



Spot Check Evaluation

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2335-4, XT2335-5, XT2335-6
FCC ID : IHDT56AJ9
STANDARD : 47 CFR Part 2, 22(H), 24(E), 27(H), 27(L), 27(M), 27(Q), 90(S)
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.

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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	XT2335-4, XT2335-5, XT2335-6
FCC ID	IHDT56AJ9
IMEI Code	Conducted: 35204690021597/352304690021605 Radiation: 352304690019252/352304690019260
HW Version	DVT2
SW Version	TTP33.28
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 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: XT2335-4, XT2335-5, XT2335-6, FCC ID: IHDT56AJ9) is electrically identical to the reference device (Model: XT2335-1, XT2335-2, FCC ID: IHDT56AJ6, IHDT56AJ7) 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) 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: IHDT56AJ9 .

2.2 Model Difference Information

The **main** difference between FCC ID: IHDT56AJ9 and FCC ID: IHDT56AJ6 is as below:

- Remove LTE B5/7/13/25/66/40 and 5G NR n1/n2/n7/n66/n40.
- Add LTE B11/18/19 and 5G NR n77.

LTE B38/41 reference FCC ID: IHDT56AJ7, LTE Band 41 support HUPE mode.

Other differences and all the details of similarity and difference can be found in the confidential documents (XT2335-4, XT2335-5, XT2335-6_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	IHDT56AJ9	All sections applicable
	DTS (BLE)	2400~2483.5	IHDT56AJ6	Original Grant	FR292106B	IHDT56AJ9	All sections applicable
	DTS (WLAN)	2400~2483.5	IHDT56AJ6	Original Grant	FR292106C	IHDT56AJ9	All sections applicable
15E	NII	5180~5240	IHDT56AJ6	Original Grant	FR292106E	IHDT56AJ9	All sections applicable
	NII	5260~5320	IHDT56AJ6	Original Grant	FR292106E	IHDT56AJ9	All sections applicable
	NII	5500~5720	IHDT56AJ6	Original Grant	FR292106E	IHDT56AJ9	All sections applicable
	NII	5745~5825	IHDT56AJ6	Original Grant	FR292106E	IHDT56AJ9	All sections applicable
	DFS	5260~5320 5500~5720	IHDT56AJ6	Original Grant	FZ292106	IHDT56AJ9	All sections applicable
22, 24, 27, 90	PCE (GSM)	GSM 850/1900	IHDT56AJ6	Original Grant	FG292106A	IHDT56AJ9	All sections applicable
	PCE (WCDMA)	Band II, IV, V	IHDT56AJ6	Original Grant	FG292106A	IHDT56AJ9	All sections applicable
	PCE (LTE)	B2/4/12/17/26	IHDT56AJ6	Original Grant	FG292106B	IHDT56AJ9	All sections applicable
	PCE (LTE)	B38/41	IHDT56AJ7	Original Grant	FG292106-01A	IHDT56AJ9	All sections applicable
	PCE (LTE)	B26 (90S)	IHDT56AJ6	Original Grant	FG292106D	IHDT56AJ9	All sections applicable
	PCE (LTE)	B42 (27Q)	IHDT56AJ6	Original Grant	FG292106E	IHDT56AJ9	All sections applicable

Note: LTE Band 41 overlaps the entire frequency range of LTE Band 38. Therefore, the test results provided in this report Band 41 covers Band 38.



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, IHDT56AJ7 Parent Worst Result	IHDT56AJ9 Variant Check Result	Difference (dB)
Conducted Power (dBm)	BT BR/EDR	12.55	12.40	-0.15
	BLE 1Mbps	2.63	2.33	-0.3
	BLE 2Mbps	2.79	2.50	-0.29
	11b, 2.4GHz	21.75	21.55	-0.2
	11g, 2.4GHz	23.27	23.12	-0.15
	11n HT20, 2.4GHz	23.32	23.17	-0.15
	11n HT40, 2.4GHz	21.53	21.47	-0.06
	11a, 5.2GHz	18.06	17.68	-0.38
	11a, 5.3GHz	17.84	17.68	-0.16
	11a, 5.5GHz	18.20	18.18	-0.02
	11a, 5.8GHz	18.06	18.00	-0.06
	11n HT20, 5.2GHz	17.85	17.71	-0.14
	11n HT20, 5.3GHz	17.88	17.83	-0.05
	11n HT20, 5.5GHz	17.99	17.80	-0.19
	11n HT20, 5.8GHz	17.84	17.80	-0.04
	11n HT40, 5.2GHz	18.24	18.17	-0.07
	11n HT40, 5.3GHz	17.89	17.68	-0.21
	11n HT40, 5.5GHz	18.28	18.21	-0.07
	11n HT40, 5.8GHz	18.35	18.18	-0.17
	11ac VHT20, 5.2GHz	17.92	17.72	-0.2
	11ac VHT20, 5.3GHz	17.89	17.68	-0.21
	11ac VHT20, 5.5GHz	18.01	17.96	-0.05
	11ac VHT20, 5.8GHz	17.85	17.80	-0.05
	11ac VHT40, 5.2GHz	17.35	17.02	-0.33
	11ac VHT40, 5.3GHz	16.88	16.79	-0.09
	11ac VHT40, 5.5GHz	17.34	17.29	-0.05
	11ac VHT40, 5.8GHz	17.17	17.14	-0.03
	11ac VHT80, 5.2GHz	16.15	15.88	-0.27
	11ac VHT80, 5.3GHz	15.51	15.22	-0.29
	11ac VHT80, 5.5GHz	15.90	15.80	-0.1
	11ac VHT80, 5.8GHz	16.24	16.13	-0.11
	GSM850	32.55	32.63	0.08
	GSM1900	30.06	30.42	0.36
	WCDMA B2	22.99	23.42	0.43
	WCDMA B4	23.17	23.61	0.44
	WCDMA B5	23.24	23.06	-0.18
	LTE B26	22.43	22.87	0.44
	LTE B2	22.27	22.32	0.05
	LTE B4	22.63	23.04	0.41
	LTE B12	22.71	23.07	0.36
LTE B41/38	25.53	25.87	0.34	
LTE B42	22.72	23.06	0.34	



Test Item	Mode	IHDT56AJ6, IHDT56AJ7 Parent Worst Result	IHDT56AJ9 Variant Check Result	Difference (dB)
Radiated Spurious Emission (dBm)	EDGE 1900	-43.56	-41.57	1.99
	WCDMA Band II	-43.62	-41.89	1.73
	LTE B42	-23.93	-25.55	-1.62
	LTE B26(90S)	-49.40	-46.77	2.63

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 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 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	Dec. 14, 2022	Oct. 11, 2023	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	Aug. 25, 2022	Dec. 14, 2022	Aug. 24, 2023	Conducted (TH01-KS)
Pulse Power Sensor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 05, 2022	Dec. 14, 2022	Jan. 04, 2023	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 05, 2022	Dec. 14, 2022	Jan. 04, 2023	Conducted (TH01-KS)
EXA Spectrum Analyzer	Keysight	N9010B	MY57471079	10Hz-44G,MAX 30dB	Oct. 12, 2022	Nov. 21, 2022	Oct. 11, 2023	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 16, 2022	Nov. 21, 2022	Oct. 15, 2023	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz-1GHz	May 24, 2022	Nov. 21, 2022	May 23, 2023	Radiation (03CH04-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	1284	1GHz~18GHz	Jan. 05, 2022	Nov. 21, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 05, 2022	Nov. 21, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Jan. 05, 2022	Nov. 21, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40GG A	060728	18~40GHz	Jan. 05, 2022	Nov. 21, 2022	Jan. 04, 2023	Radiation (03CH04-KS)
high gain Amplifier	EM	EM01G18GA	060840	1Ghz-18Ghz	Oct. 12, 2022	Nov. 21, 2022	Oct. 11, 2023	Radiation (03CH04-KS)
Amplifier	Agilent	8449B	3008A02370	1Ghz-18Ghz	Oct. 12, 2022	Nov. 21, 2022	Oct. 11, 2023	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Nov. 21, 2022	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Nov. 21, 2022	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Nov. 21, 2022	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required.

-THE END-