FCC Test Report

FCC ID	:	**2ALXJ-MTW200**
Equipment	:	**Meeting OWL™**
Model No.	:	**MTW200**
Brand Name	:	**OWLLabs™**
Applicant	:	**Owl Labs Inc**
Address	:	**33-1/2 Union Sq Somerville US 02143 United States Of America**
Standard	:	**47 CFR FCC Part 15.247**
Received Date	:	**Jul. 17, 2019**
Tested Date	:	**Jul. 25 ~ Jul. 31, 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
FR971702AC	Rev. 01	Initial issue	Aug. 12, 2019

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 4.430MHz 49.14 (Margin -6.86dB) - QP	Pass
15.247(d) 15.209	Radiated Emissions	[dBuV/m at 3m]: 2390.00MHz 53.00 (Margin -1.00dB) - AV	Pass
15.247(b)(3)	Maximum Output Power	Max Power [dBm]: 25.08	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 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
Note 1: RF output power specifies that Maximum Peak Conducted Output Power. Note 2: 802.11b uses a combination of DSSS-DBPSK, DQPSK, CCK modulation. Note 3: 802.11g/n uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.					

1.1.2 Antenna Details

Ant. No.	Model	Type	Gain (dBi)	Connector	Remark
1	SRF2W012-150	PCB	3.0	MHF IPEX	---

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: HOLOTO Model: ADS-40SI-12-2 12036E Power Rating: I/P: 100-240Vac, 50/60Hz, 1A Max O/P: 12Vdc, 3A Power Line: DC 1.49m non-shielded without core AC 2.13m non-shielded without core
2	USB Cable	1.97m non-shielded without 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	98.97	0.05
	HT20	98.89	0.05
	HT40	96.09	0.17

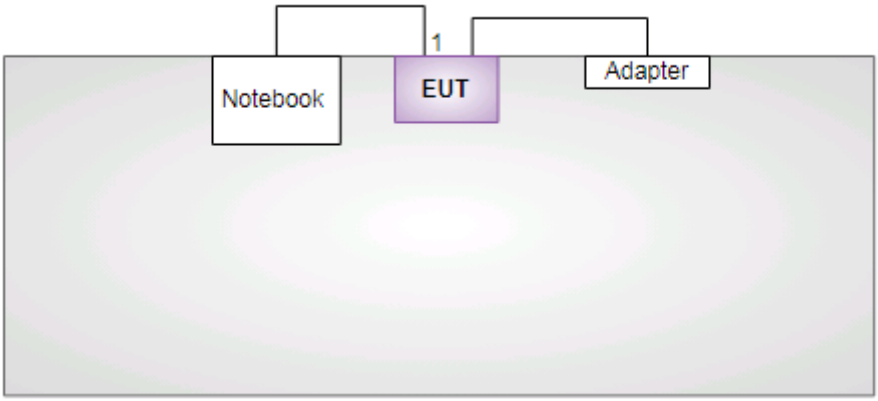
1.1.7 Power Index of Test Tool

Modulation Mode	Test Frequency (MHz)	Power Index
11b	2412	13.5
11b	2437	16.5
11b	2462	14.5
11g	2412	17.5
11g	2437	18
11g	2462	17
HT20	2412	17.5
HT20	2437	18
HT20	2462	16.5
HT40	2422	14
HT40	2437	15.5
HT40	2452	11

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	
	
No.	**Signal cable / Length (m)**
1	USB, 1.97m non-shielded without core

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
LISN (Support Unit)	SCHWARZBECK	Schwarzbeck 8127	8127-666	Nov. 29, 2018	Nov. 28, 2019
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 23, 2018	Oct. 22, 2019
50 ohm terminal (Support Unit)	NA	50	04	May 28, 2019	May 27, 2020
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. 09, 2018	Aug. 08, 2019
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
Spectrum Analyzer	R&**S**	FSV40	101499	Jan. 07, 2019	Jan. 06, 2020
Power Meter	Anritsu	ML2495A	1241002	Oct. 09, 2018	Oct. 08, 2019
Power Sensor	Anritsu	MA2411B	1207366	Oct. 09, 2018	Oct. 08, 2019
DC POWER SOURCE	GW INSTEK	GPC-6030D	EM892433	Oct. 25, 2018	Oct. 24, 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 / 58%	Alex Tsai
Radiated Emissions	03CH01-WS	25-27°C / 65-66%	Akun Chung
RF Conducted	TH01-WS	24°C / 65%	Brad Wu

- 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	6 Mbps	---
Radiated Emissions ≤1GHz	HT20	2437	6 Mbps	---
Radiated Emissions >1GHz Maximum Output Power 6dB bandwidth Power spectral density	11b 11g HT20 HT40	2412 / 2437 / 2462 2412 / 2437 / 2462 2412 / 2437 / 2462 2422 / 2437 / 2452	1 Mbps 6 Mbps MCS 0 MCS 0	---

3 Transmitter Test Results

3.1 Conducted Emissions

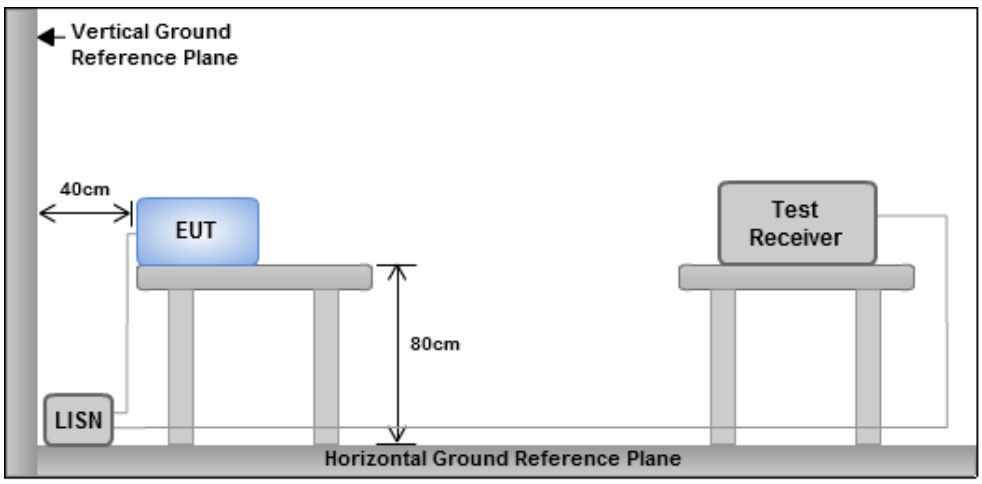
3.1.1 Limit of Conducted Emissions

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

3.1.2 Test Procedures

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

3.1.3 Test Setup

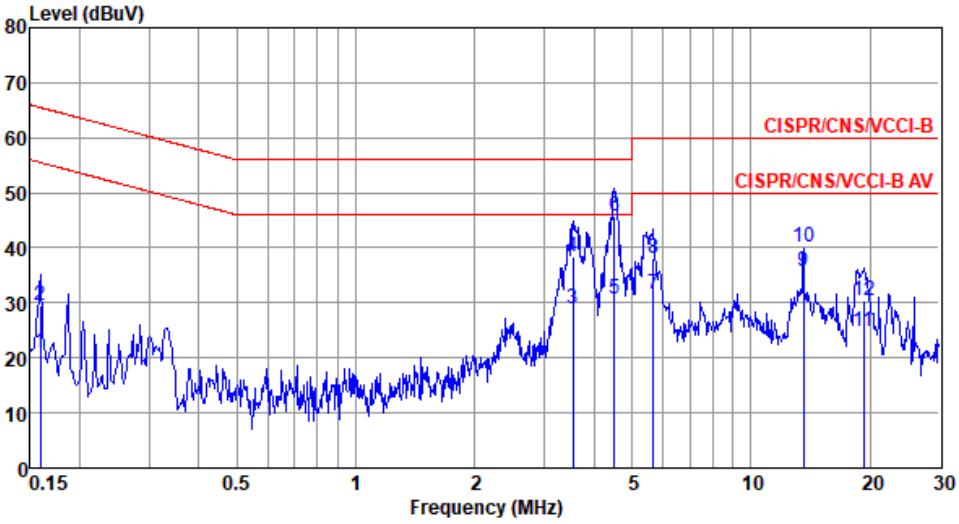


Note: 1. Support units were connected to second LISN.

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

3.1.4 Test Result of Conducted Emissions

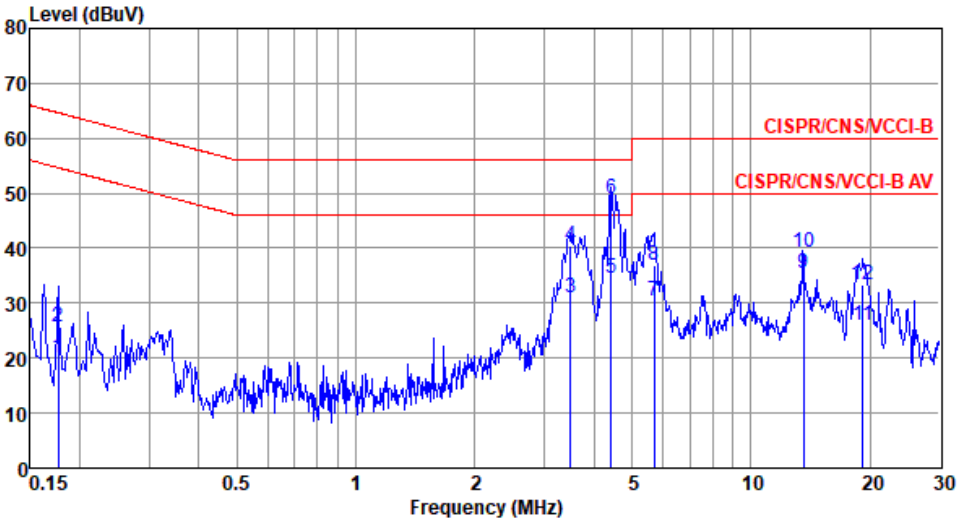
Modulation	HT20	Test Freq. (MHz)	2437
Power Phase	Line		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.159	21.04	55.52	-34.48	11.46	9.53	0.05	Average
2	0.159	29.44	65.52	-36.08	19.86	9.53	0.05	QP
3	3.547	28.97	46.00	-17.03	19.10	9.61	0.26	Average
4	3.547	38.50	56.00	-17.50	28.63	9.61	0.26	QP
5	4.501	30.65	46.00	-15.35	20.74	9.61	0.30	Average
6*	4.501	45.61	56.00	-10.39	35.70	9.61	0.30	QP
7	5.653	31.49	50.00	-18.51	21.53	9.62	0.34	Average
8	5.653	37.94	60.00	-22.06	27.98	9.62	0.34	QP
9	13.561	35.61	50.00	-14.39	25.43	9.65	0.53	Average
10	13.561	40.22	60.00	-19.78	30.04	9.65	0.53	QP
11	19.326	24.76	50.00	-25.24	14.50	9.66	0.60	Average
12	19.326	30.37	60.00	-29.63	20.11	9.66	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).

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	0.177	19.93	54.64	-34.71	10.29	9.58	0.06	Average
2	0.177	25.83	64.64	-38.81	16.19	9.58	0.06	QP
3	3.491	30.94	46.00	-15.06	21.02	9.66	0.26	Average
4	3.491	40.40	56.00	-15.60	30.48	9.66	0.26	QP
5	4.430	34.65	46.00	-11.35	24.68	9.67	0.30	Average
6*	4.430	49.14	56.00	-6.86	39.17	9.67	0.30	QP
7	5.683	30.38	50.00	-19.62	20.36	9.68	0.34	Average
8	5.683	36.94	60.00	-23.06	26.92	9.68	0.34	QP
9	13.560	35.51	50.00	-14.49	25.23	9.75	0.53	Average
10	13.560	39.39	60.00	-20.61	29.11	9.75	0.53	QP
11	19.224	25.84	50.00	-24.16	15.45	9.80	0.59	Average
12	19.224	33.31	60.00	-26.69	22.92	9.80	0.59	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

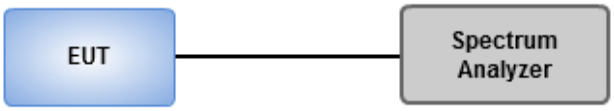
6dB Bandwidth

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	9.058M	14.038M	14M0G1D	7.101M	13.169M
802.11g_Nss1,(6Mbps)_2TX	16.377M	16.57M	16M6D1D	12.826M	16.353M
802.11n HT20_Nss1,(MCS0)_2TX	17.536M	17.8M	17M8D1D	13.768M	17.583M
802.11n HT40_Nss1,(MCS0)_2TX	36.377M	36.469M	36M5D1D	33.623M	36.035M

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;

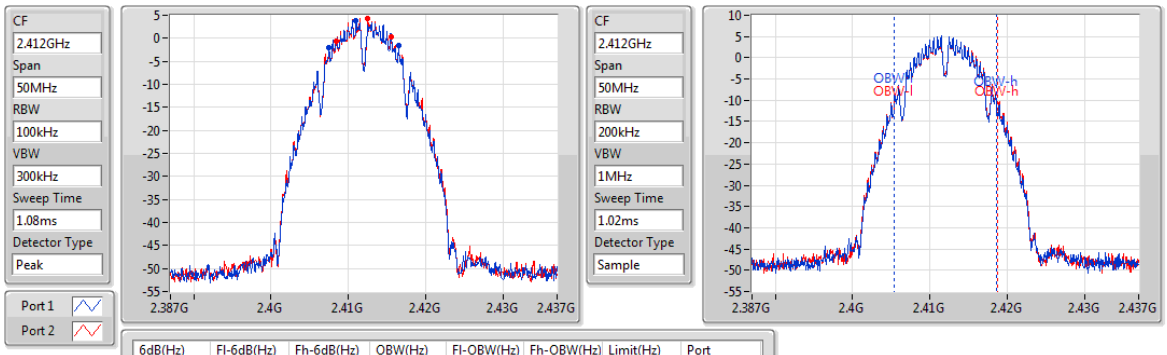
Result

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)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	8.986M	13.169M	7.101M	13.459M
2437MHz	Pass	500k	9.058M	14.038M	8.116M	13.821M
2462MHz	Pass	500k	8.551M	13.459M	8.116M	13.676M
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	15.29M	16.353M	15.507M	16.425M
2437MHz	Pass	500k	15.507M	16.57M	16.377M	16.498M
2462MHz	Pass	500k	14.638M	16.425M	12.826M	16.425M
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	500k	15.725M	17.583M	14.493M	17.583M
2437MHz	Pass	500k	17.536M	17.8M	17.536M	17.728M
2462MHz	Pass	500k	13.768M	17.583M	17.536M	17.583M
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	500k	33.623M	36.035M	35.072M	36.179M
2437MHz	Pass	500k	36.377M	36.469M	36.377M	36.324M
2452MHz	Pass	500k	33.768M	36.179M	35.217M	36.179M

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

802.11b_Nss1,(1Mbps)_2TX EBW

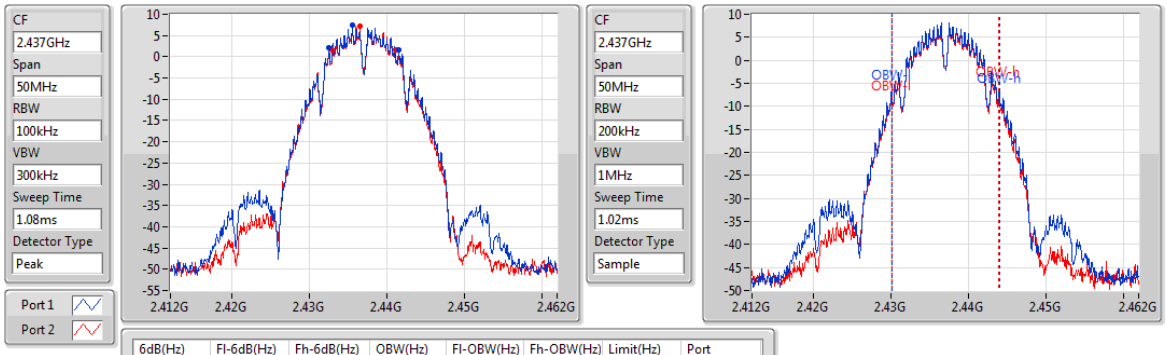
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.986M	2.407507G	2.416493G	13.169M	2.405415G	2.418585G	500k	1
7.101M	2.408449G	2.415551G	13.459M	2.405343G	2.418802G	500k	2

802.11b_Nss1,(1Mbps)_2TX EBW

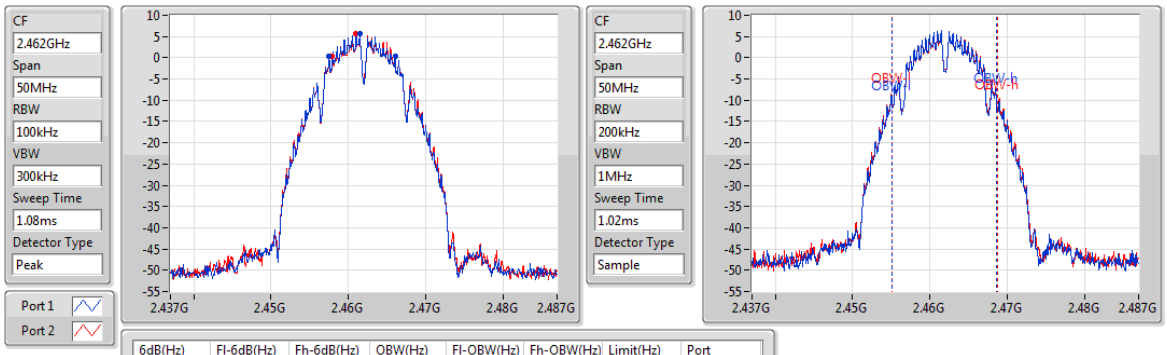
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.058M	2.432507G	2.441565G	14.038M	2.430054G	2.444091G	500k	1
8.116M	2.432942G	2.441058G	13.821M	2.430126G	2.443946G	500k	2

802.11b_Nss1,(1Mbps)_2TX EBW

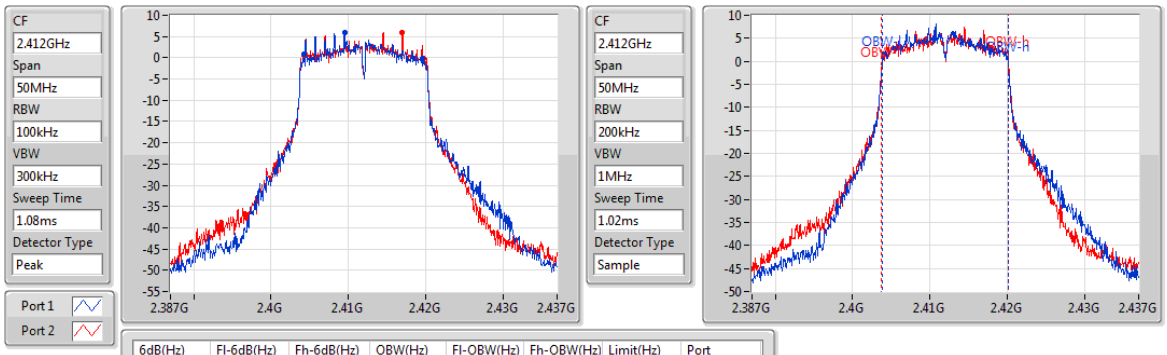
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
8.551M	2.457507G	2.466058G	13.459M	2.455126G	2.468585G	500k	1
8.116M	2.457942G	2.466058G	13.676M	2.455054G	2.468729G	500k	2

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

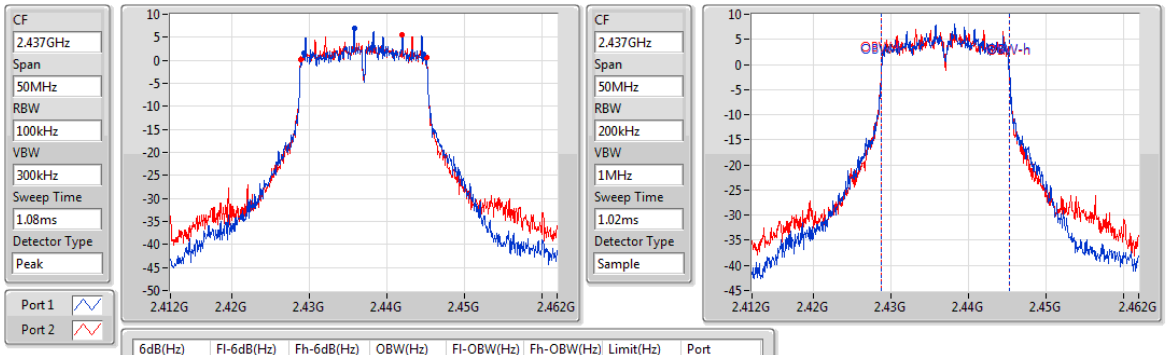
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.29M	2.404246G	2.419536G	16.353M	2.403823G	2.420177G	500k	1
15.507M	2.404246G	2.419754G	16.425M	2.403751G	2.420177G	500k	2

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

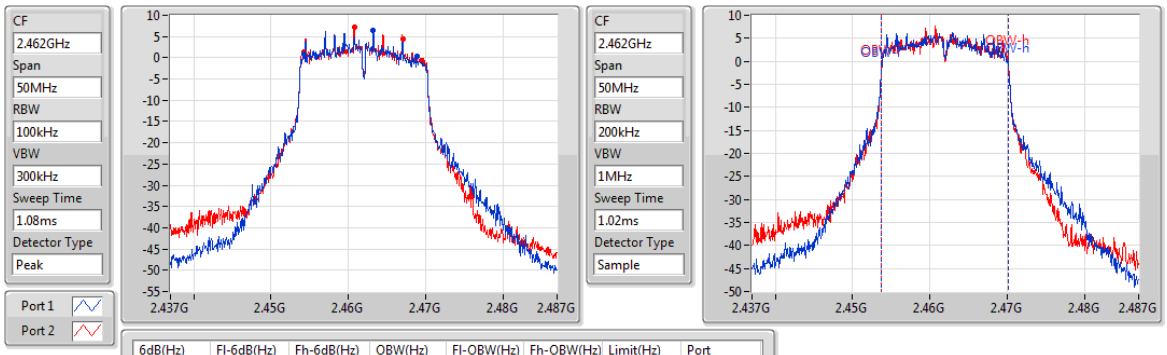
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.507M	2.429246G	2.444754G	16.57M	2.428751G	2.445321G	500k	1
16.377M	2.428812G	2.445188G	16.498M	2.428751G	2.445249G	500k	2

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

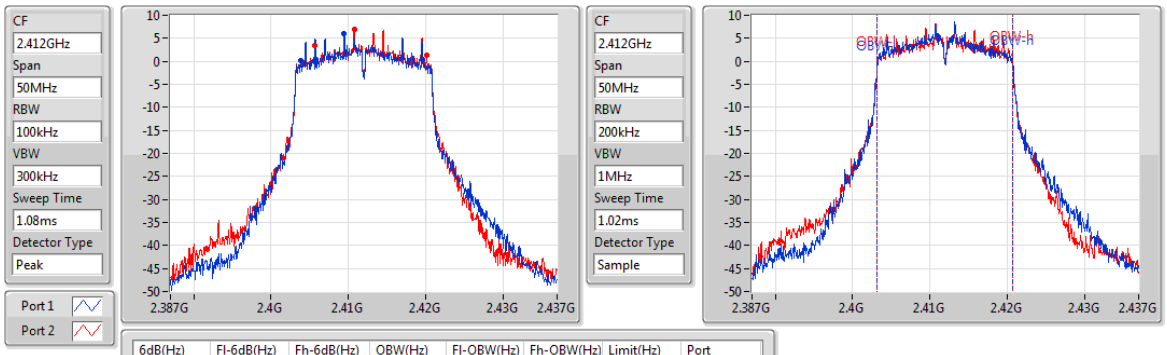
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
14.638M	2.454246G	2.468884G	16.425M	2.453751G	2.470177G	500k	1
12.826M	2.454246G	2.467072G	16.425M	2.453751G	2.470177G	500k	2

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

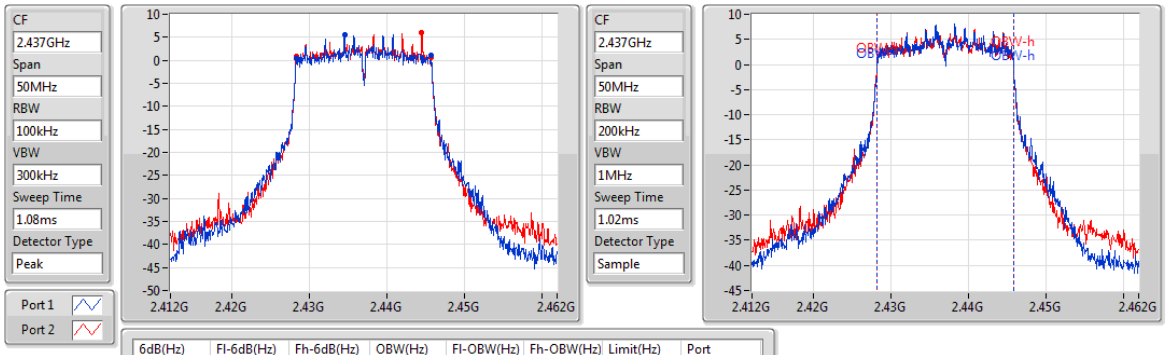
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.725M	2.403884G	2.419609G	17.583M	2.403172G	2.420755G	500k	1
14.493M	2.405696G	2.420188G	17.583M	2.403172G	2.420755G	500k	2

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

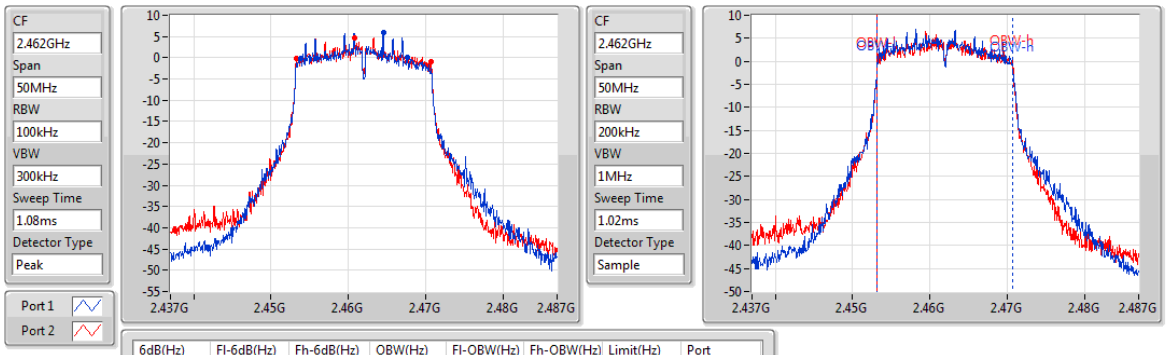
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.536M	2.428232G	2.445768G	17.8M	2.4281G	2.4459G	500k	1
17.536M	2.428232G	2.445768G	17.728M	2.4281G	2.445828G	500k	2

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

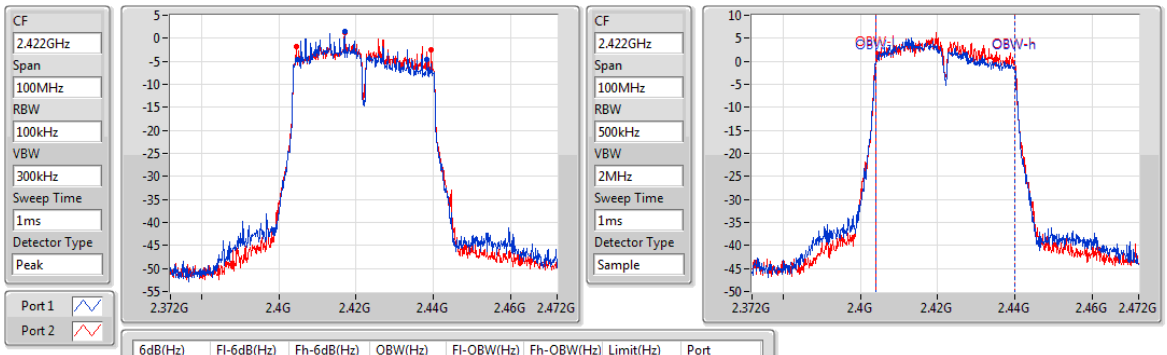
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
13.768M	2.453884G	2.467652G	17.583M	2.453172G	2.470755G	500k	1
17.536M	2.453232G	2.470768G	17.583M	2.453172G	2.470755G	500k	2

802.11n HT40_Nss1,(MCS0)_2TX EBW

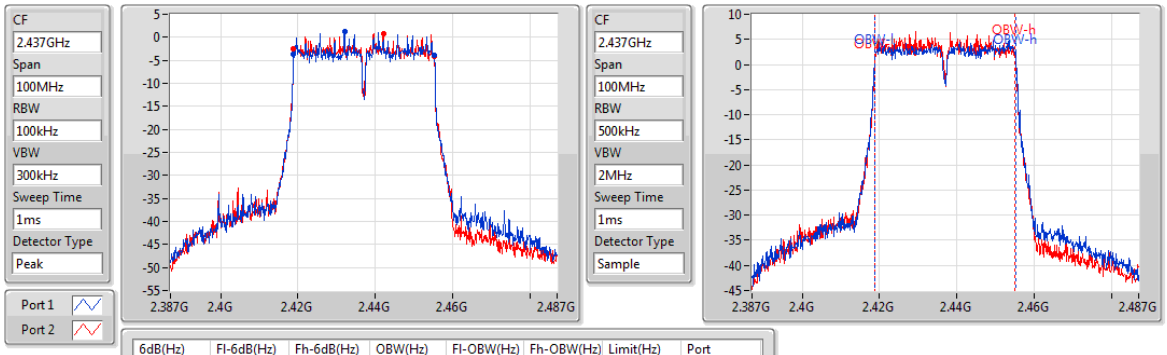
2422MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
33.623M	2.404754G	2.438377G	36.035M	2.40391G	2.439945G	500k	1
35.072M	2.404464G	2.439536G	36.179M	2.40391G	2.44009G	500k	2

802.11n HT40_Nss1,(MCS0)_2TX EBW

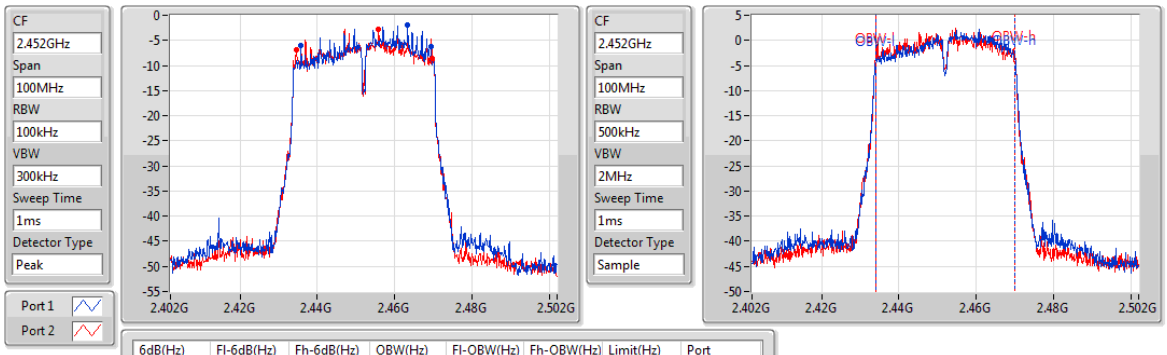
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.377M	2.418884G	2.455261G	36.469M	2.418766G	2.455234G	500k	1
36.377M	2.418884G	2.455261G	36.324M	2.418766G	2.45509G	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
33.768M	2.435768G	2.469536G	36.179M	2.43391G	2.47009G	500k	1
35.217M	2.434464G	2.469681G	36.179M	2.43391G	2.47009G	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

Peak Power

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	21.72	0.14859
802.11g_Nss1,(6Mbps)_2TX	24.99	0.31550
802.11n HT20_Nss1,(MCS0)_2TX	25.08	0.32211
802.11n HT40_Nss1,(MCS0)_2TX	24.41	0.27606

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	3.00	15.90	15.74	18.83	30.00	21.83	36.00
2437MHz	Pass	3.00	18.83	18.58	21.72	30.00	24.72	36.00
2462MHz	Pass	3.00	16.88	17.01	19.96	30.00	22.96	36.00
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-
2412MHz	Pass	3.00	21.88	21.82	24.86	30.00	27.86	36.00
2437MHz	Pass	3.00	21.99	21.96	24.99	30.00	27.99	36.00
2462MHz	Pass	3.00	21.73	21.77	24.76	30.00	27.76	36.00
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
2412MHz	Pass	3.00	21.93	21.75	24.85	30.00	27.85	36.00
2437MHz	Pass	3.00	21.98	22.15	25.08	30.00	28.08	36.00
2462MHz	Pass	3.00	21.31	21.02	24.18	30.00	27.18	36.00
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
2422MHz	Pass	3.00	20.26	20.42	23.35	30.00	26.35	36.00
2437MHz	Pass	3.00	21.33	21.47	24.41	30.00	27.41	36.00
2452MHz	Pass	3.00	17.41	16.66	20.06	30.00	23.06	36.00

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

Average Power

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_2TX	19.39	0.08690
802.11g_Nss1,(6Mbps)_2TX	20.38	0.10914
802.11n HT20_Nss1,(MCS0)_2TX	20.41	0.10990
802.11n HT40_Nss1,(MCS0)_2TX	18.32	0.06792

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	3.00	13.52	13.45	16.50	-	19.50	-
2437MHz	Pass	3.00	16.57	16.19	19.39	-	22.39	-
2462MHz	Pass	3.00	14.54	14.65	17.61	-	20.61	-
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-	-	-
2412MHz	Pass	3.00	17.36	17.28	20.33	-	23.33	-
2437MHz	Pass	3.00	17.42	17.32	20.38	-	23.38	-
2462MHz	Pass	3.00	16.96	16.83	19.91	-	22.91	-
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
2412MHz	Pass	3.00	17.12	17.04	20.09	-	23.09	-
2437MHz	Pass	3.00	17.39	17.41	20.41	-	23.41	-
2462MHz	Pass	3.00	16.34	16.03	19.20	-	22.20	-
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-	-	-
2422MHz	Pass	3.00	14.07	14.18	17.14	-	20.14	-
2437MHz	Pass	3.00	15.26	15.36	18.32	-	21.32	-
2452MHz	Pass	3.00	11.48	10.83	14.18	-	17.18	-

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

Note : Conducted average output power is for reference only

3.4 Power Spectral Density

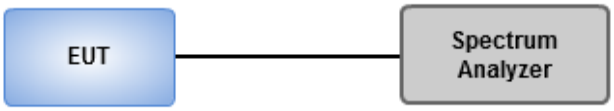
3.4.1 Limit of Power Spectral Density

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

3.4.2 Test Procedures

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)_2TX	-4.23
802.11g_Nss1,(6Mbps)_2TX	-5.54
802.11n HT20_Nss1,(MCS0)_2TX	-6.19
802.11n HT40_Nss1,(MCS0)_2TX	-10.95

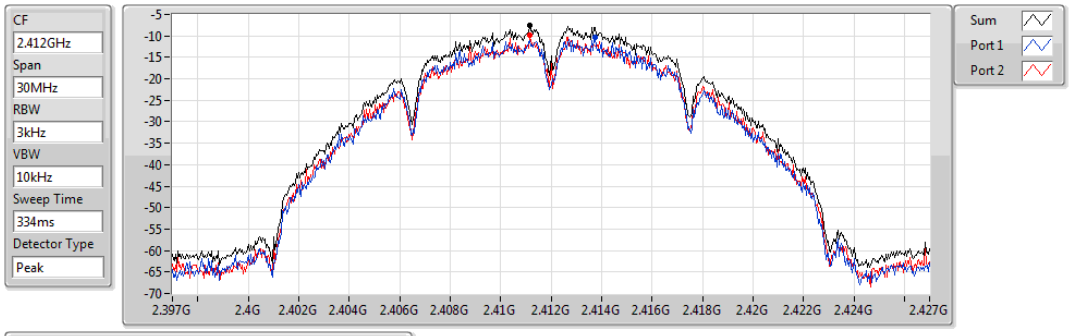
Result

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	6.01	-10.26	-9.93	-7.47	7.99
2437MHz	Pass	6.01	-6.28	-7.92	-4.23	7.99
2462MHz	Pass	6.01	-8.28	-9.24	-6.27	7.99
802.11g_Nss1,(6Mbps)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.01	-8.86	-6.87	-5.54	7.99
2437MHz	Pass	6.01	-8.52	-8.33	-6.76	7.99
2462MHz	Pass	6.01	-8.14	-9.21	-6.68	7.99
802.11n HT20_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2412MHz	Pass	6.01	-8.13	-8.19	-6.19	7.99
2437MHz	Pass	6.01	-8.72	-8.39	-6.44	7.99
2462MHz	Pass	6.01	-8.04	-9.18	-6.28	7.99
802.11n HT40_Nss1,(MCS0)_2TX	-	-	-	-	-	-
2422MHz	Pass	6.01	-12.79	-14.36	-11.59	7.99
2437MHz	Pass	6.01	-13.04	-13.23	-10.95	7.99
2452MHz	Pass	6.01	-16.81	-17.68	-15.18	7.99

DG = Directional Gain = 3 dBi +10 log(2/1)= 6.01 dBi;
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)_2TX **PSD**

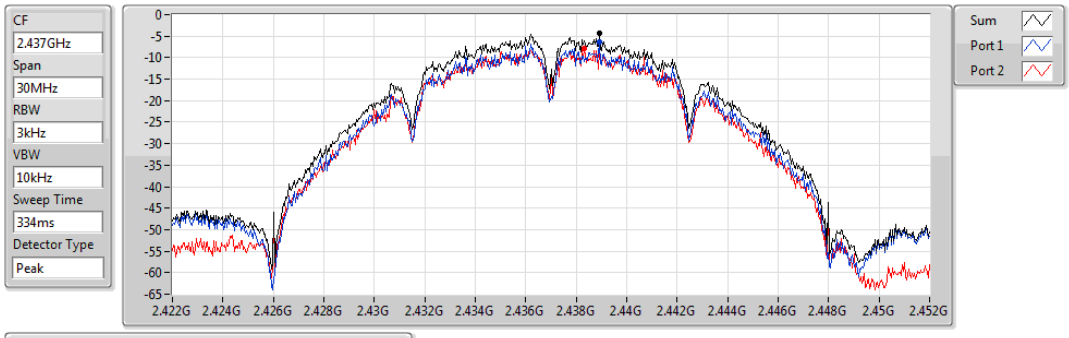
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-7.47	-7.47	-10.26	-9.93

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

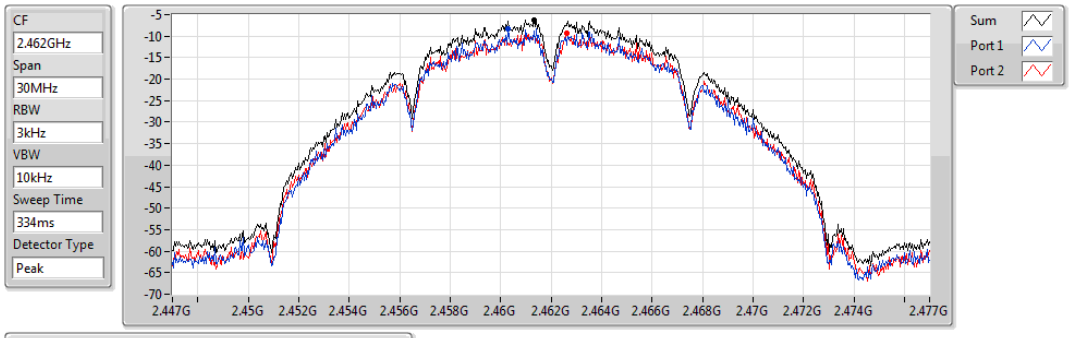
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.23	-4.23	-6.28	-7.92

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

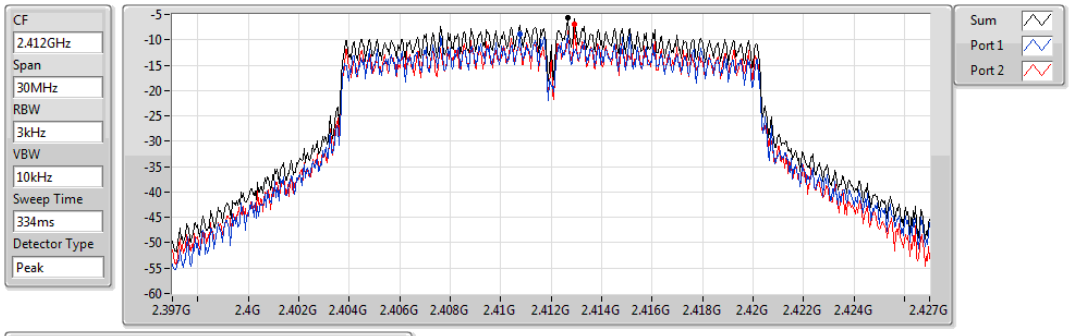
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.27	-6.27	-8.28	-9.24

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

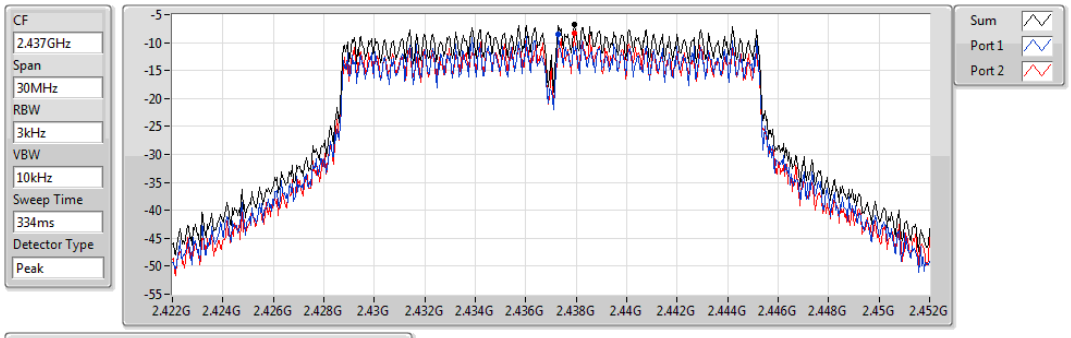
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.54	-5.54	-8.86	-6.87

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

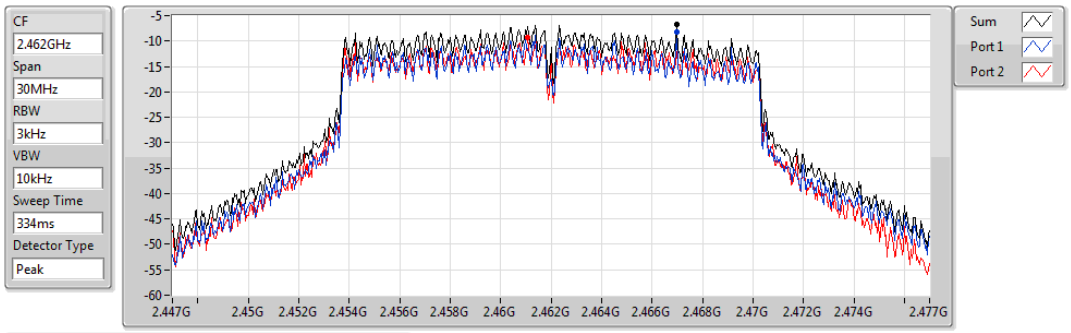
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.76	-6.76	-8.52	-8.33

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

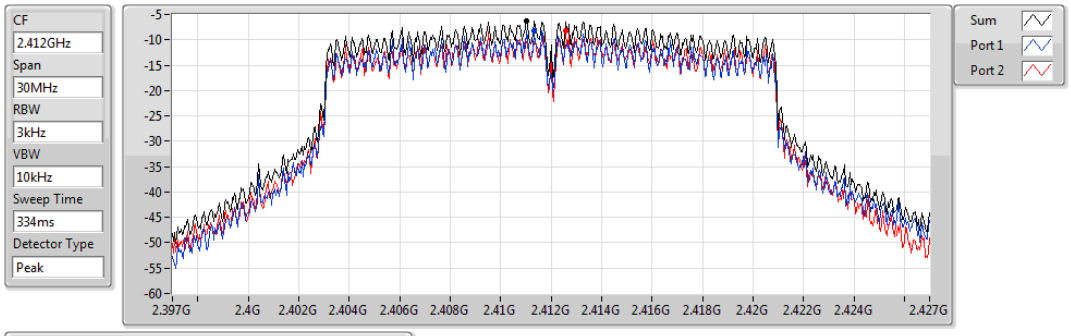
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.68	-6.68	-8.14	-9.21

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

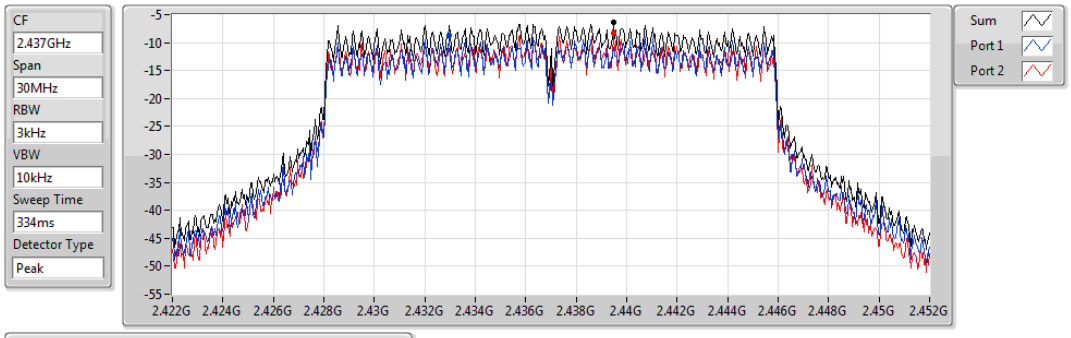
2412MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.19	-6.19	-8.13	-8.19

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

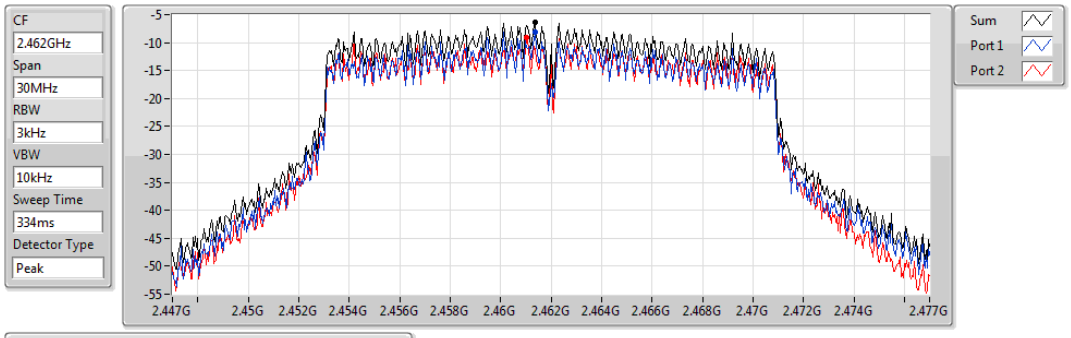
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.44	-6.44	-8.72	-8.39

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

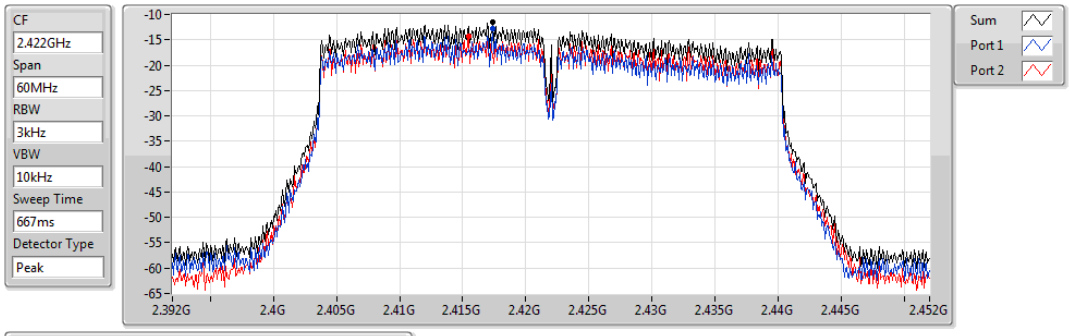
2462MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.28	-6.28	-8.04	-9.18

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

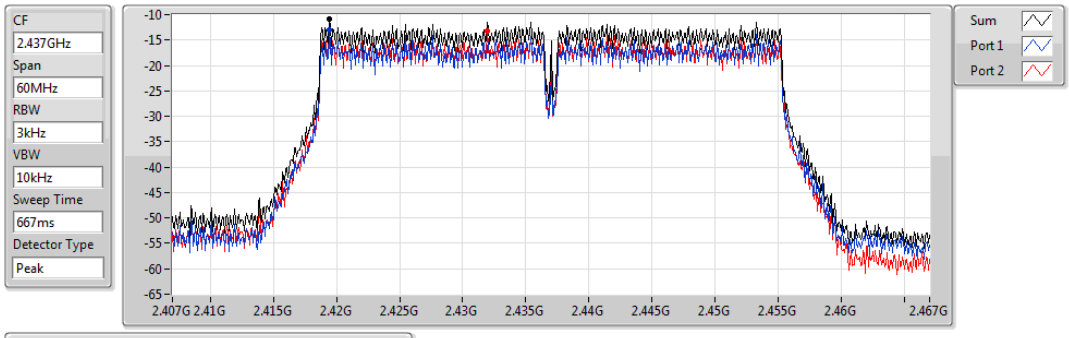
2422MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-11.59	-11.59	-12.79	-14.36

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

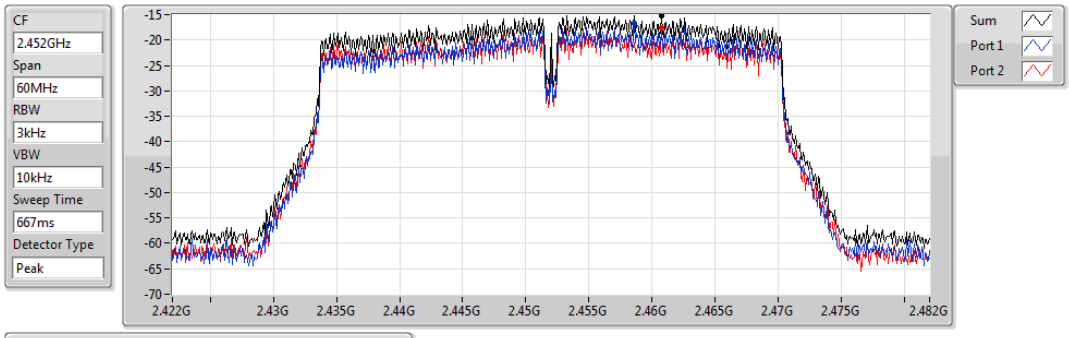
2437MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.95	-10.95	-13.04	-13.23

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

2452MHz



Sum	PD	Port 1	Port 2
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-15.18	-15.18	-16.81	-17.68

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

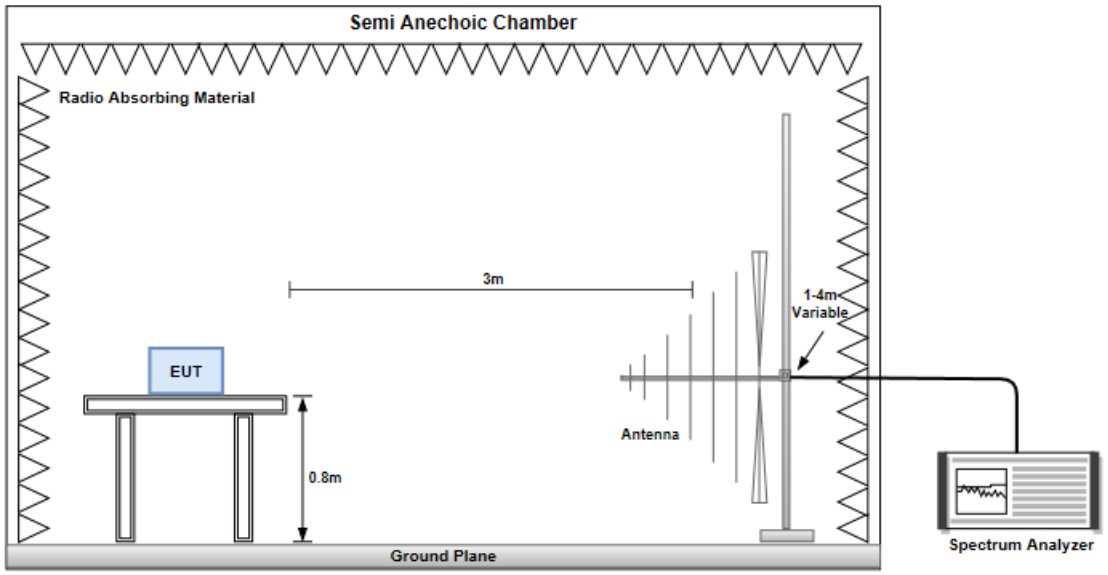
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

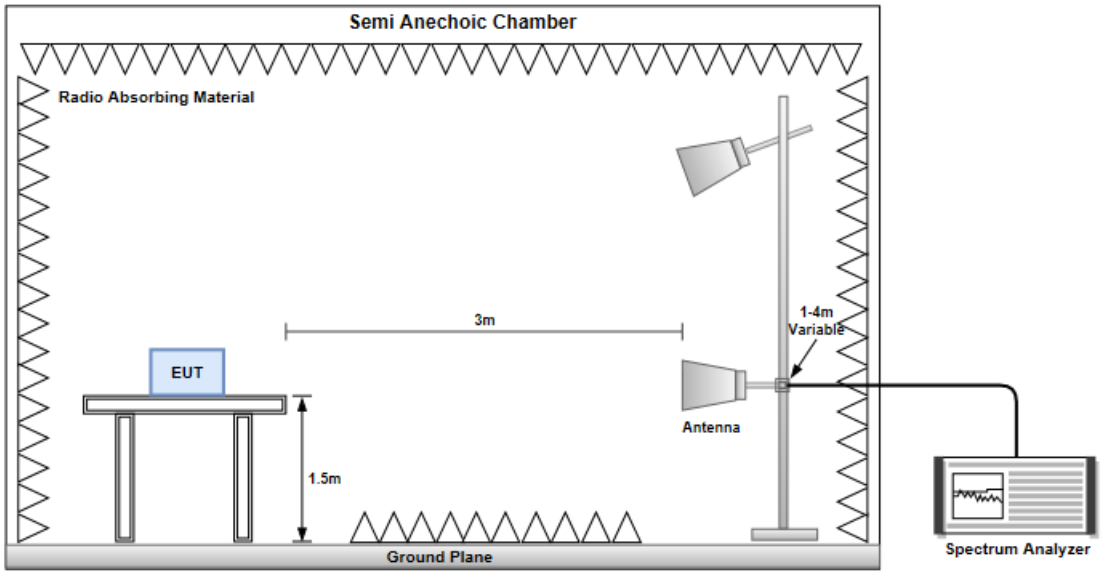
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz

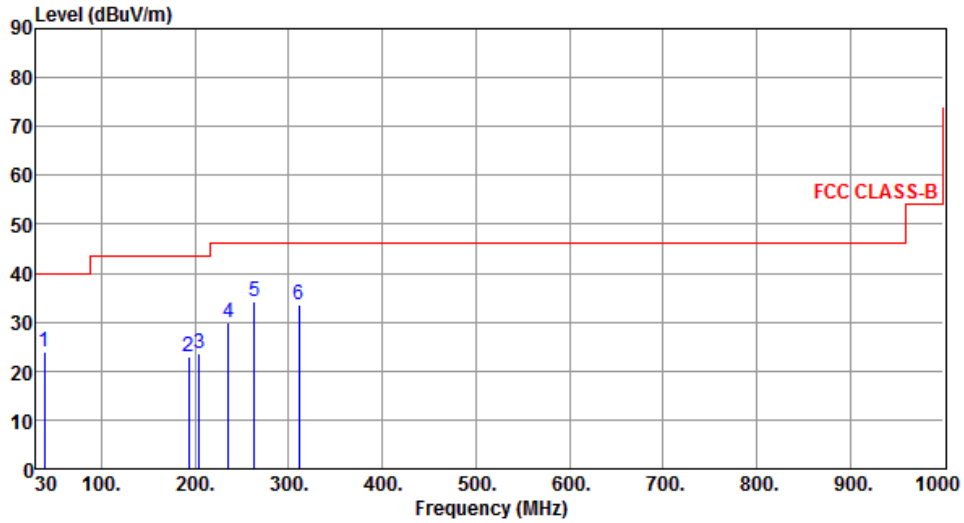


Radiated Emissions above 1 GHz



3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

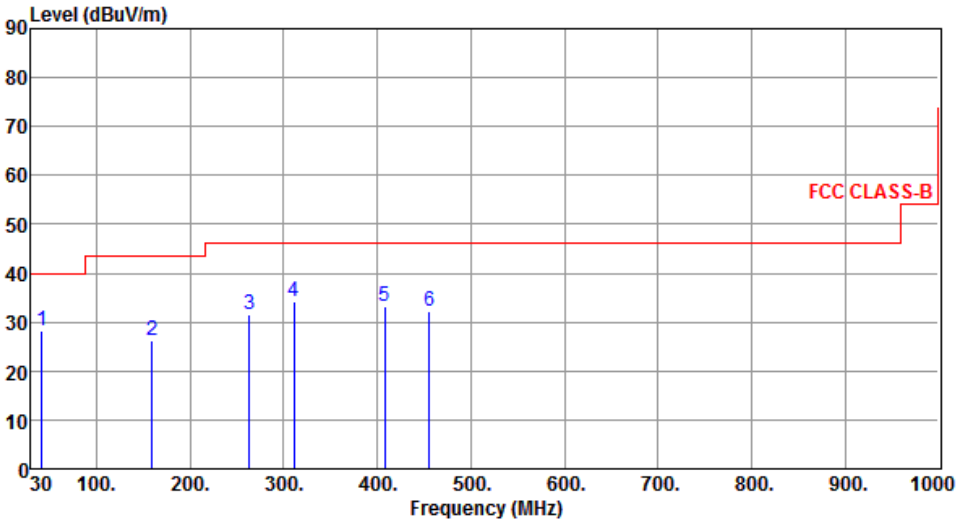
Modulation	HT20	Test Freq. (MHz)	2437
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	38.73	23.84	40.00	-16.16	32.68	-8.84	Peak	---	---
2	192.96	23.01	43.50	-20.49	34.72	-11.71	Peak	---	---
3	204.60	23.59	43.50	-19.91	35.77	-12.18	Peak	---	---
4	235.64	29.80	46.00	-16.20	40.59	-10.79	Peak	---	---
5	263.77	34.16	46.00	-11.84	43.59	-9.43	Peak	---	---
6	311.30	33.51	46.00	-12.49	41.21	-7.70	Peak	---	---

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

Modulation	HT20	Test Freq. (MHz)	2437
Polarization	Vertical		

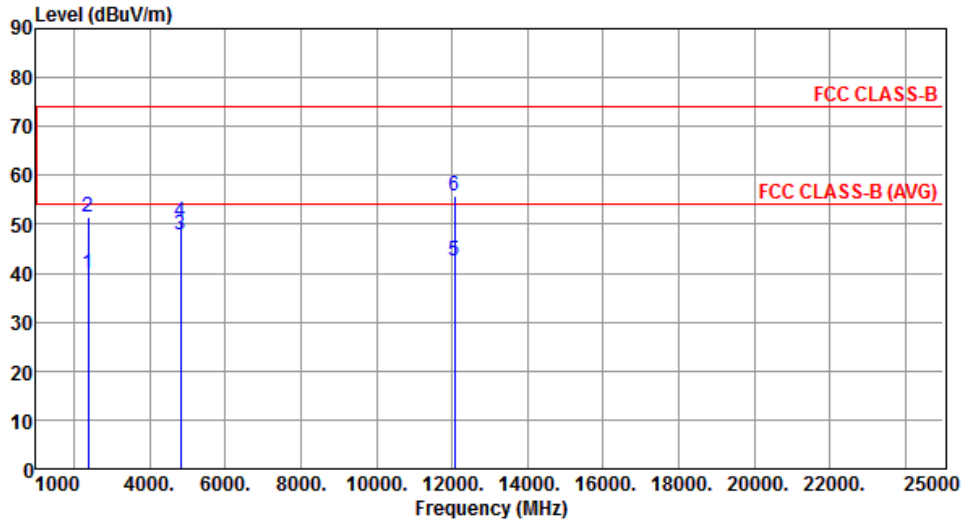


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	41.64	28.13	40.00	-11.87	36.61	-8.48	Peak	---	---
2	159.01	26.08	43.50	-17.42	34.51	-8.43	Peak	---	---
3	263.77	31.56	46.00	-14.44	40.99	-9.43	Peak	---	---
4	311.30	34.21	46.00	-11.79	41.91	-7.70	Peak	---	---
5	408.30	33.06	46.00	-12.94	38.44	-5.38	Peak	---	---
6	455.83	32.28	46.00	-13.72	36.29	-4.01	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

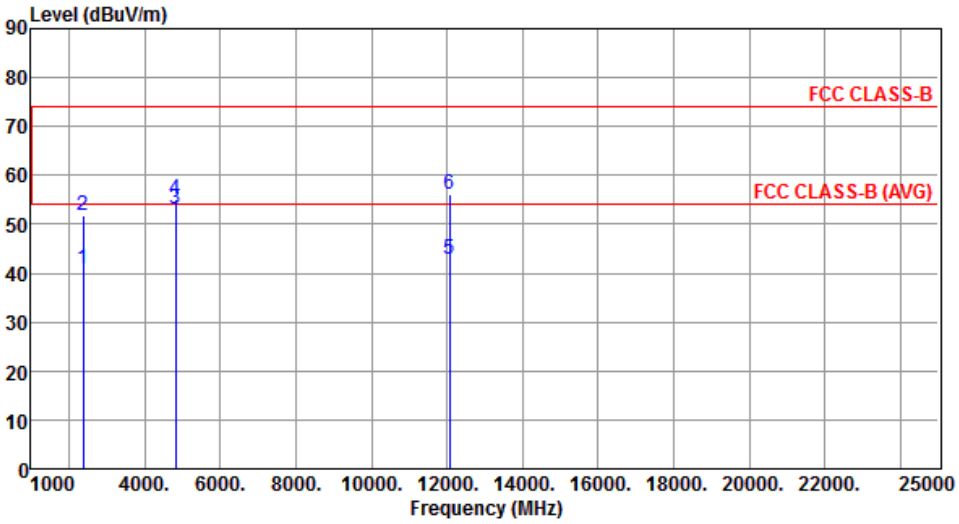
Modulation	11b	Test Freq. (MHz)	2412
Polarization	Horizontal		



	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	39.75	54.00	-14.25	42.82	-3.07	Average	100	34
2	2390.00	51.51	74.00	-22.49	54.58	-3.07	Peak	100	34
3	4824.00	47.82	54.00	-6.18	44.29	3.53	Average	201	62
4	4824.00	50.59	74.00	-23.41	47.06	3.53	Peak	201	62
5	12060.00	42.61	54.00	-11.39	29.34	13.27	Average	100	52
6	12060.00	55.81	74.00	-18.19	42.54	13.27	Peak	100	52

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).

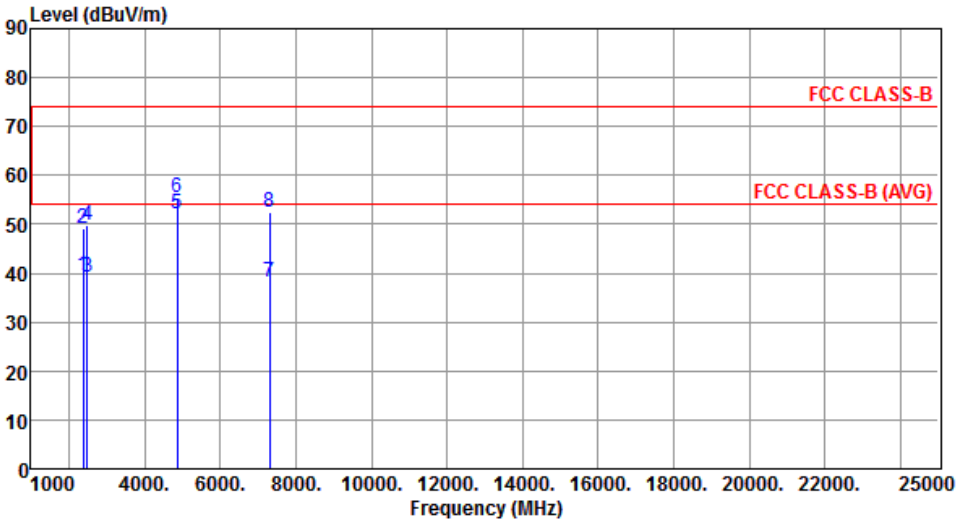
Modulation	11b	Test Freq. (MHz)	2412
Polarization	Vertical		



	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	40.74	54.00	-13.26	43.81	-3.07	Average	197	114
2	2390.00	51.77	74.00	-22.23	54.84	-3.07	Peak	197	114
3	4824.00	52.99	54.00	-1.01	49.46	3.53	Average	100	200
4	4824.00	55.19	74.00	-18.81	51.66	3.53	Peak	100	200
5	12060.00	42.88	54.00	-11.12	29.61	13.27	Average	100	192
6	12060.00	56.11	74.00	-17.89	42.84	13.27	Peak	100	192

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).

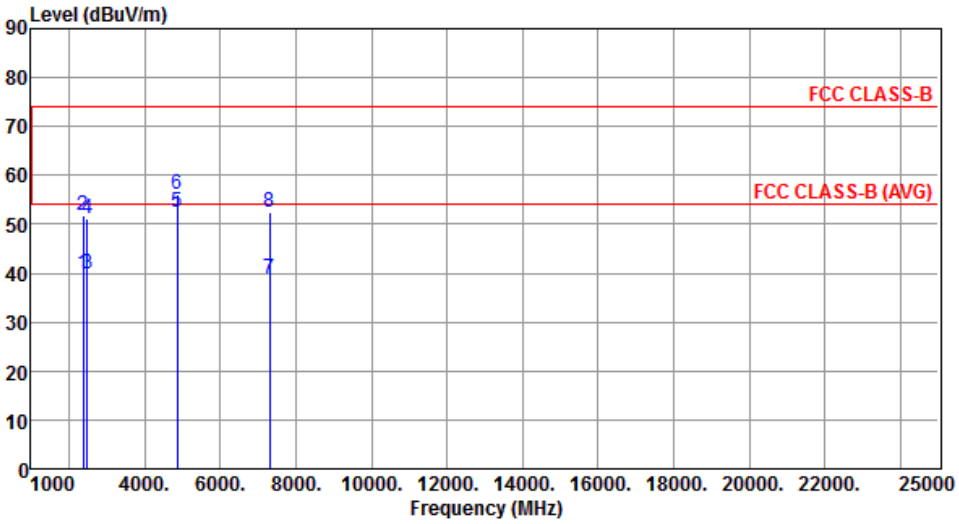
Modulation	11b	Test Freq. (MHz)	2437
Polarization	Horizontal		



	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	39.47	54.00	-14.53	42.54	-3.07	Average	100	28
2	2390.00	49.10	74.00	-24.90	52.17	-3.07	Peak	100	28
3	2483.50	39.11	54.00	-14.89	42.33	-3.22	Average	100	28
4	2483.50	49.68	74.00	-24.32	52.90	-3.22	Peak	100	28
5	4874.00	52.12	54.00	-1.88	48.52	3.60	Average	213	65
6	4874.00	55.52	74.00	-18.48	51.92	3.60	Peak	213	65
7	7311.00	38.16	54.00	-15.84	29.34	8.82	Average	100	55
8	7311.00	52.32	74.00	-21.68	43.50	8.82	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).

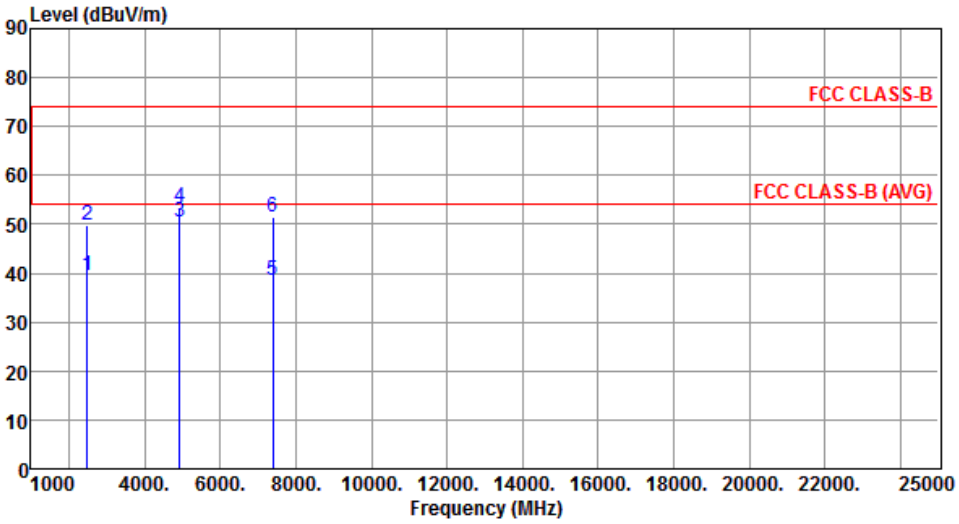
Modulation	11b	Test Freq. (MHz)	2437
Polarization	Vertical		



	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	39.82	54.00	-14.18	42.89	-3.07	Average	193	94
2	2390.00	51.79	74.00	-22.21	54.86	-3.07	Peak	193	94
3	2483.50	40.02	54.00	-13.98	43.24	-3.22	Average	193	94
4	2483.50	51.02	74.00	-22.98	54.24	-3.22	Peak	193	94
5	4874.00	52.56	54.00	-1.44	48.96	3.60	Average	100	192
6	4874.00	56.27	74.00	-17.73	52.67	3.60	Peak	100	192
7	7311.00	38.78	54.00	-15.22	29.96	8.82	Average	100	195
8	7311.00	52.64	74.00	-21.36	43.82	8.82	Peak	100	195

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).

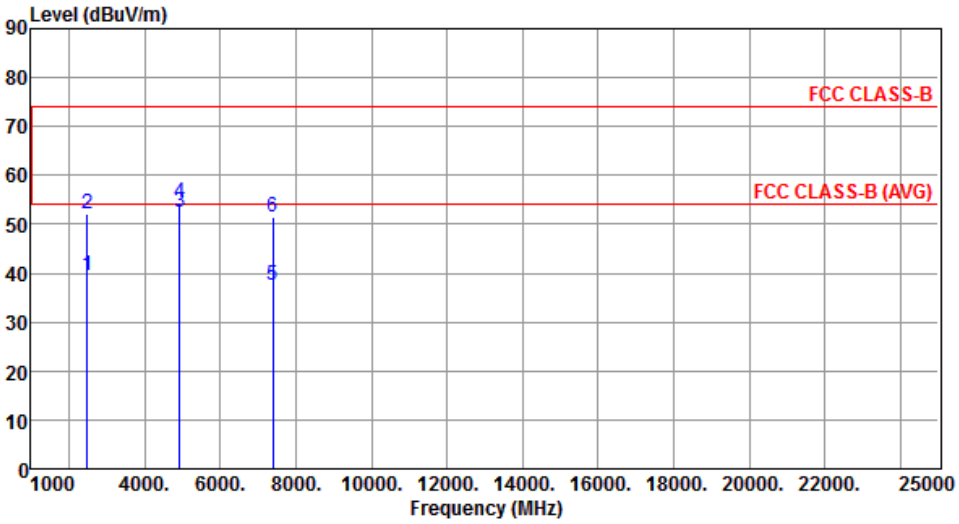
Modulation	11b	Test Freq. (MHz)	2462
Polarization	Horizontal		



	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	39.59	54.00	-14.41	42.81	-3.22	Average	100	32
2	2483.50	49.74	74.00	-24.26	52.96	-3.22	Peak	100	32
3	4924.00	50.51	54.00	-3.49	46.80	3.71	Average	202	65
4	4924.00	53.51	74.00	-20.49	49.80	3.71	Peak	202	65
5	7386.00	38.36	54.00	-15.64	29.81	8.55	Average	100	62
6	7386.00	51.43	74.00	-22.57	42.88	8.55	Peak	100	62

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		

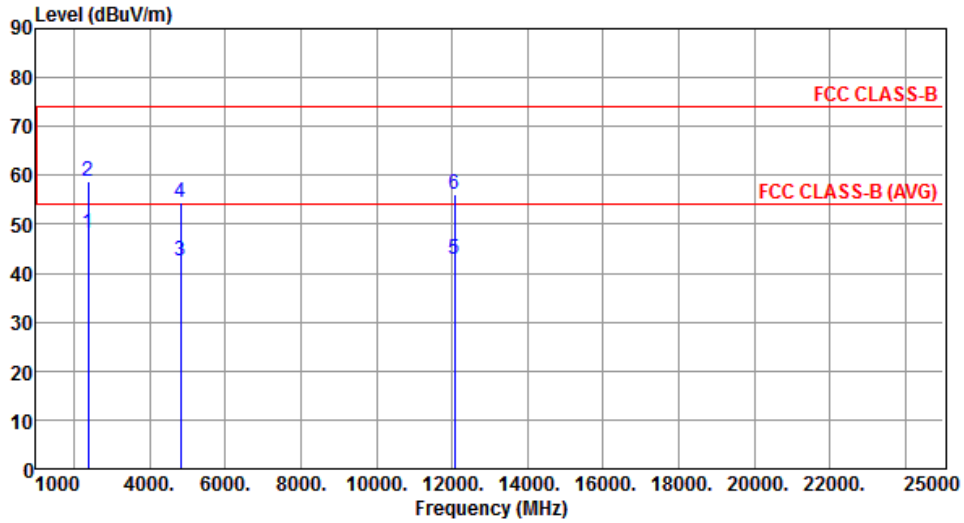


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	39.66	54.00	-14.34	42.88	-3.22	Average	191	93
2	2483.50	52.20	74.00	-21.80	55.42	-3.22	Peak	191	93
3	4924.00	52.41	54.00	-1.59	48.70	3.71	Average	100	179
4	4924.00	54.50	74.00	-19.50	50.79	3.71	Peak	100	179
5	7386.00	37.49	54.00	-16.51	28.94	8.55	Average	100	182
6	7386.00	51.41	74.00	-22.59	42.86	8.55	Peak	100	182

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

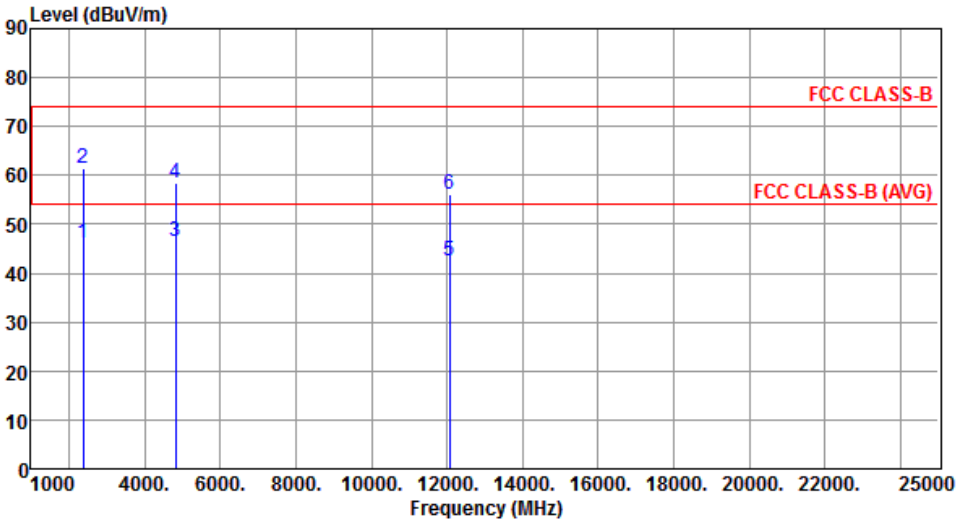
Modulation	11g	Test Freq. (MHz)	2412
Polarization	Horizontal		



	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	48.17	54.00	-5.83	51.24	-3.07	Average	209	26
2	2390.00	58.80	74.00	-15.20	61.87	-3.07	Peak	209	26
3	4824.00	42.52	54.00	-11.48	38.99	3.53	Average	109	177
4	4824.00	54.41	74.00	-19.59	50.88	3.53	Peak	109	177
5	12060.00	42.91	54.00	-11.09	29.64	13.27	Average	100	180
6	12060.00	55.98	74.00	-18.02	42.71	13.27	Peak	100	180

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

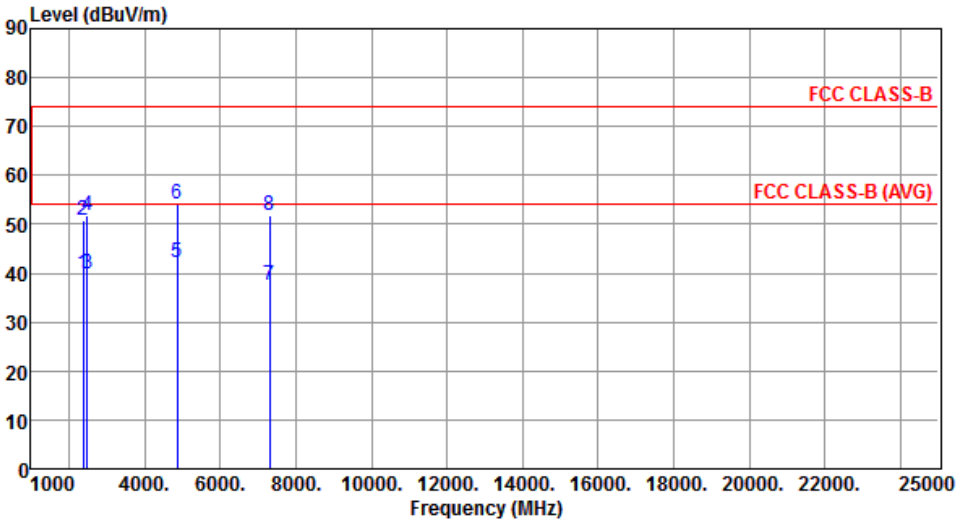
Modulation	11g	**Test Freq. (MHz)**	2412
Polarization	Vertical		



	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	46.14	54.00	-7.86	49.21	-3.07	Average	201	96
2	2390.00	61.51	74.00	-12.49	64.58	-3.07	Peak	201	96
3	4824.00	46.47	54.00	-7.53	42.94	3.53	Average	100	174
4	4824.00	58.43	74.00	-15.57	54.90	3.53	Peak	100	174
5	12060.00	42.67	54.00	-11.33	29.40	13.27	Average	100	176
6	12060.00	56.11	74.00	-17.89	42.84	13.27	Peak	100	176

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).

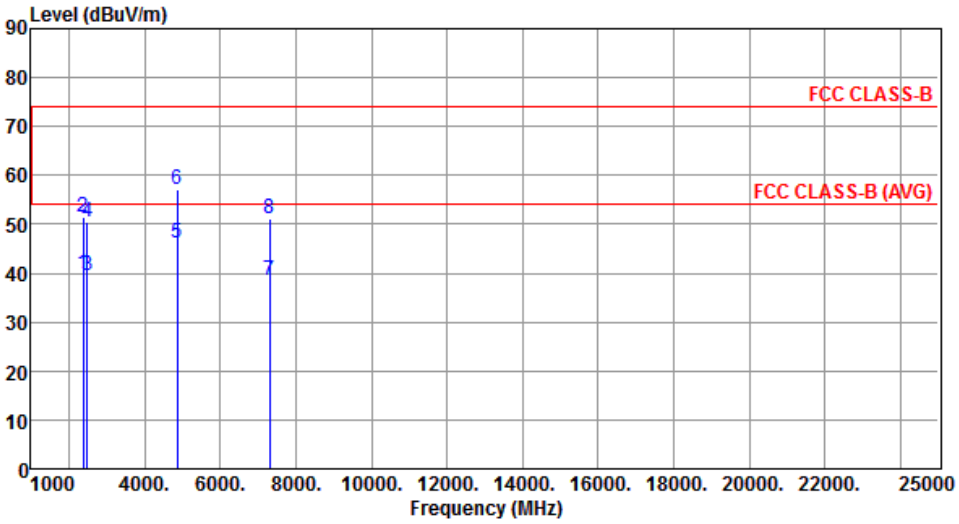
Modulation	11g	Test Freq. (MHz)	2437
Polarization	Horizontal		



	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	39.77	54.00	-14.23	42.84	-3.07	Average	295	33
2	2390.00	50.87	74.00	-23.13	53.94	-3.07	Peak	295	33
3	2483.50	39.74	54.00	-14.26	42.96	-3.22	Average	295	33
4	2483.50	51.65	74.00	-22.35	54.87	-3.22	Peak	295	33
5	4874.00	42.11	54.00	-11.89	38.51	3.60	Average	100	179
6	4874.00	54.23	74.00	-19.77	50.63	3.60	Peak	100	179
7	7311.00	37.46	54.00	-16.54	28.64	8.82	Average	100	179
8	7311.00	51.76	74.00	-22.24	42.94	8.82	Peak	100	179

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).

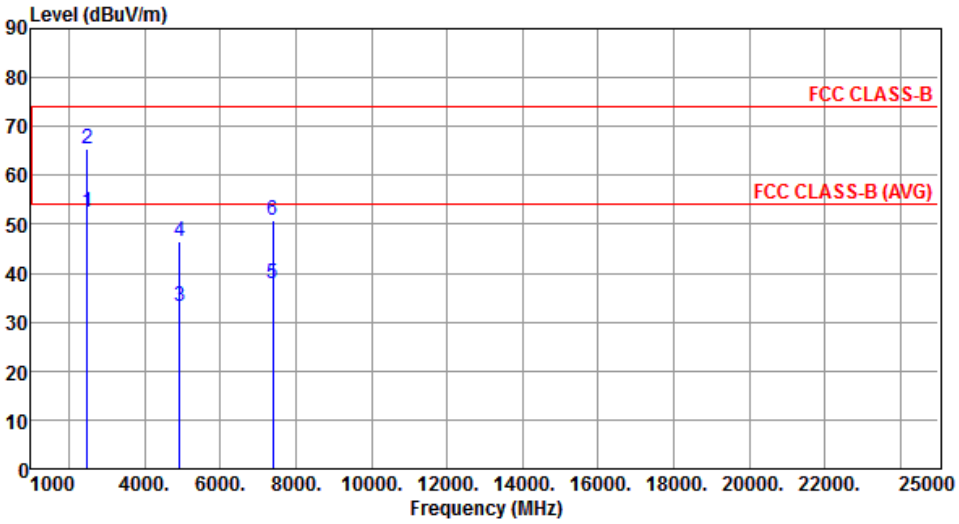
Modulation	11g	Test Freq. (MHz)	2437
Polarization	Vertical		



	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	39.70	54.00	-14.30	42.77	-3.07	Average	264	92
2	2390.00	51.57	74.00	-22.43	54.64	-3.07	Peak	264	92
3	2483.50	39.65	54.00	-14.35	42.87	-3.22	Average	264	92
4	2483.50	50.36	74.00	-23.64	53.58	-3.22	Peak	264	92
5	4874.00	46.00	54.00	-8.00	42.40	3.60	Average	130	190
6	4874.00	57.24	74.00	-16.76	53.64	3.60	Peak	130	190
7	7311.00	38.46	54.00	-15.54	29.64	8.82	Average	100	185
8	7311.00	51.29	74.00	-22.71	42.47	8.82	Peak	100	185

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).

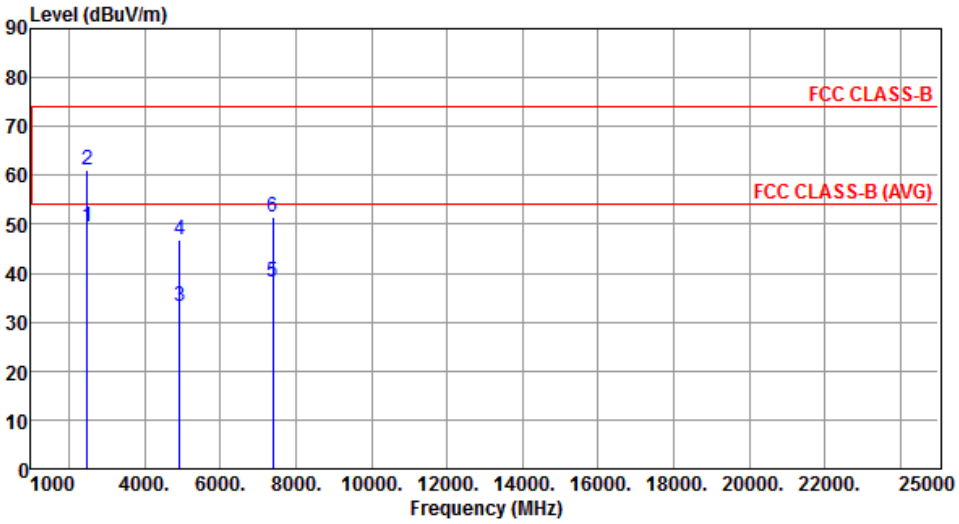
Modulation	11g	Test Freq. (MHz)	2462
Polarization	Horizontal		



	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	52.62	54.00	-1.38	55.84	-3.22	Average	313	28
2	2483.50	65.58	74.00	-8.42	68.80	-3.22	Peak	313	28
3	4924.00	33.36	54.00	-20.64	29.65	3.71	Average	100	172
4	4924.00	46.56	74.00	-27.44	42.85	3.71	Peak	100	172
5	7386.00	37.96	54.00	-16.04	29.41	8.55	Average	100	171
6	7386.00	50.72	74.00	-23.28	42.17	8.55	Peak	100	171

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		

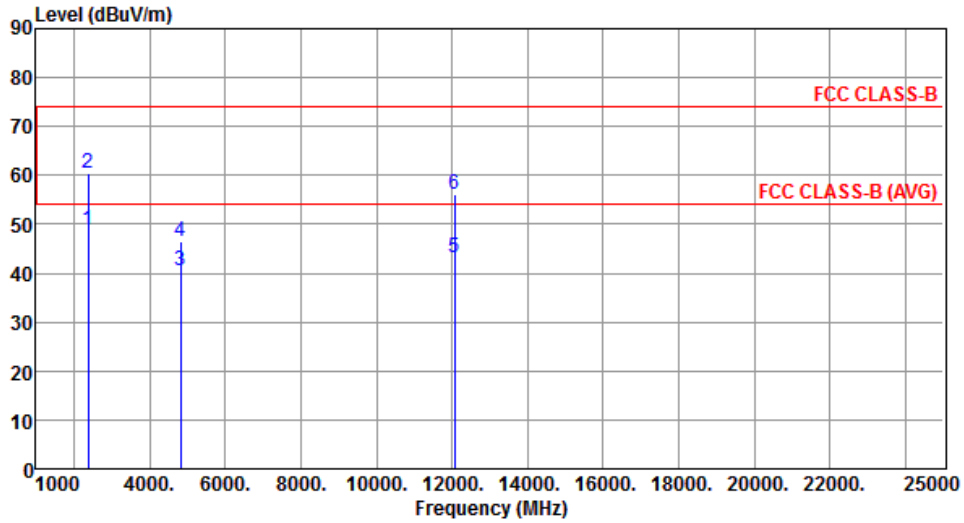


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	49.62	54.00	-4.38	52.84	-3.22	Average	241	95
2	2483.50	61.03	74.00	-12.97	64.25	-3.22	Peak	241	95
3	4924.00	33.36	54.00	-20.64	29.65	3.71	Average	100	192
4	4924.00	46.97	74.00	-27.03	43.26	3.71	Peak	100	192
5	7386.00	38.19	54.00	-15.81	29.64	8.55	Average	100	188
6	7386.00	51.39	74.00	-22.61	42.84	8.55	Peak	100	188

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

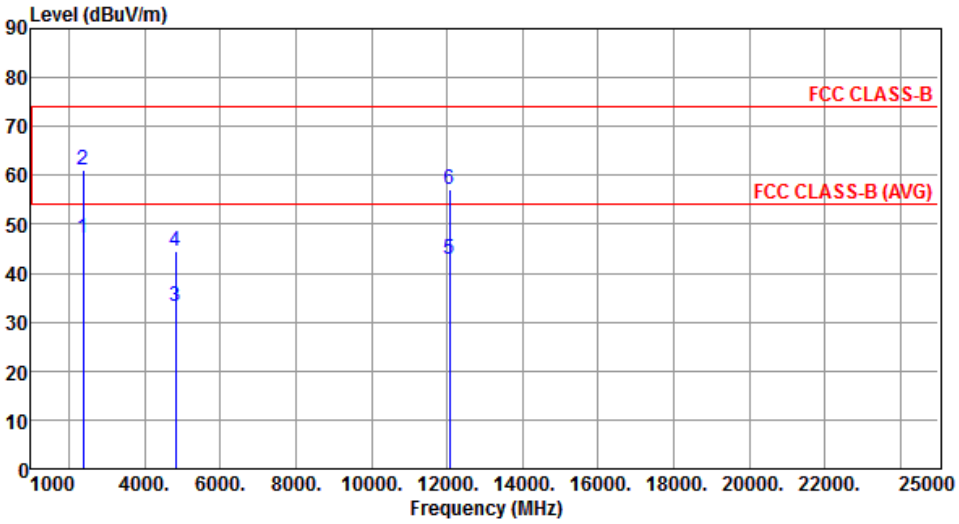
Modulation	HT20	**Test Freq. (MHz)**	2412
Polarization	Horizontal		



	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	48.93	54.00	-5.07	52.00	-3.07	Average	206	20
2	2390.00	60.60	74.00	-13.40	63.67	-3.07	Peak	206	20
3	4824.00	40.64	54.00	-13.36	37.11	3.53	Average	100	173
4	4824.00	46.47	74.00	-27.53	42.94	3.53	Peak	100	173
5	12060.00	43.01	54.00	-10.99	29.74	13.27	Average	100	182
6	12060.00	56.06	74.00	-17.94	42.79	13.27	Peak	100	182

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).

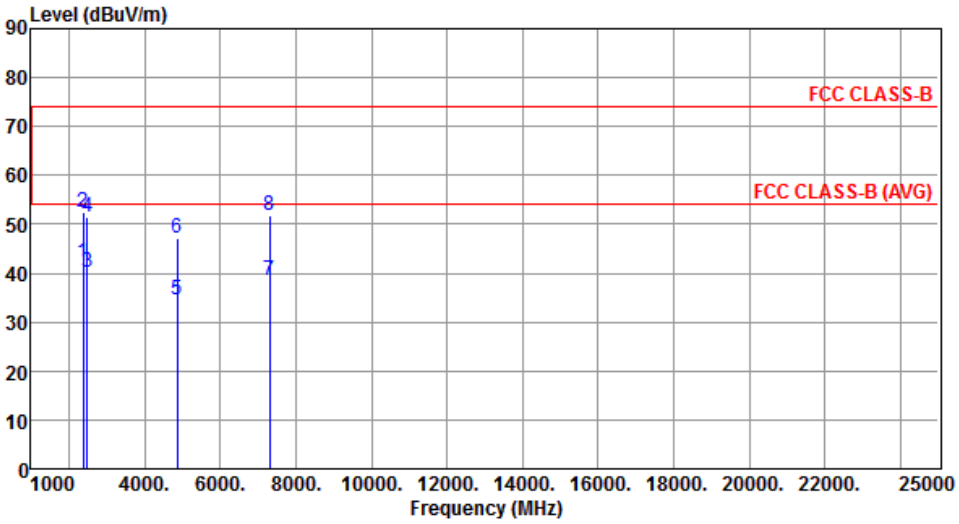
Modulation	HT20	Test Freq. (MHz)	2412
Polarization	Vertical		



	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	47.09	54.00	-6.91	50.16	-3.07	Average	194	91
2	2390.00	61.00	74.00	-13.00	64.07	-3.07	Peak	194	91
3	4824.00	33.24	54.00	-20.76	29.71	3.53	Average	100	192
4	4824.00	44.37	74.00	-29.63	40.84	3.53	Peak	100	192
5	12060.00	42.98	54.00	-11.02	29.71	13.27	Average	100	178
6	12060.00	57.21	74.00	-16.79	43.94	13.27	Peak	100	178

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

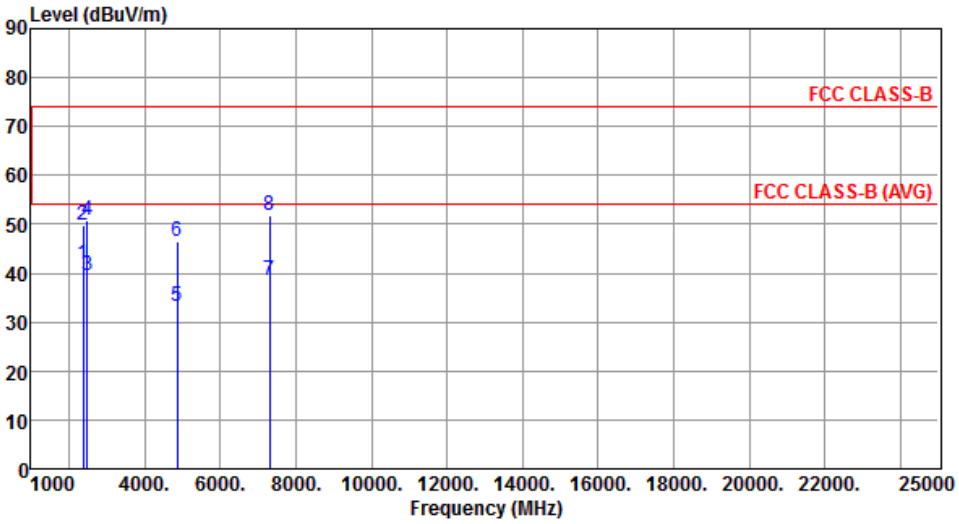
Modulation	HT20	Test Freq. (MHz)	2437
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	42.07	54.00	-11.93	45.14	-3.07	Average	334	31
2	2390.00	52.51	74.00	-21.49	55.58	-3.07	Peak	334	31
3	2483.50	40.28	54.00	-13.72	43.50	-3.22	Average	334	31
4	2483.50	51.63	74.00	-22.37	54.85	-3.22	Peak	334	31
5	4874.00	34.45	54.00	-19.55	30.85	3.60	Average	100	193
6	4874.00	47.30	74.00	-26.70	43.70	3.60	Peak	100	193
7	7311.00	38.53	54.00	-15.47	29.71	8.82	Average	100	185
8	7311.00	51.69	74.00	-22.31	42.87	8.82	Peak	100	185

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).

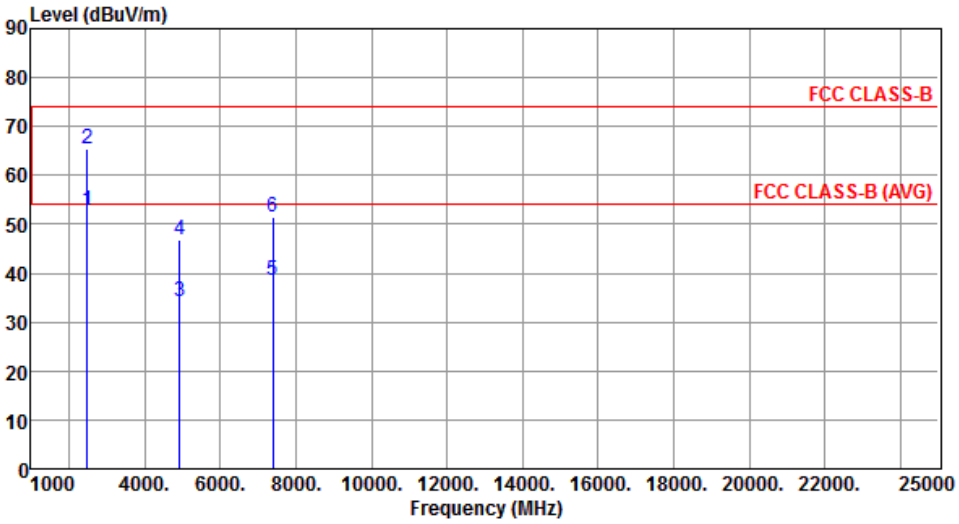
Modulation	HT20	Test Freq. (MHz)	2437
Polarization	Vertical		



	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	41.82	54.00	-12.18	44.89	-3.07	Average	245	96
2	2390.00	49.87	74.00	-24.13	52.94	-3.07	Peak	245	96
3	2483.50	39.67	54.00	-14.33	42.89	-3.22	Average	245	96
4	2483.50	50.72	74.00	-23.28	53.94	-3.22	Peak	245	96
5	4874.00	33.12	54.00	-20.88	29.52	3.60	Average	100	186
6	4874.00	46.49	74.00	-27.51	42.89	3.60	Peak	100	186
7	7311.00	38.43	54.00	-15.57	29.61	8.82	Average	100	174
8	7311.00	51.67	74.00	-22.33	42.85	8.82	Peak	100	174

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).

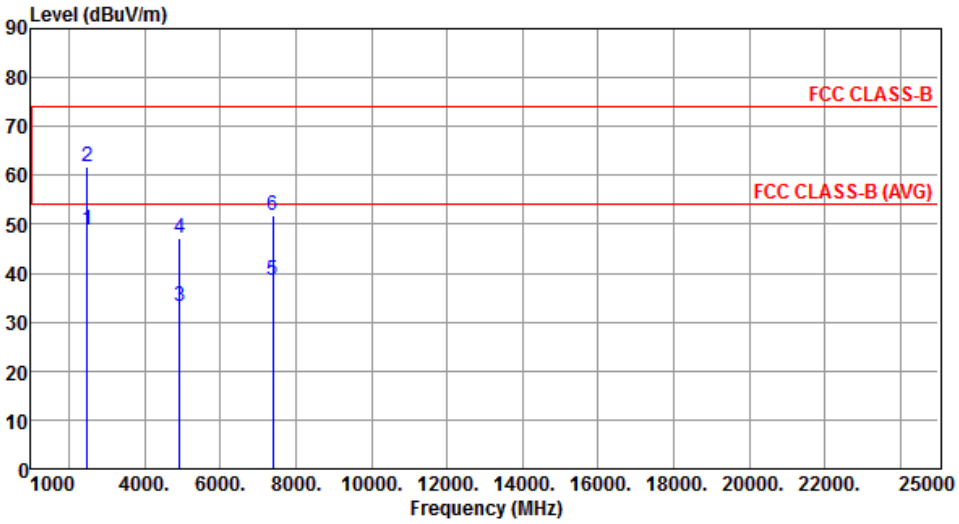
Modulation	HT20	**Test Freq. (MHz)**	2462
Polarization	Horizontal		



	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	52.72	54.00	-1.28	55.94	-3.22	Average	345	32
2	2483.50	65.29	74.00	-8.71	68.51	-3.22	Peak	345	32
3	4924.00	34.25	54.00	-19.75	30.54	3.71	Average	100	209
4	4924.00	46.67	74.00	-27.33	42.96	3.71	Peak	100	209
5	7386.00	38.37	54.00	-15.63	29.82	8.55	Average	100	205
6	7386.00	51.40	74.00	-22.60	42.85	8.55	Peak	100	205

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		

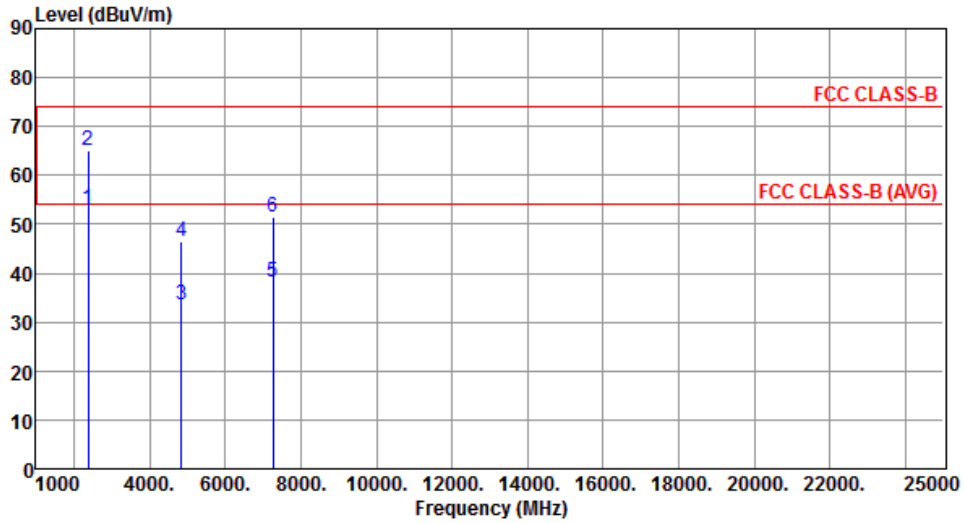


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	48.76	54.00	-5.24	51.98	-3.22	Average	210	97
2	2483.50	61.62	74.00	-12.38	64.84	-3.22	Peak	210	97
3	4924.00	33.30	54.00	-20.70	29.59	3.71	Average	100	182
4	4924.00	47.30	74.00	-26.70	43.59	3.71	Peak	100	182
5	7386.00	38.67	54.00	-15.33	30.12	8.55	Average	100	176
6	7386.00	51.80	74.00	-22.20	43.25	8.55	Peak	100	176

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

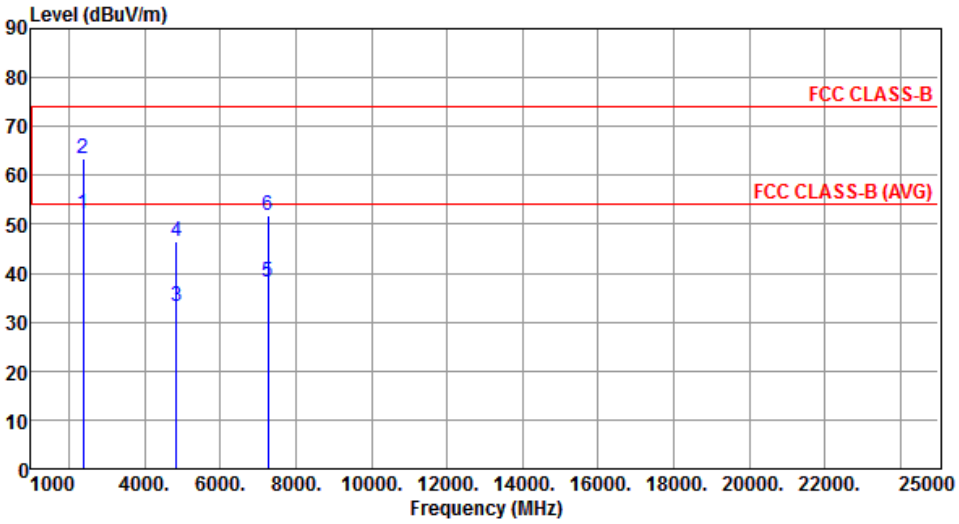
Modulation	HT40	Test Freq. (MHz)	2422
Polarization	Horizontal		



	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	53.00	54.00	-1.00	56.07	-3.07	Average	131	24
2	2390.00	65.03	74.00	-8.97	68.10	-3.07	Peak	131	24
3	4844.00	33.51	54.00	-20.49	29.95	3.56	Average	100	186
4	4844.00	46.51	74.00	-27.49	42.95	3.56	Peak	100	186
5	7266.00	38.27	54.00	-15.73	29.40	8.87	Average	100	191
6	7266.00	51.56	74.00	-22.44	42.69	8.87	Peak	100	191

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).

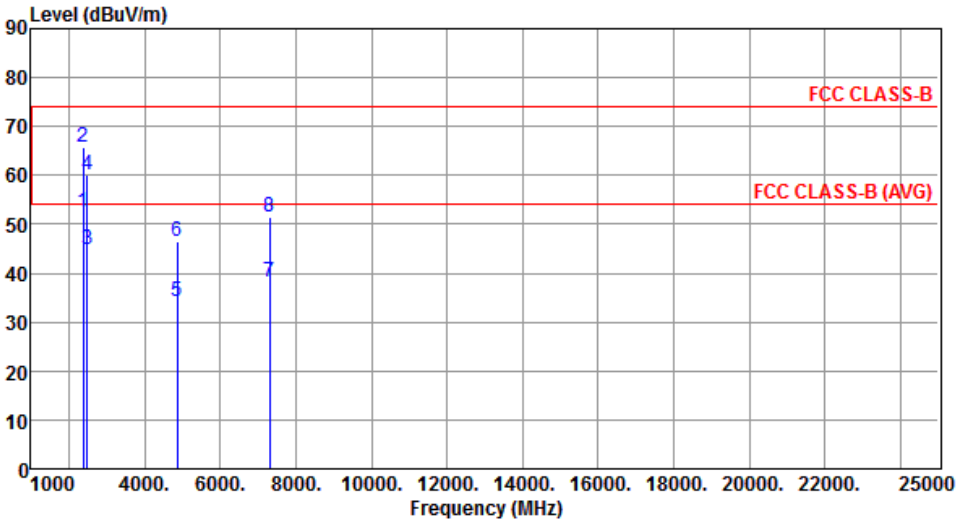
Modulation	HT40	Test Freq. (MHz)	2422
Polarization	Vertical		



	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	52.23	54.00	-1.77	55.30	-3.07	Average	199	95
2	2390.00	63.51	74.00	-10.49	66.58	-3.07	Peak	199	95
3	4844.00	33.17	54.00	-20.83	29.61	3.56	Average	100	176
4	4844.00	46.50	74.00	-27.50	42.94	3.56	Peak	100	176
5	7266.00	38.27	54.00	-15.73	29.40	8.87	Average	100	192
6	7266.00	51.79	74.00	-22.21	42.92	8.87	Peak	100	192

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).

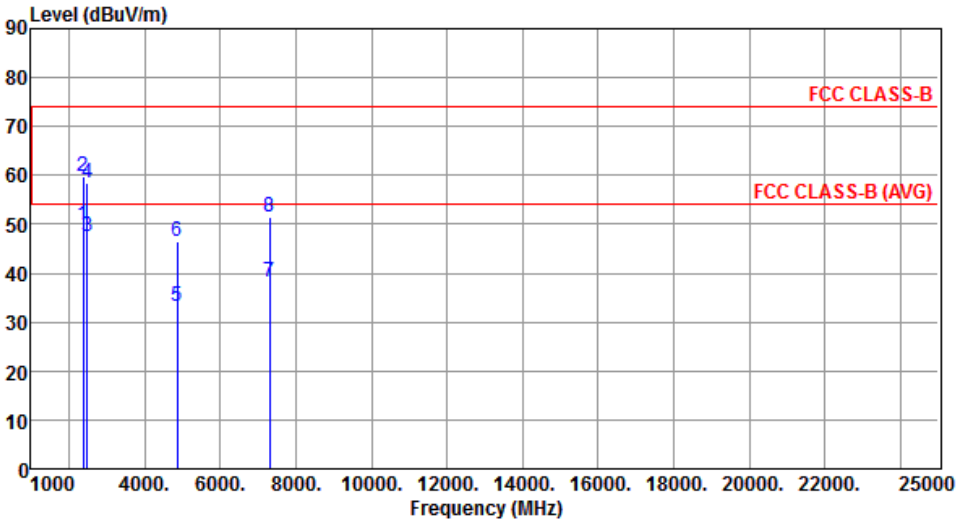
Modulation	HT40	Test Freq. (MHz)	2437
Polarization	Horizontal		



	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	52.59	54.00	-1.41	55.66	-3.07	Average	301	23
2	2390.00	65.69	74.00	-8.31	68.76	-3.07	Peak	301	23
3	2483.50	44.69	54.00	-9.31	47.91	-3.22	Average	301	23
4	2483.50	59.97	74.00	-14.03	63.19	-3.22	Peak	301	23
5	4874.00	34.14	54.00	-19.86	30.54	3.60	Average	100	182
6	4874.00	46.54	74.00	-27.46	42.94	3.60	Peak	100	182
7	7311.00	38.17	54.00	-15.83	29.35	8.82	Average	100	174
8	7311.00	51.63	74.00	-22.37	42.81	8.82	Peak	100	174

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).

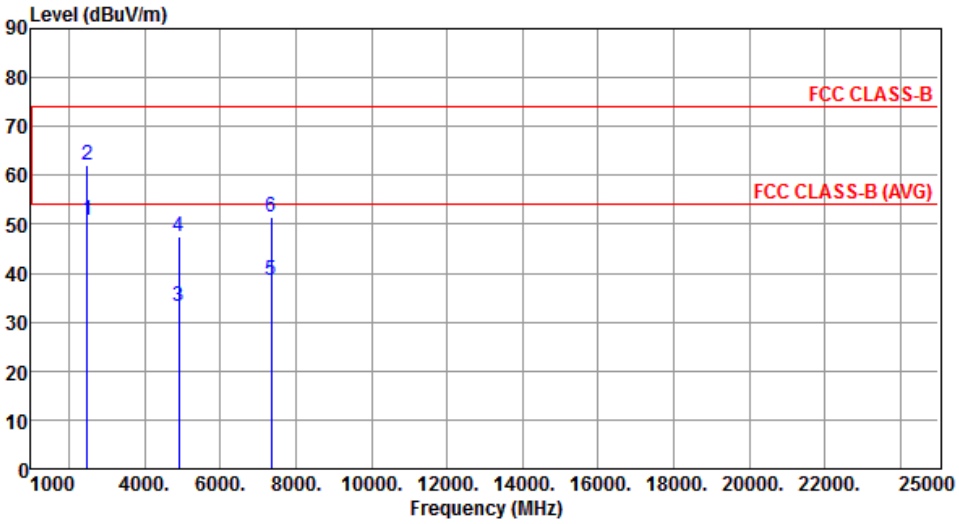
Modulation	HT40	**Test Freq. (MHz)**	2437
Polarization	Vertical		



	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	49.74	54.00	-4.26	52.81	-3.07	Average	197	98
2	2390.00	59.77	74.00	-14.23	62.84	-3.07	Peak	197	98
3	2483.50	47.66	54.00	-6.34	50.88	-3.22	Average	242	103
4	2483.50	58.53	74.00	-15.47	61.75	-3.22	Peak	242	103
5	4874.00	33.07	54.00	-20.93	29.47	3.60	Average	100	186
6	4874.00	46.54	74.00	-27.46	42.94	3.60	Peak	100	186
7	7311.00	38.29	54.00	-15.71	29.47	8.82	Average	100	192
8	7311.00	51.62	74.00	-22.38	42.80	8.82	Peak	100	192

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).

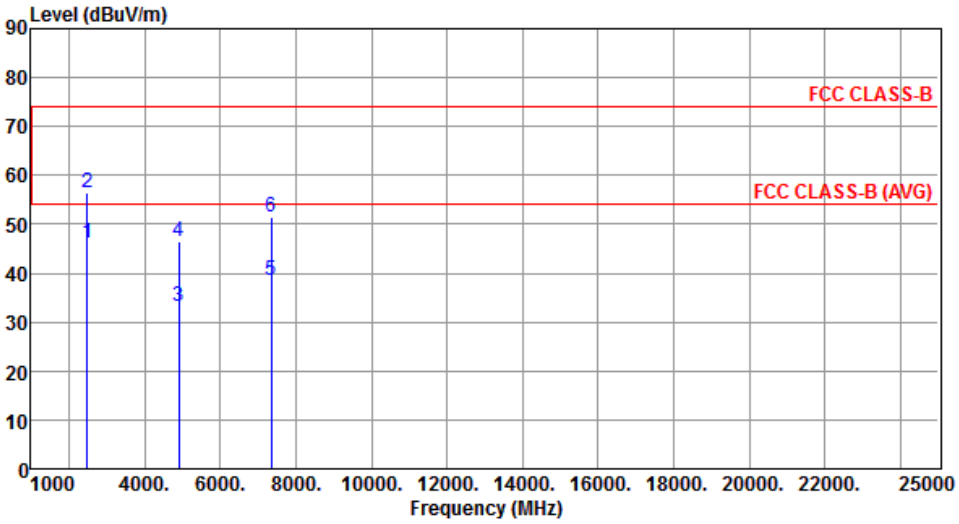
Modulation	HT40	Test Freq. (MHz)	2452
Polarization	Horizontal		



	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	50.72	54.00	-3.28	53.94	-3.22	Average	308	28
2	2483.50	62.25	74.00	-11.75	65.47	-3.22	Peak	308	28
3	4904.00	33.29	54.00	-20.71	29.64	3.65	Average	100	171
4	4904.00	47.59	74.00	-26.41	43.94	3.65	Peak	100	171
5	7356.00	38.56	54.00	-15.44	29.86	8.70	Average	100	182
6	7356.00	51.54	74.00	-22.46	42.84	8.70	Peak	100	182

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	46.08	54.00	-7.92	49.30	-3.22	Average	225	154
2	2483.50	56.61	74.00	-17.39	59.83	-3.22	Peak	225	154
3	4904.00	33.29	54.00	-20.71	29.64	3.65	Average	100	189
4	4904.00	46.46	74.00	-27.54	42.81	3.65	Peak	100	189
5	7356.00	38.53	54.00	-15.47	29.83	8.70	Average	100	177
6	7356.00	51.40	74.00	-22.60	42.70	8.70	Peak	100	177

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

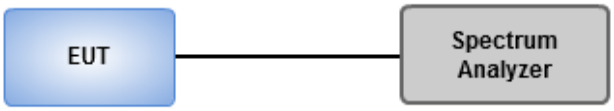
Reference level measurement

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

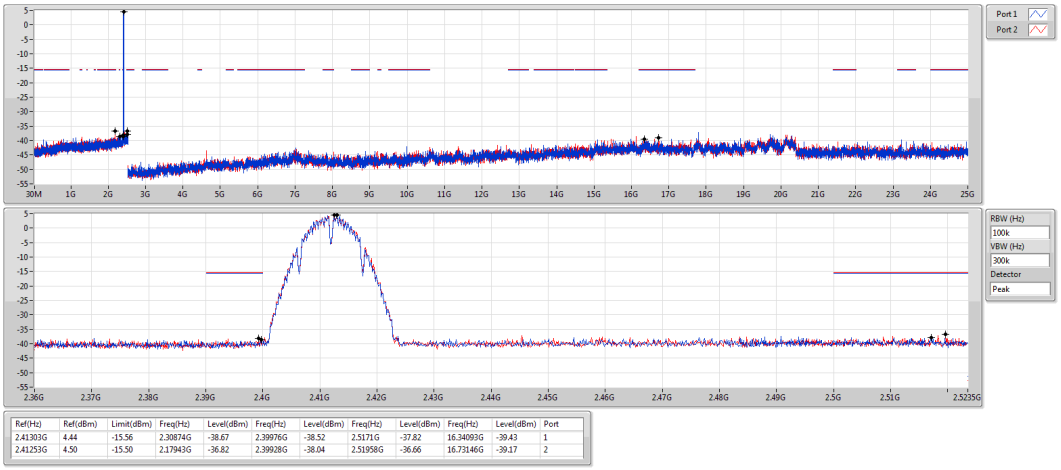
3.6.3 Test Setup



3.6.4 Unwanted Emissions into Non-Restricted Frequency Bands

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

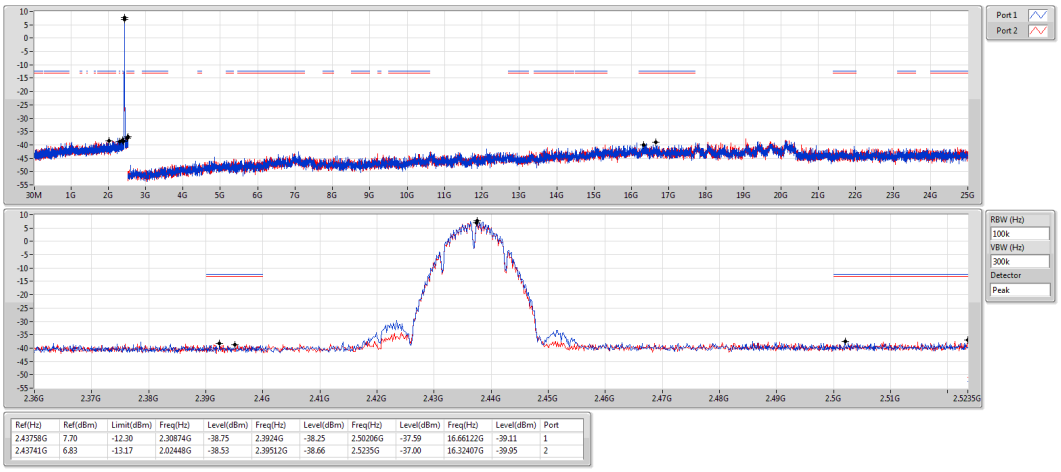
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41303G	4.44	-15.56	2.30874G	-38.67	2.39976G	-38.52	2.5171G	-37.82	16.34093G	-39.43	1
2.41253G	4.50	-15.50	2.17943G	-36.82	2.39928G	-38.04	2.51958G	-36.66	16.73146G	-39.17	2

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

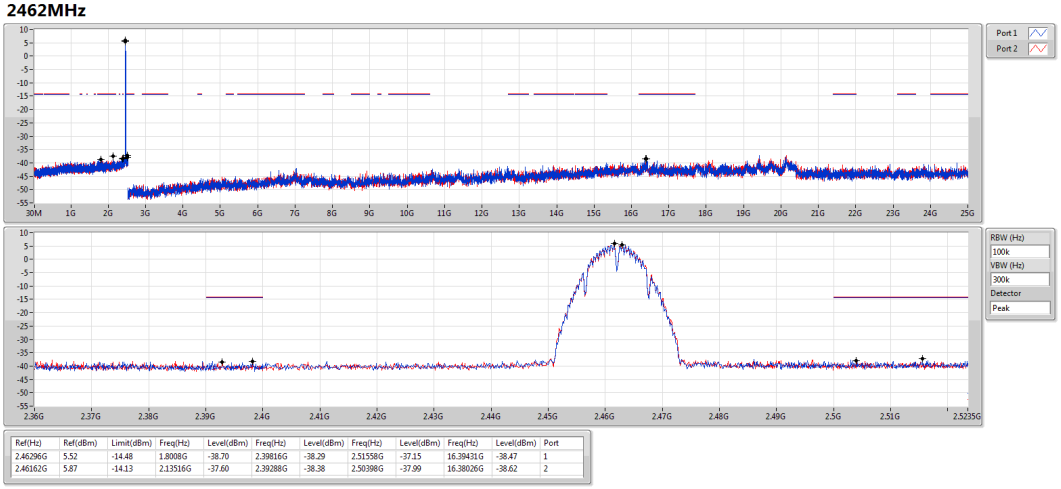
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43758G	7.70	-12.30	2.30874G	-38.75	2.3924G	-38.25	2.50206G	-37.59	16.66122G	-39.11	1
2.43741G	6.83	-13.17	2.02448G	-38.53	2.39512G	-38.66	2.5235G	-37.00	16.32407G	-39.95	2

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

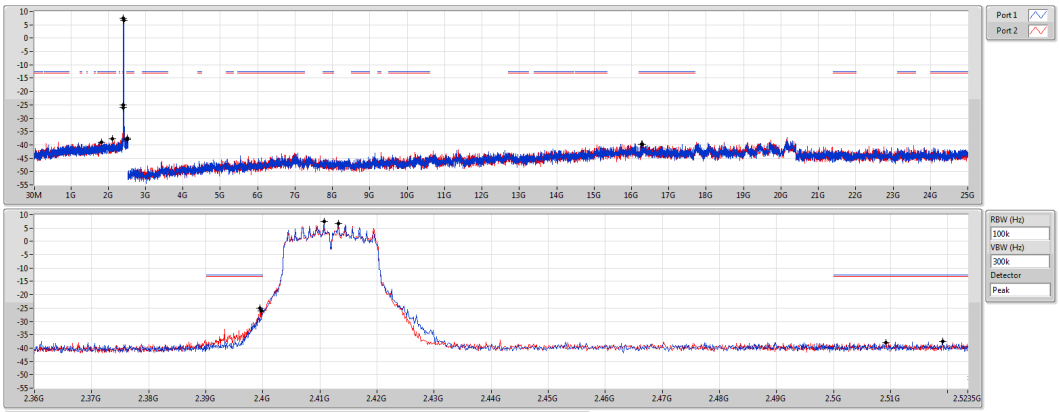
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.46296G	5.52	-14.48	1.8008G	-38.70	2.39816G	-38.29	2.51558G	-37.15	16.39431G	-38.47	1
2.46162G	5.87	-14.13	2.13516G	-37.60	2.39288G	-38.38	2.50398G	-37.99	16.38026G	-38.62	2

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

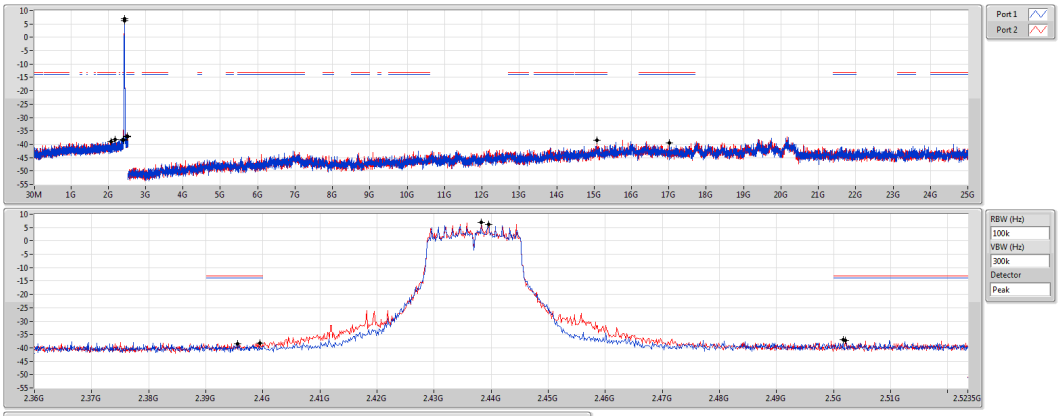
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41069G	7.37	-12.63	1.82061G	-39.04	2.39976G	-26.03	2.5191G	-37.44	16.29878G	-39.65	1
2.41319G	6.78	-13.22	2.11768G	-37.75	2.39952G	-25.11	2.50918G	-37.95	16.27631G	-39.89	2

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

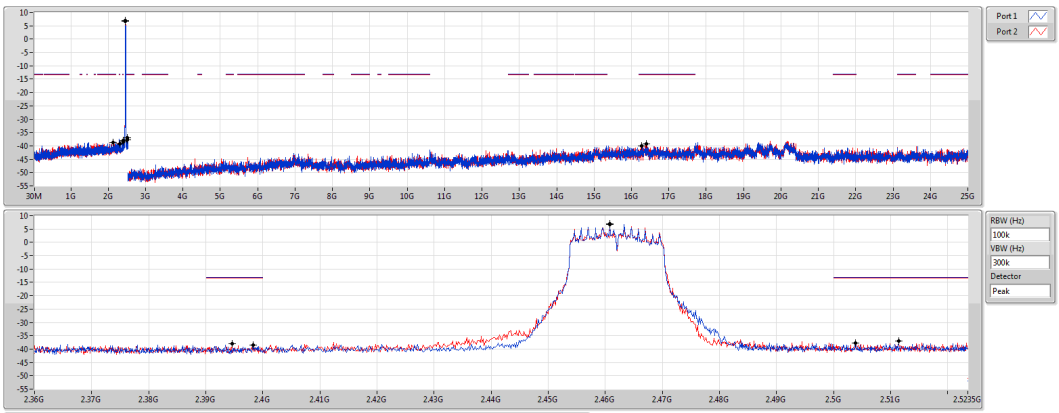
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43958G	6.13	-13.87	2.07341G	-39.03	2.3956G	-38.46	2.50166G	-37.06	17.0096G	-39.51	1
2.43824G	6.97	-13.03	2.17826G	-38.16	2.39952G	-38.30	2.50206G	-37.35	15.08505G	-38.42	2

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

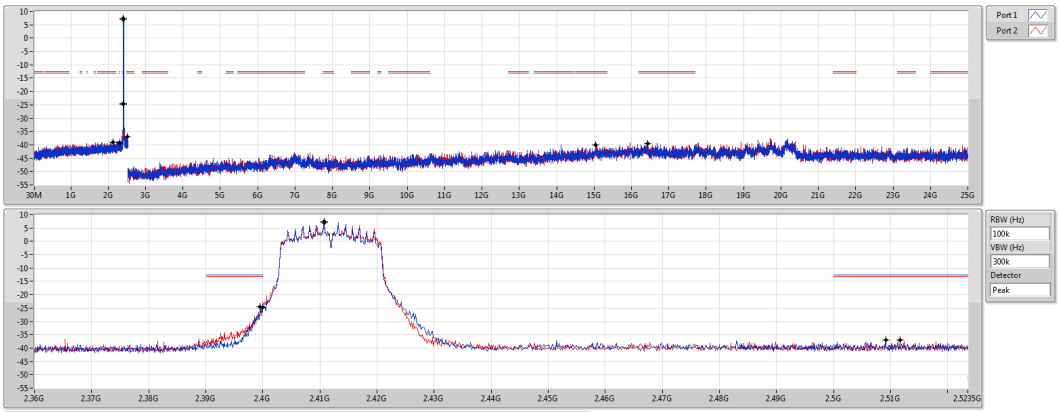
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.46079G	6.98	-13.02	2.13399G	-38.79	2.39832G	-38.42	2.50382G	-37.76	16.27631G	-39.92	1
2.46079G	6.61	-13.39	2.30292G	-39.15	2.39464G	-37.96	2.51142G	-36.96	16.39431G	-39.16	2

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

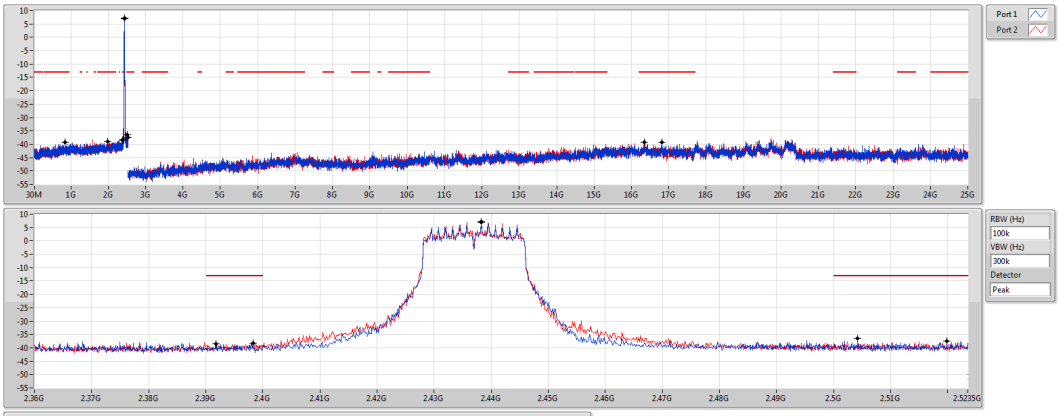
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41069G	7.48	-12.52	2.12817G	-38.96	2.39952G	-24.54	2.5091G	-37.04	16.42802G	-39.47	1
2.41069G	6.83	-13.17	2.30641G	-39.16	2.39992G	-24.72	2.51166G	-37.08	15.03448G	-39.98	2

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

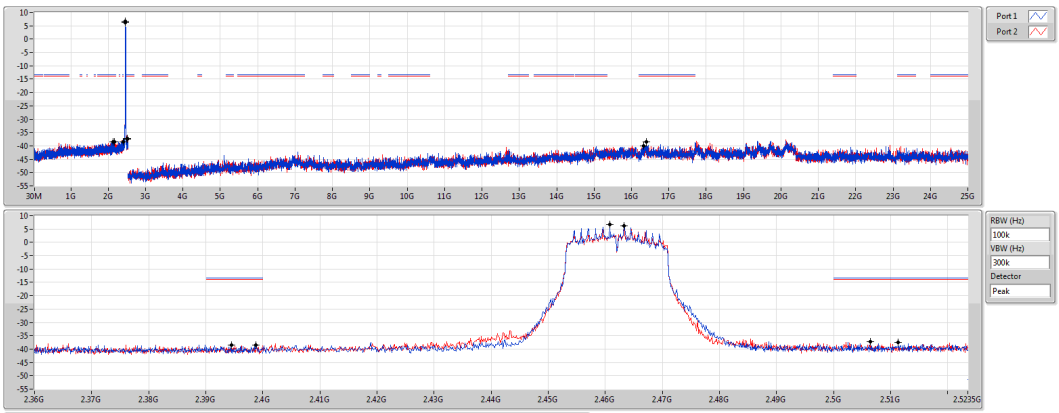
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43824G	7.21	-12.79	1.97905G	-38.92	2.39824G	-38.33	2.51982G	-37.55	16.82417G	-39.27	1
2.43824G	6.98	-13.02	852.49M	-39.38	2.39176G	-38.45	2.50422G	-36.49	16.33812G	-39.32	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
2.46079G	6.64	-13.36	2.13399G	-38.50	2.3988G	-38.40	2.51134G	-37.43	16.3915G	-38.60	1
2.46329G	6.24	-13.76	2.17011G	-38.54	2.39456G	-38.57	2.50646G	-37.20	16.3325G	-39.91	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
2.41069G	0.76	-19.24	2.13909G	-38.70	2.39712G	-34.82	2.54686G	-37.26	15.08587G	-40.06	1
2.41703G	1.46	-18.54	1.87116G	-38.11	2.39984G	-36.45	2.51758G	-37.10	16.25257G	-40.02	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
2.45194G	1.08	-18.92	2.1597G	-38.66	2.39952G	-34.13	2.5395G	-36.86	14.99893G	-40.03	1
2.43206G	1.48	-18.52	2.18031G	-38.62	2.39952G	-33.21	2.54782G	-37.76	16.67325G	-39.03	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
2.45695G	-1.19	-21.19	2.15283G	-37.87	2.39968G	-37.67	2.5603G	-36.70	16.60034G	-39.69	1
2.45695G	-2.45	-22.45	1.92498G	-38.92	2.39616G	-37.95	2.50366G	-37.16	16.37597G	-39.27	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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