



FCC RADIO TEST REPORT

FCC ID: ONUSR-RH-G2D

IC ID: 10487A-SRRHG2D

Product : Channel Device

Trade Name : N/A

Model Name : SR-RH-G2D

Serial Model : SR-RH-G3D

Report No. : NTEK-2012DG0630053F

Prepared for

SHENZHEN SYNCO TECHNOLOGY CO., LTD.

Room 718, Building 211, Tairan Industry and Trade Park, Futian District,
Shenzhen

Prepared by

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

TEST RESULT CERTIFICATION**Applicant's name** : SHENZHEN SYNCO TECHNOLOGY CO., LTD.

Address : Room 718, Building 211, Tairan Industry and Trade Park, Futian District, Shenzhen

Manufacture's Name : SHENZHEN SYNCO TECHNOLOGY CO., LTD.

Address : Room 718, Building 211, Tairan Industry and Trade Park, Futian District, Shenzhen

Product description

Product name : Channel Device

Model and/or type reference : SR-RH-G2D

Serial Model : SR-RH-G3D

Rating(s) : 100-240VAC 50/60Hz 1.5A Max

Standards : FCC Part15.225, RSS-210 Issue 8

Test procedure ANSI C63.4-2003, RSS-Gen Issue 3

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

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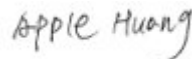
Date of Test

Date (s) of performance of tests : 01 Jun. 2012 ~26 Jun. 2012

Date of Issue..... : 27 Jun 2012

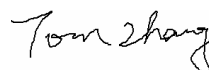
Test Result..... : **Pass**

Testing Engineer :



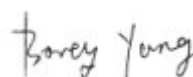
(Apple Huang)

Technical Manager :



(Tom Zhang)

Authorized Signatory :



(Bovey Yang)

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1. SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

| FCC Part15, Subpart C (15.225) & RSS-Gen Issue 3 & RSS-210 Issue 8 | | | |
|---|----------------------------|----------|--------|
| Standard Section | Test Item | Judgment | Remark |
| 15.207 | Conducted Emission | PASS | |
| 15.203 | Antenna Requirement | Pass | |
| 15.225 | Radiated Spurious Emission | Pass | |
| 15.225 | Bandwidth Requirement | Pass | |
| 15.225 | Frequency stability | Pass | |

NOTE:

(1) "N/A" denotes test is not applicable in this Test Report.

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 FRN Registration No.:238937; IC Registration No.:9270A-1

CNAS Registration No.:L5516

1.2 MEASUREMENT UNCERTAINTY

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

| No. | Item | Uncertainty |
|-----|------------------------------|---------------------------|
| 1 | Conducted Emission Test | $\pm 1.38\text{dB}$ |
| 2 | RF power,conducted | $\pm 0.16\text{dB}$ |
| 3 | Spurious emissions,conducted | $\pm 0.21\text{dB}$ |
| 4 | All emissions,radiated(<1G) | $\pm 4.68\text{dB}$ |
| 5 | All emissions,radiated(>1G) | $\pm 4.89\text{dB}$ |
| 6 | Temperature | $\pm 0.5^{\circ}\text{C}$ |
| 7 | Humidity | $\pm 2\%$ |

2. GENERAL INFORMATION

2.1 GENERAL DESCRIPTION OF EUT

| | | | | | | | | | | | | | |
|----------------------|---|----------------------|----------|------------------|-----|-------------------|------|----------------------|-------------|--------------------|------|---------------|------------------------|
| Equipment | Channel Device | | | | | | | | | | | | |
| Model Name | SR-RH-G2D | | | | | | | | | | | | |
| Serial Model | SR-RH-G3D | | | | | | | | | | | | |
| Model Difference | All the model are the same circuit and module, except the appearance and colour. | | | | | | | | | | | | |
| Product Description | <p>The EUT is a Channel Device</p> <table> <tr> <td>Operation Frequency:</td><td>13.56MHz</td></tr> <tr> <td>Modulation Type:</td><td>ASK</td></tr> <tr> <td>Number Of Channel</td><td>1CH.</td></tr> <tr> <td>Antenna Designation:</td><td>PCB antenna</td></tr> <tr> <td>Antenna Gain(Peak)</td><td>0dBi</td></tr> <tr> <td>Output Power:</td><td>93.47 dBuV/m (AV Max.)</td></tr> </table> <p>Based on the application, features, or specification exhibited in User's Manual, the EUT is considered as an ITE/Computing Device. More details of EUT technical specification, please refer to the User's Manual.</p> | Operation Frequency: | 13.56MHz | Modulation Type: | ASK | Number Of Channel | 1CH. | Antenna Designation: | PCB antenna | Antenna Gain(Peak) | 0dBi | Output Power: | 93.47 dBuV/m (AV Max.) |
| Operation Frequency: | 13.56MHz | | | | | | | | | | | | |
| Modulation Type: | ASK | | | | | | | | | | | | |
| Number Of Channel | 1CH. | | | | | | | | | | | | |
| Antenna Designation: | PCB antenna | | | | | | | | | | | | |
| Antenna Gain(Peak) | 0dBi | | | | | | | | | | | | |
| Output Power: | 93.47 dBuV/m (AV Max.) | | | | | | | | | | | | |
| Channel List | N/A | | | | | | | | | | | | |
| Adapter | 100-240VAC 50/60Hz 1.5A Max | | | | | | | | | | | | |

Note:

1. For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.
- 2.

Table for Filed Antenna

| Ant | Brand | Model Name | Antenna Type | Connector | Gain (dBi) | NOTE |
|-----|-------|------------|--------------|-----------|------------|---------|
| 1 | N/A | N/A | PCB Antenna | NA | 0 | Antenna |

2.2 DESCRIPTION OF TEST MODES

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

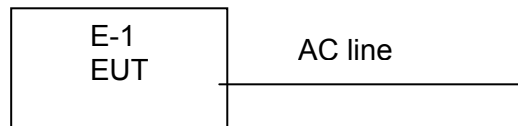
| Pretest Mode | Description |
|--------------|-------------|
| Mode 1 | TX |

| For Conducted Emission | |
|------------------------|-------------|
| Final Test Mode | Description |
| Mode 1 | TX |

| For Radiated Emission | |
|-----------------------|-------------|
| Final Test Mode | Description |
| Mode 1 | TX |

2.3 BLOCK DIGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

Radiated Spurious Emission Test



2.4 DESCRIPTION OF SUPPORT UNITS(CONDUCTED MODE)

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 | Mfr/Brand | Model/Type No. | Series No. | Note |
|------|----------------|-----------|----------------|------------|------|
| E-1 | Channel Device | N/A | SR-RH-G2D | N/A | EUT |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

| Item | Shielded Type | Ferrite Core | Length | Note |
|------|---------------|--------------|--------|------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

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.

2.5 EQUIPMENTS LIST FOR ALL TEST ITEMS

Radiation Test equipment

| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
|------|--------------------|--------------|-------------|------------|------------------|
| 1 | Spectrum Analyzer | Agilent | E4407B | 160400005 | Jul. 06. 2012 |
| 2 | Test Receiver | R&S | ESPI | 101318 | Jul. 06. 2012 |
| 3 | Bilog Antenna | TESEQ | CBL6111D | 31216 | Jul. 06. 2012 |
| 4 | 50Ω Coaxial Switch | Anritsu | MP59B | 6200264416 | Jul. 06. 2012 |
| 5 | Spectrum Analyzer | ADVANTEST | R3132 | 150900201 | Jul. 06. 2012 |
| 6 | Horn Antenna | EM | EM-AH-10180 | 2011071402 | Jul. 06. 2012 |
| 7 | Horn Ant | Schwarzbeck | BBHA 9170 | 9170-181 | Jul. 06. 2012 |
| 8 | Amplifier | EM | EM-30180 | 060538 | Jul. 06. 2012 |
| 9 | Loop Antenna | ARA | PLA-1030/B | 1029 | Jul. 06. 2012 |
| 10 | Power Meter | R&S | NRVS | 100696 | Jul. 06. 2012 |

Conduction Test equipment

| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
|------|-----------------------|--------------|----------|------------|------------------|
| 1 | Test Receiver | R&S | ESCI | 101160 | Jul. 06. 2012 |
| 2 | LISN | R&S | ENV216 | 101313 | Jul. 06. 2012 |
| 3 | LISN | EMCO | 3816/2 | 00042990 | Jul. 06. 2012 |
| 4 | 50Ω Coaxial Switch | Anritsu | MP59B | 6200264417 | Jul. 06. 2012 |
| 5 | Passive Voltage Probe | R&S | ESH2-Z3 | 100196 | Jul. 06. 2012 |
| 6 | Absorbing clamp | R&S | MOS-21 | 100423 | Jul. 06. 2012 |

3. ANTENNA REQUIREMENT

3.1 STANDARD REQUIREMENT

15.203 requirement: For intentional device, according to 15.203: an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device.

3.2 EUT ANTENNA

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

3.3 CONDUCTED EMISSION MEASUREMENT

3.3.1 POWER LINE CONDUCTED EMISSION Limits (Frequency Range 150KHz-30MHz)

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

| | | | | | |
|-----------|--|--|-----------|-----------|--------|
| 0.15 -0.5 | | | 66 - 56 * | 56 - 46 * | LP002. |
| 0.50 -5.0 | | | 56.00 | 46.00 | LP002. |
| 5.0 -30.0 | | | 60.00 | 50.00 | LP002. |

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 |

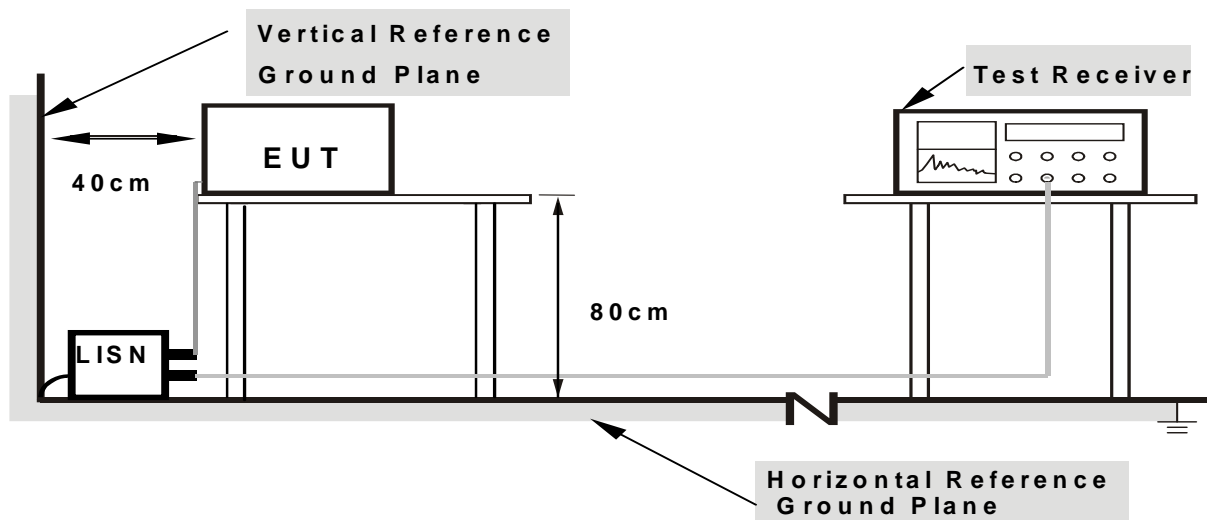
3.3.2 TEST PROCEDURE

- The EUT was placed 0.4 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.

3.3.3 DEVIATION FROM TEST STANDARD

No deviation

3.3.4 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 from other units and other metal planes

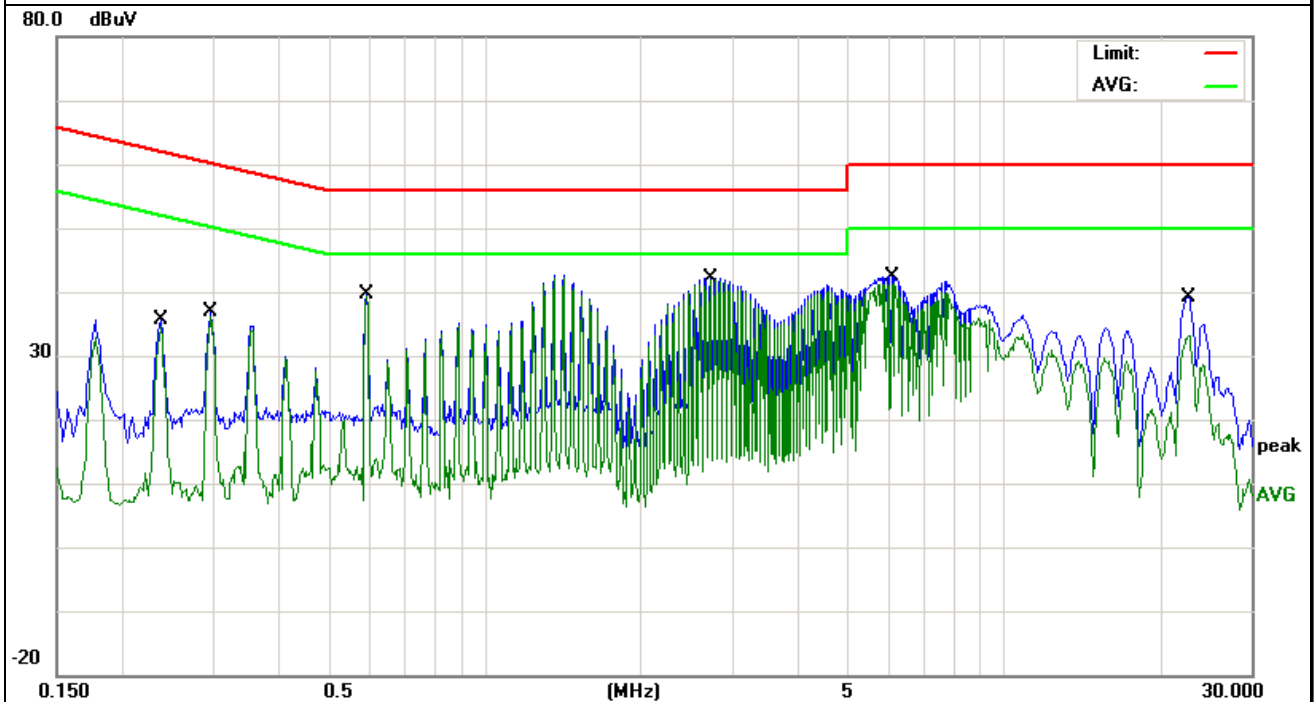
3.2.5 TEST RESULT

| | | | |
|----------------|----------------|---------------------|-----------|
| EUT : | Channel Device | Model Name. : | SR-RH-G2D |
| Temperature : | 26 °C | Relative Humidity : | 54% |
| Pressure : | 1010hPa | Phase : | L |
| Test Voltage : | AC 120V/60Hz | Test Mode : | TX |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Detector Type |
|-----------|---------------|--------|----------------|--------|--------|---------------|
| (MHz) | (dBμV) | (dB) | (dBμV) | (dBμV) | (dB) | |
| 0.2378 | 25.31 | 10.43 | 35.74 | 62.17 | -26.43 | QP |
| 0.2378 | 24.07 | 10.43 | 34.5 | 52.17 | -17.67 | AVG |
| 0.297 | 26.33 | 10.64 | 36.97 | 60.32 | -23.35 | QP |
| 0.297 | 25.59 | 10.64 | 36.23 | 50.32 | -14.09 | AVG |
| 0.5916 | 28.98 | 10.68 | 39.66 | 56 | -16.34 | QP |
| 0.5916 | 28.68 | 10.68 | 39.36 | 46 | -6.64 | AVG |

Remark:

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

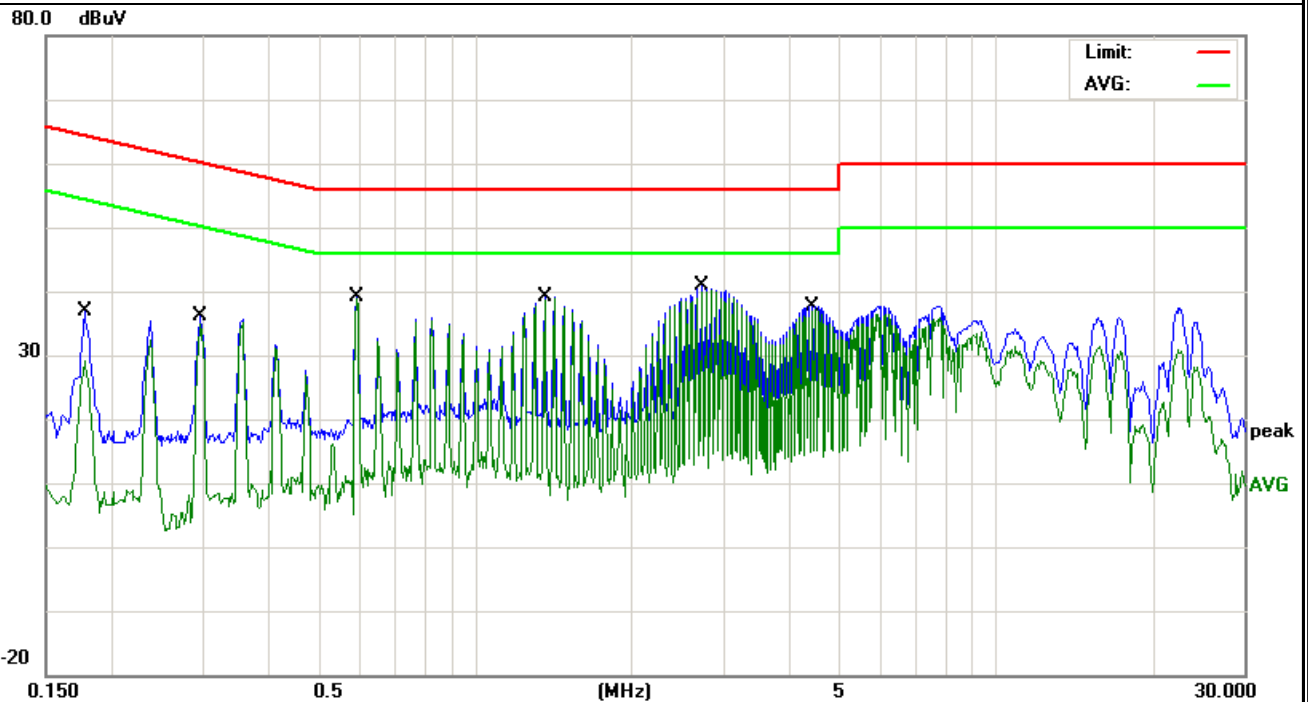


| | | | |
|----------------|----------------|---------------------|-----------|
| EUT : | Channel Device | Model Name. : | SR-RH-G2D |
| Temperature : | 26 °C | Relative Humidity : | 54% |
| Pressure : | 1010hPa | Phase : | N |
| Test Voltage : | AC 120V/60Hz | Test Mode : | TX |

| Frequency | Meter Reading | Factor | Emission Level | Limits | Margin | Detector Type |
|-----------|---------------|--------|----------------|--------|--------|---------------|
| (MHz) | (dBμV) | (dB) | (dBμV) | (dBμV) | (dB) | |
| 0.1779 | 26.58 | 10.37 | 36.95 | 64.58 | -27.63 | QP |
| 0.1779 | 18.85 | 10.37 | 29.22 | 54.58 | -25.36 | AVG |
| 0.2979 | 25.5 | 10.64 | 36.14 | 60.3 | -24.16 | QP |
| 0.2979 | 24.14 | 10.64 | 34.78 | 50.3 | -15.52 | AVG |
| 0.5939 | 28.38 | 10.68 | 39.06 | 56 | -16.94 | QP |
| 0.5939 | 28.23 | 10.68 | 38.91 | 46 | -7.09 | AVG |

Remark:

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



3.4 RADIATED EMISSION MEASUREMENT

3.4.1 Radiated Emission Limits (FCC 15.209)

| Frequencies (MHz) | Field Strength (micorvolts/meter) | Measurement Distance (meters) |
|----------------------|--------------------------------------|----------------------------------|
| 0.009~0.490 | 2400/F(KHz) | 300 |
| 0.490~1.705 | 24000/F(KHz) | 30 |
| 1.705~30.0 | 30 | 30 |
| 30~88 | 100 | 3 |
| 88~216 | 150 | 3 |
| 216~960 | 200 | 3 |
| Above 960 | 500 | 3 |

Note:

- (1) The tighter limit applies at the band edges.
- (2) Emission level (dBuV/m)=20log Emission level (uV/m).

LIMITS OF RADIATED EMISSION MEASUREMENT (FCC 15.225)

Please see the section 15.225(b) and 15.225(c)

15.225(b): Within the bands 13.410–13.553 MHz and 13.567–13.710 MHz, the field strength of any emissions shall not exceed 334 microvolts/meter (50.5dBuV/m)at 30 meters

15.225(c): Within the bands 13.110–13.410 MHz and 13.710–14.010 MHz the field strength of any emissions shall not exceed 106 microvolts/meter (40.5dBuV/m) at 30 meters

Note: 30m to 3m correction factor calculation:

$$40 * \text{Log}(30\text{m}/3\text{m}) = 40$$

| Spectrum Parameter | Setting |
|---------------------------------------|-----------------------|
| Attenuation | Auto |
| Start Frequency | 9 kHz |
| Stop Frequency | 10th carrier harmonic |
| RB / VB (emission in restricted band) | 1MHz / 1MHz for Peak |

| Receiver Parameter | Setting |
|------------------------|----------------------------------|
| Attenuation | Auto |
| Start ~ Stop Frequency | 9kHz~150kHz / RB 200Hz for QP |
| Start ~ Stop Frequency | 150kHz~30MHz / RB 9kHz for QP |
| Start ~ Stop Frequency | 30MHz~1000MHz / RB 120kHz for QP |

3.4.2 TEST PROCEDURE

- The measuring distance of at 3 m shall be used for measurements at frequency up to 1GHz. For frequencies above 1GHz, any suitable measuring distance may be used.
- The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m.
- The initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured.
- If the Peak Mode measured value compliance with and lower than Quasi Peak Mode Limit, the EUT shall be deemed to meet QP Limits and then no additional QP Mode measurement performed.
- For the actual test configuration, please refer to the related Item –EUT Test Photos.

Note:

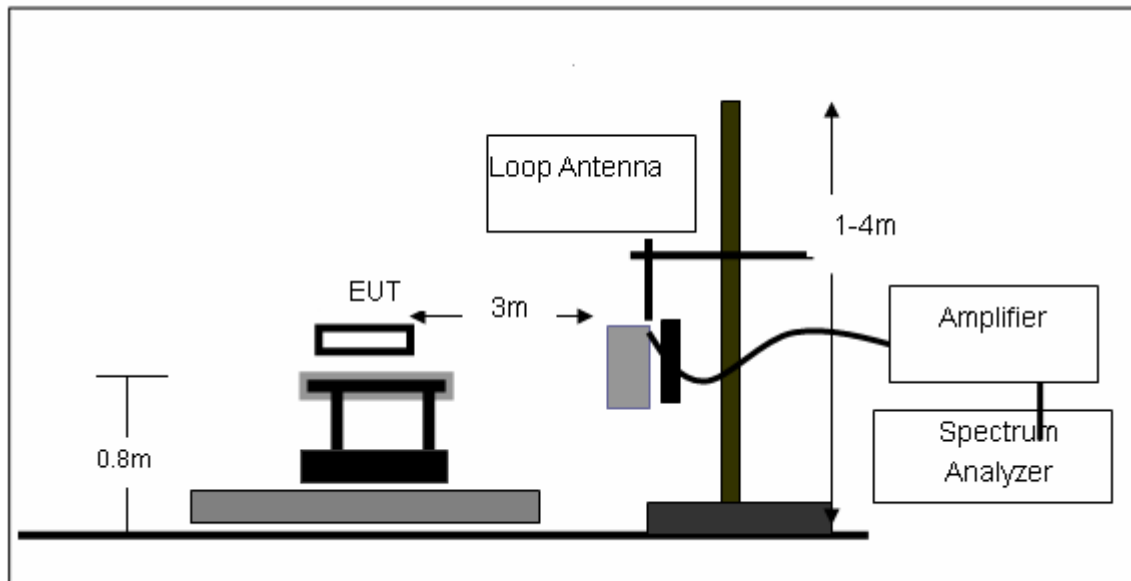
Both horizontal and vertical antenna polarities were tested and performed pretest to three orthogonal axis. The worst case emissions were reported

3.4.3 DEVIATION FROM TEST STANDARD

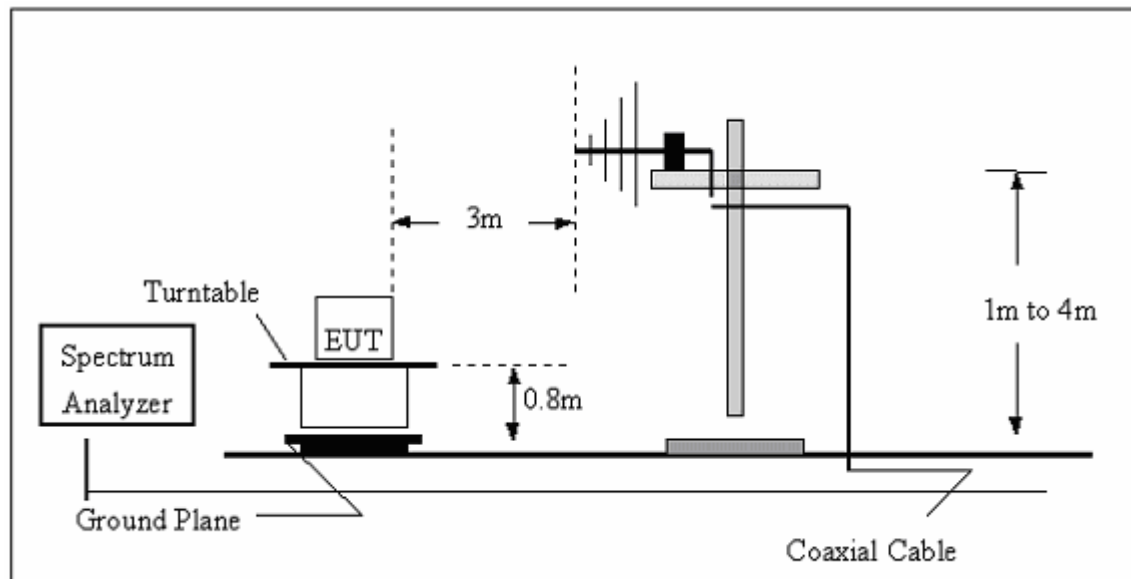
No deviation

3.4.4 TEST SETUP

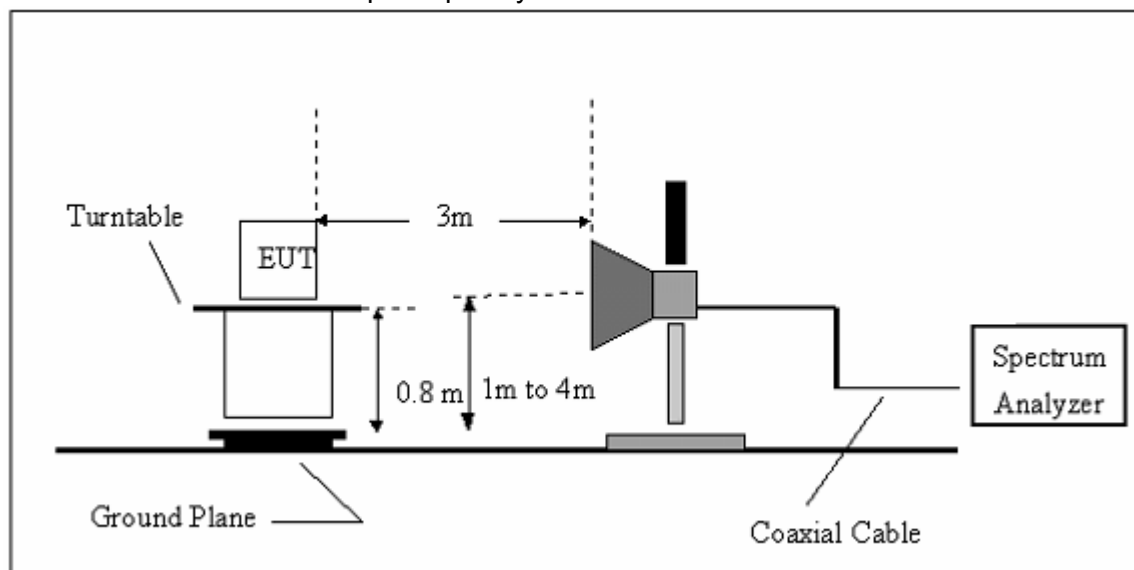
(A) Radiated Emission Test-Up Frequency Below 30MHz



(B) Radiated Emission Test-Up Frequency 30MHz~1GHz



(C) Radiated Emission Test-Up Frequency Above 1GHz



3.4.5 TEST RESULTS (BLOW 30MHz)

| | | | |
|---------------|----------------|---------------------|--------------|
| EUT : | Channel Device | Model Name. : | SR-RH-G2D |
| Temperature : | 20 °C | Relative Humidity : | 48% |
| Pressure : | 1010 hPa | Test Voltage : | AC 120V/60Hz |
| Test Mode : | TX | Polarization : | -- |

Radiated Emissions Result of Inside band (13.56MHz)

| Channel (13.56MHz) | | | | | | | | | |
|--------------------|-----------------------|-----------------|-------------------------|---------------------|-------------------------|-------------------------|-----------------------------|-----------------|--------------|
| Fre. MHz | Positio n X/Y/Z | Reading dBuV | Antenna Factor dB | Cable Loss dB | Amplifier Gain dB | Correct Factor dB | Measure Result dBuV/m | Limit dBuV/m | Margin dB |
| 13.56 | X | 126.57 (PK) | 10.4 | 0.31 | 24.62 | -13.91 | 112.66 | 124 | -11.34 |
| 13.56 | X | 107.38 (AV) | 10.4 | 0.31 | 24.62 | -13.91 | 93.47 | 104 | -10.53 |
| -- | X | -- | -- | -- | -- | -- | -- | -- | -- |
| 13.56 | Y | 115.42 (PK) | 10.4 | 0.31 | 24.62 | -13.91 | 101.51 | 124 | -22.49 |
| 13.56 | Y | 100.35 (AV) | 10.4 | 0.31 | 24.62 | -13.91 | 86.44 | 104 | -17.56 |
| -- | Y | -- | -- | -- | -- | -- | -- | -- | -- |
| 13.56 | Z | 119.48 (PK) | 10.4 | 0.31 | 24.62 | -13.91 | 105.57 | 124 | -18.43 |
| 13.56 | Z | 103.64 (AV) | 10.4 | 0.31 | 24.62 | -13.91 | 89.73 | 104 | -14.27 |
| -- | Z | -- | -- | -- | -- | -- | -- | -- | -- |

Notes: --Means other frequency and mode comply with standard requirements and at least have 20dB margin.

Correct Factor=Cable Loss+ Antenna Factor- Amplifier Gain

Measurement Result=Reading + Correct Factor

Margin=Measurement Result-Limit

--Spectrum setting:

a. Peak setting RBW=120KHz, VBW=300KHz.

b. AV setting RBW=1MHz, VBW=10Hz.

Field strength

| Freq. (MHz) | Position X/Y/Z | Detector Mode (PK/QP) | Reading (dBuV) | Factor (dB) | Actual FS (dBuV/m) | Limits 3m (dBuV/m) | Margin (dBuV/m) |
|-------------|----------------|-----------------------|----------------|-------------|--------------------|--------------------|-----------------|
| 13.274 | X | Peak | 45.62 | -13.92 | 31.70 | 80.50 | -48.80 |
| 13.468 | X | Peak | 46.38 | -13.92 | 32.46 | 90.50 | -58.04 |
| 13.513 | X | Peak | 45.14 | -13.92 | 31.22 | 90.50 | -59.28 |
| 13.569 | X | Peak | 56.63 | -13.91 | 42.72 | 90.50 | -47.78 |
| 13.728 | X | Peak | 45.87 | -13.91 | 31.96 | 80.50 | -48.54 |
| 13.896 | X | Peak | 46.29 | -13.91 | 32.38 | 80.50 | -48.12 |

| Freq. (MHz) | Position X/Y/Z | Detector Mode (PK/QP) | Reading (dBuV) | Factor (dB) | Actual FS (dBuV/m) | Limits 3m (dBuV/m) | Margin (dBuV/m) |
|-------------|----------------|-----------------------|----------------|-------------|--------------------|--------------------|-----------------|
| 13.186 | Y | Peak | 46.48 | -13.92 | 32.56 | 80.50 | -47.94 |
| 13.394 | Y | Peak | 45.74 | -13.92 | 31.82 | 80.50 | -48.68 |
| 13.452 | Y | Peak | 45.32 | -13.92 | 31.40 | 90.50 | -59.10 |
| 13.517 | Y | Peak | 45.81 | -13.92 | 31.89 | 90.50 | -58.61 |
| 13.642 | Y | Peak | 45.52 | -13.91 | 31.61 | 90.50 | -58.89 |
| 13.785 | Y | Peak | 45.49 | -13.91 | 31.58 | 80.50 | -48.92 |

| Freq. (MHz) | Position X/Y/Z | Detector Mode (PK/QP) | Reading (dBuV) | Factor (dB) | Actual FS (dBuV/m) | Limits 3m (dBuV/m) | Margin (dBuV/m) |
|-------------|----------------|-----------------------|----------------|-------------|--------------------|--------------------|-----------------|
| 13.219 | Z | Peak | 45.84 | -13.92 | 31.92 | 80.50 | -48.58 |
| 13.357 | Z | Peak | 46.43 | -13.92 | 32.51 | 80.50 | -47.99 |
| 13.436 | Z | Peak | 46.24 | -13.92 | 32.32 | 90.50 | -58.18 |
| 13.603 | Z | Peak | 45.81 | -13.91 | 31.90 | 90.50 | -58.60 |
| 13.752 | Z | Peak | 45.42 | -13.91 | 31.51 | 80.50 | -48.99 |
| 13.846 | Z | Peak | 45.37 | -13.91 | 31.46 | 80.50 | -49.04 |

3.4.6 TEST RESULTS (BETWEEN 30 – 1000 MHZ)

| | | | |
|---------------|----------------|---------------------|--------------|
| EUT : | Channel Device | Model Name : | SR-RH-G2D |
| Temperature : | 20 °C | Relative Humidity : | 48% |
| Pressure : | 1010 hPa | Test Voltage : | AC 120V/60Hz |
| Test Mode : | TX | Polarization : | Horizontal |

| Freq. (MHz) | Detector Mode (PK/QP) | Reading (dBuV) | Factor (dB) | Actual FS (dBuV/m) | Limits 3m (dBuV/m) | Margin (dBuV/m) |
|-------------|-----------------------|----------------|-------------|--------------------|--------------------|-----------------|
| 194.90 | Peak | 37.47 | -17.35 | 20.12 | 43.50 | -23.38 |
| 416.06 | Peak | 46.71 | -11.77 | 34.94 | 46.00 | -11.06 |
| 468.44 | Peak | 39.09 | -10.57 | 28.52 | 46.00 | -17.48 |
| 584.84 | Peak | 39.45 | -8.60 | 30.85 | 46.00 | -15.15 |
| 624.61 | Peak | 38.00 | -7.80 | 30.20 | 46.00 | -15.80 |
| 832.19 | Peak | 36.66 | -5.12 | 31.54 | 46.00 | -14.46 |

| | | | |
|---------------|----------------|---------------------|--------------|
| EUT : | Channel Device | Model Name : | SR-RH-G2D |
| Temperature : | 20 °C | Relative Humidity : | 48% |
| Pressure : | 1010 hPa | Test Voltage : | AC 120V/60Hz |
| Test Mode : | TX | Polarization : | Vertical |

| Freq. (MHz) | Detector Mode (PK/QP) | Reading (dBuV) | Factor (dB) | Actual FS (dBuV/m) | Limits 3m (dBuV/m) | Margin (dBuV/m) |
|-------------|-----------------------|----------------|-------------|--------------------|--------------------|-----------------|
| 221.09 | Peak | 40.67 | -16.81 | 23.86 | 46.00 | -22.14 |
| 324.88 | Peak | 43.43 | -13.74 | 29.69 | 46.00 | -16.31 |
| 416.06 | Peak | 50.28 | -11.77 | 38.51 | 46.00 | -7.49 |
| 468.44 | Peak | 45.02 | -10.57 | 34.45 | 46.00 | -11.55 |
| 572.23 | Peak | 39.91 | -8.85 | 31.06 | 46.00 | -14.94 |
| 832.19 | Peak | 37.06 | -5.12 | 31.94 | 46.00 | -14.06 |

NOTE:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. *: Denotes restricted band of operation.

Measurements were made using a peak detector and average detector. Any emission falling within the restricted bands of FCC Part 15 Section 15.205 were compliance with the emission limit of FCC Part 15 Section 15.209.

| | | | |
|---------------|----------------|---------------------|--------------|
| EUT : | Channel Device | Model Name : | SR-RH-G2D |
| Temperature : | 20 °C | Relative Humidity : | 48% |
| Pressure : | 1010 hPa | Test Voltage : | AC 120V/60Hz |
| Test Mode : | RX | Polarization : | Horizontal |

| Freq. (MHz) | Detector Mode (PK/QP) | Reading (dBuV) | Factor (dB) | Actual FS (dBuV/m) | Limits 3m (dBuV/m) | Margin (dBuV/m) |
|-------------|-----------------------|----------------|-------------|--------------------|--------------------|-----------------|
| 189.35 | Peak | 43.56 | -15.39 | 28.17 | 43.5 | -15.33 |
| 563.26 | Peak | 36.94 | -9.48 | 27.46 | 46 | -18.54 |

| | | | |
|---------------|----------------|---------------------|--------------|
| EUT : | Channel Device | Model Name : | SR-RH-G2D |
| Temperature : | 20 °C | Relative Humidity : | 48% |
| Pressure : | 1010 hPa | Test Voltage : | AC 120V/60Hz |
| Test Mode : | RX | Polarization : | Vertical |

| Freq. (MHz) | Detector Mode (PK/QP) | Reading (dBuV) | Factor (dB) | Actual FS (dBuV/m) | Limits 3m (dBuV/m) | Margin (dBuV/m) |
|-------------|-----------------------|----------------|-------------|--------------------|--------------------|-----------------|
| 365.25 | Peak | 39.65 | -17.68 | 21.97 | 43.5 | -21.53 |
| 522.23 | Peak | 42.55 | -12.14 | 30.41 | 46 | -15.59 |

NoTE:

1. Emissions attenuated more than 20 dB below the permissible value are not reported.
2. *: Denotes restricted band of operation.

Measurements were made using a peak detector and average detector. Any emission falling within the restricted bands of FCC Part 15 Section 15.205 were compliance with the emission limit of FCC Part 15 Section 15.209.

4. BANDWIDTH TEST

4.1 TEST PROCEDURE

- a) The bandwidth is measured at an amplitude level reduced 20dB from the reference level. The reference level is the level of the highest amplitude signal observed from the transmitter at the fundamental frequency. Once the reference level is established, the equipment is conditioned with typical modulating signal to produce the worst-case (i.e. the widest) bandwidth.
- b) The test receiver RBW set 10KHz, VBW set 30KHz

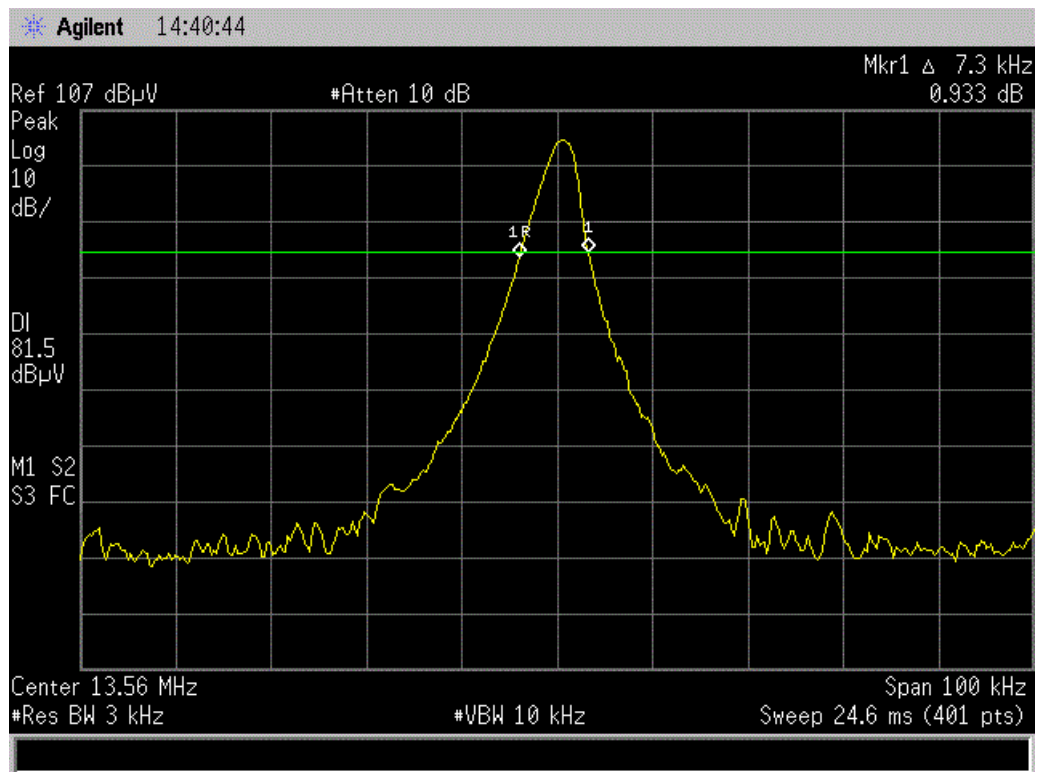
4.2 DEVIATION FROM STANDARD

No deviation.

4.3 TEST SETUP



4.4 TEST RESULTS



5. FREQUENCY STABILITY

5.1 REQUIREMENTS

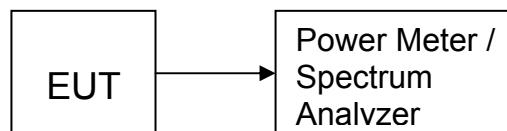
Please refer section 15.225e.

Regulation 15.225(e) The frequency tolerance of the carrier signal shall be maintained within $\pm 0.01\%$ (± 100 ppm) of the operating frequency over a temperature variation of -20 degrees to $+50$ degrees C at normal supply voltage, and for a variation in the primary supply voltage from 85% to 115% of the rated supply voltage at a temperature of 20 degrees C. For battery operated equipment, the equipment tests shall be performed using a new battery.

5.2 TEST PROCEDURE

The following equipment are installed on the emission measurement to meet the commission requirements and operating regulations in a manner which tends to maximize its emission characteristics in normal application

5.3 TEST SETUP



5.4 TEST RESULTS

| Assigned Frequency(MHz): 13.56MHz Voltage: AC 120V | | | | |
|---|-------------|--------------------------|---------------------|--------------------------|
| Voltage | Temperature | Measured Frequency (MHz) | Frequency stability | Limit |
| Low 90V | +20°C | 13.56089 | 0.00089 | ±100 ppm ±0.001356MHz |
| Normal 120V | -20°C | 13.56087 | 0.00087 | |
| | -10°C | 13.55921 | -0.00079 | |
| | 0°C | 13.56078 | 0.00078 | |
| | +10°C | 13.55949 | -0.00051 | |
| | +20°C | 13.56014 | 0.00014 | |
| | +30°C | 13.56076 | 0.00076 | |
| | +40°C | 13.55929 | -0.00071 | |
| | +50°C | 13.55932 | -0.00068 | |
| High 132V | +20°C | 13.56084 | 0.00084 | |

6. EUT TEST PHOTO

Radiated Measurement Photos



Conducted Measurement Photos