FCC RF Test Report

APPLICANT : Motorola Mobility LLC EQUIPMENT : Mobile Cellular Phone

BRAND NAME : Motorola

MODEL NAME : XT2063-2

FCC ID : IHDT56YU1

STANDARD : 47 CFR Part 2, and 90(S)

CLASSIFICATION: PCS Licensed Transmitter Held to Ear (PCE)

The product was received on Jan. 22, 2020 and completely tested on May 21, 2020. We, Sporton International (Kunshan) Inc., would like to declare that the tested sample has been evaluated in accordance with the procedures given in ANSI C63.26-2015 and shown 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.

Reviewed by: Jason Jia / Supervisor

JasonJia

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

Sporton International (Kunshan) Inc.

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Report Issued Date : Jun. 10, 2020 Report Version : Rev. 01

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REVISION HISTORY

| REPORT NO. | VERSION | DESCRIPTION | ISSUED DATE |
|--------------|---------|-------------------------|---------------|
| FW010812-01A | Rev. 01 | Initial issue of report | Jun. 10, 2020 |
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SUMMARY OF TEST RESULT

| Report Section | FCC Rule Description | | Limit | Result | Remark |
|-------------------|---|--|-------------------------------------|--------|---|
| 3.1 | §2.1046 | Conducted Output Power | Reporting only | PASS | - |
| 3.2 | §2.1049 Occupied Bandwidth and 3.2 §90.209 26dB Bandwidth | | Reporting only | PASS | - |
| 3.3 | §2.1051 §90.691 | Emission masks – In-band emissions | < 50+10log ₁₀ (P[Watts]) | PASS | - |
| 3.4 | §2.1051 §90.691 | Emission masks – Out of band emissions | < 43+10log ₁₀ (P[Watts]) | PASS | - |
| 3.5 | §2.1053 §90.691 | Field Strength of Spurious Radiation | < 43+10log ₁₀ (P[Watts]) | PASS | Under limit 49.46 dB at 3282.00 MHz |
| 3.6 | §2.1055 §90.213 | Frequency Stability for Temperature & Voltage | < 2.5 ppm | PASS | - |

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.

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General Description 1

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 Feature of Equipment Under Test

| Product Feature & Specification | | | | |
|---------------------------------|--|--|--|--|
| Equipment | Mobile Cellular Phone | | | |
| Brand Name | Motorola | | | |
| Model Name | XT2063-2 | | | |
| FCC ID | IHDT56YU1 | | | |
| EUT supports Radios application | CDMA/GSM/WCDMA/LTE/5G NR/NFC WLAN 2.4GHz 802.11b/g/n HT20 WLAN 5GHz 802.11 a/n HT20/HT40 WLAN 5GHz 802.11ac VHT20/VHT40/VHT80 Bluetooth BR/EDR/LE FM Receiver/GNSS | | | |
| IMEI Code | Conducted/ Radiation: 351612110006159 | | | |
| HW Version | PVT1 | | | |
| SW Version | QPD30.102 | | | |
| EUT Stage | Identical Prototype | | | |

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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

| Product Specification subjective to this standard | | | | | |
|---|-----------------------------|--|--|--|--|
| Tx Frequency | BC10: 817.9 ~ 823.1 MHz | | | | |
| Rx Frequency | BC10 : 862.9 ~ 868.1 MHz | | | | |
| Maximum Output Power to Antenna | 23.49 dBm | | | | |
| Antenna Type | Fixed Internal Antenna | | | | |
| Type of Modulation | CDMA2000 1xRTT: QPSK | | | | |
| l spe of Modulation | CDMA2000 1xEV-DO: QPSK/8PSK | | | | |

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1.5 Specification of Accessory

| Specification of Accessory | | | | | |
|----------------------------|------------|---------------------|------------|------------|--|
| AC Adapter 1 | Brand Name | Motorola (Chenyang) | Model Name | SC-51 | |
| AC Adapter 2 | Brand Name | Motorola (Acbel) | Model Name | SC-51 | |
| Battery | Brand Name | Motorola(ATL) | Model Name | LR50 | |
| USB Cable 1 | Brand Name | Motorola (Sai bao) | Model Name | SC18C24367 | |
| USB Cable 2 | Brand Name | Motorola (Luxshare) | Model Name | SC18C24368 | |

1.6 Modification of EUT

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

Maximum Conducted Power, Frequency Tolerance and Emission 1.7 **Designator**

| FCC Rule | System | Type of Modulation | Frequency Tolerance (ppm) | Emission Designator | Maximum Conducted power(W) |
|----------|------------------------------|-----------------------|---------------------------------|------------------------|----------------------------------|
| Part 90S | CDMA2000 BC10 1xRTT | QPSK | 0.0169 ppm | 1M27F9W | 0.2183 |
| Part 90S | CDMA2000 BC10 1xEV-DO Rev. A | QPSK | 0.0155 ppm | 1M27F9W | 0.2234 |

1.8 Testing Site

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. | | | |
|--------------------|--|---------------------|--------------------------------|--|
| | No. 1098, Pengxi North Road, Kunshan Economic Development Zone | | | |
| Test Site Location | Jiangsu Province 215300 People's Republic of China | | | |
| Test Site Location | TEL: +86-512-57900158 | | | |
| | FAX: +86-512-579009 | 58 | | |
| | Sporton Site No. | FCC Designation No. | FCC Test Firm Registration No. | |
| Test Site No. | 03CH04-KS TH01-KS | CN1257 | 314309 | |

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1.9 Test Software

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

1.10 Applied Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- 47 CFR Part 2, 90(S)
- ANSI C63.26-2015
- FCC KDB 971168 D01 Power Meas. License Digital Systems v03r01

Remark:

- 1. All test items were verified and recorded according to the standards and without any deviation during the test.
- 2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

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2 Test Configuration of Equipment Under Test

2.1 Test Mode

During all testing, EUT is in link mode with base station emulator at maximum power level. The spurious emission measurements were carried out in semi-anechoic chamber with 3-meter test range, and EUT is rotated on three test planes to find out the worst emission.

Frequency range investigated for radiated emission is 30 MHz to 10th harmonic.

| Test Modes | | | | | | |
|----------------|-----------------------|-----------------------|--|--|--|--|
| Band | Radiated TCs | Conducted TCs | | | | |
| CDM 42000 BC40 | ■ 1xRTT Link | ■ 1xRTT Link | | | | |
| CDMA2000 BC10 | ■ 1xEV-DO Rev. A Link | ■ 1xEV-DO Rev. A Link | | | | |

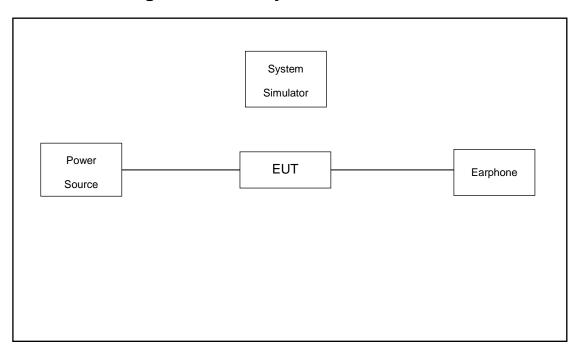
Note: The maximum RF output power levels are 1xRTT RC3 SO55 mode for CDMA2000 BC10 on QPSK Link; only these modes were used for all tests.

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2.2 Connection Diagram of Test System



2.3 Support Unit used in test configuration and system

| Item | Equipment | Trade Name | Model No. | FCC ID | Data Cable | Power Cord |
|------|------------------|------------|------------|--------|-----------------|------------------|
| 1. | System Simulator | Anritsu | MT8820C | N/A | N/A | Unshielded, 1.5m |
| 2. | DC Power Supply | GWINSTEK | GPS-3030D | N/A | N/A | Unshielded, 1.8m |
| 3. | Earphone | Moto | SH38C16618 | N/A | Unshielded,1.2m | N/A |

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2.4 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example:

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 5.0 dB and 10dB attenuator.

Offset (dB) = RF cable loss (dB) + attenuator factor (dB).
=
$$5.0 + 10 = 15.0$$
 (dB)

2.5 Frequency List of Low/Middle/High Channels

| Frequency List | | | | | | | |
|---|-----------|-------|-------|-------|--|--|--|
| Band Channel/Frequency(MHz) Lowest Middle Highest | | | | | | | |
| CDMA200 | Channel | 476 | 580 | 684 | | | |
| BC10 | Frequency | 817.9 | 820.5 | 823.1 | | | |

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3 Test Result

3.1 Conducted Output Power Measurement

3.1.1 Description of the Conducted Output Power Measurement

A system simulator was used to establish communication with the EUT. Its parameters were set to enforce EUT transmitting at the maximum power. The measured power in the radio frequency on the transmitter output terminals shall be reported.

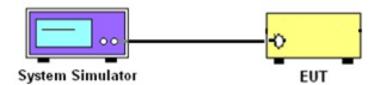
3.1.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

- 1. The transmitter output port was connected to the system simulator.
- 2. Set EUT at maximum power through system simulator.
- 3. Select lowest, middle, and highest channels for each band and different modulation.
- 4. Measure and record the power level from the system simulator.

3.1.4 Test Setup



3.1.5 Test Result of Conducted Output Power

Please refer to Appendix A.

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3.2 99% Occupied Bandwidth and 26dB Bandwidth Measurement

3.2.1 Description of (Occupied) Bandwidth Limitations Measurement

The 99% occupied bandwidth is the width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage 0.5% of the total mean transmitted power.

The emission bandwidth is defined as the width of the signal between two points, located at the 2 sides of the carrier frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

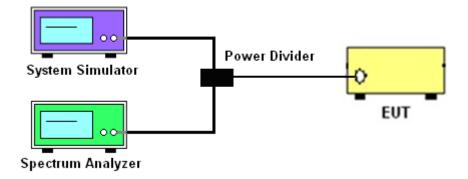
3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.2.3 Test Procedures

- 1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
- The 26dB and 99% occupied bandwidth (BW) of the middle channel for the highest RF power with full RB sizes were measured.

3.2.4 Test Setup



3.2.5 Test Result of 99% Occupied Bandwidth and 26dB Bandwidth

Please refer to Appendix A.

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3.3 Emissions Mask Measurement

3.3.1 Description of Emissions Mask Measurement

Equipment used in this licensed to EA or non-EA systems shall comply with the emission mask provisions of FCC Part 90.691.(a):

- (a) Out-of-band emission requirement shall apply only to the "outer" channels included in an EA license and to spectrum adjacent to interior channels used by incumbent licensees. The emission limits are as follows:
- (1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log₁₀(f/6.1) decibels or 50 + 10 Log₁₀(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.
- (2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log₁₀(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

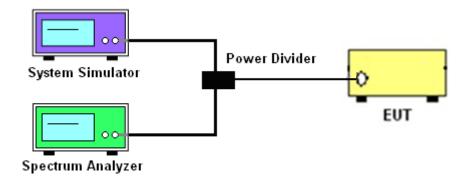
3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

- 1. The EUT was connected to spectrum analyzer and base station via power divider.
- 2. The emissions mask of low and high channels for the highest RF powers were measured.
- 3. The measured RBW and the VBW set 3 times of RBW are then set in spectrum analyzer, and the RBW correction factor 10log (1% of OBW/measured RBW)(dB) was compensated, if required.
- 4. The test results were shown below plots with a correction offset factor including cable loss, insertion loss of power divider.

3.3.4 Test Setup



3.3.5 Test Result (Plots) of Conducted Emissions Mask

Please refer to Appendix A.

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3.4 Emissions Mask - Out Of Band Emissions Measurement

3.4.1 Description of Conducted Emissions Out of band emissions measurement

The power of any emission FCC Part 90.691 (a)(2) on any frequency removed from the assigned frequency by out of the authorized bandwidth at least 43 + 10 log (P) dB. It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10th harmonic.

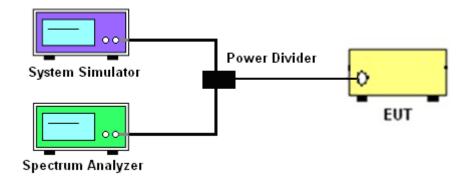
3.4.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.4.3 Test Procedures

- 1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
- The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.
 The path loss was compensated to the results for each measurement.
- 3. The middle channel for the highest RF power within the transmitting frequency was measured.
- 4. The conducted spurious emission for the whole frequency range was taken.
- 5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
- 6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
- 7. The limit line is derived from 43 + 10log(P)dB below the transmitter power P(Watts)
 - = P(W) [43 + 10log(P)] (dB)
 - = [30 + 10log(P)] (dBm) [43 + 10log(P)] (dB)
 - = -13dBm.

3.4.4 Test Setup



3.4.5 Test Result (Plots) of Conducted Emission

Please refer to Appendix A.

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3.5 Field Strength of Spurious Radiation Measurement

3.5.1 Description of Field Strength of Spurious Radiated Measurement

The radiated spurious emission was measured by substitution method according to ANSI C632.6. The power of any emission FCC Part 90.691 on any frequency removed from the assigned frequency by more than 250 percent of the authorized bandwidth at least 43 + 10 log (P) dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.5.2 Measuring Instruments

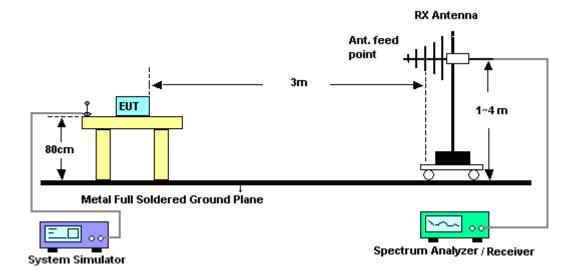
The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

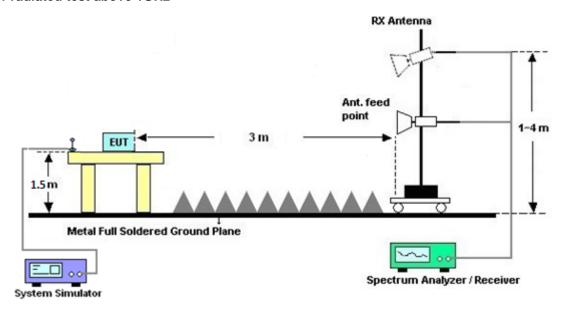
- 1. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
- 2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
- 3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
- 4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
- 5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, Sweep = 500ms, Taking the record of maximum spurious emission.
- 6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
- 7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
- 8. Taking the record of output power at antenna port.
- 9. Repeat step 7 to step 8 for another polarization.
- 10. EIRP (dBm) = S.G. Power Tx Cable Loss + Tx Antenna Gain
- 11. ERP (dBm) = EIRP 2.15
- 12. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
- 13. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)

3.5.4 Test Setup

For radiated test from 30MHz to 1GHz



For radiated test above 1GHz



3.5.5 Test Result of Field Strength of Spurious Radiated

Please refer to Appendix B.

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3.6 Frequency Stability Measurement

3.6.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within ±0.00025% (±2.5ppm) of the center frequency according to FCC Part 90.213.

3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

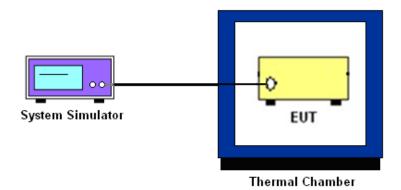
3.6.3 Test Procedures for Temperature Variation

- 1. The EUT was set up in the thermal chamber and connected with the base station.
- With power OFF, the temperature was decreased to -30°C and the EUT was stabilized for three
 hours. Power was applied and the maximum change in frequency was recorded within one
 minute.
- 3. With power OFF, the temperature was raised in 10°C step up to 50°C. The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.6.4 Test Procedures for Voltage Variation

- 1. The EUT was placed in a temperature chamber at 20±5°C and connected with the system simulator.
- The power supply voltage to the EUT was varied from 85% to 115% of the nominal value for other than hand carried battery equipment.
- 3. For hand carried, battery powered equipment, reduce the primary ac or dc supply voltage to the
- 4. battery operating end point, which shall be specified by the manufacturer.
- 5. The variation in frequency was measured for the worst case.

3.6.5 Test Setup



3.6.6 Test Result of Temperature Variation

Please refer to Appendix A.

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4 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 | Nov. 02, 2019 | May 06, 2020~ May 08, 2020 | Nov. 01, 2020 | Conducted (TH01-KS) |
| Thermal Chamber | Ten Billion | TTC-B3S | TBN-960502 | -40~+150°C | Oct. 28, 2019 | May 06, 2020~ May 08, 2020 | Oct. 27, 2020 | Conducted (TH01-KS) |
| EXA Spectrum Analyzer | Keysight | N9010A | MY55150244 | 10Hz-44G,MAX 30dB | Apr. 15, 2020 | May 21, 2020 | Apr. 14, 2021 | Radiation (03CH04-KS) |
| Bilog Antenna | TeseQ | CBL6111D | 49922 | 30MHz-1GHz | May 30, 2019 | May 21, 2020 | May 29, 2020 | Radiation (03CH04-KS) |
| Horn Antenna | Schwarzbeck | BBHA9120D | 1356 | 1GHz~18GHz | Apr. 20, 2020 | May 21, 2020 | Apr. 19, 2021 | Radiation (03CH04-KS) |
| SHF-EHF Horn | Com-power | AH-840 | 101115 | 18GHz~40GHz | Nov. 10, 2019 | May 21, 2020 | Nov. 09, 2020 | Radiation (03CH04-KS) |
| Amplifier | SONOMA | 310N | 187289 | 9KHz-1GHz | Aug. 06, 2019 | May 21, 2020 | Aug. 05, 2020 | Radiation (03CH04-KS) |
| Amplifier | MITEQ | EM18G40G GA | 060728 | 18~40GHz | Jan. 08, 2020 | May 21, 2020 | Jan. 07, 2021 | Radiation (03CH04-KS) |
| high gain Amplifier | MITEQ | AMF-7D-00 101800-30-1 0P | 2025788 | 1Ghz-18Ghz | Aug. 16, 2019 | May 21, 2020 | Aug. 15, 2020 | Radiation (03CH04-KS) |
| Amplifier | Keysight | 83017A | MY57280106 | 500MHz~26.5GHz | Oct. 15, 2019 | May 21, 2020 | Oct. 14, 2020 | Radiation (03CH04-KS) |
| AC Power Source | Chroma | 61601 | F104090004 | N/A | NCR | May 21, 2020 | NCR | Radiation (03CH04-KS) |
| Turn Table | ChamPro | EM 1000-T | 060762-T | 0~360 degree | NCR | May 21, 2020 | NCR | Radiation (03CH04-KS) |
| Antenna Mast | ChamPro | EM 1000-A | 060762-A | 1 m~4 m | NCR | May 21, 2020 | NCR | Radiation (03CH04-KS) |

NCR: No Calibration Required

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5 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 Radiated Emission Measurement (30 MHz ~ 1000 MHz)

| Measuring Uncertainty for a Level of | 3.3dB |
|--------------------------------------|-------|
| Confidence of 95% (U = 2Uc(y)) | 3.3UD |

<u>Uncertainty of Radiated Emission Measurement (1GHz ~ 40GHz)</u>

| Measuring Uncertainty for a Level of | 2 04B |
|--------------------------------------|-------|
| Confidence of 95% (U = 2Uc(y)) | 2.8dB |

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Appendix A. Test Results of Conducted Test

Conducted Output Power (Average power)

| Conducted Power (*Unit: dBm) | | | | | | |
|------------------------------|-------|--------------------|-------|--|--|--|
| Band | | CDMA2000 BC10 | | | | |
| Channel | 476 | 580 | 684 | | | |
| Frequency | 817.9 | 820.5 | 823.1 | | | |
| RC1 SO55 | 23.34 | 23.35 | 23.33 | | | |
| RC3 SO55 | 23.36 | 23.39 | 23.36 | | | |
| RC3 SO32 (F+SCH) | 23.37 | 23.39 | 23.37 | | | |
| RC3 SO32 (+SCH) | 23.37 | 23.37 | 23.35 | | | |
| RTAP 153.6Kbps | 23.45 | <mark>23.49</mark> | 23.41 | | | |
| RETAP 4096Bits | 23.47 | 23.46 | 23.44 | | | |

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26dB Bandwidth

| Mode | CDMA BC10(MHz) | | | | |
|------------|----------------|---------------|--|--|--|
| Mod. | 1xRTT | 1xEVDO Rev. A | | | |
| Lowest CH | 1.43 | 1.43 | | | |
| Middle CH | 1.42 | 1.42 | | | |
| Highest CH | 1.42 | 1.43 | | | |

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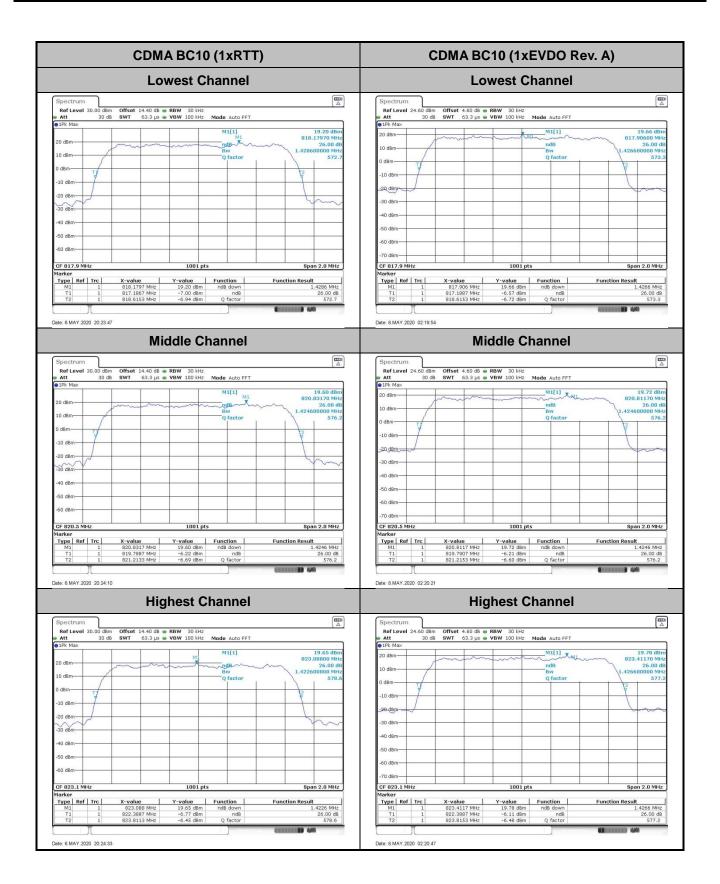
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Occupied Bandwidth

| Mode | CDMA BC10(MHz) | | | | |
|------------|----------------|---------------|--|--|--|
| Mod. | 1xRTT | 1xEVDO Rev. A | | | |
| Lowest CH | 1.27 | 1.27 | | | |
| Middle CH | 1.27 | 1.27 | | | |
| Highest CH | 1.27 | 1.27 | | | |

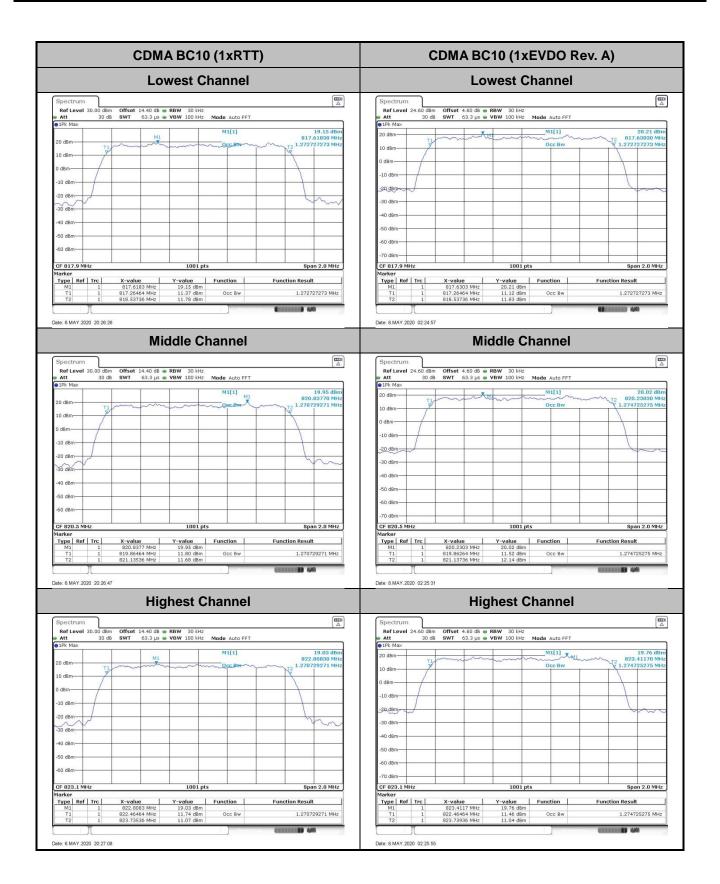
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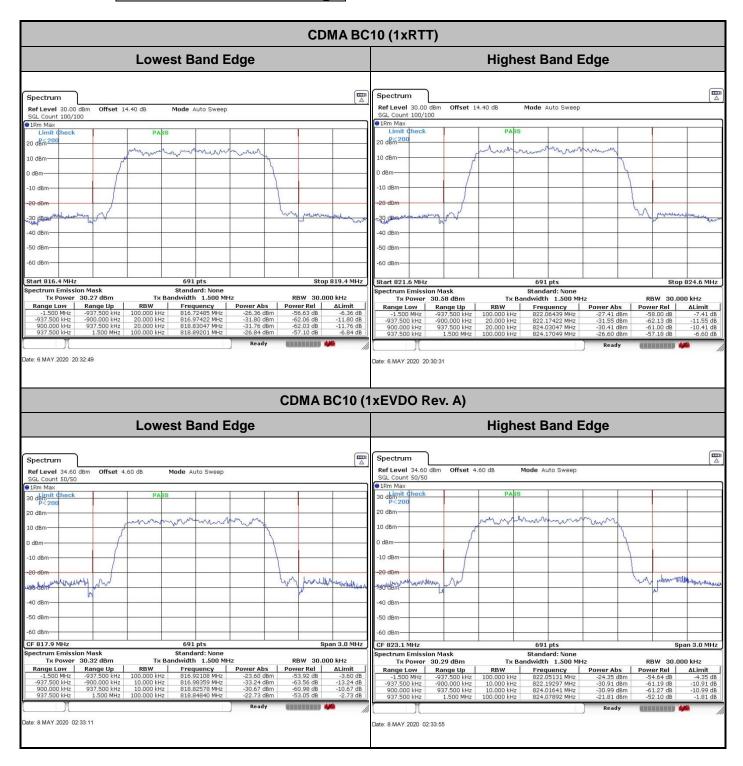
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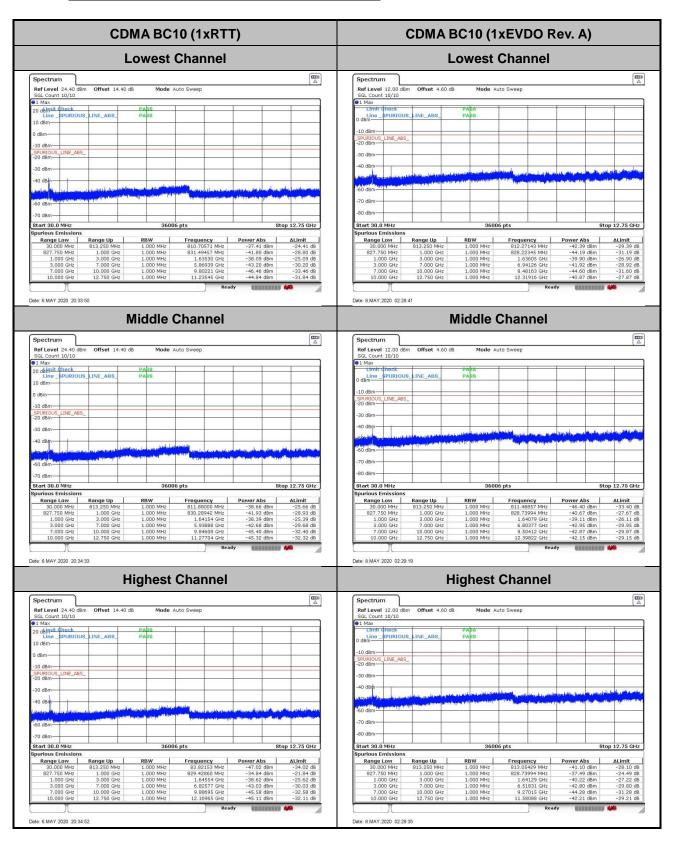
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Conducted Band Edge



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Conducted Spurious Emission



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Frequency Stability

| Test Conditions | ons Middle Channel CDMA BC10 (1xRTT) | | |
|------------------|--------------------------------------|-----------------|------------------|
| Temperature (°C) | Voltage (Volt) | Deviation (ppm) | 2.5ppm Result |
| 50 | Normal Voltage | 0.0027 | |
| 40 | Normal Voltage | 0.0131 | |
| 30 | Normal Voltage | 0.0118 | |
| 20(Ref.) | Normal Voltage | 0.0002 | |
| 10 | Normal Voltage | 0.0169 | |
| 0 | Normal Voltage | 0.0046 | |
| -10 | Normal Voltage | 0.0141 | PASS |
| -20 | Normal Voltage | 0.0159 | |
| -30 | Normal Voltage | 0.0021 | |
| 20 | Maximum Voltage | 0.0022 | |
| 20 | Normal Voltage | 0.0094 | |
| 20 | Battery End Point | 0.0031 | |

| Test Conditions | Middle Channel | CDMA BC10 (1xEVDO Rev. A) | Limit 2.5ppm |
|------------------|-------------------|------------------------------|--------------|
| Temperature (°C) | Voltage (Volt) | Deviation (ppm) | Result |
| 50 | Normal Voltage | 0.0015 | |
| 40 | Normal Voltage | 0.0033 | |
| 30 | Normal Voltage | 0.0120 | |
| 20(Ref.) | Normal Voltage | 0.0000 | |
| 10 | Normal Voltage | 0.0023 | |
| 0 | Normal Voltage | 0.0133 | |
| -10 | Normal Voltage | 0.0042 | PASS |
| -20 | Normal Voltage | 0.0155 | |
| -30 | Normal Voltage | 0.0044 | |
| 20 | Maximum Voltage | 0.0019 | |
| 20 | Normal Voltage | 0.0141 | |
| 20 | Battery End Point | 0.0038 | |

Note: Normal Voltage = 3.8V; Battery End Point (BEP) = 3.4V; Maximum Voltage =4.4V

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Appendix B. Test Results of Radiated Test

| | CDMA BC10(1xRTT) | | | | | | | |
|----------|------------------------|--------------|----------------------------------|-------------------------|------------------------|----------------------|-----------------------------|-----------------------|
| Channel | Frequency (MHz) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) |
| | 1636 | -67.25 | -13 | -54.25 | -70.49 | 1.11 | 6.50 | Н |
| | 2454 | -64.58 | -13 | -51.58 | -67.20 | 1.43 | 6.20 | Н |
| Lowest | 3270 | -62.90 | -13 | -49.90 | -67.34 | 1.71 | 8.30 | Н |
| Lowest | 1636 | -66.59 | -13 | -53.59 | -69.83 | 1.11 | 6.50 | V |
| | 2454 | -64.36 | -13 | -51.36 | -66.98 | 1.43 | 6.20 | V |
| | 3270 | -63.16 | -13 | -50.16 | -67.60 | 1.71 | 8.30 | V |
| | 1640 | -67.08 | -13 | -54.08 | -70.32 | 1.11 | 6.50 | Н |
| | 2462 | -64.43 | -13 | -51.43 | -67.05 | 1.43 | 6.20 | Н |
| Middle | 3282 | -62.46 | -13 | -49.46 | -66.90 | 1.71 | 8.30 | Н |
| ivildale | 1640 | -66.63 | 6.63 -13 -53.63 -69.87 1.11 6.50 | 6.50 | V | | | |
| | 2462 -64.33 -13 -51.33 | -51.33 | -66.95 | 1.43 | 6.20 | V | | |
| | 3282 | -62.95 | -13 | -49.95 | -67.39 | 1.71 | 8.30 | V |
| | 1646 | -67.51 | -13 | -54.51 | -70.75 | 1.11 | 6.50 | Н |
| | 2470 | -64.59 | -13 | -51.59 | -67.21 | 1.43 | 6.20 | Н |
| Llighoct | 3294 | -63.05 | -13 | -50.05 | -67.49 | 1.71 | 8.30 | Н |
| Highest | 1646 | -67.05 | -13 | -54.05 | -70.29 | 1.11 | 6.50 | V |
| | 2470 | -64.32 | -13 | -51.32 | -66.94 | 1.43 | 6.20 | V |
| | 3294 | -63.04 | -13 | -50.04 | -67.48 | 1.71 | 8.30 | V |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

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| | CDMA BC10(1xEVDO Rev. A) | | | | | | | |
|----------|--------------------------|--------------|------------------|-------------------------|------------------------|----------------------|-----------------------------|-----------------------|
| Channel | Frequency (MHz) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) |
| | 1636 | -67.16 | -13 | -54.16 | -70.40 | 1.11 | 6.50 | Н |
| | 2454 | -64.72 | -13 | -51.72 | -67.34 | 1.43 | 6.20 | Н |
| Lowest | 3270 | -62.60 | -13 | -49.60 | -67.04 | 1.71 | 8.30 | Н |
| Lowest | 1636 | -66.60 | -13 | -53.60 | -69.84 | 1.11 | 6.50 | V |
| | 2454 | -64.22 | -13 | -51.22 | -66.84 | 1.43 | 6.20 | V |
| | 3270 | -62.91 | -13 | -49.91 | -67.35 | 1.71 | 8.30 | V |
| | 1640 | -67.12 | -13 | -54.12 | -70.36 | 1.11 | 6.50 | Н |
| Middle | 2462 | -64.38 | -13 | -51.38 | -67.00 | 1.43 | 6.20 | Н |
| | 3282 | -63.22 | -13 | -50.22 | -67.66 | 1.71 | 8.30 | Н |
| ivildale | 1640 | -66.76 | -13 | -53.76 | -70.00 | 1.11 | 6.50 | V |
| | 2462 | -64.26 | -13 | -51.26 | -66.88 | 1.43 | 6.20 | V |
| | 3282 | -63.14 | -13 | -50.14 | -67.58 | 1.71 | 8.30 | V |
| | 1646 | -67.19 | -13 | -54.19 | -70.43 | 1.11 | 6.50 | Н |
| | 2470 | -64.72 | -13 | -51.72 | -67.34 | 1.43 | 6.20 | Н |
| | 3294 | -62.91 | -13 | -49.91 | -67.35 | 1.71 | 8.30 | Н |
| Highest | 1646 | -67.09 | -13 | -54.09 | -70.33 | 1.11 | 6.50 | V |
| | 2470 | -64.21 | -13 | -51.21 | -66.83 | 1.43 | 6.20 | V |
| | 3294 | -62.91 | -13 | -49.91 | -67.35 | 1.71 | 8.30 | V |

Remark: Spurious emissions within 30-1000MHz were found more than 20dB below limit line.

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