



JAPAN RADIO TEST REPORT

Equipment : AX1800 Dual Band WiFi Router
Brand Name : ASUS
Model Name : XD4R
Applicant : ASUSTeK COMPUTER INC.
1F., No. 15, Lide Rd., Beitou District, Taipei City 112,
Taiwan
Manufacturer (1) : Compal Networking (KunShan) Co., LTD.
No. 520, Nanbang Rd., Economic & Technical
Development Zone Kunshan, Jiangsu Province China
Manufacturer (2) : Datamax Electronics (DongGuan) Co., Ltd.
Niu Shan Foreign Economic Industrial Park, Dong
Cheng District, Dong Guan City, Guang Dong, China
Standard : MIC Certification Rule, Article 2 Paragraph 1 Item 19

The product was received on Dec. 24, 2019, and testing was started from Mar. 11, 2020 and completed on Mar. 12, 2020. We, SPORTON INTERNATIONAL INC. EMC & Wireless Communications 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 and ARIB STD-T66 technical standards.

The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory, the test report shall not be reproduced except in full.


Approved by: Cliff Chang

SPORTON INTERNATIONAL INC. EMC & Wireless Communications Laboratory
No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.)



Table of Contents

History of this test report.....	3
Summary of Test Result.....	4
1 General Description	5
1.1 Information.....	5
1.2 Applicable Standards	8
1.3 Testing Location Information	8
1.4 Measurement Uncertainty	8
2 Test Configuration of EUT.....	9
2.1 Test Channel Mode	9
2.2 The Worst Case Measurement Configuration	10
2.3 EUT Operation during Test	10
2.4 Accessories	10
2.5 Support Equipment.....	10
3 Test Result	11
3.1 Frequency Error.....	11
3.2 Occupied Bandwidth	12
3.3 Antenna Power, Antenna Power Error	13
3.4 Transmitter Spurious Emissions.....	14
3.5 Receiver Spurious Emissions.....	15
3.6 Identification Code.....	16
3.7 EUT Construction Protection.....	17
4 Test Equipment and Calibration Data	19
Appendix A. Test Results of Frequency Error	
Appendix B. Test Results of Occupied Bandwidth	
Appendix C. Test Results of Antenna Power / Antenna Power Error	
Appendix D. Test Results of Transmitter Spurious Emissions	
Appendix E. Test Results of Receiver Spurious Emissions	
Appendix F. Test Results of Identification Code	
Appendix G. Test Photos	
Photographs of EUT v01	



TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-D2_3 Ver1.0



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 ^{*1}	N/A	-
-	ORE:49.20	Radiated EIRP ^{*1}	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 ^{*2}	N/A	-
3.7	ORE:49.20	EUT Construction Protection	PASS	-

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

^{*1}: 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.

^{*2}: If OFDM modulation and Occupied Bandwidth \geq 26MHz, Carrier Sense shall be performed.

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

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: Sandy Chuang

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	2402-2480	0-39 [40]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	BT-LE(1Mbps)	1	1

Note:

- ♦ Bluetooth LE uses a GFSK modulation.
- ♦ BWch is the nominal channel bandwidth.
- ♦ Nss-Min is the minimum number of spatial streams.
- ♦ Nant is the number of outputs. e.g., 2(2, 3) means have 2 outputs for port 2 and port 3. 2 means have 2 outputs for port 1 and port 2.

Mode	Declared Power (mW)
BT-LE	0.82414

1.1.2 Antenna Information

For WLAN Function:

Set	Ant.	Port	Brand	Part number	Type	Connector	Uncorrelated Gain (dBi)			
							2.4GHz	5GHz B1	5GHz B2	5GHz B3
1	1	1	WHA YU	C660-510493-A (SRF20191786)	Dipole	I-PEX	0.69	0.88	0.88	1.00
	2	2	WHA YU	C660-510494-A (SRF20191787)	Dipole	I-PEX	0.69	0.88	0.88	1.00
Set	Ant.	Port	Brand	Part number	Type	Connector	Uncorrelated Gain (dBi)			
							2.4GHz	5GHz B1	5GHz B2	5GHz B3
2	1	1	WALSIN	RFDPA210608IMLB902	Dipole	I-PEX	0.65	0.65	0.50	0.99
	2	2	WALSIN	RFDPA210606IMLB902	Dipole	I-PEX	0.65	0.65	0.50	0.99

For Bluetooth Function:

Ant.	Port	Brand	Part number	Type	Connector	Antenna Gain (dBi)
1	1	YAGEO	ANT3216A063R2400A	CHIP	N/A	1.69

Note1: The above information was declared by manufacturer.

Note2: Then EUT supports b/g/n/VHT/ax in 2.4GHz and supports a/n/ac/ax in 5GHz.

Note3: For WLAN Function (2TX/2RX):

There are two set antenna for WLAN Function use, and each set contains two antennas.

Because Set 1 antenna & Set 2 antenna are the same type antennas, only the higher gain antenna "Set 1 antenna" was tested.

Port 1 and Port 2 could transmit/receive simultaneously.

Note4: For Bluetooth Function (1TX/1RX):

There is one antenna for Bluetooth Function use.

Only Port 1 can be used as transmitting/receiving.

1.1.3 EUT Information

EUT Power Type	From power adapter
Test Software Version	Telnet
Support Mode	<input checked="" type="checkbox"/> LE 1M PHY: 1 Mb/s
	<input type="checkbox"/> LE Coded PHY (S=2): 500 Kb/s
	<input type="checkbox"/> LE Coded PHY (S=8): 125 Kb/s
	<input type="checkbox"/> LE 2M PHY: 2 Mb/s

1.1.4 Mode Test Duty Cycle

Mode	DC	DCF(dB)
BT-LE(1Mbps)	0.652	1.858

1.1.5 Power Supply Voltage Fluctuation

Fluctuation	AC Input Power(V)	DC Output Power(V)	Variation (%)
Normal Vol	100	12.11	-
High Vol	110	12.11	0.000000
Low Vol	90	12.11	0.000000

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.

1.1.6 Table for EUT Supports Functions

Function	Support Type
AP Router	Master
Bridge	Slave without radar detection
Repeater	Master
Mesh	Master

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		
<input type="checkbox"/>	HWA YA	ADD : No. 52, Huaya 1st Rd., Guishan Dist., Taoyuan City, Taiwan (R.O.C.) TEL : 886-3-327-3456 FAX : 886-3-327-0973
<input checked="" type="checkbox"/>	JHUBEI	ADD : No.8, Lane 724, Bo-ai St., Jhubei City, HsinChu County 302, Taiwan, R.O.C. TEL : 886-3-656-9065 FAX : 886-3-656-9085

Test Condition	Test Site No.	Test Engineer	Test Environment	Test Date
RF Conducted	TH02-CB	Owen Hsu	21.4-22°C / 45-47%	Mar. 11, 2020~ Mar. 12, 2020

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	2.4 dB	Confidence levels of 95%
Radio frequency	5.1×10^{-10}	Confidence levels of 95%



2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
BT-LE (1Mbps)	-
2402MHz	Default
2440MHz	Default
2480MHz	Default

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.

2.3 EUT Operation during Test

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

2.4 Accessories

Accessories				
No.	Power	Brand	Model	Rating
1	Adapter 1	LEI	MU18B1120150-A1	INPUT: 100-240V ~ 50/60Hz, 0.6A OUTPUT: 12V, 1.5A
2	Adapter 2	DVE	DSA-18PFR-12 FUS 120150	INPUT: 100-240V ~ 50/60Hz, 0.6A OUTPUT: 12V, 1.5A, 18.0W
No.	Other			
3	RJ-45 cable*1: Non-shielded, 2m			

2.5 Support Equipment

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A

3 Test Result

3.1 Frequency Error

3.1.1 Frequency Error Limit

Frequency Error Limit
$\leq \pm 50 \text{ ppm}$

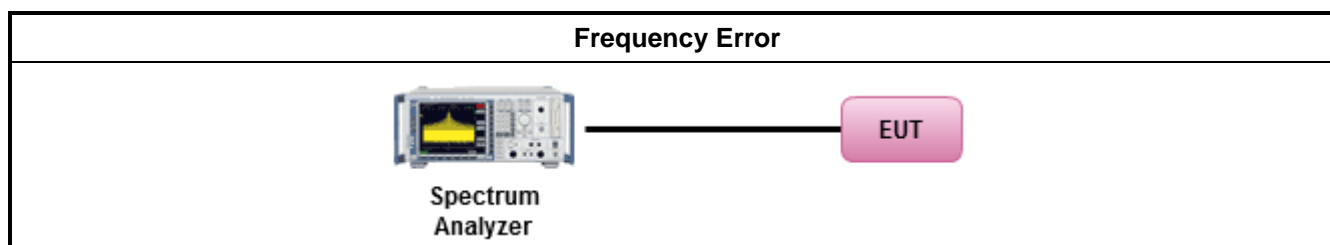
3.1.2 Measuring Instruments

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	38 MHz
Other	26 MHz

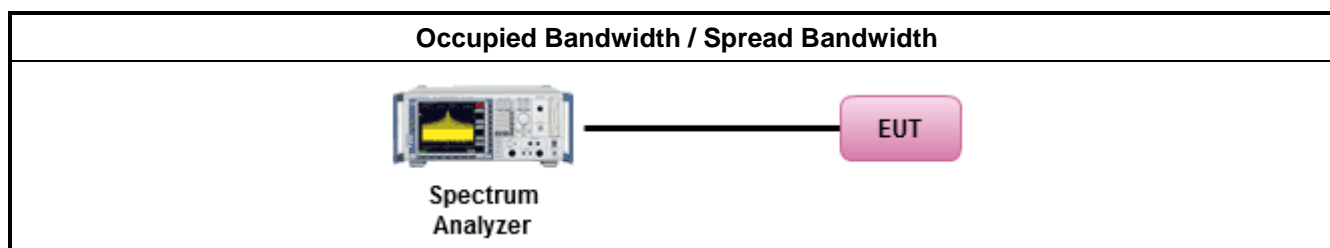
3.2.2 Measuring Instruments

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 $\leq 38\text{MHz}$] $\leq 10\text{mW}$ (Other from 2400~2483.5MHz)

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

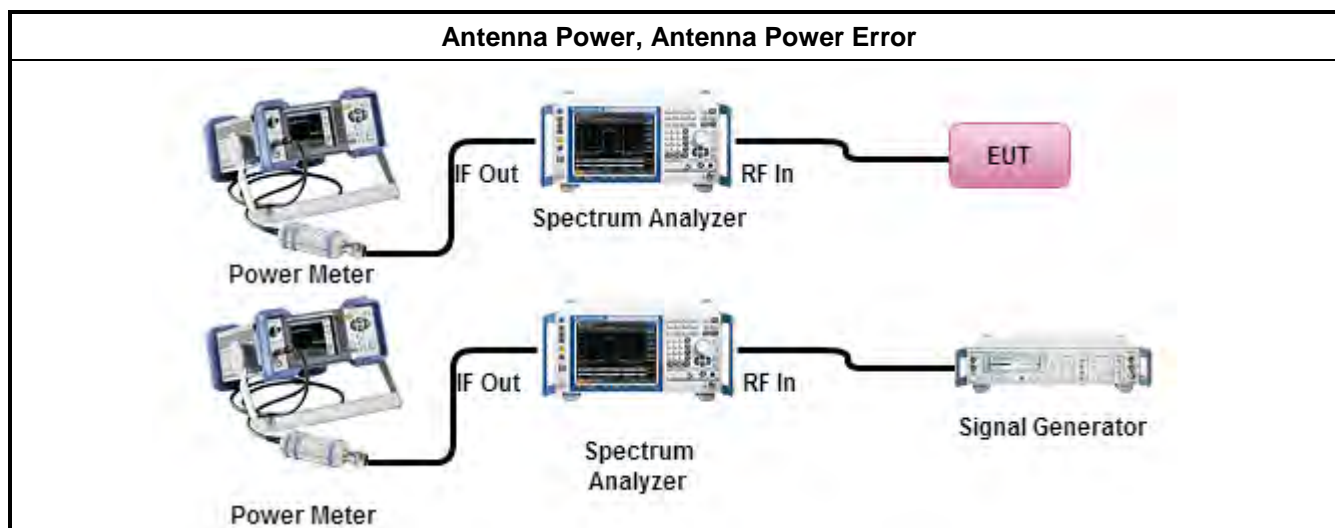
3.3.2 Measuring Instruments

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

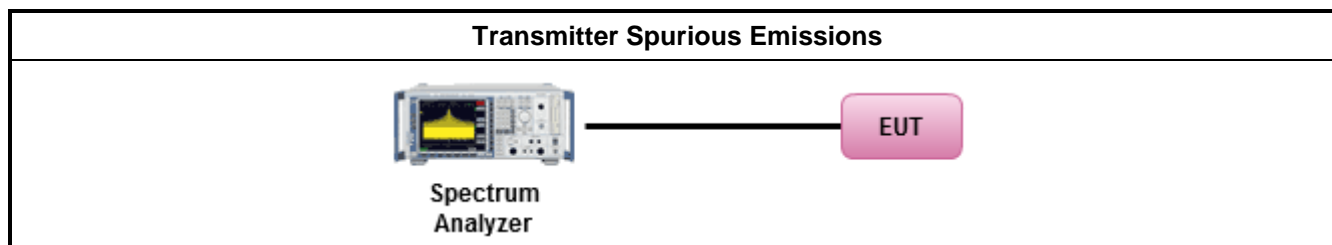
3.4.2 Measuring Instruments

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

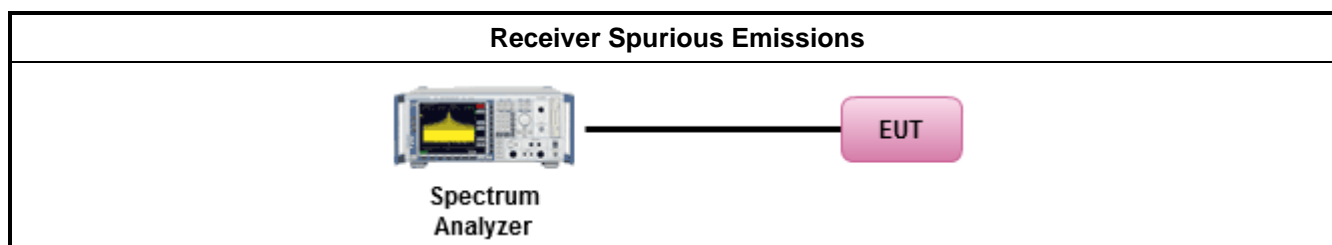
3.5.2 Measuring Instruments

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
≤ 48 bits

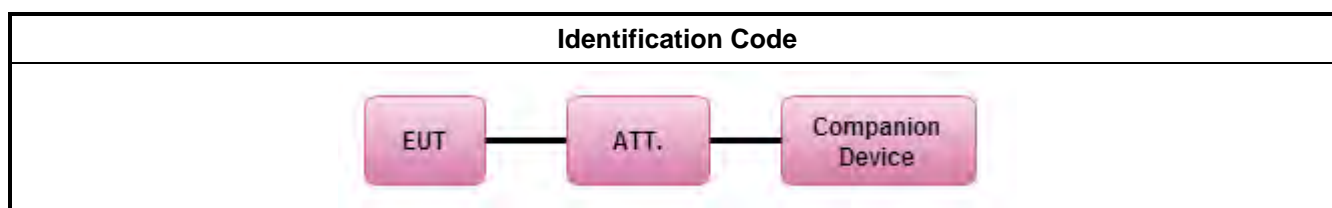
3.6.2 Measuring Instruments

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

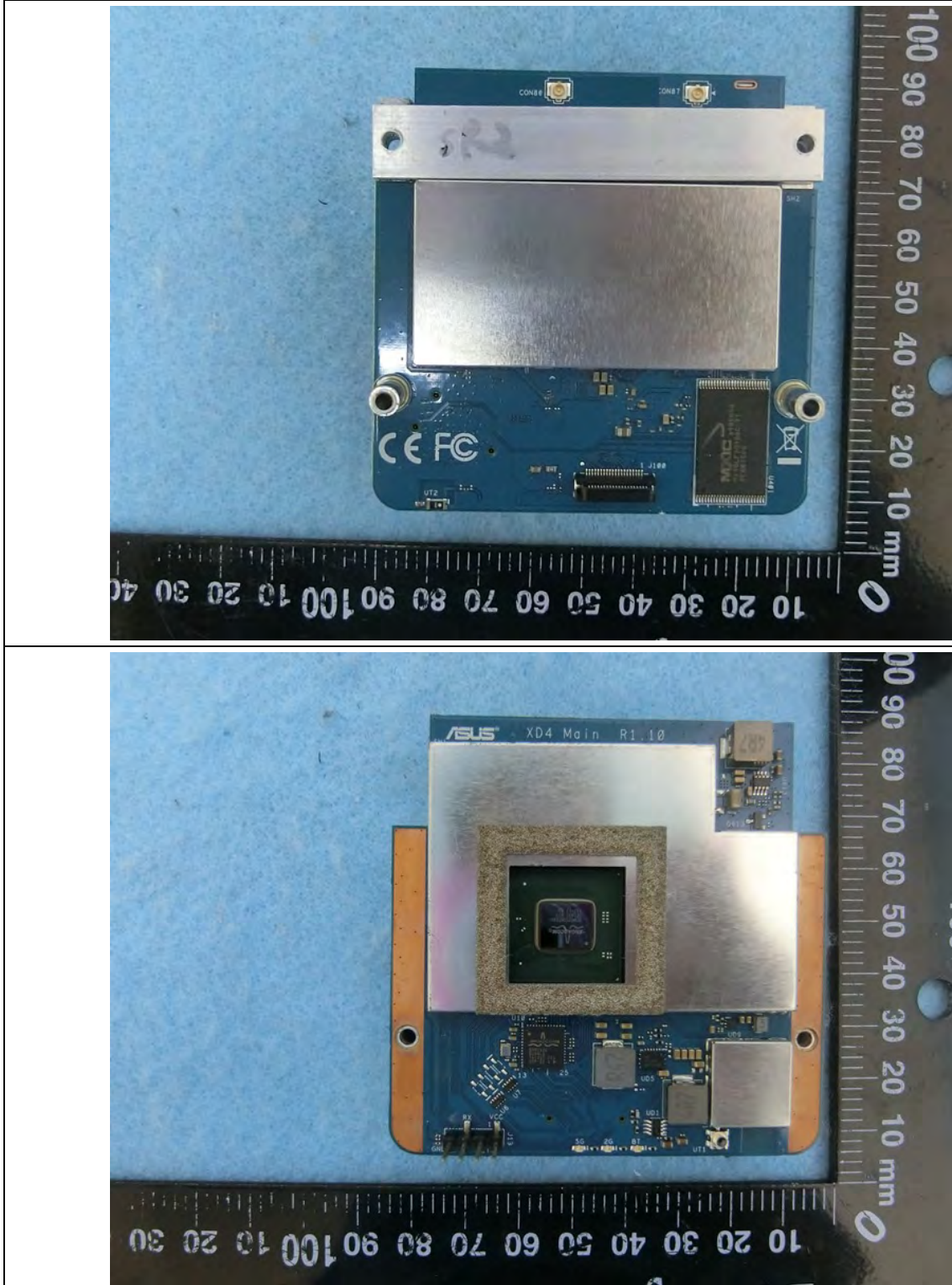
EUT Construction Protection Limit	
The high-frequency section and modulation section of the radio equipment except for the antenna system shall not be capable of being opened easily.	

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

Photo





4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Calibration Due Date	Calibration Method	Calibration Agent Name	Remark
Spectrum analyzer	R&S	FSV40	101027	9kHz~40GHz	Jul. 02, 2019	Jul. 01, 2020	c)	A	Conducted (TH02-CB)
Power Sensor	Anritsu	MA2411B	1126203	300MHz~40GHz	Sep. 11, 2019	Sep. 10, 2020	c)	A	Conducted (TH02-CB)
Power Meter	Anritsu	ML2495A	1210004	300MHz~40GHz	Sep. 11, 2019	Sep. 10, 2020	c)	A	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-01	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	c)	B	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-02	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	c)	B	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-3	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	c)	B	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-04	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	c)	B	Conducted (TH02-CB)
RF Cable-high	Woken	RG402	High Cable-05	1 GHz – 26.5 GHz	Oct. 07, 2019	Oct. 06, 2020	c)	B	Conducted (TH02-CB)
Digital Multimeters	Fluke	15B+	42390498 WS	N/A	Oct. 17, 2019	Oct. 16, 2020	c)	A	Conducted (TH02-CB)
Programmable AC/DC Source	Chroma	61504	615040000 670	-	Dec. 19, 2019	Dec. 18, 2020	c)	A	Conducted (TH02-CB)

Note:

1. Calibration Interval of instruments listed above is one year.
2. N.C.R. means Non-Calibration required.
3. 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.
4. 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)



Summary

Mode	Result	Ch (Hz)	Center (Hz)	ppm	Limit (ppm)	Port	Remark
2.4-2.4835GHz	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	2.402G	2.40200505G	2.1004	±50	1	-



Frequency Tolerance-DTS

Appendix A

Result

Mode	Result	Ch (Hz)	Center (Hz)	ppm	Limit (ppm)	Port	Remark
BT-LE(1Mbps)	-	-	-	-	-	-	-
2402MHz_TnomVnom	Pass	2.402G	2.40200505G	2.1004	±50	1	-
2440MHz_TnomVnom	Pass	2.44G	2.44000498G	2.0396	±50	1	-
2480MHz_TnomVnom	Pass	2.48G	2.48000474G	1.9121	±50	1	-



Summary

Mode	Max-OBW (Hz)	ITU-Code	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-
BT-LE(1Mbps)	1.321M	1M32F1D	1.321M

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



Result

Mode	Result	Limit (Hz)	P1-OBW (Hz)
BT-LE(1Mbps)	-	-	-
2402MHz_TnomVnom	Pass	26M	1.321M
2440MHz_TnomVnom	Pass	26M	1.321M
2480MHz_TnomVnom	Pass	26M	1.321M

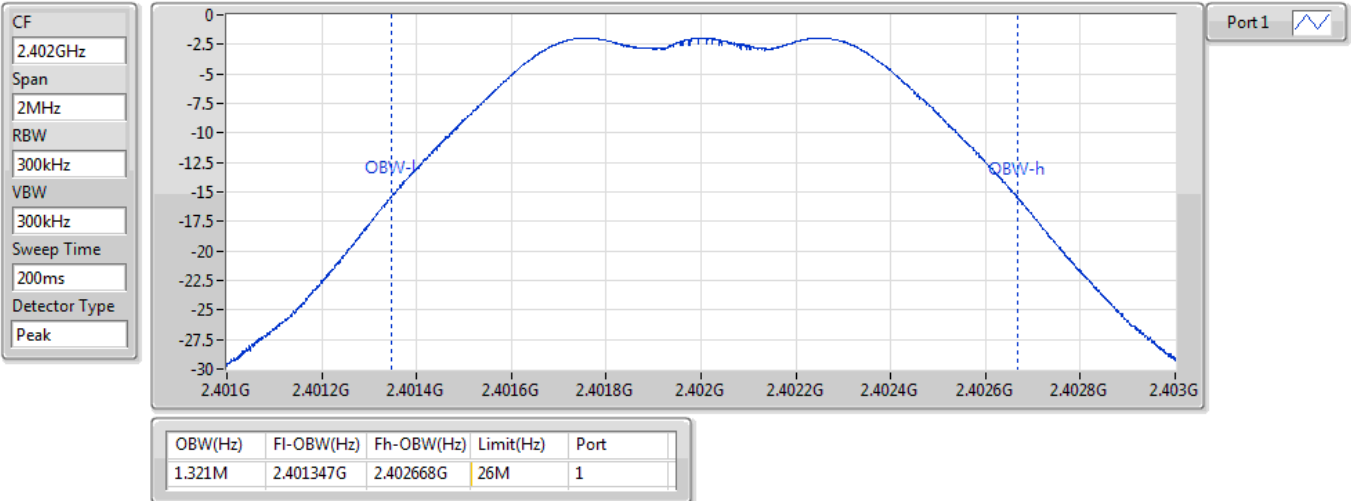
P1-OBW = Port 1 99% occupied bandwidth; **P2-OBW** = Port 2 99% occupied bandwidth; **Pn-OBW** = Port n 99% occupied bandwidth

BT-LE(1Mbps)

OBW

2402MHz_TnomVnom

12/03/2020

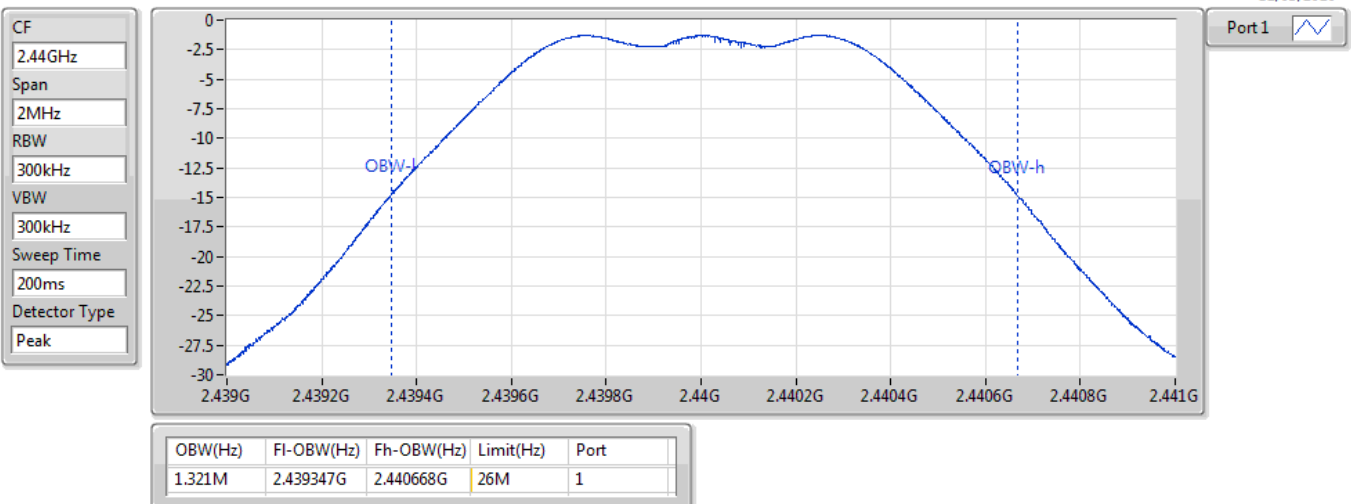


BT-LE(1Mbps)

OBW

2440MHz_TnomVnom

12/03/2020

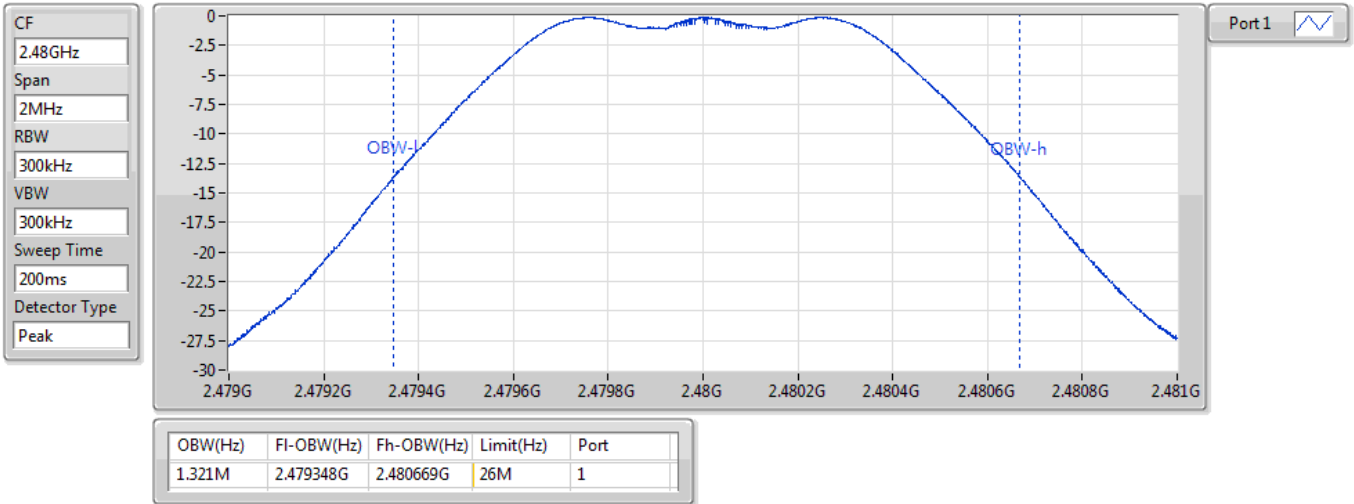


BT-LE(1Mbps)

OBW

2480MHz_TnomVnom

12/03/2020





Summary

Mode	Power (dBm)	Power (mW)	EIRP (dBm)	EIRP (mW)
2.4-2.4835GHz	-	-	-	-
BT-LE(1Mbps)	-0.84	0.824	0.85	1.216

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	1.69	-2.71	0.536	10	-1.02	0.791	16.368
2440MHz_TnomVnom	Pass	1.69	-1.95	0.638	10	-0.26	0.942	16.368
2480MHz_TnomVnom	Pass	1.69	-0.84	0.824	10	0.85	1.216	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**;

Summary

Mode	Result	Power (dBm)	Power (mW)	Declare (mW)	Tolerance (%)	Limit+ (%)	Limit- (%)
2.4-2.4835GHz	-	-	-	-	-	-	-
BT-LE(1Mbps)	Pass	-0.84	0.82414	0.82414	0.00	20	-80

Result

Mode	Result	Power (dBm)	Power (mW)	Declare (mW)	Tolerance (%)	Limit+ (%)	Limit- (%)
BT-LE(1Mbps)	-	-	-	-	-	-	-
2402MHz_TnomVnom	Pass	-2.71	0.53580	0.82414	-34.99	20	-80
2440MHz_TnomVnom	Pass	-1.95	0.63826	0.82414	-22.55	20	-80
2480MHz_TnomVnom	Pass	-0.84	0.82414	0.82414	0.00	20	-80



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	2.39997G	-27.62	1.72982	-16.02	25

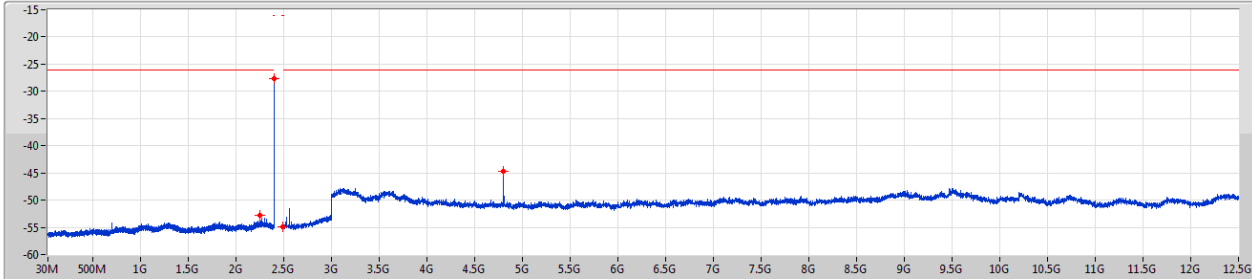
**Result**

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	2.24617G	-52.84	0.0052	-26.02	2.5
2402MHz_TnomVnom	Pass	2.387G	2.4G	1M	2.39997G	-27.62	1.72982	-16.02	25
2402MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2.48714G	-54.85	0.00327	-16.02	25
2402MHz_TnomVnom	Pass	2.4965G	12.5G	1M	4.80356G	-44.64	0.03436	-26.02	2.5
2440MHz_TnomVnom	Pass	30M	2.387G	1M	2.28418G	-51.89	0.00647	-26.02	2.5
2440MHz_TnomVnom	Pass	2.387G	2.4G	1M	2.38796G	-53.86	0.00411	-16.02	25
2440MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2.49221G	-53.81	0.00416	-16.02	25
2440MHz_TnomVnom	Pass	2.4965G	12.5G	1M	4.87983G	-43.36	0.04613	-26.02	2.5
2480MHz_TnomVnom	Pass	30M	2.387G	1M	2.32424G	-52.3	0.00589	-26.02	2.5
2480MHz_TnomVnom	Pass	2.387G	2.4G	1M	2.39275G	-54.9	0.00324	-16.02	25
2480MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	2.48353G	-41.4	0.07244	-16.02	25
2480MHz_TnomVnom	Pass	2.4965G	12.5G	1M	4.95986G	-42.03	0.06266	-26.02	2.5

BT-LE(1Mbps)

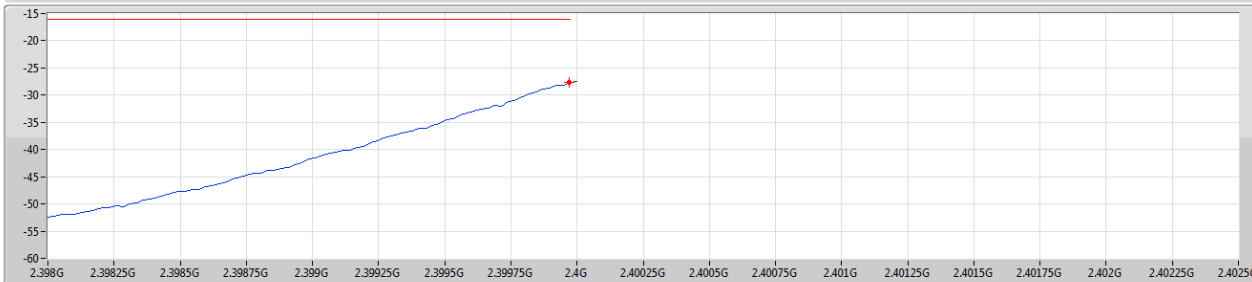
CSE-TX-DTS

2402MHz_TnomVnom



12/03/2020

Limit
Port1

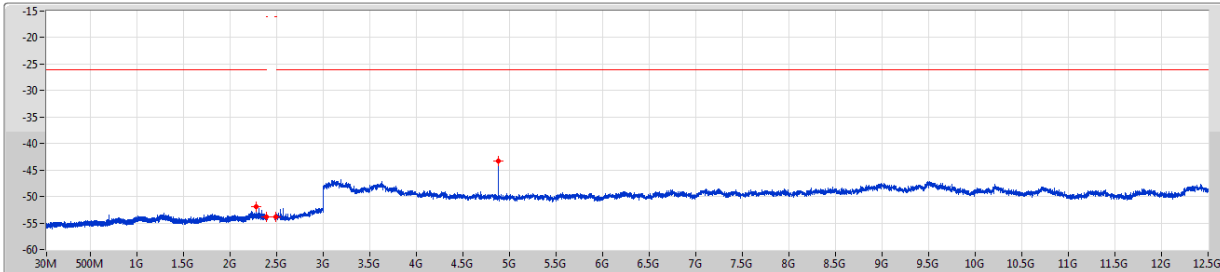


F-Start(Hz)	F-Stop(Hz)	Freq(Hz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
30M	2.387G	2.24617G	-52.84	-26.02	-26.82	-52.84
2.387G	2.4G	2.39997G	-27.62	-16.02	-11.60	-27.62
2.4835G	2.4965G	2.48714G	-54.85	-16.02	-38.83	-54.85
2.4965G	12.5G	4.80356G	-44.64	-26.02	-18.62	-44.64

BT-LE(1Mbps)

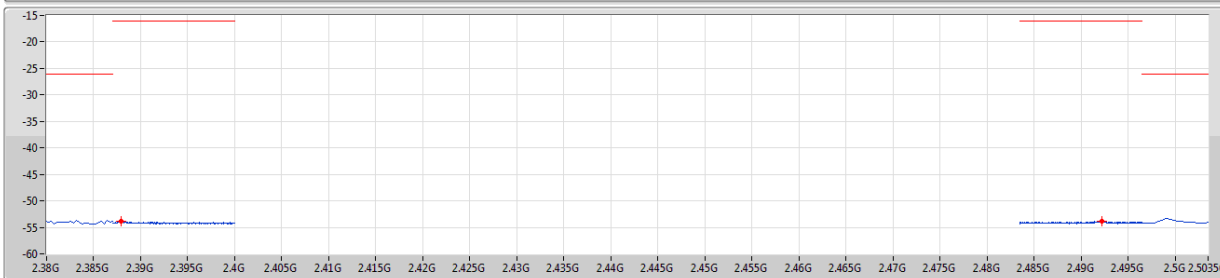
CSE-TX-DTS

2440MHz_TnomVnom



12/03/2020

Limit
Port1

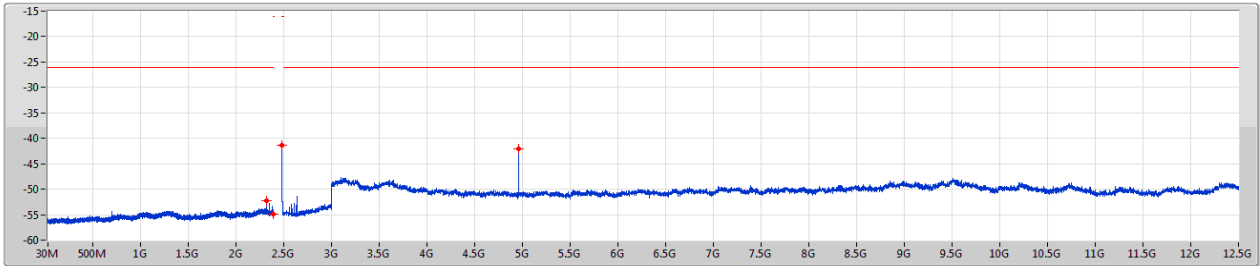


F-Start(Hz)	F-Stop(Hz)	Freq(Hz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
30M	2.387G	2.28418G	-51.89	-26.02	-25.87	-51.89
2.387G	2.4G	2.38796G	-53.86	-16.02	-37.84	-53.86
2.4835G	2.4965G	2.49221G	-53.81	-16.02	-37.79	-53.81
2.4965G	12.5G	4.87983G	-43.36	-26.02	-17.34	-43.36

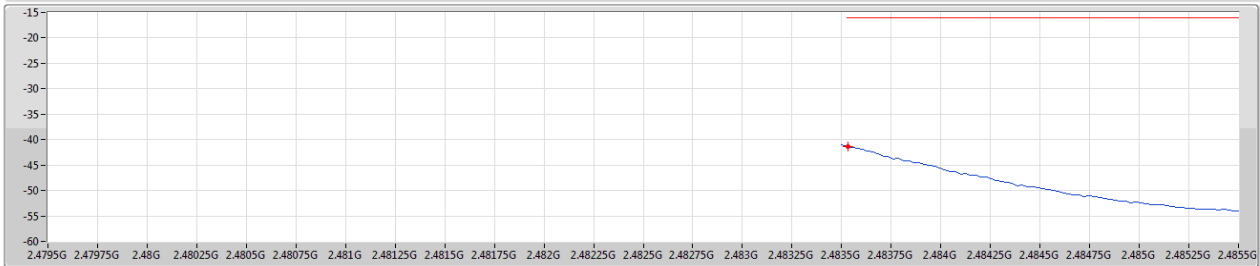
BT-LE(1Mbps)

CSE-TX-DTS

2480MHz_TnomVnom



12/03/2020
Limit
Port 1



F-Start(Hz)	F-Stop(Hz)	Freq(Hz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)
30M	2.387G	2.32424G	-52.30	-26.02	-26.28	-52.30
2.387G	2.4G	2.39275G	-54.90	-16.02	-38.88	-54.90
2.4835G	2.4965G	2.48353G	-41.40	-16.02	-25.38	-41.40
2.4965G	12.5G	4.95986G	-42.03	-26.02	-16.01	-42.03



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	513.3M	-69.32	0.11695	-53.98	4

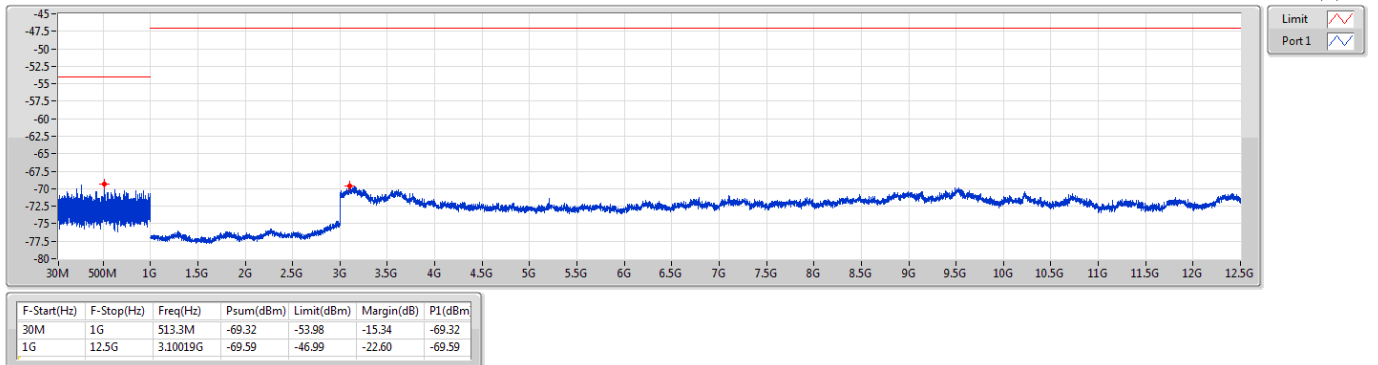
**Result**

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	513.3M	-69.32	0.11695	-53.98	4
2402MHz_TnomVnom	Pass	1G	12.5G	1M	3.10019G	-69.59	0.1099	-46.99	20
2440MHz_TnomVnom	Pass	30M	1G	100k	606.06M	-69.92	0.10186	-53.98	4
2440MHz_TnomVnom	Pass	1G	12.5G	1M	3.09156G	-69.56	0.11066	-46.99	20
2480MHz_TnomVnom	Pass	30M	1G	100k	674.57M	-70.24	0.09462	-53.98	4
2480MHz_TnomVnom	Pass	1G	12.5G	1M	3.10019G	-69.50	0.1122	-46.99	20

BT-LE(1Mbps)

CSE-RX-DTS

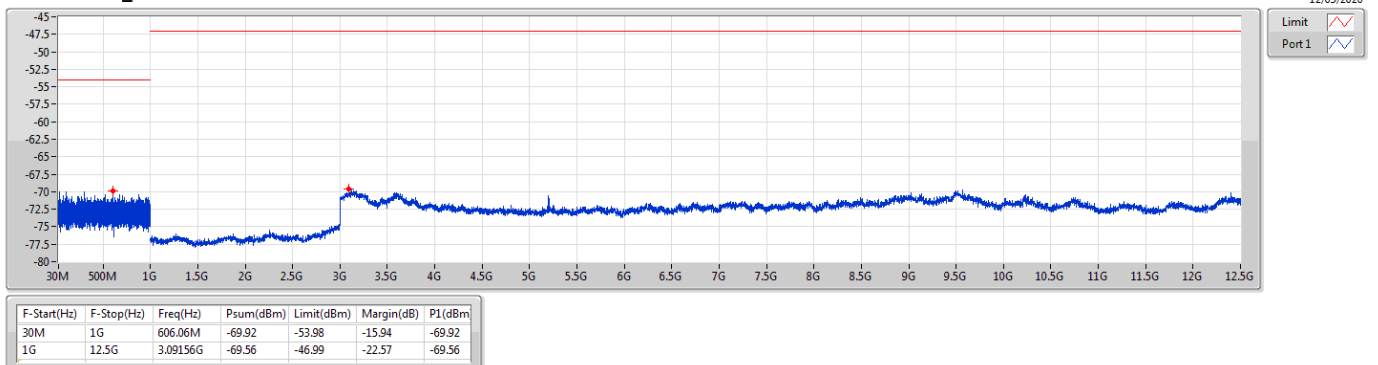
2402MHz_TnomVnom



BT-LE(1Mbps)

CSE-RX-DTS

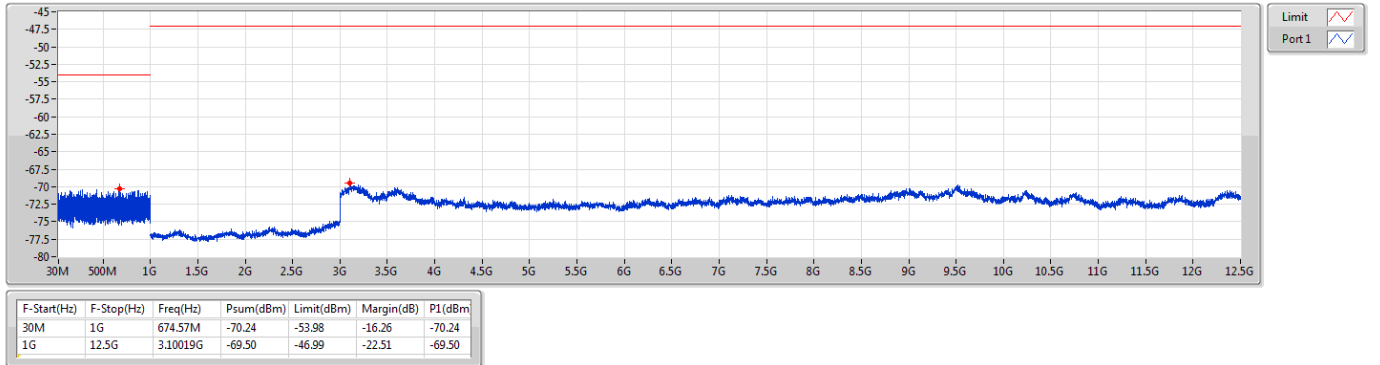
2440MHz_TnomVnom



BT-LE(1Mbps)

CSE-RX-DTS

2480MHz_TnomVnom





Summary

Mode	Result	MAC	ID Length	ID Limit	Function
2.4-2.4835GHz	-	-	-	-	-
BT-LE(1Mbps)	Pass	00:90:4C:32:A0:60	48 bits	48 bits	Good



Result

Mode	Result	ID Length	ID Limit	Function
BT-LE(1Mbps)	-	-	-	-
2402MHz_TnomVnom	Pass	48 bits	48 bits	Good
2440MHz_TnomVnom	Pass	48 bits	48 bits	Good
2480MHz_TnomVnom	Pass	48 bits	48 bits	Good