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Report No.: SHEMA09060056802  
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## ***EMC TEST REPORT***

**Application No.:** SHEMA09060056802

**Applicant:** ZTE CORPORATION

**Equipment Under Test (EUT):**

**NOTE:** The following sample(s) submitted was/were identified on behalf of the client as

**EUT Name:** HSDPA USB Stick

**Model Name:** MF100

**Standards:** FCC PART 15B

**Date of Receipt:** Jun 5, 2009

**Date of Test:** Jun 5, 2009

**Date of Issue:** Jun 10, 2009

|                      |              |
|----------------------|--------------|
| <b>Test Result :</b> | <b>PASS*</b> |
|----------------------|--------------|

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

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SGS-CSTC Co., Ltd.

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## 2 Test Summary

| Test                               | Test Requirement   | Test Method      | Class / Severity | Result |
|------------------------------------|--------------------|------------------|------------------|--------|
| Radiated Emission<br>30MHz-1000MHz | CFR 47 Part 15.109 | ANSI C63.4: 2003 | Class B          | PASS   |
| Conducted Emission<br>150KHz-30MHz | CFR 47 Part 15.107 | ANSI C63.4: 2003 | Class B          | PASS   |



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## 4 General Information

### 4.1 Client Information

Applicant: ZTE CORPORATION  
Address of Applicant: ZTE Plaza, Keji Road South, Hi-Tech, Industrial Park,  
Nanshan District, Shenzhen, Guangdong, P.R. China  
518057

### 4.2 General Description of E.U.T.

EUT Name: HSDPA USB Stick  
Model No.: MF100  
Serial No.: Not supplied by the client

### 4.3 Details of E.U.T.

Power Supply: DC 5V  
Power Cord: Not supplied by the client

### 4.4 Description of Support Units

| Item | Equipment   | Manufacturer/Brand | Model No.     | Serial No. |
|------|-------------|--------------------|---------------|------------|
| 1    | Notebook PC | IBM                | T42           | 2374IMN    |
| 2    | Printer     | HP                 | BOISB-0406-00 | CHNJB64434 |
| 3    | Mouse       | IBM                | MO28UOL       | ----       |

### 4.5 Standards Applicable for Testing

The standards used were CFR 47 Part 15, ANSI C63.4: 2003

Table 1 : Tests Carried Out Under CFR 47 Part 15: 2007 :

| Standard                                 | Status |
|--|--------|
| FCC Part 15 Subpart B Radiated Emission  | √      |
| FCC Part 15 Subpart B Conducted Emission | √      |

× Indicates that the test is not applicable

√ Indicates that the test is applicable



#### **4.6 Test Location**

Tests were performed at SGS E&E EMC lab

SGS-CSTC EMC Laboratory, No.588 West Jindu Road,Songjiang District,Shanghai,China  
Tel:+86 21 6191 5666 Fax:+86 21 6191 5655

#### **4.7 Test Facility**

The test facility is recognized, certified, or accredited by the following organizations:

FCC – Registration No.: 402683

SGS-CSTC Standards Technical Services Co., Ltd., EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration 402683, Feb 23, 2009. SGS-CSTC is an authorized test laboratory for the DoC process.



## 5 Equipment Used during Test

### Conducted Emission

| Item | Test Equipment                       | Manufacturer    | Model No. | Serial No. | Cal. Date  | Cal. Due date |
|------|--------------------------------------|-----------------|-----------|------------|------------|---------------|
| 1    | EMI test receiver                    | Rohde & Schwarz | ESCS30    | 100086     | 2008-06-26 | 2009-06-25    |
| 2    | Line impedance stabilization network | ETS             | 3816/2    | 00034161   | 2008-07-30 | 2009-07-29    |

### Radiated Emission

| Item | Test Equipment    | Manufacturer    | Model No.   | Serial No. | Cal. Date | Cal. Due date |
|------|-------------------|-----------------|-------------|------------|-----------|---------------|
| 1    | EMI test receiver | Rohde & Schwarz | ESU40       | 100109     | 2008-6-19 | 2009-6-18     |
| 2    | ANTENNA           | SCHWARZBECK     | VULB9168    | 9168-313   | 2009-5-29 | 2010-5-28     |
| 3    | ANTENNA           | SCHWARZBECK     | BBHA9120D   | 9120D-679  | 2009-5-29 | 2010-5-28     |
| 4    | ANTENNA           | SCHWARZBECK     | BBHA9170    | 9170-373   | 2009-5-29 | 2010-5-28     |
| 5    | TURNTABLE         | INNCO           | DS 2000S-1T | /          | /         | /             |

## 6 Emission Test Results

### 6.1 Radiated Emissions

|                       |   |
|-----------------------|---|
| Test Requirement:     | CFR 47 Part 15.109                              |
| Test Method:          | ANSI C63.4:2003                                 |
| Test Date:            | Jun 5, 2009                                     |
| Frequency Range:      | 30MHz to 1GHz                                   |
| Measurement Distance: | 3m  |
| Class:                | N/A   |
| Detector:             | Peak for pre-scan (120kHz resolution bandwidth) |
| Result:               | <b>PASS</b>                                     |

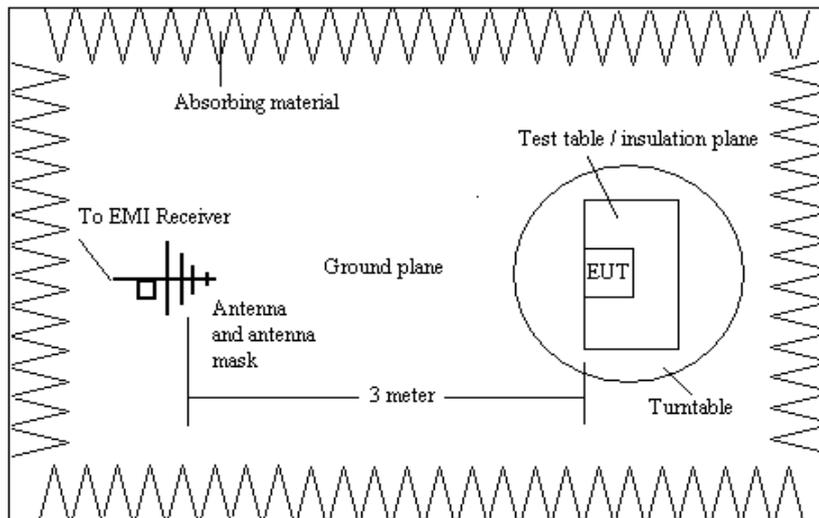
#### 6.1.1 E.U.T. Operation

Operating Environment:

Temperature: 25.0°C Humidity: 55 % RH Atmospheric Pressure: 1014 mbar

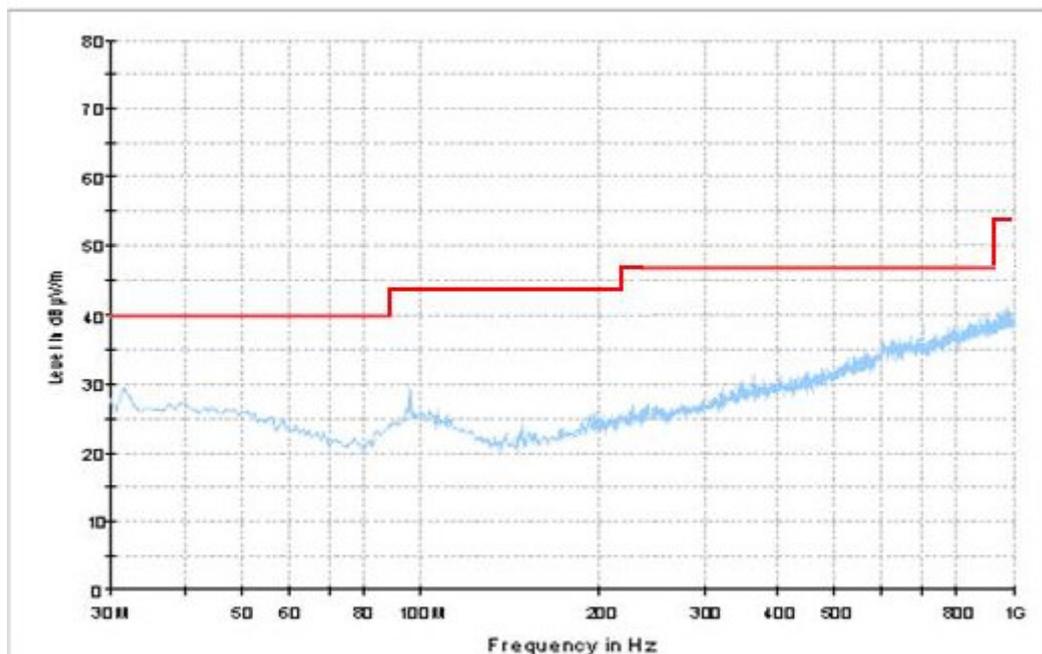
EUT Operation: Test in Mini SD acrd mode.

#### 6.1.2 Test setup:





Horizontal:  
dBuV/m

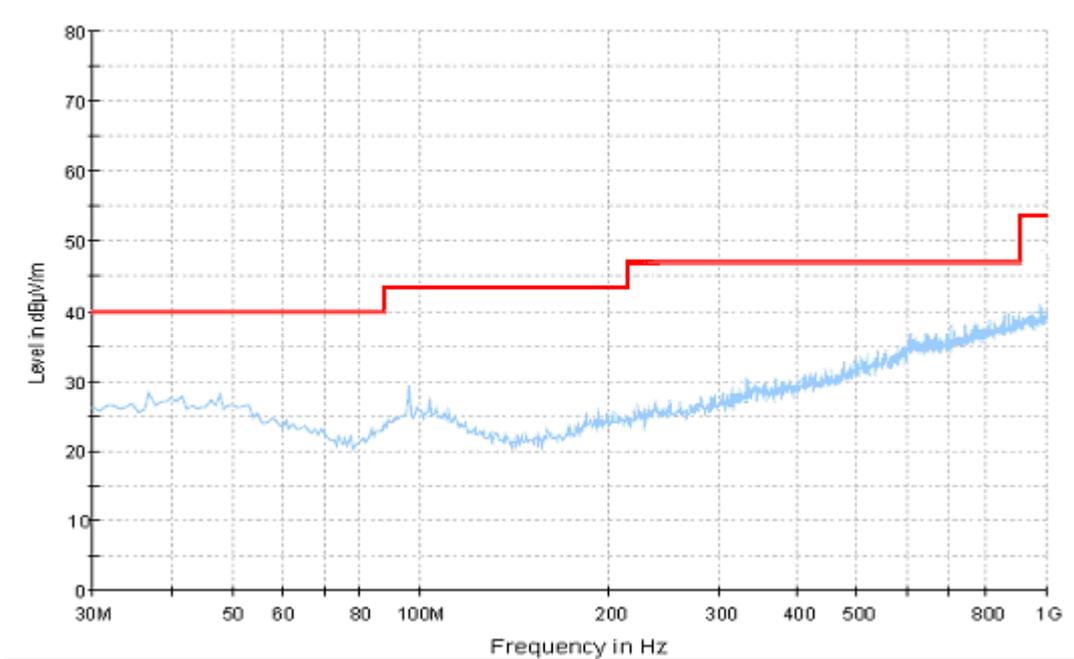


| Frequency<br>(MHz) | Actual Level<br>QP<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) |
|--------------------|--------------------------------|-------------------|----------------|
| 30.00              | *                              | 40.0              | *              |
| 100.00             | *                              | 43.5              | *              |
| 160.02             | *                              | 43.5              | *              |
| 200.02             | *                              | 43.5              | *              |
| 360.02             | *                              | 46.0              | *              |
| 1000.00            | *                              | 54.0              | *              |

“\*” means the emission level is 6dB lower than the relevant limit.



Vertical:  
dBuV/m



| Frequency<br>(MHz) | Actual Level<br>QP<br>(dBuV/m) | Limit<br>(dBuV/m) | Margin<br>(dB) |
|--------------------|--------------------------------|-------------------|----------------|
| 30.59              | *                              | 40.0              | *              |
| 57.94              | *                              | 40.0              | *              |
| 100.00             | *                              | 40.0              | *              |
| 160.01             | *                              | 43.5              | *              |
| 200.03             | *                              | 43.5              | *              |
| 1000.00            | *                              | 54.0              | *              |

“\*” means the emission level is 6dB lower than the relevant limit.



## 6.2 Conducted Emissions

Test Requirement: CFR 47 part 15.107  
Test Method: ANSI C63.4:2003  
Test Date: Jun 5, 2009  
Frequency Range: 150kHz to 30MHz  
Class: N/A  
Limit:

| Frequency of Emission (MHz) | Conducted Limit (dB $\mu$ V) |                       |
|-----------------------------|------------------------------|-----------------------|
|                             | Quasi-peak                   | Average               |
| 0.15-0.5                    | 66 to 56 <sup>*</sup>        | 56 to 46 <sup>*</sup> |
| 0.5-5                       | 56                           | 46                    |
| 5-30                        | 60                           | 50                    |

<sup>\*</sup> Decreases with the logarithm of the frequency.

Result: **PASS**

### 6.2.1 E.U.T. Operation

Operating Environment:

Temperature: 23.0°C Humidity: 57% RH Atmospheric Pressure: 1012 mbar

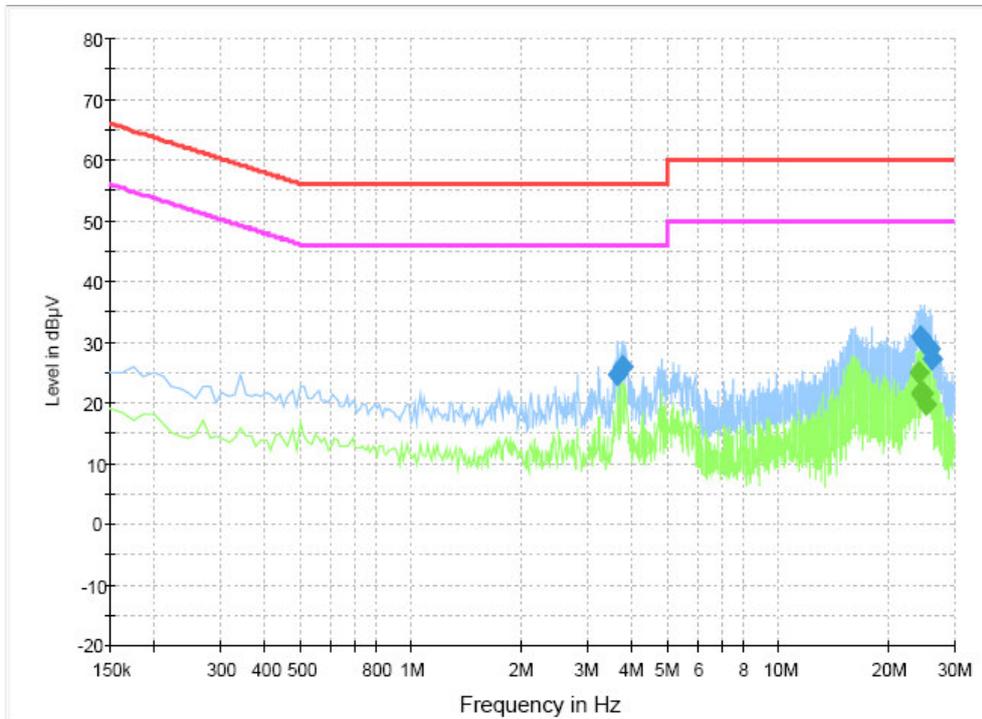
EUT Operation: Test in Mini SD card mode.

### 6.2.2 Test Result and Partial Measurement Data

**PASS**



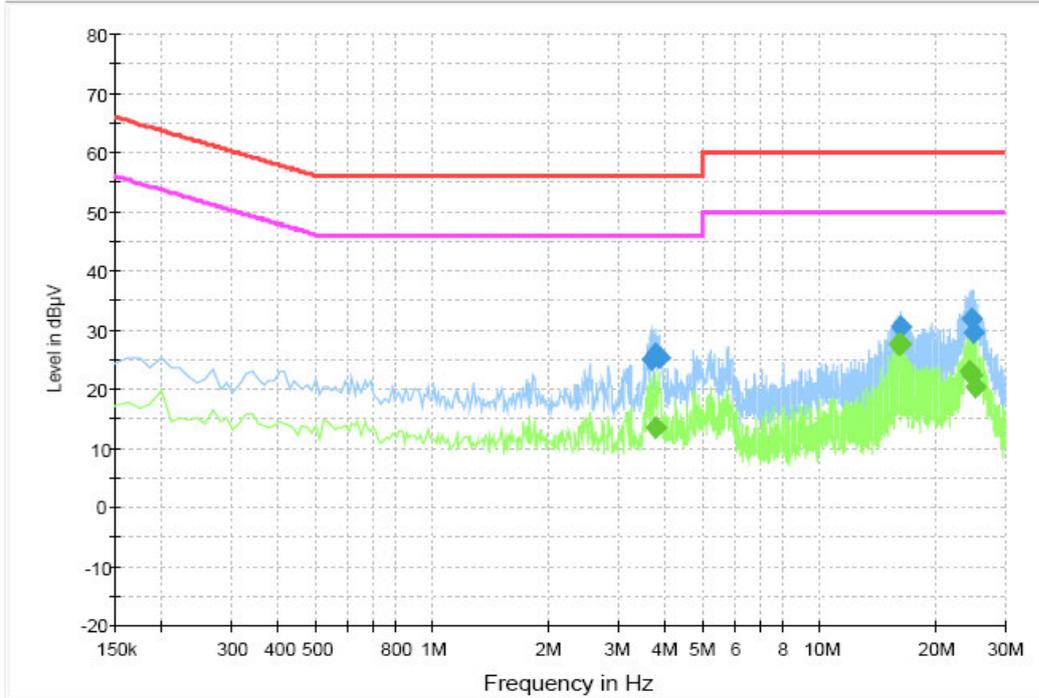
L Line:



| Frequency (MHz) | QuasiPeak (dBuV) | Limit (dBuV) | Margin (dB) |
|-----------------|------------------|--------------|-------------|
| 3.636480        | 24.5             | 56.0         | 31.5        |
| 3.732000        | 26.1             | 56.0         | 29.9        |
| 24.197160       | 30.8             | 60.0         | 29.2        |
| 24.889680       | 29.8             | 60.0         | 30.2        |
| 25.701600       | 28.9             | 60.0         | 31.1        |
| 26.047860       | 27.2             | 60.0         | 32.8        |
| Frequency (MHz) | AV (dBuV)        | Limit (dBuV) | Margin (dB) |
| 23.982240       | 25.1             | 50.0         | 24.9        |
| 24.197160       | 21.5             | 50.0         | 28.5        |
| 24.268800       | 21.2             | 50.0         | 28.8        |
| 24.447900       | 21.3             | 50.0         | 28.7        |
| 24.519540       | 21.8             | 50.0         | 28.2        |
| 25.092660       | 19.8             | 50.0         | 30.2        |



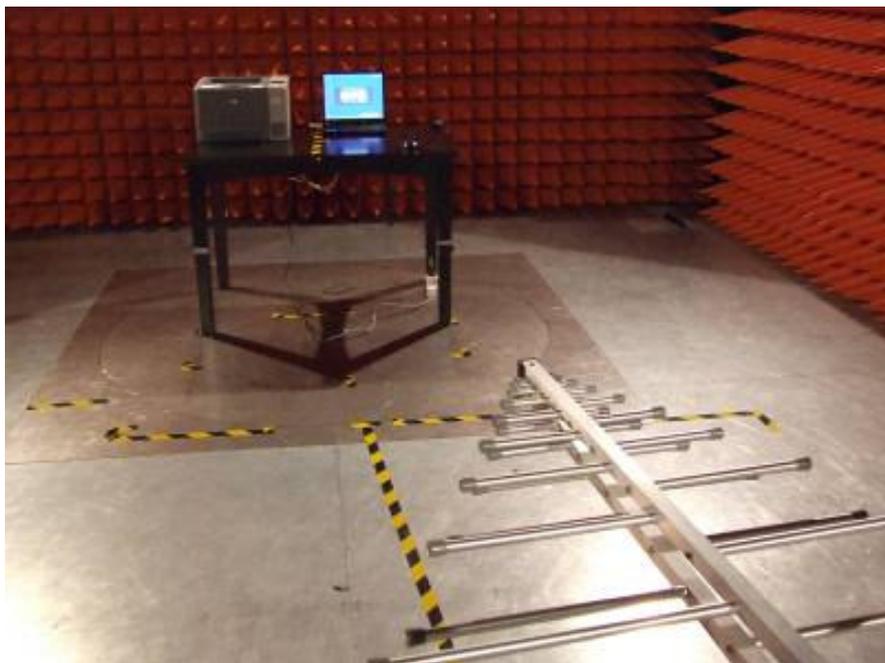
N Line:



| Frequency (MHz) | QuasiPeak (dBuV) | Limit (dBuV) | Margin (dB) |
|-----------------|------------------|--------------|-------------|
| 3.648420        | 24.9             | 56.0         | 31.1        |
| 3.743940        | 26.0             | 56.0         | 30.0        |
| 3.827520        | 25.4             | 56.0         | 30.6        |
| 16.101840       | 30.5             | 60.0         | 29.5        |
| 24.459840       | 31.9             | 60.0         | 28.1        |
| 24.889680       | 29.3             | 60.0         | 30.7        |
| Frequency (MHz) | AV (dBuV)        | Limit (dBuV) | Margin (dB) |
| 3.755880        | 13.4             | 46.0         | 32.6        |
| 15.827220       | 27.6             | 50.0         | 22.4        |
| 16.173480       | 27.4             | 50.0         | 22.6        |
| 24.256860       | 23.1             | 50.0         | 26.9        |
| 24.662820       | 22.2             | 50.0         | 27.8        |
| 25.021020       | 20.2             | 50.0         | 29.8        |

## 7 EQUIPMENT UNDER TEST PICTURES

### 7.1.1 Radiated Emission Test Setup



### 7.1.2 Conductet Emission Test Setup





## **APPENDIX PHOTOGRAPHS OF EUT**

*Front View of EUT*



*Back View of EUT*



*Side View of EUT-1*



*Side View of EUT-2*



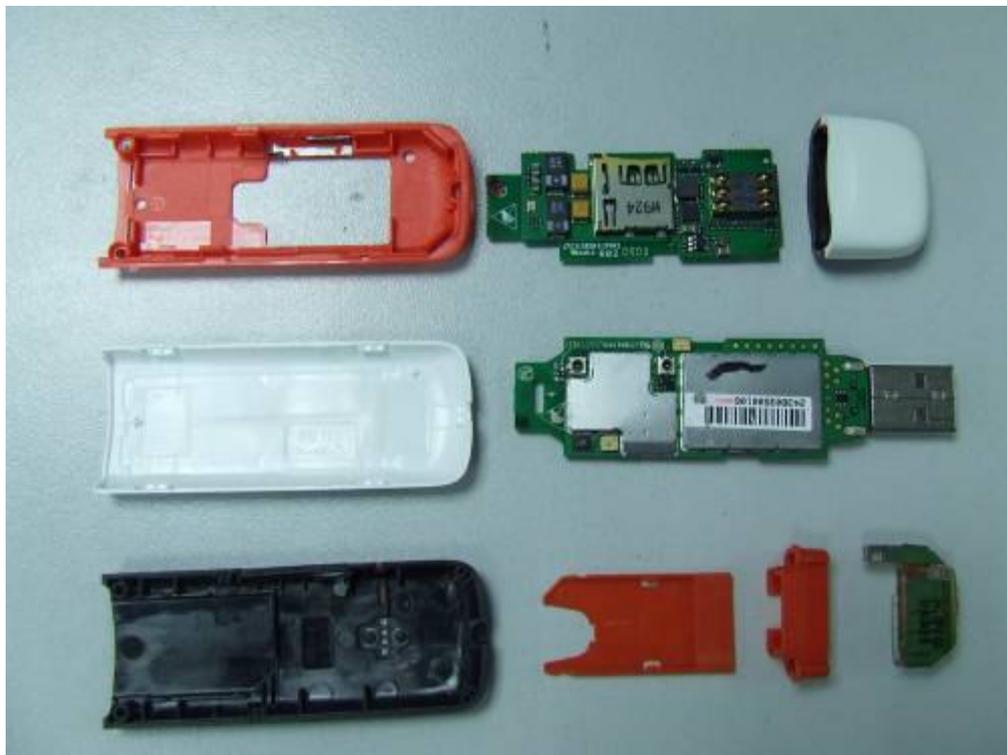
*Side View of EUT-3*



*Side View of EUT-4*



*Open View of EUT-1*



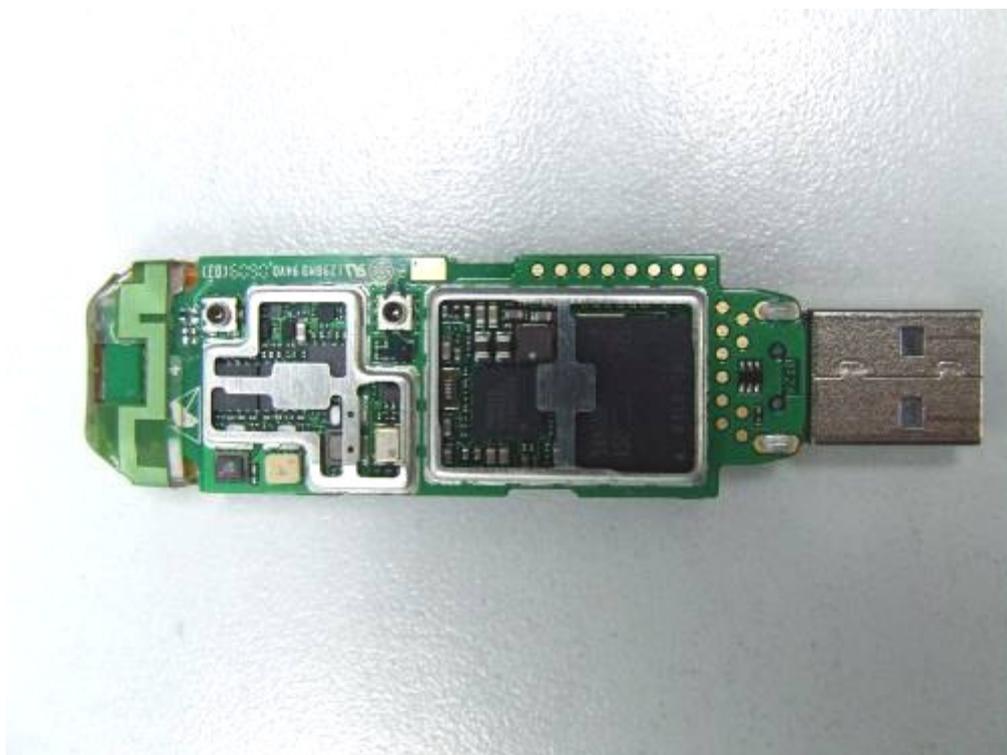
*Internal of EUT-1*



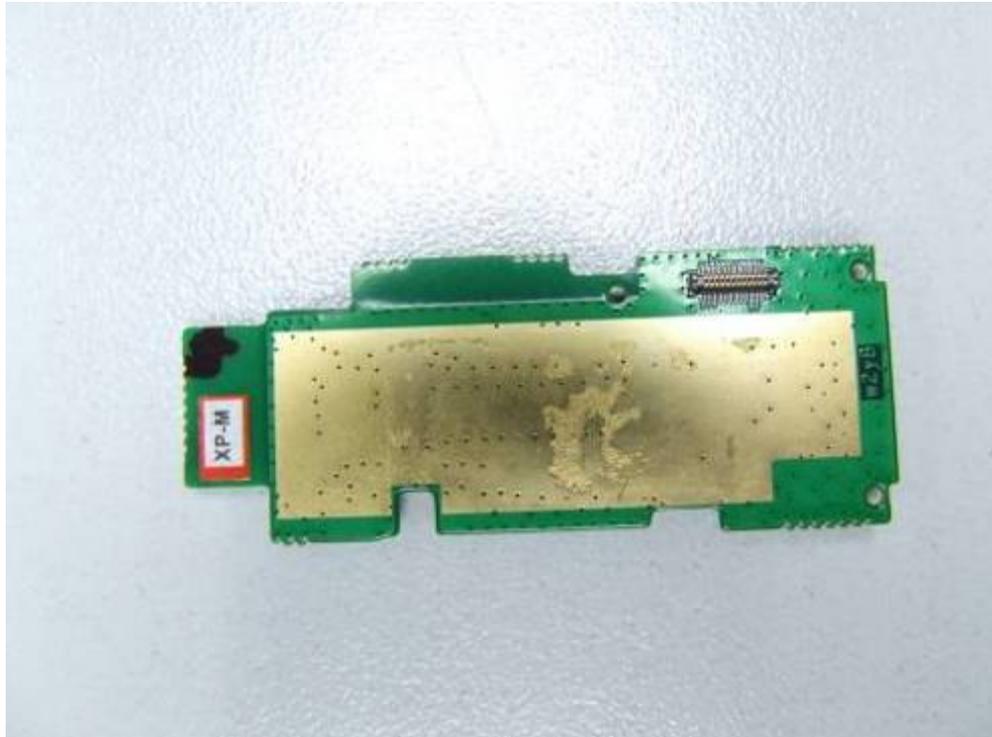
*Internal of EUT-2*



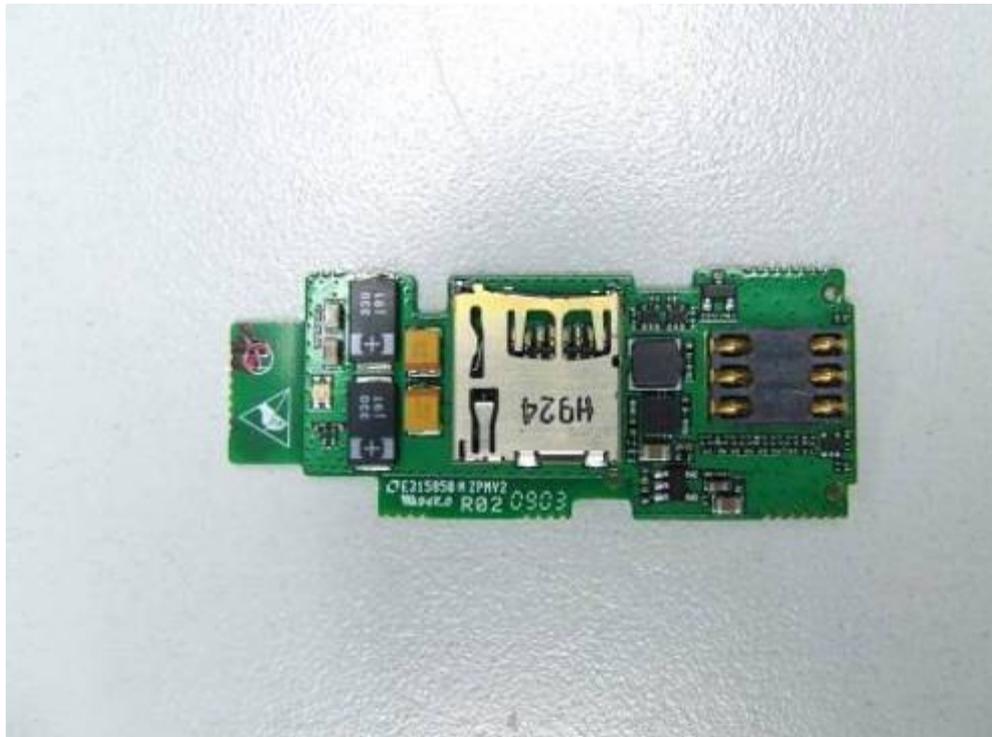
*Internal of EUT-3*



*Internal of EUT-4*



*Internal of EUT-5*



*~End of Report~*