

Shenzhen Zhongjian Nanfang Testing Co., Ltd.

Report No: CCIS14110098704

FCC REPORT

Applicant: Cellacom Incorporation

Address of Applicant: 20955 pathfinder road, suite 200 Diamond Bar, CA 91765

Equipment Under Test (EUT)

Product Name: Mobile Phone

Model No.: JM 10

Trade mark: Cellacom

FCC ID: 2AC343396993JM10

Applicable standards: FCC CFR Title 47 Part 15 Subpart B

Date of sample receipt: 25 Nov., 2014

Date of Test: 25 Nov., to 09 Dec., 2014

Date of report issued: 10 Dec., 2014

Test Result: Pass *

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





2 Version

Version No.	Date	Description
00	10 Dec., 2014	Original

Prepared by: Date: 10 Dec., 2014

Report Clerk

Reviewed by: Date: 10 Dec., 2014

Project Engineer





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4 Test Summary

Test Item	Section in CFR 47	Result
Conducted Emission	Part15.107	Pass
Radiated Emission	Part15.109	Pass

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



5 General Information

5.1 Client Information

Applicant:	Cellacom Incorporation
Address of Applicant:	20955 pathfinder road, suite 200 Diamond Bar, CA 91765
Manufacturer:	Shenzhen Joinhold Communication Technology Ltd
Address of Manufacturer:	3F, Unit 3, Bldg. D2, TCL International E City, 1001 Zhongshanyuan Park Rd., Nanshan, Shenzhen, China

5.2 General Description of E.U.T.

Product Name:	Mobile Phone
Model No.:	JM 10
Power supply:	Rechargeable Li-ion Battery DC3.7V-1300mAh
AC adapter:	Input:100-240V AC,50/60Hz 0.15A
	Output: DC 5.0V, 750mA

5.3 Test Mode

Operating mode	Detail description
PC mode	Keep the EUT in Downloading mode(Worst case)

The sample was placed 0.8m 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.



5.4 Description of Support Units

Manufacturer	Description	Model Serial Numbe		FCC ID/DoC
DELL	PC	OPTIPLEX745	N/A	DoC
DELL	MONITOR	E178FPC	N/A	DoC
DELL	KEYBOARD	SK-8115	N/A	DoC
DELL	MOUSE	MOC5UO	N/A	DoC
HP	Printer	CB495A	05257893	DoC
MERCURY	Wireless router	MW150R	12922104015	FCC ID

5.5 Laboratory Facility

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

● FCC - Registration No.: 817957

Shenzhen Zhongjian Nanfang Testing Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in out files. Registration 817957, February 27, 2012.

● 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.

5.6 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: 0755-23118282 Fax: 0755-23116366

Telephone: +86 (0) 755 2311 8282 Fax: +86 (0) 755 2311 6366



5.7 Test Instruments list

Radia	Radiated Emission:							
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal. Date (mm-dd-yy)	Cal. Due date (mm-dd-yy)		
1	3m Semi- Anechoic Chamber	SAEMC	9(L)*6(W)* 6(H)	CCIS0001	08-23-2014	08-22-2017		
2	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	CCIS0005	04-19-2014	04-19-2015		
3	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA9120D	CCIS0006	04-19-2014	04-19-2015		
4	EMI Test Software	AUDIX	E3	N/A	N/A	N/A		
5	Amplifier (10kHz-1.3GHz)	· I HP I		CCIS0003	04-01-2014	03-31-2015		
6	Amplifier (1GHz-18GHz)	Compliance Direction Systems Inc.	PAP-1G18	CCIS0011	06-09-2014	06-08-2015		
7	Pre-amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	04-01-2014	03-31-2015		
8	Horn Antenna	ETS-LINDGREN	3160	GTS217	03-31-2014	03-29-2015		
9	Printer	HP	HP LaserJet P1007	N/A	N/A	N/A		
10	Positioning Controller	UC	UC3000	CCIS0015	N/A	N/A		
11	Spectrum analyzer 9k-30GHz	Rohde & Schwarz	FSP 30	CCIS0023	04-19-2014	04-19-2015		
12	EMI Test Receiver	Rohde & Schwarz	ESRP7	CCIS0167	09-02-2014	09-01-2015		
13	Loop antenna	Laplace instrument	RF300	EMC0701	04-01-2014	03-31-2015		
14	Universal radio communication tester	Rhode & Schwarz CMU200		CCIS0069	05-29-2014	05-28-2015		
15	Signal Analyzer	Rohde & Schwarz	FSIQ3	CCIS0088	04-19-2014	04-19-2015		

Cond	Conducted Emission:							
Item Test Equipment	Manufacturar	Model No.	Inventory	Cal.Date	Cal. Due date			
	Manufacturer	wodel No.	No.	(mm-dd-yy)	(mm-dd-yy)			
1	EMI Test Receiver	Rohde & Schwarz	ESCI	CCIS0002	01-10-2014	04-09-2015		
2	LISN	CHASE	MN2050D	CCIS0074	01-10-2014	04-09-2015		
3	Coaxial Cable	CCIS	N/A	CCIS0086	04-01-2014	03-31-2015		
4	EMI Test Software	AUDIX	E3	N/A	N/A	N/A		



6 Test results and Measurement Data

6.1 Conducted Emission

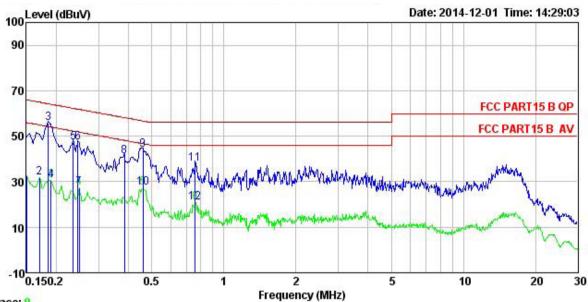
Test Requirement:	FCC Part15 B Section 15.107	,					
Test Method:	ANSI C63.4:2003						
Test Frequency Range:	150kHz to 30MHz						
Class / Severity:	Class B						
Receiver setup:	RBW=9kHz, VBW=30kHz						
Limit:			imit (dBµV)				
	Frequency range (MHz)	Quasi-peak	Average				
	0.15-0.5	66 to 56*	56 to 46*				
	0.5-5	56	46				
	0.5-30	60	50				
Test setup:	Reference Plane LISN 40cm 80cm Filter AC power Equipment Test table/Insulation plane Remark E.U.T. Equipment Under Test LISN Line Impedence Stabilization Network Test table height=0.8m						
Test procedure	 The E.U.T and simulators a impedance stabilization ne coupling impedance for the The peripheral devices are that provides a 50ohm/50u (Please refers to the block Both sides of A.C. line are order to find the maximum of the interface cables mus conducted measurement. 	etwork(L.I.S.N.). The pro- e measuring equipment e also connected to the H coupling impedance diagram of the test set e checked for maximum emission, the relative p	ovide a 50ohm/50uH . main power through a LISN with 50ohm termination. up and photographs). conducted interference. In positions of equipment and all				
Test environment:	Temp.: 23 °C Hu	umid.: 56%	Press.: 1 01kPa				
Measurement Record:		•	Uncertainty: 3.28dB				
Test Instruments:	Refer to section 5.7 for details	 S	<u> </u>				
Test mode:	Refer to section 5.3 for details	 S					
Test results:	Passed						





Measurement data:

Line:



Trace: 9

: CCIS Shielding Room : FCC PART15 B QP LISN LINE Site Condition

: Mobile Phone

Model : JM 10

Test Mode : PC mode

Power Rating : AC120V/60Hz

Environment : Temp: 23 °C Huni:56% Atmos:101KPa

Test Engineer: Carey

Remark : Job. no : 987RF

Kemark		R286 50	5353500	20020		12500 - \$160	133		
	Freq	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	
-	MHz	—dBu⊽	<u>d</u> B		dBu₹	<u>d</u> Bu₹	āB		
1	0.150	21.74	0.27	10.78	32.79	56.00	-23.21	Average	
1 2 3 4 5 6 7 8	0.170	20.75	0.27	10.77	31.79	54.94	-23.15	Average	
3	0.185	44.57	0.28	10.77	55.62	64.24	-8.62	QP	
4	0.190	19.59	0.28	10.76	30.63	54.02	-23.39	Average	
5	0.235	36.38	0.27	10.75	47.40	62.26	-14.86	QP	
6	0.246	36.05	0.27	10.75	47.07	61.91	-14.84	QP	
7	0.249	16.20	0.27	10.75	27.22	51.78	-24.56	Average	
8	0.385	30.27	0.28	10.72	41.27	58.17	-16.90	QP	
9	0.459	32.92	0.29	10.75	43.96	56.71	-12.75	QP	
10	0.459	16.34	0.29	10.75	27.38	46.71	-19.33	Average	
11	0.759	27.02	0.23	10.80	38.05	56.00	-17.95	QP	
12	0.759	9.83	0.23	10.80	20.86	46.00	-25.14	Average	

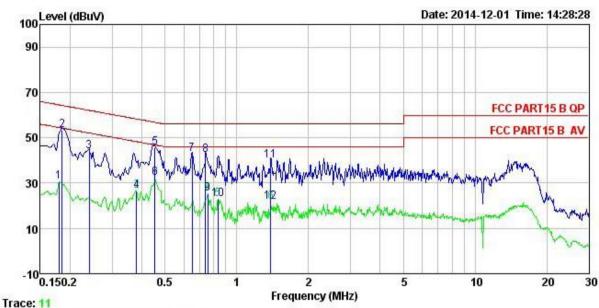
Shenzhen, China 518102

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Neutral:



Site

: CCIS Shielding Room : FCC PART15 B QP LISN NEUTRAL : 987RF Condition

Job. no EUT : Mobile Phone

Model : JM 10

Test Mode : PC mode

Power Rating : AC120V/60Hz

Environment : Temp: 23 °C Huni:56% Atmos:101KPa

Test Engineer: Carey Remark

emark	Frea	Read Level	LISN Factor	Cable Loss	Level	Limit Line	Over Limit	Remark	
(),	MHz	dBu∀	<u>dB</u>		dBu₹	dBu∜	dB		
1	0.180	19.60	0.25	10.77	30.62	54.50	-23.88	Average	
2	0.185	42.41	0.25	10.77	53.43	64.24	-10.81	QP	
3	0.240	33.18	0.25	10.75	44.18	62.08	-17.90	QP	
4	0.379	15.47	0.25	10.72	26.44	48.30	-21.86	Average	
4 5 6 7 8 9	0.454	34.60	0.27	10.74	45.61	56.80	-11.19	QP	
6	0.454	21.14	0.27	10.74	32.15	46.80	-14.65	Average	
7	0.651	31.63	0.20	10.77	42.60	56.00	-13.40	QP	
8	0.739	31.55	0.19	10.79	42.53	56.00	-13.47	QP	
9	0.755	14.24	0.19	10.79	25.22	46.00	-20.78	Average	
10	0.835	11.95	0.20	10.82	22.97	46.00	-23.03	Average	
11	1.388	28.86	0.25	10.91	40.02	56.00	-15.98	QP	
12	1.388	10.43	0.25	10.91	21.59	46.00	-24.41	Average	

Notes:

- 1. The following Quasi-Peak and Average measurements were performed on the EUT
- 2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.

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6.2 Radiated Emission

Test Requirement:	FCC Part15 B Section 15.109						
Test Method:	ANSI C63.4:2003						
Test Frequency Range:	30MHz to 6000MHz						
Test site:	Measurement Distance: 3m (Semi-Anechoic Chamber)						
Receiver setup:	Frequency	Remark					
	30MHz-1GHz	30MHz-1GHz Quasi-peak Above 1GHz		300KHz	Quasi-peak Value		
	Above 1CHz			3MHz	Peak Value		
	Above 1G112	Peak	1MHz	10Hz	Average Value		
Limit:	Freque	ency	Limit (dBuV/	m @3m)	Remark		
	30MHz-8	8MHz	40.0)	Quasi-peak Value		
	88MHz-21	16MHz	43.5	5	Quasi-peak Value		
	216MHz-9	60MHz	46.0)	Quasi-peak Value		
	960MHz-	1GHz	54.0)	Quasi-peak Value		
	Above 1	GHz	54.0		Average Value		
	7,5000	0112	74.0)	Peak Value		
Test setup:	Ground Plane — Above 1GHz	3m 4m 1m 2	s	Antenna Tower Search Antenna RF Test Receiver Antenna Tower Horn Antenna pectrum Amplifier			





Test Procedure:	The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic camber. The table was rotated 360 degrees to determine the position of the highest radiation.							
	2. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.							
	3. 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.							
	4. 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 rotatable 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.							
	6. 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 average method as specified and then reported in a data sheet.							
Test environment:	Temp.: 25 °C Humid.: 55% Press.: 1 01kPa							
Measurement Record:	Uncertainty: 4.88dB							
Test Instruments:	Refer to section 5.7 for details							
Test mode:	Refer to section 5.3 for details							
Test results:	Passed							

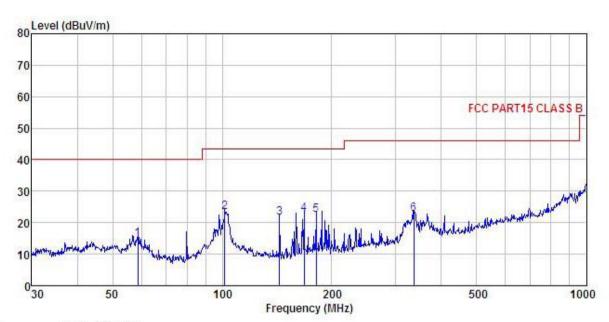




Measurement Data

Below 1GHz

Horizontal:



Site

: 3m chamber : FCC PART15 CLASS B 3m VULB9163(30M1G) HORIZONTAL Condition

Job No. : 987RF EUT : Mobile Phone Model : JM 10
Test mode : PC mode
Power Rating : AC 120V/60Hz
Environment : Temp: 25.5°C Huni: 55%

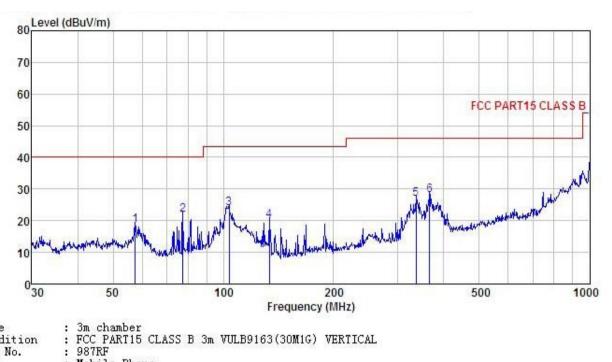
Test Engineer: Carey
REMARK

Freq						Limit Line	Over Limit	Remark
MHz	dBu∜	dB/m	dB	d₿	$\overline{dBuV/m}$	dBuV/m		
58.613	31.19	12.79	0.68	29.78	14.88	40.00	-25.12	QP
101.644	38.75	13.02	0.98	29.52	23.23	43.50	-20.27	QP
143.830	41.26	8.22	1.28	29.25	21.51	43.50	-21.99	QP
167.824	41.68	8.90	1.34	29.07	22.85	43.50	-20.65	QP
181.283	40.39	9.76	1.36	28.96	22.55	43.50	-20.95	QP
336.035	35.48	13.99	1.89	28.53	22.83	46.00	-23.17	QP
	MHz 58.613 101.644 143.830 167.824 181.283	Freq Level MHz dBuV 58.613 31.19 101.644 38.75 143.830 41.26 167.824 41.68 181.283 40.39	### Revel Factor ###################################	MHz dBuV dB/m dB 58.613 31.19 12.79 0.68 101.644 38.75 13.02 0.98 143.830 41.26 8.22 1.28 167.824 41.68 8.90 1.34 181.283 40.39 9.76 1.36	MHz dBuV dB/m dB dB 58.613 31.19 12.79 0.68 29.78 101.644 38.75 13.02 0.98 29.52 143.830 41.26 8.22 1.28 29.25 167.824 41.68 8.90 1.34 29.07 181.283 40.39 9.76 1.36 28.96	MHz dBuV dB/m dB dB dBuV/m 58.613 31.19 12.79 0.68 29.78 14.88 101.644 38.75 13.02 0.98 29.52 23.23 143.830 41.26 8.22 1.28 29.25 21.51 167.824 41.68 8.90 1.34 29.07 22.85 181.283 40.39 9.76 1.36 28.96 22.55	MHz dBuV dB/m dB dB dB dBuV/m dBuV/m 58.613 31.19 12.79 0.68 29.78 14.88 40.00 101.644 38.75 13.02 0.98 29.52 23.23 43.50 143.830 41.26 8.22 1.28 29.25 21.51 43.50 167.824 41.68 8.90 1.34 29.07 22.85 43.50 181.283 40.39 9.76 1.36 28.96 22.55 43.50	MHz dBuV dB/m dB dB dB uV/m dBuV/m dBuV/m dB uV/m dB uV/m





Vertical:



Site

Condition

Job No. EUT

: Mobile Phone Model : JM 10
Test mode : PC mode
Power Rating : AC 120V/60Hz

Environment : Temp: 25.5°C Huni: 55%

Test Engineer: Carey
REMARK :

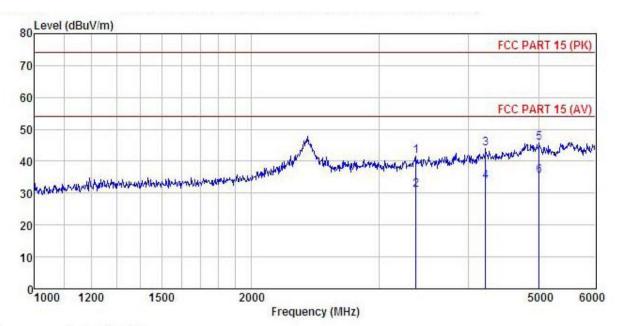
Freq							Over Limit	Remark
MHz	dBu₹	dB/m	<u>dB</u>	<u>dB</u>	dBuV/m	dBuV/m	dB	
57.392	34.72	12.87	0.67	29.79	18.47	40.00	-21.53	QP
77.593	42.43	8.20	0.84	29.66	21.81	40.00	-18.19	QP
103.806	39.64	12.78	0.99	29.50	23.91	43.50	-19.59	QP
133.619	39.38	8.67	1.22	29.31	19.96	43.50	-23.54	QP
336.035	39.56	13.99	1.89	28.53	26.91	46.00	-19.09	QP
365.539	40.19	14.48	2.00	28.63	28.04	46.00	-17.96	QP
	MHz 57.392 77.593 103.806 133.619 336.035	Freq Level MHz dBuV 57.392 34.72 77.593 42.43 103.806 39.64 133.619 39.38 336.035 39.56	MHz dBuV dB/m 57.392 34.72 12.87 77.593 42.43 8.20 103.806 39.64 12.78 133.619 39.38 8.67 336.035 39.56 13.99	Freq Level Factor Loss MHz dBuV dB/m dB 57.392 34.72 12.87 0.67 77.593 42.43 8.20 0.84 103.806 39.64 12.78 0.99 133.619 39.38 8.67 1.22 336.035 39.56 13.99 1.89	MHz dBuV dB/m dB dB 57.392 34.72 12.87 0.67 29.79 77.593 42.43 8.20 0.84 29.66 103.806 39.64 12.78 0.99 29.50 133.619 39.38 8.67 1.22 29.31 336.035 39.56 13.99 1.89 28.53	MHz dBuV dB/m dB dB dBuV/m 57.392 34.72 12.87 0.67 29.79 18.47 77.593 42.43 8.20 0.84 29.66 21.81 103.806 39.64 12.78 0.99 29.50 23.91 133.619 39.38 8.67 1.22 29.31 19.96 336.035 39.56 13.99 1.89 28.53 26.91	MHz dBuV dB/m dB dB dB dBuV/m dBuV/m 57.392 34.72 12.87 0.67 29.79 18.47 40.00 77.593 42.43 8.20 0.84 29.66 21.81 40.00 103.806 39.64 12.78 0.99 29.50 23.91 43.50 133.619 39.38 8.67 1.22 29.31 19.96 43.50 336.035 39.56 13.99 1.89 28.53 26.91 46.00	Freq Level Factor Loss Factor Level Line Limit MHz dBuV dB/m dB dB dBuV/m dBuV/m dB 57.392 34.72 12.87 0.67 29.79 18.47 40.00 -21.53 77.593 42.43 8.20 0.84 29.66 21.81 40.00 -18.19 103.806 39.64 12.78 0.99 29.50 23.91 43.50 -19.59 133.619 39.38 8.67 1.22 29.31 19.96 43.50 -23.54 336.035 39.56 13.99 1.89 28.53 26.91 46.00 -19.09





Above 1GHz

Horizontal:



Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) HORIZONTAL Condition

: 987RF Job No. : Mobile Phone EUT

Model : JM 10
Test mode : PC mode
Power Rating : AC 120V/60Hz
Environment : Temp:25.5°C Huni:55%

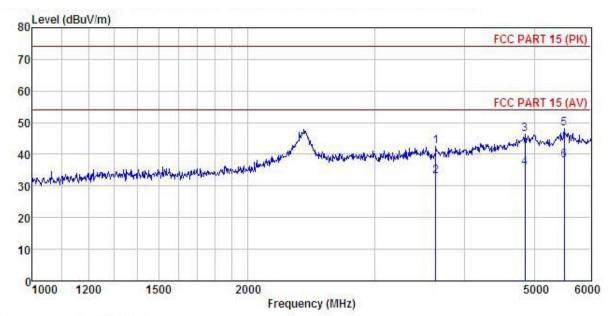
Test Engineer: Carey REMARK :

		Read	Antenna	Cable	Preamp		Limit	Over		
	Freq	Level	Factor	Loss	Factor	Level	Line	Limit	Remark	
	MHz	dBu₹		<u>dB</u>	<u>dB</u>	dBuV/m	dBuV/m	dB		
1	3381.760	45.71	28.40	6.40	39.00	41.51	74.00	-32.49	Peak	
2	3381.760	35.08	28.40	6.40	39.00	30.88	54.00	-23.12	Average	
3	4223.122	46.71	30.24	8.05	40.93			-29.93		
4	4223.122	36.27	30.24	8.05	40.93	33.63			Average	
5	5006.774	44.75	31.85	9.12	39.99	45.73	74.00	-28.27	Peak	
6	5006.774	34.35	31.85	9.12	39.99	35.33	54.00	-18.67	Average	





Vertical:



Site

: 3m chamber : FCC PART 15 (PK) 3m BBHA9120(1G18) VERTICAL Condition

Job No. : 987RF

: Mobile Phone

Model : JM 10

Test mode : PC mode

Power Rating : AC 120V/60Hz

Environment : Temp:25.5°C Huni:55%

Test Engineer: Carey

REMARK :

шици		Roads	Antenna	Cabla	Drooms		Limit	Over		
	Freq				Factor			Limit	Remark	
ä	MHz	dBu∀	<u>dB</u> /m	<u>dB</u>	<u>dB</u>	dBuV/m	dBuV/m	dB		-
1	3646.072	47.22	29.21	6.45	40.39	42.49	74.00	-31.51	Peak	
2	3646.072	37.81	29.21	6.45	40.39	33.08	54.00	-20.92	Average	
2	4856.567	45.85	31.56	8.96	40.17	46.20	74.00	-27.80	Peak	
4	4856.567	35.25	31.56	8.96	40.17	35.60			Average	
5	5505.541	47.25	32.04	9.16	40.26	48.19	74.00	-25.81	Peak	
6	5505.541	37.26	32.04	9.16	40.26	38.20	54.00	-15.80	Average	