Spot Check Evaluation

APPLICANT	:	**Motorola Mobility LLC**
EQUIPMENT	:	**Mobile Cellular Phone**
BRAND NAME	:	**Motorola**
MODEL NAME	:	**XT2335-2**
FCC ID	:	**IHDT56AJ7**
STANDARD	:	**47 CFR Part 2, 22(H), 24(E), 27(M)** **47 CFR Part 2, and 90(S)** **47 CFR Part 2, Part 27 Subpart Q** **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 Inc. (Kunshan), 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 Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia

ACCREDITED
Cert #5145.02

Sporton International Inc. (Kunshan)
No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
292106-01	Rev. 01	Initial issue of report	Nov. 18, 2022

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	XT2335-2
FCC ID	IHDT56AJ7
IMEI Code	Conducted: 351401230012275/351401230012283
HW Version	DVT2
SW Version	TTP33.24
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 Testing Location

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

Test Firm	Sporton International Inc. (Kunshan)		
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.**
	TH01-KS	CN1257	314309

1.5 Specification of Accessory

Specification of Accessory				
AC Adapter 1(US)	**Brand Name**	Motorola(AOHAI)	**Model Name**	MC-101
AC Adapter 1(EU)	**Brand Name**	Motorola(AOHAI)	**Model Name**	MC-102
AC Adapter 1(UK)	**Brand Name**	Motorola(AOHAI)	**Model Name**	MC-103
AC Adapter 1(AU)	**Brand Name**	Motorola(AOHAI)	**Model Name**	MC-105
AC Adapter 2(US)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-101
AC Adapter 2(EU)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-102
AC Adapter 2(UK)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-103
AC Adapter 2(AU)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-105
AC Adapter 3(US)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-101
AC Adapter 3(EU)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-102
AC Adapter 3(UK)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-103
AC Adapter 3(AU)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-105
AC Adapter 4(US)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-201L
AC Adapter 4(EU)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-202L
AC Adapter 4(AR)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-206L
AC Adapter 4(BR)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-207L
AC Adapter 4(CHILE)	**Brand Name**	Motorola(Salcomp)	**Model Name**	MC-209L
AC Adapter 5(US)	**Brand Name**	Motorola(AOHAI)	**Model Name**	MC-201L
AC Adapter 5(EU)	**Brand Name**	Motorola(AOHAI)	**Model Name**	MC-202L
AC Adapter 5(AR)	**Brand Name**	Motorola(AOHAI)	**Model Name**	MC-206L
AC Adapter 6(BR)	**Brand Name**	Motorola(Chenyang)	**Model Name**	MC-207
Battery 1	**Brand Name**	Motorola(ATL)	**Model Name**	NH50
Battery 2	**Brand Name**	Motorola(SUNWODA)	**Model Name**	NH50
Earphone 1	**Brand Name**	Motorola(New Leader)	**Model Name**	MH202
Earphone 2	**Brand Name**	Motorola(Lyand)	**Model Name**	MH202
USB Cable 1	**Brand Name**	Motorola(kawakami)	**Model Name**	S928D67706
USB Cable 2	**Brand Name**	Motorola(Beauford)	**Model Name**	S928D70140

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: XT2335-2, FCC ID: IHDT56AJ7) is electrically identical to the reference device (Model: XT2335-1, FCC ID: IHDT56AJ6) 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(S), 27Q (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: IHDT56AJ7 .

2.2 Model Difference Information

The **main** difference between FCC ID: IHDT56AJ6 and FCC ID: IHDT56AJ7 is as below:

- Remove WCDMA Band IV, LTE Band 4/12/13/17/25/66 and 5GNR n2/n66.
- Add WCDMA Band XIX, LTE Band 18/19/20/32 and 5GNR n5/n8/n20/n38/n41/n77.

Other differences and all the details of similarity and difference can be found in the confidential documents (XT2335-2_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	IHDT56AJ6	Original Grant	FR292106A	IHDT56AJ7	All sections applicable
	DTS (BLE)	2400~2483.5	IHDT56AJ6	Original Grant	FR292106B	IHDT56AJ7	All sections applicable
	DTS (WLAN)	2400~2483.5	IHDT56AJ6	Original Grant	FR292106C	IHDT56AJ7	All sections applicable
	DXX (NFC)	13.56	IHDT56AJ6	Original Grant	FR292106D	IHDT56AJ7	All sections applicable
15E	U-NII-1	5180~5240	IHDT56AJ6	Original Grant	FR292106E	IHDT56AJ7	All sections applicable
	U-NII-2A	5260~5320	IHDT56AJ6	Original Grant	FR292106E	IHDT56AJ7	All sections applicable
	U-NII-2C	5500~5720	IHDT56AJ6	Original Grant	FR292106E	IHDT56AJ7	All sections applicable
	U-NII-3	5745~5825	IHDT56AJ6	Original Grant	FR292106E	IHDT56AJ7	All sections applicable
	DFS	5260~5320 5500~5720	IHDT56AJ6	Original Grant	FZ292106	IHDT56AJ7	All sections applicable
22,24, 27,90S	PCE (GSM)	GSM 850/1900	IHDT56AJ6	Original Grant	FG292106A	IHDT56AJ7	All sections applicable
	PCE (WCDMA)	Band II/V	IHDT56AJ6	Original Grant	FG292106A	IHDT56AJ7	All sections applicable
	PCE (LTE)	B2/5/26	IHDT56AJ6	Original Grant	FG292106B	IHDT56AJ7	All sections applicable

	PCE (LTE)	B7/7C	IHDT56AJ6	Original Grant	FG292106C	IHDT56AJ7	All sections applicable
	PCE (LTE)	B26 (90S)	IHDT56AJ6	Original Grant	FG292106D	IHDT56AJ7	All sections applicable
	PCE (LTE)	B42 (27Q)	IHDT56AJ6	Original Grant	FG292106E	IHDT56AJ7	All sections applicable
	PCE (5GNR)	n7	IHDT56AJ6	Original Grant	FG292106G	IHDT56AJ7	All sections applicable

2.4 Spot Check Verification Data Section

Conducted power test 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

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

Test Item	Mode	IHDT56AJ6 Parent Worst Result	IHDT56AJ7 Variant Check Result	Difference (dB)
Conducted Power (dBm)	BT BR/EDR	12.55	12.41	-0.14
	BLE 1Mbps	2.63	2.50	-0.13
	BLE 2Mbps	2.79	2.72	-0.07
	11b, 2.4GHz	21.75	21.40	-0.35
	11g, 2.4GHz	23.27	23.12	0.15
	11n HT20, 2.4GHz	23.32	23.27	0.05
	11n HT40, 2.4GHz	21.53	21.47	0.06
	11a, 5.2GHz	18.06	18.00	-0.06
	11a, 5.3GHz	17.84	17.81	-0.03
	11a, 5.5GHz	18.20	18.16	-0.04
	11a, 5.8GHz	18.06	17.98	-0.08
	11n HT20, 5.2GHz	17.85	17.70	-0.15
	11n HT20, 5.3GHz	17.88	17.77	-0.11
	11n HT20, 5.5GHz	17.99	17.92	-0.07
	11n HT20, 5.8GHz	17.84	17.70	-0.14
	11n HT40, 5.2GHz	18.24	18.14	-0.1
	11n HT40, 5.3GHz	17.89	17.83	-0.06
	11n HT40, 5.5GHz	18.28	18.02	-0.26
	11n HT40, 5.8GHz	18.35	18.11	-0.24
	11ac VHT20, 5.2GHz	17.92	17.83	-0.09
	11ac VHT20, 5.3GHz	17.89	17.85	-0.04
	11ac VHT20, 5.5GHz	18.01	17.71	-0.30
	11ac VHT20, 5.8GHz	17.85	17.79	-0.06
	11ac VHT40, 5.2GHz	17.35	17.09	-0.26
	11ac VHT40, 5.3GHz	16.88	16.76	-0.12
	11ac VHT40, 5.5GHz	17.34	17.08	-0.26
	11ac VHT40, 5.8GHz	17.17	16.92	-0.25
	11ac VHT80, 5.2GHz	16.15	15.94	-0.21
	11ac VHT80, 5.3GHz	15.51	15.44	-0.07
	11ac VHT80, 5.5GHz	15.90	15.70	-0.20
	11ac VHT80, 5.8GHz	16.24	15.92	-0.32
	GSM850	32.55	32.30	-0.25

	GSM1900	30.06	29.75	-0.31
	WCDMA B2	22.99	22.65	-0.34
	WCDMA B5	23.24	22.78	-0.46
	LTE B2	22.27	22.18	-0.09
	LTE B5	22.38	22.27	-0.11
	LTE B7	22.72	22.72	0
	LTE B7C	23.18	22.87	-0.31
	LTE B26	22.43	22.32	-0.11
	LTE B26-90S	22.39	22.24	-0.15
	LTE B42 27Q	22.72	22.29	-0.43
	NR n7	23.02	22.86	-0.16

Test Item	Mode	IHDT56AJ6 Parent Worst Result	IHDT56AJ7 Variant Check Result	Difference (dB)
Field Strength (dBuV/m) @ 30m	NFC 13.56MHz	53.13	54.92	1.79

Conclusion:

Conducted Power and RSE 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 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
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 12, 2022	Nov. 07, 2022	Oct. 11, 2023	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	Aug. 25, 2022	Nov. 07, 2022	Aug. 24, 2023	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 05, 2022	Nov. 07, 2022	Jan. 04, 2023	Conducted (TH01-KS)
Pulse Power Senor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 05, 2022	Nov. 07, 2022	Jan. 04, 2023	Conducted (TH01-KS)
EMI Test Receiver	R&S	ESR7	101403	9kHz~7GHz;Max 30dBm	Oct. 10, 2022	Nov. 07, 2022	Oct. 09, 2023	Radiation (03CH02-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 14, 2022	Nov. 07, 2022	Oct. 13, 2023	Radiation (03CH02-KS)

NCR: No Calibration Required.

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