



TEST REPORT

Report Reference No	TRE1810019106 F	R/C: 64475			
FCC ID:	YPVITALCOMB1				
Applicant's name:	ITALCOM GROUP				
Address	1728 Coral Way, Coral Gables, Miami, Florida, United States				
Manufacturer	UTCOM TECHNOLOGY CO.,L	UTCOM TECHNOLOGY CO., LIMITED			
Address:	4C, Block A, Central Avenue Bu Town, Baoan District, Shenzhen				
Test item description:	Smart phone				
Trade Mark	NYX				
Model/Type reference:	B1				
Listed Model(s)	-				
Standard:	FCC CFR Title 47 Part 15 Subp	part C Section 15.247			
Date of receipt of test sample:	Oct 23,2018				
Date of testing	Oct 24,2018- Nov 13,2018				
Date of issue	Nov 14,2018				
Result	PASS				
Compiled by (position+printedname+signature):	File administrators Silvia Li	Silvia Li			
Supervised by (position+printedname+signature):	Project Engineer Aaron Fang	Silvia Li Aaron.Fang HomsHu			
Approved by (position+printedname+signature):	RF Manager Hans Hu	Homsty			
Testing Laboratory Name	Shanahan Ukutan musi Interne	tional Increation Co. 14d			
Testing Laboratory Name					
Address	1/F, Bldg 3, Hongfa Hi-tech Industrial Park, Genyu Road, Tianliao, Gongming, Shenzhen, China				
Shenzhen Huatongwei International This publication may be reproduced in					

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

<u>1.</u>	TEST STANDARDS AND REPORT VERSION	3
1.1.	Test Standards	3
1.2.	Report version	3
<u>2.</u>	TEST DESCRIPTION	4
<u>3.</u>	SUMMARY	5
3.1.	Client Information	5
3.2.	Product Description	5
3.3.	Operation state	6
3.4.	EUT configuration	6
3.5.	Modifications	6
<u>4.</u>	TEST ENVIRONMENT	7
4.1.	Address of the test laboratory	7
4.2.	Test Facility	7
4.3.	Environmental conditions	8
4.4.	Statement of the measurement uncertainty	8
4.5.	Equipments Used during the Test	9
<u>5.</u>	TEST CONDITIONS AND RESULTS	11
5.1.	Antenna requirement	11
5.2.	Conducted Emissions (AC Main)	12
5.3.	Conducted Peak Output Power	15
5.4.	Power Spectral Density	16
5.5.	6dB bandwidth	22
5.6.	Restricted band	28
5.7.	Band edge and Spurious Emissions (conducted)	33
5.8.	Spurious Emissions (radiated)	50
<u>6.</u>	TEST SETUP PHOTOS	57
<u>7.</u>	EXTERANAL AND INTERNAL PHOTOS	58

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

<u>KDB 558074 D01 DTS Meas Guidance v05:</u> 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	2018-11-14	Original

2. TEST DESCRIPTION

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

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

Shenzhen Huatongwei International Inspection Co., Ltd.

3. <u>SUMMARY</u>

3.1. Client Information

Applicant:	ITALCOM GROUP
Address:	1728 Coral Way, Coral Gables, Miami, Florida, United States
Manufacturer:	UTCOM TECHNOLOGY CO.,LIMITED
Address:	4C, Block A, Central Avenue Building, BaoYuan Road, Xixiang Town, Baoan District, Shenzhen,518012

3.2. Product Description

Smart phone	
NYX	
B1	
-	
Conducted: 359198090000802 Radiated: 359198090000778	
DC 3.8V	
Model:TPA-10120150UU Input:100-240Va.c. 50-60Hz 0.15A Output:5.0Vd.c. 1A	
NYX_B1_001	
B1_AMXNYX_V001R	
802.11b/802.11g/802.11n(HT20)/802.11n(HT40)	
DSSS for 802.11b OFDM for 802.11g/802.11n(HT20)/802.11n(HT40)	
2412MHz~2462MHz for 802.11b/802.11g/802.11n(HT20) 2422MHz~2452MHz for 802.11n(HT40)	
11 for 802.11b/802.11g/802.11n(HT20) 7 for 802.11n(HT40)	
5MHz	
FPC Antenna	
1.0dBi	

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:	/
0	7	Model No.:	/
		Manufacturer:	/
0	7	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.:5377B-1

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.: 5377B-1.

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	0.63 dB	(1)
Conducted spurious emissions 9kHz~40GHz	0.63 dB	(1)
Conducted Disturbance 150kHz~30MHz	3.35 dB	(1)
Radiated Emissions below 1GHz	4.28 dB	(1)
Radiated Emissions above 1GHz	5.16 dB	(1)
Occupied Bandwidth	69 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

Conduc	cted Emissions					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. (mm-dd-yy)	Next Cal. (mm-dd-yy)
1	EMI Test Receiver	R&S	ESCI	101247	10/27/2018	10/26/2019
2	Artificial Mains	SCHWARZBECK	NNLK 8121	573	10/27/2018	10/26/2019
3	2-Line V- Network	R&S	ESH3-Z5	100049	10/27/2018	10/26/2019
4	Pulse Limiter	R&S	ESH3-Z2	101488	10/27/2018	10/26/2019
5	RF Connection Cable	HUBER+SUHNER	EF400	N/A	11/21/2017	11/20/2018
6	Test Software	R&S	ES-K1	N/A	N/A	N/A
Radiat	ed Emissions					
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. (mm-dd-yy)	Next Cal. (mm-dd-yy)
1	Semi- Anechoic Chamber	Albatross projects	SAC-3m-01	C11121	10/16/2016	10/15/2019
2	EMI Test Receiver	R&S	ESCI	100900	10/28/2018	10/27/2019
3	Loop Antenna	R&S	HFH2-Z2	100020	11/20/2017	11/19/2020
4	Ultra- Broadband Antenna	SCHWARZBECK	VULB9163	538	4/5/2017	4/4/2020
5	Horn Antenna	SCHWARZBECK	9120D	1011	3/27/2017	3/26/2020
6	Broadband Horn Antenna	SCHWARZBECK	BBHA9170	BBHA9170 472	3/27/2017	3/26/2020
7	Pre-amplifier	SCHWARZBECK	BBV 9743	9743-0022	10/17/2018	10/16/2019
8	Broadband Pre-amplifier	SCHWARZBECK	BBV 9718	9718-248	4/28/2018	4/28/2019
9	Spectrum Analyzer	R&S	FSP40	100597	10/27/2018	10/26/2019
10	RF Connection Cable	HUBER+SUHNE R	RE-7-FL	N/A	11/21/2017	11/20/2018
11	RF Connection Cable	HUBER+SUHNE R	RE-7-FH	N/A	11/21/2017	11/20/2018
12	Test Software	Audix	E3	N/A	N/A	N/A
13	Test Software	R&S	ES-K1	N/A	N/A	N/A
14	Turntable	Maturo Germany	TT2.0-1T	N/A	N/A	N/A
15	Antenna Mast	Maturo Germany	CAM-4.0-P-12	N/A	N/A	N/A

Shenzhen Huatongwei International Inspection Co., Ltd.

RF Con	RF Conducted Test						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Last Cal. (mm-dd-yy)	Next Cal. (mm-dd-yy)	
1	Spectrum Analyzer	R&S	FSV40	100048	10/28/2018	10/27/2019	
2	EXA Signal Analyzer	Agilent	N9020A	184247	9/29/2018	9/28/2019	
3	Power Meter	Anritsu	ML249A	N/A	9/20/2018	9/19/2019	
4	OSP	R&S	OSP120	101317	N/A	N/A	

5. TEST CONDITIONS AND RESULTS

5.1. Antenna requirement <u>REQUIREMENT:</u>

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)

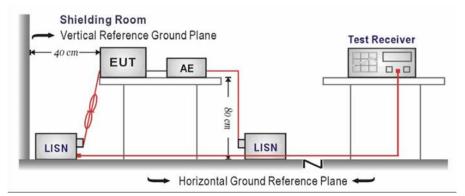
<u>LIMIT</u>

FCC CFR Title 47 Part 15 Subpart C Section 15.207:

	Limit (dBuV)				
Frequency range (MHz)	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.
- 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.
- 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:

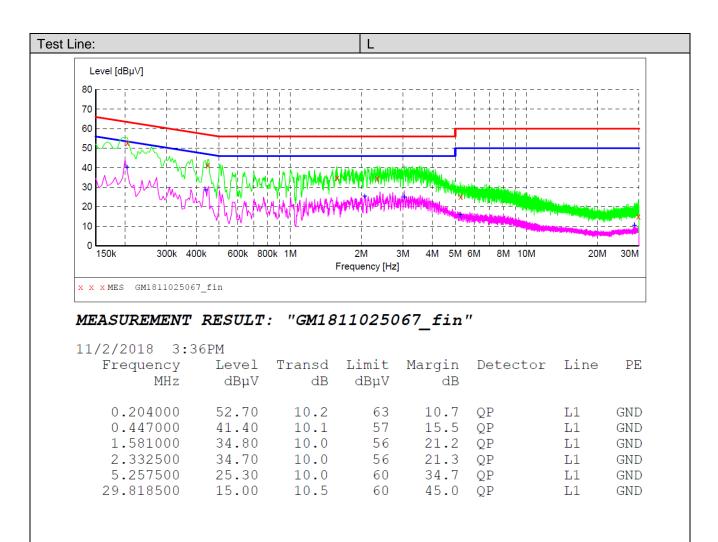
Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

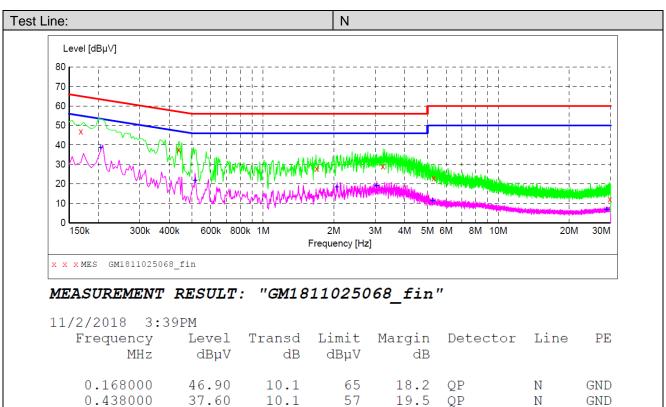
Note:

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



MEASUREMENT RESULT: "GM1811025067 fin2"

Frequency MHz	Level dBµV	Transd dB	Limit dBµV	Margin dB	Detector	Line	PE
0.204000	40.20	10.2	53	13.2	AV	L1	GND
0.438000	28.60	10.1	47	18.5	AV	L1	GND
2.067000	25.50	10.0	46	20.5	AV	L1	GND
3.043500	25.00	10.0	46	21.0	AV	L1	GND
5.248500	16.00	10.0	50	34.0	AV	L1	GND
28.684500	10.40	10.5	50	39.6	AV	L1	GND



0.100000	40.00	10.1	05	10.2	Ω1	IN	OND
0.438000	37.60	10.1	57	19.5	QP	Ν	GND
1.689000	27.80	10.0	56	28.2	QP	Ν	GND
3.228000	29.00	10.0	56	27.0	QP	Ν	GND
5.316000	22.90	10.0	60	37.1	QP	Ν	GND
29.787000	12.10	10.5	60	47.9	QP	Ν	GND

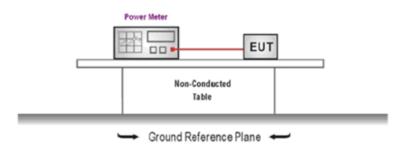
MEASUREMENT RESULT: "GM1811025068 fin2"

11/2/2018 3:3	11/2/2018 3:39PM									
Frequency	Level	Transd	Limit	Margin	Detector	Line	PE			
MHz	dBµV	dB	dBµV	dB						
0.204000	38.80	10.2	53	14.6	AV	Ν	GND			
0.514500	21.90	10.0	46	24.1	AV	Ν	GND			
2.062500	18.30	10.0	46	27.7	AV	Ν	GND			
3.043500	19.20	10.0	46	26.8	AV	Ν	GND			
5.248500	11.40	10.0	50	38.6	AV	Ν	GND			
28.887000	6.80	10.5	50	43.2	AV	Ν	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

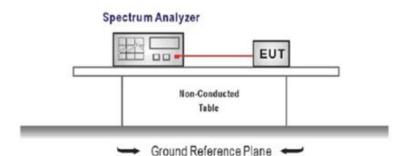
☑ Passed □ Not Applicable

Туре	Channel	Peak Output power (dBm)	Limit (dBm)	Result	
	01	17.65			
802.11b	06	17.74	≤30.00	Pass	
	11	18.48			
	01	17.19			
802.11g	06	17.24	≤30.00	Pass	
	11	17.47			
	01	16.28	≤30.00		
802.11n(HT20)	06	16.60		Pass	
	11	16.91			
	03	15.71			
802.11n(HT40)	06	15.55	≤30.00	Pass	
	09	15.79			

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,
- 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:

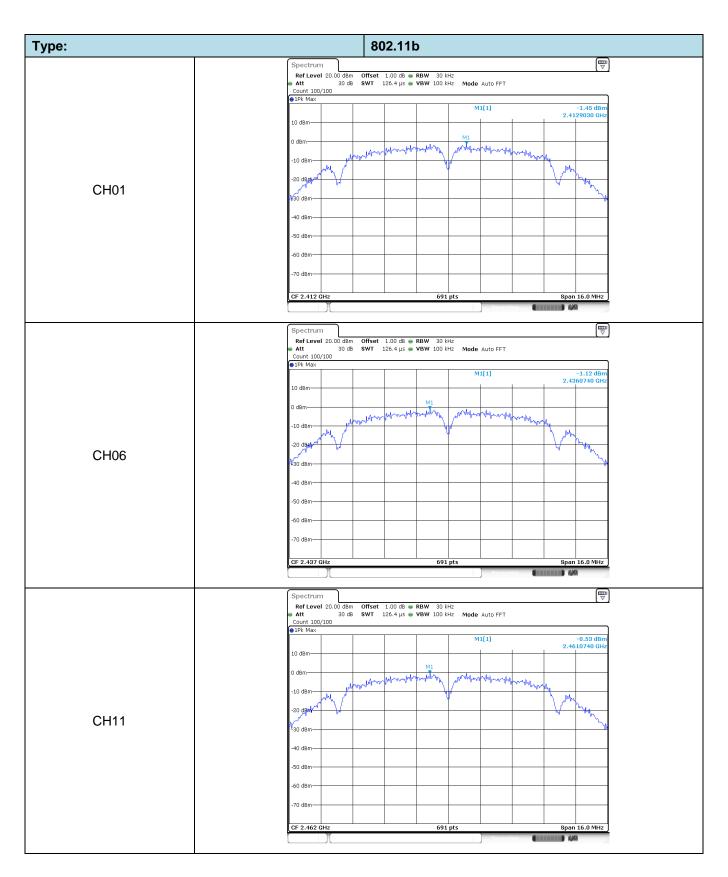
Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

Туре	Channel	Power Spectral Density (dBm/30KHz)	Limit (dBm/3KHz)	Result
	01	-1.45		
802.11b	06	-1.12	≤8.00	Pass
	11	-0.53		
	01	-7.93		
802.11g	06	-7.80	≤8.00	Pass
	11	-7.74		
	01	-8.68		
802.11n(HT20)	06	-8.21	≤8.00	Pass
	11	-7.91		
	03	-12.08		
802.11n(HT40)	06	-12.85	≤8.00	Pass
	09	-12.11		

Test plot as follows:



уре:	802.11g
,	Spectrum 🕎
	Ref Level 20.00 dBm Offset 1.00 dB 🖷 RBW 30 kHz
	● Att 30 dB SWT 189.6 μs ● VBW 100 kHz Mode Auto FFT Count 100/100
	●1Pk Max M1[1] -7.93 dBm
	10 dBm 2.4088520 GHz
	0 dBm-
	M1
	-10 dam population of the many provided in the second of t
01104	-20 dBm
CH01	-30 d8m
	-40 dBm
	vegeent ve
	-60 dBm
	-70 dBm
	CF 2.412 GHz 691 pts Span 25.0 MHz
	Spectrum [] Ref Level 20.00 dBm Offset 1.00 dB ● RBW 30 kHz
	Att 30 dB SWT 189.6 μs VBW 100 kHz Mode Auto FFT Count 100/100
	● 1Pk Max
	M1[1] -7.80 dBm 2.4338520 GHz
	10 dBm-
	0 dBm
	-10 dBm Network Warding Working Working Working Working
CH06	
	-30 dBm //
	-40 dBm
	vsa (deliti V
	-60 dBm
	-70 dBm
	CF 2.437 GHz 691 pts Span 25.0 MHz
	Measuring 🖬 (1111) 🚧
	Spectrum 🕎
	RefLevel 20.00 dBm Offset 1.00 dB RBW 30 kHz
	Att 30 0B SWI 1895 µS VBW 100 KH2 Mode Auto FFT Count 100/100 IPK Max
	• IPK Max M1[1] -7.74 dBm 2.4588520 GHz
	10 dBm
	0 dBm-
	M1
	-20 dBm
CH11	
CH11	-20 dam
CH11	-30 dBm/ // // // // // // // // /
CH11	-40 dBm
CH11	-40 dam //
CH11	-40 dBm
CH11	-40 dBm //
CH11	-40 dBm

Type: 802.11n(HT20) Spectrum
 Ref Level
 20.00 dBm
 Offset
 1.00 dB
 ■ RBW
 30 kHz

 Att
 30 dB
 SWT
 189.6 µs
 ■ VBW
 100 kHz
 Mode
 Auto FFT
 Count 100/100 M1[1] -8.68 dB 2.4126150 GF 10 dBm-0 dBm--10 dBm Marall Maran Marana with the way way the way way the -20 dBm CH01 k 30 dBn 40 dBm -50 dBm morte mm -60 dBm 70 dBm-CF 2.412 G 691 pts Spar Spectrum
 Ref Level
 20.00 dBm
 Offset
 1.00 dB
 RBW
 30 kHz

 Att
 30 dB
 SWT
 189.6 µs
 VBW
 100 kHz
 Mode Auto FFT

 Count 100/100
 FPK Max
 SWT
 189.6 µs
 VBW
 100 kHz
 Mode Auto FFT
 M1[1] -8.21 dB 2.4376150 GF 10 dBm-0 dBm warhanewalananananananananananananananananan -10 dBm--20 dBm CH06 4 -30 dBm 40 dBm -50 d8m hur -60 dBm 70 dBm CF 2.437 GH 691 pts Span 25.0 MHz Spectrum • Att Count 100/100 • 1Pk Max M1[1] -7.91 dBr 2.4626150 GH 10 dBm-0 dBm-M1 applaces of the second application of the second of the se -10 dBm -20 dBmų CH11 -30 dBn 40 dBn 1997 disht --60 dBm· -70 dBm F 2.462 G 691 pts 4.46

Type: 802.11n(HT40) Spectrum
 Ref Level
 20.00 dBm
 Offset
 1.00 dB
 ■ RBW
 30 kHz

 Att
 30 dB
 SWT
 442.4 µs
 ■ VBW
 100 kHz
 Mode
 Auto FFT
 Count 100/100 M1[1] -12.08 dB 2.4185770 GF 10 dBm-0 dBm--10 dBm problemant and a second stand and a second stand and a second stand stand stand stand stand stand stand stand s -20 dBm CH03 30 dBn 40 dBm 50 dBn W dem 70 dBm-CF 2.422 G 691 pts Span 5 Spectrum
 Ref Level
 20.00 dBm
 Offset
 1.00 dB
 RBW
 30 kHz

 Att
 30 dB
 SWT
 442.4 µs
 VBW
 100 kHz
 Mode Auto FFT

 Count 100/100
 FPK Max
 SWT
 442.4 µs
 VBW
 100 kHz
 Mode Auto FFT
 M1[1] -12.85 dB 2.4403430 GF 10 dBm-0 dBm -10 dBmpalanthaparapartantanpartanapara pulumanting mphore and all the series -20 dBm CH06 -30 dBm 40 dBm -50 dBm -80 ash 70 dBm Span 55.0 MHz CF 2.437 GH 691 pts 40 Spectrum
 Ref Level
 20.00 dBm
 Offset
 1.00 dB
 RBW
 30 kHz

 Att
 30 dB
 SWT
 442.4 μs
 VBW
 100 kHz
 Mode
 Auto FFT
 • Att Count 100/100 • 1Pk Max M1[1] -12.11 dBr 2.4441200 GH 10 dBm-0 dBm--10 dBm-hayaandahaanaanaanaanaanaanaanaanaanaanaa ka ahaanaa ka ahaanaa ka ahaa ka ahaa ka ahaa ka ahaa ka ahaa ka ahaa -20 dBm-CH09 -30 dBm 40 dBm -50 dBm -60 dBm-70 dBm F 2.452 G 691 pts Spa

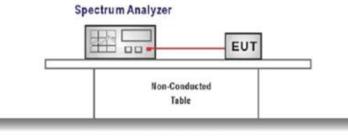
5.5. 6dB bandwidth

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



- Ground Reference Plane

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:

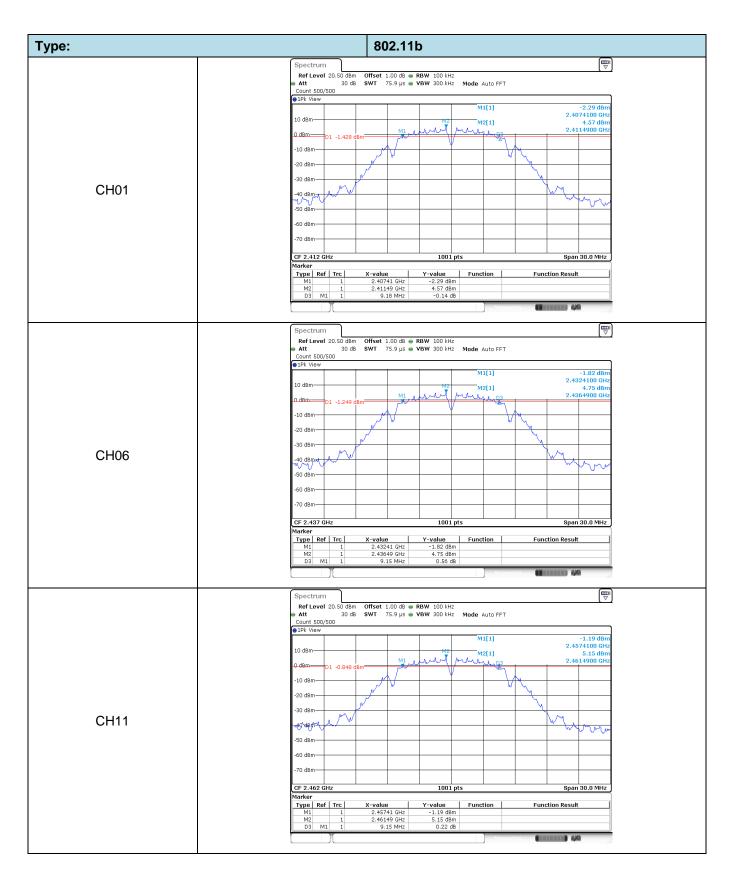
Please refer to the clause 3.3

TEST RESULTS

☑ Passed □ Not Applicable

Туре	Channel	6dB Bandwidth (MHz)	Limit (kHz)	Result
	01	9.18		
802.11b	06	9.15	≥500	Pass
	11	9.15		
	01	16.41		
802.11g	06	16.65	≥500	Pass
	11	16.65		
	01	17.67		
802.11n(HT20)	06	17.88	≥500	Pass
	11	17.85		
	03	36.48		
802.11n(HT40)	06	36.54	≥500	Pass
	09	36.54		

Test plot as follows:



pe:	802.11g						
	Spectrum (₩)						
	Ref Level 20.50 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 75.9 µs VBW 300 kHz Mode Auto FFT						
	Count 500/500						
	M1[1] -5.33 dBm						
	10 dBm M2 M2[1] 1.28 dBm M2 4126300 GHz						
	D1 -4.725 88m						
	-10 d8m						
CH01	and a family a family of the f						
CITOT	-40 dBm-						
	-50 dBm						
	-60 dBm						
	-70 dBm						
	CF 2.412 CHz 1001 pts Span 30.0 MHz Marker						
	Type Ref Trc X-value Y-value Function Function Result M1 1 2.40378 GHz -5.33 dBm						
	M2 1 2.40376 GHz 5.555 GHI D3 M1 1 16.41 MHz -0.05 dB						
	05 m1 1 10.72 mm2 0.05 d0 1 Measuring (1111111) (4011111) (40111111) (401111111)						
	Spectrum 🕎						
	RefLevel 20.50 dBm Offset 1.00 dB ● RBW 100 kHz Att 30 dB SWT 75.9 µs ● VBW 300 kHz Mode Auto FFT						
	Count 500/500 IPk View						
	10 dBm						
	2, 4349400 GHz						
	0 dBm H2 M2M2MM2M2M2M2M2M2M2M2M2M2M2M2M2M2M2M						
	-20 dBm						
CH06	-30 d8m						
01100	-40 dBm - Werd - With Ward - W						
	-60 dBm						
	-70 dBm						
	CF 2.437 GHz 1001 pts Span 30.0 MHz Marker						
	Marker Type Ref Trc X-value Y-value Function Function Result M1 1 2.42866 GHz -11.76 dBm Function Function Function						
	M2 1 2.43424 GHz -4.73 dBm D3 M1 1 16.65 MHz -0.40 dB						
	Spectrum (7) Ref Level 20.50 dbm Offset 1.00 db ● RBW 100 kHz						
	Att 30 dB SWT 75.9 µs VBW 300 kHz Mode Auto FFT Count 500/500						
	●1Pk View						
	10 dBm M2[1] -1.1.40 dBm						
	0 dBm 1/2 2.4592400 GHz						
	-10.d8m 01 -10.797 d8m						
	-20 dBm						
	-30 dBm						
CH11							
	-10 daini -50 dam						
	-60 dBm						
	-70 dBm						
	CF 2.462 GHz 1001 pts Span 30.0 MHz Marker						
	Type Ref Trc X-value Y-value Function Function Result M1 1 2.45366 GHz -11.46 dBm						
	M2 1 2.45924 GHz ~4.80 dBm D3 M1 1 16.65 MHz -0.90 dB						

ype:	802.11n(HT20)						
	Spectrum Image: Construct of the second secon						
	• D dBm • 0 dBm						
	-10 dam						
CH01	-40 dBm						
	-70 dBm						
	Type Ref Trc X-volue Y-volue Function Function Result M1 1 2.40315 GHz -6.46 dBm -6.46 dBm -6.45 dB						
	Spectrum Image: Control of the sector of the						
	Count 500/500 ● IPk View 10 dBm 10						
	0 dBm 2,4341200 GHz -10.dBm 01 -11.032 dBm						
CH06	-30 d8m -40 d8m -90 d8m						
	-60 dBm						
	CF 2.437 GHz 1001 pts Span 30.0 MHz Marker Type Ref Trc X-value Function Function Result M1 1 2.42806 GHz -12.09 dBm Image: Colspan="2">Of the second						
	Spectrum						
	Ref Level 20.50 dBm Offset 1.00 dB RBW 100 kHz ● Att 30 dB SWT 75.9 µs VBW Mode Auto FFT Count 500/500 SWT 75.9 µs VBW Mode Auto FFT ● JPk View						
	10 dBm 2.4530600 GHz 10 dBm 10 dBm 2.4530200 GHz 0 dBm 12.4591200 GHz 10 dBm 12.4591200 GHz 10 dBm 11.027@dm						
CH11	-20 dBm						
UTT	-60 dBm						
	-70 dBm						
	Type Ref Trc X-value Y-value Function Function Result M1 1 2.45906 GHz -11.78 dBm -						

Type: 802.11n(HT40) Spectrum RefLevel 20.50 dBm Offset 1.00 dB ● RBW 100 kHz Att 30 dB SWT 132.7 µs ● VBW 300 kHz Mode Auto FFT Count 500/500 -11.50 dB 10 dBm M2[1] -4.34 dB 2.4205000 GF 0 dBn Munning punemen 10 df -20 dBn -30 dBr CH03 ahlan Wh. Mulphower -50 dBn -60 dBn -70 dBm CF 2.422 GHz Marker 1001 pts Span 60.0 MHz Type Ref Trc X-value 2.40376 GHz 2.4205 GHz 36.48 MHz Y-value -11.50 dBm -4.34 dBm -0.78 dB Function Function Result M2 D3 M1 ₽ Spectrum Ref Level 20.50 dBm Att 30 dB Count 500/500 P1Pk View -15.71 dB M1[1] 10 dBm· -9.54 dBr 2.4404800 GH M2[1] 0 dBm M2 -10 dBm D1 -15.544 -20 dBm--30 dBm CH06 40 dBm 50 dBm y. -60 dBm 70 dBm CF 2.437 GH: 1001 pt Span 60.0 MHz Type Ref Trc X-value 2.4187 GHz 2.44048 GHz 36.54 MHz
 Y-value
 Function

 -15.71 dBm
 -9.54 dBm

 -0.18 dB
 -0.18 dB
 Function Result M1 M2 D3 M1 ₽ Spectrum
 Ref Level
 20.50 dBm
 Offset
 1.00 dB
 ■
 RBW
 100 kHz

 Att
 30 dB
 SWT
 132.7 µs
 •
 VBW
 300 kHz
 Mode Auto FFT Count 500/500 -15.53 dBr 2.4337000 GH M1[1] 10 dBm-M2[1] -9.52 dBr 2.4554800 GH 0 dBm M2 -10 dBm· D1 -15.521 -20 dBm--30 dBm CH09 40 dBm -50 dBmh_usi howwww -60 dBm· -70 dBm-CF 2.452 GHz 1001 pts Span 60.0 MHz Marker Type Ref Trc X-value 2.4337 GHz 2.45548 GHz 36.54 MHz Y-value -15.53 dBm -9.52 dBm -0.44 dB Function Function Result M2 D3 M1

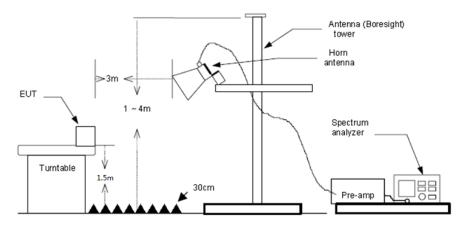
5.6. Restricted band

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

- 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. This is 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.
- 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 + Antenna Factor+ Cable Loss- Preamp Factor

802.11b					CH01				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
2310.00	27.15	28.05	6.62	0.00	61.82	74.00	-12.18	Vertical	Peak
2390.01	27.92	27.65	6.75	0.00	62.32	74.00	-11.68	Vertical	Peak
2310.00	28.13	28.05	6.62	0.00	62.80	74.00	-11.20	Horizontal	Peak
2390.01	26.63	27.65	6.75	0.00	61.03	74.00	-12.97	Horizontal	Peak
2310.00	12.53	28.05	6.62	0.00	47.20	54.00	-6.80	Vertical	Average
2390.01	12.25	27.65	6.75	0.00	46.65	54.00	-7.35	Vertical	Average
2310.00	12.52	28.05	6.62	0.00	47.19	54.00	-6.81	Horizontal	Average
2390.01	12.23	27.65	6.75	0.00	46.63	54.00	-7.37	Horizontal	Average

802.11b									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
2483.49	27.29	27.26	6.83	0.00	61.38	74.00	-12.62	Vertical	Peak
2500.00	26.73	27.20	6.84	0.00	60.77	74.00	-13.23	Vertical	Peak
2483.49	27.50	27.26	6.83	0.00	61.59	74.00	-12.41	Horizontal	Peak
2500.00	27.11	27.20	6.84	0.00	61.15	74.00	-12.85	Horizontal	Peak
2483.49	12.19	27.26	6.83	0.00	46.28	54.00	-7.72	Vertical	Average
2500.00	12.19	27.20	6.84	0.00	46.23	54.00	-7.77	Vertical	Average
2483.49	12.18	27.26	6.83	0.00	46.27	54.00	-7.73	Horizontal	Average
2500.00	12.19	27.20	6.84	0.00	46.23	54.00	-7.77	Horizontal	Average

802.11g					CH01				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
2310.00	26.73	28.05	6.62	0.00	61.40	74.00	-12.60	Vertical	Peak
2390.01	27.30	27.65	6.75	0.00	61.70	74.00	-12.30	Vertical	Peak
2310.00	26.71	28.05	6.62	0.00	61.38	74.00	-12.62	Horizontal	Peak
2390.01	26.15	27.65	6.75	0.00	60.55	74.00	-13.45	Horizontal	Peak
2310.00	12.51	28.05	6.62	0.00	47.18	54.00	-6.82	Vertical	Average
2390.01	13.17	27.65	6.75	0.00	47.57	54.00	-6.43	Vertical	Average
2310.00	12.52	28.05	6.62	0.00	47.19	54.00	-6.81	Horizontal	Average
2390.01	12.57	27.65	6.75	0.00	46.97	54.00	-7.03	Horizontal	Average

802.11g					CH11				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
2483.49	25.79	27.26	6.83	0.00	59.88	74.00	-14.12	Vertical	Peak
2500.00	26.33	27.20	6.84	0.00	60.37	74.00	-13.63	Vertical	Peak
2483.49	26.72	27.26	6.83	0.00	60.81	74.00	-13.19	Horizontal	Peak
2500.00	26.21	27.20	6.84	0.00	60.25	74.00	-13.75	Horizontal	Peak
2483.49	12.36	27.26	6.83	0.00	46.45	54.00	-7.55	Vertical	Average
2500.00	12.20	27.20	6.84	0.00	46.24	54.00	-7.76	Vertical	Average
2483.49	12.31	27.26	6.83	0.00	46.40	54.00	-7.60	Horizontal	Average
2500.00	12.19	27.20	6.84	0.00	46.23	54.00	-7.77	Horizontal	Average

802.11n(HT	20)				CH01						
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value		
2310.00	25.29	28.05	6.62	0.00	59.96	74.00	-14.04	Vertical	Peak		
2390.01	26.25	27.65	6.75	0.00	60.65	74.00	-13.35	Vertical	Peak		
2310.00	27.28	28.05	6.62	0.00	61.95	74.00	-12.05	Horizontal	Peak		
2390.01	26.29	27.65	6.75	0.00	60.69	74.00	-13.31	Horizontal	Peak		
2310.00	12.51	28.05	6.62	0.00	47.18	54.00	-6.82	Vertical	Average		
2390.01	13.91	27.65	6.75	0.00	48.31	54.00	-5.69	Vertical	Average		
2310.00	12.53	28.05	6.62	0.00	47.20	54.00	-6.80	Horizontal	Average		
2390.01	12.75	27.65	6.75	0.00	47.15	54.00	-6.85	Horizontal	Average		

802.11n(HT20) CH11									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
2483.49	25.71	27.26	6.83	0.00	59.80	74.00	-14.20	Vertical	Peak
2500.00	26.48	27.20	6.84	0.00	60.52	74.00	-13.48	Vertical	Peak
2483.49	25.96	27.26	6.83	0.00	60.05	74.00	-13.95	Horizontal	Peak
2500.00	24.98	27.20	6.84	0.00	59.02	74.00	-14.98	Horizontal	Peak
2483.49	12.40	27.26	6.83	0.00	46.49	54.00	-7.51	Vertical	Average
2500.00	12.22	27.20	6.84	0.00	46.26	54.00	-7.74	Vertical	Average
2483.49	12.56	27.26	6.83	0.00	46.65	54.00	-7.35	Horizontal	Average
2500.00	12.18	27.20	6.84	0.00	46.22	54.00	-7.78	Horizontal	Average

802.11n(HT	802.11n(HT40) CH03								
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit Polarization (dB)		Test value
2310.00	27.34	28.05	6.62	0.00	62.01	74.00	-11.99	Vertical	Peak
2389.99	26.76	27.65	6.75	0.00	61.16	74.00	-12.84	Vertical	Peak
2310.00	25.53	28.05	6.62	0.00	60.20	74.00	-13.80	Horizontal	Peak
2389.99	27.11	27.65	6.75	0.00	61.51	74.00	-12.49	Horizontal	Peak
2310.00	12.52	28.05	6.62	0.00	47.19	54.00	-6.81	Vertical	Average
2389.99	16.00	27.65	6.75	0.00	50.40	54.00	-3.60	Vertical	Average
2310.00	12.52	28.05	6.62	0.00	47.19	54.00	-6.81	Horizontal	Average
2389.99	14.01	27.65	6.75	0.00	48.41	54.00	-5.59	Horizontal	Average

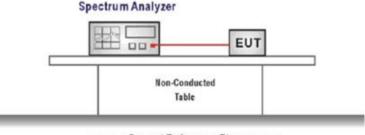
802.11n(HT	802.11n(HT40) CH09									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Limit Polarization		
2483.50	26.50	27.26	6.83	0.00	60.59	74.00	-13.41	Vertical	Peak	
2500.00	27.31	27.20	6.84	0.00	61.35	74.00	-12.65	Vertical	Peak	
2483.50	26.29	27.26	6.83	0.00	60.38	74.00	-13.62	Horizontal	Peak	
2500.00	26.86	27.20	6.84	0.00	60.90	74.00	-13.10	Horizontal	Peak	
2483.50	13.66	27.26	6.83	0.00	47.75	54.00	-6.25	Vertical	Average	
2500.00	12.35	27.20	6.84	0.00	46.39	54.00	-7.61	Vertical	Average	
2483.50	13.47	27.26	6.83	0.00	47.56	54.00	-6.44	Horizontal	Average	
2500.00	12.41	27.20	6.84	0.00	46.45	54.00	-7.55	Horizontal	Average	

5.7. Band edge and Spurious Emissions (conducted)

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 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



Ground Reference Plane

TEST PROCEDURE

- 1. Connect the antenna port(s) to the spectrum analyzer input.
- 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. 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.
- 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:

3.

Please refer to the clause 3.3

TEST RESULTS

Passed

Not Applicable

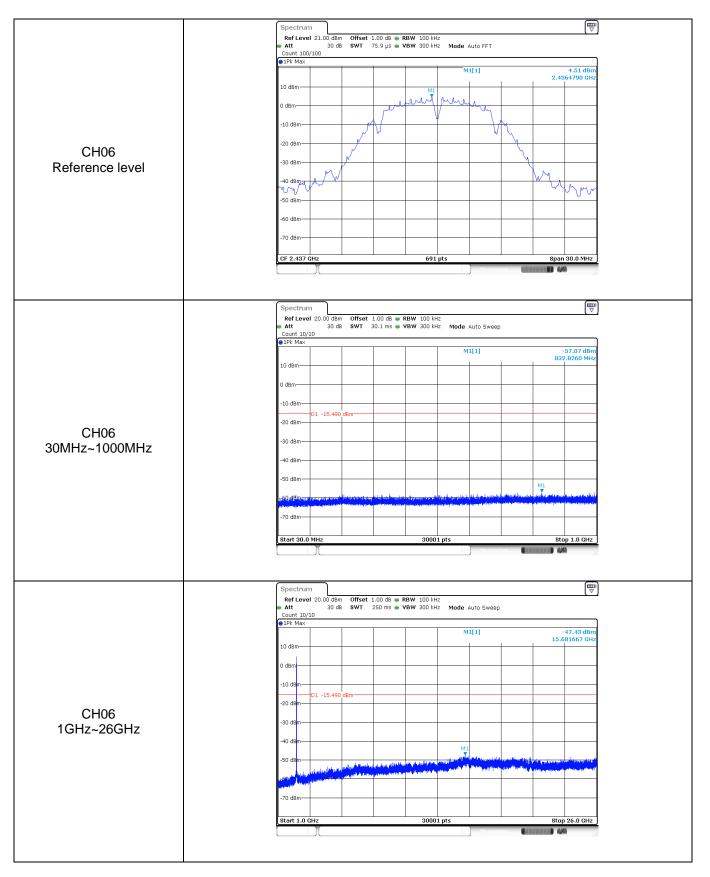
Test Item:	Bandedge	Type: 802.11b
		Spectrum Image: Construct of the system Image: Consten Image: Construct of the system <
		Count 300/300 PIPk Max 10 dBm 0 dB
		-10 dBm10 dBm
CH01		-40 dam
		-70 d8m
		Type Ref Trc X-value Y-value Function Function Function Result M1 1 2.41155 GHz 4.15 GHz 4.17 GHz
		Spectrum Image: Constraint of the second secon
		Count 300/300 PIPk Max: 10 dBm
		-10 dBm / 01 -14.990 dBm /
CH11		-90 dBm
		-70 dBm
		Marker Function Function Result Type Ref Trc X-value Y-value Function Function Result M1 1 2.461482 GHz 5.01 dBm M2 1 2.4935 GHz -56.64 dBm M3 1 2.5 GHz -58.10 dBm M4 1 2.4940174 GHz -53.72 dBm

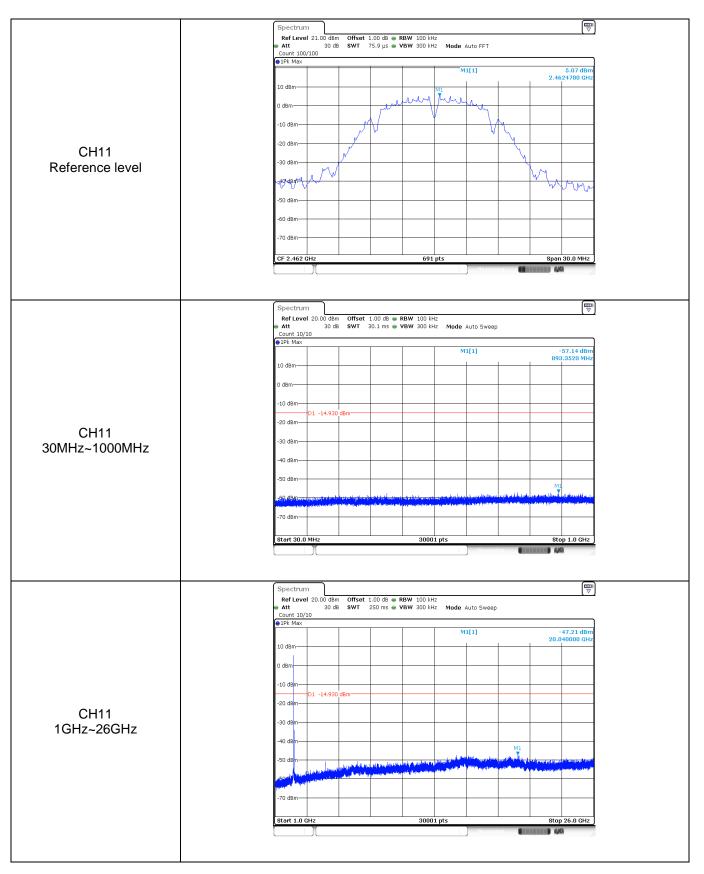
est Item:	Bandedge	-	Гуре:			8	802.1	1g
	Spectro	um l						
	Ref Le Att			RBW 100 kHz VBW 300 kHz	2 Mode Auto FFT			<u> </u>
	Count 3	00/300						
					M1[1]			-5.13 dBm
	10 dBm-				M2[1]			109280 GHz -44.34 dBm
	0 dBm					1	24	100000 GHz
	-10 dBm-							
	-20 dBm-	D1 -25.130 dBm-						
	-30 dBm-							
CH01	-40 dBm-					Manult M	Ū.	
	-50 dBm-	and the second second second	in algorith	undurmon	mound	V-TUNE		
	ilisof vasiti	and the second s	- Crussie					
	-70 dBm-							
	Start 2.	31 GHz		691 p	ts		Stop	2.422 GHz
	Marker Type	Ref Trc X-va		Y-value	Function	Fun	ction Resul	t
	M1 M2	1	40928 GHz 2.4 GHz	-5.13 dBm -44.34 dBm	1			
	M3 M4	1	2.39 GHz 2.31 GHz	-54.82 dBm -60.35 dBm	1			
	M5		99762 GHz	-42.89 dBm				
					Measu	ring		
	Spectro	um						
	Ref Le	vel 20.00 dBm Offse		RBW 100 kHz				(•)
	Att Count 3	30 dB SWT 00/300	113.8 µs 👄	VBW 300 kHz	2 Mode Auto FFT			
	●1Pk Ma:				M1[1]			-4.94 dBm
	10 dBm-							592590 GHz
	0 dBm				M2[1]			-53.30 dBm 335000 GHz
	-10/dBm-	mount my parm	monory					
	-20 dBm-	V V						
	-30 dBm-	D1 -24.940 dBm						
CH11	-40 dBm-							
CHII	-50 dBm-			mount	Junimala M244			
	-50 dBm-				Wheny	mount	Myran	month
	-70 dBm-							
		452 GHz	1	691 p	ts	1	St	ap 2.5 GHz
	Marker	Dof Teo Vi	ilue	Y-value	Function	Fun	tion Resul	t l
	Туре							
	M1 M2	1 2.4	9259 GHz .4835 GHz	-4.94 dBm -53.30 dBm				
	M1	1 2.4 1 2 1	59259 GHz		1			

Test Item:	Bandedge	-	Гуре:			8	802.1	1n(HT20)
	R		et 1.00 dB 👄 I					
	• A Co • 1F	att 30 dB SWT ount 300/300 Pk Max	246.5 µs 🕳 ۱	/BW 300 kHz	Mode Auto FFT			
		dBm			M1[1] 			-5.94 dBm 109110 GHz 48.82 dBm 100000 GHz
	-10) dBm					ment	the second state
	-30) dBmD1 -25,940 dBm) dBm					-	
CH01	-50) dBm		at a united also	mund man	M3 Martin		
) dBm	why why why provide					
		art 2.31 GHz rker		691 pts			Stop	2.422 GHz
		/pe Ref Trc X-v	40911 GHz 2.4 GHz 2.39 GHz 2.31 GHz	Y-value -5.94 dBm -48.82 dBm -54.47 dBm -60.58 dBm	Function	Func	tion Resul	
			.3996 GHz	-47.52 dBm	Meas	uring 🔳		
	R	tef Level 20.00 dBm Offs						
	Co	Att 30 dB SWT ount 300/300 Pk Max	113.8 µs 🖶 🕻	BW 300 KH2	Mode Auto FFT			
		dBm			M1[1]			-5.21 dBm 91200 GHz -54.73 dBm
		IBM MI	manning		_		2.48	335000 GHz
	· · · · · · · · · · · · · · · · · · ·	0 dBm D1 -25.210 dBm						
CH11) dBm		Luman				
	-60) dBm			and a second	hutomantha	uthout	menund
	Sta	art 2.452 GHz		691 pts			Ste	pp 2.5 GHz
	Ту	NPE Ref Trc X-v M1 1 2. M2 1 2. M3 1 3.	45912 GHz .4835 GHz 2.5 GHz 46957 GHz	Y-value -5.21 dBm -54.73 dBm -55.55 dBm -52.38 dBm	Function	Func	tion Resul	
					Meas	uring		

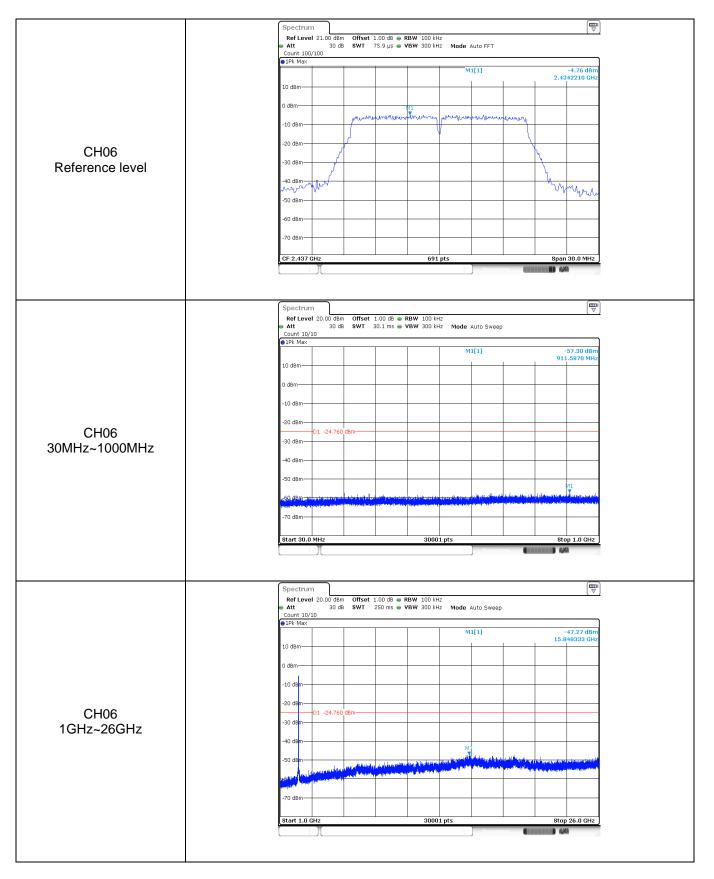
Test Item:	Bandedge	Type: 802.11n(HT40)
		Spectrum Image: Constraint of the section of the sectio
CH03		Count: 300/300 IPK Max -9.97 dBm 2.424140 GHz -9.97 dBm 0 dBm -9.97 dBm -9.98 dBm -9.99 dBm -9.99 dBm -9.99 dBm
		Type Ref Trc X-value Y-value Function Function Result M1 1 2.42416 4Hz -9.97 dBm M2 1 2.42416 4Hz -9.97 dBm M3 1 2.30 GHz -55.19 dBm M4 1 2.31 GHz -59.76 dBm M5 1 2.397235 GHz -52.20 dBm
		Spectrum Image: Constraint of the sector of t
		M1[1] -9.51 dBm 10 dBm M1[1] -9.51 dBm 0 dBm M2[1] -53.72 dBm 0 dBm 2.483500 GHz M2[1]
		-22 dBm
CH09		-40 dBm M2 M4
		Start 2.432 GHz 691 pts Stop 2.5 GHz Marker Type Ref Trc X-value Y-value Function Function Result M1 1 2.4935 GHz -9.51 dBm M2 1 2.4935 GHz -53.72 dBm
		M3 1 2.5 GHz -55.63 dBm M4 1 2.4860058 GHz -53.66 dBm

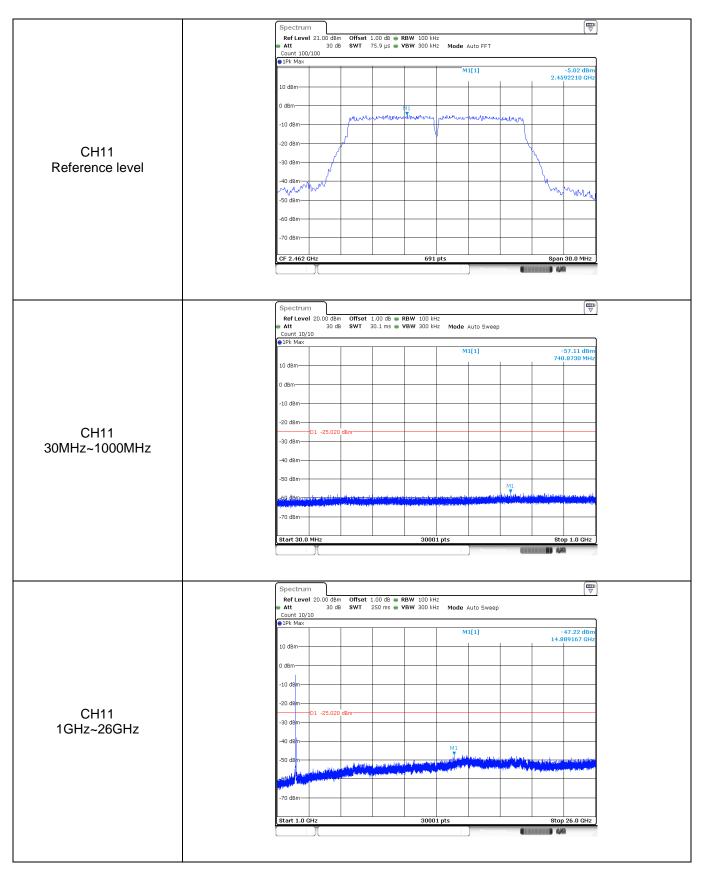
Test Item:	SE	Type: 802.11b
CH01 Reference level		Spectrum Image: Spectrum Ref Level 21.00 dBm Offset 1.00 dB • RBW 100 kHz • Att 30 dB • SWT 75.9 µs • VBW 300 kHz • Dirk Max • 17 dBm • 10 dBm • 111 4790 GHz • 0 dBm • 111 4790 GHz • 10 dBm • 10 dBm • 10 dBm • 10 dBm
		50 dBm 444444 -60 dBm 444444 -60 dBm 444444 -70 dBm 444444 CF 2.412 GHz 691 pts Spectrum 592 cm
CH01 30MHz~1000MHz		Ref Level 20.00 dlm Offset 1.00 dll RBW 100 dHz Att 30 dll SWT 30.1 ms VBW 300 kHz Mode Auto Sweep Count 1D/10 Image: Count 1D/10 <
		-20 dBm -20 dBm -20 dBm -20 dBm -30 dBm -20 dBm -50 dBm -20 dBm -50 dBm -20 dBm
		Spectrum Spectrum
		RefLevel 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 250 ms VBW 300 kHz Mode Auto Sweep Count 10/10 P1Pk Max
CH01 1GHz~26GHz		10 dBm
		-20 dbm
		Start 1.0 GHz 30001 pts Stop 26.0 GHz



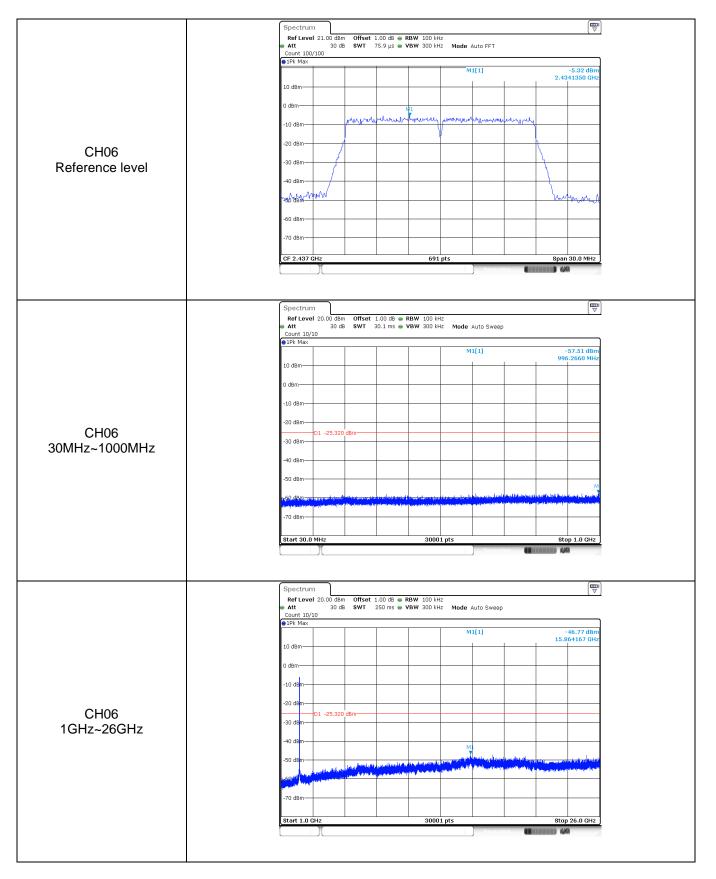


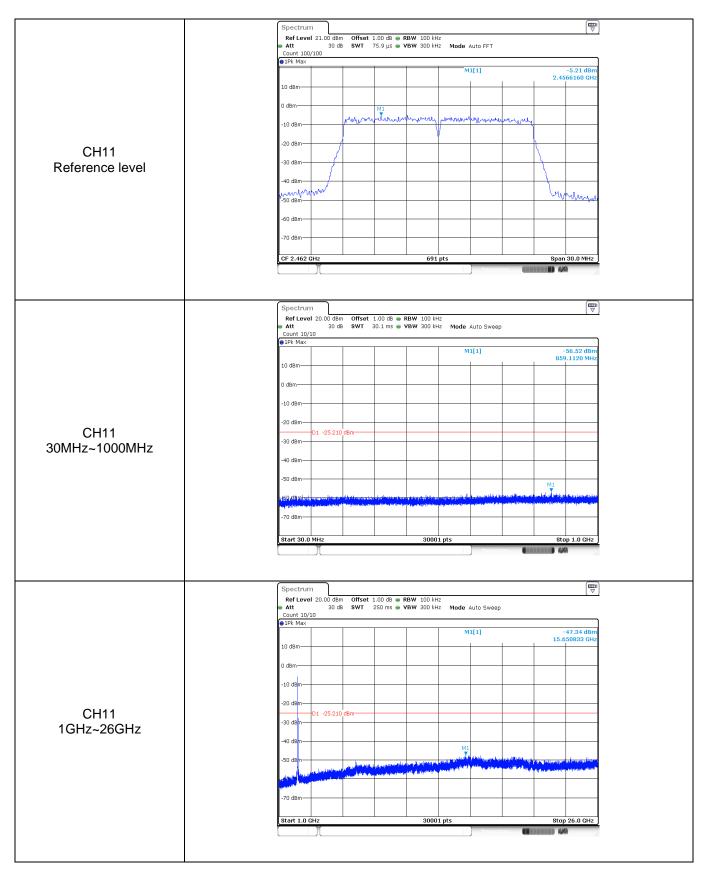
Spectrum Ref Level 2 Att Count 100/10 PIR Max	30 dB	Offset 1	(pe:					802.1	-
Count 100/10	30 ub	0111 /				Auto EET			(v
	Count 100/100 ●1Pk Max								
10 dBm					м	1[1]		2.40	-5.06 dBm 92210 GHz
0 dBm			1 Minoral Marine	/1 10 Maas	uk kau	wantermy			
-10 dBm		Juno	the change	de Se and	pare war		many		
-20 dBm	ď	<u>r</u> '						h	
-30 dBm								4	
-40 dBm								h	ħ.c.
-50 dBm	1							w	Monny
-60 dBm									
-70 dBm									
CE 2 412 GH	7			691	nts			Snan	30.0 MHz
	(0,11	PC3	Measurin	- 0		
Spectrum		0/()							
👄 Att	30 dB	SWT 3	1.00 dB 👄 🖡 30.1 ms 👄 🕻	BW 100 kH	IZ IZ Mode	Auto Sweep			
1Pk Max					M	1[1]			57.37 dBm
10 dBm								802	.7890 MHz
0 dBm									
-10 dBm									
-20 dBm									
D1	1 -25.060 d	Bm							
						1	M		e konstruction
apadada antibility and a baile			la de la constitución A constitución de la constitución A constitución de la constitución de la constitución de la constitución de la	n an			n alle and an and a start of the	a franciska fra franciska politika. Na se	a a su a
-70 dBm									
Start 30.0 Mi	Hz			3000	1 pts				p 1.0 GHz
	n					Measurin			
Spectrum									
Ref Level 2 Att	30 dB	Offset 1 SWT 2	1.00 dB 👄 R 250 ms 👄 V	BW 100 kH BW 300 kH	iz Iz Mode	Auto Sweep			(*
Count 10/10 Pk Max			I						
10 dBm					м	1[1]		16.6	47.36 dBm 13333 GHz
	1 -25.060 d	IBm							
-30 dBm									
-40 dBm						M1			
-50 dBm	ىلىلە بىلار ب	a	ANTIMATIN STATES	an phylocole H		alle speak	يونية وبالالدين ويداكرونا الالدين	ar ar gaineanna ann	
		ang an Printer of the	and an	not a feature				a nel se nel	a state of
-70 dBm									
Start 1.0 GH	z			3000	1 pts			Stor	26.0 GHz
	[Measurin			
	-70 dBm CF 2.412 CH Ref Level 2 • Att Count 10/10 • IPK Max 10 dBm -0 d	-70 dBm CF 2.412 GHz Spectrum Rof Level 20.00 dBm Att 30 dB Count 10/10 IPK Max 10 dBm -10 dBm	-70 dBm	-70 dsm	.70 dBm	.70 dBm .001 pts	-70 dem 691 pts F2.412 GHz 691 pts Ref Level 20.00 dem Offset 1.00 de 8 BW 100 Hz Auto Sweep 20 dem 0 de SWT 30.1 ms • VBW 300 Hz Mode Auto Sweep 10 dem 10 dem 1111 -20 dem 10.25.00 dem 10 dem 1111 -20 dem 10.25.00 dem 10 dem 10 dem -20 dem 10 dem 10 dem 10 dem -20 dem 10 dem 10 dem 10 dem -20 dem 10 dem 10 dem 1111 -20 dem 10 dem 1111 1111 -20 dem 10 dem 1111 1111 -20 dem 1112 1111 11111 -20 dem 1		Spectrum Spectrum



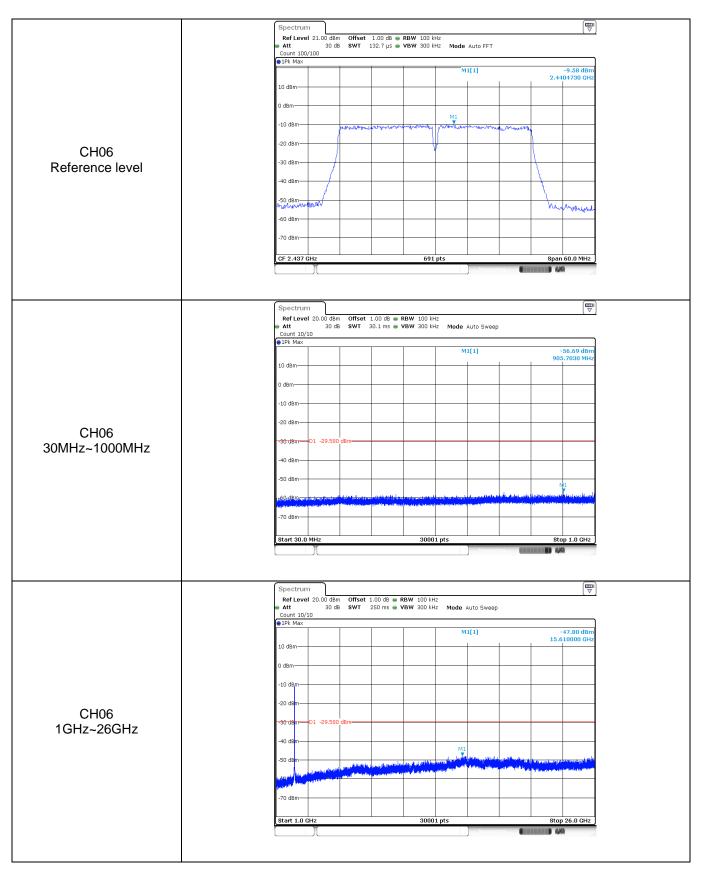


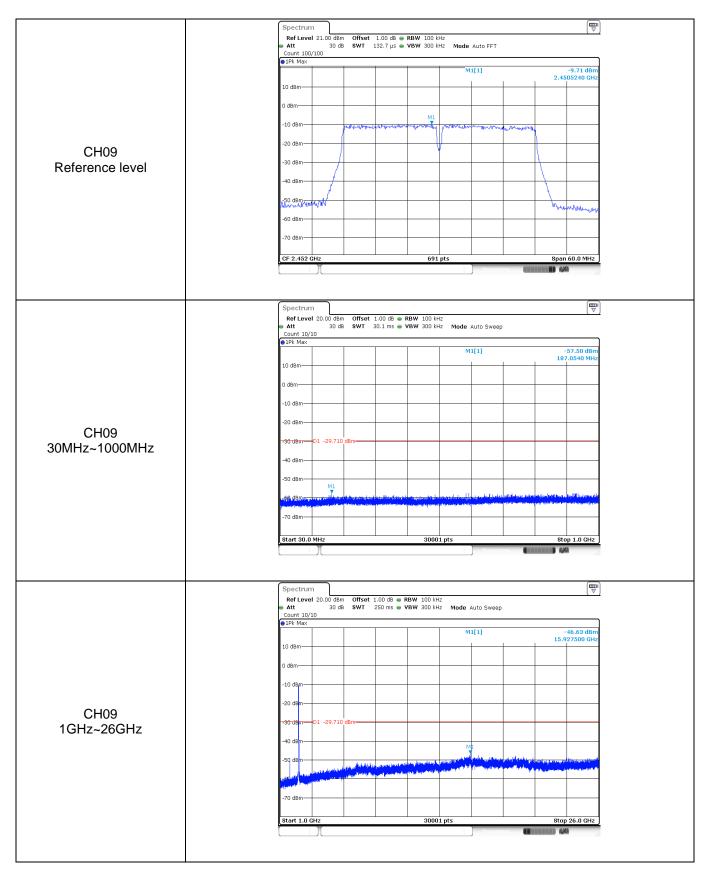
st Item:	SE	Туре:	802.11n(HT20
		Spectrum Ref Level 21.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 75.9 µs VBW 300 kHz Mc Count 100/100 X	de Auto FFT
		COME 100/100 PPK Max 10 dBm	M1[1] -5.92 dBm 2.4091350 GHz
		0 dBm	un again and
CH01 Reference level		-20 dBm	
Reference level		-40 dBm	
		-60 dBm	
		CF 2.412 GHz 691 pts	Span 30.0 MHz
		Spectrum	
		Ref Level 20.00 dBm Offset 1.00 dB € RBW 100 kHz Att 30 dB SWT 30.1 ms VBW 300 kHz Mc Count 10/10	M1[1] -56.64 dBm
		10 dBm	819,2790 MHz
0.101		-10 dBm	
CH01 30MHz~1000MHz		01 -25,920 d8m	
		-50 dBm	Mi and a start of the
		-70 dBm - Start 30.0 MHz 30001 pts	Stop 1.0 GHz
			Messurine.
		Spectrum Ref Level 20.00 dBm Offset 1.00 dB RBW 100 kHz Att 30 dB SWT 250 ms VBW 300 kHz Mc Count 10/10 Count 10/10<	₩ v
		(P1Pk Max	M1[1] -48.03 dBm 15.910833 GHz
		0 dBm	
CH01 1GHz~26GHz		-20 dBm 01 -25 920 dBm	
		-40 dem	
		-70 dBm	
		Start 1.0 GHz 30001 pts	Stop 26.0 GHz





est Item:	SE	Туре:		802.11n(HT4
		Spectrum Ref Level 21.00 dBm Offset 1.00 dB ●	RBW 100 kHz VBW 300 kHz Mode Auto FFT	
		Count 100/100]
		10 dBm-	M1[1]	-9.88 dBm 2.4254730 GHz
		0 dBm		
		10 40 1	M1	
		-20 dBm	whereas here the man and	Musse
CH03		-30 dBm	V	
Reference level		-40 dBm		
		-50 dBm		
		-60 dBm		murleumen
		-70 dBm		
		CF 2.422 GHz	691 pts	Span 60.0 MHz
			Measurin	
		Spectrum Ref Level 20.00 dBm Offset 1.00 dB • F	PW 100 bus	
		Att 30 dB SWT 30.1 ms • V Count 10/10	/BW 300 kHz Mode Auto Sweep	
		● 1Pk Max	M1[1]	-57.27 dBm
		10 dBm		844.8860 MHz
		0 dBm		
		-10 dBm		
CH03		-20 dBm		
30MHz~1000MHz				
		-40 dBm		
		-50 dBm		M1
		-60.d8m. 		
		-70 dBm		
		Start 30.0 MHz	30001 pts	Stop 1.0 GHz
		Spectrum		
		Ref Level 20.00 dBm Offset 1.00 dB ■ ■ Att 30 dB SWT 250 ms ■	BW 100 kHz BW 300 kHz Mode Auto Sweep	(*)
		Count 10/10 PIPk Max	M4743	-47.54 dBm
		10 dBm	M1[1]	-47.54 dBm 15.580833 GHz
		0 dBm		
		-10 dBm		
		-20 dBm		
CH03				
1GHz~26GHz		-40 dBm		
		-50 dem	M1	to the first of the state of the second state of the second state of the second state of the second state of the
		-501 day to 10 a first of the leader of the	under die ander die Antonie ander die	
		-70 dBm		
		Start 1.0 GHz	30001 pts	Stop 26.0 GHz
	1			





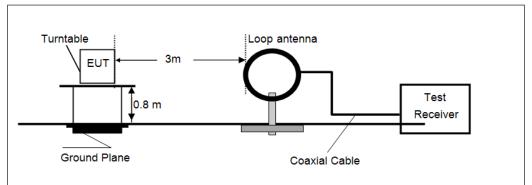
5.8. Spurious Emissions (radiated) <u>LIMIT</u>

FCC CFR Title 47 Part 15 Subpart C Section 15.209

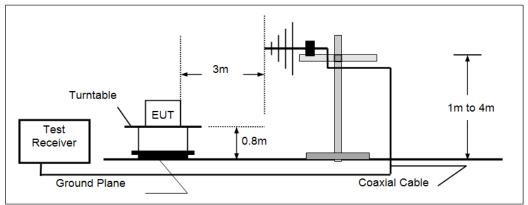
Frequency	Limit (dBuV/m @3m)	Value	
30MHz-88MHz	40.00	Quasi-peak	
88MHz-216MHz	43.50	Quasi-peak	
216MHz-960MHz	46.00	Quasi-peak	
960MHz-1GHz	54.00	Quasi-peak	
Above 1GHz	54.00	Average	
	74.00	Peak	

TEST CONFIGURATION

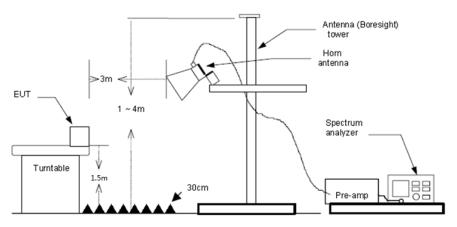
> 9kHz ~30MHz



> 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 10th 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 + Antenna Factor + Cable Loss Preamplifier Factor
- 2) The emission levels of other frequencies are very lower than the limit and not show in test report.

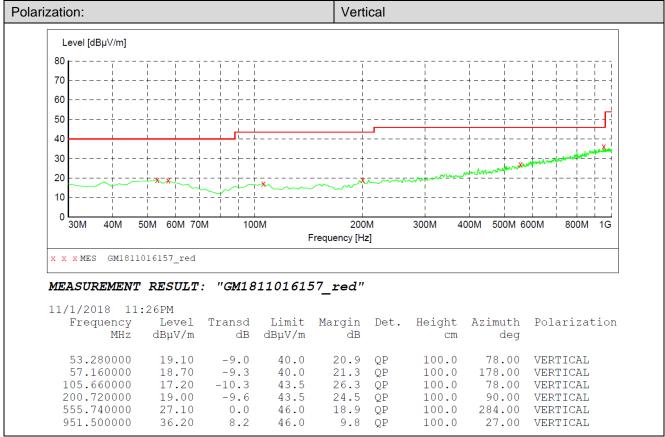
➢ 9kHz ~ 30MHz

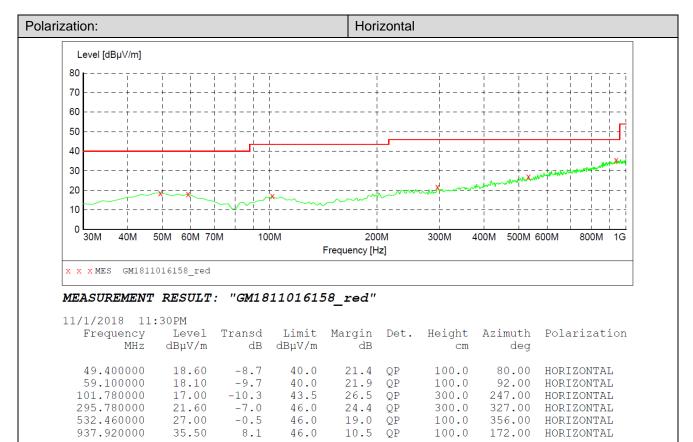
The EUT was pre-scanned the frequency band (9kHz~30MHz), found the radiated level lower than the limit, so don't show on the report.

➢ 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





|--|

802.11b					CH01				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
1213.44	34.54	26.29	4.68	37.22	28.29	74.00	-45.71	Vertical	Peak
3088.45	34.41	28.78	7.59	37.50	33.28	74.00	-40.72	Vertical	Peak
5689.36	32.08	31.62	10.41	34.31	39.80	74.00	-34.20	Vertical	Peak
7880.77	31.18	36.59	12.87	33.06	47.58	74.00	-26.42	Vertical	Peak
1468.70	32.81	25.83	5.20	37.08	26.76	74.00	-47.24	Horizontal	Peak
3143.98	34.00	28.80	7.65	37.45	33.00	74.00	-41.00	Horizontal	Peak
5476.22	30.96	31.81	10.18	34.46	38.49	74.00	-35.51	Horizontal	Peak
7566.25	30.35	36.17	12.61	33.03	46.10	74.00	-27.90	Horizontal	Peak

802.11b					CH06				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
1207.28	34.79	26.29	4.67	37.22	28.53	74.00	-45.47	Vertical	Peak
4045.06	33.62	29.79	8.82	36.72	35.51	74.00	-38.49	Vertical	Peak
6594.52	31.38	34.19	11.35	33.67	43.25	74.00	-30.75	Vertical	Peak
8770.01	31.12	37.76	13.07	32.98	48.97	74.00	-25.03	Vertical	Peak
1303.09	33.69	26.19	4.84	37.17	27.55	74.00	-46.45	Horizontal	Peak
3160.03	34.16	28.80	7.67	37.43	33.20	74.00	-40.80	Horizontal	Peak
6219.51	30.83	32.94	11.01	33.91	40.87	74.00	-33.13	Horizontal	Peak
9251.58	31.05	38.91	13.55	33.44	50.07	74.00	-23.93	Horizontal	Peak

802.11b					CH11				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
1182.94	34.56	26.17	4.62	37.23	28.12	74.00	-45.88	Vertical	Peak
3184.25	33.08	28.80	7.70	37.41	32.17	74.00	-41.83	Vertical	Peak
5125.52	32.40	31.80	9.77	35.13	38.84	74.00	-35.16	Vertical	Peak
7508.69	30.90	36.11	12.42	33.02	46.41	74.00	-27.59	Vertical	Peak
1273.57	34.63	26.23	4.79	37.18	28.47	74.00	-45.53	Horizontal	Peak
3096.33	35.00	28.79	7.60	37.49	33.90	74.00	-40.10	Horizontal	Peak
5086.52	32.57	31.85	9.74	35.21	38.95	74.00	-35.05	Horizontal	Peak
7376.08	31.86	36.30	12.04	33.23	46.97	74.00	-27.03	Horizontal	Peak

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier 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.

802.11g					CH01				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
1179.94	36.60	26.14	4.61	37.24	30.11	74.00	-43.89	Vertical	Peak
3200.50	34.82	28.80	7.72	37.40	33.94	74.00	-40.06	Vertical	Peak
5151.68	31.94	31.69	9.79	35.08	38.34	74.00	-35.66	Vertical	Peak
7921.00	30.59	36.78	12.68	33.06	46.99	74.00	-27.01	Vertical	Peak
1167.98	34.98	26.05	4.59	37.24	28.38	74.00	-45.62	Horizontal	Peak
3128.01	34.24	28.80	7.63	37.46	33.21	74.00	-40.79	Horizontal	Peak
5047.83	31.82	31.69	9.71	35.28	37.94	74.00	-36.06	Horizontal	Peak
7282.79	31.64	36.28	11.95	33.39	46.48	74.00	-27.52	Horizontal	Peak

802.11g					CH06				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
1071.15	35.67	25.42	4.37	37.30	28.16	74.00	-45.84	Vertical	Peak
3681.47	33.70	29.30	8.36	37.00	34.36	74.00	-39.64	Vertical	Peak
6511.12	30.94	34.02	11.20	33.63	42.53	74.00	-31.47	Vertical	Peak
9275.16	29.89	39.05	13.57	33.48	49.03	74.00	-24.97	Vertical	Peak
1192.01	35.28	26.24	4.64	37.23	28.93	74.00	-45.07	Horizontal	Peak
3653.46	35.04	29.30	8.33	37.02	35.65	74.00	-38.35	Horizontal	Peak
5986.51	31.48	32.47	10.66	34.16	40.45	74.00	-33.55	Horizontal	Peak
8747.72	31.41	37.80	13.05	32.97	49.29	74.00	-24.71	Horizontal	Peak

802.11g					CH11				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
1309.74	34.95	26.17	4.85	37.16	28.81	74.00	-45.19	Vertical	Peak
4024.52	34.37	29.75	8.80	36.74	36.18	74.00	-37.82	Vertical	Peak
5971.29	32.29	32.44	10.66	34.16	41.23	74.00	-32.77	Vertical	Peak
8002.06	31.73	37.10	12.30	33.07	48.06	74.00	-25.94	Vertical	Peak
1247.90	34.22	26.25	4.74	37.20	28.01	74.00	-45.99	Horizontal	Peak
3049.39	34.48	28.70	7.54	37.53	33.19	74.00	-40.81	Horizontal	Peak
5821.21	30.80	32.14	10.60	34.24	39.30	74.00	-34.70	Horizontal	Peak
8484.55	30.94	36.85	12.87	32.91	47.75	74.00	-26.25	Horizontal	Peak

- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier 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.

802.11n(HT	20)				CH01				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
1179.94	35.24	26.14	4.61	37.24	28.75	74.00	-45.25	Vertical	Peak
3160.03	34.30	28.80	7.67	37.43	33.34	74.00	-40.66	Vertical	Peak
5406.96	31.82	31.53	10.13	34.59	38.89	74.00	-35.11	Vertical	Peak
8681.17	31.48	37.79	12.98	32.95	49.30	74.00	-24.70	Vertical	Peak
1299.77	34.32	26.20	4.83	37.17	28.18	74.00	-45.82	Horizontal	Peak
3672.11	33.56	29.30	8.35	37.00	34.21	74.00	-39.79	Horizontal	Peak
6379.86	32.56	33.26	10.99	33.74	43.07	74.00	-30.93	Horizontal	Peak
8703.29	30.56	37.89	13.00	32.96	48.49	74.00	-25.51	Horizontal	Peak

802.11n(HT	20)				CH06				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
1439.09	34.43	25.86	5.11	37.10	28.30	74.00	-45.70	Vertical	Peak
3112.13	34.84	28.80	7.61	37.48	33.77	74.00	-40.23	Vertical	Peak
5603.13	32.24	31.79	10.28	34.36	39.95	74.00	-34.05	Vertical	Peak
8145.93	31.50	36.86	12.64	33.02	47.98	74.00	-26.02	Vertical	Peak
1195.05	35.27	26.26	4.65	37.23	28.95	74.00	-45.05	Horizontal	Peak
3903.44	33.59	29.70	8.64	36.83	35.10	74.00	-38.90	Horizontal	Peak
5086.52	31.49	31.85	9.74	35.21	37.87	74.00	-36.13	Horizontal	Peak
9134.58	31.30	38.34	13.44	33.25	49.83	74.00	-24.17	Horizontal	Peak

802.11n(HT	20)				CH11				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
1188.98	35.61	26.22	4.64	37.23	29.24	74.00	-44.76	Vertical	Peak
3176.16	34.22	28.80	7.69	37.42	33.29	74.00	-40.71	Vertical	Peak
4983.99	31.52	31.48	9.66	35.41	37.25	74.00	-36.75	Vertical	Peak
8187.50	30.72	36.74	12.74	33.01	47.19	74.00	-26.81	Vertical	Peak
1182.94	34.19	26.17	4.62	37.23	27.75	74.00	-46.25	Horizontal	Peak
2281.32	31.56	27.99	6.57	37.59	28.53	74.00	-45.47	Horizontal	Peak
3192.37	35.11	28.80	7.71	37.40	34.22	74.00	-39.78	Horizontal	Peak
6713.08	31.47	34.17	11.50	33.73	43.41	74.00	-30.59	Horizontal	Peak

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier 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.

802.11n(HT	40)				CH03				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
1782.18	32.66	25.37	5.93	37.39	26.57	74.00	-47.43	Vertical	Peak
3208.66	33.41	28.75	7.73	37.39	32.50	74.00	-41.50	Vertical	Peak
4421.99	33.12	30.54	9.17	36.36	36.47	74.00	-37.53	Vertical	Peak
7761.32	30.97	36.10	13.16	33.05	47.18	74.00	-26.82	Vertical	Peak
1176.94	35.52	26.12	4.61	37.24	29.01	74.00	-44.99	Horizontal	Peak
3507.65	34.84	29.02	8.13	37.13	34.86	74.00	-39.14	Horizontal	Peak
5617.41	31.61	31.76	10.30	34.35	39.32	74.00	-34.68	Horizontal	Peak
8063.40	32.70	37.04	12.45	33.05	49.14	74.00	-24.86	Horizontal	Peak

802.11n(HT	40)				CH06				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value
1204.21	34.64	26.30	4.67	37.22	28.39	74.00	-45.61	Vertical	Peak
3552.58	33.56	29.16	8.20	37.10	33.82	74.00	-40.18	Vertical	Peak
5660.47	31.19	31.68	10.37	34.33	38.91	74.00	-35.09	Vertical	Peak
8063.40	31.23	37.04	12.45	33.05	47.67	74.00	-26.33	Vertical	Peak
1182.94	35.01	26.17	4.62	37.23	28.57	74.00	-45.43	Horizontal	Peak
3225.04	34.19	28.65	7.75	37.37	33.22	74.00	-40.78	Horizontal	Peak
4748.67	32.01	31.40	9.52	35.83	37.10	74.00	-36.90	Horizontal	Peak
6696.01	32.16	34.20	11.48	33.72	44.12	74.00	-29.88	Horizontal	Peak

802.11n(HT	40)				CH09					
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	Test value	
1216.53	34.62	26.28	4.69	37.21	28.38	74.00	-45.62	Vertical	Peak	
3709.69	33.93	29.33	8.40	36.97	34.69	74.00	-39.31	Vertical	Peak	
5806.41	32.38	32.11	10.59	34.25	40.83	74.00	-33.17	Vertical	Peak	
8593.22	32.22	37.27	12.89	32.93	49.45	74.00	-24.55	Vertical	Peak	
1899.28	33.94	25.30	6.11	37.50	27.85	74.00	-46.15	Horizontal	Peak	
3672.11	34.94	29.30	8.35	37.00	35.59	74.00	-38.41	Horizontal	Peak	
5138.58	32.28	31.74	9.78	35.10	38.70	74.00	-35.30	Horizontal	Peak	
7880.77	31.75	36.59	12.87	33.06	48.15	74.00	-25.85	Horizontal	Peak	

1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier 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

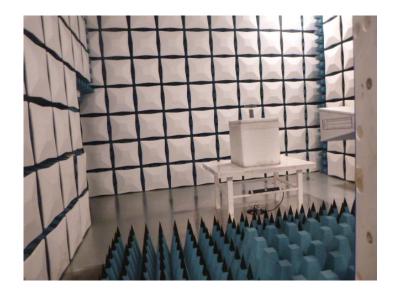
Conducted Emissions



Radiated Emissions







7. EXTERANAL AND INTERNAL PHOTOS

Reference to the test report No.: TRE1810019101

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