

Radio Test Report

FCC ID: HLEMT700NEF

This report concerns (check one) : ☐ Original Grant ☐ Class II Change

Issued Date: Feb. 20, 2014 **Project No.**: 1311155

Equipment: Multi-functional T&A Terminal

Model Name: MT700

Applicant: unitech electronics co., ltd.

Address: 5F, No. 136, Lane 235, Pao-Chiao Rd.,

Hsin-Tien Dist., New Taipei City, Taiwan

Tested by: Neutron Engineering Inc. EMC Laboratory

Date of Receipt: Nov. 18, 2013

Date of Test: Nov. 18, 2013 ~ Feb. 19, 2014

Testing Engineer:

(Josh Lin)

Technical Manager:

(och rang)

Authorized Signatory:

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Declaration

Neutron represents to the client that testing is done in accordance with standard procedures as applicable and that test instruments used has been calibrated with the standards traceable to National Measurement Laboratory (**NML**) of **R.O.C.**, or National Institute of Standards and Technology (**NIST**) of **U.S.A.**

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Limitation

For the use of the authority's logo is limited unless the Test Standard(s)/Scope(s)/Item(s) mentioned in this test report is (are) included in the conformity assessment authorities acceptance respective.

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REPORT ISSUED HISTORY

| Revised Version No. | Description | Issued Date |
|---------------------|-----------------|---------------|
| NEI-FCCP-2-1311155 | Original Issue. | Feb. 20, 2014 |

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1 CERTIFICATION

Equipment: Multi-functional T&A Terminal

Brand Name: unitech; TASHI

Model Name: MT700

Applicant: unitech electronics co., ltd. Date of Test: Nov. 18, 2013 ~ Feb. 19, 2014 Standards: FCC Part 15, Subpart C: 2012

ANSI C63.4: 2009

The above equipment has been tested and found compliance with the requirement of the relative standards by Neutron Engineering Inc. EMC Laboratory.

The test data, data evaluation, and equipment configuration contained in our test report (Ref No. NEI-FCCP-2-1311155) were obtained utilizing the test procedures, test instruments, test sites that has been accredited by the Authority of TAF according to the ISO-17025 quality assessment standard and technical standard(s).

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2 SUMMARY OF TEST RESULTS

Test procedures according to the technical standards:

| Standard Section | Test Item | Result |
|------------------|--------------------|--------|
| 15.207 | Conducted emission | PASS |
| 15.209 | Radiated Emission | PASS |

NOTE:

1. N/A: denotes test is not applicable in this Test Report

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2.1 TEST FACILITY

The test facilities used to collect the test data in this report:

Conducted emission Test:

C02: (VCCI RN: C-3477; FCC RN: 614388; FCC DN: TW1054)

1F., No. 61, Ln. 77, Sing-ai Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

Radiated emission Test:

CB08: (FCC RN: 614388; FCC DN: TW1054; IC Assigned Code: 4428C-1)

1F., No. 61, Ln. 77, Sing-ai Rd., Neihu Dist., Taipei City 114, Taiwan (R.O.C.)

2.2 MEASUREMENT UNCERTAINTY

The measurement uncertainty is not specified by FCC/Industry Canada rules and for reference only.

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

The measurement instrumentation uncertainty considerations contained in CISPR 16-4-2.

A. Conducted emission test:

| Test Site | Measurement Frequency Range | U, (dB) | NOTE |
|-----------|-----------------------------|---------|------|
| C02 | 150 kHz ~ 30 MHz | 2.59 | |

B. Radiated emission test:

| Test Site | Item | Measurement | Frequency Range | Uncertainty | NOTE | | | | | | | | |
|-----------|-------------------------------|--------------|-----------------|-------------|------|------|------|------|------|----------|---------------|---------|--|
| | | | 30 - 200MHz | 3.35 dB | | | | | | | | | |
| | | Horizontal | 200 - 1000MHz | 3.11 dB | | | | | | | | | |
| | Dadiated | Polarization | 1 - 18GHz | 3.97 dB | | | | | | | | | |
| CB08 | Radiated emission at 3m | | 18 - 40GHz | 4.01 dB | | | | | | | | | |
| CBUO | | | 30 - 200MHz | 3.22 dB | | | | | | | | | |
| | | 3111 | JIII | 3111 | 3111 | 3111 | 3111 | JIII | 3111 | Vertical | 200 - 1000MHz | 3.24 dB | |
| | | Polarization | 1 - 18GHz | 4.05 dB | | | | | | | | | |
| | | | 18 - 40GHz | 4.04 dB | | | | | | | | | |

Our calculated Measurement Instrumentation Uncertainty is shown in the tables above. These are our U_{lab} values in CISPR 16-4-2 terminology.

Since Table 1 of CISPR 16-4-2 has values of measurement instrumentation uncertainty, called U_{CISPR} , as follows:

Conducted Disturbance (mains port) – 150 kHz – 30 MHz : 3.6 dB

Radiated Disturbance (electric field strength on an open area test site or alternative test site) – 30 MHz – 1000 MHz : 5.2 dB

It can be seen that our U_{lab} values are smaller than U_{CISPR} .

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3 GENERAL INFORMATION

3.1 GENERAL DESCRIPTION OF EUT

| Equipment | Multi-functional T&A Terminal | | |
|------------------------|---|--|--|
| Brand Name | unitech; TASHI | | |
| Model Name | MT700 | | |
| OEM Brand/Model Name | N/A | | |
| Model Difference | N/A | | |
| Product Description | The EUT is a Multi-functional T&A Terminal. Operation Frequency 125 kHz Antenna Designation LOOP Antenna More details of EUT technical specification, please refer to the User's Manual. | | |
| Power Source | #1 DC Voltage supplied from External Power Supply. #2 Battery supplied. | | |
| Power Rating | #1 Sunny, SYS1319-2412-T3 I/P: AC 100-240V 1.0A MAX 50-60Hz / O/P: DC +12V 2.0A 24W MAX. #2 Li-ion Battery Pack: HUT-4010G 2600mAh | | |
| Connecting I/O Port(s) | Please refer to the User's Manual | | |
| Products Covered | 1 * WLAN Module 1 * RFID Module: MP-702EM 1 * RFID Antenna (optional): (1) TC-680I-320-K (2) TC-650I-190-K 1 * Fingerprinter (optional) | | |
| EUT Modification(s) | N/A | | |

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



3.2 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 Test Mode | Description | |
|-------------------|---------------------------------------|--|
| Mode 1 | Transmitting (Antenna: TC-680I-320-K) | |
| Mode 2 | Transmitting (Antenna: TC-650I-190-K) | |

| Conducted emission test | | | | |
|--|-------------|--|--|--|
| Final Test Mode | Description | | | |
| Mode 1 Transmitting (Antenna: TC-680I-320-K) | | | | |
| Mode 2 Transmitting (Antenna: TC-650I-190-K) | | | | |

| Radiated emission test | | | | |
|--|--|--|--|--|
| Final Test Mode Description | | | | |
| Mode 1 Transmitting (Antenna: TC-680I-320-K) | | | | |
| Mode 2 Transmitting (Antenna: TC-650I-190-K) | | | | |

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3.3 BLOCK DIAGRAM SHOWING THE CONFIGURATION OF SYSTEM TESTED

| E-1 EUT | |
|------------|--|
| | |
| | |

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3.4 DESCRIPTION OF SUPPORT UNITS

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. | FCC ID | Series No. | Note |
|------|----------------------------------|-------------------|----------------|-------------|------------|------|
| E-1 | Multi-functional T&A Terminal | unitech; TASHI | MT700 | HLEMT700NEF | N/A | EUT |

| Item | Shielded Type | Ferrite Core | Length | Note |
|------|---------------|--------------|--------|------|
| N/A | - | - | - | - |

| N | \sim | t | Δ | |
|-----|--------|---|---|---|
| 1 4 | v | L | v | • |

(1) The support equipment was authorized by Declaration of Conformity (DOC).

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4 CONDUCTED EMISSION

4.1 LIMITS

| FREQUENCY | Class A | (dBuV) | Class B (dBuV) | | |
|------------|------------|---------|----------------|-----------|--|
| (MHz) | 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.
- 3. The test result calculated as following:

 Measurement Value = Reading Level + Correct Factor

 Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)

 Margin Level = Measurement Value Limit Value

4.2 MEASUREMENT INSTRUMENTS LIST

| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
|------|-------------------------|--------------|----------------------------|------------|------------------|
| 1 | LISN | Schwarzbeck | NSLK 8127 | 8127685 | Feb. 24, 2014 |
| 2 | Test Cable | TIMES | CFD300-NL | C01 | Jun. 16, 2014 |
| 3 | EMI Test Receiver | Agilent | N9038A | MY51210215 | Mar. 21, 2014 |
| 4 | Measurement Software | EZ | EZ_EMC (Version NB-02A) | N/A | N/A |

NOTE: N/A: denotes No Model Name, No Serial No. or No Calibration specified.

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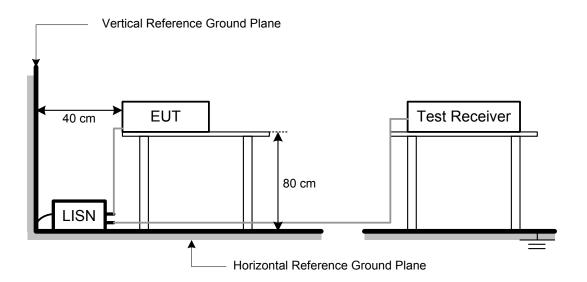
4.3 TEST PROCEDURES

- a. 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.
- b. 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.
- c. 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.
- d. LISN at least 80 cm from nearest part of EUT chassis.
- e. For the actual test configuration, please refer to the related Item –EUT Test Photos.

NOTE:

- a. Reading in which marked as Peak, QP or AVG means measurements by using are Quasi-Peak or Average Mode with Detector BW=9 kHz (6 dB Bandwidth).
- b. All readings are Peak Mode value unless otherwise stated QP or AVG in column of Note. If the Peak or QP Mode Measured value compliance with the QP Limits and lower than AVG Limits, the EUT shall be deemed to meet both QP & AVG Limits and then only Peak or QP Mode was measured, but AVG Mode didn't perform.

4.4 TEST SETUP LAYOUT



4.5 DEVIATION FROM TEST STANDARD

No deviation

4.6 EUT OPERATING CONDITIONS

The EUT used during radiated and/or conducted emission measurement was designed to exercise in a manner similar to a typical use.

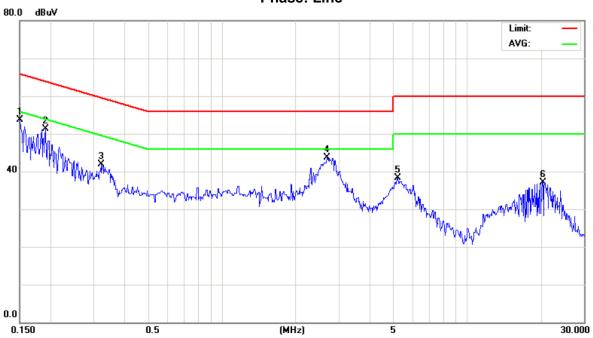
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4.7 TEST RESULTS

| EUT | Multi-functional T&A Terminal | MT700 | | | | | |
|--------------|---------------------------------------|-------|--|--|--|--|--|
| Temperature | Relative Humidity 46% | | | | | | |
| Test Voltage | AC 120V/60Hz | | | | | | |
| Test Mode | Transmitting (Antenna: TC-680I-320-K) | | | | | | |





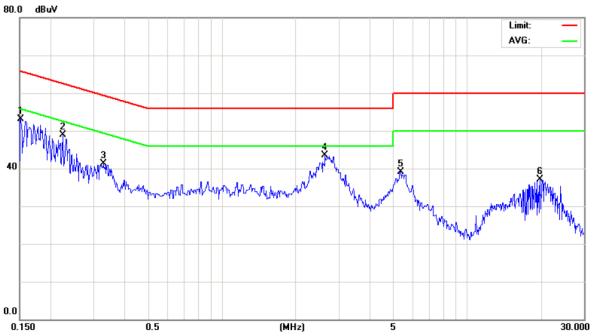
| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Over | | |
|-----|-----|---------|------------------|-------------------|------------------|-------|--------|----------|---------|
| | | MHz | dBuV | dB | dBuV | dBuV | dB | Detector | Comment |
| 1 | * | 0.1500 | 45.07 | 8.68 | 53.75 | 66.00 | -12.25 | peak | |
| 2 | | 0.1912 | 41.97 | 9.36 | 51.33 | 63.98 | -12.65 | peak | |
| 3 | | 0.3207 | 34.09 | 7.82 | 41.91 | 59.69 | -17.78 | peak | |
| 4 | | 2.6869 | 34.25 | 9.38 | 43.63 | 56.00 | -12.37 | peak | |
| 5 | | 5.2000 | 28.85 | 9.50 | 38.35 | 60.00 | -21.65 | peak | |
| 6 | | 20.2999 | 27.51 | 9.54 | 37.05 | 60.00 | -22.95 | peak | |

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| EUT | Multi-functional T&A Terminal | MT700 | | | | | |
|--------------|---------------------------------------|-------|--|--|--|--|--|
| Temperature | 4°C Relative Humidity 46% | | | | | | |
| Test Voltage | AC 120V/60Hz | | | | | | |
| Test Mode | Transmitting (Antenna: TC-680I-320-K) | | | | | | |



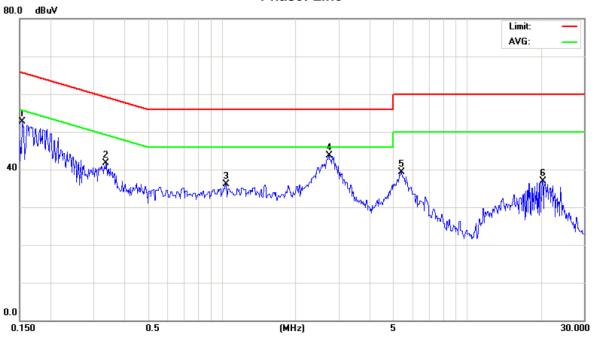


| MHz dBuV dB dBuV dB uV dB uV< | |
|---|--|
| 2 0.2248 39.04 9.84 48.88 62.64 -13.76 peak 3 0.3277 33.40 7.81 41.21 59.51 -18.30 peak | |
| 3 0.3277 33.40 7.81 41.21 59.51 -18.30 peak | |
| <u>'</u> | |
| 4 * 2.6328 34.19 9.37 43.56 56.00 -12.44 peak | |
| · | |
| 5 5.3500 29.63 9.50 39.13 60.00 -20.87 peak | |
| 6 19.7999 27.45 9.56 37.01 60.00 -22.99 peak | |



| EUT | Multi-functional T&A Terminal | Model Name | MT700 | | | | |
|--------------|---------------------------------------|------------|-------|--|--|--|--|
| Temperature | Relative Humidity 46% | | | | | | |
| Test Voltage | AC 120V/60Hz | | | | | | |
| Test Mode | Transmitting (Antenna: TC-650I-190-K) | | | | | | |





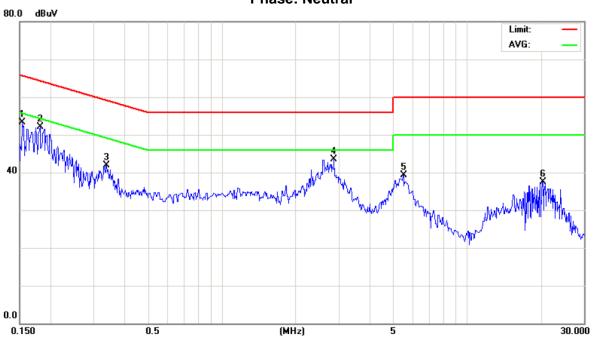
| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Over | | |
|-----|-----|---------|------------------|-------------------|------------------|-------|--------|----------|---------|
| | | MHz | dBuV | dB | dBuV | dBuV | dB | Detector | Comment |
| 1 | | 0.1534 | 43.99 | 8.74 | 52.73 | 65.81 | -13.08 | peak | |
| 2 | | 0.3368 | 33.86 | 7.81 | 41.67 | 59.28 | -17.61 | peak | |
| 3 | | 1.0399 | 26.48 | 9.68 | 36.16 | 56.00 | -19.84 | peak | |
| 4 | * | 2.7229 | 34.25 | 9.38 | 43.63 | 56.00 | -12.37 | peak | |
| 5 | | 5.4000 | 29.90 | 9.50 | 39.40 | 60.00 | -20.60 | peak | |
| 6 | | 20.2999 | 27.33 | 9.54 | 36.87 | 60.00 | -23.13 | peak | |

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| EUT | Multi-functional T&A Terminal | Model Name | MT700 | | | | |
|--------------|---------------------------------------|------------|-------|--|--|--|--|
| Temperature | Relative Humidity 46% | | | | | | |
| Test Voltage | AC 120V/60Hz | | | | | | |
| Test Mode | Transmitting (Antenna: TC-650I-190-K) | | | | | | |

Phase: Neutral



| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Over | | |
|-----|-----|---------|------------------|-------------------|------------------|-------|--------|----------|---------|
| | | MHz | dBuV | dB | dBuV | dBuV | dB | Detector | Comment |
| 1 | | 0.1534 | 44.43 | 8.80 | 53.23 | 65.81 | -12.58 | peak | |
| 2 | * | 0.1814 | 42.34 | 9.82 | 52.16 | 64.42 | -12.26 | peak | |
| 3 | | 0.3375 | 34.19 | 7.81 | 42.00 | 59.26 | -17.26 | peak | |
| 4 | | 2.8670 | 34.15 | 9.39 | 43.54 | 56.00 | -12.46 | peak | |
| 5 | | 5.5000 | 29.86 | 9.50 | 39.36 | 60.00 | -20.64 | peak | |
| 6 | | 20.2999 | 27.93 | 9.56 | 37.49 | 60.00 | -22.51 | peak | |

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5 RADIATED EMISSION

5.1 LIMITS

| FCC Part 15.209 | | | | | | | | | |
|-----------------|----------------------------|------|--|-------------------------|--|--|--|--|--|
| Frequency | Field Streng Limitation | * | Field Strength Limitation at 3m Measurement Dist | | | | | | |
| (MHz) | (uV/m) | Dist | (uV/m) | (dBuV/m) | | | | | |
| 0.009 - 0.490 | 2400 / F(KHz) | 300m | 10000 * 2400/F(KHz) | 20log 2400/F(KHz) + 80 | | | | | |
| 0.490 - 1.705 | 24000 / F(KHz) | 30m | 100 * 24000/F(KHz) | 20log 24000/F(KHz) + 40 | | | | | |
| 1.705 – 30.00 | 30 | 30m | 100* 30 | 20log 30 + 40 | | | | | |
| 30.0 – 88.0 | 100 | 3m | 100 | 20log 100 | | | | | |
| 88.0 – 216.0 | 150 | 3m | 150 | 20log 150 | | | | | |
| 216.0 – 960.0 | 200 | 3m | 200 | 20log 200 | | | | | |
| Above 960.0 | 500 | 3m | 500 | 20log 500 | | | | | |

NOTE:

- (1) The tighter limit shall apply at the boundary between two frequency range.
- (2) Limitation expressed in dBuV/m is calculated by 20log Emission Level (uV/m).
- (3) If measurement is made at 3m distance, then F.S Limitation at 3m distance is adjusted by using the formula of $L_{d1} = L_{d2} * (d_2/d_1)^2$.

Example:

F.S Limit at 30m distance is 30uV/m, then F.S Limitation at 3m distance is adjusted as L_{d1} = L_{1} = $30\text{uV/m} * (10)^2 = 100 * 30 \text{ uV/m}$ (4) The test result calculated as following:

Measurement Value = Reading Level + Correct Factor

Correct Factor = Insertion Loss + Cable Loss + Attenuator Factor(if use)

Margin Level = Measurement Value - Limit Value

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5.2 MEASUREMENT INSTRUMENTS LIST

| Item | Kind of Equipment | Manufacturer | Type No. | Serial No. | Calibrated until |
|------|---------------------------|--------------|--------------|------------|------------------|
| 1 | Spectrum Analyzer | R&S | FSP-30 | 100854 | Sep. 08, 2014 |
| 2 | Test Cable | LMR | LMR-400 | 12m | May. 14, 2014 |
| 3 | Test Cable | LMR | LMR-400 | 3m | May. 14, 2014 |
| 4 | Pre-Amplifier | Anritsu | MH648A | M92649 | Jun. 18, 2014 |
| 5 | Log-Bicon Antenna | Schwarzbeck | VULB9168-352 | 9168-352 | Jun. 11, 2014 |
| 6 | Preamplifier With Adaptor | EMC | EMC2654045 | 980030 | Feb. 18, 2014 |
| 7 | Horn Antenna | Schwarzbeck | BBHA 9170 | 187 | Dec. 24, 2013 |
| 8 | Loop Ant. | EMCO | 6502 | 00042960 | Sep. 29. 2014 |

Remark: "N/A" denotes No Model Name, No Serial No. or No Calibration specified.

5.3 TEST PROCEDURE

- a. 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.
- b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3m or 10 meter open area test site. The table was rotated 360 degrees to determine the position of the highest radiation.
- c. 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. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. The initial step in collecting radiated 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.
- e. 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.
- f. For the actual test configuration, please refer to the related Item –EUT Test Photos.

NOTE:

- a. Reading in which marked as QP or Peak means measurements by using are Quasi-Peak Mode with Detector BW=120 kHz.
- b. All readings are Peak unless otherwise stated QP in column of Note. Peak denotes that the Peak reading compliance with the QP Limits and then QP Mode measurement didn't perform.

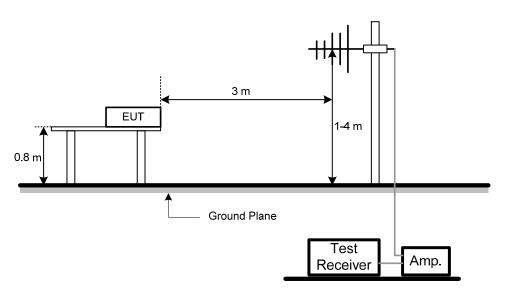
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5.4 DEVIATION FROM TEST STANDARD

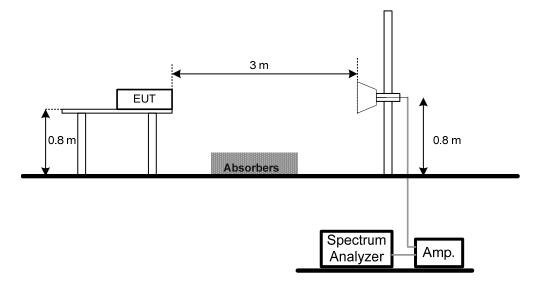
No deviation

5.5 TEST SETUP

Below 30 MHz



30 MHz to 1 GHz



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5.6 EUT OPERATING CONDITIONS

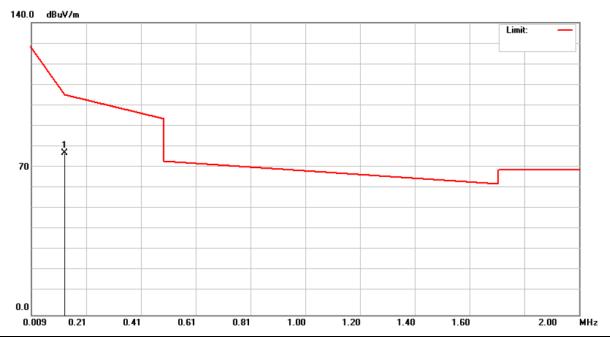
The EUT tested system was configured as the statements of **4.1.6** Unless otherwise a special operating condition is specified in the follows during the testing.

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5.7 TEST RESULTS - BELOW 30 MHZ

| EUT | Multi-functional T&A Terminal | Model Name | MT700 | | | | | |
|--------------|---------------------------------------|-------------------|-------|--|--|--|--|--|
| Temperature | 26°C | Relative Humidity | 60% | | | | | |
| Test Voltage | AC 120V/60Hz | | | | | | | |
| Test Mode | Transmitting (Antenna: TC-680I-320-K) | | | | | | | |

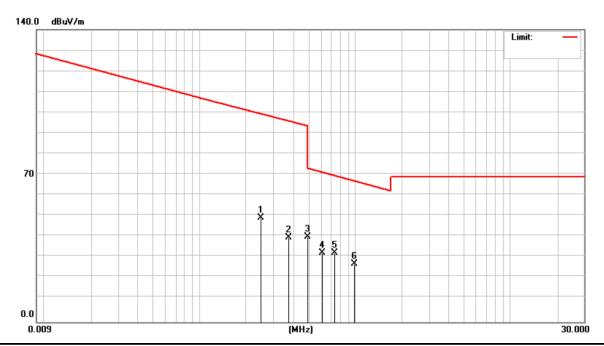


| No. Mk. | Freq. | Reading Level | Correct Factor | Measure- ment | Limit | O∨er | | |
|---------|--------|------------------|-------------------|------------------|--------|--------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 * | 0.1241 | 65.30 | 12.39 | 77.69 | 105.8 | -28.16 | peak | |

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| EUT | Multi-functional T&A Terminal | Model Name | MT700 | | | | | |
|--------------|---------------------------------------|-------------------|-------|--|--|--|--|--|
| Temperature | 26°C | Relative Humidity | 60% | | | | | |
| Test Voltage | AC 120V/60Hz | | | | | | | |
| Test Mode | Transmitting (Antenna: TC-680I-320-K) | | | | | | | |

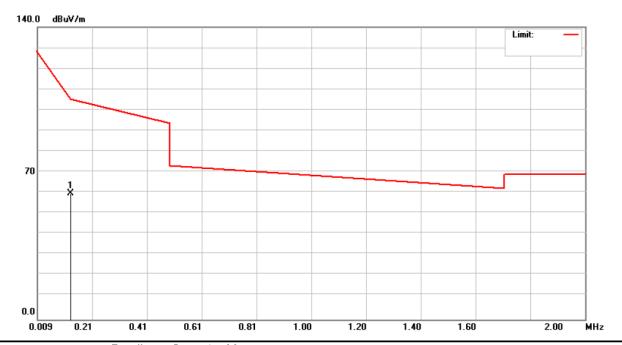


| No. Mk. | Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Over | | |
|---------|--------|------------------|-------------------|------------------|--------|--------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 0.2482 | 37.86 | 11.95 | 49.81 | 99.71 | -49.90 | peak | |
| 2 | 0.3722 | 28.57 | 11.70 | 40.27 | 96.19 | -55.92 | peak | |
| 3 * | 0.4963 | 29.09 | 11.57 | 40.66 | 73.69 | -33.03 | peak | |
| 4 | 0.6204 | 21.58 | 11.55 | 33.13 | 71.75 | -38.62 | peak | |
| 5 | 0.7445 | 21.44 | 11.53 | 32.97 | 70.17 | -37.20 | peak | |
| 6 | 0.9927 | 16.44 | 11.49 | 27.93 | 67.67 | -39.74 | peak | |

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| EUT | Multi-functional T&A Terminal | Model Name | MT700 | | | | | | |
|--------------|---------------------------------------|-------------------|-------|--|--|--|--|--|--|
| Temperature | 26°C | Relative Humidity | 60% | | | | | | |
| Test Voltage | AC 120V/60Hz | AC 120V/60Hz | | | | | | | |
| Test Mode | Transmitting (Antenna: TC-650I-190-K) | | | | | | | | |

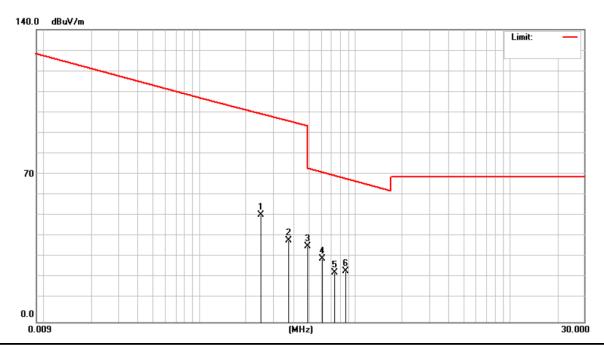


| No. Mk. | Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Over | | |
|---------|--------|------------------|-------------------|------------------|--------|--------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 * | 0.1248 | 47.83 | 12.38 | 60.21 | 105.7 | -45.50 | peak | |

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| EUT | Multi-functional T&A Terminal | Model Name | MT700 | | | | | |
|--------------|---------------------------------------|-------------------|-------|--|--|--|--|--|
| Temperature | 26°C | Relative Humidity | 60% | | | | | |
| Test Voltage | AC 120V/60Hz | | | | | | | |
| Test Mode | Transmitting (Antenna: TC-650I-190-K) | | | | | | | |



| No. Mk. | Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Over | | |
|---------|--------|------------------|-------------------|------------------|--------|--------|----------|---------|
| | MHz | dBuV/m | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | 0.2482 | 39.30 | 11.95 | 51.25 | 99.71 | -48.46 | peak | |
| 2 | 0.3723 | 27.47 | 11.70 | 39.17 | 96.19 | -57.02 | peak | |
| 3 * | 0.4964 | 24.63 | 11.57 | 36.20 | 73.69 | -37.49 | peak | |
| 4 | 0.6205 | 18.59 | 11.55 | 30.14 | 71.75 | -41.61 | peak | |
| 5 | 0.7446 | 12.00 | 11.53 | 23.53 | 70.17 | -46.64 | peak | |
| 6 | 0.8687 | 12.82 | 11.51 | 24.33 | 68.83 | -44.50 | peak | |

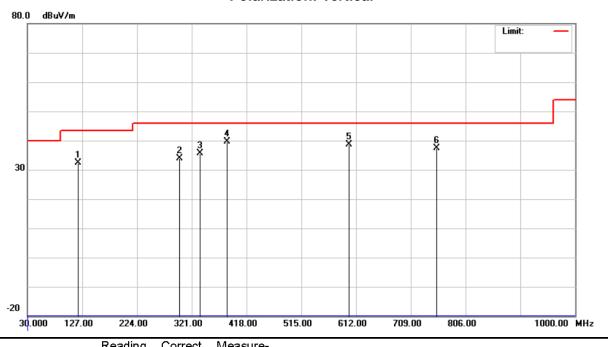
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5.8 TEST RESULTS - 30 MHZ TO 1 GHZ

| EUT | Multi-functional T&A Terminal | Model Name | MT700 | | | | | | |
|--------------|---------------------------------------|-------------------|-------|--|--|--|--|--|--|
| Temperature | 26°C | Relative Humidity | 60% | | | | | | |
| Test Voltage | AC 120V/60Hz | AC 120V/60Hz | | | | | | | |
| Test Mode | Transmitting (Antenna: TC-680I-320-K) | | | | | | | | |

Polarization: Vertical



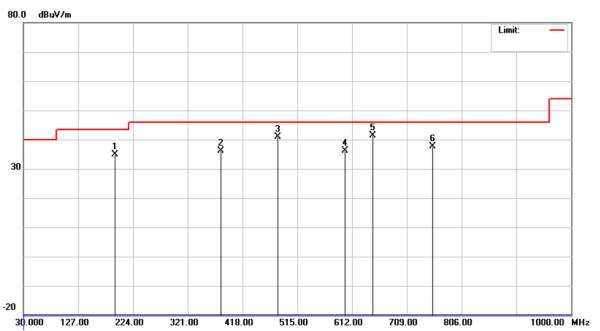
| | No. | Mk. | Freq. | Reading Level | Factor | ment | Limit | O∨er | | |
|---|-----|-----|---------|------------------|--------|--------|--------|--------|----------|---------|
| | | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| Ī | 1 | 1 | 19.7249 | 49.09 | -16.74 | 32.35 | 43.50 | -11.15 | peak | |
| | 2 | 2 | 99.1749 | 47.74 | -13.97 | 33.77 | 46.00 | -12.23 | peak | |
| | 3 | 3 | 35.5499 | 48.44 | -12.73 | 35.71 | 46.00 | -10.29 | peak | |
| | 4 | * 3 | 84.0499 | 51.46 | -11.75 | 39.71 | 46.00 | -6.29 | peak | |
| | 5 | 5 | 99.8750 | 45.29 | -6.76 | 38.53 | 46.00 | -7.47 | peak | |
| | 6 | 7 | 55.0750 | 42.75 | -5.30 | 37.45 | 46.00 | -8.55 | peak | |
| | | | | | | | | | | |

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| EUT | Multi-functional T&A Terminal | Model Name | MT700 | | | | | |
|--------------|---------------------------------------|-------------------|-------|--|--|--|--|--|
| Temperature | 26°C | Relative Humidity | 60% | | | | | |
| Test Voltage | AC 120V/60Hz | | | | | | | |
| Test Mode | Transmitting (Antenna: TC-680I-320-K) | | | | | | | |

Polarization: Horizontal



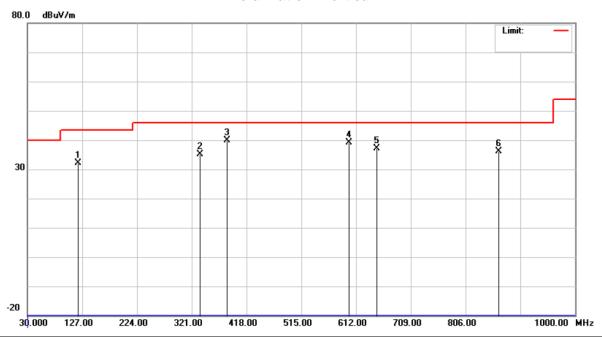
| No. | Mk. | Freq. | Reading Level | Correct Factor | Measure- ment | Limit | Over | | |
|-----|-----|----------|------------------|-------------------|------------------|--------|-------|----------|---------|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | | 192.4750 | 51.75 | -16.78 | 34.97 | 43.50 | -8.53 | peak | |
| 2 | ; | 379.2000 | 48.17 | -11.92 | 36.25 | 46.00 | -9.75 | peak | |
| 3 | | 481.0499 | 50.42 | -9.59 | 40.83 | 46.00 | -5.17 | peak | |
| 4 | ; | 599.8750 | 42.83 | -6.76 | 36.07 | 46.00 | -9.93 | peak | |
| 5 | * (| 348.3750 | 48.17 | -6.89 | 41.28 | 46.00 | -4.72 | peak | |
| 6 | • | 755.0750 | 43.04 | -5.30 | 37.74 | 46.00 | -8.26 | peak | |

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| EUT | Multi-functional T&A Terminal | Model Name | MT700 | | | | |
|---------------------------|---|-------------------|-------|--|--|--|--|
| Temperature | 26°C | Relative Humidity | 60% | | | | |
| Test Voltage AC 120V/60Hz | | | | | | | |
| Test Mode | Test Mode Transmitting (Antenna: TC-650I-190-K) | | | | | | |

Polarization: Vertical



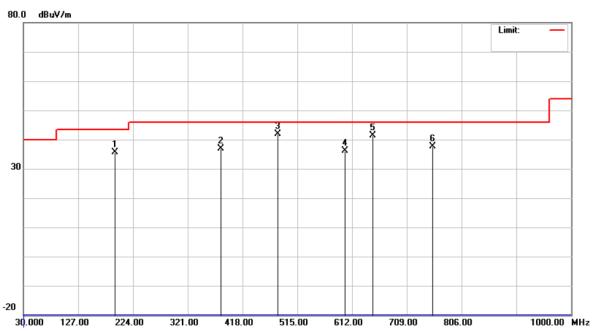
| No. | Mk | . Freq. | Level | Factor | ment | Limit | O∨er | | |
|-----|----|----------|-------|--------|--------|--------|--------|----------|---------|
| | | MHz | dBu∀ | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | | 119.7249 | 48.82 | -16.74 | 32.08 | 43.50 | -11.42 | peak | |
| 2 | | 335.5499 | 47.80 | -12.73 | 35.07 | 46.00 | -10.93 | peak | |
| 3 | * | 384.0499 | 51.61 | -11.75 | 39.86 | 46.00 | -6.14 | peak | |
| 4 | | 599.8750 | 45.85 | -6.76 | 39.09 | 46.00 | -6.91 | peak | |
| 5 | | 648.3750 | 44.14 | -6.89 | 37.25 | 46.00 | -8.75 | peak | |
| 6 | | 864.2000 | 40.03 | -3.93 | 36.10 | 46.00 | -9.90 | peak | |
| | | | | | | | | | |

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| EUT | Multi-functional T&A Terminal | Model Name | MT700 | | | | | |
|--------------|---------------------------------------|-------------------|-------|--|--|--|--|--|
| Temperature | 26°C | Relative Humidity | 60% | | | | | |
| Test Voltage | AC 120V/60Hz | | | | | | | |
| Test Mode | Transmitting (Antenna: TC-650I-190-K) | | | | | | | |

Polarization: Horizontal



| No. | Mk | . Freq. | Reading Level | Correct Factor | Measure- ment | Limit | O∨er | | |
|-----|----|----------|------------------|-------------------|------------------|--------|-------|----------|---------|
| | | MHz | dBuV | dB | dBuV/m | dBuV/m | dB | Detector | Comment |
| 1 | | 192.4750 | 52.41 | -16.78 | 35.63 | 43.50 | -7.87 | peak | |
| 2 | | 379.2000 | 48.88 | -11.92 | 36.96 | 46.00 | -9.04 | peak | |
| 3 | * | 481.0499 | 51.45 | -9.59 | 41.86 | 46.00 | -4.14 | peak | |
| 4 | | 599.8750 | 42.84 | -6.76 | 36.08 | 46.00 | -9.92 | peak | |
| 5 | | 648.3750 | 48.31 | -6.89 | 41.42 | 46.00 | -4.58 | peak | |
| 6 | | 755.0750 | 42.94 | -5.30 | 37.64 | 46.00 | -8.36 | peak | |

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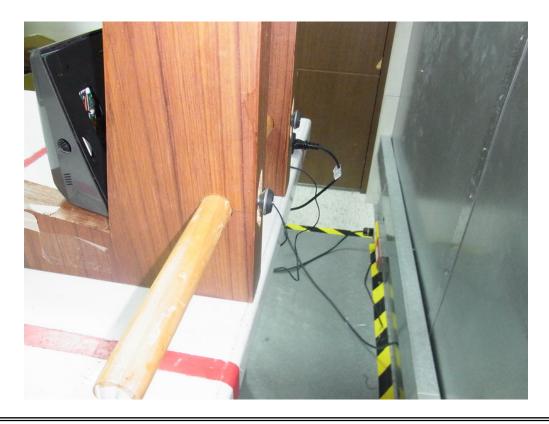


6 EUT TEST PHOTO

Conducted emission test photos

Transmitting (Antenna: TC-680I-320-K)



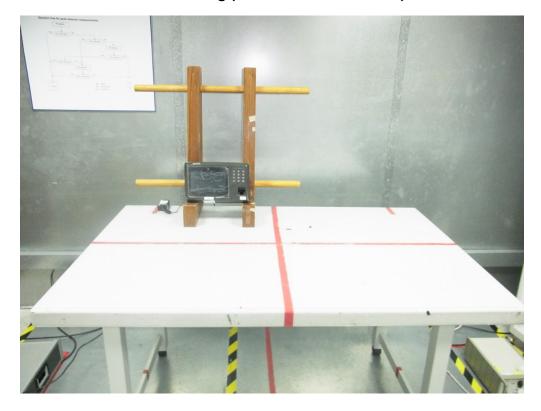


Report No.: NEI-FCCP-2-1311155



Conducted emission test photos

Transmitting (Antenna: TC-650I-190-K)





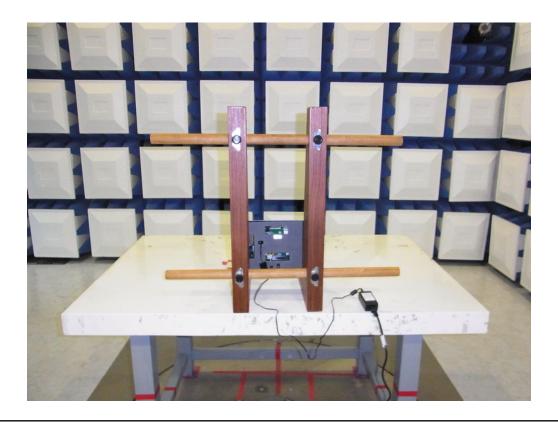
Report No.: NEI-FCCP-2-1311155



Radiated emission test photos

Transmitting (Antenna: TC-680I-320-K)







Radiated emission test photos

Transmitting (Antenna: TC-650I-190-K)



