



# RADIO TEST REPORT

Equipment : 11ax RTL8852CE Combo module  
Brand Name : REALTEK  
Model Name : RTL8852CE  
Applicant : Realtek Semiconductor Corp.  
No. 2, Innovation Road II, Hsinchu Science Park,  
Hsinchu 300, Taiwan  
Manufacturer : Realtek Semiconductor Corp.  
No. 2, Innovation Road II, Hsinchu Science Park,  
Hsinchu 300, Taiwan  
Standard : MIC Certification Rule, Article 2 Paragraph 1 Item 19

The product was received on Nov. 05, 2021, and testing was started from Nov. 06, 2021 and completed on May 13, 2022. We, Sporton International Inc. Hsinchu Laboratory, would like to declare that the tested sample has been evaluated in accordance with the procedures given in MIC Notice No.88 Appendix No.43 and shown compliance with the applicable MIC Ordinance Regulating Radio Equipment Article 49.20 technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. Hsinchu Laboratory, the test report shall not be reproduced except in full.

Approved by: Sam Chen

**Sporton International Inc. Hsinchu Laboratory**

No.8, Ln. 724, Bo'ai St., Zhubei City, Hsinchu County 302010, Taiwan



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## History of this test report

TEL : 886-3-656-9065  
FAX : 886-3-656-9085  
Report Template No.: CB-D2\_4 Ver1.1

Page Number : 3 of 18  
Issued Date : Nov. 02, 2022  
Report Version : 03



## Summary of Test Result

Report Clause	Ref Std. Clause	Test Items	Result (PASS/FAIL)	Remark
1.1.1	RLE:6	Frequency Band	PASS	-
3.1	ORE:5	Frequency Error	PASS	-
3.2	ORE:6	Occupied Bandwidth	PASS	-
3.3	ORE:49.20	Antenna Power	PASS	-
3.3	ORE:14	Antenna Power Error	PASS	-
-	ORE:49.20	Antenna Beamwidth, EIRP Limit* <sup>1</sup>	N/A	-
-	ORE:49.20	Radiated EIRP* <sup>1</sup>	N/A	-
3.4	ORE:7, Table 3	Transmitter Spurious Emissions	PASS	-
3.5	ORE:24	Receiver Spurious Emissions	PASS	-
3.6	TR:9	Identification Code	PASS	-
-	TR:9	Carrier Sense* <sup>2</sup>	N/A	-
3.7	ORE:49.20	EUT Construction Protection	N/A	Declared by manufacturer

RLE: Radio Law Enforcement Regulations

ORE: Ordinance Regulating Radio Equipment

TR: Terminal and Other Equipment Regulations

NT: Notification of the Ministry of Internal Affairs and Communications

\*<sup>1</sup>: If EIRP power of EUT is lower than 12.14dBm/MHz (20MHz) and 9.1279dBm/MHz (40MHz), so "Antenna Beamwidth, EIRP Limit" and "Radiated EIRP" could be exempted tests.

\*<sup>2</sup>: If OFDM modulation and Occupied Bandwidth  $\geq$  26MHz, Carrier Sense shall be performed.

Note: Reference to Sporton Project No.: 1N0223.

**Declaration of Conformity:**

1. The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers. It's means measurement values may risk exceeding the limit of regulation standards, if measurement uncertainty is include in test results.
2. The measurement uncertainty please refer to report "Measurement Uncertainty".

**Comments and Explanations:**

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

Reviewed by: Sam Chen

Report Producer: Wendy Pan





# 1 General Description

## 1.1 Information

### 1.1.1 RF General Information

Frequency Range (MHz)	Bluetooth Mode	Ch. Frequency (MHz)	Channel Number
2400-2483.5	LE (1Mbps) – v4.x	2402-2480	0-39 [40]
2400-2483.5	LE (1Mbps, 500Kb/s, 125Kb/s) – v5.x	2402, 2426, 2480	0, 12, 39 [3]
2400-2483.5	LE (2Mbps) – v5.x	2404-2478 (Without 2426 MHz)	1-38 [37]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	BT-LE(1Mbps)	1.0	1TX
2.4-2.4835GHz	BT-LE(500Kb/s)	1.0	1TX
2.4-2.4835GHz	BT-LE(125Kb/s)	1.0	1TX
2.4-2.4835GHz	BT-LE(2Mbps)	2.0	1TX

Note:

- Bluetooth LE uses a GFSK modulation.
- BWch is the nominal channel bandwidth.

#### <Low Power>

Mode	Declared Power (mW)
BT-LE(1Mbps)	4.22669
BT-LE(2Mbps)	4.22669

#### <High Power>

Mode	Declared Power (mW)
BT-LE(1Mbps)	7.29458
BT-LE(2Mbps)	7.29458



## 1.1.2 Antenna Information

Ant.	Port		Brand	Model Name	Antenna Type	Connector	Gain (dBi)
	WLAN 2.4GHz / 5GHz / 6GHz	Bluetooth					
1	1/2	1	ARISTOTLE	RFA-27-JP378-4B-200	Monopole	I-PEX	Note 1
2	1/2	1	ARISTOTLE	RFA-27-JP326-MHF4300	PIFA	I-PEX	
3	1/2	1	ARISTOTLE	RFA-27-C38H1-MHF4300	Dipole	I-PEX	

Note 1

Ant.	Port		Gain (dBi)			
	WLAN 2.4GHz / 5GHz / 6GHz	Bluetooth	WLAN 2.4GHz	WLAN 5GHz UNII~UNII2C	WLAN 6GHz UNII 5	Bluetooth
1	1/2	1	3.38	4.86	4.86	3.38
2	1/2	1	3.50	5.00	5.00	3.50
3	1/2	1	3.00	5.00	5.00	3.00

Note 2: The above information was declared by manufacturer.

Note 3: Only the highest gain antenna (antenna 2) was selected to test and record in this report.

## &lt;For WLAN 2.4GHz function&gt;

**For IEEE 802.11b/g/n/VHT/ax (1TX/2RX):**

The EUT supports the antenna with TX diversity functions.

Both Port 1 and Port 2 support transmit and receive functions, but only one of them will be used at one time.

The Port 2 generated the worst case, so it was selected to test and record in the report.

Port 1 and Port 2 could receive simultaneously

**For IEEE 802.11b/g/n/VHT/ax (2TX/2RX):**

Port 1 and Port 2 can be used as transmitting/receiving antenna.

Port 1 and Port 2 could transmit/receive simultaneously.

## &lt;For WLAN 5GHz function&gt;

**For IEEE 802.11a/n/ac/ax (1TX/2RX):**

The EUT supports the antenna with TX diversity functions.

Both Port 1 and Port 2 support transmit and receive functions, but only one of them will be used at one time.

The Port 2 generated the worst case, so it was selected to test and record in the report.

Port 1 and Port 2 could receive simultaneously

**For IEEE 802.11a/n/ac/ax (2TX/2RX):**

Port 1 and Port 2 can be used as transmitting/receiving antenna.

Port 1 and Port 2 could transmit/receive simultaneously.

## &lt;For WLAN 6GHz function&gt;

**For IEEE 802.11ax (1TX/2RX):**

The EUT supports the antenna with TX diversity functions.

Both Port 1 and Port 2 support transmit and receive functions, but only one of them will be used at one time.

The Port 1 generated the worst case, so it was selected to test and record in the report.

Port 1 and Port 2 could receive simultaneously

**For IEEE 802.11a/n/ac/ax (2TX/2RX):**

Port 1 and Port 2 can be used as transmitting/receiving antenna.

Port 1 and Port 2 could transmit/receive simultaneously.

**<For Bluetooth function> (1TX/1RX):**

Only Port 1 can be used as transmitting/receiving antenna.

**1.1.3 EUT Information**

<b>EUT Power Type</b>	From host system
<b>Test Software Version</b>	RTLBTAPP V5.2.3.13
<b>Support Mode</b>	<input checked="" type="checkbox"/> LE 1M PHY: 1 Mb/s
	<input checked="" type="checkbox"/> LE Coded PHY (S=2): 500 Kb/s
	<input checked="" type="checkbox"/> LE Coded PHY (S=8): 125 Kb/s
	<input checked="" type="checkbox"/> LE 2M PHY: 2 Mb/s

**1.1.4 Mode Test Duty Cycle**

Mode	DC	DCF(dB)
BT-LE(1Mbps)	0.636	1.97
BT-LE(2Mbps)	0.336	4.74

**1.1.5 Power Supply Voltage Fluctuation**

Fluctuation	AC Input Power(V)	DC Output Power(V)	Variation (%)
Normal Vol	100	3.3	-
High Vol	110	3.3	0.00
Low Vol	90	3.3	0.00

Note: Voltage Variation (%) = (Output High or Low Voltage - Output Normal Voltage)/Output Normal Voltage X 100.

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



## 1.2 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ MIC Ordinance Regulating Radio Equipment Article 49.20
- ♦ MIC Notice No.88 Appendix No.43

## 1.3 Testing Location Information

Testing Location Information				
Test Lab. : Sporton International Inc. Hsinchu Laboratory				
Hsinchu	ADD: No.8, Ln. 724, Bo' ai St., Zhubei City, Hsinchu County 302010, Taiwan			
(TAF: 3787)	TEL: 886-3-656-9065	FAX: 886-3-656-9085		

Test Condition	Test Site No.	Test Engineer	Test Environment (°C / %)	Test Date
RF Conducted	TH03-CB	Owen Hsu	22.9-23.5 / 61-63	Nov. 06, 2021~ May 13, 2022

## 1.4 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2))

Test Items	Uncertainty	Remark
Conducted Emission	2.5 dB	Confidence levels of 95%
Radio frequency	$9.7 \times 10^{-7}$ MHz	Confidence levels of 95%





## 2 Test Configuration of EUT

### 2.1 Test Channel Mode

#### <Low Power>

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	0x48
2440MHz	0x48
2480MHz	0x4A
BT-LE(2Mbps)	-
2404MHz	0x48
2440MHz	0x48
2478MHz	0x4A

#### <High Power>

Mode	Power Setting
BT-LE(1Mbps)	-
2402MHz	0x4C
2440MHz	0x4C
2480MHz	0x4E
BT-LE(2Mbps)	-
2404MHz	0x4C
2440MHz	0x4C
2478MHz	0x4D



## 2.2 The Worst Case Measurement Configuration

Tests Item	Frequency Error, Occupied Bandwidth, Antenna Power, Antenna Power Error, Transmitter Spurious Emissions, Receiver Spurious Emissions, Identification Code
Test Condition	Conducted measurement at transmit chains.
Test Mode	
1	Low Power
2	High Power

## 2.3 EUT Operation during Test

During the test, "RTLBTAPP V5.2.3.13" under WIN 7 was executed the test program to control the EUT continuously transmit/receive RF signal.

## 2.4 Accessories

N/A

## 2.5 Support Equipment

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	Fixture	REALTEK	Ameba adapter	N/A

### 3 Test Result

#### 3.1 Frequency Error

##### 3.1.1 Frequency Error Limit

Frequency Error Limit
$\leq \pm 50$ ppm

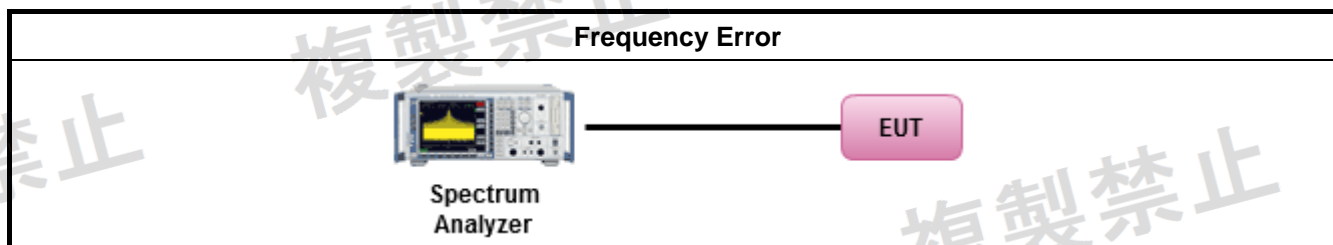
##### 3.1.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

##### 3.1.3 Test Procedures

Test Method	
Measuring Equipment Conditions	MIC Notice No.88 Appendix No.43, clause 3.2
Conditions of Equipment under Test	MIC Notice No.88 Appendix No.43, clause 3.3
Measuring Operation Procedures	MIC Notice No.88 Appendix No.43, clause 3.4
Presentation of Results	MIC Notice No.88 Appendix No.43, clause 3.5
Other Conditions	MIC Notice No.88 Appendix No.43, clause 3.6

##### 3.1.4 Test Setup



##### 3.1.5 Test Result of Frequency Error

Refer as Appendix A

## 3.2 Occupied Bandwidth

### 3.2.1 Occupied Bandwidth Limit

Occupied Bandwidth Limit	
FHSS	83.5 MHz
FHSS + DSSS	83.5 MHz
FHSS + OFDM	83.5 MHz
OFDM	40 MHz
Other	26 MHz

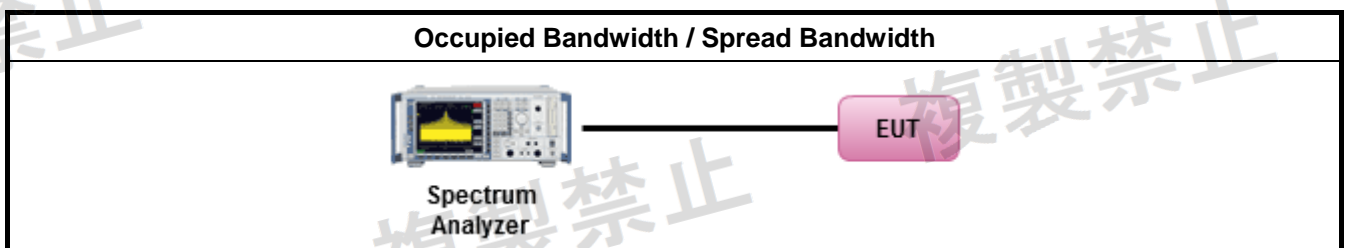
### 3.2.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

### 3.2.3 Test Procedures

Test Method	
Measuring Equipment Conditions	MIC Notice No.88 Appendix No.43, clause 4.2
Conditions of Equipment under Test	MIC Notice No.88 Appendix No.43, clause 4.3
Measuring Operation Procedures	MIC Notice No.88 Appendix No.43, clause 4.4
Presentation of Results	MIC Notice No.88 Appendix No.43, clause 4.5
Other Conditions	MIC Notice No.88 Appendix No.43, clause 4.6

### 3.2.4 Test Setup



### 3.2.5 Test Result of Occupied Bandwidth

Refer as Appendix B



### 3.3 Antenna Power, Antenna Power Error

#### 3.3.1 Antenna Power and Antenna Power Error Limit

Antenna Power Limit (mW/MHz)
$\leq 3\text{mW/MHz}$ (FHSS, FHSS+DSSS, FHSS+OFDM form 2427~2470.75 MHz) $\leq 10\text{mW/MHz}$ (DSSS from 2400~2483.5MHz) $\leq 10\text{mW/MHz}$ (OFDM from 2400~2483.5MHz) – [OBW $\leq 26\text{MHz}$ ] $\leq 5\text{mW/MHz}$ (OFDM from 2400~2483.5MHz) – [26MHz<OBW $\leq 40\text{MHz}$ ] $\leq 10\text{mW}$ (Other from 2400~2483.5MHz)

Antenna Power Error Limit (%)
+20% ~ -80%

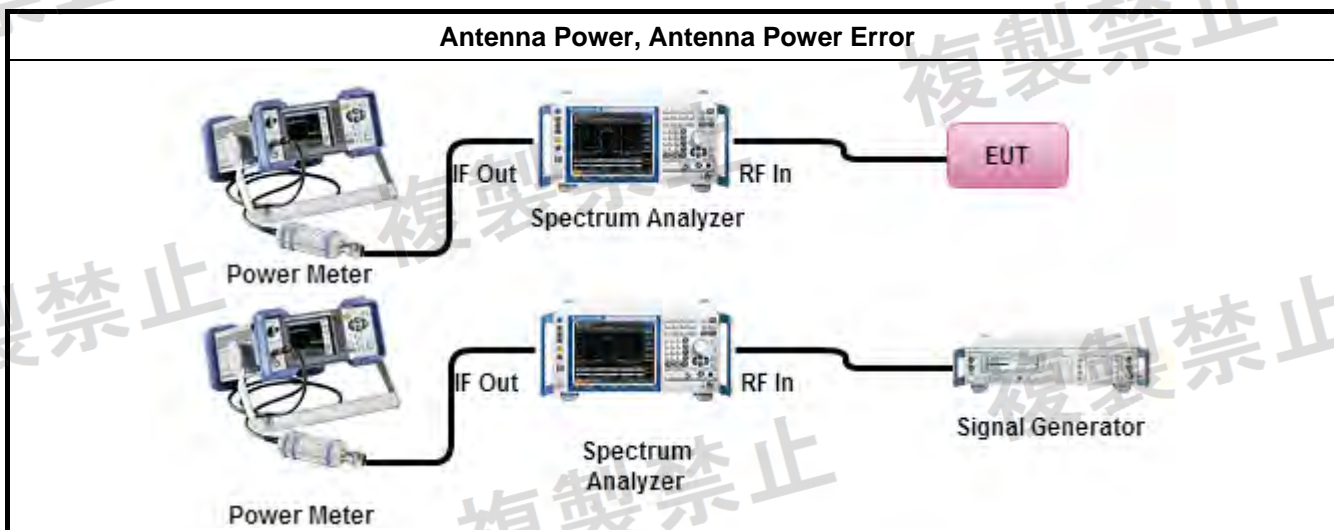
#### 3.3.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

#### 3.3.3 Test Procedures

Test Method	
Measuring Equipment Conditions	MIC Notice No.88 Appendix No.43, clause 6.2
Conditions of Equipment under Test	MIC Notice No.88 Appendix No.43, clause 6.3
Measuring Operation Procedures	MIC Notice No.88 Appendix No.43, clause 6.4
Presentation of Results	MIC Notice No.88 Appendix No.43, clause 6.5
Other Conditions	MIC Notice No.88 Appendix No.43, clause 6.6

#### 3.3.4 Test Setup



#### 3.3.5 Test Result of Antenna Power and Antenna Power Error

Refer as Appendix C

### 3.4 Transmitter Spurious Emissions

#### 3.4.1 Transmitter Spurious Emissions Limit

Transmitter Spurious Emissions		Limit	
Range (MHz)		uW/MHz	dBm/MHz
30	2387	2.5	-26
2387	2400	25	-16
2483.5	2496.5	25	-16
2496.5	12500	2.5	-26

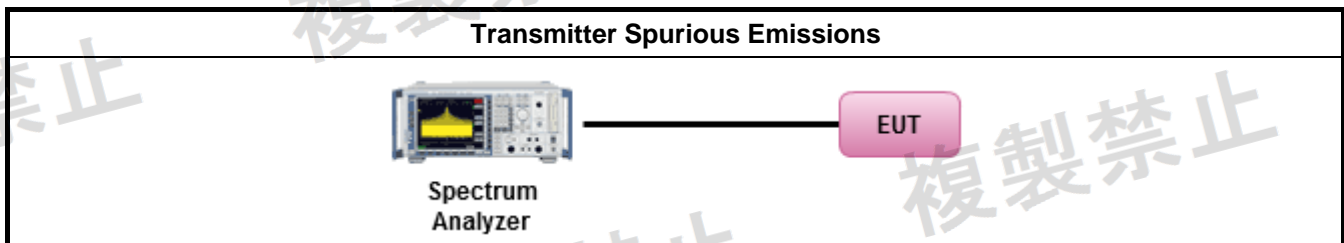
#### 3.4.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

#### 3.4.3 Test Procedures

Test Method	
Measuring Equipment Conditions	MIC Notice No.88 Appendix No.1, clause 1.3
Conditions of Equipment under Test	MIC Notice No.88 Appendix No.1, clause 1.4
Measuring Operation Procedures	MIC Notice No.88 Appendix No.1, clause 1.5
Presentation of Results	MIC Notice No.88 Appendix No.1, clause 1.6

#### 3.4.4 Test Setup



#### 3.4.5 Test Result of Transmitter Spurious Emissions

Refer as Appendix D

### 3.5 Receiver Spurious Emissions

#### 3.5.1 Receiver Spurious Emissions Limit

RX Spurious Emission		Limit			
Range (MHz)		nW		dBm	
30	1000	4	4	-54	-54
1000	12500	20	20	-47	-47

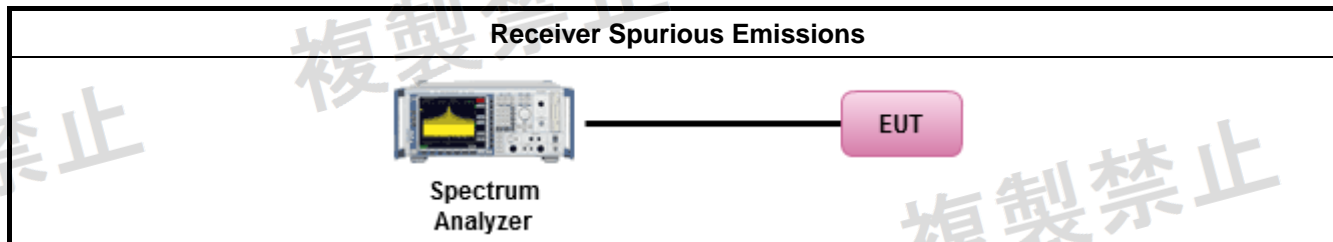
#### 3.5.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

#### 3.5.3 Test Procedures

Test Method	
Measuring Equipment Conditions	MIC Notice No.88 Appendix No.43, clause 7.2
Conditions of Equipment under Test	MIC Notice No.88 Appendix No.43, clause 7.3
Measuring Operation Procedures	MIC Notice No.88 Appendix No.43, clause 7.4
Presentation of Results	MIC Notice No.88 Appendix No.43, clause 7.5
Other Conditions	MIC Notice No.88 Appendix No.43, clause 7.6

#### 3.5.4 Test Setup



#### 3.5.5 Test Result of Receiver Spurious Emissions

Refer as Appendix E



### 3.6 Identification Code

#### 3.6.1 Identification Code Limit

Identification Code Limit
$\leq 48$ bits

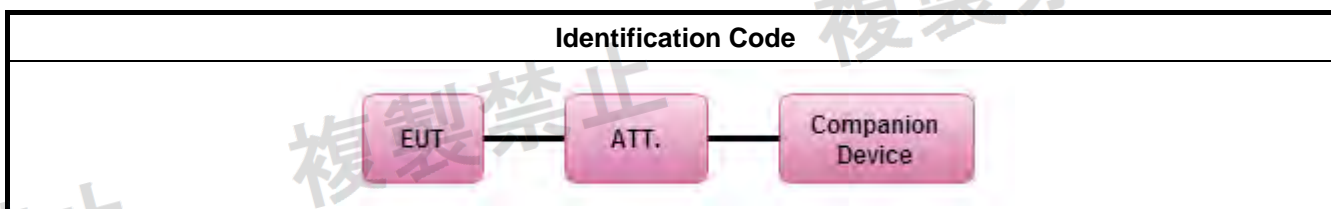
#### 3.6.2 Measuring Instruments

Refer a test equipment and calibration data table in this test report.

#### 3.6.3 Test Procedures

Test Method	
Measuring Equipment Conditions	MIC Notice No.88 Appendix No.43, clause 12.2
Conditions of Equipment under Test	MIC Notice No.88 Appendix No.43, clause 12.3
Measuring Operation Procedures	MIC Notice No.88 Appendix No.43, clause 12.4
Presentation of Results	MIC Notice No.88 Appendix No.43, clause 12.5
Other Conditions	MIC Notice No.88 Appendix No.43, clause 12.6

#### 3.6.4 Test Setup



#### 3.6.5 Test Result of Identification Code

Refer as Appendix F



### 3.7 EUT Construction Protection

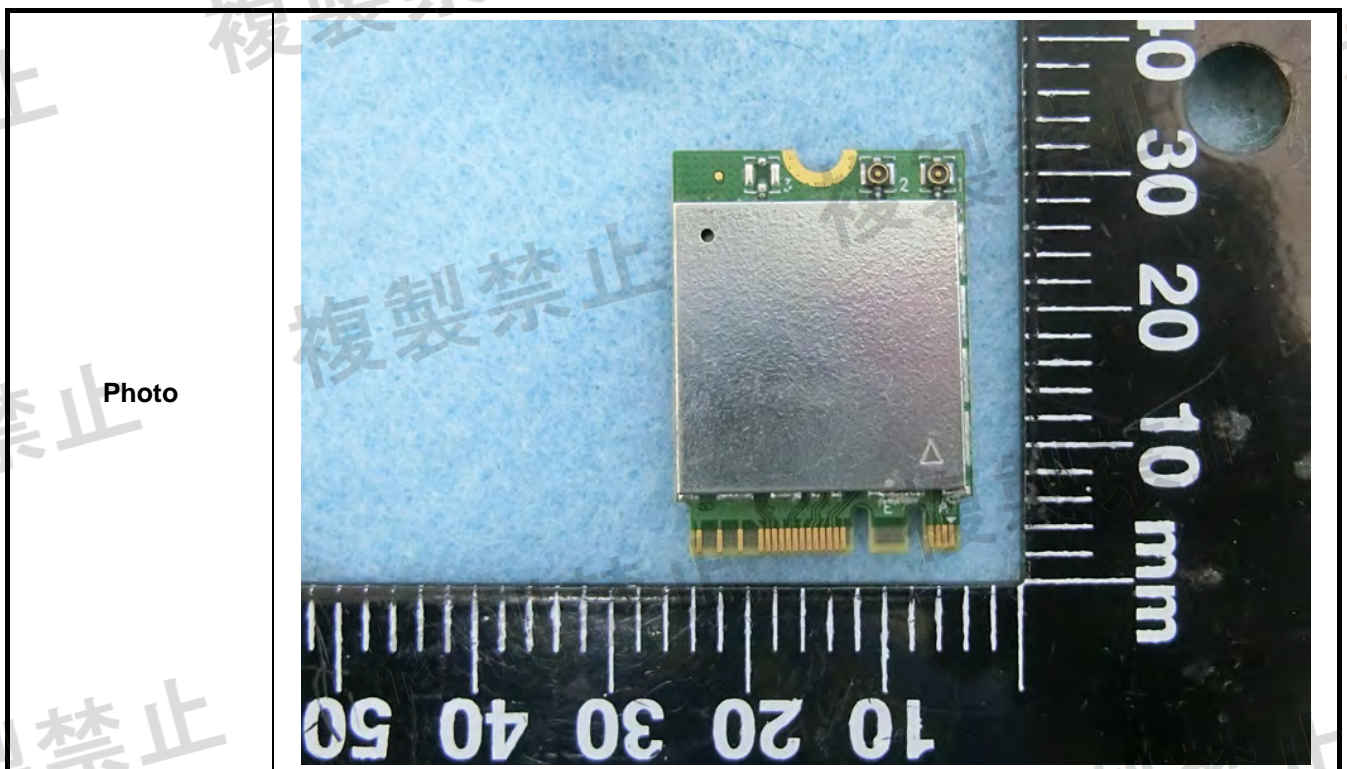
#### 3.7.1 EUT Construction Protection Limit

EUT Construction Protection 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.	

#### 3.7.2 EUT Construction Protection

EUT Construction Protection	
Protected Method	Description
Shielding Case	RF and Modulation components are covered with shielding case and this shielding case is soldered

#### 3.7.3 Reference Documents





#### 4 Test Equipment and Calibration Data

Instrument	Brand	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Calibration Method	Calibration Agent Name	Remark
Signal Analyzer	R&S	FSV40	101904	9kHz ~ 40GHz	Apr. 15, 2021	Apr. 14, 2022	c)	A	Conducted (TH03-CB)
Spectrum analyzer	R&S	FSV40	101028	9kHz~40GHz	Jan. 07, 2022	Jan. 06, 2023	c)	A	Conducted (TH03-CB)
Power Sensor	Anritsu	MA2411B	1726195	300MHz~40GHz	Aug. 22, 2021	Aug. 21, 2022	d)	A	Conducted (TH03-CB)
Power Meter	Anritsu	ML2495A	1035008	300MHz~40GHz	Aug. 22, 2021	Aug. 21, 2022	d)	A	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-11	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	d)	B	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-12	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	d)	B	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-13	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	d)	B	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-14	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	d)	B	Conducted (TH03-CB)
RF Cable-high	Woken	RG402	High Cable-15	1 GHz ~18 GHz	Oct. 04, 2021	Oct. 03, 2022	d)	B	Conducted (TH03-CB)
Digital Multimeters	Fluke	15B+	42390498WS	-	Oct. 27, 2021	Oct. 26, 2022	c)	A	Conducted (TH03-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	N/A	N/A	Conducted (TH03-CB)

**Note:**

- Calibration Interval of instruments listed above is one year.
- N.C.R. means Non-Calibration required.
- Calibration Agent Name: Describe calibration agent name with its country name, and symbols in "Calibration Agent Name" shows the agent names as follows,  
A: Electronics Testing Center, Taiwan.  
B: Sporton International Inc., Taiwan.  
C: ROHDE&SCHWARZ, Taiwan.
- Calibration Method  
a) : Calibration conducted by the National Institute of Information and Communications Technology 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)  
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)
- The second Spectrum analyzer (101028) is a spare for the first Signal Analyzer (101904), when the first one expires, we will use the second one for testing. So from Nov. 06, 2021 to Apr. 14, 2022, we use Signal Analyzer(101904) for testing, and from Apr. 15, 2022 to May 13, 2022 we use Spectrum analyzer(101028) for testing.



## Frequency Tolerance (DTS) <Low Power>

## Appendix A.1

### Summary

Mode	Result	Ch (Hz)	Center (Hz)	ppm	Limit (ppm)	Port	Remark
2.4-2.4835GHz	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.44G	2.44002175G	8.9139	±50	1	-
BT-LE(2Mbps)	Pass	2.478G	2.478036G	14.526	±50	1	-



## Frequency Tolerance (DTS) <Low Power>

## Appendix A.1

### Result

Mode	Result	Ch (Hz)	Center (Hz)	ppm	Limit (ppm)	Port
BT-LE(1Mbps)	-	-	-	-	-	-
2402MHz_TnomVnom	Pass	2.402G	2.40201847G	7.6889	±50	1
2440MHz_TnomVnom	Pass	2.44G	2.44002175G	8.9139	±50	1
2480MHz_TnomVnom	Pass	2.48G	2.48001641G	6.6154	±50	1
BT-LE(2Mbps)	-	-	-	-	-	-
2404MHz_TnomVnom	Pass	2.404G	2.40402812G	11.6978	±50	1
2440MHz_TnomVnom	Pass	2.44G	2.44003544G	14.5236	±50	1
2478MHz_TnomVnom	Pass	2.478G	2.478036G	14.526	±50	1





## Frequency Tolerance (DTS) <High Power>

## Appendix A.2

### Summary

Mode	Result	Ch (Hz)	Center (Hz)	ppm	Limit (ppm)	Port	Remark
2.4-2.4835GHz	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.44G	2.44002175G	8.9139	±50	1	-
BT-LE(2Mbps)	Pass	2.478G	2.47804462G	18.0062	±50	1	-



## Frequency Tolerance (DTS) <High Power>

## Appendix A.2

### Result

Mode	Result	Ch (Hz)	Center (Hz)	ppm	Limit (ppm)	Port	Remark
BT-LE(1Mbps)	-	-	-	-	-	-	-
2402MHz_TnomVnom	Pass	2.402G	2.40201847G	7.6889	±50	1	-
2440MHz_TnomVnom	Pass	2.44G	2.44002175G	8.9139	±50	1	-
2480MHz_TnomVnom	Pass	2.48G	2.48001641G	6.6154	±50	1	-
BT-LE(2Mbps)	-	-	-	-	-	-	-
2404MHz_TnomVnom	Pass	2.404G	2.40403243G	13.4914	±50	1	-
2440MHz_TnomVnom	Pass	2.44G	2.44003544G	14.5236	±50	1	-
2478MHz_TnomVnom	Pass	2.478G	2.47804462G	18.0062	±50	1	-



## Occupied Bandwidth (DTS) <Low Power>

## Appendix B.1

### Summary

Mode	Max-OBW (Hz)	ITU-Code	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-
BT-LE(1Mbps)	1.305M	1M31F1D	1.304M
BT-LE(2Mbps)	2.168M	2M17F1D	2.151M

Max-OBW = Maximum 99% occupied bandwidth; Min-OBW = Minimum 99% occupied bandwidth;



## Occupied Bandwidth (DTS) <Low Power>

## Appendix B.1

### Result

Mode	Result	Limit (Hz)	P1-OBW (Hz)
BT-LE(1Mbps)	-	-	-
2402MHz_TnomVnom	Pass	26M	1.304M
2440MHz_TnomVnom	Pass	26M	1.304M
2480MHz_TnomVnom	Pass	26M	1.305M
BT-LE(2Mbps)	-	-	-
2404MHz_TnomVnom	Pass	26M	2.151M
2440MHz_TnomVnom	Pass	26M	2.168M
2478MHz_TnomVnom	Pass	26M	2.153M

P1-OBW = Port 1 99% occupied bandwidth; P2-OBW = Port 2 99% occupied bandwidth; Pn-OBW = Port n 99% occupied bandwidth

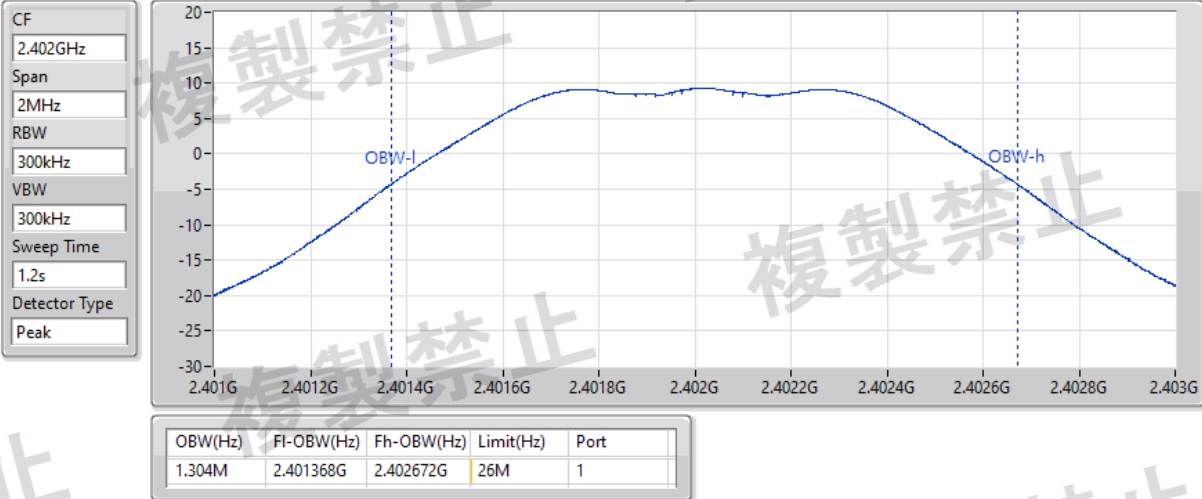


BT-LE(1Mbps)

OBW-DTS

2402MHz\_TnomVnom

07/11/2021

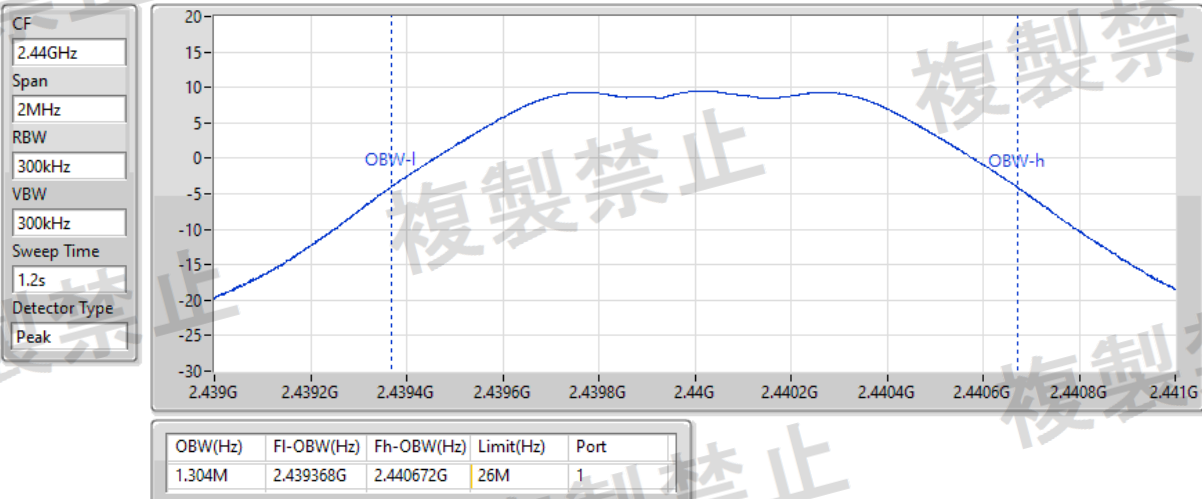


BT-LE(1Mbps)

OBW-DTS

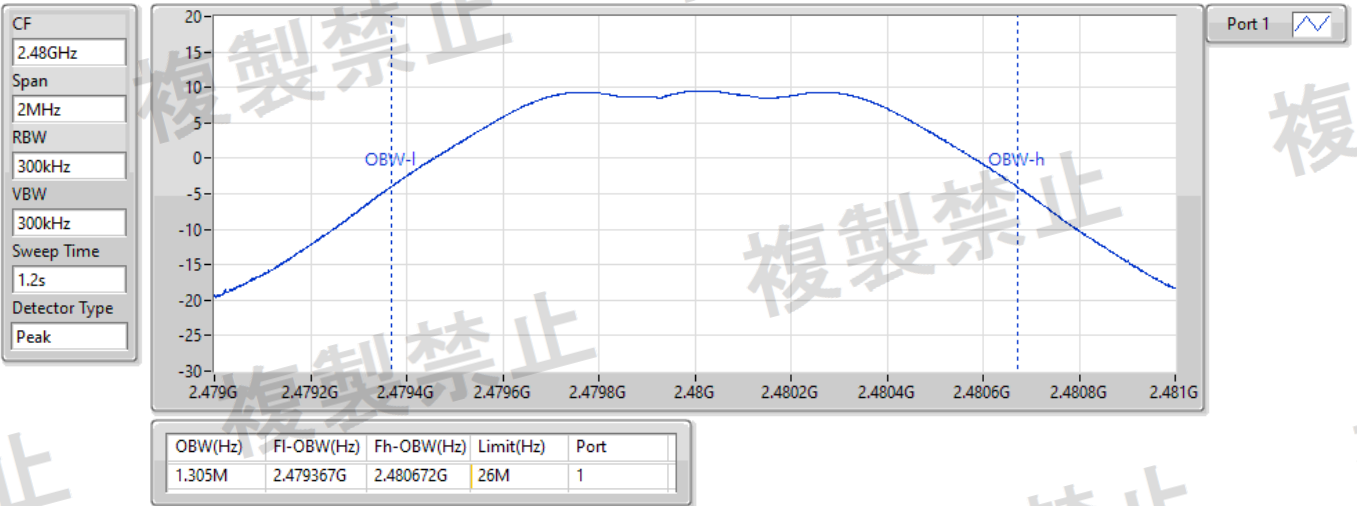
2440MHz\_TnomVnom

07/11/2021



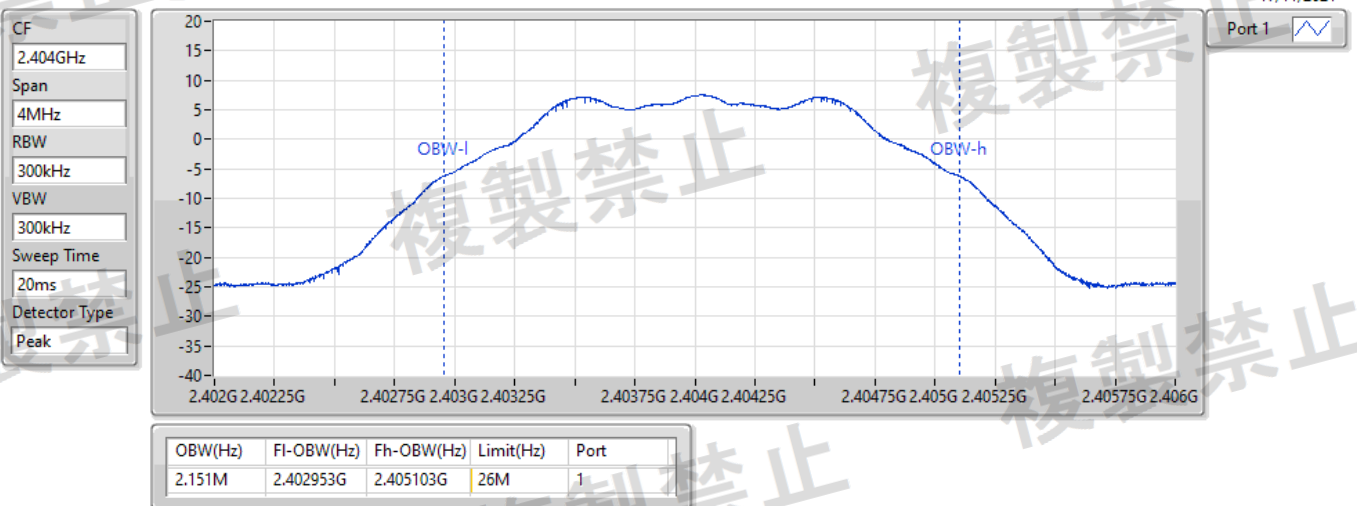
### BT-LE(1Mbps)

#### 2480MHz\_TnomVnom



### BT-LE(2Mbps)

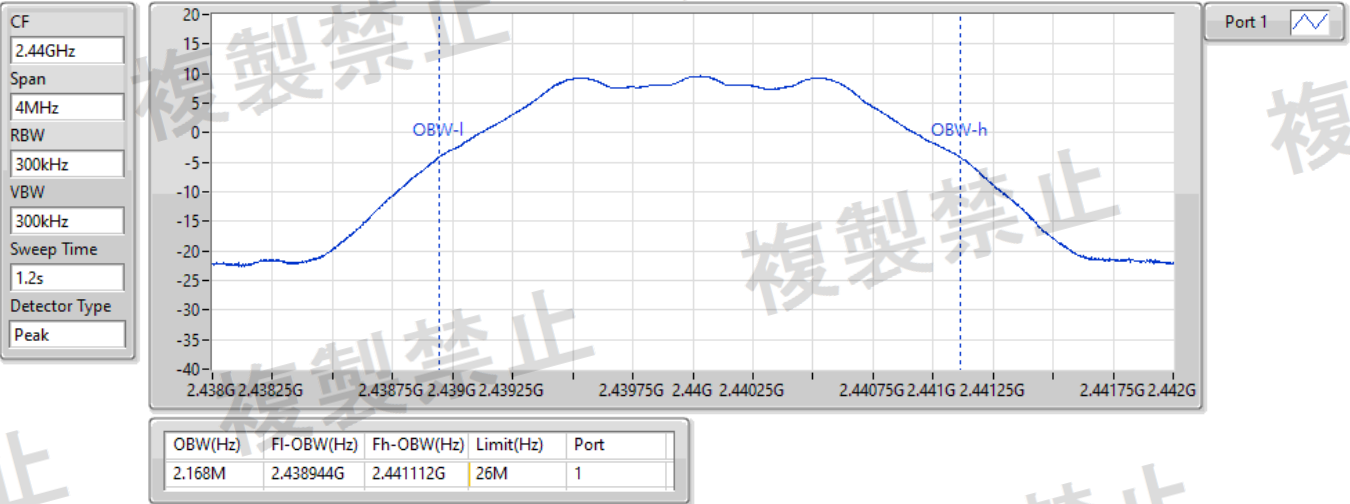
#### 2404MHz\_TnomVnom



# BT-LE(2Mbps)

## OBW-DTS

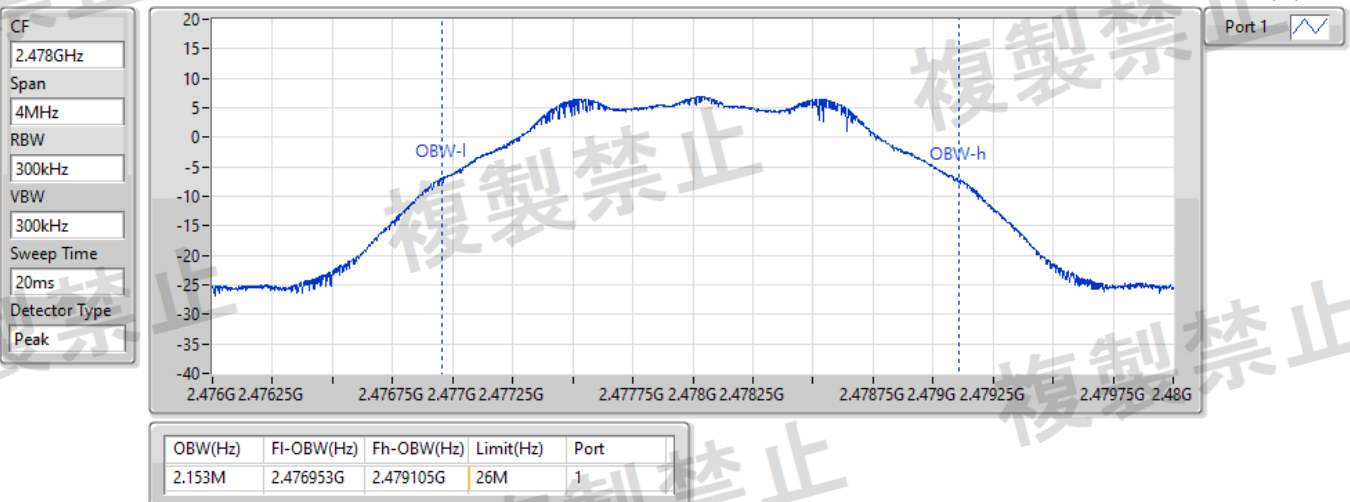
### 2440MHz\_TnomVnom



# BT-LE(2Mbps)

## OBW-DTS

### 2478MHz\_TnomVnom





## Occupied Bandwidth (DTS) <High Power>

## Appendix B.2

### Summary

Mode	Max-OBW (Hz)	ITU-Code	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-
BT-LE(1Mbps)	1.305M	1M31F1D	1.304M
BT-LE(2Mbps)	2.168M	2M17F1D	2.149M

Max-OBW = Maximum 99% occupied bandwidth; Min-OBW = Minimum 99% occupied bandwidth;





## Occupied Bandwidth (DTS) <High Power>

## Appendix B.2

### Result

Mode	Result	Limit (Hz)	P1-OBW (Hz)
BT-LE(1Mbps)	-	-	-
2402MHz_TnomVnom	Pass	26M	1.304M
2440MHz_TnomVnom	Pass	26M	1.304M
2480MHz_TnomVnom	Pass	26M	1.305M
BT-LE(2Mbps)	-	-	-
2404MHz_TnomVnom	Pass	26M	2.151M
2440MHz_TnomVnom	Pass	26M	2.168M
2478MHz_TnomVnom	Pass	26M	2.149M

P1-OBW = Port 1 99% occupied bandwidth; P2-OBW = Port 2 99% occupied bandwidth; Pn-OBW = Port n 99% occupied bandwidth

BT-LE(1Mbps)

OBW-DTS

2402MHz\_TnomVnom

07/11/2021

CF  
2.402GHz

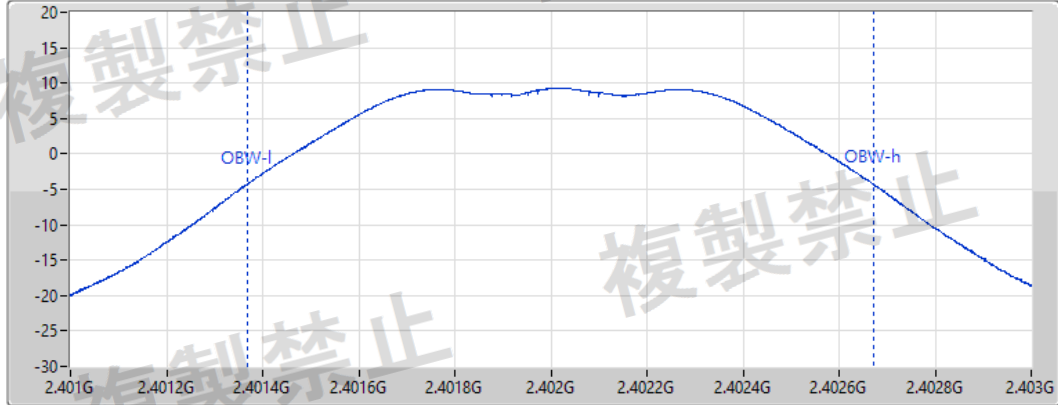
Span  
2MHz

RBW  
300kHz

VBW  
300kHz

Sweep Time  
1.2s

Detector Type  
Peak



OBW(Hz)	FI-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.304M	2.401368G	2.402672G	26M	1

BT-LE(1Mbps)

OBW-DTS

2440MHz\_TnomVnom

07/11/2021

CF  
2.44GHz

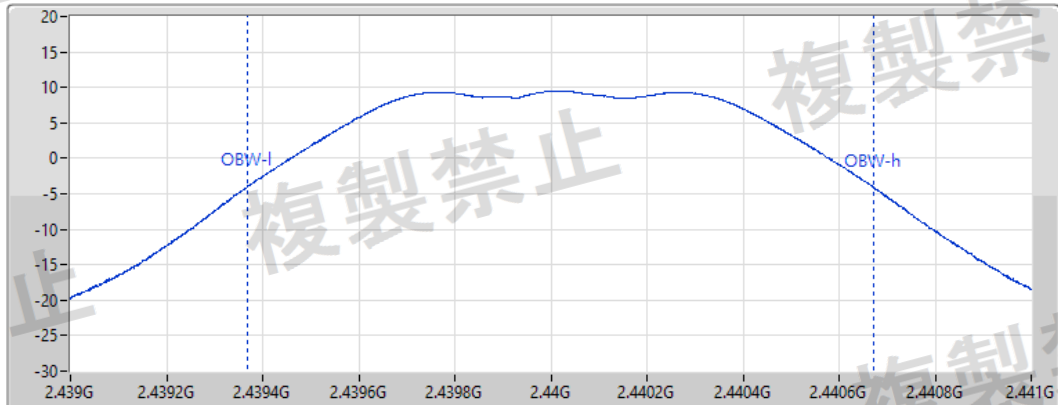
Span  
2MHz

RBW  
300kHz

VBW  
300kHz

Sweep Time  
1.2s

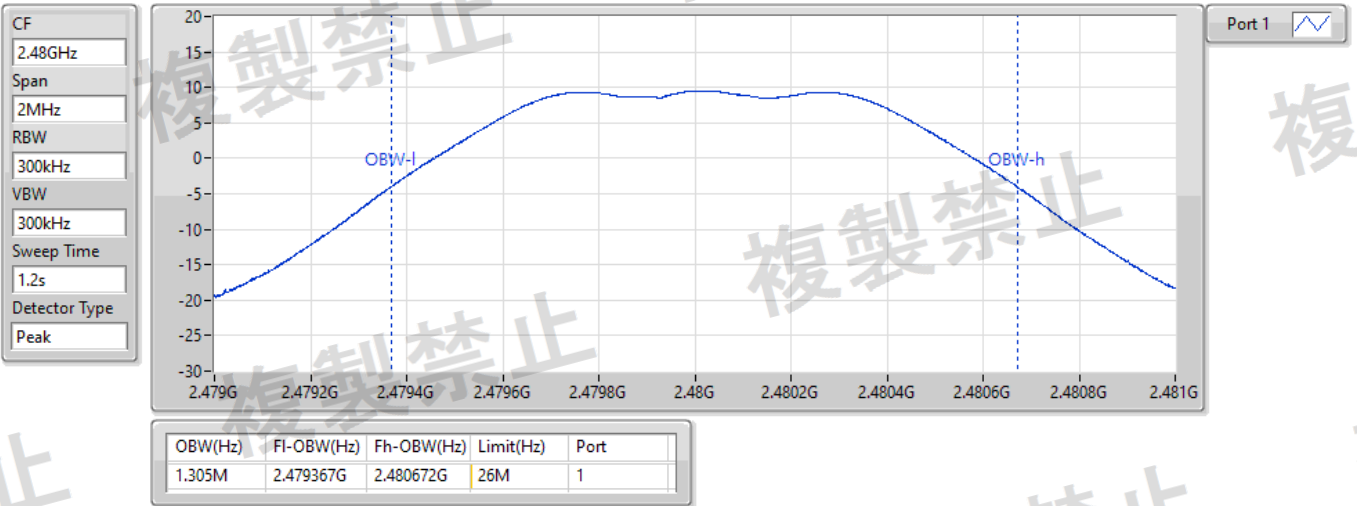
Detector Type  
Peak



OBW(Hz)	FI-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
1.304M	2.439368G	2.440672G	26M	1

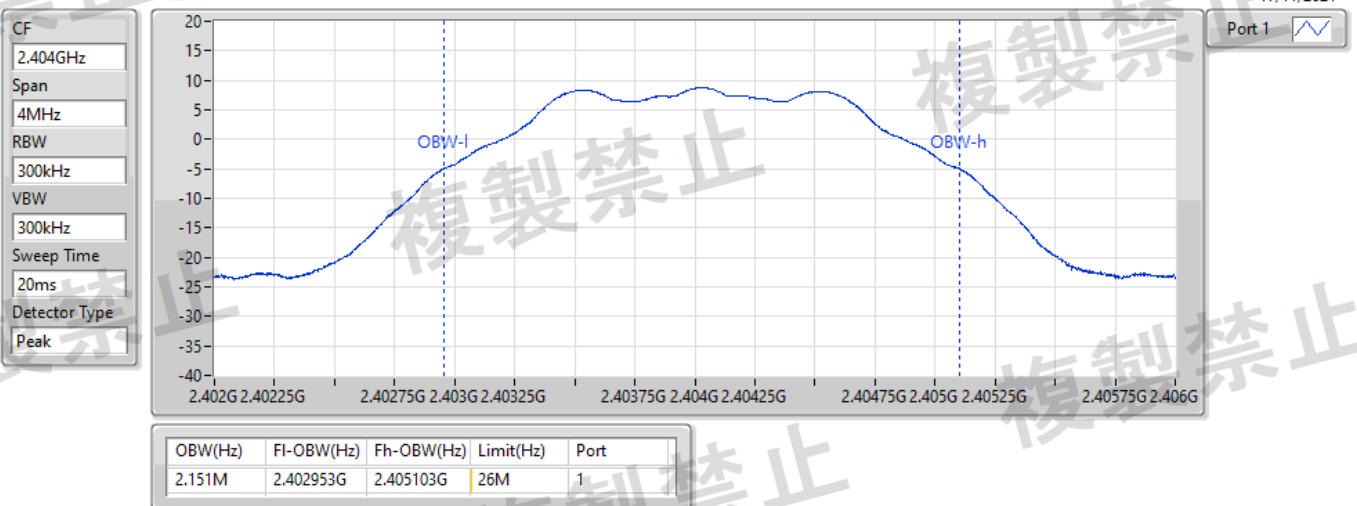
### BT-LE(1Mbps)

#### 2480MHz\_TnomVnom



### BT-LE(2Mbps)

#### 2404MHz\_TnomVnom



BT-LE(2Mbps)

OBW-DTS

2440MHz\_TnomVnom

07/11/2021

CF  
2.44GHz

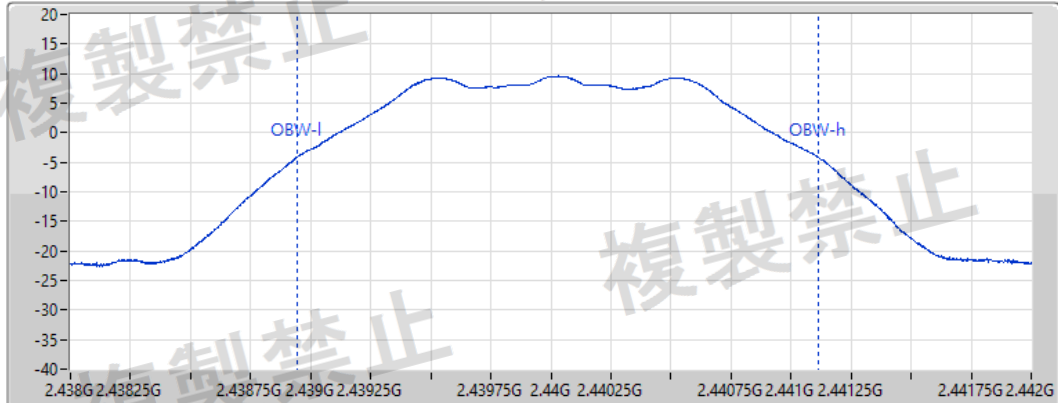
Span  
4MHz

RBW  
300kHz

VBW  
300kHz

Sweep Time  
1.2s

Detector Type  
Peak



OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
2.168M	2.438944G	2.441112G	26M	1

BT-LE(2Mbps)

OBW-DTS

2478MHz\_TnomVnom

17/11/2021

CF  
2.478GHz

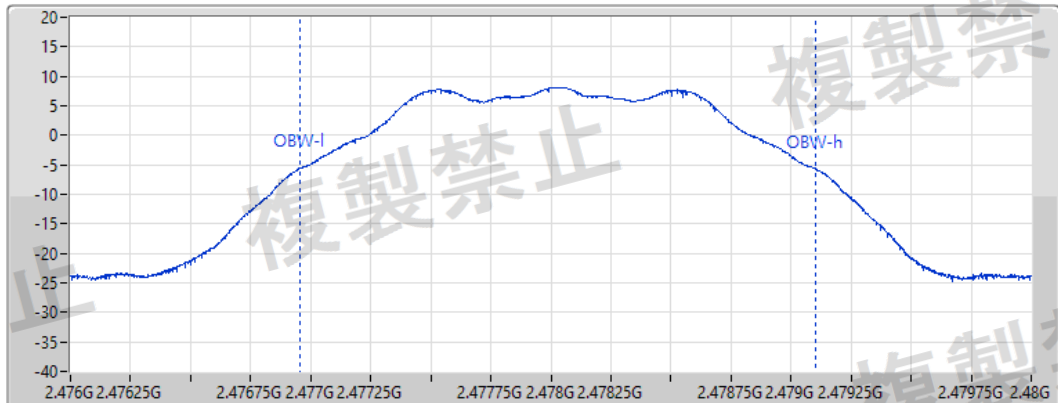
Span  
4MHz

RBW  
300kHz

VBW  
300kHz

Sweep Time  
20ms

Detector Type  
Peak



OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
2.149M	2.476953G	2.479101G	26M	1





## Total Power (DTS) <Low Power>

## Appendix C.1

### Summary

Mode	Power (dBm)	Power (mW)	EIRP (dBm)	EIRP (mW)
2.4-2.4835GHz	-	-	-	-
BT-LE(1Mbps)	6.25	4.217	9.75	9.441
BT-LE(2Mbps)	6.26	4.227	9.76	9.462

P1 = Port 1 output power; P2 = Port 2 output power; P3 = Port 3 output power; P4 = Port 4 output power;  
Power = Total power sum by P1-PN



## Total Power (DTS) <Low Power>

## Appendix C.1

### Result

Mode	Result	Gain (dBi)	Power (dBm)	Power (mW)	Power Lim. (mW)	EIRP (dBm)	EIRP (mW)	EIRP Lim. (mW)
BT-LE(1Mbps)	-	-	-	-	-	-	-	-
2402MHz_TnomVnom	Pass	3.50	6.14	4.111	10	9.64	9.204	16.368
2440MHz_TnomVnom	Pass	3.50	6.25	4.217	10	9.75	9.441	16.368
2480MHz_TnomVnom	Pass	3.50	6.17	4.140	10	9.67	9.268	16.368
BT-LE(2Mbps)	-	-	-	-	-	-	-	-
2404MHz_TnomVnom	Pass	3.50	6.03	4.009	10	9.53	8.974	16.368
2440MHz_TnomVnom	Pass	3.50	6.26	4.227	10	9.76	9.462	16.368
2478MHz_TnomVnom	Pass	3.50	6.17	4.140	10	9.67	9.268	16.368

P1 = Port 1 output power; P2 = Port 2 output power; P3 = Port 3 output power; P4 = Port 4 output power;  
Power = Total power sum by P1-PN



## Power Tolerance (DTS) <Low Power>

## Appendix C.2

### Summary

Mode	Result	Power (dBm)	Power (mW)	Declare (mW)	Tolerance (%)	Limit+ (%)	Limit- (%)
2.4-2.4835GHz	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	6.25	4.21697	4.22669	-0.23	20	-80
BT-LE(2Mbps)	Pass	6.26	4.22669	4.22669	0.00	20	-80



## Power Tolerance (DTS) <Low Power>

## Appendix C.2

### Result

Mode	Result	Power (dBm)	Power (mW)	Declare (mW)	Tolerance (%)	Limit+ (%)	Limit- (%)
BT-LE(1Mbps)	-	-	-	-	-	-	-
2402MHz_TnomVnom	Pass	6.14	4.11150	4.22669	-2.73	20	-80
2440MHz_TnomVnom	Pass	6.25	4.21697	4.22669	-0.23	20	-80
2480MHz_TnomVnom	Pass	6.17	4.14000	4.22669	-2.05	20	-80
BT-LE(2Mbps)	-	-	-	-	-	-	-
2404MHz_TnomVnom	Pass	6.03	4.00867	4.22669	-5.16	20	-80
2440MHz_TnomVnom	Pass	6.26	4.22669	4.22669	0.00	20	-80
2478MHz_TnomVnom	Pass	6.17	4.14000	4.22669	-2.05	20	-80



## Total Power (DTS) <High Power>

## Appendix C.3

### Summary

Mode	Power (dBm)	Power (mW)	EIRP (dBm)	EIRP (mW)
2.4-2.4835GHz	-	-	-	-
BT-LE(1Mbps)	8.63	7.295	12.13	16.331
BT-LE(2Mbps)	8.57	7.194	12.07	16.106

P1 = Port 1 output power; P2 = Port 2 output power; P3 = Port 3 output power; P4 = Port 4 output power;  
Power = Total power sum by P1-PN



**Result**

Mode	Result	Gain (dBi)	Power (dBm)	Power (mW)	Power Lim. (mW)	EIRP (dBm)	EIRP (mW)	EIRP Lim. (mW)
BT-LE(1Mbps)	-	-	-	-	-	-	-	-
2402MHz_TnomVnom	Pass	3.50	8.53	7.129	10	12.03	15.959	16.368
2440MHz_TnomVnom	Pass	3.50	8.63	7.295	10	12.13	16.331	16.368
2480MHz_TnomVnom	Pass	3.50	8.57	7.194	10	12.07	16.106	16.368
BT-LE(2Mbps)	-	-	-	-	-	-	-	-
2404MHz_TnomVnom	Pass	3.50	8.10	6.457	10	11.60	14.454	16.368
2440MHz_TnomVnom	Pass	3.50	8.57	7.194	10	12.07	16.106	16.368
2478MHz_TnomVnom	Pass	3.50	7.87	6.124	10	11.37	13.709	16.368

P1 = Port 1 output power; P2 = Port 2 output power; P3 = Port 3 output power; P4 = Port 4 output power;  
Power = Total power sum by P1-P4



## Power Tolerance (DTS) <High Power>

## Appendix C.4

### Summary

Mode	Result	Power (dBm)	Power (mW)	Declare (mW)	Tolerance (%)	Limit+ (%)	Limit- (%)
2.4-2.4835GHz	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	8.63	7.29458	7.29458	0.00	20	-80
BT-LE(2Mbps)	Pass	8.57	7.19449	7.29458	-1.37	20	-80



## Power Tolerance (DTS) <High Power>

## Appendix C.4

### Result

Mode	Result	Power (dBm)	Power (mW)	Declare (mW)	Tolerance (%)	Limit+ (%)	Limit- (%)
BT-LE(1Mbps)	-	-	-	-	-	-	-
2402MHz_TnomVnom	Pass	8.53	7.12853	7.29458	-2.28	20	-80
2440MHz_TnomVnom	Pass	8.63	7.29458	7.29458	0.00	20	-80
2480MHz_TnomVnom	Pass	8.57	7.19449	7.29458	-1.37	20	-80
BT-LE(2Mbps)	-	-	-	-	-	-	-
2404MHz_TnomVnom	Pass	8.10	6.45654	7.29458	-11.49	20	-80
2440MHz_TnomVnom	Pass	8.57	7.19449	7.29458	-1.37	20	-80
2478MHz_TnomVnom	Pass	7.87	6.12350	7.29458	-16.05	20	-80



## CSE-TX-Unwanted Emission (DTS) <Low Power>

## Appendix D.1

### Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Freq (Hz)	Psum (dBm/MHz)	Psum (uW/MHz)	Limit (dBm/MHz)	Limit (uW/MHz)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.387G	2.4G	1M	2.4G	-16.78	20.9894	-16.02	25
BT-LE(2Mbps)	Pass	2.4965G	12.5G	1M	6.77925G	-41.05	0.07852	-26.02	2.5

### Result

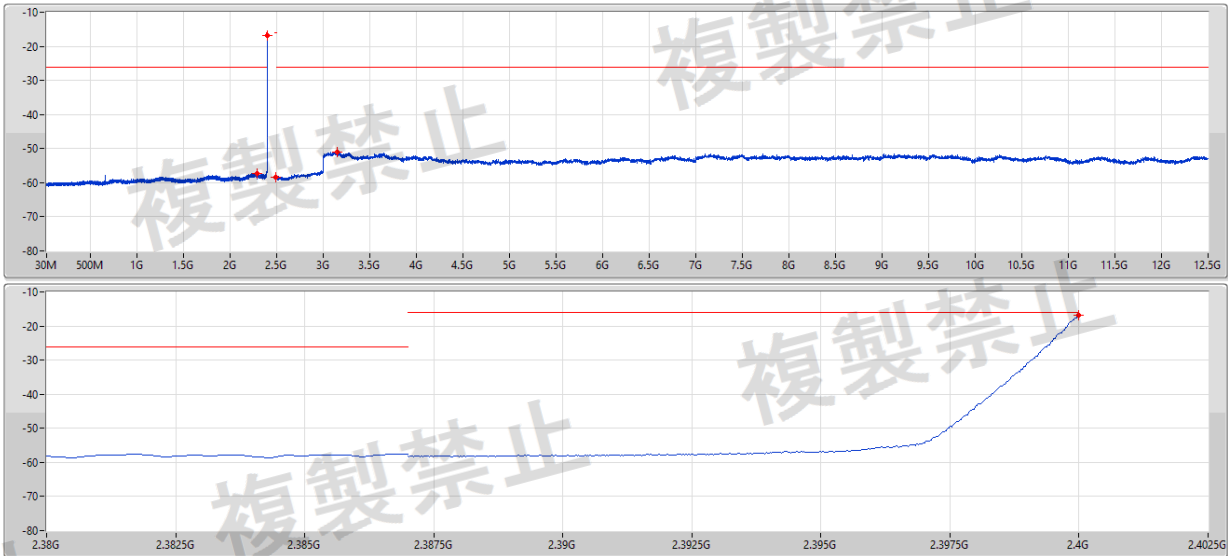
Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Freq (Hz)	Psum (dBm/MHz)	Psum (uW/MHz)	Limit (dBm/MHz)	Limit (uW/MHz)
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-
2402MHz_TnomVnom	Pass	30M	2.387G	1M	2.29243G	-57.31	0.00186	-26.02	2.5
2402MHz_TnomVnom	Pass	2.387G	2.4G	1M	2.4G	-16.78	20.9894	-16.02	25
2402MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2.48623G	-58.52	0.00141	-16.02	25
2402MHz_TnomVnom	Pass	2.4965G	12.5G	1M	3.14548G	-50.98	0.00798	-26.02	2.5
2440MHz_TnomVnom	Pass	30M	2.387G	1M	2.30657G	-57.24	0.00189	-26.02	2.5
2440MHz_TnomVnom	Pass	2.387G	2.4G	1M	2.39321G	-58.34	0.00147	-16.02	25
2440MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2.48919G	-58.50	0.00141	-16.02	25
2440MHz_TnomVnom	Pass	2.4965G	12.5G	1M	7.71833G	-50.88	0.00817	-26.02	2.5
2480MHz_TnomVnom	Pass	30M	2.387G	1M	741.81M	-57.20	0.00191	-26.02	2.5
2480MHz_TnomVnom	Pass	2.387G	2.4G	1M	2.39992G	-58.53	0.0014	-16.02	25
2480MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2.4835G	-31.83	0.65615	-16.02	25
2480MHz_TnomVnom	Pass	2.4965G	12.5G	1M	7.71833G	-50.65	0.00861	-26.02	2.5
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-
2404MHz_TnomVnom	Pass	30M	2.387G	1M	1.05677G	-46.64	0.02168	-26.02	2.5
2404MHz_TnomVnom	Pass	2.387G	2.4G	1M	2.3999G	-48.15	0.01531	-16.02	25
2404MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2.48425G	-48.05	0.01567	-16.02	25
2404MHz_TnomVnom	Pass	2.4965G	12.5G	1M	6.77925G	-41.05	0.07852	-26.02	2.5
2440MHz_TnomVnom	Pass	30M	2.387G	1M	159.93M	-43.74	0.04227	-26.02	2.5
2440MHz_TnomVnom	Pass	2.387G	2.4G	1M	2.39977G	-48.51	0.01409	-16.02	25
2440MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2.48969G	-47.95	0.01603	-16.02	25
2440MHz_TnomVnom	Pass	2.4965G	12.5G	1M	10.27547G	-41.21	0.07568	-26.02	2.5
2478MHz_TnomVnom	Pass	30M	2.387G	1M	1.00933G	-46.80	0.02089	-26.02	2.5
2478MHz_TnomVnom	Pass	2.387G	2.4G	1M	2.3974G	-48.42	0.01439	-16.02	25
2478MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2.48394G	-47.90	0.01622	-16.02	25
2478MHz_TnomVnom	Pass	2.4965G	12.5G	1M	6.80176G	-41.37	0.07295	-26.02	2.5



BT-LE(1Mbps)

CSE-TX-DTS

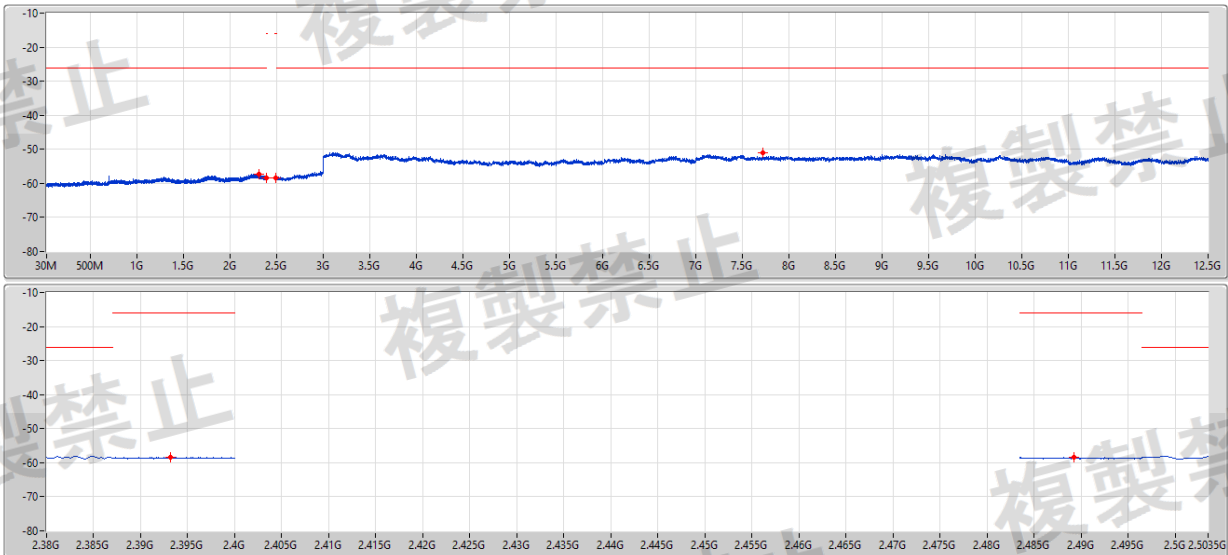
2402MHz\_TnomVnom



BT-LE(1Mbps)

CSE-TX-DTS

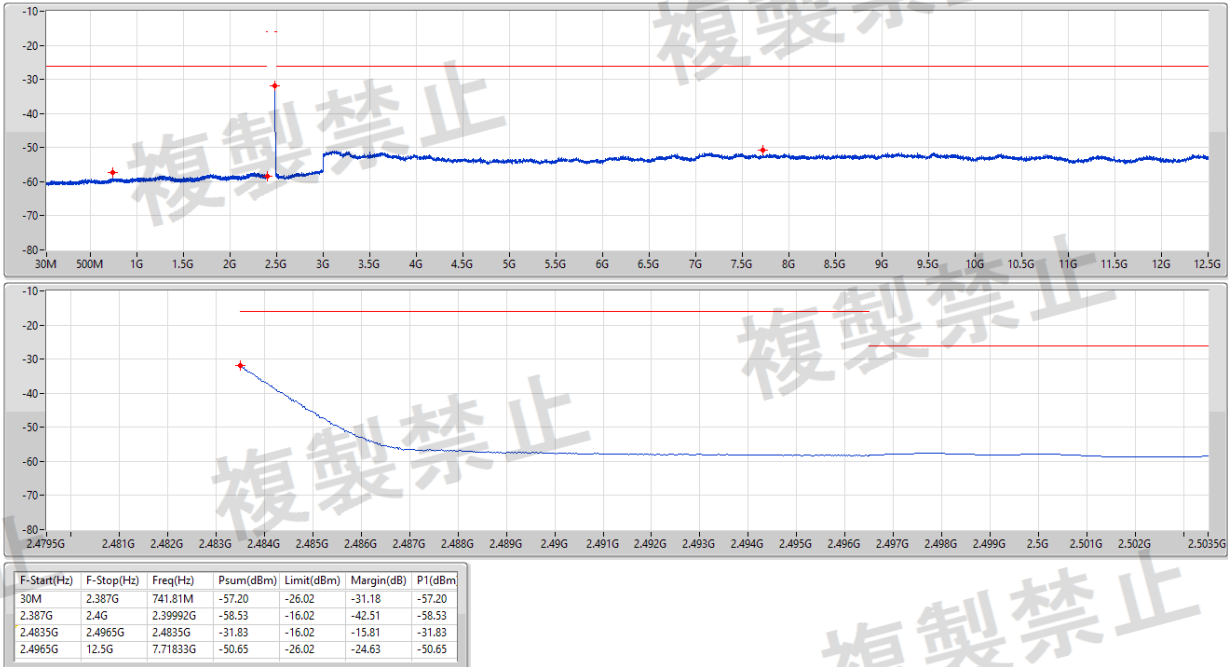
2440MHz\_TnomVnom



### BT-LE(1Mbps)

### CSE-TX-DTS

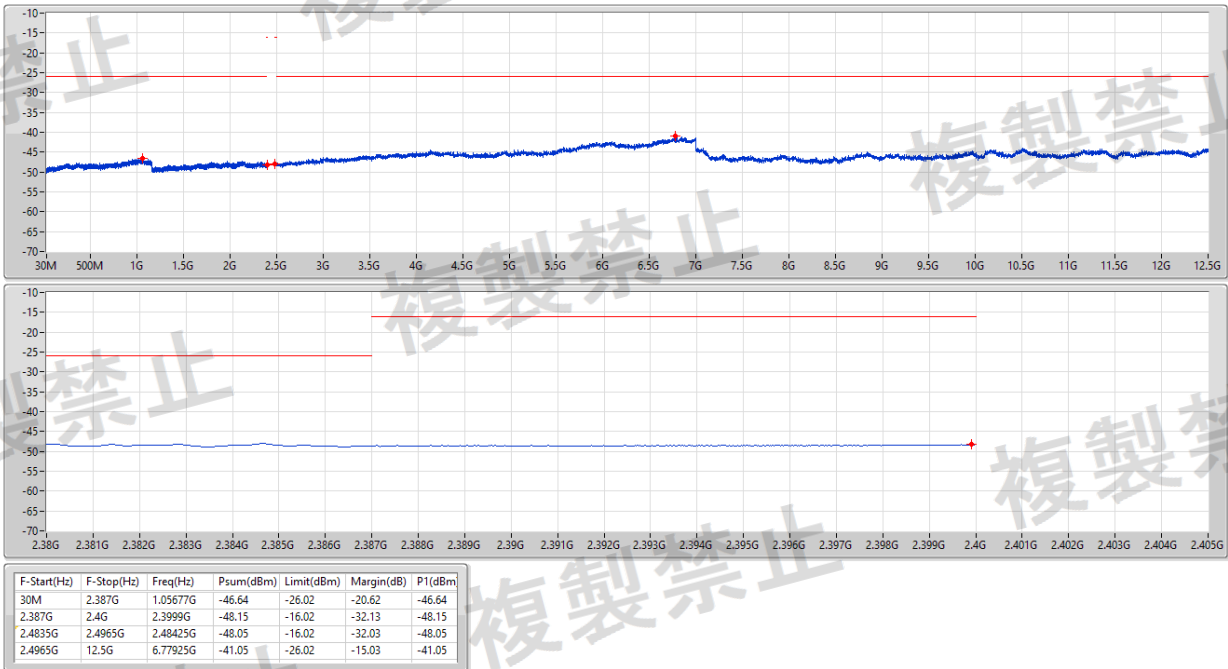
2480MHz\_TnomVnom



### BT-LE(2Mbps)

### CSE-TX-DTS

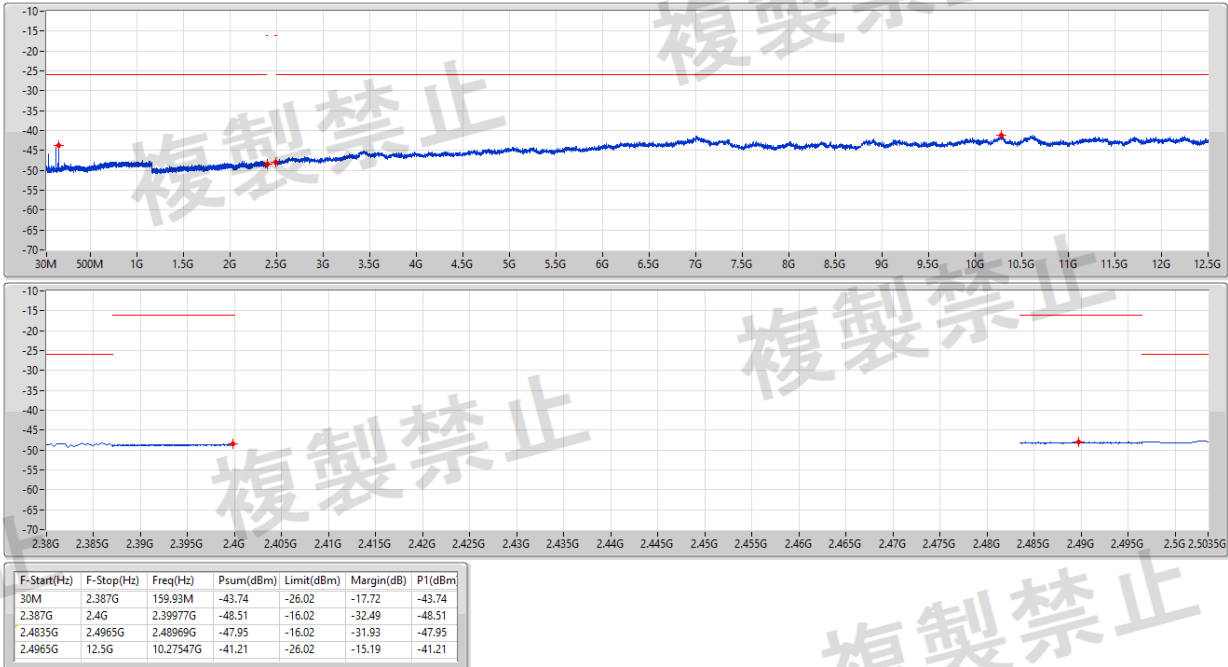
2404MHz\_TnomVnom



BT-LE(2Mbps)

CSE-TX-DTS

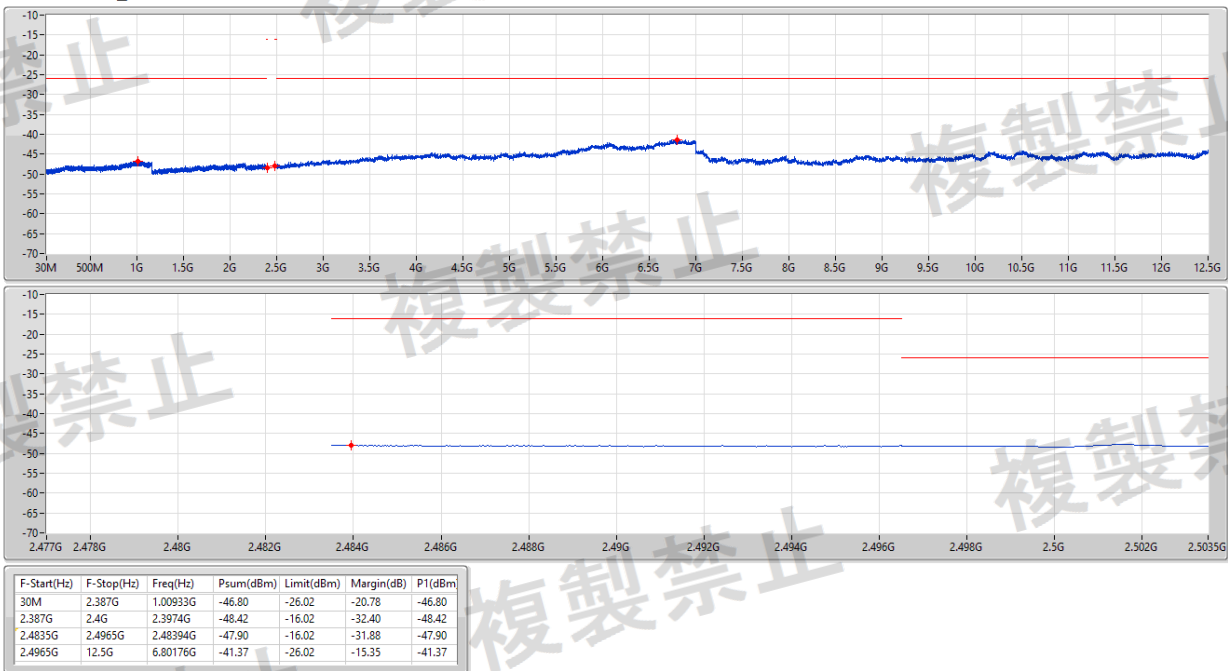
2440MHz\_TnomVnom



BT-LE(2Mbps)

CSE-TX-DTS

2478MHz\_TnomVnom





## CSE-TX-Unwanted Emission (DTS) <High Power>

## Appendix D.2

### Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Freq (Hz)	Psum (dBm/MHz)	Psum (uW/MHz)	Limit (dBm/MHz)	Limit (uW/MHz)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.387G	2.4G	1M	2.4G	-16.78	20.9894	-16.02	25
BT-LE(2Mbps)	Pass	2.4965G	12.5G	1M	10.27547G	-41.21	0.07568	-26.02	2.5

### Result

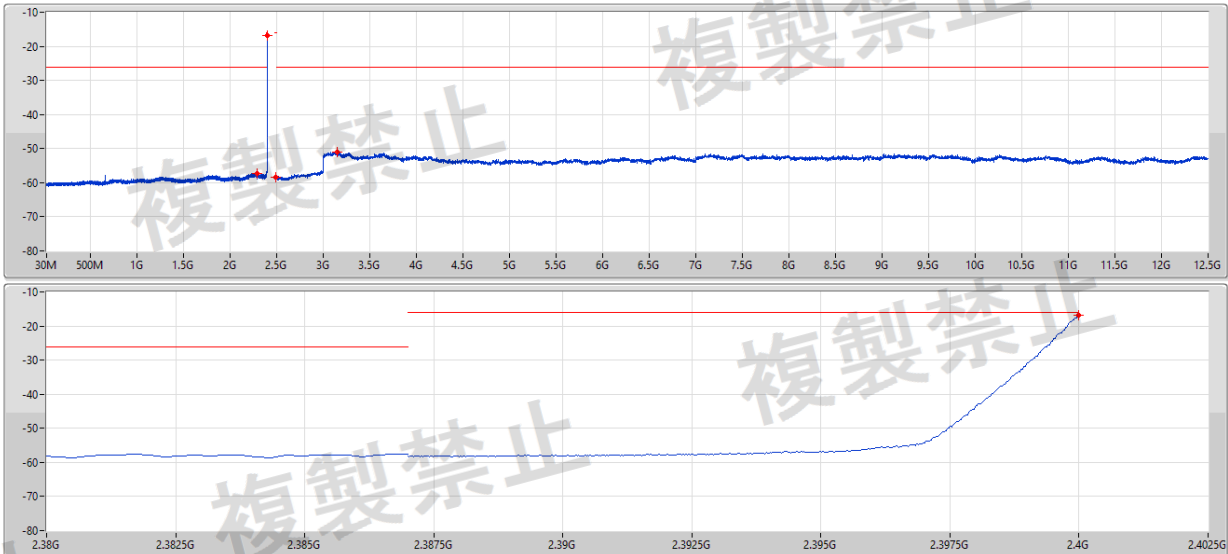
Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Freq (Hz)	Psum (dBm/MHz)	Psum (uW/MHz)	Limit (dBm/MHz)	Limit (uW/MHz)
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-
2402MHz_TnomVnom	Pass	30M	2.387G	1M	2.29243G	-57.31	0.00186	-26.02	2.5
2402MHz_TnomVnom	Pass	2.387G	2.4G	1M	2.4G	-16.78	20.9894	-16.02	25
2402MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2.48623G	-58.52	0.00141	-16.02	25
2402MHz_TnomVnom	Pass	2.4965G	12.5G	1M	3.14548G	-50.98	0.00798	-26.02	2.5
2440MHz_TnomVnom	Pass	30M	2.387G	1M	2.30657G	-57.24	0.00189	-26.02	2.5
2440MHz_TnomVnom	Pass	2.387G	2.4G	1M	2.39321G	-58.34	0.00147	-16.02	25
2440MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2.48919G	-58.50	0.00141	-16.02	25
2440MHz_TnomVnom	Pass	2.4965G	12.5G	1M	7.71833G	-50.88	0.00817	-26.02	2.5
2480MHz_TnomVnom	Pass	30M	2.387G	1M	741.81M	-57.20	0.00191	-26.02	2.5
2480MHz_TnomVnom	Pass	2.387G	2.4G	1M	2.39992G	-58.53	0.0014	-16.02	25
2480MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2.4835G	-31.83	0.65615	-16.02	25
2480MHz_TnomVnom	Pass	2.4965G	12.5G	1M	7.71833G	-50.65	0.00861	-26.02	2.5
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-
2404MHz_TnomVnom	Pass	30M	2.387G	1M	1.00491G	-46.45	0.02265	-26.02	2.5
2404MHz_TnomVnom	Pass	2.387G	2.4G	1M	2.39984G	-48.00	0.01585	-16.02	25
2404MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2.48529G	-48.02	0.01578	-16.02	25
2404MHz_TnomVnom	Pass	2.4965G	12.5G	1M	6.77425G	-41.40	0.07244	-26.02	2.5
2440MHz_TnomVnom	Pass	30M	2.387G	1M	159.93M	-43.74	0.04227	-26.02	2.5
2440MHz_TnomVnom	Pass	2.387G	2.4G	1M	2.39977G	-48.51	0.01409	-16.02	25
2440MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2.48969G	-47.95	0.01603	-16.02	25
2440MHz_TnomVnom	Pass	2.4965G	12.5G	1M	10.27547G	-41.21	0.07568	-26.02	2.5
2478MHz_TnomVnom	Pass	30M	2.387G	1M	955.71M	-46.79	0.02094	-26.02	2.5
2478MHz_TnomVnom	Pass	2.387G	2.4G	1M	2.39852G	-48.48	0.01419	-16.02	25
2478MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2.48373G	-47.73	0.01687	-16.02	25
2478MHz_TnomVnom	Pass	2.4965G	12.5G	1M	6.88303G	-41.32	0.07379	-26.02	2.5



BT-LE(1Mbps)

CSE-TX-DTS

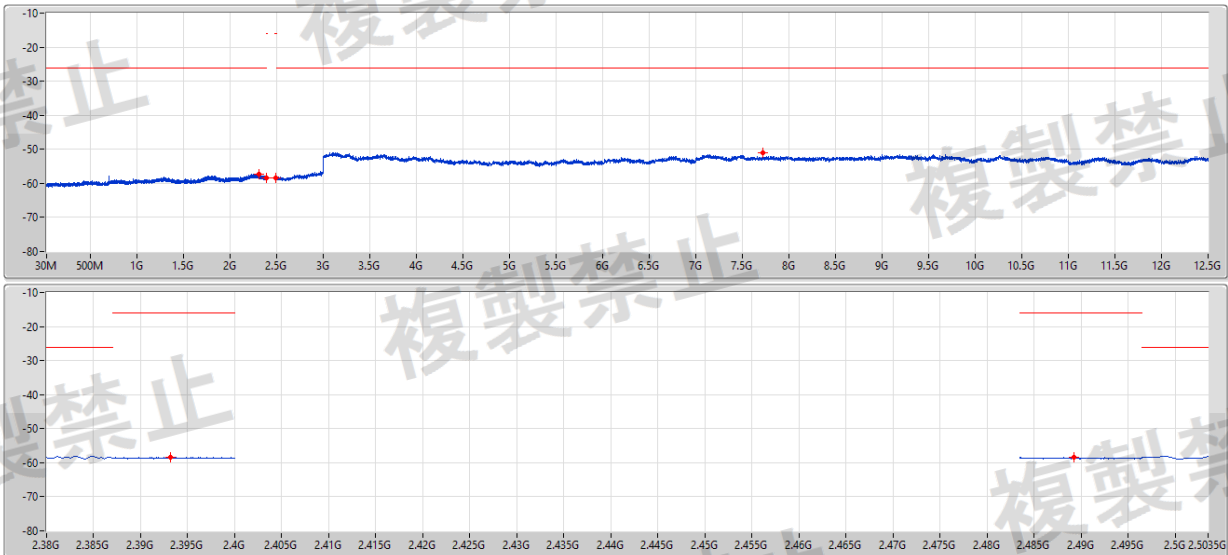
2402MHz\_TnomVnom



BT-LE(1Mbps)

CSE-TX-DTS

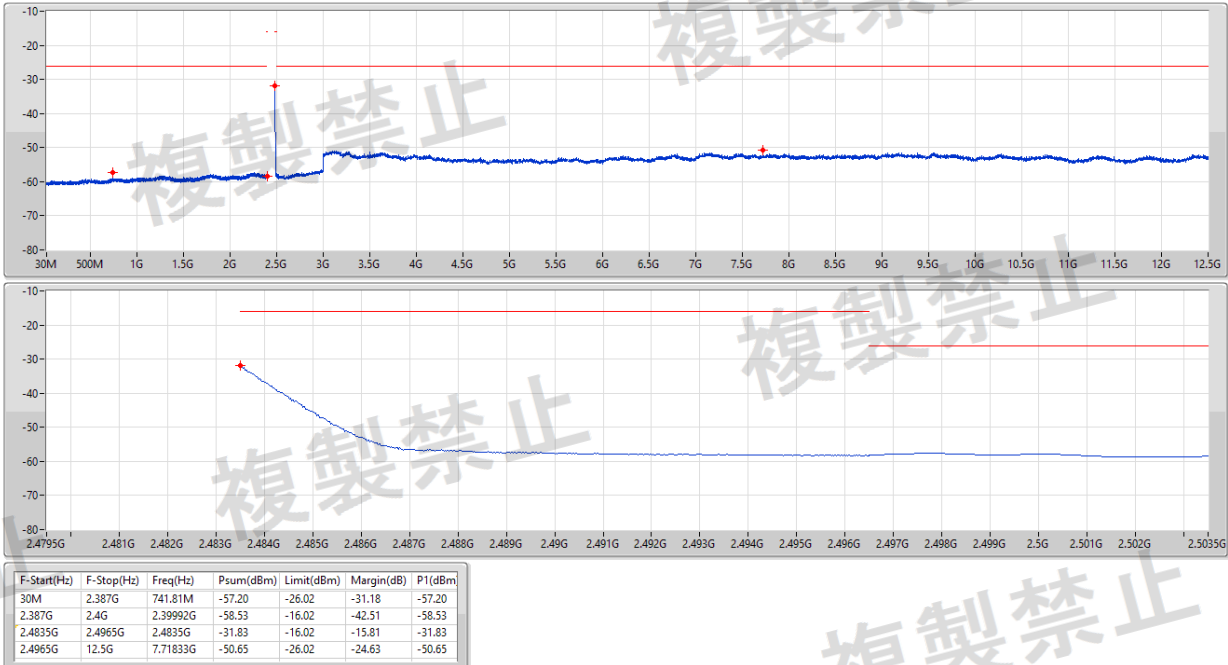
2440MHz\_TnomVnom



### BT-LE(1Mbps)

### CSE-TX-DTS

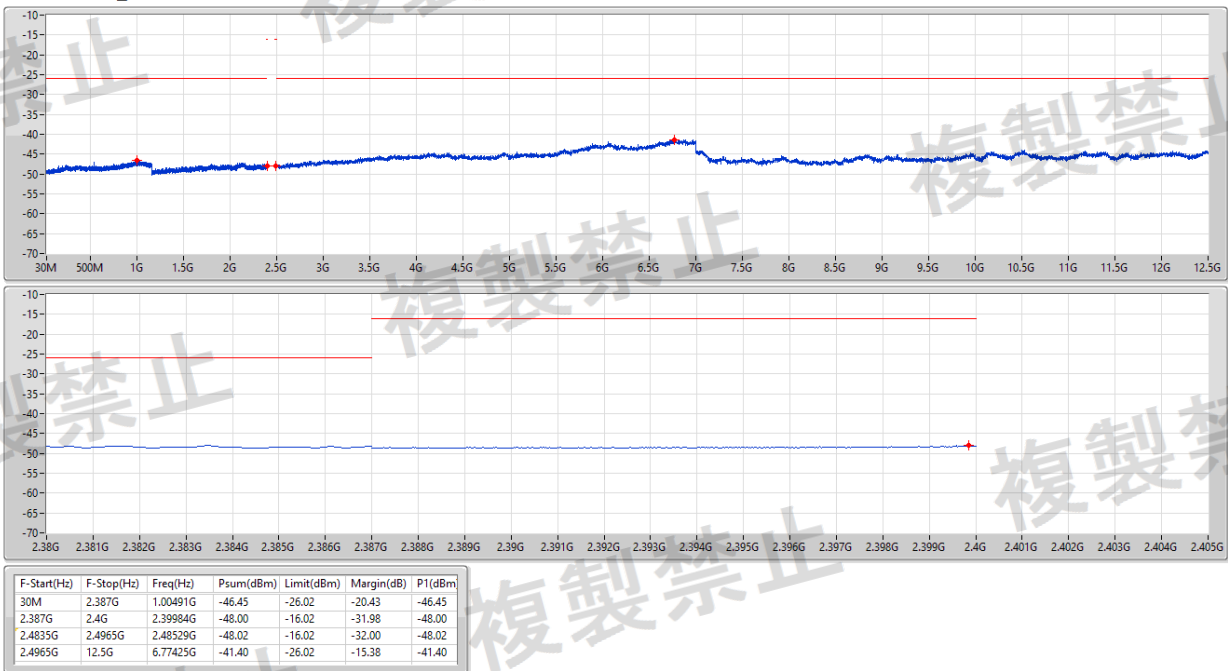
2480MHz\_TnomVnom



### BT-LE(2Mbps)

### CSE-TX-DTS

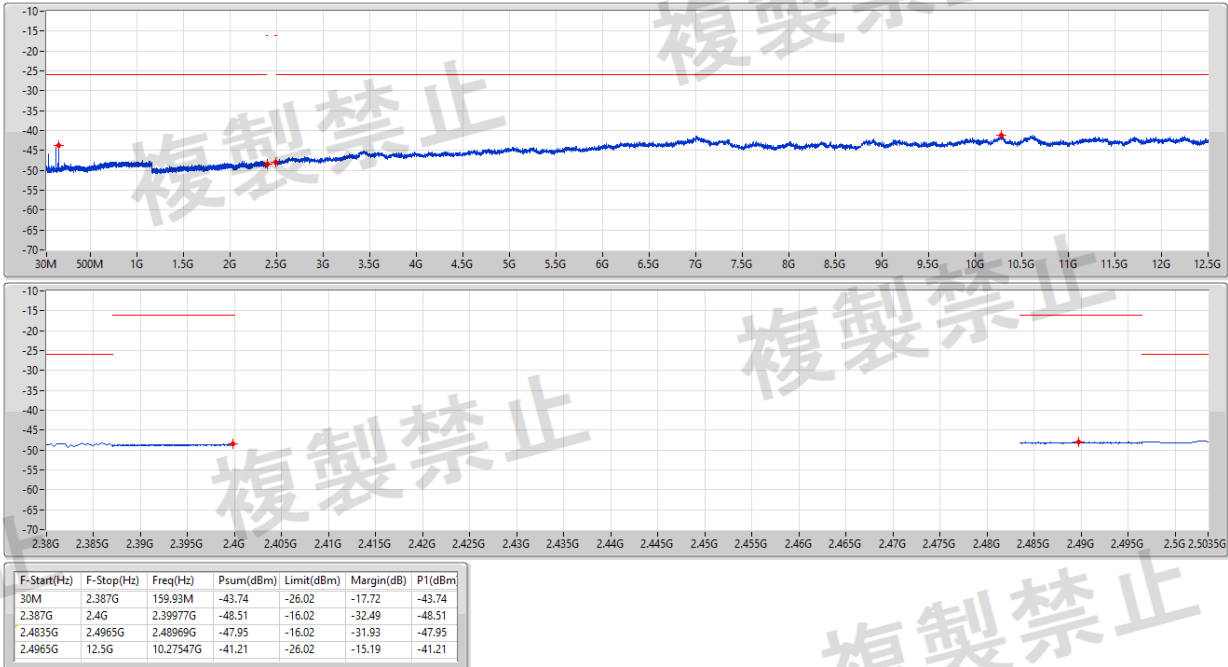
2404MHz\_TnomVnom



BT-LE(2Mbps)

CSE-TX-DTS

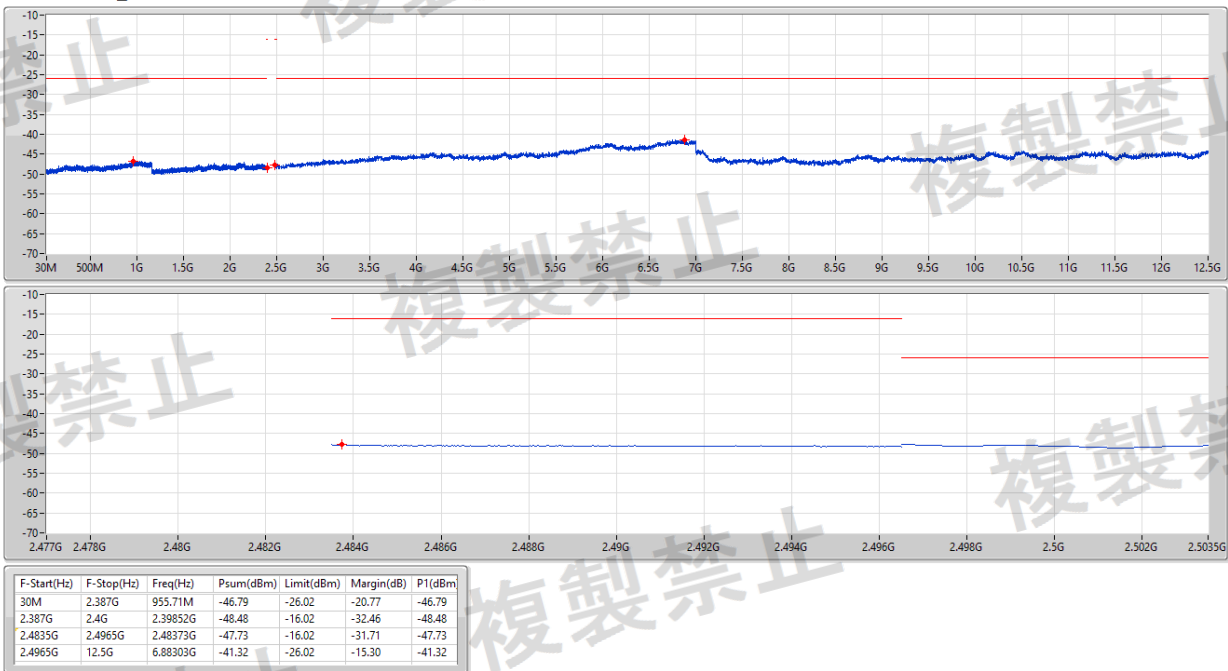
2440MHz\_TnomVnom



BT-LE(2Mbps)

CSE-TX-DTS

2478MHz\_TnomVnom





## CSE-RX Secondary Emissions (DTS) <Low Power>

## Appendix E.1

### Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Freq (Hz)	Psum (dBm)	Psum (nW)	Limit (dBm)	Limit (nW)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	30M	1G	100k	748.04M	-73.31	0.04667	-53.98	4
BT-LE(2Mbps)	Pass	1G	12.5G	1M	6.83913G	-65.70	0.26915	-46.99	20



## CSE-RX Secondary Emissions (DTS) <Low Power>

## Appendix E.1

### Result

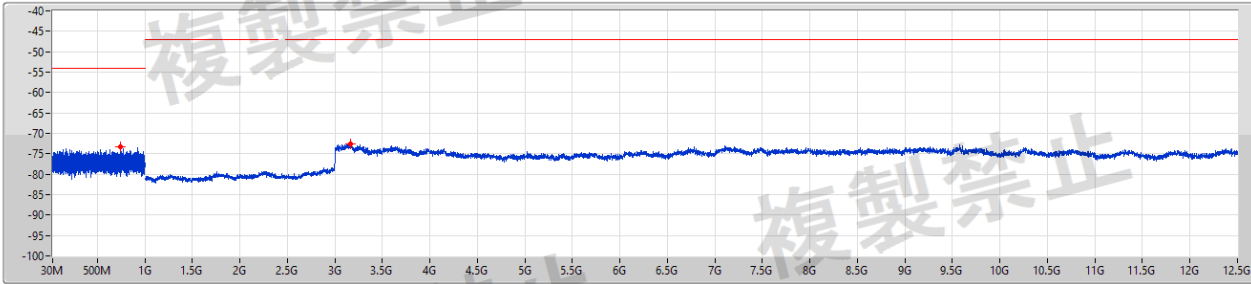
Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Freq (Hz)	Psum (dBm)	Psum (nW)	Limit (dBm)	Limit (nW)
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-
2402MHz_TnomVnom	Pass	30M	1G	100k	748.04M	-73.31	0.04667	-53.98	4
2402MHz_TnomVnom	Pass	1G	12.5G	1M	3.16631G	-72.54	0.05572	-46.99	20
2440MHz_TnomVnom	Pass	30M	1G	100k	301.72M	-73.57	0.04395	-53.98	4
2440MHz_TnomVnom	Pass	1G	12.5G	1M	3.02975G	-72.64	0.05445	-46.99	20
2480MHz_TnomVnom	Pass	30M	1G	100k	300.27M	-73.54	0.04426	-53.98	4
2480MHz_TnomVnom	Pass	1G	12.5G	1M	3.08294G	-72.22	0.05998	-46.99	20
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-
2404MHz_TnomVnom	Pass	30M	1G	100k	996.73M	-78.80	0.01318	-53.98	4
2404MHz_TnomVnom	Pass	1G	12.5G	1M	6.83913G	-65.70	0.26915	-46.99	20
2440MHz_TnomVnom	Pass	30M	1G	100k	877.17M	-73.76	0.04207	-53.98	4
2440MHz_TnomVnom	Pass	1G	12.5G	1M	3.09731G	-72.53	0.05585	-46.99	20
2478MHz_TnomVnom	Pass	30M	1G	100k	989.69M	-78.61	0.01377	-53.98	4
2478MHz_TnomVnom	Pass	1G	12.5G	1M	6.82475G	-65.73	0.2673	-46.99	20



BT-LE(1Mbps)

2402MHz\_TnomVnom

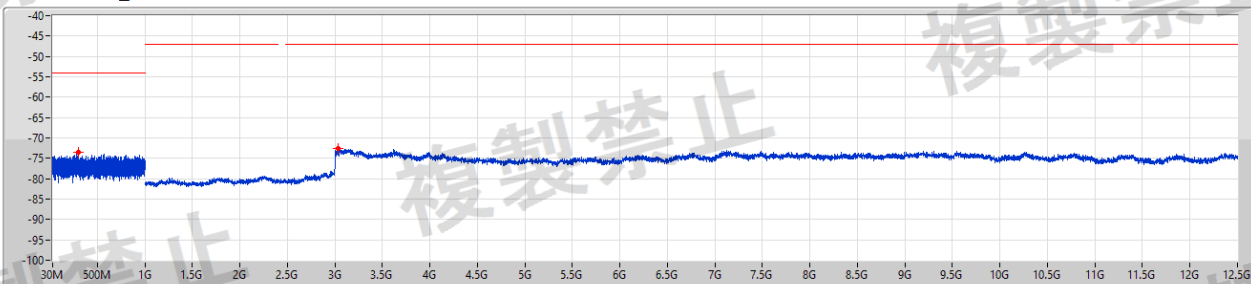
CSE-RX-DTS



BT-LE(1Mbps)

2440MHz\_TnomVnom

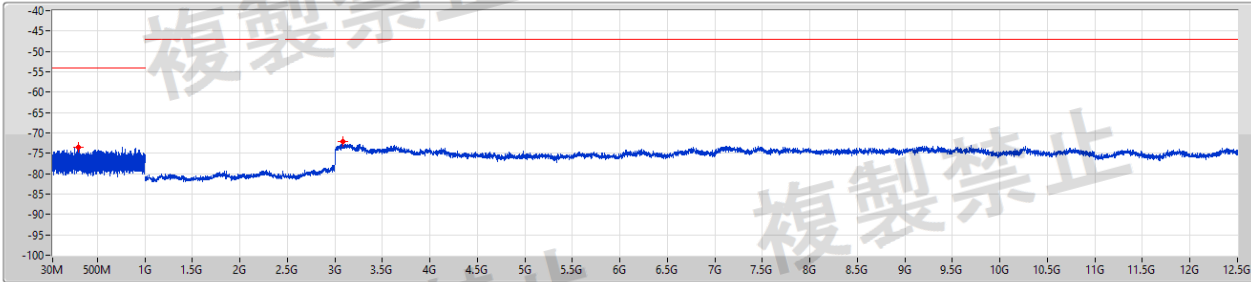
CSE-RX-DTS



BT-LE(1Mbps)

CSE-RX-DTS

2480MHz\_TnomVnom

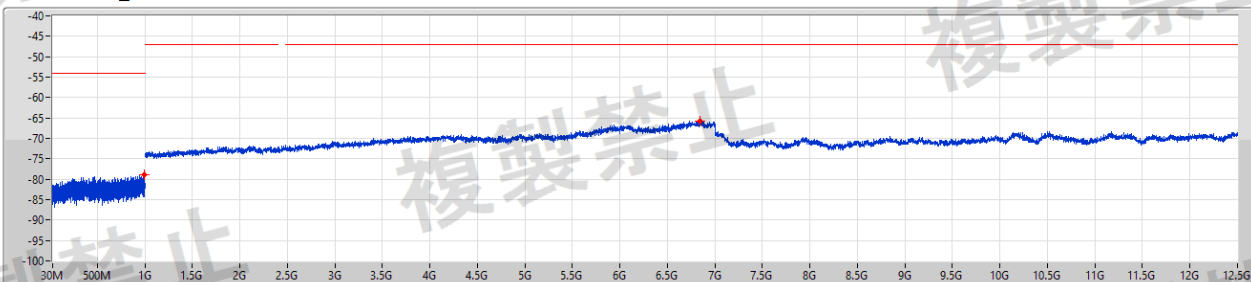


F-Start(Hz)	F-Stop(Hz)	Freq(Hz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
30M	1G	300.27M	-73.54	-53.98	-19.56	-73.54
1G	12.5G	3.08294G	-72.22	-46.99	-25.23	-72.22

BT-LE(2Mbps)

CSE-RX-DTS

2404MHz\_TnomVnom



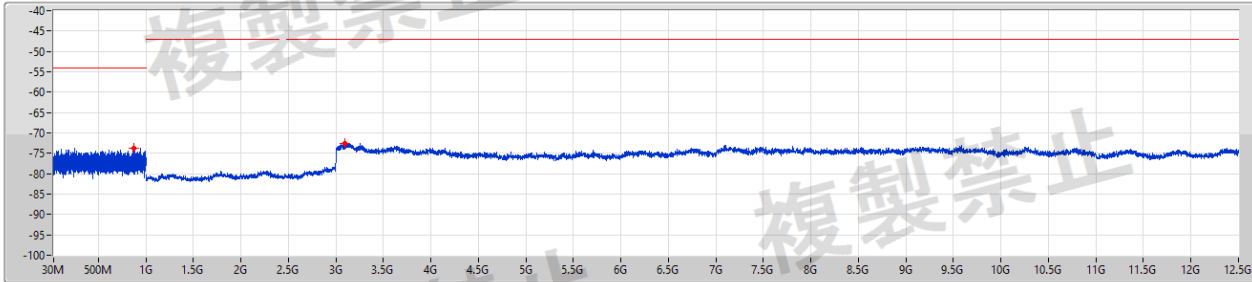
F-Start(Hz)	F-Stop(Hz)	Freq(Hz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
30M	1G	996.73M	-78.80	-53.98	-24.82	-78.80
1G	12.5G	6.83913G	-65.70	-46.99	-18.71	-65.70

BT-LE(2Mbps)

2440MHz\_TnomVnom

CSE-RX-DTS

07/11/2021



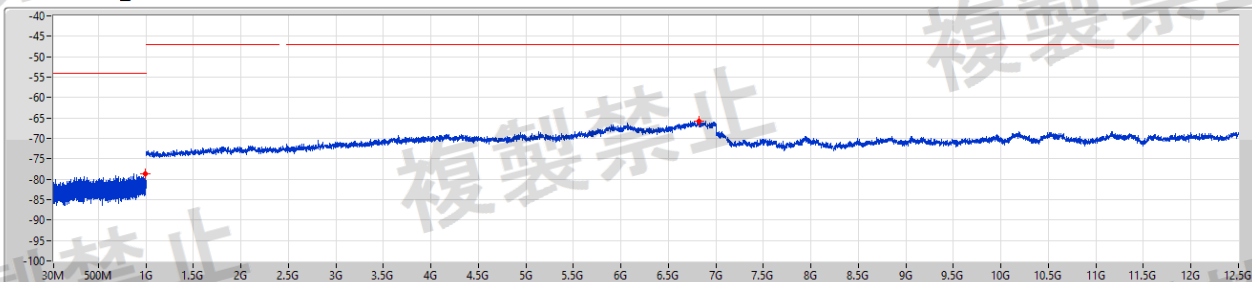
F-Start(Hz)	F-Stop(Hz)	Freq(Hz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
30M	1G	877.17M	-73.76	-53.98	-19.78	-73.76
1G	12.5G	3.09731G	-72.53	-46.99	-25.54	-72.53

BT-LE(2Mbps)

2478MHz\_TnomVnom

CSE-RX-DTS

17/11/2021



F-Start(Hz)	F-Stop(Hz)	Freq(Hz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
30M	1G	989.69M	-78.61	-53.98	-24.63	-78.61
1G	12.5G	6.82475G	-65.73	-46.99	-18.74	-65.73



## CSE-RX Secondary Emissions (DTS) <High Power>

## Appendix E.2

### Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Freq (Hz)	Psum (dBm)	Psum (nW)	Limit (dBm)	Limit (nW)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	30M	1G	100k	748.04M	-73.31	0.04667	-53.98	4
BT-LE(2Mbps)	Pass	1G	12.5G	1M	6.99438G	-65.50	0.28184	-46.99	20



## CSE-RX Secondary Emissions (DTS) <High Power>

## Appendix E.2

### Result

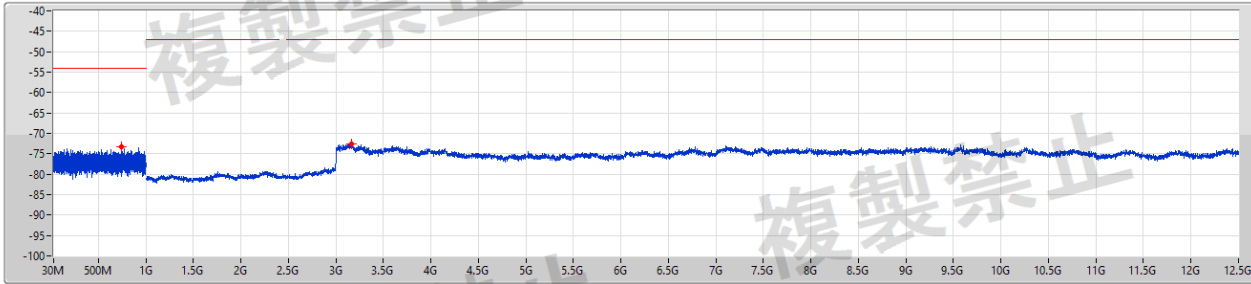
Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Freq (Hz)	Psum (dBm)	Psum (nW)	Limit (dBm)	Limit (nW)
BT-LE(1Mbps)	-	-	-	-	-	-	-	-	-
2402MHz_TnomVnom	Pass	30M	1G	100k	748.04M	-73.31	0.04667	-53.98	4
2402MHz_TnomVnom	Pass	1G	12.5G	1M	3.16631G	-72.54	0.05572	-46.99	20
2440MHz_TnomVnom	Pass	30M	1G	100k	301.72M	-73.57	0.04395	-53.98	4
2440MHz_TnomVnom	Pass	1G	12.5G	1M	3.02975G	-72.64	0.05445	-46.99	20
2480MHz_TnomVnom	Pass	30M	1G	100k	300.27M	-73.54	0.04426	-53.98	4
2480MHz_TnomVnom	Pass	1G	12.5G	1M	3.08294G	-72.22	0.05998	-46.99	20
BT-LE(2Mbps)	-	-	-	-	-	-	-	-	-
2404MHz_TnomVnom	Pass	30M	1G	100k	779.81M	-78.51	0.01409	-53.98	4
2404MHz_TnomVnom	Pass	1G	12.5G	1M	6.99438G	-65.50	0.28184	-46.99	20
2440MHz_TnomVnom	Pass	30M	1G	100k	877.17M	-73.76	0.04207	-53.98	4
2440MHz_TnomVnom	Pass	1G	12.5G	1M	3.09731G	-72.53	0.05585	-46.99	20
2478MHz_TnomVnom	Pass	30M	1G	100k	975.87M	-78.93	0.01279	-53.98	4
2478MHz_TnomVnom	Pass	1G	12.5G	1M	6.82331G	-65.66	0.27164	-46.99	20



BT-LE(1Mbps)

CSE-RX-DTS

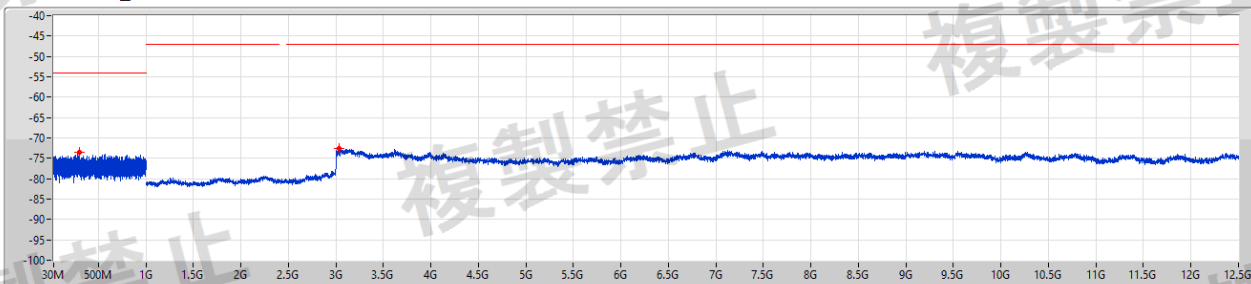
2402MHz\_TnomVnom



BT-LE(1Mbps)

CSE-RX-DTS

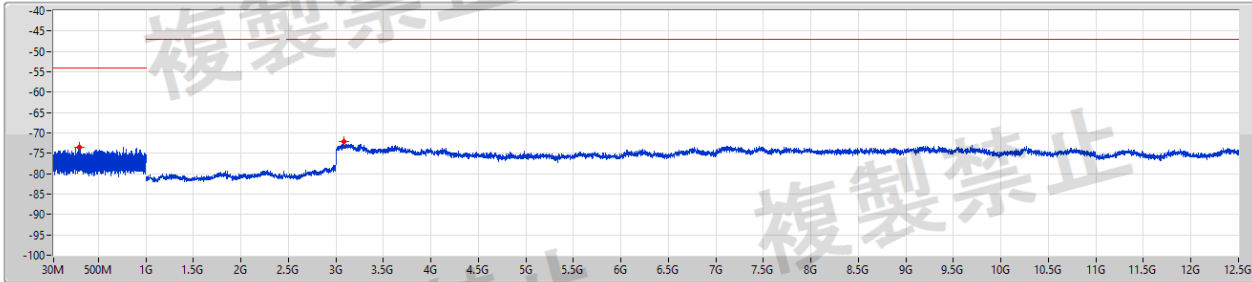
2440MHz\_TnomVnom



BT-LE(1Mbps)

CSE-RX-DTS

2480MHz\_TnomVnom

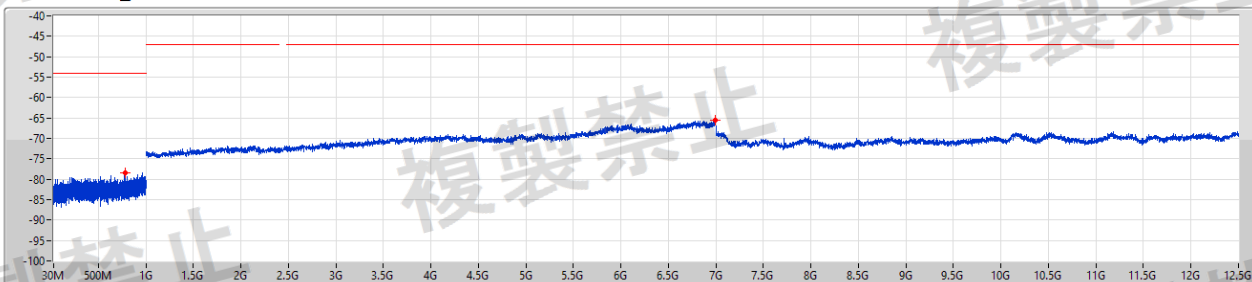


F-Start(Hz)	F-Stop(Hz)	Freq(Hz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
30M	1G	300.27M	-73.54	-53.98	-19.56	-73.54
1G	12.5G	3.08294G	-72.22	-46.99	-25.23	-72.22

BT-LE(2Mbps)

CSE-RX-DTS

2404MHz\_TnomVnom

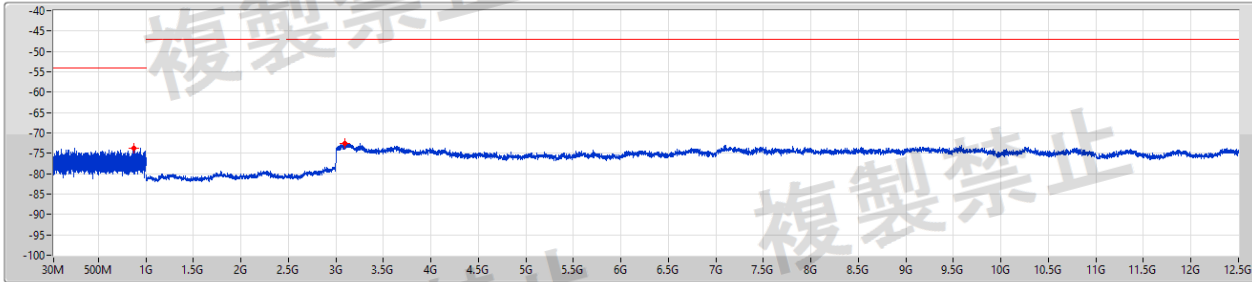


F-Start(Hz)	F-Stop(Hz)	Freq(Hz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
30M	1G	779.81M	-78.51	-53.98	-24.53	-78.51
1G	12.5G	6.99438G	-65.50	-46.99	-18.51	-65.50

BT-LE(2Mbps)

CSE-RX-DTS

2440MHz\_TnomVnom

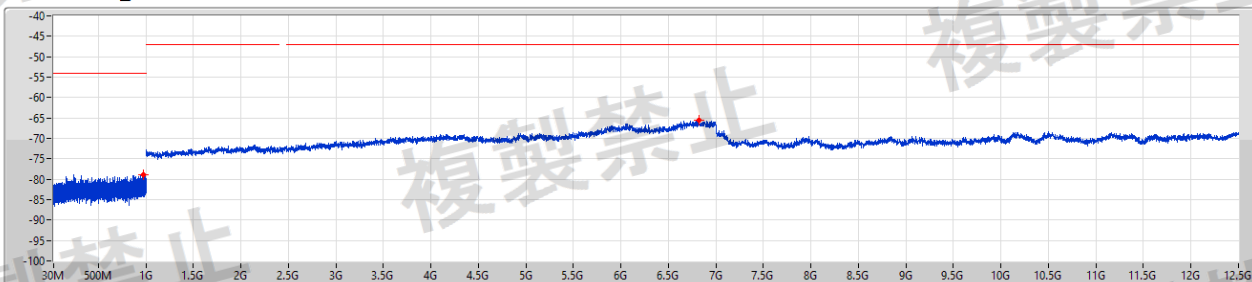


F-Start(Hz)	F-Stop(Hz)	Freq(Hz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
30M	1G	877.17M	-73.76	-53.98	-19.78	-73.76
1G	12.5G	3.09731G	-72.53	-46.99	-25.54	-72.53

BT-LE(2Mbps)

CSE-RX-DTS

2478MHz\_TnomVnom



F-Start(Hz)	F-Stop(Hz)	Freq(Hz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
30M	1G	975.87M	-78.93	-53.98	-24.95	-78.93
1G	12.5G	6.82331G	-65.66	-46.99	-18.67	-65.66



Summary

Mode	Result	MAC (ID Length)	ID Limit	Function
2.4-2.4835GHz	-	-	-	-
BT-LE(1Mbps)	Pass	00:E0:4C:8C:10:45	48 bits	Good
BT-LE(2Mbps)	Pass	00:E0:4C:8C:10:45	48 bits	Good



Result

Mode	Result	MAC (ID Length)	ID Limit	Function
BT-LE(1Mbps)	-	-	-	-
2402MHz_TnomVnom	Pass	00:E0:4C:8C:10:45	48 bits	Good
2440MHz_TnomVnom	Pass	00:E0:4C:8C:10:45	48 bits	Good
2480MHz_TnomVnom	Pass	00:E0:4C:8C:10:45	48 bits	Good
BT-LE(2Mbps)	-	-	-	-
2404MHz_TnomVnom	Pass	00:E0:4C:8C:10:45	48 bits	Good
2440MHz_TnomVnom	Pass	00:E0:4C:8C:10:45	48 bits	Good
2478MHz_TnomVnom	Pass	00:E0:4C:8C:10:45	48 bits	Good





Summary

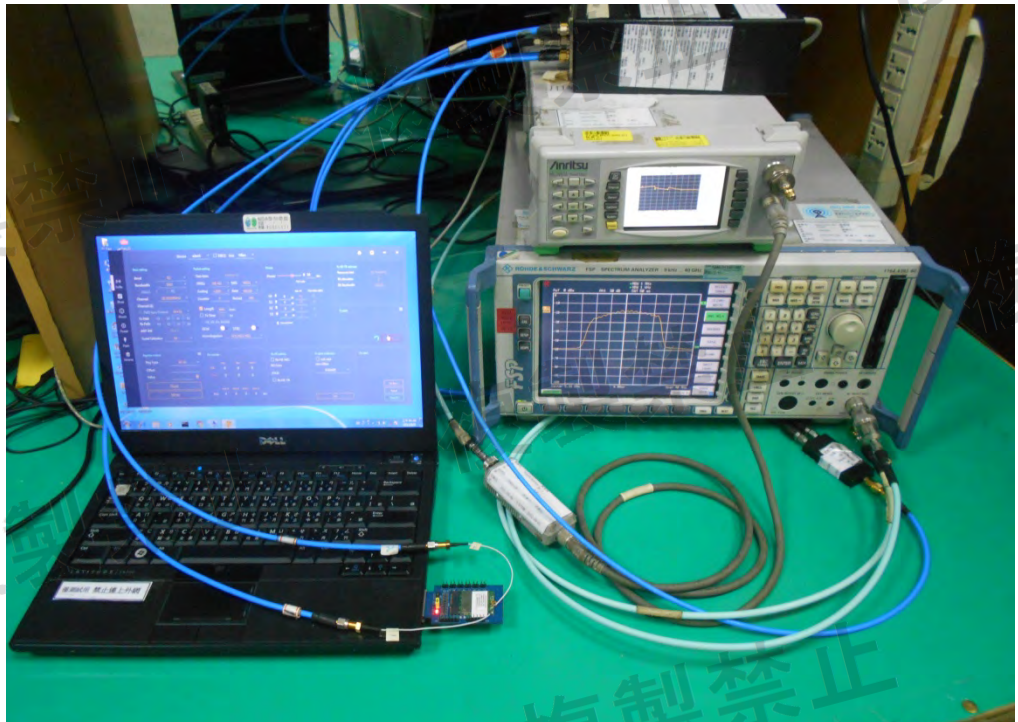
Mode	Result	MAC (ID Length)	ID Limit	Function
2.4-2.4835GHz	-	-	-	-
BT-LE(1Mbps)	Pass	00:E0:4C:8C:10:45	48 bits	Good
BT-LE(2Mbps)	Pass	00:E0:4C:8C:10:45	48 bits	Good



Result

Mode	Result	MAC (ID Length)	ID Limit	Function
BT-LE(1Mbps)	-	-	-	-
2402MHz_TnomVnom	Pass	00:E0:4C:8C:10:45	48 bits	Good
2440MHz_TnomVnom	Pass	00:E0:4C:8C:10:45	48 bits	Good
2480MHz_TnomVnom	Pass	00:E0:4C:8C:10:45	48 bits	Good
BT-LE(2Mbps)	-	-	-	-
2404MHz_TnomVnom	Pass	00:E0:4C:8C:10:45	48 bits	Good
2440MHz_TnomVnom	Pass	00:E0:4C:8C:10:45	48 bits	Good
2478MHz_TnomVnom	Pass	00:E0:4C:8C:10:45	48 bits	Good

## 1. Photographs of Test Configuration



—THE END—