



Spot Check Evaluation

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2171-2
FCC ID : IHDT56ZX4
STANDARD : 47 CFR Part 2, 22(H), 24(E), 27(L), 27(Q), 90(S)
47 CFR Part 15 Subpart C §15.225
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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People's Republic of China



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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	XT2171-2
FCC ID	IHDT56ZX4
EUT supports Radios application	GSM/WCDMA/LTE/5G NR WLAN 2.4GHz 802.11b/g/n HT20/HT40 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE NFC, GNSS and FM Receiver
HW Version	DVT2
SW Version	RRYA31.Q3-23
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

1.6 Specification of Accessory

Specification of Accessory				
AC Adapter 1(US)	Brand Name	Motorola(Chenyang)	Model Name	MC-101
AC Adapter 1(EU)	Brand Name	Motorola(Chenyang)	Model Name	MC-102
AC Adapter 1(UK)	Brand Name	Motorola(Chenyang)	Model Name	MC-103
AC Adapter 1(AU)	Brand Name	Motorola(Chenyang)	Model Name	MC-105
AC Adapter 2(US)	Brand Name	Motorola(Salcomp)	Model Name	MC-101
AC Adapter 2(EU)	Brand Name	Motorola(Salcomp)	Model Name	MC-102
AC Adapter 2(UK)	Brand Name	Motorola(Salcomp)	Model Name	MC-103
AC Adapter 2(AU)	Brand Name	Motorola(Salcomp)	Model Name	MC-105
AC Adapter 3(US)	Brand Name	Motorola(Aohai)	Model Name	MC-101
AC Adapter 3(EU)	Brand Name	Motorola(Aohai)	Model Name	MC-102
AC Adapter 3(UK)	Brand Name	Motorola(Aohai)	Model Name	MC-103
AC Adapter 3(AU)	Brand Name	Motorola(Aohai)	Model Name	MC-105
AC Adapter 4(US)	Brand Name	Motorola(Chenyang)	Model Name	MC-201
AC Adapter 4(AR)	Brand Name	Motorola(Chenyang)	Model Name	MC-206
AC Adapter 5(US)	Brand Name	Motorola(Acbel)	Model Name	MC-201
AC Adapter 5(AR)	Brand Name	Motorola(Acbel)	Model Name	MC-206
AC Adapter 5(Chile)	Brand Name	Motorola(Acbel)	Model Name	MC-209
AC Adapter 6(IN)	Brand Name	Motorola(Chenyang)	Model Name	MC-204
AC Adapter 7(IN)	Brand Name	Motorola(Aohai)	Model Name	MC-204
AC Adapter 8 (BR Local build)	Brand Name	Motorola(Salcomp)	Model Name	MC-207
AC Adapter 9 (BR Local build)	Brand Name	Motorola(Flex)	Model Name	MC-207
AC Adapter 10(US)	Brand Name	Motorola(Chenyang)	Model Name	MC-201



Earphone 1	Brand Name	Motorola(Juwei)	Model Name	MH202(JWEP1182-T03H)
Earphone 2	Brand Name	Motorola(New Leader)	Model Name	MH202(NLD-EM313A-11SF)
Earphone 3	Brand Name	Motorola(Juwei)	Model Name	MH191(JWEP1209-T03H)
Earphone 4	Brand Name	Motorola(New Leader)	Model Name	MH191(NLD-EM313A-21SF)
USB Cable 1	Brand Name	Motorola(Chuangyitong)	Model Name	88806-024
USB Cable 2	Brand Name	Motorola(SUNTOPS)	Model Name	336258
USB Cable 3	Brand Name	Motorola(I SHENG)	Model Name	SC18C28955
Battery	Brand Name	Motorola(ATL)	Model Name	JK50



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: XT2171-2, FCC ID: IHDT56ZX4) is electrically identical to the reference device (Model: XT2171-1, FCC ID: IHDT56ZX3) 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) and FCC Part 22, 24, 27, 90 (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: IHDT56ZX4 .

2.2 Model Difference Information

The **main** difference between FCC ID: IHDT56ZX3 and FCC ID: IHDT56ZX4 is as below:

- Remove WCDMA Band IV, LTE Band 4/12/13/17/66 and 5G NR n66.
- Add WCDMA Band XIX, LTE Band 18/19/20/32/41 and 5G NR n20/n38/n41/n77.

Other differences and all the details of similarity and difference can be found in the confidential documents (XT2171-2_Operational Description of Product Equality Declaration).

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	IHDT56ZX3	Original Grant	FR180409A	IHDT56ZX4	All sections applicable
	DTS (BLE)	2400~2483.5	IHDT56ZX3	Original Grant	FR180409B	IHDT56ZX4	All sections applicable
	DTS (WLAN)	2400~2483.5	IHDT56ZX3	Original Grant	FR180409C	IHDT56ZX4	All sections applicable
	DXX (NFC)	13.56	IHDT56ZX3	Original Grant	FR180409D	IHDT56ZX4	All sections applicable
15E	U-NII-1	5150~5250	IHDT56ZX3	Original Grant	FR180409E	IHDT56ZX4	All sections applicable
	U-NII-2A	5250~5350	IHDT56ZX3	Original Grant	FR180409E	IHDT56ZX4	All sections applicable
	U-NII-2C	5470~5725	IHDT56ZX3	Original Grant	FR180409E	IHDT56ZX4	All sections applicable



	U-NII-3	5725~5850	IHDT56ZX3	Original Grant	FR180409F	IHDT56ZX4	All sections applicable
	DFS	5250~5350 5470~5725	IHDT56ZX3	Original Grant	FZ180409	IHDT56ZX4	All sections applicable
22, 24, 27	PCE (GSM)	GSM 850/1900	IHDT56ZX3	Original Grant	FG180409A	IHDT56ZX4	All sections applicable
	PCE (WCDMA)	Band II, V	IHDT56ZX3	Original Grant	FG180409A	IHDT56ZX4	All sections applicable
	PCE (LTE)	B42	IHDT56ZX3	Original Grant	FG180409D	IHDT56ZX4	All sections applicable
90	PCE (LTE)	B26	IHDT56ZX3	Original Grant	FW180409	IHDT56ZX4	All sections applicable

2.4 Spot Check Verification Data Section

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

Test Item	Mode	IHDT56ZX3 Parent Worst Result	IHDT56ZX4 Variant Check Result	Difference (dB)
Conducted Power (dBm)	BR 1Mbps	11.5	10.7	0.8
	EDR 2Mbps	11.1	10.3	0.8
	EDR 3Mbps	11.3	10.7	0.6
	BLE 1Mbps	5.9	5.7	0.2
	BLE 2Mbps	5.8	5.7	0.1
	WLAN 2.4GHz 802.11b	19.0	18.8	0.2
	WLAN 2.4GHz 802.11g	17.5	17.4	0.1
	WLAN 2.4GHz 802.11n HT20	16.9	16.7	0.2
	WLAN 2.4GHz 802.11n HT40	15.0	15.3	0.3
	WLAN 5GHz 802.11a	17.44	17.30	0.14
	WLAN 5GHz 802.11n HT20 ch140	17.25	17.12	0.13
	WLAN 5GHz 802.11n HT40 ch38	16.51	16.13	0.38
	WLAN 5GHz 802.11ac VHT 20 ch36	16.74	16.43	0.31
	WLAN 5GHz 802.11ac VHT 40 ch38	16.49	16.13	0.36
	WLAN 5GHz 802.11ac VHT80 ch42	15.33	15.36	0.03
	GSM850	32.59	32.57	0.02
GSM1900	29.46	29.42	0.04	



	WCDMA Band II	22.65	22.65	0
	WCDMA Band V	22.85	22.85	0
	LTE Band 26	22.59	22.80	0.21
	LTE Band 42	22.31	22.76	0.45

Conclusion:

Based on the spot check test result, the test data from the original model is representative for the variant model. The power level spot check is 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
Pulse Power Sensor	Anritsu	MA2411B	1207253	30MHz~40GHz	Dec. 25, 2020	Sep. 03, 2021~ Sep. 23, 2021	Dec. 24, 2021	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1218010	50MHz Bandwidth	Dec. 25, 2020	Sep. 03, 2021~ Sep. 23, 2021	Dec. 24, 2021	Conducted (TH01-SZ)
Spectrum Analyzer	R&S	FSV40	101078	10Hz~40GHz	Apr. 08, 2021	Sep. 03, 2021~ Sep. 23, 2021	Apr. 07, 2022	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-0426 5	60.06.020. 0077	0.4GHz~26.5G Hz	Dec. 26, 2020	Sep. 03, 2021~ Sep. 23, 2021	Dec. 25, 2021	Conducted (TH01-SZ)
Base Station	Anritsu	MT8820C	620156377 7	2G/3G/4G	Dec. 25, 2020	Sep. 03, 2021~ Sep. 23, 2021	Dec. 24, 2021	Conducted (TH01-SZ)

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