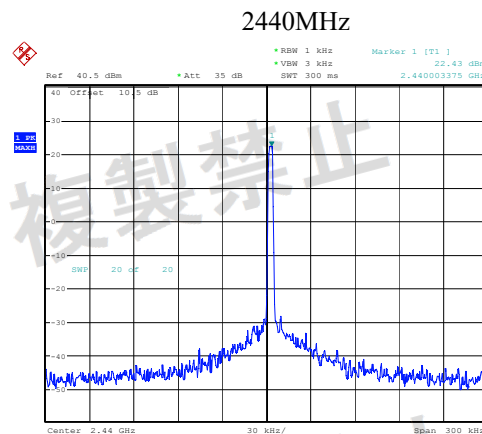
Mode	Frequency (MHz)	Measure Frequency (MHz)	Frequency Tolerance (ppm)	Limit (ppm)	Verdict
Single Carrier	2402	2402.00713	2.97	± 50	Pass
	2440	2440.00338	1.39		Pass
	2480	2480.00338	1.36		Pass

$$\text{Frequency Tolerance} = (\text{Measure Frequency} - \text{Frequency}) / \text{Frequency} * 10^6$$

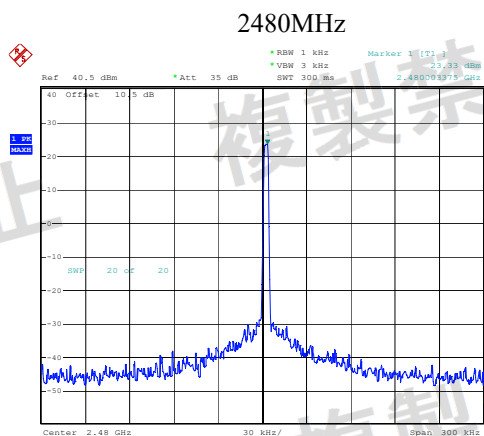
Test Condition: NV



ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 15:01:00



ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 15:01:44



ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 15:02:14

Occupied Bandwidth**Test Information:**

Sample No.:	3EDM-1	Test Date:	2026/01/08
Test Site:	RF	Test Mode:	Transmitting
Tester:	Cheeb Huang	Test Result:	Pass

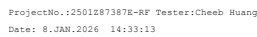
Environmental Conditions:

Temperature: (°C)	23	Relative Humidity: (%)	49	ATM Pressure: (kPa)	101
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Test Condition: NV

Mode	Occupied bandwidth (MHz)			Limit(MHz)	Verdict
	Low Channel	Middle Channel	High Channel		
BLE 1M	1.053	1.050	1.053	≤ 26	Pass
BLE 2M	2.044	2.044	2.044		Pass

BLE 1M_Low Channel



ProjectNo.:2501287387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:38:31

ProjectNo.:2501287387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:40:37

ProjectNo.:2501z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:42:49

ProjectNo.:2501287387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:45:01

ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:49:01

Transmitter Spurious Emission and Unwanted Emission Intensity**Test Information:**

Sample No.:	3EDM-1	Test Date:	2026/01/08
Test Site:	RF	Test Mode:	Transmitting
Tester:	Cheeb Huang	Test Result:	Pass

Environmental Conditions:

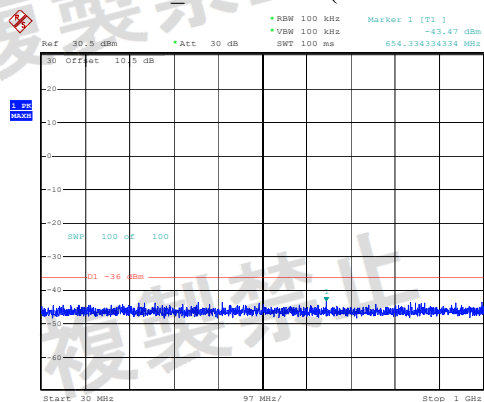
Temperature: (°C)	23	Relative Humidity: (%)	49	ATM Pressure: (kPa)	101
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Test Condition: Normal, BLE 1M

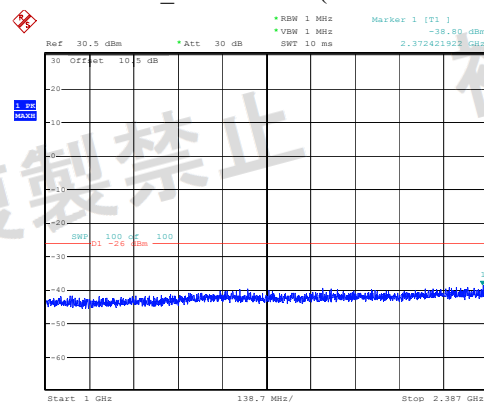
Channel	Test Band (RBW)	Frequency Range		Max.Emission Located(MHz)	Result (dBm/RBW)	Result (μW/RBW)	Limit (μW/RBW)	Verdict
		Start (MHz)	Stop (MHz)					
Low	Band I (100kHz)	30	1000	654.3343343	-43.47	0.045	0.25	Pass
	Band II (1MHz)	1000	2387	2372.4219000	-38.80	0.132	2.50	Pass
	Band III (1MHz)	2387	2400	2400.0	-23.71	4.256	25	Pass
	Band IV (1MHz)	2483.5	2496.5	2486.6622000	-37.74	0.168	25	Pass
	Band V (1MHz)	2496.5	12500	10732.6149000	-36.44	0.227	2.50	Pass
Middle	Band I (100kHz)	30	1000	301.8718719	-43.57	0.044	0.25	Pass
	Band II (1MHz)	1000	2387	2372.4219000	-39.07	0.124	2.50	Pass
	Band III (1MHz)	2387	2400	2396.0180000	-37.51	0.177	25	Pass
	Band IV (1MHz)	2483.5	2496.5	2488.2823000	-37.38	0.183	25	Pass
	Band V (1MHz)	2496.5	12500	12344.7905000	-36.97	0.201	2.50	Pass
High	Band I (100kHz)	30	1000	206.2312312	-43.31	0.047	0.25	Pass
	Band II (1MHz)	1000	2387	2325.9109000	-39.09	0.123	2.50	Pass
	Band III (1MHz)	2387	2400	2390.8844000	-38.33	0.147	25	Pass
	Band IV (1MHz)	2483.5	2496.5	2486.0961000	-37.81	0.166	25	Pass
	Band V (1MHz)	2496.5	12500	11198.2432000	-37.41	0.182	2.50	Pass

Test Condition: Normal, BLE 2M

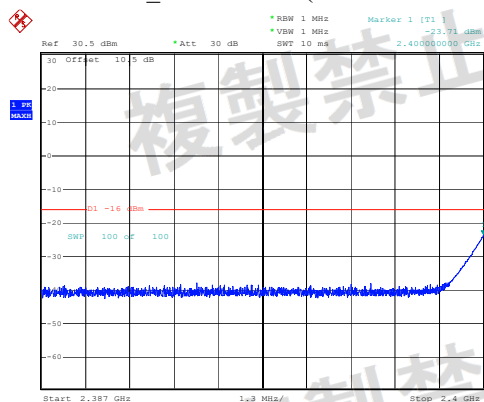
Channel	Test Band (RBW)	Frequency Range		Max.Emission Located(MHz)	Result (dBm/RBW)	Result (μW/RBW)	Limit (μW/RBW)	Verdict
		Start (MHz)	Stop (MHz)					
Low	Band I (100kHz)	30	1000	225.1651652	-43.60	0.044	0.25	Pass
	Band II (1MHz)	1000	2387	2162.7753000	-38.95	0.127	2.50	Pass
	Band III (1MHz)	2387	2400	2400.0	-19.03	12.503	25	Pass
	Band IV (1MHz)	2483.5	2496.5	2487.6186000	-37.82	0.165	25	Pass
	Band V (1MHz)	2496.5	12500	10061.7095000	-37.06	0.197	2.50	Pass
Middle	Band I (100kHz)	30	1000	910.1851852	-43.62	0.043	0.25	Pass
	Band II (1MHz)	1000	2387	2196.7908000	-39.16	0.121	2.50	Pass
	Band III (1MHz)	2387	2400	2388.4379000	-38.27	0.149	25	Pass
	Band IV (1MHz)	2483.5	2496.5	2488.4319000	-37.42	0.181	25	Pass
	Band V (1MHz)	2496.5	12500	11138.1622000	-36.96	0.201	2.50	Pass
High	Band I (100kHz)	30	1000	926.6916917	-43.61	0.044	0.25	Pass
	Band II (1MHz)	1000	2387	2165.5521000	-38.92	0.128	2.50	Pass
	Band III (1MHz)	2387	2400	2393.5521000	-37.95	0.160	25	Pass
	Band IV (1MHz)	2483.5	2496.5	2483.5781000	-37.78	0.167	25	Pass
	Band V (1MHz)	2496.5	12500	12244.6554000	-36.84	0.207	2.50	Pass

Test Condition: NV**BLE 1M_Low Channel(30MHz~1GHz)**

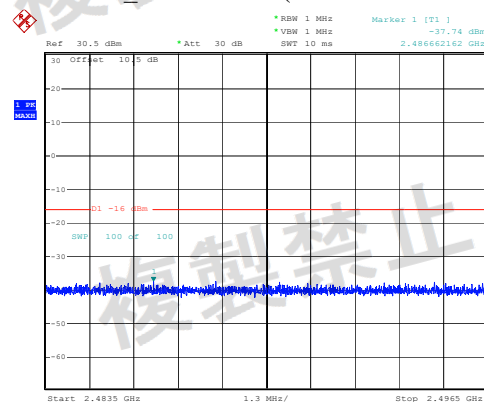
ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:33:29

BLE 1M_Low Channel(1GHz~2.387GHz)

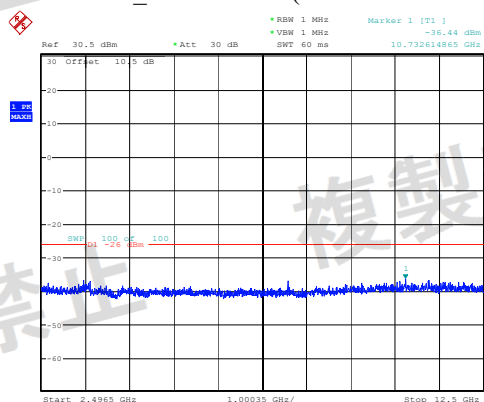
ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:33:30

BLE 1M_Low Channel(2.387GHz~2.4GHz)

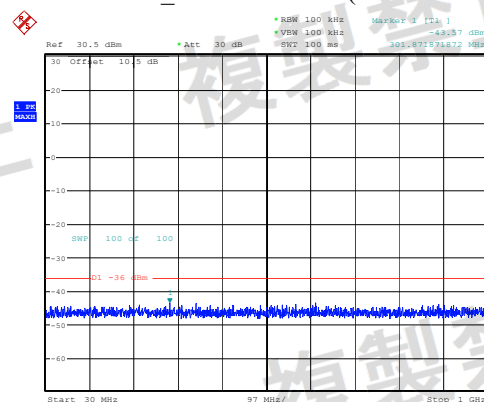
ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:33:46

BLE 1M_Low Channel(2.4835GHz~2.4965GHz)

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Date: 8.JAN.2026 14:33:54

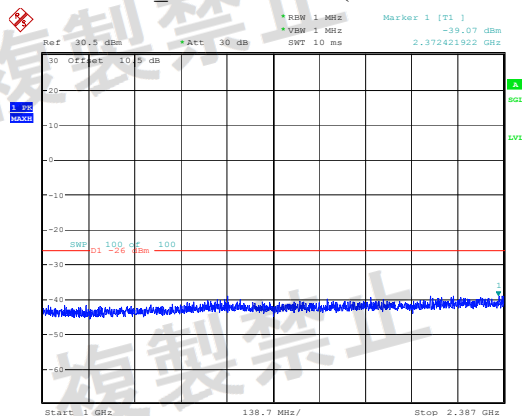
BLE 1M_Low Channel(2.4965GHz~12.5GHz)

ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:34:18

BLE 1M_Middle Channel(30MHz~1GHz)

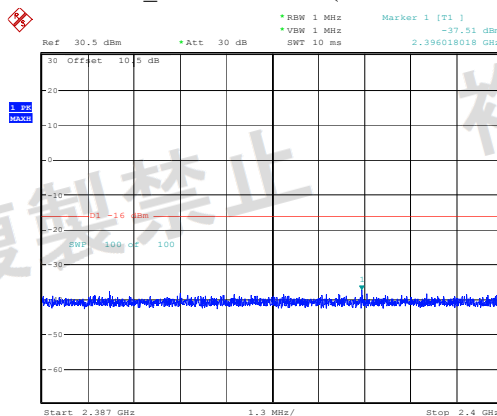
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Date: 8.JAN.2026 14:38:46

BLE 1M_Middle Channel(1GHz~2.387GHz)



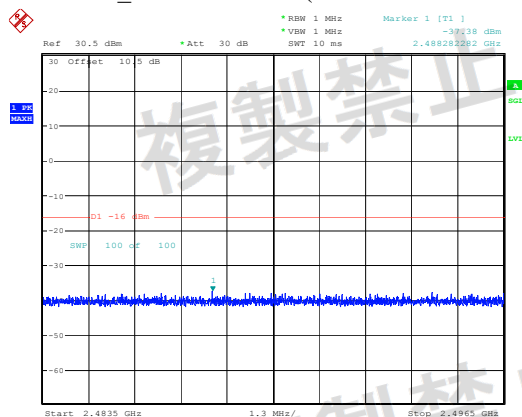
ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:38:56

BLE 1M_Middle Channel(2.387GHz~2.4GHz)



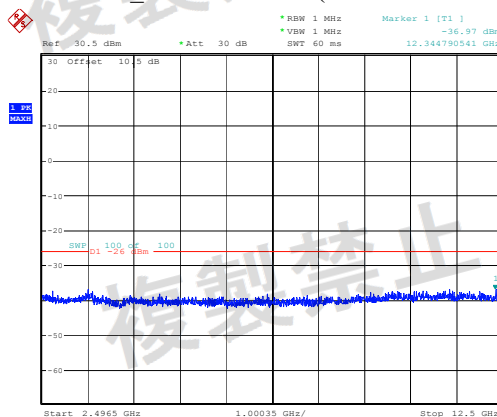
ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:39:04

BLE 1M_Middle Channel(2.4835GHz~2.4965GHz)



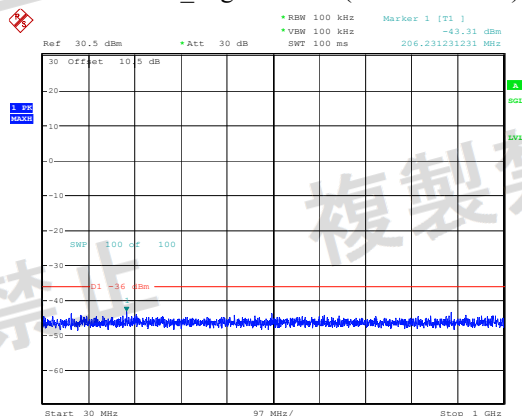
ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:39:11

BLE 1M_Middle Channel(2.4965GHz~12.5GHz)



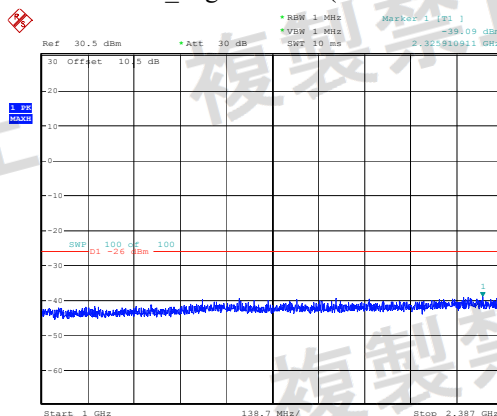
ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:39:36

BLE 1M_High Channel(30MHz~1GHz)



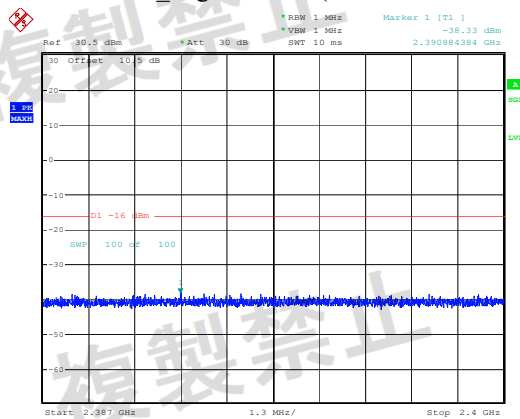
ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:40:52

BLE 1M_High Channel(1GHz~2.387GHz)



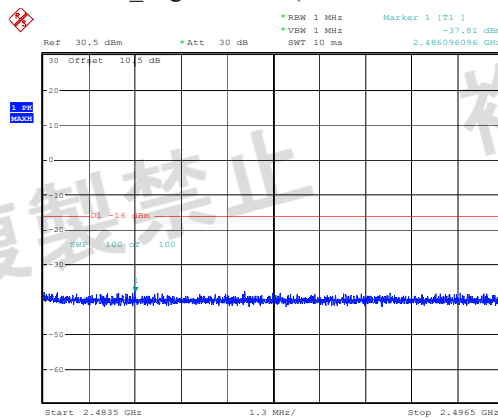
ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:41:02

BLE 1M_High Channel(2.387GHz~2.4GHz)



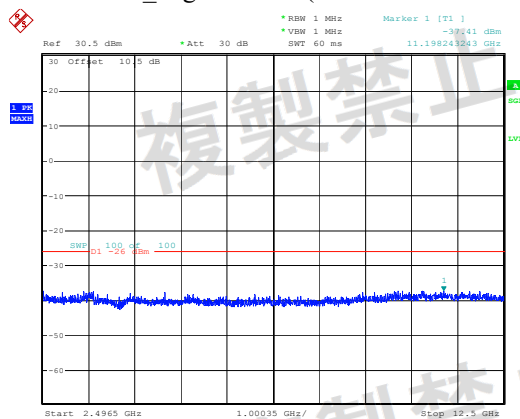
ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:41:10

BLE 1M_High Channel(2.4835GHz~2.4965GHz)



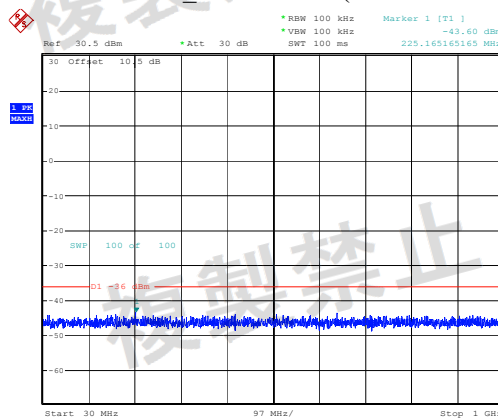
ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:41:17

BLE 1M_High Channel(2.4965GHz~12.5GHz)



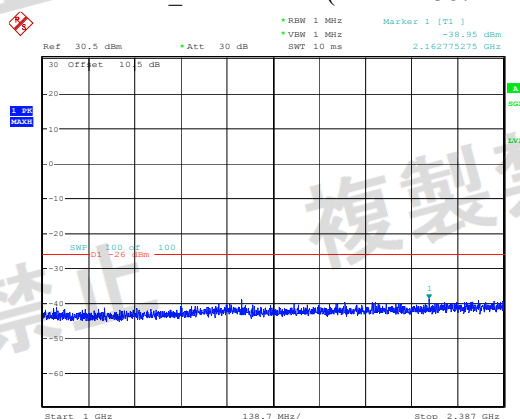
ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:41:41

BLE 2M_Low Channel(30MHz~1GHz)



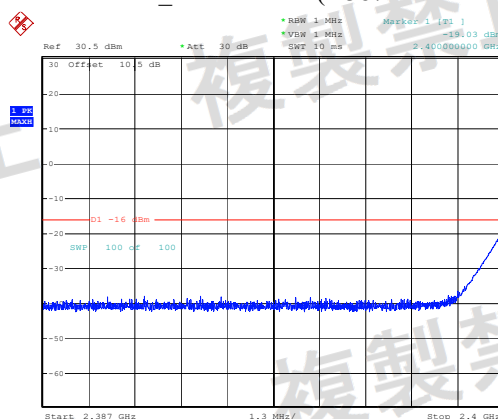
ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:43:05

BLE 2M_Low Channel(1GHz~2.387GHz)



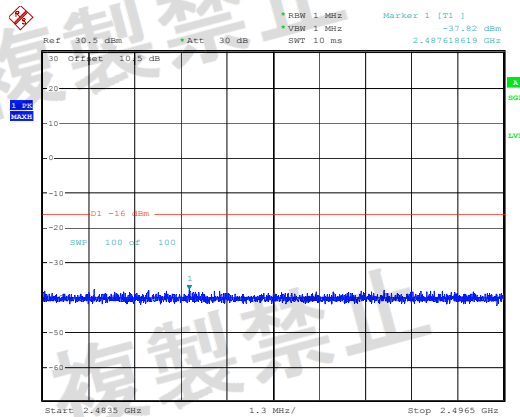
ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:43:14

BLE 2M_Low Channel(2.387GHz~2.4GHz)

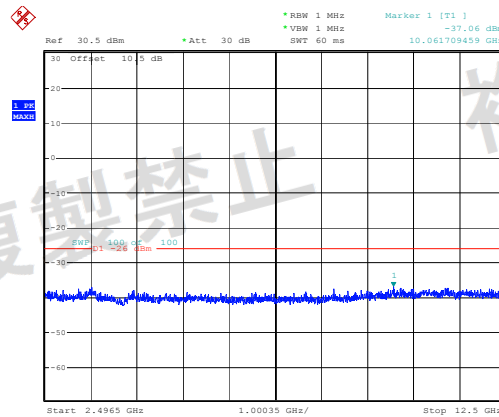


ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:43:22

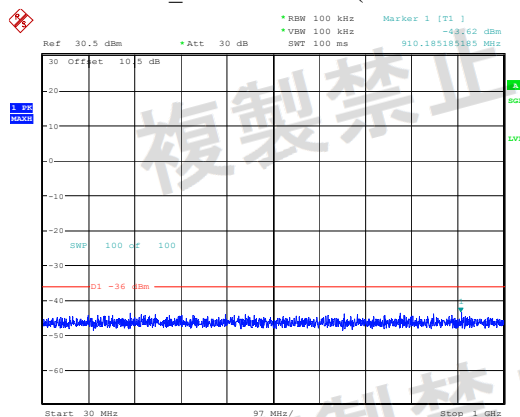
BLE 2M_Low Channel(2.4835GHz~2.4965GHz)



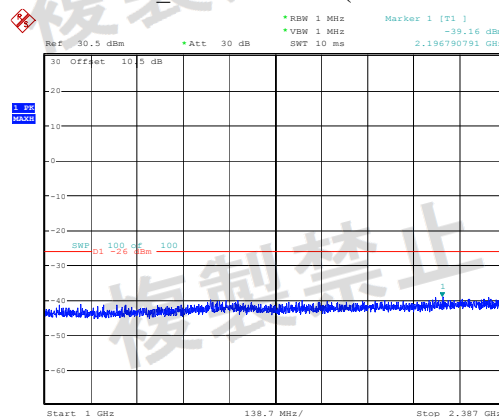
BLE 2M_Low Channel(2.4965GHz~12.5GHz)



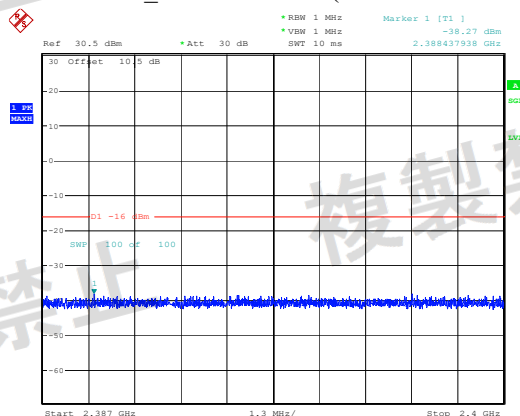
BLE 2M_Middle Channel(30MHz~1GHz)



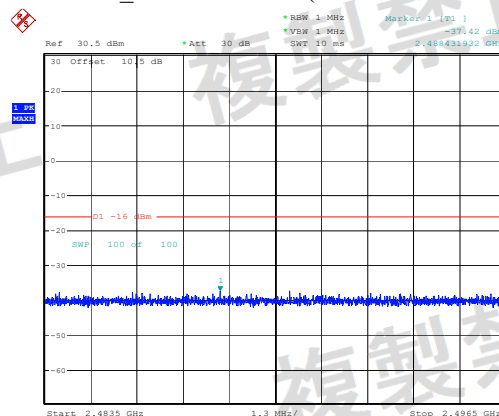
BLE 2M_Middle Channel(1GHz~2.387GHz)



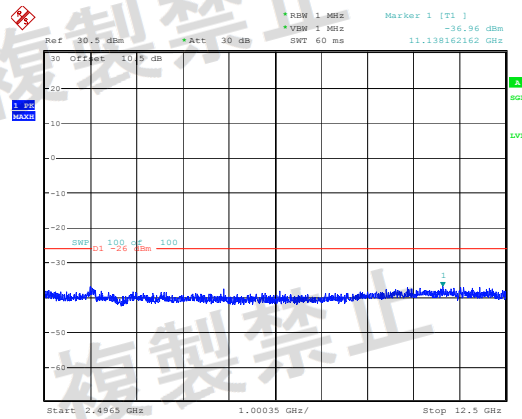
BLE 2M_Middle Channel(2.387GHz~2.4GHz)



BLE 2M_Middle Channel(2.4835GHz~2.4965GHz)

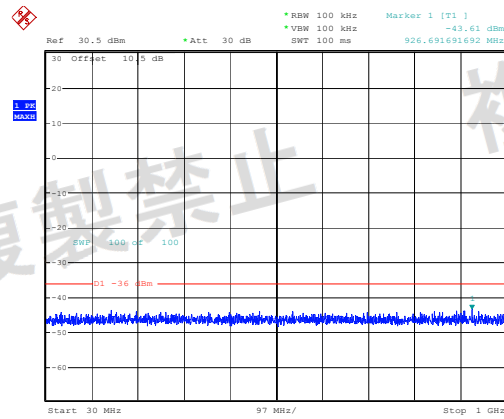


BLE 2M_Middle Channel(2.4965GHz~12.5GHz)



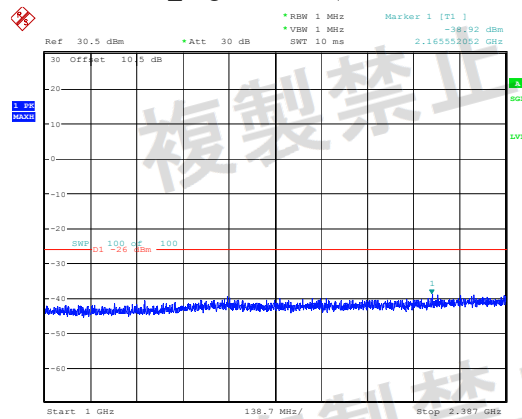
ProjectNo.:2501287387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:46:20

BLE 2M_High Channel(30MHz~1GHz)



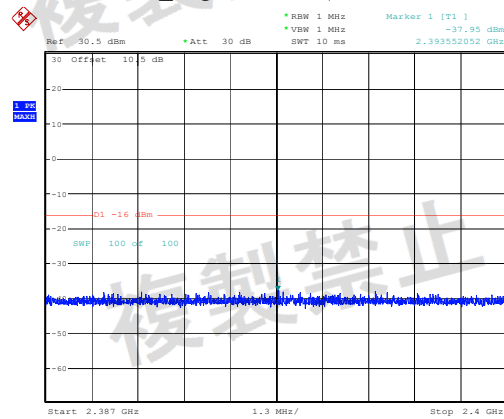
ProjectNo.:2501287387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:49:18

BLE 2M_High Channel(1GHz~2.387GHz)



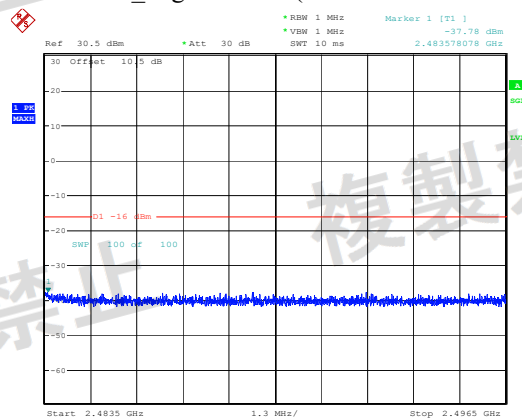
ProjectNo.:2501287387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:49:28

BLE 2M_High Channel(2.387GHz~2.4GHz)



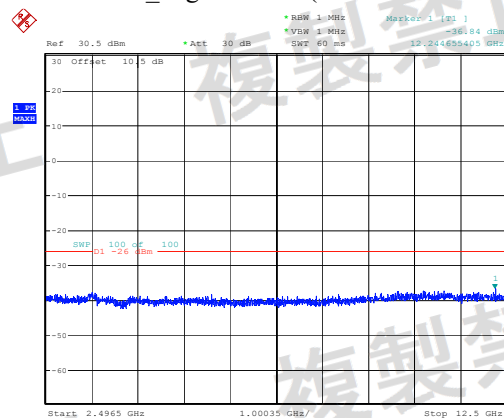
ProjectNo.:2501287387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:49:37

BLE 2M_High Channel(2.4835GHz~2.4965GHz)



ProjectNo.:2501287387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:49:45

BLE 2M_High Channel(2.4965GHz~12.5GHz)



ProjectNo.:2501287387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 14:50:10

Antenna Output Power and Output Power Tolerance**Test Information:**

Sample No.:	3EDM-1	Test Date:	2026/01/08
Test Site:	RF	Test Mode:	Transmitting
Tester:	Cheeb Huang	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	23	Relative Humidity: (%)	49	ATM Pressure: (kPa)	101
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Test Condition: NV

Mode	Antenna gain (dBi)	Declared power (mW)
BLE 1M	1.0	1.0
BLE 2M		1.0

Mode	Channel	Conducted power(dBm)	Antenna output power(mW)		Antenna output tolerance(%)		EIRP (dBm)		Verdict
			Result	Limit	Result	Limit	Result	Limit	
BLE 1M	Low	-1.80	0.661	≤ 10	-33.90	80~+20	-0.80	≤ 12.14	Pass
	Middle	-1.33	0.736		-26.40		-0.33		Pass
	High	-1.47	0.713		-28.70		-0.47		Pass
BLE 2M	Low	-2.06	0.622	≤ 10	-37.80	80~+20	-1.06	≤ 12.14	Pass
	Middle	-1.62	0.689		-31.10		-0.62		Pass
	High	-1.80	0.661		-33.90		-0.80		Pass

Note:

Antenna output power(mW) = $10^{\{\text{Conducted power(dBm)} / 10\}}$

Antenna output power tolerance(%) = (Antenna output power - Declared power) / Declared power * 100%

EIRP(dBm) = Conducted power (dBm) + Antenna gain.

Receiver Spurious Emission and Unwanted Emission Intensity**Test Information:**

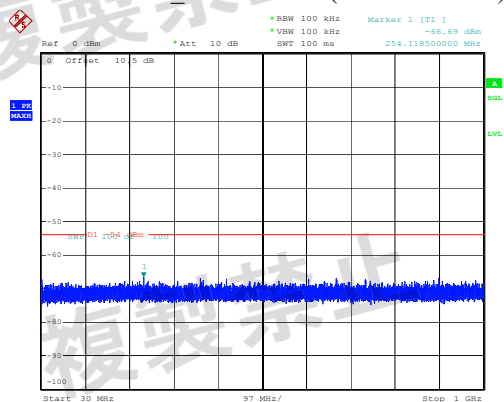
Sample No.:	3EDM-1	Test Date:	2026/01/08
Test Site:	RF	Test Mode:	Receiving
Tester:	Cheeb Huang	Test Result:	Pass

Environmental Conditions:

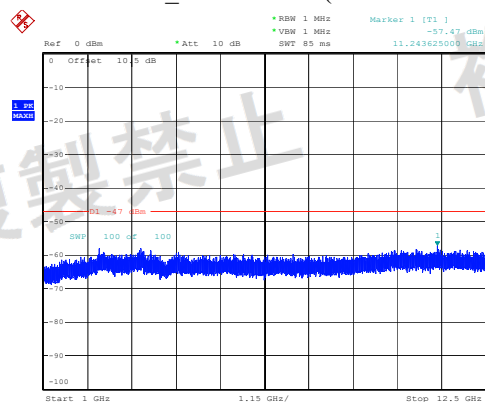
Temperature: (°C)	23	Relative Humidity: (%)	49	ATM Pressure: (kPa)	101
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Test Condition: NV

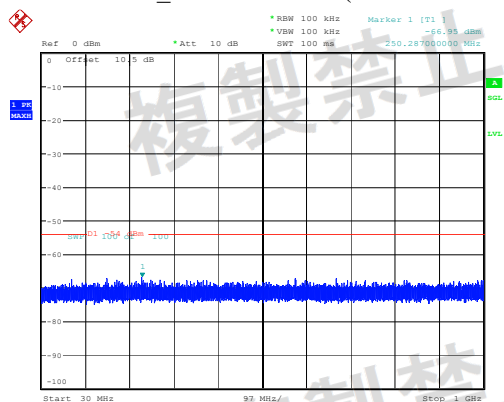
Mode	Channel	Test Band (RBW)	Frequency Range		Max.Emission Located(MHz)	Result (dBm)	Result (nW)	Limit (nW)	Verdict
			Start (MHz)	Stop (MHz)					
BLE 1M	Low	Band I (100kHz)	30	1000	254.1185	-66.69	0.214	4	Pass
		Band II (1MHz)	1000	12500	11243.625	-57.47	1.791	20	Pass
	Middle	Band I (100kHz)	30	1000	250.287	-66.95	0.202	4	Pass
		Band II (1MHz)	1000	12500	11602.425	-56.84	2.070	20	Pass
	High	Band I (100kHz)	30	1000	567.283	-67.22	0.190	4	Pass
		Band II (1MHz)	1000	12500	1765.9	-53.87	4.102	20	Pass
BLE 2M	Low	Band I (100kHz)	30	1000	960.521	-66.95	0.202	4	Pass
		Band II (1MHz)	1000	12500	2437.5	-55.64	2.729	20	Pass
	Middle	Band I (100kHz)	30	1000	995.5865	-67.40	0.182	4	Pass
		Band II (1MHz)	1000	12500	2621.5	-57.99	1.589	20	Pass
	High	Band I (100kHz)	30	1000	914.737	-67.07	0.196	4	Pass
		Band II (1MHz)	1000	12500	11988.825	-57.86	1.637	20	Pass

Test Condition: NV**BLE 1M_Low Channel(30MHz~1GHz)**

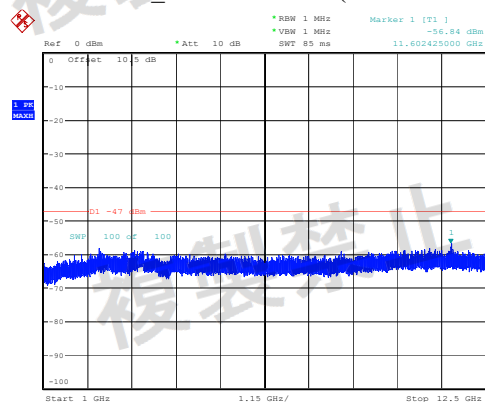
ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 15:03:07

BLE 1M_Low Channel(1GHz~12.5GHz)

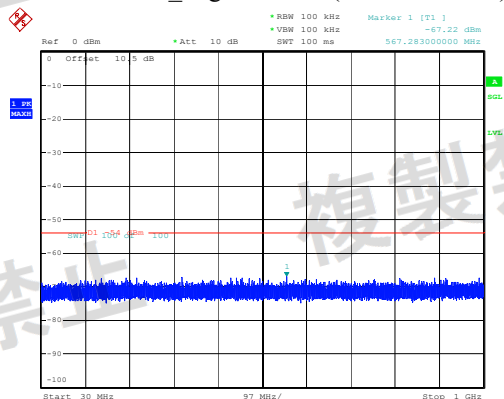
ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 15:03:30

BLE 1M_Middle Channel(30MHz~1GHz)

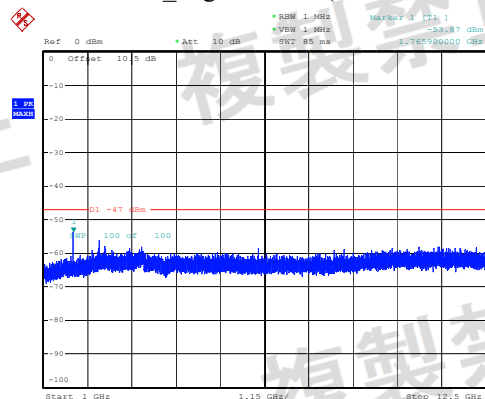
ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 15:04:02

BLE 1M_Middle Channel(1GHz~12.5GHz)

ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 15:04:34

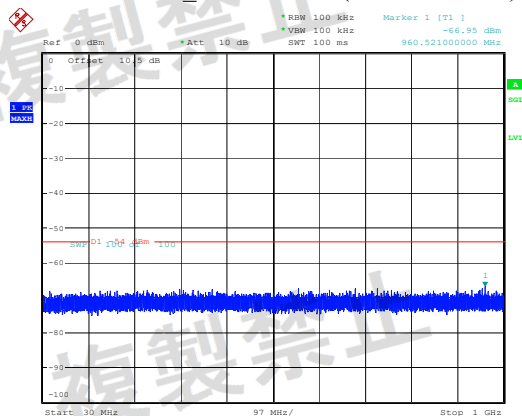
BLE 1M_High Channel(30MHz~1GHz)

ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 15:05:00

BLE 1M_High Channel(1GHz~12.5GHz)

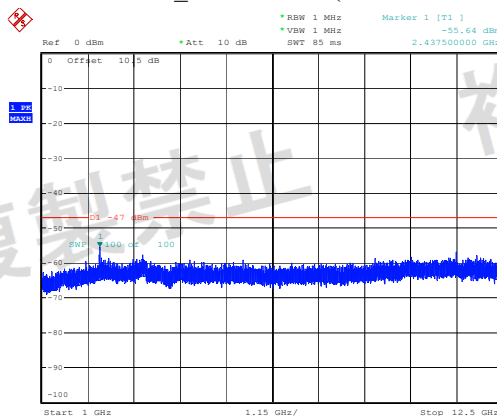
ProjectNo.:2501Z87387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 15:05:32

BLE 2M_Low Channel(30MHz~1GHz)



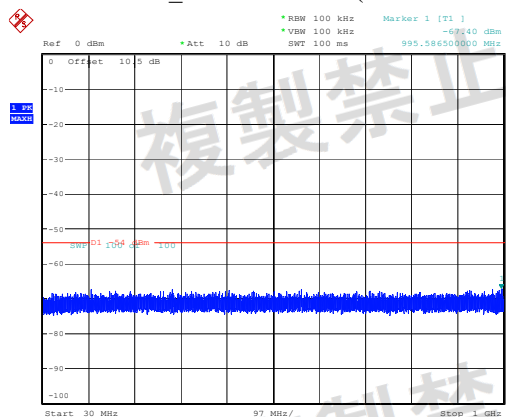
ProjectNo.:2501287387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 15:05:54

BLE 2M_Low Channel(1GHz~12.5GHz)



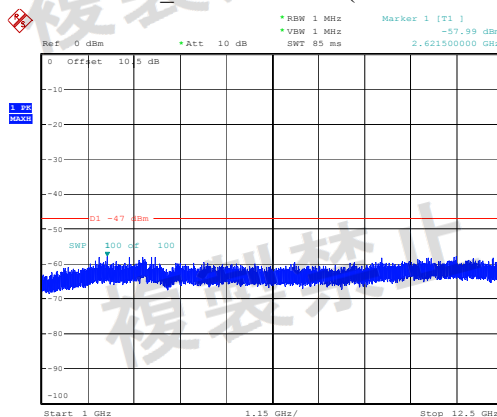
ProjectNo.:2501287387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 15:06:26

BLE 2M_Middle Channel(30MHz~1GHz)



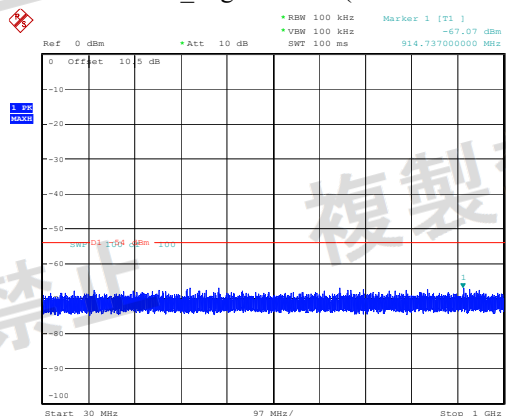
ProjectNo.:2501287387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 15:06:51

BLE 2M_Middle Channel(1GHz~12.5GHz)



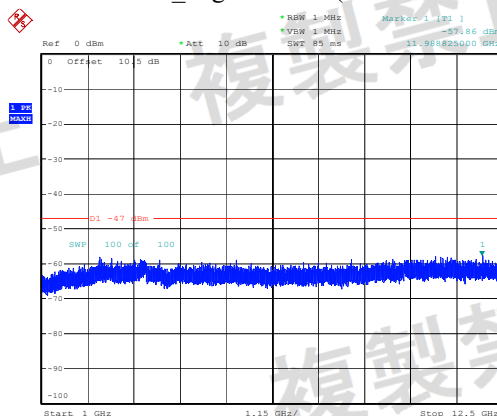
ProjectNo.:2501287387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 15:07:23

BLE 2M_High Channel(30MHz~1GHz)



ProjectNo.:2501287387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 15:07:48

BLE 2M_High Channel(1GHz~12.5GHz)



ProjectNo.:2501287387E-RF Tester:Cheeb Huang
Date: 8.JAN.2026 15:08:19

Interference Prevention Function**Test Information:**

Sample No.:	3EDM-1	Test Date:	2026/01/08
Test Site:	RF	Test Mode:	Communicating
Tester:	Cheeb Huang	Test Result:	Good

Environmental Conditions:

Temperature: (°C)	23	Relative Humidity: (%)	49	ATM Pressure: (kPa)	101
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CONSTRUCTION PROTECTION CONFIRMATION

Limit

The high-frequency section and modulation section of the radio equipment except for the antenna system shall not be capable of being opened easily.

Confirmation Result

The EUT has shielding cover for the high-frequency section and modulation section of the radio which can't be opened easily, please see the EUT photos.

EUT PHOTOGRAPHS

Please refer to the attachment 2501Z87387E-RF-EXP External photo and 2501Z87387E-RF-INP Internal photo.

TEST SETUP PHOTOGRAPHS

Please refer to the attachment 2501Z87387E-RFA-TSP Test Setup photo.

****END OF REPORT****