

RF Test Report

Applicant : ASUSTeK COMPUTER INC.

Applicant Address : 1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan

Product Name : Active stylus SA205H

Trade Name : ASUS

Model Number : SA205H

Applicable Standard : Notification No.88 of MIC, 2004, Annex 43
2.4 GHz band wide-band low-power data communication system
(Item 19 of Article 2 Paragraph 1)

Received Date : Jun. 09, 2025

Test Period : Jun. 18, 2025 ~ Jun. 26, 2025

Issued Date : Jul. 16, 2025

Issued by

Eurofins E&E Wireless Taiwan Co., Ltd.
No. 140-1, Changan Street, Bade District,
Taoyuan City, Taiwan (R.O.C.)
Tel : +886-3-2710188 / Fax : +886-3-2710190

Note:

- 1.The test results are valid only for samples provided by customers and under the test conditions described in this report.
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- 3.The relevant information is provided by customers in this test report. According to the correctness, appropriateness or completeness of the information provided by the customer, if there is any doubt or error in the information which affects the validity of the test results, the laboratory does not take the responsibility.

Revision History

Rev.	Issued Date	Description	Revised by
00	Jul. 16, 2025	Initial Issue	Emma Chao

Verification of Compliance

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2.4 GHz band wide-band low-power data communication
system (Item 19 of Article 2 Paragraph 1)

Test Result : Complied

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The above equipment has been tested by Eurofins E&E Wireless Taiwan Co., Ltd., and found compliance with the requirements set forth in the 2.4 GHz band wide-band low-power data communication system (Item 19 of Article 2 Paragraph 1) and technical standards mentioned above. The results of testing in this report apply only to the product/system, which was tested. Other similar equipment will not necessarily produce the same results due to production tolerance and measurement uncertainties.

Approved By

: Kai Yu Yang

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Appendix A. Test Setup Photographs

1 General Information

1.1. EUT Description

The product specifications of the EUT presented in the report are declared by the manufacturer who shall take full responsibility for the authenticity(except Declared Rated Power , E.I.R.P.).

Applicant	ASUSTeK COMPUTER INC. 1F., No. 15, Lide Rd., Beitou Dist., Taipei City 112, Taiwan		
Product Name	Active stylus SA205H		
Trade Name	ASUS		
Model Number	SA205H		
Hardware Version	V0.2		
Software Version	2.0.5		
Antenna Information	Trade Name: Shenzhen Qianfenyi Intelligent Technology Co., LTD Model Number: 2061500158-B Antenna Type: FPC Antenna Max. Gain: 0.82 dBi		
Radio Equipment	2.4 GHz Band Wide-Band Low-Power Data Communication System		
Classification of Specified Radio Equipment	Article 2 Clause 1 Item 19		
Frequency Band	Bluetooth LE : 1 Mbps Bluetooth 2LE : 2 Mbps Bluetooth BLR C2 : 500 kbps Bluetooth BLR C8 : 125 kbps		
Frequency Range	2402-2480 MHz		
Channel Number	40		
Channel Separated	2 MHz		
Modulation Type	GFSK		
Type of Emissions	F1D		
Temperature Range	0 ~ 40 °C		
EUT Power Rating	5 Vdc, 50 mA		
Declared Rated Power	BLE 1M	1.002 mW	0.009 dBm
	BLE 2M	1.005 mW	0.022 dBm
	BLR C2	1.000 mW	0.000 dBm
	BLR C8	0.998 mW	-0.009 dBm
E.I.R.P.	BLE 1M	0.829 dBm	
	BLE 2M	0.842 dBm	
	BLR C2	0.820 dBm	
	BLR C8	0.810 dBm	

Testing Sample No.	
Test Item	Sample Number
Radiated Emissions	C256132_A001
Conducted	C256132_A004

1.2. Testing Location

Lab Name: Eurofins E&E Wireless Taiwan Co., Ltd.

Site Address: ☒ No. 140-1, Changan Street, Bade District, Taoyuan City, Taiwan (R.O.C.)

Site Address: ☐ No. 2, Wuquan 5th Rd. Wugu Dist., New Taipei City, Taiwan (R.O.C.)

1.3. Summary of Test Result

Item	Result	Remark
Frequency Error	PASS	----
Occupied Bandwidth	PASS	----
Antenna Power (Conducted)	PASS	----
Unwanted Emission Strength	PASS	----
Secondarily Emitted Radio Wave Strength	PASS	----
Radio Interference Prevention Capability Measurement	PASS	----

Decision Rule

☒ Uncertainty is not included.

☐ Uncertainty is included.

2 Test Methodology

2.1. Mode of Operation

Test Category

2.4 GHz Band Wideband Low-Power Data Communication System

Pre-Test Mode	Final-Test Mode
BLE 1M	V
BLE 2M	V
BLR C2	
BLR C8	

Note : Investigation has been done on all the possible configurations for searching the worst cases (1M / 2M covers C2 / C8).

Comprehensive operation test

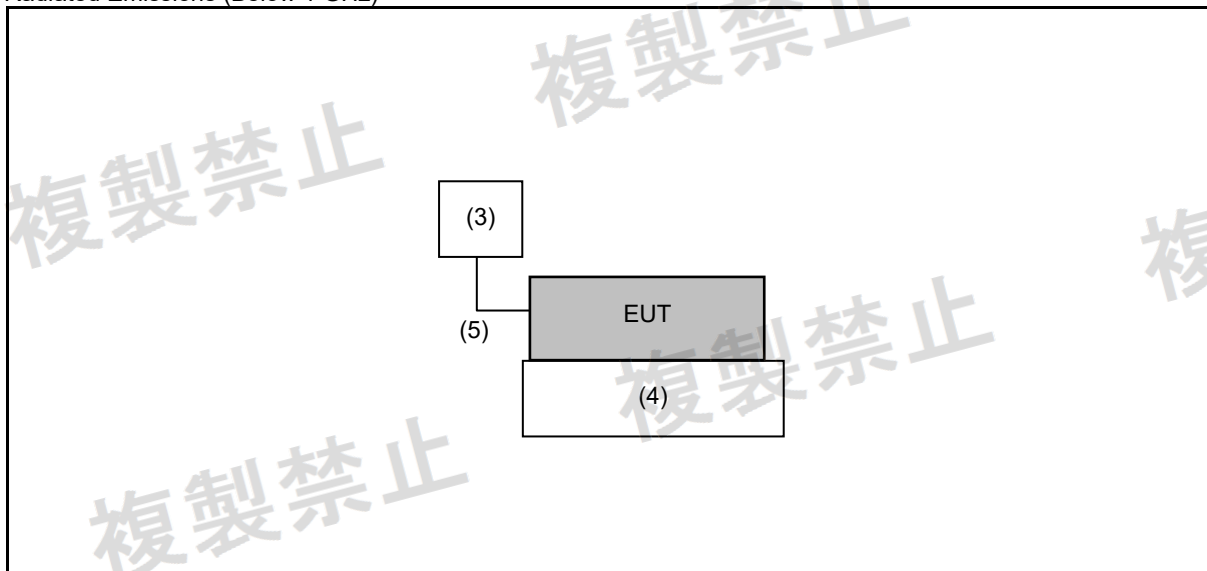
Three voltage settings are respectively adopted during the test. They are Normal Voltage, Normal Voltage + 10 % and Normal Voltage - 10 %.

2.2. EUT Test Step

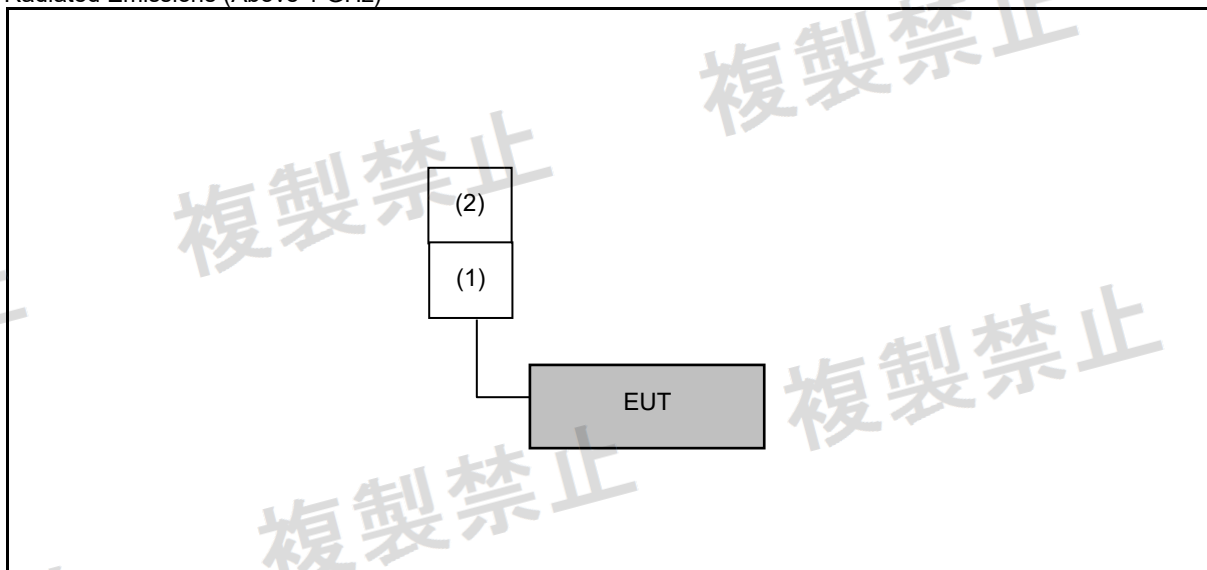
1.	Setup the EUT shown on "Configuration of Test System Details".
2.	Turn on Bluetooth function.
3.	EUT run test program.

2.3. Configuration of Test System Details

Radiated Emissions (Below 1 GHz)



Radiated Emissions (Above 1 GHz)



Devices Description				
	Product	Trade Name	Model Number	Serial Number
(1)	Fixture	ASUS	SA205H	---
(2)	NB	ASUS	P1448U	---
(3)	Adapter	Philips	DLP5320C	---
(4)	ASUS Pen Wireless Charger	ASUS	AW2P5	---
(5)	USB Cable	HUAWEI	04071121	---

2.4. Test Instruments

Test Period: Jun. 18, 2025 ~ Jun. 26, 2025

Testing Engineer: Peter Shui

Test Site			RF01-BD					
Use	Equipment	Manufacturer	Model Number	Serial Number	Calibration Authority	Cal. Date	Cal. Period	Cal. Method
☒	Power Sensor	Anritsu	MA24208A	2326014	ETC	Dec. 02, 2024	1 year	(C)
☒	Spectrum Analyzer (20 Hz~26.5 GHz)	Agilent	N9020A	US47520902	ETC	Aug. 28, 2024	1 year	(C)
☒	Power Supply	KEITHLEY	2303	4045290	OCL	Jan. 03, 2025	1 year	(C)

Remark :

- (a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) in Japan (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1) in JRL.
- (b) Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Act (Act No. 51 of 1992).
- (c) Calibration conducted in countries except Japan, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1).
- (d) Calibration, etc. conducted by using measuring instruments and other equipment listed in the right column of appended table No. 3, which shall have been given any type of calibration, etc. listed above from (a) to (c)

From JRL Article 24-2, paragraph 4, Item 2

2.5. Uncertainty of Measured Value

Test Item	Uncertainty	
	BD	WG
Frequency Error	4.8×10^{-7}	4.9×10^{-7}
Occupied Bandwidth	4.4%	4.4%
Spread Bandwidth	4.4%	4.4%
Antenna Power Error	1.1 dB	1.1 dB
Unwanted Emission Strength	1.0 dB	1.0 dB
Secondarily Emitted Radio Wave Strength	1.0 dB	1.0 dB

2.6. Test Site Environment

Items	Test Item	Required	Interval(*)
Temperature (°C)	Conducted	5-35	20-30
Humidity (%RH)		45-85	45-75

(*)The measurement ambient temperature is within this range.

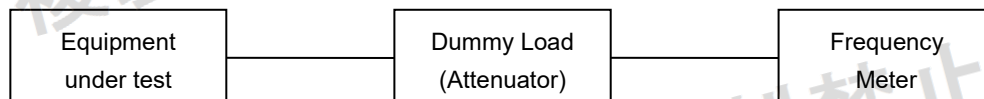
3 Measurement Procedure

3.1. Frequency Error Measurement

■ Limit

Frequency Tolerances ≤ 50 ppm.

■ Test Setup



■ Measuring Equipment Conditions

- (1) Use a frequency counter that has sensitivity of -20 dBm or better or a spectrum analyzer that has synthesized local oscillator.
- (2) Accuracy of the frequency counter shall be one tenth of the tolerance specified for EUT or less (e.g. 5×10^{-6} or less)
- (3) Attenuation of the attenuator shall be adjusted to give the optimum operation input level to the frequency meter in order to avoid the effect from the amplitude fluctuation of measurement wave.
- (4) When measuring burst waves, use the pulse measuring function of the counter and set the gate open time to a value that enables the measurement though entire period of burst as long as possible.

■ Conditions of Equipment under Test

- (1) Set the EUT to the test frequency and transmit RF signal.
- (2) The modulation state is "continuous wave without modulation" by stopping spread spectrum in principle. But, if it is not possible, it shall be "continuous burst wave without modulation".

■ Measuring Operation Procedures

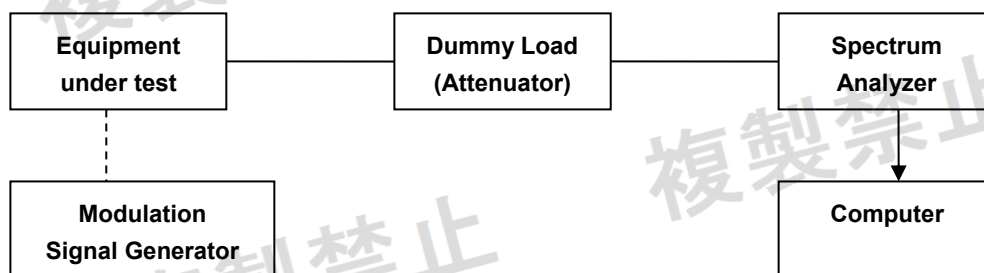
In case of burst waves, the measurement shall be done for enough time (e.g. covering 20 or more of burst waves) in order to obtain the enough measuring accuracy, and the average of the measured values becomes the final value.

3.2. Occupied Bandwidth Measurement

■ Limit

Max. Occupied Bandwidth: 26 MHz.

■ Test Setup



■ Measuring Equipment Conditions

Spectrum Analyzer Setting

SPAN : 200 MHz

RBW : 300 kHz

VBW : 300 kHz

Sweep Time : AUTO (Minimum time to ensure measurement accuracy.)

Data Points : 401 points or more

Indication mode : Max hold

Detection Mode : Positive Peak

Storage Mode : Normal

Y-axis Scale : 10 dB/Div.

Reference Level : Enough level for maximum dynamic range

■ Conditions of Equipment under Test

Set to testing frequency and modulate using standard encoding test signals.

■ Measuring Operation Procedures

- (1) Configure the setting of the spectrum analyzer to 3.3(1).
- (2) After repeating sweeps until no display changes are found, import the values of all the data points as array variables of the computer.
- (3) Convert the dB value into the antilog of the power dimension (i.e. mW) for all the data.
- (4) Find the total power of the all the data and record as "Total Power" in mW.
- (5) Add power to the minimum frequency data in order and find the value of the limiting data point that is 0.5 % of the "Total Power". Convert the limiting point into a frequency and record as the "lower limit" frequency.
- (6) Add power to the maximum frequency data in order and find the value of the limiting data point that is 0.5 % of the "Total Power". Convert the limiting point into a frequency and record as the "upper limit" frequency.

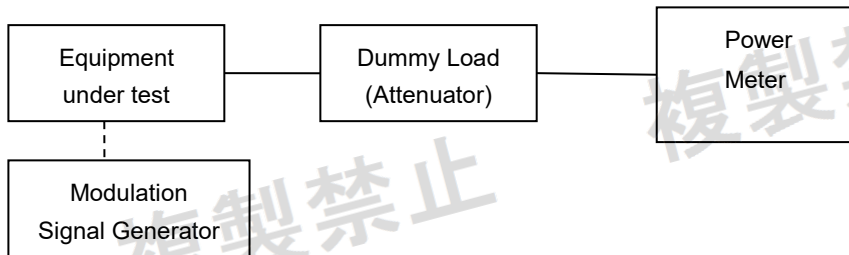
3.3. Antenna Power (Conducted) Measurement

■ Limit

RF Output Power ≤ 10 mW.

RF Output Power Tolerance ≤ 20 %.

■ Test Setup



■ Measuring Equipment Conditions

a. Use power meter to measure burst power.

■ Conditions of Equipment under Test

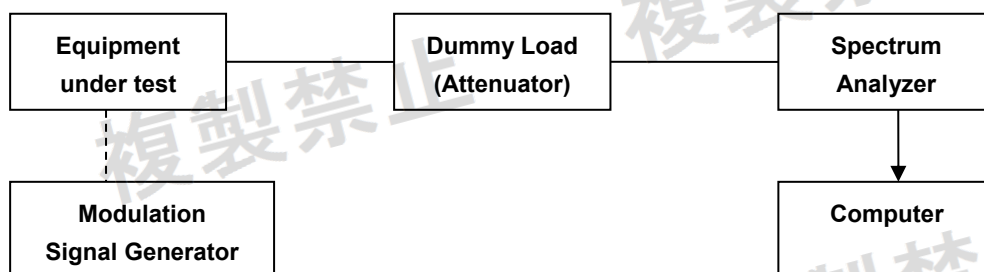
a. Connect the high frequency power meter to the output of the attenuator and measure the total power (without bandwidth limitation)

3.4. Unwanted Emission Strength Measurement

■ Limit

Frequency (MHz)	Limit (μW/MHz)
Under 2387 MHz	≤ 2.5
2387-2400 MHz	≤ 25
2483.5-2496.5 MHz	≤ 25
2496.5 - 12.5 GHz	≤ 2.5

■ Test Setup



Note 1: The computer is used for calculating the mean value of amplitude levels.

■ Measuring Equipment Conditions

(1) The setting of the spectrum analyzer during spurious searches are as follow:

Sweep Bandwidth:	Starts spurious searches from the smallest possible frequencies to more than 5 times the carrier frequencies..
Resolution bandwidth:	1 MHz
Video bandwidth:	1 MHz
Y-axis scale:	10 dB/Div.
Input level:	Maximum dynamic range value
Sweep time:	Minimum amount of time to ensure measurement accuracy.
Sweep mode:	Continuous mode
Data Points:	Over 400 points
Detection mode:	Positive peak
Display mode:	Maximum hold

- (2) The setting of spectrum analyzer while conducting spurious amplitude measurement are as follows:

Center Frequency:	Acquired spurious frequency in (1)
Frequency sweep width:	0 MHz
Resolution bandwidth:	1 MHz
Video bandwidth:	Same as Resolution bandwidth
	Note: take into account that the requirement limits the power in a bandwidth of 1 MHz. If the measurement is carried out with a bandwidth of 100 kHz (for frequencies below 1 GHz), the limit shall be reduced with 10 dB
Y-axis scale:	10 dB/Div
Input level:	Choose input level within the linear range of the SA mixer (so that no additional spurious are generated by the mixer).
Sweep mode:	Minimum amount of time to ensure measurement accuracy.
Data Points:	Over 400 points
Sweep mode:	Single sweep
Detection mode:	Sample (BIN-Width $\ll$ RBW, so that all spurious emissions are captured). [BIN-width is the frequency difference between 2 adjacent sample points on the display.]

■ Conditions of Equipment under Test

Set the testing frequency and testing spread codes and modulate using standard encoding test signals.

Choose a frequency / channel according to specified range (Low, Middle and High).

Note: If the spurious limit is specified with the EIRP value, the effective (maximum) antenna gain shall be taken into account.

■ Measuring Operation Procedures

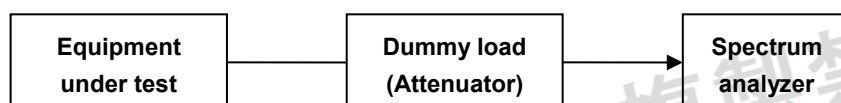
- (1) Configure the settings of the spectrum analyzer to 8.3(1) and search for spurious frequencies by sweeping. Do not conduct the measurements in 8.3(2) if the amplitude value of the acquired spurious frequencies meets the standard value.
- (2) If the acquired spurious amplitude value exceeds the standard value, narrow the sweep Bandwidth, in the order of 100 MHz, 10 MHz, and 1 MHz, to increase the frequency accuracy of the spectrum analyzer and accurately find the spurious frequency. Configure the spectrum analyzer to the settings in 8.3(2), find the average of the spurious amplitude values (in the case of burst waves, the average values are within the respective burst and set this as the measured value. Averaging can be done by summing up the power (display must give the linear power in uW) according to 8.3(2) and dividing by the amount of points. Correction on the equivalent noise bandwidth shall be necessary (if not realized automatically).

3.5. Secondly Emitted Radio Wave Strength Measurement

■ Limit

Frequency (MHz)	Limit (nW)
Under 1 GHz	≤ 4
1 - 12.5 GHz	≤ 20

■ Test Setup



■ Measuring Equipment Conditions

- (1) Set the attenuation of the attenuator to under 20 dB because the subject for measurement is of low level.
- (2) Set the spectrum analyzer as follow:
 - Frequency sweep width: See 7.5 Measuring Operation Procedures
 - Resolution bandwidth: A value determined by the specified dynamic range and the sweep time. (e.g. 30 kHz for 8 GHz sweep width and 30 second sweep time.).
 - Video bandwidth: Approximately the same bandwidth as resolution bandwidth.
 - Y-axis scale: 10 dB/Div
 - Input level: 0 dB, if possible.
 - Sweep mode: Single sweep
 - Detection mode: Positive peak

■ Conditions of Equipment under Test

Set the EUT to receiver the test frequency with forced continuous receiving control.

■ Measuring Operation Procedures

Sweep the spectrum analyzer from a low frequency to a frequency of 3 times if the carrier or over (e.g. 10 MHz to about 8 GHz) and measure the collateral radio emissions.

3.6. Radio Interference Prevention Capability Measurement

■ Limit

Identification code $\geq$ 48 bits

■ Measuring Id Code Software

MAC IP List: MAC Scan

■ Test Setup



■ Measuring Operation Procedures

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.

3.7. Construction Protection Confirmation Method

■ 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.

4 Test Results

BLE 1M

2. TEST RESULTS DATA FOR JAPANESE CERTIFICATION BLE-1M

Peak Antenna Gain	0.820	dBi
Declaration Output Power	1.002	mW
Declaration Output Power	0.009	dBm
EIRP	0.829	dBm
Input Power Voltage	5	Vdc

Tested Circuit Insertion Loss		0.8	dB
Burst	ON TIME	-Not applicable-	sec
	OFF TIME	-Not applicable-	sec
	Ratio	-Not applicable-	%
Packet Type (Mode)		-Not applicable-	mode

Test Category ; 2.4GHz Band Wideband Low-Power Data Communication System

2.1 TEST Results (Normal Voltage)

Measurement Frequency			MHz	2402	2440	2480	Result	Limit
Channel Number			Ch.	0	19	39	-----	
Reading Frequency			MHz	2401.9700	2439.9760	2479.9910	-----	
Frequency Tolerance			ppm	-12.49	-9.84	-3.63	PASS	-50≤x≤+50
Occupied Bandwidth			MHz	1.5753	1.5550	1.5590	PASS	≤26 MHz
RF Output Power			mW	0.998	1.002	0.966	PASS	≤10 mW
RF Output Power Tolerance			%	-0.399	0.000	-3.593	PASS	≤+20
EIRP			dBm	0.810	0.830	0.670		
Unwanted Emission Strength (TX1)	Under 2387MHz		μW/MHz	0.251	0.258	0.236	PASS	≤2.5uW/MHz
			MHz	30.000	30.000	30.000	-----	
	2387-2400MHz		μW/MHz	10.079	0.042	0.014	PASS	≤25uW/MHz
			MHz	2400.000	2399.740	2399.714	-----	
	2483.5-2496.5MHz		μW/MHz	0.009	0.020	3.592	PASS	≤25uW/MHz
			MHz	2484.878	2483.500	2483.552	-----	
	2496.5 - 12.5GHz		μW/MHz	0.008	0.007	0.113	PASS	≤2.5uW/MHz
			MHz	4807.000	4877.000	2496.500	-----	
Secondarily Emitted Radio Wave Strength (RX Spurious) (RX1)		Under 1GHz	nW	0.004	0.004	0.004	PASS	≤ 4 nW
			MHz	31.940	31.940	31.940	-----	
		1 - 12.5GHz	nW	1.877	2.273	2.365	PASS	≤ 20 nW
			MHz	5623.000	2438.000	2449.000	-----	
Interference Prevention Function			-----	good			PASS	

2.2 TEST Results (High Voltage)

Measurement Frequency		MHz	2402	2440	2480	Result	Limit
Channel Number		Ch.	0	19	39	-----	
Reading Frequency		MHz	2401.9250	2440.0060	2479.9400	-----	
Frequency Tolerance		ppm	-31.22	2.46	-24.19	PASS	-50≤x≤+50
Occupied Bandwidth		MHz	1.5748	1.5535	1.5358	PASS	≤26 MHz
RF Output Power		mW	0.998	1.000	0.966	PASS	≤10 mW
RF Output Power Tolerance		%	-0.399	-0.200	-3.593	PASS	≤+20
EIRP		dBm	0.810	0.820	0.670		
Unwanted Emission Strength (TX1)	Under 2387MHz	μW/MHz	0.245	0.214	0.228	PASS	≤2.5uW/MHz
		MHz	30.000	30.000	30.000	-----	
	2387-2400MHz	μW/MHz	10.090	0.040	0.015	PASS	≤25uW/MHz
		MHz	2400.000	2398.557	2395.697	-----	
	2483.5-2496.5MHz	μW/MHz	0.008	0.022	3.422	PASS	≤25uW/MHz
		MHz	2486.282	2484.670	2483.526	-----	
	2496.5 - 12.5GHz	μW/MHz	0.006	0.012	0.240	PASS	≤2.5uW/MHz
		MHz	4807.000	2496.500	2496.500	-----	
Secondarily Emitted Radio Wave Strength (RX Spurious) (RX1)	Under 1GHz	nW	0.004	0.004	0.005	PASS	≤ 4 nW
		MHz	31.940	31.940	31.940	-----	
	1 - 12.5GHz	nW	1.667	2.936	1.371	PASS	≤ 20 nW
		MHz	2461.000	3415.000	2449.000	-----	
Interference Prevention Function		-----	good			PASS	

2.3 TEST Results (Low Voltage)

Measurement Frequency			MHz	2402	2440	2480	Result	Limit
Channel Number			Ch.	0	19	39	-----	
Reading Frequency			MHz	2402.0210	2440.0000	2479.9700	-----	
Frequency Tolerance			ppm	8.74	0.00	-12.10	PASS	-50≤x≤+50
Occupied Bandwidth			MHz	1.5858	1.5549	1.5513	PASS	≤26 MHz
RF Output Power			mW	0.998	1.002	0.964	PASS	≤10 mW
RF Output Power Tolerance			%	-0.399	0.000	-3.792	PASS	≤+20
EIRP			dBm	0.810	0.830	0.660		
Unwanted Emission Strength (TX1)	Under 2387MHz		μW/MHz	0.239	0.252	0.239	PASS	≤2.5uW/MHz
			MHz	30.000	30.000	30.000	-----	
	2387-2400MHz		μW/MHz	10.046	0.040	0.015	PASS	≤25uW/MHz
			MHz	2400.000	2399.233	2397.517	-----	
	2483.5-2496.5MHz		μW/MHz	0.008	0.021	3.584	PASS	≤25uW/MHz
			MHz	2483.591	2483.500	2483.513	-----	
	2496.5 - 12.5GHz		μW/MHz	0.008	0.010	0.292	PASS	≤2.5uW/MHz
			MHz	4807.000	2496.500	2496.500	-----	
Secondarily Emitted Radio Wave Strength (RX Spurious) (RX1)		Under 1GHz	nW	0.004	0.004	0.004	PASS	≤ 4 nW
			MHz	31.940	31.940	31.940	-----	
		1 - 12.5GHz	nW	1.313	1.533	1.922	PASS	≤ 20 nW
			MHz	2449.000	2461.000	2461.000	-----	
Interference Prevention Function			-----	good			PASS	

BLE 2M

2. TEST RESULTS DATA FOR JAPANESE CERTIFICATION BLE-2M

Peak Antenna Gain	0.820	dBi
Declaration Output Power	1.005	mW
Declaration Output Power	0.022	dBm
EIRP	0.842	dBm
Input Power Voltage	5	Vdc

Tested Circit Insertion Loss		0.8	dB
Burst	ON TIME	-Not applicable-	sec
	OFF TIME	-Not applicable-	sec
	Ratio	-Not applicable-	%
Packet Type (Mode)		-Not applicable-	mode

Test Category ; 2.4GHz Band Wideband Low-Power Data Communication System

2.1 TEST Results (Normal Voltage)

Measurement Frequency		MHz	2402	2440	2480	Result	Limit
Channel Number		Ch.	0	19	39	----	
Reading Frequency		MHz	2401.9910	2439.9910	2479.9880	----	
Frequency Tolerance		ppm	-3.75	-3.69	-4.84	PASS	-50≤x≤+50
Occupied Bandwidth		MHz	2.1826	2.1930	2.1919	PASS	≤26 MHz
RF Output Power		mW	1.002	1.005	0.971	PASS	≤10 mW
RF Output Power Tolerance		%	-0.299	0.000	-3.383	PASS	≤+20
EIRP		dBm	0.830	0.840	0.690		
Unwanted Emission Strength (TX1)	Under 2387MHz	μW/MHz	0.246	0.234	0.259	PASS	≤2.5uW/MHz
		MHz	2387.000	30.000	30.000	----	
	2387-2400MHz	μW/MHz	9.202	0.040	0.017	PASS	≤25uW/MHz
		MHz	2400.000	2399.922	2399.623	----	
	2483.5-2496.5MHz	μW/MHz	0.008	0.023	3.661	PASS	≤25uW/MHz
		MHz	2487.959	2484.384	2483.526	----	
	2496.5 - 12.5GHz	μW/MHz	0.007	0.012	0.189	PASS	≤2.5uW/MHz
		MHz	2496.500	2496.500	2496.500	----	
Secondarily Emitted Radio Wave Strength (RX Spurious) (RX1)	Under 1GHz	nW	0.004	0.006	0.005	PASS	≤ 4 nW
		MHz	31.940	741.980	31.940	----	
	1 - 12.5GHz	nW	1.046	1.307	1.495	PASS	≤ 20 nW
		MHz	2461.000	2472.000	2449.000	----	
Interference Prevention Function		----	good			PASS	

2.2 TEST Results (High Voltage)

Measurement Frequency		MHz	2402	2440	2480	Result	Limit
Channel Number		Ch.	0	19	39	-----	
Reading Frequency		MHz	2401.9910	2439.9850	2479.9910	-----	
Frequency Tolerance		ppm	-3.75	-6.15	-3.63	PASS	-50≤x≤+50
Occupied Bandwidth		MHz	2.1798	2.1849	2.1873	PASS	≤26 MHz
RF Output Power		mW	1.000	1.002	0.971	PASS	≤10 mW
RF Output Power Tolerance		%	-0.498	-0.299	-3.383	PASS	≤+20
EIRP		dBm	0.820	0.830	0.690		
Unwanted Emission Strength (TX1)	Under 2387MHz	μW/MHz	0.243	0.211	0.250	PASS	≤2.5uW/MHz
		MHz	30.000	32.400	30.000	-----	
	2387-2400MHz	μW/MHz	9.177	0.040	0.016	PASS	≤25uW/MHz
		MHz	2400.000	2398.999	2393.474	-----	
	2483.5-2496.5MHz	μW/MHz	0.008	0.020	3.727	PASS	≤25uW/MHz
		MHz	2487.777	2483.578	2483.513	-----	
	2496.5 - 12.5GHz	μW/MHz	0.006	0.013	0.277	PASS	≤2.5uW/MHz
		MHz	4807.000	2496.500	2496.500	-----	
Secondarily Emitted Radio Wave Strength (RX Spurious) (RX1)	Under 1GHz	nW	0.004	0.004	0.004	PASS	≤ 4 nW
		MHz	31.940	31.940	31.940	-----	
	1 - 12.5GHz	nW	1.225	0.862	1.227	PASS	≤ 20 nW
		MHz	5221.000	2472.000	3381.000	-----	
Interference Prevention Function		-----	good			PASS	

2.3 TEST Results (Low Voltage)

Measurement Frequency		MHz	2402	2440	2480	Result	Limit
Channel Number		Ch.	0	19	39	-----	
Reading Frequency		MHz	2401.9940	2439.9850	2479.9910	-----	
Frequency Tolerance		ppm	-2.50	-6.15	-3.63	PASS	-50≤x≤+50
Occupied Bandwidth		MHz	2.1819	2.1922	2.1922	PASS	≤26 MHz
RF Output Power		mW	1.002	1.005	0.968	PASS	≤10 mW
RF Output Power Tolerance		%	-0.299	0.000	-3.682	PASS	≤+20
EIRP		dBm	0.830	0.840	0.680		
Unwanted Emission Strength (TX1)	Under 2387MHz	μW/MHz	0.238	0.230	0.247	PASS	≤2.5uW/MHz
		MHz	30.000	30.000	30.000	-----	
	2387-2400MHz	μW/MHz	9.122	0.039	0.014	PASS	≤25uW/MHz
		MHz	2400.000	2399.337	2395.762	-----	
	2483.5-2496.5MHz	μW/MHz	0.010	0.021	3.574	PASS	≤25uW/MHz
		MHz	2483.682	2484.618	2483.513	-----	
	2496.5 - 12.5GHz	μW/MHz	0.007	0.009	0.118	PASS	≤2.5uW/MHz
		MHz	4807.000	2507.000	2496.500	-----	
Secondarily Emitted Radio Wave Strength (RX Spurious) (RX1)	Under 1GHz	nW	0.008	0.006	0.005	PASS	≤4 nW
		MHz	744.890	741.980	497.540	-----	
	1 - 12.5GHz	nW	2.221	1.241	1.229	PASS	≤20 nW
		MHz	5738.000	5531.000	2449.000	-----	
Interference Prevention Function		-----	good			PASS	

BLR C2

2. TEST RESULTS DATA FOR JAPANESE CERTIFICATION BLR C2

Peak Antenna Gain	0.820	dBi
Declaration Output Power	1.000	mW
Declaration Output Power	0.000	dBm
EIRP	0.820	dBm
Input Power Voltage	5	Vdc

Tested Circit Insertion Loss		0.8	dB
Burst	ON TIME	-Not applicable-	sec
	OFF TIME	-Not applicable-	sec
	Ratio	-Not applicable-	%
Packet Type (Mode)		-Not applicable-	mode

Test Category ; 2.4GHz Band Wideband Low-Power Data Communication System

2.1 TEST Results (Normal Voltage)

Measurement Frequency	MHz	2402	2440	2480	Result	Limit
Channel Number	Ch.	0	19	39	----	
RF Output Power	mW	0.995	1.000	0.962	PASS	≤ 10 mW
RF Output Power Tolerance	%	-0.500	0.000	-3.800	PASS	≤ +20
EIRP	dBm	0.800	0.820	0.650		

BLR C8

2. TEST RESULTS DATA FOR JAPANESE CERTIFICATION BLR C8

Peak Antenna Gain	0.820	dBi
Declaration Output Power	0.998	mW
Declaration Output Power	-0.009	dBm
EIRP	0.810	dBm
Input Power Voltage	5	Vdc

Tested Circuit Insertion Loss		0.8	dB
Burst	ON TIME	-Not applicable-	sec
	OFF TIME	-Not applicable-	sec
	Ratio	-Not applicable-	%
Packet Type (Mode)		-Not applicable-	mode

Test Category ; 2.4GHz Band Wideband Low-Power Data Communication System

2.1 TEST Results (Normal Voltage)

Measurement Frequency	MHz	2402	2440	2480	Result	Limit
Channel Number	Ch.	0	19	39	----	
RF Output Power	mW	0.995	0.998	0.964	PASS	≤ 10 mW
RF Output Power Tolerance	%	-0.301	0.000	-3.407	PASS	≤ +20
EIRP	dBm	0.800	0.810	0.660		

Antenna List

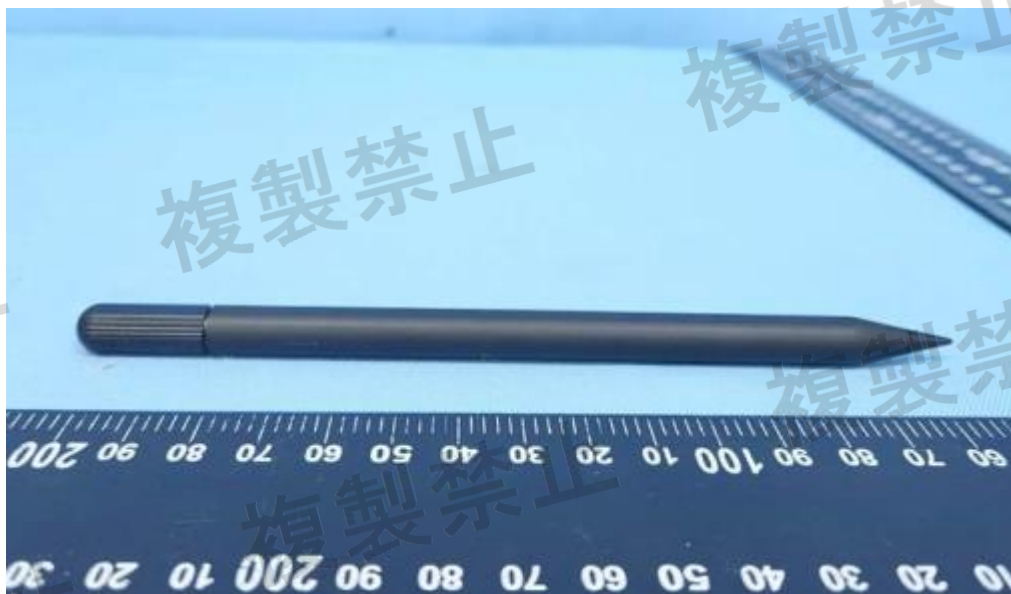
Antenna			Gain Specification			Notes (Cable or Others)
No	Type	Model Name	Max Gain (dBi)	Attenuation (dB)	Net Gain (dBi)	
ANT-0	FPC Antenna	2061500158-B	0.82	0	0	Horizontal + Vertical

Construction Protection Confirmation Method

Confirmation Method

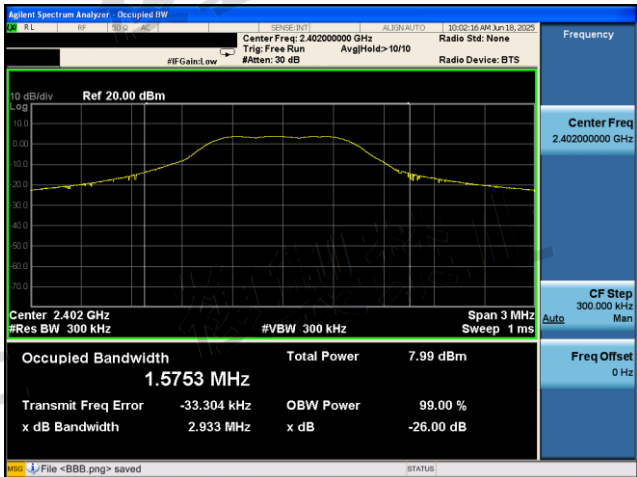
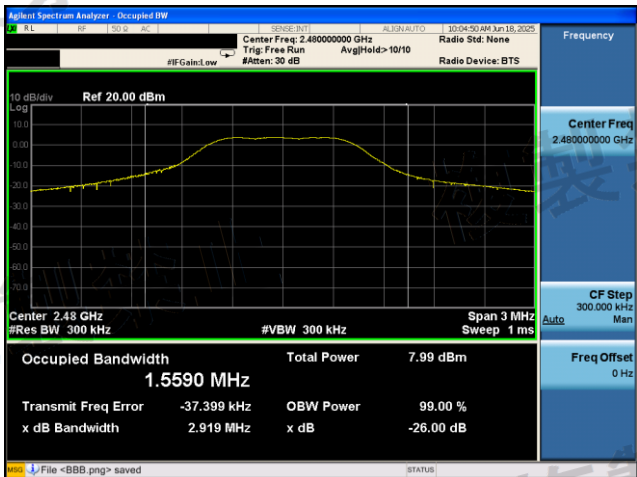
☐	1. Sealed with special screws (indicate the special screws used in Exterior View Drawings, and also attach its technical drawings of such screws).
☒	2. Plastic chassis is being welded using ultrasonic waves.
☐	3. Chassis is glued using a special adhesive.
☐	4. Metal covers are spot-fused (indicate the fused points in Exterior View Drawings).
☐	5. Cover is specially interlocked (indicate the interlocked part in Exterior View Drawings).
☐	6. Shield case is welded at RF and modulation parts, and ID-ROM is welded using the BGA Method.
☐	7. Shield case is welded at RF and modulation parts, and ID-ROM is glued at its lead with a special adhesive.
☐	8. Shield case is welded at RF and modulation parts, and ID-ROM is glued with a non-transparent laminating agent.
☐	9. Other ()

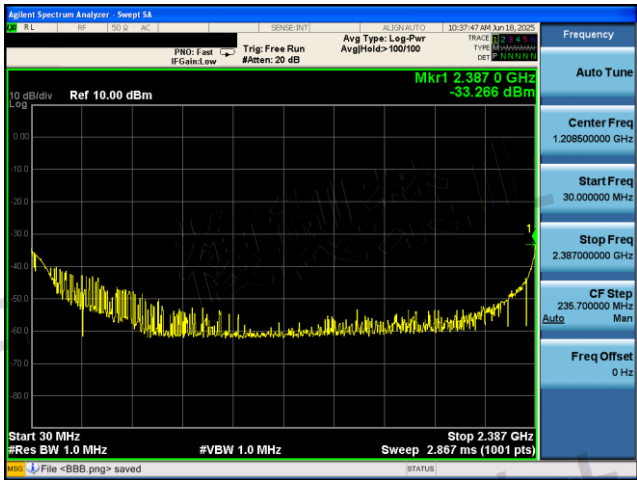
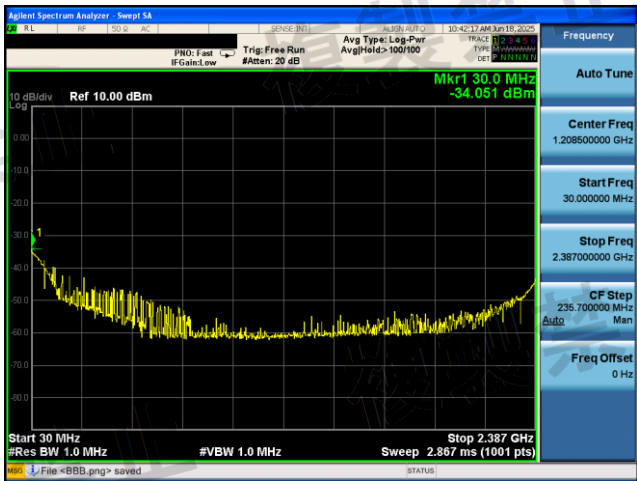
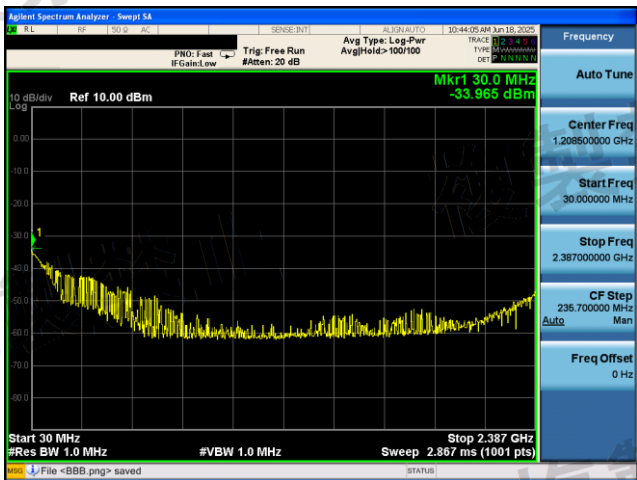
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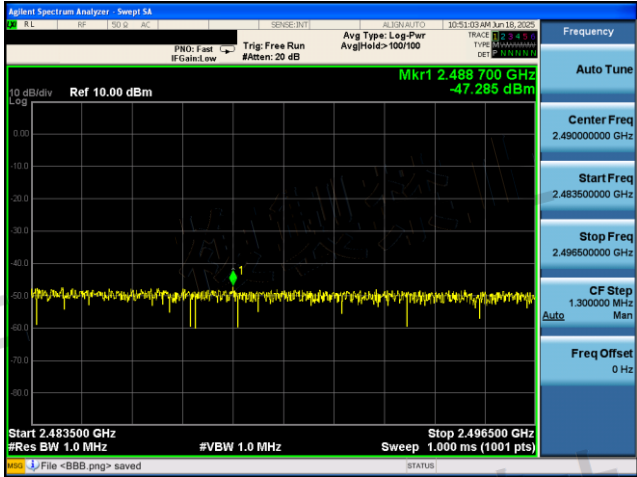
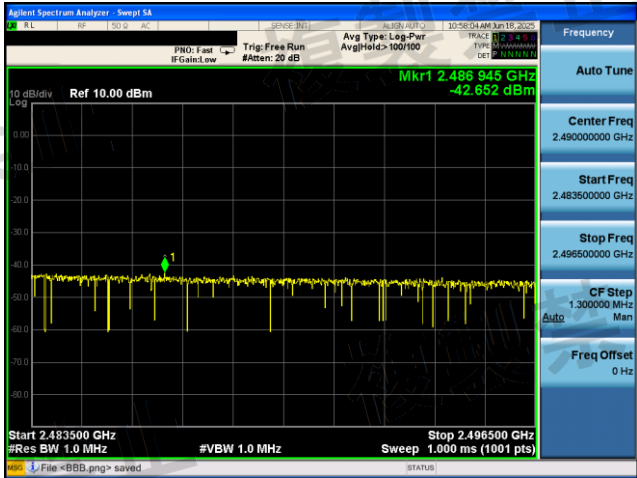
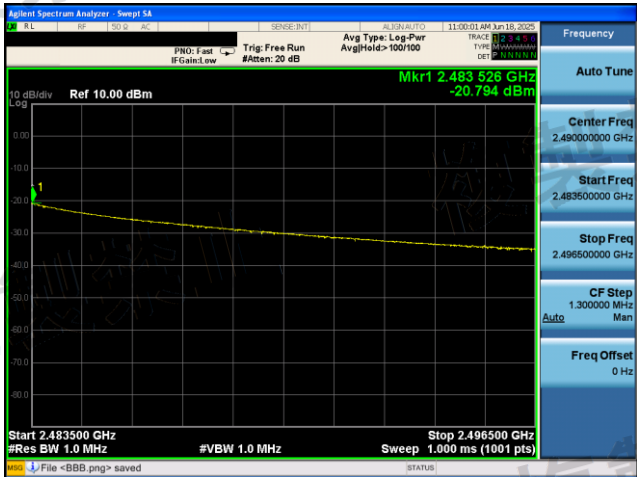
Test Graphs

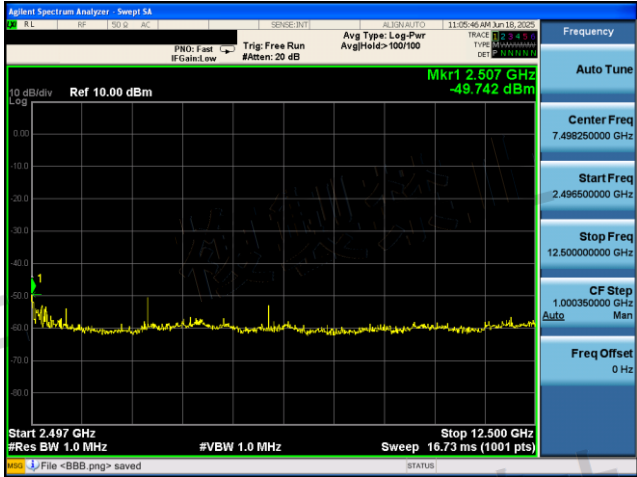
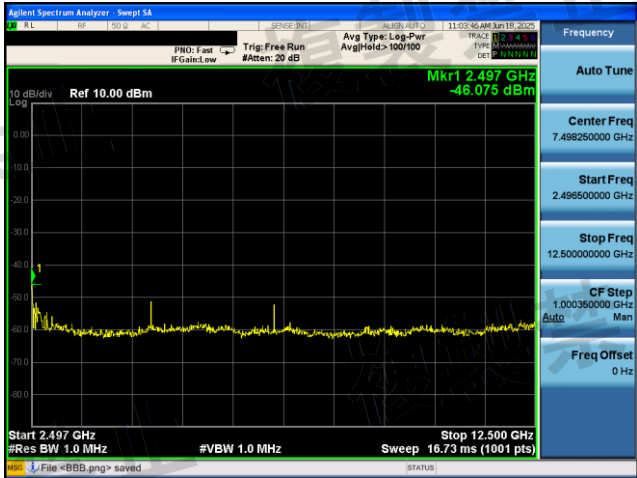
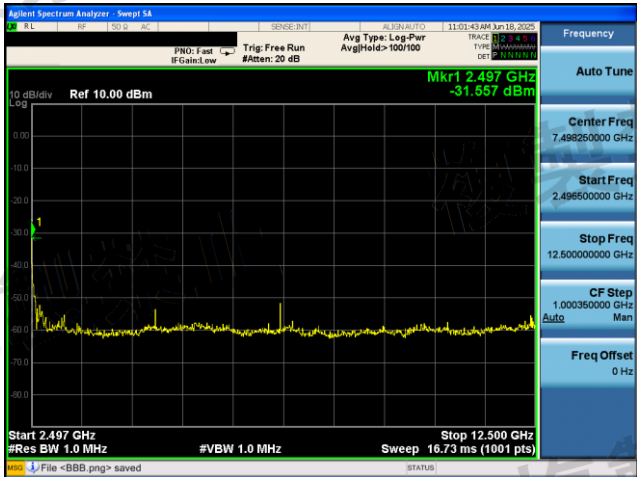
BLE 1M																													
Frequency Error Measurement																													
Normal Voltage Low CH	<p>Agilent Spectrum Analyzer - Sweep 5A</p> <p>PROG: Fast Trig: Free Run IF Gain: Low #Att: 30 dB Avg Type: Log-Pwr Avg Hold: 100/100</p> <p>Ref 20.00 dBm</p> <p>Mkr3 2.403188 GHz -6.767 dBm</p> <p>Center 2.402000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts)</p> <table><thead><tr><th>Mkr</th><th>Mode</th><th>Freq</th><th>Power</th><th>Function</th><th>Function Width</th><th>Function Value</th></tr></thead><tbody><tr><td>1</td><td>N</td><td>2.401916 GHz</td><td>-6.696 dBm</td><td></td><td></td><td></td></tr><tr><td>2</td><td>N</td><td>2.401952 GHz</td><td>-6.389 dBm</td><td></td><td></td><td></td></tr><tr><td>3</td><td>N</td><td>2.403188 GHz</td><td>-6.767 dBm</td><td></td><td></td><td></td></tr></tbody></table> <p>File <BBB.png> saved</p>	Mkr	Mode	Freq	Power	Function	Function Width	Function Value	1	N	2.401916 GHz	-6.696 dBm				2	N	2.401952 GHz	-6.389 dBm				3	N	2.403188 GHz	-6.767 dBm			
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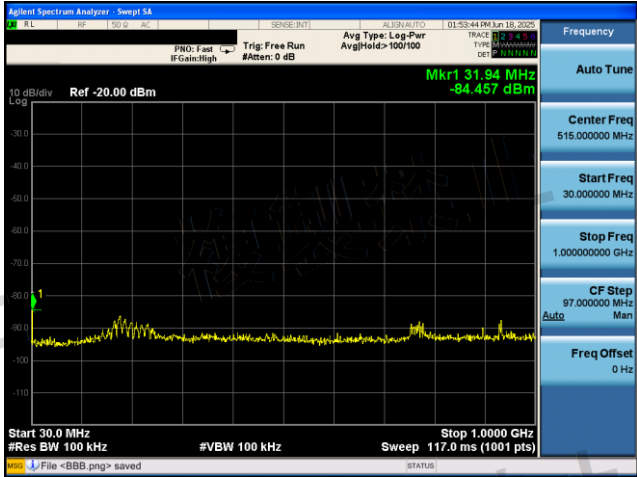
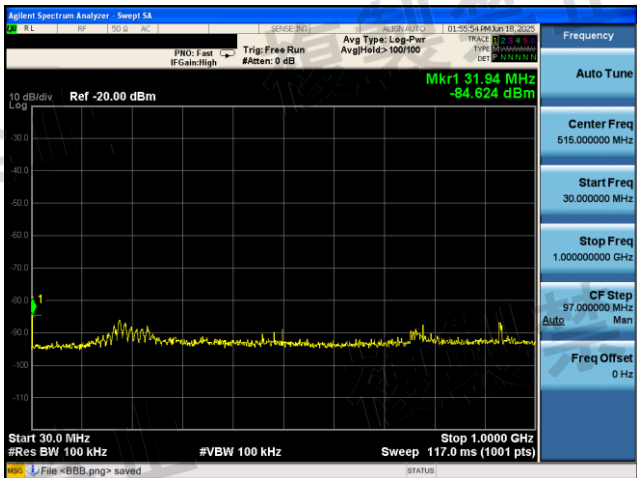
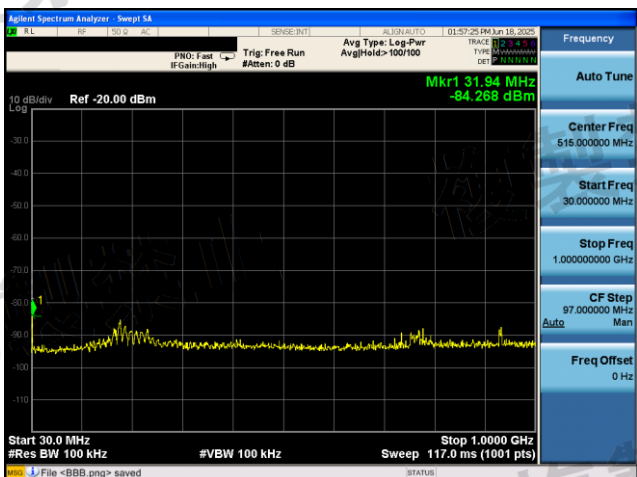
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Normal Voltage Middle CH	 <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.44000000 GHz Trig: Free Run #Gain: Low #Atten: 30 dB AvgHold: 10/10 Radio Std: None Radio Device: BTS</p> <p>10 dB/div Ref 20.00 dBm</p> <p>Center 2.44 GHz #Res BW 300 kHz #VBW 300 kHz Span 3 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 1.5550 MHz Total Power 7.91 dBm</p> <p>Transmit Freq Error -20.842 kHz OBW Power 99.00 % x dB Bandwidth 2.888 MHz x dB -26.00 dB</p> <p>File <BBB.png> saved</p>
Normal Voltage High CH	 <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.48000000 GHz Trig: Free Run #Gain: Low #Atten: 30 dB AvgHold: 10/10 Radio Std: None Radio Device: BTS</p> <p>10 dB/div Ref 20.00 dBm</p> <p>Center 2.48 GHz #Res BW 300 kHz #VBW 300 kHz Span 3 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 1.5590 MHz Total Power 7.99 dBm</p> <p>Transmit Freq Error -37.399 kHz OBW Power 99.00 % x dB Bandwidth 2.919 MHz x dB -26.00 dB</p> <p>File <BBB.png> saved</p>

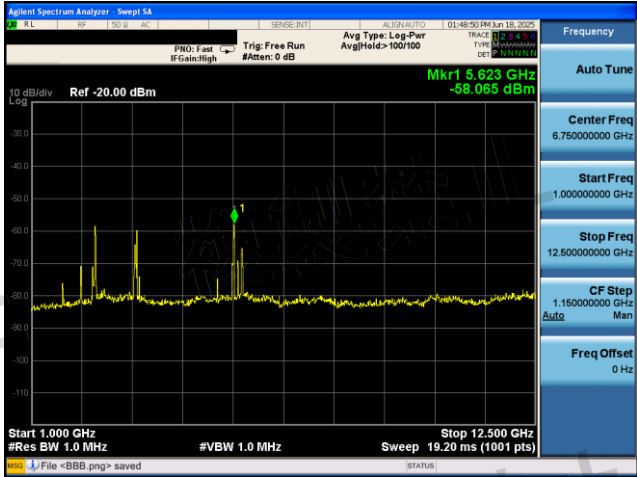
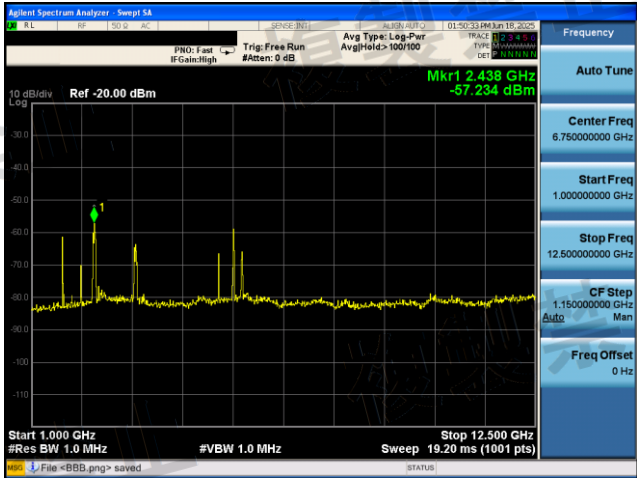
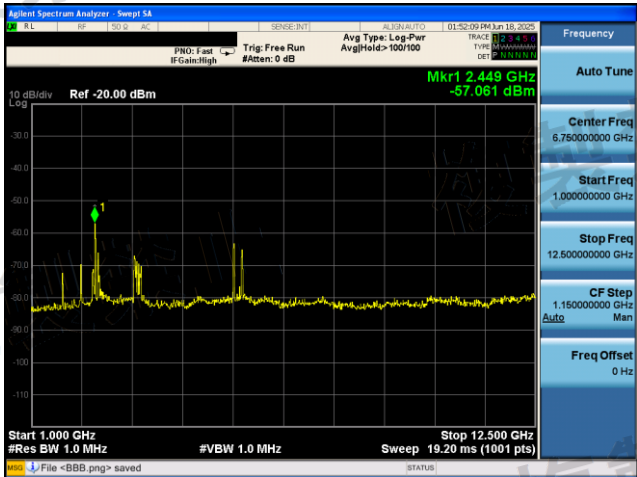
BLE 1M	
Unwanted Emission Strength Measurement	
30 MHz – 2387 MHz	
Normal Voltage Low CH	
Normal Voltage Middle CH	
Normal Voltage High CH	

BLE 1M	
Unwanted Emission Strength Measurement	
2387 MHz – 2400 MHz	
Normal Voltage Low CH	
Normal Voltage Middle CH	
Normal Voltage High CH	

BLE 1M	
Unwanted Emission Strength Measurement	
2483.5 MHz – 2496.5 MHz	
Normal Voltage Low CH	
Normal Voltage Middle CH	
Normal Voltage High CH	

BLE 1M	
Unwanted Emission Strength Measurement	
2496.5 MHz – 12.5 GHz	
Normal Voltage Low CH	
Normal Voltage Middle CH	
Normal Voltage High CH	

BLE 1M	
Secondarily Emitted Radio Wave Strength Measurement	
30 MHz – 1 GHz	
Normal Voltage Low CH	
Normal Voltage Middle CH	
Normal Voltage High CH	

BLE 1M	
Secondarily Emitted Radio Wave Strength Measurement	
1 GHz – 12.5 GHz	
Normal Voltage Low CH	
Normal Voltage Middle CH	
Normal Voltage High CH	

BLE 1M

Frequency Error Measurement

High Voltage

Low CH



High Voltage

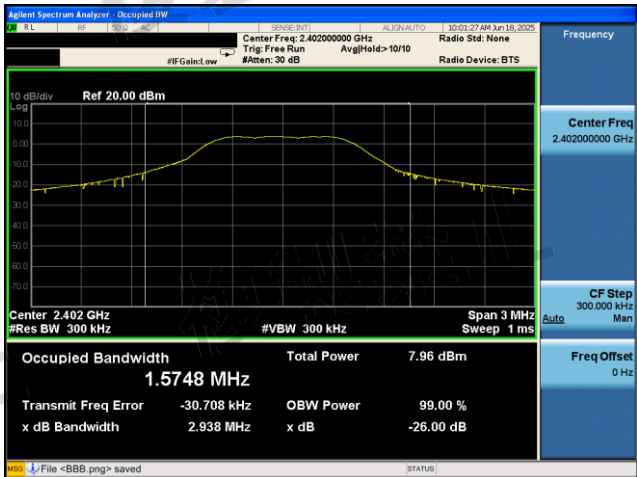
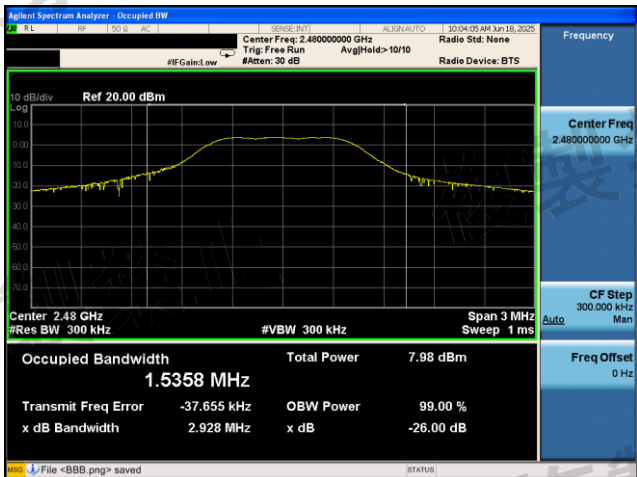
Middle CH

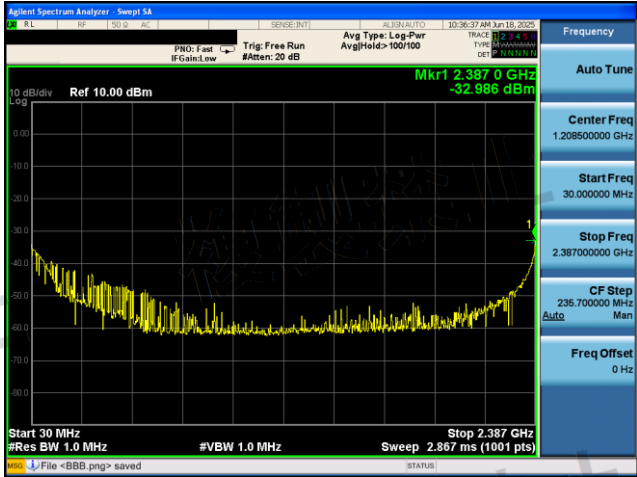
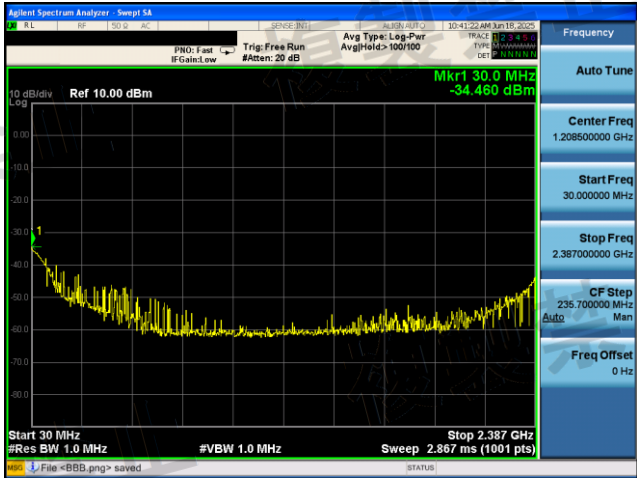
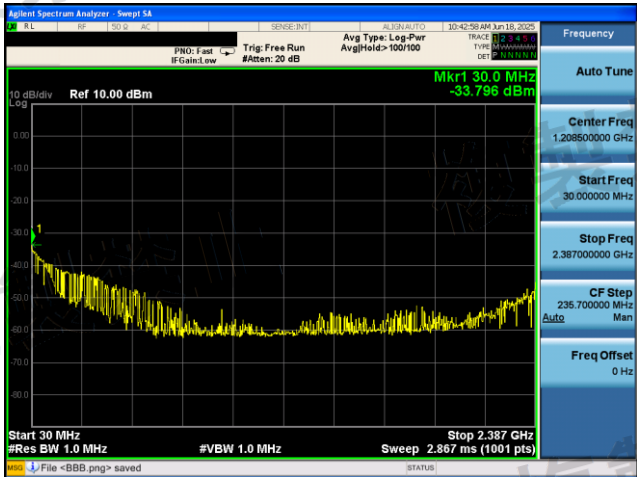


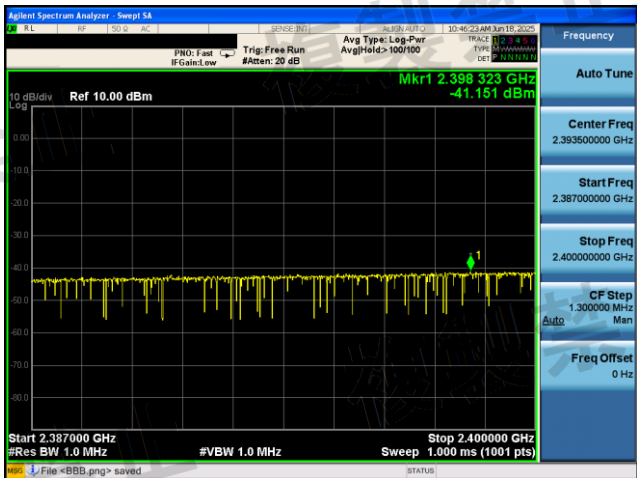
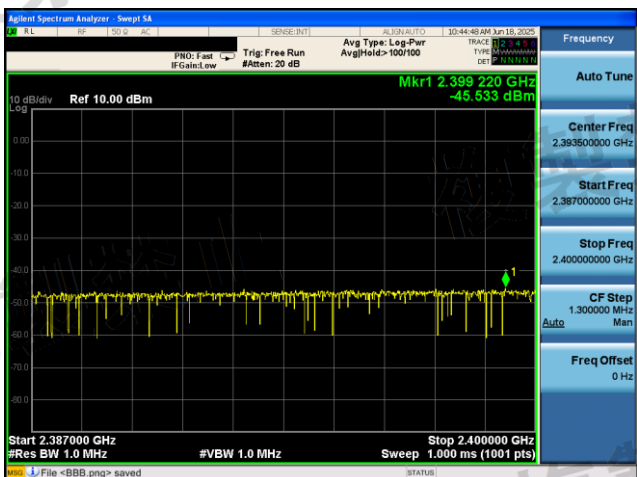
High Voltage

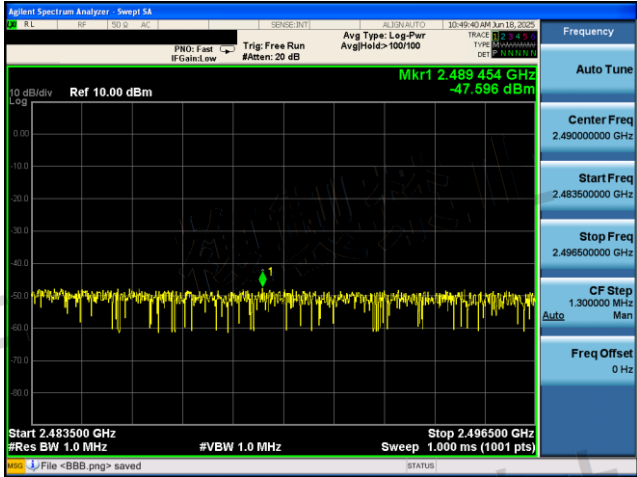
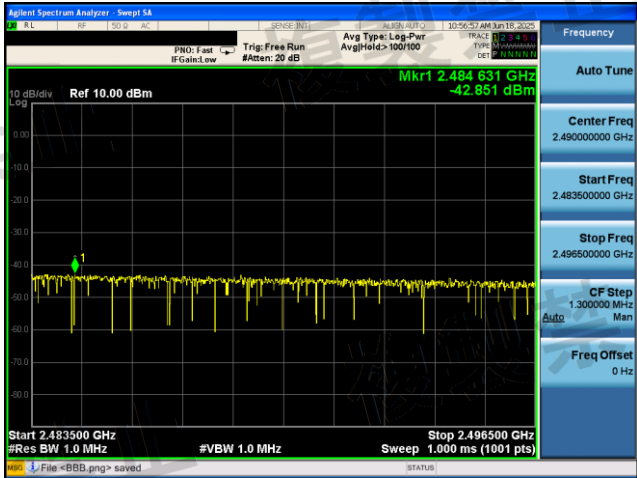
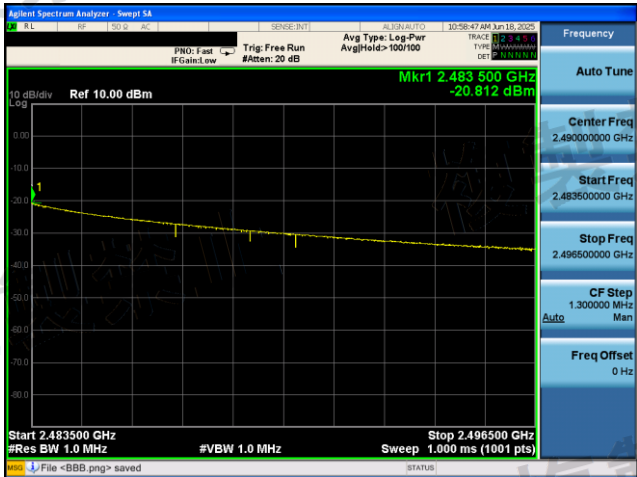
High CH

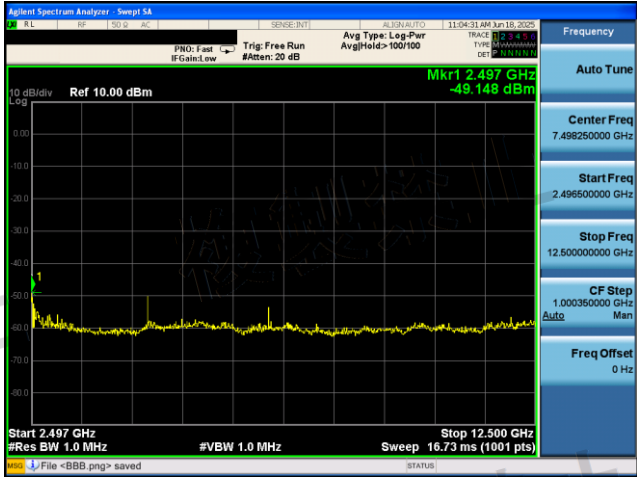
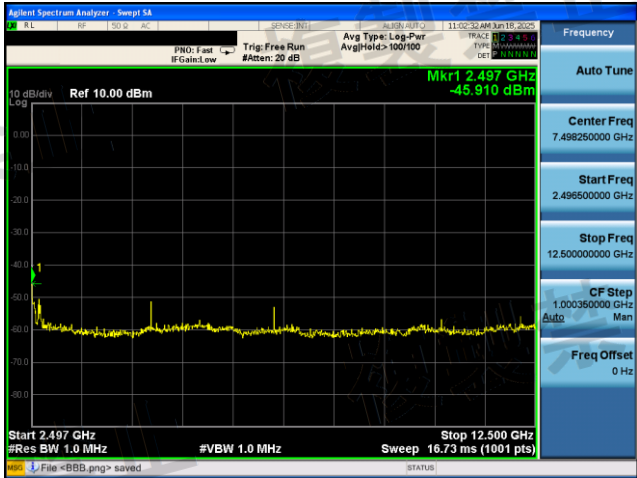
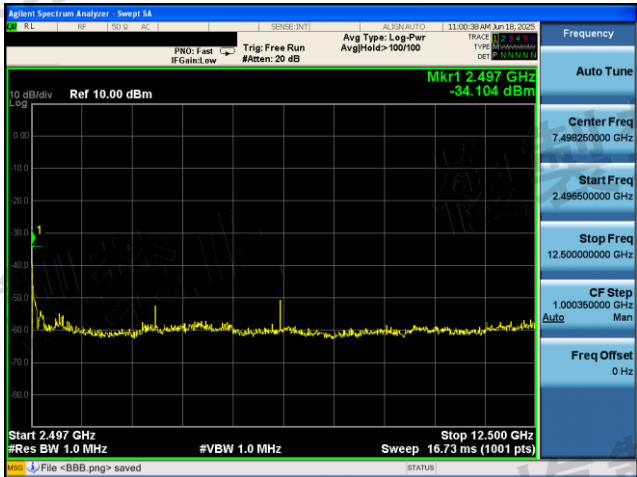


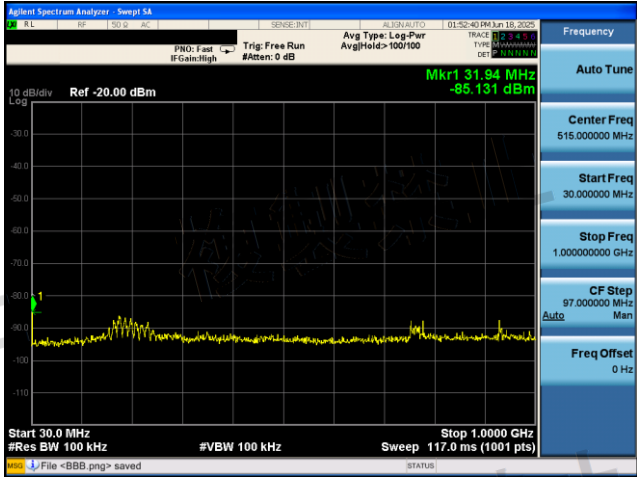
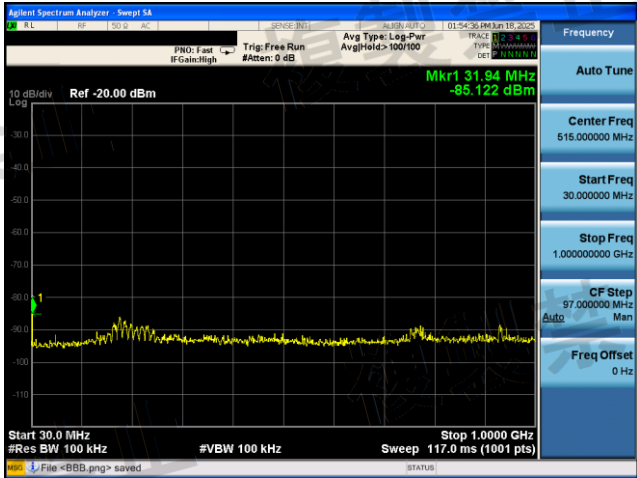
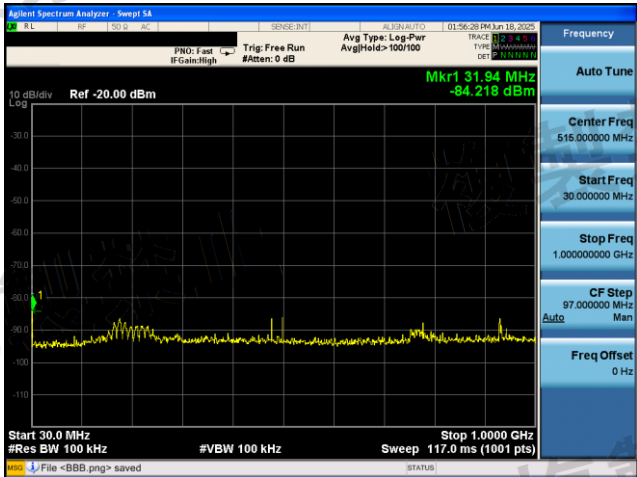
BLE 1M	
Occupied Bandwidth Measurement	
High Voltage Low CH	 <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.40200000 GHz Trig: Free Run #Att: 30 dB AvgHold: 10/10 Radio Std: None Radio Device: BTS</p> <p>10 dB/div Ref 20.00 dBm</p> <p>Center 2.402 GHz #Res BW 300 kHz #VBW 300 kHz Span 3 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 1.5748 MHz Total Power 7.96 dBm Transmit Freq Error -30.708 kHz OBW Power 99.00 % x dB Bandwidth 2.938 MHz x dB -26.00 dB</p> <p>File <BBB.png> saved</p>
High Voltage Middle CH	 <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.44000000 GHz Trig: Free Run #Att: 30 dB AvgHold: 10/10 Radio Std: None Radio Device: BTS</p> <p>10 dB/div Ref 20.00 dBm</p> <p>Center 2.44 GHz #Res BW 300 kHz #VBW 300 kHz Span 3 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 1.5535 MHz Total Power 7.91 dBm Transmit Freq Error -18.440 kHz OBW Power 99.00 % x dB Bandwidth 2.904 MHz x dB -26.00 dB</p> <p>File <BBB.png> saved</p>
High Voltage High CH	 <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.48000000 GHz Trig: Free Run #Att: 30 dB AvgHold: 10/10 Radio Std: None Radio Device: BTS</p> <p>10 dB/div Ref 20.00 dBm</p> <p>Center 2.48 GHz #Res BW 300 kHz #VBW 300 kHz Span 3 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 1.5358 MHz Total Power 7.98 dBm Transmit Freq Error -37.655 kHz OBW Power 99.00 % x dB Bandwidth 2.928 MHz x dB -26.00 dB</p> <p>File <BBB.png> saved</p>

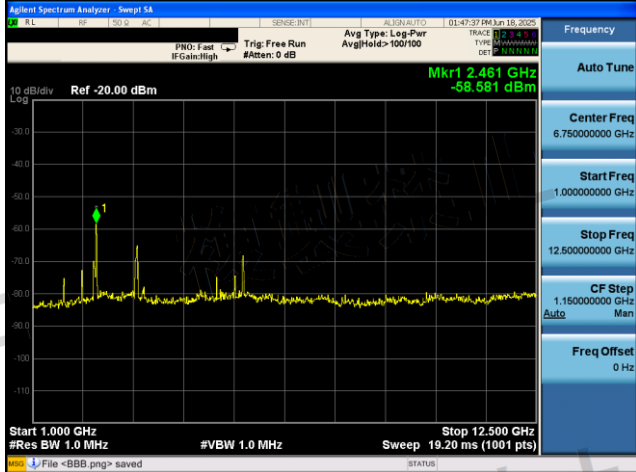
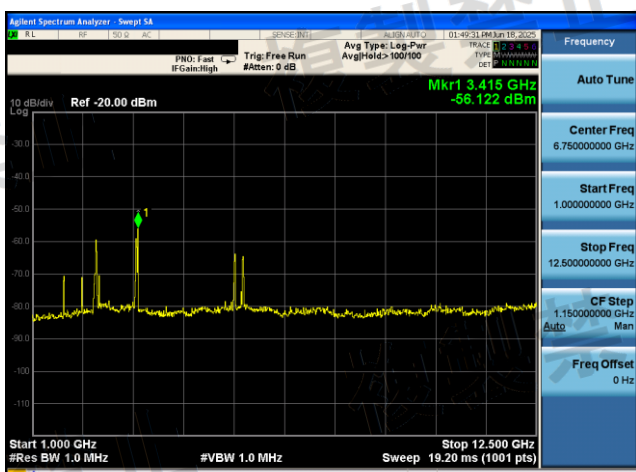
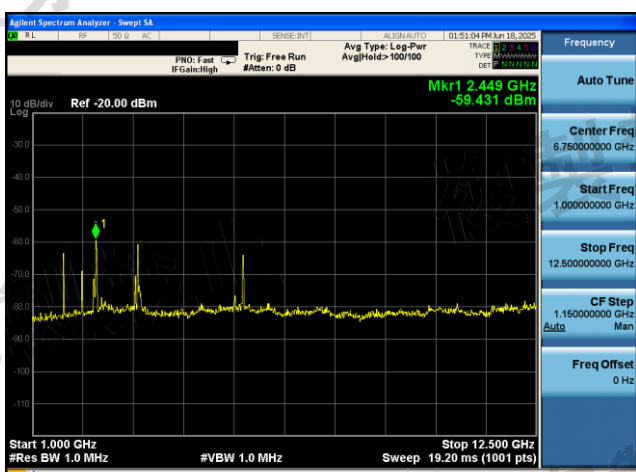
BLE 1M	
Unwanted Emission Strength Measurement	
30 MHz – 2387 MHz	
High Voltage Low CH	
High Voltage Middle CH	
High Voltage High CH	

BLE 1M	
Unwanted Emission Strength Measurement	
2387 MHz – 2400 MHz	
High Voltage Low CH	 <p>Agilent Spectrum Analyzer - Sweep 5A</p> <p>Ref 10.00 dBm</p> <p>Mkr1 2.400 000 GHz -14.764 dBm</p> <p>Start 2.387000 GHz #Res BW 1.0 MHz #VBW 1.0 MHz Sweep 1.000 ms (1001 pts)</p> <p>Stop 2.400000 GHz</p> <p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.393500000 GHz</p> <p>Start Freq 2.387000000 GHz</p> <p>Stop Freq 2.400000000 GHz</p> <p>CF Step 1.300000 MHz</p> <p>Freq Offset 0 Hz</p>
High Voltage Middle CH	 <p>Agilent Spectrum Analyzer - Sweep 5A</p> <p>Ref 10.00 dBm</p> <p>Mkr1 2.398 323 GHz -41.151 dBm</p> <p>Start 2.387000 GHz #Res BW 1.0 MHz #VBW 1.0 MHz Sweep 1.000 ms (1001 pts)</p> <p>Stop 2.400000 GHz</p> <p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.393500000 GHz</p> <p>Start Freq 2.387000000 GHz</p> <p>Stop Freq 2.400000000 GHz</p> <p>CF Step 1.300000 MHz</p> <p>Freq Offset 0 Hz</p>
High Voltage High CH	 <p>Agilent Spectrum Analyzer - Sweep 5A</p> <p>Ref 10.00 dBm</p> <p>Mkr1 2.399 220 GHz -45.533 dBm</p> <p>Start 2.387000 GHz #Res BW 1.0 MHz #VBW 1.0 MHz Sweep 1.000 ms (1001 pts)</p> <p>Stop 2.400000 GHz</p> <p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.393500000 GHz</p> <p>Start Freq 2.387000000 GHz</p> <p>Stop Freq 2.400000000 GHz</p> <p>CF Step 1.300000 MHz</p> <p>Freq Offset 0 Hz</p>

BLE 1M	
Unwanted Emission Strength Measurement	
2483.5 MHz – 2496.5 MHz	
High Voltage Low CH	
High Voltage Middle CH	
High Voltage High CH	

BLE 1M	
Unwanted Emission Strength Measurement	
2496.5 MHz – 12.5 GHz	
High Voltage Low CH	
High Voltage Middle CH	
High Voltage High CH	

BLE 1M	
Secondarily Emitted Radio Wave Strength Measurement	
30 MHz – 1 GHz	
High Voltage Low CH	
High Voltage Middle CH	
High Voltage High CH	

BLE 1M	
Secondarily Emitted Radio Wave Strength Measurement	
1 GHz – 12.5 GHz	
High Voltage Low CH	
High Voltage Middle CH	
High Voltage High CH	

BLE 1M

Frequency Error Measurement

Low Voltage

Low CH



Low Voltage

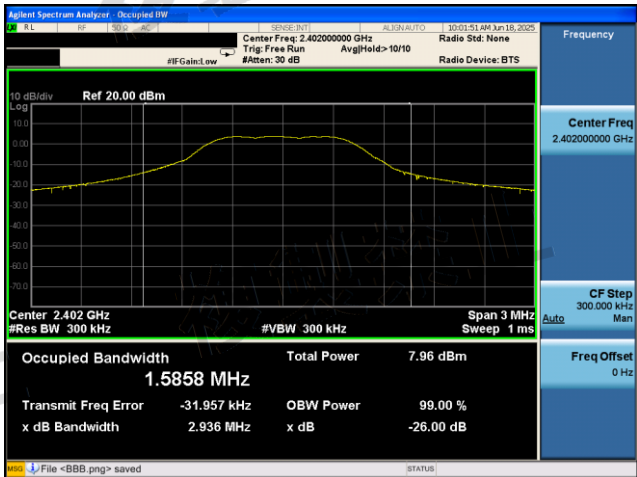
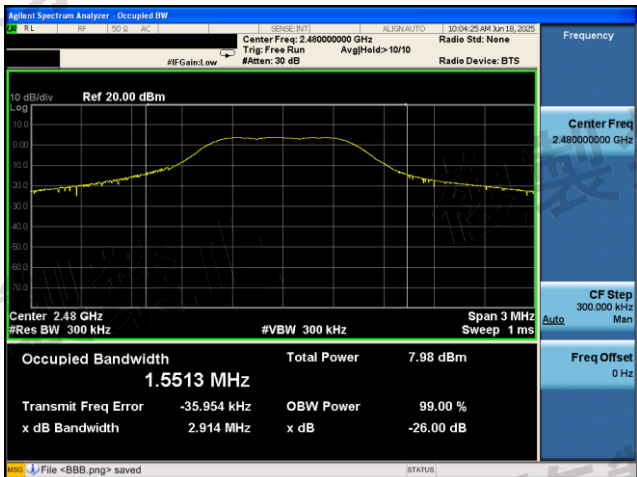
Middle CH

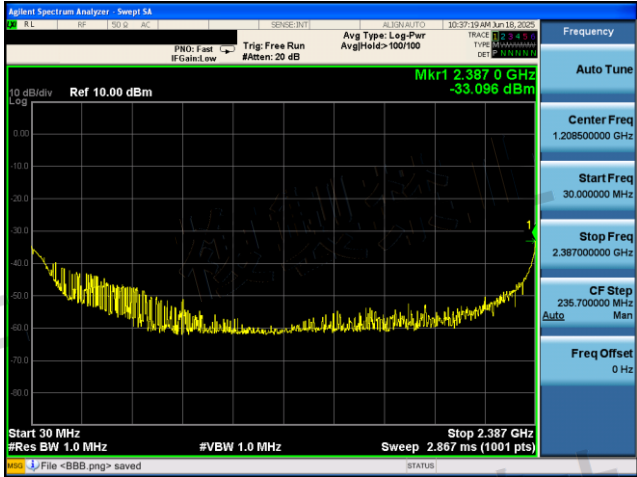
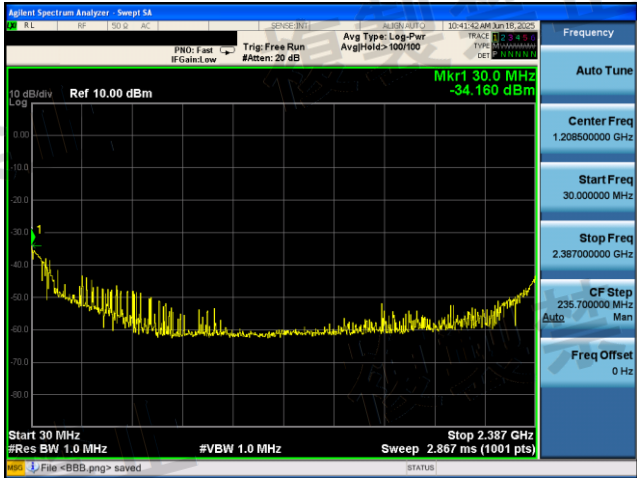
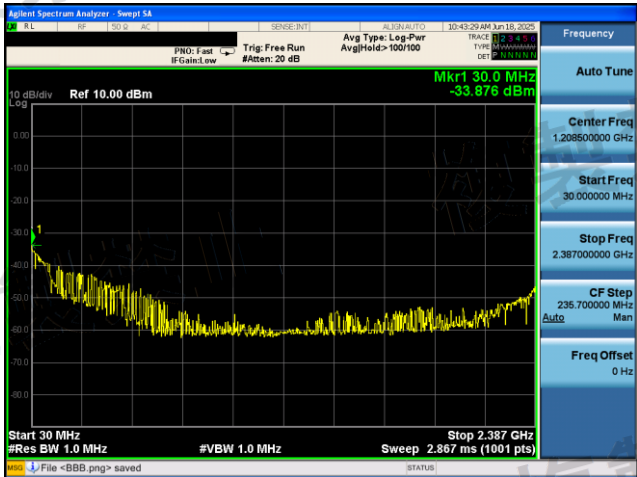


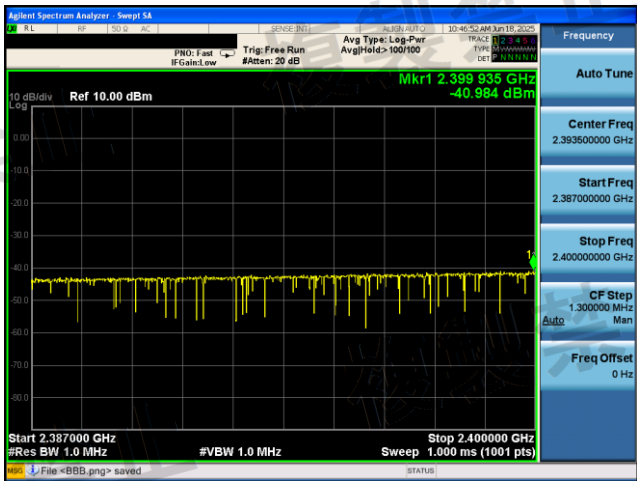
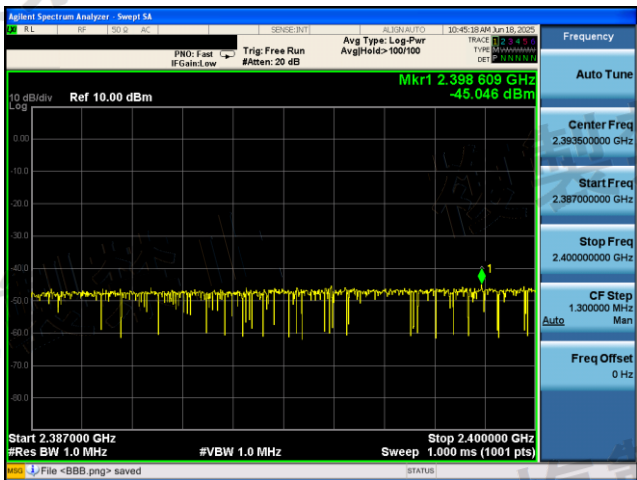
Low Voltage

High CH

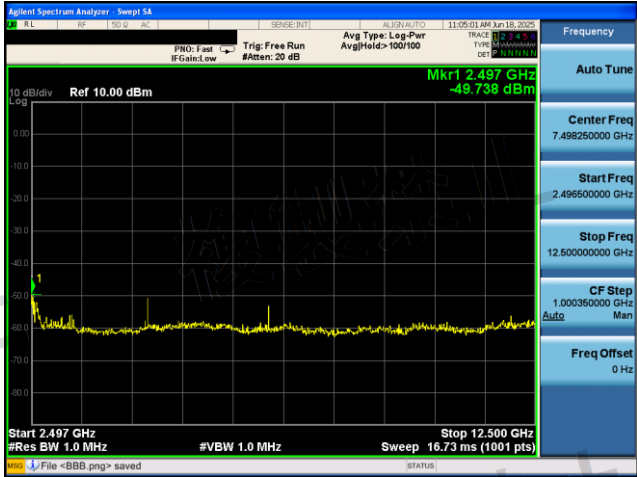
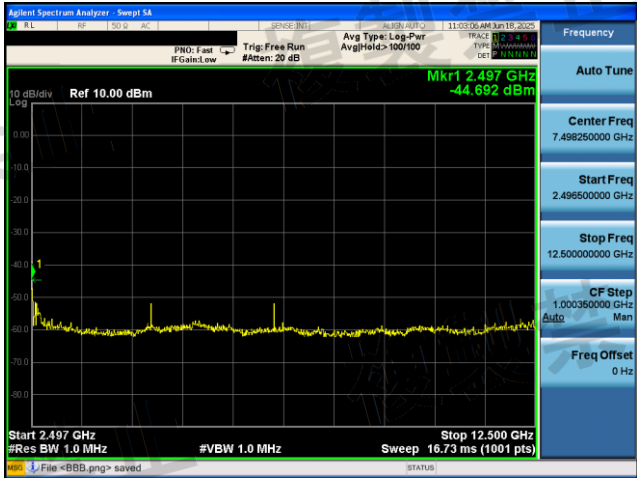
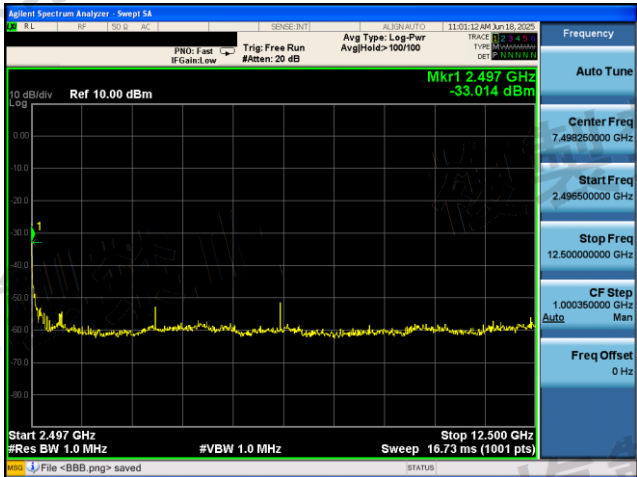


BLE 1M	
Occupied Bandwidth Measurement	
Low Voltage Low CH	 <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.40200000 GHz Trig: Free Run #Gain: Low #Atten: 30 dB Avg/Hold: 10/10 Radio Std: None Radio Device: BTS</p> <p>10 dB/div Ref 20.00 dBm</p> <p>Center 2.402 GHz #Res BW 300 kHz #VBW 300 kHz Span 3 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 1.5858 MHz Total Power 7.96 dBm Transmit Freq Error -31.957 kHz OBW Power 99.00 % x dB Bandwidth 2.936 MHz x dB -26.00 dB</p> <p>File <BBB.png> saved</p>
Low Voltage Middle CH	 <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.44000000 GHz Trig: Free Run #Gain: Low #Atten: 30 dB Avg/Hold: 10/10 Radio Std: None Radio Device: BTS</p> <p>10 dB/div Ref 20.00 dBm</p> <p>Center 2.44 GHz #Res BW 300 kHz #VBW 300 kHz Span 3 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 1.5549 MHz Total Power 7.91 dBm Transmit Freq Error -19.768 kHz OBW Power 99.00 % x dB Bandwidth 2.888 MHz x dB -26.00 dB</p> <p>File <BBB.png> saved</p>
Low Voltage High CH	 <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.48000000 GHz Trig: Free Run #Gain: Low #Atten: 30 dB Avg/Hold: 10/10 Radio Std: None Radio Device: BTS</p> <p>10 dB/div Ref 20.00 dBm</p> <p>Center 2.48 GHz #Res BW 300 kHz #VBW 300 kHz Span 3 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 1.5513 MHz Total Power 7.98 dBm Transmit Freq Error -35.954 kHz OBW Power 99.00 % x dB Bandwidth 2.914 MHz x dB -26.00 dB</p> <p>File <BBB.png> saved</p>

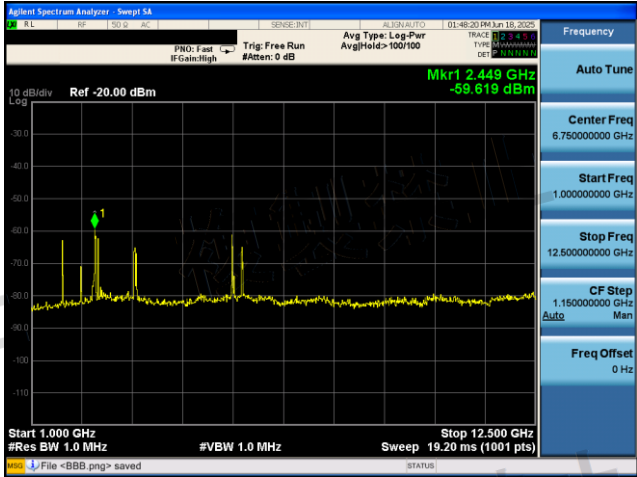
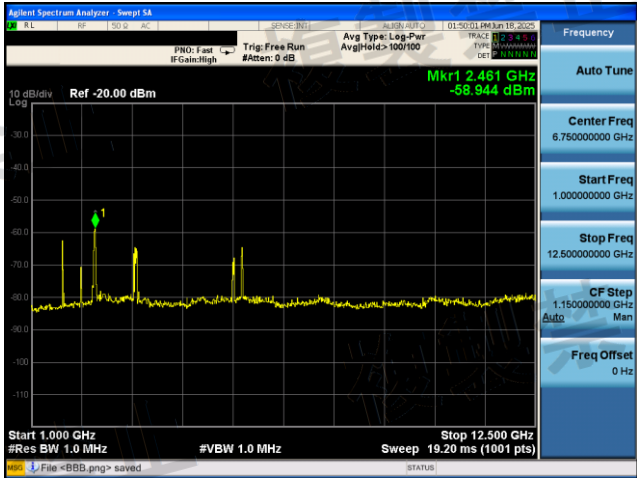
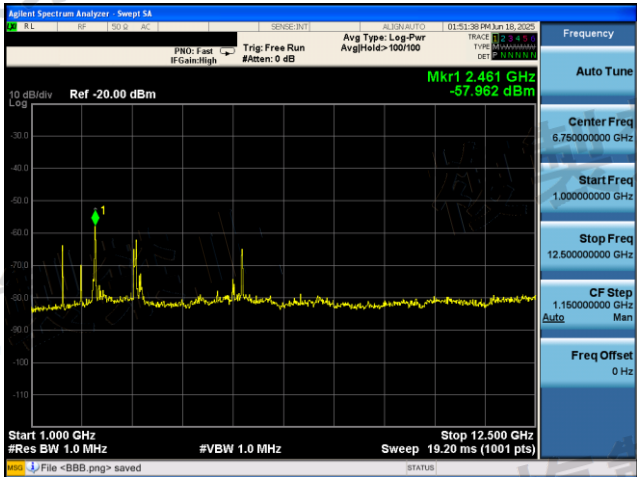
BLE 1M	
Unwanted Emission Strength Measurement	
30 MHz – 2387 MHz	
Low Voltage Low CH	
Low Voltage Middle CH	
Low Voltage High CH	

BLE 1M	
Unwanted Emission Strength Measurement	
2387 MHz – 2400 MHz	
Low Voltage Low CH	
Low Voltage Middle CH	
Low Voltage High CH	

BLE 1M	
Unwanted Emission Strength Measurement	
2483.5 MHz – 2496.5 MHz	
Low Voltage Low CH	
Low Voltage Middle CH	
Low Voltage High CH	

BLE 1M	
Unwanted Emission Strength Measurement	
2496.5 MHz – 12.5 GHz	
Low Voltage Low CH	
Low Voltage Middle CH	
Low Voltage High CH	

BLE 1M	
Secondarily Emitted Radio Wave Strength Measurement	
30 MHz – 1 GHz	
Low Voltage Low CH	
Low Voltage Middle CH	
Low Voltage High CH	

BLE 1M	
Secondarily Emitted Radio Wave Strength Measurement	
1 GHz – 12.5 GHz	
Low Voltage Low CH	
Low Voltage Middle CH	
Low Voltage High CH	

BLE 2M

Frequency Error Measurement

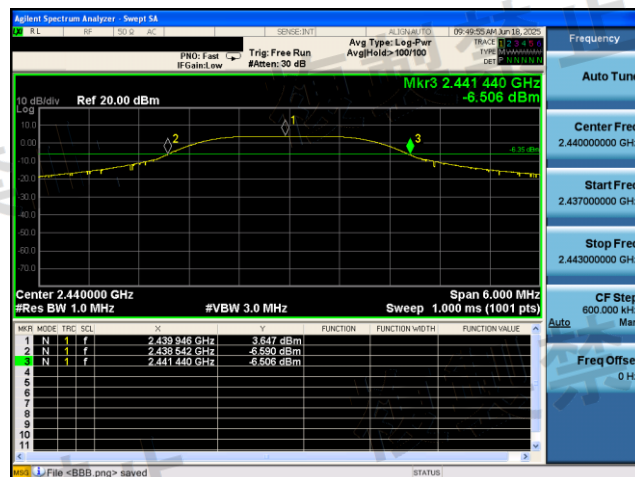
Normal Voltage

Low CH



Normal Voltage

Middle CH



Normal Voltage

High CH

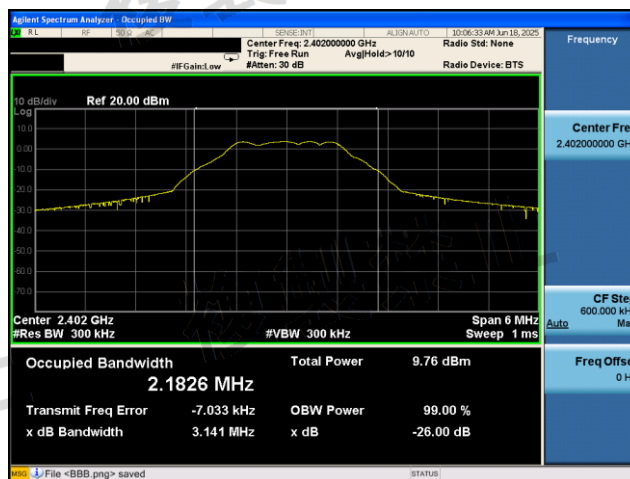


BLE 2M

Occupied Bandwidth Measurement

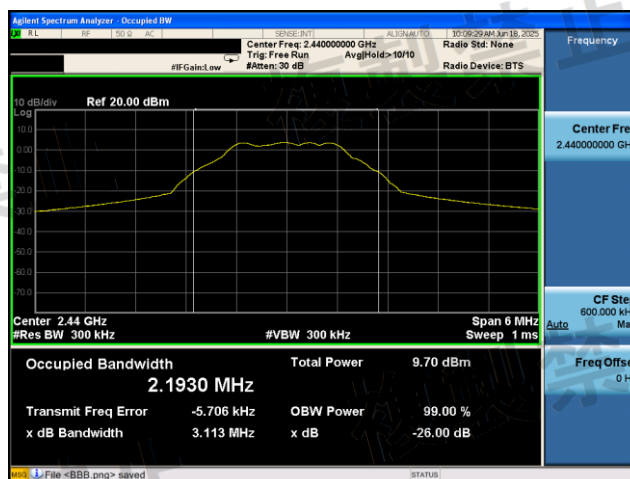
Normal Voltage

Low CH



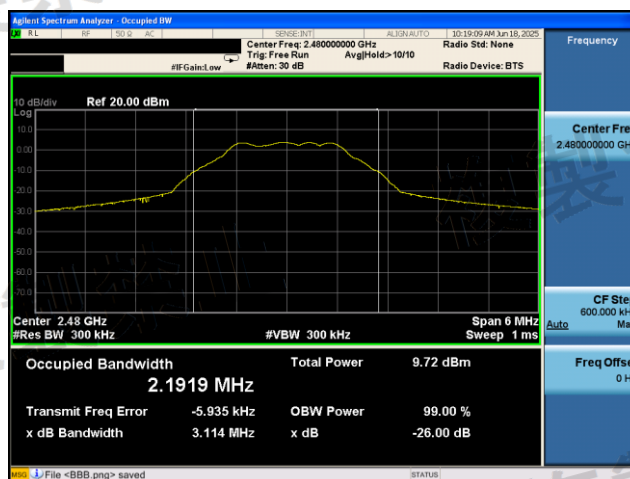
Normal Voltage

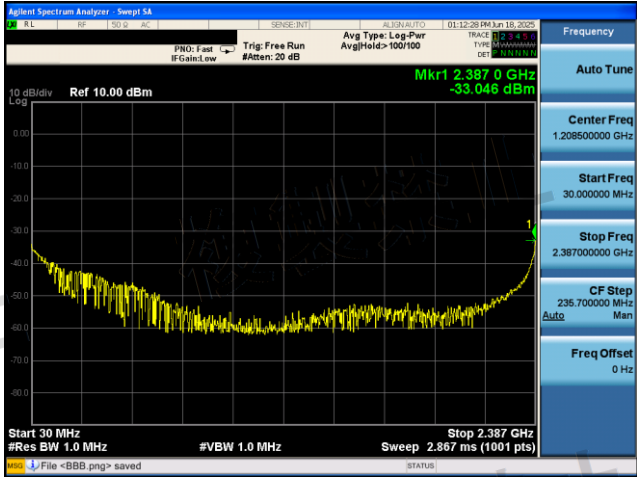
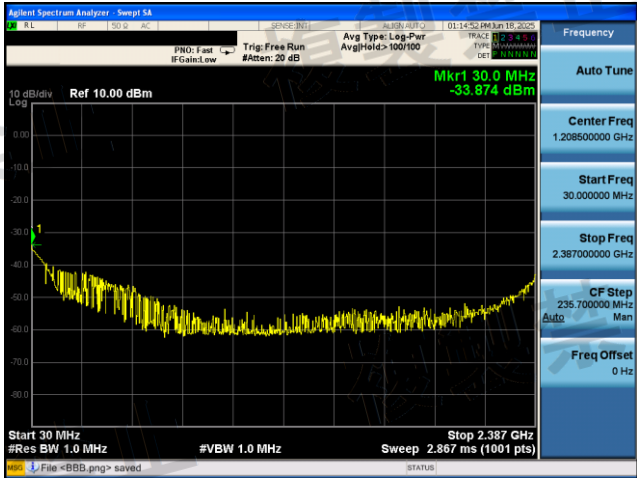
Middle CH



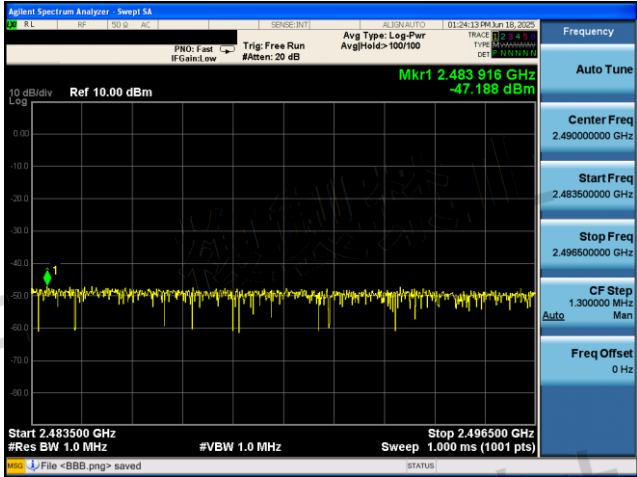
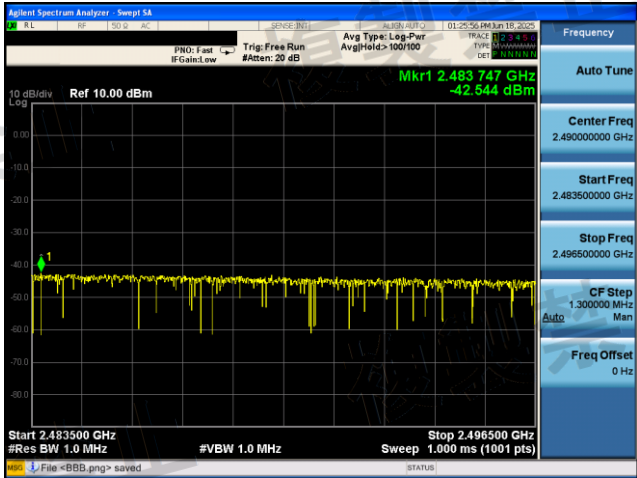
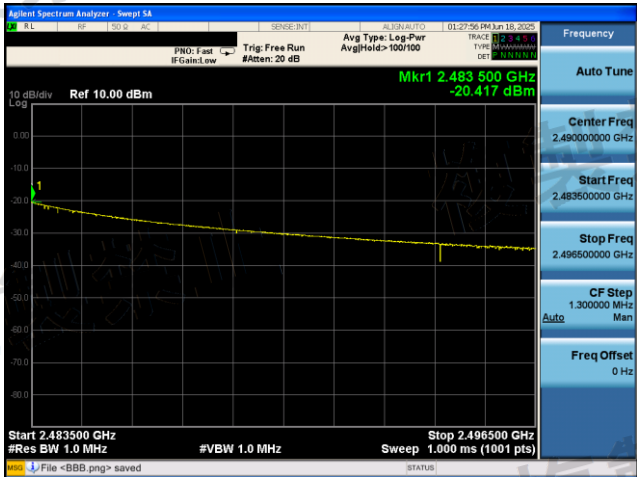
Normal Voltage

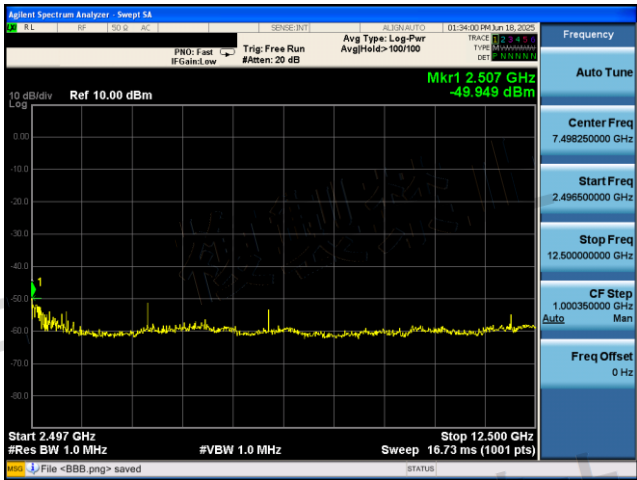
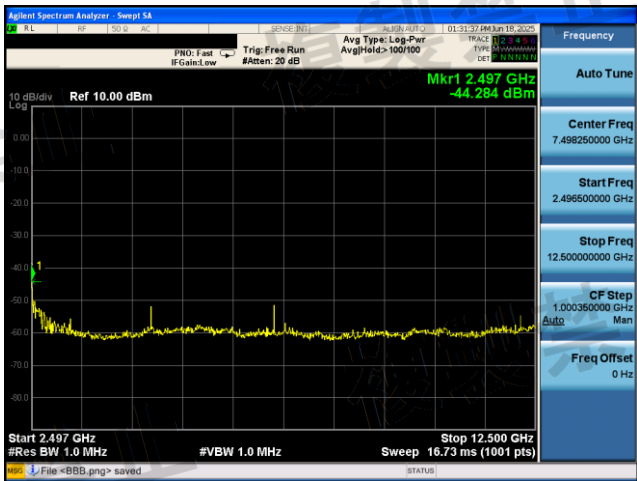
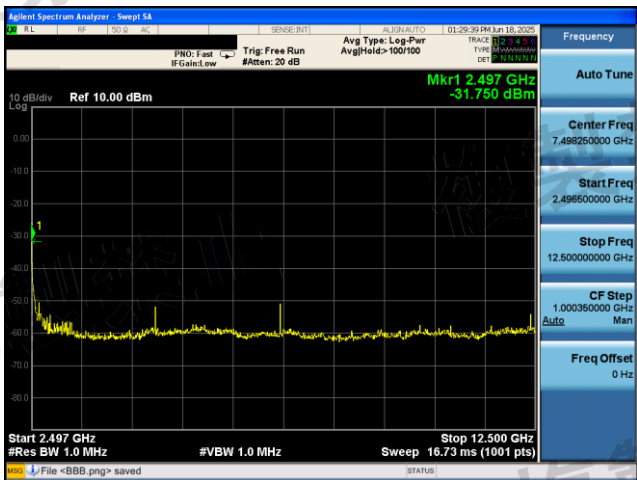
High CH

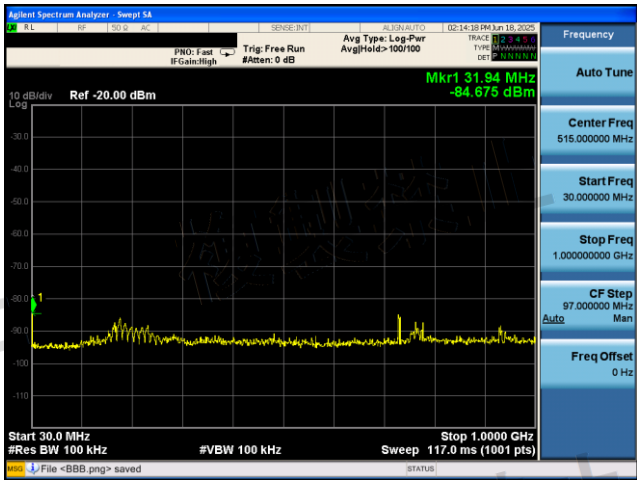
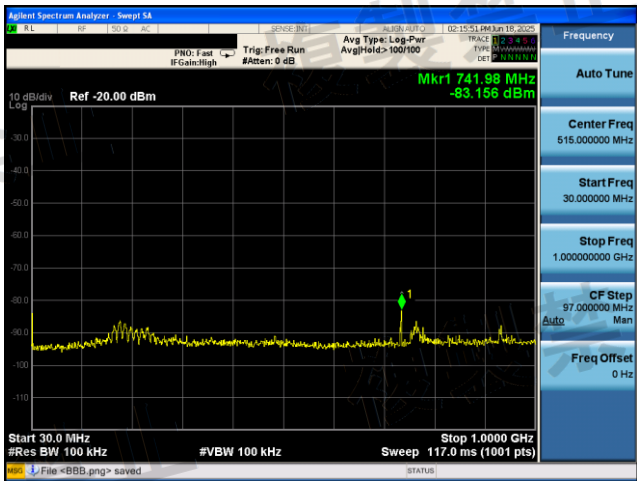
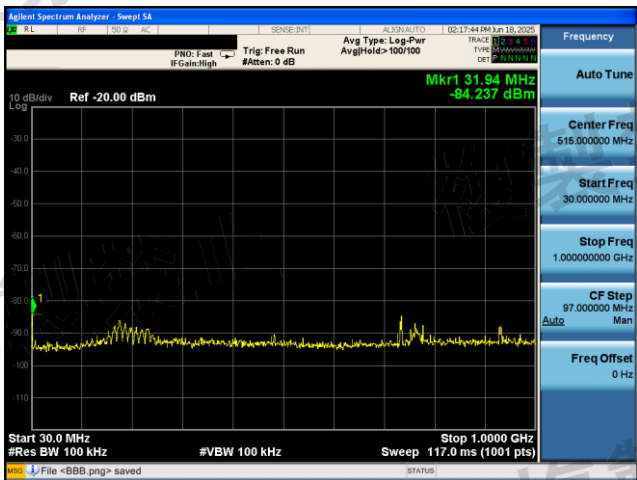


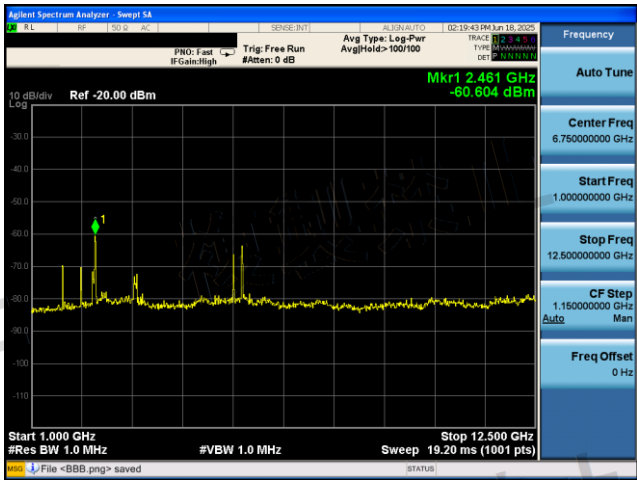
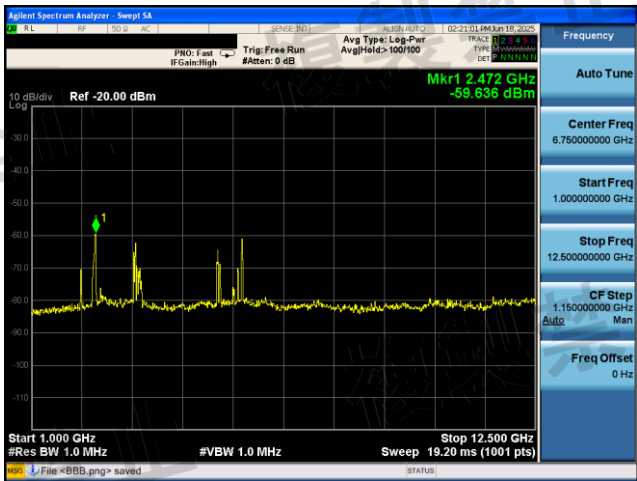
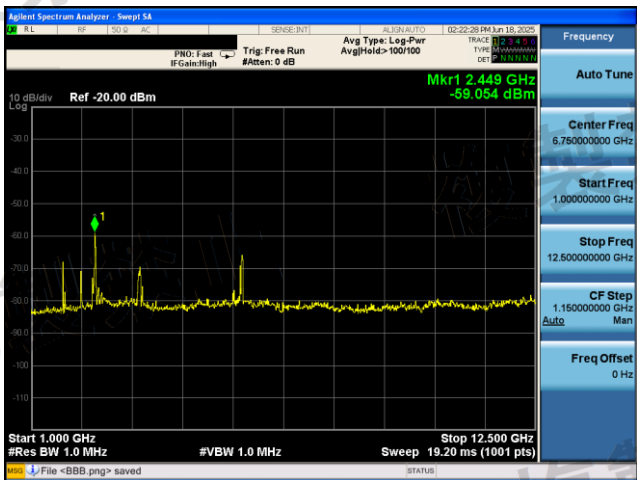
BLE 2M	
Unwanted Emission Strength Measurement	
30 MHz – 2387 MHz	
Normal Voltage Low CH	
Normal Voltage Middle CH	
Normal Voltage High CH	

BLE 2M	
Unwanted Emission Strength Measurement	
2387 MHz – 2400 MHz	
Normal Voltage Low CH	
Normal Voltage Middle CH	
Normal Voltage High CH	

BLE 2M	
Unwanted Emission Strength Measurement	
2483.5 MHz – 2496.5 MHz	
Normal Voltage Low CH	
Normal Voltage Middle CH	
Normal Voltage High CH	

BLE 2M	
Unwanted Emission Strength Measurement	
2496.5 MHz – 12.5 GHz	
Normal Voltage Low CH	
Normal Voltage Middle CH	
Normal Voltage High CH	

BLE 2M	
Secondarily Emitted Radio Wave Strength Measurement	
30 MHz – 1 GHz	
Normal Voltage Low CH	
Normal Voltage Middle CH	
Normal Voltage High CH	

BLE 2M	
Secondarily Emitted Radio Wave Strength Measurement	
1 GHz – 12.5 GHz	
Normal Voltage Low CH	
Normal Voltage Middle CH	
Normal Voltage High CH	

BLE 2M

Frequency Error Measurement

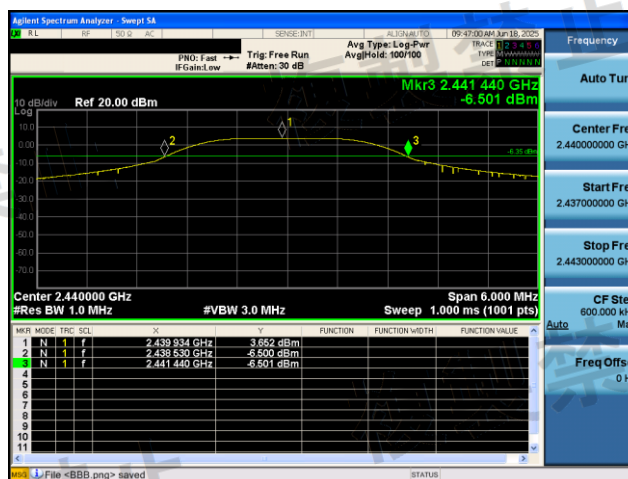
High Voltage

Low CH



High Voltage

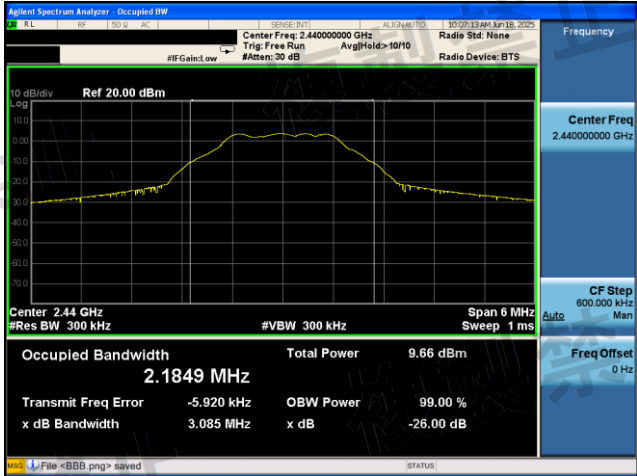
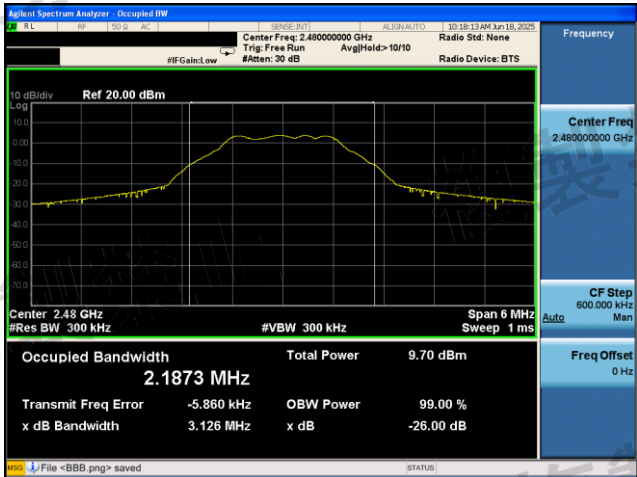
Middle CH

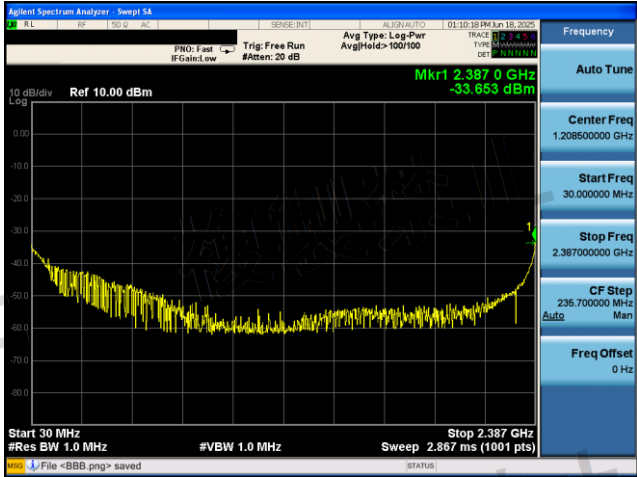
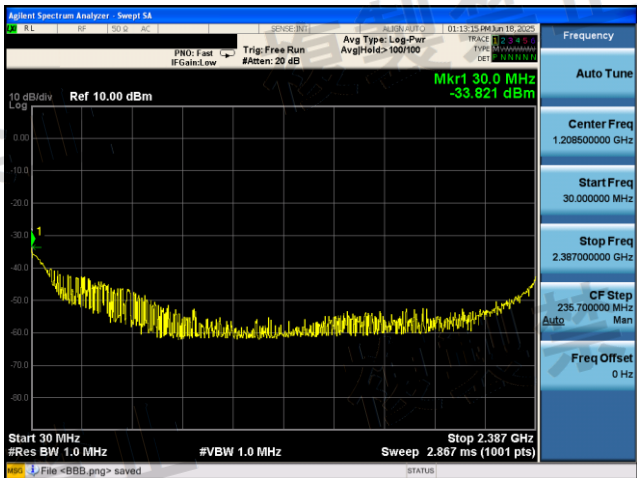
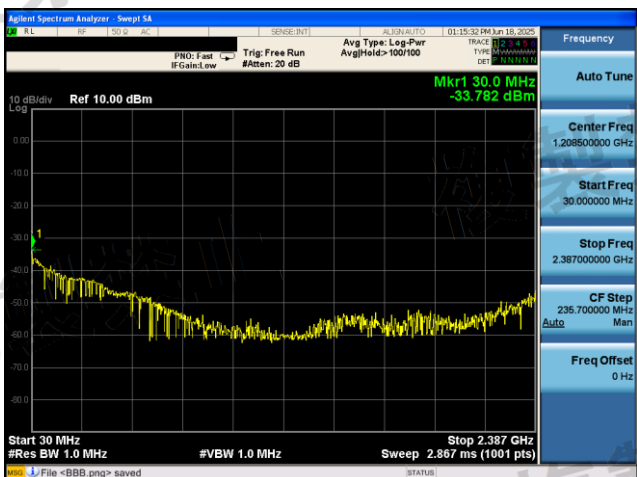


High Voltage

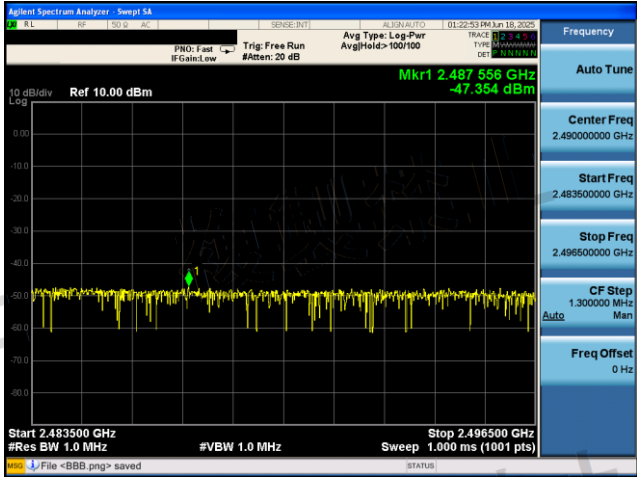
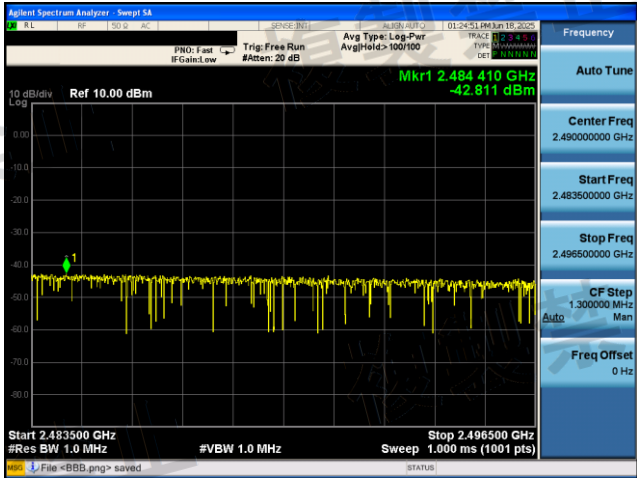
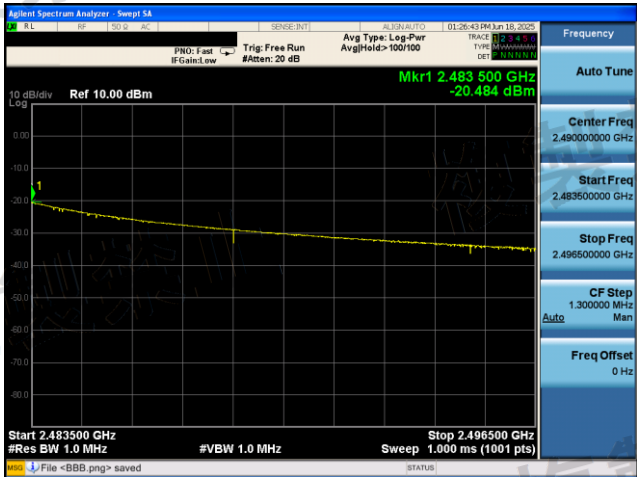
High CH

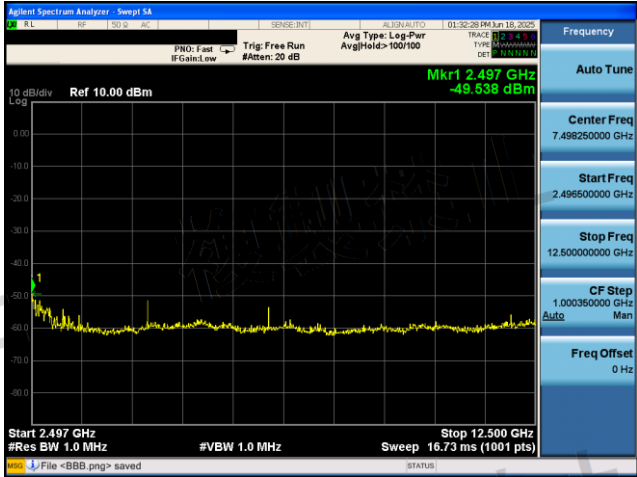
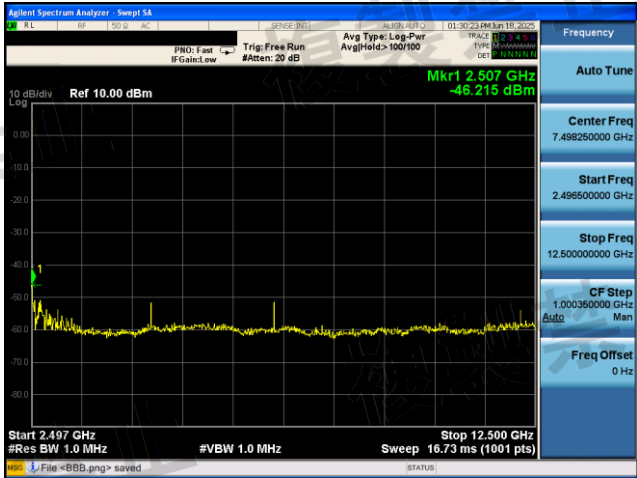
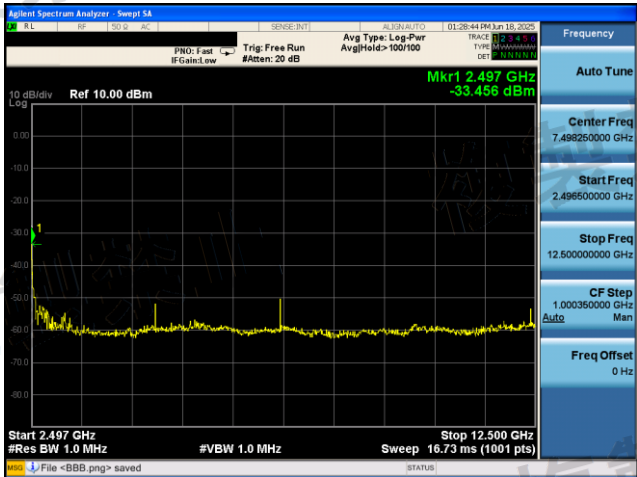


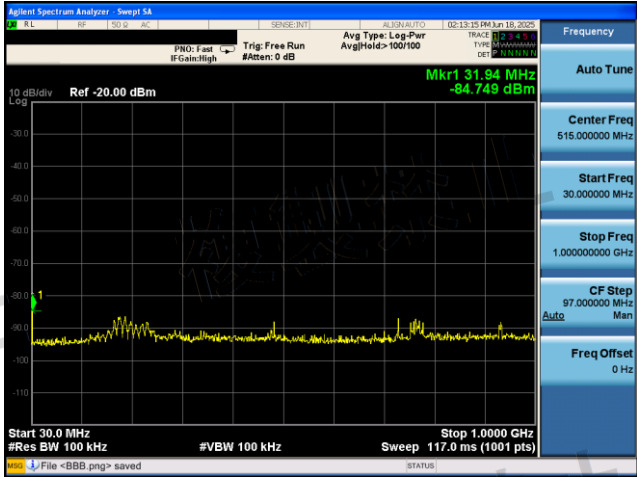
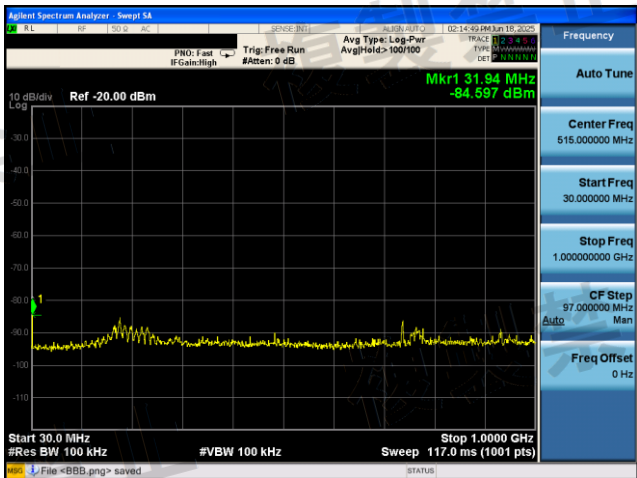
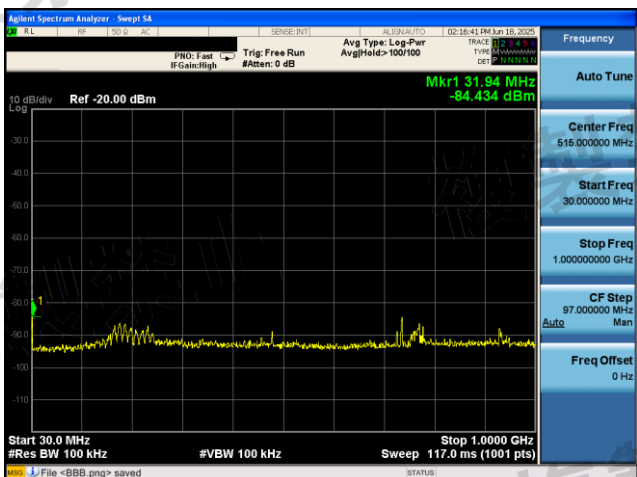
BLE 2M	
Occupied Bandwidth Measurement	
High Voltage Low CH	 <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.40200000 GHz Trig: Free Run #Gain: Low #Atten: 30 dB Avg/Hold: 10/10 Radio Std: None Radio Device: BTS</p> <p>10 dB/div Ref 20.00 dBm</p> <p>Center 2.402 GHz #Res BW 300 kHz #VBW 300 kHz Span 6 MHz Sweep 1 ms</p> <p>Occupied Bandwidth: 2.1798 MHz Total Power: 9.76 dBm Transmit Freq Error: -6.954 kHz OBW Power: 99.00 % x dB Bandwidth: 3.133 MHz x dB: -26.00 dB</p> <p>File <BBB.png> saved</p>
High Voltage Middle CH	 <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.44000000 GHz Trig: Free Run #Gain: Low #Atten: 30 dB Avg/Hold: 10/10 Radio Std: None Radio Device: BTS</p> <p>10 dB/div Ref 20.00 dBm</p> <p>Center 2.44 GHz #Res BW 300 kHz #VBW 300 kHz Span 6 MHz Sweep 1 ms</p> <p>Occupied Bandwidth: 2.1849 MHz Total Power: 9.66 dBm Transmit Freq Error: -5.920 kHz OBW Power: 99.00 % x dB Bandwidth: 3.085 MHz x dB: -26.00 dB</p> <p>File <BBB.png> saved</p>
High Voltage High CH	 <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.48000000 GHz Trig: Free Run #Gain: Low #Atten: 30 dB Avg/Hold: 10/10 Radio Std: None Radio Device: BTS</p> <p>10 dB/div Ref 20.00 dBm</p> <p>Center 2.48 GHz #Res BW 300 kHz #VBW 300 kHz Span 6 MHz Sweep 1 ms</p> <p>Occupied Bandwidth: 2.1873 MHz Total Power: 9.70 dBm Transmit Freq Error: -5.860 kHz OBW Power: 99.00 % x dB Bandwidth: 3.126 MHz x dB: -26.00 dB</p> <p>File <BBB.png> saved</p>

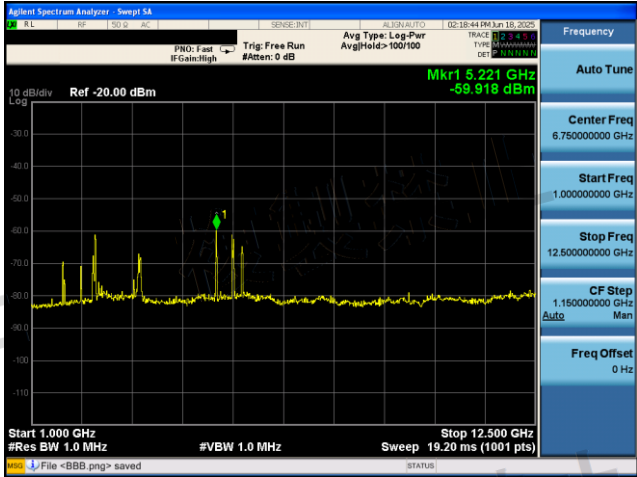
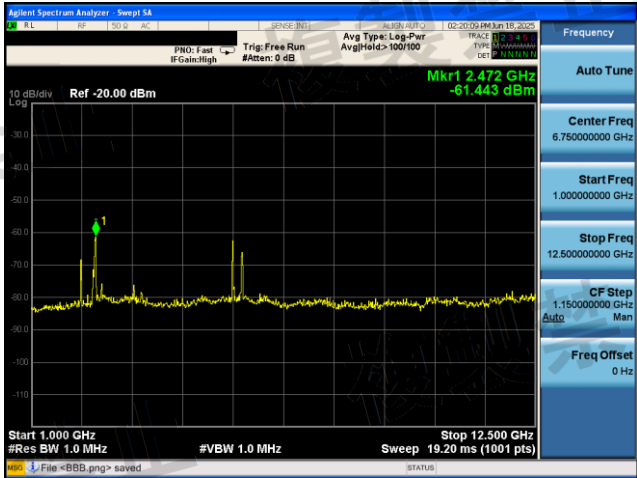
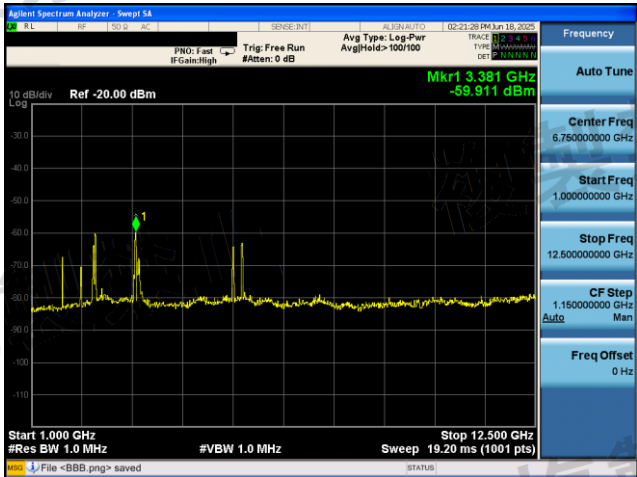
BLE 2M	
Unwanted Emission Strength Measurement	
30 MHz – 2387 MHz	
High Voltage Low CH	
High Voltage Middle CH	
High Voltage High CH	

BLE 2M	
Unwanted Emission Strength Measurement	
2387 MHz – 2400 MHz	
High Voltage Low CH	
High Voltage Middle CH	
High Voltage High CH	

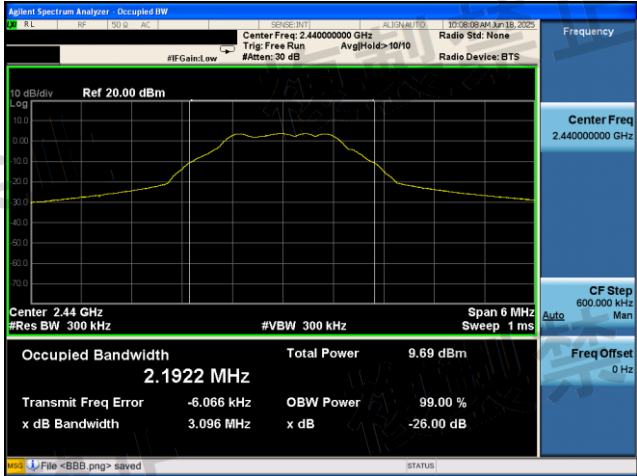
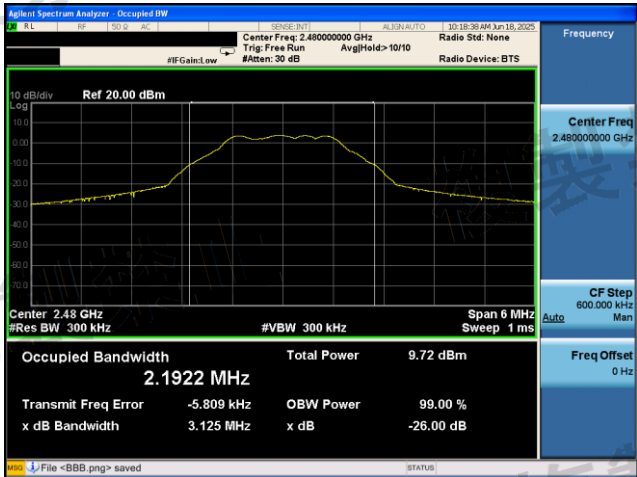
BLE 2M	
Unwanted Emission Strength Measurement	
2483.5 MHz – 2496.5 MHz	
High Voltage Low CH	 <p>Agilent Spectrum Analyzer - Sweep 5A</p> <p>Ref 10.00 dBm</p> <p>Mkr1 2487.556 GHz -47.354 dBm</p> <p>Start 2483500 GHz #Res BW 1.0 MHz #VBW 1.0 MHz Sweep 1.000 ms (1001 pts)</p> <p>Stop 2496500 GHz</p> <p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.490000000 GHz</p> <p>Start Freq 2.483500000 GHz</p> <p>Stop Freq 2.496500000 GHz</p> <p>CF Step 1.300000 MHz</p> <p>Freq Offset 0 Hz</p>
High Voltage Middle CH	 <p>Agilent Spectrum Analyzer - Sweep 5A</p> <p>Ref 10.00 dBm</p> <p>Mkr1 2484.410 GHz -42.811 dBm</p> <p>Start 2483500 GHz #Res BW 1.0 MHz #VBW 1.0 MHz Sweep 1.000 ms (1001 pts)</p> <p>Stop 2496500 GHz</p> <p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.490000000 GHz</p> <p>Start Freq 2.483500000 GHz</p> <p>Stop Freq 2.496500000 GHz</p> <p>CF Step 1.300000 MHz</p> <p>Freq Offset 0 Hz</p>
High Voltage High CH	 <p>Agilent Spectrum Analyzer - Sweep 5A</p> <p>Ref 10.00 dBm</p> <p>Mkr1 2483.500 GHz -20.484 dBm</p> <p>Start 2483500 GHz #Res BW 1.0 MHz #VBW 1.0 MHz Sweep 1.000 ms (1001 pts)</p> <p>Stop 2496500 GHz</p> <p>Frequency</p> <p>Auto Tune</p> <p>Center Freq 2.490000000 GHz</p> <p>Start Freq 2.483500000 GHz</p> <p>Stop Freq 2.496500000 GHz</p> <p>CF Step 1.300000 MHz</p> <p>Freq Offset 0 Hz</p>

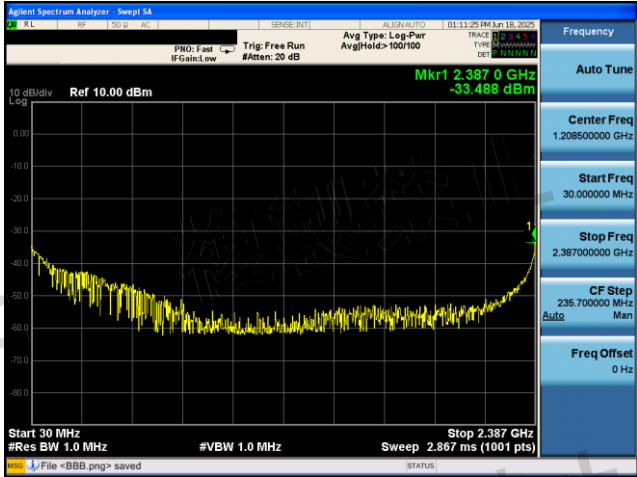
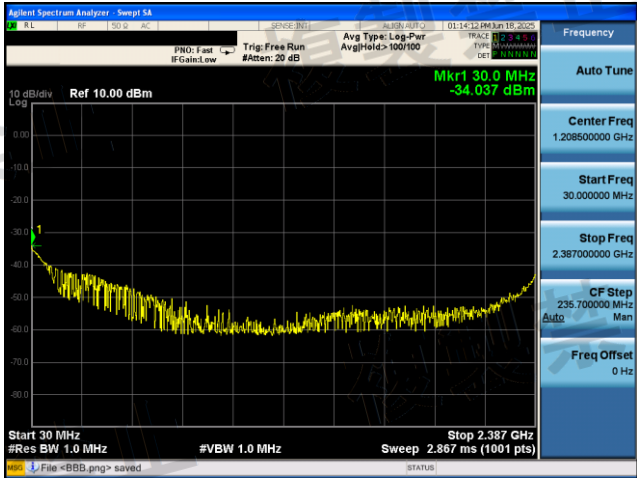
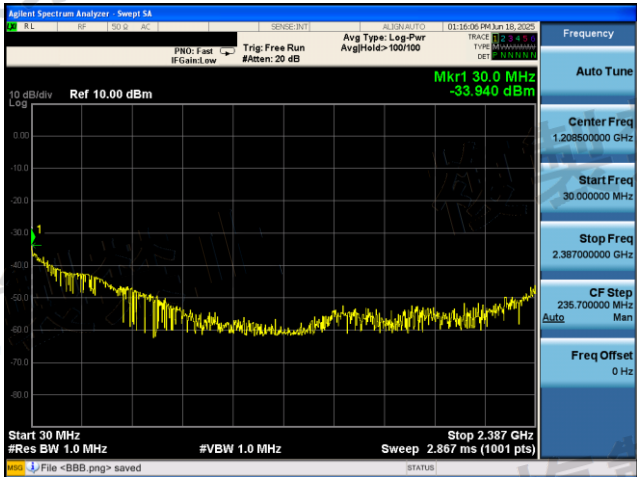
BLE 2M	
Unwanted Emission Strength Measurement	
2496.5 MHz – 12.5 GHz	
High Voltage Low CH	
High Voltage Middle CH	
High Voltage High CH	

BLE 2M	
Secondarily Emitted Radio Wave Strength Measurement	
30 MHz – 1 GHz	
High Voltage Low CH	
High Voltage Middle CH	
High Voltage High CH	

BLE 2M	
Secondarily Emitted Radio Wave Strength Measurement	
1 GHz – 12.5 GHz	
High Voltage Low CH	
High Voltage Middle CH	
High Voltage High CH	

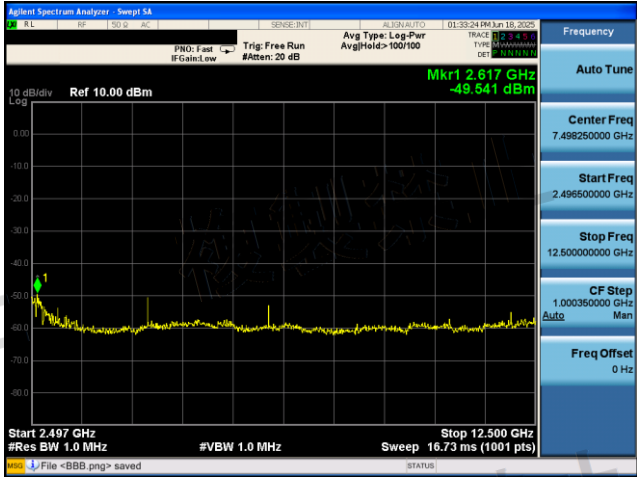
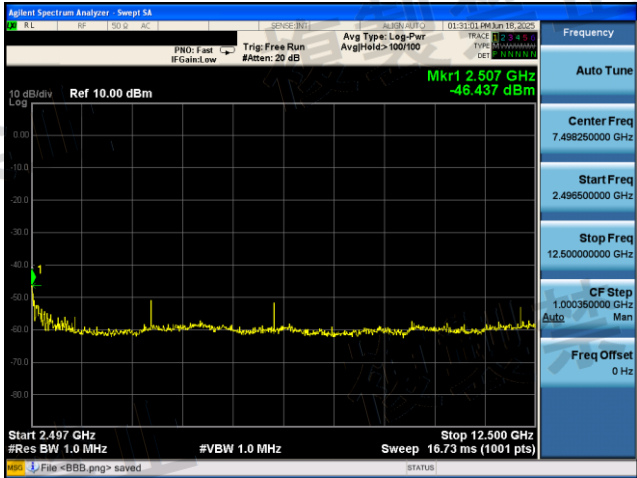
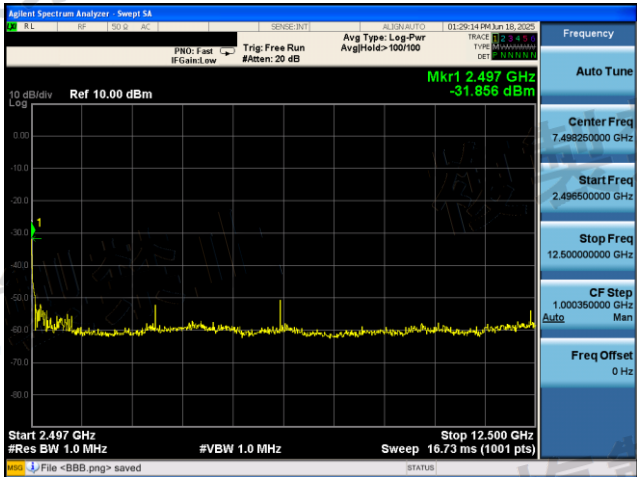
BLE 2M	
Frequency Error Measurement	
Low Voltage Low CH	
Low Voltage Middle CH	
Low Voltage High CH	

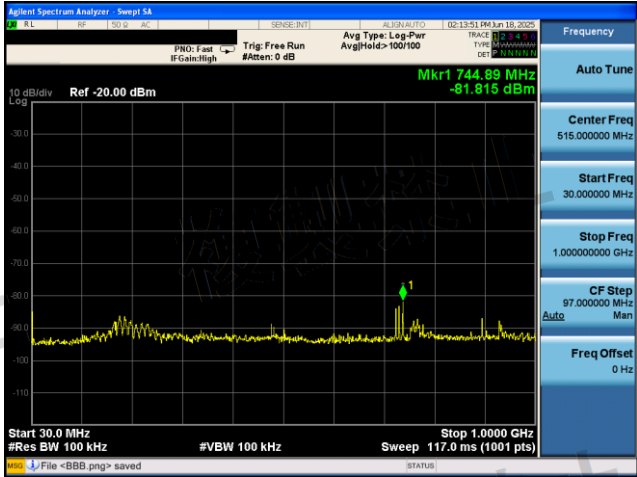
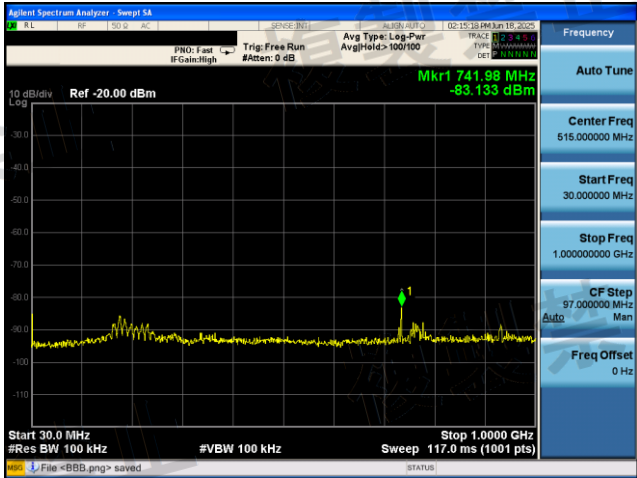
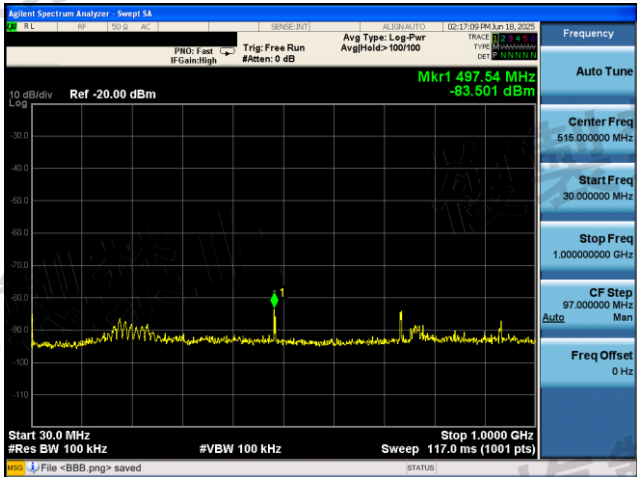
BLE 2M	
Occupied Bandwidth Measurement	
Low Voltage Low CH	 <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.40200000 GHz Trig: Free Run #Gain: Low #Atten: 30 dB AvgHold: 10/10 Radio Std: None Radio Device: BTS</p> <p>10 dB/div Ref 20.00 dBm</p> <p>Center 2.402 GHz #Res BW 300 kHz #VBW 300 kHz Span 6 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 2.1819 MHz Total Power 9.76 dBm Transmit Freq Error -7.754 kHz OBW Power 99.00 % x dB Bandwidth 3.121 MHz x dB -26.00 dB</p> <p>File <BBB.png> saved</p>
Low Voltage Middle CH	 <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.44000000 GHz Trig: Free Run #Gain: Low #Atten: 30 dB AvgHold: 10/10 Radio Std: None Radio Device: BTS</p> <p>10 dB/div Ref 20.00 dBm</p> <p>Center 2.44 GHz #Res BW 300 kHz #VBW 300 kHz Span 6 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 2.1922 MHz Total Power 9.69 dBm Transmit Freq Error -6.066 kHz OBW Power 99.00 % x dB Bandwidth 3.096 MHz x dB -26.00 dB</p> <p>File <BBB.png> saved</p>
Low Voltage High CH	 <p>Agilent Spectrum Analyzer - Occupied BW</p> <p>Center Freq: 2.48000000 GHz Trig: Free Run #Gain: Low #Atten: 30 dB AvgHold: 10/10 Radio Std: None Radio Device: BTS</p> <p>10 dB/div Ref 20.00 dBm</p> <p>Center 2.48 GHz #Res BW 300 kHz #VBW 300 kHz Span 6 MHz Sweep 1 ms</p> <p>Occupied Bandwidth 2.1922 MHz Total Power 9.72 dBm Transmit Freq Error -5.809 kHz OBW Power 99.00 % x dB Bandwidth 3.125 MHz x dB -26.00 dB</p> <p>File <BBB.png> saved</p>

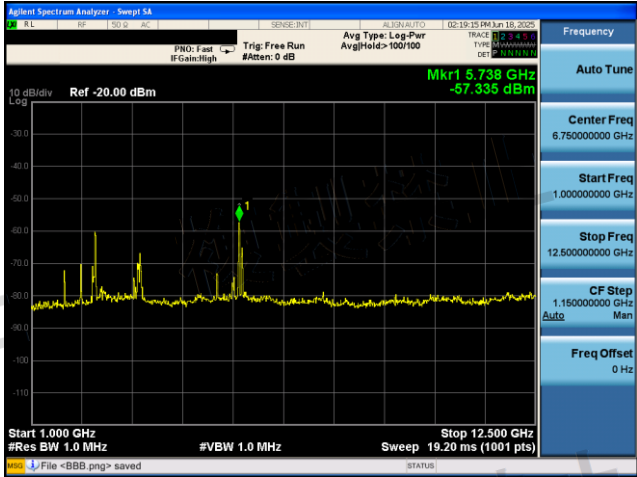
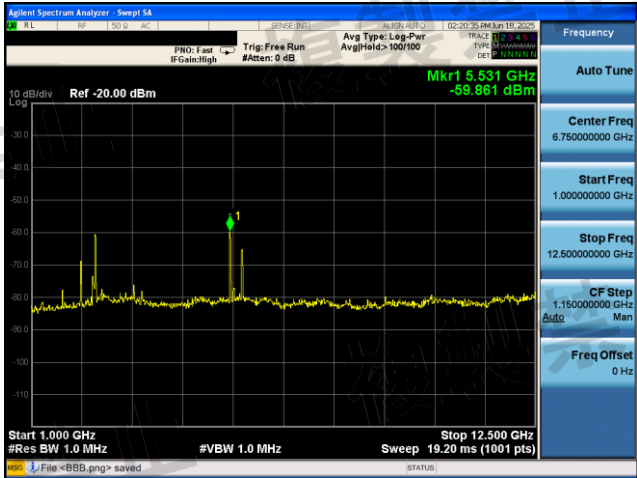
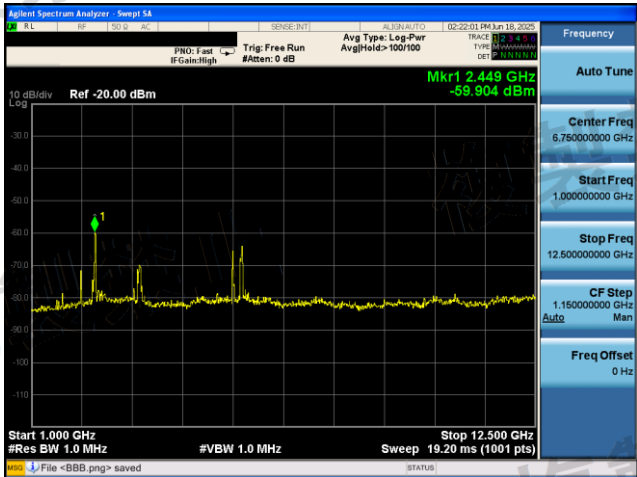
BLE 2M	
Unwanted Emission Strength Measurement	
30 MHz – 2387 MHz	
Low Voltage Low CH	
Low Voltage Middle CH	
Low Voltage High CH	

BLE 2M	
Unwanted Emission Strength Measurement	
2387 MHz – 2400 MHz	
Low Voltage Low CH	<p>Agilent Spectrum Analyzer - Sweep 5A</p> <p>Ref 10.00 dBm</p> <p>Mkr1 2399.961 GHz -14.435 dBm</p> <p>Start 2.387000 GHz #Res BW 1.0 MHz #VBW 1.0 MHz Stop 2.400000 GHz Sweep 1.000 ms (1001 pts)</p> <p>File <BBB.png> saved</p>
Low Voltage Middle CH	<p>Agilent Spectrum Analyzer - Sweep 5A</p> <p>Ref 10.00 dBm</p> <p>Mkr1 2399.415 GHz -41.175 dBm</p> <p>Start 2.387000 GHz #Res BW 1.0 MHz #VBW 1.0 MHz Stop 2.400000 GHz Sweep 1.000 ms (1001 pts)</p> <p>File <BBB.png> saved</p>
Low Voltage High CH	<p>Agilent Spectrum Analyzer - Sweep 5A</p> <p>Ref 10.00 dBm</p> <p>Mkr1 2398.531 GHz -44.776 dBm</p> <p>Start 2.387000 GHz #Res BW 1.0 MHz #VBW 1.0 MHz Stop 2.400000 GHz Sweep 1.000 ms (1001 pts)</p> <p>File <BBB.png> saved</p>

BLE 2M	
Unwanted Emission Strength Measurement	
2483.5 MHz – 2496.5 MHz	
Low Voltage Low CH	
Low Voltage Middle CH	
Low Voltage High CH	

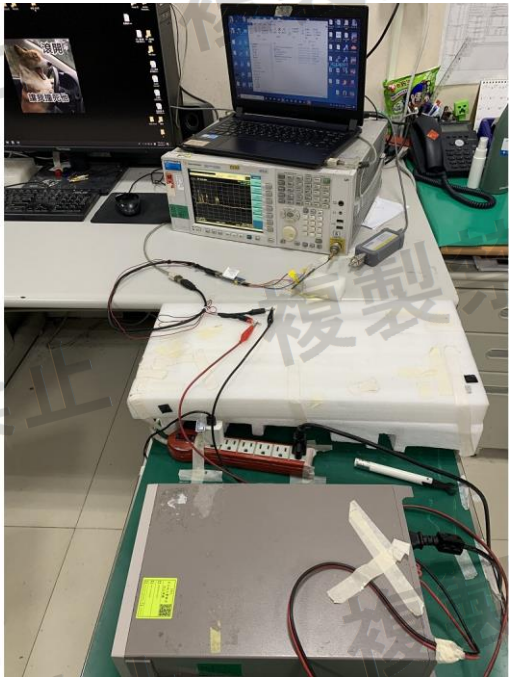
BLE 2M	
Unwanted Emission Strength Measurement	
2496.5 MHz – 12.5 GHz	
Low Voltage Low CH	
Low Voltage Middle CH	
Low Voltage High CH	

BLE 2M	
Secondarily Emitted Radio Wave Strength Measurement	
30 MHz – 1 GHz	
Low Voltage Low CH	
Low Voltage Middle CH	
Low Voltage High CH	

BLE 2M	
Secondarily Emitted Radio Wave Strength Measurement	
1 GHz – 12.5 GHz	
Low Voltage Low CH	
Low Voltage Middle CH	
Low Voltage High CH	

--- END---

Appendix A. Test Setup Photographs

Description:	Test Circuit Photo
	
Description:	Conducted Measurement Photo
	