FCC Test Report

FCC ID	:	**R33EAV2WIFI**
Equipment	:	**EA-V2 WiFi Module**
Model No.	:	**EA-V2 WiFi Module**
Brand Name	:	**Control4**
Applicant	:	**Control4**
Address	:	**11734 S. Election Road, Draper, UT 84020**
Standard	:	**47 CFR FCC Part 15.247**
Received Date	:	**Mar. 20, 2018**
Tested Date	:	**Mar. 21 ~ Mar. 27, 2018**

We, International Certification Corp., would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by: **Approved by:**

Along Chen / Assistant Manager **Gary Chang / Manager**

Testing Laboratory 2732

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Release Record

Report No.	Version	Description	Issued Date
FR832002	Rev. 01	Initial issue	Apr. 12, 2018

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.454MHz 38.40 (Margin -18.40dB) - QP	Pass
15.247(d) 15.209	Radiated Emissions	[dBuV/m at 3m]: 4824.00MHz 52.99 (Margin -1.01dB) – AV [dBuV/m at 3m]: 2390.00MHz 72.99 (Margin -1.01dB) – PK [dBuV/m at 3m]: 2483.50MHz 52.99 (Margin -1.01dB) - AV	Pass
15.247(b)(3)	Maximum Output Power	Max Power [dBm]: 25.86	Pass
15.247(a)(2)	6dB Bandwidth	Meet the requirement of limit	Pass
15.247(e)	Power Spectral Density	Meet the requirement of limit	Pass
15.203	Antenna Requirement	Meet the requirement of limit	Pass

1 General Description

1.1 Information

1.1.1 Specification of the Equipment under Test (EUT)

RF General Information					
Frequency Range (MHz)	**IEEE Std. 802.11**	**Ch. Freq. (MHz)**	**Channel Number**	**Transmit Chains (N_{TX})**	**Data Rate / MCS**
2400-2483.5	b	2412-2462	1-11 [11]	1	1-11 Mbps
2400-2483.5	g	2412-2462	1-11 [11]	1	6-54 Mbps
2400-2483.5	n (HT20)	2412-2462	1-11 [11]	1	MCS 0-7
2400-2483.5	n (HT40)	2422-2452	3-9 [7]	1	MCS 0-7
Note 1: RF output power specifies that Maximum Peak Conducted Output Power. Note 2: 802.11b uses a combination of DSSS-DBPSK, DQPSK, CCK modulation. Note 3: 802.11g/n uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.					

1.1.2 Antenna Details

Ant. No.	Model	Type	Gain (dBi)	Connector
1	CSL-AN2400-100840-B01	Dipole	2	R-SMA

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	3.3Vdc from host

1.1.4 Accessories

N/A

1.1.5 Channel List

Frequency band (MHz)		2400~2483.5	
802.11 b / g / n HT20		802.11n HT40	
Channel	Frequency(MHz)	Channel	Frequency(MHz)
1	2412	3	2422
2	2417	4	2427
3	2422	5	2432
4	2427	6	2437
5	2432	7	2442
6	2437	8	2447
7	2442	9	2452
8	2447	---	---
9	2452	---	---
10	2457	---	---
11	2462	---	---

1.1.6 Test Tool and Duty Cycle

Test Tool	Realtek, V0.0026		
Duty Cycle and Duty Factor	Mode	Duty cycle (%)	Duty factor (dB)
	11b	100.00%	0.00
	11g	100.00%	0.00
	HT20	100.00%	0.00
	HT40	100.00%	0.00

1.1.7 Power Setting

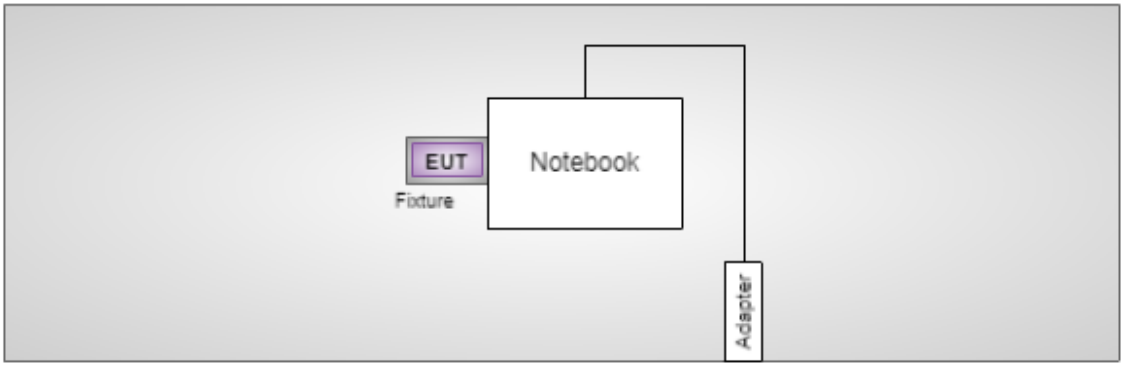
Modulation Mode	Test Frequency (MHz)	Power Set
11b	2412	41
11b	2437	42
11b	2462	46
11g	2412	48
11g	2437	63
11g	2462	50
HT20	2412	48
HT20	2437	63
HT20	2462	50
HT40	2422	47
HT40	2437	52
HT40	2452	47

1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Signal cable / Length (m)**
1	Notebook	DELL	Latitude E6430	DoC	---
2	Fixture	---	---	---	---

1.3 Test Setup Chart

Test Setup Diagram



1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Mar. 27, 2018				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101657	Jan. 05, 2018	Jan. 04, 2019
LISN	SCHWARZBECK	Schwarzbeck 8127	8127-667	Nov. 13, 2017	Nov. 12, 2018
RF Cable-CON	EMC	EMCCFD300-BM-BM-6000	50821	Dec. 18, 2017	Dec. 17, 2018
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Tested Date	Mar. 21, 2018				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101498	Dec. 04, 2017	Dec. 03, 2018
Receiver	R&S	ESR3	101658	Nov. 20, 2017	Nov. 19, 2018
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Jul. 25, 2017	Jul. 24, 2018
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 20, 2017	Dec. 19, 2018
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 23, 2017	Nov. 22, 2018
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 13, 2017	Nov. 12, 2018
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Dec. 07, 2017	Dec. 06, 2018
Preamplifier	EMC	EMC02325	980225	Jul. 28, 2017	Jul. 27, 2018
Preamplifier	Agilent	83017A	MY39501308	Oct. 06, 2017	Oct. 05, 2018
Preamplifier	EMC	EMC184045B	980192	Aug. 22, 2017	Aug. 21, 2018
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16014/4	Dec. 07, 2017	Dec. 06, 2018
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Dec. 07, 2017	Dec. 06, 2018
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16139/4	Dec. 07, 2017	Dec. 06, 2018
LF cable 1M	EMC	EMCCFD400-NM-NM-1000	16052	Dec. 07, 2017	Dec. 06, 2018
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Dec. 07, 2017	Dec. 06, 2018
LF cable 10M	Woken	CFD400NL-LW	CFD400NL-002	Dec. 07, 2017	Dec. 06, 2018
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	RF Conducted				
Test Site	(TH01-WS)				
Tested Date	Mar. 26, 2018				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101499	Jan. 03, 2018	Jan. 02, 2019
Power Meter	Anritsu	ML2495A	1241002	Oct. 16, 2017	Oct. 15, 2018
Power Sensor	Anritsu	MA2411B	1207366	Oct. 16, 2017	Oct. 15, 2018
DC POWER SOURCE	GW INSTEK	GPC-6030D	EM892433	Oct. 26, 2017	Oct. 25, 2018
Measurement Software	Sporton	Sporton_1	1.3.30	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Test Standards

According to the specification of EUT, the EUT must comply with following standards and KDB documents.

47 CFR FCC Part 15.247
ANSI C63.10-2013
FCC KDB 558074 D01 DTS Meas Guidance v04

1.6 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)

Measurement Uncertainty	
Parameters	**Uncertainty**
Bandwidth	±34.134 Hz
Conducted power	±0.808 dB
Power density	±0.463 dB
Conducted emission	±2.670 dB
AC conducted emission	±2.90 dB
Radiated emission ≤ 1GHz	±3.66 dB
Radiated emission > 1GHz	±5.63 dB

2 Test Configuration

2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	22°C / 57%	Alex Tsai
Radiated Emissions	03CH01-WS	22°C / 62%	Aska Huang Vincent Yeh
RF Conducted	TH01-WS	21°C / 64%	Brad Wu

- FCC Designation No.: TW2732
- FCC site registration No.: 181692
- IC site registration No.: 10807A-1

2.2 The Worst Test Modes and Channel Details

Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Configuration
Conducted Emissions	11g	2437	6 Mbps	---
Radiated Emissions ≤1GHz	11g	2437	6 Mbps	---
Radiated Emissions >1GHz Maximum Output Power 6dB bandwidth Power spectral density	11b 11g HT20 HT40	2412 / 2437 / 2462 2412 / 2437 / 2462 2412 / 2437 / 2462 2422 / 2437 / 2452	1 Mbps 6 Mbps MCS 0 MCS 0	---

3 Transmitter Test Results

3.1 Conducted Emissions

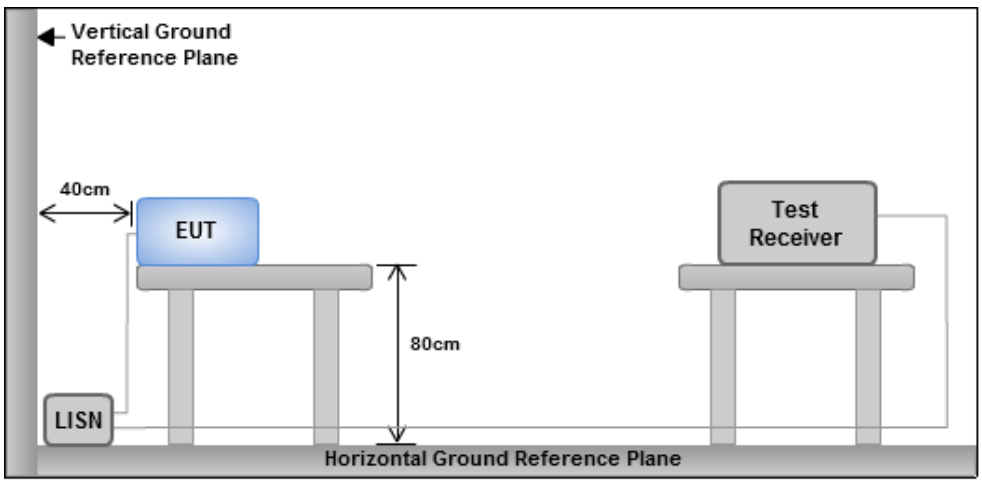
3.1.1 Limit of Conducted Emissions

Conducted Emissions Limit		
Frequency Emission (MHz)	**Quasi-Peak**	**Average**
0.15-0.5	66 - 56 *	56 - 46 *
0.5-5	56	46
5-30	60	50
Note 1: * Decreases with the logarithm of the frequency.		

3.1.2 Test Procedures

1. The device is placed on a test table, raised 80 cm above the reference ground plane. The vertical conducting plane is located 40 cm to the rear of the device.
2. The device is connected to line impedance stabilization network (LISN) and other accessories are connected to other LISN. Measured levels of AC power line conducted emission are across the 50 Ω LISN port.
3. AC conducted emission measurements is made over frequency range from 150 kHz to 30 MHz.
4. This measurement was performed with AC 120V / 60Hz.

3.1.3 Test Setup

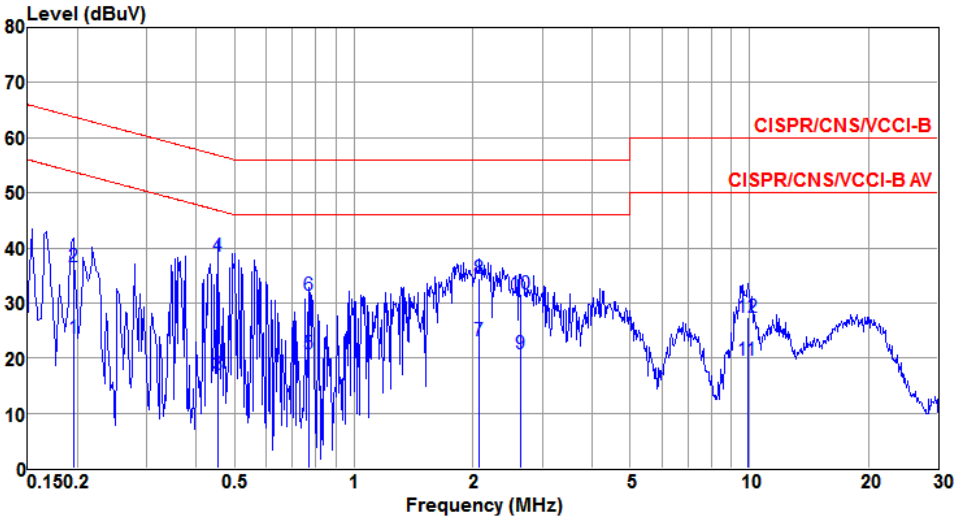


Note: 1. Support units were connected to second LISN.

2. Both of LISNs (AMN) are 80 cm from EUT and at least 80 cm from other units and other metal planes

3.1.4 Test Result of Conducted Emissions

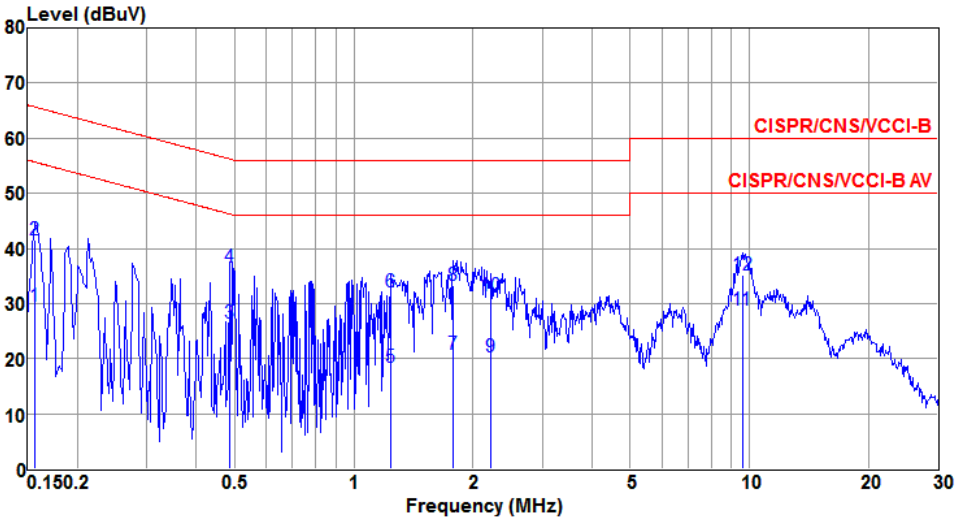
Modulation	11g	Test Freq. (MHz)	2437
Power Phase	Line		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.195	23.50	53.80	-30.30	23.39	0.08	0.03	Average
2	0.195	36.63	63.80	-27.17	36.52	0.08	0.03	QP
3	0.454	16.96	46.80	-29.84	16.86	0.08	0.02	Average
4@	0.454	38.40	56.80	-18.40	38.30	0.08	0.02	QP
5	0.767	20.66	46.00	-25.34	20.54	0.09	0.03	Average
6	0.767	31.35	56.00	-24.65	31.23	0.09	0.03	QP
7	2.077	23.11	46.00	-22.89	22.89	0.11	0.11	Average
8	2.077	34.55	56.00	-21.45	34.33	0.11	0.11	QP
9	2.650	20.84	46.00	-25.16	20.57	0.12	0.15	Average
10	2.650	31.67	56.00	-24.33	31.40	0.12	0.15	QP
11	9.913	19.61	50.00	-30.39	19.09	0.20	0.32	Average
12	9.913	27.49	60.00	-32.51	26.97	0.20	0.32	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

Modulation	11g	Test Freq. (MHz)	2437
Power Phase	Neutral		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.156	29.50	55.69	-26.19	29.45	0.04	0.01	Average
2	0.156	41.64	65.69	-24.05	41.59	0.04	0.01	QP
3	0.484	26.34	46.27	-19.93	26.28	0.04	0.02	Average
4@	0.484	36.57	56.27	-19.70	36.51	0.04	0.02	QP
5	1.236	18.39	46.00	-27.61	18.28	0.06	0.05	Average
6	1.236	32.15	56.00	-23.85	32.04	0.06	0.05	QP
7	1.781	20.79	46.00	-25.21	20.63	0.07	0.09	Average
8	1.781	33.19	56.00	-22.81	33.03	0.07	0.09	QP
9	2.225	20.36	46.00	-25.64	20.17	0.07	0.12	Average
10	2.225	31.43	56.00	-24.57	31.24	0.07	0.12	QP
11	9.603	28.69	50.00	-21.31	28.20	0.17	0.32	Average
12	9.603	35.21	60.00	-24.79	34.72	0.17	0.32	QP

Note 1: Level (dBuV) = Read Level (dBuV) + LISN Factor (dB) + Cable Loss (dB).
2: Over Limit (dB) = Level (dBuV) – Limit Line (dBuV).

3.2 6dB and Occupied Bandwidth

3.2.1 Limit of 6dB Bandwidth

The minimum 6dB bandwidth shall be at least 500 kHz.

3.2.2 Test Procedures

6dB Bandwidth

1. Set resolution bandwidth (RBW) = 100 kHz, Video bandwidth = 300 kHz.
2. Detector = Peak, Trace mode = max hold.
3. Sweep = auto couple, Allow the trace to stabilize.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower) that are attenuated by 6dB relative to the maximum level measured in the fundamental emission.

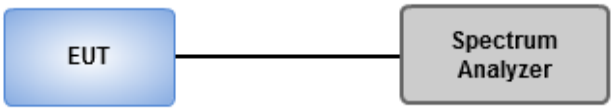
Occupied Bandwidth

1. Set resolution bandwidth (RBW) = 1 MHz, Video bandwidth = 3 MHz.
2. Detector = Sample, Trace mode = max hold.

3 Sweep = auto couple, Allow the trace to stabilize.

4. Use the OBW measurement function of spectrum analyzer to measure the occupied bandwidth.

3.2.3 Test Setup



3.2.4 Test Result of 6dB and Occupied Bandwidth

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	10.072M	15.195M	15M2G1D	10M	15.051M
802.11g_Nss1,(6Mbps)_1TX	16.594M	20.912M	20M9D1D	16.522M	16.715M
802.11n HT20_Nss1,(MCS0)_1TX	17.826M	22.648M	22M6D1D	17.826M	17.873M
802.11n HT40_Nss1,(MCS0)_1TX	36.522M	36.469M	36M5D1D	36.377M	36.179M

Max-N dB = Maximum 6dB down bandwidth; **Max-OBW** = Maximum 99% occupied bandwidth;
Min-N dB = Minimum 6dB down bandwidth; **Min-OBW** = Minimum 99% occupied bandwidth;

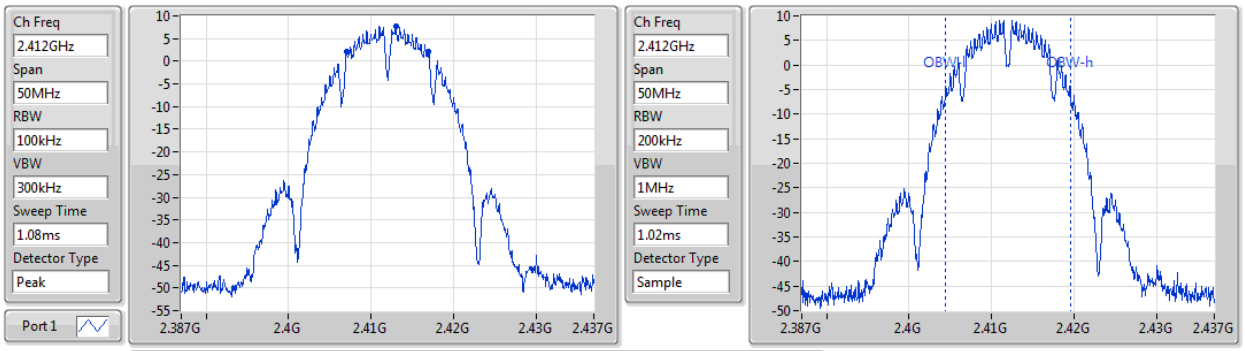
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	10M	15.051M
2437MHz	Pass	500k	10.072M	15.123M
2462MHz	Pass	500k	10.072M	15.195M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	16.594M	16.787M
2437MHz	Pass	500k	16.522M	20.912M
2462MHz	Pass	500k	16.522M	16.715M
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-
2412MHz	Pass	500k	17.826M	17.873M
2437MHz	Pass	500k	17.826M	22.648M
2462MHz	Pass	500k	17.826M	17.873M
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-
2422MHz	Pass	500k	36.377M	36.324M
2437MHz	Pass	500k	36.522M	36.469M
2452MHz	Pass	500k	36.522M	36.179M

Port X-N dB = Port **X** 6dB down bandwidth; **Port X-OBW** = Port **X** 99% occupied bandwidth;

802.11b_Nss1,(1Mbps)_1TX EBW

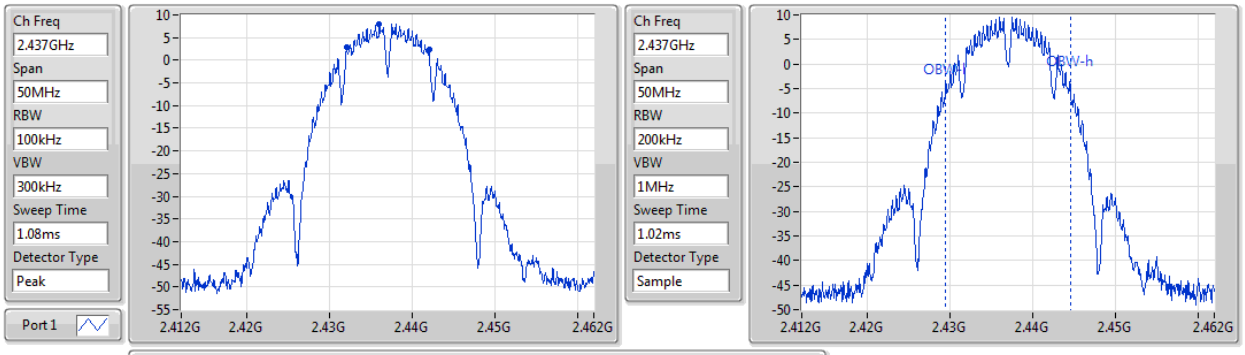
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10M	2.407G	2.417G	15.051M	2.404475G	2.419525G	500k	1

802.11b_Nss1,(1Mbps)_1TX EBW

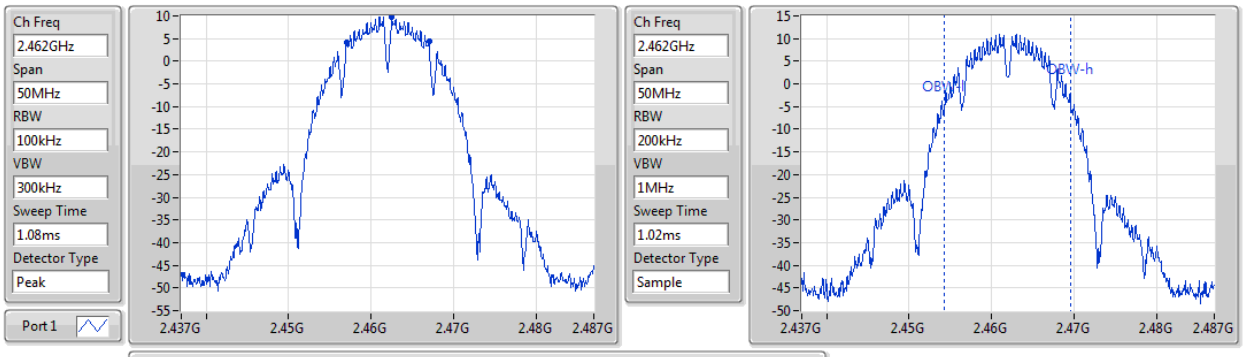
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.072M	2.432G	2.442072G	15.123M	2.429402G	2.444525G	500k	1

802.11b_Nss1,(1Mbps)_1TX EBW

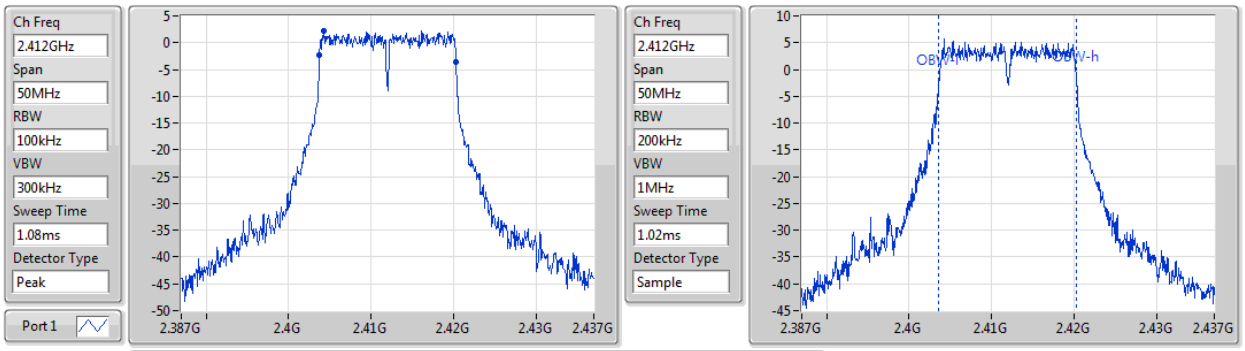
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.072M	2.457G	2.467072G	15.195M	2.45433G	2.469525G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

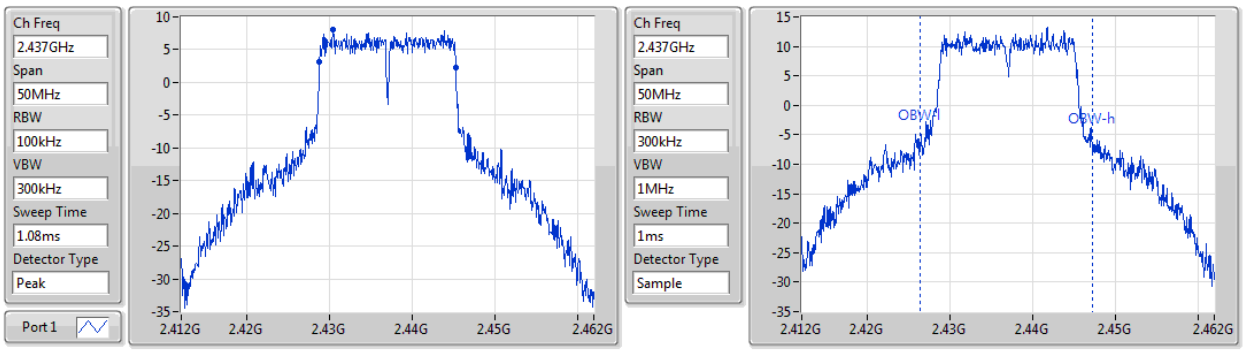
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.594M	2.403739G	2.420333G	16.787M	2.403534G	2.420321G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

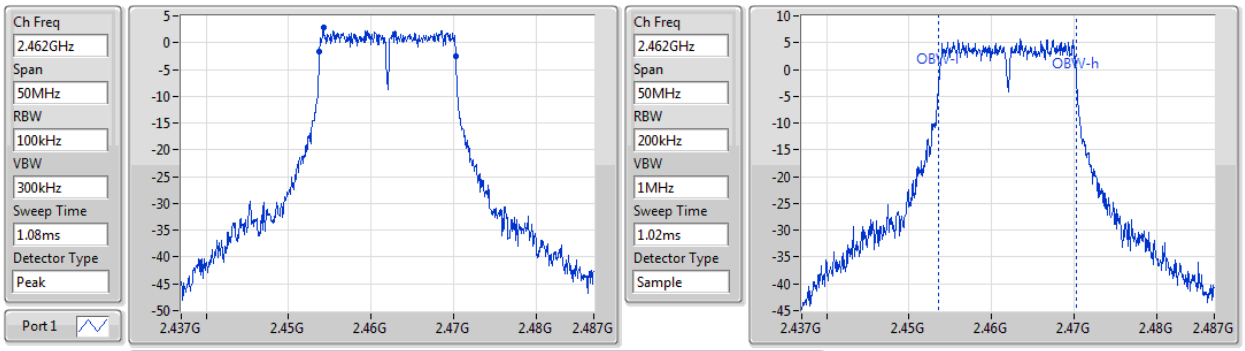
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.522M	2.428739G	2.445261G	20.912M	2.426291G	2.447203G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

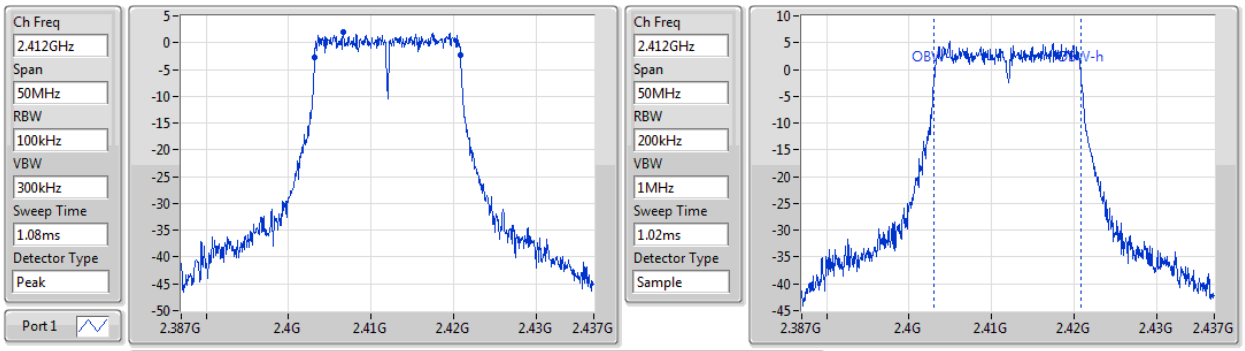
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.522M	2.453739G	2.470261G	16.715M	2.453606G	2.470321G	500k	1

802.11n HT20_Nss1,(MCS0)_1TX EBW

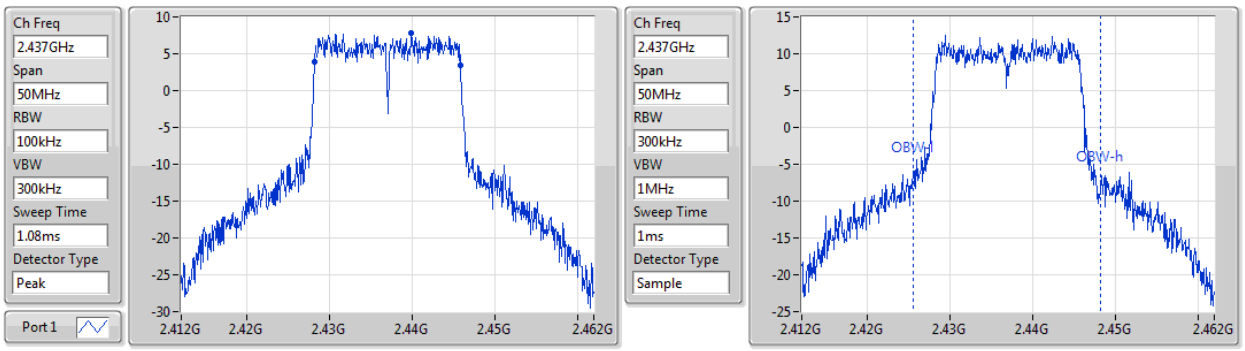
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.826M	2.403087G	2.420913G	17.873M	2.403027G	2.4209G	500k	1

802.11n HT20_Nss1,(MCS0)_1TX EBW

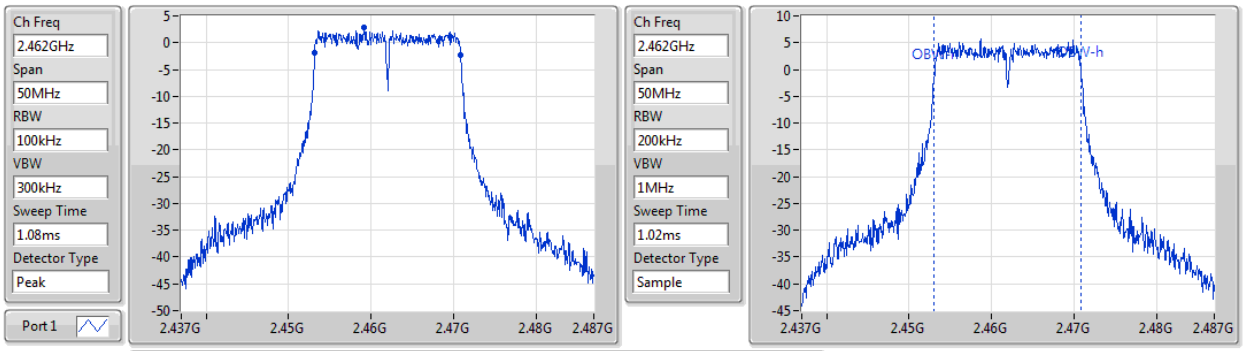
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.826M	2.428087G	2.445913G	22.648M	2.425567G	2.448216G	500k	1

802.11n HT20_Nss1,(MCS0)_1TX EBW

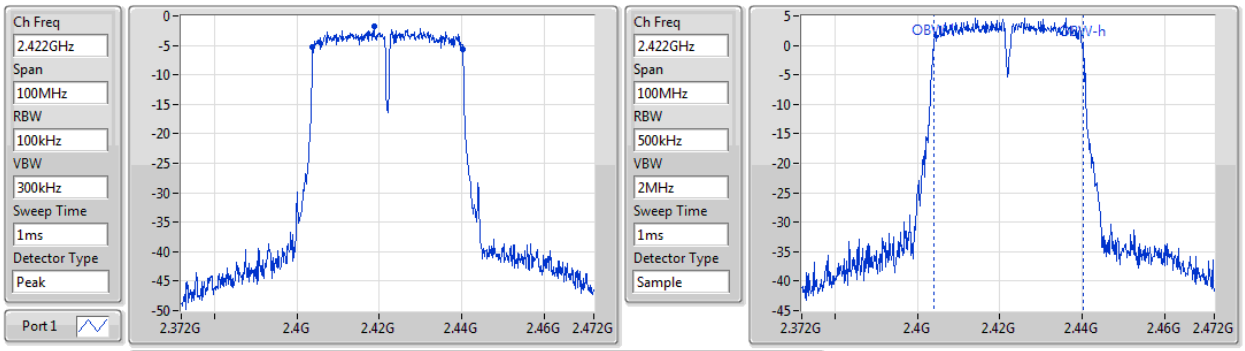
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.826M	2.453087G	2.470913G	17.873M	2.453027G	2.4709G	500k	1

802.11n HT40_Nss1,(MCS0)_1TX EBW

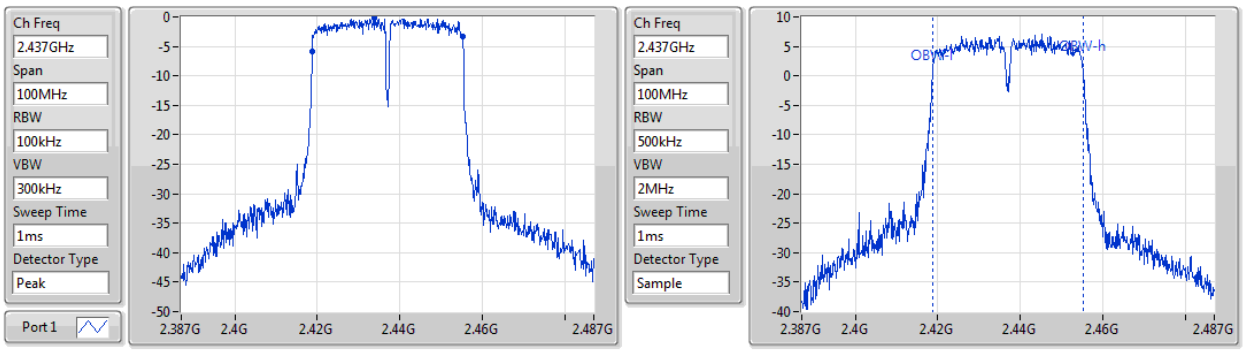
2422MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.377M	2.403884G	2.440261G	36.324M	2.40391G	2.440234G	500k	1

802.11n HT40_Nss1,(MCS0)_1TX EBW

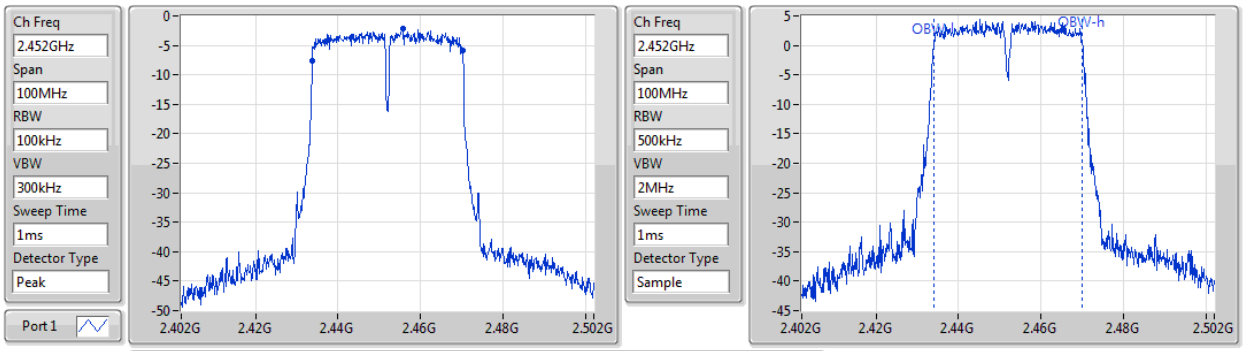
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.522M	2.418739G	2.455261G	36.469M	2.418766G	2.455234G	500k	1

802.11n HT40_Nss1,(MCS0)_1TX EBW

2452MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.522M	2.433739G	2.470261G	36.179M	2.43391G	2.47009G	500k	1

3.3 RF Output Power

3.3.1 Limit of RF Output Power

Conducted power shall not exceed 1Watt.

☒ Antenna gain <= 6dBi, no any corresponding reduction is in output power limit.

☐ Antenna gain > 6dBi

☐ Non Fixed, point to point operations.
The conducted output power from the intentional radiator shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dB

☐ Fixed, point to point operations
Systems operating in the 2400–2483.5 MHz band that are used exclusively for fixed, point-to-point Operations, maximum peak output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

Systems operating in the 5725–5850 MHz band that are used exclusively for fixed, point-to-point operations ,no any corresponding reduction is in transmitter peak output power

3.3.2 Test Procedures

☒ Maximum Peak Conducted Output Power

☐ **Spectrum analyzer**

1. Set RBW = 1MHz, VBW = 3MHz, Detector = Peak.
2. Sweep time = auto, Trace mode = max hold, Allow trace to fully stabilize.
3. Use the spectrum analyzer channel power measurement function with the band limits set equal to the DTS bandwidth edges.

☒ **Power meter**

1. A broadband Peak RF power meter is used for output power measurement. The video bandwidth of power meter is greater than DTS bandwidth of EUT. If duty cycle of test signal is not 100 %, trigger and gating function of power meter will be enabled to capture transmission burst for measuring output power.

☒ Maximum Conducted Output Power (For reference only)

☒ **Power meter**

1. A broadband Average RF power meter is used for output power measurement. The video bandwidth of power meter is greater than DTS bandwidth of EUT. If duty cycle of test signal is not 100 %, trigger and gating function of power meter will be enabled to capture transmission burst for measuring output power.

3.3.3 Test Setup

3.3.4 Test Result of Maximum Output Power

Summary (Peak power)

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	22.24	0.16749
802.11g_Nss1,(6Mbps)_1TX	**25.86**	0.38548
802.11n HT20_Nss1,(MCS0)_1TX	25.82	0.38194
802.11n HT40_Nss1,(MCS0)_1TX	24.51	0.28249

Result (Peak power)

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.00	20.46	20.46	30.00	22.46	36.00
2437MHz	Pass	2.00	20.76	20.76	30.00	22.76	36.00
2462MHz	Pass	2.00	22.24	22.24	30.00	24.24	36.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.00	24.52	24.52	30.00	26.52	36.00
2437MHz	Pass	2.00	25.86	25.86	30.00	27.86	36.00
2462MHz	Pass	2.00	24.63	24.63	30.00	26.63	36.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.00	24.18	24.18	30.00	26.18	36.00
2437MHz	Pass	2.00	25.82	25.82	30.00	27.82	36.00
2462MHz	Pass	2.00	24.34	24.34	30.00	26.34	36.00
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
2422MHz	Pass	2.00	23.47	23.47	30.00	25.47	36.00
2437MHz	Pass	2.00	24.51	24.51	30.00	26.51	36.00
2452MHz	Pass	2.00	23.29	23.29	30.00	25.29	36.00

DG = Directional Gain; **Port X** = Port X output power

Summary (Average Power)

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	20.38	0.10914
802.11g_Nss1,(6Mbps)_1TX	22.24	0.16749
802.11n HT20_Nss1,(MCS0)_1TX	22.18	0.16520
802.11n HT40_Nss1,(MCS0)_1TX	18.25	0.06683

Result (Average Power)

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.00	18.47	18.47	-	20.47	-
2437MHz	Pass	2.00	18.79	18.79	-	20.79	-
2462MHz	Pass	2.00	20.38	20.38	-	22.38	-
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.00	17.06	17.06	-	19.06	-
2437MHz	Pass	2.00	22.24	22.24	-	24.24	-
2462MHz	Pass	2.00	17.58	17.58	-	19.58	-
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	2.00	17.05	17.05	-	19.05	-
2437MHz	Pass	2.00	22.18	22.18	-	24.18	-
2462MHz	Pass	2.00	17.56	17.56	-	19.56	-
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
2422MHz	Pass	2.00	16.02	16.02	-	18.02	-
2437MHz	Pass	2.00	18.25	18.25	-	20.25	-
2452MHz	Pass	2.00	15.96	15.96	-	17.96	-

DG = Directional Gain; **Port X** = Port X output power
Note : Conducted average output power is for reference only

3.4 Power Spectral Density

3.4.1 Limit of Power Spectral Density

Power spectral density shall not be greater than 8 dBm in any 3 kHz band.

3.4.2 Test Procedures

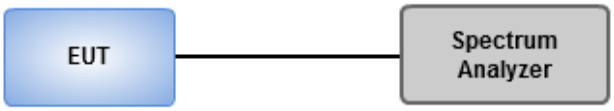
☒ Maximum peak conducted output power was used to demonstrate compliance to the fundamental output power limit.

1. Set the RBW = 3kHz, VBW = 10kHz.
2. Detector = Peak, Sweep time = auto couple.
3. Trace mode = max hold, allow trace to fully stabilize.
4. Use the peak marker function to determine the maximum amplitude level.

☐ Maximum (average) conducted output power was used to demonstrate compliance to the fundamental output power limit.

1. Set the RBW = 100kHz, VBW = 300 kHz.
2. Detector = RMS, Sweep time = auto couple.
3. Set the sweep time to: ≥ 10 x (number of measurement points in sweep) x (maximum data rate per stream).
4. Perform the measurement over a single sweep.
5. Use the peak marker function to determine the maximum amplitude level.

3.4.3 Test Setup



3.4.4 Test Result of Power Spectral Density

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_1TX	-10.46
802.11g_Nss1,(6Mbps)_1TX	-7.05
802.11n HT20_Nss1,(MCS0)_1TX	-6.50
802.11n HT40_Nss1,(MCS0)_1TX	-10.84

RBW=3kHz.

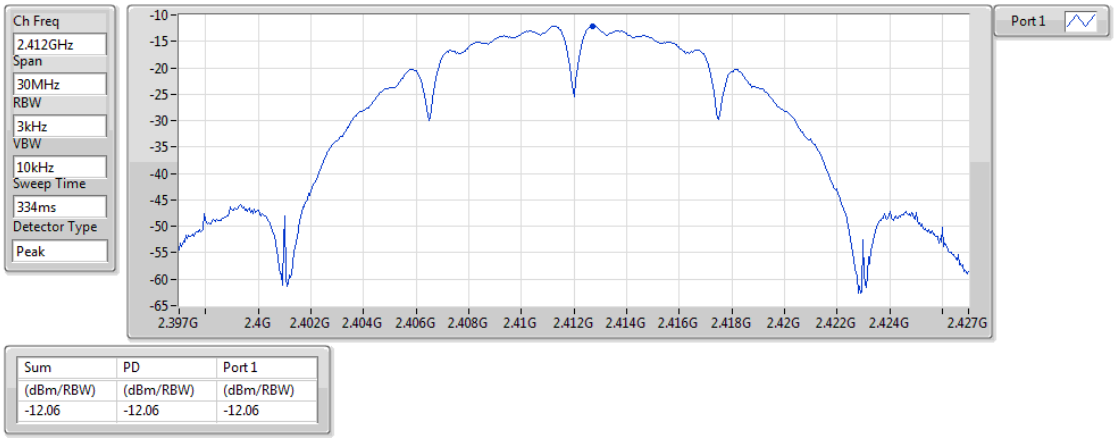
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.00	-12.06	-12.06	8.00
2437MHz	Pass	2.00	-12.08	-12.08	8.00
2462MHz	Pass	2.00	-10.46	-10.46	8.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	2.00	-12.25	-12.25	8.00
2437MHz	Pass	2.00	-7.05	-7.05	8.00
2462MHz	Pass	2.00	-11.91	-11.91	8.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	2.00	-11.72	-11.72	8.00
2437MHz	Pass	2.00	-6.50	-6.50	8.00
2462MHz	Pass	2.00	-10.81	-10.81	8.00
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-
2422MHz	Pass	2.00	-13.17	-13.17	8.00
2437MHz	Pass	2.00	-10.84	-10.84	8.00
2452MHz	Pass	2.00	-14.77	-14.77	8.00

DG = Directional Gain; RBW=3kHz;
PD = trace bin-by-bin of each transmits port summing can be performed maximum power density; **Port X** = Port X power density;

802.11b_Nss1,(1Mbps)_1TX **PSD**

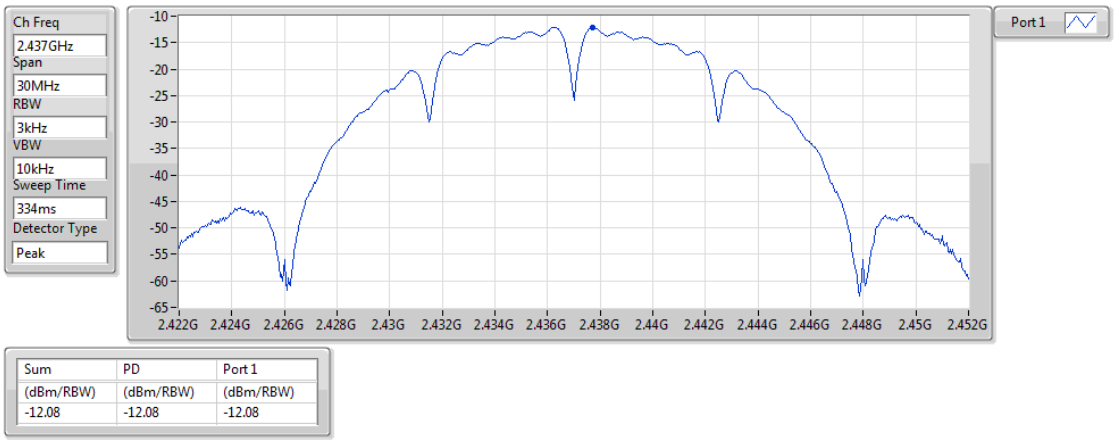
2412MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.06	-12.06	-12.06

802.11b_Nss1,(1Mbps)_1TX **PSD**

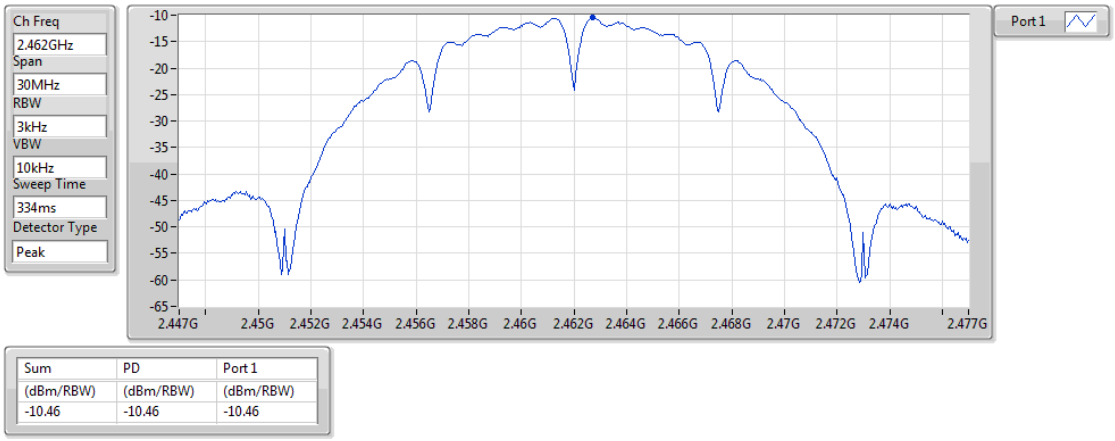
2437MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.08	-12.08	-12.08

802.11b_Nss1,(1Mbps)_1TX **PSD**

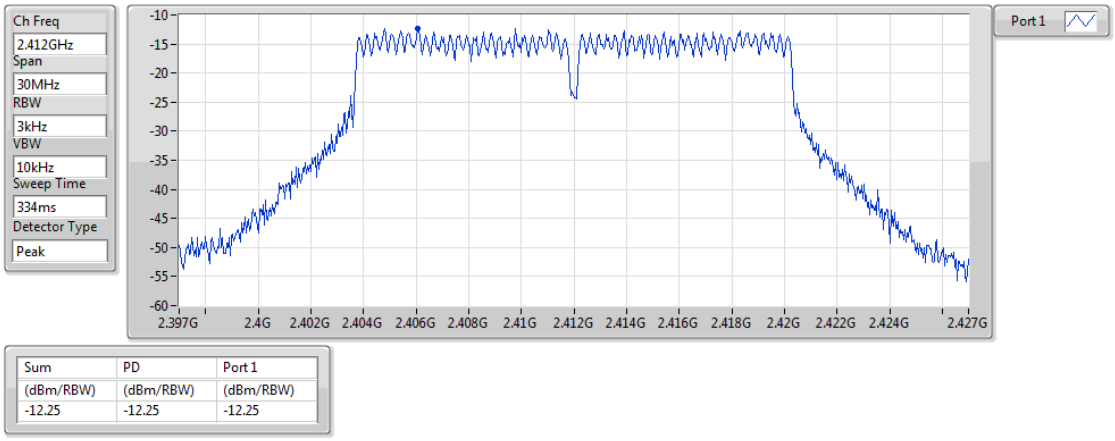
2462MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.46	-10.46	-10.46

802.11g_Nss1,(6Mbps)_1TX PSD

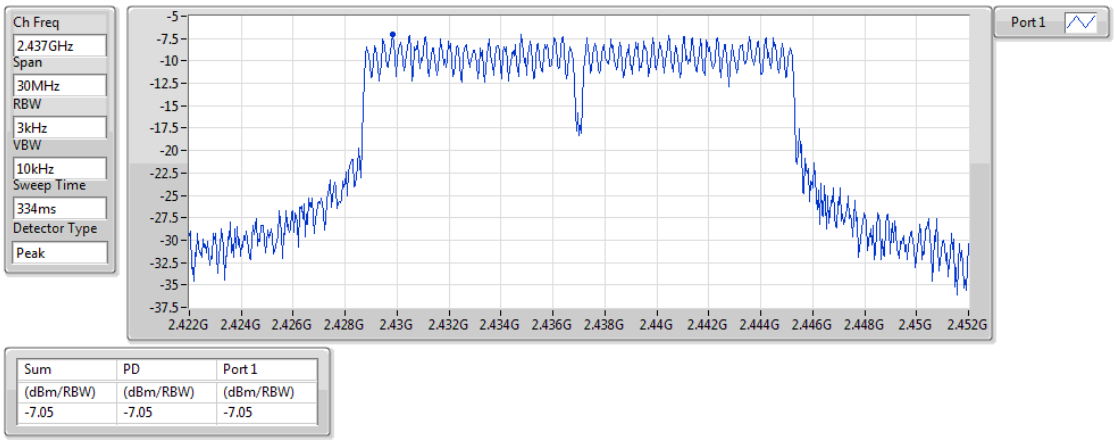
2412MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.25	-12.25	-12.25

802.11g_Nss1,(6Mbps)_1TX PSD

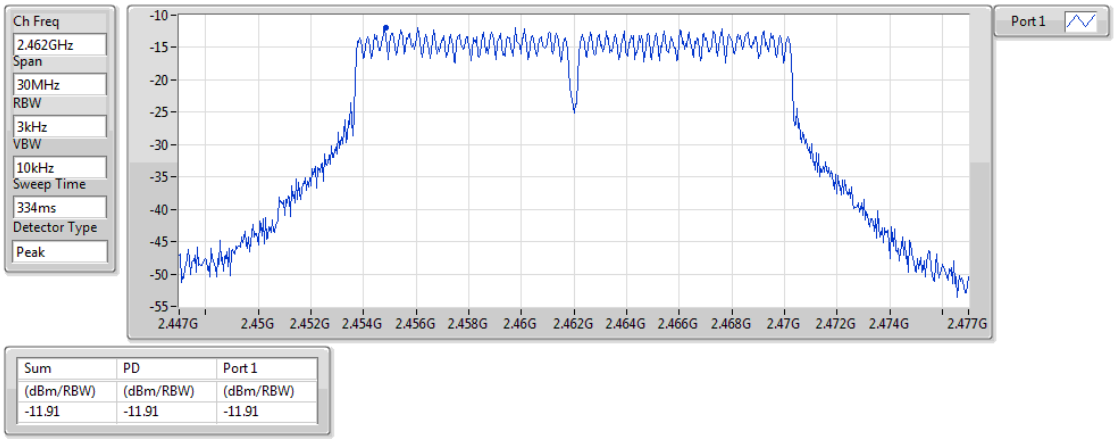
2437MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.05	-7.05	-7.05

802.11g_Nss1,(6Mbps)_1TX PSD

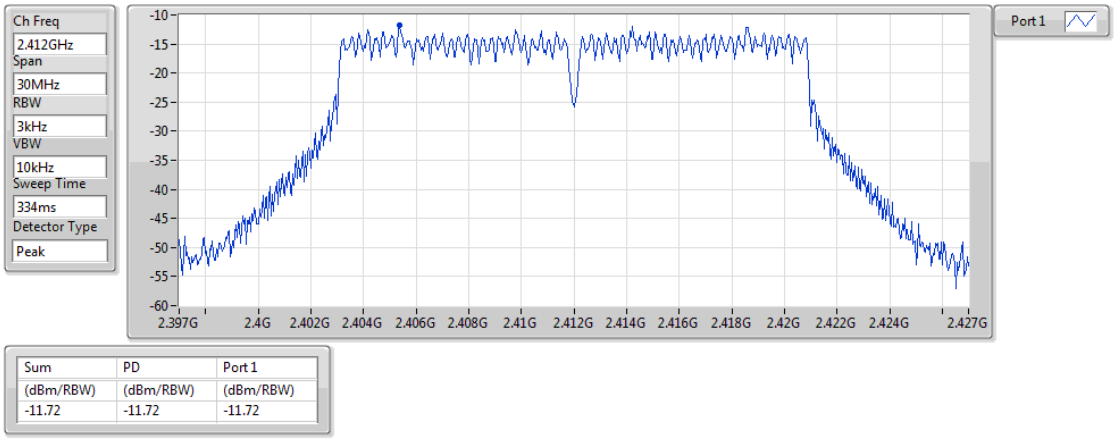
2462MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-11.91	-11.91	-11.91

802.11n HT20_Nss1,(MCS0)_1TX PSD

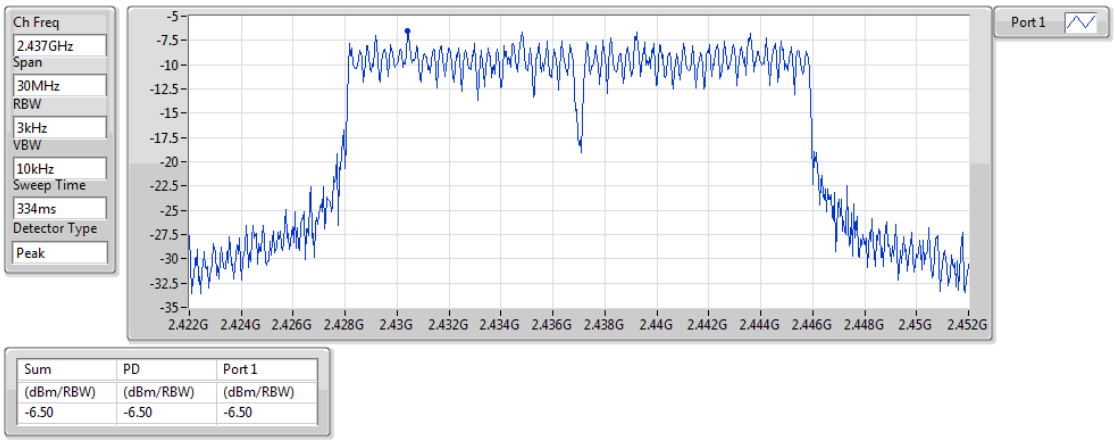
2412MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-11.72	-11.72	-11.72

802.11n HT20_Nss1,(MCS0)_1TX PSD

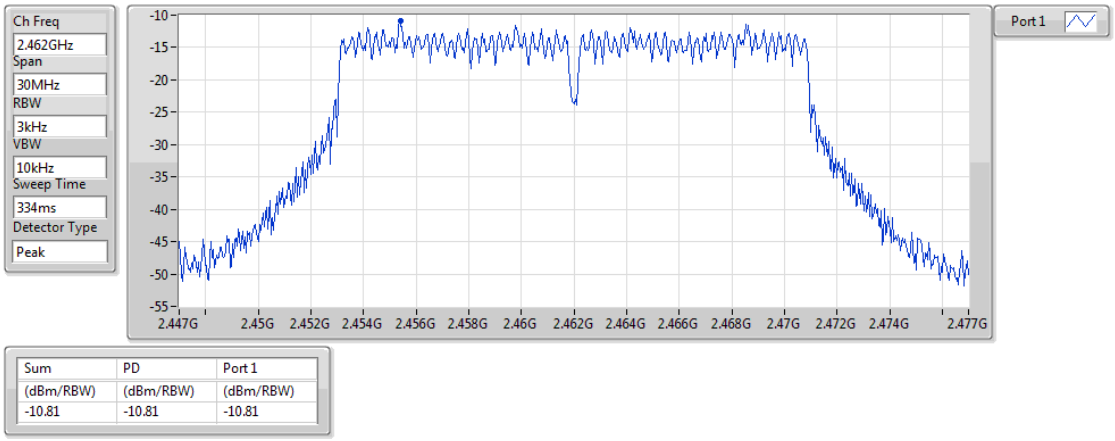
2437MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.50	-6.50	-6.50

802.11n HT20_Nss1,(MCS0)_1TX PSD

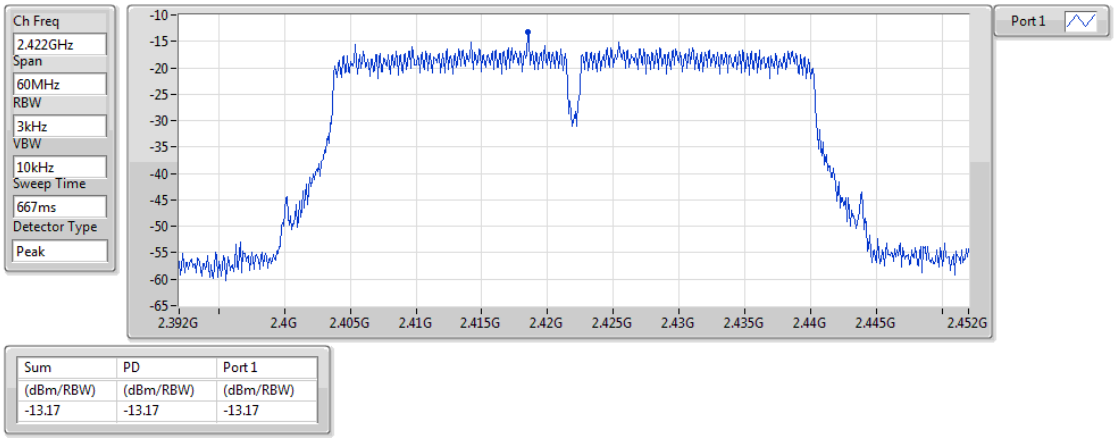
2462MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.81	-10.81	-10.81

802.11n HT40_Nss1,(MCS0)_1TX **PSD**

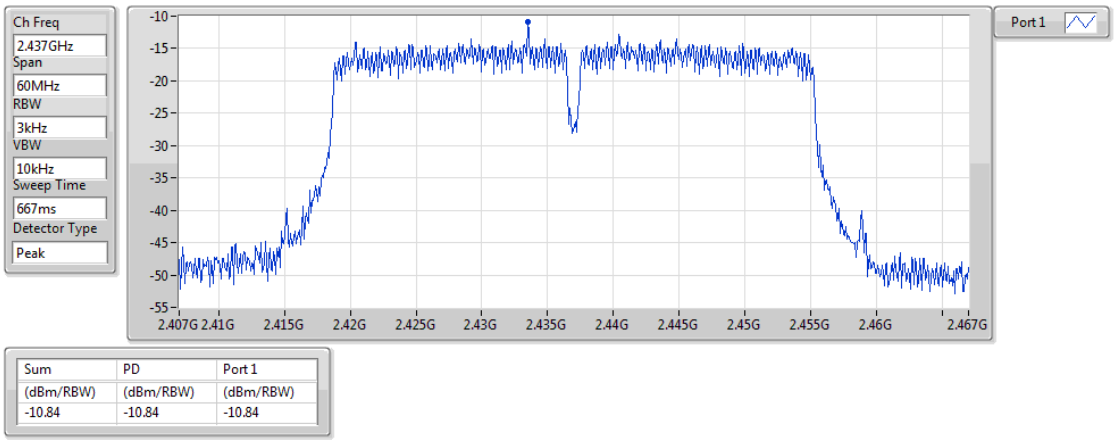
2422MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-13.17	-13.17	-13.17

802.11n HT40_Nss1,(MCS0)_1TX **PSD**

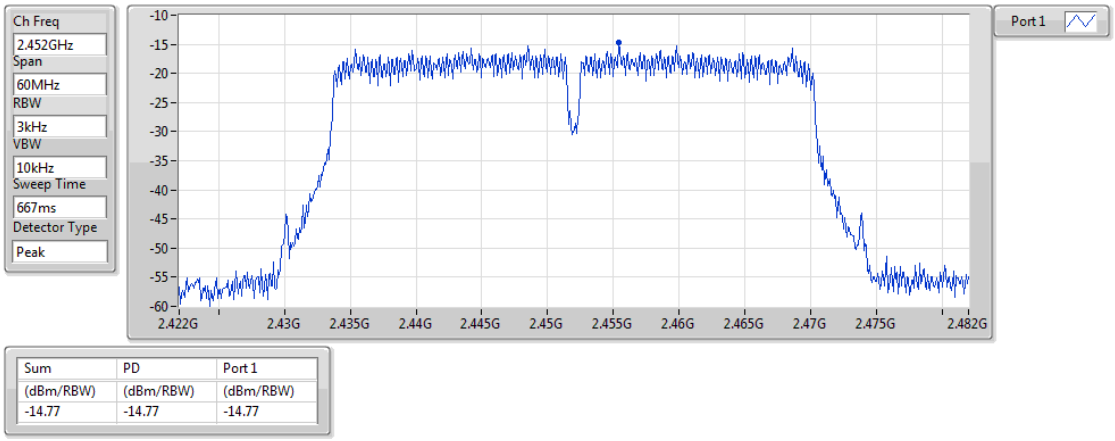
2437MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.84	-10.84	-10.84

802.11n HT40_Nss1,(MCS0)_1TX **PSD**

2452MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-14.77	-14.77	-14.77

3.5 Unwanted Emissions into Restricted Frequency Bands

3.5.1 Limit of Unwanted Emissions into Restricted Frequency Bands

Restricted Band Emissions Limit			
Frequency Range (MHz)	**Field Strength (uV/m)**	**Field Strength (dBuV/m)**	**Measure Distance (m)**
0.009~0.490	2400/F(kHz)	48.5 - 13.8	300
0.490~1.705	24000/F(kHz)	33.8 - 23	30
1.705~30.0	30	29	30
30~88	100	40	3
88~216	150	43.5	3
216~960	200	46	3
Above 960	500	54	3

Note 1:
Qusai-Peak value is measured for frequency below 1GHz except for 9–90 kHz, 110–490 kHz frequency band. Peak and average value are measured for frequency above 1GHz. The limit on average radio frequency emission is as above table. The limit on peak radio frequency emissions is 20 dB above the maximum permitted average emission limit
Note 2:
Measurements may be performed at a distance other than what is specified provided. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor as below, Frequency at or above 30 MHz: 20 dB/decade Frequency below 30 MHz: 40 dB/decade.

3.5.2 Test Procedures

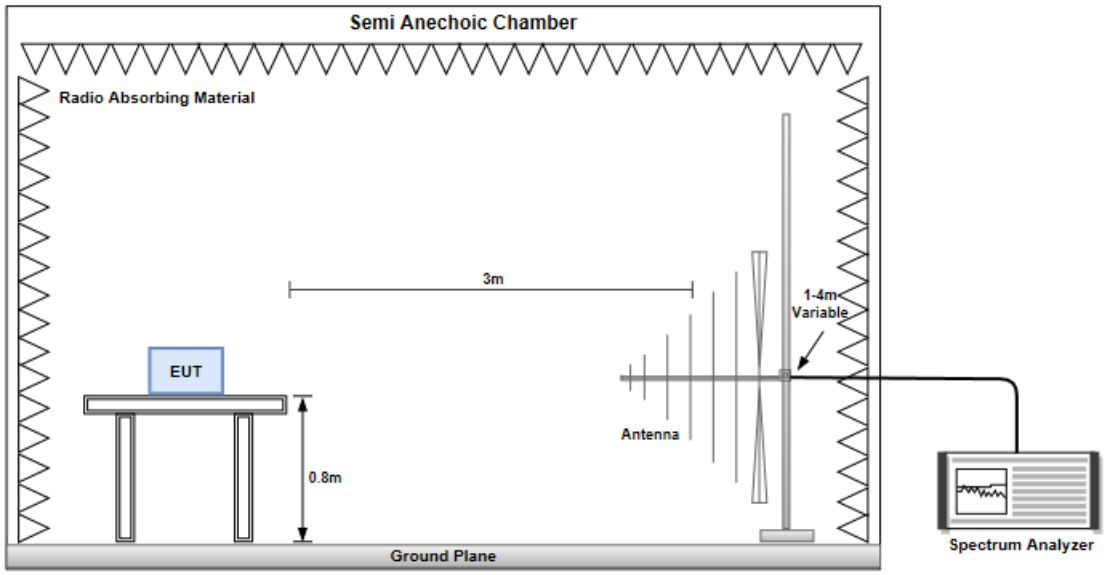
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission frequency. The EUT is placed at test table. For emissions testing at or below 1 GHz, the table height is 80 cm above the reference ground plane. For emission measurements above 1 GHz, the table height is 1.5 m
2. Measurement is made with the antenna positioned in both the horizontal and vertical planes of polarization. The measurement antenna is varied in height (1m ~ 4m) above the reference ground plane to obtain the maximum signal strength. Distance between EUT and antenna is 3 m.
3. This investigation is performed with the EUT rotated 360°, the antenna height scanned between 1 m and 4 m, and the antenna rotated to repeat the measurements for both the horizontal and vertical antenna polarizations.

Note:

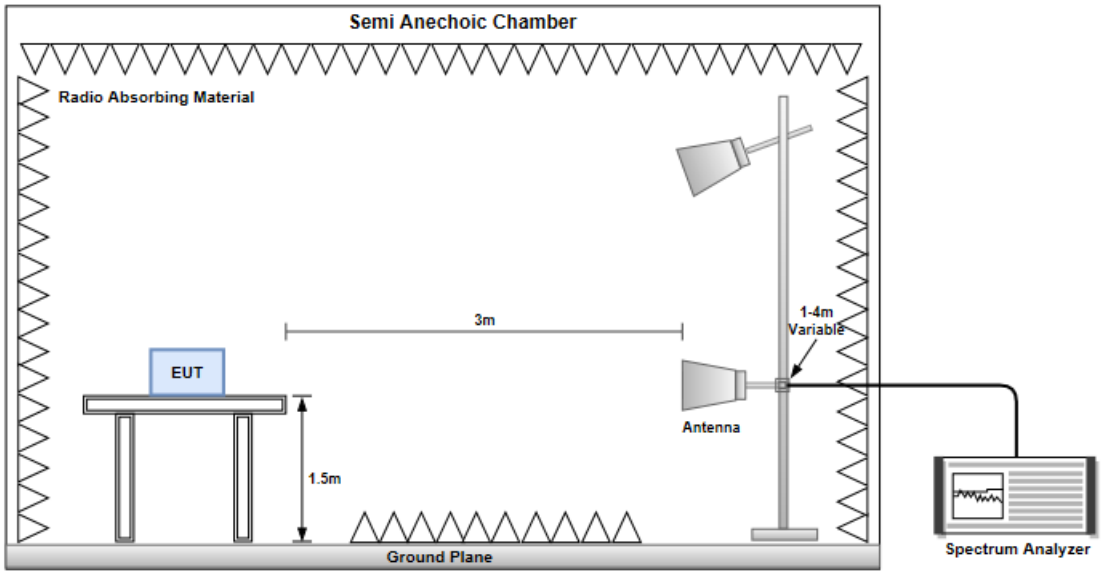
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above 1GHz.

3.5.3 Test Setup

Radiated Emissions below 1 GHz

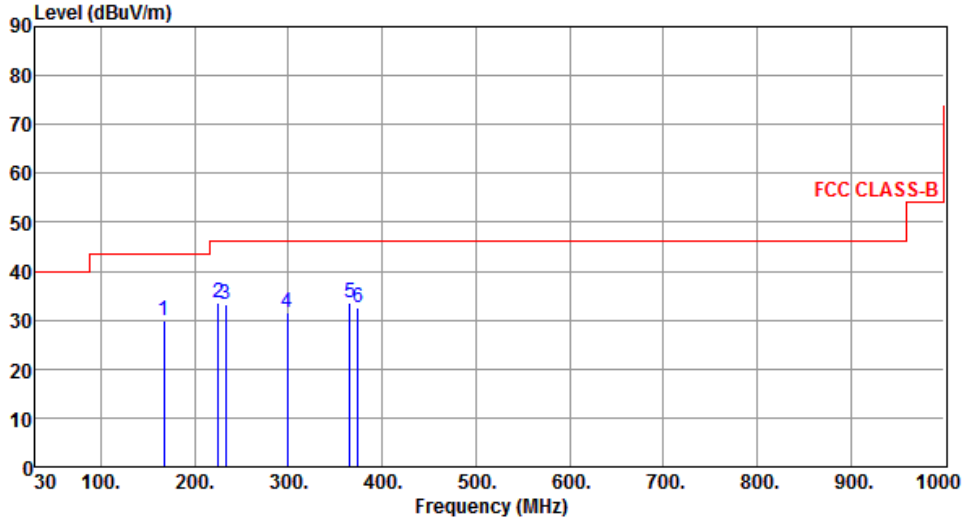


Radiated Emissions above 1 GHz



3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

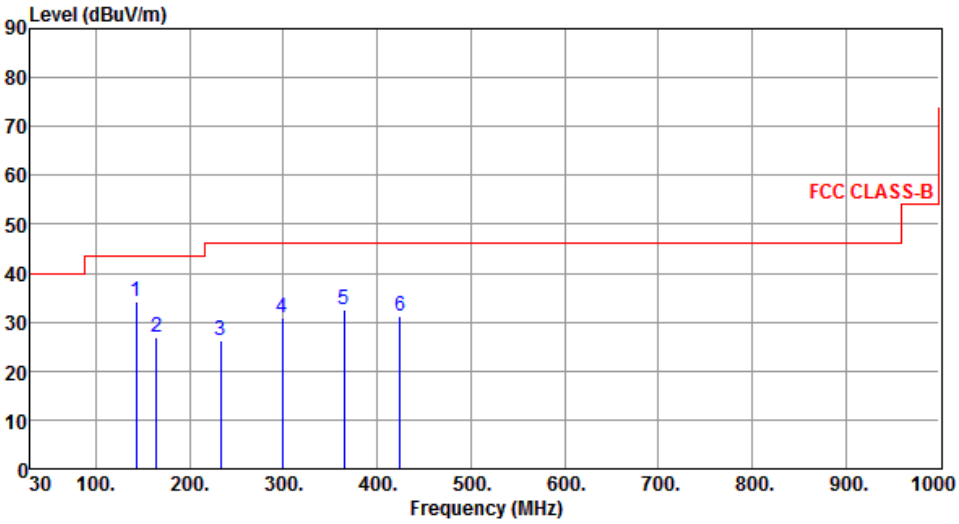
Modulation	11g	Test Freq. (MHz)	2437
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	166.77	30.05	43.50	-13.45	38.49	-8.44	Peak	---	---
2	224.97	33.43	46.00	-12.57	43.95	-10.52	Peak	---	---
3	232.73	33.37	46.00	-12.63	43.47	-10.10	Peak	---	---
4	298.69	31.51	46.00	-14.49	39.18	-7.67	Peak	---	---
5	365.62	33.45	46.00	-12.55	39.40	-5.95	Peak	---	---
6	374.35	32.67	46.00	-13.33	38.37	-5.70	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

Modulation	11g	Test Freq. (MHz)	2437
Polarization	Vertical		

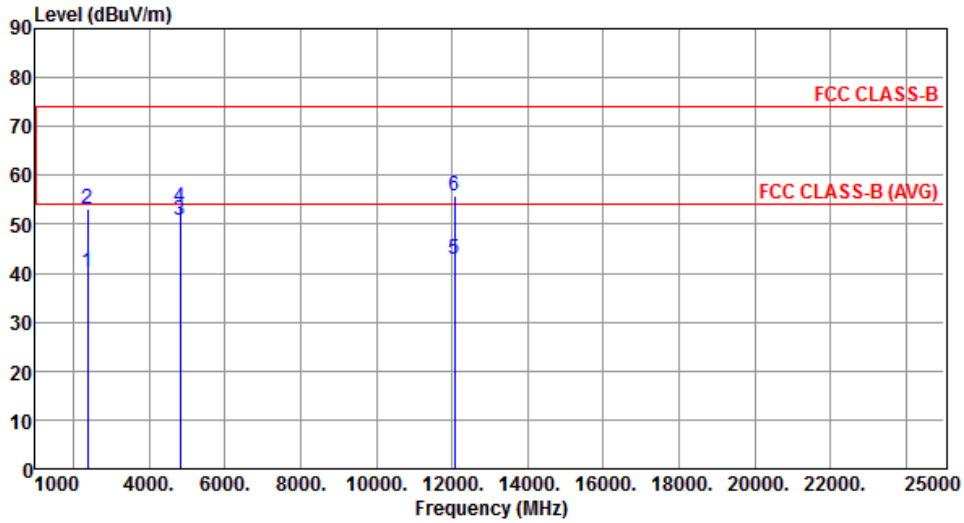


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	142.52	34.37	43.50	-9.13	42.90	-8.53	Peak	---	---
2	164.83	26.98	43.50	-16.52	35.35	-8.37	Peak	---	---
3	232.73	26.31	46.00	-19.69	36.41	-10.10	Peak	---	---
4	298.69	30.93	46.00	-15.07	38.60	-7.67	Peak	---	---
5	364.65	32.38	46.00	-13.62	38.36	-5.98	Peak	---	---
6	424.79	31.09	46.00	-14.91	35.47	-4.38	Peak	---	---

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3: All spurious emissions below 30MHz are more than 20 dB below the limit.

3.5.5 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 11b

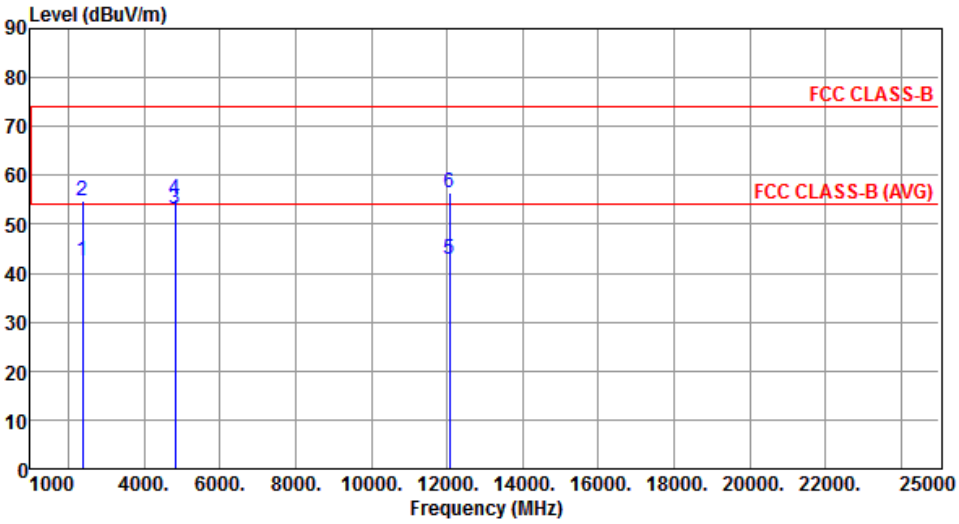
Modulation	11b	Test Freq. (MHz)	2412
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	40.11	54.00	-13.89	43.71	-3.60	Average	100	290
2	2390.00	53.13	74.00	-20.87	56.73	-3.60	Peak	100	290
3	4824.00	50.71	54.00	-3.29	47.11	3.60	Average	372	258
4	4824.00	53.59	74.00	-20.41	49.99	3.60	Peak	372	258
5	12060.00	42.97	54.00	-11.03	29.83	13.14	Average	100	260
6	12060.00	55.89	74.00	-18.11	42.75	13.14	Peak	100	260

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

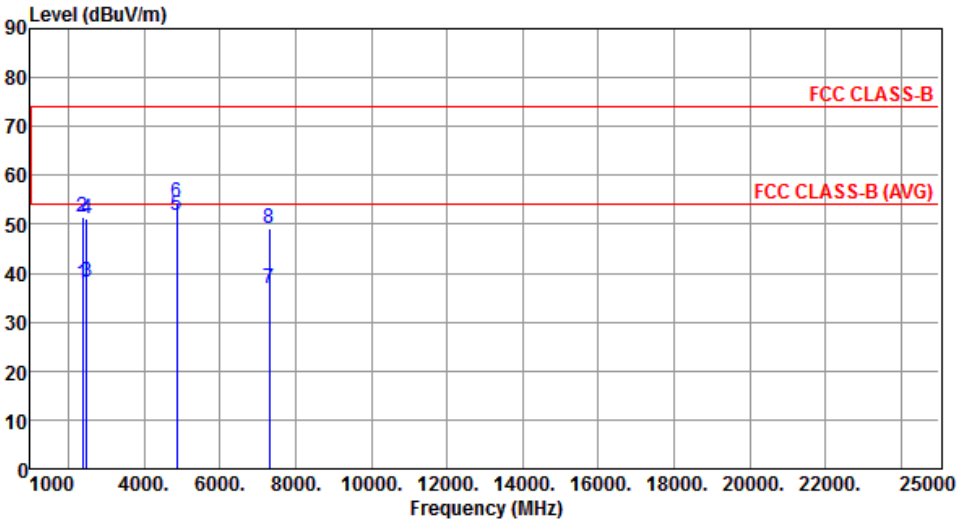
Modulation	11b	Test Freq. (MHz)	2412
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	42.60	54.00	-11.40	46.20	-3.60	Average	133	95
2	2390.00	54.85	74.00	-19.15	58.45	-3.60	Peak	133	95
3	4824.00	52.99	54.00	-1.01	49.39	3.60	Average	361	123
4	4824.00	55.17	74.00	-18.83	51.57	3.60	Peak	361	123
5	12060.00	42.94	54.00	-11.06	29.80	13.14	Average	100	150
6	12060.00	56.40	74.00	-17.60	43.26	13.14	Peak	100	150

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

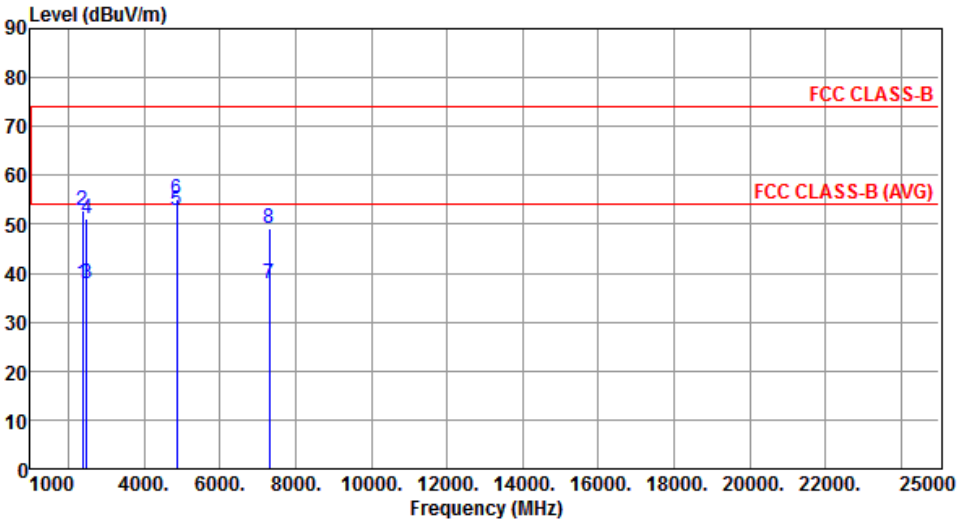
Modulation	11b	Test Freq. (MHz)	2437
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	37.80	54.00	-16.20	41.40	-3.60	Average	113	289
2	2390.00	51.62	74.00	-22.38	55.22	-3.60	Peak	113	289
3	2483.50	38.33	54.00	-15.67	41.52	-3.19	Average	113	289
4	2483.50	51.29	74.00	-22.71	54.48	-3.19	Peak	113	289
5	4874.00	51.76	54.00	-2.24	48.01	3.75	Average	366	165
6	4874.00	54.60	74.00	-19.40	50.85	3.75	Peak	366	165
7	7311.00	37.01	54.00	-16.99	28.88	8.13	Average	100	180
8	7311.00	49.25	74.00	-24.75	41.12	8.13	Peak	100	180

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

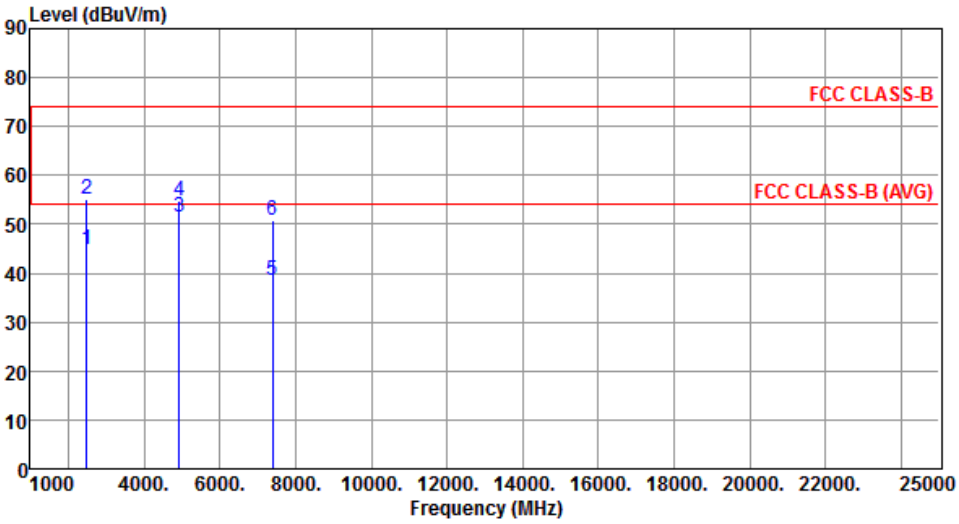
Modulation	11b	Test Freq. (MHz)	2437
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	37.79	54.00	-16.21	41.39	-3.60	Average	104	100
2	2390.00	52.70	74.00	-21.30	56.30	-3.60	Peak	104	100
3	2483.50	37.86	54.00	-16.14	41.05	-3.19	Average	104	100
4	2483.50	51.27	74.00	-22.73	54.46	-3.19	Peak	104	100
5	4874.00	52.80	54.00	-1.20	49.05	3.75	Average	321	120
6	4874.00	55.00	74.00	-19.00	51.25	3.75	Peak	321	120
7	7311.00	37.89	54.00	-16.11	29.76	8.13	Average	100	50
8	7311.00	49.13	74.00	-24.87	41.00	8.13	Peak	100	50

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

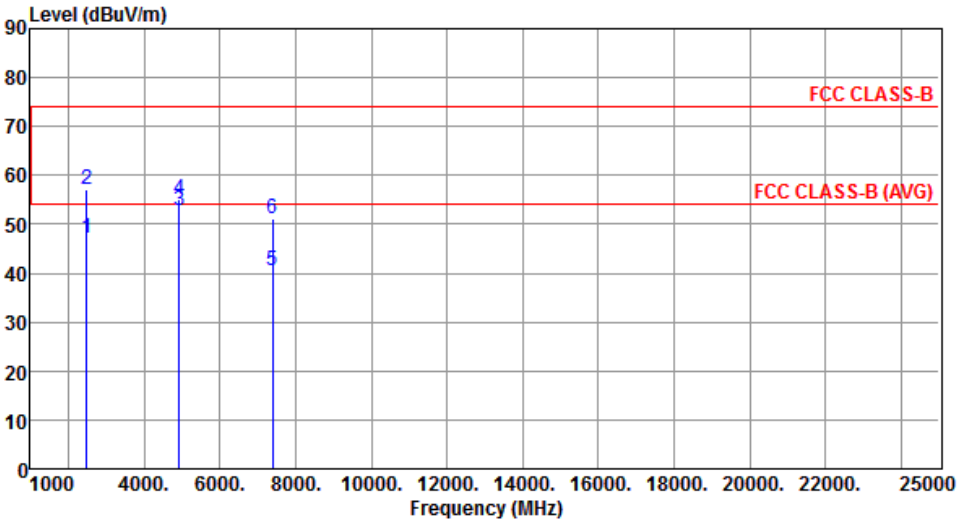
Modulation	11b	Test Freq. (MHz)	2462
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	44.78	54.00	-9.22	47.97	-3.19	Average	137	291
2	2483.50	55.10	74.00	-18.90	58.29	-3.19	Peak	137	291
3	4924.00	51.62	54.00	-2.38	47.70	3.92	Average	370	216
4	4924.00	54.90	74.00	-19.10	50.98	3.92	Peak	370	216
5	7386.00	38.61	54.00	-15.39	30.38	8.23	Average	100	257
6	7386.00	50.72	74.00	-23.28	42.49	8.23	Peak	100	257

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11b	Test Freq. (MHz)	2462
Polarization	Vertical		

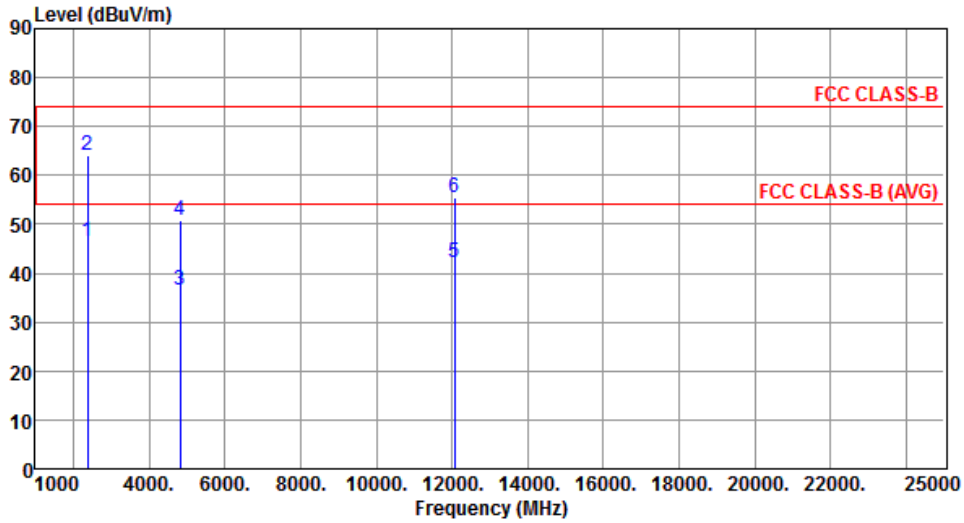


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	47.31	54.00	-6.69	50.50	-3.19	Average	108	201
2	2483.50	57.23	74.00	-16.77	60.42	-3.19	Peak	108	201
3	4924.00	52.81	54.00	-1.19	48.89	3.92	Average	362	119
4	4924.00	55.12	74.00	-18.88	51.20	3.92	Peak	362	119
5	7386.00	40.56	54.00	-13.44	32.33	8.23	Average	357	203
6	7386.00	51.24	74.00	-22.76	43.01	8.23	Peak	357	203

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.5.6 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 11g

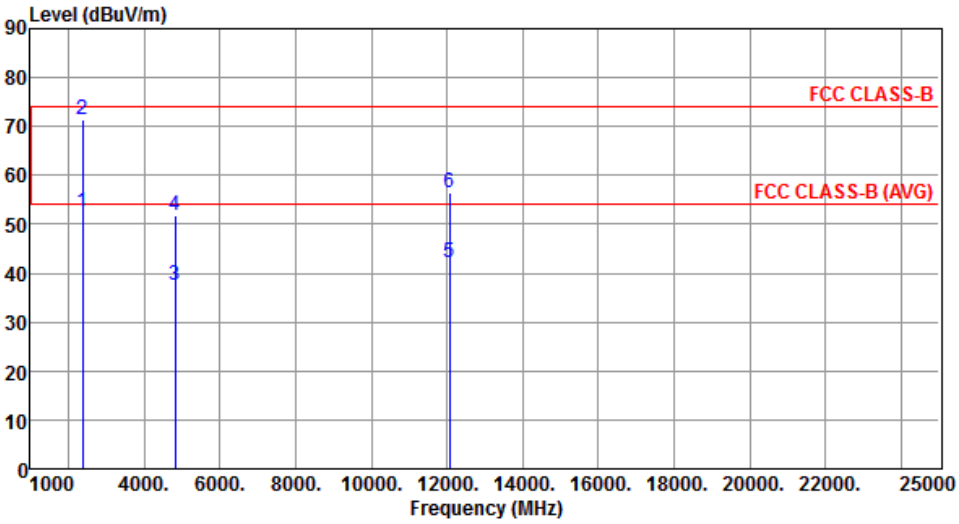
Modulation	11g	Test Freq. (MHz)	2412
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	46.50	54.00	-7.50	50.10	-3.60	Average	155	290
2	2390.00	64.12	74.00	-9.88	67.72	-3.60	Peak	155	290
3	4824.00	36.69	54.00	-17.31	33.09	3.60	Average	357	171
4	4824.00	50.89	74.00	-23.11	47.29	3.60	Peak	357	171
5	12060.00	42.07	54.00	-11.93	28.93	13.14	Average	100	271
6	12060.00	55.35	74.00	-18.65	42.21	13.14	Peak	100	271

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

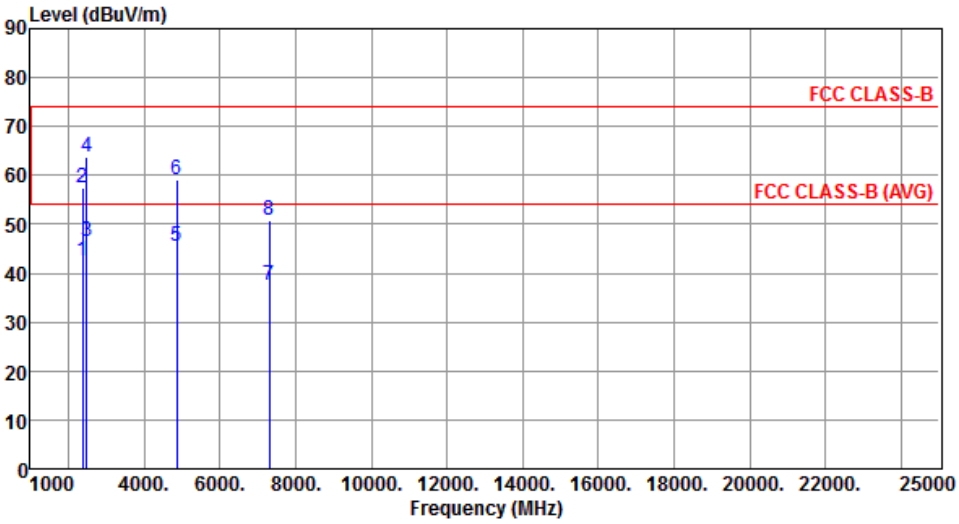
Modulation	11g	Test Freq. (MHz)	2412
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	52.64	54.00	-1.36	56.24	-3.60	Average	100	330
2	2390.00	71.24	74.00	-2.76	74.84	-3.60	Peak	100	330
3	4824.00	37.59	54.00	-16.41	33.99	3.60	Average	305	120
4	4824.00	51.66	74.00	-22.34	48.06	3.60	Peak	305	120
5	12060.00	42.19	54.00	-11.81	29.05	13.14	Average	100	162
6	12060.00	56.47	74.00	-17.53	43.33	13.14	Peak	100	162

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

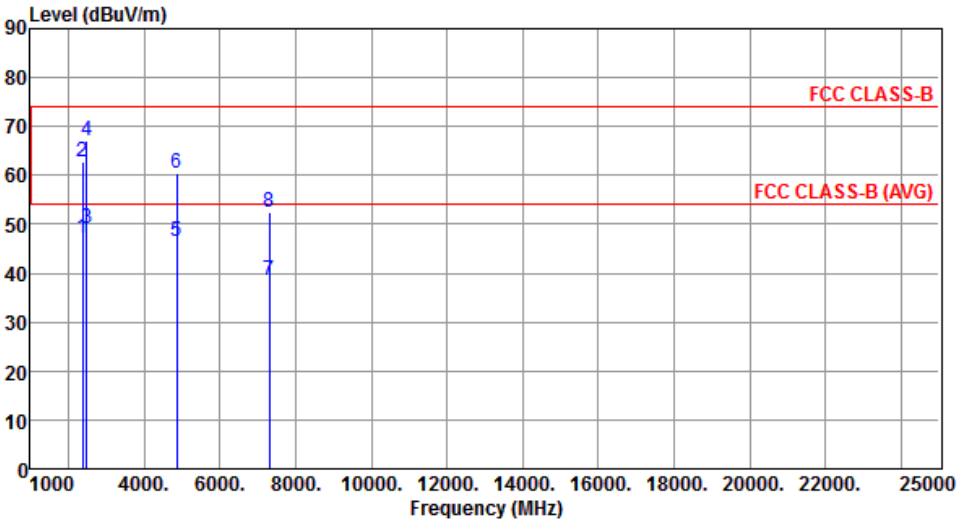
Modulation	11g	Test Freq. (MHz)	2437
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	42.53	54.00	-11.47	46.13	-3.60	Average	125	291
2	2390.00	57.52	74.00	-16.48	61.12	-3.60	Peak	125	291
3	2483.50	46.45	54.00	-7.55	49.64	-3.19	Average	125	291
4	2483.50	63.68	74.00	-10.32	66.87	-3.19	Peak	125	291
5	4874.00	45.62	54.00	-8.38	41.87	3.75	Average	366	165
6	4874.00	59.01	74.00	-14.99	55.26	3.75	Peak	366	165
7	7311.00	37.53	54.00	-16.47	29.40	8.13	Average	100	259
8	7311.00	50.65	74.00	-23.35	42.52	8.13	Peak	100	259

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

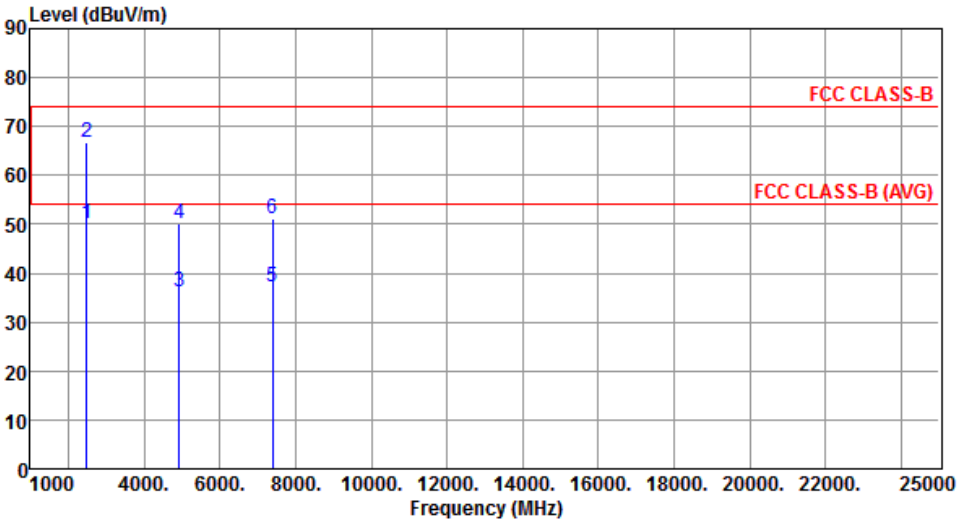
Modulation	11g	Test Freq. (MHz)	2437
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	47.01	54.00	-6.99	50.61	-3.60	Average	109	326
2	2390.00	62.66	74.00	-11.34	66.26	-3.60	Peak	109	326
3	2483.50	49.01	54.00	-4.99	52.20	-3.19	Average	109	326
4	2483.50	67.02	74.00	-6.98	70.21	-3.19	Peak	109	326
5	4874.00	46.48	54.00	-7.52	42.73	3.75	Average	320	120
6	4874.00	60.34	74.00	-13.66	56.59	3.75	Peak	320	120
7	7311.00	38.45	54.00	-15.55	30.32	8.13	Average	204	36
8	7311.00	52.32	74.00	-21.68	44.19	8.13	Peak	204	36

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

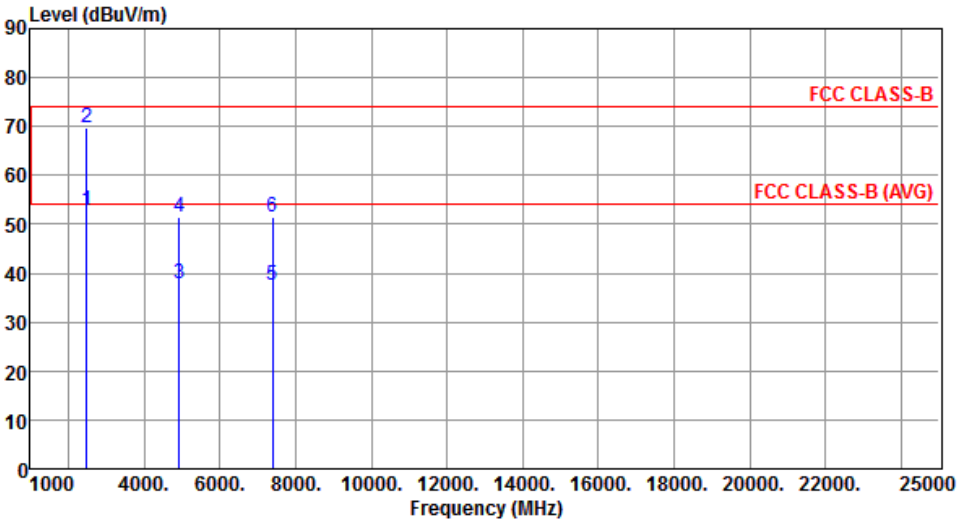
Modulation	11g	Test Freq. (MHz)	2462
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	50.02	54.00	-3.98	53.21	-3.19	Average	142	289
2	2483.50	66.67	74.00	-7.33	69.86	-3.19	Peak	142	289
3	4924.00	36.35	54.00	-17.65	32.43	3.92	Average	358	172
4	4924.00	50.23	74.00	-23.77	46.31	3.92	Peak	358	172
5	7386.00	37.11	54.00	-16.89	28.88	8.23	Average	100	265
6	7386.00	51.01	74.00	-22.99	42.78	8.23	Peak	100	265

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	11g	Test Freq. (MHz)	2462
Polarization	Vertical		

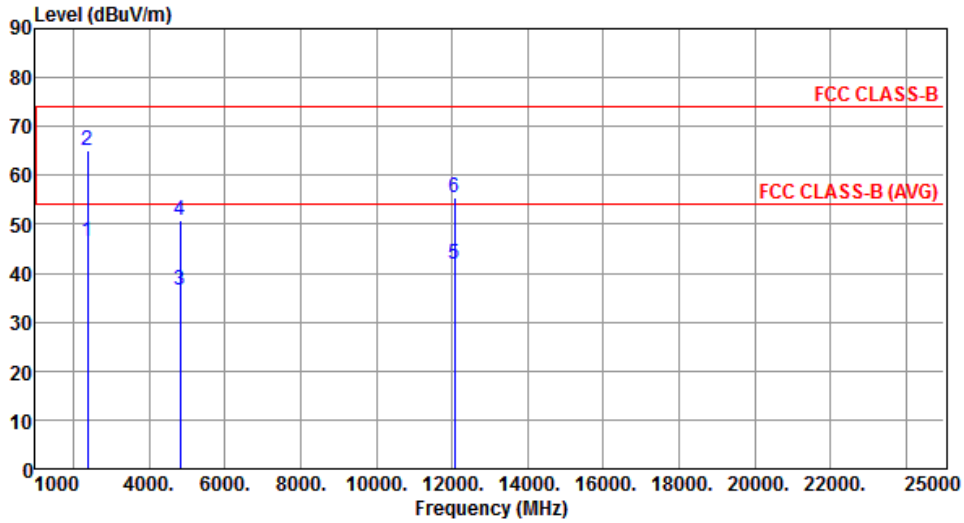


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	52.74	54.00	-1.26	55.93	-3.19	Average	100	326
2	2483.50	69.70	74.00	-4.30	72.89	-3.19	Peak	100	326
3	4924.00	37.77	54.00	-16.23	33.85	3.92	Average	311	119
4	4924.00	51.35	74.00	-22.65	47.43	3.92	Peak	311	119
5	7386.00	37.43	54.00	-16.57	29.20	8.23	Average	226	28
6	7386.00	51.44	74.00	-22.56	43.21	8.23	Peak	226	28

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.5.7 Transmitter Radiated Unwanted Emissions (Above 1GHz) for HT20

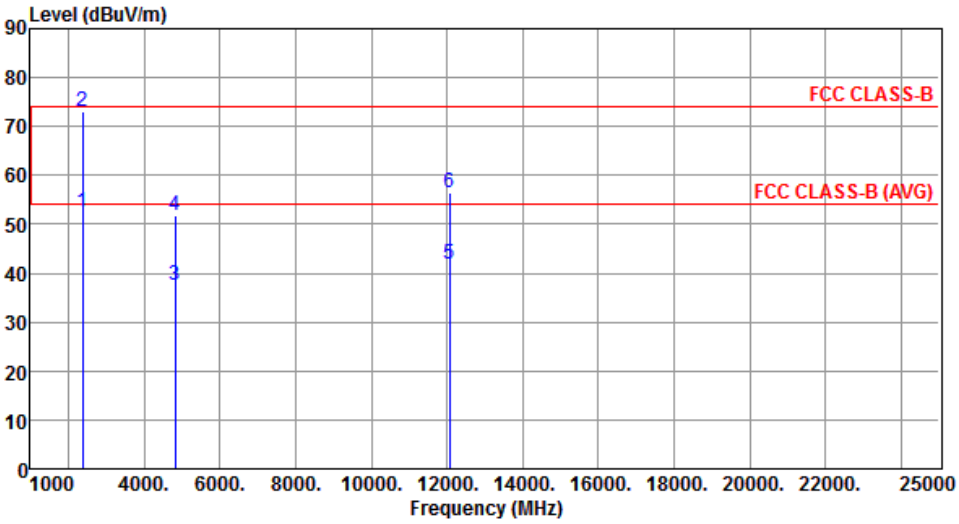
Modulation	HT20	**Test Freq. (MHz)**	2412
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	46.35	54.00	-7.65	49.95	-3.60	Average	162	292
2	2390.00	65.26	74.00	-8.74	68.86	-3.60	Peak	162	292
3	4824.00	36.42	54.00	-17.58	32.82	3.60	Average	351	166
4	4824.00	50.79	74.00	-23.21	47.19	3.60	Peak	351	166
5	12060.00	41.88	54.00	-12.12	28.74	13.14	Average	100	285
6	12060.00	55.59	74.00	-18.41	42.45	13.14	Peak	100	285

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

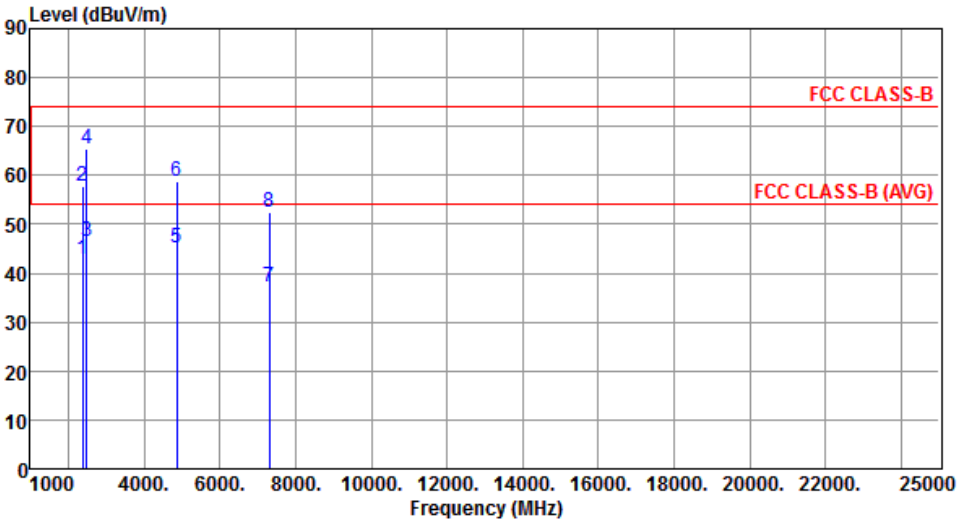
Modulation	HT20	Test Freq. (MHz)	2412
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	52.56	54.00	-1.44	56.16	-3.60	Average	104	327
2	2390.00	72.99	74.00	-1.01	76.59	-3.60	Peak	104	327
3	4824.00	37.47	54.00	-16.53	33.87	3.60	Average	309	128
4	4824.00	51.86	74.00	-22.14	48.26	3.60	Peak	309	128
5	12060.00	42.01	54.00	-11.99	28.87	13.14	Average	100	155
6	12060.00	56.40	74.00	-17.60	43.26	13.14	Peak	100	155

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

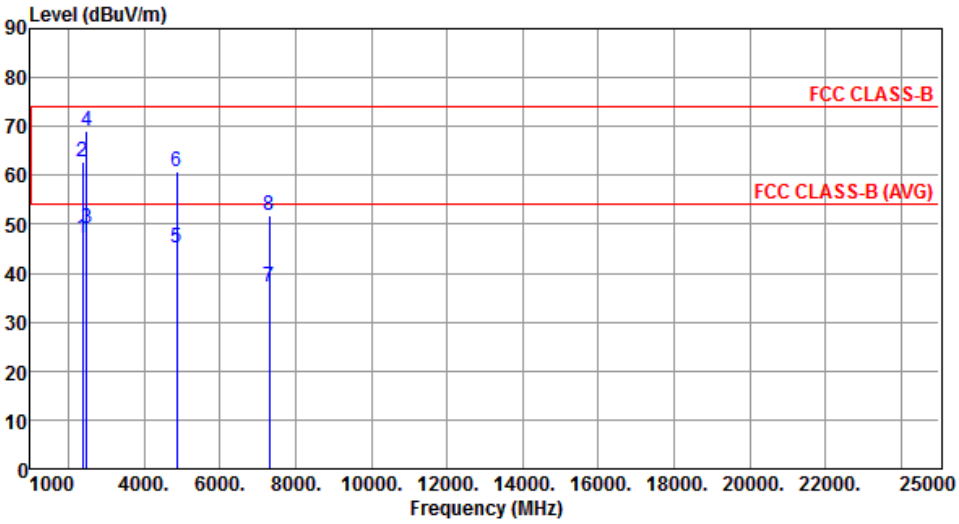
Modulation	HT20	Test Freq. (MHz)	2437
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	42.68	54.00	-11.32	46.28	-3.60	Average	123	290
2	2390.00	57.78	74.00	-16.22	61.38	-3.60	Peak	123	290
3	2483.50	46.60	54.00	-7.40	49.79	-3.19	Average	123	290
4	2483.50	65.53	74.00	-8.47	68.72	-3.19	Peak	123	290
5	4874.00	45.25	54.00	-8.75	41.50	3.75	Average	352	162
6	4874.00	58.87	74.00	-15.13	55.12	3.75	Peak	352	162
7	7311.00	37.04	54.00	-16.96	28.91	8.13	Average	100	256
8	7311.00	52.42	74.00	-21.58	44.29	8.13	Peak	100	256

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

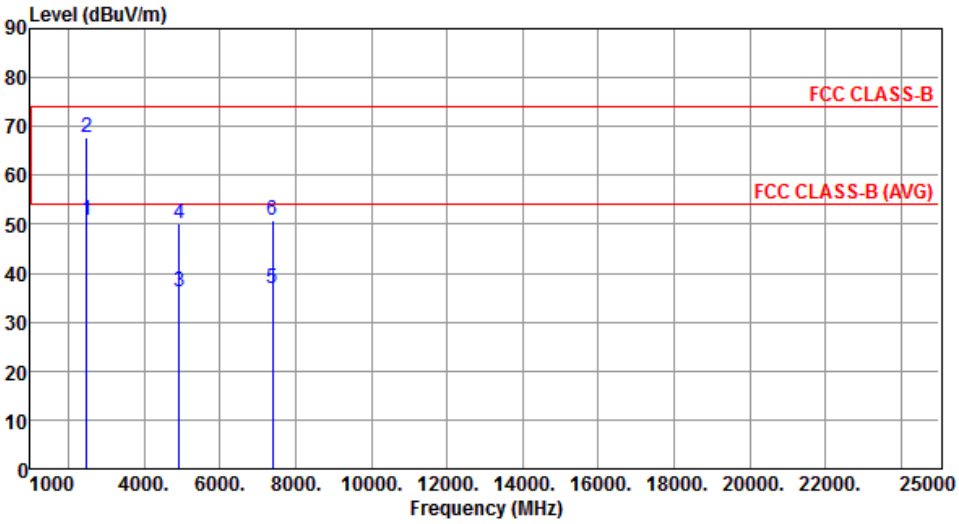
Modulation	HT20	Test Freq. (MHz)	2437
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	47.21	54.00	-6.79	50.81	-3.60	Average	100	327
2	2390.00	62.86	74.00	-11.14	66.46	-3.60	Peak	100	327
3	2483.50	49.18	54.00	-4.82	52.37	-3.19	Average	100	327
4	2483.50	69.19	74.00	-4.81	72.38	-3.19	Peak	100	327
5	4874.00	45.19	54.00	-8.81	41.44	3.75	Average	343	116
6	4874.00	60.62	74.00	-13.38	56.87	3.75	Peak	343	116
7	7311.00	37.05	54.00	-16.95	28.92	8.13	Average	211	32
8	7311.00	51.77	74.00	-22.23	43.64	8.13	Peak	211	32

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

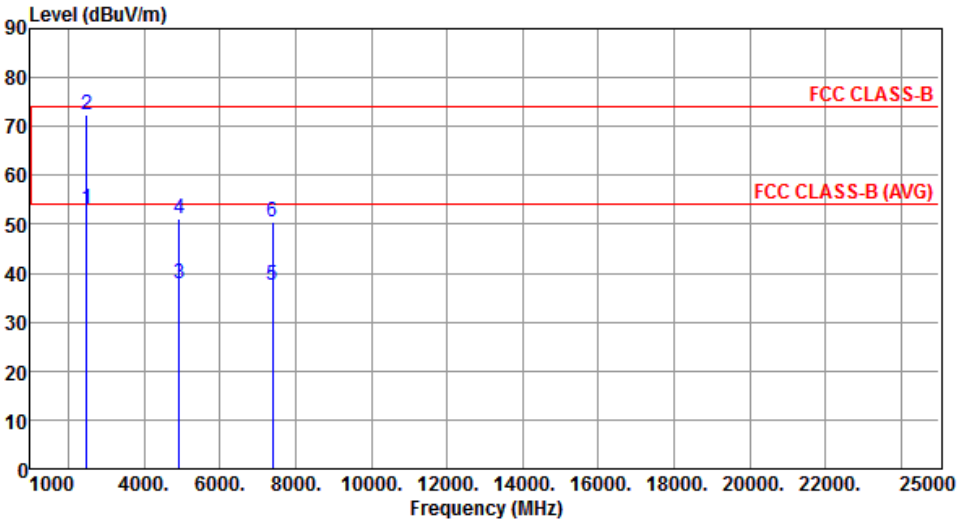
Modulation	HT20	Test Freq. (MHz)	2462
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	50.66	54.00	-3.34	53.85	-3.19	Average	148	290
2	2483.50	67.80	74.00	-6.20	70.99	-3.19	Peak	148	290
3	4924.00	36.30	54.00	-17.70	32.38	3.92	Average	355	171
4	4924.00	50.21	74.00	-23.79	46.29	3.92	Peak	355	171
5	7386.00	36.98	54.00	-17.02	28.75	8.23	Average	100	271
6	7386.00	50.93	74.00	-23.07	42.70	8.23	Peak	100	271

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	HT20	Test Freq. (MHz)	2462
Polarization	Vertical		

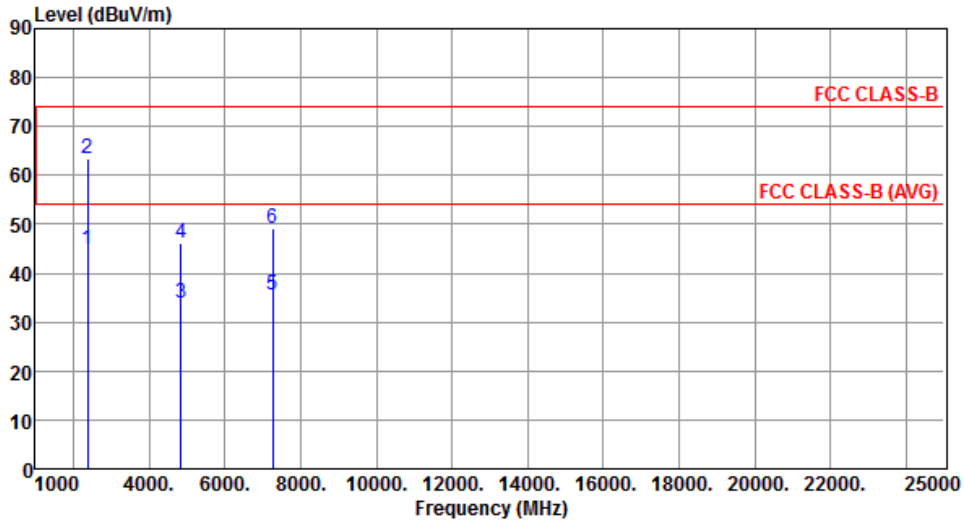


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	52.99	54.00	-1.01	56.18	-3.19	Average	104	325
2	2483.50	72.29	74.00	-1.71	75.48	-3.19	Peak	104	325
3	4924.00	37.73	54.00	-16.27	33.81	3.92	Average	314	118
4	4924.00	51.31	74.00	-22.69	47.39	3.92	Peak	314	118
5	7386.00	37.37	54.00	-16.63	29.14	8.23	Average	233	26
6	7386.00	50.40	74.00	-23.60	42.17	8.23	Peak	233	26

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.5.8 Transmitter Radiated Unwanted Emissions (Above 1GHz) for HT40

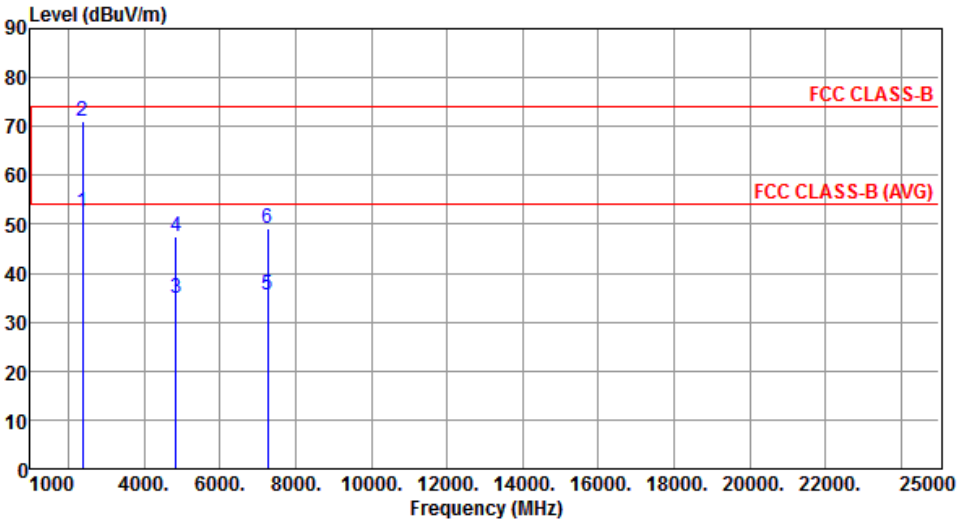
Modulation	HT40	Test Freq. (MHz)	2422
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	44.78	54.00	-9.22	48.38	-3.60	Average	120	289
2	2390.00	63.58	74.00	-10.42	67.18	-3.60	Peak	120	289
3	4844.00	33.89	54.00	-20.11	30.22	3.67	Average	347	165
4	4844.00	46.33	74.00	-27.67	42.66	3.67	Peak	347	165
5	7266.00	35.52	54.00	-18.48	27.46	8.06	Average	100	253
6	7266.00	49.05	74.00	-24.95	40.99	8.06	Peak	100	253

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

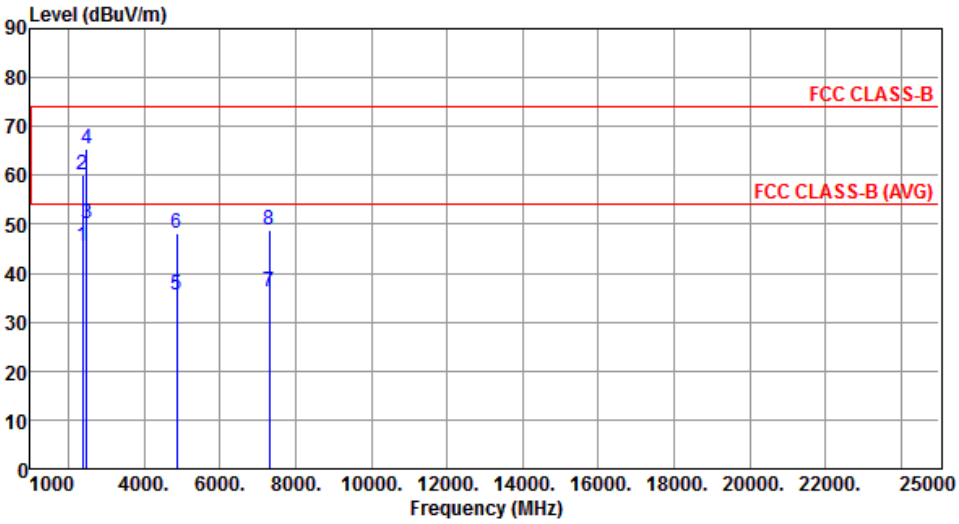
Modulation	HT40	Test Freq. (MHz)	2422
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	52.53	54.00	-1.47	56.13	-3.60	Average	103	327
2	2390.00	71.05	74.00	-2.95	74.65	-3.60	Peak	103	327
3	4844.00	34.78	54.00	-19.22	31.11	3.67	Average	308	119
4	4844.00	47.58	74.00	-26.42	43.91	3.67	Peak	308	119
5	7266.00	35.66	54.00	-18.34	27.60	8.06	Average	204	42
6	7266.00	49.21	74.00	-24.79	41.15	8.06	Peak	204	42

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

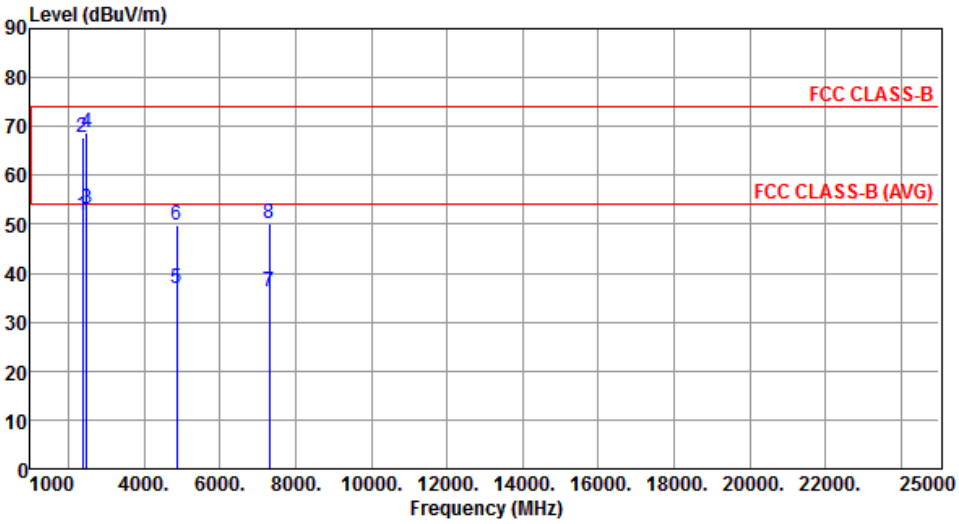
Modulation	HT40	Test Freq. (MHz)	2437
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	45.52	54.00	-8.48	49.12	-3.60	Average	120	290
2	2390.00	60.23	74.00	-13.77	63.83	-3.60	Peak	120	290
3	2483.50	50.24	54.00	-3.76	53.43	-3.19	Average	120	290
4	2483.50	65.26	74.00	-8.74	68.45	-3.19	Peak	120	290
5	4874.00	35.39	54.00	-18.61	31.64	3.75	Average	361	174
6	4874.00	48.29	74.00	-25.71	44.54	3.75	Peak	361	174
7	7311.00	36.18	54.00	-17.82	28.05	8.13	Average	100	251
8	7311.00	48.66	74.00	-25.34	40.53	8.13	Peak	100	251

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

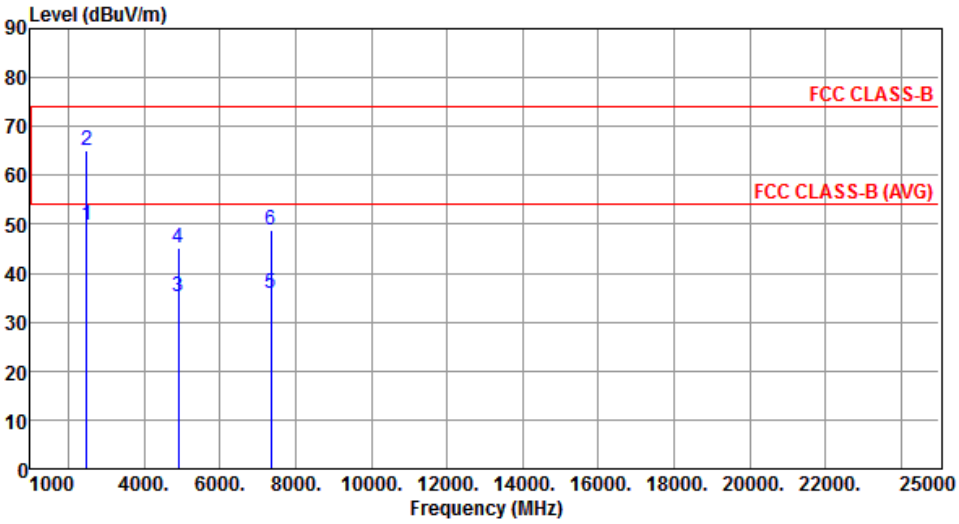
Modulation	HT40	Test Freq. (MHz)	2437
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	51.80	54.00	-2.20	55.40	-3.60	Average	100	325
2	2390.00	67.88	74.00	-6.12	71.48	-3.60	Peak	100	325
3	2483.50	52.99	54.00	-1.01	56.18	-3.19	Average	100	325
4	2483.50	68.73	74.00	-5.27	71.92	-3.19	Peak	100	325
5	4874.00	36.88	54.00	-17.12	33.13	3.75	Average	362	116
6	4874.00	49.94	74.00	-24.06	46.19	3.75	Peak	362	116
7	7311.00	36.30	54.00	-17.70	28.17	8.13	Average	213	92
8	7311.00	50.06	74.00	-23.94	41.93	8.13	Peak	213	92

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

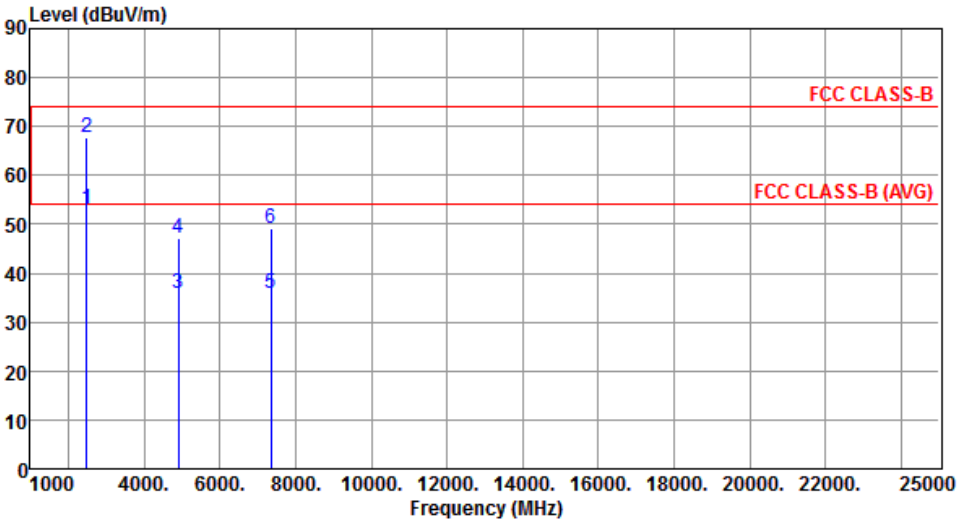
Modulation	HT40	Test Freq. (MHz)	2452
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	49.90	54.00	-4.10	53.09	-3.19	Average	117	287
2	2483.50	65.02	74.00	-8.98	68.21	-3.19	Peak	117	287
3	4904.00	35.13	54.00	-18.87	31.27	3.86	Average	341	168
4	4904.00	45.24	74.00	-28.76	41.38	3.86	Peak	341	168
5	7356.00	35.75	54.00	-18.25	27.55	8.20	Average	100	263
6	7356.00	48.92	74.00	-25.08	40.72	8.20	Peak	100	263

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

Modulation	HT40	Test Freq. (MHz)	2452
Polarization	Vertical		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	52.98	54.00	-1.02	56.17	-3.19	Average	103	325
2	2483.50	67.85	74.00	-6.15	71.04	-3.19	Peak	103	325
3	4904.00	35.80	54.00	-18.20	31.94	3.86	Average	316	121
4	4904.00	47.03	74.00	-26.97	43.17	3.86	Peak	316	121
5	7356.00	35.96	54.00	-18.04	27.76	8.20	Average	202	36
6	7356.00	49.18	74.00	-24.82	40.98	8.20	Peak	202	36

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).

3.6 Emissions in Non-Restricted Frequency Bands

3.6.1 Emissions in Non-Restricted Frequency Bands Limit

Peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz

3.6.2 Test Procedures

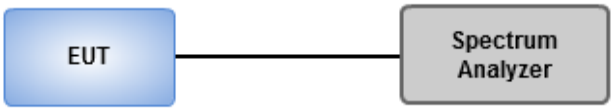
Reference level measurement

1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Use the peak marker function to determine the maximum PSD level

Emission level measurement

1. Set RBW=100kHz, VBW = 300kHz , Detector = Peak, Sweep time = Auto
2. Trace = max hold , Allow Trace to fully stabilize
3. Scan Frequency range is up to 25GHz
4. Use the peak marker function to determine the maximum amplitude level

3.6.3 Test Setup



3.6.4 Unwanted Emissions into Non-Restricted Frequency Bands

Summary

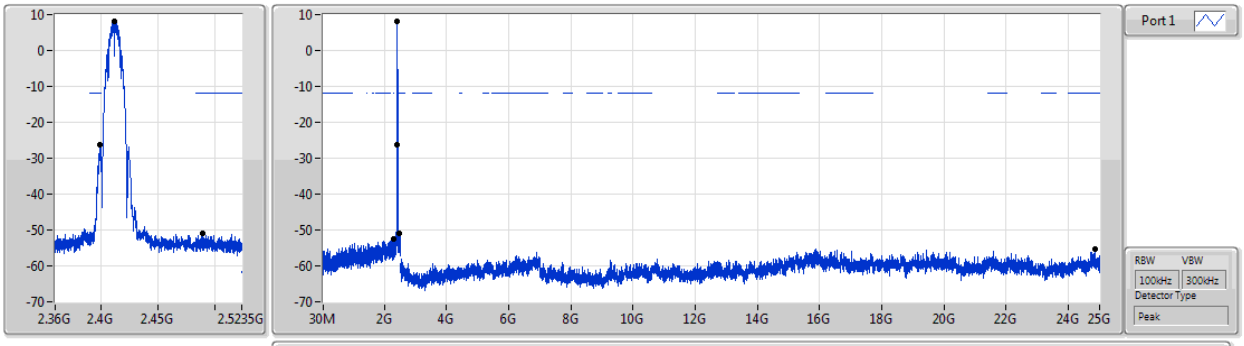
Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
2.4-2.4835GHz	-	-	-	-	-	-	-	-	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	Pass	2.412358G	7.98	-12.02	2.307575G	-52.48	2.39952G	-26.29	2.48918G	-50.90	24.853903G	-55.18	1
802.11g_Nss1,(6Mbps)_1TX	Pass	2.404175G	2.13	-17.87	2.30175G	-52.02	2.39992G	-28.53	2.50022G	-50.22	16.756744G	-55.38	1
802.11n HT20_Nss1,(MCS0)_1TX	Pass	2.417368G	1.60	-18.40	2.12933G	-53.06	2.39992G	-28.35	2.49614G	-50.81	16.812935G	-56.08	1
802.11n HT40_Nss1,(MCS0)_1TX	Pass	2.439078G	-0.22	-20.22	2.10474G	-52.34	2.39712G	-33.93	2.4843G	-39.75	16.516198G	-56.10	1

Result

Mode	Result	Ref (Hz)	Ref (dBm)	Limit (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Freq (Hz)	Level (dBm)	Port
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.412358G	7.98	-12.02	2.307575G	-52.48	2.39952G	-26.29	2.48918G	-50.90	24.853903G	-55.18	1
2437MHz	Pass	2.437408G	8.34	-11.66	1.98021G	-52.95	2.39728G	-51.59	2.51526G	-51.24	24.758378G	-54.90	1
2462MHz	Pass	2.462625G	9.86	-10.14	2.309905G	-52.39	2.39968G	-51.88	2.48798G	-45.41	14.72262G	-55.71	1
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.404175G	2.13	-17.87	2.30175G	-52.02	2.39992G	-28.53	2.50022G	-50.22	16.756744G	-55.38	1
2437MHz	Pass	2.443921G	8.30	-11.70	2.13399G	-51.83	2.3992G	-40.20	2.4839G	-40.80	2.548786G	-55.39	1
2462MHz	Pass	2.454275G	2.73	-17.27	2.19923G	-51.87	2.39928G	-51.63	2.48486G	-39.51	6.987895G	-55.25	1
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	2.417368G	1.60	-18.40	2.12933G	-53.06	2.39992G	-28.35	2.49614G	-50.81	16.812935G	-56.08	1
2437MHz	Pass	2.442585G	7.48	-12.52	2.13166G	-52.37	2.3964G	-40.16	2.48454G	-40.43	2.5235G	-53.52	1
2462MHz	Pass	2.456613G	2.78	-17.22	2.30175G	-51.56	2.39584G	-52.03	2.48438G	-38.31	2.540357G	-55.24	1
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	2.418537G	-2.28	-22.28	2.089855G	-51.97	2.39984G	-36.38	2.48862G	-50.51	5.811183G	-55.97	1
2437MHz	Pass	2.439078G	-0.22	-20.22	2.10474G	-52.34	2.39712G	-33.93	2.4843G	-39.75	16.516198G	-56.10	1
2452MHz	Pass	2.444255G	-2.34	-22.34	2.101305G	-50.05	2.3984G	-50.52	2.48974G	-40.20	16.41243G	-54.63	1

802.11b_Nss1,(1Mbps)_1TX **CSE NdB**

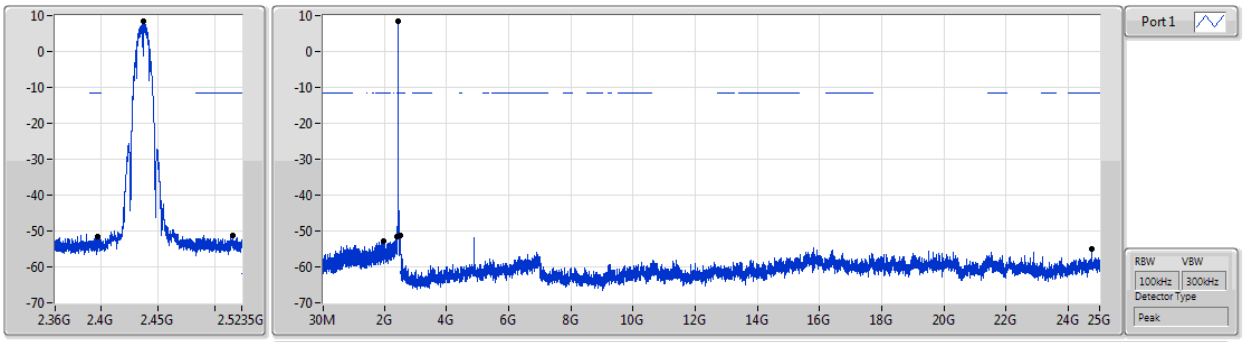
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.412358G	7.98	-12.02	2.307575G	-52.48	2.39952G	-26.29	2.48918G	-50.90	24.853903G	-55.18	1

802.11b_Nss1,(1Mbps)_1TX **CSE NdB**

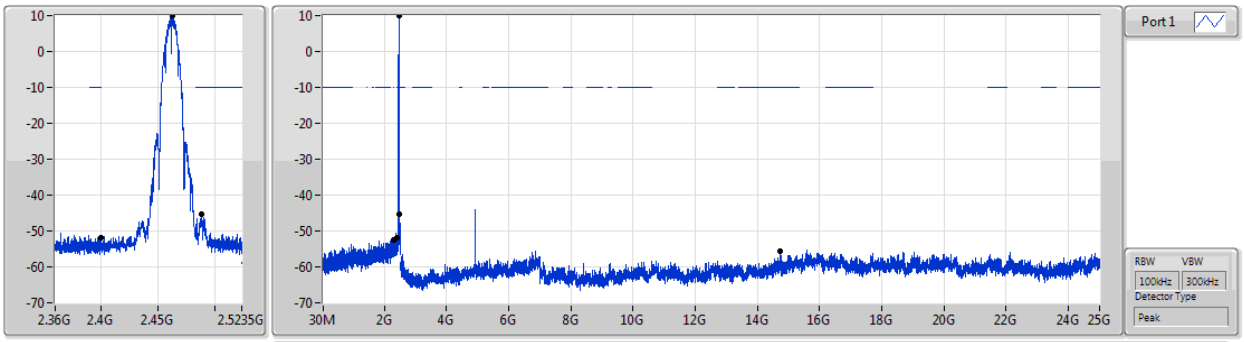
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.437408G	8.34	-11.66	1.98021G	-52.95	2.39728G	-51.59	2.51526G	-51.24	24.758378G	-54.90	1

802.11b_Nss1,(1Mbps)_1TX **CSE NdB**

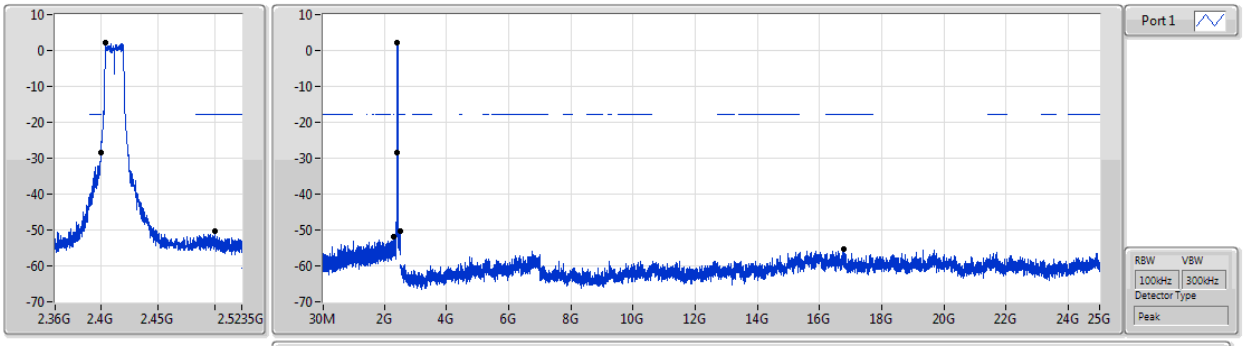
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.462625G	9.86	-10.14	2.309905G	-52.39	2.39968G	-51.88	2.48798G	-45.41	14.72262G	-55.71	1

802.11g_Nss1,(6Mbps)_1TX **CSE NdB**

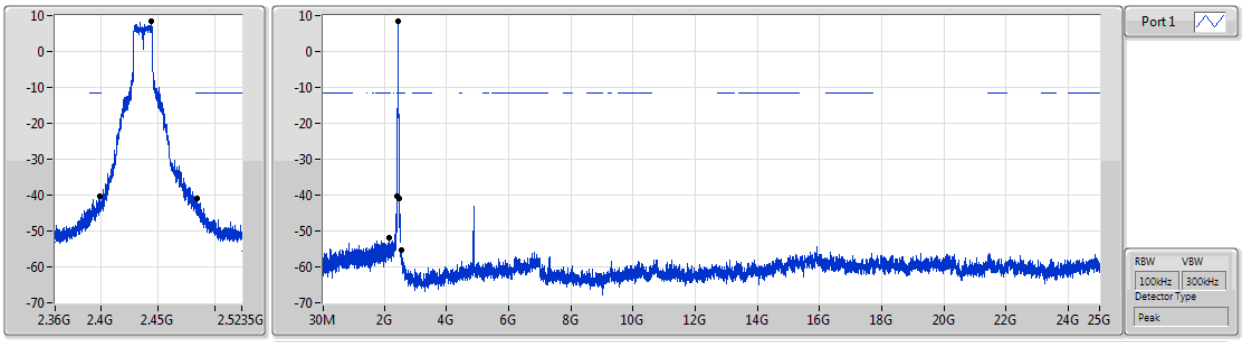
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.404175G	2.13	-17.87	2.30175G	-52.02	2.39992G	-28.53	2.50022G	-50.22	16.756744G	-55.38	1

802.11g_Nss1,(6Mbps)_1TX **CSE NdB**

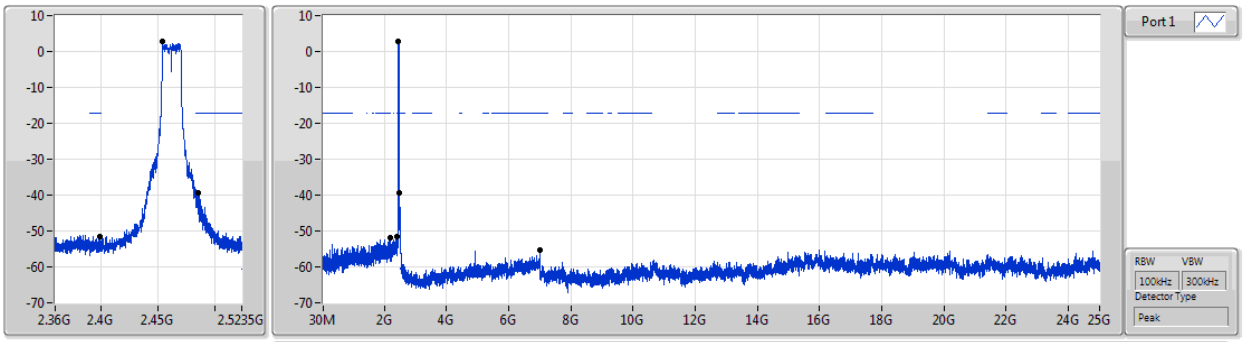
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.443921G	8.30	-11.70	2.13399G	-51.83	2.3992G	-40.20	2.4839G	-40.80	2.548786G	-55.39	1

802.11g_Nss1,(6Mbps)_1TX **CSE NdB**

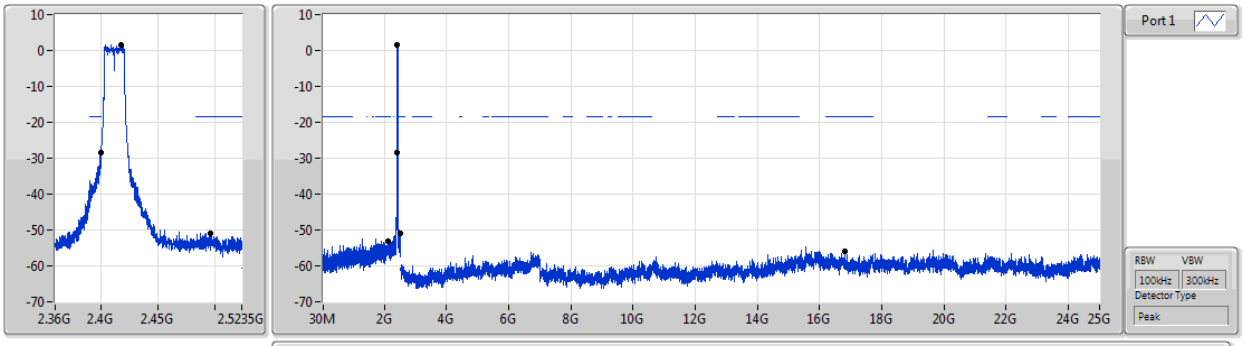
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.454275G	2.73	-17.27	2.19923G	-51.87	2.39928G	-51.63	2.48486G	-39.51	6.987895G	-55.25	1

802.11n HT20_Nss1,(MCS0)_1TX **CSE NdB**

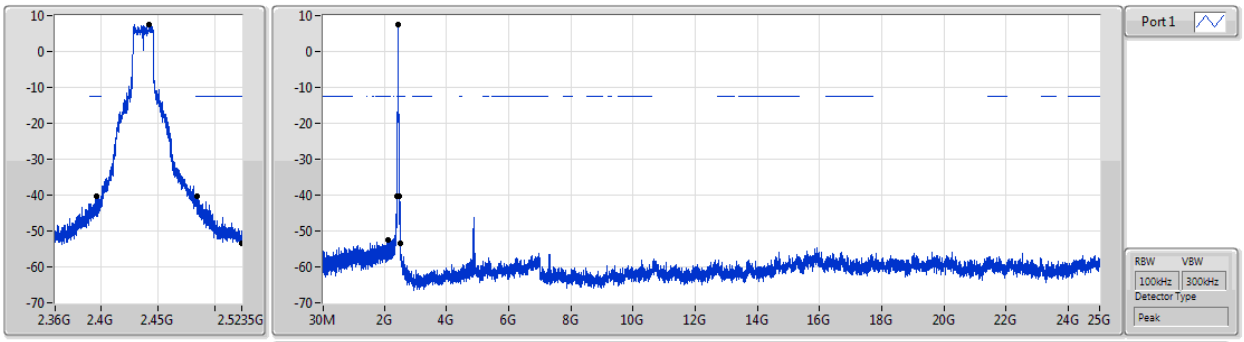
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.417368G	1.60	-18.40	2.12933G	-53.06	2.39992G	-28.35	2.49614G	-50.81	16.812935G	-56.08	1

802.11n HT20_Nss1,(MCS0)_1TX **CSE NdB**

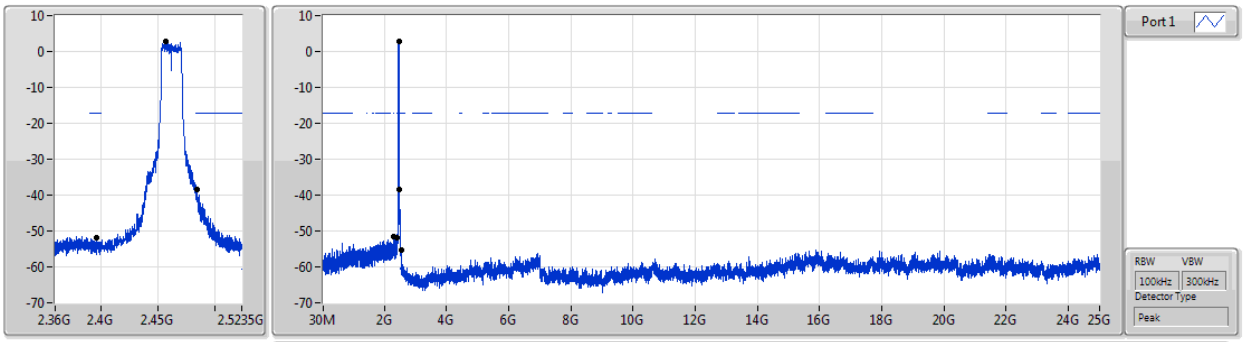
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.442585G	7.48	-12.52	2.13166G	-52.37	2.3964G	-40.16	2.48454G	-40.43	2.5235G	-53.52	1

802.11n HT20_Nss1,(MCS0)_1TX **CSE NdB**

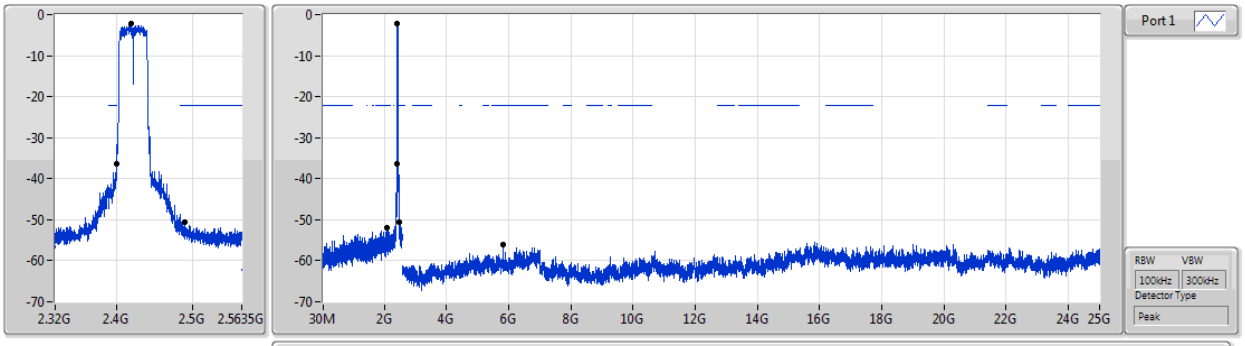
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.456613G	2.78	-17.22	2.30175G	-51.56	2.39584G	-52.03	2.48438G	-38.31	2.540357G	-55.24	1

802.11n HT40_Nss1,(MCS0)_1TX **CSE NdB**

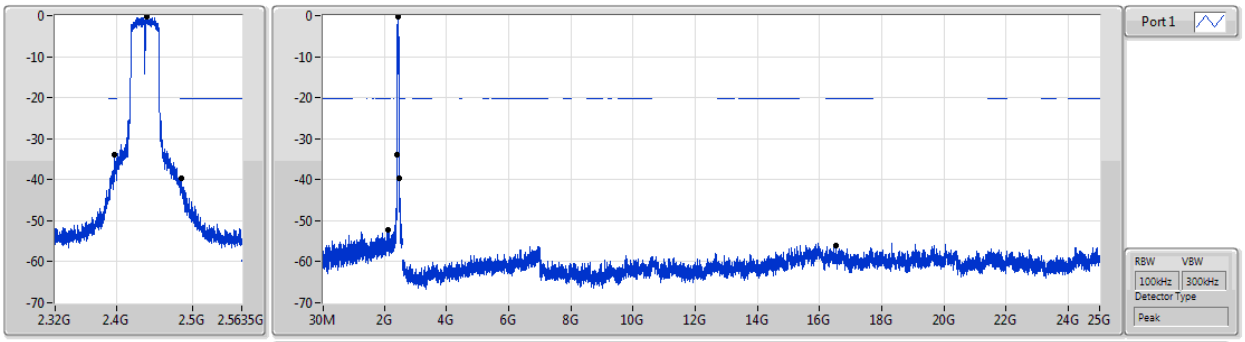
2422MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.418537G	-2.28	-22.28	2.089855G	-51.97	2.39984G	-36.38	2.48862G	-50.51	5.811183G	-55.97	1

802.11n HT40_Nss1,(MCS0)_1TX **CSE NdB**

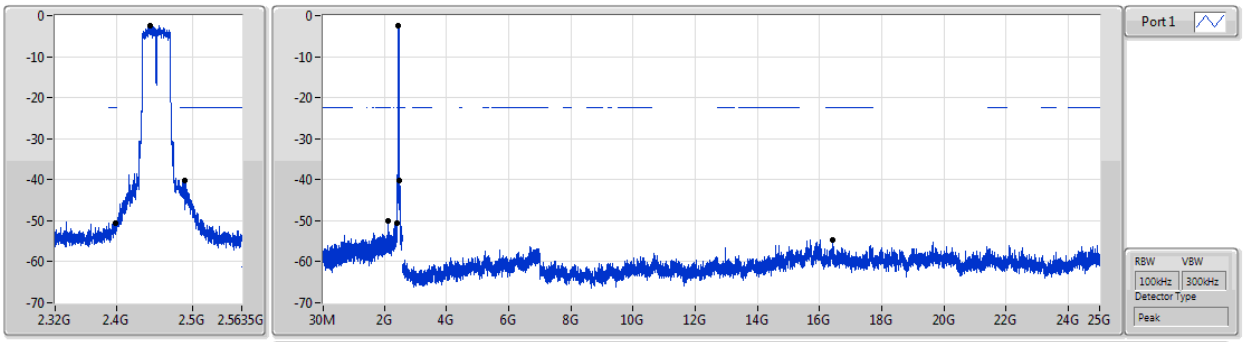
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.439078G	-0.22	-20.22	2.10474G	-52.34	2.39712G	-33.93	2.4843G	-39.75	16.516198G	-56.10	1

802.11n HT40_Nss1,(MCS0)_1TX **CSE NdB**

2452MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.444255G	-2.34	-22.34	2.101305G	-50.05	2.3984G	-50.52	2.48974G	-40.20	16.41243G	-54.63	1

4 Test laboratory information

Established in 2012, ICC provides foremost EMC & RF Testing and advisory consultation services by our skilled engineers and technicians. Our services employ a wide variety of advanced edge test equipment and one of the widest certification extents in the business.

International Certification Corp (EMC and Wireless Communication Laboratory), it is our definitive objective is to institute long term, trust-based associations with our clients. The expectation we set up with our clients is based on outstanding service, practical expertise and devotion to a certified value structure. Our passion is to grant our clients with best EMC / RF services by oriented knowledgeable and accommodating staff.

Our Test sites are located at Linkou District and Kwei Shan District. Location map can be found on our website http://www.icertifi.com.tw.

Linkou	**Kwei Shan**	**Kwei Shan Site II**
Tel: 886-2-2601-1640	Tel: 886-3-271-8666	Tel: 886-3-271-8640
No. 30-2, Ding Fwu Tsuen, Lin Kou District, New Taipei City, Taiwan, R.O.C.	No. 3-1, Lane 6, Wen San 3rd St., Kwei Shan District, Tao Yuan City 333, Taiwan, R.O.C.	No. 14-1, Lane 19, Wen San 3rd St., Kwei Shan District, Tao Yuan City 333, Taiwan, R.O.C.

If you have any suggestion, please feel free to contact us as below information.

Tel: 886-3-271-8666
Fax: 886-3-318-0155
Email: ICC_Service@icertifi.com.tw

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