FCC RF Test Report

APPLICANT	:	TCL Communication Ltd.
EQUIPMENT	:	LTE / UMTS / GSM Band Mobile Phone
MODEL NAME	:	7053J
FCC ID	:	2ACCJB033
STANDARD	:	FCC 47 CFR Part 2, 22(H), 24(E)
CLASSIFICATION	:	PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Sep. 16, 2015 and testing was completed on Nov. 07, 2015. We, SPORTON INTERNATIONAL (SHENZHEN) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures given in ANSI / TIA / EIA-603-D-2010 and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL (SHENZHEN) INC., the test report shall not be reproduced except in full.

Prepared by: Andy Yeh / Manager

Approved by: Jones Tsai / Manager

Testing Laboratory
2353

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG591604-01A	Rev. 01	This is a variant product of 7053E, The product equality declaration could be referred to Appendix B. All the test cases were performed on original report which can be referred to Sporton Report Number FG591604A (Model name: 7053E; FCC ID: 2ACCJB034). Based on the original test report, only the conducted power, ERP/EIRP and the worst cases of radiated emission were verified for the differences between 7053E and current 7053J.	Nov. 23, 2015

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.1	§2.1046	Conducted Output Power	Reporting Only	PASS	-
3.2	§22.913(a)(2)	Effective Radiated Power	< 7 Watts	PASS	-
	§24.232(c)	Equivalent Isotropic Radiated Power	< 2 Watts	PASS	-
3.3	§2.1053 §22.917(a) §24.238(a)	Field Strength of Spurious Radiation	< 43+10log10(P[Watts])	PASS	Under limit 27.88 dB at 1672.000 MHz

1 General Description

1.1 Applicant

TCL Communication Ltd.
5F, C-Tower, No. 232, Liang Jing Road, ZhangJiang High-Tech Park, Pudong Area, Shanghai, 201203, P. R. China

1.2 Manufacturer

TCL Communication Ltd.
5F, C-Tower, No. 232, Liang Jing Road, ZhangJiang High-Tech Park, Pudong Area, Shanghai, 201203, P. R. China

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	LTE / UMTS / GSM Band Mobile Phone
Model Name	7053J
FCC ID	2ACCJB033
EUT supports Radios application	GSM/GPRS/EGPRS/WCDMA/HSPA/DC-HSDPA/ HSPA+ (16QAM uplink is not supported)/LTE/ WLAN 2.4GHz 802.11b/g/n HT20/ Bluetooth v3.0 + EDR/Bluetooth v4.0 LE
IMEI	Radiation:014467000000542/014467000000559 ERP/EIRP: 014467000000542/014467000000559 Conducted: 014467000000237/014467000000245
HW Version	PIO
SW Version	V1.0
EUT Stage	Production Unit

Remark: The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.

1.4 Product Specification subjective to this standard

Product Specification subjective to this standard	
Tx Frequency	GSM850: 824.2 MHz ~ 848.8 MHz GSM1900: 1850.2 MHz ~ 1909.8MHz WCDMA Band V: 826.4 MHz ~ 846.6 MHz WCDMA Band II: 1852.4 MHz ~ 1907.6 MHz
Rx Frequency	GSM850: 869.2 MHz ~ 893.8 MHz GSM1900: 1930.2 MHz ~ 1989.8 MHz WCDMA Band V: 871.4 MHz ~ 891.6 MHz WCDMA Band II: 1932.4 MHz ~ 1987.6 MHz
Maximum Output Power to Antenna	GSM850 : 32.07 dBm GSM1900 : 29.05 dBm WCDMA Band V : 23.62 dBm WCDMA Band II : 22.72 dBm
Antenna Type	PIFA Antenna
Type of Modulation	GSM: GMSK GPRS: GMSK EDGE: GMSK / 8PSK WCDMA : QPSK (Uplink) HSDPA/DC-HSDPA : QPSK (Uplink) HSUPA : QPSK (Uplink) HSPA+ : 16QAM uplink is not supported DC-HSDPA : 64QAM

1.5 Modification of EUT

No modifications are made to the EUT during all test items.

1.6 Maximum ERP/EIRP Power

FCC Rule	System	Type of Modulation	Maximum ERP/EIRP (W)
Part 22	GSM850 GSM	GMSK	0.5445
Part 22	WCDMA Band V RMC 12.2Kbps	QPSK	0.0948
Part 24	GSM1900 GSM	GMSK	0.7161
Part 24	WCDMA Band II RMC 12.2Kbps	QPSK	0.1574

1.7 Specification of Accessory

Specification of Accessory				
AC Adapter	Brand Name	TENPAO	Model Name	UC11US
	Power Rating	I/P: 100-240Vac, 200mA, O/P: 5Vdc, 1000mA		
	P/N	CBA0058AG0C2		
Battery	Brand Name	JIADE	Model Name	TLp021CF
	Power Rating	3.8Vdc, 2150mAh		
	S/N	C2150009CFJ004UV		
USB Cable 1	Brand Name	JUWEI	Model Name	CDA0000025C2
	Signal Line Type	1.0m, shielded cable, without core		
USB Cable 2	Brand Name	JUWEI	Model Name	CDA0000026C2
	Signal Line Type	1.0m, shielded cable, without core		
Earphone 1	Brand Name	JUWEI	Model Name	CCB0023A10C1
	Signal Line Type	1.2m, non-shielded cable, without core		
Earphone 2	Brand Name	JUWEI	Model Name	CCB0023B10C1
	Signal Line Type	1.2m, non-shielded cable, without core		

1.8 Testing Location

Test Site	SPORTON INTERNATIONAL (SHENZHEN) INC.	
Test Site Location	No. 3 Building, the third floor of south, Shahe River west, Fengzeyuan warehouse, Nanshan District, Shenzhen, Guangdong, P. R. China TEL: +86-755- 3320-2398	
Test Site No.	**Sporton Site No.**	**FCC Registration No.**
	03CH01-SZ	831040

Note: The test site complies with ANSI C63.4 2009 requirement.

1.9 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR Part 2, 22(H), 24(E)
- ANSI / TIA / EIA-603-D-2010
- FCC KDB 971168 D01 Power Meas. License Digital Systems v02r02

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

2.1 Test Mode

Antenna port conducted and radiated test items were performed according to KDB 971168 D01 Power Meas. License Digital Systems v02r02 with maximum output power.

Radiated measurements were performed with rotating EUT in different three orthogonal test planes to find the maximum emission.

Radiated emissions were investigated as following frequency range:

1. 30 MHz to 10th harmonic for GSM850 and WCDMA Band V.
2. 30 MHz to 10th harmonic for GSM1900 and WCDMA Band II.

All modes and data rates and positions were investigated.

Test modes are chosen to be reported as the worst case configuration below:

Test Modes		
Band	**Radiated TCs**	**Conducted TCs**
GSM 850	■ GSM Link	■ GSM Link
GSM 1900	■ GSM Link	■ GSM Link
WCDMA Band V	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link
WCDMA Band II	■ RMC 12.2Kbps Link	■ RMC 12.2Kbps Link

Note: The maximum power levels are chosen to test as the worst case configuration as follows:

GSM mode for GMSK modulation, `

RMC 12.2Kbps mode for WCDMA band V,

RMC 12.2Kbps mode for WCDMA band II, only these modes were used for all tests.

Conducted Power Measurement Results:

SIM1 Card:

Conducted Power (*Unit: dBm)						
Band	GSM850			GSM1900		
Channel	128	189	251	512	661	810
Frequency	824.2	836.4	848.8	1850.2	1880.0	1909.8
GSM	32.05	32.04	32.07	29.05	29.04	29.02
GPRS class 8	32.03	32.01	32.06	29.04	29.04	29.01
GPRS class 10	30.77	30.80	30.84	27.98	27.96	27.93
GPRS class 11	29.58	29.55	29.59	26.87	26.77	26.85
GPRS class 12	27.31	27.28	27.32	24.69	24.58	24.68
EGPRS class 8	26.50	26.33	26.26	24.94	25.00	25.16
EGPRS class 10	24.88	24.75	24.69	23.86	23.92	24.07
EGPRS class 11	23.77	23.65	23.67	22.78	22.82	22.96
EGPRS class 12	22.66	22.53	22.47	21.69	21.73	21.87

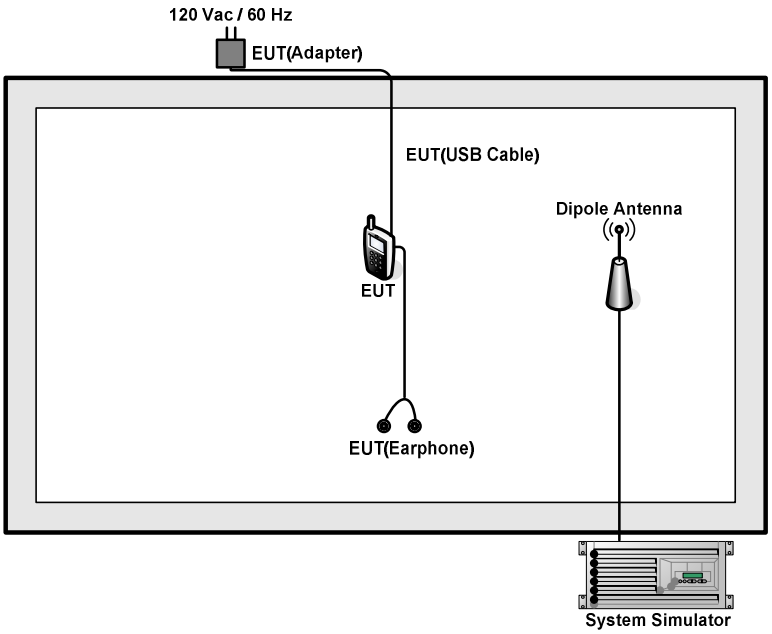
Conducted Power (*Unit: dBm)						
Band	WCDMA Band V			WCDMA Band II		
Channel	4132	4182	4233	9262	9400	9538
Frequency	826.4	836.4	846.6	1852.4	1880	1907.6
AMR 12.2K	23.54	23.60	23.60	22.66	22.59	22.70
RMC 12.2K	23.55	23.62	23.61	22.68	22.60	22.72
HSDPA Subtest-1	22.25	22.46	22.33	21.21	21.32	21.47
HSDPA Subtest-2	22.26	22.50	22.31	21.33	21.47	21.57
HSDPA Subtest-3	21.77	22.03	21.92	20.81	20.96	21.05
HSDPA Subtest-4	21.77	22.02	21.92	20.79	20.96	21.06
DC-HSDPA Subtest-1	21.54	21.90	21.76	20.60	20.80	20.86
DC-HSDPA Subtest-2	21.50	21.77	21.54	20.68	20.89	20.85
DC-HSDPA Subtest-3	20.97	21.35	21.20	20.08	20.39	20.32
DC-HSDPA Subtest-4	21.03	21.47	21.22	20.09	20.42	20.39
HSUPA Subtest-1	22.19	22.47	22.23	21.07	21.54	21.32
HSUPA Subtest-2	20.76	21.23	20.98	19.66	20.55	20.52
HSUPA Subtest-3	20.93	21.36	20.80	20.00	20.33	20.08
HSUPA Subtest-4	21.07	21.34	21.39	20.63	20.21	20.66
HSUPA Subtest-5	22.30	22.40	22.40	21.30	21.53	21.40

SIM2 Card:

Conducted Power (*Unit: dBm)						
Band	**GSM850**			**GSM1900**		
Channel	**128**	**189**	**251**	**512**	**661**	**810**
Frequency	**824.2**	**836.4**	**848.8**	**1850.2**	**1880.0**	**1909.8**
GSM	32.01	32.03	**32.06**	**29.03**	29.01	28.99
GPRS class 8	32.00	31.99	32.05	29.02	28.99	28.98
GPRS class 10	30.71	30.68	30.80	27.95	27.92	27.90
GPRS class 11	29.52	29.50	29.57	26.86	26.71	26.80
GPRS class 12	27.30	27.25	27.30	24.68	24.54	24.65
EGPRS class 8	26.38	26.30	26.25	24.90	24.96	25.15
EGPRS class 10	24.87	24.70	24.67	23.83	23.90	24.02
EGPRS class 11	23.72	23.64	23.62	22.77	22.81	22.90
EGPRS class 12	22.61	22.52	22.42	21.68	21.70	21.81

Conducted Power (*Unit: dBm)						
Band	**WCDMA Band V**			**WCDMA Band II**		
Channel	**4132**	**4182**	**4233**	**9262**	**9400**	**9538**
Frequency	**826.4**	**836.4**	**846.6**	**1852.4**	**1880**	**1907.6**
AMR 12.2K	23.50	23.58	23.57	22.62	22.58	22.68
RMC 12.2K	23.52	**23.59**	23.58	22.65	22.59	**22.70**
HSDPA Subtest-1	22.22	22.44	22.30	21.20	21.30	21.45
HSDPA Subtest-2	22.24	22.49	22.30	21.30	21.46	21.56
HSDPA Subtest-3	21.70	22.00	21.90	20.75	20.95	21.04
HSDPA Subtest-4	21.71	22.01	21.87	20.75	20.94	21.03
DC-HSDPA Subtest-1	21.51	21.88	21.73	20.59	20.78	20.84
DC-HSDPA Subtest-2	21.48	21.76	21.53	20.65	20.88	20.84
DC-HSDPA Subtest-3	20.90	21.32	21.18	20.02	20.38	20.31
DC-HSDPA Subtest-4	20.97	21.46	21.17	20.05	20.40	20.36
HSUPA Subtest-1	22.18	22.45	22.22	21.00	21.52	21.30
HSUPA Subtest-2	20.74	21.20	20.96	19.64	20.54	20.51
HSUPA Subtest-3	20.90	21.32	20.69	19.96	20.30	20.05
HSUPA Subtest-4	21.05	21.30	21.38	20.62	20.20	20.64
HSUPA Subtest-5	22.28	22.39	22.37	21.27	21.51	21.37

2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration

Item	Equipment	Trade Name	Model No.	FCC ID	Data Cable	Power Cord
1.	System Simulator	R&S	CMU 200	N/A	N/A	Unshielded, 1.8 m

3 Test Result

3.1 Conducted Output Power Measurement

3.1.1 Description of the Conducted Output Power Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to enforce EUT transmitting at the maximum power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

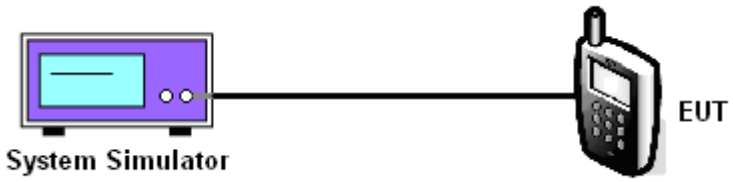
3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

1. The transmitter output port was connected to the system simulator.
2. Set EUT at maximum power through system simulator.
3. Select lowest, middle, and highest channels for each band and different modulation.
4. Measure the maximum burst average power for GSM and maximum average power for other modulation signal.

3.1.4 Test Setup



3.1.5 Test Result of Conducted Output Power

Cellular Band									
Modes	GSM850 (GSM)			GSM850 (EDGE)			WCDMA Band V (RMC 12.2Kbps)		
Channel	128 (Low)	189 (Mid)	251 (High)	128 (Low)	189 (Mid)	251 (High)	4132 (Low)	4182 (Mid)	4233 (High)
Frequency (MHz)	824.2	836.4	848.8	824.2	836.4	848.8	826.4	836.4	846.6
Conducted Power (dBm)	32.05	32.04	32.07	26.50	26.33	26.26	23.55	23.62	23.61

PCS Band									
Modes	GSM1900 (GSM)			GSM1900 (EDGE)			WCDMA Band II (RMC 12.2Kbps)		
Channel	512 (Low)	661 (Mid)	810 (High)	512 (Low)	661 (Mid)	810 (High)	9262 (Low)	9400 (Mid)	9538 (High)
Frequency (MHz)	1850.2	1880	1909.8	1850.2	1880	1909.8	1852.4	1880	1907.6
Conducted Power (dBm)	29.05	29.04	29.02	24.94	25.00	25.16	22.68	22.60	22.72

Note: maximum burst average power for GSM, and maximum average power for WCDMA.

3.2 Effective Radiated Power and Effective Isotropic Radiated Power Measurement

3.2.1 Description of the ERP/EIRP Measurement

The substitution method, in ANSI / TIA / EIA-603-D-2010, was used for ERP/EIRP measurement, and the spectrum analyzer configuration follows KDB 971168 D01 Power Meas. License Digital Systems v02r02. The ERP of mobile transmitters must not exceed 7 Watts (Cellular Band) and the EIRP of mobile transmitters are limited to 2 Watts (PCS Band).

3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.2.3 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 5.2.1. (for CDMA/WCDMA), Section 5.2.2.2 (for GSM/GPRS/EDGE) and ANSI / TIA-603-D-2010 Section 2.2.17.
2. The EUT was placed on a non-conductive rotating platform 0.8 meters high in a semi-anechoic chamber. The radiated emission at the fundamental frequency was measured at 3 m with a test antenna and a spectrum analyzer with RMS detector per section 5. of KDB 971168 D01.
3. During the measurement, the system simulator parameters were set to force the EUT transmitting at maximum output power. The maximum emission was recorded from analyzer power level (LVL) from the 360 degrees rotation of the turntable and the test antenna raised and lowered over a range from 1 to 4 meters in both horizontally and vertically polarized orientations.
4. Effective Isotropic Radiated Power (EIRP) was measured by substitution method according to TIA/EIA-603-D. The EUT was replaced by the substitution antenna at same location, and then a known power from S.G. was applied into the dipole antenna through a Tx cable, and then recorded the maximum Analyzer reading through raised and lowered the test antenna. The correction factor (in dB) = S.G. - Tx Cable loss + Substitution antenna gain - Analyzer reading. Then the EUT's EIRP was calculated with the correction factor, EIRP = LVL + Correction factor and ERP = EIRP - 2.15. Take the record of the output power at substitution antenna.

	GSM/GPRS/EDGE	WCDMA/HSPA
SPAN	500kHz	10MHz
RBW	10kHz	100kHz
VBW	30kHz	300kHz
Detector	RMS	RMS
Trace	Average	Average
Average Type	Power	Power
Sweep Count	100	100

3.2.4 Test Result of ERP

GSM850 (GSM) Radiated Power ERP					
Channel	Frequency (MHz)	Horizontal		Vertical	
		ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	824.2	25.71	0.3724	27.33	0.5408
Middle	836.4	26.11	0.4083	26.90	0.4898
Highest	848.8	26.38	0.4345	27.36	0.5445
Limit	ERP < 7W	Result		PASS	

WCDMA Band V (RMC 12.2Kbps) Radiated Power ERP					
Channel	Frequency (MHz)	Horizontal		Vertical	
		ERP(dBm)	ERP(W)	ERP(dBm)	ERP(W)
Lowest	826.4	17.39	0.0548	19.77	0.0948
Middle	836.4	17.61	0.0577	19.44	0.0879
Highest	846.6	17.20	0.0525	19.27	0.0845
Limit	ERP < 7W	Result		PASS	

3.2.5 Test Result of EIRP

GSM1900 (GSM) Radiated Power EIRP					
Channel	Frequency (MHz)	Horizontal		Vertical	
		EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	1850.2	26.46	0.4426	28.55	0.7161
Middle	1880.0	26.02	0.3999	28.24	0.6668
Highest	1909.8	26.21	0.4178	28.19	0.6592
Limit	EIRP < 2W	Result		PASS	

WCDMA Band II (RMC 12.2Kbps) Radiated Power EIRP					
Channel	Frequency (MHz)	Horizontal		Vertical	
		EIRP(dBm)	EIRP(W)	EIRP(dBm)	EIRP(W)
Lowest	1852.4	21.18	0.1312	21.97	0.1574
Middle	1880.0	21.16	0.1306	21.31	0.1352
Highest	1907.6	20.31	0.1074	21.02	0.1265
Limit	EIRP < 2W	Result		PASS	

3.3 Field Strength of Spurious Radiation Measurement

3.3.1 Description of Field Strength of Spurious Radiated Measurement

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

1. The testing follows FCC KDB 971168 v02r02 Section 5.8 and ANSI / TIA-603-D-2010 Section 2.2.12.
2. The EUT was placed on a rotatable wooden table 0.8 meters above the ground.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between one meter and four meters to search for the maximum spurious emission for both horizontal and vertical polarizations.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
12. ERP (dBm) = EIRP - 2.15
13. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
14. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)

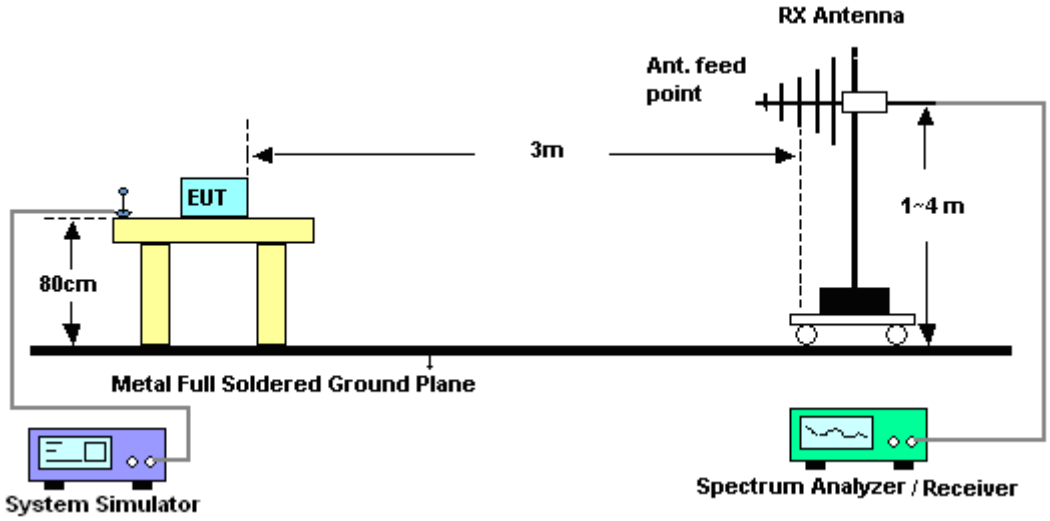
    = P(W) - [43 + 10log(P)] (dB)

    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)

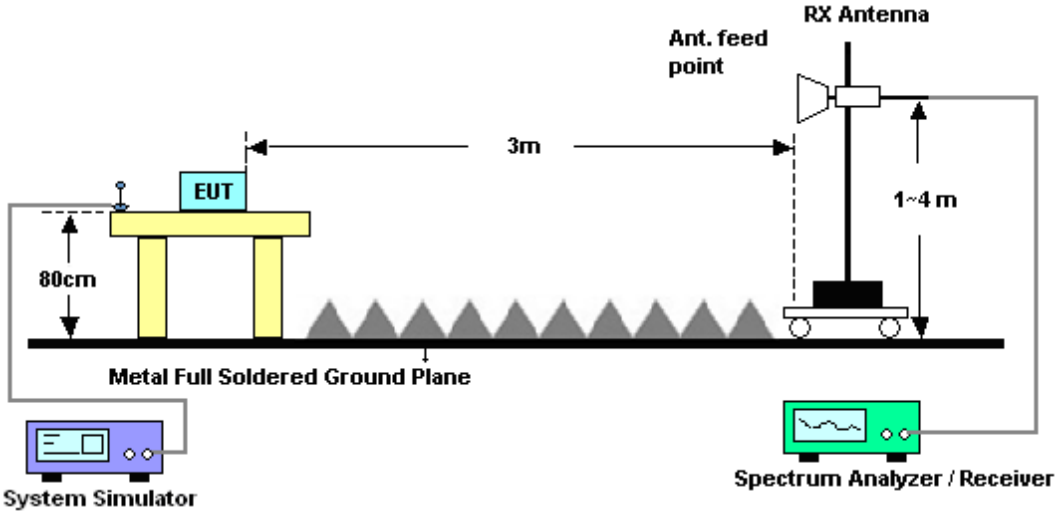
    = -13dBm.

3.3.4 Test Setup

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.3.5 Test Result of Field Strength of Spurious Radiated

Band :	GSM850	Temperature :	23~25°C
Test Mode :	GSM Link (GMSK)	Relative Humidity :	48~52%
Test Engineer :	Lei Pang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-48.04	-13	-35.04	-51.76	-51.86	0.53	6.50	H	Pass
2510	-53.44	-13	-40.44	-58.86	-56.31	0.68	5.70	H	Pass
3346	-57.03	-13	-44.03	-67.05	-62.07	0.81	8.00	H	Pass

Band :	GSM850	Temperature :	23~25°C
Test Mode :	GSM Link (GMSK)	Relative Humidity :	48~52%
Test Engineer :	Lei Pang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-40.88	-13	-27.88	-46.78	-44.70	0.53	6.50	V	Pass
2510	-56.57	-13	-43.57	-60.89	-59.44	0.68	5.70	V	Pass
3346	-57.78	-13	-44.78	-66.79	-62.82	0.81	8.00	V	Pass

Band :	GSM1900	Temperature :	23~25°C
Test Mode :	GSM Link (GMSK)	Relative Humidity :	48~52%
Test Engineer :	Lei Pang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-53.27	-13	-40.27	-66.04	-60.46	0.81	8.00	H	Pass
5640	-41.47	-13	-28.47	-60.22	-51.46	1.01	11.00	H	Pass
7520	-48.22	-13	-35.22	-70.39	-60.46	1.46	13.70	H	Pass

Band :	GSM1900	Temperature :	23~25°C
Test Mode :	GSM Link (GMSK)	Relative Humidity :	48~52%
Test Engineer :	Lei Pang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-51.60	-13	-38.60	-64.67	-58.79	0.81	8.00	V	Pass
5640	-44.58	-13	-31.58	-63.64	-54.57	1.01	11.00	V	Pass
7520	-48.51	-13	-35.51	-71	-60.75	1.46	13.70	V	Pass

Band :	WCDMA Band V	Temperature :	23~25°C
Test Mode :	RMC 12.2Kbps Link (QPSK)	Relative Humidity :	48~52%
Test Engineer :	Lei Pang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-61.05	-13	-48.05	-63.60	-64.87	0.53	6.50	H	Pass
2510	-59.38	-13	-46.38	-64.80	-62.25	0.68	5.70	H	Pass
3346	-56.88	-13	-43.88	-66.90	-61.92	0.81	8.00	H	Pass

Band :	WCDMA Band V	Temperature :	23~25°C
Test Mode :	RMC 12.2Kbps Link (QPSK)	Relative Humidity :	48~52%
Test Engineer :	Lei Pang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

Frequency (MHz)	ERP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
1672	-57.96	-13	-44.96	-60.87	-61.78	0.53	6.50	V	Pass
2510	-61.40	-13	-48.40	-65.72	-64.27	0.68	5.70	V	Pass
3346	-57.89	-13	-44.89	-66.90	-62.93	0.81	8.00	V	Pass

Band :	WCDMA Band II	Temperature :	23~25°C
Test Mode :	RMC 12.2Kbps Link (QPSK)	Relative Humidity :	48~52%
Test Engineer :	Lei Pang	Polarization :	Horizontal
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-51.12	-13	-38.12	-63.89	-58.31	0.81	8.00	H	Pass
5640	-46.86	-13	-33.86	-65.61	-56.85	1.01	11.00	H	Pass
7520	-45.07	-13	-32.07	-67.24	-57.31	1.46	13.70	H	Pass

Band :	WCDMA Band II	Temperature :	23~25°C
Test Mode :	RMC 12.2Kbps Link (QPSK)	Relative Humidity :	48~52%
Test Engineer :	Lei Pang	Polarization :	Vertical
Remark :	Spurious emissions within 30-1000MHz were found more than 20dB below limit line.		

Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Over Limit (dB)	SPA Reading (dBm)	S.G. Power (dBm)	TX Cable loss (dB)	TX Antenna Gain (dBi)	Polarization (H/V)	Result
3760	-50.66	-13	-37.66	-63.73	-57.85	0.81	8.00	V	Pass
5640	-47.97	-13	-34.97	-67.03	-57.96	1.01	11.00	V	Pass
7520	-46.62	-13	-33.62	-69.11	-58.86	1.46	13.70	V	Pass

4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver&SA	Agilent Technologies	N9038A	MY52260185	20Hz~26.5GHz	May 26, 2015	Nov. 07, 2015	May 25, 2016	Radiation (03CH01-SZ)
Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz;Max 30dBm	Jun. 07, 2015	Nov. 07, 2015	Jun. 06, 2016	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	23188	30MHz-2GHz	Oct. 17, 2015	Nov. 07, 2015	Oct. 16, 2016	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA 9120D	9120D-1285	1GHz~18GHz	Jan. 20, 2015	Nov. 07, 2015	Jan. 19, 2016	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Aug.19, 2015	Nov. 07, 2015	Aug. 18, 2016	Radiation (03CH01-SZ)
Amplifier	ADVANTEST	BB525C	E9007003	9kHz ~3000MHz / 30 dB	Jan. 28, 2015	Nov. 07, 2015	Jan. 27, 2016	Radiation (03CH01-SZ)
Amplifier	Agilent Technologies	83017A	MY39501302	500MHz~26.5GHz	Jan. 28, 2015	Nov. 07, 2015	Jan. 27, 2016	Radiation (03CH01-SZ)
Amplifier	Yiai	AV3860B	04030	2GHz~26.5GHz	May 05, 2015	Nov. 07, 2015	May 04, 2016	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	616010001985	N/A	NCR	Nov. 07, 2015	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Nov. 07, 2015	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Nov. 07, 2015	NCR	Radiation (03CH01-SZ)

5 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	**4.8 dB**

Appendix B. product equality declaration

5F, C-Tower, No. 232, Liang Jing Road,
ZhangJiang High-Tech Park,
Pudong Area,Shanghai,201203,P.R.China
TEL: +86(0)21 61460666
FAX: +86(0)21 61460602

Declaration of changes from Initial to Variant

General: 7053J is a variant product of 7053E

- **SOFTWARE MODIFICATIONS:**
  - Protocol Stack changes: No
  - MMS/STK/USAT/USIM changes: No
  - DM/SUPL/VT/FUMO/SWP/HCI: No (indicated the changed items if yes)
  - Other changes detailed: No

- **HARDWARE MODIFICATIONS:**
  - Band changes: Yes
  - **7053E** (GSM 850/900/1800/1900 UMTS 850/1700/1900/2100 LTE B2/B4/B5/B7/B12/B17)
  - **7053J** (GSM 850/900/1800/1900 UMTS 850/900/1900/2100 LTE B1/B2/B3/B4/B7/B28)
  - PCB Layout changes: No
  - Main RF components changes:

	Antenna	AP	Modem	Transceiver	Power Amplifier	Rx SAW Filter	ASM
GSM850	NO	No	No	No	NO	NO	NO
GSM900	NO	No	No	No	NO	NO	NO
GSM1800	NO	No	No	No	NO	NO	NO
GSM1900	NO	No	No	No	NO	NO	NO

	Antenna	AP	Modem	Transceiver	Power Amplifier	Tx SAW Filter	Rx SAW Filter	Duplexer	ASM
UMTS2100	NO	no	No	No	NO	NO	no	NO	NO
UMTS1900	NO	No	No	No	no	no	No	no	no
UMTS1700	no	NA	NA	NA	NA	NA	NA	NA	NA
UMTS900	NO	No	No	No	NO	NO	YES	YES	NO
UMTS850	NO	No	No	No	No	No	no	No	No

	Antenna	AP	Modem	Transceiver	Power Amplifier	Tx SAW Filter	Rx SAW Filter	Duplexer	ASM
LTE Band 1	NO	NO	NO	NO	NO	YES	YES	YES	NO
LTE Band 2	NO	NO	NO	NO	NO	NO	NO	NO	NO

LTE Band 3	NO	NO	NO	NO	NO	YES	YES	YES	NO
LTE Band 4	NO	NO	NO	NO	NO	NO	NO	NO	NO
LTE Band 5	NA	NA	NA	NA	NA	NA	NA	NA	NA
LTE Band 7	NO	NO	NO	NO	NO	NO	NO	NO	NO
LTE Band 12	NA	NA	NA	NA	NA	NA	NA	NA	NA
LTE Band 17	NA	NA	NA	NA	NA	NA	NA	NA	NA
LTE Band 28	NO	NO	NO	NO	NO	YES	YES	YES	NO

	Antenna	**AP**	**Modem**	**Transceiver**	**Power Amplifier**	**Balun**	**Band pass filter**	**Diplexer**
Bluetooth	NO	No	No	No	No	No	No	No
Wi-Fi	NO	No	No	No	No	No	No	No

- FM changes: No
- LCD/ Speaker/ Camera/ Vibrator changes: (indicated the changed items if yes) No
- Other changes detailed: NO

- **MECHANICAL MODIFICATIONS:**
  - Use new metal front/back cover or keypad: No
  - Mechanical shell changes:
    Whole size of EUT: No
    Distance of Ear reference point to bottom of handset: No
    Other trinkets to change the surface of handset: No
  - Other changes detailed: No

APPROVED BY:
Project Manager: Tiffany Tang
Signature:

Date: 2015-11-06