FCC Test Report

FCC ID	:	**I88WSQ60**
Equipment	:	**Multy X AC3000 Tri-Band WiFi System**
Model No.	:	**WSQ50**
Multiple Listing	:	**Refer to item 1.1.1 for more details**
Brand Name	:	**ZYXEL**
Applicant	:	**Zyxel Communications Corporation**
Address	:	**No.2, Industry East Road IX, Hsinchu Science Park, Hsinchu, 30075, Taiwan, R.O.C.**
Standard	:	**47 CFR FCC Part 15.247**
Received Date	:	**Jan. 31, 2018**
Tested Date	:	**Mar. 07 ~ Mar. 31, 2018**

We, International Certification Corp., would like to declare that the tested sample has been evaluated and in compliance with the requirement of the above standards. The test results contained in this report refer exclusively to the product. It may be duplicated completely for legal use with the approval of the applicant. It shall not be reproduced except in full without the written approval of our laboratory.

Reviewed by: **Approved by:**

Along Chen / Assistant Manager **Gary Chang / Manager**

Testing Laboratory 2732

Table of Contents

Release Record

Report No.	Version	Description	Issued Date
FR760801-02AC	Rev. 01	Initial issue	Jun. 15, 2018

Summary of Test Results

FCC Rules	Test Items	Measured	Result
15.207	Conducted Emissions	[dBuV]: 0.484MHz 29.50 (Margin -16.77dB) - AV	Pass
15.247(d) 15.209	Radiated Emissions	[dBuV/m at 3m]: 2390.00MHz 53.86 (Margin -0.14dB) - AV	Pass
15.247(b)(3)	Maximum Output Power	Refer to FR760801AC	Pass
15.247(a)(2)	6dB Bandwidth	Refer to FR760801AC	Pass
15.247(e)	Power Spectral Density	Refer to FR760801AC	Pass
15.203	Antenna Requirement	Meet the requirement of limit	Pass

1 General Description

1.1 Information

1.1.1 Product Details

The following models are provided to this EUT.

Brand Name	Model Name	Product Name	Description
ZYXEL	WSQ50	Multy X AC3000 Tri-Band WiFi System	For marketing different
	WSQ60	Multy Plus AC3000 Tri-Band WiFi System	

- ✦ All models are electrically identical, different model names are for marketing purpose.
- ✦ The above models, model **WSQ50** 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]	2	1-11 Mbps
2400-2483.5	g	2412-2462	1-11 [11]	2	6-54 Mbps
2400-2483.5	n (HT20)	2412-2462	1-11 [11]	2	MCS 0-15
2400-2483.5	n (HT40)	2422-2452	3-9 [7]	2	MCS 0-15

Note 1: RF output power specifies that Maximum 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 Main Chipset / RF Chipset

Function	Model No.
Main Chipset	IPQ4019
2.4G	IPQ4019
5G 2T2R	IPQ4019
5G 4T4R	QCA9984
Bluetooth LE	CSR8811

1.1.4 Antenna Details

Ant. No.	Model	Type	Connector	Operating Frequency (MHz) / Gain (dBi)		
				2400~2483.5	5150~5250	5725~5850
1	ALX17P-051XXB-00	PCB dipole	UFL	0	0	0
2	ALX17P-051XXC-00	PCB dipole	UFL	0	0	0
3	ALX17P-091XX5-00	PCB dipole	UFL	0	0	0
4	ALX17P-091XX6-00	PCB dipole	UFL	0	0	0
5	ALX17P-091XX7-00	PCB dipole	UFL	0	0	0
6	ALX17P-091XX8-00	PCB dipole	UFL	0	0	0
7	ALX17P-091XX9-00	PCB dipole	UFL	0	0	0
8	ALX17P-091XXA-00	PCB dipole	UFL	0	0	0

1.1.5 Power Supply Type of Equipment under Test (EUT)

Power Supply Type	12Vdc from adapter

1.1.6 Accessories

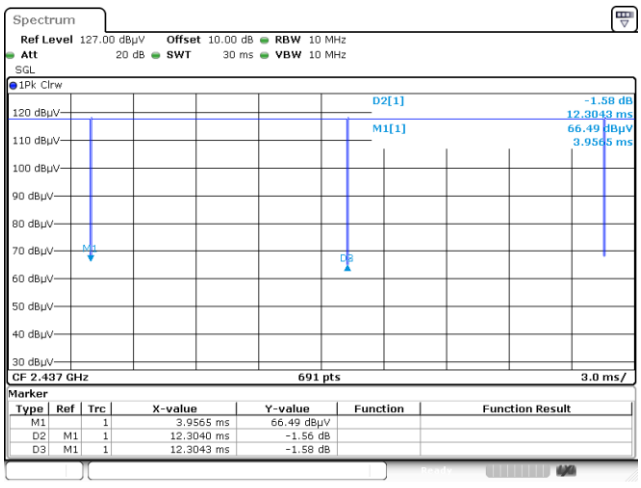
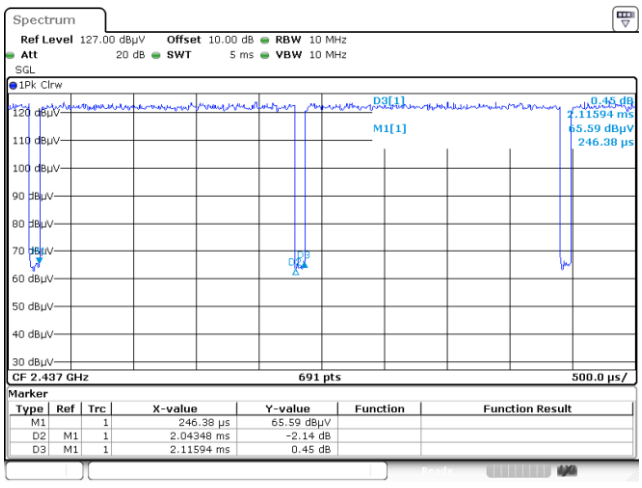
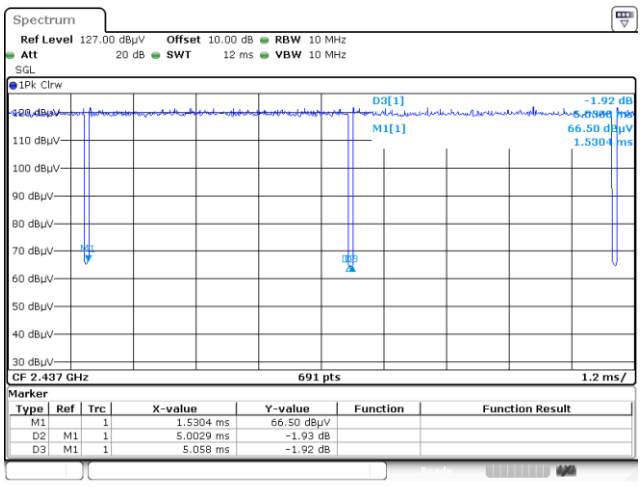
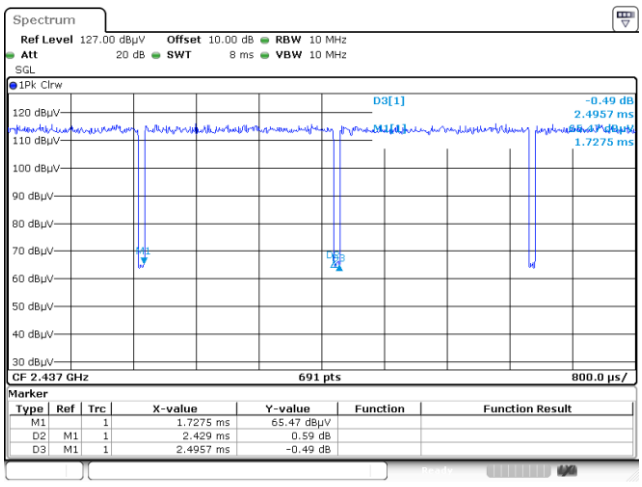
Accessories		
No.	Equipment	Description
1	AC adapter	Brand Name: APD Model Name: WA-36A12FU I/P: 100-240Vac, 50-60Hz 0.9 Max O/P: 12Vdc, 3A Power line: 1.75m non-shielded without core
2	AC adapter	Brand Name: APD Model Name: WA-36A12R I/P: 100-240Vac, 50-60Hz 0.9 Max O/P: 12Vdc, 3A Power line: 1.75m non-shielded without core
3	RJ45 cable	1.9m non-shielded without core

1.1.7 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	---	---

1.1.8 Test Tool and Duty Cycle

Test Tool	QRCT, V3.0.144.0		
Duty Cycle and Duty Factor	Mode	Duty cycle (%)	Duty factor (dB)
	11b	100.00%	0.00
	11g	96.58%	0.15
	HT20	98.91%	0.05
	HT40	97.33%	0.12

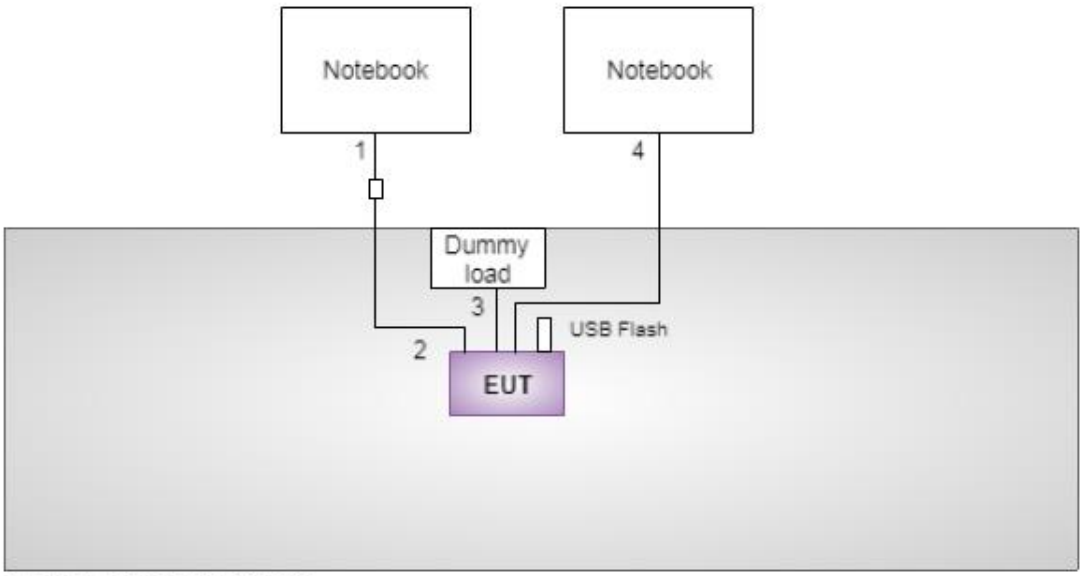
11b	11g
	
11n HT20	**11n HT40**
	

1.2 Local Support Equipment List

Support Equipment List					
No.	**Equipment**	**Brand**	**Model**	**FCC ID**	**Signal cable / Length (m)**
1	Notebook	DELL	Latitude E6430	DoC	RJ45, 10m non-shielded.
2	Notebook	DELL	Latitude E5420	DoC	RJ45, 10m non-shielded.
3	USB Flash	Kingston	DTSE9	---	---
4	Dummy Load	---	---	---	RJ45, 1m(x2) non-shielded.

1.3 Test Setup Chart

Test Setup Diagram



1. RJ45, 1.9m non-shielded.
2. RJ45, 10m non-shielded.
3. RJ45, 1.5m(x2) non-shielded.
4 . RJ45, 10m non-shielded.

1.4 The Equipment List

Test Item	Conducted Emission				
Test Site	Conduction room 1 / (CO01-WS)				
Tested Date	Mar. 31, 2018				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Receiver	Agilent	N9038A	MY53290044	Sep. 26, 2017	Sep. 25, 2018
LISN	R&S	ENV216	101579	Feb. 13, 2018	Feb. 12, 2019
RF Cable-CON	EMC	EMCCFD300-BM-BM-6000	50821	Dec. 18, 2017	Dec. 17, 2018
Measurement Software	AUDIX	e3	6.120210k	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

Test Item	Radiated Emission				
Test Site	966 chamber1 / (03CH01-WS)				
Tested Date	Mar. 07 ~ Mar. 17, 2018				
Instrument	**Manufacturer**	**Model No.**	**Serial No.**	**Calibration Date**	**Calibration Until**
Spectrum Analyzer	R&S	FSV40	101498	Dec. 04, 2017	Dec. 03, 2018
Receiver	R&S	ESR3	101658	Nov. 20, 2017	Nov. 19, 2018
Bilog Antenna	SCHWARZBECK	VULB9168	VULB9168-522	Jul. 25, 2017	Jul. 24, 2018
Horn Antenna 1G-18G	SCHWARZBECK	BBHA 9120 D	BBHA 9120 D 1096	Dec. 20, 2017	Dec. 19, 2018
Horn Antenna 18G-40G	SCHWARZBECK	BBHA 9170	BBHA 9170517	Nov. 23, 2017	Nov. 22, 2018
Loop Antenna	R&S	HFH2-Z2	100330	Nov. 13, 2017	Nov. 12, 2018
Loop Antenna Cable	KOAX KABEL	101354-BW	101354-BW	Dec. 07, 2017	Dec. 06, 2018
Preamplifier	EMC	EMC02325	980225	Jul. 28, 2017	Jul. 27, 2018
Preamplifier	Agilent	83017A	MY39501308	Oct. 06, 2017	Oct. 05, 2018
Preamplifier	EMC	EMC184045B	980192	Aug. 22, 2017	Aug. 21, 2018
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16014/4	Dec. 07, 2017	Dec. 06, 2018
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16019/4	Dec. 07, 2017	Dec. 06, 2018
RF Cable	HUBER+SUHNER	SUCOFLEX104	MY16139/4	Dec. 07, 2017	Dec. 06, 2018
LF cable 1M	EMC	EMCCFD400-NM-NM-1000	16052	Dec. 07, 2017	Dec. 06, 2018
LF cable 3M	Woken	CFD400NL-LW	CFD400NL-001	Dec. 07, 2017	Dec. 06, 2018
LF cable 10M	Woken	CFD400NL-LW	CFD400NL-002	Dec. 07, 2017	Dec. 06, 2018
Measurement Software	AUDIX	e3	6.120210g	NA	NA
Note: Calibration Interval of instruments listed above is one year.					

1.5 Test Standards

According to the specification of EUT, the EUT must comply with following standards and KDB documents.

47 CFR FCC Part 15.247
ANSI C63.10-2013
FCC KDB 558074 D01 DTS Meas Guidance v04
FCC KDB 662911 D01 Multiple Transmitter Output v02r01

1.6 Measurement Uncertainty

ISO/IEC 17025 requires that an estimate of the measurement uncertainties associated with the emissions test results be included in the report. The measurement uncertainties given below are based on a 95% confidence level (based on a coverage factor (k=2)

Measurement Uncertainty	
Parameters	**Uncertainty**
Bandwidth	±34.134 Hz
Conducted power	±0.808 dB
Power density	±0.463 dB
Conducted emission	±2.670 dB
AC conducted emission	±2.90 dB
Radiated emission ≤ 1GHz	±3.66 dB
Radiated emission > 1GHz	±5.63 dB

2 Test Configuration

2.1 Testing Condition

Test Item	Test Site	Ambient Condition	Tested By
AC Conduction	CO01-WS	24°C / 57%	Alex Tsai
Radiated Emissions	03CH01-WS	20-22°C / 63-64%	Vincent Yeh Roger Lu

- FCC Designation No.: TW2732
- FCC site registration No.: 181692
- IC site registration No.: 10807A-1

2.2 The Worst Test Modes and Channel Details

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

Note:
1. Two adapters (WA-36A12FU and WA-36A12R) had been covered during the pretest, and found that **WA-36A12FU adapter** was the worst case and was selected for final test.
2. 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.

3 Transmitter Test Results

3.1 Conducted Emissions

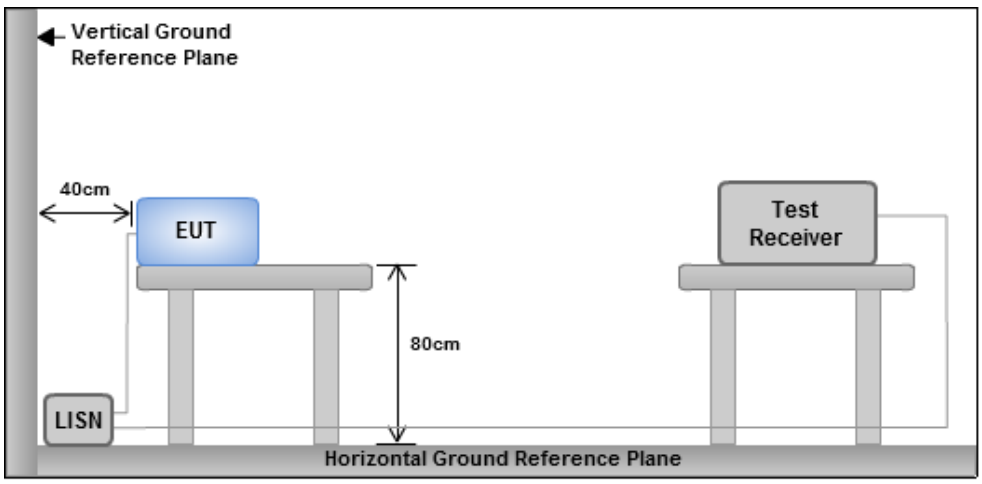
3.1.1 Limit of Conducted Emissions

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

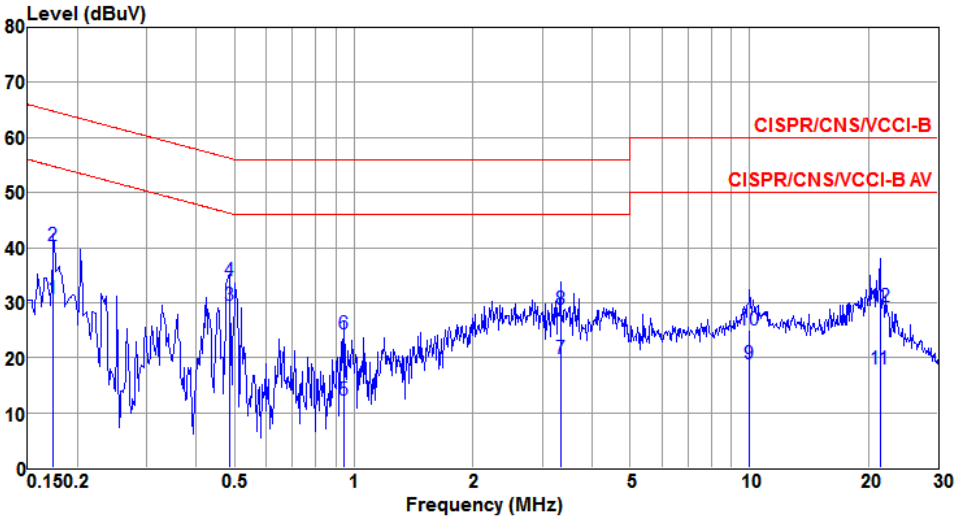


Note: 1. Support units were connected to second LISN.

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

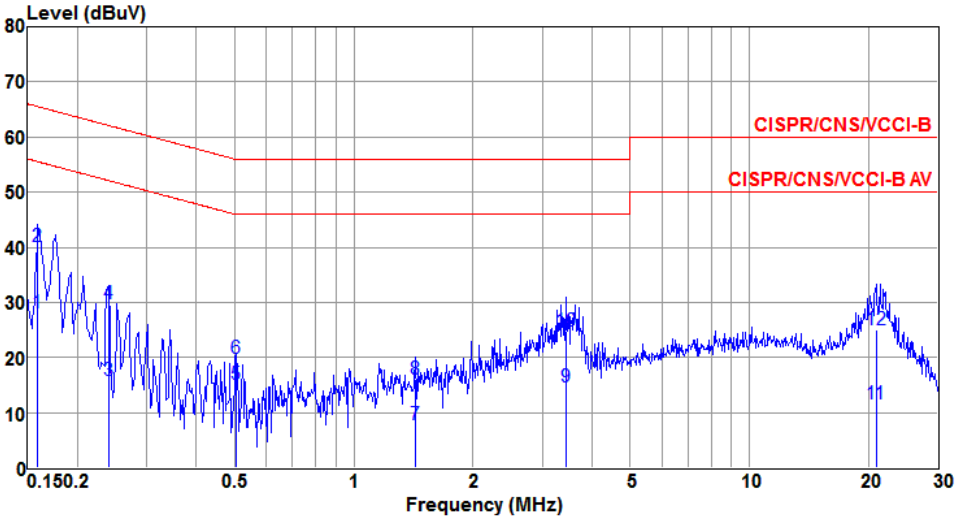
Modulation	11b	Test Freq. (MHz)	2437
Power Phase	Line		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.174	30.60	54.77	-24.17	20.85	9.73	0.02	Average
2	0.174	40.33	64.77	-24.44	30.58	9.73	0.02	QP
3@	0.484	29.50	46.27	-16.77	19.75	9.73	0.02	Average
4	0.484	34.11	56.27	-22.16	24.36	9.73	0.02	QP
5	0.943	12.36	46.00	-33.64	2.60	9.73	0.03	Average
6	0.943	24.38	56.00	-31.62	14.62	9.73	0.03	QP
7	3.328	19.94	46.00	-26.06	10.00	9.75	0.19	Average
8	3.328	28.79	56.00	-27.21	18.85	9.75	0.19	QP
9	10.019	18.93	50.00	-31.07	8.83	9.78	0.32	Average
10	10.019	25.01	60.00	-34.99	14.91	9.78	0.32	QP
11	21.373	18.06	50.00	-31.94	8.01	9.70	0.35	Average
12	21.373	29.24	60.00	-30.76	19.19	9.70	0.35	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)	2437
Power Phase	Neutral		



	Freq	Level	Limit Line	Over Limit	Read Level	LISN factor	cable loss	Remark
	MHz	dBuV	dBuV	dB	dBuV	dB	dB	
1	0.159	28.17	55.52	-27.35	18.48	9.68	0.01	Average
2@	0.159	40.19	65.52	-25.33	30.50	9.68	0.01	QP
3	0.240	15.81	52.08	-36.27	6.11	9.67	0.03	Average
4	0.240	29.72	62.08	-32.36	20.02	9.67	0.03	QP
5	0.505	15.21	46.00	-30.79	5.52	9.67	0.02	Average
6	0.505	19.88	56.00	-36.12	10.19	9.67	0.02	QP
7	1.433	7.79	46.00	-38.21	-1.96	9.68	0.07	Average
8	1.433	15.99	56.00	-40.01	6.24	9.68	0.07	QP
9	3.436	14.71	46.00	-31.29	4.83	9.69	0.19	Average
10	3.436	24.68	56.00	-31.32	14.80	9.69	0.19	QP
11	20.924	11.56	50.00	-38.44	1.38	9.83	0.35	Average
12	20.924	25.06	60.00	-34.94	14.88	9.83	0.35	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 Unwanted Emissions into Restricted Frequency Bands

3.2.1 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.

3.2.2 Test Procedures

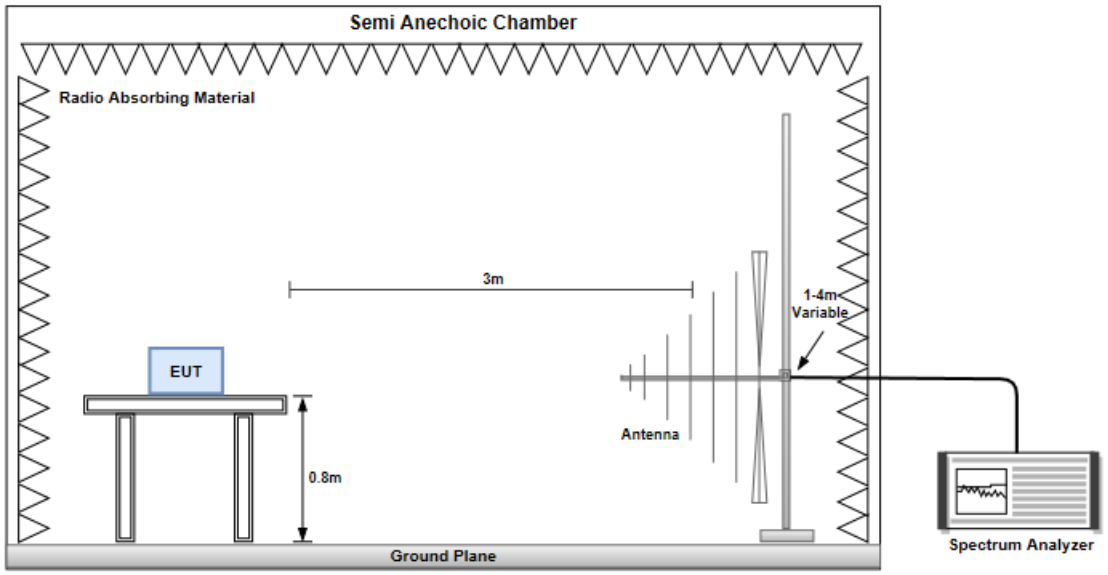
1. Measurement is made at a semi-anechoic chamber that incorporates a turntable allowing a EUT rotation of 360°. A continuously-rotating, remotely-controlled turntable is installed at the test site to support the EUT and facilitate determination of the direction of maximum radiation for each EUT emission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

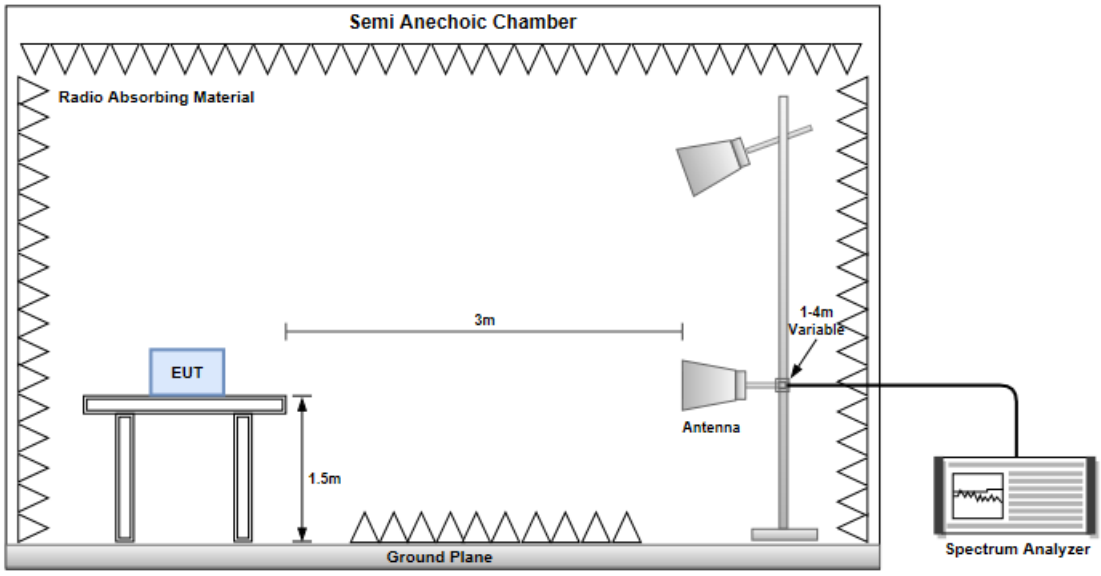
1. 120kHz measurement bandwidth of test receiver and Quasi-peak detector is for radiated emission below 1GHz.
2. RBW=1MHz, VBW=3MHz and Peak detector is for peak measured value of radiated emission above 1GHz.
3. RBW=1MHz, VBW=1/T and Peak detector is for average measured value of radiated emission above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

3.2.3 Test Setup

Radiated Emissions below 1 GHz

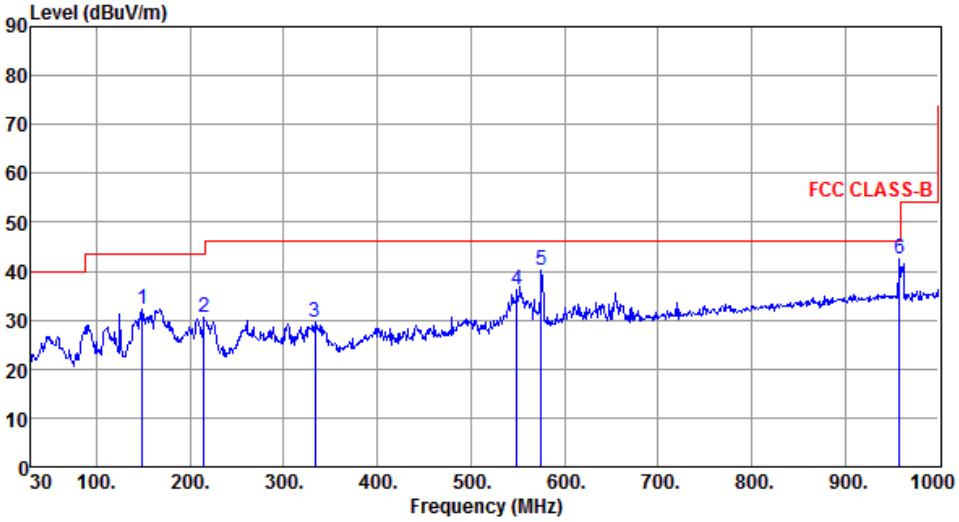


Radiated Emissions above 1 GHz



3.2.4 Transmitter Radiated Unwanted Emissions (Below 1GHz)

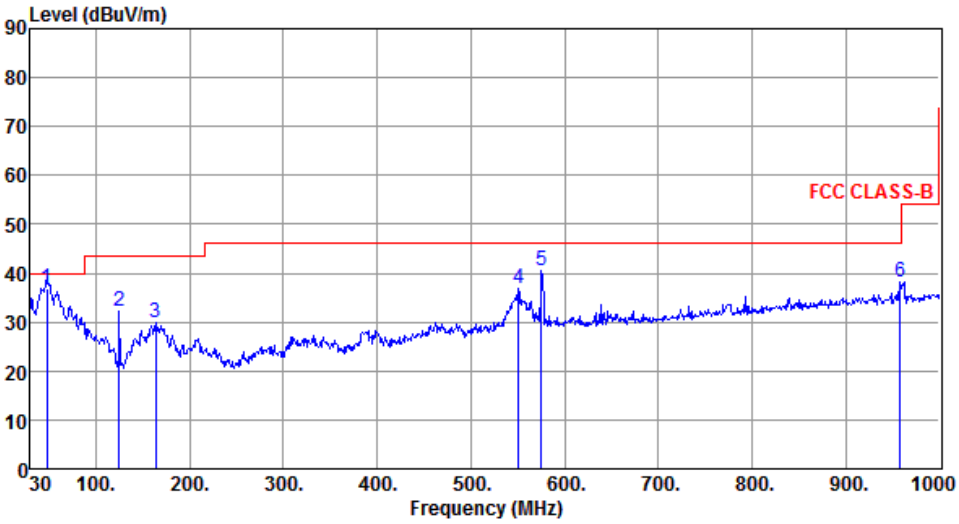
Modulation	11b	Test Freq. (MHz)	2437
Polarization	Horizontal		



	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	149.31	32.36	43.50	-11.14	40.68	-8.32	Peak	---	---
2	215.27	30.48	43.50	-13.02	41.26	-10.78	Peak	---	---
3	333.61	29.54	46.00	-16.46	36.35	-6.81	Peak	---	---
4	548.95	36.21	46.00	-9.79	37.96	-1.75	Peak	---	---
5	575.14	40.08	46.00	-5.92	41.28	-1.20	Peak	---	---
6	958.29	42.48	46.00	-3.52	37.49	4.99	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)	2437
Polarization	Vertical		

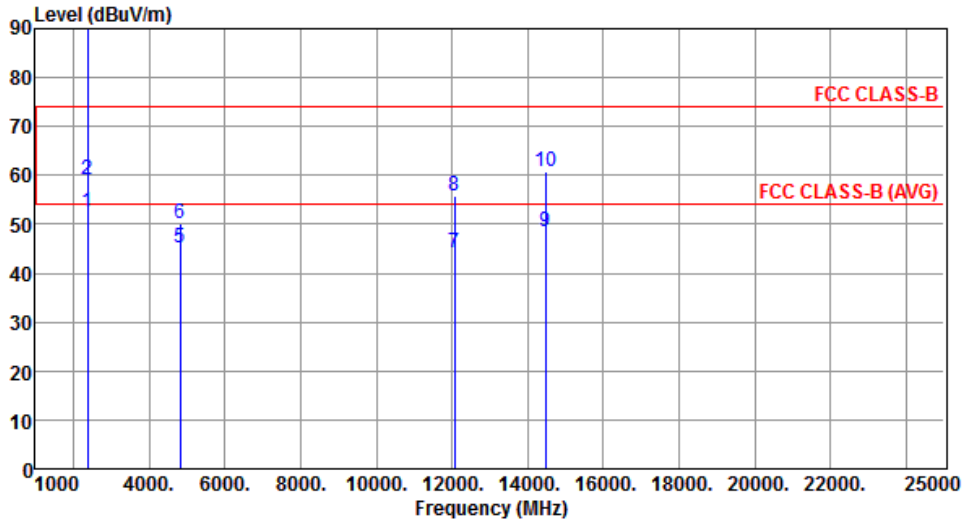


	Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	47.46	36.89	40.00	-3.11	44.61	-7.72	QP	100	205
2	125.06	32.16	43.50	-11.34	42.23	-10.07	Peak	---	---
3	163.86	29.93	43.50	-13.57	38.26	-8.33	Peak	---	---
4	550.89	36.98	46.00	-9.02	38.69	-1.71	Peak	---	---
5	575.14	40.45	46.00	-5.55	41.65	-1.20	Peak	---	---
6	958.29	38.11	46.00	-7.89	33.12	4.99	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.

3.2.5 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 11b

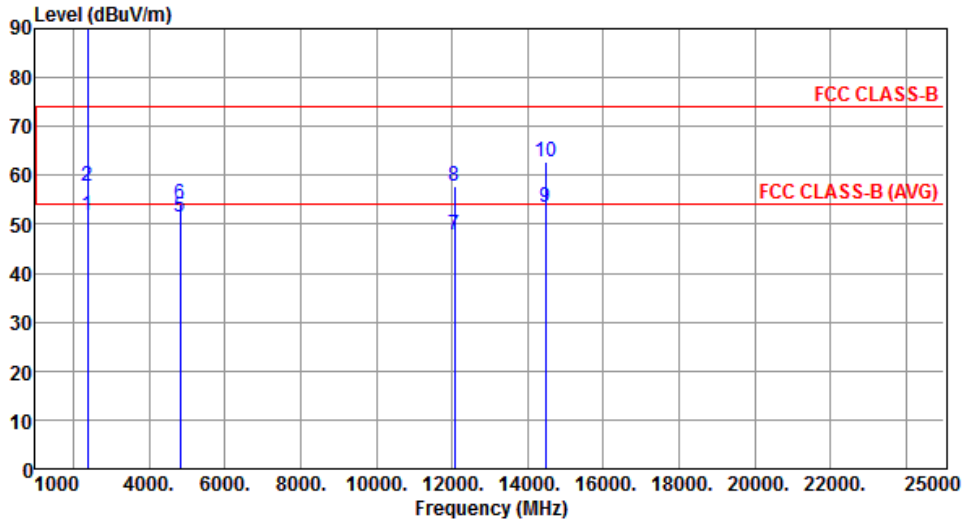
Modulation	11b	Test Freq. (MHz)	2412
Polarization	Horizontal		



		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	52.49	54.00	-1.51	56.09	-3.60	Average	100	348
2		2390.00	59.01	74.00	-14.99	62.61	-3.60	Peak	100	348
3	*	2412.00	113.30			116.81	-3.51	Average	100	348
4	*	2412.00	116.23			119.74	-3.51	Peak	100	348
5		4824.00	45.26	54.00	-8.74	41.66	3.60	Average	108	125
6		4824.00	50.13	74.00	-23.87	46.53	3.60	Peak	108	125
7		12060.00	44.15	54.00	-9.85	31.01	13.14	Average	100	333
8		12060.00	55.95	74.00	-18.05	42.81	13.14	Peak	100	333
9		14472.00	48.62	54.00	-5.38	31.01	17.61	Average	100	130
10		14472.00	60.77	74.00	-13.23	43.16	17.61	Peak	100	130

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:"*" is Peak / Average value of fundamental frequency

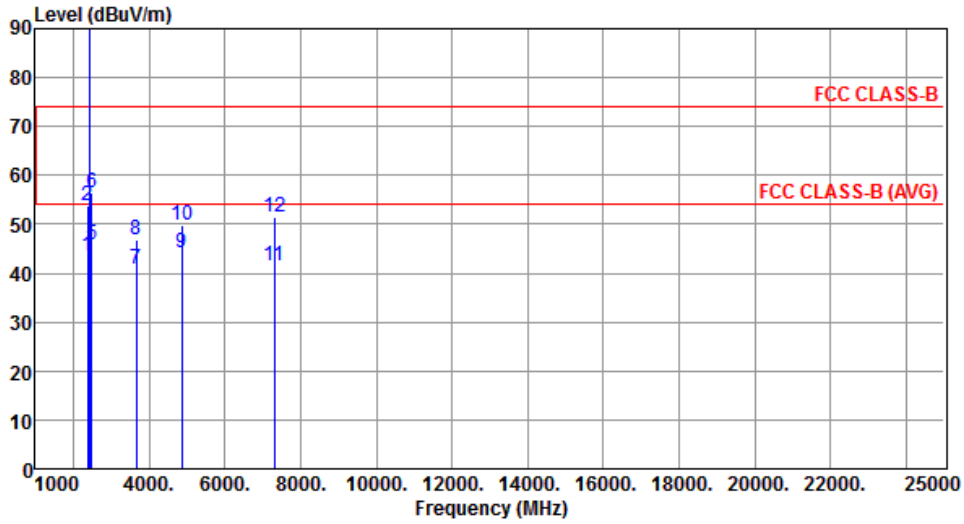
Modulation	11b	Test Freq. (MHz)	2412
Polarization	Vertical		



		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	51.91	54.00	-2.09	55.51	-3.60	Average	301	0
2		2390.00	57.90	74.00	-16.10	61.50	-3.60	Peak	301	0
3	*	2412.00	112.50			116.01	-3.51	Average	301	0
4	*	2412.00	115.27			118.78	-3.51	Peak	301	0
5		4824.00	51.41	54.00	-2.59	47.81	3.60	Average	278	256
6		4824.00	54.02	74.00	-19.98	50.42	3.60	Peak	278	256
7		12060.00	47.85	54.00	-6.15	34.71	13.14	Average	100	43
8		12060.00	57.89	74.00	-16.11	44.75	13.14	Peak	100	43
9		14472.00	53.60	54.00	-0.40	35.99	17.61	Average	100	225
10		14472.00	62.72	74.00	-11.28	45.11	17.61	Peak	100	225

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:"*" is Peak / Average value of fundamental frequency

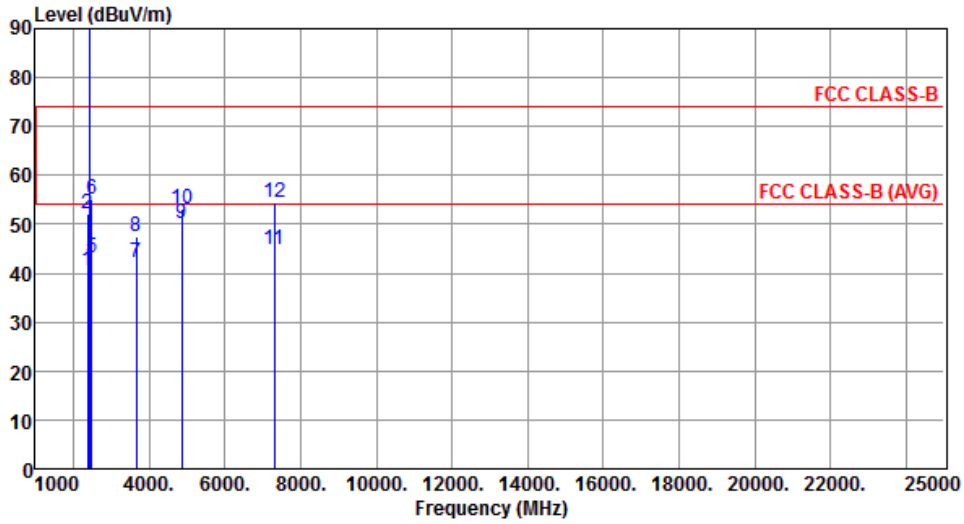
Modulation	11b	Test Freq. (MHz)	2437
Polarization	Horizontal		



		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	43.50	54.00	-10.50	47.10	-3.60	Average	100	348
2		2390.00	53.67	74.00	-20.33	57.27	-3.60	Peak	100	348
3	*	2437.00	115.73			119.13	-3.40	Average	100	348
4	*	2437.00	118.56			121.96	-3.40	Peak	100	348
5		2483.50	45.83	54.00	-8.17	49.02	-3.19	Average	100	348
6		2483.50	56.44	74.00	-17.56	59.63	-3.19	Peak	100	348
7		3655.50	40.79	54.00	-13.21	40.79	0.00	Average	100	295
8		3655.50	46.74	74.00	-27.26	46.74	0.00	Peak	100	295
9		4874.00	44.33	54.00	-9.67	40.58	3.75	Average	119	121
10		4874.00	49.67	74.00	-24.33	45.92	3.75	Peak	119	121
11		7311.00	41.39	54.00	-12.61	33.26	8.13	Average	100	47
12		7311.00	51.41	74.00	-22.59	43.28	8.13	Peak	100	47

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:"*" is Peak / Average value of fundamental frequency

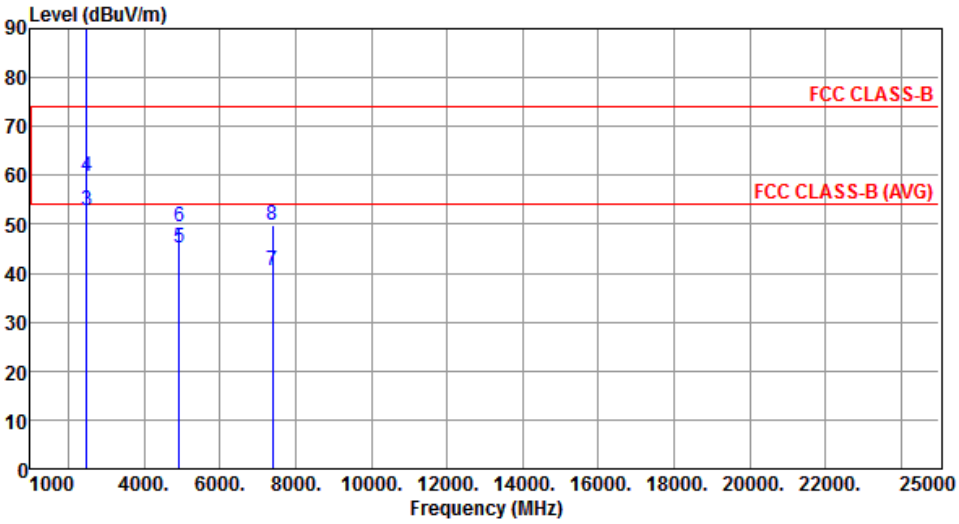
Modulation	11b	Test Freq. (MHz)	2437
Polarization	Vertical		



		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	40.54	54.00	-13.46	44.14	-3.60	Average	290	2
2		2390.00	52.30	74.00	-21.70	55.90	-3.60	Peak	290	2
3	*	2437.00	114.24			117.64	-3.40	Average	290	2
4	*	2437.00	116.98			120.38	-3.40	Peak	290	2
5		2483.50	43.31	54.00	-10.69	46.50	-3.19	Average	290	2
6		2483.50	55.08	74.00	-18.92	58.27	-3.19	Peak	290	2
7		3655.50	42.23	54.00	-11.77	42.23	0.00	Average	100	35
8		3655.50	47.57	74.00	-26.43	47.57	0.00	Peak	100	35
9		4874.00	50.02	54.00	-3.98	46.27	3.75	Average	294	281
10		4874.00	53.16	74.00	-20.84	49.41	3.75	Peak	294	281
11		7311.00	44.79	54.00	-9.21	36.66	8.13	Average	100	266
12		7311.00	54.54	74.00	-19.46	46.41	8.13	Peak	100	266

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:"*" is Peak / Average value of fundamental frequency

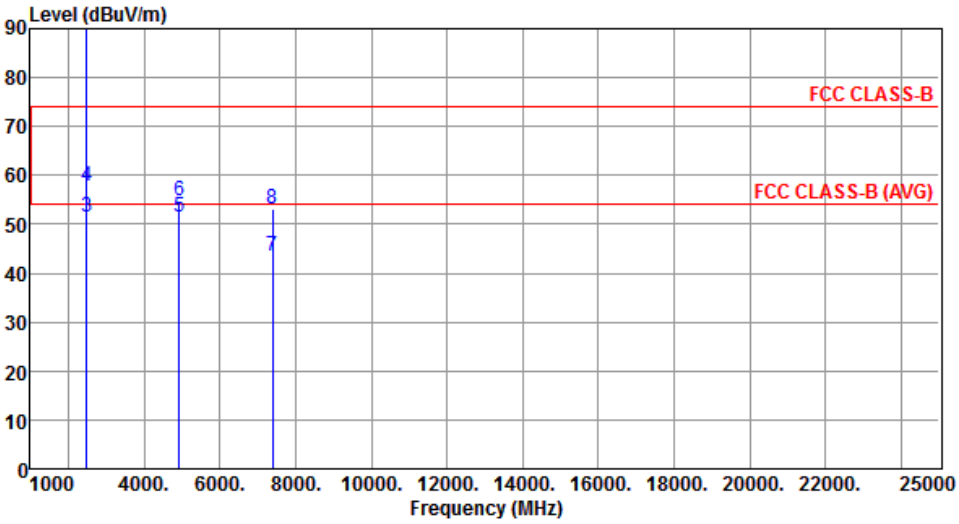
Modulation	11b	Test Freq. (MHz)	2462
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	2462.00	114.16			117.44	-3.28	Average	100	15
2	*	2462.00	116.85			120.13	-3.28	Peak	100	15
3		2483.50	52.83	54.00	-1.17	56.02	-3.19	Average	100	330
4		2483.50	59.94	74.00	-14.06	63.13	-3.19	Peak	100	330
5		4924.00	45.26	54.00	-8.74	41.34	3.92	Average	116	124
6		4924.00	49.50	74.00	-24.50	45.58	3.92	Peak	116	124
7		7386.00	40.58	54.00	-13.42	32.35	8.23	Average	100	45
8		7386.00	49.86	74.00	-24.14	41.63	8.23	Peak	100	45

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:"*" is Peak / Average value of fundamental frequency

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

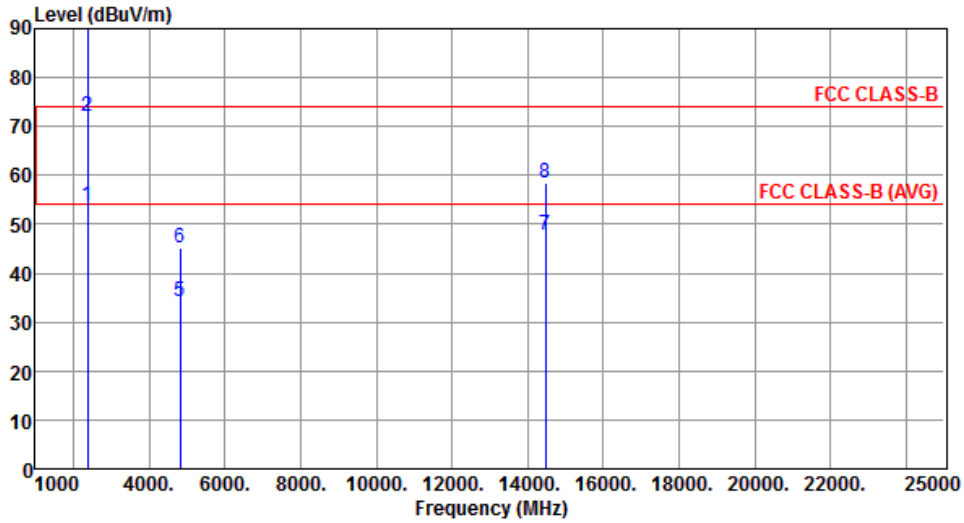


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	2462.00	113.03			116.31	-3.28	Average	288	0
2	*	2462.00	115.75			119.03	-3.28	Peak	288	0
3		2483.50	51.39	54.00	-2.61	54.58	-3.19	Average	288	0
4		2483.50	57.83	74.00	-16.17	61.02	-3.19	Peak	288	0
5		4924.00	51.36	54.00	-2.64	47.44	3.92	Average	284	275
6		4924.00	54.67	74.00	-19.33	50.75	3.92	Peak	284	275
7		7386.00	43.40	54.00	-10.60	35.17	8.23	Average	100	262
8		7386.00	52.99	74.00	-21.01	44.76	8.23	Peak	100	262

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:"*" is Peak / Average value of fundamental frequency

3.2.6 Transmitter Radiated Unwanted Emissions (Above 1GHz) for 11g

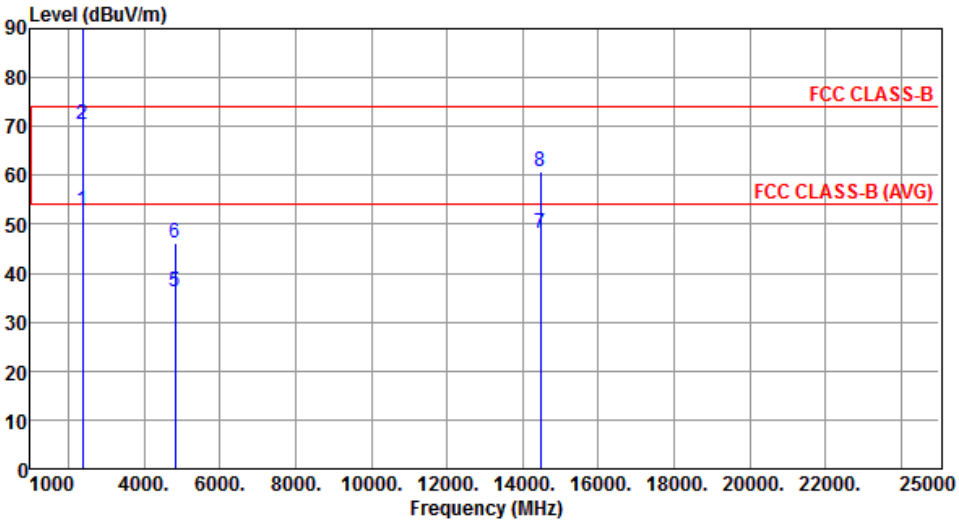
Modulation	11g	Test Freq. (MHz)	2412
Polarization	Horizontal		



		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	53.75	54.00	-0.25	57.35	-3.60	Average	256	5
2		2390.00	72.15	74.00	-1.85	75.75	-3.60	Peak	256	5
3	*	2412.00	105.30			108.81	-3.51	Average	256	5
4	*	2412.00	115.95			119.46	-3.51	Peak	256	5
5		4824.00	34.10	54.00	-19.90	30.50	3.60	Average	100	125
6		4824.00	45.10	74.00	-28.90	41.50	3.60	Peak	100	125
7		14472.00	47.71	54.00	-6.29	30.10	17.61	Average	100	139
8		14472.00	58.58	74.00	-15.42	40.97	17.61	Peak	100	139

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:"*" is Peak / Average value of fundamental frequency

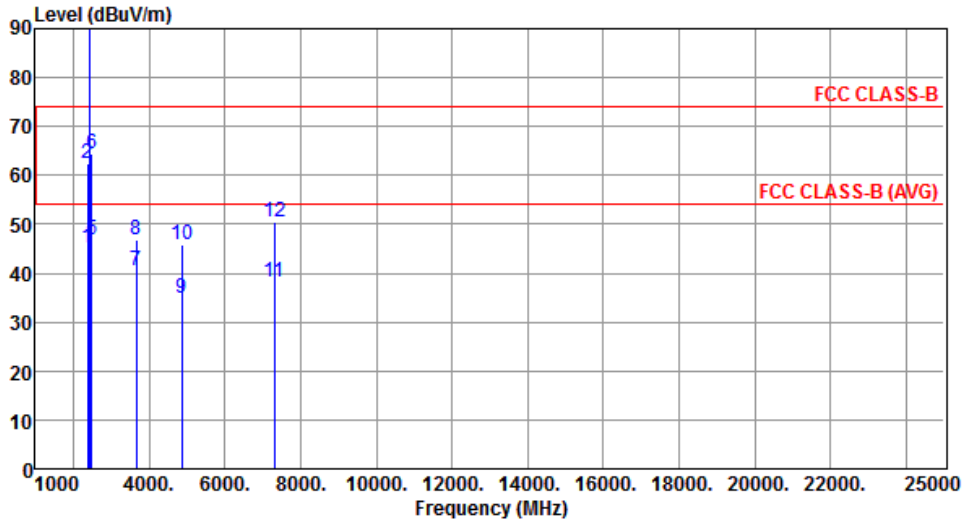
Modulation	11g	Test Freq. (MHz)	2412
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		2390.00	52.80	54.00	-1.20	56.40	-3.60	Average	309	2
2		2390.00	70.47	74.00	-3.53	74.07	-3.60	Peak	309	2
3	*	2412.00	104.10			107.61	-3.51	Average	309	2
4	*	2412.00	115.64			119.15	-3.51	Peak	309	2
5		4824.00	36.29	54.00	-17.71	32.69	3.60	Average	268	277
6		4824.00	46.07	74.00	-27.93	42.47	3.60	Peak	268	277
7		14472.00	48.24	54.00	-5.76	30.63	17.61	Average	100	224
8		14472.00	60.70	74.00	-13.30	43.09	17.61	Peak	100	224

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:"*" is Peak / Average value of fundamental frequency

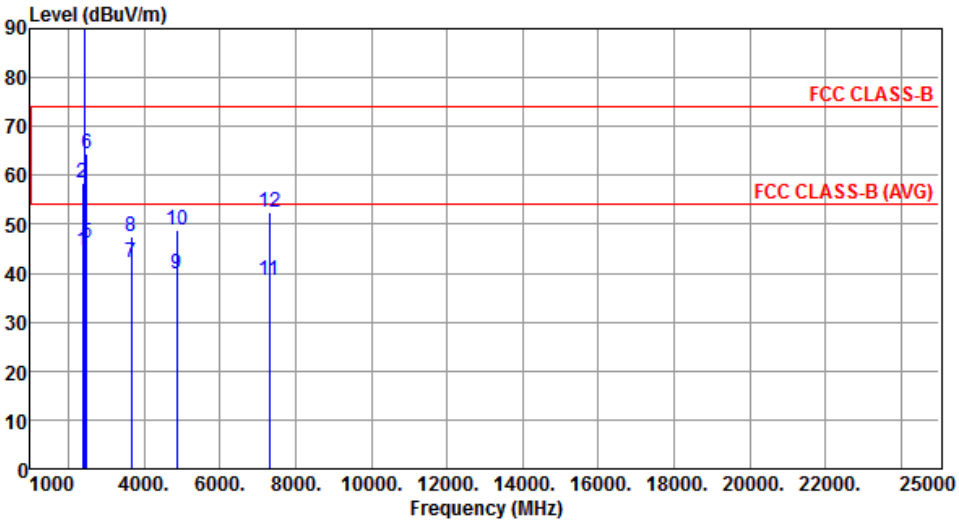
Modulation	11g	Test Freq. (MHz)	2437
Polarization	Horizontal		



		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	45.03	54.00	-8.97	48.63	-3.60	Average	195	6
2		2390.00	62.50	74.00	-11.50	66.10	-3.60	Peak	195	6
3	*	2437.00	109.11			112.51	-3.40	Average	195	6
4	*	2437.00	120.00			123.40	-3.40	Peak	195	6
5		2483.50	46.96	54.00	-7.04	50.15	-3.19	Average	195	6
6		2483.50	64.44	74.00	-9.56	67.63	-3.19	Peak	195	6
7		3655.50	40.67	54.00	-13.33	40.67	0.00	Average	100	293
8		3655.50	46.77	74.00	-27.23	46.77	0.00	Peak	100	293
9		4874.00	34.81	54.00	-19.19	31.06	3.75	Average	119	127
10		4874.00	45.81	74.00	-28.19	42.06	3.75	Peak	119	127
11		7311.00	38.19	54.00	-15.81	30.06	8.13	Average	100	48
12		7311.00	50.35	74.00	-23.65	42.22	8.13	Peak	100	48

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:"*" is Peak / Average value of fundamental frequency

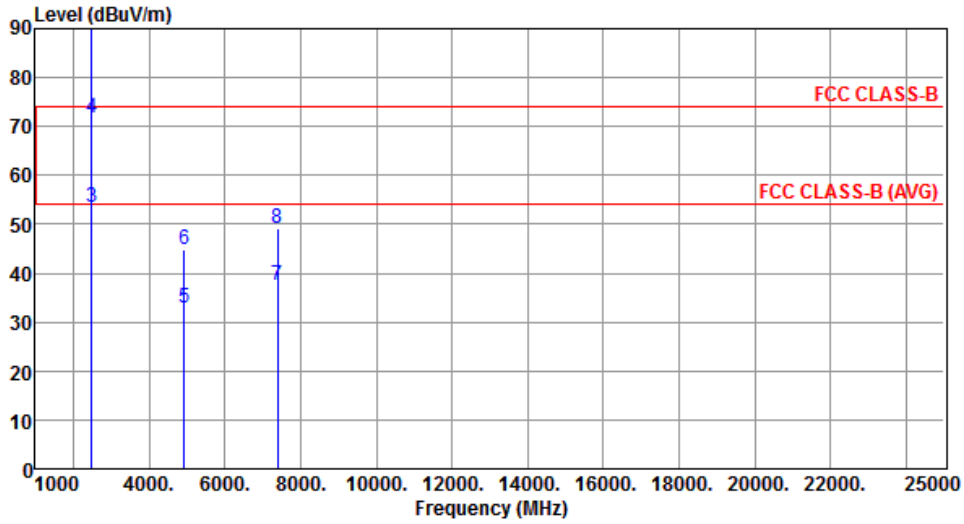
Modulation	11g	Test Freq. (MHz)	2437
Polarization	Vertical		



		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	44.42	54.00	-9.58	48.02	-3.60	Average	305	6
2		2390.00	58.30	74.00	-15.70	61.90	-3.60	Peak	305	6
3	*	2437.00	107.44			110.84	-3.40	Average	305	6
4	*	2437.00	119.04			122.44	-3.40	Peak	305	6
5		2483.50	46.27	54.00	-7.73	49.46	-3.19	Average	305	6
6		2483.50	64.31	74.00	-9.69	67.50	-3.19	Peak	305	6
7		3655.50	42.15	54.00	-11.85	42.15	0.00	Average	100	39
8		3655.50	47.59	74.00	-26.41	47.59	0.00	Peak	100	39
9		4874.00	39.70	54.00	-14.30	35.95	3.75	Average	272	282
10		4874.00	48.97	74.00	-25.03	45.22	3.75	Peak	272	282
11		7311.00	38.69	54.00	-15.31	30.56	8.13	Average	100	268
12		7311.00	52.55	74.00	-21.45	44.42	8.13	Peak	100	268

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:"*" is Peak / Average value of fundamental frequency

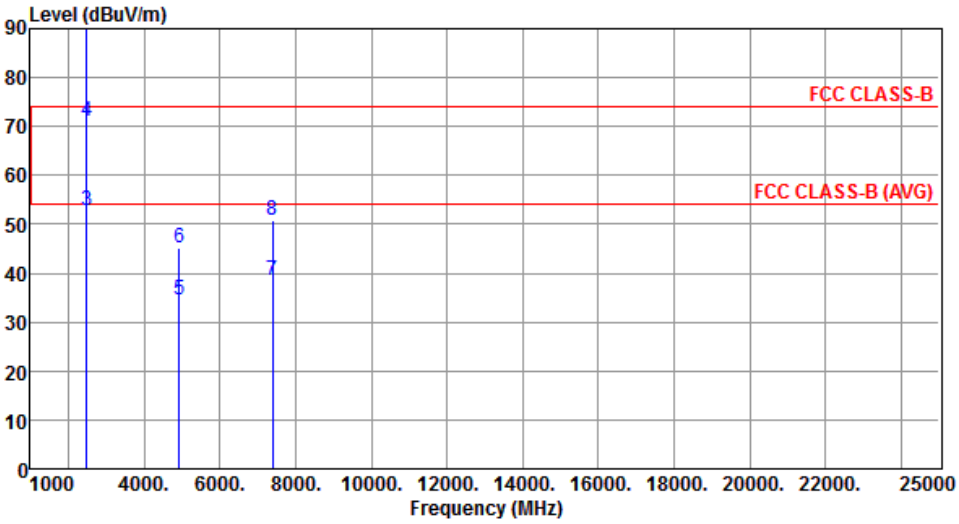
Modulation	11g	Test Freq. (MHz)	2462
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	2462.00	104.10			107.38	-3.28	Average	275	353
2	*	2462.00	114.68			117.96	-3.28	Peak	275	353
3		2483.50	53.56	54.00	-0.44	56.75	-3.19	Average	275	353
4		2483.50	71.73	74.00	-2.27	74.92	-3.19	Peak	275	353
5		4924.00	32.74	54.00	-21.26	28.82	3.92	Average	106	123
6		4924.00	44.74	74.00	-29.26	40.82	3.92	Peak	106	123
7		7386.00	37.68	54.00	-16.32	29.45	8.23	Average	100	56
8		7386.00	49.12	74.00	-24.88	40.89	8.23	Peak	100	56

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:"*" is Peak / Average value of fundamental frequency

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

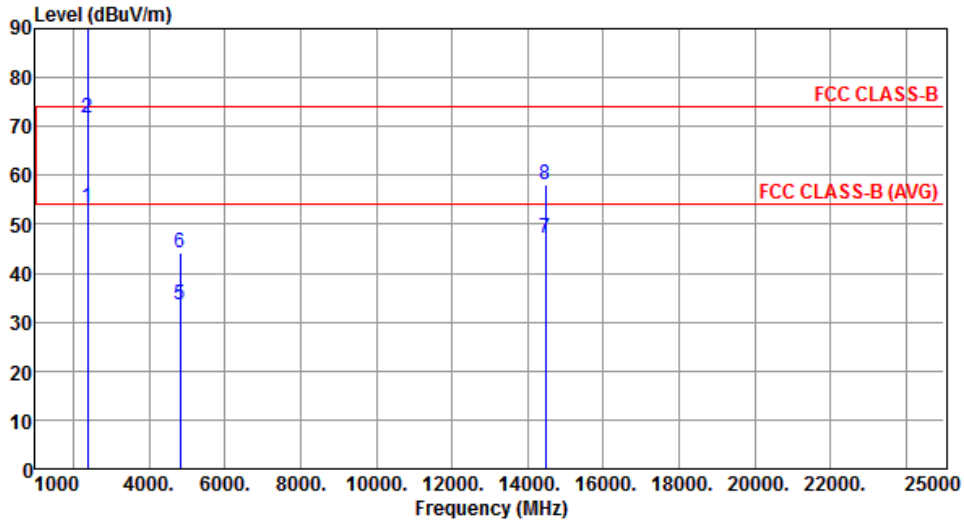


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	2462.00	103.34			106.62	-3.28	Average	317	5
2	*	2462.00	114.22			117.50	-3.28	Peak	317	5
3		2483.50	52.66	54.00	-1.34	55.85	-3.19	Average	317	5
4		2483.50	71.09	74.00	-2.91	74.28	-3.19	Peak	317	5
5		4924.00	34.38	54.00	-19.62	30.46	3.92	Average	262	270
6		4924.00	45.30	74.00	-28.70	41.38	3.92	Peak	262	270
7		7386.00	38.63	54.00	-15.37	30.40	8.23	Average	100	263
8		7386.00	50.66	74.00	-23.34	42.43	8.23	Peak	100	263

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:"*" is Peak / Average value of fundamental frequency

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

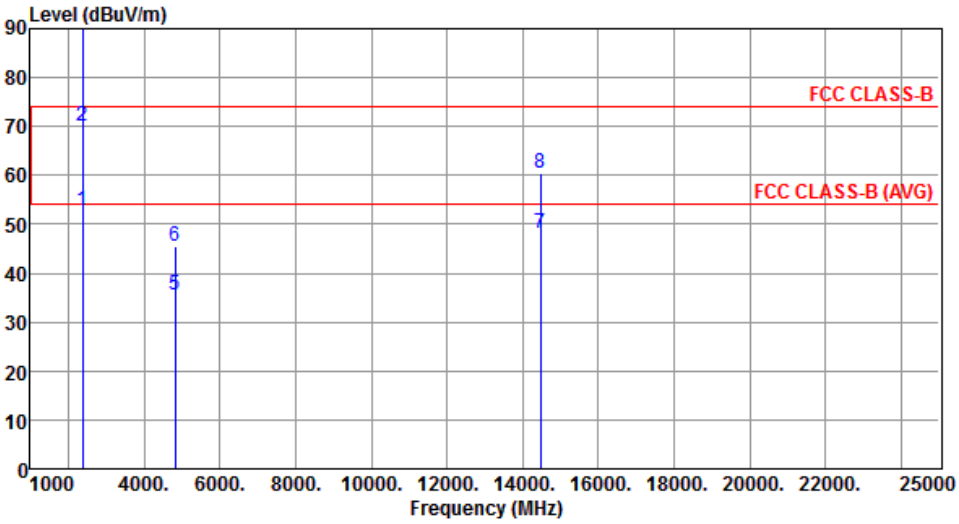
Modulation	HT20	Test Freq. (MHz)	2412
Polarization	Horizontal		



		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	53.56	54.00	-0.44	57.16	-3.60	Average	251	2
2		2390.00	71.86	74.00	-2.14	75.46	-3.60	Peak	251	2
3	*	2412.00	104.24			107.75	-3.51	Average	251	2
4	*	2412.00	116.79			120.30	-3.51	Peak	251	2
5		4824.00	33.67	54.00	-20.33	30.07	3.60	Average	100	121
6		4824.00	44.23	74.00	-29.77	40.63	3.60	Peak	100	121
7		14472.00	47.32	54.00	-6.68	29.71	17.61	Average	100	145
8		14472.00	57.98	74.00	-16.02	40.37	17.61	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).
Note 3:"*" is Peak / Average value of fundamental frequency

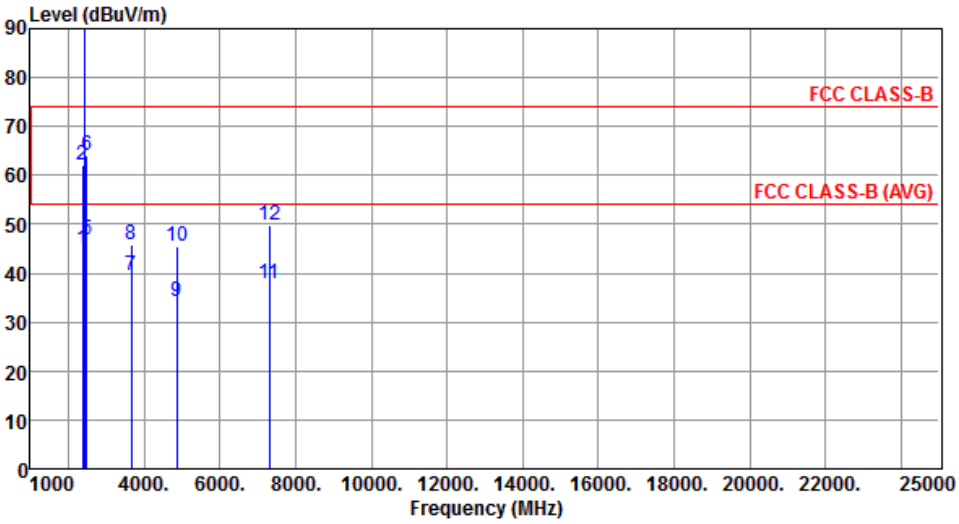
Modulation	HT20	Test Freq. (MHz)	2412
Polarization	Vertical		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		2390.00	52.69	54.00	-1.31	56.29	-3.60	Average	305	6
2		2390.00	70.07	74.00	-3.93	73.67	-3.60	Peak	305	6
3	*	2412.00	103.38			106.89	-3.51	Average	305	6
4	*	2412.00	116.42			119.93	-3.51	Peak	305	6
5		4824.00	35.56	54.00	-18.44	31.96	3.60	Average	263	268
6		4824.00	45.42	74.00	-28.58	41.82	3.60	Peak	263	268
7		14472.00	48.03	54.00	-5.97	30.42	17.61	Average	100	236
8		14472.00	60.28	74.00	-13.72	42.67	17.61	Peak	100	236

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:"*" is Peak / Average value of fundamental frequency

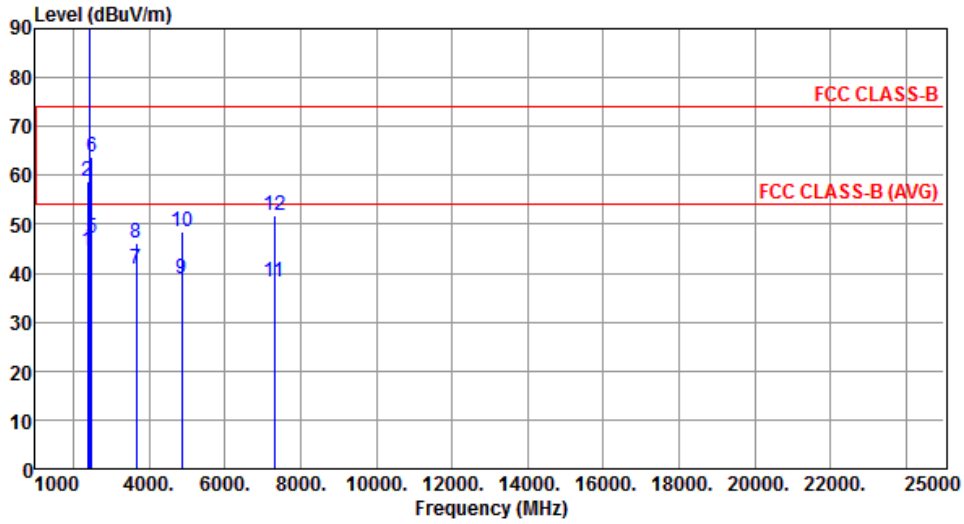
Modulation	HT20	Test Freq. (MHz)	2437
Polarization	Horizontal		



		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	44.91	54.00	-9.09	48.51	-3.60	Average	196	3
2		2390.00	62.14	74.00	-11.86	65.74	-3.60	Peak	196	3
3	*	2437.00	108.04			111.44	-3.40	Average	196	3
4	*	2437.00	120.99			124.39	-3.40	Peak	196	3
5		2483.50	46.87	54.00	-7.13	50.06	-3.19	Average	196	3
6		2483.50	64.25	74.00	-9.75	67.44	-3.19	Peak	196	3
7		3655.50	39.50	54.00	-14.50	39.50	0.00	Average	100	290
8		3655.50	45.84	74.00	-28.16	45.84	0.00	Peak	100	290
9		4874.00	34.29	54.00	-19.71	30.54	3.75	Average	115	124
10		4874.00	45.46	74.00	-28.54	41.71	3.75	Peak	115	124
11		7311.00	37.75	54.00	-16.25	29.62	8.13	Average	100	61
12		7311.00	49.73	74.00	-24.27	41.60	8.13	Peak	100	61

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:"*" is Peak / Average value of fundamental frequency

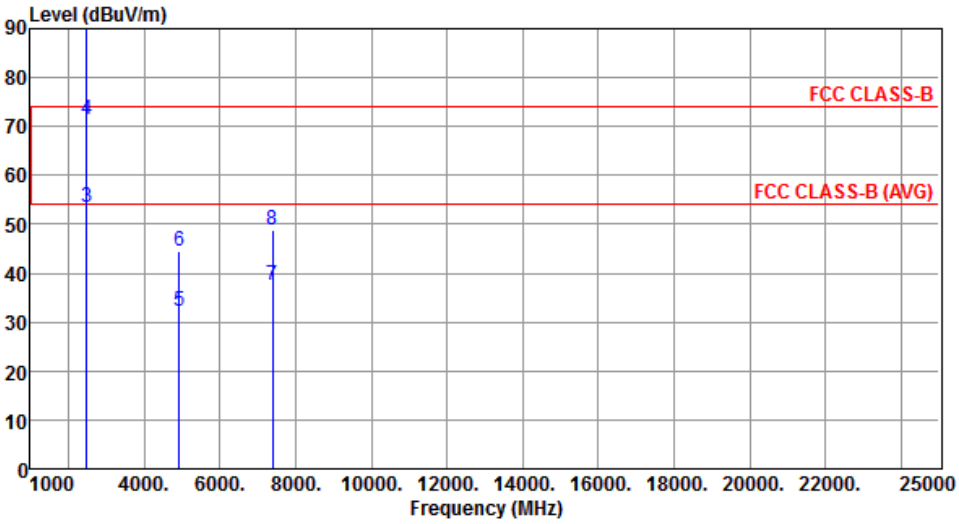
Modulation	HT20	Test Freq. (MHz)	2437
Polarization	Vertical		



		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	44.44	54.00	-9.56	48.04	-3.60	Average	297	5
2		2390.00	58.85	74.00	-15.15	62.45	-3.60	Peak	297	5
3	*	2437.00	106.23			109.63	-3.40	Average	297	5
4	*	2437.00	120.21			123.61	-3.40	Peak	297	5
5		2483.50	47.31	54.00	-6.69	50.50	-3.19	Average	297	5
6		2483.50	63.80	74.00	-10.20	66.99	-3.19	Peak	297	5
7		3655.50	40.99	54.00	-13.01	40.99	0.00	Average	100	37
8		3655.50	46.10	74.00	-27.90	46.10	0.00	Peak	100	37
9		4874.00	38.94	54.00	-15.06	35.19	3.75	Average	274	279
10		4874.00	48.48	74.00	-25.52	44.73	3.75	Peak	274	279
11		7311.00	38.26	54.00	-15.74	30.13	8.13	Average	100	262
12		7311.00	51.65	74.00	-22.35	43.52	8.13	Peak	100	262

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:"*" is Peak / Average value of fundamental frequency

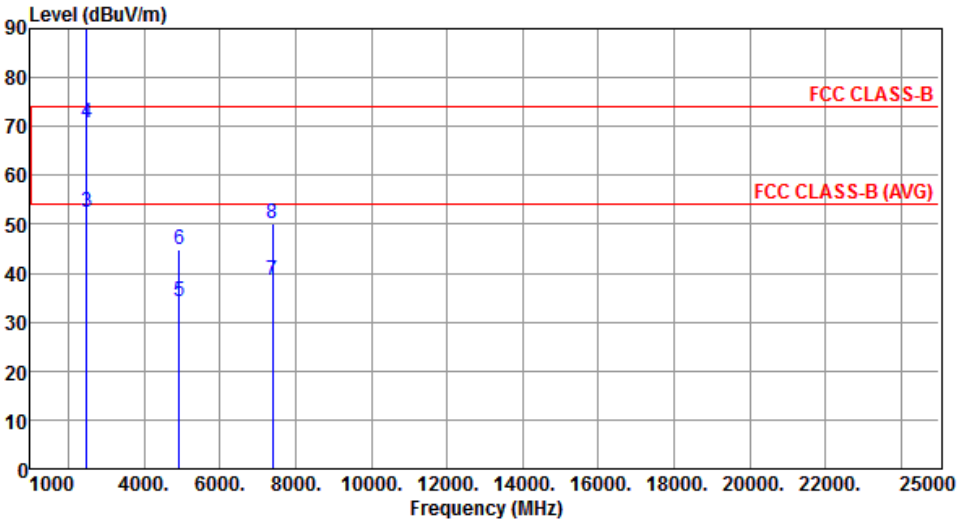
Modulation	HT20	Test Freq. (MHz)	2462
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	2462.00	103.18			106.46	-3.28	Average	269	1
2	*	2462.00	115.30			118.58	-3.28	Peak	269	1
3		2483.50	53.51	54.00	-0.49	56.70	-3.19	Average	269	1
4		2483.50	71.52	74.00	-2.48	74.71	-3.19	Peak	269	1
5		4924.00	32.26	54.00	-21.74	28.34	3.92	Average	100	135
6		4924.00	44.44	74.00	-29.56	40.52	3.92	Peak	100	135
7		7386.00	37.55	54.00	-16.45	29.32	8.23	Average	100	61
8		7386.00	48.67	74.00	-25.33	40.44	8.23	Peak	100	61

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:"*" is Peak / Average value of fundamental frequency

Modulation	HT20	Test Freq. (MHz)	2462
Polarization	Vertical		

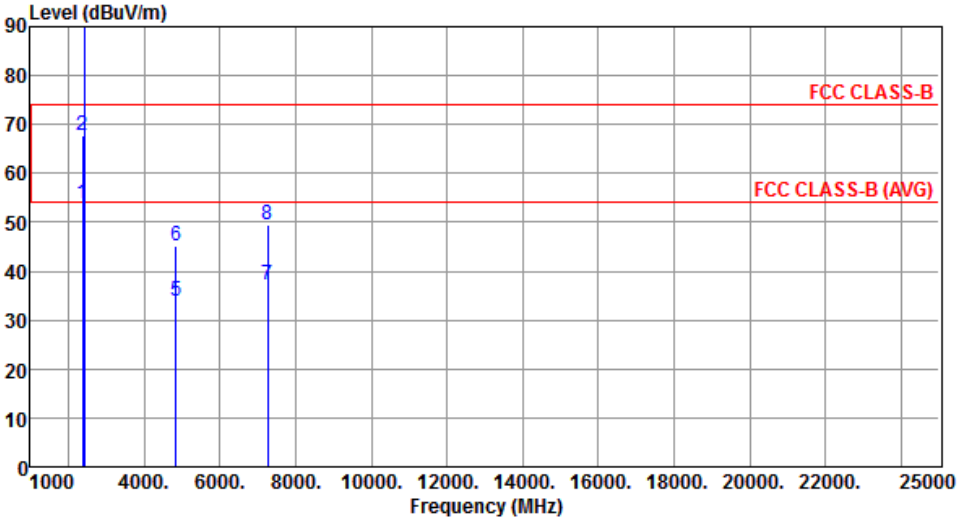


		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	2462.00	102.27			105.55	-3.28	Average	303	1
2	*	2462.00	114.85			118.13	-3.28	Peak	303	1
3		2483.50	52.51	54.00	-1.49	55.70	-3.19	Average	303	1
4		2483.50	70.87	74.00	-3.13	74.06	-3.19	Peak	303	1
5		4924.00	34.05	54.00	-19.95	30.13	3.92	Average	258	275
6		4924.00	44.88	74.00	-29.12	40.96	3.92	Peak	258	275
7		7386.00	38.53	54.00	-15.47	30.30	8.23	Average	100	258
8		7386.00	49.99	74.00	-24.01	41.76	8.23	Peak	100	258

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

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

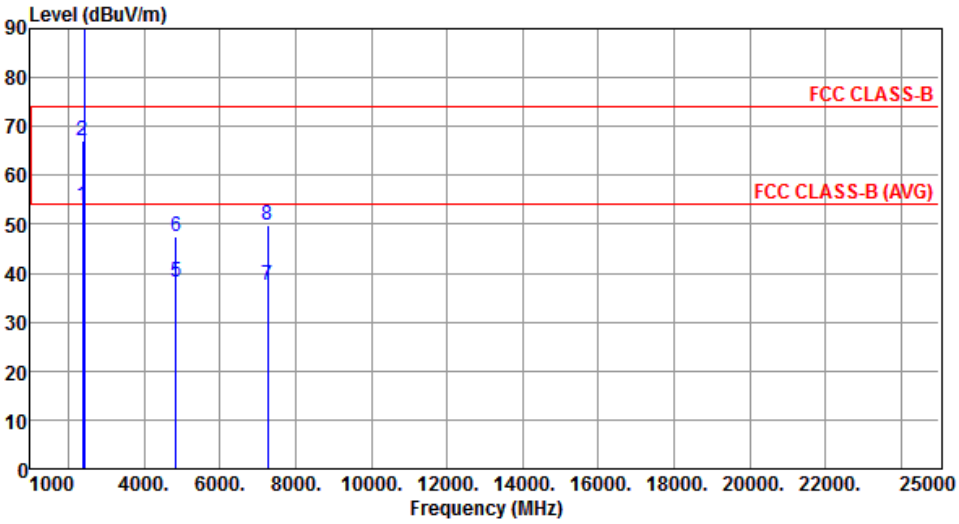
Modulation	HT40	Test Freq. (MHz)	2422
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		2390.00	53.86	54.00	-0.14	57.46	-3.60	Average	197	1
2		2390.00	67.91	74.00	-6.09	71.51	-3.60	Peak	197	1
3	*	2422.00	100.66			104.13	-3.47	Average	197	1
4	*	2422.00	110.92			114.39	-3.47	Peak	197	1
5		4844.00	33.73	54.00	-20.27	30.06	3.67	Average	106	122
6		4844.00	45.10	74.00	-28.90	41.43	3.67	Peak	106	122
7		7266.00	37.12	54.00	-16.88	29.06	8.06	Average	100	58
8		7266.00	49.34	74.00	-24.66	41.28	8.06	Peak	100	58

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:"*" is Peak / Average value of fundamental frequency

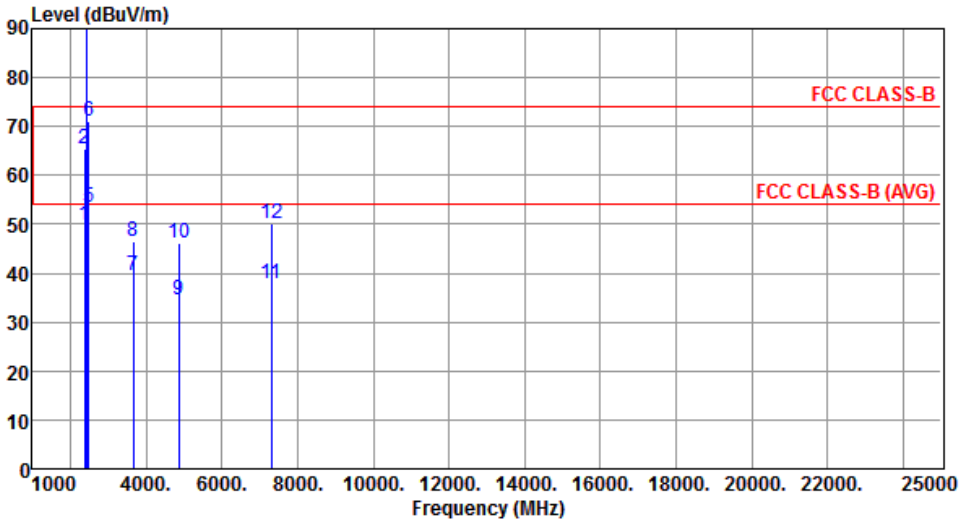
Modulation	HT40	Test Freq. (MHz)	2422
Polarization	Vertical		



		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	53.76	54.00	-0.24	57.36	-3.60	Average	297	2
2		2390.00	67.08	74.00	-6.92	70.68	-3.60	Peak	297	2
3	*	2422.00	98.29			101.76	-3.47	Average	297	2
4	*	2422.00	109.74			113.21	-3.47	Peak	297	2
5		4844.00	38.13	54.00	-15.87	34.46	3.67	Average	272	283
6		4844.00	47.38	74.00	-26.62	43.71	3.67	Peak	272	283
7		7266.00	37.52	54.00	-16.48	29.46	8.06	Average	100	269
8		7266.00	49.68	74.00	-24.32	41.62	8.06	Peak	100	269

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

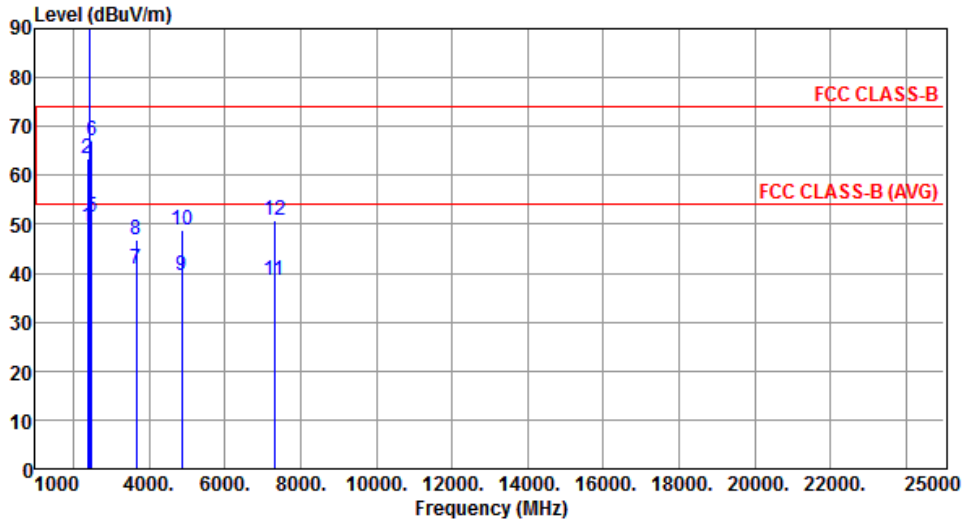
Modulation	HT40	Test Freq. (MHz)	2437
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1		2390.00	49.80	54.00	-4.20	53.40	-3.60	Average	199	0
2		2390.00	65.36	74.00	-8.64	68.96	-3.60	Peak	199	0
3	*	2437.00	101.36			104.76	-3.40	Average	199	0
4	*	2437.00	113.73			117.13	-3.40	Peak	199	0
5		2483.50	53.51	54.00	-0.49	56.70	-3.19	Average	199	0
6		2483.50	71.21	74.00	-2.79	74.40	-3.19	Peak	199	0
7		3655.50	39.50	54.00	-14.50	39.50	0.00	Average	100	294
8		3655.50	46.63	74.00	-27.37	46.63	0.00	Peak	100	294
9		4874.00	34.56	54.00	-19.44	30.81	3.75	Average	120	125
10		4874.00	46.26	74.00	-27.74	42.51	3.75	Peak	120	125
11		7311.00	37.98	54.00	-16.02	29.85	8.13	Average	100	52
12		7311.00	50.31	74.00	-23.69	42.18	8.13	Peak	100	52

Note 1: Emission Level (dBuV/m) = SA Reading (dBuV/m) + Factor* (dB)
*Factor includes antenna factor , cable loss and amplifier gain
Note 2: Margin (dB) = Emission level (dBuV/m) – Limit (dBuV/m).
Note 3:"*" is Peak / Average value of fundamental frequency

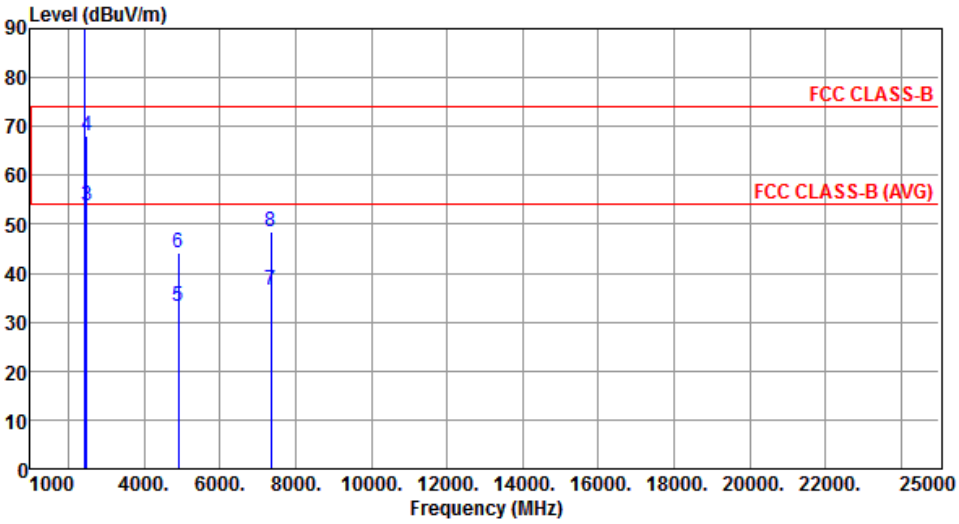
Modulation	HT40	Test Freq. (MHz)	2437
Polarization	Vertical		



		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	49.45	54.00	-4.55	53.05	-3.60	Average	296	3
2		2390.00	63.43	74.00	-10.57	67.03	-3.60	Peak	296	3
3	*	2437.00	100.37			103.77	-3.40	Average	296	3
4	*	2437.00	112.11			115.51	-3.40	Peak	296	3
5		2483.50	51.49	54.00	-2.51	54.68	-3.19	Average	296	3
6		2483.50	67.17	74.00	-6.83	70.36	-3.19	Peak	296	3
7		3655.50	40.80	54.00	-13.20	40.80	0.00	Average	100	37
8		3655.50	46.74	74.00	-27.26	46.74	0.00	Peak	100	37
9		4874.00	39.41	54.00	-14.59	35.66	3.75	Average	276	285
10		4874.00	48.73	74.00	-25.27	44.98	3.75	Peak	276	285
11		7311.00	38.58	54.00	-15.42	30.45	8.13	Average	100	272
12		7311.00	50.65	74.00	-23.35	42.52	8.13	Peak	100	272

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:"*" is Peak / Average value of fundamental frequency

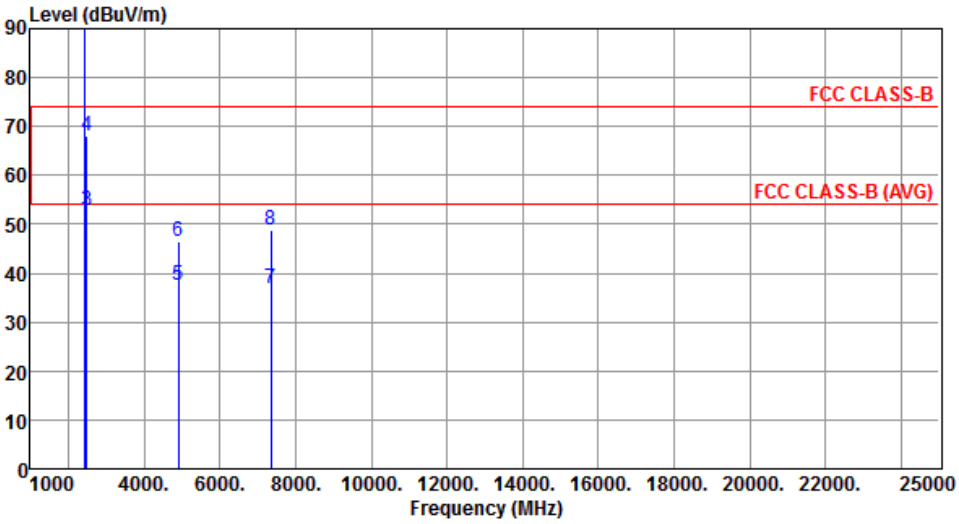
Modulation	HT40	Test Freq. (MHz)	2452
Polarization	Horizontal		



		Freq. MHz	Emission level dBuV/m	Limit dBuV/m	Margin dB	SA reading dBuV	Factor dB	Remark	ANT High cm	Turn Table deg
1	*	2452.00	98.53			101.86	-3.33	Average	183	2
2	*	2452.00	107.97			111.30	-3.33	Peak	183	2
3		2483.50	53.85	54.00	-0.15	57.04	-3.19	Average	183	2
4		2483.50	68.04	74.00	-5.96	71.23	-3.19	Peak	183	2
5		4904.00	33.11	54.00	-20.89	29.25	3.86	Average	100	116
6		4904.00	44.13	74.00	-29.87	40.27	3.86	Peak	100	116
7		7356.00	36.69	54.00	-17.31	28.49	8.20	Average	100	63
8		7356.00	48.55	74.00	-25.45	40.35	8.20	Peak	100	63

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:"*" is Peak / Average value of fundamental frequency

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	*	2452.00	96.47			99.80	-3.33	Average	310	5
2	*	2452.00	106.73			110.06	-3.33	Peak	310	5
3		2483.50	52.79	54.00	-1.21	55.98	-3.19	Average	310	5
4		2483.50	68.01	74.00	-5.99	71.20	-3.19	Peak	310	5
5		4904.00	37.37	54.00	-16.63	33.51	3.86	Average	271	280
6		4904.00	46.51	74.00	-27.49	42.65	3.86	Peak	271	280
7		7356.00	36.97	54.00	-17.03	28.77	8.20	Average	100	263
8		7356.00	48.90	74.00	-25.10	40.70	8.20	Peak	100	263

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:"*" is Peak / Average value of fundamental frequency

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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