# FCC Radio Test Report FCC ID: YDUVMTB317

This report concerns (check one) : Original Grant Class II Change

Issued Date : Nov. 11, 2010
Project No. : 1011C054
Equipment : Cruz Tablet

Model Name : Cruz Tablet T301

Applicant : ADVANCED MULTI TECH PTE.LTD

Address : No. 10 Anson Road #15-17/18,International Plaza

Singapore 079903

Manufacturer: ADVANCED MULTI TECH PTE.LTD

Address : No. 10 Anson Road #15-17/18, International Plaza

Singapore 079903

Tested by:

Neutron Engineering Inc. EMC Laboratory

Date of Receipt: Nov. 04, 2010

Date of Test:

Nov. 04, 2010 ~ Nov. 10, 2010

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## 1. CERTIFICATION

Equipment: Cruz Tablet

Brand Name: N/A

Model Name: Cruz Tablet T301

Applicant: ADVANCED MULTITECH PTE.LTD Date of Test: Nov. 04, 2010 ~ Nov. 10, 2010

Test Item: ENGINEERING SAMPLE

Standards: FCC Part15, Subpart C(15.247) / ANSI C63.4: 2003

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCP-1-1011C054) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of NVLAP and TAF according to the ISO-17025 quality assessment standard and technical standard(s).

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# 2. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

| FCC Part15 (15.247), Subpart C |                                     |          |        |  |  |  |
|--------------------------------|-------------------------------------|----------|--------|--|--|--|
| Standard Section               | Test Item                           | Judgment | Remark |  |  |  |
| 15.207                         | Conducted Emission                  | PASS     |        |  |  |  |
| 15.247(d)                      | Antenna conducted Spurious Emission | PASS     |        |  |  |  |
| 15.247(a)(2)                   | 6dB Bandwidth                       | PASS     |        |  |  |  |
| 15.247(b)(3)                   | Peak Output Power                   | PASS     |        |  |  |  |
| 15.209/15.205                  | Radiated Spurious Emission          | PASS     |        |  |  |  |
| 15.247(e)                      | Power Spectral Density              | PASS     |        |  |  |  |
| 15.203                         | Antenna Requirement                 | PASS     |        |  |  |  |

NOTE:

(1)" N/A" denotes test is not applicable in this Test Report

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## 2.1 TEST FACILITY

The test facilities used to collect the test data in this report is **CB03/DG-C02** at the location of No.3, Jinshagang 1st Road, ShiXia, Dalang Town, Dong Guan, China.523792 Neutron's test firm number is 319330

## 2.2 MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2:

The reported uncertainty of measurement y  $\pm$  U  $^{,}$  where expended uncertainty U is based on a standard uncertainty multiplied by a coverage factor of k=2  $^{,}$  providing a level of confidence of approximately 95 %  $^{\circ}$ 

## A. Conducted Measurement:

| Test Site | Method | Measurement Frequency Range | U , (dB) | NOTE |
|-----------|--------|-----------------------------|----------|------|
| DG-C02    | CISPR  | 150 KHz ~ 30MHz             | 1.94     |      |

## B. Radiated Measurement:

| Test Site | Method | Measurement Frequency<br>Range | Ant.<br>H / V | U , (dB) | NOTE |
|-----------|--------|--------------------------------|---------------|----------|------|
|           |        | 30MHz ~ 200MHz                 | V             | 3.82     |      |
| CB03      | CISPR  | 30MHz ~ 200MHz                 | Н             | 3.60     |      |
| CD03      | CISER  | 200MHz ~ 1,000MHz              | V             | 3.86     |      |
|           |        | 200MHz ~ 1,000MHz              | Н             | 3.94     |      |

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# 3. GENERAL INFORMATION

# 3.1 GENERAL DESCRIPTION OF EUT

| Equipment              | Cruz Tablet  |   |  |  |
|------------------------|--|---|--|--|
| Brand Name             | N/A  |   |  |  |
| Model Name             | Cruz Tablet T301   |   |  |  |
| OEM Brand/Model Name   | N/A  |   |  |  |
| Model Difference       | N/A  |   |  |  |
| Product Description    | The EUT is a Cruz Table Operation Frequency:  Modulation Type: Bit Rate of Transmitter  Number of Channel  Antenna Designation: Antenna Gain(Peak) Conducted Peak Output Power:  Based on the application in User's Manual, the EU | 2412~2462 MHz 802.11b:CCK(11/5.5Mbps), DQPSK(2Mbps), DBPSK(1Mbps) 802.11g/n: 64QAM(/150/135/120/72.2/65/ 57.8/54/48Mbps), 16QAM(90/60/43.3/36/28.9/ 24Mbps), QPSK(45/30/21.7/18/14.7/ 12Mbps), BPSK(15/9/7.2/6Mbps) 802.11n up to 150 Mbps 11 CH, Please see Note 2. (please see page 9) Please see Note 3. (please see page 9) 802.11b: 19.71 dBm 802.11g: 22.63 dBm 802.11n(20MHz): 22.45 dBm |  |  |
|                        | specification, please refe<br>#1 DC Voltage supplied to  |   |  |  |
| D 0                    |  | DSA-20PFE-05 FUS 050300   |  |  |
| Power Source           | #2 DC Voltage supplied from Lithium battery*2 set. ( parallel)   |   |  |  |
|                        | #3 DC Voltage supplied from Host system  |   |  |  |
| Power Rating           | #1 I/P AC 100~240V~50/60Hz 0.7A O/P DC 5V 3A<br>#2 DC 3.7V 4000mAh<br>#3 I/P AC 120V/60Hz  |   |  |  |
| Connecting I/O Port(s) | Please refer to the User's   | Please refer to the User's Manual   |  |  |
| Products Covered       | N/A  |   |  |  |

## Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.

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2. CH 01 – CH 11 for 802.11b, 802.11g, 802.11n(20MHz)

|         | Channel List       |         |                    |         |                    |         |                    |
|---------|--------------------|---------|--------------------|---------|--------------------|---------|--------------------|
| Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) | Channel | Frequency<br>(MHz) |
| 01      | 2412               | 04      | 2427               | 07      | 2442               | 10      | 2457               |
| 02      | 2417               | 05      | 2432               | 80      | 2447               | 11      | 2462               |
| 03      | 2422               | 06      | 2437               | 09      | 2452               |         |                    |

Table for Filed Antenna

| Ant. | Brand  | Model Name | Antenna Type | Connector | Gain (dBi) |
|------|--------|------------|--------------|-----------|------------|
| 1    | Cortec | NB0175-A   | PIFA         | N/A       | 0.77       |

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# 3.2 DESCRIPTION OF TEST MODES

To investigate the maximum EMI emission characteristics generates from EUT, the test system was pre-scanning tested base on the consideration of following EUT operation mode or test configuration mode which possible have effect on EMI emission level. Each of these EUT operation mode(s) or test configuration mode(s) mentioned above was evaluated respectively.

| Pretest Mode | Description                      |
|--------------|----------------------------------|
| Mode 1       | TX B MODE CHANNEL 01//06/11      |
| Mode 2       | TX G MODE CHANNEL 01/06/11       |
| Mode 3       | TX N-20MHZ MODE CHANNEL 01/06/11 |
| Mode 4       | TX B MODE CHANNEL 01             |

The EUT system operated these modes were found to be the worst case during the pre-scanning test as Following:

| For Conducted Test          |                             |  |  |  |  |
|-----------------------------|-----------------------------|--|--|--|--|
| Final Test Mode Description |                             |  |  |  |  |
| Mode 4                      | Mode 4 TX B MODE CHANNEL 01 |  |  |  |  |

| For Radiated Test |                                  |  |  |  |
|-------------------|----------------------------------|--|--|--|
| Final Test Mode   | Description                      |  |  |  |
| Mode 1            | TX B MODE CHANNEL 01//06/11      |  |  |  |
| Mode 2            | TX G MODE CHANNEL 01/06/11       |  |  |  |
| Mode 3            | TX N-20MHZ MODE CHANNEL 01/06/11 |  |  |  |
| Mode 4            | TX B MODE CHANNEL 01             |  |  |  |

#### Note:

- (1) The measurements are performed at the highest, middle, lowest available channels.
- (2) The EUT is considered a portable unit; it was pre-tested on the positioned of each 3 axis. The worst case was found positioned on X-plane. Therefore only the test data of this X-plane was used for radiated emission measurement test.
- (3) During the output power test, all data rates have been investigated and the highest output powers were recorded are as follows:

802.11b mode: DBPSK (1Mbps) 802.11g mode: OFDM (6Mbps) 802.11n HT20 mode : MCS0 (6Mbps)

For radiated emission tests, the highest output powers were set for final test.

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# 3.3 TABLE OF PARAMETERS OF TEXT SOFTWARE SETTING

During testing channel & power controlling software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product power parameters of WLAN

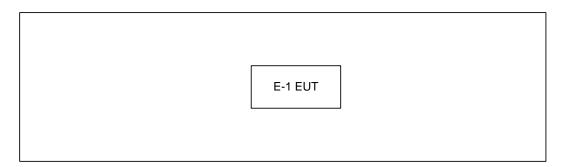
| Test software Version | Test Program: WLAN TEST    |    |    |  |
|-----------------------|----------------------------|----|----|--|
| Frequency             | 2412 MHz 2437 MHz 2462 MHz |    |    |  |
| IEEE 802.11b DSSS     | 15                         | 15 | 15 |  |
| IEEE 802.11g OFDM     | 10                         | 10 | 10 |  |
| IEEE 802.11n (20MHz)  | 10                         | 10 | 10 |  |

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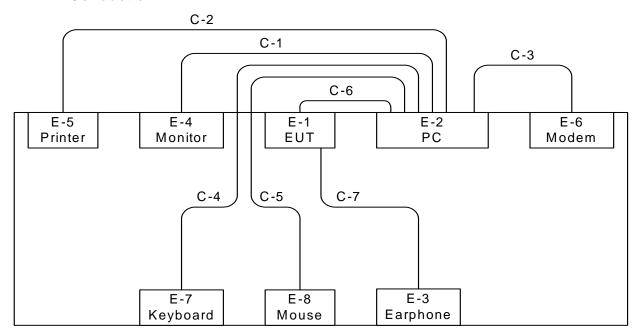


# 3.4 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

# Radiation TX/RX Mode:



# Conduction:



C-1: D-Sub Cable

C-2: Parallel Cable

C-3: RS232 Cable

C-4: USB Cable

C-5: USB Cable

C-6: USB Cable

C-7: Audio Cable

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# 3.5 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.

| Item | Equipment    | Mfr/Brand | Model/Type No.      | FCC ID     | Series No.                  | Note |
|------|--------------|-----------|---------------------|------------|-----------------------------|------|
| E-1  | Cruz Tablet  | N/A       | Cruz Tablet<br>T301 | YDUVMTB317 | N/A                         | EUT  |
| E-2  | PC           | Dell 745  | DCSM                | DOC        | G7K832X                     |      |
| E-3  | Earphone     | APPLE     | N/A                 | N/A        | N/A                         |      |
| E-4  | LCD monitor  | Dell      | E177FPc             | DOC        | CNOFJ179-6418<br>0-6AG-1WNS |      |
| E-5  | Printer      | SII       | DPU-414             | DOC        | 3018507 B                   |      |
| E-6  | Modem        | ACEEX     | DM-1414V            | IFAXDm1414 | 0603002131                  |      |
| E-7  | USB Keyboard | Dell      | L100                | DOC        | CNORH6596589<br>085C00U7    |      |
| E-8  | USB Mouse    | Dell      | MO56UOA             | DOC        | G01003HO                    |      |
|      |              |           |                     |            |                             |      |
|      |              |           |                     |            |                             |      |

| Item | Shielded Type | Ferrite Core | Length | Note |
|------|---------------|--------------|--------|------|
| C-1  | YES           | YES          | 1.8M   |      |
| C-2  | YES           | NO           | 1.5M   |      |
| C-3  | YES           | NO           | 1.5M   |      |
| C-4  | YES           | YES          | 1.8M   |      |
| C-5  | YES           | NO           | 1.8M   |      |
| C-6  | YES           | NO           | 1.5M   |      |
| C-7  | NO            | NO           | 1.2M   |      |
|      |               |              |        |      |

# Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in <code>"Length\_"</code> column.

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# 4. EMC EMISSION TEST

## 4.1 CONDUCTED EMISSION MEASUREMENT

# 4.1.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

| FREQUENCY (MHz)     | Class A (dBuV) |         | Class B (dBuV) |           | Standard |  |
|---------------------|----------------|---------|----------------|-----------|----------|--|
| FREQUENCT (IVII 12) | Quasi-peak     | Average | Quasi-peak     | Average   | Standard |  |
| 0.15 -0.5           | 79.00          | 66.00   | 66 - 56 *      | 56 - 46 * | CISPR    |  |
| 0.50 -5.0           | 73.00          | 60.00   | 56.00          | 46.00     | CISPR    |  |
| 5.0 -30.0           | 73.00          | 60.00   | 60.00          | 50.00     | CISPR    |  |

| 0.15 -0.5 | 79.00 | 66.00 | 66 - 56 * | 56 - 46 * | FCC |
|-----------|-------|-------|-----------|-----------|-----|
| 0.50 -5.0 | 73.00 | 60.00 | 56.00     | 46.00     | FCC |
| 5.0 -30.0 | 73.00 | 60.00 | 60.00     | 50.00     | FCC |

## Note:

- (1) The tighter limit applies at the band edges.
- (2) The limit of " \* " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

## 4.1.2 MEASUREMENT INSTRUMENTS LIST AND SETTING

| Item | Kind of Equipment | Manufacturer | Type No.  | Serial No. | Calibrated until |
|------|-------------------|--------------|-----------|------------|------------------|
| 1    | LISN              | EMCO         | 3816/2    | 00052765   | May.26.2011      |
| 2    | LISN              | Rolf Heine   | NNB-2-16Z | 99044      | May.26.2011      |
| 3    | 50Ω Terminator    | SHX          | TF2-3G-A  | 08122901   | May.26.2011      |
| 4    | Transient Limiter | Agilent      | 11947A    | 3107A03668 | May.26.2011      |
| 5    | Test Cable        | N/A          | C-06_C03  | N/A        | Nov.16.2010      |
| 6    | Test Receiver     | R&S          | ESCI      | 100382     | May.26.2011      |

Remark: "N/A" denotes No Model Name. , Serial No. or No Calibration specified.

# The following table is the setting of the receiver

| Receiver Parameters | Setting  |  |
|---------------------|----------|--|
| Attenuation         | 10 dB    |  |
| Start Frequency     | 0.15 MHz |  |
| Stop Frequency      | 30 MHz   |  |
| IF Bandwidth        | 9 kHz    |  |

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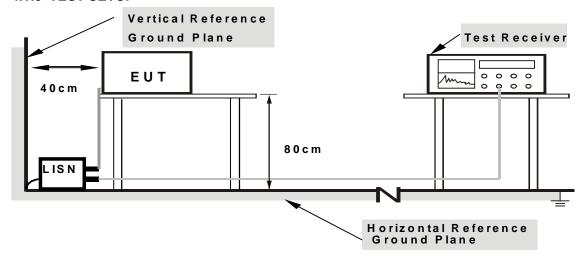
## 4.1.3 TEST PROCEDURE

- a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 Ohm/ 50uH of coupling impedance for the measuring instrument.
- b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.
- c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item -EUT Test Photos.

#### 4.1.4 DEVIATION FROM TEST STANDARD

No deviation

## 4.1.5 TEST SETUP



Note: 1.Support units were connected to second LISN.

2.Both of LISNs (AMN) are 80 cm from EUT and at least 80 from other units and other metal planes

#### 4.1.6 EUT OPERATING CONDITIONS

The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

The EUT was programmed to be in continuously transmitting mode.

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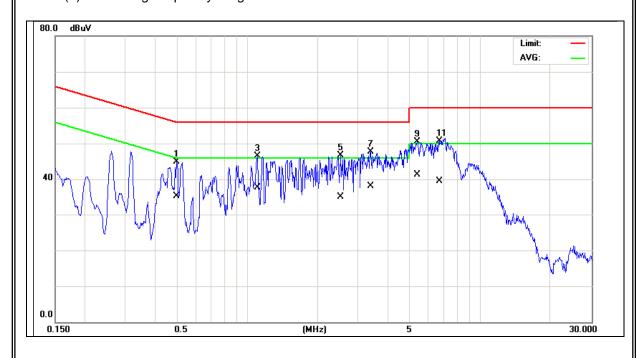
# 4.1.7 TEST RESULTS

| EUT:         | Cruz Tablet          | Model Name :       | Cruz Tablet T301 |
|--------------|----------------------|--------------------|------------------|
| Temperature: | 23 ℃                 | Relative Humidity: | 54 %             |
| Pressure:    | 1010hPa              | Test Power :       | AC 120V/60Hz     |
| Test Mode :  | TX B MODE CHANNEL 01 |                    |                  |

| Freq. | Terminal | Measure | ed(dBuV) | Limits( | (dBuV)  | Margin | Note  |
|-------|----------|---------|----------|---------|---------|--------|-------|
| (MHz) | L/N      | QP-Mode | AV-Mode  | QP-Mode | AV-Mode | (dB)   | INOLE |
| 0.50  | Line     | 44.97   | 35.18    | 56.03   | 46.03   | -10.85 | (AV)  |
| 1.11  | Line     | 46.42   | 37.68    | 56.00   | 46.00   | -8.32  | (AV)  |
| 2.53  | Line     | 46.64   | 34.98    | 56.00   | 46.00   | -9.36  | (QP)  |
| 3.40  | Line     | 47.80   | 38.05    | 56.00   | 46.00   | -7.95  | (AV)  |
| 5.37  | Line     | 50.48   | 41.22    | 60.00   | 50.00   | -8.78  | (AV)  |
| 6.68  | Line     | 50.73   | 39.54    | 60.00   | 50.00   | -9.27  | (QP)  |

## Remark

- (1) All readings are QP Mode value unless otherwise stated AVG in column of Note I few the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform on In this case, a " \* " marked in AVG Mode column of Interference Voltage Measured on the North North
- (2) Measuring frequency range from 150KHz to 30MHz •



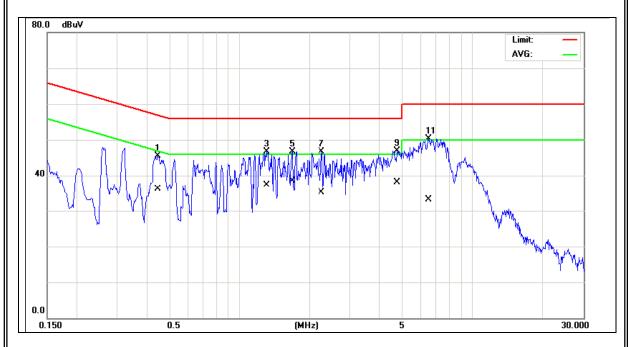
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| EUT:         | Cruz Tablet          | Model Name :       | Cruz Tablet T301 |
|--------------|----------------------|--------------------|------------------|
| Temperature: | 23 ℃                 | Relative Humidity: | 54 %             |
| Pressure:    | 1010hPa              | Test Power :       | AC 120V/60Hz     |
| Test Mode :  | TX B MODE CHANNEL 01 |                    |                  |

| Freq. | Terminal | Measure | d(dBuV) | Limits( | (dBuV)  | Margin | Note |
|-------|----------|---------|---------|---------|---------|--------|------|
| (MHz) | L/N      | QP-Mode | AV-Mode | QP-Mode | AV-Mode | (dB)   | NOIG |
| 0.45  | Neutral  | 45.47   | 36.15   | 56.94   | 46.94   | -10.79 | (AV) |
| 1.31  | Neutral  | 46.65   | 37.29   | 56.00   | 46.00   | -8.71  | (AV) |
| 1.68  | Neutral  | 46.74   | 38.53   | 56.00   | 46.00   | -7.47  | (AV) |
| 2.26  | Neutral  | 46.64   | 35.04   | 56.00   | 46.00   | -9.36  | (QP) |
| 4.77  | Neutral  | 46.89   | 38.17   | 56.00   | 46.00   | -7.83  | (AV) |
| 6.49  | Neutral  | 50.29   | 33.06   | 60.00   | 50.00   | -9.71  | (QP) |

- (1) All readings are QP Mode value unless otherwise stated AVG in column of Note I few the QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only QP Mode was measured, but AVG Mode didn't perform In this case, a " \* " marked in AVG Mode column of Interference Voltage Measured In the Normal States of the Normal Stat
- (2) Measuring frequency range from 150KHz to 30MHz  ${\scriptstyle \circ}$



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## **4.2 RADIATED EMISSION MEASUREMENT**

# 4.2.1 RADIATED EMISSION LIMITS (Frequency Range 9KHz-1000MHz)

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

| Frequencies | Field Strength     | Measurement Distance |
|-------------|--------------------|----------------------|
| (MHz)       | (micorvolts/meter) | (meters)             |
| 0.009~0.490 | 2400/F(KHz)        | 300                  |
| 0.490~1.705 | 24000/F(KHz)       | 30                   |
| 1.705~30.0  | 30                 | 30                   |
| 30~88       | 100                | 3                    |
| 88~216      | 150                | 3                    |
| 216~960     | 200                | 3                    |
| Above 960   | 500                | 3                    |

# LIMITS OF RADIATED EMISSION MEASUREMENT (Above 1000MHz)

| FREQUENCY (MHz)    | (dBuV/m) (at 3m) |         |  |
|--------------------|------------------|---------|--|
| FREQUENCT (IVITIZ) | PEAK             | AVERAGE |  |
| Above 1000         | 74               | 54      |  |

## Notes:

- (1) The limit for radiated test was performed according to FCC PART 15C.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

## FREQUENCY RANGE OF RADIATED MEASUREMENT (For unintentional radiators)

| Highest frequency generated or<br>Upper frequency of<br>measurement used in the device<br>or on which the device operates<br>or tunes (MHz) | Range (MHz)   |
|---|---|
| Below 1.705   | 30  |
| 1.705 – 108   | 1000  |
| 108 – 500   | 2000  |
| 500 – 1000  | 5000  |
| Above 1000  | 5 <sup>th</sup> harmonic of the highest frequency or 40 GHz, whichever is lower |

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# 4.2.2 MEASUREMENT INSTRUMENTS LIST ANS SETTING

| Item | Kind of Equipment          | Manufacturer | Type No.        | Serial No. | Calibrated until |
|------|----------------------------|--------------|-----------------|------------|------------------|
| 1    | Triple Loop<br>Antenna     | R&S          | HFH2-Z2         | 830749/020 | May.27.2011      |
| 2    | Bi-log Antenna             | Schwarbeck   | VULB9160        | 9160-3232  | May.26.2011      |
| 3    | Horn Antenna               | ETS          | 3115            | 00075789   | May.12.2011      |
| 4    | Broad-Band Horn<br>Antenna | Schwarzbeck  | BBHA 9170       | 9170340    | Dec.16.2010      |
| 5    | Amplifier                  | HP           | 8447D           | 2944A09673 | May.26.2011      |
| 6    | Amplifier                  | Agilent      | 8449B           | 3008A02274 | May.26.2011      |
| 7    | Amplifier                  | EMC          | EMC265404<br>5  | 980039     | Aug.12.2011      |
| 8    | Test Receiver              | R&S          | ESCI            | 100895     | May.26.2011      |
| 9    | Spectrum Analyzer          | R&S          | FSP 40          | 100185     | Nov.27.2010      |
| 10   | Test Cable                 | N/A          | C-01_CB03       | N/A        | Jul.05.2011      |
| 11   | Test Cable                 | HUBER+SUHNER | SUCOFLEX_<br>8m | 313794/4   | Apr.12.2011      |
| 12   | Controller                 | СТ           | SC100           | N/A        | N/A              |

Remark: "N/A" denotes No Model Name / Serial No. and No Calibration specified.

| Spectrum Parameter            | Setting  |  |  |  |
|-------------------------------|--|--|--|--|
| Attenuation                   | Auto   |  |  |  |
| Start Frequency               | 1000 MHz                                       |  |  |  |
| Stop Frequency                | 10th carrier harmonic                          |  |  |  |
| RB / VB                       | 1MHz / 1MHz for Dook 1 MHz / 10Hz for Average  |  |  |  |
| (Emission in restricted band) | 1MHz / 1MHz for Peak, 1 MHz / 10Hz for Average |  |  |  |

| Receiver Parameter     | Setting                          |
|------------------------|----------------------------------|
| Attenuation            | Auto                             |
| Start ~ Stop Frequency | 9kHz~150kHz / RB 200Hz for QP    |
| Start ~ Stop Frequency | 150kHz~30MHz / RB 9kHz for QP    |
| Start ~ Stop Frequency | 30MHz~1000MHz / RB 120kHz for QP |

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## 4.2.3 TEST PROCEDURE

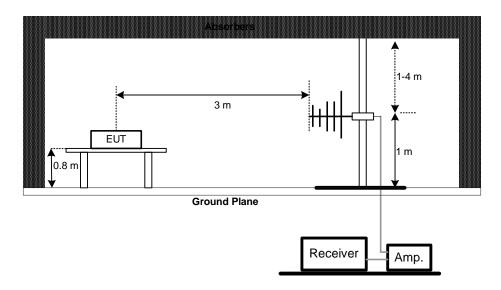
- a. The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

d. The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. e. If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed. f. For the actual test configuration, please refer to the related Item –EUT Test Photos. 4.2.4 DEVIATION FROM TEST STANDARD No deviation

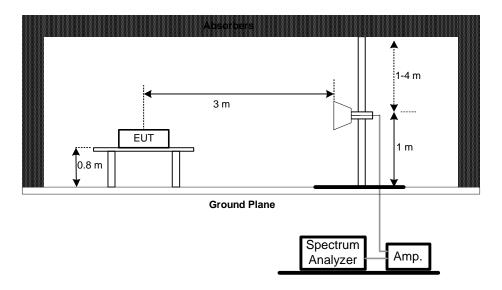
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# 4.2.5 TEST SETUP

(A) Radiated Emission Test Set-Up Frequency Below 1 GHz



(B) Radiated Emission Test Set-Up Frequency Above 1 GHz



# **4.2.6 EUT OPERATING CONDITIONS**

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

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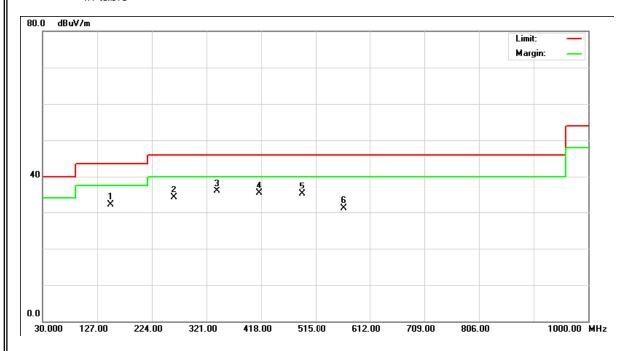
# 4.2.7 TEST RESULTS (BETWEEN 30 - 1000 MHZ)

| EUT:         | Cruz Tablet       | Model Name :       | Cruz Tablet T301 |
|--------------|-------------------|--------------------|------------------|
| Temperature: | <b>26</b> ℃       | Relative Humidity: | 57 %             |
| Pressure:    | 1010 hPa          | Test Voltage :     | DC 3.7V          |
| Test Mode :  | TX B MODE 2412MHz |                    |                  |

| Freq.<br>(MHz) | Ant.<br>H/V | Reading(RA)<br>(dBuV) | Corr.Factor(CF)<br>(dB) | Measured(FS)<br>(dBuV/m) | Limits(QP)<br>(dBuV/m) | Margin<br>(dB) | Note |
|----------------|-------------|-----------------------|-------------------------|--------------------------|------------------------|----------------|------|
| 150.28         | V           | 52.51                 | -20.41                  | 32.10                    | 43.50                  | - 11.40        |      |
| 263.77         | V           | 50.07                 | -15.94                  | 34.13                    | 46.00                  | - 11.87        |      |
| 339.43         | V           | 51.12                 | -15.27                  | 35.85                    | 46.00                  | - 10.15        |      |
| 415.09         | V           | 47.45                 | -12.09                  | 35.36                    | 46.00                  | - 10.64        |      |
| 490.75         | V           | 45.81                 | -10.74                  | 35.07                    | 46.00                  | - 10.93        |      |
| 565.44         | V           | 39.85                 | -8.83                   | 31.02                    | 46.00                  | - 14.98        |      |

## Remark:

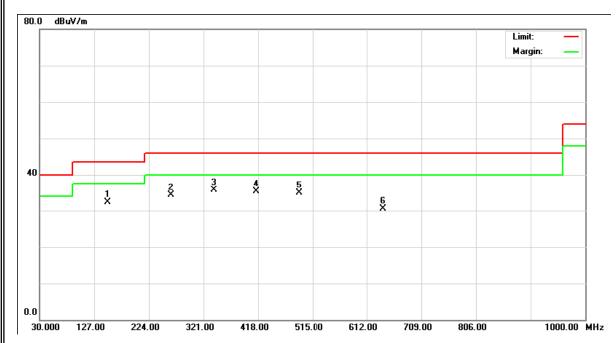
- (1) Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode or Peak Mode with Detector BW=120KHz ; SPA setting in RBW=120KHz, VBW =120KHz, Swp. Time = 0.3 sec./MHz  $^{\circ}$
- (2) All readings are Peak unless otherwise stated QP in column of  $^{\mathbb{F}}$  Note  $_{\mathbb{J}}$  . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $^{\circ}$
- (3) Measuring frequency range from 30MHz to 1000MHz •
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table  ${}^{\circ}$



| EUT:         | Cruz Tablet       | Model Name :       | Cruz Tablet T301 |
|--------------|-------------------|--------------------|------------------|
| Temperature: | <b>26</b> ℃       | Relative Humidity: | 57 %             |
| Pressure :   | 1010 hPa          | Test Voltage :     | DC 3.7V          |
| Test Mode :  | TX B MODE 2412MHz |                    |                  |

| Freq.<br>(MHz) | Ant.<br>H/V | Reading(RA)<br>(dBuV) | Corr.Factor(CF)<br>(dB) | Measured(FS)<br>(dBuV/m) | Limits(QP)<br>(dBuV/m) | Margin<br>(dB) | Note |
|----------------|-------------|-----------------------|-------------------------|--------------------------|------------------------|----------------|------|
| 150.28         | Н           | 52.73                 | -20.41                  | 32.32                    | 43.50                  | - 11.18        |      |
| 263.77         | Ι           | 50.27                 | -15.94                  | 34.33                    | 46.00                  | - 11.67        |      |
| 339.43         | Η           | 50.97                 | -15.27                  | 35.70                    | 46.00                  | - 10.30        |      |
| 415.09         | Н           | 47.31                 | -12.09                  | 35.22                    | 46.00                  | - 10.78        |      |
| 490.45         | Н           | 45.60                 | -10.74                  | 34.86                    | 46.00                  | - 11.14        |      |
| 641.10         | Η           | 38.38                 | -7.82                   | 30.56                    | 46.00                  | - 15.44        |      |

- (1) Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode or Peak Mode with Detector BW=120KHz; SPA setting in RBW=120KHz, VBW =120KHz, Swp. Time = 0.3 sec./MHz $_{\circ}$
- (2) All readings are Peak unless otherwise stated QP in column of  $^{\mathbb{F}}$  Note  $_{\mathbb{J}}$  . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $^{\circ}$
- (3) Measuring frequency range from 30MHz to 1000MHz  $^{\circ}$
- (4) If the peak scan value lower limit more than 20dB, then this signal data does not show in table  $^{\circ}$



# 4.2.8 TEST RESULTS (ABOVE 1000 MHZ)

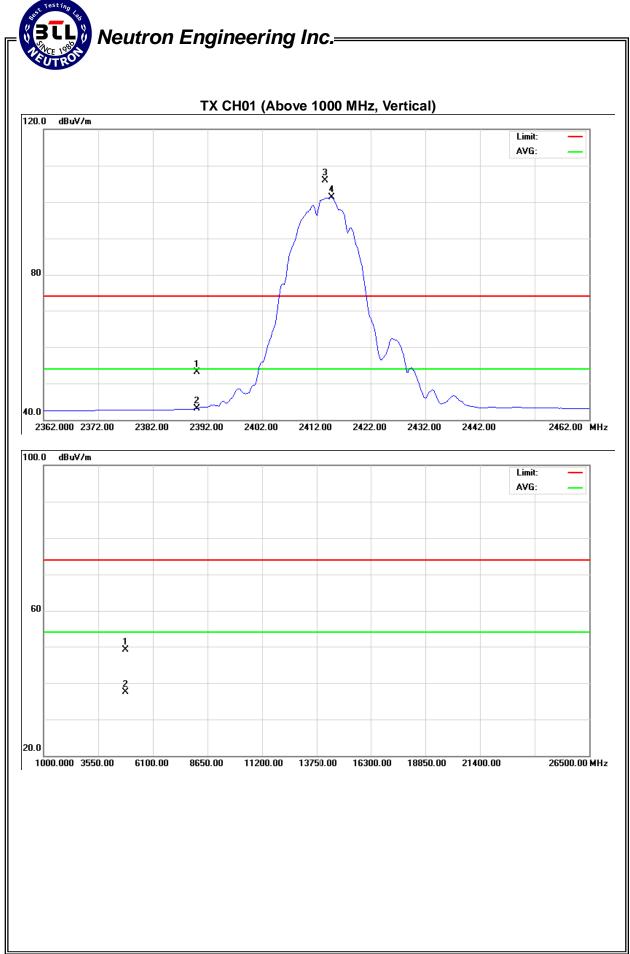
| EUT:          | Cruz Tablet       | Model Name :       | Cruz Tablet T301 |
|---------------|-------------------|--------------------|------------------|
| Temperature : | <b>25</b> ℃       | Relative Humidity: | 51 %             |
| Pressure:     | 1010 hPa          | Test Voltage :     | DC 3.7V          |
| Test Mode :   | TX B MODE 2412MHz |                    |                  |

| Freq.   | Freq. Ant.Pol. Reading |        | Ant./CF | Act.   |          | Lir      |          |          |      |
|---------|------------------------|--------|---------|--------|----------|----------|----------|----------|------|
| гіец.   | AIII.FUI.              | Peak   | AV      |        | Peak     | AV       | Peak     | AV       | Note |
| (MHz)   | H/V                    | (dBuV) | (dBuV)  | CF(dB) | (dBuV/m) | (dBuV/m) | (dBuV/m) | (dBuV/m) |      |
| 2390.00 | V                      | 21.53  | 11.65   | 31.54  | 53.07    | 43.19    | 74.00    | 54.00    | X/E  |
| 2413.60 | V                      | 74.32  | 69.77   | 31.58  | 105.90   | 101.35   |          |          | X/F  |
| 4824.15 | V                      | 43.05  | 31.49   | 6.00   | 49.05    | 37.49    | 74.00    | 54.00    | X/H  |

#### Remark:

- (1) All readings are Peak unless otherwise stated QP in column of  $^{\mathbb{F}}$  Note  $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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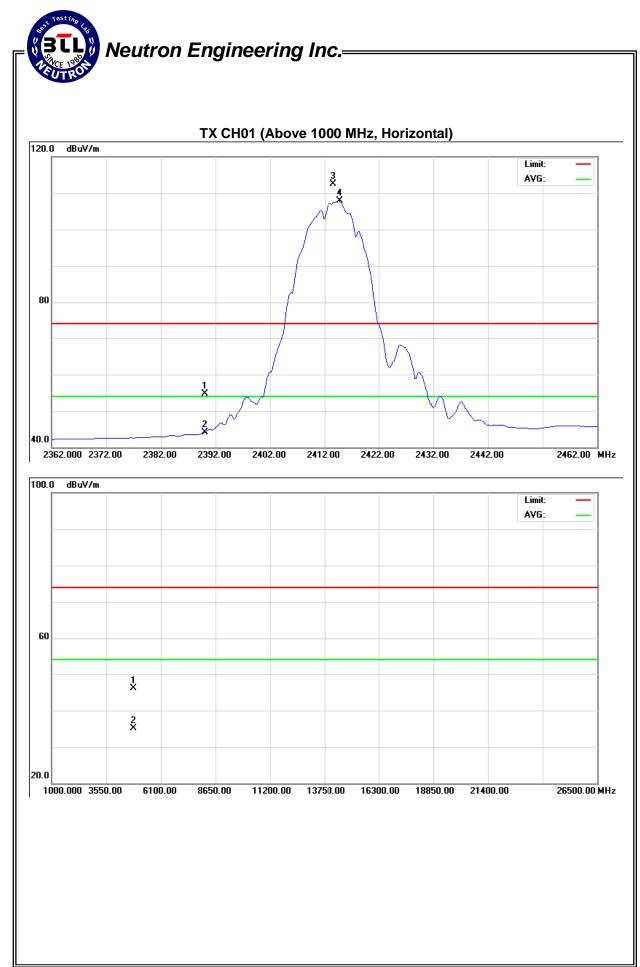


| EUT:         | Cruz Tablet       | Model Name :       | Cruz Tablet T301 |
|--------------|-------------------|--------------------|------------------|
| Temperature: | <b>23</b> ℃       | Relative Humidity: | 56 %             |
| Pressure:    | 1010 hPa          | Test Voltage :     | DC 3.7V          |
| Test Mode :  | TX B MODE 2412MHz |                    |                  |

| Freq.   | Ant.Pol. Reading |        | Ant./CF | Act.   |          | Liı      |          |          |      |
|---------|------------------|--------|---------|--------|----------|----------|----------|----------|------|
| гіец.   | AHL.FOI.         | Peak   | AV      |        | Peak     | AV       | Peak     | AV       | Note |
| (MHz)   | H/V              | (dBuV) | (dBuV)  | CF(dB) | (dBuV/m) | (dBuV/m) | (dBuV/m) | (dBuV/m) |      |
| 2390.00 | Н                | 23.08  | 12.66   | 31.54  | 54.62    | 44.20    | 74.00    | 54.00    | X/E  |
| 2413.60 | Н                | 80.87  | 76.33   | 31.58  | 112.45   | 107.91   |          |          | X/F  |
| 4824.15 | Н                | 40.11  | 29.02   | 6.00   | 46.11    | 35.02    | 74.00    | 54.00    | X/H  |

- (1) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note ${}_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  ${}^{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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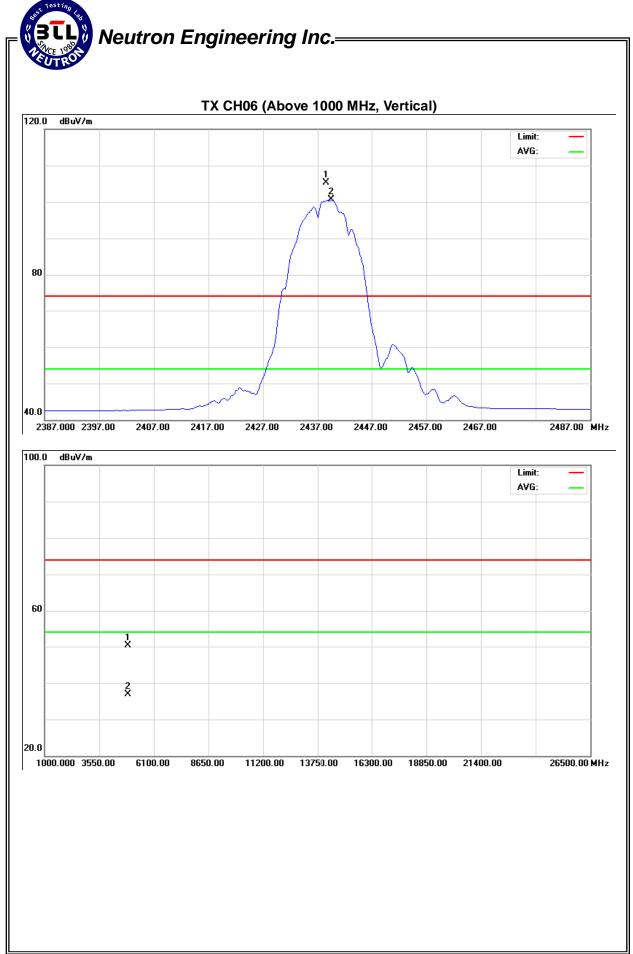


| EUT:         | Cruz Tablet       | Model Name :       | Cruz Tablet T301 |
|--------------|-------------------|--------------------|------------------|
| Temperature: | <b>23</b> ℃       | Relative Humidity: | 56 %             |
| Pressure :   | 1010 hPa          | Test Voltage :     | DC 3.7V          |
| Test Mode :  | TX B MODE 2437MHz |                    |                  |

| Freq.   | Ant.Pol. | Ant Pol Reading A |        | Ant./CF | A        | Act.     |          | Limit    |      |  |
|---------|----------|-------------------|--------|---------|----------|----------|----------|----------|------|--|
| 1 164.  | AHLITOI. | Peak              | AV     |         | Peak     | AV       | Peak     | AV       | Note |  |
| (MHz)   | H/V      | (dBuV)            | (dBuV) | CF(dB)  | (dBuV/m) | (dBuV/m) | (dBuV/m) | (dBuV/m) |      |  |
| 2438.60 | V        | 73.63             | 69.04  | 31.62   | 105.25   | 100.66   |          |          | X/F  |  |
| 4875.89 | V        | 44.09             | 30.84  | 6.15    | 50.24    | 36.99    | 74.00    | 54.00    | X/H  |  |

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ∘
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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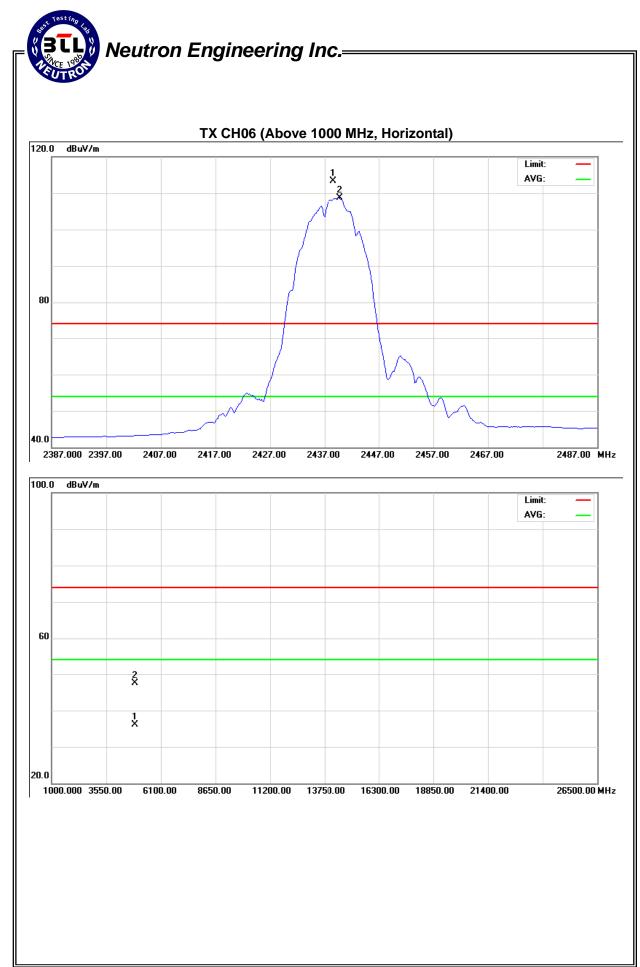


| EUT:         | Cruz Tablet       | Model Name :       | Cruz Tablet T301 |
|--------------|-------------------|--------------------|------------------|
| Temperature: | 23 ℃              | Relative Humidity: | 56 %             |
| Pressure :   | 1010 hPa          | Test Voltage :     | DC 3.7V          |
| Test Mode :  | TX B MODE 2437MHz |                    |                  |

| Freq.   | Ant.Pol. | Rea    | ding   | Ant./CF | A        | ct.      | Lir      | mit      |      |
|---------|----------|--------|--------|---------|----------|----------|----------|----------|------|
| i ieq.  |          | Peak   | AV     |         | Peak     | AV       | Peak     | AV       | Note |
| (MHz)   | H/V      | (dBuV) | (dBuV) | CF(dB)  | (dBuV/m) | (dBuV/m) | (dBuV/m) | (dBuV/m) |      |
| 2438.60 | Н        | 81.75  | 77.08  | 31.62   | 113.37   | 108.70   |          |          | X/F  |
| 4875.89 | Н        | 41.40  | 29.89  | 6.15    | 47.55    | 36.04    | 74.00    | 54.00    | X/H  |

- (1) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note  ${}_{\mathbb{L}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  ${}_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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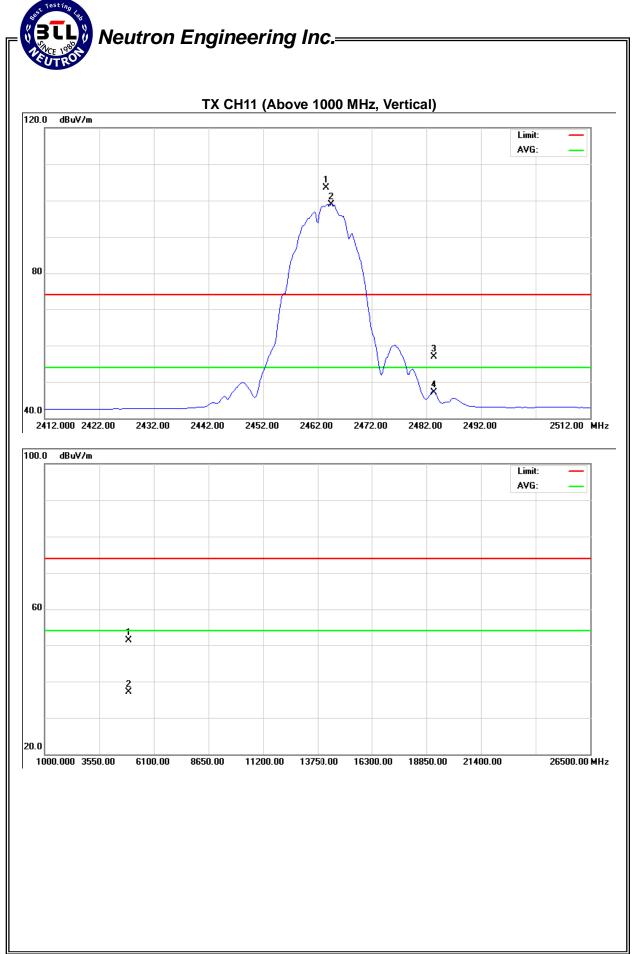


| EUT:         | Cruz Tablet       | Model Name :       | Cruz Tablet T301 |
|--------------|-------------------|--------------------|------------------|
| Temperature: | <b>23</b> ℃       | Relative Humidity: | 56 %             |
| Pressure :   | 1010 hPa          | Test Voltage :     | DC 3.7V          |
| Test Mode :  | TX B MODE 2462MHz |                    |                  |

| Freq.   | Ant.Pol. | Reading |        | Reading Ant./CF Act. |          | Lir      |          |          |      |
|---------|----------|---------|--------|----------------------|----------|----------|----------|----------|------|
|         |          | Peak    | AV     |                      | Peak     | AV       | Peak     | AV       | Note |
| (MHz)   | H/V      | (dBuV)  | (dBuV) | CF(dB)               | (dBuV/m) | (dBuV/m) | (dBuV/m) | (dBuV/m) |      |
| 2463.60 | V        | 71.91   | 67.33  | 31.66                | 103.57   | 98.99    |          |          | X/F  |
| 2483.50 | V        | 25.11   | 15.46  | 31.70                | 56.81    | 47.16    | 74.00    | 54.00    | X/E  |
| 4824.03 | V        | 44.98   | 30.71  | 6.30                 | 51.28    | 37.01    | 74.00    | 54.00    | X/H  |

- (1) All readings are Peak unless otherwise stated QP in column of  $^{\mathbb{F}}$  Note $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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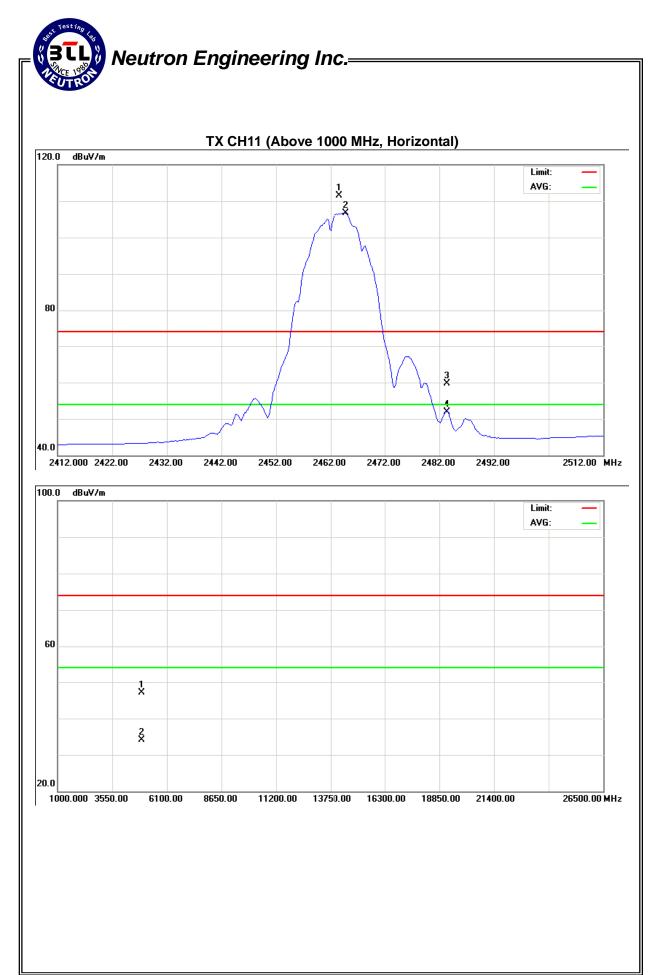


| EUT:          | Cruz Tablet       | Model Name :       | Cruz Tablet T301 |
|---------------|-------------------|--------------------|------------------|
| Temperature : | 20 ℃              | Relative Humidity: | 54 %             |
| Pressure:     | 1010 hPa          | Test Voltage :     | DC 3.7V          |
| Test Mode :   | TX B MODE 2462MHz |                    |                  |

| Freq.   | Ant.Pol. | Reading |        | Ant./CF | A        | ct.      | Lir      | mit      |      |
|---------|----------|---------|--------|---------|----------|----------|----------|----------|------|
|         |          | Peak    | AV     |         | Peak     | AV       | Peak     | AV       | Note |
| (MHz)   | H/V      | (dBuV)  | (dBuV) | CF(dB)  | (dBuV/m) | (dBuV/m) | (dBuV/m) | (dBuV/m) |      |
| 2463.60 | Н        | 79.90   | 75.11  | 31.66   | 111.56   | 106.77   |          |          | X/F  |
| 2483.50 | Н        | 28.02   | 20.13  | 31.70   | 59.72    | 51.83    | 74.00    | 54.00    | X/E  |
| 4924.03 | Н        | 40.89   | 27.77  | 6.30    | 47.19    | 34.07    | 74.00    | 54.00    | X/H  |

- (1) All readings are Peak unless otherwise stated QP in column of  $^{\mathbb{F}}$  Note $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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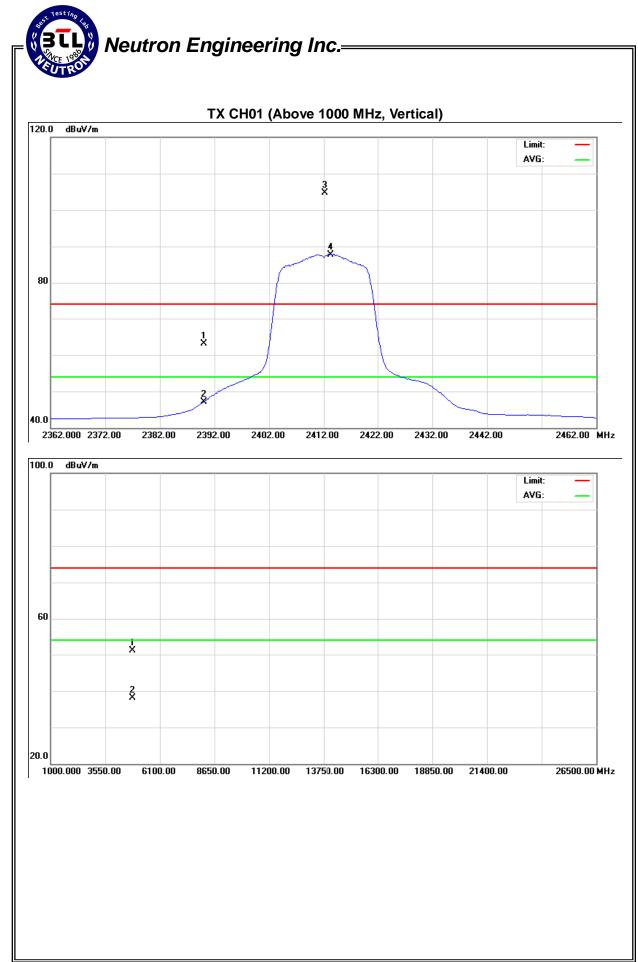


| EUT:         | Cruz Tablet       | Model Name :       | Cruz Tablet T301 |  |
|--------------|-------------------|--------------------|------------------|--|
| Temperature: | <b>23</b> ℃       | Relative Humidity: | 56 %             |  |
| Pressure :   | 1010 hPa          | Test Voltage :     | DC 3.7V          |  |
| Test Mode :  | TX G MODE 2412MHz |                    |                  |  |

| Ī | Freq.   | Ant.Pol. | Reading |        | Ant./CF | Act.     |          | Lir      |          |      |
|---|---------|----------|---------|--------|---------|----------|----------|----------|----------|------|
|   |         |          | Peak    | AV     |         | Peak     | AV       | Peak     | AV       | Note |
|   | (MHz)   | H/V      | (dBuV)  | (dBuV) | CF(dB)  | (dBuV/m) | (dBuV/m) | (dBuV/m) | (dBuV/m) |      |
|   | 2390.00 | V        | 31.60   | 15.52  | 31.54   | 63.14    | 47.06    | 74.00    | 54.00    | X/E  |
|   | 2412.20 | V        | 73.07   | 56.18  | 31.57   | 104.64   | 87.86    |          |          | X/F  |
|   | 4824.07 | V        | 45.06   | 32.01  | 6.00    | 51.06    | 38.01    | 74.00    | 54.00    | X/H  |

- (1) All readings are Peak unless otherwise stated QP in column of  $^{\mathbb{F}}$  Note  $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
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- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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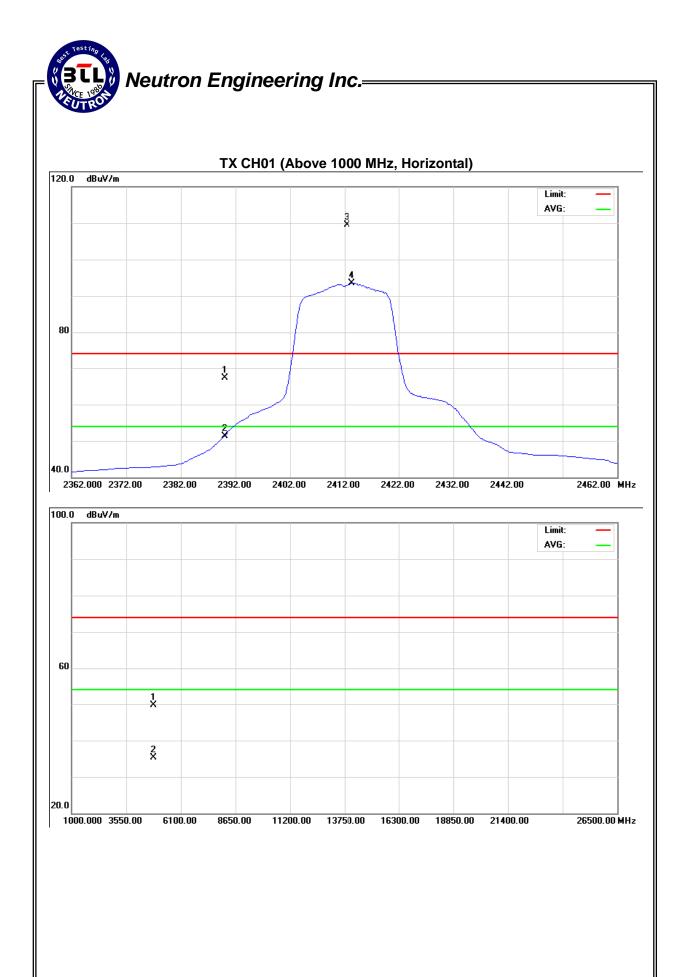


| EUT:         | Cruz Tablet       | Model Name :       | Cruz Tablet T301 |
|--------------|-------------------|--------------------|------------------|
| Temperature: | 23 ℃              | Relative Humidity: | 56 %             |
| Pressure :   | 1010 hPa          | Test Voltage :     | DC 3.7V          |
| Test Mode :  | TX G MODE 2412MHz |                    |                  |

| Freq.   | Ant.Pol. | Reading |        | Ant./CF | Act.     |          | Limit    |          |      |
|---------|----------|---------|--------|---------|----------|----------|----------|----------|------|
|         |          | Peak    | AV     |         | Peak     | AV       | Peak     | AV       | Note |
| (MHz)   | H/V      | (dBuV)  | (dBuV) | CF(dB)  | (dBuV/m) | (dBuV/m) | (dBuV/m) | (dBuV/m) |      |
| 2390.00 | Н        | 35.70   | 19.85  | 31.54   | 67.24    | 51.39    | 74.00    | 54.00    | X/E  |
| 2412.40 | Н        | 78.00   | 62.00  | 31.57   | 109.57   | 93.58    |          |          | X/F  |
| 4824.07 | Н        | 43.71   | 29.29  | 6.00    | 49.71    | 35.29    | 74.00    | 54.00    | X/H  |

- (1) All readings are Peak unless otherwise stated QP in column of  $^{\mathbb{F}}$  Note $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
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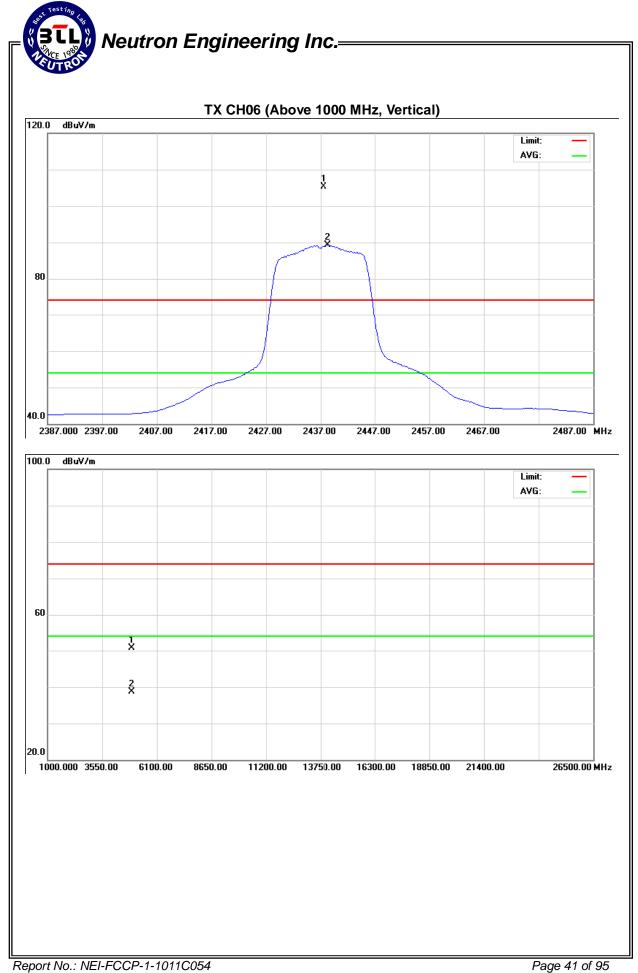


| EUT:          | Cruz Tablet       | Model Name :       | Cruz Tablet T301 |
|---------------|-------------------|--------------------|------------------|
| Temperature : | 23 ℃              | Relative Humidity: | 56 %             |
| Pressure:     | 1010 hPa          | Test Voltage :     | DC 3.7V          |
| Test Mode :   | TX G MODE 2437MHz |                    |                  |

| Freq.   | Ant.Pol.   | Reading A |        | Ant./CF | A        | Act.     |          | Limit    |      |  |
|---------|------------|-----------|--------|---------|----------|----------|----------|----------|------|--|
| i ieq.  | AIII.F OI. | Peak      | AV     |         | Peak     | AV       | Peak     | AV       | Note |  |
| (MHz)   | H/V        | (dBuV)    | (dBuV) | CF(dB)  | (dBuV/m) | (dBuV/m) | (dBuV/m) | (dBuV/m) |      |  |
| 2437.60 | V          | 73.77     | 57.69  | 31.62   | 105.39   | 89.31    |          |          | X/F  |  |
| 4876.57 | V          | 44.52     | 32.54  | 6.15    | 50.67    | 38.69    | 74.00    | 54.00    | X/H  |  |

- (1) All readings are Peak unless otherwise stated QP in column of 『Note』. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform ∘
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission •
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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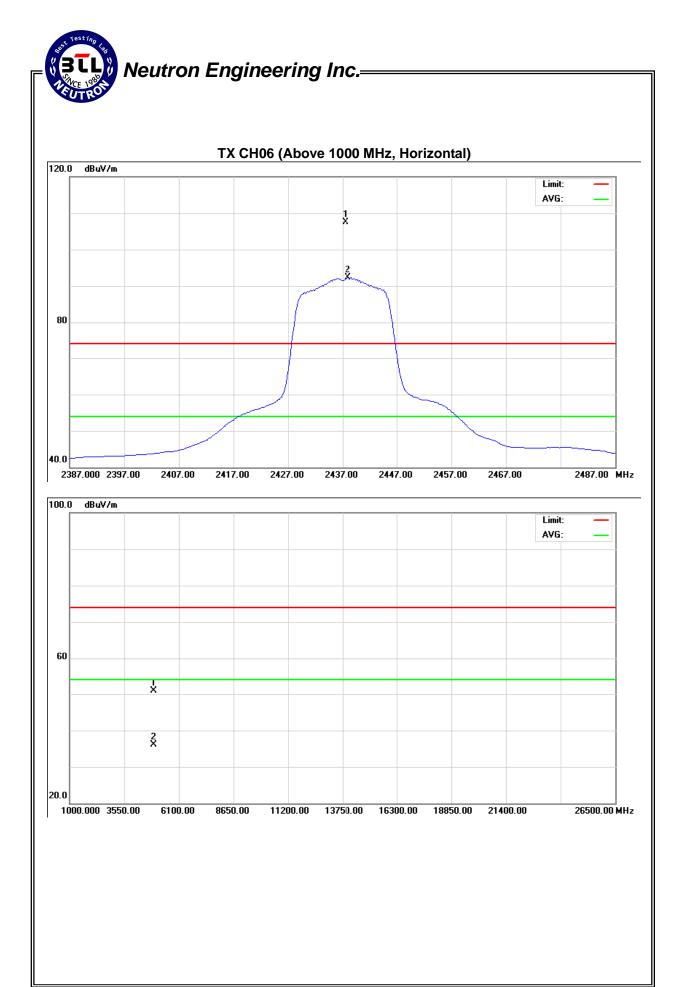


| EUT:         | Cruz Tablet       | Model Name :       | Cruz Tablet T301 |
|--------------|-------------------|--------------------|------------------|
| Temperature: | <b>23</b> ℃       | Relative Humidity: | 56 %             |
| Pressure :   | 1010 hPa          | Test Voltage :     | DC 3.7V          |
| Test Mode :  | TX G MODE 2437MHz |                    |                  |

| Freq. Ant.Pol | Ant Pol   | Reading Ant./CF |        | Act.   |          | Lir      |          |          |      |
|---------------|-----------|-----------------|--------|--------|----------|----------|----------|----------|------|
|               | AIII.FUI. | Peak            | AV     |        | Peak     | AV       | Peak     | AV       | Note |
| (MHz)         | H/V       | (dBuV)          | (dBuV) | CF(dB) | (dBuV/m) | (dBuV/m) | (dBuV/m) | (dBuV/m) |      |
| 2437.60       | Н         | 75.96           | 60.66  | 31.62  | 107.58   | 92.28    |          |          | X/F  |
| 4876.57       | Н         | 44.72           | 29.86  | 6.15   | 50.87    | 36.01    | 74.00    | 54.00    | X/H  |

- (1) All readings are Peak unless otherwise stated QP in column of  $^{\mathbb{F}}$  Note  $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
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- (6) EUT Orthogonal Axis:
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- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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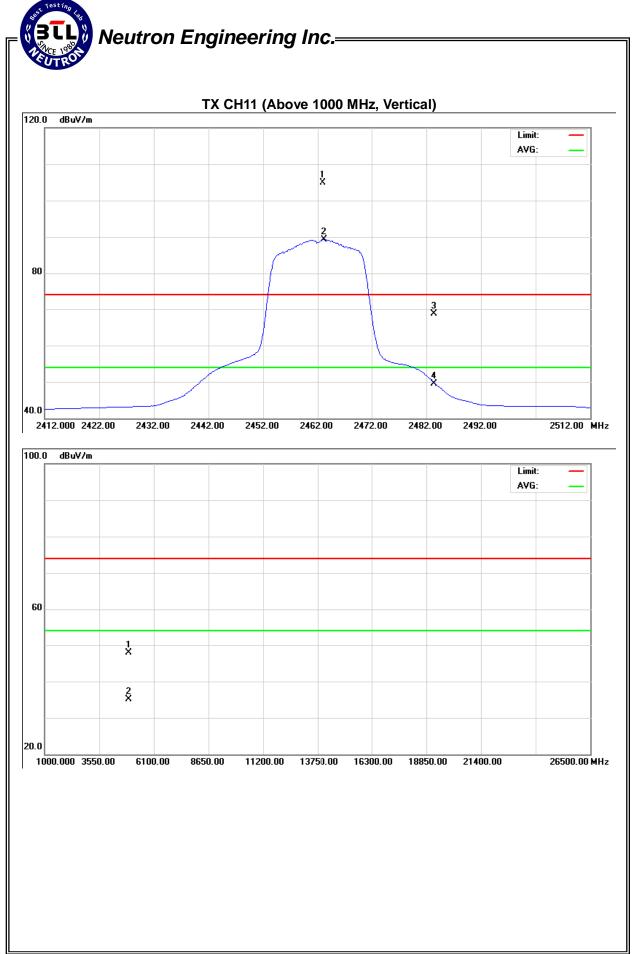


| EUT:         | Cruz Tablet       | Model Name :       | Cruz Tablet T301 |
|--------------|-------------------|--------------------|------------------|
| Temperature: | <b>23</b> ℃       | Relative Humidity: | 56 %             |
| Pressure :   | 1010 hPa          | Test Voltage :     | DC 3.7V          |
| Test Mode :  | TX G MODE 2462MHz |                    |                  |

| Freq.   | Ant.Pol. | Reading |        | Ant./CF | Act.     |          | Lir      |          |      |
|---------|----------|---------|--------|---------|----------|----------|----------|----------|------|
|         |          | Peak    | AV     |         | Peak     | AV       | Peak     | AV       | Note |
| (MHz)   | H/V      | (dBuV)  | (dBuV) | CF(dB)  | (dBuV/m) | (dBuV/m) | (dBuV/m) | (dBuV/m) |      |
| 2463.00 | V        | 73.27   | 57.64  | 31.66   | 104.93   | 89.30    |          |          | X/F  |
| 2483.50 | V        | 37.10   | 17.86  | 31.70   | 68.80    | 49.56    | 74.00    | 54.00    | X/E  |
| 4924.07 | V        | 41.52   | 28.83  | 6.30    | 47.82    | 35.13    | 74.00    | 54.00    | X/H  |

- (1) All readings are Peak unless otherwise stated QP in column of  $^{\mathbb{F}}$  Note $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
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- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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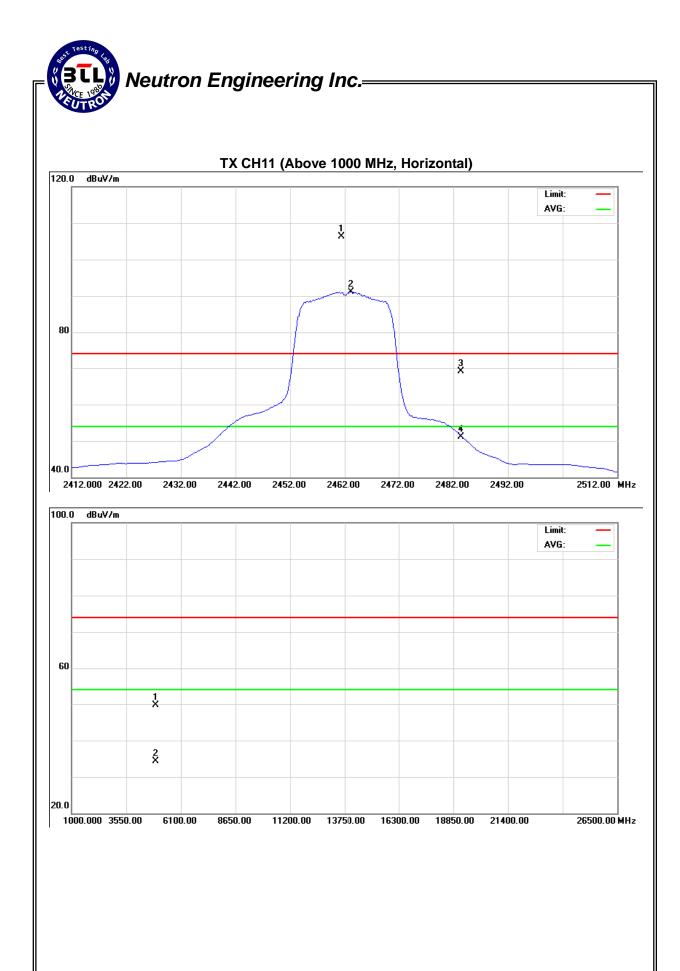


| EUT:         | Cruz Tablet       | Model Name :       | Cruz Tablet T301 |
|--------------|-------------------|--------------------|------------------|
| Temperature: | <b>23</b> ℃       | Relative Humidity: | 56 %             |
| Pressure :   | 1010 hPa          | Test Voltage :     | DC 3.7V          |
| Test Mode :  | TX G MODE 2462MHz |                    |                  |

| Freq.   | Ant.Pol. | Reading |        | Ant./CF | A        | Act.     |          | Limit    |      |  |
|---------|----------|---------|--------|---------|----------|----------|----------|----------|------|--|
|         |          | Peak    | AV     |         | Peak     | AV       | Peak     | AV       | Note |  |
| (MHz)   | H/V      | (dBuV)  | (dBuV) | CF(dB)  | (dBuV/m) | (dBuV/m) | (dBuV/m) | (dBuV/m) |      |  |
| 2461.40 | Н        | 74.59   | 59.47  | 31.65   | 106.24   | 91.13    |          |          | X/F  |  |
| 2483.50 | Н        | 37.35   | 19.46  | 31.70   | 69.05    | 51.16    | 74.00    | 54.00    | X/E  |  |
| 4924.07 | Н        | 43.43   | 27.99  | 6.30    | 46.73    | 34.29    | 74.00    | 54.00    | X/H  |  |

- (1) All readings are Peak unless otherwise stated QP in column of  $^{\mathbb{F}}$  Note  $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{\circ}$
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- (6) EUT Orthogonal Axis:
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- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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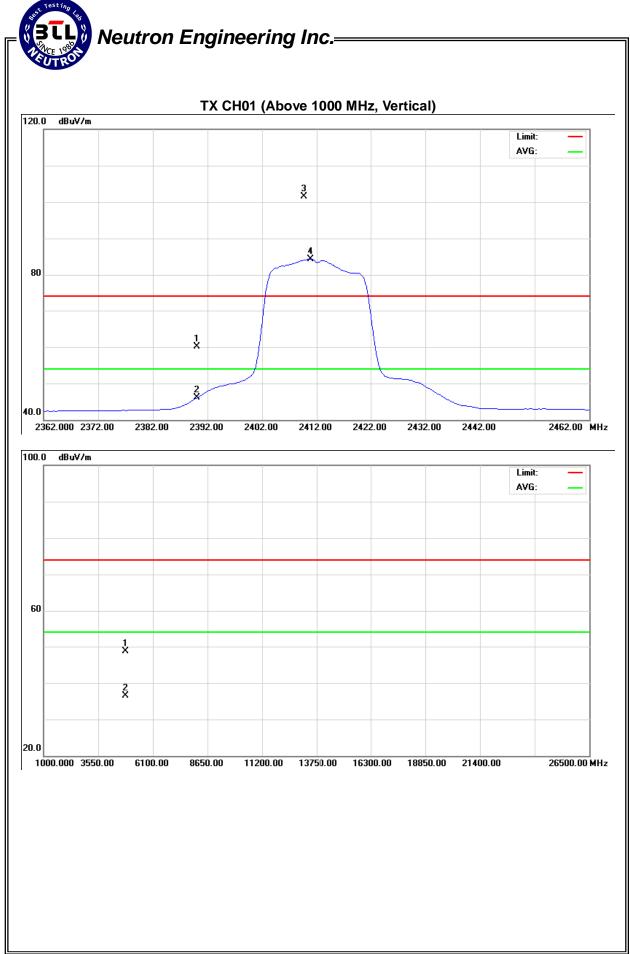


| EUT:         | Cruz Tablet           | Model Name :       | Cruz Tablet T301 |
|--------------|-----------------------|--------------------|------------------|
| Temperature: | 23 ℃                  | Relative Humidity: | 56 %             |
| Pressure:    | 1010 hPa              | Test Voltage :     | DC 3.7V          |
| Test Mode :  | TX N-20M MODE 2412MHz |                    |                  |

| Freq.   | Ant.Pol. | Reading |        | Ant./CF | Act.     |          | Lir      |          |      |
|---------|----------|---------|--------|---------|----------|----------|----------|----------|------|
|         |          | Peak    | AV     |         | Peak     | AV       | Peak     | AV       | Note |
| (MHz)   | H/V      | (dBuV)  | (dBuV) | CF(dB)  | (dBuV/m) | (dBuV/m) | (dBuV/m) | (dBuV/m) |      |
| 2390.00 | V        | 28.60   | 14.53  | 31.54   | 60.14    | 46.07    | 74.00    | 54.00    | X/E  |
| 2409.60 | V        | 70.02   | 52.76  | 31.57   | 101.59   | 84.33    |          |          | X/F  |
| 4824.06 | V        | 42.77   | 30.51  | 6.00    | 48.77    | 36.51    | 74.00    | 54.00    | X/H  |

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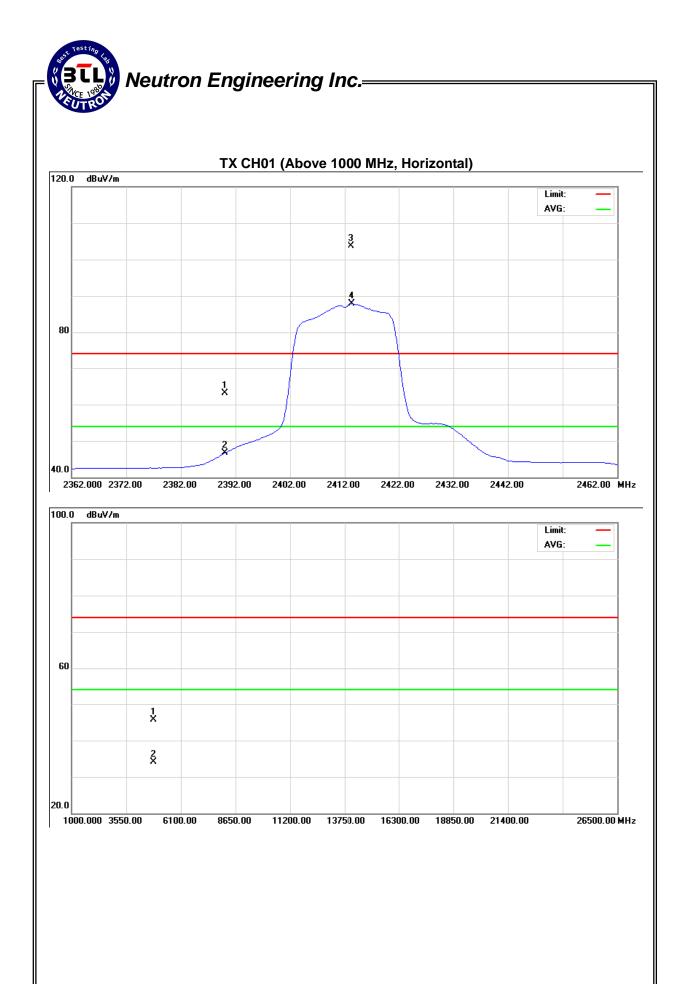


| EUT:          | Cruz Tablet           | Model Name :       | Cruz Tablet T301 |
|---------------|-----------------------|--------------------|------------------|
| Temperature : | 23 ℃                  | Relative Humidity: | 56 %             |
| Pressure:     | 1010 hPa              | Test Voltage :     | DC 3.7V          |
| Test Mode :   | TX N-20M MODE 2412MHz |                    |                  |

| Freq.   | Ant.Pol. | Rea    | ding   | Ant./CF | Ad       | ct.      | Lir      | mit      |      |
|---------|----------|--------|--------|---------|----------|----------|----------|----------|------|
|         |          | Peak   | AV     |         | Peak     | AV       | Peak     | AV       | Note |
| (MHz)   | H/V      | (dBuV) | (dBuV) | CF(dB)  | (dBuV/m) | (dBuV/m) | (dBuV/m) | (dBuV/m) |      |
| 2390.00 | Η        | 31.53  | 15.06  | 31.54   | 63.07    | 46.60    | 74.00    | 54.00    | X/E  |
| 2413.20 | Н        | 72.07  | 56.32  | 31.58   | 103.65   | 87.90    |          |          | X/F  |
| 4824.06 | Н        | 39.79  | 28.06  | 6.00    | 45.79    | 34.06    | 74.00    | 54.00    | X/H  |

- (1) All readings are Peak unless otherwise stated QP in column of  $^{\mathbb{F}}$  Note $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{\circ}$
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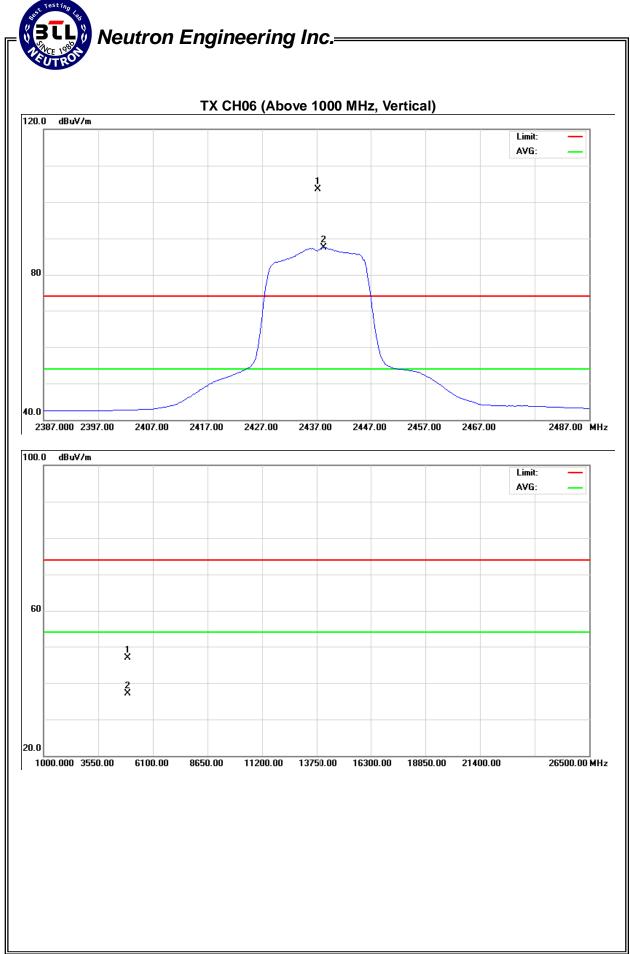


| EUT:         | Cruz Tablet           | Model Name :       | Cruz Tablet T301 |
|--------------|-----------------------|--------------------|------------------|
| Temperature: | 23 ℃                  | Relative Humidity: | 56 %             |
| Pressure:    | 1010 hPa              | Test Voltage :     | DC 3.7V          |
| Test Mode :  | TX N-20M MODE 2437MHz |                    |                  |

| Freq.   | Ant.Pol.   | Reading Ant./0 |        | Ant./CF | Act.     |          | Limit    |          |      |
|---------|------------|----------------|--------|---------|----------|----------|----------|----------|------|
| i ieq.  | AIII.F OI. | Peak           | AV     |         | Peak     | AV       | Peak     | AV       | Note |
| (MHz)   | H/V        | (dBuV)         | (dBuV) | CF(dB)  | (dBuV/m) | (dBuV/m) | (dBuV/m) | (dBuV/m) |      |
| 2437.20 | V          | 71.87          | 55.84  | 31.62   | 103.49   | 87.46    |          |          | X/F  |
| 4878.52 | V          | 40.73          | 30.88  | 6.15    | 46.88    | 37.03    | 74.00    | 54.00    | X/H  |

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- (6) EUT Orthogonal Axis:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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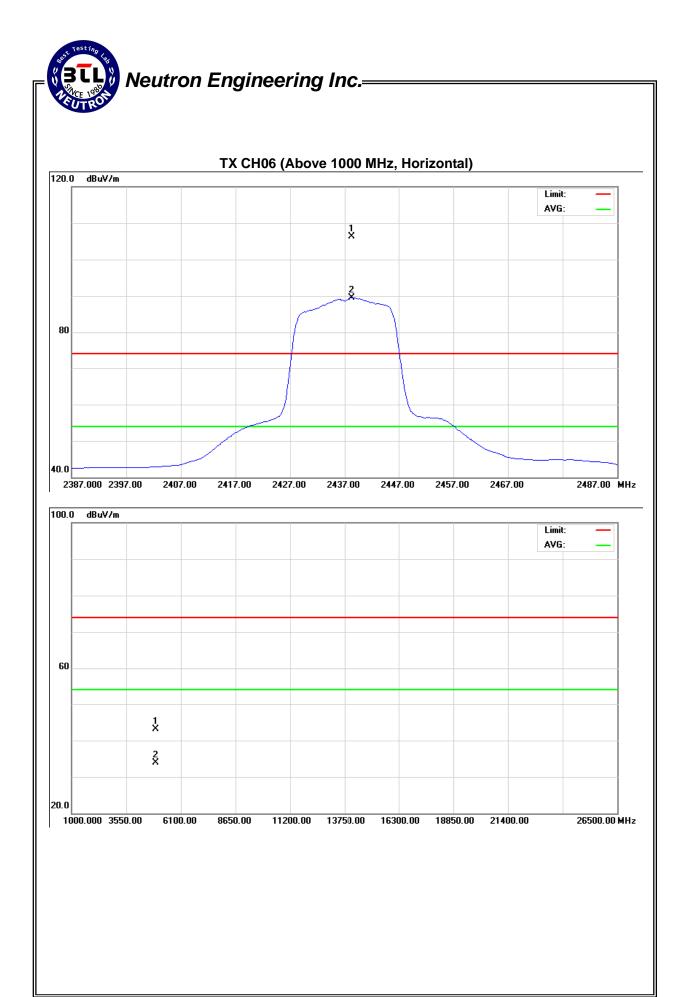


| EUT:         | Cruz Tablet           | Model Name :       | Cruz Tablet T301 |
|--------------|-----------------------|--------------------|------------------|
| Temperature: | <b>23</b> ℃           | Relative Humidity: | 56 %             |
| Pressure :   | 1010 hPa              | Test Voltage :     | DC 3.7V          |
| Test Mode :  | TX N-20M MODE 2437MHz |                    |                  |

| Freq.   | Ant.Pol.  | Rea    | Reading Ant./ |        | Act.     |          | Limit    |          |      |
|---------|-----------|--------|---------------|--------|----------|----------|----------|----------|------|
| i ieq.  | AIII.FUI. | Peak   | AV            |        | Peak     | AV       | Peak     | AV       | Note |
| (MHz)   | H/V       | (dBuV) | (dBuV)        | CF(dB) | (dBuV/m) | (dBuV/m) | (dBuV/m) | (dBuV/m) |      |
| 2438.40 | Н         | 74.70  | 57.96         | 31.62  | 106.32   | 89.58    |          |          | X/F  |
| 4876.52 | Н         | 36.90  | 27.66         | 6.15   | 43.05    | 33.81    | 74.00    | 54.00    | X/H  |

- (1) All readings are Peak unless otherwise stated QP in column of  ${}^{\mathbb{F}}$ Note  ${}_{\mathbb{L}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  ${}_{\circ}$
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- (6) EUT Orthogonal Axis:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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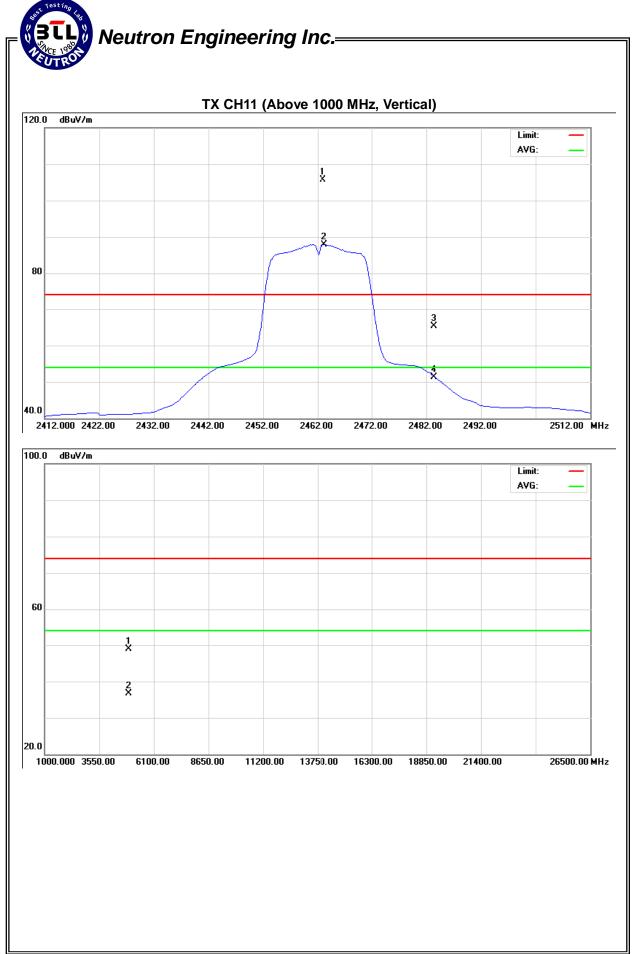


| EUT:         | Cruz Tablet           | Model Name :       | Cruz Tablet T301 |
|--------------|-----------------------|--------------------|------------------|
| Temperature: | <b>23</b> ℃           | Relative Humidity: | 56 %             |
| Pressure :   | 1010 hPa              | Test Voltage :     | DC 3.7V          |
| Test Mode :  | TX N-20M MODE 2462MHz |                    |                  |

| Freq.   | Ant.Pol. | Rea    | ding   | Ant./CF | A        | ct.      | Lir      | mit      |      |
|---------|----------|--------|--------|---------|----------|----------|----------|----------|------|
|         |          | Peak   | AV     |         | Peak     | AV       | Peak     | AV       | Note |
| (MHz)   | H/V      | (dBuV) | (dBuV) | CF(dB)  | (dBuV/m) | (dBuV/m) | (dBuV/m) | (dBuV/m) |      |
| 2463.00 | V        | 73.98  | 56.33  | 31.66   | 105.64   | 87.99    |          |          | X/F  |
| 2483.50 | V        | 33.58  | 19.65  | 31.70   | 65.28    | 51.35    | 74.00    | 54.00    | X/E  |
| 4923.06 | V        | 42.66  | 30.42  | 6.29    | 48.95    | 36.71    | 74.00    | 54.00    | X/H  |

- (1) All readings are Peak unless otherwise stated QP in column of  $^{\mathbb{F}}$  Note $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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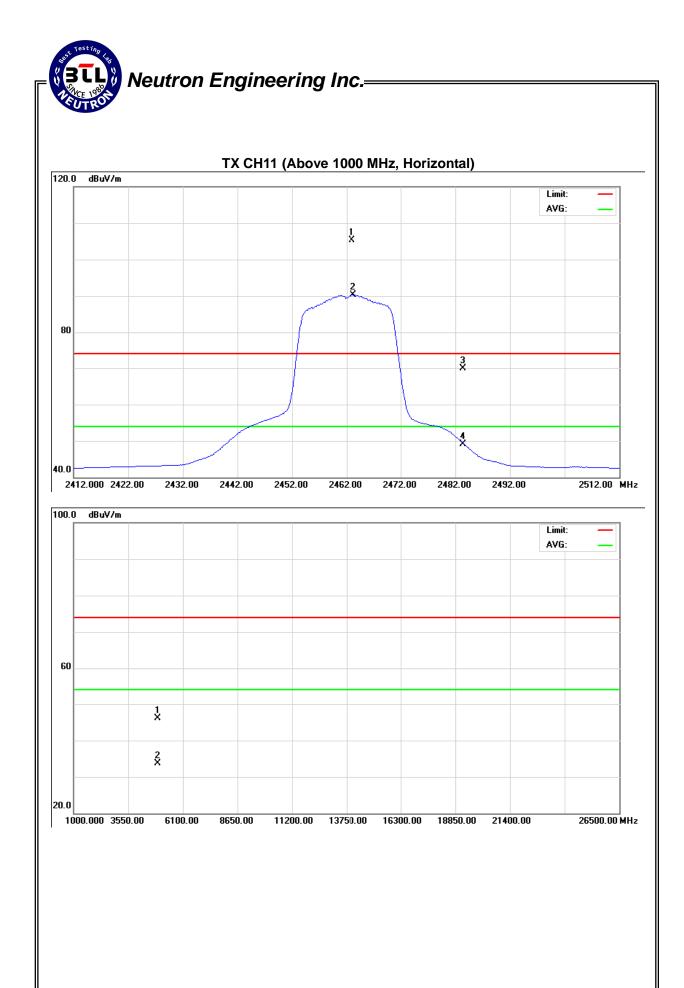


| EUT:         | Cruz Tablet           | Model Name :       | Cruz Tablet T301 |
|--------------|-----------------------|--------------------|------------------|
| Temperature: | 23 ℃                  | Relative Humidity: | 56 %             |
| Pressure :   | 1010 hPa              | Test Voltage :     | DC 3.7V          |
| Test Mode :  | TX N-20M MODE 2462MHz |                    |                  |

| Freq.   | Ant.Pol. | Rea    | ding   | Ant./CF | A        | ct.      | Lir      | mit      |      |
|---------|----------|--------|--------|---------|----------|----------|----------|----------|------|
|         |          | Peak   | AV     |         | Peak     | AV       | Peak     | AV       | Note |
| (MHz)   | H/V      | (dBuV) | (dBuV) | CF(dB)  | (dBuV/m) | (dBuV/m) | (dBuV/m) | (dBuV/m) |      |
| 2463.00 | Н        | 73.66  | 58.65  | 31.66   | 107.34   | 90.31    |          |          | X/F  |
| 2483.50 | Н        | 38.17  | 17.39  | 31.70   | 69.87    | 49.09    | 74.00    | 54.00    | X/E  |
| 4923.06 | Н        | 39.74  | 27.45  | 6.29    | 46.03    | 33.74    | 74.00    | 54.00    | X/H  |

- (1) All readings are Peak unless otherwise stated QP in column of  $^{\mathbb{F}}$  Note  $_{\mathbb{J}}$ . Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform  $_{\circ}$
- (2) Measuring frequency range from 30MHz to 1000MHz or the 10th harmonic of highest fundamental frequency "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency. (This judgment method includes the Band Edge Requirement.)
- (3) Radiated emissions measured in frequency range above 1000MHz were made with an instrument using Peak detector mode and AV detector mode of the emission
- (4) Data of measurement within this frequency range shown " \* " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- (5) A preamp and high pass filter were used for this test in order to provide sufficient measurement sensitivity.
- (6) EUT Orthogonal Axis:
  - "X" denotes Laid on Table; "Y" denotes Vertical Stand; "Z" denotes Side Stand
- (7) During the measurements above 1 GHz it is taken care of that the EUT is always within the 3 dB cone of radiation BW of the used antenna

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# 5. BANDWIDTH TEST

# 5.1 Applied procedures / limit

| FCC Part15 (15.247), Subpart C |           |                              |                          |        |  |  |  |
|--------------------------------|-----------|------------------------------|--------------------------|--------|--|--|--|
| Section                        | Test Item | Limit                        | Frequency Range<br>(MHz) | Result |  |  |  |
| 15.247(a)(2)                   | Bandwidth | >= 500KHz<br>(6dB bandwidth) | 2400-2483.5              | PASS   |  |  |  |

#### **5.1.1 MEASUREMENT INSTRUMENTS LIST**

| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
|------|-------------------|--------------|----------|------------|------------------|
| 1    | Spectrum Analyzer | R&S          | FSP_40   | 100129     | Jan. 05, 2011    |

Remark: "N/A" denotes No Model Name., Serial No. or No Calibration specified.

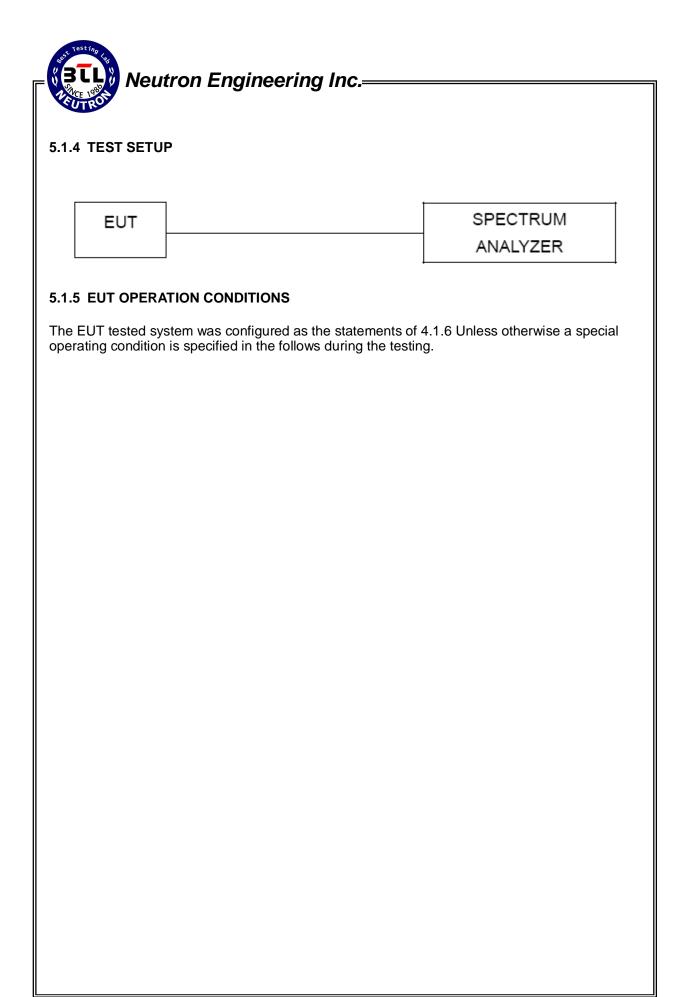
#### **5.1.2 TEST PROCEDURE**

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=100KHz, Sweep time = 20 ms.

#### **5.1.3 DEVIATION FROM STANDARD**

No deviation.

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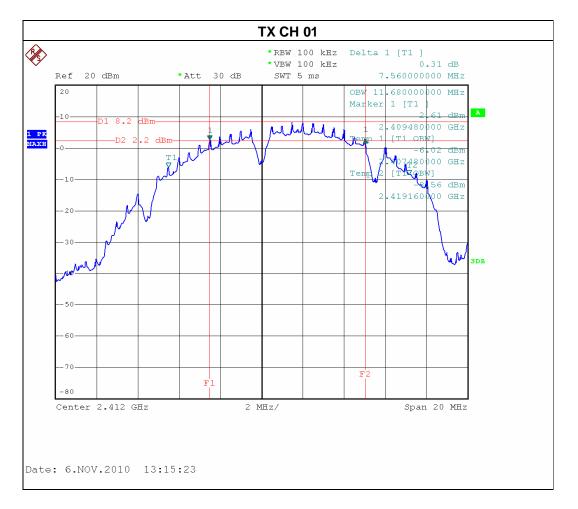


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# **5.1.6 TEST RESULTS**

| EUT:         | Cruz Tablet                 | Model Name. :      | Cruz Tablet T301 |  |
|--------------|-----------------------------|--------------------|------------------|--|
| Temperature: | <b>24</b> ℃                 | Relative Humidity: | 60 %             |  |
| Pressure :   | 1016 hPa                    | Test Voltage :     | AC 120V/60Hz     |  |
| Test Mode :  | TX B MODE /CH01, CH06, CH11 |                    |                  |  |

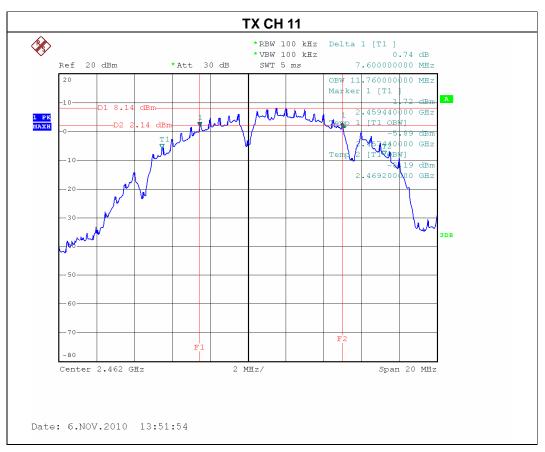
| Test Channel  | Frequency | Bandwidth | 99% Occupied BW | LIMIT    |
|---------------|-----------|-----------|-----------------|----------|
| rest Chamilei | (MHz)     | (MHz)     | (MHz)           | (MHz)    |
| CH01          | 2412      | 7.56      | 11.68           | >=500KHz |
| CH06          | 2437      | 7.56      | 11.76           | >=500KHz |
| CH11          | 2462      | 7.60      | 11.76           | >=500KHz |



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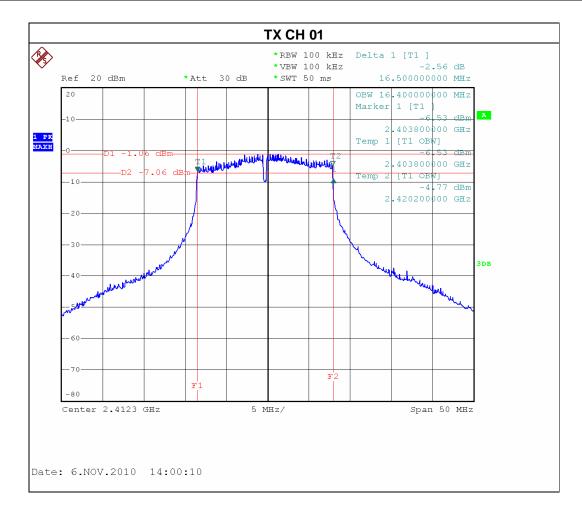
# Neutron Engineering Inc.



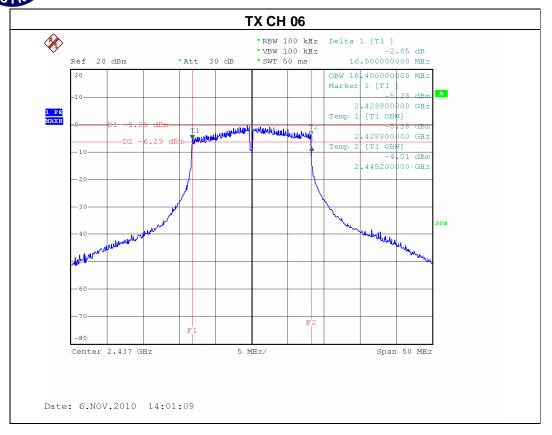


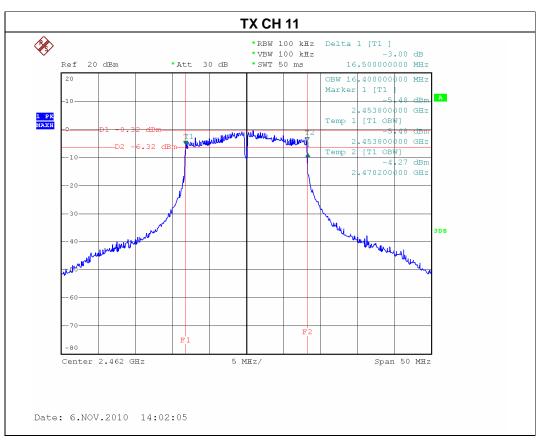
| EUT:         | Cruz Tablet                 | Model Name. :      | Cruz Tablet T301 |  |
|--------------|-----------------------------|--------------------|------------------|--|
| Temperature: | <b>24</b> ℃                 | Relative Humidity: | 60 %             |  |
| Pressure:    | 1016 hPa                    | Test Voltage :     | AC 120V/60Hz     |  |
| Test Mode :  | TX G MODE /CH01, CH06, CH11 |                    |                  |  |

| Test Channel   | Frequency | Bandwidth | 99% Occupied BW | LIMIT    |
|----------------|-----------|-----------|-----------------|----------|
| rest Orialinei | (MHz)     | (MHz)     | (MHz)           | (MHz)    |
| CH01           | 2412      | 16.50     | 16.40           | >=500KHz |
| CH06           | 2437      | 16.50     | 16.40           | >=500KHz |
| CH11           | 2462      | 16.50     | 16.40           | >=500KHz |



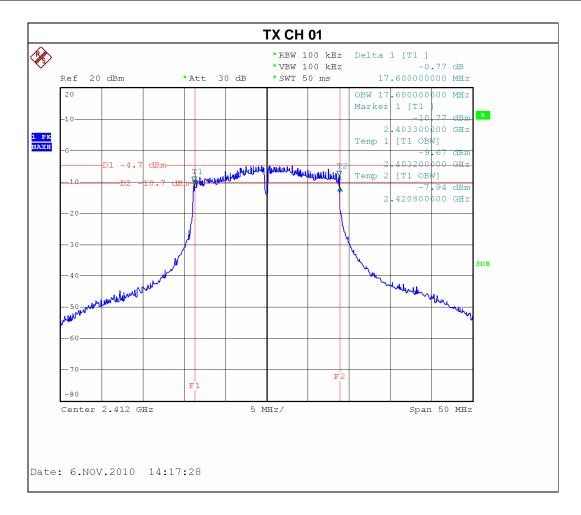
# Neutron Engineering Inc.=



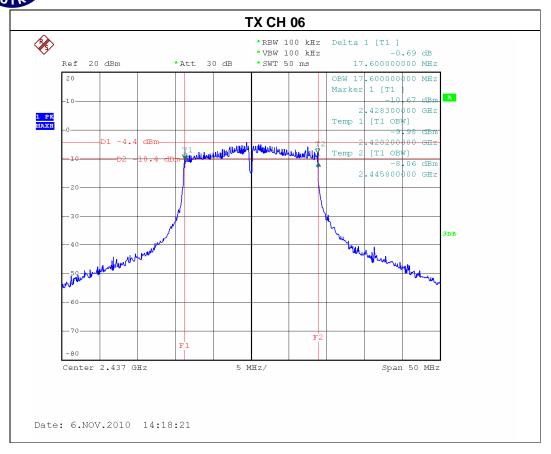


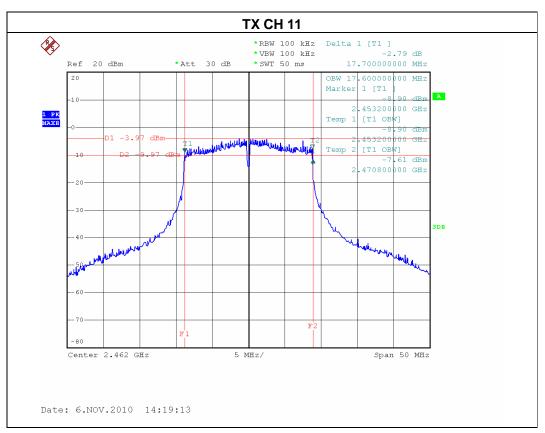
| EUT:         | Cruz Tablet                        | Model Name. :      | Cruz Tablet T301 |  |
|--------------|------------------------------------|--------------------|------------------|--|
| Temperature: | <b>24</b> ℃                        | Relative Humidity: | 60 %             |  |
| Pressure:    | 1016 hPa                           | Test Voltage :     | AC 120V/60Hz     |  |
| Test Mode :  | TX N MODE -20MHz/ CH01, CH06, CH11 |                    |                  |  |

| Test Channel  | Frequency | Bandwidth | 99% Occupied BW | LIMIT    |
|---------------|-----------|-----------|-----------------|----------|
| rest orialine | (MHz)     | (MHz)     | (MHz)           | (MHz)    |
| CH01          | 2412      | 17.60     | 17.60           | >=500KHz |
| CH06          | 2437      | 17.60     | 17.60           | >=500KHz |
| CH11          | 2462      | 17.70     | 17.60           | >=500KHz |



# Neutron Engineering Inc.=





# **6. PEAK OUTPUT POWER TEST**

### 6.1 Applied procedures / limit

| FCC Part15 (15.247), Subpart C |  |                 |             |      |
|--------------------------------|--|-----------------|-------------|------|
| Section                        | Test Item Limit Frequency Range (MHz) Result |                 |             |      |
| 15.247(b)(3)                   | Peak Output<br>Power                         | 1 watt or 30dBm | 2400-2483.5 | PASS |

#### **6.1.1 MEASUREMENT INSTRUMENTS LIST**

| Ī | Item | Kind of Equipment  | Manufacturer | Type No. | Serial No. | Calibrated until |
|---|------|--------------------|--------------|----------|------------|------------------|
|   | 1    | Power Meter        | Anritsu      | ML2487A  | 6K00004714 | Feb. 10, 2011    |
|   | 2    | Power Meter Sensor | Anritsu      | MA2491A  | 34138      | Feb. 10, 2011    |

Remark: "N/A" denotes No Model Name., Serial No. or No Calibration specified.

#### **6.1.2 TEST PROCEDURE**

a. The EUT was directly connected to the power metter and antenna output port as show in the block diagram below,

## **6.1.3 DEVIATION FROM STANDARD**

No deviation.

## 6.1.4 TEST SETUP



#### **6.1.5 EUT OPERATION CONDITIONS**

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

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# **6.1.6 TEST RESULTS**

| EUT:         | Cruz Tablet                 | Model Name :       | Cruz Tablet T301 |  |
|--------------|-----------------------------|--------------------|------------------|--|
| Temperature: | <b>24</b> ℃                 | Relative Humidity: | 60 %             |  |
| Pressure:    | 1016 hPa                    | Test Voltage :     | AC 120V/60Hz     |  |
| Test Mode :  | TX B MODE /CH01, CH06, CH11 |                    |                  |  |

# **Peak Output Power**

| Test Channel | Frequency<br>(MHz) | Peak Output Power<br>(dBm) | LIMIT<br>(dBm) | LIMIT<br>(W) |
|--------------|--------------------|----------------------------|----------------|--------------|
| CH01         | 2412 MHz           | 19.03                      | 30             | 1            |
| CH06         | 2437 MHz           | 19.53                      | 30             | 1            |
| CH11         | 2462 MHz           | 19.71                      | 30             | 1            |

# Average Output Power limit: None; for reporting purposes only

| Test Channel | Frequency<br>(MHz) | AV Output Power (dBm) | LIMIT<br>(dBm) | LIMIT<br>(W) |
|--------------|--------------------|-----------------------|----------------|--------------|
| CH01         | 2412 MHz           | 16.25                 | None           | None         |
| CH06         | 2437 MHz           | 16.67                 | None           | None         |
| CH11         | 2462 MHz           | 16.89                 | None           | None         |

| EUT:         | Cruz Tablet                 | Model Name :       | Cruz Tablet T301 |
|--------------|-----------------------------|--------------------|------------------|
| Temperature: | <b>24</b> ℃                 | Relative Humidity: | 60 %             |
| Pressure:    | 1016 hPa                    | Test Voltage :     | AC 120V/60Hz     |
| Test Mode :  | TX G MODE /CH01, CH06, CH11 |                    |                  |

# **Peak Output Power**

|               | I         | -                 |       |       |
|---------------|-----------|-------------------|-------|-------|
| Test Channel  | Frequency | Peak Output Power | LIMIT | LIMIT |
| rest orialine | (MHz)     | (dBm)             | (dBm) | (W)   |
| CH01          | 2412 MHz  | 22.56             | 30    | 1     |
| CH06          | 2437 MHz  | 22.41             | 30    | 1     |
| CH11          | 2462 MHz  | 22.63             | 30    | 1     |

# Average Output Power limit: None; for reporting purposes only

|              | •              | •         | . •             | •     |       |
|--------------|----------------|-----------|-----------------|-------|-------|
| Test Channel |                | Frequency | AV Output Power | LIMIT | LIMIT |
|              | rest Orialinei | (MHz)     | (dBm)           | (dBm) | (W)   |
|              | CH01           | 2412 MHz  | 10.24           | None  | None  |
|              | CH06           | 2437 MHz  | 10.29           | None  | None  |
|              | CH11           | 2462 MHz  | 10.19           | None  | None  |

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| EUT:         | Cruz Tablet                        | Model Name :       | Cruz Tablet T301 |  |
|--------------|------------------------------------|--------------------|------------------|--|
| Temperature: | <b>24</b> ℃                        | Relative Humidity: | 60 %             |  |
| Pressure:    | 1016 hPa                           | Test Voltage :     | AC 120V/60Hz     |  |
| Test Mode :  | e: TX N-20M MODE /CH01, CH06, CH11 |                    |                  |  |

# **Peak Output Power**

| •            |           |                   |       |       |
|--------------|-----------|-------------------|-------|-------|
| Test Channel | Frequency | Peak Output Power | LIMIT | LIMIT |
| TOST OHAITIO | (MHz)     | (dBm)             | (dBm) | (W)   |
| CH01         | 2412 MHz  | 22.10             | 30    | 1     |
| CH06         | 2437 MHz  | 21.98             | 30    | 1     |
| CH11         | 2462 MHz  | 22.45             | 30    | 1     |

# Average Output Power limit: None ; for reporting purposes only

| Test Channel  | Frequency | AV Output Power | LIMIT | LIMIT |
|---------------|-----------|-----------------|-------|-------|
| rest Orlanner | (MHz)     | (dBm)           | (dBm) | (W)   |
| CH01          | 2412 MHz  | 10.25           | None  | None  |
| CH06          | 2437 MHz  | 10.18           | None  | None  |
| CH11          | 2462 MHz  | 10.26           | None  | None  |

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## 7. ANTENNA CONDUCTED SPURIOUS EMISSION

### 7.1 Applied procedures / limit

20dBc in any 100 kHz bandwidth outside the operating frequency band. In case the emission fall within the restricted band specified on 15.205(a), then the 15.209(a) limit in the table below has to be followed.

| Frequencies (MHz) | Field Strength (micorvolts/meter) | Measurement Distance (meters) |
|-------------------|-----------------------------------|-------------------------------|
| 0.009~0.490       | 2400/F(KHz)                       | 300                           |
| 0.490~1.705       | 24000/F(KHz)                      | 30                            |
| 1.705~30.0        | 30                                | 30                            |
| 30~88             | 100                               | 3                             |
| 88~216            | 150                               | 3                             |
| 216~960           | 200                               | 3                             |
| Above 960         | 500                               | 3                             |

#### 7.1.1 MEASUREMENT INSTRUMENTS LIST

| Itei | n Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
|------|---------------------|--------------|----------|------------|------------------|
| 1    | Spectrum Analyzer   | R&S          | FSP_40   | 100129     | Jan. 05, 2011    |

Remark: "N/A" denotes No Model Name., Serial No. or No Calibration specified.

#### 7.1.2 TEST PROCEDURE

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW= 100KHz, VBW=100KHz, Sweep time = 10 ms.

#### 7.1.3 DEVIATION FROM STANDARD

No deviation.

#### 7.1.4 TEST SETUP



#### 7.1.5 EUT OPERATION CONDITIONS

The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

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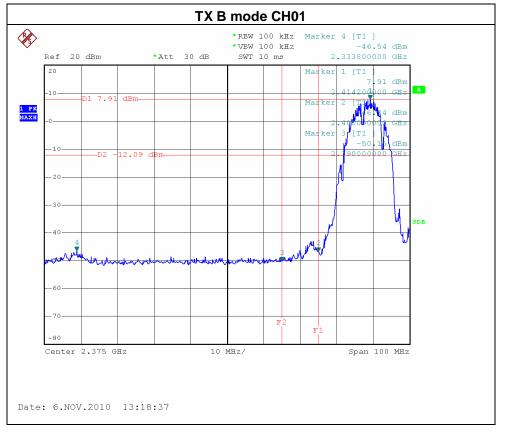
# 7.1.6 TEST RESULTS

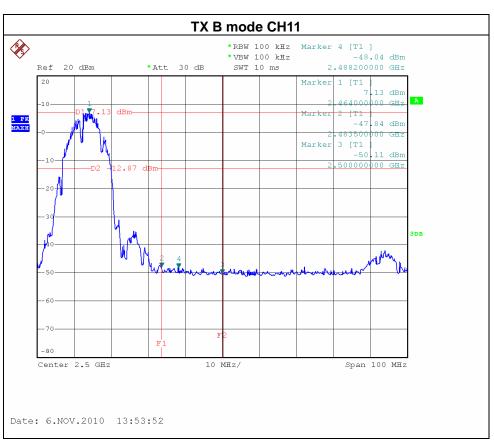
| EUT:         | Cruz Tablet                  | Model Name :       | Cruz Tablet T301 |
|--------------|------------------------------|--------------------|------------------|
| Temperature: | <b>24</b> ℃                  | Relative Humidity: | 60 %             |
| Pressure:    | 1016 hPa                     | Test Voltage :     | AC 120V/60Hz     |
| Test Mode :  | TX B MODE /CH01, CH06 , CH11 |                    |                  |

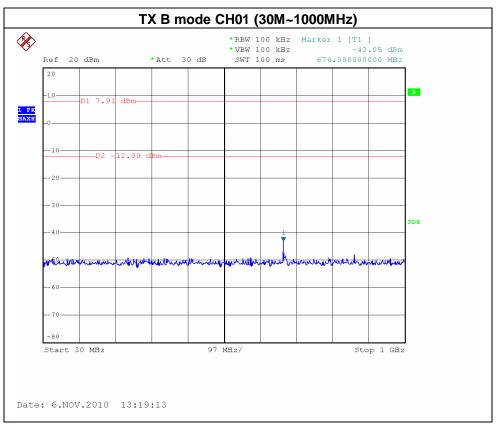
| Channel of Worst Data: CH01   |  |   |            |  |  |
|-------------------------------|--|---|------------|--|--|
|                               | cy power in any 100kHz<br>the frequency band | The max. radio frequence bandwidth within the |            |  |  |
| FREQUENCY(MHz)                | POWER(dBm)                                   | FREQUENCY(MHz)                                | POWER(dBm) |  |  |
| 2333.80 -46.54 2483.50 -47.84 |  |   |            |  |  |
| Result                        |  |   |            |  |  |

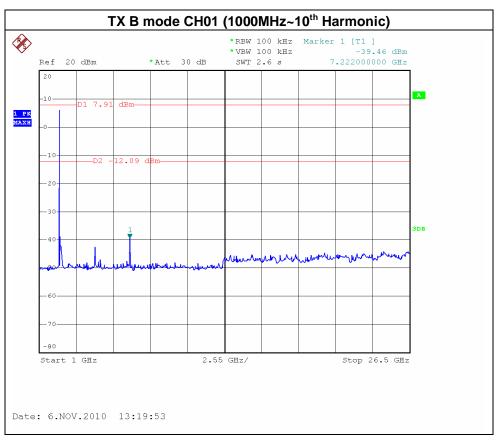
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

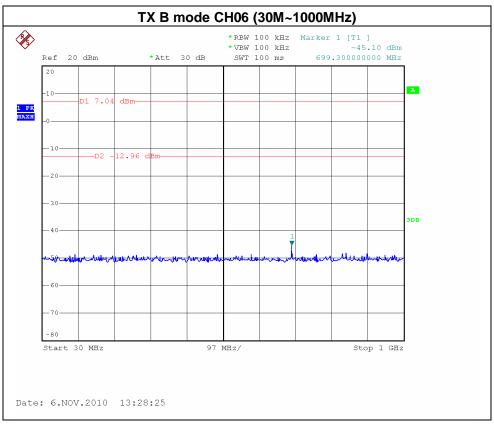
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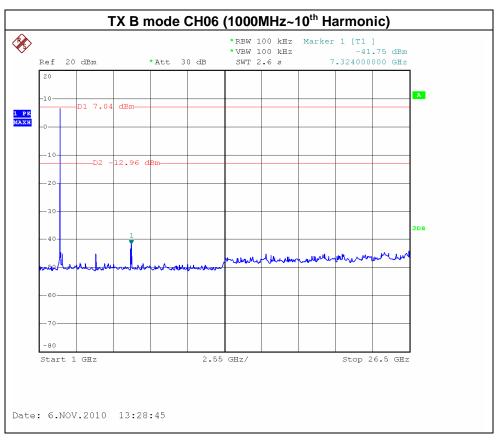


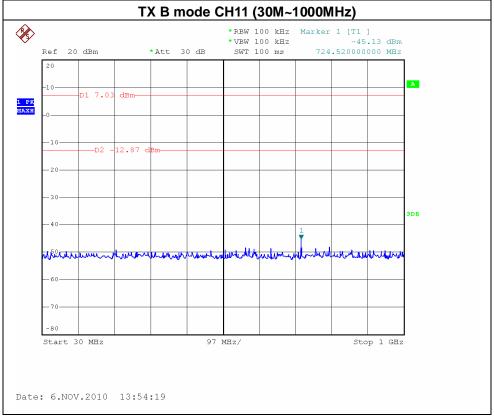


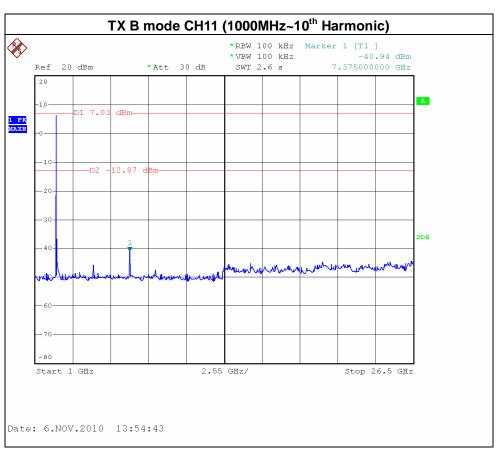












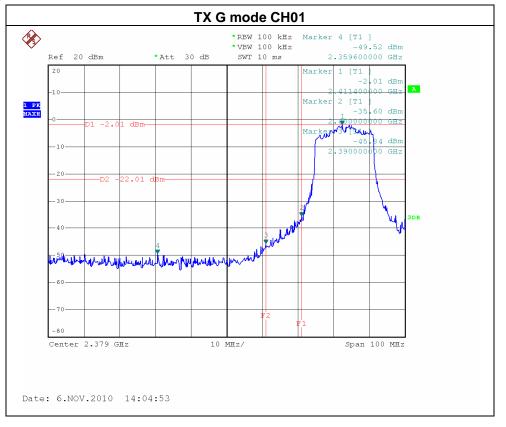


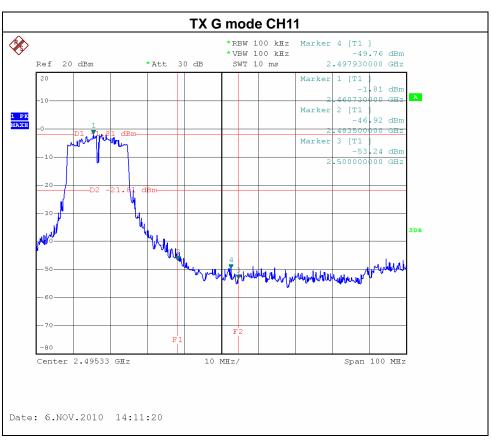
| EUT:         | Cruz Tablet                             | Model Name :       | Cruz Tablet T301 |
|--------------|---|--------------------|------------------|
| Temperature: | <b>24</b> ℃                             | Relative Humidity: | 60 %             |
| Pressure:    | 1016 hPa                                | Test Voltage :     | AC 120V/60Hz     |
| Test Mode :  | st Mode : TX G MODE / CH01, CH06 , CH11 |                    |                  |

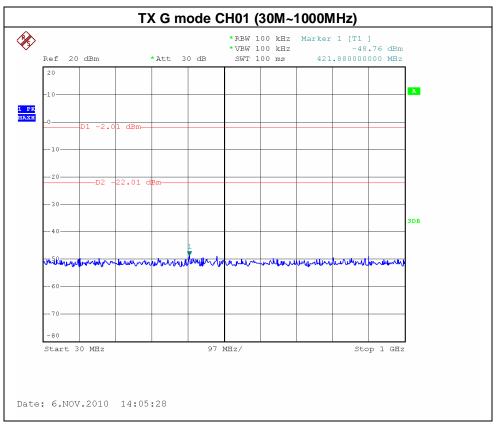
| Channel of Worst Data: CH01  |                    |                     |                    |  |
|--|--------------------|---------------------|--------------------|--|
| The max. radio frequency power in any 100kHz The max. radio frequency power in any 100 kHz |                    |                     |                    |  |
| bandwidth outside  | the frequency band | bandwidth within th | ne frequency band. |  |
| FREQUENCY(MHz) POWER(dBm) FREQUENCY(MHz) POWER(dBm)  |                    |                     |                    |  |
| 2390.00 -45.84 2483.50 -46.92  |                    |                     |                    |  |
| Result   |                    |                     |                    |  |

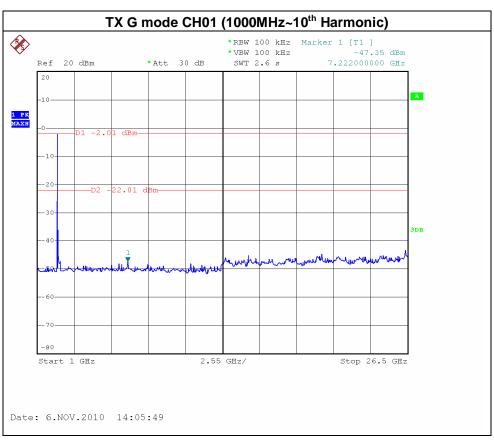
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

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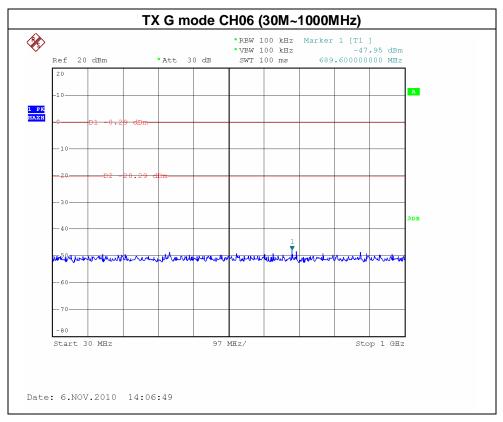


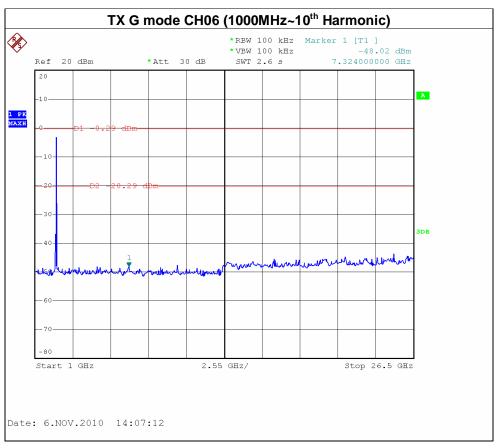


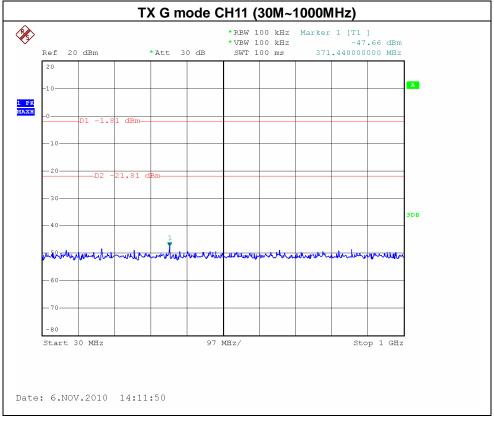


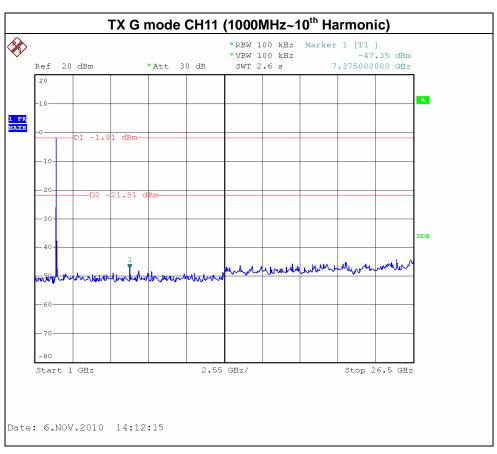
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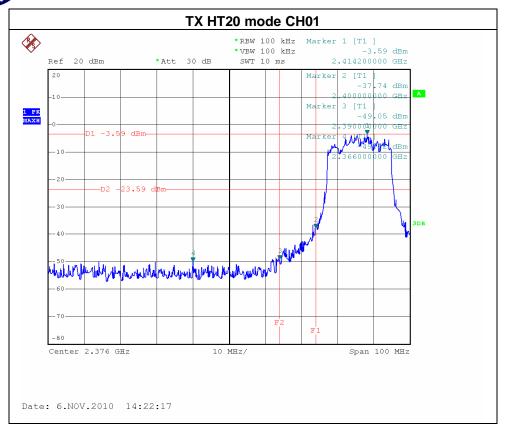


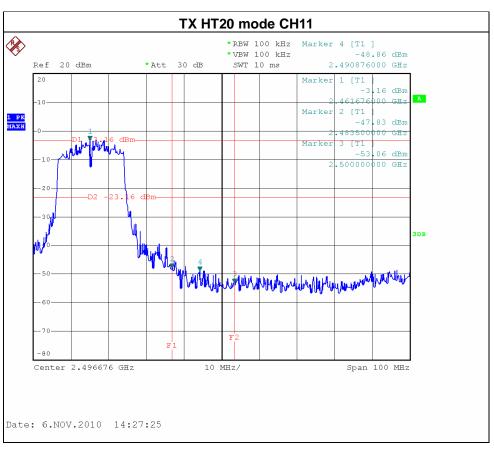
| EUT:         | Cruz Tablet                                 | Model Name :       | Cruz Tablet T301 |  |
|--------------|---|--------------------|------------------|--|
| Temperature: | <b>24</b> ℃                                 | Relative Humidity: | 60 %             |  |
| Pressure:    | 1016 hPa                                    | Test Voltage :     | AC 120V/60Hz     |  |
| Test Mode :  | est Mode : TX N-20M MODE / CH01, CH06, CH11 |                    |                  |  |

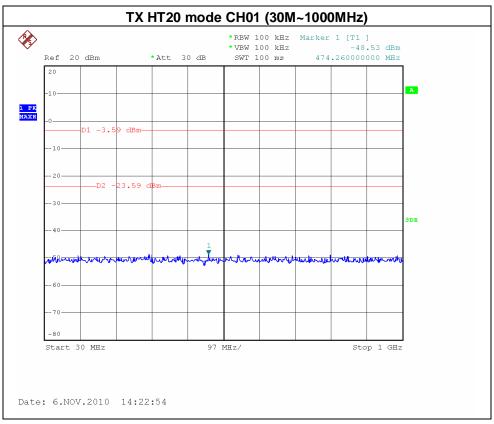
| Channel of Worst Data: CH11  |  |  |                    |  |
|--|--|--|--------------------|--|
| The max. radio frequency power in any 100kHz The max. radio frequency power in any 100 kHz |  |  |                    |  |
| bandwidth outside the frequency band bandwidth within the fre                              |  |  | ne frequency band. |  |
| FREQUENCY(MHz) POWER(dBm) FREQUENCY(MHz) POWER(dBm)  |  |  |                    |  |
| 2390.00 -49.05 2483.50 -47.83  |  |  |                    |  |
| Result   |  |  |                    |  |

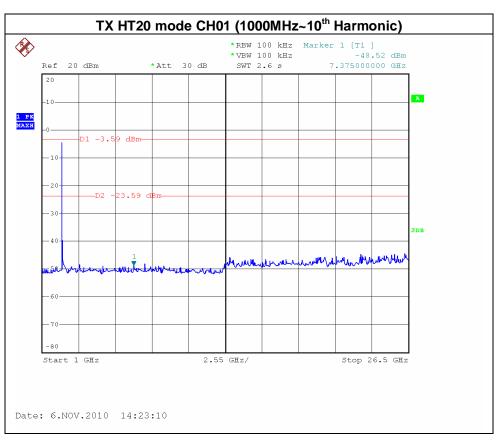
In any 100kHz bandwidth outside the frequency band, the radio frequency power is at least 20dB below that in the 100kHz bandwidth within the band that contains the highest lever of the desired power.

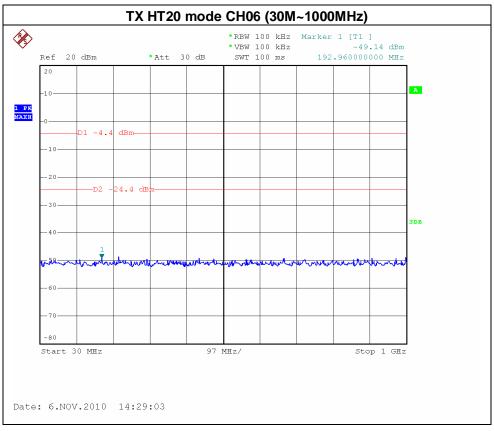
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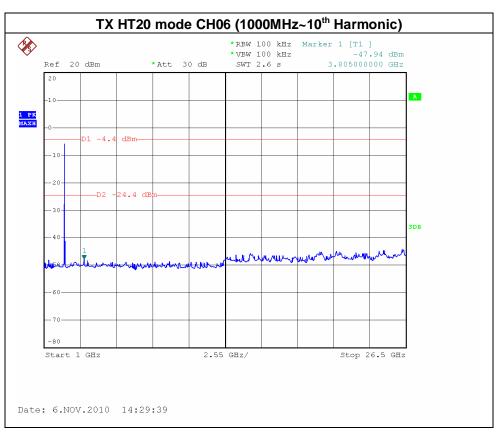




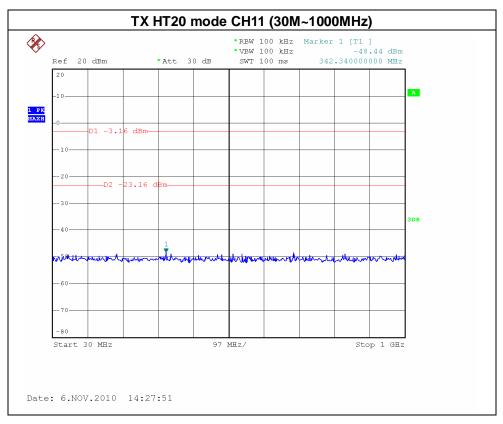


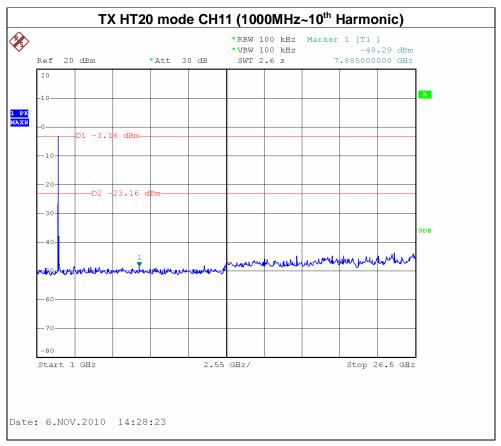












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#### **8. POWER SPECTRAL DENSITY TEST**

#### 8.1 Applied procedures / limit

| FCC Part15 (15.247) , Subpart C |                        |                        |                          |        |  |
|---------------------------------|------------------------|------------------------|--------------------------|--------|--|
| Section                         | Test Item              | Limit                  | Frequency Range<br>(MHz) | Result |  |
| 15.247(e)                       | Power Spectral Density | 8 dBm<br>(in any 3KHz) | 2400-2483.5              | PASS   |  |

#### **8.1.1 MEASUREMENT INSTRUMENTS LIST**

| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
|------|-------------------|--------------|----------|------------|------------------|
| 1    | Spectrum Analyzer | R&S          | FSP_40   | 100129     | Jan. 05, 2011    |

Remark: "N/A" denotes No Model Name., Serial No. or No Calibration specified.

#### **8.1.2 TEST PROCEDURE**

- a. The EUT was directly connected to the spectrum analyzer and antenna output port as show in the block diagram below,
- b. Spectrum Setting: RBW=3KHz, VBW=30 KHz, Sweep time = 500s.

#### **8.1.3 DEVIATION FROM STANDARD**

No deviation.

#### 8.1.4 TEST SETUP

| EUT | SPECTRUM |
|-----|----------|
|     | ANALYZER |

#### **8.1.5 EUT OPERATION CONDITIONS**

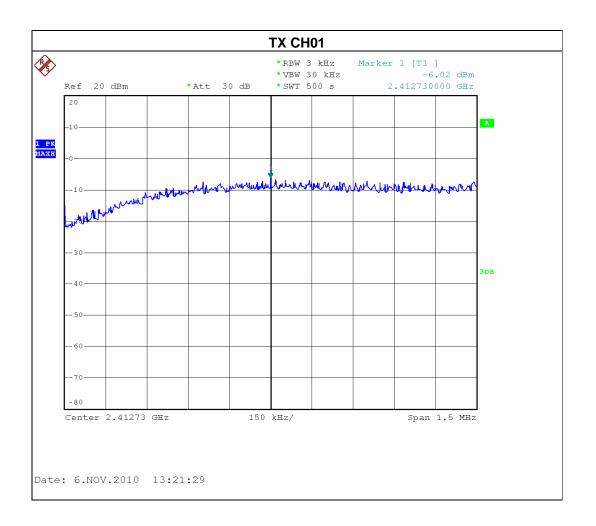
The EUT tested system was configured as the statements of 4.1.6 Unless otherwise a special operating condition is specified in the follows during the testing.

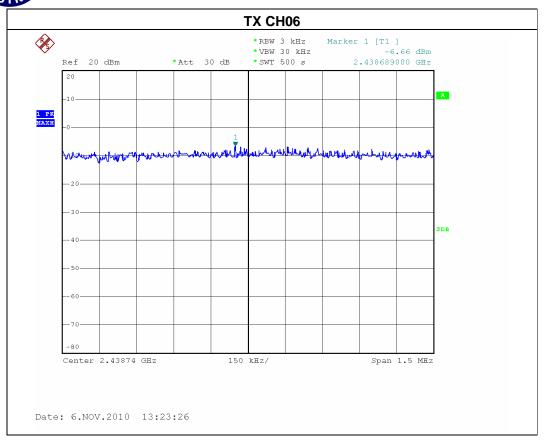
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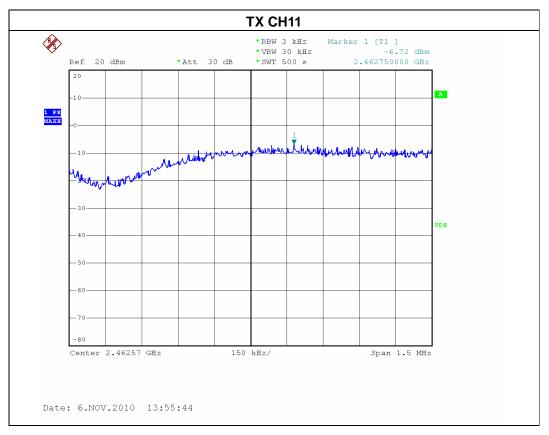
#### 8.1.6 TEST RESULTS

| EUT:         | Cruz Tablet                 | Model Name :       | Cruz Tablet T301 |
|--------------|-----------------------------|--------------------|------------------|
| Temperature: | <b>24</b> ℃                 | Relative Humidity: | 60 %             |
| Pressure:    | 1016 hPa                    | Test Voltage :     | AC 120V/60Hz     |
| Test Mode :  | TX B MODE /CH01, CH06, CH11 |                    |                  |

| Test Channel  | Frequency | Power Density | LIMIT |
|---------------|-----------|---------------|-------|
| rest Chamilei | (MHz)     | (dBm)         | (dBm) |
| CH01          | 2412 MHz  | -6.02         | 8     |
| CH06          | 2437 MHz  | -6.66         | 8     |
| CH11          | 2462 MHz  | -6.72         | 8     |

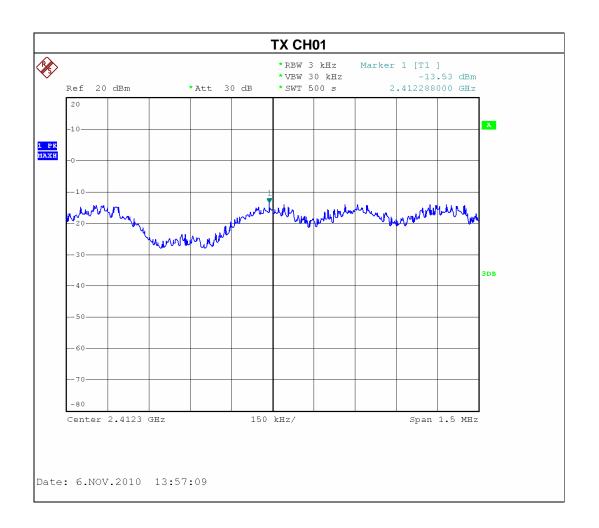




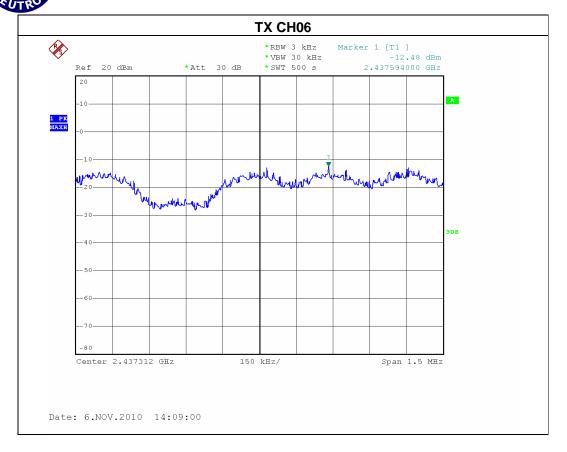


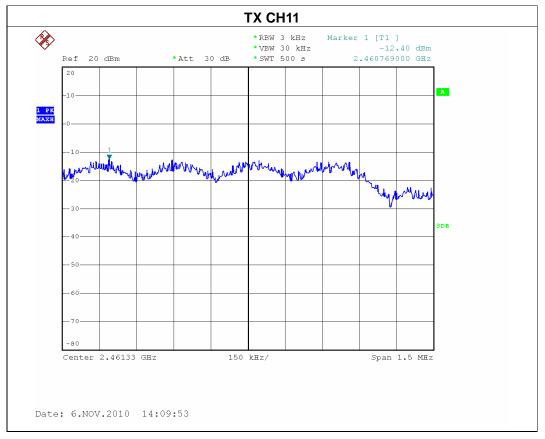
| EUT:         | Cruz Tablet                 | Model Name :       | Cruz Tablet T301 |
|--------------|-----------------------------|--------------------|------------------|
| Temperature: | <b>24</b> ℃                 | Relative Humidity: | 60 %             |
| Pressure:    | 1016 hPa                    | Test Voltage :     | AC 120V/60Hz     |
| Test Mode :  | TX G MODE /CH01, CH06, CH11 |                    |                  |

| Test Channel | Frequency<br>(MHz) | Power Density<br>(dBm) | LIMIT<br>(dBm) |
|--------------|--------------------|------------------------|----------------|
| CH01         | 2412 MHz           | -13.53                 | 8              |
| CH06         | 2437 MHz           | -12.48                 | 8              |
| CH11         | 2462 MHz           | -12.40                 | 8              |



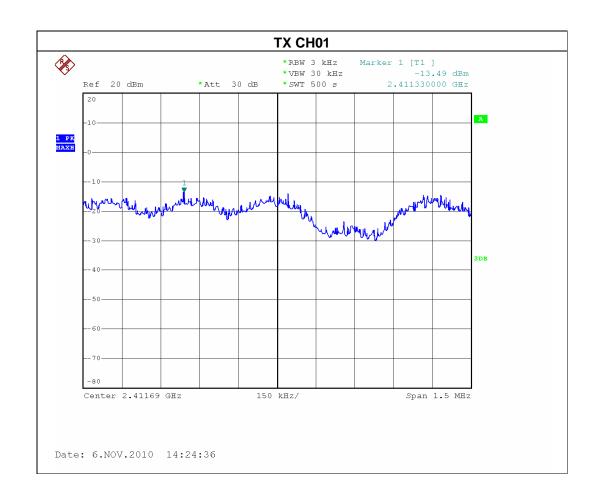
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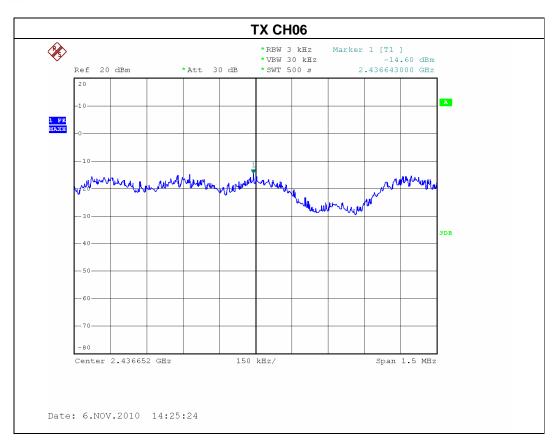
| EUT:         | Cruz Tablet                       | Model Name :       | Cruz Tablet T301 |
|--------------|-----------------------------------|--------------------|------------------|
| Temperature: | <b>24</b> ℃                       | Relative Humidity: | 60 %             |
| Pressure :   | 1016 hPa                          | Test Voltage :     | AC 120V/60Hz     |
| Test Mode :  | TX N MODE-20MHz /CH01, CH06, CH11 |                    |                  |

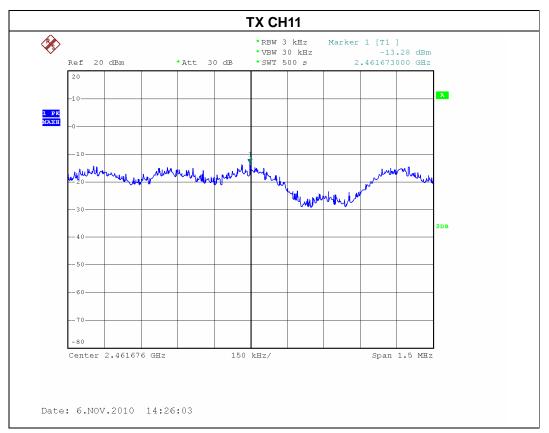
| Test Channel | Frequency<br>(MHz) | Power Density<br>(dBm) | LIMIT<br>(dBm) |
|--------------|--------------------|------------------------|----------------|
| CH01         | 2412 MHz           | -13.49                 | 8              |
| CH06         | 2437 MHz           | -14.60                 | 8              |
| CH11         | 2462 MHz           | -13.28                 | 8              |



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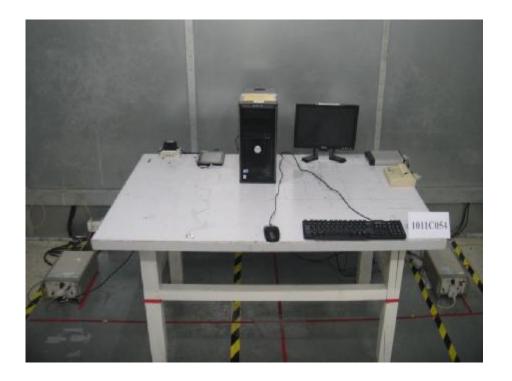






### 9. EUT TEST PHOTO

### **Conducted Measurement Photos**





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### **Radiated Measurement Photos**





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