



IC TEST REPORT (RSS-139)

| Applicant: | Particle Industries,Inc | | |
|---|---|---------------------|--|
| Address: | 126 Post St,4th floor, San Francisco,CA 94108 USA | | |
| | | | |
| Manufacturer or Supplier: | Particle Industries,Inc | | |
| Address: | 126 Post St,4th floor, San Francisc | co,CA 94108 USA | |
| Product: | Tracker One LTE M1 | | |
| Brand Name: | Particle | | |
| Model Name: | ONE402M, ONE404M,ONE402M-NB, ONE404M-NB | | |
| IC: | 20127-ONE40X | | |
| Date of tests: | Aug. 08, 2020 ~ Jan. 21, 2021 | | |
| The tests have been carried out according to the requirements of the following standard: | | | |
| \subseteq RSS-139 Issue 3, July, 2015 \subseteq RSS-Gen Issue 5, Amendment 1, March 2019 \subseteq ANSI C63.26-2015 | | | |
| CONCLUSION: The submitted sample was found to COMPLY with the test requirement | | | |
| Prepared by Simon Wang Engineer / Mobile Department Approved by Luke Lu Manager / Mobile Department | | | |
| Simon | | luke lu | |
| Da | ate: Jan. 21, 2021 | Date: Jan. 21, 2021 | |
| This report is governed by, and incorporates by reference, CPS Conditions of Service as posted at the date of issuance of this report at | | | |

Inis report is governed by, and incorporates by reference, CPS Conditions of Service as posted at the date of issuance of this report at <a href="http://www.bureauverilas.com/home/about-us/our-pubsiness/gos/about-us/emms-conditions/and is intended for your exclusive use. Any copying or replication of this report to or for any other person or entity, or use of our name or trademark, is permitted only with our prior written permission. This report sets forth our findings solely with respect to the test samples identified herein. The results set forth in this report are not indicative or representative of the quality or characteristics of the lot from which a test sample was taken or any similar or identical product unless specifically and expressly noted. Our report includes all of the tests requested by you and the results thereof based upon the information that you provided to us. Measurement uncertainty is only provided upon request for accredited tests. You have 60 days from date of issuance of this report to notify us of any material error or omission caused by our negligence or if you require measurement uncertainty; provided, however, that such notice shall be in writing and shall specifically address the issue you wish to raise. A failure to raise such issue within the prescribed time shall constitute you unqualified acceptance of the completeness of this report, the tests conducted and the correctness of the report contents.



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RELEASE CONTROL RECORD

| ISSUE NO. | REASON FOR CHANGE | DATE ISSUED |
|----------------|--|----------------|
| IC200807W004-4 | Original release | Sept. 16, 2020 |
| IC200927W002-4 | Based on the original report IC200807W004-4 add circuit, change HW version and add two models ONE402M-NB, ONE404M-NB. In this report verify below 1G RSE data, other test data is reused from the original test report | Jan. 21, 2021 |

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Report Version 1

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1 SUMMARY OF TEST RESULTS

The EUT has been tested according to the following specifications:

| | APPLIED STANDARD: IC RSS-139, RSS-Gen | | | | |
|--------------------------------|---|------------|-------------------------------|--|--|
| STANDARD SECTION RSS-Gen | TEST TYPE AND LIMIT | RESULT | REMARK | | |
| 6.7 | Occupied Bandwidth | N.A | Meet the requirement of limit | | |
| 6.8 | Transmit antenna | Compliance | Meet the requirement of limit | | |
| STANDARD SECTION RSS-139 | TEST TYPE AND LIMIT | RESULT | REMARK | | |
| 6.4 | Frequency Stability AFC Freq. Error vs. Voltage AFC Freq. Error vs. Temperature | N.A | See note | | |
| 6.5 | Maximum Peak Output Power | N.A | See note | | |
| 6.5 | peak-to-average power ratio | N.A | See note | | |
| 6.6 | Band Edge Measurements | N.A | See note | | |
| 6.6 | Conducted Spurious Emissions | N.A | See note | | |
| 6.6 | Radiated Spurious Emissions | Compliance | Meet the requirement of limit | | |
| 6.7 | Transmitter Power Control | N.A | See note | | |

Refer to KDB 971168 D01 Power Meas License Digital Systems v03r01.

Note: In this report only verify and show the below 1G RSE data, other test data is reused from the original test report. More details please refer test report IC200807W004-4.

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1.1 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in ETSI TR 100 028-1 V1.4.1(2001-12):

| MEASUREMENT | UNCERTAINTY |
|--|-------------|
| Frequency Stability | ±76.97Hz |
| Radiated emissions & Radiated Power (30MHz~1GMHz) | ±4.98dB |
| Radiated emissions & Radiated Power (1GMHz ~6GMHz) | ±4.70dB |
| Radiated emissions (6GMHz ~18GMHz) | ±4.60dB |
| Radiated emissions (18GMHz ~40GMHz) | ±4.12dB |
| Conducted emissions | ±4.01dB |
| Occupied Channel Bandwidth | ±43.58KHz |
| Conducted Output power | ±2.06dB |
| Band Edge Measurements | ±4.70dB |
| Peak to average ratio | ±0.76dB |

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.



1.2 TEST SITE AND INSTRUMENTS

| Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
|---|--------------|-------------------------------------|---------------------------------|-------------|-------------|
| MXE EMI Receiver | KEYSIGHT | N9038A-544 | MY54450026 | Apr. 27,20 | Apr. 26,21 |
| EXA Signal Analyzer | KEYSIGHT | N9010A-526 | MY54510322 | Feb. 26,20 | Feb. 25,21 |
| Bilog Antenna | ETS-LINDGREN | 3143B | 00161965 | Mar. 27,20 | Mar. 26,21 |
| Horn Antenna (1GHz-18GHz) | ETS-LINDGREN | 3117 | 00168692 | Mar. 27,20 | Mar. 26,21 |
| Horn Antenna (18GHz-40GHz) | N/A | QWH-SL-18-40 -K-SG/QMS-00 361 | | Nov. 24, 20 | Nov. 23, 21 |
| Radio Communication Analyzer | ANRITSU | MT8820C | 6201465426 | Feb. 27,20 | Feb. 26,21 |
| Signal Pre-Amplifier | EMSI | EMC 9135 | 980249 | Jun. 02,20 | Jun. 01,21 |
| Signal Pre-Amplifier | EMSI | EMC 012645B | 980257 | Jun. 02,20 | Jun. 01,21 |
| Signal Pre-Amplifier | EMSI | EMC 184045B | 980259 | Apr. 30,20 | Apr. 29,21 |
| 3m Semi-anechoic Chamber | ETS-LINDGREN | 9m*6m*6m | Euroshieldpn- CT0001143-1216 | May. 19,20 | May. 18,23 |
| Test Software | E3 | V 9.160323 | N/A | N/A | N/A |
| Test Software | ADT | ADT_Radiated _V7.6.15.9.2 | N/A | N/A | N/A |
| 10dB Attenuator | JFW/USA | 50HF-010-SM A | 1505 | Jun. 03,20 | Jun. 02,21 |
| Power Meter | Anritsu | ML2495A | 1506002 | Feb. 26,20 | Feb. 25,21 |
| Power Sensor | Anritsu | MA2411B | 1339352 | Feb. 26,20 | Feb. 25,21 |
| Humid & Temp Programmable Tester | Juyi | ITH-120-45-CP -AR | IAA1504-001 | Jun. 02,20 | Jun. 01,21 |
| MXG Analog Microvave Signal Generator | KEYSIGHT | N5183A | MY50143024 | Mar. 11,20 | Mar. 10,21 |
| Power Divider | MCLI/USA | PS2-15 | 24880 | N/A | N/A |

NOTE: 1. The calibration interval of the above test instruments is 12 months or 36 months and the calibrations are traceable to CEPREI/CHINA, GRGT/CHINA and NIM/CHINA.

- 2. The test was performed in 3m Semi-anechoic Chamber and RF Oven Room.
- 3. The horn antenna is used only for the measurement of emission frequency above 1GHz if tested.
- 4. The IC test Site Registration No. is 21771-1; The Designation No. is CN0007.

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2 GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

| EUT | Tracker One LTE M1 | |
|--------------------------|---|-----------------------|
| BRAND NAME | Particle | |
| MODEL NAME | ONE402M, ONE404M,ONE402M-NB, | ONE404M-NB |
| POWER SUPPLY | DC 3.7V from Battery or DC 5V from Uor DC 12V from Adapter (support unit) | SB Host Unit |
| MODULATION TECHNOLOGY | LTE | QPSK, 16QAM |
| | LTE Band 4 Channel Bandwidth: 1.4MHz | 1710.7MHz ~ 1754.3MHz |
| | LTE Band 4 Channel Bandwidth: 3MHz | 1711.5MHz ~ 1753.5MHz |
| FREQUENCY | LTE Band 4 Channel Bandwidth: 5MHz | 1712.5MHz ~ 1752.5MHz |
| RANGE | LTE Band 4 Channel Bandwidth: 10MHz | 1715.0MHz ~ 1750.0MHz |
| | LTE Band 4 Channel Bandwidth: 15MHz | 1717.5MHz ~ 1747.5MHz |
| | LTE Band 4 Channel Bandwidth: 20MHz | 1720.0MHz ~ 1745.0MHz |
| | LTE Band 4 Channel Bandwidth: 1.4MHz | 292mW |
| | LTE Band 4 Channel Bandwidth: 3MHz | 293mW |
| MAX. EIRP POWER | LTE Band 4 Channel Bandwidth: 5MHz | 307mW |
| | LTE Band 4 Channel Bandwidth: 10MHz | 294mW |
| | LTE Band 4 Channel Bandwidth: 15MHz | 296mW |
| | LTE Band 4 Channel Bandwidth: 20MHz | 296mW |



| | LTE Band 4 | QPSK: 1M12G7D | |
|----------------|---|----------------|--|
| | Channel Bandwidth: 1.4MHz | 16QAM: 939KW7D | |
| | LTE Band 4 Channel Bandwidth: 3MHz | QPSK: 1M15G7D | |
| | | 16QAM: 981KW7D | |
| | LTE Band 4 | QPSK: 1M13G7D | |
| EMISSION | Channel Bandwidth: 5MHz | 16QAM: 1M02W7D | |
| DESIGNATOR | LTE Band 4 | QPSK: 1M18G7D | |
| | Channel Bandwidth: 10MHz | 16QAM: 1M07W7D | |
| | LTE Band 4 Channel Bandwidth: 15MHz | QPSK: 1M20G7D | |
| | | 16QAM: 1M06W7D | |
| | LTE Band 4 Channel Bandwidth: 20MHz | QPSK: 1M21G7D | |
| | | 16QAM: 1M11W7D | |
| ANTENNA TYPE | External Antenna with 1.94dBi gain for LTE B4 | | |
| HW VERSION | V1.1 | | |
| SW VERSION | V1.5.4 | | |
| I/O PORTS | Refer to user's manual | | |
| CABLE SUPPLIED | USB cable: non-shielded, detachable,2meter | | |

NOTE:

- 1. For a more detailed features description, please refer to the manufacturer's specifications or the user's manual.
- 2. The EUT was powered by the following Battery:

| The Let mae penered by the renorming Lattery. | | |
|---|--------------------------------------|--|
| BATTERY | | |
| BRAND: | Zhaoneng | |
| MODEL: | 113450 | |
| MANUFACTURER | Zhaoneng Battery Industrial Co., Ltd | |
| POWER RATING: | 3.7V, 2000mAh | |

3. The EUT matched the following USB cable:

| USB CABLE | |
|-------------|--------------------|
| RAND: | KAWEEI |
| IODEL: | CBUSB31-AM-CM-2000 |
| IGNAL LINE: | 2.0 METER |

4. The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitter and one receiver.

| MODULATION MODE | TX FUNCTION | |
|-----------------|-------------|--|
| LTE | 1TX/1RX | |



5. The schematic and PCB of each model is same, and the HW&SW used is the same. The only difference is ONE402M uses eSIM of Kore, ONE404M uses eSIM of Twilio. At the same time, we add two product models on v1.1, ONE402M-NB, ONE404M-NB, please see the table below for the differences of different model.

| Product name | e-SIM company | Built-in LiPo battery |
|--------------|---------------|-----------------------|
| ONE402M | Kore | Yes |
| ONE404M | Twilio | Yes |
| ONE402M-NB | Kore | No |
| ONE404M-NB | Twilio | No |

6. For the test results, the EUT had been tested with all conditions. But only the worst case was shown in test report.

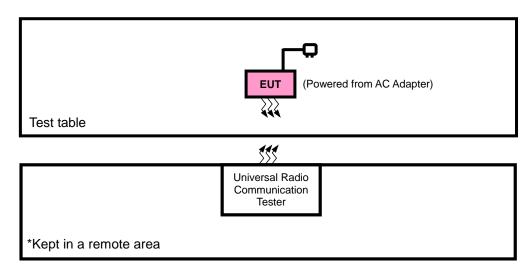
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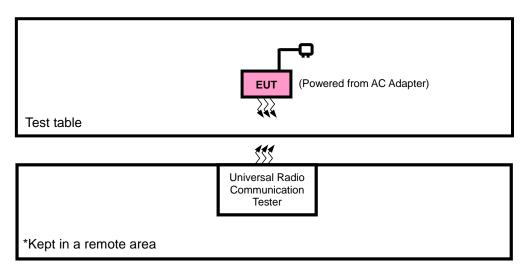


2.2 CONFIGURATION OF SYSTEM UNDER TEST

FOR RADIATION EMISSION TEST



FOR CONDUCTED & E.R.P./E.I.R.P TEST



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2.3 DESCRIPTION OF SUPPORT UNITS

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| NO. | PRODUCT | BRAND | MODEL NO. | SERIAL NO. | FCC ID |
|-----|-----------|----------|-----------|------------|--------|
| 1 | DC source | LONG WEI | PS-6403D | 010934269 | N/A |

| NO. | SIGNAL CABLE DESCRIPTION OF THE ABOVE SUPPORT UNITS |
|-----|---|
| 1 | DC Line: Unshielded, Detachable 1.8m |

2.4 DESCRIPTION OF TEST MODES

Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates, XYZ axis and antenna ports.

The worst case was found when positioned on X-plane for EIRP and X-axis for radiated emission. Following channel(s) was (were) selected for the final test as listed below:

| EUT CONFIGURE MODE | DESCRIPTION |
|--------------------------|---|
| Α | EUT + Adapter + USB Cable with LTE link |
| В | EUT + Battery with LTE link |



LTE BAND 4

| EUT CONFIGURE MODE | TEST ITEM | AVAILABLE CHANNEL | TESTED CHANNEL | CHANNEL BANDWIDTH | MODULATION | MODE |
|--------------------------|----------------------|----------------------|---------------------|----------------------|------------|--------------------|
| | RADIATED EMISSION | 19957 to 20393 | 20175 | 1.4MHz | QPSK | 1 RB / 0 RB Offset |
| | | 19965 to 20385 | 19965, 20175, 20385 | 3MHz | QPSK | 1 RB / 0 RB Offset |
| Α | | 19975 to 20375 | 20175 | 5MHz | QPSK | 1 RB / 0 RB Offset |
| A | | 20000 to 20350 | 20175 | 10MHz | QPSK | 1 RB / 0 RB Offset |
| | | 20025 to 20325 | 20175 | 15MHz | QPSK | 1 RB / 0 RB Offset |
| | | 20050 to 20300 | 20175 | 20MHz | QPSK | 1 RB / 0 RB Offset |

Note: This device was tested under all bandwidths, RB configurations and modulations. The worst case was found in QPSK modulation.

TEST CONDITION:

| TEST ITEM | TEST ITEM ENVIRONMENTAL CONDITIONS | | TESTED BY | |
|-------------------|------------------------------------|--------------------------|-----------|--|
| RADIATED EMISSION | 23deg. C, 70%RH | DC 5V from USB Host Unit | Jace Hu | |



2.5 GENERAL DESCRIPTION OF APPLIED STANDARDS

The EUT is a RF product. According to the specifications of the manufacturer, it must comply with the requirements of the following standards:

Canada RSS-139, Issue 3, July 2015
Canada RSS-Gen, Issue 5, Amendment 1, March 2019
ANSI C63.26 - 2015

NOTE: All test items have been performed and recorded as per the above standards.

2.6 TRANSMIT ANTENNA

The applicant for equipment certification shall provide a list of all antenna types that may be used with the transmitter, where applicable (i.e. for transmitters with detachable antenna), indicating the maximum permissible antenna gain (in dBi) and the required impedance for each antenna. The test report shall demonstrate the compliance of the transmitter with the limit for maximum equivalent isotropically radiated power (e.i.r.p.) specified in the applicable RSS, when the transmitter is equipped with any antenna type, selected from this list.

| Antenna Type | External Antenna |
|--------------|------------------|
| Antenna Gain | 1.94dBi |
| Impedance | 50 Ω |

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3 TEST TYPES AND RESULTS

3.1 OUTPUT POWER MEASUREMENT AND POWER CONTROL

3.1.1 LIMITS OF OUTPUT POWER MEASUREMENT

Fixed, mobile, and portable (hand-held) stat ions operating in the 1710–1755 MHz band are limited to 1 watt EIRP.

3.1.2 TEST PROCEDURES

EIRP / ERP MEASUREMENT:

Per KDB 971168 D01 Power Meas License Digital Systems v03r01 or subclause 5.2.5.5 of ANSI C63.26-2015, the relevant equation for determing the ERP or EIRP from the conducted RF output power measured using the guidance provided above is:

ERP or EIRP = $P_{Meas} + G_{T} - L_{C}$

Where:

ERP or EIRP = effective radiated power or equivalent isotropically radiated power, respectively

(expressed in the same units as PMeas, typically dBW or dBm);

P_{Meas} = measured transmitter output power or PSD, in dBm or dBW;

 G_T = gain of the transmitting antenna, in dBd (ERP) or dBi (EIRP);

Lc = signal attenuation in the connecting cable between the transmitter and antenna, in dB.

ERP=EIRP-2.15

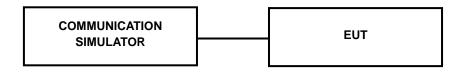
CONDUCTED POWER MEASUREMENT:

- a. The EUT was set up for the maximum power with LTE link data modulation and link up with simulator.
- b. Set the EUT to transmit under low, middle and high channel and record the power level shown on simulator.



3.1.3 TEST SETUP

CONDUCTED POWER MEASUREMENT:



3.1.4 TEST RESULTS N/A



3.2 FREQUENCY STABILITY MEASUREMENT

3.2.1 LIMITS OF FREQUENCY STABILITY MEASUREMENT

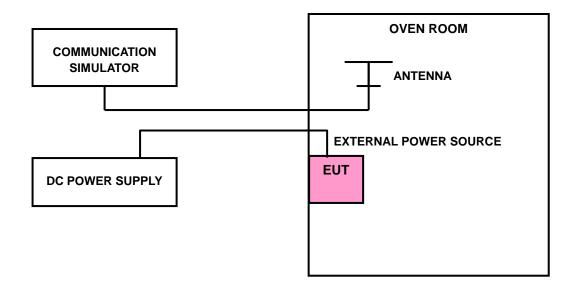
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

3.2.2 TEST PROCEDURE

- a. Device is placed at the oven room. The oven room could control the temperatures and humidity. Power warm up is at least 15 min and power applied should perform before recording frequency error.
- b. EUT is connected the external power supply to control the DC input power. The test voltage range is from minimum to maximum working voltage. Each step shall be record the frequency error rate.
- c. The temperature range step is 10 degrees in this test items. All temperature levels shall be hold the ±0.5°C during the measurement testing. The each temperature step shall be at least 0.5 hours, consider the EUT could be test under the stability condition.

NOTE: The frequency error was recorded frequency error from the communication simulator.

3.2.3 TEST SETUP



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3.2.4 TEST RESULTS

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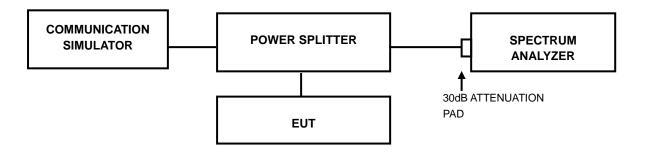


3.3 OCCUPIED BANDWIDTH MEASUREMENT

3.3.1 LIMITS OF OCCUPIED BANDWIDTH MEASUREMENT

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 power of a given emission.

3.3.2 TEST SETUP



3.3.3 TEST PROCEDURES

- a. The conducted occupied bandwidth used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
- b. Use OBW measurement function of Spectrum analyzer to measure 99 % occupied bandwidth.

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3.3.4 TEST RESULTS

N/A

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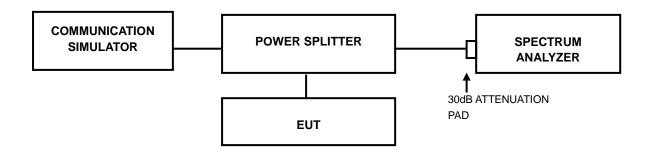


3.4 PEAK TO AVERAGE RATIO

3.4.1 LIMITS OF PEAK TO AVERAGE RATIO MEASUREMENT

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB

3.4.2 TEST SETUP



3.4.3 TEST PROCEDURES

- 1. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
- 2. Set the number of counts to a value that stabilizes the measured CCDF curve;
- 3. Record the maximum PAPR level associated with a probability of 0.1%.



3.4.4 TEST RESULTS

N/A

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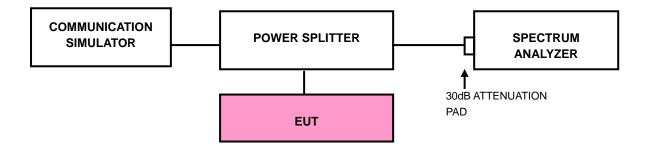
3.5 BAND EDGE MEASUREMENT

3.5.1 LIMITS OF BAND EDGE MEASUREMENT

The power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater.

However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

3.5.2 TEST SETUP





3.5.3 TEST PROCEDURES

- a. The EUT was set up for the maximum peak power with LTE link data modulation. The power was measured with R&S Spectrum Analyzer. All measurements were done at 2 channels (low and high operational frequency range.).
- b. The band edge measurement used the power splitter via EUT RF power connector between simulation base station and spectrum analyzer.
- c. The center frequency of spectrum is the band edge frequency and span is 1~5 MHz. RBW of the spectrum is 20kHz and VBW of the spectrum is 100 kHz.
 (LTE bandwidth 1.4MHz)
- d. The center frequency of spectrum is the band edge frequency and span is 1~5 MHz. RBW of the spectrum is 30kHz and VBW of the spectrum is 100kHz.
 (LTE bandwidth 3MHz)
- e. The center frequency of spectrum is the band edge frequency and span is 1~5 MHz. RBW of the spectrum is 50kHz and VBW of the spectrum is 200kHz.
 (LTE bandwidth 5MHz)
- f. The center frequency of spectrum is the band edge frequency and span is 1~5 MHz. RBW of the spectrum is 100kHz and VBW of the spectrum is 300kHz. (LTE bandwidth 10MHz)
- g. The center frequency of spectrum is the band edge frequency and span is 1~5 MHz. RBW of the spectrum is 150kHz and VBW of the spectrum is 1MHz. (LTE bandwidth 15MHz)
- h. he center frequency of spectrum is the band edge frequency and span is 1~5 MHz. RBW of the spectrum is 200kHz and VBW of the spectrum is 1MHz.
 (LTE bandwidth 20MHz)
- i. Record the max trace plot into the test report.

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3.5.4 TEST RESULTS

N/A

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3.6 CONDUCTED SPURIOUS EMISSIONS

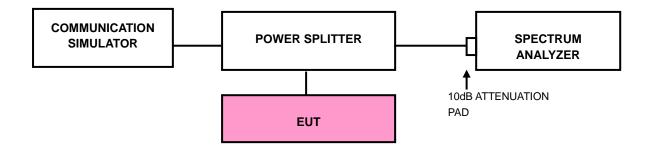
3.6.1 LIMITS OF CONDUCTED SPURIOUS EMISSIONS MEASUREMENT

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 +10 log10(P) dB. The limit of emission equal to -13dBm.

3.6.2 TEST PROCEDURE

- a. The EUT makes a phone call to the communication simulator. All measurements were done at middle operational frequency range.
- b. Measuring frequency range is from 30 MHz to 19.1GHz for WCDMA Band 4 and LTE Band 4. 10dB attenuation pad is connected with spectrum. RBW=1MHz and VBW=3MHz are used for conducted emission measurement.

3.6.3 TEST SETUP





3.6.4 TEST RESULTS

N/A

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3.7 RADIATED EMISSION MEASUREMENT

3.7.1 LIMITS OF RADIATED EMISSION MEASUREMENT

The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 +10 log10(P) dB. The limit of emission equal to -13dBm

3.7.2 TEST PROCEDURES

- a. Substitution method is used for E.I.R.P measurement. In the semi-anechoic chamber, EUT placed on the 0.8m/1.5m height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The "Read Value" is the spectrum reading the maximum power value.
- b. The substitution horn antenna is substituted for EUT at the same position and signals generator export the CW signal to the substitution antenna via a TX cable. Rotated the Turn Table and moved receiving antenna to find the maximum radiation power. Adjust output power level of S.G to get a Value of spectrum reading equal to "Read Value" of step a. Record the power level of S.G
- c. EIRP = Output power level of S.G TX cable loss + Antenna gain of substitution horn.
- d. E.R.P power can be calculated form E.I.R.P power by subtracting the gain of dipole, E.R.P power = E.I.P.R power 2.15dBi.

NOTE: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

3.7.3 DEVIATION FROM TEST STANDARD

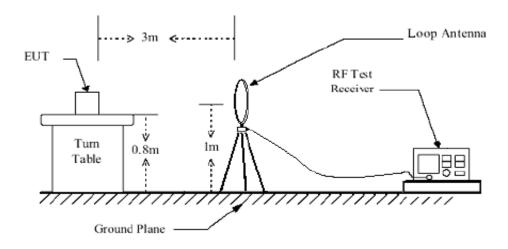
No deviation

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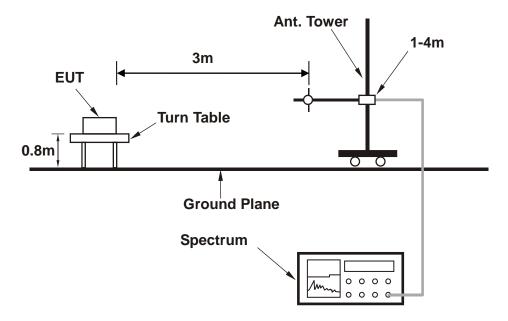


3.7.4 TEST SETUP

< Frequency Range below 30MHz >

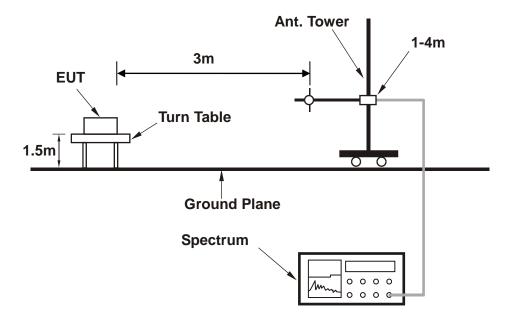


< Frequency Range 30MHz~1GHz >





< Frequency Range above 1GHz >



For the actual test configuration, please refer to the attached file (Test Setup Photo).

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3.7.5 TEST RESULTS

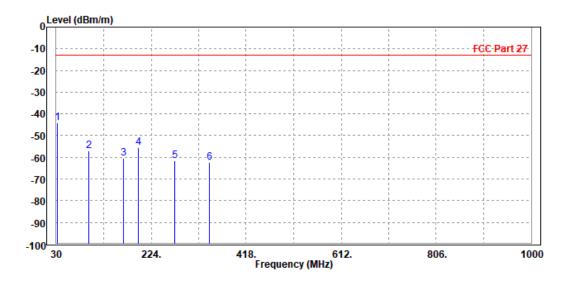
BELOW 1GHz WORST-CASE DATA

30 MHz - 1GHz data:

LTE BAND 4:

| MODE | TX channel 20175 | FREQUENCY RANGE | Below 1000MHz | | | |
|---|------------------|-----------------|-----------------------------|--|--|--|
| ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH | INPUT POWER | DC 5V from USB Host Unit | | | |
| TESTED BY | Jace Hu | | | | | |
| ANTENNA POLARITY & TEST DISTANCE: HORIZONTAL AT 3 M | | | | | | |

| | Freq | Level | | Limit Line | Over Limit | Factor | Remark | Pol/Phase |
|------|---------|--------|--------|---------------|---------------|--------|--------|------------|
| _ | MHz | dBm/m | dBm | dBm/m | dB | dB/m | | |
| 1 PP | 32.940 | -44.22 | -59.52 | -13.00 | -31.22 | 15.30 | Peak | Horizontal |
| 2 | 96.930 | -57.03 | -46.52 | -13.00 | -44.03 | -10.51 | Peak | Horizontal |
| 3 | 167.740 | -60.39 | -42.19 | -13.00 | -47.39 | -18.20 | Peak | Horizontal |
| 4 | 197.810 | -55.35 | -38.06 | -13.00 | -42.35 | -17.29 | Peak | Horizontal |
| 5 | 272.500 | -61.46 | -46.29 | -13.00 | -48.46 | -15.17 | Peak | Horizontal |
| 6 | 343.310 | -62.48 | -50.12 | -13.00 | -49.48 | -12.36 | Peak | Horizontal |



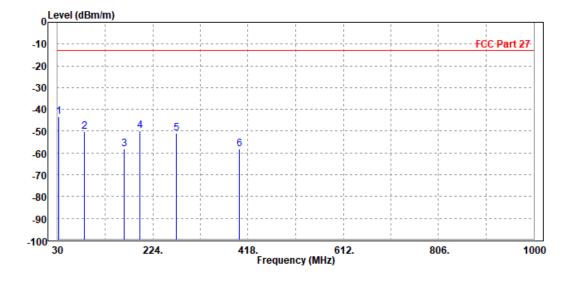
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| MODE | TX channel 20175 | FREQUENCY RANGE | Below 1000MHz | | |
|---|------------------|-----------------|-----------------------------|--|--|
| ENVIRONMENTAL CONDITIONS | 23deg. C, 70%RH | INPUT POWER | DC 5V from USB Host Unit | | |
| TESTED BY | Jace Hu | | | | |
| ANTENNA POLARITY & TEST DISTANCE: VERTICAL AT 3 M | | | | | |

| | | | Read | Limit | 0ver | | | |
|------|---------|--------|--------|--------|--------|--------|--------|------------|
| | Freq | Level | Level | Line | Limit | Factor | Remark | Pol/Phase |
| _ | | | | | | | | |
| | MHz | dBm/m | dBm | dBm/m | dB | dB/m | | |
| 4 00 | 34 040 | 42.20 | 46 43 | 43.00 | 20.20 | 2.75 | ъ . | |
| 1 PP | 31.940 | -43.38 | -46.13 | -13.00 | -30.38 | 2./5 | Реак | Vertical |
| 2 | 85.490 | -50.05 | -39.64 | -13.00 | -37.05 | -10.41 | Peak | Vertical |
| 3 | 166.640 | -58.16 | -43.59 | -13.00 | -45.16 | -14.57 | Peak | Vertical |
| 4 | 197.810 | -49.97 | -39.06 | -13.00 | -36.97 | -10.91 | Peak | Horizontal |
| 5 | 271.530 | -50.87 | -39.45 | -13.00 | -37.87 | -11.42 | Peak | Vertical |
| 6 | 399.570 | -58.10 | -47.16 | -13.00 | -45.10 | -10.94 | Peak | Vertical |



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ABOVE 1GHz

Note: For higher frequency, the emission is too low to be detected.

N/A

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INFORMATION ON THE TESTING LABORATORIES

We, BV 7Layers Communications Technology (Shenzhen) Co. Ltd, were founded in 2015 to provide our best service in EMC, Radio, and Telecom. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Shenzhen EMC/RF Lab:

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Web Site: www.adt.com.tw

The address and road map of all our labs can be found in our web site also.

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APPENDIX A - MODIFICATIONS RECORDERS FOR ENGINEERING **CHANGES TO THE EUT BY THE LAB**

No modifications were made to the EUT by the lab during the test.

---END---

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Report Version 1

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