



FCC TEST REPORT

47 CFR FCC Part 15 Subpart B

Report Reference No.....: CTA-01-160700204

FCC ID.....: H79Q3PLUS

Compiled by

(position+printed name+signature)..: File administrators Kevin Liu

Kevin Liu

Supervised by

(position+printed name+signature)..: Project Engineer Kevin Liu

Kevin Liu

Approved by

(position+printed name+signature)..: RF Manager Eric Wang

Eric Wang

Date of issue.....: July. 20, 2016

Representative Laboratory Name ..: Shenzhen CTA Testing Technology Co., Ltd.

Address: Room 520,5th Floor, No.1053 Xixiang Baoyuan Road, Baoan District,Shenzhen,China

Testing Laboratory Name: Dongguan Yaxu (AiT) Technology Limited

Address: No. 22,JinQianLing Street 3, JiTiGang Village, Huang-Jiang Town, DongGuan, Guangdong, 523757 China

Applicant's name: Delta Electronics Incorporated

Address: 3, Tungyuan Road Chungli Industrial Zone Taoyuan County 32063, Taiwan

Test specification:

Standard: **47 CFR FCC Part 15 Subpart B - Unintentional Radiators**

ANSI C63.4: 2014

TRF Originator.....: Shenzhen CTA Testing Technology Co., Ltd.

Shenzhen CTA Testing Technology Co., Ltd. All rights reserved.

This publication may be reproduced in whole or in part for non-commercial purposes as long as the Shenzhen CTA Testing Technology Co., Ltd. as copyright owner and source of the material. Shenzhen CTA Testing Technology Co., Ltd. takes no responsibility for and will not assume liability for damages resulting from the reader's interpretation of the reproduced material due to its placement and context.

Test item description: HD Pocket Projector

Trade Mark: VIVITEK

Manufacturer.....: Delta Electronics Incorporated

Model/Type reference.....: Q3PLUS

Listed Models: Q3PLUS-WH, Q3PLUS-BK, Q3PLUS-RD, Q3PLUS-GD, Q3-BK, Q3-WH, Q3HP2704A, Q3HP2702A, Q3HP2706A, Q3HP2708

Rating: DC 7.40V / DC 12V adapter from AC 120V/60Hz

Hardware version: 2800-AV69S8-06 2016-06-08 V69+S805

Software version: V1.0-2016.07.18

Result.....: **PASS**

TEST REPORT

| | | |
|--------------------------|-------------------------|----------------|
| Test Report No. : | CTA-01-160700204 | July. 20, 2016 |
| | | Date of issue |

Equipment under Test : HD Pocket Projector

Model /Type : Q3PLUS

Listed Models : Q3PLUS-WH, Q3PLUS-BK, Q3PLUS-RD, Q3PLUS-GD,
Q3-BK, Q3-WH, Q3HP2704A, Q3HP2702A, Q3HP2706A,
Q3HP2708

Applicant : **Delta Electronics Incorporated**

Address : 3, Tungyuan Road Chungli Industrial Zone Taoyuan
County 32063, Taiwan

Manufacturer : **Delta Electronics Incorporated**

Address : 3, Tungyuan Road Chungli Industrial Zone Taoyuan
County 32063, Taiwan

| | |
|---------------------|-------------|
| Test Result: | PASS |
|---------------------|-------------|

The test report merely corresponds to the test sample.

It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

Revision History

| Revision | Issue Date | Revisions | Revised By |
|----------|------------|---------------|------------|
| V1.0 | 2016-07-20 | Initial Issue | Eric Wang |
| | | | |
| | | | |

Contents

| | | |
|-----------------|--|------------------|
| <u>1</u> | <u>TEST STANDARDS.....</u> | <u>5</u> |
| <u>2</u> | <u>SUMMARY</u> | <u>6</u> |
| 2.1 | General Remarks | 6 |
| 2.2 | Product Description | 6 |
| 2.3 | Equipment under Test | 6 |
| 2.4 | General Test Conditions/Configurations | 6 |
| 2.5 | EUT operation mode | 6 |
| 2.6 | Related Submittal(s) / Grant (s) | 7 |
| 2.7 | Modifications | 7 |
| 2.8 | EUT configuration | 7 |
| 2.9 | Configuration of Tested System | 7 |
| <u>3</u> | <u>TEST ENVIRONMENT.....</u> | <u>8</u> |
| 3.1 | Address of the test laboratory | 8 |
| 3.2 | Test Facility | 8 |
| 3.3 | Environmental conditions | 8 |
| 3.4 | Statement of the measurement uncertainty | 8 |
| 3.5 | Test Conditions | 9 |
| 3.6 | Summary of measurement results | 9 |
| 3.7 | Equipment Used during the Test | 10 |
| <u>4</u> | <u>TEST CONDITIONS AND RESULTS.....</u> | <u>11</u> |
| 4.1 | Conducted Emissions Test | 11 |
| 4.2 | Radiated Emission Test | 14 |
| <u>5</u> | <u>TEST SETUP PHOTOS OF THE EUT</u> | <u>18</u> |
| <u>6</u> | <u>EXTERNAL PHOTOS OF THE EUT.....</u> | <u>18</u> |
| <u>7</u> | <u>INTERNAL PHOTOS OF THE EUT.....</u> | <u>18</u> |

1 TEST STANDARDS

The tests were performed according to following standards:

[47 CFR FCC Part 15 Subpart B](#) - Unintentional Radiators

[ANSI C63.4: 2014](#) – 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 40GHz

2 SUMMARY

2.1 General Remarks

| | | |
|--------------------------------|---|---------------|
| Date of receipt of test sample | : | Feb. 15, 2016 |
| | | |
| Testing commenced on | : | Feb. 16, 2016 |
| | | |
| Testing concluded on | : | Feb. 29, 2016 |

2.2 Product Description

The **Delta Electronics Incorporated's** Model: Q3PLUS or the "EUT" as referred to in this report; more general information as follows, for more details, refer to the user's manual of the EUT.

| | |
|----------------------------|--|
| Name of EUT | HD Pocket Projector |
| Model Number | Q3PLUS |
| Modulation Type | GFSK,8DPSK, π /4DQPSK |
| Antenna information | Internal and maximum gain is 2.541dBi |
| BT FCC Operation frequency | 2402MHz-2480MHz |
| Extreme temp. Tolerance | -30°C to +50°C |
| Extreme vol. Limits | 6.00VDC to 8.40VDC (nominal: 7.40VDC) |
| Adapter information | Mode:ADP-36PH A Input:AC 100-240V 50/60Hz 1A Output:DC12V 3A |

2.3 Equipment under Test

Power supply system utilised

| | | | |
|----------------------|---|---|-----------------------------------|
| Power supply voltage | : | <input type="radio"/> 120V / 60 Hz | <input type="radio"/> 115V / 60Hz |
| | | <input type="radio"/> 12 V DC | <input type="radio"/> 24 V DC |
| | | <input checked="" type="radio"/> Other (specified in blank below) | |

DC 7.40V / DC 12V adapter from AC 120V/60Hz

2.4 General Test Conditions/Configurations

2.4.1 Test Modes

NOTE: The test mode(s) are selected according to relevant radio technology specifications.

| Test Mode | Test Modes Description |
|-----------|--|
| TM1 | data exchange with PC by USB |
| TM2 | data exchange with PC by HDMI |
| TM3 | data exchange with PC by HDMI and USB together |

2.4.2 Test Environments

NOTE: The values used in the test report maybe stringent than the declared.

| Environment Parameter | Selected Values During Tests | | |
|-----------------------|------------------------------|---------|-------------------|
| NTNV | Temperature | Voltage | Relative Humidity |
| | Ambient | 7.40VDC | Ambient |

2.5 EUT operation mode

The EUT has been tested under typical operating condition.

2.6 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for **FCC ID: H79Q3PLUS** filing to comply with FCC Part 15, Subpart B Rules.

2.7 Modifications

No modifications were implemented to meet testing criteria.

2.8 EUT configuration

The following peripheral devices and interface cables were connected during the measurement:

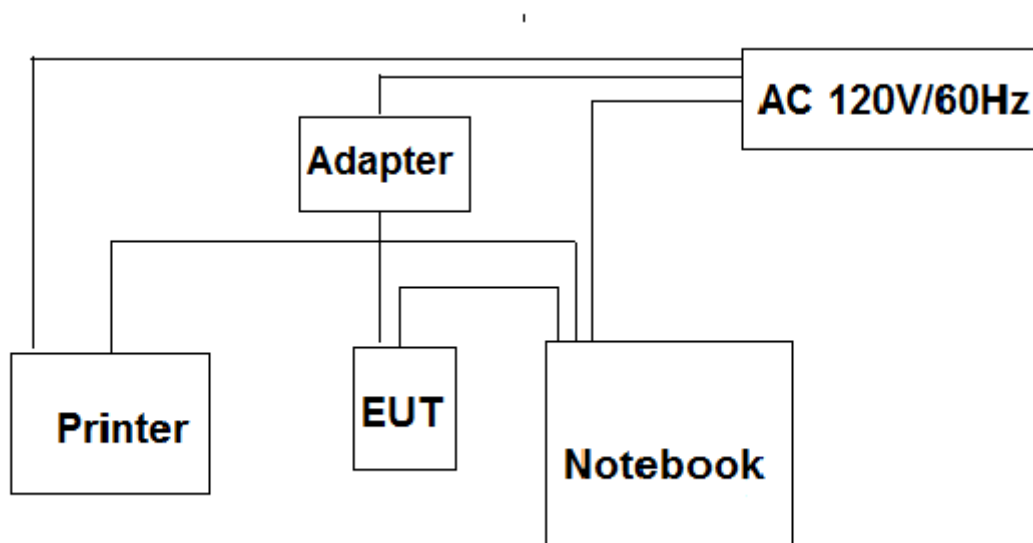
● - supplied by the manufacturer

○ - supplied by the lab

| | | | |
|-----------------------|-------------|----------------|---|
| <input type="radio"/> | Power Cable | Length (m) : | / |
| <input type="radio"/> | | Shield : | / |
| <input type="radio"/> | | Detachable : | / |
| <input type="radio"/> | Multimeter | Manufacturer : | / |
| <input type="radio"/> | | Model No. : | / |

2.9 Configuration of Tested System

Configuration of Tested System



Equipment Used in Tested System

| No. | Equipment | Manufacturer | Model No. | Serial No. | Length | shielded/unshielded | Notes |
|-----|-----------|--------------|-----------|------------|--------|---------------------|-------|
| 1 | Notebook | ASUS | R510V | A131101550 | / | / | DOC |
| 5 | Printer | Epson | R230 | R8792T58 | / | / | DOC |

3 TEST ENVIRONMENT

3.1 Address of the test laboratory

Dongguan Yaxu (AiT) Technology Limited

No. 22, JinQianLing Street 3, JiTiGang Village, Huang-Jiang Town, DongGuan, Guangdong, 523757 China

There is one 3m semi-anechoic chamber and two line conducted labs for final test. The Test Sites meet the requirements in documents ANSI C63.4, CISPR 22/EN 55022 and CISPR16-1-4:2010 SVSWR requirements.

3.2 Test Facility

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

CNAS- Registration No: L6177

Dongguan Yaxu (AiT) technology Limited is accredited to ISO/IEC 17025:2005 general Requirements for the competence of testing and calibration laboratories (CNAS-CL01 Accreditation Criteria for the competence of testing and calibration laboratories) on Apr. 18, 2013

FCC- Registration No: 248337

The 3m Semi-Anechoic Chamber, 3m/10m Open Area Test Site and Shielding Room of Dongguan Yaxu (AiT) Technology Limited have been registered by Federal Communications Commission (FCC) on Aug.29, 2014.

Industry Canada(IC)-Registration No: IC6819A

The 3m Semi-Anechoic Chamber and 3m/10m Open Area Test Site of Dongguan Yaxu (AiT) Technology Limited have been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing on Oct. 01, 2014.

VCCI- Registration No: 2705

The 3m/10m Open Area Test Site, Shielding Room and 3m Chamber of Dngguan Yaxu (AiT) technology Limited have been registered by Voluntary Control Council for Interference on Nov. 21, 2012. The Telecommunication Ports Conducted Disturbance Measurement of Asia Institute Technology (Dongguan) Limited have been registered by Voluntary Control Council for Interference on May. 13, 2013.

3.3 Environmental conditions

During the measurement the environmental conditions were within the listed ranges:

| | |
|-----------------------|---------------------|
| Temperature: | <u>15-35 ° C</u> |
| Humidity: | <u>30-60 %</u> |
| Atmospheric pressure: | <u>950-1050mbar</u> |

3.4 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate. The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities. The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 "Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements" and is documented in the Dongguan Yaxu (AiT) Technology Limited quality system acc. to DIN EN ISO/IEC 17025. Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for CTL laboratory is reported:

| Test | Range | Measurement Uncertainty | Notes |
|-----------------------|-------------|-------------------------|-------|
| Radiated Emission | 30~1000MHz | 4.5 dB | (1) |
| Radiated Emission | 1~18GHz | 4.6 dB | (1) |
| Conducted Disturbance | 0.009~30MHz | 3.5 dB | (1) |

- (1) This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

3.5 Test Conditions

| Test Case | Test Conditions | |
|-----------------------|------------------|-----------------|
| | Configuration | Description |
| AC Conducted Emission | Meas. Method | ANSI C63.4:2014 |
| | Test Environment | NTNV |
| | EUT Conf. | TM1, TM2, TM3 |
| Radiated Emission | Meas. Method | ANSI C63.4:2014 |
| | Test Environment | NTNV |
| | EUT Conf. | TM1, TM2, TM3 |

Note:

1. We pre-test both AC 120V/60Hz and AC 240V/50Hz for AC conducted emission, recorded worst case at AC 120V/60Hz;

3.6 Summary of measurement results

| Test Specification clause | Test case | Test Mode | Recorded In Report | Pass | Fail | NA | NP | Remark |
|---------------------------|-------------------------------------|---------------|--------------------|-------------------------------------|--------------------------|--------------------------|--------------------------|----------|
| §15.107(a) | Conducted Emissions < 30 MHz | TM1, TM2, TM3 | TM3 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | complies |
| §15.109 | Radiated Emissions (30 MHz – 18GHz) | TM1, TM2, TM3 | TM3 | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | complies |

Remark:

1. The measurement uncertainty is not included in the test result.
2. NA = Not Applicable; NP = Not Performed
3. We tested all test mode and recorded worst case in report

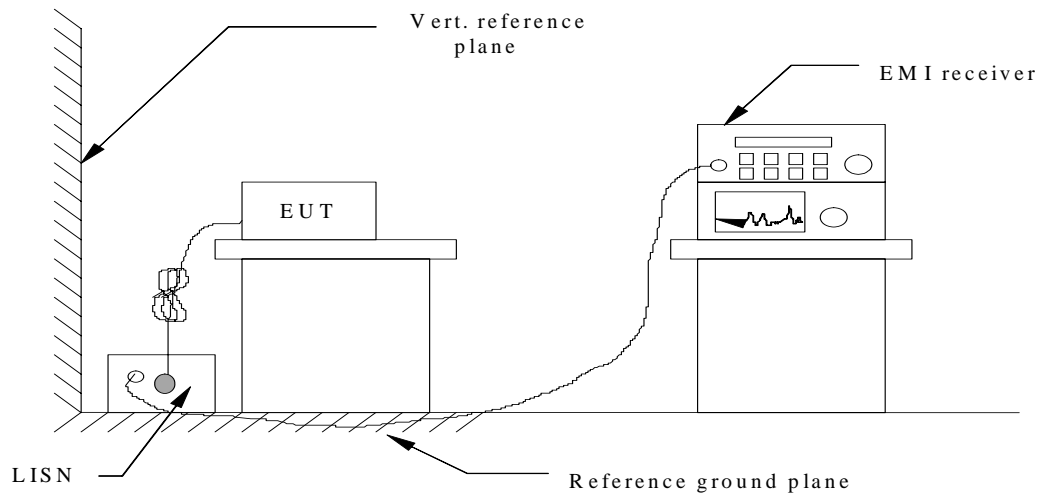
3.7 Equipment Used during the Test

| No | Test Equipment | Manufacturer | Model No | Serial No | Cal. Date | Cal. Due Date |
|----|-------------------------------------|--------------|------------------|-------------|------------|---------------|
| 1 | Spectrum Analyzer | ADVANTEST | R3182 | 150900201 | 2016/06/29 | 2017/06/28 |
| 2 | EMI Measuring Receiver | R&S | ESR | 101660 | 2016/06/29 | 2017/06/28 |
| 3 | Low Noise Pre Amplifier | Tsj | MLA-10K01-B01-27 | 1205323 | 2016/06/29 | 2017/06/28 |
| 4 | Low Noise Pre Amplifier | Tsj | MLA-0120-A02-34 | 2648A04738 | 2016/06/29 | 2017/06/28 |
| 5 | TRILOG Super Broadband test Antenna | SCHWARZBECK | VULB9160 | 9160-3206 | 2016/06/29 | 2017/06/28 |
| 6 | Broadband Horn Antenna | SCHWARZBECK | BBHA9120D | 452 | 2016/06/29 | 2017/06/28 |
| 7 | SHF-EHF Horn | SCHWARZBECK | BBHA9170 | BBHA9170367 | 2016/06/29 | 2017/06/28 |
| 8 | 50Ω Coaxial Switch | Anritsu | MP59B | 6200264416 | 2016/06/29 | 2017/06/28 |
| 9 | EMI Test Receiver | R&S | ESCI | 100124 | 2016/06/29 | 2017/06/28 |
| 10 | LISN | Kyoritsu | KNW-242 | 8-837-4 | 2016/06/29 | 2017/06/28 |
| 11 | LISN | Kyoritsu | KNW-407 | 8-1789-3 | 2016/06/29 | 2017/06/28 |
| 12 | 50Ω Coaxial Switch | Anritsu | MP59B | 6200264417 | 2016/06/29 | 2017/06/28 |
| 13 | Loop Antenna | ARA | PLA-1030/B | 1029 | 2016/06/29 | 2017/06/28 |
| 14 | Radiated Cable 1# (30MHz-1GHz) | FUJIKURA | 5D-2W | 01 | 2016/06/29 | 2017/06/28 |
| 15 | Radiated Cable 2# (1GHz -25GHz) | FUJIKURA | 10D2W | 02 | 2016/06/29 | 2017/06/28 |
| 16 | Conducted Cable 1#(9KHz-30MHz) | FUJIKURA | 1D-2W | 01 | 2016/06/29 | 2017/06/28 |
| 17 | Power Meter | Anritsu | ML2495A | N/A | 2016/06/29 | 2017/06/28 |
| 18 | Power sensor | Anritsu | MA2411B | N/A | 2016/06/29 | 2017/06/28 |
| 19 | Signal Analyzer | Agilent | N9020A | MY49430428 | 2016/06/07 | 2017/06/06 |

4 TEST CONDITIONS AND RESULTS

4.1 Conducted Emissions Test

TEST CONFIGURATION



TEST PROCEDURE

1. The equipment was set up as per the test configuration to simulate typical actual usage per the user's manual. The EUT is a tabletop system; a wooden table with a height of 0.8 meters is used and is placed on the ground plane as per ANSI C63.4-2014.
2. Support equipment, if needed, was placed as per ANSI C63.4-2014.
3. All I/O cables were positioned to simulate typical actual usage as per ANSI C63.4-2014.
4. The EUT received AC120V/60Hz power through a Line Impedance Stabilization Network (LISN) which supplied power source and was grounded to the ground plane.
5. All support equipments received AC power from a second LISN, if any.
6. The EUT test program was started. Emissions were measured on each current carrying line of the EUT using a spectrum Analyzer / Receiver connected to the LISN powering the EUT. The LISN has two monitoring points: Line 1 (Hot Side) and Line 2 (Neutral Side). Two scans were taken: one with Line 1 connected to Analyzer / Receiver and Line 2 connected to a 50 ohm load; the second scan had Line 1 connected to a 50 ohm load and Line 2 connected to the Analyzer / Receiver.
7. Analyzer / Receiver scanned from 150 KHz to 30MHz for emissions in each of the test modes.
8. During the above scans, the emissions were maximized by cable manipulation.

CONDUCTED POWER LINE EMISSION LIMIT

For unintentional device, according to § 15.107(a) Line Conducted Emission Limits is as following :

| Frequency (MHz) | Maximum RF Line Voltage (dBμV) | | | |
|--------------------|--------------------------------|------|---------|--------|
| | CLASS A | | CLASS B | |
| | Q.P. | Ave. | Q.P. | Ave. |
| 0.15 - 0.50 | 79 | 66 | 66-56* | 56-46* |
| 0.50 - 5.00 | 73 | 60 | 56 | 46 |
| 5.00 - 30.0 | 73 | 60 | 60 | 50 |

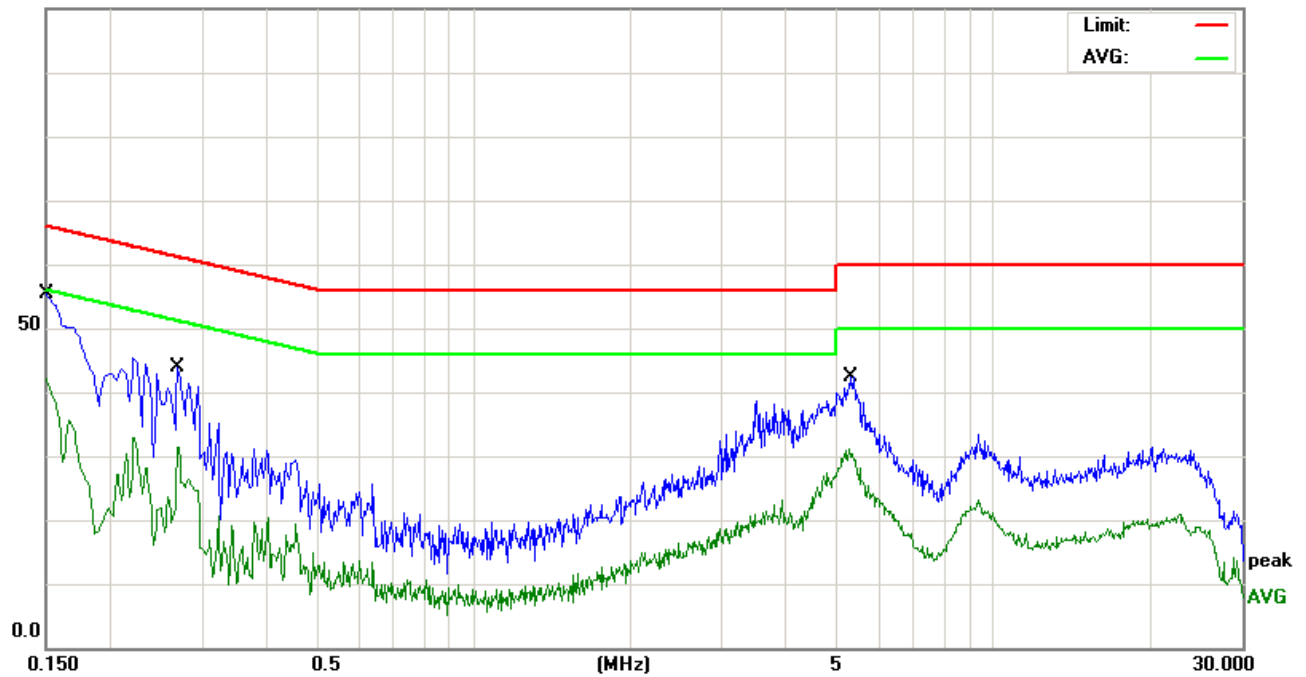
* Decreasing linearly with the logarithm of the frequency

TEST RESULTS

Note: We tested TM1, TM2 and TM3, recorded worst case at TM3.

L:

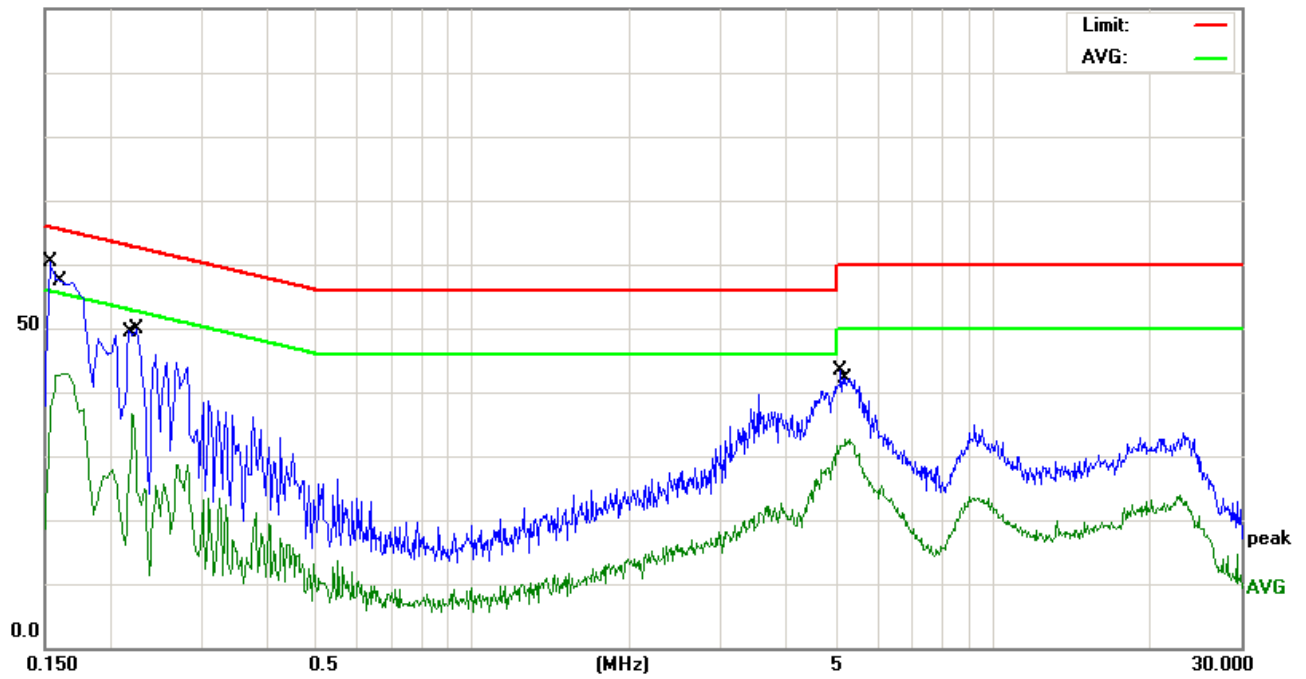
100.0 dBuV



| No. | Mk. | Freq. | Reading Level | Correct Factor | Measurement | Limit | Over | |
|-----|-----|--------|---------------|----------------|-------------|-------|--------|----------|
| | | MHz | dBuV | dB | dBuV | dBuV | dB | Detector |
| 1 | * | 0.1500 | 43.45 | 11.94 | 55.39 | 65.99 | -10.60 | QP |
| 2 | | 0.1500 | 30.26 | 11.94 | 42.20 | 55.99 | -13.79 | AVG |
| 3 | | 0.2700 | 33.02 | 10.83 | 43.85 | 61.12 | -17.27 | QP |
| 4 | | 0.2700 | 20.64 | 10.83 | 31.47 | 51.12 | -19.65 | AVG |
| 5 | | 5.2700 | 20.97 | 10.12 | 31.09 | 50.00 | -18.91 | AVG |
| 6 | | 5.2940 | 32.39 | 10.12 | 42.51 | 60.00 | -17.49 | QP |

N:

100.0 dBuV

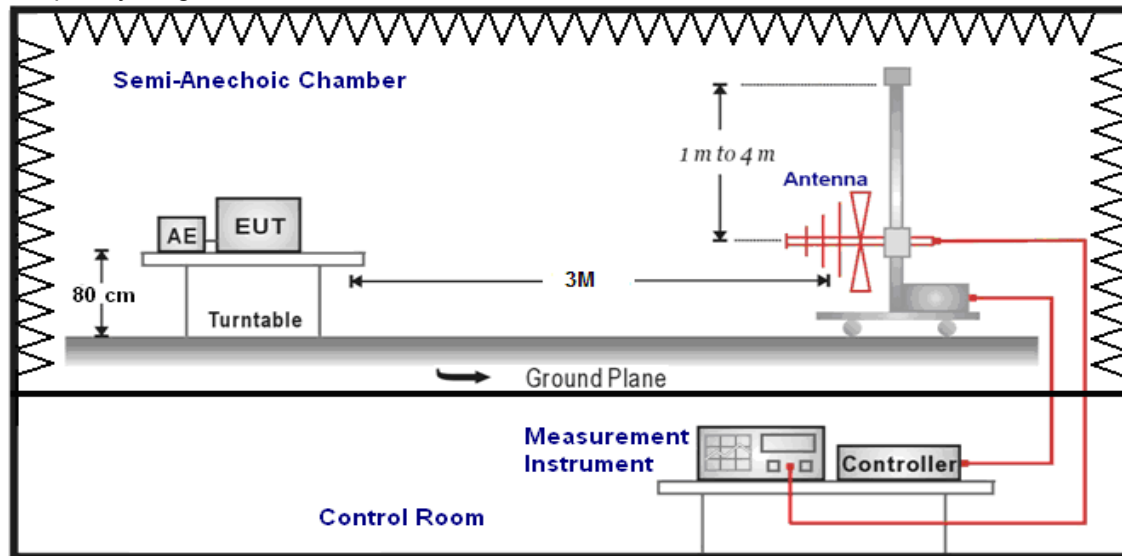


| No. | Mk. | Freq. | Reading Level | Correct Factor | Measurement | Limit | Over | |
|-----|-----|--------|---------------|----------------|-------------|-------|--------|----------|
| | | MHz | dBuV | dB | dBuV | dBuV | dB | Detector |
| 1 | * | 0.1539 | 48.49 | 11.84 | 60.33 | 65.78 | -5.45 | QP |
| 2 | | 0.1620 | 31.09 | 11.68 | 42.78 | 55.36 | -12.58 | AVG |
| 3 | | 0.2220 | 25.56 | 10.98 | 36.54 | 52.74 | -16.20 | AVG |
| 4 | | 0.2260 | 38.96 | 10.96 | 49.92 | 62.59 | -12.67 | QP |
| 5 | | 5.0939 | 33.25 | 10.11 | 43.36 | 60.00 | -16.64 | QP |
| 6 | | 5.2100 | 22.63 | 10.11 | 32.74 | 50.00 | -17.26 | AVG |

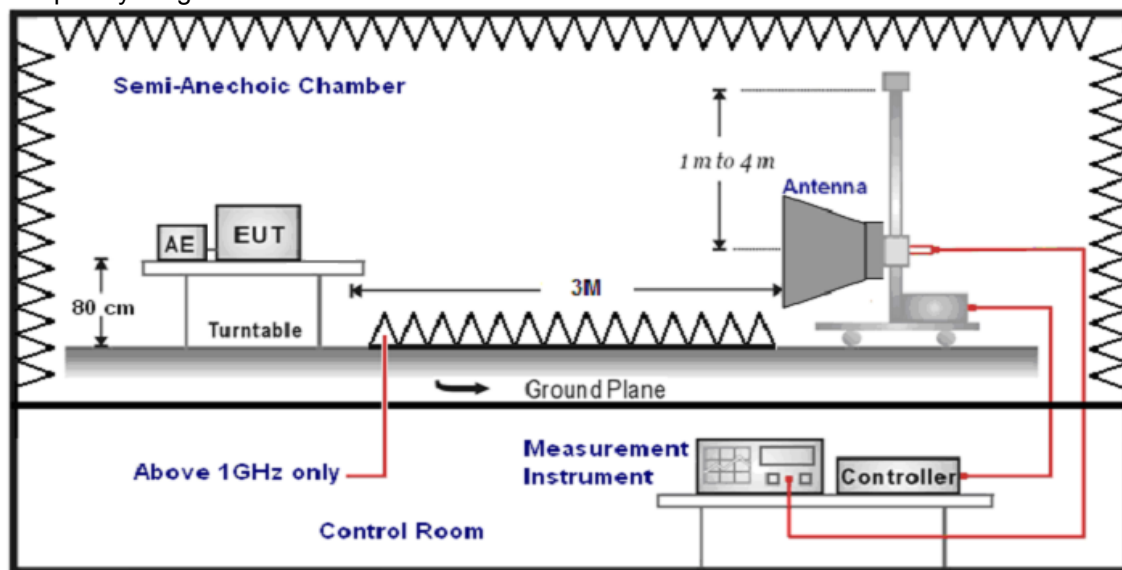
4.2 Radiated Emission Test

TEST CONFIGURATION

Frequency range: 30MHz – 1000MHz



Frequency range above 1GHz-18GHz



TEST PROCEDURE

- The EUT is placed on a turntable, which is 0.8m above ground plane.
- The turntable shall be rotated for 360 degrees to determine the position of maximum emission level.
- EUT is set 3m away from the receiving antenna, which is varied from 1m to 4m to find out the highest emissions.
- Maximum procedure was performed on the six highest emissions to ensure EUT compliance.
- And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical.
- Repeat above procedures until the measurements for all frequencies are complete.
- The maximum operation frequency was 2.48GHz, the radiated emission test frequency from 30 MHz to 18GHz.
- The distance between test antenna and EUT as following table states:

| Test Frequency range | Test Antenna Type | Test Distance |
|----------------------|----------------------------|---------------|
| 30MHz-1GHz | Ultra-Broadband Antenna | 3 |
| 1GHz-18GHz | Double Ridged Horn Antenna | 3 |
- Setting test receiver/spectrum as following table states:

| Test Frequency range | Test Receiver/Spectrum Setting | Detector |
|----------------------|--|----------|
| 9KHz-150KHz | RBW=200Hz/VBW=3KHz,Sweep time=Auto | QP |
| 150KHz-30MHz | RBW=9KHz/VBW=100KHz,Sweep time=Auto | QP |
| 30MHz-1GHz | RBW=120KHz/VBW=1000KHz,Sweep time=Auto | QP |
| 1GHz-40GHz | Peak Value: RBW=1MHz/VBW=3MHz, Sweep time=Auto | Peak |
| | Average Value: RBW=1MHz/VBW=10Hz, Sweep time=Auto | Peak |

FIELD STRENGTH CALCULATION

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain and Duty Cycle Correction Factor (if any) from the measured reading. The basic equation with a sample calculation is as follows:

$$FS = RA + AF + CL - AG$$

| | |
|---------------------------|--|
| Where FS = Field Strength | CL = Cable Attenuation Factor (Cable Loss) |
| RA = Reading Amplitude | AG = Amplifier Gain |
| AF = Antenna Factor | |

For example

| Frequency (MHz) | FS (dBμV/m) | RA (dBμV/m) | AF (dB) | CL (dB) | AG (dB) | Transd (dB) |
|-----------------|-------------|-------------|---------|---------|---------|-------------|
| 300.00 | 40 | 58.1 | 12.2 | 1.6 | 31.90 | -18.1 |

$$\text{Transd} = \text{AF} + \text{CL} - \text{AG}$$

RADIATION LIMIT

For unintentional device, according to § 15.109(a), except for Class A digital devices, the field strength of radiated emissions from unintentional radiators at a distance of 3 meters shall not exceed the following values:

| Frequency (MHz) | Distance (Meters) | Radiated (dBμV/m) | Radiated (μV/m) |
|-----------------|-------------------|----------------------------------|-----------------------|
| 0.009-0.49 | 300 | $20\log(2400/F(\text{KHz}))+80$ | $2400/F(\text{KHz})$ |
| 0.49-1.705 | 30 | $20\log(24000/F(\text{KHz}))+40$ | $24000/F(\text{KHz})$ |
| 1.705-30 | 30 | $20\log(30)+40$ | 30 |
| 30-88 | 3 | 40.0 | 100 |
| 88-216 | 3 | 43.5 | 150 |
| 216-960 | 3 | 46.0 | 200 |
| Above 960 | 3 | 54.0 | 500 |

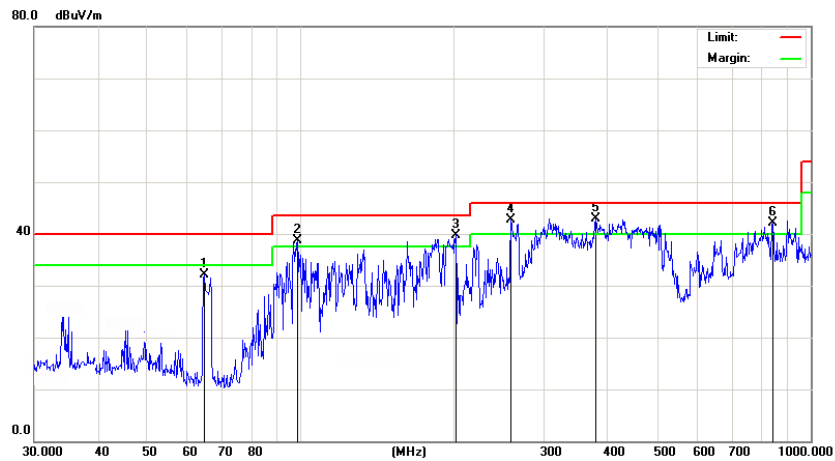
TEST RESULTS

Note: We tested TM1, TM2 and TM3, recorded worst case at TM3.

Polarization

30MHz-1GHz

Horizontal

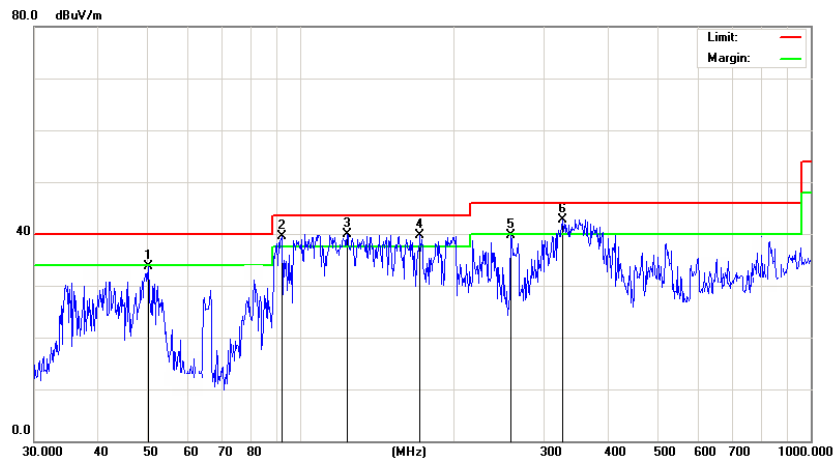


| No. | Mk. | Freq. | Reading | Correct | Measure- | Limit | Over | |
|-----|-----|----------|---------|---------|----------|--------|-------|----------|
| | | MHz | Level | Factor | ment | | | |
| | | | dBuV | dB | dBuV/m | dBuV/m | dB | Detector |
| 1 | | 64.6594 | 49.53 | -17.50 | 32.03 | 40.00 | -7.97 | peak |
| 2 | ! | 98.4865 | 54.95 | -16.17 | 38.78 | 43.50 | -4.72 | peak |
| 3 | ! | 201.3930 | 56.68 | -16.91 | 39.77 | 43.50 | -3.73 | peak |
| 4 | ! | 258.3264 | 55.75 | -12.95 | 42.80 | 46.00 | -3.20 | peak |
| 5 | * | 378.5842 | 50.48 | -7.54 | 42.94 | 46.00 | -3.06 | peak |
| 6 | ! | 842.1295 | 41.10 | 1.10 | 42.20 | 46.00 | -3.80 | peak |

Polarization

30MHz-1GHz

Vertical



| No. | Mk. | Freq. | Reading | Correct | Measure- | Limit | Over | |
|-----|-----|----------|---------|---------|----------|--------|-------|----------|
| | | MHz | Level | Factor | ment | | | |
| | | | dBuV | dB | dBuV/m | dBuV/m | dB | Detector |
| 1 | | 50.2324 | 52.39 | -18.77 | 33.62 | 40.00 | -6.38 | peak |
| 2 | ! | 91.8162 | 57.64 | -18.11 | 39.53 | 43.50 | -3.97 | peak |
| 3 | ! | 123.2655 | 55.08 | -15.06 | 40.02 | 43.50 | -3.48 | peak |
| 4 | ! | 171.3925 | 55.08 | -15.40 | 39.68 | 43.50 | -3.82 | peak |
| 5 | | 258.3263 | 52.57 | -12.95 | 39.62 | 46.00 | -6.38 | peak |
| 6 | * | 326.7395 | 51.52 | -8.74 | 42.78 | 46.00 | -3.22 | peak |

For 1 GHz – 18 GHz

| Item (Mark) | Frequency (MHz) | Read Level (dBμV) | Antenna Factor (dB/m) | PRM Factor dB | Cable Loss (dB) | Result Level (dBμV/m) | Limit Line (dBμV/m) | Margin (dB) | Detector | Polarization |
|-------------|-----------------|-------------------|-----------------------|---------------|-----------------|-----------------------|---------------------|-------------|----------|--------------|
| 1 | 1655.19 | 43.39 | 33.17 | 34.77 | 4.45 | 46.24 | 74.00 | 27.76 | Peak | Vertical |
| 1 | 1656.36 | 31.08 | 33.17 | 34.77 | 4.45 | 33.93 | 54.00 | 20.07 | AV | Vertical |
| 2 | 12566.91 | 33.91 | 38.91 | 35.14 | 12.24 | 49.92 | 74.00 | 24.08 | Peak | Horizontal |
| 2 | 12581.36 | 24.21 | 38.91 | 35.16 | 12.28 | 40.24 | 54.00 | 13.76 | AV | Horizontal |
| 3 | 17945.00 | 41.98 | 38.46 | 33.86 | 13.77 | 60.35 | 74.00 | 13.65 | Peak | Horizontal |
| 3 | 17964.44 | 30.07 | 38.46 | 33.86 | 13.82 | 48.49 | 54.00 | 5.51 | AV | Horizontal |

Remark:

1. According to FCC part 15.33(b) require < if highest frequency generated or used in the device or on which the device operates or tunes, the highest measure frequency up to 5th harmonic of the highest frequency or 40 GHz, whichever is lower>, the sample highest operate frequency is 2.48GHz, need measured highest frequency up to 12.4GHz, we measured frequency range up to 18GHz;
2. Over Limit = Emission level - Limit value
3. “---” means emission in Peak detector below Average limits;
4. Emission level (dBuV/m) = Raw Value (dBuV) + Correction Factor (dB/m)
5. Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Factor (dB) - Pre-amplifier Factor
6. RBW=1MHz VBW=3MHz Peak detector is for PK value; RBW=1MHz VBW=10Hz Peak detector is for AV value.

5 Test Setup Photos of the EUT

Please refer to separated files for Test Setup Photos of the EUT.

6 External Photos of the EUT

Please refer to separated files for External Photos of the EUT.

7 Internal Photos of the EUT

Please refer to separated files for Internal Photos of the EUT.

.....**End of Report**.....