

Report No: JYTSZB-R12-2100483

# FCC REPORT

Applicant:	TECNO MOBILE 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.:	BD2p			
Trade mark:	TECNO			
FCC ID:	2ADYY-BD2P			
Applicable standards:	FCC CFR Title 47 Part 15 Subpart C Section 15.247			
Date of sample receipt:	26 Mar., 2021			
Date of Test:	27 Mar., to 13 Apr., 2021			
Date of report issued:	14 Apr., 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	14 Apr., 2021	Original

Tested by:

Mike.OU Test Engineer

Date: 14 Apr., 2021

Winner Thang

Reviewed by:

**Project Engineer** 

Date: 14 Apr., 2021

Project No.: JYTSZE2103077



# 3 Contents

		Page
1	COVER PAGE	1
2	VERSION	
	CONTENTS	
3		-
4	TEST SUMMARY	4
5	GENERAL INFORMATION	5
5	5.1 Client Information	5
5	5.2 GENERAL DESCRIPTION OF E.U.T.	5
5	5.3 TEST ENVIRONMENT AND MODE	6
5	5.4 DESCRIPTION OF SUPPORT UNITS	6
5	5.5 Measurement Uncertainty	
5	5.6 LABORATORY FACILITY	
-	5.7 LABORATORY LOCATION	
5	5.8 TEST INSTRUMENTS LIST	7
6	TEST RESULTS AND MEASUREMENT DATA	8
6	δ.1 ANTENNA REQUIREMENT	8
6	6.2 CONDUCTED EMISSION	9
6	6.3 CONDUCTED OUTPUT POWER	
6	6.4 OCCUPY BANDWIDTH	13
6	6.5 Power Spectral Density	14
6	6.6 BAND EDGE	15
	6.6.1 Conducted Emission Method	15
	6.6.2 Radiated Emission Method	16
6	6.7 Spurious Emission	29
	6.7.1 Conducted Emission Method	29
	6.7.2 Radiated Emission Method	30
7	TEST SETUP PHOTO	
8	EUT CONSTRUCTIONAL DETAILS	



# 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	45.005.8.45.000	Appendix A – 2.4G Wi-Fi	Pass
Radiated Spurious Emission	15.205 & 15.209	See Section 6.7.2	Pass
Remark:	1	•	

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:	TECNO MOBILE LIMITED
Address:	FLAT 39 8/F BLOCK D WAH LOK INDUSTRIAL CENTRE 31-35 SHAN MEI STREET FOTAN NT
Manufacturer:	TECNO MOBILE 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.:	BD2p			
Operation Frequency:	2412MHz~2462MHz: 802.11b/802.11g/802.11n(HT20)			
Channel numbers:	11: 802.11b/802.11g/802.11(HT20)			
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:	Internal Antenna			
Antenna gain:	-0.5dBi			
Power supply:	Rechargeable Li-ion Polymer Battery DC3.85V-4850mAh			
AC adapter:	Model: A8-501000 Input: AC100-240V, 50/60Hz, 200mA Output: DC 5.0V 1.0A			
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	3 2422MHz 6 2437MHz 9 2452MHz							
Note:								
1. Channel 1, 6 & 11 selected for 802.11b/g/n-HT20 as Lowest, Middle and Highest channel.								



## 5.3 Test environment and mode

Operating Environment:	
Temperature:	24.0 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010 mbar
Test mode:	
Transmitting mode	Keep the EUT in continuous 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, the follow list were the worst case.

Mode	Data rate
802.11b	1Mbps
802.11g	6Mbps
802.11n(HT20)	6.5Mbps

## 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)	±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 17025:2005 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@ccis-cb.com, Website: <u>http://www.ccis-cb.com</u>



# 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	06-18-2020	06-17-2021
Horn Antenna	SCHWARZBECK	BBHA9120D	916	03-03-2021	03-02-2022
Horn Antenna	SCHWARZBECK	BBHA9120D	1805	06-18-2020	06-17-2021
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

<b>Conducted Emission:</b>					
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	06-18-2020	06-17-2021
Cable	HP	10503A	N/A	03-03-2021	03-02-2022
EMI Test Software	AUDIX	E3	Version: 6.110919b		

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	, v	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:							
responsible party shall be us antenna that uses a unique so that a broken antenna ca electrical connector is prohib 15.247(b) (4) requirement: (4) The conducted output po antennas with directional ga section, if transmitting anten power from the intentional ra	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 n be replaced by the user, but the use of a standard antenna jack or bited. ower limit specified in paragraph (b) of this section is based on the use of ins that do not exceed 6 dBi. Except as shown in paragraph (c) of this nas of directional gain greater than 6 dBi are used, the conducted output adiator shall be reduced below the stated values in paragraphs (b)(1), ion, as appropriate, by the amount in dB that the directional gain of the						
E.U.T Antenna:							
The Wi-Fi antenna is an Inter antenna is -0.5 dBi.	nal antenna which cannot replace by end-user, the best case gain of the						



# 6.2 Conducted Emission

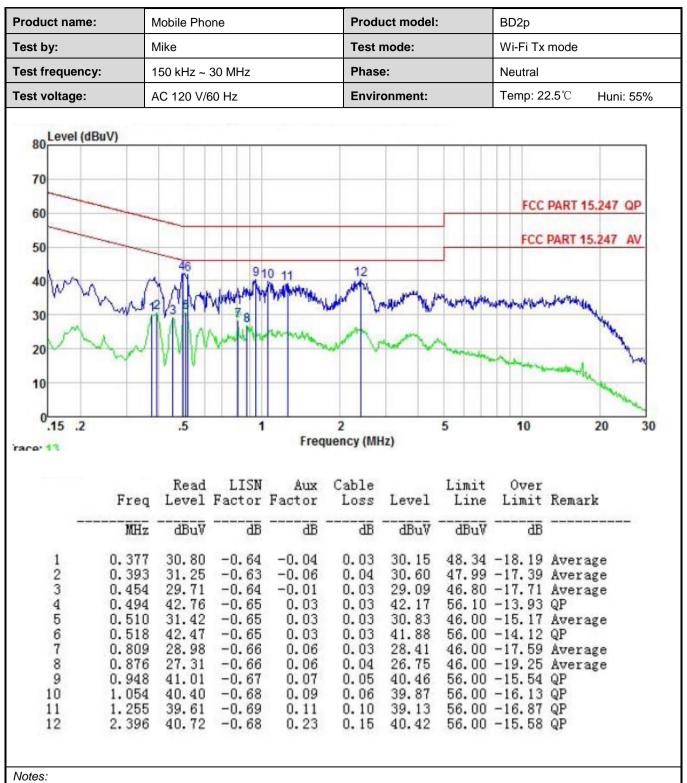
Test Requirement:	FCC Part 15 C Section 15.2	.07	
Test Frequency Range:	150 kHz to 30 MHz		
Class / Severity:	Class B		
Receiver setup:	RBW=9 kHz, VBW=30 kHz		
Limit:	Frequency range (MHz)	Limit (o	dBuV)
		Quasi-peak	Average
	0.15-0.5	66 to 56*	56 to 46*
	0.5-5 5-30	<u> </u>	46
	5-30 * Decreases with the logarit		50
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>	ors are connected to the m ation network (L.I.S.N.), w mpedance for the measur are also connected to the ohm/50uH coupling imper fer to the block diagram of are checked for maximum o find the maximum emissi and all of the interface cal .10(latest version) on cond	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:		.t	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:**

Product name:	Mobile	Phone		Pro	oduct mod	lel:	BD2p				
Test by:	Mike			Te	Test mode:			Wi-Fi Tx mode			
Test frequency:	150 kH	z ~ 30 MHz		Ph	Phase:			Line			
Test voltage:	AC 120 V/60 Hz		En	vironment	t:	Temp	: <b>22.5</b> ℃	Huni: 55%			
80 Level (dBuV) 70 60 50 40 30 20 10	1 2 V3 1				Muniman Lunn		F	CC PART 15			
0.15 .2	.5		1 Fr Aux	2 equency ( Cable	(MHz)	5 Limit	10	0	20 3		
Fre	Read				Lamal		Over	Percel			
Fre	q Level	LISN Factor I dB		Loss	Level dBuV	Line		Remark			





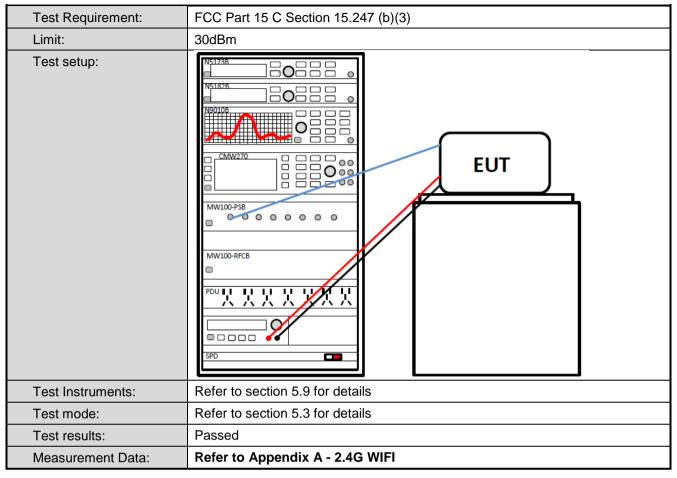
1. An initial pre-scan was performed on the line and neutral lines with peak detector.

2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.

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

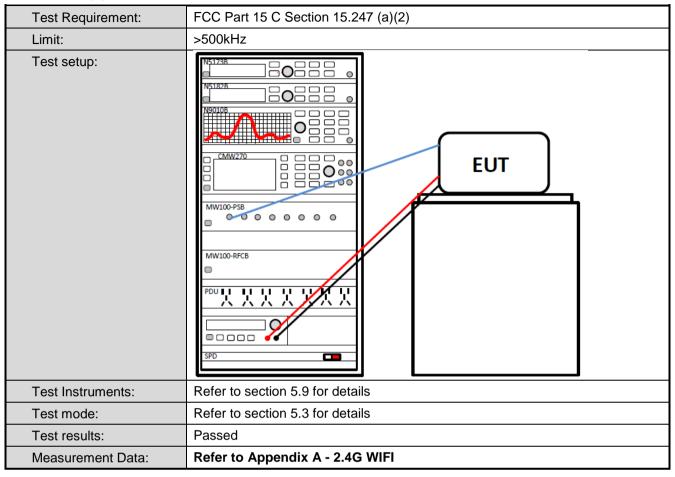


## 6.3 Conducted Output Power



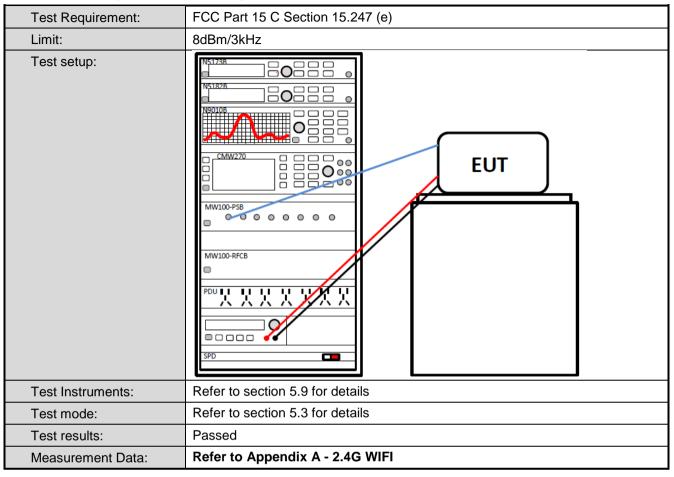


## 6.4 Occupy Bandwidth





## 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

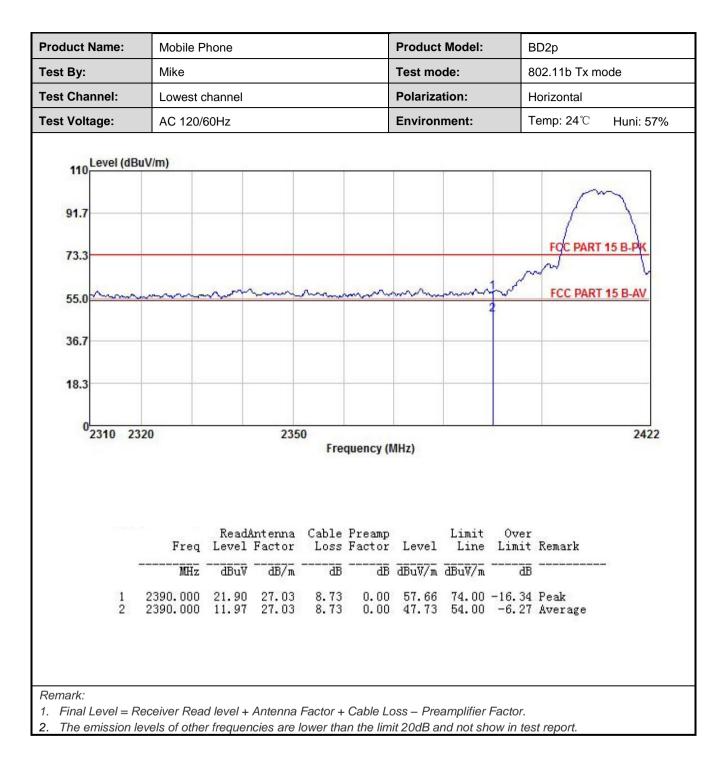
Test Requirement:	FCC Part 15 C Se	ection 15.209	and 15.205				
Test Frequency Range:	2310 MHz to 2390	) MHz and 24	83.5 MHz to 2	500 MHz			
Test Distance:	3m						
Receiver setup:	Frequency	Detector	RBW	VBW	Remark		
	Above 1GHz	Peak	1MHz	3MHz	Peak Value		
	RMS         1MHz         3MHz         Average Value           Frequency         Limit (dBuV/m @3m)         Remark						
Limit:							
	Above 1GHz 74.00 Peak Value						
Test Procedure:	<ul> <li>the ground at determine the</li> <li>2. The EUT was antenna, whit tower.</li> <li>3. The antenna ground to det horizontal an measuremen</li> <li>4. For each sus and then the and the rota to maximum rea</li> <li>5. The test-rece Specified Bat</li> <li>6. If the emission limit specified the EUT wou 10dB margin</li> </ul>	t a 3 meter ca e position of t s set 3 meters ch was moun height is vari- termine the m d vertical pola t. pected emiss antenna was table was turr ading. viver system v ndwidth with I on level of the d, then testing Id be reported would be re-	imber. The tak he highest radi s away from the ted on the top ed from one m aximum value arizations of the ion, the EUT w tuned to heigh ned from 0 deg was set to Peal Maximum Hold EUT in peak r could be stop d. Otherwise th	ble was rotati iation. e interferenc of a variable eter to four r of the field s e antenna ar vas arranged its from 1 me rees to 360 of k Detect Fun I Mode. node was 10 ped and the ne emissions one using pe	-height antenna neters above the strength. Both e set to make the l to its worst case eter to 4 meters degrees to find the ction and dB lower than the peak values of that did not have ak, quasi-peak or		
Test setup:	150cm	AE EUT (Turntable)	Horn	Antenna To	wer		
Test Instruments:	Refer to section 5	.9 for details					
Test mode:	Refer to section 5	.3 for details					
Test results:	Passed						



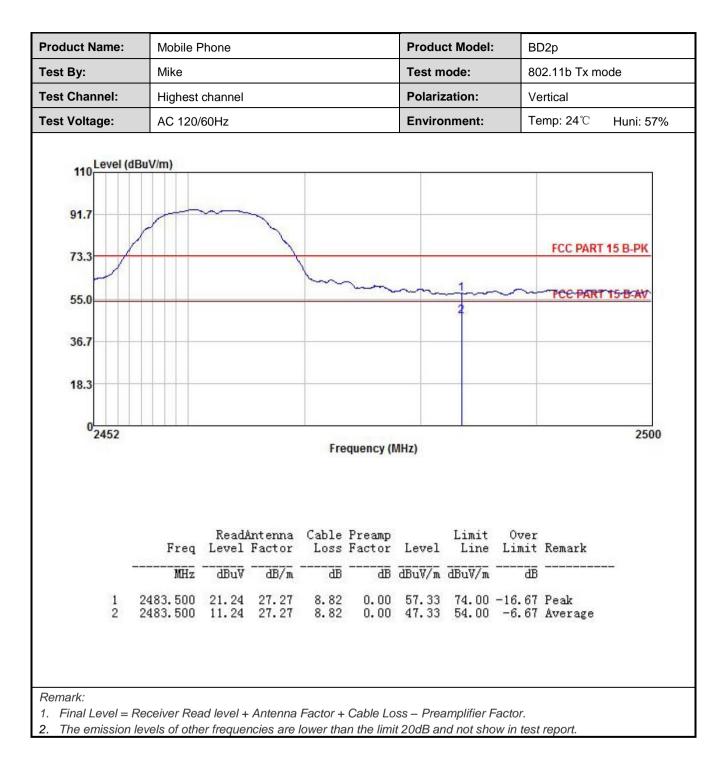
#### 802.11b mode:

	Mobile Phone         Product Model:         BD2p				Produ	ct Model	: в	D2p	2р	
Test By:	Mike				Test mode:			802.11b Tx mode		
Fest Channel:	Lowest cha	annel			Polaria	arization: Vertical				
Fest Voltage:	AC 120/60	AC 120/60Hz Environment: Temp: 24°C			emp: 24℃	Huni: 57%				
110 Level (d 91.7 73.3 55.0 36.7 18.3	BuV/m)	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	un m	-	2	FCC PART	L	
			50							
<sup>0</sup> 2310	2320	23		quency (N	MHz)				2422	
02310		23 ReadAntenna Level Factor	Fre	Preamp		Limit Line	Over Limit	Remark	2422	
<sup>0</sup> 2310		ReadAntenna Level Factor	Fre	Preamp Factor	Level	Line	Limit	Remark		

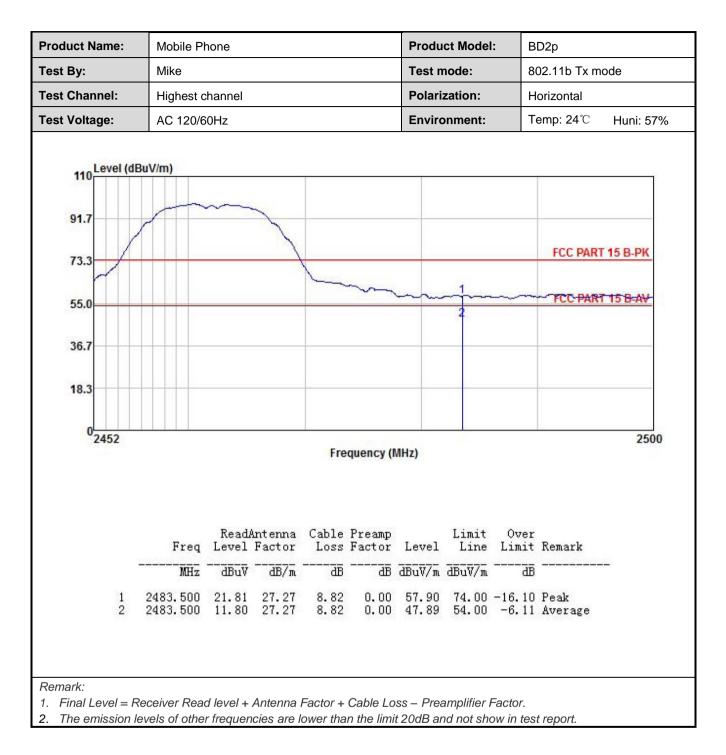










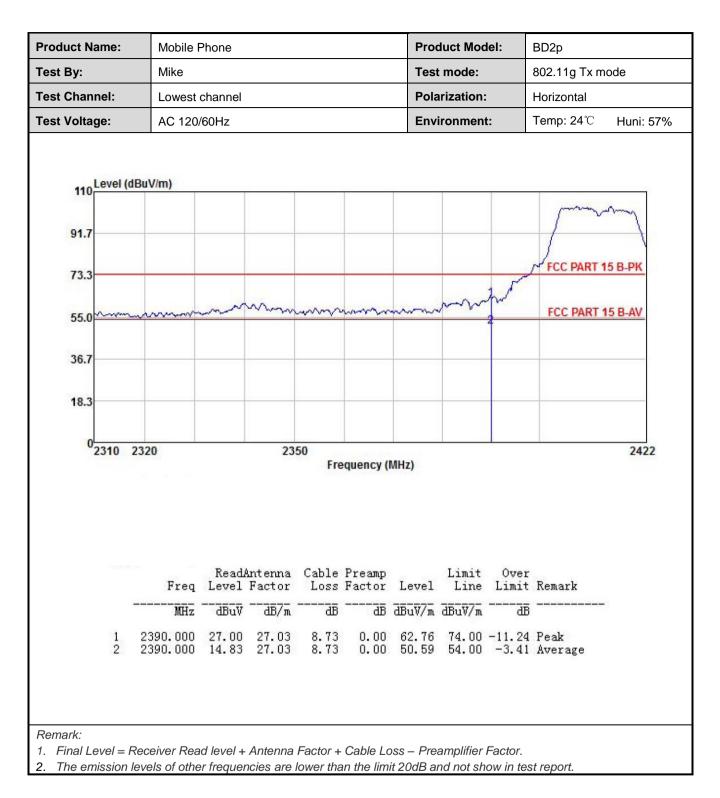




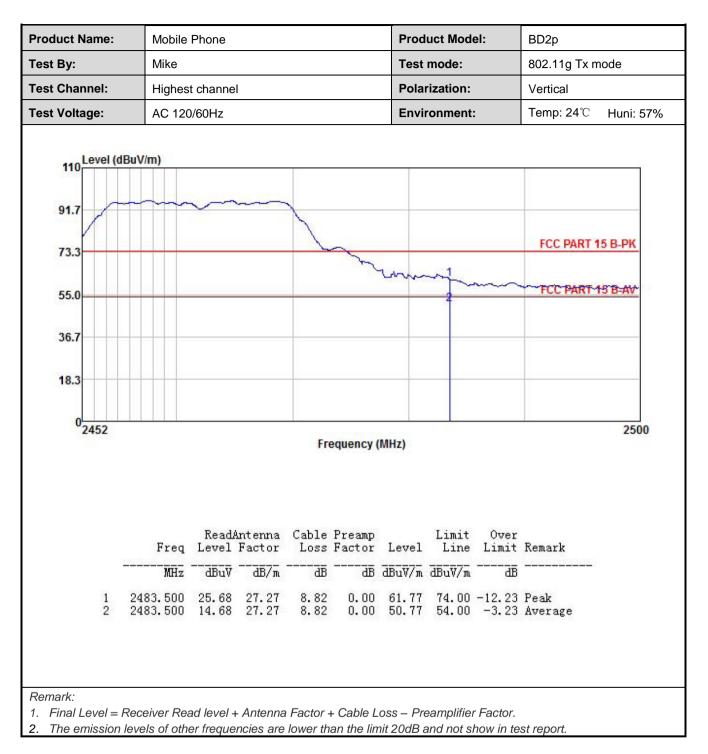
#### 802.11g mode:

	ne:	Mobile I	Phone				Prod	uct Mode	el: E	3D2p	
Fest By:		Mike					Test	mode:	8	802.11g Tx mode	
est Channe	el:	Lowest	owest channel Polarization: Vertical				/ertical				
Fest Voltage	):	AC 120	AC 120/60Hz Environment: Temp:				<b>Гетр: 24</b> ℃	Huni: 57%			
		BuV/m)		~~~~~~						FCC PART 1	<u>5 B-PK</u>
0 <sub>23</sub>	10 2	2320		23		quency (l	MHz)				2422
023	10 2		Read& Level	ntenna	Fre Cable	Preamp	MHz) Level	Limit Line	Over Limit	Remark	2422
023	10 2		Level	ntenna	Fre Cable Loss	Preamp Factor	Level	Limit Line dBuV/m	Limit	Remark	2422

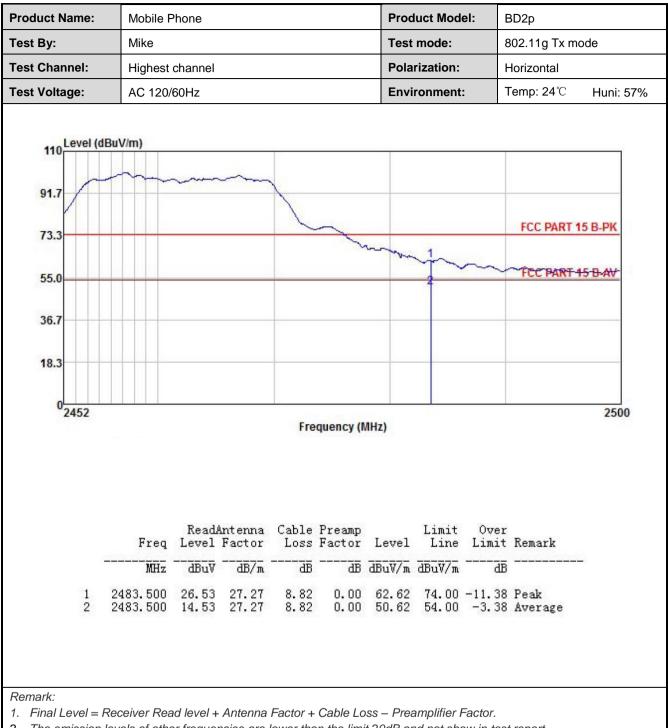












2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.

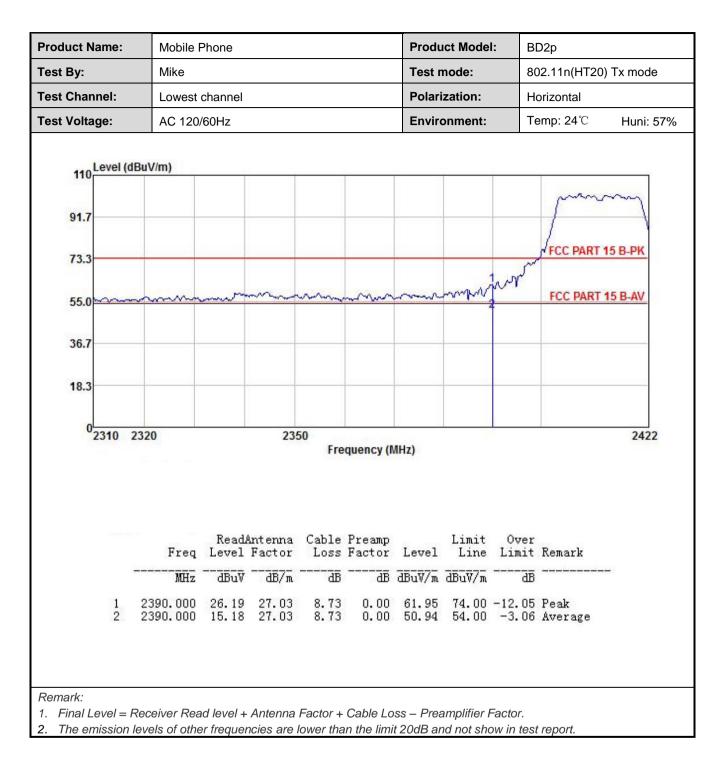


#### 802.11n(HT20):

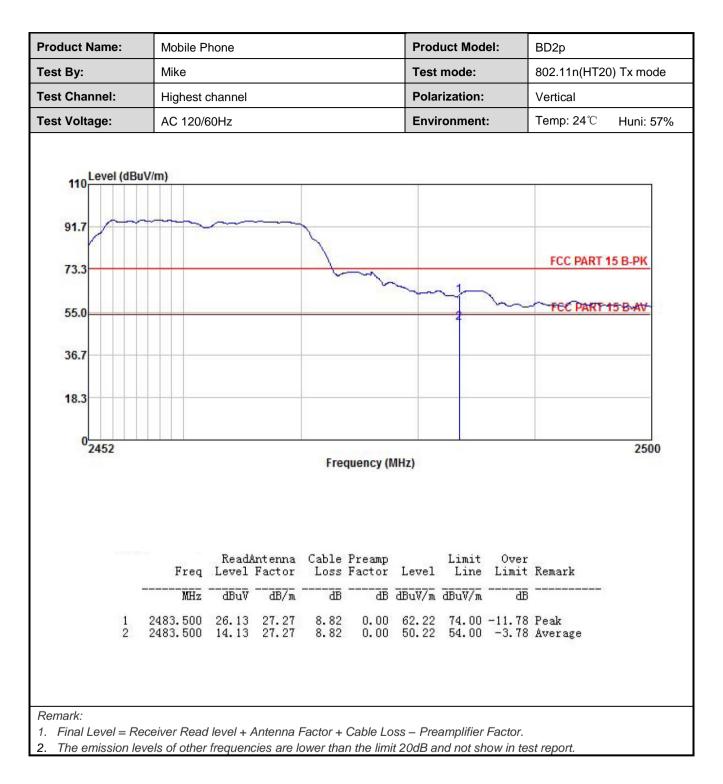
	Mobile Ph	Mobile Phone			Produ	ct Mode	l: E	BD2p		
est By:	Mike				Test n	node:	ε	802.11n(HT20) Tx mode		
Fest Channel:	Lowest ch	Lowest channel AC 120/60Hz			Polarization:			Vertical		
Fest Voltage:	AC 120/60				Enviro	onment:	Г	Temp: 24℃ Huni: 57%		
110 Level (d	BuV/m)									
91.7								Jum	m	
73.3							Inan	FCC PART	15 B-PK	
55.0	manton	mon	mm		m	m	<u> </u>	FCC PART	15 B-AV	
36.7										
18.3										
0 2310	2320	235		quency (I	MHz)				2422	
	Freq	ReadAntenna Level Factor	Loss	Factor	Level		Limit	Remark		
	Freq MHz	ReadAntenna Level Factor 	Loss	Preamp Factor 	Level	Line	Limit	Remark	-	
1 2		Level Factor	Loss dB 8.73	Factor dB 0.00	Level dBuV/m 59.92	Line dBuV/m 74.00	Limit dB -14.08	Remark  Peak	-	

Project No.: JYTSZE2103077

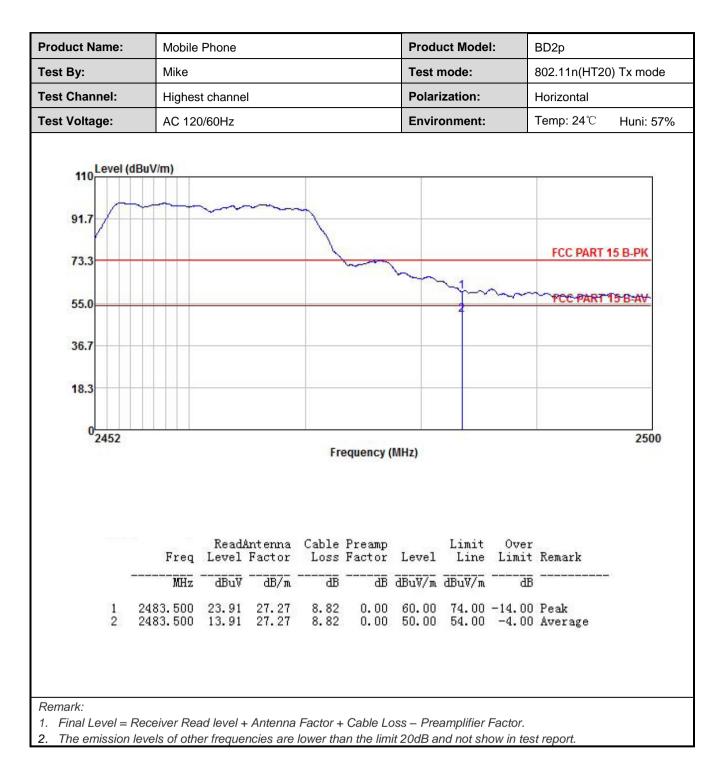














# 6.7 Spurious Emission

## 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	ection 15.	.209 ar	nd 15.205			
Test Frequency Range:	9kHz to 25GHz						
Test Distance:	3m						
Receiver setup:	Frequency	Deteo	ctor	RBW	V	BW	Remark
	30MHz-1GHz	Quasi-	peak	120KHz			Quasi-peak Value
	Above 1GHz			1MHz		3MHz Peak Valu	
		RM		1MHz		ЛНz	Average Value
Limit:	FrequencyLimit (dBuV/m @3m)Remark30MHz-88MHz40.0Quasi-peak Value						Remark
	300H12-880H240.0Quasi-peak Valu880H12-216MHz43.5Quasi-peak Valu216MH2-960MHz46.0Quasi-peak Valu						
	960MHz-1GH			54.0			uasi-peak Value
				54.0			Average Value
	Above 1GHz			74.0			Peak Value
	<ol> <li>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.</li> <li>The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.</li> <li>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.</li> <li>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.</li> <li>The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.</li> <li>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, quasi-peak or</li> </ol>						
Test setup:	Below 1GHz		4m 4m			5	

Project No.: JYTSZE2103077



## Report No: JYTSZB-R12-2100483

	Horn Antenna Tower Horn Antenna 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>

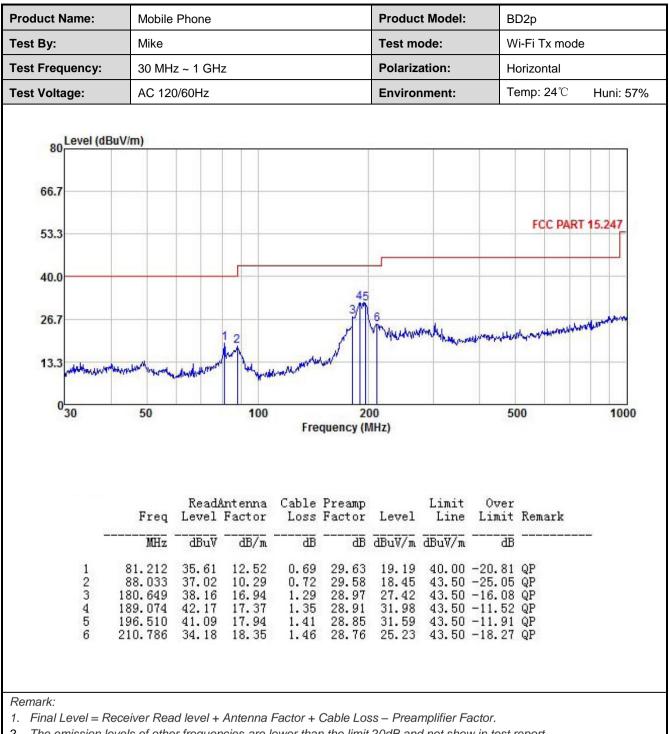


#### Measurement Data (worst case):

Below 1GHz:

roduct Name: Mobile Phone						Produ	ct Model	: В	BD2p		
Test By: Mike					Test n	node:	٧	Wi-Fi Tx mode			
est Frequency:	30 MH	30 MHz ~ 1 GHz					Polarization:		Vertical		
Fest Voltage:	AC 12	120/60Hz				Enviro	Environment:		<b>emp: 24°</b> C	Huni: 57%	
80 Level (d 66.7 53.3 40.0 26.7 13.3 0 30			3		45 MM 2 equency (I	00	Margin selection		FCC PAR		
50											
30	Freq				Preamp Factor		Limit Line	Over Limit	Remark		
	Freq MHz				Factor	Level		Limit	Remark		





2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.



#### Above 1GHz

				8	02.11b				
			Τe		I: Lowest c	hannel			
Detector: Peak Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	53.21	30.81	6.81	2.46	41.82	51.47	74.00	-22.53	Vertical
4824.00	51.26	30.81	6.81	2.46	41.82	49.52	74.00	-24.48	Horizontal
Detector: Average Value									
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4824.00	46.55	30.81	6.81	2.46	41.82	44.81	54.00	-9.19	Vertical
4824.00	45.81	30.81	6.81	2.46	41.82	44.07	54.00	-9.93	Horizontal
			Te		I: Middle cl				
					: Peak Val	ue			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	53.01	30.93	6.85	2.47	41.84	51.42	74.00	-22.58	Vertical
4874.00	51.35	30.93	6.85	2.47	41.84	49.76	74.00	-24.24	Horizontal
				Detector:	Average Va	alue			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4874.00	46.28	30.93	6.85	2.47	41.84	44.69	54.00	-9.31	Vertical
4874.00	45.63	30.93	6.85	2.47	41.84	44.04	54.00	-9.96	Horizontal
			Te	st channel	l: Highest c	hannel			
				Detector	: Peak Val	ue			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	54.32	31.05	6.89	2.48	41.86	52.88	74.00	-21.12	Vertical
4924.00	53.26	31.05	6.89	2.48	41.86	51.82	74.00	-22.18	Horizontal
				1	Average Va	alue			
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization
4924.00	47.28	31.05	6.89	2.48	41.86	45.84	54.00	-8.16	Vertical
4924.00	46.25	31.05	6.89	2.48	41.86	44.81	54.00	-9.19	Horizontal
						– Preamplifie OdB and not s		eport.	



902.11a										
802.11g Test channel: Lowest channel										
Detector: Peak Value										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
4824.00	52.14	30.81	6.81	2.46	41.82	50.40	74.00	-23.60	Vertical	
4824.00	53.18	30.81	6.81	2.46	41.82	51.44	74.00	-22.56	Horizontal	
Detector: Average Value										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
4824.00	46.36	30.81	6.81	2.46	41.82	44.62	54.00	-9.38	Vertical	
4824.00	45.28	30.81	6.81	2.46	41.82	43.54	54.00	-10.46	Horizontal	
			1 €		I: Middle cl					
	Deed	Antonno	Oabla		: Peak Val	ue	1 1	0		
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
4874.00	53.18	30.93	6.85	2.47	41.84	51.59	74.00	-22.41	Vertical	
4874.00	54.36	30.93	6.85	2.47	41.84	52.77	74.00	-21.23	Horizontal	
				Detector:	Average Va	alue				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
4874.00	45.28	30.93	6.85	2.47	41.84	43.69	54.00	-10.31	Vertical	
4874.00	46.92	30.93	6.85	2.47	41.84	45.33	54.00	-8.67	Horizontal	
			Те	est channel	: Highest c	hannel				
					: Peak Val					
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
4924.00	54.03	31.05	6.89	2.48	41.86	52.59	74.00	-21.41	Vertical	
4924.00	53.12	31.05	6.89	2.48	41.86	51.68	74.00	-22.32	Horizontal	
				Detector:	Average Va	alue				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
4924.00	45.69	31.05	6.89	2.48	41.86	44.25	54.00	-9.75	Vertical	
4924.00	45.89	31.05	6.89	2.48	41.86	44.45	54.00	-9.55	Horizontal	
Remark: 1. Final Lev										

2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.

JianYan Testing Group Shenzhen Co., Ltd. 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. Telephone: +86 (0) 755 23118282 Fax: +86 (0) 755 23116366



802.11n(HT20)										
Test channel: Lowest channel										
Detector: Peak Value										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
4824.00	54.25	30.81	6.81	2.46	41.82	52.51	74.00	-21.49	Vertical	
4824.00	53.29	30.81	6.81	2.46	41.82	51.55	74.00	-22.46	Horizontal	
Detector: Average Value										
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
4824.00	46.32	30.81	6.81	2.46	41.82	44.58	54.00	-9.42	Vertical	
4824.00	45.82	30.81	6.81	2.46	41.82	44.08	54.00	-9.92	Horizontal	
	Test channel: Middle channel									
				Detector	r: Peak Val	ue				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
4874.00	52.82	30.93	6.85	2.47	41.84	51.23	74.00	-22.77	Vertical	
4874.00	53.96	30.93	6.85	2.47	41.84	52.37	74.00	-21.63	Horizontal	
				Detector:	Average V	alue				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
4874.00	45.29	30.93	6.85	2.47	41.84	43.70	54.00	-10.30	Vertical	
4874.00	46.28	30.93	6.85	2.47	41.84	44.69	54.00	-9.31	Horizontal	
			Те	est channel	l: Highest c	hannel				
				Detector	r: Peak Val	ue				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
4924.00	52.88	31.05	6.89	2.48	41.86	51.44	74.00	-22.56	Vertical	
4924.00	53.93	31.05	6.89	2.48	41.86	52.49	74.00	-21.51	Horizontal	
				Detector:	Average V	alue				
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization	
4924.00	45.28	31.05	6.89	2.48	41.86	43.84	54.00	-10.16	Vertical	
4924.00	46.83	31.05	6.89	2.48	41.86	45.39	54.00	-8.61	Horizontal	
						– Preamplifie	er Factor.			

2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.



802.11n(HT40)											
Test channel: Lowest channel											
Detector: Peak Value											
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization		
4844.00	47.41	30.87	6.83	2.46	41.83	45.74	74.00	-28.26	Vertical		
4844.00	47.62	30.87	6.83	2.46	41.83	45.95	74.00	-28.05	Horizontal		
Detector: Average Value											
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization		
4844.00	39.58	30.87	6.83	2.46	41.83	37.91	54.00	-16.09	Vertical		
4844.00	40.13	30.87	6.83	2.46	41.83	38.46	54.00	-15.54	Horizontal		
			16		I: Middle cl						
		-		1	: Peak Val	ue					
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization		
4874.00	47.80	30.93	6.85	2.47	41.84	46.21	74.00	-27.79	Vertical		
4874.00	47.20	30.93	6.85	2.47	41.84	45.61	74.00	-28.39	Horizontal		
				Detector:	Average Va	alue					
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization		
4874.00	39.08	30.93	6.85	2.47	41.84	37.49	54.00	-16.51	Vertical		
4874.00	40.45	30.93	6.85	2.47	41.84	38.86	54.00	-15.14	Horizontal		
			Te	st channel	l: Highest c	hannel					
				Detector	: Peak Val	ue					
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization		
4904.00	48.28	30.99	6.87	2.48	41.85	46.77	74.00	-27.23	Vertical		
4904.00	47.04	30.99	6.87	2.48	41.85	45.53	74.00	-28.47	Horizontal		
				Detector:	Average V	alue					
Frequency (MHz)	Read Level (dBuV)	Antenna Factor (dB/m)	Cable Loss (dB)	Aux Factor (dB)	Preamp Factor (dB)	Level (dBuV/m)	Limit Line (dBuV/m)	Over Limit (dB)	Polarization		
4904.00	38.59	30.99	6.87	2.48	41.85	37.08	54.00	-16.92	Vertical		
4904.00	40.33	30.99	6.87	2.48	41.85	38.82	54.00	-15.18	Horizontal		
<ul> <li>Remark:</li> <li>1. Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor.</li> <li>2. The emission levels of other frequencies are lower than the limit 20dB and not show in test report.</li> </ul>											

Project No.: JYTSZE2103077