FCC RF Test Report

APPLICANT	:	TCL Communication Ltd
EQUIPMENT	:	GSM Quad-band / UMTS Quad-band / LTE 4 band mobile phone
BRAND NAME	:	ALCATEL ONETOUCH
MODEL NAME	:	6045O
MARKETING NAME	:	ALCATEL ONETOUCH IDOL 3 (5.5)
FCC ID	:	2ACCJN005
STANDARD	:	FCC Part 15 Subpart C §15.225
CLASSIFICATION	:	(DXX) Low Power Communication Device Transmitter

The product was received on Jan. 13, 2015 and testing was completed on Feb. 27, 2015. We, SPORTON INTERNATIONAL (KUNSHAN) INC., would like to declare that the tested sample has been evaluated in accordance with the test procedures 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 (KUNSHAN) INC., the test report shall not be reproduced except in full.

Reviewed by: Joseph Lin / Supervisor

Approved by: Jones Tsai / Manager

Testing Laboratory 2627

SPORTON INTERNATIONAL (KUNSHAN) INC.

No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P. R. China

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APPENDIX E. PRODUCT EQUALITY DECLARATION

REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR511301-21D	Rev. 01	This report is for 6045O which is the variant product of 6045I. According to the product equality declaration as Appendix B which are provided by applicant, the test result is not affected, all test cases were leveraged from original Sporton Report Number FR511301D (Model name: 6045B, FCC ID: 2ACCJN001).	Aug. 27, 2015

SUMMARY OF THE TEST RESULT

Applied Standard: 47 CFR FCC Part 15 Subpart C				
Part	**FCC Rule**	**Description of Test**	**Result**	**Under Limit**
3.1	15.207	AC Power Line Conducted Emissions	Complies	3.08 dB at 0.520MHz
3.2	15.225(a)(b)(c)	Field Strength of Fundamental Emissions	Complies	71.190 dB at 13.560 MHz
3.3	2.1049	20dB Spectrum Bandwidth	Complies	-
3.4	15.225(d) 15.209	Radiated Emissions	Complies	7.22 dB at 158.040 MHz
3.5	15.225(e)	Frequency Stability	Complies	-
3.6	15.203	Antenna Requirements	Complies	-

Test Items	Uncertainty	Remark
AC Power Line Conducted Emissions	2.3 dB	Confidence levels of 95%
Radiated Emissions (30MHz~1000MHz)	2.5 dB	Confidence levels of 95%

1. GENERAL INFORMATION

1.1 Applicant

TCL Communication Ltd

FLAT/RM 1910-12A BLOCK 3 19/F CHINA HONG KONG CITY 33 CANTON ROAD TSIMSHATSUI KL

1.2 Manufacturer

TCL Communication Ltd

FLAT/RM 1910-12A BLOCK 3 19/F CHINA HONG KONG CITY 33 CANTON ROAD TSIMSHATSUI KL

1.3 Product Details

Items	Description
Tx/Rx Frequency Range	13.553 ~ 13.567MHz
Channel Number	1
20dBW	2.64 kHz
99%OBW	2.24 kHz
Antenna Type	Loop Antenna
Type of Modulation	ASK

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 Modification of EUT

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

1.5 Testing Location

Test Site	SPORTON INTERNATIONAL (KUNSHAN) INC.			
Test Site Location	No. 3-2, PingXiang Road, Kunshan, Jiangsu Province, P. R. China TEL: +86-0512-5790-0158 FAX: +86-0512-5790-0958			
Test Site No.	**Sporton Site No.**			**FCC Registration No.**
	TH01-KS	CO01-KS	03CH01-KS	149928
Test Engineer	Issac Song	Eko Guan	Nick Su	
Temperature	24~25℃	22~24℃	22~23℃	
Relative Humidity	49~51％	33~35％	40~41℃	

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

1.6 Applicable Standards

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

- FCC Part 15 Subpart C §15.225
- ANSI C63.10-2009

1.7 Test Modes

Investigation has been done on all the possible configurations for searching the worst cases. The following table is a list of the test modes shown in this test report.

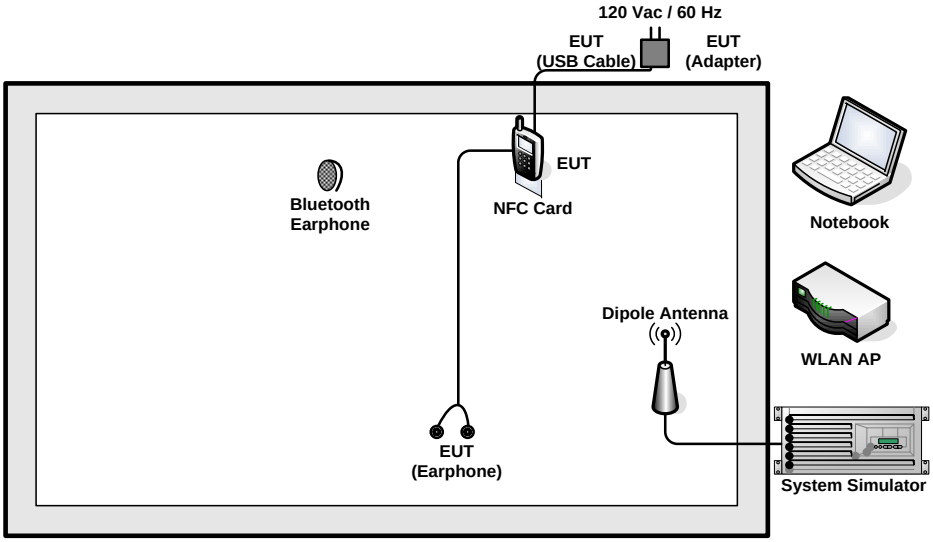
Test Items	
AC Power Line Conducted Emissions	Field Strength of Fundamental Emissions
20dB Spectrum Bandwidth	Frequency Stability
Radiated Emissions 9kHz~30MHz	Radiated Emissions 30MHz~1GHz

Note:

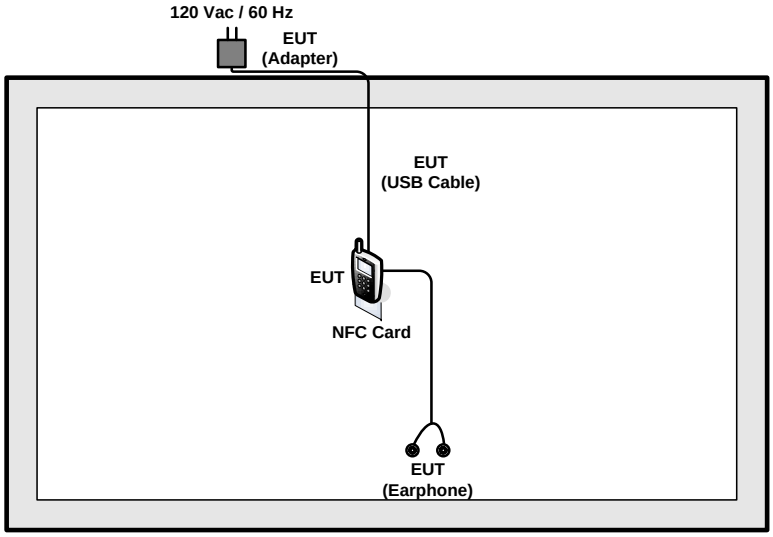
1. The EUT was programmed to be in continuously transmitting mode.
2. The ancillary equipment, NFC card, is used to make the EUT (NFC) continuously transmit at 13.56MHz and is placed around 3 cm gap to the EUT.

1.8 Test Configurations

<AC Conducted Emissions>



<For Fundamental Emissions and Mask and Radiated Emissions Measurement>



1.9 Table for Supporting Units

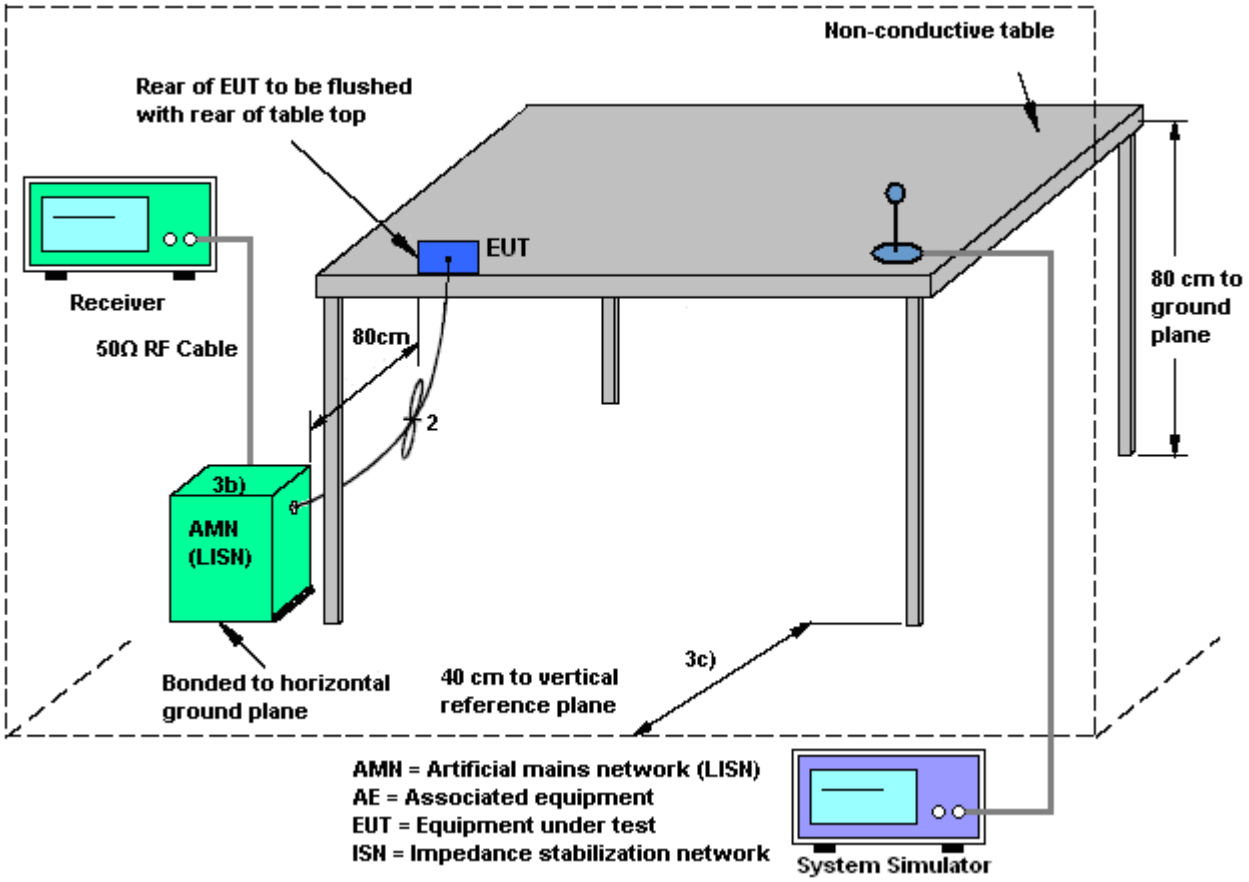
Support Unit	Manufacturer	Model	FCC ID
NFC Card	N/A	N/A	N/A
WLAN AP	D-Link	DIR-855	KA2DIR855A2
Notebook	Lenovo	G480	PRC4
Bluetooth Earphone	Nokia	BH-102	PYAHS-107W
DC Power Supply	GW INSTEK	GPD-2303S	N/A
System Simulator	R&S	CMU 200	N/A

2. CONDUCTED EMISSION TEST

2.1 Measuring Instruments

See list of measuring instruments of this test report.

2.2 Test setup



2.3 Test Result of Conducted Emission Test

Please refer to Appendix B.

2.4 AC Power Line Conducted Emissions Measurement

2.4.1 Limit

For equipment that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies within the band 150 kHz to 30 MHz shall not exceed the limits in the following table.

Frequency of Emission (MHz)	Conducted Limit (dBμV)	
	Quasi-Peak	Average
0.15-0.5	66 to 56*	56 to 46*
0.5-5	56	46
5-30	60	50

*Decreases with the logarithm of the frequency.

2.4.2 Test Procedures

1. The EUT was placed 0.4 meter from the conducting wall of the shielding room, and it was kept at least 80 centimeters from any other grounded conducting surface.
2. Connect EUT to the power mains through a line impedance stabilization network (LISN).
3. All the support units are connecting to the other LISN.
4. The LISN provides 50 ohm coupling impedance for the measuring instrument.
5. The FCC states that a 50 ohm, 50 microhenry LISN should be used.
6. Both sides of AC line were checked for maximum conducted interference.
7. The frequency range from 150 kHz to 30 MHz was searched.
8. Set the test-receiver system to Peak Detect Function and specified bandwidth (IF Bandwidth = 9kHz) with Maximum Hold Mode. Then measurement is also conducted by Average Detector and Quasi-Peak Detector Function respectively.

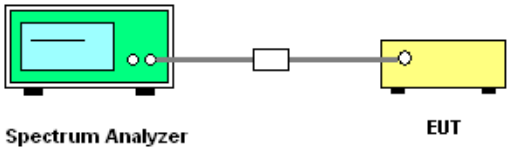
3. CONDUCTED TEST ITEMS

3.1 Measuring Instruments

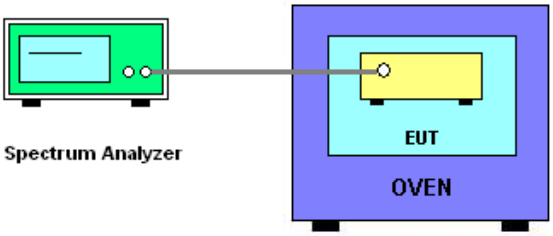
See list of measuring instruments of this test report.

3.2 Test Setup

3.2.1 20dB Spectrum Bandwidth



3.2.2 Frequency Stability



3.3 Test Result of Conducted Test Items

Please refer to Appendix C.

3.4 20dB Spectrum Bandwidth Measurement

3.4.1 Limit

Intentional radiators must be designed to ensure that the 20 dB bandwidth of the emissions in the specific band 13.553~13.567MHz

3.4.2 Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer in peak Max hold mode.
2. The resolution bandwidth of 1 kHz and the video bandwidth of 3 kHz were used.
3. Measured the spectrum width with power higher than 20dB below carrier.

3.5 Frequency Stability Measurement

3.5.1 Limit

The frequency tolerance of the carrier signal shall be maintained within +/- 0.01% (100ppm) of the operating frequency over a temperature variation of -20 degrees to +50 degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

3.5.2 Test Procedures

1. The transmitter output (antenna port) was connected to the spectrum analyzer.
2. EUT have transmitted signal and fixed channelize.
3. Set the spectrum analyzer span to view the entire emissions bandwidth.
4. Set RBW = 1 kHz, VBW = 3 kHz with peak detector and maxhold settings.
5. The fc is declaring of channel frequency. Then the frequency error formula is $(fc-f)/fc \times 10^6$ ppm and the limit is less than ±100ppm.
6. Extreme temperature rule is -20°C~50°C.

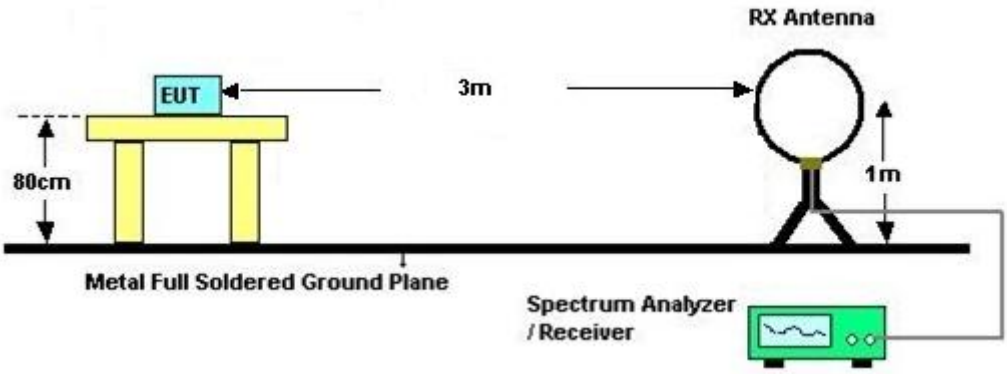
4. RADIATED TEST ITEMS

4.1 Measuring Instruments

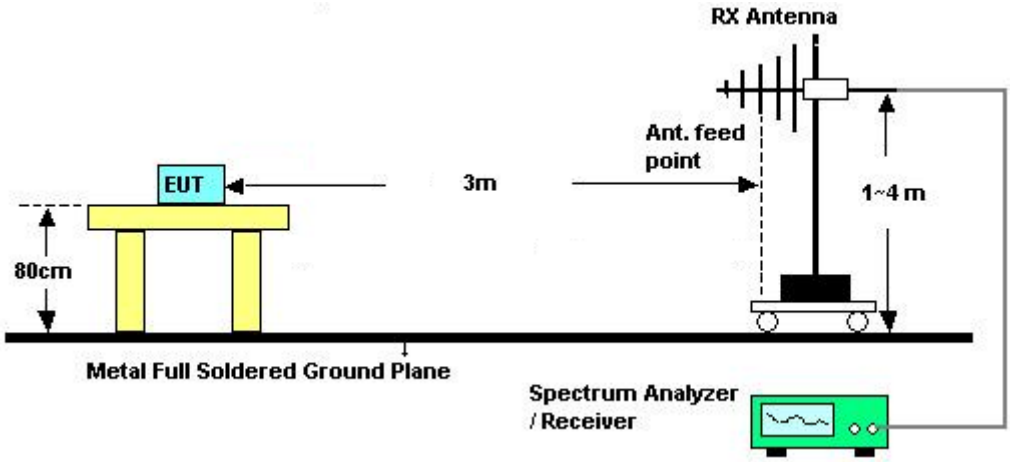
See list of measuring instruments of this test report.

4.2 Test Setup

4.2.1 For radiated emissions below 30MHz



4.2.2 For radiated emissions above 30MHz



4.3 Test Result of Radiated Test Items

Please refer to Appendix D.

4.4 Field Strength of Fundamental Emissions and Mask Measurement

4.4.1 Limit

Rules and specifications	CFR 47 Part 15 section 15.225(a)-(d)			
Description	Compliance with the spectrum mask is tested using a spectrum analyzer with RBW set to a 9kHz for the band 13.553~13.567MHz			
Freq. of Emission (MHz)	Field Strength (μV/m) at 30m	Field Strength (dBμV/m) at 30m	Field Strength (dBμV/m) at 10m	Field Strength (dBμV/m) at 3m
1.705~13.110	30	29.5	48.58	69.5
13.110~13.410	106	40.5	59.58	80.5
13.410~13.553	334	50.5	69.58	90.5
13.553~13.567	15848	84.0	103.08	124.0
13.567~13.710	334	50.5	69.58	90.5
13.710~14.010	106	40.5	59.58	80.5
14.010~30.000	30	29.5	48.58	69.5

4.4.2 Test Procedures

1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the loop receiving antenna mounted antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the receiving antenna was fixed at one meter above ground to find the maximum emissions field strength.
4. For Fundamental emissions, use the receiver to measure QP reading.
5. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
6. Compliance with the spectrum mask is tested using a spectrum analyzer with RBW set to a 9kHz for the band 13.553~13.567MHz.

Note: Emission level (dBμV/m) = 20 log Emission level (μV/m).

4.5 Radiated Emissions Measurement

4.5.1 Limit

The field strength of any emissions which appear outside of 13.553~13.567MHz band shall not exceed the general radiated emissions limits.

Frequencies (MHz)	Field Strength (μV/m)	Measurement Distance (meters)
0.009~0.490	2400/F(kHz)	300
0.490~1.705	24000/F(kHz)	30
1.705~30.0	30	30
30~88	100	3
88~216	150	3
216~960	200	3
Above 960	500	3

4.5.2 Measuring Instrument Setting

The following table is the setting of receiver.

Receiver Parameter	Setting
Attenuation	Auto
Frequency Range: 9kHz~150kHz	RBW 200Hz for QP
Frequency Range: 150kHz~30MHz	RBW 9kHz for QP
Frequency Range: 30MHz~1000MHz	RBW 120kHz for Peak

Note: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90 kHz, 110-490 kHz. Radiated emission limits in these two bands are based on measurements employing an average detector.

4.5.3 Test Procedures

1. Configure the EUT according to ANSI C63.10. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum value.
7. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. Antenna Requirements.

4.5.4 Limit

Except for special regulations, the Low-power Radio-frequency Devices must not be equipped with any jacket for installing an antenna with extension cable. An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that the user can replace a broken antenna, but the use of a standard antenna jack or electrical connector is prohibited.

4.5.5 Antenna Anti-Replacement Construction

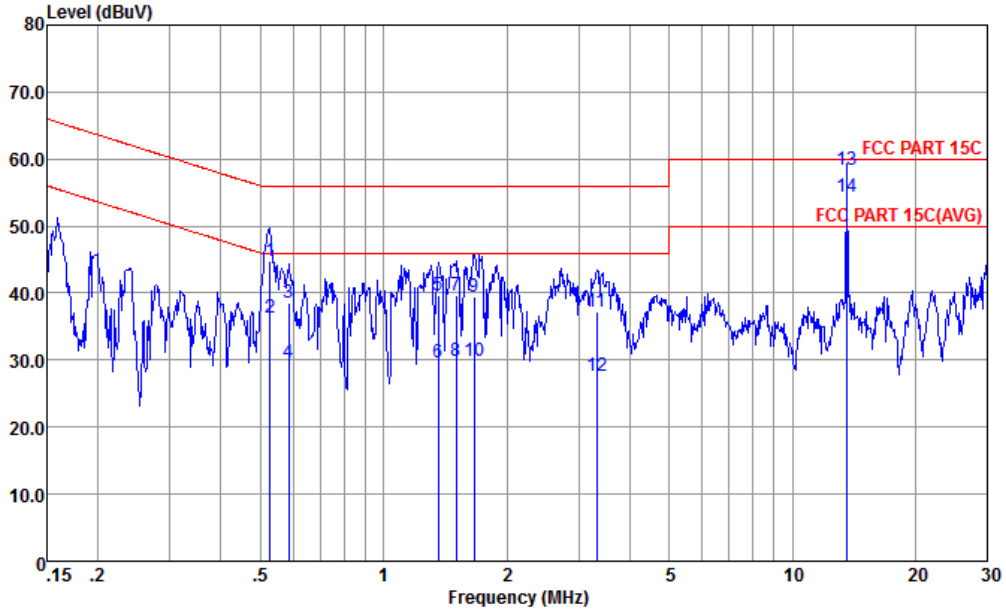
An embedded-in antenna design is used.

5. LIST OF MEASURING EQUIPMENT

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Spectrum Analyzer	R&S	FSP40	100319	9kHz~40GHz	Oct. 28, 2014	Feb. 13, 2015	Oct. 27, 2015	Conducted (TH01-KS)
Thermal Chamber	Ten Billion	TTC-B3S	TBN-960502	-40~+150°C	Oct. 25, 2014	Feb. 13, 2015	Oct. 24, 2015	Conducted (TH01-KS)
EMI Receiver	R&S	ESCI7	100768	9kHz~7GHz;	May 04, 2014	Feb. 27, 2015	May 03, 2015	Conduction (CO01-KS)
AC LISN	MessTec	AN3016	060103	9kHz~30MHz	Oct. 25, 2014	Feb. 27, 2015	Oct. 24, 2015	Conduction (CO01-KS)
AC LISN (for auxiliary equipment)	MessTec	AN3016	060105	9kHz~30MHz	Oct. 25, 2014	Feb. 27, 2015	Oct. 24, 2015	Conduction (CO01-KS)
AC Power Source	Chroma	61602	ABP000000811	AC 0V~300V, 45Hz~1000Hz	Oct. 25, 2014	Feb. 27, 2015	Oct. 24, 2015	Conduction (CO01-KS)
EMI Test Receiver	R&S	ESCI	100534	9kHz~3GHz	Oct. 25, 2014	Feb. 19, 2015	Oct. 24, 2015	Radiation (03CH01-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Nov. 13, 2014	Feb. 19, 2015	Nov. 12, 2015	Radiation (03CH01-KS)
Bilog Antenna	TeseQ	CBL6112D	23182	25Mhz-2Ghz	Jan. 17, 2015	Feb. 19, 2015	Jan. 16, 2016	Radiation (03CH01-KS)
Amplifier	com-power	PA-103A	161069	1MHz~1GHz /32dB	May 04, 2014	Feb. 19, 2015	May 03, 2015	Radiation (03CH01-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Feb. 19, 2015	NCR	Radiation (03CH01-KS)
Turn Table	MF	MF7802	N/A	0~360 degree	NCR	Feb. 19, 2015	NCR	Radiation (03CH01-KS)
Antenna Mast	MF	MF7802	N/A	1 m~4 m	NCR	Feb. 19, 2015	NCR	Radiation (03CH01-KS)

Appendix B. Test Results of Conducted Emission Test

Test Mode :	NFC Tx	Test Voltage :	120Vac / 60Hz
Function Type :	GSM850 Idle + Bluetooth Link + WLAN Link + USB Cable (Charging from Adapter 1) + Earphone + Battery 1 + NFC Tx		

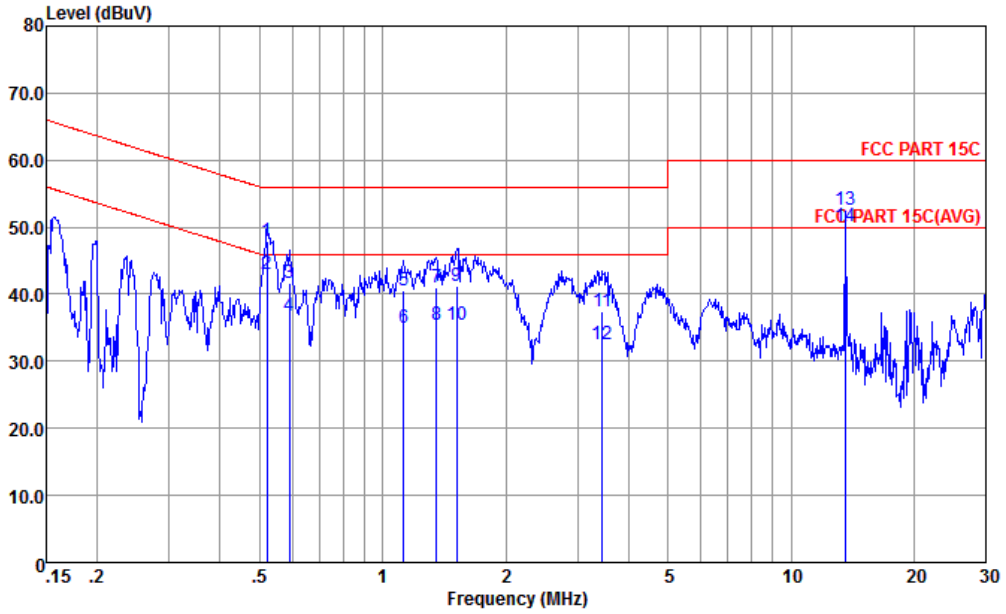


Site : CO01-KS
Condition : FCC PART 15C LISN-L20140306 LINE

	Freq MHz	Level dBuV	Over Limit dB	Limit Line dBuV	Read Level dBuV	LISN Factor dB	Cable Loss dB	Remark
1	0.53	44.73	-11.27	56.00	33.90	0.20	10.63	QP
2	0.53	36.43	-9.57	46.00	25.60	0.20	10.63	Average
3	0.59	38.53	-17.47	56.00	27.70	0.20	10.63	QP
4	0.59	29.73	-16.27	46.00	18.90	0.20	10.63	Average
5	1.36	39.57	-16.43	56.00	28.80	0.10	10.67	QP
6	1.36	29.57	-16.43	46.00	18.80	0.10	10.67	Average
7	1.50	39.58	-16.42	56.00	28.80	0.10	10.68	QP
8	1.50	29.88	-16.12	46.00	19.10	0.10	10.68	Average
9	1.66	39.49	-16.51	56.00	28.70	0.10	10.69	QP
10	1.66	29.89	-16.11	46.00	19.10	0.10	10.69	Average
11	3.33	37.17	-18.83	56.00	26.20	0.16	10.81	QP
12	3.33	27.57	-18.43	46.00	16.60	0.16	10.81	Average
13	13.56	58.38	-1.62	60.00	47.20	0.20	10.98	QP
14 *	13.56	54.48	4.48	50.00	43.30	0.20	10.98	Average

(1) The EUT is with NFC antenna during testing.

Test Mode :	NFC Tx	Test Voltage :	120Vac / 60Hz
Function Type :	GSM850 Idle + Bluetooth Link + WLAN Link + USB Cable (Charging from Adapter 1) + Earphone + Battery 1 + NFC Tx		

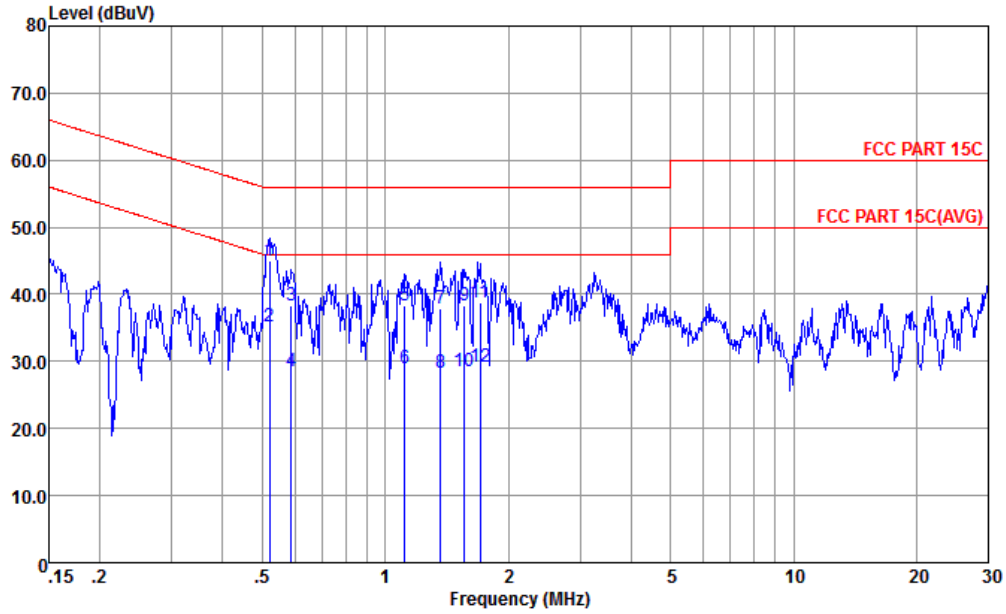


Site : CO01-KS
Condition : FCC PART 15C LISN-N20140306 NEUTRAL

	Freq MHz	Level dBuV	Over Limit dB	Limit Line dBuV	Read Level dBuV	LISN Factor dB	Cable Loss dB	Remark
1	0.52	47.92	-8.08	56.00	37.00	0.29	10.63	QP
2	0.52	42.92	-3.08	46.00	32.00	0.29	10.63	Average
3	0.59	41.58	-14.42	56.00	30.70	0.25	10.63	QP
4	0.59	36.78	-9.22	46.00	25.90	0.25	10.63	Average
5	1.12	40.66	-15.34	56.00	29.90	0.10	10.66	QP
6	1.12	34.96	-11.04	46.00	24.20	0.10	10.66	Average
7	1.35	41.07	-14.93	56.00	30.30	0.10	10.67	QP
8	1.35	35.47	-10.53	46.00	24.70	0.10	10.67	Average
9	1.52	41.28	-14.72	56.00	30.50	0.10	10.68	QP
10	1.52	35.48	-10.52	46.00	24.70	0.10	10.68	Average
11	3.45	37.48	-18.52	56.00	26.50	0.17	10.81	QP
12	3.45	32.48	-13.52	46.00	21.50	0.17	10.81	Average
13	13.56	52.57	-7.43	60.00	41.31	0.28	10.98	QP
14 *	13.56	50.07	0.07	50.00	38.81	0.28	10.98	Average

(1) The EUT is with NFC antenna during testing.

Test Mode :	NFC Tx	Test Voltage :	120Vac / 60Hz
Function Type :	GSM850 Idle + Bluetooth Link + WLAN Link + USB Cable (Charging from Adapter 1) + Earphone + Battery 1 + NFC Tx		

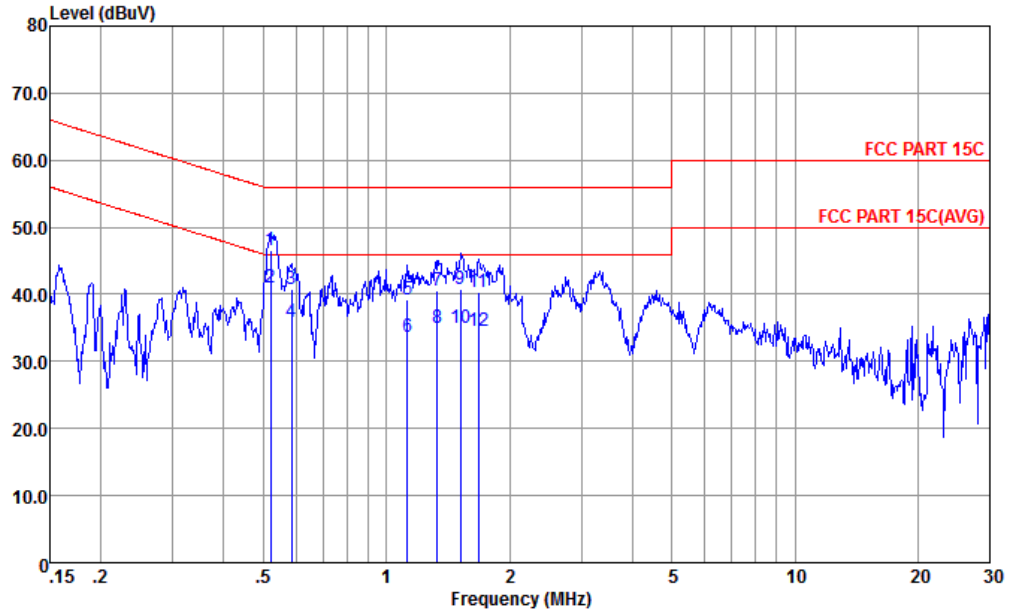


Site : CO01-KS
Condition : FCC PART 15C LISN-L20140306 LINE

		Freq	Level	Over Limit	Limit Line	Read Level	LISN Factor	Cable Loss	Remark
		MHz	dBuV	dB	dBuV	dBuV	dB	dB	
1		0.52	45.03	-10.97	56.00	34.20	0.20	10.63	QP
2	*	0.52	35.13	-10.87	46.00	24.30	0.20	10.63	Average
3		0.59	38.23	-17.77	56.00	27.40	0.20	10.63	QP
4		0.59	28.53	-17.47	46.00	17.70	0.20	10.63	Average
5		1.12	38.35	-17.65	56.00	27.60	0.10	10.65	QP
6		1.12	29.05	-16.95	46.00	18.30	0.10	10.65	Average
7		1.37	37.97	-18.03	56.00	27.20	0.10	10.67	QP
8		1.37	28.27	-17.73	46.00	17.50	0.10	10.67	Average
9		1.56	38.29	-17.71	56.00	27.50	0.10	10.69	QP
10		1.56	28.59	-17.41	46.00	17.80	0.10	10.69	Average
11		1.71	38.69	-17.31	56.00	27.90	0.10	10.69	QP
12		1.71	29.09	-16.91	46.00	18.30	0.10	10.69	Average

(2) The NFC antenna is replaced by a dummy load during test.

Test Mode :	NFC Tx	Test Voltage :	120Vac / 60Hz
Function Type :	GSM850 Idle + Bluetooth Link + WLAN Link + USB Cable (Charging from Adapter 1) + Earphone + Battery 1 + NFC Tx		



Site : CO01-KS
Condition : FCC PART 15C LISN-N20140306 NEUTRAL

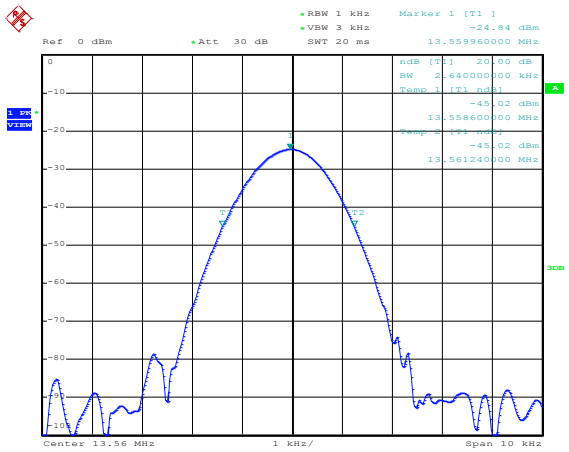
	Freq MHz	Level dBuV	Over Limit dB	Limit Line dBuV	Read Level dBuV	LISN Factor dB	Cable Loss dB	Remark
1	0.52	46.52	-9.48	56.00	35.60	0.29	10.63	QP
2 *	0.52	41.02	-4.98	46.00	30.10	0.29	10.63	Average
3	0.59	40.78	-15.22	56.00	29.90	0.25	10.63	QP
4	0.59	35.98	-10.02	46.00	25.10	0.25	10.63	Average
5	1.12	39.26	-16.74	56.00	28.50	0.10	10.66	QP
6	1.12	33.56	-12.44	46.00	22.80	0.10	10.66	Average
7	1.33	40.67	-15.33	56.00	29.90	0.10	10.67	QP
8	1.33	34.97	-11.03	46.00	24.20	0.10	10.67	Average
9	1.52	40.68	-15.32	56.00	29.90	0.10	10.68	QP
10	1.52	34.98	-11.02	46.00	24.20	0.10	10.68	Average
11	1.68	40.29	-15.71	56.00	29.50	0.10	10.69	QP
12	1.68	34.59	-11.41	46.00	23.80	0.10	10.69	Average

(2) The NFC antenna is replaced by a dummy load during test.

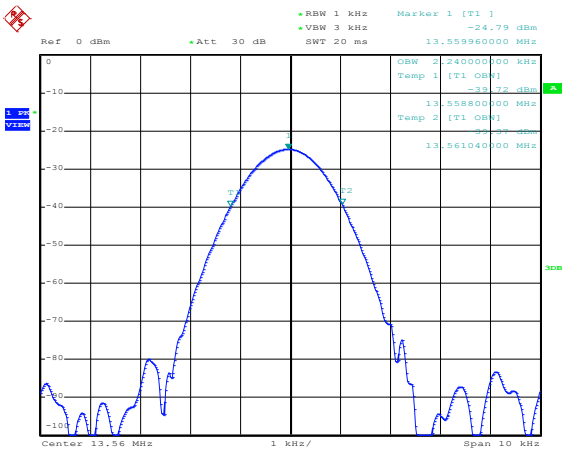
Appendix C. Test Results of Conducted Test Items

C.1 Test Result of 20dB Spectrum Bandwidth

Test mode	NFC Tx	Test Frequency (MHz)	13.56



Date: 13.FEB.2015 14:08:48



Date: 13.FEB.2015 14:10:14

20dB Bandwidth (kHz)	2.64	99% Occupied BW (kHz)	2.24
Frequency range (MHz)	f_L > 13.553	13.55860	Test Result
	f_H < 13.567	13.56124	Complies

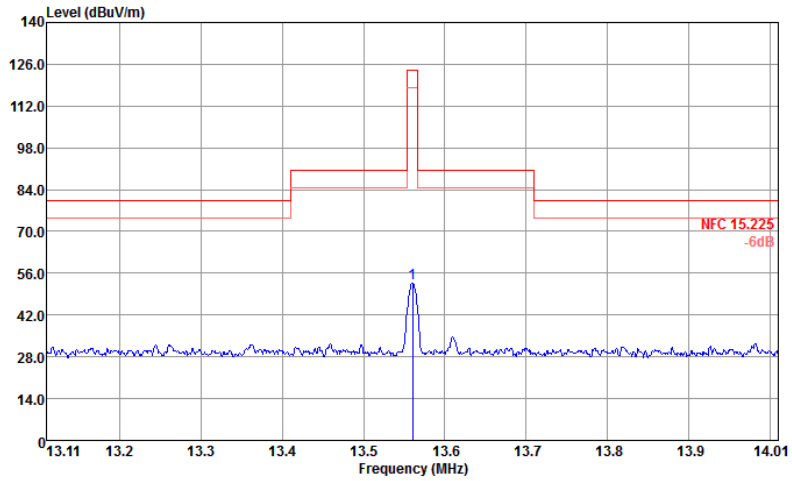
C.2 Test Result of Frequency Stability

Voltage vs. Frequency Stability		Temperature vs. Frequency Stability	
Voltage (Vac)	Measurement Frequency (MHz)	Temperature (℃)	Measurement Frequency (MHz)
120	13.559940	-20	13.560000
102	13.559920	-10	13.560000
138	13.559940	0	13.559960
-	-	10	13.559960
-	-	20	13.559920
-	-	30	13.559900
-	-	40	13.559890
-	-	50	13.559920
Max.Deviation (MHz)	-0.000080	**Max.Deviation (MHz)**	-0.000110
Max.Deviation (ppm)	-5.8997	**Max.Deviation (ppm)**	-8.1121
Limit	**FS < ±100 ppm**	**Limit**	**FS < ±100 ppm**
Test Result	**PASS**	**Test Result**	**PASS**

Appendix D. Test Results of Radiated Test Items

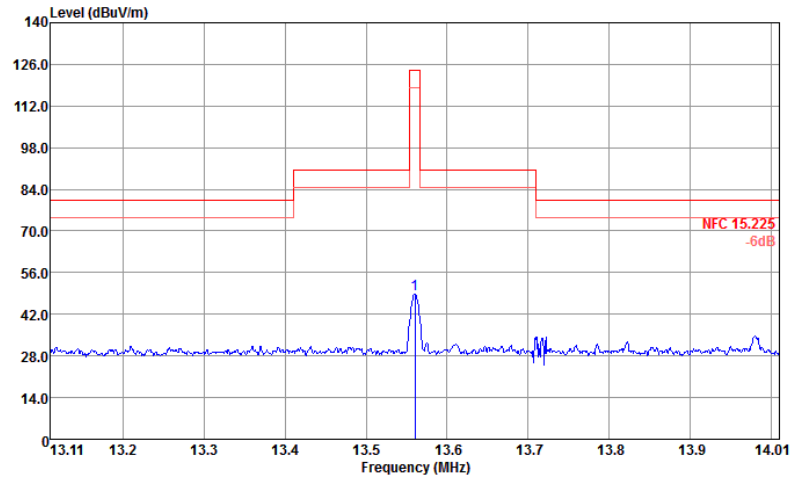
D.1 Test Result of Field Strength of Fundamental Emissions

Test Mode :	NFC Tx	Test Frequency (MHz)	13.56



Site : 03CH01-KS
Condition : NFC 15.225 3m LF LOOP ANT_140902 3 HORIZONTAL

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phas
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg		
1	13.56	52.81	-71.19	124.00	32.56	20.00	0.25	0.00	---	---	QP	HORIZONT



Site : 03CH01-KS
Condition : NFC 15.225 3m LF LOOP ANT_140902 3 VERTICAL

	Freq	Level	Over Limit	Limit Line	ReadAntenna Level	Antenna Factor	Cable Loss	Preamp Factor	A/Pos	T/Pos	Remark	Pol/Phas
	MHz	dBuV/m	dB	dBuV/m	dBuV	dB/m	dB	dB	cm	deg		
1	13.56	48.91	-75.09	124.00	28.66	20.00	0.25	0.00	---	---	QP	VERTICAL

Note: All NFC's spurious emissions are below 20dB of limits.

D.2 Results of Radiated Emissions (9 kHz~30MHz)

Test Mode :	NFC Tx	Polarization :	Horizontal

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.04	51.96	-64.74	116.70	31.95	20.00	0.01	-	-	Average
0.04	60.09	-55.55	115.64	40.08	20.00	0.01	-	-	Average
0.08	42.33	-67.67	110.00	22.32	20.00	0.01	-	-	Average
0.08	53.02	-56.67	109.69	33.01	20.00	0.01	-	-	Average
0.12	38.62	-67.69	106.31	18.61	20.00	0.01	-	-	Average
0.12	44.01	-62.18	106.19	24.00	20.00	0.01	-	-	Average
0.16	49.25	-54.40	103.65	29.24	20.00	0.01	-	-	Average
0.20	43.83	-57.90	101.73	23.82	20.00	0.01	-	-	Average
4.09	34.37	-35.17	69.54	14.21	20.00	0.16	-	-	QP
6.42	33.78	-35.76	69.54	13.59	20.00	0.19	-	-	QP
28.81	32.31	-37.23	69.54	11.96	20.00	0.35	-	-	QP

Test Mode :	NFC Tx	Polarization :	Vertical

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
0.01	49.51	-77.40	126.91	29.45	20.00	0.06	-	-	Average
0.04	44.84	-71.86	116.70	24.83	20.00	0.01	-	-	Average
0.04	43.75	-71.96	115.71	23.74	20.00	0.01	-	-	Average
0.08	38.18	-71.51	109.69	18.17	20.00	0.01	-	-	Average
0.09	29.88	-78.80	108.68	9.87	20.00	0.01	-	-	Average
0.12	32.39	-73.81	106.20	12.38	20.00	0.01	-	-	Average
0.71	45.06	-25.56	70.62	25.03	20.00	0.03	-	-	QP
3.55	35.48	-34.06	69.54	15.37	20.00	0.11	-	-	QP
4.67	39.25	-30.29	69.54	19.09	20.00	0.16	-	-	QP
7.35	36.93	-32.61	69.54	16.73	20.00	0.20	-	-	QP
26.81	33.98	-35.56	69.54	13.64	20.00	0.34	-	-	QP

Note:

1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Distance extrapolation factor = 40 log (specific distance / test distance) (dB);
3. Limit line = specific limits (dBμV) + distance extrapolation factor.

D.3 Results of Radiated Emissions (30MHz~1GHz)

Test Mode :	NFC Tx	Polarization :	Horizontal

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.97	27.06	-12.94	40.00	40.22	18.71	0.79	32.66	-	-	Peak
88.20	24.67	-18.83	43.50	46.27	9.98	1.04	32.62	-	-	Peak
158.04	36.28	-7.22	43.50	55.99	11.40	1.44	32.55	100	325	Peak
189.08	29.13	-14.37	43.50	49.78	10.21	1.61	32.47	-	-	Peak
368.53	29.32	-16.68	46.00	43.95	15.56	2.15	32.34	-	-	Peak
465.53	29.73	-16.27	46.00	42.15	17.24	2.51	32.17	-	-	Peak

Test Mode :	NFC Tx	Polarization :	Vertical

Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB)	Cable Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Remark
30.97	31.54	-8.46	40.00	44.70	18.71	0.79	32.66	100	0	Peak
45.52	27.12	-12.88	40.00	47.74	11.25	0.79	32.66	-	-	Peak
88.20	26.37	-17.13	43.50	47.97	9.98	1.04	32.62	-	-	Peak
156.10	30.86	-12.64	43.50	50.50	11.48	1.44	32.56	-	-	Peak
193.93	27.00	-16.50	43.50	47.84	10.02	1.61	32.47	-	-	Peak
462.62	32.30	-13.70	46.00	44.82	17.25	2.40	32.17	-	-	Peak

Note:

1. The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.
2. Emission level (dBμV/m) = 20 log Emission level (μV/m).
3. Corrected Reading: Antenna Factor + Cable Loss + Read Level - Preamp Factor= Level.

Appendix E. Product Equality Declaration

TCT Mobile

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

Declaration of changes from Initial (Idol 3 5.5 LATAM-6045B) to Variant (Idol 3 5.5 cricket – 6045O)

General: 6045O is a variant product of 6045B.

SOFTWARE MODIFICATIONS:

- Protocol Stack changes: NO
- MMS/STK/USAT/USIM changes: NO
- DM/SUPL/VT/FUMO/SWP/HCI: NO
- Reversible Call: NO
- Other changes detailed: 6045O have no IMS,DTM, have TTY.

HARDWARE MODIFICATIONS:

- Baseband changes: NO
- Band changes: YES

product	GSM	UMTS	LTE
6045B	850/900/1800/1900	FDD 850/900/1900/2100	B1/2/3/4/7/28
6045O	850/900/1800/1900	FDD 850/1900/1700/2100	B2/4/5/12

- Antenna changes: yes
- PCB Layout changes: no
- Main components changes:

	Base Band	Transceiver	ASM	Power Amplifier	Tx SAW Filter	Rx SAW Filter（SAW Duplexer）
GSM 850	NO	NO	NO	NO	N/A	NO
GSM 900	NO	NO	NO	NO	N/A	NO
GSM 1800	NO	NO	NO	NO	N/A	NO
GSM 1900	NO	NO	NO	NO	N/A	NO

	Base Band	Transceiver	ASM	Power Amplifier	Tx SAW Filter	Rx SAW Filter（SAW Duplexer）
UMTS FDD I	NO	NO	NO	NO	N/A	NO
UMTS FDD II	NO	NO	NO	NO	NA	NO
UMTS FDD IV	NO	NO	NO	NO	N/A	NO
UMTS FDD V	NO	NO	NO	NO	N/A	NO

	Base Band	Transceiver	ASM	Power Amplifier	Tx SAW Filter	Rx SAW Filter（SAW Duplexer）
LTE B2	NO	NO	NO	NO	N/A	NO
LTE B4	NO	NO	NO	NO	N/A	NO
LTE B5	NO	NO	NO	NO	N/A	NO
LTE B12	NO	NO	NO	NO	N/A	YES

- Bluetooth changes: NO
- WiFi changes: NO
- FM changes: NO
- Other components changes:NO

TP/LCD/ Camera changes: NO

- Other changes detailed: 6045O support HSDPA Category 14 and GPRS/EDGE class 10. 6045B support HSDPA Category 24 and GPRS/EDGE class 12.

MECHANICAL MODIFICATIONS:

- Use new metal front/back cover or keypad: NO
- Mechanical shell changes: NO

  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

APPROVED BY:

Project Manager:
Signature: 李海光
Date: 2015.8.27