Spot Check Evaluation

APPLICANT	:	**Motorola Mobility LLC**
EQUIPMENT	:	**Mobile Cellular Phone**
BRAND NAME	:	**Motorola**
MODEL NAME	:	**XT2271-3, XT2271-4**
FCC ID	:	**IHDT56ZP6**
STANDARD	:	**47 CFR Part 2, 22(H), 24(E), 27(F), 27(L) , 27(H), 90(R), 27(D)** **47 CFR Part 15 Subpart C §15.247** **47 CFR Part 15 Subpart E §15.407**

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

Jason Jia

Approved by: Jason Jia

ACCREDITED Cert #5145.01

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REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
260816-04	Rev. 01	Initial issue of report	Nov. 17, 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	XT2271-3, XT2271-4
FCC ID	IHDT56ZP6
EUT supports Radios application	GSM/WCDMA/LTE 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 GNSS/FM
IMEI Code	Radiation: 358390900034342
HW Version	PVT
SW Version	S3SG32.39-32
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.

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: XT2271-3, XT2271-4, FCC ID: IHDT56ZP6) is electrically identical to the reference device (Model: XT2165-1, XT2165-2, FCC ID: IHDT56ZP4) 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(H), 24(E), 27(F), 27(L) , 27(H), 90(R), 27(D) (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: IHDT56ZP6 .

2.2 Model Difference Information

The **main** difference between FCC ID: IHDT56ZP4 and FCC ID: IHDT56ZP6 is as below:

- Add LTE Band 3.

Other differences and all the details of similarity and difference can be found in the confidential documents (XT2271-3, XT2271-4_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	IHDT56ZP4	Original Grant	FR170628-01A	IHDT56ZP6	All sections applicable
	DTS (BLE)	2400~2483.5	IHDT56ZP4	Original Grant	FR170628-01B	IHDT56ZP6	All sections applicable
	DTS (WLAN)	2400~2483.5	IHDT56ZP4	Original Grant	FR170628-01C	IHDT56ZP6	All sections applicable
15E	NII	5150~5250	IHDT56ZP4	Original Grant	FR170628-01E	IHDT56ZP6	All sections applicable
	NII	5250~5350	IHDT56ZP4	Original Grant	FR170628-01E, FZ170628-01	IHDT56ZP6	All sections applicable
	NII	5470~5725	IHDT56ZP4	Original Grant	FR170628-01E, FZ170628-01	IHDT56ZP6	All sections applicable
	NII	5725~5850	IHDT56ZP4	Original Grant	FR170628-01F	IHDT56ZP6	All sections applicable
22, 24, 27, 90,	PCE (GSM)	GSM 850/1900	IHDT56ZP4	Original Grant	FG170628-01A	IHDT56ZP6	All sections applicable
	PCE (WCDMA)	Band II, IV, V	IHDT56ZP4	Original Grant	FG170628-01A	IHDT56ZP6	All sections applicable
	PCE (LTE)	B2/4/5/12/13/66	IHDT56ZP4	Original Grant	FG170628-01B	IHDT56ZP6	All sections applicable
	PCE (LTE)	B14	IHDT56ZP4	Original Grant	FG170628-01C	IHDT56ZP6	All sections applicable
	PCE (LTE)	B30	IHDT56ZP4	Original Grant	FG170628-01D	IHDT56ZP6	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	IHDT56ZP4 Parent Worst Result	IHDT56ZP6 Variant Check Result	Difference (dB)
Conducted Power (dBm)	BT2.0 DH5 CH39	10	9.9	-0.10
	BLE 1M CH19	3.22	1.66	-1.56
	BLE 2M CH19	3.28	1.70	-1.58
	11b CH11	21.46	21.41	-0.05
	11g CH01	25.18	25.05	-0.13
	11N20 CH06	25.18	24.97	-0.21
	11N40 CH03	25.22	25.12	-0.10
	11a CH48	18.67	18.34	-0.33
	11N20 CH116	18.53	18.15	-0.38
	11N40 CH54	17.56	17.17	-0.39
	11ac20 CH116	18.55	18.20	-0.35
	11ac40 CH54	17.61	17.23	-0.38
	11ac80 CH155	16.12	15.77	-0.35
	GSM 850	32.25	32.18	-0.07
	GSM 1900	29.72	29.44	-0.28
	WCDMA B2	22.98	22.62	-0.36
	WCDMA B4	22.68	22.64	-0.04
	WCDMA B5	22.77	22.60	-0.17
	LTE B2	22.77	22.64	-0.13
	LTE B4	22.48	22.47	-0.01
	LTE B5	22.69	22.55	-0.14
	LTE B12	22.62	22.60	-0.02
	LTE B13	22.81	22.54	-0.27
	LTE B14	22.70	22.48	-0.22
	LTE B30	22.57	22.52	-0.05
	LTE B66	22.50	22.47	-0.03
Radiated Spurious Emission (dBμV/m)	BT_TX_CH39	48.55	48.05	-0.5
	BLE_TX_CH39	43.52	37.8	-5.72
	11g_TX_CH01	50.74	50.99	0.25
	11ac HT40_TX_CH38	51.99	47.23	-4.76
	11a_TX_CH157	45.37	39.12	-6.25
Radiated Spurious Emission (dBm)	Part 22H GSM 850	-38.66	-39.77	-1.11
	Part 90R-LTE Band14	-63.59	-65.25	-1.66
	Part27F-LTE Band13	-65.13	-63.42	1.71

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 mechanism/software is used in the variant. Hence, there is no spot check data for DFS 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
EMI Test Receiver&SA	Agilent	N9038A	MY52260185	20Hz~26.5GHz	Dec. 27, 2021	Oct. 20, 2022~ Nov. 11, 2022	Dec. 26, 2022	Conducted (TH01-SZ)
Power Meter	Anritsu	ML2495A	1542004	50MHz Bandwidth	Dec. 28, 2021	Oct. 20, 2022~ Nov. 11, 2022	Dec. 27, 2022	Conducted (TH01-SZ)
Power Divider	TOJOIN	PS-2SM-04265	60.06.020.0077	0.4GHz~26.5GHz	Dec. 25, 2021	Oct. 20, 2022~ Nov. 11, 2022	Dec. 24, 2022	Conducted (TH01-SZ)
EMI Test Receiver	R&S	ESR7	101404	9kHz~7GHz	Oct. 19,2022	Oct. 21, 2022	Oct. 18,2023	Radiation (03CH04-SZ)
EXA Spectrum Analyzer	KEYSIGHT	N9010A	MY55150213	10Hz~44GHz	Jul. 07, 2022	Oct. 21, 2022	Jul. 06, 2023	Radiation (03CH04-SZ)
Loop Antenna	R&S	HFH2-Z2	100354	9kHz~30MHz	Jun. 28, 2022	Oct. 21, 2022	Jun. 27, 2024	Radiation (03CH04-SZ)
Bilog Antenna	TeseQ	CBL6111D	41909	30MHz~1GHz	Apr. 27,2022	Oct. 21, 2022	Apr. 27,2023	Radiation (03CH04-SZ)
Double Ridge Horn Antenna	SCHWARZBECK	BBHA9120D	9120D-1474	1GHz~18GHz	Jul. 07, 2022	Oct. 21, 2022	Jul. 06, 2023	Radiation (03CH04-SZ)
Horn Antenna	SCHWARZBECK	BBHA9170	9170#679	15GHz~40GHz	Jul. 07, 2022	Oct. 21, 2022	Jul. 06, 2023	Radiation (03CH04-SZ)
Amplifier	Burgeon	BPA-530	102211	0.01Hz ~3000MHz	Oct. 19,2022	Oct. 21, 2022	Oct. 18,2023	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	AMF-7D-00101800-30-10P-R	1943528	1GHz~18GHz	Oct. 19,2022	Oct. 21, 2022	Oct. 18,2023	Radiation (03CH04-SZ)
HF Amplifier	MITEQ	TTA1840-35-HG	1871923	18GHz~40GHz	Jul. 06, 2022	Oct. 21, 2022	Jul. 05, 2023	Radiation (03CH04-SZ)
Amplifier	Agilent Technologies	83017A	MY57280136	500MHz~26.5GHz	Sep. 30, 2022	Oct. 21, 2022	Sep. 29, 2023	Radiation (03CH04-SZ)
AC Power Source	Chroma	61601	N/A	N/A	NCR	Oct. 21, 2022	NCR	Radiation (03CH04-SZ)
Turn Table	EM	EM1000	N/A	0~360 degree	NCR	Oct. 21, 2022	NCR	Radiation (03CH04-SZ)
Antenna Mast	EM	EM1000	N/A	1 m~4 m	NCR	Oct. 21, 2022	NCR	Radiation (03CH04-SZ)

NCR: No Calibration Required.

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