



FCC RF Test Report

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2173-2
FCC ID : IHDT56ZV4
STANDARD : 47 CFR Part 15 Subpart C §15.247
47 CFR Part 15 Subpart E §15.407

We, Sporton International (Shenzhen) 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 (Shenzhen) Inc., the test report shall not be reproduced except in full.

Reviewed by: Derreck Chen / Supervisor

Approved by: Eric Shih / Manager



Sporton International (ShenZhen) Inc.

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR162325-01	Rev. 01	Initial issue of report	Aug. 25, 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	Motorolaor
Model Name	XT2173-2
FCC ID	IHDT56ZV4
HW Version	DVT2
SW Version	RRWB31.Q3-25
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 Modification of EUT

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

1.5 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	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

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.
	03CH02-SZ	CN1256	421272

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.
	03CH04-KS	CN1257	314309



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: XT2173-2, FCC ID: IHDT56ZV4) is electrically identical to the reference device (Model: XT2173-1, FCC ID: IHDT56ZV3) for the portions of the circuitry corresponding to the data being re-used. Based on their similarity, the FCC Part 15C (equipment class: DSS, DTS, 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: IHDT56ZV4 .

2.2 Model Difference Information

The **main** difference between FCC ID: IHDT56ZV3 and FCC ID: IHDT56ZV4 is that the two models support different WCDMA and LTE bands for different markets, the BT/WLAN portion are the same. Other differences and all the details of similarity and difference can be found in the XT2173-2_Operational Description of Product Equality Declaration which is exhibited separately.

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	IHDT56ZV3	Original Grant	FR162325A	IHDT56ZV4	All sections applicable
	DTS (BLE)	2400~2483.5	IHDT56ZV3	Original Grant	FR162325B	IHDT56ZV4	All sections applicable
	DTS (WLAN)	2400~2483.5	IHDT56ZV3	Original Grant	FR162325C	IHDT56ZV4	All sections applicable
15E	U-NII-1	5150~5250	IHDT56ZV3	Original Grant	FR162325D	IHDT56ZV4	All sections applicable
	U-NII-2A	5250~5350	IHDT56ZV3	Original Grant	FR162325D	IHDT56ZV4	All sections applicable
	U-NII-2C	5470~5725	IHDT56ZV3	Original Grant	FR162325D	IHDT56ZV4	All sections applicable
	U-NII-3	5725~5850	IHDT56ZV3	Original Grant	FR162325E	IHDT56ZV4	All sections applicable
	DFS	5250~5350 5470~5725	IHDT56ZV3	Original Grant	FZ162325	IHDT56ZV4	All sections applicable

2.4 Spot Check Verification Data Section

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

Test Item	Mode	IHDT56ZV3 Parent Worst Result	IHDT56ZV4 Variant Check Result	Difference (dB)
Conducted Power (dBm)	BT2.0 CH78 DH5	10.8	9.3	1.5
	BLE1M CH19	-2.2	-2.2	0
	BLE2M CH19	-2.3	-2.6	0.3
	11b CH01	18.8	18.5	0.3
	11g CH06	18.5	18.2	0.3
	11n HT20 CH06	17.9	17.5	0.4
	11a CH165	17.77	17.38	0.39
	11n HT20 CH165	17.7	17.27	0.43
	11n HT40 CH159	17.68	17.22	0.46
	11ac VHT20 CH165	17.66	17.22	0.44
	11ac VHT40 CH159	17.66	17.18	0.48
	11ac VHT80 CH155	17.66	17.22	0.44
Radiated Spurious Emission (dBuV/m) @ 3m	BT2.0 CH39	-25.75	-25.52	0.23
	BLE2M CH19	-16.59	-16.44	0.25
	11g CH11	-3.05	-3.07	0.02
	11n20 CH100	-3.02	-5.01	1.99
	11ac80 CH155	-8.24	-7.85	0.39

Conclusion:

Conducted Power and 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 power level and 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 EUD mechanism/software is used in the variant. Hence, there is no spot check data for DFS EUD hand-shaking mechanism.

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
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 08, 2021	Aug. 03, 2021~ Aug. 13, 2021	Apr. 07, 2022	Conducted (TH01-SZ)
Pulse Power Sensor	Anritsu	MA2411B	1207253	30MHz~40GHz	Dec. 25, 2020	Aug. 03, 2021~ Aug. 13, 2021	Dec. 24, 2021	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	50MHz Bandwidth	Dec. 25, 2020	Aug. 03, 2021~ Aug. 13, 2021	Dec. 24, 2021	Conducted (TH01-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 13, 2021	Aug. 15, 2021	Jul. 13, 2022	Radiation (03CH02-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jun. 22, 2020	Aug. 15, 2021	Jun. 21, 2022	Radiation (03CH02-SZ)
Bilog Antenna	TeseQ	CBL6112D	35407	30MHz~2GHz	Jul. 15, 2021	Aug. 15, 2021	Jul. 14, 2022	Radiation (03CH02-SZ)
Double Ridge Horn Antenna	ETS-Lindgren	3117	00119436	1GHz~18GHz	Jul. 25, 2021	Aug. 15, 2021	Jul. 24, 2022	Radiation (03CH02-SZ)
SHF-EHF Horn	com-power	AH-840	101071	18GHz~40GHz	Apr. 11, 2021	Aug. 15, 2021	Apr. 10, 2022	Radiation (03CH02-SZ)
LF Amplifier	Burgeon	BPA-530	102211	0.01~3000Mhz	Oct. 16, 2020	Aug. 15, 2021	Oct. 15, 2021	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1943528	1GHz~18GHz	Oct. 16, 2020	Aug. 15, 2021	Oct. 15, 2021	Radiation (03CH02-SZ)
HF Amplifier	KEYSIGHT	83017A	MY53270105	0.5GHz~26.5GHz	Oct. 16, 2020	Aug. 15, 2021	Oct. 15, 2021	Radiation (03CH02-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 13, 2021	Aug. 15, 2021	Jul. 13, 2022	Radiation (03CH02-SZ)
AC Power Source	Chroma	61601	616010002470	N/A	NCR	Aug. 15, 2021	NCR	Radiation (03CH02-SZ)
Turn Table	Chaintek	T-200	N/A	0~360 degree	NCR	Aug. 15, 2021	NCR	Radiation (03CH02-SZ)
Antenna Mast	Chaintek	MBS-400	N/A	1 m~4 m	NCR	Aug. 15, 2021	NCR	Radiation (03CH02-SZ)
EMI Test Receiver	Keysight	N9038A	MY57290151	3Hz~8.5GHz; Max 30dBm	Jul. 12, 2021	Aug. 14, 2021	Jul. 11, 2022	Radiation (03CH04-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz~44GHz, MAX 30dB	Apr.13, 2021	Aug. 14, 2021	Apr. 12, 2022	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Nov. 01, 2020	Aug. 14, 2021	Oct. 31, 2021	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz~1GHz	May. 30, 2021	Aug. 14, 2021	May. 29, 2022	Radiation (03CH04-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	1356	1GHz~18GHz	Apr. 18, 2021	Aug. 14, 2021	Apr. 17, 2022	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Nov. 10, 2020	Aug. 14, 2021	Nov. 09, 2021	Radiation (03CH04-KS)
Amplifier	Burgeon	BPA-530	102219	0.01MHz~3000MHz	Nov. 02, 2020	Aug. 14, 2021	Nov. 01, 2021	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40GGA	060728	18~40GHz	Jan. 07, 2021	Aug. 14, 2021	Jan. 06, 2022	Radiation (03CH04-KS)
high gain Amplifier	MITEQ	AMF-7D-00101800-30-10P	2025788	1Ghz~18Ghz	Jan. 06, 2021	Aug. 14, 2021	Jan. 05, 2022	Radiation (03CH04-KS)
Amplifier	Keysight	83017A	MY57280106	500MHz~26.5GHz	Oct. 14, 2020	Aug. 14, 2021	Oct. 13, 2021	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Aug. 14, 2021	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Aug. 14, 2021	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Aug. 14, 2021	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required

—————THE END—————