

# Test Report

## FCC Part15 Subpart C

Product Name : DEX Adaptor  
Model No. : DEX-BLE-1  
FCC ID : HD5-DEX-BLE-1

Applicant : Honeywell International Inc  
Address : 9680 Old Bailes Rd, Fort Mill, SC 29707, USA

Date of Receipt : Mar. 17, 2016  
Test Date : Mar. 17, 2016~Mar. 25, 2016  
Issued Date : Apr.19, 2016  
Report No. : 1632070R-RF-US-P06V01  
Report Version : V1.2

The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.

The test report shall not be reproduced without the written approval of QuieTek Corporation.

## Test Report Certification

Issued Date : Apr. 19, 2016

Report No. : 1632070R-RF-US-P06V01



Product Name : DEX Adaptor  
Applicant : Honeywell International Inc  
Address : 9680 Old Bailes Rd, Fort Mill, SC 29707, USA  
Manufacturer : Honeywell International Inc  
Address : 9680 Old Bailes Rd, Fort Mill, SC 29707, USA  
Model No. : DEX-BLE-1  
FCC ID : HD5-DEX-BLE-1  
EUT Voltage : DC 3.3V  
Brand Name : Honeywell  
Applicable Standard : FCC CFR Title 47 Part 15 Subpart C: 2014  
ANSI C63.4:2014;  
ANSI C63.10:2013;  
KDB 558074 D01v03r04  
Test Result : Complied  
Performed Location : Quietek Corporation - Suzhou EMC Laboratory  
No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006,  
Jiangsu, China  
TEL: +86-512-6251-5088 / FAX: +86-512-6251-5098  
FCC Registration Number: 800392

Documented By : Alice Ni  
(Senior Adm. Specialist: Alice Ni )

Reviewed By : Jack Zhang  
(Senior Engineer: Jack Zhang )

Approved By : Harry Zhao  
(Engineering Manager : Harry Zhao )

## Laboratory Information

We, **Quietek Corporation**, are an independent EMC and safety consultancy that was established the whole facility in our laboratories. The test facility has been accredited/accepted(audited or listed) by the following related bodies in compliance with ISO 17025, EN 45001 and specified testing scope:

|                      |          |                       |
|----------------------|----------|-----------------------|
| <b>Taiwan R.O.C.</b> | <b>:</b> | <b>BSMI, NCC, TAF</b> |
| <b>USA</b>           | <b>:</b> | <b>FCC</b>            |
| <b>Japan</b>         | <b>:</b> | <b>VCCI</b>           |
| <b>China</b>         | <b>:</b> | <b>CNAS</b>           |

The related certificate for our laboratories about the test site and management system can be downloaded from Quietek Corporation's Web Site : <http://www.quietek.com/english/about/certificates.aspx?bval=5>  
The address and introduction of Quietek Corporation's laboratories can be founded in our Web site : [http://www.quietek.com/index\\_en.aspx](http://www.quietek.com/index_en.aspx)

If you have any comments, Please don't hesitate to contact us. Our contact information is as below:

### **HsinChu Testing Laboratory :**

No.75-2, 3rd Lin, Wangye Keng, Yonghxing Tsuen, Qionglin Shiang, Hsinchu County 307, Taiwan, R.O.C.  
TEL:+886-3-592-8858 / FAX:+886-3-592-8859 E-Mail : [service@quietek.com](mailto:service@quietek.com)

### **LinKou Testing Laboratory :**

No.5-22, Ruishukeng, Linkou Dist., New Taipei City 24451, Taiwan, R.O.C.  
TEL : 886-2-8601-3788 / FAX : 886-2-8601-3789 E-Mail : [service@quietek.com](mailto:service@quietek.com)

### **Suzhou Testing Laboratory :**

No.99 Hongye Rd., Suzhou Industrial Park, Suzhou, 215006, Jiangsu, China  
TEL : +86-512-6251-5088 / FAX : 86-512-6251-5098 E-Mail : [service@quietek.com](mailto:service@quietek.com)

## TABLE OF CONTENTS

| Description                                          | Page |
|------------------------------------------------------|------|
| 1. General Information .....                         | 7    |
| 1.1. EUT Description .....                           | 7    |
| 1.2. Working Frequency of Each Channel: .....        | 7    |
| 1.3. Antenna information .....                       | 8    |
| 1.4. Mode of Operation .....                         | 8    |
| 1.5. Tested System Details .....                     | 8    |
| 1.6. Configuration of Tested System .....            | 9    |
| 1.7. EUT Exercise Software .....                     | 11   |
| 2. Technical Test .....                              | 12   |
| 2.1. Summary of Test Result .....                    | 12   |
| 2.2. Test Frequency configuration: .....             | 13   |
| 2.3. Test Environment .....                          | 14   |
| 2.4. Measurement Uncertainty .....                   | 14   |
| 3. AC Power Line Conducted Emission .....            | 15   |
| 3.1. Test Equipment .....                            | 15   |
| 3.2. Test Setup .....                                | 15   |
| 3.3. Limit .....                                     | 16   |
| 3.4. Test Procedure .....                            | 16   |
| 3.5. Test Result .....                               | 17   |
| 4. Emissions in restricted frequency bands .....     | 19   |
| 4.1. Test Equipment .....                            | 19   |
| 4.2. Test Setup .....                                | 20   |
| 4.3. Limit .....                                     | 21   |
| 4.4. Test Procedure .....                            | 23   |
| 4.5. EUT test Axis definition .....                  | 24   |
| 4.6. Test Result .....                               | 25   |
| 5. Emissions in non-restricted frequency bands ..... | 28   |
| 5.1. Test Equipment .....                            | 28   |
| 5.2. Test Setup .....                                | 29   |
| 5.3. Limit .....                                     | 30   |
| 5.4. Test Procedure .....                            | 31   |
| 5.5. EUT test Axis definition .....                  | 32   |
| 5.6. Test Result .....                               | 33   |
| 6. Radiated Emission Band Edge .....                 | 34   |
| 6.1. Test Equipment .....                            | 34   |
| 6.2. Test Setup .....                                | 35   |
| 6.3. Limit .....                                     | 35   |

|      |                                         |    |
|------|-----------------------------------------|----|
| 6.4. | Test Procedure .....                    | 36 |
| 6.5. | EUT test definition .....               | 37 |
| 6.6. | Duty Cycle .....                        | 38 |
| 6.7. | Test Result.....                        | 39 |
| 7.   | Occupied Bandwidth.....                 | 43 |
| 7.1. | Test Equipment.....                     | 43 |
| 7.2. | Test Setup.....                         | 43 |
| 7.3. | Limit.....                              | 44 |
| 7.4. | Test Procedure .....                    | 44 |
| 7.5. | EUT test definition .....               | 45 |
| 7.6. | Test Result.....                        | 46 |
| 8.   | Fundamental emission output power ..... | 47 |
| 8.1. | Test Equipment.....                     | 47 |
| 8.2. | Test Setup.....                         | 47 |
| 8.3. | Limit.....                              | 48 |
| 8.4. | Test Procedure .....                    | 49 |
| 8.5. | EUT test definition .....               | 51 |
| 8.6. | Test Result.....                        | 52 |
| 9.   | Power Spectral Density .....            | 53 |
| 9.1. | Test Equipment.....                     | 53 |
| 9.2. | Test Setup.....                         | 53 |
| 9.3. | Limit.....                              | 53 |
| 9.4. | Test Procedure .....                    | 54 |
| 9.5. | EUT test definition .....               | 56 |
| 9.6. | Test Result.....                        | 57 |

## History of This Test Report

| REPORT NO.            | VERSION | DESCRIPTION                             | ISSUED DATE   |
|-----------------------|---------|-----------------------------------------|---------------|
| 1632070R-RF-US-P06V01 | V1.0    | Initial Issued Report                   | Mar. 30, 2016 |
| 1632070R-RF-US-P06V01 | V1.1    | 1, On page 36, modify the<br>VBW value. | Apr. 08, 2016 |
| 1632070R-RF-US-P06V01 | V1.2    | 1, On page 38 modify the table.         | Apr. 19, 2016 |
|                       |         |                                         |               |

## 1. General Information

### 1.1. EUT Description

|                         |                           |
|-------------------------|---------------------------|
| Product Name            | DEX Adaptor               |
| Brand Name              | Honeywell                 |
| Model No.               | DEX-BLE-1                 |
| Working Voltage         | DC 3.3V                   |
| NFC                     | Passive                   |
| Bluetooth Specification | Version 4.1               |
| Frequency Range         | 2402- 2480 MHz            |
| Channel Number          | V4.1: 40                  |
| Channel Separation      | V4.1: 2MHz                |
| Type of Modulation      | V4.1: GFSK                |
| Data Rate               | V4.1: 1Mbps(GFSK)         |
| Antenna Type            | Reference to Antenna List |
| Peak Antenna Gain       | Reference to Antenna List |

### 1.2. Working Frequency of Each Channel:

| Bluetooth Working Frequency of Each Channel: (For V4.1) |           |         |           |         |           |         |           |
|---------------------------------------------------------|-----------|---------|-----------|---------|-----------|---------|-----------|
| Channel                                                 | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 00                                                      | 2402 MHz  | 01      | 2404 MHz  | 02      | 2406 MHz  | 03      | 2408 MHz  |
| 04                                                      | 2410 MHz  | 05      | 2412 MHz  | 06      | 2414 MHz  | 07      | 2416 MHz  |
| 08                                                      | 2418 MHz  | 09      | 2420 MHz  | 10      | 2422 MHz  | 11      | 2424 MHz  |
| 12                                                      | 2426 MHz  | 13      | 2428 MHz  | 14      | 2430 MHz  | 15      | 2432 MHz  |
| 16                                                      | 2434 MHz  | 17      | 2436 MHz  | 18      | 2438 MHz  | 19      | 2440 MHz  |
| 20                                                      | 2442 MHz  | 21      | 2444 MHz  | 22      | 2446 MHz  | 23      | 2448 MHz  |
| 24                                                      | 2450 MHz  | 25      | 2452 MHz  | 26      | 2454 MHz  | 27      | 2456 MHz  |
| 28                                                      | 2458 MHz  | 29      | 2460 MHz  | 30      | 2462 MHz  | 31      | 2464 MHz  |
| 32                                                      | 2466 MHz  | 33      | 2468 MHz  | 34      | 2470 MHz  | 35      | 2472 MHz  |
| 36                                                      | 2474 MHz  | 37      | 2476 MHz  | 38      | 2478 MHz  | 39      | 2480 MHz  |

### 1.3. Antenna information

|                      |                                     |           |                                     |                            |                          |           |
|----------------------|-------------------------------------|-----------|-------------------------------------|----------------------------|--------------------------|-----------|
| Model No.            | N/A                                 |           |                                     |                            |                          |           |
| Antenna manufacturer | N/A                                 |           |                                     |                            |                          |           |
| Antenna Delivery     | <input checked="" type="checkbox"/> | 1*TX+1*RX | <input type="checkbox"/>            | 2*TX+2*RX                  | <input type="checkbox"/> | 3*TX+3*RX |
| Antenna technology   | <input checked="" type="checkbox"/> | SISO      |                                     |                            |                          |           |
|                      | <input type="checkbox"/>            | MIMO      | <input type="checkbox"/>            | Basic                      |                          |           |
|                      |                                     |           | <input type="checkbox"/>            | CDD                        |                          |           |
|                      |                                     |           | <input type="checkbox"/>            | Beam-forming               |                          |           |
| Antenna Type         | <input type="checkbox"/>            | External  | <input type="checkbox"/>            | Dipole                     |                          |           |
|                      | <input checked="" type="checkbox"/> | Internal  | <input type="checkbox"/>            | PIFA                       |                          |           |
|                      |                                     |           | <input checked="" type="checkbox"/> | PCB                        |                          |           |
|                      |                                     |           | <input type="checkbox"/>            | Ceramic Chip Antenna       |                          |           |
|                      |                                     |           | <input type="checkbox"/>            | Metal plate type F antenna |                          |           |
| Antenna Gain         | -1.56 dBi                           |           |                                     |                            |                          |           |

### 1.4. Mode of Operation

|                                  |
|----------------------------------|
| Test Mode                        |
| Mode 1: Transmit-1Mbps(GFSK_BLE) |

### 1.5. Tested System Details

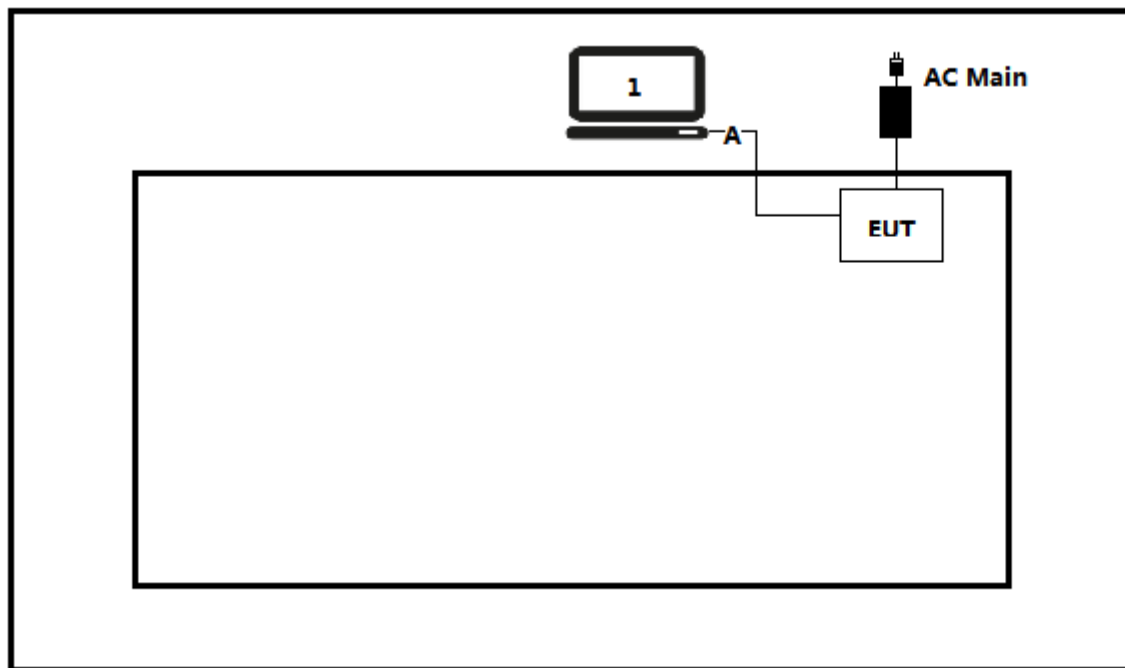
The types for all equipments, plus descriptions of all cables used in the tested system (including inserted cards) are:

| No. | Product  | Manufacturer | Model No. | Serial No. | Power Cord       |
|-----|----------|--------------|-----------|------------|------------------|
| 1   | Notebook | Think Pad    | 2526      | LV-A3285   | Power by adapter |
|     |          |              |           |            |                  |
|     |          |              |           |            |                  |
|     |          |              |           |            |                  |
|     |          |              |           |            |                  |

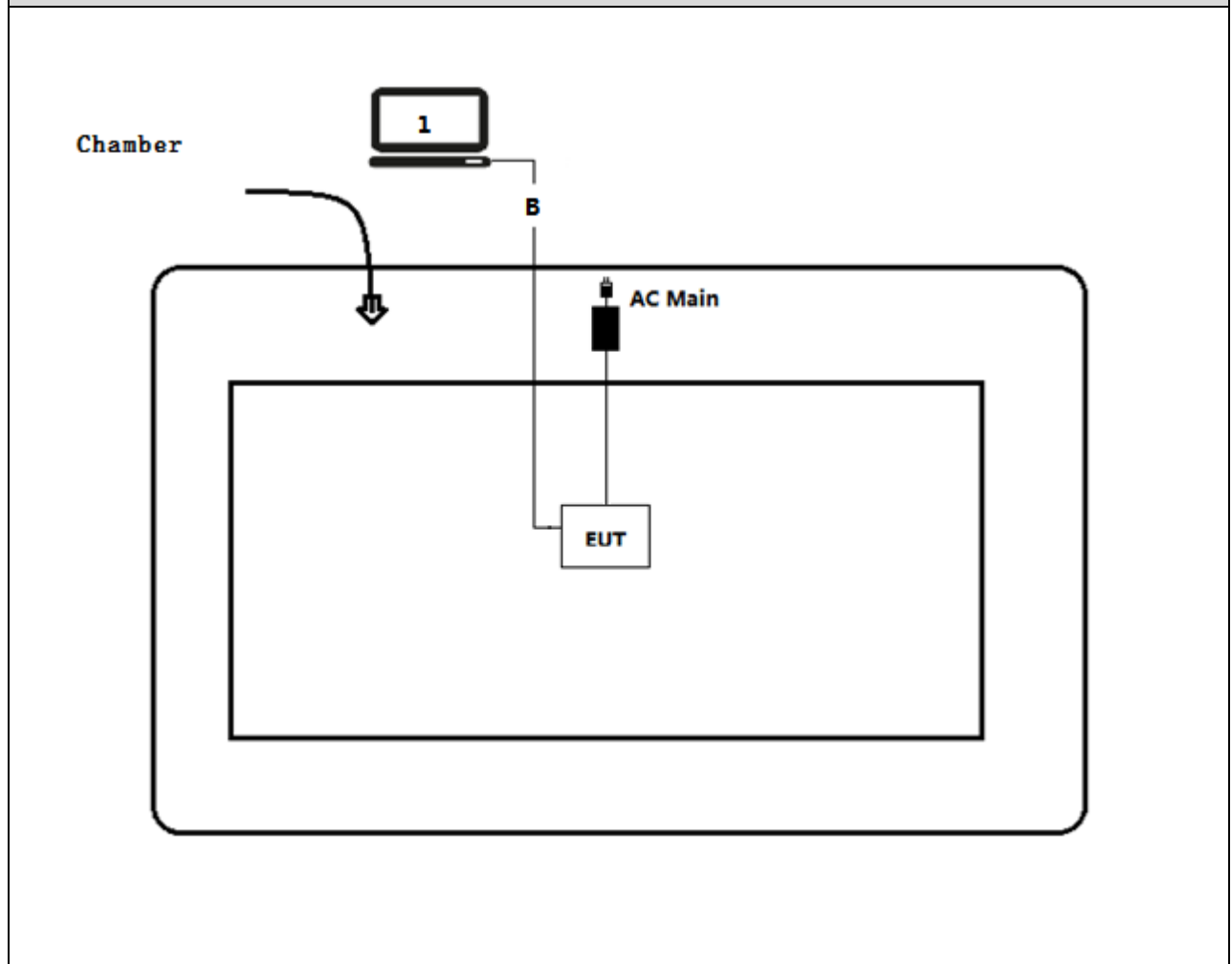


## 1.6. Configuration of Tested System

Test setup Diagram- AC Line Conducted Emission Test



Test setup Diagram- Radiated Emission



### 1.7. EUT Exercise Software

|   |                                                                                                       |
|---|-------------------------------------------------------------------------------------------------------|
| 1 | Setup the EUT and simulators as shown on above.                                                       |
| 2 | Turn on the power of all equipment.                                                                   |
| 3 | Run the RF test software, and set the test mode and channel, then press OK to start continue receive. |

## 2. Technical Test

### 2.1. Summary of Test Result

| Performed Test Item                               | Normative References                                             | Worst case mode | Limit                   | Result |
|---------------------------------------------------|------------------------------------------------------------------|-----------------|-------------------------|--------|
| AC Power Line<br>Conducted Emission               | FCC CFR Title 47 Part 15 Subpart C:<br>2015 Section 15.207       | Mode 1          | FCC 15.207              | PASS   |
| Emissions in restricted<br>frequency bands        | FCC CFR Title 47 Part 15 Subpart C:<br>2015 Section 15.209       | Mode 1          | FCC 15.209              | PASS   |
| Emissions in<br>non-restricted<br>frequency bands | FCC CFR Title 47 Part 15 Subpart C:<br>2015 Section 15.247(d)    | Mode 1          | $\geq 30\text{dBc}$     | PASS   |
| Radiated Emission<br>Band Edge                    | FCC CFR Title 47 Part 15 Subpart C:<br>2015 15.247(d)            | Mode 1          | FCC 15.209              | PASS   |
| Occupied Bandwidth                                | FCC CFR Title 47 Part 15 Subpart C:<br>2015 Section 15.247(a)(2) | Mode 1          | $\geq 500\text{kHz}$    | PASS   |
| Fundamental emission<br>output power              | FCC CFR Title 47 Part 15 Subpart C:<br>2015 Section 15.247(b)(3) | Mode 1          | $\leq 30\text{dBm}$     | PASS   |
| Power Spectral Density                            | FCC CFR Title 47 Part 15 Subpart C:<br>2015 Section 15.247(e)    | Mode 1          | $\leq 8\text{dBm/3kHz}$ | PASS   |

## 2.2. Test Frequency configuration:

| Modulation Mode | Channel | Frequency | Channel | Frequency | Channel | Frequency |
|-----------------|---------|-----------|---------|-----------|---------|-----------|
| BLE             | 00      | 2402 MHz  | 19      | 2440 MHz  | 39      | 2480MHz   |

### 2.3. Test Environment

| Items                      | Required (IEC 68-1) | Actual   |
|----------------------------|---------------------|----------|
| Temperature (°C)           | 15-35               | 21       |
| Humidity (%RH)             | 25-75               | 50       |
| Barometric pressure (mbar) | 860-1060            | 950-1000 |

### 2.4. Measurement Uncertainty

| Test Items                         | Uncertainty                    |
|------------------------------------|--------------------------------|
| AC Power Line Conducted Emission   | $\pm 2.02\text{dB}$            |
| Radiated Emission                  | Below 1GHz $\pm 3.8\text{ dB}$ |
|                                    | Above 1GHz $\pm 3.9\text{ dB}$ |
| RF Antenna Port Conducted Emission | $\pm 1.27\text{dB}$            |
| Radiated Emission Band Edge        | $\pm 3.9\text{dB}$             |
| Occupied Bandwidth                 | $\pm 1\text{kHz}$              |
| Power Spectral Density             | $\pm 1.27\text{dB}$            |

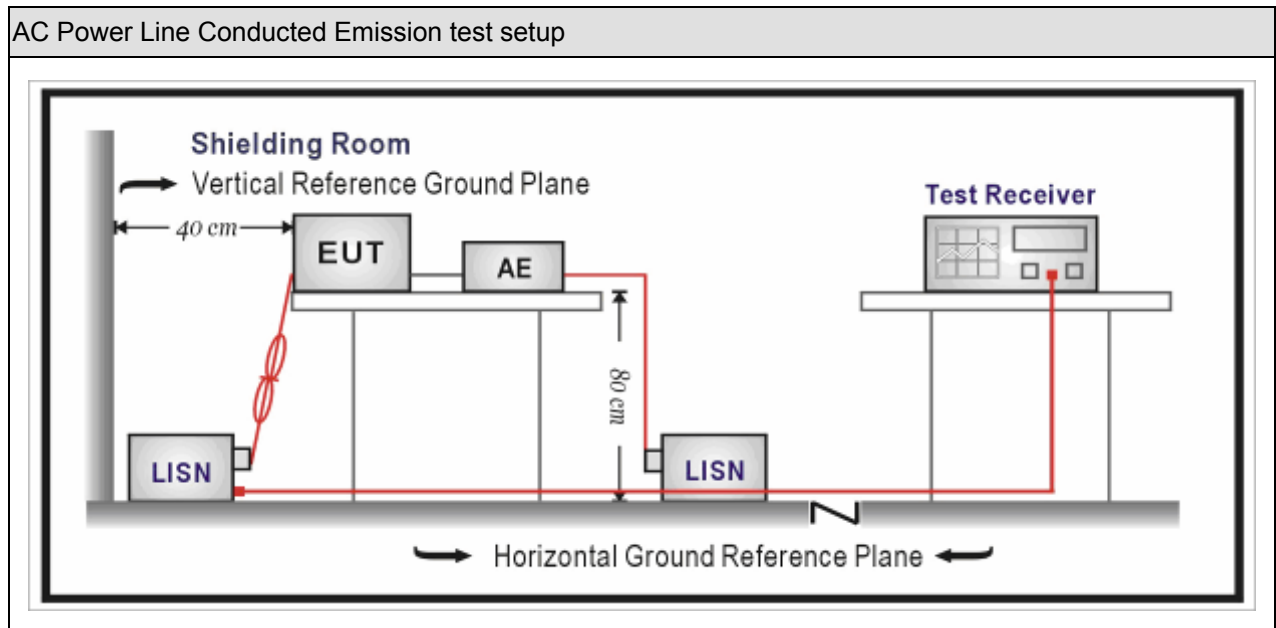
### 3. AC Power Line Conducted Emission

#### 3.1. Test Equipment

| AC Power Line Conducted Emission / TR-1 |              |          |            |            |               |
|-----------------------------------------|--------------|----------|------------|------------|---------------|
| Instrument                              | Manufacturer | Type No. | Serial No. | Cal. Date  | Cal. Due Date |
| EMI Test Receiver                       | R&S          | ESCI     | 100726     | 2016.03.05 | 2017.03.04    |
| Two-Line V-Network                      | R&S          | ENV216   | 100043     | 2015.03.29 | 2016.03.28    |
| Two-Line V-Network                      | R&S          | ENV216   | 100044     | 2015.09.17 | 2016.09.16    |
| 50ohm Coaxial Switch                    | Anritsu      | MP59B    | 6200464462 | 2016.03.02 | 2017.03.01    |
| 50ohm Termination                       | SHX          | TF2      | 07081401   | 2015.09.17 | 2016.09.16    |
| Temperature/Humidity Meter              | zhichen      | ZC1-2    | TR1-TH     | 2016.01.04 | 2017.01.03    |

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

#### 3.2. Test Setup



### 3.3. Limit

| Frequency of Emission<br>(MHz)                                                                                                                                                   | Conducted Limit         |                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|----------------------|
|                                                                                                                                                                                  | Quasi-peak (dB $\mu$ V) | Average (dB $\mu$ V) |
| 0.15-0.5                                                                                                                                                                         | 66 to 56                | 56 to 46             |
| 0.5-5                                                                                                                                                                            | 56                      | 46                   |
| 5-30                                                                                                                                                                             | 60                      | 50                   |
| Note 1: The lower limit shall apply at the transition frequencies.<br>Note 2: The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz to 0.5 MHz. |                         |                      |

### 3.4. Test Procedure

| Test Method                         |                  |         |                                                                                             |
|-------------------------------------|------------------|---------|---------------------------------------------------------------------------------------------|
|                                     | References Rule  | Chapter | Item                                                                                        |
| <input checked="" type="checkbox"/> | ANSI C63.10-2013 | 6.2     | Standard test method for ac power-line conducted emissions from unlicensed wireless devices |
| <input checked="" type="checkbox"/> | ANSI C63.4-2014  | 7       | AC power-line conducted emission measurements                                               |

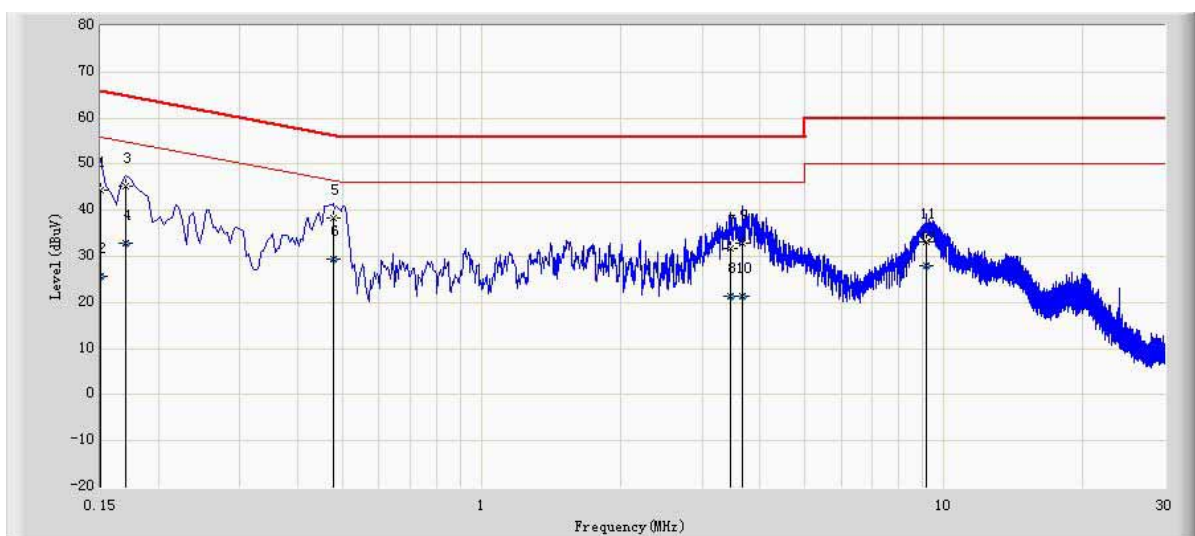


### 3.5. Test Result

|              |                                    |           |                |
|--------------|------------------------------------|-----------|----------------|
| Product Name | : DEX Adaptor                      | Polarity  | : Line         |
| Test Item    | : AC Power Line Conducted Emission | Power     | : AC 120V/60Hz |
| Test Site    | : TR1                              | Test Mode | : Mode 1       |

| No | Frequency (MHz) | Measure Level (dB $\mu$ V) | Reading Level (dB $\mu$ V) | Over Limit (dB) | Limit (dB $\mu$ V) | Probe (dB) | Cable (dB) | Type |
|----|-----------------|----------------------------|----------------------------|-----------------|--------------------|------------|------------|------|
| 1  | 0.150           | 44.289                     | 34.553                     | -21.711         | 66.000             | 9.676      | 0.060      | QP   |
| 2  | 0.150           | 25.708                     | 15.972                     | -30.292         | 56.000             | 9.676      | 0.060      | AV   |
| 3  | 0.170           | 45.300                     | 35.577                     | -19.660         | 64.960             | 9.663      | 0.060      | QP   |
| 4  | 0.170           | 32.896                     | 23.173                     | -22.064         | 54.960             | 9.663      | 0.060      | AV   |
| 5  | 0.478           | 38.427                     | 28.727                     | -17.947         | 56.374             | 9.630      | 0.070      | QP   |
| 6  | 0.478           | 29.557                     | 19.857                     | -16.817         | 46.374             | 9.630      | 0.070      | AV   |
| 7  | 3.462           | 31.842                     | 22.062                     | -24.158         | 56.000             | 9.650      | 0.130      | QP   |
| 8  | 3.462           | 21.486                     | 11.706                     | -24.514         | 46.000             | 9.650      | 0.130      | AV   |
| 9  | 3.662           | 32.820                     | 23.030                     | -23.180         | 56.000             | 9.660      | 0.130      | QP   |
| 10 | 3.662           | 21.354                     | 11.564                     | -24.646         | 46.000             | 9.660      | 0.130      | AV   |
| 11 | 9.162           | 33.195                     | 23.225                     | -26.805         | 60.000             | 9.720      | 0.250      | QP   |
| 12 | 9.162           | 27.943                     | 17.973                     | -22.057         | 50.000             | 9.720      | 0.250      | AV   |

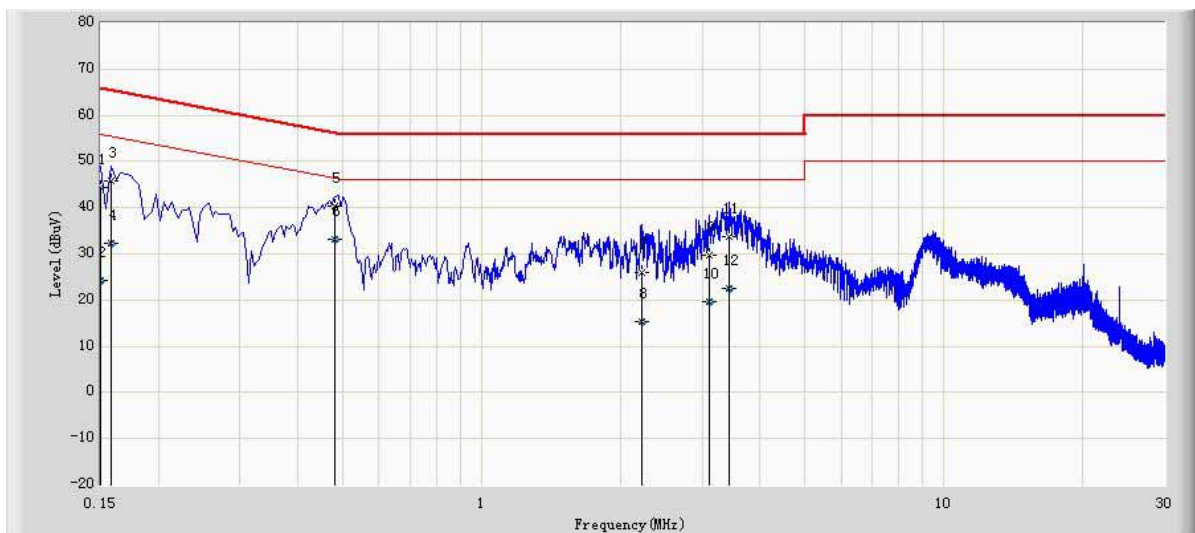
#### Polarity: Line



|              |                                    |           |                |
|--------------|------------------------------------|-----------|----------------|
| Product Name | : DEX Adaptor                      | Polarity  | : Neutral      |
| Test Item    | : AC Power Line Conducted Emission | Power     | : AC 120V/60Hz |
| Test Site    | : TR1                              | Test Mode | : Mode 1       |

| No | Frequency (MHz) | Measure Level (dB $\mu$ V) | Reading Level (dB $\mu$ V) | Over Limit (dB) | Limit (dB $\mu$ V) | Probe (dB) | Cable (dB) | Type |
|----|-----------------|----------------------------|----------------------------|-----------------|--------------------|------------|------------|------|
| 1  | 0.150           | 44.441                     | 34.705                     | -21.559         | 66.000             | 9.676      | 0.060      | QP   |
| 2  | 0.150           | 24.141                     | 14.405                     | -31.859         | 56.000             | 9.676      | 0.060      | AV   |
| 3  | 0.158           | 45.709                     | 35.978                     | -19.859         | 65.568             | 9.671      | 0.060      | QP   |
| 4  | 0.158           | 32.163                     | 22.432                     | -23.405         | 55.568             | 9.671      | 0.060      | AV   |
| 5  | 0.482           | 40.211                     | 30.511                     | -16.094         | 56.305             | 9.630      | 0.070      | QP   |
| 6  | 0.482           | 33.152                     | 23.452                     | -13.153         | 46.305             | 9.630      | 0.070      | AV   |
| 7  | 2.226           | 26.033                     | 16.293                     | -29.967         | 56.000             | 9.640      | 0.100      | QP   |
| 8  | 2.226           | 15.302                     | 5.562                      | -30.698         | 46.000             | 9.640      | 0.100      | AV   |
| 9  | 3.106           | 29.714                     | 19.944                     | -26.286         | 56.000             | 9.650      | 0.120      | QP   |
| 10 | 3.106           | 19.717                     | 9.947                      | -26.283         | 46.000             | 9.650      | 0.120      | AV   |
| 11 | 3.442           | 33.661                     | 23.881                     | -22.339         | 56.000             | 9.650      | 0.130      | QP   |
| 12 | 3.442           | 22.599                     | 12.819                     | -23.401         | 46.000             | 9.650      | 0.130      | AV   |

**Polarity: Neutral**



## 4. Emissions in restricted frequency bands

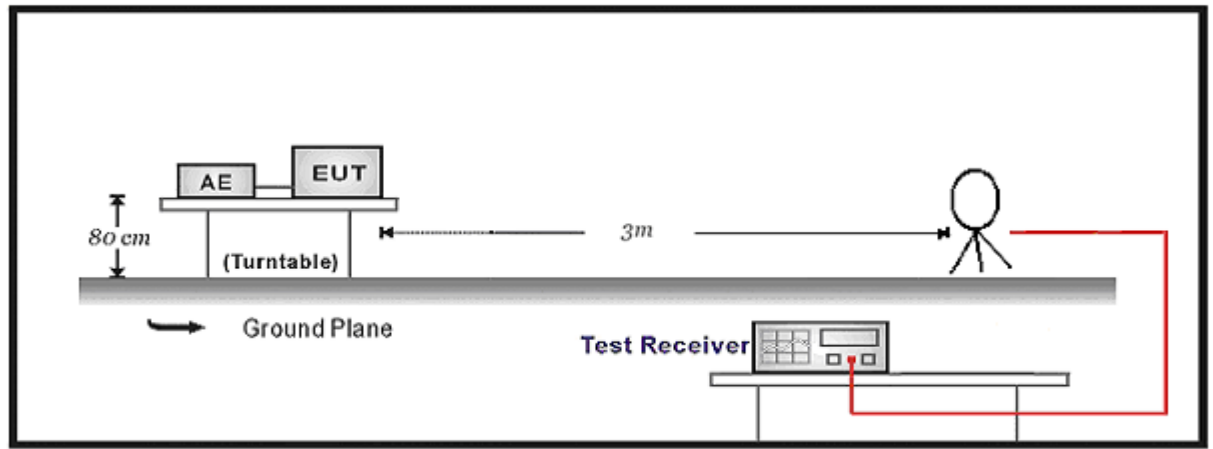
### 4.1. Test Equipment

| Radiated Emission(Below 1GHz) / AC-2                                                                                                       |              |              |            |            |               |
|--------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|------------|------------|---------------|
| Instrument                                                                                                                                 | Manufacturer | Type No.     | Serial No. | Cal. Date  | Cal. Due Date |
| EMI Test Receiver                                                                                                                          | R&S          | ESCI         | 100573     | 2016.03.05 | 2017.03.04    |
| Loop Antenna                                                                                                                               | R&S          | HFH2-Z2      | 833799/003 | 2015.11.16 | 2016.11.17    |
| Bilog Chainenna                                                                                                                            | Teseq GmbH   | CBL6112D     | 27611      | 2015.10.16 | 2016.10.15    |
| Coaxial Cable                                                                                                                              | Huber+Suhner | SUCOFLEX 106 | AC2-C      | 2016.03.02 | 2017.03.01    |
| Temperature/Humidity Meter                                                                                                                 | Zhichen      | ZC1-2        | AC2-TH     | 2016.01.04 | 2017.01.03    |
| Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards. |              |              |            |            |               |

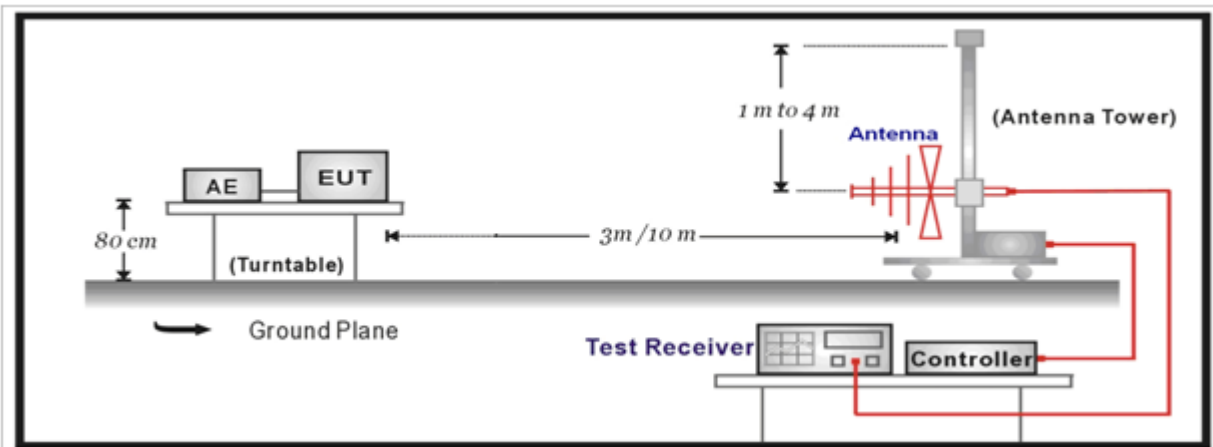
| Radiated Emission(Above 1GHz) / AC-5                                                                                                       |              |              |             |            |               |
|--------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|-------------|------------|---------------|
| Instrument                                                                                                                                 | Manufacturer | Type No.     | Serial No.  | Cal. Date  | Cal. Due Date |
| Spectrum Analyzer                                                                                                                          | Agilent      | E4446A       | MY45300103  | 2016.01.04 | 2017.01.03    |
| Preamplifier                                                                                                                               | Miteq        | NSP1800-25   | 1364185     | 2015.05.06 | 2016.05.05    |
| Preamplifier                                                                                                                               | QuieTek      | AP-040G      | CHM-0906001 | 2015.05.06 | 2016.05.05    |
| DRG Horn                                                                                                                                   | ETS-Lindgren | 3117         | 00123988    | 2016.01.22 | 2017.01.21    |
| Broad-Band Horn Antenna                                                                                                                    | Schwarzbeck  | BBHA9170     | 294         | 2015.11.25 | 2016.11.24    |
| Coaxial Cable                                                                                                                              | Huber+Suhner | SUCOFLEX 106 | AC5-C1      | 2016.03.02 | 2017.03.01    |
| Coaxial Cable                                                                                                                              | Huber+Suhner | SUCOFLEX 106 | AC5-C2      | 2016.03.02 | 2017.03.01    |
| Coaxial Cable                                                                                                                              | Huber+Suhner | SUCOFLEX 102 | AC5-C3      | 2016.03.02 | 2017.03.01    |
| EMI Receiver                                                                                                                               | Agilent      | N9038A       | MY51210196  | 2015.06.10 | 2016.06.09    |
| Temperature/Humidity Meter                                                                                                                 | Zhichen      | ZC1-2        | AC5-TH      | 2016.01.04 | 2017.01.03    |
| Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards. |              |              |             |            |               |

## 4.2. Test Setup

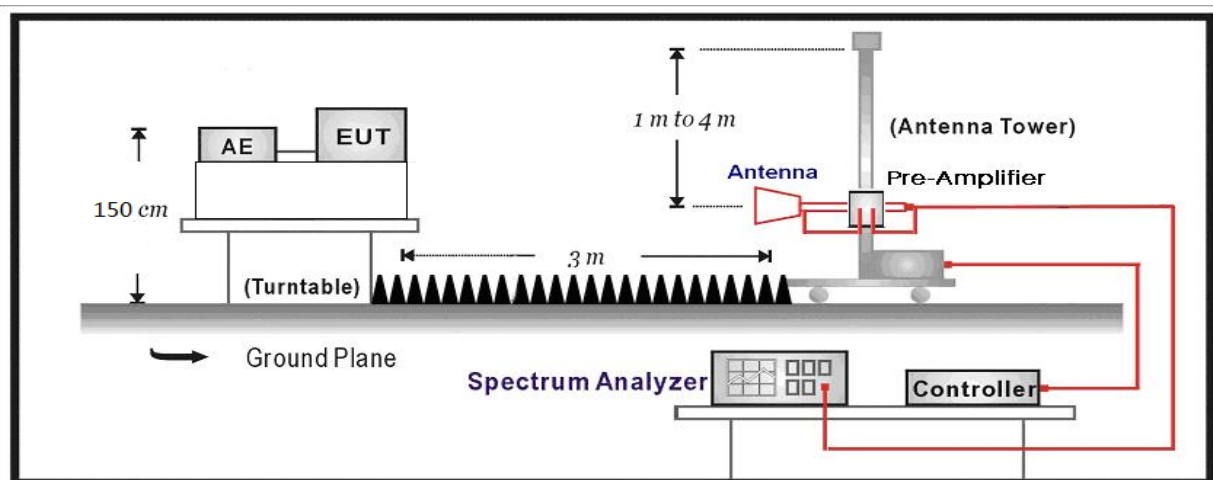
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



#### 4.3. Limit

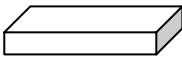
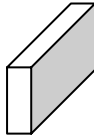
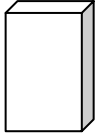
| Restricted Bands of operation |                       |                 |                 |
|-------------------------------|-----------------------|-----------------|-----------------|
| Frequency (MHz)               | Frequency (MHz)       | Frequency (MHz) | Frequency (GHz) |
| 0.090 – 0.110                 | 16.42 – 16.423        | 399.9 – 410     | 4.5 – 5.15      |
| 0.495 – 0.505                 | 16.69475 – 16.69525   | 608 – 614       | 5.35 – 5.46     |
| 2.1735 – 2.1905               | 16.80425 – 16.80475   | 960 – 1240      | 7.25 – 7.75     |
| 4.125 – 4.128                 | 25.5 – 25.67          | 1300 – 1427     | 8.025 – 8.5     |
| 4.17725 – 4.17775             | 37.5 – 38.25          | 1435 – 1626.5   | 9.0 – 9.2       |
| 4.20725 – 4.20775             | 73 – 74.6             | 1645.5 – 1646.5 | 9.3 – 9.5       |
| 6.215 – 6.218                 | 74.8 – 75.2           | 1660 – 1710     | 10.6 – 12.7     |
| 6.26775 – 6.26825             | 108 – 121.94          | 1718.8 – 1722.2 | 13.25 – 13.4    |
| 6.31175 – 6.31225             | 123 – 138             | 2200 – 2300     | 14.47 – 14.5    |
| 8.291 – 8.294                 | 149.9 – 150.05        | 2310 – 2390     | 15.35 – 16.2    |
| 8.362 – 8.366                 | 156.52475 – 156.52525 | 2483.5 – 2500   | 17.7 – 21.4     |
| 8.37625 – 8.38675             | 156.7 – 156.9         | 2690 – 2900     | 22.01 – 23.12   |
| 8.81425 – 8.81475             | 162.0125 – 167.17     | 3260 – 3267     | 23.6 – 24.0     |
| 12.29 – 12.293                | 167.72 – 173.2        | 3332 – 3339     | 31.2 – 31.8     |
| 12.51975 – 12.52025           | 240 – 285             | 3345.8 – 3358   | 36.43 – 36.5    |
| 12.57675 – 12.57725           | 322 – 335.4           | 3600 – 4400     |                 |
| 13.36 – 13.41                 |                       |                 |                 |

| Restricted Band Emissions Limit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                             |                               |                          |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------------------|--------------------------|
| Frequency (MHz)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Field strength ( $\mu$ V/m) | Field strength (dB $\mu$ V/m) | Measurement distance (m) |
| 0.009 - 0.49                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 2400/F(kHz)                 | 48.5 – 13.8                   | 300 <sub>(Note 1)</sub>  |
| 0.49 - 1.705                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 24000/F(kHz)                | 33.8 - 23                     | 30 <sub>(Note 1)</sub>   |
| 1.705 - 30                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 30                          | 29.5                          | 30 <sub>(Note 1)</sub>   |
| 30 - 88                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 100                         | 40                            | 3 <sub>(Note 2)</sub>    |
| 88 - 216                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 150                         | 43.5                          | 3 <sub>(Note 2)</sub>    |
| 216 - 960                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 200                         | 46                            | 3 <sub>(Note 2)</sub>    |
| Above 960                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 500                         | 54                            | 3 <sub>(Note 2)</sub>    |
| <p>Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).</p> <p>Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).</p> |                             |                               |                          |

#### 4.4. Test Procedure

| Test Method                         |                                     |                                     |                                     |                                             |                                                                                                  |                                                                                                    |
|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|---------------------------------------------|--------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
|                                     | References Rule                     |                                     | Chapter                             | Description                                 |                                                                                                  |                                                                                                    |
| <input type="checkbox"/>            | ANSI C63.10                         |                                     | 11.11                               | Emissions in non-restricted frequency bands |                                                                                                  |                                                                                                    |
|                                     | <input type="checkbox"/>            | ANSI C63.10                         | 11.11.2                             | Reference level measurement                 |                                                                                                  |                                                                                                    |
|                                     | <input type="checkbox"/>            | ANSI C63.10                         | 11.11.3                             | Emission level measurement                  |                                                                                                  |                                                                                                    |
| <input checked="" type="checkbox"/> | ANSI C63.10                         |                                     | 11.12                               | Emissions in restricted frequency bands     |                                                                                                  |                                                                                                    |
|                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 11.12.1                             | Radiated emission measurements              |                                                                                                  |                                                                                                    |
|                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 11.12.2.7                           | Radiated spurious emission test             |                                                                                                  |                                                                                                    |
|                                     |                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 6.4                                         | Radiated emissions from unlicensed wireless devices below 30 MHz                                 |                                                                                                    |
|                                     |                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 6.5                                         | Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz |                                                                                                    |
|                                     |                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 6.6                                         | Radiated emissions from unlicensed wireless devices above 1 GHz                                  |                                                                                                    |
|                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 11.12.2                             | Antenna-port conducted measurements         |                                                                                                  |                                                                                                    |
|                                     |                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 11.12.2.3                                   | Quasi-peak measurement procedure                                                                 |                                                                                                    |
|                                     |                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 11.12.2.4                                   | Peak power measurement procedure                                                                 |                                                                                                    |
|                                     |                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 11.12.2.5                                   | Average power measurement procedures                                                             |                                                                                                    |
|                                     |                                     |                                     | <input type="checkbox"/>            | ANSI C63.10                                 | 11.12.2.5.1                                                                                      | Trace averaging with continuous EUT transmission at full power                                     |
|                                     |                                     |                                     | <input type="checkbox"/>            | ANSI C63.10                                 | 11.12.2.5.2                                                                                      | Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction |
|                                     |                                     |                                     | <input checked="" type="checkbox"/> | ANSI C63.10                                 | 11.12.2.5.3                                                                                      | Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold               |

#### 4.5. EUT test Axis definition

| Item            | Emissions in non-restricted frequency bands |                                                                                      |                                                                                     |                                                                                     |
|-----------------|---------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Device Category | <input type="checkbox"/>                    | Fixed position use                                                                   |                                                                                     |                                                                                     |
|                 | <input checked="" type="checkbox"/>         | Mobile position use                                                                  |                                                                                     |                                                                                     |
| Test mode       | Mode 1                                      |                                                                                      |                                                                                     |                                                                                     |
| Test method     | <input checked="" type="checkbox"/>         | Radiated                                                                             |                                                                                     |                                                                                     |
|                 |                                             | X Axis                                                                               | Y Axis                                                                              | Z Axis                                                                              |
|                 |                                             |     |  |  |
|                 |                                             | Worst Axis <input type="checkbox"/>                                                  | Worst Axis <input type="checkbox"/>                                                 | Worst Axis <input checked="" type="checkbox"/>                                      |
|                 | <input type="checkbox"/>                    | Conducted                                                                            |                                                                                     |                                                                                     |
|                 | <input checked="" type="checkbox"/>         | Chain 1                                                                              |                                                                                     |                                                                                     |
|                 |                                             |  |                                                                                     |                                                                                     |
|                 | <input type="checkbox"/>                    | Chain 1                                                                              | Chain 2                                                                             |                                                                                     |
|                 |                                             |  |                                                                                     |                                                                                     |
|                 |                                             | Worst Chain <input type="checkbox"/>                                                 | Worst Chain <input type="checkbox"/>                                                |                                                                                     |
|                 | <input type="checkbox"/>                    | Chain 1                                                                              | Chain 2                                                                             | Chain 3                                                                             |
|                 |                                             |  |                                                                                     |                                                                                     |
|                 | Worst Chain <input type="checkbox"/>        | Worst Chain <input type="checkbox"/>                                                 | Worst Chain <input type="checkbox"/>                                                |                                                                                     |



#### 4.6. Test Result

|              |   |             |           |   |         |
|--------------|---|-------------|-----------|---|---------|
| Product Name | : | DEX Adaptor | Power     | : | DC 3.3V |
| Test Mode    | : | Mode 1      | Test Site | : | AC-5    |

| Chain | CH | Antenna | Frequency<br>(MHz) | Reading<br>Level<br>(dB $\mu$ V/m) | Factor<br>(dB) | Measure<br>Level<br>(dB $\mu$ V/m) | Limit<br>(dB $\mu$ V/m) | Margin<br>(dB) | Detector |
|-------|----|---------|--------------------|------------------------------------|----------------|------------------------------------|-------------------------|----------------|----------|
| Ant 0 | 1  | H       | 4824.0             | 43.8                               | 7.3            | 51.1                               | 54(note3)               | -2.9           | PK       |
|       |    | H       | 7230.5             | 32.8                               | 12.7           | 45.5                               | 54(note3)               | -8.5           | PK       |
|       |    | H       | 9644.5             | 28.7                               | 14.9           | 43.6                               | 54(note3)               | -10.4          | PK       |
|       |    | V       | 4823.9             | 45.8                               | 7.3            | 53.1                               | 54(note3)               | -0.9           | PK       |
|       |    | V       | 7230.5             | 33.3                               | 12.7           | 46.0                               | 54(note3)               | -8.0           | PK       |
|       |    | V       | 9644.5             | 31.7                               | 14.9           | 46.6                               | 54(note3)               | -7.4           | PK       |
|       | 6  | H       | 4876.0             | 41.9                               | 7.4            | 49.3                               | 54(note3)               | -4.7           | PK       |
|       |    | H       | 7311.0             | 27.1                               | 12.5           | 39.6                               | 54(note3)               | -14.4          | PK       |
|       |    | H       | 9748.0             | 25.6                               | 14.8           | 40.4                               | 54(note3)               | -13.6          | PK       |
|       |    | V       | 4876.0             | 40.2                               | 7.4            | 47.6                               | 54(note3)               | -6.4           | PK       |
|       |    | V       | 7311.0             | 27.1                               | 12.5           | 39.6                               | 54(note3)               | -14.4          | PK       |
|       |    | V       | 9748.0             | 26.1                               | 14.8           | 40.9                               | 54(note3)               | -13.1          | PK       |
|       | 11 | H       | 4927.0             | 42.7                               | 7.5            | 50.2                               | 54(note3)               | -3.8           | PK       |
|       |    | H       | 7386.0             | 24.6                               | 12.3           | 36.9                               | 54(note3)               | -17.1          | PK       |
|       |    | H       | 9848.0             | 21.2                               | 15.3           | 36.5                               | 54(note3)               | -17.5          | PK       |
|       |    | V       | 4927.0             | 38.9                               | 7.5            | 46.4                               | 54(note3)               | -7.6           | PK       |
|       |    | V       | 7386.0             | 24.0                               | 12.3           | 36.3                               | 54(note3)               | -17.7          | PK       |
|       |    | V       | 9848.0             | 20.2                               | 15.3           | 35.5                               | 54(note3)               | -18.5          | PK       |

Note: 1. Measure Level = Reading Level + Factor.

Note: 2. The test frequency range, 9kHz~30MHz, 18GHz~25GHz, both of the worst case are at least 6dB below the limits, therefore no data appear in the report.

Note: 3. This limit applies for using average detector, if the test result on peak is lower than average limit, then average measurement needn't be performed.

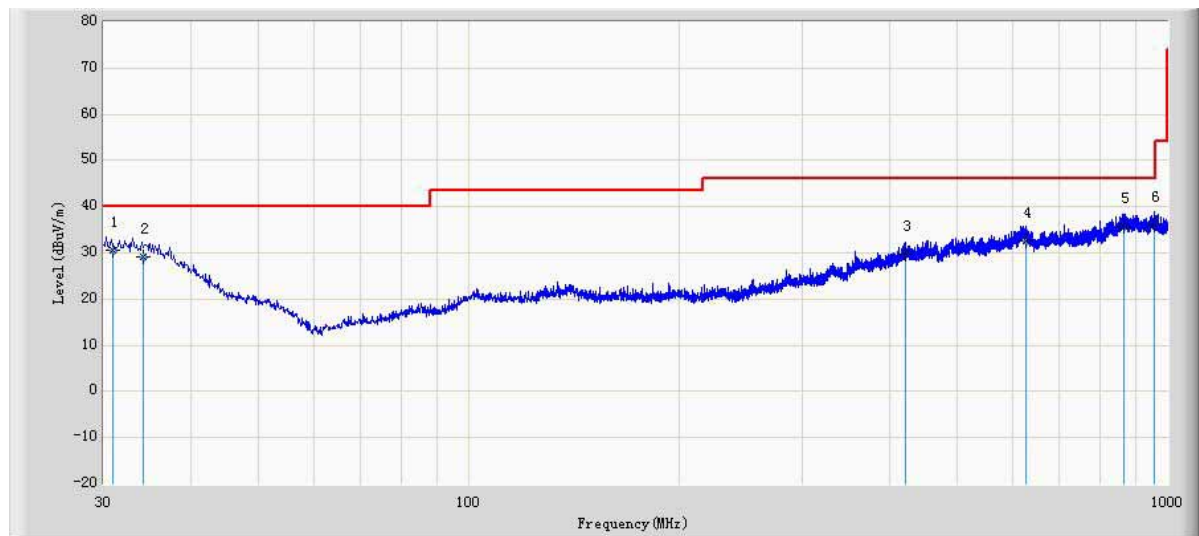
Note: 4. The RBW set up , see Clause 6.6..

**The worst case of Radiated Emission below 1GHz:**

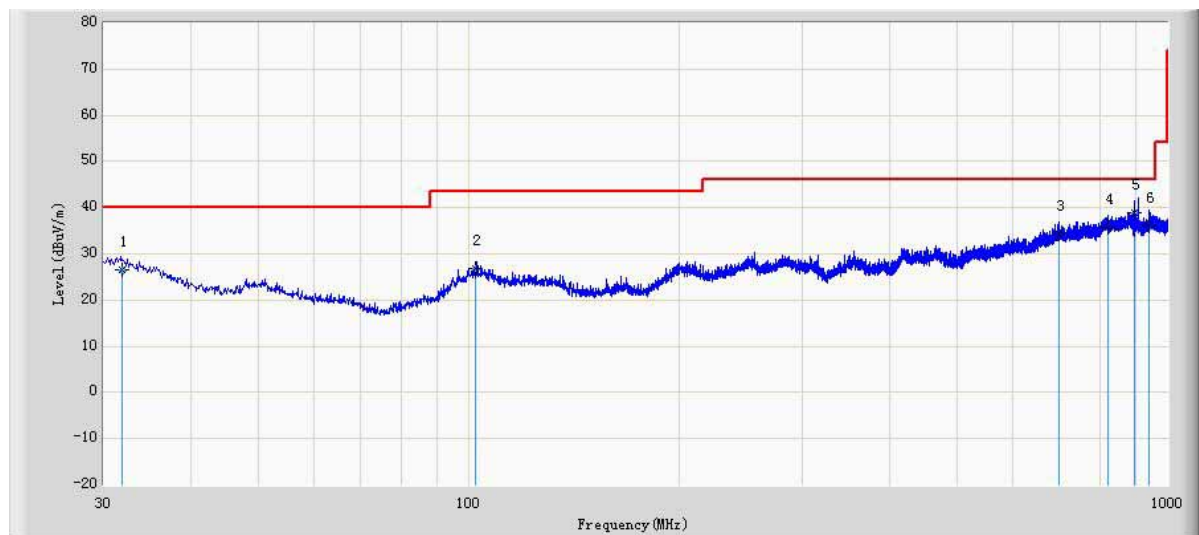
| Chain | CH | Antenna | Frequency<br>(MHz) | Reading<br>Level<br>(dB $\mu$ V/m) | Factor<br>(dB) | Measure<br>Level<br>(dB $\mu$ V/m) | Limit<br>(dB $\mu$ V/m) | Margin<br>(dB) | Detector |
|-------|----|---------|--------------------|------------------------------------|----------------|------------------------------------|-------------------------|----------------|----------|
| Ant 0 | 1  | H       | 31.0               | 34.7                               | -4.2           | 30.5                               | 40.0                    | -9.5           | QP       |
|       |    | H       | 34.2               | 35.4                               | -6.1           | 29.3                               | 40.0                    | -10.7          | QP       |
|       |    | H       | 421.7              | 33.9                               | -4.2           | 29.7                               | 46.0                    | -16.3          | QP       |
|       |    | H       | 626.6              | 33.4                               | -0.7           | 32.7                               | 46.0                    | -13.3          | QP       |
|       |    | H       | 866.5              | 34.8                               | 1.1            | 35.9                               | 46.0                    | -10.1          | QP       |
|       |    | H       | 956.3              | 34.1                               | 2.1            | 36.2                               | 46.0                    | -9.8           | QP       |
|       |    | V       | 31.8               | 31.4                               | -4.8           | 26.6                               | 40.0                    | -13.4          | QP       |
|       |    | V       | 102.3              | 37.5                               | -10.7          | 26.8                               | 43.5                    | -16.7          | QP       |
|       |    | V       | 698.3              | 35.0                               | -0.7           | 34.3                               | 46.0                    | -11.7          | QP       |
|       |    | V       | 822.4              | 34.8                               | 0.9            | 35.7                               | 46.0                    | -10.3          | QP       |
|       |    | V       | 897.5              | 38.0                               | 1.0            | 39.0                               | 46.0                    | -7.0           | QP       |
|       |    | V       | 939.3              | 34.3                               | 1.8            | 36.1                               | 46.0                    | -9.9           | QP       |

Note 1: The worst case of Radiated Emission below 1GHz:

### Polarity: Horizontal



### Polarity: Vertical



## 5. Emissions in non-restricted frequency bands

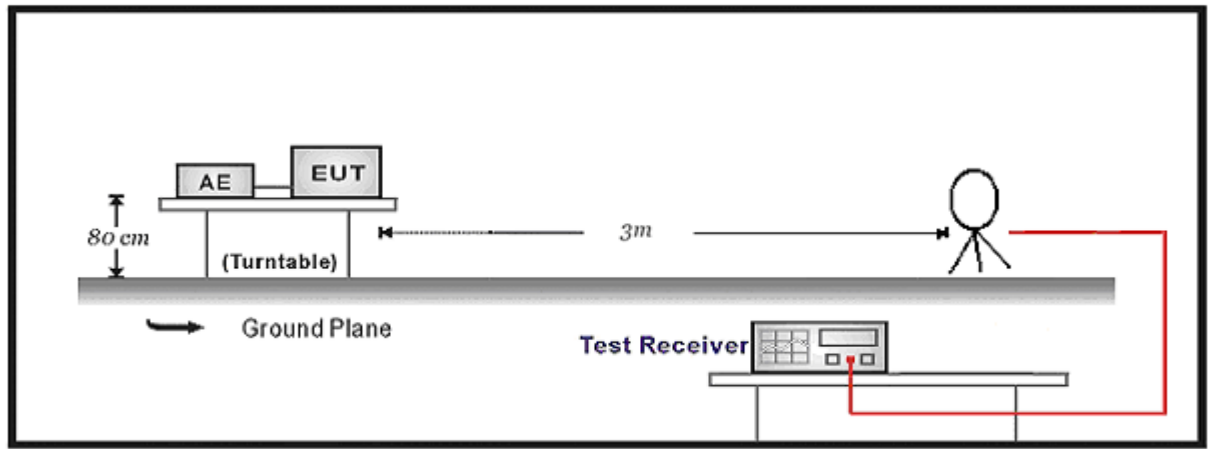
### 5.1. Test Equipment

| Radiated Emission(Below 1GHz) / AC-2                                                                                                       |              |              |            |            |               |
|--------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|------------|------------|---------------|
| Instrument                                                                                                                                 | Manufacturer | Type No.     | Serial No. | Cal. Date  | Cal. Due Date |
| EMI Test Receiver                                                                                                                          | R&S          | ESCI         | 100573     | 2016.03.05 | 2017.03.04    |
| Loop Antenna                                                                                                                               | R&S          | HFH2-Z2      | 833799/003 | 2015.11.16 | 2016.11.17    |
| Bilog Chainenna                                                                                                                            | Teseq GmbH   | CBL6112D     | 27611      | 2015.10.16 | 2016.10.15    |
| Coaxial Cable                                                                                                                              | Huber+Suhner | SUCOFLEX 106 | AC2-C      | 2016.03.02 | 2017.03.01    |
| Temperature/Humidity Meter                                                                                                                 | Zhichen      | ZC1-2        | AC2-TH     | 2016.01.04 | 2017.01.03    |
| Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards. |              |              |            |            |               |

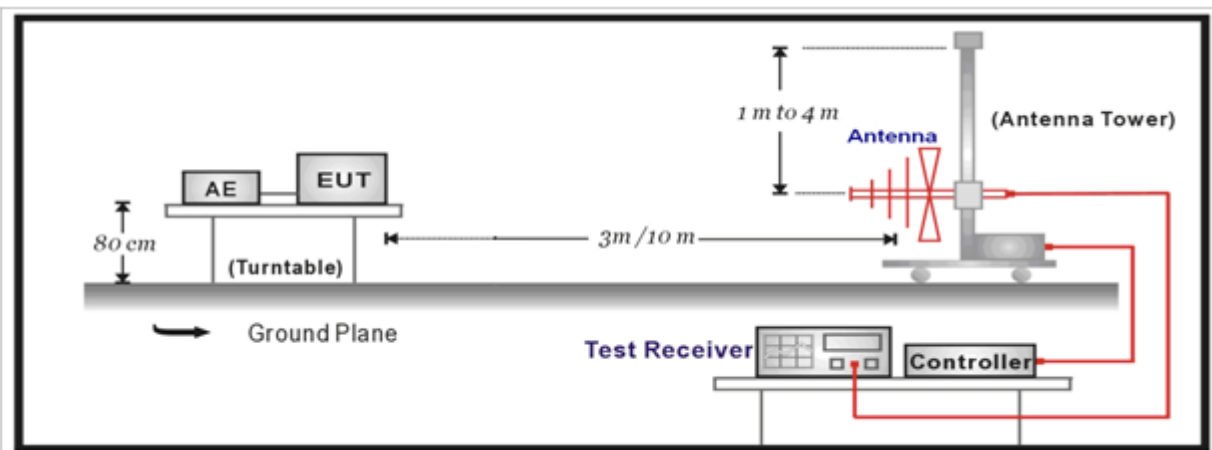
| Radiated Emission(Above 1GHz) / AC-5                                                                                                       |              |              |             |            |               |
|--------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|-------------|------------|---------------|
| Instrument                                                                                                                                 | Manufacturer | Type No.     | Serial No.  | Cal. Date  | Cal. Due Date |
| Spectrum Analyzer                                                                                                                          | Agilent      | N9020A       | MY49100159  | 2016.03.05 | 2017.03.04    |
| Spectrum Analyzer                                                                                                                          | Agilent      | E4446A       | MY45300103  | 2016.01.04 | 2017.01.03    |
| Preamplifier                                                                                                                               | Miteq        | NSP1800-25   | 1364185     | 2015.05.06 | 2016.05.05    |
| Preamplifier                                                                                                                               | QuieTek      | AP-040G      | CHM-0906001 | 2015.05.06 | 2016.05.05    |
| DRG Horn                                                                                                                                   | ETS-Lindgren | 3117         | 00123988    | 2016.01.22 | 2017.01.21    |
| Broad-Band Horn Antenna                                                                                                                    | Schwarzbeck  | BBHA9170     | 294         | 2015.11.25 | 2016.11.24    |
| Coaxial Cable                                                                                                                              | Huber+Suhner | SUCOFLEX 106 | AC5-C1      | 2016.03.02 | 2017.03.01    |
| Coaxial Cable                                                                                                                              | Huber+Suhner | SUCOFLEX 106 | AC5-C2      | 2016.03.02 | 2017.03.01    |
| Coaxial Cable                                                                                                                              | Huber+Suhner | SUCOFLEX 102 | AC5-C3      | 2016.03.02 | 2017.03.01    |
| EMI Receiver                                                                                                                               | Agilent      | N9038A       | MY51210196  | 2015.06.10 | 2016.06.09    |
| Temperature/Humidity Meter                                                                                                                 | Zhichen      | ZC1-2        | AC5-TH      | 2016.01.04 | 2017.01.03    |
| Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards. |              |              |             |            |               |

## 5.2. Test Setup

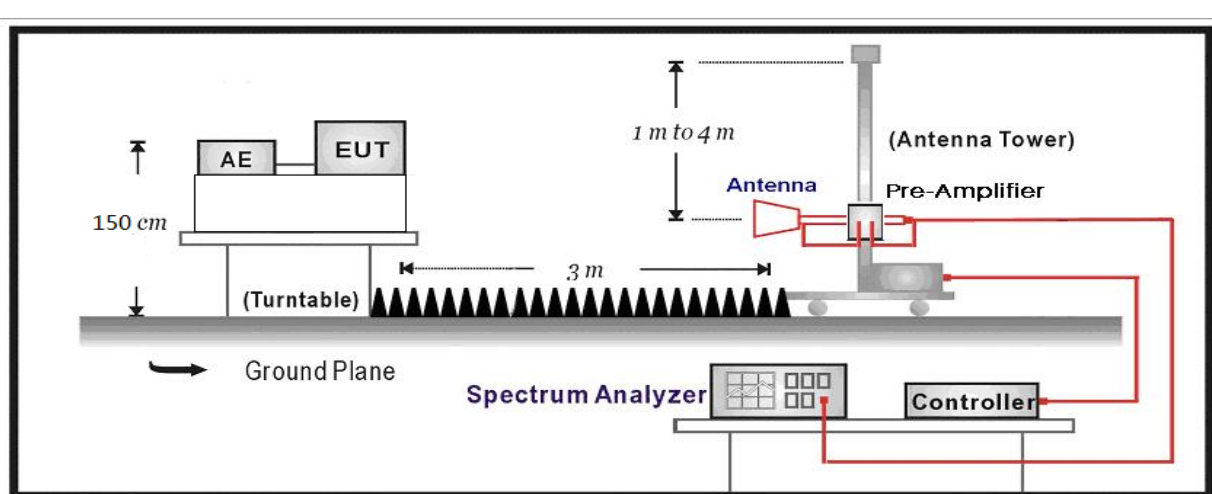
Below 30MHz Test Setup:



30MHz-1GHz Test Setup:



Above 1GHz Test Setup:



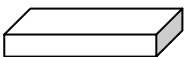
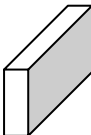
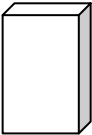
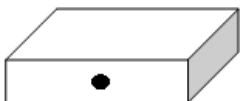
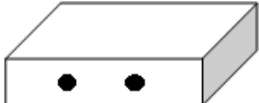
### 5.3. Limit

| Un-Restricted Band Emissions Limit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------|
| RF Output power (Detection methods)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Limit(dB)  |
| RF Output power(Average detector)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 30c(Note1) |
| RF Output power(PK detector)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 20c(Note2) |
| <p>Note 1: If maximum conducted (average) output power was used to demonstrate compliance as described in 9.2, then the peak power in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 30 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 30 dBc).</p> <p>Note 2: If the maximum peak conducted output power procedure was used, then the peak output power measured in any 100 kHz bandwidth outside of the authorized frequency band shall be attenuated by at least 20 dB relative to the maximum in-band peak PSD level in 100 kHz (i.e., 20 dBc).</p> |            |

## 5.4. Test Procedure

| Test Method                         |                                     |                          |             |                                                                                                                |
|-------------------------------------|-------------------------------------|--------------------------|-------------|----------------------------------------------------------------------------------------------------------------|
|                                     | References Rule                     |                          | Chapter     | Description                                                                                                    |
| <input checked="" type="checkbox"/> | ANSI C63.10                         |                          | 11.11       | Emissions in non-restricted frequency bands                                                                    |
|                                     | <input checked="" type="checkbox"/> | ANSI C63.10              | 11.11.2     | Reference level measurement                                                                                    |
|                                     | <input checked="" type="checkbox"/> | ANSI C63.10              | 11.11.3     | Emission level measurement                                                                                     |
| <input type="checkbox"/>            | ANSI C63.10                         |                          | 11.12       | Emissions in restricted frequency bands                                                                        |
|                                     | <input checked="" type="checkbox"/> | ANSI C63.10              | 11.12.1     | Radiated emission measurements                                                                                 |
|                                     | <input checked="" type="checkbox"/> | ANSI C63.10              | 11.12.2.7   | Radiated spurious emission test                                                                                |
| <input checked="" type="checkbox"/> | ANSI C63.10                         |                          | 6.4         | Radiated emissions from unlicensed wireless devices below 30 MHz                                               |
| <input checked="" type="checkbox"/> | ANSI C63.10                         |                          | 6.5         | Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz               |
| <input checked="" type="checkbox"/> | ANSI C63.10                         |                          | 6.6         | Radiated emissions from unlicensed wireless devices above 1 GHz                                                |
|                                     | <input type="checkbox"/>            | ANSI C63.10              | 11.12.2     | Antenna-port conducted measurements                                                                            |
|                                     |                                     | <input type="checkbox"/> | ANSI C63.10 | 11.12.2.3 Quasi-peak measurement procedure                                                                     |
|                                     |                                     | <input type="checkbox"/> | ANSI C63.10 | 11.12.2.4 Peak power measurement procedure                                                                     |
|                                     |                                     | <input type="checkbox"/> | ANSI C63.10 | 11.12.2.5 Average power measurement procedures                                                                 |
|                                     |                                     | <input type="checkbox"/> | ANSI C63.10 | 11.12.2.5.1 Trace averaging with continuous EUT transmission at full power                                     |
|                                     |                                     | <input type="checkbox"/> | ANSI C63.10 | 11.12.2.5.2 Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction |
|                                     |                                     | <input type="checkbox"/> | ANSI C63.10 | 11.12.2.5.3 Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold               |

## 5.5. EUT test Axis definition

| Item            | Emissions in non-restricted frequency bands |                                                                                      |                                                                                     |                                                                                     |
|-----------------|---------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Device Category | <input type="checkbox"/>                    | Fixed position use                                                                   |                                                                                     |                                                                                     |
|                 | <input checked="" type="checkbox"/>         | Mobile position use                                                                  |                                                                                     |                                                                                     |
| Test mode       | Mode 1                                      |                                                                                      |                                                                                     |                                                                                     |
| Test method     | <input type="checkbox"/>                    | Radiated                                                                             |                                                                                     |                                                                                     |
|                 |                                             | X Axis                                                                               | Y Axis                                                                              | Z Axis                                                                              |
|                 |                                             |     |  |  |
|                 |                                             | Worst Axis <input type="checkbox"/>                                                  | Worst Axis <input type="checkbox"/>                                                 | Worst Axis <input type="checkbox"/>                                                 |
|                 | <input checked="" type="checkbox"/>         | Conducted                                                                            |                                                                                     |                                                                                     |
|                 | <input checked="" type="checkbox"/>         | Chain 1                                                                              |                                                                                     |                                                                                     |
|                 |                                             |  |                                                                                     |                                                                                     |
|                 | <input type="checkbox"/>                    | Chain 1                                                                              | Chain 2                                                                             |                                                                                     |
|                 |                                             |  |                                                                                     |                                                                                     |
|                 |                                             | Worst Chain <input type="checkbox"/>                                                 | Worst Chain <input type="checkbox"/>                                                |                                                                                     |
|                 | <input type="checkbox"/>                    | Chain 1                                                                              | Chain 2                                                                             | Chain 3                                                                             |
|                 |                                             |  |                                                                                     |                                                                                     |
|                 | Worst Chain <input type="checkbox"/>        | Worst Chain <input type="checkbox"/>                                                 | Worst Chain <input type="checkbox"/>                                                |                                                                                     |



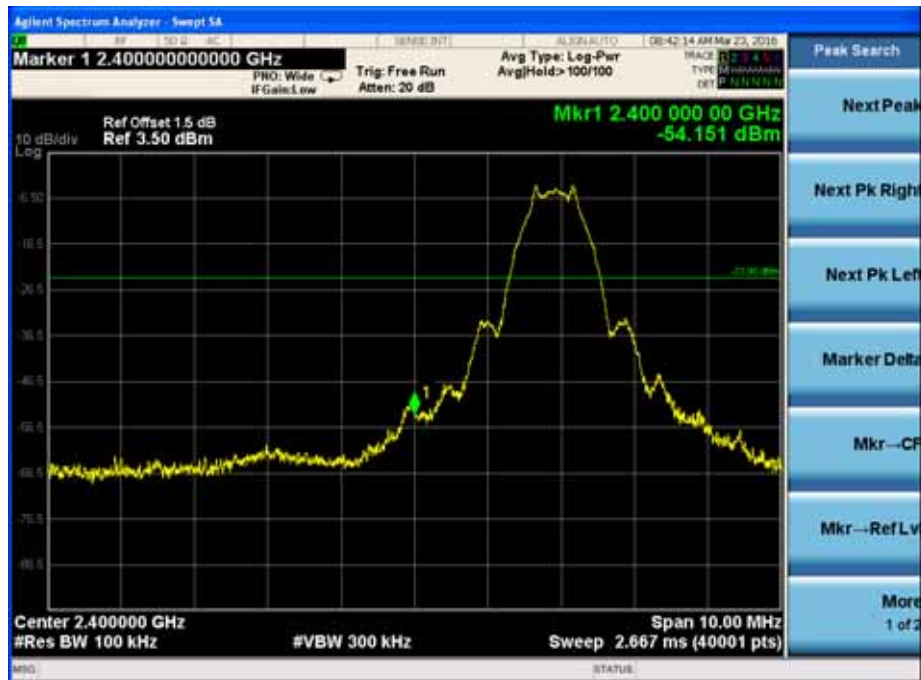
## 5.6. Test Result

|              |   |             |            |   |         |
|--------------|---|-------------|------------|---|---------|
| Product Name | : | DEX Adaptor | Test Power | : | DC 3.3V |
| Test Site    | : | TR8         |            |   |         |

| Mode | Channel | Test Frequency (MHz) | In-Band PSD[a] (dBm/100kHz) | Frequency (MHz) | Out-Band PSD[b] (dBm/100kHz) | [a]-[b] (dB) | Limit (dB) | Result |
|------|---------|----------------------|-----------------------------|-----------------|------------------------------|--------------|------------|--------|
| 1    | 00      | 2402                 | -3.90                       | 2400.00         | -54.15                       | 46.31        | >30        | Pass   |
| 1    | 39      | 2480                 | -5.005                      | 2511.90         | -66.09                       | 58.08        | >30        | Pass   |

Note: The worst case of Emissions in non-restricted frequency bands as below:

Mode 1 CH01(2412MHz)



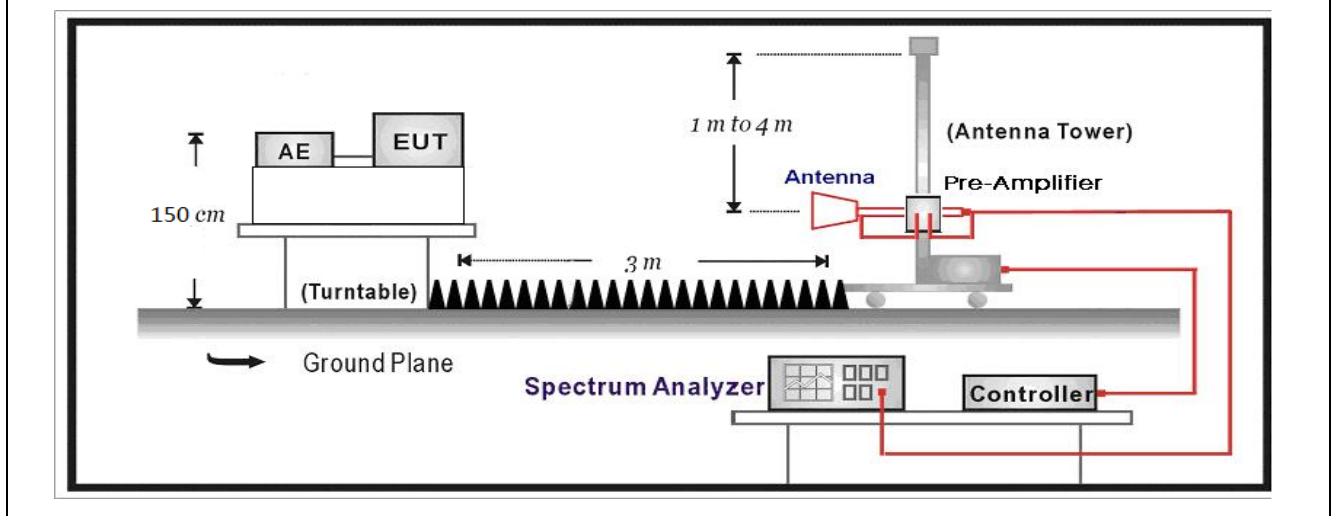
## 6. Radiated Emission Band Edge

### 6.1. Test Equipment

| Radiated Emission(Above 1GHz) / AC-5                                                                                                       |              |              |             |            |               |
|--------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|-------------|------------|---------------|
| Instrument                                                                                                                                 | Manufacturer | Type No.     | Serial No.  | Cal. Date  | Cal. Due Date |
| Spectrum Analyzer                                                                                                                          | Agilent      | E4446A       | MY45300103  | 2016.01.04 | 2017.01.03    |
| Preamplifier                                                                                                                               | Miteq        | NSP1800-25   | 1364185     | 2015.05.06 | 2016.05.05    |
| Preamplifier                                                                                                                               | Quietek      | AP-040G      | CHM-0906001 | 2015.05.06 | 2016.05.05    |
| DRG Horn                                                                                                                                   | ETS-Lindgren | 3117         | 00123988    | 2016.01.22 | 2017.01.21    |
| Broad-Band Horn Antenna                                                                                                                    | Schwarzbeck  | BBHA9170     | 294         | 2015.11.25 | 2016.11.24    |
| Coaxial Cable                                                                                                                              | Huber+Suhner | SUCOFLEX 106 | AC5-C1      | 2016.03.02 | 2017.03.01    |
| Coaxial Cable                                                                                                                              | Huber+Suhner | SUCOFLEX 106 | AC5-C2      | 2016.03.02 | 2017.03.01    |
| Coaxial Cable                                                                                                                              | Huber+Suhner | SUCOFLEX 102 | AC5-C3      | 2016.03.02 | 2017.03.01    |
| EMI Receiver                                                                                                                               | Agilent      | N9038A       | MY51210196  | 2015.06.10 | 2016.06.09    |
| Temperature/Humidity Meter                                                                                                                 | Zhichen      | ZC1-2        | AC5-TH      | 2016.01.04 | 2017.01.03    |
| Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards. |              |              |             |            |               |

## 6.2. Test Setup

Above 1GHz Test Setup:



## 6.3. Limit

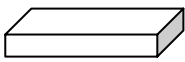
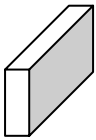
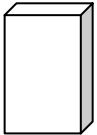
| Band edge Limit       |          |                      |           |              |
|-----------------------|----------|----------------------|-----------|--------------|
| Frequency bands (MHz) | Detector | Limit (dB $\mu$ V/m) | RBW (MHz) | Distance (m) |
| 2310-2390             | PK       | 74                   | 1         | 3            |
| 2483.5-2500           | AV       | 54                   | 1         | 3            |

Note: The field strength of emissions appearing within these frequency bands shall not exceed the limits.

## 6.4. Test Procedure

| Test Method                         |                                     |                                     |             |                                                                                                                |
|-------------------------------------|-------------------------------------|-------------------------------------|-------------|----------------------------------------------------------------------------------------------------------------|
|                                     | References Rule                     |                                     | Chapter     | Description                                                                                                    |
| <input checked="" type="checkbox"/> | ANSI C63.10                         |                                     | 6.10        | Band-edge testing                                                                                              |
|                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 6.10.5      | Restricted-band band-edge measurements                                                                         |
|                                     | <input type="checkbox"/>            | ANSI C63.10                         | 6.10.6      | Marker-delta method                                                                                            |
| <input checked="" type="checkbox"/> | ANSI C63.10                         |                                     | 11.12       | Emissions in restricted frequency bands                                                                        |
|                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 11.12.1     | Radiated emission measurements                                                                                 |
|                                     | <input checked="" type="checkbox"/> | ANSI C63.10                         | 11.12.2.7   | Radiated spurious emission test                                                                                |
| <input type="checkbox"/>            | ANSI C63.10                         |                                     | 6.4         | Radiated emissions from unlicensed wireless devices below 30 MHz                                               |
| <input type="checkbox"/>            | ANSI C63.10                         |                                     | 6.5         | Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz               |
| <input checked="" type="checkbox"/> | ANSI C63.10                         |                                     | 6.6         | Radiated emissions from unlicensed wireless devices above 1 GHz                                                |
|                                     | <input type="checkbox"/>            | ANSI C63.10                         | 11.12.2     | Antenna-port conducted measurements                                                                            |
|                                     |                                     | <input type="checkbox"/>            | ANSI C63.10 | 11.12.2.3 Quasi-peak measurement procedure                                                                     |
|                                     |                                     | <input checked="" type="checkbox"/> | ANSI C63.10 | 11.12.2.4 Peak power measurement procedure                                                                     |
|                                     |                                     | <input checked="" type="checkbox"/> | ANSI C63.10 | 11.12.2.5 Average power measurement procedures                                                                 |
|                                     |                                     | <input type="checkbox"/>            | ANSI C63.10 | 11.12.2.5.1 Trace averaging with continuous EUT transmission at full power                                     |
|                                     |                                     | <input type="checkbox"/>            | ANSI C63.10 | 11.12.2.5.2 Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction |
|                                     |                                     | <input checked="" type="checkbox"/> | ANSI C63.10 | 11.12.2.5.3 Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold               |

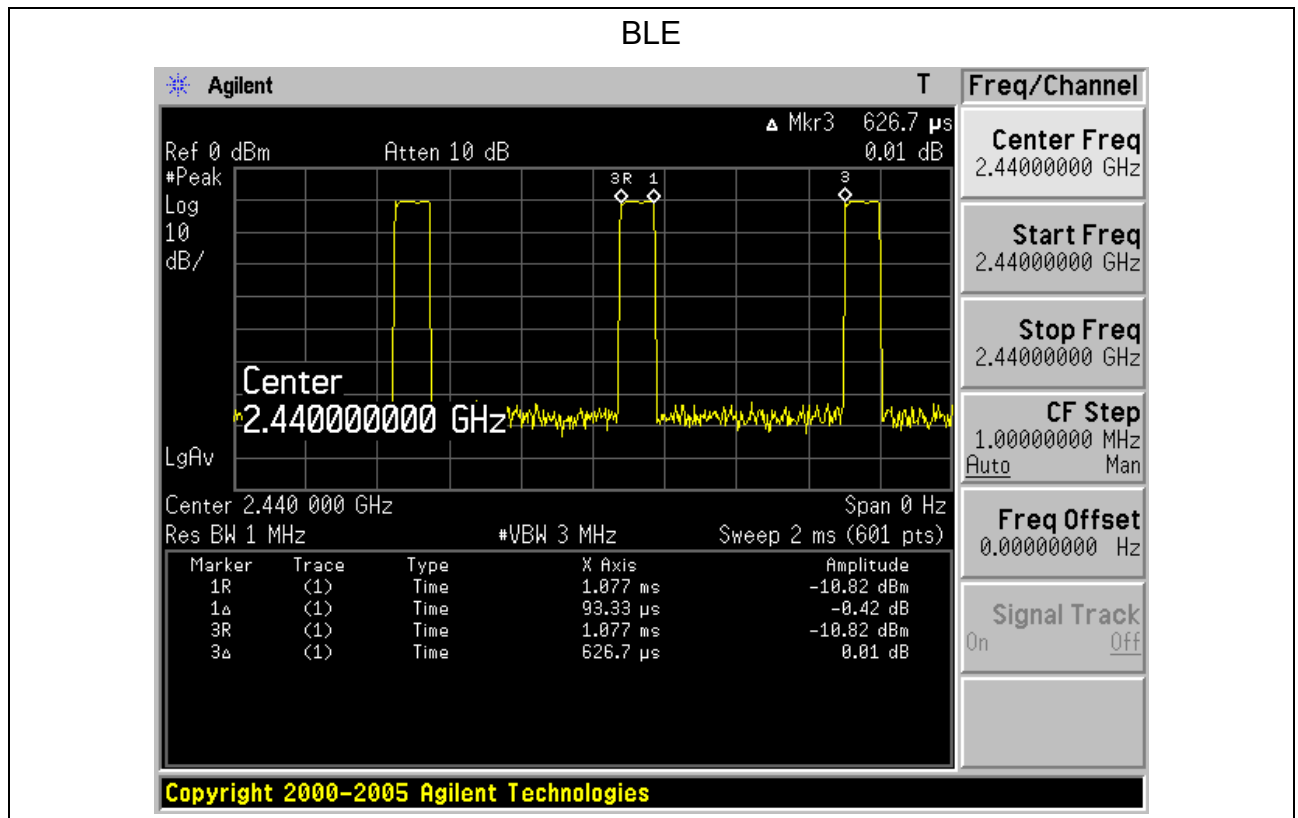
## 6.5. EUT test definition

| Item            | Emissions in non-restricted frequency bands |                                                                                      |                                                                                     |                                                                                     |
|-----------------|---------------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Device Category | <input type="checkbox"/>                    | Fixed position use                                                                   |                                                                                     |                                                                                     |
|                 | <input checked="" type="checkbox"/>         | Mobile position use                                                                  |                                                                                     |                                                                                     |
| Test mode       | Mode 1                                      |                                                                                      |                                                                                     |                                                                                     |
| Test method     | <input checked="" type="checkbox"/>         | Radiated                                                                             |                                                                                     |                                                                                     |
|                 |                                             | X Axis                                                                               | Y Axis                                                                              | Z Axis                                                                              |
|                 |                                             |     |  |  |
|                 |                                             | Worst Axis <input type="checkbox"/>                                                  | Worst Axis <input type="checkbox"/>                                                 | Worst Axis <input checked="" type="checkbox"/>                                      |
|                 | <input type="checkbox"/>                    | Conducted                                                                            |                                                                                     |                                                                                     |
|                 | <input type="checkbox"/>                    | Chain 1                                                                              |                                                                                     |                                                                                     |
|                 |                                             |  |                                                                                     |                                                                                     |
|                 | <input type="checkbox"/>                    | Chain 1                                                                              | Chain 2                                                                             |                                                                                     |
|                 |                                             |  |                                                                                     |                                                                                     |
|                 |                                             | Worst Chain <input type="checkbox"/>                                                 | Worst Chain <input type="checkbox"/>                                                |                                                                                     |
|                 | <input type="checkbox"/>                    | Chain 1                                                                              | Chain 2                                                                             | Chain 3                                                                             |
|                 |                                             |  |                                                                                     |                                                                                     |
|                 | Worst Chain <input type="checkbox"/>        | Worst Chain <input type="checkbox"/>                                                 | Worst Chain <input type="checkbox"/>                                                |                                                                                     |

## 6.6. Duty Cycle

| Test Mode | Tx On (ms) | Tx Off (ms) | Reduced VBW | Tx On + Tx Off (ms) | Duty Cycle |
|-----------|------------|-------------|-------------|---------------------|------------|
| BLE       | 0.09333    | 0.53337     | 13kHz       | 0.6263              | 14.89%     |

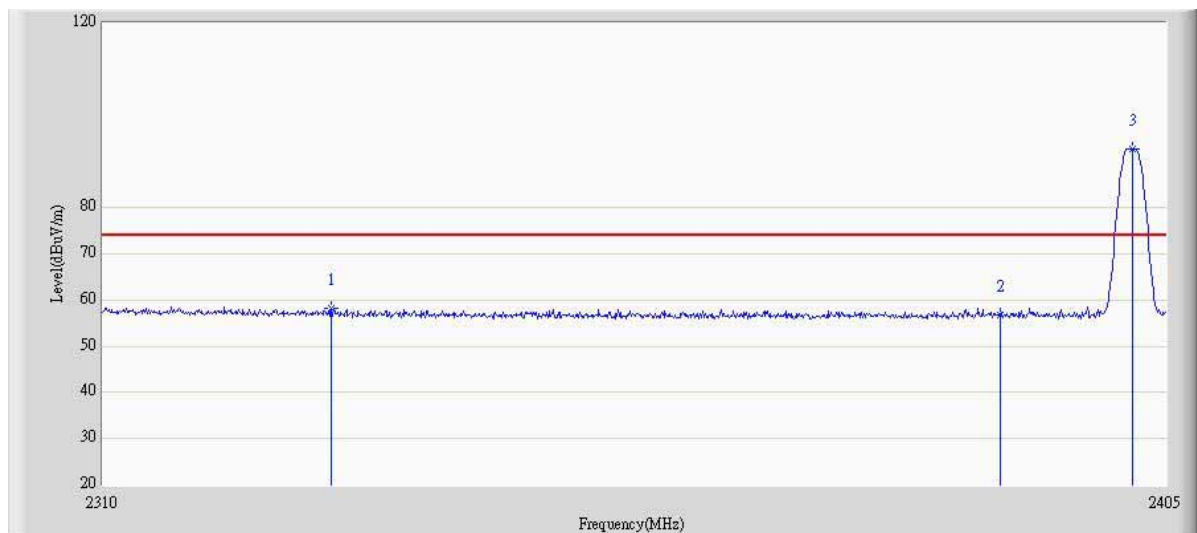
Note: The duty cycle is less than 98%, so VBW should be reduced to  $(13\text{kHz})1/T_{\text{on}}$  to test AV.



## 6.7. Test Result

|              |   |              |           |   |            |
|--------------|---|--------------|-----------|---|------------|
| Product Name | : | DEX Adaptor  | Polarity  | : | Horizontal |
| Test Mode    | : | Mode 1       | Power     | : | DC 3.3V    |
| Test CH/Freq | : | CH00/2402MHz | Test Site | : | AC5        |

| No | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Over Limit (dB) | Limit (dBμV/m) | Factor (dB) | Type |
|----|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  | 2330.140        | 58.090                 | 25.537               | -15.910         | 74.000         | 32.553      | PK   |
| 2  | 2402.000        | 92.713                 | 60.449               | N/A             | N/A            | 32.264      | PK   |
| 1  | 2390.000        | 43.407                 | 11.173               | -10.593         | 54.000         | 32.234      | AV   |
| 2  | 2402.000        | 90.493                 | 58.229               | N/A             | N/A            | 32.264      | AV   |



|              |   |              |           |   |          |
|--------------|---|--------------|-----------|---|----------|
| Product Name | : | DEX Adaptor  | Polarity  | : | Vertical |
| Test Mode    | : | Mode 1       | Power     | : | DC 3.3V  |
| Test CH/Freq | : | CH00/2402MHz | Test Site | : | AC5      |

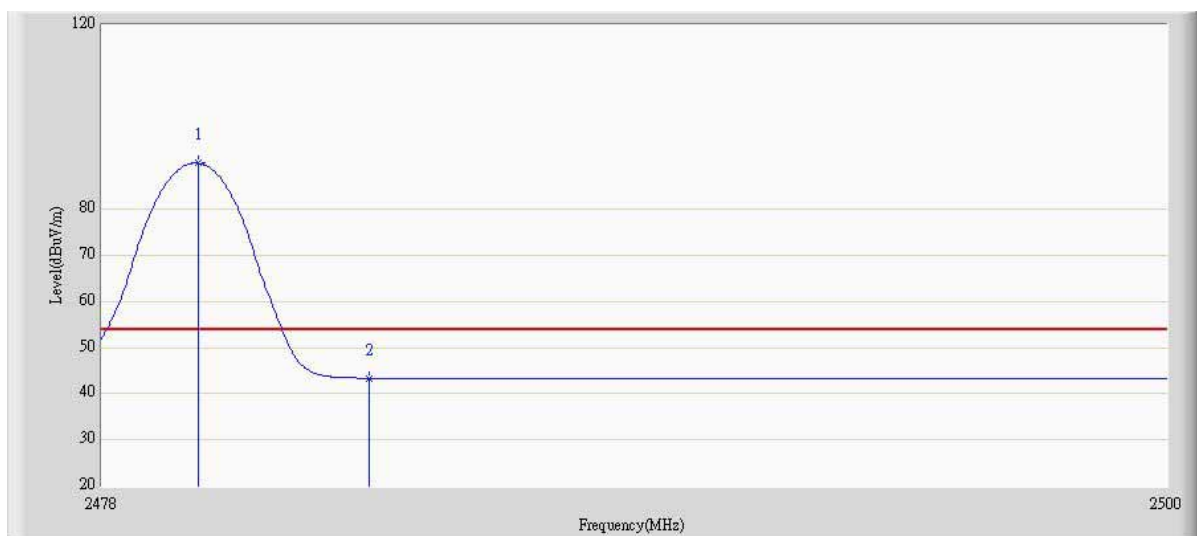
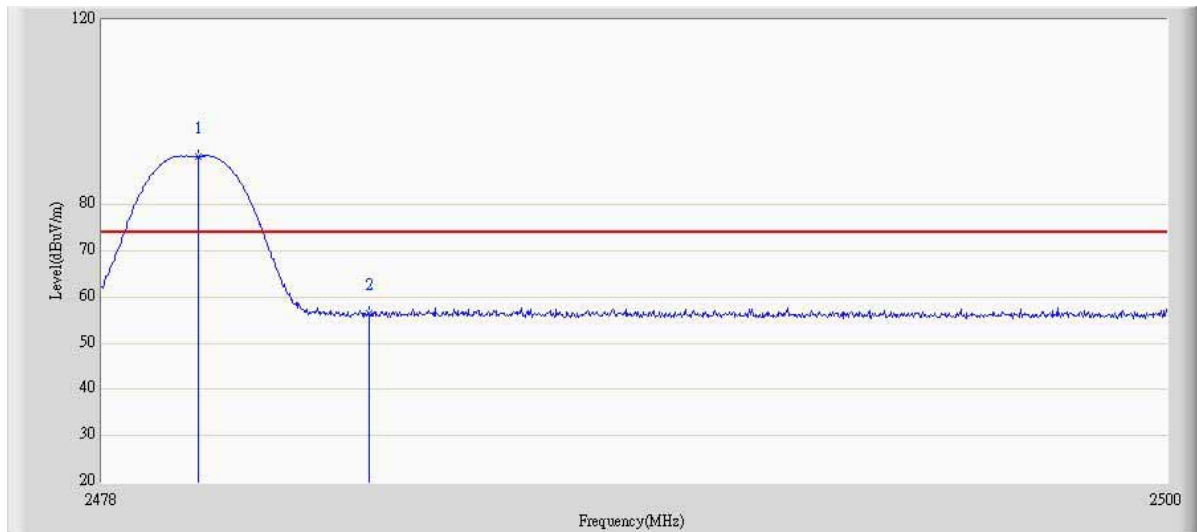
| No | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Over Limit (dB) | Limit (dBμV/m) | Factor (dB) | Type |
|----|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  | 2390.000        | 55.856                 | 24.248               | -18.144         | 74.000         | 31.608      | PK   |
| 2  | 2402.000        | 87.504                 | 55.901               | N/A             | N/A            | 31.603      | PK   |
| 1  | 2390.000        | 42.742                 | 11.134               | -11.258         | 54.000         | 31.608      | AV   |
| 2  | 2402.000        | 85.507                 | 53.904               | N/A             | N/A            | 31.603      | AV   |





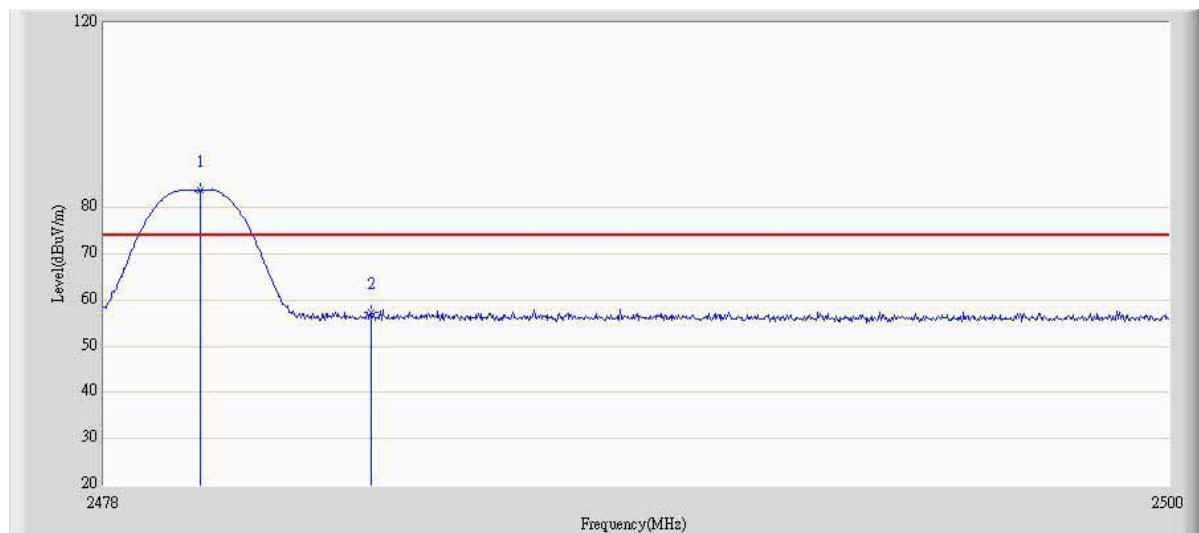
|              |   |              |           |   |            |
|--------------|---|--------------|-----------|---|------------|
| Product Name | : | DEX Adaptor  | Polarity  | : | Horizontal |
| Test Mode    | : | Mode 1       | Power     | : | DC 3.3V    |
| Test CH/Freq | : | CH39/2480MHz | Test Site | : | AC5        |

| No | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Over Limit (dB) | Limit (dBμV/m) | Factor (dB) | Type |
|----|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  | 2480.000        | 90.526                 | 58.839               | N/A             | N/A            | 31.687      | PK   |
| 2  | 2483.500        | 56.412                 | 24.797               | -17.588         | 74.000         | 31.615      | PK   |
| 1  | 2480.000        | 89.978                 | 58.053               | N/A             | N/A            | 31.925      | AV   |
| 2  | 2483.500        | 43.404                 | 11.518               | -10.596         | 54.000         | 31.886      | AV   |



|              |   |              |           |   |          |
|--------------|---|--------------|-----------|---|----------|
| Product Name | : | DEX Adaptor  | Polarity  | : | Vertical |
| Test Mode    | : | Mode 1       | Power     | : | DC 3.3V  |
| Test CH/Freq | : | CH39/2480MHz | Test Site | : | AC5      |

| No | Frequency (MHz) | Measure Level (dBμV/m) | Reading Level (dBμV) | Over Limit (dB) | Limit (dBμV/m) | Factor (dB) | Type |
|----|-----------------|------------------------|----------------------|-----------------|----------------|-------------|------|
| 1  | 2480.000        | 83.768                 | 52.081               | N/A             | N/A            | 31.687      | PK   |
| 2  | 2483.500        | 57.272                 | 25.657               | -16.728         | 74.000         | 31.615      | PK   |
| 1  | 2480.000        | 82.863                 | 51.176               | N/A             | N/A            | 31.687      | AV   |
| 2  | 2483.500        | 43.108                 | 11.493               | -10.892         | 54.000         | 31.615      | AV   |

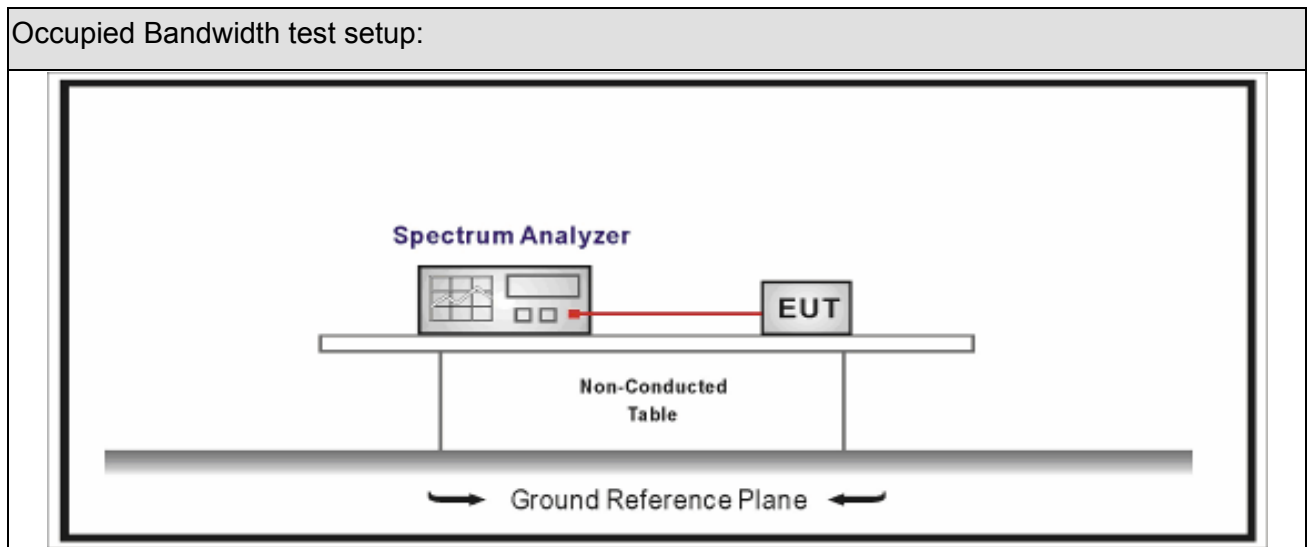


## 7. Occupied Bandwidth

### 7.1. Test Equipment

| Occupied Bandwidth / TR-8                                                                                                                  |              |          |            |            |               |
|--------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------|------------|------------|---------------|
| Instrument                                                                                                                                 | Manufacturer | Type No. | Serial No. | Cal. Date  | Cal. Due Date |
| Spectrum Analyzer                                                                                                                          | Agilent      | E4446A   | MY45300103 | 2016.01.04 | 2017.01.03    |
| Spectrum Analyzer                                                                                                                          | Agilent      | N9010A   | MY48030494 | 2016.03.11 | 2017.03.10    |
| Temperature/Humidity Meter                                                                                                                 | zhichen      | ZC1-2    | TR8-TH     | 2015.04.10 | 2016.04.09    |
| Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards. |              |          |            |            |               |

### 7.2. Test Setup



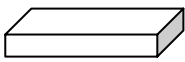
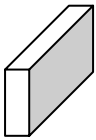
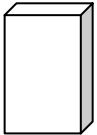
### 7.3. Limit

| Occupied Bandwidth                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------|
| Systems using digital modulation techniques operate in the 2400-2483.5 MHz. The minimum 6 dB bandwidth shall be at least 500 kHz |

### 7.4. Test Procedure

| Test Method                         |                                     |             |         |               |
|-------------------------------------|-------------------------------------|-------------|---------|---------------|
|                                     | Reference Rule                      |             | Chapter | Description   |
| <input checked="" type="checkbox"/> | ANSI C63.10                         |             | 11.8    | DTS bandwidth |
|                                     | <input type="checkbox"/>            | ANSI C63.10 | 11.8.1  | Option 1      |
|                                     | <input checked="" type="checkbox"/> | ANSI C63.10 | 11.8.2  | Option 2      |

## 7.5. EUT test definition

| Item            | Occupied Bandwidth                   |                                                                                      |                                                                                     |                                                                                     |
|-----------------|--------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Device Category | <input type="checkbox"/>             | Fixed position use                                                                   |                                                                                     |                                                                                     |
|                 | <input checked="" type="checkbox"/>  | Mobile position use                                                                  |                                                                                     |                                                                                     |
| Test mode       | Mode 1, Mode 2, Mode 3, Mode 4       |                                                                                      |                                                                                     |                                                                                     |
| Test method     | <input type="checkbox"/>             | Radiated                                                                             |                                                                                     |                                                                                     |
|                 |                                      | X Axis                                                                               | Y Axis                                                                              | Z Axis                                                                              |
|                 |                                      |     |  |  |
|                 |                                      | Worst Axis <input type="checkbox"/>                                                  | Worst Axis <input type="checkbox"/>                                                 | Worst Axis <input type="checkbox"/>                                                 |
|                 | <input checked="" type="checkbox"/>  | Conducted                                                                            |                                                                                     |                                                                                     |
|                 | <input checked="" type="checkbox"/>  | Chain 1                                                                              |                                                                                     |                                                                                     |
|                 |                                      |  |                                                                                     |                                                                                     |
|                 | <input type="checkbox"/>             | Chain 1                                                                              | Chain 2                                                                             |                                                                                     |
|                 |                                      |  |                                                                                     |                                                                                     |
|                 |                                      | Worst Chain <input type="checkbox"/>                                                 | Worst Chain <input type="checkbox"/>                                                |                                                                                     |
|                 | <input type="checkbox"/>             | Chain 1                                                                              | Chain 2                                                                             | Chain 3                                                                             |
|                 |                                      |  |                                                                                     |                                                                                     |
|                 | Worst Chain <input type="checkbox"/> | Worst Chain <input type="checkbox"/>                                                 | Worst Chain <input type="checkbox"/>                                                |                                                                                     |

## 7.6. Test Result

|              |   |             |            |   |         |
|--------------|---|-------------|------------|---|---------|
| Product Name | : | DEX Adaptor | Test Power | : | DC 3.3V |
| Test Site    | : | TR-8        |            |   |         |

| Mode | CH. | Test Freq. (MHz) | 99% Occupied Bandwidth (kHz) | 6dB Occupied Bandwidth (kHz) | Limit (kHz) | Result |
|------|-----|------------------|------------------------------|------------------------------|-------------|--------|
|      |     |                  | Ant 0                        | Ant 0                        |             |        |
| 1    | 00  | 2402             | 1072.2                       | 711.6                        | >500        | Pass   |
| 1    | 19  | 2440             | 1073.7                       | 722.4                        | >500        | Pass   |
| 1    | 39  | 2480             | 1082.5                       | 727.9                        | >500        | Pass   |

Note : The worst case of Occupied Bandwidth as below:

### Mode 1 CH39 (2480MHz)



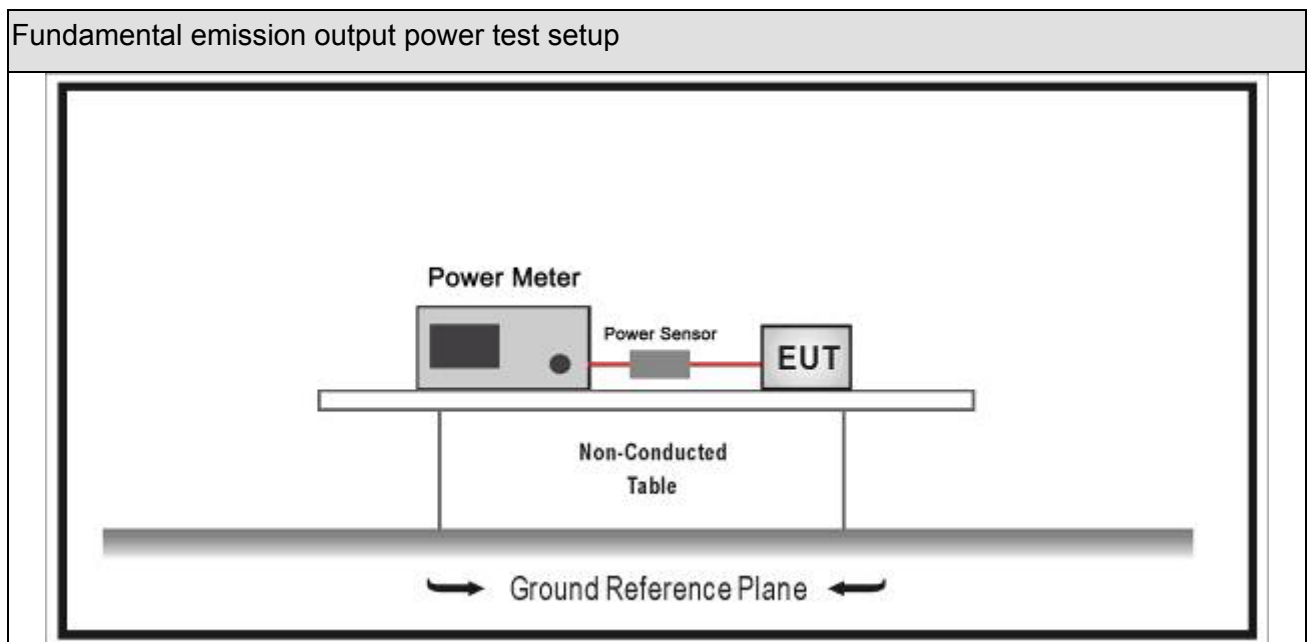
## 8. Fundamental emission output power

### 8.1. Test Equipment

| Fundamental emission output power/ TR-8 |              |          |            |            |               |
|-----------------------------------------|--------------|----------|------------|------------|---------------|
| Instrument                              | Manufacturer | Type No. | Serial No. | Cal. Date  | Cal. Due Date |
| Spectrum Analyzer                       | Agilent      | E4446A   | MY45300103 | 2016.01.04 | 2017.01.03    |
| Spectrum Analyzer                       | Agilent      | N9010A   | MY48030494 | 2016.03.11 | 2017.03.10    |
| Wideband Peak Power Meter               | Anritsu      | ML2495A  | 0905006    | 2015.11.11 | 2016.11.10    |
| Power Sensor                            | Anritsu      | MA2411B  | 0846014    | 2015.11.11 | 2016.11.10    |
| Temperature/Humidity Meter              | zhicheng     | ZC1-2    | TR8-TH     | 2015.04.10 | 2016.04.09    |

Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.

### 8.2. Test Setup



### 8.3. Limit

| Fundamental emission output power Limit                                                                                     |                                                                                  |                                                   |
|-----------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|---------------------------------------------------|
| <input checked="" type="checkbox"/>                                                                                         | $G_{TX} < 6\text{dBi}$                                                           | $P_{out} \leq 30\text{dBm}$                       |
| <input type="checkbox"/>                                                                                                    | $G_{TX} > 6\text{dBi}$                                                           |                                                   |
|                                                                                                                             | <input type="checkbox"/> Non-Fix point-point                                     | $P_{out} \leq 30 - (G_{TX} - 6)$                  |
|                                                                                                                             | <input type="checkbox"/> Fix point-point                                         | $P_{out} \leq 30 - [(G_{TX} - 6)]/3$              |
|                                                                                                                             | <input type="checkbox"/> Point-to-multipoint                                     | $P_{out} \leq 30 - (G_{TX} - 6)$                  |
|                                                                                                                             | <input type="checkbox"/> Overlap Beams                                           | $P_{out} \leq 30 - [(G_{TX} - 6)]/3$              |
|                                                                                                                             | <input type="checkbox"/> Aggregate power transmitted simultaneously on all beams | $P_{out} \leq 30 - [(G_{TX} - 6)]/3$              |
|                                                                                                                             | <input type="checkbox"/> single directional beam                                 | $P_{out} \leq 30 - [(G_{TX} - 6)]/3 + 8\text{dB}$ |
| Note 1 : $G_{TX}$ directional gain of transmitting antennas.<br>Note 2 : $P_{out}$ is maximum peak conducted output power . |                                                                                  |                                                   |

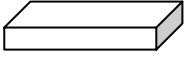
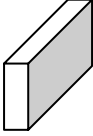
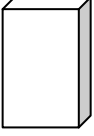
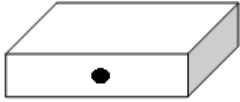


## 8.4. Test Procedure

| Fundamental emission output power Test Method |                                     |                                     |                          |             |                                          |                                            |
|-----------------------------------------------|-------------------------------------|-------------------------------------|--------------------------|-------------|------------------------------------------|--------------------------------------------|
|                                               | References Rule                     |                                     |                          | Chapter     | Description                              |                                            |
| <input checked="" type="checkbox"/>           | ANSI C63.10                         |                                     |                          | 11.9        | Fundamental emission output power        |                                            |
|                                               | <input checked="" type="checkbox"/> | ANSI C63.10                         |                          | 11.9.1      | Maximum peak conducted output power      |                                            |
|                                               |                                     | <input type="checkbox"/>            | ANSI C63.10              | 11.9.1.1    | RBW ≥ DTS bandwidth                      |                                            |
|                                               |                                     | <input type="checkbox"/>            | ANSI C63.10              | 11.9.1.2    | Integrated band power method             |                                            |
|                                               |                                     | <input checked="" type="checkbox"/> | ANSI C63.10              | 11.9.1.3    | PKPM1 Peak power meter method            |                                            |
|                                               | <input type="checkbox"/>            | ANSI C63.10                         |                          | 11.9.2      | Maximum conducted (average) output power |                                            |
|                                               |                                     | <input type="checkbox"/>            | ANSI C63.10              |             | 11.9.2.2                                 | Measurement using a spectrum analyzer (SA) |
|                                               |                                     |                                     | <input type="checkbox"/> | ANSI C63.10 | 11.9.2.2.2                               | Method AVGSA-1(Duty cycle ≥ 98%)           |
|                                               |                                     |                                     | <input type="checkbox"/> | ANSI C63.10 | 11.9.2.2.3                               | Method AVGSA-1A(Duty cycle ≥ 98%)          |
|                                               |                                     |                                     | <input type="checkbox"/> | ANSI C63.10 | 11.9.2.2.4                               | Method AVGSA-2(Duty cycle ≤ 98%)           |
|                                               |                                     |                                     | <input type="checkbox"/> | ANSI C63.10 | 11.9.2.2.5                               | Method AVGSA-2A(Duty cycle ≤ 98%)          |
|                                               |                                     |                                     | <input type="checkbox"/> | ANSI C63.10 | 11.9.2.2.4                               | Method AVGSA-3                             |
|                                               |                                     |                                     | <input type="checkbox"/> | ANSI C63.10 | 11.9.2.2.5                               | Method AVGSA-3A                            |
|                                               |                                     | <input type="checkbox"/>            | ANSI C63.10              |             | 11.9.2.3                                 | Measurement using a power meter (PM)       |
|                                               |                                     |                                     | <input type="checkbox"/> | ANSI C63.10 | 11.9.2.3.1                               | Method AVGPM                               |
|                                               |                                     |                                     | <input type="checkbox"/> | ANSI C63.10 | 11.9.2.3.2                               | Method AVGPM-G                             |

| Directional Gain Calculations for In-Band test method |                          |             |             |                                                                   |
|-------------------------------------------------------|--------------------------|-------------|-------------|-------------------------------------------------------------------|
|                                                       | References Rule          |             | Chapter     | Description                                                       |
| <input type="checkbox"/>                              | KDB 662911               |             | F2)a)       | Basic methodology with NANT transmit antennas                     |
|                                                       | <input type="checkbox"/> | KDB 662911  | F2)a) (i)   | transmit signals are correlated                                   |
|                                                       | <input type="checkbox"/> | KDB 662911  | F2)a) (ii)  | transmit signals are uncorrelated                                 |
| <input type="checkbox"/>                              | KDB 662911               |             | F2)b)       | Sectorized antenna systems.                                       |
| <input type="checkbox"/>                              | KDB 662911               |             | F2)c)       | Cross-polarized antennas                                          |
|                                                       | <input type="checkbox"/> | ANSI C63.10 | F2)c) (i)   | Cross-polarized antennas with NANT = 2.                           |
|                                                       | <input type="checkbox"/> | ANSI C63.10 | F2)c) (ii)  | Multiple antennas                                                 |
| <input type="checkbox"/>                              | KDB 662911               |             | F2)d)       | Sectorized antenna systems.                                       |
|                                                       | <input type="checkbox"/> | KDB 662911  | F2)d) (i)   | transmit signals are correlated                                   |
|                                                       | <input type="checkbox"/> | KDB 662911  | F2)d) (ii)  | transmit signals are uncorrelated                                 |
| <input type="checkbox"/>                              | KDB 662911               |             | F2)e)       | Sectorized antenna systems.                                       |
|                                                       | <input type="checkbox"/> | KDB 662911  | F2)e) (i)   | Antennas have the same gain                                       |
|                                                       | <input type="checkbox"/> | KDB 662911  | F2)e) (ii)  | Antenna have the different gain with one spatial stream           |
|                                                       | <input type="checkbox"/> | KDB 662911  | F2)e) (iii) | Antenna have the different gain with more than one spatial stream |
| <input type="checkbox"/>                              | KDB 662911               |             | F2)f)       | Cyclic Delay Diversity (CDD)                                      |
|                                                       | <input type="checkbox"/> | KDB 662911  | F2)f) (i)   | Antennas have the same gain                                       |
|                                                       | <input type="checkbox"/> | KDB 662911  | F2)f) (ii)  | Antenna have the different gain with one spatial stream           |
|                                                       | <input type="checkbox"/> | KDB 662911  | F2)f) (ii)  | Antenna have the different gain with more than one spatial stream |

## 8.5. EUT test definition

| Item            | Fundamental emission output power    |                                                                                      |                                                                                     |                                                                                     |
|-----------------|--------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Device Category | <input type="checkbox"/>             | Fixed position use                                                                   |                                                                                     |                                                                                     |
|                 | <input checked="" type="checkbox"/>  | Mobile position use                                                                  |                                                                                     |                                                                                     |
| Test mode       | Mode 1                               |                                                                                      |                                                                                     |                                                                                     |
| Test method     | <input type="checkbox"/>             | Radiated                                                                             |                                                                                     |                                                                                     |
|                 |                                      | X Axis                                                                               | Y Axis                                                                              | Z Axis                                                                              |
|                 |                                      |     |  |  |
|                 |                                      | Worst Axis <input type="checkbox"/>                                                  | Worst Axis <input type="checkbox"/>                                                 | Worst Axis <input type="checkbox"/>                                                 |
|                 | <input checked="" type="checkbox"/>  | Conducted                                                                            |                                                                                     |                                                                                     |
|                 | <input checked="" type="checkbox"/>  | Chain 1                                                                              |                                                                                     |                                                                                     |
|                 |                                      |  |                                                                                     |                                                                                     |
|                 | <input type="checkbox"/>             | Chain 1                                                                              | Chain 2                                                                             |                                                                                     |
|                 |                                      |  |                                                                                     |                                                                                     |
|                 |                                      | Worst Chain <input type="checkbox"/>                                                 | Worst Chain <input type="checkbox"/>                                                |                                                                                     |
|                 | <input type="checkbox"/>             | Chain 1                                                                              | Chain 2                                                                             | Chain 3                                                                             |
|                 |                                      |  |                                                                                     |                                                                                     |
|                 | Worst Chain <input type="checkbox"/> | Worst Chain <input type="checkbox"/>                                                 | Worst Chain <input type="checkbox"/>                                                |                                                                                     |

## 8.6. Test Result

|              |   |             |            |   |         |
|--------------|---|-------------|------------|---|---------|
| Product Name | : | DEX Adaptor | Test Power | : | DC 3.3V |
| Test Site    | : | TR8         |            |   |         |

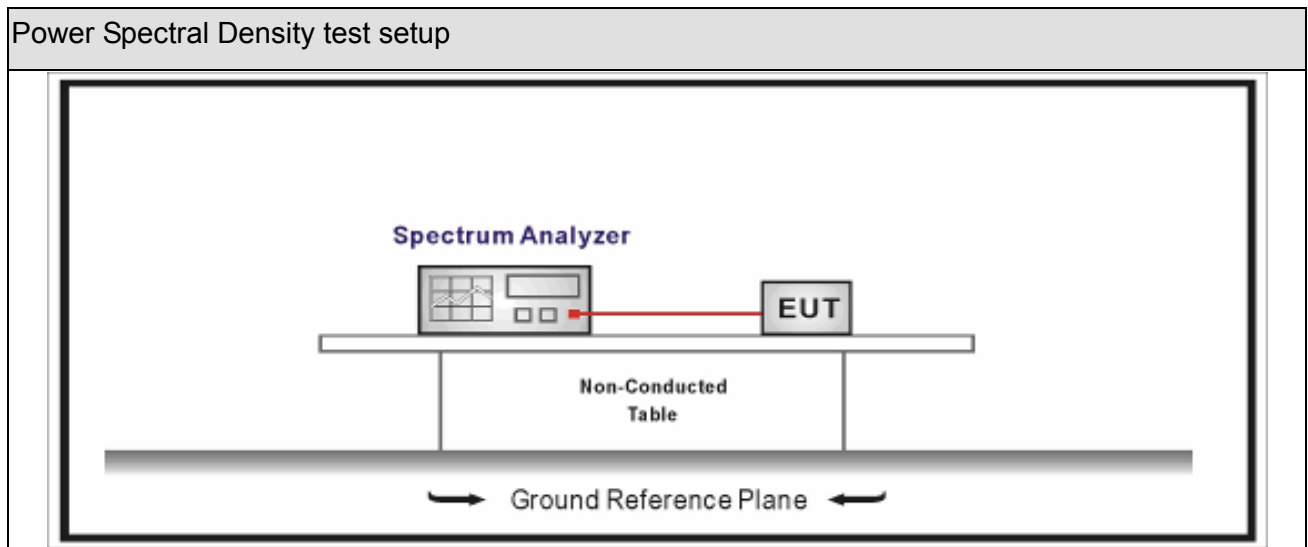
| Mode | Channel | Test Frequency (MHz) | Measurement Power Output (dBm) | Total Power (dBm) | Limit (dBm) | Result |
|------|---------|----------------------|--------------------------------|-------------------|-------------|--------|
| 1    | 00      | 2402                 | -3.865                         | -3.865            | 30          | Pass   |
| 1    | 19      | 2440                 | -4.389                         | -4.389            | 30          | Pass   |
| 1    | 39      | 2480                 | -5.099                         | -5.099            | 30          | Pass   |

## 9. Power Spectral Density

### 9.1. Test Equipment

| Power Spectral Density / TR-8                                                                                                              |              |          |            |            |               |
|--------------------------------------------------------------------------------------------------------------------------------------------|--------------|----------|------------|------------|---------------|
| Instrument                                                                                                                                 | Manufacturer | Type No. | Serial No. | Cal. Date  | Cal. Due Date |
| Spectrum Analyzer                                                                                                                          | Agilent      | E4446A   | MY45300103 | 2016.01.04 | 2017.01.03    |
| Spectrum Analyzer                                                                                                                          | Agilent      | N9010A   | MY48030494 | 2016.03.11 | 2017.03.10    |
| Temperature/Humidity Meter                                                                                                                 | zhichen      | ZC1-2    | TR8-TH     | 2015.04.10 | 2016.04.09    |
| Note: All equipments are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards. |              |          |            |            |               |

### 9.2. Test Setup



### 9.3. Limit

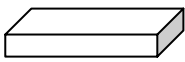
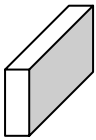
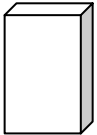
|                                                       |
|-------------------------------------------------------|
| Power Spectral Density Limit                          |
| Power Spectral Density $\leq 8\text{dBm}/3\text{kHz}$ |

## 9.4. Test Procedure

| Power Spectral Density Test Method  |                                     |             |         |                                                                  |
|-------------------------------------|-------------------------------------|-------------|---------|------------------------------------------------------------------|
|                                     | References Rule                     |             | Chapter | Description                                                      |
| <input checked="" type="checkbox"/> | ANSI C63.10                         |             | 11.10   | Maximum power spectral density level in the fundamental emission |
|                                     | <input checked="" type="checkbox"/> | ANSI C63.10 | 11.10.2 | Method PKPSD (peak PSD)                                          |
|                                     | <input type="checkbox"/>            | ANSI C63.10 | 11.10.3 | Method AVGPSSD-1(Duty cycle $\geq$ 98%)                          |
|                                     | <input type="checkbox"/>            | ANSI C63.10 | 11.10.4 | Method AVGPSSD-1A(Duty cycle $\geq$ 98%)                         |
|                                     | <input type="checkbox"/>            | ANSI C63.10 | 11.10.5 | Method AVGPSSD-2(Duty cycle $<$ 98%)                             |
|                                     | <input type="checkbox"/>            | ANSI C63.10 | 11.10.6 | Method AVGPSSD-2A(Duty cycle $<$ 98%)                            |
|                                     | <input type="checkbox"/>            | ANSI C63.10 | 11.10.7 | Method AVGPSSD-3                                                 |
|                                     | <input type="checkbox"/>            | ANSI C63.10 | 11.10.8 | Method AVGPSSD-3A                                                |

| Directional Gain Calculations for In-Band test method |                          |             |             |                                                                   |
|-------------------------------------------------------|--------------------------|-------------|-------------|-------------------------------------------------------------------|
|                                                       | Referred Rule            |             | Chapter     | Description                                                       |
| <input type="checkbox"/>                              | KDB 662911               |             | F2)a)       | Basic methodology with NANT transmit antennas                     |
|                                                       | <input type="checkbox"/> | KDB 662911  | F2)a) (i)   | transmit signals are correlated                                   |
|                                                       | <input type="checkbox"/> | KDB 662911  | F2)a) (ii)  | transmit signals are uncorrelated                                 |
| <input type="checkbox"/>                              | KDB 662911               |             | F2)b)       | Sectorized antenna systems.                                       |
| <input type="checkbox"/>                              | KDB 662911               |             | F2)c)       | Cross-polarized antennas                                          |
|                                                       | <input type="checkbox"/> | ANSI C63.10 | F2)c) (i)   | Cross-polarized antennas with NANT = 2.                           |
|                                                       | <input type="checkbox"/> | ANSI C63.10 | F2)c) (ii)  | Multiple antennas                                                 |
| <input type="checkbox"/>                              | KDB 662911               |             | F2)d)       | Sectorized antenna systems.                                       |
|                                                       | <input type="checkbox"/> | KDB 662911  | F2)d) (i)   | transmit signals are correlated                                   |
|                                                       | <input type="checkbox"/> | KDB 662911  | F2)d) (ii)  | transmit signals are uncorrelated                                 |
| <input type="checkbox"/>                              | KDB 662911               |             | F2)e)       | Sectorized antenna systems.                                       |
|                                                       | <input type="checkbox"/> | KDB 662911  | F2)e) (i)   | Antennas have the same gain                                       |
|                                                       | <input type="checkbox"/> | KDB 662911  | F2)e) (ii)  | Antenna have the different gain with one spatial stream           |
|                                                       | <input type="checkbox"/> | KDB 662911  | F2)e) (iii) | Antenna have the different gain with more than one spatial stream |
| <input type="checkbox"/>                              | KDB 662911               |             | F2)f)       | Cyclic Delay Diversity (CDD)                                      |
|                                                       | <input type="checkbox"/> | KDB 662911  | F2)f) (i)   | Antennas have the same gain                                       |
|                                                       | <input type="checkbox"/> | KDB 662911  | F2)f) (ii)  | Antenna have the different gain with one spatial stream           |
|                                                       | <input type="checkbox"/> | KDB 662911  | F2)f) (ii)  | Antenna have the different gain with more than one spatial stream |

## 9.5. EUT test definition

| Item            | Power Spectral Density Test Method   |                                                                                      |                                                                                     |                                                                                     |
|-----------------|--------------------------------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| Device Category | <input type="checkbox"/>             | Fixed position use                                                                   |                                                                                     |                                                                                     |
|                 | <input checked="" type="checkbox"/>  | Mobile position use                                                                  |                                                                                     |                                                                                     |
| Test mode       | Mode 1                               |                                                                                      |                                                                                     |                                                                                     |
| Test method     | <input type="checkbox"/>             | Radiated                                                                             |                                                                                     |                                                                                     |
|                 |                                      | X Axis                                                                               | Y Axis                                                                              | Z Axis                                                                              |
|                 |                                      |     |  |  |
|                 |                                      | Worst Axis <input type="checkbox"/>                                                  | Worst Axis <input type="checkbox"/>                                                 | Worst Axis <input type="checkbox"/>                                                 |
|                 | <input checked="" type="checkbox"/>  | Conducted                                                                            |                                                                                     |                                                                                     |
|                 | <input checked="" type="checkbox"/>  | Chain 1                                                                              |                                                                                     |                                                                                     |
|                 |                                      |  |                                                                                     |                                                                                     |
|                 | <input type="checkbox"/>             | Chain 1                                                                              | Chain 2                                                                             |                                                                                     |
|                 |                                      |  |                                                                                     |                                                                                     |
|                 |                                      | Worst Chain <input type="checkbox"/>                                                 | Worst Chain <input type="checkbox"/>                                                |                                                                                     |
|                 | <input type="checkbox"/>             | Chain 1                                                                              | Chain 2                                                                             | Chain 3                                                                             |
|                 |                                      |  |                                                                                     |                                                                                     |
|                 | Worst Chain <input type="checkbox"/> | Worst Chain <input type="checkbox"/>                                                 | Worst Chain <input type="checkbox"/>                                                |                                                                                     |



## 9.6. Test Result

|              |   |             |            |   |         |
|--------------|---|-------------|------------|---|---------|
| Product Name | : | DEX Adaptor | Test Power | : | DC 3.3V |
| Test Site    | : | TR8         |            |   |         |

| Mode | Channel | Test Frequency (MHz) | Measurement PSD (dBm/3kHz) | Total PSD (dBm/3kHz) | Directional Gain (dBi) | Limit (dBm/3kHz) | Result |
|------|---------|----------------------|----------------------------|----------------------|------------------------|------------------|--------|
|      |         |                      | Ant 0                      |                      |                        |                  |        |
| 1    | 00      | 2402                 | -13.225                    | -13.225              | 3.28                   | 8                | Pass   |
| 1    | 19      | 2440                 | -13.487                    | -13.487              | 3.28                   | 8                | Pass   |
| 1    | 39      | 2480                 | -13.139                    | -13.139              | 3.28                   | 8                | Pass   |

Mode 1 CH39(2480MHz)



The End