



JAPAN RADIO TEST REPORT

Equipment : Wireless AX6100 Tri Band Gigabit Router
Brand Name : ASUS
Model Name : RT-AX92U
Applicant : ASUSTeK COMPUTER INC.
No. 15, Li-Te Rd., Peitou District, Taipei 112, Taiwan, R.O.C.
Manufacturer (1) : Compal Networking (KunShan) Co., LTD.
No. 520, Nanbang Rd., Economic & Technical Development
Zone Kunshan, Jiangsu Province China
Manufacturer (2) : ASKEY TECHNOLOGY (JIANG SU) LTD
NO1388, Jiao Tong Road, Wujiang Economic Technological
Development Area Jiangsu Province 215200 China
Manufacturer (3) : 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 Mar. 20, 2019, and testing was started from Mar. 22, 2019 and completed on Apr. 24, 2019. 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 test results in this variant 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: Sam Chen

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



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Photographs of EUT v01



History of this test report

TEL : 886-3-656-9065
FAX : 886-3-656-9085
Report Template No.: CB-D2_8 Ver1.0

Page Number : 4 of 21
Issued Date : Nov. 11, 2020
Report Version : 01



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	-
3.2	ORE:49.20	Spread Bandwidth / Factor	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	-
3.7	TR:9	Carrier Sense* ²	PASS	-
3.8	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: Emily Chen

1 General Description

1.1 Information

1.1.1 RF General Information

Frequency Range (MHz)	IEEE Std. 802.11	Ch. Frequency (MHz)	Channel Number
2400-2483.5	b, g, n (HT20), VHT20	2412-2472	1-13 [13]
2400-2483.5	n (HT40), VHT40	2422-2462	3-11 [9]

Band	Mode	BWch (MHz)	Nant
2.4-2.4835GHz	802.11b	20	2TX
2.4-2.4835GHz	802.11g	20	2TX
2.4-2.4835GHz	802.11n HT20	20	2TX
2.4-2.4835GHz	VHT20	20	2TX
2.4-2.4835GHz	802.11n HT40	40	2TX
2.4-2.4835GHz	VHT40	40	2TX

Note:

- 11b mode uses a combination of DSSS-DBPSK, DQPSK, CCK modulation.
- 11g, HT20 and HT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.
- VHT20, VHT40 use a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM 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/MHz)
802.11b_Nss1_2TX	9.95405
802.11g_Nss1_2TX	9.88553
VHT20_Nss1,(MCS0)_2TX	9.72747
VHT40_Nss1,(MCS0)_2TX	4.88652

1.1.2 Antenna Information

For Radio 1 (2.4GHz) and Radio 2 (5GHz Band 1~Band 2):

Ant.	Port	Brand	Model Name	Type	Connector	Un-correlated Gain (dBi)	
						2.4GHz	5GHz Band 1~Band 2
1	1	WHA YU	C660-510426-A	Dipole	I-PEX	1.77	2.00
2	2	WHA YU	C660-510427-A	Dipole	I-PEX	1.77	2.00

For Radio 3 (5GHz Band 3):

Ant.	Port	Brand	Model Name	Type	Connector	Un-correlated Gain (dBi)
3	1	WHA YU	C660-510428-A	Dipole	I-PEX	1.65
4	2	WHA YU	C660-510429-A	Dipole	I-PEX	1.65
5	3	WHA YU	C660-510430-A	Dipole	I-PEX	1.65
6	4	WHA YU	C660-510430-A	Dipole	I-PEX	1.65

Note 1: The above information was declared by manufacturer.

Note 2: The EUT has three Radios (Radio 1 supports 2.4GHz, Radio 2 supports 5GHz Band 1~Band 2 and Radio 3 supports 5GHz Band 3).

Note 3: The EUT has six antennas.

For Radio 1 (2.4GHz) and Radio 2 (5GHz Band 1~Band 2) <2TX/2RX>:

Port 1 and Port 2 will transmit/receive the same signal simultaneously.

For Radio 3 (Band 3) <4TX/4RX>:

Port 1, Port 2, Port 3 and Port 4 will transmit/receive the same signal simultaneously.

1.1.3 Table for Multiple Listing

The EUT has two SKU which are identical to each other in all aspects except for the following table:

Description	SKU 1	SKU 2
LAN port transformer (Brand Name/Model Name)	SWAPnet/NS773602	Mingtek/HN36201CG
WAN port transformer (Brand Name/Model Name)	SWAPnet/NS892402	BOTHHAND/GST5009W

Note: The SKU does not affect the test result of RF tests, so only SKU 1 was tested and recorded in this report.



1.1.4 Table for Slight Change

This product is an extension of original one reported under Sporton project number: JR791525-05AA

Below is the table for the change of the product with respect to the original one.

Modifications	Performance Checking
Add a manufacturer: Datamax Electronics(DongGuan) Co., Ltd. / Niu Shan Foreign Economic Industrial Park,Dong Cheng District,Dong Guan City,Guang Dong,China	Do not affect the test results.

Note: All test results were based on original test report.

1.1.5 EUT Information

EUT Power Type	From Power Adapter
Test Software Version	accessMTool_3_0_0_5

1.1.6 Mode Test Duty Cycle

Mode	DC	DCF(dB)	Tx-sequence(s)	Tx-gap(s)
802.11b_Nss1_2TX	0.958	0.186	12.56m	0
802.11g_Nss1_2TX	0.968	0.141	2.1m	0
VHT20_Nss1,(MCS0)_2TX	0.988	0.052	5.01m	0
VHT40_Nss1,(MCS0)_2TX	0.974	0.114	1.94m	0

1.1.7 Power Supply Voltage Fluctuation

Fluctuation	AC Input Power(V)	DC Output Power(V)	Variation (%)
Normal Vol	100	19.38	-
High Vol	110	19.39	0.051600
Low Vol	90	19.36	-0.103199

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 Testing Applied 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	TH01-CB	Serway Li	20~22°C / 52~54%	Mar. 22, 2019~Apr. 24, 2019

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	1.7 dB	Confidence levels of 95%
Radio frequency	6.6×10^{-8} MHz	Confidence levels of 95%

2 Test Configuration of EUT

2.1 Test Channel Mode

Mode	Power Setting
802.11b_Nss1_2TX	-
2412MHz	55
2442MHz	55
2472MHz	56
802.11g_Nss1_2TX	-
2412MHz	71
2442MHz	71
2472MHz	71
VHT20_Nss1,(MCS0)_2TX	-
2412MHz	71
2442MHz	72
2472MHz	72
VHT40_Nss1,(MCS0)_2TX	-
2422MHz	67
2442MHz	67
2462MHz	67

Note:

- ♦ VHT20/VHT40 covers HT20/HT40, due to same modulation. The power setting for 802.11n HT20 and HT40 are the same or lower than VHT20 and VHT40.



2.2 The Worst Case Measurement Configuration

Tests Item	Frequency Error, Occupied Bandwidth, Spread Bandwidth, Spread Factor, Antenna Power, Antenna Power Error, Transmitter Spurious Emissions, Receiver Spurious Emissions, Identification Code, Carrier Sense
Test Condition	Conducted measurement at transmit chains.

Note:

The EUT supports Master (AP Router, Bridge, Extender and Mesh) and Slave without radar detection, only AP Router mode has been tested for carrier sense test and recorded in this test report.

2.3 EUT Operation during Test

During the test, "accessMTool_3_0_0_5" under WIN XP was executed the test program to control the EUT continuously transmit/receive RF signal.

2.4 Accessories

Accessories				
Equipment Name	Brand Name	Model Name	Type	Rating
Adapter 1	DELTA	ADP-33AW Y	-	INPUT: 100-240V~1A, 50-60Hz OUTPUT: 19V, 1.75A
Adapter 2	PI	AD2088320	010-5LF	INPUT: 100-240V~50/60Hz, 0.8A OUTPUT: 19V, 1.75A
Adapter 3	DELTA	ADP-33AW B	-	INPUT: 100-240V~1A, 50-60Hz OUTPUT: 19V, 1.75A
Other				
RJ-45 cable*1: Non-shielded, 1.5m				

Note: The adapter does not affect the test result of RF tests, so only adapter 1 was tested and recorded in this report.

2.5 Support Equipment

For Other Items:

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

**For Carrier Sense:**

Support Equipment				
No.	Equipment	Brand Name	Model Name	FCC ID
A	Notebook	DELL	E4300	N/A
B	Notebook	DELL	E4300	N/A
C	AP	ASUS	RT-AX92U	N/A

3 Test Result

3.1 Frequency Error

3.1.1 Frequency Error Limit

Frequency Error Limit
$\leq \pm 50$ ppm

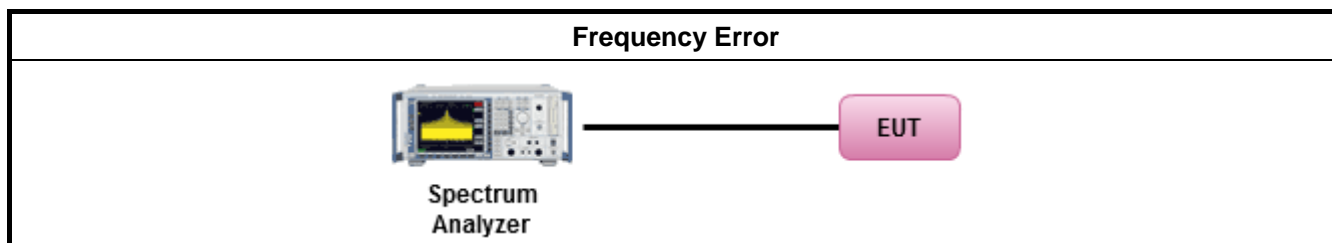
3.1.2 Measuring Instruments

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, Spread Bandwidth and Spread Factor

3.2.1 Occupied Bandwidth, Spread Bandwidth and Spread Factor Limit

Occupied Bandwidth Limit	
FHSS	83.5 MHz
FHSS + DSSS	83.5 MHz
FHSS + OFDM	83.5 MHz
OFDM	38 MHz
Other	26 MHz

Spread Bandwidth and Spread Factor Limit	
Spread Bandwidth	≥500kHz
Spread Factor	≥5

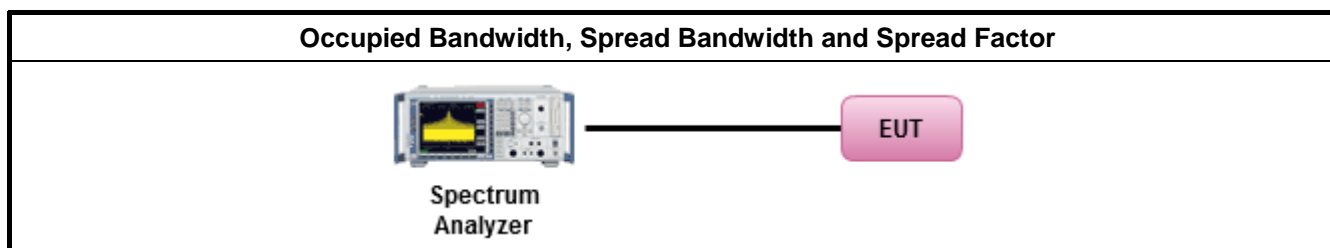
3.2.2 Measuring Instruments

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 / Spread Bandwidth / Spread Factor

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 from 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 26MHz] $\leq 5\text{mW/MHz}$ (OFDM from 2400~2483.5MHz) – [26MHz<OBW \leq 38MHz] $\leq 10\text{mW}$ (Other from 2400~2483.5MHz)

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

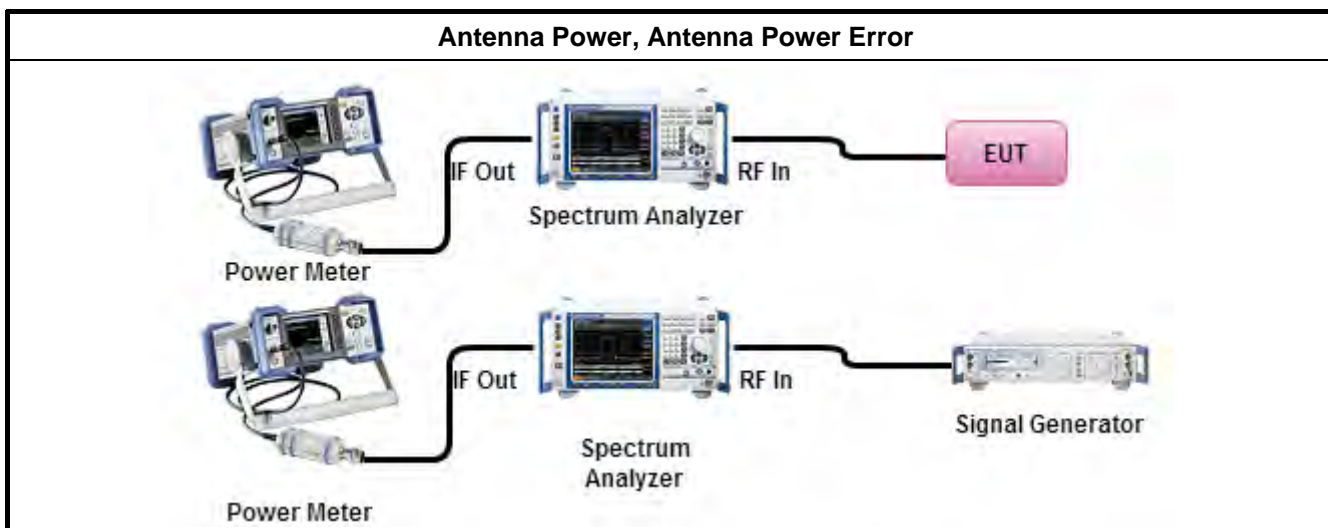
3.3.2 Measuring Instruments

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

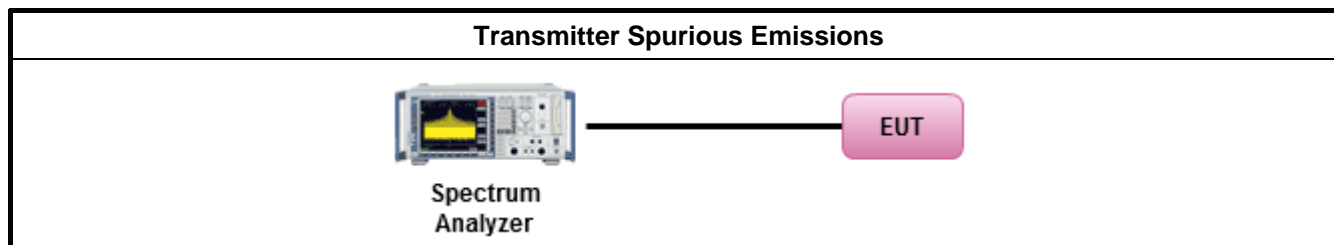
3.4.2 Measuring Instruments

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

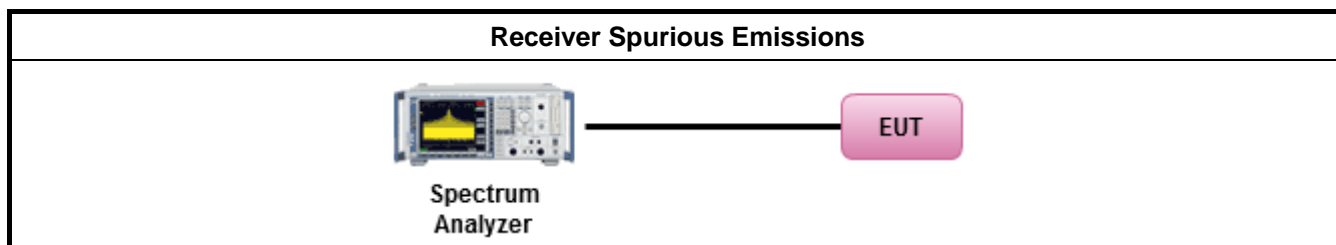
3.5.2 Measuring Instruments

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

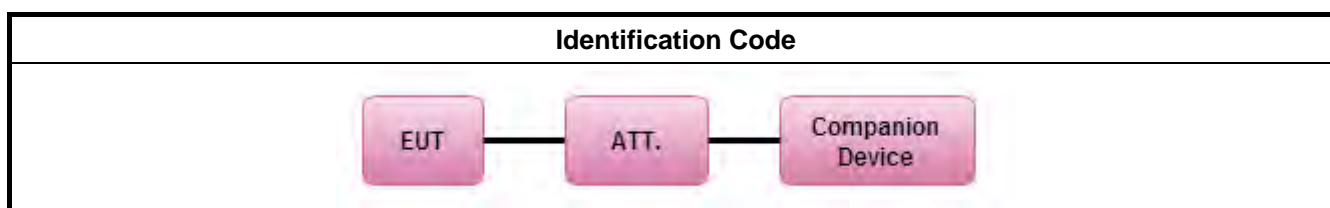
3.6.2 Measuring Instruments

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 Carrier Sense

3.7.1 Carrier Sense Limit

Carrier Sense Limit	
Stop transmission for interference signal level above 100mV/m (or level at $22.79 + Gr - 20 \cdot \log(f)$ [dBm])	

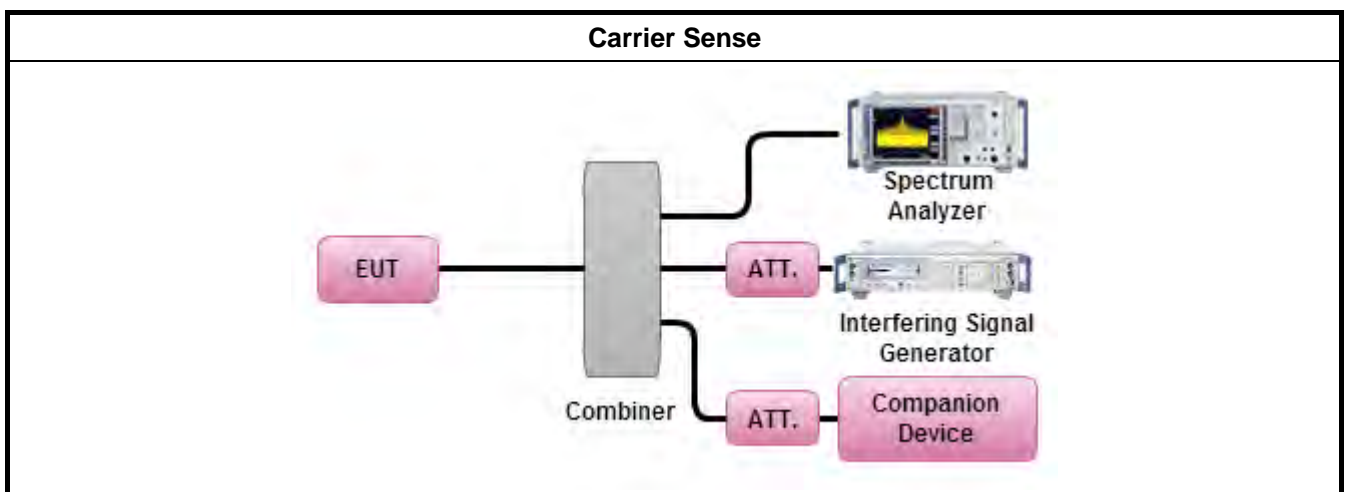
3.7.2 Measuring Instruments

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

3.7.3 Test Procedures

Test Method	
Measuring Equipment Conditions	MIC Notice No.88 Appendix No.43, clause 8.2
Conditions of Equipment under Test	MIC Notice No.88 Appendix No.43, clause 8.3
Measuring Operation Procedures	MIC Notice No.88 Appendix No.43, clause 8.4
Presentation of Results	MIC Notice No.88 Appendix No.43, clause 8.5
Other Conditions	MIC Notice No.88 Appendix No.43, clause 8.6

3.7.4 Test Setup



3.7.5 Test Result of Carrier Sense

Refer as Appendix G

3.8 EUT Construction Protection

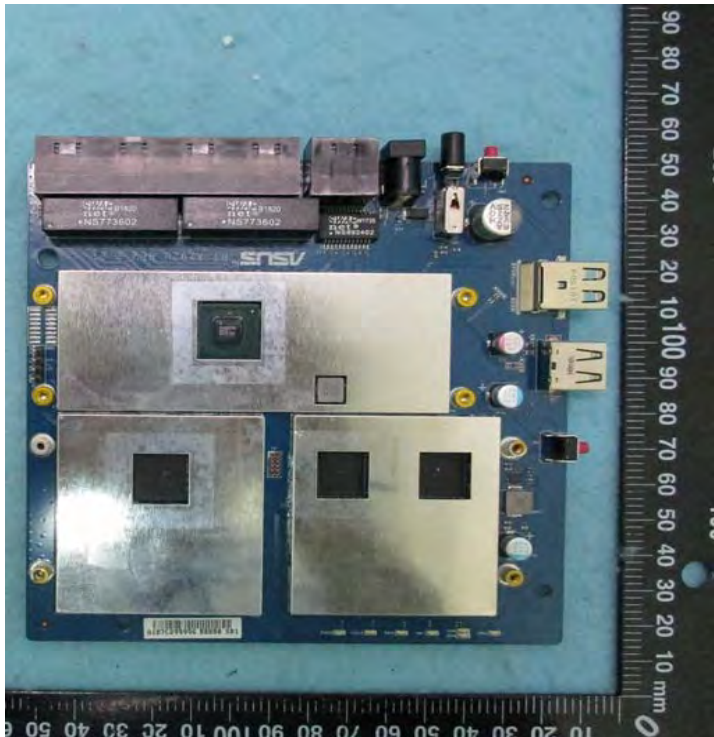
3.8.1 EUT Construction Protection Limit

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.	

3.8.2 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

3.8.3 Reference Documents

<p>Photo</p>	
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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	Jun. 22, 2018	Jun. 21, 2019	c)	A	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-06	1 GHz ~ 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	c)	B	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-07	1 GHz ~ 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	c)	B	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-08	1 GHz ~ 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	c)	B	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-09	1 GHz ~ 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	c)	B	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz ~ 26.5 GHz	Oct. 08, 2018	Oct. 07, 2019	c)	B	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-28	1 GHz ~ 26.5 GHz	Nov. 19, 2018	Nov. 18, 2019	c)	B	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 05, 2018	Nov. 04, 2019	c)	A	Conducted (TH01-CB)
Digital Multimeters	Fluke	15B+	42390498WS	N/A	Oct. 18, 2018	Oct. 17, 2019	c)	A	Conducted (TH01-CB)
Signal generator	R&S	SMB100A	177785	25MHz-6GHz	Jul. 18, 2018	Jul. 17, 2019	c)	A	Conducted (TH01-CB)
RF Power Divider	ANAREN	2 Way	DFS-01-DV-02	1GHz ~ 6GHz	Oct. 08, 2018	Oct. 07, 2019	c)	B	Conducted (TH01-CB)
RF Power Divider	MTJ	2 Way	DFS-01-DV-03	1GHz ~ 6GHz	Oct. 08, 2018	Oct. 07, 2019	c)	B	Conducted (TH01-CB)
RF Power Divider	ANAREN	4 Way	DFS-01-DV-01	1GHz ~ 6GHz	Oct. 08, 2018	Oct. 07, 2019	c)	B	Conducted (TH01-CB)
Test Software	SPORTON	SENSE	V5.10	-	N.C.R.	N.C.R.	N/A	N/A	Conducted (TH01-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)



Frequency Tolerance Result

Appendix A

Summary

Mode	Result	Ch (Hz)	Center (Hz)	ppm	Limit (ppm)	Port
2.4-2.4835GHz	-	-	-	-	-	-
802.11b_Nss1_2TX	Pass	2.472G	2.47195875G	-16.687	±50	1
802.11g_Nss1_2TX	Pass	2.472G	2.471955G	-18.204	±50	1
VHT20_Nss1,(MCS0)_2TX	Pass	2.472G	2.47195125G	-19.721	±50	1
VHT40_Nss1,(MCS0)_2TX	Pass	2.422G	2.42195125G	-20.128	±50	1



Frequency Tolerance Result

Appendix A

Result

Mode	Result	Ch (Hz)	Center (Hz)	ppm	Limit (ppm)	Port
802.11b_Nss1_2TX	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	2.412G	2.41196625G	-13.993	±50	1
2442MHz_TnomVnom	Pass	2.442G	2.4419625G	-15.356	±50	1
2472MHz_TnomVnom	Pass	2.472G	2.47195875G	-16.687	±50	1
802.11g_Nss1_2TX	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	2.412G	2.41195875G	-17.102	±50	1
2442MHz_TnomVnom	Pass	2.442G	2.44197188G	-11.517	±50	1
2472MHz_TnomVnom	Pass	2.472G	2.471955G	-18.204	±50	1
VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	2.412G	2.41195313G	-19.434	±50	1
2442MHz_TnomVnom	Pass	2.442G	2.44196813G	-13.053	±50	1
2472MHz_TnomVnom	Pass	2.472G	2.47195125G	-19.721	±50	1
VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz_TnomVnom	Pass	2.422G	2.42195125G	-20.128	±50	1
2442MHz_TnomVnom	Pass	2.442G	2.44195875G	-16.892	±50	1
2462MHz_TnomVnom	Pass	2.462G	2.46195125G	-19.801	±50	1

Occupied Bandwidth Result

Appendix B.1

Summary

Mode	Max-OBW (Hz)	ITU-Code	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-
802.11b_Nss1_2TX	11.7M	11M7G1D	11.62M
802.11g_Nss1_2TX	16.82M	16M8D1D	16.7M
VHT20_Nss1,(MCS0)_2TX	17.92M	17M9D1D	17.78M
VHT40_Nss1,(MCS0)_2TX	36.8M	36M8D1D	36.64M

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

Result

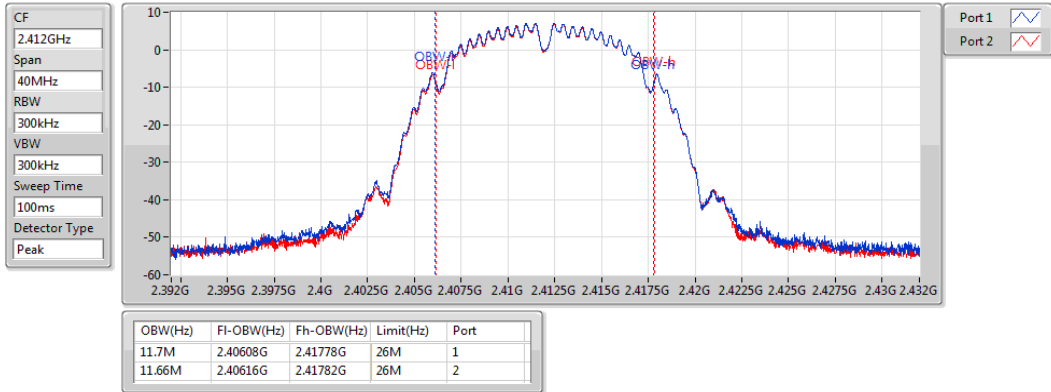
Mode	Result	Limit (Hz)	P1-OBW (Hz)	P2-OBW (Hz)
802.11b_Nss1_2TX	-	-	-	-
2412MHz_TnomVnom	Pass	26M	11.7M	11.66M
2442MHz_TnomVnom	Pass	26M	11.68M	11.62M
2472MHz_TnomVnom	Pass	26M	11.64M	11.66M
802.11g_Nss1_2TX	-	-	-	-
2412MHz_TnomVnom	Pass	26M	16.8M	16.7M
2442MHz_TnomVnom	Pass	26M	16.82M	16.7M
2472MHz_TnomVnom	Pass	26M	16.82M	16.72M
VHT20_Nss1,(MCS0)_2TX	-	-	-	-
2412MHz_TnomVnom	Pass	26M	17.88M	17.78M
2442MHz_TnomVnom	Pass	26M	17.92M	17.8M
2472MHz_TnomVnom	Pass	26M	17.9M	17.78M
VHT40_Nss1,(MCS0)_2TX	-	-	-	-
2422MHz_TnomVnom	Pass	38M	36.76M	36.64M
2442MHz_TnomVnom	Pass	38M	36.8M	36.72M
2462MHz_TnomVnom	Pass	38M	36.64M	36.72M

P1-OBW = Port 1 99% occupied bandwidth; **P2-OBW** = Port 2 99% occupied bandwidth; **P3-OBW** = Port 3 99% occupied bandwidth;
P4-OBW = Port 4 99% occupied bandwidth;

802.11b_Nss1_2TX

OBW

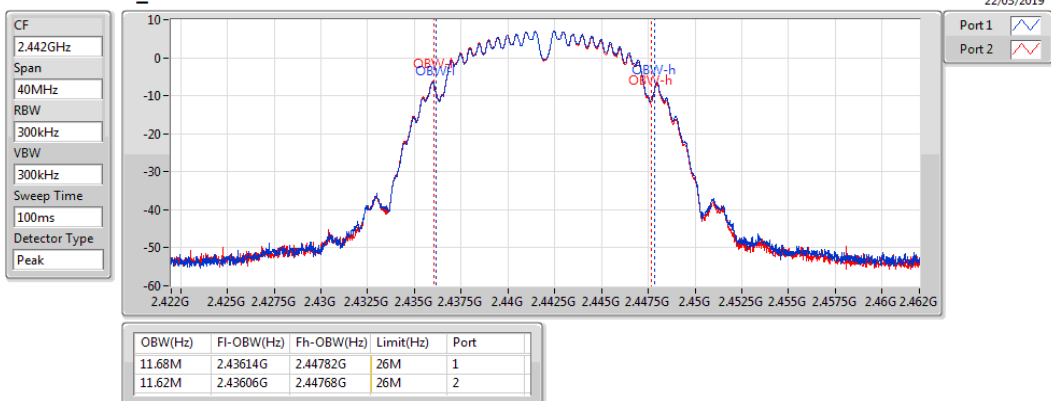
2412MHz_TnomVnom



802.11b_Nss1_2TX

OBW

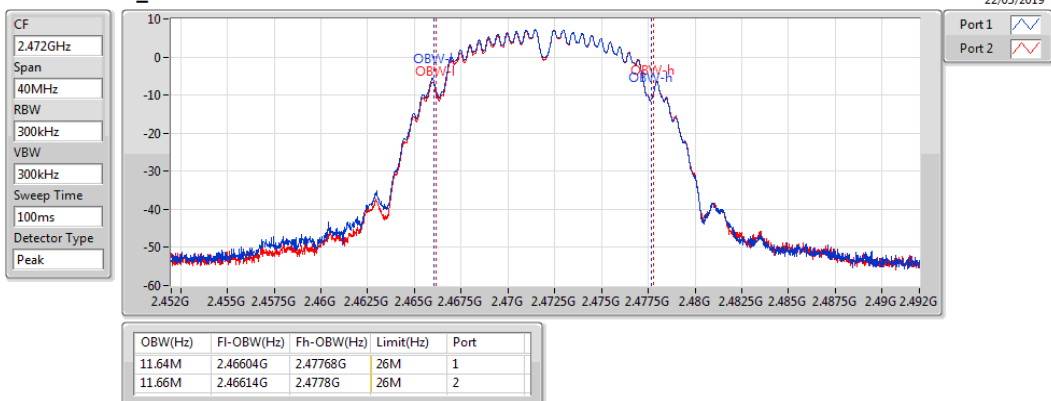
2442MHz_TnomVnom



802.11b_Nss1_2TX

OBW

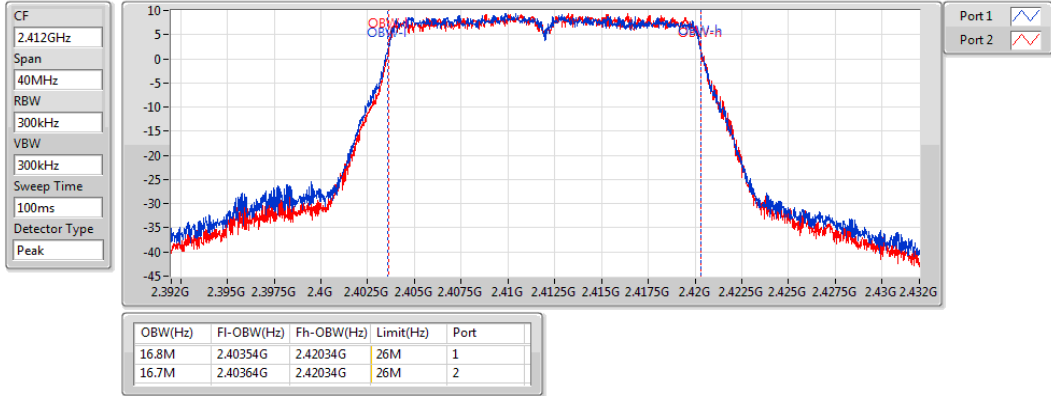
2472MHz_TnomVnom



802.11g_Nss1_2TX

OBW

2412MHz_TnomVnom



802.11g_Nss1_2TX

OBW

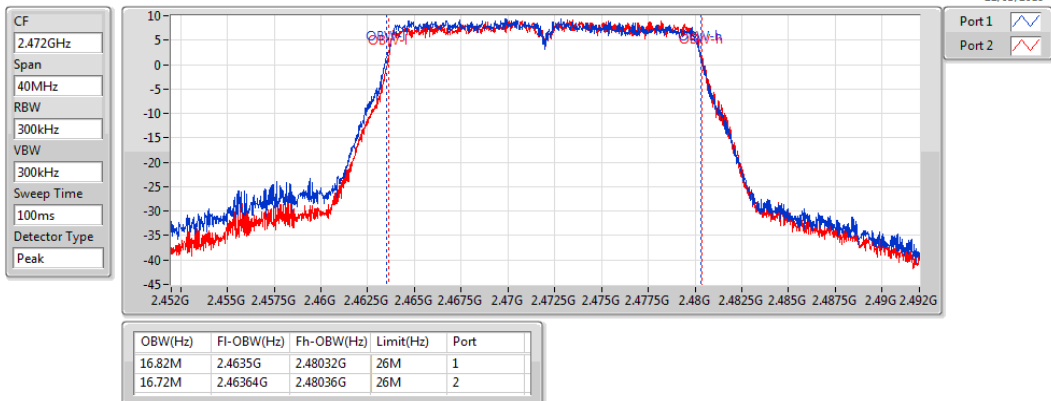
2442MHz_TnomVnom



802.11g_Nss1_2TX

OBW

2472MHz_TnomVnom



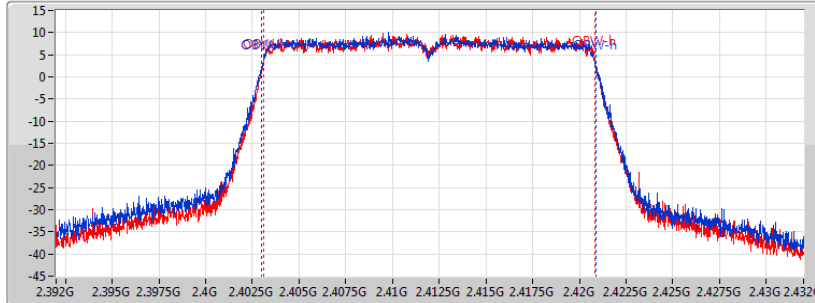
VHT20_Nss1,(MCS0)_2TX



OBW

2412MHz_TnomVnom

22/03/2019

CF
2.412GHz
Span
40MHz
RBW
300kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



Port 1 
Port 2 

OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.88M	2.40302G	2.4209G	26M	1
17.78M	2.40308G	2.42086G	26M	2

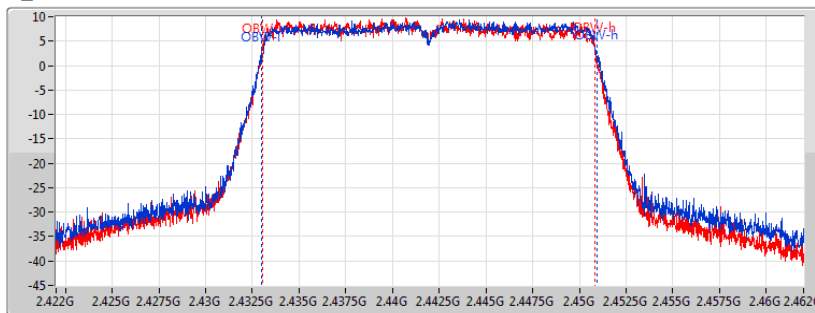
VHT20_Nss1,(MCS0)_2TX



OBW

2442MHz_TnomVnom

22/03/2019

CF
2.442GHz
Span
40MHz
RBW
300kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



Port 1 
Port 2 

OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.92M	2.43302G	2.45094G	26M	1
17.8M	2.43304G	2.45084G	26M	2

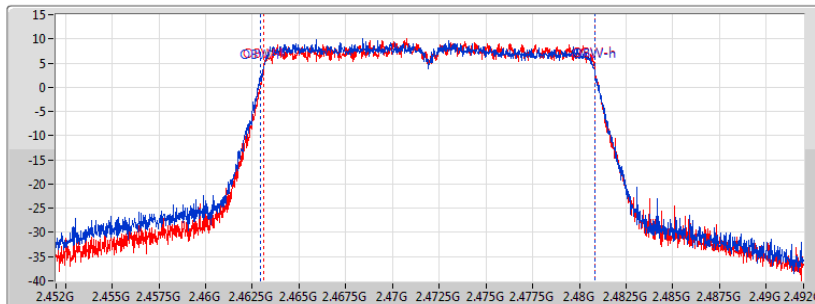
VHT20_Nss1,(MCS0)_2TX



OBW

2472MHz_TnomVnom

22/03/2019

CF
2.472GHz
Span
40MHz
RBW
300kHz
VBW
300kHz
Sweep Time
100ms
Detector Type
Peak



Port 1 
Port 2 

OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.9M	2.46296G	2.48086G	26M	1
17.78M	2.46308G	2.48086G	26M	2

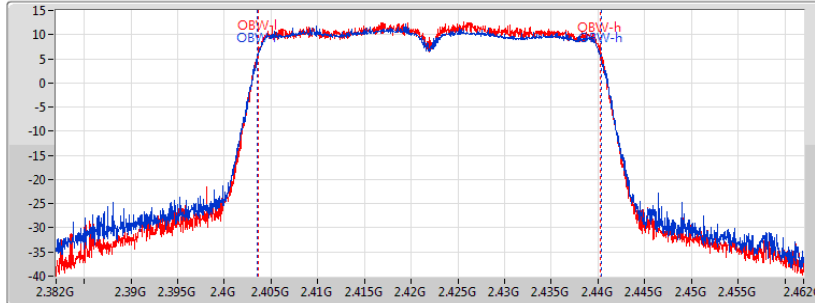
VHT40_Nss1,(MCS0)_2TX

OBW

2422MHz_TnomVnom

22/03/2019

CF
2.422GHz
Span
80MHz
RBW
1MHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Peak



Port 1
Port 2

OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.76M	2.40356G	2.44032G	38M	1
36.64M	2.40364G	2.44028G	38M	2

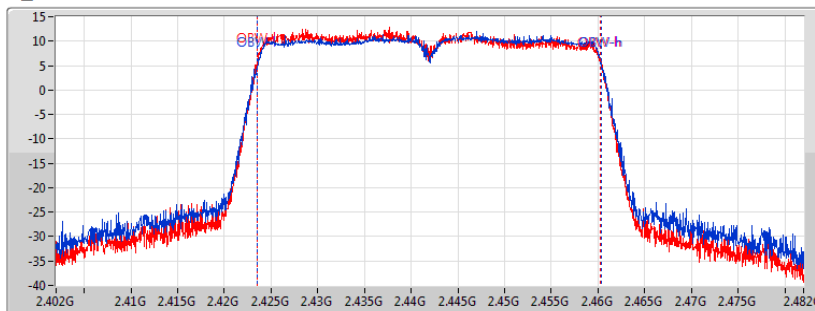
VHT40_Nss1,(MCS0)_2TX

OBW

2442MHz_TnomVnom

22/03/2019

CF
2.442GHz
Span
80MHz
RBW
1MHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Peak



Port 1
Port 2

OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.8M	2.42356G	2.46036G	38M	1
36.72M	2.42356G	2.46028G	38M	2

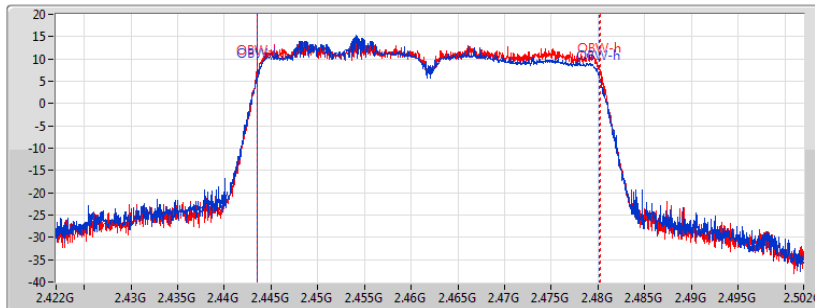
VHT40_Nss1,(MCS0)_2TX

OBW

2462MHz_TnomVnom

22/03/2019

CF
2.462GHz
Span
80MHz
RBW
1MHz
VBW
1MHz
Sweep Time
100ms
Detector Type
Peak



Port 1
Port 2

OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.64M	2.44352G	2.48016G	38M	1
36.72M	2.44356G	2.48028G	38M	2



Spread Bandwidth Result

Appendix B.2

Summary

Mode	Max-SBW (Hz)	Min-SBW (Hz)	Max-SF	Min-SF
2.4-2.4835GHz	-	-	-	-
802.11b_Nss1_2TX	8.18M	8.14M	5.949	5.92

Max-SBW = Maximum spreading bandwidth; **Min-SBW** = Minimum spreading bandwidth;
Max-SF = Maximum spreading factor; **Min-SF** = Minimum spreading factor;

Result

Mode	Result	SBW Limit (Hz)	Symbol Rate (Msps)	SF Limit	P1-SBW (Hz)	P1-SF	P2-SBW (Hz)	P2-SF
802.11b_Nss1_2TX	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	500k	1.375M	5	8.16M	5.935	8.14M	5.92
2442MHz_TnomVnom	Pass	500k	1.375M	5	8.14M	5.92	8.16M	5.935
2472MHz_TnomVnom	Pass	500k	1.375M	5	8.18M	5.949	8.14M	5.92

P1-SBW = Port 1 spreading bandwidth; **P2-SBW** = Port 2spreading bandwidth; **P3-SBW** = Port 3spreading bandwidth;

P4-OBW = Port 4spreading bandwidth;

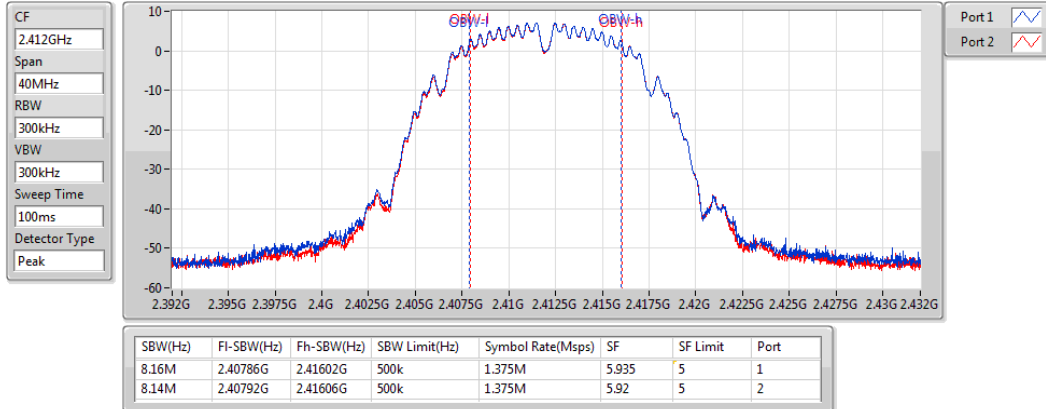
P1-SF = Port 1 spreading factor; **P2-SF** = Port 2spreading factor; **P3-SF** = Port 3spreading factor; **P4-SF** = Port 4spreading factor;

802.11b_Nss1_2TX

SBW

2412MHz_TnomVnom

22/03/2019

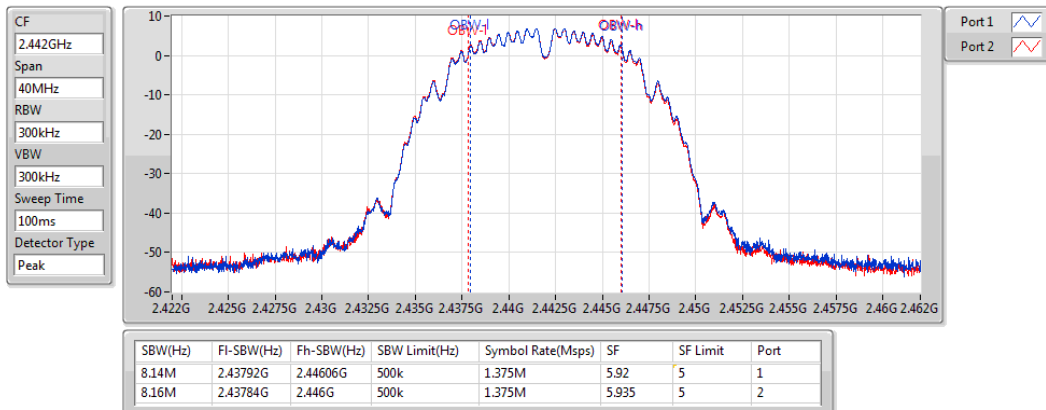


802.11b_Nss1_2TX

SBW

2442MHz_TnomVnom

22/03/2019

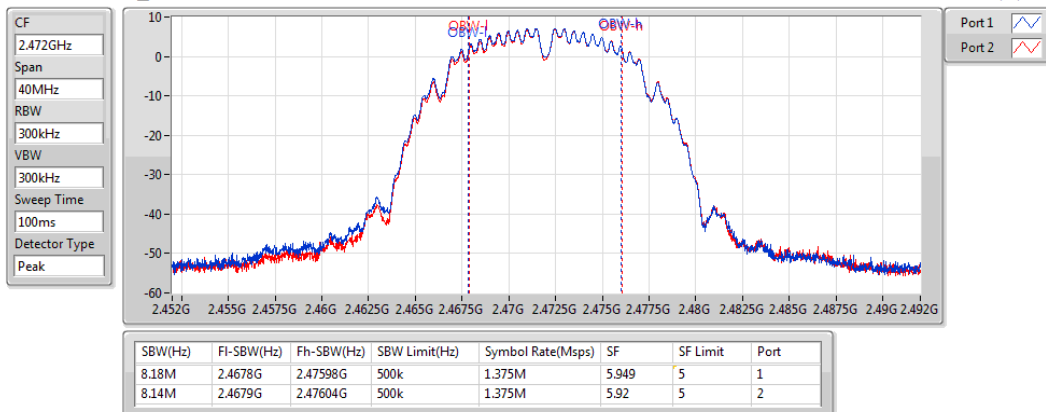


802.11b_Nss1_2TX

SBW

2472MHz_TnomVnom

22/03/2019



Summary

Mode	Antenna Power (dBm/MHz)	Antenna Power (mW/MHz)	EIRP Antenna Power (dBm/MHz)	EIRP Antenna Power (mW/MHz)
2.4-2.4835GHz	-	-	-	-
802.11b_Nss1_2TX	9.98	9.95405	11.75	14.96236
802.11g_Nss1_2TX	9.95	9.88553	11.72	14.85936
VHT20_Nss1,(MCS0)_2TX	9.88	9.72747	11.65	14.62177
VHT40_Nss1,(MCS0)_2TX	6.89	4.88652	8.66	7.34514

PD = Antenna Power (Power Density)sum by P1-PN;

P1 = Port 1 PD; P2 = Port 2 PD; P3 = Port 3 PD; P4 = Port 4 PD;;

Result

Mode	Result	Gain (dBi)	P1 (dBm/MHz)	P2 (dBm/MHz)	Antenna Power (dBm/MHz)	Antenna Power (mW/MHz)	Antenna Power Lim. (mW/MHz)	EIRP Antenna Power (dBm/MHz)	EIRP Antenna Power (mW/MHz)	EIRP Antenna Power Lim. (mW/MHz)
802.11b_Nss1_2TX	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	1.77	7.14	6.80	9.98	9.95405	10	11.75	14.96236	16.368
2442MHz_TnomVnom	Pass	1.77	6.93	6.93	9.94	9.86279	10	11.71	14.82518	16.368
2472MHz_TnomVnom	Pass	1.77	7.08	6.53	9.82	9.59401	10	11.59	14.42115	16.368
802.11g_Nss1_2TX	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	1.77	6.96	6.89	9.94	9.86279	10	11.71	14.82518	16.368
2442MHz_TnomVnom	Pass	1.77	6.84	7.03	9.95	9.88553	10	11.72	14.85936	16.368
2472MHz_TnomVnom	Pass	1.77	7.07	6.74	9.92	9.81748	10	11.69	14.75707	16.368
VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	1.77	6.87	6.74	9.82	9.59401	10	11.59	14.42115	16.368
2442MHz_TnomVnom	Pass	1.77	6.93	6.81	9.88	9.72747	10	11.65	14.62177	16.368
2472MHz_TnomVnom	Pass	1.77	6.80	6.83	9.83	9.61612	10	11.60	14.45440	16.368
VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-
2422MHz_TnomVnom	Pass	1.77	4.00	3.75	6.89	4.88652	5	8.66	7.34514	8.184
2442MHz_TnomVnom	Pass	1.77	3.90	3.68	6.80	4.78630	5	8.57	7.19449	8.184
2462MHz_TnomVnom	Pass	1.77	4.16	3.51	6.86	4.85289	5	8.63	7.29458	8.184

PD = Antenna Power (Power Density)sum by P1-PN;

P1 = Port 1 PD; P2 = Port 2 PD; P3 = Port 3 PD; P4 = Port 4 PD;

Summary

Mode	Result	Antenna Power (dBm/MHz)	Antenna Power (mW/MHz)	Declare (mW/MHz)	Tolerance (%)	Limit+ (%)	Limit- (%)
2.4-2.4835GHz	-	-	-	-	-	-	-
802.11b_Nss1_2TX	Pass	9.98	9.95405	9.95405	0.00	20	-80
802.11g_Nss1_2TX	Pass	9.95	9.88553	9.88553	0.00	20	-80
VHT20_Nss1,(MCS0)_2TX	Pass	9.88	9.72747	9.72747	0.00	20	-80
VHT40_Nss1,(MCS0)_2TX	Pass	6.89	4.88652	4.88652	0.00	20	-80

Result

Mode	Result	Antenna Power (dBm/MHz)	Antenna Power (mW/MHz)	Declare (mW/MHz)	Tolerance (%)	Limit+ (%)	Limit- (%)
802.11b_Nss1_2TX	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	9.98	9.95405	9.95405	0.00	20	-80
2442MHz_TnomVnom	Pass	9.94	9.86279	9.95405	-0.92	20	-80
2472MHz_TnomVnom	Pass	9.82	9.59401	9.95405	-3.62	20	-80
802.11g_Nss1_2TX	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	9.94	9.86279	9.88553	-0.23	20	-80
2442MHz_TnomVnom	Pass	9.95	9.88553	9.88553	0.00	20	-80
2472MHz_TnomVnom	Pass	9.92	9.81748	9.88553	-0.69	20	-80
VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	9.82	9.59401	9.72747	-1.37	20	-80
2442MHz_TnomVnom	Pass	9.88	9.72747	9.72747	0.00	20	-80
2472MHz_TnomVnom	Pass	9.83	9.61612	9.72747	-1.14	20	-80
VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-
2422MHz_TnomVnom	Pass	6.89	4.88652	4.88652	0.00	20	-80
2442MHz_TnomVnom	Pass	6.80	4.78630	4.88652	-2.05	20	-80
2462MHz_TnomVnom	Pass	6.86	4.85289	4.88652	-0.69	20	-80



CSE-TX Unwanted Emission Strength Result

Appendix D

Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Detector	Freq (MHz)	Psum (dBm)	Psum (μW/MHz)	Limit (dBm)	Limit (μW/MHz)	Loss (dB)	P1 (dBm)	P1 (μW/MHz)	P2 (dBm)	P2 (μW/MHz)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1_2TX	Pass	30M	2.387G	1M	RMS	733.56M	-35.07	0.31117	-26.02	2.5	2.29	-37.80	0.16596	-38.38	0.14521
802.11g_Nss1_2TX	Pass	30M	2.387G	1M	RMS	733.56M	-33.86	0.4113	-26.02	2.5	2.24	-36.31	0.23388	-37.51	0.17742
VHT20_Nss1,(MCS0)_2TX	Pass	2.4835G	2.4965G	1M	RMS	2.48353G	-23.08	4.9151	-16.02	25	2.15	-26.08	2.46604	-26.11	2.44906
VHT40_Nss1,(MCS0)_2TX	Pass	2.4965G	12.5G	1M	RMS	2.49775G	-36.14	0.24338	-26.02	2.5	2.21	-38.25	0.14962	-40.28	0.09376

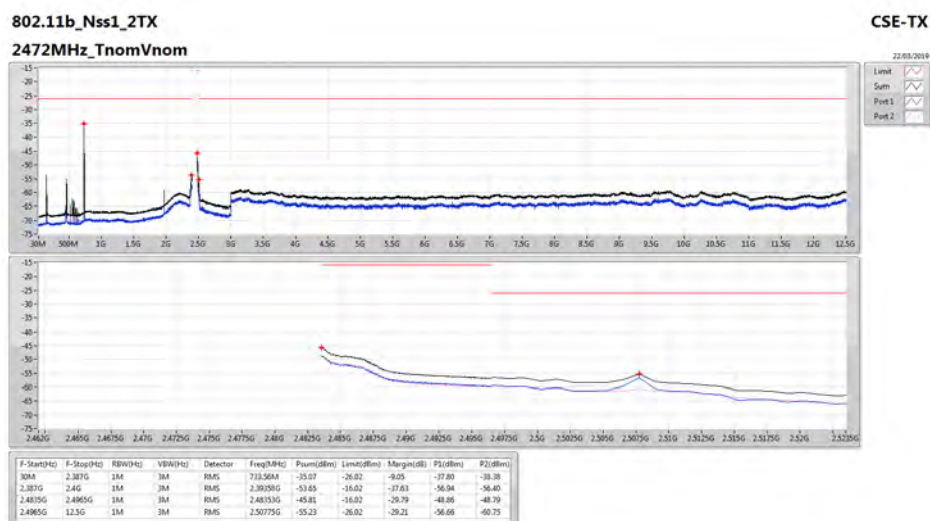
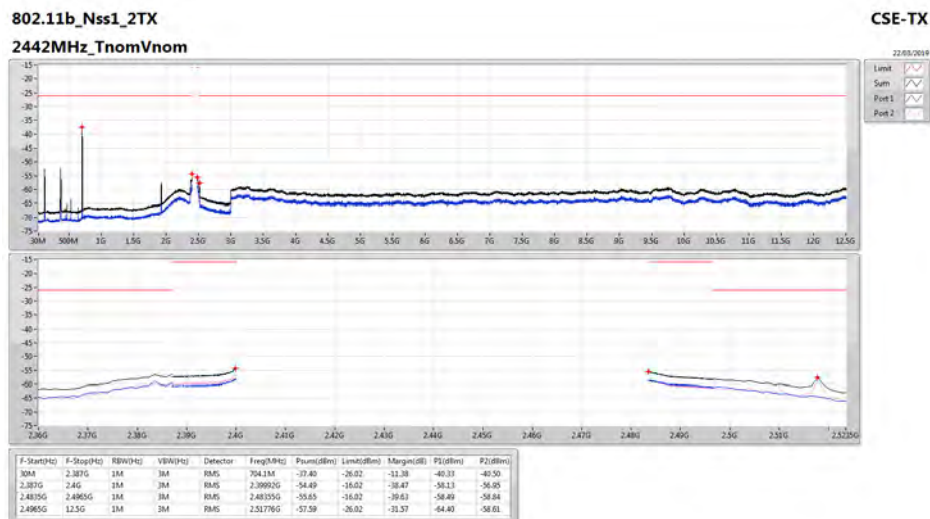
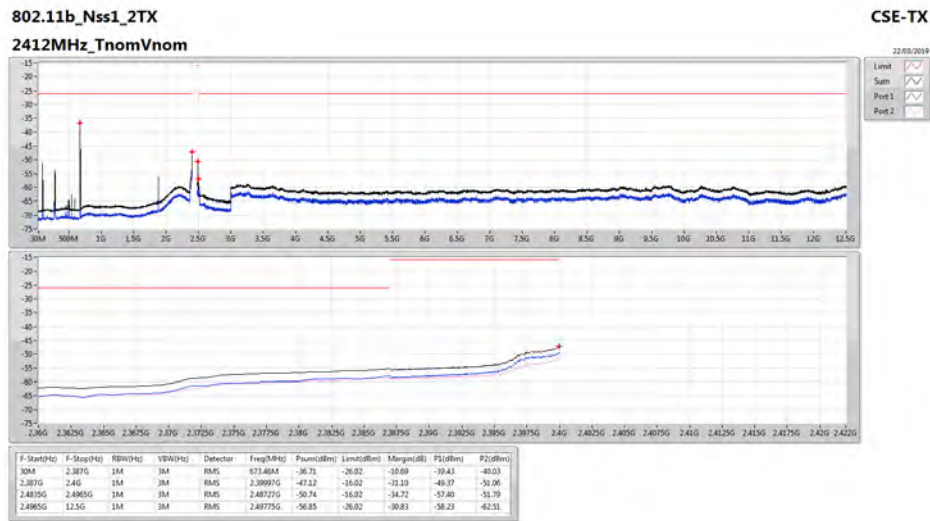


CSE-TX Unwanted Emission Strength Result

Appendix D

Result

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Detector	Freq (MHz)	Psum (dBm)	Psum (uW/MHz)	Limit (dBm)	Limit (uW/MHz)	Loss (dB)	P1 (dBm)	P1 (uW/MHz)	P2 (dBm)	P2 (uW/MHz)
802.11b_Nss1_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	30M	2.387G	1M	RMS	673.46M	-36.71	0.21334	-26.02	2.5	2.29	-39.43	0.11402	-40.03	0.09931
2412MHz_TnomVnom	Pass	2.387G	2.4G	1M	RMS	2.39997G	-47.12	0.0194	-16.02	25	2.29	-49.37	0.01156	-51.06	0.00783
2412MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	RMS	2.48727G	-50.74	0.00844	-16.02	25	2.29	-57.40	0.00182	-51.79	0.00662
2412MHz_TnomVnom	Pass	2.4965G	12.5G	1M	RMS	2.49775G	-56.85	0.00206	-26.02	2.5	2.29	-58.23	0.0015	-62.51	0.00056
2442MHz_TnomVnom	Pass	30M	2.387G	1M	RMS	704.1M	-37.40	0.18181	-26.02	2.5	2.29	-40.33	0.09268	-40.50	0.08913
2442MHz_TnomVnom	Pass	2.387G	2.4G	1M	RMS	2.39992G	-54.49	0.00356	-16.02	25	2.29	-58.13	0.00154	-56.95	0.00202
2442MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	RMS	2.48355G	-55.65	0.00272	-16.02	25	2.29	-58.49	0.00142	-58.84	0.00131
2442MHz_TnomVnom	Pass	2.4965G	12.5G	1M	RMS	2.51776G	-57.59	0.00174	-26.02	2.5	2.29	-64.40	0.00036	-58.61	0.00138
2472MHz_TnomVnom	Pass	30M	2.387G	1M	RMS	733.56M	-35.07	0.31117	-26.02	2.5	2.29	-37.80	0.16596	-38.38	0.14521
2472MHz_TnomVnom	Pass	2.387G	2.4G	1M	RMS	2.39358G	-53.65	0.00431	-16.02	25	2.29	-56.94	0.00202	-56.40	0.00229
2472MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	RMS	2.48353G	-45.81	0.02621	-16.02	25	2.29	-48.86	0.013	-48.79	0.01321
2472MHz_TnomVnom	Pass	2.4965G	12.5G	1M	RMS	2.50775G	-55.23	0.003	-26.02	2.5	2.29	-56.66	0.00216	-60.75	0.00084
802.11g_Nss1_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	30M	2.387G	1M	RMS	673.46M	-34.39	0.36397	-26.02	2.5	2.24	-37.05	0.19724	-37.78	0.16672
2412MHz_TnomVnom	Pass	2.387G	2.4G	1M	RMS	2.39997G	-25.74	2.66879	-16.02	25	2.24	-27.77	1.67109	-30.01	0.9977
2412MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	RMS	2.48732G	-50.93	0.00807	-16.02	25	2.24	-57.01	0.00199	-52.16	0.00608
2412MHz_TnomVnom	Pass	2.4965G	12.5G	1M	RMS	2.49775G	-55.93	0.00255	-26.02	2.5	2.24	-57.79	0.00166	-60.51	0.00089
2442MHz_TnomVnom	Pass	30M	2.387G	1M	RMS	704.1M	-33.99	0.39908	-26.02	2.5	2.24	-36.71	0.2133	-37.31	0.18578
2442MHz_TnomVnom	Pass	2.387G	2.4G	1M	RMS	2.39995G	-51.91	0.00644	-16.02	25	2.24	-55.43	0.00286	-54.47	0.00357
2442MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	RMS	2.48441G	-53.53	0.00443	-16.02	25	2.24	-56.42	0.00228	-56.67	0.00215
2442MHz_TnomVnom	Pass	2.4965G	12.5G	1M	RMS	2.4965G	-55.48	0.00283	-26.02	2.5	2.24	-57.89	0.00163	-59.19	0.00121
2472MHz_TnomVnom	Pass	30M	2.387G	1M	RMS	733.56M	-33.86	0.4113	-26.02	2.5	2.24	-36.31	0.23388	-37.51	0.17742
2472MHz_TnomVnom	Pass	2.387G	2.4G	1M	RMS	2.39992G	-51.70	0.00675	-16.02	25	2.24	-55.16	0.00305	-54.31	0.00371
2472MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	RMS	2.48353G	-24.57	3.49345	-16.02	25	2.24	-27.16	1.92309	-28.04	1.57036
2472MHz_TnomVnom	Pass	2.4965G	12.5G	1M	RMS	2.4965G	-51.82	0.00657	-26.02	2.5	2.24	-55.43	0.00286	-54.31	0.00371
VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	30M	2.387G	1M	RMS	673.46M	-34.79	0.33198	-26.02	2.5	2.15	-37.58	0.17458	-38.03	0.1574
2412MHz_TnomVnom	Pass	2.387G	2.4G	1M	RMS	2.39997G	-25.55	2.78533	-16.02	25	2.15	-27.96	1.59956	-29.26	1.18577
2412MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	RMS	2.4873G	-49.78	0.01053	-16.02	25	2.15	-52.47	0.00566	-53.13	0.00486
2412MHz_TnomVnom	Pass	2.4965G	12.5G	1M	RMS	2.49775G	-56.10	0.00246	-26.02	2.5	2.15	-57.96	0.0016	-60.67	0.00086
2442MHz_TnomVnom	Pass	30M	2.387G	1M	RMS	702.92M	-34.05	0.39361	-26.02	2.5	2.15	-37.28	0.18707	-36.85	0.20654
2442MHz_TnomVnom	Pass	2.387G	2.4G	1M	RMS	2.39997G	-51.69	0.00678	-16.02	25	2.15	-55.53	0.0028	-54.00	0.00398
2442MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	RMS	2.48376G	-53.45	0.00452	-16.02	25	2.15	-56.71	0.00213	-56.22	0.00239
2442MHz_TnomVnom	Pass	2.4965G	12.5G	1M	RMS	2.4965G	-55.85	0.0026	-26.02	2.5	2.15	-59.31	0.00117	-58.45	0.00143
2472MHz_TnomVnom	Pass	30M	2.387G	1M	RMS	733.56M	-33.43	0.45445	-26.02	2.5	2.15	-36.24	0.23768	-36.64	0.21677
2472MHz_TnomVnom	Pass	2.387G	2.4G	1M	RMS	2.39995G	-51.65	0.00684	-16.02	25	2.15	-55.34	0.00292	-54.07	0.00392
2472MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	RMS	2.48353G	-23.08	4.9151	-16.02	25	2.15	-26.08	2.46604	-26.11	2.44906
2472MHz_TnomVnom	Pass	2.4965G	12.5G	1M	RMS	2.4965G	-44.93	0.03215	-26.02	2.5	2.15	-47.57	0.0175	-48.34	0.01466
VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz_TnomVnom	Pass	30M	2.387G	1M	RMS	2.387G	-37.91	0.16167	-26.02	2.5	2.21	-39.83	0.10399	-42.39	0.05768
2422MHz_TnomVnom	Pass	2.387G	2.4G	1M	RMS	2.3999G	-30.43	0.90551	-16.02	25	2.21	-32.90	0.51286	-34.06	0.39264
2422MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	RMS	2.48368G	-54.01	0.00398	-16.02	25	2.21	-57.55	0.00176	-56.54	0.00222
2422MHz_TnomVnom	Pass	2.4965G	12.5G	1M	RMS	2.4965G	-55.71	0.00268	-26.02	2.5	2.21	-59.34	0.00116	-58.18	0.00152
2442MHz_TnomVnom	Pass	30M	2.387G	1M	RMS	704.1M	-38.18	0.15218	-26.02	2.5	2.21	-41.02	0.07907	-41.36	0.07311
2442MHz_TnomVnom	Pass	2.387G	2.4G	1M	RMS	2.39992G	-40.75	0.08405	-16.02	25	2.21	-42.91	0.05117	-44.83	0.03289
2442MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	RMS	2.48358G	-41.77	0.06652	-16.02	25	2.21	-43.69	0.04276	-46.24	0.02377
2442MHz_TnomVnom	Pass	2.4965G	12.5G	1M	RMS	2.499G	-52.67	0.00541	-26.02	2.5	2.21	-56.39	0.0023	-55.07	0.00311
2462MHz_TnomVnom	Pass	30M	2.387G	1M	RMS	724.14M	-37.18	0.19145	-26.02	2.5	2.21	-40.14	0.09683	-40.24	0.09462
2462MHz_TnomVnom	Pass	2.387G	2.4G	1M	RMS	2.39995G	-50.27	0.00939	-16.02	25	2.21	-53.63	0.00434	-52.96	0.00506
2462MHz_TnomVnom	Pass	2.4835G	2.4965G	1M	RMS	2.48363G	-28.71	1.34621	-16.02	25	2.21	-31.95	0.63826	-31.50	0.70795
2462MHz_TnomVnom	Pass	2.4965G	12.5G	1M	RMS	2.49775G	-36.14	0.24338	-26.02	2.5	2.21	-38.25	0.14962	-40.28	0.09376

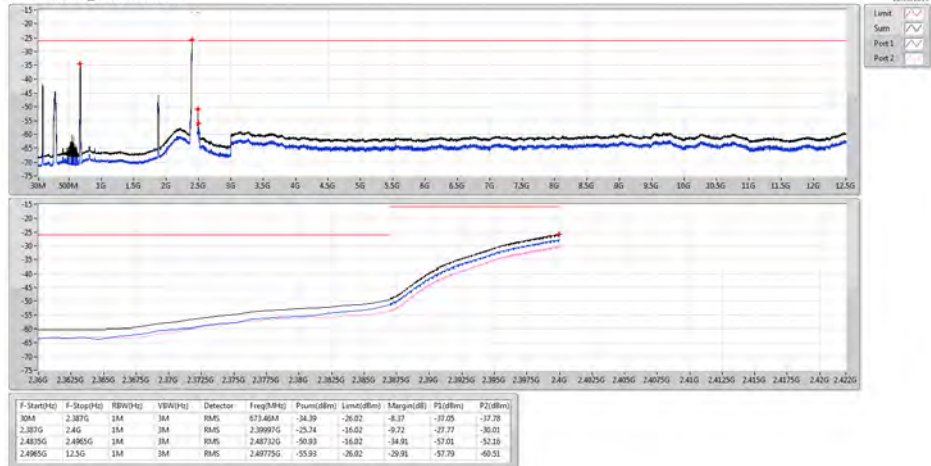


802.11g_Nss1_2TX

2412MHz_TnomVnom

CSE-TX

22/03/2019

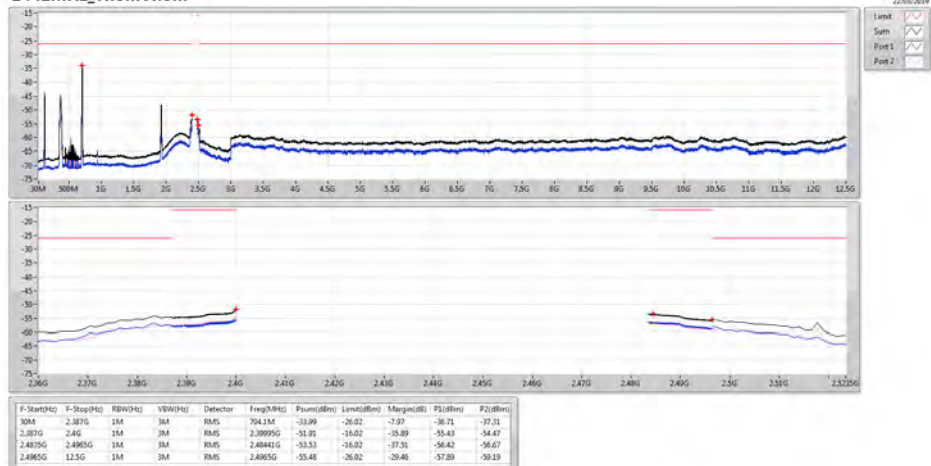


802.11g_Nss1_2TX

2442MHz_TnomVnom

CSE-TX

22/03/2019

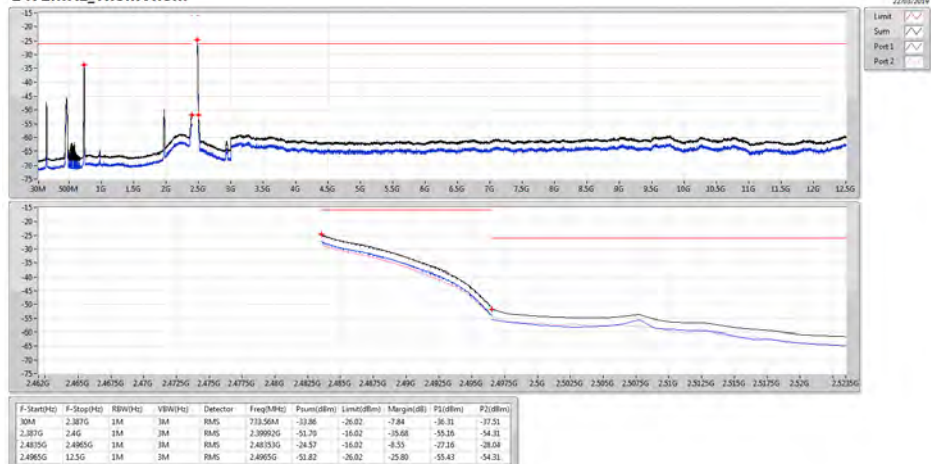


802.11g_Nss1_2TX

2472MHz_TnomVnom

CSE-TX

22/03/2019



VHT20_Nss1,(MCS0)_2TX

2412MHz_TnomVnom

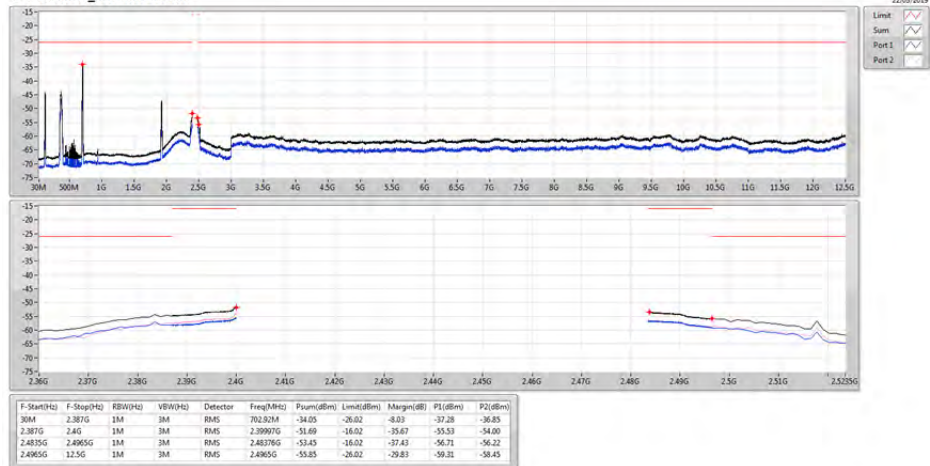
CSE-TX



VHT20_Nss1,(MCS0)_2TX

2442MHz_TnomVnom

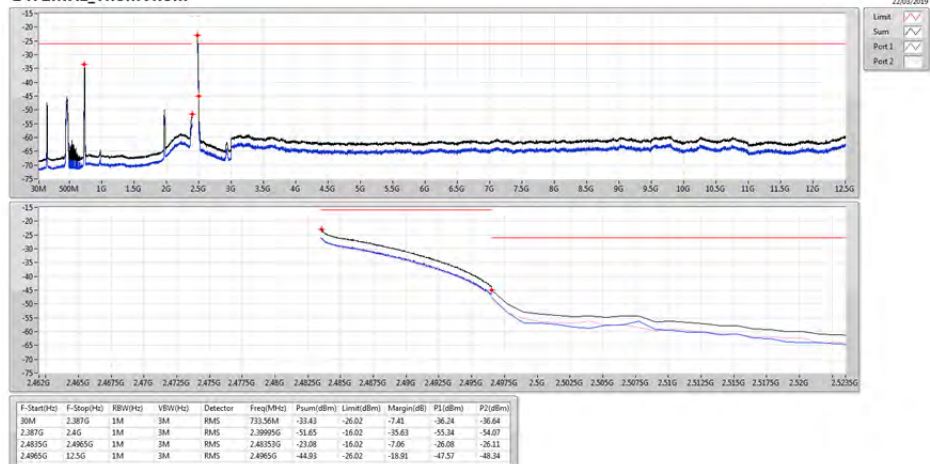
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VHT20_Nss1,(MCS0)_2TX

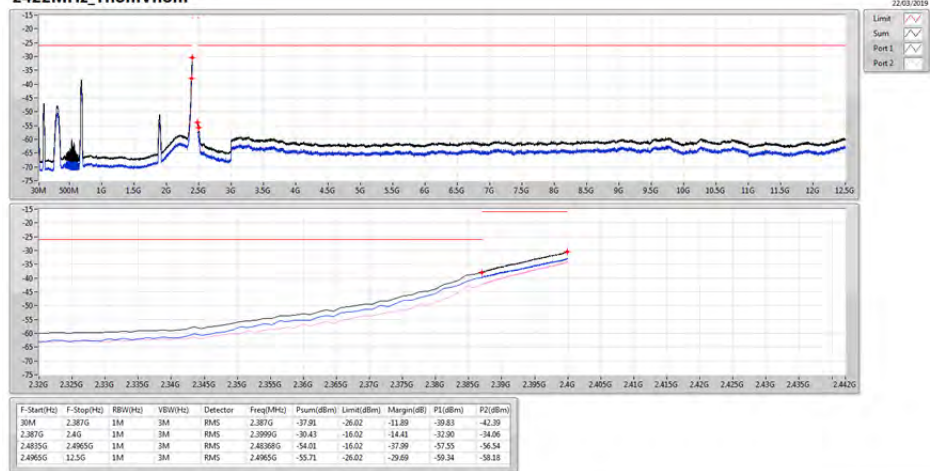
2472MHz_TnomVnom

CSE-TX



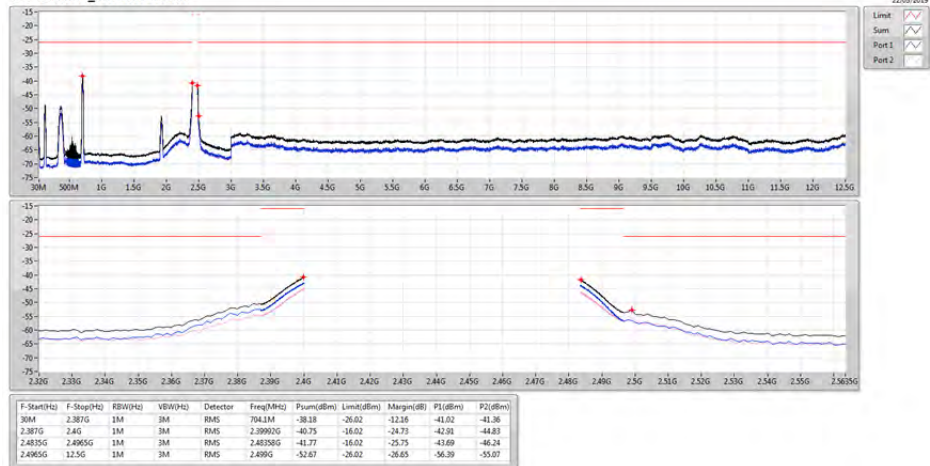
VHT40_Nss1,(MCS0)_2TX
2422MHz_TnomVnom

CSE-TX



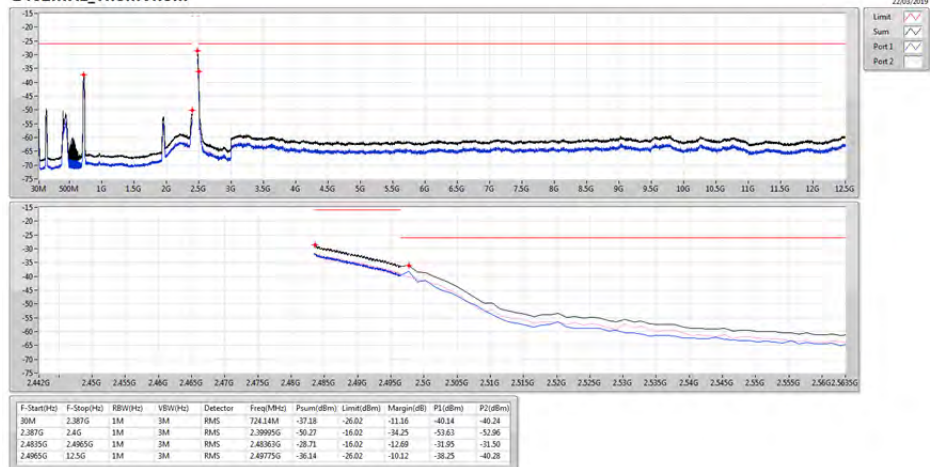
VHT40_Nss1,(MCS0)_2TX
2442MHz_TnomVnom

CSE-TX



VHT40_Nss1,(MCS0)_2TX
2462MHz_TnomVnom

CSE-TX





CSE-RX Secondary Radiated Emissions Result

Appendix E

Summary

Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Detector	Freq (MHz)	Psum (dBm)	Psum (nW/MHz)	Limit (dBm)	Limit (nW/MHz)	Loss (dB)	P1 (dBm)	P1 (nW/MHz)	P2 (dBm)	P2 (nW/MHz)
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1_2TX	Pass	30M	1G	100k	RMS	314.21M	-82.69	0.00539	-53.98	4	2.10	-85.09	0.0031	-86.40	0.00229
802.11g_Nss1_2TX	Pass	30M	1G	100k	RMS	420.91M	-82.75	0.00531	-53.98	4	2.10	-85.66	0.00272	-85.86	0.00259
VHT20_Nss1,(MCS0)_2TX	Pass	30M	1G	100k	RMS	708.03M	-82.79	0.00525	-53.98	4	2.10	-86.11	0.00245	-85.52	0.00281
VHT40_Nss1,(MCS0)_2TX	Pass	30M	1G	100k	RMS	896.21M	-82.77	0.00528	-53.98	4	2.10	-85.95	0.00254	-85.62	0.00274



CSE-RX Secondary Radiated Emissions Result

Appendix E

Result

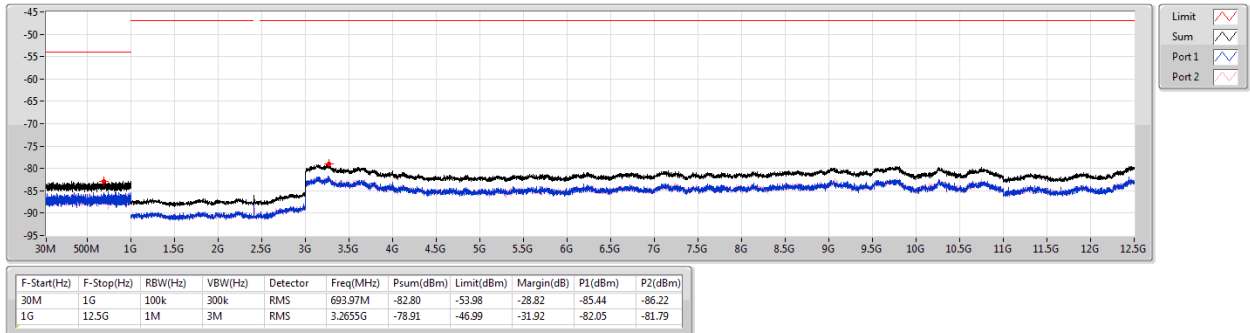
Mode	Result	F-Start (Hz)	F-Stop (Hz)	RBW (Hz)	Detector	Freq (MHz)	Psum (dBm)	Psum (nW/MHz)	Limit (dBm)	Limit (nW/MHz)	Loss (dB)	P1 (dBm)	P1 (nW/MHz)	P2 (dBm)	P2 (nW/MHz)
802.11b_Nss1_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	30M	1G	100k	RMS	693.97M	-82.80	0.00525	-53.98	4	2.10	-85.44	0.00286	-86.22	0.00239
2412MHz_TnomVnom	Pass	1G	12.5G	1M	RMS	3.2655G	-78.91	0.01286	-46.99	20	2.10	-82.05	0.00624	-81.79	0.00662
2442MHz_TnomVnom	Pass	30M	1G	100k	RMS	346.22M	-82.78	0.00527	-53.98	4	2.10	-86.12	0.00244	-85.48	0.00283
2442MHz_TnomVnom	Pass	1G	12.5G	1M	RMS	3.277G	-79.05	0.01244	-46.99	20	2.10	-82.25	0.00596	-81.88	0.00649
2472MHz_TnomVnom	Pass	30M	1G	100k	RMS	314.21M	-82.69	0.00539	-53.98	4	2.10	-85.09	0.0031	-86.40	0.00229
2472MHz_TnomVnom	Pass	1G	12.5G	1M	RMS	3.14763G	-79.11	0.01228	-46.99	20	2.10	-82.07	0.00621	-82.17	0.00607
802.11g_Nss1_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	30M	1G	100k	RMS	36.79M	-82.90	0.00512	-53.98	4	2.10	-85.51	0.00281	-86.36	0.00231
2412MHz_TnomVnom	Pass	1G	12.5G	1M	RMS	3.1505G	-79.10	0.01229	-46.99	20	2.10	-81.99	0.00632	-82.24	0.00597
2442MHz_TnomVnom	Pass	30M	1G	100k	RMS	414.61M	-82.81	0.00523	-53.98	4	2.10	-86.14	0.00243	-85.53	0.0028
2442MHz_TnomVnom	Pass	1G	12.5G	1M	RMS	3.25975G	-79.09	0.01233	-46.99	20	2.10	-81.91	0.00644	-82.30	0.00589
2472MHz_TnomVnom	Pass	30M	1G	100k	RMS	420.91M	-82.75	0.00531	-53.98	4	2.10	-85.66	0.00272	-85.86	0.00259
2472MHz_TnomVnom	Pass	1G	12.5G	1M	RMS	3.1045G	-79.00	0.01258	-46.99	20	2.10	-82.03	0.00627	-82.00	0.00631
VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz_TnomVnom	Pass	30M	1G	100k	RMS	708.03M	-82.79	0.00525	-53.98	4	2.10	-86.11	0.00245	-85.52	0.00281
2412MHz_TnomVnom	Pass	1G	12.5G	1M	RMS	3.13469G	-79.04	0.01247	-46.99	20	2.10	-81.81	0.00659	-82.31	0.00587
2442MHz_TnomVnom	Pass	30M	1G	100k	RMS	774.48M	-82.85	0.00519	-53.98	4	2.10	-86.27	0.00236	-85.48	0.00283
2442MHz_TnomVnom	Pass	1G	12.5G	1M	RMS	3.29138G	-79.08	0.01235	-46.99	20	2.10	-81.88	0.00649	-82.32	0.00586
2472MHz_TnomVnom	Pass	30M	1G	100k	RMS	965.08M	-82.98	0.00503	-53.98	4	2.10	-85.20	0.00302	-86.96	0.00201
2472MHz_TnomVnom	Pass	1G	12.5G	1M	RMS	3.26981G	-78.93	0.0128	-46.99	20	2.10	-81.82	0.00658	-82.06	0.00622
VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz_TnomVnom	Pass	30M	1G	100k	RMS	896.21M	-82.77	0.00528	-53.98	4	2.10	-85.95	0.00254	-85.62	0.00274
2422MHz_TnomVnom	Pass	1G	12.5G	1M	RMS	3.25113G	-79.01	0.01256	-46.99	20	2.10	-81.99	0.00632	-82.05	0.00624
2442MHz_TnomVnom	Pass	30M	1G	100k	RMS	942.77M	-82.84	0.0052	-53.98	4	2.10	-85.99	0.00252	-85.72	0.00268
2442MHz_TnomVnom	Pass	1G	12.5G	1M	RMS	3.25975G	-78.91	0.01284	-46.99	20	2.10	-81.80	0.00661	-82.05	0.00624
2462MHz_TnomVnom	Pass	30M	1G	100k	RMS	586.3M	-82.86	0.00517	-53.98	4	2.10	-85.44	0.00286	-86.35	0.00232
2462MHz_TnomVnom	Pass	1G	12.5G	1M	RMS	3.12463G	-78.88	0.01294	-46.99	20	2.10	-81.88	0.00649	-81.90	0.00646

802.11b_Nss1_2TX

2412MHz_TnomVnom

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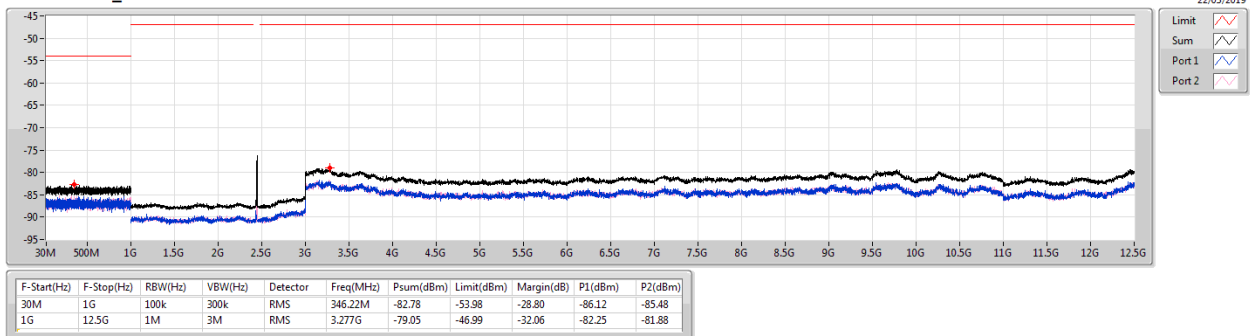


802.11b_Nss1_2TX

2442MHz_TnomVnom

CSE-RX

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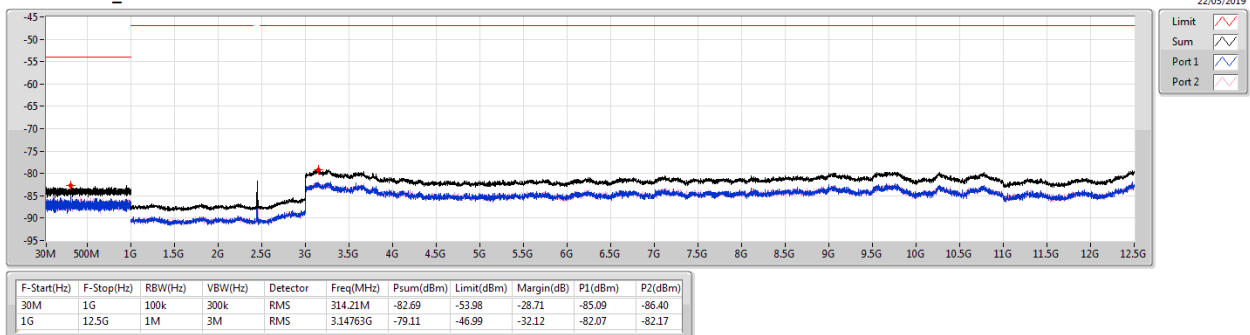


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2472MHz_TnomVnom

CSE-RX

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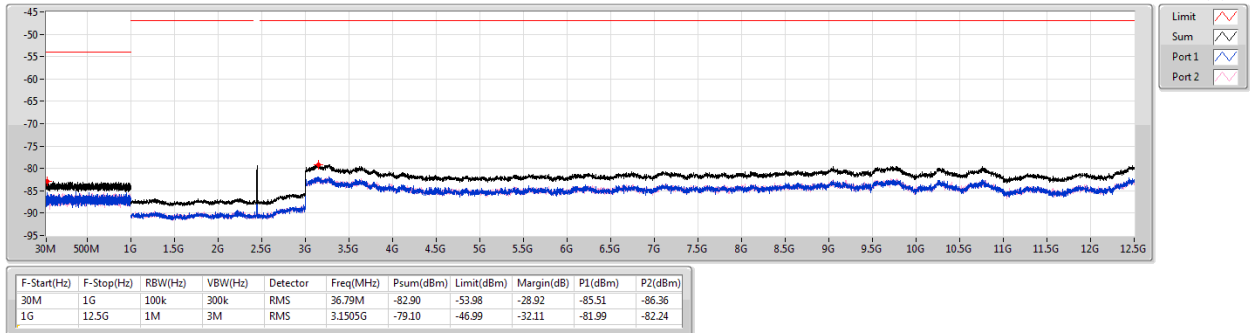


802.11g_Nss1_2TX

2412MHz_TnomVnom

CSE-RX

22/03/2019

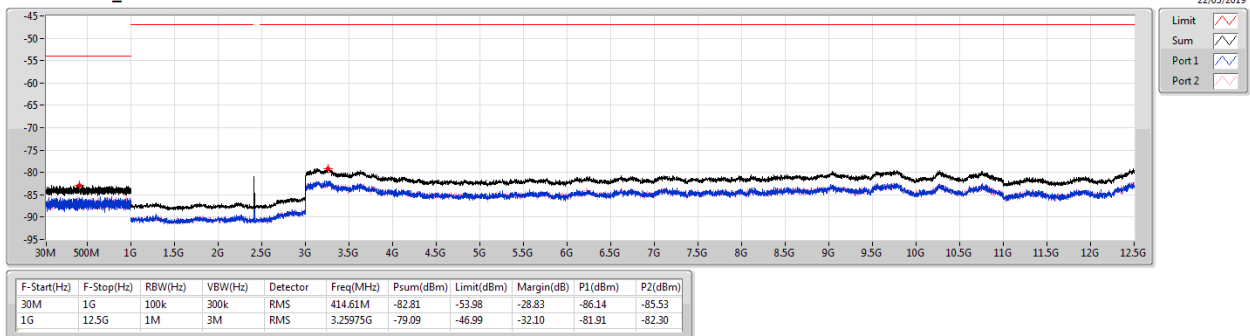


802.11g_Nss1_2TX

2442MHz_TnomVnom

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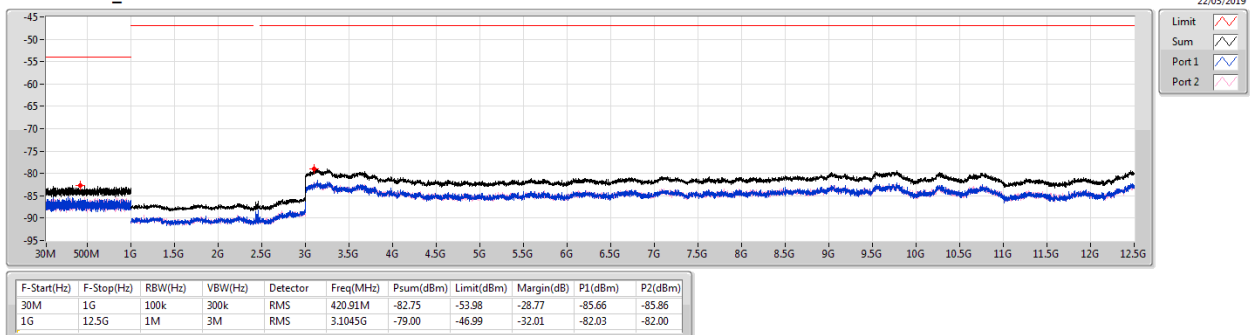


802.11g_Nss1_2TX

2472MHz_TnomVnom

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22/03/2019

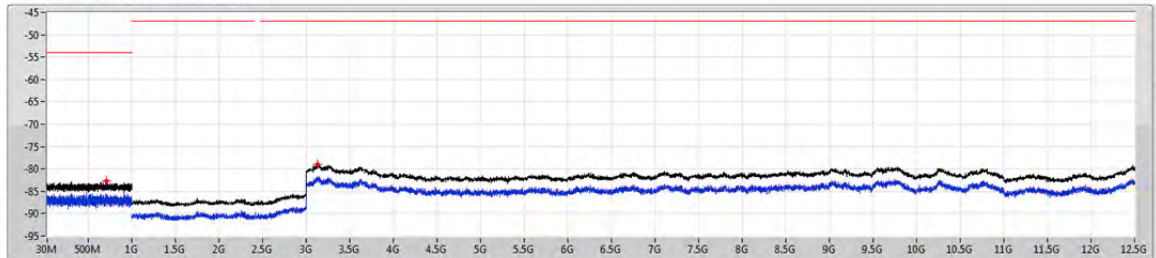


VHT20_Nss1,(MCS0)_2TX

2412MHz_TnomVnom

CSE-RX

22/03/2019



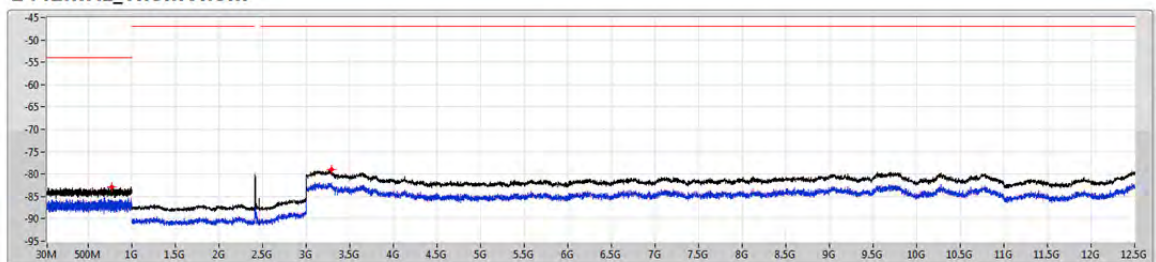
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30M	1G	100k	300k	RMS	708.03M	-82.79	-53.98	-28.81	-86.11	-85.52
1G	12.5G	1M	3M	RMS	3.13469G	-79.04	-46.99	-32.05	-81.81	-82.31

VHT20_Nss1,(MCS0)_2TX

2442MHz_TnomVnom

CSE-RX

22/03/2019



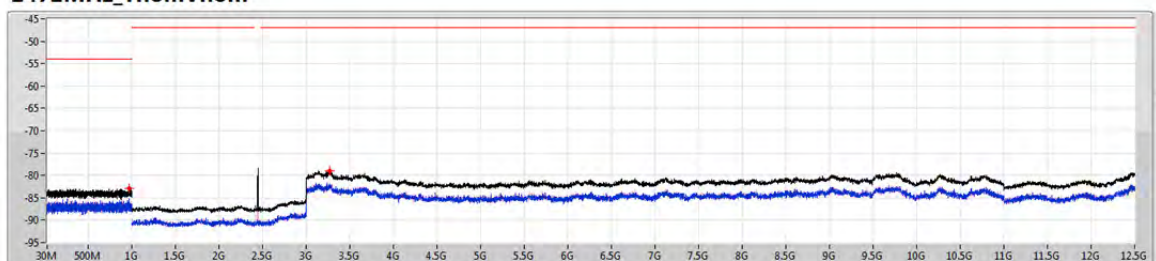
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30M	1G	100k	300k	RMS	774.48M	-82.85	-53.98	-28.87	-86.27	-85.48
1G	12.5G	1M	3M	RMS	3.29138G	-79.08	-46.99	-32.09	-81.88	-82.32

VHT20_Nss1,(MCS0)_2TX

2472MHz_TnomVnom

CSE-RX

22/03/2019



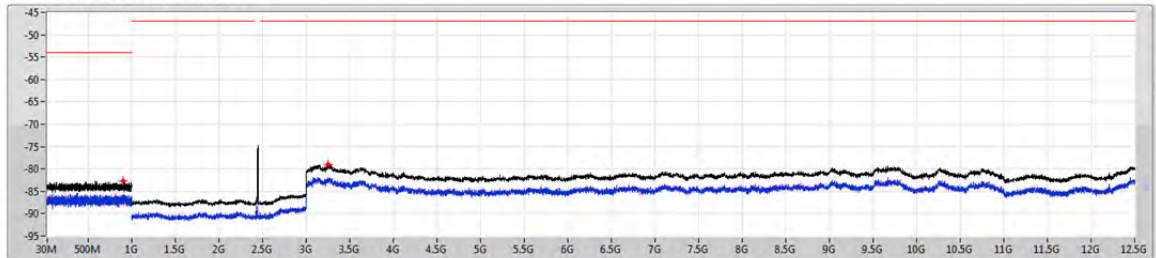
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30M	1G	100k	300k	RMS	965.08M	-82.98	-53.98	-29.00	-85.20	-86.96
1G	12.5G	1M	3M	RMS	3.26981G	-78.93	-46.99	-31.94	-81.82	-82.06

VHT40_Nss1,(MCS0)_2TX

2422MHz_TnomVnom

CSE-RX

22/03/2019



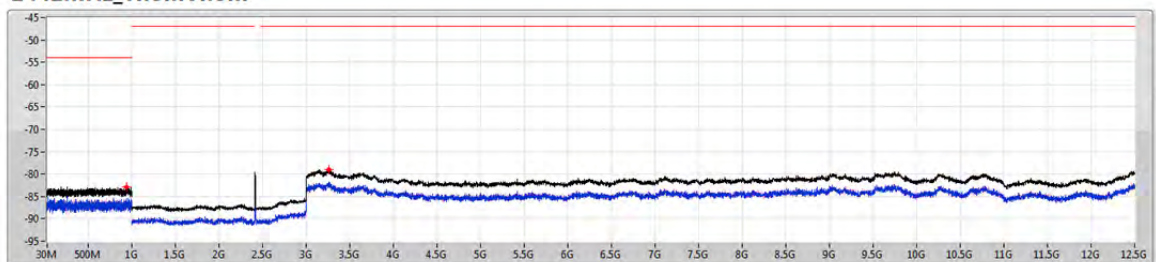
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30M	1G	100k	300k	RMS	896.21M	-82.77	-53.98	-28.79	-85.95	-85.62
1G	12.5G	1M	3M	RMS	3.25113G	-79.01	-46.99	-32.02	-81.99	-82.05

VHT40_Nss1,(MCS0)_2TX

2442MHz_TnomVnom

CSE-RX

22/03/2019



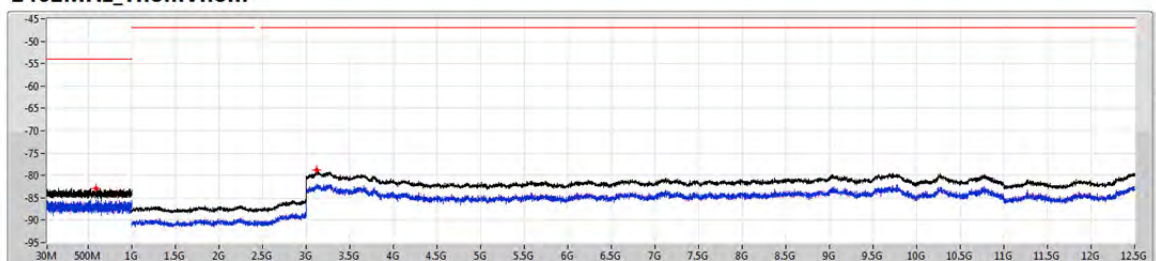
F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)	P2(dBm)
30M	1G	100k	300k	RMS	942.77M	-82.84	-53.98	-28.86	-85.99	-85.72
1G	12.5G	1M	3M	RMS	3.25975G	-78.91	-46.99	-31.92	-81.80	-82.05

VHT40_Nss1,(MCS0)_2TX

2462MHz_TnomVnom

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F-Start(Hz)	F-Stop(Hz)	RBW(Hz)	VBW(Hz)	Detector	Freq(MHz)	Psum(dBm)	Limit(dBm)	Margin(dB)	P1(dBm)	P2(dBm)
30M	1G	100k	300k	RMS	586.3M	-82.86	-53.98	-28.88	-85.44	-86.35
1G	12.5G	1M	3M	RMS	3.12463G	-78.88	-46.99	-31.89	-81.88	-81.90



Interference Prevention Function Result

Appendix F

Summary

Mode	Result	MAC	ID Length	ID Limit	Function
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1_2TX	Pass	0C:9D:92:4E:88:90	48 bits	48 bits	Good
802.11g_Nss1_2TX	Pass	0C:9D:92:4E:88:90	48 bits	48 bits	Good
VHT20_Nss1,(MCS0)_2TX	Pass	0C:9D:92:4E:88:90	48 bits	48 bits	Good
VHT40_Nss1,(MCS0)_2TX	Pass	0C:9D:92:4E:88:90	48 bits	48 bits	Good

**Result**

Mode	Result	ID Length	ID Limit	Function
802.11b_Nss1_2TX	-	-	-	-
2412MHz_TnomVnom	Pass	48 bits	48 bits	Good
2442MHz_TnomVnom	Pass	48 bits	48 bits	Good
2472MHz_TnomVnom	Pass	48 bits	48 bits	Good
802.11g_Nss1_2TX	-	-	-	-
2412MHz_TnomVnom	Pass	48 bits	48 bits	Good
2442MHz_TnomVnom	Pass	48 bits	48 bits	Good
2472MHz_TnomVnom	Pass	48 bits	48 bits	Good
VHT20_Nss1,(MCS0)_2TX	-	-	-	-
2412MHz_TnomVnom	Pass	48 bits	48 bits	Good
2442MHz_TnomVnom	Pass	48 bits	48 bits	Good
2472MHz_TnomVnom	Pass	48 bits	48 bits	Good
VHT40_Nss1,(MCS0)_2TX	-	-	-	-
2422MHz_TnomVnom	Pass	48 bits	48 bits	Good
2442MHz_TnomVnom	Pass	48 bits	48 bits	Good
2462MHz_TnomVnom	Pass	48 bits	48 bits	Good



Summary

Mode	Result	Interference Pin (dBm)	Function
2.4-2.4835GHz	-	-	-
802.11b_Nss1_2TX	Pass	OBW<26MHz	w/o test
802.11g_Nss1_2TX	Pass	OBW<26MHz	w/o test
VHT20_Nss1,(MCS0)_2TX	Pass	OBW<26MHz	w/o test
VHT40_Nss1,(MCS0)_2TX	Pass	Undefined	Good

Result

Mode	Result	Interference Pin (dBm)	Function
802.11b_Nss1_2TX	-	-	-
2412MHz_TnomVnom	Pass	OBW<26MHz	w/o test
2442MHz_TnomVnom	Pass	OBW<26MHz	w/o test
2472MHz_TnomVnom	Pass	OBW<26MHz	w/o test
802.11g_Nss1_2TX	-	-	-
2412MHz_TnomVnom	Pass	OBW<26MHz	w/o test
2442MHz_TnomVnom	Pass	OBW<26MHz	w/o test
2472MHz_TnomVnom	Pass	OBW<26MHz	w/o test
VHT20_Nss1,(MCS0)_2TX	-	-	-
2412MHz_TnomVnom	Pass	OBW<26MHz	w/o test
2442MHz_TnomVnom	Pass	OBW<26MHz	w/o test
2472MHz_TnomVnom	Pass	OBW<26MHz	w/o test
VHT40_Nss1,(MCS0)_2TX	-	-	-
2422MHz_TnomVnom	Pass	Undefined	Good
2442MHz_TnomVnom	Pass	Undefined	Good
2462MHz_TnomVnom	Pass	Undefined	Good