Spot Check Evaluation

APPLICANT	**:**	**Motorola Mobility LLC**
EQUIPMENT	**:**	**Mobile Cellular Phone**
BRAND NAME	**:**	**Motorola**
MODEL NAME	**:**	**XT2323-2, XT2323-5, XT2323-6**
FCC ID	**:**	**IHDT56AL9**
STANDARD	**:**	**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
340401-01A	Rev. 01	Initial issue of report	Jun. 06, 2023

Conformity Assessment Condition:
1. The test results (PASS/FAIL) with all measurement uncertainty excluded are presented against the regulation limits or in accordance with the requirements stipulated by the applicant/manufacturer who shall bear all the risks of non-compliance that may potentially occur if measurement uncertainty is taken into account. 2. The measurement uncertainty please refer to each test result in the section “Measurement Uncertainty”
Disclaimer:
The product specifications of the EUT presented in the test report that may affect the test assessments are declared by the manufacturer who shall take full responsibility for the authenticity.

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	XT2323-2, XT2323-5, XT2323-6
FCC ID	IHDT56AL9
IMEI Code	Conducted: 351606570017474/351606570017482
HW Version	DVT2
SW Version	T2TV33.23
EUT Stage	Identical Prototype

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. The three models XT2323-2, XT2323-5, XT2323-6 are only for market differentiation, all the others are the same.

1.4 Specification of Accessory

Accessories Information				
AC Adapter	**Brand Name**	Motorola(Salom)	**Model Name**	MC-301
Base Battery	**Brand Name**	Motorola (ATL)	**Model Name**	PM29
Flip Battery	**Brand Name**	Motorola (ATL)	**Model Name**	PV11
USB Cable 1	**Brand Name**	Motorola(Cabletech)	**Model Name**	SC18D13216
USB Cable 2	**Brand Name**	Motorola(Luxshare)	**Model Name**	SC18D13217
USB Cable 3	**Brand Name**	Motorola(Saibao)	**Model Name**	SC18D13215
USB Cable 4	**Brand Name**	Motorola(Saibao)	**Model Name**	SC18D86732

1.5 Modification of EUT

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

1.6 Testing Site

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		
Test Site No.	**Sporton Site No.**	**FCC Designation No.**	**FCC Test Firm Registration No.**
	TH01-KS DFS01-KS	CN1257	314309

1.7 Test Software

Item	Site	Manufacturer	Name	Version
1.	DFS01-KS	Sporton	Test Tools	1.0

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: XT2323-2, XT2323-5, XT2323-6, FCC ID: IHDT56AL9) is electrically identical to the reference device (Model: XT2323-1, FCC ID: IHDT56AL8) 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, 6XD) reuse the original model's result and do spot-check, following the FCC KDB 484596 D01 Referencing Test Data v01.

The applicant takes full responsibility that the test data as referenced in this report represent compliance for this FCC ID: IHDT56AL9.

2.2 Model Difference Information

The **main** difference between FCC ID: IHDT56AL8 and FCC ID: IHDT56AL9 is as below:

- Remove LTE B19/32/42/43/38C, 5G NR n8/n38/n40.
- Add LTE B14/29/30/46/71/5B/66B/48C, 5G NR n12/n14/n25/n29/n30/n48/n70/n71;

Other differences and all the details of similarity and difference can be found in the confidential documents (XT2323-2, XT2323-5, XT2323-6_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	IHDT56AL8	Original Grant	FR340401A	IHDT56AL9	All sections applicable
	DTS (BLE)	2400~2483.5	IHDT56AL8	Original Grant	FR340401B	IHDT56AL9	All sections applicable
	DTS (WLAN)	2400~2483.5	IHDT56AL8	Original Grant	FR340401C	IHDT56AL9	All sections applicable
15E	NII	5180~5240	IHDT56AL8	Original Grant	FR340401E	IHDT56AL9	All sections applicable
		5260~5320	IHDT56AL8	Original Grant	FR340401E FZ340401	IHDT56AL9	All sections applicable
		5500~5720	IHDT56AL8	Original Grant	FR340401E FZ340401	IHDT56AL9	All sections applicable
		5745~5825	IHDT56AL8	Original Grant	FR340401E	IHDT56AL9	All sections applicable
	6XD	5925~7125	IHDT56AL8	Original Grant	FR340401F	IHDT56AL9	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

All test procedures follow the related section of parent report.

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

Test Item	Mode	IHDT56AL8 Parent Worst Result	IHDT56AL9 Variant Check Result	Difference (dB)
Conducted Power (dBm)	BT BR/EDR ANT4	19.52	19.45	0.07
	BT BR/EDR ANT6	18.43	18.34	0.09
	BLE 1M ANT4	8.45	7.78	0.67
	BLE 1M ANT4	8.56	8.50	0.06
	BLE 2M ANT6	8.22	7.57	0.65
	BLE 2M ANT6	8.31	7.29	1.02
	2.4G WLAN 11b	26.96	26.92	0.04
	2.4G WLAN 11g	28.97	28.93	0.04
	2.4G WLAN 11n20	28.90	28.88	0.02
	2.4G WLAN 11n40	28.90	28.85	0.05
	2.4G WLAN 11ax20	28.98	28.95	0.03
	2.4G WLAN 11ax40	28.97	28.93	0.04
	5G WLAN 11a U-NII-1	21.37	21.10	0.27
	5G WLAN 11a U-NII-2A	21.19	20.85	0.34
	5G WLAN 11a U-NII-2C	20.93	20.90	0.03
	5G WLAN 11a U-NII-3	22.52	22.32	0.20
	5G WLAN 11n20 U-NII-1	22.25	22.12	0.13
	5G WLAN 11n20 U-NII-2A	22.49	22.45	0.04
	5G WLAN 11n20 U-NII-2C	22.26	22.10	0.16
	5G WLAN 11n20 U-NII-3	22.31	22.16	0.15
	5G WLAN 11ac20 U-NII-1	22.34	22.25	0.09
	5G WLAN 11ac20 U-NII-2A	22.54	22.50	0.04
	5G WLAN 11ac20 U-NII-2C	22.30	22.11	0.19
	5G WLAN 11ac20 U-NII-3	22.32	22.23	0.09
	5G WLAN 11ax20 U-NII-1	22.36	22.29	0.07
	5G WLAN 11ax20 U-NII-2A	22.55	22.54	0.01
	5G WLAN 11ax20 U-NII-2C	22.34	22.15	0.19
	5G WLAN 11ax20 U-NII-3	22.41	22.31	0.10
	5G WLAN 11n40 U-NII-1	22.27	22.23	0.04
	5G WLAN 11n40 U-NII-2A	22.53	22.52	0.01
	5G WLAN 11n40 U-NII-2C	22.49	22.32	0.17
	5G WLAN 11n40 U-NII-3	22.22	22.20	0.02
	5G WLAN 11ac40 U-NII-1	22.30	22.26	0.04
	5G WLAN 11ac40 U-NII-2A	22.55	22.53	0.02
	5G WLAN 11ac40 U-NII-2C	22.53	22.42	0.11
	5G WLAN 11ac40 U-NII-3	22.28	22.25	0.03
	5G WLAN 11ax40 U-NII-1	22.33	22.31	0.02
	5G WLAN 11ax40 U-NII-2A	22.57	22.56	0.01
	5G WLAN 11ax40 U-NII-2C	22.55	22.46	0.09
	5G WLAN 11ax40 U-NII-3	22.30	22.28	0.02
	5G WLAN 11ac80 U-NII-1	19.87	19.84	0.03

	5G WLAN 11ac80 U-NII-2A	20.67	20.65	0.02
	5G WLAN 11ac80 U-NII-2C	22.48	22.44	0.04
	5G WLAN 11ac80 U-NII-3	22.21	22.15	0.06
	5G WLAN 11ax80 U-NII-1	19.89	19.88	0.01
	5G WLAN 11ax80 U-NII-2A	20.71	20.70	0.01
	5G WLAN 11ax80 U-NII-2C	22.51	22.48	0.03
	5G WLAN 11ax80 U-NII-3	22.24	22.19	0.05
	5G WLAN 11ac160 U-NII-2A	19.59	19.51	0.08
	5G WLAN 11ac160 U-NII-2C	19.67	19.65	0.02
	5G WLAN 11ax160 U-NII-2A	19.61	19.60	0.01
	5G WLAN 11ax160 U-NII-2C	19.72	19.70	0.02
	6G WLAN 11a U-NII-5	13.33	12.16	1.17
	6G WLAN 11a U-NII-6	13.19	12.79	0.40
	6G WLAN 11a U-NII-7	12.96	12.95	0.01
	6G WLAN 11a U-NII-8	12.93	12.55	0.38
	6G WLAN 11ax20 U-NII-5	13.59	12.07	1.49
	6G WLAN 11ax20 U-NII-6	13.12	12.73	0.39
	6G WLAN 11ax20 U-NII-7	13.28	12.97	0.31
	6G WLAN 11ax20 U-NII-8	13.31	12.97	0.34
	6G WLAN 11ax40 U-NII-5	16.24	12.12	4.12
	6G WLAN 11ax40 U-NII-6	16.10	16.03	0.07
	6G WLAN 11ax40 U-NII-7	16.30	16.15	0.15
	6G WLAN 11ax40 U-NII-8	16.22	16.00	0.22
	6G WLAN 11ax80 U-NII-5	16.41	12.26	4.15
	6G WLAN 11ax80 U-NII-6	17.70	17.59	0.11
	6G WLAN 11ax80 U-NII-7	17.78	17.50	0.28
	6G WLAN 11ax80 U-NII-8	17.38	17.05	0.33
	6G WLAN 11ax160 U-NII-5	16.49	12.33	4.16
	6G WLAN 11ax160 U-NII-6	17.62	17.59	0.03
	6G WLAN 11ax160 U-NII-7	17.63	17.42	0.21
	6G WLAN 11ax160 U-NII-8	17.46	17.22	0.24

Test Item	Mode	IHDT56AL8 Parent Worst Result	IHDT56AL9 Variant Check Result	Difference (dB)
CBP	UNII-8 BW160M CH Freq. 6985MHz	-62.92	-62.41	0.51

Conclusion:
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.

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.

The same CBP detection mechanism/software/antenna gain is used in the variant. Hence, all test cases refer to parent report for CBP.

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	May 26, 2023	Oct. 11, 2023	Conducted (TH01-KS)
Pulse Power Senor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 05, 2023	May 26, 2023	Jan. 04, 2024	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 05, 2023	May 26, 2023	Jan. 04, 2024	Conducted (TH01-KS)
Signal Analyzer	R&S	FSV7	101632	10Hz~7GHz	Jan. 05, 2023	Jun. 01, 2023	Jan. 04, 2024	CBP (DFS01-KS)
MXG-B RF Vector Signal Genertor	Keysight	5182B /5182BX07	MY56200417 /MY59360210	9kHz~7.2GHz	May 16, 2023	Jun. 01, 2023	May 15, 2024	CBP (DFS01-KS)
Vector Signal Generator	R&S	SMBV100A	258305	9kHz~6GHz	Jan. 05, 2023	Jun. 01, 2023	Jan. 04, 2024	CBP (DFS01-KS)
Combiner	MTJ Cooperation	MTJ7112	N/A	0.4-6GHz	NCR	Jun. 01, 2023	NCR	CBP (DFS01-KS)

NCR: No Calibration Required.

4 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.26-2015. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Measurement

Test Item	Uncertainty
Conducted Power	**±0.46 dB**

——— **THE END** ———

Appendix A. Conducted Test Results

Conducted Power & EIRP for UNII-5:

UNII-5 MIMO												
Mod.	Data Rate	NTX	Freq. (MHz)	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
				Ant 5	Ant 4	Ant 5	Ant 4	SUM	Ant 5	Ant 4	SUM		
11a	6Mbps	2	5935	0.03	0.03	8.96	8.62	11.80	-5.50		6.30	24.00	Pass
11a	6Mbps	2	5955	0.03	0.03	9.57	8.68	12.16	-5.50		6.66	24.00	Pass
11a	6Mbps	2	6175	0.03	0.03	9.25	8.95	12.11	-5.50		6.61	24.00	Pass
11a	6Mbps	2	6415	0.03	0.03	9.58	8.61	12.13	-5.50		6.63	24.00	Pass

UNII-5 MIMO													
Mod.	Data Rate	NTX	Freq. (MHz)	RU Config.	Duty Factor (dB)		Conducted Power with duty factor (dBm)			DG (dBi)		EIRP Power (dBm)	EIRP Power Limit (dBm)	Pass /Fail
					Ant 5	Ant 4	Ant 5	Ant 4	SUM	Ant 5	Ant 4	SUM		
HE20	MCS0	2	5955	Full	0.00	0.00	9.42	8.66	12.07	-5.50		6.57	24.00	Pass
HE20	MCS0	2	5955	26/0	0.00	0.00	-0.45	0.21	2.90	-5.50		-2.60	24.00	Pass
HE20	MCS0	2	5955	52/37	0.00	0.00	1.73	2.79	5.30	-5.50		-0.20	24.00	Pass
HE20	MCS0	2	5955	106/53	0.00	0.00	4.60	6.03	8.38	-5.50		2.88	24.00	Pass
HE20	MCS0	2	5935	Full	0.00	0.00	0.95	1.79	4.40	-5.50		-1.10	24.00	Pass
HE20	MCS0	2	5935	26/0	0.00	0.00	-10.16	-9.89	-7.01	-5.50		-12.51	24.00	Pass
HE20	MCS0	2	5935	52/37	0.00	0.00	-5.42	-5.48	-2.44	-5.50		-7.94	24.00	Pass
HE20	MCS0	2	5935	106/53	0.00	0.00	-2.89	-2.98	0.08	-5.50		-5.42	24.00	Pass
HE20	MCS0	2	6175	Full	0.00	0.00	8.99	8.79	11.90	-5.50		6.40	24.00	Pass
HE20	MCS0	2	6175	26/0	0.00	0.00	-1.31	0.14	2.49	-5.50		-3.01	24.00	Pass
HE20	MCS0	2	6175	52/37	0.00	0.00	1.74	3.13	5.50	-5.50		0.00	24.00	Pass
HE20	MCS0	2	6175	106/53	0.00	0.00	4.65	6.06	8.42	-5.50		2.92	24.00	Pass
HE20	MCS0	2	6415	Full	0.00	0.00	9.34	8.53	11.96	-5.50		6.46	24.00	Pass
HE20	MCS0	2	6415	26/8	0.00	0.00	-0.76	-0.48	2.39	-5.50		-3.11	24.00	Pass
HE20	MCS0	2	6415	52/40	0.00	0.00	2.06	2.63	5.36	-5.50		-0.14	24.00	Pass
HE20	MCS0	2	6415	106/54	0.00	0.00	4.61	5.09	7.87	-5.50		2.37	24.00	Pass
HE40	MCS0	2	5965	Full	0.00	0.00	9.36	8.85	12.12	-5.50		6.62	24.00	Pass
HE40	MCS0	2	6165	Full	0.00	0.00	8.97	8.73	11.86	-5.50		6.36	24.00	Pass
HE40	MCS0	2	6405	Full	0.00	0.00	9.53	8.51	12.06	-5.50		6.56	24.00	Pass
HE80	MCS0	2	5985	Full	0.00	0.00	9.54	8.91	12.25	-5.50		6.75	24.00	Pass
HE80	MCS0	2	6145	Full	0.00	0.00	9.41	8.73	12.09	-5.50		6.59	24.00	Pass
HE80	MCS0	2	6385	Full	0.00	0.00	9.75	8.69	12.26	-5.50		6.76	24.00	Pass
HE160	MCS0	2	6025	Full	0.00	0.00	9.62	8.99	12.33	-5.50		6.83	24.00	Pass
HE160	MCS0	2	6185	Full	0.00	0.00	9.60	8.94	12.29	-5.50		6.79	24.00	Pass
HE160	MCS0	2	6345	Full	0.00	0.00	9.39	8.93	12.18	-5.50		6.68	24.00	Pass