FCC Test Report

FCC ID	:	**BKMAE-ELPWT01**
Equipment	:	**Wireless Transmitter**
Model No.	:	**ELPWT01**
Brand Name	:	**EPSON**
Applicant	:	**Seiko Epson Corporation**
Address	:	**3-5, Owa 3-chome, Suwa-shi, Nagano-ken 392-8502 Japan**
Standard	:	**47 CFR FCC Part 15.247**
Received Date	:	**Dec. 04, 2020**
Tested Date	:	**Dec. 15, 2020 ~ Feb. 08, 2021**

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

Table of Contents

Release Record

Report No.	Version	Description	Issued Date
FR0D0401AC	Rev. 01	Initial issue	Mar. 09, 2021

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.518MHz 30.58 (Margin -15.42dB) - AV	Pass
15.247(d) 15.209	Radiated Emissions	[dBuV/m at 3m]: 2390.00MHz 52.97 (Margin -1.03dB) - AV	Pass
15.247(b)(3)	Maximum Output Power	Max Power [dBm]: 24.31	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]	1	1-11 Mbps
2400-2483.5	g	2412-2462	1-11 [11]	1	6-54 Mbps
2400-2483.5	n (HT20)	2412-2462	1-11 [11]	1	MCS 0-7
2400-2483.5	n (HT40)	2422-2452	3-9 [7]	1	MCS 0-7
Note 1: RF output power specifies that Maximum Peak Conducted Output Power. Note 2: 802.11b uses a combination of DSSS-DBPSK, DQPSK, CCK modulation. Note 3: 802.11g/n uses a combination of OFDM-BPSK, QPSK, 16QAM, 64QAM modulation. Note 4: TX diversity function is supported.					

1.1.2 Antenna Details

Ant. No.	Brand	Model	Type	Gain (dBi)	Connector	Remark
1	Unictron	AA077U	Chip	3.1	No	---

1.1.3 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	5Vdc from host

1.1.4 Accessories

N/A

1.1.5 Channel List

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

1.1.6 Test Tool and Duty Cycle

Test Tool	Putty, Version: 0.60.0.0		
Duty Cycle and Duty Factor	Mode	Duty Cycle (%)	Duty Factor (dB)
	11b	100.00%	0.00
	11g	100.00%	0.00
	HT20	100.00%	0.00
	HT40	100.00%	0.00

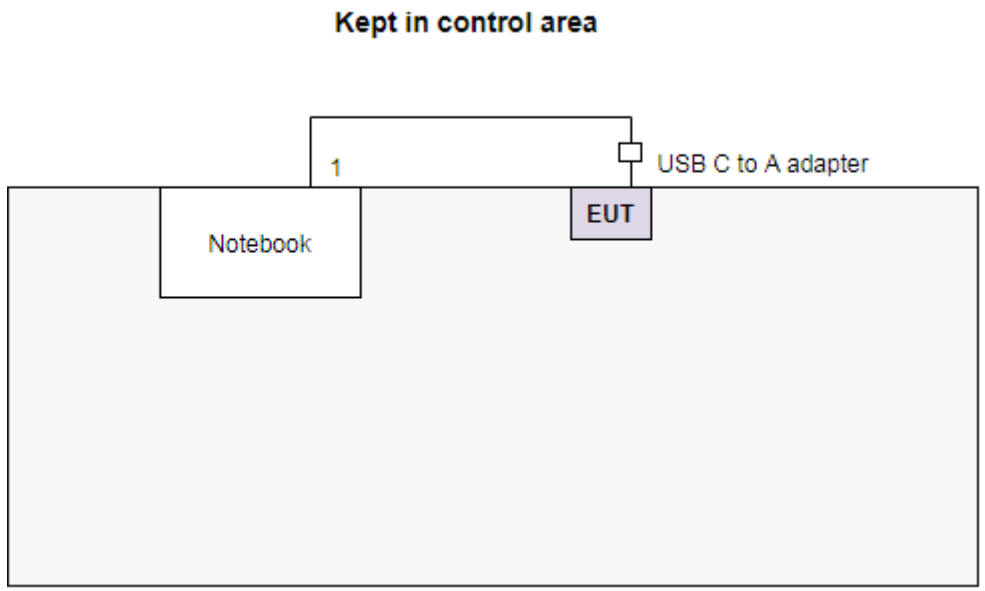
1.1.7 Power Index of Test Tool

Modulation Mode	Test Frequency (MHz)	Power Index
11b	2412	43
11b	2437	43
11b	2462	44
11g	2412	51
11g	2437	53
11g	2462	50
HT20	2412	49
HT20	2437	53
HT20	2462	50
HT40	2422	47
HT40	2437	51
HT40	2452	48

1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Remarks**
1	USB extend Cable	Chang Xing	CVW-U3BAAPS050	---	---
2	USB C to A adapter	ICC	USB C to A adapter	---	---

1.3 Test Setup Chart

Test Setup Diagram


No.	Signal cable / Length (m)
1	USB, 0.5m shielded.

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Test Date	Dec. 23, 2020				
Instrument	**Brand**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	R&S	ESR3	101657	Feb. 14, 2020	Feb. 13, 2021
LISN	R&S	ENV216	101579	Mar. 12, 2020	Mar. 11, 2021
RF Cable-CON	Woken	CFD200-NL	CFD200-NL-001	Oct. 21, 2020	Oct. 20, 2021
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)				
Test Date	Dec. 15 ~ Dec. 18, 2020				
Instrument	**Brand**	**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. 06, 2020	Nov. 05, 2021
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 17, 2020	Nov. 16, 2021
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Oct. 06, 2020	Oct. 05, 2021
Preamplifier	EMC	EMC02325	980187	Aug. 05, 2020	Aug. 04, 2021
Preamplifier	Agilent	83017A	MY39501309	Sep. 02, 2020	Sep. 01, 2021
Preamplifier	EMC	EMC184045B	980192	Jul. 21, 2020	Jul. 20, 2021
RF cable-3M	HUBER+SUHNER	SUCOFLEX104	MY22620/**4**	Sep. 26, 2020	Sep. 25, 2021
RF cable-8M	EMC	EMC104-SM-SM-8000	181107	Sep. 26, 2020	Sep. 25, 2021
RF cable-1M	HUBER+SUHNER	SUCOFLEX104	MY22624/4	Sep. 26, 2020	Sep. 25, 2021
LF cable-0.8M	EMC	EMC8D-NM-NM-800	EMC8D-NM-NM-800-001	Sep. 26, 2020	Sep. 25, 2021
LF cable-3M	EMC	EMC8D-NM-NM-3000	131103	Sep. 26, 2020	Sep. 25, 2021
LF cable-13M	EMC	EMC8D-NM-NM-13000	131104	Sep. 26, 2020	Sep. 25, 2021
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)				
Test Date	Feb. 08, 2021				
Instrument	**Brand**	**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	Nov. 04, 2020	Nov. 03, 2021
Power Sensor	Anritsu	MA2411B	1207366	Nov. 04, 2020	Nov. 03, 2021
DC POWER SOURCE	GW INSTEK	GPC-6030D	GES855395	Nov. 09, 2020	Nov. 08, 2021
Measurement Software	--	SENSE-15247_DTS	V5.10.7	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

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 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.

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

2.2 The Worst Test Modes and Channel Details

Test item	Modulation Mode	Test Frequency (MHz)	Data Rate	Test Antenna
Conducted Emissions	11g	2437	6 Mbps	Main
Radiated Emissions ≤1GHz	11g	2437	6 Mbps	Main
Maximum Output Power	11b 11g HT20 HT40	2412 / 2437 / 2462 2412 / 2437 / 2462 2412 / 2437 / 2462 2422 / 2437 / 2452	1 Mbps 6 Mbps MCS 0 MCS 0	Main Aux
Radiated Emissions >1GHz 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	Main

NOTE:

1. The EUT was pretested with 3 orientations placed on the table for the radiated emission measurement – X, Y, and Z-plane. The **X-plane** results were found as the worst case and were shown in this report.
2. Main and Aux antenna had been covered during pretest. The worst antenna is Main antenna thus main antenna is tested for all items.

3 Transmitter Test Results

3.1 Conducted Emissions

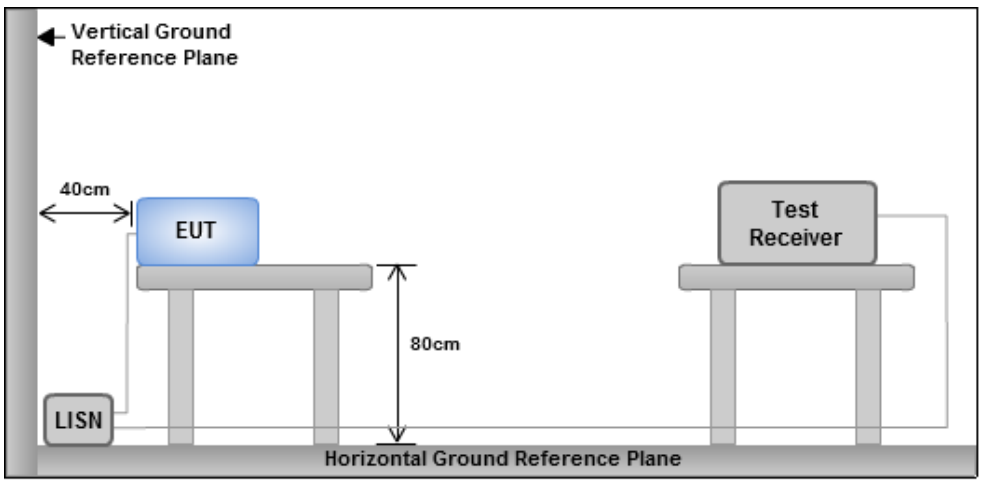
3.1.1 Limit of Conducted Emissions

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

3.1.2 Test Procedures

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

3.1.3 Test Setup



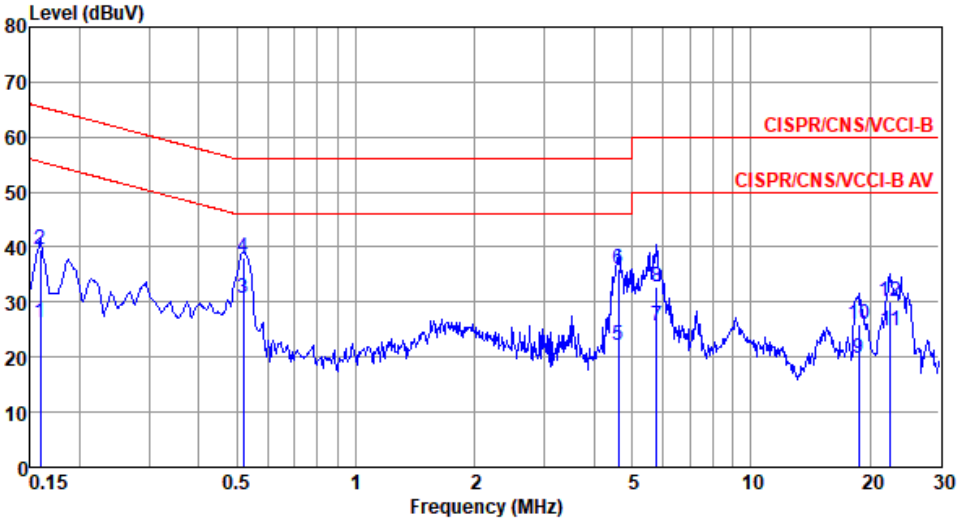
Note: 1. Support units were connected to second LISN.

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

3.1.4 Test Result of Conducted Emissions

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

Test by : Alex Tsai Temperature: 25°C Humidity: 61%

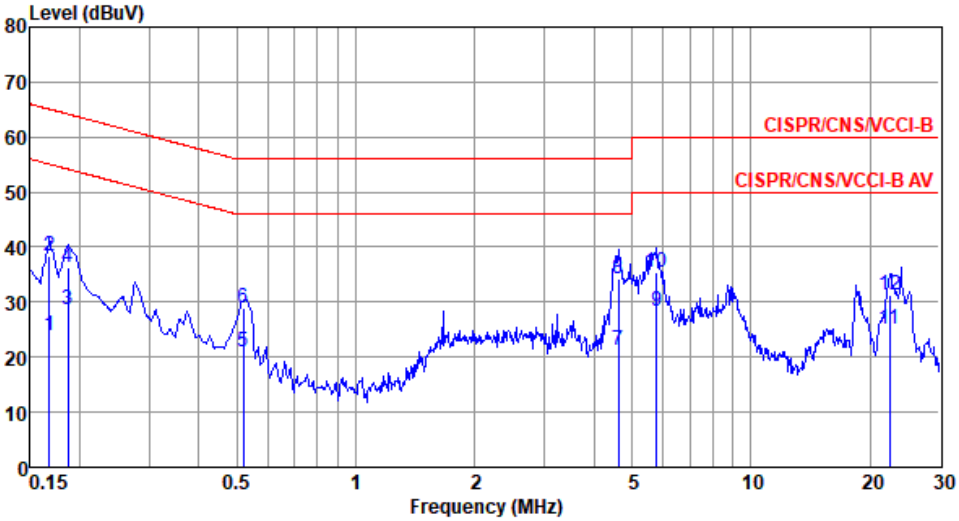


	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.159	26.36	55.52	-29.16	16.67	9.64	0.05	Average
2	0.159	39.53	65.52	-25.99	29.84	9.64	0.05	QP
3*	0.518	30.58	46.00	-15.42	20.86	9.63	0.09	Average
4	0.518	37.96	56.00	-18.04	28.24	9.63	0.09	QP
5	4.622	22.20	46.00	-23.80	12.23	9.66	0.31	Average
6	4.622	36.13	56.00	-19.87	26.16	9.66	0.31	QP
7	5.774	25.74	50.00	-24.26	15.74	9.67	0.33	Average
8	5.774	32.83	60.00	-27.17	22.83	9.67	0.33	QP
9	18.721	19.78	50.00	-30.22	9.41	9.72	0.65	Average
10	18.721	25.83	60.00	-34.17	15.46	9.72	0.65	QP
11	22.535	24.88	50.00	-25.12	14.50	9.69	0.69	Average
12	22.535	29.99	60.00	-30.01	19.61	9.69	0.69	QP

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

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

Test by : Alex Tsai Temperature: 25°C Humidity: 61%



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.168	23.81	55.08	-31.27	14.10	9.66	0.05	Average
2	0.168	38.51	65.08	-26.57	28.80	9.66	0.05	QP
3	0.186	28.64	54.20	-25.56	18.93	9.65	0.06	Average
4	0.186	36.34	64.20	-27.86	26.63	9.65	0.06	QP
5	0.518	21.03	46.00	-24.97	11.29	9.65	0.09	Average
6	0.518	28.82	56.00	-27.18	19.08	9.65	0.09	QP
7	4.622	21.12	46.00	-24.88	11.13	9.68	0.31	Average
8	4.622	34.32	56.00	-21.68	24.33	9.68	0.31	QP
9*	5.774	28.40	50.00	-21.60	18.38	9.69	0.33	Average
10	5.774	35.51	60.00	-24.49	25.49	9.69	0.33	QP
11	22.416	25.15	50.00	-24.85	14.64	9.82	0.69	Average
12	22.416	31.15	60.00	-28.85	20.64	9.82	0.69	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

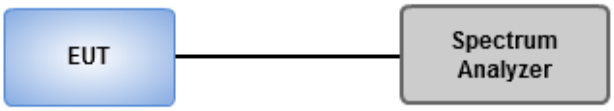
6dB Bandwidth

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

Ambient Condition	23°C / 63%	Tested By	Brad Wu

Summary

Mode	Max-N dB (Hz)	Max-OBW (Hz)	ITU-Code	Min-N dB (Hz)	Min-OBW (Hz)
2.4-2.4835GHz	-	-	-	-	-
802.11b_Nss1,(1Mbps)_1TX	10.072M	15.051M	15M1G1D	10.072M	15.051M
802.11g_Nss1,(6Mbps)_1TX	16.522M	16.643M	16M6D1D	16.449M	16.57M
802.11n HT20_Nss1,(MCS0)_1TX	17.681M	17.728M	17M7D1D	17.609M	17.656M
802.11n HT40_Nss1,(MCS0)_1TX	36.522M	36.179M	36M2D1D	36.377M	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;

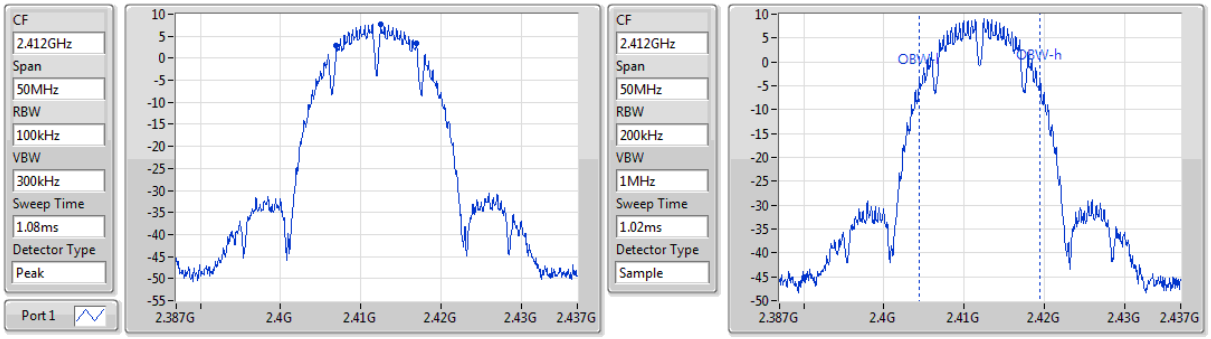
Result

Mode	Result	Limit (Hz)	Port 1-N dB (Hz)	Port 1-OBW (Hz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	10.072M	15.051M
2437MHz	Pass	500k	10.072M	15.051M
2462MHz	Pass	500k	10.072M	15.051M
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-
2412MHz	Pass	500k	16.522M	16.643M
2437MHz	Pass	500k	16.449M	16.643M
2462MHz	Pass	500k	16.449M	16.57M
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-
2412MHz	Pass	500k	17.681M	17.656M
2437MHz	Pass	500k	17.609M	17.728M
2462MHz	Pass	500k	17.609M	17.656M
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-
2422MHz	Pass	500k	36.522M	36.035M
2437MHz	Pass	500k	36.377M	36.179M
2452MHz	Pass	500k	36.522M	36.179M

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

802.11b_Nss1,(1Mbps)_1TX EBW

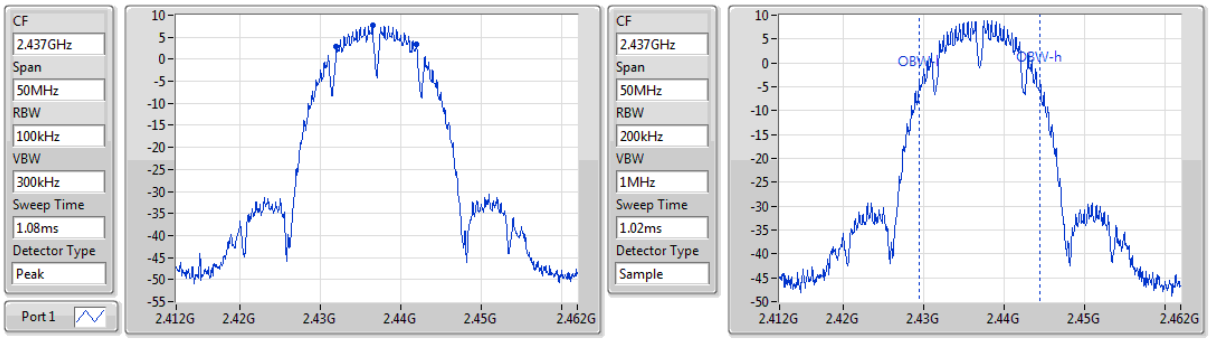
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.072M	2.406928G	2.417G	15.051M	2.404402G	2.419453G	500k	1

802.11b_Nss1,(1Mbps)_1TX EBW

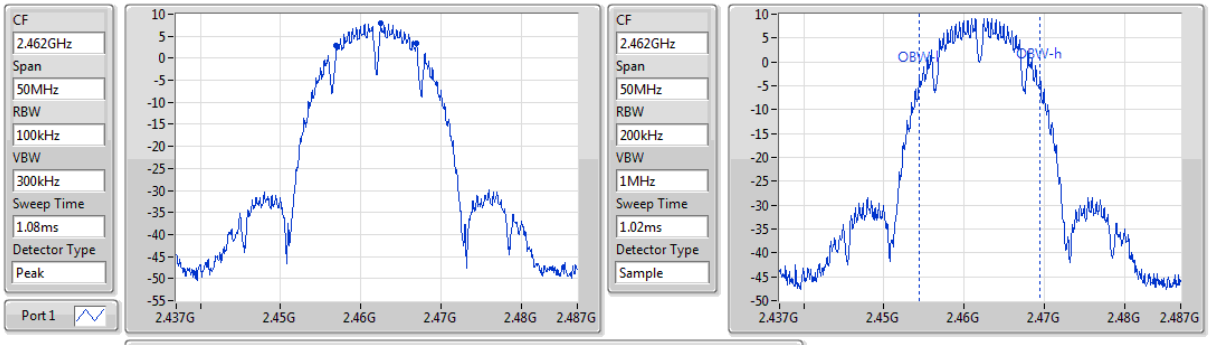
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.072M	2.431928G	2.442G	15.051M	2.429402G	2.444453G	500k	1

802.11b_Nss1,(1Mbps)_1TX EBW

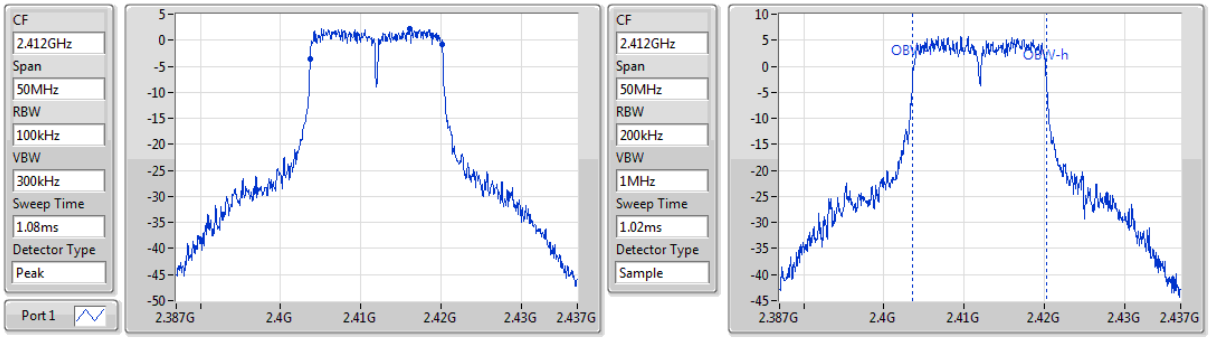
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
10.072M	2.456928G	2.467G	15.051M	2.454402G	2.469453G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

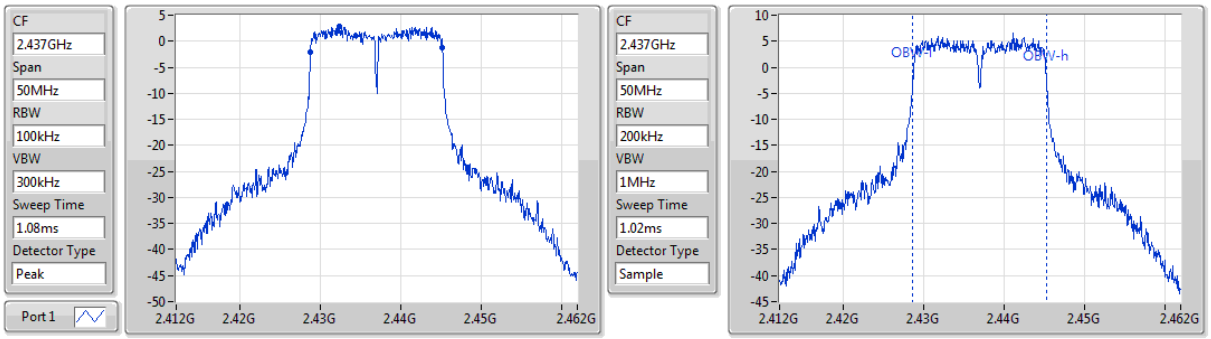
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.522M	2.403667G	2.420188G	16.643M	2.403606G	2.420249G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

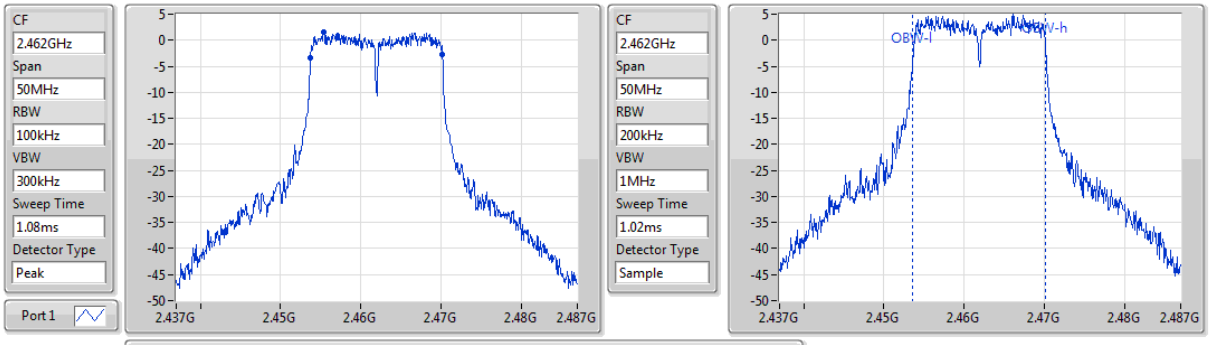
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.449M	2.428739G	2.445188G	16.643M	2.428606G	2.445249G	500k	1

802.11g_Nss1,(6Mbps)_1TX EBW

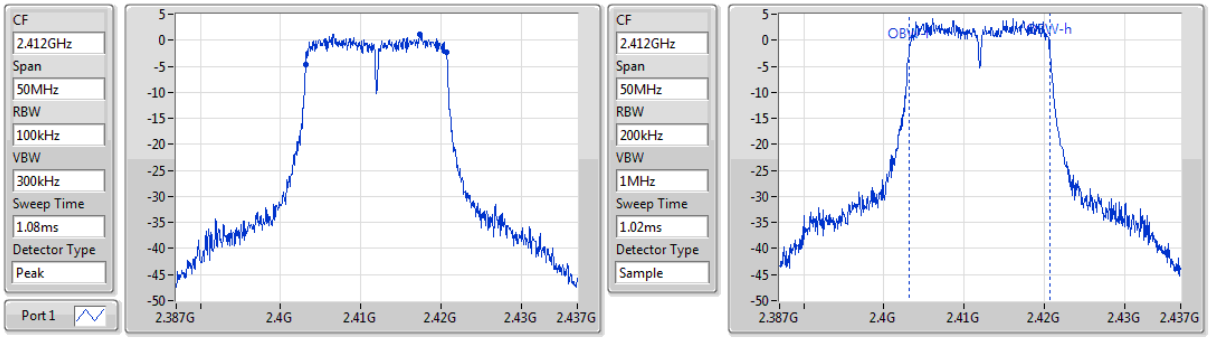
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
16.449M	2.453739G	2.470188G	16.57M	2.453606G	2.470177G	500k	1

802.11n HT20_Nss1,(MCS0)_1TX EBW

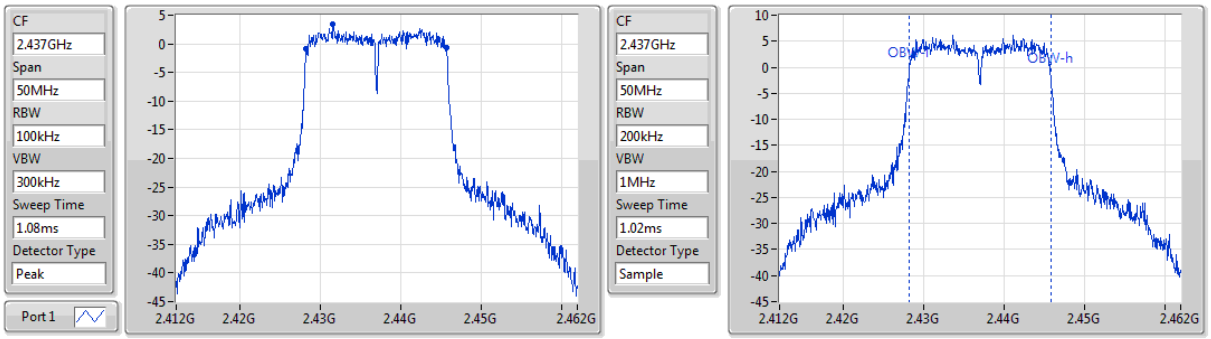
2412MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.681M	2.403087G	2.420768G	17.656M	2.4031G	2.420755G	500k	1

802.11n HT20_Nss1,(MCS0)_1TX EBW

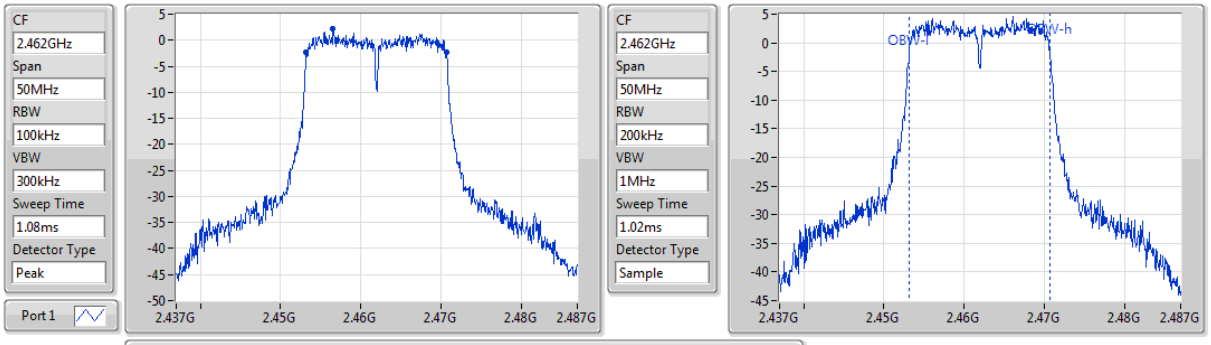
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.609M	2.428159G	2.445768G	17.728M	2.4281G	2.445828G	500k	1

802.11n HT20_Nss1,(MCS0)_1TX EBW

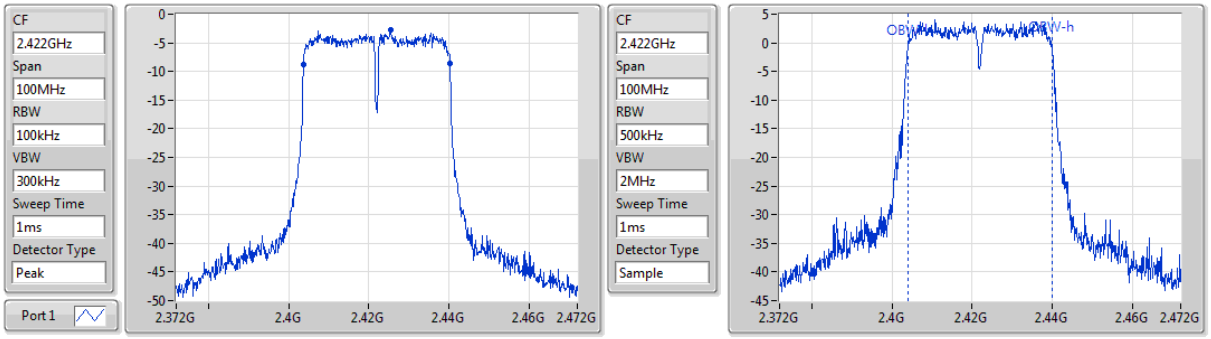
2462MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
17.609M	2.453159G	2.470768G	17.656M	2.4531G	2.470755G	500k	1

802.11n HT40_Nss1,(MCS0)_1TX EBW

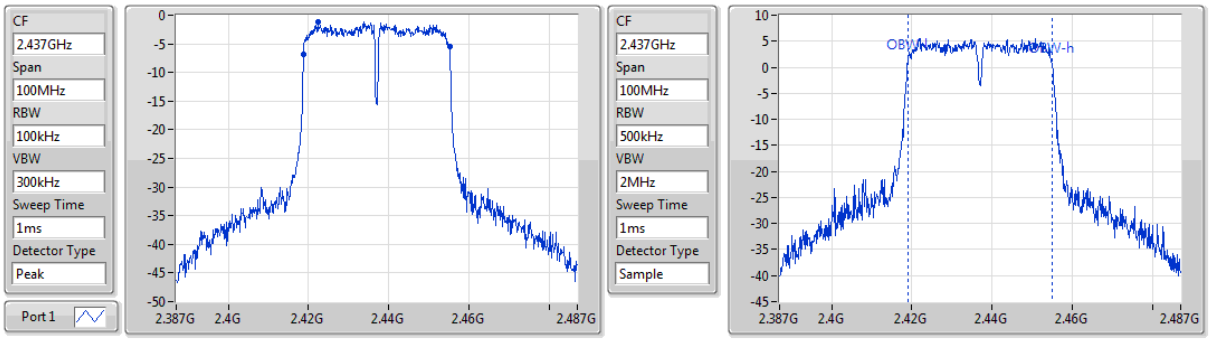
2422MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.522M	2.403739G	2.440261G	36.035M	2.40391G	2.439945G	500k	1

802.11n HT40_Nss1,(MCS0)_1TX EBW

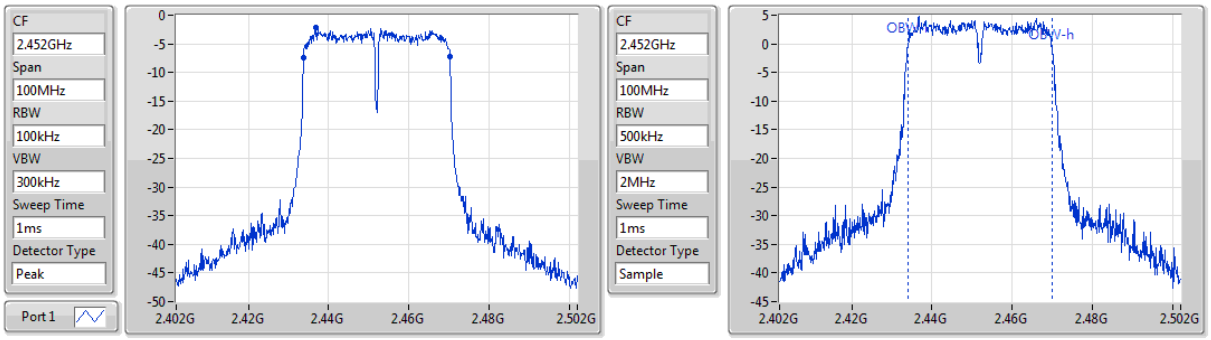
2437MHz



6dB(Hz)	Fl-6dB(Hz)	Fh-6dB(Hz)	OBW(Hz)	Fl-OBW(Hz)	Fh-OBW(Hz)	Limit(Hz)	Port
36.377M	2.418739G	2.455116G	36.179M	2.41891G	2.45509G	500k	1

802.11n HT40_Nss1,(MCS0)_1TX EBW

2452MHz



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

3.3 RF Output Power

3.3.1 Limit of RF Output Power

Conducted power shall not exceed 1Watt.

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

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

Ambient Condition	23°C / 63%	Tested By	Brad Wu

Summary of Peak Conducted Output Power

Main Antenna

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	20.81	0.12050
802.11g_Nss1,(6Mbps)_1TX	24.31	0.26977
802.11n HT20_Nss1,(MCS0)_1TX	24.16	0.26062
802.11n HT40_Nss1,(MCS0)_1TX	23.65	0.23174

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	3.10	20.24	20.24	30.00	23.34	36.00
2437MHz	Pass	3.10	20.32	20.32	30.00	23.42	36.00
2462MHz	Pass	3.10	20.81	20.81	30.00	23.91	36.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	3.10	23.98	23.98	30.00	27.08	36.00
2437MHz	Pass	3.10	24.31	24.31	30.00	27.41	36.00
2462MHz	Pass	3.10	24.02	24.02	30.00	27.12	36.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	3.10	23.31	23.31	30.00	26.41	36.00
2437MHz	Pass	3.10	24.16	24.16	30.00	27.26	36.00
2462MHz	Pass	3.10	23.65	23.65	30.00	26.75	36.00
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
2422MHz	Pass	3.10	22.56	22.56	30.00	25.66	36.00
2437MHz	Pass	3.10	23.65	23.65	30.00	26.75	36.00
2452MHz	Pass	3.10	23.02	23.02	30.00	26.12	36.00

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

Aux Antenna

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	19.25	0.08414
802.11g_Nss1,(6Mbps)_1TX	23.22	0.20989
802.11n HT20_Nss1,(MCS0)_1TX	22.62	0.18281
802.11n HT40_Nss1,(MCS0)_1TX	22.03	0.15959

Result

Mode	Result	DG (dBi)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	3.10	19.15	19.15	30.00	22.25	36.00
2437MHz	Pass	3.10	19.25	19.25	30.00	22.35	36.00
2462MHz	Pass	3.10	19.12	19.12	30.00	22.22	36.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	3.10	23.11	23.11	30.00	26.21	36.00
2437MHz	Pass	3.10	23.22	23.22	30.00	26.32	36.00
2462MHz	Pass	3.10	22.59	22.59	30.00	25.69	36.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	3.10	22.53	22.53	30.00	25.63	36.00
2437MHz	Pass	3.10	22.62	22.62	30.00	25.72	36.00
2462MHz	Pass	3.10	22.41	22.41	30.00	25.51	36.00
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
2422MHz	Pass	3.10	21.76	21.76	30.00	24.86	36.00
2437MHz	Pass	3.10	22.03	22.03	30.00	25.13	36.00
2452MHz	Pass	3.10	22.03	22.03	30.00	25.13	36.00

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

Summary of Conducted (Average) Output Power

Main Antenna

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	18.54	0.07145
802.11g_Nss1,(6Mbps)_1TX	17.33	0.05408
802.11n HT20_Nss1,(MCS0)_1TX	17.32	0.05395
802.11n HT40_Nss1,(MCS0)_1TX	16.72	0.04699

Result

Mode	Result	DG (dBi)	Port 1 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	3.10	17.82	17.82	-	20.92	-
2437MHz	Pass	3.10	17.94	17.94	-	21.04	-
2462MHz	Pass	3.10	18.54	18.54	-	21.64	-
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	3.10	16.52	16.52	-	19.62	-
2437MHz	Pass	3.10	17.33	17.33	-	20.43	-
2462MHz	Pass	3.10	15.96	15.96	-	19.06	-
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	3.10	15.65	15.65	-	18.75	-
2437MHz	Pass	3.10	17.32	17.32	-	20.42	-
2462MHz	Pass	3.10	16.02	16.02	-	19.12	-
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
2422MHz	Pass	3.10	14.43	14.43	-	17.53	-
2437MHz	Pass	3.10	16.72	16.72	-	19.82	-
2452MHz	Pass	3.10	15.22	15.22	-	18.32	-

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

Note : Conducted average output power is for reference only

Aux Antenna

Mode	Total Power (dBm)	Total Power (W)
2.4-2.4835GHz	-	-
802.11b_Nss1,(1Mbps)_1TX	17.15	0.05188
802.11g_Nss1,(6Mbps)_1TX	16.45	0.04416
802.11n HT20_Nss1,(MCS0)_1TX	16.31	0.04276
802.11n HT40_Nss1,(MCS0)_1TX	15.72	0.03733

Result

Mode	Result	DG (dBi)	Port 2 (dBm)	Total Power (dBm)	Power Limit (dBm)	EIRP (dBm)	EIRP Limit (dBm)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	3.10	17.11	17.11	-	20.21	-
2437MHz	Pass	3.10	17.15	17.15	-	20.25	-
2462MHz	Pass	3.10	17.03	17.03	-	20.13	-
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	3.10	15.73	15.73	-	18.83	-
2437MHz	Pass	3.10	16.45	16.45	-	19.55	-
2462MHz	Pass	3.10	14.95	14.95	-	18.05	-
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
2412MHz	Pass	3.10	15.11	15.11	-	18.21	-
2437MHz	Pass	3.10	16.31	16.31	-	19.41	-
2462MHz	Pass	3.10	14.82	14.82	-	17.92	-
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-	-	-
2422MHz	Pass	3.10	13.56	13.56	-	16.66	-
2437MHz	Pass	3.10	15.72	15.72	-	18.82	-
2452MHz	Pass	3.10	14.15	14.15	-	17.25	-

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

3.4 Power Spectral Density

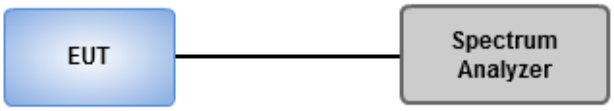
3.4.1 Limit of Power Spectral Density

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

Ambient Condition	23°C / 63%	Tested By	Brad Wu

Summary

Mode	PD (dBm/3kHz)
2.4-2.4835GHz	-
802.11b_Nss1,(1Mbps)_1TX	-12.41
802.11g_Nss1,(6Mbps)_1TX	-11.87
802.11n HT20_Nss1,(MCS0)_1TX	-10.22
802.11n HT40_Nss1,(MCS0)_1TX	-14.00

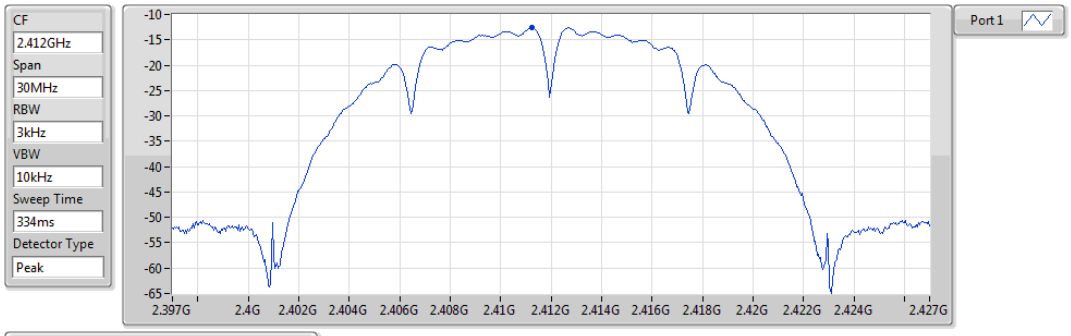
Result

Mode	Result	DG (dBi)	Port 1 (dBm/3kHz)	PD (dBm/3kHz)	PD Limit (dBm/3kHz)
802.11b_Nss1,(1Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	3.10	-12.64	-12.64	8.00
2437MHz	Pass	3.10	-12.69	-12.69	8.00
2462MHz	Pass	3.10	-12.41	-12.41	8.00
802.11g_Nss1,(6Mbps)_1TX	-	-	-	-	-
2412MHz	Pass	3.10	-12.09	-12.09	8.00
2437MHz	Pass	3.10	-11.87	-11.87	8.00
2462MHz	Pass	3.10	-13.02	-13.02	8.00
802.11n HT20_Nss1,(MCS0)_1TX	-	-	-	-	-
2412MHz	Pass	3.10	-13.31	-13.31	8.00
2437MHz	Pass	3.10	-10.22	-10.22	8.00
2462MHz	Pass	3.10	-12.20	-12.20	8.00
802.11n HT40_Nss1,(MCS0)_1TX	-	-	-	-	-
2422MHz	Pass	3.10	-16.54	-16.54	8.00
2437MHz	Pass	3.10	-14.00	-14.00	8.00
2452MHz	Pass	3.10	-14.75	-14.75	8.00

DG = Directional Gain;
PD = Maximum power density; **Port X** = Port X power density;

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

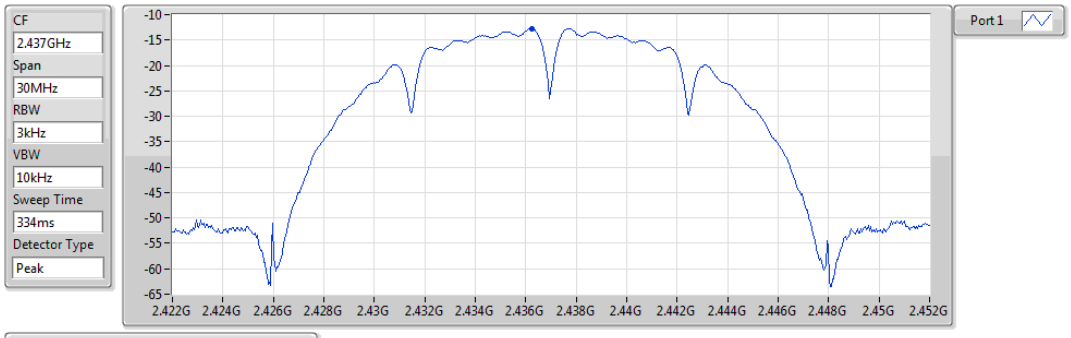
2412MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.64	-12.64	-12.64

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

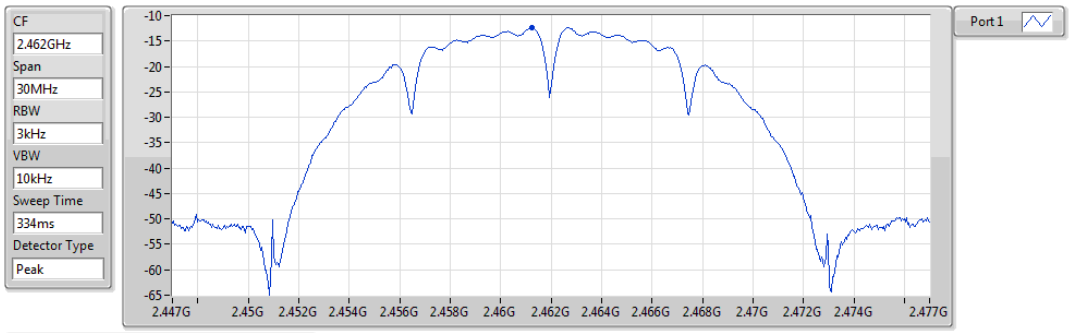
2437MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.69	-12.69	-12.69

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

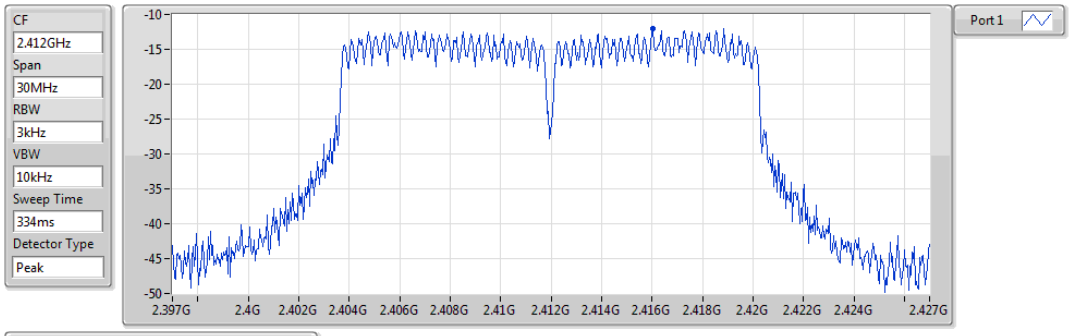
2462MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.41	-12.41	-12.41

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

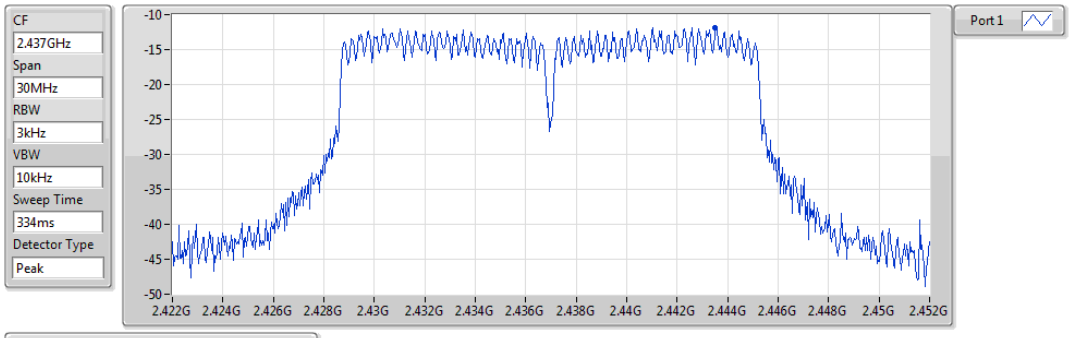
2412MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.09	-12.09	-12.09

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

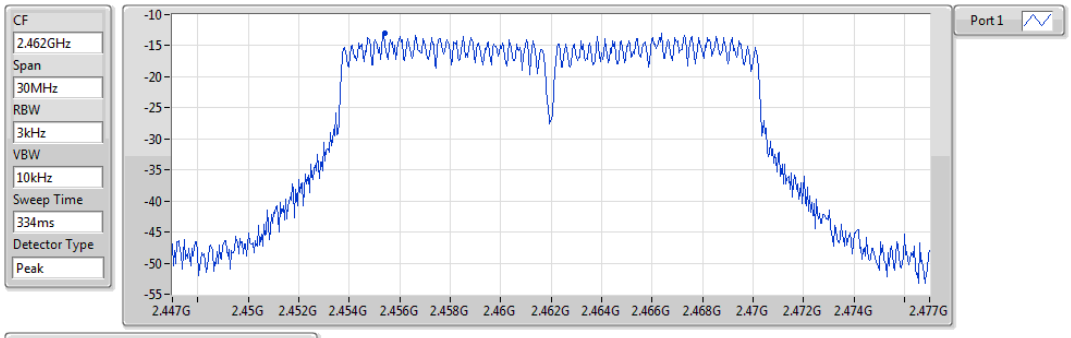
2437MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-11.87	-11.87	-11.87

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

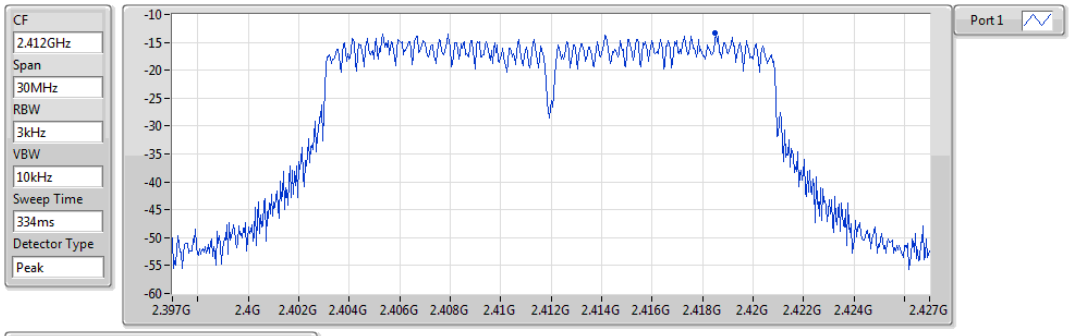
2462MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-13.02	-13.02	-13.02

802.11n HT20_Nss1,(MCS0)_1TX **PSD**

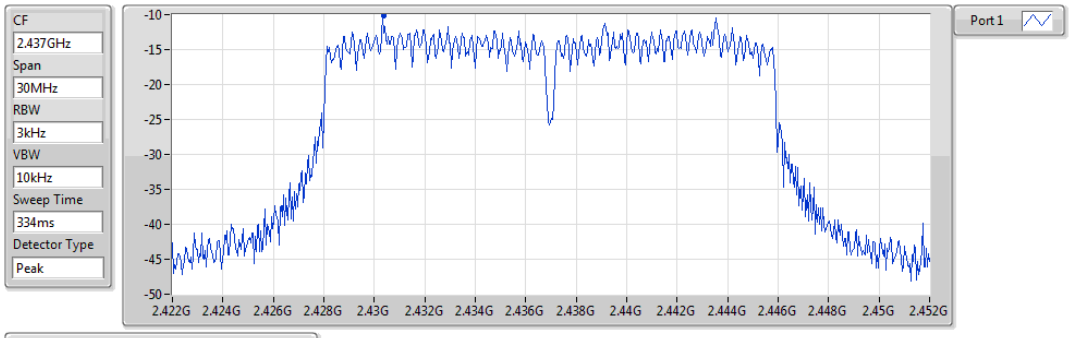
2412MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-13.31	-13.31	-13.31

802.11n HT20_Nss1,(MCS0)_1TX **PSD**

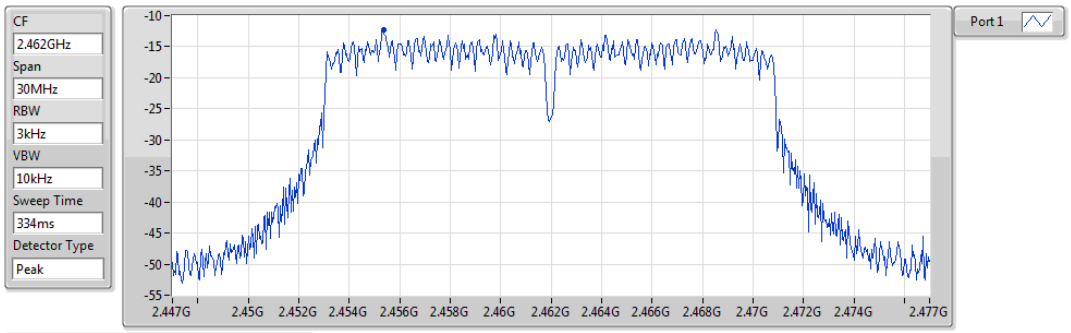
2437MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-10.22	-10.22	-10.22

802.11n HT20_Nss1,(MCS0)_1TX **PSD**

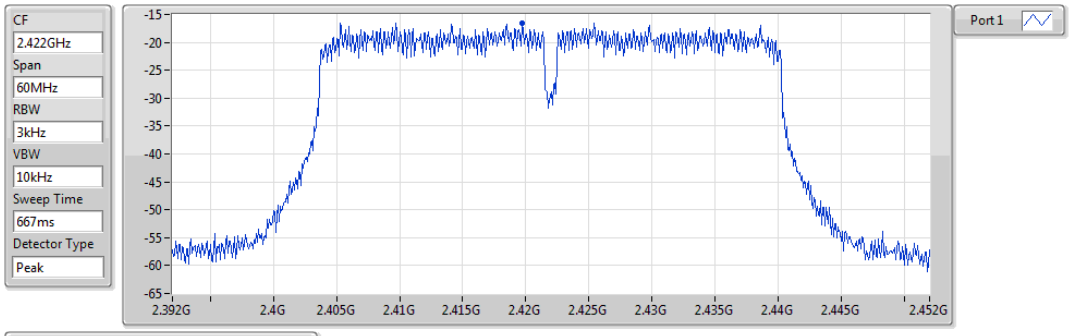
2462MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-12.20	-12.20	-12.20

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

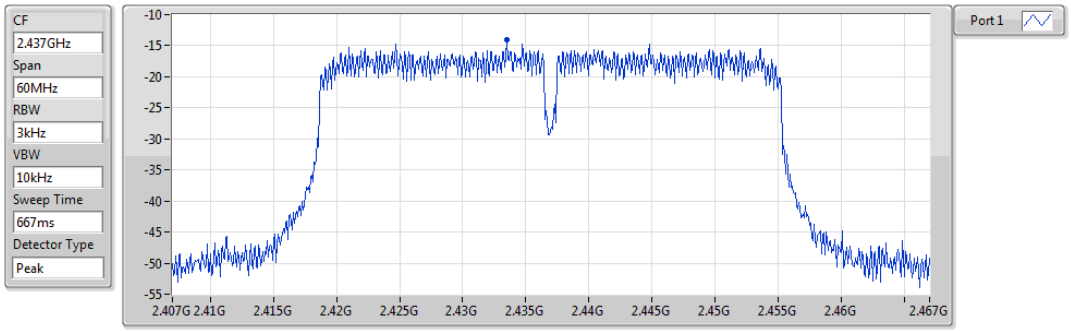
2422MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-16.54	-16.54	-16.54

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

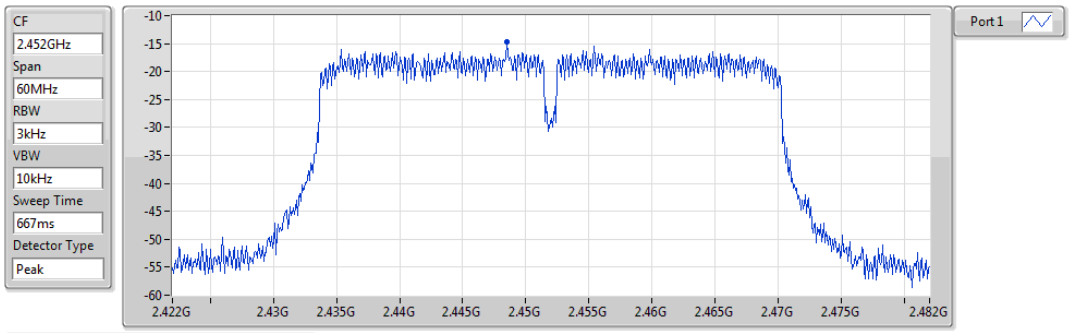
2437MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-14.00	-14.00	-14.00

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

2452MHz



Sum	PD	Port 1
(dBm/RBW)	(dBm/RBW)	(dBm/RBW)
-14.75	-14.75	-14.75

3.5 Unwanted Emissions into Restricted Frequency Bands

3.5.1 Limit of Unwanted Emissions into Restricted Frequency Bands

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

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

3.5.2 Test Procedures

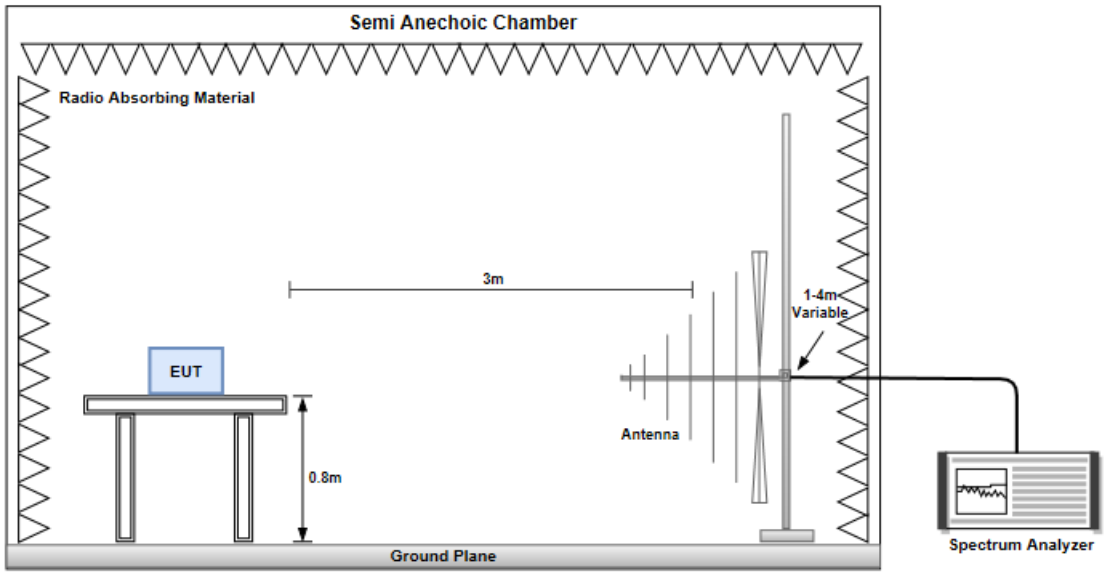
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

Note:

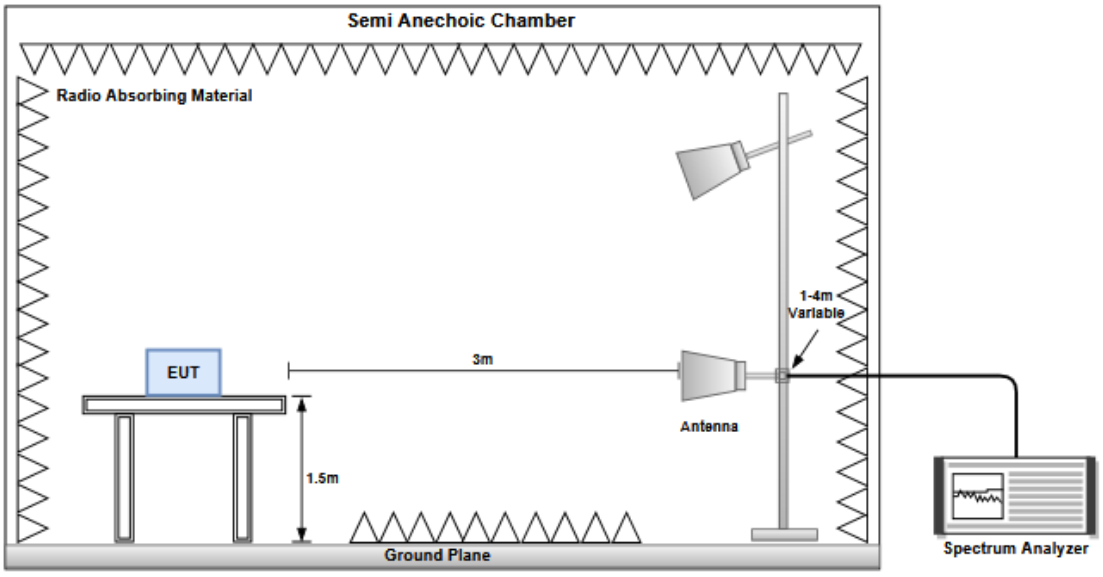
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.5.3 Test Setup

Radiated Emissions below 1 GHz



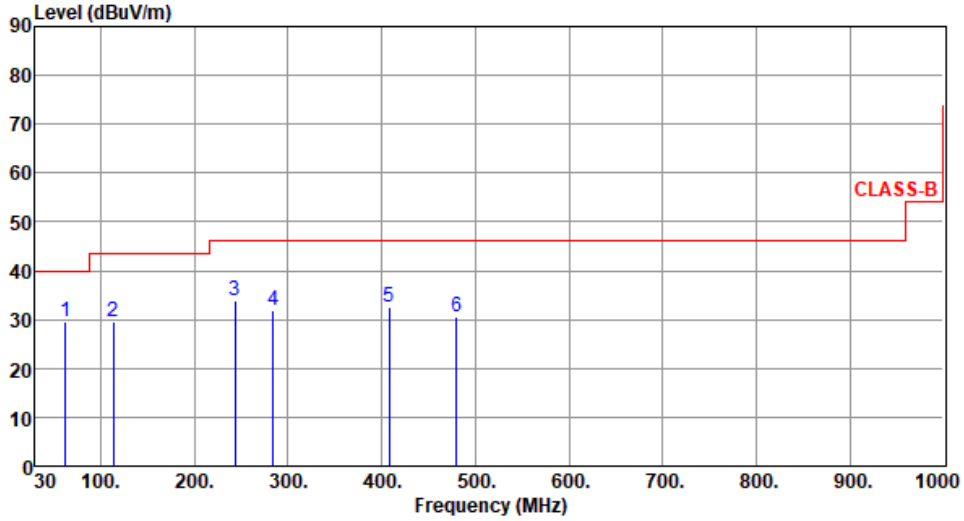
Radiated Emissions above 1 GHz



3.5.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

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

Test By :BRAD WU Temperature(℃):23 Humidity(%):65

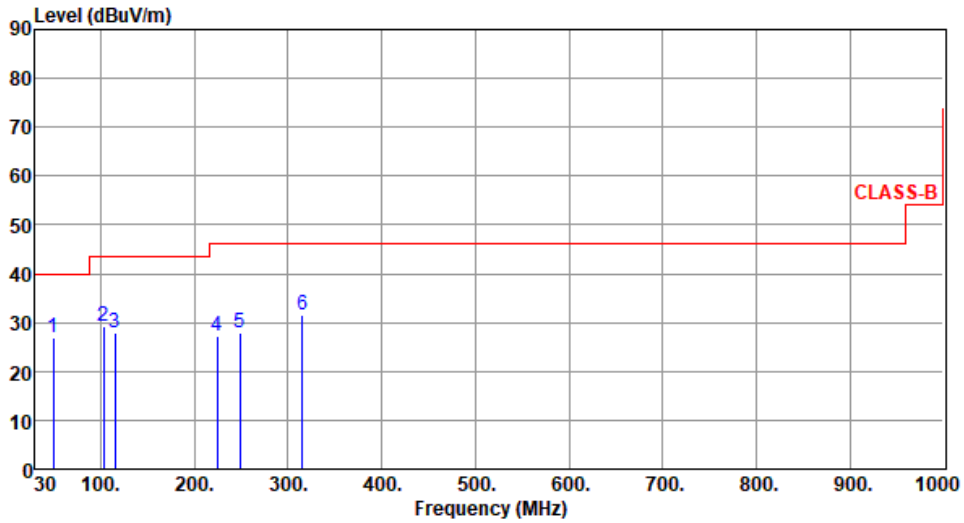


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	62.01	29.48	40.00	-10.52	39.17	-9.69	Peak	---	---
2	113.42	29.53	43.50	-13.97	41.33	-11.80	Peak	---	---
3	243.40	33.77	46.00	-12.23	44.22	-10.45	Peak	---	---
4	284.14	32.03	46.00	-13.97	41.06	-9.03	Peak	---	---
5	408.30	32.51	46.00	-13.49	38.11	-5.60	Peak	---	---
6	480.08	30.51	46.00	-15.49	34.02	-3.51	Peak	---	---

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

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

Test By :BRAD WU Temperature(℃):23 Humidity(%):65



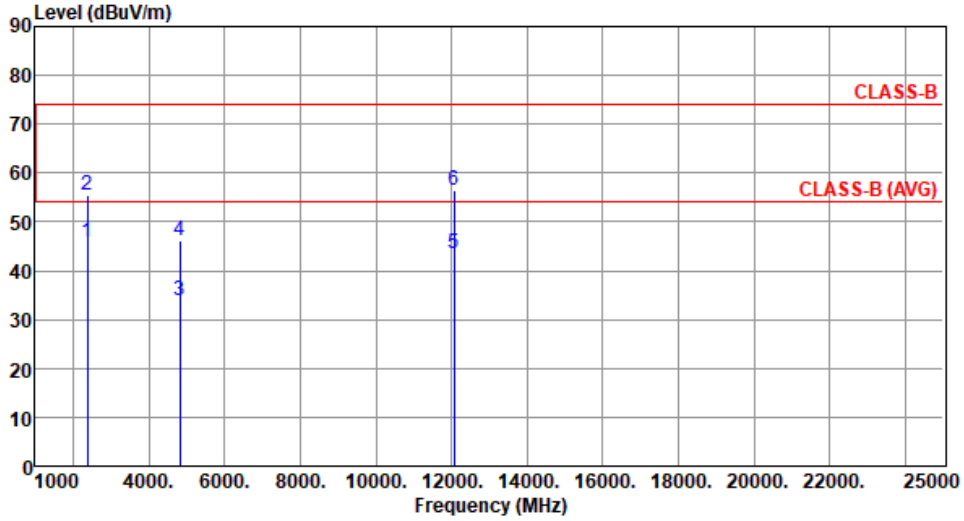
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	49.40	26.97	40.00	-13.03	35.76	-8.79	Peak	---	---
2	102.75	29.28	43.50	-14.22	42.54	-13.26	Peak	---	---
3	115.36	28.01	43.50	-15.49	39.75	-11.74	Peak	---	---
4	224.00	27.14	46.00	-18.86	39.57	-12.43	Peak	---	---
5	248.25	27.89	46.00	-18.11	38.12	-10.23	Peak	---	---
6	315.18	31.66	46.00	-14.34	39.73	-8.07	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		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66

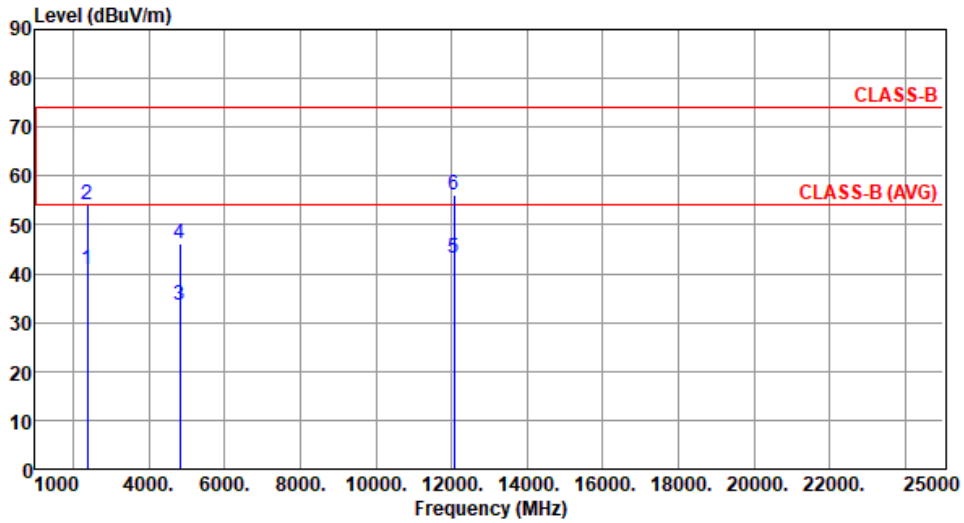


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	45.93	54.00	-8.07	47.77	-1.84	Average	149	3
2	2390.00	55.56	74.00	-18.44	57.40	-1.84	Peak	149	3
3	4824.00	33.85	54.00	-20.15	28.77	5.08	Average	105	114
4	4824.00	46.14	74.00	-27.86	41.06	5.08	Peak	105	114
5	12060.00	43.54	54.00	-10.46	28.85	14.69	Average	100	29
6	12060.00	56.53	74.00	-17.47	41.84	14.69	Peak	100	29

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		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66

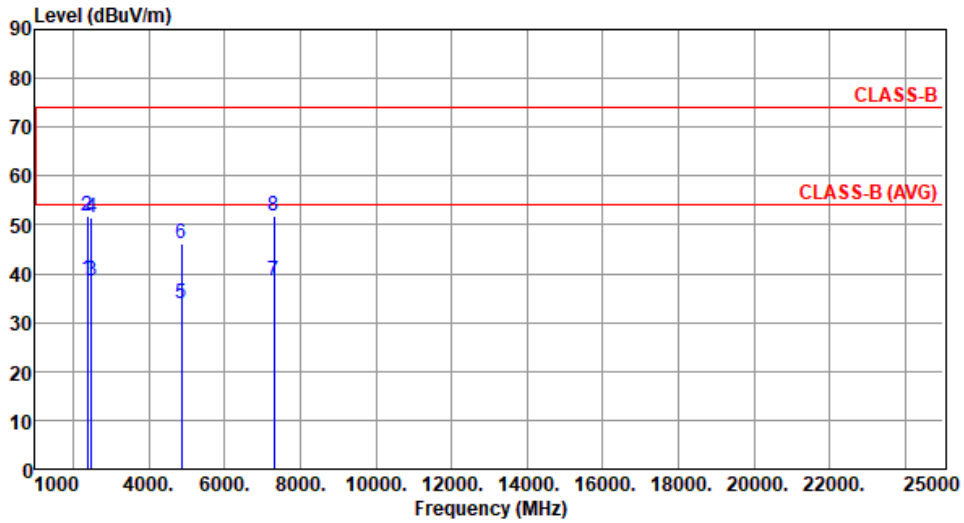


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	40.81	54.00	-13.19	42.65	-1.84	Average	355	322
2	2390.00	54.03	74.00	-19.97	55.87	-1.84	Peak	355	322
3	4824.00	33.52	54.00	-20.48	28.44	5.08	Average	100	21
4	4824.00	46.05	74.00	-27.95	40.97	5.08	Peak	100	21
5	12060.00	43.14	54.00	-10.86	28.45	14.69	Average	100	24
6	12060.00	56.22	74.00	-17.78	41.53	14.69	Peak	100	24

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		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66

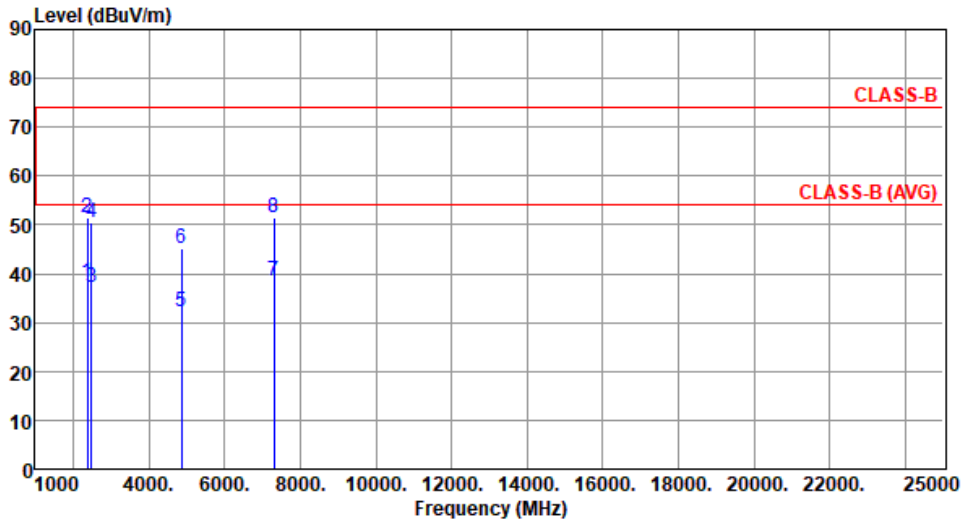


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	38.86	54.00	-15.14	40.70	-1.84	Average	147	2
2	2390.00	51.68	74.00	-22.32	53.52	-1.84	Peak	147	2
3	2483.50	38.58	54.00	-15.42	40.38	-1.80	Average	147	2
4	2483.50	51.49	74.00	-22.51	53.29	-1.80	Peak	147	2
5	4874.00	33.96	54.00	-20.04	28.89	5.07	Average	100	123
6	4874.00	46.32	74.00	-27.68	41.25	5.07	Peak	100	123
7	7311.00	38.61	54.00	-15.39	28.33	10.28	Average	100	16
8	7311.00	51.88	74.00	-22.12	41.60	10.28	Peak	100	16

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		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66

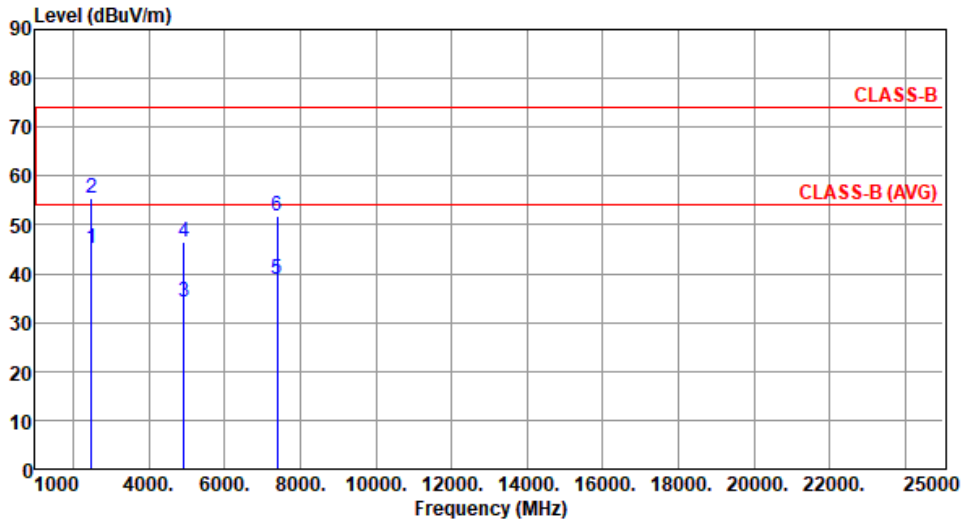


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	38.28	54.00	-15.72	40.12	-1.84	Average	348	318
2	2390.00	51.57	74.00	-22.43	53.41	-1.84	Peak	348	318
3	2483.50	37.15	54.00	-16.85	38.95	-1.80	Average	348	318
4	2483.50	50.44	74.00	-23.56	52.24	-1.80	Peak	348	318
5	4874.00	32.32	54.00	-21.68	27.25	5.07	Average	100	24
6	4874.00	45.24	74.00	-28.76	40.17	5.07	Peak	100	24
7	7311.00	38.43	54.00	-15.57	28.15	10.28	Average	110	25
8	7311.00	51.50	74.00	-22.50	41.22	10.28	Peak	110	25

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

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

Test By :BRAD WU Temperature(℃):23 Humidity(%):66

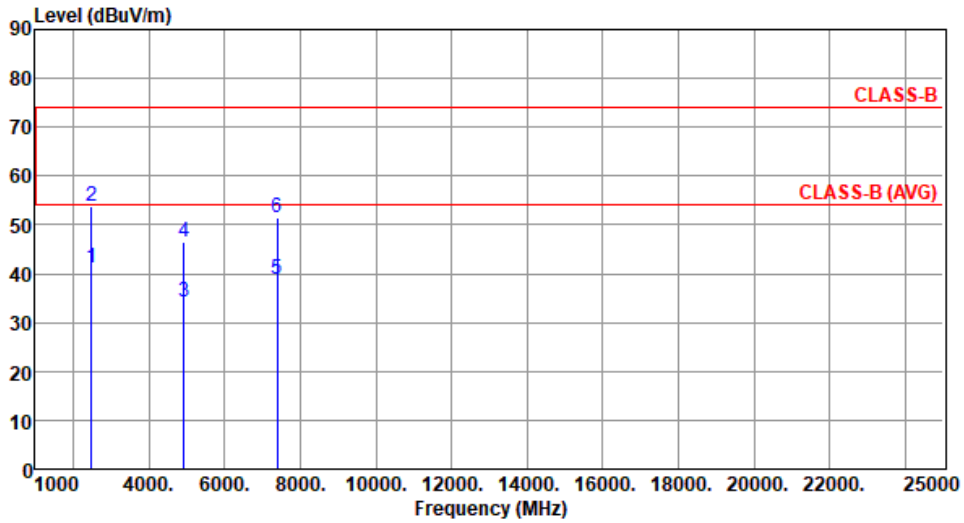


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	45.17	54.00	-8.83	46.97	-1.80	Average	149	358
2	2483.50	55.36	74.00	-18.64	57.16	-1.80	Peak	149	358
3	4924.00	34.24	54.00	-19.76	29.12	5.12	Average	103	108
4	4924.00	46.51	74.00	-27.49	41.39	5.12	Peak	103	108
5	7386.00	38.92	54.00	-15.08	28.65	10.27	Average	100	19
6	7386.00	51.95	74.00	-22.05	41.68	10.27	Peak	100	19

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		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66



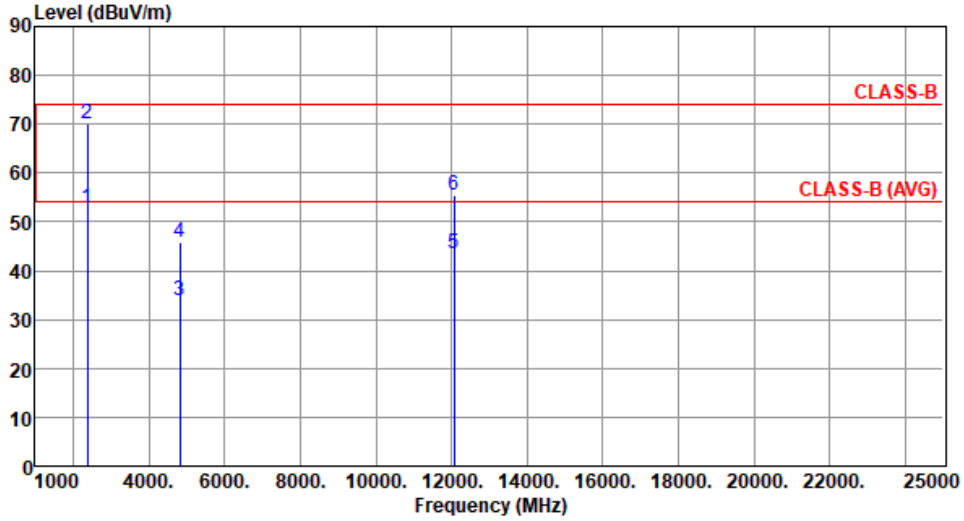
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	41.08	54.00	-12.92	42.88	-1.80	Average	356	321
2	2483.50	53.73	74.00	-20.27	55.53	-1.80	Peak	356	321
3	4924.00	34.17	54.00	-19.83	29.05	5.12	Average	100	25
4	4924.00	46.37	74.00	-27.63	41.25	5.12	Peak	100	25
5	7386.00	38.81	54.00	-15.19	28.54	10.27	Average	100	23
6	7386.00	51.52	74.00	-22.48	41.25	10.27	Peak	100	23

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		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66

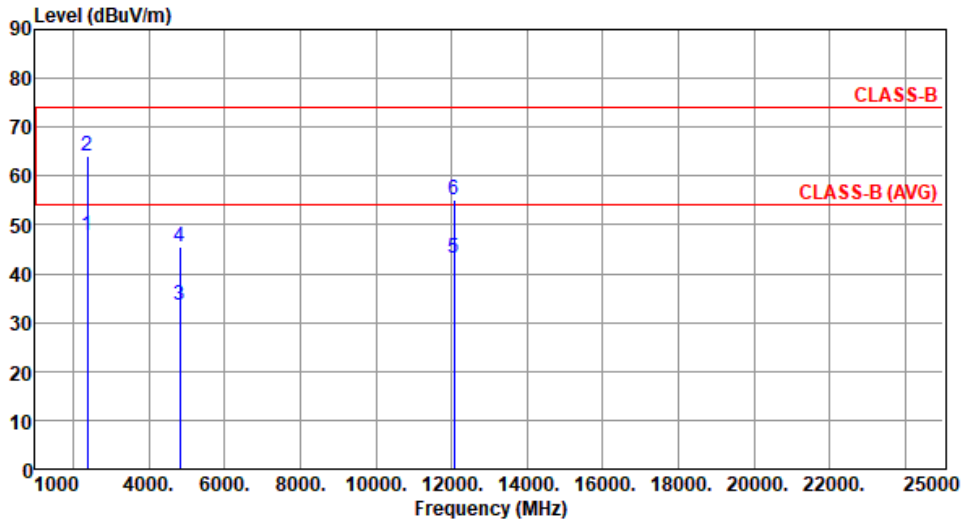


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	52.70	54.00	-1.30	54.54	-1.84	Average	150	3
2	2390.00	70.01	74.00	-3.99	71.85	-1.84	Peak	150	3
3	4824.00	33.83	54.00	-20.17	28.75	5.08	Average	100	106
4	4824.00	45.93	74.00	-28.07	40.85	5.08	Peak	100	106
5	12060.00	43.45	54.00	-10.55	28.76	14.69	Average	100	102
6	12060.00	55.48	74.00	-18.52	40.79	14.69	Peak	100	102

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		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66

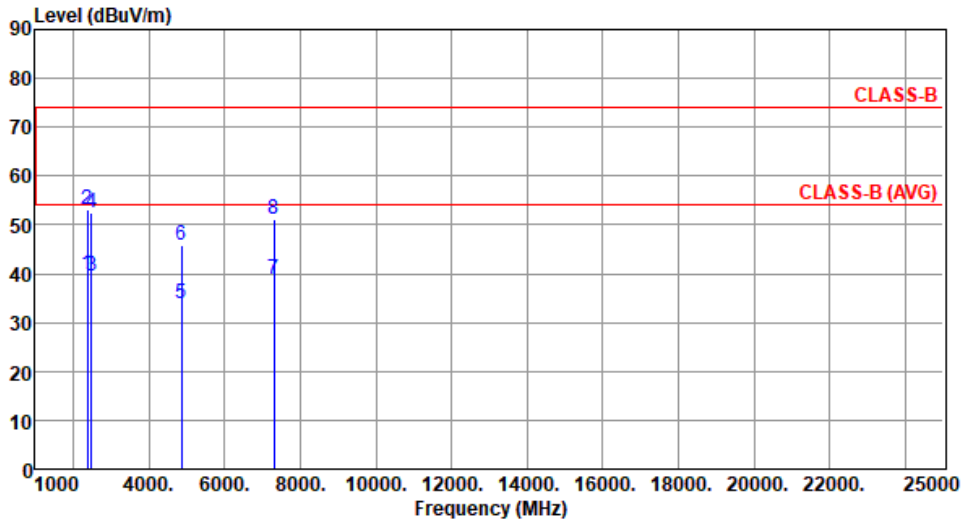


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	47.71	54.00	-6.29	49.55	-1.84	Average	351	326
2	2390.00	64.01	74.00	-9.99	65.85	-1.84	Peak	351	326
3	4824.00	33.40	54.00	-20.60	28.32	5.08	Average	100	25
4	4824.00	45.40	74.00	-28.60	40.32	5.08	Peak	100	25
5	12060.00	43.09	54.00	-10.91	28.40	14.69	Average	100	26
6	12060.00	55.07	74.00	-18.93	40.38	14.69	Peak	100	26

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

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

Test By :BRAD WU Temperature(℃):23 Humidity(%):66

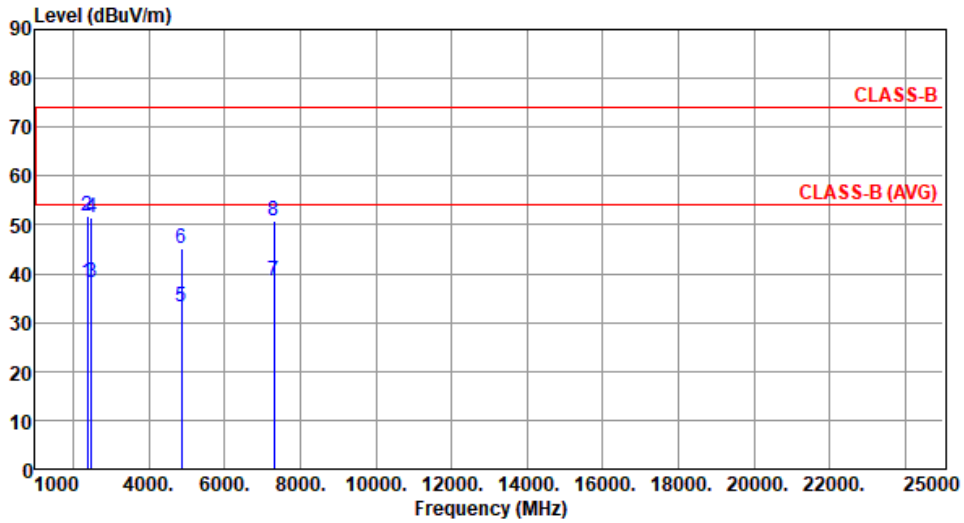


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	39.73	54.00	-14.27	41.57	-1.84	Average	149	4
2	2390.00	53.12	74.00	-20.88	54.96	-1.84	Peak	149	4
3	2483.50	39.59	54.00	-14.41	41.39	-1.80	Average	149	4
4	2483.50	52.60	74.00	-21.40	54.40	-1.80	Peak	149	4
5	4874.00	33.80	54.00	-20.20	28.73	5.07	Average	100	109
6	4874.00	45.88	74.00	-28.12	40.81	5.07	Peak	100	109
7	7311.00	38.99	54.00	-15.01	28.71	10.28	Average	100	105
8	7311.00	51.06	74.00	-22.94	40.78	10.28	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	11g	Test Freq. (MHz)	2437
Polarization	Vertical		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66

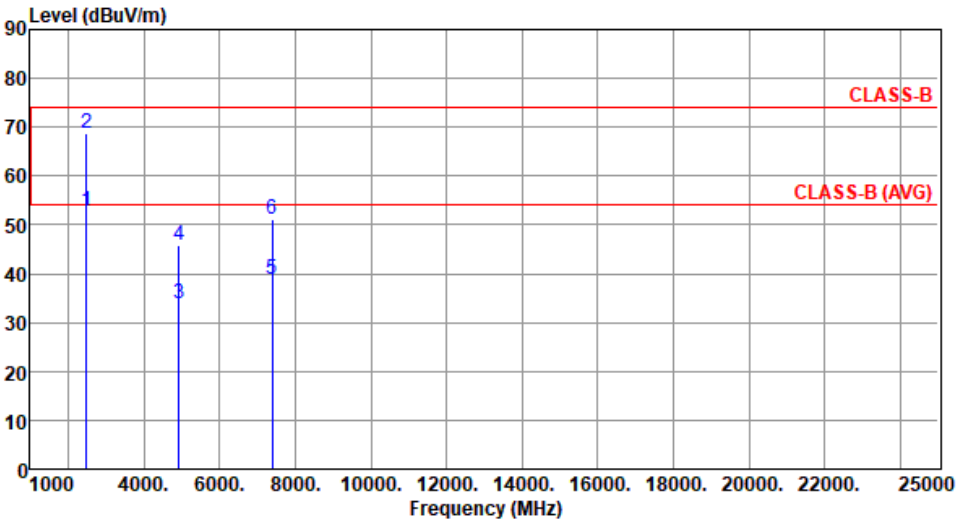


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	38.06	54.00	-15.94	39.90	-1.84	Average	347	316
2	2390.00	51.95	74.00	-22.05	53.79	-1.84	Peak	347	316
3	2483.50	38.16	54.00	-15.84	39.96	-1.80	Average	347	316
4	2483.50	51.35	74.00	-22.65	53.15	-1.80	Peak	347	316
5	4874.00	33.26	54.00	-20.74	28.19	5.07	Average	100	26
6	4874.00	45.33	74.00	-28.67	40.26	5.07	Peak	100	26
7	7311.00	38.62	54.00	-15.38	28.34	10.28	Average	100	29
8	7311.00	50.68	74.00	-23.32	40.40	10.28	Peak	100	29

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		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66

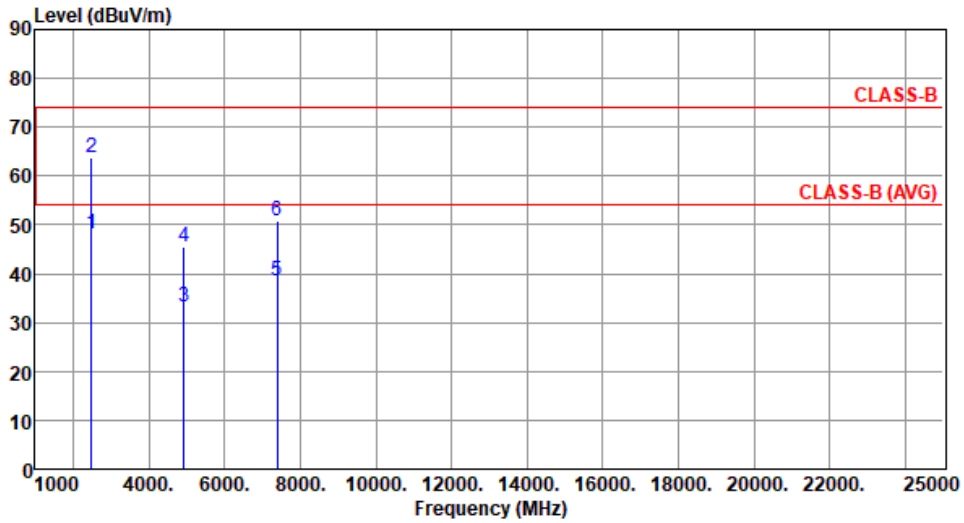


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	52.79	54.00	-1.21	54.59	-1.80	Average	143	2
2	2483.50	68.66	74.00	-5.34	70.46	-1.80	Peak	143	2
3	4924.00	33.78	54.00	-20.22	28.66	5.12	Average	100	102
4	4924.00	45.90	74.00	-28.10	40.78	5.12	Peak	100	102
5	7386.00	38.99	54.00	-15.01	28.72	10.27	Average	100	105
6	7386.00	51.06	74.00	-22.94	40.79	10.27	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	11g	Test Freq. (MHz)	2462
Polarization	Vertical		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66



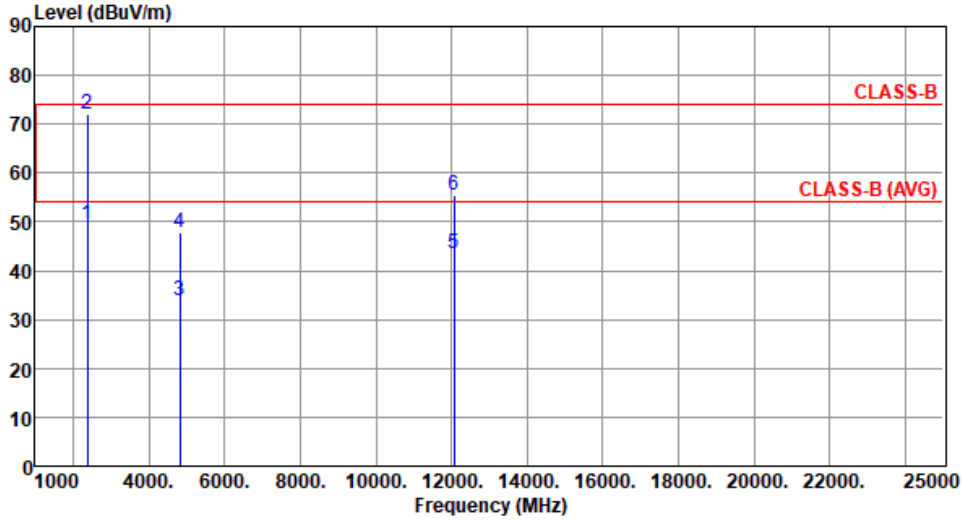
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	48.15	54.00	-5.85	49.95	-1.80	Average	355	322
2	2483.50	63.74	74.00	-10.26	65.54	-1.80	Peak	355	322
3	4924.00	33.26	54.00	-20.74	28.14	5.12	Average	100	29
4	4924.00	45.35	74.00	-28.65	40.23	5.12	Peak	100	29
5	7386.00	38.40	54.00	-15.60	28.13	10.27	Average	100	25
6	7386.00	50.66	74.00	-23.34	40.39	10.27	Peak	100	25

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

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

Modulation	HT20	Test Freq. (MHz)	2412
Polarization	Horizontal		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66

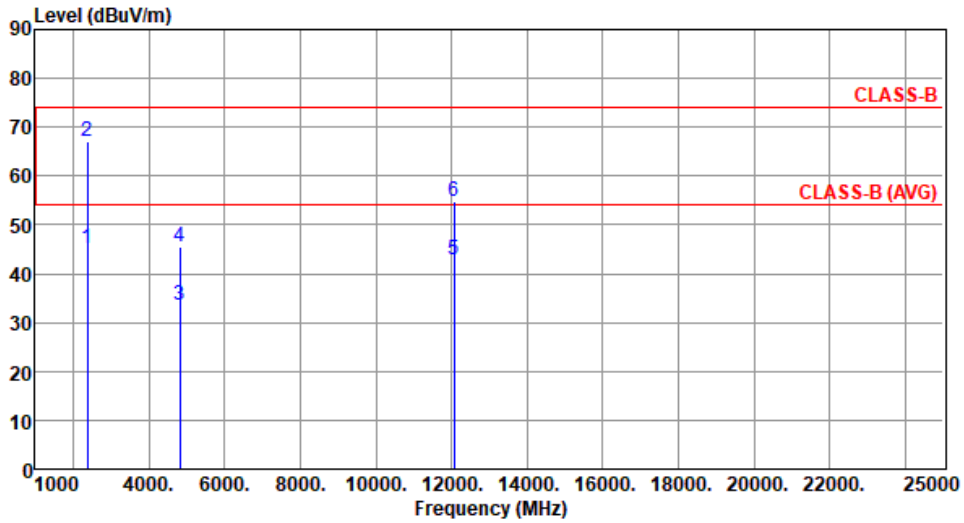


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	49.41	54.00	-4.59	51.25	-1.84	Average	152	9
2	2390.00	72.10	74.00	-1.90	73.94	-1.84	Peak	152	9
3	4824.00	33.76	54.00	-20.24	28.68	5.08	Average	100	107
4	4824.00	47.73	74.00	-26.27	42.65	5.08	Peak	100	107
5	12060.00	43.36	54.00	-10.64	28.67	14.69	Average	100	105
6	12060.00	55.36	74.00	-18.64	40.67	14.69	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)	2412
Polarization	Vertical		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66

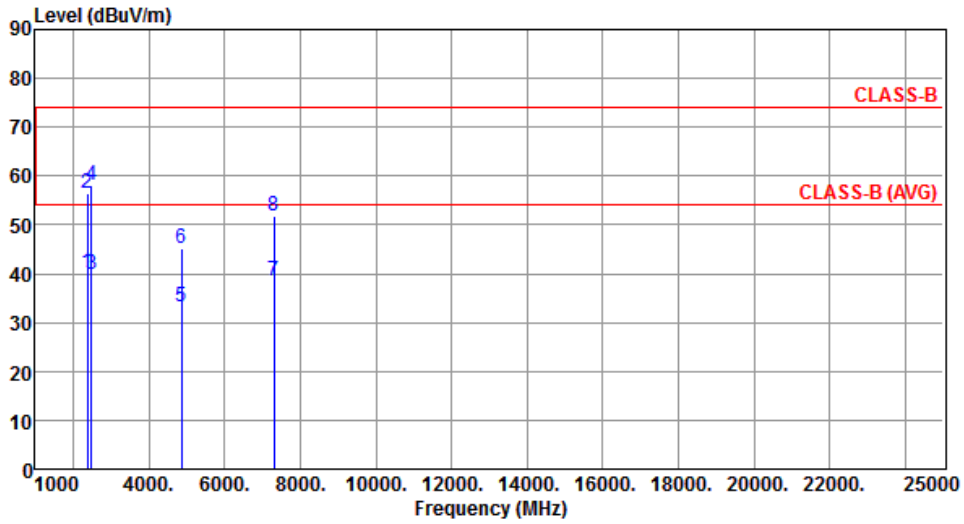


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	45.00	54.00	-9.00	46.84	-1.84	Average	358	328
2	2390.00	67.03	74.00	-6.97	68.87	-1.84	Peak	358	328
3	4824.00	33.41	54.00	-20.59	28.33	5.08	Average	100	26
4	4824.00	45.36	74.00	-28.64	40.28	5.08	Peak	100	26
5	12060.00	42.96	54.00	-11.04	28.27	14.69	Average	100	25
6	12060.00	54.95	74.00	-19.05	40.26	14.69	Peak	100	25

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

Modulation	HT20	Test Freq. (MHz)	2437
Polarization	Horizontal		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66

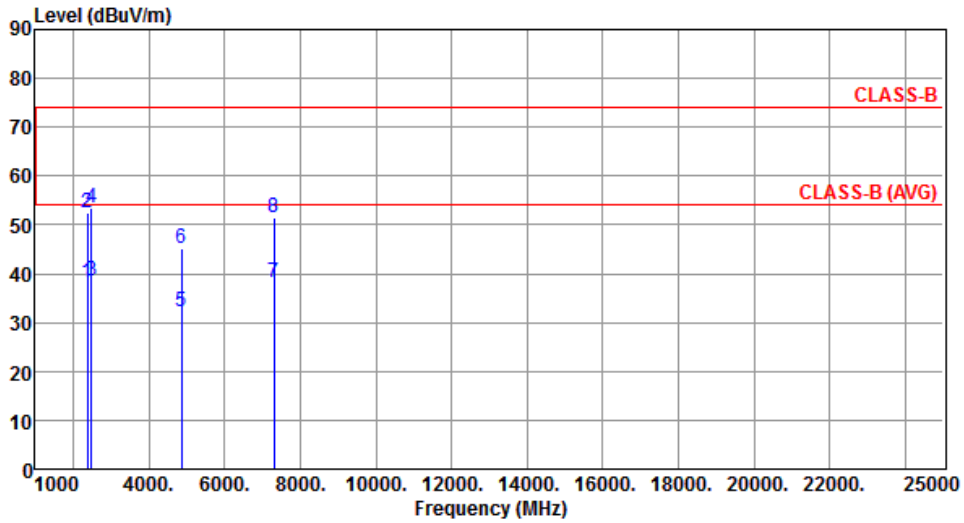


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	40.13	54.00	-13.87	41.97	-1.84	Average	148	2
2	2390.00	56.47	74.00	-17.53	58.31	-1.84	Peak	148	2
3	2483.50	40.01	54.00	-13.99	41.81	-1.80	Average	148	2
4	2483.50	58.06	74.00	-15.94	59.86	-1.80	Peak	148	2
5	4874.00	33.25	54.00	-20.75	28.18	5.07	Average	100	114
6	4874.00	45.16	74.00	-28.84	40.09	5.07	Peak	100	114
7	7311.00	38.59	54.00	-15.41	28.31	10.28	Average	100	12
8	7311.00	51.72	74.00	-22.28	41.44	10.28	Peak	100	12

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		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66

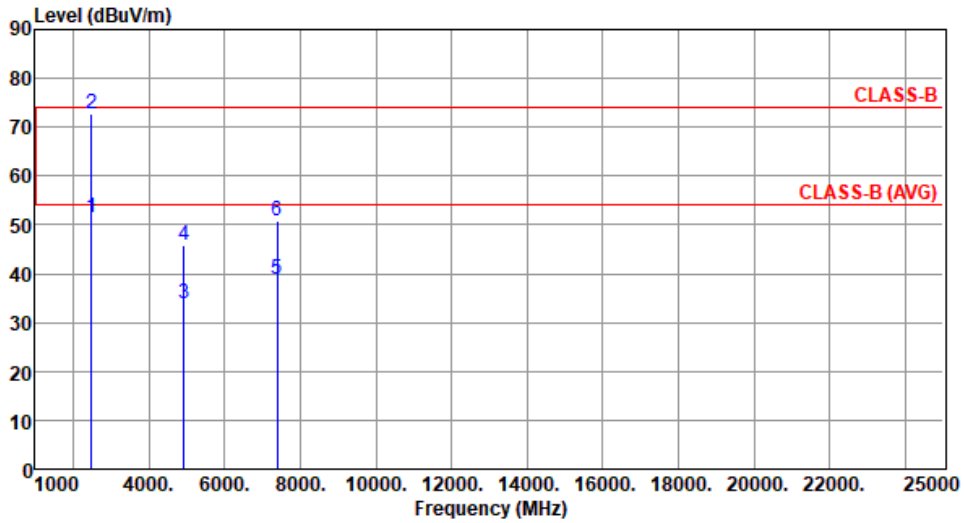


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	38.21	54.00	-15.79	40.05	-1.84	Average	346	319
2	2390.00	52.46	74.00	-21.54	54.30	-1.84	Peak	346	319
3	2483.50	38.46	54.00	-15.54	40.26	-1.80	Average	346	319
4	2483.50	53.59	74.00	-20.41	55.39	-1.80	Peak	346	319
5	4874.00	32.21	54.00	-21.79	27.14	5.07	Average	103	29
6	4874.00	45.16	74.00	-28.84	40.09	5.07	Peak	103	29
7	7311.00	38.32	54.00	-15.68	28.04	10.28	Average	108	34
8	7311.00	51.44	74.00	-22.56	41.16	10.28	Peak	108	34

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		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66

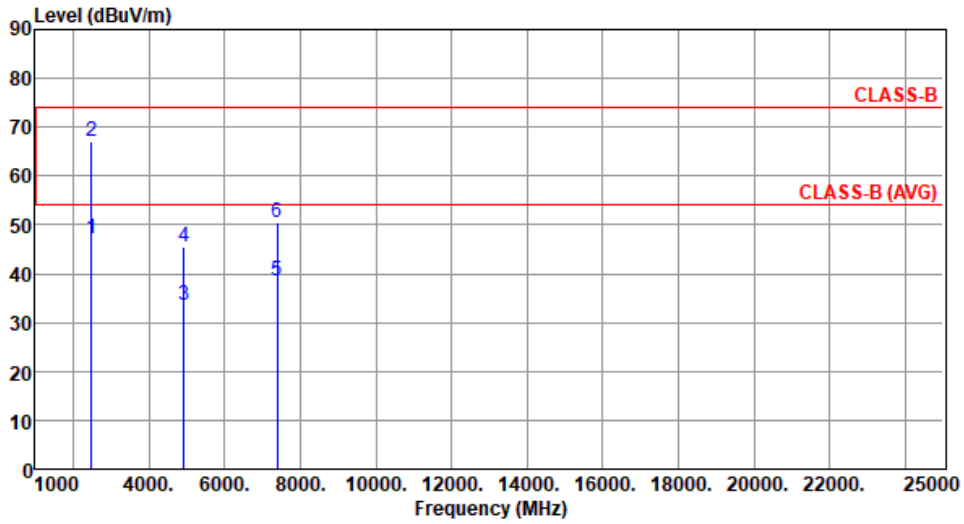


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	51.59	54.00	-2.41	53.39	-1.80	Average	139	352
2	2483.50	72.73	74.00	-1.27	74.53	-1.80	Peak	139	352
3	4924.00	33.80	54.00	-20.20	28.68	5.12	Average	100	107
4	4924.00	45.80	74.00	-28.20	40.68	5.12	Peak	100	107
5	7386.00	38.90	54.00	-15.10	28.63	10.27	Average	100	102
6	7386.00	50.92	74.00	-23.08	40.65	10.27	Peak	100	102

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		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66



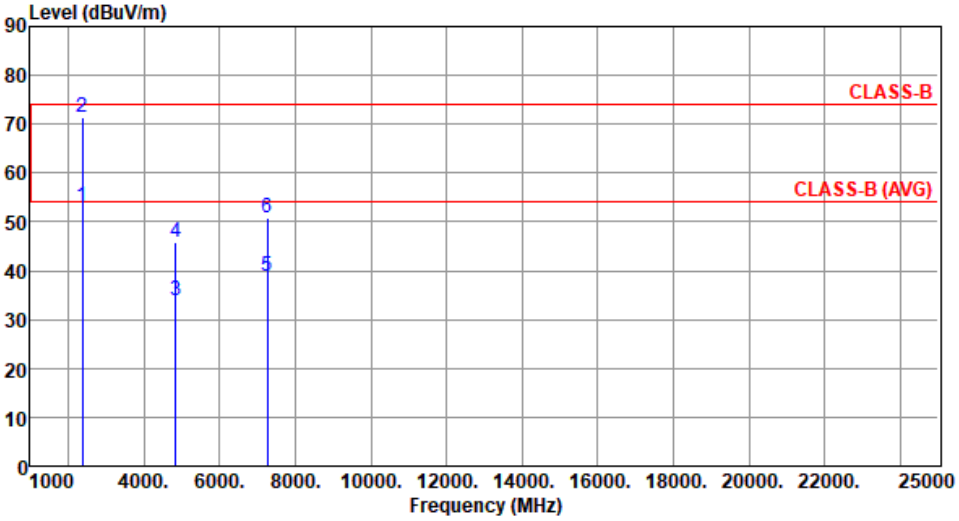
	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	47.09	54.00	-6.91	48.89	-1.80	Average	354	324
2	2483.50	67.06	74.00	-6.94	68.86	-1.80	Peak	354	324
3	4924.00	33.40	54.00	-20.60	28.28	5.12	Average	100	24
4	4924.00	45.41	74.00	-28.59	40.29	5.12	Peak	100	24
5	7386.00	38.51	54.00	-15.49	28.24	10.27	Average	100	26
6	7386.00	50.51	74.00	-23.49	40.24	10.27	Peak	100	26

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

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

Modulation	HT40	Test Freq. (MHz)	2422
Polarization	Horizontal		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66

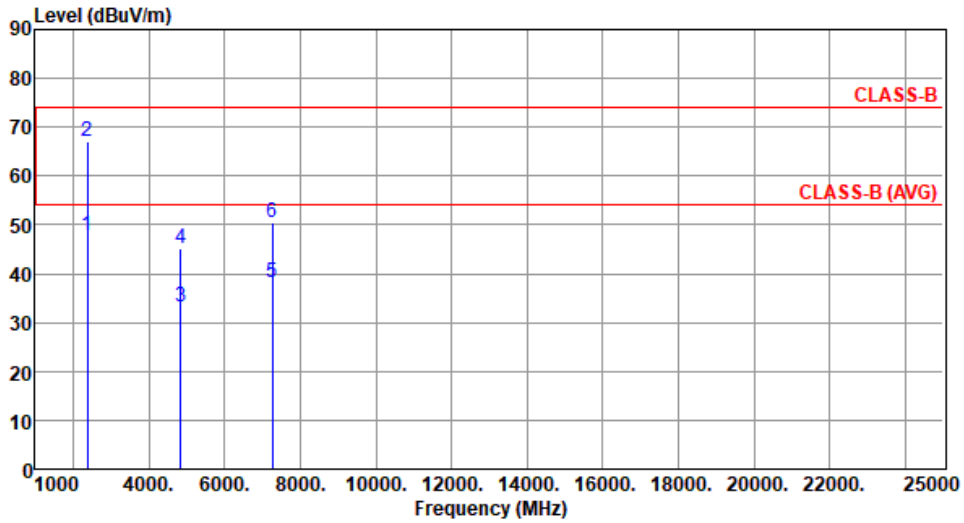


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	52.97	54.00	-1.03	54.81	-1.84	Average	153	12
2	2390.00	71.36	74.00	-2.64	73.20	-1.84	Peak	153	12
3	4844.00	33.71	54.00	-20.29	28.58	5.13	Average	100	109
4	4844.00	45.68	74.00	-28.32	40.55	5.13	Peak	100	109
5	7266.00	38.81	54.00	-15.19	28.63	10.18	Average	100	102
6	7266.00	50.68	74.00	-23.32	40.50	10.18	Peak	100	102

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		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66

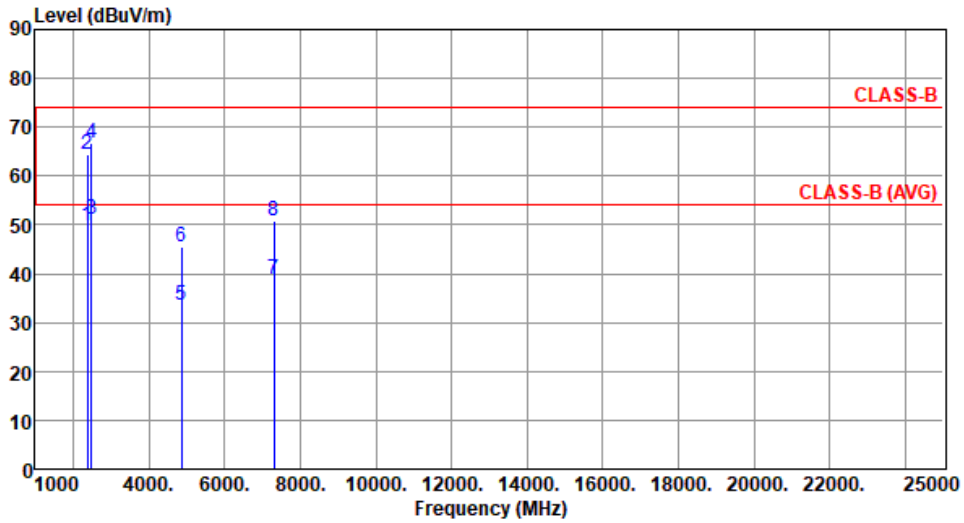


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	47.72	54.00	-6.28	49.56	-1.84	Average	349	323
2	2390.00	66.99	74.00	-7.01	68.83	-1.84	Peak	349	323
3	4844.00	33.18	54.00	-20.82	28.05	5.13	Average	100	24
4	4844.00	45.24	74.00	-28.76	40.11	5.13	Peak	100	24
5	7266.00	38.31	54.00	-15.69	28.13	10.18	Average	100	19
6	7266.00	50.34	74.00	-23.66	40.16	10.18	Peak	100	19

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		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66

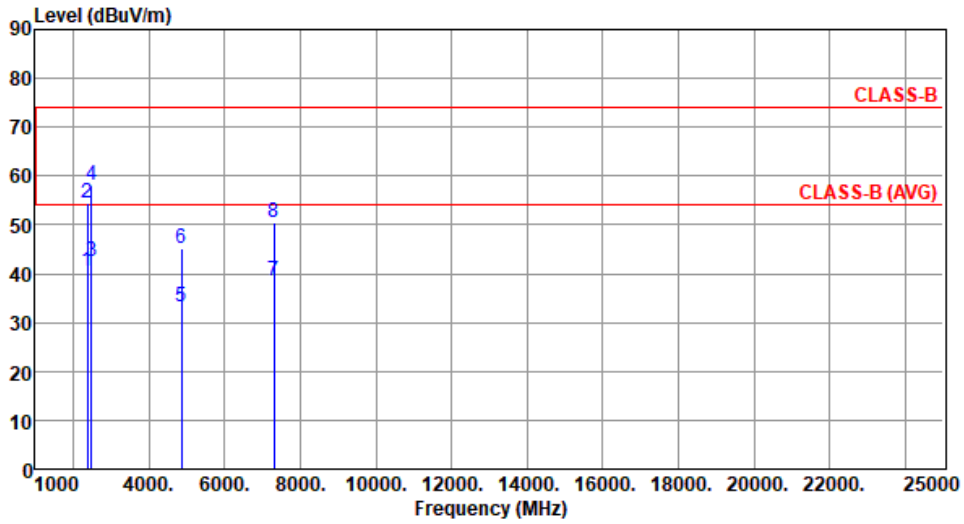


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	49.87	54.00	-4.13	51.71	-1.84	Average	145	2
2	2390.00	64.31	74.00	-9.69	66.15	-1.84	Peak	145	2
3	2483.50	51.09	54.00	-2.91	52.89	-1.80	Average	145	2
4	2483.50	66.89	74.00	-7.11	68.69	-1.80	Peak	145	2
5	4874.00	33.67	54.00	-20.33	28.60	5.07	Average	100	105
6	4874.00	45.60	74.00	-28.40	40.53	5.07	Peak	100	105
7	7311.00	38.83	54.00	-15.17	28.55	10.28	Average	100	102
8	7311.00	50.88	74.00	-23.12	40.60	10.28	Peak	100	102

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		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66

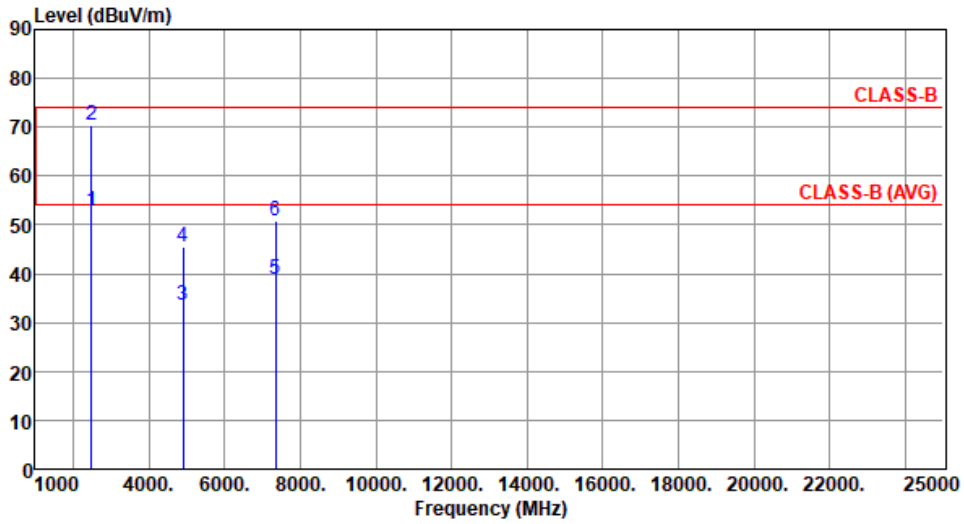


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2390.00	40.37	54.00	-13.63	42.21	-1.84	Average	346	317
2	2390.00	54.30	74.00	-19.70	56.14	-1.84	Peak	346	317
3	2483.50	42.53	54.00	-11.47	44.33	-1.80	Average	346	317
4	2483.50	58.11	74.00	-15.89	59.91	-1.80	Peak	346	317
5	4874.00	33.18	54.00	-20.82	28.11	5.07	Average	100	17
6	4874.00	45.28	74.00	-28.72	40.21	5.07	Peak	100	17
7	7311.00	38.45	54.00	-15.55	28.17	10.28	Average	100	23
8	7311.00	50.50	74.00	-23.50	40.22	10.28	Peak	100	23

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		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66

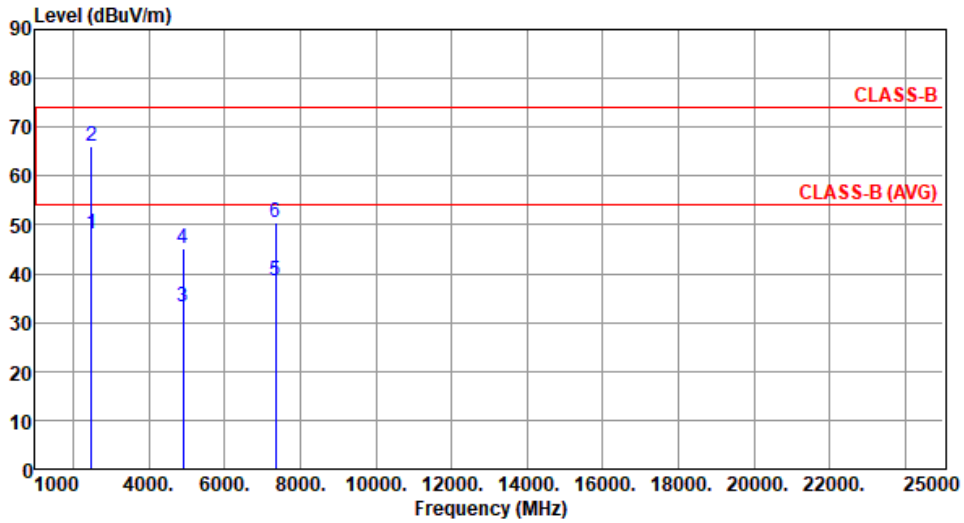


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	2483.50	52.85	54.00	-1.15	54.65	-1.80	Average	171	357
2	2483.50	70.56	74.00	-3.44	72.36	-1.80	Peak	171	357
3	4904.00	33.61	54.00	-20.39	28.59	5.02	Average	100	104
4	4904.00	45.57	74.00	-28.43	40.55	5.02	Peak	100	104
5	7356.00	38.83	54.00	-15.17	28.52	10.31	Average	100	105
6	7356.00	50.83	74.00	-23.17	40.52	10.31	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	HT40	Test Freq. (MHz)	2452
Polarization	Vertical		

Test By :BRAD WU Temperature(℃):23 Humidity(%):66



	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	48.07	54.00	-5.93	49.87	-1.80	Average	359	322
2	2483.50	66.07	74.00	-7.93	67.87	-1.80	Peak	359	322
3	4904.00	33.17	54.00	-20.83	28.15	5.02	Average	100	23
4	4904.00	45.16	74.00	-28.84	40.14	5.02	Peak	100	23
5	7356.00	38.44	54.00	-15.56	28.13	10.31	Average	100	25
6	7356.00	50.36	74.00	-23.64	40.05	10.31	Peak	100	25

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

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

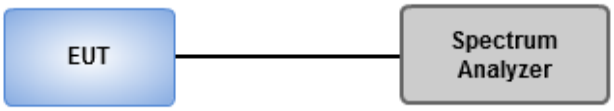
Reference level measurement

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

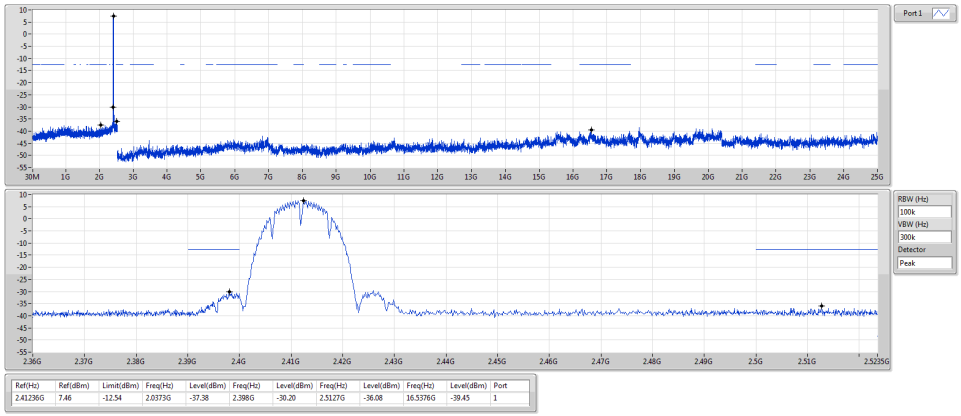


3.6.4 Unwanted Emissions into Non-Restricted Frequency Bands

Ambient Condition	23°C / 63%	Tested By	Brad Wu

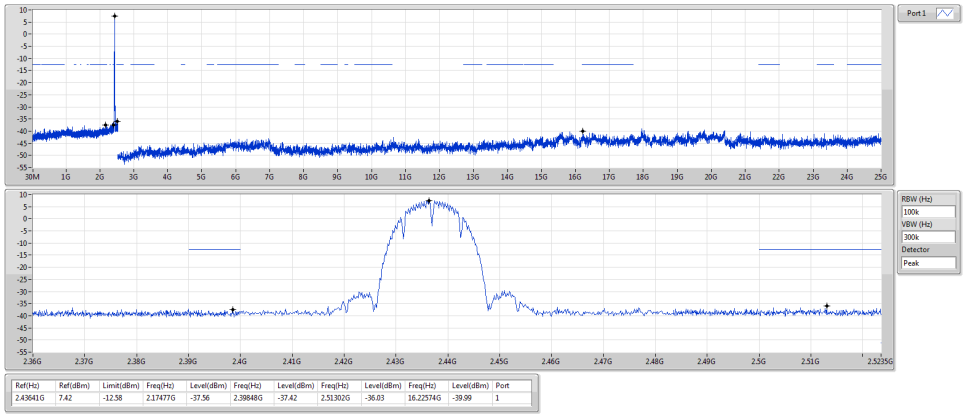
802.11b_Nss1,(1Mbps)_1TX CSE NdB

2412MHz



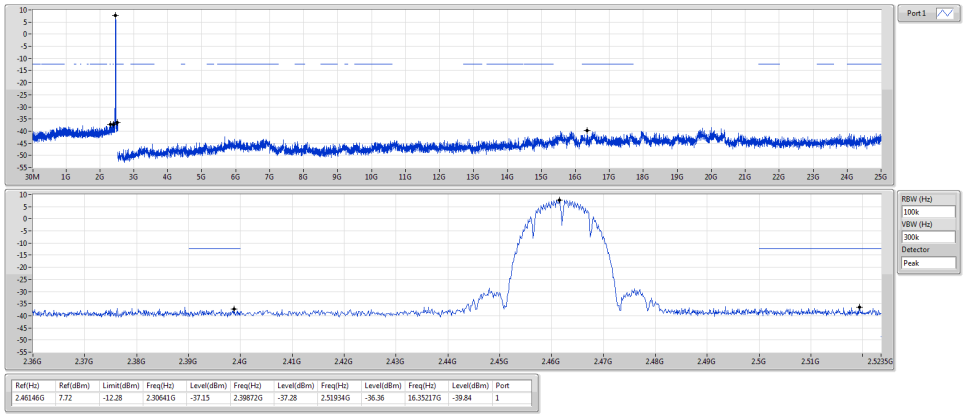
802.11b_Nss1,(1Mbps)_1TX CSE NdB

2437MHz



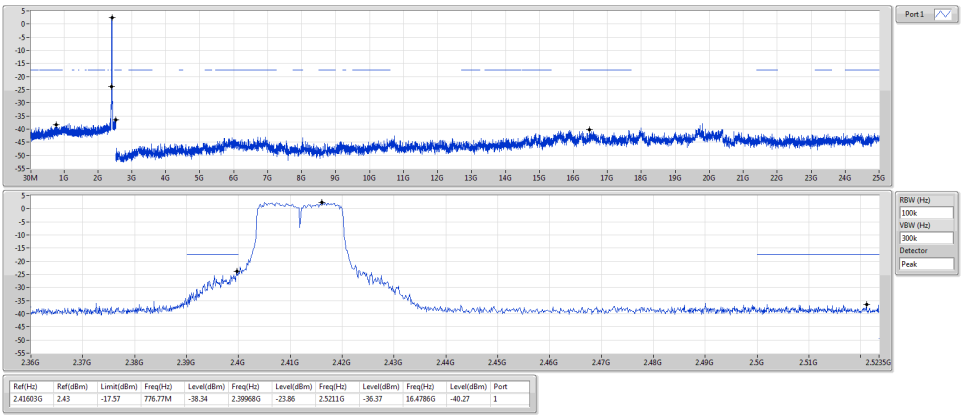
802.11b_Nss1,(1Mbps)_1TX CSE NdB

2462MHz



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

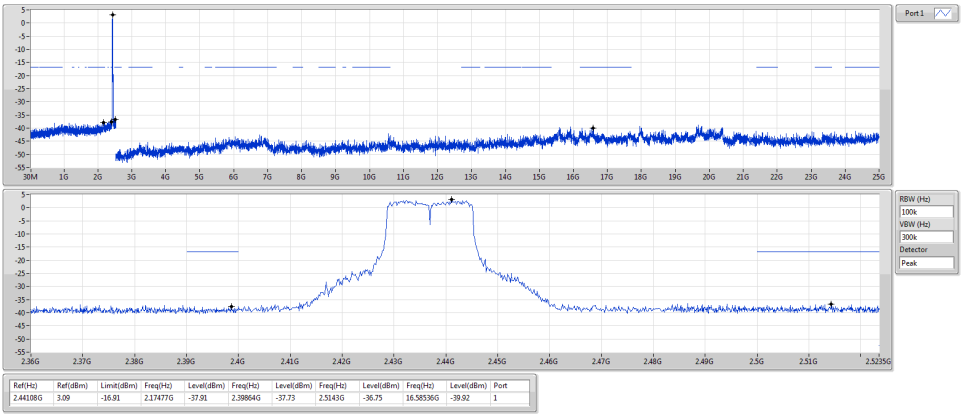
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.41603G	2.43	-17.57	776.77M	-38.34	2.39968G	-23.86	2.5211G	-36.37	16.4786G	-40.27	1

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

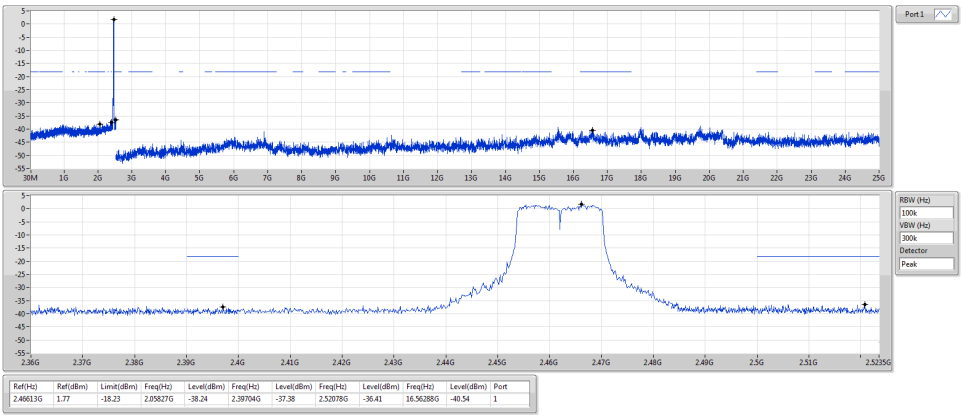
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.44108G	3.09	-16.91	2.17477G	-37.91	2.39864G	-37.73	2.5143G	-36.75	16.58536G	-39.92	1

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

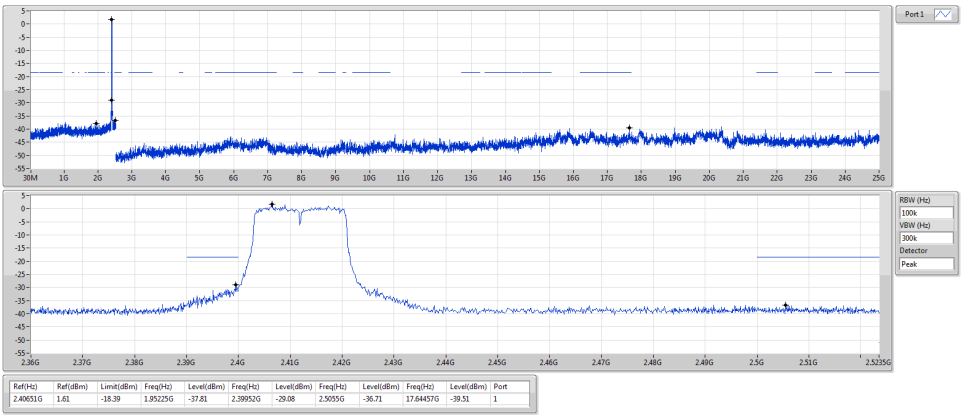
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.46613G	1.77	-18.23	2.05827G	-38.24	2.39704G	-37.38	2.52078G	-36.41	16.56288G	-40.54	1

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

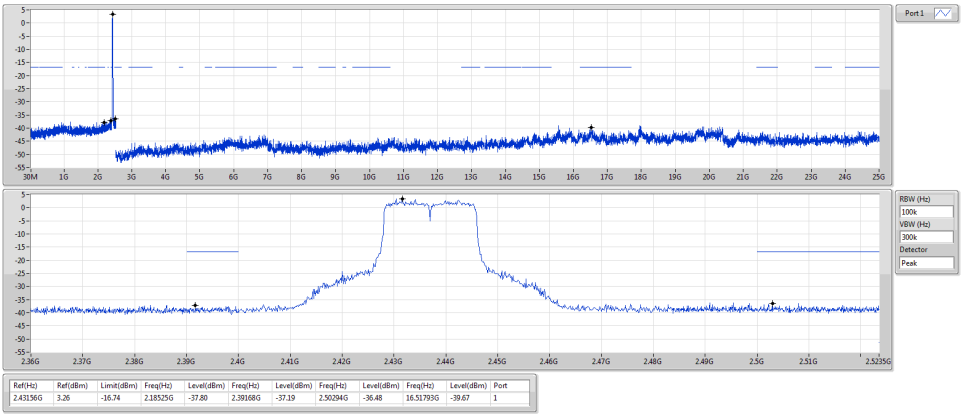
2412MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.40651G	1.61	-18.39	1.95225G	-37.81	2.39952G	-29.08	2.5055G	-36.71	17.64457G	-39.51	1

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

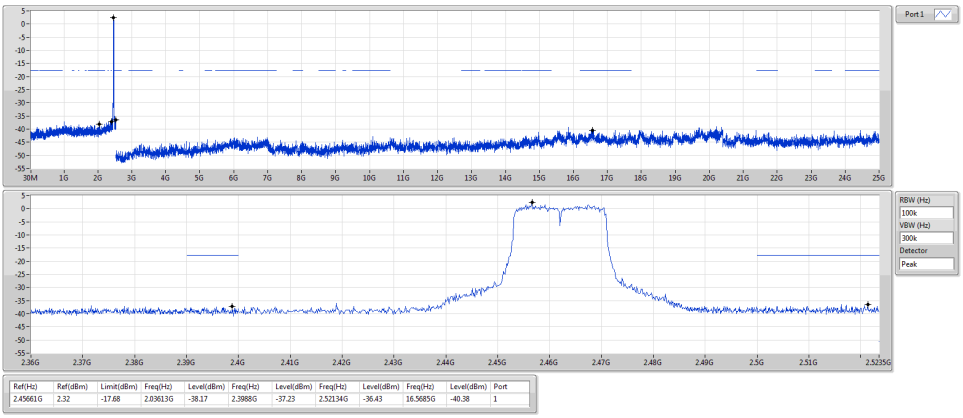
2437MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.43156G	3.26	-16.74	2.18525G	-37.80	2.39168G	-37.19	2.50294G	-36.48	16.51793G	-39.67	1

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

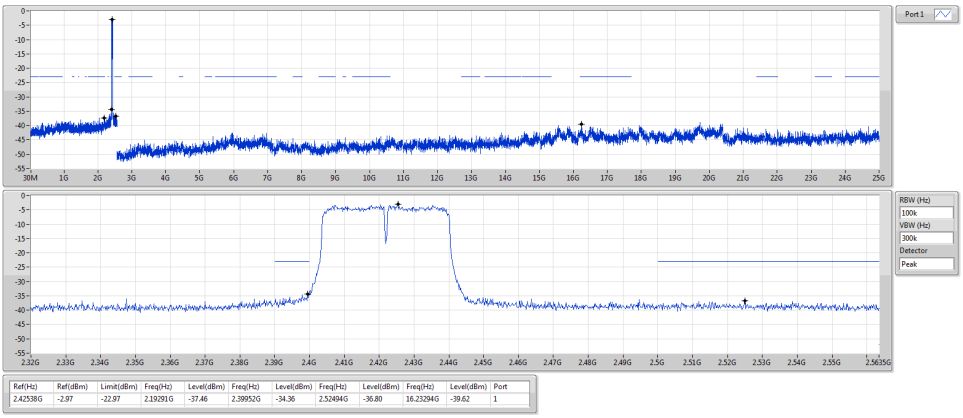
2462MHz



Ref(Hz)	Ref(dBm)	Limit(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Freq(Hz)	Level(dBm)	Port
2.45661G	2.32	-17.68	2.03613G	-38.17	2.3988G	-37.23	2.52134G	-36.43	16.5685G	-40.38	1

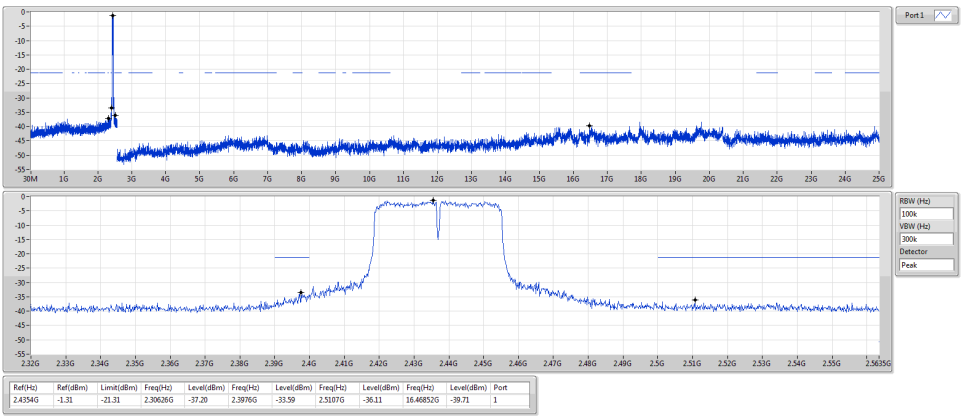
802.11n HT40_Nss1,(MCS0)_1TX **CSE NdB**

2422MHz



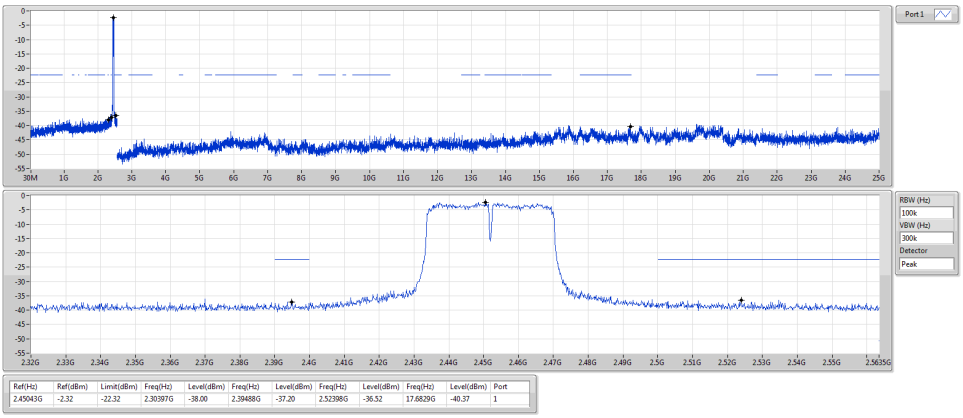
802.11n HT40_Nss1,(MCS0)_1TX **CSE NdB**

2437MHz



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

2452MHz



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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