



# **FCC Test Report**

## **FCC ID: 2ACDFMAGIC**

**Product :** Mobile phone

**Trade Name :** Superinworld

**Model Number :** MAGIC

**Serial Model :** L26

**Report No. :** NTEK-2015NT09012607F1

**Prepared for**

SUPERDIGITAL TECHNOLOGY CO., LIMITED  
F19,Block B,Nanxian Building,Longhua New District,Shenzhen  
518000,China

**Prepared by**

Shenzhen NTEK Testing Technology Co., Ltd.  
1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street,  
Bao'an District, Shenzhen P.R. China  
Tel.: +86-0755-61156588 Fax.: +86-0755-61156599  
Website: [www.ntek.org.cn](http://www.ntek.org.cn)

## TEST RESULT CERTIFICATION

**Applicant's name** ..... : SUPERDIGITAL TECHNOLOGY CO., LIMITED  
**Address** ..... : F19,Block B,Nanxian Building,Longhua New District,Shenzhen  
 518000,China  
**Manufacturer's Name** ..... : SUPERDIGITAL TECHNOLOGY CO., LIMITED  
**Address** ..... : F19,Block B,Nanxian Building,Longhua New District,Shenzhen  
 518000,China

### Product description

**Product name** ..... : Mobile phone  
**Model and/or type reference** : MAGIC  
 FCC Part15B:01 Oct.2014

**Standards** ..... : ANSI C63.4:2014

This device described above has been tested by NTEK, and the test results show that the equipment under test (EUT) is in compliance with Part 15 of FCC Rules. And it is applicable only to the tested sample identified in the report.

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**Date of Test** .....

**Date (s) of performance of tests** ..... : 01 Sep. 2015 ~17 Sep. 2015

**Date of Issue**..... : 17 Sep. 2015

**Test Result**..... : **Pass**

**Testing Engineer** : Eileen Liu.  
 (Eileen Liu)

**Technical Manager** : Brown Lu  
 (Brown Lu)

**Authorized Signatory** : Sam. Chen  
 (Sam Chen)

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## 1. TEST SUMMARY

Test procedures according to the technical standards:

| EMC Emission                         |                    |         |          |        |
|--------------------------------------|--------------------|---------|----------|--------|
| Standard                             | Test Item          | Limit   | Judgment | Remark |
| FCC Part15B:2014<br>ANSI C63.4: 2014 | Conducted Emission | Class B | PASS     |        |
|                                      | Radiated Emission  | Class B | PASS     |        |

NOTE:

- (1) 'N/A' denotes test is not applicable in this Test Report
- (2) For client's request and manual description, the test will not be executed.

## 1.1 TEST FACILITY

NTEK Testing Technology Co., Ltd

Add. : 1/F, Building E, Fenda Science Park, Sanwei Community, Xixiang Street, Bao'an District, Shenzhen P.R. China.

FCC Registration Number:238937; IC Registration Number:9270A-1

CNAS Registration Number:L5516

## 1.2 MEASUREMENT UNCERTAINTY

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

### A. Conducted Measurement :

| Test Site | Method | Measurement Frequency Range | U , (dB) | NOTE |
|-----------|--------|-----------------------------|----------|------|
| NTEKC01   | ANSI   | 150 KHz ~ 30MHz             | 3.2      |      |

### B. Radiated Measurement :

| Test Site | Method | Measurement Frequency Range | U , (dB) | NOTE |
|-----------|--------|-----------------------------|----------|------|
| NTEKA01   | ANSI   | 30MHz ~ 1000MHz             | 4.7      |      |
|           |        | 1GHz ~12.4GHz               | 5.0      |      |

## 2. GENERAL INFORMATION

### 2.1 GENERAL DESCRIPTION OF EUT

|                     |                                                                                     |                                                                                                                                                                                                                            |
|---------------------|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Equipment           | Mobile phone                                                                        |                                                                                                                                                                                                                            |
| Trade Name          | Superinworld                                                                        |                                                                                                                                                                                                                            |
| Model Name          | MAGIC                                                                               |                                                                                                                                                                                                                            |
| Serial Model        | L26                                                                                 |                                                                                                                                                                                                                            |
| Model Difference    | All the model are the same circuit and RF module, except the model name and colour. |                                                                                                                                                                                                                            |
| Product Description | The EUT is a Mobile phone.                                                          |                                                                                                                                                                                                                            |
|                     | Connecting I/O port:                                                                | USB, DC in                                                                                                                                                                                                                 |
|                     | Operation Frequency:                                                                | BT:2402~2480 MHz<br>WIFI:802.11b/g/n(20MHz): 2412~2462MHz<br>802.11n(40MHz):2422~2452MHz<br>GSM: 824.2-848.8MHz/1850.2-1909.8MHz<br>WCDMA: 826.4-846.6MHz/<br>1852.4-1907.6MHz                                             |
|                     | Modulation Type:                                                                    | BT(1Mbps): GFSK<br>BT EDR(2Mbps): $\pi/4$ -DQPSK<br>BT EDR(3Mbps): 8-DPSK<br>IEEE 802.11b :<br>DSSS (CCK, QPSK, DBPSK)<br>IEEE 802.11g/n (HT20/HT40) : OFDM<br>(64QAM, 16QAM, QPSK, BPSK)<br>GSM / DCS: GMSK<br>WCDMA:QPSK |
| Power Source        | DC Voltage                                                                          |                                                                                                                                                                                                                            |
| Adapter             | Mode:KA25-0501000US                                                                 |                                                                                                                                                                                                                            |
|                     | Input: 100-240V~, 50/60Hz, 0.25A Max<br>Output: 5.0V ---, 1000mA                    |                                                                                                                                                                                                                            |
| Battery             | DC 3.7V,1800mAh                                                                     |                                                                                                                                                                                                                            |

### 2.1.1.1 DESCRIPTION OF TEST MODES

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

| Pretest Mode | Description                   |
|--------------|-------------------------------|
| Mode 1       | Downloading Mode              |
| Mode 2       | REC Mode                      |
| Mode 3       | TF Card Playing Mode+Charging |

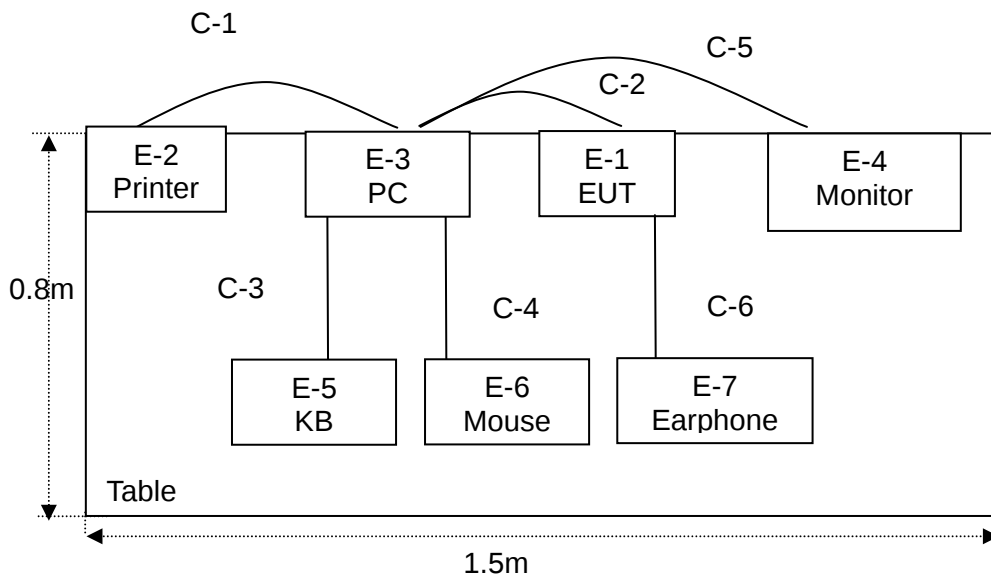
| For Conducted Test |                  |
|--------------------|------------------|
| Final Test Mode    | Description      |
| Mode 1             | Downloading Mode |

| For Radiated Test |                  |
|-------------------|------------------|
| Final Test Mode   | Description      |
| Mode 1            | Downloading Mode |

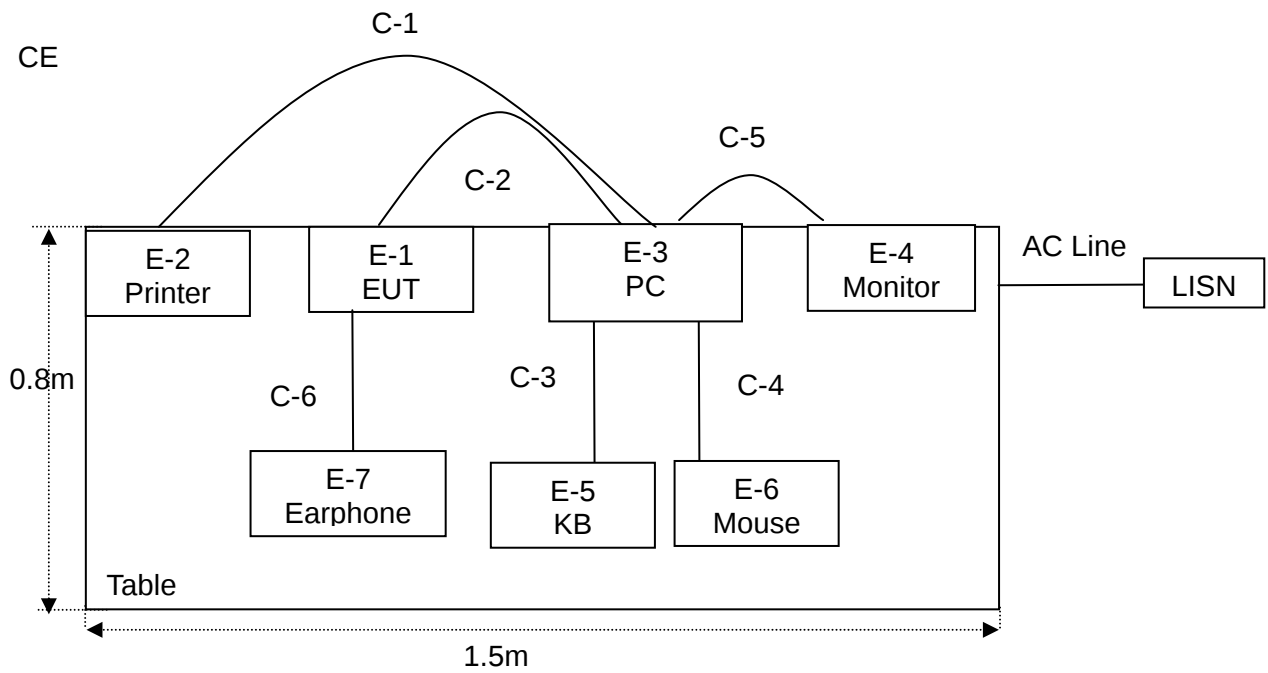
Note: Final Test Mode: Through Pre-scan, find the mode 1 is the worse case.  
Only the worst case mode is recorded in the report.

## 2.2 DESCRIPTION OF TEST SETUP

RE



CE



## 2.3 DESCRIPTION TEST PERIPHERAL AND EUT PERIPHERAL

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| Item | Equipment         | Brand        | Model/Type No. | Series No.               | Note |
|------|-------------------|--------------|----------------|--------------------------|------|
| E-1  | Mobile phone      | Superinworld | MAGIC          | N/A                      | EUT  |
| E-2  | Printer           | Canon        | L11121E        | LBP2900                  |      |
| E-3  | Personal computer | DELL         | FT4Y23X        | 34413561645              |      |
| E-4  | Monitor           | DELL         | IN2020MB       | cn-0y6mhx-74261-11f-67es |      |
| E-5  | Keyboard          | DELL         | SK-8185        | OY526KUS                 |      |
| E-6  | Mouse             | DELL         | MS111-P        | cn-011d3v-71581-11e-1th7 |      |
| E-7  | Earphone          | N/A          | 2688           | N/A                      |      |
|      |                   |              |                |                          |      |
|      |                   |              |                |                          |      |

| Item | Shielded Type | Ferrite Core | Length | Note |
|------|---------------|--------------|--------|------|
| C-1  | NO            | NO           | 1.2m   |      |
| C-2  | NO            | NO           | 1.0m   |      |
| C-3  | NO            | NO           | 1.0m   |      |
| C-4  | NO            | NO           | 1.0m   |      |
| C-5  | NO            | NO           | 1.0m   |      |
| C-6  | NO            | NO           | 1.0m   |      |
|      |               |              |        |      |

Note:

- (1) The support equipment was authorized by Declaration of Confirmation.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.
- (3) "YES" means "shielded" "with core"; "NO" means "unshielded" "without core".

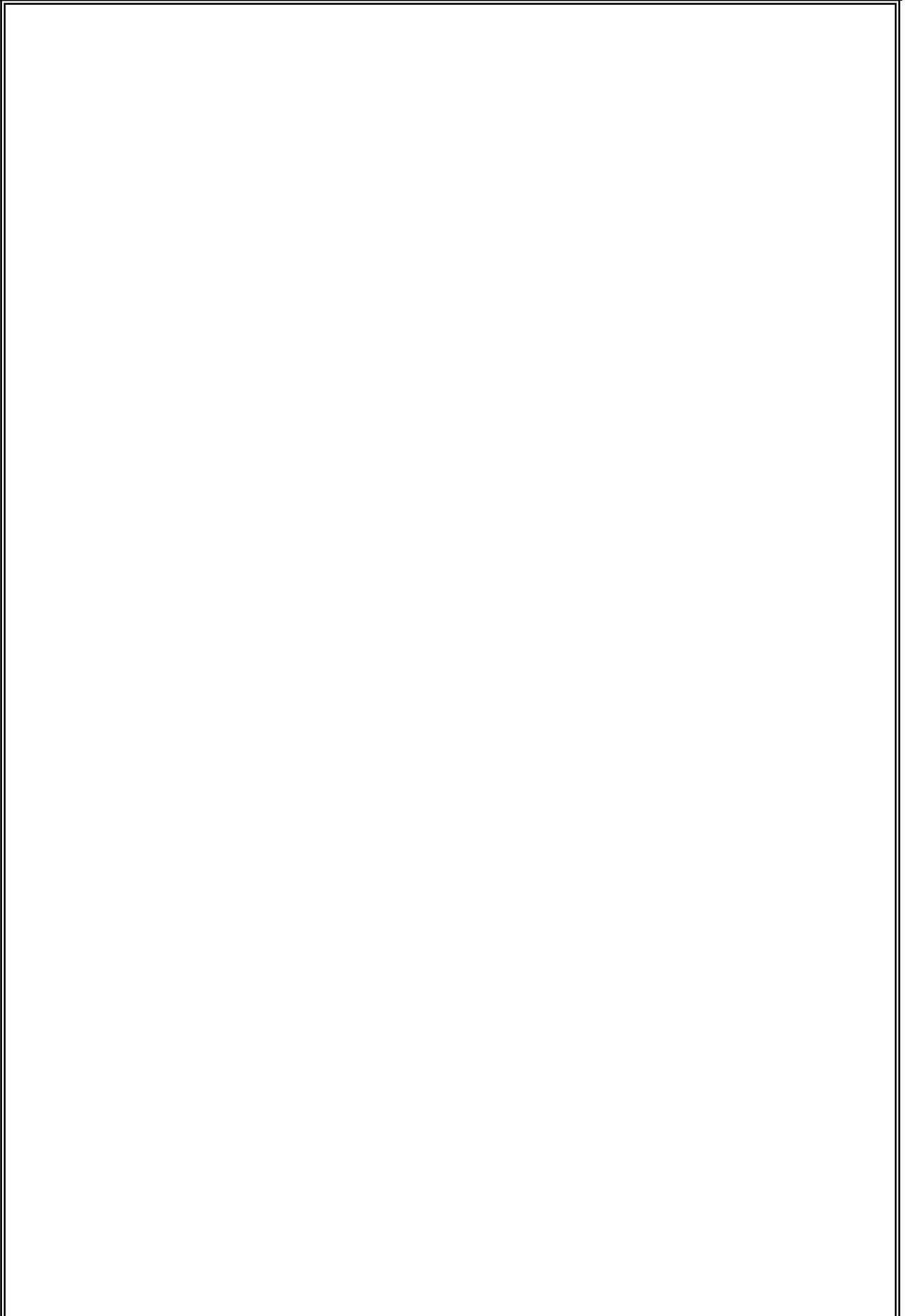
## 2.4 MEASUREMENT INSTRUMENTS LIST

### Radiation Test equipment

| Item | Kind of Equipment  | Manufacturer | Type No.    | Serial No.   | Last calibration | Calibrated until | Calibration period |
|------|--------------------|--------------|-------------|--------------|------------------|------------------|--------------------|
| 1    | Spectrum Analyzer  | Agilent      | E4407B      | MY45108040   | 2015.07.06       | 2016.07.05       | 1 year             |
| 2    | Test Receiver      | R&S          | ESPI        | 101318       | 2015.06.07       | 2016.06.06       | 1 year             |
| 3    | Bilog Antenna      | TESEQ        | CBL6111D    | 31216        | 2015.07.06       | 2016.07.05       | 1 year             |
| 4    | 50Ω Coaxial Switch | Anritsu      | MP59B       | 6200264416   | 2015.06.07       | 2016.06.06       | 1 year             |
| 5    | Spectrum Analyzer  | ADVANTEST    | R3132       | 150900201    | 2015.06.07       | 2016.06.06       | 1 year             |
| 6    | Horn Antenna       | EM           | EM-AH-10180 | 2011071402   | 2015.07.06       | 2016.07.05       | 1 year             |
| 7    | Horn Ant           | Schwarzbeck  | BBHA 9170   | 9170-181     | 2015.07.06       | 2016.07.05       | 1 year             |
| 8    | Amplifier          | EM           | EM-30180    | 060538       | 2014.12.22       | 2015.12.21       | 1 year             |
| 9    | Loop Antenna       | ARA          | PLA-1030/B  | 1029         | 2015.06.08       | 2016.06.07       | 1 year             |
| 10   | Power Meter        | R&S          | NRVS        | 100696       | 2015.07.06       | 2016.07.05       | 1 year             |
| 11   | Power Sensor       | R&S          | URV5-Z4     | 0395.1619.05 | 2015.07.06       | 2016.07.05       | 1 year             |
| 12   | Test Cable         | N/A          | R-01        | N/A          | 2015.07.06       | 2016.07.05       | 1 year             |
| 13   | Test Cable         | N/A          | R-02        | N/A          | 2015.07.06       | 2016.07.05       | 1 year             |

### Conduction Test equipment

| Item | Kind of Equipment     | Manufacturer | Type No. | Serial No. | Last calibration | Calibrated until | Calibration period |
|------|-----------------------|--------------|----------|------------|------------------|------------------|--------------------|
| 1    | Test Receiver         | R&S          | ESCI     | 101160     | 2015.06.06       | 2016.06.05       | 1 year             |
| 2    | LISN                  | R&S          | ENV216   | 101313     | 2015.08.24       | 2016.08.23       | 1 year             |
| 3    | LISN                  | EMCO         | 3816/2   | 00042990   | 2015.08.24       | 2016.08.23       | 1 year             |
| 4    | 50Ω Coaxial Switch    | Anritsu      | MP59B    | 6200264417 | 2015.06.07       | 2016.06.06       | 1 year             |
| 5    | Passive Voltage Probe | R&S          | ESH2-Z3  | 100196     | 2015.06.07       | 2016.06.06       | 1 year             |
| 6    | Absorbing clamp       | R&S          | MOS-21   | 100423     | 2015.06.08       | 2016.06.07       | 1 year             |
| 7    | Test Cable            | N/A          | C01      | N/A        | 2015.06.08       | 2016.06.07       | 1 year             |
| 8    | Test Cable            | N/A          | C02      | N/A        | 2015.06.08       | 2016.06.07       | 1 year             |
| 9    | Test Cable            | N/A          | C03      | N/A        | 2015.06.08       | 2016.06.07       | 1 year             |



### 3. EMC EMISSION TEST

#### 3.1 CONDUCTED EMISSION MEASUREMENT

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

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

Note:

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

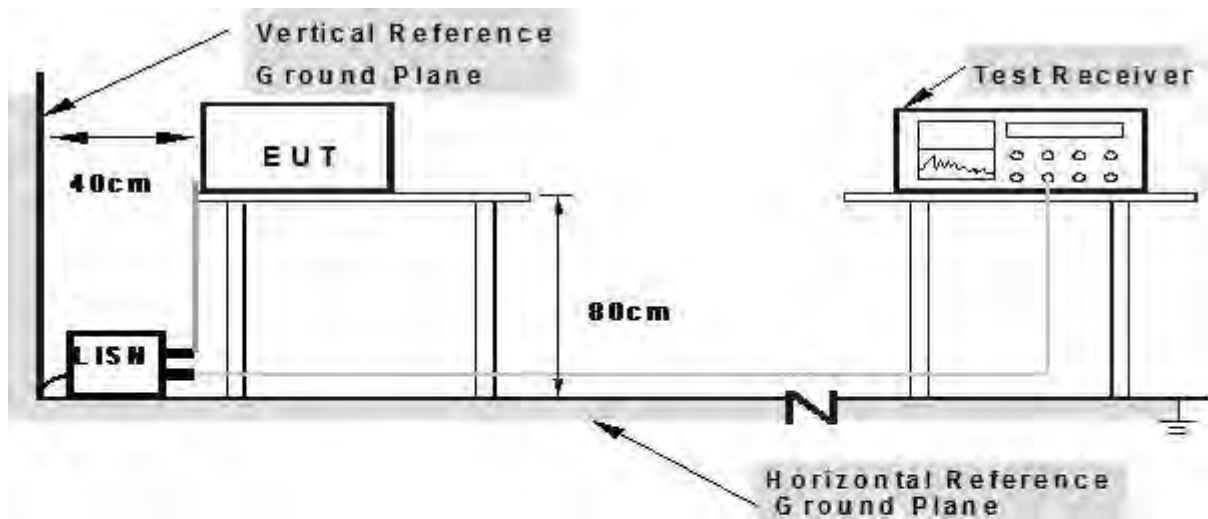
The following table is the setting of the receiver

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

### 3.1.2 TEST PROCEDURE

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

### 3.1.3 TEST SETUP



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

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

### 3.1.4 EUT OPERATING CONDITIONS

The EUT tested system was configured as the statements of **2.3** Unless otherwise a special operating condition is specified in the follows during the testing.

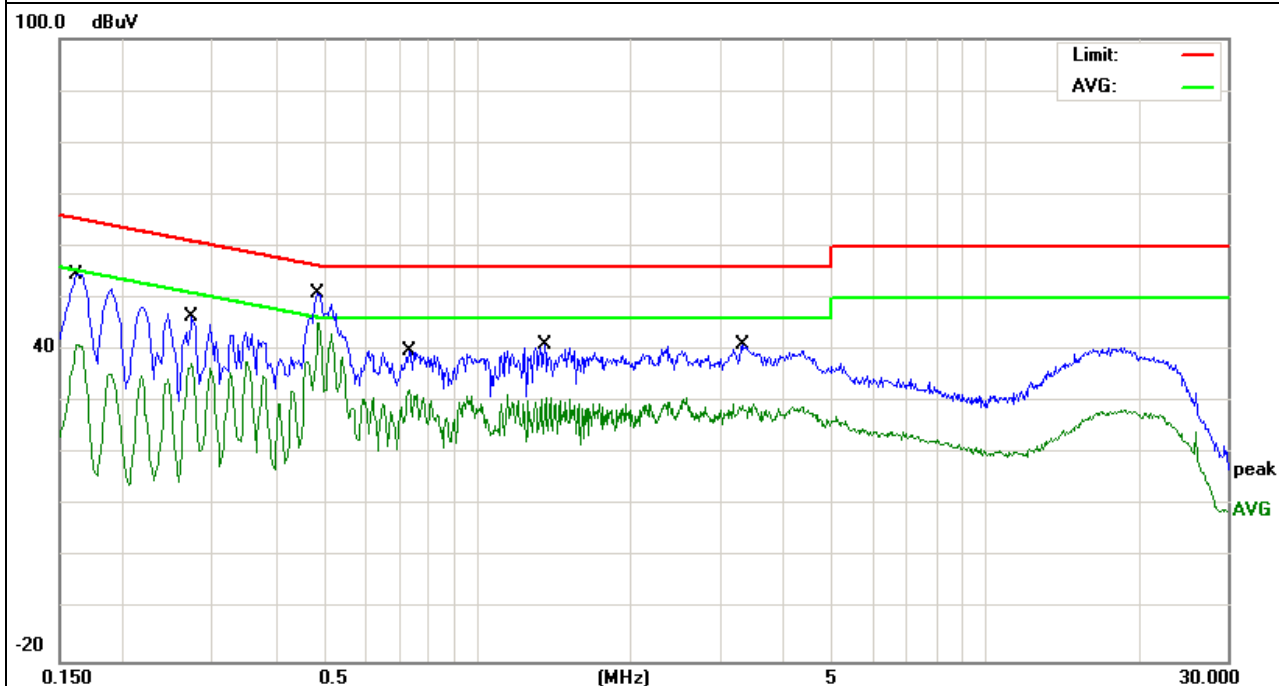
### 3.1.5 TEST RESULTS

|                |                            |                     |            |
|----------------|----------------------------|---------------------|------------|
| EUT :          | Mobile phone               | Model Name. :       | MAGIC      |
| Temperature :  | 26 °C                      | Relative Humidity : | 54%        |
| Pressure :     | 1010hPa                    | Test Date :         | 2015-09-15 |
| Test Mode :    | Mode 1                     | Phase :             | L          |
| Test Voltage : | DC 5V From PC AC 120V/60Hz |                     |            |

| Frequency | Reading Level | Correct Factor | Measure-ment | Limits | Margin | Remark |
|-----------|---------------|----------------|--------------|--------|--------|--------|
| (MHz)     | (dBμV)        | (dB)           | (dBμV)       | (dBμV) | (dB)   |        |
| 0.1620    | 44.94         | 9.62           | 54.56        | 65.36  | -10.80 | QP     |
| 0.1620    | 31.34         | 9.62           | 40.96        | 55.36  | -14.40 | AVG    |
| 0.2740    | 36.69         | 9.71           | 46.40        | 60.99  | -14.59 | QP     |
| 0.2740    | 27.73         | 9.71           | 37.44        | 50.99  | -13.55 | AVG    |
| 0.4860    | 41.16         | 9.72           | 50.88        | 56.24  | -5.36  | QP     |
| 0.4860    | 35.29         | 9.72           | 45.01        | 46.24  | -1.23  | AVG    |
| 0.7338    | 29.97         | 9.77           | 39.74        | 56.00  | -16.26 | QP     |
| 0.7338    | 22.63         | 9.77           | 32.40        | 46.00  | -13.60 | AVG    |
| 1.3580    | 31.37         | 9.70           | 41.07        | 56.00  | -14.93 | QP     |
| 1.3580    | 21.15         | 9.70           | 30.85        | 46.00  | -15.15 | AVG    |
| 3.3220    | 31.32         | 9.68           | 41.00        | 56.00  | -15.00 | QP     |
| 3.3220    | 19.86         | 9.68           | 29.54        | 46.00  | -16.46 | AVG    |

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

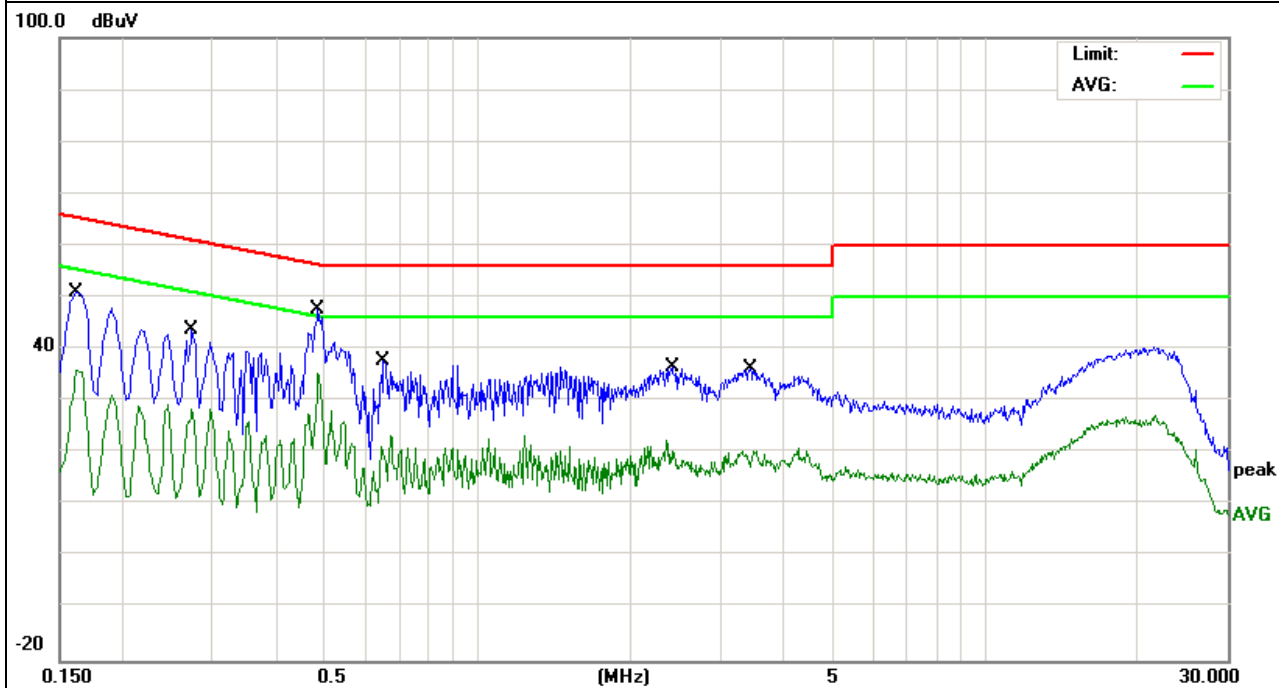


|                |                            |                     |            |
|----------------|----------------------------|---------------------|------------|
| EUT :          | Mobile phone               | Model Name. :       | MAGIC      |
| Temperature :  | 26 °C                      | Relative Humidity : | 54%        |
| Pressure :     | 1010hPa                    | Test Date :         | 2015-09-15 |
| Test Mode :    | Mode 1                     | Phase :             | N          |
| Test Voltage : | DC 5V From PC AC 120V/60Hz |                     |            |

| Frequency | Reading Level | Correct Factor | Measure-ment | Limits | Margin | Remark |
|-----------|---------------|----------------|--------------|--------|--------|--------|
| (MHz)     | (dBμV)        | (dB)           | (dBμV)       | (dBμV) | (dB)   |        |
| 0.1620    | 41.30         | 9.60           | 50.90        | 65.36  | -14.46 | QP     |
| 0.1620    | 26.21         | 9.60           | 35.81        | 55.36  | -19.55 | AVG    |
| 0.2740    | 34.24         | 9.61           | 43.85        | 60.99  | -17.14 | QP     |
| 0.2740    | 18.97         | 9.61           | 28.58        | 50.99  | -22.41 | AVG    |
| 0.4860    | 37.94         | 9.68           | 47.62        | 56.24  | -8.62  | QP     |
| 0.4860    | 25.54         | 9.68           | 35.22        | 46.24  | -11.02 | AVG    |
| 0.6540    | 28.19         | 9.65           | 37.84        | 56.00  | -18.16 | QP     |
| 0.6540    | 13.61         | 9.65           | 23.26        | 46.00  | -22.74 | AVG    |
| 2.4100    | 27.01         | 9.53           | 36.54        | 56.00  | -19.46 | QP     |
| 2.4100    | 13.01         | 9.53           | 22.54        | 46.00  | -23.46 | AVG    |
| 3.4500    | 26.62         | 9.51           | 36.13        | 56.00  | -19.87 | QP     |
| 3.4500    | 10.95         | 9.51           | 20.46        | 46.00  | -25.54 | AVG    |

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

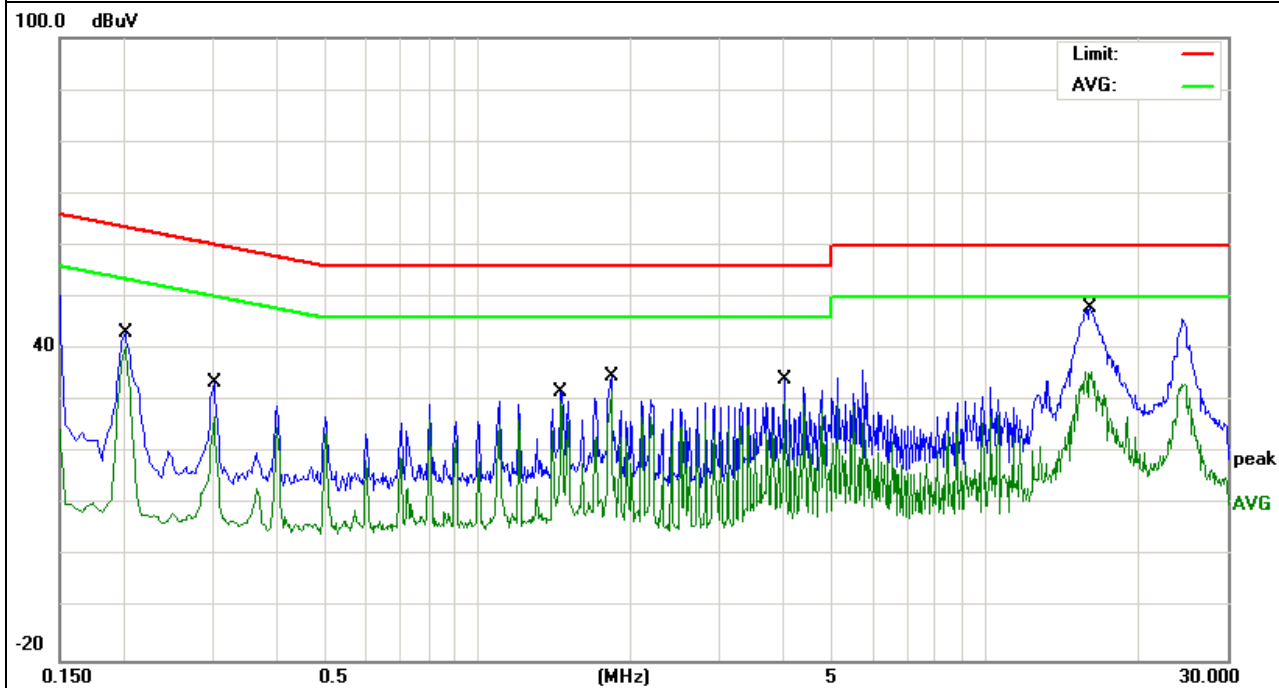


|                |                            |                     |            |
|----------------|----------------------------|---------------------|------------|
| EUT :          | Mobile phone               | Model Name. :       | MAGIC      |
| Temperature :  | 26 °C                      | Relative Humidity : | 54%        |
| Pressure :     | 1010hPa                    | Test Date :         | 2015-09-15 |
| Test Mode :    | Mode 1                     | Phase :             | L          |
| Test Voltage : | DC 5V From PC AC 240V/60Hz |                     |            |

| Frequency | Reading Level | Correct Factor | Measure-ment | Limits | Margin | Remark |
|-----------|---------------|----------------|--------------|--------|--------|--------|
| (MHz)     | (dBμV)        | (dB)           | (dBμV)       | (dBμV) | (dB)   |        |
| 0.2020    | 33.44         | 9.61           | 43.05        | 63.52  | -20.47 | QP     |
| 0.2020    | 30.90         | 9.61           | 40.51        | 53.52  | -13.01 | AVG    |
| 0.3020    | 23.83         | 9.62           | 33.45        | 60.19  | -26.74 | QP     |
| 0.3020    | 17.36         | 9.62           | 26.98        | 50.19  | -23.21 | AVG    |
| 1.4620    | 22.18         | 9.58           | 31.76        | 56.00  | -24.24 | QP     |
| 1.4620    | 20.49         | 9.58           | 30.07        | 46.00  | -15.93 | AVG    |
| 1.8340    | 25.21         | 9.55           | 34.76        | 56.00  | -21.24 | QP     |
| 1.8340    | 22.11         | 9.55           | 31.66        | 46.00  | -14.34 | AVG    |
| 4.0220    | 24.60         | 9.51           | 34.11        | 56.00  | -21.89 | QP     |
| 4.0220    | 20.46         | 9.51           | 29.97        | 46.00  | -16.03 | AVG    |
| 16.0699   | 38.16         | 9.77           | 47.93        | 60.00  | -12.07 | QP     |
| 16.0699   | 25.74         | 9.77           | 35.51        | 50.00  | -14.49 | AVG    |

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

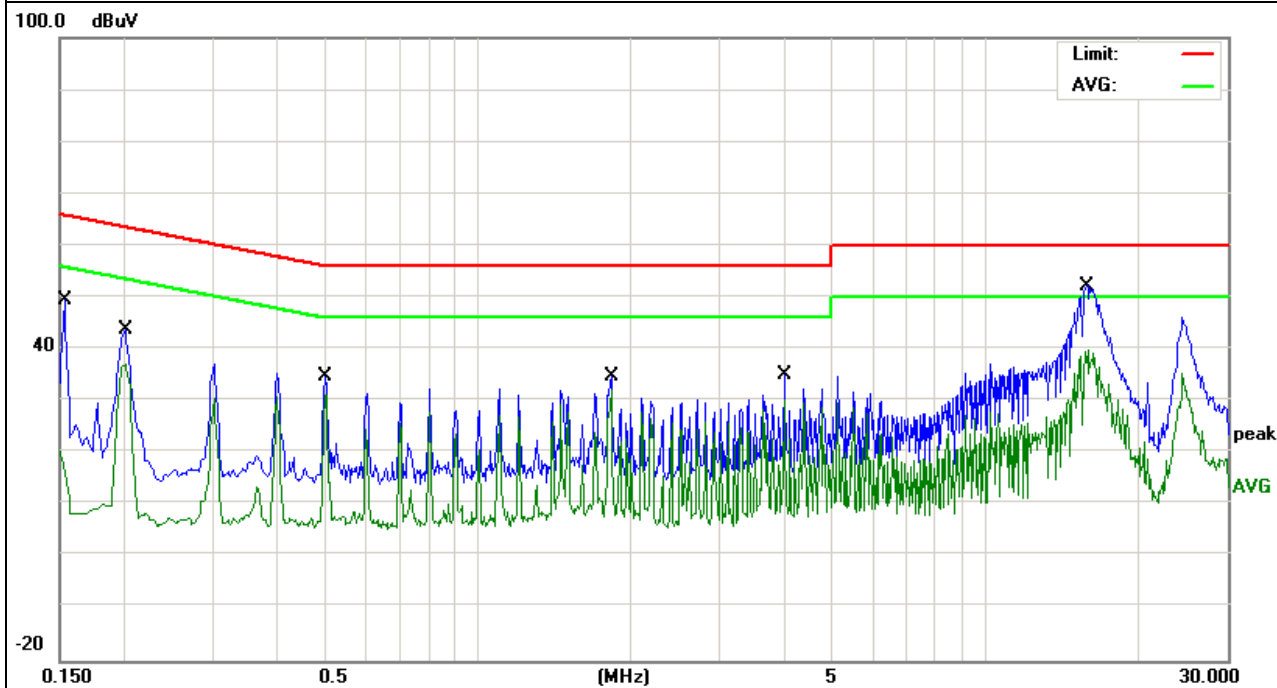


|                |                            |                     |            |
|----------------|----------------------------|---------------------|------------|
| EUT :          | Mobile phone               | Model Name. :       | MAGIC      |
| Temperature :  | 26 °C                      | Relative Humidity : | 54%        |
| Pressure :     | 1010hPa                    | Test Date :         | 2015-09-15 |
| Test Mode :    | Mode 1                     | Phase :             | N          |
| Test Voltage : | DC 5V From PC AC 240V/60Hz |                     |            |

| Frequency | Reading Level | Correct Factor | Measure-ment | Limits | Margin | Remark |
|-----------|---------------|----------------|--------------|--------|--------|--------|
| (MHz)     | (dBμV)        | (dB)           | (dBμV)       | (dBμV) | (dB)   |        |
| 0.1539    | 39.71         | 9.60           | 49.31        | 65.78  | -16.47 | QP     |
| 0.1539    | 10.83         | 9.60           | 20.43        | 55.78  | -35.35 | AVG    |
| 0.2020    | 34.29         | 9.61           | 43.90        | 63.52  | -19.62 | QP     |
| 0.2020    | 27.44         | 9.61           | 37.05        | 53.52  | -16.47 | AVG    |
| 0.5020    | 25.17         | 9.68           | 34.85        | 56.00  | -21.15 | QP     |
| 0.5020    | 21.45         | 9.68           | 31.13        | 46.00  | -14.87 | AVG    |
| 1.8300    | 25.06         | 9.55           | 34.61        | 56.00  | -21.39 | QP     |
| 1.8300    | 22.48         | 9.55           | 32.03        | 46.00  | -13.97 | AVG    |
| 4.0220    | 25.53         | 9.51           | 35.04        | 56.00  | -20.96 | QP     |
| 4.0220    | 20.74         | 9.51           | 30.25        | 46.00  | -15.75 | AVG    |
| 15.8620   | 42.44         | 9.77           | 52.21        | 60.00  | -7.79  | QP     |
| 15.8620   | 30.20         | 9.77           | 39.97        | 50.00  | -10.03 | AVG    |

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

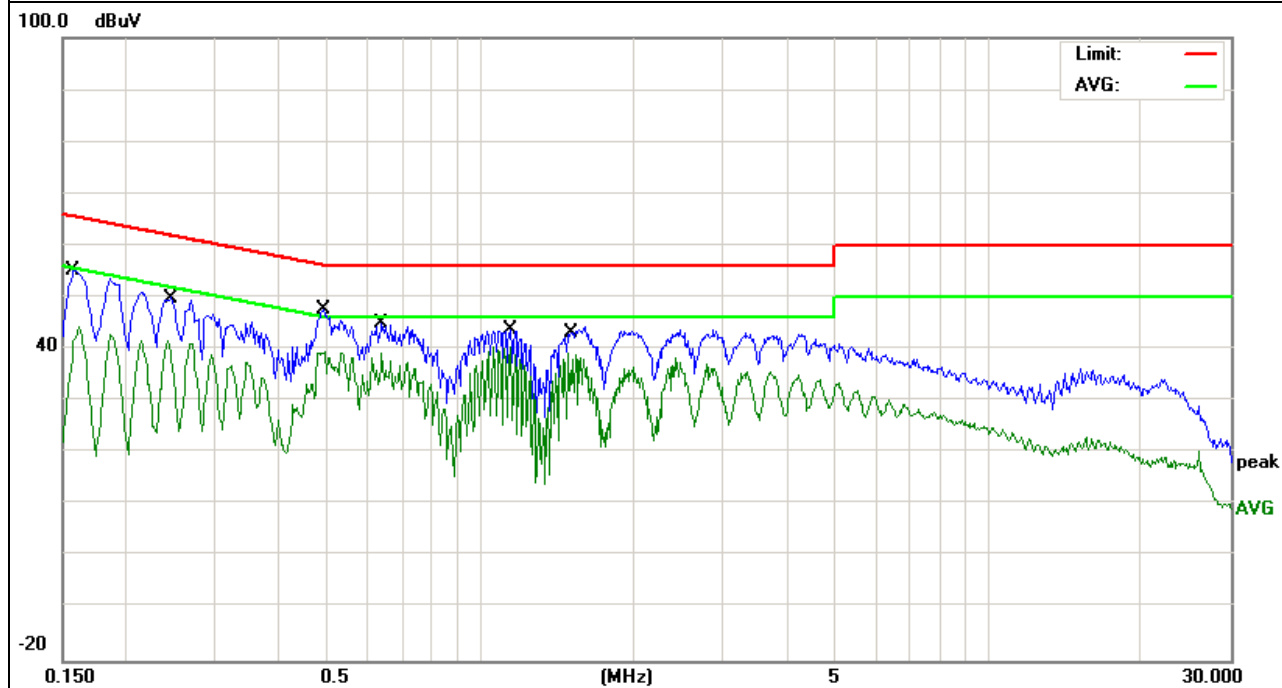


|                |                                 |                     |            |
|----------------|---------------------------------|---------------------|------------|
| EUT :          | Mobile phone                    | Model Name. :       | MAGIC      |
| Temperature :  | 26 °C                           | Relative Humidity : | 54%        |
| Pressure :     | 1010hPa                         | Test Date :         | 2015-09-15 |
| Test Mode :    | Mode 1                          | Phase :             | L          |
| Test Voltage : | DC 5V From Adapter AC 120V/60Hz |                     |            |

| Frequency | Reading Level | Correct Factor | Measure-ment | Limits | Margin | Remark |
|-----------|---------------|----------------|--------------|--------|--------|--------|
| (MHz)     | (dBμV)        | (dB)           | (dBμV)       | (dBμV) | (dB)   |        |
| 0.1580    | 45.68         | 9.60           | 55.28        | 65.56  | -10.28 | QP     |
| 0.1580    | 34.65         | 9.60           | 44.25        | 55.56  | -11.31 | AVG    |
| 0.2419    | 40.33         | 9.61           | 49.94        | 62.03  | -12.09 | QP     |
| 0.2419    | 31.98         | 9.61           | 41.59        | 52.03  | -10.44 | AVG    |
| 0.4940    | 38.06         | 9.68           | 47.74        | 56.10  | -8.36  | QP     |
| 0.4940    | 29.88         | 9.68           | 39.56        | 46.10  | -6.54  | AVG    |
| 0.6380    | 35.40         | 9.65           | 45.05        | 56.00  | -10.95 | QP     |
| 0.6380    | 29.75         | 9.65           | 39.40        | 46.00  | -6.60  | AVG    |
| 1.1420    | 34.13         | 9.60           | 43.73        | 56.00  | -12.27 | QP     |
| 1.1420    | 30.79         | 9.60           | 40.39        | 46.00  | -5.61  | AVG    |
| 1.4899    | 34.79         | 9.58           | 44.37        | 56.00  | -11.63 | QP     |
| 1.4899    | 29.72         | 9.58           | 39.30        | 46.00  | -6.70  | AVG    |

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

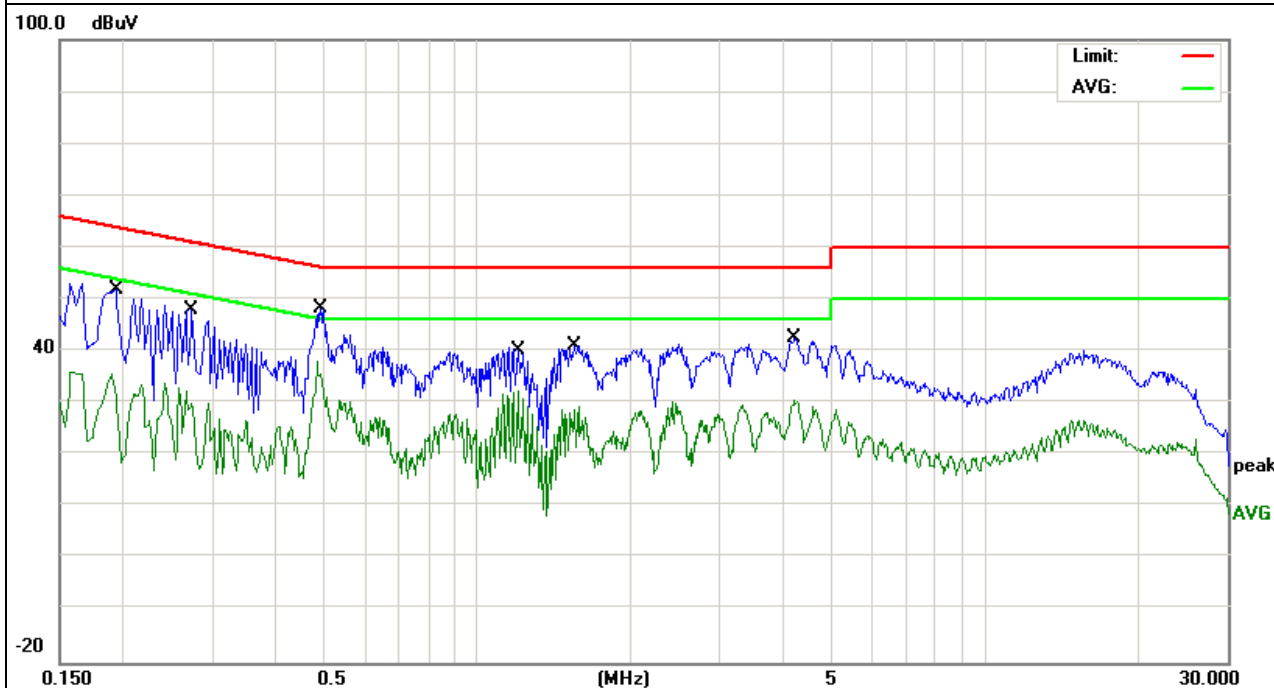


|                |                                 |                     |            |
|----------------|---------------------------------|---------------------|------------|
| EUT :          | Mobile phone                    | Model Name. :       | MAGIC      |
| Temperature :  | 26 °C                           | Relative Humidity : | 54%        |
| Pressure :     | 1010hPa                         | Test Date :         | 2015-09-15 |
| Test Mode :    | Mode 1                          | Phase :             | N          |
| Test Voltage : | DC 5V From Adapter AC 120V/60Hz |                     |            |

| Frequency | Reading Level | Correct Factor | Measure-ment | Limits | Margin | Remark |
|-----------|---------------|----------------|--------------|--------|--------|--------|
| (MHz)     | (dBμV)        | (dB)           | (dBμV)       | (dBμV) | (dB)   |        |
| 0.1940    | 42.33         | 9.61           | 51.94        | 63.86  | -11.92 | QP     |
| 0.1940    | 26.13         | 9.61           | 35.74        | 53.86  | -18.12 | AVG    |
| 0.2740    | 38.36         | 9.61           | 47.97        | 60.99  | -13.02 | QP     |
| 0.2740    | 23.36         | 9.61           | 32.97        | 50.99  | -18.02 | AVG    |
| 0.4900    | 38.46         | 9.68           | 48.14        | 56.17  | -8.03  | QP     |
| 0.4900    | 28.31         | 9.68           | 37.99        | 46.17  | -8.18  | AVG    |
| 1.2019    | 31.27         | 9.60           | 40.87        | 56.00  | -15.13 | QP     |
| 1.2019    | 22.62         | 9.60           | 32.22        | 46.00  | -13.78 | AVG    |
| 1.5460    | 31.60         | 9.57           | 41.17        | 56.00  | -14.83 | QP     |
| 1.5460    | 19.87         | 9.57           | 29.44        | 46.00  | -16.56 | AVG    |
| 4.2138    | 32.97         | 9.51           | 42.48        | 56.00  | -13.52 | QP     |
| 4.2138    | 20.96         | 9.51           | 30.47        | 46.00  | -15.53 | AVG    |

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

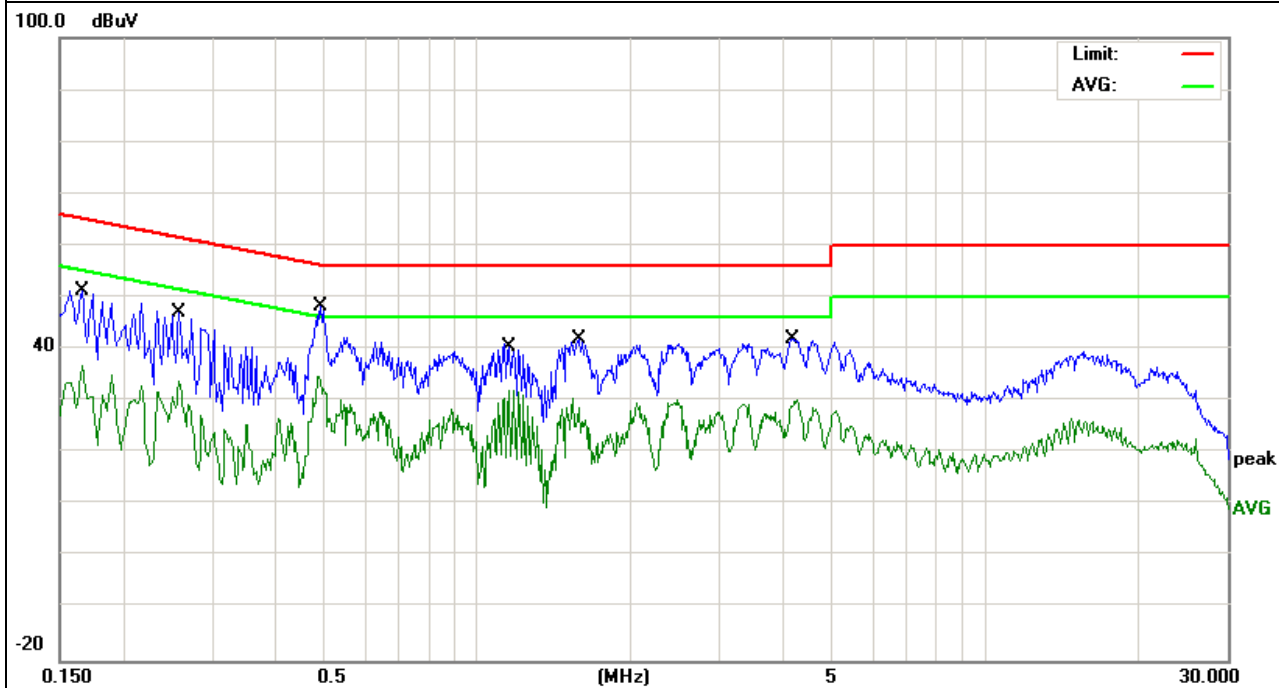


|                |                                  |                     |            |
|----------------|----------------------------------|---------------------|------------|
| EUT :          | Mobile phone                     | Model Name. :       | MAGIC      |
| Temperature :  | 26 °C                            | Relative Humidity : | 54%        |
| Pressure :     | 1010hPa                          | Test Date :         | 2015-09-15 |
| Test Mode :    | Mode 1                           | Phase :             | L          |
| Test Voltage : | DC 5V From Adapter AC 240V /60Hz |                     |            |

| Frequency | Reading Level | Correct Factor | Measure-ment | Limits | Margin | Remark |
|-----------|---------------|----------------|--------------|--------|--------|--------|
| (MHz)     | (dBμV)        | (dB)           | (dBμV)       | (dBμV) | (dB)   |        |
| 0.1660    | 41.70         | 9.60           | 51.30        | 65.15  | -13.85 | QP     |
| 0.1660    | 27.26         | 9.60           | 36.86        | 55.15  | -18.29 | AVG    |
| 0.2580    | 37.37         | 9.62           | 46.99        | 61.49  | -14.50 | QP     |
| 0.2580    | 24.26         | 9.62           | 33.88        | 51.49  | -17.61 | AVG    |
| 0.4900    | 38.55         | 9.68           | 48.23        | 56.17  | -7.94  | QP     |
| 0.4900    | 25.02         | 9.68           | 34.70        | 46.17  | -11.47 | AVG    |
| 1.1499    | 31.31         | 9.60           | 40.91        | 56.00  | -15.09 | QP     |
| 1.1499    | 22.46         | 9.60           | 32.06        | 46.00  | -13.94 | AVG    |
| 1.5780    | 32.25         | 9.57           | 41.82        | 56.00  | -14.18 | QP     |
| 1.5780    | 20.90         | 9.57           | 30.47        | 46.00  | -15.53 | AVG    |
| 4.1779    | 32.45         | 9.51           | 41.96        | 56.00  | -14.04 | QP     |
| 4.1779    | 20.81         | 9.51           | 30.32        | 46.00  | -15.68 | AVG    |

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.

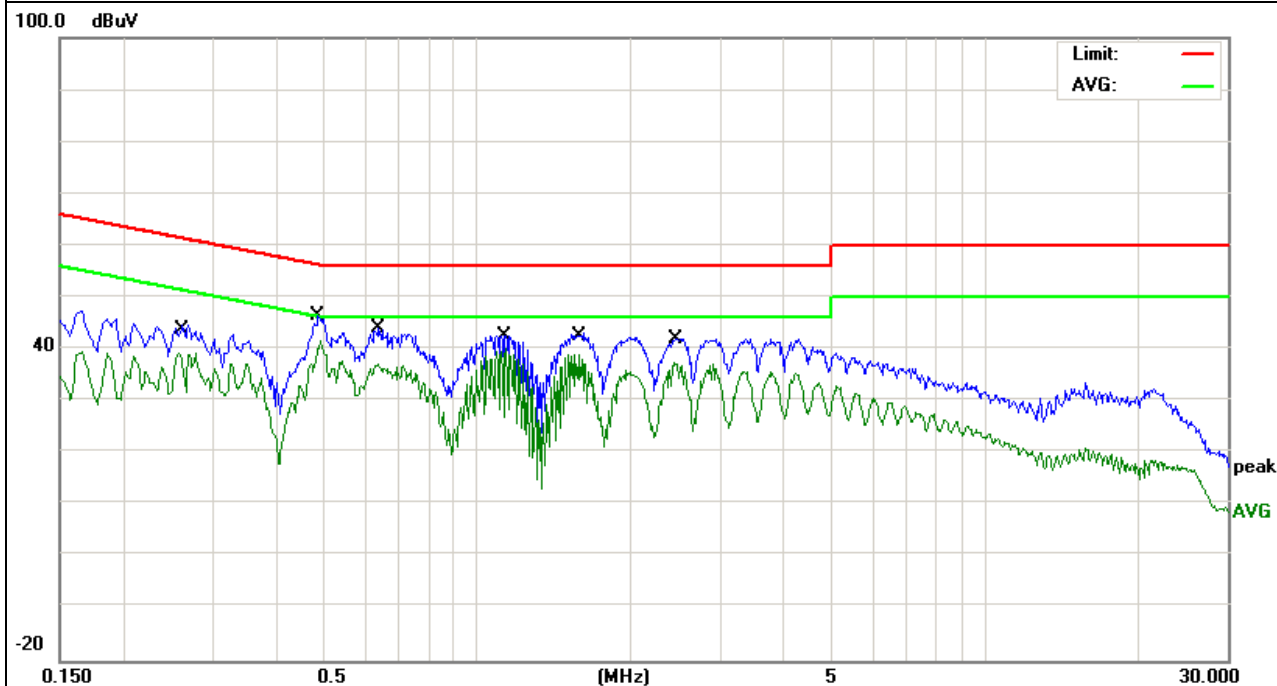


|                |                                 |                     |            |
|----------------|---------------------------------|---------------------|------------|
| EUT :          | Mobile phone                    | Model Name. :       | MAGIC      |
| Temperature :  | 26 °C                           | Relative Humidity : | 54%        |
| Pressure :     | 1010hPa                         | Test Date :         | 2015-09-15 |
| Test Mode :    | Mode 1                          | Phase :             | N          |
| Test Voltage : | DC 5V From Adapter AC 240V/60Hz |                     |            |

| Frequency | Reading Level | Correct Factor | Measure-ment | Limits | Margin | Remark |
|-----------|---------------|----------------|--------------|--------|--------|--------|
| (MHz)     | (dBμV)        | (dB)           | (dBμV)       | (dBμV) | (dB)   |        |
| 0.2580    | 35.14         | 9.62           | 44.76        | 61.49  | -16.73 | QP     |
| 0.2580    | 29.68         | 9.62           | 39.30        | 51.49  | -12.19 | AVG    |
| 0.4900    | 36.75         | 9.68           | 46.43        | 56.17  | -9.74  | QP     |
| 0.4900    | 31.87         | 9.68           | 41.55        | 46.17  | -4.62  | AVG    |
| 0.6340    | 34.31         | 9.65           | 43.96        | 56.00  | -12.04 | QP     |
| 0.6340    | 27.65         | 9.65           | 37.30        | 46.00  | -8.70  | AVG    |
| 1.1380    | 33.07         | 9.60           | 42.67        | 56.00  | -13.33 | QP     |
| 1.1380    | 30.50         | 9.60           | 40.10        | 46.00  | -5.90  | AVG    |
| 1.5820    | 33.63         | 9.57           | 43.20        | 56.00  | -12.80 | QP     |
| 1.5820    | 29.46         | 9.57           | 39.03        | 46.00  | -6.97  | AVG    |
| 2.4580    | 32.52         | 9.53           | 42.05        | 56.00  | -13.95 | QP     |
| 2.4580    | 27.72         | 9.53           | 37.25        | 46.00  | -8.75  | AVG    |

Remark:

1. All readings are Quasi-Peak and Average values.
2. Factor = Insertion Loss + Cable Loss.



## 3.2 RADIATED EMISSION MEASUREMENT

### 3.2.1 LIMITS OF RADIATED EMISSION MEASUREMENT

| FREQUENCY (MHz) | Class A (at 10m) | Class B (at 3m) |
|-----------------|------------------|-----------------|
|                 | dBuV/m           | dBuV/m          |
| 30 ~ 88         | 39.0             | 40.0            |
| 88 ~ 216        | 43.5             | 43.5            |
| 216 ~ 960       | 46.5             | 46.0            |
| Above 960       | 49.5             | 54.0            |

Notes:

- (1) The limit for radiated test was performed according to as following:  
FCC PART 15B /ICES-003.
- (2) The tighter limit applies at the band edges.
- (3) Emission level (dBuV/m)=20log Emission level (uV/m).

### 3.2.2 TEST PROCEDURE

#### Test Arrangement for Radiated Emissions up to 1 GHz

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at an accredited test facility. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna is a broadband antenna, and its height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

Note: The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for quasi-peak detection (QP) at frequency below 1GHz.

#### Test Arrangement for Radiated Emissions above 1 GHz.

- a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at an accredited chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The height of antenna can be varied from one meter to four meters, the height of adjustment depends on the EUT height and the antenna 3dB beamwidth both, to detect the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.

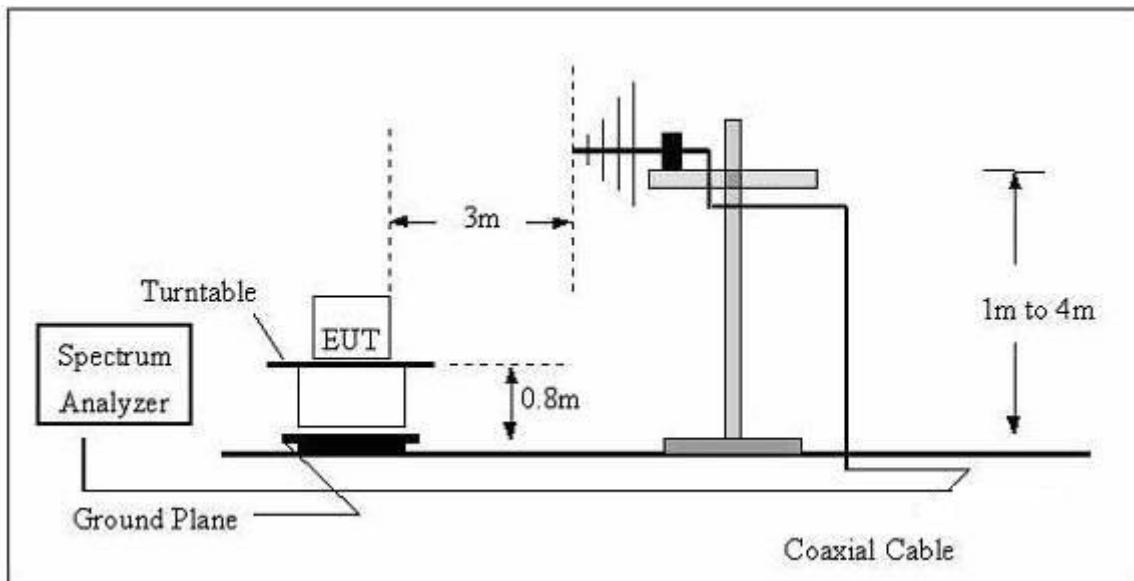
Note: For the hand-held device, the EUT should be measured for all 3 axes and only the worst case is recorded in the report

During the radiated emission test, the Spectrum Analyzer was set with the following configurations:

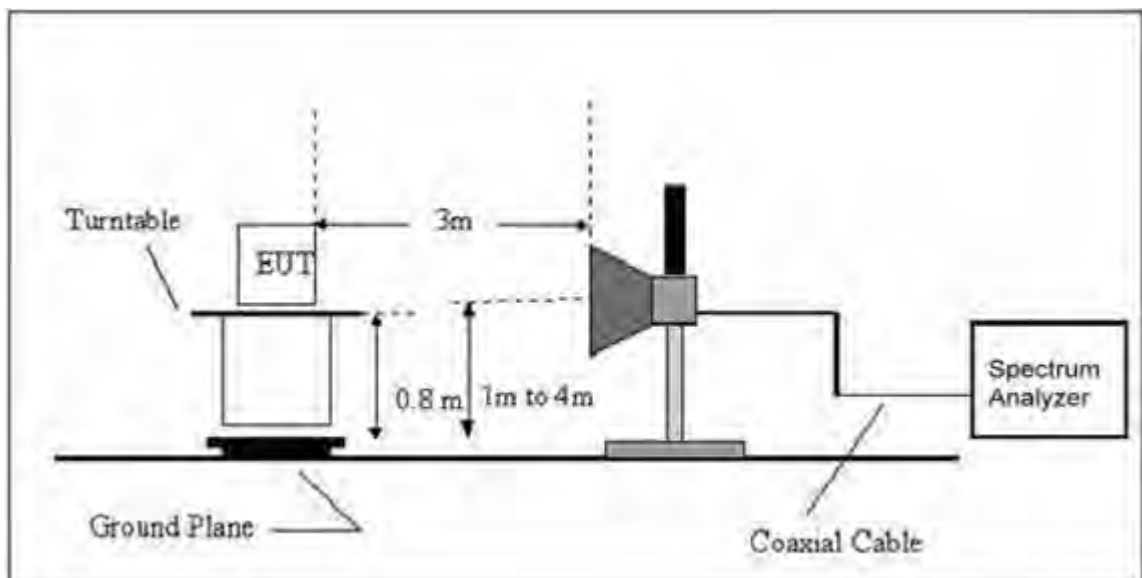
| Frequency Band (MHz) | Function | Resolution bandwidth | Video Bandwidth |
|----------------------|----------|----------------------|-----------------|
| 30 to 1000           | QP       | 120 kHz              | 300 kHz         |
| Above 1000           | Peak     | 1 MHz                | 1 MHz           |
|                      | Peak     | 1 MHz                | 10 Hz           |

### 3.2.3 TEST SETUP

For Radiated Emission 30~1000MHz



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



### 3.2.4 TEST RESULTS

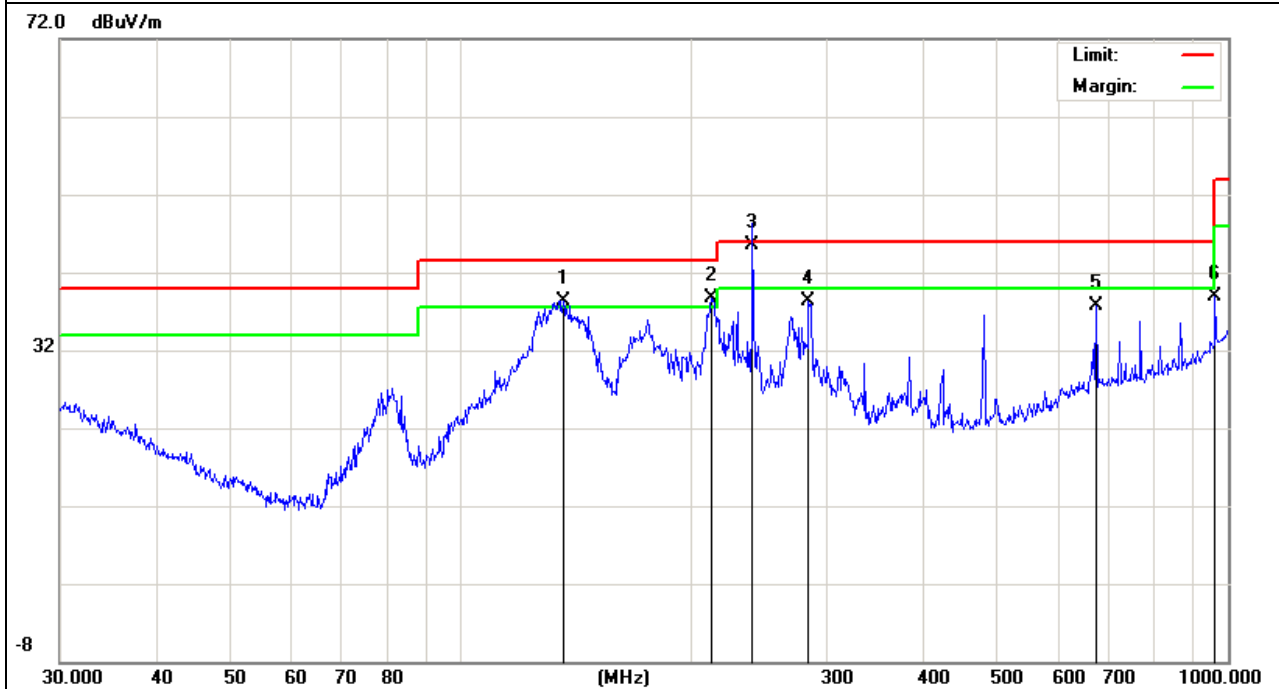
#### TEST RESULTS (30~1000 MHz)

|               |                            |                     |            |
|---------------|----------------------------|---------------------|------------|
| EUT :         | Mobile phone               | Model Name :        | MAGIC      |
| Temperature : | 24 °C                      | Relative Humidity : | 54%        |
| Pressure :    | 1010 hPa                   | Test Date :         | 2015-09-15 |
| Test Mode :   | Mode 1                     | Polarization :      | Horizontal |
| Test Power :  | DC 5V From PC AC 120V/60Hz |                     |            |

| Freq.<br>(MHz) | Reading<br>(dBuV) | Factor<br>(dBuV) | Measurement<br>(dBuV) | Limit<br>(dBuV) | Over<br>(dB) | Remark |
|----------------|-------------------|------------------|-----------------------|-----------------|--------------|--------|
| 135.9822       | 27.41             | 10.98            | 38.39                 | 43.50           | -5.11        | QP     |
| 212.2692       | 27.59             | 11.03            | 38.62                 | 43.50           | -4.88        | QP     |
| 239.9874       | 34.77             | 10.73            | 45.50                 | 46.00           | -0.50        | QP     |
| 283.9791       | 26.39             | 11.84            | 38.23                 | 46.00           | -7.77        | QP     |
| 672.8444       | 16.77             | 20.84            | 37.61                 | 46.00           | -8.39        | QP     |
| 962.1621       | 12.27             | 26.67            | 38.94                 | 54.00           | -15.06       | QP     |

Remark:

Factor = Antenna Factor + Cable Loss - Amplifier.

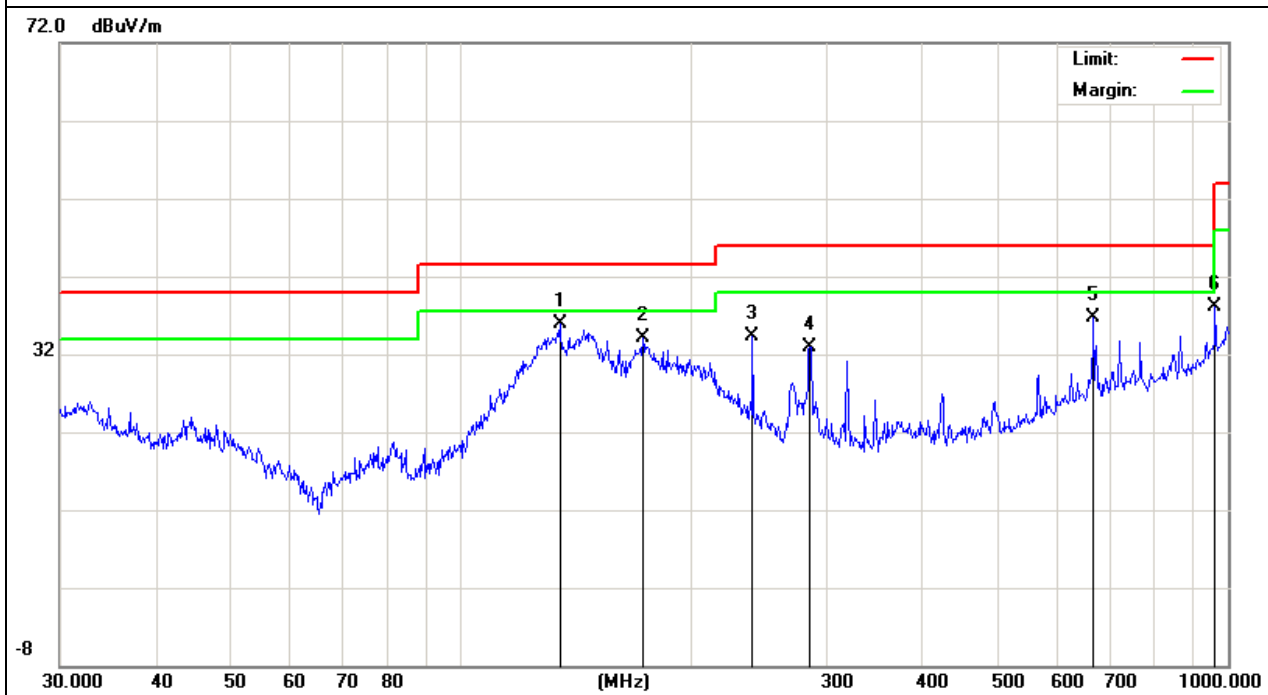


|               |                            |                     |            |
|---------------|----------------------------|---------------------|------------|
| EUT :         | Mobile phone               | Model Name :        | MAGIC      |
| Temperature : | 24 °C                      | Relative Humidity : | 54%        |
| Pressure :    | 1010 hPa                   | Test Date :         | 2015-09-15 |
| Test Mode :   | Mode 1                     | Polarization :      | Vertical   |
| Test Power :  | DC 5V From PC AC 120V/60Hz |                     |            |

| Freq.<br>(MHz) | Reading<br>(dBuV) | Factor<br>(dBuV) | Measurement<br>(dBuV) | Limit<br>(dBuV) | Over<br>(dB) | Remark |
|----------------|-------------------|------------------|-----------------------|-----------------|--------------|--------|
| 134.5592       | 24.88             | 10.97            | 35.85                 | 43.50           | -7.65        | QP     |
| 172.5988       | 21.78             | 12.42            | 34.20                 | 43.50           | -9.30        | QP     |
| 239.9874       | 23.57             | 10.73            | 34.30                 | 46.00           | -11.70       | QP     |
| 284.9766       | 21.19             | 11.81            | 33.00                 | 46.00           | -13.00       | QP     |
| 668.1423       | 15.89             | 20.83            | 36.72                 | 46.00           | -9.28        | QP     |
| 962.1622       | 11.44             | 26.67            | 38.11                 | 54.00           | -15.89       | QP     |

Remark:

Factor = Antenna Factor + Cable Loss - Amplifier.



### 3.2.5 TEST RESULTS(1000~12400MHz)

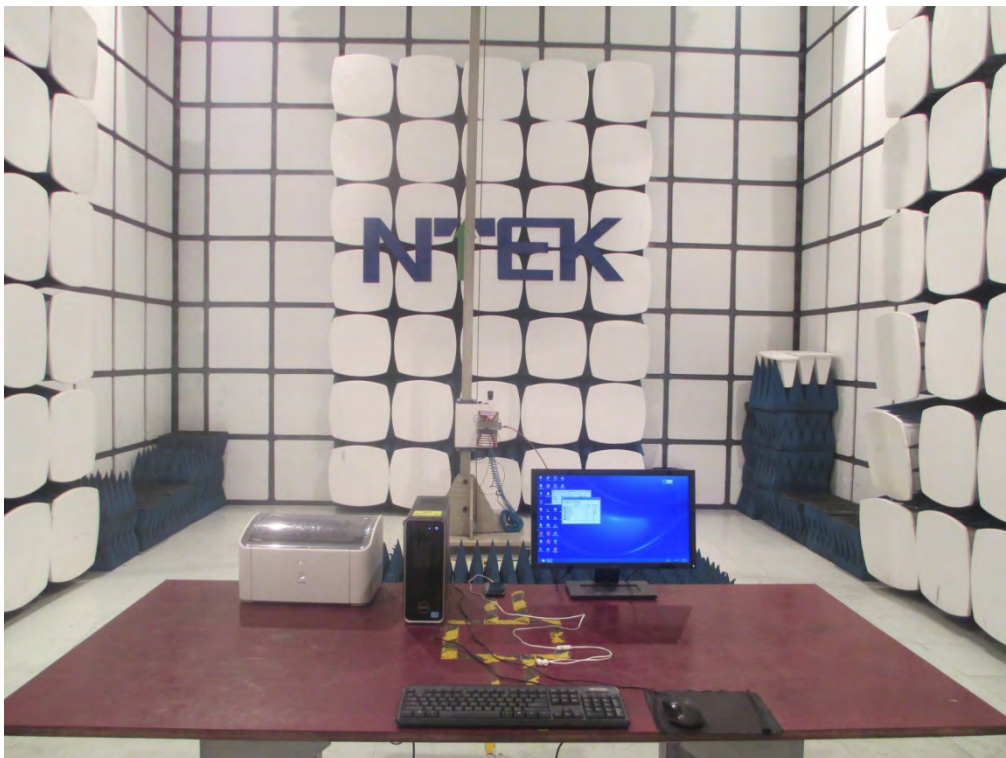
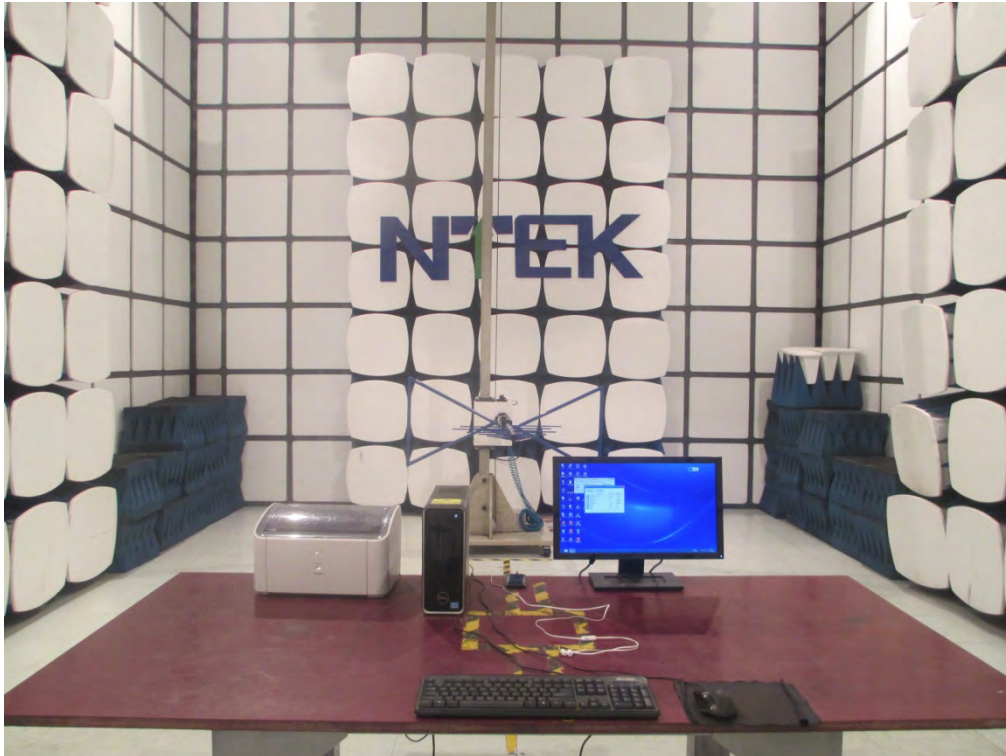
| Polar<br>(H/V) | Frequency | Meter Reading | Factor | Emission<br>Level | Limits | Margin | Remark |
|----------------|-----------|---------------|--------|-------------------|--------|--------|--------|
|                | (MHz)     | (dBm)         | (dB)   | (dBm)             | (dBm)  | (dB)   |        |
| V              | 1430.969  | 58.58         | -12.83 | 45.75             | 74.00  | -28.25 | peak   |
| V              | 1916.323  | 63.15         | -10.38 | 52.77             | 74.00  | -21.23 | peak   |
| V              | 1996.946  | 65.12         | -9.70  | 55.42             | 74.00  | -18.58 | peak   |
| V              | 1996.946  | 44.70         | -9.70  | 35.00             | 54.00  | -19.00 | AVG    |
| V              | 2598.691  | 50.88         | -8.42  | 42.46             | 74.00  | -31.54 | peak   |
| V              | 3406.085  | 48.00         | -5.89  | 42.11             | 74.00  | -31.89 | peak   |
| H              | 1534.540  | 55.46         | -12.50 | 42.96             | 74.00  | -31.04 | peak   |
| H              | 1786.985  | 56.48         | -10.92 | 45.56             | 74.00  | -28.44 | peak   |
| H              | 1993.371  | 59.17         | -9.76  | 49.41             | 74.00  | -24.59 | peak   |
| H              | 2080.961  | 57.05         | -8.36  | 48.69             | 74.00  | -25.31 | peak   |
| H              | 2791.777  | 46.51         | -7.49  | 39.02             | 74.00  | -34.98 | peak   |
| H              | 4074.465  | 42.49         | -2.23  | 40.26             | 74.00  | -33.74 | peak   |

**Remark:**

Absolute Level= ReadingLevel+ Factor, Margin= Absolute Level - Limit

#### 4. EUT TEST PHOTO

**Radiated Measurement Photos**



**Conducted Measurement Photos**

