



FCC RF Test Report

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2128-1
FCC ID : IHDT56ZQ2
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure

This is a data re-used report which is only valid together with the original test report. We, Sporton International (ShenZhen) 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 (ShenZhen) Inc., the test report shall not be reproduced except in full.

Reviewed by: Derreck Chen / Supervisor

Approved by: Eric Shih / Manager



Sporton International (ShenZhen) Inc.

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People's Republic of China



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APPENDIX A. REFERENCE REPORT



REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION | ISSUED DATE |
|--------------|---------|-------------------------|---------------|
| FR120201-01D | Rev. 01 | Initial issue of report | Mar. 10, 2021 |
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Declaration of Conformity:
The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:
The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.



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 Cellular Phone |
| Brand Name | Motorola |
| Model Name | XT2128-1 |
| FCC ID | IHDT56ZQ2 |
| EUT supports Radios application | GSM/WCDMA/LTE WLAN 2.4GHz 802.11b/g/n HT20 WLAN 5GHz 802.11a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE FM Receiver and GNSS |
| HW Version | DVT2 |
| SW Version | RTA31.09 |
| EUT Stage | Production Unit |

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 | |
|---|---|
| Tx/Rx Frequency Range | 5180 MHz ~ 5240 MHz 5260 MHz ~ 5320 MHz 5500 MHz ~ 5720 MHz |
| Antenna Type / Gain | <5180 MHz ~ 5240 MHz> PIFA Antenna with gain -4.40 dBi <5260 MHz ~ 5320 MHz> PIFA Antenna with gain -4.30 dBi <5500 MHz ~ 5720 MHz> PIFA Antenna with gain -4.40 dBi |
| Type of Modulation | 802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM) |



1.5 Modification of EUT

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

1.6 Testing Location

Sporton International (Shenzhen) Inc. is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.01.

| | | | |
|---------------------------|---|----------------------------|---------------------------------------|
| Test Firm | Sporton International (Shenzhen) Inc. | | |
| Test Site Location | 1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055 People's Republic of China TEL: +86-755-86379589 FAX: +86-755-86379595 | | |
| Test Site No. | Sporton Site No. | FCC Designation No. | FCC Test Firm Registration No. |
| | TH01-SZ | CN1256 | 421272 |

1.7 Re-use of Measured Data

1.7.1 Introduction Section

This application re-uses data collected on a similar device. The subject device of this application (Model: XT2128-1, FCC ID: IHDT56ZQ2) is electrically identical to the reference device (Model: XT2128-2, FCC ID: IHDT56ZQ3) for the portions of the circuitry corresponding to the data being re-used, as treated by KDB Publication 484596 D01.

1.7.2 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 A (Sporton RF Report No. FR120201E for the reference device Model: XT2128-2, FCC ID: IHDT56ZQ3).



1.7.3 Reference detail Section:

| Equipment Class | Reference FCC ID | Folder Test | Report Title/Section |
|-----------------|------------------|--------------------|-------------------------|
| NII (B1~3) | IHDT56ZQ3 | Part15E(FR120201E) | All sections applicable |
| NII (B4) | IHDT56ZQ3 | Part15E(FR120201F) | All sections applicable |
| DFS | IHDT56ZQ3 | Part15E(FZ120201) | All sections applicable |

1.7.4 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: IHDT56ZQ3.

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 | IHDT56ZQ3 Worst Result | IHDT56ZQ2 Worst Result | Difference (dB) |
|-----------------------|----------------------|------------------------|------------------------|-----------------|
| Conducted Power (dBm) | 802.11a CH52 | 16.62 | 16.60 | 0.02 |
| | 802.11a CH165 | 16.47 | 16.25 | 0.22 |
| | 802.11n HT20 CH44 | 16.59 | 16.59 | 0 |
| | 802.11n HT20 CH149 | 16.37 | 16.36 | 0.01 |
| | 802.11n HT40 CH46 | 16.44 | 16.43 | 0.01 |
| | 802.11n HT40 CH151 | 16.13 | 16.11 | 0.02 |
| | 802.11ac VHT20 CH44 | 16.54 | 16.52 | 0.02 |
| | 802.11ac VHT20 CH149 | 16.30 | 16.21 | 0.09 |
| | 802.11ac VHT40 CH46 | 16.35 | 16.38 | 0.03 |
| | 802.11ac VHT40 CH151 | 16.11 | 16.09 | 0.02 |
| | 802.11ac VHT80 CH138 | 16.18 | 16.15 | 0.03 |
| | 802.11ac VHT80 CH155 | 15.70 | 15.65 | 0.05 |



2 List of Measuring Equipment

| Instrument | Manufacturer | Model No. | Serial No. | Characteristics | Calibration Date | Test Date | Due Date | Remark |
|--------------------|--------------|-----------|------------|-----------------|------------------|---------------|---------------|---------------------|
| Spectrum Analyzer | R&S | FSV40 | 101078 | 10Hz~40GHz | Apr. 17, 2020 | Mar. 09, 2021 | Apr. 16, 2021 | Conducted (TH01-SZ) |
| Pulse Power Sensor | Anritsu | MA2411B | 1207253 | 30MHz~40GHz | Dec. 25, 2020 | Mar. 09, 2021 | Dec. 24, 2021 | Conducted (TH01-SZ) |
| Power Meter | Anritsu | ML2495A | 1218010 | 50MHz Bandwidth | Dec. 25, 2020 | Mar. 09, 2021 | Dec. 24, 2021 | Conducted (TH01-SZ) |



Appendix A. Reference Report

Please refer to Sporton report number FR120201E & FZ120201 which is issued separately.