

# Measurement Report

**FCC ID:H8GRSOP533P**This report concerns (check one) : ☒ Original Grant ☐ Class II Change

**Issued Date** : Jan. 25, 2005  
**Project No.** : 05E0009  
**Equipment** : RF Mouse  
**Model No.** : RFSOP-533; RFSWOP-533; RP-8533  
**Applicant** : A-FOUR TECH CO., LTD.  
6F, No. 108, Min-Chuan Rd., Hsin-Tien, Taipei,  
Taiwan, R.O.C.

**Tested by :**  
Neutron Engineering Inc. EMC Laboratory  
**Data of Test :**  
Jan. 10, 2005 ~ Jan. 21, 2005

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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.

## Assessment Authorities



## Test Standard/Scope/Item Acceptance

FCC Part 15 Subpart B  
IEC/CISPR22  
AS/NZS 3548  
CNS 13438

FCC Part 15 Subpart B  
CISPR 22/EN 55022  
AS/NZS 3548  
VCCI -Technical Requirement  
CNS 13438

SS IEC/CISPR 22  
IEC/EN 61000-3-2 IEC/EN 61000-4-5  
IEC/EN 61000-3-3 IEC/EN 61000-4-6  
IEC/EN 61000-4-2 IEC/EN 61000-4-8  
IEC/EN 61000-4-3 IEC/EN 61000-4-11  
IEC/EN 61000-4-4

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## 1. General Information

### 1.1 Applicant

Name A-FOUR TECH CO., LTD.

Address 6F, No. 108, Min-Chuan Rd., Hsin-Tien, Taipei, Taiwan, R.O.C.

### 1.2 Manufacturer

Name N/A

Address N/A

### 1.3 Equipment Under Tested

Name: RF Mouse

Model No.: RFSOP-533; RFSWOP-533; RP-8533

### 1.4 OEM Brand/Model (if applicable)

OEM Brand(s)/Model(s) except the basic model in sub-clause 1.3 is(are) the follows:

OEM Brand: N/A

Model No.: N/A

### 1.5 Model Difference (Series, Versions, if any)

Except the basic model no. (model designation of the sample tested in this test report), additional model no. covered is(are) :

Model RFSWOP-533; RP-8533 is identical to model RFSOP-533 except the model no. designation.

#### 1.6 Product Descriptions (Application/Features/Specification)

The EUT is a RF Mouse. A major technical descriptions of EUT is described as following:

|                        |                                     |
|------------------------|-------------------------------------|
| A. Operation Frequency | CH1: 27.045 MHz and CH2: 27.145 MHz |
| B. Modulation Type     | FSK                                 |
| C. Antenna Designation | Integral                            |
| D. Number Of Channel   | 2                                   |

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 .

#### 1.7 Connecting I/O Port(s)

Please refer to the User's Manual.

#### 1.8 Power Supplied

DC 2.7 V, 30mA

#### 1.9 Products Covered (if applicable)

The sample tested including the following sub-system/module/accessory :

| Sub-system/ Module/ Accessory | Model/Type No. | Int. Inst./ Ext. Cont. |
|-------------------------------|----------------|------------------------|
| N/A                           | N/A            | N/A                    |

#### 1.10 Description of Test Mode(s)

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.

Mode 1 CH1

Mode 2 CH2

The EUT system operated Mode 1/2, mentioned above was found to be the worst case during the pre-scanning test.

These operation modes were used for final testing and collecting test data included in this report.

## 1.11 Summary of Test Results

Test procedures according to the technical standards: (Antenna to EUT distance is 3 m)

| FCC Part15 (15.227), Subpart C |                    |  |                       |        |
|--------------------------------|--------------------|--|-----------------------|--------|
| Section                        | Test Item          | Limit                                  | Frequency Range (MHz) | Result |
| 15.207                         | Conducted Emission | Class B                                | 0.15-30               | PASS   |
| 15.209                         | Radiated Emission  | Class B                                | 30-1000               | PASS   |
| 15.227                         | Radiated Emission  | 10000 $\mu$ V/m (80dB $\mu$ V/m) @ 3 m | 26.96-27.28           | PASS   |

## 2. RFI Emissions Measurement

### 2.1 Test Facility

The test facilities used to collect the test data in this report located at No.132-1, Lane 329, Sec. 2, Palain Road, Shijr City, Taipei, Taiwan.

### 2.2 Standard Compliance

The test data contained in this report relate only to the item(s) listed below :  
FCC Part15, Subpart C / RSS-210: 2004/ ANCI C63.4 : 2003

### 2.3 Test Methodolog

Both conducted and radiated testing were performed during the max. EMI emission evaluation.  
Test procedures according to the technical standards:  
FCC Part15, Subpart C / ANSI C63.4 : 2003.

### 2.4 Deviations from Standard Test Method

N/A

### 2.5 Sample(s) Tested

The representative sample tested in this reports is(are): RFSOP-533  
Test results in this test report relate only to the sample(s) tested.  
The EUT has been tested according to the following environmental condition:

|                          |                                       |
|--------------------------|---------------------------------------|
| Input Power              | DC: 2.7V                              |
| Environmental Conditions | Please refer to the measurement data. |

### 2.6 Measurement Instruments

Valid measurement instruments used in this report refer to **Table-1** enclosed.



## 2.7 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 %.

A. Conducted Measurement :5.05dB

B. Radiated Measurement :

| Test Site | Method | Measurement Frequency Range | Ant.<br>H / V | U , (dB) | NOTE |
|-----------|--------|-----------------------------|---------------|----------|------|
| OS-01     | ANSI   | 30MHz ~ 200MHz              | H             | 4.59     |      |
|           |        | 30MHz ~ 200MHz              | V             | 4.80     |      |
|           |        | 200MHz ~ 1,000MHz           | H             | 4.47     |      |
|           |        | 200MHz ~ 1,000MHz           | V             | 5.03     |      |

## 2.8 Tested System Set-Up/Configuration Details

The system was configured for testing in a typical fashion (as a user would normally use) or in-accordance with the operating configuration specified in the user's manual. A Block Diagram(please refer to the Diagram - 1) and Photos(please refer to the attachment - **A**) showing the set-up/configuration of system tested. In addition, **Table-2** and **Table-3** provide a detail of all equipment items and cables information used in the system tested.

**Table -1 Measurement Instruments List**

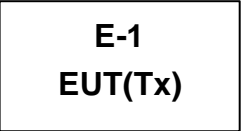
| Item | Instruments        | Mfr/Brand       | Model/Type No. | Serial No.  | Calibrated Date | Next Cali. Date | Note |
|------|--------------------|-----------------|----------------|-------------|-----------------|-----------------|------|
| 1    | LISN               | EMCO            | 3825/2         | 9605-2539   | 2004-10-01      | 2005-09-30      | ✓    |
| 2    | LISN               | Rolf Heine      | NNB-2/16Z      | 98083       | 2004-08-03      | 2005-08-02      |      |
| 3    | LISN               | Rolf Heine      | NNB-2/16Z      | 98053       | 2004-12-14      | 2005-12-13      |      |
| 4    | 4L-V-LISN          | Rolf Heine      | NNB-4/63TL     | 02/10040    | 2004-04-07      | 2005-04-06      | ✓    |
| 5    | LISN               | EMCO            | 4825/2         | 00028234    | 2004-10-08      | 2005-10-07      |      |
| 6    | Pulse Limiter      | Electro-Metrics | EM-7600        | 112644      | 2004-12-07      | 2005-12-06      | ✓    |
| 7    | 50 Terminator      | N/A             | N/A            | N/A         | 2004-05-08      | 2005-05-07      | ✓    |
| 8    | Test Cable         | N/A             | C01            | N/A         | 2004-12-08      | 2005-12-07      | ✓    |
| 9    | Log-Bicon Antenna  | MESS-ELEKTRONIK | VULB 9160      | 3058        | 2004-10-20      | 2005-10-19      |      |
| 10   | Log-Bicon Antenna  | MESS-ELEKTRONIK | VULB 9160      | 3115        | 2004-04-14      | 2005-04-13      | ✓    |
| 11   | Log-Bicon Antenna  | MESS-ELEKTRONIK | VULB 9161      | 4022        | 2004-07-15      | 2005-07-14      |      |
| 12   | Test Cable         | N/A             | 10M_OS01       | N/A         | 2004-12-08      | 2005-12-07      |      |
| 13   | Test Cable         | N/A             | OS01-1/-2      | N/A         | 2004-12-08      | 2005-12-07      |      |
| 14   | Test Cable         | N/A             | 10M_OS02       | N/A         | 2004-12-08      | 2005-12-07      | ✓    |
| 15   | Test Cable         | N/A             | OS02-1/-2/-3   | N/A         | 2004-12-08      | 2005-12-07      | ✓    |
| 16   | RF Switch          | Anritsu         | MP59B          | M65982      | 2004-12-07      | 2005-12-06      | ✓    |
| 17   | Quasi-Peak Adapter | HP              | 85650A         | 2521A00844  | 2004-03-16      | 2005-03-15      | ✓    |
| 18   | RF Pre-Selector    | HP              | 85685A         | 2648A00417  | 2004-03-16      | 2005-03-15      | ✓    |
| 19   | Spectrum Analyzer  | HP              | 85680B         | 2634A03025  | 2005-01-07      | 2006-01-06      | ✓    |
| 20   | Spectrum Monitor   | HP              | 85662B         | 2648A13616  | 2005-01-07      | 2006-01-06      | ✓    |
| 21   | Pre-Amplifier      | Anritsu         | MH648A         | M09961      | 2004-11-24      | 2005-11-23      | ✓    |
| 22   | Spectrum Analyzer  | ADVAN TEST      | R3261C         | 81720298    | 2004-09-01      | 2005-08-31      |      |
| 23   | Test Receiver      | R&S             | ESH3           | 860156/018  | 2004-12-31      | 2005-12-30      |      |
| 24   | Test Receiver      | R&S             | ESVP           | 860687/009  | 2004-12-31      | 2005-12-30      |      |
| 25   | Test Receiver      | MEB             | SMV41          | 130         | 2004-12-06      | 2005-12-05      | ✓    |
| 26   | Horn Antenna       | EMCO            | 3115           | 9605-4803   | 2004-05-28      | 2005-05-27      |      |
| 27   | Test Receiver      | R&S             | ESMI           | 843977/005  | 2004-05-18      | 2005-05-17      |      |
| 28   | Absorbing Clamp    | R&S             | MDS-21         | 841077/011  | 2004-09-09      | 2005-09-08      |      |
| 29   | Voltage Probe      | R&S             | ESH2-Z3        | 841.800/023 | 2004-09-07      | 2005-09-06      |      |
| 30   | Signal Generator   | HP              | 8648A          | 3426A01034  | 2004-05-17      | 2006-05-16      |      |
| 31   | Antenna Mast       | Chance Most     | CMTB-1.5       | N/A         | N/A             | N/A             | ✓    |
| 32   | Turn Table         | Chance Most     | CMTB-1.5       | N/A         | N/A             | N/A             | ✓    |

Remark :

(1) "✓" indicates the instrument used in Test Report.

(2) "N/A" denotes No Model No. / Serial No. and No Calibration specified.

**Diagram - 1**  
**Block diagram showing the configuration of system tested**



**E-1**  
**EUT(Tx)**

A rectangular block diagram with a black border. Inside the rectangle, the text "E-1" is centered on the top line, and "EUT(Tx)" is centered on the bottom line.

**Table - 2 Equipments Used in Tested System**

| Item | Equipment | Mfr/Brand | Model/Type No. | FCC ID / DOC | Series No. | Note |
|------|-----------|-----------|----------------|--------------|------------|------|
| E-1  | RF Mouse  | A4TECH    | RFSOP-533      | H8GRSOP533P  | N/A        | EUT  |
|      |           |           |                |              |            |      |
|      |           |           |                |              |            |      |
|      |           |           |                |              |            |      |
|      |           |           |                |              |            |      |
|      |           |           |                |              |            |      |
|      |           |           |                |              |            |      |
|      |           |           |                |              |            |      |
|      |           |           |                |              |            |      |
|      |           |           |                |              |            |      |
|      |           |           |                |              |            |      |
|      |           |           |                |              |            |      |
|      |           |           |                |              |            |      |
|      |           |           |                |              |            |      |
|      |           |           |                |              |            |      |
|      |           |           |                |              |            |      |
|      |           |           |                |              |            |      |
|      |           |           |                |              |            |      |

Note:

- (1) Unless otherwise denoted as EUT in 『Remark』 column , device(s) used in tested system is a support equipment.
- (2) Unless otherwise marked as in 『Remark』 column, Neutron consigns the support equipment to the tested system.
- (3) The support equipment was authorized by Declaration of Confirmation.

**Table - 3 Information of Interface Cable**

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

Note:

- (1) Unless otherwise marked as in 『Remark』 column, Neutron consigns the support equipment to the tested system.
- (2) For detachable type I/O cable should be specified the length in cm in 『Length』 column.

## 2.9 EUT Operating Conditions

- (a) Both conducted and radiated testing were performed during the max. EMI emission evaluation.
- (b) The EUT was configured for testing in a typical fashion (as a customer would normally use it). The EUT has been programmed to continuously transmit during test. This operating condition was tested and used to collect the included data.

### 3. Justification

#### 3.1 Limitations

##### 3.1.1 Power Line Conducted Emission

| Measurement<br>Frequency<br>Range<br>(MHz) | Mains Terminal<br>Class A Limits<br>(dBuV)<br>QP Mode AV Mode | Mains Terminals<br>Class B Limits<br>(dBuV)<br>QP Mode AV Mode | Note<br>CISPR<br>FCC<br>Std. |
|--|---|--|------------------------------|
| 0.15 - 0.50                                | 79.00 66.00   | 66 - 56 * 56 - 46 *  | CISPR                        |
| 0.50 - 5.00                                | 73.00 60.00   | 56.00 46.00  | CISPR                        |
| 5.00 - 30.0                                | 73.00 60.00   | 60.00 50.00  | CISPR                        |
| 0.15 - 0.50                                | 79.00 66.00   | 66 - 56 * 56 - 46 *  | FCC                          |
| 0.50 - 5.00                                | 73.00 60.00   | 56.00 46.00  | FCC                          |
| 5.00 - 30.0                                | 73.00 60.00   | 60.00 50.00  | FCC                          |

Notes:

- (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.

##### 3.1.2 Radiated Emission Limits (Frequency Range 30MHz-1000MHz)

| Measurement<br>Frequency<br>Range<br>(MHz) | Quasi-Peak Mode<br>Class A Limits<br>(dBuV/m)<br>10m 30m | Quasi-Peak Mode<br>Class B Limits<br>(dBuV/m)<br>10m 3m | Note<br>CISPR<br>FCC<br>Std. |
|--|--|---|------------------------------|
| 30.00 -230.00                              | 40.00 30.00  | 30.00 40.00   | CISPR                        |
| 230.0 -1000.0                              | 47.00 37.00  | 37.00 47.00   | CISPR                        |
| 30.00 - 88.00                              | 39.00 N/A  | 30.00 40.00   | FCC                          |
| 88.00 - 216.0                              | 43.50 N/A  | 33.50 43.50   | FCC                          |
| 216.0 -960.0                               | 46.00 N/A  | 36.00 46.00   | FCC                          |
| above 960.0                                | 49.50 N/A  | 46.00 54.00   | FCC                          |

Notes:

- (1). The tighter limit applies at the band edges.
- (2). Emission level (dBuV/m)=20log Emission level (uV/m).
- (3). A measuring distance of 10m is a primary used. However, either 3m or 10m (instead of 10m) distance may be allowed. If the distance is 3m, add 10dB to the QP-limit above. If the distance is 10m, subtract 10dB from the QP-limit above.

### 3.2 Measurement Justification

#### 3.2.1 Conducted Emission

The EUT is placed on a table which is 0.8 m above ground plane. According to the requirements in Section 13.1.4.1 of ANSI C63.4-2003. Conducted emissions from the EUT measured in the **frequency range between 0.15 MHz and 30MHz** were made with a **Spectrum Analyzer** using **CISPR Quasi-Peak detector mode**.

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 these signals are then Quasi Peak detector mode and/or Average detector mode re-measured.

Data of **Table - 4** lists the significant emission frequencies, measured levels, limits and safe margins. All readings are Peak Mode measured unless otherwise stated as QP or AV in column of " Remark ".

If the Peak Mode measured value lower than both QP Mode and AV Mode Limit, EUT shall be deemed to compliance with both QP & AV Limits and then no additional QP Mode or AV Mode measurement performed.

If additional QP or AV Mode measurement needed, and if the QP Mode measured value compliance with the QP Mode Limit and lower than AV Mode Limit, the EUT shall be deemed to meet both QP & AV Limits and then only QP Mode was measured, but AV Mode was not performed.

#### 3.2.2 Radiated Emission

The EUT is placed on a turn table which is 0.8 m above ground plane. The turn table shall rotate 360 degrees to determine the position of maximum emission level. EUT is set 3m away from the receiving antenna which varied from 1m to 4m to find out the highest emission. And also, each emission was to be maximized by changing the polarization of receiving antenna both horizontal and vertical. In order to find out the max. emission, the relative positions of this hand-held transmitter(EUT) was rotated through three orthogonal axes according to the requirements in Section 13.1.4.1 of ANSI C63.4-2003.

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, Peak or Average detector mode re-measured.

Data of **Table – 5** lists the significant emission frequencies, measured levels, limits and safe margins. All readings are Peak Mode measured unless otherwise stated as QP or AV in column of " Remark ".

If the Peak Mode measured value compliance with and lower than Quasi Peak or Average Mode Limit, the EUT shall be deemed to meet QP/AV Limits and then no additional QP/AV Mode measurement performed.

### 3.2.3 Field Strength Calculation

The field strength is calculated by adding the Antenna Factor and Cable Factor and subtracting the Amplifier Gain (if any) from the measured reading. The basic equation with a sample calculation is as  **$FS = RA + AF + CL - AG$**

Where FS = Field Strength

RA = Receiver Amplitude

AF = Antenna Factor (1)

CL = Cable Attenuation Factor(Cable Loss) (1)

AG = Amplifier Gain (1)

Remark :

(1) The Correction Factor =  $AF + CL - AG$ , as shown in the data tables' Correction Factor column.

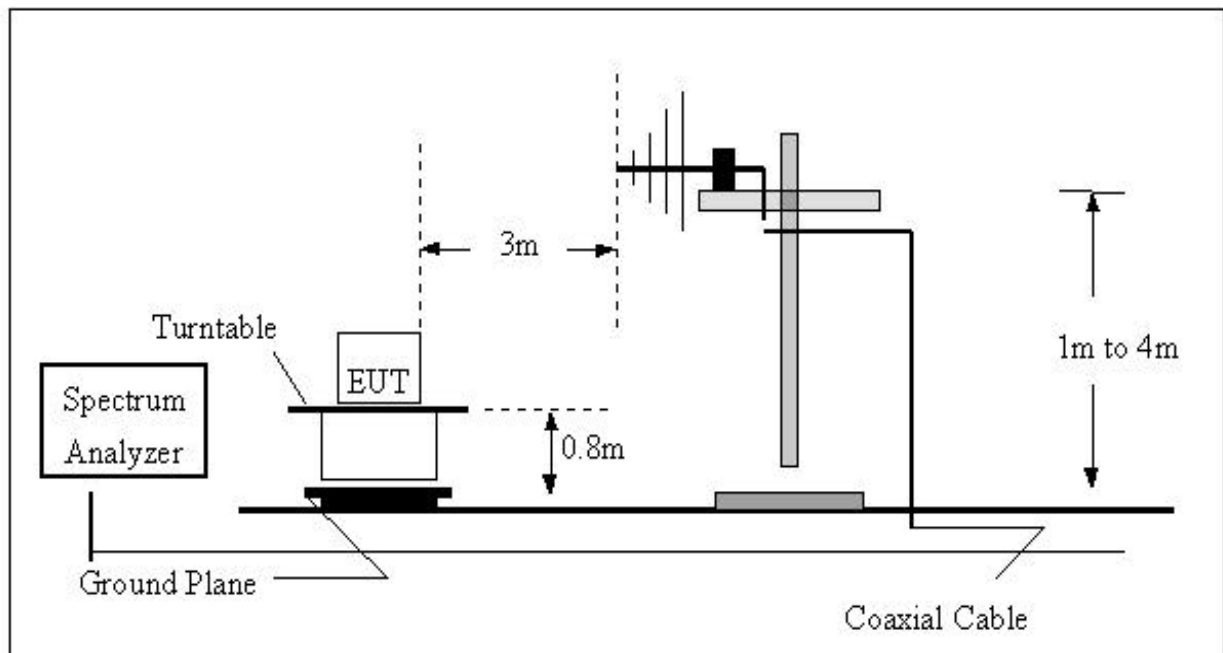
### 3.3 Measurement Data

Table - 4. Conducted Emission Data (0.15-30MHz)- Not Applicable

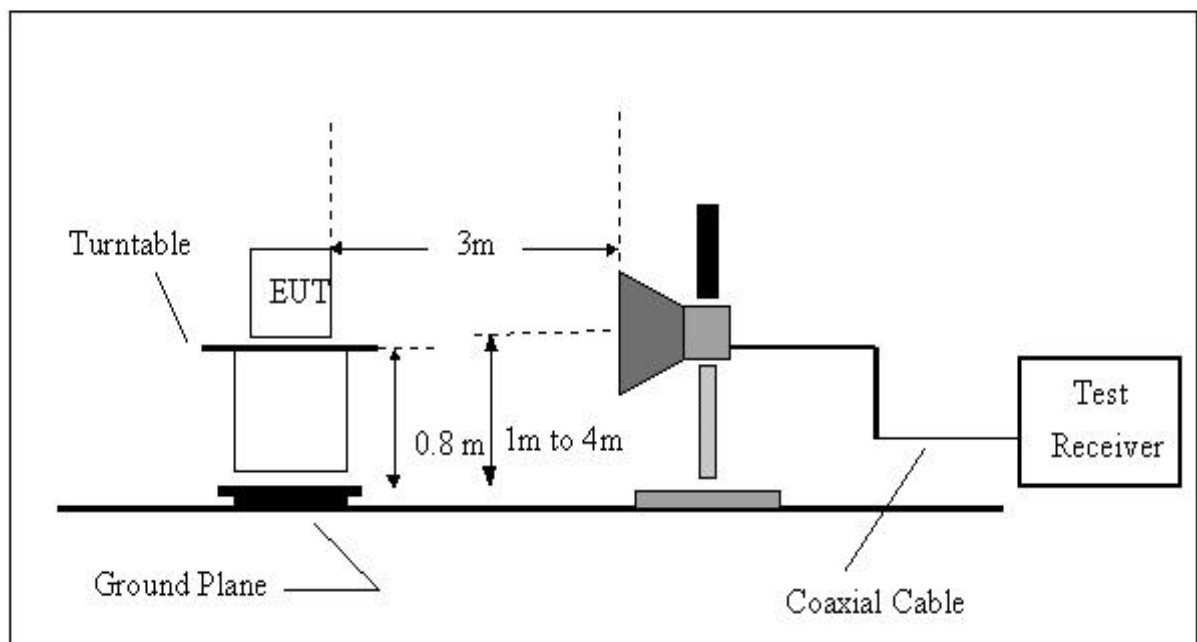
Table - 5. Radiated Emission Data (30-1000MHz)



## (A) Radiated Emission Test Set-Up, Frequency Below 1000MHz



## (B) Radiated Emission Test Set-UP Frequency Over 1 GHz



**Table 4 Conducted Emission Data - Not Applicable****Table 5 Radiated Emission Data (30-1000MHz)**

EUT : RF Mouse

Model/Type No. : RFSOP-533

Temperature : 18 Relative Humidity : 65 % Pressure : 1019.6 hPa

Special Notes : (EUT Operation Mode or Test Configuration Mode, if applicable)

Mode 1

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | Detector<br>(PK/AV) | Mode Reading<br>(dBuV) | Ant./CL/<br>Amp. CF(dB) | Actual FS<br>(dBuV/m) | Limit3m<br>(dBuV/m) | Safe Margin<br>(dB) | Note |
|----------------|-----------------|---------------------|------------------------|-------------------------|-----------------------|---------------------|---------------------|------|
| 27.046         | V               | Peak                | 50.60                  | -16.41                  | 34.19                 | 80.00               | -45.81              | F    |
| 26.960         | V               | Peak                | 20.80                  | -16.42                  | 4.38                  | 69.50               | -65.12              | E    |
| 27.278         | V               | Peak                | 20.00                  | -16.38                  | 3.62                  | 69.50               | -65.88              | E    |
| 54.050         | V               | Peak                | 30.70                  | -5.55                   | 25.15                 | 40.00               | -14.85              | H    |
| 81.089         | V               | Peak                | 31.90                  | -9.40                   | 22.50                 | 40.00               | -17.50              | H    |
| 108.134        | V               | Peak                | 34.40                  | -6.91                   | 27.49                 | 43.50               | -16.01              | H    |
| 135.185        | V               | Peak                | 30.70                  | -5.04                   | 25.66                 | 43.50               | -17.84              | H    |
| 162.230        | V               | Peak                | 25.50                  | -4.74                   | 20.76                 | 43.50               | -22.74              | H    |
|                |                 |                     |                        |                         |                       |                     |                     |      |
| 27.045         | H               | Peak                | 59.80                  | -16.41                  | 43.39                 | 80.00               | -36.61              | F    |
| 26.960         | H               | Peak                | 23.00                  | -16.42                  | 6.58                  | 69.50               | -62.92              | E    |
| 27.280         | H               | Peak                | 21.60                  | -16.38                  | 5.22                  | 69.50               | -64.28              | E    |
| 54.335         | H               | Peak                | 29.00                  | -5.58                   | 23.42                 | 40.00               | -16.58              | H    |
| 81.380         | H               | Peak                | 24.80                  | -9.36                   | 15.44                 | 40.00               | -24.56              | H    |
| 108.425        | H               | Peak                | 24.00                  | -6.88                   | 17.12                 | 43.50               | -26.38              | H    |
| 135.470        | H               | Peak                | 23.40                  | -5.02                   | 18.38                 | 43.50               | -25.12              | H    |
| 162.515        | H               | Peak                | 24.50                  | -4.77                   | 19.73                 | 43.50               | -23.77              | H    |

## Remark :

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms.  
1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = 200 ms
- (2) 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.
- (3) Measuring frequency range from 25MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (4) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission .
- (5) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

**Table 5 Radiated Emission Data (30-1000MHz)**

EUT : RF Mouse Model/Type No. : RFSOP-533

Temperature : 18 Relative Humidity : 65 % Pressure : 1019.6 hPa

Special Notes : (EUT Operation Mode or Test Configuration Mode, if applicable)

Mode 2

| Freq.<br>(MHz) | Ant.Pol.<br>H/V | DetectorMode<br>(PK/AV) | Reading<br>(dBuV) | Ant./CL/<br>Amp. CF(dB) | Actual FS<br>(dBuV/m) | Limit3m<br>(dBuV/m) | Safe Margin<br>(dB) | Note |
|----------------|-----------------|-------------------------|-------------------|-------------------------|-----------------------|---------------------|---------------------|------|
| 27.145         | V               | Peak                    | 49.40             | -16.40                  | 33.00                 | 80.00               | -47.00              | F    |
| 26.960         | V               | Peak                    | 18.90             | -16.42                  | 2.48                  | 69.50               | -67.02              | E    |
| 27.280         | V               | Peak                    | 49.20             | -16.38                  | 32.82                 | 69.50               | -36.68              | E    |
| 54.260         | V               | Peak                    | 29.40             | -5.56                   | 23.84                 | 40.00               | -16.16              | H    |
| 81.405         | V               | Peak                    | 24.70             | -9.36                   | 15.34                 | 40.00               | -24.66              | H    |
| 108.550        | V               | Peak                    | 28.80             | -6.86                   | 21.94                 | 43.50               | -21.56              | H    |
| 135.695        | V               | Peak                    | 27.30             | -5.01                   | 22.29                 | 43.50               | -21.21              | H    |
| 162.840        | V               | Peak                    | 26.90             | -4.79                   | 22.11                 | 43.50               | -21.39              | H    |
|                |                 |                         |                   |                         |                       |                     |                     |      |
| 27.145         | H               | Peak                    | 59.50             | -16.40                  | 43.10                 | 80.00               | -36.90              | F    |
| 26.960         | H               | Peak                    | 19.70             | -16.42                  | 3.28                  | 69.50               | -66.22              | E    |
| 27.280         | H               | Peak                    | 20.20             | -16.38                  | 3.82                  | 69.50               | -65.68              | E    |
| 54.296         | H               | Peak                    | 24.20             | -5.56                   | 18.64                 | 40.00               | -21.36              | H    |
| 81.441         | H               | Peak                    | 26.50             | -9.36                   | 17.14                 | 40.00               | -22.86              | H    |
| 108.586        | H               | Peak                    | 22.60             | -6.86                   | 15.74                 | 43.50               | -27.76              | H    |
| 135.731        | H               | Peak                    | 22.50             | -5.01                   | 17.49                 | 43.50               | -26.01              | H    |
| 162.876        | H               | Peak                    | 23.70             | -4.79                   | 18.91                 | 43.50               | -24.59              | H    |

Remark :

- (1) Spectrum Setting : 30MHz – 1000MHz , RBW= 100KHz, VBW=100KHz, Sweep time = 200 ms. 1GHz- 25GHz, RBW= 1MHz, VBW= 1MHz, Sweep time = 200 ms
- (2) 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.
- (3) Measuring frequency range from 25MHz to 1000MHz or the 10th harmonic of highest fundamental frequency. "F" denotes fundamental frequency; "H" denotes spurious frequency. "E" denotes band edge frequency.
- (4) Radiated emissions measured in frequency range from 30 MHz to 1000 MHz were made with an instrument using Peak detector mode or QP detector mode of the emission .
- (5) Data of measurement within this frequency range shown " - " in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.

## **Attachment**

### **Table Contents**

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- A. EUT Photos
- B. Product Labeling
- C. Bandwidth Requirement (Plot)

## **Attachment - A.**

### **EUT Test Photos**

#### **1. Radiated Measurement Photos**

## **Attachment – B.**

### **Product Labeling**

## **Attachment - C.**

### **Bandwidth Requirement**

# **ATTACHMENT**

**05E0009**

## **PHOTOGRAPHS OF EUT**