

Shenzhen Zhongjian Nanfang Testing Co., Ltd.

Report No: CCISE181104503

FCC REPORT

Applicant: MOVILTELCO TRADE, S.L

Address of Applicant: ABTAO, 25-1Floor A-office MADRID-SPAIN MADRID Spain

Equipment Under Test (EUT)

Product Name: mobile phone

Model No.: A85, A80, A85B, A85C, A85D

Trade mark: mtt

FCC ID: 2ACQKTELCO018

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247

Date of sample receipt: 13 Nov., 2018

Date of Test: 13 Nov., to 30 Nov., 2018

Date of report issued: 03 Dec., 2018

Test Result: PASS*

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

Authorized Signature:



Bruce Zhang Laboratory Manager

This report details the results of the testing carried out on one sample. The results contained in this test report do not relate to other samples of the same product and does not permit the use of the CCIS product certification mark. The manufacturer should ensure that all products in series production are in conformity with the product sample detailed in this report.

This report may only be reproduced and distributed in full. If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards.

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2 Version

Version No.	Date	Description
00	03 Dec., 2018	Original

Tested by: O3 Dec., 2018

Test Engineer

Reviewed by: 03 Dec., 2018

Project Engineer



3 Contents

			Page
1	CO	/ER PAGE	1
2	VER	RSION	2
3	100	NTENTS	3
	5.1	CLIENT INFORMATION	5
			_
	5.3		
	5.4	DESCRIPTION OF SUPPORT UNITS	6
	5.5	MEASUREMENT UNCERTAINTY	6
	5.6	LABORATORY FACILITY	6
	5.7	LABORATORY LOCATION	7
	5.8	TEST INSTRUMENTS LIST	7
6	TES	T RESULTS AND MEASUREMENT DATA	8
	6.1		
	6.2	CONDUCTED EMISSION	9
	6.3		
	6.4		_
	6.5		
	6.6		
	6.7		
	• • • • • • • • • • • • • • • • • • • •		
	0		
7	TES	ST SETUP PHOTO	48
5.4 DESCRIPTION OF SUPPORT UNITS 5.5 MEASUREMENT UNCERTAINTY 5.6 LABORATORY FACILITY 5.7 LABORATORY LOCATION 5.8 TEST INSTRUMENTS LIST 6 TEST RESULTS AND MEASUREMENT DATA 6.1 ANTENNA REQUIREMENT 6.2 CONDUCTED EMISSION 6.3 CONDUCTED EMISSION 6.4 OCCUPY BANDWIDTH 6.5 POWER SPECTRAL DENSITY 6.6 BAND EDGE 6.6.1 Conducted Emission Method 6.6.2 Radiated Emission Method 6.6.2 Radiated Emission Method			





4 Test Summary

Test Items	Section in CFR 47	Result
Antenna requirement	15.203 & 15.247 (c)	Pass
AC Power Line Conducted Emission	15.207	Pass
Conducted Peak Output Power	15.247 (b)(3)	Pass
6dB Emission Bandwidth 99% Occupied Bandwidth	15.247 (a)(2)	Pass
Power Spectral Density	15.247 (e)	Pass
Band Edge	15.247 (d)	Pass
Spurious Emission	15.205 & 15.209	Pass

Pass: The EUT complies with the essential requirements in the standard.

N/A: Not Applicable.



5 General Information

5.1 Client Information

Applicant:	MOVILTELCO TRADE, S.L
Address:	ABTAO,25-1Floor A-office MADRID-SPAIN MADRID Spain
Manufacturer/ Factory:	MOVILTELCO TRADE, S.L
Address:	Room703, A Block, Yuanzheng Chuanye Building, Lang shan Road 19#, Nanshan District, Shenzhen, China.

5.2 General Description of E.U.T.

Product Name:	mobile phone
Model No.:	A85, A80, A85B, A85C, A85D
Operation Frequency:	2412MHz~2462MHz (802.11b/802.11g/802.11n(H20))
Channel numbers:	11 for 802.11b/802.11g/802.11(H20)
Channel separation:	5MHz
Modulation technology: (IEEE 802.11b)	Direct Sequence Spread Spectrum (DSSS)
Modulation technology: (IEEE 802.11g/802.11n)	Orthogonal Frequency Division Multiplexing(OFDM)
Data speed (IEEE 802.11b):	1Mbps, 2Mbps, 5.5Mbps, 11Mbps
Data speed (IEEE 802.11g):	6Mbps, 9Mbps, 12Mbps, 18Mbps, 24Mbps, 36Mbps, 48Mbps, 54Mbps
Data speed (IEEE 802.11n):	Up to 72.2Mbps
Antenna Type:	External Antenna
Antenna gain:	-4.71dBi
Power supply:	Rechargeable Li-ion Battery DC3.8V-2450mAh
AC adapter:	US and Europe have the same adapter specifications Model: A85 Input: AC100-240V, 50/60Hz, 0.2A Output: DC 5.0V, 1000mA
Test Sample Condition:	The test samples were provided in good working order with no visible defects.
Remarks:	item No.: A85,A80,A85B,A85C,A85D were identical inside, the electrical circuit design, layout, components used and internal wiring, with only difference being model name.

Operation Frequency each of channel for 802.11b/g/n(H20)								
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency	
1	2412MHz	4	2427MHz	7	2442MHz	10	2457MHz	
2	2417MHz	5	2432MHz	8	2447MHz	11	2462MHz	
3 2422MHz 6 2437MHz 9 2452MHz								
Note: Channel 1, 6 & 11 selected for 802.11b/g/n-HT20 as Lowest, Middle and Highest channel								

Report No: CCISE181104503

5.3 Test environment and test mode

Operating Environment:			
Temperature:	24.0 °C		
Humidity:	54 % RH		
Atmospheric Pressure:	1010 mbar		
Test mode:	<u> </u>		

Transmitting mode	Keep the EUT in continuous transmi	tting with modulation

The sample was placed 0.8m (below 1GHz)/1.5m (above 1GHz) above the ground plane of 3m chamber. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating the turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

We have verified the construction and function in typical operation. All the test modes were carried out with the EUT in transmitting operation, which was shown in this test report and defined as follows:

Per-scan all kind of data rate, the follow list were the worst case.				
Mode Data rate				
802.11b	1Mbps			
802.11g	6Mbps			
802.11n(H20)	6.5Mbps			
802.11n(H40) 13.5Mbps				

5.4 Description of Support Units

The EUT has been tested as an independent unit.

5.5 Measurement Uncertainty

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

5.6 Laboratory Facility

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

FCC - Registration No.: 727551

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

IC - Registration No.: 10106A-1

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

CNAS - Registration No.: CNAS L6048

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

A2LA - Registration No.: 4346.01

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

Shenzhen Zhongjian Nanfang Testing Co., Ltd. No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road, Bao'an District, Shenzhen, Guangdong, China Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366





5.7 Laboratory Location

Shenzhen Zhongjian Nanfang Testing Co., Ltd.

Address: No. B-C, 1/F., Building 2, Laodong No.2 Industrial Park, Xixiang Road,

Bao'an District, Shenzhen, Guangdong, China Tel: +86-755-23118282, Fax: +86-755-23116366

Email: info@ccis-cb.com, Website: http://www.ccis-cb.com

5.8 Test Instruments list

Radiated Emission:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	SAEMC	9m*6m*6m	966	07-22-2017	07-21-2020
Loop Antenna	SCHWARZBECK	FMZB1519B	00044	03-16-2018	03-15-2019
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-16-2018	03-15-2019
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-16-2018	03-15-2019
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-22-2017	06-21-2020
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170582	11-21-2017	11-20-2018
потп Аптеппа	SCHWARZBECK	DDNA 9170	DDHA9170362	11-21-2018	11-20-2019
EMI Test Software	AUDIX	E3	V	ersion: 6.110919	b
Pre-amplifier	HP	8447D	2944A09358	03-07-2018	03-06-2019
Pre-amplifier	CD	PAP-1G18	11804	03-07-2018	03-06-2019
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-07-2018	03-06-2019
Cooteum analyzar	Rohde & Schwarz	FSP40	100363	11-21-2017	11-20-2018
Spectrum analyzer	Ronde & Schwarz	F3F40	100303	11-21-2018	11-20-2019
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-07-2018	03-06-2019
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-07-2018	03-06-2019
Cable	MICRO-COAX	MFR64639	K10742-5	03-07-2018	03-06-2019
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-07-2018	03-06-2019
RF Switch Unit	MWRFTEST	MW200	N/A	N/A	N/A
Test Software	MWRFTEST	MTS8200		Version: 2.0.0.0	_

Conducted Emission:					
Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
EMI Test Receiver	Rohde & Schwarz	ESCI	101189	03-07-2018	03-06-2019
Pulse Limiter	SCHWARZBECK	OSRAM 2306	9731	03-07-2018	03-06-2019
LISN	CHASE	MN2050D	1447	03-19-2018	03-18-2019
LISN	Rohde & Schwarz	ESH3-Z5	8438621/010	07-21-2018	07-20-2019
Cable	HP	10503A	N/A	03-07-2018	03-06-2019
EMI Test Software	AUDIX	E3	\	/ersion: 6.110919	b



6 Test results and Measurement Data

6.1 Antenna requirement

Standard requirement:

FCC Part 15 C Section 15.203 /247(b)

15.203 requirement:

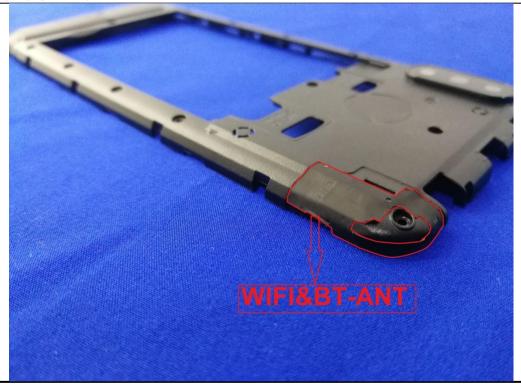
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator, the manufacturer may design the unit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

15.247(b) (4) requirement:

(4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

E.U.T Antenna:

The WiFi antenna is an Inernal antenna which cannot replace by end-user, the best case gain of the antenna is -4.71 dBi.





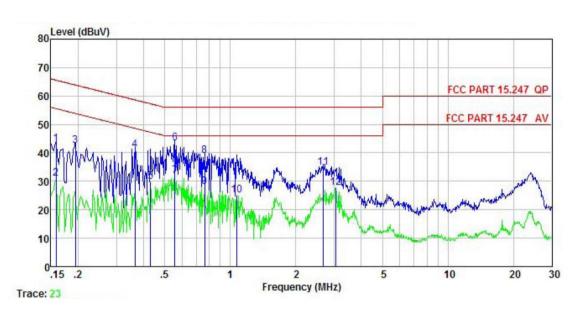
6.2 Conducted Emission

	ı				
Test Requirement:	FCC Part 15 C Section 1	5.207			
Test Method:	ANSI C63.10: 2013	ANSI C63.10: 2013			
Test Frequency Range:	150 kHz to 30 MHz	150 kHz to 30 MHz			
Class / Severity:	Class B	Class B			
Receiver setup:	RBW=9 kHz, VBW=30 kl	Hz			
Limit:	Frequency range	Limit (dBuV)		
	(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 procedure	line impedance stab 500hm/50uH couplir 2. The peripheral device a LISN that provides termination. (Please photographs). 3. Both sides of A.C. ling interference. In order positions of equipments	plators are connected to the pilization network (L.I.S.N.), and impedance for the measures are also connected to the associated as a 500hm/50uH coupling it is refer to the block diagram are checked for maximum entities and all of the interface 263.4: 2014 on conducted	which provides a suring equipment. the main power through mpedance with 50ohm of the test setup and sision, the relative cables must be changed		
Test setup:	AUX Equipment Test table/Insula Remark: E.U.T: Equipment Under LISN: Line Impedence State Test table height=0.8m	E.U.T EMI Receiver	ilter — AC power		
Test Instruments:	Refer to section 5.8 for d	letails			
Test mode:	Refer to section 5.3 for d	letails			
Test results:	Passed				



Measurement Data:

Product name:	mobile phone	Product model:	A85
Test by:	Caffrey	Test mode:	Wi-Fi Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase:	Line
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5℃ Huni: 55%



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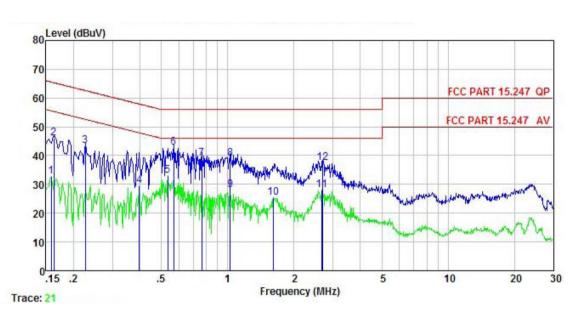
	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBu∀	₫B	₫B	dBu₹	dBu∜	dB	
1	0.158	32.06	0.17	10.77	43.00		-22.56	
2	0.158	20.16	0.17	10.77	31.10	55.56	-24.46	Average
3	0.194	31.71	0.15	10.76	42.62	63.84	-21.22	QP
4	0.365	30.14	0.12	10.73	40.99	58.61	-17.62	QP
5	0.431	18.97	0.12	10.73	29.82	47.24	-17.42	Average
2 3 4 5 6 7	0.555	32.37	0.12	10.76	43.25	56.00	-12.75	QP
7	0.555	20.96	0.12	10.76	31.84	46.00	-14.16	Average
8	0.763	28.02	0.13	10.80	38.95		-17.05	
9	0.763	17.22	0.13	10.80	28.15			Average
10	1.071	14.18	0.13	10.88	25.19			Average
11	2.664	23.79	0.16	10.93	34.88		-21.12	
12	3.041	16.52	0.16	10.92	27.60			Average

Notes:

- 1. An initial pre-scan was performed on the line and neutral lines with peak detector.
- 2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
- 3. Final Level =Receiver Read level + LISN Factor + Cable Loss.



Product name:	mobile phone	Product model:	A85
Test by:	Caffrey	Test mode:	Wi-Fi Tx mode
Test frequency:	150 kHz ~ 30 MHz	Phase: Neutral	
Test voltage:	AC 120 V/60 Hz	Environment:	Temp: 22.5℃ Huni: 55%



-		*
Ret	22 234	
IV.C	11 (2)	Ph.

	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark
	MHz	dBu∀	₫B	₫B	dBu₹	dBu∀	<u>d</u> B	
1	0.158	21.05	0.98	10.77	32.80			Average
1 2 3 4 5 6 7 8 9	0.162 0.226	34.20 31.59	0.97 0.94	10.77 10.75	45.94 43.28		-19.40 -19.33	
4	0.398 0.535	17.96 21.48	0.97 0.97	10.72 10.76	29.65 33.21			Average Average
6	0.570	30.97	0.97	10.76	42.70		-13.30	
7	0.763	27. 24 26. 99	0.97 0.97	10.80	39.01		-16.99	
9	1.027 1.027	16.23	0.97	10.87 10.87	38.83 28.07		-17.17 -17.93	Average
10	1.610	13.34	0.98	10.93	25.25			Average
11 12	2.664 2.707	16.07 25.58	0.99 0.99	10.93 10.93	27.99 37.50		-18.50	Average QP

Notes:

- 1. An initial pre-scan was performed on the line and neutral lines with peak detector.
- 2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
- 3. Final Level =Receiver Read level + LISN Factor + Cable Loss.



6.3 Conducted Output Power

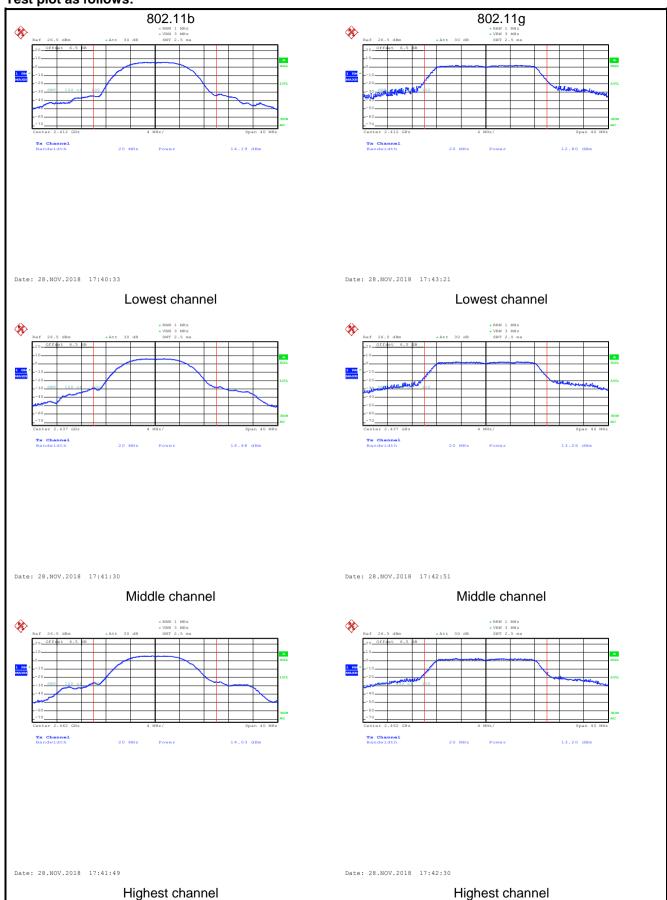
Test Requirement:	FCC Part 15 C Section 15.247 (b)(3)
Test Method:	ANSI C63.10:2013 and KDB 558074
Limit:	30dBm
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane
Test Instruments:	Refer to section 5.8 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed

Measurement Data:

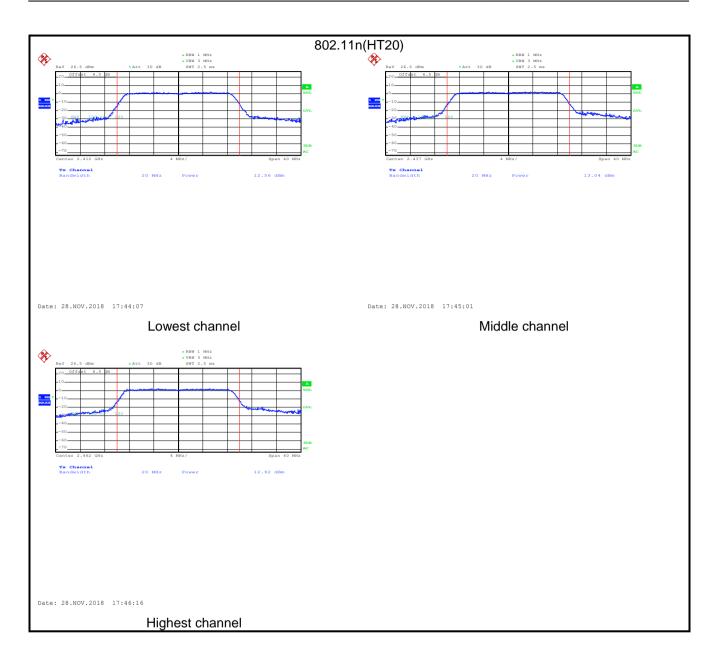
Test CH	Maximum Conducted Output Power (dBm)				Result
Test on	802.11b	802.11g	802.11n(H20)	Limit(dBm)	Result
Lowest	14.19	12.80	12.56		
Middle	14.48	13.26	13.04	30.00	Pass
Highest	14.03	13.20	12.92		



Test plot as follows:









6.4 Occupy Bandwidth

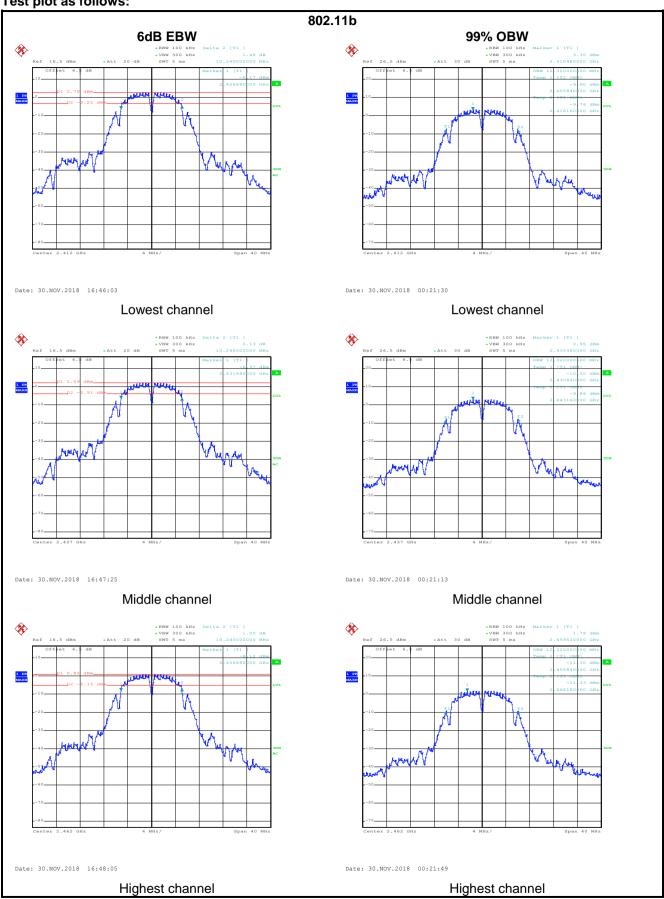
Test Requirement:	FCC Part 15 C Section 15.247 (a)(2)	
Test Method:	ANSI C63.10:2013 and KDB 558074	
Limit:	>500kHz	
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane	
Test Instruments:	Refer to section 5.8 for details	
Test mode:	Refer to section 5.3 for details	
Test results:	Passed	

Measurement Data:

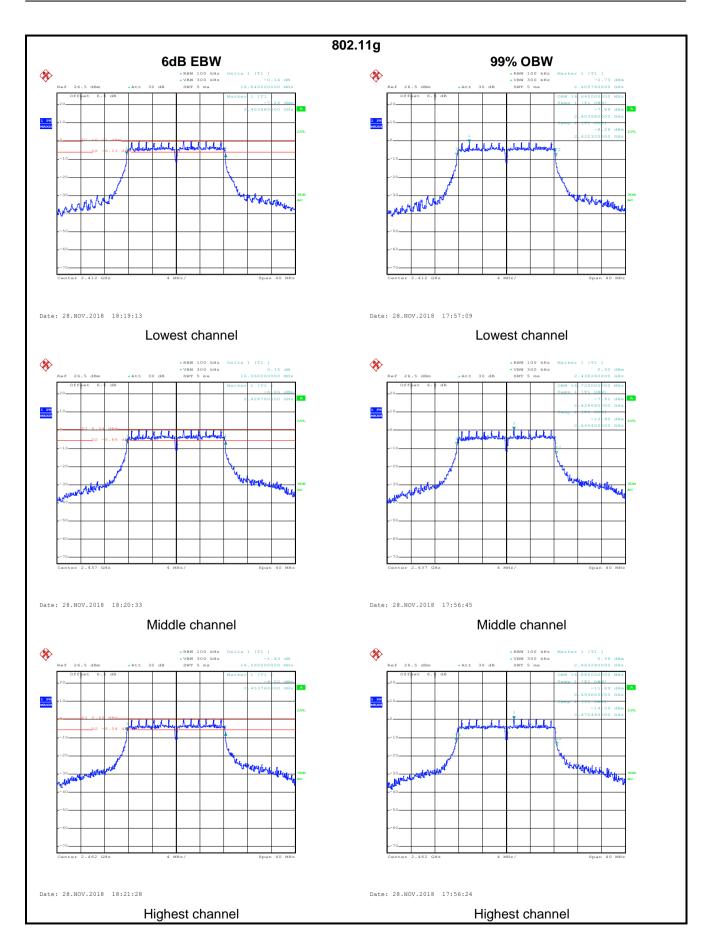
Test CH	6dB Emission Bandwidth (MHz)			Limit(kHz)	Result
rest on	802.11b	802.11g	802.11n(H20)	LIIIII(KHZ)	Result
Lowest	10.24	16.64	17.52		
Middle	10.24	16.56	17.52	>500	Pass
Highest	10.24	16.56	17.52		1
Test CH	99% Occupy Bandwidth (MHz)			Limit(kHz)	Result
rest on	802.11b	802.11g	802.11n(H20)	LIIIII(KI12)	Result
Lowest	12.32	16.64	17.76		
Middle	12.32	16.72	17.76	N/A	N/A
Highest	12.32	16.88	17.84		



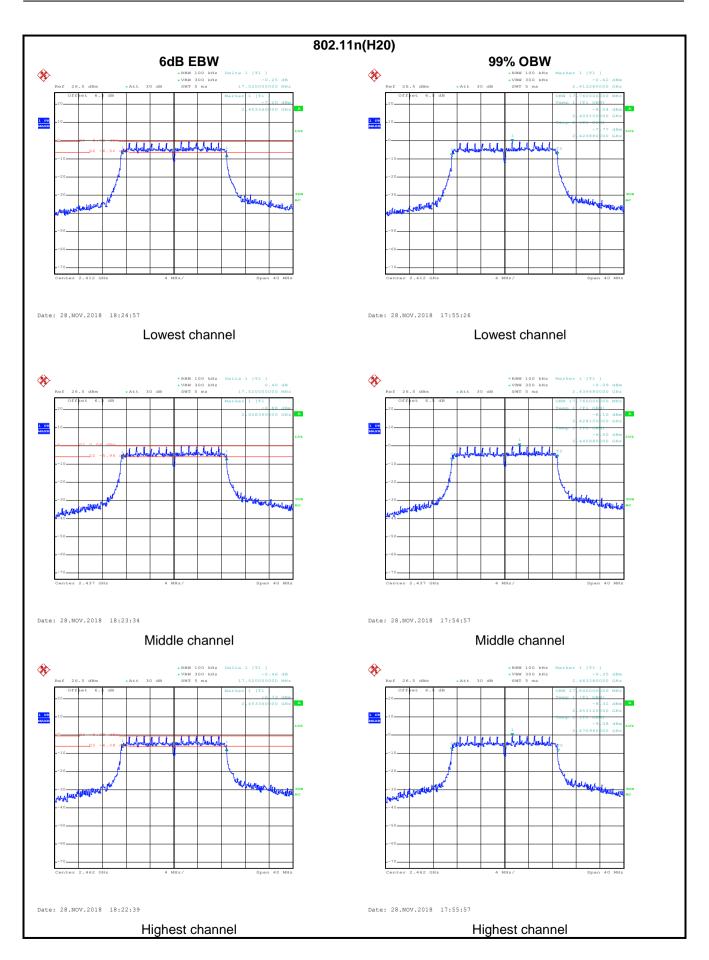
Test plot as follows:













6.5 Power Spectral Density

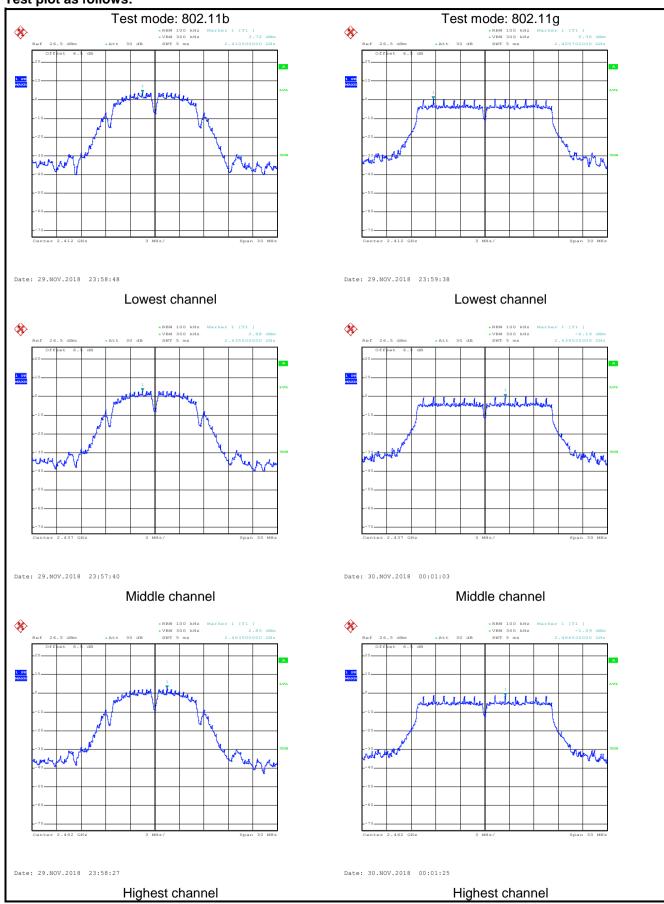
Test Requirement:	FCC Part 15 C Section 15.247 (e)	
Test Method:	ANSI C63.10:2013 and KDB 558074	
Limit:	8dBm	
Test setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane	
Test Instruments:	Refer to section 5.8 for details	
Test mode:	Refer to section 5.3 for details	
Test results:	Passed	

Measurement Data:

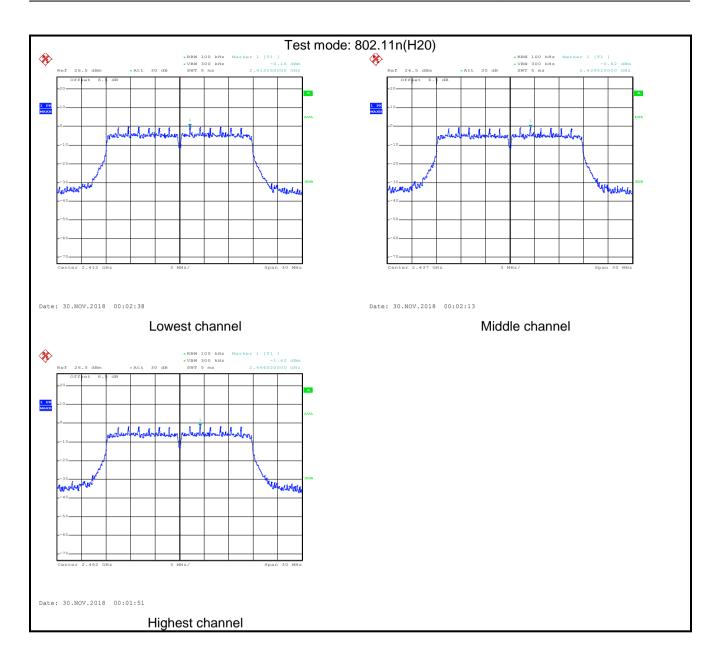
Toot CH	Powe	er Spectral Density	Limit(dDm)	Result	
Test CH	802.11b	802.11g	802.11n(H20)	Limit(dBm)	Resuit
Lowest	3.72	0.36	-0.16		
Middle	2.88	-0.19	-0.62	8.00	Pass
Highest	2.85	-1.09	-1.62		



Test plot as follows:









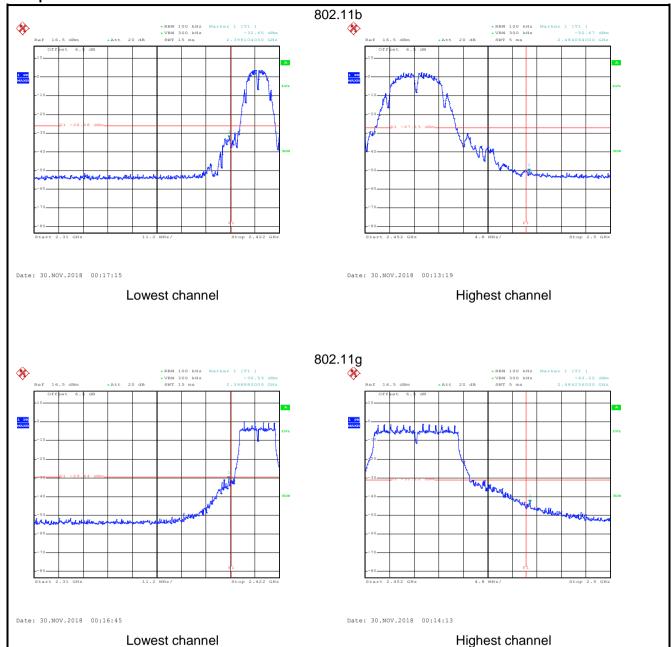
6.6 Band Edge

6.6.1 Conducted Emission Method

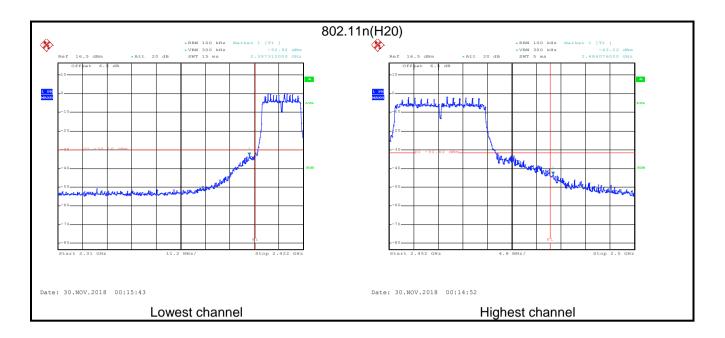
Test Requirement:	FCC Part 15 C Section 15.247 (d)			
Test Method:	ANSI C63.10:2013 and KDB 558074			
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 30 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 setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane			
Test Instruments:	Refer to section 5.8 for details			
Test mode:	Refer to section 5.3 for details			
Test results:	Passed			



Test plot as follows:









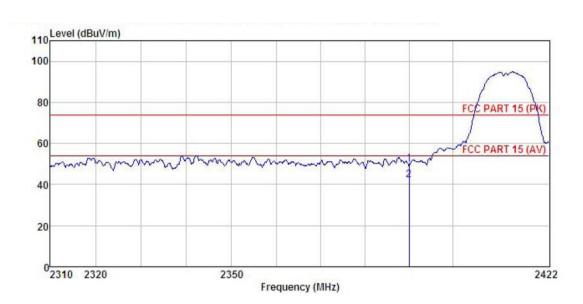
6.6.2 Radiated Emission Method

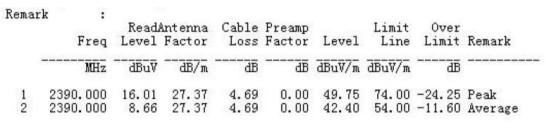
0.0.2	Radiated Emission We	etnoa						
	Test Requirement:	FCC Part 15 C Section 15.209 and 15.205						
	Test Method:	ANSI C63.10: 2013 and KDB 558074						
	Test Frequency Range:	2.3GHz to 2.5GHz						
	Test Distance:	3m	3m					
	Receiver setup:	Frequency	Detec	tor	RBW	V	BW	Remark
		Above 1GHz	Pea		1MHz		MHz	Peak Value
	1226	Fragues	RMS		1MHz nit (dBuV/m @		MHz I	Average Value Remark
	Limit:	Frequenc		LII	54.00	3111)	A۱	verage Value
		Above 1G	Hz		74.00			Peak Value
	Test Procedure:	 The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter camber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasipeak or average method as specified and then reported in a data 						
	Test setup:	\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	AE E (Turntabl	· //	Hor 3m Ground Reference Plane	n Antenna	Antenna Tox	wer
	Test Instruments:	Refer to section	n 5.8 for c	detail	S			
	Test mode:	Refer to section	n 5.3 for c	detail	S			
	Test results:	Passed						



802.11b mode:

Product Name:	mobile phone	Product Model:	A85
Test By:	Caffrey	Test mode:	802.11b Tx mode
Test Channel:	Lowest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%





Remark

- 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.

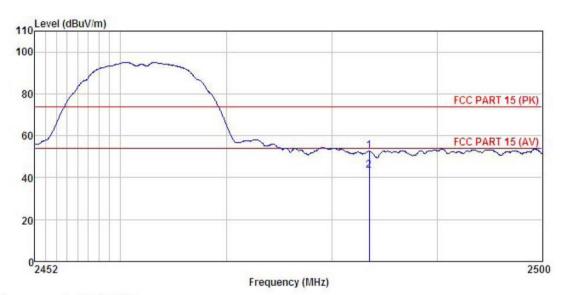


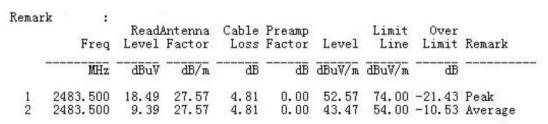
roduct Name:	ct Name: mobile phone		F	Product Model:		A85	A85			
est By:	Caf	frey			1	Test mode:		802.1	802.11b Tx mode	
est Channel:	Lov	vest chanı	nel		F	Polarizatio	on:	Horiz	ontal	
est Voltage:	AC	120/60Hz	•		E	Environm	ent:	Temp	ວ: 24℃	Huni: 57%
					·					
110 Leve	(dBuV/m)									
100									Tolle-II	
									~	
80								FCC	PART 15 (I	PIO
60	mana	^~~~	ywww.	2000	m	~~~~	~~~	FCC	PART 15 (AV)
40				44			2			
40										
20										
02310	2320		2:	350						2422
				Fre	quency (Mi	łz)				
Remark		7440.000			Name of the last			P2NC-22-000		
	Freq	ReadA Level	ntenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Remark	
	MHz		dB/m	<u>d</u> B			dBuV/m			
	ших		27.37							
1 23	390.000			4 60	0.00	E4 62	74 00	-19.38	Paale	

- 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.



Product Name:	mobile phone	Product Model:	A85
Test By:	Caffrey	Test mode:	802.11b Tx mode
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%

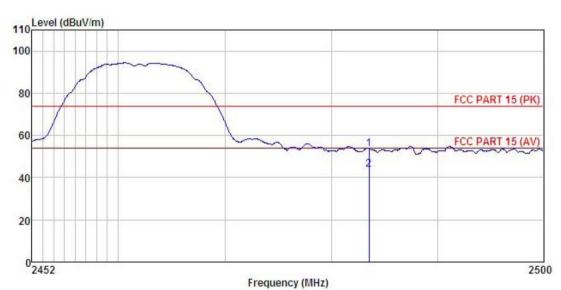


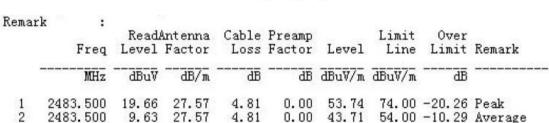


- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.



Product Name:	mobile phone	Product Model:	A85
Test By:	Caffrey	Test mode:	802.11b Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%





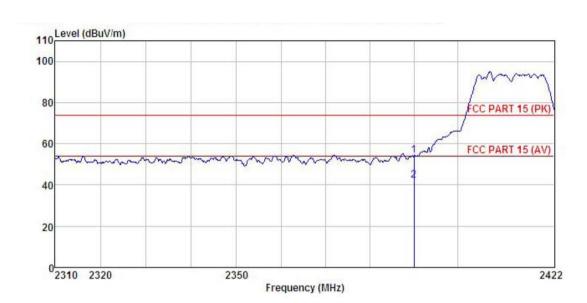
- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.

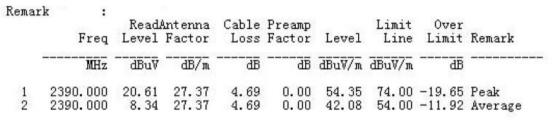




802.11g mode:

Product Name:	mobile phone	Product Model:	A85
Test By:	Caffrey	Test mode:	802.11g Tx mode
Test Channel:	Lowest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%



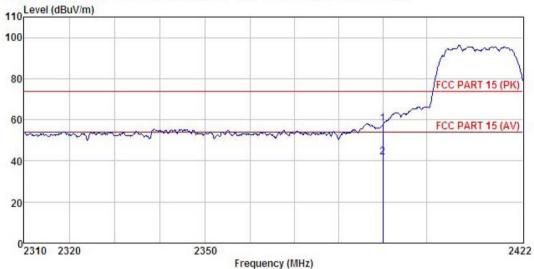


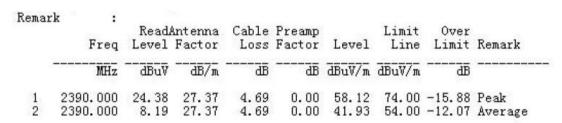
Remark

- 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.



Product Name:	mobile phone	Product Model:	A85				
Test By:	Caffrey	Test mode:	802.11g Tx mode				
Test Channel:	Lowest channel	Polarization:	Horizontal				
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%				
110 Level (dBuV/m)							

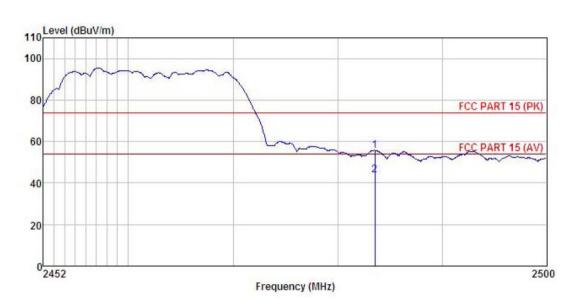




- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.



Product Name:	mobile phone	Product Model:	A85
Test By:	Caffrey	Test mode:	802.11g Tx mode
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%



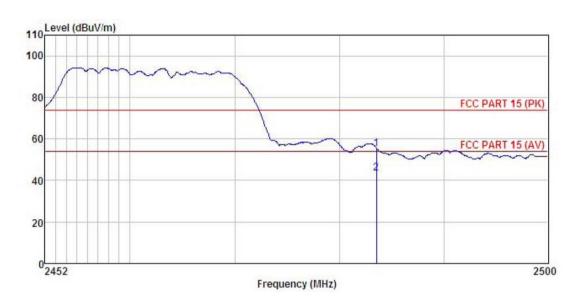
Remark ReadAntenna Cable Preamp Limit Over Freq Level Factor Loss Factor Level Line Limit Remark MHz dBuV dB/m dB dB dBuV/m dBuV/m 0.00 55.79 74.00 -18.21 Peak 0.00 43.92 54.00 -10.08 Average 2483.500 21.71 27.57 4.81 2483.500 9.84 27.57 4.81

Remark:

- 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.



Product Name:	mobile phone	Product Model:	A85
Test By:	Caffrey	Test mode:	802.11g Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



Remark	:	Read	Antenna	Cable	Preamn		Limit	Over	
	Freq		Factor						
-	MHz	dBu₹	dB/m	dB	<u>dB</u>	dBuV/m	dBuV/m	<u>dB</u>	
1 2	2483.500 2483.500			4.81 4.81		55.26 43.50			Peak Average

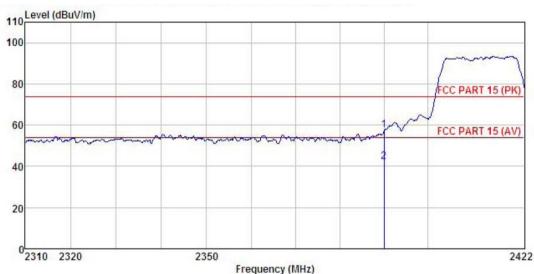
- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.

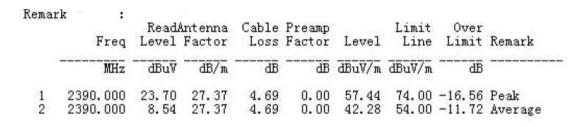




802.11n(HT20):

Product Name:	mobile phone	Product Model:	A85		
Test By:	Caffrey	Test mode:	802.11n(HT20) Tx mode		
Test Channel:	Lowest channel	Polarization:	Vertical		
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%		
Level (dE	uM/mah				



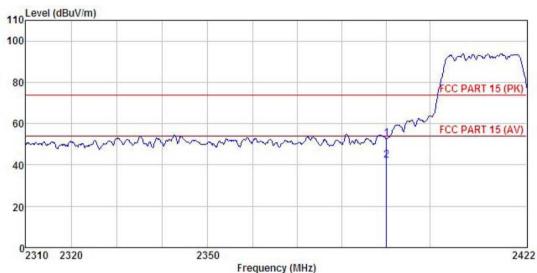


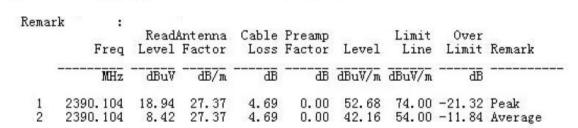
Remark:

- 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.



Product Name:	mobile phone	Product Model:	A85		
Test By:	Caffrey	Test mode:	802.11n(HT20) Tx mode		
Test Channel:	Lowest channel	Polarization:	Horizontal		
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%		

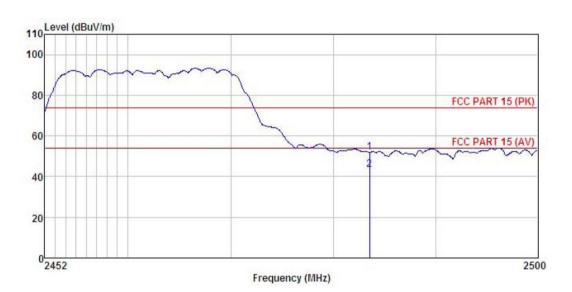




- 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss Preamplifier Factor.
- 2. The emission levels of other frequencies are very lower than the limit and not show in test report.



Product Name:	mobile phone	Product Model:	A85
Test By:	Caffrey	Test mode:	802.11n(HT20) Tx mode
Test Channel:	Highest channel	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%

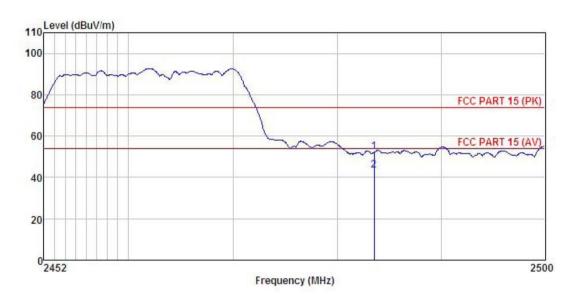


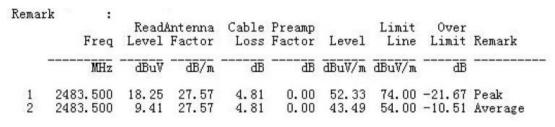
Remarl	k :	Read	Ant enna	Cable	Preamp		Limit	Over	
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark
	MHz	—dBu∜	dB/m	dB	<u>dB</u>	$\overline{dBuV/m}$	dBuV/m	<u>dB</u>	
1 2	2483.500 2483.500								

- 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.



Product Name:	mobile phone	Product Model:	A85
Test By:	Caffrey	Test mode:	802.11n(HT20) Tx mode
Test Channel:	Highest channel	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%





- 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.



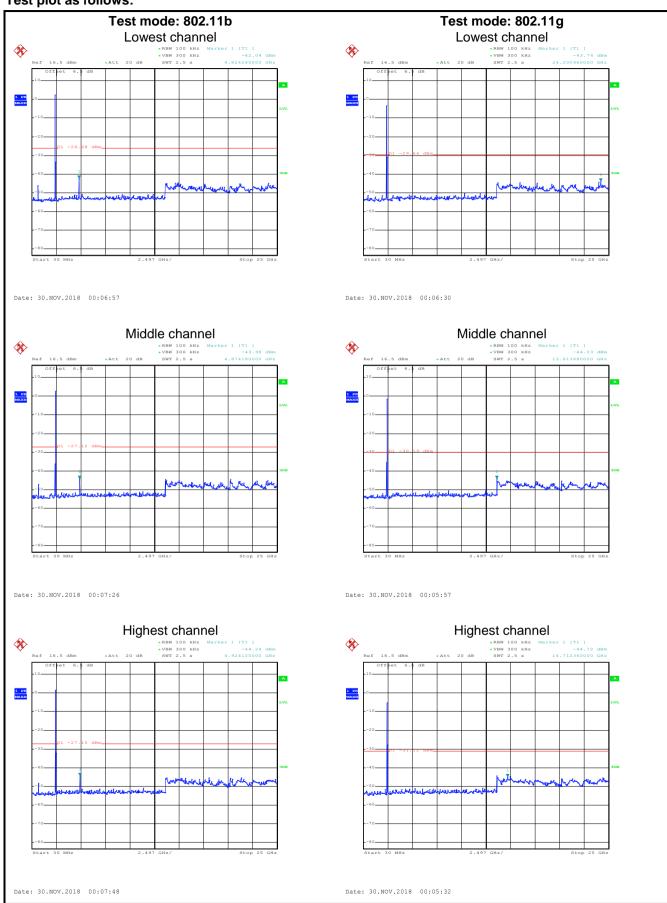
6.7 Spurious Emission

6.7.1 Conducted Emission Method

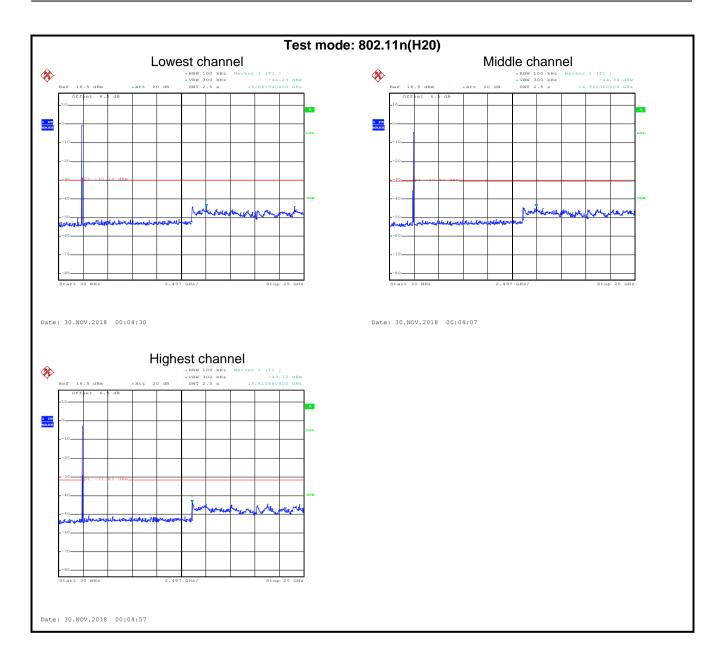
0.7.1 Conducted Linission							
Test Requirement:	FCC Part 15 C Section 15.247 (d)						
Test Method:	ANSI C63.10:2013 and KDB 558074						
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced 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. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph(b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB.						
Test setup:							
	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane						
Test Instruments:	Refer to section 5.8 for details						
Test mode:	Refer to section 5.3 for details						
Test results:	Passed						



Test plot as follows:





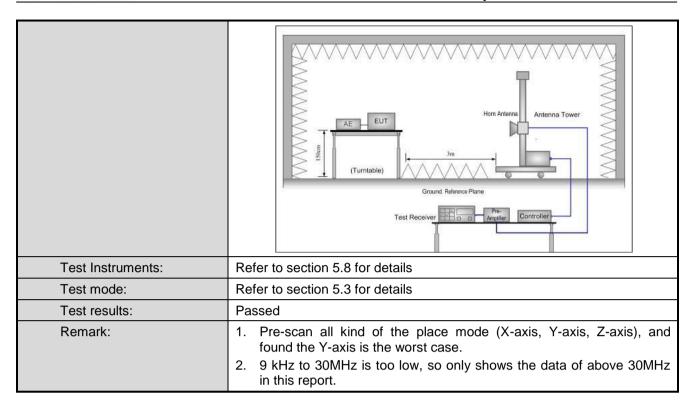




6.7.2 Radiated Emission Method

0.7.2 Radiated Ellission W	2 Radiated Emission Method										
Test Requirement:	FCC Part 15 C Section 15.209 and 15.205										
Test Method:	ANSI C63.10:2013										
Test Frequency Range:	9kHz to 25GHz										
Test Distance:	3m										
Receiver setup:	Frequency	Detector	RBW	VBV	N	Remark					
· ·	30MHz-1GHz	Quasi-peak	120KHz	300K	Hz	Quasi-peak Value					
	Above 1GHz	Peak	1MHz	3MH		Peak Value					
		RMS	1MHz	3MH	lz	Average Value					
Limit:	Frequency 30MHz-88MH		nit (dBuV/m @3 40.0	m)	Ou.	Remark asi-peak Value					
	88MHz-216MH		43.5			asi-peak Value					
	216MHz-960M		46.0			asi-peak Value					
	960MHz-1GH		54.0			asi-peak Value					
			54.0			verage Value					
	Above 1GHz		74.0			Peak Value					
	 The EUT was placed on the top of a rotating table 0.8m(below 1GHz)/1.5m(above 1GHz) above the ground at a 3 meter chamber. The table was rotated 360 degrees to determine the position of the highest radiation. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rota table was turned from 0 degrees to 360 degrees to find the maximum reading. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasipeak or average method as specified and then reported in a data 										
Test setup:	Below 1GHz Turn Table Ground P Above 1GHz	anny			s						



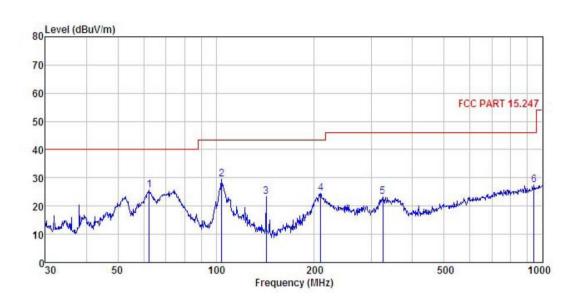




Measurement Data (worst case):

Below 1GHz:

Product Name:	mobile phone	Product Model:	A85
Test By:	Caffrey	Test mode:	Wi-Fi Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Vertical
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24℃ Huni: 57%



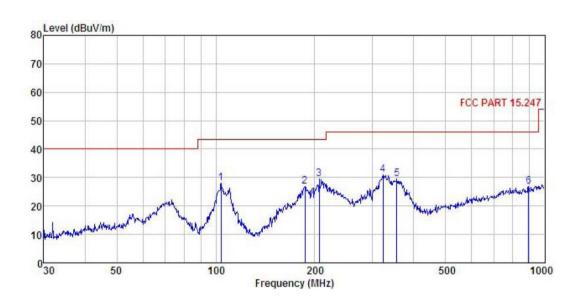
Remark	: Frea		Antenna Factor		Preamp Factor	Level	Limit Line	Over	Remark
	rred	rever	ractor	F022	ractor	rever	Line	TIMIL	Kemark
	MHz	dBu₹	$\overline{-dB}/\overline{m}$		<u>dB</u>	$\overline{\mathtt{dBuV/m}}$	dBuV/m	<u>dB</u>	
1	62.431	42.42	11.55	1.38	29.76	25.59	40.00	-14.41	QP
2	104.170	44.96	11.96	1.99	29.50	29.41	43.50	-14.09	QP
3	142.324	42.06	8.22	2.43	29.26	23.45	43.50	-20.05	QP
4	209.313	38.40	11.87	2.86	28.77	24.36	43.50	-19.14	QP
5	324.456	34.77	14.11	3.02	28.51	23.39	46.00	-22.61	QP
1 2 3 4 5 6	942.131	28.59	22.38	4.13	27.75	27.35	46.00	-18.65	QP

Remark:

- 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.



Product Name:	mobile phone	Product Model:	A85
Test By:	Caffrey	Test mode:	Wi-Fi Tx mode
Test Frequency:	30 MHz ~ 1 GHz	Polarization:	Horizontal
Test Voltage:	AC 120/60Hz	Environment:	Temp: 24°C Huni: 57%



Remark	:	Road	Ant enna	Cabla	Dreamn		Limit	Over	
	Freq				Factor	Level			Remark
_	MHz	dBu∜			<u>dB</u>	$\overline{dBuV/m}$	dBuV/m	<u>dB</u>	
1	103.806	43.62	11.94	1.99	29.50	28.05	43.50	-15.45	QP
2	186.441	42.20	10.71	2.77	28.93	26.75	43.50	-16.75	QP
2 3 4	206.398	43.60	11.75	2.86	28.79	29.42	43.50	-14.08	QP
4	322.189	42.34	14.06	3.01	28.50	30.91	46.00	-15.09	QP
5 6	355.427	40.17	14.70	3.10	28.58	29.39	46.00	-16.61	QP
6	893.857	28.90	22.18	3.77	27.89	26.96	46.00	-19.04	QP

- 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.





Above 1GHz

				802.11b							
			Test ch	annel: Lowe							
				tector: Peak							
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			
4824.00	48.60	30.94	6.81	41.82	44.53	74.00	-29.47	Vertical			
4824.00	47.23	30.94	6.81	41.82	43.16	74.00	-30.84	Horizontal			
Detector: Average Value											
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			
4824.00	39.67	30.94	6.81	41.82	35.60	54.00	-18.40	Vertical			
4824.00	39.68	30.94	6.81	41.82	35.61	54.00	-18.39	Horizontal			
ı			De	annel: Mido							
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			
4874.00	46.75	31.20	6.85	41.84	42.96	74.00	-31.04	Vertical			
4874.00	46.97	31.20	6.85	41.84	43.18	74.00	-30.82	Horizontal			
			Dete	ctor: Averag	je Value						
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			
4874.00	39.63	31.20	6.85	41.84	35.84	54.00	-18.16	Vertical			
4874.00	39.28	31.20	6.85	41.84	35.49	54.00	-18.51	Horizontal			
			Took ob	annalı I limb	at abanal						
				annel: Highe							
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	tector: Peak Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
4924.00	47.08	31.46	6.89	41.86	43.57	74.00	-30.43	Vertical			
4924.00	45.86	31.46	6.89	41.86	42.35	74.00	-31.65	Horizontal			
			Dete	ctor: Averaç	je Value						
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			
4924.00	38.93	31.46	6.89	41.86	35.42	54.00	-18.58	Vertical			
		31.46	6.89	41.86	35.03	54.00	-18.97	Horizontal			

Remark:

^{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.





802.11g											
Test channel: Lowest channel											
Detector: Peak Value											
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			
4824.00	48.48	30.94	6.81	41.82	44.41	74.00	-29.59	Vertical			
4824.00	47.51	30.94	6.81	41.82	43.44	74.00	-30.56	Horizontal			
Detector: Average Value											
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			
4824.00	39.12	30.94	6.81	41.82	35.05	54.00	-18.95	Vertical			
4824.00	39.40	30.94	6.81	41.82	35.33	54.00	-18.67	Horizontal			
Test channel: Middle channel											
				tector: Peak	Value		T .				
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			
4874.00	46.84	31.20	6.85	41.84	43.05	74.00	-30.95	Vertical			
4874.00	46.20	31.20	6.85	41.84	42.41	74.00	-31.59	Horizontal			
			Dete	ctor: Averag	ge Value						
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			
4874.00	38.54	31.20	6.85	41.84	34.75	54.00	-19.25	Vertical			
4874.00	38.42	31.20	6.85	41.84	34.63	54.00	-19.37	Horizontal			
Test channel: Highest channel											
				tector: Peak							
Frequency (MHz)	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization			
, ,	(dBuV)	(dB/m)	(dB)	(dB)	, ,		` ,), (i i			
4924.00	47.11	31.46	6.89	41.86	43.60	74.00	-30.40	Vertical			
4924.00	46.67	31.46	6.89	41.86	43.16	74.00	-30.84	Horizontal			
	D I	A		ctor: Averag	je value						
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			
4924.00	38.32	31.46	6.89	41.86	34.81	54.00	-19.19	Vertical			
4924.00	37.34	31.46	6.89	41.86	33.83	54.00	-20.17	Horizontal			
Remark: 1. Final Level = Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor.											

Shenzhen Zhongjian Nanfang Testing Co., Ltd.

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2. The emission levels of other frequencies are very lower than the limit and not show in test report.





802.11n(HT20)											
Test channel: Lowest channel											
Detector: Peak Value											
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			
4824.00	47.93	36.06	6.81	41.82	48.98	74.00	-25.02	Vertical			
4824.00	47.48	36.06	6.81	41.82	48.53	74.00	-25.47	Horizontal			
Detector: Average Value											
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			
4824.00	38.54	36.06	6.81	41.82	39.59	54.00	-14.41	Vertical			
4824.00	39.02	36.06	6.81	41.82	40.07	54.00	-13.93	Horizontal			
Test channel: Middle channel											
Detector: Peak Value											
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			
4874.00	46.92	36.32	6.85	41.84	48.25	74.00	-25.75	Vertical			
4874.00	47.10	36.32	6.85	41.84	48.43	74.00	-25.57	Horizontal			
Detector: Average Value											
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			
4874.00	38.36	36.32	6.85	41.84	39.69	54.00	-14.31	Vertical			
4874.00	38.23	36.32	6.85	41.84	39.56	54.00	-14.44	Horizontal			
				annel: Highe							
		T T		tector: Peak	Value		T				
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			
4924.00	47.54	36.58	6.89	41.86	49.15	74.00	-24.85	Vertical			
4924.00	46.28	36.58	6.89	41.86	47.89	74.00	-26.11	Horizontal			
			Dete	ctor: Averag	ge Value						
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			
4924.00	38.43	36.58	6.89	41.86	40.04	54.00	-13.96	Vertical			
4924.00	37.56	36.58	6.89	41.86	39.17	54.00	-14.83	Horizontal			
Remark:	Remark: 1 Final Level = Receiver Read level + Antenna Factor + Cable Loss - Preamplifier Factor										

^{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.