



FCC Test Report

Report No.: AGC00006140602FE03

FCC ID : ZDB-BRK5200

APPLICATION PURPOSE : Class II Permissive Change

PRODUCT DESIGNATION : Classic Case with Bluetooth® Keyboard for 7" Tablets

BRAND NAME : N/A

MODEL NAME : 8020576, 8020579, 8020580, ITIP-7700UM, BRK5200B

CLIENT : Tianyu Technology Co., Ltd

DATE OF ISSUE : Jun.16, 2014

STANDARD(S) : FCC Part 15 Rules

REPORT VERSION : V 1.0

Attestation of Global Compliance (Shenzhen) Co., Ltd



CAUTION:

This report shall not be reproduced except in full without the written permission of the test laboratory and shall not be quoted out of context.

Report Revise Record

| Report Version | Revise Time | Issued Date | Valid Version | Notes |
|----------------|-------------|--------------|---------------|----------------------------|
| V1.0 | / | Jun.16, 2014 | Valid | Class II Permissive Change |

Product Change Record

This is a variant report based on model BRK5200.
Two Models all the same except for the appearance.
The original report can be referred to AGC02Y130301-1F2.
Only Radiated Emission, Band Edges were verified for the differences based on the original product.

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1. VERIFICATION OF COMPLIANCE

| | |
|---------------------------------|---|
| Applicant | Tianyu Technology Co., Ltd |
| Address | No 5, 3rd Beian Road, HuangJiang Town, Dongguan City, China |
| Manufacturer | Tianyu Technology Co., Ltd |
| Address | No 5, 3rd Beian Road, HuangJiang Town, Dongguan City, China |
| Product Designation | Classic Case with Bluetooth® Keyboard for 7" Tablets |
| Brand Name | N/A |
| Test Model | 8020576 |
| Series Model | 8020579, 8020580, ITIP-7700UM, BRK5200B |
| Difference description | All the same except for the model name. |
| Date of test | Jun.11, 2014 to Jun.13, 2014 |
| Deviation | None |
| Condition of Test Sample | Normal |

WE HEREBY CERTIFY THAT:

The above equipment was tested by Attestation of Global Compliance (Shenzhen) Co., Ltd. The test data, data evaluation, test procedures, and equipment configurations shown in this report were made in accordance with the procedures given in ANSI C63.4 (2003) and the energy emitted by the sample EUT tested as described in this report is in compliance with radiated emission limits of FCC Rules Part 15.247.

Prepared By



Water Huang Jun.16, 2014

Checked By



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Authorized By



Solger Zhang Jun.16, 2014

2. GENERAL INFORMATION

2.1 PRODUCT DESCRIPTION

The EUT is “Classic Case with Bluetooth® Keyboard for 7” Tablets” designed as a “Communication Device”. It is designed by way of utilizing the FHSS technology to achieve the system operation.

A major technical description of EUT is described as following:

| | |
|---------------------|------------------------------------|
| Operation Frequency | 2.402 GHz to 2.480GHz |
| Bluetooth Version | V3.0 |
| Modulation | GFSK, π /4-DQPSK, 8DPSK |
| Number of channels | 79 |
| Antenna Designation | Integrated Antenna |
| Antenna Gain | 0.8dBi |
| Hardware Version | N/A |
| Software Version | N/A |
| Power Supply | DC 3.7V by Built-in Li-ion Battery |

2.2 TABLE OF CARRIER FREQUENCIES

| Frequency Band | Channel Number | Frequency |
|----------------|----------------|-----------|
| 2400~2483.5MHZ | 0 | 2402MHZ |
| | 1 | 2403MHZ |
| | : | : |
| | 38 | 2440 MHZ |
| | 39 | 2441 MHZ |
| | 40 | 2442 MHZ |
| | : | : |
| | 77 | 2479 MHZ |
| | 78 | 2480 MHZ |

2.3 RECEIVER INPUT BANDWIDTH

The input bandwidth of the receiver is 1.3 MHz. In every connection one Bluetooth device is the master and the other one is slave. The master determines the hopping sequence. The slave follows this sequence. Both devices shift between RX and TX time slot according to the clock of the master. Additionally the type of connection (e.g. single or multisport (packet)) is set up at the beginning of the connection. The master adapts its hopping frequency and its TX/RX timing according to the packet type of the connection. Also the slave of the connection will use these settings.

Repeating of a packet has no influence on the hopping sequence. The hopping sequence generated by the master of the connection will be followed in any case. That means, a repeated packet will not be sent on the same frequency, it is sent on the next frequency of the hopping sequence.

2.4 EXAMPLE OF A HOPPING SEQUENCY IN DATA MODE

Example of a 79 hopping sequence in data mode:

40,21,44,23,42,53,46,55,48,33,52,35,50,65,54,67
56,37,60,39,58,69,62,71,64,25,68,27,66,57,70,59
72,29,76,31,74,61,78,63,01,41,05,43,03,73,07,75
09,45,13,47,11,77,15,00,64,49,66,53,68,02,70,06
01, 51,03,55,05,04

2.5 EQUALLY AVERAGE USE OF FREQUENCIES AND BEHAVIOUR

The generation of the hopping sequence in connection mode depends essentially on two input values:

1 LAP/UAP of the master of the connection

2 Internal master clock

The LAP(lower address part) are the 24 LSB's of the 48 BD_ADDRESS. The BD_ADDRESS is an unambiguous number of every Bluetooth unit. The UAP(upper address part) are the 24MSB's of the 48BD_ADDRESS

The internal clock of a Bluetooth unit is derived from a free running clock which is never adjusted and is never turned off. For synchronization with other units only offset are used. It has no relation to the time of the day. Its resolution is at least half the RX/TX slot length of 312.5us. The clock has a cycle of about One day(23h30). In most case it is implemented as 28 bit counter. For the deriving of the hopping sequence the entire.

LAP(24 bits), 4LSB's(4bits)(Input 1) and the 27MSB's of the clock(Input 2) are used. With this input values different mathematical procedures(permutations, additions, XOR-operations)are performed to generate the Sequence. This will be done at the beginning of every new transmission.

Regarding short transmissions the Bluetooth system has the following behavior:

The first connection between the two devices is established, a hopping sequence was generated. For Transmitting the wanted data the complete hopping sequence was not used. The connection ended.

The second connection will be established. A new hopping sequence is generated. Due to the fact the Bluetooth clock has a different value, because the period between the two transmission is longer(and it Cannot be shorter)than the minimum resolution of the clock(312.5us). The hopping sequence will always Differ from the first one.

2.6 RELATED SUBMITTAL(S) / GRANT (S)

This submittal(s) (test report) is intended for **FCC ID: ZDB-BRK5200**, filing to comply with Section 15.247 of the FCC Part 15, Subpart C Rules.

2.7 TEST METHODOLOGY

Both conducted and radiated testing were performed according to the procedures in ANSI C63.4 (2003). Radiated testing was performed at an antenna to EUT distance 3 meters.

2.8 MEASUREMENT UNCERTAINTY

The uncertainty is calculated using the methods suggested in the "Guide to the Expression of Uncertainty in Measurement" (GUM) published by ISO.

- Uncertainty of Conducted Emission, $U_c = \pm 2.75\text{dB}$
- Uncertainty of Radiated Emission, $U_c = \pm 3.2\text{dB}$

2.9 TEST FACILITY

All measurement facilities used to collect the measurement data are located at
Attestation of Global Compliance(Shenzhen) Co., Ltd.

2/F., Building 2, No.1-No.4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Bao'an District, Shenzhen,
Guangdong, China

The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.4: 2003.
FCC register No.: 259865

2.10 SPECIAL ACCESSORIES

Refer to section 2.2.

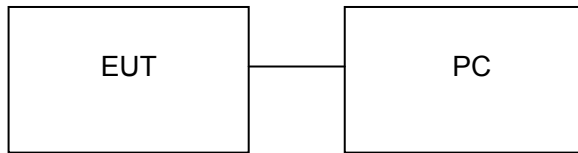
2.11 EQUIPMENT MODIFICATIONS

Not available for this EUT intended for grant.

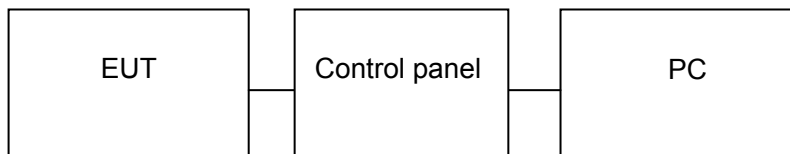
3. SYSTEM TEST CONFIGURATION

3.1 CONFIGURATION OF TESTED SYSTEM

Configuration 1: (Normal Hopping)



Configuration 2: (Control continuous TX)



3.2 EQUIPMENT USED IN EUT SYSTEM

| Item | Equipment | Mfr/Brand | Model/Type No. | Remark |
|------|--|-----------|----------------|--------|
| 1 | Classic Case with Bluetooth® Keyboard for 7" Tablets | N/A | 8020576 | EUT |
| 2 | PC | Dell | INSPIRON | A.E |

3.3. TEST FACILITY

| | |
|--------------------|--|
| Site | Attestation of Global Compliance (Shenzhen) Co., Ltd |
| Location | 2/F., Building 2, No.1-No.4, Chaxi Sanwei Technical Industrial Park, Gushu, Xixiang, Bao'an District, Shenzhen, Guangdong, China |
| Description | The test site is constructed and calibrated to meet the FCC requirements in documents ANSI C63.4:2003. |

ALL TEST EQUIPMENT LIST

(For original test equipment list)

| Description | Manufacturer | Model | S/N | Cal. Date | Cal. Due |
|-----------------------|-------------------|-------------|------------|------------|------------|
| Power Meter | R&S | NRP-Z23 | 100323 | 07/18/2012 | 07/17/2013 |
| RF attenuator | N/A | RFA20db | 68 | N/A | N/A |
| Spectrum Analyzer | Agilent | E4440A | US41421290 | 07/18/2012 | 07/17/2013 |
| Amplifier | EM | EM30180 | 0607030 | 02/28/2013 | 02/27/2014 |
| Horn Antenna | EM | EM-AH-10180 | 67 | 04/21/2012 | 04/20/2014 |
| Horn Antenna | A.H. Systems Inc. | SAS-574 | -- | 07/18/2012 | 07/17/2013 |
| EMI Test Receiver | Rohde & Schwarz | ESCI | 100694 | 07/18/2012 | 07/17/2013 |
| Biological Antenna | A.H. Systems Inc. | SAS-521-4 | 26 | 06/08/2012 | 06/07/2013 |
| Loop Antenna | Daze | ZN30900N | SEL0097 | 07/18/2012 | 07/17/2013 |
| Isolation Transformer | LETEAC | LTBK | -- | 07/18/2012 | 07/17/2013 |

(For new test equipment list)

| Description | Manufacturer | Model | S/N | Cal. Date | Cal. Due |
|-----------------------|-------------------|-------------|------------|------------|------------|
| Power Probe | R&S | NRP-Z23 | 100323 | 07/17/2013 | 07/16/2014 |
| RF attenuator | N/A | RFA20db | 68 | N/A | N/A |
| Spectrum Analyzer | Agilent | E4440A | US41421290 | 07/17/2013 | 07/16/2014 |
| Amplifier | EM | EM30180 | 0607030 | 02/27/2014 | 02/26/2015 |
| Horn Antenna | EM | EM-AH-10180 | 67 | 04/20/2014 | 04/19/2015 |
| Horn Antenna | A.H. Systems Inc. | SAS-574 | -- | 06/06/2014 | 06/06/2015 |
| EMI Test Receiver | Rohde & Schwarz | ESCI | 100694 | 07/17/2013 | 07/16/2014 |
| Biological Antenna | A.H. Systems Inc. | SAS-521-4 | 26 | 06/06/2014 | 06/06/2015 |
| Loop Antenna | Daze | ZN30900N | SEL0097 | 07/17/2013 | 07/16/2014 |
| Isolation Transformer | LETEAC | LTBK | -- | 07/17/2013 | 07/16/2014 |

4. SUMMARY OF TEST RESULTS

| FCC RULES | DESCRIPTION OF TEST | RESULT |
|-----------|---------------------|-----------|
| §15.209 | Radiated Emission | Compliant |
| §15.247 | Band Edges | Compliant |

5. DESCRIPTION OF TEST MODES

| NO. | TEST MODE DESCRIPTION |
|-----|-----------------------|
| 1 | Low channel TX |
| 2 | Middle channel TX |
| 3 | High channel TX |
| 4 | Normal operating |

Note:

1. All the test modes can be supply by Built-in Li-ion battery and adapter, only the result of the worst case was recorded in the report, if no other cases.
2. For Radiated Emission, 3axis were chosen for testing for each applicable mode.

6. RADIATED EMISSION

6.1 MEASUREMENT PROCEDURE

1. Configure the EUT according to ANSI C63.4. The EUT was placed on the top of the turntable 0.8 meter above ground. The phase center of the receiving antenna mounted on the top of a height-variable antenna tower was placed 3 meters far away from the turntable.
2. Power on the EUT and all the supporting units. The turntable was rotated by 360 degrees to determine the position of the highest radiation.
3. The height of the broadband receiving antenna was varied between one meter and four meters above ground to find the maximum emissions field strength of both horizontal and vertical polarization.
4. For each suspected emissions, the antenna tower was scan (from 1 M to 4 M) and then the turntable was rotated (from 0 degree to 360 degrees) to find the maximum reading.
5. Set the test-receiver system to Peak or CISPR quasi-peak Detect Function with specified bandwidth under Maximum Hold Mode.
6. For emissions above 1GHz, use 1MHz VBW and RBW for peak reading. Then 1MHz RBW and 10Hz VBW for average reading in spectrum analyzer.
7. When the radiated emissions limits are expressed in terms of the average value of the emissions, and pulsed operation is employed, the measurement field strength shall be determined by averaging over one complete pulse train, including blanking intervals, as long as the pulse train does not exceed 0.1 seconds. As an alternative (provided the transmitter operates for longer than 0.1 seconds) or in cases where the pulse train exceeds 0.1 seconds, the measured field strength shall be determined from the average absolute voltage during a 0.1 second interval during which the field strength is at its maximum values.
8. If the emissions level of the EUT in peak mode was 3 dB lower than the average limit specified, then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions which do not have 3 dB margin will be repeated one by one using the quasi-peak method for below 1GHz.
9. For testing above 1GHz, the emissions level of the EUT in peak mode was lower than average limit (that means the emissions level in peak mode also complies with the limit in average mode), then testing will be stopped and peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.
10. In case the emission is lower than 30MHz, loop antenna has to be used for measurement and the recorded data should be QP measured by receiver. High - Low scan is not required in this case.

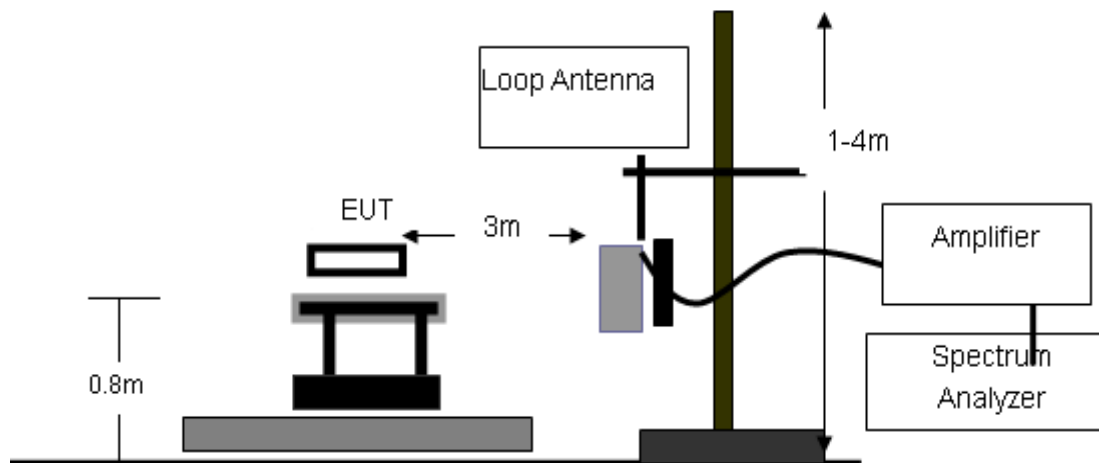
The following table is the setting of spectrum analyzer and receiver.'

| Spectrum Parameter | Setting |
|--|---|
| Start Frequency | 1GHz |
| Stop Frequency | 26.5GHz |
| RB/VB(Emission in restricted band) | 1MHz/1MHz for Peak, 1MHz/10Hz for Average |
| RB/VB(Emission in non-restricted band) | 1MHz/1MHz for Peak |

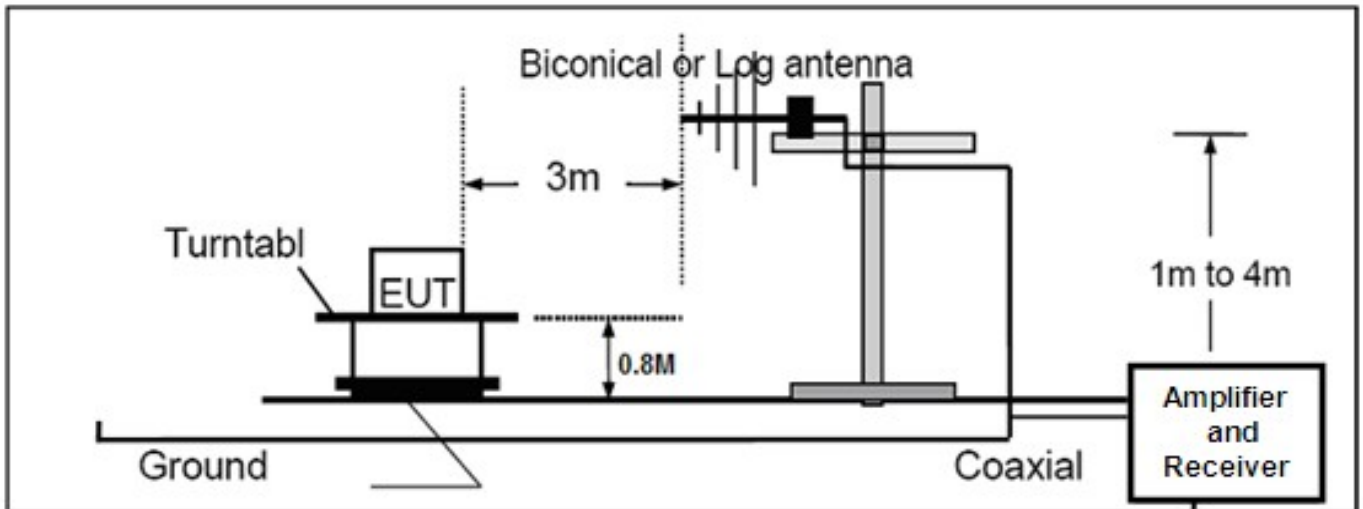
| Receiver Parameter | Setting |
|-----------------------|--------------------------------|
| Start ~Stop Frequency | 9KHz~150KHz/RB 200Hz for QP |
| Start ~Stop Frequency | 150KHz~30MHz/RB 9KHz for QP |
| Start ~Stop Frequency | 30MHz~1000MHz/RB 120KHz for QP |

6.2 TEST SETUP

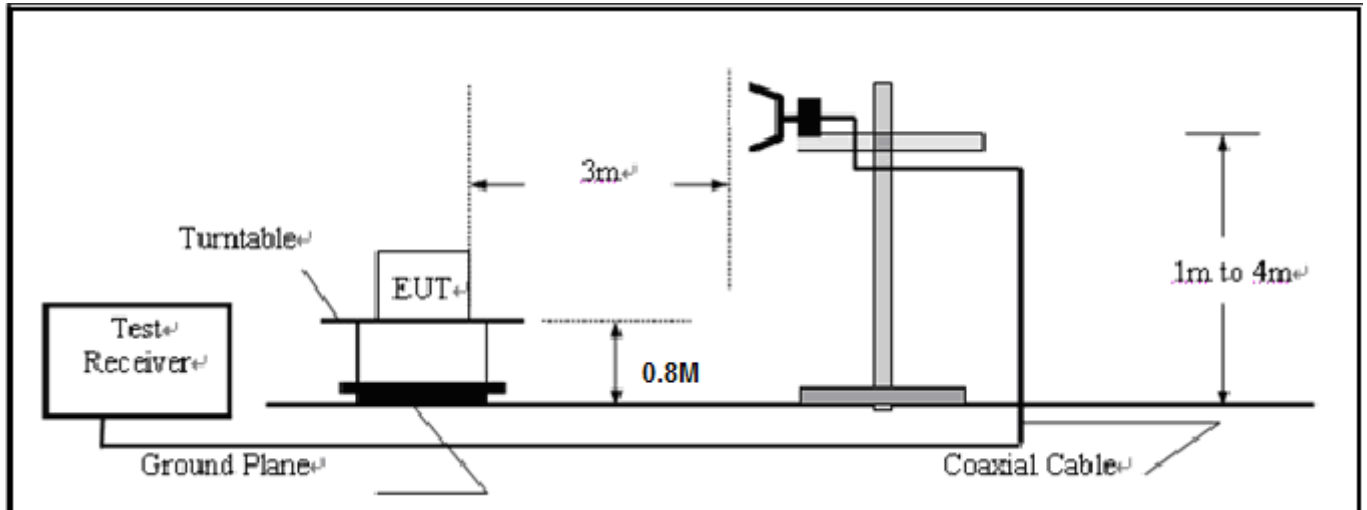
RADIATED EMISSION TEST SETUP BELOW 30MHz



RADIATED EMISSION TEST SETUP 30MHz-1000MHz

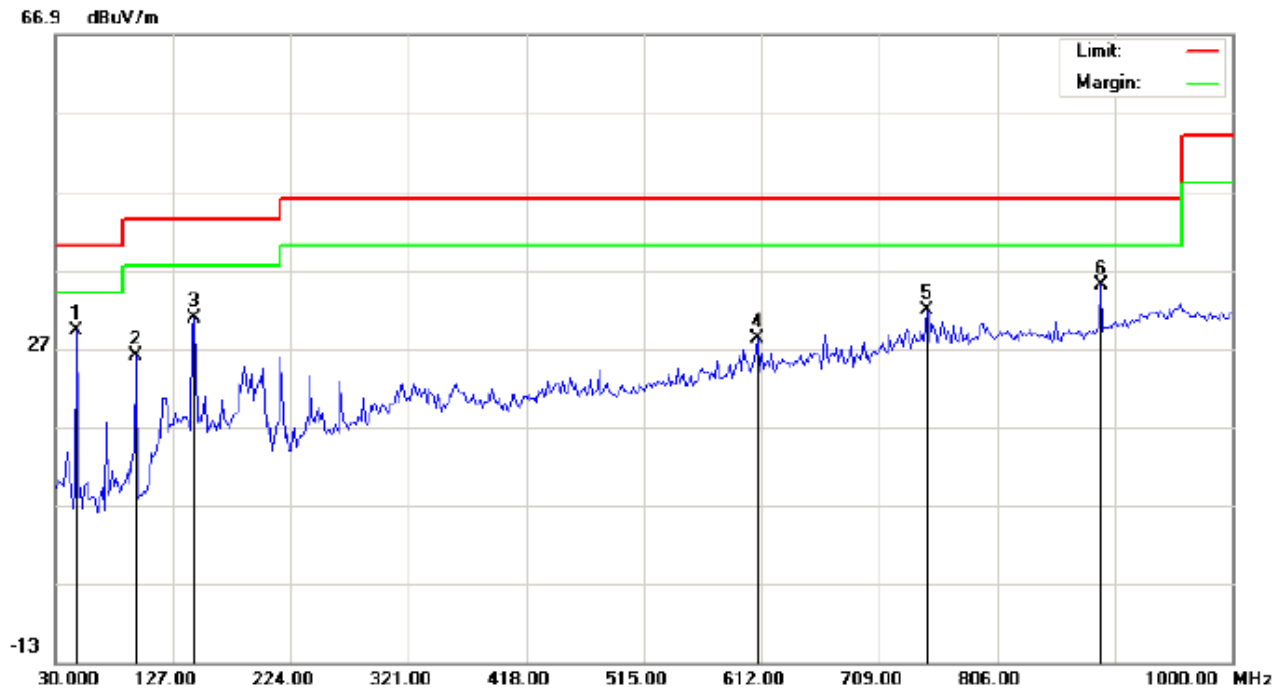


RADIATED EMISSION TEST SETUP ABOVE 1000MHz



6.3 TEST RESULT (Worst Modulation: GFSK)**RADIATED EMISSION BELOW 30MHZ**

No emission found between lowest internal used/generated frequencies to 30MHz.

RADIATED EMISSION BELOW 1GHZ**RADIATED EMISSION TEST- (30MHZ-1GHZ)-LOW CHANNEL-HORIZONTAL**

Site: site #1

Polarization: *Horizontal*

Temperature: 26

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT: Classic Case with Bluetooth Keyboard for 7" Tablets

M/N:8020576

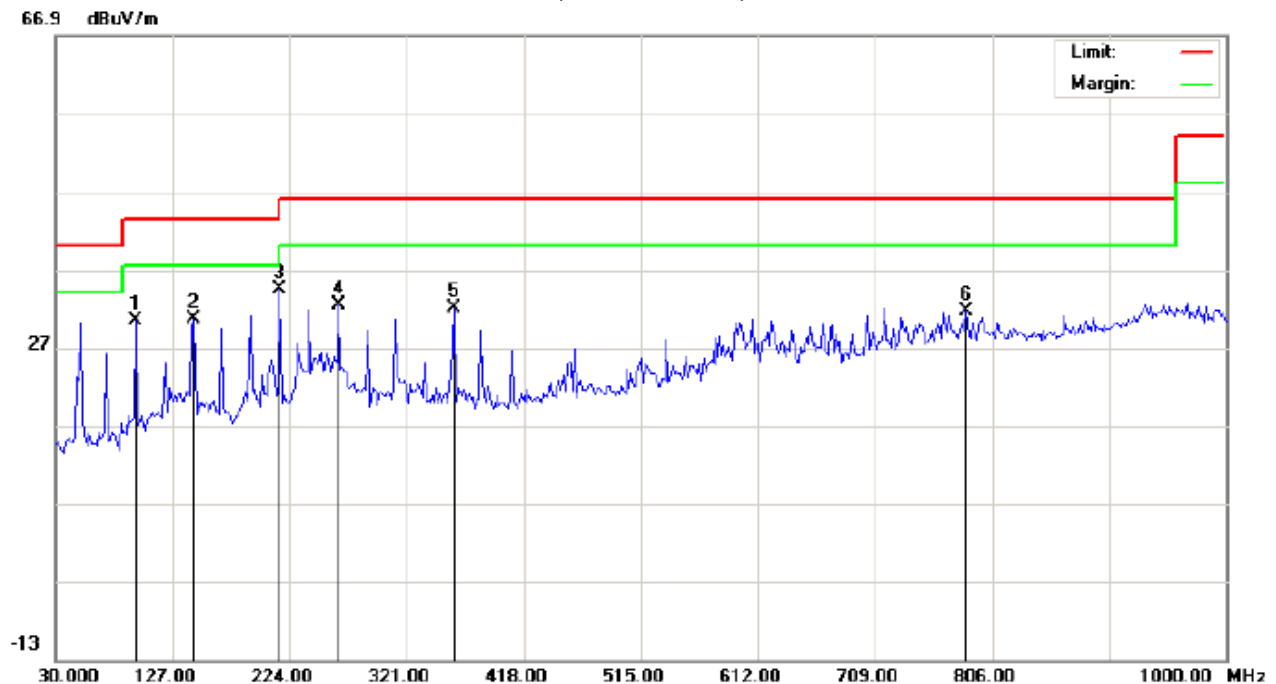
Mode:Low Channel TX

Note:

| No. | Mk | Freq. | Reading | Factor | Measurement | Limit | Over | Detector | Antenna Height | Table Degree | Comment |
|-----|----|----------|---------|--------|-------------|--------|--------|----------|----------------|--------------|---------|
| | | MHz | dBuV | dB/m | dBuV/m | dBuV/m | dB | | cm | degree | |
| 1 | * | 47.7832 | 20.89 | 8.39 | 29.28 | 40.00 | -10.72 | peak | | | |
| 2 | | 96.2833 | 25.86 | 0.05 | 25.91 | 43.50 | -17.59 | peak | | | |
| 3 | | 144.7833 | 15.64 | 15.23 | 30.87 | 43.50 | -12.63 | peak | | | |
| 4 | | 608.7667 | 5.24 | 22.93 | 28.17 | 46.00 | -17.83 | peak | | | |
| 5 | | 747.8000 | 5.25 | 26.57 | 31.82 | 46.00 | -14.18 | peak | | | |
| 6 | | 891.6833 | 6.52 | 28.39 | 34.91 | 46.00 | -11.09 | peak | | | |

RESULT: PASS

RADIATED EMISSION TEST- (30MHZ-1GHZ)-LOW CHANNEL –VERTICAL



Site: site #1

Polarization: **Vertical**

Temperature: 26

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT: Classic Case with Bluetooth Keyboard for 7" Tablets

M/N:8020576

Mode:Low Channel TX

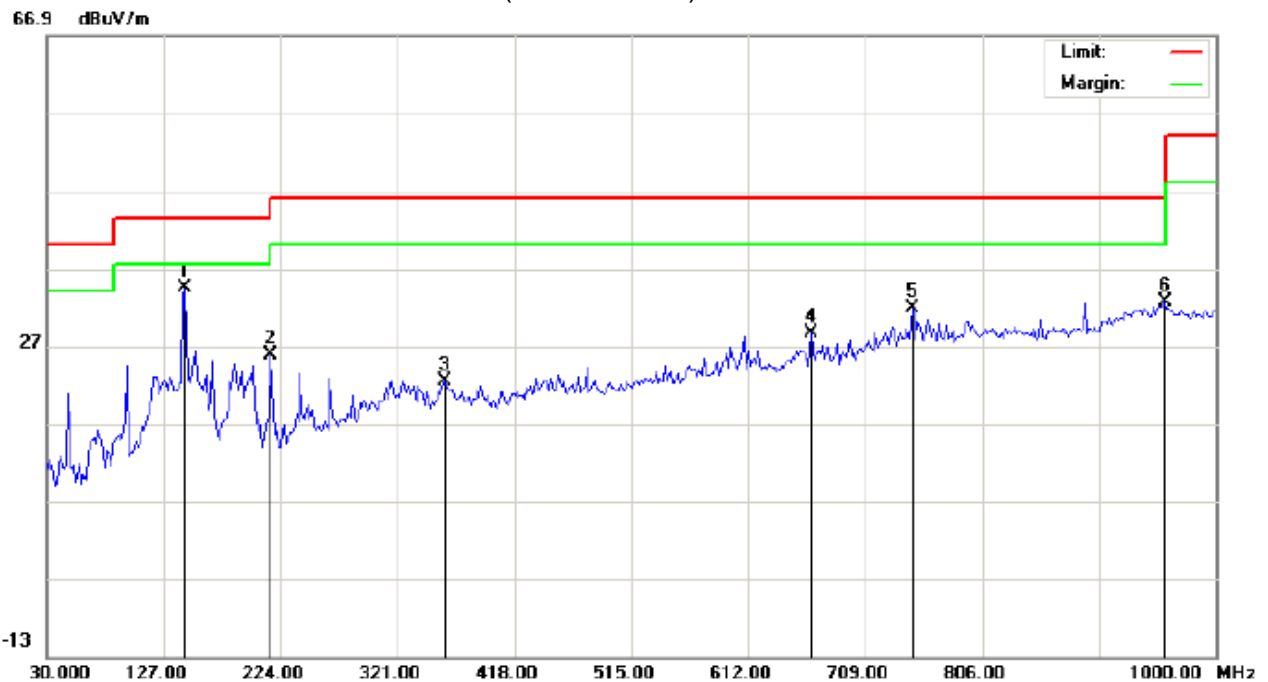
Note:

| No. | Mk | Freq. | Reading | Factor | Measurement | Limit | Over | Detector | Antenna Height | Table Degree | Comment |
|-----|----|----------|---------|--------|-------------|--------|--------|----------|----------------|--------------|---------|
| | | MHz | dBuV | dB/m | dBuV/m | dBuV/m | dB | | cm | degree | |
| 1 | | 96.2833 | 20.26 | 10.07 | 30.33 | 43.50 | -13.17 | peak | | | |
| 2 | | 144.7833 | 15.42 | 15.23 | 30.65 | 43.50 | -12.85 | peak | | | |
| 3 | * | 215.9167 | 21.81 | 12.60 | 34.41 | 43.50 | -9.09 | peak | | | |
| 4 | | 264.4166 | 18.07 | 14.34 | 32.41 | 46.00 | -13.59 | peak | | | |
| 5 | | 359.8000 | 13.16 | 18.80 | 31.96 | 46.00 | -14.04 | peak | | | |
| 6 | | 784.9833 | 4.59 | 27.11 | 31.70 | 46.00 | -14.30 | peak | | | |

RESULT: PASS**Note:** 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

2. The "Factor" value can be calculated automatically by software of measurement system.

RADIATED EMISSION TEST- (30MHZ-1GHZ)-MIDDLE CHANNEL-HORIZONTAL



Site: site #1

Polarization: *Horizontal*

Temperature: 26

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT:Classic Case with Bluetooth Keyboard for 7" Tablets

M/N:8020576

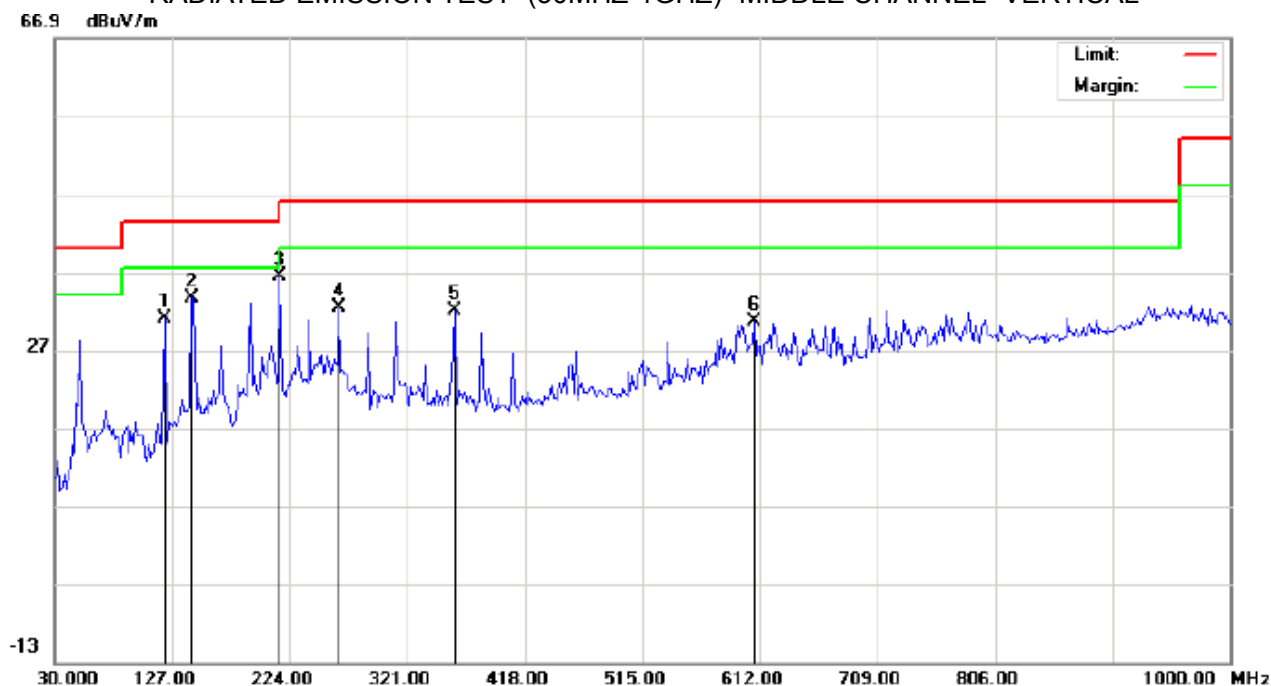
Mode:Middle Channel TX

Note:

| No. | Mk | Freq. | Reading | Factor | Measurement | Limit | Over | Detector | Antenna Height | Table Degree | Comment |
|-----|----|----------|---------|--------|-------------|--------|--------|----------|----------------|--------------|---------|
| | | MHz | dBuV | dB/m | dBuV/m | dBuV/m | dB | | cm | degree | |
| 1 | * | 144.7833 | 19.14 | 15.23 | 34.37 | 43.50 | -9.13 | peak | | | |
| 2 | | 215.9167 | 15.22 | 10.56 | 25.78 | 43.50 | -17.72 | peak | | | |
| 3 | | 359.8000 | 3.56 | 18.80 | 22.36 | 46.00 | -23.64 | peak | | | |
| 4 | | 663.7333 | 4.36 | 24.22 | 28.58 | 46.00 | -17.42 | peak | | | |
| 5 | | 747.8000 | 5.25 | 26.57 | 31.82 | 46.00 | -14.18 | peak | | | |
| 6 | | 957.9667 | 2.60 | 29.92 | 32.52 | 46.00 | -13.48 | peak | | | |

RESULT: PASS

RADIATED EMISSION TEST- (30MHZ-1GHZ)- MIDDLE CHANNEL -VERTICAL



Site: site #1 Polarization: **Vertical** Temperature: 26
Limit: FCC Class B 3M Radiation Power: Humidity: 60 %
EUT:Classic Case with Bluetooth Keyboard for 7" Tablets
M/N:8020576
Mode:Middle Channel TX
Note:

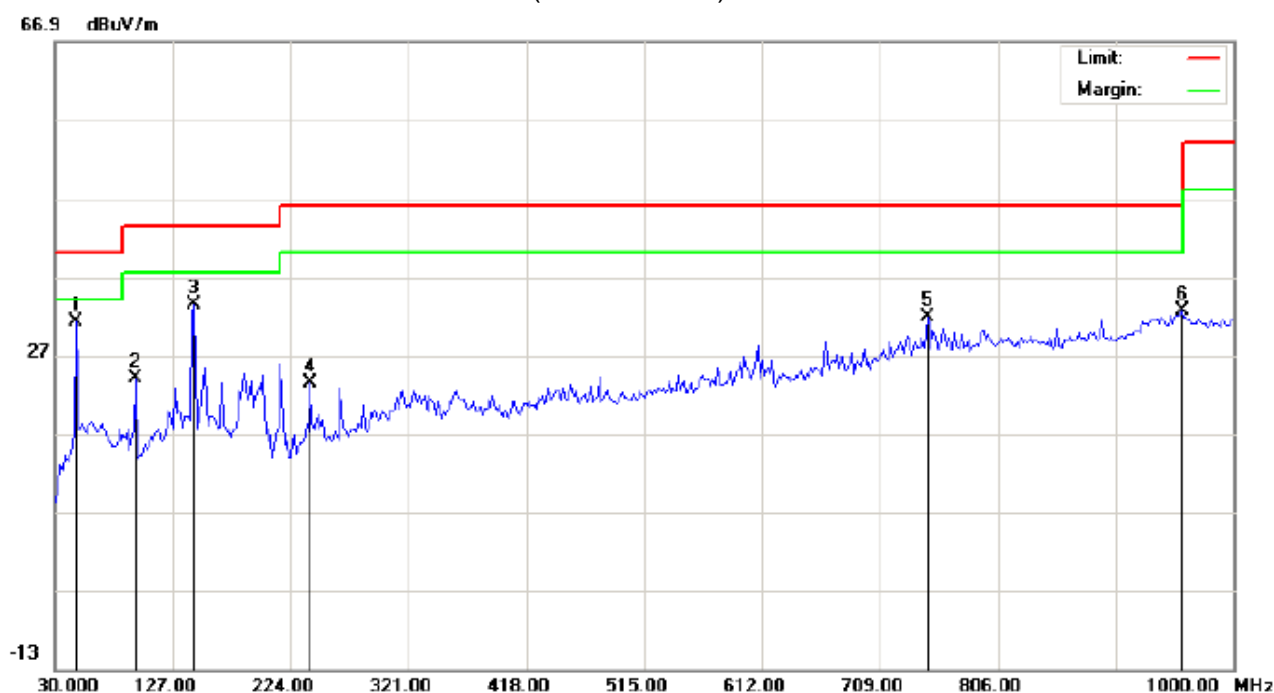
| No. | Mk | Freq. | Reading | Factor | Measurement | Limit | Over | Detector | Antenna Height | Table Degree | Comment |
|-----|----|----------|---------|--------|-------------|--------|--------|----------|----------------|--------------|---------|
| | | MHz | dBuV | dB/m | dBuV/m | dBuV/m | dB | | cm | degree | |
| 1 | | 120.5333 | 19.10 | 11.95 | 31.05 | 43.50 | -12.45 | peak | | | |
| 2 | | 143.1667 | 18.43 | 15.22 | 33.65 | 43.50 | -9.85 | peak | | | |
| 3 | * | 215.9167 | 23.81 | 12.60 | 36.41 | 43.50 | -7.09 | peak | | | |
| 4 | | 264.4166 | 18.07 | 14.34 | 32.41 | 46.00 | -13.59 | peak | | | |
| 5 | | 359.8000 | 13.16 | 18.80 | 31.96 | 46.00 | -14.04 | peak | | | |
| 6 | | 607.1500 | 6.93 | 23.75 | 30.68 | 46.00 | -15.32 | peak | | | |

RESULT: PASS

Note: 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

2. The "Factor" value can be calculated automatically by software of measurement system.

RADIATED EMISSION TEST- (30MHZ-1GHZ)-HIGH CHANNEL-HORIZONTAL



Site: site #1

Polarization: *Horizontal*

Temperature: 26

Limit: FCC Class B 3M Radiation

Power:

Humidity: 60 %

EUT:Classic Case with Bluetooth Keyboard for 7" Tablets

M/N:8020576

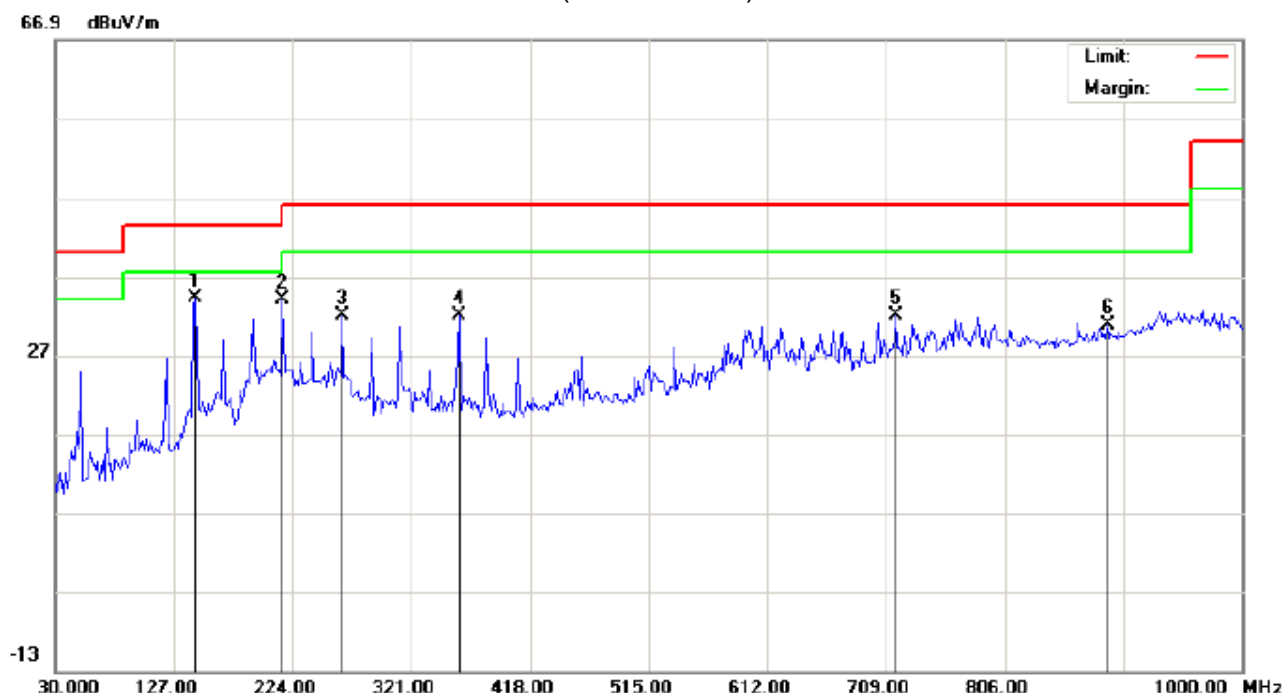
Mode:High Channel TX

Note:

| No. | Mk | Freq. | Reading | Factor | Measurement | Limit | Over | Detector | Antenna Height | Table Degree | Comment |
|-----|----|----------|---------|--------|-------------|--------|--------|----------|----------------|--------------|---------|
| | | MHz | dBuV | dB/m | dBuV/m | dBuV/m | dB | | cm | degree | |
| 1 | * | 47.7832 | 22.89 | 8.39 | 31.28 | 40.00 | -8.72 | peak | | | |
| 2 | | 96.2833 | 23.86 | 0.05 | 23.91 | 43.50 | -19.59 | peak | | | |
| 3 | | 144.7833 | 18.14 | 15.23 | 33.37 | 43.50 | -10.13 | peak | | | |
| 4 | | 240.1667 | 10.45 | 12.94 | 23.39 | 46.00 | -22.61 | peak | | | |
| 5 | | 747.8000 | 5.25 | 26.57 | 31.82 | 46.00 | -14.18 | peak | | | |
| 6 | | 957.9667 | 2.60 | 29.92 | 32.52 | 46.00 | -13.48 | peak | | | |

RESULT: PASS

RADIATED EMISSION TEST- (30MHZ-1GHZ)-HIGH CHANNEL -VERTICAL



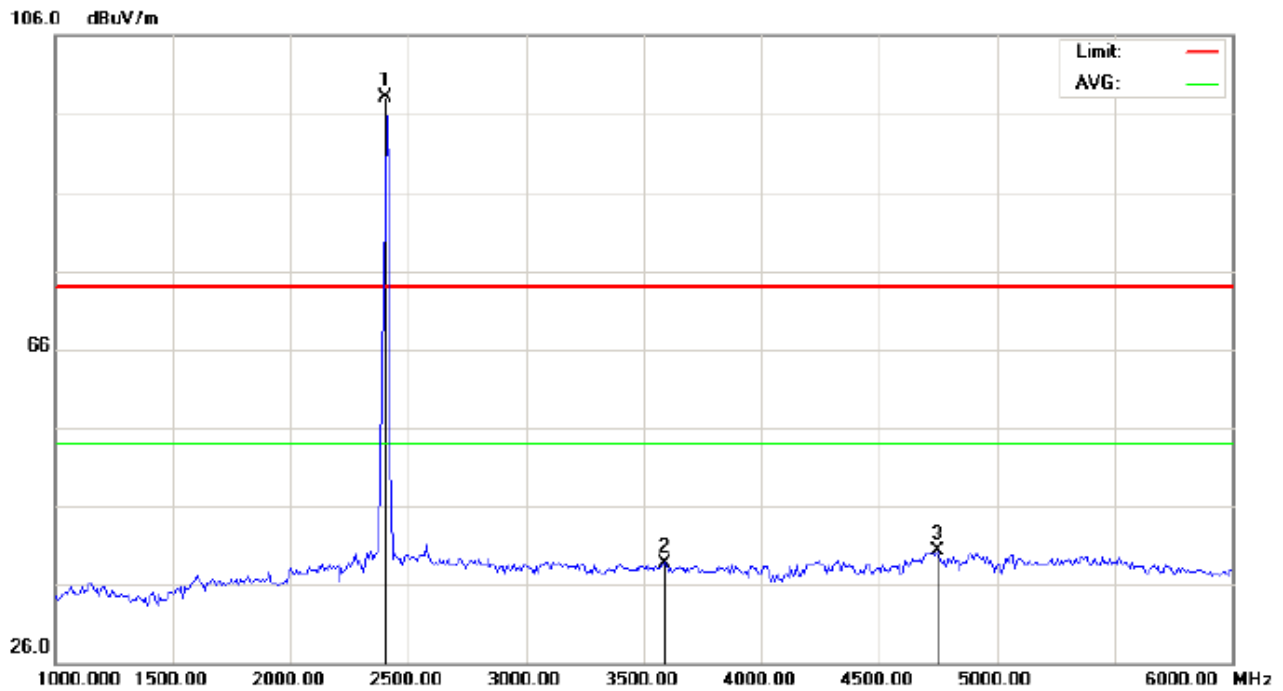
Site: site #1 Polarization: **Vertical** Temperature: 26
Limit: FCC Class B 3M Radiation Power: Humidity: 60 %
EUT:Classic Case with Bluetooth Keyboard for 7" Tablets
M/N:8020576
Mode:High Channel TX
Note:

| No. | Mk | Freq. | Reading | Factor | Measurement | Limit | Over | Detector | Antenna Height | Table Degree | Comment |
|-----|----|----------|---------|--------|-------------|--------|--------|----------|----------------|--------------|---------|
| | | MHz | dBuV | dB/m | dBuV/m | dBuV/m | dB | | cm | degree | |
| 1 | * | 144.7833 | 18.92 | 15.23 | 34.15 | 43.50 | -9.35 | peak | | | |
| 2 | | 215.9167 | 21.31 | 12.60 | 33.91 | 43.50 | -9.59 | peak | | | |
| 3 | | 264.4166 | 17.57 | 14.34 | 31.91 | 46.00 | -14.09 | peak | | | |
| 4 | | 359.8000 | 13.16 | 18.80 | 31.96 | 46.00 | -14.04 | peak | | | |
| 5 | | 717.0833 | 6.39 | 25.68 | 32.07 | 46.00 | -13.93 | peak | | | |
| 6 | | 890.0667 | 2.40 | 28.35 | 30.75 | 46.00 | -15.25 | peak | | | |

RESULT: PASS

Note: 1. Factor=Antenna Factor + Cable loss, Margin=Measurement-Limit.

2. The "Factor" value can be calculated automatically by software of measurement systemRADIATED

RADIATED EMISSION ABOVE 1GHZRADIATED EMISSION ABOVE 1GHZ (1-10th Harmonics)-LOW CHANNEL-HORIZONTAL

Site: site #1

Polarization: *Horizontal*

Temperature: 26

Limit: RSS-GEN Class B 3M Radiation above 1GHZ (Power)

Humidity: 60 %

EUT: Classic Case with Bluetooth Keyboard for 7" Tablets

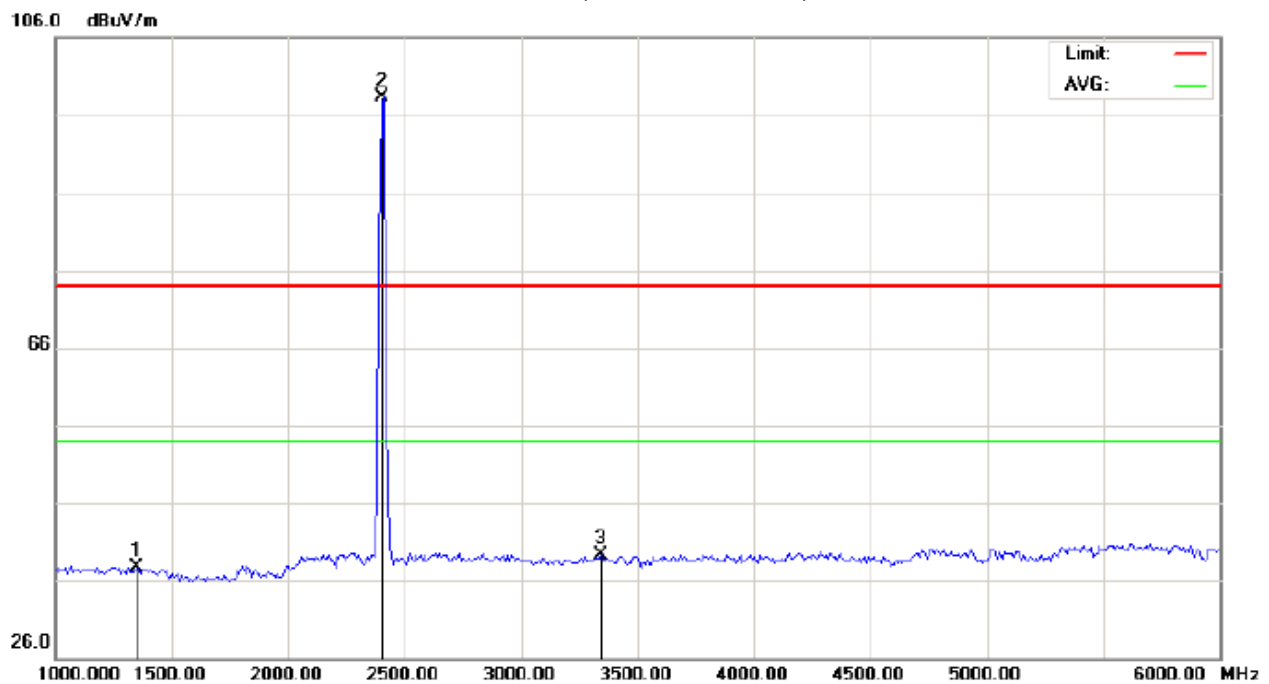
M/N: 8020576

Mode: Low Channel TX

Note:

| No. | Mk | Freq. | Reading | Factor | Measurement | Limit | Over | Detector | Antenna Height | Table Degree | Comment |
|-----|----|----------|---------|--------|-------------|--------|--------|----------|----------------|--------------|---------|
| | | MHz | dBuV | dB/m | dBuV/m | dBuV/m | dB | | cm | degree | |
| 1 | * | 2402.000 | 107.83 | -9.68 | 98.15 | 74.00 | 24.15 | peak | | | |
| 2 | | 3591.667 | 46.13 | -7.33 | 38.80 | 74.00 | -35.20 | peak | | | |
| 3 | | 4750.000 | 42.66 | -2.45 | 40.21 | 74.00 | -33.79 | peak | | | |

RESULT: PASS

RADIATED EMISSION ABOVE 1GHZ (1-10th Harmonics)-LOW CHANNEL –VERTICAL

Site: site #1

Polarization: **Vertical**

Temperature: 26

Limit: RSS-GEN Class B 3M Radiation above 1GHZ(Pk)

Humidity: 60 %

EUT:Classic Case with Bluetooth Keyboard for 7" Tablets

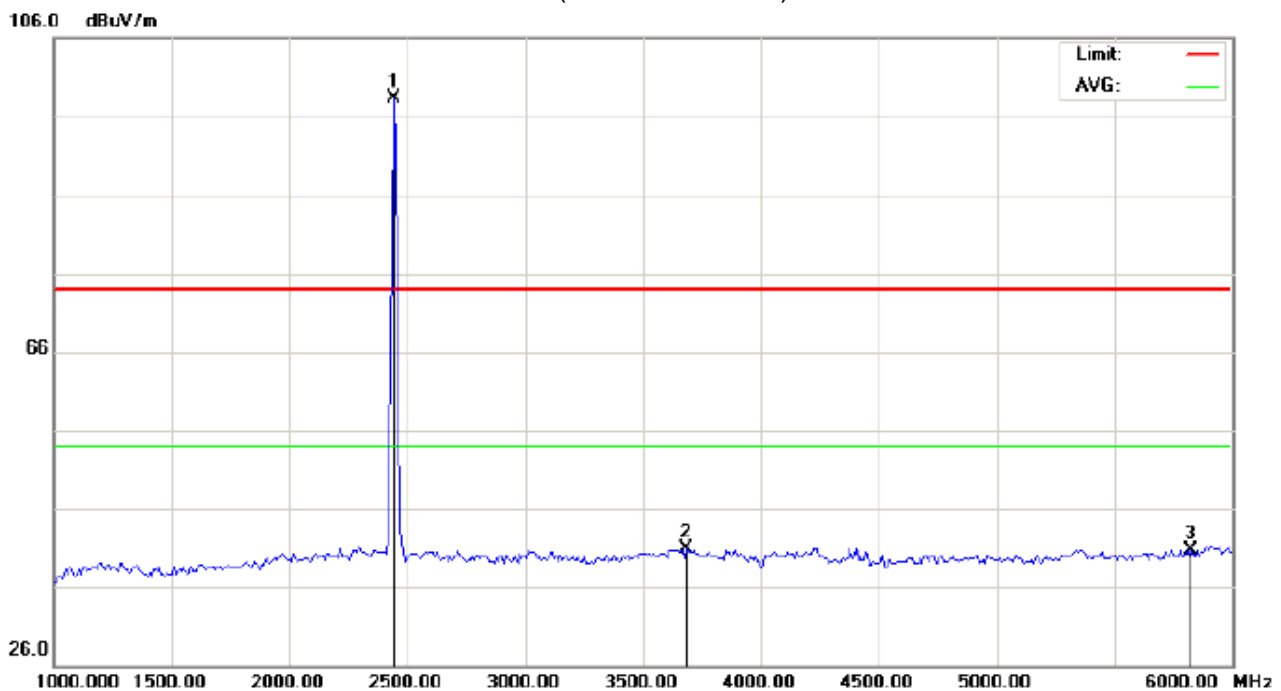
M/N:8020576

Mode: Low Channel TX

Note:

| No. | Mk | Freq. | Reading | Factor | Measurement | Limit | Over | Detector | Antenna Height | Table Degree | Comment |
|-----|----|----------|---------|--------|-------------|--------|--------|----------|----------------|--------------|---------|
| | | MHz | dBuV | dB/m | dBuV/m | dBuV/m | dB | | cm | degree | |
| 1 | | 1350.000 | 53.23 | -15.44 | 37.79 | 74.00 | -36.21 | peak | | | |
| 2 | * | 2402.000 | 108.08 | -9.68 | 98.40 | 74.00 | 24.40 | peak | | | |
| 3 | | 3341.667 | 47.28 | -8.04 | 39.24 | 74.00 | -34.76 | peak | | | |

RESULT: PASS

RADIATED EMISSION ABOVE 1GHZ (1-10th Harmonics)-MIDDLE CHANNEL-HORIZONTAL

Site: site #1

Polarization: *Horizontal*

Temperature: 26

Limit: RSS-GEN Class B 3M Radiation above 1GHZ(Power)

Humidity: 60 %

EUT:Classic Case with Bluetooth Keyboard for 7" Tablets

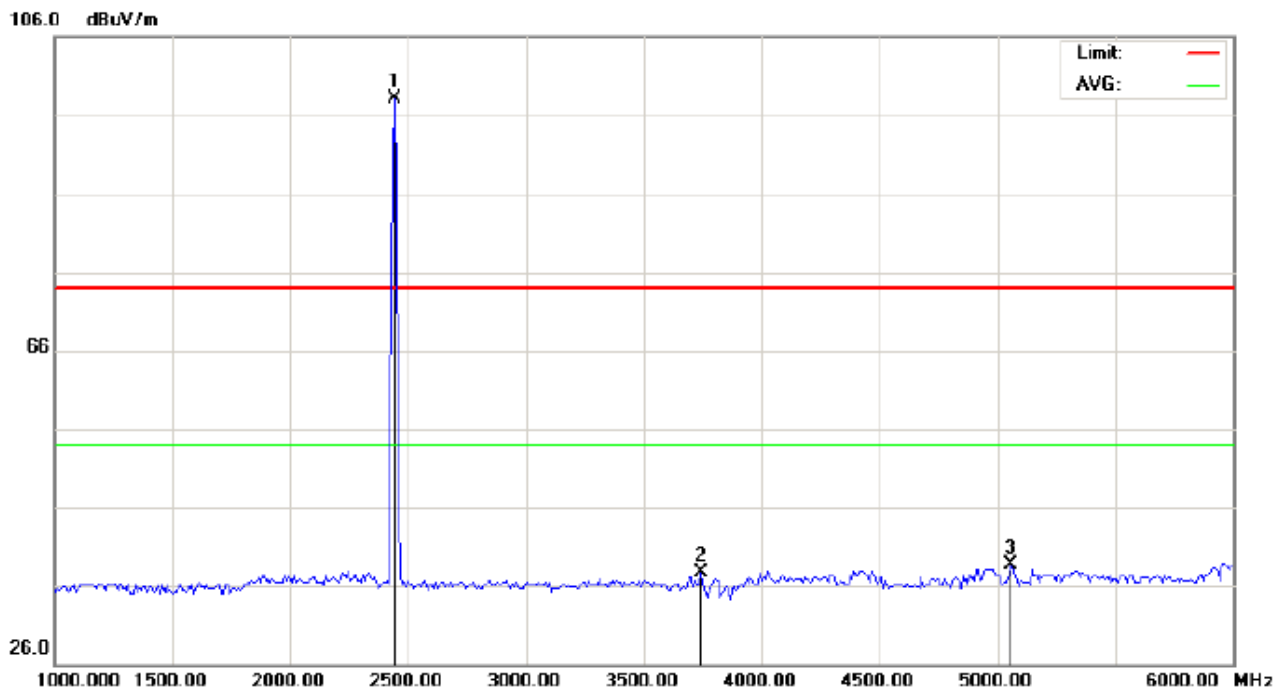
M/N:8020576

Mode: Middle Channel TX

Note:

| No. | Mk | Freq. | Reading | Factor | Measurement | Limit | Over | Detector | Antenna Height | Table Degree | Comment |
|-----|----|----------|---------|--------|-------------|--------|--------|----------|----------------|--------------|---------|
| | | MHz | dBuV | dB/m | dBuV/m | dBuV/m | dB | | cm | degree | |
| 1 | * | 2441.000 | 107.87 | -9.63 | 98.24 | 74.00 | 24.24 | peak | | | |
| 2 | | 3683.333 | 47.65 | -6.76 | 40.89 | 74.00 | -33.11 | peak | | | |
| 3 | | 5825.000 | 42.45 | -1.66 | 40.79 | 74.00 | -33.21 | peak | | | |

RESULT: PASS

RADIATED EMISSION ABOVE 1GHZ (1-10th Harmonics) - MIDDLE CHANNEL –VERTICAL

Site: site #1

Polarization: **Vertical**

Temperature: 26

Limit: RSS-GEN Class B 3M Radiation above 1GHZ (1-10th Harmonics)

Humidity: 60 %

EUT: Classic Case with Bluetooth Keyboard for 7" Tablets

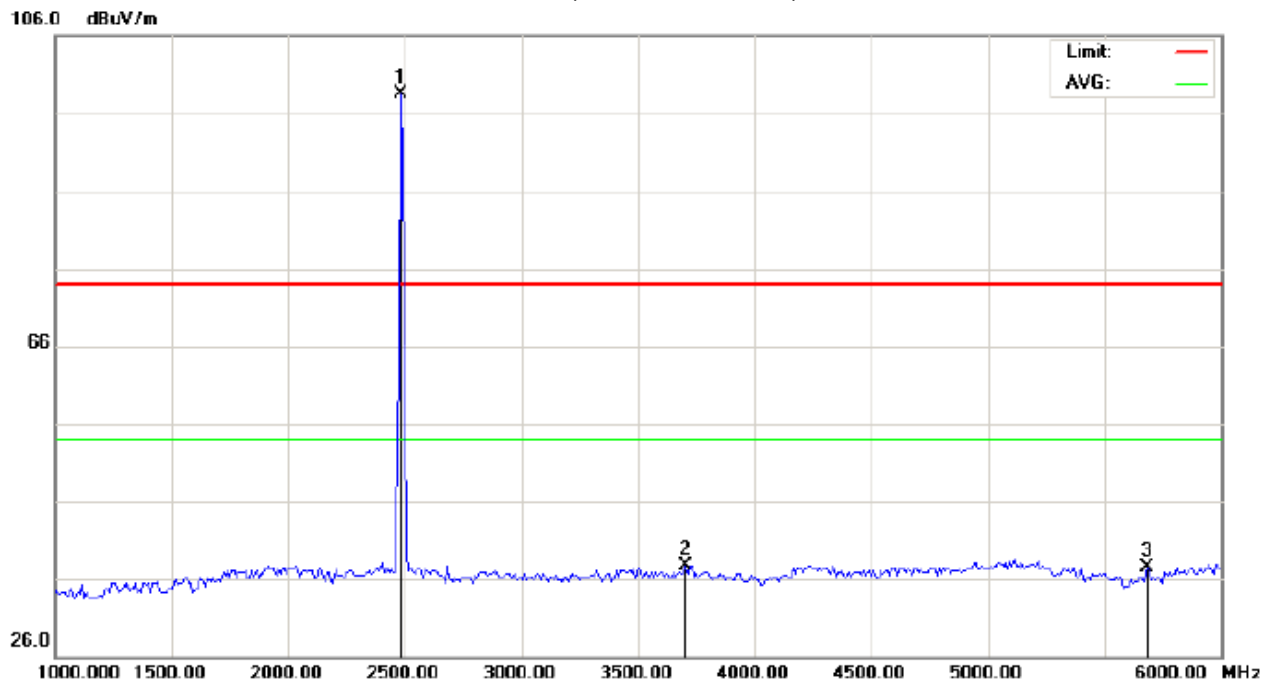
M/N: 8020576

Mode: Middle Channel TX

Note:

| No. | Mk | Freq. | Reading | Factor | Measurement | Limit | Over | Detector | Antenna Height | Table Degree | Comment |
|-----|----|----------|---------|--------|-------------|--------|--------|----------|----------------|--------------|---------|
| | | MHz | dBuV | dB/m | dBuV/m | dBuV/m | dB | | cm | degree | |
| 1 | * | 2441.000 | 107.80 | -9.63 | 98.17 | 74.00 | 24.17 | peak | | | |
| 2 | | 3741.667 | 44.04 | -6.40 | 37.64 | 74.00 | -36.36 | peak | | | |
| 3 | | 5058.333 | 40.47 | -1.80 | 38.67 | 74.00 | -35.33 | peak | | | |

RESULT: PASS

RADIATED EMISSION ABOVE 1GHZ (1-10th Harmonics)-HIGH CHANNEL-HORIZONTAL

Site: site #1

Polarization: *Horizontal*

Temperature: 26

Limit: RSS-GEN Class B 3M Radiation above 1GHZ (PK)

Humidity: 60 %

EUT: Classic Case with Bluetooth Keyboard for 7" Tablets

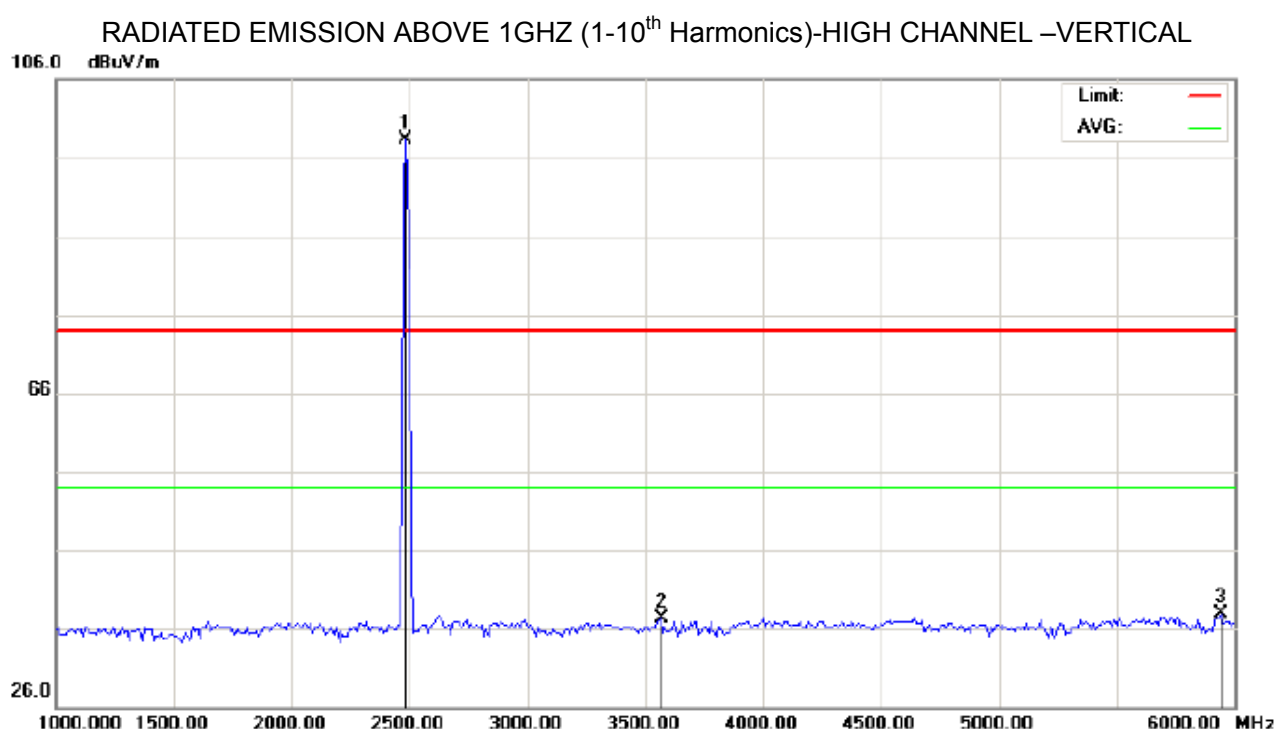
M/N: 8020576

Mode: High Channel TX

Note:

| No. | Mk | Freq. | Reading | Factor | Measurement | Limit | Over | Detector | Antenna Height | Table Degree | Comment |
|-----|----|----------|---------|--------|-------------|--------|--------|----------|----------------|--------------|---------|
| | | MHz | dBuV | dB/m | dBuV/m | dBuV/m | dB | | cm | degree | |
| 1 | * | 2480.000 | 108.17 | -9.59 | 98.58 | 74.00 | 24.58 | peak | | | |
| 2 | | 3700.000 | 44.41 | -6.66 | 37.75 | 74.00 | -36.25 | peak | | | |
| 3 | | 5683.333 | 39.32 | -1.73 | 37.59 | 74.00 | -36.41 | peak | | | |

RESULT: PASS



Site: site #1 Polarization: **Vertical** Temperature: 26
Limit: RSS-GEN Class B 3M Radiation above 1GHZ(Power) Humidity: 60 %
EUT:Classic Case with Bluetooth Keyboard for 7" Tablets
M/N:8020576
Mode: High Channel TX
Note:

| No. | Mk | Freq. | Reading | Factor | Measurement | Limit | Over | Detector | Antenna Height | Table Degree | Comment |
|-----|----|----------|---------|--------|-------------|--------|--------|----------|----------------|--------------|---------|
| | | MHz | dBuV | dB/m | dBuV/m | dBuV/m | dB | | cm | degree | |
| 1 | * | 2480.000 | 107.88 | -9.59 | 98.29 | 74.00 | 24.29 | peak | | | |
| 2 | | 3566.667 | 44.69 | -7.48 | 37.21 | 74.00 | -36.79 | peak | | | |
| 3 | | 5941.667 | 39.55 | -1.61 | 37.94 | 74.00 | -36.06 | peak | | | |

RESULT: PASS

Note: 6~25GHz at least have 20dB margin. No recording in the test report.

Factor=Antenna Factor+ Cable loss-Amplifier gain, Margin=Measurement-Limit.

The "Factor" value can be calculated automatically by software of measurement system.

7. BAND EDGES EMISSION

7.1 MEASUREMENT PROCEDURE

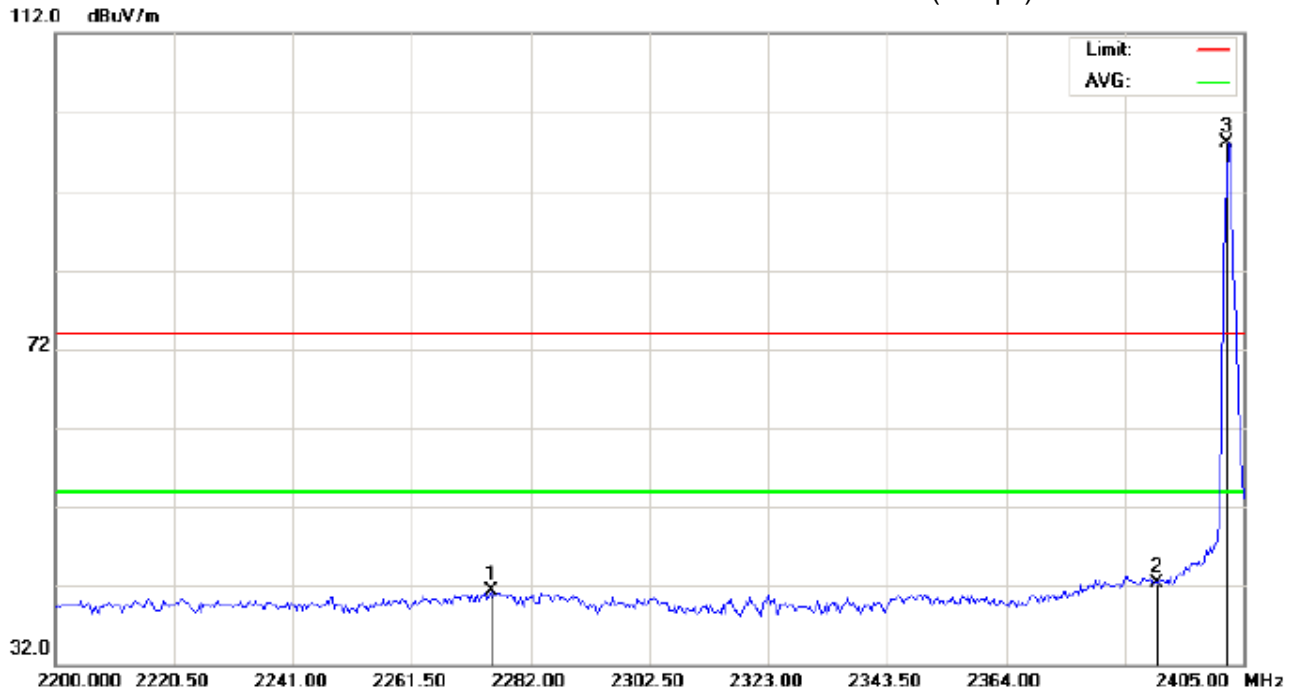
- 1, Set the EUT Work on the top, the bottom operation frequency individually.
2. Set SPA Start or Stop Frequency = Operation Frequency, $RBW \geq 1\% \text{span}$, $VBW \geq RBW$
3. The band edges was measured and recorded.

7.2 TEST SET-UP

The same as described in section 6.2

7.3 TEST RESULT

TEST PLOT OF BAND EDGE FOR LOW CHANNEL (3Mbps)



Site: site #1

Polarization: *Horizontal*

Temperature: 26

Limit: RSS-GEN Class B 3M Radiation above 1GHz(Power)

Humidity: 60 %

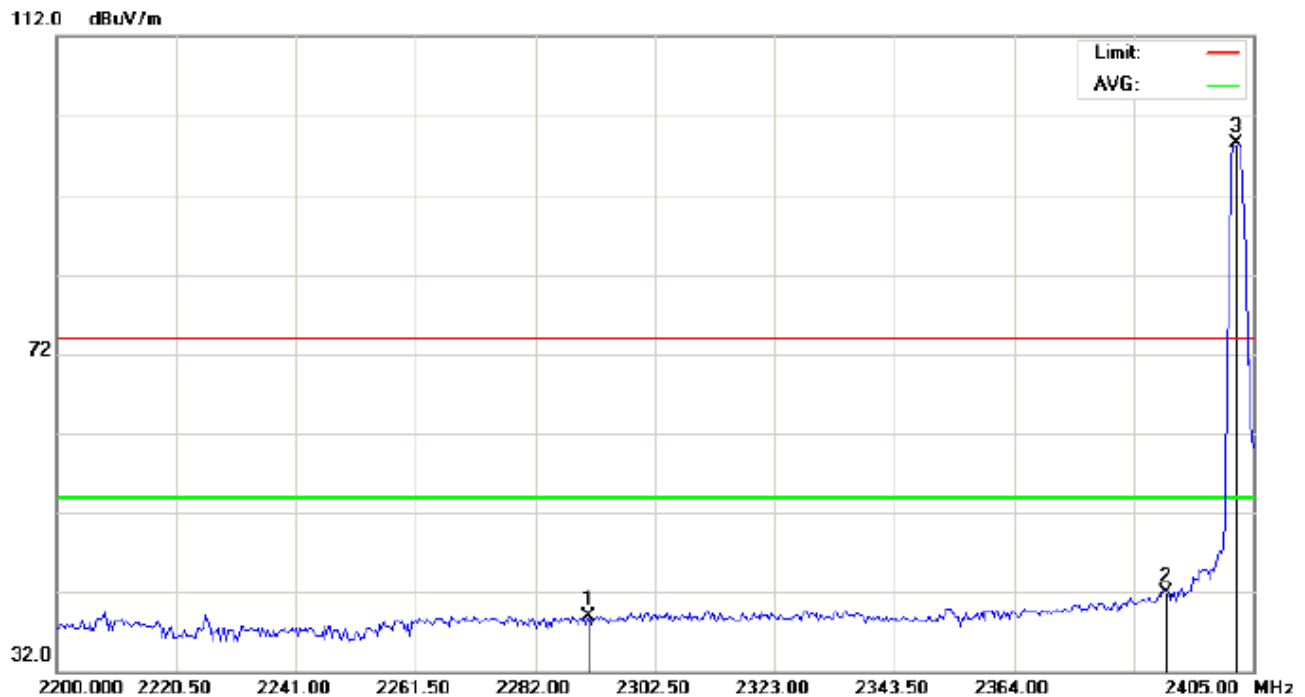
EUT:Classic Case with Bluetooth Keyboard for 7" Tablets

M/N:8020576

Mode: Low Channel TX

Note:

| No. | Mk | Freq. | Reading | Factor | Measurement | Limit | Over | Detector | Antenna Height | Table Degree | Comment |
|-----|----|----------|---------|--------|-------------|--------|--------|----------|----------------|--------------|---------|
| | | MHz | dBuV | dB/m | dBuV/m | dBuV/m | dB | | cm | degree | |
| 1 | | 2275.167 | 51.10 | -9.82 | 41.28 | 74.00 | -32.72 | peak | | | |
| 2 | | 2390.000 | 51.94 | -9.69 | 42.25 | 74.00 | -31.75 | peak | | | |
| 3 | * | 2402.000 | 107.73 | -9.68 | 98.05 | 74.00 | 24.05 | peak | | | |



Site: site #1

Polarization: *Vertical*

Temperature: 26

Limit: RSS-GEN Class B 3M Radiation above 1GHZ(Power):

Humidity: 60 %

EUT:Classic Case with Bluetooth Keyboard for 7" Tablets

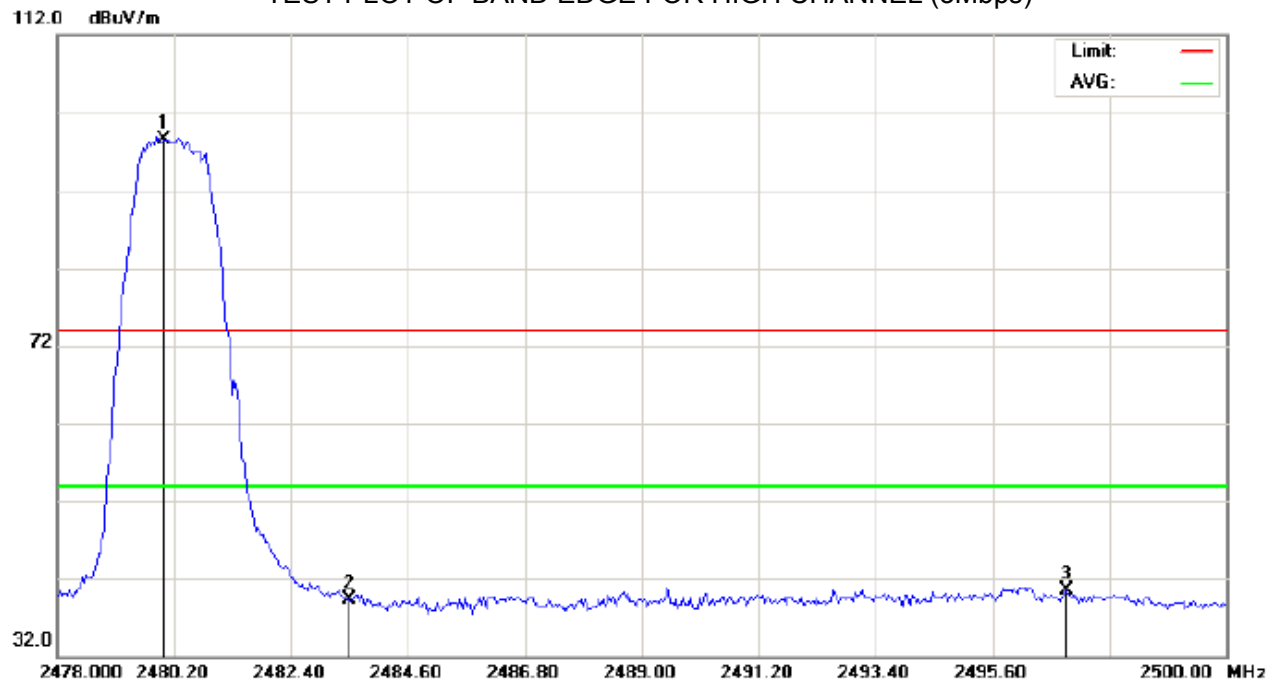
M/N:8020576

Mode: Low Channel TX

Note:

| No. | Mk | Freq. | Reading | Factor | Measurement | Limit | Over | Detector | Antenna Height | Table Degree | Comment |
|-----|----|----------|---------|--------|-------------|--------|--------|----------|----------------|--------------|---------|
| | | MHz | dBuV | dB/m | dBuV/m | dBuV/m | dB | | cm | degree | |
| 1 | | 2291.225 | 48.68 | -9.80 | 38.88 | 74.00 | -35.12 | peak | | | |
| 2 | | 2390.000 | 51.65 | -9.69 | 41.96 | 74.00 | -32.04 | peak | | | |
| 3 | * | 2402.000 | 108.09 | -9.68 | 98.41 | 74.00 | 24.41 | peak | | | |

TEST PLOT OF BAND EDGE FOR HIGH CHANNEL (3Mbps)



Site: site #1

Polarization: *Horizontal*

Temperature: 26

Limit: RSS-GEN Class B 3M Radiation above 1GHZ (P6)

Humidity: 60 %

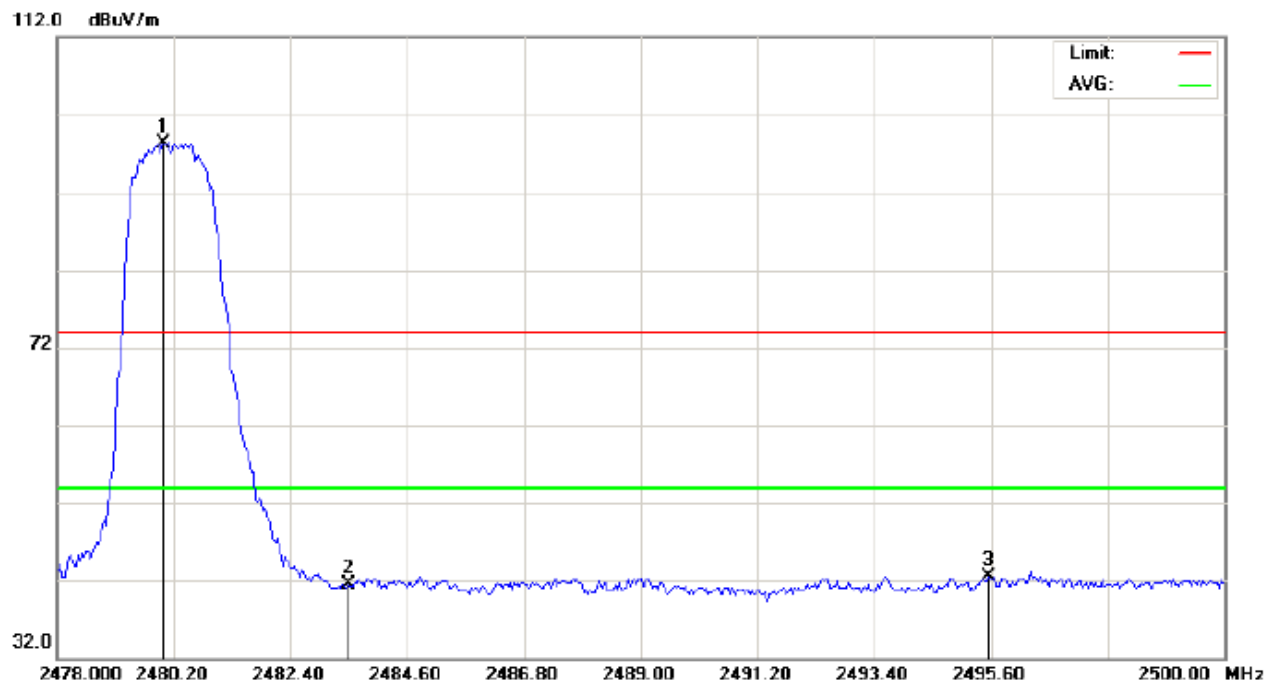
EUT: Classic Case with Bluetooth Keyboard for 7" Tablets

M/N: 8020576

Mode: High Channel TX

Note:

| No. | Mk | Freq. | Reading | Factor | Measurement | Limit | Over | Detector | Antenna Height | Table Degree | Comment |
|-----|----|----------|---------|--------|-------------|--------|--------|----------|----------------|--------------|---------|
| | | MHz | dBuV | dB/m | dBuV/m | dBuV/m | dB | | cm | degree | |
| 1 | * | 2480.000 | 108.05 | -9.59 | 98.46 | 74.00 | 24.46 | peak | | | |
| 2 | | 2483.500 | 48.88 | -9.59 | 39.29 | 74.00 | -34.71 | peak | | | |
| 3 | | 2496.993 | 50.01 | -9.57 | 40.44 | 74.00 | -33.56 | peak | | | |



Site: site #1

Polarization: **Vertical**

Temperature: 26

Limit: RSS-GEN Class B 3M Radiation above 1GHZ (Power)

Humidity: 60 %

EUT: Classic Case with Bluetooth Keyboard for 7" Tablets

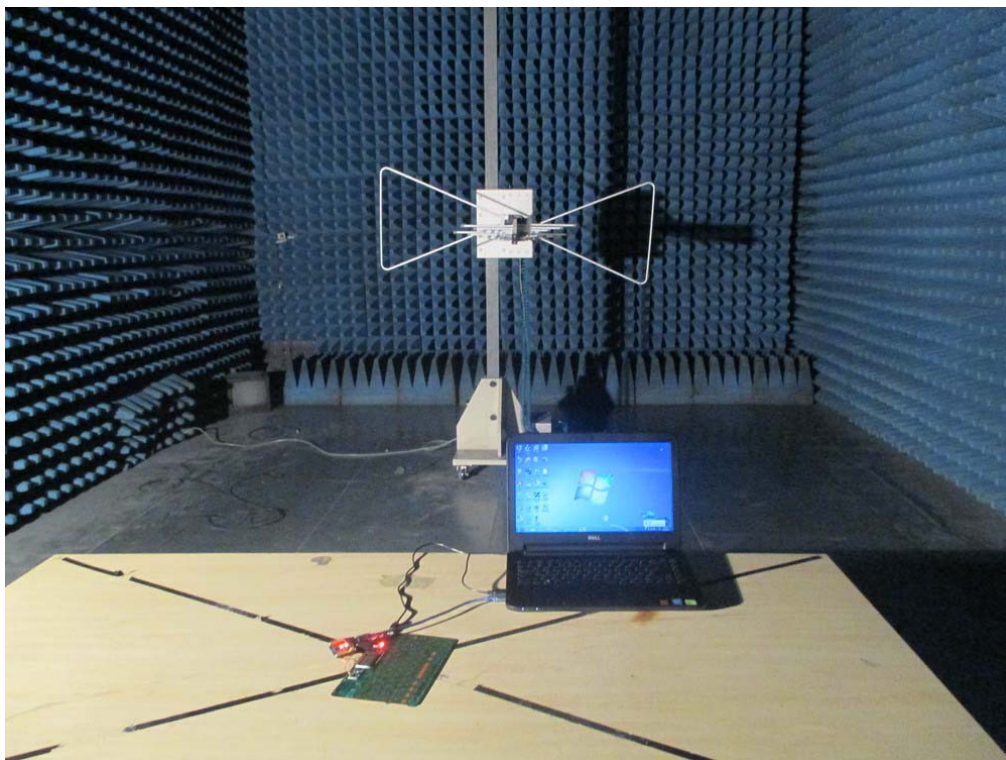
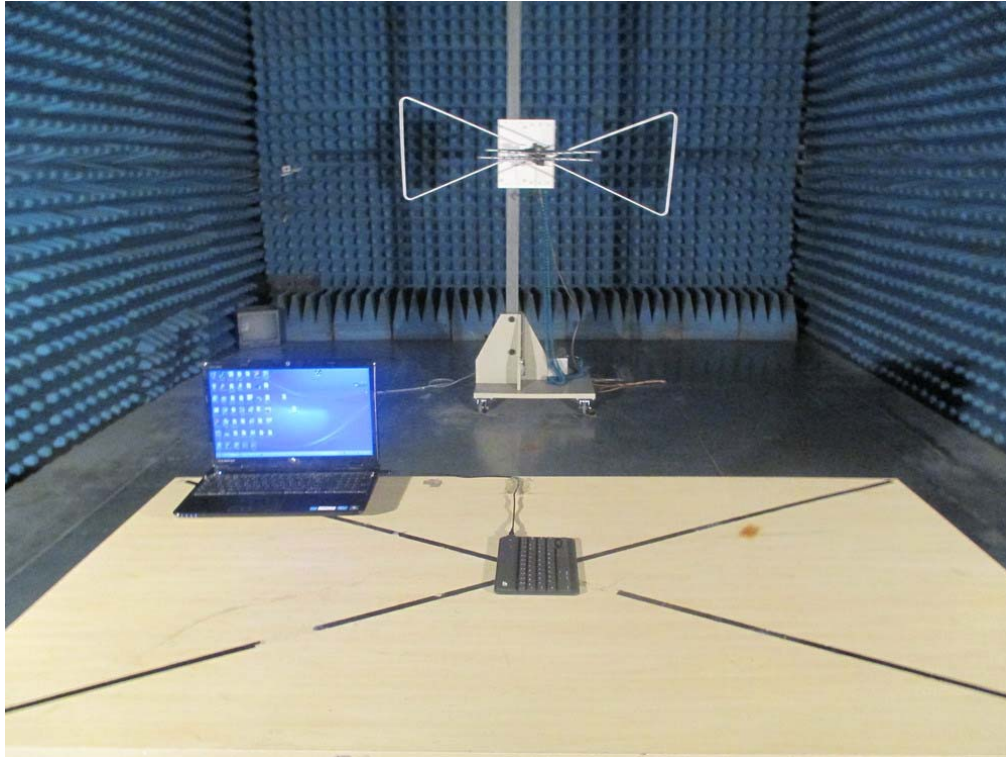
M/N: 8020576

Mode: High Channel TX

Note:

| No. | Mk | Freq. | Reading | Factor | Measurement | Limit | Over | Detector | Antenna Height | Table Degree | Comment |
|-----|----|----------|---------|--------|-------------|--------|--------|----------|----------------|--------------|---------|
| | | MHz | dBuV | dB/m | dBuV/m | dBuV/m | dB | | cm | degree | |
| 1 | * | 2480.000 | 107.95 | -9.59 | 98.36 | 74.00 | 24.36 | peak | | | |
| 2 | | 2483.500 | 51.19 | -9.59 | 41.60 | 74.00 | -32.40 | peak | | | |
| 3 | | 2495.563 | 52.15 | -9.57 | 42.58 | 74.00 | -31.42 | peak | | | |

APPENDIX A
PHOTOGRAPHS OF THE TEST SETUP
RADIATED EMISSION



APPENDIX B: PHOTOGRAPHS OF EUT

TOP VIEW OF EUT



BOTTOM VIEW OF EUT



FRONT VIEW OF EUT



BACK VIEW OF EUT



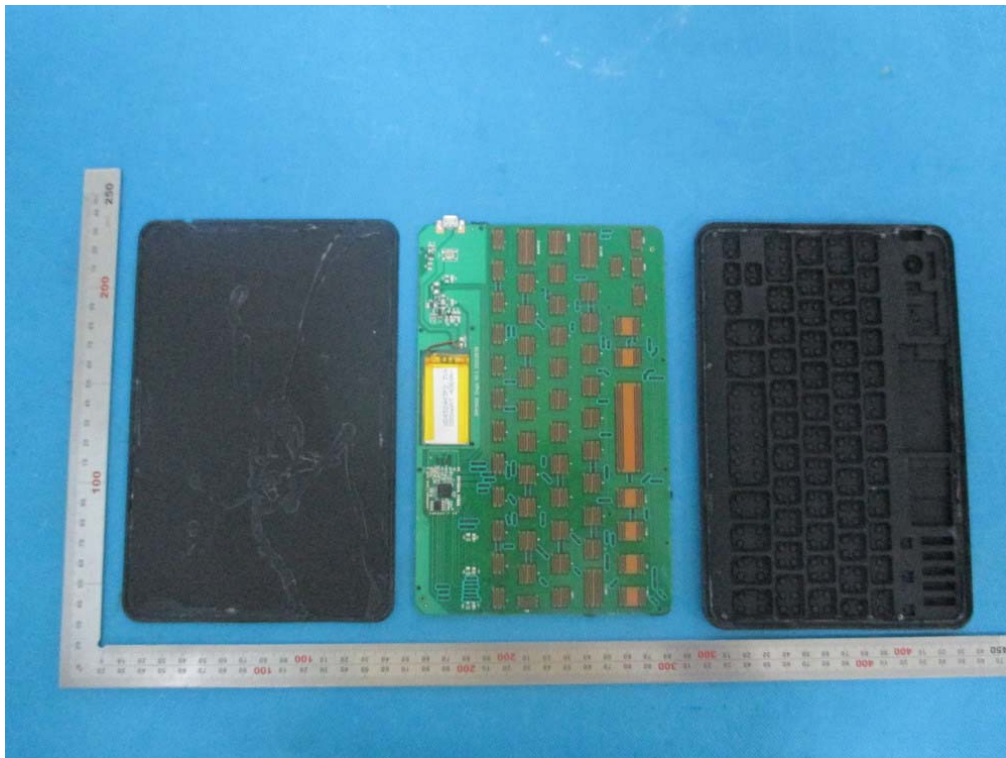
LEFT VIEW OF EUT



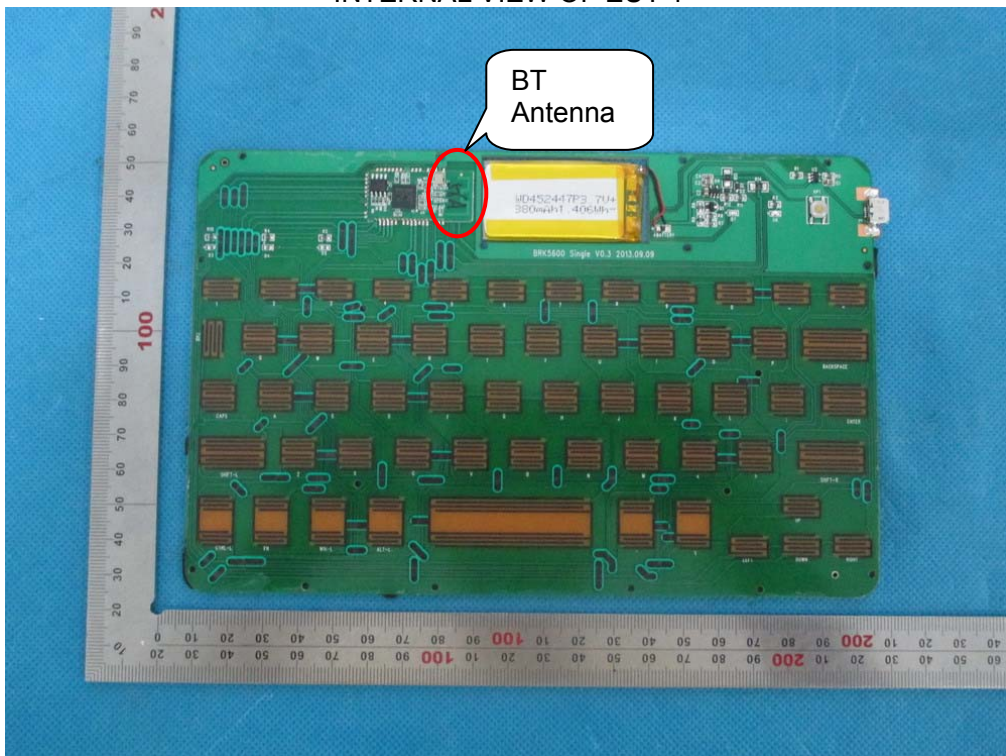
RIGHT VIEW OF EUT



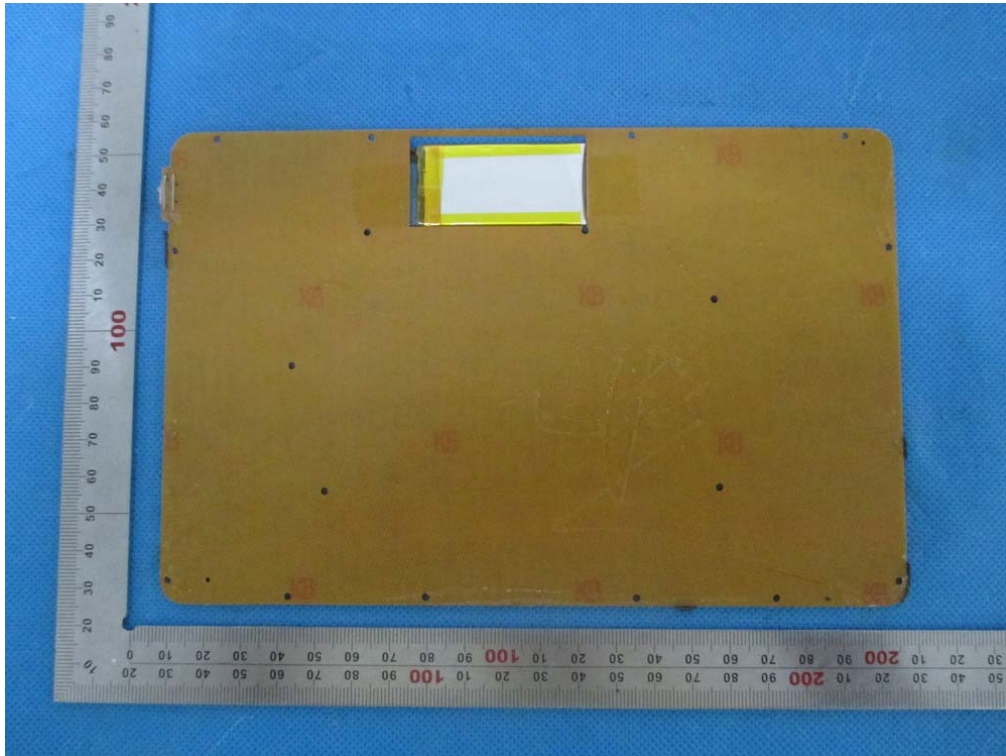
OPEN VIEW OF EUT



INTERNAL VIEW OF EUT-1



INTERNAL VIEW OF EUT-2



INTERNAL VIEW OF EUT-3



-----END OF REPORT-----