



# FCC RF Test Report

**APPLICANT** : Motorola Mobility LLC  
**EQUIPMENT** : Mobile Cellular Phone  
**BRAND NAME** : Motorola  
**MODEL NAME** : XT2113-3  
**FCC ID** : IHDT56ZF4  
**STANDARD** : 47 CFR Part 2, 22(H), 24(E), 27(L)  
**CLASSIFICATION** : PCS Licensed Transmitter Held to Ear (PCE)

This is a data re-used report which is only valid together with the original test report. 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*

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Reviewed by: Jason Jia / Supervisor

*James Huang*

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Approved by: James Huang / Manager



***Sporton International (Kunshan) Inc.***

***No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300  
People's Republic of China***



## TABLE OF CONTENTS

|                                                        |   |
|--------------------------------------------------------|---|
| REVISION HISTORY.....                                  | 3 |
| 1 GENERAL DESCRIPTION.....                             | 4 |
| 1.1 Applicant.....                                     | 4 |
| 1.2 Manufacturer.....                                  | 4 |
| 1.3 Product Feature of Equipment Under Test.....       | 4 |
| 1.4 Product Specification of Equipment Under Test..... | 5 |
| 1.5 Modification of EUT .....                          | 5 |
| 1.6 Testing Location .....                             | 6 |
| 1.7 Test Software.....                                 | 6 |
| 1.8 Re-use of Measured Data .....                      | 6 |
| 2 LIST OF MEASURING EQUIPMENT.....                     | 8 |
| APPENDIX A. SETUP PHOTOGRAPHS                          |   |
| APPENDIX B. REFERENCE REPORT                           |   |



## REVISION HISTORY

| REPORT NO.   | VERSION | DESCRIPTION             | ISSUED DATE   |
|--------------|---------|-------------------------|---------------|
| FG082402-01A | Rev. 01 | Initial issue of report | Oct. 09, 2020 |
| FG082402-01A | Rev. 02 | Update accessory list   | Oct. 13, 2020 |
| FG082402-01A | Rev. 03 | Revised FCC ID          | Oct. 21, 2020 |
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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                      | XT2113-3                                                                                                                                                                        |
| FCC ID                          | FORMTEXT IJHDT56ZF4                                                                                                                                                             |
| EUT supports Radios application | GSM/WCDMA/LTE/5G NR/NFC<br>WLAN 2.4GHz 802.11b/g/n HT20<br>WLAN 5GHz 802.11a/n HT20/HT40<br>WLAN 5GHz 802.11ac VHT20/VHT40/VHT80<br>Bluetooth BR/EDR/LE<br>FM Receiver and GNSS |
| HW Version                      | DVT2                                                                                                                                                                            |
| SW Version                      | QZK30.Q4-23                                                                                                                                                                     |
| 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 Product Specification of Equipment Under Test

| Standards-related Product Specification |                                                                                                                                                                                                                |
|-----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Tx Frequency</b>                     | <b>GSM/GPRS/EDGE:</b><br>850: 824.2 MHz ~ 848.8 MHz<br>1900: 1850.2 MHz ~ 1909.8MHz<br><b>WCDMA:</b><br>Band V: 826.4 MHz ~ 846.6 MHz<br>Band II: 1852.4 MHz ~ 1907.6 MHz<br>Band IV: 1712.4 MHz ~ 1752.6 MHz  |
| <b>Rx Frequency</b>                     | <b>GSM/GPRS/EDGE:</b><br>850: 869.2 MHz ~ 893.8 MHz<br>1900: 1930.2 MHz ~ 1989.8 MHz<br><b>WCDMA:</b><br>Band V: 871.4 MHz ~ 891.6 MHz<br>Band II: 1932.4 MHz ~ 1987.6 MHz<br>Band IV: 2112.4 MHz ~ 2152.6 MHz |
| <b>Antenna Type</b>                     | Fixed Internal Antenna                                                                                                                                                                                         |
| <b>Antenna Gain</b>                     | Cellular Band: -2.60 dBi<br>PCS Band: -2.20 dBi<br>AWS Band: -1.90 dBi                                                                                                                                         |
| <b>Type of Modulation</b>               | GSM: GMSK<br>GPRS: GMSK<br>EDGE: GMSK / 8PSK<br>WCDMA : BPSK<br>HSDPA/DC-HSDPA : QPSK<br>HSUPA : QPSK<br>HSPA+ : 16QAM (Uplink not supported)<br>DC-HSDPA : 64QAM                                              |

## 1.5 Modification of EUT

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



## 1.6 Testing Location

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

|                           |                                                                                                                                                                          |                            |                                       |
|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------|---------------------------------------|
| <b>Test Firm</b>          | Sporton International (Kunshan) Inc.                                                                                                                                     |                            |                                       |
| <b>Test Site Location</b> | No. 1098, Pengxi North Road, Kunshan Economic Development Zone<br>Jiangsu Province 215300 People's Republic of China<br>TEL : +86-512-57900158<br>FAX : +86-512-57900958 |                            |                                       |
| <b>Test Site No.</b>      | <b>Sporton Site No.</b>                                                                                                                                                  | <b>FCC Designation No.</b> | <b>FCC Test Firm Registration No.</b> |
|                           | 03CH04-KS                                                                                                                                                                | CN1257                     | 314309                                |

## 1.7 Test Software

| Item | Site      | Manufacture | Name | Version      |
|------|-----------|-------------|------|--------------|
| 1.   | 03CH04-KS | AUDIX       | E3   | 6.2009-8-24a |

## 1.8 Re-use of Measured Data

### 1.8.1 Introduction Section

This application re-uses data collected on a similar device. The subject device of this application (Model: XT2113-3, FCC ID: IHDT56ZF4) is electrically identical to the reference device (Model: XT2113-2, XT2113-5, FCC ID: IHDT56ZF2) for the portions of the circuitry corresponding to the data being re-used, as treated by KDB Publication 484596 D01.

### 1.8.2 Difference Section

For details concerning the similarity with respect to component placement, mechanical/electrical design etc., please refer to the Product Equality Declaration.

The re-used RF data includes the following bands provided in Appendix B (Sporton RF Report No. FG082402A for the reference device Model: XT2113-2, XT2113-5, FCC ID: IHDT56ZF2).

### 1.8.3 Reference detail Section:

| Equipment Class | Reference FCC ID | Folder Test                | Report Title/Section                       |
|-----------------|------------------|----------------------------|--------------------------------------------|
| PCE (2G/3G)     | IHDT56ZF2        | Part22H.24E.27L(FG082402A) | All sections applicable for GSM/WCDMA Band |

### 1.8.4 Spot Check Verification Data Section

In order to confirm hardware similarity of the subject device with the reference device, spot check measurements were performed on the subject device for the following test items, the test result were consistent with FCC ID: IHDT56ZF2.

Assertions concerning the similarity of these devices are based on representations by the applicant. The applicant accepts full responsibility for the validity of the similarity claim, and for the determination that verification test data are sufficient to support it.

| Test Item                        | Mode                 | IHDT56ZF2 Worst Result | IHDT56ZF4 Worst Result | Difference (dB) |
|----------------------------------|----------------------|------------------------|------------------------|-----------------|
| Radiated Spurious Emission (dBm) | ANT 1                | -                      | -                      | -               |
|                                  | Part 22H EDGE850 L   | -51.60                 | -50.17                 | 1.43            |
|                                  | Part 24E EDGE1900 M  | -51.98                 | -49.41                 | 2.57            |
|                                  | Part 24E WCDMA1900 M | -51.47                 | -49.71                 | 1.76            |
|                                  | Part 27L WCDMA1700 H | -53.72                 | -51.52                 | 2.20            |
|                                  | ANT 2                | -                      | -                      | -               |
|                                  | Part 22H GSM850 H    | -48.41                 | -50.64                 | 2.23            |



## 2 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. 15, 2020    | Sep. 21, 2020 | Apr. 14, 2021 | Radiation (03CH04-KS) |
| Bilog Antenna             | TeseQ        | CBL6111D                 | 49922      | 30MHz-1GHz        | Jan. 03, 2020    | Sep. 21, 2020 | Jan. 02, 2021 | Radiation (03CH04-KS) |
| Double Ridge Horn Antenna | ETS-Lindgren | 3117                     | 75957      | 1GHz~18GHz        | Nov. 10, 2019    | Sep. 21, 2020 | Nov. 09, 2020 | Radiation (03CH04-KS) |
| SHF-EHF Horn              | Com-power    | AH-840                   | 101115     | 18GHz~40GHz       | Nov. 10, 2019    | Sep. 21, 2020 | Nov. 09, 2020 | Radiation (03CH04-KS) |
| Amplifier                 | SONOMA       | 310N                     | 187289     | 9KHz-1GHz         | Jan. 03, 2020    | Sep. 21, 2020 | Jan. 02, 2021 | Radiation (03CH04-KS) |
| Amplifier                 | MITEQ        | EM18G40G GA              | 060728     | 18~40GHz          | Jan. 08, 2020    | Sep. 21, 2020 | Jan. 07, 2021 | Radiation (03CH04-KS) |
| high gain Amplifier       | MITEQ        | AMF-7D-00 101800-30-1 0P | 2025788    | 1Ghz-18Ghz        | Jan. 03, 2020    | Sep. 21, 2020 | Jan. 02, 2021 | Radiation (03CH04-KS) |
| Amplifier                 | Keysight     | 83017A                   | MY57280106 | 500MHz~26.5GHz    | Oct. 15, 2019    | Sep. 21, 2020 | Oct. 14, 2020 | Radiation (03CH04-KS) |
| AC Power Source           | Chroma       | 61601                    | F104090004 | N/A               | NCR              | Sep. 21, 2020 | NCR           | Radiation (03CH04-KS) |
| Turn Table                | ChamPro      | EM 1000-T                | 060762-T   | 0~360 degree      | NCR              | Sep. 21, 2020 | NCR           | Radiation (03CH04-KS) |
| Antenna Mast              | ChamPro      | EM 1000-A                | 060762-A   | 1 m~4 m           | NCR              | Sep. 21, 2020 | NCR           | Radiation (03CH04-KS) |

NCR: No Calibration Required



## **Appendix B. Reference Report**

Please refer to Sporton report number FG082402A which is issued separately.