Shenzhen Certification Technology Service Co., Ltd
2F, Building B, East Area of Nanchang Second Industrial Zone, Gushu 2nd Road, Bao'an District, Shenzhen 518126, P.R. China.

# TEST REPORT

## FCC ID: 2AAV9-CPITP101

**Applicant** : Wanxin Image Corporation
**Address** :4/5F, 518 Zhonghua Rd. Sec.4, Xiangshan Dist., Hsinchu city, Taiwan

Equipment Under Test (EUT):

Name : Tablet pc
Model : CPITP101

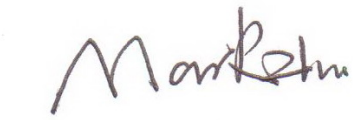
In Accordance with: FCC PART 15.247

Report No : STI130827161-2
Date of Test : September 09-22, 2013
Date of Issue : September 23, 2013

| **Test Result :** | **PASS *** |
|---|---|

* In the configuration tested, the EUT complied with the standards specified above

Authorized Signature



(Mark Zhu)
General Manager

The manufacture should ensure that all the products in series production are in conformity with the product sample detailed in this report.

If the product in this report is used in any configuration other than that detailed in the report, the manufacturer must ensure the new system complies with all relevant standards. Any mention of Shenzhen Certification Technology Service Co., Ltd. Or test done by Shenzhen Certification Technology Service Co., Ltd. Approvals in connection with, distribution or use of the product described in this report must be approved by Shenzhen Certification Technology Service Co., Ltd. Approvals in writing.

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# 1 General Information

## 1.1 Description of Device (EUT)

| | | |
|---|---|---|
| Trade Name | : | N/A |
| EUT<br>Model No. | : | Tablet pc<br>CPITP101 |
| Radio Technology | : | Bluetooth 3.0, Bluetooth 4.0<br>WIFI: IEEE 802..11 b,g,n/HT20,n/HT40 |
| Note | : | This report is only test the Bluetooth 4.0, For other transmitters is tested and reported in another radio test report. |
| Type of Antenna | : | For Bluetooth: Integral Antenna, Maximum Gain is 2dBi<br>For WIFI: Integral Antenna, Maximum Gain 2dBi |
| Operation Frequency | : | 2402MHz-2480MHz for Bluetooth,<br>2412MHz-2462MHz for IEEE 802.11 b,g.n/HT20,<br>2422MHz-2452MHz for IEEE 802.11 n/HT40 for WIFI |
| Channel number | : | 79 for BT 3.0<br>40 for BT 4.0<br>11 for 802.11b.g.n/HT20<br>7 for 802.11n/HT40 |
| Modulation type | : | For Bluetooth 3.0: GFSK, π/4 DQPSK, 8- DPSK<br>For Bluetooth 4.0: GFSK<br>For WIFI: IEEE 802.11b: DSSS(CCK, DQPSK, DBPSK)<br>IEEE 802.11g: OFDM(64QAM, 16QAM, QPSK, BPSK)<br>IEEE 802.11n HT20: OFDM (64QAM, 16QAM, QPSK, BPSK)<br>IEEE 802.11n HT40: OFDM (64QAM, 16QAM, QPSK, BPSK) |
| Power Supply | : | DC 3.7V Supply by battery<br>DC 5V Supply by AC 120V/60Hz adapter |
| Applicant | : | Wanxin Image Corporation |
| Address | : | 4/5F, 518 Zhonghua Rd. Sec.4, Xiangshan Dist., Hsinchu city, Taiwan |
| Manufacturer | : | Wanxin Image Corporation |
| Address | : | 4/5F, 518 Zhonghua Rd. Sec.4, Xiangshan Dist., Hsinchu city, Taiwan |

## 1.2 Description of Test Facility

Shenzhen Certification Technology Service Co., Ltd.
2F, Building B, East Area of Nanchang Second Industrial Zone,
Gushu 2nd Road, Bao'an District, Shenzhen 518126, P.R. China
FCC Registered No.:197647

# 2 EMC Equipment List

| Equipment | Manufacture | Model No. | Serial No. | Last cal. | Cal Interval |
|---|---|---|---|---|---|
| 3m Semi-Anechoic | ETS-LINDGREN | N/A | SEL0017 | Nov. 16, 12 | 1Year |
| Spectrum analyzer | Agilent | E4407B | MY49510055 | Oct. 31, 12 | 1Year |
| Receiver | R&S | ESCI | 101165 | Oct. 31, 12 | 1Year |
| Receiver | R&S | ESCI | 101202 | Oct. 31, 12 | 1Year |
| Bilog Antenna | SCHWARZBECK | VULB 9168 | 9168-438 | Feb. 20, 13 | 1Year |
| Horn Antenna | SCHWARZBECK | BBHA 9120 D | BBHA 9120 D(1201) | Feb. 20, 13 | 1Year |
| Horn Antenna | SCHWARZBECK | BBHA 9170 | BBHA 9170 D(1432) | Feb. 20, 13 | 1Year |
| Active Loop Antenna | Beijing Daze | ZN30900A | SEL0097 | Feb.20, 13 | 1Year |
| L.I.S.N. | SCHWARZBECK | NSLK8126 | 8126466 | Oct. 31, 12 | 1Year |
| Cable | Resenberger | N/A | No.1 | Oct. 31, 12 | 1Year |
| Cable | SCHWARZBECK | N/A | No.2 | Oct. 31, 12 | 1Year |
| Cable | SCHWARZBECK | N/A | No.3 | Oct. 31, 12 | 1Year |
| Power Meter | Anritsu | ML2487A | 6K00001491 | Oct. 31, 12 | 1Year |
| Power sensor | Anritsu | ML2491A | 32516 | Oct. 31, 12 | 1Year |
| Pre-amplifier | SCHWARZBECK | BBV9743 | 9743-019 | Oct. 31, 12 | 1Year |
| Pre-amplifier | Quietek | AP-180C | CHM-0602012 | Oct. 31, 12 | 1Year |

# 3 Test Procedure

**POWER LINE CONDUCTED INTERFERENCE:** The test procedure used was ANSI Standard C63.4-2003 using a 50 u H LISN. Both Lines were observed. The bandwidth of the receiver was 10kHz with an appropriate sweep speed. The ambient temperature of the EUT was 25℃ with a humidity of 58%.

**RADIATION INTERFERENCE:** The test procedure used was ANSI Standard C63.4-2003 using a ANRITSU spectrum analyzer with a pre-selector. The analyzer was calibrated in dB above a micro volt at the output of the antenna. The resolution bandwidth was 100kHz and the video bandwidth was 300 kHz up to 1 GHz and 1 MHz with a video BW of 3MHz above 1 GHz. The ambient temperature of the EUT was 25℃ with a humidity of 58%.

**FORMULA OF CONVERSION FACTORS:** The Field Strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBuV) to the antenna correction factor supplied by the antenna manufacturer and cable loss. The antenna correction factors and cable loss are stated in terms of dB. The gain of the Pre-selector was accounted for in the Spectrum Analyzer Meter Reading.
Example:
Freq (MHz) METER READING + ACF + CABLE = FS
33.20 dBuV + 10.36 dB + 0.9 dB= 44.46 dBuV/m @ 3m
ANSI STANDARD C63.4-2003 10.1.7 MEASUREMENT PROCEDURES: The EUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The EUT was placed in the center of the table (1.5m side). The table used for radiated measurements is capable of continuous rotation. When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes. The situation was similar for the conducted measurement except that the table did not rotate. The EUT was setup as described in ANSI Standard C63.4-2003 10.1.7 with the EUT 40 cm from the vertical ground wall.

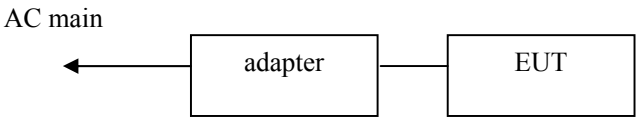
# 4 Summary of Measurement

## 4.1 Summary of test result

| Test Item | Test Requirement | Standards Paragraph | Result |
|---|---|---|---|
| Spurious Emission | FCC PART 15 : 2012 | Section 15.247&15.209 | Compliance |
| Conduction Emission | FCC PART 15: 2012 | Section 15.207 | Compliance |
| 6dB Bandwidth Test | FCC PART 15: 2012 | Section 15.247 | Compliance |
| Peak Power | FCC PART 15: 2012 | Section 15.247 | Compliance |
| Power Density | FCC PART 15: 2012 | Section 15.247 | Compliance |
| Band Edge | FCC PART 15: 2012 | Section 15.247 | Compliance |
| Antenna Requirement | FCC PART 15 : 2012 | Section 15.203 | Compliance |

Note: The EUT has been tested as an independent unit. And Continual Transmitting in maximum power (The new battery be used during Test)

## 4.2 Test connection




## 4.3 Assistant equipment used for test

| | | |
|---|---|---|
| Description | : | AC ADAPTER |
| Manufacturer | : | N/A |
| Model No. | : | JY-05200 |

## 4.4 Test mode

The test software "Bluesuite" was used to control EUT work in Continuous TX mode, and select test channel, wireless mode

| Tested mode, channel, and data rate information | | |
|---|---|---|
| Mode | Channel | Frequency (MHz) |
| GFSK | Low :CH0 | 2402 |
| | Middle: CH19 | 2440 |
| | High: CH39 | 2480 |

## 4.5 Test Conditions

| | |
|---|---|
| Temperature range | 21-25℃ |
| Humidity range | 40-75% |
| Pressure range | 86-106kPa |

## 4.6 Measurement Uncertainty (95% confidence levels, k=2)

| Item | MU | Remark |
|---|---|---|
| Uncertainty for Power point Conducted Emissions Test | 2.42dB | |
| Uncertainty for Radiation Emission test in 3m chamber (below 30MHz) | 2.13 dB | Polarize: V |
| | 2.57dB | Polarize: H |
| Uncertainty for Radiation Emission test in 3m chamber (30MHz to 1GHz) | 3.54dB | Polarize: V |
| | 4.1dB | Polarize: H |
| Uncertainty for Radiation Emission test in 3m chamber (1GHz to 25GHz) | 2.08dB | Polarize: H |
| | 2.56dB | Polarize: V |
| Uncertainty for radio frequency | 1×10-9 | |
| Uncertainty for conducted RF Power | 0.65dB | |
| Uncertainty for temperature | 0.2℃ | |
| Uncertainty for humidity | 1% | |
| Uncertainty for DC and low frequency voltages | 0.06% | |

# 5 Spurious Emission

## 5.1 Radiation Emission

### 5.1.1 Radiation Emission Limits(15.209)

| 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 |

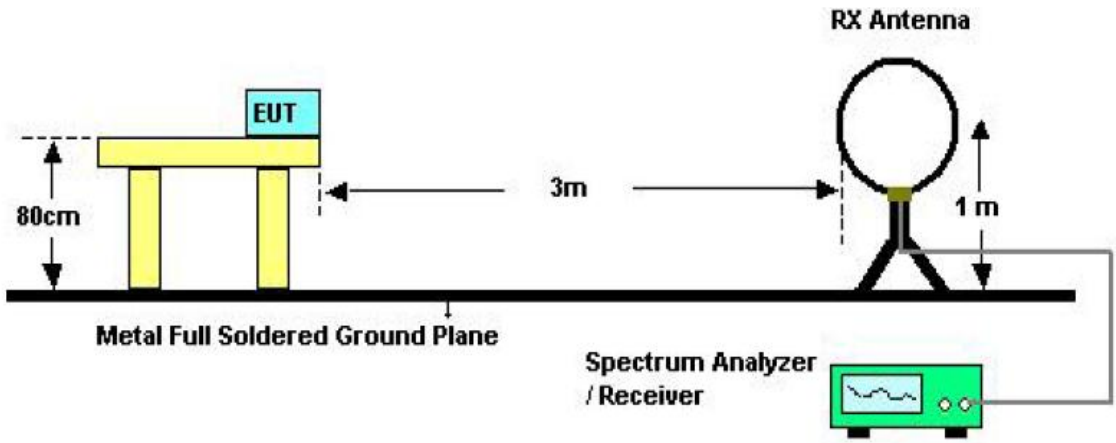
Harmonic emissions limits comply with below 54 dBuV/m at 3m. Other emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or comply with the radiated emissions limits specified in section 15.209(a) limit in the table below has to be followed.

**NOTE:**

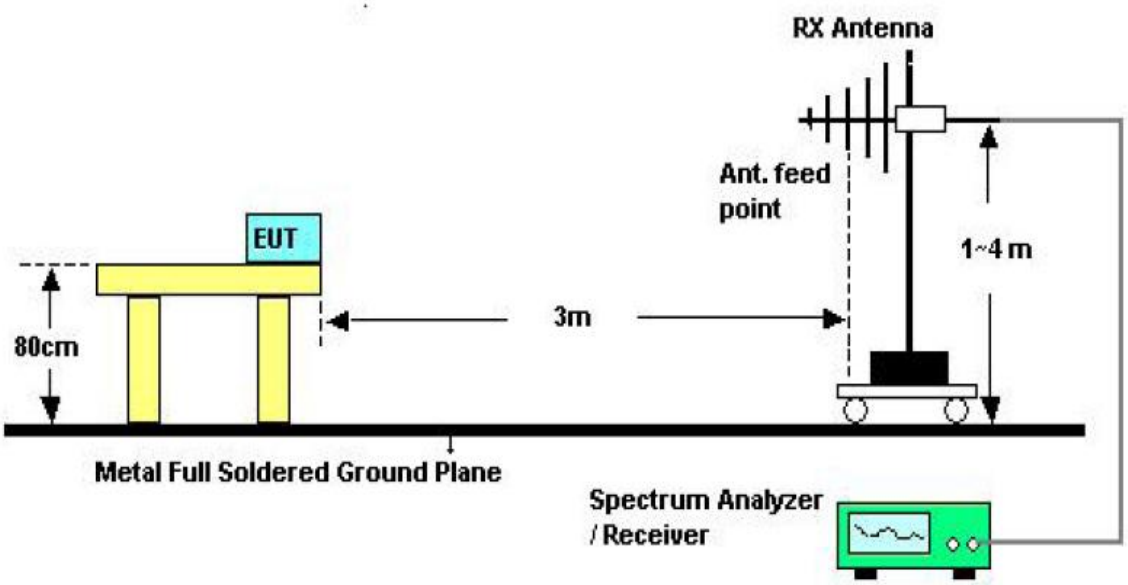
a) The tighter limit applies at the band edges.
b) Emission Level(dB uV/m)=20log Emission Level(Uv/m)

### 5.1.2 Test Setup

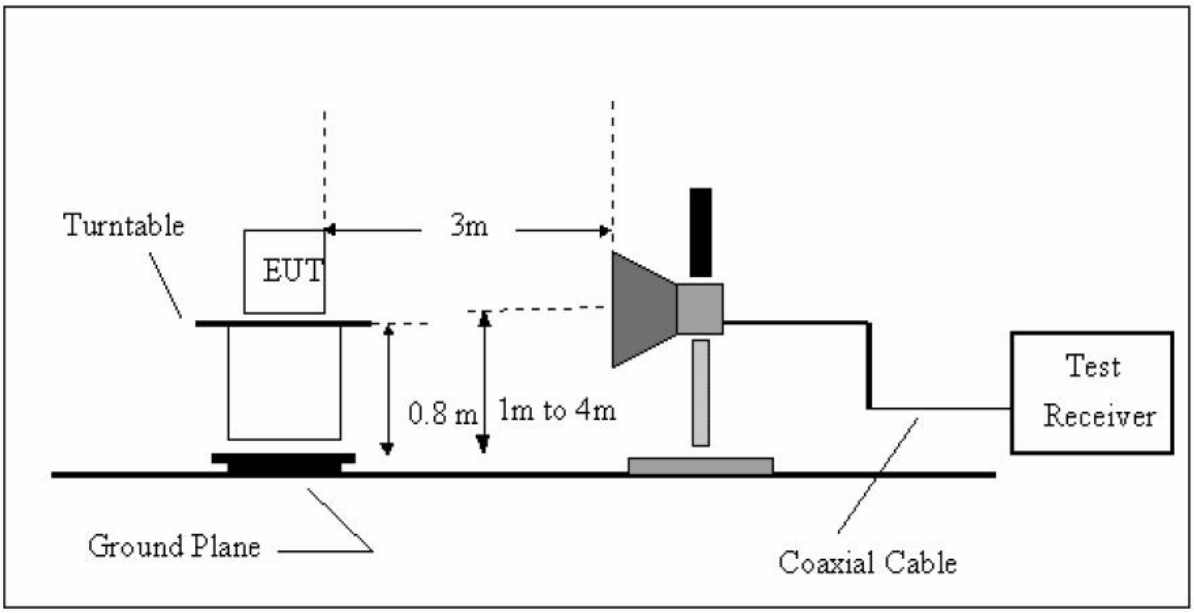
See the next page




Below 30MHz Test Setup




Above 30MHz Test Setup




Above 1GHz Test Setup

### 5.1.3 Test Procedure

a) The measuring distance of 3m shall be used for measurements at frequency up to 1GHz and above 1GHz, The EUT was placed on a rotating 0.8 m high above ground, The table was rotated 360 degrees to determine the position of the highest radiation
b) The Test antenna shall vary between 1m and 4m, Both Horizontal and Vertical antenna are set of make measurement.
c) 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 Qusia Peak Detector mode premeasured
d) If Peak value comply with QP limit Below 1GHz.The EUT deemed to comply with QP limit. But the Peak value and average value both need to comply with applicable limit above 1GHz.
e) For the actual test configuration, please see the test setup photo.

### 5.1.4 Test Equipment Setting For emission test Result

| | | |
|---|---|---|
| 9KHz~150KHz | RBW 200Hz | VBW1KHz |
| 150KHz~30MHz | RBW 9KHz | VBW 30KHz |
| 30MHZ~1GHz | RBW 120KHz | VBW 300KHz |
| Above 1GHz | RBW 1MHz | VBW 3MHz |

### 5.1.5 Test Condition

Continual Transmitting in maximum power.

### 5.1.6 Test Result

We have scanned the 10th harmonic from 9KHz to the EUT.

Detailed information please see the following page.

From 9KHz to 30MHz: Conclusion: PASS

Note: The amplitude of spurious emissions which are attenuated by more than 20dB below the permissible value has no need to be reported.

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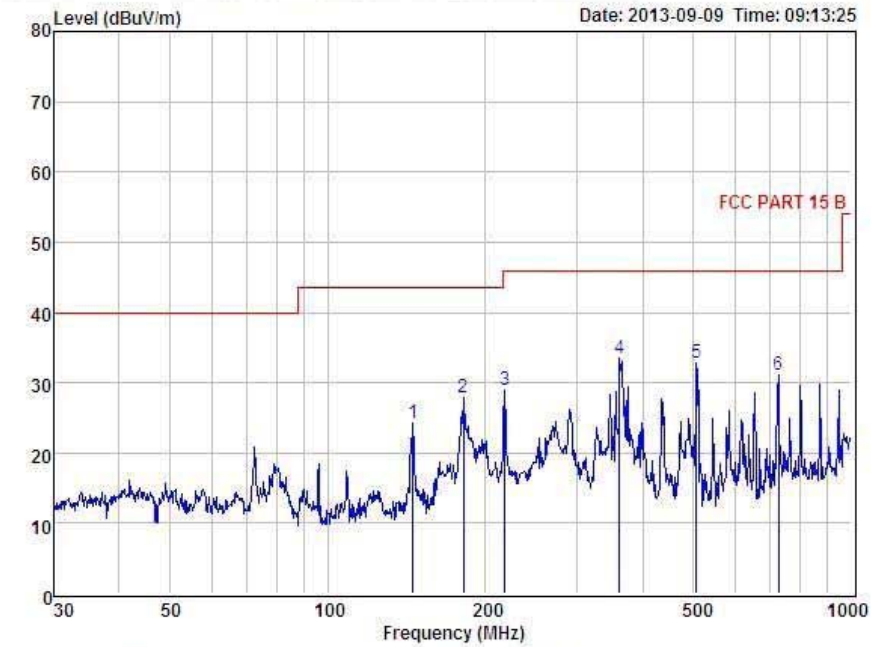
Website: http://www.cessz.com Email: Service@cessz.com




Condition : FCC PART 15 B 3m POL: HORIZONTAL
EUT : Tablet pc
Model No : CPITP101
Test Mode : Charging
Power : DC 5V Supply by AC 120V/60Hz adapter
Test Engineer : Store
Remark :
Temp : 24.2℃
Hum : 54%

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 145.35 | 36.97 | 13.77 | 26.90 | 0.44 | 24.28 | 43.50 | -19.22 | QP |
| 2 | 181.92 | 42.81 | 11.44 | 26.93 | 0.56 | 27.88 | 43.50 | -15.62 | QP |
| 3 | 218.31 | 44.78 | 10.53 | 27.06 | 0.63 | 28.88 | 46.00 | -17.12 | QP |
| 4 | 360.45 | 45.99 | 14.03 | 27.30 | 0.66 | 33.38 | 46.00 | -12.62 | QP |
| 5 | 506.48 | 43.00 | 16.65 | 27.64 | 0.88 | 32.89 | 46.00 | -13.11 | QP |
| 6 | 726.81 | 37.38 | 19.99 | 27.72 | 1.42 | 31.07 | 46.00 | -14.93 | QP |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

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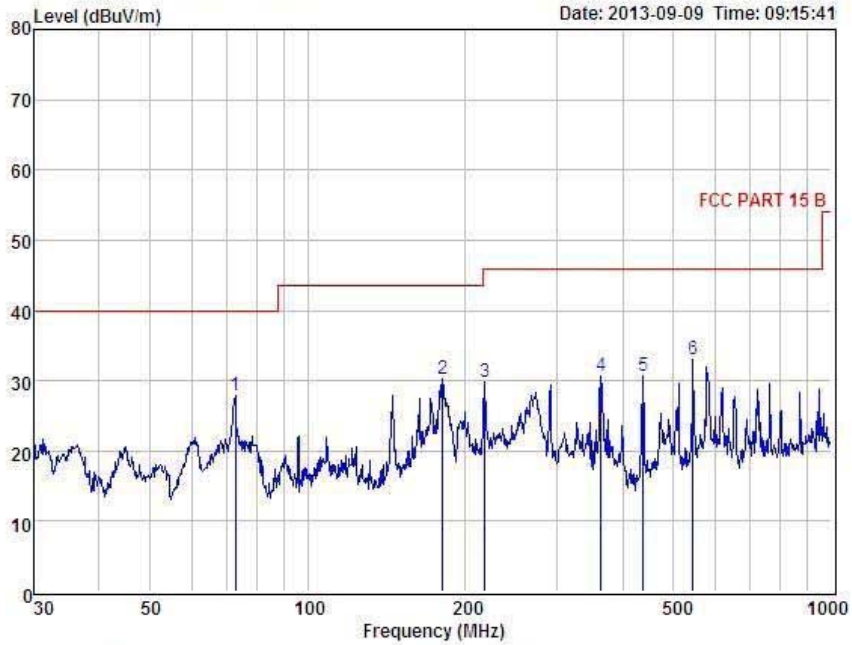



Condition : FCC PART 15 B 3m POL: VERTICAL
EUT : Tablet pc
Model No : CPITP101
Test Mode : Charging
Power : DC 5V Supply by AC 120V/60Hz adapter
Test Engineer : Store
Remark :
Temp : 24.2℃
Hum : 54%

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 72.85 | 44.18 | 10.21 | 26.77 | 0.21 | 27.83 | 40.00 | -12.17 | QP |
| 2 | 181.28 | 45.00 | 11.68 | 26.93 | 0.51 | 30.26 | 43.50 | -13.24 | QP |
| 3 | 218.31 | 45.74 | 10.53 | 27.06 | 0.63 | 29.84 | 46.00 | -16.16 | QP |
| 4 | 362.98 | 43.10 | 14.07 | 27.31 | 0.80 | 30.66 | 46.00 | -15.34 | QP |
| 5 | 437.12 | 41.72 | 15.68 | 27.48 | 0.72 | 30.64 | 46.00 | -15.36 | QP |
| 6 | 545.18 | 42.73 | 17.29 | 27.70 | 0.68 | 33.00 | 46.00 | -13.00 | QP |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

| 1GHz—25GHz Radiated emissison Test result | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| EUT: Tablet pc M/N: CPITP101 | | | | | | | | | |
| Power: DC 5V Supply by AC 120V/60Hz adapter | | | | | | | | | |
| Test date: 2013-09-17 Test site: 3m Chamber Tested by: Anna Fan | | | | | | | | | |
| Test mode: GFSK Tx CH0 2402MHz | | | | | | | | | |
| Antenna polarity: Vertical | | | | | | | | | |
| No | Freq (MHz) | Read Level (dBuV/m) | Antenna Factor (dB/m) | Cable loss(dB) | Amp Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
| 1 | 4804 | 48.67 | 33.95 | 10.18 | 34.26 | 58.54 | 74.00 | 15.46 | PK |
| 2 | 4804 | 32.15 | 33.95 | 10.18 | 34.26 | 42.02 | 54.00 | 11.98 | AV |
| 3 | 7206 | / | | | | | | | |
| 4 | 9608 | / | | | | | | | |
| 5 | 12010 | / | | | | | | | |
| Antenna Polarity: Horizontal | | | | | | | | | |
| 1 | 4804 | 49.32 | 33.95 | 10.18 | 34.26 | 59.19 | 74.00 | 14.81 | PK |
| 2 | 4804 | 34.71 | 33.95 | 10.18 | 34.26 | 44.58 | 54.00 | 9.42 | AV |
| 3 | 7206 | / | | | | | | | |
| 4 | 9608 | / | | | | | | | |
| 5 | 12010 | / | | | | | | | |
| Note:<br>1, Measuring frequency from 1GHz to 25GHz<br>2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK<br>2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK<br>3, Result = Read level + Antenna factor + cable loss-Amp factor<br>4, All the other emissions not reported were too low to read and deemed to comply with FCC limit. | | | | | | | | | |

| 1GHz—25GHz Radiated emission Test result | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| EUT: Tablet pc M/N: CPITP101 | | | | | | | | | |
| Power: DC 5V Supply by AC 120V/60Hz adapter | | | | | | | | | |
| Test date: 2013-09-17 Test site: 3m Chamber Tested by: Anna Fan | | | | | | | | | |
| Test mode: GFSK Tx CH19 2440MHz | | | | | | | | | |
| Antenna polarity: Vertical | | | | | | | | | |
| No | Freq (MHz) | Read Level (dBuV/m) | Antenna Factor (dB/m) | Cable loss(dB) | Amp Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
| 1 | 4880 | 47.52 | 33.93 | 10.20 | 34.29 | 57.36 | 74.00 | 16.64 | PK |
| 2 | 4880 | 33.19 | 33.93 | 10.20 | 34.29 | 43.03 | 54.00 | 10.97 | AV |
| 3 | 7320 | / | | | | | | | |
| 4 | 9760 | / | | | | | | | |
| 5 | 12200 | / | | | | | | | |
| Antenna Polarity: Horizontal | | | | | | | | | |
| 1 | 4880 | 48.22 | 33.93 | 10.20 | 34.29 | 58.06 | 74.00 | 15.94 | PK |
| 2 | 4880 | 34.83 | 33.93 | 10.20 | 34.29 | 44.67 | 54.00 | 9.33 | AV |
| 3 | 7320 | / | | | | | | | |
| 4 | 9760 | / | | | | | | | |
| 5 | 12200 | / | | | | | | | |
| Note:<br>1, Measuring frequency from 1GHz to 25GHz<br>2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK<br>2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK<br>3, Result = Read level + Antenna factor + cable loss-Amp factor<br>4, All the other emissions not reported were too low to read and deemed to comply with FCC limit. | | | | | | | | | |

| 1GHz—25GHz Radiated emissison Test result | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| EUT: Tablet pc M/N: CPITP101 | | | | | | | | | |
| Power: DC 5V Supply by AC 120V/60Hz adapter | | | | | | | | | |
| Test date: 2013-09-17 Test site: 3m Chamber Tested by: Anna Fan | | | | | | | | | |
| Test mode: GFSK Tx CH39 2480MHz | | | | | | | | | |
| Antenna polarity: Vertical | | | | | | | | | |
| No | Freq (MHz) | Read Level (dBuV/m) | Antenna Factor (dB/m) | Cable loss(dB) | Amp Factor (dB) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
| 1 | 4960 | 48.14 | 33.98 | 10.22 | 34.25 | 58.09 | 74.00 | 15.91 | PK |
| 2 | 4960 | 35.16 | 33.98 | 10.22 | 34.25 | 45.11 | 54.00 | 8.89 | AV |
| 3 | 7440 | / | | | | | | | |
| 4 | 9920 | / | | | | | | | |
| 5 | 12400 | / | | | | | | | |
| Antenna Polarity: Horizontal | | | | | | | | | |
| 1 | 4960 | 46.53 | 33.98 | 10.22 | 34.25 | 56.48 | 74.00 | 17.52 | PK |
| 2 | 4960 | 34.37 | 33.98 | 10.22 | 34.25 | 44.32 | 54.00 | 9.68 | AV |
| 3 | 7440 | / | | | | | | | |
| 4 | 9920 | / | | | | | | | |
| 5 | 12400 | / | | | | | | | |
| Note:<br>1, Measuring frequency from 1GHz to 25GHz<br>2, Spectrum Set for PK measure: RBW=1MHz, VBW=1MHz, Sweep time=Auto, Detector: PK<br>2, Spectrum Set for AV measure: RBW=1MHz, VBW=10Hz, Sweep time=Auto, Detector: PK<br>3, Result = Read level + Antenna factor + cable loss-Amp factor<br>4, All the other emissions not reported were too low to read and deemed to comply with FCC limit. | | | | | | | | | |

# 6 POWER LINE CONDUCTED EMISSION

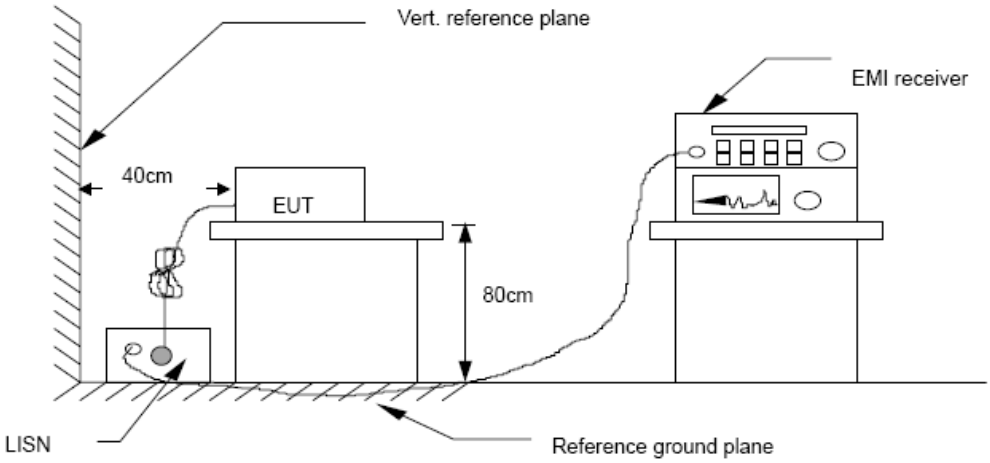
## 6.1 Conducted Emission Limits(15.207)

| Frequency MHz | Limits dB(μV) | |
|---|---|---|
| | Quasi-peak Level | Average Level |
| 0.15 -0.50 | 66 -56* | 56 - 46* |
| 0.50 -5.00 | 56 | 46 |
| 5.00 -30.00 | 60 | 50 |

Notes: 1. *Decreasing linearly with logarithm of frequency.
2. The lower limit shall apply at the transition frequencies.

3.The limit decreases in line with the logarithm of the frequency in the rang of 0.15 to 0.50 MHz.

## 6.2 Test Setup



## 6.3 Test Procedure

The EUT is put on the plane 0.8m high above the ground by insulating support and is connected to the power mains through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm coupling impedance for the EUT system. Please refer the block diagram of the test setup and photographs. Both sides of AC lines are checked to find out the maximum conducted emission. In order to find the maximum emission levels, the relative positions of equipment and all of the interface cables shall be changed according to ANSI C63.4-2003 on Conducted Emission Measurement.
The bandwidth of test receiver (R & S ESCS30) is set at 9 kHz.

## 6.4 Test Results

PASS. (See below detailed test data)

Shenzhen Certification Technology Service Co., Ltd.
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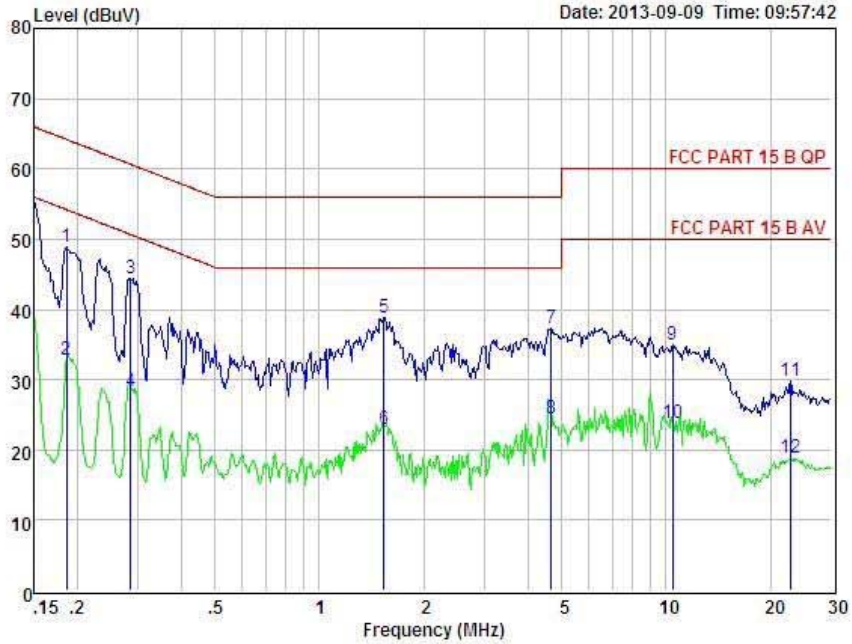
Website: http://www.cessz.com Email:Service@cessz.com




Condition : FCC PART 15 B QP POL: LINE Temp:24 ℃ Hum:56 %
EUT : Tablet pc
Model No : CPITP101
Test Mode : Charging
Power : DC 5V Supply by AC 120V/60Hz adapter
Test Engineer: Store
Remark :

| Item | Freq | Read | LISN Factor | Preamp Factor | Cable Lose | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 0.186 | 48.70 | 0.03 | 0.00 | 0.10 | 48.83 | 64.20 | -15.37 | QP |
| 2 | 0.186 | 32.70 | 0.03 | 0.00 | 0.10 | 32.83 | 54.20 | -21.37 | Average |
| 3 | 0.285 | 44.20 | 0.03 | 0.00 | 0.10 | 44.33 | 60.68 | -16.35 | QP |
| 4 | 0.285 | 28.20 | 0.03 | 0.00 | 0.10 | 28.33 | 50.68 | -22.35 | Average |
| 5 | 1.535 | 38.70 | 0.05 | 0.00 | 0.10 | 38.85 | 56.00 | -17.15 | QP |
| 6 | 1.535 | 22.70 | 0.05 | 0.00 | 0.10 | 22.85 | 46.00 | -23.15 | Average |
| 7 | 4.672 | 37.20 | 0.09 | 0.00 | 0.12 | 37.41 | 56.00 | -18.59 | QP |
| 8 | 4.672 | 24.20 | 0.09 | 0.00 | 0.12 | 24.41 | 46.00 | -21.59 | Average |
| 9 | 10.452 | 34.46 | 0.20 | 0.00 | 0.21 | 34.87 | 60.00 | -25.13 | QP |
| 10 | 10.452 | 23.46 | 0.20 | 0.00 | 0.21 | 23.87 | 50.00 | -26.13 | Average |
| 11 | 22.896 | 28.94 | 0.42 | 0.00 | 0.43 | 29.79 | 60.00 | -30.21 | QP |
| 12 | 22.896 | 17.94 | 0.42 | 0.00 | 0.43 | 18.79 | 50.00 | -31.21 | Average |

Remarks: Level = Read + LISN Factor - Preamp Factor + Cable loss

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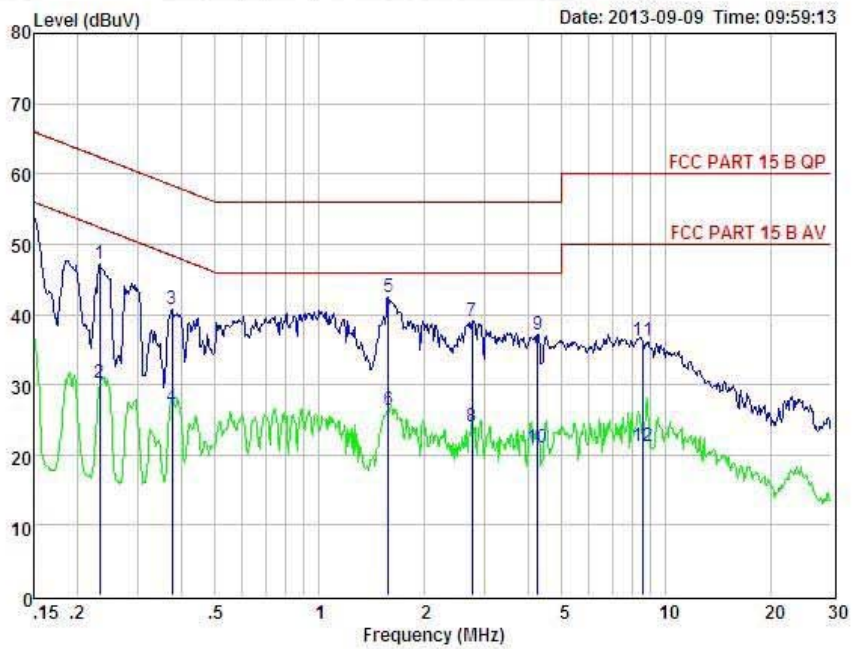
Website: http://www.cessz.com Email:Service@cessz.com




Condition : FCC PART 15 B QP POL: NEUTRAL Temp:24 ℃ Hum:56 %
EUT : Tablet pc
Model No : CPITP101
Test Mode : Charging
Power : DC 5V Supply by AC 120V/60Hz adapter
Test Engineer: Store
Remark :

| Item | Freq | Read | LISN Factor | Preamp Factor | Cable Lose | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 0.233 | 47.02 | 0.03 | 0.00 | 0.10 | 47.15 | 62.35 | -15.20 | QP |
| 2 | 0.233 | 30.02 | 0.03 | 0.00 | 0.10 | 30.15 | 52.35 | -22.20 | Average |
| 3 | 0.375 | 40.62 | 0.03 | 0.00 | 0.10 | 40.75 | 58.39 | -17.64 | QP |
| 4 | 0.375 | 26.62 | 0.03 | 0.00 | 0.10 | 26.75 | 48.39 | -21.64 | Average |
| 5 | 1.585 | 42.33 | 0.05 | 0.00 | 0.10 | 42.48 | 56.00 | -13.52 | QP |
| 6 | 1.585 | 26.33 | 0.05 | 0.00 | 0.10 | 26.48 | 46.00 | -19.52 | Average |
| 7 | 2.765 | 38.80 | 0.07 | 0.00 | 0.12 | 38.99 | 56.00 | -17.01 | QP |
| 8 | 2.765 | 23.80 | 0.07 | 0.00 | 0.12 | 23.99 | 46.00 | -22.01 | Average |
| 9 | 4.269 | 36.91 | 0.08 | 0.00 | 0.12 | 37.11 | 56.00 | -18.89 | QP |
| 10 | 4.269 | 20.91 | 0.08 | 0.00 | 0.12 | 21.11 | 46.00 | -24.89 | Average |
| 11 | 8.546 | 35.99 | 0.15 | 0.00 | 0.17 | 36.31 | 60.00 | -23.69 | QP |
| 12 | 8.546 | 20.99 | 0.15 | 0.00 | 0.17 | 21.31 | 50.00 | -28.69 | Average |

Remarks: Level = Read + LISN Factor - Preamp Factor + Cable loss

# 7 Conducted Maximum Output Power

## 7.1 Test limit

Please refer section15.247.

Regulation 15.247(b) The limit of Maximum Peak Output Power Measurement is 1W(30dBm)

## 7.2 Test Procedure

Details see the KDB558074 Meas Guidance V03

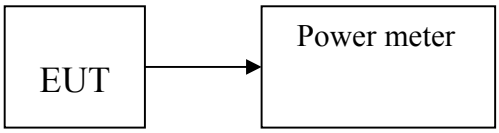
7.2.1 Place the EUT on the table and set it in transmitting mode.

7.2.2 Connected the EUT's antenna port to peak power meter by 20dB attenuator.

7.2.3 Measure out each mode and each bands peak output power of EUT.

Note: The cable loss and attenuator loss were offset into measure device as amplitude offset. Details see the KDB558074 DTS Meas Guidance V03

## 7.3 Test Setup




## 7.4 Test Results

PASS

Detailed information please see the following page.

| EUT: Tablet pc | | M/N: CPITP101 | | |
|---|---|---|---|---|
| Test date: 2013-09-13 | | Test site: RF site | Tested by: Simple Guan | |
| Mode | Frequency (MHz) | PK Output power (dBm) | Limit (dBm) | Margin (dB) |
| GFSK | 2402 | 4.46 | 30 | 17.69 |
| | 2440 | 4.79 | 30 | 18.01 |
| | 2480 | 4.71 | 30 | 16.30 |
| Conclusion: PASS | | | | |

# 8 PEAK POWER SPECTRAL DENSITY

## 8.1 Test limit

8.1.1 Please refer section15.247.

8.1.2 For direct sequence systems, the peak power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8dBm in any 3kHz band during any time interval of continuous transmission.

8.1.3 The direct sequence operating of the hybrid system, with the frequency hopping operation turned off, shall comply with the power density requirements of paragraph (d) of this section.

## 8.2 Method of measurement

Details see the KDB558074 V03 Meas Guidance

8.2.1 Place the EUT on the table and set it in transmitting mode.

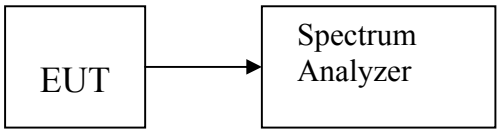
8.2.2 Remove the antenna from the EUT and then connect a low loss RF cable from the antenna port to the spectrum analyzer.

8.2.3 Set the spectrum analyzer as RBW = 3kHz, VBW = 10kHz, Span≥1.5DTS EBW, detail see the test plot.

8.2.4 Record the max reading.

8.2.5 Repeat the above procedure until the measurements for all frequencies are completed.

## 8.3 Test Setup



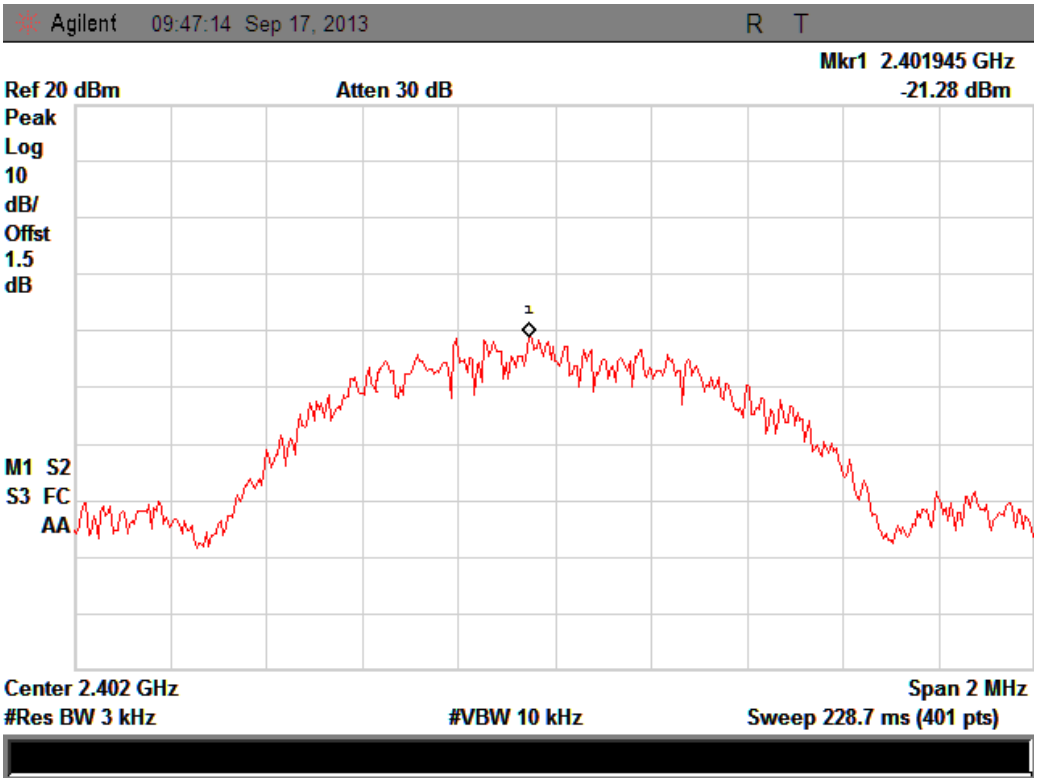

## 8.4 Test Results

PASS.

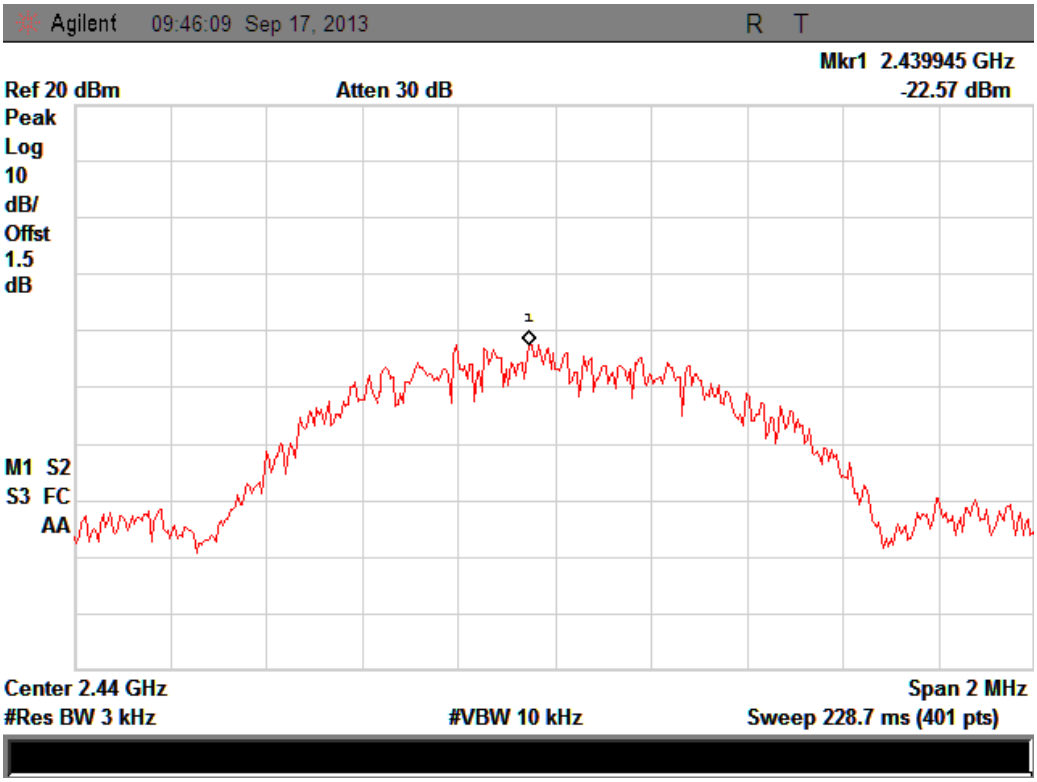
Detailed information please see the following page.

| Channel | Frequency (MHz) | Power Spectral Density (dBm) | Limit (dBm) | Result |
|---|---|---|---|---|
| CH0 | 2402 | -21.28 | 8 | PASS |
| CH19 | 2440 | -22.57 | 8 | PASS |
| CH39 | 2480 | -23.88 | 8 | PASS |

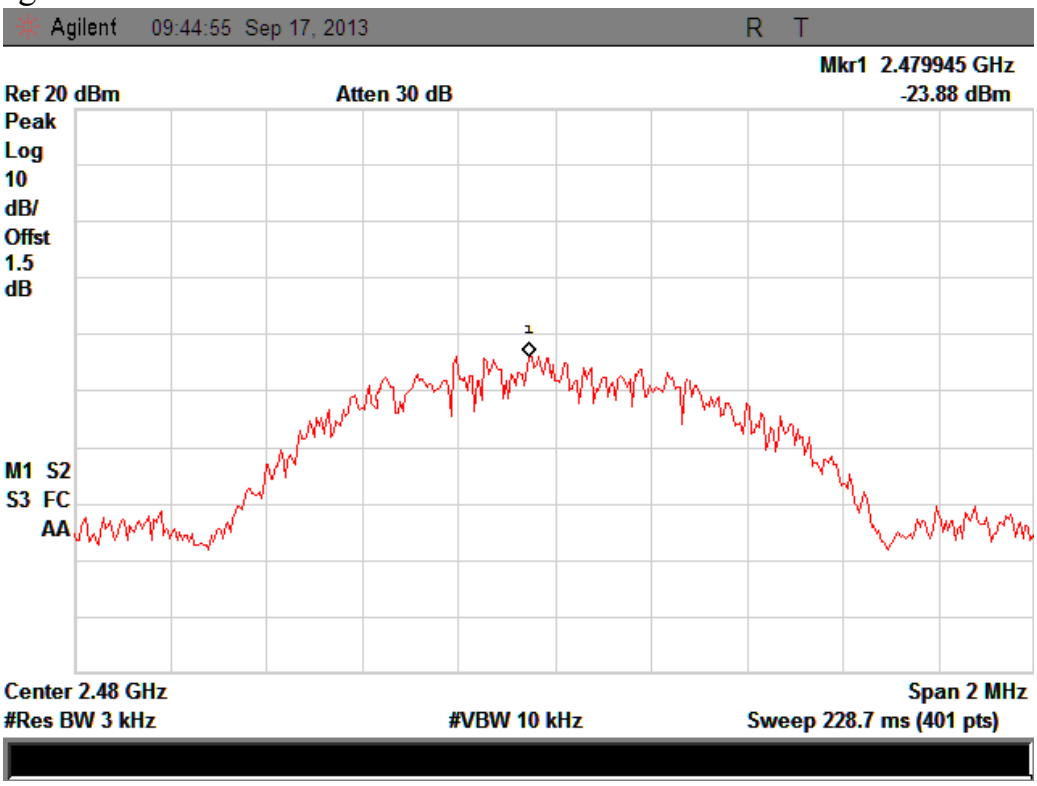
CH Low :


Agilent 09:47:14 Sep 17, 2013
R T
Mkr1 2.401945 GHz
Ref 20 dBm
Atten 30 dB
-21.28 dBm
Peak
Log
10
dB/
Offst
1.5
dB
M1 S2
S3 FC
AA
Center 2.402 GHz
Span 2 MHz
#Res BW 3 kHz
#VBW 10 kHz
Sweep 228.7 ms (401 pts)

CH Mid :


Agilent 09:46:09 Sep 17, 2013
R T
Mkr1 2.439945 GHz
Ref 20 dBm
Atten 30 dB
-22.57 dBm
Peak
Log
10
dB/
Offst
1.5
dB
M1 S2
S3 FC
AA
Center 2.44 GHz
Span 2 MHz
#Res BW 3 kHz
#VBW 10 kHz
Sweep 228.7 ms (401 pts)

CH High :


Agilent 09:44:55 Sep 17, 2013
R T
Mkr1 2.479945 GHz
-23.88 dBm
Ref 20 dBm
Atten 30 dB
Peak
Log
10
dB/
Offst
1.5
dB
M1 S2
S3 FC
AA
Center 2.48 GHz
#Res BW 3 kHz
#VBW 10 kHz
Span 2 MHz
Sweep 228.7 ms (401 pts)

# 9 6dB Bandwidth

## 9.1 Test limit

Please refer section15.247

For direct sequence systems, the minimum 6dB bandwidth shall be at least 500kHz.

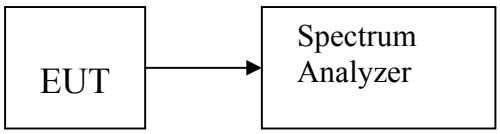
## 9.2 Method of measurement

Details see the KDB558074 V03 Meas Guidance

a)The bandwidth is measured at an amplitude level reduced 20dB from the reference level. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.

b) The test receiver set RBW = 100KHz, VBW≥3RBW, Sweep time set auto, detail see the test plot.

## 9.3 Test Setup



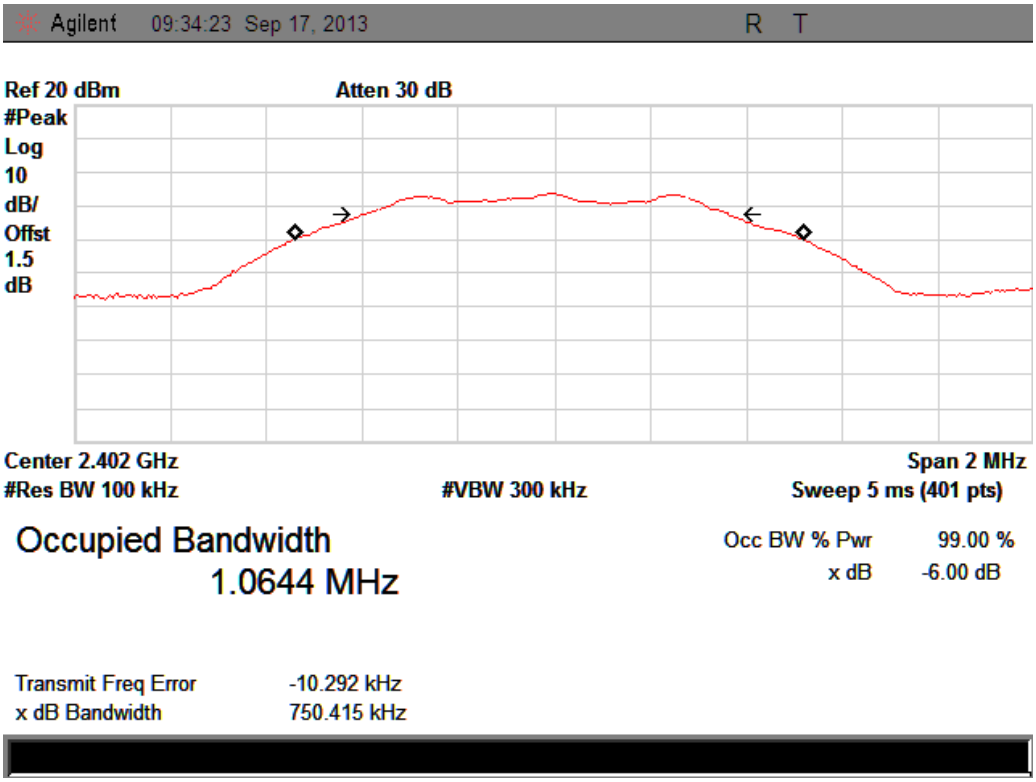

## 9.4 Test Results

PASS.

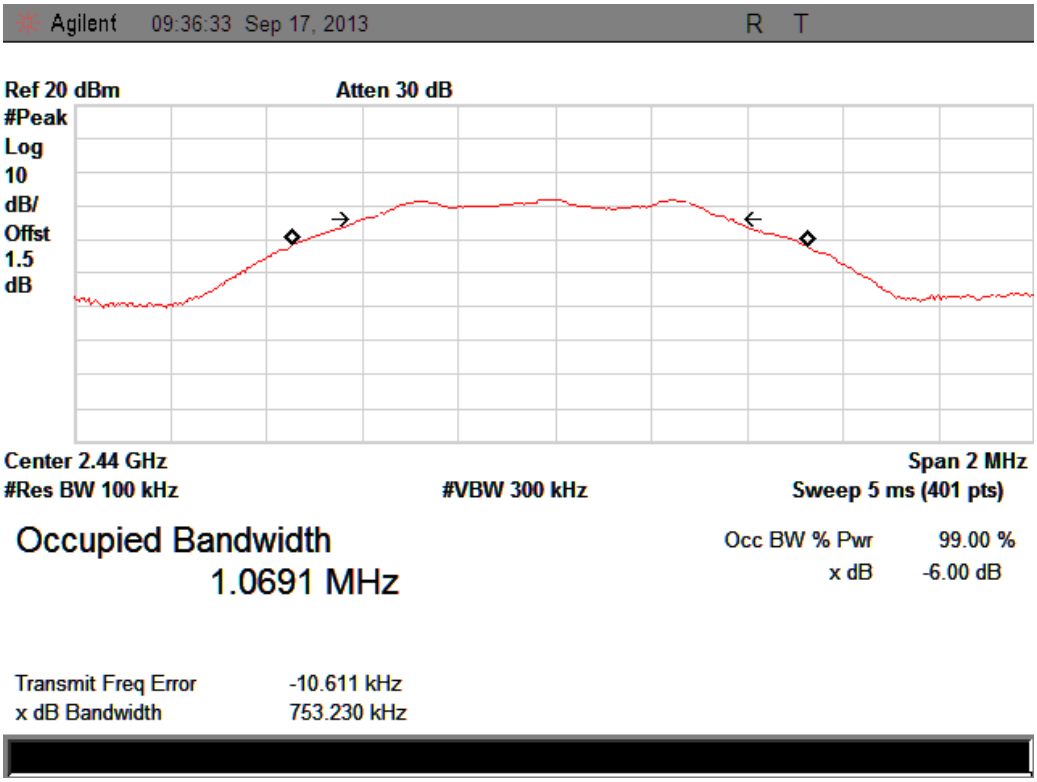
Detailed information please see the following page.

| Channel | Frequency (MHz) | 6dB Bandwidth (MHz) | Limit (MHz) | Result |
|---|---|---|---|---|
| CH0 | 2402 | 0.750 | 0.5 | PASS |
| CH19 | 2440 | 0.753 | 0.5 | PASS |
| CH39 | 2480 | 0.764 | 0.5 | PASS |

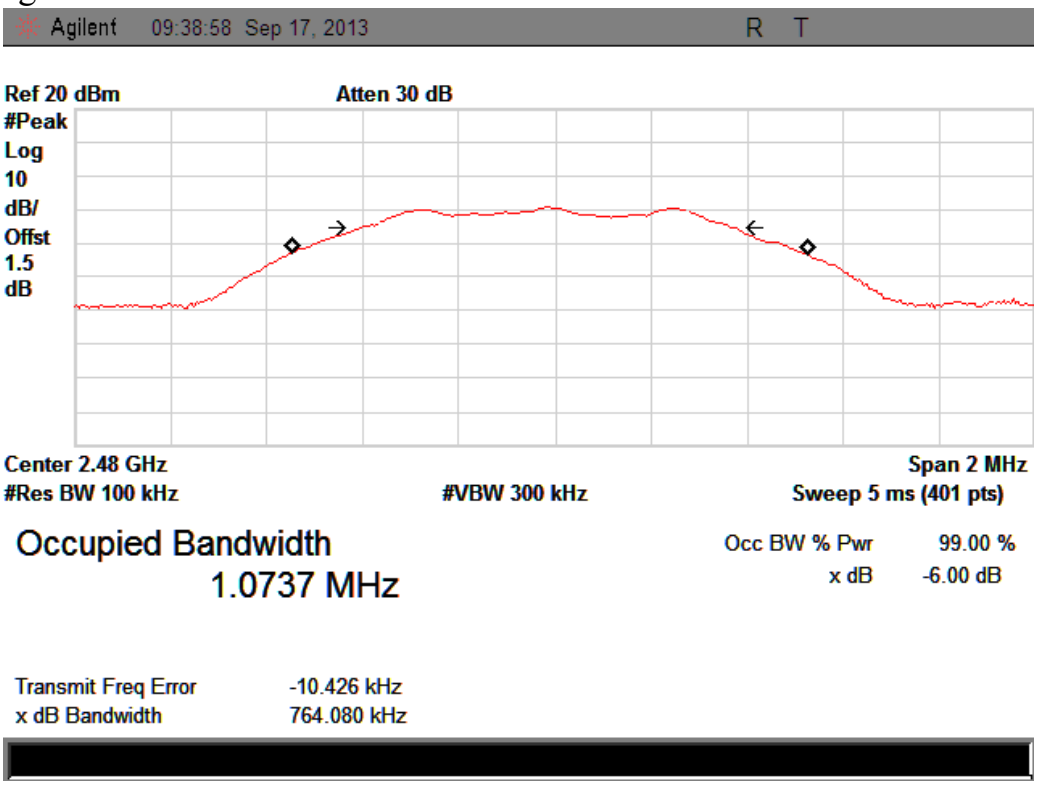
CH Low :


Agilent 09:34:23 Sep 17, 2013
R T
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1.5
dB
Center 2.402 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 2 MHz
Sweep 5 ms (401 pts)
Occupied Bandwidth
1.0644 MHz
Occ BW % Pwr 99.00 %
x dB -6.00 dB
Transmit Freq Error -10.292 kHz
x dB Bandwidth 750.415 kHz

CH Mid :


Agilent 09:36:33 Sep 17, 2013
R T
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1.5
dB
Center 2.44 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 2 MHz
Sweep 5 ms (401 pts)
Occupied Bandwidth
1.0691 MHz
Occ BW % Pwr 99.00 %
x dB -6.00 dB
Transmit Freq Error -10.611 kHz
x dB Bandwidth 753.230 kHz

CH High :


Agilent 09:38:58 Sep 17, 2013
R T
Ref 20 dBm
Atten 30 dB
#Peak
Log
10
dB/
Offst
1.5
dB
Center 2.48 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 2 MHz
Sweep 5 ms (401 pts)
Occupied Bandwidth
1.0737 MHz
Occ BW % Pwr 99.00 %
x dB -6.00 dB
Transmit Freq Error -10.426 kHz
x dB Bandwidth 764.080 kHz

# 10 Band Edge Check

## 10.1 Test limit

Please refer section15.247

All the lower and upper band-edges emissions appearing within 2310MHz to 2390MHz and 2483.5MHz to 2500MHz restricted frequency bands shall not exceed the limits shown in 15.209, all the other emissions outside operation frequency band 2400MHz to 2483.5MHz shall be at least 20dB below the fundamental emissions, or comply with 15.209 limits.

## 10.2 Test Procedure

12.2.1 Put the EUT on a 0.8m high table, power on the EUT. Emissions were scanned and measured rotating the EUT to 360 degrees, Find the maximum Emission

12.2.2 Check the spurious emissions out of band.

12.2.3 RBW, VBW Setting, please see the following test plot.

## 10.3 Test Setup

Same as 5.2.2.

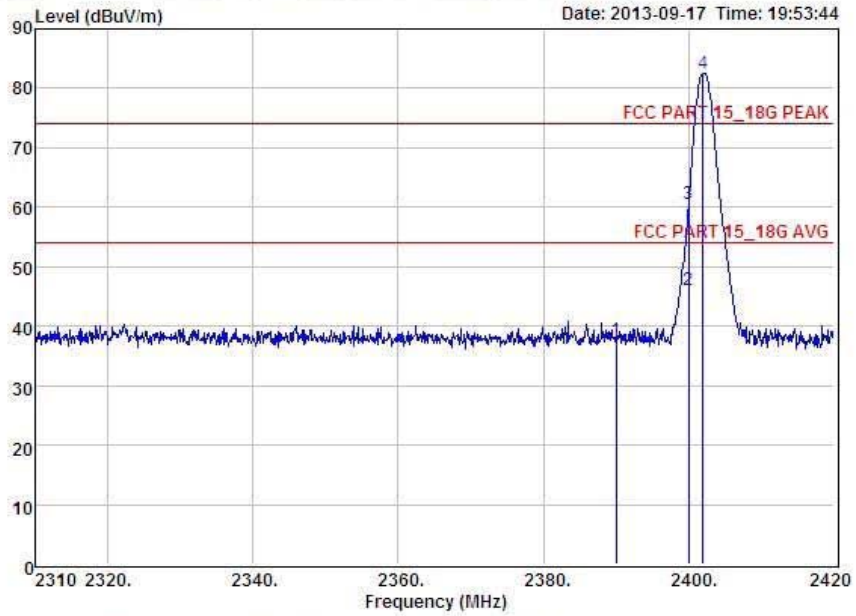
## 10.4 Test Result

PASS.

Detailed information please see the following page.

CH LOW :

Shenzhen Certification Technology Service Co., Ltd.
2F, Building B, East Area of Nanchang Second Industrial Zone,
Gushu 2nd Road, Bao'an District, Shenzhen 518126, P.R. China
Tel: 4006786199 FAX: +86-755-26736857
Website: http://www.cessz.com Email: Service@cessz.com




Condition : FCC PART 15_18G PEAK 3m POL: HORIZONTAL
EUT : Tablet pc
Model No : CPITP101
Test Mode : GFSK TX 2402MHz
Power : DC 5V Supply by AC 120V/60Hz adapter
Test Engineer : Anna
Remark :
Temp :
Hum :

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 2390.00 | 41.11 | 27.62 | 34.97 | 3.92 | 37.68 | 74.00 | -36.32 | Peak |
| 2 | 2400.00 | 49.38 | 27.62 | 34.97 | 3.94 | 45.97 | 54.00 | -8.03 | Average |
| 3 | 2400.00 | 63.93 | 27.62 | 34.97 | 3.94 | 60.52 | 74.00 | -13.48 | Peak |
| 4 | 2402.00 | 85.82 | 27.62 | 34.97 | 3.94 | 82.41 | 74.00 | 8.41 | Peak |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

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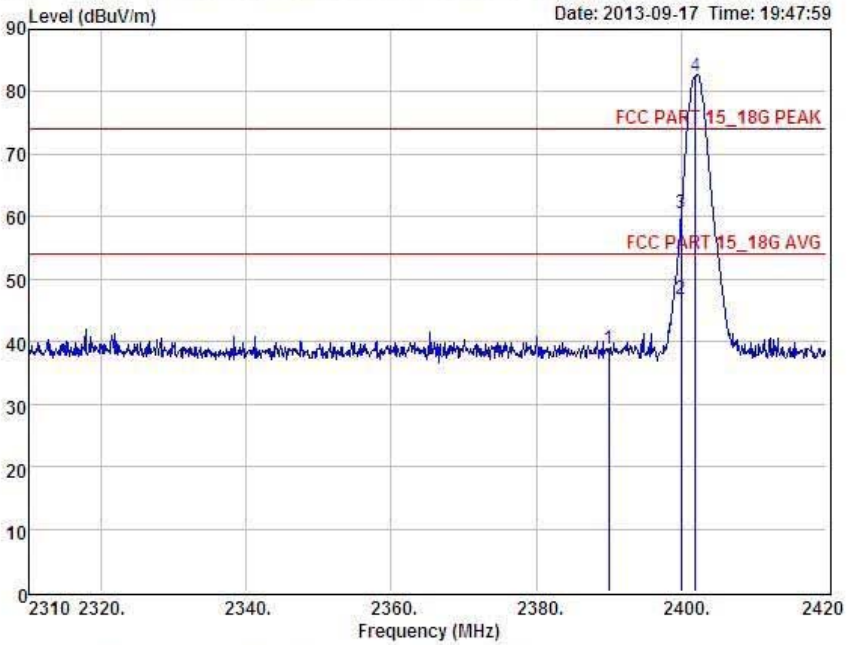
Tel: 4006786199 FAX: +86-755-26736857
Website: http://www.cessz.com Email: Service@cessz.com



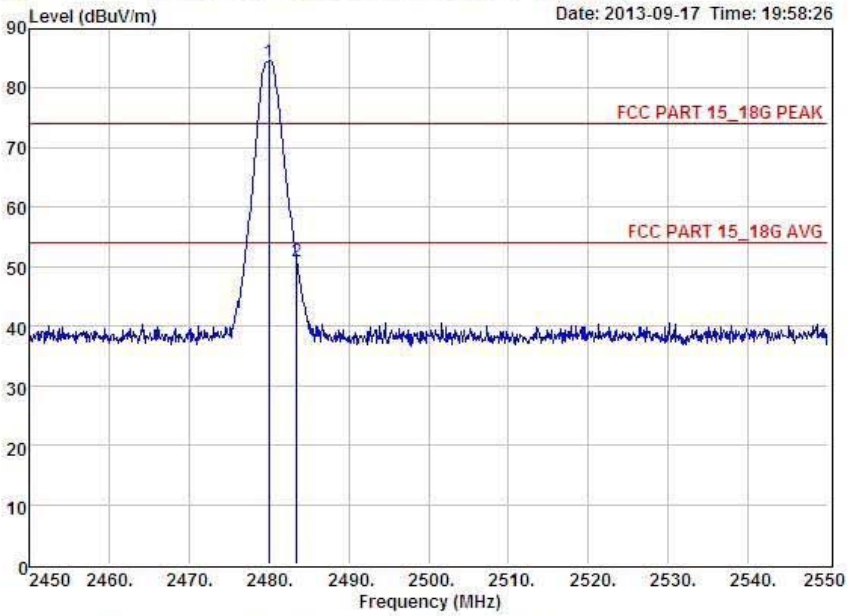

Condition : FCC PART 15_18G PEAK 3m POL: VERTICAL
EUT : Tablet pc
Model No : CPITP101
Test Mode : GFSK TX 2402MHz
Power : DC 5V Supply by AC 120V/60Hz adapter
Test Engineer : Anna
Remark :
Temp :
Hum :

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 2390.00 | 42.19 | 27.62 | 34.97 | 3.92 | 38.76 | 74.00 | -35.24 | Peak |
| 2 | 2400.00 | 50.12 | 27.62 | 34.97 | 3.94 | 46.71 | 54.00 | -7.29 | Average |
| 3 | 2400.00 | 63.87 | 27.62 | 34.97 | 3.94 | 60.46 | 74.00 | -13.54 | Peak |
| 4 | 2402.00 | 85.96 | 27.62 | 34.97 | 3.94 | 82.55 | 74.00 | 8.55 | Peak |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

CH High :

Shenzhen Certification Technology Service Co., Ltd.
2F, Building B, East Area of Nanchang Second Industrial Zone,
Gushu 2nd Road, Bao'an District, Shenzhen 518126, P.R. China
Tel: 4006786199 FAX: +86-755-26736857
Website: http://www.cessz.com Email: Service@cessz.com




Condition : FCC PART 15_18G PEAK 3m POL: HORIZONTAL
EUT : Tablet pc
Model No : CPITP101
Test Mode : GFSK TX 2480MHz
Power : DC 5V Supply by AC 120V/60Hz adapter
Test Engineer : Anna
Remark :
Temp :
Hum :

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 2480.00 | 87.94 | 27.59 | 34.97 | 4.00 | 84.56 | 74.00 | 10.56 | Peak |
| 2 | 2483.50 | 54.33 | 27.59 | 34.97 | 4.00 | 50.95 | 74.00 | -23.05 | Peak |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

Shenzhen Certification Technology Service Co., Ltd.
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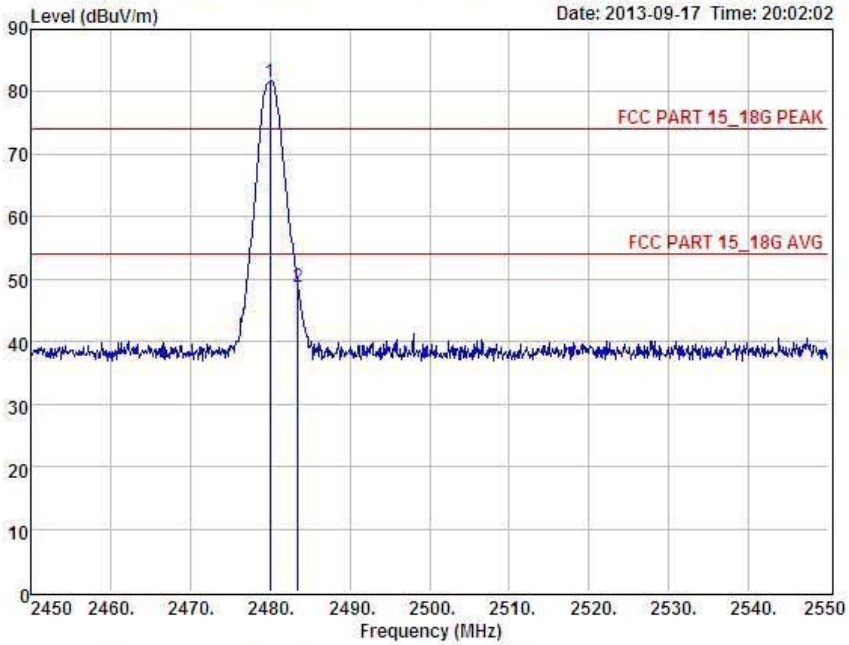
Tel: 4006786199 FAX: +86-755-26736857
Website: http://www.cessz.com Email: Service@cessz.com




Condition : FCC PART 15_18G PEAK 3m POL: VERTICAL
EUT : Tablet pc
Model No : CPITP101
Test Mode : GFSK TX 2480MHz
Power : DC 5V Supply by AC 120V/60Hz adapter
Test Engineer : Anna
Remark :
Temp :
Hum :

| Item | Freq | Read Level | Antenna Factor | Preamp Factor | Cable Loss | Level | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|---|---|
| | MHz | dBuV | dB | dB | dB | dBuV | dBuV | dBuV | |
| 1 | 2480.00 | 84.97 | 27.59 | 34.97 | 4.00 | 81.59 | 74.00 | 7.59 | Peak |
| 2 | 2483.50 | 52.11 | 27.59 | 34.97 | 4.00 | 48.73 | 74.00 | -25.27 | Peak |

Remark: Level = Read Level + Antenna Factor - Preamp Factor + Cable Loss

# 11 Antenna Requirement

## 11.1 Standard Requirement

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

## 11.2 Antenna Connected Construction

The directional gains of antenna used for transmitting is 2 dBi, and the antenna connector is de-signed with permanent attachment and no consideration of replacement. Please see EUT photo for details.

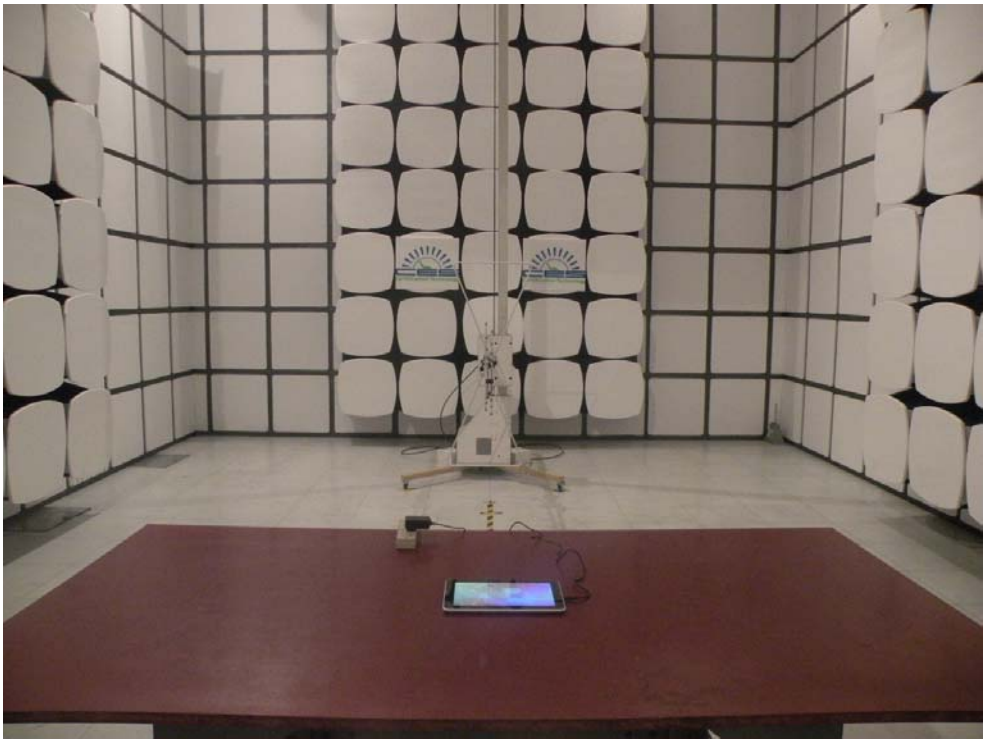
## 11.3 Result

The EUT antenna is Integral Antenna. It comply with the standard requirement.

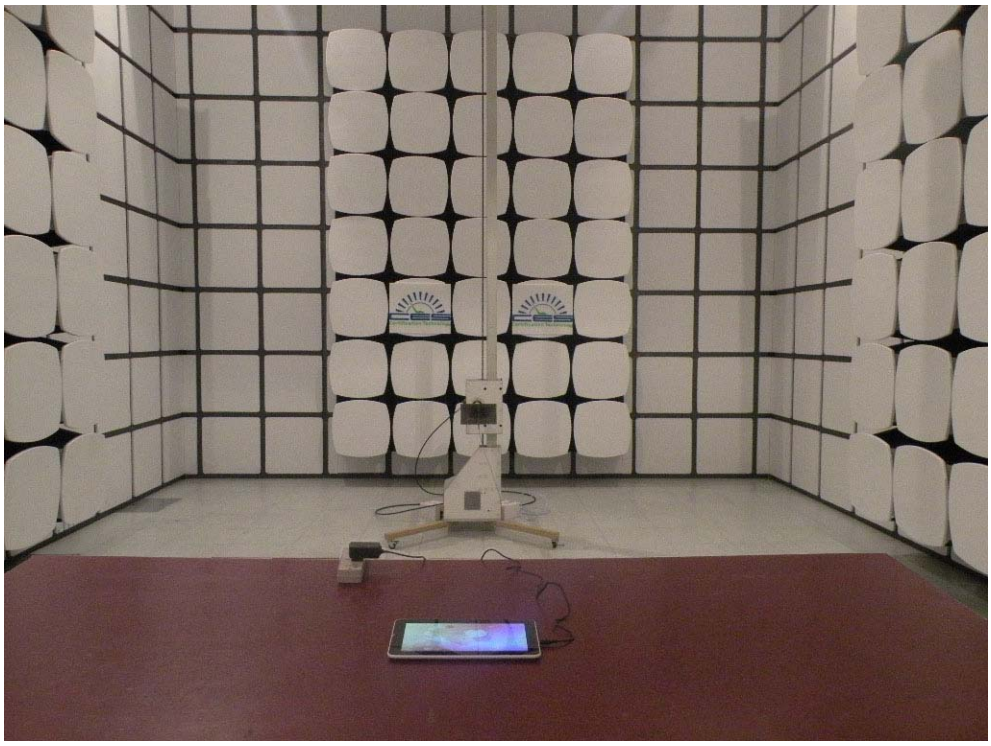
# 12 Photographs of Test Setup

## Photographs-Radiated Emission Test Setup in Chamber

Below 1G

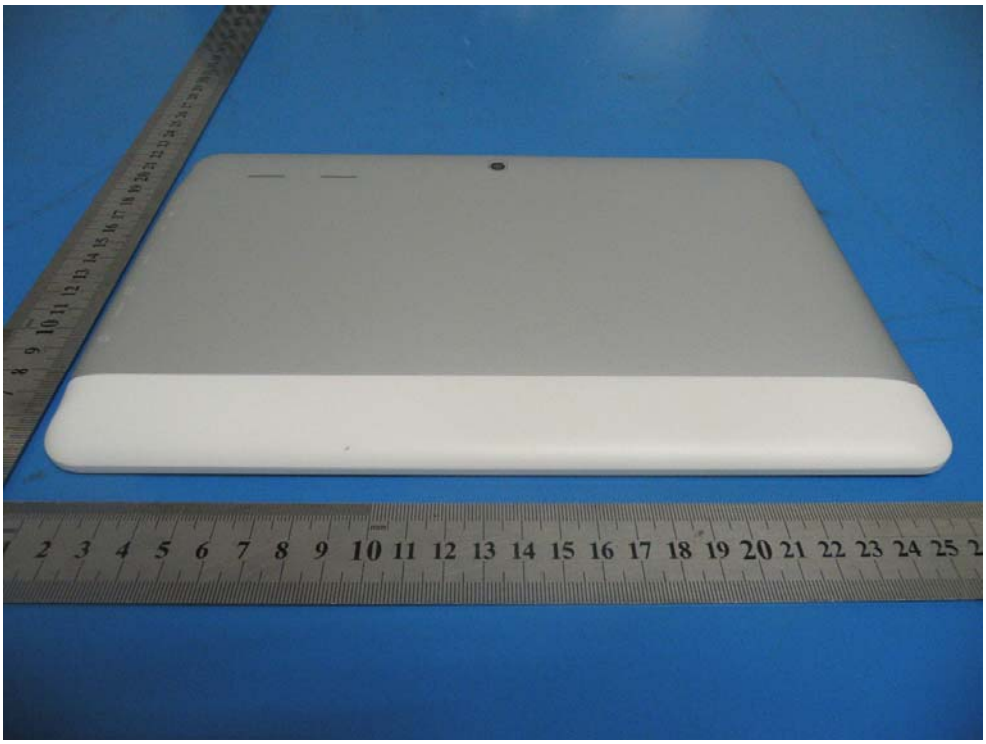


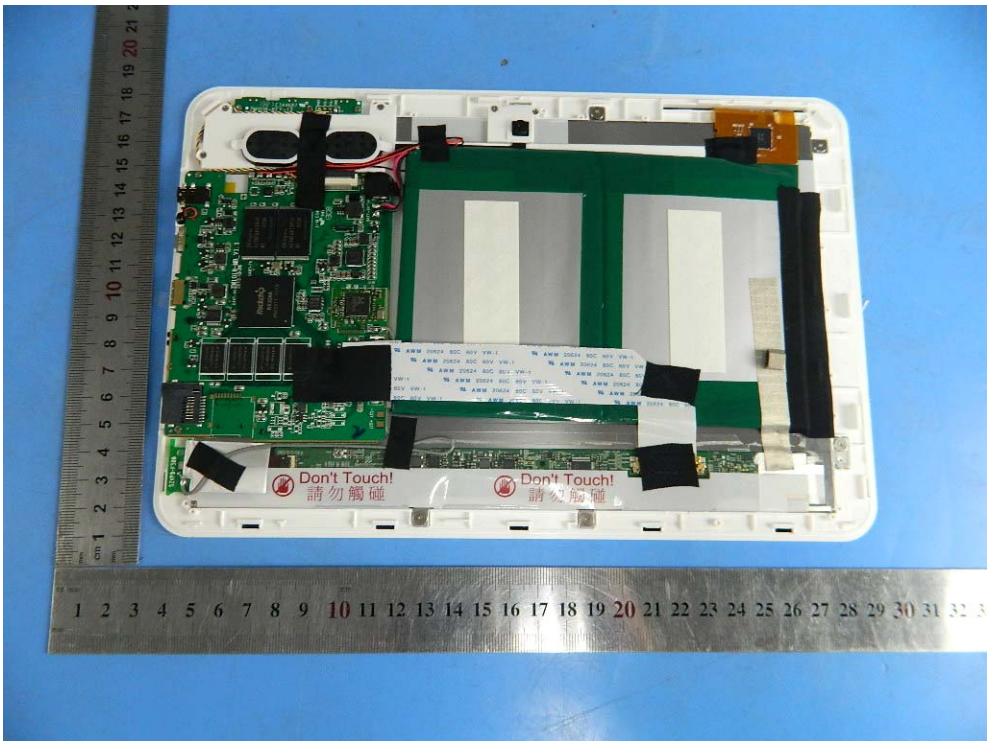
Above 1G

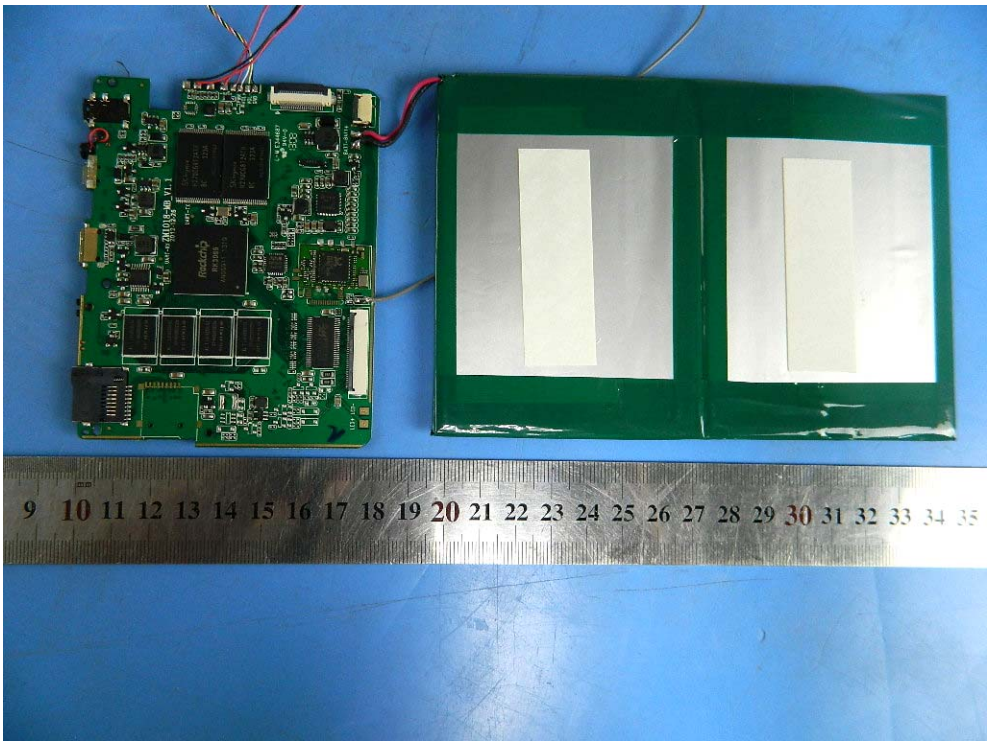


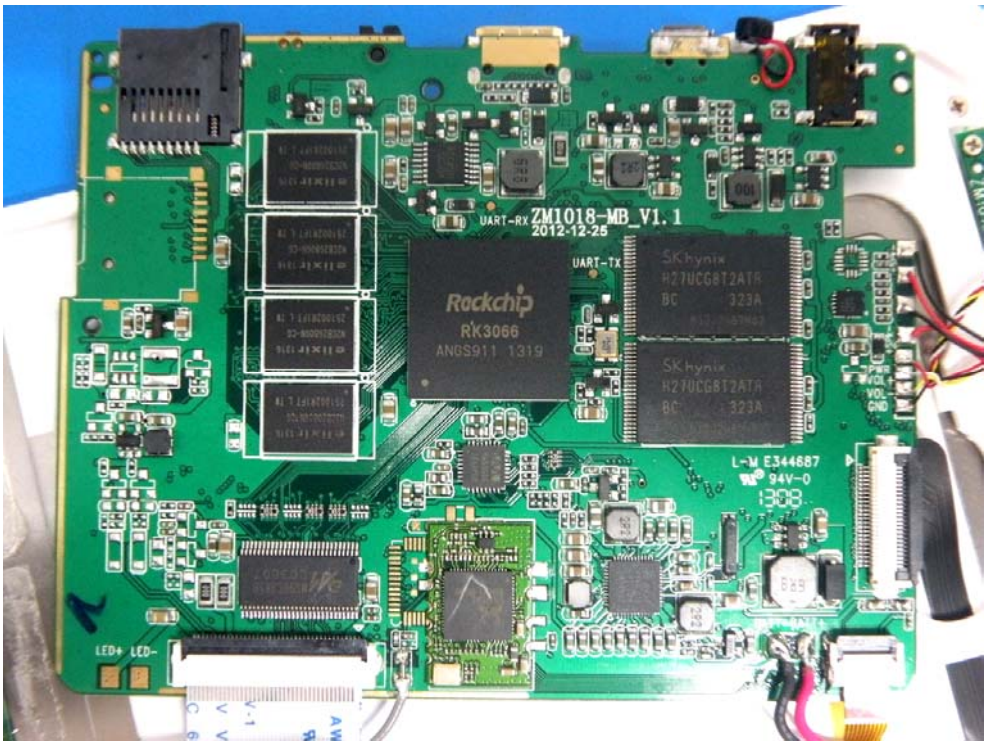
Conducted Emission Test Setup

# 13 Photographs of EUT




Don't Touch!
請勿觸碰
Don't Touch!

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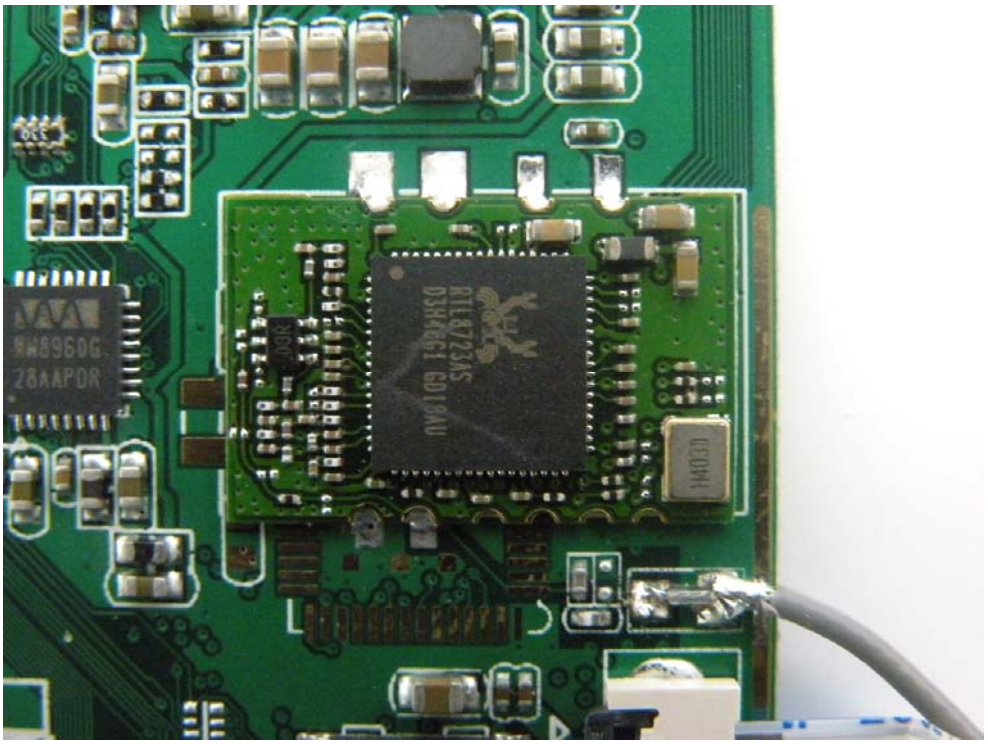
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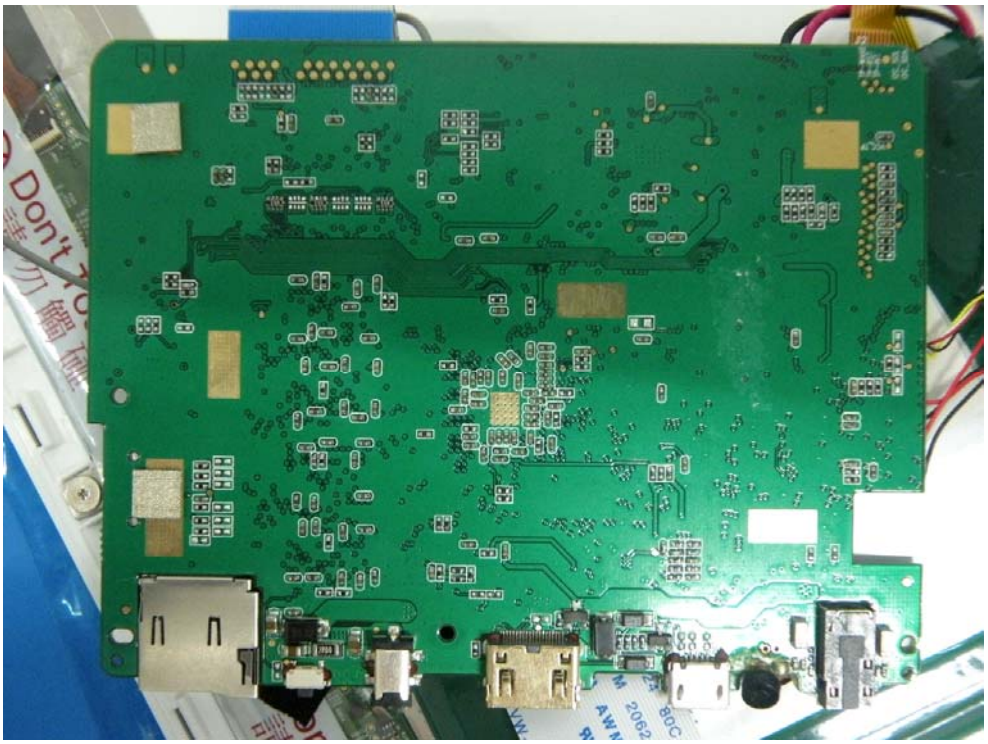

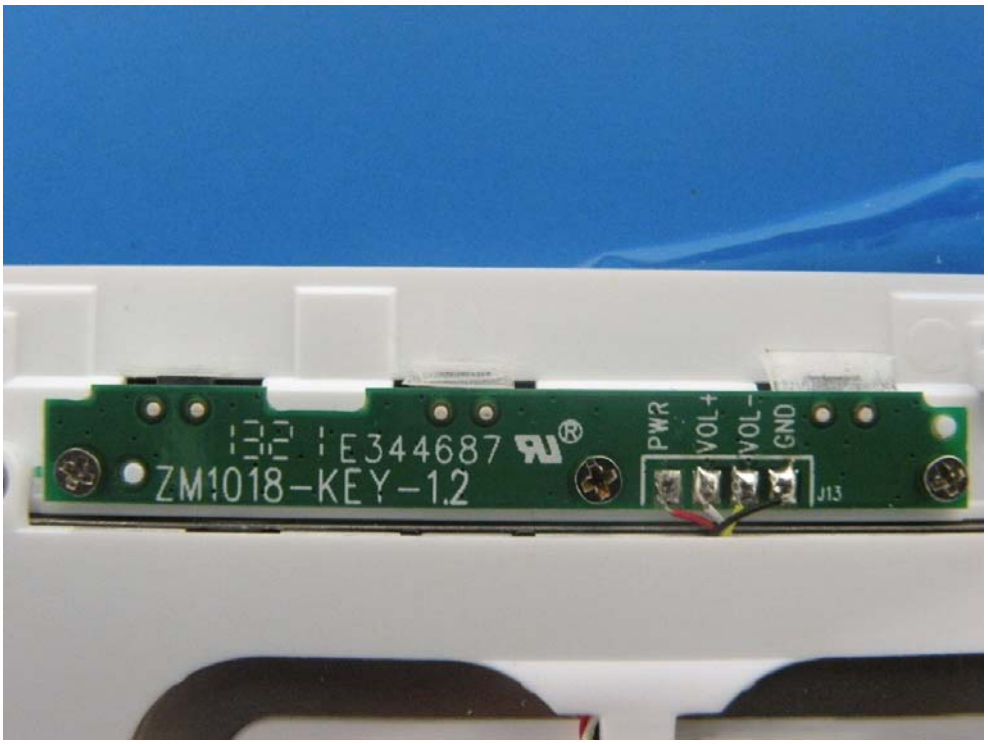
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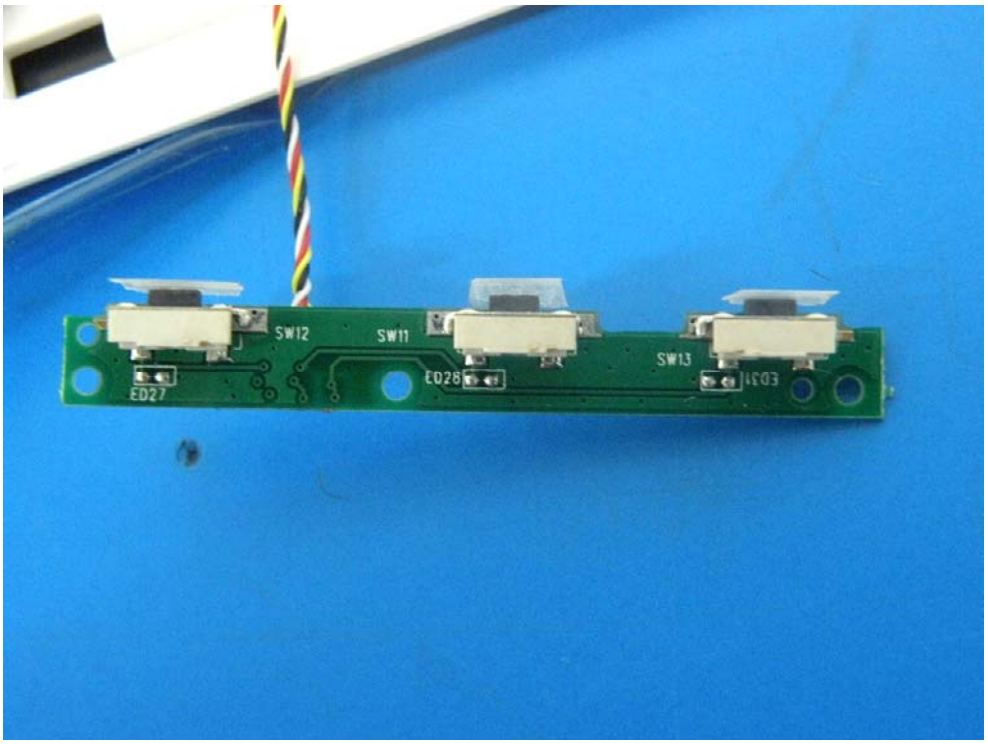
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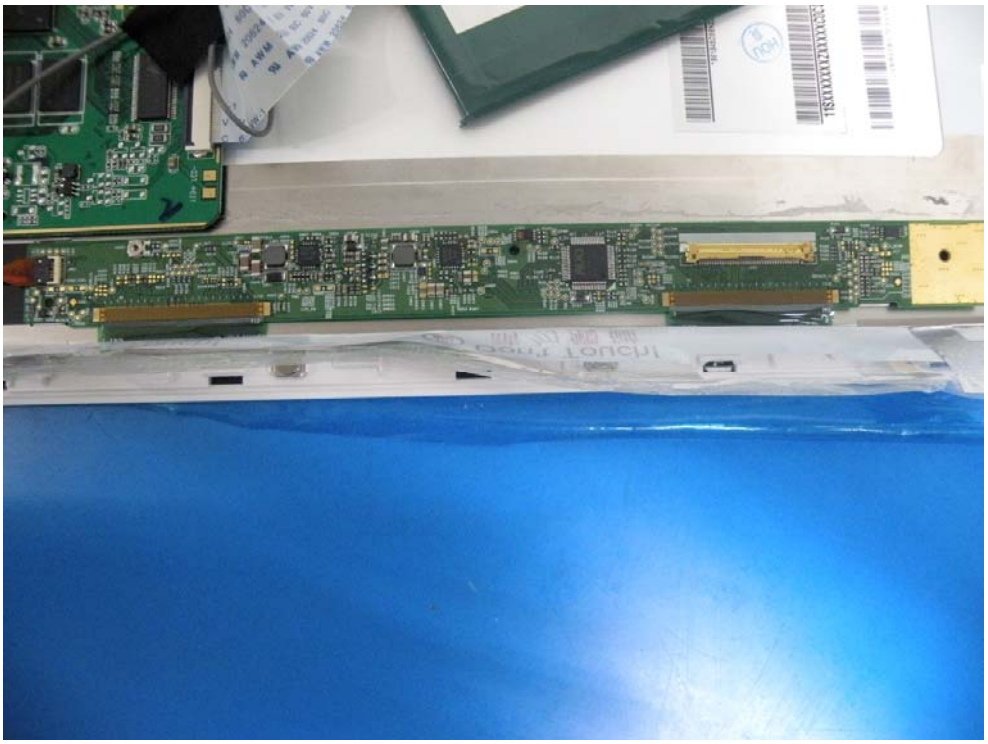


B101EW05 V0 CTRL BD
10B17-C01
AUO


**-------END OF THE REPORT-------**