FCC Test Report

FCC ID	:	**MXF-WAPQ-245**
Equipment	:	**Router**
Model No.	:	**AC3000**
Brand Name	:	**Onelink**
Applicant	:	**Gemtek Technology Co., Ltd.**
Address	:	**No.15-1 Zhoughua Rd, Hsinchu Industrial Park, Hukou, Hsinchu, Taiwan, R.O.C**
Standard	:	**47 CFR FCC Part 15.247**
Received Date	:	**Oct. 29, 2018**
Tested Date	:	**Oct. 29 ~ Nov. 15, 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
FR8O3101AC	Rev. 01	Initial issue	Nov. 26, 2018

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.460MHz 38.45 (Margin -8.24dB) - AV	Pass
15.247(d) 15.209	Radiated Emissions	[dBuV/m at 3m]:4874.00MHz 53.00 (Margin -1.00dB) – AV [dBuV/m at 3m]:2390.00MHz 53.00 (Margin -1.00dB) – AV [dBuV/m at 3m]:2483.50MHz 53.00 (Margin -1.00dB) – AV	Pass
15.247(b)(3)	Maximum Output Power	Max Power [dBm]: 23.29	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]	2	1-11 Mbps
2400-2483.5	g	2412-2462	1-11 [11]	2	6-54 Mbps
2400-2483.5	n (HT20)	2412-2462	1-11 [11]	2	MCS 0-15
2400-2483.5	n (HT40)	2422-2452	3-9 [7]	2	MCS 0-15
2400-2483.5	ac (VHT20)	2412-2462	1-11 [11]	2	MCS 0-9
2400-2483.5	ac (VHT40)	2422-2452	3-9 [7]	2	MCS 0-9
Note 1: RF output power specifies that Maximum Conducted (Average) 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	2.4GHz,G1	PIFA	2.4	UFL
2	2.4GHz,G2	PIFA	2.1	UFL

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	12Vdc from adapter

1.1.4 Accessories

Accessories		
No.	**Equipment**	**Description**
1	AC Adapter	Brand: APD Model: WB-24J12FU Power Rating: I/P: 100-120Vac, 60Hz, 0.7A Max O/P: 12Vdc, 2.0A Power Line: 1.8m non-shielded cable w/o core
2	RJ45 cable (white)	1.45m non-shielded cable w/o core

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	QRCT, Version: 3.0.298.0		
Duty Cycle and Duty Factor	Mode	Duty cycle (%)	Duty factor (dB)
	11b	100.00%	0.00
	11g	96.97%	0.13
	VHT20	99.06%	0.04
	VHT40	97.25%	0.12

1.1.7 Power Setting

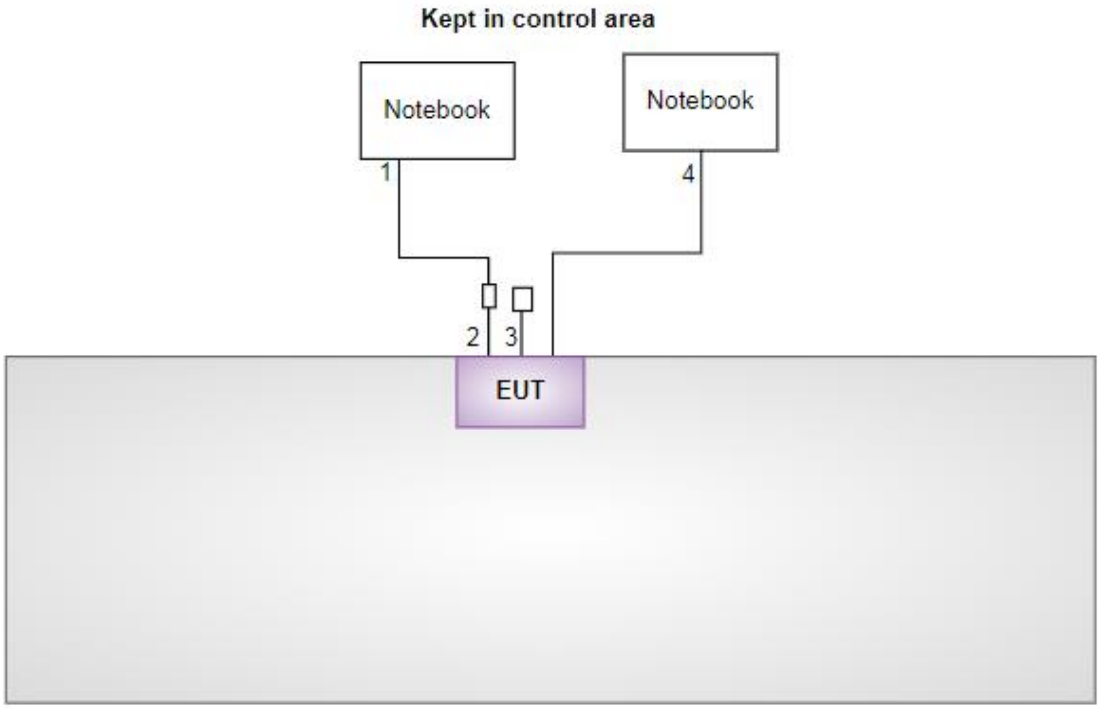
Modulation Mode	Test Frequency (MHz)	Power Set
11b	2412	19.5
11b	2437	19.0
11b	2462	20.0
11g	2412	19.0
11g	2437	19.5
11g	2462	18.5
VHT20	2412	18.5
VHT20	2437	20.0
VHT20	2462	18.5
VHT40	2422	18.0
VHT40	2437	18.5
VHT40	2452	18.0

1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Remarks**
1	Notebook	DELL	Latitude E5470	DoC	---
2	Notebook	DELL	Latitude E6430	DoC	---
3	Notebook	DELL	Latitude E6430	DoC	---

1.3 Test Setup Chart

Test Setup Diagram



No.	Signal cable / Length (m)
1	RJ45, 10m non-shielded.
2	RJ45, 1.45m non-shielded.
3	RJ45, 1m non-shielded with load.
4	RJ45, 10m non-shielded.

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Nov. 12, 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 chamber 3 / (03CH03-WS)				
Tested Date	Oct. 29 ~ Nov. 09, 2018				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&**S**	FSV40	101499	Jan. 03, 2018	Jan. 02, 2019
Receiver	R&**S**	ESR3	101658	Nov. 20, 2017	Nov. 19, 2018
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-685	Apr. 19, 2018	Apr. 18, 2019
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1206	Jan. 18, 2018	Jan. 17, 2019
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 23, 2017	Nov. 22, 2018
Preamplifier	EMC	EMC02325	980187	Aug. 24, 2018	Aug. 23, 2019
Preamplifier	Agilent	83017A	MY53270014	Aug. 09, 2018	Aug. 08, 2019
Preamplifier	EMC	EMC184045B	980192	Aug. 09, 2018	Aug. 08, 2019
Loop Antenna	TESEQ	HLA 6120	31244	Mar. 29, 2018	Mar. 28, 2019
RF cable-3M	HUBER+SUHNER	SUCOFLEX104	MY22620/4	Nov. 27, 2017	Nov. 26, 2018
RF cable-8M	HUBER+SUHNER	SUCOFLEX104	MY32487/4	Nov. 27, 2017	Nov. 26, 2018
RF cable-1M	HUBER+SUHNER	SUCOFLEX104	MY22624/4	Nov. 27, 2017	Nov. 26, 2018
LF cable-0.8M	EMC	EMC8D-NM-NM-800	EMC8D-NM-NM-800-001	Nov. 27, 2017	Nov. 26, 2018
LF cable-3M	EMC	EMC8D-NM-NM-3000	131103	Nov. 27, 2017	Nov. 26, 2018
LF cable-13M	EMC	EMC8D-NM-NM-13000	131104	Nov. 27, 2017	Nov. 26, 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	Nov. 13 ~ Nov. 15, 2018				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101063	Apr. 16, 2018	Apr. 15, 2019
Power Meter	Anritsu	ML2495A	1241002	Oct. 09, 2018	Oct. 08, 2019
Power Sensor	Anritsu	MA2411B	1207366	Oct. 09, 2018	Oct. 08, 2019
AC POWER SOURCE	APC	AFC-500W	F312060012	Dec. 01, 2017	Nov. 30, 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 15.247 Meas Guidance v05
FCC KDB 662911 D01 Multiple Transmitter Output v02r01

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	±5.37 dB

2 Test Configuration

2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	24°C / 58%	Alex Tsai
Radiated Emissions	03CH03-WS	24°C / 66%	Akun Chung
RF Conducted	TH01-WS	22°C / 64%	Aska Huang

- FCC Designation No.: TW0009
- FCC site registration No.: 207696
- IC site registration No.: 10807C-1

2.2 The Worst Test Modes and Channel Details

Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Configuration
Conducted Emissions	11g	2462	6 Mbps	---
Radiated Emissions ≤1GHz	11g	2462	6 Mbps	---
Radiated Emissions >1GHz Maximum Output Power 6dB bandwidth Power spectral density	11b 11g VHT20 VHT40	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

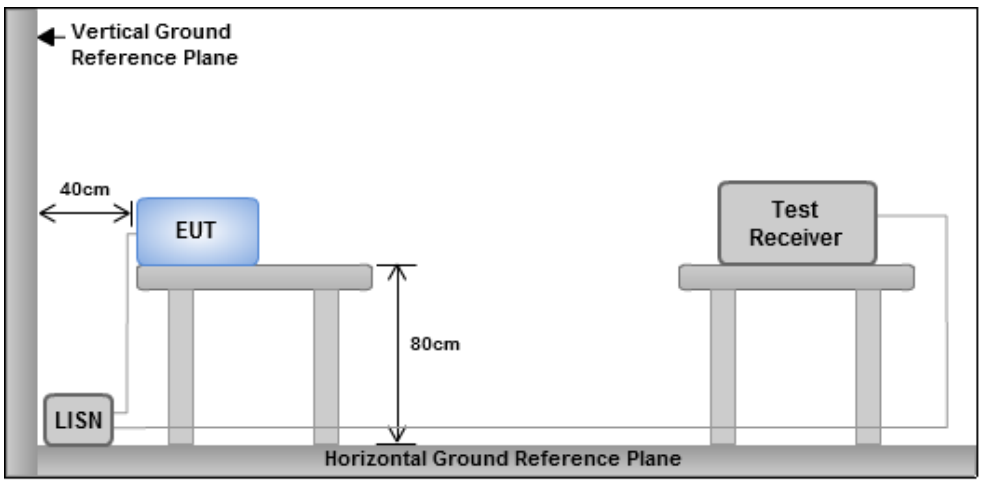
3.1.1 Limit of Conducted Emissions

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

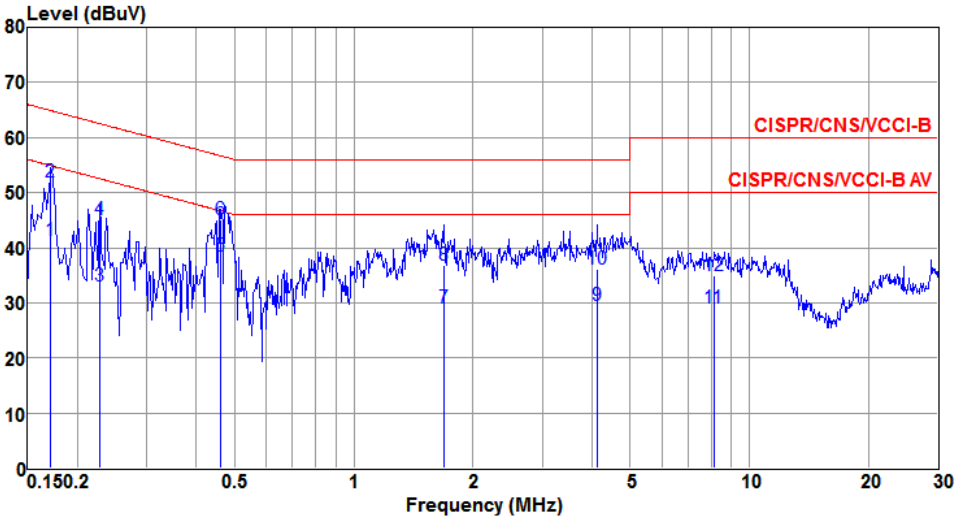


Note: 1. Support units were connected to second LISN.

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

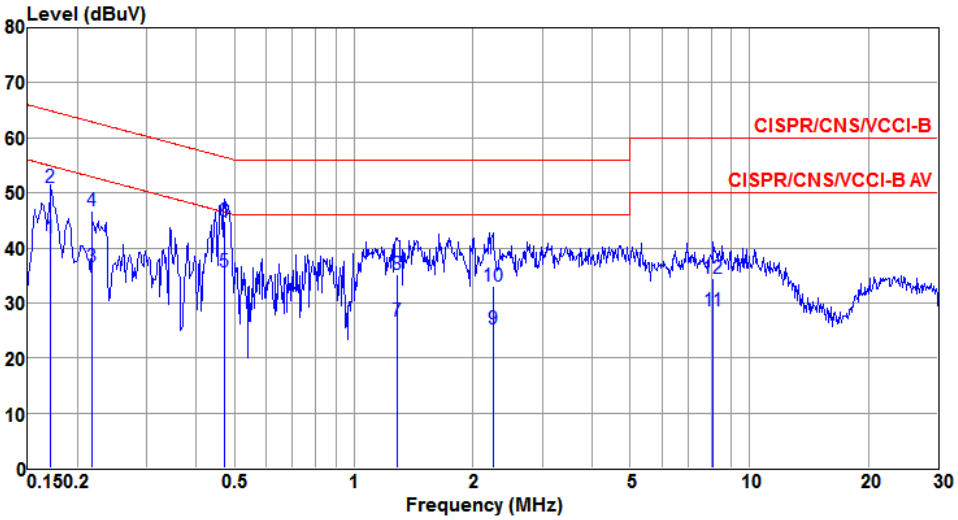
Modulation	11g	Test Freq. (MHz)	2462
Power Phase	Line		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.171	41.21	54.90	-13.69	41.16	0.03	0.02	Average
2	0.171	51.91	64.90	-12.99	51.86	0.03	0.02	QP
3	0.228	33.00	52.52	-19.52	32.94	0.03	0.03	Average
4	0.228	45.17	62.52	-17.35	45.11	0.03	0.03	QP
5*	0.460	38.45	46.69	-8.24	38.40	0.03	0.02	Average
6	0.460	45.03	56.69	-11.66	44.98	0.03	0.02	QP
7	1.689	29.02	46.00	-16.98	28.89	0.05	0.08	Average
8	1.689	36.81	56.00	-19.19	36.68	0.05	0.08	QP
9	4.114	29.51	46.00	-16.49	29.21	0.08	0.22	Average
10	4.114	36.21	56.00	-19.79	35.91	0.08	0.22	QP
11	8.148	28.95	50.00	-21.05	28.50	0.15	0.30	Average
12	8.148	34.85	60.00	-25.15	34.40	0.15	0.30	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)	2462
Power Phase	Neutral		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.171	41.74	54.90	-13.16	41.69	0.03	0.02	Average
2	0.171	50.90	64.90	-14.00	50.85	0.03	0.02	QP
3	0.219	36.54	52.88	-16.34	36.48	0.03	0.03	Average
4	0.219	46.70	62.88	-16.18	46.64	0.03	0.03	QP
5*	0.471	35.74	46.49	-10.75	35.69	0.03	0.02	Average
6	0.471	44.92	56.49	-11.57	44.87	0.03	0.02	QP
7	1.289	26.57	46.00	-19.43	26.46	0.05	0.06	Average
8	1.289	35.16	56.00	-20.84	35.05	0.05	0.06	QP
9	2.249	25.29	46.00	-20.71	25.11	0.06	0.12	Average
10	2.249	32.95	56.00	-23.05	32.77	0.06	0.12	QP
11	8.105	28.54	50.00	-21.46	28.10	0.14	0.30	Average
12	8.105	34.43	60.00	-25.57	33.99	0.14	0.30	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

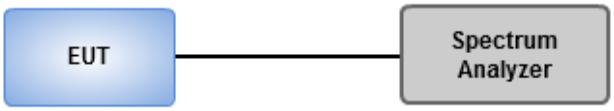
6dB Bandwidth

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% ~ 5 % of OBW, Video bandwidth = 3 x RBW
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) _2TX	8.043M	12.88M	12M9G1D	8.043M	12.735M
802.11g_Nss1,(6Mbps) _2TX	16.304M	16.425M	16M4D1D	16.304M	16.353M
802.11ac VHT20_Nss1,(MCS0)_2TX	17.609M	17.656M	17M7D1D	17.246M	17.583M
802.11ac VHT40_Nss1,(MCS0)_2TX	35.362M	35.89M	35M9D1D	33.913M	35.89M

Max-N dB = Maximum6dB downbandwidth;**Max-OBW** = Maximum99% occupied bandwidth;
Min-N dB = Minimum6dB downbandwidth;**Min-OBW** = Minimum99% occupied bandwidth;

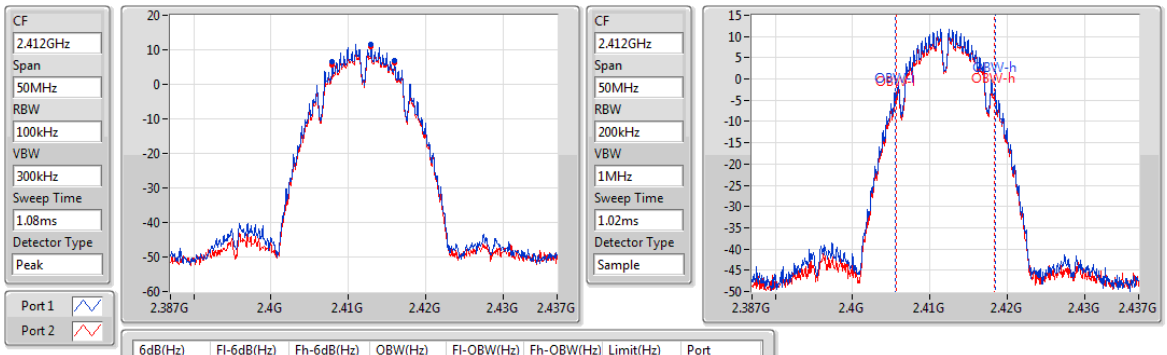
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port1-OBW (Hz)	Port 2 -N dB (Hz)	Port2 -OBW (Hz)
802.11b_Nss1 ,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	8.043M	12.88M	8.043M	12.735M
2437MHz	Pass	500k	8.043M	12.808M	8.043M	12.808M
2462MHz	Pass	500k	8.043M	12.88M	8.043M	12.735M
802.11g_Nss1 ,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.304M	16.353M	16.304M	16.353M
2437MHz	Pass	500k	16.304M	16.425M	16.304M	16.353M
2462MHz	Pass	500k	16.304M	16.353M	16.304M	16.353M
802.11ac VHT20 _Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	17.609M	17.583M	17.609M	17.583M
2437MHz	Pass	500k	17.609M	17.656M	17.246M	17.583M
2462MHz	Pass	500k	17.609M	17.583M	17.609M	17.583M
802.11ac VHT40 _Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	33.913M	35.89M	35.072M	35.89M
2437MHz	Pass	500k	35.362M	35.89M	33.913M	35.89M
2452MHz	Pass	500k	33.913M	35.89M	35.072M	35.89M

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

802.11b_Nss1,(1Mbps)_2TX **EBW**

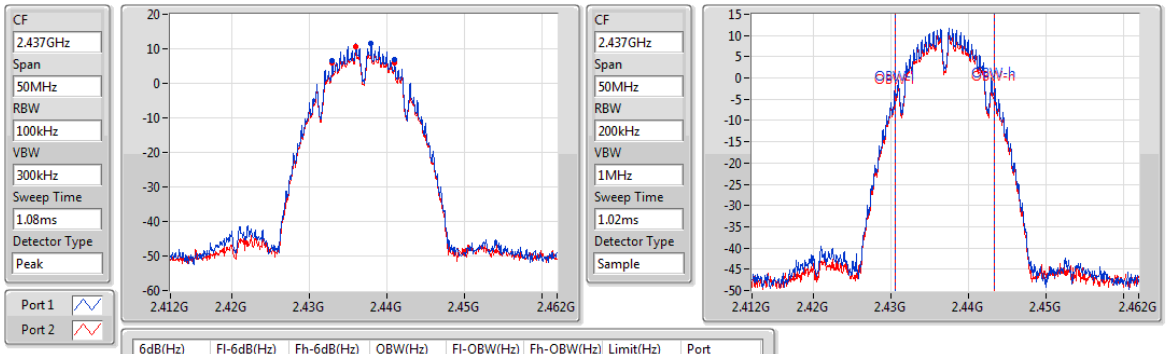
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.043M	2.407942G	2.415986G	12.88M	2.40556G	2.41844G	500k	1
8.043M	2.407942G	2.415986G	12.735M	2.405632G	2.418368G	500k	2

802.11b_Nss1,(1Mbps)_2TX **EBW**

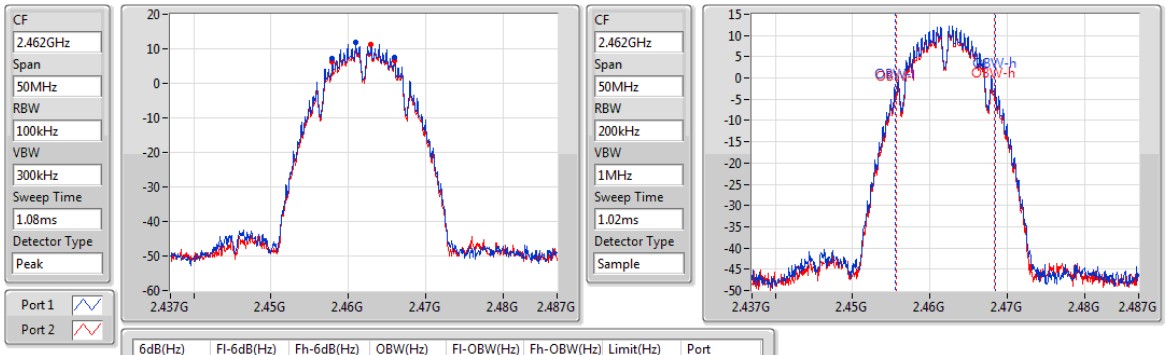
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.043M	2.432942G	2.440986G	12.808M	2.43056G	2.443368G	500k	1
8.043M	2.432942G	2.440986G	12.808M	2.43056G	2.443368G	500k	2

802.11b_Nss1,(1Mbps)_2TX **EBW**

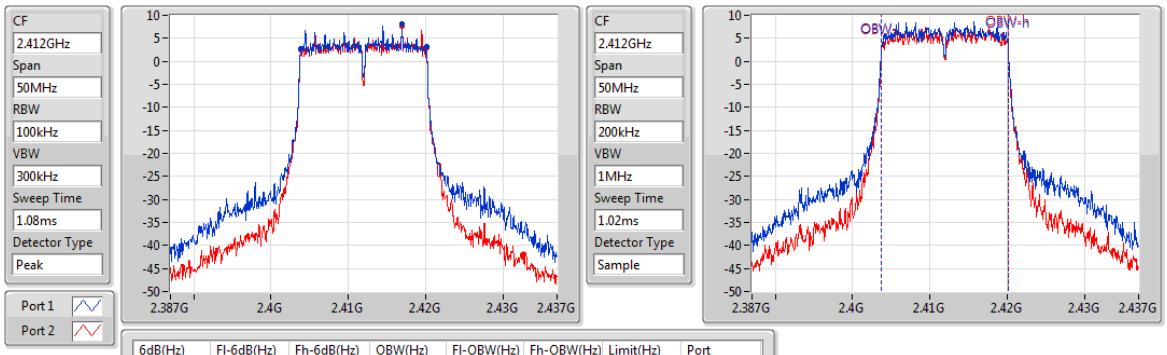
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.043M	2.457942G	2.465986G	12.88M	2.45556G	2.46844G	500k	1
8.043M	2.457942G	2.465986G	12.735M	2.455632G	2.468368G	500k	2

802.11g_Nss1,(6Mbps)_2TX **EBW**

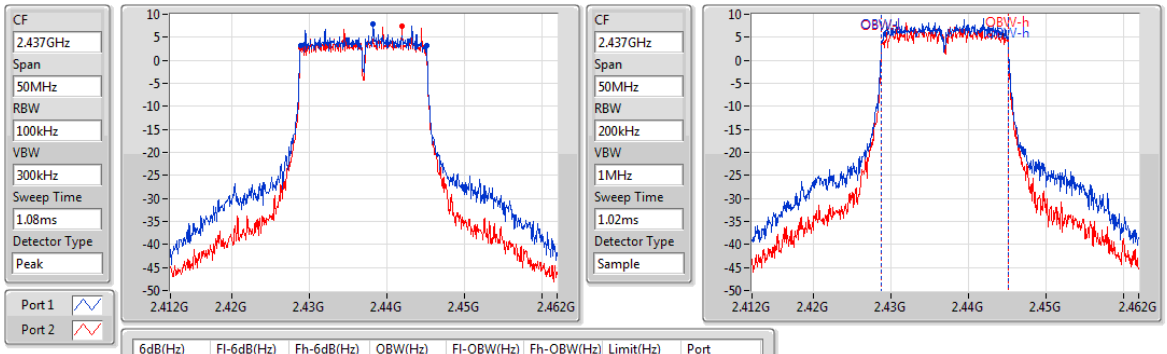
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.304M	2.403812G	2.420116G	16.353M	2.403751G	2.420104G	500k	1
16.304M	2.403812G	2.420116G	16.353M	2.403751G	2.420104G	500k	2

802.11g_Nss1,(6Mbps)_2TX **EBW**

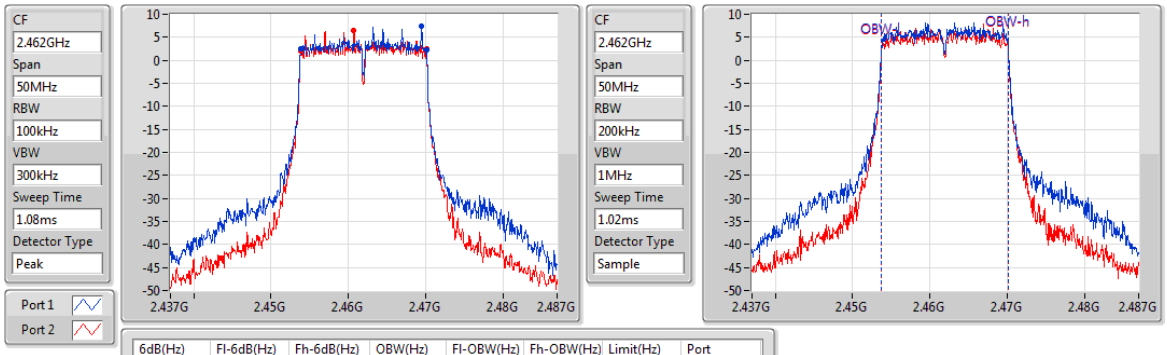
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.304M	2.428812G	2.445116G	16.425M	2.428751G	2.445177G	500k	1
16.304M	2.428812G	2.445116G	16.353M	2.428751G	2.445104G	500k	2

802.11g_Nss1,(6Mbps)_2TX **EBW**

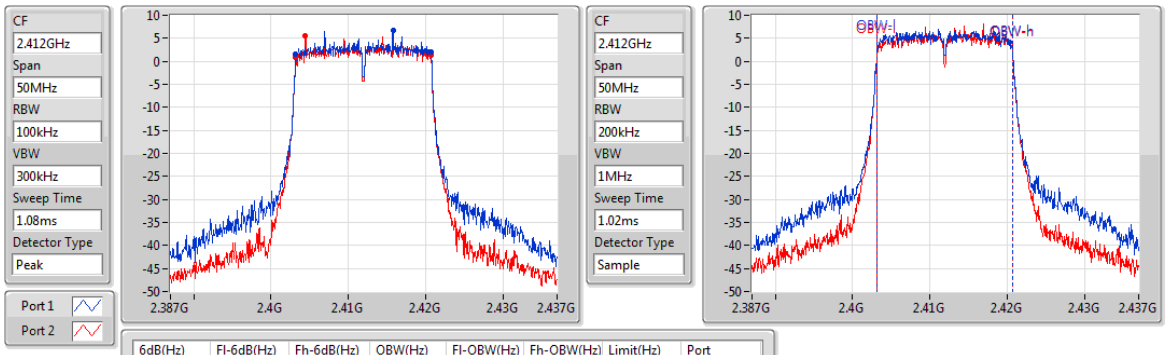
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.304M	2.453812G	2.470116G	16.353M	2.453751G	2.470104G	500k	1
16.304M	2.453812G	2.470116G	16.353M	2.453751G	2.470104G	500k	2

802.11ac VHT20_Nss1,(MCS0)_2TX EBW

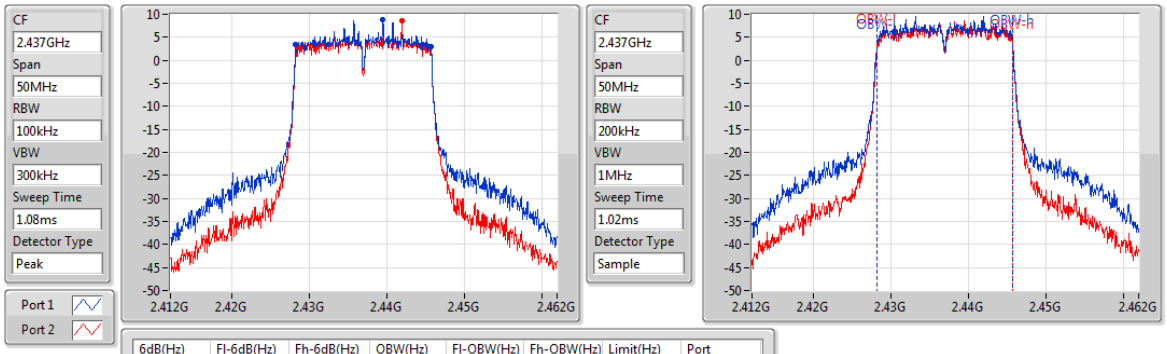
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.609M	2.403159G	2.420768G	17.583M	2.403172G	2.420755G	500k	1
17.609M	2.403159G	2.420768G	17.583M	2.403172G	2.420755G	500k	2

802.11ac VHT20_Nss1,(MCS0)_2TX EBW

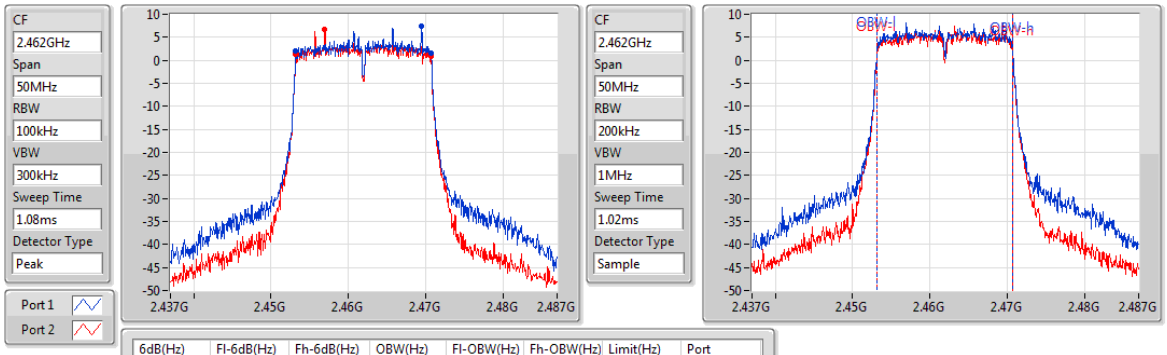
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.609M	2.428159G	2.445768G	17.656M	2.4281G	2.445755G	500k	1
17.246M	2.428522G	2.445768G	17.583M	2.428172G	2.445755G	500k	2

802.11ac VHT20_Nss1,(MCS0)_2TX EBW

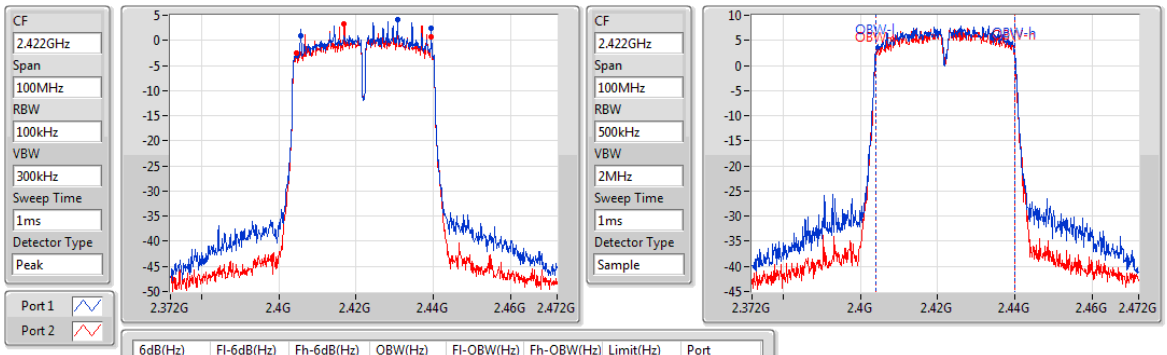
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.609M	2.453159G	2.470768G	17.583M	2.453172G	2.470755G	500k	1
17.609M	2.453159G	2.470768G	17.583M	2.453172G	2.470755G	500k	2

802.11ac VHT40_Nss1,(MCS0)_2TX EBW

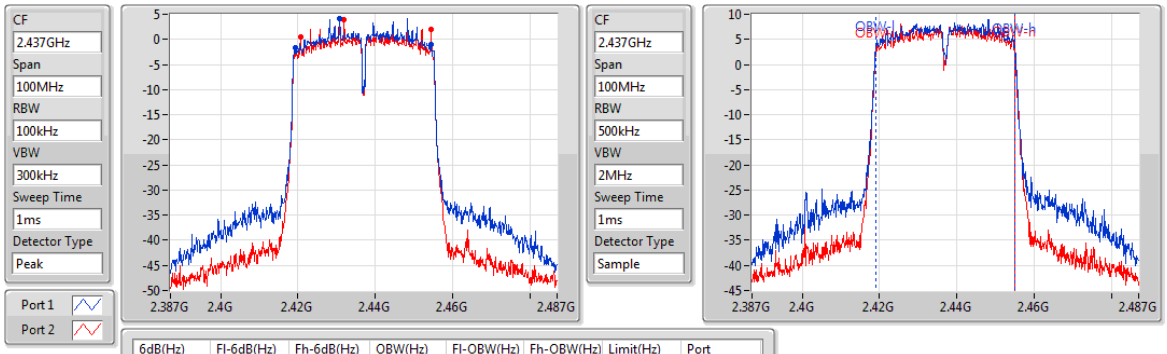
2422MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
33.913M	2.405623G	2.439536G	35.89M	2.404055G	2.439945G	500k	1
35.072M	2.404464G	2.439536G	35.89M	2.404055G	2.439945G	500k	2

802.11ac VHT40_Nss1,(MCS0)_2TX EBW

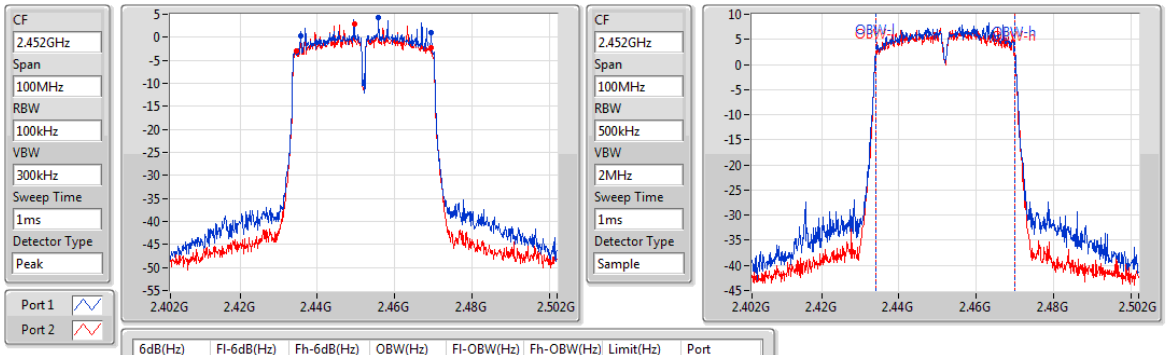
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.362M	2.419174G	2.454536G	35.89M	2.419055G	2.454945G	500k	1
33.913M	2.420623G	2.454536G	35.89M	2.419055G	2.454945G	500k	2

802.11ac VHT40_Nss1,(MCS0)_2TX EBW

2452MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
33.913M	2.435623G	2.469536G	35.89M	2.434055G	2.469945G	500k	1
35.072M	2.434464G	2.469536G	35.89M	2.434055G	2.469945G	500k	2

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.

3.3.2 Test Procedures

A broadband 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

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	**23.29**	0.21330
802.11g_Nss1,(6Mbps)_2TX	22.54	0.17947
802.11ac VHT20_Nss1,(MCS0)_2TX	23.02	0.20045
802.11ac VHT40_Nss1,(MCS0)_2TX	21.43	0.13900

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11b_Nss1,(1Mbps)_2TX	-	-	-	-	-	-	-	-
2412MHz	Pass	2.40	20.02	19.47	22.76	30.00	25.16	36.00
2437MHz	Pass	2.40	19.62	18.92	22.29	30.00	24.69	36.00
2462MHz	Pass	2.40	20.63	19.89	**23.29**	30.00	25.69	36.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-
2412MHz	Pass	2.40	19.48	18.94	22.23	30.00	24.63	36.00
2437MHz	Pass	2.40	19.83	19.21	22.54	30.00	24.94	36.00
2462MHz	Pass	2.40	19.27	18.65	21.98	30.00	24.38	36.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
2412MHz	Pass	2.40	19.21	18.69	21.97	30.00	24.37	36.00
2437MHz	Pass	2.40	20.27	19.73	23.02	30.00	25.42	36.00
2462MHz	Pass	2.40	19.12	18.65	21.90	30.00	24.30	36.00
802.11ac VHT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
2422MHz	Pass	2.40	18.35	17.74	21.07	30.00	23.47	36.00
2437MHz	Pass	2.40	18.73	18.09	21.43	30.00	23.83	36.00
2452MHz	Pass	2.40	18.22	17.61	20.94	30.00	23.34	36.00

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

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

Peak PSD

1. Set the RBW = 3 kHz, VBW = 10 kHz.
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.

Average PSD, duty cycle ≥ 98%

1. Set the RBW = 30 kHz, VBW = 100 kHz.
2. Detector = RMS, Sweep time = auto couple.
3. Sweep time = auto couple.
4. Employ trace averaging (RMS) mode over a minimum of 100 traces.
5. Use the peak marker function to determine the maximum amplitude level.

Average PSD, duty cycle < 98%

1 Set the RBW = 30 kHz, VBW = 100 kHz. Detector = RMS.

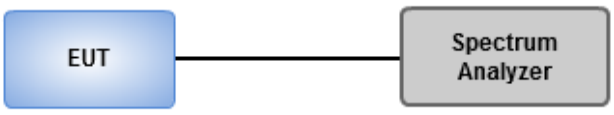
2 Set the sweep time to: ≥ 10 (number of measurement points in sweep) x (total on/off period of the transmitted signal).

3 Perform the measurement over a single sweep.

4 Use the peak marker function to determine the maximum amplitude level.

5 Add 10 log (1/x), where x is the duty cycle.

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)_2TX	1.37
802.11g_Nss1,(6Mbps)_2TX	-3.00
802.11ac VHT20_Nss1,(MCS0)_2TX	-1.79
802.11ac VHT40_Nss1,(MCS0)_2TX	-6.79

RBW=3kHz.

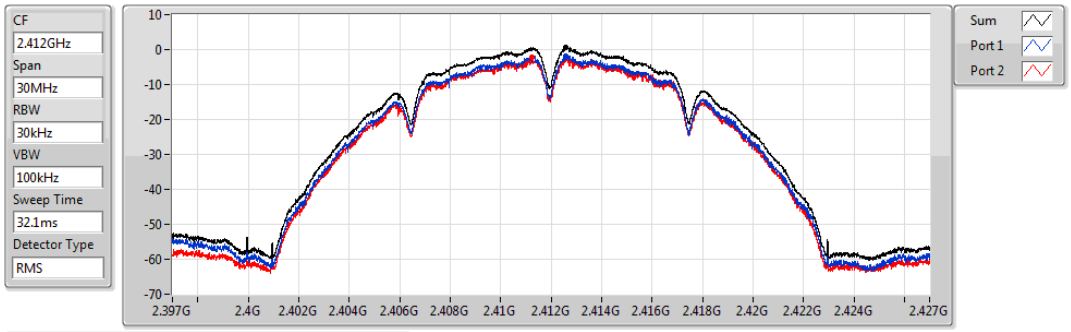
Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1 ,(1Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	5.26	-1.72	-2.31	0.59	8.00
2437MHz	Pass	5.26	-1.79	-2.80	0.68	8.00
2462MHz	Pass	5.26	-1.22	-1.80	1.37	8.00
802.11g_Nss1 ,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	5.26	-6.10	-6.54	-3.46	8.00
2437MHz	Pass	5.26	-5.58	-6.21	-3.00	8.00
2462MHz	Pass	5.26	-6.19	-6.94	-3.75	8.00
802.11ac VHT20 _Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	5.26	-5.12	-6.09	-2.74	8.00
2437MHz	Pass	5.26	-4.36	-4.74	-1.79	8.00
2462MHz	Pass	5.26	-5.96	-5.83	-3.19	8.00
802.11ac VHT40 _Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	5.26	-10.04	-10.53	-7.30	8.00
2437MHz	Pass	5.26	-9.37	-10.19	-6.79	8.00
2452MHz	Pass	5.26	-10.18	-10.77	-7.54	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 Xpower density;
Directional gain = $10 * \log((10^{2.4/20}+10^{2.1/20})^2/2) = 5.26$ dBi

802.11b_Nss1,(1Mbps)_2TX **PSD**

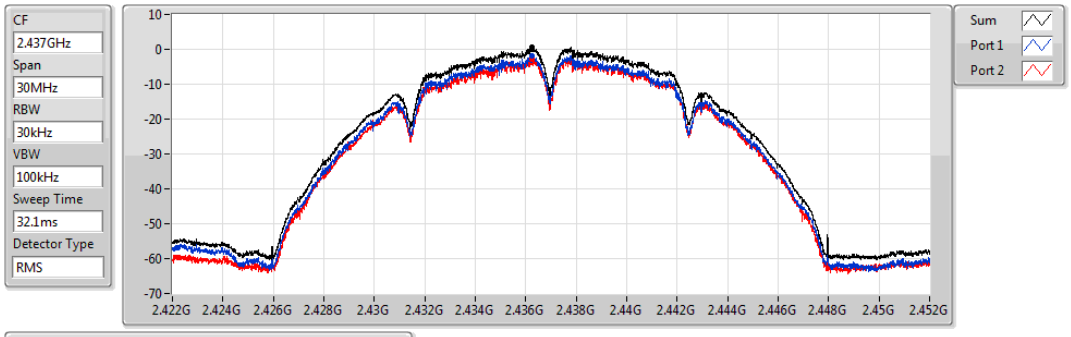
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.59	0.59	-1.72	-2.31

802.11b_Nss1,(1Mbps)_2TX **PSD**

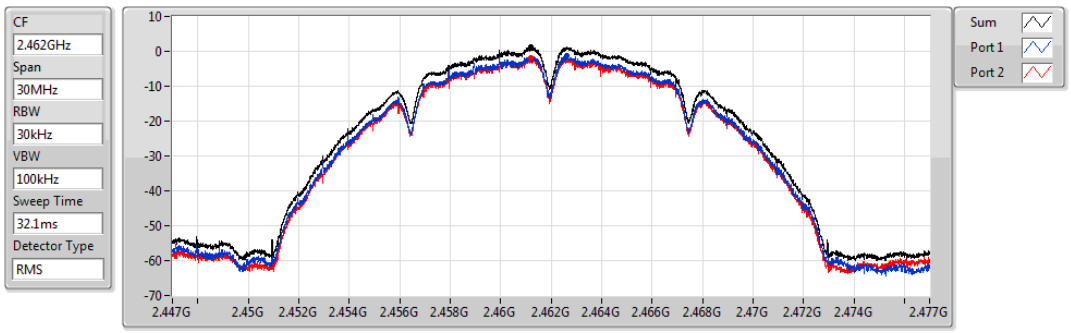
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
0.68	0.68	-1.79	-2.80

802.11b_Nss1,(1Mbps)_2TX **PSD**

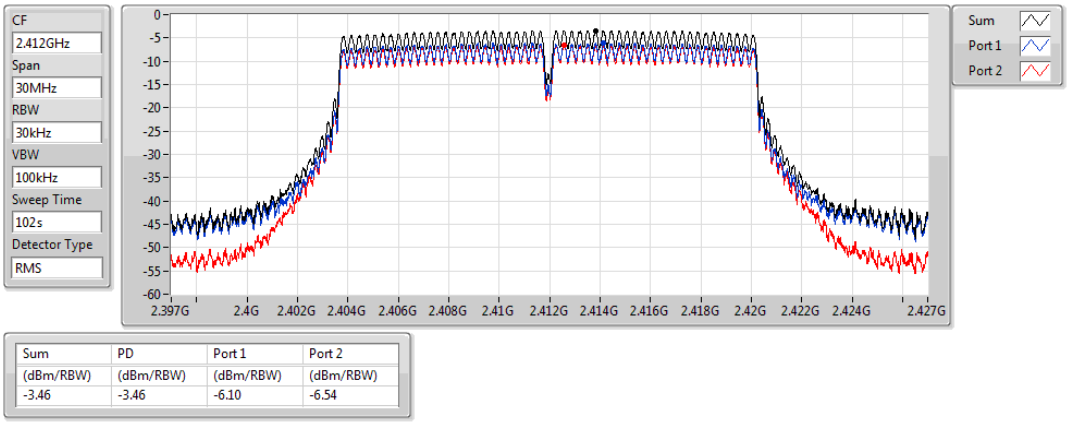
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.37	1.37	-1.22	-1.80

802.11g_Nss1,(6Mbps)_2TX **PSD**

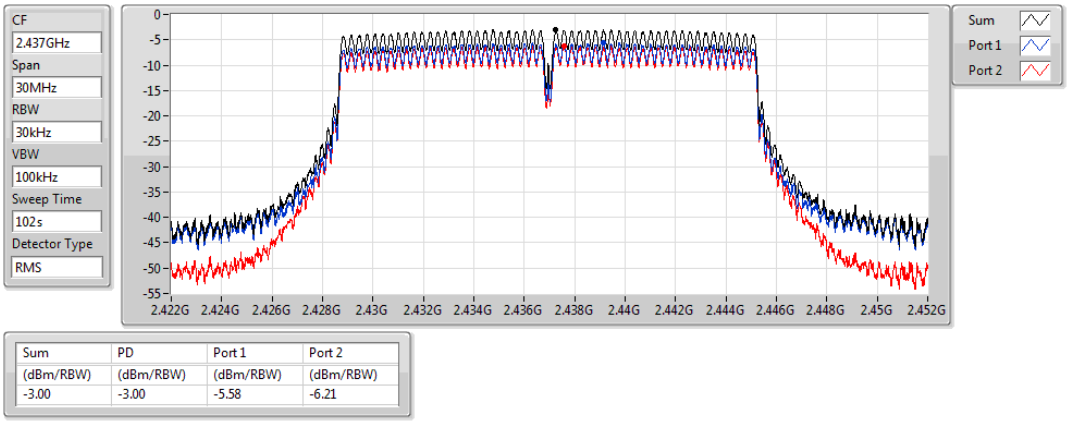
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.46	-3.46	-6.10	-6.54

802.11g_Nss1,(6Mbps)_2TX **PSD**

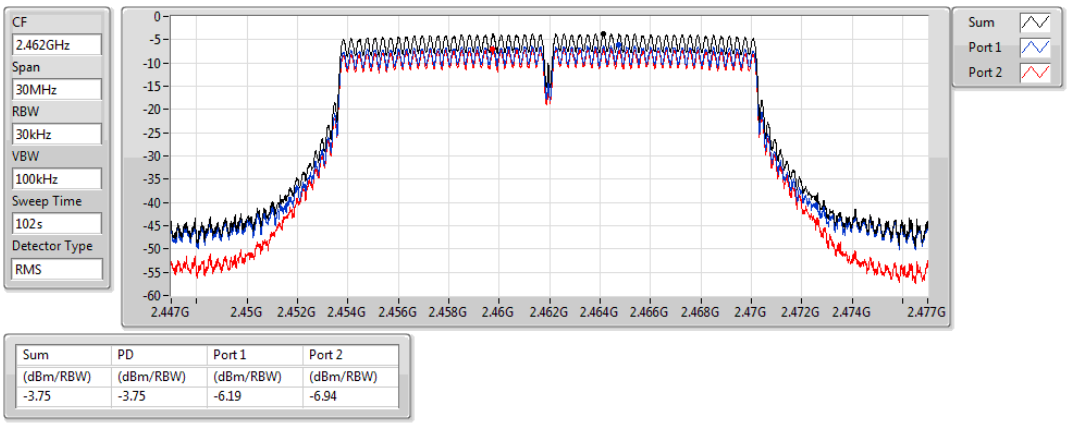
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.00	-3.00	-5.58	-6.21

802.11g_Nss1,(6Mbps)_2TX **PSD**

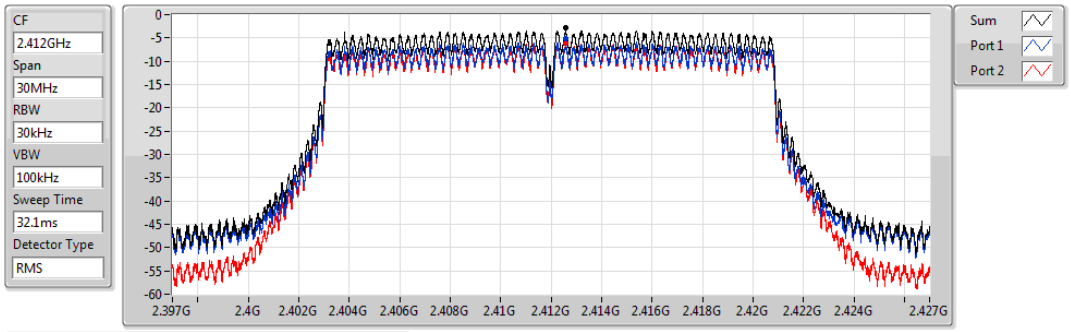
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.75	-3.75	-6.19	-6.94

802.11ac VHT20_Nss1,(MCS0)_2TX **PSD**

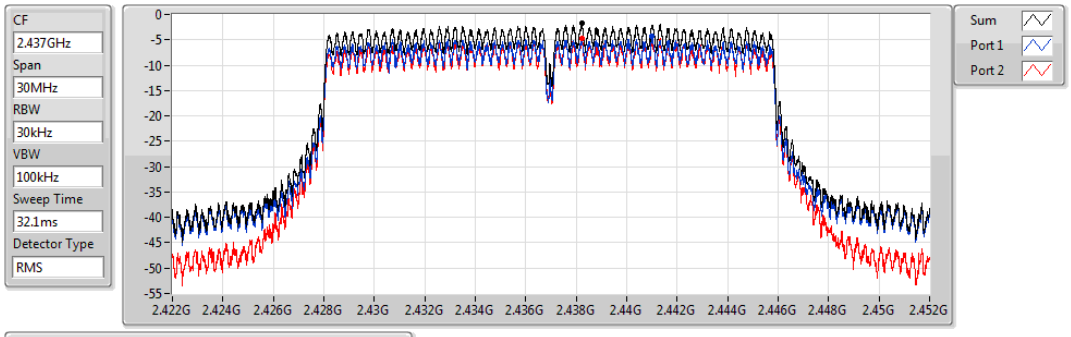
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.74	-2.74	-5.12	-6.09

802.11ac VHT20_Nss1,(MCS0)_2TX **PSD**

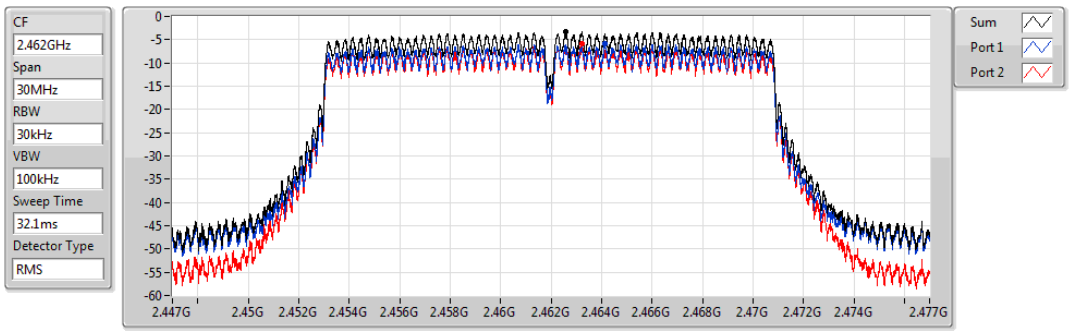
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.79	-1.79	-4.36	-4.74

802.11ac VHT20_Nss1,(MCS0)_2TX **PSD**

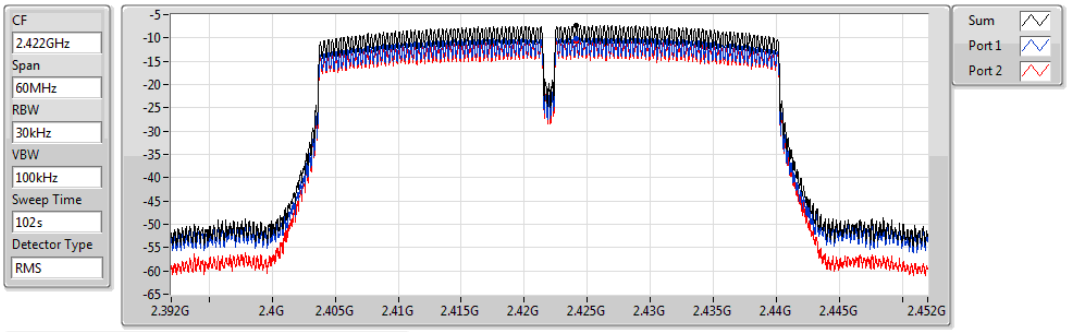
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.19	-3.19	-5.96	-5.83

802.11ac VHT40_Nss1,(MCS0)_2TX **PSD**

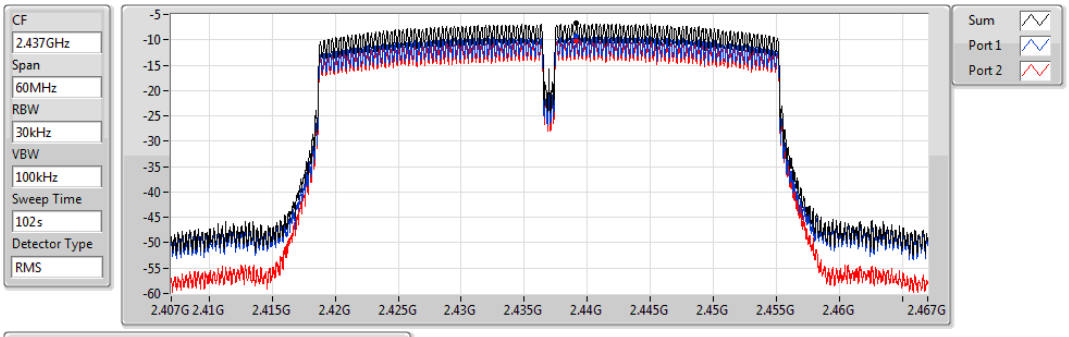
2422MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.30	-7.30	-10.04	-10.53

802.11ac VHT40_Nss1,(MCS0)_2TX **PSD**

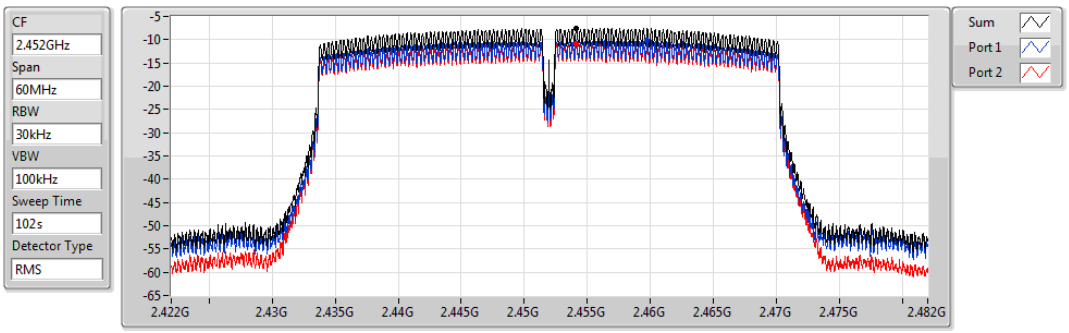
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.79	-6.79	-9.37	-10.19

802.11ac VHT40_Nss1,(MCS0)_2TX **PSD**

2452MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.54	-7.54	-10.18	-10.77

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

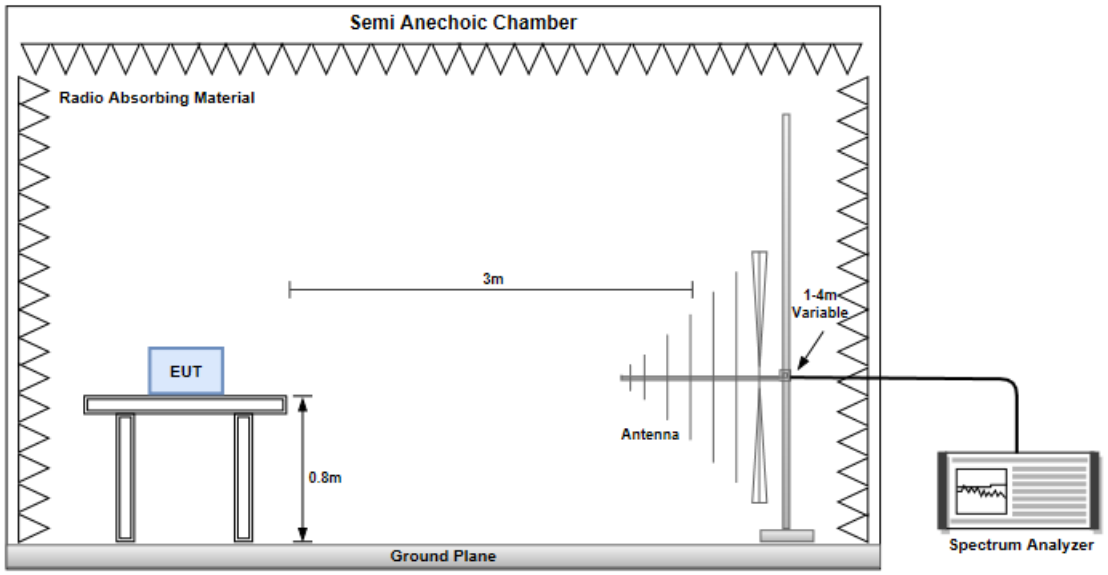
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission 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:

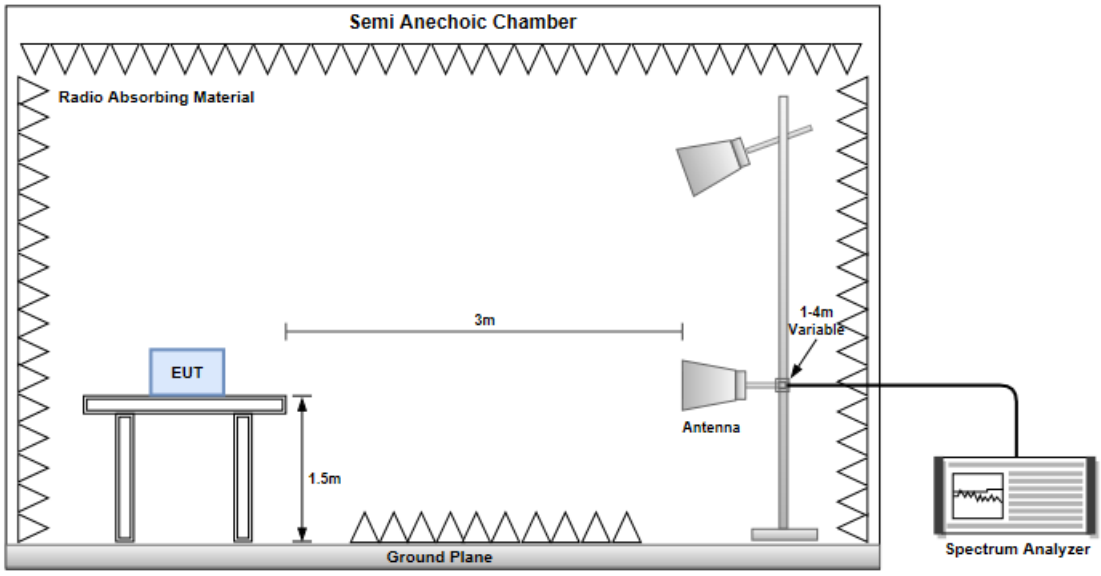
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz

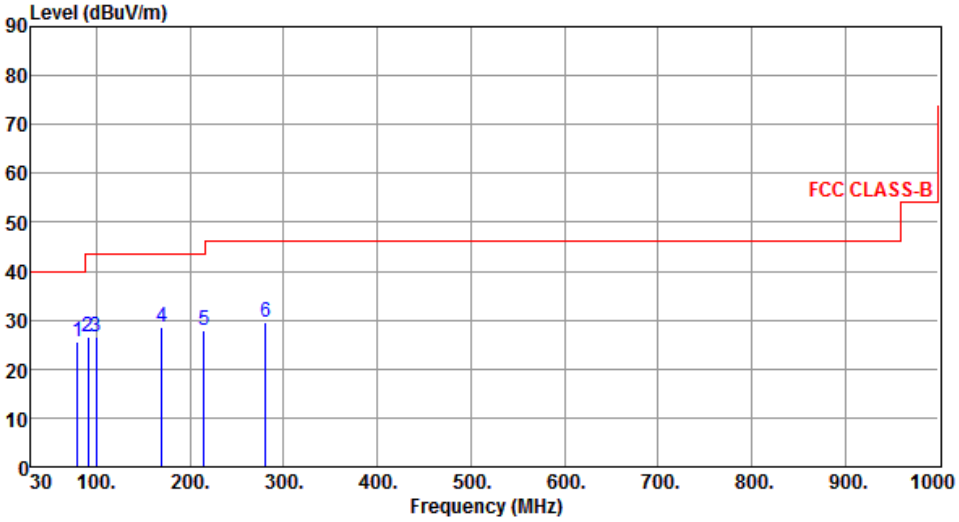


Radiated Emissions above 1 GHz



3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

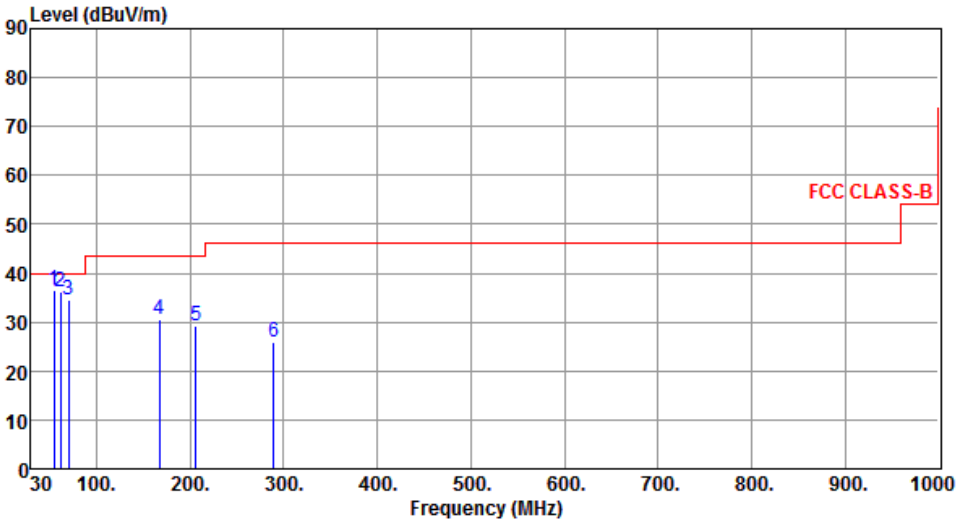
Modulation	11g	Test Freq. (MHz)	2462
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	79.86	25.69	40.00	-14.31	38.60	-12.91	Peak	---	---
2	91.25	26.58	43.50	-16.92	40.93	-14.35	Peak	---	---
3	100.01	26.59	43.50	-16.91	40.10	-13.51	Peak	---	---
4	170.03	28.59	43.50	-14.91	37.08	-8.49	Peak	---	---
5	214.58	28.00	43.50	-15.50	38.97	-10.97	Peak	---	---
6	280.69	29.69	46.00	-16.31	37.84	-8.15	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)	2462
Polarization	Vertical		

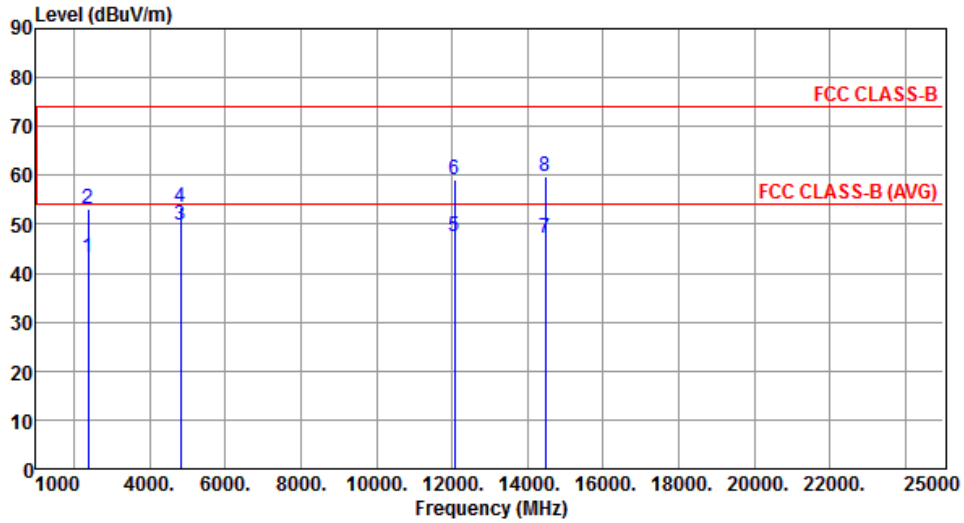


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	54.20	36.37	40.00	-3.63	44.58	-8.21	Peak	---	---
2	61.89	36.10	40.00	-3.90	45.11	-9.01	Peak	---	---
3	69.99	34.59	40.00	-5.41	45.08	-10.49	Peak	---	---
4	167.14	30.69	43.50	-12.81	39.11	-8.42	Peak	---	---
5	206.61	29.32	43.50	-14.18	40.32	-11.00	Peak	---	---
6	289.14	26.07	46.00	-19.93	34.02	-7.95	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

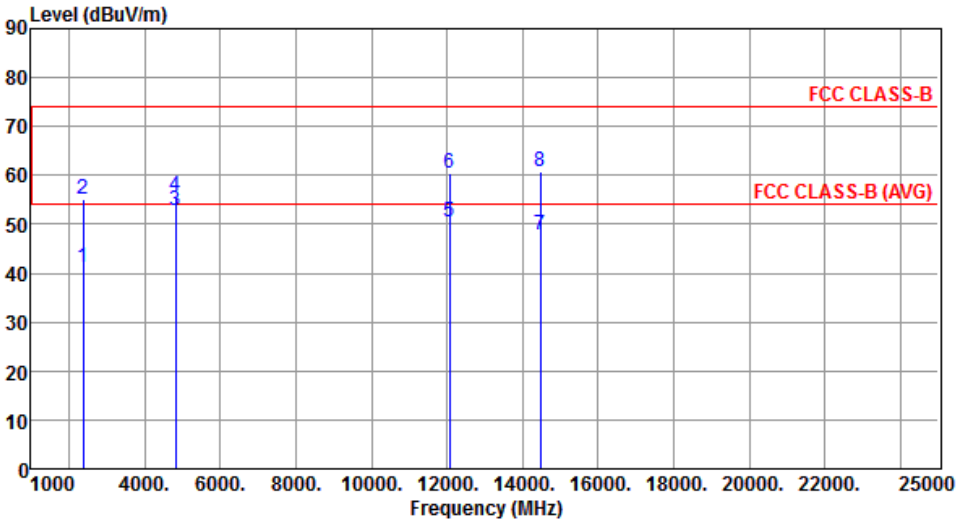
Modulation	11b	Test Freq. (MHz)	2412
Polarization	Horizontal		



	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	43.19	54.00	-10.81	44.43	-1.24	Average	102	325
2	2390.00	52.99	74.00	-21.01	54.23	-1.24	Peak	102	325
3	4824.00	49.97	54.00	-4.03	44.41	5.56	Average	346	307
4	4824.00	53.58	74.00	-20.42	48.02	5.56	Peak	346	307
5	12060.00	47.47	54.00	-6.53	31.80	15.67	Average	100	14
6	12060.00	59.11	74.00	-14.89	43.44	15.67	Peak	100	14
7	14472.00	47.31	54.00	-6.69	28.22	19.09	Average	100	20
8	14472.00	59.77	74.00	-14.23	40.68	19.09	Peak	100	20

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).

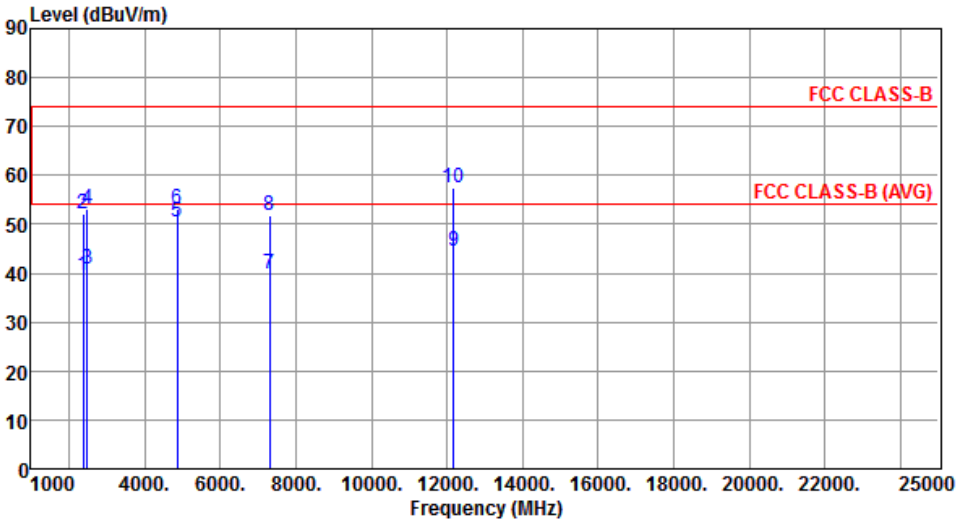
Modulation	11b	Test Freq. (MHz)	2412
Polarization	Vertical		



	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	41.14	54.00	-12.86	42.38	-1.24	Average	100	92
2	2390.00	55.25	74.00	-18.75	56.49	-1.24	Peak	100	92
3	4824.00	52.94	54.00	-1.06	47.38	5.56	Average	100	268
4	4824.00	55.86	74.00	-18.14	50.30	5.56	Peak	100	268
5	12060.00	50.60	54.00	-3.40	34.93	15.67	Average	100	255
6	12060.00	60.32	74.00	-13.68	44.65	15.67	Peak	100	255
7	14472.00	47.91	54.00	-6.09	28.82	19.09	Average	100	4
8	14472.00	60.83	74.00	-13.17	41.74	19.09	Peak	100	4

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).

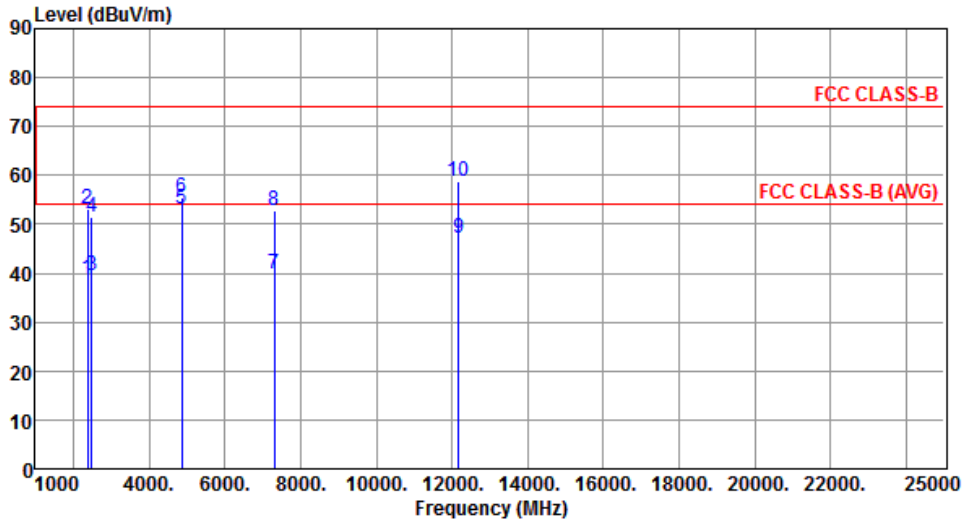
Modulation	11b	Test Freq. (MHz)	2437
Polarization	Horizontal		



	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	39.37	54.00	-14.63	40.61	-1.24	Average	109	357
2	2390.00	52.03	74.00	-21.97	53.27	-1.24	Peak	109	357
3	2483.50	40.92	54.00	-13.08	41.80	-0.88	Average	109	357
4	2483.50	53.19	74.00	-20.81	54.07	-0.88	Peak	109	357
5	4874.00	50.55	54.00	-3.45	44.86	5.69	Average	360	309
6	4874.00	53.24	74.00	-20.76	47.55	5.69	Peak	360	309
7	7311.00	39.79	54.00	-14.21	28.91	10.88	Average	100	149
8	7311.00	51.69	74.00	-22.31	40.81	10.88	Peak	100	149
9	12185.00	44.66	54.00	-9.34	29.17	15.49	Average	100	18
10	12185.00	57.50	74.00	-16.50	42.01	15.49	Peak	100	18

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).

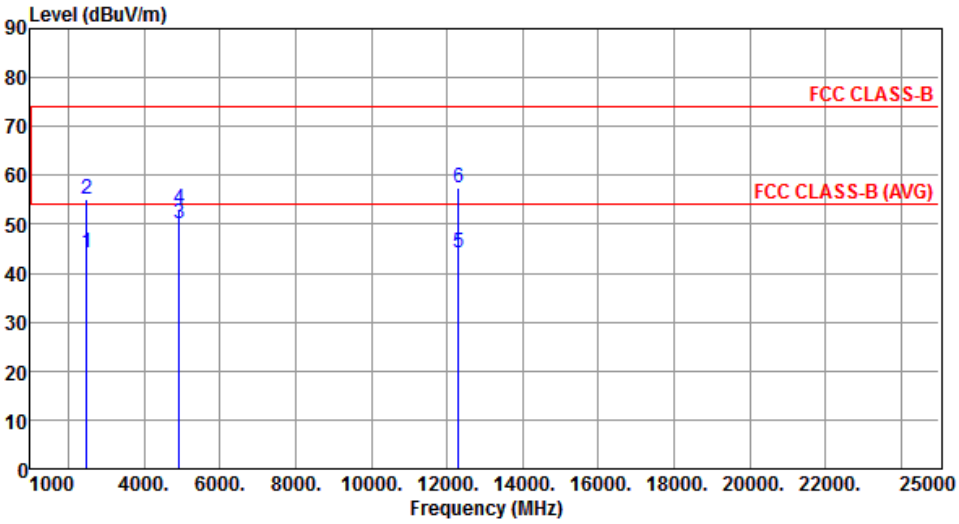
Modulation	11b	Test Freq. (MHz)	2437
Polarization	Vertical		



	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	39.01	54.00	-14.99	40.25	-1.24	Average	100	90
2	2390.00	53.27	74.00	-20.73	54.51	-1.24	Peak	100	90
3	2483.50	39.46	54.00	-14.54	40.34	-0.88	Average	100	90
4	2483.50	51.53	74.00	-22.47	52.41	-0.88	Peak	100	90
5	4874.00	53.00	54.00	-1.00	47.31	5.69	Average	100	266
6	4874.00	55.42	74.00	-18.58	49.73	5.69	Peak	100	266
7	7311.00	39.81	54.00	-14.19	28.93	10.88	Average	100	44
8	7311.00	52.93	74.00	-21.07	42.05	10.88	Peak	100	44
9	12185.00	47.26	54.00	-6.74	31.77	15.49	Average	104	258
10	12185.00	58.71	74.00	-15.29	43.22	15.49	Peak	104	258

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).

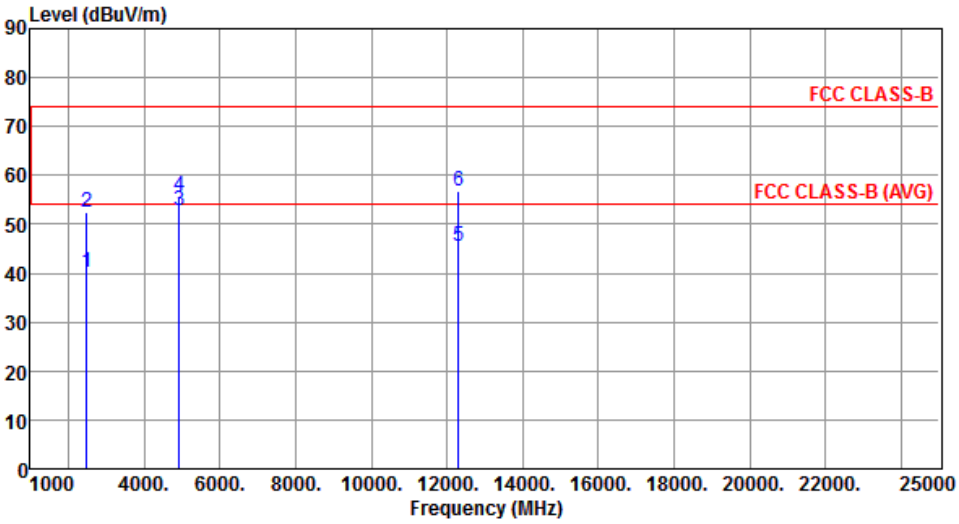
Modulation	11b	Test Freq. (MHz)	2462
Polarization	Horizontal		



	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	44.26	54.00	-9.74	45.14	-0.88	Average	100	355
2	2483.50	55.26	74.00	-18.74	56.14	-0.88	Peak	100	355
3	4924.00	50.22	54.00	-3.78	44.40	5.82	Average	315	303
4	4924.00	53.04	74.00	-20.96	47.22	5.82	Peak	315	303
5	12310.00	44.17	54.00	-9.83	28.85	15.32	Average	100	15
6	12310.00	57.59	74.00	-16.41	42.27	15.32	Peak	100	15

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		

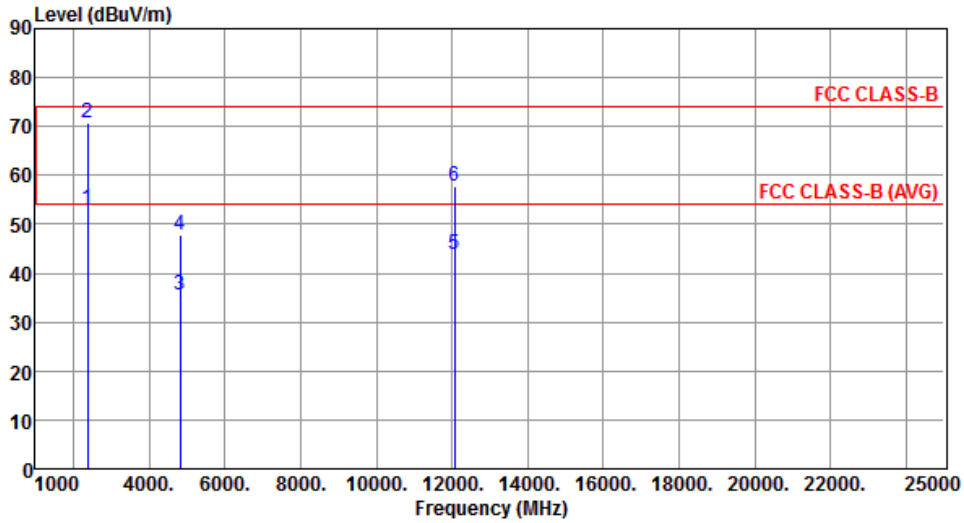


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	40.10	54.00	-13.90	40.98	-0.88	Average	117	93
2	2483.50	52.33	74.00	-21.67	53.21	-0.88	Peak	117	93
3	4924.00	52.95	54.00	-1.05	47.13	5.82	Average	100	268
4	4924.00	55.75	74.00	-18.25	49.93	5.82	Peak	100	268
5	12310.00	45.44	54.00	-8.56	30.12	15.32	Average	100	278
6	12310.00	56.73	74.00	-17.27	41.41	15.32	Peak	100	278

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

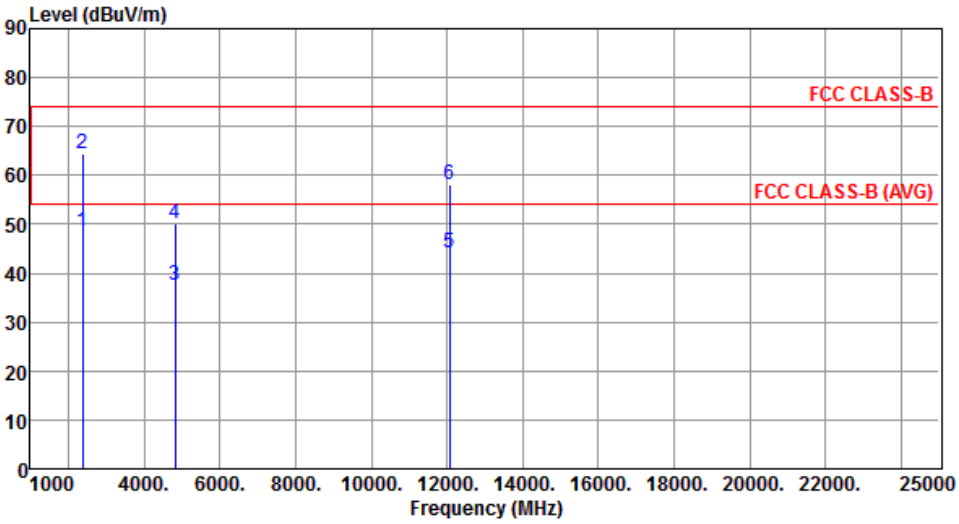
Modulation	11g	Test Freq. (MHz)	2412
Polarization	Horizontal		



	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	52.97	54.00	-1.03	54.21	-1.24	Average	100	1
2	2390.00	70.70	74.00	-3.30	71.94	-1.24	Peak	100	1
3	4824.00	35.68	54.00	-18.32	30.12	5.56	Average	100	309
4	4824.00	47.87	74.00	-26.13	42.31	5.56	Peak	100	309
5	12060.00	43.88	54.00	-10.12	28.21	15.67	Average	100	30
6	12060.00	57.88	74.00	-16.12	42.21	15.67	Peak	100	30

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).

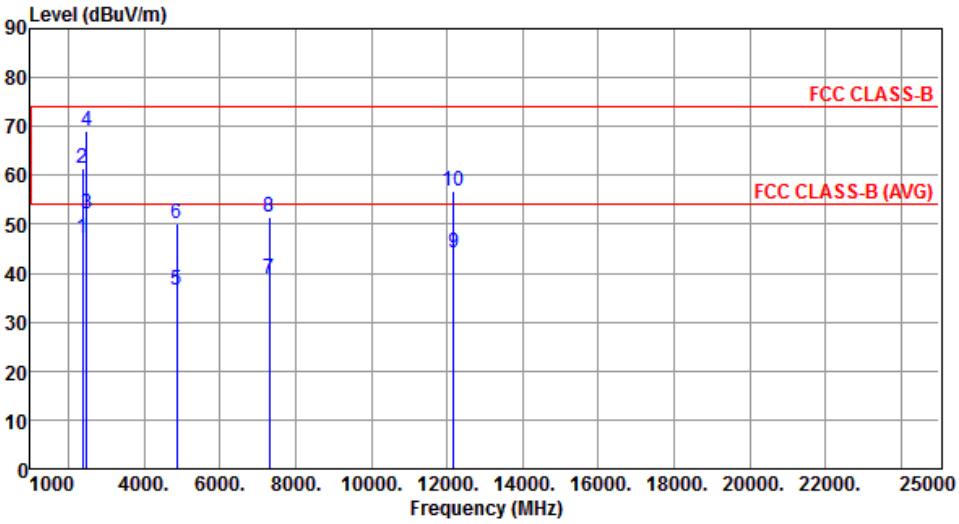
Modulation	11g	Test Freq. (MHz)	2412
Polarization	Vertical		



	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	48.37	54.00	-5.63	49.61	-1.24	Average	100	123
2	2390.00	64.29	74.00	-9.71	65.53	-1.24	Peak	100	123
3	4824.00	37.68	54.00	-16.32	32.12	5.56	Average	100	263
4	4824.00	50.24	74.00	-23.76	44.68	5.56	Peak	100	263
5	12060.00	44.04	54.00	-9.96	28.37	15.67	Average	100	50
6	12060.00	57.98	74.00	-16.02	42.31	15.67	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).

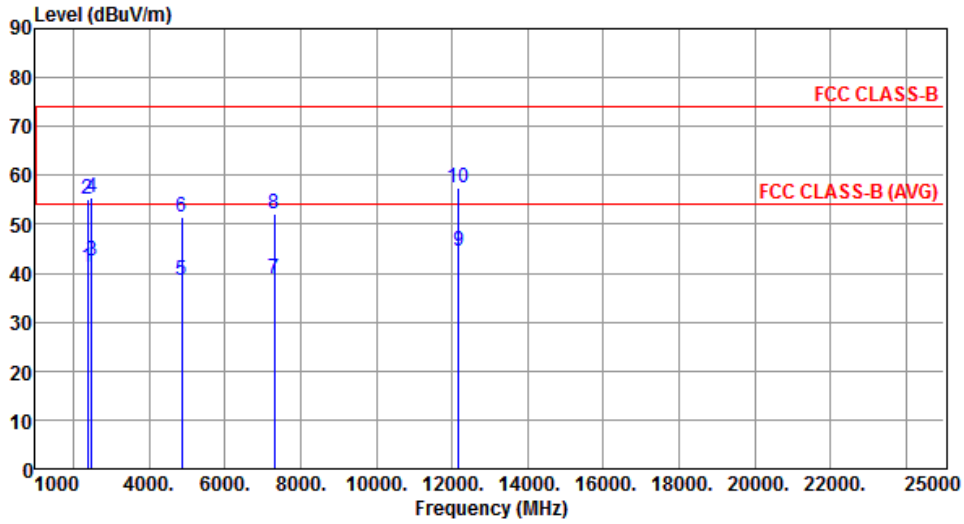
Modulation	11g	Test Freq. (MHz)	2437
Polarization	Horizontal		



	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	47.13	54.00	-6.87	48.37	-1.24	Average	100	3
2	2390.00	61.60	74.00	-12.40	62.84	-1.24	Peak	100	3
3	2483.50	52.18	54.00	-1.82	53.06	-0.88	Average	100	3
4	2483.50	69.11	74.00	-4.89	69.99	-0.88	Peak	100	3
5	4874.00	36.65	54.00	-17.35	30.96	5.69	Average	100	319
6	4874.00	50.05	74.00	-23.95	44.36	5.69	Peak	100	319
7	7311.00	38.86	54.00	-15.14	27.98	10.88	Average	100	100
8	7311.00	51.45	74.00	-22.55	40.57	10.88	Peak	100	100
9	12185.00	44.03	54.00	-9.97	28.54	15.49	Average	100	20
10	12185.00	56.88	74.00	-17.12	41.39	15.49	Peak	100	20

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).

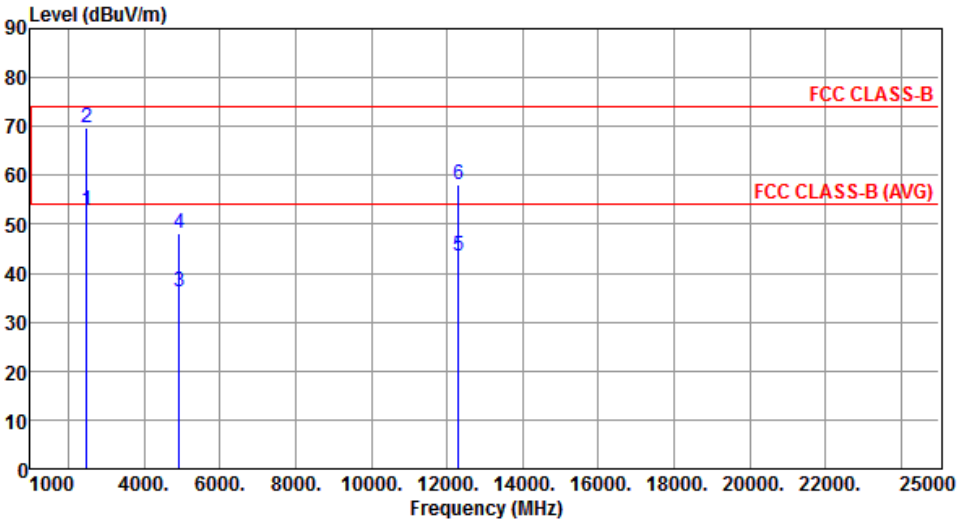
Modulation	11g	Test Freq. (MHz)	2437
Polarization	Vertical		



	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	41.08	54.00	-12.92	42.32	-1.24	Average	100	98
2	2390.00	55.03	74.00	-18.97	56.27	-1.24	Peak	100	98
3	2483.50	42.47	54.00	-11.53	43.35	-0.88	Average	100	98
4	2483.50	55.32	74.00	-18.68	56.20	-0.88	Peak	100	98
5	4874.00	38.62	54.00	-15.38	32.93	5.69	Average	100	268
6	4874.00	51.61	74.00	-22.39	45.92	5.69	Peak	100	268
7	7311.00	39.00	54.00	-15.00	28.12	10.88	Average	100	40
8	7311.00	52.16	74.00	-21.84	41.28	10.88	Peak	100	40
9	12185.00	44.54	54.00	-9.46	29.05	15.49	Average	100	260
10	12185.00	57.34	74.00	-16.66	41.85	15.49	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).

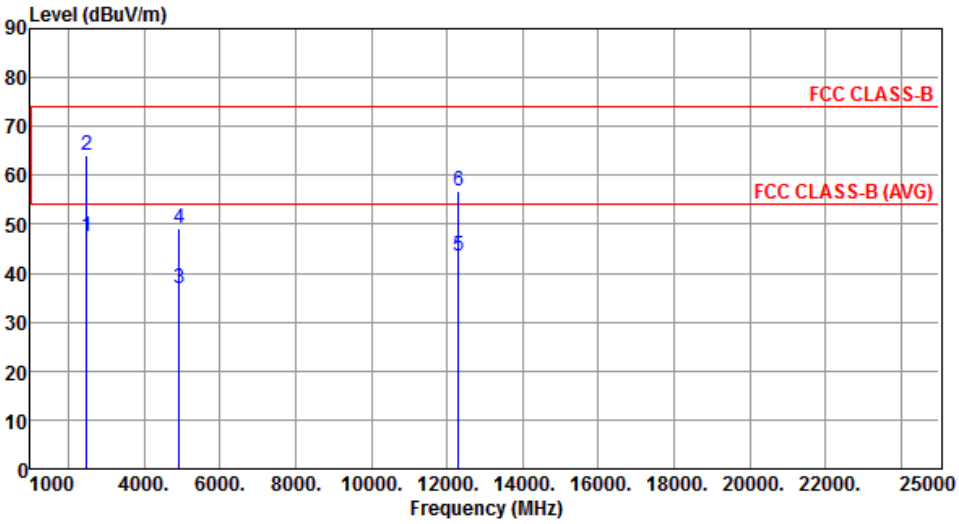
Modulation	11g	Test Freq. (MHz)	2462
Polarization	Horizontal		



	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	52.82	54.00	-1.18	53.70	-0.88	Average	100	358
2	2483.50	69.67	74.00	-4.33	70.55	-0.88	Peak	100	358
3	4924.00	36.04	54.00	-17.96	30.22	5.82	Average	100	305
4	4924.00	48.22	74.00	-25.78	42.40	5.82	Peak	100	305
5	12310.00	43.43	54.00	-10.57	28.11	15.32	Average	100	20
6	12310.00	58.01	74.00	-15.99	42.69	15.32	Peak	100	20

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		

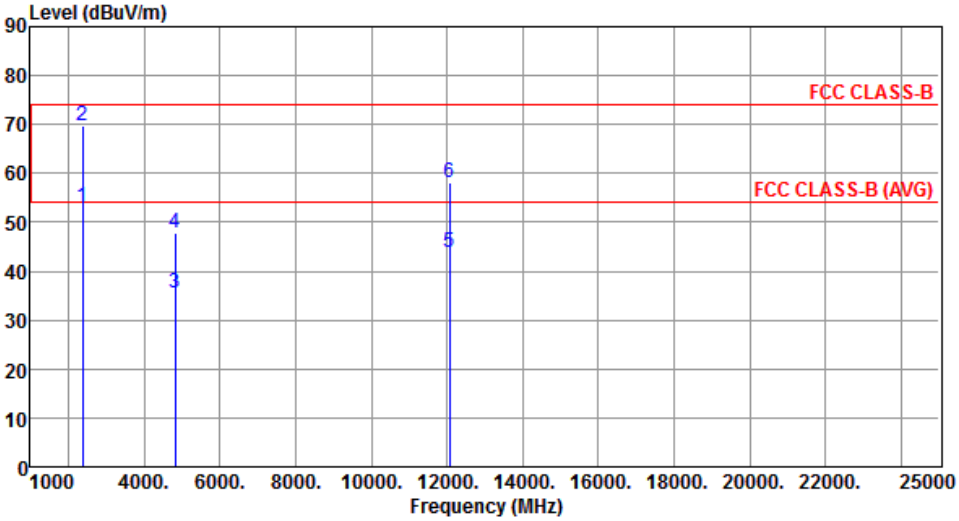


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	47.37	54.00	-6.63	48.25	-0.88	Average	116	89
2	2483.50	64.03	74.00	-9.97	64.91	-0.88	Peak	116	89
3	4924.00	36.95	54.00	-17.05	31.13	5.82	Average	100	266
4	4924.00	49.04	74.00	-24.96	43.22	5.82	Peak	100	266
5	12310.00	43.46	54.00	-10.54	28.14	15.32	Average	100	20
6	12310.00	56.90	74.00	-17.10	41.58	15.32	Peak	100	20

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

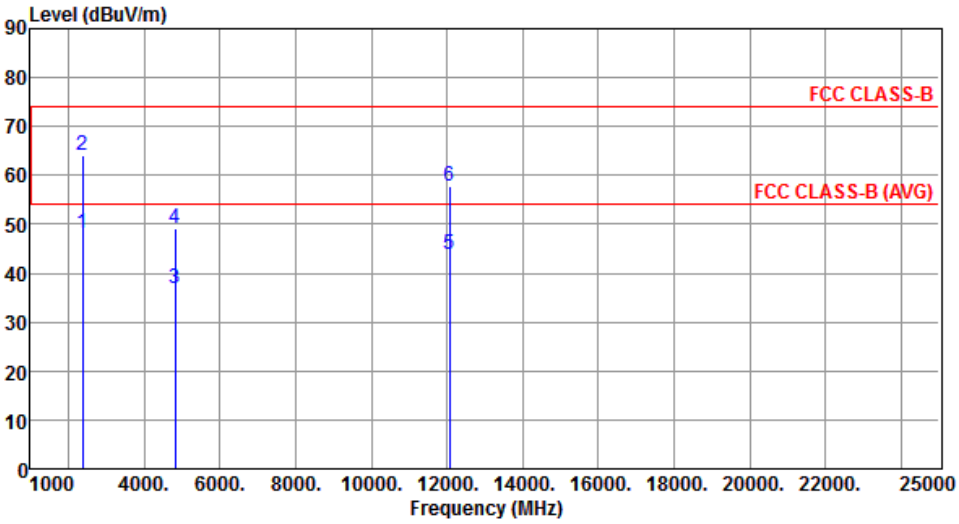
Modulation	VHT20	Test Freq. (MHz)	2412
Polarization	Horizontal		



	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	53.00	54.00	-1.00	54.24	-1.24	Average	108	353
2	2390.00	69.68	74.00	-4.32	70.92	-1.24	Peak	108	353
3	4824.00	35.41	54.00	-18.59	29.85	5.56	Average	100	303
4	4824.00	47.97	74.00	-26.03	42.41	5.56	Peak	100	303
5	12060.00	43.79	54.00	-10.21	28.12	15.67	Average	100	20
6	12060.00	58.06	74.00	-15.94	42.39	15.67	Peak	100	20

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).

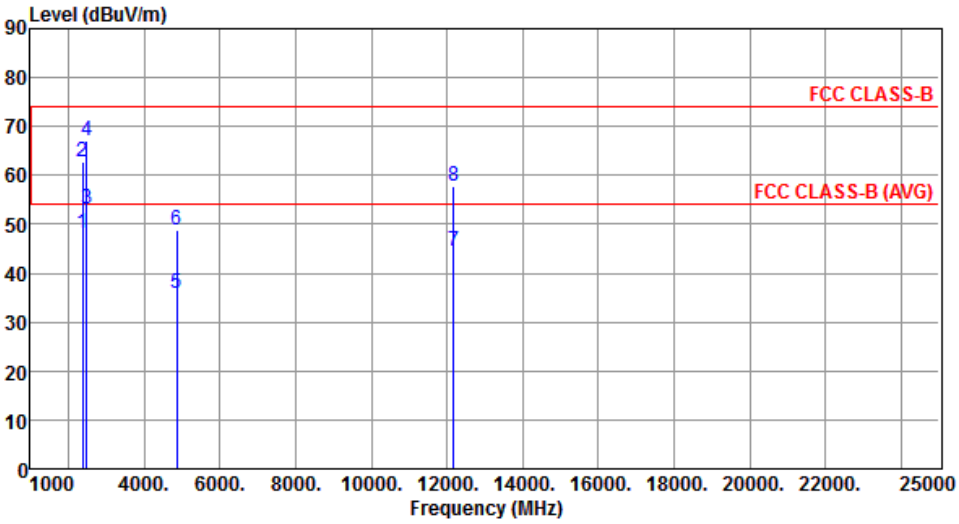
Modulation	VHT20	**Test Freq. (MHz)**	2412
Polarization	Vertical		



	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	48.07	54.00	-5.93	49.31	-1.24	Average	100	96
2	2390.00	64.21	74.00	-9.79	65.45	-1.24	Peak	100	96
3	4824.00	36.77	54.00	-17.23	31.21	5.56	Average	100	266
4	4824.00	49.24	74.00	-24.76	43.68	5.56	Peak	100	266
5	12060.00	43.94	54.00	-10.06	28.27	15.67	Average	100	60
6	12060.00	57.84	74.00	-16.16	42.17	15.67	Peak	100	60

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).

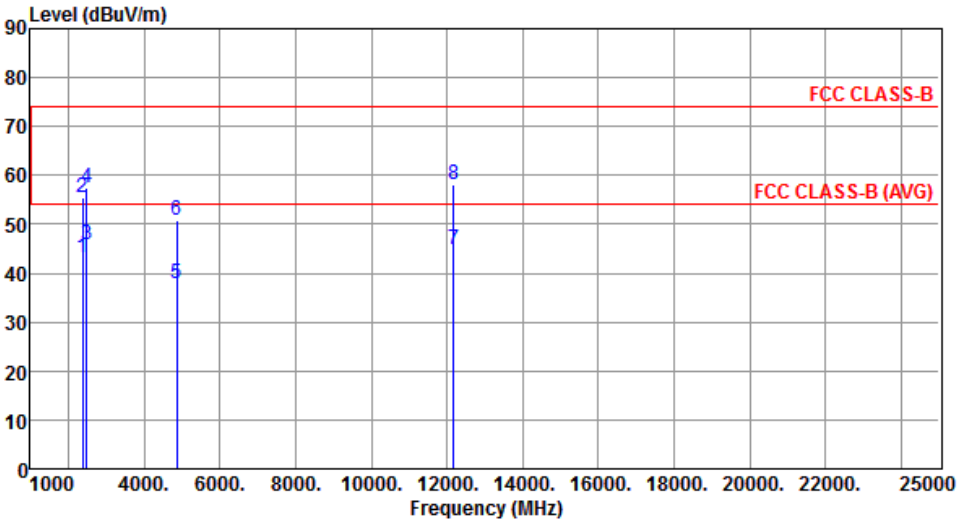
Modulation	VHT20	Test Freq. (MHz)	2437
Polarization	Horizontal		



	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	48.19	54.00	-5.81	49.43	-1.24	Average	134	1
2	2390.00	62.68	74.00	-11.32	63.92	-1.24	Peak	134	1
3	2483.50	52.99	54.00	-1.01	53.87	-0.88	Average	100	1
4	2483.50	67.12	74.00	-6.88	68.00	-0.88	Peak	100	1
5	4874.00	35.88	54.00	-18.12	30.19	5.69	Average	150	309
6	4874.00	48.95	74.00	-25.05	43.26	5.69	Peak	150	309
7	12185.00	44.35	54.00	-9.65	28.86	15.49	Average	100	40
8	12185.00	57.82	74.00	-16.18	42.33	15.49	Peak	100	40

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).

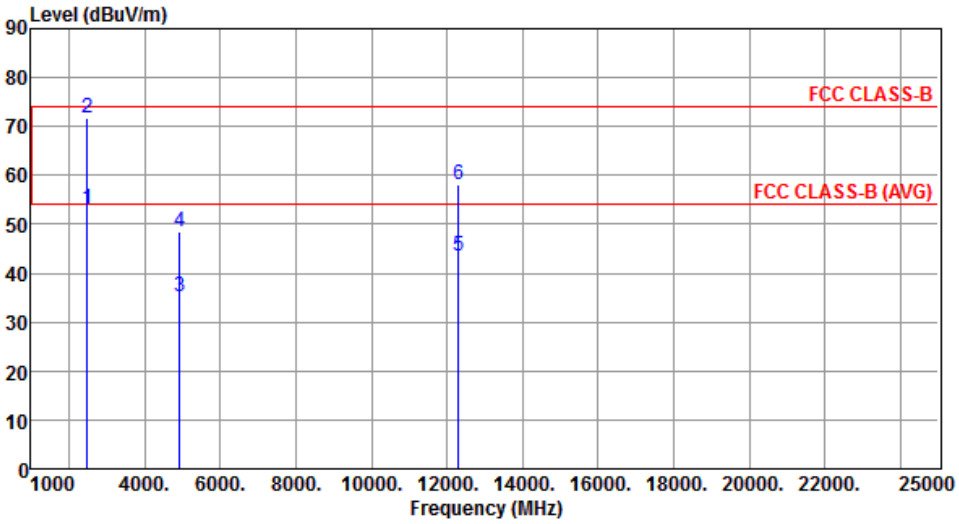
Modulation	VHT20	Test Freq. (MHz)	2437
Polarization	Vertical		



	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	43.32	54.00	-10.68	44.56	-1.24	Average	100	93
2	2390.00	55.40	74.00	-18.60	56.64	-1.24	Peak	100	93
3	2483.50	45.79	54.00	-8.21	46.67	-0.88	Average	100	270
4	2483.50	57.39	74.00	-16.61	58.27	-0.88	Peak	100	270
5	4874.00	37.87	54.00	-16.13	32.18	5.69	Average	100	267
6	4874.00	50.81	74.00	-23.19	45.12	5.69	Peak	100	267
7	12185.00	44.68	54.00	-9.32	29.19	15.49	Average	100	265
8	12185.00	58.25	74.00	-15.75	42.76	15.49	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).

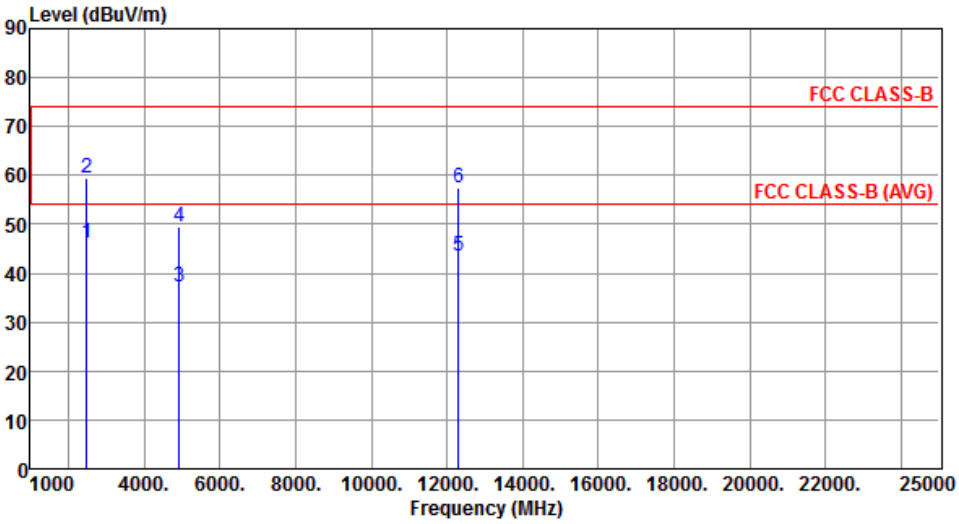
Modulation	VHT20	**Test Freq. (MHz)**	2462
Polarization	Horizontal		



	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	53.00	54.00	-1.00	53.88	-0.88	Average	100	3
2	2483.50	71.79	74.00	-2.21	72.67	-0.88	Peak	100	3
3	4924.00	35.21	54.00	-18.79	29.39	5.82	Average	100	307
4	4924.00	48.46	74.00	-25.54	42.64	5.82	Peak	100	307
5	12310.00	43.45	54.00	-10.55	28.13	15.32	Average	100	55
6	12310.00	58.00	74.00	-16.00	42.68	15.32	Peak	100	55

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	VHT20	Test Freq. (MHz)	2462
Polarization	Vertical		

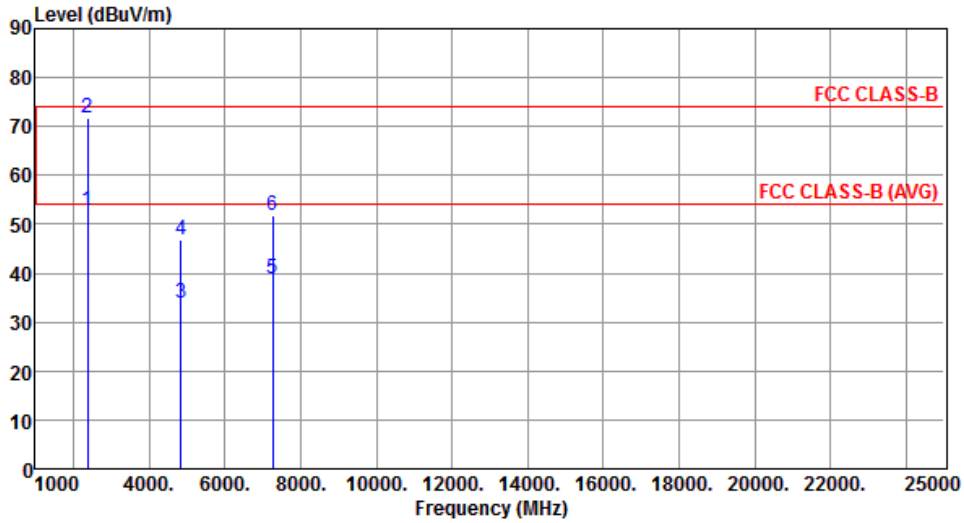


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	46.14	54.00	-7.86	47.02	-0.88	Average	100	93
2	2483.50	59.37	74.00	-14.63	60.25	-0.88	Peak	100	93
3	4924.00	37.19	54.00	-16.81	31.37	5.82	Average	100	265
4	4924.00	49.52	74.00	-24.48	43.70	5.82	Peak	100	265
5	12310.00	43.56	54.00	-10.44	28.24	15.32	Average	100	50
6	12310.00	57.53	74.00	-16.47	42.21	15.32	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).

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

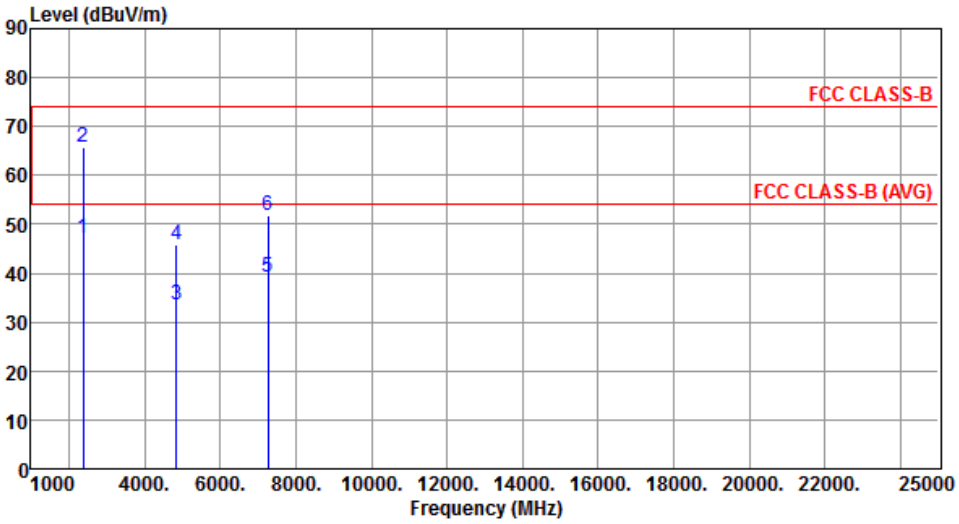
Modulation	VHT40	Test Freq. (MHz)	2422
Polarization	Horizontal		



	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	52.89	54.00	-1.11	54.13	-1.24	Average	100	4
2	2390.00	71.86	74.00	-2.14	73.10	-1.24	Peak	100	4
3	4844.00	33.73	54.00	-20.27	28.11	5.62	Average	100	30
4	4844.00	46.88	74.00	-27.12	41.26	5.62	Peak	100	30
5	7266.00	39.00	54.00	-15.00	28.32	10.68	Average	100	60
6	7266.00	51.74	74.00	-22.26	41.06	10.68	Peak	100	60

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).

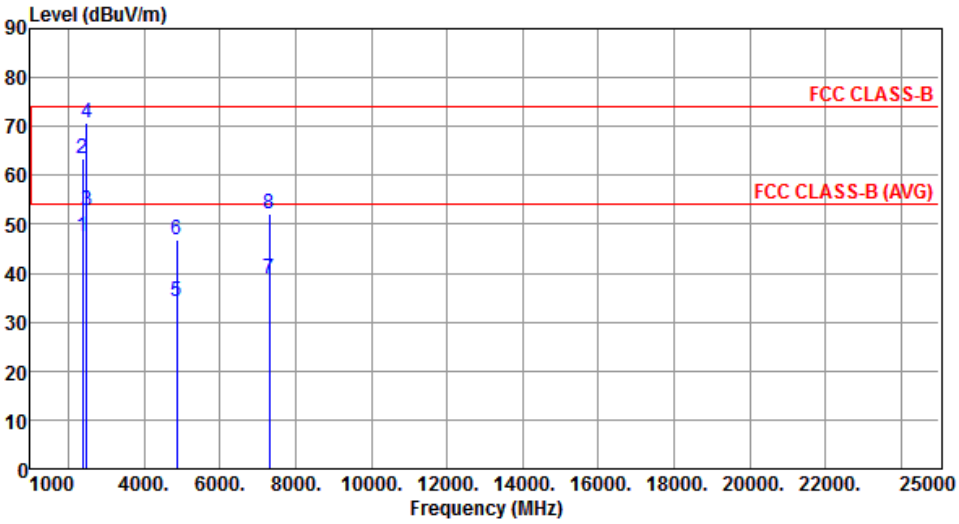
Modulation	VHT40	**Test Freq. (MHz)**	2422
Polarization	Vertical		



	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	47.09	54.00	-6.91	48.33	-1.24	Average	100	94
2	2390.00	65.82	74.00	-8.18	67.06	-1.24	Peak	100	94
3	4844.00	33.64	54.00	-20.36	28.02	5.62	Average	100	250
4	4844.00	45.93	74.00	-28.07	40.31	5.62	Peak	100	250
5	7266.00	39.13	54.00	-14.87	28.45	10.68	Average	100	100
6	7266.00	51.93	74.00	-22.07	41.25	10.68	Peak	100	100

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).

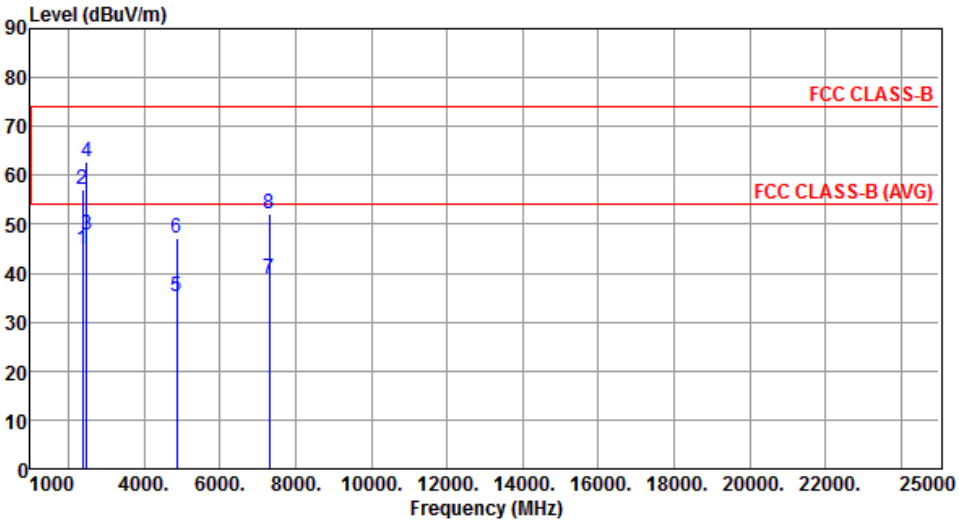
Modulation	VHT40	Test Freq. (MHz)	2437
Polarization	Horizontal		



	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	47.35	54.00	-6.65	48.59	-1.24	Average	100	287
2	2390.00	63.46	74.00	-10.54	64.70	-1.24	Peak	100	287
3	2483.50	52.83	54.00	-1.17	53.71	-0.88	Average	100	4
4	2483.50	70.64	74.00	-3.36	71.52	-0.88	Peak	100	4
5	4874.00	34.07	54.00	-19.93	28.38	5.69	Average	100	30
6	4874.00	46.91	74.00	-27.09	41.22	5.69	Peak	100	30
7	7311.00	38.94	54.00	-15.06	28.06	10.88	Average	100	50
8	7311.00	52.02	74.00	-21.98	41.14	10.88	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).

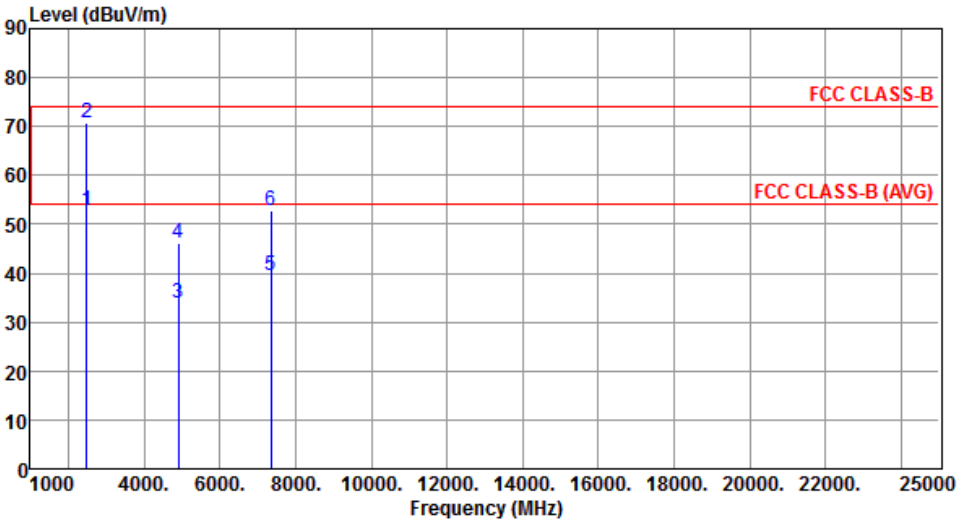
Modulation	VHT40	**Test Freq. (MHz)**	2437
Polarization	Vertical		



	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	44.76	54.00	-9.24	46.00	-1.24	Average	100	94
2	2390.00	57.22	74.00	-16.78	58.46	-1.24	Peak	100	94
3	2483.50	47.95	54.00	-6.05	48.83	-0.88	Average	100	274
4	2483.50	62.61	74.00	-11.39	63.49	-0.88	Peak	100	274
5	4874.00	35.05	54.00	-18.95	29.36	5.69	Average	100	264
6	4874.00	47.05	74.00	-26.95	41.36	5.69	Peak	100	264
7	7311.00	39.02	54.00	-14.98	28.14	10.88	Average	100	20
8	7311.00	52.21	74.00	-21.79	41.33	10.88	Peak	100	20

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).

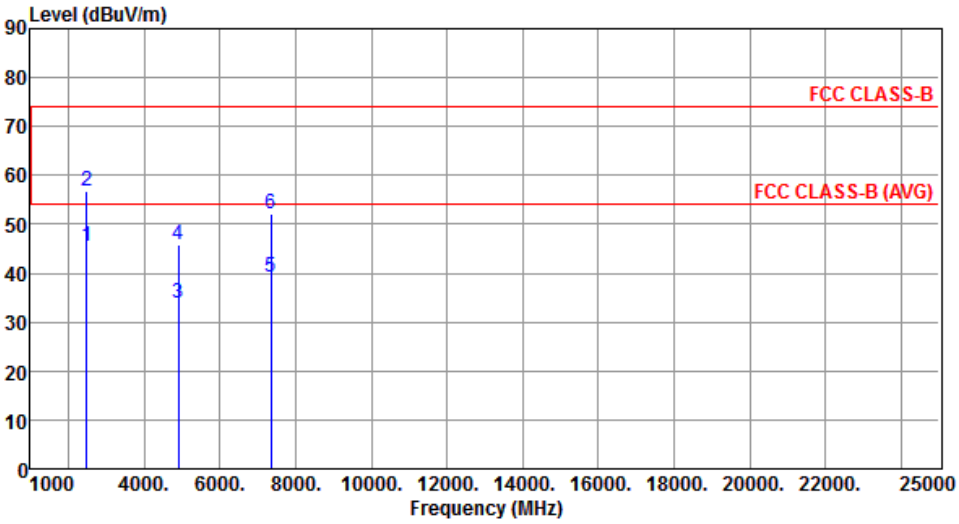
Modulation	VHT40	**Test Freq. (MHz)**	2452
Polarization	Horizontal		



	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	52.83	54.00	-1.17	53.71	-0.88	Average	100	0
2	2483.50	70.83	74.00	-3.17	71.71	-0.88	Peak	100	0
3	4904.00	33.79	54.00	-20.21	28.02	5.77	Average	100	30
4	4904.00	46.16	74.00	-27.84	40.39	5.77	Peak	100	30
5	7356.00	39.38	54.00	-14.62	28.31	11.07	Average	100	30
6	7356.00	52.72	74.00	-21.28	41.65	11.07	Peak	100	30

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	VHT40	**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	45.33	54.00	-8.67	46.21	-0.88	Average	100	78
2	2483.50	56.69	74.00	-17.31	57.57	-0.88	Peak	100	78
3	4904.00	33.89	54.00	-20.11	28.12	5.77	Average	100	100
4	4904.00	45.89	74.00	-28.11	40.12	5.77	Peak	100	100
5	7356.00	39.28	54.00	-14.72	28.21	11.07	Average	100	50
6	7356.00	52.30	74.00	-21.70	41.23	11.07	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).

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 30 dB relative to the maximum in-band peak PSD level in 100 kHz.

3.6.2 Test Procedures

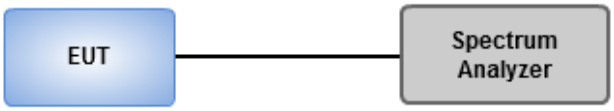
Reference level measurement

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

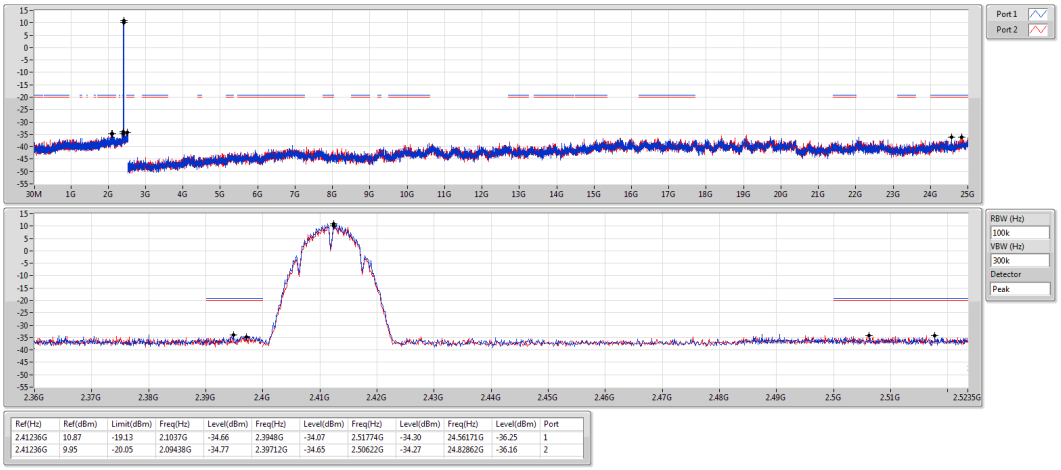
3.6.3 Test Setup



3.6.4 Unwanted Emissions into Non-Restricted Frequency Bands

802.11b_Nss1,(1Mbps)_2TX **CSE NdB**

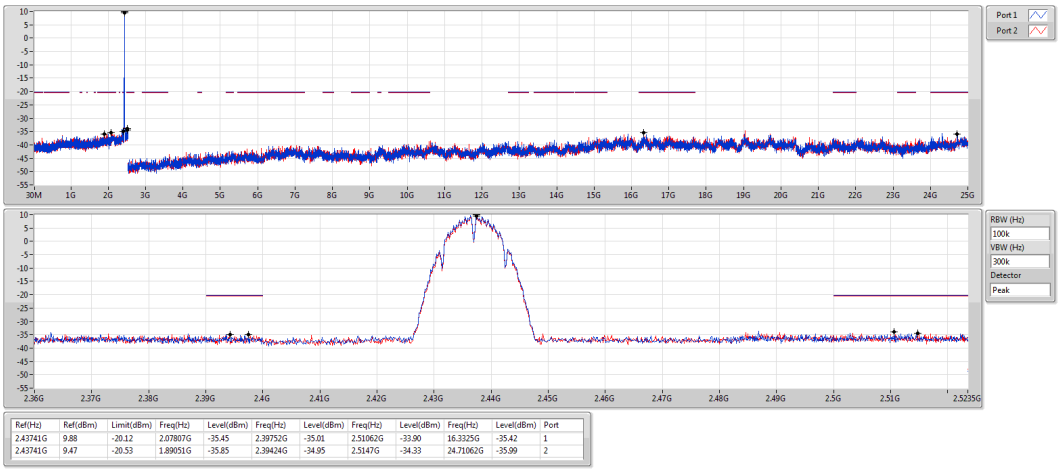
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41236G	10.87	-19.13	2.1037G	-34.66	2.3948G	-34.07	2.51774G	-34.30	24.56171G	-36.25	1
2.41236G	9.95	-20.05	2.09438G	-34.77	2.39712G	-34.65	2.50622G	-34.27	24.82862G	-36.16	2

802.11b_Nss1,(1Mbps)_2TX **CSE NdB**

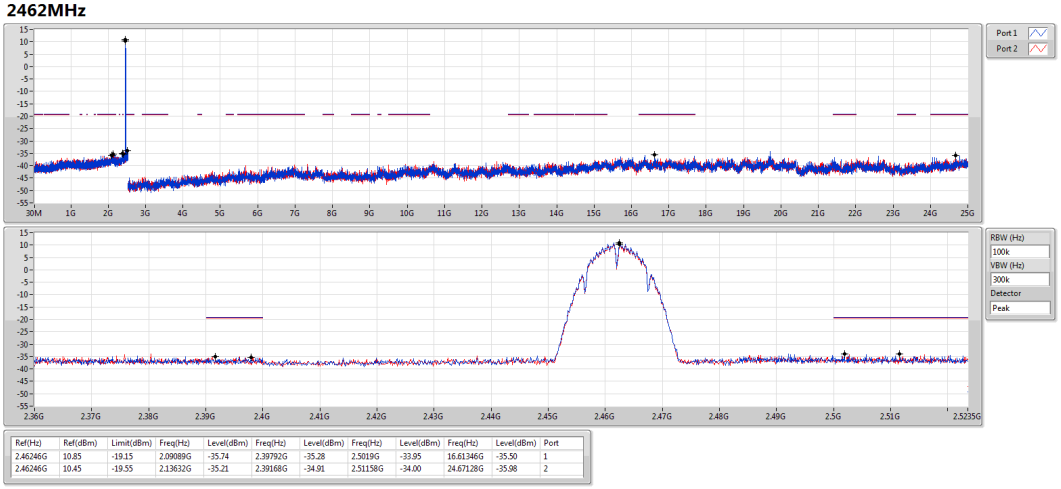
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43741G	9.88	-20.12	2.07807G	-35.45	2.39752G	-35.01	2.51062G	-33.90	16.3325G	-35.42	1
2.43741G	9.47	-20.53	1.89051G	-35.85	2.39424G	-34.95	2.5147G	-34.33	24.71062G	-35.99	2

802.11b_Nss1,(1Mbps)_2TX **CSE NdB**

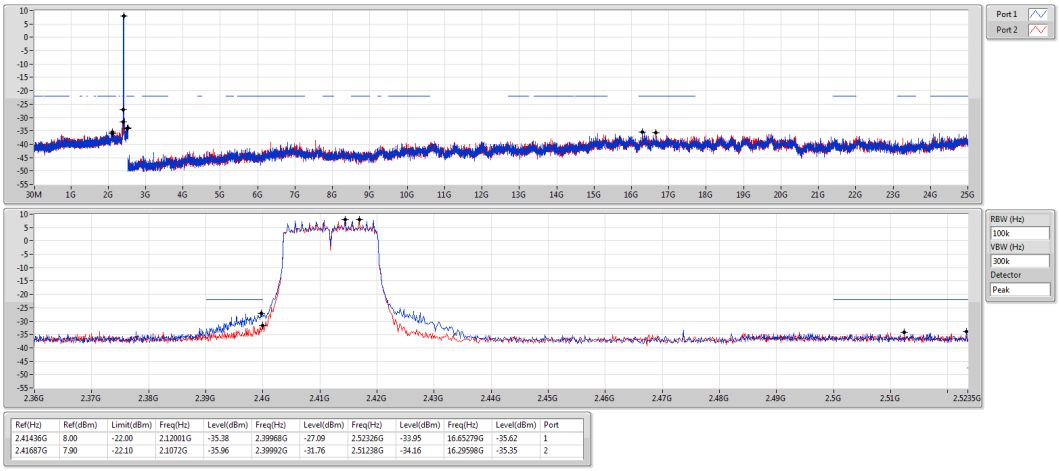
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.46246G	10.85	-19.15	2.09089G	-35.74	2.39792G	-35.28	2.5019G	-33.95	16.61346G	-35.50	1
2.46246G	10.45	-19.55	2.13632G	-35.21	2.39168G	-34.91	2.51158G	-34.00	24.67128G	-35.98	2

802.11g_Nss1,(6Mbps)_2TX **CSE NdB**

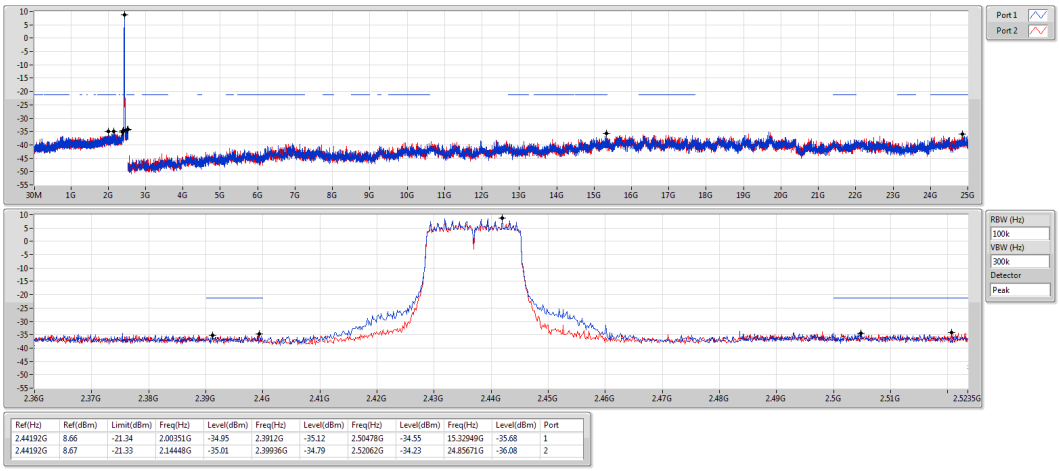
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41436G	8.00	-22.00	2.12001G	-35.38	2.39968G	-27.09	2.52326G	-33.95	16.65279G	-35.62	1
2.41687G	7.90	-22.10	2.1072G	-35.96	2.39992G	-31.76	2.51238G	-34.16	16.29598G	-35.35	2

802.11g_Nss1,(6Mbps)_2TX **CSE NdB**

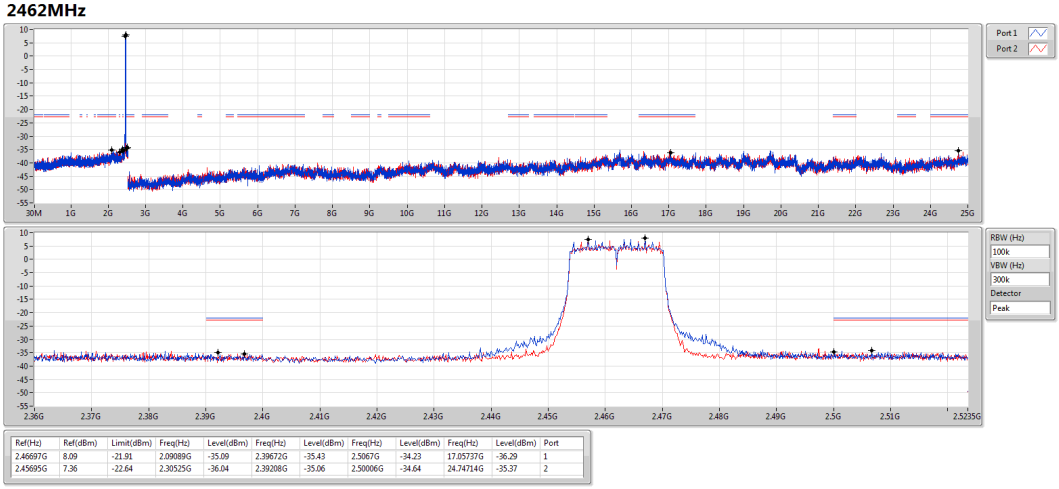
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44192G	8.66	-21.34	2.00351G	-34.95	2.3912G	-35.12	2.50478G	-34.55	15.32949G	-35.68	1
2.44192G	8.67	-21.33	2.14448G	-35.01	2.39936G	-34.79	2.52062G	-34.23	24.85671G	-36.08	2

802.11g_Nss1,(6Mbps)_2TX **CSE NdB**

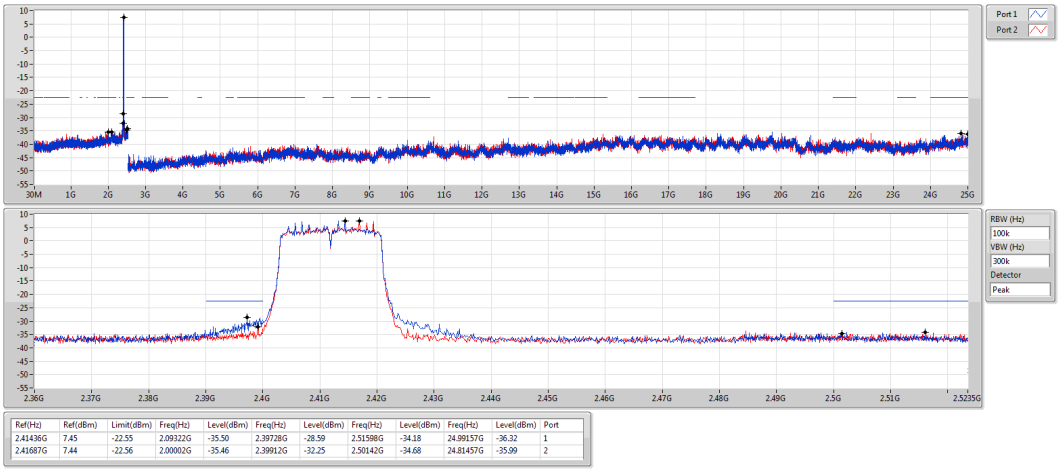
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.46697G	8.09	-21.91	2.09089G	-35.09	2.39672G	-35.43	2.5067G	-34.23	17.05737G	-36.29	1
2.45695G	7.36	-22.64	2.30525G	-36.04	2.39208G	-35.06	2.50006G	-34.64	24.74714G	-35.37	2

802.11ac VHT20_Nss1,(MCS0)_2TX **CSE NdB**

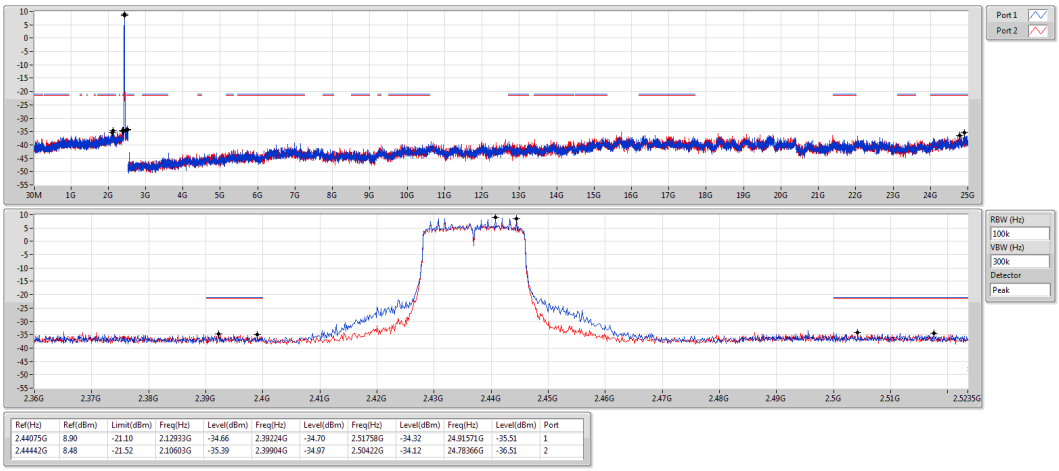
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41436G	7.45	-22.55	2.09322G	-35.50	2.39728G	-28.59	2.51598G	-34.18	24.99157G	-36.32	1
2.41687G	7.44	-22.56	2.00002G	-35.46	2.39912G	-32.25	2.50142G	-34.68	24.81457G	-35.99	2

802.11ac VHT20_Nss1,(MCS0)_2TX **CSE NdB**

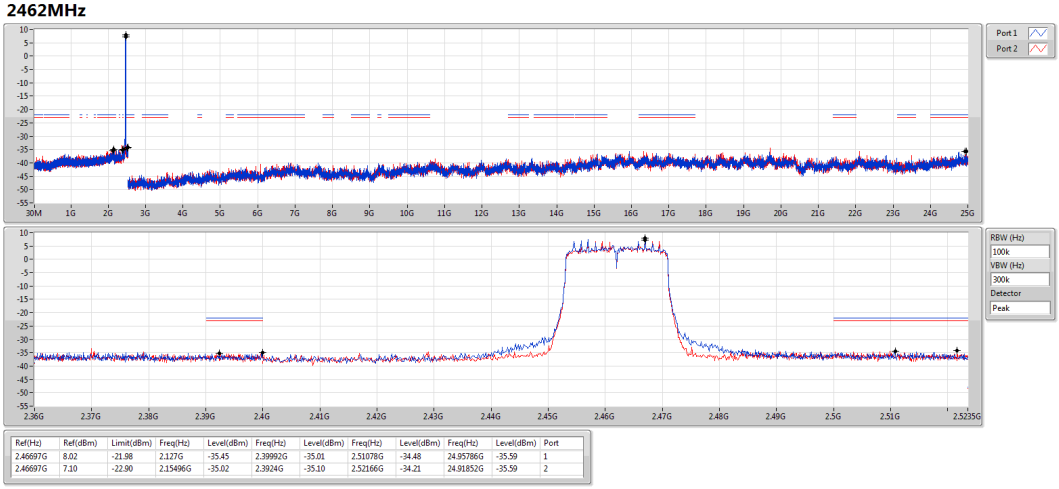
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44075G	8.90	-21.10	2.12933G	-34.66	2.39224G	-34.70	2.51758G	-34.32	24.91571G	-35.51	1
2.44442G	8.48	-21.52	2.10603G	-35.39	2.39904G	-34.97	2.50422G	-34.12	24.78366G	-36.51	2

802.11ac VHT20_Nss1,(MCS0)_2TX **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
2.46697G	8.02	-21.98	2.127G	-35.45	2.39992G	-35.01	2.51078G	-34.48	24.95786G	-35.59	1
2.46697G	7.10	-22.90	2.15496G	-35.02	2.3924G	-35.10	2.52166G	-34.21	24.91852G	-35.59	2

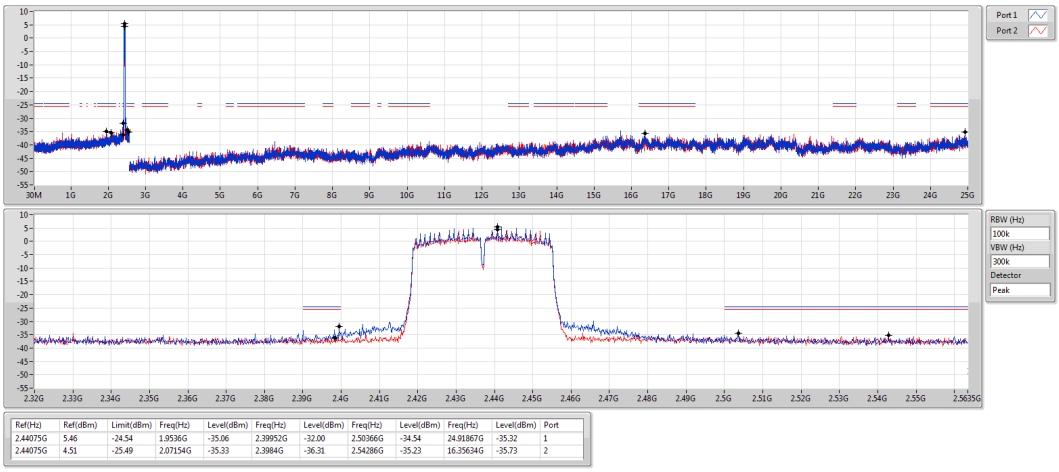
802.11ac VHT40_Nss1,(MCS0)_2TX **CSE NdB**

2422MHz

Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41687G	4.44	-25.56	2.11619G	-35.03	2.39056G	-32.69	2.53118G	-35.23	24.88221G	-34.78	1
2.42438G	3.64	-26.36	2.07039G	-35.20	2.39696G	-35.81	2.51438G	-34.91	24.85136G	-35.67	2

802.11ac VHT40_Nss1,(MCS0)_2TX **CSE NdB**

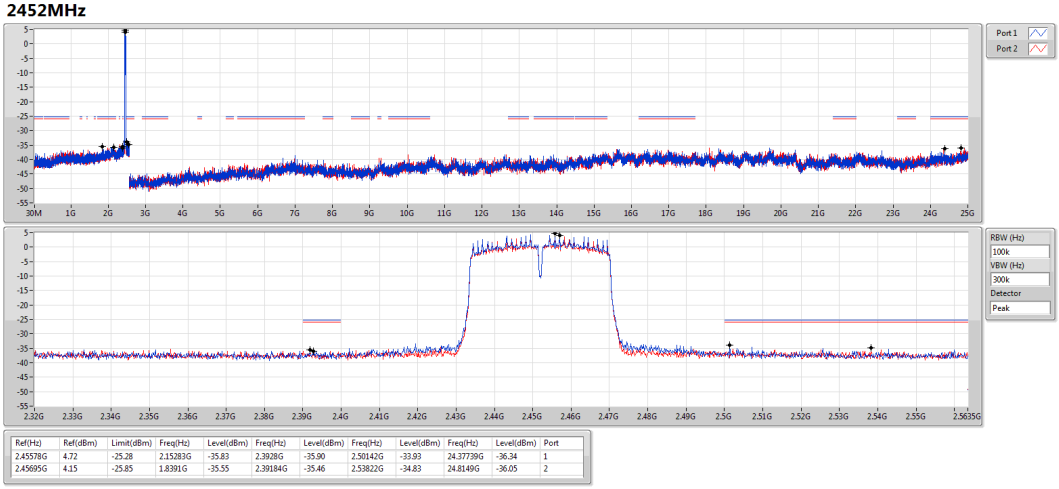
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44075G	5.46	-24.54	1.9536G	-35.06	2.39952G	-32.00	2.50366G	-34.54	24.91867G	-35.32	1
2.44075G	4.51	-25.49	2.07154G	-35.33	2.3984G	-36.31	2.54286G	-35.23	16.35634G	-35.73	2

802.11ac VHT40_Nss1,(MCS0)_2TX **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
2.45578G	4.72	-25.28	2.15283G	-35.83	2.3928G	-35.90	2.50142G	-33.93	24.37739G	-36.34	1
2.45695G	4.15	-25.85	1.8391G	-35.55	2.39184G	-35.46	2.53822G	-34.83	24.8149G	-36.05	2

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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