



Spot Check Evaluation

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2345-5
FCC ID : IHDT56AK3
STANDARD : 47 CFR Part 2, 22(H), 27(M)
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



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
292304	Rev. 01	Initial issue of report	Dec. 09, 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	XT2345-5
FCC ID	IHDT56AK3
IMEI Code	Conducted: 350928980006157/350928980006165
HW Version	DVT2
SW Version	TLA33.64
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 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



1.6 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(IN)	Brand Name	Motorola(aohai)	Model Name	MC-104
AC Adapter 1(AU)	Brand Name	Motorola(aohai)	Model Name	MC-105
AC Adapter 1(AR)	Brand Name	Motorola(aohai)	Model Name	MC-106
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(IN)	Brand Name	Motorola(chenyang)	Model Name	MC-104
AC Adapter 2(AU)	Brand Name	Motorola(chenyang)	Model Name	MC-105
AC Adapter 2(AR)	Brand Name	Motorola(chenyang)	Model Name	MC-106
AC Adapter 2(BR)	Brand Name	Motorola(chenyang)	Model Name	MC-107
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 3(AR)	Brand Name	Motorola(Salcomp)	Model Name	MC-106
AC Adapter 3(CHILE)	Brand Name	Motorola(Salcomp)	Model Name	MC-109
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	NLD-EM313A-20SF
Earphone 2	Brand Name	Motorola(JWELL)	Model Name	JWEP1205-L20H
USB Cable 1	Brand Name	Motorola(SAIBAO)	Model Name	SLQ-A214A
USB Cable 2	Brand Name	Motorola(JIEYE)	Model Name	JY-C03-410



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: XT2345-5, FCC ID: IHDT56AK3) is electrically identical to the reference device (Model: XT2345-2, XT2345-3, FCC ID: IHDT56AK1, IHDT56AK2) 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, 27(equipment class: TNE) 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: IHDT56AK3 .

2.2 Model Difference Information

The main difference between FCC ID: IHDT56AK1 and FCC ID: IHDT56AK3 is as below:

- Remove GSM1900/WCDMA Band II/IV and LTE Band 2/4/13/26/66.
- Add NFC function and LTE Band 20/41.

The main difference between FCC ID: IHDT56AK2 and FCC ID: IHDT56AK3 is as below:

- Add NFC function

Other differences and all the details of similarity and difference can be found in the confidential documents (XT2345-5_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	IHDT56AK1	Original Grant	FR292306A	IHDT56AK3	All sections applicable
	DTS (BLE)	2400~2483.5	IHDT56AK1	Original Grant	FR292306B	IHDT56AK3	All sections applicable
	DTS (WLAN)	2400~2483.5	IHDT56AK1	Original Grant	FR292306C	IHDT56AK3	All sections applicable
15E	U-NII-1	5150~5250	IHDT56AK1	Original Grant	FR292306D	IHDT56AK3	All sections applicable
	U-NII-2A	5250~5350	IHDT56AK1	Original Grant	FR292306D	IHDT56AK3	All sections applicable
	U-NII-2C	5470~5725	IHDT56AK1	Original Grant	FR292306D	IHDT56AK3	All sections applicable
	U-NII-3	5725~5850	IHDT56AK1	Original Grant	FR292306D	IHDT56AK3	All sections applicable
	DFS	5250~5350 5470~5725	IHDT56AK1	Original Grant	FZ292306	IHDT56AK3	All sections applicable



22, 27	TNE (GSM)	GSM 850	IHDT56AK2	Original Grant	FG292304-01A	IHDT56AK3	All sections applicable
	TNE (WCDMA)	Band V	IHDT56AK2	Original Grant	FG292304-01A	IHDT56AK3	All sections applicable
	TNE (LTE)	B5/41	IHDT56AK2	Original Grant	FG292304-01B	IHDT56AK3	All sections applicable
		B7/38	IHDT56AK1	Original Grant	FG292306B	IHDT56AK3	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	IHDT56AK1 Parent Worst Result	IHDT56AK3 Variant Check Result	Difference (dB)
Conducted Power (dBm)	BT BR/EDR	11.12	11.02	0.1
	BLE 1Mbps	1.77	1.69	0.08
	BLE 2Mbps	1.71	1.66	0.05
	11b, 2.4GHz	22.47	22.40	0.07
	11g, 2.4GHz	24.56	24.20	0.36
	11n HT20, 2.4GHz	24.44	24.16	0.28
	11a, 5.2GHz	18.49	18.11	0.38
	11a, 5.3GHz	18.04	17.70	0.34
	11a, 5.5GHz	18.24	17.87	0.37
	11a, 5.8GHz	18.02	17.82	0.2
	11n HT20, 5.2GHz	18.46	18.18	0.28
	11n HT20, 5.3GHz	18.04	17.86	0.18
	11n HT20, 5.5GHz	18.15	17.80	0.35
	11n HT20, 5.8GHz	17.92	17.86	0.06
	11ac VHT20, 5.2GHz	17.56	17.54	0.02
	11ac VHT20, 5.3GHz	17.32	17.24	0.08
	11ac VHT20, 5.5GHz	17.21	17.15	0.06
	11ac VHT20, 5.8GHz	17.56	17.51	0.05
	LTE B7	22.93	22.08	0.85
LTE B38	23.12	22.69	0.43	

Test Item	Mode	IHDT56AK2 Parent Worst Result	IHDT56AK3 Variant Check Result	Difference (dB)
Conducted Power (dBm)	GSM850	32.08	32.07	0.01
	WCDMA B5	22.37	22.28	0.09
	LTE B5	22.89	22.77	0.12
	LTE B41	23.32	22.69	0.63



Conclusion:

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	Nov. 25, 2022	Oct. 11, 2023	Conducted (TH01-KS)
Power divider	STI	STI08-0055	-	0.5~40GHz	Aug. 25, 2022	Nov. 25, 2022	Aug. 24, 2023	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1435004	50MHz Bandwidth	Mar. 02, 2022	Nov. 25, 2022	Mar. 01, 2023	Conducted (TH01-KS)
Pulse Power Sensor	Anritsu	MA2411B	1339163	300MHz~40GHz	Oct. 12, 2022	Nov. 25, 2022	Oct. 11, 2023	Conducted (TH01-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-