FCC Test Report

FCC ID	:	**P27OC845**
Equipment	:	**Waterproof FHD IP Camera**
Model No.	:	**OC845**
Brand Name	:	**ADT**
Multiple Listing	:	**Refer to item 1.1.1 for more details.**
Applicant	:	**Sercomm Corporation**
Address	:	**8F, No. 3-1, YuanQu St., NanKang, Taipei 115, Taiwan, R.O.C.**
Standard	:	**47 CFR FCC Part 15.247**
Received Date	:	**Aug. 27, 2019**
Tested Date	:	**Aug. 29 ~ Sep. 19, 2019**

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
FR982702AC	Rev. 01	Initial issue	Oct. 22, 2019

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.258MHz 33.42 (Margin -18.09dB) - AV	Pass
15.247(d) 15.209	Radiated Emissions	[dBuV/m at 3m]: 2390.00MHz 52.99 (Margin -1.01dB) - AV	Pass
15.247(b)(3)	Maximum Output Power	Max Power [dBm]: 27.33	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

Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.
Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

1 General Description

1.1 Information

1.1.1 Product Details

The following models are provided to this EUT.

Model Name	Description
OC845	Main tested model
OC845xxxxxxxx	the 1st x should be "blank" or "-"; the rest x could be 0 to 9, A to Z, a to z for marketing purpose.
✦ All models are electrically identical, different model names are for marketing purpose.	

1.1.2 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]	2	MCS 0-15
2400-2483.5	n (HT40)	2422-2452	3-9 [7]	2	MCS 0-15
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.					

1.1.3 Antenna Details

Ant. No.	Model	Type	Connector	Operating Frequencies (MHz) / Antenna Gain (dBi)		
				2400~2483.5	**5150~5250**	**5725~5850**
1	Ant 1	Dipole	I-PEX	3.6	3.15	3.81
2	Ant 2	Dipole	I-PEX	3.17	2.81	3.71

1.1.4 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	12Vdc from adapter

1.1.5 Accessories

Accessories		
No.	**Equipment**	**Description**
1	AC adapter	Brand: APD Model: WB-18D12FU I/P: 100-240Vac, 50-60Hz, 0.5A Max O/P: 12Vdc, 1.5A Power Line: 3m non-shielded without core

1.1.6 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	---	---

1.1.7 Test Tool and Duty Cycle

Test Tool	TeraTerm, V4.80		
Duty Cycle and Duty Factor	**Mode**	**Duty Cycle (%)**	**Duty Factor (dB)**
	11b	99.31%	0.03
	11g	92.93%	0.32
	HT20	94.74%	0.23
	HT40	88.75%	0.52

1.1.8 Power Index of Test Tool

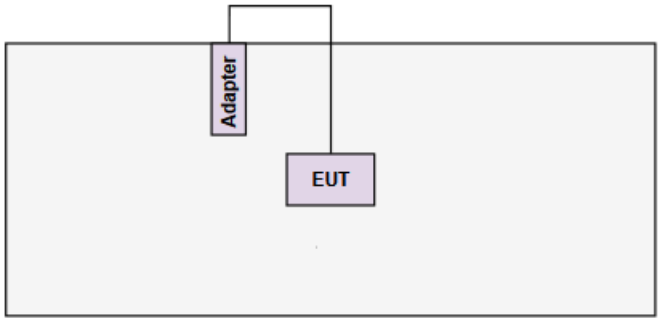
Modulation Mode	Test Frequency (MHz)	Power Index
11b	2412	38
11b	2437	38
11b	2462	38
11g	2412	48
11g	2437	50
11g	2462	48
HT20	2412	45/47
HT20	2437	51/52
HT20	2462	45/45
HT40	2422	44/45
HT40	2437	47/48
HT40	2452	43/43

1.2 Local Support Equipment List

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

1.3 Test Setup Chart

Test Setup Diagram



Note: The support notebook is disconnected from EUT and removed from test table after sending command to EUT to control EUT to transmit continuously.

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101657	Jan. 08, 2019	Jan. 07, 2020
LISN	R&S	ENV216	101579	Mar. 08, 2019	Mar. 07, 2020
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 23, 2018	Oct. 22, 2019
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)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101498	Dec. 27, 2018	Dec. 26, 2019
Receiver	R&S	ESR3	101658	Dec. 11, 2018	Dec. 10, 2019
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Jul. 12, 2019	Jul. 11, 2020
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 18, 2018	Dec. 17, 2019
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 15, 2018	Nov. 14, 2019
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 09, 2018	Nov. 08, 2019
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 08, 2018	Oct. 07, 2019
Preamplifier	EMC	EMC02325	980225	Jul. 09, 2019	Jul. 08, 2020
Preamplifier	Agilent	83017A	MY39501308	Oct. 04, 2018	Oct. 03, 2019
Preamplifier	EMC	EMC184045B	980192	Aug. 01, 2019	Jul. 31, 2020
RF Cable	EMC	EMC104-SM-SM-8000	181106	Oct. 08, 2018	Oct. 07, 2019
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Oct. 08, 2018	Oct. 07, 2019
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16014/4	Oct. 08, 2018	Oct. 07, 2019
LF cable 1M	EMC	EMCCFD400-NM-NM-1000	160502	Oct. 08, 2018	Oct. 07, 2019
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Oct. 08, 2018	Oct. 07, 2019
LF cable 10M	Woken	CFD400NL-LW	CFD400NL-002	Oct. 08, 2018	Oct. 07, 2019
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)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101063	Apr. 17, 2019	Apr. 16, 2020
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	Nov. 29, 2018	Nov. 28, 2019
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 v05r02
FCC KDB 662911 D01 Multiple Transmitter Output v02r01

1.6 Deviation from Test Standard and Measurement Procedure

None

1.7 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	±34.130 Hz
Conducted power	±0.808 dB
Power density	±0.583 dB
Conducted emission	±2.715 dB
AC conducted emission	±2.92 dB
Radiated emission ≤ 1GHz	±3.41 dB
Radiated emission > 1GHz	±4.59 dB

2 Test Configuration

2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	24°C / 62%	Alex Tsai
Radiated Emissions	03CH01-WS	23-24°C / 63-64%	Akun Chung Aska Huang
RF Conducted	TH01-WS	25°C / 63%	Aska Huang

- FCC Designation No.: TW2732
- FCC site registration No.: 181692
- ISED#: 10807A
- CAB identifier: TW2732

2.2 The Worst Test Modes and Channel Details

Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Configuration
Conducted Emissions	HT20	2437	MCS 0	---
Radiated Emissions ≤1GHz	HT20	2437	MCS 0	---
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	---

NOTE:

1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **Z-plane** results were found as the worst case and were shown in this report.

3 Transmitter Test Results

3.1 Conducted Emissions

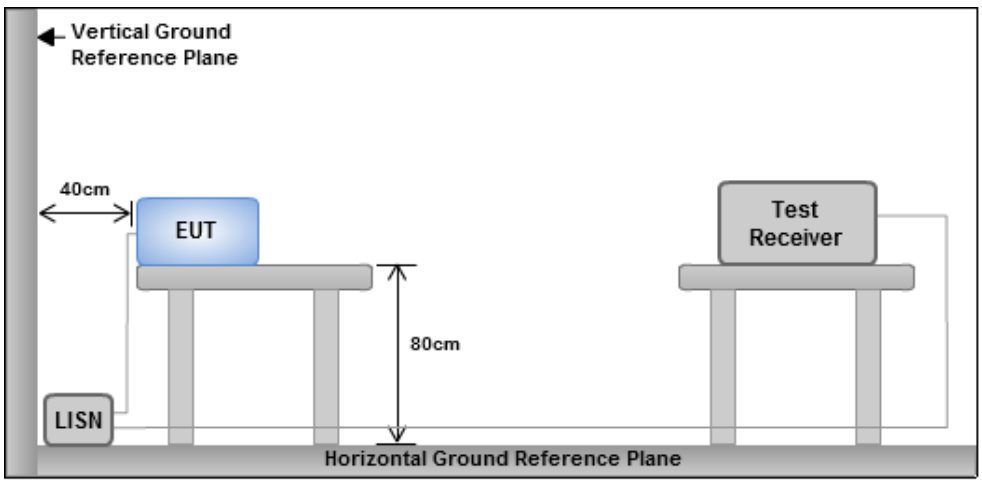
3.1.1 Limit of Conducted Emissions

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

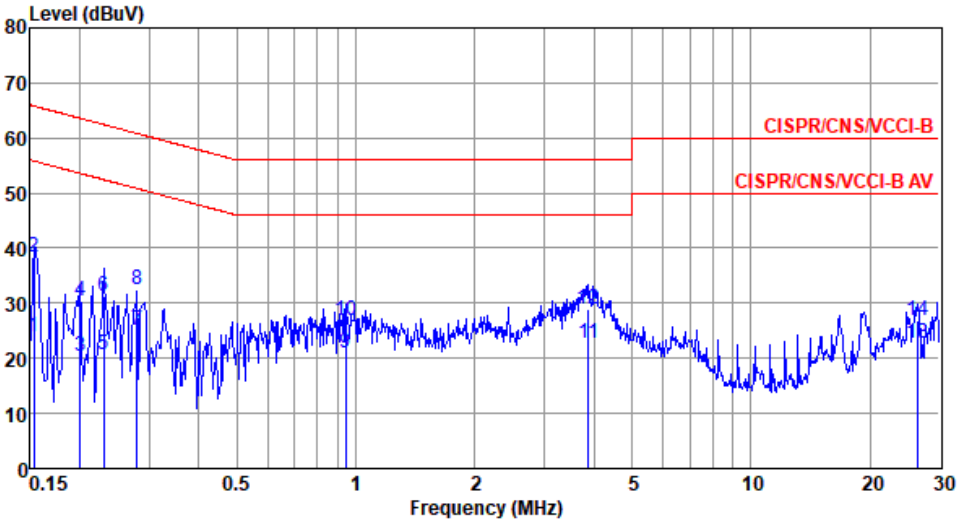


Note: 1. Support units were connected to second LISN.

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

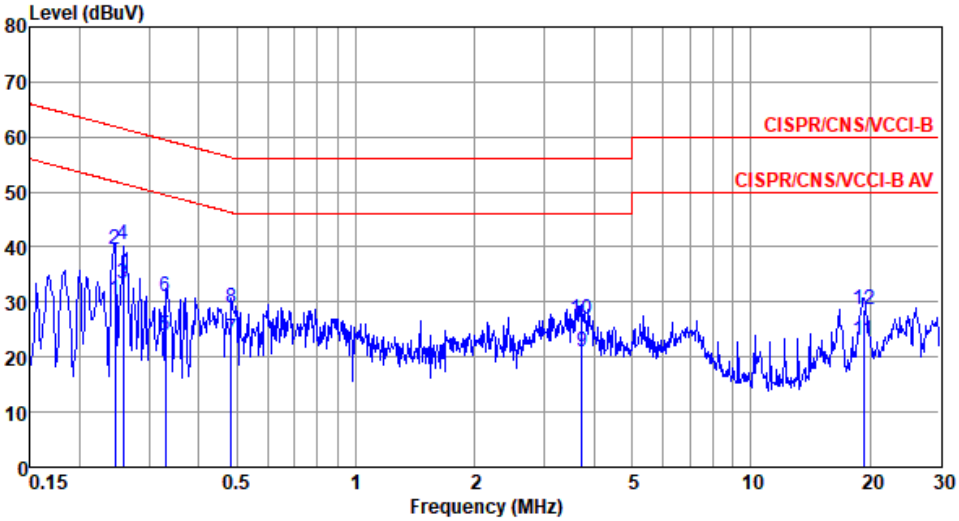
Modulation	HT20	Test Freq. (MHz)	2437
Power Phase	Line		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.153	24.06	55.82	-31.76	14.35	9.53	0.05	Average
2	0.153	38.50	65.82	-27.32	28.79	9.53	0.05	QP
3	0.201	20.47	53.58	-33.11	10.67	9.54	0.07	Average
4	0.201	30.31	63.58	-33.27	20.51	9.54	0.07	QP
5	0.230	20.64	52.44	-31.80	10.82	9.55	0.07	Average
6	0.230	31.24	62.44	-31.20	21.42	9.55	0.07	QP
7	0.279	25.22	50.85	-25.63	15.38	9.55	0.07	Average
8	0.279	32.42	60.85	-28.43	22.58	9.55	0.07	QP
9	0.943	20.82	46.00	-25.18	10.82	9.60	0.10	Average
10	0.943	26.93	56.00	-29.07	16.93	9.60	0.10	QP
11*	3.881	22.60	46.00	-23.40	12.34	9.61	0.27	Average
12	3.881	28.99	56.00	-27.01	18.73	9.61	0.27	QP
13	26.418	22.72	50.00	-27.28	11.64	9.63	0.72	Average
14	26.418	26.80	60.00	-33.20	15.72	9.63	0.72	QP

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

Modulation	HT20	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	0.246	30.36	51.91	-21.55	20.57	9.59	0.07	Average
2	0.246	39.49	61.91	-22.42	29.70	9.59	0.07	QP
3*	0.258	33.42	51.51	-18.09	23.63	9.59	0.07	Average
4	0.258	40.34	61.51	-21.17	30.55	9.59	0.07	QP
5	0.330	23.80	49.44	-25.64	13.99	9.60	0.08	Average
6	0.330	31.11	59.44	-28.33	21.30	9.60	0.08	QP
7	0.484	23.26	46.27	-23.01	13.42	9.62	0.08	Average
8	0.484	29.00	56.27	-27.27	19.16	9.62	0.08	QP
9	3.740	20.96	46.00	-25.04	10.77	9.66	0.27	Average
10	3.740	26.89	56.00	-29.11	16.70	9.66	0.27	QP
11	19.326	22.91	50.00	-27.09	12.06	9.81	0.60	Average
12	19.326	28.52	60.00	-31.48	17.67	9.81	0.60	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

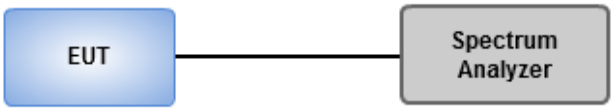
6dB Bandwidth

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)_1TX	10.072M	15.051M	15M1G1D	9.855M	14.978M
802.11g_Nss1,(6Mbps)_1TX	16.377M	16.715M	16M7D1D	16.304M	16.643M
802.11n HT20_Nss1,(MCS0)_2TX	17.101M	17.873M	17M9D1D	16.377M	17.656M
802.11n HT40_Nss1,(MCS0)_2TX	36.232M	36.469M	36M5D1D	35.217M	36.324M

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;

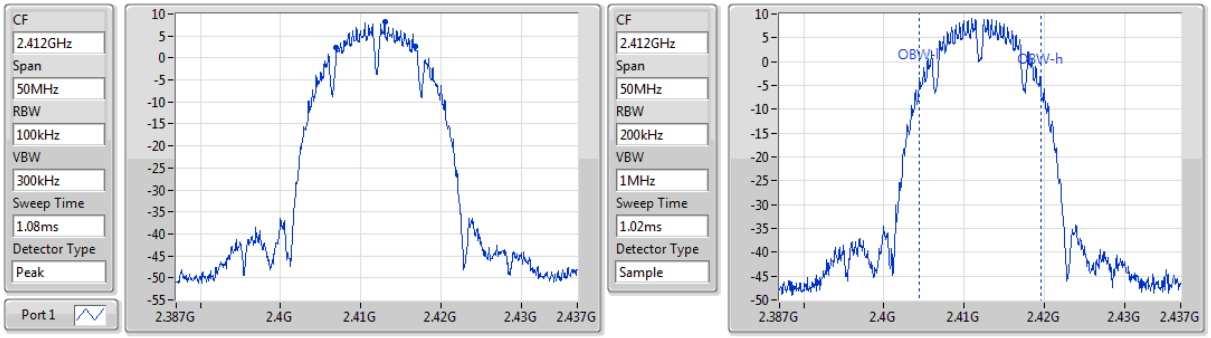
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-
2412MHz	Pass	500k	9.855M	15.051M		
2437MHz	Pass	500k	10M	14.978M		
2462MHz	Pass	500k	10.072M	14.978M		
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-
2412MHz	Pass	500k	16.377M	16.715M		
2437MHz	Pass	500k	16.304M	16.643M		
2462MHz	Pass	500k	16.377M	16.643M		
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	17.101M	17.728M	16.377M	17.728M
2437MHz	Pass	500k	16.884M	17.728M	16.594M	17.873M
2462MHz	Pass	500k	16.957M	17.656M	16.884M	17.728M
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	35.652M	36.324M	35.652M	36.469M
2437MHz	Pass	500k	35.652M	36.469M	35.217M	36.469M
2452MHz	Pass	500k	35.797M	36.469M	36.232M	36.469M

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

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

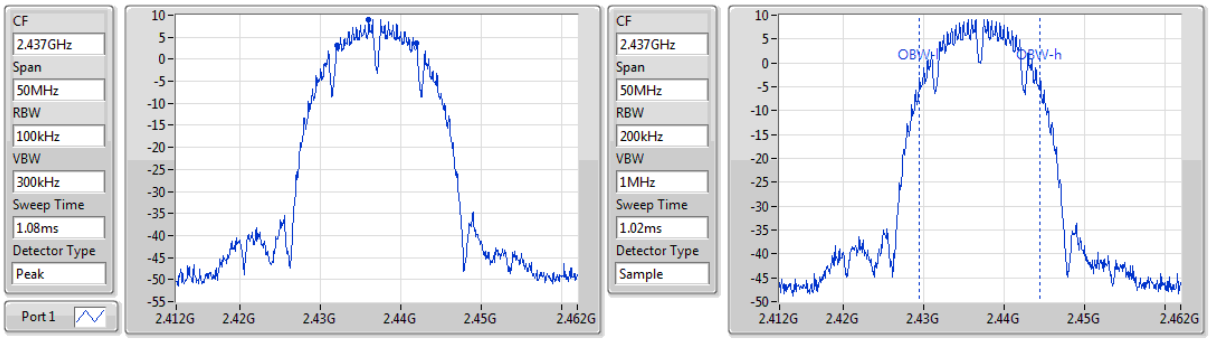
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.855M	2.406928G	2.416783G	15.051M	2.404475G	2.419525G	500k	1

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

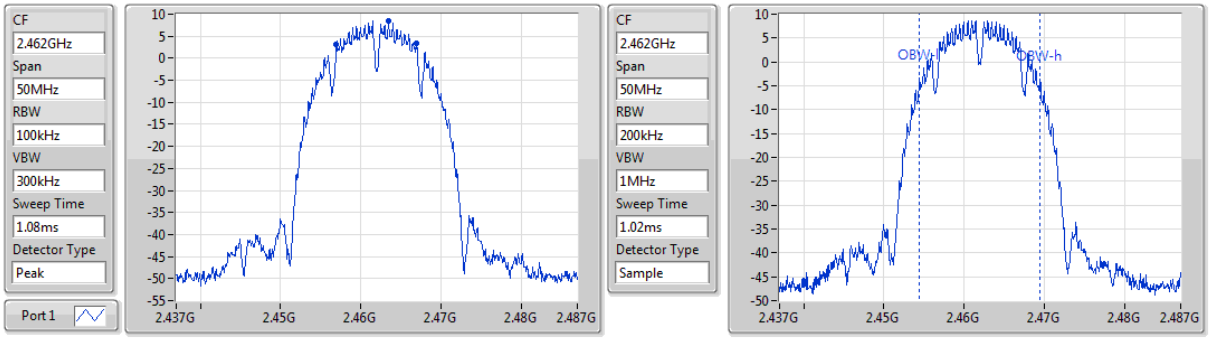
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10M	2.432G	2.442G	14.978M	2.429475G	2.444453G	500k	1

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

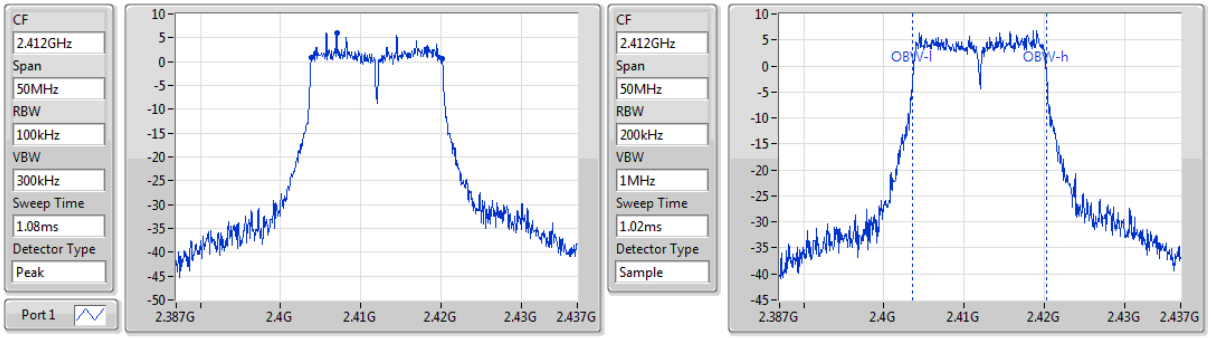
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.072M	2.456928G	2.467G	14.978M	2.454475G	2.469453G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

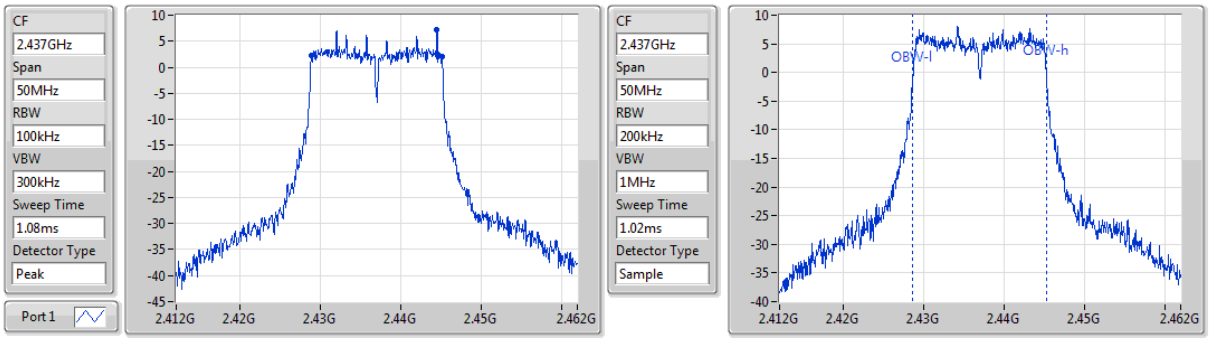
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.377M	2.403812G	2.420188G	16.715M	2.403606G	2.420321G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

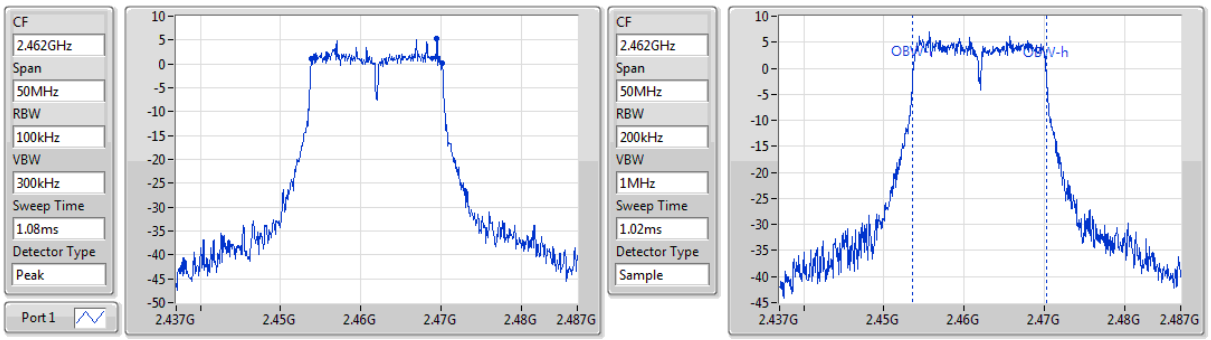
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.304M	2.428812G	2.445116G	16.643M	2.428606G	2.445249G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

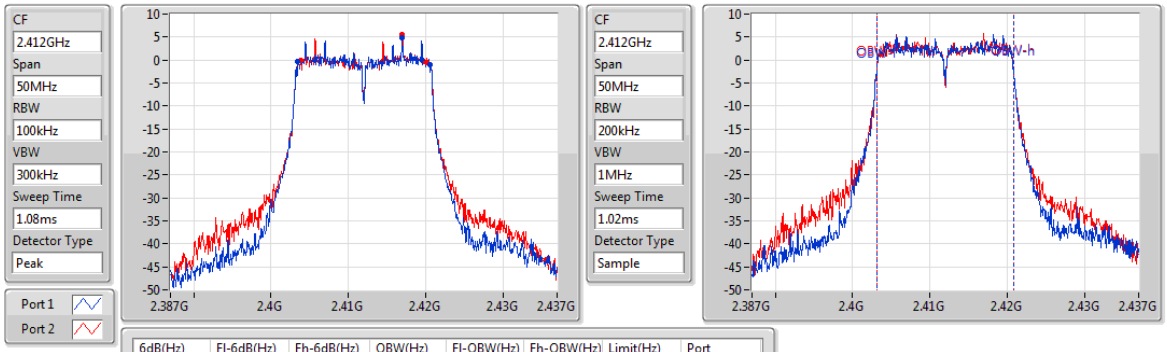
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.377M	2.453812G	2.470188G	16.643M	2.453606G	2.470249G	500k	1

802.11n HT20_Nss1,(MCS0)_2TX EBW

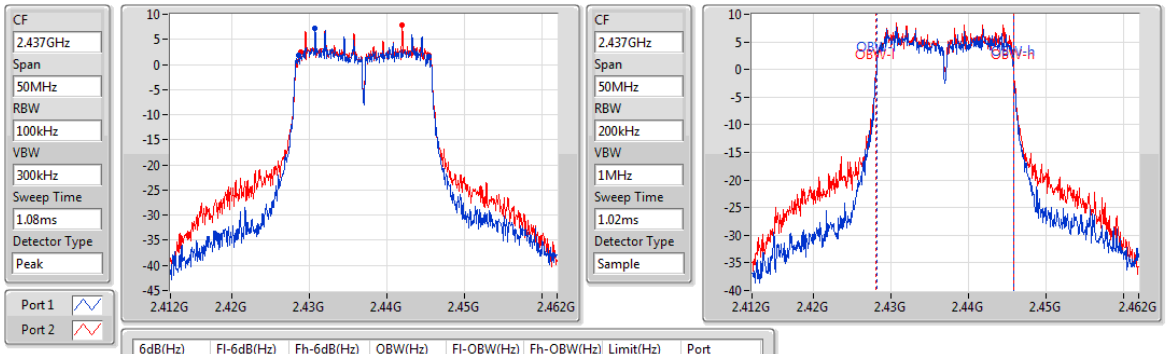
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.101M	2.403449G	2.420551G	17.728M	2.4031G	2.420828G	500k	1
16.377M	2.403812G	2.420188G	17.728M	2.4031G	2.420828G	500k	2

802.11n HT20_Nss1,(MCS0)_2TX EBW

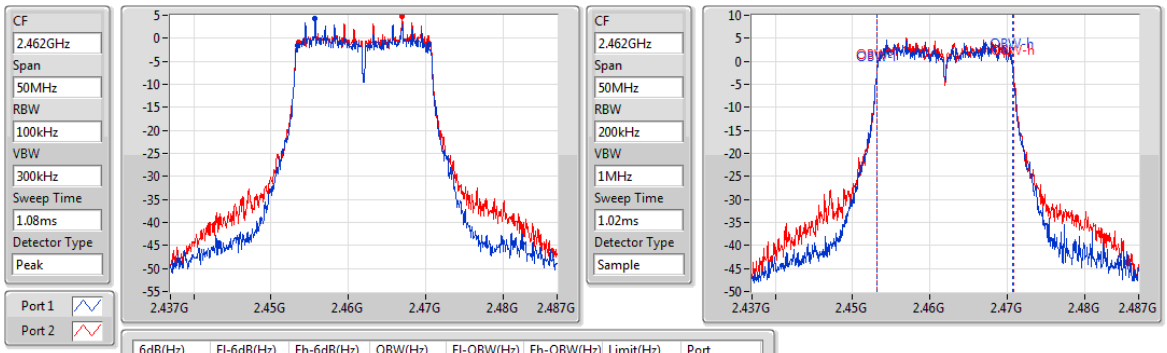
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.884M	2.428594G	2.445478G	17.728M	2.4281G	2.445828G	500k	1
16.594M	2.428812G	2.445406G	17.873M	2.428027G	2.4459G	500k	2

802.11n HT20_Nss1,(MCS0)_2TX EBW

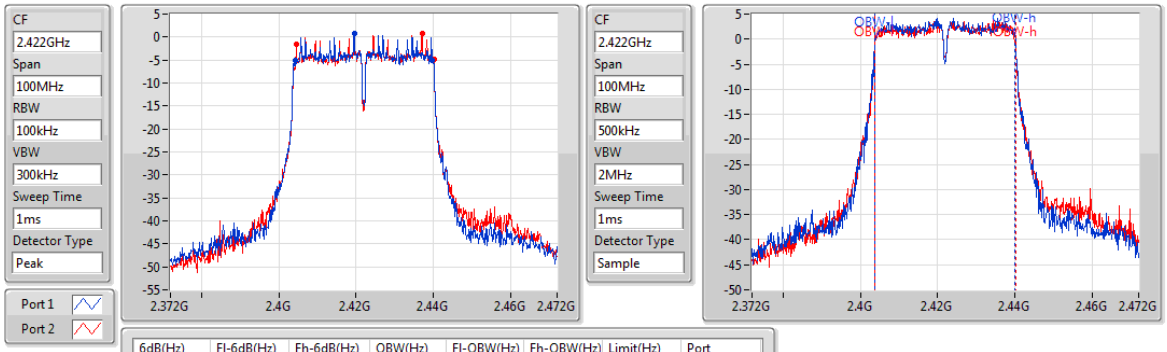
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.957M	2.453449G	2.470406G	17.656M	2.4531G	2.470755G	500k	1
16.884M	2.453594G	2.470478G	17.728M	2.4531G	2.470828G	500k	2

802.11n HT40_Nss1,(MCS0)_2TX **EBW**

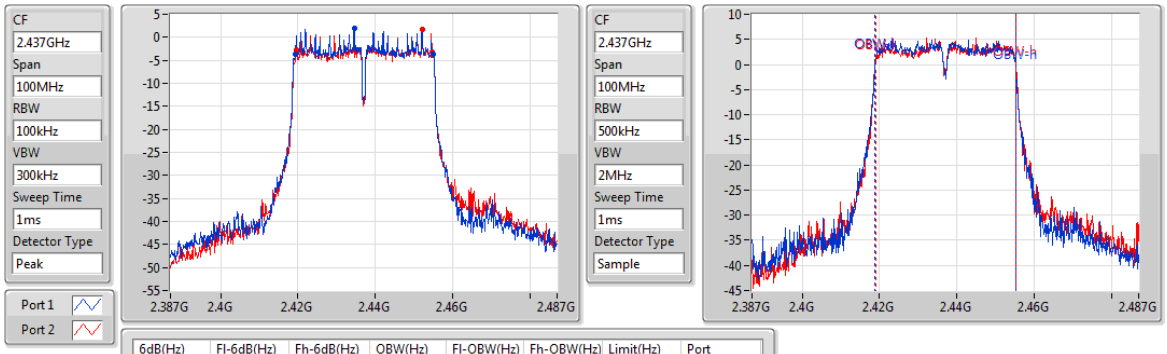
2422MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.652M	2.404174G	2.439826G	36.324M	2.403766G	2.44009G	500k	1
35.652M	2.404464G	2.440116G	36.469M	2.403766G	2.440234G	500k	2

802.11n HT40_Nss1,(MCS0)_2TX **EBW**

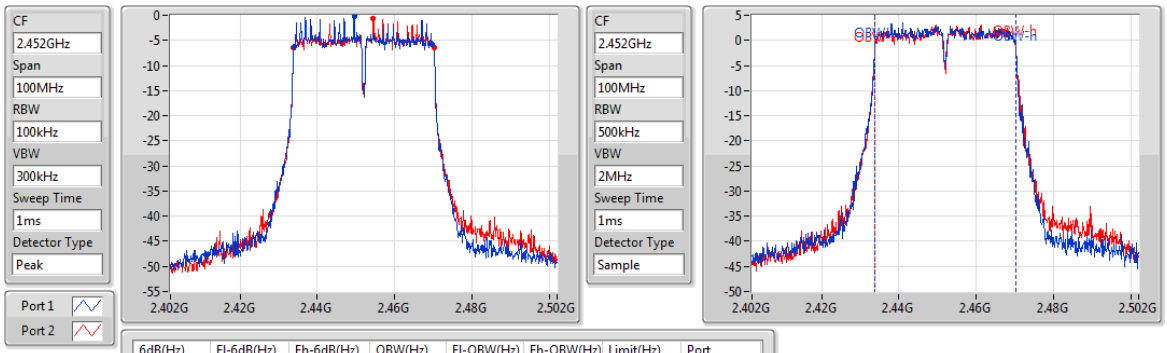
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.652M	2.419319G	2.454971G	36.469M	2.418766G	2.455234G	500k	1
35.217M	2.419464G	2.454681G	36.469M	2.41891G	2.455379G	500k	2

802.11n HT40_Nss1,(MCS0)_2TX **EBW**

2452MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
35.797M	2.434029G	2.469826G	36.469M	2.433766G	2.470234G	500k	1
36.232M	2.433884G	2.470116G	36.469M	2.433766G	2.470234G	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 of Peak Conducted Output Power

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	20.70	0.11749
802.11g_Nss1,(6Mbps)_1TX	25.34	0.34198
802.11n HT20_Nss1,(MCS0)_2TX	27.33	0.54075
802.11n HT40_Nss1,(MCS0)_2TX	26.49	0.44566

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)_1TX	-	-	-	-	-	-	-	-
2412MHz	Pass	3.60	20.61		20.61	30.00	24.21	36.00
2437MHz	Pass	3.60	20.70		20.70	30.00	24.30	36.00
2462MHz	Pass	3.60	20.55		20.55	30.00	24.15	36.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-
2412MHz	Pass	3.60	25.28		25.28	30.00	28.88	36.00
2437MHz	Pass	3.60	25.34		25.34	30.00	28.94	36.00
2462MHz	Pass	3.60	25.19		25.19	30.00	28.79	36.00
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
2412MHz	Pass	3.60	24.11	23.03	26.61	30.00	30.21	36.00
2437MHz	Pass	3.60	24.38	24.25	27.33	30.00	30.93	36.00
2462MHz	Pass	3.60	23.98	23.15	26.60	30.00	30.20	36.00
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
2422MHz	Pass	3.60	23.24	23.47	26.37	30.00	29.97	36.00
2437MHz	Pass	3.60	23.54	23.42	26.49	30.00	30.09	36.00
2452MHz	Pass	3.60	23.35	23.17	26.27	30.00	29.87	36.00

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

Summary of Conducted (Average) Output Power

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	18.46	0.07015
802.11g_Nss1,(6Mbps)_1TX	18.49	0.07063
802.11n HT20_Nss1,(MCS0)_2TX	21.47	0.14028
802.11n HT40_Nss1,(MCS0)_2TX	19.31	0.08531

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)_1TX	-	-	-	-	-	-	-	-
2412MHz	Pass	3.60	18.43		18.43	-	22.03	-
2437MHz	Pass	3.60	18.46		18.46	-	22.06	-
2462MHz	Pass	3.60	18.23		18.23	-	21.83	-
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-	-
2412MHz	Pass	3.60	17.31		17.31	-	20.91	-
2437MHz	Pass	3.60	18.49		18.49	-	22.09	-
2462MHz	Pass	3.60	17.22		17.22	-	20.82	-
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
2412MHz	Pass	3.60	15.56	15.83	18.71	-	22.31	-
2437MHz	Pass	3.60	18.53	18.38	21.47	-	25.07	-
2462MHz	Pass	3.60	15.75	15.72	18.75	-	22.35	-
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
2422MHz	Pass	3.60	14.28	15.20	17.77	-	21.37	-
2437MHz	Pass	3.60	16.38	16.22	19.31	-	22.91	-
2452MHz	Pass	3.60	14.36	14.26	17.32	-	20.92	-

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

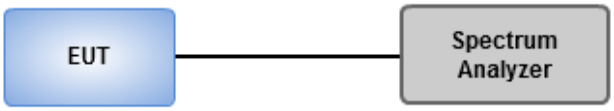
Power spectral density shall not be greater than 8 dBm in any 3 kHz band.

3.4.2 Test Procedures

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.

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	-4.60
802.11g_Nss1,(6Mbps)_1TX	-7.20
802.11n HT20_Nss1,(MCS0)_2TX	-4.91
802.11n HT40_Nss1,(MCS0)_2TX	-10.22

RBW= 3 kHz

Result

Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-
2412MHz	Pass	3.60	-4.60		-4.60	8.00
2437MHz	Pass	3.60	-5.58		-5.58	8.00
2462MHz	Pass	3.60	-5.07		-5.07	8.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-
2412MHz	Pass	3.60	-7.20		-7.20	8.00
2437MHz	Pass	3.60	-7.76		-7.76	8.00
2462MHz	Pass	3.60	-8.40		-8.40	8.00
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.40	-10.45	-8.33	-7.16	7.60
2437MHz	Pass	6.40	-6.53	-7.65	-4.91	7.60
2462MHz	Pass	6.40	-8.94	-10.71	-7.32	7.60
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	6.40	-13.01	-13.79	-10.37	7.60
2437MHz	Pass	6.40	-13.54	-12.62	-10.22	7.60
2452MHz	Pass	6.40	-14.71	-14.00	-11.33	7.60

RBW= 3kHz,
DG = Directional Gain

For 1TX

Directional Gain = max gain of single antenna;

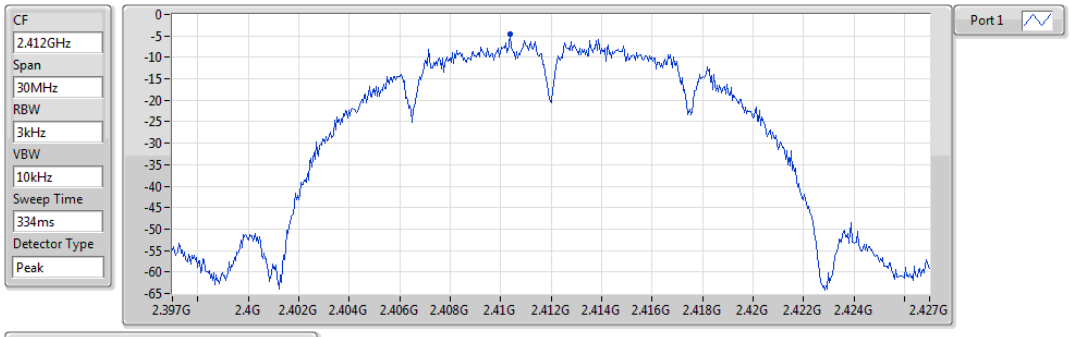
For 2TX

Directional Gain = $10 * \log((10^{3.6/20}+10^{3.17/20})^2/2)$ = 6.4 dBi > 6 dBi ,Limit shall be reduced to 8 dBm – (6.4 dBi – 6 dBi) = 7.6 dBm

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**

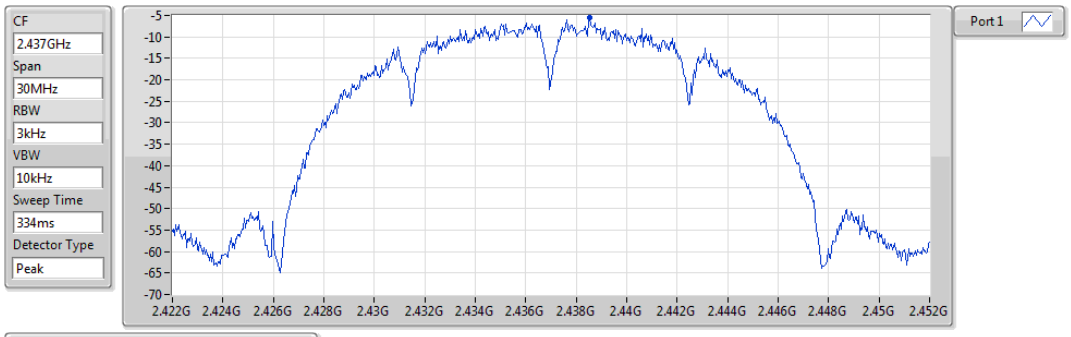
2412MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.60	-4.60	-4.60

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

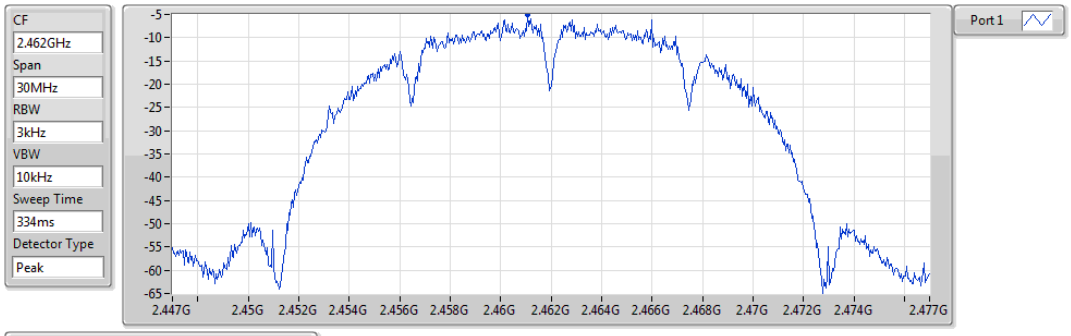
2437MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.58	-5.58	-5.58

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

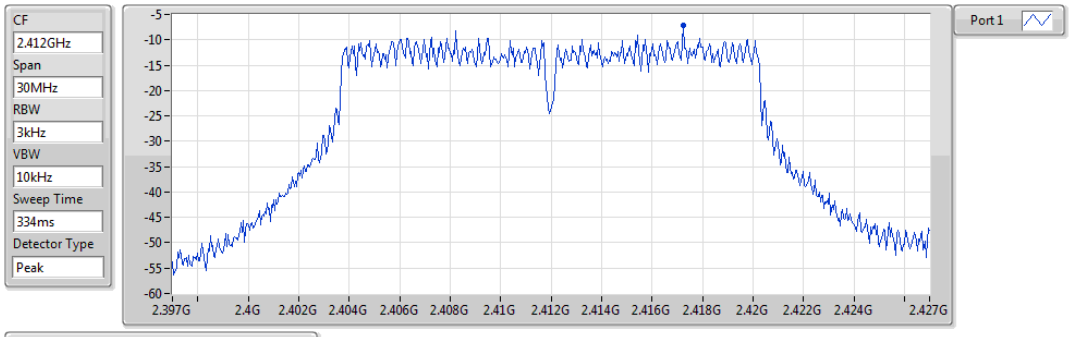
2462MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.07	-5.07	-5.07

802.11g_Nss1,(6Mbps)_1TX **PSD**

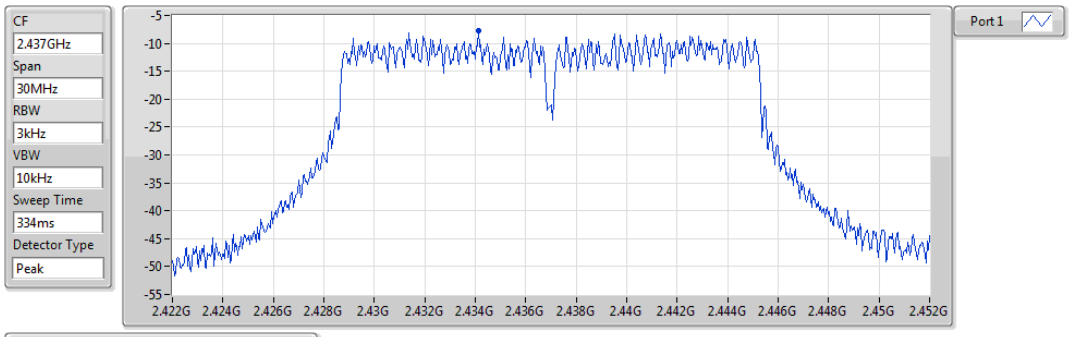
2412MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.20	-7.20	-7.20

802.11g_Nss1,(6Mbps)_1TX **PSD**

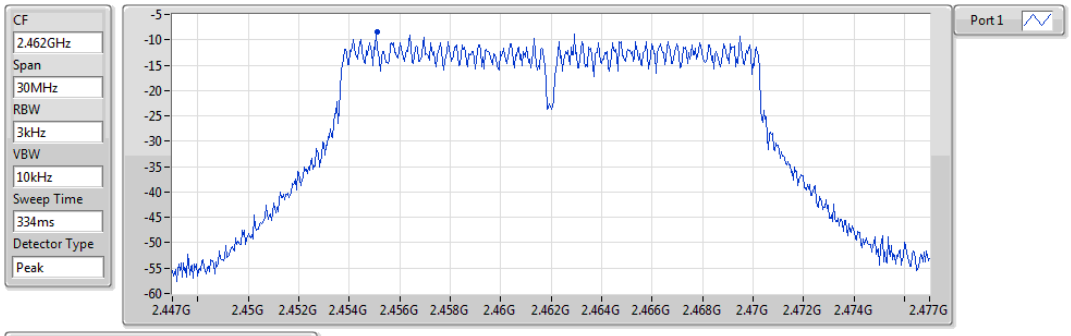
2437MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.76	-7.76	-7.76

802.11g_Nss1,(6Mbps)_1TX **PSD**

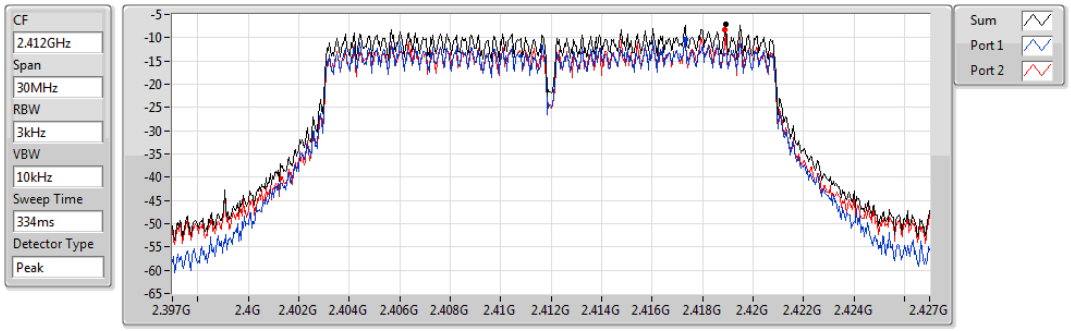
2462MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-8.40	-8.40	-8.40

802.11n HT20_Nss1,(MCS0)_2TX **PSD**

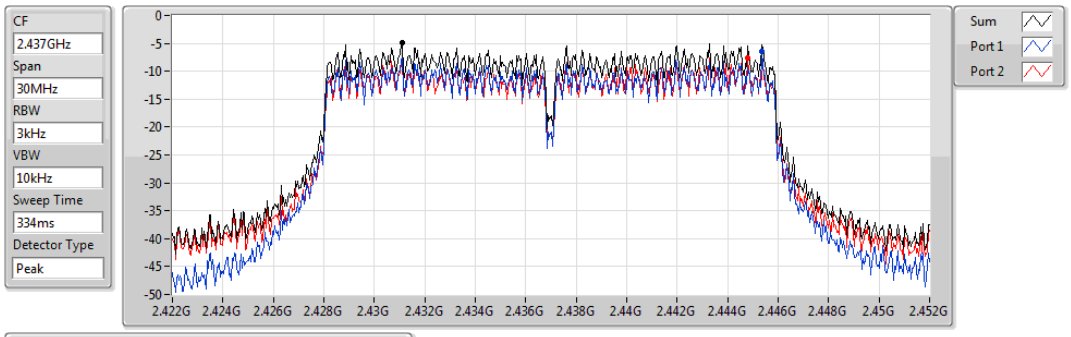
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.16	-7.16	-10.45	-8.33

802.11n HT20_Nss1,(MCS0)_2TX **PSD**

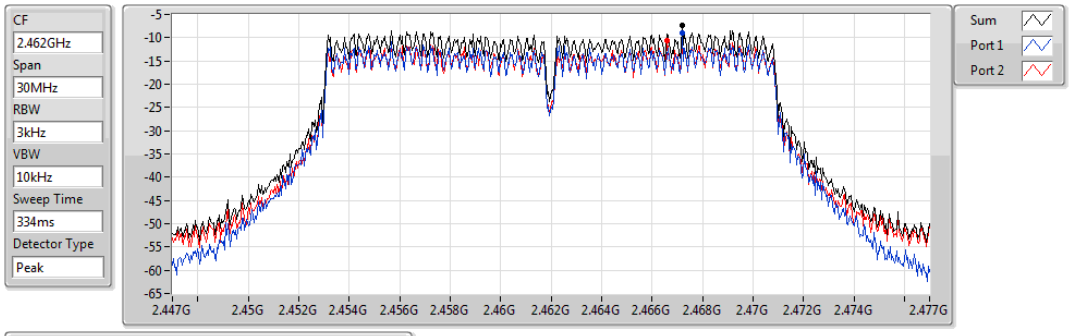
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.91	-4.91	-6.53	-7.65

802.11n HT20_Nss1,(MCS0)_2TX **PSD**

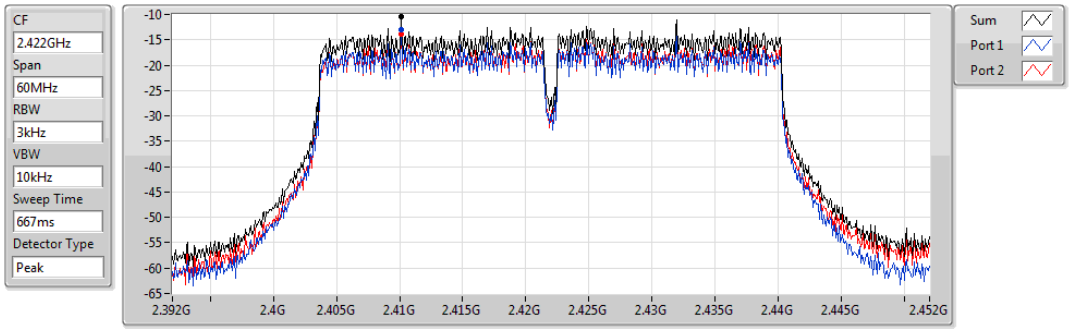
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.32	-7.32	-8.94	-10.71

802.11n HT40_Nss1,(MCS0)_2TX **PSD**

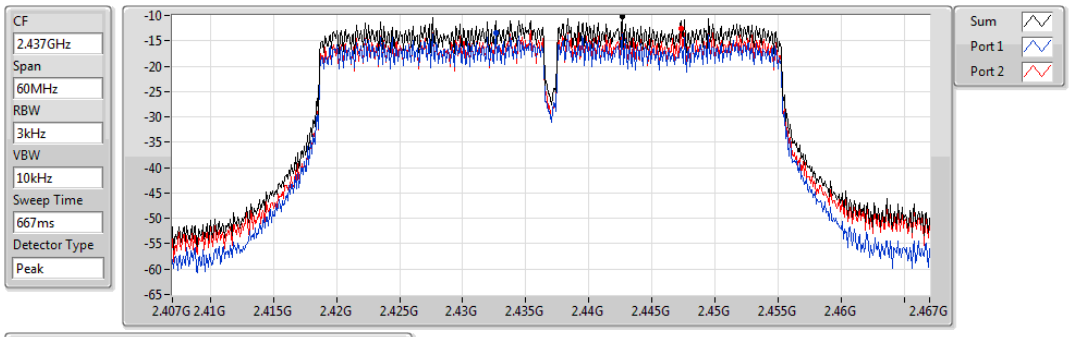
2422MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.37	-10.37	-13.01	-13.79

802.11n HT40_Nss1,(MCS0)_2TX **PSD**

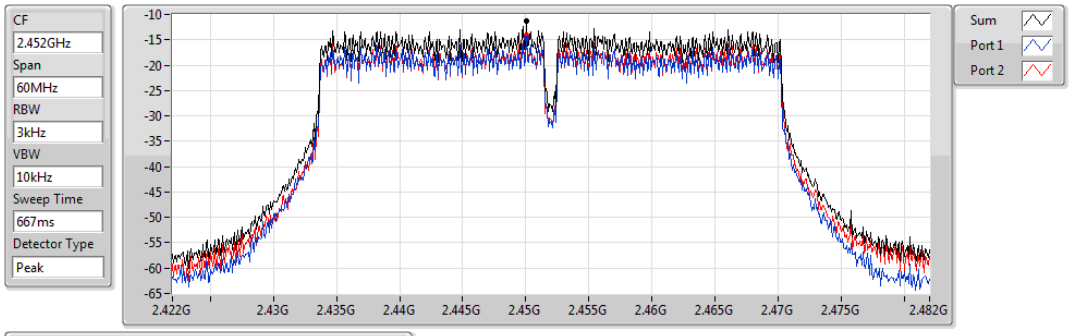
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.22	-10.22	-13.54	-12.62

802.11n HT40_Nss1,(MCS0)_2TX **PSD**

2452MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-11.33	-11.33	-14.71	-14.00

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

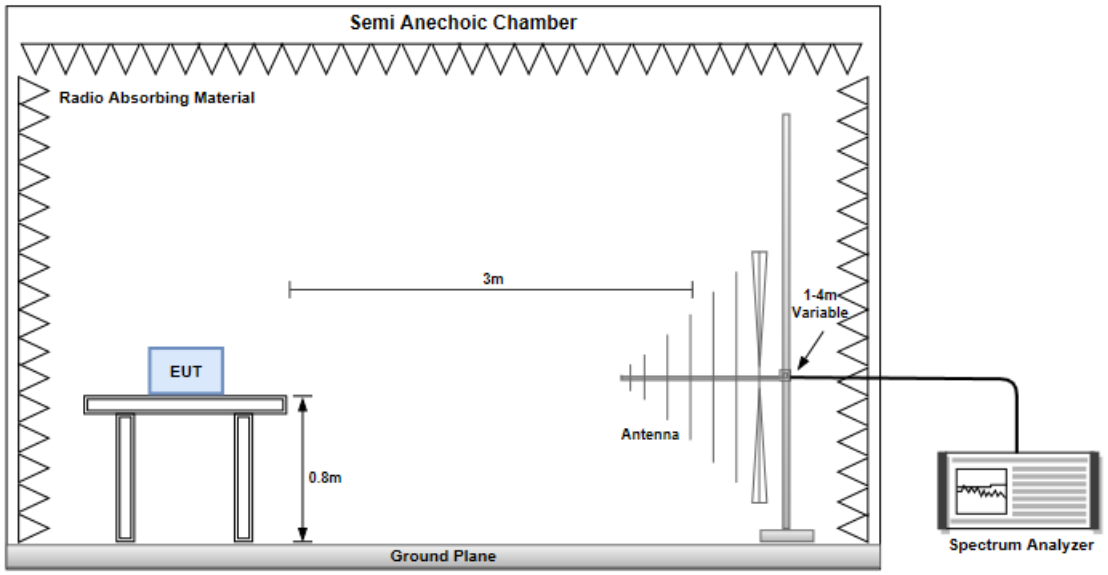
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

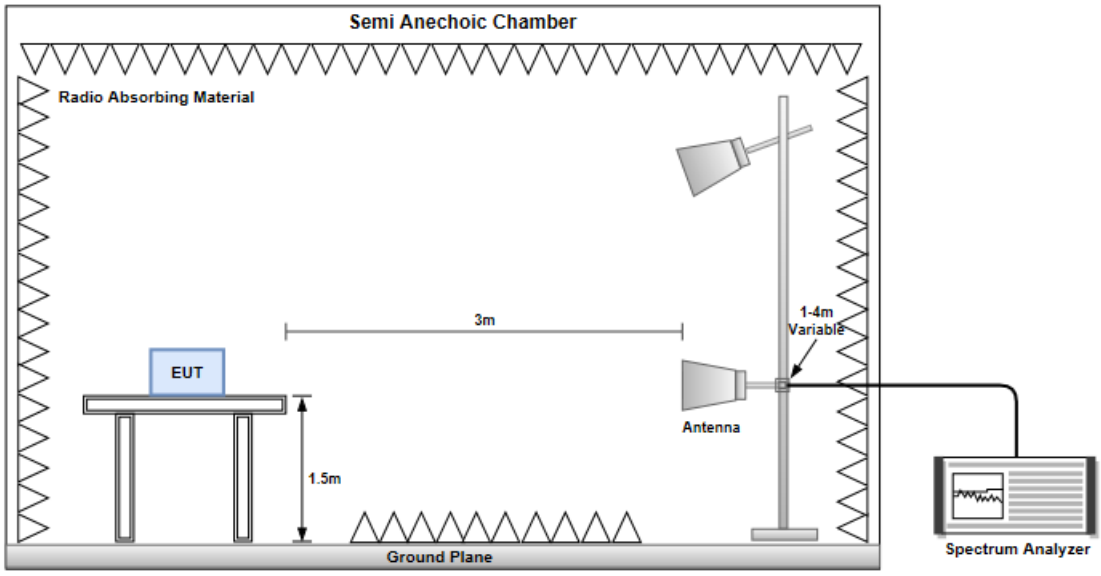
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz

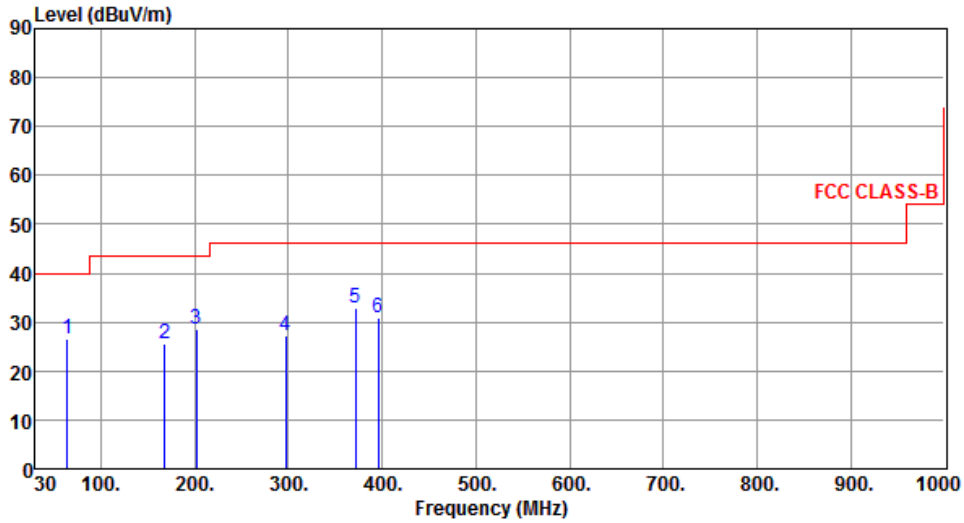


Radiated Emissions above 1 GHz



3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

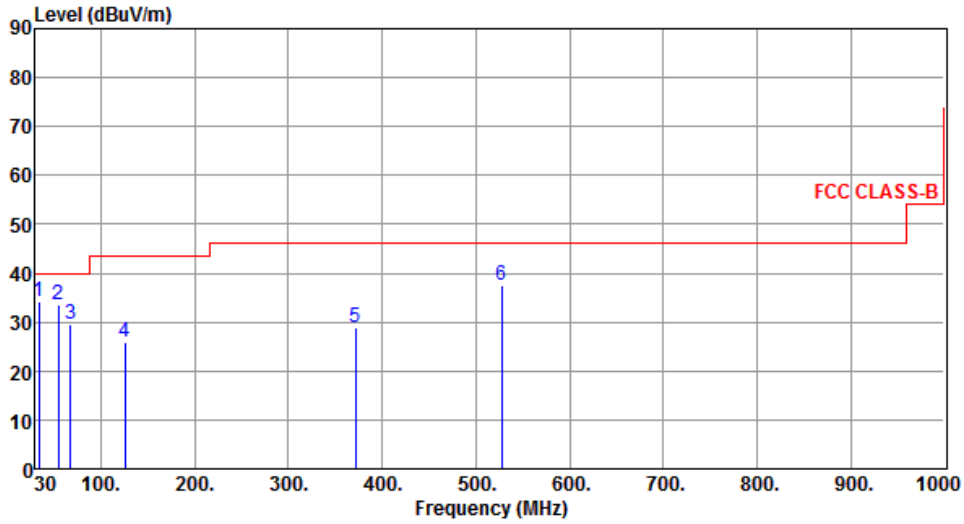
Modulation	HT20	Test Freq. (MHz)	2437
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	63.95	26.67	40.00	-13.33	36.09	-9.42	Peak	---	---
2	167.74	25.63	43.50	-17.87	34.45	-8.82	Peak	---	---
3	201.69	28.48	43.50	-15.02	40.56	-12.08	Peak	---	---
4	296.75	27.11	46.00	-18.89	35.28	-8.17	Peak	---	---
5	371.44	32.93	46.00	-13.07	39.11	-6.18	Peak	---	---
6	395.69	30.88	46.00	-15.12	36.47	-5.59	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	HT20	Test Freq. (MHz)	2437
Polarization	Vertical		

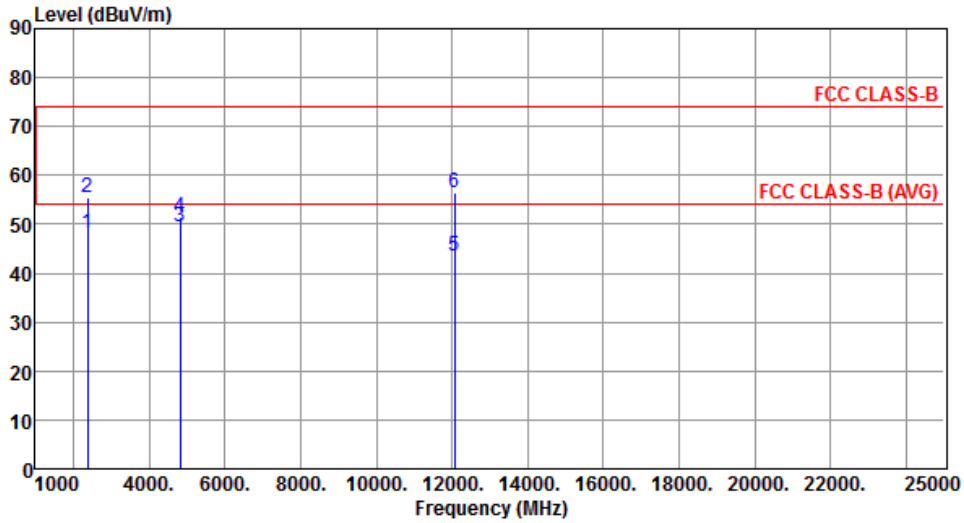


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	33.88	34.33	40.00	-5.67	43.94	-9.61	Peak	---	---
2	54.25	33.60	40.00	-6.40	42.28	-8.68	Peak	---	---
3	67.83	29.72	40.00	-10.28	39.81	-10.09	Peak	---	---
4	126.03	26.02	43.50	-17.48	36.18	-10.16	Peak	---	---
5	371.44	28.90	46.00	-17.10	35.08	-6.18	Peak	---	---
6	527.61	37.46	46.00	-8.54	40.21	-2.75	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

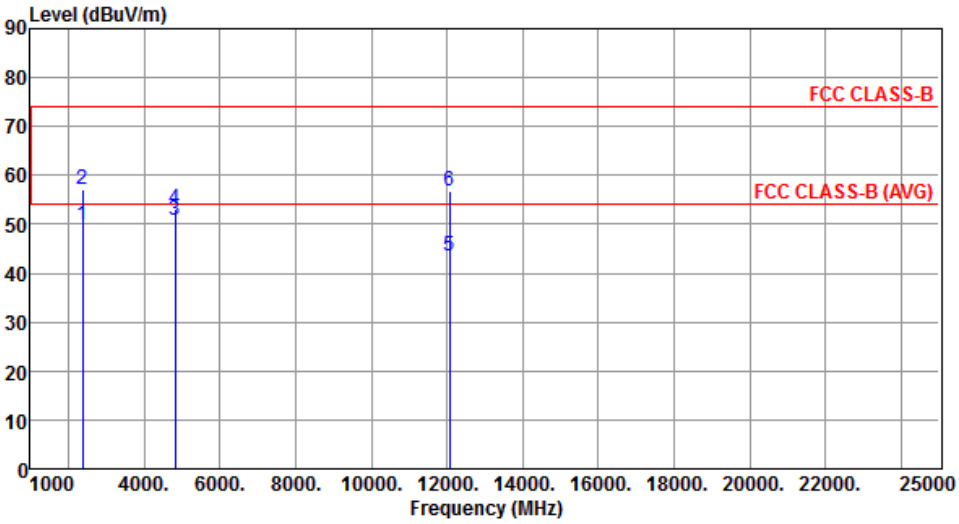
Modulation	11b	Test Freq. (MHz)	2412
Polarization	Horizontal		



	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	48.25	54.00	-5.75	51.32	-3.07	Average	166	344
2	2390.00	55.48	74.00	-18.52	58.55	-3.07	Peak	166	344
3	4824.00	49.41	54.00	-4.59	45.88	3.53	Average	100	333
4	4824.00	51.38	74.00	-22.62	47.85	3.53	Peak	100	333
5	12060.00	43.49	54.00	-10.51	30.22	13.27	Average	100	25
6	12060.00	56.52	74.00	-17.48	43.25	13.27	Peak	100	25

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).

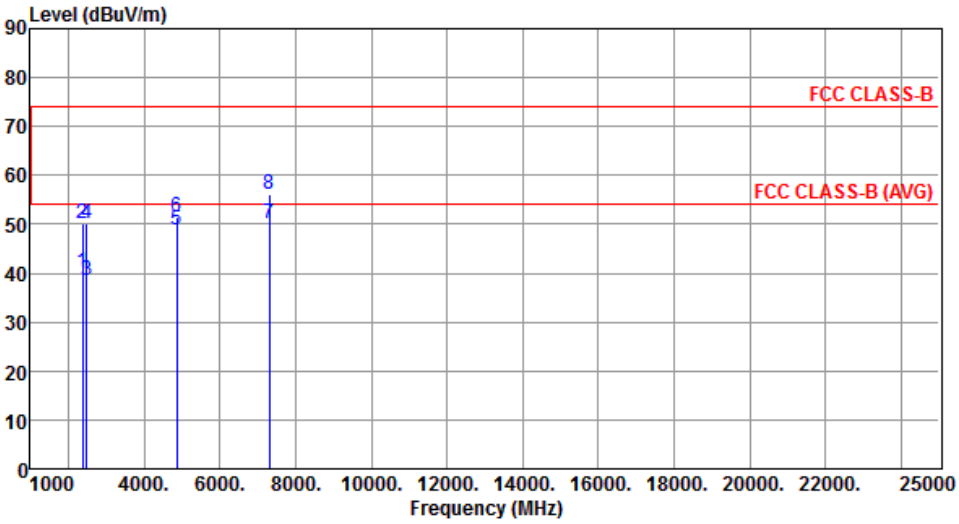
Modulation	11b	Test Freq. (MHz)	2412
Polarization	Vertical		



	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	49.69	54.00	-4.31	52.76	-3.07	Average	150	248
2	2390.00	57.10	74.00	-16.90	60.17	-3.07	Peak	150	248
3	4824.00	50.65	54.00	-3.35	47.12	3.53	Average	235	338
4	4824.00	53.22	74.00	-20.78	49.69	3.53	Peak	235	338
5	12060.00	43.42	54.00	-10.58	30.15	13.27	Average	100	20
6	12060.00	56.82	74.00	-17.18	43.55	13.27	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).

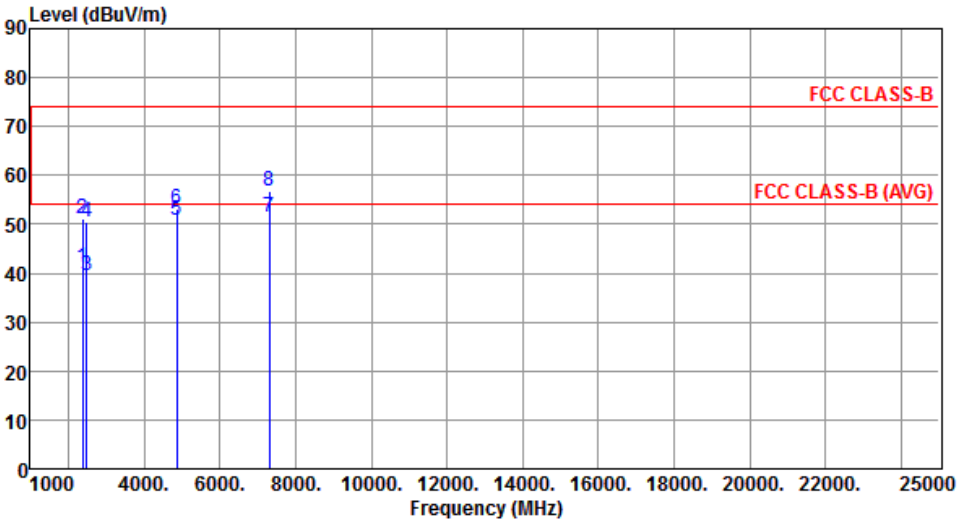
Modulation	11b	Test Freq. (MHz)	2437
Polarization	Horizontal		



	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	40.07	54.00	-13.93	43.14	-3.07	Average	165	347
2	2390.00	50.16	74.00	-23.84	53.23	-3.07	Peak	165	347
3	2483.50	38.68	54.00	-15.32	41.90	-3.22	Average	165	347
4	2483.50	50.24	74.00	-23.76	53.46	-3.22	Peak	165	347
5	4874.00	48.96	54.00	-5.04	45.36	3.60	Average	100	332
6	4874.00	51.35	74.00	-22.65	47.75	3.60	Peak	100	332
7	7311.00	50.20	54.00	-3.80	41.38	8.82	Average	210	335
8	7311.00	56.22	74.00	-17.78	47.40	8.82	Peak	210	335

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).

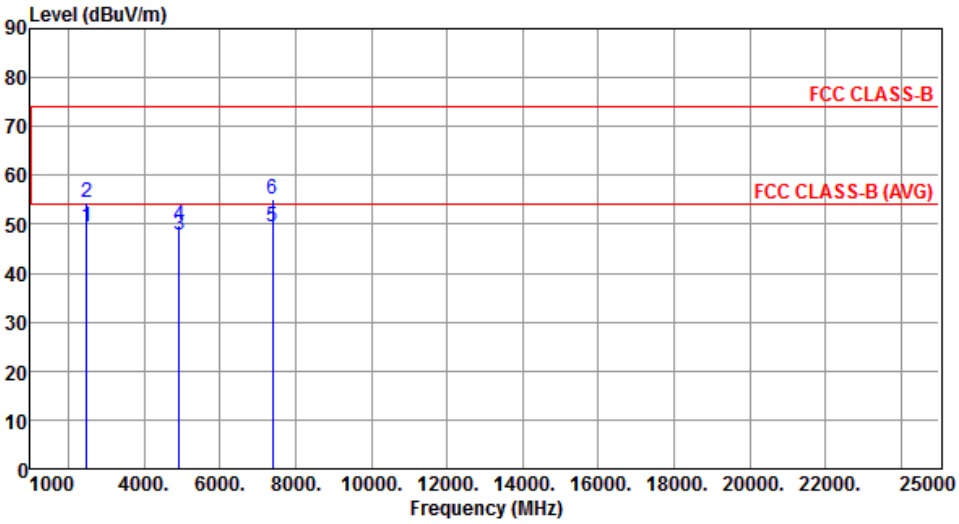
Modulation	11b	Test Freq. (MHz)	2437
Polarization	Vertical		



	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	41.24	54.00	-12.76	44.31	-3.07	Average	145	272
2	2390.00	51.16	74.00	-22.84	54.23	-3.07	Peak	145	272
3	2483.50	39.55	54.00	-14.45	42.77	-3.22	Average	145	272
4	2483.50	50.40	74.00	-23.60	53.62	-3.22	Peak	145	272
5	4874.00	50.97	54.00	-3.03	47.37	3.60	Average	228	340
6	4874.00	53.26	74.00	-20.74	49.66	3.60	Peak	228	340
7	7311.00	51.37	54.00	-2.63	42.55	8.82	Average	134	356
8	7311.00	56.74	74.00	-17.26	47.92	8.82	Peak	134	356

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).

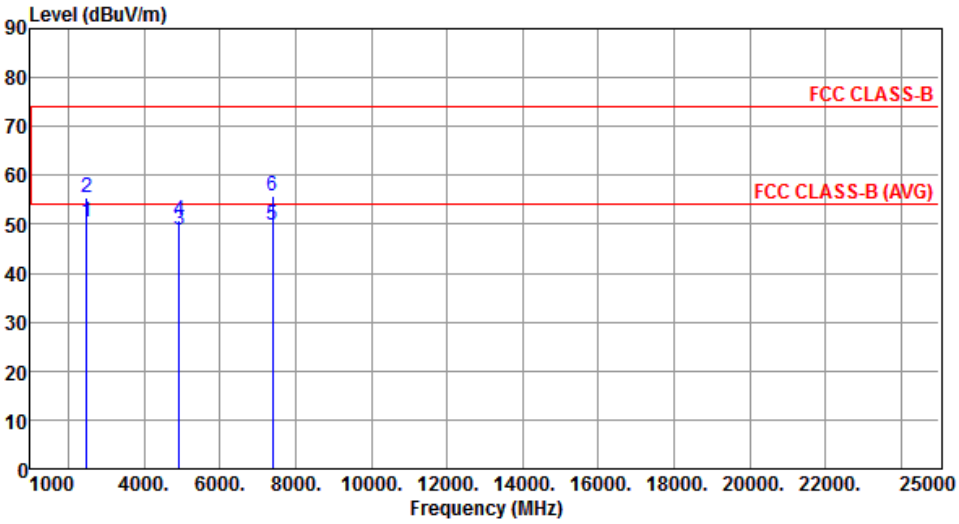
Modulation	11b	Test Freq. (MHz)	2462
Polarization	Horizontal		



	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	49.33	54.00	-4.67	52.55	-3.22	Average	158	348
2	2483.50	54.55	74.00	-19.45	57.77	-3.22	Peak	158	348
3	4924.00	47.94	54.00	-6.06	44.23	3.71	Average	100	330
4	4924.00	49.94	74.00	-24.06	46.23	3.71	Peak	100	330
5	7386.00	49.53	54.00	-4.47	40.98	8.55	Average	170	355
6	7386.00	55.13	74.00	-18.87	46.58	8.55	Peak	170	355

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		

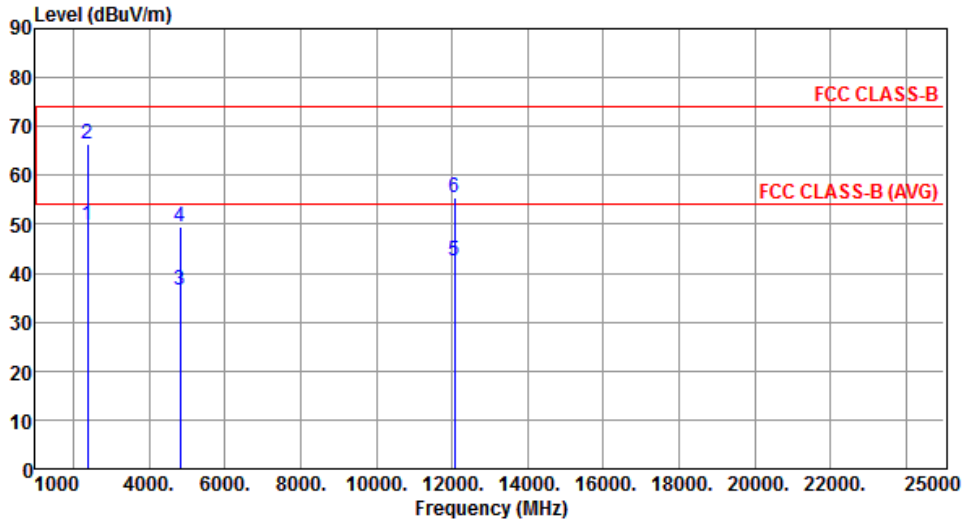


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	50.56	54.00	-3.44	53.78	-3.22	Average	149	278
2	2483.50	55.63	74.00	-18.37	58.85	-3.22	Peak	149	278
3	4924.00	48.85	54.00	-5.15	45.14	3.71	Average	244	338
4	4924.00	50.91	74.00	-23.09	47.20	3.71	Peak	244	338
5	7386.00	49.95	54.00	-4.05	41.40	8.55	Average	171	356
6	7386.00	55.69	74.00	-18.31	47.14	8.55	Peak	171	356

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

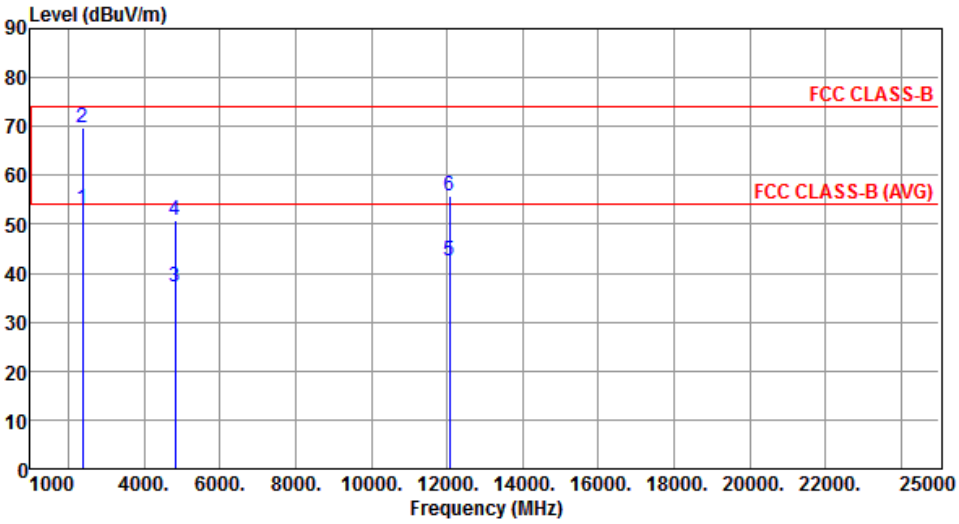
Modulation	11g	Test Freq. (MHz)	2412
Polarization	Horizontal		



	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	49.87	54.00	-4.13	52.94	-3.07	Average	113	20
2	2390.00	66.45	74.00	-7.55	69.52	-3.07	Peak	113	20
3	4824.00	36.41	54.00	-17.59	32.88	3.53	Average	100	322
4	4824.00	49.37	74.00	-24.63	45.84	3.53	Peak	100	322
5	12060.00	42.50	54.00	-11.50	29.23	13.27	Average	100	26
6	12060.00	55.47	74.00	-18.53	42.20	13.27	Peak	100	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).

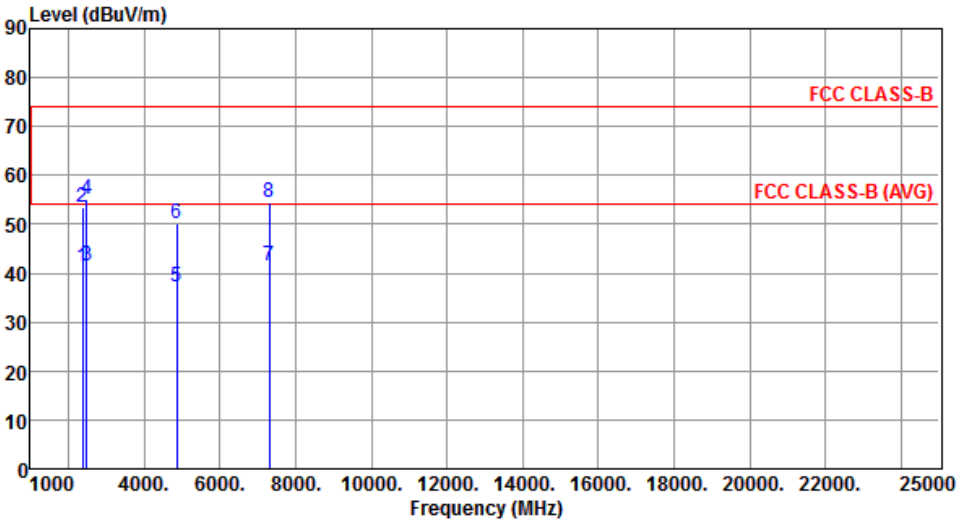
Modulation	11g	Test Freq. (MHz)	2412
Polarization	Vertical		



	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	52.99	54.00	-1.01	56.06	-3.07	Average	114	273
2	2390.00	69.87	74.00	-4.13	72.94	-3.07	Peak	114	273
3	4824.00	37.18	54.00	-16.82	33.65	3.53	Average	165	335
4	4824.00	50.74	74.00	-23.26	47.21	3.53	Peak	165	335
5	12060.00	42.42	54.00	-11.58	29.15	13.27	Average	100	30
6	12060.00	55.86	74.00	-18.14	42.59	13.27	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).

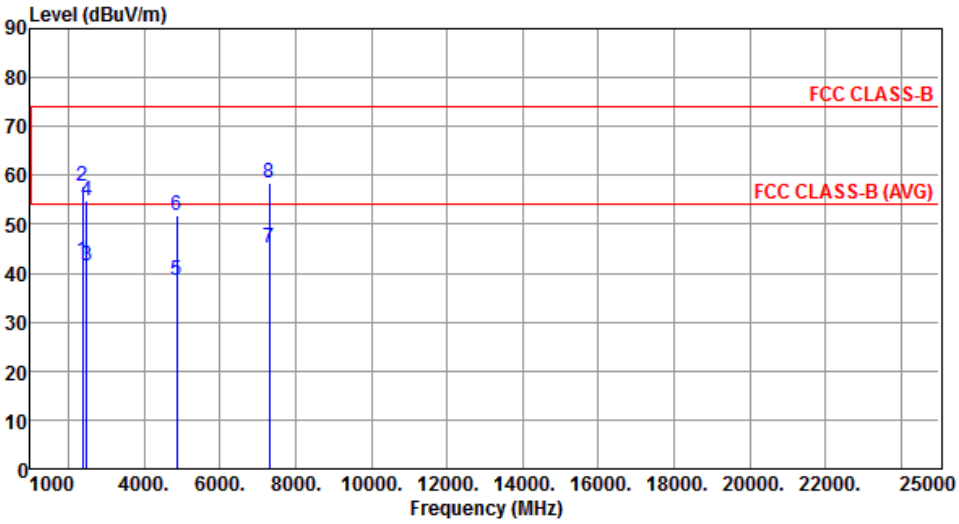
Modulation	11g	Test Freq. (MHz)	2437
Polarization	Horizontal		



	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	41.08	54.00	-12.92	44.15	-3.07	Average	111	10
2	2390.00	53.59	74.00	-20.41	56.66	-3.07	Peak	111	10
3	2483.50	41.57	54.00	-12.43	44.79	-3.22	Average	111	10
4	2483.50	55.02	74.00	-18.98	58.24	-3.22	Peak	111	10
5	4874.00	37.06	54.00	-16.94	33.46	3.60	Average	100	325
6	4874.00	50.31	74.00	-23.69	46.71	3.60	Peak	100	325
7	7311.00	41.35	54.00	-12.65	32.53	8.82	Average	100	343
8	7311.00	54.52	74.00	-19.48	45.70	8.82	Peak	100	343

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).

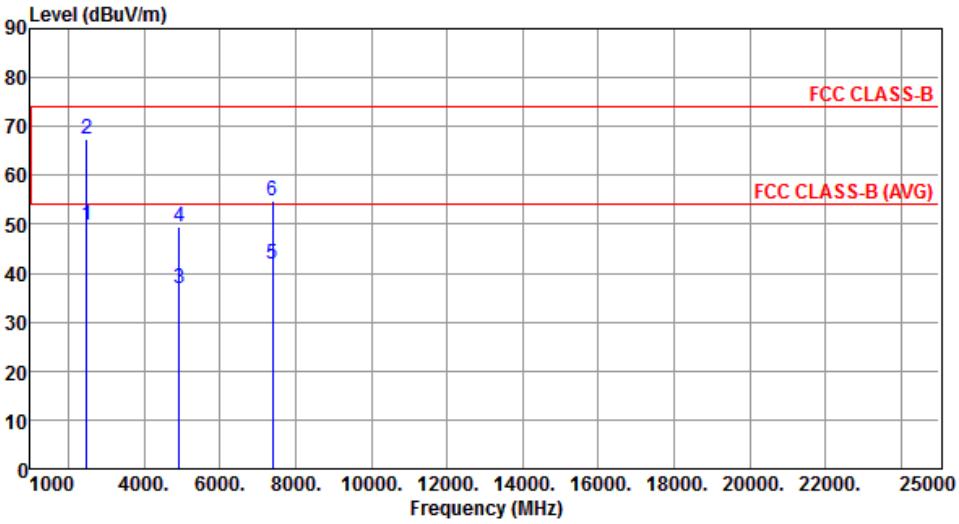
Modulation	11g	Test Freq. (MHz)	2437
Polarization	Vertical		



	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	42.51	54.00	-11.49	45.58	-3.07	Average	123	264
2	2390.00	57.67	74.00	-16.33	60.74	-3.07	Peak	123	264
3	2483.50	41.45	54.00	-12.55	44.67	-3.22	Average	123	264
4	2483.50	54.93	74.00	-19.07	58.15	-3.22	Peak	123	264
5	4874.00	38.39	54.00	-15.61	34.79	3.60	Average	164	334
6	4874.00	51.78	74.00	-22.22	48.18	3.60	Peak	164	334
7	7311.00	45.18	54.00	-8.82	36.36	8.82	Average	128	4
8	7311.00	58.35	74.00	-15.65	49.53	8.82	Peak	128	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).

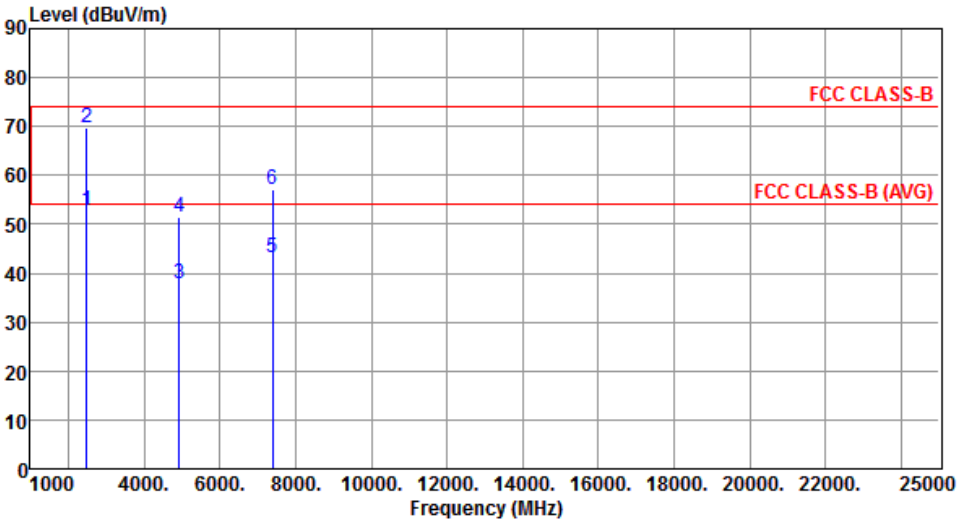
Modulation	11g	Test Freq. (MHz)	2462
Polarization	Horizontal		



	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	49.79	54.00	-4.21	53.01	-3.22	Average	111	21
2	2483.50	67.30	74.00	-6.70	70.52	-3.22	Peak	111	21
3	4924.00	36.97	54.00	-17.03	33.26	3.71	Average	100	326
4	4924.00	49.37	74.00	-24.63	45.66	3.71	Peak	100	326
5	7386.00	41.80	54.00	-12.20	33.25	8.55	Average	100	341
6	7386.00	54.77	74.00	-19.23	46.22	8.55	Peak	100	341

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		

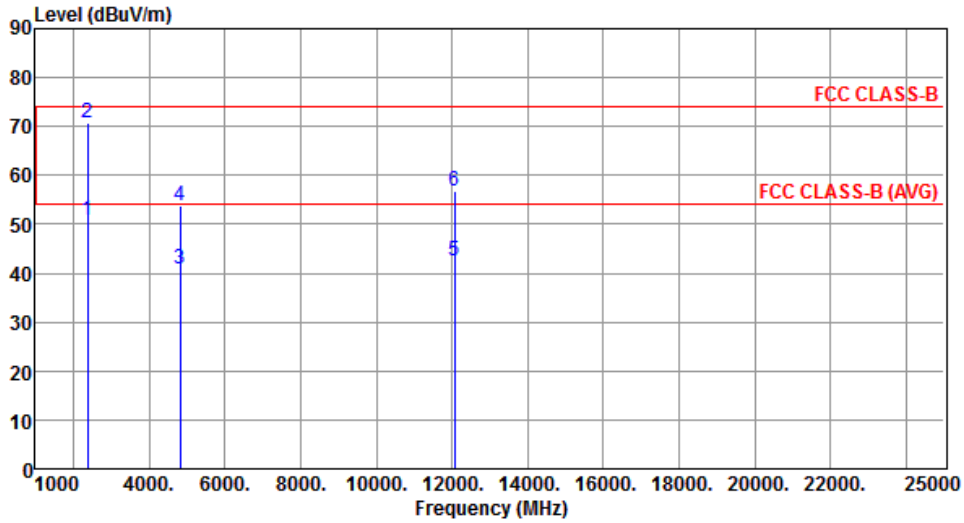


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	52.90	54.00	-1.10	56.12	-3.22	Average	145	276
2	2483.50	69.82	74.00	-4.18	73.04	-3.22	Peak	145	276
3	4924.00	37.84	54.00	-16.16	34.13	3.71	Average	160	338
4	4924.00	51.60	74.00	-22.40	47.89	3.71	Peak	160	338
5	7386.00	43.14	54.00	-10.86	34.59	8.55	Average	130	5
6	7386.00	57.11	74.00	-16.89	48.56	8.55	Peak	130	5

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

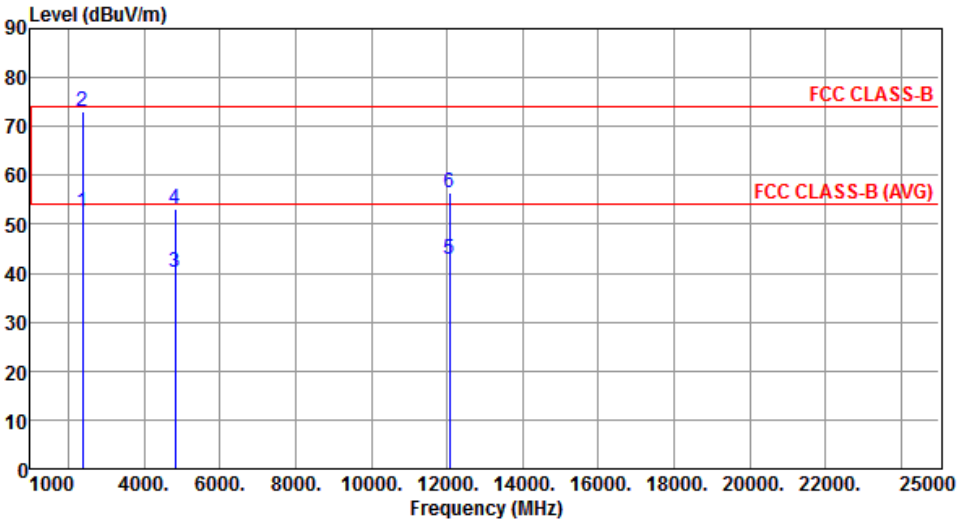
Modulation	HT20	Test Freq. (MHz)	2412
Polarization	Horizontal		



	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	50.89	54.00	-3.11	53.96	-3.07	Average	116	15
2	2390.00	70.71	74.00	-3.29	73.78	-3.07	Peak	116	15
3	4824.00	40.98	54.00	-13.02	37.45	3.53	Average	100	52
4	4824.00	53.65	74.00	-20.35	50.12	3.53	Peak	100	52
5	12060.00	42.53	54.00	-11.47	29.26	13.27	Average	100	30
6	12060.00	56.83	74.00	-17.17	43.56	13.27	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).

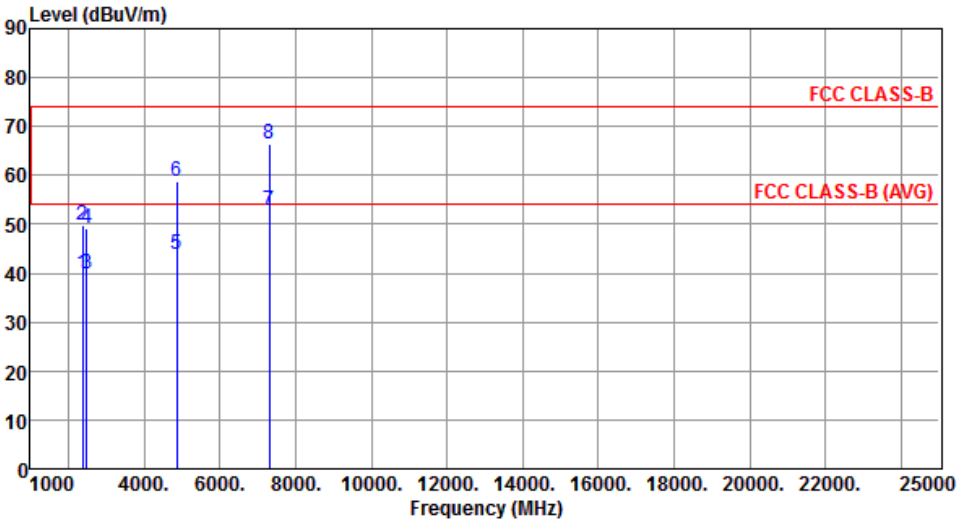
Modulation	HT20	**Test Freq. (MHz)**	2412
Polarization	Vertical		



	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	55.63	-3.07	Average	147	287
2	2390.00	72.97	74.00	-1.03	76.04	-3.07	Peak	147	287
3	4824.00	40.17	54.00	-13.83	36.64	3.53	Average	100	106
4	4824.00	53.17	74.00	-20.83	49.64	3.53	Peak	100	106
5	12060.00	42.89	54.00	-11.11	29.62	13.27	Average	100	22
6	12060.00	56.56	74.00	-17.44	43.29	13.27	Peak	100	22

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).

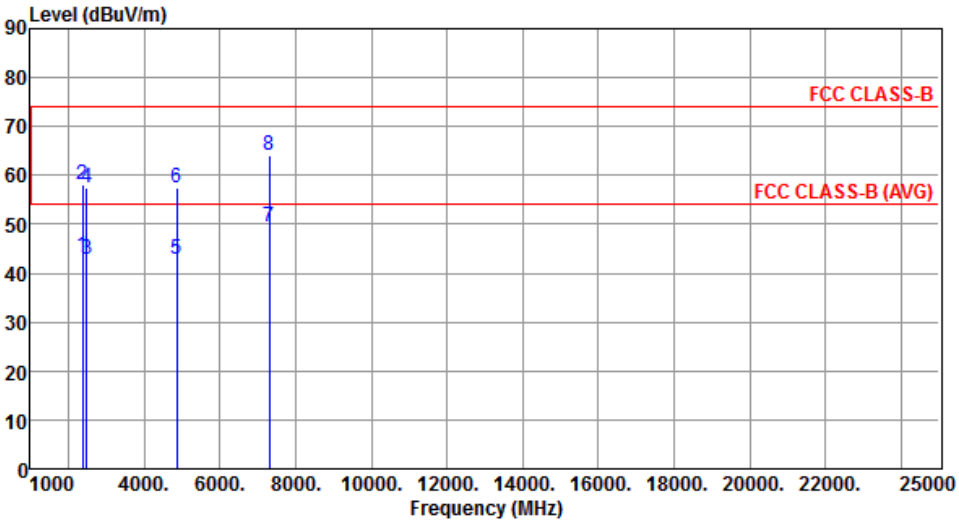
Modulation	HT20	Test Freq. (MHz)	2437
Polarization	Horizontal		



	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	39.89	54.00	-14.11	42.96	-3.07	Average	118	23
2	2390.00	49.87	74.00	-24.13	52.94	-3.07	Peak	118	23
3	2483.50	39.77	54.00	-14.23	42.99	-3.22	Average	118	23
4	2483.50	49.08	74.00	-24.92	52.30	-3.22	Peak	118	23
5	4874.00	43.90	54.00	-10.10	40.30	3.60	Average	100	256
6	4874.00	58.63	74.00	-15.37	55.03	3.60	Peak	100	256
7	7311.00	52.76	54.00	-1.24	43.94	8.82	Average	100	343
8	7311.00	66.44	74.00	-7.56	57.62	8.82	Peak	100	343

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).

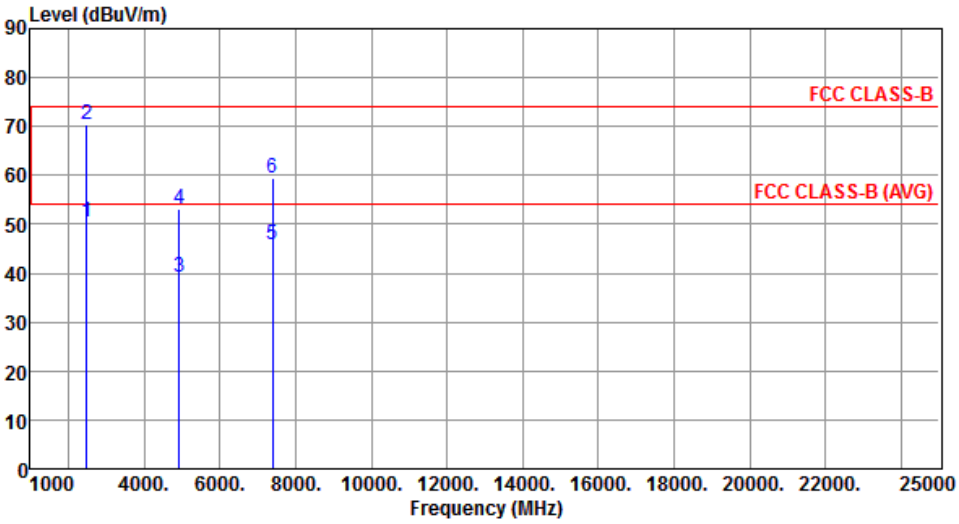
Modulation	HT20	Test Freq. (MHz)	2437
Polarization	Vertical		



	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	43.61	54.00	-10.39	46.68	-3.07	Average	184	270
2	2390.00	58.06	74.00	-15.94	61.13	-3.07	Peak	184	270
3	2483.50	43.01	54.00	-10.99	46.23	-3.22	Average	184	270
4	2483.50	57.35	74.00	-16.65	60.57	-3.22	Peak	184	270
5	4874.00	42.69	54.00	-11.31	39.09	3.60	Average	220	156
6	4874.00	57.59	74.00	-16.41	53.99	3.60	Peak	220	156
7	7311.00	49.53	54.00	-4.47	40.71	8.82	Average	100	313
8	7311.00	64.21	74.00	-9.79	55.39	8.82	Peak	100	313

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).

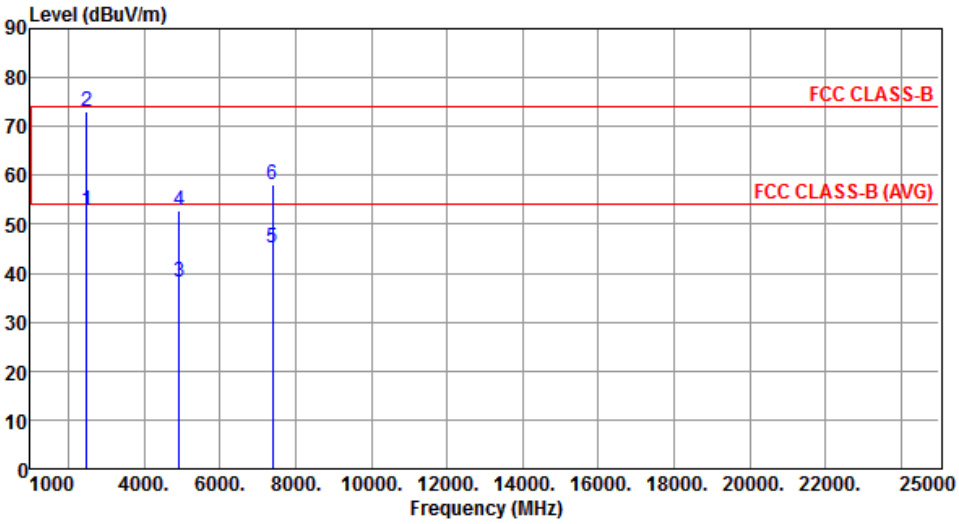
Modulation	HT20	Test Freq. (MHz)	2462
Polarization	Horizontal		



	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	50.64	54.00	-3.36	53.86	-3.22	Average	116	25
2	2483.50	70.42	74.00	-3.58	73.64	-3.22	Peak	116	25
3	4924.00	39.17	54.00	-14.83	35.46	3.71	Average	214	22
4	4924.00	53.17	74.00	-20.83	49.46	3.71	Peak	214	22
5	7386.00	45.72	54.00	-8.28	37.17	8.55	Average	100	269
6	7386.00	59.51	74.00	-14.49	50.96	8.55	Peak	100	269

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		

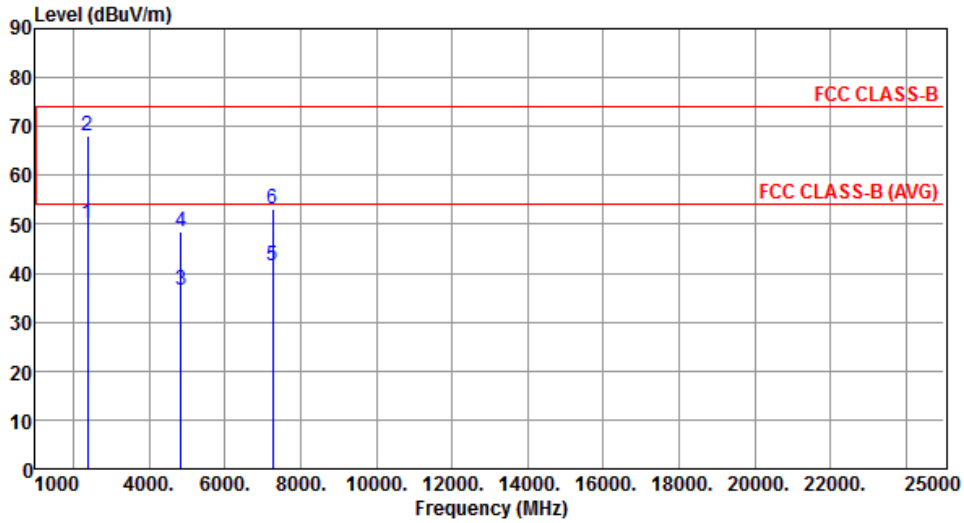


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	52.91	54.00	-1.09	56.13	-3.22	Average	100	285
2	2483.50	72.97	74.00	-1.03	76.19	-3.22	Peak	100	277
3	4924.00	38.06	54.00	-15.94	34.35	3.71	Average	223	151
4	4924.00	52.67	74.00	-21.33	48.96	3.71	Peak	223	151
5	7386.00	45.20	54.00	-8.80	36.65	8.55	Average	223	151
6	7386.00	58.18	74.00	-15.82	49.63	8.55	Peak	223	151

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

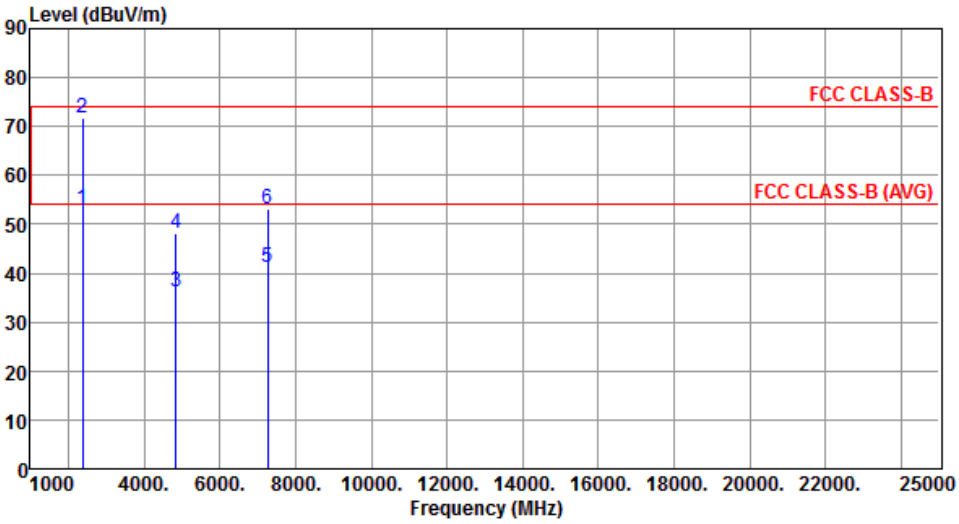
Modulation	HT40	Test Freq. (MHz)	2422
Polarization	Horizontal		



	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	50.14	54.00	-3.86	53.21	-3.07	Average	117	25
2	2390.00	67.95	74.00	-6.05	71.02	-3.07	Peak	117	25
3	4844.00	36.52	54.00	-17.48	32.96	3.56	Average	100	251
4	4844.00	48.41	74.00	-25.59	44.85	3.56	Peak	100	251
5	7266.00	41.40	54.00	-12.60	32.53	8.87	Average	100	323
6	7266.00	53.15	74.00	-20.85	44.28	8.87	Peak	100	323

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).

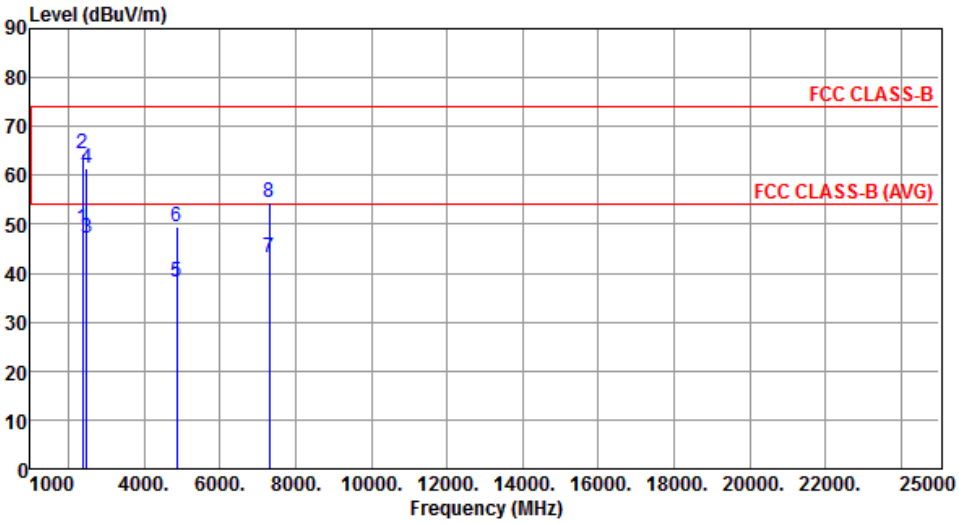
Modulation	HT40	Test Freq. (MHz)	2422
Polarization	Vertical		



	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	52.98	54.00	-1.02	56.05	-3.07	Average	146	277
2	2390.00	71.71	74.00	-2.29	74.78	-3.07	Peak	146	277
3	4844.00	36.08	54.00	-17.92	32.52	3.56	Average	229	155
4	4844.00	48.19	74.00	-25.81	44.63	3.56	Peak	229	155
5	7266.00	41.08	54.00	-12.92	32.21	8.87	Average	100	310
6	7266.00	53.09	74.00	-20.91	44.22	8.87	Peak	100	310

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).

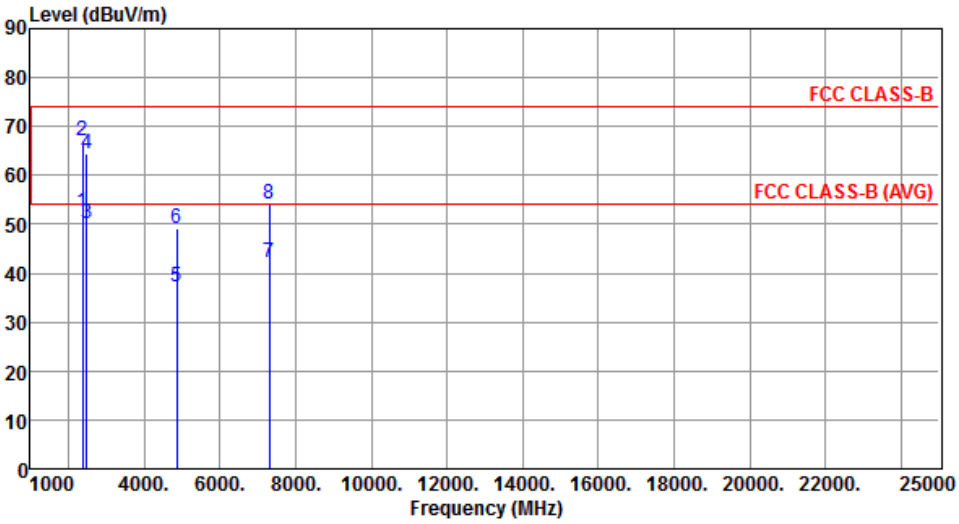
Modulation	HT40	Test Freq. (MHz)	2437
Polarization	Horizontal		



	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	49.25	54.00	-4.75	52.32	-3.07	Average	109	25
2	2390.00	64.58	74.00	-9.42	67.65	-3.07	Peak	109	25
3	2483.50	47.03	54.00	-6.97	50.25	-3.22	Average	109	25
4	2483.50	61.40	74.00	-12.60	64.62	-3.22	Peak	109	25
5	4874.00	38.18	54.00	-15.82	34.58	3.60	Average	100	251
6	4874.00	49.52	74.00	-24.48	45.92	3.60	Peak	100	251
7	7311.00	43.34	54.00	-10.66	34.52	8.82	Average	100	352
8	7311.00	54.51	74.00	-19.49	45.69	8.82	Peak	100	352

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).

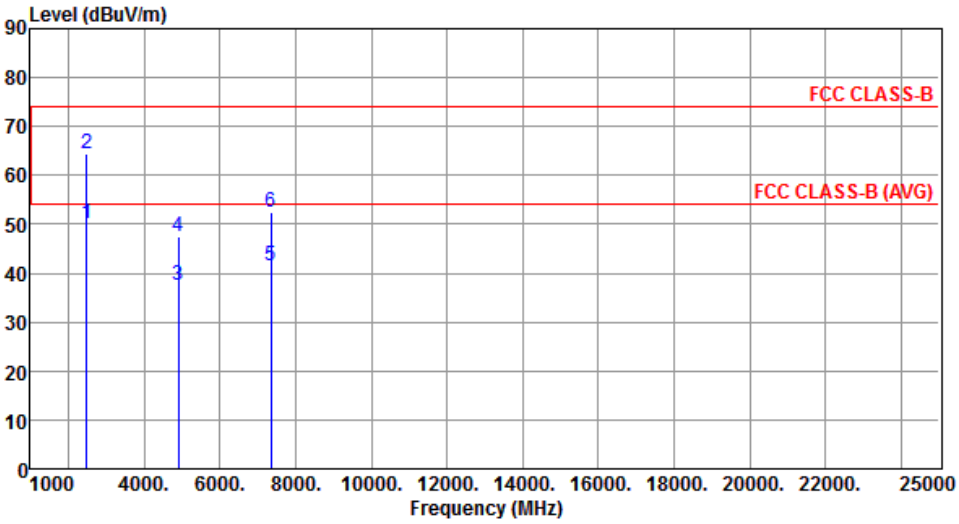
Modulation	HT40	Test Freq. (MHz)	2437
Polarization	Vertical		



	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	52.61	54.00	-1.39	55.68	-3.07	Average	128	277
2	2390.00	67.05	74.00	-6.95	70.12	-3.07	Peak	128	277
3	2483.50	50.18	54.00	-3.82	53.40	-3.22	Average	128	277
4	2483.50	64.34	74.00	-9.66	67.56	-3.22	Peak	128	277
5	4874.00	37.18	54.00	-16.82	33.58	3.60	Average	229	153
6	4874.00	49.12	74.00	-24.88	45.52	3.60	Peak	229	153
7	7311.00	42.33	54.00	-11.67	33.51	8.82	Average	100	317
8	7311.00	54.04	74.00	-19.96	45.22	8.82	Peak	100	317

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).

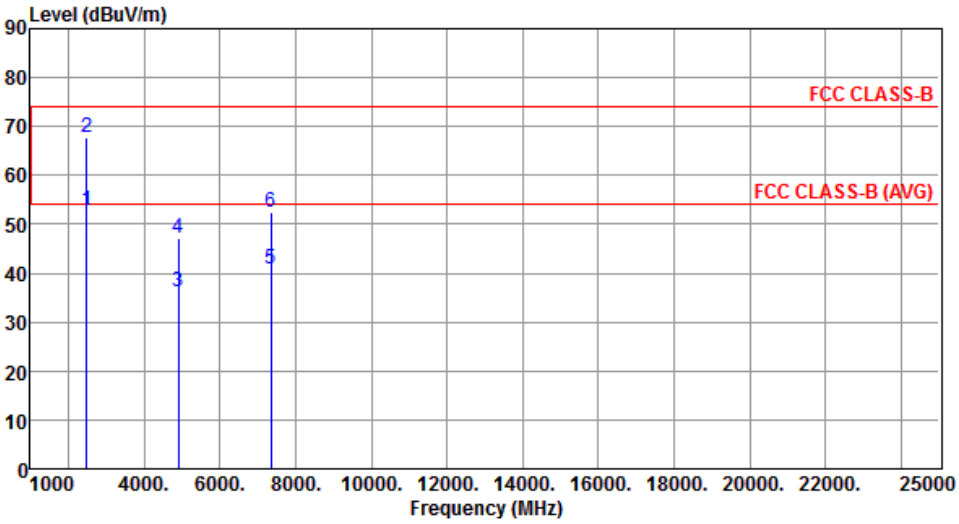
Modulation	HT40	Test Freq. (MHz)	2452
Polarization	Horizontal		



	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	50.03	54.00	-3.97	53.25	-3.22	Average	119	274
2	2483.50	64.59	74.00	-9.41	67.81	-3.22	Peak	119	274
3	4904.00	37.50	54.00	-16.50	33.85	3.65	Average	100	253
4	4904.00	47.56	74.00	-26.44	43.91	3.65	Peak	100	253
5	7356.00	41.57	54.00	-12.43	32.87	8.70	Average	100	348
6	7356.00	52.61	74.00	-21.39	43.91	8.70	Peak	100	348

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	52.97	54.00	-1.03	56.19	-3.22	Average	131	279
2	2483.50	67.62	74.00	-6.38	70.84	-3.22	Peak	131	279
3	4904.00	36.17	54.00	-17.83	32.52	3.65	Average	223	152
4	4904.00	47.23	74.00	-26.77	43.58	3.65	Peak	223	152
5	7356.00	40.90	54.00	-13.10	32.20	8.70	Average	100	310
6	7356.00	52.35	74.00	-21.65	43.65	8.70	Peak	100	310

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

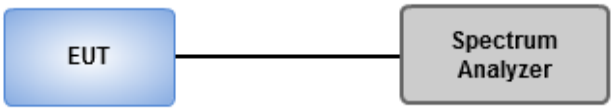
Reference level measurement

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

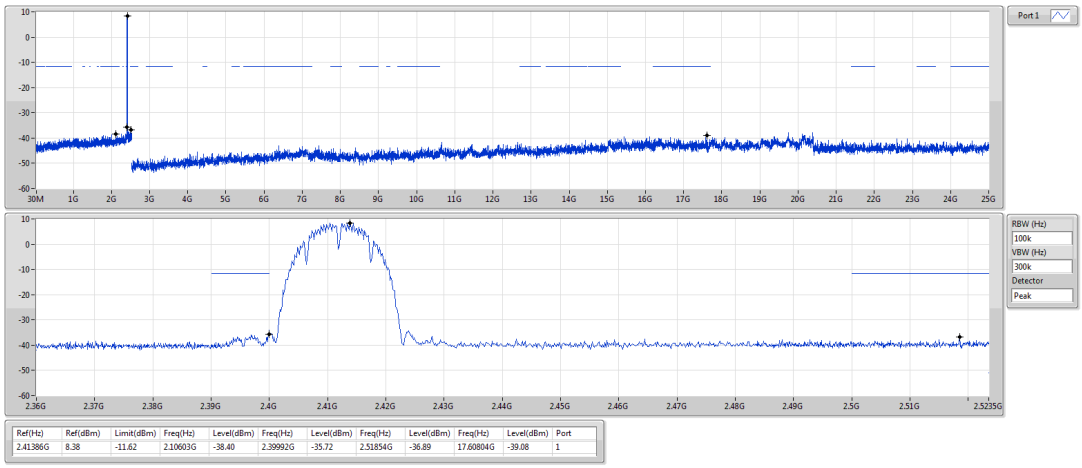
3.6.3 Test Setup



3.6.4 Unwanted Emissions into Non-Restricted Frequency Bands

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

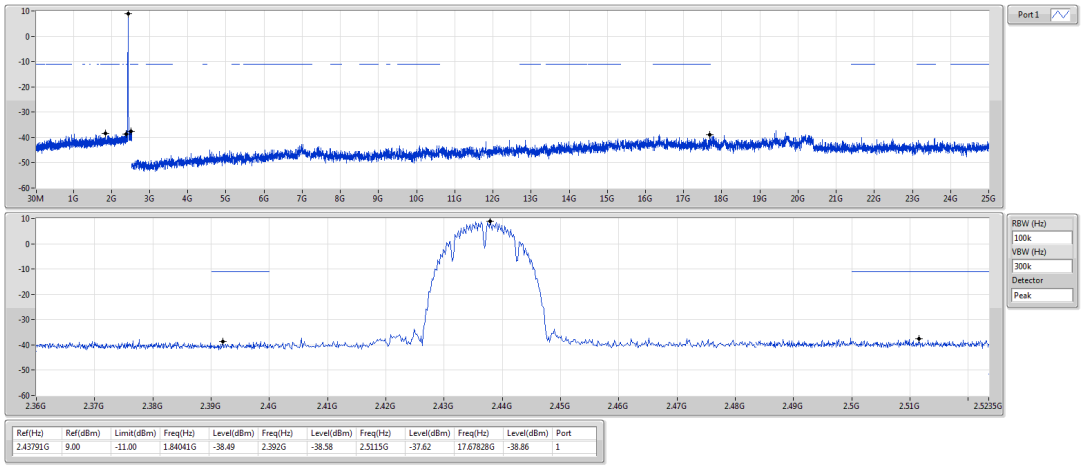
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41386G	8.38	-11.62	2.10603G	-38.40	2.39992G	-35.72	2.51854G	-36.89	17.60804G	-39.08	1

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

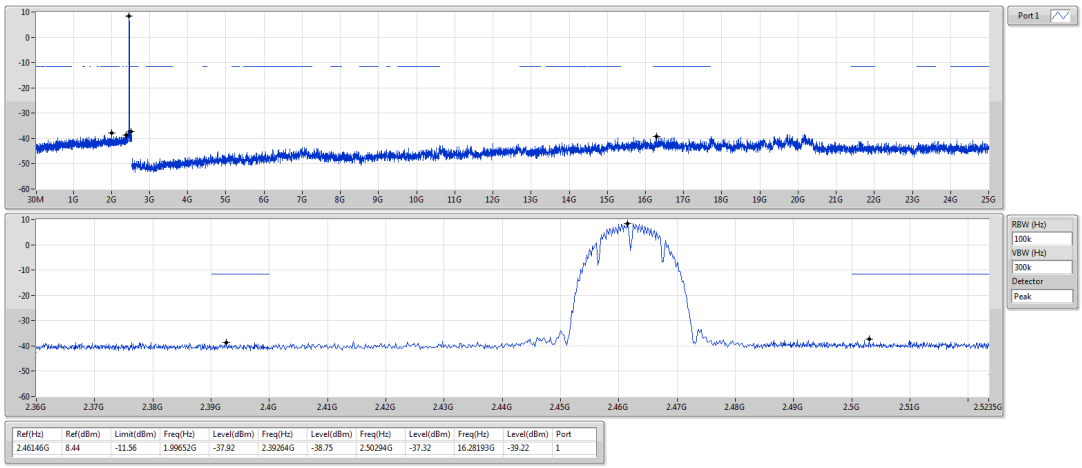
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43791G	9.00	-11.00	1.84041G	-38.49	2.392G	-38.58	2.5115G	-37.62	17.67828G	-38.86	1

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

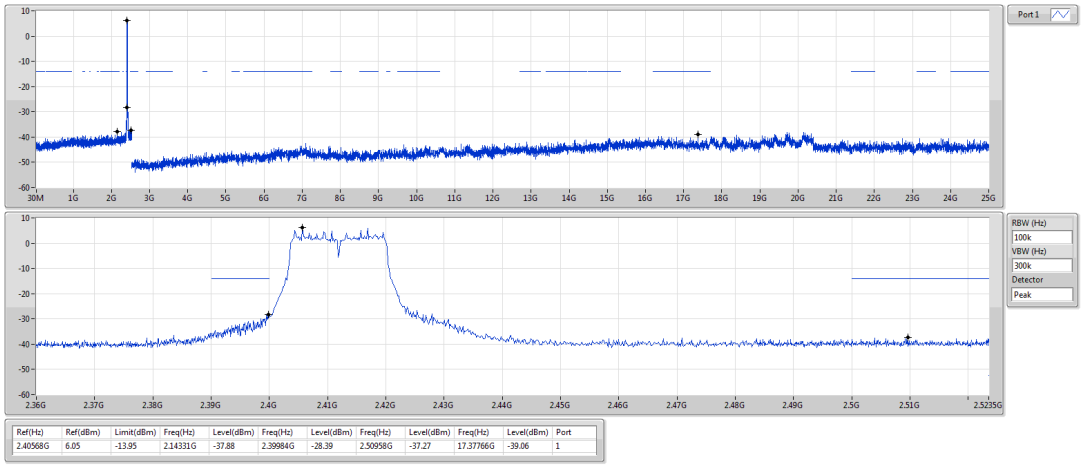
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.46146G	8.44	-11.56	1.99652G	-37.92	2.39264G	-38.75	2.50294G	-37.32	16.28193G	-39.22	1

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

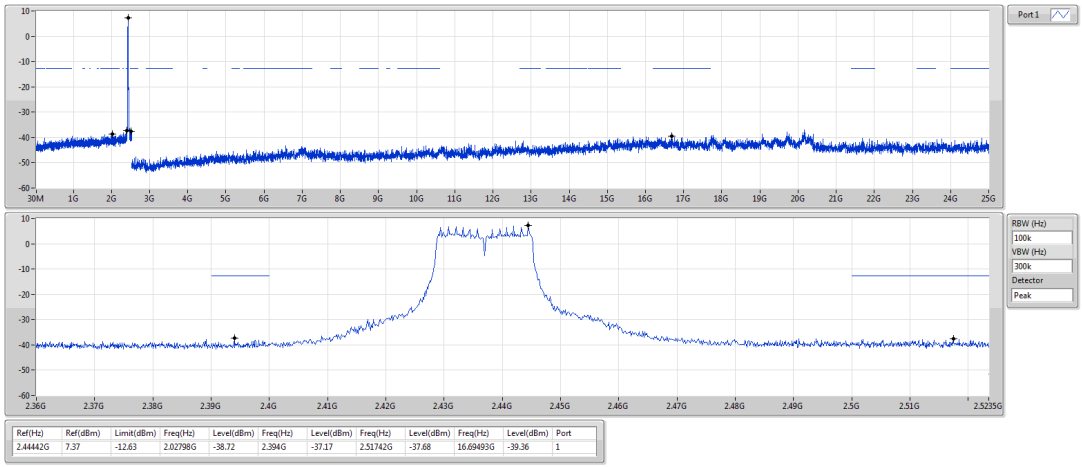
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40568G	6.05	-13.95	2.14331G	-37.88	2.39984G	-28.39	2.50958G	-37.27	17.37766G	-39.06	1

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

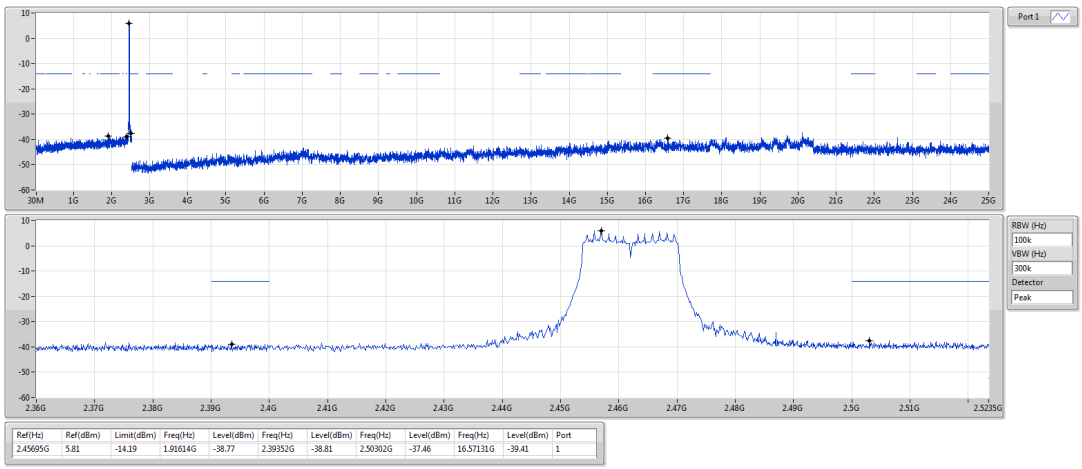
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44442G	7.37	-12.63	2.02798G	-38.72	2.394G	-37.17	2.51742G	-37.68	16.69493G	-39.36	1

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

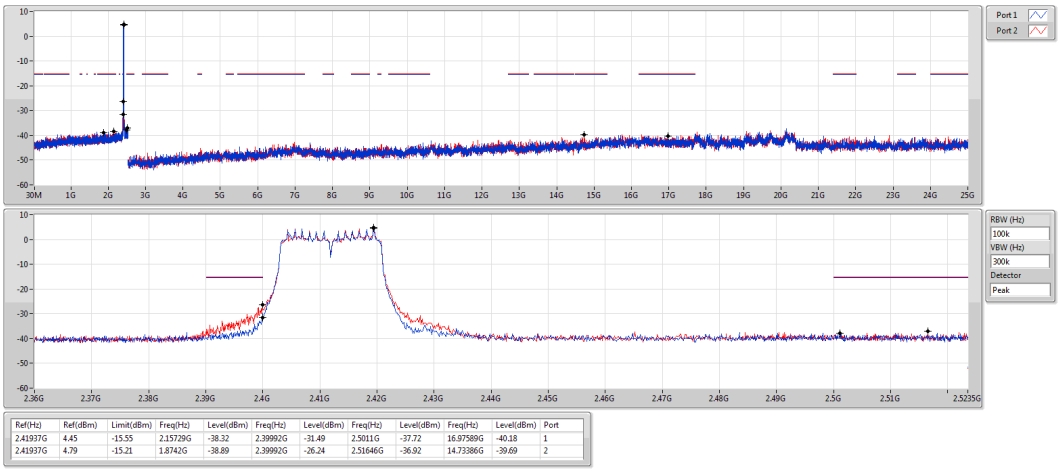
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.45695G	5.81	-14.19	1.91614G	-38.77	2.39352G	-38.81	2.50302G	-37.46	16.57131G	-39.41	1

802.11n HT20_Nss1,(MCS0)_2TX **CSE NdB**

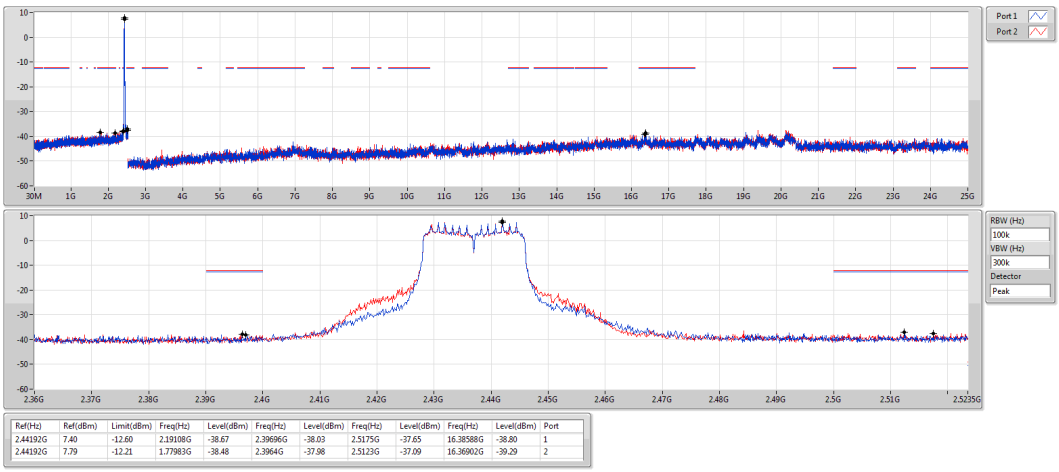
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41937G	4.45	-15.55	2.15729G	-38.32	2.39992G	-31.49	2.5011G	-37.72	16.97589G	-40.18	1
2.41937G	4.79	-15.21	1.8742G	-38.89	2.39992G	-26.24	2.51646G	-36.92	14.73386G	-39.69	2

802.11n HT20_Nss1,(MCS0)_2TX **CSE NdB**

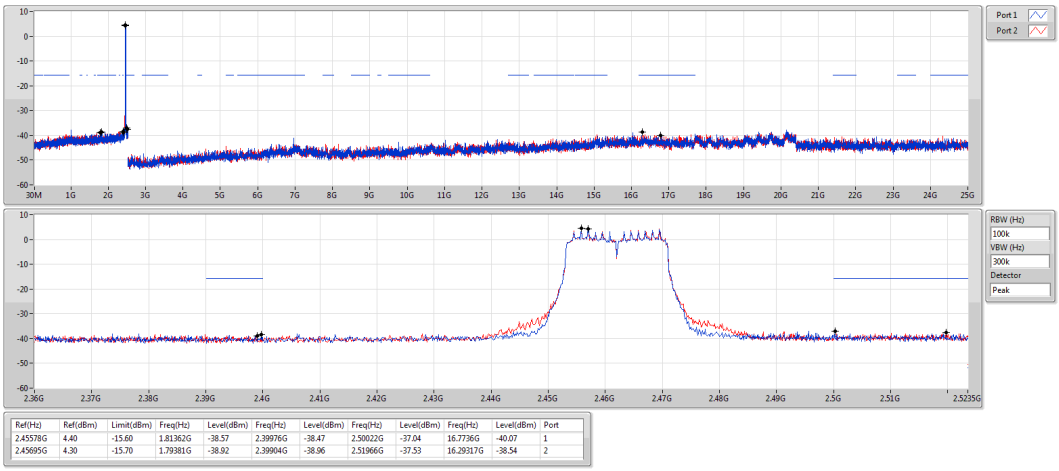
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44192G	7.40	-12.60	2.19108G	-38.67	2.39696G	-38.03	2.5175G	-37.65	16.38588G	-38.80	1
2.44192G	7.79	-12.21	1.77983G	-38.48	2.3964G	-37.98	2.5123G	-37.09	16.36902G	-39.29	2

802.11n HT20_Nss1,(MCS0)_2TX **CSE NdB**

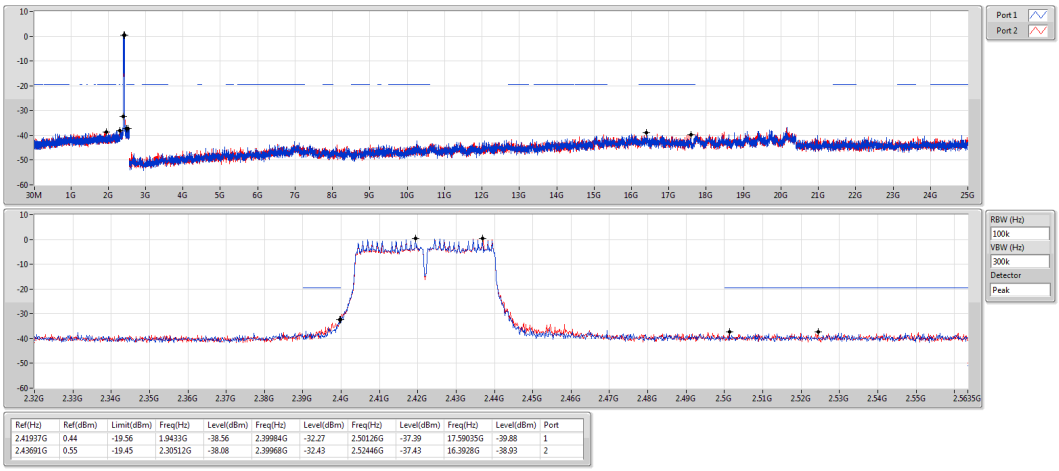
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.45578G	4.40	-15.60	1.81362G	-38.57	2.39976G	-38.47	2.50022G	-37.04	16.7736G	-40.07	1
2.45695G	4.30	-15.70	1.79381G	-38.92	2.39904G	-38.96	2.51966G	-37.53	16.29317G	-38.54	2

802.11n HT40_Nss1,(MCS0)_2TX **CSE NdB**

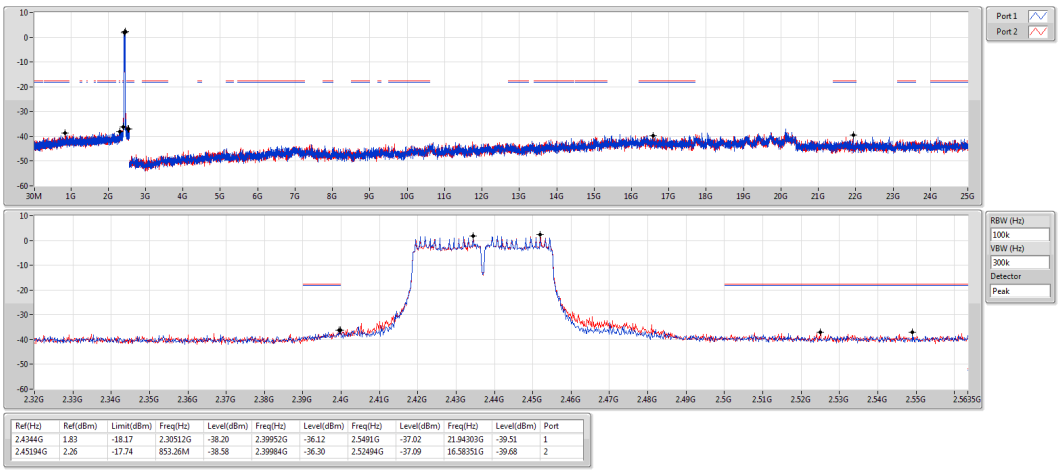
2422MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41937G	0.44	-19.56	1.9433G	-38.56	2.39984G	-32.27	2.50126G	-37.39	17.59035G	-39.88	1
2.43691G	0.55	-19.45	2.30512G	-38.08	2.39968G	-32.43	2.52446G	-37.43	16.3928G	-38.93	2

802.11n HT40_Nss1,(MCS0)_2TX **CSE NdB**

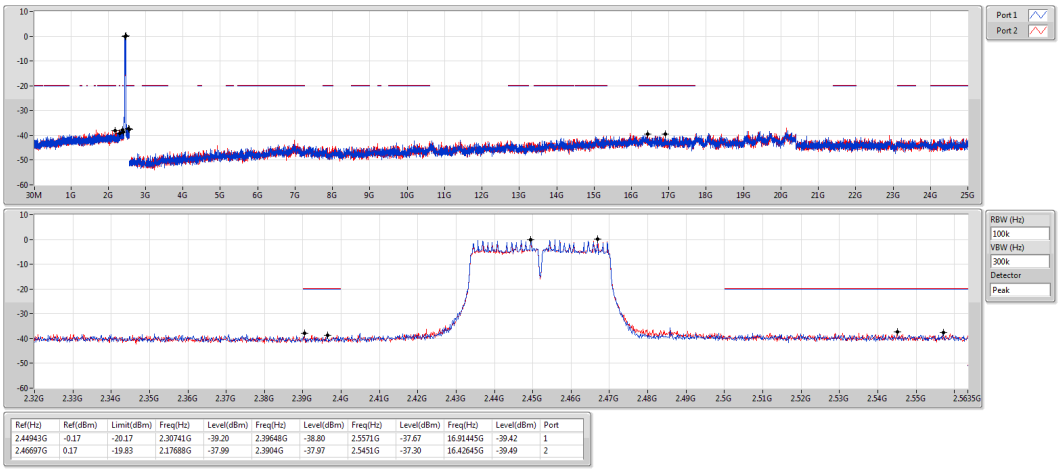
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.4344G	1.83	-18.17	2.30512G	-38.20	2.39952G	-36.12	2.5491G	-37.02	21.94303G	-39.51	1
2.45194G	2.26	-17.74	853.26M	-38.58	2.39984G	-36.30	2.52494G	-37.09	16.58351G	-39.68	2

802.11n HT40_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
2.44943G	-0.17	-20.17	2.30741G	-39.20	2.39648G	-38.80	2.5571G	-37.67	16.91445G	-39.42	1
2.46697G	0.17	-19.83	2.17688G	-37.99	2.3904G	-37.97	2.5451G	-37.30	16.42645G	-39.49	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.

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

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