Shenzhen Huatongwei International Inspection Co., Ltd.
1/F,Bldg 3,Hongfa Hi-tech Industrial Park,Genyu Road,Tianliao,Gongming,Shenzhen,China
Phone:86-755-26748019 Fax:86-755-26748089 http://www.szhtw.com.cn

TEST REPORT

Report Reference No. ..... :	**CHTEW19100159**	Report verification:
Project No. ..... :	**SHT1909043101EW**	
FCC ID ..... :	**ZSW-10-026**	
Applicant's name ..... :	**b mobile HK Limited**	
Address.....:	Flat 18; 14/F Block 1; Golden Industrial Building;16-26 Kwai Tak Street; Kwai Chung; New Territories; Hong Kong.	
Manufacturer.....:	b mobile HK Limited	
Address.....:	Flat 18; 14/F Block 1; Golden Industrial Building;16-26 Kwai Tak Street; Kwai Chung; New Territories; Hong Kong	
Test item description ..... :	**Mobile Phone**	
Trade Mark .....:	Bmobile	
Model/Type reference.....:	W120	
Listed Model(s) .....:	-	
Standard ..... :	**FCC CFR Title 47 Part 15 Subpart C Section 15.247**	
Date of receipt of test sample…….....:	Sep 17, 2019	
Date of testing……..:	Sep 18, 2019- Oct 28, 2019	
Date of issue……....:	Oct 29, 2019	
Result..... ……..:	**PASS**	

Compiled by (position+printedname+signature)...:	File administrators Silvia Li	Silvia Li
Supervised by (position+printedname+signature)....:	Project Engineer Aaron Fang	Aaron.Fang
Approved by (position+printedname+signature)....:	RF Manager Hans Hu	Hans Hu

Testing Laboratory Name ..... :	**Shenzhen Huatongwei International Inspection Co., Ltd.**
Address.....:	1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China

Shenzhen Huatongwei International Inspection Co., Ltd. All rights reserved.

This publication may be reproduced in whole or in part for non-commercial purposes as long as the Shenzhen Huatongwei International Inspection Co., Ltd. is acknowledged as copyright owner and source of the material. Shenzhen Huatongwei International Inspection Co., Ltd. takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

The test report merely correspond to the test sample.

Contents

1. TEST STANDARDS AND REPORT VERSION

1.1. Test Standards

The tests were performed according to following standards:

FCC Rules Part 15.247: Frequency Hopping, Direct Spread Spectrum and Hybrid Systems that are in operation within the bands of 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz.

ANSI C63.10:2013: American National Standard forTesting Unlicensed Wireless Devices

KDB 558074 D01 15.247 Meas Guidance v05r02: Guidance for Compliance Measurements on Digital Transmission System, Frequency Hopping Spread Spectrum System, and Hybrid System Devices Operating under Section 15.247 of The FCC Rules

1.2. Report version

Revision No.	Date of issue	Description
N/A	2019-10-29	Original

2. TEST DESCRIPTION

Test Item	FCC Rule	Result	Test Engineer
Antenna requirement	15.203/15.247(c)	PASS	Kang Yang
Line Conducted Emissions (AC Main)	15.207	PASS	Kang Yang
Conducted Peak Output Power	15.247(b)(3)	PASS	Bruce Wong
Power Spectral Density	15.247(e)	PASS	Bruce Wong
6dB Bandwidth	15.247(a)(2)	PASS	Bruce Wong
Restricted band	15.247(d)/15.205	PASS	Barry Chang
Spurious Emissions	15.247(d)/15.209	PASS	Barry Chang

Note: The measurement uncertainty is not included in the test result.

3. SUMMARY

3.1. Client Information

Applicant:	b mobile HK Limited
Address:	Flat 18; 14/F Block 1; Golden Industrial Building;16-26 Kwai Tak Street; Kwai Chung; New Territories; Hong Kong.
Manufacturer:	b mobile HK Limited
Address:	Flat 18; 14/F Block 1; Golden Industrial Building;16-26 Kwai Tak Street; Kwai Chung; New Territories; Hong Kong

3.2. Product Description

Name of EUT:	Mobile Phone
Trade Mark:	Bmobile
Model No.:	W120
Listed Model(s):	-
IMEI Code:	Conducted: 351727110000117 Radiated: 351727110000075
Power supply:	DC 3.7V
Adapter information:	Input:100-240Va.c., 50/60Hz, 0.15A Output:5.0Vd.c., 650mA
Hardware version:	Bmobile_W120_HW_V001
Software version:	Bmobile_W120_TEM_MX_V001
WIFI	
Supported type:	802.11b/802.11g/802.11n(HT20)/802.11n(HT40)
Modulation:	DSSS for 802.11b OFDM for 802.11g/802.11n(HT20)/802.11n(HT40)
Operation frequency:	2412MHz~2462MHz for 802.11b/802.11g/802.11n(HT20) 2422MHz~2452MHz for 802.11n(HT40)
Channel number:	11 for 802.11b/802.11g/802.11n(HT20) 7 for 802.11n(HT40)
Channel separation:	5MHz
Antenna type:	PIFA Antenna
Antenna gain:	0dBi

3.3. Operation state

➢ **Test frequency list**

According to section 15.31(m), regards to the operating frequency range over 10 MHz, must select three channel which were tested. the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, please see the above gray bottom.

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

➢ **Test mode**

For RF test items
The engineering test program was provided and enabled to make EUT continuous transmit (duty cycle>98%).
For AC power line conducted emissions:
The EUT was set to connect with the WLAN AP under large package sizes transmission.
For Radiated suprious emissions test item:
The engineering test program was provided and enabled to make EUT continuous transmit(duty cycle>98%). The EUT in each of three orthogonal axis emissions had been tested ,but only the worst case (X axis) data Recorded in the report.

3.4. EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

- ● - supplied by the manufacturer
- ○ - supplied by the lab

○	/	Manufacturer:	/
		Model No.:	/
○	/	Manufacturer:	/
		Model No.:	/

3.5. Modifications

No modifications were implemented to meet testing criteria.

4. TEST ENVIRONMENT

4.1. Address of the test laboratory

Laboratory: Shenzhen Huatongwei International Inspection Co., Ltd.
Address: 1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China

4.2. Test Facility

CNAS-Lab Code: L1225

Shenzhen Huatongwei International Inspection Co., Ltd. has been assessed and proved to be in compliance with CNAS-CL01 Accreditation Criteria for Testing and Calibration Laboratories (identical to ISO/IEC17025: 2005 General Requirements) for the Competence of Testing and Calibration Laboratories.

A2LA-Lab Cert. No.: 3902.01

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been accredited by A2LA for technical competence in the field of electrical testing, and proved to be in compliance with ISO/IEC 17025: 2005 General Requirements for the Competence of Testing and Calibration Laboratories and any additional program requirements in the identified field of testing.

FCC-Registration No.: 762235

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the FCC (Federal Communications Commission). The acceptance letter from the FCC is maintained in our files.

IC-Registration No.:5377A

Two 3m Alternate Test Site of Shenzhen Huatongwei International Inspection Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for the performance of radiated measurements with Registration No.: 5377A.

ACA

Shenzhen Huatongwei International Inspection Co., Ltd. EMC Laboratory can also perform testing for the Australian C-Tick mark as a result of our A2LA accreditation.

4.3. Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

Temperature:	15~35°C
Relative Humidity:	30~60 %
Air Pressure:	950~1050mba

4.4. Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors in calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report according to TR-100028-01 “Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1” and TR-100028-02 “Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2” and is documented in the Shenzhen Huatongwei International Inspection Co., Ltd. quality system according to ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Here after the best measurement capability for Shenzhen Huatongwei International Inspection Co., Ltd. is reported:

Test Items	Measurement Uncertainty	Notes
Transmitter power conducted	0.51 dB	(1)
Conducted spurious emissions 9kHz~40GHz	0.51 dB	(1)
Conducted Disturbance 150kHz~30MHz	3.02 dB	(1)
Radiated Emissions below 1GHz	4.90 dB	(1)
Radiated Emissions above 1GHz	4.96 dB	(1)
Occupied Bandwidth	70 Hz	(1)

(1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=1.96.

4.5. Equipments Used during the Test

● Conducted Emission							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Shielded Room	Albatross projects	HTWE0114	N/A	N/A	2018/09/28	2023/09/27
●	EMI Test Receiver	R&S	HTWE0111	ESCI	101247	2019/10/26	2020/10/25
●	Artificial Mains	SCHWARZBECK	HTWE0113	NNLK 8121	573	2019/10/23	2020/10/22
●	Pulse Limiter	R&S	HTWE0033	ESH3-Z2	100499	2019/10/23	2020/10/22
●	RF Connection Cable	HUBER+SUHNER	HTWE0113-02	ENVIROFLEX_142	EF-NM-BNCM-2M	2019/10/23	2020/10/22
●	Test Software	R&S	N/A	ES-K1	N/A	N/A	N/A

● Radiated Emission-6th test site							
Used	Test Equipment	Manufacturer	Equipment No.	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Semi-Anechoic Chamber	Albatross projects	HTWE0127	SAC-3m-02	C11121	2018/09/30	2021/09/29
●	EMI Test Receiver	R&S	HTWE0099	ESCI	100900	2019/10/26	2020/10/25
●	Ultra-Broadband Antenna	SCHWARZBECK	HTWE0119	VULB9163	546	2017/04/05	2020/04/04
●	Pre-Amplifer	SCHWARZBECK	HTWE0295	BBV 9742	N/A	2018/11/14	2019/11/13
●	RF Connection Cable	HUBER+SUHNER	HTWE0062-01	N/A	N/A	2019/8/21	2020/8/20
●	RF Connection Cable	HUBER+SUHNER	HTWE0062-02	SUCOFLEX104	501184/4	2019/5/27	2020/5/26
●	Test Software	R&S	N/A	ES-K1	N/A	N/A	N/A

● **Radiated emission-7th test site**						
Used	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Semi-Anechoic Chamber	Albatross projects	SAC-3m-01	N/A	2018/09/30	2021/09/29
●	Spectrum Analyzer	R&S	FSP40	100597	2019/10/26	2020/10/25
●	Horn Antenna	SCHWARZBECK	9120D	1011	2017/03/27	2020/03/26
●	Pre-amplifier	BONN	BLWA0160-2M	1811887	2018/11/14	2019/11/13
●	Pre-amplifier	CD	PAP-0102	12004	2018/11/14	2019/11/13
●	Broadband Pre-amplifier	SCHWARZBECK	BBV 9718	9718-248	2019/04/26	2020/04/25
●	RF Connection Cable	HUBER+SUHNER	RE-7-FH	N/A	2018/11/15	2019/11/14
●	RF Connection Cable	HUBER+SUHNER	RE-7-FL	N/A	2018/11/15	2019/11/14
●	Test Software	Audix	E3	N/A	N/A	N/A
●	Turntable	Maturo Germany	TT2.0-1T	N/A	N/A	N/A
●	Antenna Mast	Maturo Germany	CAM-4.0-P-12	N/A	N/A	N/A

● RF Conducted Method						
Used	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. Date (YY-MM-DD)	Next Cal. Date (YY-MM-DD)
●	Signal and spectrum Analyzer	R&S	FSV40	100048	2018/10/28	2019/10/27
●	Spectrum Analyzer	Agilent	N9020A	MY50510187	2018/10/8	2020/10/7
●	Radio communication tester	R&S	CMW500	137688-Lv	2019/10/26	2020/10/25
●	OSP	R&S	OSP120	101317	N/A	N/A
●	Test software	Tonscend	JS1120	N/A	N/A	N/A

5. TEST CONDITIONS AND RESULTS

5.1. Antenna requirement

REQUIREMENT:

FCC CFR Title 47 Part 15 Subpart C Section 15.203:

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of anantenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

FCC CFR Title 47 Part 15 Subpart C Section 15.247(c) (1)(i):

(i) Systems operating in the 2400~2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6 dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi.

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

The directional gain of the antenna less than 6 dBi, please refer to the below antenna photo.

5.2. Conducted Emissions (AC Main)

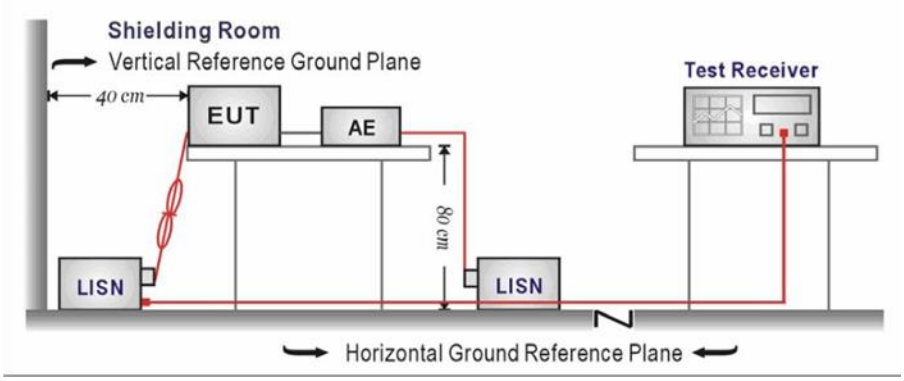
LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.207:

Frequency range (MHz)	Limit (dBuV)	
	Quasi-peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

* Decreases with the logarithm of the frequency.

TEST CONFIGURATION



TEST PROCEDURE

1. The EUT was setup according to ANSI C63.10:2013 requirements.
2. The EUT was placed on a platform of nominal size, 1 m by 1.5 m, raised 80 cm above the conducting ground plane. The vertical conducting plane was located 40 cm to the rear of the EUT. All other surfaces of EUT were at least 80 cm from any other grounded conducting surface.
3. The EUT and simulators are connected to the main power through a line impedances stabilization network (LISN). The LISN provides a 50 ohm /50uH coupling impedance for the measuring equipment.
4. The peripheral devices are also connected to the main power through a LISN. (Please refer to the block diagram of the test setup and photographs)
5. Each current-carrying conductor of the EUT power cord, except the ground (safety) conductor,was individually connected through a LISN to the input power source.
6. The excess length of the power cord between the EUT and the LISN receptacle were folded back and forth at the center of the lead to form a bundle not exceeding 40 cm in length.
7. Conducted Emissions were investigated over the frequency range from 0.15MHz to 30MHz using a receiver bandwidth of 9 kHz.
8. During the above scans, the emissions were maximized by cable manipulation.

TEST MODE:

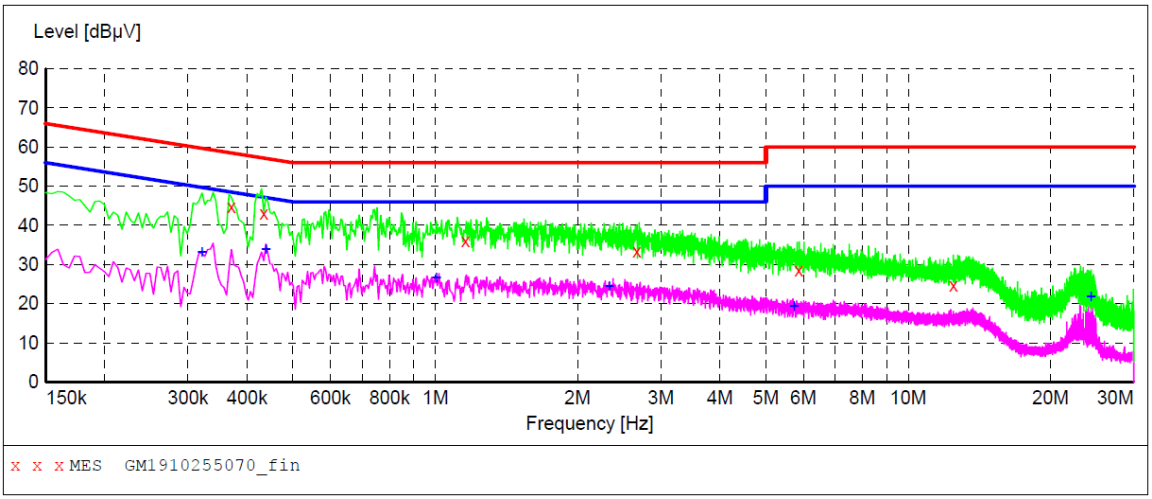
Please refer to the clause 3.3

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

Note:
1) Transd=Cable lose+ Pulse Limiter Factor + Artificial Mains Factor
2) Margin= Limit -Level

Test Line:	L



MEASUREMENT RESULT: "GM1910255070_fin"

10/25/2019 3:34PM

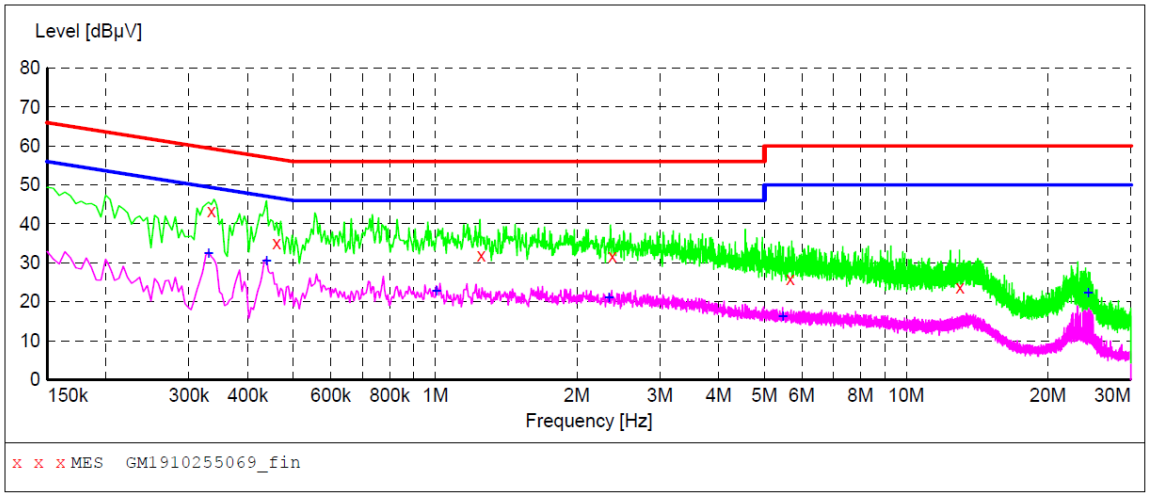
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.370500	44.70	10.1	59	13.8	QP	L1	GND
0.433500	43.20	10.1	57	14.0	QP	L1	GND
1.158000	36.00	10.1	56	20.0	QP	L1	GND
2.665500	33.30	10.1	56	22.7	QP	L1	GND
5.865000	28.60	10.2	60	31.4	QP	L1	GND
12.457500	24.80	10.2	60	35.2	QP	L1	GND

MEASUREMENT RESULT: "GM1910255070_fin2"

10/25/2019 3:34PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.321000	33.20	10.1	50	16.5	AV	L1	GND
0.438000	33.90	10.1	47	13.2	AV	L1	GND
1.005000	26.60	10.1	46	19.4	AV	L1	GND
2.332500	24.50	10.1	46	21.5	AV	L1	GND
5.734500	19.30	10.2	50	30.7	AV	L1	GND
24.351000	21.80	10.3	50	28.2	AV	L1	GND

Test Line:	N



MEASUREMENT RESULT: "GM1910255069_fin"

10/25/2019 3:31PM

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.334500	43.40	10.1	59	15.9	QP	N	GND
0.460500	35.20	10.1	57	21.5	QP	N	GND
1.252500	31.90	10.1	56	24.1	QP	N	GND
2.377500	31.70	10.1	56	24.3	QP	N	GND
5.671500	26.00	10.2	60	34.0	QP	N	GND
13.006500	23.60	10.2	60	36.4	QP	N	GND

MEASUREMENT RESULT: "GM1910255069_fin2"

10/25/2019 3:31PM

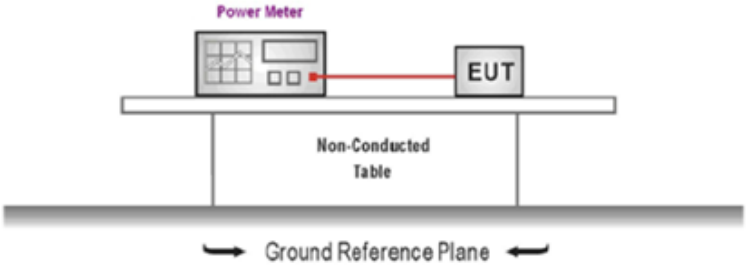
Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.330000	32.50	10.1	50	17.0	AV	N	GND
0.438000	30.40	10.1	47	16.7	AV	N	GND
1.005000	22.80	10.1	46	23.2	AV	N	GND
2.337000	21.10	10.1	46	24.9	AV	N	GND
5.473500	16.30	10.2	50	33.7	AV	N	GND
24.351000	22.20	10.3	50	27.8	AV	N	GND

5.3. Conducted Peak Output Power

LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (b)(3): 30dBm

TEST CONFIGURATION



TEST PROCEDURE

1. The EUT was tested according to ANSI C63.10: 2013 and KDB 558074 D01 for compliance to FCC 47 CFR 15.247 requirements.
2. The maximum peak conducted output power may be measured using a broadband peak RF power meter.
3. The power meter shall have a video bandwidth that is greater than or equal to the DTS bandwidth and shall utilize a fast-responding diode detector
4. Record the measurement data.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

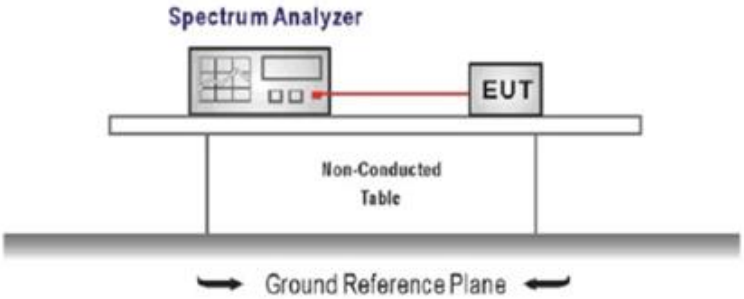
Type	Channel	Peak Output power (dBm)	Average Output power (dBm)	Limit (dBm)	Result
802.11b	01	19.35	17.19	≤30.00	Pass
	06	19.54	17.54		
	11	19.74	17.53		
802.11g	01	20.66	17.23	≤30.00	Pass
	06	21.91	18.35		
	11	21.16	18.26		
802.11n(HT20)	01	20.73	17.24	≤30.00	Pass
	06	21.93	18.36		
	11	21.19	17.56		
802.11n(HT40)	03	18.81	15.26	≤30.00	Pass
	06	19.12	15.56		
	09	19.06	15.48		

5.4. Power Spectral Density

LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (e): For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

TEST CONFIGURATION



TEST PROCEDURE

1. Connect the antenna port(s) to the spectrum analyzer input,
2. Configure the spectrum analyzer as shown below:
   Center frequency=DTS channel center frequency
   Span =1.5 times the DTS bandwidth
   RBW = 3 kHz ≤ RBW ≤ 100 kHz, VBW ≥ 3 × RBW
   Sweep time = auto couple
   Detector = peak
   Trace mode = max hold
3. Place the radio in continuous transmit mode, allow the trace to stabilize, view the transmitter wave form on the spectrum analyzer.
4. Use the peak marker function to determine the maximum amplitude level within the RBW.
5. If measured value exceeds limit, reduce RBW (no less than 3 kHz) and repeat.

TEST MODE:

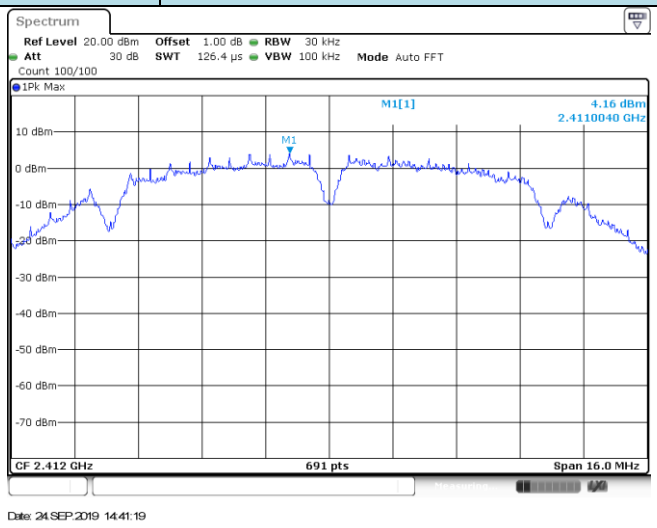
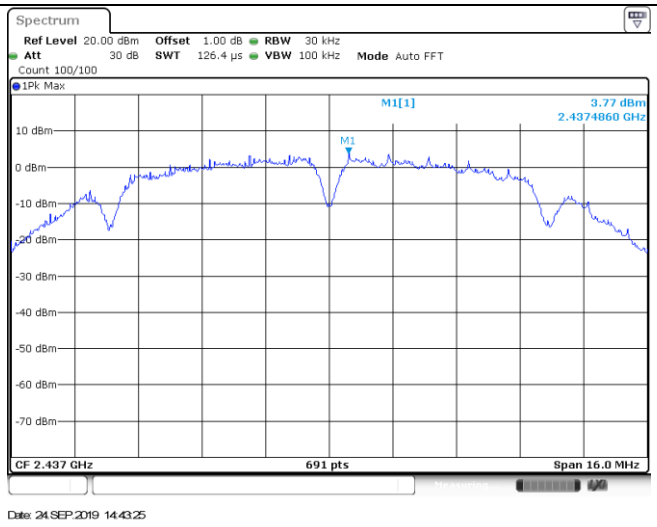
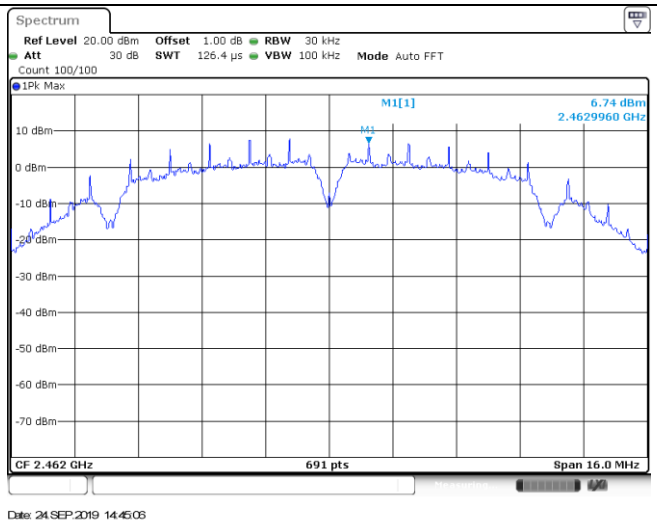
Please refer to the clause 3.3

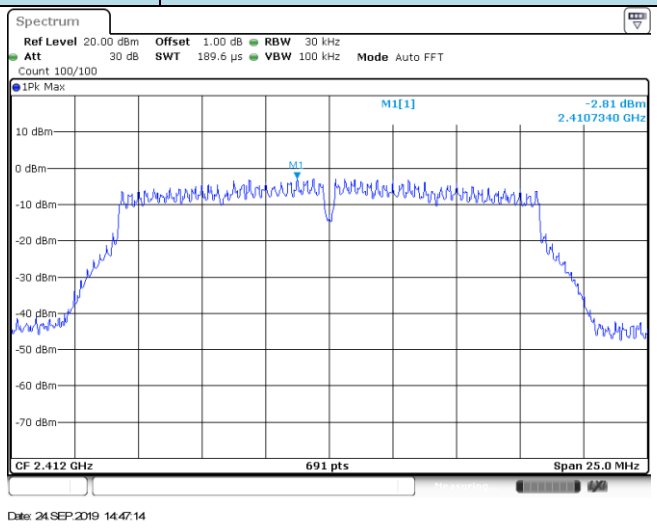
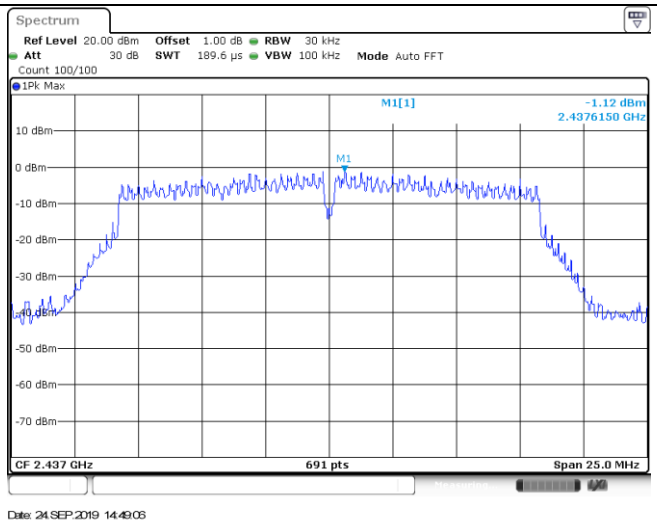
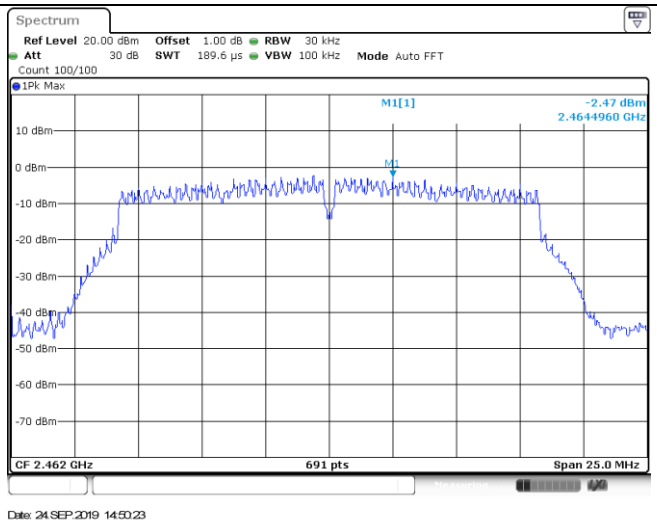
TEST RESULTS

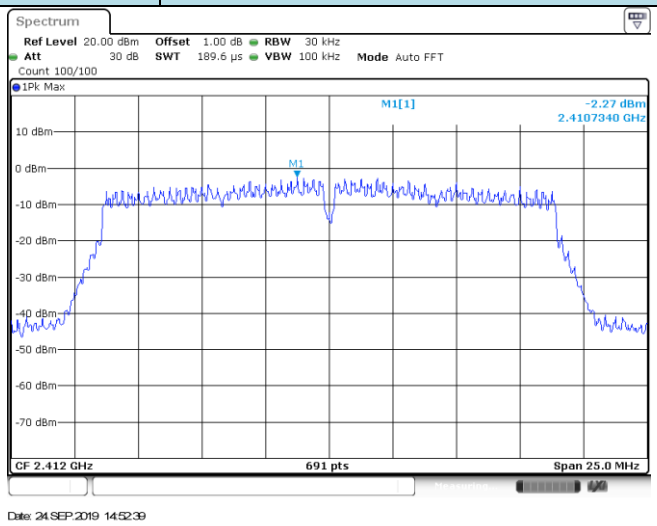
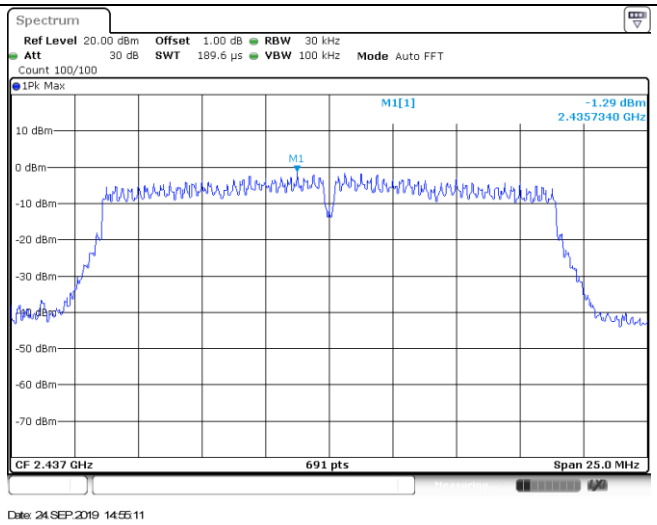
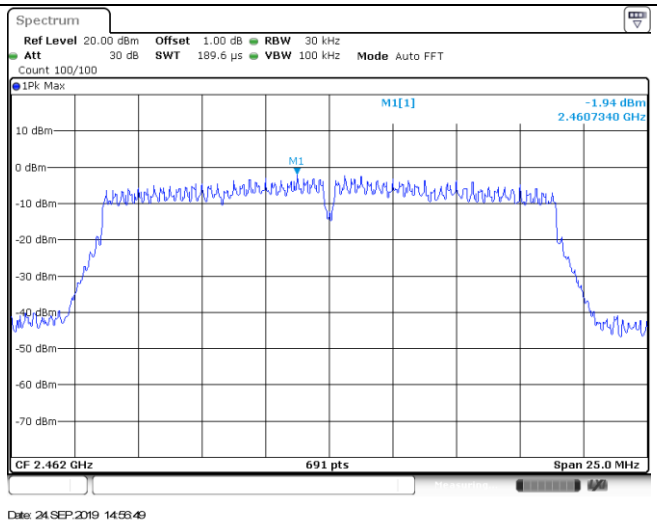
☒ **Passed** ☐ **Not Applicable**

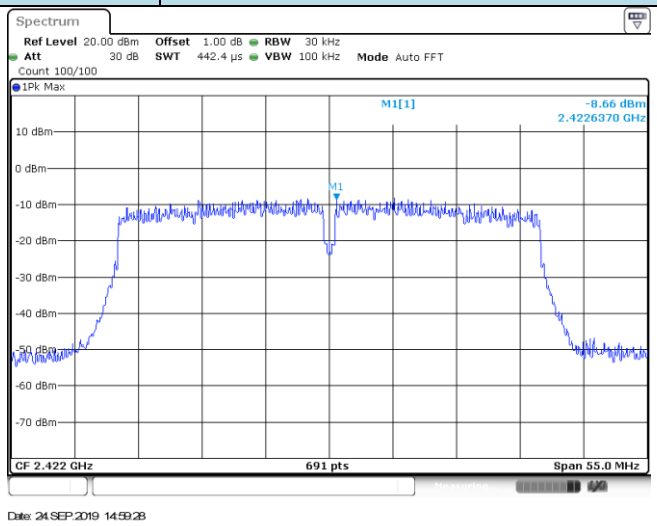
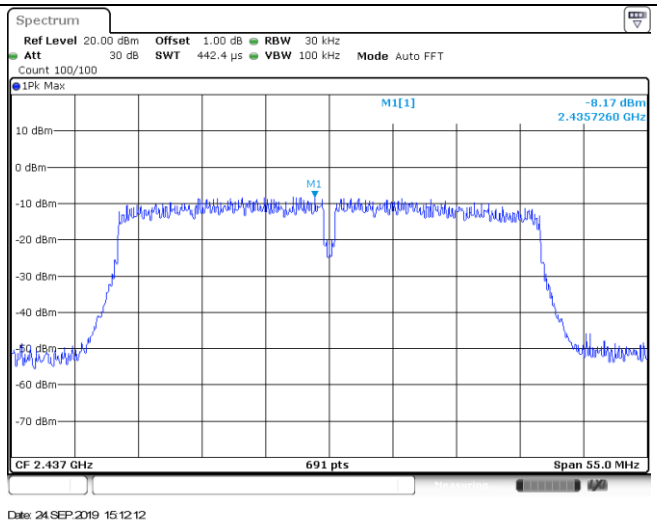
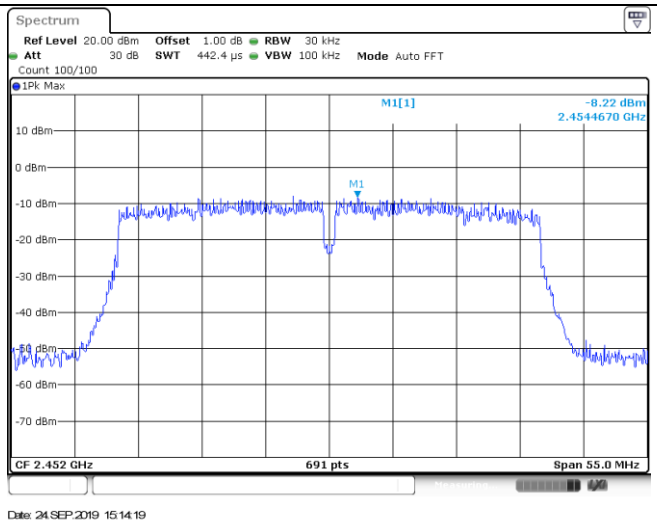
Type	Channel	Power Spectral Density (dBm/30KHz)	Limit (dBm/3KHz)	Result
802.11b	01	4.16	≤8.00	Pass
	06	3.77		
	11	6.74		
802.11g	01	-2.81	≤8.00	Pass
	06	-1.12		
	11	-2.47		
802.11n(HT20)	01	-2.27	≤8.00	Pass
	06	-1.29		
	11	-1.94		
802.11n(HT40)	03	-8.66	≤8.00	Pass
	06	-8.17		
	09	-8.22		

Test plot as follows:

Type:	802.11b
CH01	
CH06	
CH11	

Type:	802.11g
CH01	
CH06	
CH11	

Type:	802.11n(HT20)
CH01	
CH06	
CH11	

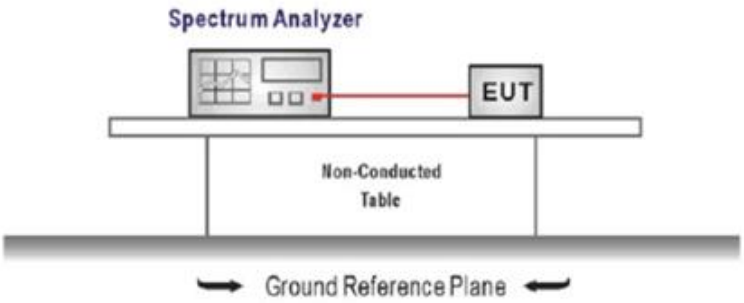
Type:	802.11n(HT40)
CH03	
CH06	
CH09	

5.5. 6dB bandwidth

LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (a)(2):
For digital modulation systems, the minimum 6 dB bandwidth shall be at least 500 kHz.

TEST CONFIGURATION



TEST PROCEDURE

1. Connect the antenna port(s) to the spectrum analyzer input.
2. Configure the spectrum analyzer as shown below (enter all losses between the transmitter output and the spectrum analyzer).
   Center Frequency =DTS channel center frequency
   Span=2 x DTS bandwidth
   RBW = 100 kHz, VBW ≥ 3 × RBW
   Sweep time= auto couple
   Detector = Peak
   Trace mode = max hold
3. Place the radio in continuous transmit mode, allow the trace to stabilize, view the transmitter wave form on the spectrum analyzer.
4. Measure the maximum width of the emission that is constrained by the frequencies associated with the two outermost amplitude points (upper and lower frequencies) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission, and record the pertinent measurements.

TEST MODE:

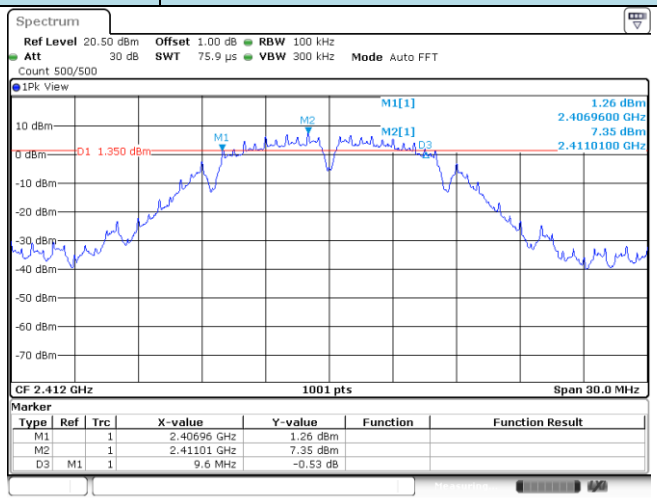
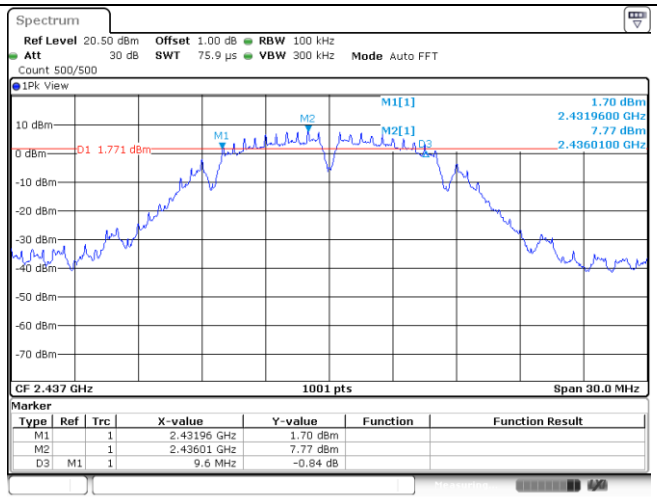
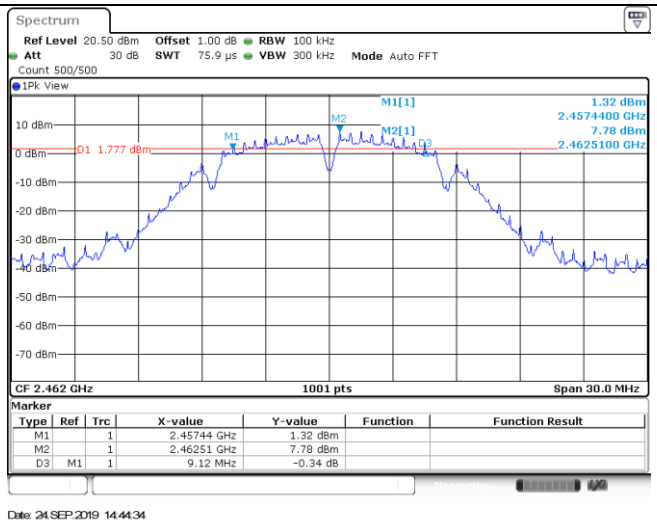
Please refer to the clause 3.3

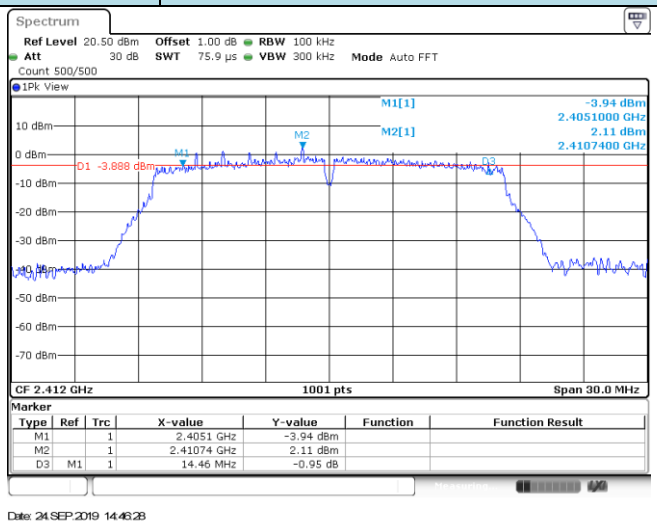
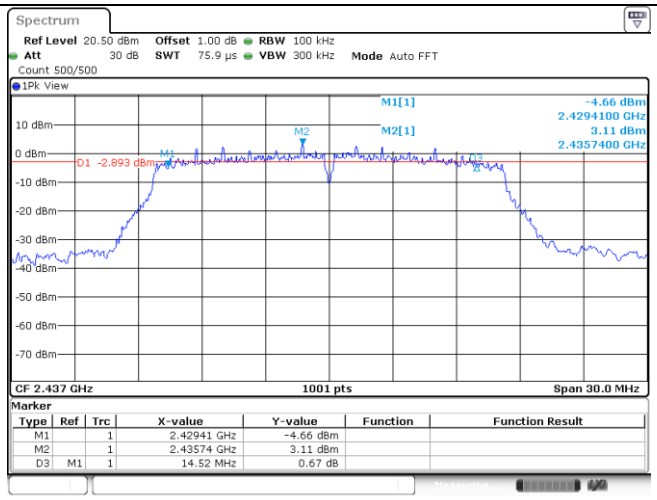
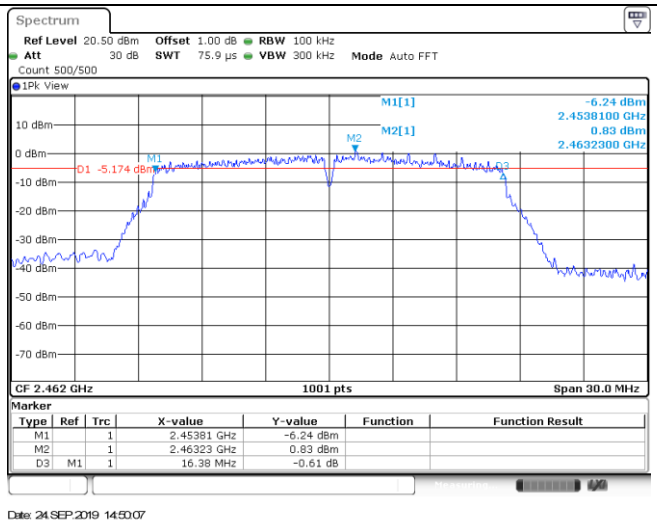
TEST RESULTS

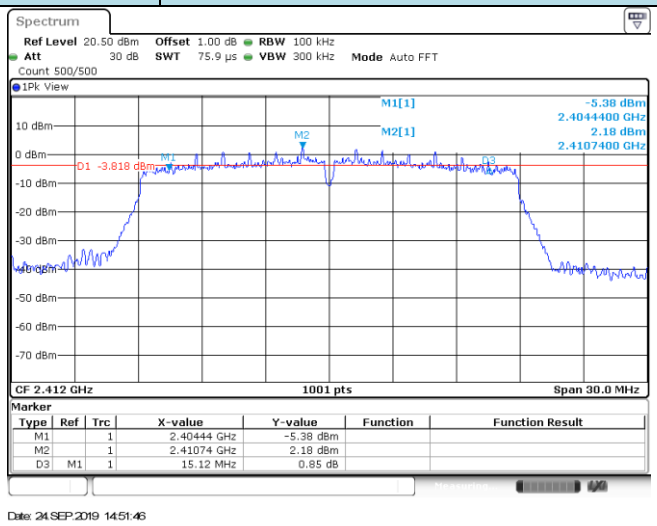
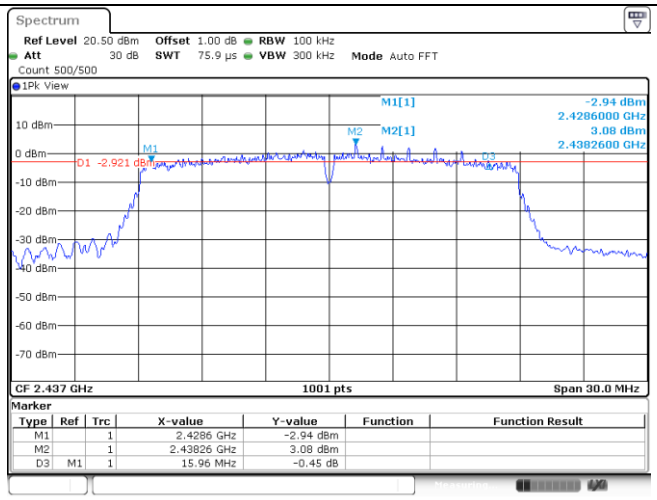
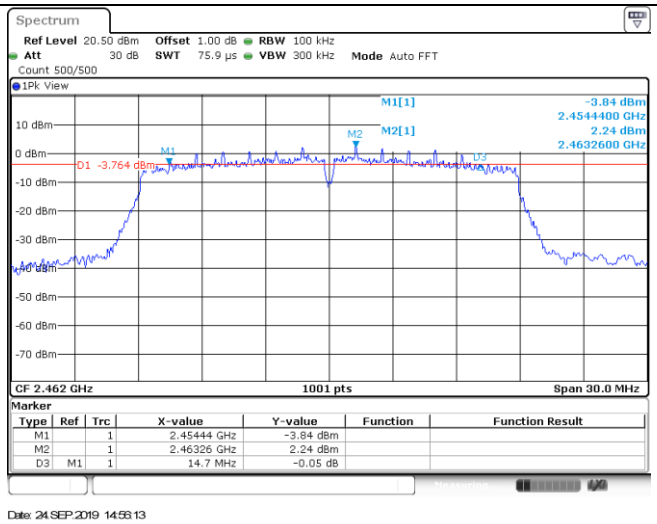
☒ **Passed** ☐ **Not Applicable**

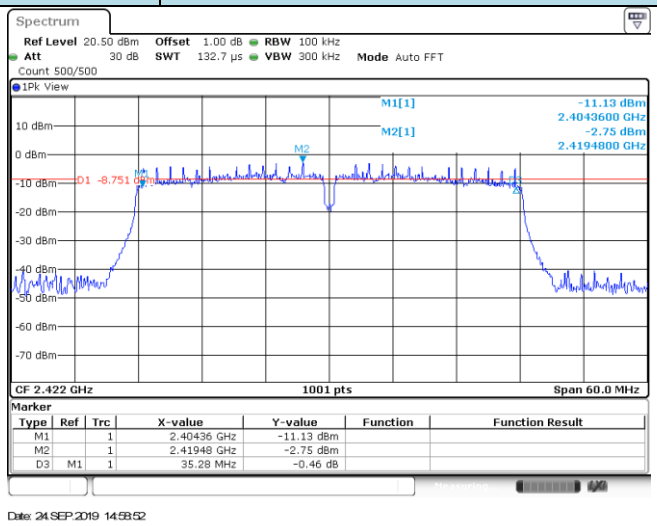
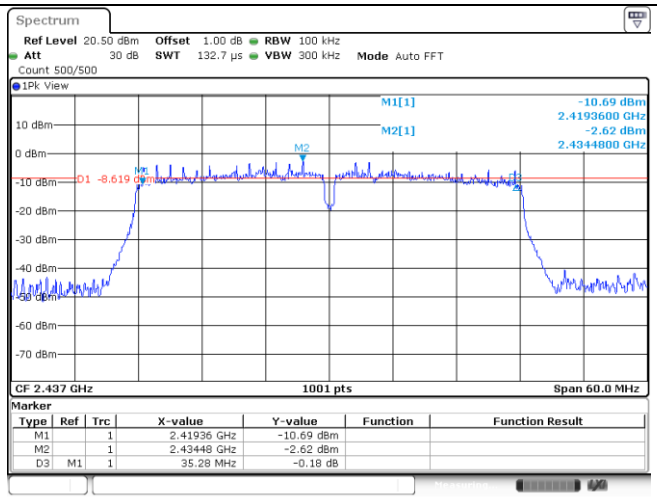
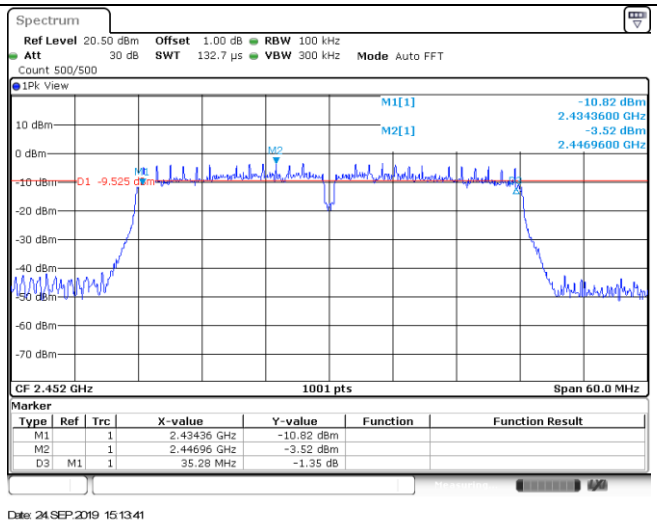
Type	Channel	6dB Bandwidth (MHz)	Limit (kHz)	Result
802.11b	01	9.60	≥500	Pass
	06	9.60		
	11	9.12		
802.11g	01	14.46	≥500	Pass
	06	14.52		
	11	16.38		
802.11n(HT20)	01	15.12	≥500	Pass
	06	15.96		
	11	14.70		
802.11n(HT40)	03	35.28	≥500	Pass
	06	35.28		
	09	35.28		

Test plot as follows:

Type:	802.11b
CH01	
CH06	
CH11	

Type:	802.11g
CH01	
CH06	
CH11	

Type:	802.11n(HT20)
CH01	
CH06	
CH11	

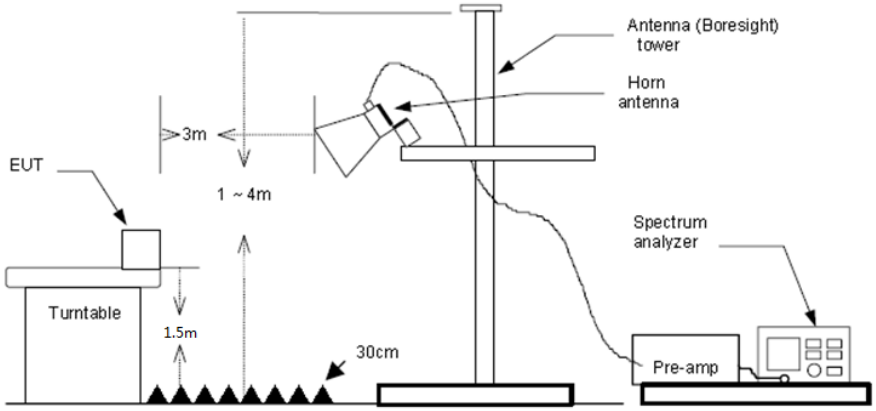
Type:	802.11n(HT40)
CH03	
CH06	
CH09	

5.6. Restricted band

LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.247 (d):
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, Radiated Emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the Radiated Emissions limits specified in §15.209(a) (see §15.205(c)).

TEST CONFIGURATION



TEST PROCEDURE

1) The EUT was setup and tested according to ANSI C63.10:2013 for compliance to FCC 47CFR 15.247 requirements.
2) The EUT is placed on a turn table which is 1.5 meter above ground. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3) The EUT waspositioned such that the distance from antenna to the EUT was 3 meters.
4) The antenna is scanned from 1 meter to 4 meters to find out the maximum emission level. Thisis repeated for both horizontal and vertical polarization of the antenna. In order to find themaximum emission, all of the interface cables were manipulated according to ANSI C63.10:2013 on radiated measurement.
5) The receiver set as follow:
   RBW=1MHz, VBW=3MHz PEAK detector for Peak value.
   RBW=1MHz, VBW=3MHz RMS detector for Average value.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

Note:
1) Final level= Read level + Factor

802.11b	CH01

Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
2310.000	21.45	35.78	57.23	74.00	16.77	Horizontal	PK
2310.000	15.10	35.78	50.88	54.00	3.12	Horizontal	AV
2390.000	21.05	35.50	56.55	74.00	17.45	Horizontal	PK
2390.000	14.42	35.50	49.92	54.00	4.08	Horizontal	AV

Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
2310.000	20.02	35.78	55.80	74.00	18.20	Vertical	PK
2310.000	13.94	35.78	49.72	54.00	4.28	Vertical	AV
2390.000	21.49	35.50	56.99	74.00	17.01	Vertical	PK
2390.000	14.23	35.50	49.73	54.00	4.27	Vertical	AV

802.11b	CH11

Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
2483.500	15.47	35.31	50.78	54.00	3.22	Horizontal	AV
2483.500	20.87	35.31	56.18	74.00	17.82	Horizontal	PK
2500.000	14.26	35.28	49.54	54.00	4.46	Horizontal	AV
2500.000	21.71	35.28	56.99	74.00	17.01	Horizontal	PK

Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
2483.500	20.39	35.31	55.70	74.00	18.30	Vertical	PK
2483.500	14.85	35.31	50.16	54.00	3.84	Vertical	AV
2500.000	21.98	35.28	57.26	74.00	16.74	Vertical	PK
2500.000	14.58	35.28	49.86	54.00	4.14	Vertical	AV

802.11g				CH01			
Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
2310.000	14.48	35.78	50.26	54.00	3.74	Horizontal	AV
2310.000	21.12	35.78	56.90	74.00	17.10	Horizontal	PK
2390.000	14.90	35.50	50.40	54.00	3.60	Horizontal	AV
2390.000	23.78	35.50	59.28	74.00	14.72	Horizontal	PK

Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
2310.000	21.91	35.78	57.69	74.00	16.31	Vertical	PK
2310.000	14.76	35.78	50.54	54.00	3.46	Vertical	AV
2390.000	20.90	35.50	56.40	74.00	17.60	Vertical	PK
2390.000	13.74	35.50	49.24	54.00	4.76	Vertical	AV

802.11g				CH11			
Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
2483.500	27.54	35.31	62.85	74.00	11.15	Horizontal	PK
2483.504	15.01	35.31	50.32	54.00	3.68	Horizontal	AV
2500.000	22.26	35.28	57.54	74.00	16.46	Horizontal	PK
2500.000	14.48	35.28	49.76	54.00	4.24	Horizontal	AV

Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
2483.500	22.16	35.31	57.47	74.00	16.53	Vertical	PK
2483.500	15.57	35.31	50.88	54.00	3.12	Vertical	AV
2500.000	21.98	35.28	57.26	74.00	16.74	Vertical	PK
2500.000	15.30	35.28	50.58	54.00	3.42	Vertical	AV

802.11n(HT20)				CH01			
Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
2310.000	20.83	35.78	56.61	74.00	17.39	Horizontal	PK
2310.000	13.87	35.78	49.65	54.00	4.35	Horizontal	AV
2390.000	27.11	35.50	62.61	74.00	11.39	Horizontal	PK
2390.000	13.63	35.50	49.13	54.00	4.87	Horizontal	AV

Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
2310.000	22.31	35.78	58.09	74.00	15.91	Vertical	PK
2310.000	15.14	35.78	50.92	54.00	3.08	Vertical	AV
2390.000	25.48	35.50	60.98	74.00	13.02	Vertical	PK
2390.000	14.70	35.50	50.20	54.00	3.80	Vertical	AV

802.11n(HT20)				CH11			
Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
2483.500	14.93	35.31	50.24	54.00	3.76	Horizontal	AV
2483.500	27.88	35.31	63.19	74.00	10.81	Horizontal	PK
2500.000	15.39	35.28	50.67	54.00	3.33	Horizontal	AV
2500.000	21.93	35.28	57.21	74.00	16.79	Horizontal	PK

Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
2483.500	15.46	35.31	50.77	54.00	3.23	Vertical	AV
2483.500	23.07	35.31	58.38	74.00	15.62	Vertical	PK
2500.000	13.70	35.28	48.98	54.00	5.02	Vertical	AV
2500.000	21.48	35.28	56.76	74.00	17.24	Vertical	PK

802.11n(HT40)				CH03			
Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
2310.000	14.36	35.78	50.14	54.00	3.86	Horizontal	AV
2310.000	20.40	35.78	56.18	74.00	17.82	Horizontal	PK
2390.000	14.49	35.50	49.99	54.00	4.01	Horizontal	AV
2390.000	22.10	35.50	57.60	74.00	16.40	Horizontal	PK
Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
2310.000	21.55	35.78	57.33	74.00	16.67	Vertical	PK
2310.000	14.63	35.78	50.41	54.00	3.59	Vertical	AV
2390.000	21.16	35.50	56.66	74.00	17.34	Vertical	PK
2390.000	14.59	35.50	50.09	54.00	3.91	Vertical	AV

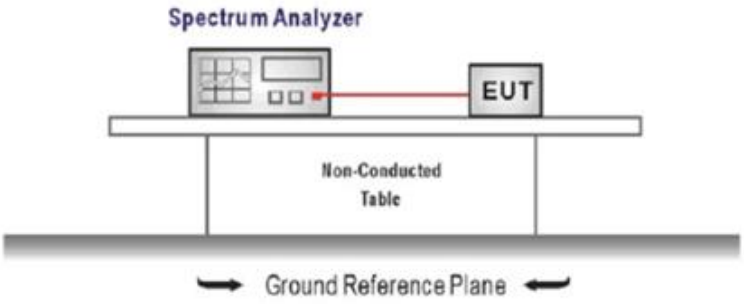
802.11n(HT40)				CH09			
Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
2483.500	26.82	35.31	62.13	74.00	11.87	Horizontal	PK
2483.500	15.14	35.31	50.45	54.00	3.55	Horizontal	AV
2500.000	24.29	35.28	59.57	74.00	14.43	Horizontal	PK
2500.000	14.54	35.28	49.82	54.00	4.18	Horizontal	AV
Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
2483.503	15.25	35.31	50.56	54.00	3.44	Vertical	AV
2483.503	24.68	35.31	59.99	74.00	14.01	Vertical	PK
2500.000	22.47	35.28	57.75	74.00	16.25	Vertical	PK
2500.000	15.15	35.28	50.43	54.00	3.57	Vertical	AV

5.7. Band edge and Spurious Emissions (conducted)

LIMIT

FCC CFR Title 47 Part 15 Subpart C Section15.247 (d):
In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement.

TEST CONFIGURATION



TEST PROCEDURE

1. Connect the antenna port(s) to the spectrum analyzer input.
2. Establish a reference level by using the following procedure
   Center frequency=DTS channel center frequency
   The span = 1.5 times the DTS bandwidth.
   RBW = 100 kHz, VBW ≥ 3 x RBW
   Detector = peak, Sweep time = auto couple, Trace mode = max hold
   Allow trace to fully stabilize
   Use the peak marker function to determine the maximum PSD level

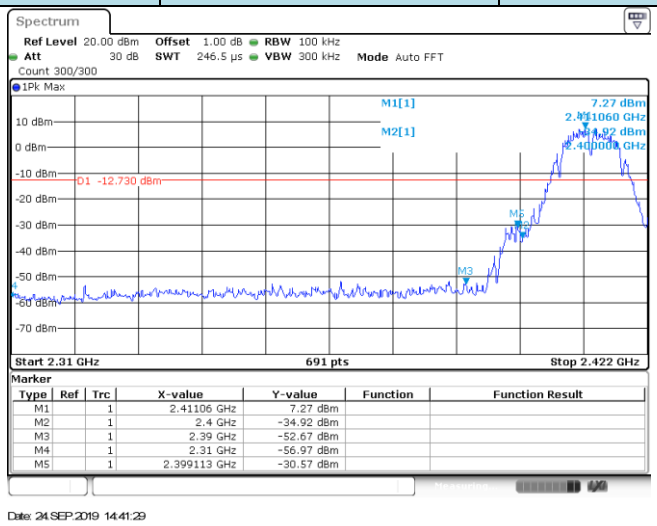
   Note: the channel found to contain the maximum PSD level can be used to establish the reference level.
3. Emission level measurement
   Set the center frequency and span to encompass frequency range to be measured
   RBW = 100 kHz, VBW ≥ 3 x RBW
   Detector = peak, Sweep time = auto couple, Trace mode = max hold
   Allow trace to fully stabilize
   Use the peak marker function to determine the maximum amplitude level.
4. Place the radio in continuous transmit mode, allow the trace to stabilize, view the transmitter waveform on the spectrum analyzer.
5. Ensure that the amplitude of all unwanted emission outside of the authorized frequency band excluding restricted frequency bands) are attenuated by at least the minimum requirements specified (at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz). Report the three highest emission relative to the limit.

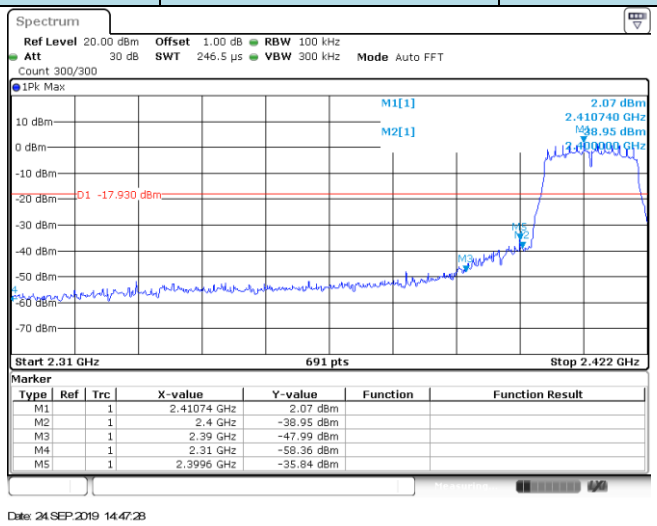
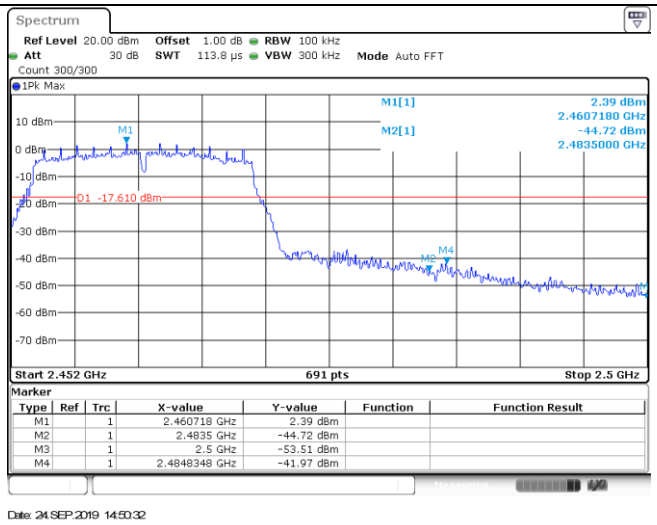
TEST MODE:

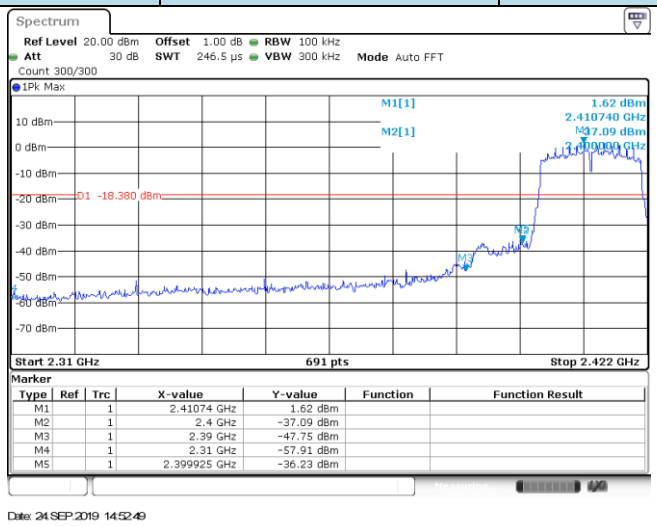
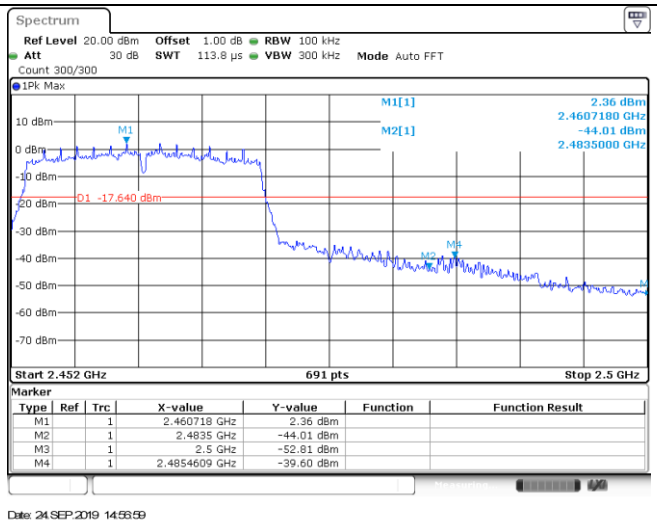
Please refer to the clause 3.3

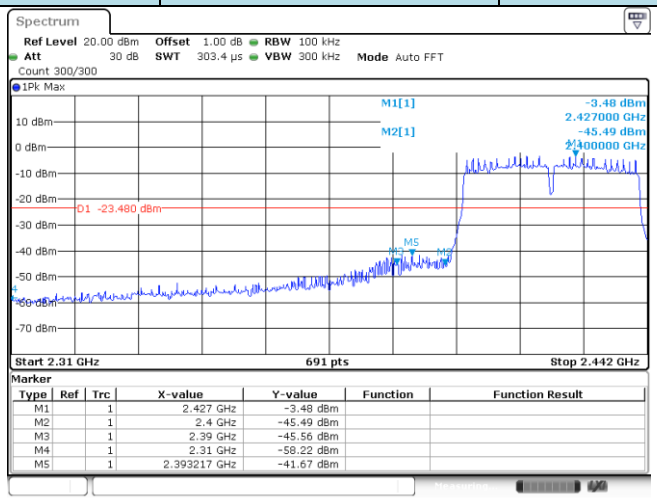
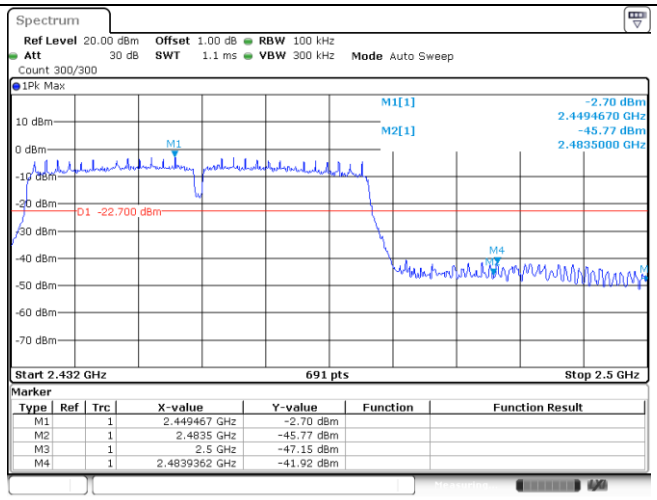
TEST RESULTS

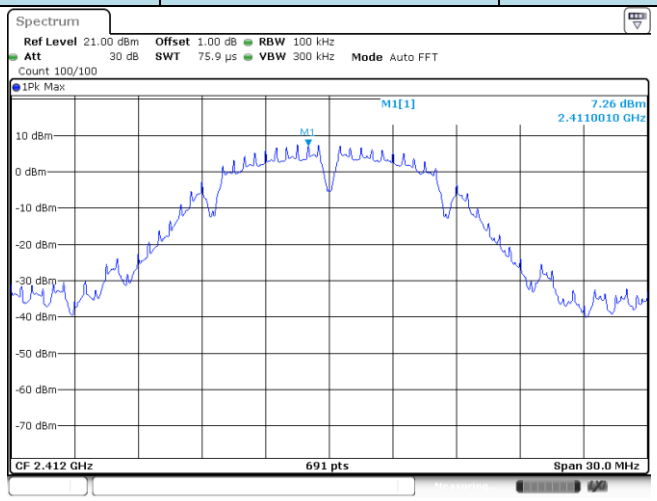
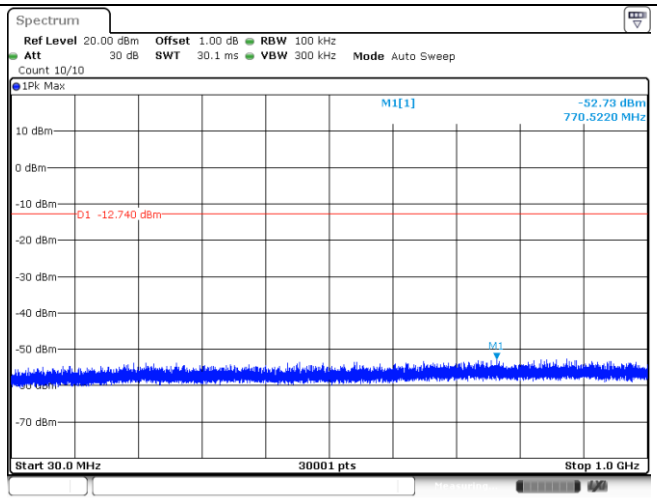
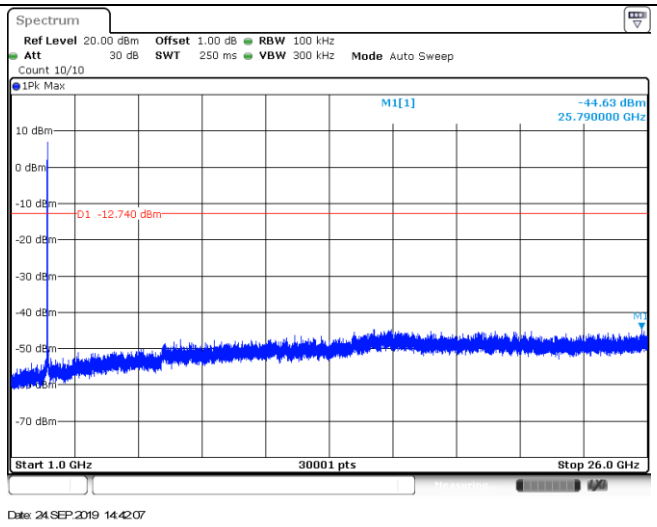
☒ **Passed** ☐ **Not Applicable**

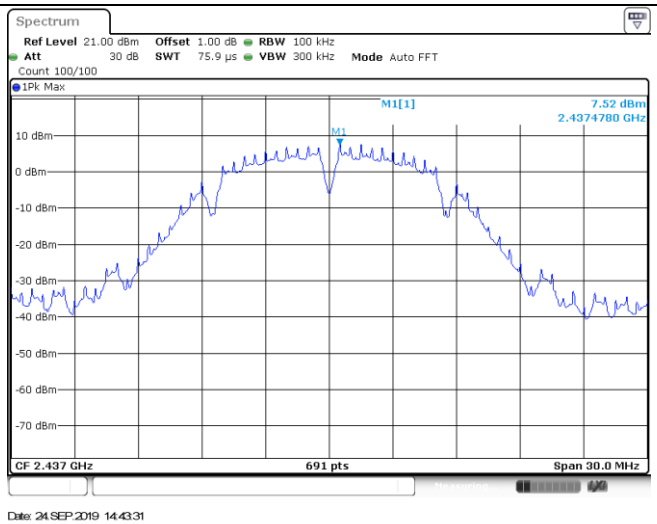
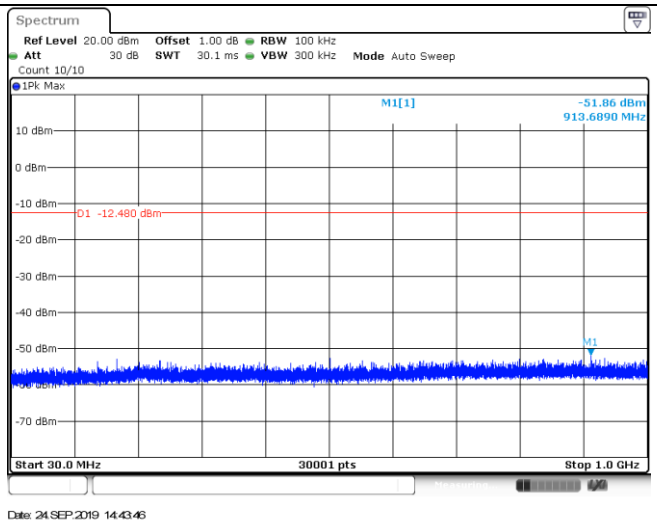
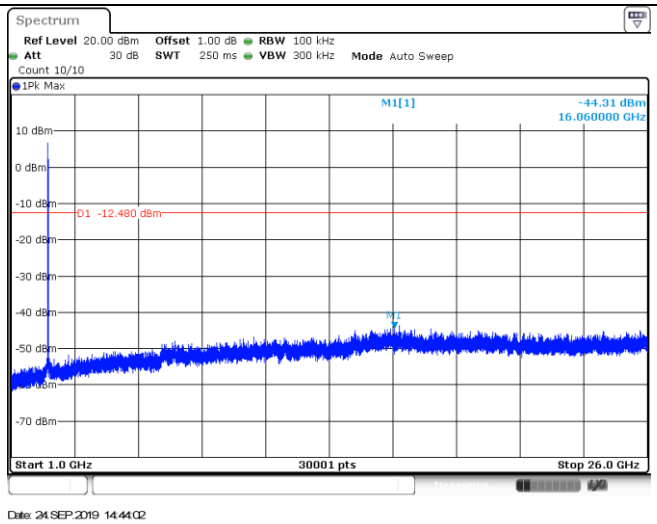
Test Item:	Bandedge	Type:	802.11b
CH01	
CH11	

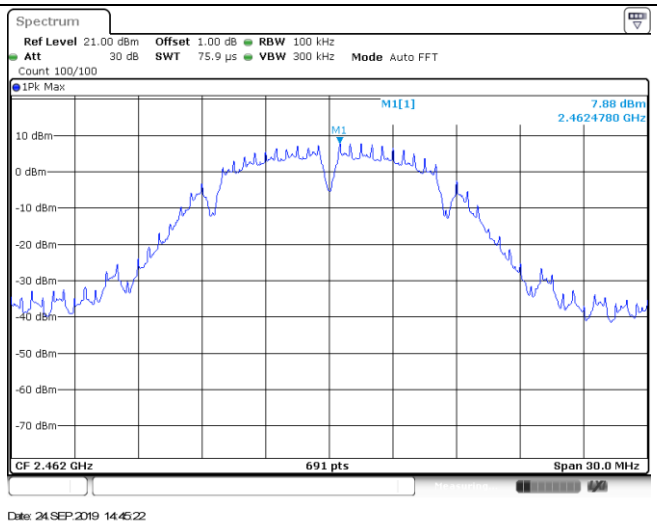
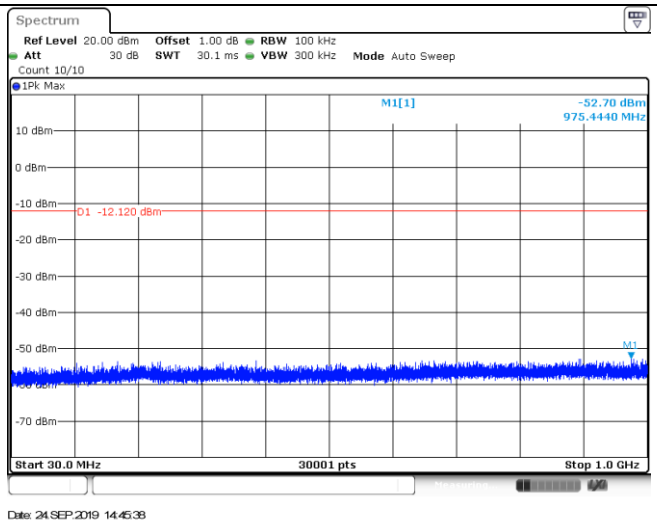
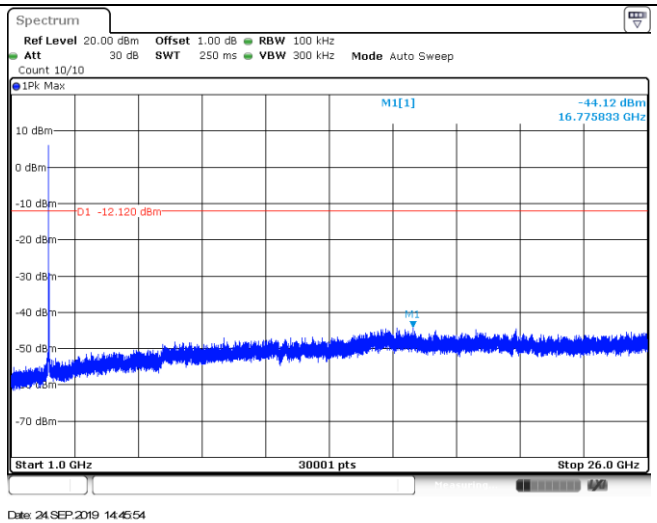
Test Item:	Bandedge	Type:	802.11g
CH01			
CH11			

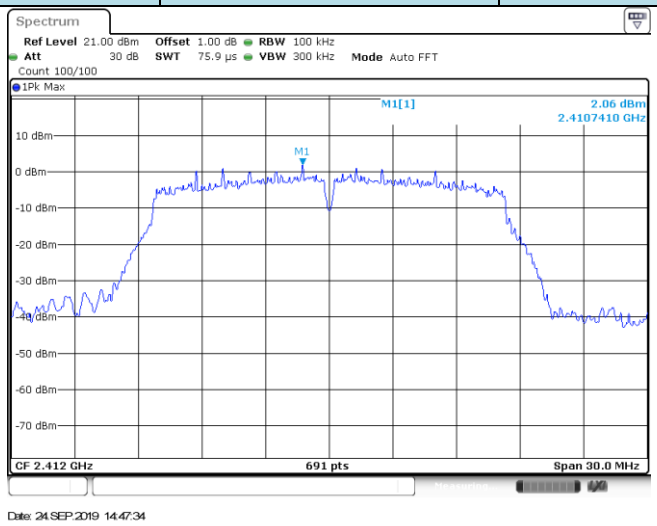
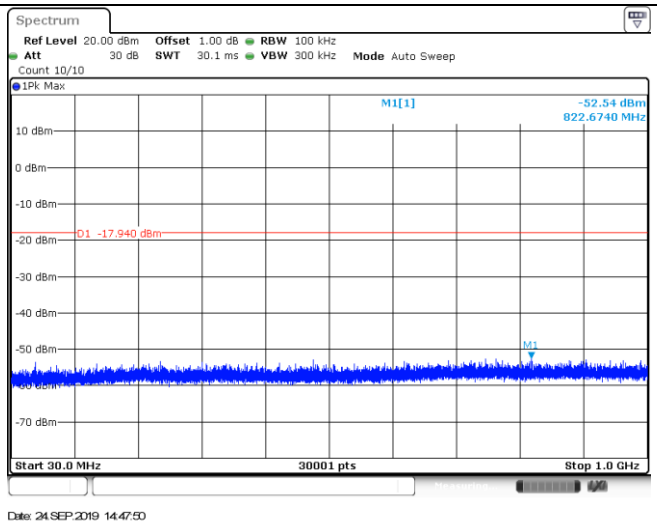
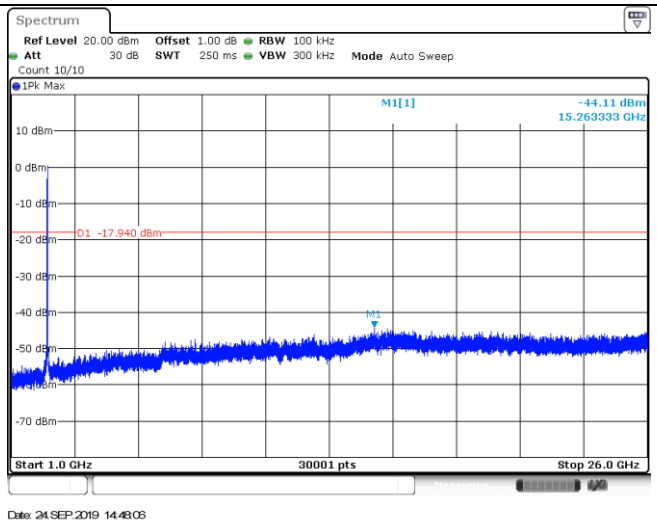
Test Item:	Bandedge	Type:	802.11n(HT20)
CH01			
CH11			

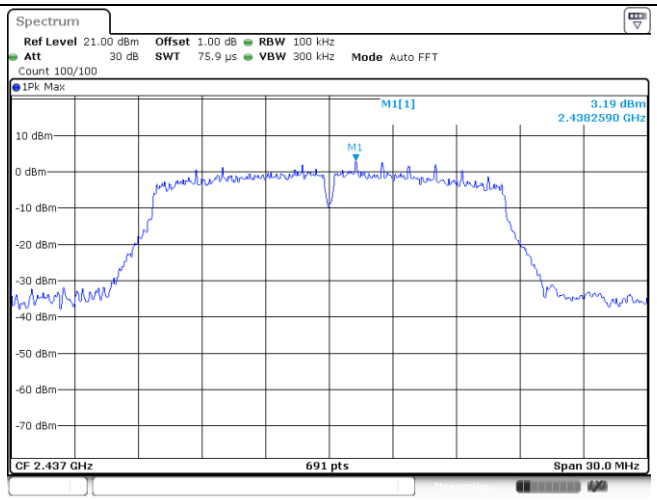
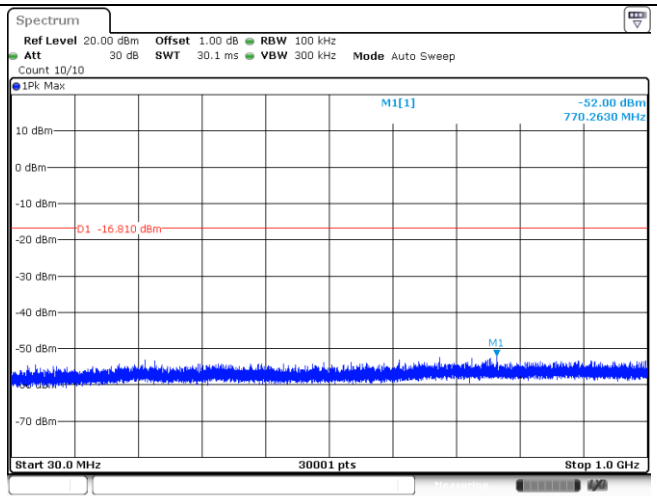
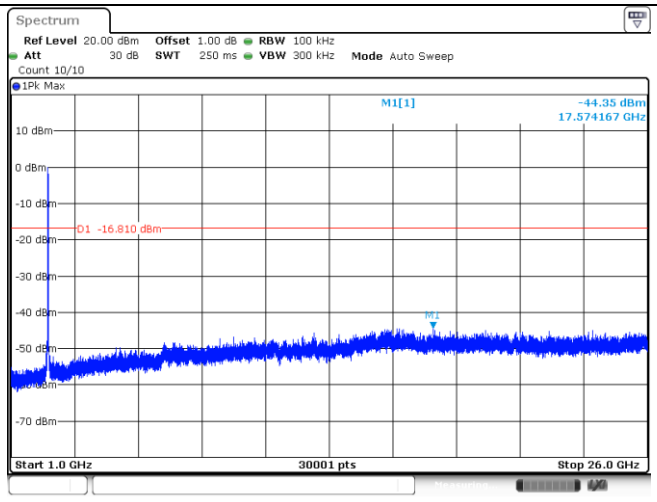
Test Item:	Bandedge	Type:	802.11n(HT40)
CH03			
CH09			

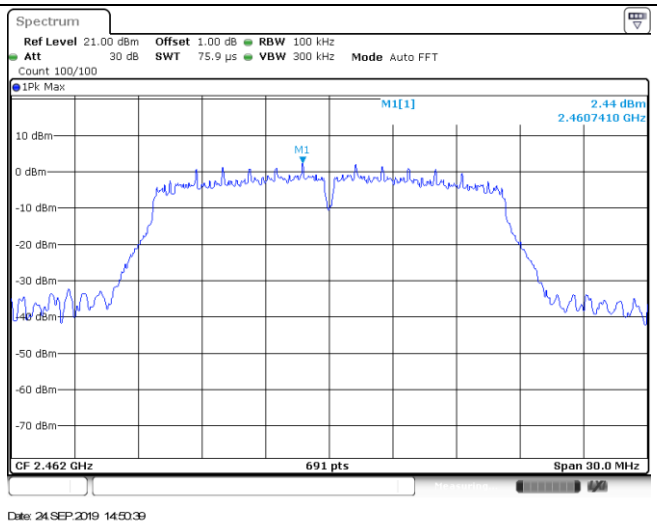
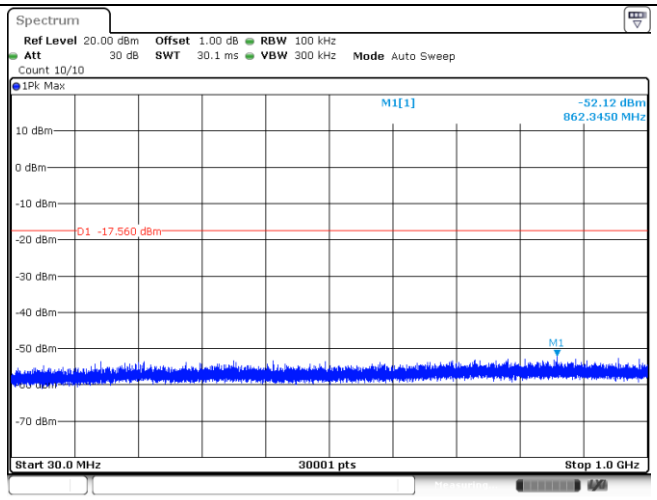
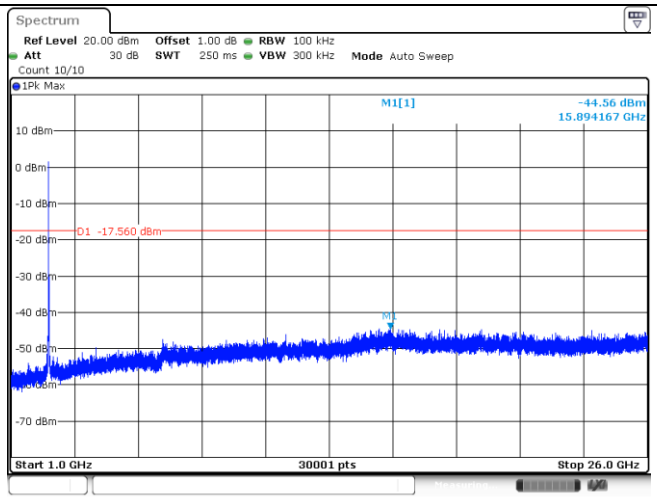
Test Item:	SE	Type:	802.11b
CH01 Reference level			
CH01 30MHz~1000MHz			
CH01 1GHz~26GHz			

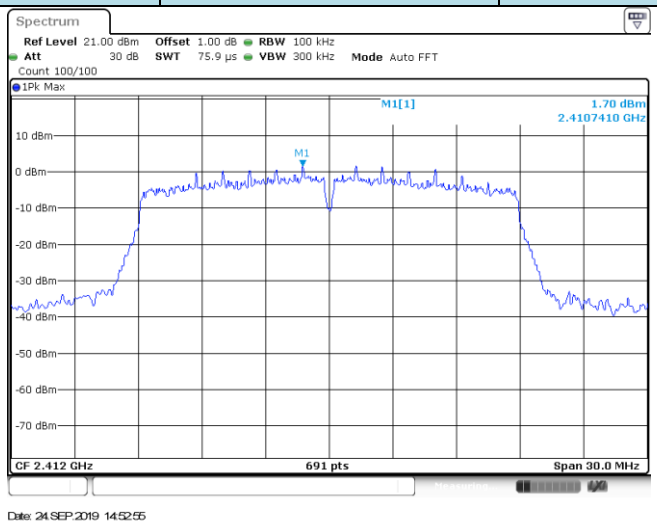
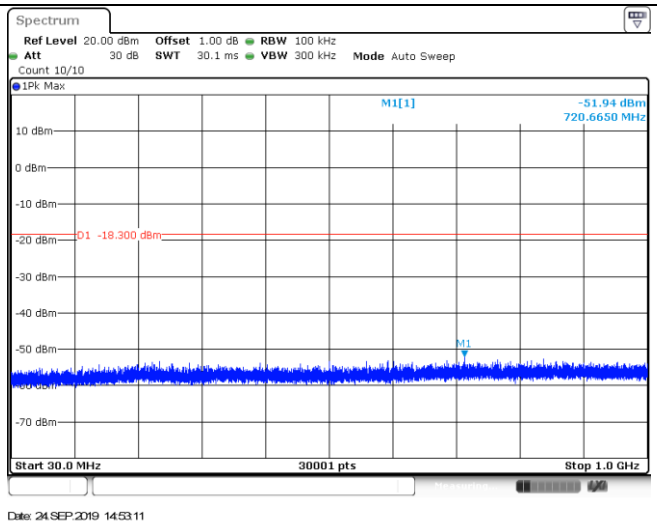
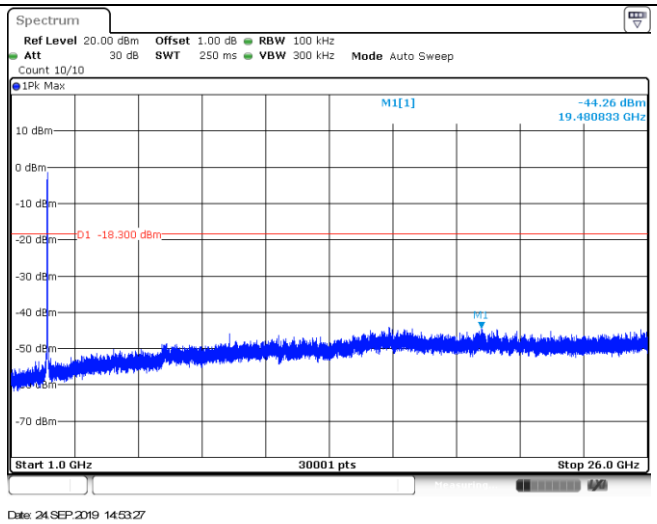
CH06 Reference level	
CH06 30MHz~1000MHz	
CH06 1GHz~26GHz	

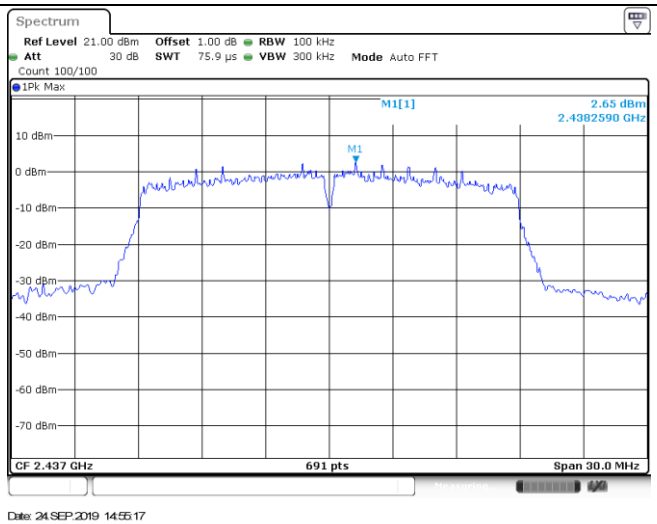
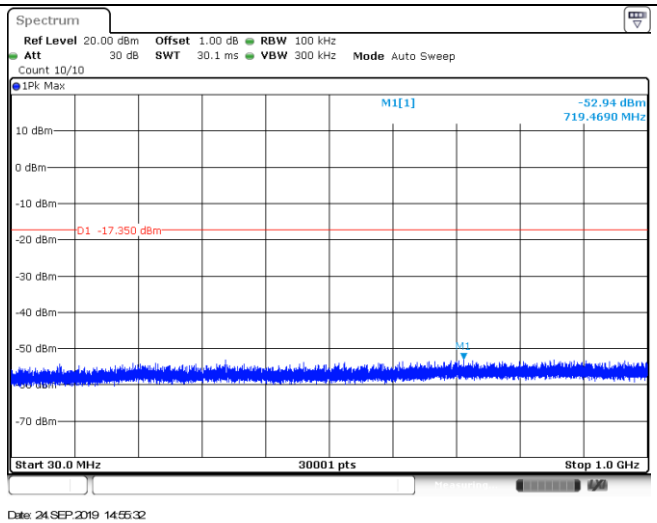
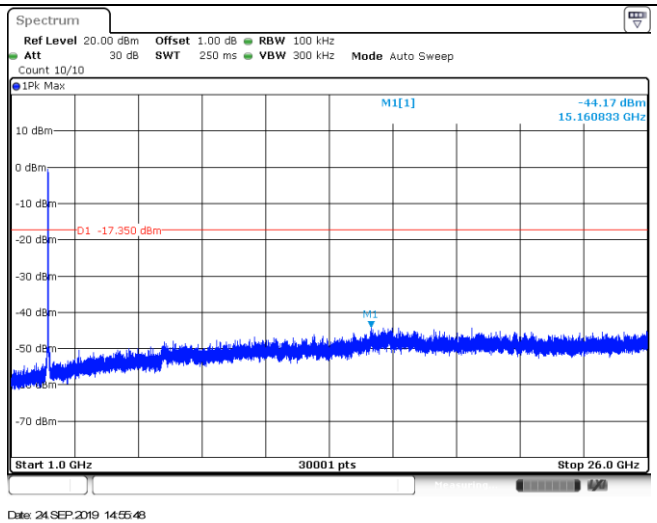
CH11 Reference level	
CH11 30MHz~1000MHz	
CH11 1GHz~26GHz	

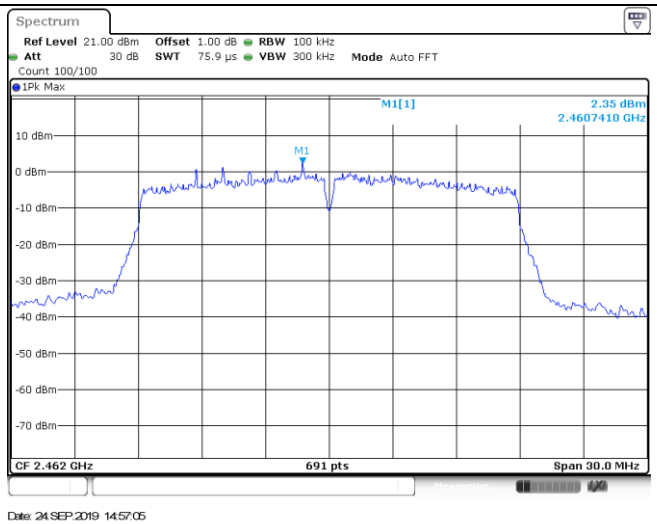
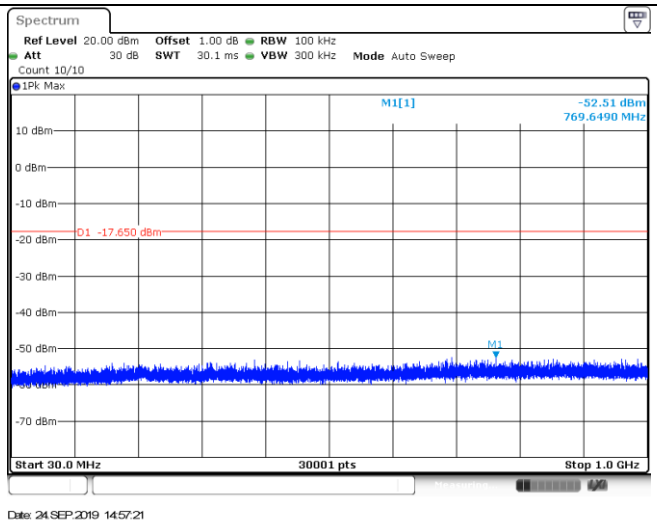
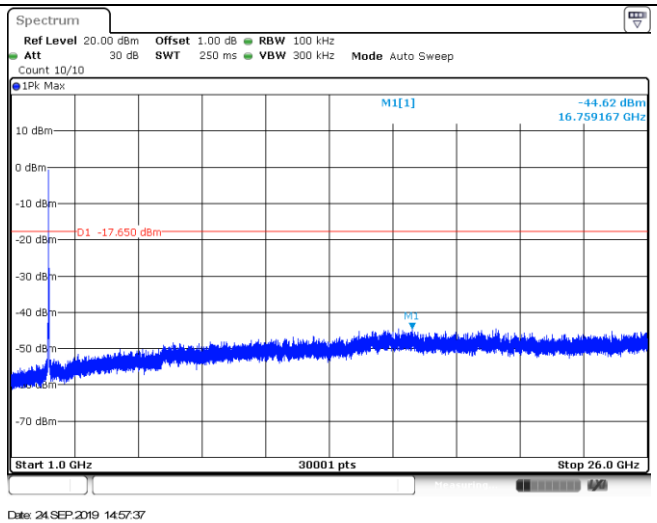
Test Item:	SE	Type:	802.11g
CH01 Reference level			
CH01 30MHz~1000MHz			
CH01 1GHz~26GHz			

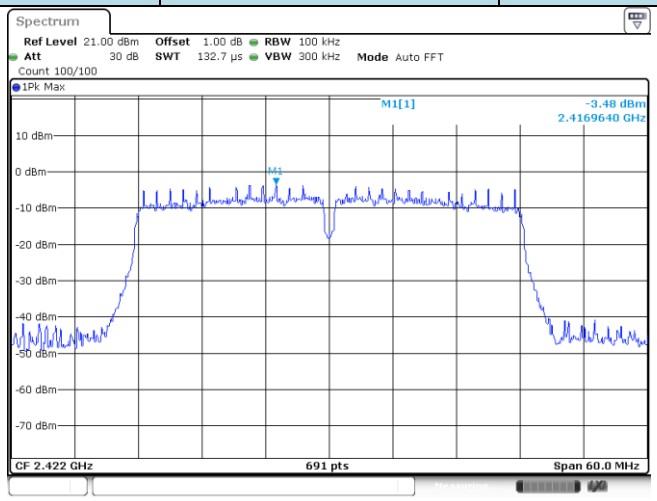
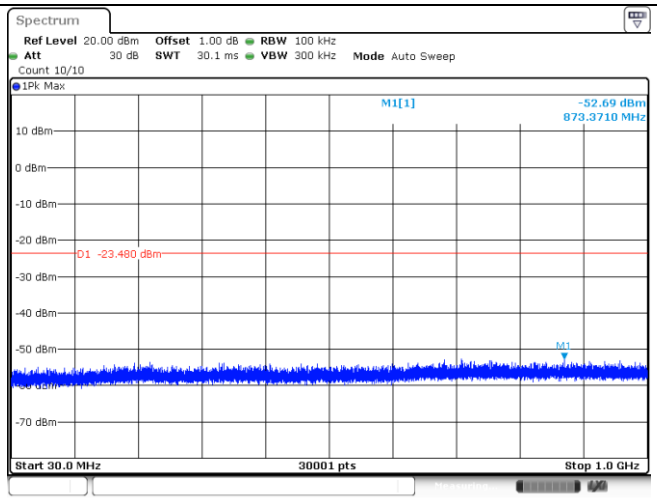
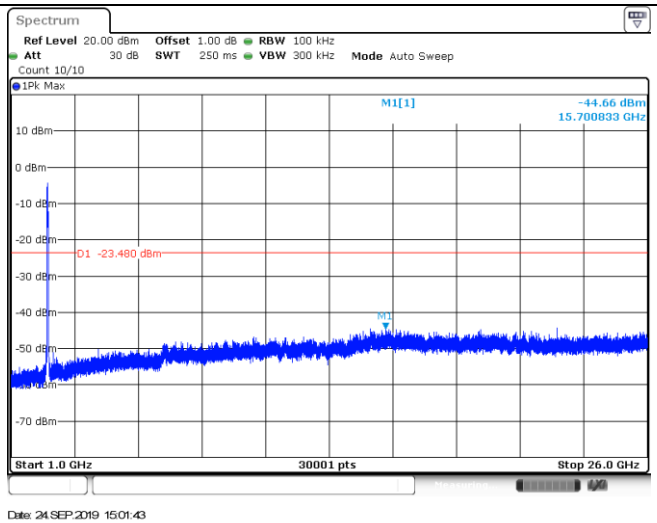
CH06 Reference level	
CH06 30MHz~1000MHz	
CH06 1GHz~26GHz	

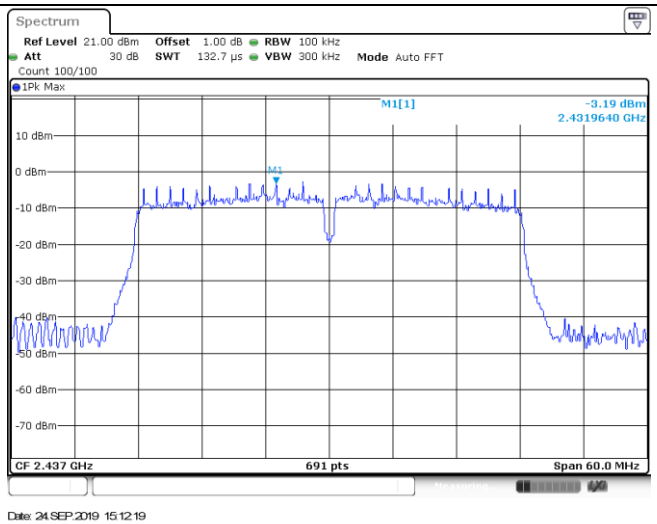
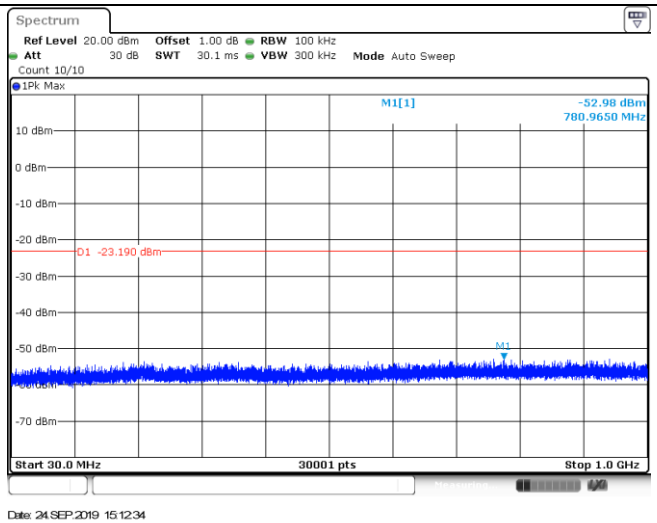
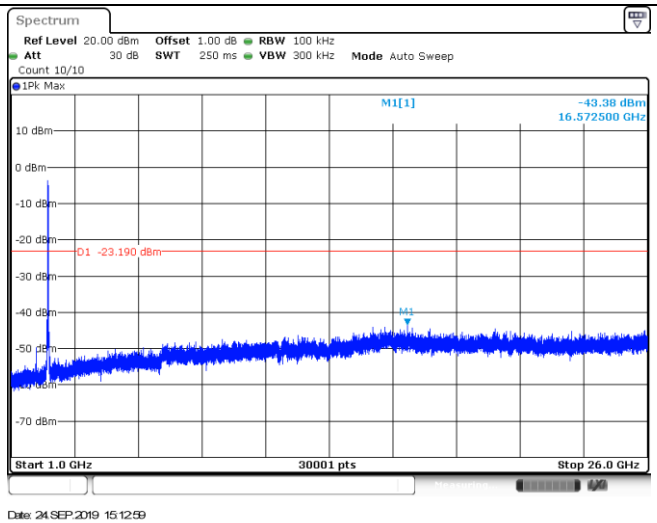
CH11 Reference level	
CH11 30MHz~1000MHz	
CH11 1GHz~26GHz	

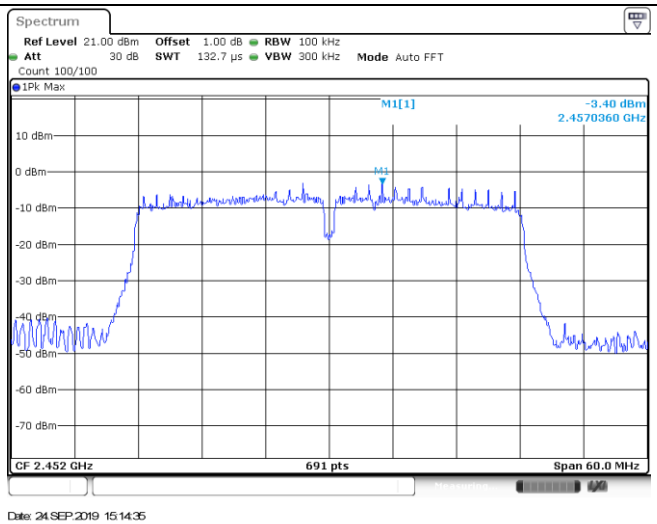
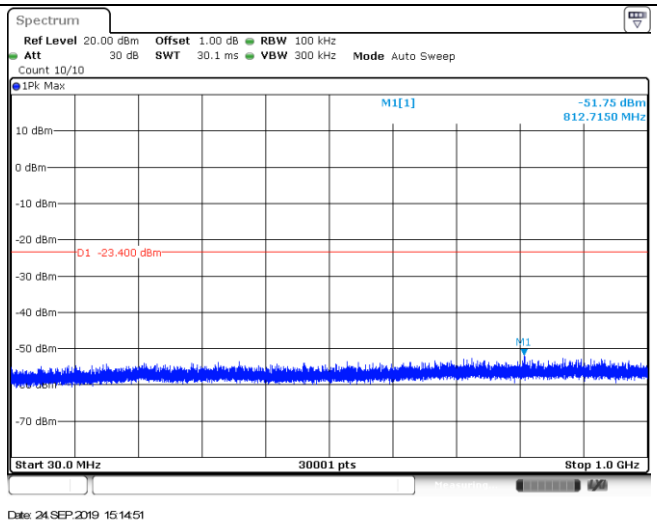
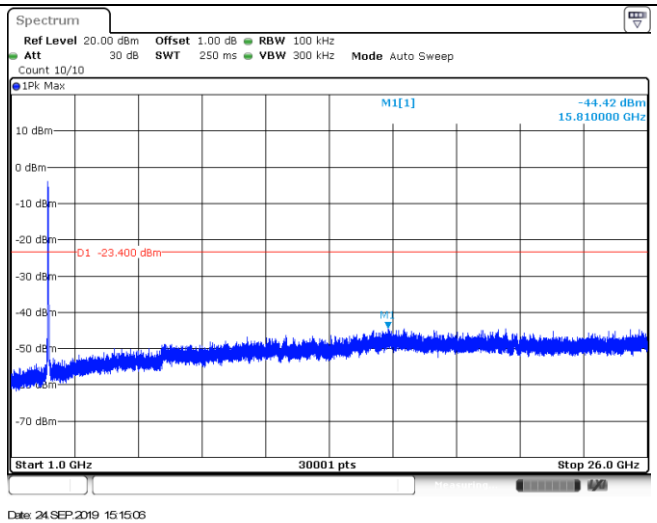
Test Item:	SE	Type:	802.11n(HT20)
CH01 Reference level			
CH01 30MHz~1000MHz			
CH01 1GHz~26GHz			

CH06 Reference level	
CH06 30MHz~1000MHz	
CH06 1GHz~26GHz	

CH11 Reference level	
CH11 30MHz~1000MHz	
CH11 1GHz~26GHz	

Test Item:	SE	Type:	802.11n(HT40)
CH03 Reference level	
CH03 30MHz~1000MHz	
CH03 1GHz~26GHz	

CH06 Reference level	
CH06 30MHz~1000MHz	
CH06 1GHz~26GHz	

CH09 Reference level	
CH09 30MHz~1000MHz	
CH09 1GHz~26GHz	

5.8. Spurious Emissions (radiated)

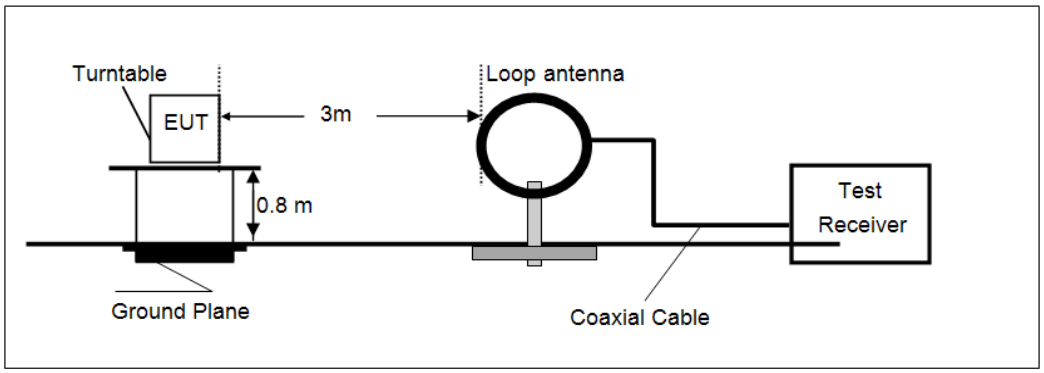
LIMIT

FCC CFR Title 47 Part 15 Subpart C Section 15.209

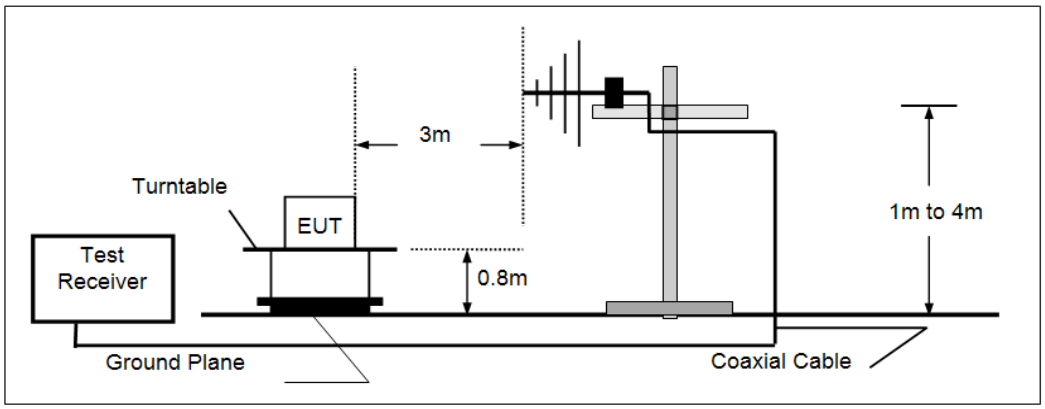
Frequency	Limit (dBuV/m @3m)	Value
30MHz-88MHz	40.00	Quasi-peak
88MHz-216MHz	43.50	Quasi-peak
216MHz-960MHz	46.00	Quasi-peak
960MHz-1GHz	54.00	Quasi-peak
Above 1GHz	54.00	Average
	74.00	Peak

TEST CONFIGURATION

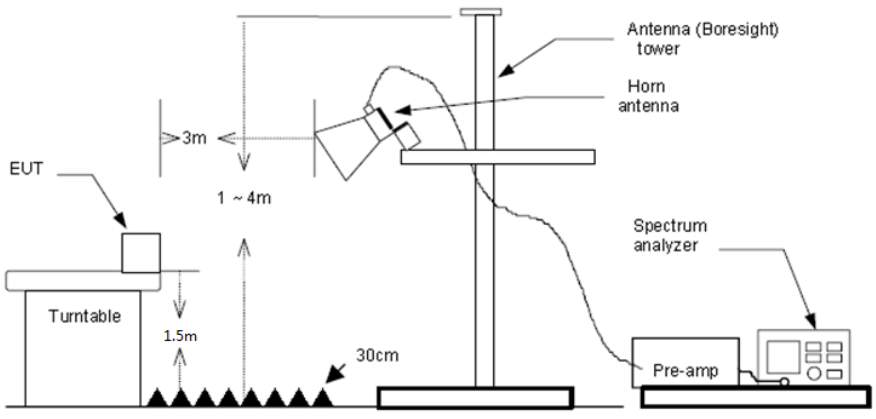
➢ 9kHz ~30MHz



➢ 30MHz ~ 1GHz



➢ Above 1GHz



TEST PROCEDURE

1. The EUT was setup and tested according to ANSI C63.10:2013 for compliance to FCC 47CFR 15.247 requirements.
2. The EUT is placed on a turn table which is 0.8 meter above ground for below 1 GHz, and 1.5 m for above 1 GHz. The turn table is rotated 360 degrees to determine the position of the maximum emission level.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the top of a variable height antenna tower.
4. For each suspected emission, the EUT was arranged to its worst case and then tune the Antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading. A pre-amp and a high pass filter are used for the test in order to get better signal level to comply with the guidelines.
5. Set to the maximum power setting and enable the EUT transmit continuously.
6. Use the following spectrum analyzer settings
   (1) Span shall wide enough to fully capture the emission being measured;
   (2) Below 1 GHz:
   RBW=120 kHz, VBW=300 kHz, Sweep=auto, Detector function=peak, Trace=max hold;
   If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
   (3) From 1 GHz to 10^{th} harmonic:
   RBW=1MHz, VBW=3MHz Peak detector for Peak value.
   RBW=1MHz, VBW=3MHz RMS detector for Average value.

TEST MODE:

Please refer to the clause 3.3

TEST RESULTS

☒ **Passed** ☐ **Not Applicable**

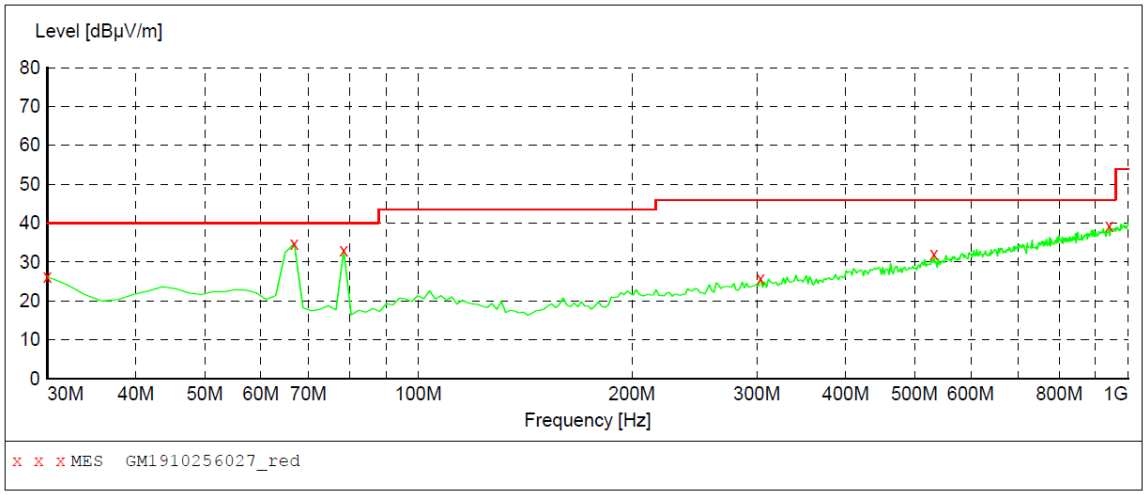
Note:
1) Final Level =Receiver Read level + Factor
2) The emission levels of other frequencies are very lower than the limit and not show in test report.

- **9kHz ~ 30MHz**
  The EUT was pre-scanned the frequency band (9kHz~30MHz), found the radiated level lower than the limit, so don't show on the report.

- **30MHz ~1000MHz**
  Have pre-scan all modulation mode, found the 802.11b mode CH01 which it was worst case, so only the worst case's data on the test report.

➢ **30MHz ~ 1GHz**

Polarization:	Vertical

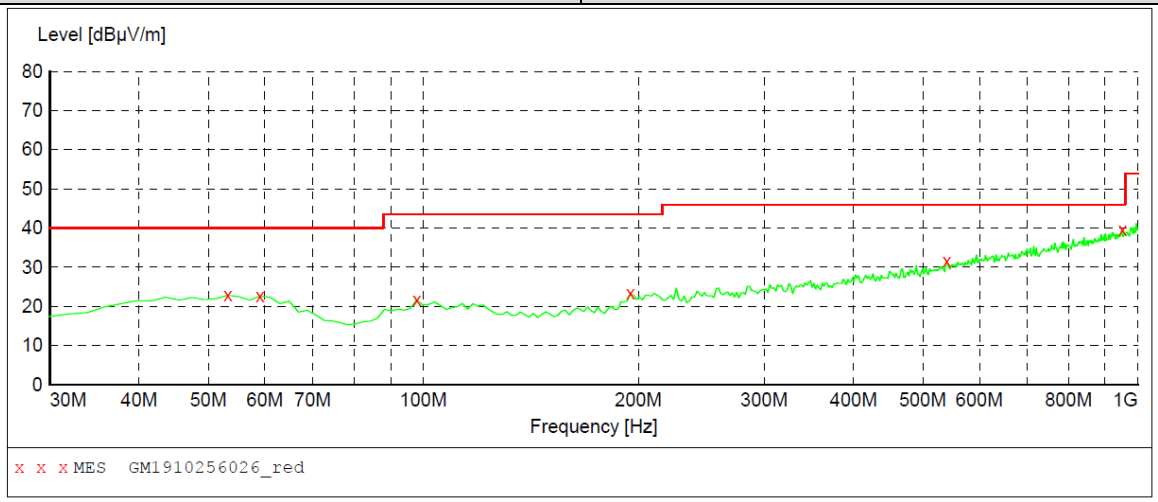


MEASUREMENT RESULT: "GM1910256027_red"

10/25/2019 11:21AM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
30.000000	26.20	-8.8	40.0	13.8	QP	100.0	146.00	VERTICAL
66.860000	34.80	-7.7	40.0	5.2	QP	100.0	328.00	VERTICAL
78.500000	33.00	-11.1	40.0	7.0	QP	100.0	328.00	VERTICAL
303.540000	25.70	-2.3	46.0	20.3	QP	100.0	248.00	VERTICAL
532.460000	32.00	3.6	46.0	14.0	QP	100.0	248.00	VERTICAL
939.860000	39.30	12.0	46.0	6.7	QP	100.0	272.00	VERTICAL

Polarization:	Horizontal



MEASUREMENT RESULT: "GM1910256026_red"

10/25/2019 11:18AM

Frequency MHz	Level dBµV/m	Transd dB	Limit dBµV/m	Margin dB	Det.	Height cm	Azimuth deg	Polarization
53.280000	22.80	-4.6	40.0	17.2	QP	100.0	194.00	HORIZONTAL
59.100000	22.60	-5.1	40.0	17.4	QP	100.0	321.00	HORIZONTAL
97.900000	21.70	-6.4	43.5	21.8	QP	100.0	0.00	HORIZONTAL
194.900000	23.40	-5.4	43.5	20.1	QP	100.0	78.00	HORIZONTAL
540.220000	31.60	3.8	46.0	14.4	QP	100.0	215.00	HORIZONTAL
951.500000	39.60	12.2	46.0	6.4	QP	100.0	359.00	HORIZONTAL

➢ **1 GHz ~ 25 GHz**

802.11b	CH01

Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1367.187	34.43	-5.58	28.85	74.00	45.15	Horizontal	PK
3614.375	33.86	1.47	35.33	74.00	38.67	Horizontal	PK
4824.625	37.33	7.08	44.41	74.00	29.59	Horizontal	PK
8017.687	30.69	18.22	48.91	74.00	25.09	Horizontal	PK

Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1218.843	36.11	-5.78	30.33	74.00	43.67	Vertical	PK
3742.156	33.92	1.76	35.68	74.00	38.32	Vertical	PK
4823.156	36.27	7.08	43.35	74.00	30.65	Vertical	PK
8097.000	30.67	18.34	49.01	74.00	24.99	Vertical	PK

802.11b	CH06

Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1302.562	34.87	-5.57	29.30	74.00	44.70	Horizontal	PK
3106.187	34.08	0.35	34.43	74.00	39.57	Horizontal	PK
4874.562	37.19	7.15	44.34	74.00	29.66	Horizontal	PK
7311.218	31.50	16.09	47.59	74.00	26.41	Horizontal	PK

Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1210.031	35.74	-5.80	29.94	74.00	44.06	Vertical	PK
3654.031	34.96	1.53	36.49	74.00	37.51	Vertical	PK
4873.093	33.22	7.15	40.37	74.00	33.63	Vertical	PK
7312.687	31.73	16.09	47.82	74.00	26.18	Vertical	PK

802.11b	CH11

Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1306.968	34.49	-5.57	28.92	74.00	45.08	Horizontal	PK
3692.218	34.03	1.58	35.61	74.00	38.39	Horizontal	PK
4923.031	31.39	7.33	38.72	74.00	35.28	Horizontal	PK
7384.656	31.59	16.32	47.91	74.00	26.09	Horizontal	PK

Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1235.000	35.68	-5.74	29.94	74.00	44.06	Vertical	PK
3690.750	34.82	1.58	36.40	74.00	37.60	Vertical	PK
4924.500	32.36	7.34	39.70	74.00	34.30	Vertical	PK
7387.593	31.67	16.33	48.00	74.00	26.00	Vertical	PK

802.11g	CH01

Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1185.062	35.47	-5.99	29.48	74.00	44.52	Horizontal	PK
3182.562	33.49	0.75	34.24	74.00	39.76	Horizontal	PK
4823.156	34.84	7.08	41.92	74.00	32.08	Horizontal	PK
7233.375	31.11	16.01	47.12	74.00	26.88	Horizontal	PK

Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1165.968	36.01	-6.19	29.82	74.00	44.18	Vertical	PK
3620.250	34.64	1.48	36.12	74.00	37.88	Vertical	PK
4820.218	35.47	7.08	42.55	74.00	31.45	Vertical	PK
8042.656	30.67	18.25	48.92	74.00	25.08	Vertical	PK

802.11g	CH06

Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1164.500	35.08	-6.21	28.87	74.00	45.13	Horizontal	PK
3655.500	34.34	1.53	35.87	74.00	38.13	Horizontal	PK
4876.031	32.18	7.15	39.33	74.00	34.67	Horizontal	PK
7434.593	30.98	16.38	47.36	74.00	26.64	Horizontal	PK

Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1174.781	35.44	-6.10	29.34	74.00	44.66	Vertical	PK
3654.031	34.94	1.53	36.47	74.00	37.53	Vertical	PK
4868.687	31.15	7.14	38.29	74.00	35.71	Vertical	PK
7308.281	33.01	16.08	49.09	74.00	24.91	Vertical	PK

802.11g				CH11			
Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1223.250	35.16	-5.77	29.39	74.00	44.61	Horizontal	PK
3166.406	33.52	0.67	34.19	74.00	39.81	Horizontal	PK
4921.562	32.32	7.32	39.64	74.00	34.36	Horizontal	PK
7456.625	30.70	16.39	47.09	74.00	26.91	Horizontal	PK
Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1198.281	35.49	-5.85	29.64	74.00	44.36	Vertical	PK
3151.718	35.32	0.59	35.91	74.00	38.09	Vertical	PK
4668.937	31.57	6.19	37.76	74.00	36.24	Vertical	PK
7390.531	30.41	16.34	46.75	74.00	27.25	Vertical	PK

802.11n(HT20)				CH01			
Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1215.906	34.98	-5.79	29.19	74.00	44.81	Horizontal	PK
3626.125	34.10	1.49	35.59	74.00	38.41	Horizontal	PK
4823.156	34.71	7.08	41.79	74.00	32.21	Horizontal	PK
7234.843	31.05	16.01	47.06	74.00	26.94	Horizontal	PK
Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1195.343	34.96	-5.88	29.08	74.00	44.92	Vertical	PK
3182.562	34.10	0.75	34.85	74.00	39.15	Vertical	PK
4817.281	35.21	7.07	42.28	74.00	31.72	Vertical	PK
7236.312	31.48	16.01	47.49	74.00	26.51	Vertical	PK

802.11n(HT20)				CH06			
Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1132.187	35.93	-6.55	29.38	74.00	44.62	Horizontal	PK
3188.437	33.77	0.78	34.55	74.00	39.45	Horizontal	PK
4878.968	34.47	7.15	41.62	74.00	32.38	Horizontal	PK
7434.593	31.12	16.38	47.50	74.00	26.50	Horizontal	PK
Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1202.687	35.18	-5.82	29.36	74.00	44.64	Vertical	PK
3711.312	34.17	1.64	35.81	74.00	38.19	Vertical	PK
4873.093	31.28	7.15	38.43	74.00	35.57	Vertical	PK
7317.093	31.05	16.10	47.15	74.00	26.85	Vertical	PK

802.11n(HT20)				CH11			
Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1189.468	35.44	-5.94	29.50	74.00	44.50	Horizontal	PK
3683.406	33.53	1.57	35.10	74.00	38.90	Horizontal	PK
4921.562	31.60	7.32	38.92	74.00	35.08	Horizontal	PK
7387.593	31.43	16.33	47.76	74.00	26.24	Horizontal	PK
Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1171.843	35.36	-6.13	29.23	74.00	44.77	Vertical	PK
3101.781	34.73	0.33	35.06	74.00	38.94	Vertical	PK
4820.218	30.40	7.08	37.48	74.00	36.52	Vertical	PK
7390.531	32.27	16.34	48.61	74.00	25.39	Vertical	PK

802.11n(HT40)				CH03			
Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1242.343	34.67	-5.72	28.95	74.00	45.05	Horizontal	PK
3181.093	32.89	0.74	33.63	74.00	40.37	Horizontal	PK
4834.906	31.64	7.10	38.74	74.00	35.26	Horizontal	PK
7430.187	30.44	16.38	46.82	74.00	27.18	Horizontal	PK
Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1182.125	35.82	-6.02	29.80	74.00	44.20	Vertical	PK
3163.468	33.64	0.65	34.29	74.00	39.71	Vertical	PK
4679.218	31.51	6.25	37.76	74.00	36.24	Vertical	PK
7087.968	30.72	15.40	46.12	74.00	27.88	Vertical	PK

802.11n(HT40)				CH06			
Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1198.281	35.44	-5.85	29.59	74.00	44.41	Horizontal	PK
3197.250	33.98	0.83	34.81	74.00	39.19	Horizontal	PK
4873.093	30.86	7.15	38.01	74.00	35.99	Horizontal	PK
6626.781	31.10	13.24	44.34	74.00	29.66	Horizontal	PK
Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1174.781	35.63	-6.10	29.53	74.00	44.47	Vertical	PK
3156.125	34.50	0.61	35.11	74.00	38.89	Vertical	PK
4812.875	31.00	7.07	38.07	74.00	35.93	Vertical	PK
7268.625	30.82	16.03	46.85	74.00	27.15	Vertical	PK

802.11n(HT40)	CH09

Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1255.562	35.48	-5.69	29.79	74.00	44.21	Horizontal	PK
3162.000	32.87	0.64	33.51	74.00	40.49	Horizontal	PK
4886.312	30.83	7.16	37.99	74.00	36.01	Horizontal	PK
7440.468	30.61	16.39	47.00	74.00	27.00	Horizontal	PK

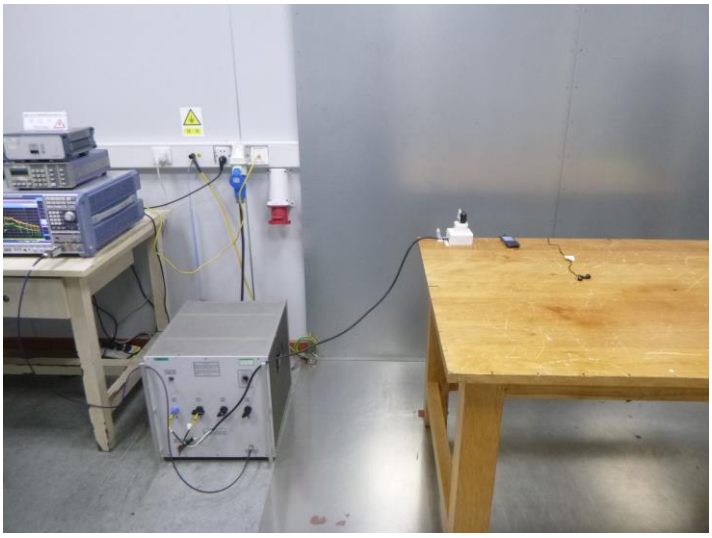
Freq. [MHz]	Reading [dBμV/m]	Factor [dB]	Level [dBμV/m]	Limit [dBμV/m]	Margin [dB]	Polarity	Detector
1227.656	35.17	-5.76	29.41	74.00	44.59	Vertical	PK
3125.281	33.76	0.45	34.21	74.00	39.79	Vertical	PK
4880.437	31.46	7.15	38.61	74.00	35.39	Vertical	PK
7340.593	30.65	16.18	46.83	74.00	27.17	Vertical	PK

Remark:

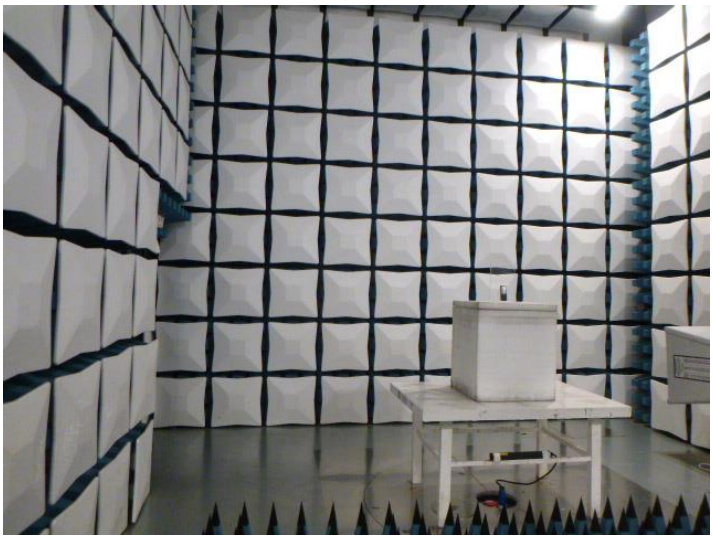
1. Final Level =Receiver Read level + Factor
2. The peak level is lower than average limit(54 dBuV/m), this data is the too weak instrument of signal is unable to test.
3. The emission levels of other frequencies(test frequency band is 1GHz to 25GHz) are very lower than the limit and not show in test report.

6. TEST SETUP PHOTOS

Conducted Emissions



Radiated Emissions



7. EXTERANAL AND INTERNAL PHOTOS

Reference to the test report No. CHTEW19100155

--------End of Report--------