



FCC RF Test Report

APPLICANT : Motorola Mobility LLC
EQUIPMENT : Mobile Cellular Phone
BRAND NAME : Motorola
MODEL NAME : XT2129-1
FCC ID : IHDT56ZN1
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.

1/F, 2/F, Bldg 5, Shiling Industrial Zone, Xinwei Village, Xili, Nanshan, Shenzhen, 518055

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 | 4 |
| 1.5 Modification of EUT | 5 |
| 1.6 Testing Location | 5 |
| 1.7 Re-use of Measured Data | 5 |
| 2 LIST OF MEASURING EQUIPMENT | 7 |
| APPENDIX A. REFERENCE REPORT | |



REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION | ISSUED DATE |
|--------------|---------|-------------------------|---------------|
| FR002023-01D | Rev. 01 | Initial issue of report | Dec. 21, 2020 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |



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 | XT2129-1 |
| FCC ID | IHDT56ZN1 |
| 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 | RRC31.30 |
| 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 | <5150 MHz ~ 5250 MHz> PIFA Antenna with gain -4.50 dBi <5250 MHz ~ 5350 MHz> PIFA Antenna with gain -4.50 dBi <5470 MHz ~ 5725 MHz> PIFA Antenna with gain -4.50 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: XT2129-1, FCC ID: IHDT56ZN1) is electrically identical to the reference device (Model: XT2129-2, FCC ID: IHDT56ZN2) 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. FR002023E for the reference device Model: XT2129-2, FCC ID: IHDT56ZN2).

1.7.3 Reference detail Section:

| Equipment Class | Reference FCC ID | Folder Test | Report Title/Section |
|-----------------|------------------|--------------------|-------------------------|
| NII (B1~3) | IHDT56ZN2 | Part15E(FR002023E) | All sections applicable |
| NII (B4) | IHDT56ZN2 | Part15E(FR002023F) | All sections applicable |
| DFS | IHDT56ZN2 | Part15E(FZ002023) | 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: IHDT56ZN2.

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 | IHDT56ZN2 Worst Result | IHDT56ZN1 Worst Result | Difference (dB) |
|--|------------------------|---------------------------|---------------------------|-----------------|
| Average Conducted Power (dBm) | 802.11a _ Ch60 | 17.67 | 17.14 | -0.53 |
| | 802.11n HT20 _ Ch64 | 17.71 | 17.35 | -0.36 |
| | 802.11n HT40 _ Ch134 | 17.67 | 17.29 | -0.38 |
| | 802.11ac VHT20 _ Ch64 | 17.68 | 17.51 | -0.17 |
| | 802.11ac VHT40 _ Ch134 | 17.62 | 17.33 | -0.29 |
| | 802.11ac VHT80 _ Ch42 | 15.01 | 14.65 | -0.36 |



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 | Dec. 09, 2020 | Apr. 16, 2021 | Conducted (TH01-SZ) |
| Pulse Power Sensor | Anritsu | MA2411B | 1207253 | 30MHz~40GHz | Dec. 26, 2019 | Dec. 09, 2020 | Dec. 25, 2020 | Conducted (TH01-SZ) |
| Power Meter | Anritsu | ML2495A | 1218010 | 50MHz Bandwidth | Dec. 26, 2019 | Dec. 09, 2020 | Dec. 25, 2020 | Conducted (TH01-SZ) |



Appendix A. Reference Report

Please refer to Sporton report number FR002023E and FZ002023 which is issued separately.