Report No: CCISE190703501

TEST REPORT

Applicant:	**Binatone Electronics International Ltd.**
Address of Applicant:	Floor 23A, 9 Des Voeux Road West, Sheung Wan, Hong Kong
Equipment Under Test (EUT)	
Product Name:	**Baby Unit** (2.8" HD Wi-Fi® Video Baby and Home Monitor; 5" HD Wi-Fi® Video Baby and Home Monitor)
Model Name.:	CN35BU, COMFORT45BU, CN75BU, COMFORT85BU
Trade mark:	motorola
FCC ID:	VLJ-CN35BU
Canada IC:	4522A-CN35BU
HVIN:	CN35BU
Applicable standards:	CFR47 FCC Part 15: Subpart C Section 15.247 CFR47 FCC Part 15: Subpart C Section 15.207 CFR47 FCC Part 15: Subpart C Section 15.209 CFR47 FCC Part 15: Subpart B Section 15.107 CFR47 FCC Part 15: Subpart B Section 15.109 RSS-247 Issue 2 February 2017 RSS-Gen Issue 5 April 2018 ICES-003 Issue 6 January 2016
Date of sample receipt:	20 Nov. 2018
Date of Test:	20 Nov. 2018 to 14 Jun. 2019
Date of report issued:	09 Jul. 2019
Test Result:	PASS*

* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:

Bruce Zhang
Laboratory Manager

Revision History

Rev.	Issue Date	Report NO.	Effect Page	Contents
00	09 Jul. 2019	CCISE190703501	ALL	Initial Issue

Tested by: Carey Chen ***Date:*** *20 Nov. 2018 – 14 Jun. 2019*

Test Engineer

Reviewed by: Winner Zhang ***Date:*** *09 Jul. 2019*

Project Engineer

Table of Contents Page

1 SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

KDB 558074 D01 DTS Meas Guidance v05

FCC Part 15,Subpart C RSS-247Issue 2			
StandardSection	**Test Item**	**Judgment**	**Remark**
FCC Part 15.207(a) RSS-Gen Clause 8.8	Conducted Emission	PASS	
FCC Part 15.247(a)(2) RSS-247Clause 5.2(a)	6dB Bandwidth	PASS	
RSS-Gen Clause 6.7	99% Bandwidth	PASS	
FCC Part 15.247(b)(3) RSS-247Clause 5.4(d)	Output Power	PASS	
FCC Part 15.247(d) RSS-247Clause 3.3	Radiated Spurious Emission	PASS	
FCC Part 15.247(d) RSS-247Clause 5.5	Conducted Spurious & Band EdgeEmission	PASS	
FCC Part 15.247(e) RSS-247Clause 5.2(b)	Power Spectral Density	PASS	
FCC Part 15.205	Restricted Band Edge Emission	PASS	
FCC Part 15.247(d)&15.209(a) RSS-247Clause 5.5	Band Edge Emission	PASS	
FCC Part 15.247(b)(4) &15.203	Antenna Requirement	PASS	
RSS-Gen Clause 6.11	Frequency Stability	PASS	

FCC Part 15,Subpart B ICES-003 Issue 6			
StandardSection	**Test Item**	**Judgment**	**Remark**
FCC Part 15.107(a) ICES-003	Conducted Emission	PASS	Class B limit
FCC Part 15.109(a)) ICES-003	Radiated Emission	PASS	Class B limit

NOTE:

1) 'N/A' denotes test is not applicable in this test report
2) All tests were performed according to the procedures in ANSI C63.10: 2013 and ANSI C63.4: 2014.

1.1 TEST FACTORY

Shenzhen Zhongjian Nanfang Testing Co., Ltd.
Address: No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,
Bao'an District, Shenzhen, Guangdong, China
Tel: +86-755-23118282, Fax: +86-755-23116366
Email: info@ccis-cb.com, Website: http://www.ccis-cb.com

The test facility is recognized, certified, or accredited by the following organizations:

- FCC - Designation No.: CN1211

Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been accredited as a testing laboratory by FCC(Federal Communications Commission). The test firm Registration No. is 727551.

- ISED – CAB identifier.: CN0021

The 3m Semi-anechoic chamber of Shenzhen Zhongjian Nanfang Testing Co., Ltd. has been Registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 10106A-1.

- CNAS - Registration No.: CNAS L6048

Shenzhen Zhongjian Nanfang Testing Co., Ltd. is accredited to ISO/IEC 17025:2005 General Requirements for the Competence of Testing and Calibration laboratories for the competence of testing. The Registration No. is CNAS L6048.

A2LA - Registration No.: 4346.01

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2005 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: https://portal.a2la.org/scopepdf/4346-01.pdf

1.2 MEASUREMENT UNCERTAINTY

Parameters	Expanded Uncertainty
Conducted Emission (9kHz ~ 30MHz)	±2.22 dB (k=2)
Radiated Emission (9kHz ~ 30MHz)	±2.76 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	±4.28 dB (k=2)
Radiated Emission (1GHz ~ 18GHz)	±5.72 dB (k=2)
Radiated Emission (18GHz ~ 40GHz)	±2.88 dB (k=2)

2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

Product Name	**Baby Unit** (2.8" HD Wi-Fi® Video Baby and Home Monitor; 5" HD Wi-Fi® Video Baby and Home Monitor)	
Trade Name	motorola	
Model Name	CN35BU	
Series Model	COMFORT45BU, CN75BU, COMFORT85BU	
Model Difference	All models are fully identical except model name.	
Product Description	The EUT is a Baby Unit(2.8" Video Baby Monitor with Wi-Fi®; 5" Video Baby Monitor with Wi-Fi®) of one of the Video Baby Monitor With Wi-Fi® which supports 2.4GHz FHSS and Wi-Fi 802.11b/g/n wireless technologies. This report for Wi-Fi 802.11b/g/n operation only.	
	Operation Frequency:	2412 - 2462 MHz for 802.11b/g/n(HT20) 2422 - 2452 MHz for 802.11n(HT40)
	Modulation Type:	DSSS(DBPSK/DQPSK/CCK) OFDM(BPSK/QPSK/16QAM/64QAM)
	Bit Rate of Transmitter:	1/2/5.5/11 Mbps for 802.11b 6/9/12/18/24/36/48/54 Mbps for 802.11g MCS0 ~ MCS7 for 802.11n
	Number Of Channel:	11 channels for 802.11b/g/n(HT20) 7 channels for 802.11n(HT40)
	Antenna Designation:	Please see Note 4
	AntennaGain(dBi):	0dBi
	Duty Cycle:	>98%
Channel List	Please refer to the Note 2.	
Adapter 1#	Model: S005BNU0500100 (Tenpao) Input: AC 100-240V, 0.15mA, 50/60Hz Output: DC 5.0V, 1000mA	
Adapter 2#	Model: CS6F050100FUF (Csec) Input: AC 100-240V, 0.20mA, 50/60Hz Output: DC 5.0V, 1000mA	
Battery	N/A	
Hardware version	N/A	
Software version	N/A	
Radio Hardware version	N/A	
Radio Software version	N/A	
Test Software	SecureCRT	
RF Power Setting TEST Software (power class)	1	
Connecting I/O Port(s)	Please refer to the User's Manual	

Note:

1 For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

2

RF Channel and Frequency of Wi-Fi 802.11 b/g/n			
802.11b/g/n (HT20)		802.11n (HT40)	
RF Channel	Freq.(MHz)	RF Channel	Freq.(MHz)
01	**2412**	**03**	**2422**
02	2417	04	2427
03	2422	05	2432
04	2427	**06**	**2437**
05	2432	07	2442
06	**2437**	08	2447
07	2442	**09**	**2452**
08	2447	/	/
09	2452	/	/
10	2457	/	/
11	**2462**	/	/

3 Note:

1) In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, themiddle frequency, and the highest frequency of channel were selected to perform the test;
2) Test frequencies are lowest channel: 2412 MHz, middle channel: 2437 MHz and highest channel: 2462 MHz for 802.11b/g/n(HT20)
3) Test frequencies are lowest channel: 2422 MHz, middle channel: 2437 MHz and highest channel: 2452 MHz for 802.11n(HT40)

4

Ant	Brand	Model Name	Antenna Type	Connector	Gain (dBi)	NOTE
1	N/A	CN35BU	Integral Antenna	N/A	0	WLAN Antenna

2.2 DESCRIPTION OF TEST MODES

Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

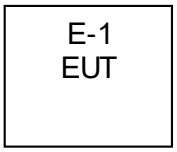
Worst Mode	Description	Data Rate
Mode 1	TX IEEE 802.11b CH1	1 Mbps
Mode 2	TX IEEE 802.11b CH6	1 Mbps
Mode 3	TX IEEE 802.11 b CH11	1 Mbps
Mode 4	TX IEEE 802.11g CH1	6 Mbps
Mode 5	TX IEEE 802.11g CH6	6 Mbps
Mode 6	TX IEEE 802.11g CH11	6 Mbps
Mode 7	TX IEEE 802.11n HT20 CH1	MCS 0
Mode 8	TX IEEE 802.11n HT20 CH6	MCS 0
Mode 9	TX IEEE 802.11n HT20 CH11	MCS 0
Mode 10	TX IEEE 802.11n HT40 CH3	MCS 0
Mode 11	TX IEEE 802.11n HT40 CH6	MCS 0
Mode 12	TX IEEE 802.11n HT40 CH9	MCS 0
Mode13	Wi-Fi transmitting mode	/
Mode 14	Operating mode	/

Note:

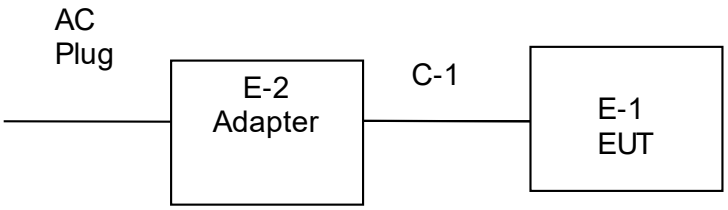
1) The measurements are performed at all Bit Rate of Transmitter, the worst data was reported
2) We have be tested for all avaiable U.S. voltage and frequencies(For 120V,50/60Hz and 240V, 50/60Hz) for which the device is capable of operation, and the worst case of 120V/60Hz is shown in the report
3) Controlled using a bespoke application on the laptop PC supplied by the customer. The application was used to enable a continuous transmission mode and to select the test channels, data rates and modulation schemes as required.

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiation Test Set



Conduction Test Set



2.4 DESCRIPTION OF NECESSARY ACCESSORIES AND SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

Item	Equipment	Mfr/Brand	Model/Type No.	Serial No.	Note
E-2	Adapter	Tenpao	S005BNU0500100	N/A	Accessories Equipment
E-2	Adapter	Csec	CS6F050100FUF	N/A	
E-3	Personal computer	HP	500-320cx	4CV428DQYN	Auxiliary Equipment

Item	Shielded Type	Ferrite Core	Length	Note
C-1	Adapter DC Cable	NO	200cm	N/A

Note:

1) The support equipment was authorized by Declaration of Confirmation.
2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
3) “YES” is means “shielded” “with core”; “NO” is means “unshielded” “without core”.

2.5 EQUIPMENTS LIST

Radio Spectrum Testing				
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Until**
USB RF power sensor	DARE	RPR3006W	15I00041SNO09	05.03.2020
Spectrum analyzer	Agilent	N9020A	MY51110123	01.03.2020
Spurious Emission				
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Until**
Loop Antenna	Schwarzbeck	FMZB1519B	00044	14.03.2020
Bilog Antenna	Schwarzbeck	VULB9163	497	14.03.2020
Horn Antenna	Schwarzbeck	BBHA 9120D	1805	21.06.2020
SHF-EHF Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170582	20.11.2019
Pre-amplifier	HP	8447D	2944A09358	05.03.2020
Pre-amplifier	CD	PAP-1G18	11804	05.03.2020
EMI Test Receiver	R&S	ESRP7	101070	05.03.2020
Spectrum analyzer	R&S	FSP30	101454	05.03.2020
Spectrum analyzer	R&S	FSP40	100363	05.03.2020
Cable	ZDECL	Z108-NJ-NJ-81	1608458	05.03.2020
Cable	MICRO-COAX	MFR64639	K10742-5	05.03.2020
Cable	SUHNER	SUCOFLEX100	58193/4PE	05.03.2020
Conducted Emission on AC Mains				
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Until**
EMI Test Receiver	R&S	ESCI	101189	05.03.2020
Pulse Limiter	Schwarzbeck	OSRAM 2306	9731	05.03.2020
LISN	CHASE	MN2050D	1447	17.03.2020
LISN	R&S	ESH3-Z5	8438621/010	20.07.2019

3 EMC EMISSION TEST

3.1 CONDUCTED EMISSION MEASUREMENT

3.1.1 POWER LINE CONDUCTED EMISSION LIMITS

operating frequency band. In case the emission fall within the restricted band specified on Part 15. 207(a), 107(a), RSS-Gen Table3 and ICES-003 Table2 limit in the table below has to be followed. This item was performed according to the procedures in ANSI C63.10: 2013 and ANSI C63.4: 2014.

FREQUENCY (MHz)	Conducted Emissionlimit (dBuV)	
	Quasi-peak	Average
0.15 -0.5	66 - 56 *	56 - 46 *
0.50 -5.0	56.00	46.00
5.0 -30.0	60.00	50.00

Note:

1) The tighter limit applies at the band edges.
2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

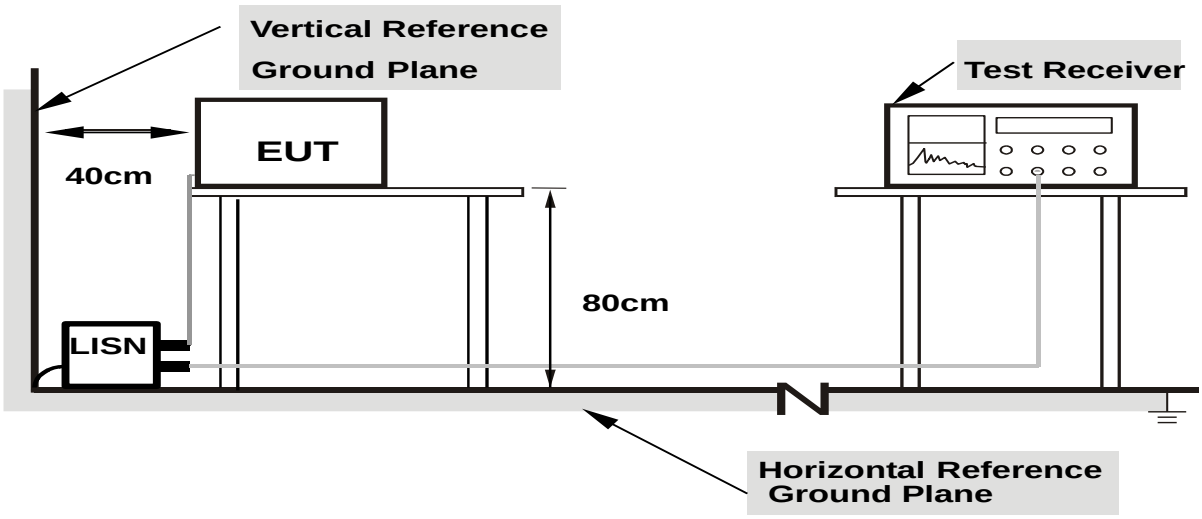
The following table is the setting of the receiver

Receiver Parameters	Setting
Attenuation	10 dB
Start Frequency	0.15 MHz
Stop Frequency	30 MHz
IF Bandwidth	9 kHz

3.1.2 TEST PROCEDURE

a. The EUT was 0.8 meters from the horizontal ground plane and 0.4 meters from the vertical ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
d. LISN at least 80 cm from nearest part of EUT chassis.
e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

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 from other units and other metal planes

3.1.4 EUT OPERATING CONDITIONS

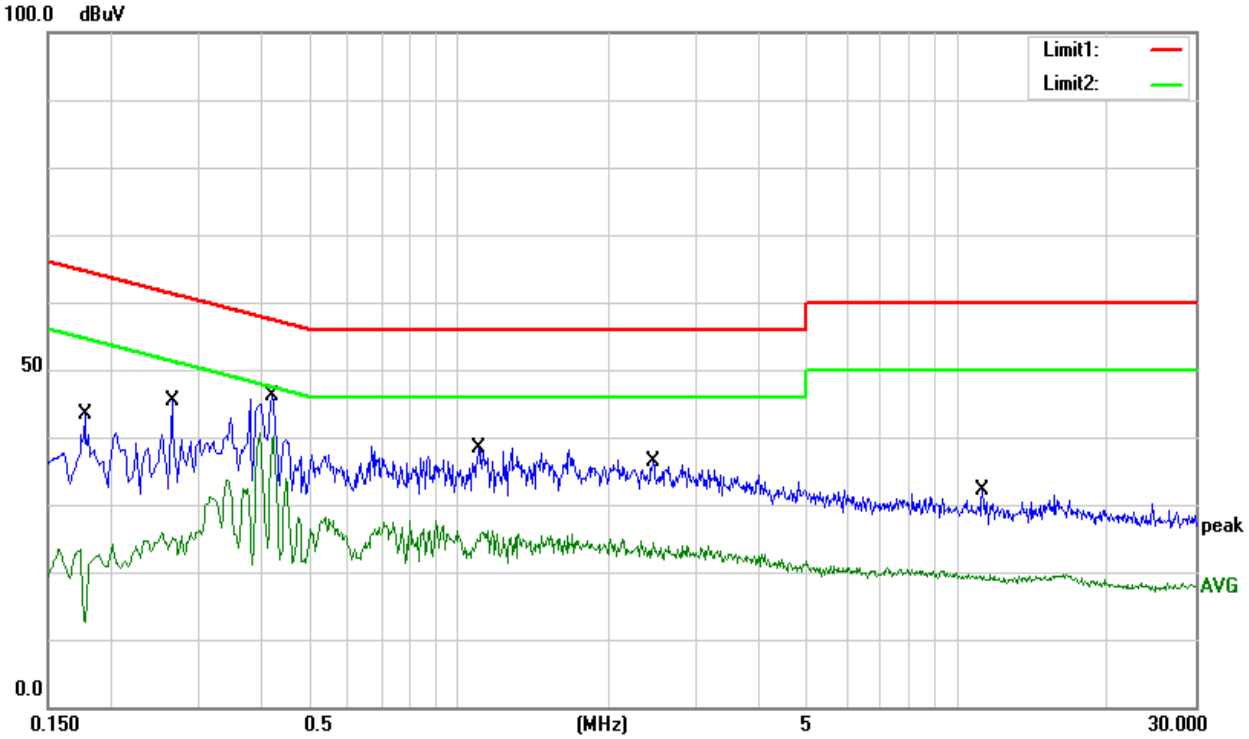
The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

3.1.5 TEST RESULT

Temperature:	22℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz	Phase:	L
Test Mode:	Mode 13	Test Date:	2019-06-14
Note:	Adapter(Tenpao)		

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
0.1780	23.19	20.23	43.42	64.58	-21.16	QP
0.1780	3.86	20.23	24.09	54.58	-30.49	AVG
0.2660	24.73	20.56	45.29	61.24	-15.95	QP
0.2660	5.30	20.56	25.86	51.24	-25.38	AVG
0.4220	25.68	20.49	46.17	57.41	-11.24	QP
0.4220	19.75	20.49	40.24	47.41	-7.17	AVG
1.0980	18.15	20.15	38.30	56.00	-17.70	QP
1.0980	5.94	20.15	26.09	46.00	-19.91	AVG
2.4580	16.45	20.02	36.47	56.00	-19.53	QP
2.4580	4.28	20.02	24.30	46.00	-21.70	AVG
11.2460	12.09	20.10	32.19	60.00	-27.81	QP
11.2460	-0.35	20.10	19.75	50.00	-30.25	AVG

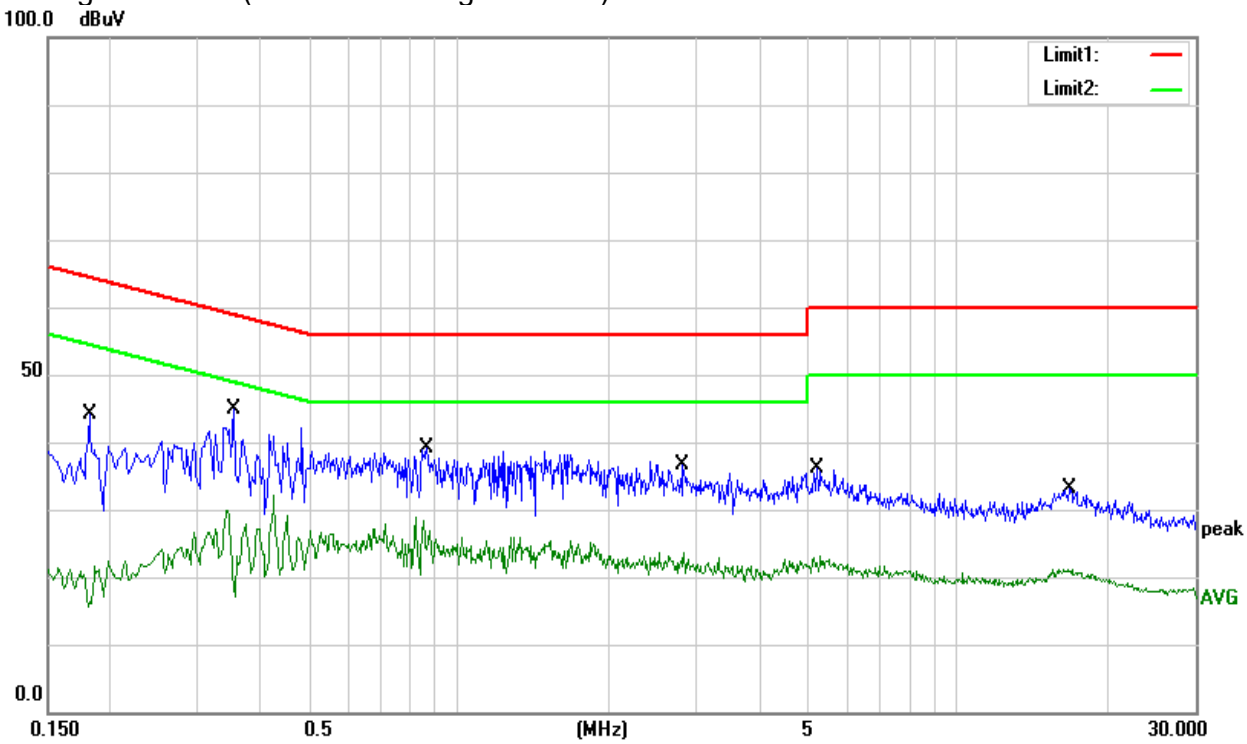
Remark:
1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	22℃	Relative Humidity:	55%
Test Voltage:	AC 120V/60Hz	Phase:	N
Test Mode:	Mode 13	Test Date:	2019-06-14
Note:	Adapter(Tenpao)		

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
0.1820	23.99	20.23	44.22	64.39	-20.17	QP
0.1820	3.81	20.23	24.04	54.39	-30.35	AVG
0.3540	24.20	20.60	44.80	58.87	-14.07	QP
0.3540	11.48	20.60	32.08	48.87	-16.79	AVG
0.8660	19.00	20.20	39.20	56.00	-16.80	QP
0.8660	6.63	20.20	26.83	46.00	-19.17	AVG
2.8100	16.64	20.00	36.64	56.00	-19.36	QP
2.8100	3.71	20.00	23.71	46.00	-22.29	AVG
5.2460	16.30	19.93	36.23	60.00	-23.77	QP
5.2460	3.10	19.93	23.03	50.00	-26.97	AVG
16.8340	13.05	19.97	33.02	60.00	-26.98	QP
16.8340	1.13	19.97	21.10	50.00	-28.90	AVG

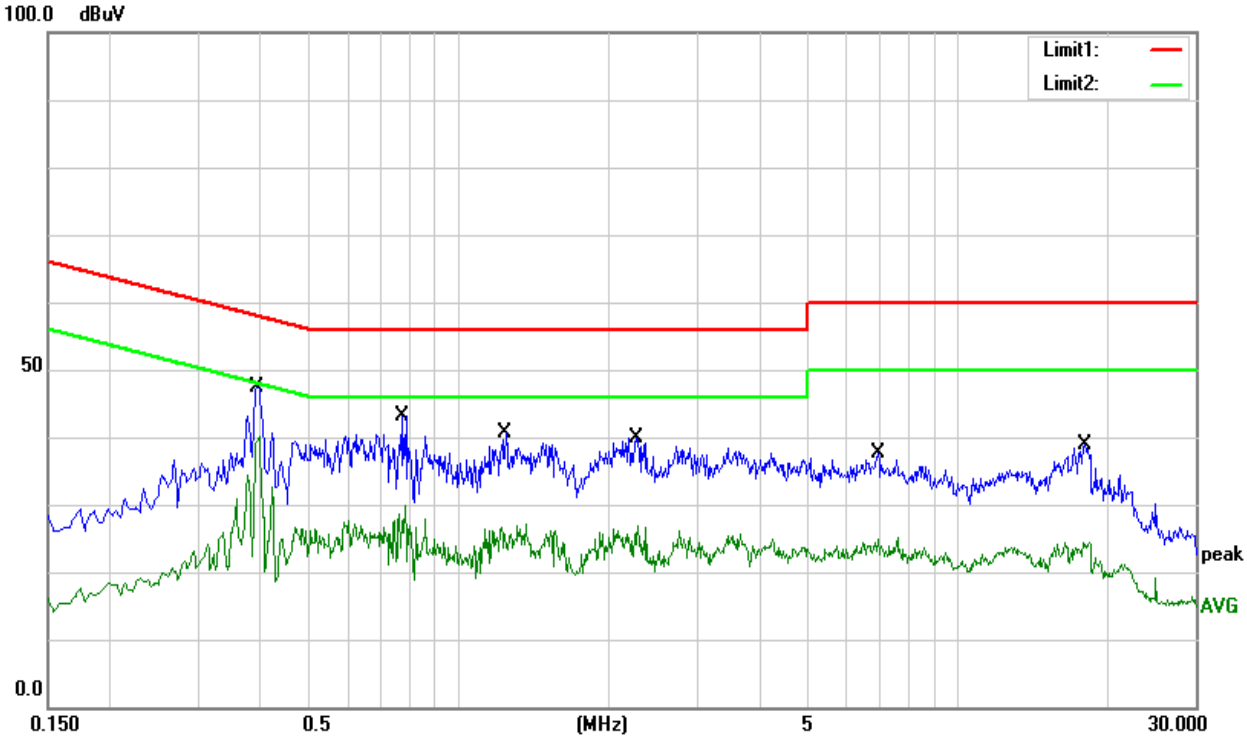
Remark:
1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	25.3 ℃	Relative Humidity:	54%
Test Voltage:	AC 120V/60Hz	Phase:	N
Test Mode:	Mode 14 (Part 15B & ICES-003)	Test Date:	2019-06-14
Note:	Adapter(Tenpao)		

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
0.3940	26.96	20.51	47.47	57.98	-10.51	QP
0.3940	19.55	20.51	40.06	47.98	-7.92	AVG
0.7740	22.94	20.24	43.18	56.00	-12.82	QP
0.7740	9.51	20.24	29.75	46.00	-16.25	AVG
1.2460	20.59	20.14	40.73	56.00	-15.27	QP
1.2460	6.93	20.14	27.07	46.00	-18.93	AVG
2.2620	19.91	20.04	39.95	56.00	-16.05	QP
2.2620	6.50	20.04	26.54	46.00	-19.46	AVG
6.9380	17.77	19.91	37.68	60.00	-22.32	QP
6.9380	5.11	19.91	25.02	50.00	-24.98	AVG
17.9740	18.98	19.95	38.93	60.00	-21.07	QP
17.9740	4.52	19.95	24.47	50.00	-25.53	AVG

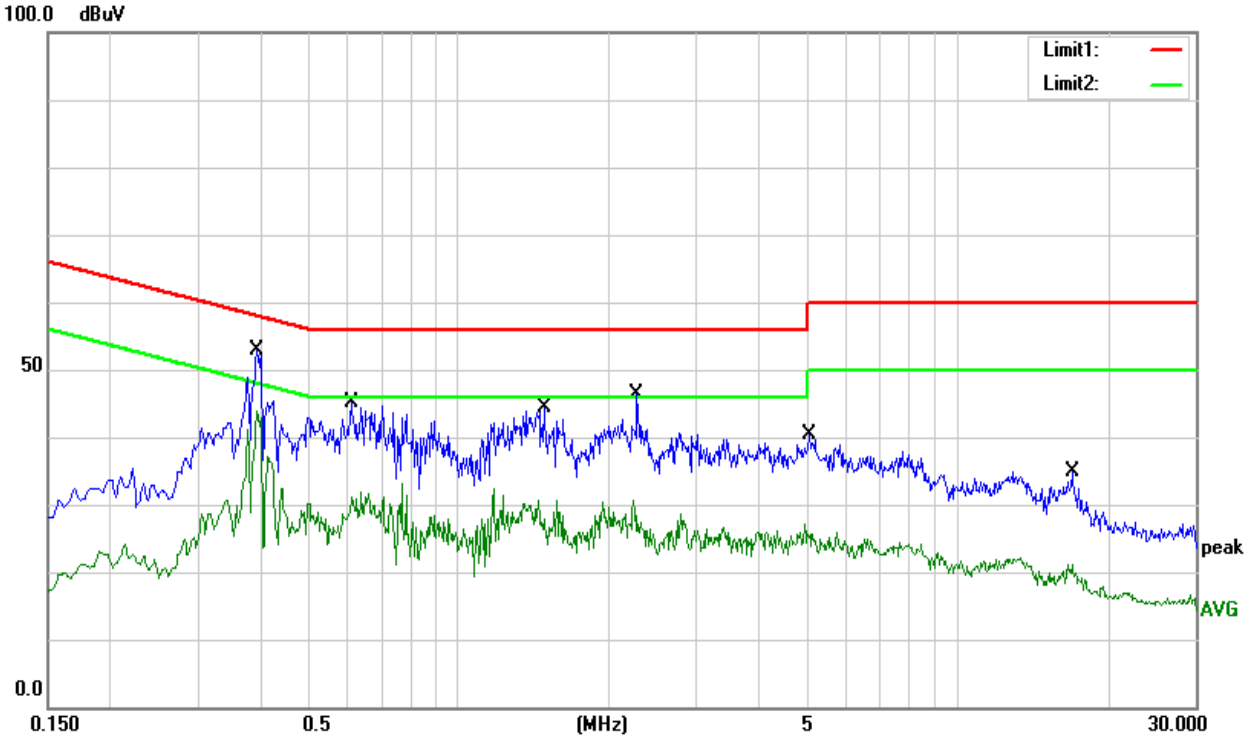
Remark:
1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	25.3 ℃	Relative Humidity:	54%
Test Voltage:	AC 120V/60Hz	Phase:	L
Test Mode:	Mode 14 (Part 15B & ICES-003)	Test Date:	2019-06-14
Note:	Adapter(Tenpao)		

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
0.3940	32.26	20.51	52.77	57.98	-5.21	QP
0.3940	23.37	20.51	43.88	47.98	-4.10	AVG
0.6100	24.67	20.36	45.03	56.00	-10.97	QP
0.6100	12.67	20.36	33.03	46.00	-12.97	AVG
1.4820	24.26	20.11	44.37	56.00	-11.63	QP
1.4820	10.58	20.11	30.69	46.00	-15.31	AVG
2.2780	26.26	20.04	46.30	56.00	-9.70	QP
2.2780	8.48	20.04	28.52	46.00	-17.48	AVG
5.0460	20.51	19.95	40.46	60.00	-19.54	QP
5.0460	5.89	19.95	25.84	50.00	-24.16	AVG
16.9780	14.94	19.97	34.91	60.00	-25.09	QP
16.9780	1.14	19.97	21.11	50.00	-28.89	AVG

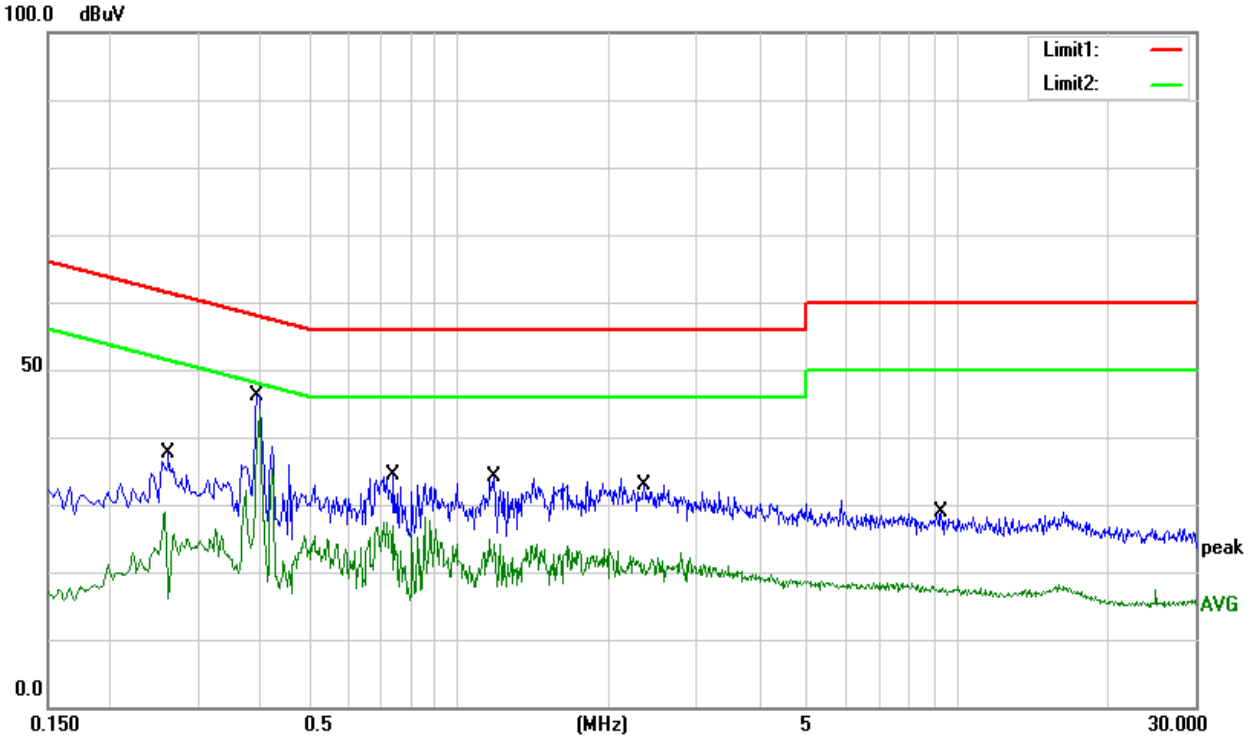
Remark:
1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	25.3 ℃	Relative Humidity:	54%
Test Voltage:	AC 120V/60Hz	Phase:	N
Test Mode:	Mode 14 (Part 15B & ICES-003)	Test Date:	2019-06-14
Note:	Adapter(Csec)		

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
0.2620	17.08	20.54	37.62	61.37	-23.75	QP
0.2620	8.35	20.54	28.89	51.37	-22.48	AVG
0.3940	25.51	20.51	46.02	57.98	-11.96	QP
0.3940	23.69	20.51	44.20	47.98	-3.78	AVG
0.7420	14.06	20.24	34.30	56.00	-21.70	QP
0.7420	7.94	20.24	28.18	46.00	-17.82	AVG
1.1740	14.01	20.15	34.16	56.00	-21.84	QP
1.1740	4.05	20.15	24.20	46.00	-21.80	AVG
2.3500	12.90	20.03	32.93	56.00	-23.07	QP
2.3500	2.79	20.03	22.82	46.00	-23.18	AVG
9.2540	8.91	20.08	28.99	60.00	-31.01	QP
9.2540	-2.06	20.08	18.02	50.00	-31.98	AVG

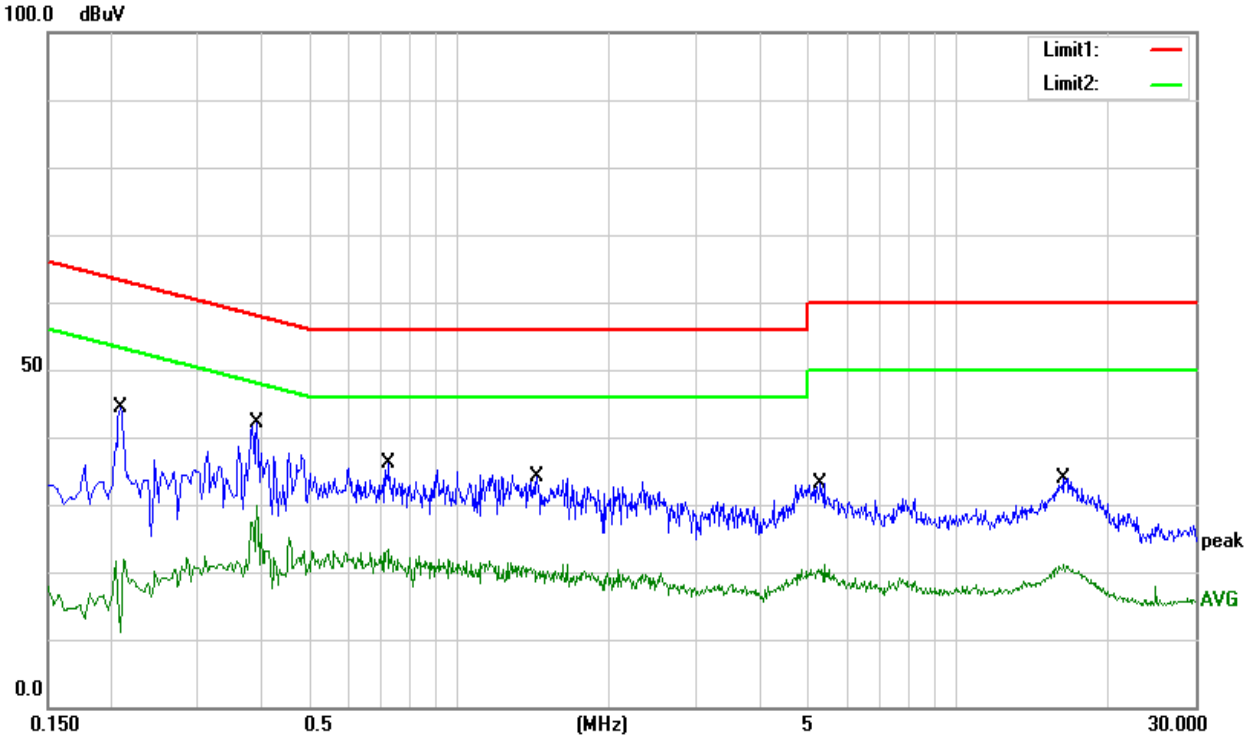
Remark:
1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	25.3 ℃	Relative Humidity:	54%
Test Voltage:	AC 120V/60Hz	Phase:	L
Test Mode:	Mode 14 (Part 15B & ICES-003)	Test Date:	2019-06-14
Note:	Adapter(Csec)		

Frequency (MHz)	Reading (dBuV)	Correct Factor(dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
0.2100	24.17	20.28	44.45	63.21	-18.76	QP
0.2100	1.66	20.28	21.94	53.21	-31.27	AVG
0.3940	21.58	20.51	42.09	57.98	-15.89	QP
0.3940	9.36	20.51	29.87	47.98	-18.11	AVG
0.7260	15.78	20.25	36.03	56.00	-19.97	QP
0.7260	3.16	20.25	23.41	46.00	-22.59	AVG
1.4340	14.04	20.12	34.16	56.00	-21.84	QP
1.4340	1.12	20.12	21.24	46.00	-24.76	AVG
5.3060	13.25	19.93	33.18	60.00	-26.82	QP
5.3060	1.22	19.93	21.15	50.00	-28.85	AVG
16.3500	13.81	19.97	33.78	60.00	-26.22	QP
16.3500	1.11	19.97	21.08	50.00	-28.92	AVG

Remark:
1. All readings are Quasi-Peak and Average values.
2. Margin = Result (Result =Reading + Factor)–Limit



3.2 RADIATED EMISSION MEASUREMENT

3.2.1 RADIATED EMISSION LIMITS

Frequencies (MHz)	Class A (at 10m) dBuV/m	Class B (at 3m) dBuV/m
30~88	39.0	40.0
88~216	43.5	43.5
216~960	46.5	46.0
Above 960	49.5	54.0

LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

FREQUENCY (MHz)	Class A (dBuV/m) (at 3M)		Class B (dBuV/m) (at 3M)	
	PEAK	AVERAGE	PEAK	AVERAGE
Above 1000	80	60	74	54

Note:
1) The tighter limit applies at the band edges.
2) Emission level (dBuV/m)=20log Emission level (uV/m).

3.2.2 TEST PROCEDURE

a) The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.

b) The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.

c) The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 0.8 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d) The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.

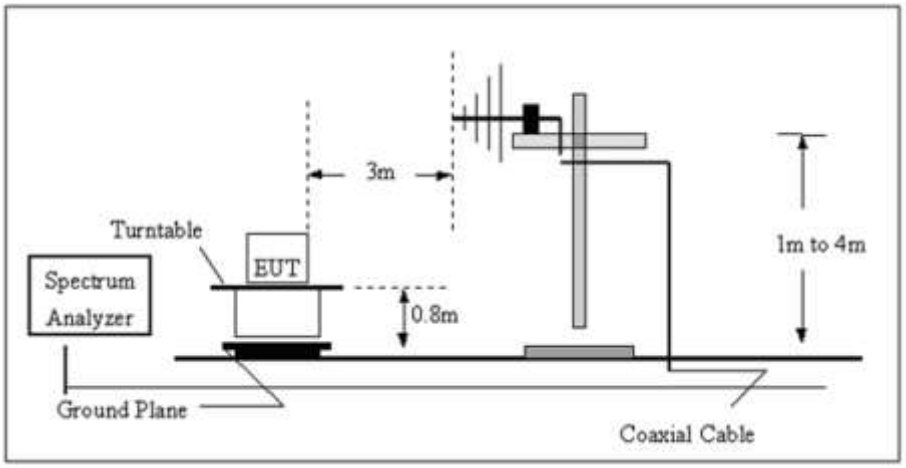
e) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.

f) For the actual test configuration, please refer to the related Item –EUT Test Photos.

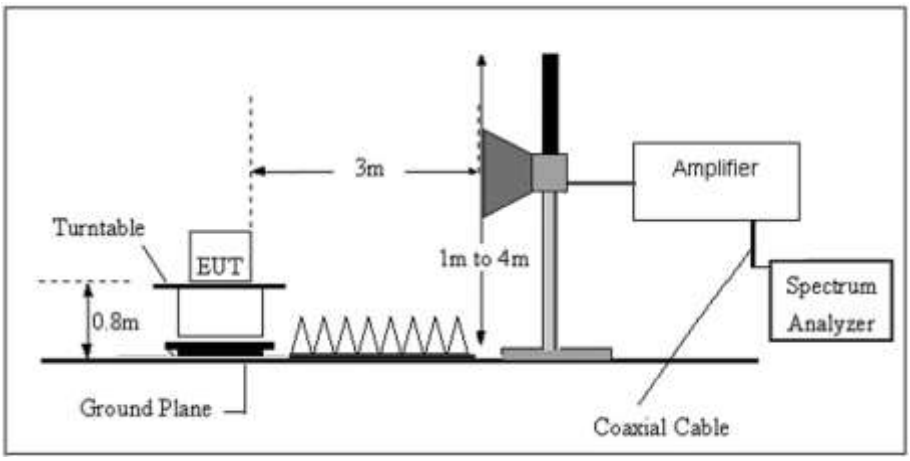
Note: Both horizontal and vertical antenna polarities were testedand performed pretest to three orthogonal axis. The worst case emissions were reported

3.2.3 TEST SETUP

a) Radiated Emission Test-Up Frequency 30MHz~1GHz



b) Radiated Emission Test-Up Frequency Above 1GHz



3.2.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.4 Unless otherwise a special operating condition is specified in the follows during the testing.

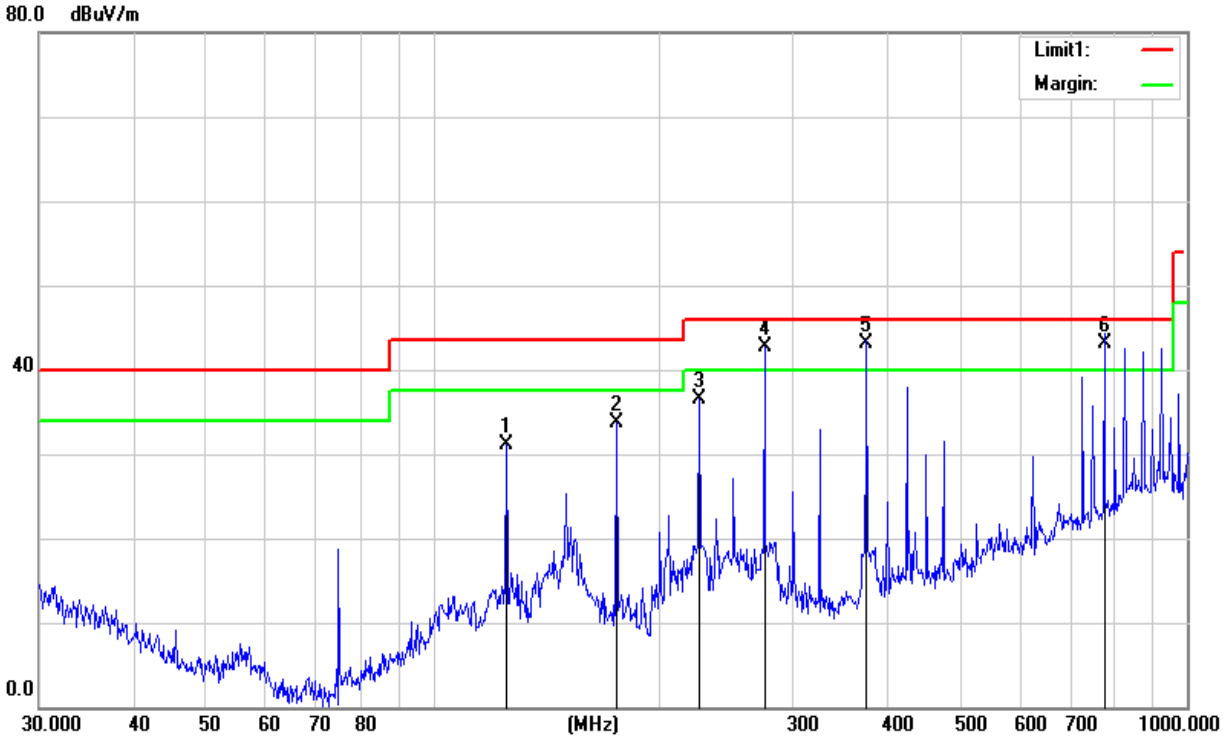
3.2.5 TEST RESULTS

Between 30-1000MHz:

Temperature:	20.5 ℃	Relative Humidity:	49%
Pressure:	1010hPa	Phase:	Horizontal
Test Voltage:	AC 120V/60Hz	Test Mode:	Mode 14 (Part 15B & ICES-003)
Note:	Adapter(Tenpao)	Test Date:	2019-06-14

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	125.0066	48.78	-17.61	31.17	43.50	-12.33	QP
2	175.0368	53.17	-19.38	33.79	43.50	-9.71	QP
3	225.3080	55.29	-18.77	36.52	46.00	-9.48	QP
4	275.1570	58.26	-15.65	42.61	46.00	-3.39	QP
5	375.9385	55.92	-12.73	43.19	46.00	-2.81	QP
6	776.8778	46.30	-3.18	43.12	46.00	-2.88	QP

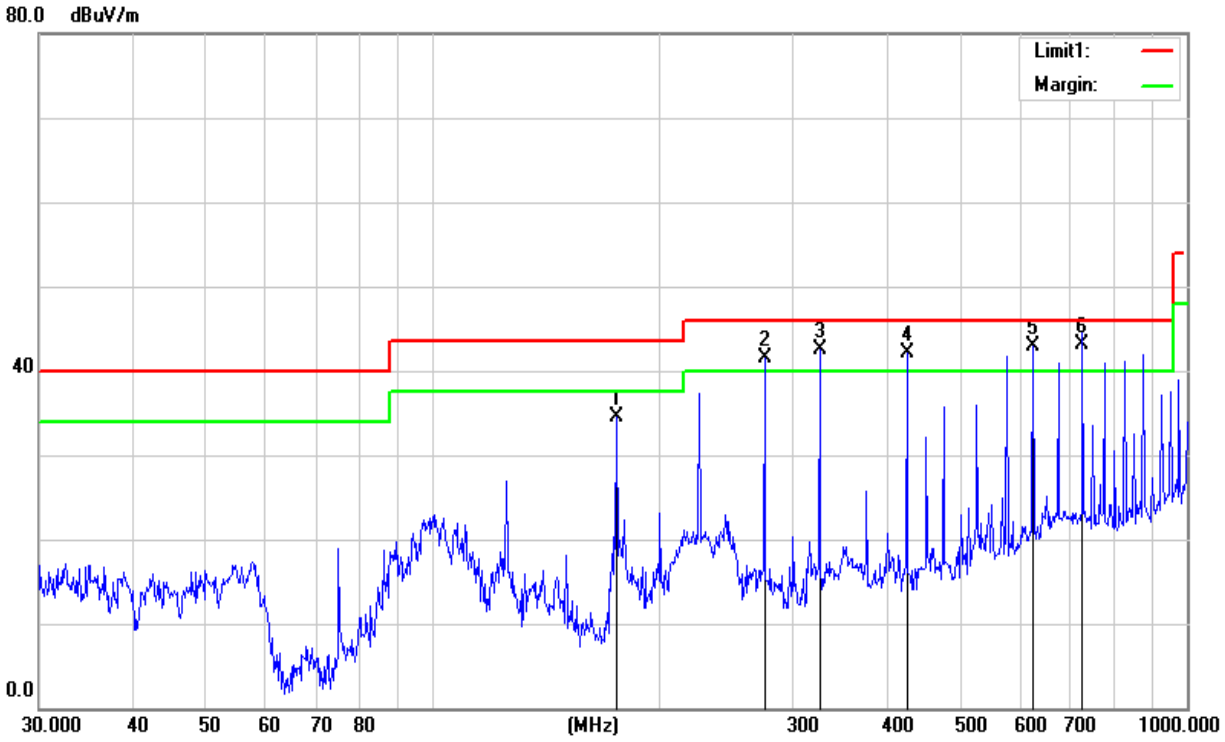
Remark:
1. All readings are Quasi-Peak .
2. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	20.5 ℃	Relative Humidity:	49%
Pressure:	1010hPa	Phase:	Vertical
Test Voltage:	AC 120V/60Hz	Test Mode:	Mode 14 (Part 15B & ICES-003)
Note:	Adapter(Tenpao)	Test Date:	2019-06-14

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	175.0368	53.98	-19.38	34.60	43.50	-8.90	QP
2	275.1570	57.10	-15.65	41.45	46.00	-4.55	QP
3	325.5957	56.70	-14.12	42.58	46.00	-3.42	QP
4	425.0280	52.98	-10.90	42.08	46.00	-3.92	QP
5	625.0780	49.29	-6.43	42.86	46.00	-3.14	QP
6	726.8052	47.38	-4.26	43.12	46.00	-2.88	QP

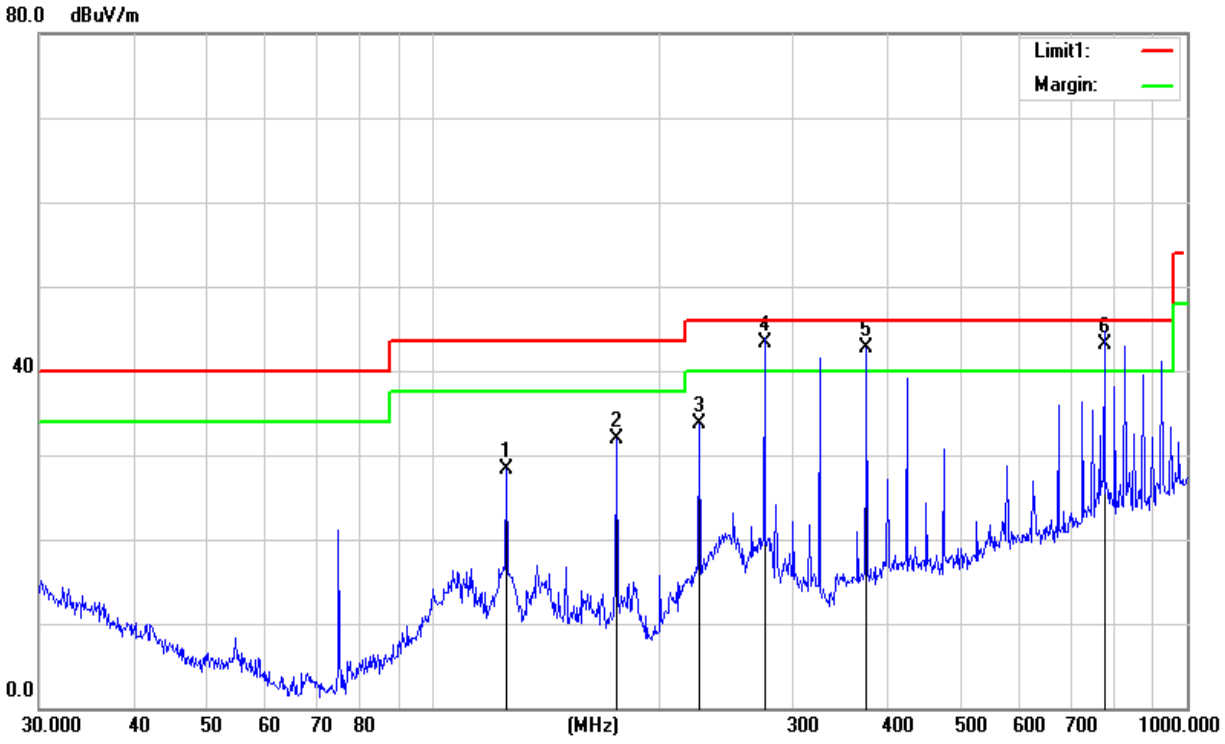
Remark:
1. All readings are Quasi-Peak .
2. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	20.5 ℃	Relative Humidity:	49%
Pressure:	1010hPa	Phase:	Horizontal
Test Voltage:	AC 120V/60Hz	Test Mode:	Mode 14 (Part 15B & ICES-003)
Note:	Adapter(Csec)	Test Date:	2019-06-14

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	125.0066	45.86	-17.61	28.25	43.50	-15.25	QP
2	175.0368	51.32	-19.38	31.94	43.50	-11.56	QP
3	225.3080	52.54	-18.77	33.77	46.00	-12.23	QP
4	275.1570	58.97	-15.65	43.32	46.00	-2.68	QP
5	375.9384	55.36	-12.73	42.63	46.00	-3.37	QP
6	776.8778	46.36	-3.18	43.18	46.00	-2.82	QP

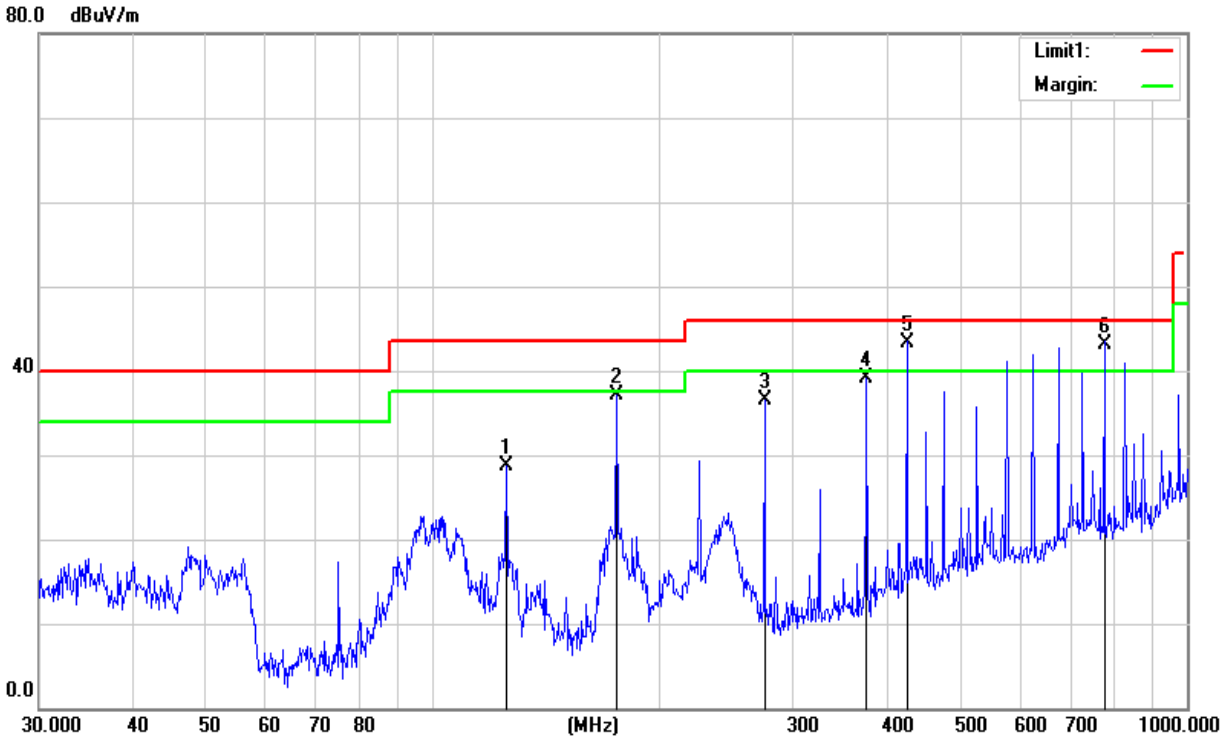
Remark:
1. All readings are Quasi-Peak .
2. Margin = Result (Result =Reading + Factor)–Limit



Temperature:	20.5 ℃	Relative Humidity:	49%
Pressure:	1010hPa	Phase:	Vertical
Test Voltage:	AC 120V/60Hz	Test Mode:	Mode 14 (Part 15B & ICES-003)
Note:	Adapter(Csec)	Test Date:	2019-06-14

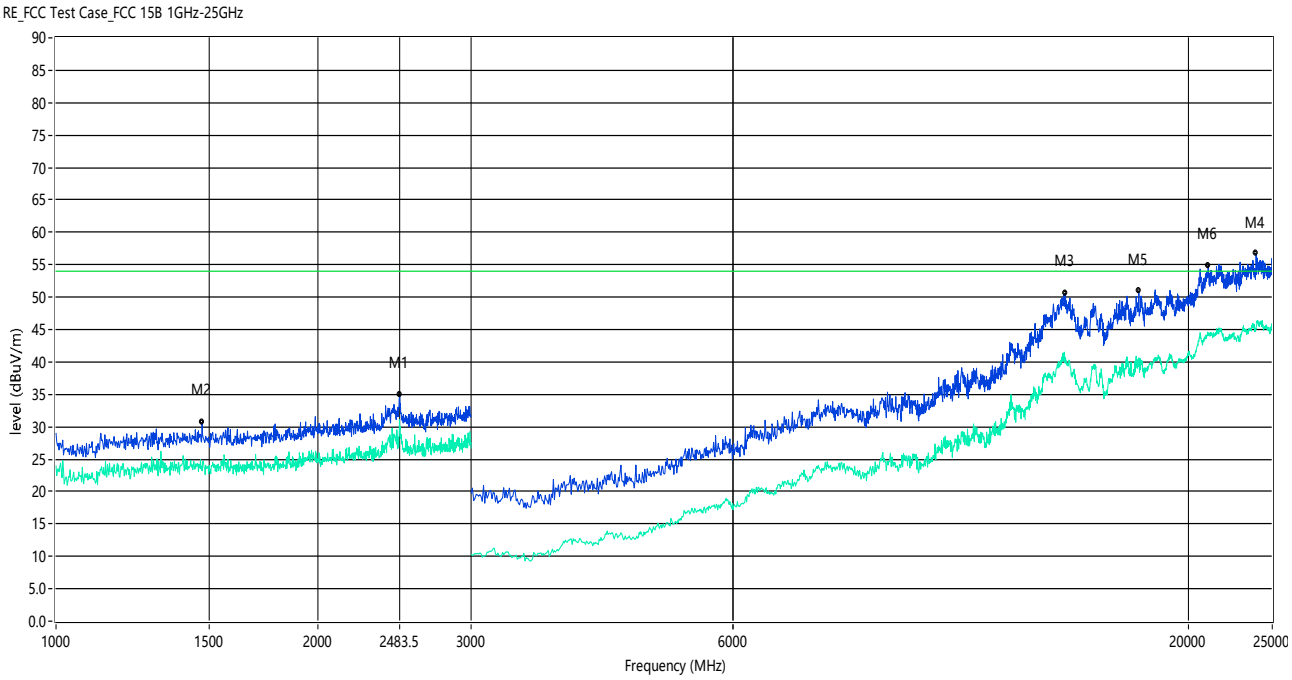
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Results (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector
1	125.0066	46.35	-17.61	28.74	43.50	-14.76	QP
2	175.0363	56.56	-19.38	37.18	43.50	-6.32	QP
3	275.1570	52.07	-15.65	36.42	46.00	-9.58	QP
4	375.9385	51.77	-12.73	39.04	46.00	-6.96	QP
5	425.0280	54.26	-10.90	43.36	46.00	-2.64	QP
6	776.8777	46.37	-3.18	43.19	46.00	-2.81	QP

Remark:
1. All readings are Quasi-Peak .
2. Margin = Result (Result =Reading + Factor)–Limit



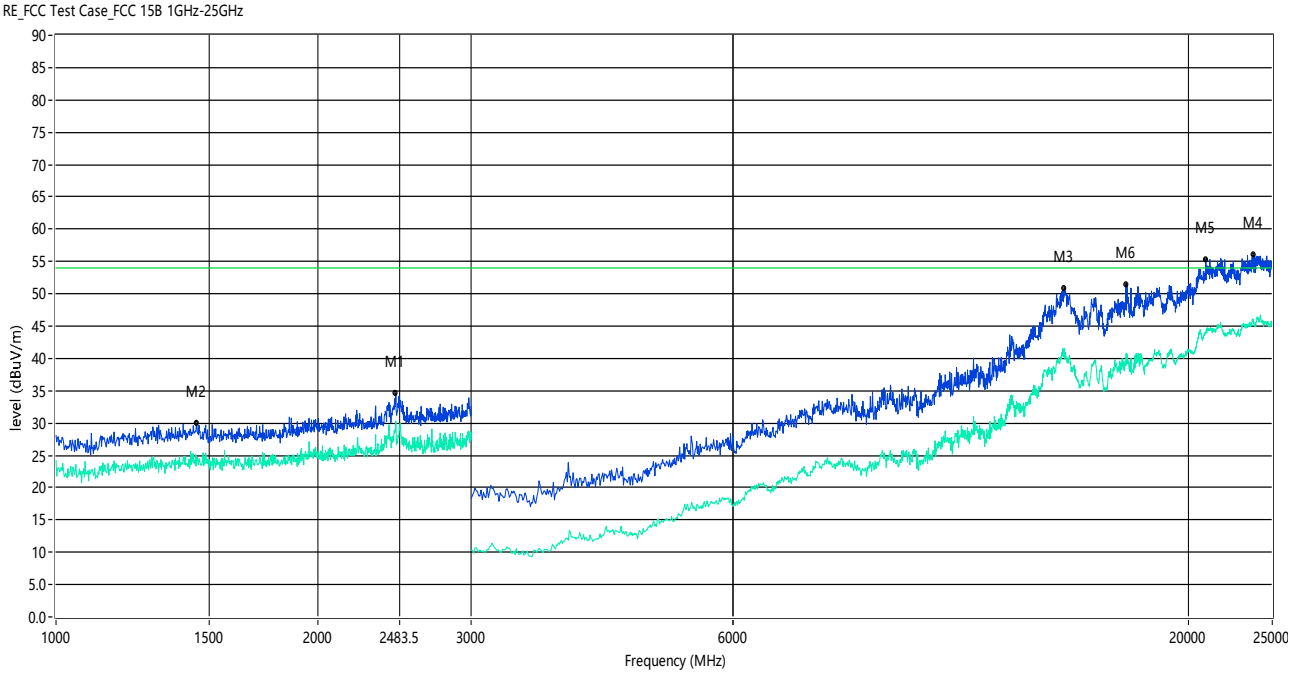
Between1GHz – 6GHz:

Temperature:	25 ℃	Relative Humidity:	65%
Pressure:	1010hPa	Phase:	Horizontal
Test Mode:	Mode 14 (Part 15B & ICES-003)	Test Date:	2019-06-14
Note:	Adaptre(Tenpao)		



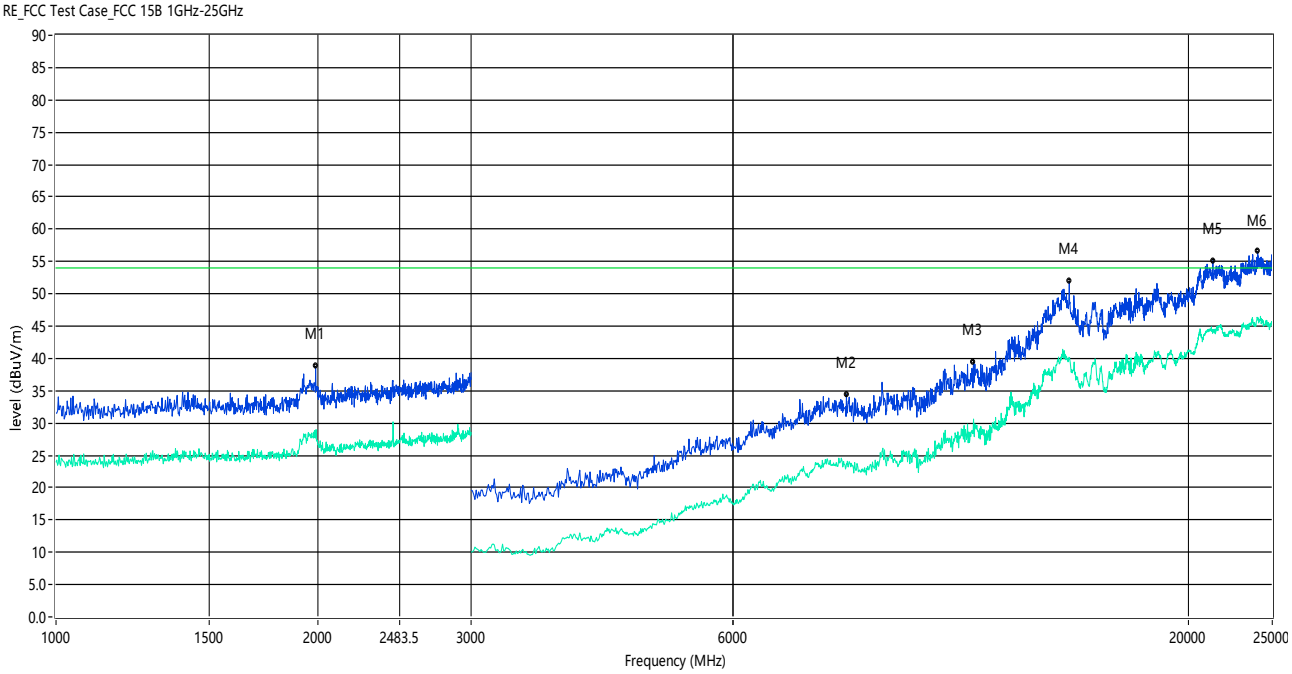
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	2484.000	29.59	-13.55	54.0	-24.41	AV	H	Pass
1	2484.000	34.90	-13.55	74.0	-39.10	Peak	H	Pass
2**	1472.000	23.20	-19.11	54.0	-30.80	AV	H	Pass
2	1472.000	30.65	-19.11	74.0	-43.35	Peak	H	Pass
3**	14464.000	40.68	24.63	54.0	-13.32	AV	H	Pass
3	14464.000	50.53	24.63	74.0	-23.47	Peak	H	Pass
4**	23956.001	45.40	23.32	54.0	-8.60	AV	H	Pass
4	23956.001	56.69	23.32	74.0	-17.31	Peak	H	Pass
5**	17560.001	40.64	22.89	54.0	-13.36	AV	H	Pass
5	17560.001	50.89	22.89	74.0	-23.11	Peak	H	Pass
6**	21099.999	44.20	24.11	54.0	-9.80	AV	H	Pass
6	21099.999	54.86	24.11	74.0	-19.14	Peak	H	Pass

Temperature:	25 ℃	Relative Humidity:	65%
Pressure:	1010hPa	Phase:	Vertical
Test Mode:	Mode 14 (Part 15B & ICES-003)	Test Date:	2019-06-14
Note:	Adaptre(Tenpao)		



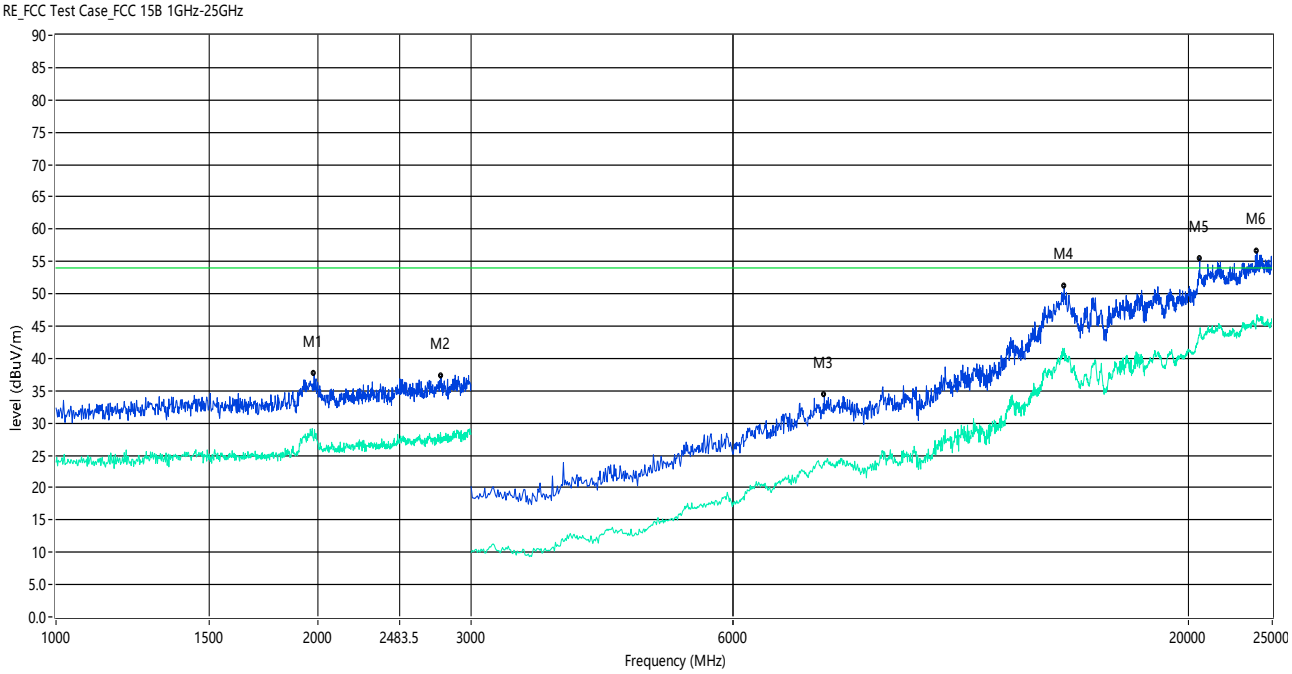
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	2458.000	30.32	-13.75	54.0	-23.68	AV	V	Pass
1	2458.000	34.59	-13.75	74.0	-39.41	Peak	V	Pass
2**	1450.000	23.36	-19.11	54.0	-30.64	AV	V	Pass
2	1450.000	29.98	-19.11	74.0	-44.02	Peak	V	Pass
3**	14416.000	41.53	25.52	54.0	-12.47	AV	V	Pass
3	14416.000	50.83	25.52	74.0	-23.17	Peak	V	Pass
4**	23787.999	45.50	23.37	54.0	-8.50	AV	V	Pass
4	23787.999	56.08	23.37	74.0	-17.92	Peak	V	Pass
5**	20967.999	44.07	24.14	54.0	-9.93	AV	V	Pass
5	20967.999	55.31	24.14	74.0	-18.69	Peak	V	Pass
6**	16972.000	40.12	21.35	54.0	-13.88	AV	V	Pass
6	16972.000	51.45	21.35	74.0	-22.55	Peak	V	Pass

Temperature:	25 ℃	Relative Humidity:	65%
Pressure:	1010hPa	Phase:	Horizontal
Test Mode:	Mode 14 (Part 15B & ICES-003)	Test Date:	2019-06-14
Note:	Adapter(Csec)		



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1988.000	27.85	-0.41	54.0	-26.15	AV	H	Pass
1	1988.000	38.76	-0.41	74.0	-35.24	Peak	H	Pass
2**	8100.000	23.68	10.08	54.0	-30.32	AV	H	Pass
2	8100.000	34.42	10.08	74.0	-39.58	Peak	H	Pass
3**	11340.000	30.61	16.89	54.0	-23.39	AV	H	Pass
3	11340.000	39.48	16.89	74.0	-34.52	Peak	H	Pass
4**	14608.000	40.11	24.23	54.0	-13.89	AV	H	Pass
4	14608.000	51.92	24.23	74.0	-22.08	Peak	H	Pass
5**	21364.001	44.01	24.04	54.0	-9.99	AV	H	Pass
5	21364.001	55.12	24.04	74.0	-18.88	Peak	H	Pass
6**	24052.001	46.18	23.29	54.0	-7.82	AV	H	Pass
6	24052.001	56.51	23.29	74.0	-17.49	Peak	H	Pass

Temperature:	25 ℃	Relative Humidity:	65%
Pressure:	1010hPa	Phase:	Vertical
Test Mode:	Mode 14 (Part 15B & ICES-003)	Test Date:	2019-06-14
Note:	Adapter(Csec)		



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1980.000	28.21	-0.46	54.0	-25.79	AV	V	Pass
1	1980.000	37.63	-0.46	74.0	-36.37	Peak	V	Pass
2**	2770.000	27.68	0.86	54.0	-26.32	AV	V	Pass
2	2770.000	37.30	0.86	74.0	-36.70	Peak	V	Pass
3**	7640.000	23.48	10.06	54.0	-30.52	AV	V	Pass
3	7640.000	34.32	10.06	74.0	-39.68	Peak	V	Pass
4**	14416.000	41.44	25.52	54.0	-12.56	AV	V	Pass
4	14416.000	50.24	25.52	74.0	-23.76	Peak	V	Pass
5**	20632.001	43.87	23.82	54.0	-10.13	AV	V	Pass
5	20632.001	55.51	23.82	74.0	-18.49	Peak	V	Pass
6**	24004.000	45.82	23.30	54.0	-8.18	AV	V	Pass
6	24004.000	56.55	23.30	74.0	-17.45	Peak	V	Pass

3.3 RADIATED SPURIOUS EMISSION MEASUREMENT

3.3.1 RADIATED EMISSION LIMITS

in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the Restricted band specified on Part15.205(a)&209(a) and RSS-247 Issue 2 limit in the table and according to ANSI C63.10-2013 below has to be followed.

LIMITS OF RADIATED EMISSION MEASUREMENT (0.009MHz - 1000MHz)

Frequencies (MHz)	Field Strength (micorvolts/meter)	Measurement Distance (meters)
0.009~0.490	2400/F(KHz)	300
0.490~1.705	24000/F(KHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

LIMITS OF RADIATED EMISSION MEASUREMENT (1000MHz-25GHz)

FREQUENCY (MHz)	(dBuV/m) (at 3M)	
	PEAK	AVERAGE
Above 1000	74	54

Notes:

(1) The limit for radiated test was performed according to FCC PART 15C.

(2) The tighter limit applies at the band edges.

(3) Emission level (dBuV/m)=20log Emission level (uV/m).

For Radiated Emission

Spectrum Parameter	Setting
Attenuation	Auto
Detector	Peak/AV
Start Frequency	1000 MHz(Peak/AV)
Stop Frequency	10th carrier hamonic(Peak/AV)
RB / VB (emission in restricted	1 MHz /3MHz

For Band edge

Spectrum Parameter	Setting
Detector	Peak/AV
Start/Stop Frequency	Lower Band Edge: 2300 to 2422 MHz Upper Band Edge: 2452to 2500 MHz
RB / VB (emission in restricted band)	1 MHz /3MHz

Receiver Parameter	Setting
Start ~ Stop Frequency	9kHz~90kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	90kHz~110kHz / RB 200Hz for QP
Start ~ Stop Frequency	110kHz~490kHz / RB 200Hz for PK & AV
Start ~ Stop Frequency	490kHz~30MHz / RB 9kHz for QP
Start ~ Stop Frequency	30MHz~1000MHz / RB 120kHz for QP

3.3.2 TEST PROCEDURE

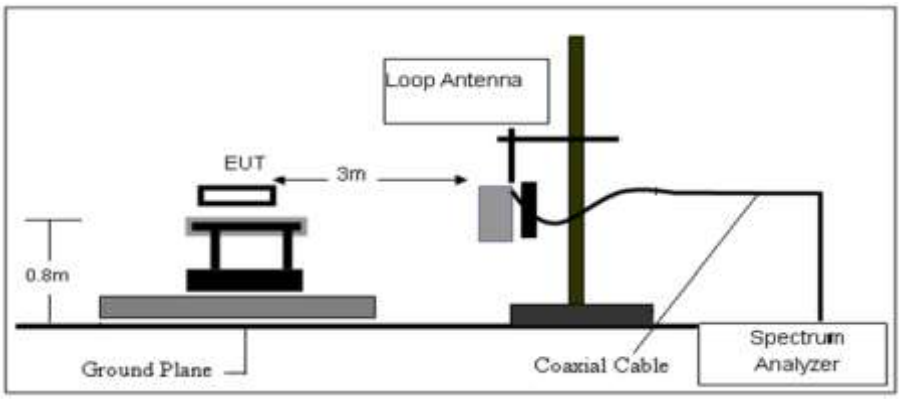
a) The measuring distance of at 3 m shall be used for measurements at frequency 0.009MHz up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
b) The EUT was placed on the top of a rotating table 0.8 meters(above 1GHz is 1.5 m) above the ground at a 3 meter anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
c) The height of the equipment shall be 0.8 m(above 1GHz is 1.5 m); the height of the test antenna shall vary between 1 m to 4 m. Horizontal and vertical polarizations of the antenna are set to make the measurement
d) The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
e) If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
f) For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

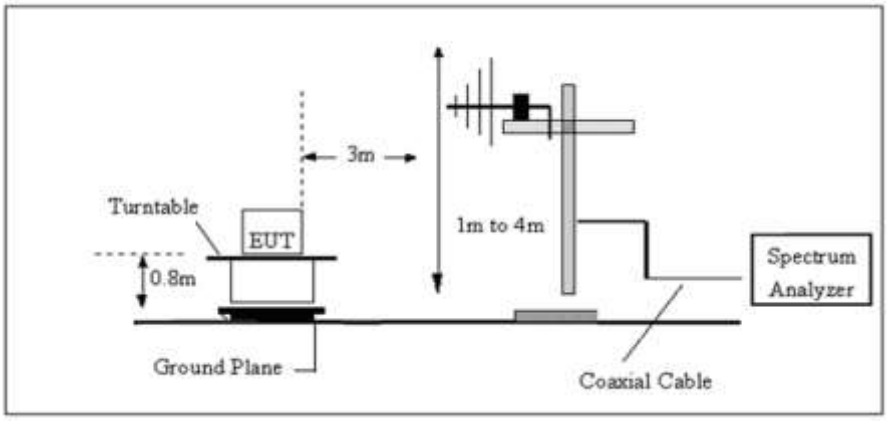
Both horizontal and vertical antenna polarities were testedand performed test to three orthogonal axis. The worst case emissions were reported

3.3.3 TEST SETUP

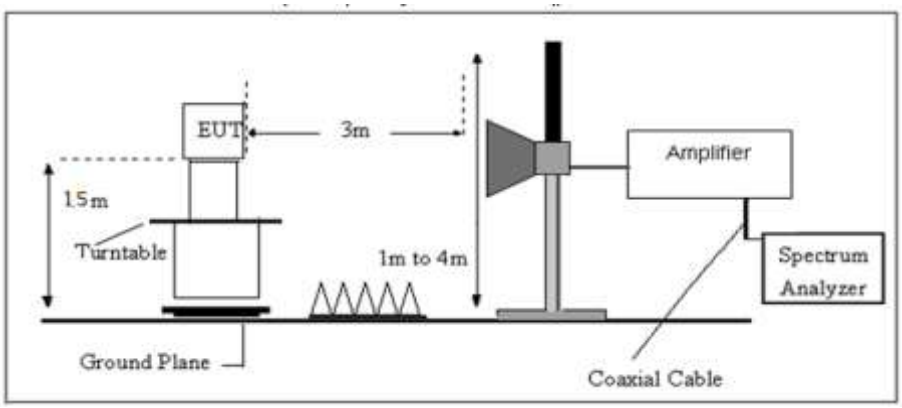
a) Radiated Emission Test-Up Frequency Below 30MHz



b) Radiated Emission Test-Up Frequency 30MHz~1GHz



c) Radiated Emission Test-Up Frequency Above 1GHz



3.3.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

3.3.5 FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting theAmplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:
FS = RA + AF + CL - AG
Where
FS = Field Strength
CL = Cable Attenuation Factor (Cable Loss)
RA = Reading Amplitude
AG = Amplifier Gain
AF = Antenna Factor
For example

Frequency	FS	RA	AF	CL	AG	Factor
(MHz)	(dBμV/m)	(dBμV/m)	(dB)	(dB)	(dB)	(dB)
300	40	58.1	12.2	1.6	31.9	-18.1

Factor=AF+CL-AG

3.3.6 TEST RESULT

9KHz-30MHz

Temperature:	20.5℃	Relative Humidtity:	49%
Test Voltage:	AC 120V/60Hz	Polarization:	--
Test Mode:	TX Mode		

Freq.	Reading	Limit	Margin	State	Test Result
(MHz)	(dBuV/m)	(dBuV/m)	(dB)	P/F	
--	--	--	--	--	PASS
--	--	--	--	--	PASS

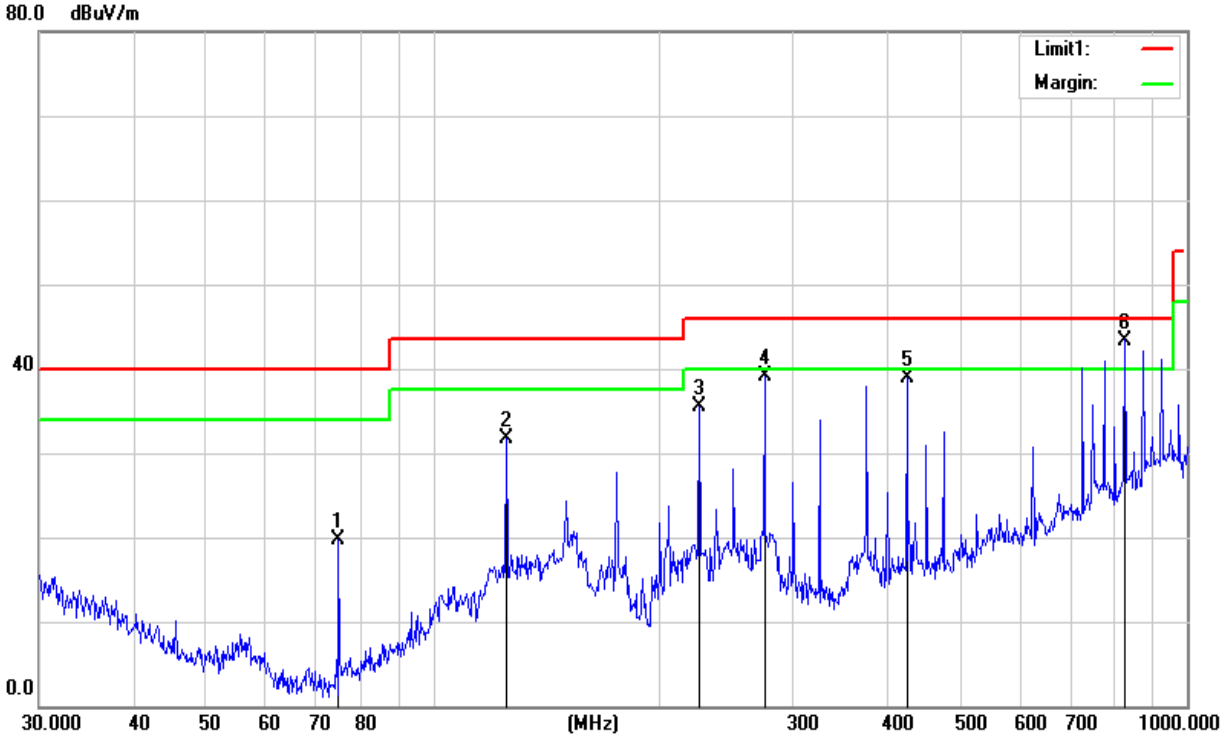
Note:
The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
Distance extrapolation factor =40 log (specific distance/test distance)(dB);
Limit line = specific limits(dBuv) + distance extrapolation factor.

(30MHz - 1000MHz)

Temperature:	20.5℃	Relative Humidtity:	49%
Test Voltage:	AC 120V/60Hz	Polarization:	Horizontal
Test Mode:	Mode 1/2/3/4/5/6/7/8/9/10/11/12 (Mode 8 worst mode)	Test Date:	2019-06-14
Note:	Adapter(Tenpao)		

Frequency	Reading	Correct	Result	Limit	Margin	Remark
(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
74.9191	43.20	-23.41	19.79	40.00	-20.21	QP
125.0066	49.28	-17.61	31.67	43.50	-11.83	QP
225.3080	54.29	-18.77	35.52	46.00	-10.48	QP
275.1570	54.76	-15.65	39.11	46.00	-6.89	QP
425.0280	49.83	-10.90	38.93	46.00	-7.07	QP
827.4932	46.45	-3.23	43.22	46.00	-2.78	QP

Remark:
1. Margin = Result (Result =Reading + Factor)–Limit

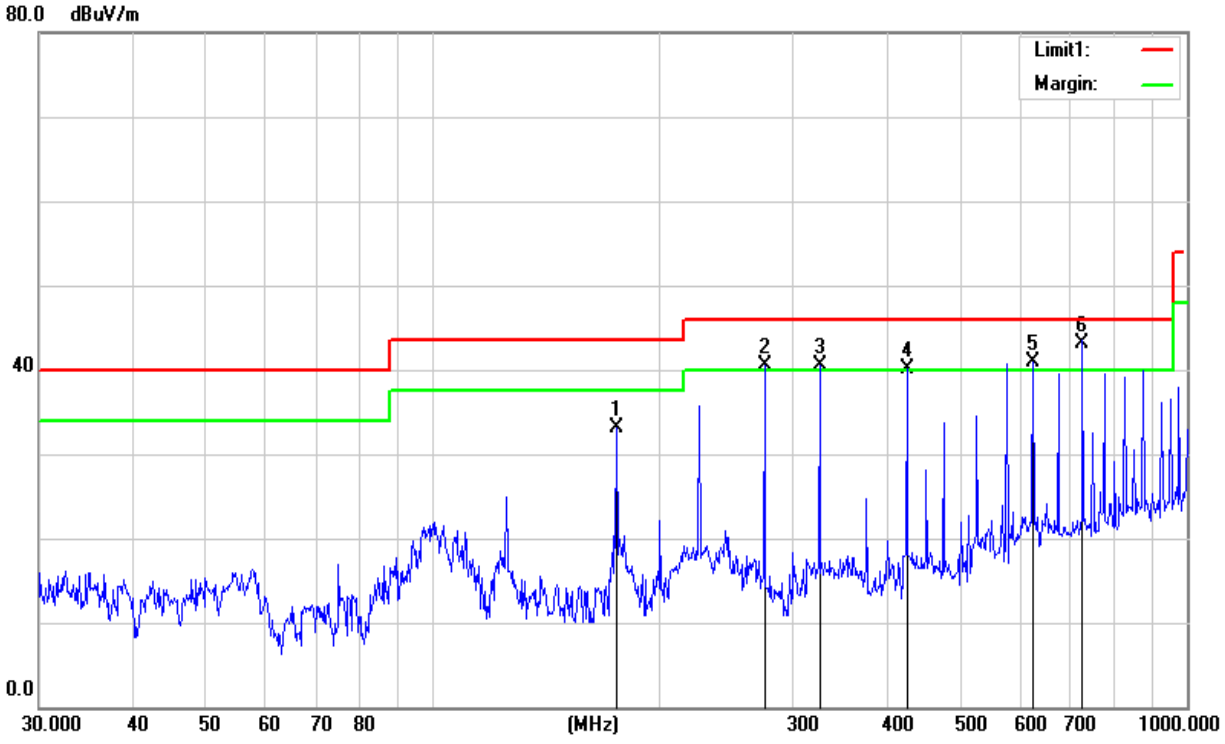


Temperature:	20.5℃	Relative Humidtity:	49%
Test Voltage:	AC 120V/60Hz	Polarization:	Vertical
Test Mode:	Mode 1/2/3/4/5/6/7/8/9/10/11/12 (Mode 8 worst mode)	Test Date:	2019-06-14
Note:	Adapter(Tenpao)		

Frequency	Reading	Correct	Result	Limit	Margin	Remark
(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
175.0363	52.48	-19.38	33.10	43.50	-10.40	QP
275.1570	56.10	-15.65	40.45	46.00	-5.55	QP
325.5957	54.70	-14.12	40.58	46.00	-5.42	QP
425.0280	50.98	-10.90	40.08	46.00	-5.92	QP
625.0780	47.29	-6.43	40.86	46.00	-5.14	QP
726.8052	47.43	-4.26	43.17	46.00	-2.83	QP

Remark:.

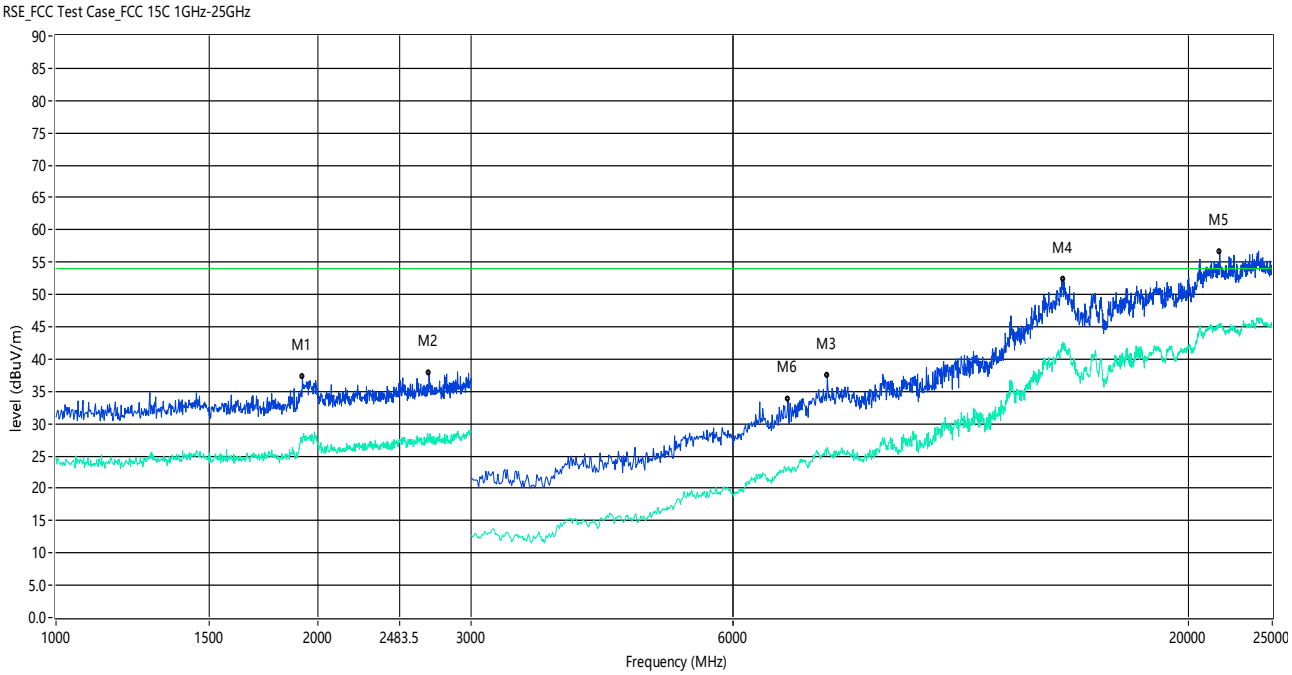
1. Margin = Result (Result =Reading + Factor)–Limit



(Above 1000MHz) Restricted band and Spurious emission Requirements

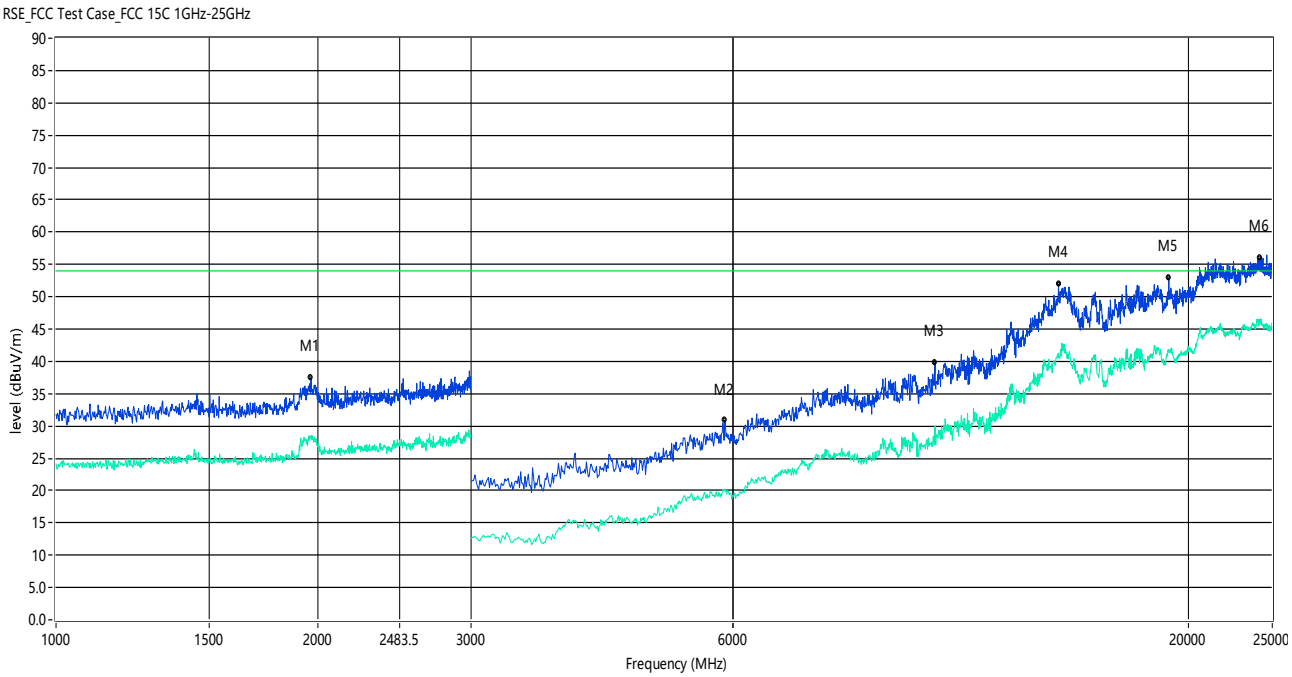
802.11 b_Low

vertical



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1920.000	27.93	-1.11	54.0	-26.07	AV	V	Pass
1	1920.000	37.27	-1.11	74.0	-36.73	Peak	V	Pass
2**	2684.000	27.40	0.38	54.0	-26.60	AV	V	Pass
2	2684.000	37.87	0.38	74.0	-36.13	Peak	V	Pass
3**	7700.000	26.30	10.88	54.0	-27.70	AV	V	Pass
3	7700.000	37.43	10.88	74.0	-36.57	Peak	V	Pass
4**	14356.000	42.60	25.12	54.0	-11.40	AV	V	Pass
4	14356.000	52.28	25.12	74.0	-21.72	Peak	V	Pass
5**	21760.000	45.02	23.94	54.0	-8.98	AV	V	Pass
5	21760.000	56.58	23.94	74.0	-17.42	Peak	V	Pass
6**	6940.000	23.22	8.11	54.0	-30.78	AV	V	Pass
6	6940.000	33.77	8.11	74.0	-40.23	Peak	V	Pass

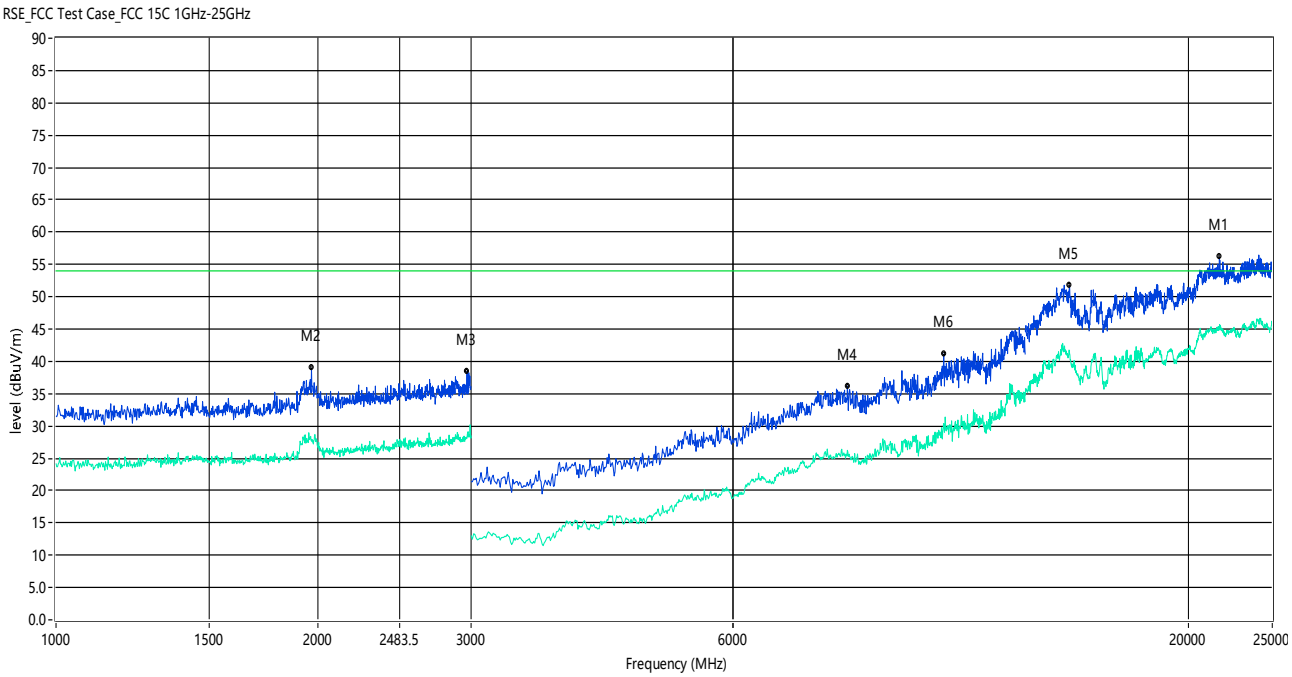
Horizontal



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1964.000	27.97	-0.58	54.0	-26.03	AV	H	Pass
1	1964.000	37.45	-0.58	74.0	-36.55	Peak	H	Pass
2**	5870.000	20.24	4.19	54.0	-33.76	AV	H	Pass
2	5870.000	30.81	4.19	74.0	-43.19	Peak	H	Pass
3**	10240.000	30.03	13.64	54.0	-23.97	AV	H	Pass
3	10240.000	39.84	13.64	74.0	-34.16	Peak	H	Pass
4**	14200.001	41.27	24.06	54.0	-12.73	AV	H	Pass
4	14200.001	51.95	24.06	74.0	-22.05	Peak	H	Pass
5**	19012.000	41.48	21.77	54.0	-12.52	AV	H	Pass
5	19012.000	52.92	21.77	74.0	-21.08	Peak	H	Pass
6**	24196.000	46.22	23.24	54.0	-7.78	AV	H	Pass
6	24196.000	55.96	23.24	74.0	-18.04	Peak	H	Pass

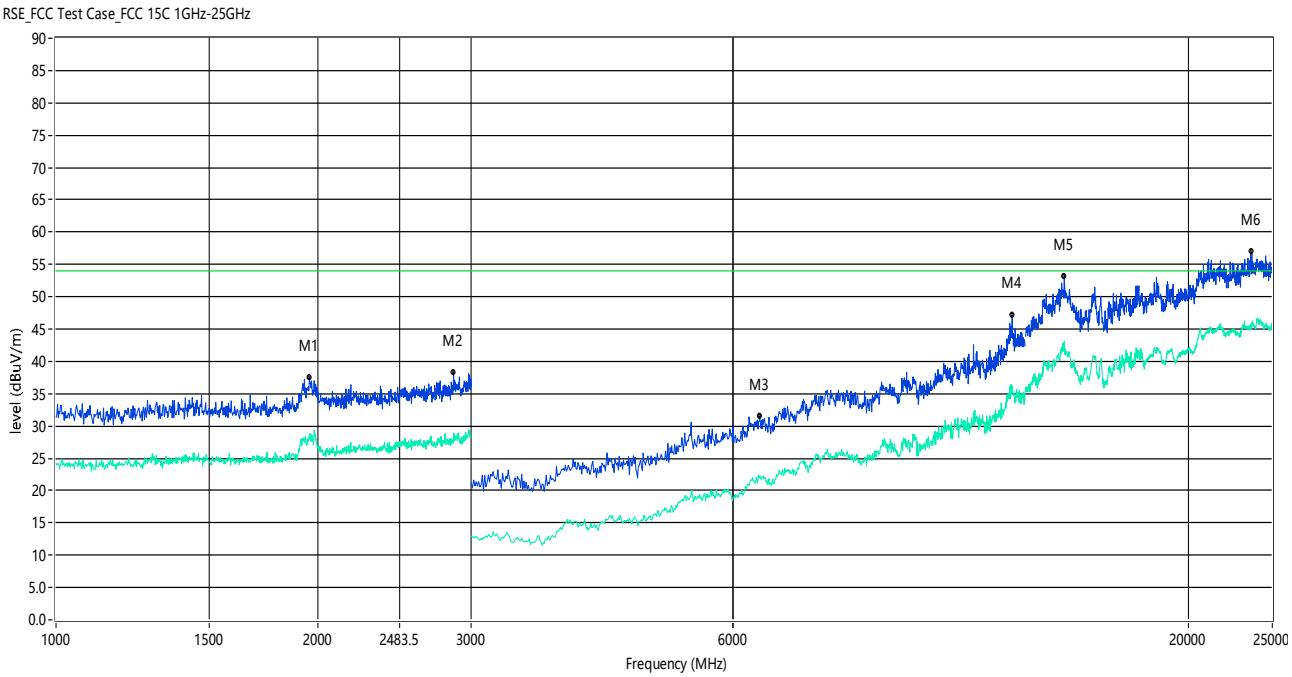
802.11 b_Middle

vertical



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	21735.999	45.01	23.95	54.0	-8.99	AV	V	Pass
1	21735.999	56.15	23.95	74.0	-17.85	Peak	V	Pass
2**	1966.000	27.71	-0.57	54.0	-26.29	AV	V	Pass
2	1966.000	38.94	-0.57	74.0	-35.06	Peak	V	Pass
3**	2968.000	28.17	1.75	54.0	-25.83	AV	V	Pass
3	2968.000	38.45	1.75	74.0	-35.55	Peak	V	Pass
4**	8120.000	26.22	10.50	54.0	-27.78	AV	V	Pass
4	8120.000	36.17	10.50	74.0	-37.83	Peak	V	Pass
5**	14608.000	41.69	24.23	54.0	-12.31	AV	V	Pass
5	14608.000	51.68	24.23	74.0	-22.32	Peak	V	Pass
6**	10480.000	30.37	14.66	54.0	-23.63	AV	V	Pass
6	10480.000	41.14	14.66	74.0	-32.86	Peak	V	Pass

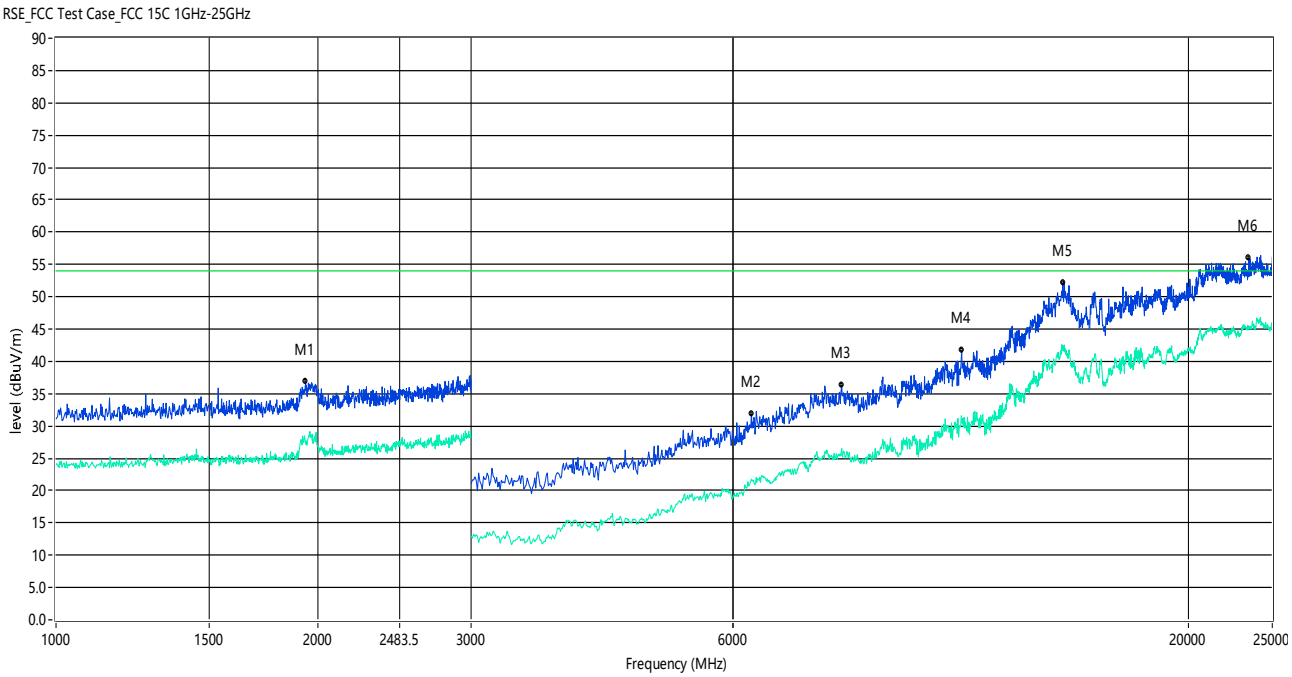
Horizontal



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1956.000	28.00	-0.66	54.0	-26.00	AV	H	Pass
1	1956.000	37.54	-0.66	74.0	-36.46	Peak	H	Pass
2**	2864.000	27.68	1.51	54.0	-26.32	AV	H	Pass
2	2864.000	38.24	1.51	74.0	-35.76	Peak	H	Pass
3**	6440.000	21.99	6.09	54.0	-32.01	AV	H	Pass
3	6440.000	31.55	6.09	74.0	-42.45	Peak	H	Pass
4**	12560.000	36.14	19.50	54.0	-17.86	AV	H	Pass
4	12560.000	47.08	19.50	74.0	-26.92	Peak	H	Pass
5**	14416.000	43.08	25.52	54.0	-10.92	AV	H	Pass
5	14416.000	53.08	25.52	74.0	-20.92	Peak	H	Pass
6**	23680.000	45.44	23.41	54.0	-8.56	AV	H	Pass
6	23680.000	56.90	23.41	74.0	-17.10	Peak	H	Pass

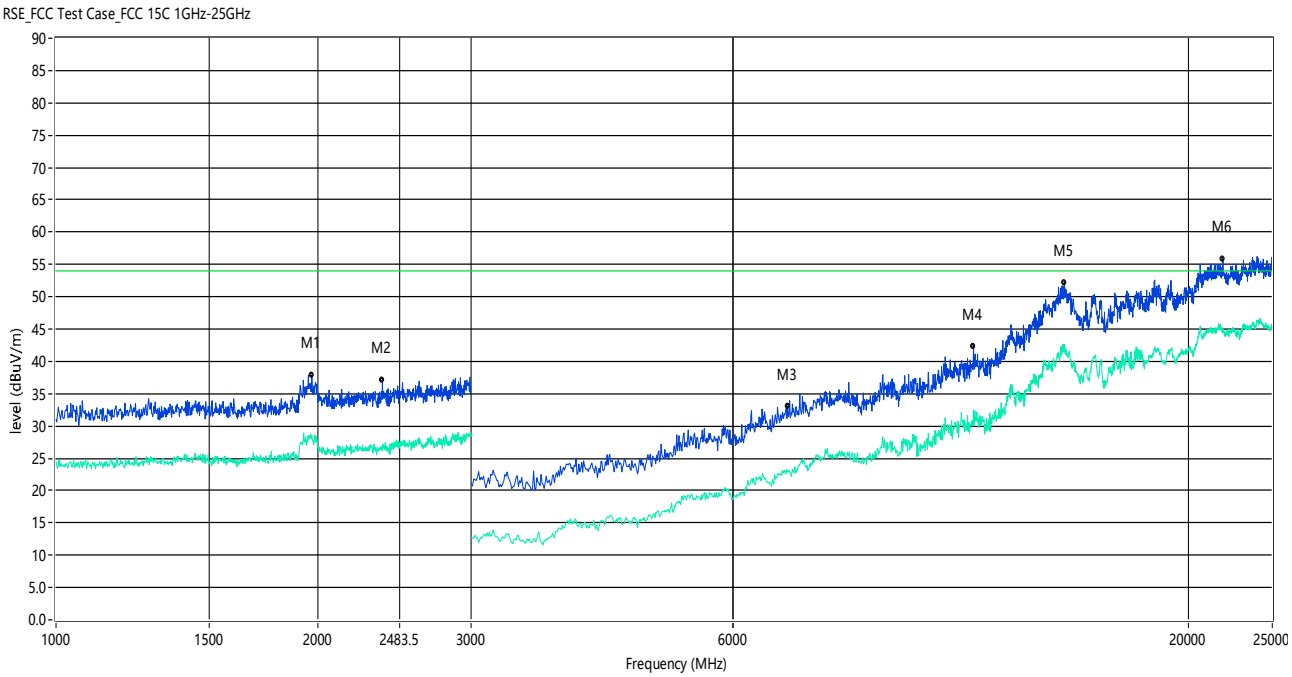
802.11 b_High

vertical



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1936.000	27.23	-0.89	54.0	-26.77	AV	V	Pass
1	1936.000	36.84	-0.89	74.0	-37.16	Peak	V	Pass
2**	6300.000	21.79	5.65	54.0	-32.21	AV	V	Pass
2	6300.000	31.85	5.65	74.0	-42.15	Peak	V	Pass
3**	8000.000	26.50	10.93	54.0	-27.50	AV	V	Pass
3	8000.000	36.35	10.93	74.0	-37.65	Peak	V	Pass
4**	10990.000	31.17	15.03	54.0	-22.83	AV	V	Pass
4	10990.000	41.70	15.03	74.0	-32.30	Peak	V	Pass
5**	14356.000	42.45	25.12	54.0	-11.55	AV	V	Pass
5	14356.000	52.14	25.12	74.0	-21.86	Peak	V	Pass
6**	23488.000	45.32	23.47	54.0	-8.68	AV	V	Pass
6	23488.000	56.00	23.47	74.0	-18.00	Peak	V	Pass

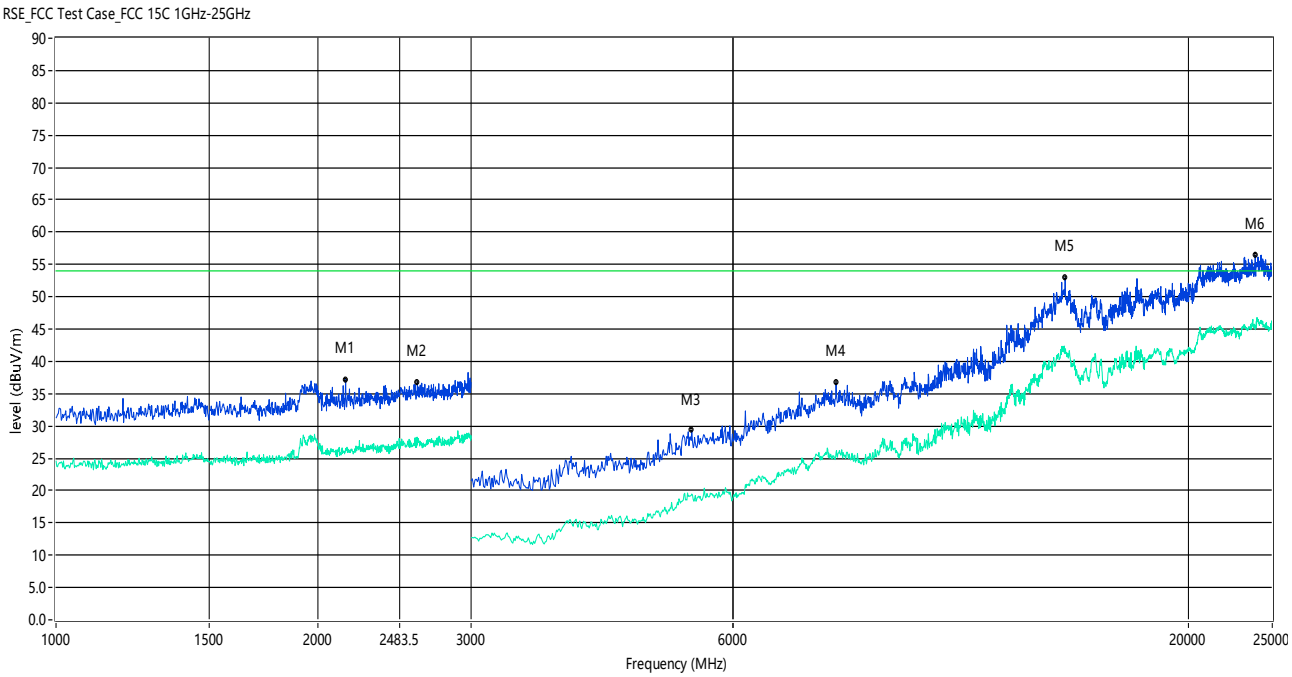
Horizontal



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1968.000	28.52	-0.55	54.0	-25.48	AV	H	Pass
1	1968.000	37.83	-0.55	74.0	-36.17	Peak	H	Pass
2**	2372.000	26.12	-1.19	54.0	-27.88	AV	H	Pass
2	2372.000	37.13	-1.19	74.0	-36.87	Peak	H	Pass
3**	6930.000	22.87	7.93	54.0	-31.13	AV	H	Pass
3	6930.000	33.03	7.93	74.0	-40.97	Peak	H	Pass
4**	11340.000	32.49	16.89	54.0	-21.51	AV	H	Pass
4	11340.000	42.33	16.89	74.0	-31.67	Peak	H	Pass
5**	14428.000	41.84	25.10	54.0	-12.16	AV	H	Pass
5	14428.000	52.09	25.10	74.0	-21.91	Peak	H	Pass
6**	21940.001	44.81	23.90	54.0	-9.19	AV	H	Pass
6	21940.001	55.90	23.90	74.0	-18.10	Peak	H	Pass

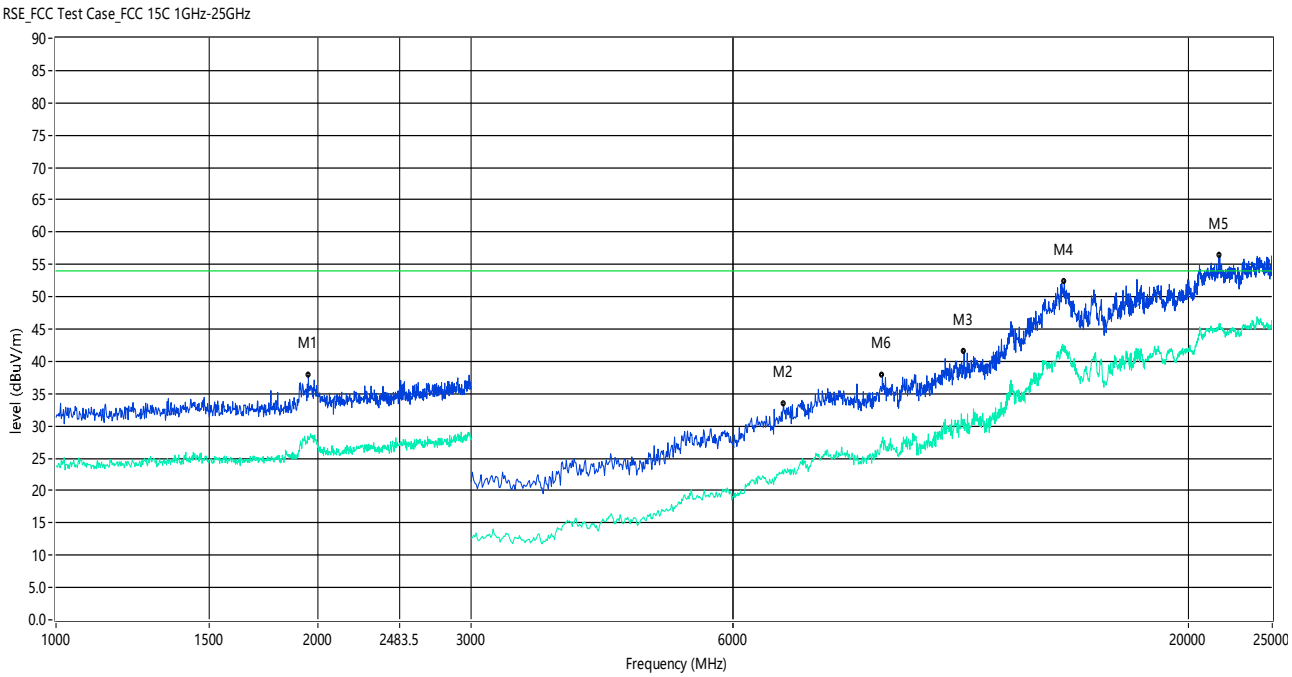
802.11 g_Low

vertical



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	2152.000	26.54	-1.87	54.0	-27.46	AV	V	Pass
1	2152.000	37.17	-1.87	74.0	-36.83	Peak	V	Pass
2**	2602.000	27.02	0.04	54.0	-26.98	AV	V	Pass
2	2602.000	36.70	0.04	74.0	-37.30	Peak	V	Pass
3**	5380.000	19.47	3.37	54.0	-34.53	AV	V	Pass
3	5380.000	29.27	3.37	74.0	-44.73	Peak	V	Pass
4**	7880.000	25.91	9.91	54.0	-28.09	AV	V	Pass
4	7880.000	36.67	9.91	74.0	-37.33	Peak	V	Pass
5**	14452.000	41.81	24.56	54.0	-12.19	AV	V	Pass
5	14452.000	52.94	24.56	74.0	-21.06	Peak	V	Pass
6**	23896.001	44.94	23.34	54.0	-9.06	AV	V	Pass
6	23896.001	56.39	23.34	74.0	-17.61	Peak	V	Pass

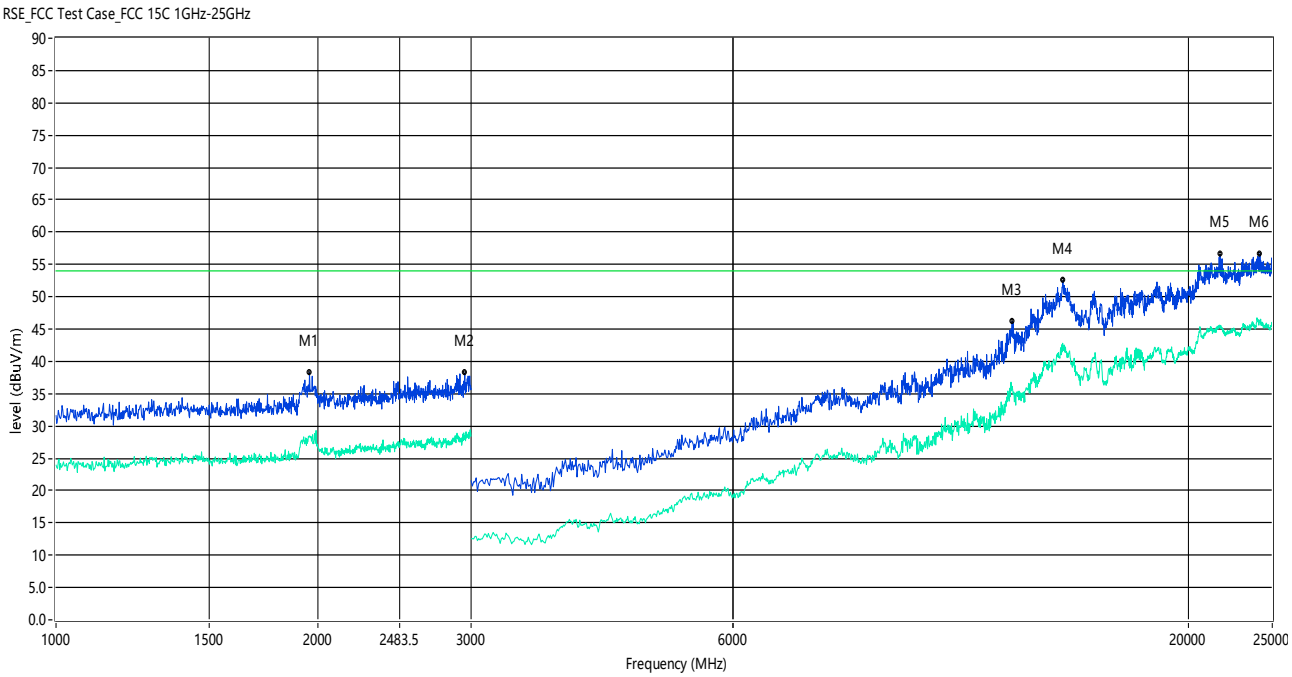
Horizontal



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1950.000	27.97	-0.73	54.0	-26.03	AV	H	Pass
1	1950.000	37.78	-0.73	74.0	-36.22	Peak	H	Pass
2**	6860.000	22.57	7.20	54.0	-31.43	AV	H	Pass
2	6860.000	33.35	7.20	74.0	-40.65	Peak	H	Pass
3**	11060.000	31.04	15.61	54.0	-22.96	AV	H	Pass
3	11060.000	41.51	15.61	74.0	-32.49	Peak	H	Pass
4**	14416.000	42.41	25.52	54.0	-11.59	AV	H	Pass
4	14416.000	52.36	25.52	74.0	-21.64	Peak	H	Pass
5**	21760.000	45.39	23.94	54.0	-8.61	AV	H	Pass
5	21760.000	56.33	23.94	74.0	-17.67	Peak	H	Pass
6**	8910.000	27.87	12.48	54.0	-26.13	AV	H	Pass
6	8910.000	37.86	12.48	74.0	-36.14	Peak	H	Pass

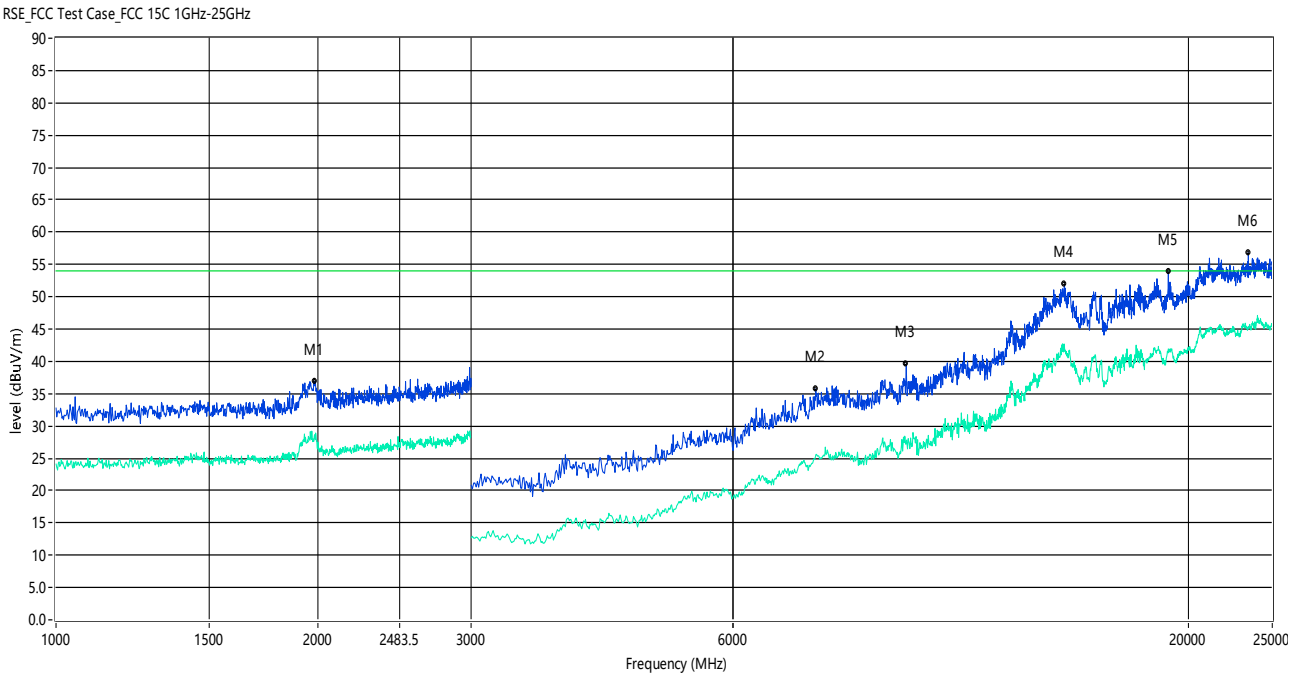
802.11 g_Middle

vertical



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1956.000	28.35	-0.66	54.0	-25.65	AV	V	Pass
1	1956.000	38.29	-0.66	74.0	-35.71	Peak	V	Pass
2**	2950.000	28.33	1.67	54.0	-25.67	AV	V	Pass
2	2950.000	38.21	1.67	74.0	-35.79	Peak	V	Pass
3**	12560.000	36.14	19.50	54.0	-17.86	AV	V	Pass
3	12560.000	46.18	19.50	74.0	-27.82	Peak	V	Pass
4**	14368.000	42.21	24.92	54.0	-11.79	AV	V	Pass
4	14368.000	52.47	24.92	74.0	-21.53	Peak	V	Pass
5**	21771.999	45.45	23.94	54.0	-8.55	AV	V	Pass
5	21771.999	56.55	23.94	74.0	-17.45	Peak	V	Pass
6**	24196.000	46.04	23.24	54.0	-7.96	AV	V	Pass
6	24196.000	56.66	23.24	74.0	-17.34	Peak	V	Pass

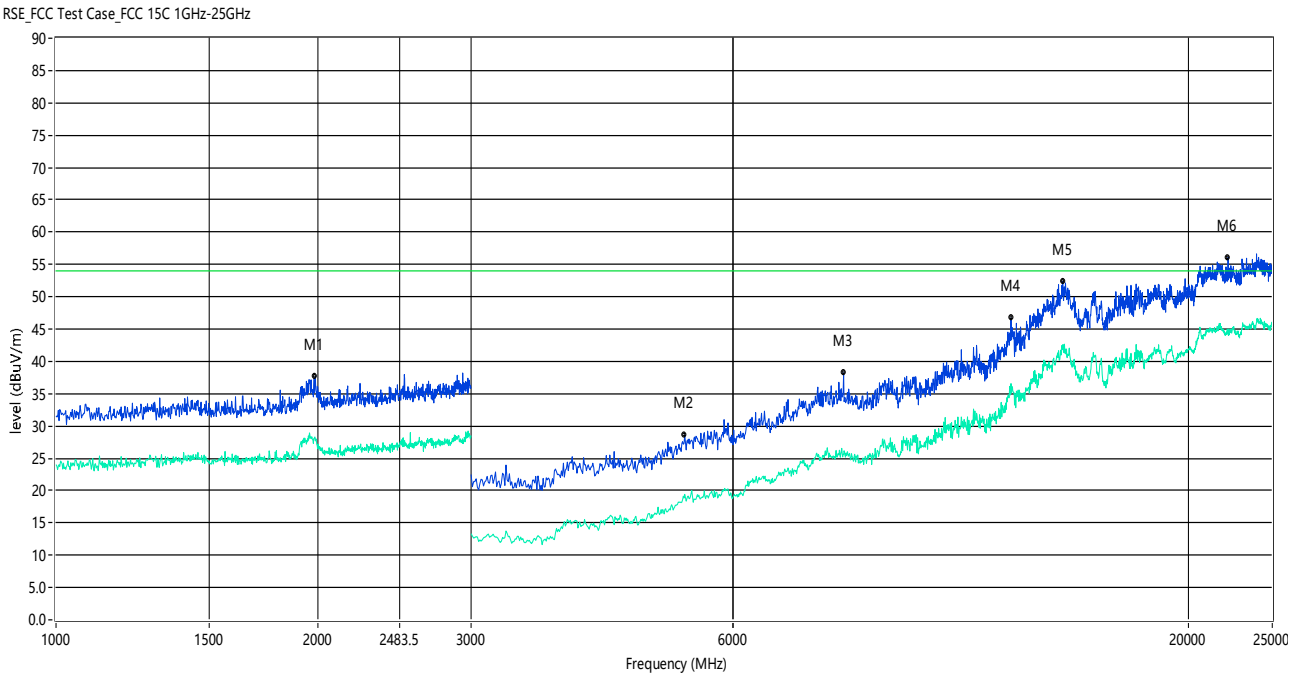
Horizontal



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1986.000	27.89	-0.42	54.0	-26.11	AV	H	Pass
1	1986.000	36.97	-0.42	74.0	-37.03	Peak	H	Pass
2**	7470.000	25.52	10.11	54.0	-28.48	AV	H	Pass
2	7470.000	35.74	10.11	74.0	-38.26	Peak	H	Pass
3**	9490.000	27.62	11.53	54.0	-26.38	AV	H	Pass
3	9490.000	39.56	11.53	74.0	-34.44	Peak	H	Pass
4**	14428.000	42.11	25.10	54.0	-11.89	AV	H	Pass
4	14428.000	51.94	25.10	74.0	-22.06	Peak	H	Pass
5**	18987.999	41.92	21.77	54.0	-12.08	AV	H	Pass
5	18987.999	53.87	21.77	74.0	-20.13	Peak	H	Pass
6**	23463.999	45.31	23.48	54.0	-8.69	AV	H	Pass
6	23463.999	56.79	23.48	74.0	-17.21	Peak	H	Pass

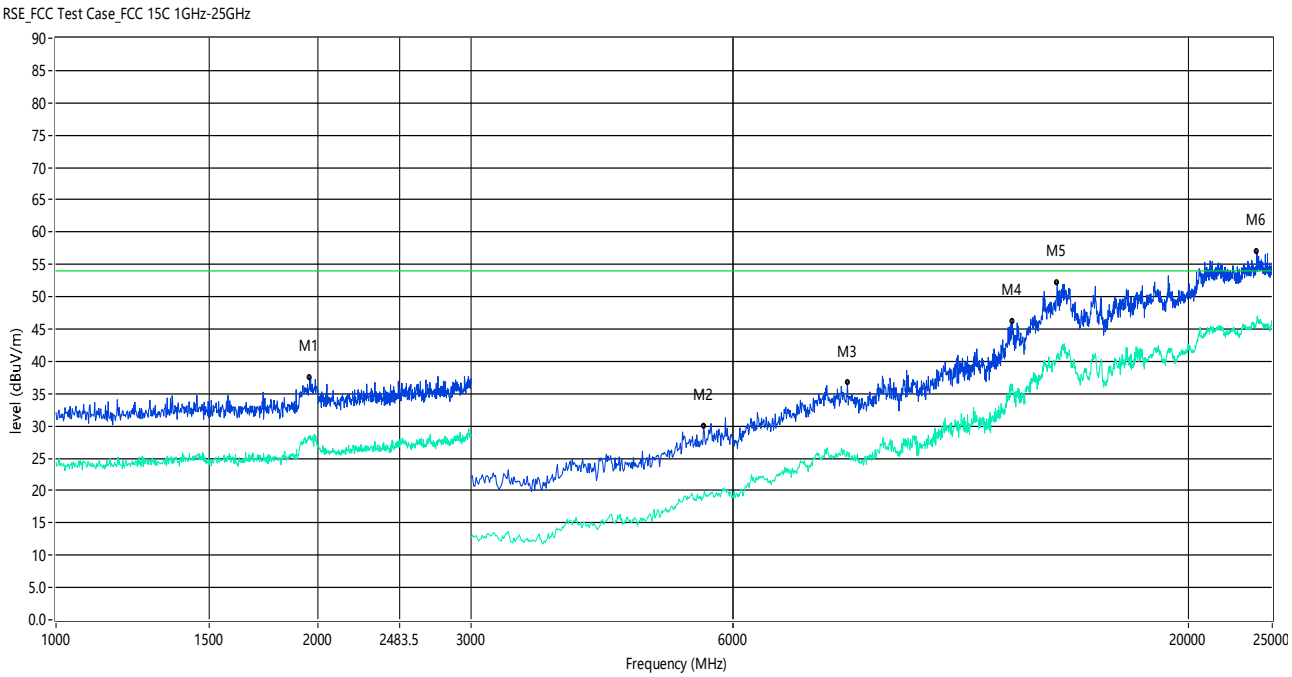
802.11 g_High

vertical



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1986.000	27.70	-0.42	54.0	-26.30	AV	V	Pass
1	1986.000	37.66	-0.42	74.0	-36.34	Peak	V	Pass
2**	5280.000	19.40	3.29	54.0	-34.60	AV	V	Pass
2	5280.000	28.63	3.29	74.0	-45.37	Peak	V	Pass
3**	8040.000	25.56	10.41	54.0	-28.44	AV	V	Pass
3	8040.000	38.21	10.41	74.0	-35.79	Peak	V	Pass
4**	12519.999	36.56	19.89	54.0	-17.44	AV	V	Pass
4	12519.999	46.71	19.89	74.0	-27.29	Peak	V	Pass
5**	14356.000	42.59	25.12	54.0	-11.41	AV	V	Pass
5	14356.000	52.35	25.12	74.0	-21.65	Peak	V	Pass
6**	22240.000	44.11	23.83	54.0	-9.89	AV	V	Pass
6	22240.000	56.10	23.83	74.0	-17.90	Peak	V	Pass

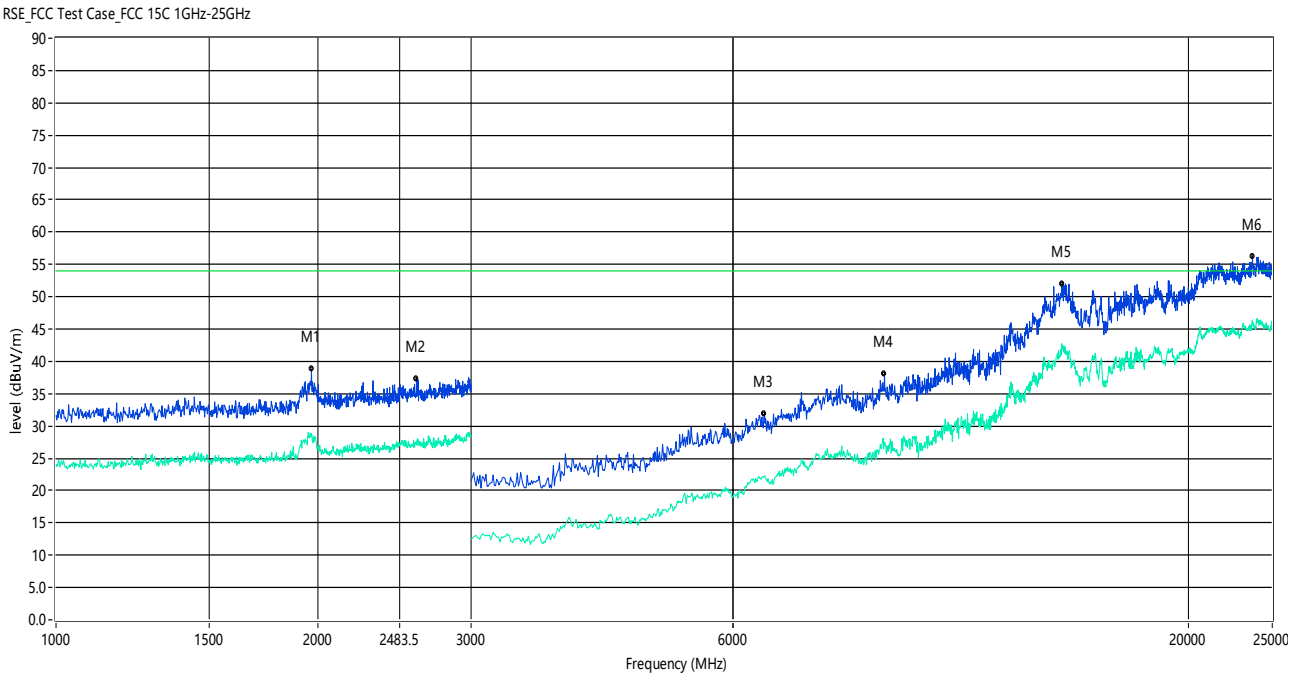
Horizontal



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1958.000	28.34	-0.64	54.0	-25.66	AV	H	Pass
1	1958.000	37.48	-0.64	74.0	-36.52	Peak	H	Pass
2**	5550.000	19.11	3.63	54.0	-34.89	AV	H	Pass
2	5550.000	29.86	3.63	74.0	-44.14	Peak	H	Pass
3**	8120.000	26.01	10.50	54.0	-27.99	AV	H	Pass
3	8120.000	36.60	10.50	74.0	-37.40	Peak	H	Pass
4**	12570.000	35.89	18.95	54.0	-18.11	AV	H	Pass
4	12570.000	46.11	18.95	74.0	-27.89	Peak	H	Pass
5**	14151.999	40.92	23.77	54.0	-13.08	AV	H	Pass
5	14151.999	52.21	23.77	74.0	-21.79	Peak	H	Pass
6**	24004.000	46.37	23.30	54.0	-7.63	AV	H	Pass
6	24004.000	56.96	23.30	74.0	-17.04	Peak	H	Pass

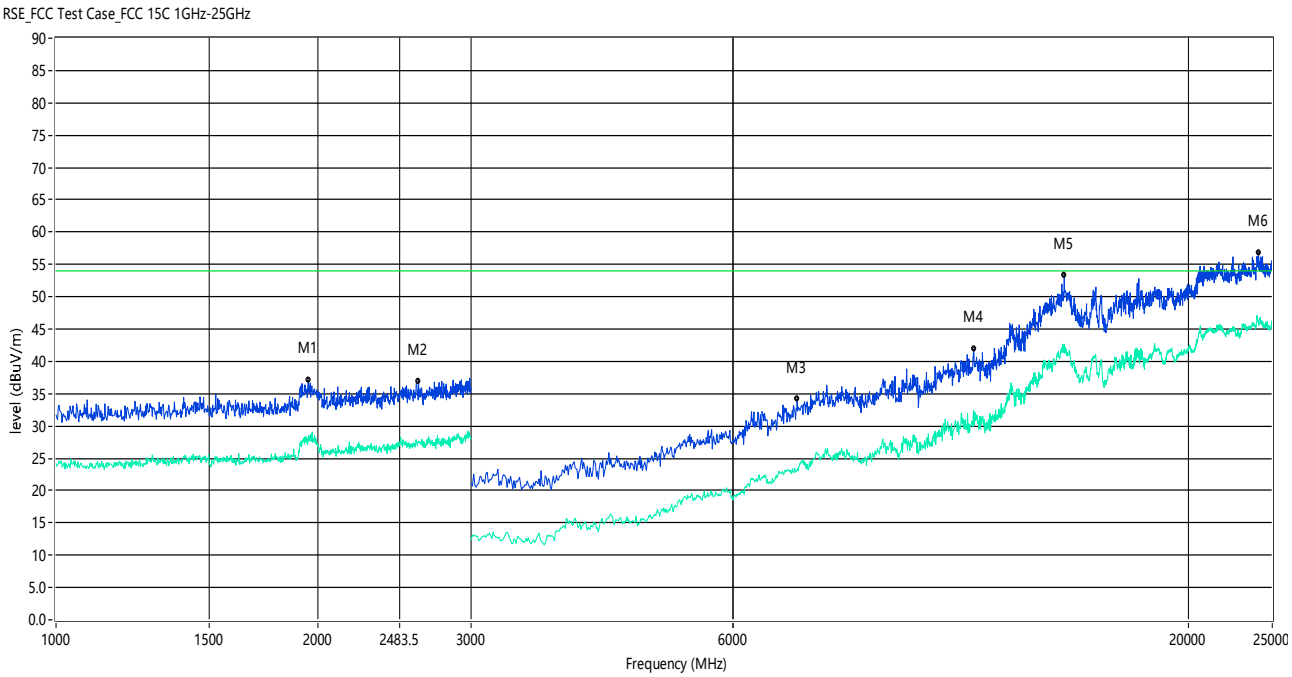
802.11 n(HT20)_Low

vertical



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1966.000	28.84	-0.57	54.0	-25.16	AV	V	Pass
1	1966.000	38.77	-0.57	74.0	-35.23	Peak	V	Pass
2**	2596.000	27.58	0.01	54.0	-26.42	AV	V	Pass
2	2596.000	37.34	0.01	74.0	-36.66	Peak	V	Pass
3**	6520.000	22.29	6.21	54.0	-31.71	AV	V	Pass
3	6520.000	31.89	6.21	74.0	-42.11	Peak	V	Pass
4**	8960.000	27.53	11.89	54.0	-26.47	AV	V	Pass
4	8960.000	38.10	11.89	74.0	-35.90	Peak	V	Pass
5**	14320.000	42.75	24.92	54.0	-11.25	AV	V	Pass
5	14320.000	51.98	24.92	74.0	-22.02	Peak	V	Pass
6**	23728.001	45.69	23.39	54.0	-8.31	AV	V	Pass
6	23728.001	56.22	23.39	74.0	-17.78	Peak	V	Pass

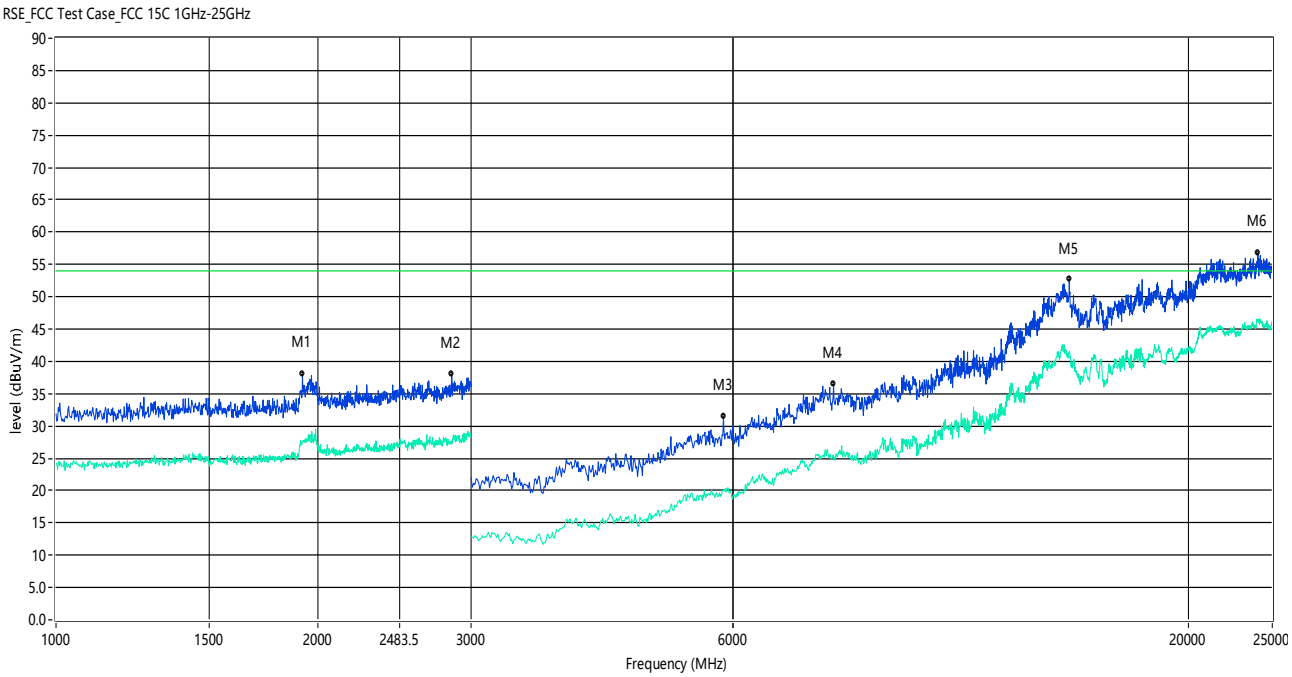
Horizontal



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1950.000	27.95	-0.73	54.0	-26.05	AV	H	Pass
1	1950.000	37.06	-0.73	74.0	-36.94	Peak	H	Pass
2**	2610.000	27.61	0.12	54.0	-26.39	AV	H	Pass
2	2610.000	36.92	0.12	74.0	-37.08	Peak	H	Pass
3**	7110.000	23.14	8.15	54.0	-30.86	AV	H	Pass
3	7110.000	34.10	8.15	74.0	-39.90	Peak	H	Pass
4**	11350.000	32.00	15.68	54.0	-22.00	AV	H	Pass
4	11350.000	41.88	15.68	74.0	-32.12	Peak	H	Pass
5**	14416.000	42.62	25.52	54.0	-11.38	AV	H	Pass
5	14416.000	53.32	25.52	74.0	-20.68	Peak	H	Pass
6**	24112.001	45.85	23.27	54.0	-8.15	AV	H	Pass
6	24112.001	56.81	23.27	74.0	-17.19	Peak	H	Pass

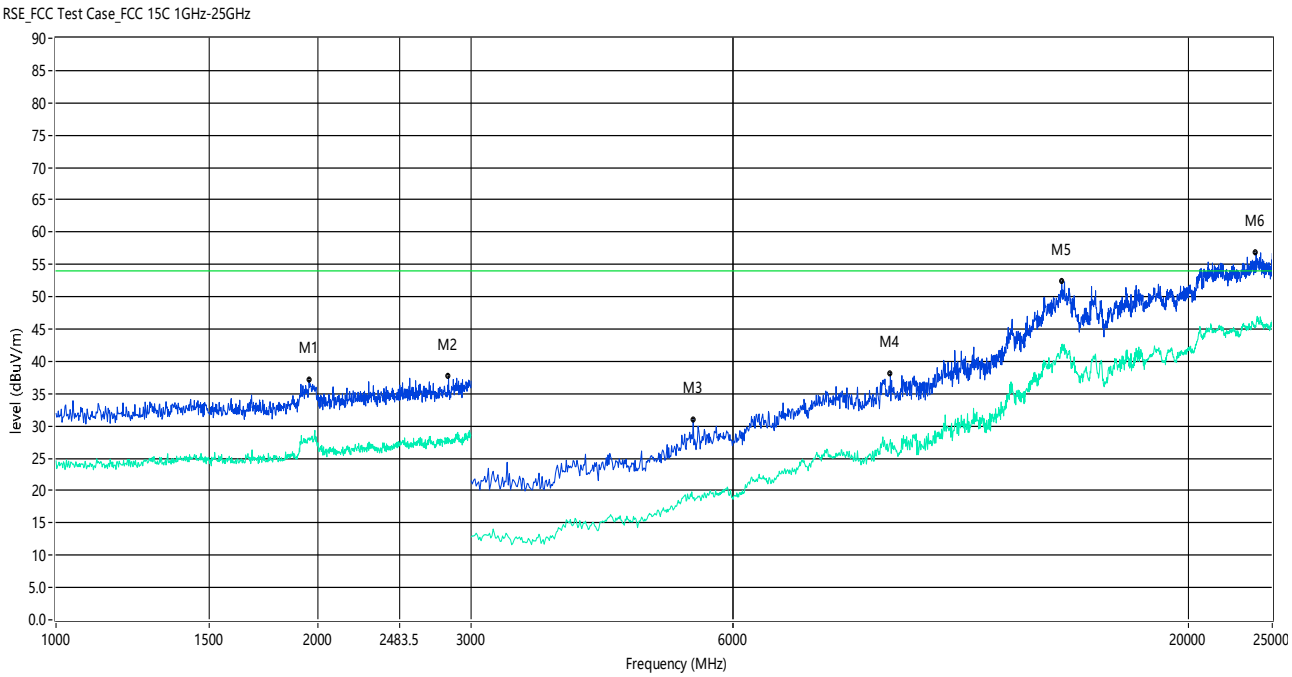
802.11 n(HT20)_Middle

vertical



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1920.000	27.58	-1.11	54.0	-26.42	AV	V	Pass
1	1920.000	38.00	-1.11	74.0	-36.00	Peak	V	Pass
2**	2850.000	27.24	1.15	54.0	-26.76	AV	V	Pass
2	2850.000	37.96	1.15	74.0	-36.04	Peak	V	Pass
3**	5850.000	20.13	4.06	54.0	-33.87	AV	V	Pass
3	5850.000	31.39	4.06	74.0	-42.61	Peak	V	Pass
4**	7830.000	25.03	9.70	54.0	-28.97	AV	V	Pass
4	7830.000	36.42	9.70	74.0	-37.58	Peak	V	Pass
5**	14608.000	41.37	24.23	54.0	-12.63	AV	V	Pass
5	14608.000	52.63	24.23	74.0	-21.37	Peak	V	Pass
6**	24064.000	46.36	23.28	54.0	-7.64	AV	V	Pass
6	24064.000	56.74	23.28	74.0	-17.26	Peak	V	Pass

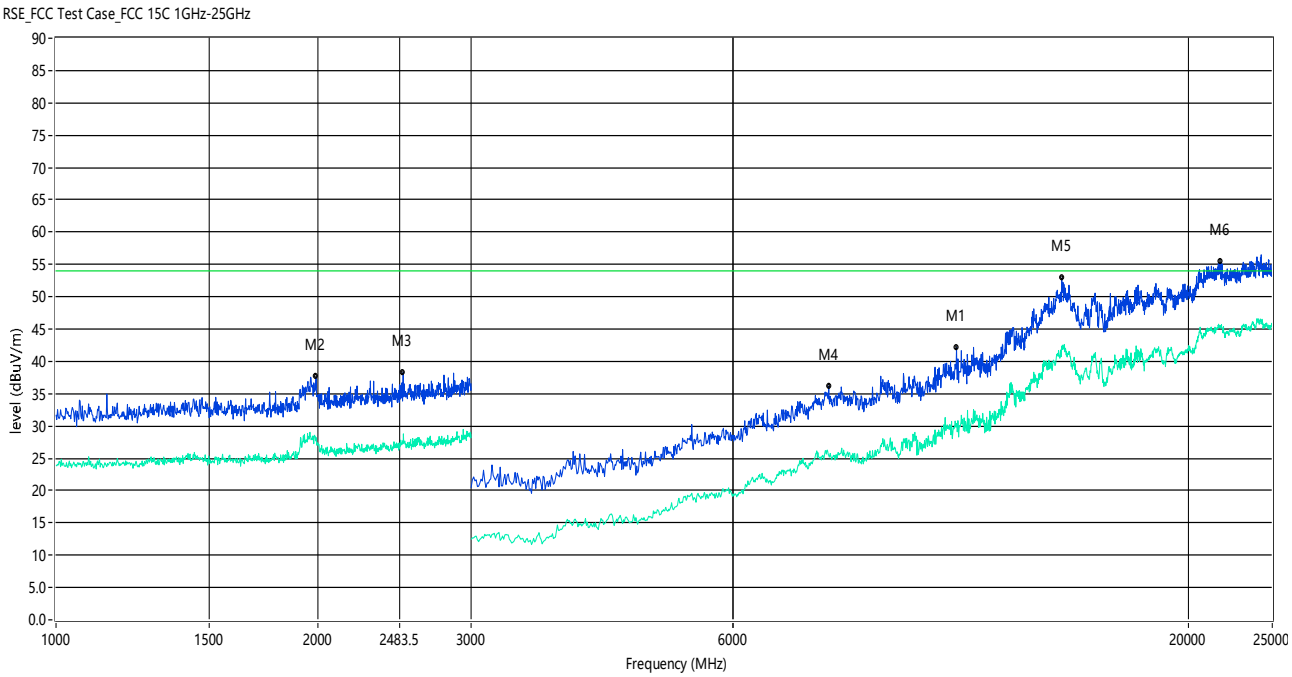
Horizontal



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1954.000	27.86	-0.68	54.0	-26.14	AV	H	Pass
1	1954.000	37.09	-0.68	74.0	-36.91	Peak	H	Pass
2**	2826.000	28.10	0.98	54.0	-25.90	AV	H	Pass
2	2826.000	37.64	0.98	74.0	-36.36	Peak	H	Pass
3**	5400.000	18.73	2.58	54.0	-35.27	AV	H	Pass
3	5400.000	30.96	2.58	74.0	-43.04	Peak	H	Pass
4**	9100.000	27.89	13.19	54.0	-26.11	AV	H	Pass
4	9100.000	38.10	13.19	74.0	-35.90	Peak	H	Pass
5**	14320.000	42.62	24.92	54.0	-11.38	AV	H	Pass
5	14320.000	52.31	24.92	74.0	-21.69	Peak	H	Pass
6**	23956.001	45.70	23.32	54.0	-8.30	AV	H	Pass
6	23956.001	56.85	23.32	74.0	-17.15	Peak	H	Pass

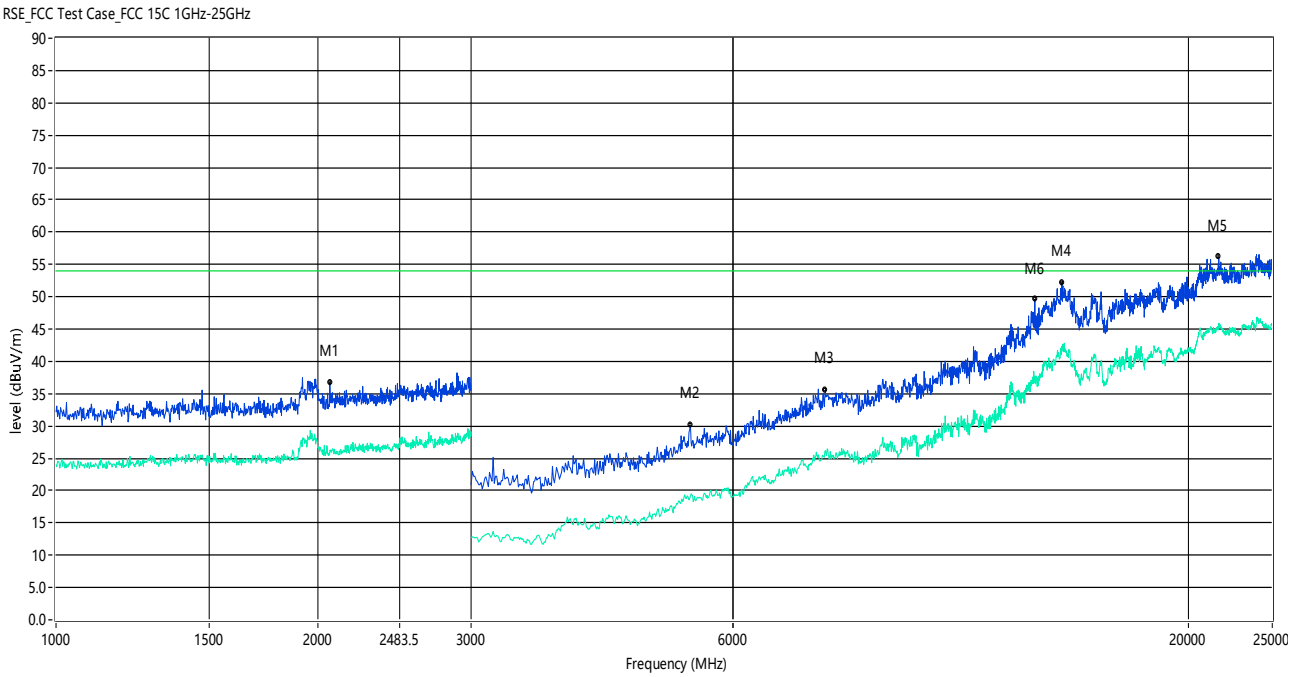
802.11 n(HT20)_High

vertical



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	10840.001	30.37	14.54	54.0	-23.63	AV	V	Pass
1	10840.001	42.18	14.54	74.0	-31.82	Peak	V	Pass
2**	1990.000	28.22	-0.40	54.0	-25.78	AV	V	Pass
2	1990.000	37.60	-0.40	74.0	-36.40	Peak	V	Pass
3**	2506.000	27.38	-0.42	54.0	-26.62	AV	V	Pass
3	2506.000	38.30	-0.42	74.0	-35.70	Peak	V	Pass
4**	7730.000	25.50	10.03	54.0	-28.50	AV	V	Pass
4	7730.000	36.17	10.03	74.0	-37.83	Peak	V	Pass
5**	14320.000	42.37	24.92	54.0	-11.63	AV	V	Pass
5	14320.000	52.88	24.92	74.0	-21.12	Peak	V	Pass
6**	21820.000	45.19	23.93	54.0	-8.81	AV	V	Pass
6	21820.000	55.37	23.93	74.0	-18.63	Peak	V	Pass

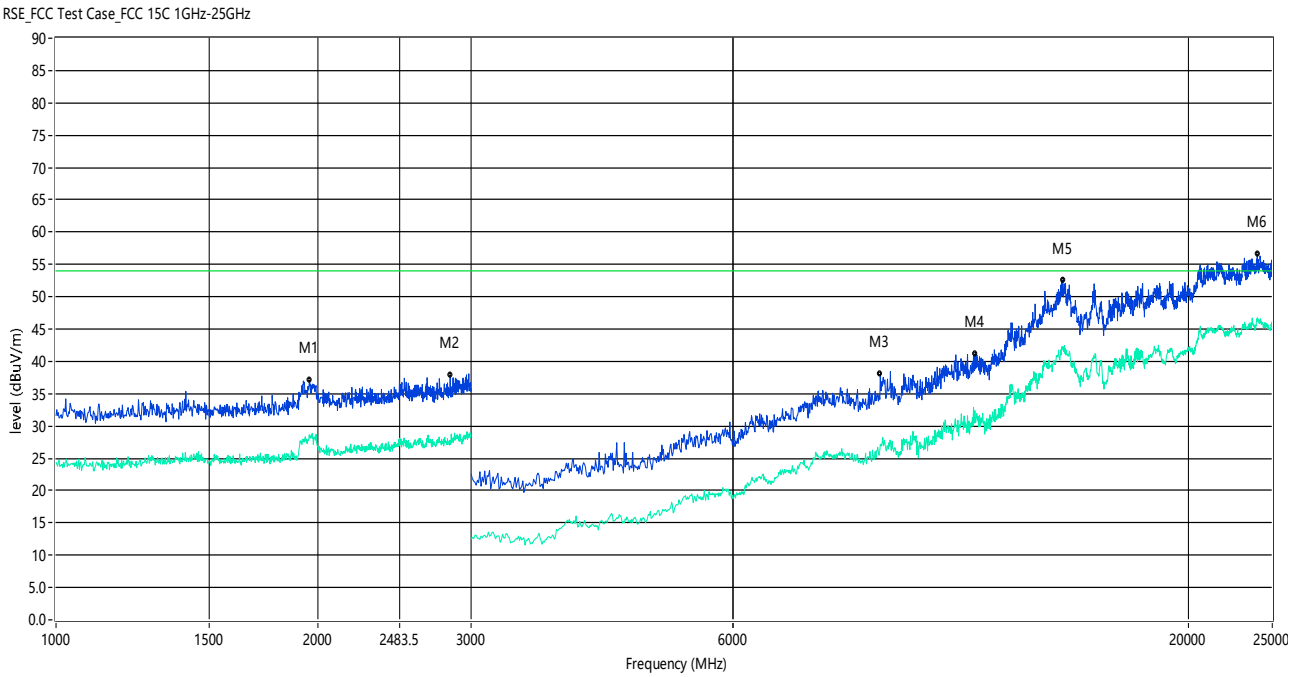
Horizontal



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	2064.000	26.22	-2.21	54.0	-27.78	AV	H	Pass
1	2064.000	36.73	-2.21	74.0	-37.27	Peak	H	Pass
2**	5360.000	19.14	2.79	54.0	-34.86	AV	H	Pass
2	5360.000	30.08	2.79	74.0	-43.92	Peak	H	Pass
3**	7660.000	26.18	10.67	54.0	-27.82	AV	H	Pass
3	7660.000	35.54	10.67	74.0	-38.46	Peak	H	Pass
4**	14320.000	42.32	24.92	54.0	-11.68	AV	H	Pass
4	14320.000	52.21	24.92	74.0	-21.79	Peak	H	Pass
5**	21700.000	45.52	23.96	54.0	-8.48	AV	H	Pass
5	21700.000	56.12	23.96	74.0	-17.88	Peak	H	Pass
6**	13336.001	37.71	21.33	54.0	-16.29	AV	H	Pass
6	13336.001	49.56	21.33	74.0	-24.44	Peak	H	Pass

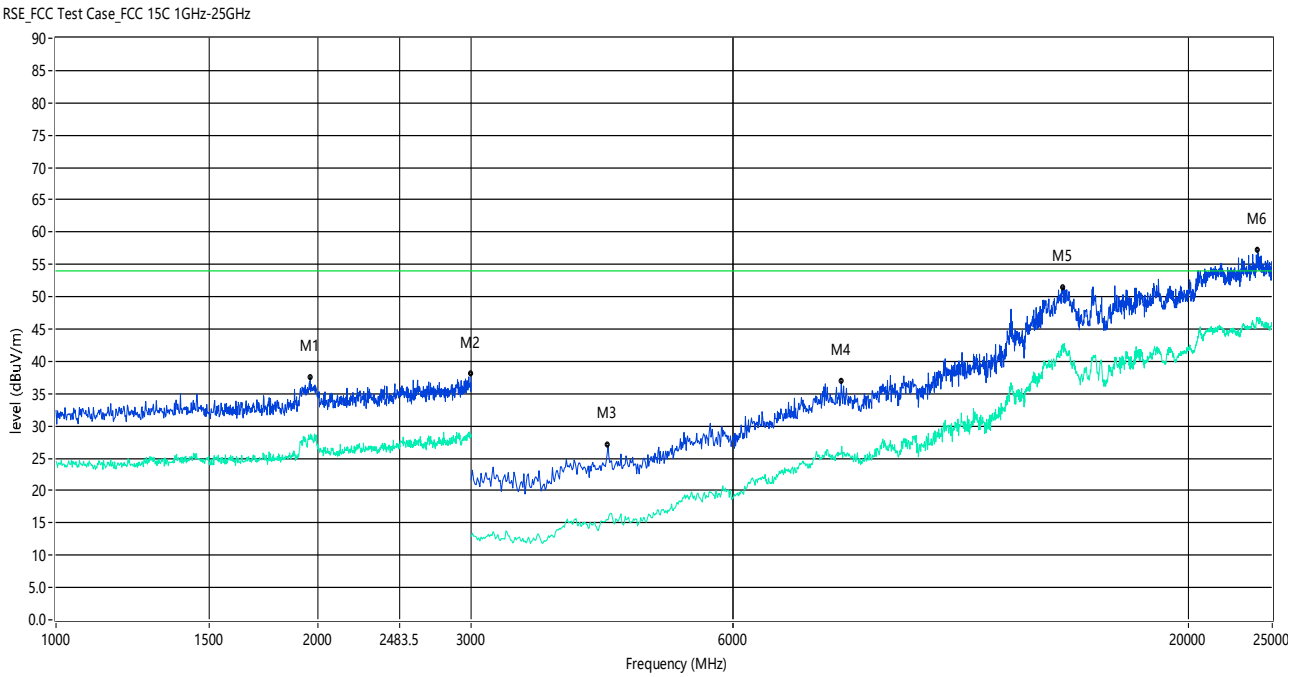
802.11 n(HT40)_Low

vertical



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1956.000	28.64	-0.66	54.0	-25.36	AV	V	Pass
1	1956.000	37.09	-0.66	74.0	-36.91	Peak	V	Pass
2**	2838.000	27.18	0.88	54.0	-26.82	AV	V	Pass
2	2838.000	37.88	0.88	74.0	-36.12	Peak	V	Pass
3**	8860.000	27.15	12.15	54.0	-26.85	AV	V	Pass
3	8860.000	37.97	12.15	74.0	-36.03	Peak	V	Pass
4**	11390.000	31.26	15.55	54.0	-22.74	AV	V	Pass
4	11390.000	41.18	15.55	74.0	-32.82	Peak	V	Pass
5**	14356.000	42.28	25.12	54.0	-11.72	AV	V	Pass
5	14356.000	52.55	25.12	74.0	-21.45	Peak	V	Pass
6**	24028.000	46.48	23.30	54.0	-7.52	AV	V	Pass
6	24028.000	56.59	23.30	74.0	-17.41	Peak	V	Pass

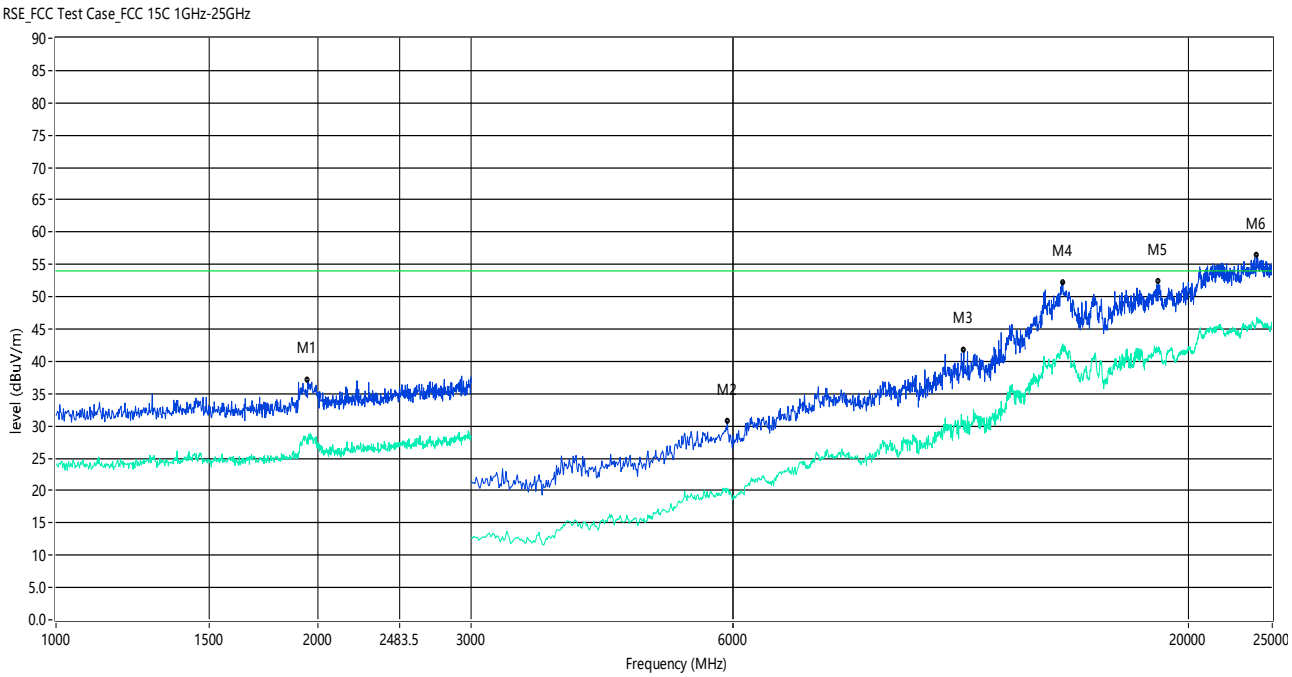
Horizontal



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1960.000	28.04	-0.62	54.0	-25.96	AV	H	Pass
1	1960.000	37.49	-0.62	74.0	-36.51	Peak	H	Pass
2**	3000.000	28.21	1.86	54.0	-25.79	AV	H	Pass
2	3000.000	37.95	1.86	74.0	-36.05	Peak	H	Pass
3**	4310.000	15.44	1.18	54.0	-38.56	AV	H	Pass
3	4310.000	27.02	1.18	74.0	-46.98	Peak	H	Pass
4**	7990.000	25.94	10.65	54.0	-28.06	AV	H	Pass
4	7990.000	36.91	10.65	74.0	-37.09	Peak	H	Pass
5**	14356.000	42.69	25.12	54.0	-11.31	AV	H	Pass
5	14356.000	51.42	25.12	74.0	-22.58	Peak	H	Pass
6**	24052.001	46.31	23.29	54.0	-7.69	AV	H	Pass
6	24052.001	57.23	23.29	74.0	-16.77	Peak	H	Pass

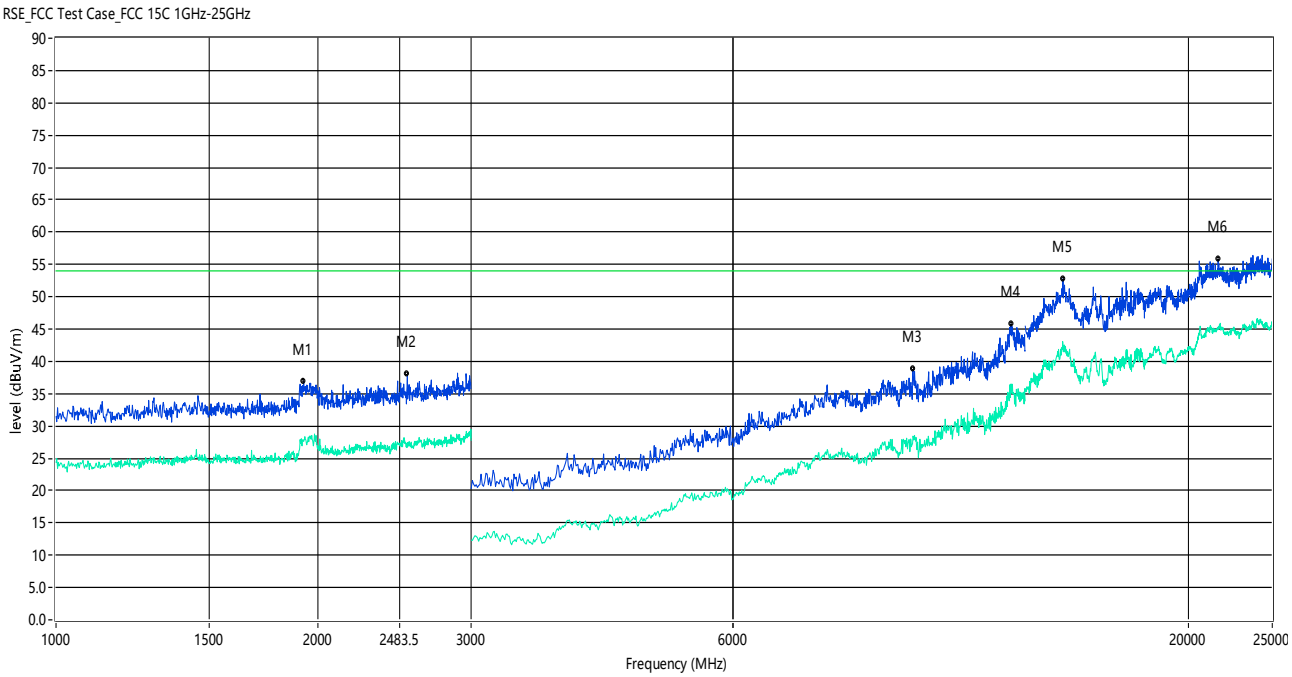
802.11 n(HT40)_Middle

vertical



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1948.000	27.17	-0.75	54.0	-26.83	AV	V	Pass
1	1948.000	37.02	-0.75	74.0	-36.98	Peak	V	Pass
2**	5910.000	19.98	4.37	54.0	-34.02	AV	V	Pass
2	5910.000	30.71	4.37	74.0	-43.29	Peak	V	Pass
3**	11050.000	30.34	14.76	54.0	-23.66	AV	V	Pass
3	11050.000	41.65	14.76	74.0	-32.35	Peak	V	Pass
4**	14356.000	42.70	25.12	54.0	-11.30	AV	V	Pass
4	14356.000	52.20	25.12	74.0	-21.80	Peak	V	Pass
5**	18496.000	42.25	22.62	54.0	-11.75	AV	V	Pass
5	18496.000	52.31	22.62	74.0	-21.69	Peak	V	Pass
6**	24004.000	46.81	23.30	54.0	-7.19	AV	V	Pass
6	24004.000	56.44	23.30	74.0	-17.56	Peak	V	Pass

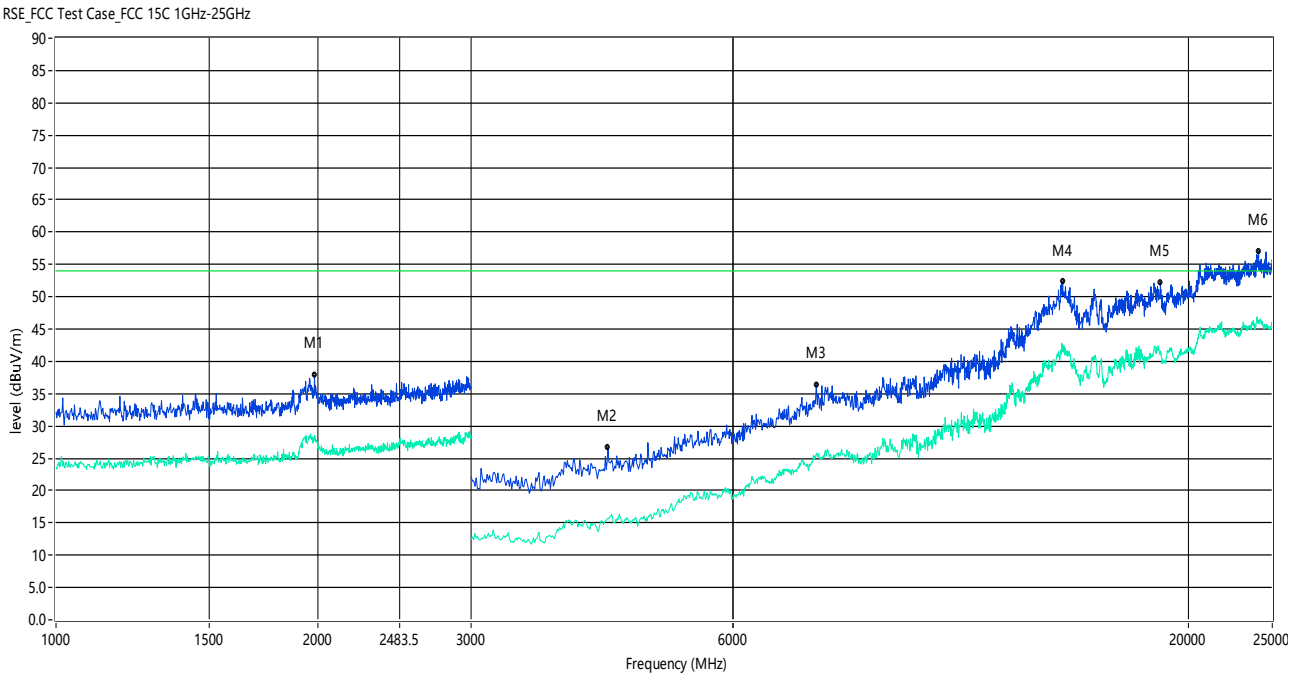
Horizontal



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1926.000	27.62	-1.03	54.0	-26.38	AV	H	Pass
1	1926.000	36.98	-1.03	74.0	-37.02	Peak	H	Pass
2**	2534.000	27.43	-0.31	54.0	-26.57	AV	H	Pass
2	2534.000	38.01	-0.31	74.0	-35.99	Peak	H	Pass
3**	9660.000	28.42	12.67	54.0	-25.58	AV	H	Pass
3	9660.000	38.73	12.67	74.0	-35.27	Peak	H	Pass
4**	12519.999	36.50	19.89	54.0	-17.50	AV	H	Pass
4	12519.999	45.77	19.89	74.0	-28.23	Peak	H	Pass
5**	14368.000	42.59	24.92	54.0	-11.41	AV	H	Pass
5	14368.000	52.77	24.92	74.0	-21.23	Peak	H	Pass
6**	21664.000	44.96	23.97	54.0	-9.04	AV	H	Pass
6	21664.000	55.79	23.97	74.0	-18.21	Peak	H	Pass

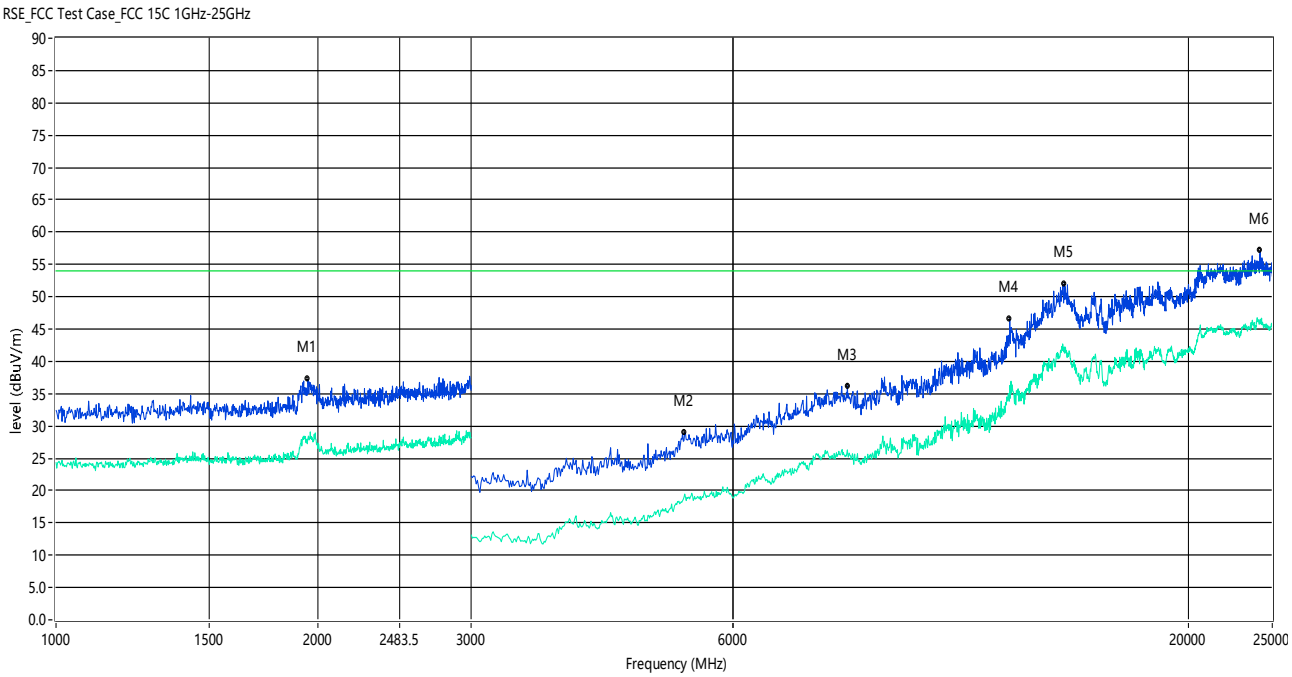
802.11 n(HT40)_High

vertical



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1982.000	28.53	-0.44	54.0	-25.47	AV	V	Pass
1	1982.000	37.78	-0.44	74.0	-36.22	Peak	V	Pass
2**	4310.000	15.71	1.18	54.0	-38.29	AV	V	Pass
2	4310.000	26.67	1.18	74.0	-47.33	Peak	V	Pass
3**	7480.000	25.69	10.48	54.0	-28.31	AV	V	Pass
3	7480.000	36.39	10.48	74.0	-37.61	Peak	V	Pass
4**	14356.000	42.59	25.12	54.0	-11.41	AV	V	Pass
4	14356.000	52.26	25.12	74.0	-21.74	Peak	V	Pass
5**	18592.000	41.40	22.14	54.0	-12.60	AV	V	Pass
5	18592.000	52.22	22.14	74.0	-21.78	Peak	V	Pass
6**	24112.001	46.16	23.27	54.0	-7.84	AV	V	Pass
6	24112.001	57.00	23.27	74.0	-17.00	Peak	V	Pass

Horizontal

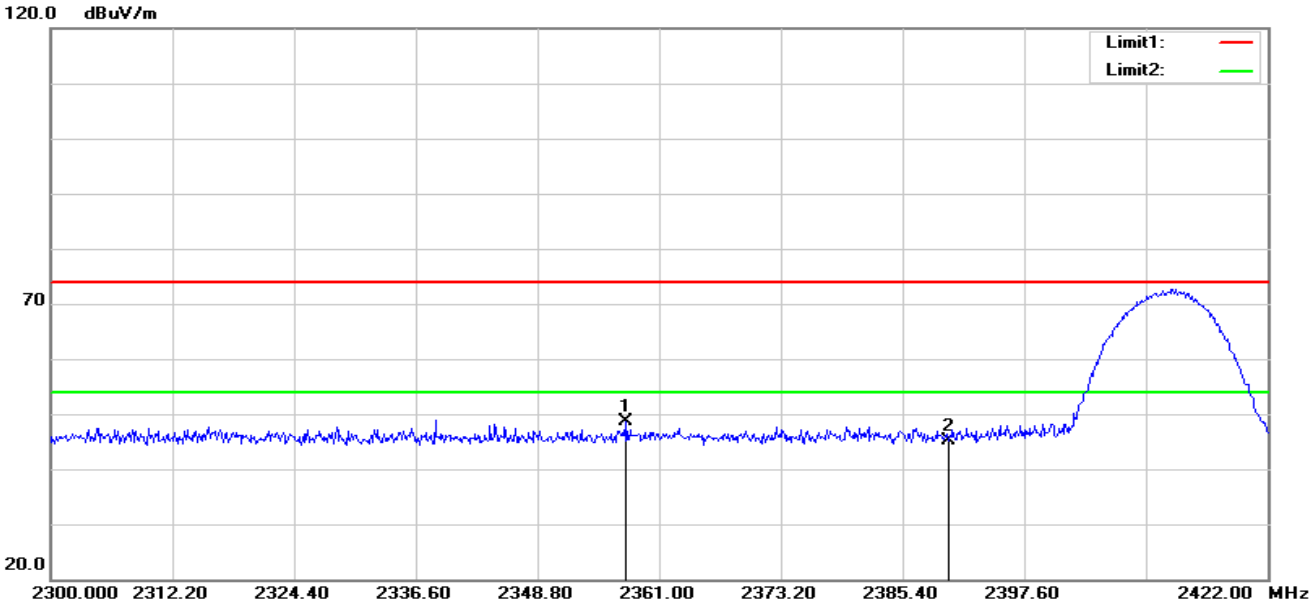


No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	ANT	Verdict
1**	1948.000	28.08	-0.75	54.0	-25.92	AV	H	Pass
1	1948.000	37.24	-0.75	74.0	-36.76	Peak	H	Pass
2**	5280.000	19.48	3.29	54.0	-34.52	AV	H	Pass
2	5280.000	28.98	3.29	74.0	-45.02	Peak	H	Pass
3**	8120.000	26.30	10.50	54.0	-27.70	AV	H	Pass
3	8120.000	36.21	10.50	74.0	-37.79	Peak	H	Pass
4**	12480.000	36.25	19.51	54.0	-17.75	AV	H	Pass
4	12480.000	46.57	19.51	74.0	-27.43	Peak	H	Pass
5**	14416.000	42.25	25.52	54.0	-11.75	AV	H	Pass
5	14416.000	52.01	25.52	74.0	-21.99	Peak	H	Pass
6**	24207.999	46.27	23.24	54.0	-7.73	AV	H	Pass
6	24207.999	57.11	23.24	74.0	-16.89	Peak	H	Pass

3.3.7 TEST RESULTS (BAND EDGE REQUIREMENTS)

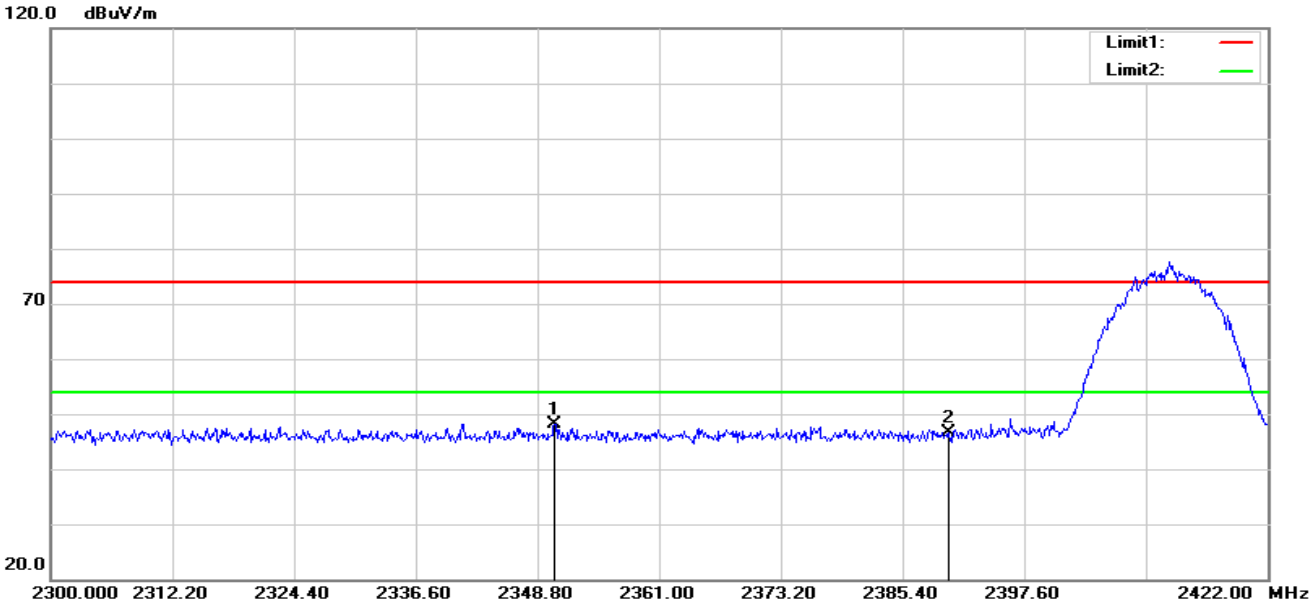
802.11 b-Low

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2357.706	59.71	-10.96	48.75	74.00	-25.25	peak
2	2390.000	55.82	-10.75	45.07	74.00	-28.93	peak

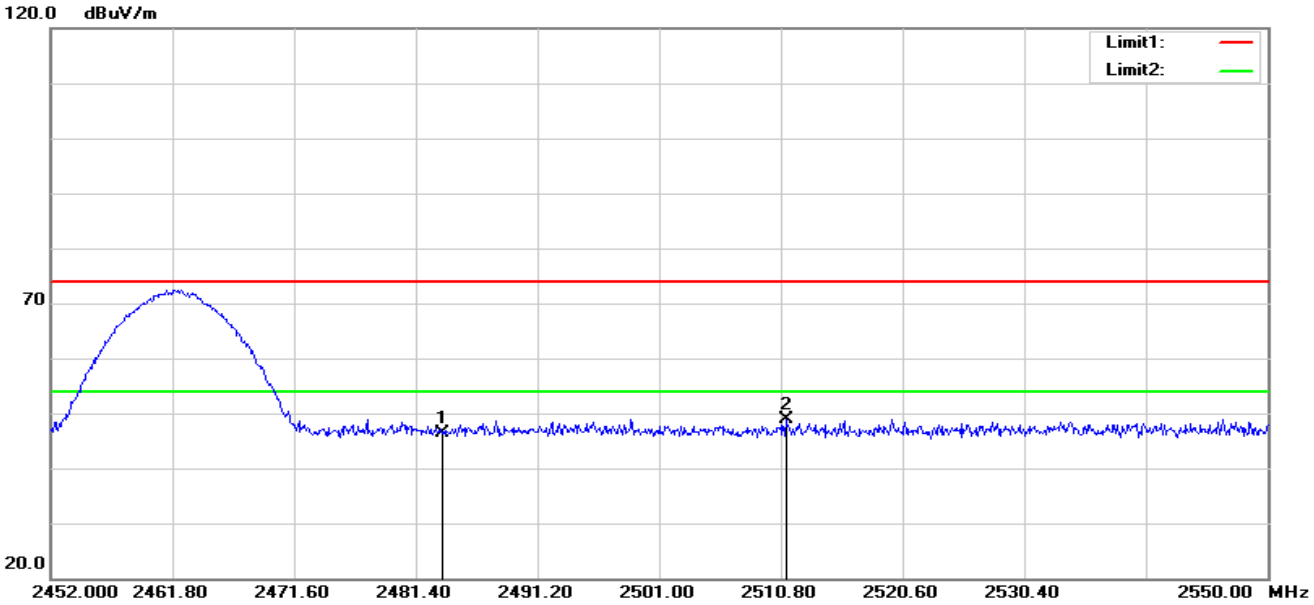
Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2350.508	59.17	-11.01	48.16	74.00	-25.84	peak
2	2390.000	57.42	-10.75	46.67	74.00	-27.33	peak

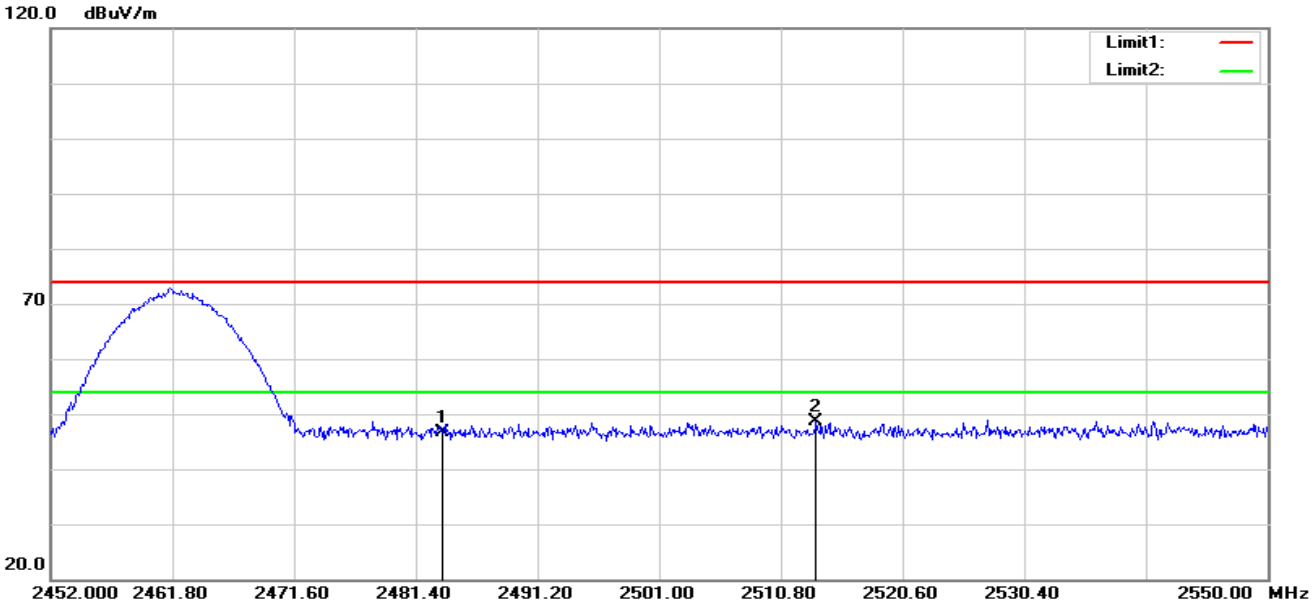
802.11 b-High

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	56.68	-10.29	46.39	74.00	-27.61	peak
2	2511.192	59.02	-10.18	48.84	74.00	-25.16	peak

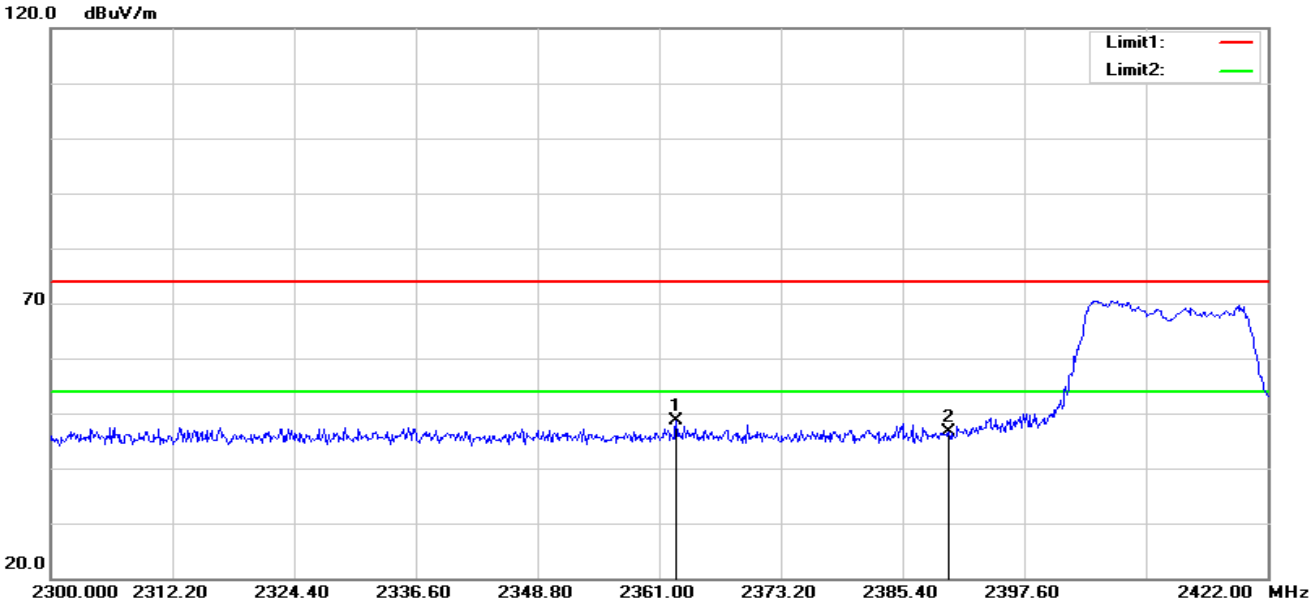
Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	56.87	-10.29	46.58	74.00	-27.42	peak
2	2513.642	58.85	-10.17	48.68	74.00	-25.32	peak

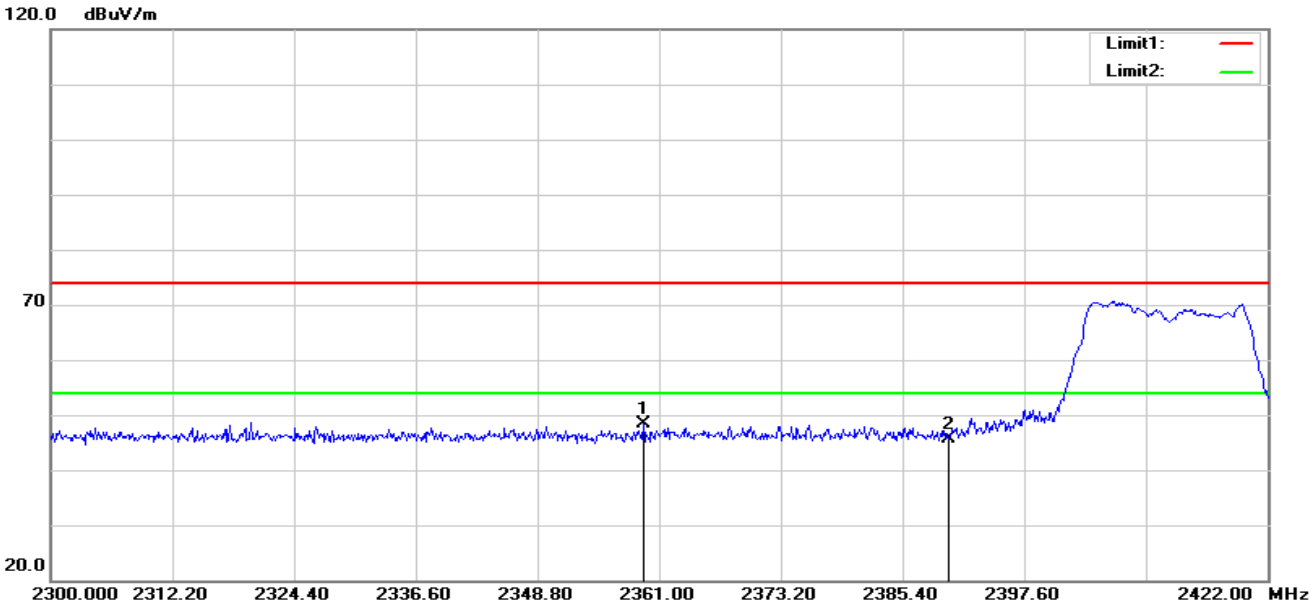
802.11 g-Low

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2362.708	59.57	-10.94	48.63	74.00	-25.37	peak
2	2390.000	57.27	-10.75	46.52	74.00	-27.48	peak

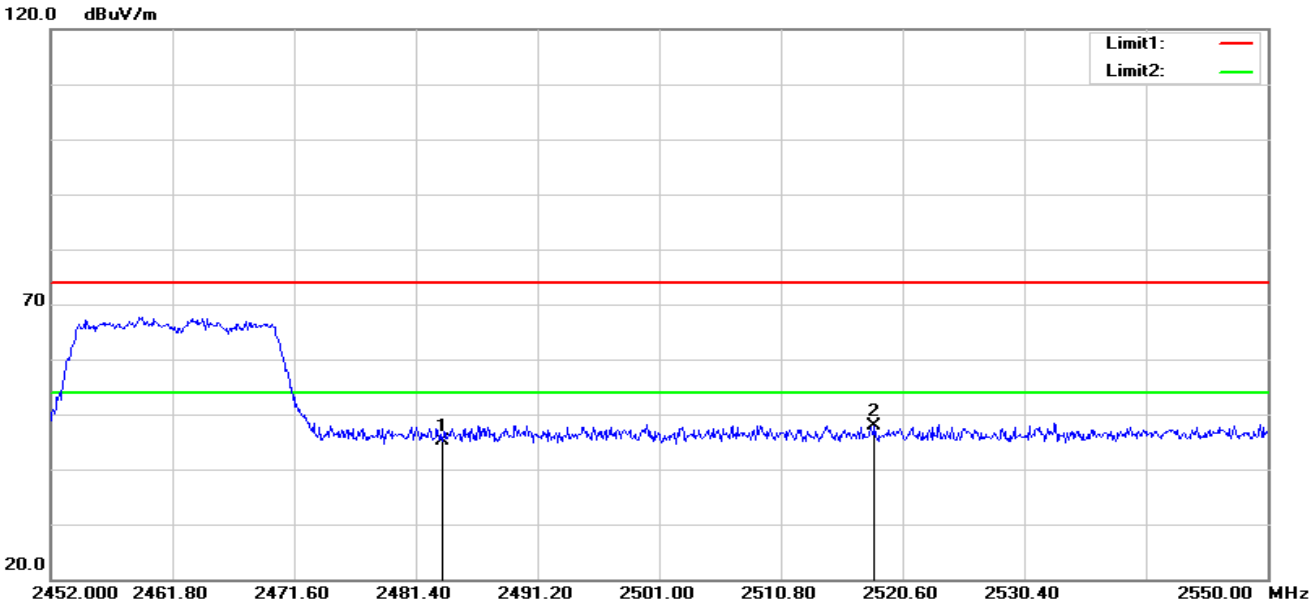
Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2359.414	59.39	-10.95	48.44	74.00	-25.56	peak
2	2390.000	56.45	-10.75	45.70	74.00	-28.30	peak

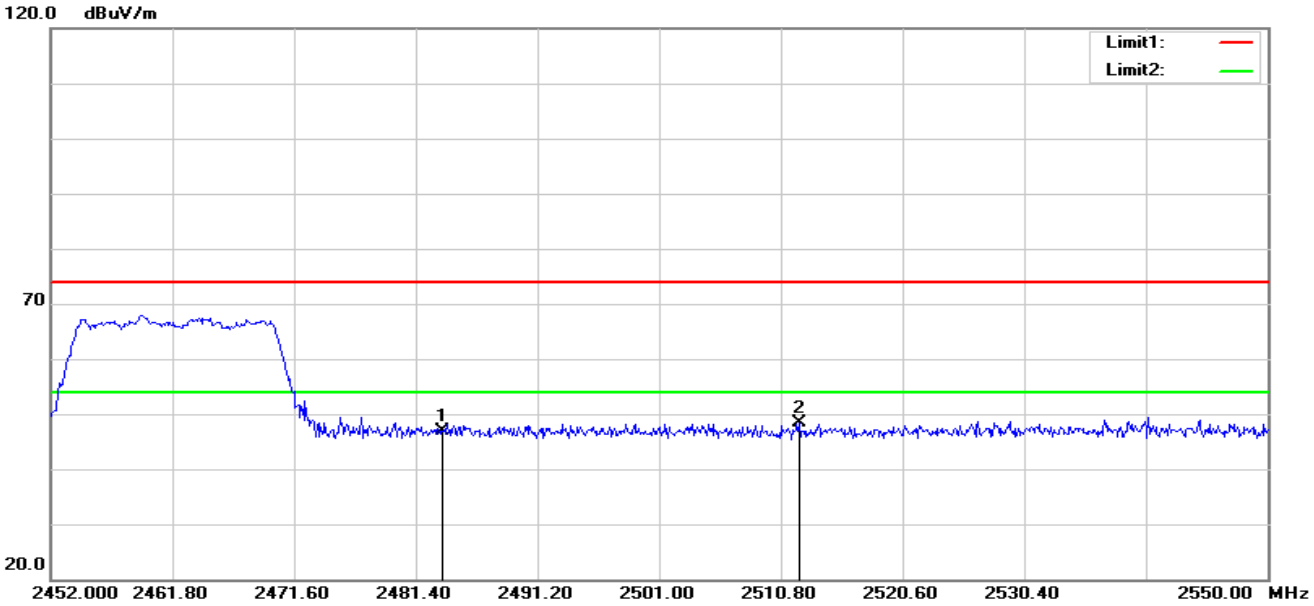
802.11 g-High

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	55.43	-10.29	45.14	74.00	-28.86	peak
2	2518.346	58.10	-10.16	47.94	74.00	-26.06	peak

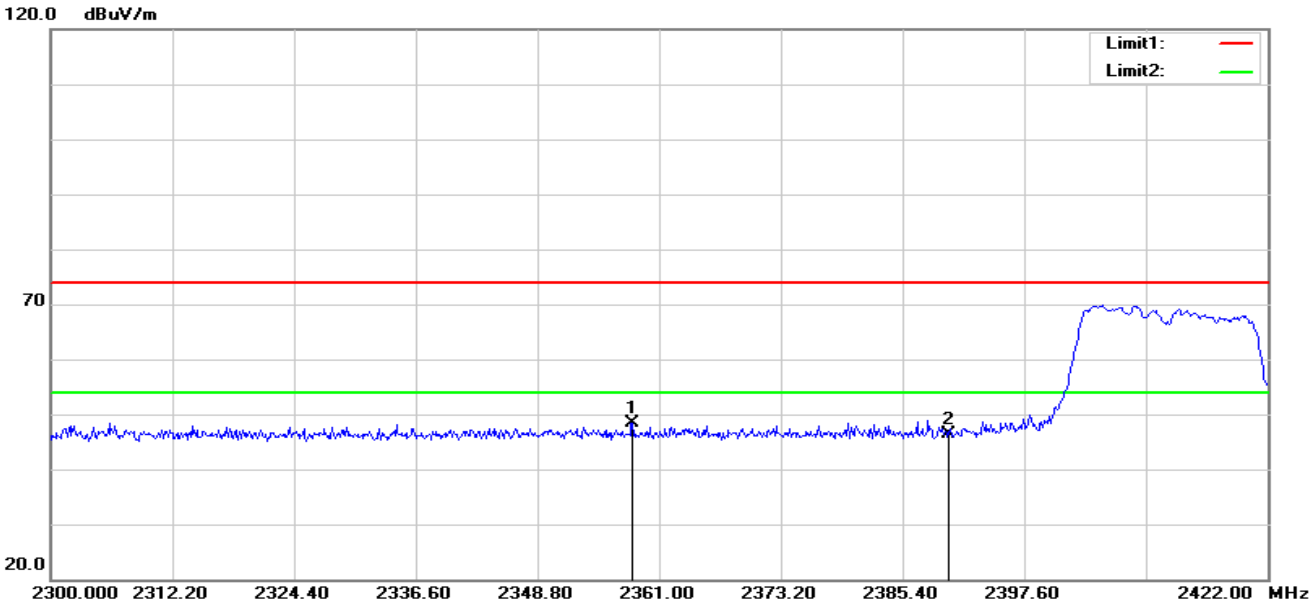
Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	57.07	-10.29	46.78	74.00	-27.22	peak
2	2512.270	58.48	-10.18	48.30	74.00	-25.70	peak

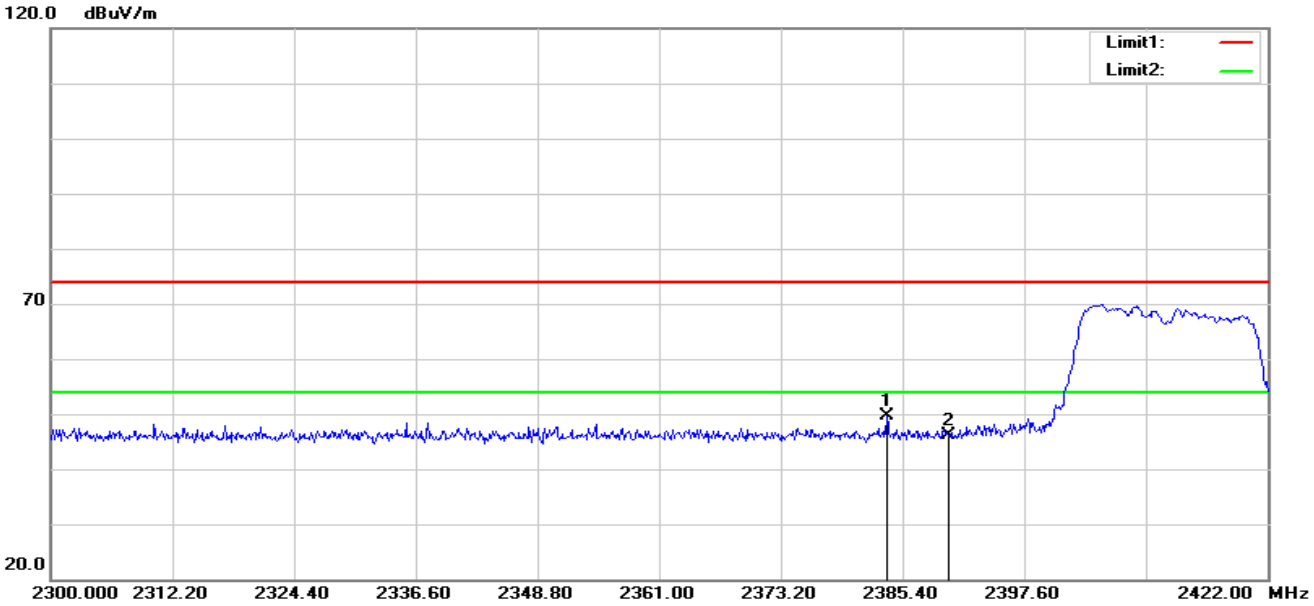
802.11 n(HT20)-Low

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2358.316	59.35	-10.96	48.39	74.00	-25.61	peak
2	2390.000	57.18	-10.75	46.43	74.00	-27.57	peak

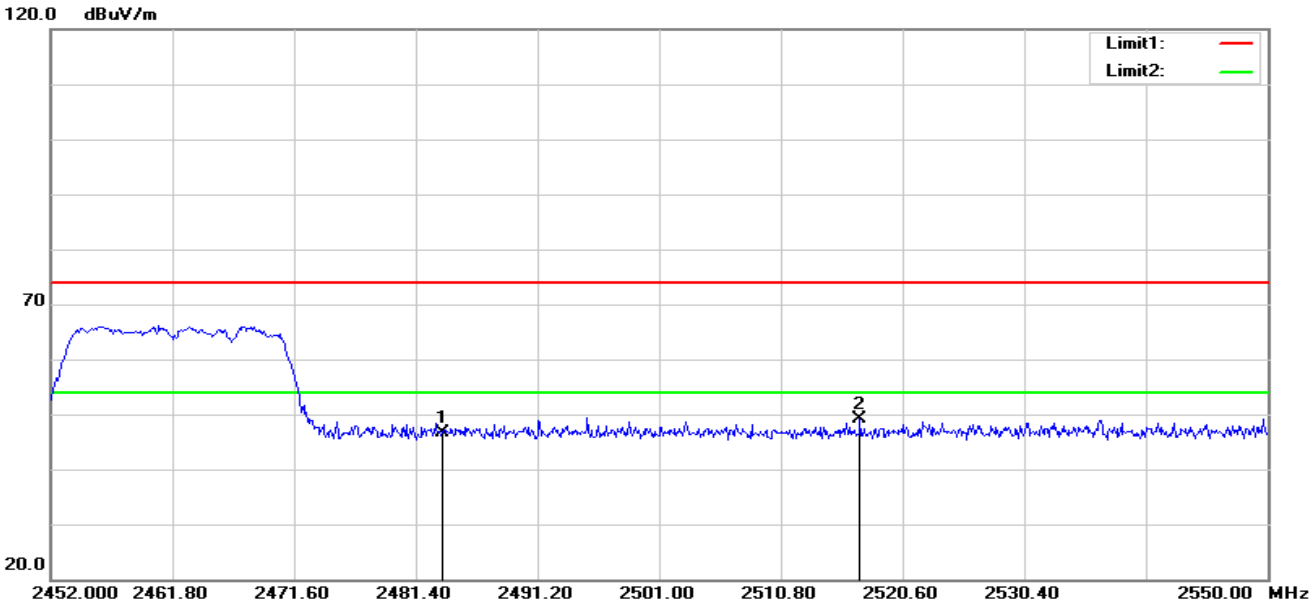
Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2383.814	60.39	-10.80	49.59	74.00	-24.41	peak
2	2390.000	56.95	-10.75	46.20	74.00	-27.80	peak

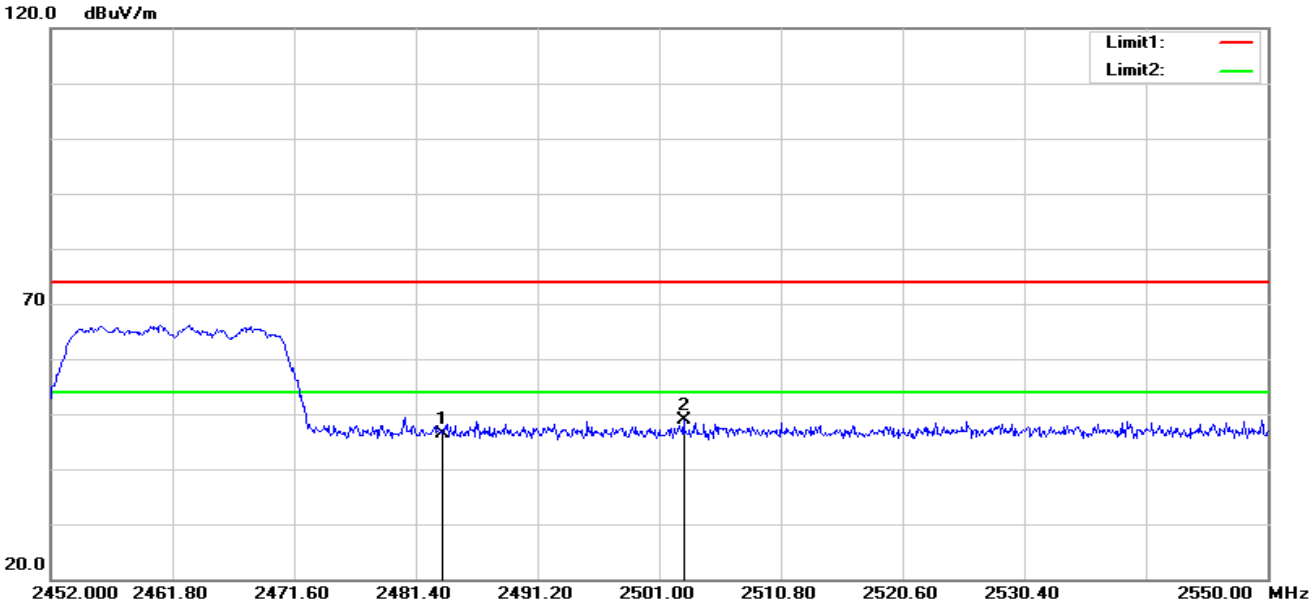
802.11 n(HT20)-High

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	57.02	-10.29	46.73	74.00	-27.27	peak
2	2517.170	59.36	-10.16	49.20	74.00	-24.80	peak

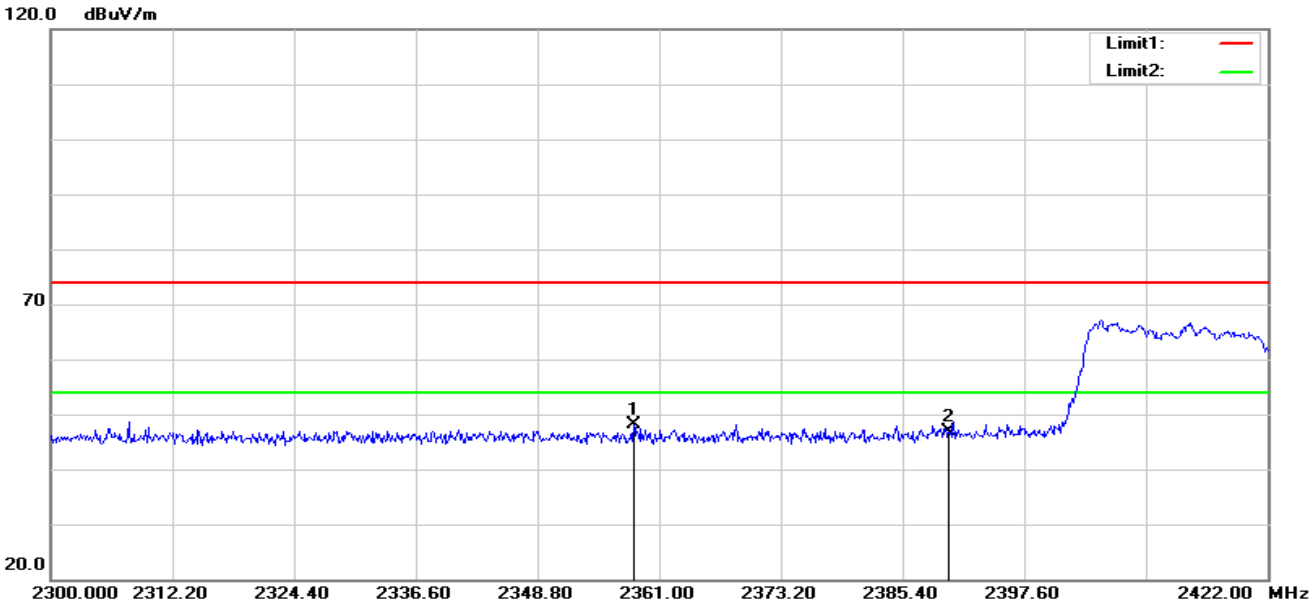
Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	56.78	-10.29	46.49	74.00	-27.51	peak
2	2502.960	58.98	-10.21	48.77	74.00	-25.23	peak

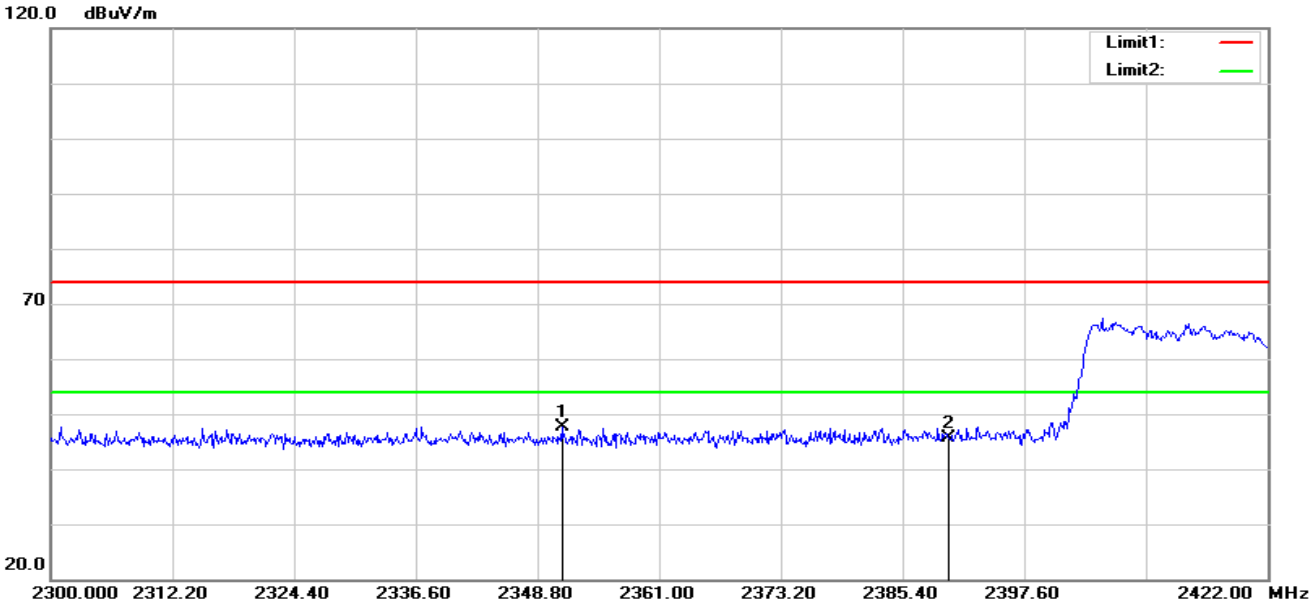
802.11 n(HT40)-Low

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2358.438	59.13	-10.96	48.17	74.00	-25.83	peak
2	2390.000	57.57	-10.75	46.82	74.00	-27.18	peak

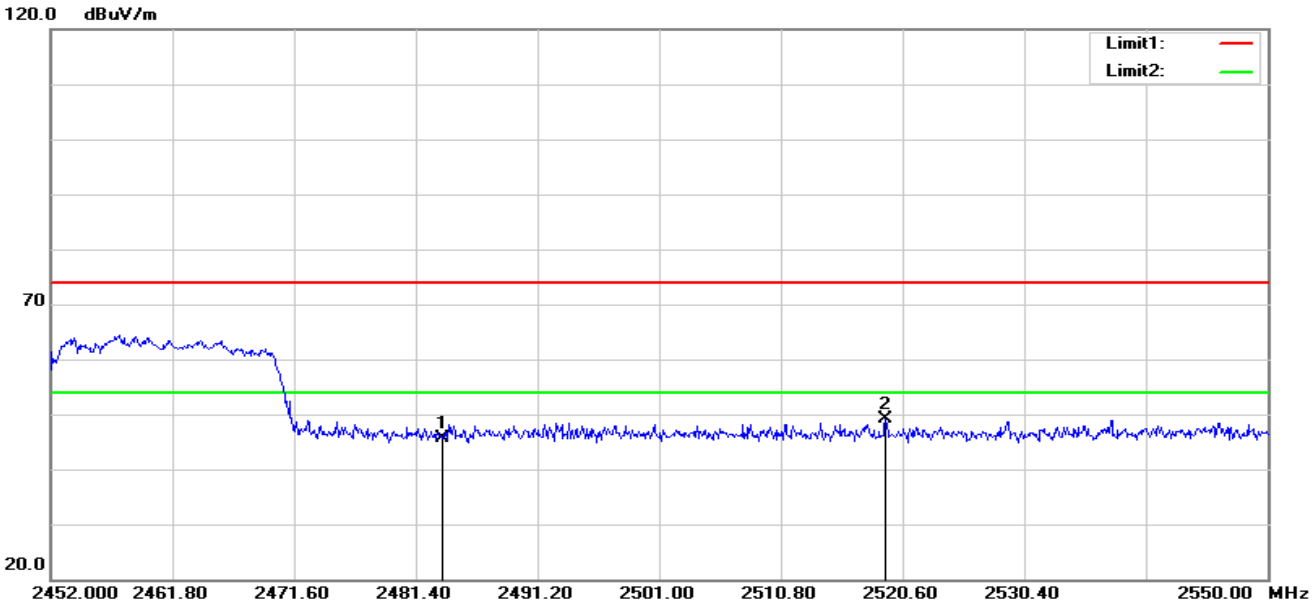
Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2351.240	58.65	-11.01	47.64	74.00	-26.36	peak
2	2390.000	56.30	-10.75	45.55	74.00	-28.45	peak

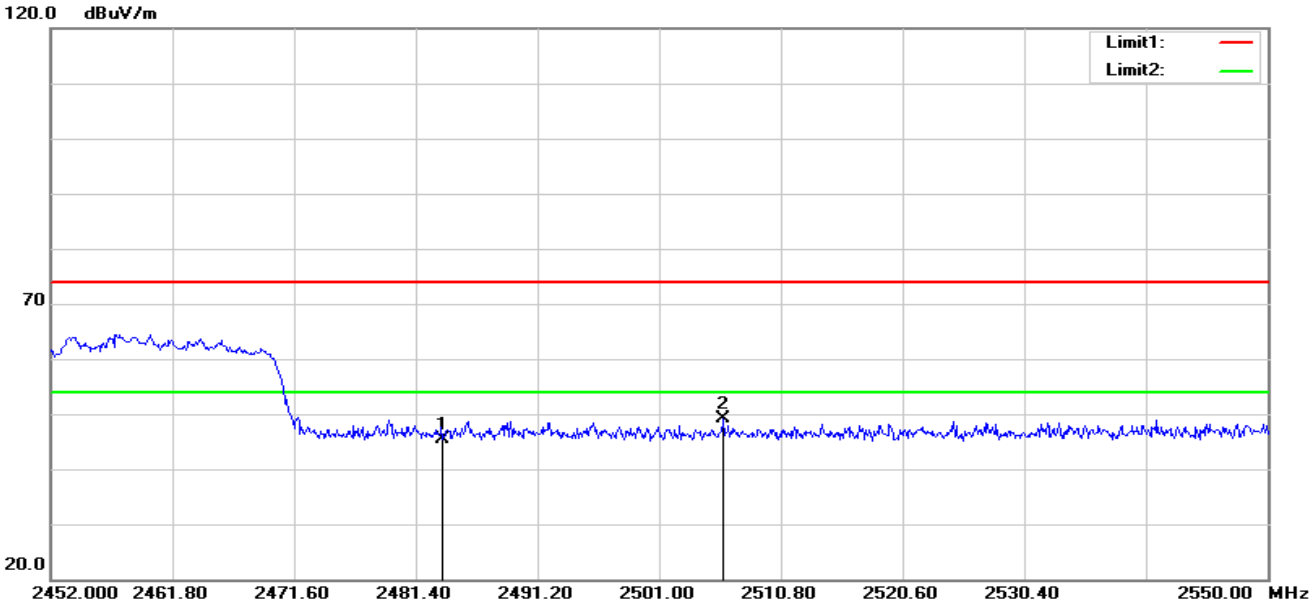
802.11 n(HT40)-High

Horizontal



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	55.91	-10.29	45.62	74.00	-28.38	peak
2	2519.228	59.40	-10.16	49.24	74.00	-24.76	peak

Vertical



No.	Frequency	Reading	Correct	Result	Limit	Margin	Remark
	(MHz)	(dBuV)	Factor(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	
1	2483.500	55.63	-10.29	45.34	74.00	-28.66	peak
2	2506.194	59.38	-10.19	49.19	74.00	-24.81	peak

4 CONDUCTED SPURIOUS & BAND EDGE EMISSION

4.1 LIMIT

According to FCC Part 15.247(d)and RSS-247 Clause 5.5, in any 100kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

4.2 TEST PROCEDURE

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	30 MHz to 10th carrier harmonic
RB / VB (emission in restricted band)	100 KHz/300 KHz
Trace-Mode:	Max hold

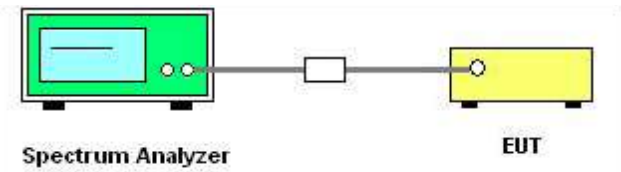
For Band edge

Spectrum Parameter	Setting
Detector	Peak
Start/Stop Frequency	Lower Band Edge: 2300 to 2422 MHz Upper Band Edge: 2452to 2500 MHz
RB / VB (emission in restricted band)	100 KHz/300 KHz
Trace-Mode:	Max hold

4.3 DEVIATION FROM STANDARD

No deviation.

4.4 TEST SETUP



The EUT which is powered by the Battery, is coupled to the Spectrum Analyzer; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading.
Make the measurement with the spectrum analyzer's resolution bandwidth (RBW) = 100 kHz. In order to make an accurate measurement, set the span greater than RBW.

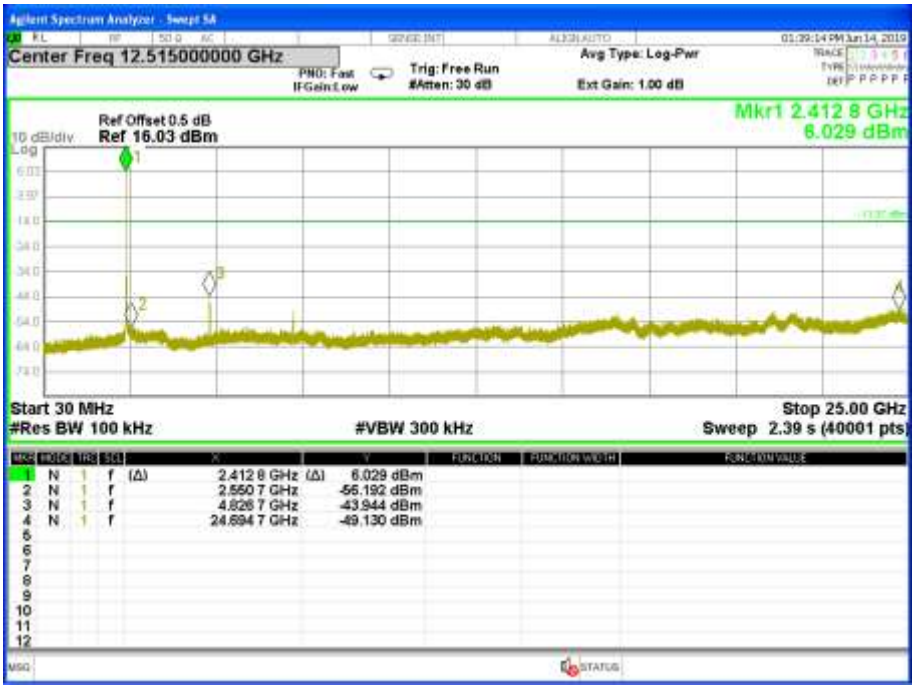
4.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

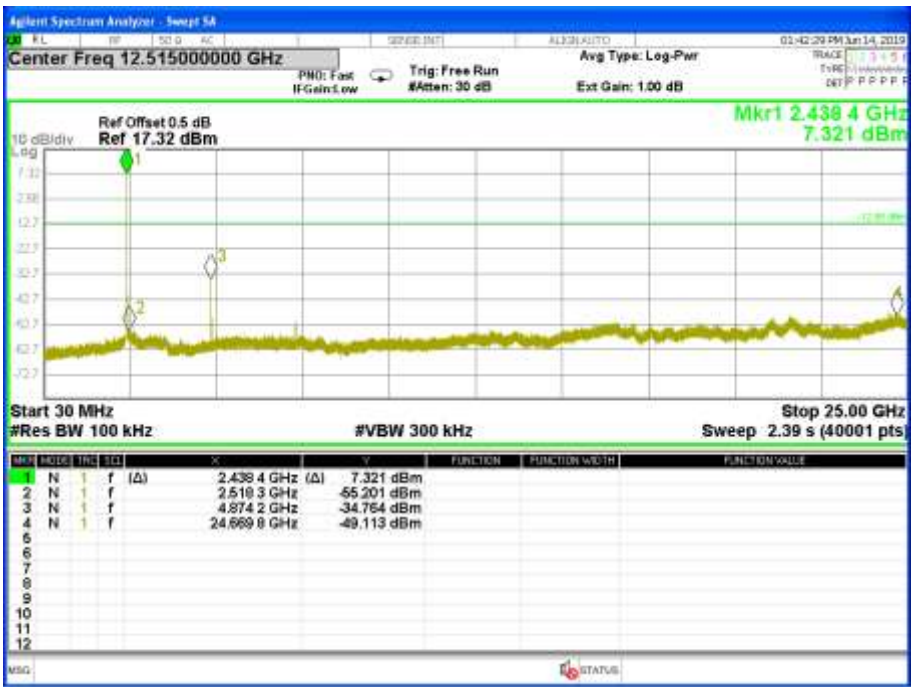
4.6 TEST RESULTS

Temperature：	25℃	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Test Mode ：	TX b Mode /CH01, CH06, CH11

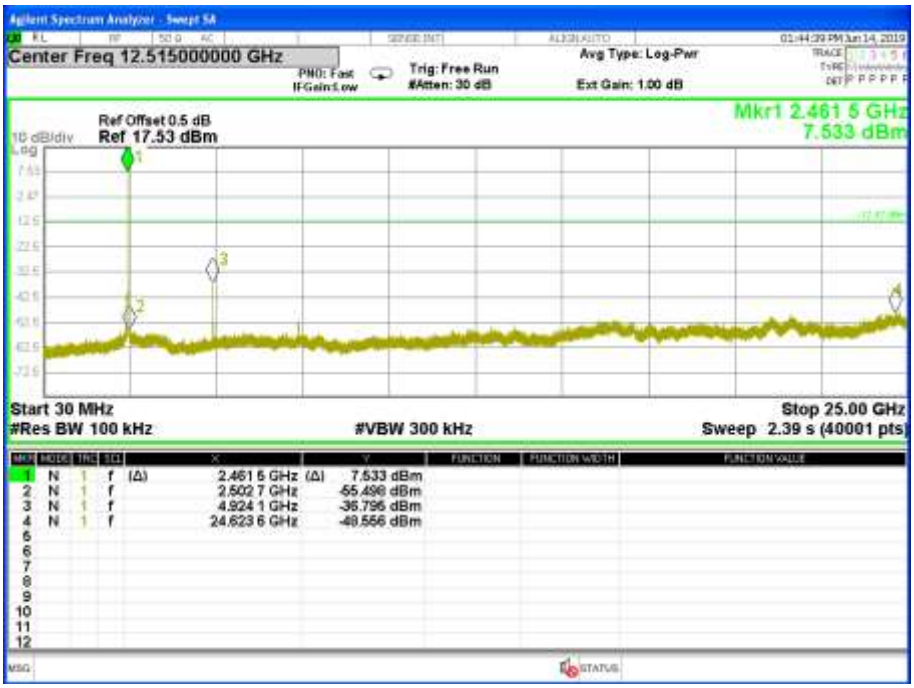
CH 01



CH 06

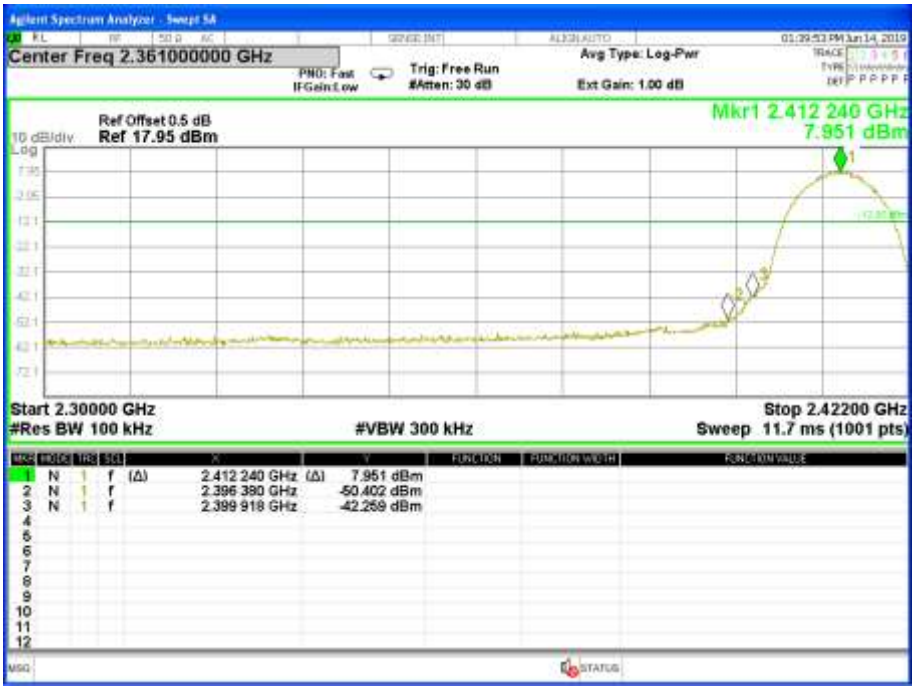


CH 11

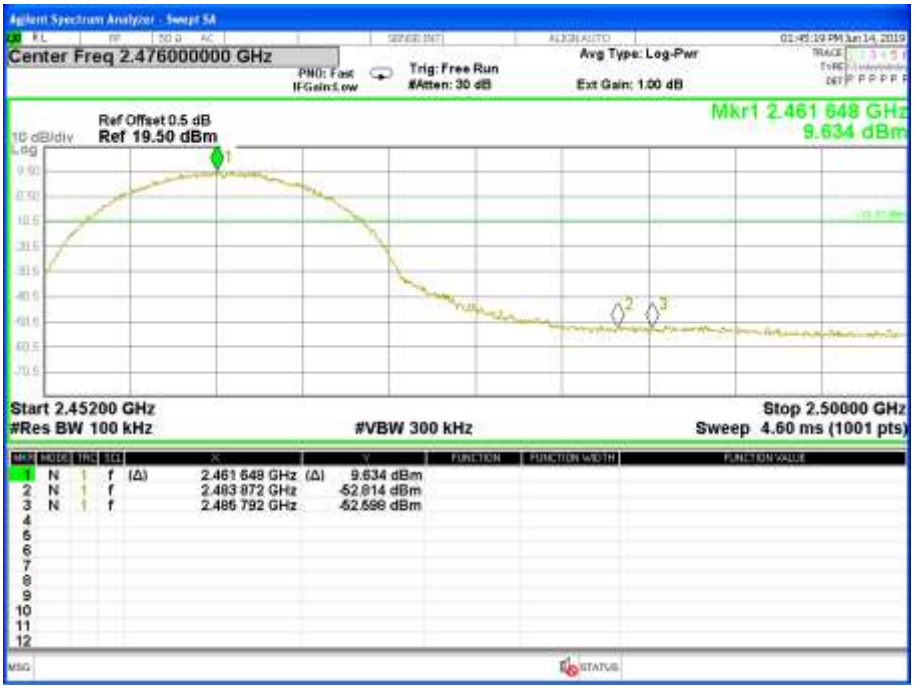

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Ext Gain: 1.00 dB
Ref Offset 0.5 dB
10 dB/div
Ref 17.53 dBm
Mkr1 2.461 5 GHz
7.533 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.39 s (40001 pts)
1 N 1 f (Δ) 2.461 5 GHz 7.533 dBm
2 N 1 f 2.502 7 GHz -55.498 dBm
3 N 1 f 4.924 1 GHz -36.796 dBm
4 N 1 f 24.623 6 GHz -49.556 dBm

Band edge

CH 01



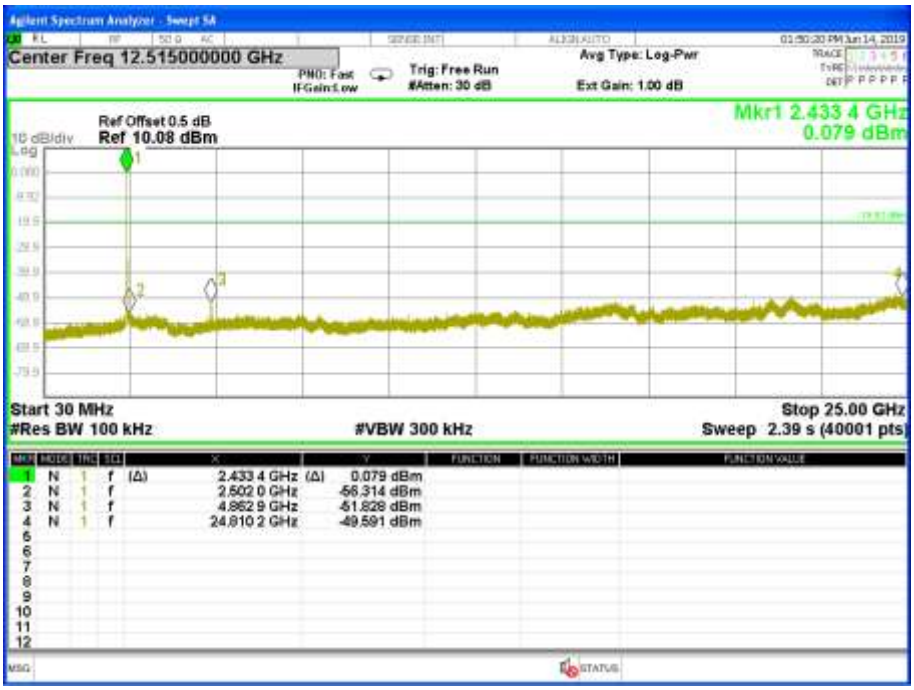
CH 11



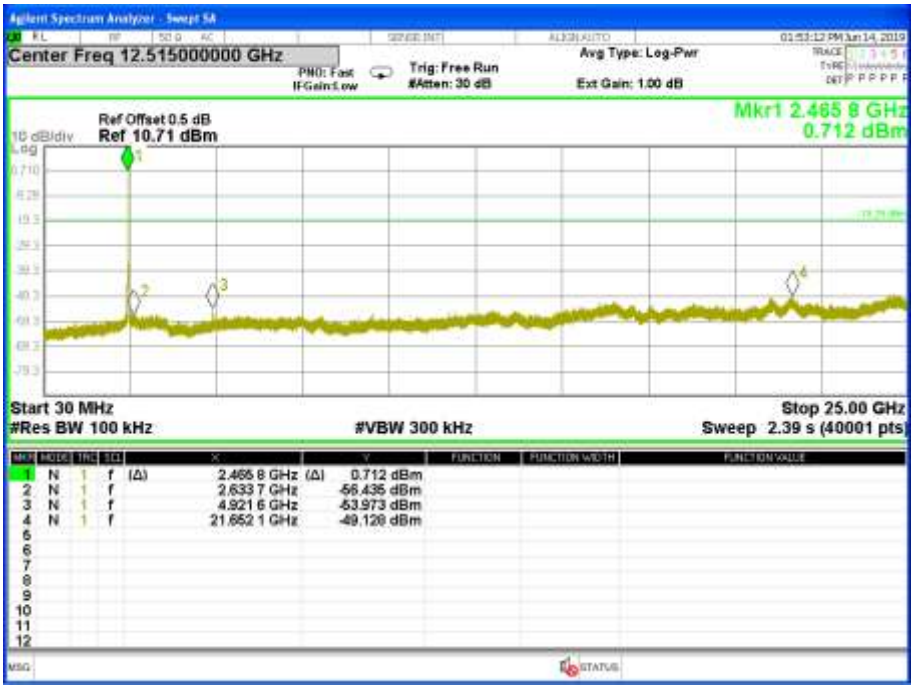
Temperature：	25℃	Relative Humidity：	60%
Test Voltage：	AC 120V/60Hz	Test Mode ：	TX g Mode /CH01, CH06, CH11

CH 01

CH06

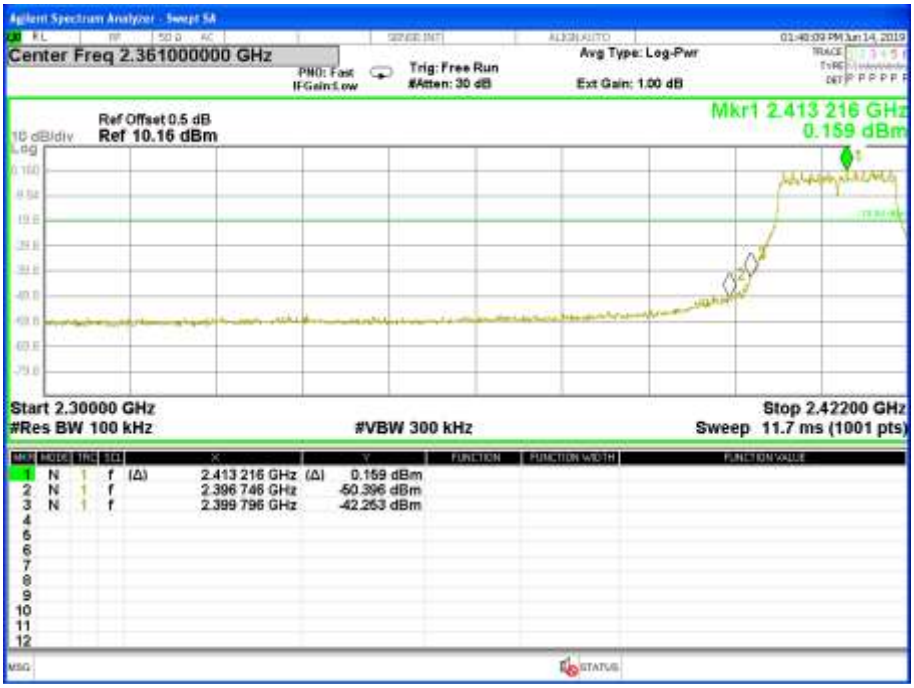


CH 11

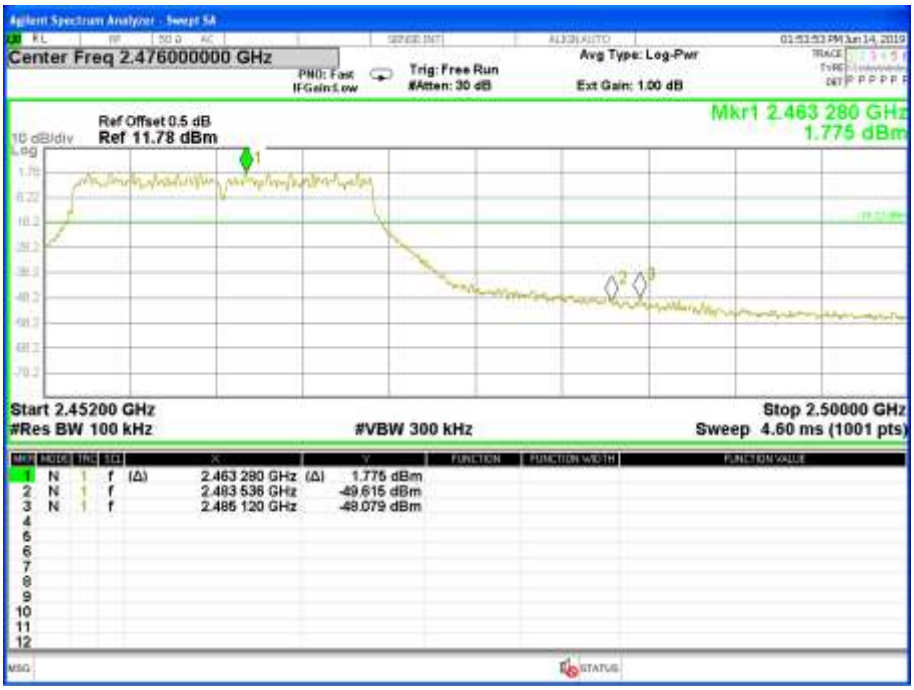

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Ext Gain: 1.00 dB
Ref Offset 0.5 dB
10 dB/div
Ref 10.71 dBm
Mkr1 2.465 8 GHz
0.712 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.39 s (40001 pts)
1 N 1 f (Δ) 2.465 8 GHz (Δ) 0.712 dBm
2 N 1 f 2.633 7 GHz -56.436 dBm
3 N 1 f 4.921 6 GHz -53.973 dBm
4 N 1 f 21.652 1 GHz -49.128 dBm

Band edge

CH 01

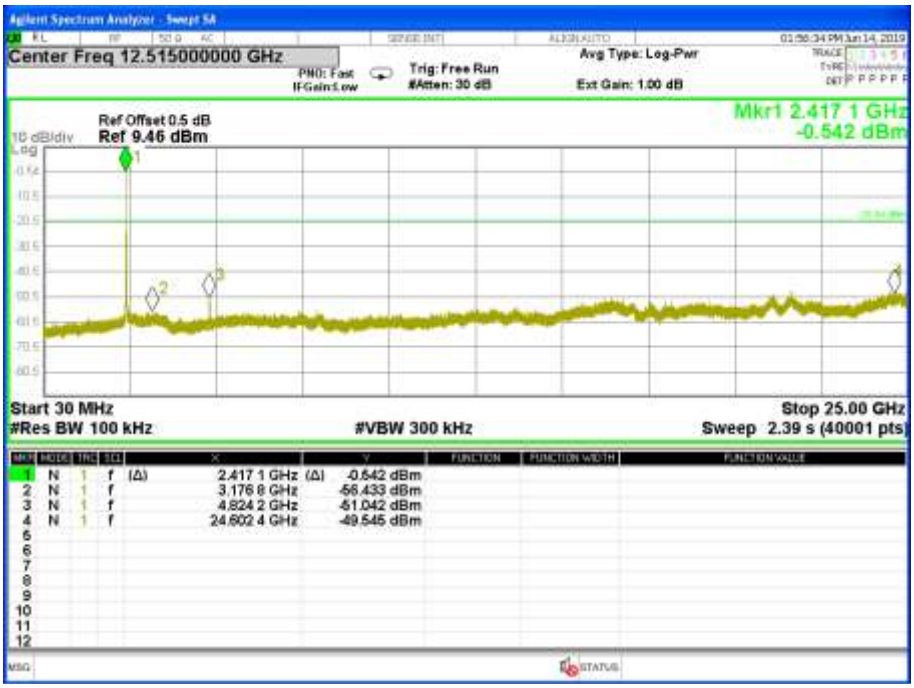


CH11



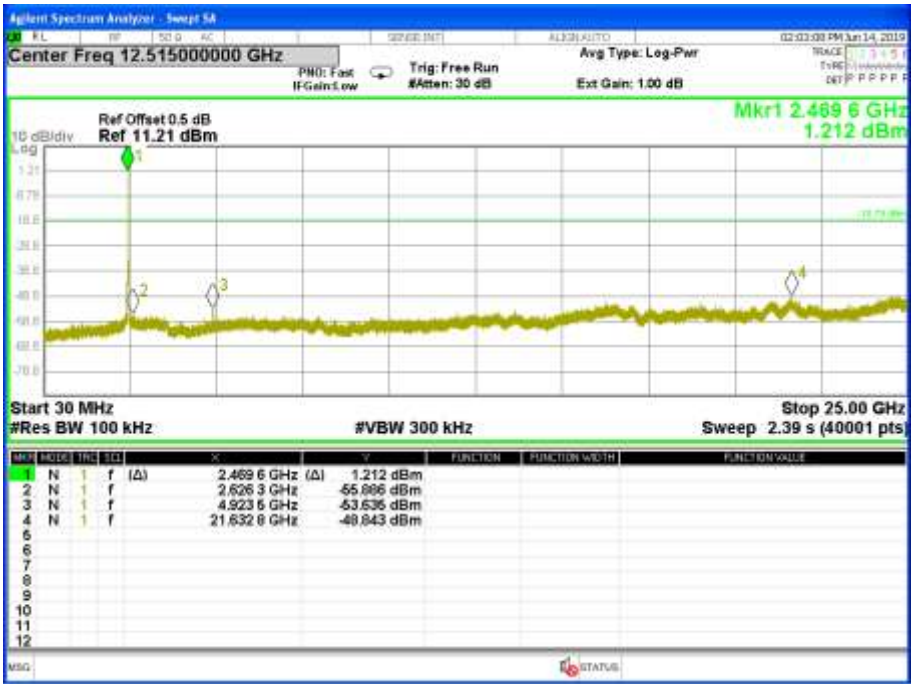
Temperature :	25℃	Relative Humidity :	60%
Test Voltage :	AC 120V/60Hz	Test Mode :	TX n(HT20) Mode /CH01, CH06, CH11

CH 01



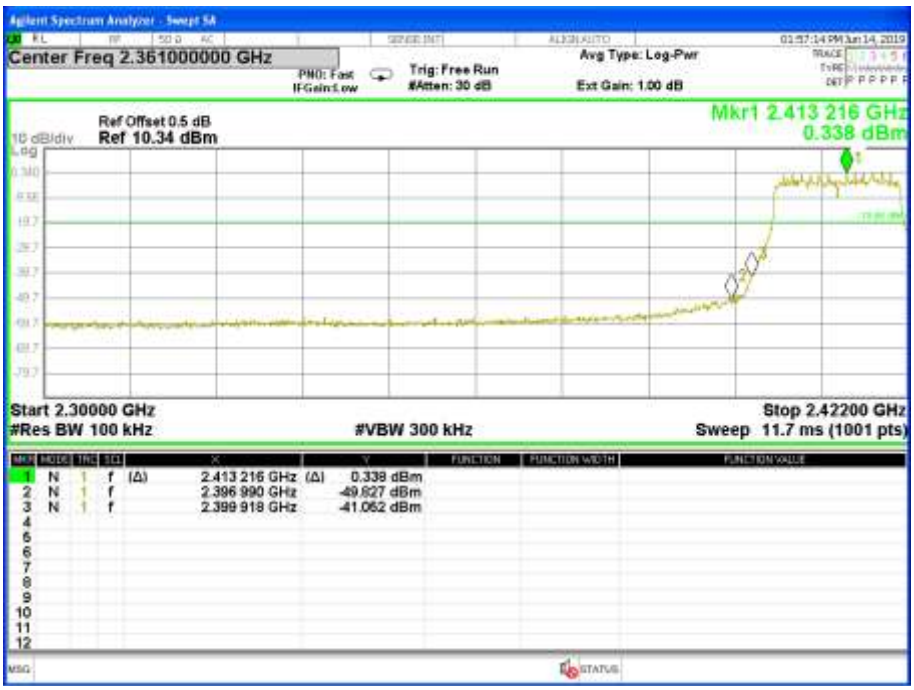
CH 06

CH 11

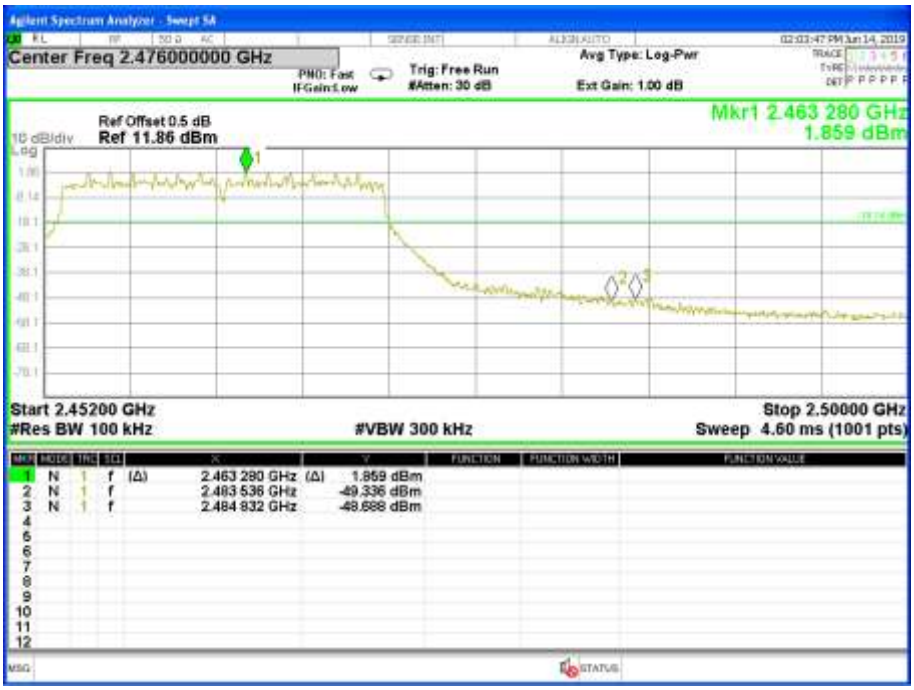

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Ext Gain: 1.00 dB
Ref Offset 0.5 dB
10 dB/div
Ref 11.21 dBm
Mkr1 2.469 6 GHz
1.212 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.39 s (40001 pts)
1 N 1 f (Δ) 2.469 6 GHz (Δ) 1.212 dBm
2 N 1 f 2.626 3 GHz -55.886 dBm
3 N 1 f 4.923 5 GHz -53.635 dBm
4 N 1 f 21.632 8 GHz -48.843 dBm

Band edge

CH 01

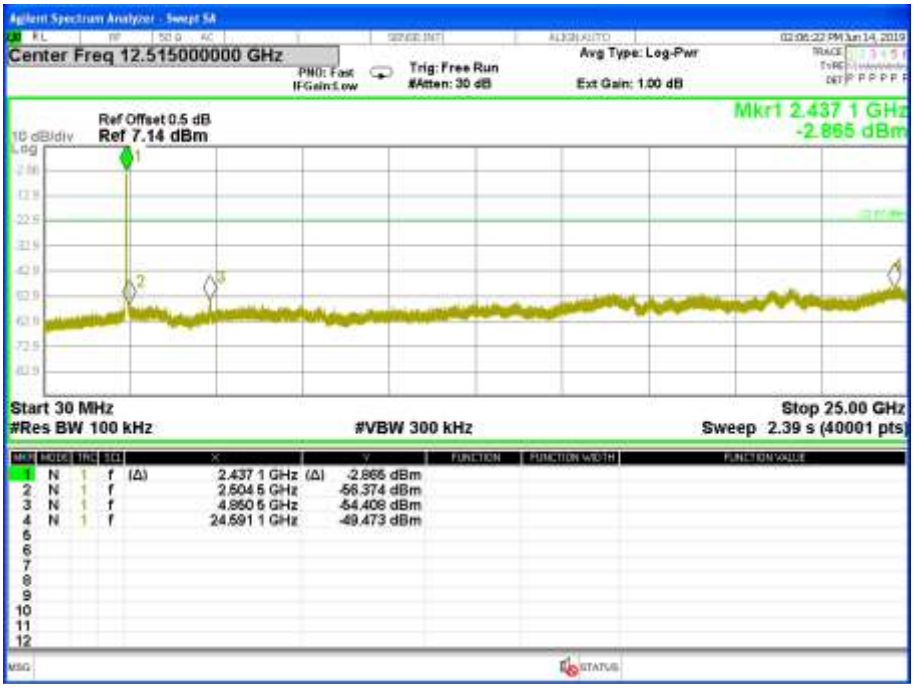


CH 11

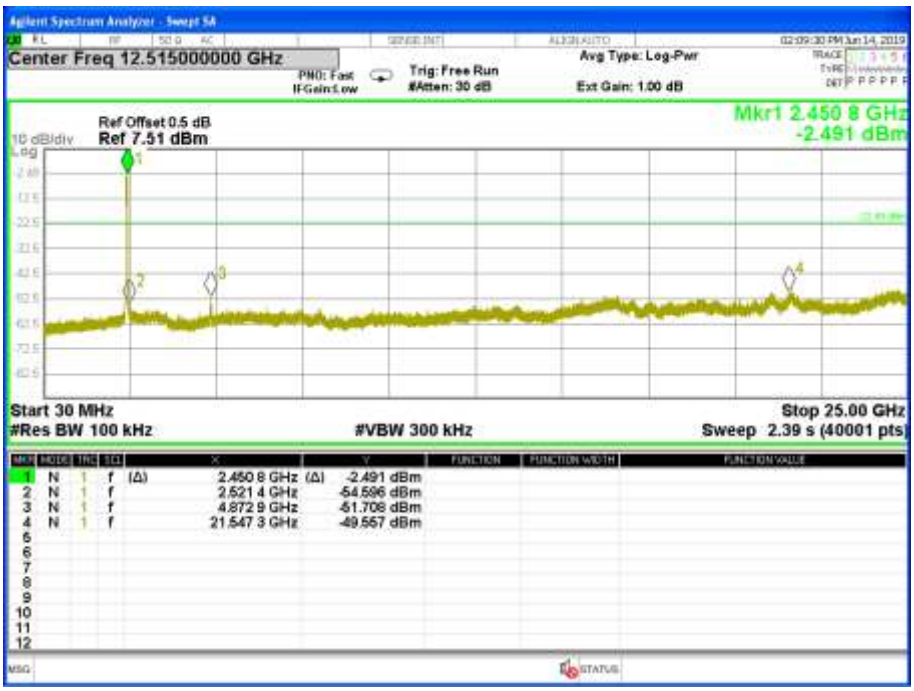


Temperature:	25 ℃	Relative Humidity:	60%
Test Voltage:	AC 120V/60Hz	Test Mode:	TX n(HT40) Mode /CH03, CH06, CH09

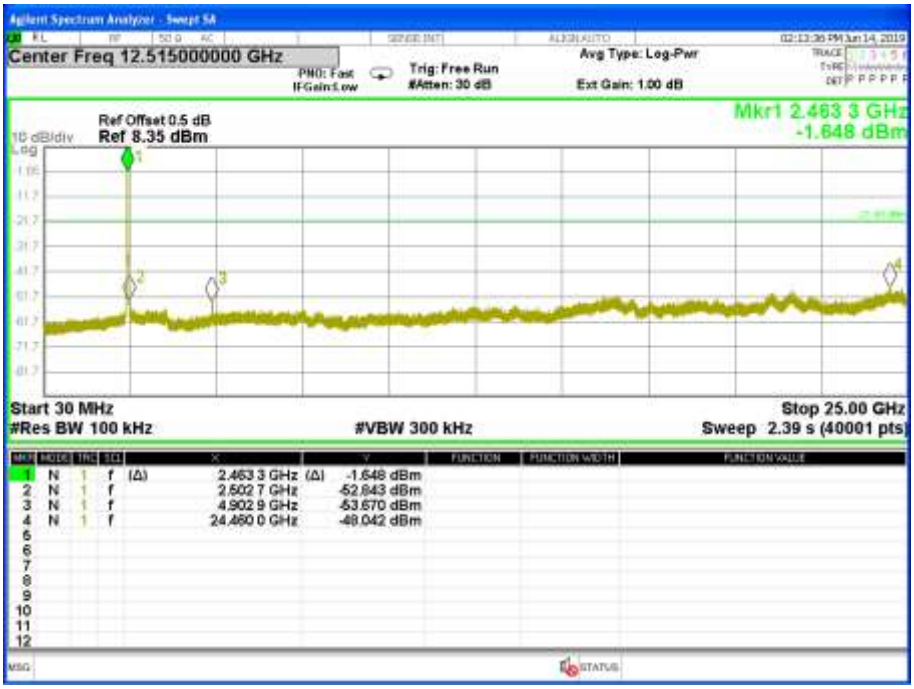
CH 03



CH06

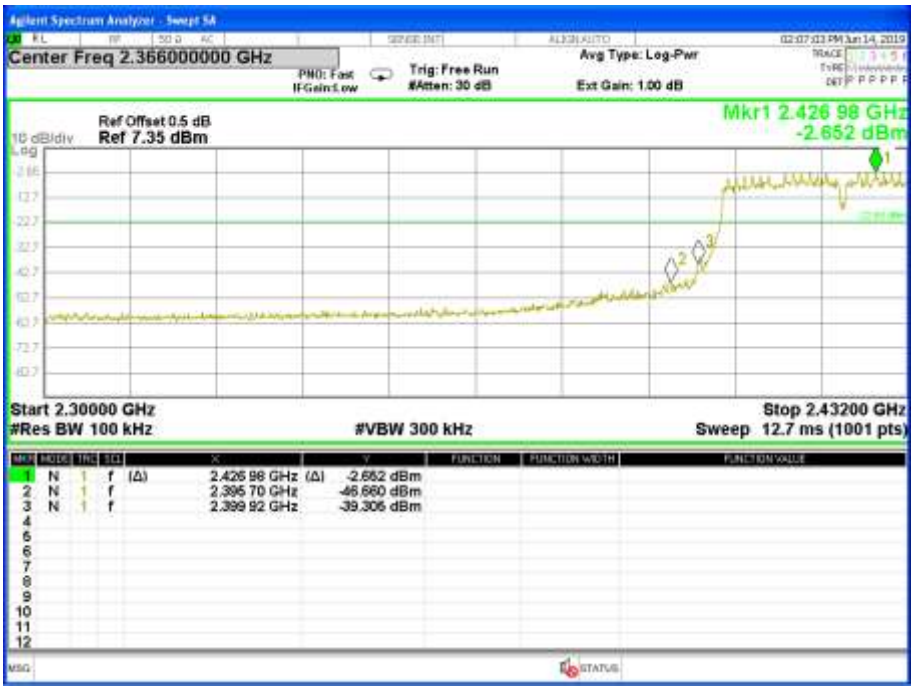


CH09

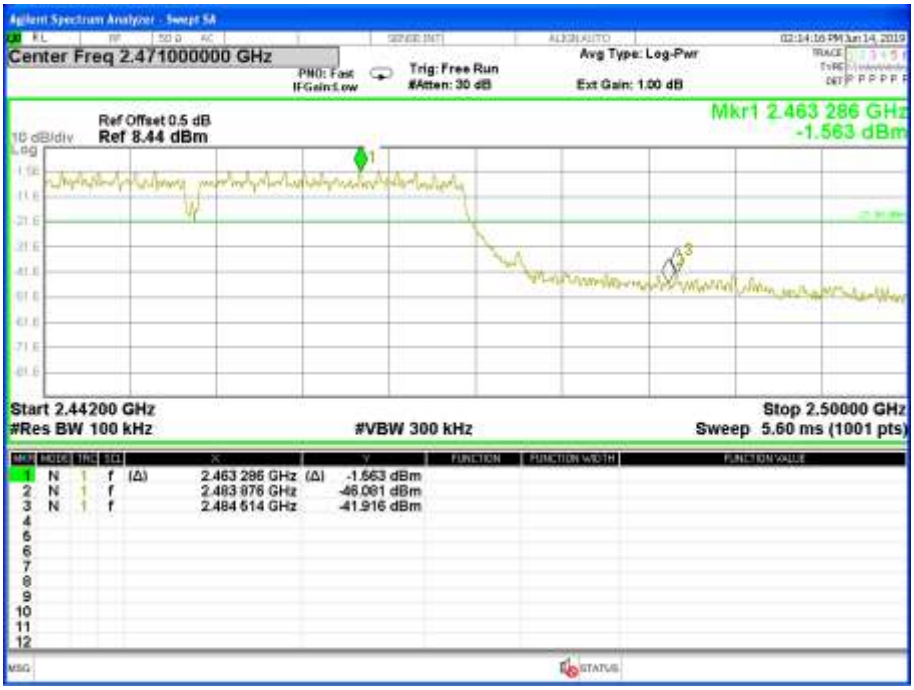

Agilent Spectrum Analyzer - Swept SA
Center Freq 12.515000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 30 dB
Avg Type: Log-Pwr
Ext Gain: 1.00 dB
Ref Offset 0.5 dB
10 dB/div
Ref 8.35 dBm
Mkr1 2.463 3 GHz
-1.648 dBm
Start 30 MHz
#Res BW 100 kHz
#VBW 300 kHz
Stop 25.00 GHz
Sweep 2.39 s (40001 pts)
1 N 1 f (Δ) 2.463 3 GHz (Δ) -1.648 dBm
2 N 1 f 2.502 7 GHz -52.843 dBm
3 N 1 f 4.902 9 GHz -53.670 dBm
4 N 1 f 24.460 0 GHz -48.042 dBm

Band edge

CH03



CH 09



5 POWER SPECTRAL DENSITY TEST

5.1 LIMIT

FCC Part15.247,Subpart C RSS-247 Issue 2				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(e) RSS-247 Clause 5.2(b)	Power Spectral Density	≤8 dBm (RBW ≥3KHz)	2400-2483.5	PASS

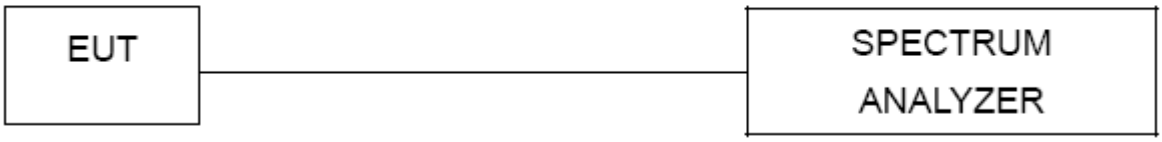
5.2 TEST PROCEDURE

1) Set analyzer center frequency to DTS channel center frequency.
2) Set the span to 1.5 times the DTS channel bandwidth.
3) Set the 100 kHz ≥ RBW ≥3 kHz.
4) Set the VBW ≥ 3 x RBW.
5) Detector = peak.
6) Sweep time = auto couple.
7) Trace mode = max hold.
8) Allow trace to fully stabilize.
9) Use the peak marker function to determine the maximum amplitude level.
10) If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

5.3 DEVIATION FROM STANDARD

No deviation.

5.4 TEST SETUP



5.5 EUT OPERATION CONDITIONS

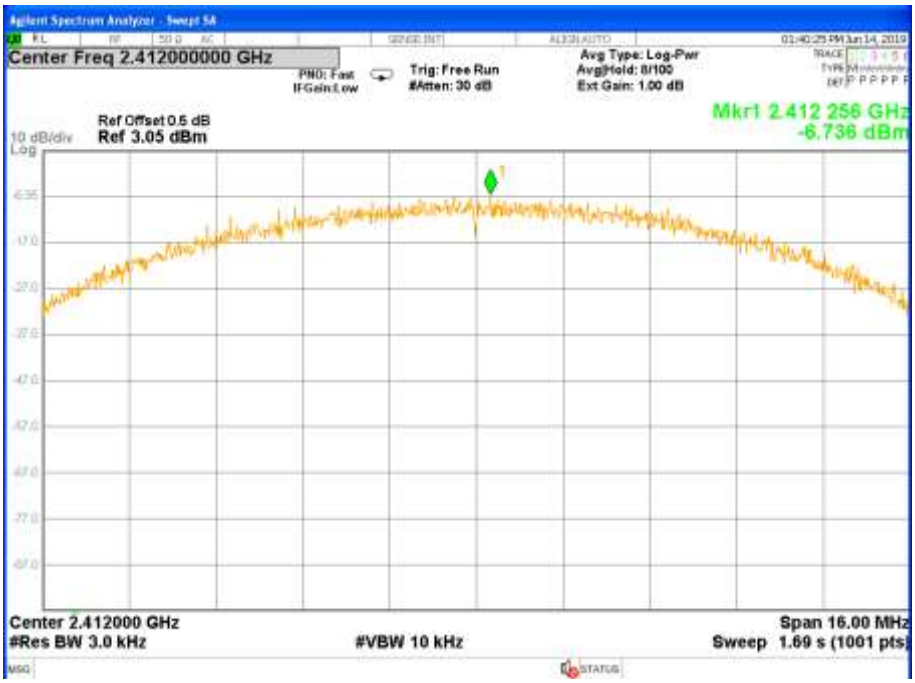
The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

5.6 TEST RESULTS

Temperature:	25℃	Relative Humidity:	60%
Test Voltage:	AC 120V/60Hz	Test Mode:	TX b Mode /CH01, CH06, CH11

Test Mode	Frequency (MHz)	Power Density (dBm/3kHz)	Limit (dBm/3KHz)	Result
b mode (1 Mbps)	2412.00	-6.736	≤ 8.00	PASS
	2437.00	-6.478	≤ 8.00	PASS
	2462.00	-5.982	≤ 8.00	PASS

TX CH01



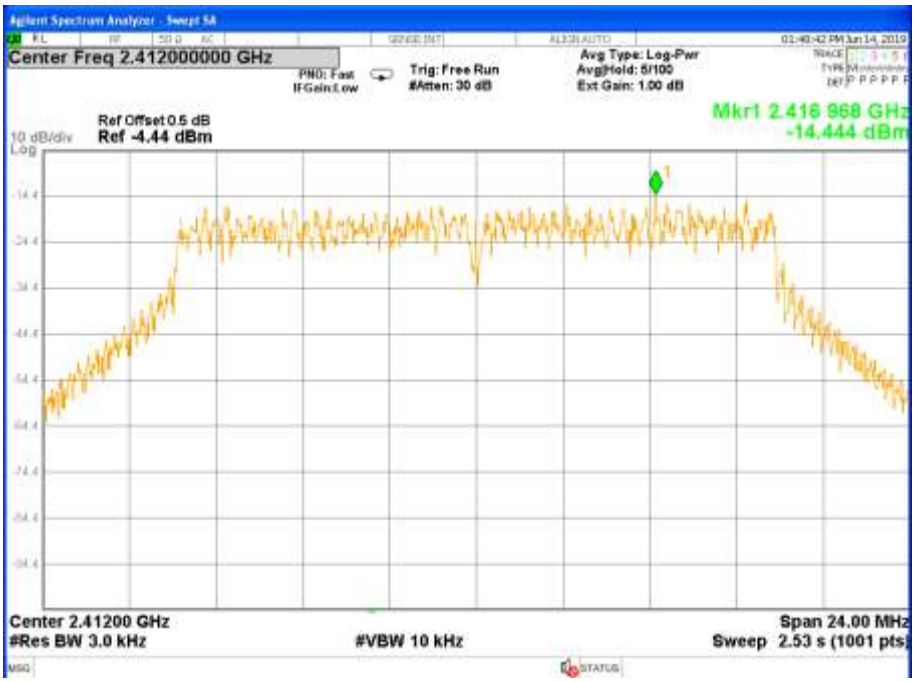
TX CH06

TX CH11

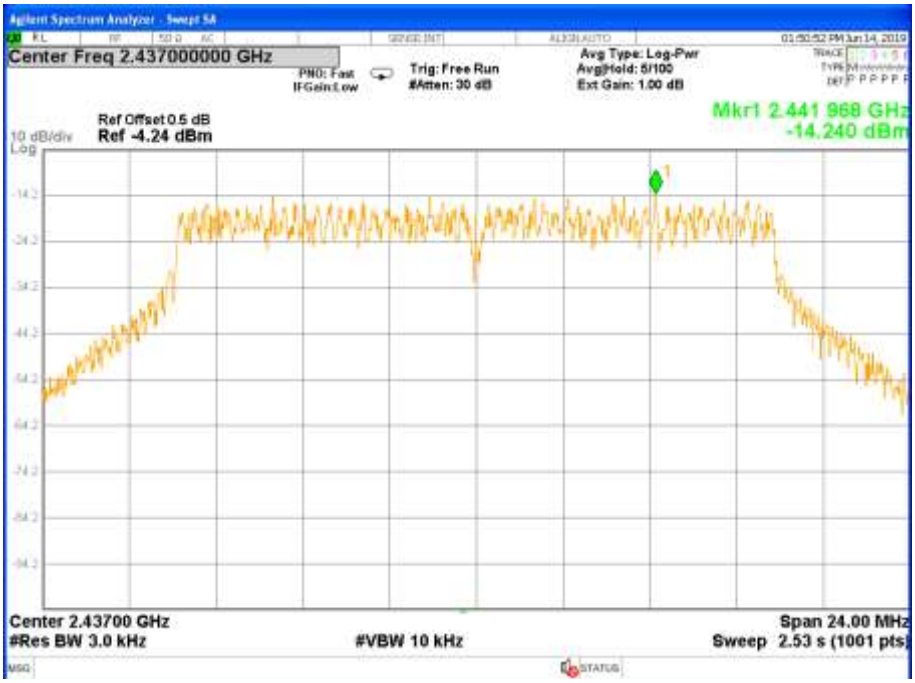
Temperature:	25℃	Relative Humidity:	60%
Test Voltage:	AC 120V/60Hz	Test Mode:	TX g Mode /CH01, CH06, CH11

Test Mode	Frequency (MHz)	Power Density (dBm/3kHz)	Limit (dBm/3KHz)	Result
g mode (6 Mbps)	2412.00	-14.444	≤ 8.00	PASS
	2437.00	-14.240	≤ 8.00	PASS
	2462.00	-12.924	≤ 8.00	PASS

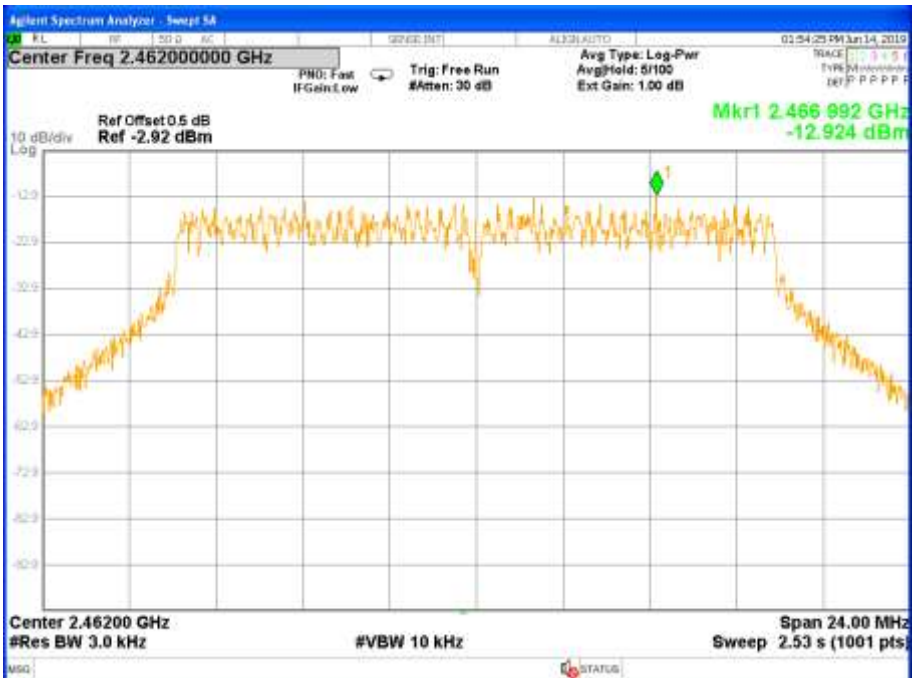
TX CH01



TX CH06



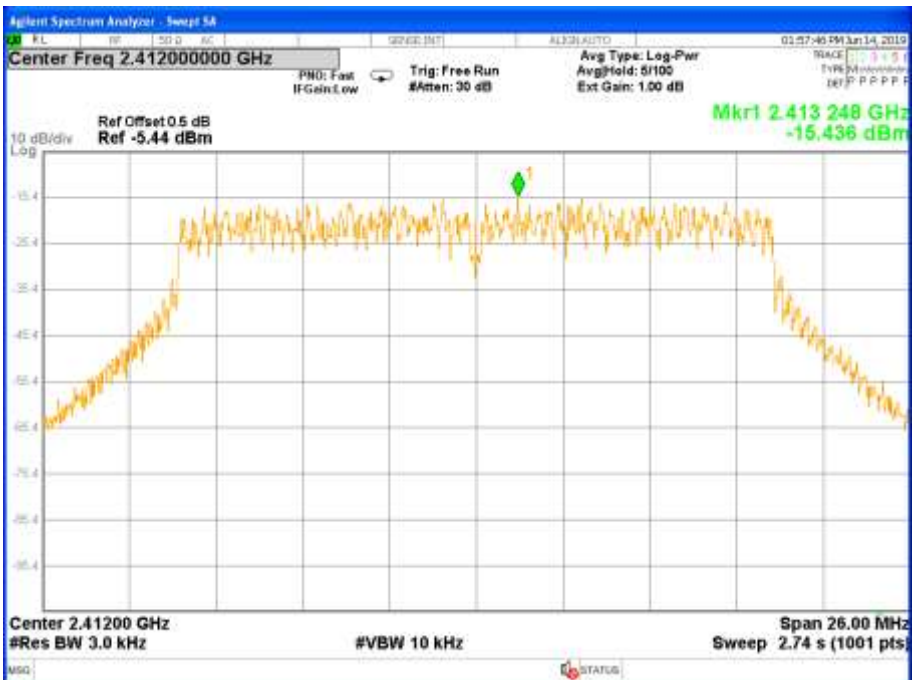
TX CH11



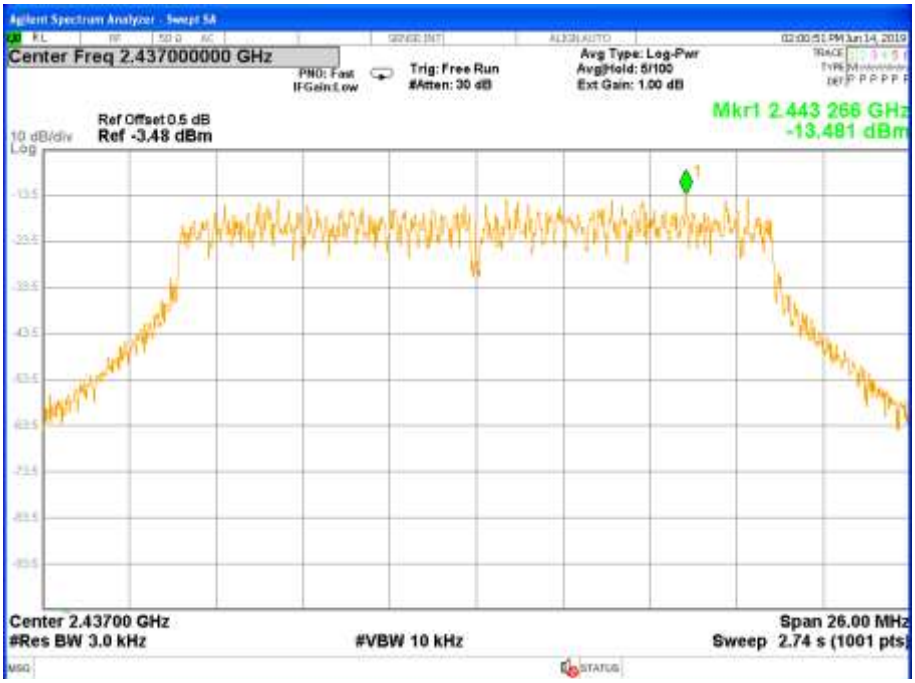
Temperature:	25℃	Relative Humidity:	60%
Test Voltage:	AC 120V/60Hz	Test Mode:	TX n(HT20) Mode /CH01, CH06, CH11

Test Mode	Frequency (MHz)	Power Density (dBm/3kHz)	Limit (dBm/3KHz)	Result
n(HT20) mode (MCS0)	2412.00	-15.436	≤ 8.00	PASS
	2437.00	-13.481	≤ 8.00	PASS
	2462.00	-14.245	≤ 8.00	PASS

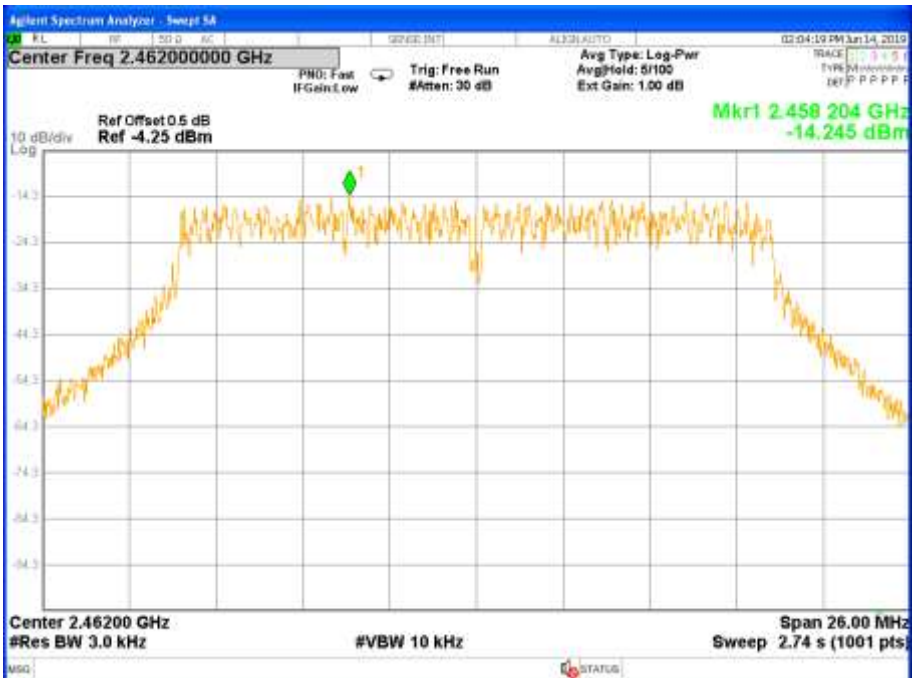
TX CH01



TX CH06



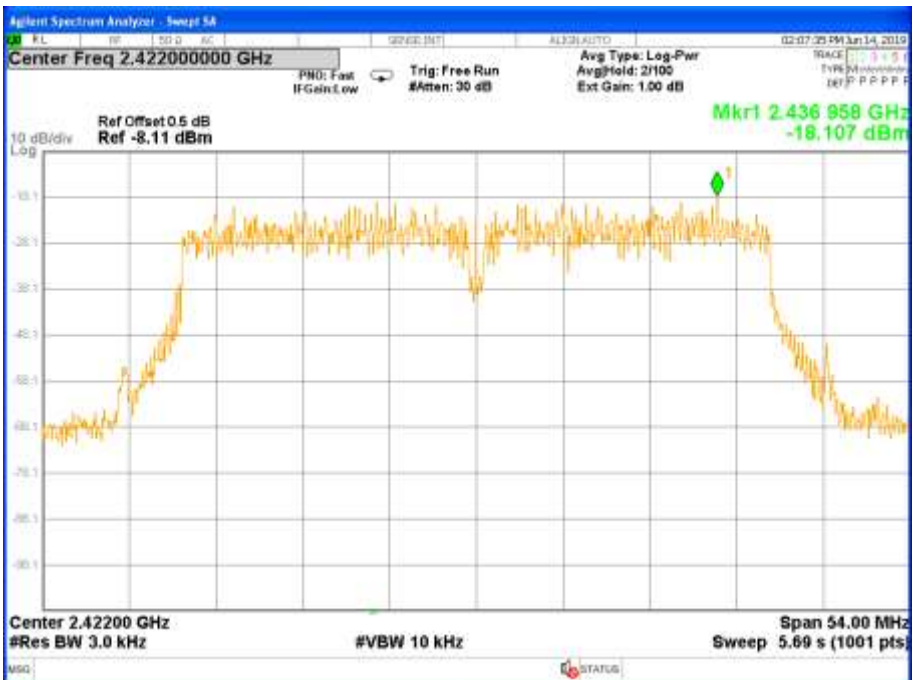
TX CH11



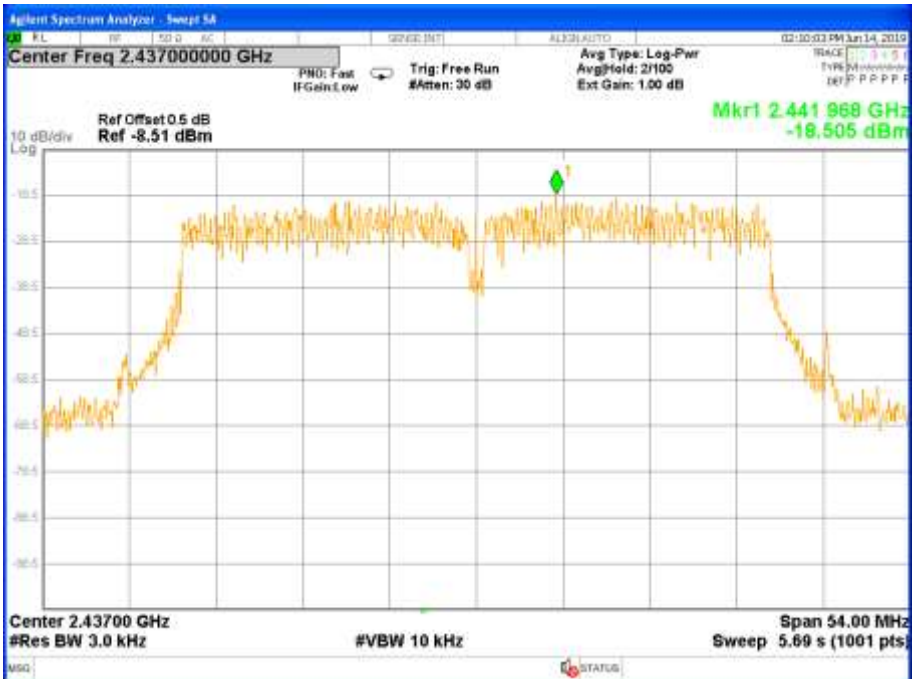
Temperature:	25℃	Relative Humidity:	60%
Test Voltage:	AC 120V/60Hz	Test Mode:	TX n(HT40) Mode /CH03, CH06, CH09

Test Mode	Frequency (MHz)	Power Density (dBm/3kHz)	Limit (dBm/3KHz)	Result
n(HT40) mode (MCS0)	2422.00	-18.107	≤ 8.00	PASS
	2437.00	-18.505	≤ 8.00	PASS
	2452.00	-16.708	≤ 8.00	PASS

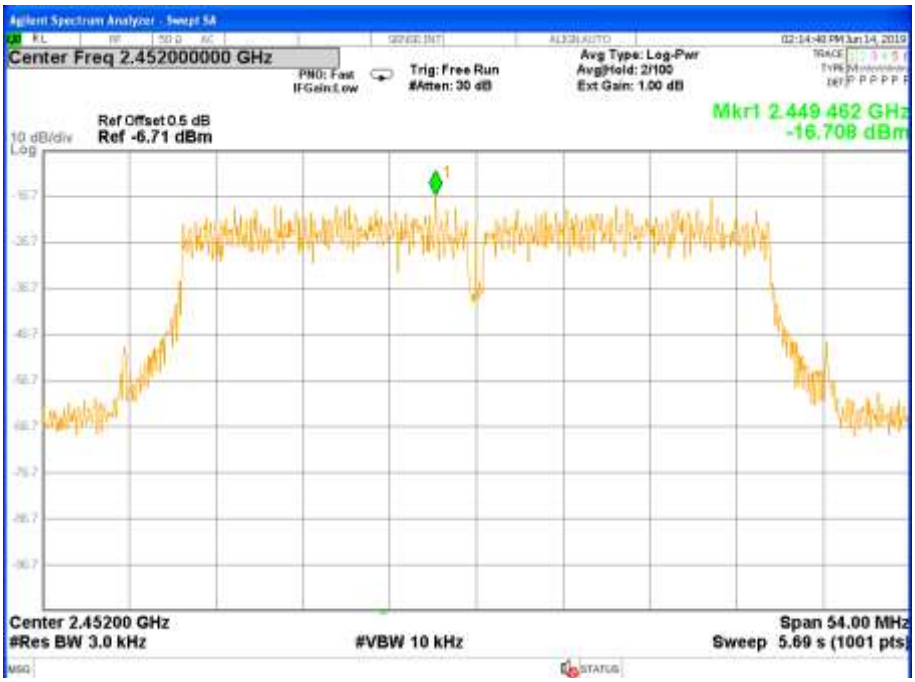
TX CH03



TX CH06



TX CH09



6 BANDWIDTH TEST

6.1 LIMIT

FCC Part15.247,Subpart C RSS-247 Issue 2 & RSS-Gen Issue 5				
Section	**Test Item**	**Limit**	**Frequency Range (MHz)**	**Result**
15.247(a)(2) RSS-247 Clause 5.2(a)	6dB Bandwidth	≥500KHz	2400-2483.5	PASS
RSS-Gen Clause 6.7	99%Bandwidth	-	2400-2483.5	PASS

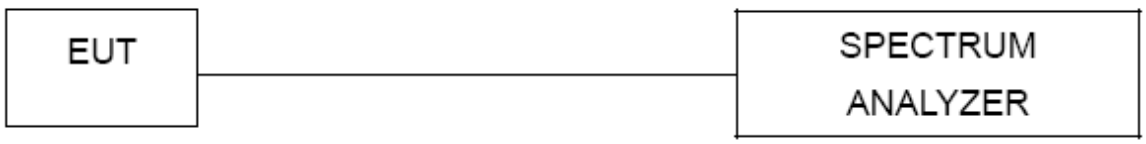
6.2 TEST PROCEDURE

The automatic bandwidth measurement capability of an instrument may be employed using the X dB bandwidth mode with X set to 6 dB, if the functionality described above (i.e., RBW = 100 kHz, VBW≥3RBW, peak detector with maximum hold) is implemented by the instrumentation function. When using this capability, care shall be taken so that the bandwidth measurement is not influenced by any intermediate power nulls in the fundamental emission that might be ≥6 dB.

6.3 DEVIATION FROM STANDARD

No deviation.

6.4 TEST SETUP



6.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

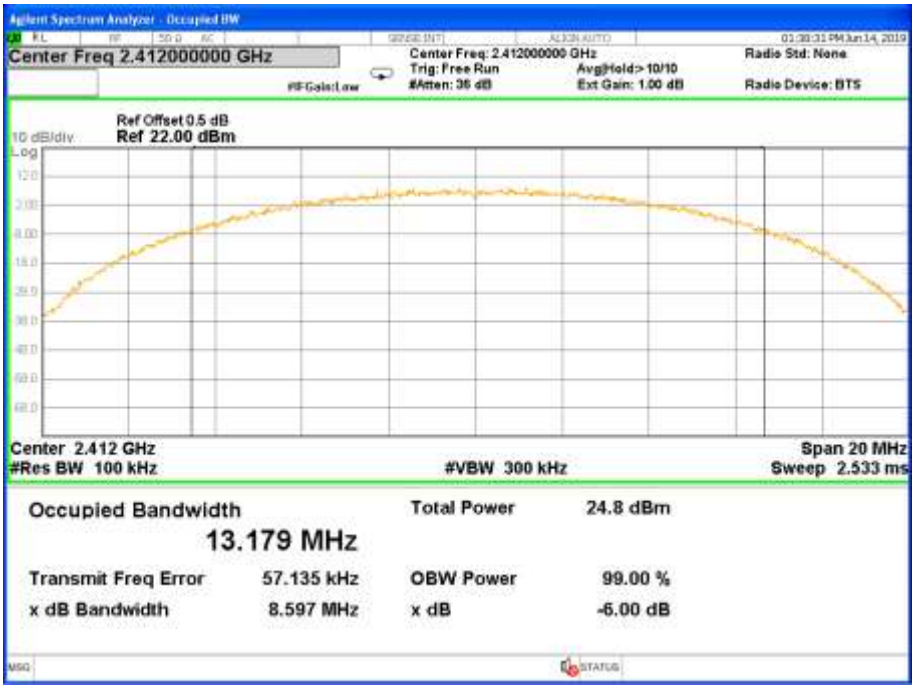
6.6 TEST RESULTS

Temperature:	25℃	Relative Humidity:	60%
Test Voltage:	AC 120V/60Hz	Test Mode:	TX b Mode /CH01, CH06, CH11

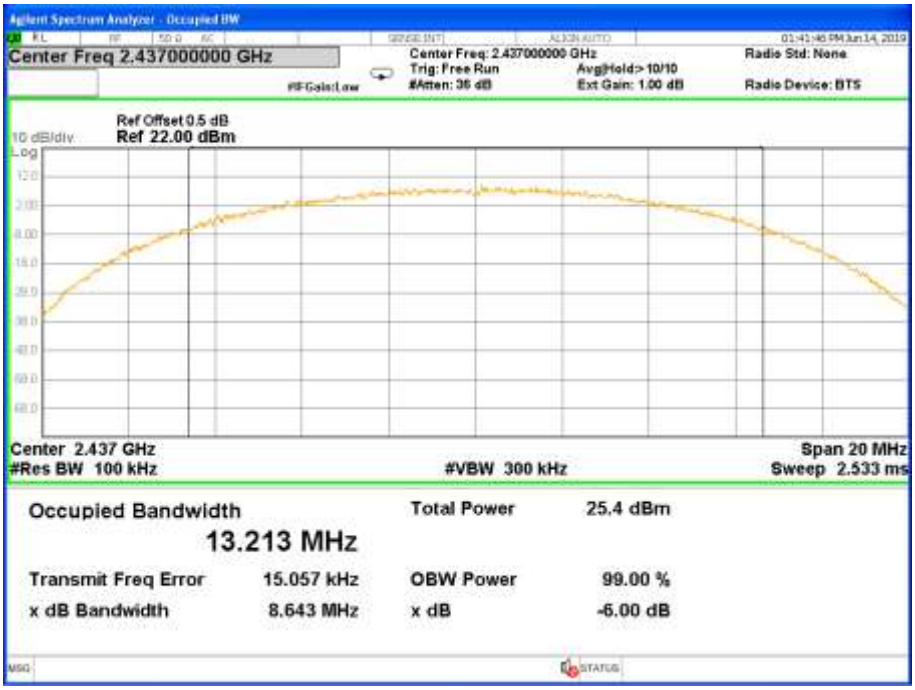
Remark: PEAK DETECTOR IS USED

Test Mode	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit of 6dB Bandwidth (MHz)	Result
b mode (1 Mbps)	2412.00	8.597	13.216	≥ 0.50	PASS
	2437.00	8.643	13.308	≥ 0.50	PASS
	2462.00	8.057	13.253	≥ 0.50	PASS

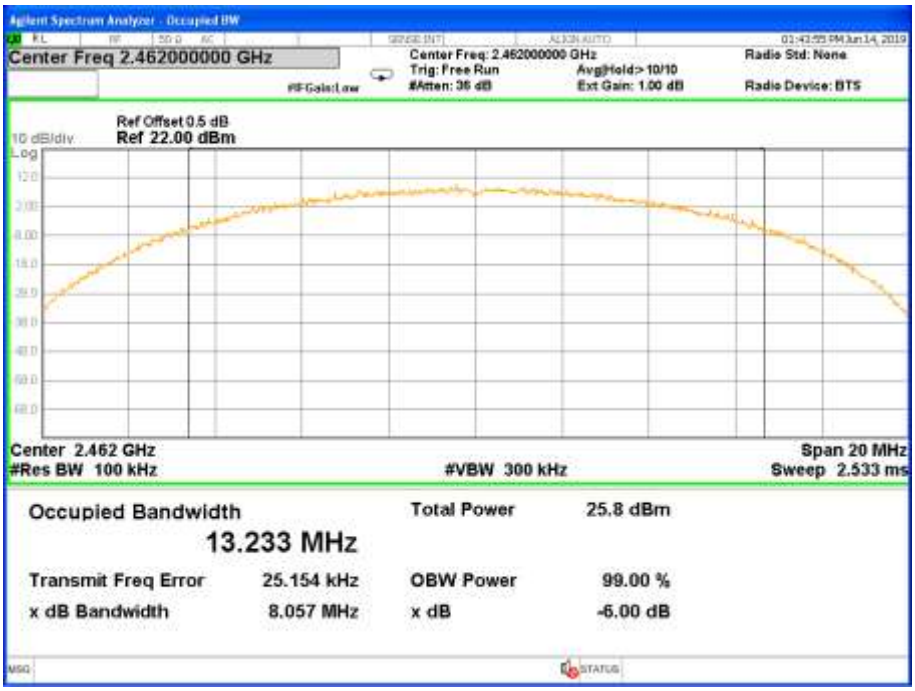
6dB Bandwidth TX CH 01



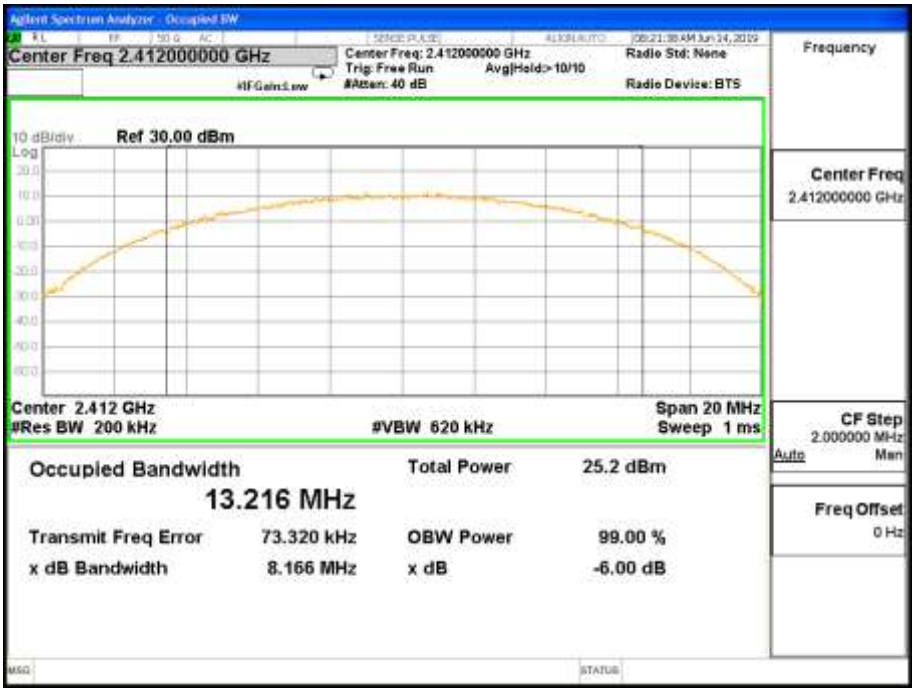
6dB Bandwidth TX CH 06



6dB Bandwidth TX CH 11

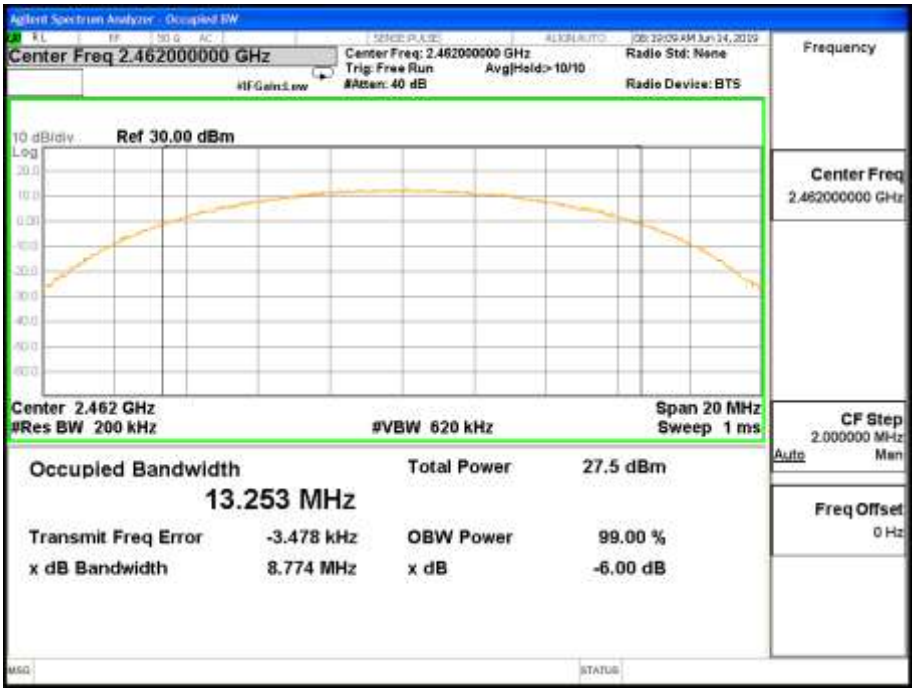


99% Bandwidth TX CH 01



99% Bandwidth TX CH 06

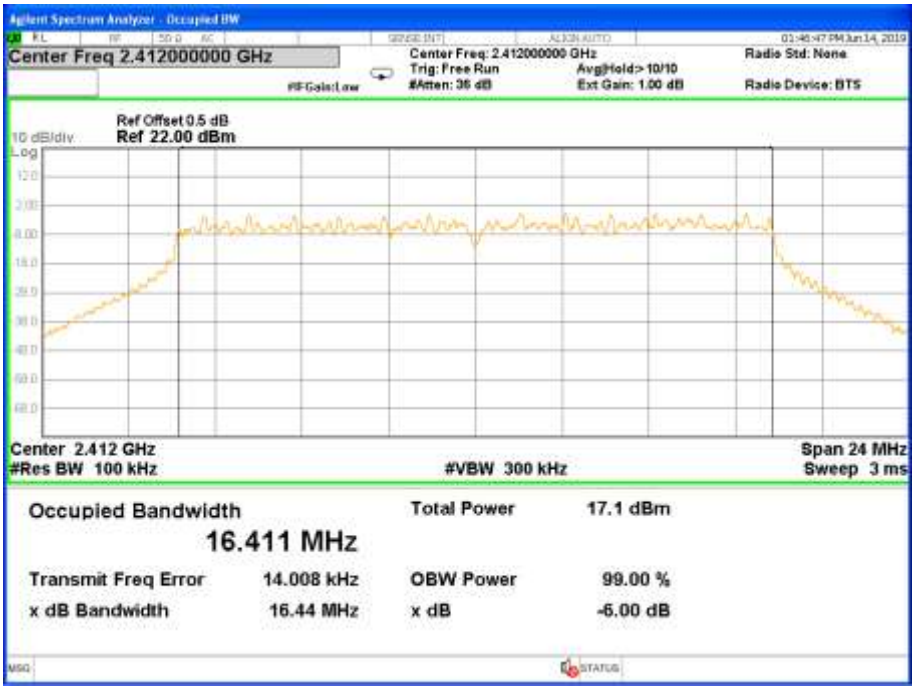
99% Bandwidth TX CH 11



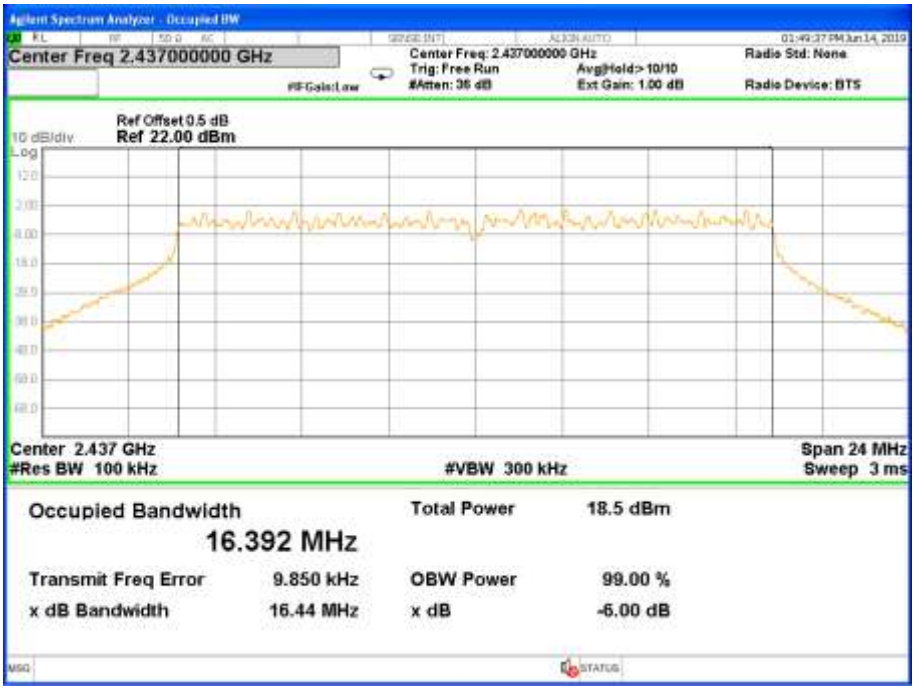
Temperature:	25℃	Relative Humidity:	60%
Test Voltage:	AC 120V/60Hz	Test Mode:	TX g Mode /CH01, CH06, CH11

Test Mode	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit of 6dB Bandwidth (MHz)	Result
g mode (6 Mbps)	2412.00	16.44	16.505	≥ 0.50	PASS
	2437.00	16.44	16.501	≥ 0.50	PASS
	2462.00	16.45	16.516	≥ 0.50	PASS

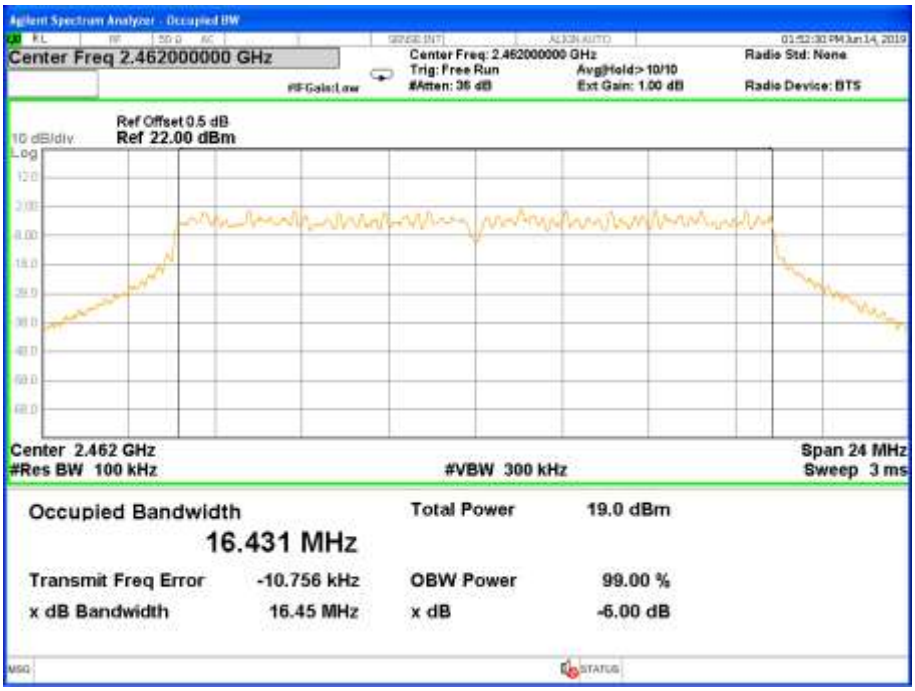
6dB Bandwidth TX CH 01



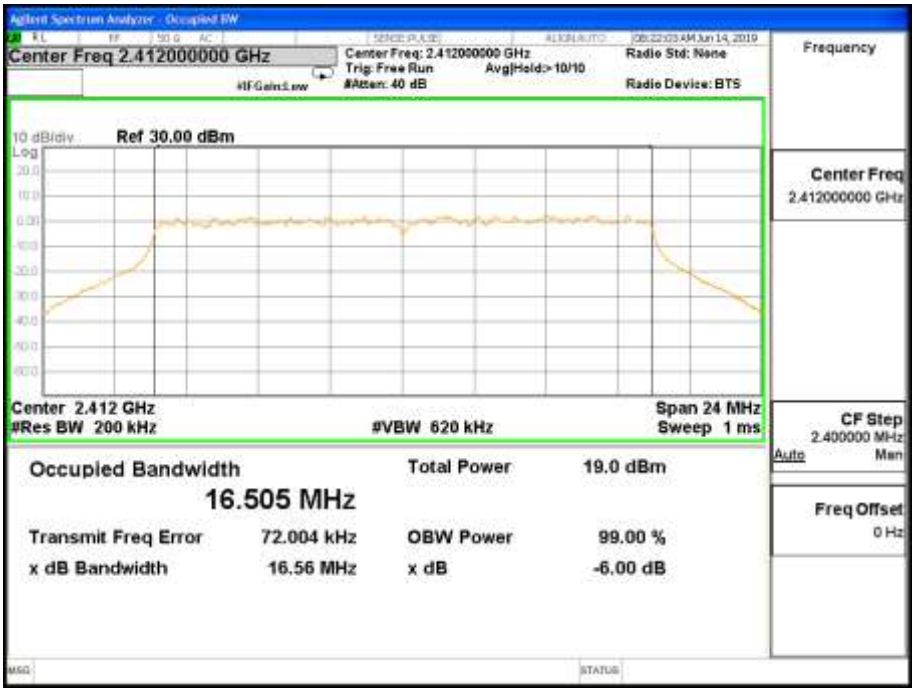
6dB Bandwidth TX CH 06



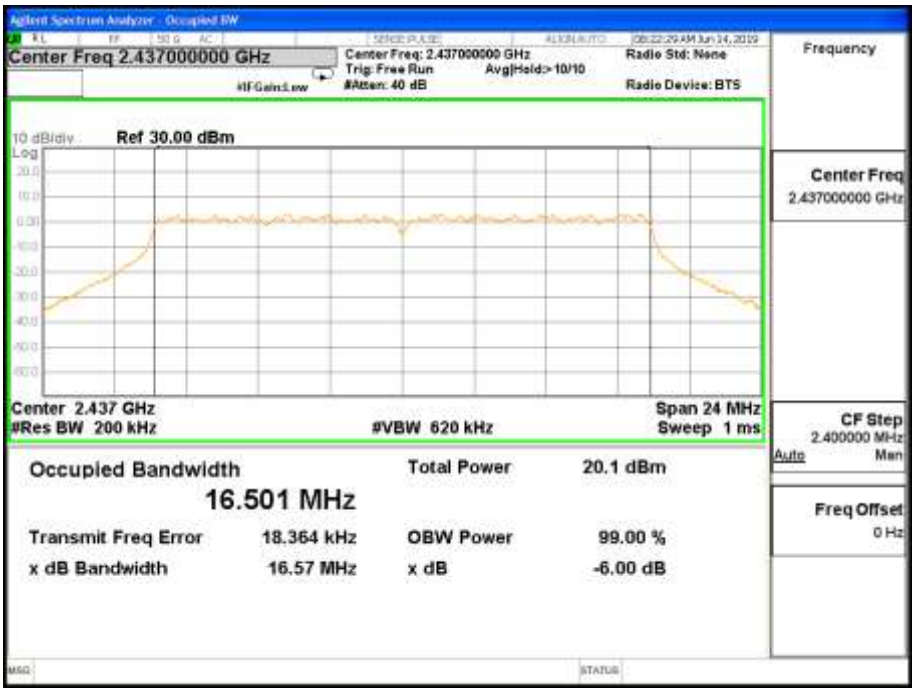
6dB Bandwidth TX CH 11



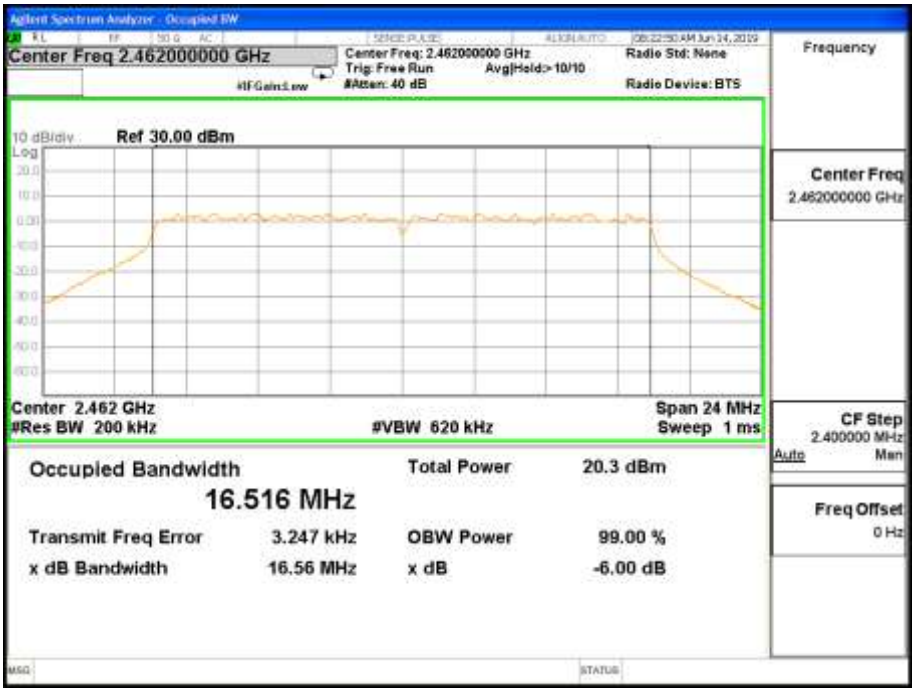
99% Bandwidth TX CH 01



99% Bandwidth TX CH 06



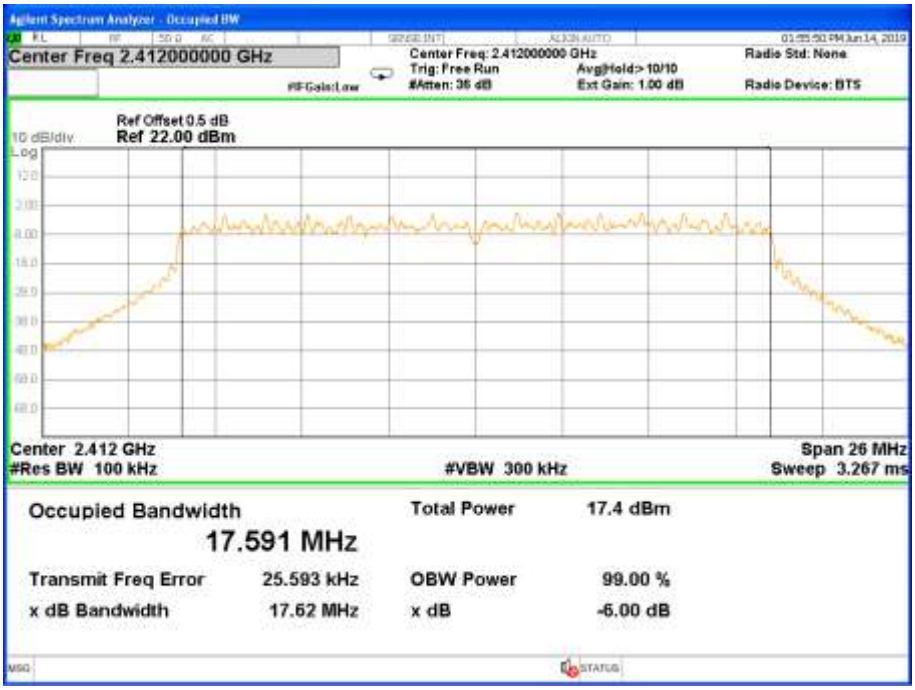
99% Bandwidth TX CH 11



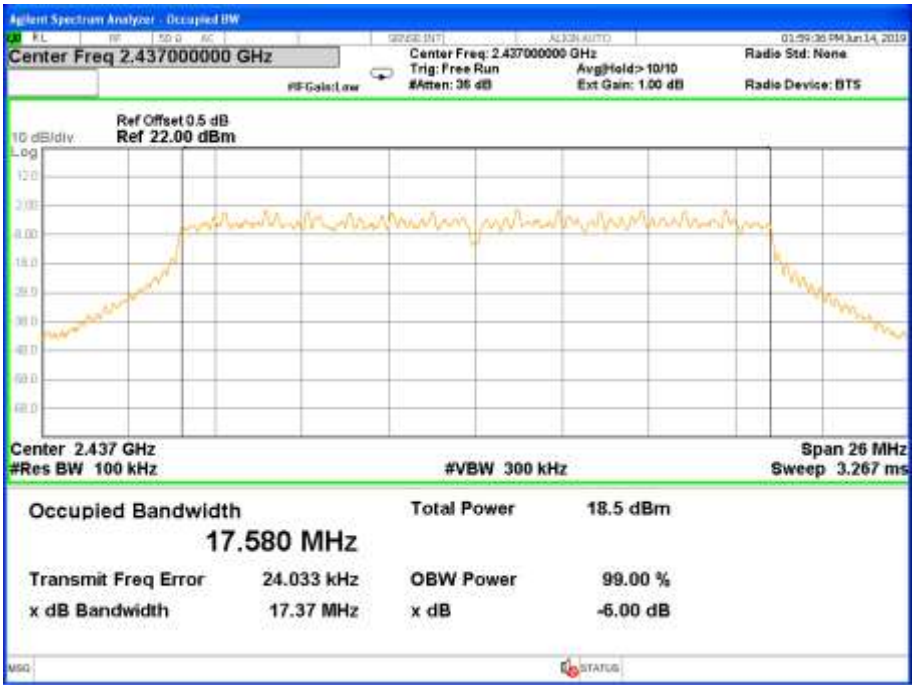
Temperature:	25℃	Relative Humidity:	60%
Test Voltage:	AC 120V/60Hz	Test Mode:	TX n(HT20) Mode /CH01, CH06, CH11

Test Mode	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit of 6dB Bandwidth (MHz)	Result
n(HT20) mode (MCS0)	2412.00	17.62	17.640	≥ 0.50	PASS
	2437.00	17.37	17.627	≥ 0.50	PASS
	2462.00	17.67	17.618	≥ 0.50	PASS

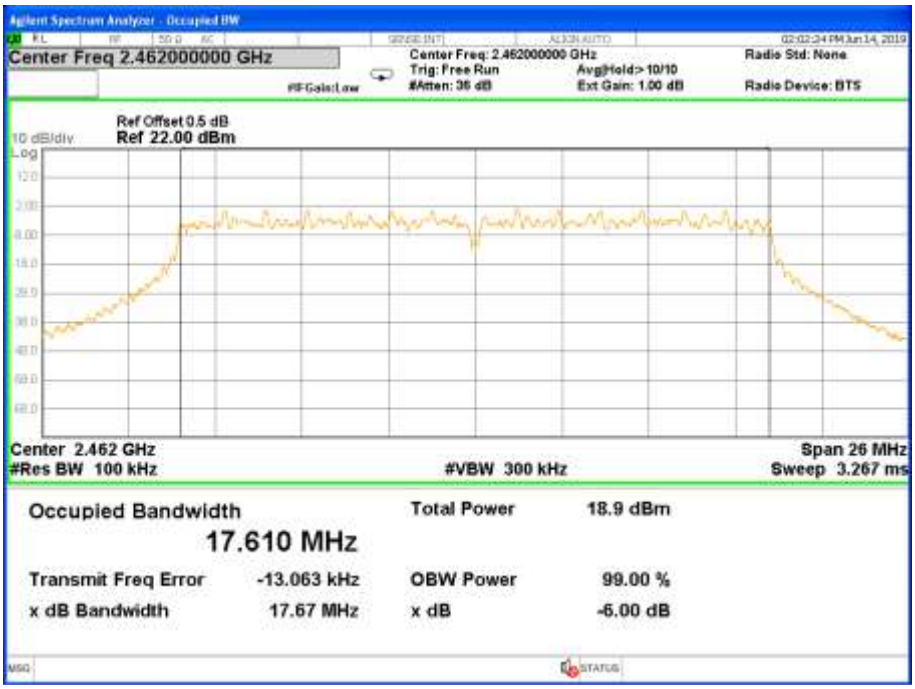
6dB Bandwidth TX CH 01



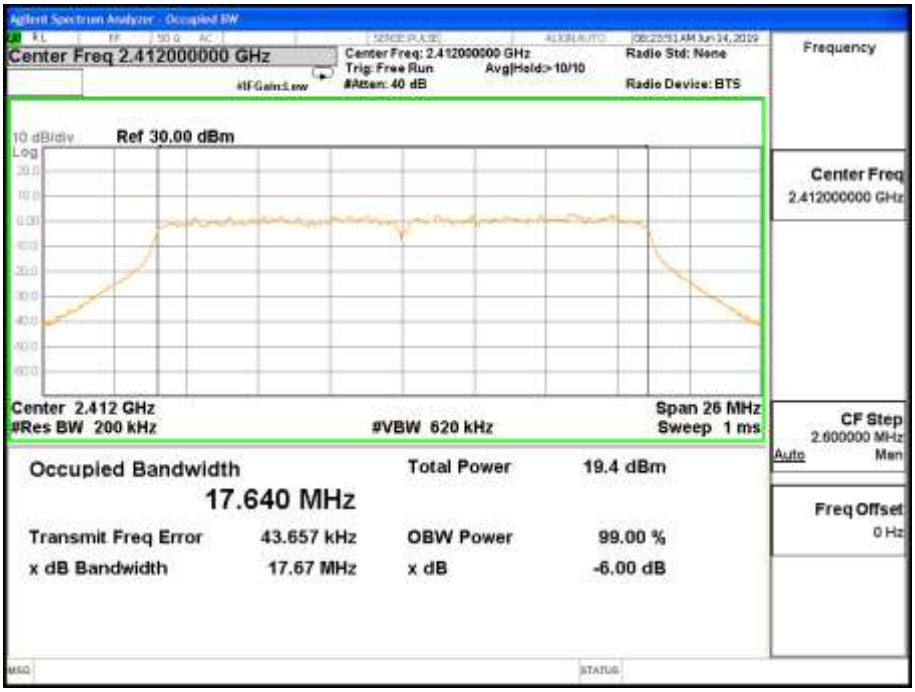
6dB Bandwidth TX CH 06



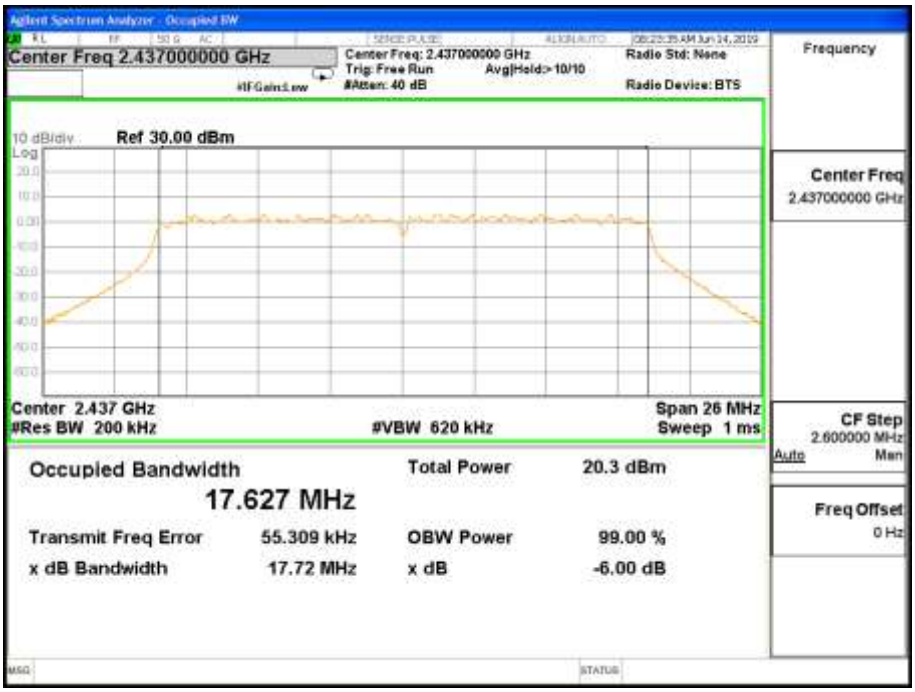
6dB Bandwidth TX CH 11



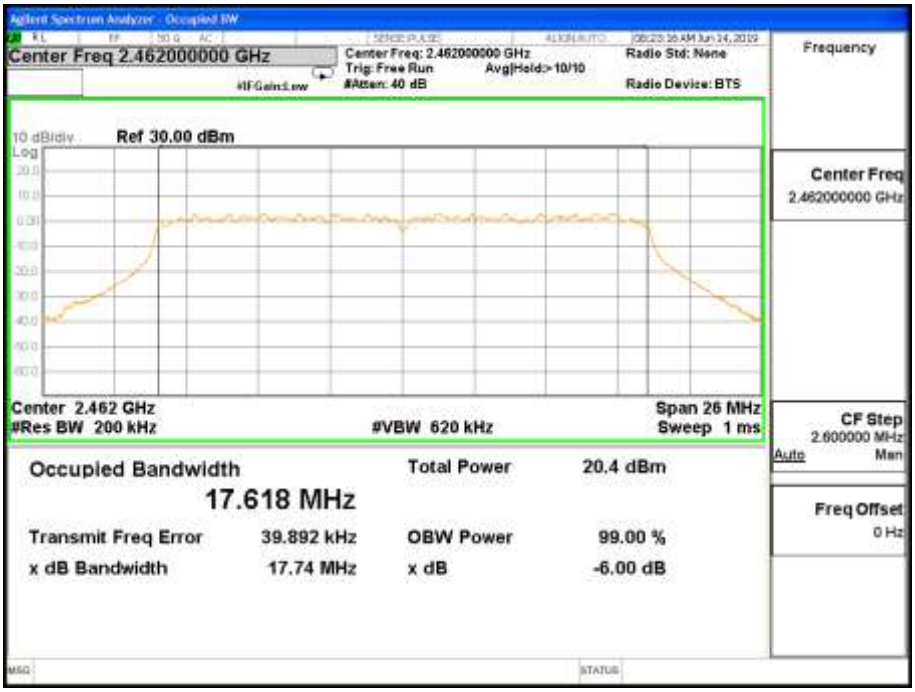
99% Bandwidth TX CH 01



99% Bandwidth TX CH 06



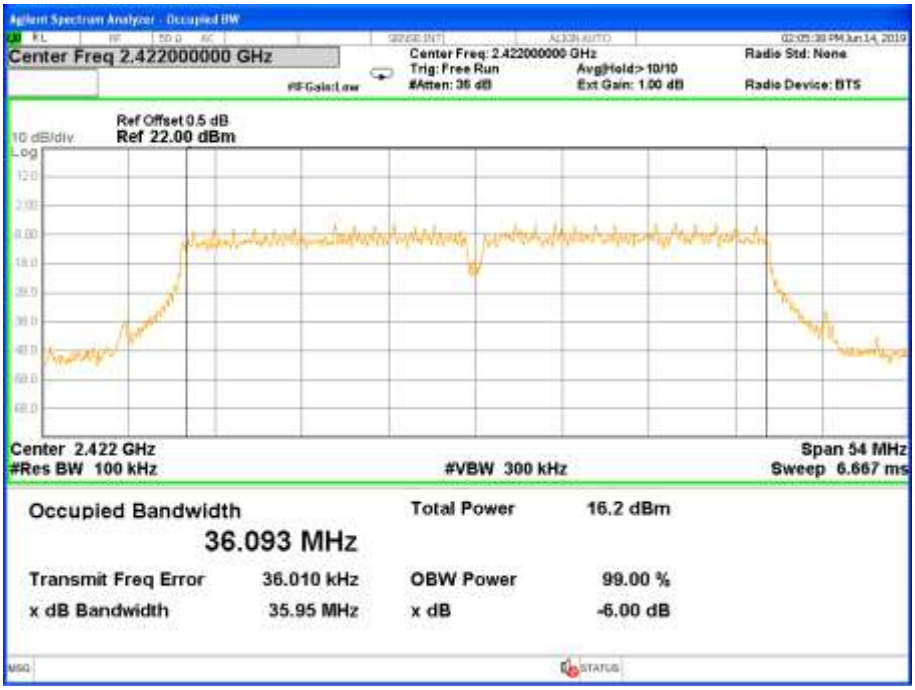
99% Bandwidth TX CH 11



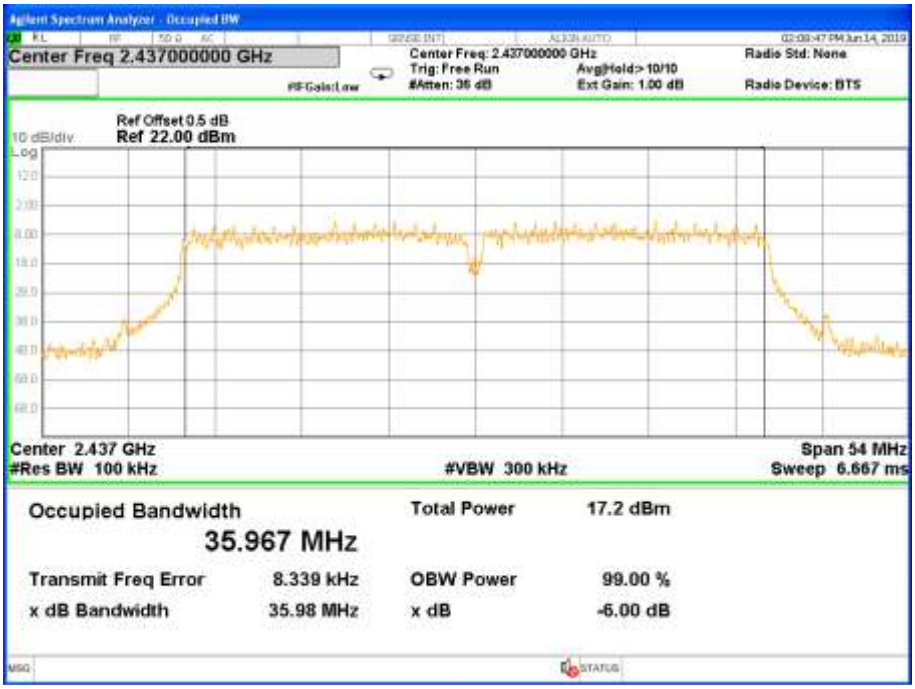
Temperature:	25℃	Relative Humidity:	60%
Test Voltage:	AC 120V/60Hz	Test Mode:	TX n(HT40) Mode /CH03, CH06, CH09

Test Mode	Frequency (MHz)	6dB Bandwidth (MHz)	99% Bandwidth (MHz)	Limit of 6dB Bandwidth (MHz)	Result
n(HT40) mode (MCS0)	2422.00	35.95	36.129	≥ 0.50	PASS
	2437.00	35.98	36.033	≥ 0.50	PASS
	2452.00	35.76	36.082	≥ 0.50	PASS

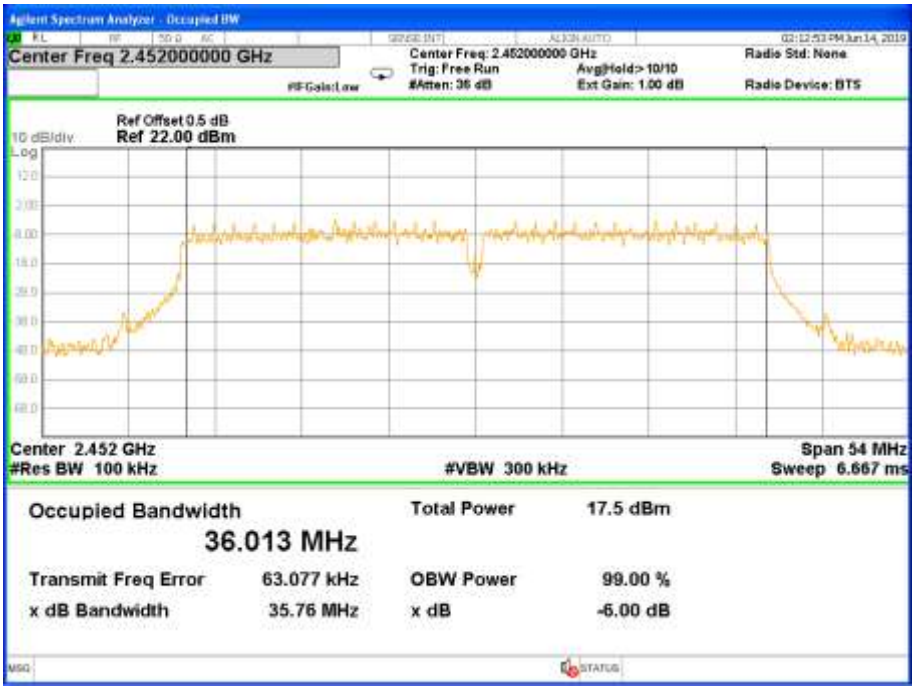
6dB Bandwidth TX CH 03



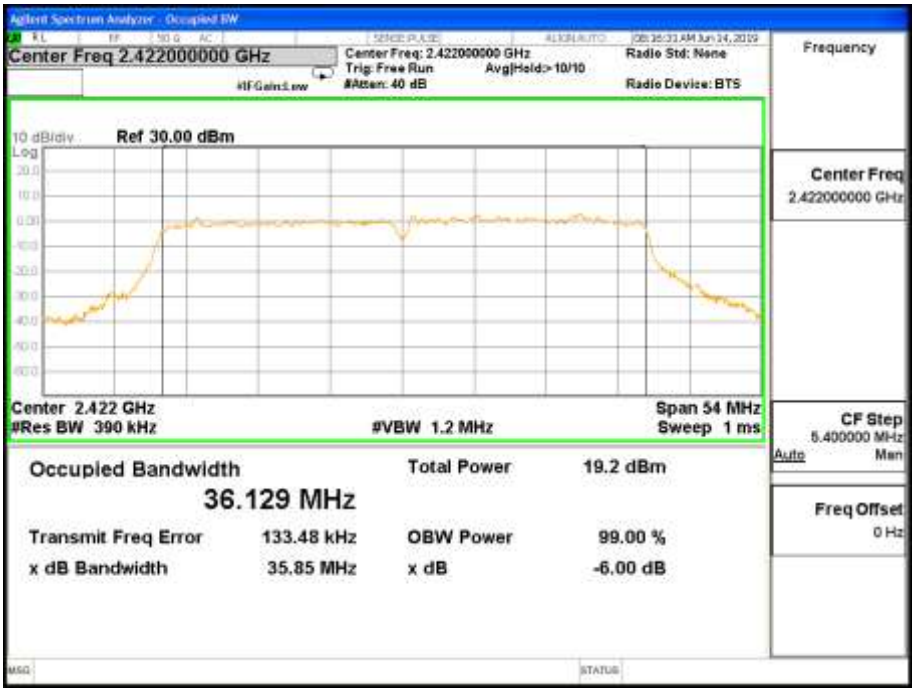
6dB Bandwidth TX CH 06



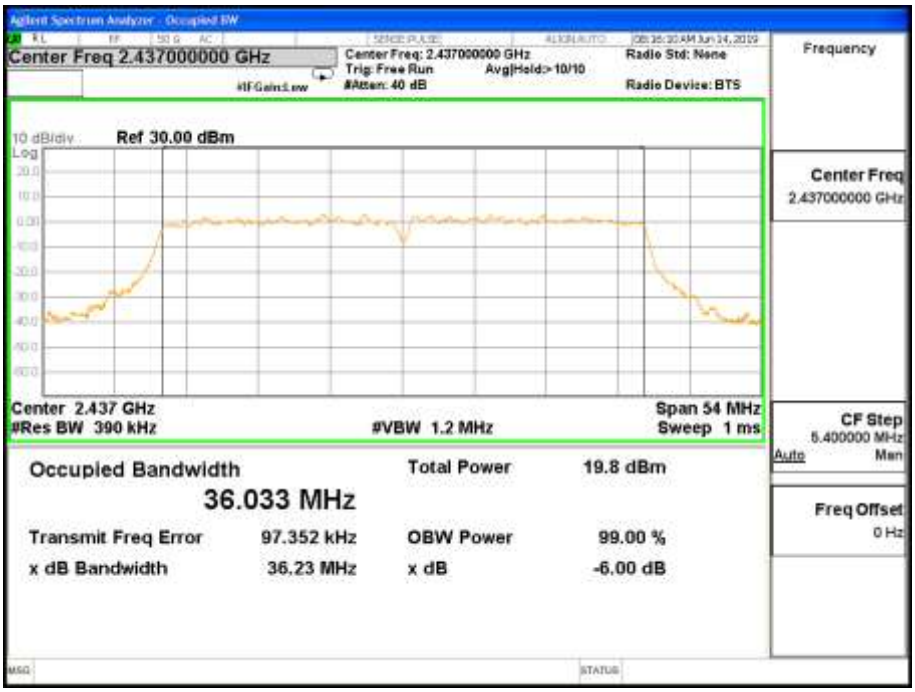
6dB Bandwidth TX CH 09



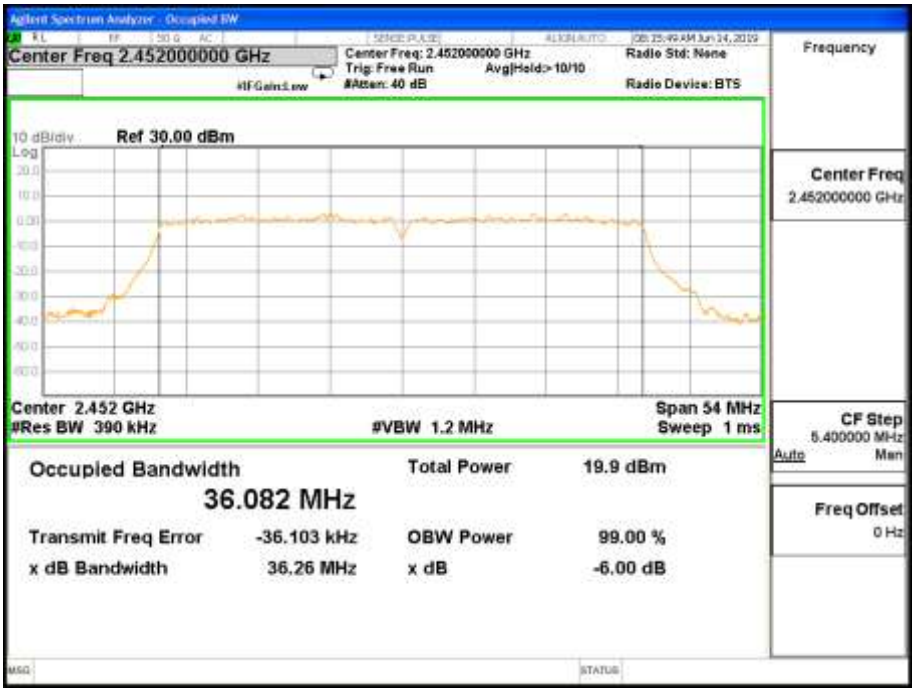
99% Bandwidth TX CH 03



99% Bandwidth TX CH 06



99% Bandwidth TX CH 09



7 PEAK OUTPUT POWER TEST

7.1 LIMIT

FCC Part15.247,Subpart C RSS-247 Issue 2				
Section	Test Item	Limit	Frequency Range (MHz)	Result
15.247(b)(3) RSS-247 Clause 5.4(d)	Output Power	1 watt or 30dBm	2400-2483.5	PASS

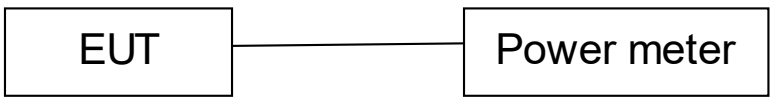
7.2 TEST PROCEDURE

a. The EUT was directly connected to the Power Meter

7.3 DEVIATION FROM STANDARD

No deviation.

7.4 TEST SETUP



7.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 2.3 Unless otherwise a special operating condition is specified in the follows during the testing.

7.6 TEST RESULTS

Temperature：	25℃	Relative Humidity：	60%
Test Voltage ：	AC 120V/60Hz		

TX 802.11 b mode (1 Mbps)				
Test Channel	Frequency (MHz)	Conducted Output Power		Limit (dBm)
		Peak(dBm)	AVG(dBm)	
CH01	2412.00	19.75	16.56	30.00
CH06	2437.00	20.99	17.44	30.00
CH11	2462.00	20.69	17.51	30.00

TX 802.11 g mode (6 Mbps)				
Test Channel	Frequency (MHz)	Conducted Output Power		Limit (dBm)
		Peak(dBm)	AVG(dBm)	
CH01	2412.00	19.84	11.84	30.00
CH06	2437.00	20.95	12.54	30.00
CH11	2462.00	21.13	13.27	30.00

TX 802.11 n(HT20) mode (MCS0)				
Test Channel	Frequency (MHz)	Conducted Output Power		Limit (dBm)
		Peak(dBm)	AVG(dBm)	
CH01	2412.00	21.06	10.82	30.00
CH06	2437.00	21.13	10.94	30.00
CH11	2462.00	21.00	10.90	30.00

TX 802.11 n(HT40) mode (MCS0)				
Test Channel	Frequency (MHz)	Conducted Output Power		Limit (dBm)
		Peak(dBm)	AVG(dBm)	
CH03	2422.00	17.36	10.74	30.00
CH06	2437.00	17.64	10.91	30.00
CH09	2452.00	17.85	10.94	30.00

Note:

1) The cable loss and antenna gain are taken into account in results.
2) Antenna gain(G): 0 dBi
3) The max e.i.r.p = conducted power + antenna gain = 21.13 dBm

8 ANTENNA REQUIREMENT

8.1 STANDARD REQUIREMENT

15.203 and RSS-Gen Issue 5 requirement: For intentional device, according to 15.203 and RSS-Gen Issue 5: an intentional radiator shallbe designed to ensure that no antenna other than that furnished by the responsible partyshall be used with the device.

8.2 EUT ANTENNA

The EUT antenna is Integral Antenna. It comply with the standard requirement.