



# Spot Check Evaluation

**APPLICANT** : Motorola Mobility LLC  
**EQUIPMENT** : Mobile Phone  
**BRAND NAME** : Motorola, Lenovo  
**MODEL NAME** : XT2159-4, XT2159-5  
**FCC ID** : IHDT56ZW8  
**STANDARD** : 47 CFR Part 2, 22(H), 24(E)

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

*Jason Jia*

Reviewed by: Jason Jia / Supervisor

*Alex Wang*

Approved by: Alex Wang / Manager



**Sporton International (Kunshan) Inc.**

**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
161824-04B	Rev. 01	Initial issue of report	Aug. 19, 2021



# 1 General Description

## 1.1 Applicant

Motorola Mobility LLC  
222 W, Merchandise Mart Plaza,Chicago,IL60654 USA

## 1.2 Manufacturer

Motorola Mobility LLC  
222 W, Merchandise Mart Plaza,Chicago,IL60654 USA

## 1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	Mobile Phone
Brand Name	Motorola, Lenovo
Model Name	XT2159-4, XT2159-5
FCC ID	IHDT56ZW8
HW Version	DVT2
SW Version	ROQ31.105
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. Sample1 with adapter 1, usb cable 1 and earphone 1 performs RSE tests.

## 1.4 Modification of EUT

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

## 1.5 Testing Location

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

Test Firm	Sporton International (Kunshan) Inc.		
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.
	03CH04-KS	CN1257	314309

## 1.6 Specification of Accessory

Specification of Accessory				
AC Adapter 1(US)	Brand Name	Motorola(Chenyang)	Model Name	MC-101
AC Adapter 1(EU)	Brand Name	Motorola(Chenyang)	Model Name	MC-102
AC Adapter 1(UK)	Brand Name	Motorola(Chenyang)	Model Name	MC-103
AC Adapter 1(AU)	Brand Name	Motorola(Chenyang)	Model Name	MC-105
AC Adapter 1(AR)	Brand Name	Motorola(Chenyang)	Model Name	MC-106
AC Adapter 1(IN)	Brand Name	Motorola(Chenyang)	Model Name	MC-104
AC Adapter 2(US)	Brand Name	Motorola(Aohai)	Model Name	MC-101
AC Adapter 2(EU)	Brand Name	Motorola(Aohai)	Model Name	MC-102
AC Adapter 2(UK)	Brand Name	Motorola(Aohai)	Model Name	MC-103
AC Adapter 2(AU)	Brand Name	Motorola(Aohai)	Model Name	MC-105
AC Adapter 2(AR)	Brand Name	Motorola(Aohai)	Model Name	MC-106
AC Adapter 2(IN)	Brand Name	Motorola(Aohai)	Model Name	MC-104
AC Adapter 3(CHILE)	Brand Name	Motorola(Salcomp)	Model Name	MC-109
Battery 1	Brand Name	Motorola(Sunwoda)	Model Name	JK50
Battery 2	Brand Name	Motorola(ATL)	Model Name	JK50
Earphone 1	Brand Name	Motorola(NEW LEADER)	Model Name	NLD-EM313A-23SF
Earphone 2	Brand Name	Motorola(Ju wei)	Model Name	JWEP1185-ZN01H
USB Cable 1	Brand Name	Motorola(Washin)	Model Name	HX-ZN-13
USB Cable 2	Brand Name	Motorola(Ju wei)	Model Name	JWUB1498-ZN01H



## 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: XT2159-4, XT2159-5, FCC ID: IHDT56ZW8) is electrically identical to the reference device (Model: XT2159-1, XT2159-2, FCC ID: IHDT56ZW6) for the portions of the circuitry corresponding to the data being re-used. Based on their similarity, the FCC Part 22, 24 (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: IHDT56ZW8 .

### 2.2 Model Difference Information

The main difference between FCC ID: IHDT56ZW6 and FCC ID: IHDT56ZW8 is as below:

- Remove WCDMA Band IV/VI and LTE Band 4/28/66.
- Add LTE Band 18/20/26/38/41.

Other differences and all the details of similarity and difference can be found in the confidential documents(XT2159-4, XT2159-5\_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
22, 24	PCE (GSM)	GSM 850/1900	IHDT56ZW6	Original Grant	FG161824A	IHDT56ZW8	All sections applicable
	PCE (WCDMA)	Band II, V	IHDT56ZW6	Original Grant	FG161824A	IHDT56ZW8	All sections applicable



## 2.4 Spot Check Verification Data Section

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

Test Item	Mode	IHDT56ZW6 Parent Worst Result	IHDT56ZW8 Variant Check Result	Difference (dB)
Radiated Spurious Emission ( dBm)	GSM850	-33.27	-35.75	2.48
	GSM1900	-33.24	-31.23	2.01

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.

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
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz-44G,MAX 30dB	Apr. 13, 2021	Jul. 07, 2021	Apr. 12, 2022	Radiation (03CH04-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Nov. 01, 2020	Jul. 07, 2021	Oct. 31, 2021	Radiation (03CH04-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz~1GHz	Jun. 07, 2021	Jul. 07, 2021	Jun. 06, 2022	Radiation (03CH04-KS)
Horn Antenna	Schwarzbeck	BBHA9120D	1356	1GHz~18GHz	Apr. 18, 2021	Jul. 07, 2021	Apr. 17, 2022	Radiation (03CH04-KS)
SHF-EHF Horn	Com-power	AH-840	101115	18GHz~40GHz	Jan. 06, 2021	Jul. 07, 2021	Jan. 05, 2022	Radiation (03CH04-KS)
Amplifier	SONOMA	310N	187289	9KHz-1GHz	Jan. 06, 2021	Jul. 07, 2021	Jan. 05, 2022	Radiation (03CH04-KS)
Amplifier	MITEQ	EM18G40GG A	060728	18~40GHz	Jan. 07, 2021	Jul. 07, 2021	Jan. 06, 2022	Radiation (03CH04-KS)
high gain Amplifier	MITEQ	AMF-7D-0010 1800-30-10P	2025788	1Ghz-18Ghz	Jan. 06, 2021	Jul. 07, 2021	Jan. 05, 2022	Radiation (03CH04-KS)
Amplifier	Keysight	83017A	MY57280106	500MHz~26.5G Hz	Oct. 14, 2020	Jul. 07, 2021	Oct. 13, 2021	Radiation (03CH04-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Jul. 07, 2021	NCR	Radiation (03CH04-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Jul. 07, 2021	NCR	Radiation (03CH04-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Jul. 07, 2021	NCR	Radiation (03CH04-KS)

NCR: No Calibration Required.

-THE END-