

Report No: JYTSZB-R12-2101317

# FCC REPORT

Applicant:	INFINIX MOBILITY LIMITED
Address of Applicant:	FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35 SHAN MEI STREET FOTAN NT
Equipment Under Test (E	EUT)
Product Name:	Mobile Phone
Model No.:	X698
Trade mark:	Infinix
FCC ID:	2AIZN-X698
Applicable standards:	FCC CFR Title 47 Part 15 Subpart C Section 15.247
Date of sample receipt:	13 Jul., 2021
Date of Test:	13 Jul., to 30 Jul., 2021
Date of report issued:	02 Aug., 2021
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 JYT 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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#### Version 2

Version No.	Date	Description
00	02 Aug., 2021	Original

Tested by:

Mike.DU Test Engineer

Date: 02 Aug., 2021

Winner Thang

Reviewed by:

**Project Engineer** 

Date: 02 Aug., 2021

Project No.: JYTSZE2107031



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# 4 Test Summary

Test Items	Section in CFR 47	Test Data	Result	
Antenna requirement	15.203 & 15.247 (b)	See Section 6.1	Pass	
AC Power Line Conducted Emission	15.207	See Section 6.2	Pass	
Duty Cycle	ANSI C63.10-2013	Appendix A – 2.4G Wi-Fi	Pass	
Conducted Peak Output Power	15.247 (b)(3)	Appendix A – 2.4G Wi-Fi	Pass	
6dB Emission Bandwidth 99% Occupied Bandwidth	15.247 (a)(2)	Appendix A – 2.4G Wi-Fi	Pass	
Power Spectral Density	15.247 (e)	Appendix A – 2.4G Wi-Fi	Pass	
Conducted Band Edge		Appendix A – 2.4G Wi-Fi	Pass	
Radiated Band Edge	15.247 (d)	See Section 6.6.2	Pass	
Conducted Spurious Emission		Appendix A – 2.4G Wi-Fi	Pass	
Radiated Spurious Emission	15.205 & 15.209	See Section 6.7.2	Pass	

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

2. N/A: Not Applicable.

3. The cable insertion loss used by "RF Output Power" and other conduction measurement items is 0.5dB (provided by the customer).

Test Method:

ANSI C63.10-2013 KDB 558074 D01 15.247 Meas Guidance v05r02



# 5 General Information

## 5.1 Client Information

Applicant:	INFINIX MOBILITY LIMITED
Address:	FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35 SHAN MEI STREET FOTAN NT
Manufacturer:	INFINIX MOBILITY LIMITED
Address:	FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35 SHAN MEI STREET FOTAN NT
Factory:	SHENZHEN TECNO TECHNOLOGY CO.,LTD.
Address:	101, Building 24, Waijing Industrial Park, Fumin Community, Fucheng Street, Longhua District, Shenzhen City, P.R.China

# 5.2 General Description of E.U.T.

Product Name:	Mobile Phone				
Model No.:	X698				
Operation Frequency:	2412MHz~2462MHz: 802.11b/802.11g/802.11n(HT20)				
	2422MHz~2452MHz: 802.11n(HT40)				
Channel numbers:	11: 802.11b/802.11g/802.11(HT20)				
	7: 802.11n(HT40)				
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 150Mbps				
Antenna Type:	Internal Antenna				
Antenna gain:	1.2dBi				
Power supply:	Rechargeable Li-ion Polymer Battery DC3.87V, 4900mAh				
AC adapter:	Model: U330XSA				
	Input: AC100-240V, 50/60Hz, 1.5A				
	Output: DC 5.0V=3A or 10V=3.3A				
Test Sample Condition:	The test samples were provided in good working order with no visible defects.				

Operation Frequency each of channel for 802.11b/g/n(HT20)							
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:							

1. For 802.11n-HT40 mode, the channel number is from 3 to 9;

2. Channel 1, 6 & 11 selected for 802.11b/g/n-HT20 as Lowest, Middle and Highest channel. Channel 3, 6 & 9 selected for 802.11n-HT40 as Lowest, Middle and Highest Channel.



## 5.3 Test environment and mode, and test samples plans

-						
Operating Environment:						
Temperature:	24.0 °C	24.0 °C				
Humidity:	4 % RH					
Atmospheric Pressure:	1010 mbar	)10 mbar				
Test mode:						
Transmitting mode	Keep the EUT in cont	tinuous transmitting with modulation				
Radiated Emission: 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, th	e follow list were th	e worst case.				
Mode		Data rate				
802.11b		1Mbps				
802.11g		6Mbps				
802.11n(HT20	)	6.5Mbps				
802.11n(HT40	)	13.5Mbps				
Test Samples Plans:	•					
Samples Number		Used for Test Items				
3#	Conducted measure	Conducted measurements test method				
1#	Radiated measurements test method					
1#	EUT constructional details					
<b>Remark:</b> Jian Yan Testing Group She will keep the above samples for a mo		responsible for the test project data of the above samples, and				
E A Decembration of Cum						

## 5.4 Description of Support Units

The EUT has been tested as an independent unit.

## 5.5 Measurement Uncertainty

Parameters	Expanded Uncertainty
r didiliteteis	
Conducted Emission (9kHz ~ 30MHz)	±1.60 dB (k=2)
Radiated Emission (9kHz ~ 30MHz)	±3.12 dB (k=2)
Radiated Emission (30MHz ~ 1000MHz)	±4.32 dB (k=2)
Radiated Emission (1GHz ~ 18GHz)	±5.16 dB (k=2)
Radiated Emission (18GHz ~ 40GHz)	±3.20 dB (k=2)

## 5.6 Laboratory Facility

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

### • FCC - Designation No.: CN1211

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

### • ISED – CAB identifier.: CN0021

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

### • A2LA - Registration No.: 4346.01

This laboratory is accredited in accordance with the recognized International Standard ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories. The test scope can be found as below link: <u>https://portal.a2la.org/scopepdf/4346-01.pdf</u>



## 5.7 Laboratory Location

JianYan Testing Group Shenzhen Co., Ltd.

Address: No.101, Building 8, Innovation Wisdom Port, No.155 Hongtian Road, Huangpu Community, Xinqiao Street, Bao'an District, Shenzhen, Guangdong, People's Republic of China. Tel: +86-755-23118282, Fax: +86-755-23116366

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

# 5.8 Test Instruments list

Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)
3m SAC	ETS	9m*6m*6m	966	01-19-2021	01-18-2024
BiConiLog Antenna	SCHWARZBECK	VULB9163	497	03-03-2021	03-02-2022
Biconical Antenna	SCHWARZBECK	VUBA9117	359	06-18-2021	06-17-2022
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-03-2021	03-02-2022
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-18-2021	06-17-2022
Horn Antenna	SCHWARZBECK	BBHA 9170	BBHA9170582	11-18-2020	11-17-2021
EMI Test Software	AUDIX	E3	V	/ersion: 6.110919b	)
Pre-amplifier	HP	8447D	2944A09358	03-03-2021	03-02-2022
Pre-amplifier	CD	PAP-1G18	11804	03-03-2021	03-02-2022
Spectrum analyzer	Rohde & Schwarz	FSP30	101454	03-03-2021	03-02-2022
Spectrum analyzer	Rohde & Schwarz	FSP40	100363	11-18-2020	11-17-2021
EMI Test Receiver	Rohde & Schwarz	ESRP7	101070	03-03-2021	03-02-2022
Spectrum Analyzer	Agilent	N9020A	MY50510123	11-18-2020	11-17-2021
Signal Generator	Rohde & Schwarz	SMX	835454/016	03-03-2021	03-02-2022
Signal Generator	R&S	SMR20	1008100050	03-03-2021	03-02-2022
RF Switch Unit	MWRFTEST	MW200	N/A	N/A	N/A
Test Software	MWRFTEST	MTS8200		Version: 2.0.0.0	
Cable	ZDECL	Z108-NJ-NJ-81	1608458	03-03-2021	03-02-2022
Cable	MICRO-COAX	MFR64639	K10742-5	03-03-2021	03-02-2022
Cable	SUHNER	SUCOFLEX100	58193/4PE	03-03-2021	03-02-2022
DC Power Supply	XinNuoEr	WYK-10020K	1409050110020	09-25-2020	09-24-2021
Temperature Humidity Chamber	HengPu	HPGDS-500	20140828008	11-01-2020	10-31-2021
Simulated Station	Rohde & Schwarz	CMW500	140493	07-22-2020	07-21-2021
Simulated Station	Ronde & Schwarz	CIVIV500	140493	07-21-2021	07-20-2022
10m SAC	ETS	RFSD-100-F/A	Q2005	03-31-2021	04-01-2024
BiConiLog Antenna	SCHWARZBECK	VULB 9168	1249	03-31-2021	04-01-2022
BiConiLog Antenna	SCHWARZBECK	VULB 9168	1250	03-31-2021	04-01-2022
EMI Test Receiver	R&S	ESR 3	102800	04-06-2021	04-07-2022
EMI Test Receiver	R&S	ESR 3	102802	04-06-2021	04-07-2022
Pre-amplifier	Bost	LNA 0920N	2016	04-06-2021	04-07-2022
Pre-amplifier	Bost	LNA 0920N	2019	04-06-2021	04-07-2022
Test Software	R&S	EMC32		Version: 10.50.40	)

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	03-03-2021	03-02-2022	
Pulse Limiter	SCHWARZBECK	OSRAM 2306	9731	03-03-2021	03-02-2022	
LISN	CHASE	MN2050D	1447	03-03-2021	03-02-2022	
LISN	Rohde & Schwarz	ESH3-Z5	8438621/010	06-18-2021	06-17-2022	
Cable	HP	10503A	N/A	03-03-2021	03-02-2022	
EMI Test Software	AUDIX	E3	Version: 6.110919b			

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## Conducted method:

Test Equipment	Manufacturer	Model No.	Serial No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)	
Spectrum Analyzer	Keysight	N9010B	MY60240202	11-27-2020	11-26-2021	
Vector Signal Generator	Keysight	N5182B	MY59101009	11-27-2020	11-26-2021	
Analog Signal Generator	Keysight	N5173B	MY59100765	11-27-2020	11-26-2021	
Power Detector Box	MWRF-test	MW100-PSB	MW201020JYT	11-27-2020	11-26-2021	
Simulated Station	Rohde & Schwarz	CMW270	102335	11-27-2020	11-26-2021	
RF Control Box	MWRF-test	MW100-RFCB	MW200927JYT	N/A	N/A	
PDU	MWRF-test	XY-G10	N/A	N/A	N/A	
Test Software	MWRF-tes	MTS 8310	Version: 2.0.0.0			
DC Power Supply	Keysight	E3642A	MY60296194	11-27-2020	11-26-2021	

# 6 Test results and Measurement Data

# 6.1 Antenna requirement

Standard requirement:	FCC Part 15 C Section 15.203 /247(b)
<ul> <li>15.203 requirement:</li> <li>An intentional radiator shall responsible party shall be us antenna that uses a unique so that a broken antenna ca electrical connector is prohil 15.247(b) (4) requirement:</li> <li>(4) The conducted output po antennas with directional ga section, if transmitting anten power from the intentional radiator shall responsible parts.</li> </ul>	be designed to ensure that no antenna other than that furnished by the sed with the device. The use of a permanently attached antenna or of an coupling to the intentional radiator, the manufacturer may design the unit in be replaced by the user, but the use of a standard antenna jack or
E.U.T Antenna:	
The Wi-Fi antenna is an Inter	nal antenna which cannot replace by end-user, the best case gain of the



# 6.2 Conducted Emission

Test Requirement:	FCC Part 15 C Section 15.2	207	
Test Frequency Range:	150 kHz to 30 MHz		
Class / Severity:	Class B		
Receiver setup:	RBW=9 kHz, VBW=30 kHz		
Limit:	Frequency range (MHz)	Limit (c	dBuV)
	,	Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5	56	46
	5-30	60	50
	* Decreases with the logarit		
Test procedure	<ol> <li>line impedance stabiliza 50ohm/50uH coupling i</li> <li>The peripheral devices LISN that provides a 50 termination. (Please ref photographs).</li> <li>Both sides of A.C. line a interference. In order to positions of equipment</li> </ol>	brs are connected to the mation network (L.I.S.N.), with mpedance for the measure are also connected to the Dohm/50uH coupling imperferent to the block diagram of are checked for maximum of find the maximum emission and all of the interface call. 10(latest version) on control of the second control of the se	hich provides a ing equipment. main power through a dance with 50ohm the test setup and conducted on, the relative bles must be changed
Test setup:		st	er — AC power
Test Instruments:	Refer to section 5.9 for deta	ils	
Test mode:	Refer to section 5.3 for deta	ils	
Test results:	Passed		

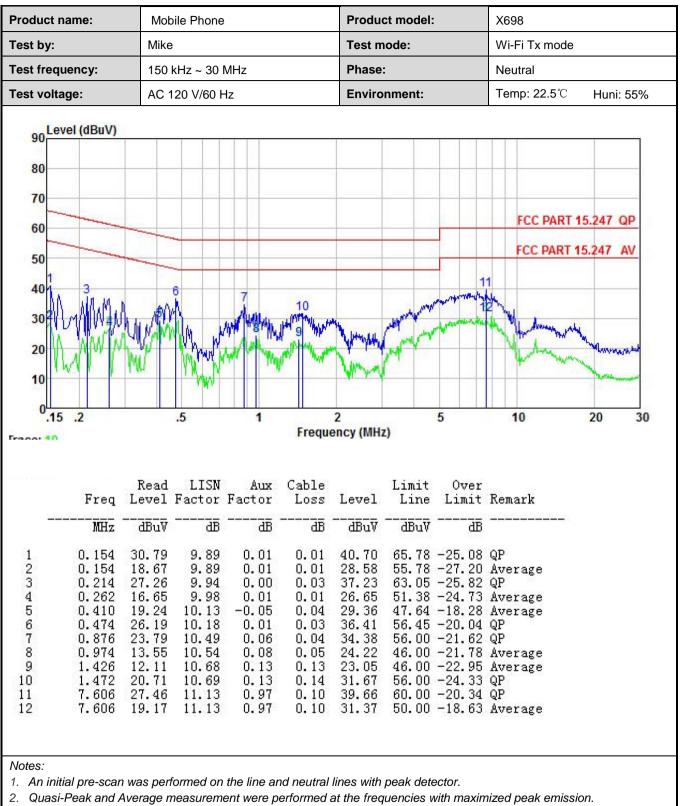


#### **Measurement Data:**

roduct name:	Mobile Phone	Product r	nodel:	X698
est by:	Mike	Test mod	e:	Wi-Fi Tx mode
est frequency:	150 kHz ~ 30 MHz	Phase:		Line
est voltage:	AC 120 V/60 Hz	Environm	Environment: Temp: 22	
90 Level (dBuV)				
80				
70				
60	~			FCC PART 15.247 QP
50				FCC PART 15.247 AV
40 1 3	6		8	10
30 MAN MUL	arminth		Proventing 9	Y.A.
AN ACAUMY	TAN WANNER THAT	and a consideration of the way	American	Walking
20 10 10 10 10	A REAL WAY AND	non-maning the M		V my manufacture
10				
0,15,2	.5 1	2	5	10 20 30
Co: 17		Frequency (MHz)		
		Cable Limit		
	evel Factor Factor		e Limit Remari	k 
MHz —	dBuV dB dB	dB dBu∛ dBu≀		
	1.08 10.14 -0.15 0.03 10.14 -0.15		l -22.74 QP l -23.79 Avera	ge
	8.13 10.17 -0.21 8.75 10.20 -0.25	0.01 38.10 62.04	l -23.94 QP 5 -22.04 Avera	~
5 0.474 2	0.92 10.33 -0.18 8.27 10.33 -0.24	0.03 31.10 46.45	5 -15.35 Avera 2 -17.93 QP	
7 0.876 2	1.18 10.45 0.13 8.32 10.73 1.34	0.04 31.80 56.00	) -24.20 QP ) -19.51 QP	
9 7.486 1	9.35 10.75 1.44 0.88 10.96 3.01	0.10 31.64 50.00	) -19.31 Qr ) -18.36 Avera ) -25.04 QP	ge
11 12.988 1	3.98 10.96 3.01	0.11 28.06 50.00	) -21.94 Avera	ge
12 18.039	9.52 11.13 1.90	0.15 22.70 50.00	) -27.30 Avera	80
otes:				
An initial pre-scan w		and neutral lines with pea performed at the frequer		zed peak emission.

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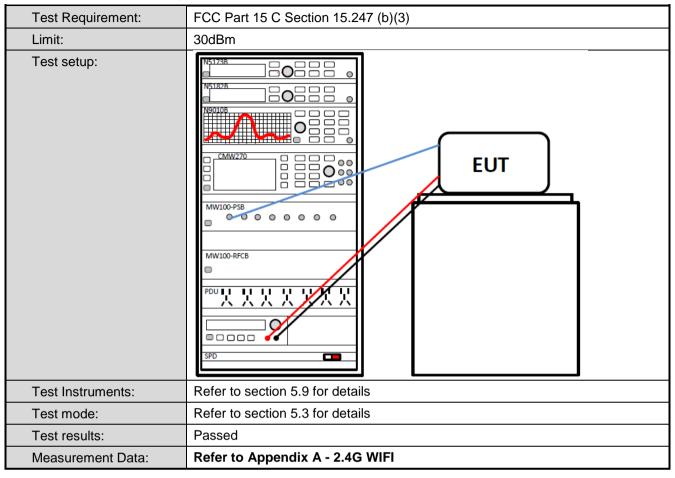




3. Final Level =Receiver Read level + LISN Factor + Aux Factor + Cable Loss.

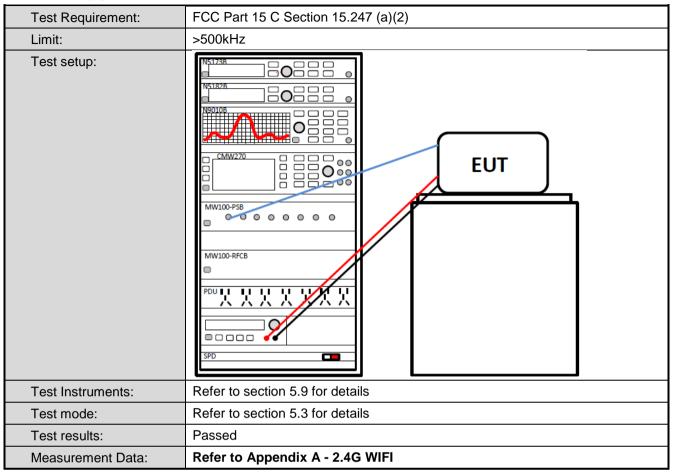


## 6.3 Conducted Output Power



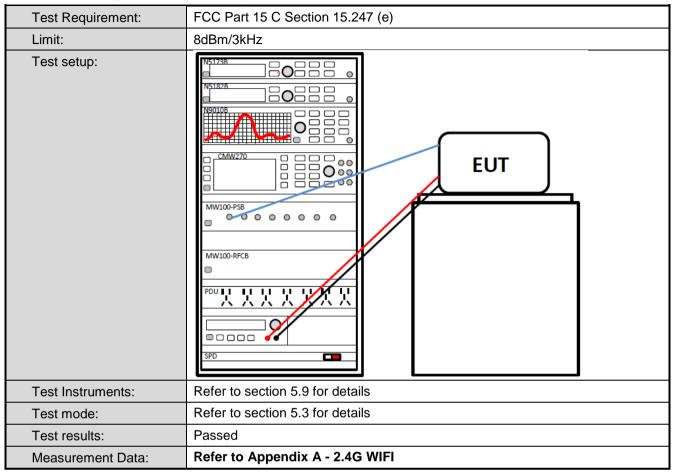


# 6.4 Occupy Bandwidth





## 6.5 Power Spectral Density





# 6.6 Band Edge

## 6.6.1 Conducted Emission Method

Test Requirement:	FCC Part 15 C Section 15.247 (d)
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:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Measurement Data:	Refer to Appendix A - 2.4G WIFI



## 6.6.2 Radiated Emission Method

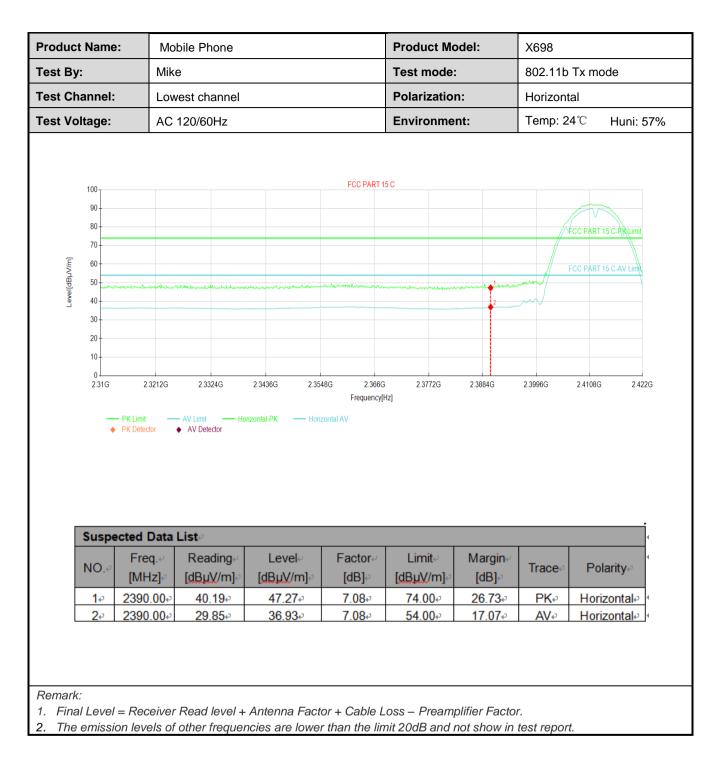
Test Requirement:	FCC Part 15 C Se	ection 15.209	and 15.205		
Test Frequency Range:	2310 MHz to 2390	) MHz and 24	483.5 MHz to 2	500 MHz	
Test Distance:	3m				
Receiver setup:	Frequency	Detector	RBW	VBW	Remark
	Above 1GHz	Peak	1MHz	3MHz	Peak Value
1 : :	Frequency	RMS	1MHz nit (dBuV/m @	3MHz	Average Value Remark
Limit:			54.00	,	Average Value
	Above 1GH	Z	74.00		Peak Value
Test Procedure:	<ul> <li>the ground at determine the determine the determine the determine the santenna, which tower.</li> <li>The antenna, which tower.</li> <li>The antenna ground to det horizontal an measurement</li> <li>For each sus and then the and the rota to maximum readsective specified Bar</li> <li>The test-recession of the emission limit specified bar</li> <li>If the emission limit specified the EUT wou 10dB margin</li> </ul>	a 3 meter ca e position of the s set 3 meter ch was mourt height is vari- cermine the n d vertical polit. pected emission antenna was table was turn ading. viver system with the level of the d, then testing ld be reporte would be re-	amber. The tak the highest rad is away from the ted on the top ed from one m naximum value arizations of the sion, the EUT v tuned to heigh ned from 0 deg was set to Peal Maximum Holo EUT in peak r g could be stop d. Otherwise th	ble was rota iation. e interference of a variable eter to four f of the field e antenna a vas arrangee ts from 1 m rees to 360 k Detect Fur I Mode. node was 10 ped and the ne emissions one using pe	e-height antenna meters above the strength. Both re set to make the d to its worst case eter to 4 meters degrees to find the nction and OdB lower than the peak values of s that did not have eak, quasi-peak or
Test setup:		AE EUT (Turntable)	Arm	Antenna T	ower
Test Instruments:	Refer to section 5	.9 for details			
Test mode:	Refer to section 5	.3 for details			
Test results:	Passed				



#### 802.11b mode:

louuot	Name	IV IV	obile					FIC	oduct I	woder.	X69	98			
est By:		М	ke					Те	st mod	le:	802	.11b	Tx moo	de	
est Ch	annel:	Lo	west	channel				Po	larizati	ion:	Ver	tical			
est Vol	tage:	A	2 120/	60Hz				En	vironn	vironment:			l℃	Huni:	57%
Level[dBµV/m]	100 90 80 70 60 50 40 30			~~~ L		······	FCC PAR	15 C					CC PART 15		
	20 10 0 2.31G	2.321. – PK Limit • PK Detector	— AV	2.3324G Limit V V Detector	2.3436G ertical PK —	2.3548G	Frequenc		3772G	2.3884G	2.3996	G	2.4108G	2.4:	22G
	10 0 2.31G	– PK Limit	AV A	Limit — V V Detector			Frequenc		3772G	2.3884G	2.3996	G	2.4108G	2.4:	22G
	10 0 2.31G	<ul> <li>PK Limit</li> <li>PK Detector</li> </ul>	→ AV ◆ A ta Lis	Limit — V V Detector		• Vertical AV	Frequenc	(Hz)	3772G nit.↓ V/m].↓	2.3884G Margin	۹۰ Tra	G ace⊷		2.4: arity	226
	10 0 2.31G	PK Limit PK Detector	→ AV → AV	Limit – V V Detector	ertical PK	- Vertical AV	Frequence Factor	(Hz)	nit₊∕	Margin	ריק דרמ		Pola		226

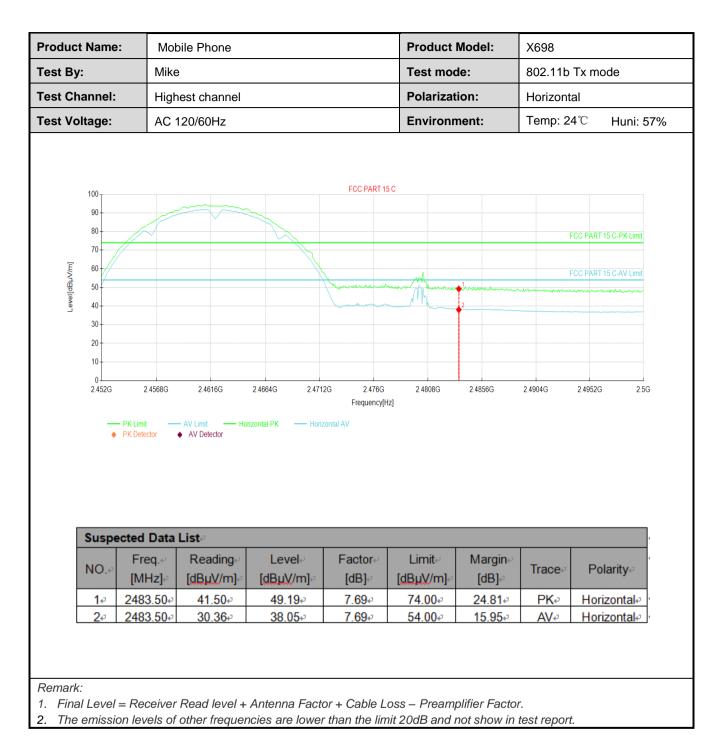






Test By:		oile Phone			Product I	viodei:	X698		
rear by.	Mike	1			Test mod	le:	802.11b	Tx mode	
Test Channel:	High	est channel			Polarizat	ion:	Vertical		
Test Voltage:	AC 1	20/60Hz			Environm	nent:	Temp: 24°C Huni: 5		
					5 C	1		CC PART 15 C-PK Limit	
20 10 0 2.452G		2.4616G AV Limit Vert AV Detector	2.4664G 2.471: tical PK — Vertical	Frequency[H	2.4808G z]	2.4856G	2.4904G	24952G 2.5G	
20 10 0 2.452G	PK Limit PK Detector	AV Limit Vert AV Detector	tical PK — Vertical	Frequency[H			2 4904G	2.4952G 2.5G	
20 10 0 2.452G	PK Limit PK Detector	AV Limit Vert		Frequency[H		2.4856G 2.4856G Margin⊷ [dB]⊷	2.4904G	24952G 2.5G	
20 10 2.452G •	PK Limit PK Detector	AV Limit Vert AV Detector	tical PK — Vertical	Frequency(H AV Factore	z] Limite	Margin∉			



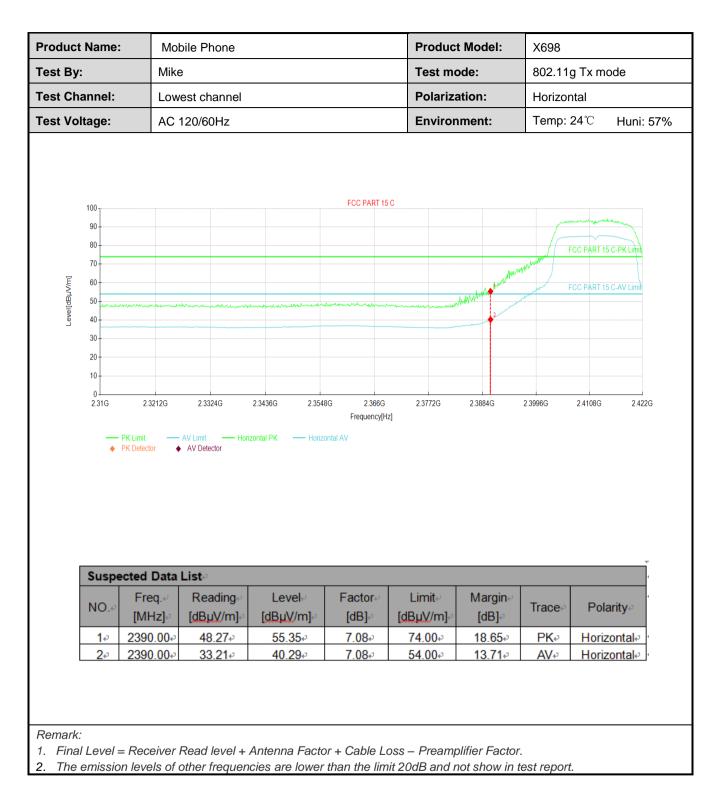




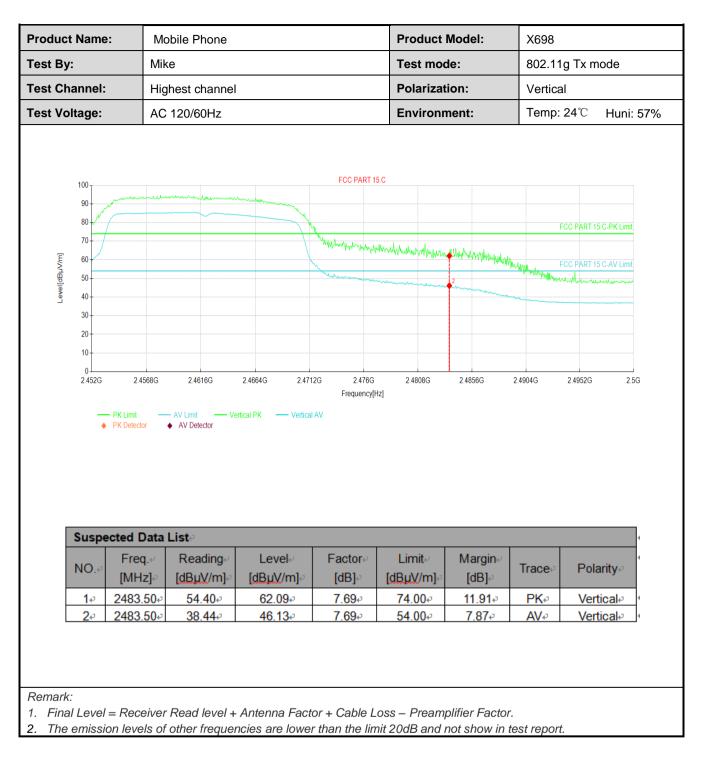
#### 802.11g mode:

							Product	Product Model:		X698		
est By:		М	ike				Test mo	de:	802.11g	g Tx mod	le	
est Cha	innel:	L	west cha	nnel			Polariza	tion:	Vertical			
est Volt	tage:	A	AC 120/60Hz					Environment:		Temp: 24°C Huni:		
Level(dBJJV/m]	100 90 80 70 60 50 40 30					FCC PART 1		with Martin 2	whether the second seco	FCC PART 15 C		
		2.3212G - PK Limit - PK Detector	2.33240 AV Limit AV Detecto	Vertica	I.3436G 2.354 al PK — Vertical	Frequency[H		2.3884G	2.3996G	2.4108G	2.422G	
5	10 0 2.31G	– PK Limit –	— AV Limit	Vertica		Frequency[H		23884G	2.3996G	2.4108G	2.422G	
	10 0 2.31G	- PK Limit PK Detector ected Data	→ AV Limit	r Vertica r	al PK Vertical	Frequency[ł AV Factor.↩	iz] Limit∉	Margin∉	2.3996G	2.4108G	, ,	
	10 0 2.31G	- PK Limit PK Detector ected Data	AV Limit AV Detecto	r r ing∉ /m]↩	al PK — Vertical	Frequency(ł	iz]				rity+3	

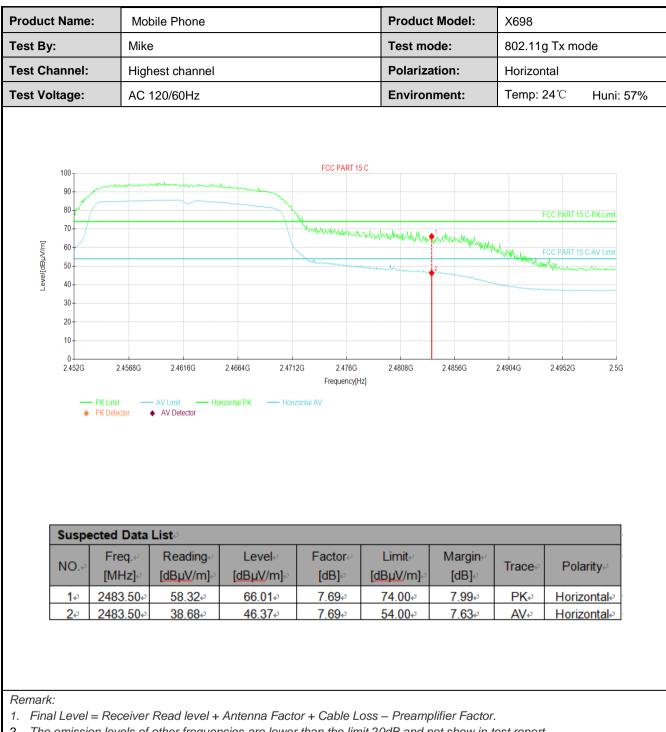










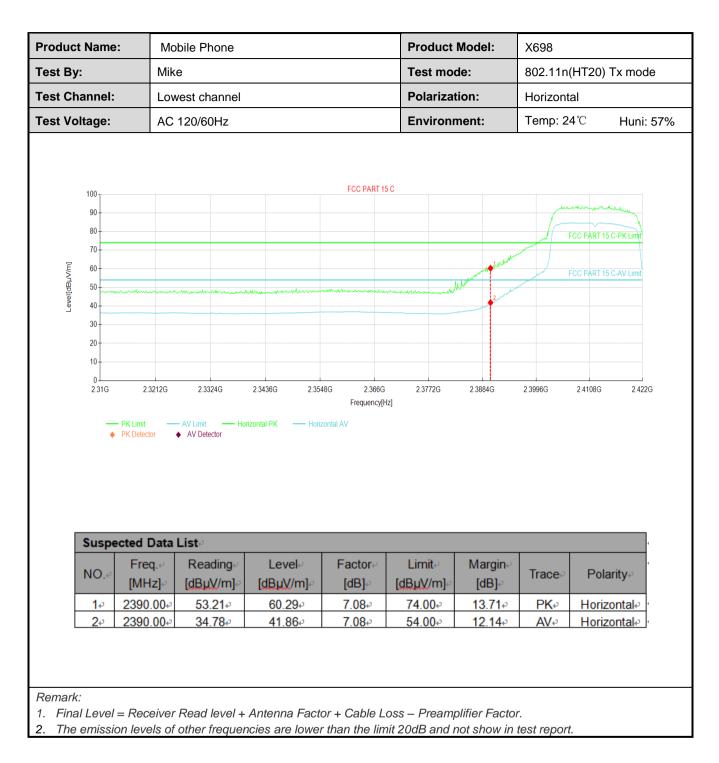




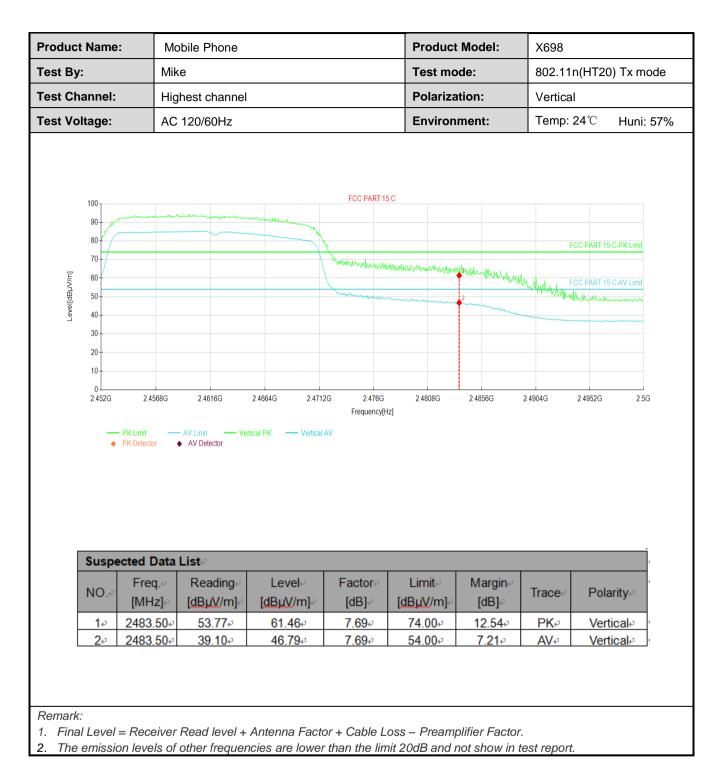


Test By: Test Channel: Test Voltage:	Mike	le Phone			Product M	Nodel:	X698	
					Test mod	e:	802.11n(H	T20) Tx mode
Fest Voltage:	Lowe	st channel			Polarizati	on:	Vertical	
	AC 12	20/60Hz			Environm	ent:	Temp: 24°0	C Huni: 57%
		2.3324G AV Limit Vei	2.3436G 2.354	Frequency[H	2.3772G	2.3884G	FCC	PART 15 C-PK Limit PART 15 C-AV Limit 4108G 2.422G
	ected Data							
Suspe			Level⊌	Factor.	I transition	Margin⊬		
Suspe NO.@	Freq.∉ [MHz]∉	Reading⊮ [dBµV/m]∉	[dBµV/m]∂	[dB]∂	Limit⊭ [dBµV/m]⊮	[dB]∉	Trace	Polarity
	-	_				-	Trace	Polarity₀ Vertical₀ Vertical₀

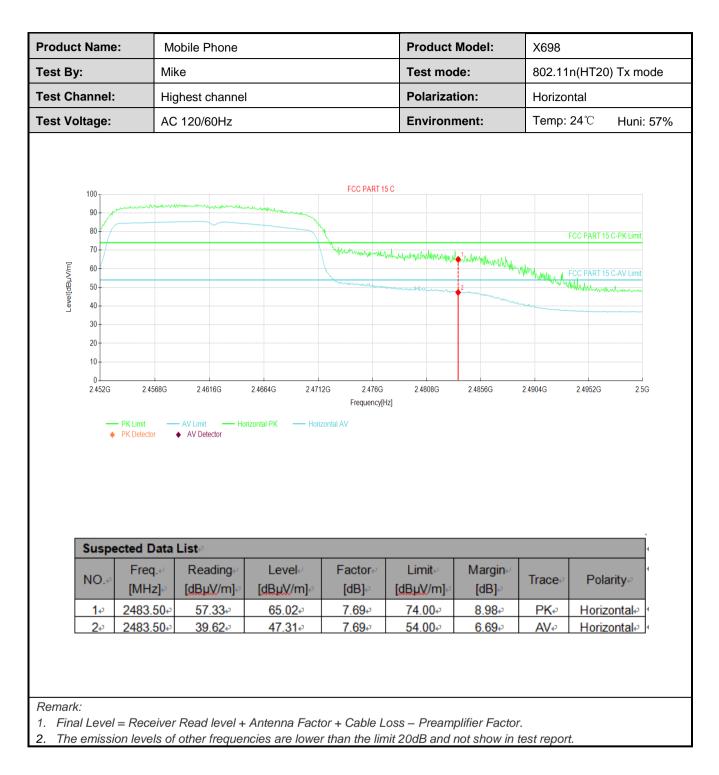










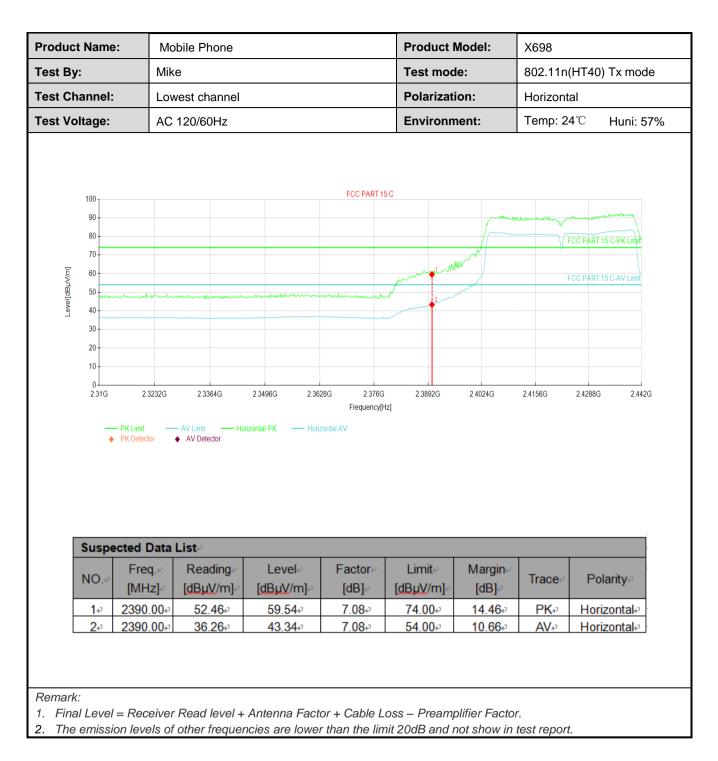




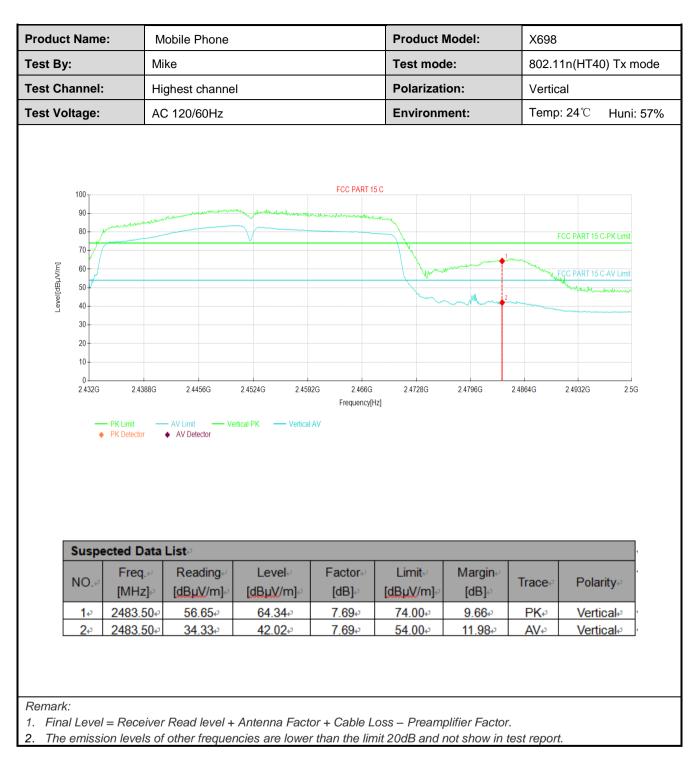
#### 802.11n(HT40):

	Name								FIU	duct	mouol.		<b>&lt;698</b>				
st By:	:	Ν	like							Test	t mo	de:	8	302.11	n(HT4	0) Tx	mode
st Cha	annel:	L	owe	st char	nnel					Pola	ariza	tion:	١	/ertica	ıl		
st Vol	tage:	A	AC 120/60Hz					Env	Environment:			Temp: 24°C Huni: 5		uni: 57			
Level[dBµV/m]	100 90 80 70 60 50 40 30				~~~~			FCC F	PART 15 C	c marine	1 2	M			FCC PART 1		
	20 10 0 2.31G	2.32 – PK Limit PK Detector	_	2.336 AV Limit AV Detec	Ve	2.3496G	2.36, — Vertical	Frequ	2.376G Jency[Hz]	2389	)2G	2.4024G	2.41	56G	2.4288G		2.442G
	20 10 0 2.31G	– PK Limit	•	AV Limit AV Detec	Ve tor	rtical PK	Vertical	Frequ					_	56G	2.4288G		2.442G
	20 10 0 2.31G	<ul> <li>PK Limit</li> <li>PK Detector</li> </ul>	• ata L	AV Limit AV Detec	Ve tor ding⊲	rical PK		Frequ	Jency[Hz]		t	2.4024G Margir [dB]		56G race⊷		arity	4
	20 10 2.31G	- PK Limit PK Detector	ata L ∉ ]₂	AV Limit AV Detec		rical PK Lev [dBµ) 58.	vel⊷	Frequ AV Facto	JF المحالية المحالية المحالية	Limit	t≓ 'm]≓	Margir	н <sup>и</sup> П		Pol	arity tical	

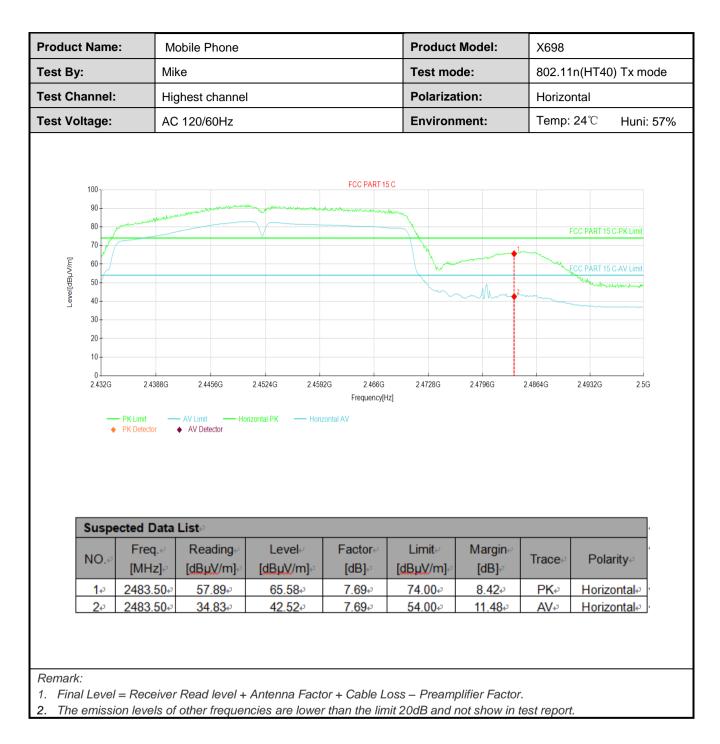












Project No.: JYTSZE2107031



# 6.7 Spurious Emission

## 6.7.1 Conducted Emission Method

Test Requirement:	FCC Part 15 C Section 15.247 (d)
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:	
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Measurement Data:	Refer to Appendix A - 2.4G WIFI



## 6.7.2 Radiated Emission Method

Test Requirement:	FCC Part 15 C Se	ction 15	.209 an	d 15.205			
Test Frequency Range:	9kHz to 25GHz						
Test Distance:	3m or 10m						
		Data	- 1				Damark
Receiver setup:	Frequency	Dete				BW	Remark
	30MHz-1GHz	Quasi-		120KHz		)KHz	Quasi-peak Value
	Above 1GHz	Pea RM		1MHz 1MHz		<u>ИНz</u> ИНz	Peak Value Average Value
Lingity	Frequency	R IV		(dBuV/m @10			Remark
Limit:	30MHz-88MH	17	LIIIII	30.0	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0	uasi-peak Value
	88MHz-216MH			33.5			uasi-peak Value
	216MHz-960M			36.0			uasi-peak Value
	960MHz-1GH			44.0			uasi-peak Value
	Frequency		Limi	t (dBuV/m @3	m)		Remark
	· · ·			54.0	/		Average Value
	Above 1GHz	<u> </u>		74.0			Peak Value
	<ul> <li>(below 1GHz) 360 degrees</li> <li>2. The EUT was away from th the top of a va 3. The antenna ground to det horizontal and measuremen</li> <li>4. For each sus and then the and the rota to maximum rea</li> <li>5. The test-rece Specified Bar</li> <li>6. If the emission limit specified the EUT would</li> </ul>	)or 3 me to detern s set 10 e interfe ariable-h height is ermine t d vertica t. pected e antenna able was ading. iver syst n level o l, then te ld be rep would be	ter cha mine the meters rence-n leight a varied he max l polariz mission was tu s turned em was with Ma f the El sting co orted. ( e re-tes	mber(above e position of t s(below 1GH receiving ant ntenna tower from one me timum value of zations of the timum value of zations of the timum value of zations of the timum value of zations of the set to Peak to peak mould be stopp otherwise the ted one by o	1GHz the hi iz) or enna, r. eter to of the e ante as arr ts fror rees to Dete Mode to Dete and wode to bed ar e emis ne us	z). The ghest r 3 me which o four m field s nna are ranged n 1 me o 360 c ct Fund was 10 nd the ssions ing pea	ters (above 1GHz) was mounted on heters above the trength. Both e set to make the to its worst case ter to 4 meters legrees to find the ction and dB lower than the peak values of that did not have ak, quasi-peak or
Test setup:	Below 1GHz		4m 4m 1m			Ante Searc Anter RF Test Receive	nna

Project No.: JYTSZE2107031



## Report No: JYTSZB-R12-2101317

	Horn Artenna Tower Horn Artenna Tower Horn Artenna Tower Ground Reference Plane Test Receiver
Test Instruments:	Refer to section 5.9 for details
Test mode:	Refer to section 5.3 for details
Test results:	Passed
Remark:	<ol> <li>Pre-scan all kind of the place mode (X-axis, Y-axis, Z-axis), and found the Y-axis is the worst case.</li> <li>9 kHz to 30MHz is lower than the limit 20dB, so only shows the data of above 30MHz in this report.</li> </ol>



#### Measurement Data (worst case):

#### Below 1GHz:

	ime:	Mobile Phone			Produc	ct Model:	X698		
est By:		Mike			Test m	Test mode:		Wi-Fi Tx mode	
est Frequ	t Frequency: 30 MHz ~ 1 GHz				Polariz	Polarization:		Vertical & Horizontal	
st Voltage: AC 120/60Hz Environment: Temp				Temp: 2	24℃ Huni: 57				
				FullSpec	etru m				
	45						FCC PART	15.247 10m	
	40								
l evel in dBuV/	30							***	
l evel ir	20 10				.*\\\\\\				
					19pdt				
	0+								
	0 <del> </del> 30M	50 60	80 100N		200 ncv in Hz	300 400	500	800 1G	
Cr	30M		80 1001		200 ncy in Hz	300 400	500	800 1G	
	30M itical_F	reqs.₀ MaxPeak↓	Limit↓	Freque Margin↓	ncy in Hz Height↓	300 400 Pole	Azimuth↓	<b>Corr.</b> ↓	
	30M itical_F Frequency↓ (MHz)↩	Teqs. MaxPeak↓ (dBルV/m)⊮	Limit↓ (dB ዞ V/m)∂	Freque Margin↓ (dB)⊷	ncy in Hz Height∔ (cm)⊷	Pole	Azimuth↓ (deg)⇔	Corr.↓ (dB/m)-₂	
	30M itical_F Frequency↓ (MHz)⊷ 30.00000	reqs.₀ MaxPeak↓ (dB ⊬ V/m)₀ 0₀ 18.05.₀	Limit↓ (dB μ V/m)↩ 30.00↩	Freque Margin↓ (dB)⊷ 11.95⊷	ncy in Hz Height↓ (cm)₀ 100.0₀	Pole He	Azimuth↓ (deg)∜ 316.0∛	Corr.↓ (dB/m)↩ -17.3↩	
	30M itical_F Frequency↓ (MHz)↩	reqs MaxPeak↓ (dB ⊬ V/m) 0.⊲ 18.05 0.⊲ 18.55	Limit↓ (dB ዞ V/m)∂	Freque Margin↓ (dB)⊷	ncy in Hz Height∔ (cm)⊷	Pole	Azimuth↓ (deg)⇔	Corr.↓ (dB/m)-₂	
	30M itical_F Frequency↓ (MHz)↩ 30.00000 38.73000	TCQS. MaxPeak↓ (dB μ V/m)↔ 0.↓ 18.05↔ 0.↓ 18.55↔ 0.↓ 17.73↔ 0.↓ 18.16↔	Limit↓ (dB ዞ V/m)↔ 30.00↔ 30.00↔	Freque Margin↓ (dB)↩ 11.95↩ 11.45↩	ncy in Hz Height↓ (cm)↩ 100.0↩ 100.0↩	Pol@ H@ V@	Azimuth↓ (deg)↔ 316.0↔ 34.0↔	Corr.↓ (dB/m)↩ -17.3↩ -15.9↩	

Remark:

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

- 2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.
- 3. The Aux Factor is a notch filter switch box loss, this item is not used.



#### Above 1GHz

			802.11b			
			annel: Lowest ch			
	Desilies	De	tector: Peak Valu	Limit Line	Morain	
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	(dBuV/m)	Margin (dB)	Polarizatio
4824.00	59.20	-9.46	49.74	74.00	24.26	Vertical
4824.00	59.89	-9.46	50.43	74.00	23.57	Horizonta
		Dete	ctor: Average Va	llue		
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4824.00	49.75	-9.46	40.29	54.00	13.71	Vertical
4824.00	47.94	-9.46	38.48	54.00	15.52	Horizonta
		Teet ob	annel: Middle ch	oppol		
			tector: Peak Valu			
Fraguanay	Read Level	De		Limit Line	Margin	
Frequency (MHz)	(dBuV)	Factor(dB)	Level (dBuV/m)	(dBuV/m)	Margin (dB)	Polarizatio
4874.00	58.89	-9.11	49.78	74.00	24.22	Vertical
4874.00	60.20	-9.11	51.09	74.00	22.91	Horizonta
	T	Dete	ctor: Average Va	lue	1	
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4874.00	49.63	-9.11	40.52	54.00	13.48	Vertical
4874.00	48.40	-9.11	39.29	54.00	14.71	Horizonta
		Test ch	annel: Highest cl	nannel		
			tector: Peak Valu			
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4924.00	59.01	-8.74	50.27	74.00	23.73	Vertical
4924.00	59.97	-8.74	51.23	74.00	22.77	Horizonta
		Dete	ctor: Average Va	llue		
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4924.00	49.54	-8.74	40.80	54.00	13.20	Vertical
	48.10	-8.74	39.36	54.00	14.64	Horizonta



			802.11g			
			annel: Lowest ch			
	T	De	tector: Peak Valu		<b></b>	
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4824.00	59.20	-9.46	49.74	74.00	24.26	Vertical
4824.00	59.89	-9.46	50.43	74.00	23.57	Horizonta
		Dete	ctor: Average Va	alue		
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4824.00	49.20	-9.46	39.74	54.00	14.26	Vertical
4824.00	47.97	-9.46	38.51	54.00	15.49	Horizonta
		Test ch	annel: Middle ch	annel		
		De	tector: Peak Valu	le		
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4874.00	58.75	-9.11	49.64	74.00	24.36	Vertical
4874.00	59.46	-9.11	50.35	74.00	23.65	Horizonta
		Dete	ctor: Average Va	alue		
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4874.00	49.41	-9.11	40.30	54.00	13.70	Vertical
4874.00	47.93	-9.11	38.82	54.00	15.18	Horizonta
			annel: Highest cl tector: Peak Valu			
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4924.00	59.20	-8.74	50.46	74.00	23.54	Vertical
4924.00	59.57	-8.74	50.83	74.00	23.17	Horizonta
		Dete	ctor: Average Va	alue		
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4924.00	49.20	-8.74	40.46	54.00	13.54	Vertical
4924.00	48.28	-8.74	39.54	54.00	14.46	Horizonta
	Receiver Read level levels of other frequ		er than the limit 20	dB and not show in te	est report	



		Test ch	annel: Lowest ch	nannel		
			tector: Peak Valu			
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4824.00	58.78	-9.46	49.32	74.00	24.68	Vertical
4824.00	59.38	-9.46	49.92	74.00	24.08	Horizonta
		Dete	ctor: Average Va	llue		
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4824.00	49.68	-9.46	40.22	54.00	13.78	Vertical
4824.00	48.24	-9.46	38.78	54.00	15.22	Horizonta
		Test ch	annel: Middle ch	annel		
			tector: Peak Valu			
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4874.00	59.19	-9.11	50.08	74.00	23.92	Vertical
4874.00	58.94	-9.11	49.83	74.00	24.17	Horizonta
	•	Dete	ctor: Average Va	llue		
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4874.00	50.17	-9.11	41.06	54.00	12.94	Vertical
4874.00	48.62	-9.11	39.51	54.00	14.49	Horizonta
			annel: Highest ch tector: Peak Valu			
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4924.00	59.31	-8.74	50.57	74.00	23.43	Vertical
4924.00	58.51	-8.74	49.77	74.00	24.23	Horizonta
	-	Dete	ctor: Average Va	llue		
	Read Level	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
Frequency (MHz)	(dBuV)		( )			
	(dBuV) 50.54	-8.74	41.80	54.00	12.20	Vertical



			802.11n(HT40) annel: Lowest ch	annal		
			tector: Peak Valu			
Fraguanay	Deedlevel	Dei			Morgin	
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4844.00	59.56	-9.32	50.24	74.00	23.76	Vertical
4844.00	58.12	-9.32	48.80	74.00	25.20	Horizonta
		Dete	ctor: Average Va	lue		
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4844.00	50.52	-9.32	41.20	54.00	12.80	Vertical
4844.00	48.59	-9.32	39.27	54.00	14.73	Horizonta
		Test ch	annel: Middle ch	annel		
	1	Det	ector: Peak Valu	е	T	
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4874.00	59.17	-9.11	50.06	74.00	23.94	Vertical
4874.00	58.50	-9.11	49.39	74.00	24.61	Horizonta
		Dete	ctor: Average Va	lue		
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4874.00	50.45	-9.11	41.34	54.00	12.66	Vertical
4874.00	48.54	-9.11	39.43	54.00	14.57	Horizonta
		Test cha	annel: Highest ch	annel		
			ector: Peak Valu			
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4904.00	59.56	-8.90	50.66	74.00	23.34	Vertical
4904.00	58.73	-8.90	49.83	74.00	24.17	Horizonta
		Dete	ctor: Average Va	lue		
Frequency (MHz)	Read Level (dBuV)	Factor(dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Margin (dB)	Polarizatio
4904.00	50.43	-8.90	41.53	54.00	12.47	Vertical
4904.00	48.23	-8.90	39.33	54.00	14.67	Horizonta