



FCC RF Test Report

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2153-1
FCC ID : IHDT56ZW2
STANDARD : 47 CFR Part 2, 22(H), 24(E), 27(L)
CLASSIFICATION : PCS Licensed Transmitter Held to Ear (PCE)
TEST DATE(S) : May 30, 2021

We, Sporton International (Shenzhen) Inc., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown 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.

Reviewed by: Derreck Chen / Supervisor

Approved by: Eric Shih / Manager



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People's Republic of China



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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FG151407A	Rev. 01	Initial issue of report	Jun. 29, 2021
FG151407A	Rev. 02	Modify Antenna type	Jul. 01, 2021



SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit	Result	Remark
3.4	§2.1046	Conducted Output Power	Reporting Only	PASS	-
	§22.913(a)(5)	Effective Radiated Power	< 7 Watts	PASS	-
	§24.232(c)	Equivalent Isotropic Radiated Power	< 2 Watts	PASS	-
	§27.50(d)(4)	Equivalent Isotropic Radiated Power	< 1 Watts	PASS	-
4.4	§2.1053; §22.917(a); §24.238(a); §27.53(h)	Field Strength of Spurious Radiation	< 43+10log10(P[Watts])	PASS	Under limit 36.17 dB at 5197.80 MHz

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.



1 General Description

1.1 Applicant

Motorola Mobility LLC
222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.2 Manufacturer

Motorola Mobility LLC
222 W,Merchandise Mart Plaza, Chicago IL 60654 USA

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Cellular Phone
Brand Name	Motorola
Model Name	XT2153-1
FCC ID	IHDT56ZW2
EUT supports Radios application	GSM/WCDMA/LTE/5G NR WLAN 2.4GHz 802.11b/g/n/ac/ax HT20/VHT20/HE20 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 WLAN 5GHz 802.11ax HE20/HE40/HE80 Bluetooth BR/EDR/LE NFC and GNSS
IMEI Code	Radiated: 356368690018156/356368690018164
HW Version	DVT2
SW Version	RRA31.43
EUT Stage	Identical Prototype

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 of Equipment Under Test

Standards-related Product Specification	
Tx Frequency	GSM/GPRS/EDGE: 850: 824 MHz ~ 849 MHz 1900: 1850MHz ~ 1910MHz WCDMA: Band V: 824 MHz ~ 849 MHz Band II: 1850 MHz ~ 1910 MHz Band IV: 1710 MHz ~ 1755 MHz
Rx Frequency	GSM/GPRS/EDGE: 850: 869 MHz ~ 894 MHz 1900: 1930 MHz ~ 1990 MHz WCDMA: Band V: 869 MHz ~ 894 MHz Band II: 1930 MHz ~ 1990 MHz Band IV: 2110 MHz ~ 2155 MHz
Antenna Type	DILA Antenna
Antenna Gain	Cellular Band: -4.6 dBi PCS Band: -1.6 dBi AWS Band: -1.2 dBi
Type of Modulation	GSM: GMSK GPRS: GMSK EDGE: GMSK / 8PSK WCDMA : BPSK HSDPA/DC-HSDPA : QPSK HSUPA : QPSK HSPA+ : 16QAM(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, Frequency Tolerance, and Emission Designator

FCC Rule	System	Type of Modulation	Maximum ERP/EIRP (W)	Frequency Tolerance (ppm)	Emission Designator
Part 22H	GSM850 GSM	GMSK	0.3499	0.0191 ppm	242KGXW
Part 22H	GSM850 EDGE class 8	8PSK	0.0861	0.0244 ppm	243KG7W
Part 22H	WCDMA Band V RMC 12.2Kbps	BPSK	0.0420	0.0278 ppm	4M15F9W
Part 24E	GSM1900 GSM	GMSK	0.6039	0.0145 ppm	242KGXW
Part 24E	GSM1900 EDGE class 8	8PSK	0.2312	0.0174 ppm	246KG7W
Part 24E	WCDMA Band II RMC 12.2Kbps	BPSK	0.1413	0.0174 ppm	4M15F9W
Part 27L	WCDMA Band IV RMC 12.2Kbps	BPSK	0.1581	0.0151 ppm	4M15F9W



1.7 Re-use of Measured Data

1.7.1 Introduction Section

This application re-uses data collected on a similar device. The subject device of this application (Model: XT2153-1, FCC ID: IHDT56ZW2) is electrically identical to the reference device (Model: XT2125-4, FCC ID: IHDT56ZR1) for the portions of the circuitry corresponding to the data being re-used. Based on their similarity, FCC Part 22, 24, 27(equipment class: PCE) reuse the original model's result and do spot-check, following the FCC KDB 484596 D01 v01.

The applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID: IHDT56ZW2.

1.7.2 Difference Section

Some PCBA components and Antenna match are different. For details concerning the similarity with respect to component placement, mechanical/electrical design etc., please refer to the Product Equality Declaration.

The re-used RF data includes the following bands provided in Appendix C (Sporton RF Report No. FG0N0201A for the reference device Model: XT2125-4, FCC ID: IHDT56ZR1).

1.7.3 Reference detail Section:

Equipment Class	Reference FCC ID	Folder Test	Report Title/Section
PCE (GSM, WCDMA)	IHDT56ZR1	Part22H.24E.27L (FG0N0201A)	Except Power/ERP/EIRP/RSE, all the other Conducted results applicable for GSM 850/1900, WCDMA Band II/IV/V

1.7.4 Spot Check Verification Data Section

In order to confirm hardware similarity of the subject device with the reference device, spot check measurements were performed on the subject device for the conducted power, the test result were consistent with FCC ID: IHDT56ZR1.

Assertions concerning the similarity of these devices are based on representations by the applicant. The applicant accepts full responsibility for the validity of the similarity claim, and for the determination that verification test data are sufficient to support it.

Test Item	Mode	IHDT56ZR1 Worst Result	IHDT56ZW2 Worst Result	Difference (dB)
Average Conducted Power (dBm)	GSM 850	32.29	32.19	-0.1
	GSM1900	29.91	29.41	-0.5
	WCDMA Band II	23.32	23.10	-0.22
	WCDMA Band IV	23.33	23.19	-0.14
	WCDMA Band V	23.18	22.98	-0.2



1.8 Testing Location

Sporton International (Shenzhen) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

Test Firm	Sporton International (Shenzhen) Inc.		
Test Site Location	101, 1st Floor, Block B, Building 1, No. 2, Tengfeng 4th Road, Fenghuang Community, Fuyong Street, Baoan District, Shenzhen City Guangdong Province China 518103 TEL: +86-755-33202398		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH01-SZ	CN1256	421272

Test Firm	Sporton International (Shenzhen) Inc.		
Test Site Location	1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People’s Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	TH01-SZ	CN1256	421272

1.9 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH01-SZ	AUDIX	E3	6.2009-8-24



1.10 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), 27(L)
- ♦ ANSI C63.26-2015
- ♦ FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01
- ♦ FCC KDB 412172 D01 Determining ERP and EIRP v01r01

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.

1.11 Specification of Accessory

Specification of Accessory				
AC Adapter 1(US)	Brand Name	Motorola (Acbel)	Model Name	MC-301
AC Adapter 1(EU)	Brand Name	Motorola (Acbel)	Model Name	MC-302
AC Adapter 1(UK)	Brand Name	Motorola (Acbel)	Model Name	MC-303
AC Adapter 1(IN)	Brand Name	Motorola (Acbel)	Model Name	MC-304
AC Adapter 1(AU)	Brand Name	Motorola (Acbel)	Model Name	MC-305
AC Adapter 1(AR)	Brand Name	Motorola (Acbel)	Model Name	MC-306
AC Adapter 2(US)	Brand Name	Motorola (Salom)	Model Name	MC-301
AC Adapter 2(EU)	Brand Name	Motorola (Salom)	Model Name	MC-302
AC Adapter 2(UK)	Brand Name	Motorola (Salom)	Model Name	MC-303
AC Adapter 2(AU)	Brand Name	Motorola (Salom)	Model Name	MC-305
AC Adapter 2(AR)	Brand Name	Motorola (Salom)	Model Name	MC-306
AC Adapter 2(BR)	Brand Name	Motorola (Salom)	Model Name	MC-307
AC Adapter 2(BR)	Brand Name	Motorola (flex)	Model Name	MC-307
Battery	Brand Name	Motorola (ATL)	Model Name	MT45
Earphone	Brand Name	Motorola (Lyand)	Model Name	MD211(SH38D20195)
USB Cable 1	Brand Name	Motorola (Luxshare)	Model Name	SC18D13217
USB Cable 2	Brand Name	Motorola (Saibao)	Model Name	SC18D13215
USB Cable 3	Brand Name	Motorola (Cabletech)	Model Name	SC18D13216
HDMI Cable	Brand Name	Motorola (Linxee)	Model Name	SC18D02146



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 v03r01 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:

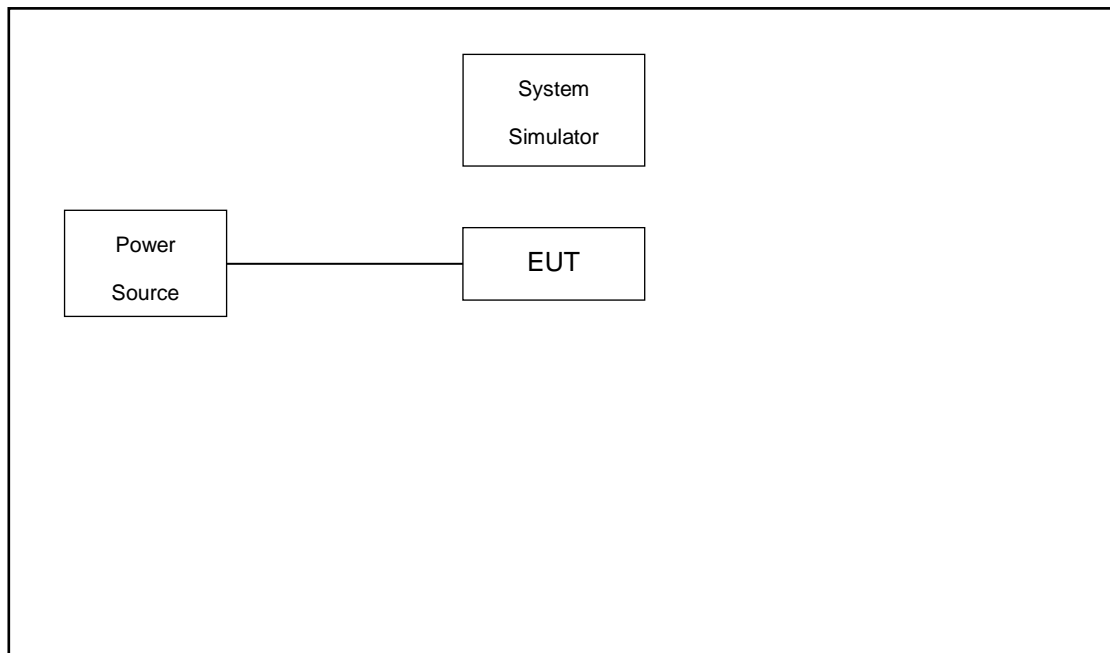
1. 30 MHz to 9000 MHz for GSM850 and WCDMA Band V.
2. 30 MHz to 18000 MHz for WCDMA Band IV.
3. 30 MHz to 19100 MHz for GSM1900 and WCDMA Band II.

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	<ul style="list-style-type: none"> ■ GSM Link ■ EDGE class 8 Link 	<ul style="list-style-type: none"> ■ GSM Link ■ EDGE class 8 Link
GSM 1900	<ul style="list-style-type: none"> ■ GSM Link ■ EDGE class 8 Link 	<ul style="list-style-type: none"> ■ GSM Link ■ EDGE class 8 Link
WCDMA Band V	<ul style="list-style-type: none"> ■ RMC 12.2Kbps Link 	<ul style="list-style-type: none"> ■ RMC 12.2Kbps Link
WCDMA Band II	<ul style="list-style-type: none"> ■ RMC 12.2Kbps Link 	<ul style="list-style-type: none"> ■ RMC 12.2Kbps Link
WCDMA Band IV	<ul style="list-style-type: none"> ■ RMC 12.2Kbps Link 	<ul style="list-style-type: none"> ■ RMC 12.2Kbps Link

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.	Base Station	Anritsu	MT8820C	Fcc DoC	N/A	Shielded, 1.5m

2.4 Frequency List of Low/Middle/High Channels

Frequency List				
Band	Channel/Frequency(MHz)	Lowest	Middle	Highest
GSM850	Channel	128	189	251
	Frequency	824.2	836.4	848.8
WCDMA Band V	Channel	4132	4182	4233
	Frequency	826.4	836.4	846.6
GSM1900	Channel	512	661	810
	Frequency	1850.2	1880.0	1909.8
WCDMA Band II	Channel	9262	9400	9538
	Frequency	1852.4	1880.0	1907.6
WCDMA Band IV	Channel	1312	1413	1513
	Frequency	1712.4	1732.6	1752.6

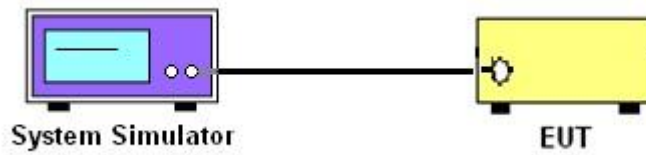
3 Conducted Test Result

3.1 Measuring Instruments

See list of measuring instruments of this test report.

3.2 Test Setup

3.2.1 Conducted Output Power



3.3 Test Result of Conducted Test

Please refer to Appendix A.



3.4 Conducted Output Power and ERP/EIRP

3.4.1 Description of the Conducted Output Power and ERP/EIRP

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.

The ERP of mobile transmitters must not exceed 7 Watts for GSM850 and WCDMA Band V and CDMA BC0.

The EIRP of mobile transmitters must not exceed 2 Watts for GSM1900 and WCDMA Band II and CDMA BC1.

The EIRP of mobile transmitters must not exceed 1 Watts for WCDMA Band IV.

According to KDB 412172 D01 Power Approach,

$EIRP = P_T + G_T - L_C$, $ERP = EIRP - 2.15$, where

P_T = transmitter output power in dBm

G_T = gain of the transmitting antenna in dBi

L_C = signal attenuation in the connecting cable between the transmitter and antenna in dB

3.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.2
2. The transmitter output port was connected to the system simulator.
3. Set EUT at maximum power through the system simulator.
4. Select lowest, middle, and highest channels for each band and different modulation.
5. Measure and record the power level from the system simulator.

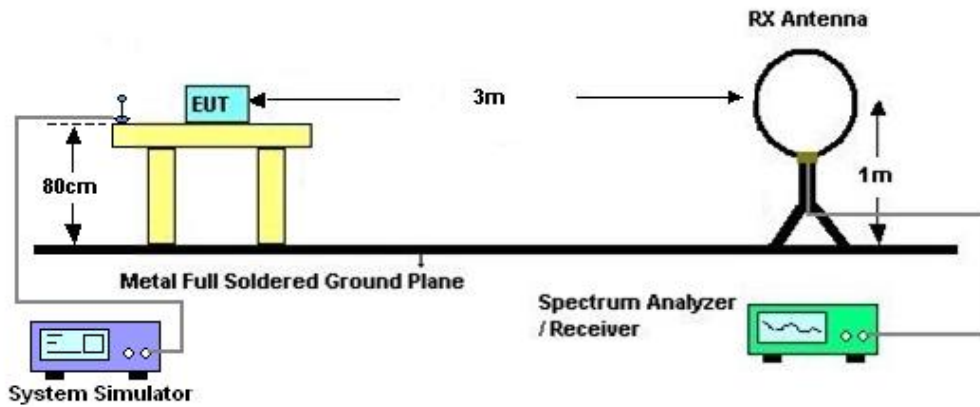
4 Radiated Test Items

4.1 Measuring Instruments

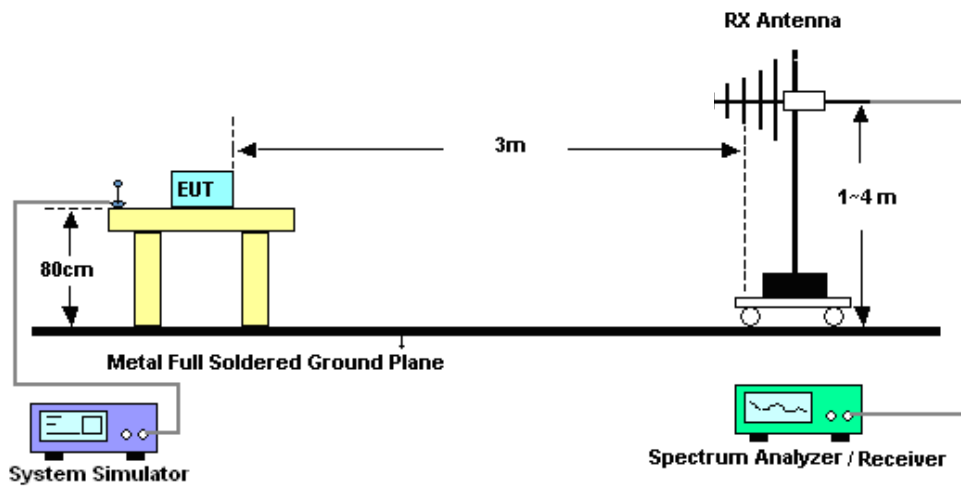
See list of measuring instruments of this test report.

4.2 Test Setup

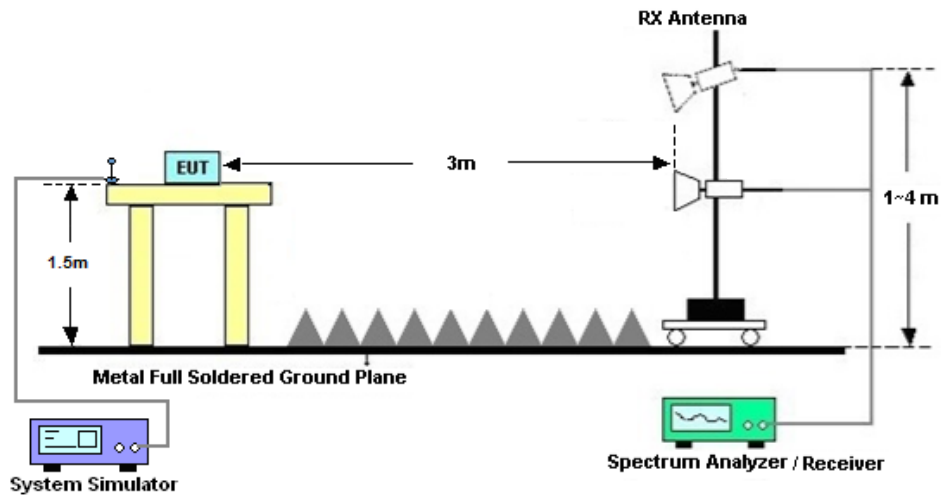
4.2.1 For radiated test below 30MHz



4.2.2 For radiated test from 30MHz to 1GHz



4.2.3 For radiated test above 1GHz



4.3 Test Result of Radiated Test

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

Please refer to Appendix B.



4.4 Field Strength of Spurious Radiation Measurement

4.4.1 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.

4.4.2 Test Procedures

1. The testing follows ANSI C63.26 Section 5.5
2. The EUT was placed on a rotatable wooden table 0.8 meters for frequency below 1GHz and 1.5 meter for frequency above 1GHz 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. $EIRP \text{ (dBm)} = S.G. \text{ Power} - Tx \text{ Cable Loss} + Tx \text{ Antenna Gain}$
12. $ERP \text{ (dBm)} = EIRP - 2.15$
13. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
14. The limit line is derived from $43 + 10\log(P)$ dB below the transmitter power P(Watts)



5 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
Radio communication analyzer	Anritsu	MT8820C	6201563777	2G/3G/4G	Dec. 25, 2020	May 30, 2021	Dec. 24, 2021	Conducted (TH1-SZ)
EMI Test Receiver&SA	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Jul. 21, 2020	May 30, 2021	Jul. 20, 2021	Radiation (03CH01-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jul. 22, 2020	May 30, 2021	Jul. 21, 2022	Radiation (03CH01-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5Ghz	Oct. 16, 2020	May 30, 2021	Oct. 15, 2021	Radiation (03CH01-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz-2GHz	Jul. 15, 2020	May 30, 2021	Jul. 14, 2021	Radiation (03CH01-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 25, 2020	May 30, 2021	Jul. 24, 2021	Radiation (03CH01-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18Ghz-40GHz	Apr. 23, 2021	May 30, 2021	Apr. 22, 2022	Radiation (03CH01-SZ)
LF Amplifier	Burgeon	BPA-530	102209	0.01~3000Mhz	Apr. 18, 2021	May 30, 2021	Apr. 17, 2022	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	AMF-7D-00 101800-30-1 0P-R	1943528	1GHz~18GHz	Oct. 17, 2020	May 30, 2021	Oct. 16, 2021	Radiation (03CH01-SZ)
HF Amplifier	MITEQ	TTA1840-35 -HG	1871923	18GHz~40GHz	Jul. 21, 2020	May 30, 2021	Jul. 20, 2021	Radiation (03CH01-SZ)
AC Power Source	Chroma	61601	61601000198 5	N/A	NCR	May 30, 2021	NCR	Radiation (03CH01-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	May 30, 2021	NCR	Radiation (03CH01-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	May 30, 2021	NCR	Radiation (03CH01-SZ)

NCR: No Calibration Required



6 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

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

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	2.48dB
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Uncertainty of Radiated Emission Measurement (1 GHz ~ 18 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	3.53dB
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Uncertainty of Radiated Emission Measurement (18 GHz ~ 40 GHz)

Measuring Uncertainty for a Level of Confidence of 95% (U = 2Uc(y))	4.02dB
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Appendix A. Test Results of Conducted Power and ERP/EIRP

GSM850 ($G_T - L_C = -4.6$ dB)			
Channel	128	189	251
	(Low)	(Mid)	(High)
Frequency	824.2	836.4	848.8
(MHz)			
Conducted Power (dBm)	32.19	32.08	31.94
Conducted Power (Watts)	1.6558	1.6144	1.5631
ERP(dBm)	25.44	25.33	25.19
ERP(Watts)	0.3499	0.3412	0.3304

EDGE850 ($G_T - L_C = -4.6$ dB)			
Channel	128	189	251
	(Low)	(Mid)	(High)
Frequency	824.2	836.4	848.8
(MHz)			
Conducted Power (dBm)	26.10	26.01	25.82
Conducted Power (Watts)	0.4074	0.3990	0.3819
ERP(dBm)	19.35	19.26	19.07
ERP(Watts)	0.0861	0.0843	0.0807



GSM1900 ($G_T - L_C = -1.6$ dB)			
Channel	512	661	810
	(Low)	(Mid)	(High)
Frequency	1850.2	1880	1909.8
(MHz)			
Conducted Power (dBm)	29.17	29.41	29.23
Conducted Power (Watts)	0.8260	0.8730	0.8375
EIRP(dBm)	27.57	27.81	27.63
EIRP(Watts)	0.5715	0.6039	0.5794

EDGE1900 ($G_T - L_C = -1.6$ dB)			
Channel	512	661	810
	(Low)	(Mid)	(High)
Frequency	1850.2	1880	1909.8
(MHz)			
Conducted Power (dBm)	25.14	25.24	25.18
Conducted Power (Watts)	0.3266	0.3342	0.3296
EIRP(dBm)	23.54	23.64	23.58
EIRP(Watts)	0.2259	0.2312	0.2280



WCDMA Band V ($G_T - L_C = -4.6$ dB)			
Channel	4132	4182	4233
	(Low)	(Mid)	(High)
Frequency	826.4	836.4	846.6
(MHz)			
Conducted Power (dBm)	22.89	22.83	22.98
Conducted Power (Watts)	0.1945	0.1919	0.1986
ERP(dBm)	16.14	16.08	16.23
ERP(Watts)	0.0411	0.0406	0.0420

WCDMA Band II ($G_T - L_C = -1.6$ dB)			
Channel	9262	9400	9538
	(Low)	(Mid)	(High)
Frequency	1852.4	1880	1907.6
(MHz)			
Conducted Power (dBm)	22.97	23.10	23.08
Conducted Power (Watts)	0.1982	0.2042	0.2032
EIRP(dBm)	21.37	21.50	21.48
EIRP(Watts)	0.1371	0.1413	0.1406

WCDMA Band IV ($G_T - L_C = -1.2$ dB)			
Channel	1312	1413	1513
	(Low)	(Mid)	(High)
Frequency	1712.4	1732.6	1752.6
(MHz)			
Conducted Power (dBm)	23.02	23.19	22.91
Conducted Power (Watts)	0.2004	0.2084	0.1954
EIRP(dBm)	21.82	21.99	21.71
EIRP(Watts)	0.1521	0.1581	0.1483



Appendix B. Test Results of Radiated Test

Radiated Spurious Emission

GSM850 (GSM)									
Channel	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)
Middle	1672.8	-59.27	-13	-46.27	-70.98	-62.52	4.00	9.40	H
	2509.2	-50.51	-13	-37.51	-69.41	-54.08	4.88	10.60	H
	3345.6	-57.87	-13	-44.87	-78.94	-62.80	5.52	12.60	H
	1672.8	-54.75	-13	-41.75	-67.17	-58.00	4.00	9.40	V
	2509.2	-55.57	-13	-42.57	-74.68	-59.14	4.88	10.60	V
	3345.6	-57.55	-13	-44.55	-78.92	-62.48	5.52	12.60	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

GSM850 (EDGE class 8)									
Channel	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)
Middle	1672.8	-64.44	-13	-51.44	-76.15	-67.69	4.00	9.40	H
	2509.2	-50.45	-13	-37.45	-69.35	-54.02	4.88	10.60	H
	3345.6	-57.66	-13	-44.66	-78.73	-62.59	5.52	12.60	H
	1672.8	-63.79	-13	-50.79	-76.21	-67.04	4.00	9.40	V
	2509.2	-58.38	-13	-45.38	-77.49	-61.95	4.88	10.60	V
	3345.6	-57.31	-13	-44.31	-78.68	-62.24	5.52	12.60	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

WCDMA Band V(RMC 12.2Kbps)									
Channel	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)
Middle	1672.8	-64.48	-13	-51.48	-76.19	-67.73	4.00	9.40	H
	2509.2	-58.72	-13	-45.72	-77.62	-62.29	4.88	10.60	H
	3345.6	-58.02	-13	-45.02	-79.09	-62.95	5.52	12.60	H
	1672.8	-63.89	-13	-50.89	-76.31	-67.14	4.00	9.40	V
	2509.2	-58.72	-13	-45.72	-77.83	-62.29	4.88	10.60	V
	3345.6	-57.63	-13	-44.63	-79.00	-62.56	5.52	12.60	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



GSM1900 (GSM)									
Channel	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)
Middle	3760	-57.25	-13	-44.25	-79.59	-64.00	5.85	12.60	H
	5640	-56.86	-13	-43.86	-80.98	-62.66	7.30	13.10	H
	7520	-54.62	-13	-41.62	-80.90	-57.77	8.35	11.50	H
	3760	-54.64	-13	-41.64	-80.14	-61.39	5.85	12.60	V
	5640	-56.56	-13	-43.56	-80.83	-62.36	7.30	13.10	V
	7520	-54.46	-13	-41.46	-80.72	-57.61	8.35	11.50	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

GSM1900 (EDGE class 8)									
Channel	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)
Middle	3760	-57.49	-13	-44.49	-79.83	-64.24	5.85	12.60	H
	5640	-56.39	-13	-43.39	-80.51	-62.19	7.30	13.10	H
	7520	-54.37	-13	-41.37	-80.65	-57.52	8.35	11.50	H
	3760	-54.54	-13	-41.54	-80.04	-61.29	5.85	12.60	V
	5640	-56.43	-13	-43.43	-80.7	-62.23	7.30	13.10	V
	7520	-54.81	-13	-41.81	-81.07	-57.96	8.35	11.50	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

WCDMA Band II(RMC 12.2Kbps)									
Channel	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)
Middle	3760	-57.28	-13	-44.28	-79.62	-64.03	5.85	12.60	H
	5640	-56.61	-13	-43.61	-80.73	-62.41	7.30	13.10	H
	7520	-54.35	-13	-41.35	-80.63	-57.50	8.35	11.50	H
	3760	-54.94	-13	-41.94	-80.44	-61.69	5.85	12.60	V
	5640	-56.59	-13	-43.59	-80.86	-62.39	7.30	13.10	V
	7520	-54.64	-13	-41.64	-80.9	-57.79	8.35	11.50	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



WCDMA Band IV(RMC 12.2Kbps)									
Channel	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)
Middle	3465.2	-57.39	-13	-44.39	-79.34	-64.24	5.65	12.50	H
	5197.8	-49.17	-13	-36.17	-73.33	-54.84	7.13	12.80	H
	6930.4	-55.11	-13	-42.11	-80.81	-58.51	8.40	11.80	H
	3465.2	-56.91	-13	-43.91	-78.66	-63.76	5.65	12.50	V
	5197.8	-49.84	-13	-36.84	-74.27	-55.51	7.13	12.80	V
	6930.4	-54.24	-13	-41.24	-80.86	-57.64	8.40	11.80	V

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.



Appendix D. Reference Report

Please refer to Sporton report number FG0N0201A which is issued separately.