

FCC Part 15B

Measurement and Test Report

For

Verykool USA Inc

3636 Nobel Drive, Suite 325 San Diego, CA 92122

FCC ID: WA6S758

Test Standards: FCC Part 15 Subpart B

Product Description: Android phone

Tested Model: S758

Report No.: STR12118097I-4

Tested Date: 2012-11-08 to 2012-11-28

Issued Date: 2012-11-28

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Note: This test report is limited to the above client company and the product model only. It may not be duplicated without prior permitted by SEM.Test Compliance Service Co., Ltd

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1. GENERAL INFORMATION

1.1 Product Description for Equipment Under Test (EUT)

Client Information

Applicant: Verykool USA Inc
Address of applicant: 3636 Nobel Drive, Suite 325 San Diego, CA 92122

Manufacturer: FUKDA TECHNOLOGY CO., LTD
Address of manufacturer: East Unit, 4th Floor, No.2 Building, Zhenhua Laobing Industrial Park, No.44 Tiezai Road, Xixiang Town, Bao'an District, Shenzhen, China

| General Description of EUT | |
|---|---|
| Product Name: | Android phone |
| Trade Name: | Verykool |
| Model No.: | S758 |
| Rated Voltage: | DC 3.7V Li-ion Battery (Model:GS3) |
| Power Adapter Model: | TNC-L108C-CH (Input: AC 100-240V, Output: DC 5V 800mA) |
| <i>Note: The test data is gathered from a production sample provided by the manufacturer.</i> | |

| Technical Characteristics of EUT | |
|----------------------------------|--|
| Rated Voltage: | DC 3.7V Li-ion Battery, Adapter DC5V |
| Rated Current: | / |
| Power Adapter Model: | A261-0500500U (Input: AC 100-240V,50/60Hz 0.2A, Output: DC 5V,500mA) |
| Highest Internal Frequency: | 26MHz |
| Classification of ITE: | B |
| Support Interface: | Earphone Port, DC Power Port |

1.2 Test Standards

The following report is prepared on behalf of the Verykool USA Inc in accordance with Part 2, Subpart J, and Part 15, Subparts A and B of the Federal Communication Commissions rules.

The objective is to determine compliance with FCC Part 15, Subpart B, and section 15.205, 15.107, and 15.109 rules.

Maintenance of compliance is the responsibility of the manufacturer. Any modification of the product, which result in lowering the emission, should be checked to ensure compliance has been maintained.

1.3 Test Methodology

All measurements contained in this report were conducted with ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

1.4 Test Facility

- **FCC – Registration No.: 994117**

SEM.Test Compliance Services Co., Ltd. EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files and the Registration is 994117.

- **Industry Canada (IC) Registration No.: 7673A**

The 3m Semi-anechoic chamber of SEM.Test Compliance Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 7673A.

- **CNAS Registration No.: L4062**

Shenzhen SEM.Test Electronics Service Co., Ltd. is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L4062. All measurement facilities used to collect the measurement data are located at 3/F, Jinbao Commerce Building, Xin'an Fanshen Road, Bao'an District, Shenzhen, P.R.C (518101)

1.5 EUT Setup and Operation Mode

The equipment under test (EUT) was configured to measure its highest possible emission level. The test modes were adapted according to the operation manual for use, more detailed description as follows:

Test Mode List:

| Test Mode | Description | Remark |
|-----------|--------------------|---------------------------------|
| TM1 | Playing & Charging | Playing multimedia from TF card |
| TM2 | Downloading | Reading & writing |

EUT Cable List and Details

| Cable Description | Length (M) | Shielded/Unshielded | With Core/Without Core |
|-------------------|------------|---------------------|------------------------|
| DC Power Cable | 0.9 | Unshielded | Unshielded |
| Earphone Cable | 0.9 | Unshielded | Without Ferrite |

Auxiliary Equipment List and Details

| Description | Manufacturer | Model | Serial Number |
|-------------|--------------|--------|----------------|
| Notebook | SAMSUNG | NP-R20 | 124V93FP30082V |

Special Cable List and Details

| Cable Description | Length (M) | Shielded/Unshielded | With Core/Without Core |
|-------------------|------------|---------------------|------------------------|
| USB Cable | 1.0 | Shielded | Without Ferrite |

2. SUMMARY OF TEST RESULTS

| FCC Rules | Description of Test Item | Result |
|--------------|--------------------------|-----------|
| § 15.107 (a) | Conducted Emissions | Compliant |
| § 15.109 (a) | Radiated Emissions | Compliant |

N/A: not applicable

3. §15.107 (a) CONDUCTED EMISSIONS

3.1 Measurement Uncertainty

Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any conducted emissions measurement is ± 2.88 dB.

3.2 Test Equipment List and Details

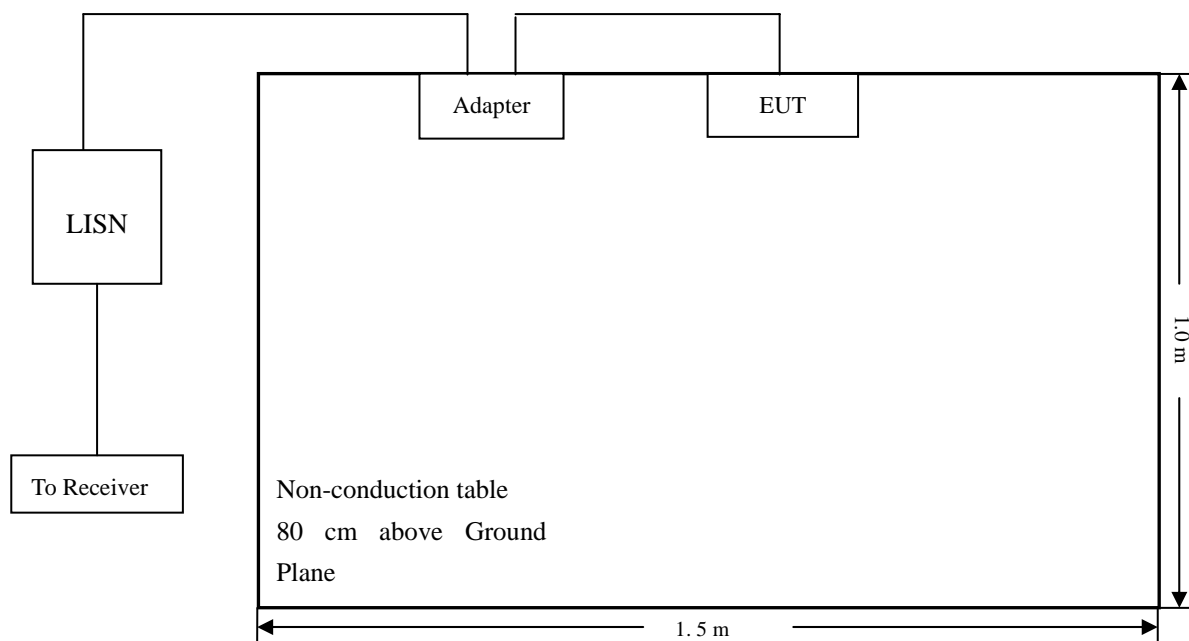
| Description | Manufacturer | Model | Serial Number | Cal. Date | Due. Date |
|-------------------|-----------------|----------|---------------|------------|------------|
| EMI Test Receiver | Rohde & Schwarz | ESPI | 101611 | 2012-03-28 | 2013-03-27 |
| L.I.S.N | Schwarz beck | NSLK8126 | 8126-224 | 2012-03-28 | 2013-03-27 |
| Pulse Limiter | Rohde & Schwarz | ESH3-Z2 | 100911 | 2012-03-28 | 2013-03-27 |

Statement of Traceability: All calibrations have been performed per the NVLAP requirements traceable to the NIST.

3.3 Test Procedure

Test is conducting under the description of ANSI C63.4-2003, American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the range of 9 kHz to 40 GHz.

3.4 Basic Test Setup Block Diagram



3.5 Environmental Conditions

| | |
|--------------------|-----------|
| Temperature: | 23 °C |
| Relative Humidity: | 52% |
| ATM Pressure: | 1011 mbar |

3.6 Summary of Test Results/Plots

According to the data in section 3.7, the EUT complied with the FCC Part 15.107(a) Conducted margin for a Class B device, with the *worst* margin reading of:

-7.84 dB at **2.27 MHz** in the **Line, Peak** detector, 0.15-30MHz

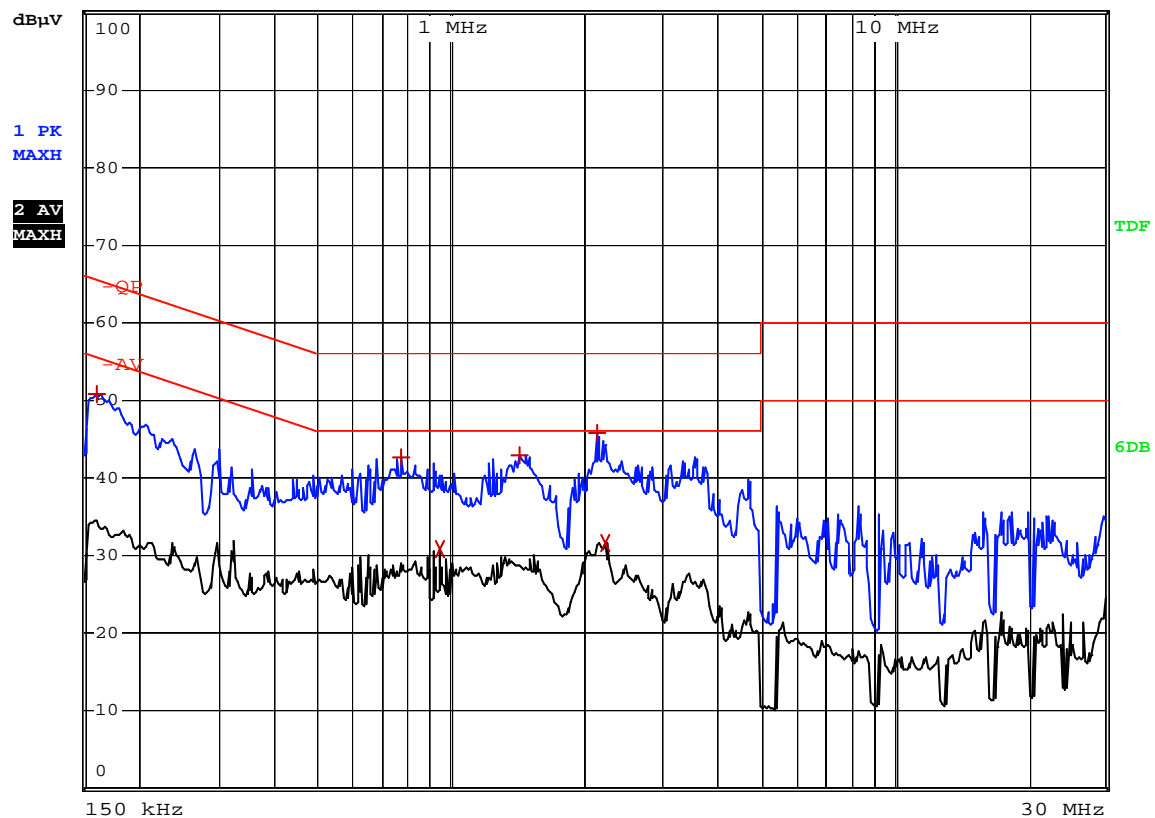
3.7 Conducted Emissions Test Data

Plot of Conducted Emissions Test Data*EUT: Android phone**Tested Model: S758**Operating Condition: Charging & Playing**Comment: AC 120V/60Hz, Adapter DC5V**Test Specification: Neutral*

RBW 9 kHz

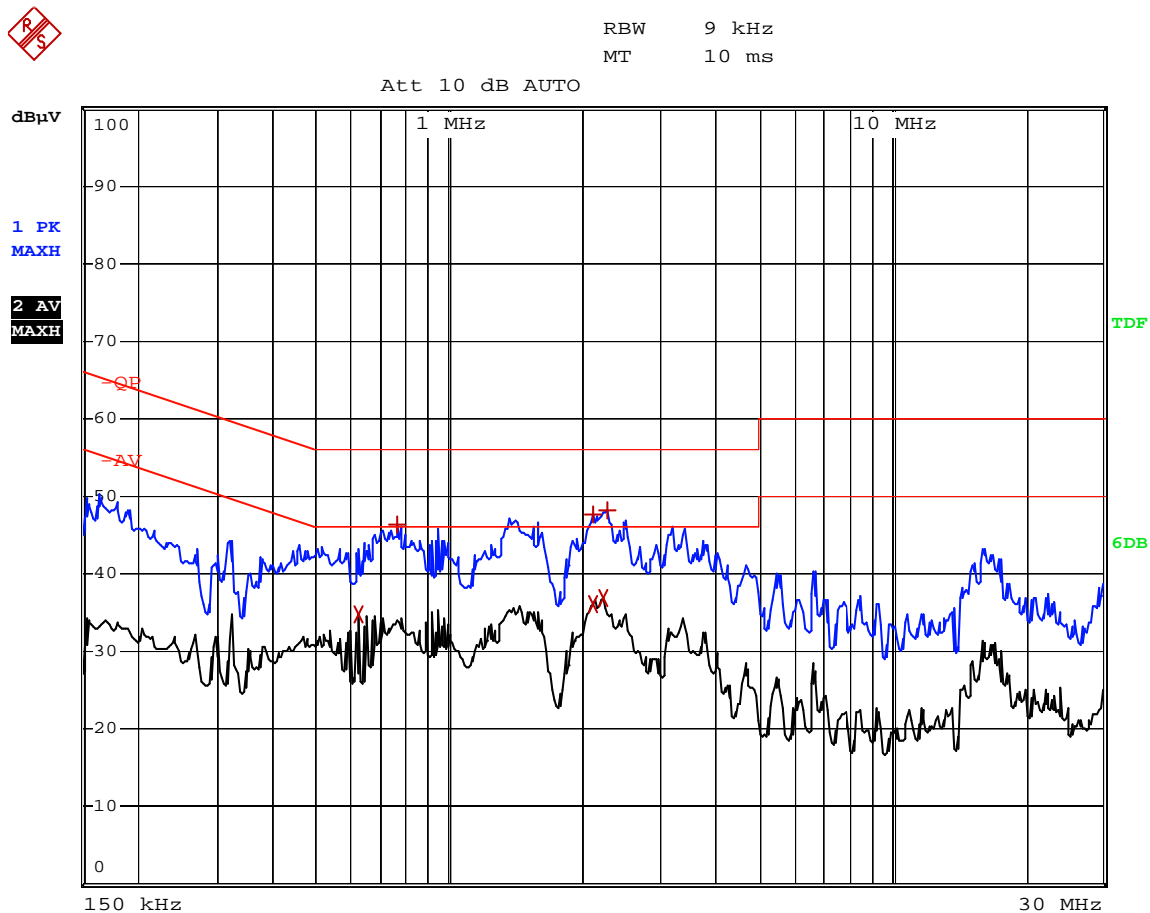
MT 10 ms

Att 10 dB AUTO



| EDIT PEAK LIST (Prescan Results) | | | |
|----------------------------------|-----------|------------|----------------|
| Trace1: | -QP | | |
| Trace2: | -AV | | |
| Trace3: | --- | | |
| TRACE | FREQUENCY | LEVEL dBμV | DELTA LIMIT dB |
| 1 Max Peak | 162 kHz | 50.71 | -14.64 |
| 1 Max Peak | 774 kHz | 42.63 | -13.36 |
| 2 Average | 946 kHz | 30.74 | -15.25 |
| 1 Max Peak | 1.422 MHz | 42.88 | -13.11 |
| 1 Max Peak | 2.138 MHz | 45.82 | -10.17 |
| 2 Average | 2.222 MHz | 31.70 | -14.29 |

Test Specification: Line



| EDIT PEAK LIST (Prescan Results) | | | |
|----------------------------------|-----------|------------|----------------|
| Trace1: | -QP | | |
| Trace2: | -AV | | |
| Trace3: | --- | | |
| TRACE | FREQUENCY | LEVEL dBμV | DELTA LIMIT dB |
| 2 Average | 622 kHz | 34.81 | -11.18 |
| 1 Max Peak | 766 kHz | 46.35 | -9.64 |
| 1 Max Peak | 2.118 MHz | 47.55 | -8.44 |
| 2 Average | 2.118 MHz | 36.01 | -9.98 |
| 2 Average | 2.234 MHz | 36.86 | -9.13 |
| 1 Max Peak | 2.27 MHz | 48.15 | -7.84 |

4. §15.109(a)- RADIATED EMISSION

4.1 Measurement Uncertainty

Base on NIS 81, The Treatment of Uncertainty in EMC Measurements, the best estimate of the uncertainty of any radiation emissions measurement is ± 5.10 dB.

4.2 Test Equipment List and Details

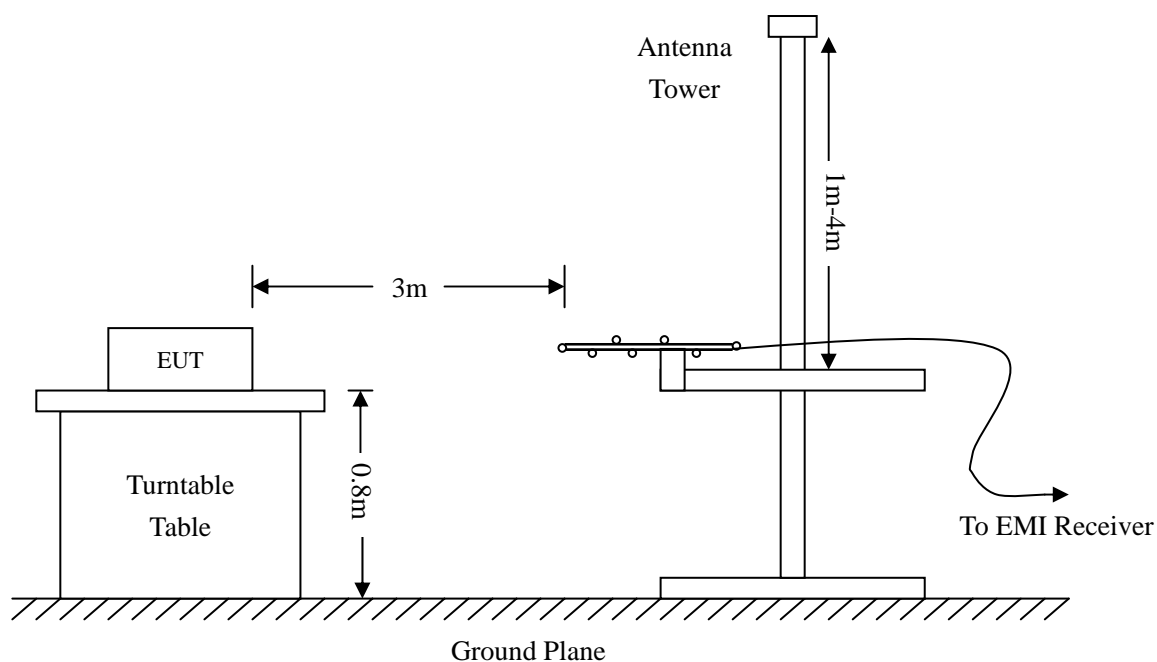
| Description | Manufacturer | Model | Serial Number | Cal. Date | Due. Date |
|--------------------------|----------------------|----------|---------------|------------|------------|
| Spectrum Analyzer | R&S | FSP | 836079/035 | 2012-03-28 | 2013-03-27 |
| EMI Test Receiver | R&S | ESVB | 825471/005 | 2012-03-28 | 2013-03-27 |
| Pre-amplifier | Agilent | 8447F | 3113A06717 | 2012-03-28 | 2013-03-27 |
| Pre-amplifier | Compliance Direction | PAP-0118 | 24002 | 2012-03-28 | 2013-03-27 |
| Trilog Broadband Antenna | SCHWARZBECK | VULB9163 | 9163-333 | 2012-02-25 | 2013-02-24 |
| Horn Antenna | ETS | 3117 | 00086197 | 2012-02-25 | 2013-02-24 |

4.3 Test Procedure

The setup of EUT is according with per ANSI C63.4-2003 measurement procedure. The specification used was with the FCC Part 15.109 Limit.

The external I/O cables were draped along the test table and formed a bundle 30 to 40 cm long in the middle.

The spacing between the peripherals was 10 cm.



4.4 Test Receiver Setup

During the radiated emission test for above 1GHz, the test receiver was set with the following configurations:

For peak detector:

RBW = 1000kHz, VBW = 3000kHz, Sweep Time = Auto

For average detector:

RBW = 1000kHz, VBW = 10Hz, Sweep Time = Auto

4.5 Corrected Amplitude & Margin Calculation

The Corrected Amplitude is calculated by adding the Antenna Factor and the Cable Factor, and subtracting the Amplifier Gain from the Amplitude reading. The basic equation is as follows:

$$\text{Corr. Ampl.} = \text{Indicated Reading} - \text{Corr. Factor}$$

The “**Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, a margin of -6dB μ V means the emission is 6dB μ V below the maximum limit for a Class B device. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corr. Ampl.} - \text{FCC Part 15.109(a) Limit}$$

4.6 Environmental Conditions

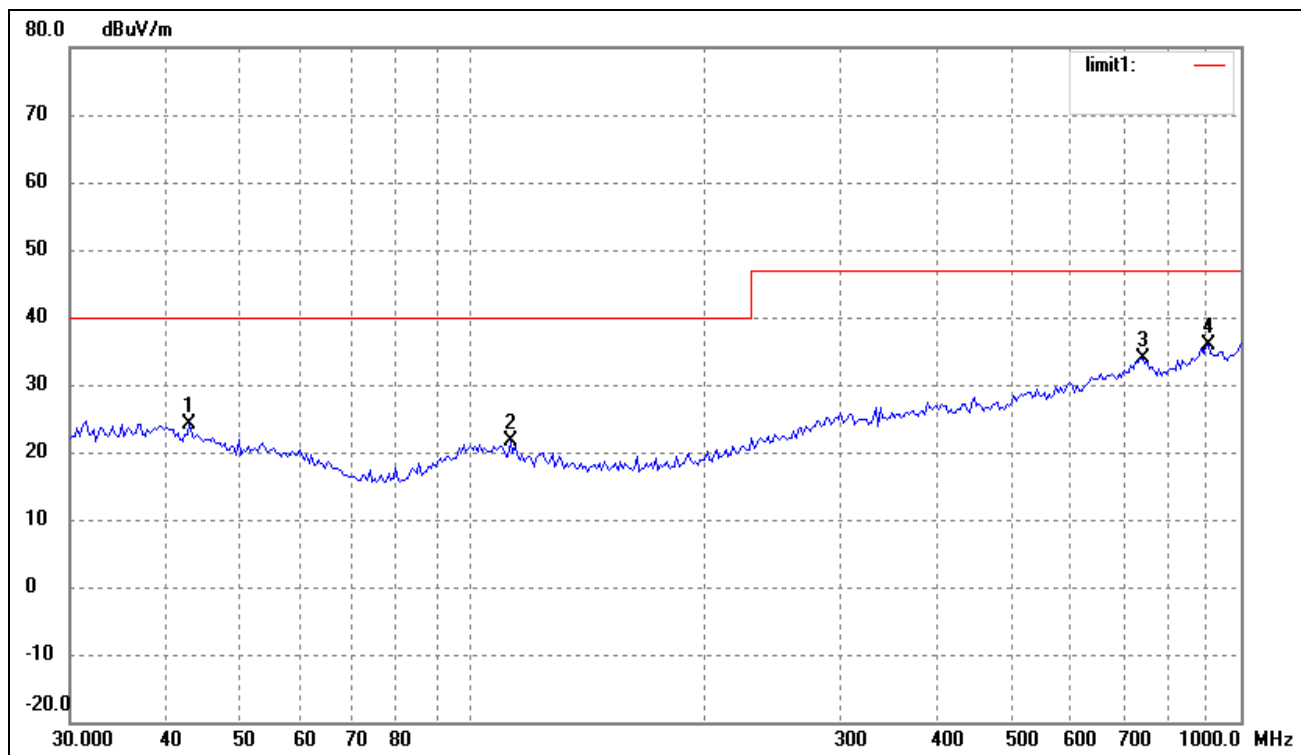
| | |
|--------------------|-----------|
| Temperature: | 23 °C |
| Relative Humidity: | 55 % |
| ATM Pressure: | 1011 mbar |

4.7 Summary of Test Results/Plots

According to the data, the EUT complied with the FCC Part 15.109(a) rule, and had the worst margin of:

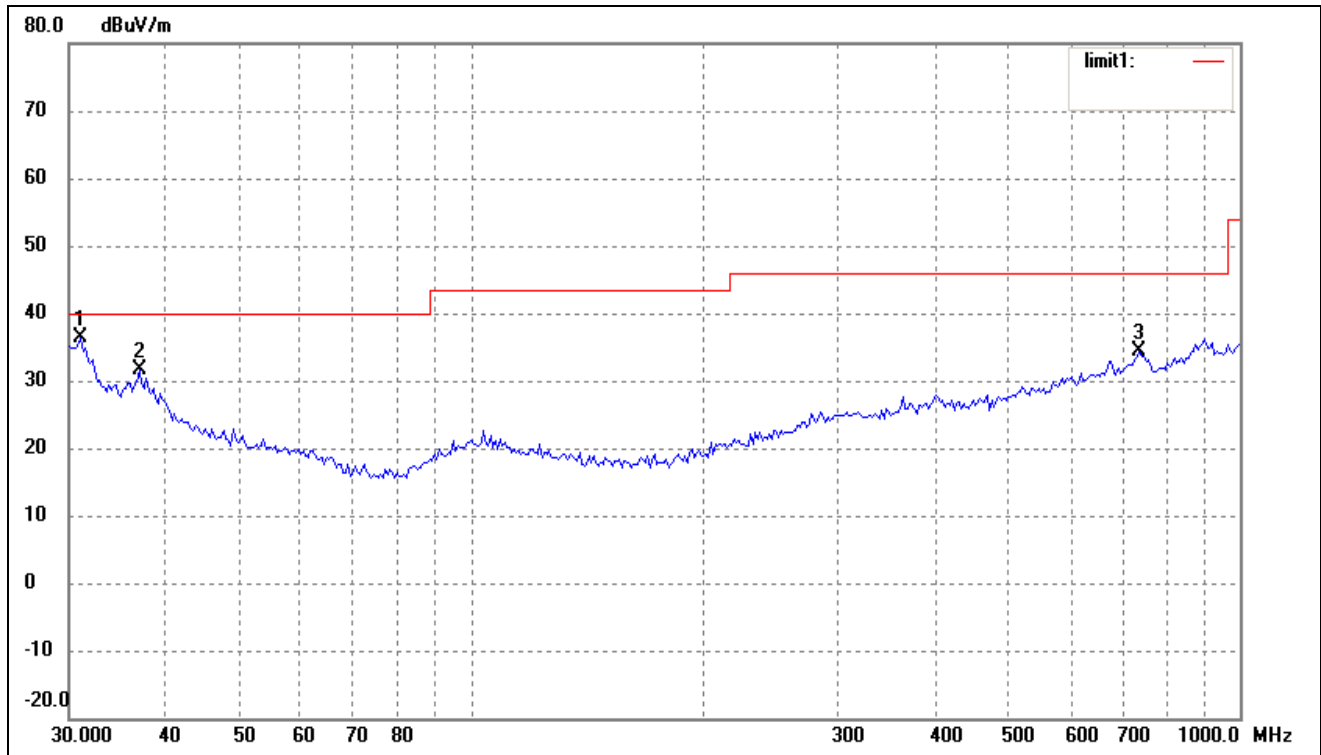
-3.58 dB at 31.0706MHz in the Vertical polarization, Charging &Playing Mode, 9kHz to 1 GHz, 3Meters

-2.30 dB at 301.4224 MHz in the Horizontal polarization, Downloading Mode 9kHz to 1 GHz, 3Meters

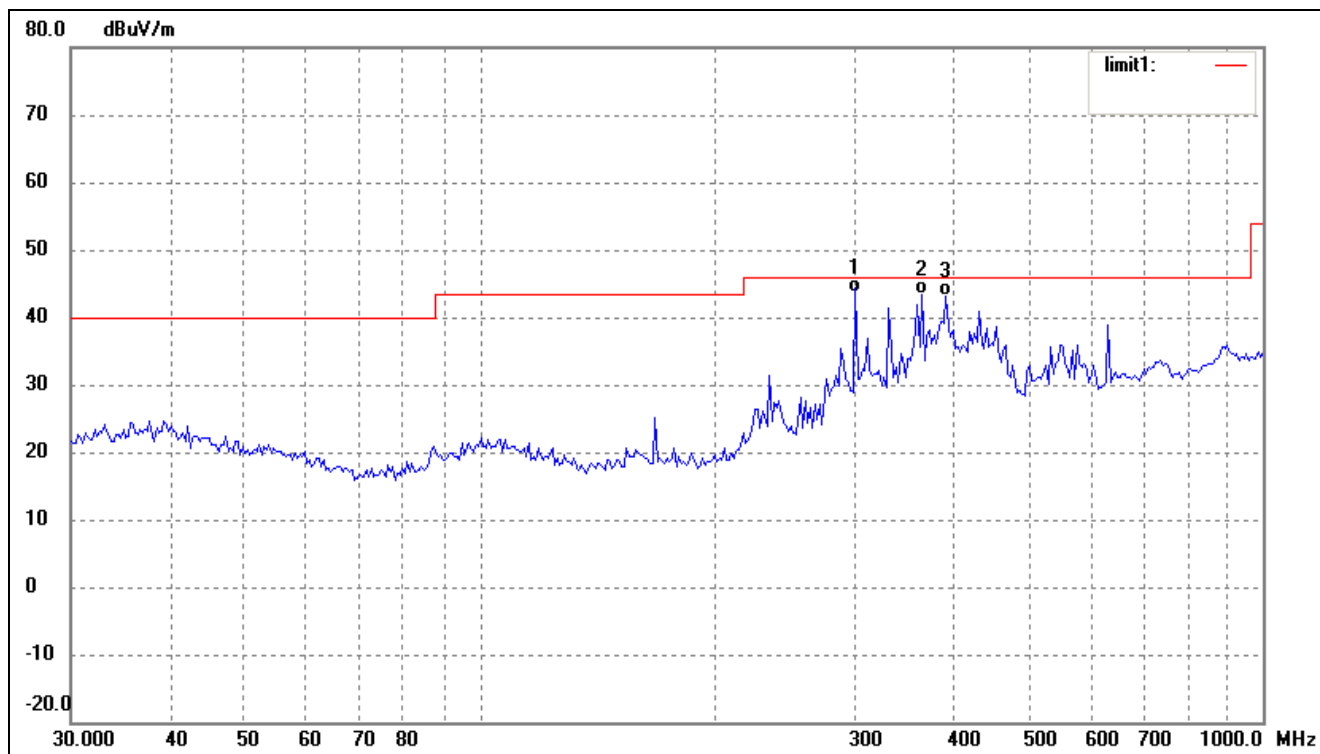
Plot of Radiated Emissions Test Data*EUT:* Android phone*Tested Model:* S758*Operating Condition:* Charging &Playing*Comment:* Playing multimedia from TF card*Test Specification:* Horizontal

| No. | Frequency (MHz) | Reading (dBuV/m) | Correct dB/m | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Degree (°) | Height (cm) | Remark |
|-----|--------------------|---------------------|-----------------|--------------------|-------------------|----------------|-----------------|----------------|--------|
| 1 | 42.8998 | 15.31 | 8.79 | 24.10 | 40.00 | -15.90 | 224 | 100 | peak |
| 2 | 112.1305 | 16.10 | 5.65 | 21.75 | 40.00 | -18.25 | 167 | 200 | peak |
| 3 | 744.8661 | 16.02 | 17.95 | 33.97 | 47.00 | -13.03 | 286 | 200 | peak |
| 4 | 906.4824 | 16.72 | 19.15 | 35.87 | 47.00 | -11.13 | 360 | 100 | peak |

Test Specification: Vertical

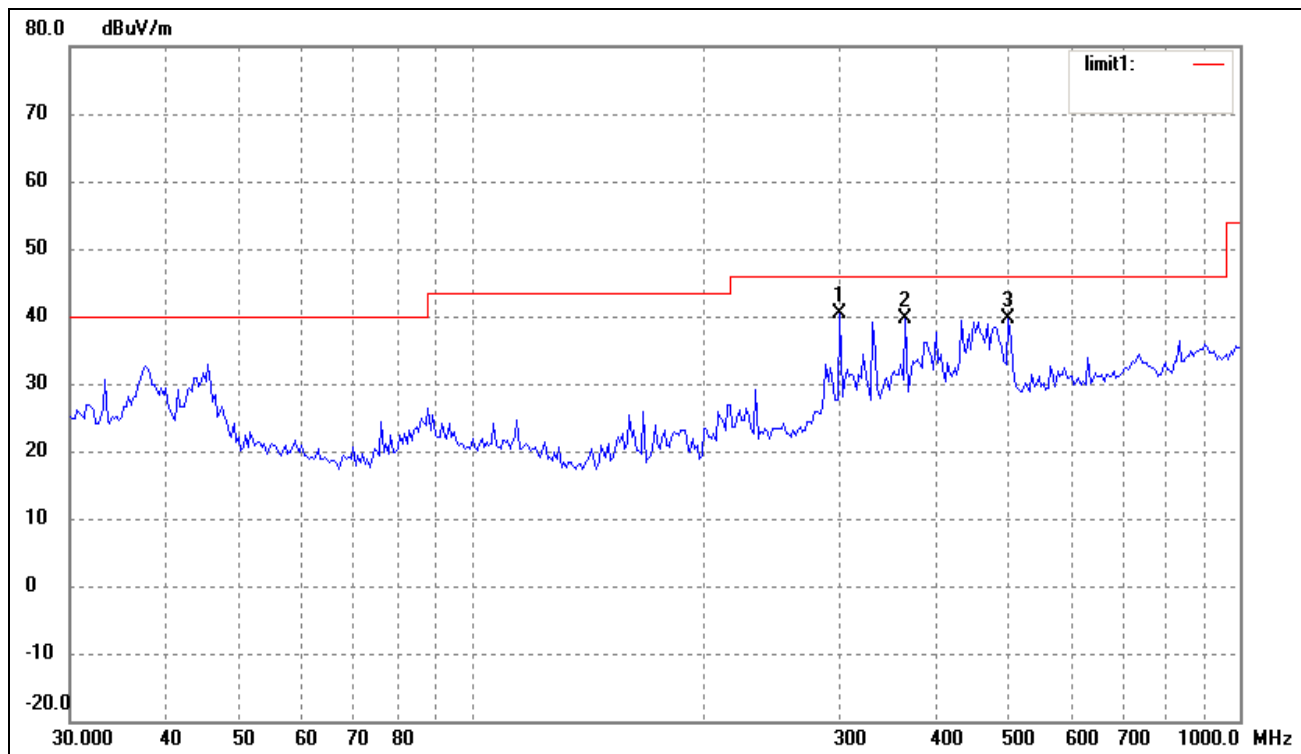


| No. | Frequency | Reading | Correct | Result | Limit | Margin | Degree | Height | Remark |
|-----|-----------|----------|---------|----------|----------|--------|--------|--------|--------|
| | (MHz) | (dBuV/m) | dB/m | (dBuV/m) | (dBuV/m) | (dB) | (°) | (cm) | |
| 1 | 31.0706 | 28.20 | 8.22 | 36.42 | 40.00 | -3.58 | 254 | 100 | peak |
| 2 | 37.0248 | 22.30 | 9.21 | 31.51 | 40.00 | -8.49 | 180 | 100 | peak |
| 3 | 739.6604 | 16.21 | 18.07 | 34.28 | 46.00 | -11.72 | 226 | 100 | peak |

Plot of Radiated Emissions Test Data*EUT:* Android phone*Tested Model:* S758*Operating Condition:* Downloading*Comment:* Connect to PC*Test Specification:* Horizontal

| No. | Frequency (MHz) | Reading (dBuV/m) | Correct dB/m | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Degree (°) | Height (cm) | Remark |
|-----|--------------------|---------------------|-----------------|--------------------|-------------------|----------------|---------------|----------------|--------|
| 1 | 301.4224 | 33.50 | 10.20 | 43.70 | 46.00 | -2.30 | 261 | 100 | QP |
| 2 | 366.8231 | 32.59 | 10.67 | 43.26 | 46.00 | -2.74 | 360 | 100 | QP |
| 3 | 393.4724 | 31.94 | 11.24 | 43.18 | 46.00 | -2.82 | 114 | 100 | QP |

Test Specification: Vertical



| No. | Frequency (MHz) | Reading (dBuV/m) | Correct dB/m | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Degree (°) | Height (cm) | Remark |
|-----|--------------------|---------------------|-----------------|--------------------|-------------------|----------------|---------------|----------------|--------|
| 1 | 301.4224 | 30.16 | 10.20 | 40.36 | 46.00 | -5.64 | 274 | 100 | peak |
| 2 | 366.8231 | 28.92 | 10.67 | 39.59 | 46.00 | -6.41 | 225 | 200 | peak |
| 3 | 499.4247 | 27.43 | 12.18 | 39.61 | 46.00 | -6.39 | 168 | 100 | peak |

Note: Testing is carried out with frequency rang 9kHz to 1GHz, which emissions below 30MHz are attenuated more than 20dB below the permissible limits or the field strength are not list above.