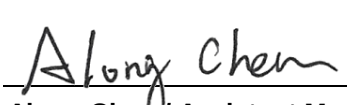
FCC Test Report

FCC ID	:	**P27IP3442M**
Equipment	:	**AC2600 Wi-Fi Mesh Router**
Model No.	:	**IP3442MXXXXXXXXXX** **(refer to item 1.1.1 for more details)**
Brand Name	:	**Sercomm**
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	:	**May 14, 2020**
Tested Date	:	**May 19 ~ Jun. 12, 2020**

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.
The report must not be used by the client to claim product certification, approval, or endorsement by TAF or any agency of government.

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
FR051403AC	Rev. 01	Initial issue	Jun. 23, 2020

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.165MHz 53.00 (Margin -12.21dB) - QP	Pass
15.247(d) 15.209	Radiated Emissions	[dBuV/m at 3m]: 2483.50MHz 72.92 (Margin -1.08dB) - PK	Pass
15.247(b)(3)	Maximum Output Power	Max Power [dBm]: 26.59	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
IP3442MXXXXXXXXXX	the 1st x should be "blank" or "-"; the rest x could be 0 to 9, A to Z, "blank", "-" or "/" , for marketing purpose
✦ The above models, model **IP3442M** was selected as a representative one for the final test and only its data was recorded in this report.	

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]	4	1-11 Mbps
2400-2483.5	g	2412-2462	1-11 [11]	4	6-54 Mbps
2400-2483.5	n (HT20)	2412-2462	1-11 [11]	4	MCS 0-31
2400-2483.5	n (HT40)	2422-2452	3-9 [7]	4	MCS 0-31
Note 1: RF output power specifies that Maximum Conducted (Average) Output Power. Note 2: 802.11b uses a combination of DSSS-DBPSK, DQPSK, CCK modulation. Note 3: 802.11g/n uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation.					

1.1.3 Antenna Details

Ant. No.	Model	Type	Connector	Gain (dBi)	Remark
1	Ant 1	PIFA	NA	2.8	---
2	Ant 2	PIFA	NA	3.1	---
3	Ant 3	Dipole	UFL	3.0	---
4	Ant 4	Dipole	UFL	2.6	---

1.1.4 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	12Vdc from AC adapter

1.1.5 Accessories

Accessories		
No.	**Equipment**	**Description**
1	AC adapter	Brand: LEI Model: MU24B1120200-A1 I/P: 100-240Vac, 50/60Hz, 0.7A O/P: 12Vdc, 2A Power Line: 1.5m non-shielded without core
2	AC adapter	Brand: MOSO Model: MSS-V2000WR120-024E0-US I/P: 100-240Vac, 50/60Hz, 0.7A max O/P: 12Vdc, 2A Power Line: 1.5m 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	MT7615 QA, Version: 0.0.1.88		
Duty Cycle and Duty Factor	Mode	Duty Cycle (%)	Duty Factor (dB)
	11b	99.98%	0.00
	11g	98.97%	0.05
	HT20	98.91%	0.05
	HT40	96.48%	0.16

1.1.8 Power Index of Test Tool

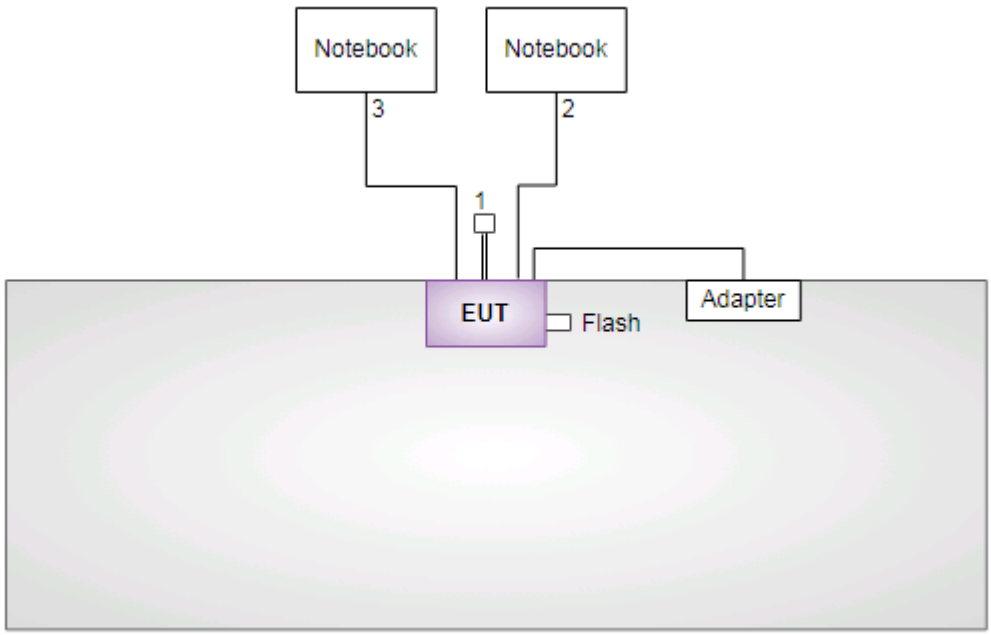
Modulation Mode	Test Frequency (MHz)	Power Index
11b	2412	26
11b	2437	26
11b	2462	24
11g	2412	1C
11g	2437	24
11g	2462	18
HT20	2412	1A
HT20	2437	24
HT20	2462	17
HT40	2422	19
HT40	2437	1C
HT40	2452	14

1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Remarks**
1	RJ45	ICC	RJ45-1.3m	**---**	---
2	RJ45	ICC	RJ45-1.3m	**---**	---
4	RJ45	ICC	RJ45-10m	**---**	---
5	Notebook	DELL	Latitude E5470	DoC	---
6	Notebook	DELL	Latitude E5470	DoC	---
7	USB 3.0 Flash	Transcend	JetFlash 700	---	---

1.3 Test Setup Chart

Test Setup Diagram



No.	Signal cable / Length (m)
1	RJ45, 1.3m(x2) non-shielded with load.
2	RJ45, 10m non-shielded.
3	RJ45, 10m non-shielded.

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	101658	Dec. 12, 2019	Dec. 11, 2020
LISN	R&S	ENV216	101579	Mar. 12, 2020	Mar. 11, 2021
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 22, 2019	Oct. 21, 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 chamber 3 / (03CH03-WS)				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101499	Jan. 09, 2020	Jan. 08, 2021
Receiver	R&S	ESR3	101657	Feb. 14, 2020	Feb. 13, 2021
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-685	Apr. 29, 2020	Apr. 28, 2021
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1206	Dec. 27, 2019	Dec. 26, 2020
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 15, 2019	Nov. 14, 2020
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 13, 2019	Nov. 12, 2020
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 07, 2019	Oct. 06, 2020
Preamplifier	EMC	EMC02325	980187	Aug. 14, 2019	Aug. 13, 2020
Preamplifier	Agilent	83017A	MY53270014	Aug. 07, 2019	Aug. 06, 2020
Preamplifier	EMC	EMC184045B	980192	Aug. 01, 2019	Jul. 31, 2020
RF cable-3M	HUBER+SUHNER	SUCOFLEX104	MY22620/4	Sep. 27, 2019	Sep. 26, 2020
RF cable-8M	EMC	EMC104-SM-SM-8000	181107	Sep. 27, 2019	Sep. 26, 2020
RF cable-1M	HUBER+SUHNER	SUCOFLEX104	MY22624/4	Sep. 27, 2019	Sep. 26, 2020
LF cable-0.8M	EMC	EMC8D-NM-NM-800	EMC8D-NM-NM-800-001	Sep. 27, 2019	Sep. 26, 2020
LF cable-3M	EMC	EMC8D-NM-NM-3000	131103	Sep. 27, 2019	Sep. 26, 2020
LF cable-13M	EMC	EMC8D-NM-NM-13000	131104	Sep. 27, 2019	Sep. 26, 2020
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. 30, 2020	Apr. 29, 2021
Power Meter	Anritsu	ML2495A	1241002	Oct. 23, 2019	Oct. 22, 2020
Power Sensor	Anritsu	MA2411B	1207366	Oct. 23, 2019	Oct. 22, 2020
Measurement Software	Sporton	Sporton_1	1.3.30	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Test Standards

47 CFR FCC Part 15.247
ANSI C63.10-2013

1.6 Reference Guidance

FCC KDB 558074 D01 15.247 Meas Guidance v05r02
FCC KDB 662911 D01 Multiple Transmitter Output v02r01

1.7 Deviation from Test Standard and Measurement Procedure

None

1.8 Measurement Uncertainty

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	±3.96 dB
Radiated emission > 1GHz	±4.51 dB

2 Test Configuration

2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	18°C / 61%	Alex Tsai
Radiated Emissions	03CH03-WS	24°C / 68%	Roger Lu
RF Conducted	TH01-WS	23°C / 63%	Brad Wu

- FCC Designation No.: TW0009
- FCC site registration No.: 207696
- ISED#: 10807A
- CAB identifier: TW2732

2.2 Testing Facility

Test Laboratory	International Certification Corp.
Test Site	CO01-WS, TH01-WS
Address of Test Site	No. 3-1, Lane 6, Wen San 3rd St., Kwei Shan District, Tao Yuan City 333, Taiwan, R.O.C.

Test Site	03CH03-WS
Address of Test Site	No. 14-1, Lane 19, Wen San 3rd St., Kwei Shan District, Tao Yuan City 333, Taiwan, R.O.C.

2.3 The Worst Test Modes and Channel Details

Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Configuration
Conducted Emissions	11b	2412	1 Mbps	---
Radiated Emissions ≤1GHz	11b	2412	1 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	---
NOTE: Adapter 1 (Brand: LEI) and Adapter 2 (Brand: MOSO) had been covered during the pretest. The worst adapter is **Adapter 2 (Brand: MOSO)**, and only its data was record in this test report.				

3 Transmitter Test Results

3.1 Conducted Emissions

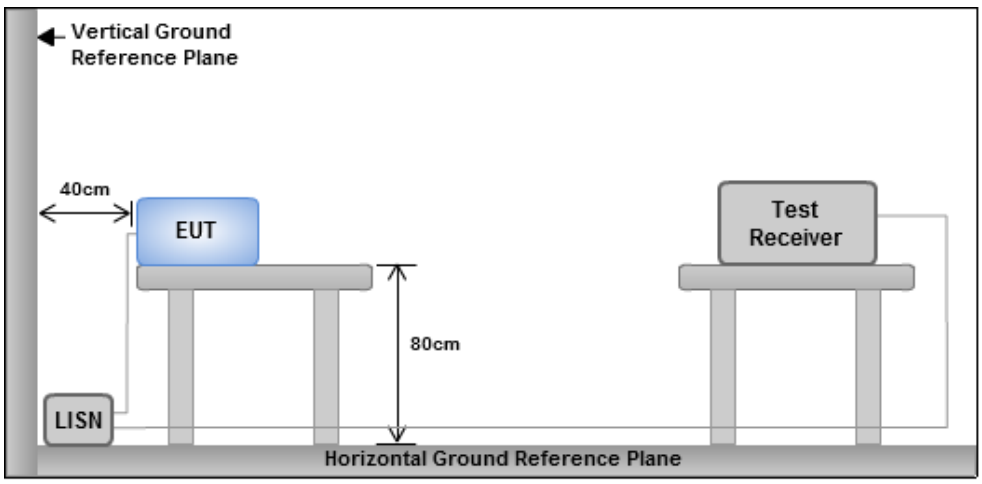
3.1.1 Limit of Conducted Emissions

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

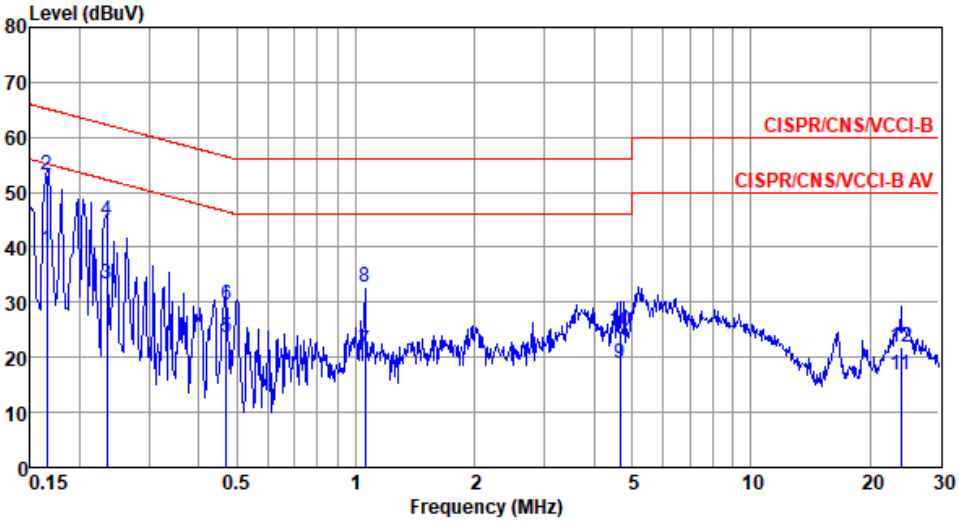


Note: 1. Support units were connected to second LISN.

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

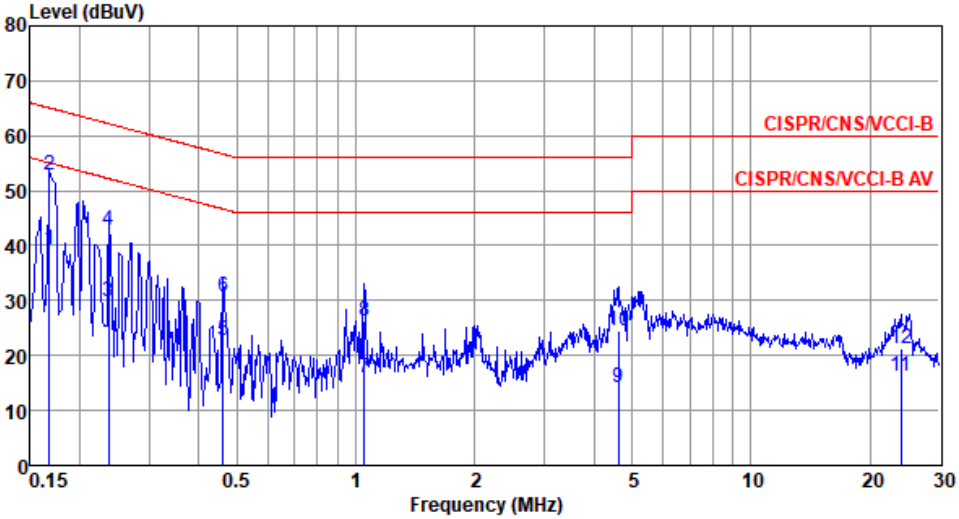
Modulation	11b	Test Freq. (MHz)	2412
Power Phase	Line		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.165	39.52	55.21	-15.69	29.66	9.64	0.05	Average
2*	0.165	53.00	65.21	-12.21	43.14	9.64	0.05	QP
3	0.234	33.25	52.30	-19.05	23.36	9.63	0.06	Average
4	0.234	44.90	62.30	-17.40	35.01	9.63	0.06	QP
5	0.471	23.55	46.49	-22.94	13.57	9.63	0.09	Average
6	0.471	29.53	56.49	-26.96	19.55	9.63	0.09	QP
7	1.054	21.24	46.00	-24.76	11.17	9.63	0.12	Average
8	1.054	32.70	56.00	-23.30	22.63	9.63	0.12	QP
9	4.672	18.97	46.00	-27.03	8.62	9.66	0.31	Average
10	4.672	24.85	56.00	-31.15	14.50	9.66	0.31	QP
11	24.015	16.83	50.00	-33.17	5.78	9.67	0.70	Average
12	24.015	21.91	60.00	-38.09	10.86	9.67	0.70	QP

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

Modulation	11b	Test Freq. (MHz)	2412
Power Phase	Neutral		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.168	39.17	55.08	-15.91	29.33	9.66	0.05	Average
2*	0.168	52.83	65.08	-12.25	42.99	9.66	0.05	QP
3	0.237	29.73	52.22	-22.49	19.87	9.65	0.06	Average
4	0.237	42.73	62.22	-19.49	32.87	9.65	0.06	QP
5	0.461	22.87	46.67	-23.80	12.96	9.65	0.09	Average
6	0.461	30.77	56.67	-25.90	20.86	9.65	0.09	QP
7	1.049	15.98	46.00	-30.02	6.01	9.65	0.12	Average
8	1.049	26.15	56.00	-29.85	16.18	9.65	0.12	QP
9	4.622	14.28	46.00	-31.72	4.02	9.68	0.31	Average
10	4.622	24.56	56.00	-31.44	14.30	9.68	0.31	QP
11	24.015	16.25	50.00	-33.75	5.09	9.81	0.70	Average
12	24.015	21.32	60.00	-38.68	10.16	9.81	0.70	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

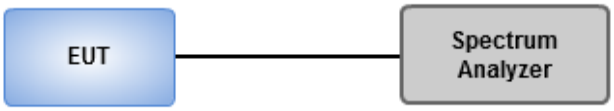
6dB Bandwidth

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)_4TX	10M	14.689M	14M7G1D	9.058M	13.965M
802.11g_Nss1,(6Mbps)_4TX	16.304M	16.932M	16M9D1D	10.29M	16.353M
802.11n HT20_Nss1,(MCS0)_4TX	16.594M	17.945M	17M9D1D	13.188M	17.438M
802.11n HT40_Nss1,(MCS0)_4TX	35.072M	36.179M	36M2D1D	31.304M	35.89M

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

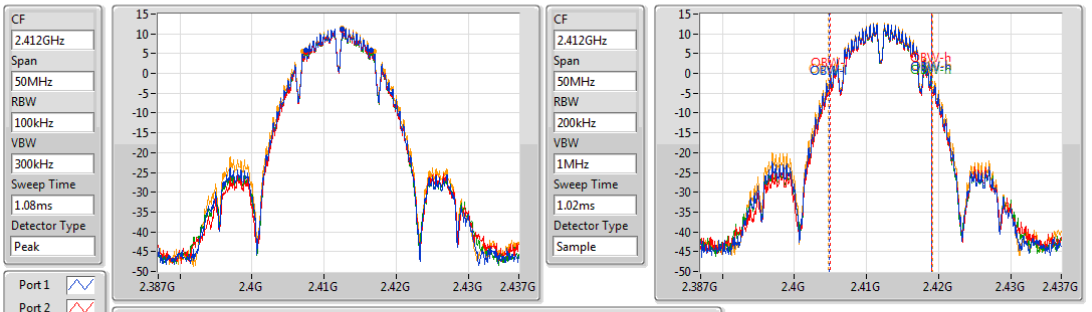
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)	Port 2-N dB (Hz)	Port 2-OBW (Hz)	Port 3-N dB (Hz)	Port 3-OBW (Hz)	Port 4-N dB (Hz)	Port 4-OBW (Hz)
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	9.13M	14.327M	9.13M	14.11M	9.13M	14.255M	10M	14.616M
2437MHz	Pass	500k	9.13M	14.255M	9.13M	14.182M	9.13M	14.255M	10M	14.689M
2462MHz	Pass	500k	9.058M	14.038M	9.058M	13.965M	9.13M	13.965M	9.13M	14.11M
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	13.768M	16.498M	15.435M	16.353M	13.043M	16.498M	16.304M	16.498M
2437MHz	Pass	500k	10.29M	16.932M	14.42M	16.715M	15.435M	16.932M	14.42M	16.86M
2462MHz	Pass	500k	15.797M	16.425M	15.072M	16.353M	16.304M	16.425M	15.652M	16.425M
802.11n HT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	500k	15.87M	17.511M	14.71M	17.511M	13.188M	17.583M	16.594M	17.511M
2437MHz	Pass	500k	15.145M	17.873M	15.942M	17.945M	13.841M	17.873M	15.145M	17.945M
2462MHz	Pass	500k	15.072M	17.438M	15.725M	17.438M	15.797M	17.511M	15.29M	17.511M
802.11n HT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	500k	31.304M	35.89M	33.768M	36.179M	32.609M	35.89M	32.609M	35.89M
2437MHz	Pass	500k	33.913M	35.89M	35.072M	36.179M	35.072M	35.89M	34.058M	36.035M
2452MHz	Pass	500k	31.304M	36.035M	33.768M	36.035M	33.913M	35.89M	35.072M	36.035M

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

802.11b_Nss1,(1Mbps)_4TX **EBW**

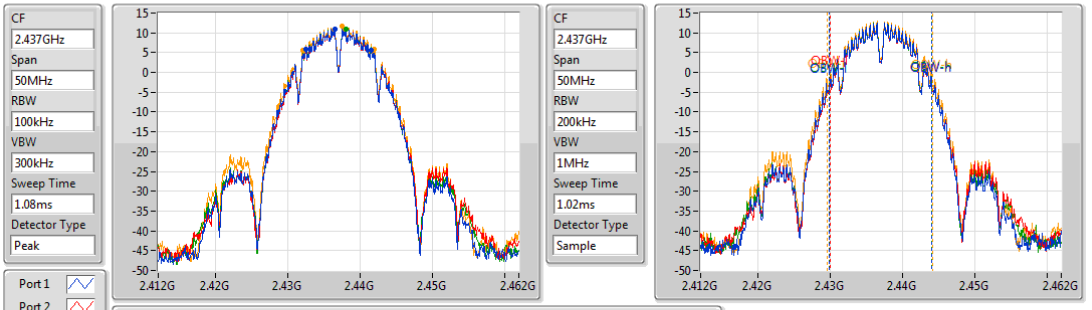
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.13M	2.407435G	2.416565G	14.327M	2.404764G	2.419091G	500k	1
9.13M	2.407435G	2.416565G	14.11M	2.404909G	2.419019G	500k	2
9.13M	2.407435G	2.416565G	14.255M	2.404836G	2.419091G	500k	3
10M	2.407G	2.417G	14.616M	2.404619G	2.419236G	500k	4

802.11b_Nss1,(1Mbps)_4TX **EBW**

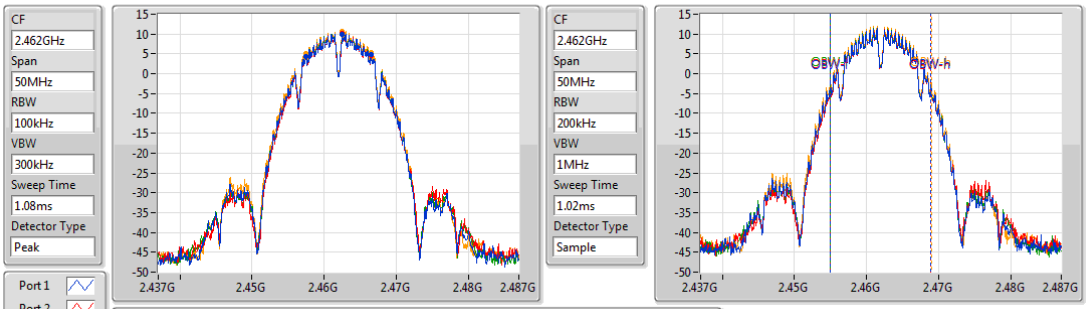
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.13M	2.432435G	2.441565G	14.255M	2.429836G	2.444091G	500k	1
9.13M	2.432435G	2.441565G	14.182M	2.429909G	2.444091G	500k	2
9.13M	2.432435G	2.441565G	14.255M	2.429836G	2.444091G	500k	3
10M	2.432G	2.442G	14.689M	2.429547G	2.444236G	500k	4

802.11b_Nss1,(1Mbps)_4TX **EBW**

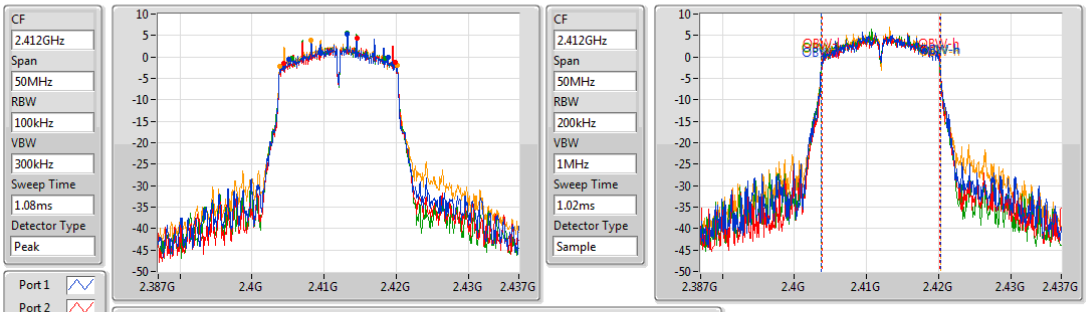
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
9.058M	2.457435G	2.466493G	14.038M	2.454909G	2.468946G	500k	1
9.058M	2.457435G	2.466493G	13.965M	2.454981G	2.468946G	500k	2
9.13M	2.457435G	2.466565G	13.965M	2.454981G	2.468946G	500k	3
9.13M	2.457435G	2.466565G	14.11M	2.454909G	2.469019G	500k	4

802.11g_Nss1,(6Mbps)_4TX **EBW**

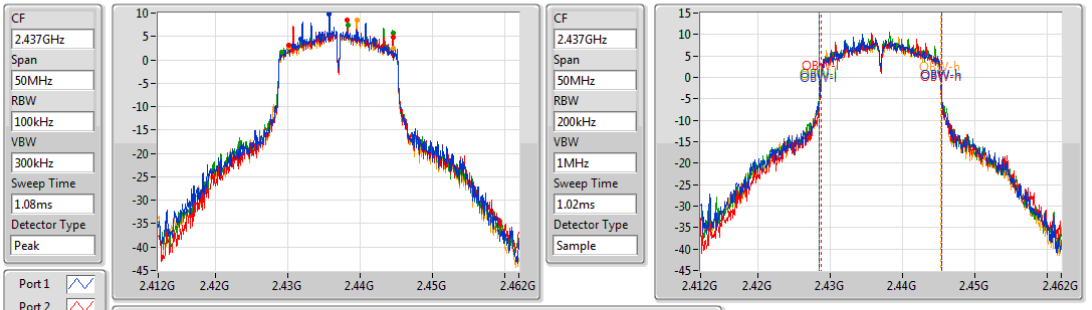
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
13.768M	2.405116G	2.418884G	16.498M	2.403751G	2.420249G	500k	1
15.435M	2.404464G	2.419899G	16.353M	2.403823G	2.420177G	500k	2
13.043M	2.405478G	2.418522G	16.498M	2.403679G	2.420177G	500k	3
16.304M	2.403884G	2.420188G	16.498M	2.403751G	2.420249G	500k	4

802.11g_Nss1,(6Mbps)_4TX **EBW**

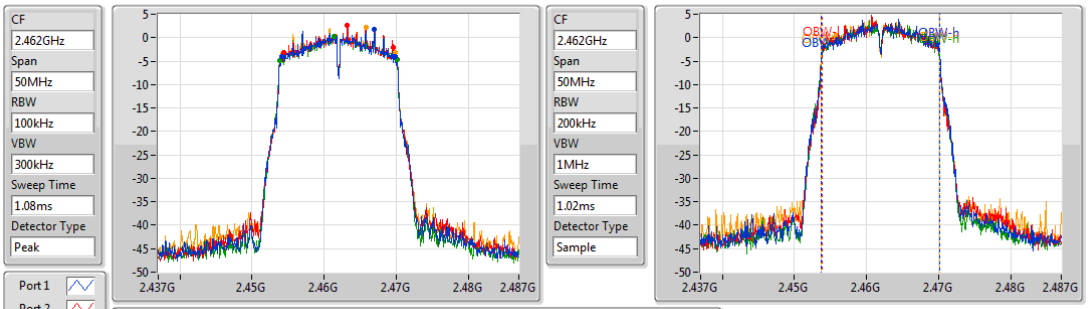
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.29M	2.43171G	2.442G	16.932M	2.428462G	2.445394G	500k	1
14.42M	2.430116G	2.444536G	16.715M	2.428679G	2.445394G	500k	2
15.435M	2.429101G	2.444536G	16.932M	2.428462G	2.445394G	500k	3
14.42M	2.430116G	2.444536G	16.86M	2.428462G	2.445321G	500k	4

802.11g_Nss1,(6Mbps)_4TX **EBW**

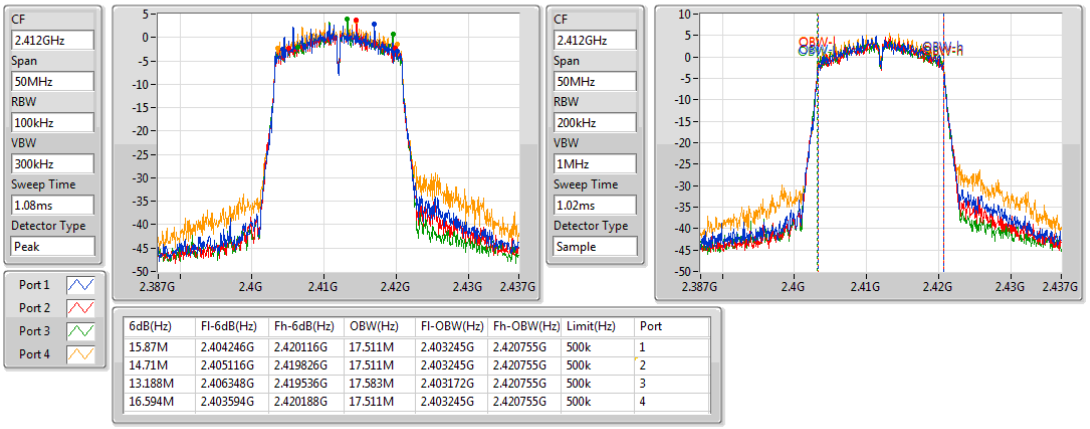
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.797M	2.454101G	2.469899G	16.425M	2.453751G	2.470177G	500k	1
15.072M	2.454464G	2.469536G	16.353M	2.453823G	2.470177G	500k	2
16.304M	2.453812G	2.470116G	16.425M	2.453751G	2.470177G	500k	3
15.652M	2.454246G	2.469899G	16.425M	2.453751G	2.470177G	500k	4

802.11n HT20_Nss1,(MCS0)_4TX **EBW**

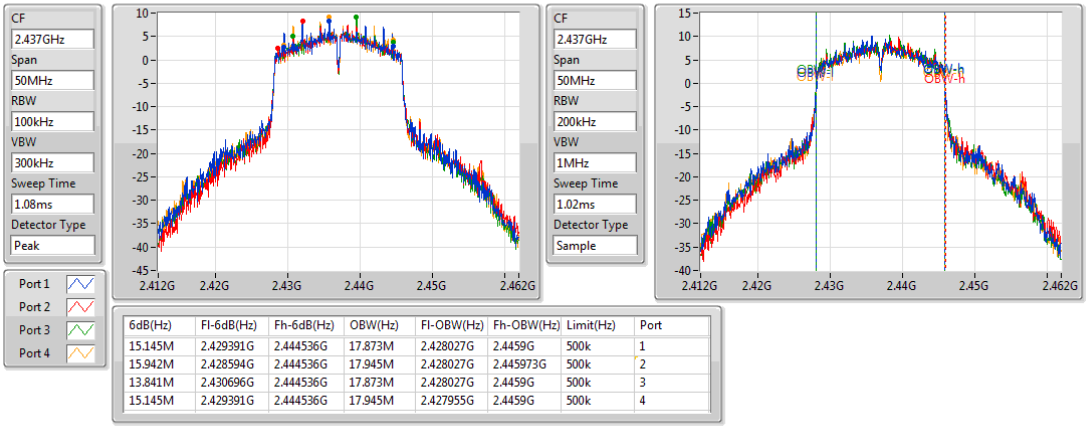
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.87M	2.404246G	2.420116G	17.511M	2.403245G	2.420755G	500k	1
14.71M	2.405116G	2.419826G	17.511M	2.403245G	2.420755G	500k	2
13.188M	2.406348G	2.419536G	17.583M	2.403172G	2.420755G	500k	3
16.594M	2.403594G	2.420188G	17.511M	2.403245G	2.420755G	500k	4

802.11n HT20_Nss1,(MCS0)_4TX **EBW**

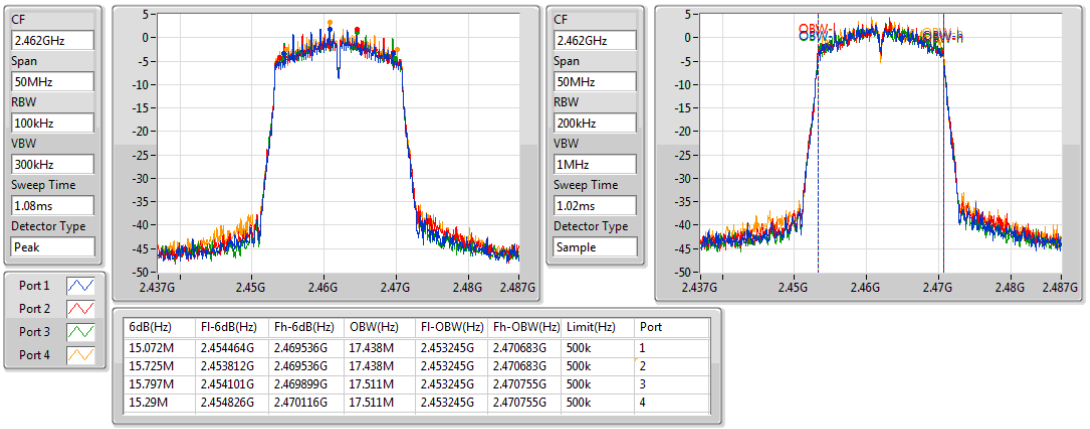
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.145M	2.429391G	2.444536G	17.873M	2.428027G	2.4459G	500k	1
15.942M	2.428594G	2.444536G	17.945M	2.428027G	2.445973G	500k	2
13.841M	2.430696G	2.444536G	17.873M	2.428027G	2.4459G	500k	3
15.145M	2.429391G	2.444536G	17.945M	2.427955G	2.4459G	500k	4

802.11n HT20_Nss1,(MCS0)_4TX **EBW**

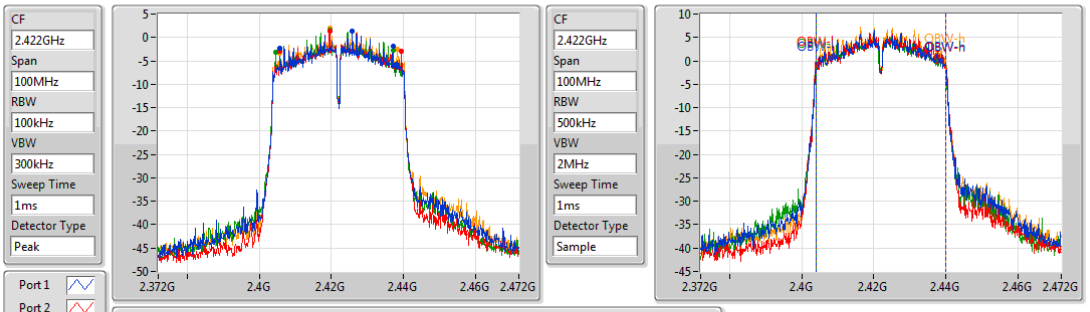
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
15.072M	2.454464G	2.469536G	17.438M	2.453245G	2.470683G	500k	1
15.725M	2.453812G	2.469536G	17.438M	2.453245G	2.470683G	500k	2
15.797M	2.454101G	2.469899G	17.511M	2.453245G	2.470755G	500k	3
15.29M	2.454826G	2.470116G	17.511M	2.453245G	2.470755G	500k	4

802.11n HT40_Nss1,(MCS0)_4TX **EBW**

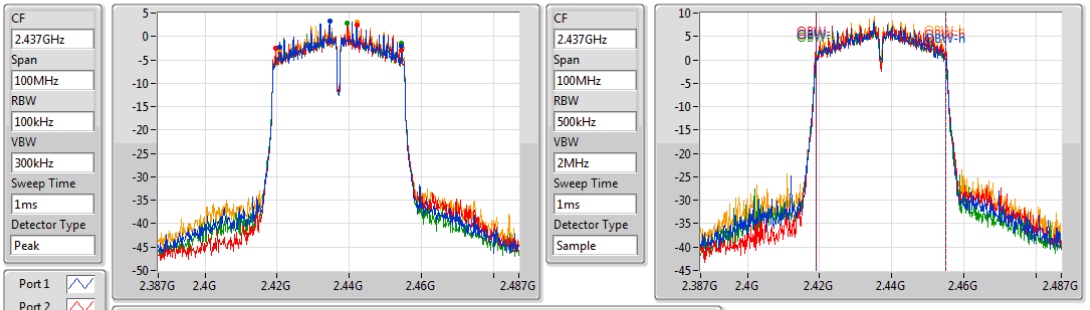
2422MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
31.304M	2.405768G	2.437072G	35.89M	2.404055G	2.439945G	500k	1
33.768M	2.405768G	2.439536G	36.179M	2.40391G	2.44009G	500k	2
32.609M	2.404464G	2.437072G	35.89M	2.404055G	2.439945G	500k	3
32.609M	2.405768G	2.438377G	35.89M	2.404055G	2.439945G	500k	4

802.11n HT40_Nss1,(MCS0)_4TX **EBW**

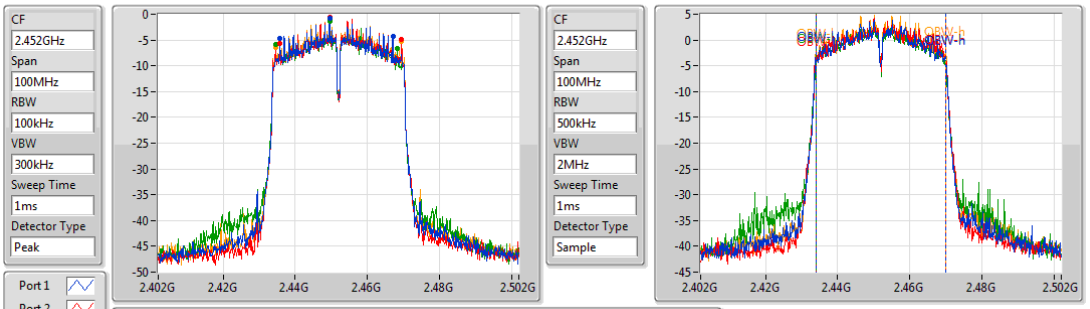
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
33.913M	2.420623G	2.454536G	35.89M	2.419055G	2.454945G	500k	1
35.072M	2.419464G	2.454536G	36.179M	2.41891G	2.45509G	500k	2
35.072M	2.419464G	2.454536G	35.89M	2.419055G	2.454945G	500k	3
34.058M	2.420623G	2.454681G	36.035M	2.419055G	2.45509G	500k	4

802.11n HT40_Nss1,(MCS0)_4TX **EBW**

2452MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
31.304M	2.435768G	2.467072G	36.035M	2.43391G	2.469945G	500k	1
33.768M	2.435768G	2.469536G	36.035M	2.43391G	2.469945G	500k	2
33.913M	2.434464G	2.468377G	35.89M	2.434055G	2.469945G	500k	3
35.072M	2.434464G	2.469536G	36.035M	2.43391G	2.469945G	500k	4

3.3 RF Output Power

3.3.1 Limit of RF Output Power

Conducted power shall not exceed 1Watt.

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

3.3.2 Test Procedures

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

3.3.3 Test Setup

3.3.4 Test Result of Maximum Output Power

Summary

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_4TX	26.59	0.45604
802.11g_Nss1,(6Mbps)_4TX	25.43	0.34914
802.11n HT20_Nss1,(MCS0)_4TX	25.36	0.34356
802.11n HT40_Nss1,(MCS0)_4TX	21.54	0.14256

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Port 2 (dBm)	Port 3 (dBm)	Port 4 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	3.10	20.73	20.61	20.49	20.44	26.59	30.00	29.69	36.00
2437MHz	Pass	3.10	20.74	20.66	20.27	20.32	26.52	30.00	29.62	36.00
2462MHz	Pass	3.10	19.72	19.41	19.24	19.33	25.45	30.00	28.55	36.00
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	3.10	15.76	15.74	15.34	15.57	21.63	30.00	24.73	36.00
2437MHz	Pass	3.10	19.81	19.49	19.12	19.17	25.43	30.00	28.53	36.00
2462MHz	Pass	3.10	13.74	13.82	13.19	13.69	19.64	30.00	22.74	36.00
802.11n HT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2412MHz	Pass	3.10	14.65	14.99	14.27	14.49	20.63	30.00	23.73	36.00
2437MHz	Pass	3.10	19.58	19.48	19.07	19.22	25.36	30.00	28.46	36.00
2462MHz	Pass	3.10	13.19	13.26	12.56	12.97	19.02	30.00	22.12	36.00
802.11n HT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-	-	-
2422MHz	Pass	3.10	14.33	14.45	13.85	13.98	20.18	30.00	23.28	36.00
2437MHz	Pass	3.10	15.78	15.63	15.22	15.43	21.54	30.00	24.64	36.00
2452MHz	Pass	3.10	11.65	11.64	11.13	11.44	17.49	30.00	20.59	36.00

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

3.4 Power Spectral Density

3.4.1 Limit of Power Spectral Density

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

3.4.2 Test Procedures

Average PSD, duty cycle ≥ 98%

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

Average PSD, duty cycle < 98%

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

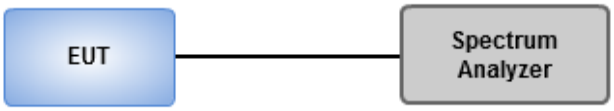
2 Set the sweep time to: ≥ 10 (number of measurement points in sweep) x (total on/off period of the transmitted signal).

3 Perform the measurement over a single sweep.

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

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

3.4.3 Test Setup



3.4.4 Test Result of Power Spectral Density

Summary

Mode	PD (dBm/RBW)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_4TX	4.39
802.11g_Nss1,(6Mbps)_4TX	1.81
802.11n HT20_Nss1,(MCS0)_4TX	1.99
802.11n HT40_Nss1,(MCS0)_4TX	-5.10

RBW=30kHz.

Result

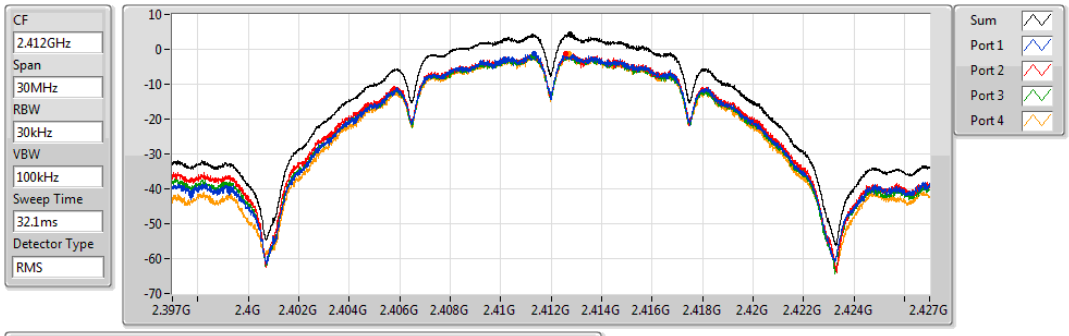
Mode	Result	DG (dBi)	Port 1 (dBm/RBW)	Port 2 (dBm/RBW)	Port 3 (dBm/RBW)	Port 4 (dBm/RBW)	PD (dBm/RBW)	PD Limit (dBm/RBW)
802.11b_Nss1,(1Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	8.90	-1.27	-1.14	-1.78	-1.14	4.39	5.10
2437MHz	Pass	8.90	-1.30	-1.37	-1.43	-1.99	4.14	5.10
2462MHz	Pass	8.90	-1.70	-1.41	-1.85	-1.03	4.21	5.10
802.11g_Nss1,(6Mbps)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	8.90	-7.39	-7.38	-7.63	-7.04	-1.77	5.10
2437MHz	Pass	8.90	-3.01	-3.34	-3.69	-4.05	1.81	5.10
2462MHz	Pass	8.90	-9.38	-9.40	-9.53	-8.98	-3.72	5.10
802.11n HT20_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2412MHz	Pass	8.90	-8.07	-7.74	-8.72	-7.50	-2.58	5.10
2437MHz	Pass	8.90	-3.40	-3.78	-3.69	-3.57	1.99	5.10
2462MHz	Pass	8.90	-9.82	-9.79	-10.16	-8.20	-4.06	5.10
802.11n HT40_Nss1,(MCS0)_4TX	-	-	-	-	-	-	-	-
2422MHz	Pass	8.90	-12.53	-12.82	-12.70	-11.98	-6.63	5.10
2437MHz	Pass	8.90	-10.95	-11.05	-11.19	-10.81	-5.10	5.10
2452MHz	Pass	8.90	-15.14	-14.93	-15.22	-14.68	-9.11	5.10

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

Directional gain = 10 * log($(10^{2.8/20}+10^{3.1/20}+10^{3/20}+10^{2.6/20})^2$/4) = 8.9 dBi > 6 dBi, Limit shall be reduced to 8 dBm – (8.9 dBi – 6 dBi) = 5.1 dBm

802.11b_Nss1,(1Mbps)_4TX **PSD**

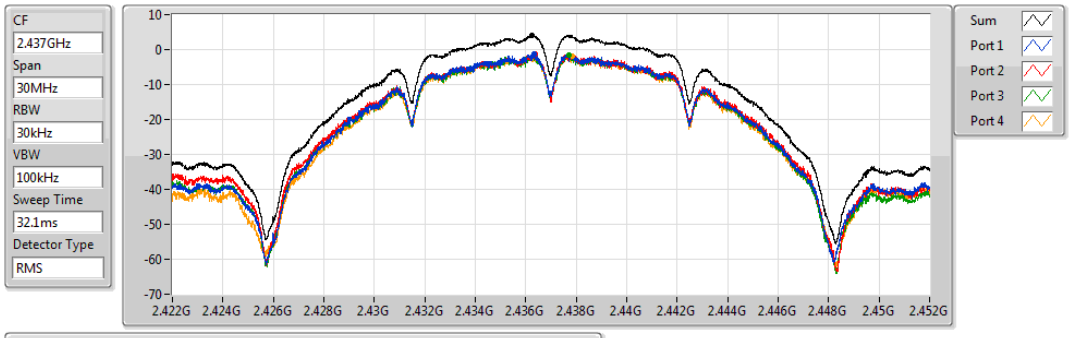
2412MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.39	4.39	-1.27	-1.14	-1.78	-1.14

802.11b_Nss1,(1Mbps)_4TX **PSD**

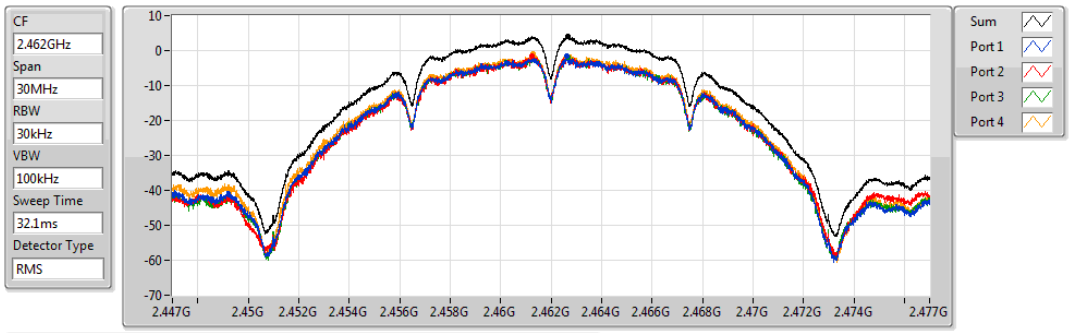
2437MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.14	4.14	-1.30	-1.37	-1.43	-1.99

802.11b_Nss1,(1Mbps)_4TX **PSD**

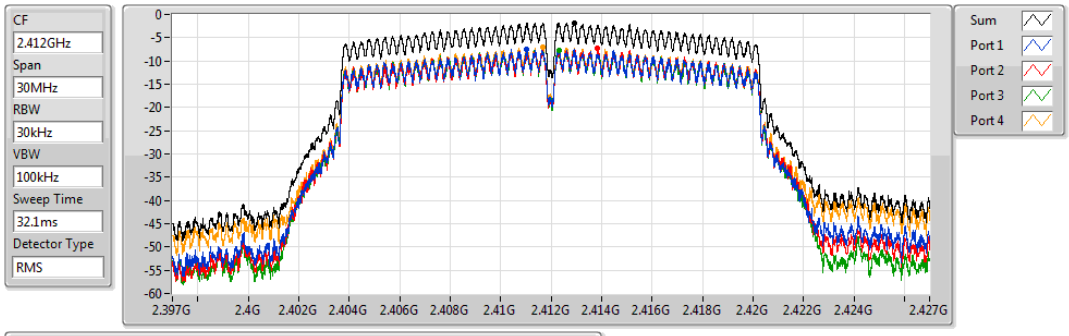
2462MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
4.21	4.21	-1.70	-1.41	-1.85	-1.03

802.11g_Nss1,(6Mbps)_4TX **PSD**

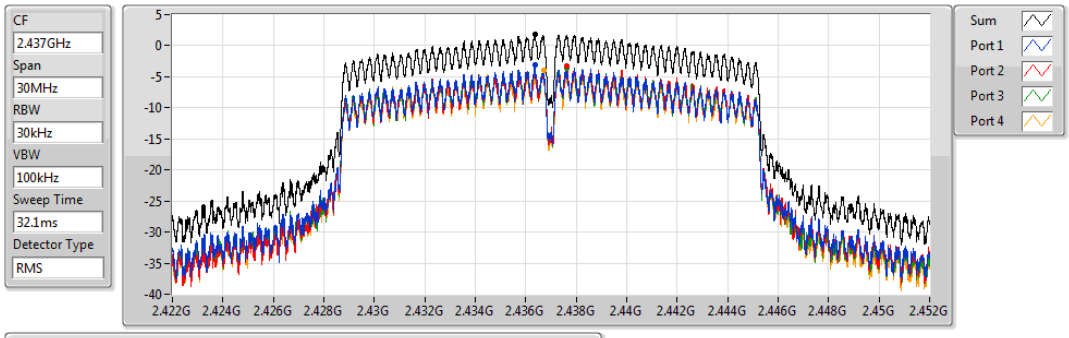
2412MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-1.77	-1.77	-7.39	-7.38	-7.63	-7.04

802.11g_Nss1,(6Mbps)_4TX **PSD**

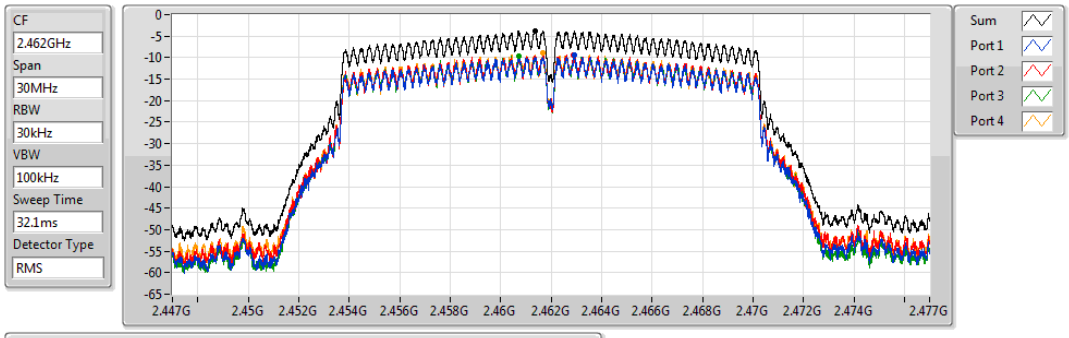
2437MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.81	1.81	-3.01	-3.34	-3.69	-4.05

802.11g_Nss1,(6Mbps)_4TX **PSD**

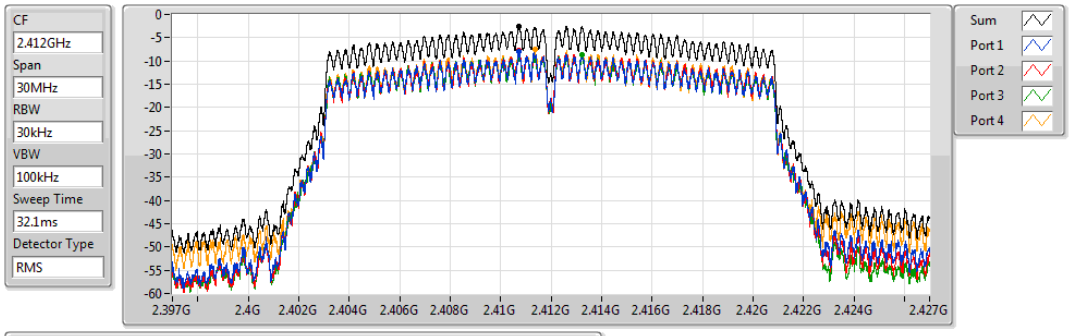
2462MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-3.72	-3.72	-9.38	-9.40	-9.53	-8.98

802.11n HT20_Nss1,(MCS0)_4TX PSD

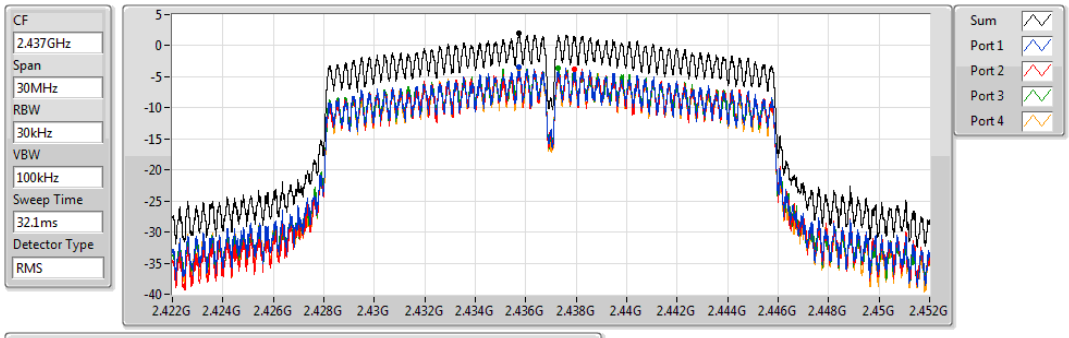
2412MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-2.58	-2.58	-8.07	-7.74	-8.72	-7.50

802.11n HT20_Nss1,(MCS0)_4TX PSD

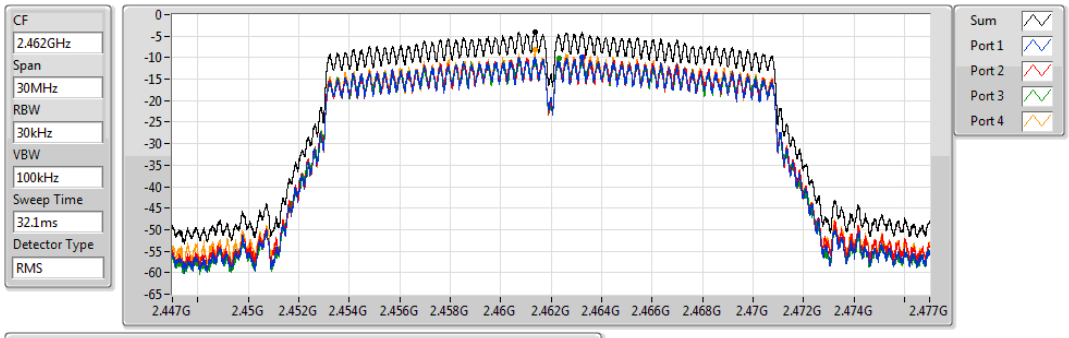
2437MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
1.99	1.99	-3.40	-3.78	-3.69	-3.57

802.11n HT20_Nss1,(MCS0)_4TX PSD

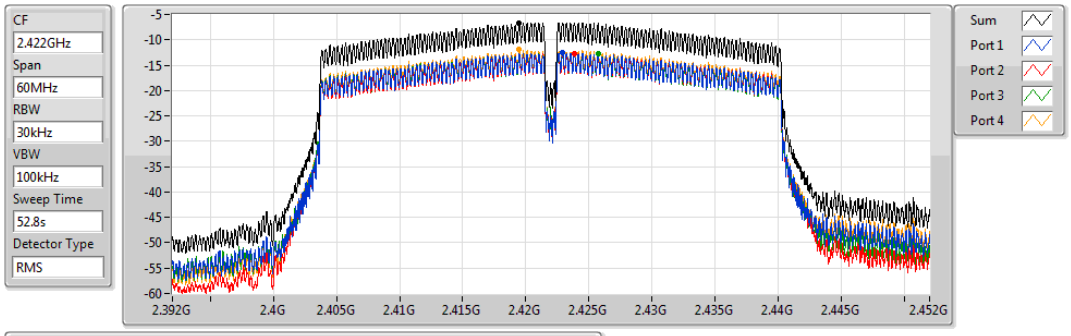
2462MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-4.06	-4.06	-9.82	-9.79	-10.16	-8.20

802.11n HT40_Nss1,(MCS0)_4TX **PSD**

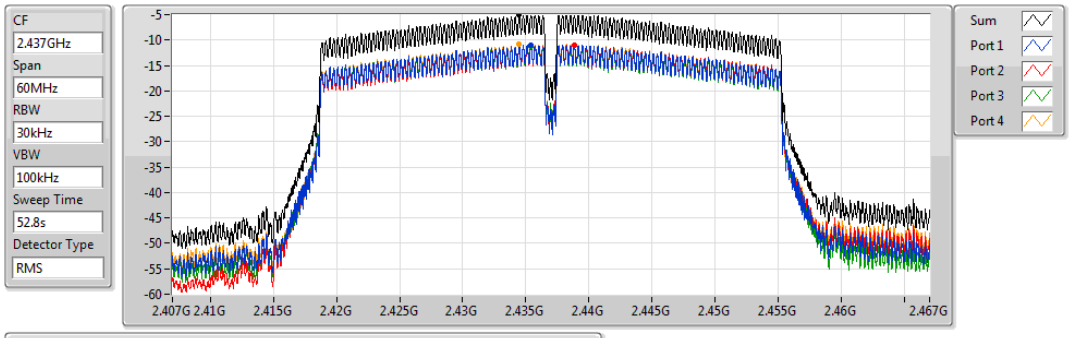
2422MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-6.63	-6.63	-12.53	-12.82	-12.70	-11.98

802.11n HT40_Nss1,(MCS0)_4TX **PSD**

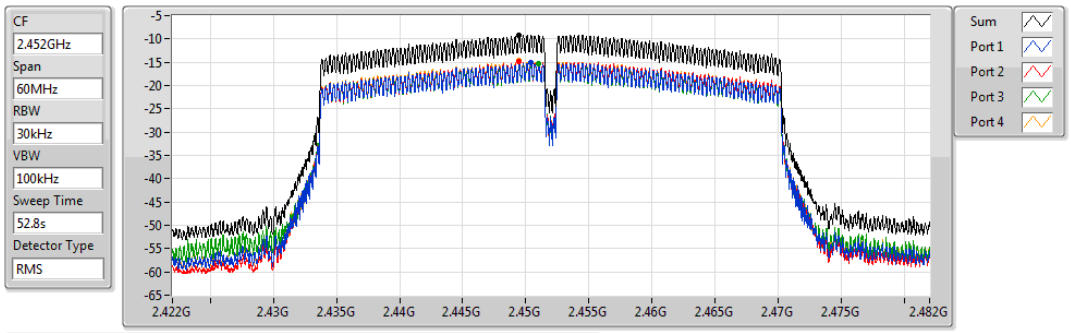
2437MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-5.10	-5.10	-10.95	-11.05	-11.19	-10.81

802.11n HT40_Nss1,(MCS0)_4TX **PSD**

2452MHz



Sum	PD	Port 1	Port 2	Port 3	Port 4
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-9.11	-9.11	-15.14	-14.93	-15.22	-14.68

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

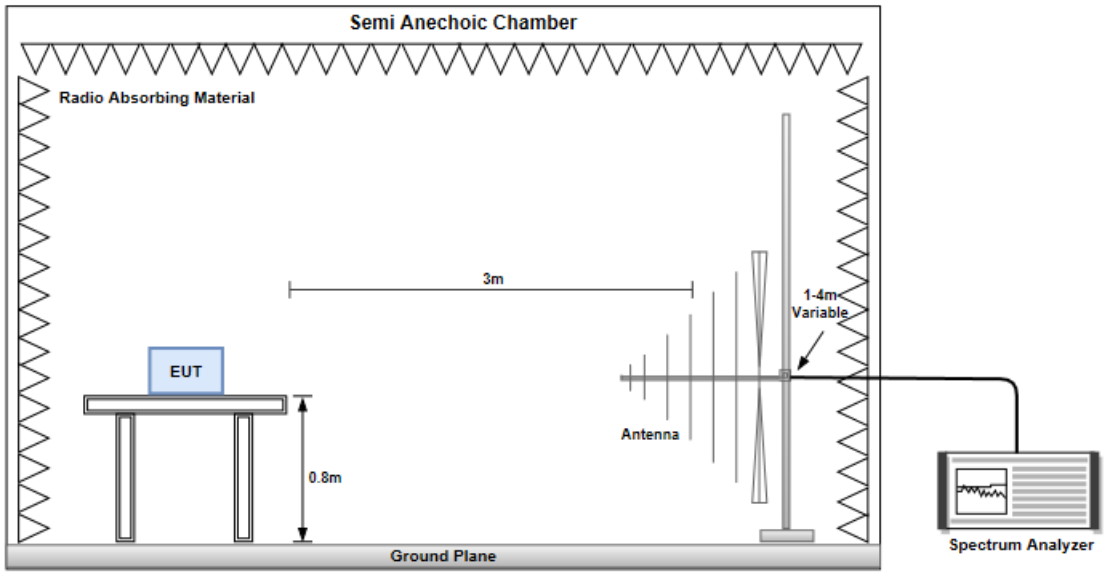
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

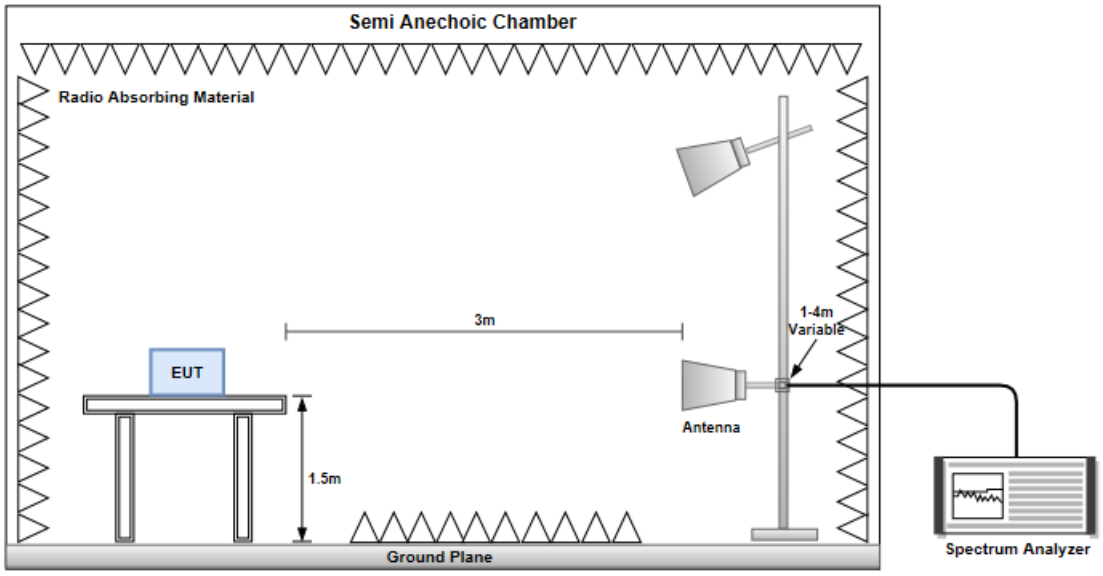
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz

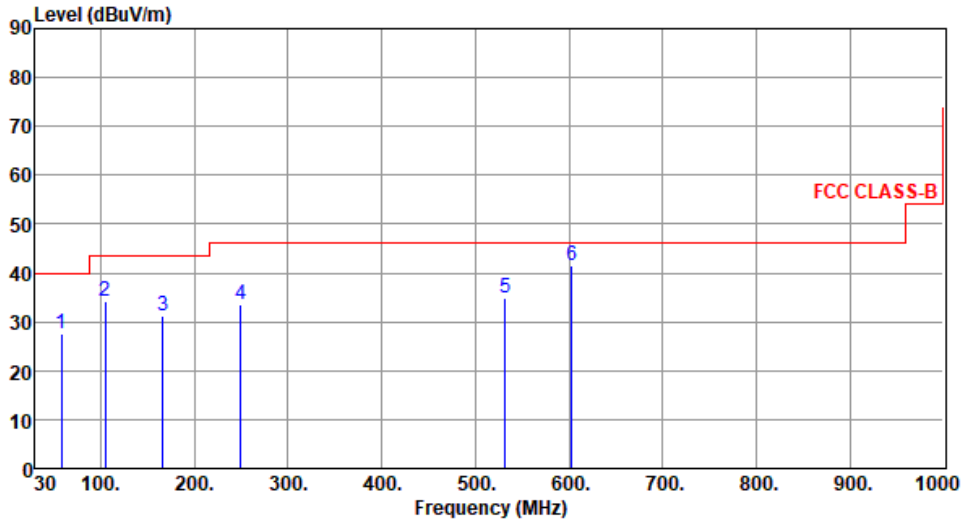


Radiated Emissions above 1 GHz



3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

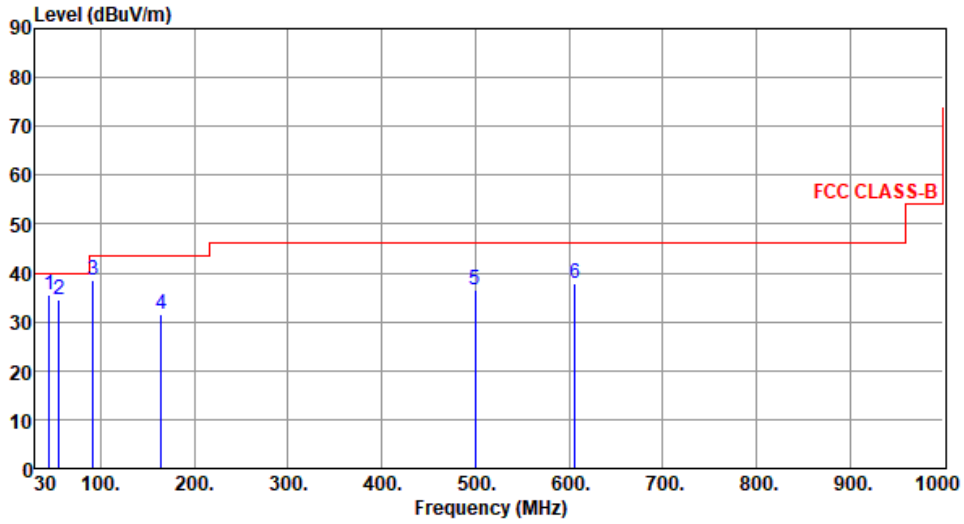
Modulation	11b	Test Freq. (MHz)	2412
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	58.26	27.55	40.00	-12.45	36.77	-9.22	Peak	---	---
2	104.53	34.31	43.50	-9.19	47.25	-12.94	Peak	---	---
3	166.28	31.31	43.50	-12.19	40.49	-9.18	Peak	---	---
4	249.36	33.45	46.00	-12.55	43.63	-10.18	Peak	---	---
5	531.52	34.85	46.00	-11.15	37.36	-2.51	Peak	---	---
6	603.25	41.43	46.00	-4.57	41.92	-0.49	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	11b	Test Freq. (MHz)	2412
Polarization	Vertical		

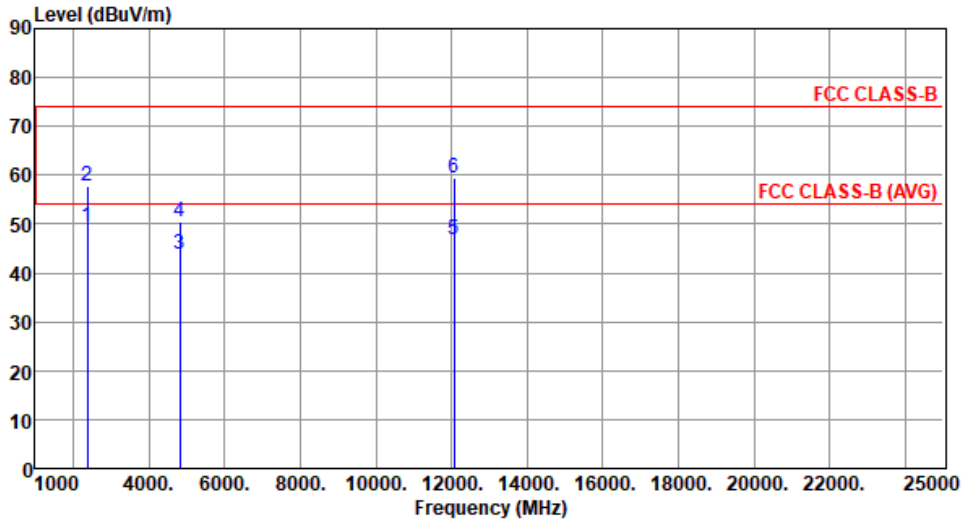


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	45.46	35.38	40.00	-4.62	44.15	-8.77	Peak	---	---
2	55.41	34.52	40.00	-5.48	43.61	-9.09	Peak	---	---
3	92.16	38.65	43.50	-4.85	53.57	-14.92	Peak	---	---
4	164.67	31.41	43.50	-12.09	40.50	-9.09	Peak	---	---
5	499.53	36.51	46.00	-9.49	39.66	-3.15	Peak	---	---
6	606.28	37.82	46.00	-8.18	38.09	-0.27	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

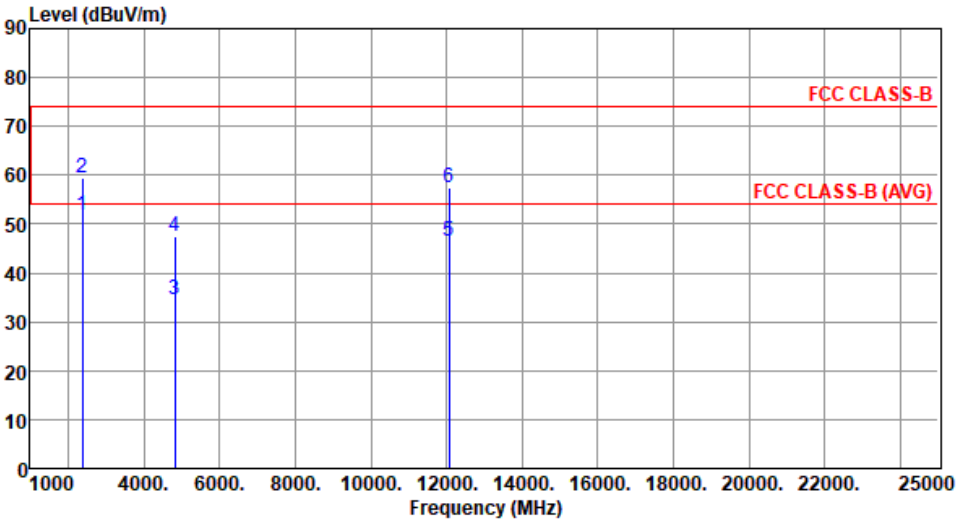
Modulation	11b	Test Freq. (MHz)	2412
Polarization	Horizontal		



	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	49.46	54.00	-4.54	49.22	0.24	Average	216	202
2	2390.00	57.78	74.00	-16.22	57.54	0.24	Peak	216	202
3	4824.00	43.85	54.00	-10.15	37.35	6.50	Average	179	31
4	4824.00	50.44	74.00	-23.56	43.94	6.50	Peak	179	31
5	12060.00	46.89	54.00	-7.11	30.65	16.24	Average	179	31
6	12060.00	59.49	74.00	-14.51	43.25	16.24	Peak	179	31

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).

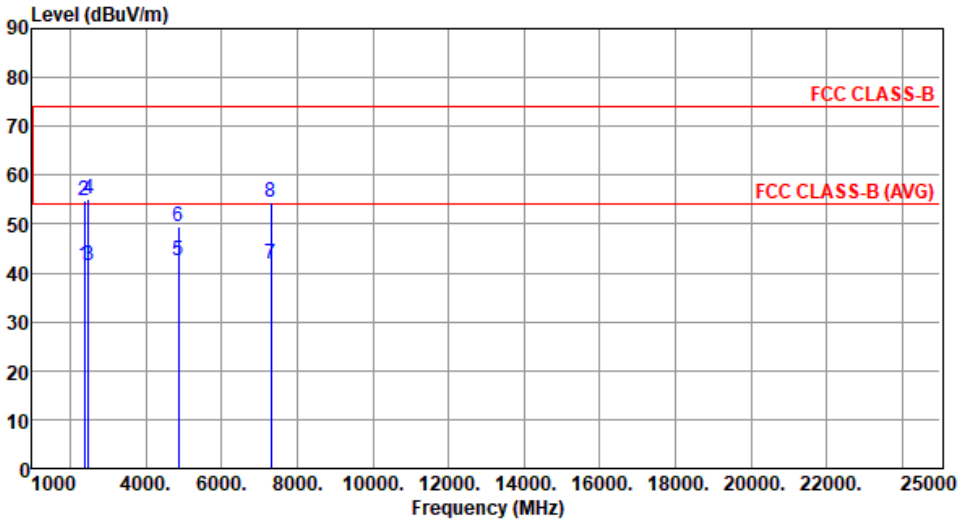
Modulation	11b	Test Freq. (MHz)	2412
Polarization	Vertical		



	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	51.71	54.00	-2.29	51.47	0.24	Average	256	20
2	2390.00	59.44	74.00	-14.56	59.20	0.24	Peak	256	20
3	4824.00	34.64	54.00	-19.36	28.14	6.50	Average	100	41
4	4824.00	47.51	74.00	-26.49	41.01	6.50	Peak	100	41
5	12060.00	46.39	54.00	-7.61	30.15	16.24	Average	100	128
6	12060.00	57.62	74.00	-16.38	41.38	16.24	Peak	100	128

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).

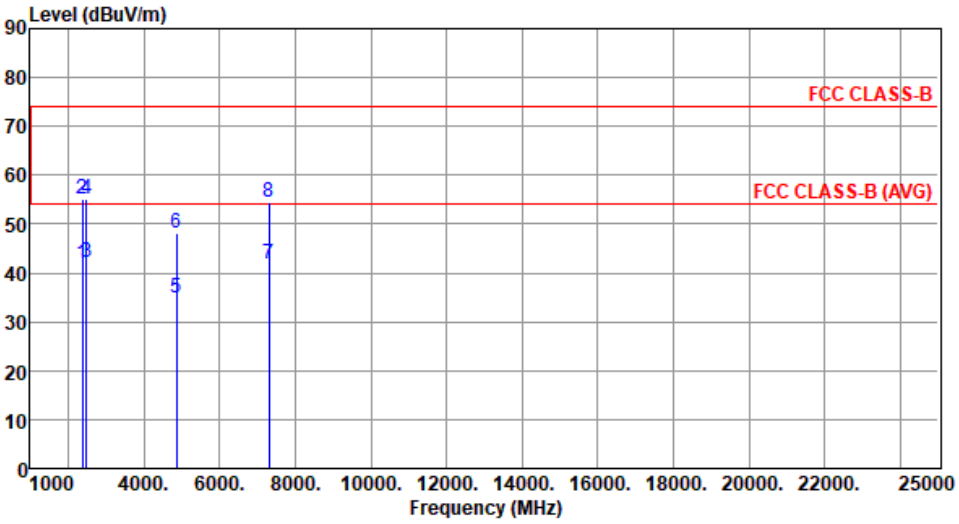
Modulation	11b	Test Freq. (MHz)	2437
Polarization	Horizontal		



	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	41.55	54.00	-12.45	41.31	0.24	Average	234	187
2	2390.00	54.86	74.00	-19.14	54.62	0.24	Peak	234	187
3	2483.50	41.54	54.00	-12.46	41.29	0.25	Average	234	187
4	2483.50	55.20	74.00	-18.80	54.95	0.25	Peak	234	187
5	4874.00	42.56	54.00	-11.44	36.08	6.48	Average	221	20
6	4874.00	49.42	74.00	-24.58	42.94	6.48	Peak	221	20
7	7311.00	41.97	54.00	-12.03	30.21	11.76	Average	100	247
8	7311.00	54.39	74.00	-19.61	42.63	11.76	Peak	100	247

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).

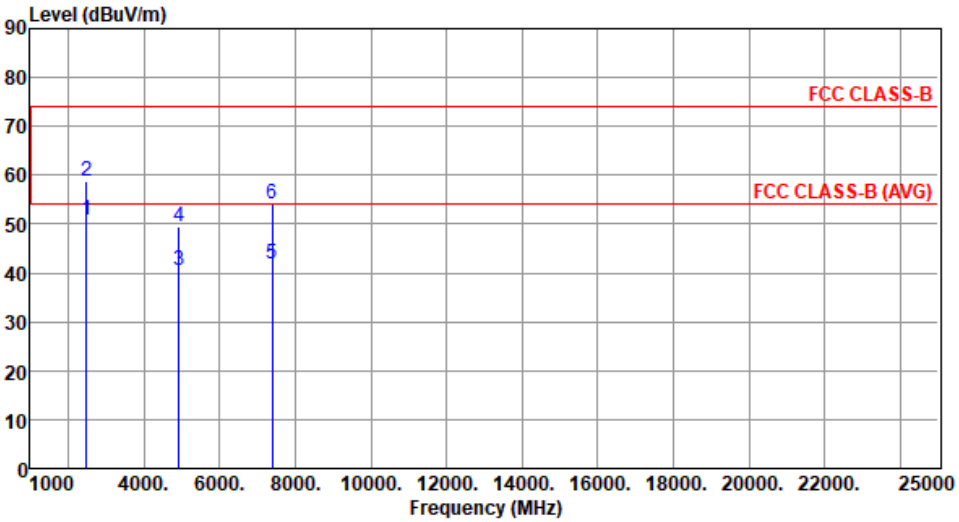
Modulation	11b	Test Freq. (MHz)	2437
Polarization	Vertical		



	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	41.69	54.00	-12.31	41.45	0.24	Average	296	49
2	2390.00	55.19	74.00	-18.81	54.95	0.24	Peak	296	49
3	2483.50	42.13	54.00	-11.87	41.88	0.25	Average	296	49
4	2483.50	55.06	74.00	-18.94	54.81	0.25	Peak	296	49
5	4874.00	34.86	54.00	-19.14	28.38	6.48	Average	100	20
6	4874.00	48.06	74.00	-25.94	41.58	6.48	Peak	100	20
7	7311.00	41.79	54.00	-12.21	30.03	11.76	Average	100	50
8	7311.00	54.31	74.00	-19.69	42.55	11.76	Peak	100	50

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

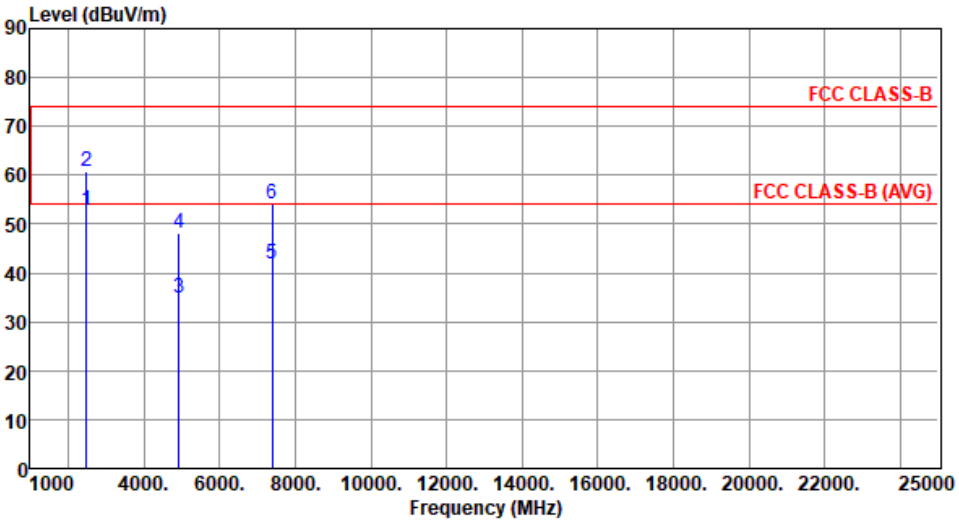
Modulation	11b	**Test Freq. (MHz)**	2462
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	50.77	54.00	-3.23	50.52	0.25	Average	225	191
2	2483.50	58.81	74.00	-15.19	58.56	0.25	Peak	225	191
3	4924.00	40.37	54.00	-13.63	33.86	6.51	Average	270	15
4	4924.00	49.35	74.00	-24.65	42.84	6.51	Peak	270	15
5	7386.00	41.96	54.00	-12.04	30.15	11.81	Average	100	250
6	7386.00	54.27	74.00	-19.73	42.46	11.81	Peak	100	250

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		

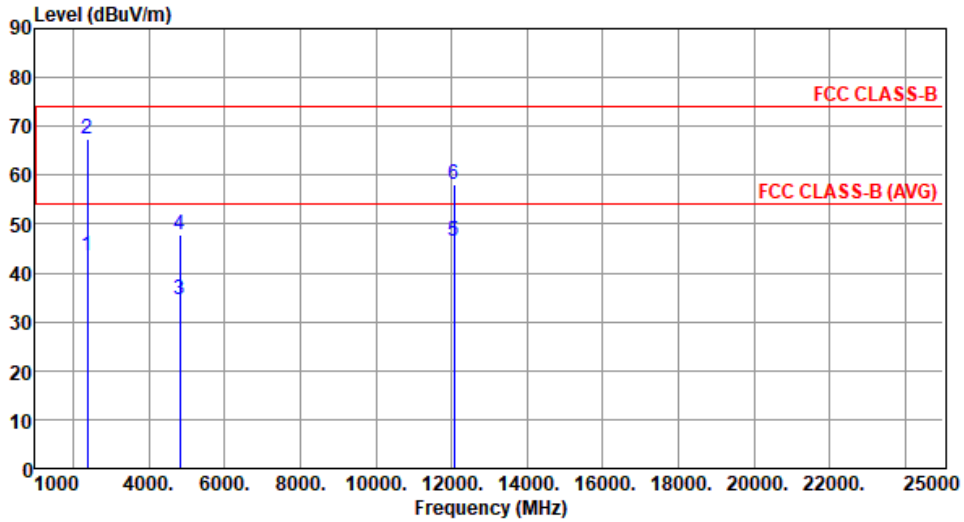


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	52.74	54.00	-1.26	52.49	0.25	Average	240	23
2	2483.50	60.89	74.00	-13.11	60.64	0.25	Peak	240	23
3	4924.00	34.76	54.00	-19.24	28.25	6.51	Average	100	26
4	4924.00	48.02	74.00	-25.98	41.51	6.51	Peak	100	26
5	7386.00	41.92	54.00	-12.08	30.11	11.81	Average	100	53
6	7386.00	54.01	74.00	-19.99	42.20	11.81	Peak	100	53

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

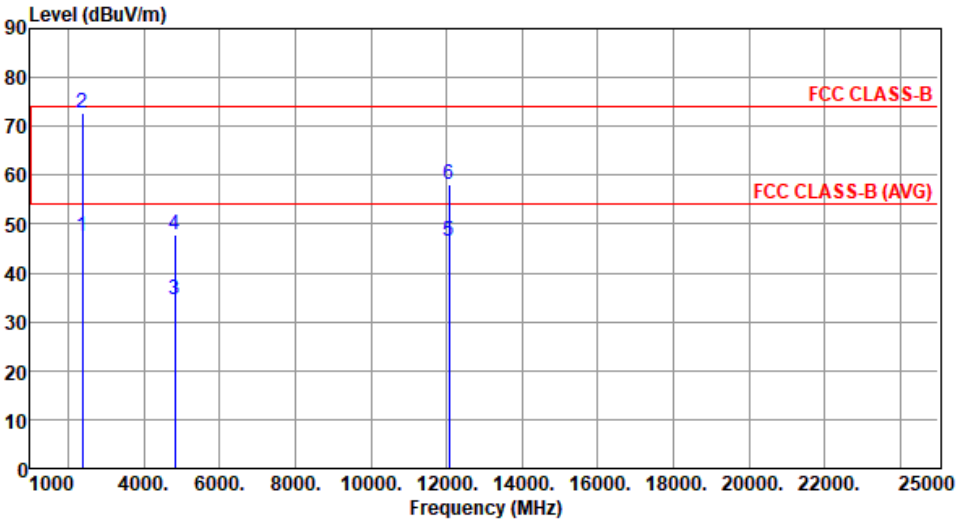
Modulation	11g	Test Freq. (MHz)	2412
Polarization	Horizontal		



	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	43.49	54.00	-10.51	43.25	0.24	Average	223	190
2	2390.00	67.55	74.00	-6.45	67.31	0.24	Peak	223	190
3	4824.00	34.61	54.00	-19.39	28.11	6.50	Average	100	46
4	4824.00	47.73	74.00	-26.27	41.23	6.50	Peak	100	46
5	12060.00	46.59	54.00	-7.41	30.35	16.24	Average	100	128
6	12060.00	57.99	74.00	-16.01	41.75	16.24	Peak	100	128

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).

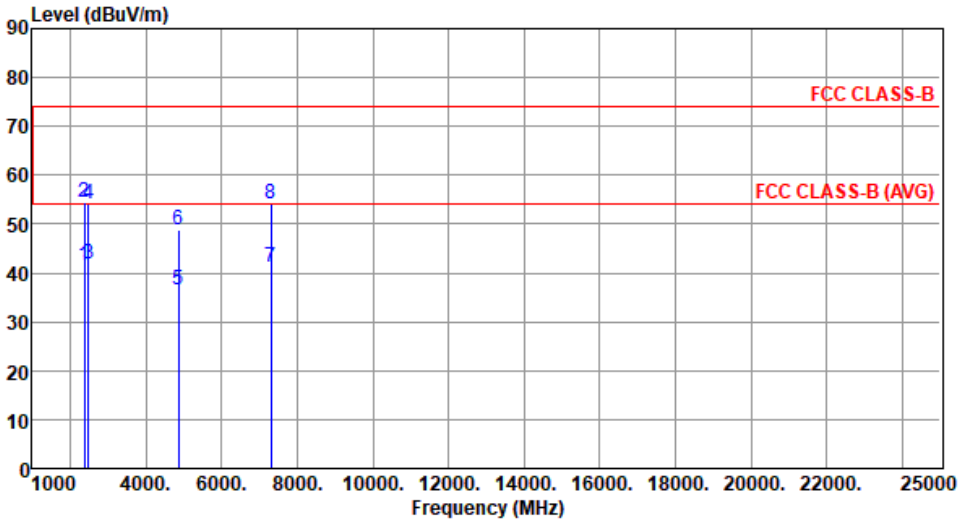
Modulation	11g	**Test Freq. (MHz)**	2412
Polarization	Vertical		



	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	47.44	54.00	-6.56	47.20	0.24	Average	238	165
2	2390.00	72.70	74.00	-1.30	72.46	0.24	Peak	238	165
3	4824.00	34.54	54.00	-19.46	28.04	6.50	Average	100	33
4	4824.00	47.67	74.00	-26.33	41.17	6.50	Peak	100	33
5	12060.00	46.55	54.00	-7.45	30.31	16.24	Average	100	125
6	12060.00	58.07	74.00	-15.93	41.83	16.24	Peak	100	125

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).

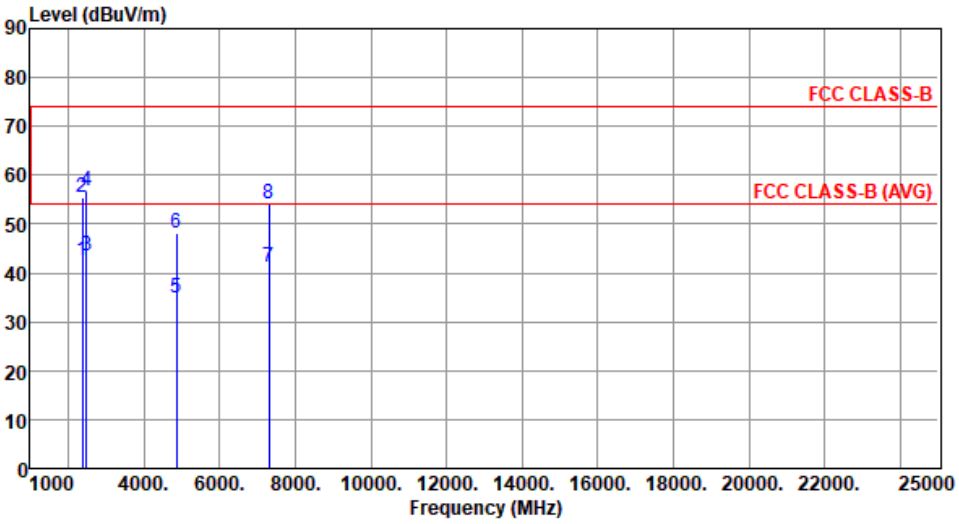
Modulation	11g	Test Freq. (MHz)	2437
Polarization	Horizontal		



	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	41.56	54.00	-12.44	41.32	0.24	Average	221	193
2	2390.00	54.36	74.00	-19.64	54.12	0.24	Peak	221	193
3	2483.50	41.83	54.00	-12.17	41.58	0.25	Average	221	193
4	2483.50	54.12	74.00	-19.88	53.87	0.25	Peak	221	193
5	4874.00	36.59	54.00	-17.41	30.11	6.48	Average	273	11
6	4874.00	48.87	74.00	-25.13	42.39	6.48	Peak	273	11
7	7311.00	41.29	54.00	-12.71	29.53	11.76	Average	100	40
8	7311.00	54.06	74.00	-19.94	42.30	11.76	Peak	100	40

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

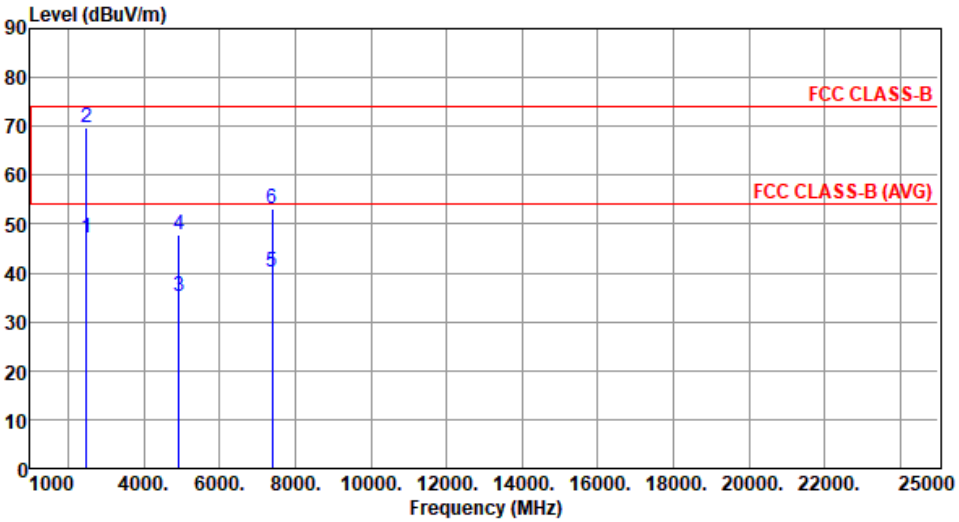
Modulation	11g	Test Freq. (MHz)	2437
Polarization	Vertical		



	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	42.42	54.00	-11.58	42.18	0.24	Average	237	54
2	2390.00	55.36	74.00	-18.64	55.12	0.24	Peak	237	54
3	2483.50	43.44	54.00	-10.56	43.19	0.25	Average	237	54
4	2483.50	56.84	74.00	-17.16	56.59	0.25	Peak	237	54
5	4874.00	34.93	54.00	-19.07	28.45	6.48	Average	100	50
6	4874.00	48.01	74.00	-25.99	41.53	6.48	Peak	100	50
7	7311.00	41.30	54.00	-12.70	29.54	11.76	Average	100	60
8	7311.00	54.10	74.00	-19.90	42.34	11.76	Peak	100	60

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

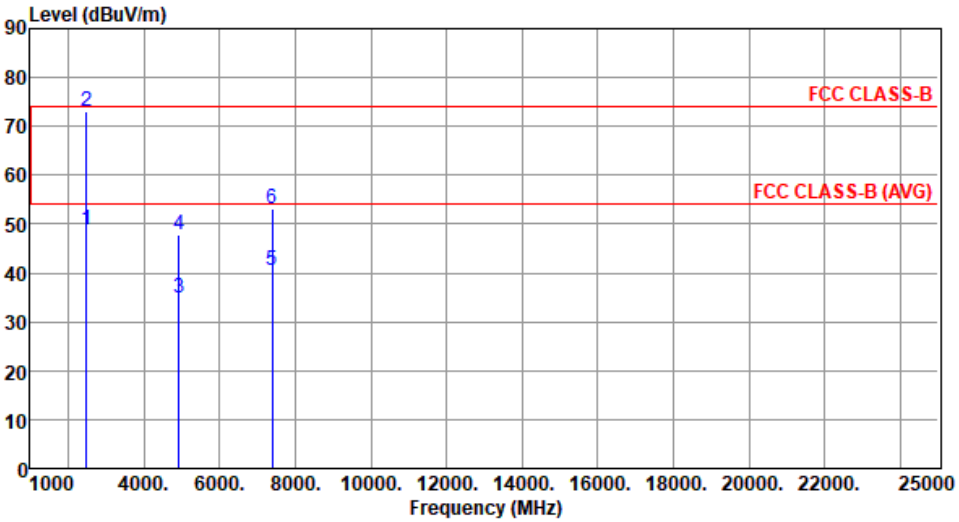
Modulation	11g	**Test Freq. (MHz)**	2462
Polarization	Horizontal		



	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	47.21	54.00	-6.79	46.96	0.25	Average	231	213
2	2483.50	69.81	74.00	-4.19	69.56	0.25	Peak	231	213
3	4924.00	35.07	54.00	-18.93	28.56	6.51	Average	100	156
4	4924.00	47.76	74.00	-26.24	41.25	6.51	Peak	100	156
5	7386.00	40.18	54.00	-13.82	28.37	11.81	Average	100	131
6	7386.00	53.09	74.00	-20.91	41.28	11.81	Peak	100	131

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		

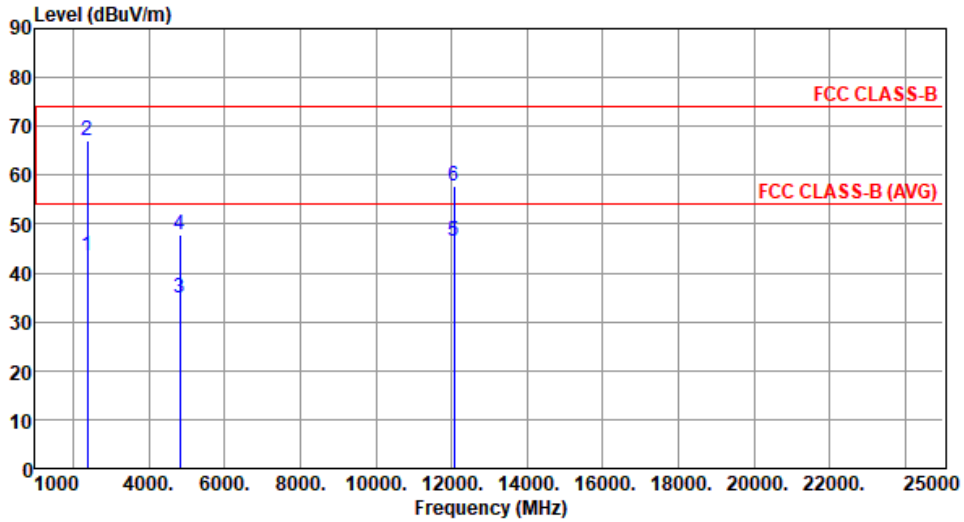


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	48.80	54.00	-5.20	48.55	0.25	Average	232	90
2	2483.50	72.92	74.00	-1.08	72.67	0.25	Peak	232	90
3	4924.00	34.75	54.00	-19.25	28.24	6.51	Average	100	144
4	4924.00	47.94	74.00	-26.06	41.43	6.51	Peak	100	144
5	7386.00	40.35	54.00	-13.65	28.54	11.81	Average	100	169
6	7386.00	53.13	74.00	-20.87	41.32	11.81	Peak	100	169

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

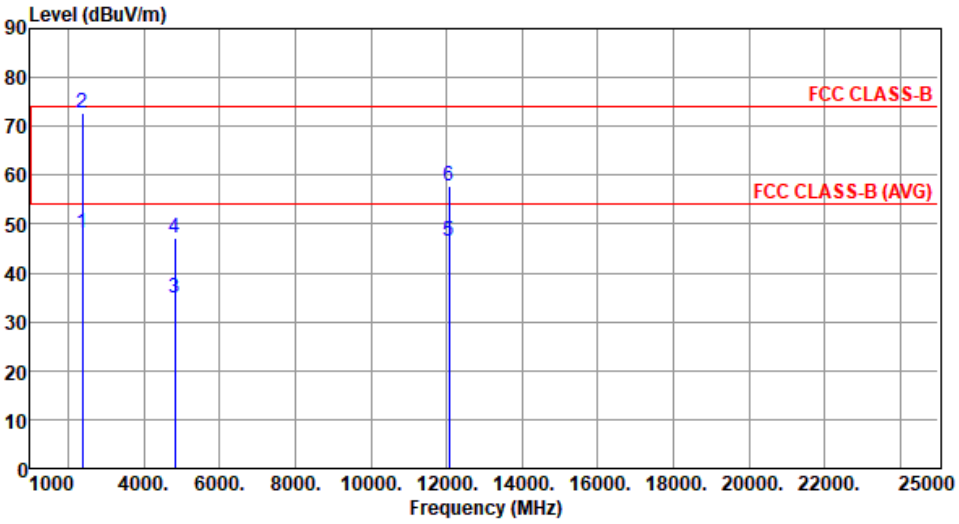
Modulation	HT20	**Test Freq. (MHz)**	2412
Polarization	Horizontal		



	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	43.40	54.00	-10.60	43.16	0.24	Average	222	192
2	2390.00	67.09	74.00	-6.91	66.85	0.24	Peak	222	192
3	4824.00	34.75	54.00	-19.25	28.25	6.50	Average	100	51
4	4824.00	47.92	74.00	-26.08	41.42	6.50	Peak	100	51
5	12060.00	46.59	54.00	-7.41	30.35	16.24	Average	100	125
6	12060.00	57.67	74.00	-16.33	41.43	16.24	Peak	100	125

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).

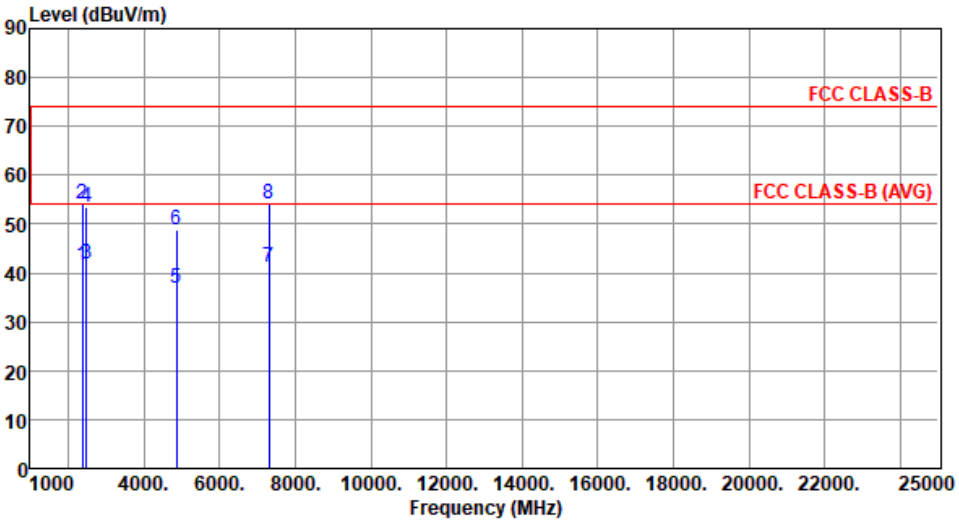
Modulation	HT20	**Test Freq. (MHz)**	2412
Polarization	Vertical		



	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	48.19	54.00	-5.81	47.95	0.24	Average	241	73
2	2390.00	72.78	74.00	-1.22	72.54	0.24	Peak	241	73
3	4824.00	34.94	54.00	-19.06	28.44	6.50	Average	100	173
4	4824.00	47.30	74.00	-26.70	40.80	6.50	Peak	100	173
5	12060.00	46.55	54.00	-7.45	30.31	16.24	Average	100	125
6	12060.00	57.70	74.00	-16.30	41.46	16.24	Peak	100	125

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).

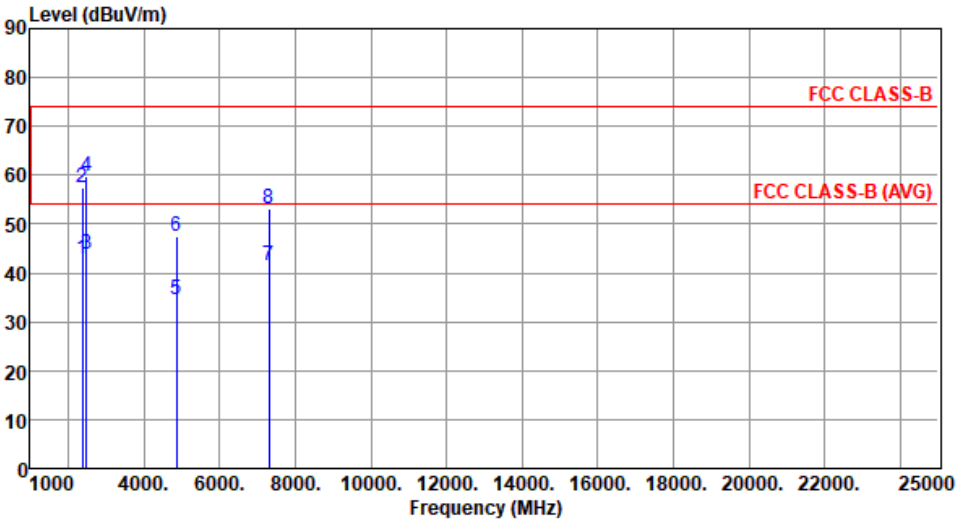
Modulation	HT20	Test Freq. (MHz)	2437
Polarization	Horizontal		



	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	41.45	54.00	-12.55	41.21	0.24	Average	221	195
2	2390.00	54.02	74.00	-19.98	53.78	0.24	Peak	221	195
3	2483.50	41.71	54.00	-12.29	41.46	0.25	Average	221	195
4	2483.50	53.63	74.00	-20.37	53.38	0.25	Peak	221	195
5	4874.00	36.73	54.00	-17.27	30.25	6.48	Average	269	12
6	4874.00	48.93	74.00	-25.07	42.45	6.48	Peak	269	12
7	7311.00	41.20	54.00	-12.80	29.44	11.76	Average	100	35
8	7311.00	54.21	74.00	-19.79	42.45	11.76	Peak	100	35

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).

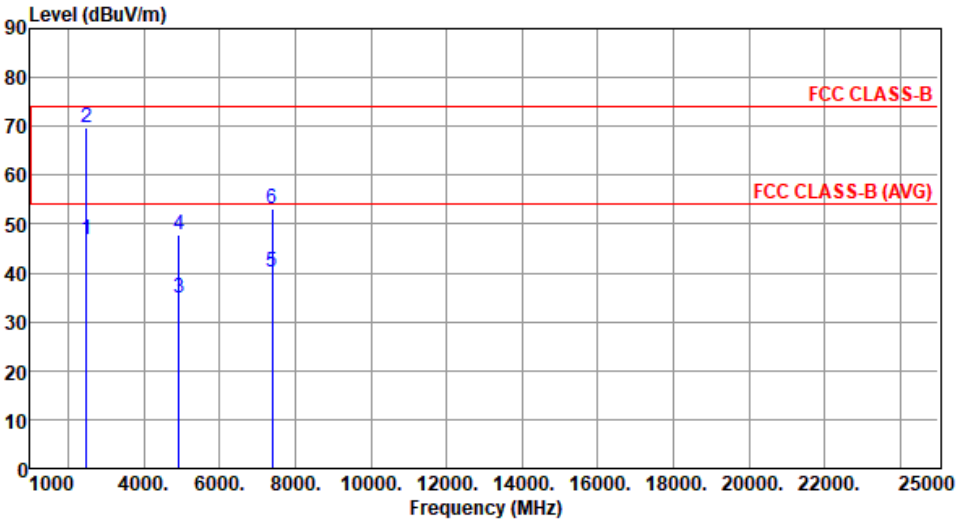
Modulation	HT20	Test Freq. (MHz)	2437
Polarization	Vertical		



	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	42.72	54.00	-11.28	42.48	0.24	Average	235	32
2	2390.00	57.39	74.00	-16.61	57.15	0.24	Peak	235	32
3	2483.50	43.91	54.00	-10.09	43.66	0.25	Average	235	32
4	2483.50	59.62	74.00	-14.38	59.37	0.25	Peak	235	32
5	4874.00	34.66	54.00	-19.34	28.18	6.48	Average	100	172
6	4874.00	47.51	74.00	-26.49	41.03	6.48	Peak	100	172
7	7311.00	41.50	54.00	-12.50	29.74	11.76	Average	100	105
8	7311.00	53.12	74.00	-20.88	41.36	11.76	Peak	100	105

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).

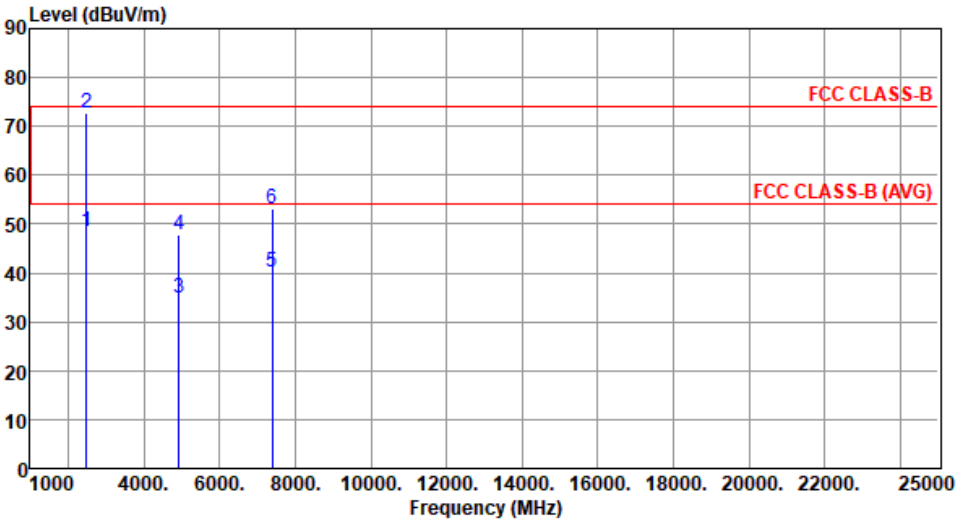
Modulation	HT20	Test Freq. (MHz)	2462
Polarization	Horizontal		



	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	46.99	54.00	-7.01	46.74	0.25	Average	230	211
2	2483.50	69.69	74.00	-4.31	69.44	0.25	Peak	230	111
3	4924.00	34.85	54.00	-19.15	28.34	6.51	Average	100	128
4	4924.00	47.85	74.00	-26.15	41.34	6.51	Peak	100	128
5	7386.00	40.27	54.00	-13.73	28.46	11.81	Average	100	115
6	7386.00	53.17	74.00	-20.83	41.36	11.81	Peak	100	115

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		

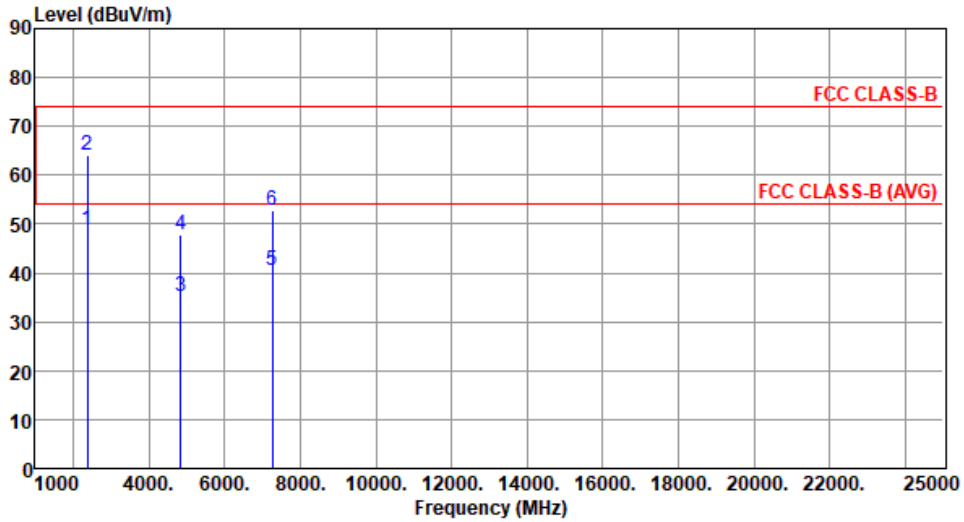


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	48.38	54.00	-5.62	48.13	0.25	Average	238	95
2	2483.50	72.71	74.00	-1.29	72.46	0.25	Peak	238	95
3	4924.00	34.76	54.00	-19.24	28.25	6.51	Average	100	43
4	4924.00	47.89	74.00	-26.11	41.38	6.51	Peak	100	43
5	7386.00	40.32	54.00	-13.68	28.51	11.81	Average	100	67
6	7386.00	53.29	74.00	-20.71	41.48	11.81	Peak	100	67

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

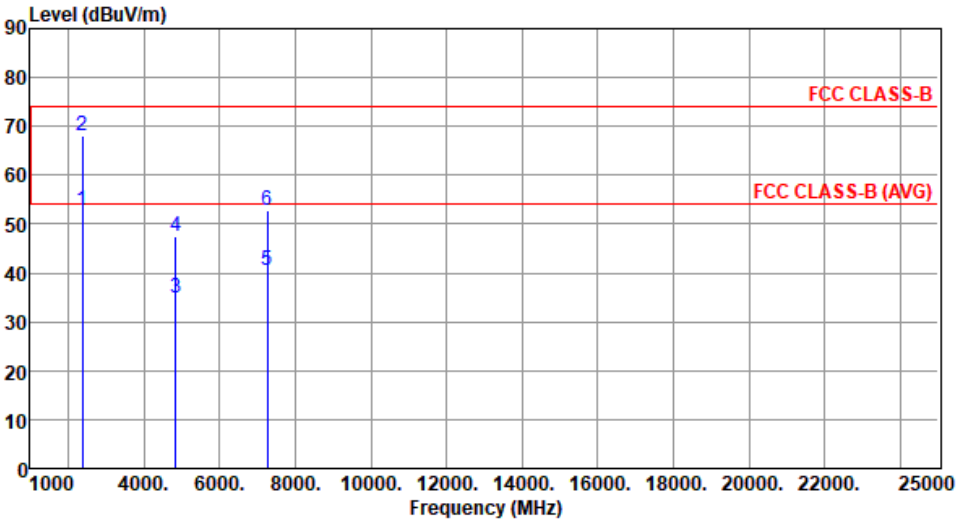
Modulation	HT40	**Test Freq. (MHz)**	2422
Polarization	Horizontal		



	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	48.65	54.00	-5.35	48.41	0.24	Average	222	205
2	2390.00	64.20	74.00	-9.80	63.96	0.24	Peak	222	205
3	4844.00	35.05	54.00	-18.95	28.50	6.55	Average	100	68
4	4844.00	47.75	74.00	-26.25	41.20	6.55	Peak	100	68
5	7266.00	40.37	54.00	-13.63	28.76	11.61	Average	100	137
6	7266.00	52.93	74.00	-21.07	41.32	11.61	Peak	100	137

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).

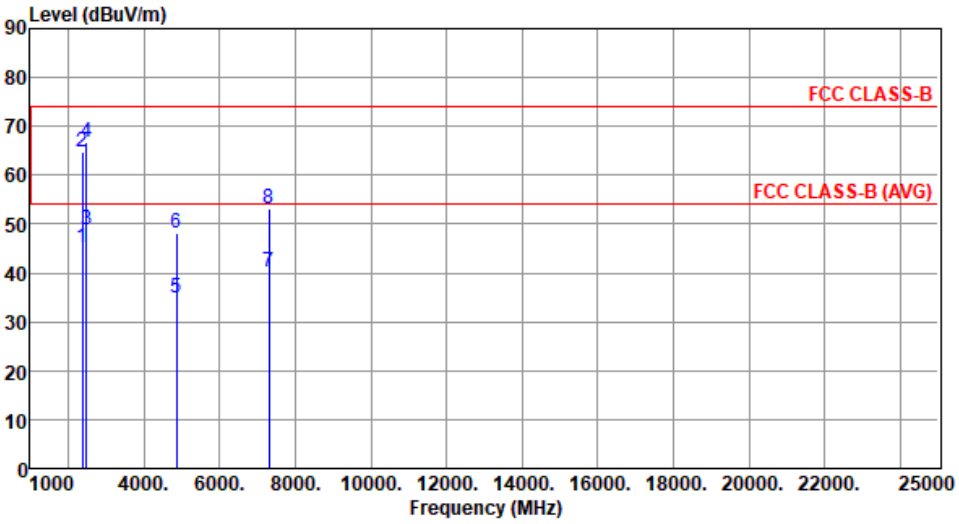
Modulation	HT40	Test Freq. (MHz)	2422
Polarization	Vertical		



	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	52.80	54.00	-1.20	52.56	0.24	Average	296	309
2	2390.00	67.93	74.00	-6.07	67.69	0.24	Peak	296	309
3	4844.00	34.85	54.00	-19.15	28.30	6.55	Average	100	52
4	4844.00	47.49	74.00	-26.51	40.94	6.55	Peak	100	52
5	7266.00	40.57	54.00	-13.43	28.96	11.61	Average	100	145
6	7266.00	52.80	74.00	-21.20	41.19	11.61	Peak	100	145

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

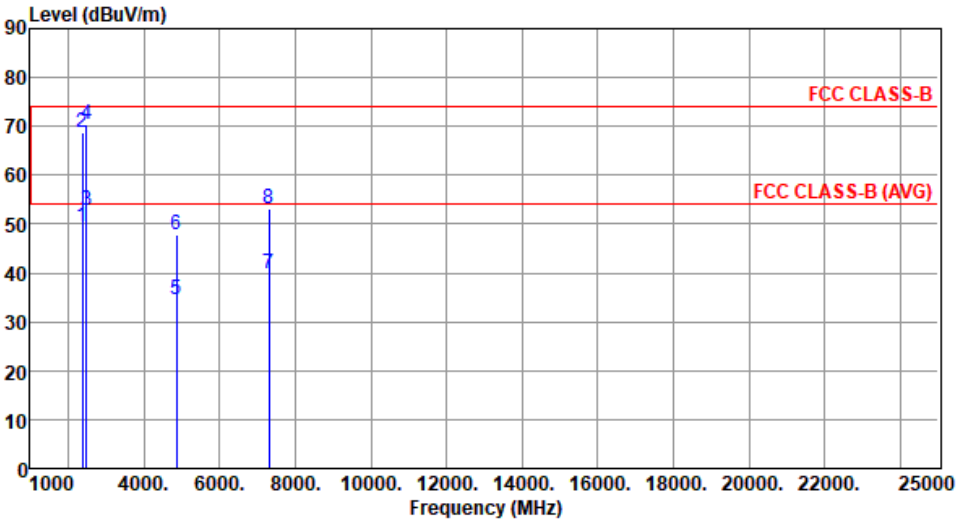
Modulation	HT40	Test Freq. (MHz)	2437
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	45.07	54.00	-8.93	44.83	0.24	Average	221	192
2	2390.00	64.80	74.00	-9.20	64.56	0.24	Peak	221	192
3	2483.50	48.82	54.00	-5.18	48.57	0.25	Average	221	192
4	2483.50	66.63	74.00	-7.37	66.38	0.25	Peak	221	192
5	4874.00	34.82	54.00	-19.18	28.34	6.48	Average	100	58
6	4874.00	47.99	74.00	-26.01	41.51	6.48	Peak	100	58
7	7311.00	40.18	54.00	-13.82	28.42	11.76	Average	100	76
8	7311.00	53.28	74.00	-20.72	41.52	11.76	Peak	100	76

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).

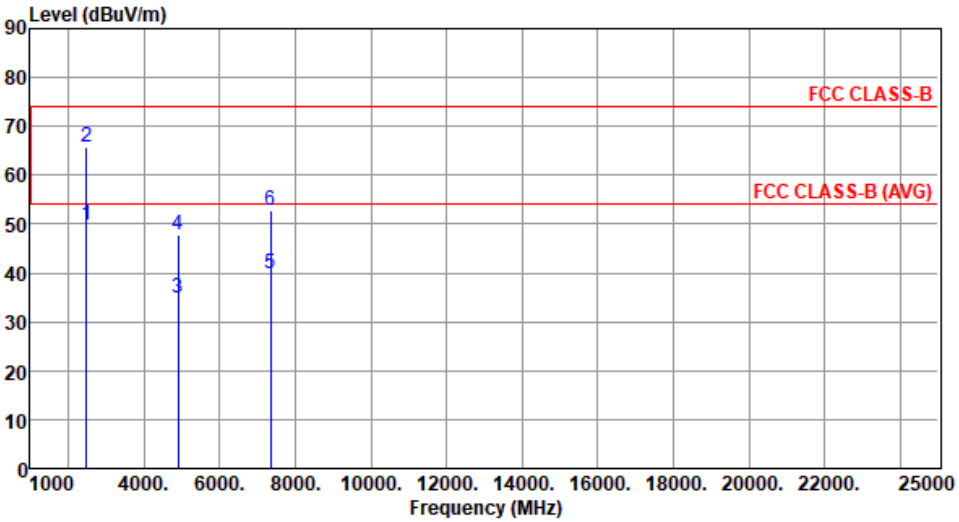
Modulation	HT40	Test Freq. (MHz)	2437
Polarization	Vertical		



	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	49.41	54.00	-4.59	49.17	0.24	Average	296	37
2	2390.00	68.72	74.00	-5.28	68.48	0.24	Peak	296	37
3	2483.50	52.72	54.00	-1.28	52.47	0.25	Average	296	37
4	2483.50	70.44	74.00	-3.56	70.19	0.25	Peak	296	37
5	4874.00	34.60	54.00	-19.40	28.12	6.48	Average	100	56
6	4874.00	47.85	74.00	-26.15	41.37	6.48	Peak	100	56
7	7311.00	39.97	54.00	-14.03	28.21	11.76	Average	100	85
8	7311.00	53.12	74.00	-20.88	41.36	11.76	Peak	100	85

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

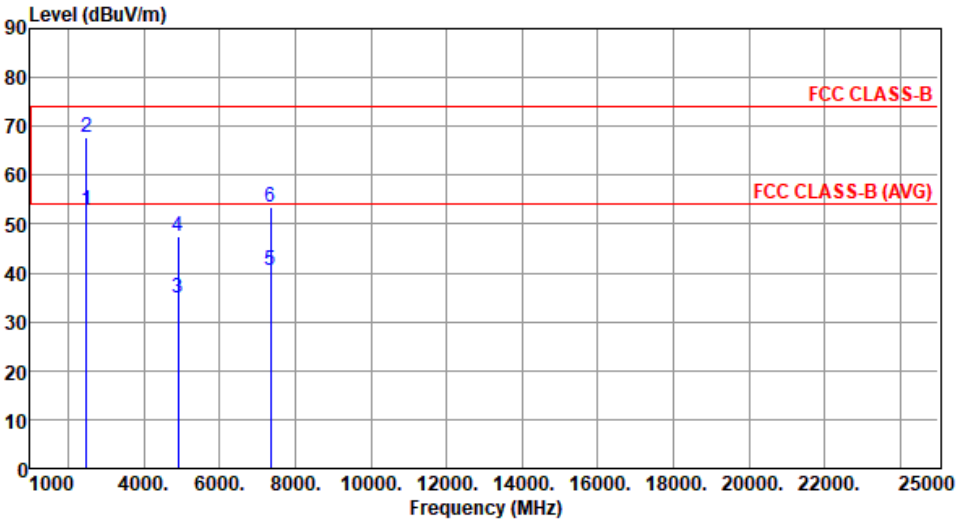
Modulation	HT40	Test Freq. (MHz)	2452
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	49.73	54.00	-4.27	49.48	0.25	Average	225	210
2	2483.50	65.60	74.00	-8.40	65.35	0.25	Peak	225	210
3	4904.00	34.73	54.00	-19.27	28.31	6.42	Average	100	56
4	4904.00	47.94	74.00	-26.06	41.52	6.42	Peak	100	56
5	7356.00	39.98	54.00	-14.02	28.16	11.82	Average	100	148
6	7356.00	52.70	74.00	-21.30	40.88	11.82	Peak	100	148

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	52.91	54.00	-1.09	52.66	0.25	Average	258	89
2	2483.50	67.66	74.00	-6.34	67.41	0.25	Peak	258	89
3	4904.00	34.77	54.00	-19.23	28.35	6.42	Average	100	125
4	4904.00	47.62	74.00	-26.38	41.20	6.42	Peak	100	125
5	7356.00	40.53	54.00	-13.47	28.71	11.82	Average	100	163
6	7356.00	53.40	74.00	-20.60	41.58	11.82	Peak	100	163

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

3.6 Emissions in Non-Restricted Frequency Bands

3.6.1 Emissions in Non-Restricted Frequency Bands Limit

Peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz.

3.6.2 Test Procedures

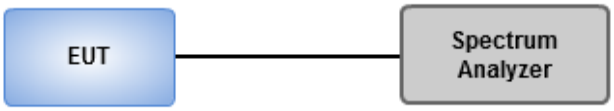
Reference level measurement

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

Emission level measurement

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

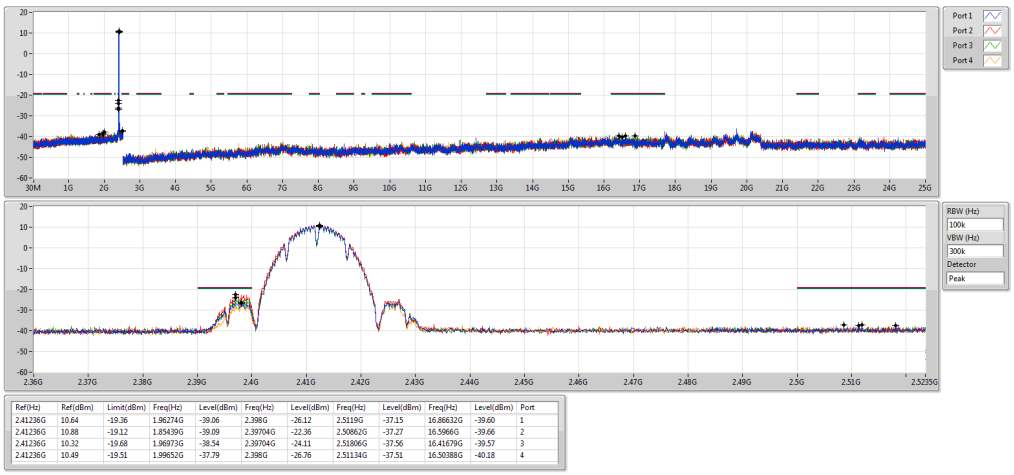
3.6.3 Test Setup



3.6.4 Unwanted Emissions into Non-Restricted Frequency Bands

802.11b_Nss1,(1Mbps)_4TX **CSE NdB**

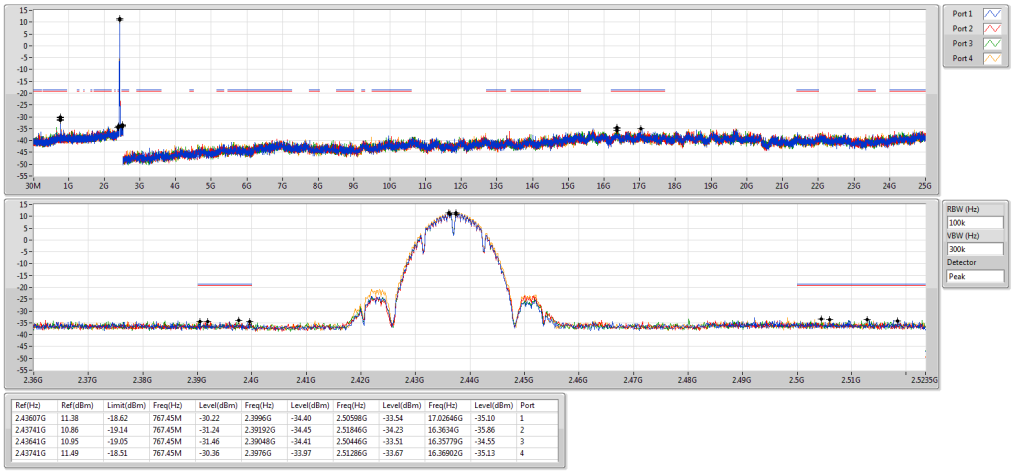
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41236G	10.64	-19.36	1.96274G	-39.06	2.398G	-26.12	2.5119G	-37.15	16.86632G	-39.60	1
2.41236G	10.88	-19.12	1.85439G	-39.09	2.39704G	-22.36	2.50862G	-37.27	16.5966G	-39.66	2
2.41236G	10.32	-19.68	1.96973G	-38.54	2.39704G	-24.11	2.51806G	-37.56	16.41679G	-39.57	3
2.41236G	10.49	-19.51	1.99652G	-37.79	2.398G	-26.76	2.51134G	-37.51	16.50388G	-40.18	4

802.11b_Nss1,(1Mbps)_4TX **CSE NdB**

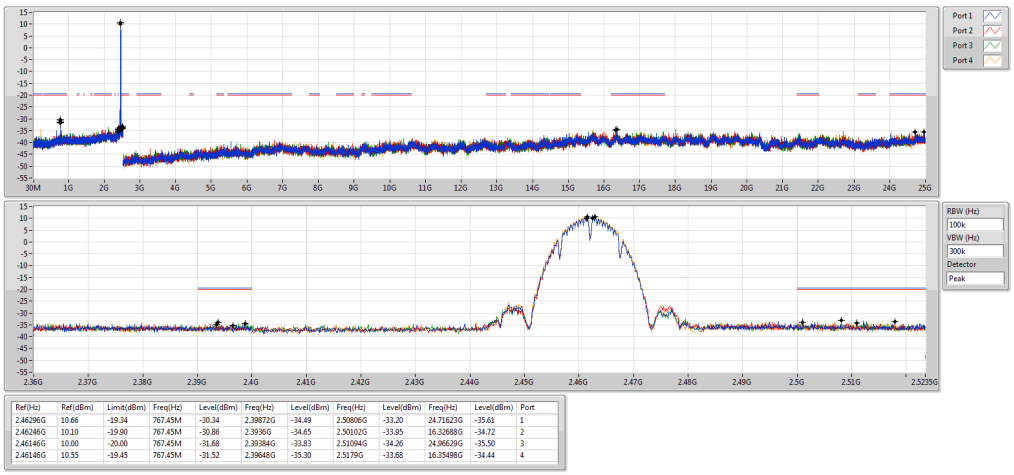
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43607G	11.38	-18.62	767.45M	-30.22	2.3996G	-34.40	2.50598G	-33.54	17.02646G	-35.10	1
2.43741G	10.86	-19.14	767.45M	-31.24	2.39192G	-34.45	2.51846G	-34.23	16.3634G	-35.86	2
2.43641G	10.95	-19.05	767.45M	-31.46	2.39048G	-34.41	2.50446G	-33.51	16.35779G	-34.55	3
2.43741G	11.49	-18.51	767.45M	-30.36	2.3976G	-33.97	2.51286G	-33.67	16.36902G	-35.13	4

802.11b_Nss1,(1Mbps)_4TX **CSE NdB**

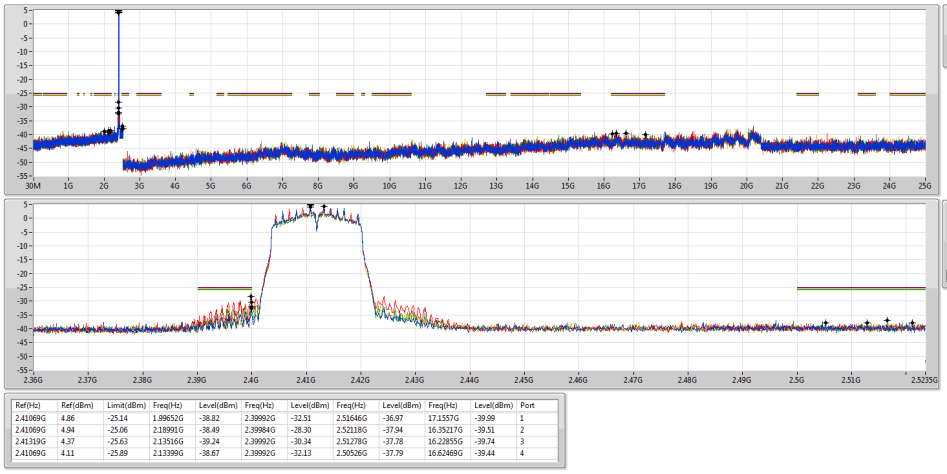
2462MHz



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	10.66	-19.34	767.45M	-30.34	2.39872G	-34.49	2.50806G	-33.20	24.71623G	-35.61	1
2.46246G	10.10	-19.90	767.45M	-30.86	2.3936G	-34.65	2.50102G	-33.95	16.32688G	-34.72	2
2.46146G	10.00	-20.00	767.45M	-31.68	2.39384G	-33.83	2.51094G	-34.26	24.96628G	-35.50	3
2.46146G	10.55	-19.45	767.45M	-31.52	2.39648G	-35.30	2.5179G	-33.68	16.35498G	-34.44	4

802.11g_Nss1,(6Mbps)_4TX **CSE NdB**

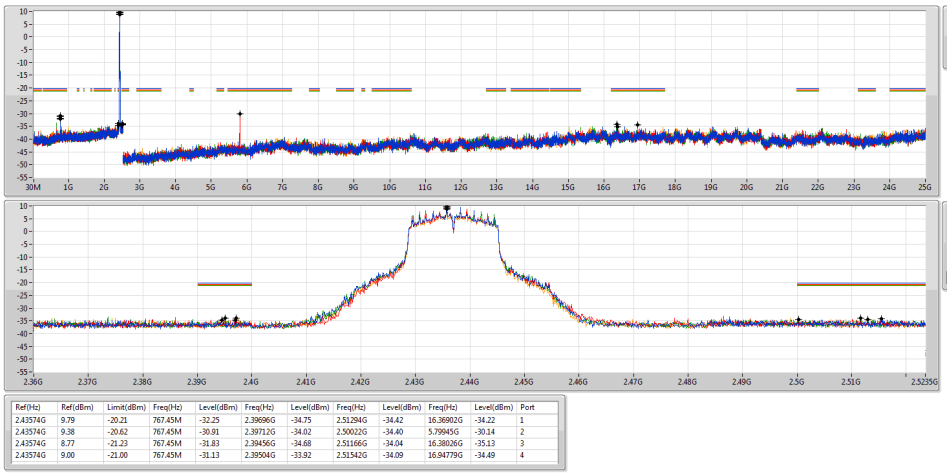
2412MHz



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	4.86	-25.14	1.99652G	-38.82	2.39992G	-32.51	2.51646G	-36.97	17.1557G	-39.99	1
2.41069G	4.94	-25.06	2.18991G	-38.49	2.39984G	-28.30	2.52118G	-37.94	16.35217G	-39.51	2
2.41319G	4.37	-25.63	2.13516G	-39.24	2.39992G	-30.34	2.51278G	-37.78	16.22855G	-39.74	3
2.41069G	4.11	-25.89	2.13399G	-38.67	2.39992G	-32.13	2.50526G	-37.79	16.62469G	-39.44	4

802.11g_Nss1,(6Mbps)_4TX **CSE NdB**

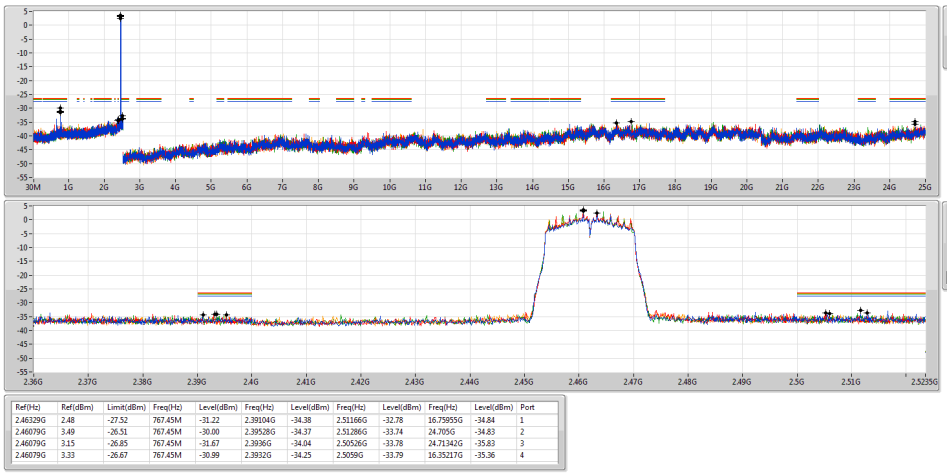
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43574G	9.79	-20.21	767.45M	-32.25	2.39696G	-34.75	2.51294G	-34.42	16.36902G	-34.22	1
2.43574G	9.38	-20.62	767.45M	-30.91	2.39712G	-34.02	2.50022G	-34.40	5.79945G	-30.14	2
2.43574G	8.77	-21.23	767.45M	-31.83	2.39456G	-34.68	2.51166G	-34.04	16.38026G	-35.13	3
2.43574G	9.00	-21.00	767.45M	-31.13	2.39504G	-33.92	2.51542G	-34.09	16.94779G	-34.49	4

802.11g_Nss1,(6Mbps)_4TX **CSE NdB**

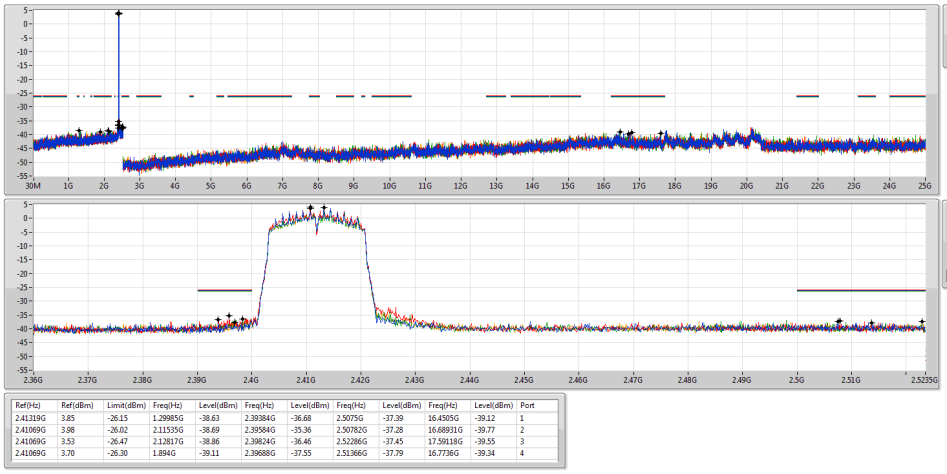
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.46329G	2.48	-27.52	767.45M	-31.22	2.39104G	-34.38	2.51166G	-32.78	16.75955G	-34.84	1
2.46079G	3.49	-26.51	767.45M	-30.00	2.39528G	-34.37	2.51286G	-33.74	24.705G	-34.83	2
2.46079G	3.15	-26.85	767.45M	-31.67	2.3936G	-34.04	2.50526G	-33.78	24.71342G	-35.83	3
2.46079G	3.33	-26.67	767.45M	-30.99	2.3932G	-34.25	2.5059G	-33.79	16.35217G	-35.36	4

802.11n HT20_Nss1,(MCS0)_4TX **CSE NdB**

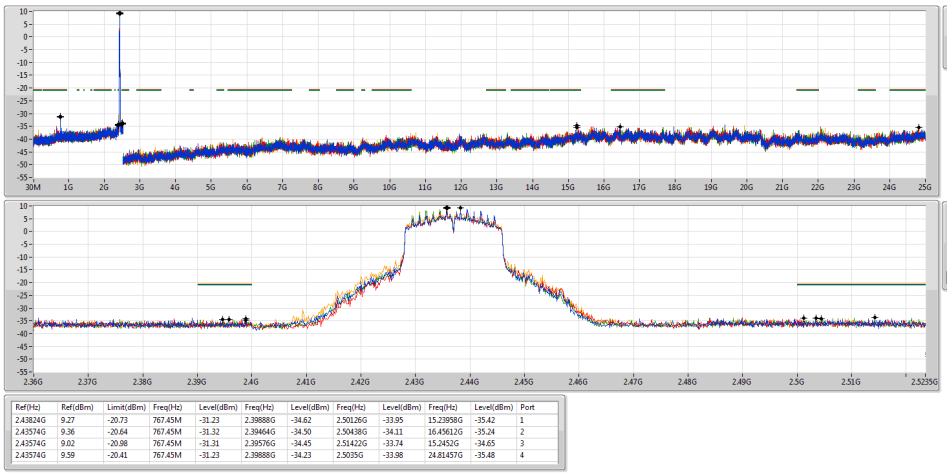
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41319G	3.85	-26.15	1.29985G	-38.63	2.39384G	-36.68	2.5075G	-37.39	16.4505G	-39.12	1
2.41069G	3.98	-26.02	2.11535G	-38.69	2.39584G	-35.36	2.50782G	-37.28	16.68931G	-39.77	2
2.41069G	3.53	-26.47	2.12817G	-38.86	2.39824G	-36.46	2.52286G	-37.45	17.59118G	-39.55	3
2.41069G	3.70	-26.30	1.894G	-39.11	2.39688G	-37.55	2.51366G	-37.79	16.7736G	-39.34	4

802.11n HT20_Nss1,(MCS0)_4TX **CSE NdB**

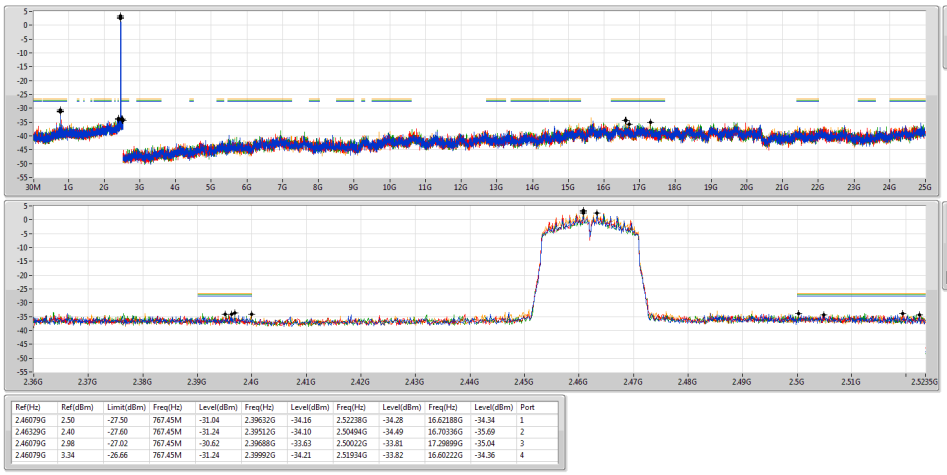
2437MHz



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	9.27	-20.73	767.45M	-31.23	2.39888G	-34.62	2.50126G	-33.95	15.2395BG	-35.42	1
2.43574G	9.36	-20.64	767.45M	-31.32	2.39464G	-34.50	2.50438G	-34.11	16.45612G	-35.24	2
2.43574G	9.02	-20.98	767.45M	-31.31	2.39576G	-34.45	2.51422G	-33.74	15.2452G	-34.65	3
2.43574G	9.59	-20.41	767.45M	-31.23	2.39888G	-34.23	2.5035G	-33.98	24.81457G	-35.48	4

802.11n HT20_Nss1,(MCS0)_4TX **CSE NdB**

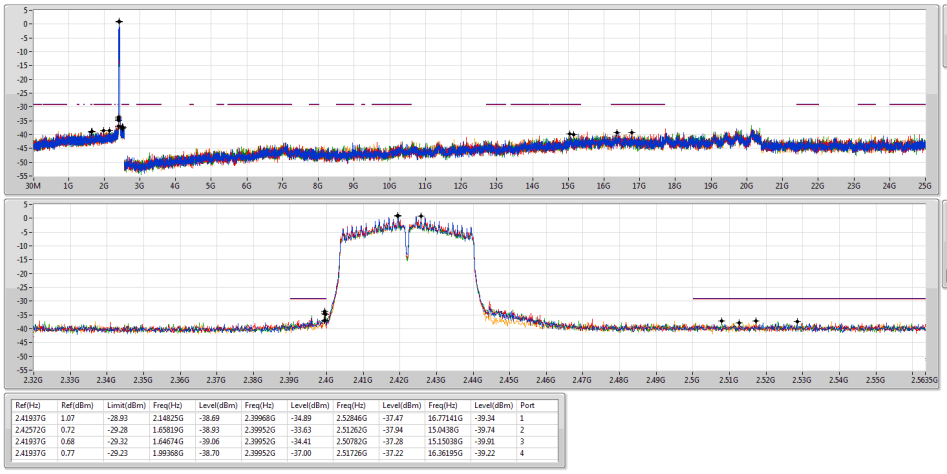
2462MHz



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	2.50	-27.50	767.45M	-31.04	2.39632G	-34.16	2.5223BG	-34.28	16.62188G	-34.34	1
2.46329G	2.40	-27.60	767.45M	-31.24	2.39512G	-34.10	2.50494G	-34.49	16.70336G	-35.69	2
2.46079G	2.98	-27.02	767.45M	-30.62	2.39688G	-33.63	2.50022G	-33.81	17.29899G	-35.04	3
2.46079G	3.34	-26.66	767.45M	-31.24	2.39992G	-34.21	2.51934G	-33.82	16.60222G	-34.36	4

802.11n HT40_Nss1,(MCS0)_4TX **CSE NdB**

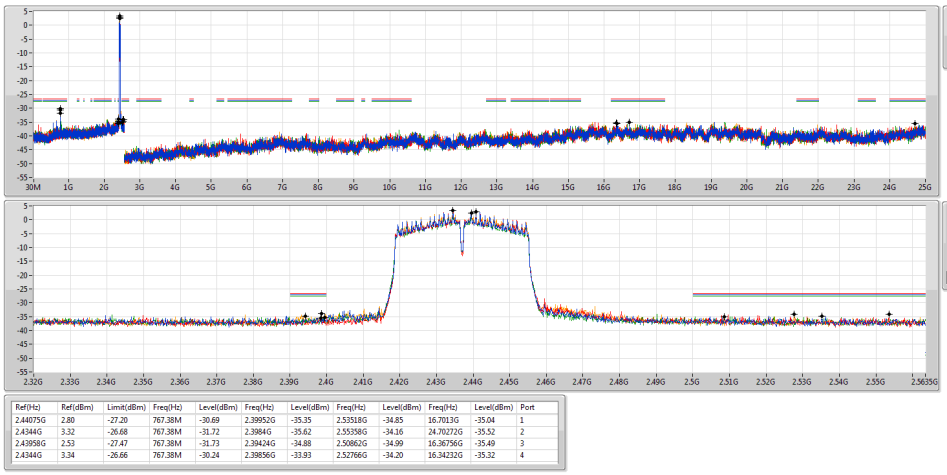
2422MHz



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	1.07	-28.93	2.14825G	-38.69	2.39968G	-34.89	2.52846G	-37.47	16.77141G	-39.34	1
2.42572G	0.72	-29.28	1.65819G	-38.93	2.39952G	-33.63	2.51262G	-37.94	15.0438G	-39.74	2
2.41937G	0.68	-29.32	1.64674G	-39.06	2.39952G	-34.41	2.50782G	-37.28	15.15038G	-39.91	3
2.41937G	0.77	-29.23	1.99368G	-38.70	2.39952G	-37.00	2.51726G	-37.22	16.36195G	-39.22	4

802.11n HT40_Nss1,(MCS0)_4TX **CSE NdB**

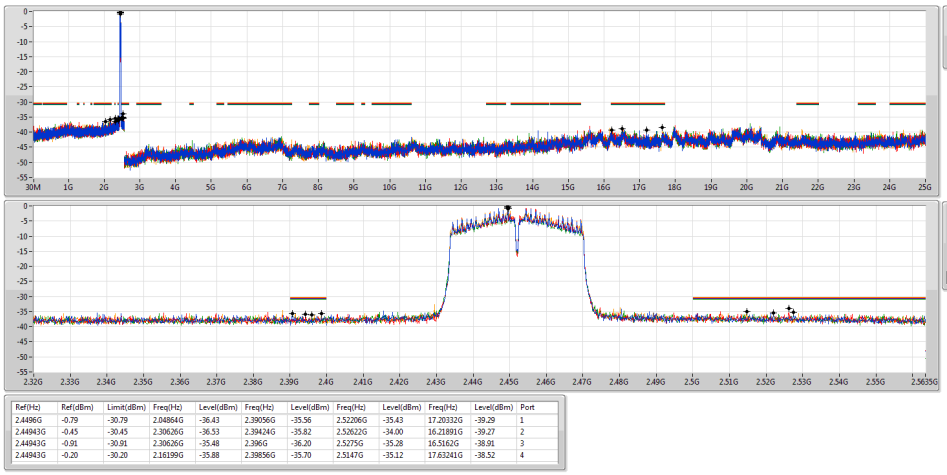
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44075G	2.80	-27.20	767.38M	-30.69	2.39952G	-35.35	2.53518G	-34.85	16.7013G	-35.04	1
2.4344G	3.32	-26.68	767.38M	-31.72	2.3984G	-35.62	2.55358G	-34.16	24.70272G	-35.52	2
2.43958G	2.53	-27.47	767.38M	-31.73	2.39424G	-34.88	2.50862G	-34.99	16.36756G	-35.49	3
2.4344G	3.34	-26.66	767.38M	-30.24	2.39856G	-33.93	2.52766G	-34.20	16.34232G	-35.32	4

802.11n HT40_Nss1,(MCS0)_4TX **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
2.4496G	-0.79	-30.79	2.04864G	-36.43	2.39056G	-35.56	2.52206G	-35.43	17.20332G	-39.29	1
2.44943G	-0.45	-30.45	2.30626G	-36.53	2.39424G	-35.82	2.52622G	-34.00	16.21891G	-39.27	2
2.44943G	-0.91	-30.91	2.30626G	-35.48	2.396G	-36.20	2.5275G	-35.28	16.5162G	-38.91	3
2.44943G	-0.20	-30.20	2.16199G	-35.88	2.39856G	-35.70	2.5147G	-35.12	17.63241G	-38.52	4

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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