



Spot Check Evaluation

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2113-1, XT2113-1PP
FCC ID : IHDT56ZF3
STANDARD : 47 CFR Part 15 Subpart C §15.225
47 CFR Part 15 Subpart C §15.247
47 CFR Part 15 Subpart E §15.407
TEST DATE(S) : Mar. 18, 2021

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.

Jason Jia

Reviewed by: Jason Jia / Supervisor

Alex Wang

Approved by: Alex Wang / Manager



Sporton International (Kunshan) Inc.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
082402-06	Rev. 01	Initial issue of report	Apr. 22, 2021
082402-06	Rev. 02	Add test site information	May. 11, 2021



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	XT2113-1, XT2113-1PP
FCC ID	IHDT56ZF3
EUT supports Radios application	GSM/WCDMA/LTE/5G NR/NFC WLAN 2.4GHz 802.11b/g/n HT20 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE FM Receiver and GNSS
HW Version	DVT2
SW Version	RRV31.Q2-20
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 Specification of Accessory

Specification of Accessory				
AC Adapter	Brand Name	Motorola (Chenyang)	Model Name	MC-201
Battery	Brand Name	Motorola (Amperex)	Model Name	MK50
USB Cable 1	Brand Name	Motorola (Saibao)	Model Name	SC18C24367
USB Cable 2	Brand Name	Motorola (Luxshare)	Model Name	SC18C24368
USB Cable 3	Brand Name	Motorola (I SHENG)	Model Name	SC18C28955

1.5 Modification of EUT

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



1.6 Testing Location

Sporton International (Kunshan) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International (Kunshan) Inc.		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH06-KS	CN1257	314309

1.7 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH06-KS	AUDIX	E3	6.2009-8-24al



2 Re-use of Measured Data

2.1 Introduction Section

This application re-uses data collected on a similar device. The subject device of this application (Model: XT2113-1, XT2113-1PP, FCC ID: IHDT56ZF3) is electrically identical to the reference device (Model: XT2113-3, FCC ID: IHDT56ZF4) for the portions of the circuitry corresponding to the data being re-used. Based on their similarity, the FCC Part 15C (equipment class: DTS, DSS, DXX) and FCC Part 15E (equipment class: NII) 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: IHDT56ZF3 .

2.2 Model Difference Information

The **main** difference between FCC ID: IHDT56ZF4 and FCC ID: IHDT56ZF3 is as below:

- Add LTE Band 13/17/48 and 5G NR Band n2/n77/n78.
- Delete WCDMA Band IV, LTE Band 26/38/41 and 5G NR Band n7.
- Antenna / PCB comment / number of SIM difference.

Other differences and all the details of similarity and difference can be found in the confidential documents.

**2.3 Reference detail Section:**

Rule Part	Equipment Class	Frequency Band (MHz)	Reference FCC ID(Parent)	Type Grant/ Permissive Change	Reference Title	FCC ID Filling (Variant)	Report Title/Section
15C	DSS (BR/EDR)	2400~2483.5	IHDT56ZF4	Original Grant	FR082402-01A	IHDT56ZF3	All sections applicable
	DTS (BLE)	2400~2483.5	IHDT56ZF4	Original Grant	FR082402-01B	IHDT56ZF3	All sections applicable
	DTS (WLAN)	2400~2483.5	IHDT56ZF4	Original Grant	FR082402-01C	IHDT56ZF3	All sections applicable
	DXX (NFC)	13.56	IHDT56ZF4	Original Grant	FR082402-01D	IHDT56ZF3	All sections applicable
15E	U-NII-1	5150~5250	IHDT56ZF4	Original Grant	FR082402-01E	IHDT56ZF3	All sections applicable
	U-NII-2A	5250~5350	IHDT56ZF4	Original Grant	FR082402-01E	IHDT56ZF3	All sections applicable
	U-NII-2C	5470~5725	IHDT56ZF4	Original Grant	FR082402-01E	IHDT56ZF3	All sections applicable
	U-NII-3	5725~5850	IHDT56ZF4	Original Grant	FR082402-01F	IHDT56ZF3	All sections applicable
	DFS	5250~5350 5470~5725	IHDT56ZF4	Original Grant	FZ082402-01	IHDT56ZF3	All sections applicable



2.4 Spot Check Verification Data Section

Radiated spurious emission test against the variant model based on the worst-case condition from the original model was performed in this filing to demonstrate the test data from original model remains representative for the variant model

Summary for RSE spot check for each rule entry and technology is listed as below:

Test Item	Mode	IHDT56ZF4 Parent Worst Result	IHDT56ZF3 Variant Check Result	Difference (dB)
Radiated Spurious Emission (dBuV/m) @ 3m	BT-3Mbps CH78	57.47	56.49	0.98
	BLE4.2(1Mbps) CH39	48.99	46.21	2.78
	BLE5.0(2Mbps) CH39	51.08	48.54	2.54
	WLAN 2.4GHz 802.11g CH11	50.98	49.99	0.99
	WLAN 5GHz 802.11a CH64	50.74	50.62	0.12
	WLAN 5GHz 802.11ac VHT80 CH155	61.91	62.53	-0.62

Conclusion:

Radiated spurious emission test against the variant model based on the worst-case condition from the original model was performed in this filing to demonstrate the test data from original model remains representative for the variant model.

Based on the spot check test result, the test data from the original model is representative for the variant model. The RSE spot check are shown within expected level compliant to limit line.

We are using power and ERP/EIRP measurements from the original parent model reports to list on the grant.

The same DFS detection is used in the variant. Hence, there is no spot check data for DFS.

We confirm that the test data reuse policy of FCC KDB 484596 D01 Referencing Test Data v01 has been followed and the test data as referenced from the parent model report represents compliance with new FCC ID.



3 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver	Keysight	N9038A	MY56400004	3Hz~8.5GHz;Max 30dBm	Oct. 17, 2020	Mar. 18, 2021	Oct. 16, 2021	Radiation (03CH06-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150208	10Hz~44GHz	Apr. 14, 2020	Mar. 18, 2021	Apr. 13, 2021	Radiation (03CH06-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Nov. 01, 2020	Mar. 18, 2021	Oct. 31, 2021	Radiation (03CH06-KS)
Bilog Antenna	TeseQ	CBL6111D	49921	30MHz~1GHz	May 29, 2020	Mar. 18, 2021	May 28, 2021	Radiation (03CH06-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00218652	1GHz~18GHz	Apr. 27, 2020	Mar. 18, 2021	Apr. 26, 2021	Radiation (03CH06-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Nov. 06, 2020	Mar. 18, 2021	Nov. 05, 2021	Radiation (03CH06-KS)
Amplifier	SONOMA	310N	187289	9KHz ~1GHZ	Apr. 14, 2020	Mar. 18, 2021	Apr. 13, 2021	Radiation (03CH06-KS)
Amplifier	MITEQ	EM18G40GGA	060728	18~40GHz	Jan. 06, 2021	Mar. 18, 2021	Jan. 05, 2022	Radiation (03CH06-KS)
high gain Amplifier	MITEQ	AMF-7D-00101800-30-10P	2025788	1Ghz-18Ghz	Jan. 06, 2021	Mar. 18, 2021	Jan. 05, 2022	Radiation (03CH06-KS)
Amplifier	Keysight	83017A	MY53270203	500MHz~26.5GHz	Apr. 15, 2020	Mar. 18, 2021	Apr. 14, 2021	Radiation (03CH06-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Mar. 18, 2021	NCR	Radiation (03CH06-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Mar. 18, 2021	NCR	Radiation (03CH06-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Mar. 18, 2021	NCR	Radiation (03CH06-KS)

NCR: No Calibration Required

4 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10-2013. 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% ($U = 2Uc(y)$)	5.0dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.0dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.0dB
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————THE END————