# TEST REPORT

## STANDARD : FCC Part 15B-Scanning Receiver
## : Industry Canada RSS-215 Issue 2

| Applicant | Testing Laboratory |
|---|---|
| Kenwood Corporation<br>1-16-2,Hakusan,Modori-ku,Yokohama-shi<br>Kanagawa, 226-8525 Japan<br><br>Tel.: +81 45 939 6254 Fax.:+81 45 939 7097 | Intertek Japan K.K. Tochigi Laboratory<br>870, Nakaawano, Kanuma-shi, Tochigi-ken<br>322-0306 Japan<br><br>Tel. : +81 289 86 7121<br>URL: http://www.japan.intertek-etlsemko.com |

| | |
|---|---|
| **Equipment Type** | HF/50MHz ALL MODE TRANSCEIVER |
| **Category** | Scanning Receiver |
| **Trademark** | KENWOOD |
| **Model(s)** | TS-590S |
| **Serial No.** | None |
| **Equipment Authorization** | Certification (FCC ID : K44407100, IC : 282F-407100) |
| **Test Result** | Complied |
| **Report Number** | JT10070001 |
| **Report Issue Date** | July 16, 2010 |



Approved by 
Kazuo Gokita
[Manager]

Tested by 
Atsuyuki Morishima

VLAC-008-5

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# SECTION 1. GENERAL INFORMATION

**TEST PERFORMED**

| | |
|---|---|
| **Location** | Tochigi No.2 Test Site |
| **EUT Received** | June 22, 2010 |
| **Date of Test** | From Jun 30, 2010 to July 6, 2010 |
| **Standard Applied** | FCC Part15B – Scanning Receiver<br>Industry Canada RSS-215 Issue 2 *<br>* It is not covered by accredited scope of VLAC. |
| **Measurement methods** | ANSI C63.4-2003 / RSS-GEN Issue2 4.10 |
| **Test Procedure** | Document number : RJP-EM001, RJP-EM003 |
| **Deviation from Standard(s)** | None |

Note : As for the ICES-003 “Digital Apparatus”, the EUT has been measured.
Refer to report No.“JT10070003”.
As for the FCC Part15B Class B “Peripherals”, the EUT has been measured.
Refer to report No.“JT10070002”.

**QUALIFICATIONS OF TESTING LABORATORY**

| ACCREDITATION | SCOPE | LAB. CODE | Remarks |
|---|---|---|---|
| VLAC | EMC Testing | VLAC-008-5 | JAPAN |
| BSMI | EMC Testing | SL2-IN-E-6017, SL2-A-E-6017 | TAIWAN |
| **FILING** | | | |
| VCCI | EMC Testing | R-257, C-260, C-284, T-1736, T-1737, G-124<br>R-258, C-261, C-285, T-1738, T-1739<br>R-259, C-262, T-1740, G-125 | JAPAN |
| FCC | EMC Testing | Designation Number : JP0011 | USA |
| IC | EMC Testing | 2042P-1, 2042P-2 | CANADA |
| SAUDI ARABIA | EMC Testing | N/A | |

**ABBREVIATIONS**

| | | | |
|---|---|---|---|
| EUT | Equipment Under Test | DoC | Declaration of Conformity |
| AMN | Artificial Mains Network | ISN | Impedance Stabilization Network |
| LISN | Line Impedance Stabilization Network | Q-P | Quasi-peak |
| AMP | Amplifier | AVG | Average |
| ATT | Attenuator | PK | Peak |
| ANT | Antenna | Cal | Calibration |
| BBA | Broadband Antenna | N/A | Not applicable or Not available |
| DIP | Dipole Antenna | LCD | Liquid-Crystal Display |
| AE | Associated Equipment | VFO | Variable Frequency Oscillator |

## SECTION 2. SUMMARY OF TEST RESULTS

The minimum margins to the limits are as follows:

| | |
|---|---|
| **Conducted disturbance at mains terminals** | RX mode(0.03MHz:ANT 1)<br>13.5 dB (3.7933 MHz) AVG<br>RX mode(60.000MHz:ANT 1)<br>13.5 dB (3.9980 MHz) AVG |
| **Radiated disturbance** | RX mode(30.000MHz:ANT 1)<br>2.6 dB (412.37 MHz) |
| **Conducted Power on Antenna Port (15.111) / (RSS-215 5.1)** | VFO A SCAN( ANT 2 ) mode<br>12.8 dB (80.00 MHz) |
| **38dB Rejection Test (15.121(b))** | No frequency of response was detected – Passed- |

Note : See Section 10 for details.

< Measurement data correction >

* Conducted disturbance at mains terminals
  Emission Level [dBµV] = Meter Reading [dBµV] + Factor [dB]
  Margin [dB] = Limit [dBµV] - Emission Level [dBµV]
  * Factor = LISN Factor + Cable Loss + ATT

* Radiated disturbance
  Emission Level [dBµV/m] = Meter Reading [dBµV] + Factor [dB/m]
  Margin [dB] = Limit [dBµV/m] - Emission Level [dBµV/m]
  * Factor = Antenna Factor + Cable Loss - Amplifier Gain + ATT
  ( – Distance Conversion Factor)

* Conducted Power on Antenna Port
  Emission Level [dBµV] = Meter Reading [dBµV] + Factor [dB]
  Margin [dB] = Limit [dBµV] - Emission Level [dBµV]
  * Factor = Pad +Cable Loss - Amplifier Gain

# SECTION 3. EQUIPMENT UNDER TEST

The equipment under test (EUT) consisted of the following apparatus.

### 3.1 System Configuration

| Symbol | Item | Model No. | Serial No. | Manufacturer | Notes | FCC ID |
|---|---|---|---|---|---|---|
| **A** | HF/50MHz ALL MODE TRANSCEIVER | TS-590S | None | KENWOOD | EUT | K44407100 |
| **Rated Power** : DC13.8 V ± 15% 1.5 A max. | | | | | | |
| **Supplied Power** : DC13.8 V | | | | | | |
| **Condition of Equipment** | Prototype | | | | | |
| **Type** | Tabletop | | | | | |
| **Suppression Devices** | No Modifications by the laboratory were made to the device | | | | | |

### 3.2 Overview of EUT

| | |
|---|---|
| **Frequency Ranges** | 0.030 – 60.000 MHz |
| **Receiver Type** | Double or Triple Conversion |
| **Model of Operation** | J3E, A1A, A3E, F3E, F1B |

### 3.3 Intermediate Frequencies

| | |
|---|---|
| **1st** | 11.374MHz(upper) or 73.095MHz(upper) |
| **2nd** | 24kHz(upper or lower) or 10.695MHz(lower) |
| **3rd** | 24kHz(upper) or 455kHz(lower) |

### 3.4 Highest Frequency Oscillator(s) / Crystal(s)

| Base Clock | Operating Frequency | Board Name | Remarks |
|---|---|---|---|
| 24 MHz | 480 MHz | Local PCB | |

### 3.5 Port(s)/Connector(s)

| Port Name | Connector Type | Connector Pin | Remarks |
|---|---|---|---|
| ANT 1 | M | 2pin | |
| ANT 2 | M | 2pin | |
| EXT. AT | JST 6pin | 6pin | |
| DC 13.8V | JST 4pin | 4pin | |
| COM | D-Sub | 9pin | |
| USB | Type B | 4pin | |
| EXT SP | 3.5Φ | 2pin | |
| ACC2 | MINI-DIN | 13pin | |
| REMOTE | MINI-DIN | 7pin | |
| KEY | 3.5Φ | 2pin | |
| PADDLE | 3.5Φ | 3pin | |
| DRV | RCA | 2pin | |
| RX ANT | RCA | 2pin | |
| MIC | Receptacle | 8pin | FRONT |
| PHONES | 6.2Φ | 3pin | FRONT |

### 3.6 Frequency Range of Measurements

| | Required Measurement Frequency Range | Measured Frequency Range |
|---|---|---|
| Conducted disturbance at mains terminals | 0.15M – 30 MHz | 0.15M – 30 MHz |
| Radiated disturbance | 30M – 2000 MHz | 30M – 2000 MHz |
| Conducted Power on Antenna Port (15.111) | 30M – 2000 MHz | 30M – 2000 MHz |
| 38dB Rejection Test (15.121(b)) | 0.030M – 60 MHz (ANT1,ANT2 port)<br>0.030M – 30 MHz (RX ANT port) | 0.030M – 60 MHz (ANT1, ANT2 port)<br>0.030M – 30 MHz (RX ANT port) |

## SECTION 4. SUPPORT EQUIPMENT

The EUT was supported by the following equipment during the test.

| Symbol | Item | Model No. | Serial No. | Manufacturer | Remarks | FCC ID |
|---|---|---|---|---|---|---|
| **B** | DC Power Supply | PS-60 | None | KENWOOD | | N/A |
| **C** | Microphone | MC-47 | None | KENWOOD | | N/A |
| **D** | Headphone | HS-6 | None | KENWOOD | | N/A |
| **E** | Speaker | SP-50B | None | KENWOOD | 2.5W 8ohm | N/A |
| **F** | TCXO | SO-3 | None | KENWOOD | | N/A |
| **G** | Voice Guide & Storage Unit | VGS-1 | None | KENWOOD | | N/A |
| **H,I,J,K** | Dummy Antenna | None | None | None | | N/A |
| **L** | Computer | DMC | FXYKV1X | DELL | | DoC |
| **M** | Mobile Bracket | MB-430 | None | KENWOOD | | N/A |
| **N** | LCD | E172FPb | None | DELL | | DoC |
| **O** | Printer | C8154AL | TH71Q5Z024 | HEWLETT PACKARD | | DoC |
| **P** | AC Adaptor | 0957-2171 | E151B100MU02L | HEWLETT PACKARD | | N/A |
| **Q** | Keyboard | SK-8115 | None | DELL | | DoC |
| **R** | Mouse | M-S34 | 141189-401 | Compaq | | DZL211029 |
| **Supplied Power:** | | | | | | |
| **B, L , N, P** | AC120 V, 60 Hz | | | | | |

## SECTION 5. USED CABLE(S)

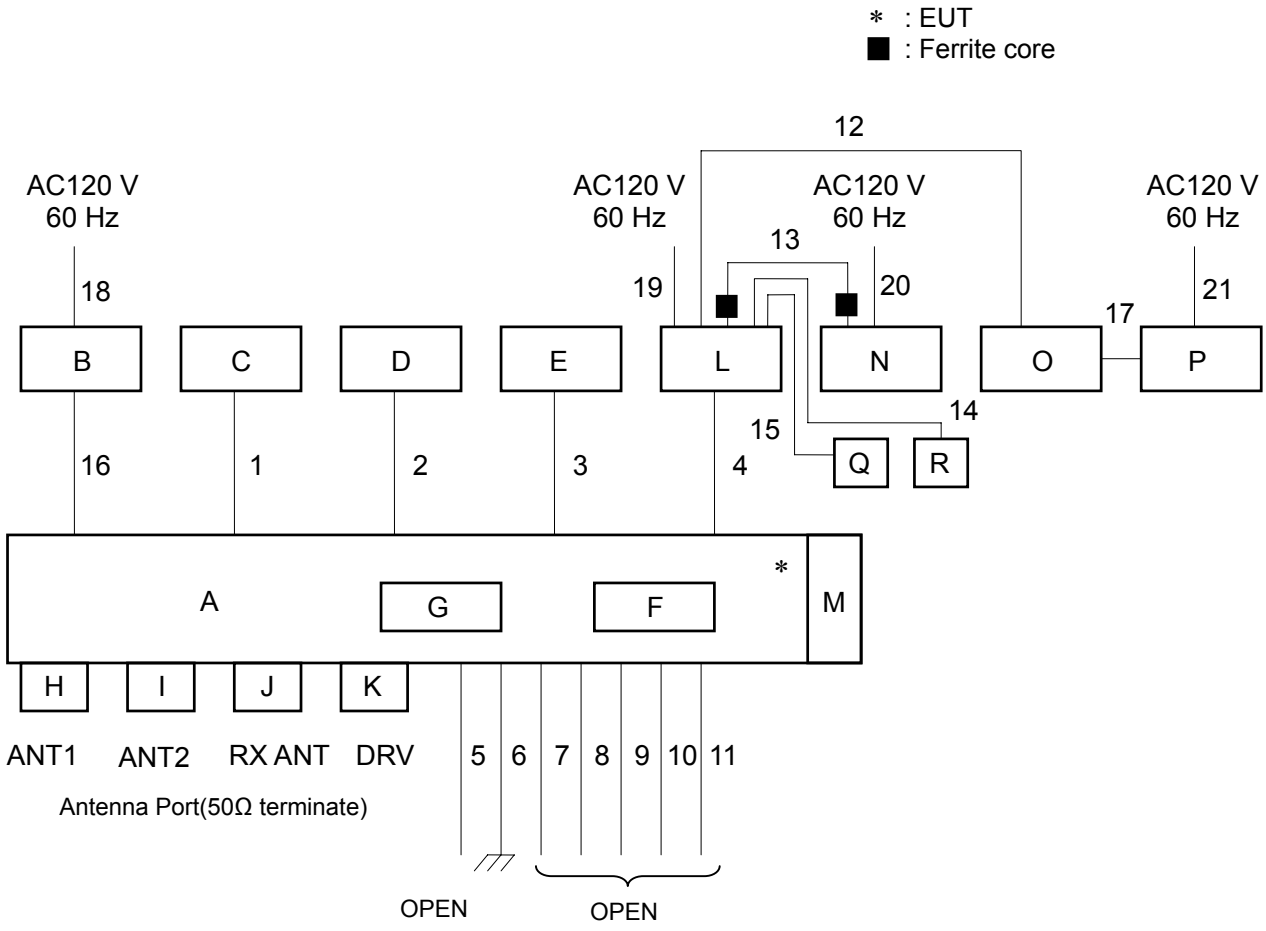
The following cable(s) was used for the test.

| No. | Name | Length (m) | Shield | Metal Connector | Ferrite Core |
|---|---|---|---|---|---|
| **1** | Microphone cable | 0.60 | No | Yes | |
| **2** | Headphone cable | 1.50 | No | No | |
| **3** | Speaker cable | 2.50 | No | No | |
| **4** | USB cable | 1.00 | Yes | Yes | |
| **5** | EXT AT cable | 1.00 | No | No | |
| **6** | GND cable | 1.20 | No | N/A | |
| **7** | COM cable | 1.50 | No | Yes | |
| **8** | ACC 2 cable | 1.00 | No | No | |
| **9** | Remote cable | 1.00 | No | No | |
| **10** | KEY cable | 1.00 | No | No | |
| **11** | Paddle cable | 1.00 | No | No | |
| **12** | Printer cable | 2.40 | Yes | Yes | |
| **13** | Monitor cable | 1.80 | Yes | Yes | Fixed x 2 |
| **14** | Mouse cable | 1.80 | Yes | Yes | |
| **15** | Keyboard cable | 2.00 | Yes | Yes | |
| **16** | Power cable for TS-590S (DC) | 2.00 | No | No | |
| **17** | Power cable for Printer (DC) | 1.70 | No | No | |
| **18** | Power cable for DC Supply (AC) | 1.75 | No | No | |
| **19** | Power cable for Computer (AC) | 1.90 | No | No | |
| **20** | Power cable for LCD (AC) | 1.70 | No | No | |
| **21** | Power cable for AC Adaptor (AC) | 0.90 | No | No | |

Note : No. 13 cable is supplied together with LCD(N).

# SECTION 6. TEST CONFIGURATION

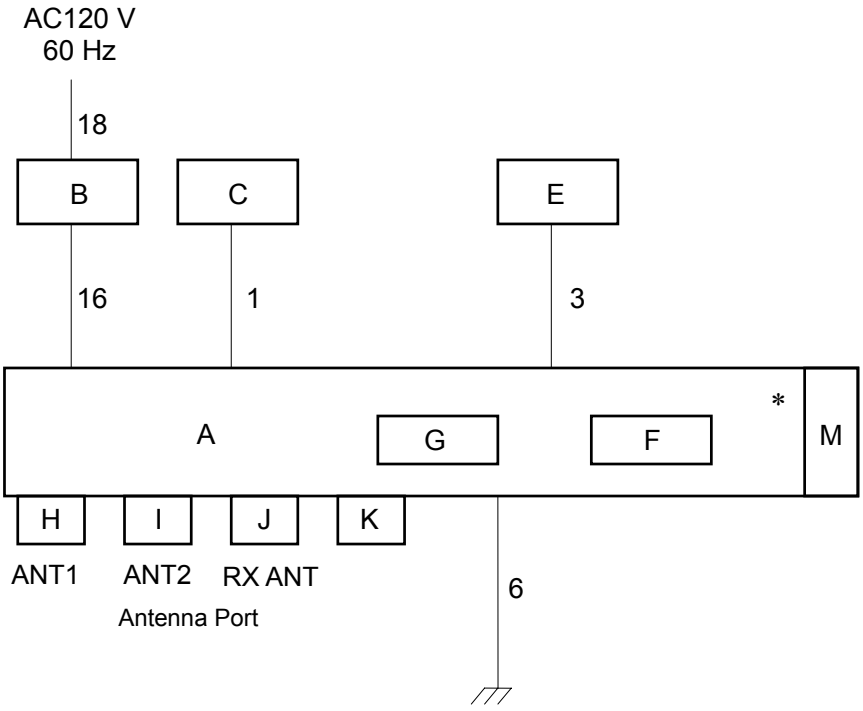
## 6.1 Conducted disturbance at mains terminals
## Radiated disturbance



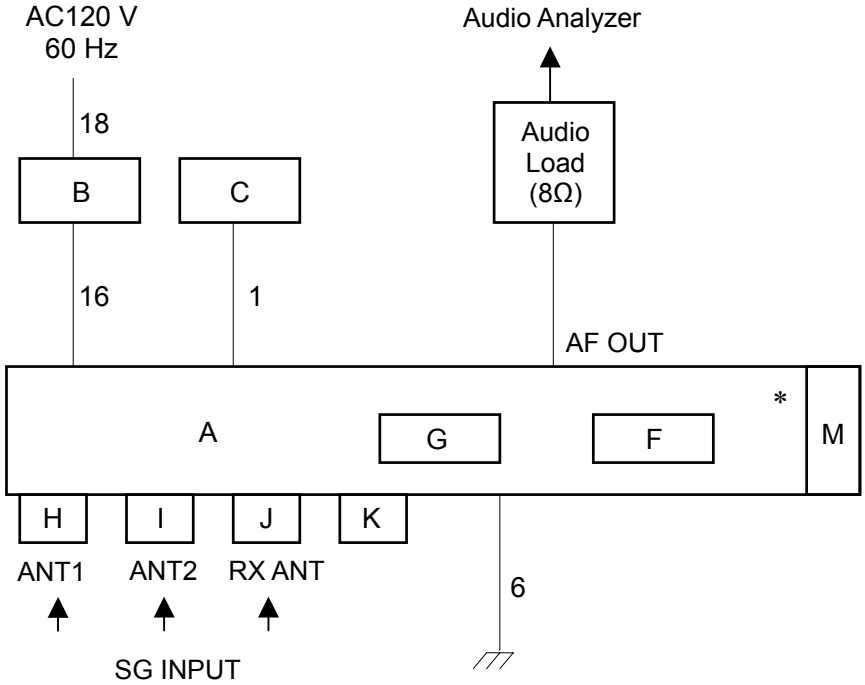

The symbols and numbers assigned to the equipments and cables on this diagram correspond to the ones in Sections 3 to 5.

### 6.2 Conducted Power on Antenna Port (15.111)

＊ :EUT




### 6.3 38dB Rejection Test (15.121(b))




The symbols and numbers assigned to the equipments and cables on this diagram correspond to the ones in Sections 3 to 5.

# SECTION 7. OPERATING CONDITION

The EUT was operated under the following conditions during the test.

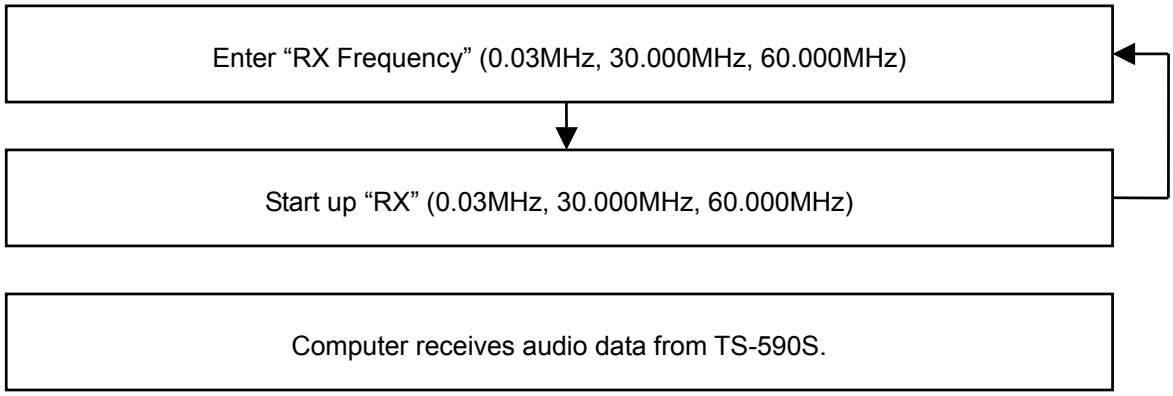
## 7.1 Operating Condition

The test was carried out under RX mode and VFO SCAN mode.
EUT was examined in the operating conditions that had maximum emissions.

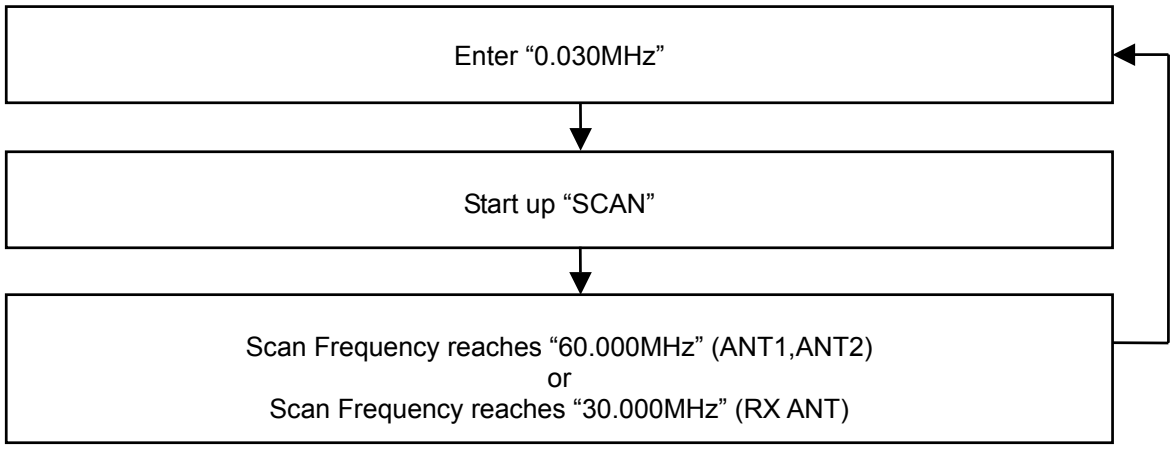
## 7.2 Operating Flow [RX mode and VFO SCAN mode]

Following operations were performed continuously.

### 7.2.1 RX mode




### 7.2.2 VFO SCAN mode

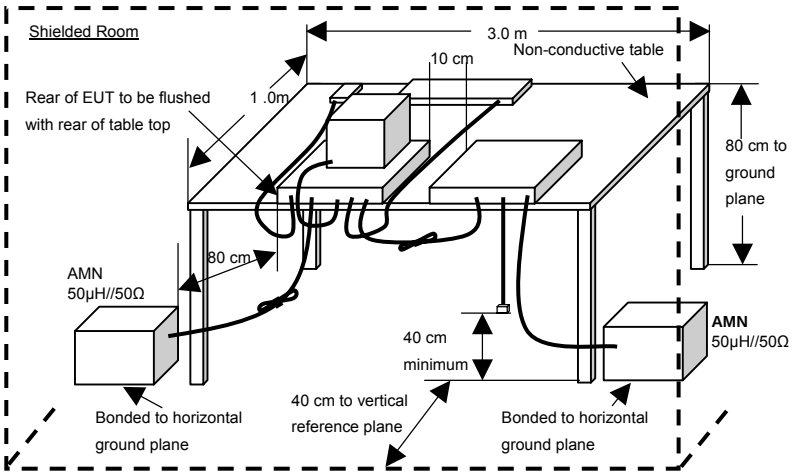


## SECTION 8. TEST PROCEDURE(S)

Test was carried out under the following conditions.

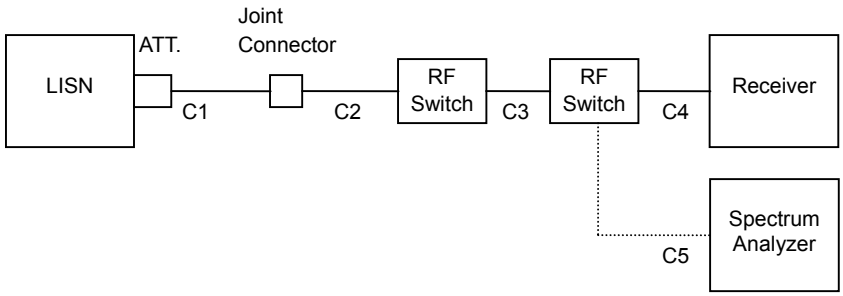
**Conducted disturbance at mains terminals**

Test setup as per standard




* Reference Ground plane : greater than 2 x 2m

Diagram of the measuring instruments




Setting for the instruments

| Frequency [MHz] | Instrument | Detector Function | Resolution Bandwidth | Video Bandwidth |
|---|---|---|---|---|
| 0.15 – 30 | Receiver | Quasi Peak | 10 kHz | N/A |
| | | Average | 10 kHz | N/A |

[ Preliminary Measurement ]
EUT is tested on all operating conditions.
The spectrum analyzer is controlled by the computer program to sweep the frequency range to be measured, then spectrum chart is plotted out to find the worst emission conditions in operating mode and/or configuration decision for the final test.
All leads other than safety ground are tested.

[ Final Measurement ]
The EUT is operated in the worst emission condition found by the preliminary test.
The equipment and cables are arranged or manipulated within the range of the test standard in the above condition.
At least six highest spectrum are measured in quasi-peak and average (if necessary) using the test receiver.

**Radiated disturbance**

Test setup as per standard

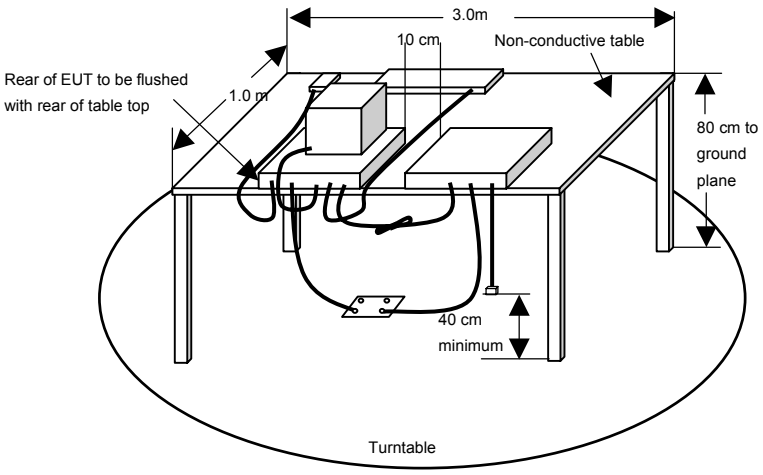
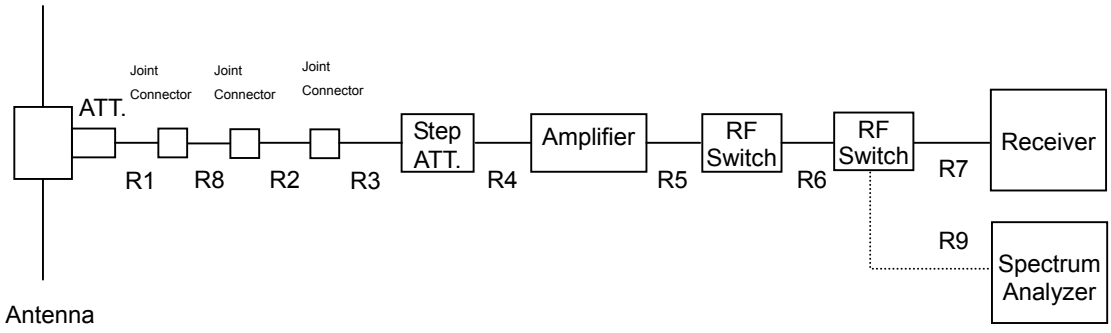
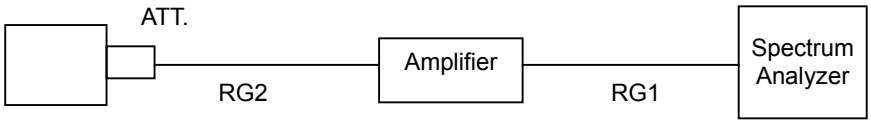



Diagram of the measuring instruments ( 30-1000MHz )




Above 1GHz




Setting for the instruments

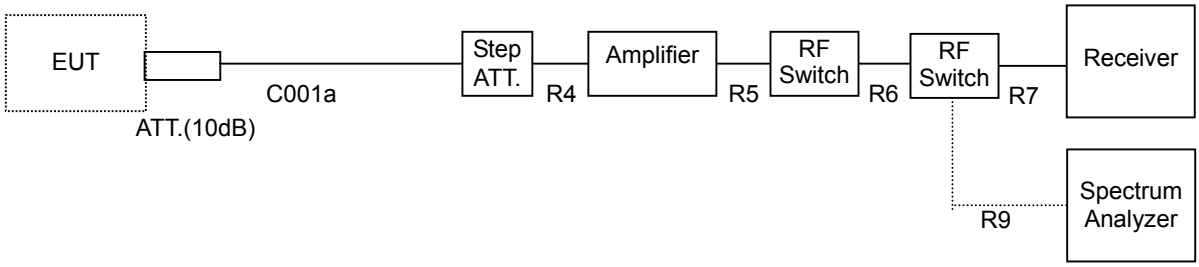
| Frequency [MHz] | Instrument | Detector Function | Resolution Bandwidth | Video Bandwidth |
|---|---|---|---|---|
| 30 – 1000 | Receiver | Quasi Peak | 120 kHz | N/A |
| Above 1000 | Spectrum Analyzer | Peak | 1 MHz | 1 MHz |
| | | Average | 1 MHz | 10 Hz |

[ Preliminary Measurement ]
EUT is tested on all operating conditions.
The spectrum analyzer is set max-hold mode and swept during turntable was rotated 0 to 360 degree. Then spectrum chart is plotted out to find the worst emission conditions in configuration, operating mode, or ambient noise notation.

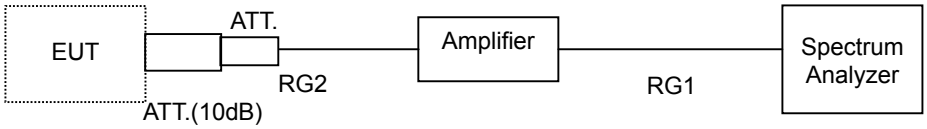
[ Final Measurement ]
The EUT operated in the worst emission condition found by the preliminary test.
The turntable azimuth (EUT direction) and antenna height (1 to 4 meters) are adjusted the position so that maximum field strength is obtained for each frequency spectrum to be measured.
The equipment and cables are arranged or manipulated within the range of the test standard in the above condition. At least six highest spectrum are measured by the test receiver (quasi-peak) and spectrum analyzer (peak and average). When the uncertain result was obtained, the measurement is retried by using the half wave dipole antenna instead of the broadband antenna.

**Conducted Power on Antenna port (15.111)**

Schema for the conducted power on antenna port measurement




Above 1GHz




[ Instrument Setup ]

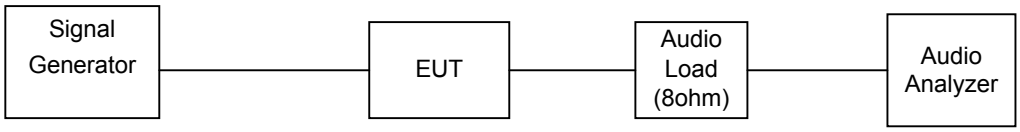
| Frequency [MHz] | Instrument | Detector Function | Resolution Bandwidth | Video Bandwidth |
|---|---|---|---|---|
| 30 to 1000 | Receiver | Quasi Peak | 120 kHz | N.A. |
| Above 1000 | Spectrum Analyzer | Peak | 1 MHz | 1 MHz |

[ Preliminary Measurement ]
EUT is tested on all operating conditions.
The spectrum analyzer is controlled by the computer program to sweep the frequency range to be measured, then spectrum chart are plotted out to find the worst emission conditions in operating mode and/or configuration decision for the final test.

[ Final Measurement ]
The EUT is operated in the worst emission condition found by the preliminary test.
The equipment and cables are arranged or manipulated within the range of the test standard in the above condition.
At least six highest spectrum are measured by the test receiver (quasi-peak) and spectrum analyzer (peak).

**38dB Rejection**

Schema for the 38dB rejection measurement




[ Preliminary Measurement ]

The Signal Genarator conditions :
Output level = 66 dBuV.
Modulation = Frequency modulated to 1 kHz tone at 3 kHz peak deviation.
Frequency Points = 824.040 MHz, 836.505 MHz, 848.970 MHz
869.040 MHz, 881.505 MHz, 893.970 MHz
(The Cellular Radiotelephone Service mobile and base frequency bands)
The EUT condition :
Scanning Frequency = 0.030 MHz – 60.000 MHz (5 kHz Step).
Scan stopped point, was the detected frequency.

[ Final Measurement ]

Injected 12dB SINAD Reading (SG RF Output)
The EUT condition :
Frequency = Scan stopped point
The Signal Genarator condition :
Frequency = Cellular point
Detected 12dB SINAD Reading (SG RF Output)
The EUT condition :
Frequency = Scan stopped point
The Signal Genarator condition :
Frequency = Scan stopped point
Under the requirements of Section15.121(b) of the Rule.
Injected 12dB SINAD Reading – Detected 12dB SINAD Reading = 38 dB or more.

## SECTION 9. MEASUREMENT UNCERTAINTY

| **Radiated disturbance at 3m** | $U_{lab}$ | $U_{cispr}$ |
|---|---|---|
| 30 MHz – 1000 MHz | 3.57 dB | 5.19 dB |
| Above 1 GHz CISPR22 | N/A | |
| Above 1 GHz ANSI 63.4 | 4.24 dB | |
| **Radiated disturbance at 10m** | | |
| 30 MHz – 1000 MHz | 3.73 dB | 5.06 dB |
| Above 1 GHz ANSI 63.4 | 4.24 dB | |
| **Radiated disturbance at 30m** | | |
| | N/A | 5.02 dB |
| **Radiated disturbance (power)** | | |
| 11.7 GHz – 12.7 GHz | N/A | Nil |
| **Conducted disturbance at mains terminals** | | |
| 9 kHz – 150 kHz | 2.70 dB | 3.97 dB |
| 150 kHz – 30 MHz | | 3.60 dB |
| **Conducted disturbance at telecommunication ports (voltage)** | | |
| 9 kHz – 30 MHz | 2.70 dB | Nil |
| **Conducted disturbance at telecommunication ports (current)** | | |
| 9 kHz – 30 MHz | 2.81 dB | Nil |
| **Conducted disturbance at terminals** | | |
| 150 kHz – 30 MHz | 2.74 dB | Nil |
| **Disturbance power** | | |
| 30 MHz – 300 MHz | 2.94 dB | 4.45 dB |
| **Conducted Power on Antenna Port (15.111)** | | |
| 30 MHz – 1000 MHz<br>Above 1 GHz | 2.86 dB<br>1.60 dB | Nil |
| **38dB Rejection (15.121(b))** | | |
| 30 kHz – 60 MHz | 0.56 dB | Nil |

The above expanded instrumentation uncertainty, $U_{lab.}$, is estimated in accordance with CISPR 16-4-2.
Traceability to national standard in SI units is ensured with these values.
Compliance with the limits in this standard are determined without in consideration of the measurement uncertainty of the measurement instrumentation.

## SECTION 10. EVALUATION OF TEST RESULTS

### 10.1 Conducted disturbance at mains terminals

10.1.1 RX mode(0.03MHz :ANT 1)

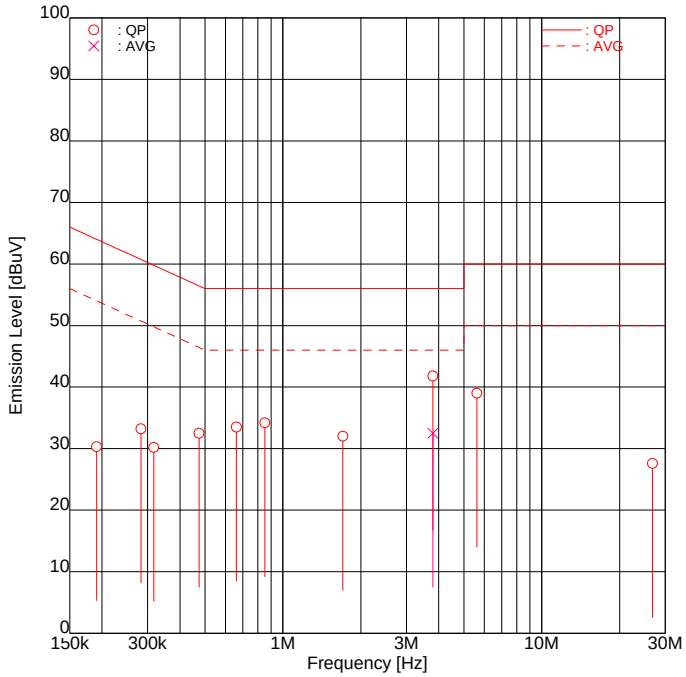
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Conducted Voltages on Mains Port

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (0.03MHz:ANT1) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jul 02 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B Class B |
| TEST METHOD | : ANSI C63.4-2003 |
| TEMPERATURE | : 24.0 [degC] |
| HUMIDITY | : 50.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | MODE | READING [dBuV] Line1 | READING [dBuV] Line2 | FACTOR [dB] Line1 | FACTOR [dB] Line2 | EMISSION [dBuV] Line1 | EMISSION [dBuV] Line2 | LIMIT [dBuV] | MARGIN [dB] Line1 | MARGIN [dB] Line2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.1904 | QP | 19.2 | 19.6 | 10.7 | 10.7 | 29.9 | 30.3 | 64.0 | 34.1 | 33.7 |
| 2 | 0.2830 | QP | 22.5 | 21.1 | 10.7 | 10.7 | 33.2 | 31.8 | 60.7 | 27.5 | 28.9 |
| 3 | 0.3169 | QP | 19.5 | 12.8 | 10.7 | 10.7 | 30.2 | 23.5 | 59.8 | 29.6 | 36.3 |
| 4 | 0.4744 | QP | 21.7 | 21.8 | 10.7 | 10.7 | 32.4 | 32.5 | 56.4 | 24.0 | 23.9 |
| 5 | 0.6617 | QP | 21.7 | 22.8 | 10.7 | 10.7 | 32.4 | 33.5 | 56.0 | 23.6 | 22.5 |
| 6 | 0.8513 | QP | 21.5 | 23.5 | 10.7 | 10.7 | 32.2 | 34.2 | 56.0 | 23.8 | 21.8 |
| 7 | 1.7056 | QP | 21.3 | 20.4 | 10.7 | 10.7 | 32.0 | 31.1 | 56.0 | 24.0 | 24.9 |
| 8 | 3.7933 | QP | 28.5 | 30.8 | 11.0 | 11.0 | 39.5 | 41.8 | 56.0 | 16.5 | 14.2 |
| 9 | 3.7933 | AVG | 19.2 | 21.5 | 11.0 | 11.0 | 30.2 | 32.5 | 46.0 | 15.8 | **13.5** |
| 10 | 5.6107 | QP | 28.0 | 25.7 | 11.0 | 11.0 | 39.0 | 36.7 | 60.0 | 21.0 | 23.3 |
| 11 | 26.7944 | QP | 12.5 | 15.9 | 11.5 | 11.7 | 24.0 | 27.6 | 60.0 | 36.0 | 32.4 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emisson Level = Read + Factor(LISN,Pad,Cable)

emiT 3, 0, 0, 0

10.1.2 RX mode(30.000MHz :ANT 1)

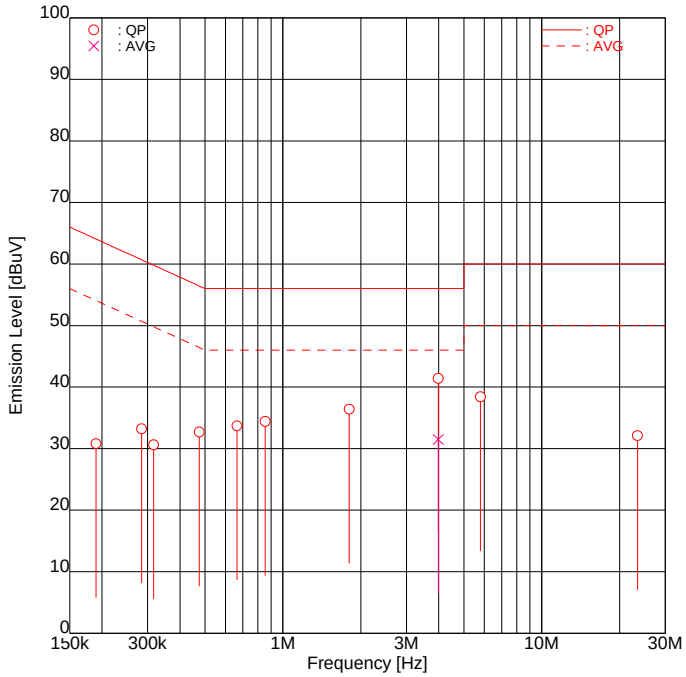
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Conducted Voltages on Mains Port

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (30.000MHz:ANT1) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jul 02 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B Class B |
| TEST METHOD | : ANSI C63.4-2003 |
| TEMPERATURE | : 24.0 [degC] |
| HUMIDITY | : 50.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | MODE | READING [dBuV] Line1 | READING [dBuV] Line2 | FACTOR [dB] Line1 | FACTOR [dB] Line2 | EMISSION [dBuV] Line1 | EMISSION [dBuV] Line2 | LIMIT [dBuV] | MARGIN [dB] Line1 | MARGIN [dB] Line2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.1894 | QP | 19.9 | 20.1 | 10.7 | 10.7 | 30.6 | 30.8 | 64.1 | 33.5 | 33.3 |
| 2 | 0.2843 | QP | 22.5 | 21.1 | 10.7 | 10.7 | 33.2 | 31.8 | 60.7 | 27.5 | 28.9 |
| 3 | 0.3162 | QP | 19.9 | 13.9 | 10.7 | 10.7 | 30.6 | 24.6 | 59.8 | 29.2 | 35.2 |
| 4 | 0.4746 | QP | 21.8 | 22.0 | 10.7 | 10.7 | 32.5 | 32.7 | 56.4 | 23.9 | 23.7 |
| 5 | 0.6643 | QP | 21.7 | 23.0 | 10.7 | 10.7 | 32.4 | 33.7 | 56.0 | 23.6 | 22.3 |
| 6 | 0.8540 | QP | 21.5 | 23.7 | 10.7 | 10.7 | 32.2 | 34.4 | 56.0 | 23.8 | 21.6 |
| 7 | 1.8041 | QP | 18.0 | 25.7 | 10.7 | 10.7 | 28.7 | 36.4 | 56.0 | 27.3 | 19.6 |
| 8 | 3.9819 | QP | 27.4 | 30.4 | 11.0 | 11.0 | 38.4 | 41.4 | 56.0 | 17.6 | 14.6 |
| 9 | 3.9819 | AVG | 17.5 | 20.5 | 11.0 | 11.0 | 28.5 | 31.5 | 46.0 | 17.5 | **14.5** |
| 10 | 5.8029 | QP | 27.4 | 27.2 | 11.0 | 11.0 | 38.4 | 38.2 | 60.0 | 21.6 | 21.8 |
| 11 | 23.4655 | QP | 15.5 | 20.4 | 11.5 | 11.7 | 27.0 | 32.1 | 60.0 | 33.0 | 27.9 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emisson Level = Read + Factor(LISN,Pad,Cable)

emiT 3, 0, 0, 0

10.1.3 RX mode(60.000MHz :ANT 1)

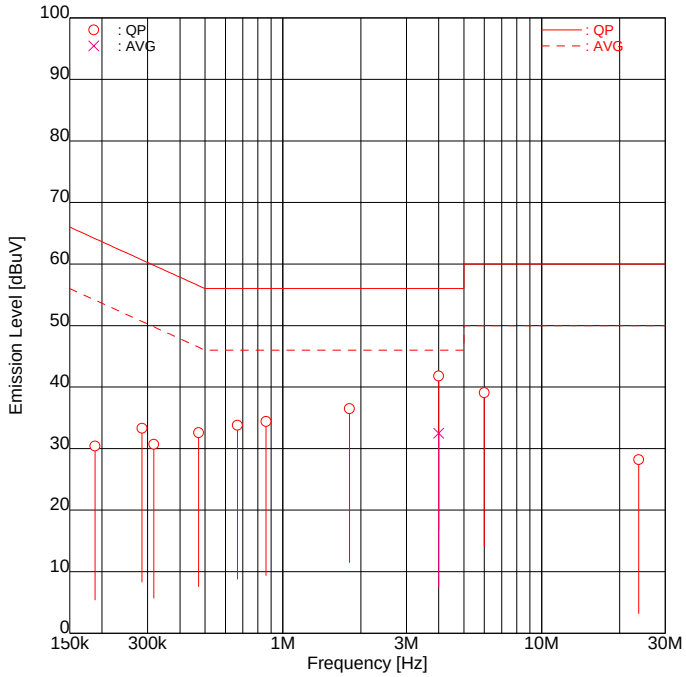
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Conducted Voltages on Mains Port

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (60.000MHz:ANT1) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jul 02 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B Class B |
| TEST METHOD | : ANSI C63.4-2003 |
| TEMPERATURE | : 24.0 [degC] |
| HUMIDITY | : 50.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | MODE | READING [dBuV] Line1 | READING [dBuV] Line2 | FACTOR [dB] Line1 | FACTOR [dB] Line2 | EMISSION [dBuV] Line1 | EMISSION [dBuV] Line2 | LIMIT [dBuV] | MARGIN [dB] Line1 | MARGIN [dB] Line2 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.1880 | QP | 19.5 | 19.7 | 10.7 | 10.7 | 30.2 | 30.4 | 64.1 | 33.9 | 33.7 |
| 2 | 0.2856 | QP | 22.6 | 21.3 | 10.7 | 10.7 | 33.3 | 32.0 | 60.7 | 27.4 | 28.7 |
| 3 | 0.3173 | QP | 20.0 | 14.2 | 10.7 | 10.7 | 30.7 | 24.9 | 59.8 | 29.1 | 34.9 |
| 4 | 0.4723 | QP | 21.6 | 21.9 | 10.7 | 10.7 | 32.3 | 32.6 | 56.5 | 24.2 | 23.9 |
| 5 | 0.6674 | QP | 21.9 | 23.1 | 10.7 | 10.7 | 32.6 | 33.8 | 56.0 | 23.4 | 22.2 |
| 6 | 0.8605 | QP | 21.5 | 23.7 | 10.7 | 10.7 | 32.2 | 34.4 | 56.0 | 23.8 | 21.6 |
| 7 | 1.8065 | QP | 18.2 | 25.8 | 10.7 | 10.7 | 28.9 | 36.5 | 56.0 | 27.1 | 19.5 |
| 8 | 3.9980 | QP | 27.9 | 30.8 | 11.0 | 11.0 | 38.9 | 41.8 | 56.0 | 17.1 | 14.2 |
| 9 | 3.9980 | AVG | 18.7 | 21.5 | 11.0 | 11.0 | 29.7 | 32.5 | 46.0 | 16.3 | **13.5** |
| 10 | 5.9987 | QP | 25.8 | 28.1 | 11.0 | 11.0 | 36.8 | 39.1 | 60.0 | 23.2 | 20.9 |
| 11 | 23.6936 | QP | 11.5 | 16.5 | 11.5 | 11.7 | 23.0 | 28.2 | 60.0 | 37.0 | 31.8 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emisson Level = Read + Factor(LISN,Pad,Cable)

emiT 3, 0, 0, 0

**10.2 Radiated disturbance**

10.2.1 RX mode(0.03MHz :ANT 1) [30 – 1000MHz]

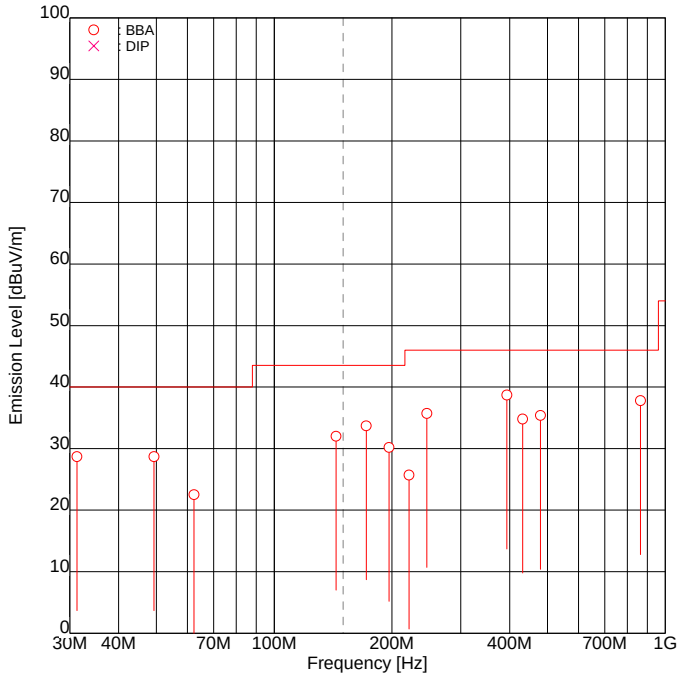
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Radiated Electric Field

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (0.03MHz:ANT1) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jul 05 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B Class B |
| TEST METHOD | : ANSI C63.4-2003 |
| DISTANCE | : 3.00 [m] |
| TEMPERATURE | : 25.0 [degC] |
| HUMIDITY | : 69.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | ANT. | READING [dBuV] Hori | READING [dBuV] Vert | FACTOR [dB/m] Hori | FACTOR [dB/m] Vert | EMISSION [dBuV/m] Hori | EMISSION [dBuV/m] Vert | LIMIT [dBuV/m] | MARGIN [dB] Hori | MARGIN [dB] Vert |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 31.30 | BBA | - | 36.0 | -7.3 | -7.3 | - | 28.7 | 40.0 | - | 11.3 |
| 2 | 49.27 | BBA | 34.0 | - | -5.3 | -5.3 | 28.7 | - | 40.0 | 11.3 | - |
| 3 | 62.40 | BBA | - | 28.2 | -5.7 | -5.7 | - | 22.5 | 40.0 | - | 17.5 |
| 4 | 144.02 | BBA | 36.3 | - | -4.3 | -4.3 | 32.0 | - | 43.5 | 11.5 | - |
| 5 | 172.04 | BBA | - | 38.2 | -4.5 | -4.5 | - | 33.7 | 43.5 | - | 9.8 |
| 6 | 196.61 | BBA | 32.2 | 36.1 | -5.9 | -5.9 | 26.3 | 30.2 | 43.5 | 17.2 | 13.3 |
| 7 | 221.19 | BBA | 30.8 | 28.2 | -5.1 | -5.1 | 25.7 | 23.1 | 46.0 | 20.3 | 22.9 |
| 8 | 245.77 | BBA | 37.2 | 39.7 | -4.0 | -4.0 | 33.2 | 35.7 | 46.0 | 12.8 | 10.3 |
| 9 | 393.60 | BBA | 38.4 | 35.6 | 0.3 | 0.3 | 38.7 | 35.9 | 46.0 | **7.3** | 10.1 |
| 10 | 432.05 | BBA | 33.6 | - | 1.2 | 1.2 | 34.8 | - | 46.0 | 11.2 | - |
| 11 | 480.06 | BBA | 33.1 | - | 2.3 | 2.3 | 35.4 | - | 46.0 | 10.6 | - |
| 12 | 864.12 | BBA | 25.5 | 27.2 | 10.6 | 10.6 | 36.1 | 37.8 | 46.0 | 9.9 | 8.2 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

emiT 3, 0, 0, 0

10.2.2 RX mode(0.03MHz :ANT 1) [1000 – 2000MHz]

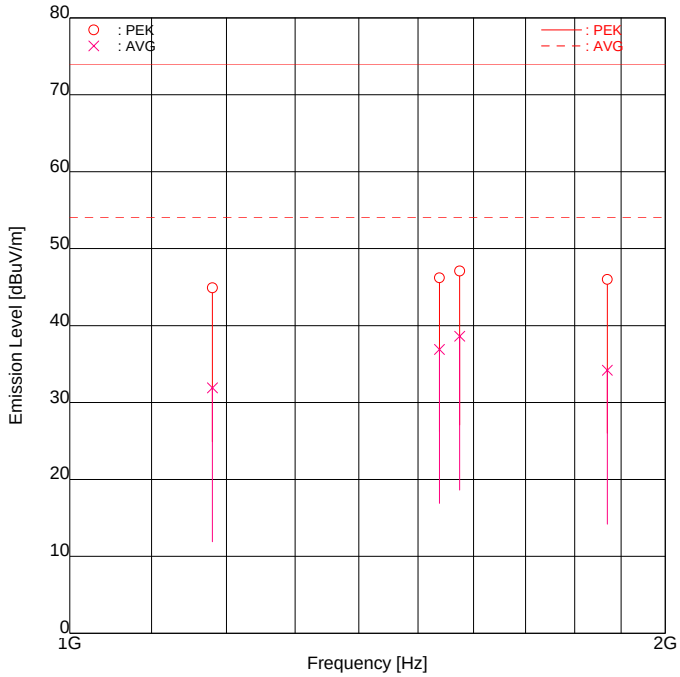
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Radiated Electric Field

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (0.03MHz:ANT1) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jul 06 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B Class B |
| TEST METHOD | : ANSI C63.4-2003 |
| DISTANCE | : 3.00 [m] |
| TEMPERATURE | : 23.0 [degC] |
| HUMIDITY | : 69.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | MODE | READING [dBuV] Hori | READING [dBuV] Vert | FACTOR [dB] Hori | FACTOR [dB] Vert | EMISSION [dBuV/m] Hori | EMISSION [dBuV/m] Vert | LIMIT [dBuV/m] | MARGIN [dB] Hori | MARGIN [dB] Vert |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1180.83 | PEK | 44.2 | 47.3 | -2.4 | -2.4 | 41.8 | 44.9 | 74.0 | 32.2 | 29.1 |
| 2 | 1180.83 | AVG | 33.5 | 34.3 | -2.4 | -2.4 | 31.1 | 31.9 | 54.0 | 22.9 | 22.1 |
| 3 | 1537.82 | PEK | 47.0 | 42.5 | -0.8 | -0.8 | 46.2 | 41.7 | 74.0 | 27.8 | 32.3 |
| 4 | 1537.82 | AVG | 37.7 | 34.9 | -0.8 | -0.8 | 36.9 | 34.1 | 54.0 | 17.1 | 19.9 |
| 5 | 1574.33 | PEK | 47.2 | 47.8 | -0.7 | -0.7 | 46.5 | 47.1 | 74.0 | 27.5 | 26.9 |
| 6 | 1574.33 | AVG | 36.8 | 39.3 | -0.7 | -0.7 | 36.1 | 38.6 | 54.0 | 17.9 | **15.4** |
| 7 | 1869.63 | PEK | 45.1 | 44.7 | 0.9 | 0.9 | 46.0 | 45.6 | 74.0 | 28.0 | 28.4 |
| 8 | 1869.63 | AVG | 32.9 | 33.3 | 0.9 | 0.9 | 33.8 | 34.2 | 54.0 | 20.2 | 19.8 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

emiT 3, 0, 0, 0

10.2.3 RX mode(30.000MHz :ANT 1) [30 – 1000MHz]

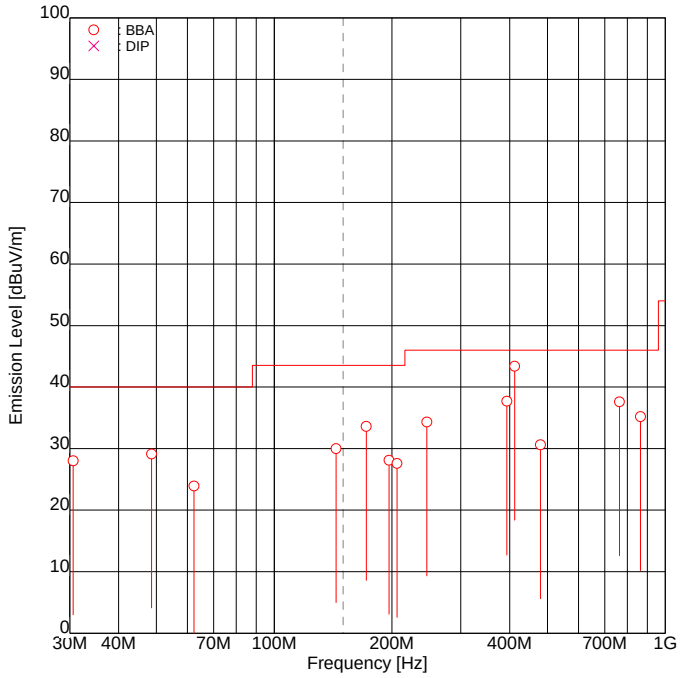
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Radiated Electric Field

APPLICANT : Kenwood Corporation
EUT NAME : HF/50MHz ALL MODE TRANSCEIVER
MODEL NO. : TS-590S
SERIAL NO. : None
TEST MODE : RX mode (30.000MHz:ANT1)
POWER SOURCE : DC 13.8 V
DATE TESTED : Jul 05 2010
FILE NO. : JT10070001
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2003
DISTANCE : 3.00 [m]
TEMPERATURE : 25.0 [degC]
HUMIDITY : 69.0 [%]
NOTE :

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | ANT. | READING [dBuV] Hori | READING [dBuV] Vert | FACTOR [dB/m] Hori | FACTOR [dB/m] Vert | EMISSION [dBuV/m] Hori | EMISSION [dBuV/m] Vert | LIMIT [dBuV/m] | MARGIN [dB] Hori | MARGIN [dB] Vert |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 30.63 | BBA | - | 35.4 | -7.4 | -7.4 | - | 28.0 | 40.0 | - | 12.0 |
| 2 | 48.61 | BBA | 34.4 | - | -5.3 | -5.3 | 29.1 | - | 40.0 | 10.9 | - |
| 3 | 62.40 | BBA | - | 29.6 | -5.7 | -5.7 | - | 23.9 | 40.0 | - | 16.1 |
| 4 | 144.02 | BBA | 34.3 | - | -4.3 | -4.3 | 30.0 | - | 43.5 | 13.5 | - |
| 5 | 172.04 | BBA | - | 38.1 | -4.5 | -4.5 | - | 33.6 | 43.5 | - | 9.9 |
| 6 | 196.80 | BBA | 34.0 | 33.0 | -5.9 | -5.9 | 28.1 | 27.1 | 43.5 | 15.4 | 16.4 |
| 7 | 206.19 | BBA | 33.5 | 32.2 | -5.9 | -5.9 | 27.6 | 26.3 | 43.5 | 15.9 | 17.2 |
| 8 | 245.77 | BBA | 38.3 | 37.2 | -4.0 | -4.0 | 34.3 | 33.2 | 46.0 | 11.7 | 12.8 |
| 9 | 393.60 | BBA | 35.9 | 37.4 | 0.3 | 0.3 | 36.2 | 37.7 | 46.0 | 9.8 | 8.3 |
| 10 | 412.37 | BBA | 42.7 | 42.2 | 0.7 | 0.7 | 43.4 | 42.9 | 46.0 | **2.6** | 3.1 |
| 11 | 480.06 | BBA | 28.3 | - | 2.3 | 2.3 | 30.6 | - | 46.0 | 15.4 | - |
| 12 | 764.36 | BBA | - | 28.9 | 8.7 | 8.7 | - | 37.6 | 46.0 | - | 8.4 |
| 13 | 864.12 | BBA | 24.1 | 24.6 | 10.6 | 10.6 | 34.7 | 35.2 | 46.0 | 11.3 | 10.8 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

emiT 3, 0, 0, 0

10.2.4 RX mode(30.000MHz :ANT 1) [1000 – 2000MHz]

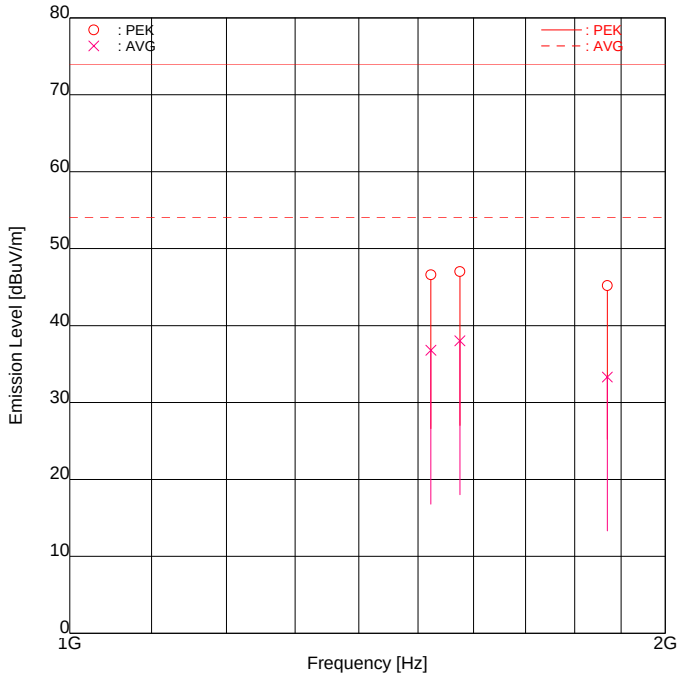
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Radiated Electric Field

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (30.000MHz:ANT1) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jul 06 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B Class B |
| TEST METHOD | : ANSI C63.4-2003 |
| DISTANCE | : 3.00 [m] |
| TEMPERATURE | : 23.0 [degC] |
| HUMIDITY | : 69.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | MODE | READING [dBuV] Hori | READING [dBuV] Vert | FACTOR [dB] Hori | FACTOR [dB] Vert | EMISSION [dBuV/m] Hori | EMISSION [dBuV/m] Vert | LIMIT [dBuV/m] | MARGIN [dB] Hori | MARGIN [dB] Vert |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1522.63 | PEK | 47.4 | 47.5 | -0.9 | -0.9 | 46.5 | 46.6 | 74.0 | 27.5 | 27.4 |
| 2 | 1522.63 | AVG | 37.7 | 36.7 | -0.9 | -0.9 | 36.8 | 35.8 | 54.0 | 17.2 | 18.2 |
| 3 | 1574.67 | PEK | 47.7 | 47.4 | -0.7 | -0.7 | 47.0 | 46.7 | 74.0 | 27.0 | 27.3 |
| 4 | 1574.67 | AVG | 38.7 | 38.1 | -0.7 | -0.7 | 38.0 | 37.4 | 54.0 | **16.0** | 16.6 |
| 5 | 1869.72 | PEK | 44.3 | 44.2 | 0.9 | 0.9 | 45.2 | 45.1 | 74.0 | 28.8 | 28.9 |
| 6 | 1869.72 | AVG | 31.7 | 32.4 | 0.9 | 0.9 | 32.6 | 33.3 | 54.0 | 21.4 | 20.7 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

emiT 3, 0, 0, 0

10.2.5 RX mode(60.000MHz :ANT 1) [30 – 1000MHz]

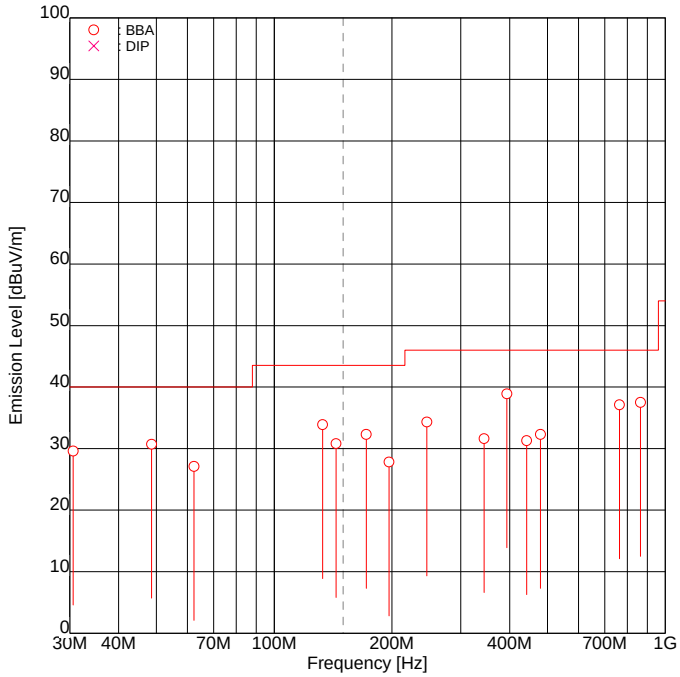
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Radiated Electric Field

APPLICANT : Kenwood Corporation
EUT NAME : HF/50MHz ALL MODE TRANSCEIVER
MODEL NO. : TS-590S
SERIAL NO. : None
TEST MODE : RX mode (60.000MHz:ANT1)
POWER SOURCE : DC 13.8 V
DATE TESTED : Jul 05 2010
FILE NO. : JT10070001
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2003
DISTANCE : 3.00 [m]
TEMPERATURE : 25.0 [degC]
HUMIDITY : 69.0 [%]
NOTE :

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | ANT. | READING [dBuV] Hori | READING [dBuV] Vert | FACTOR [dB/m] Hori | FACTOR [dB/m] Vert | EMISSION [dBuV/m] Hori | EMISSION [dBuV/m] Vert | LIMIT [dBuV/m] | MARGIN [dB] Hori | MARGIN [dB] Vert |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 30.63 | BBA | - | 37.0 | -7.4 | -7.4 | - | 29.6 | 40.0 | - | 10.4 |
| 2 | 48.61 | BBA | 36.0 | - | -5.3 | -5.3 | 30.7 | - | 40.0 | 9.3 | - |
| 3 | 62.40 | BBA | - | 32.8 | -5.7 | -5.7 | - | 27.1 | 40.0 | - | 12.9 |
| 4 | 133.10 | BBA | 39.1 | 38.3 | -5.2 | -5.2 | 33.9 | 33.1 | 43.5 | 9.6 | 10.4 |
| 5 | 144.02 | BBA | 35.1 | - | -4.3 | -4.3 | 30.8 | - | 43.5 | 12.7 | - |
| 6 | 172.04 | BBA | 33.4 | 36.8 | -4.5 | -4.5 | 28.9 | 32.3 | 43.5 | 14.6 | 11.2 |
| 7 | 196.80 | BBA | 33.7 | 31.3 | -5.9 | -5.9 | 27.8 | 25.4 | 43.5 | 15.7 | 18.1 |
| 8 | 245.77 | BBA | 36.1 | 38.3 | -4.0 | -4.0 | 32.1 | 34.3 | 46.0 | 13.9 | 11.7 |
| 9 | 344.07 | BBA | 32.1 | - | -0.5 | -0.5 | 31.6 | - | 46.0 | 14.4 | - |
| 10 | 393.60 | BBA | 38.6 | 37.1 | 0.3 | 0.3 | 38.9 | 37.4 | 46.0 | **7.1** | 8.6 |
| 11 | 442.38 | BBA | - | 29.9 | 1.4 | 1.4 | - | 31.3 | 46.0 | - | 14.7 |
| 12 | 480.06 | BBA | 30.0 | - | 2.3 | 2.3 | 32.3 | - | 46.0 | 13.7 | - |
| 13 | 764.36 | BBA | - | 28.4 | 8.7 | 8.7 | - | 37.1 | 46.0 | - | 8.9 |
| 14 | 864.12 | BBA | 24.9 | 26.9 | 10.6 | 10.6 | 35.5 | 37.5 | 46.0 | 10.5 | 8.5 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

emiT 3, 0, 0, 0

10.2.6 RX mode(60.000MHz :ANT 1) [1000 – 2000MHz]

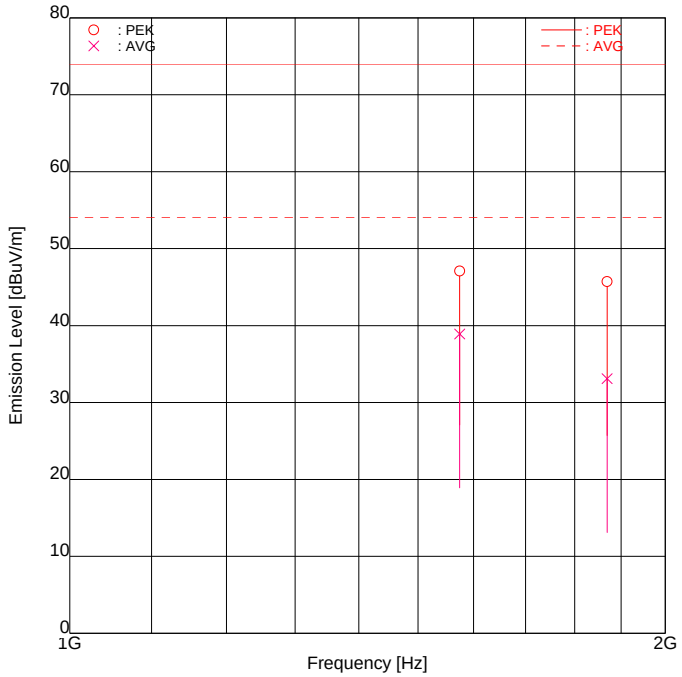
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Radiated Electric Field

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (60.000MHz:ANT1) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jul 06 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B Class B |
| TEST METHOD | : ANSI C63.4-2003 |
| DISTANCE | : 3.00 [m] |
| TEMPERATURE | : 23.0 [degC] |
| HUMIDITY | : 69.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | MODE | READING [dBuV] Hori | READING [dBuV] Vert | FACTOR [dB] Hori | FACTOR [dB] Vert | EMISSION [dBuV/m] Hori | EMISSION [dBuV/m] Vert | LIMIT [dBuV/m] | MARGIN [dB] Hori | MARGIN [dB] Vert |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 1574.38 | PEK | 47.6 | 47.8 | -0.7 | -0.7 | 46.9 | 47.1 | 74.0 | 27.1 | 26.9 |
| 2 | 1574.38 | AVG | 39.2 | 39.6 | -0.7 | -0.7 | 38.5 | 38.9 | 54.0 | 15.5 | **15.1** |
| 3 | 1869.16 | PEK | 44.7 | 44.8 | 0.9 | 0.9 | 45.6 | 45.7 | 74.0 | 28.4 | 28.3 |
| 4 | 1869.16 | AVG | 31.8 | 32.2 | 0.9 | 0.9 | 32.7 | 33.1 | 54.0 | 21.3 | 20.9 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B Class B limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
ANT. : Used antenna(BBA = Broadband antenna, DIP = Dipole antenna)

emiT 3, 0, 0, 0

**10.3 Conducted Power on Antenna Port ( 15.111 )**

10.3.1 RX mode(0.03MHz :ANT 1) [30 – 1000MHz]

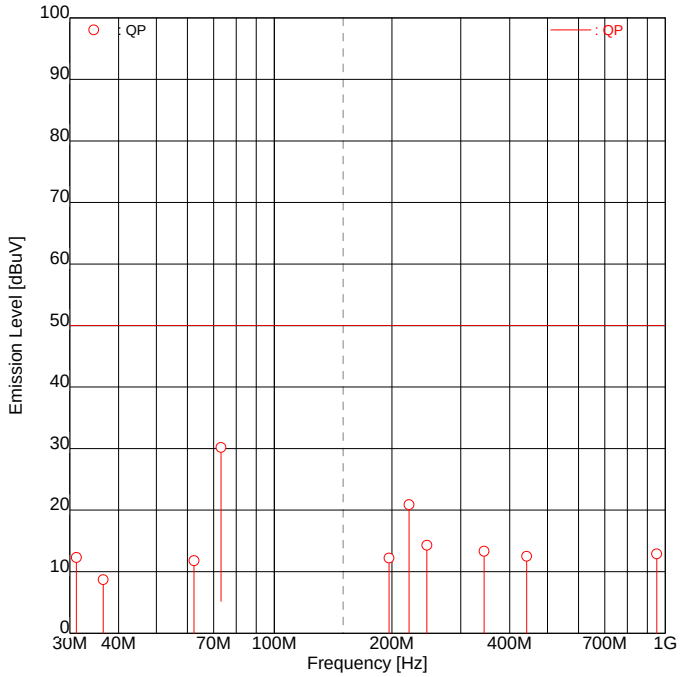
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Conducted Power on Antenna Port

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (0.03MHz:ANT1) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jun 30 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B (15.111) |
| TEST METHOD | : ANSI C63.4-2003 |
| TEMPERATURE | : 25.0 [degC] |
| HUMIDITY | : 60.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | READING [dBuV] | FACTOR [dB] | EMISSION [dBuV] | LIMIT [dBuV] | MARGIN [dB] |
|---|---|---|---|---|---|---|
| 1 | 31.1977 | 28.3 | -16.0 | 12.3 | 50.0 | 37.7 |
| 2 | 36.5633 | 24.6 | -15.9 | 8.7 | 50.0 | 41.3 |
| 3 | 62.3997 | 27.4 | -15.6 | 11.8 | 50.0 | 38.2 |
| 4 | 73.1237 | 45.6 | -15.4 | 30.2 | 50.0 | **19.8** |
| 5 | 196.8000 | 26.0 | -13.8 | 12.2 | 50.0 | 37.8 |
| 6 | 221.1900 | 34.3 | -13.4 | 20.9 | 50.0 | 29.1 |
| 7 | 245.7700 | 27.5 | -13.2 | 14.3 | 50.0 | 35.7 |
| 8 | 344.0700 | 26.1 | -12.8 | 13.3 | 50.0 | 36.7 |
| 9 | 442.3800 | 25.6 | -13.1 | 12.5 | 50.0 | 37.5 |
| 10 | 950.6250 | 23.5 | -10.6 | 12.9 | 50.0 | 37.1 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
Limit: 2nW = 50dBuV (50ohm impedance)

emiT 3, 0, 0, 0

10.3.2 RX mode(0.03MHz :ANT 1) [1000 – 2000MHz]

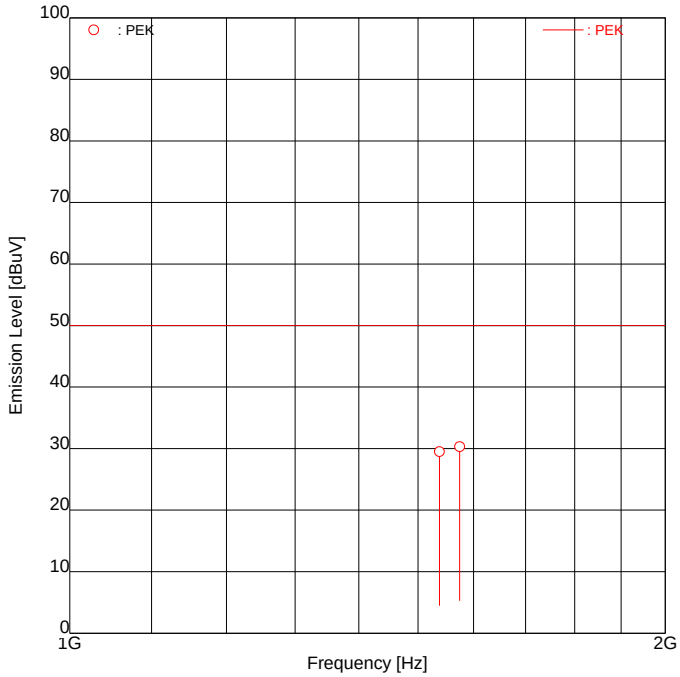
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Conducted Power on Antenna Port

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (0.03MHz :ANT1) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jun 30 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B (15.111) |
| TEST METHOD | : ANSI C63.4-2003 |
| TEMPERATURE | : 24.0 [degC] |
| HUMIDITY | : 65.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | READING [dBuV] | FACTOR [dB] | EMISSION [dBuV] | LIMIT [dBuV] | MARGIN [dB] |
|---|---|---|---|---|---|---|
| 1 | 1537.9680 | 49.2 | -19.7 | 29.5 | 50.0 | 20.5 |
| 2 | 1574.3100 | 50.0 | -19.7 | 30.3 | 50.0 | **19.7** |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
Limit: 2nW = 50dBuV (50ohm impedance)

emiT 3, 0, 0, 0

10.3.3 RX mode(30.000MHz :ANT 1) [30 – 1000MHz]

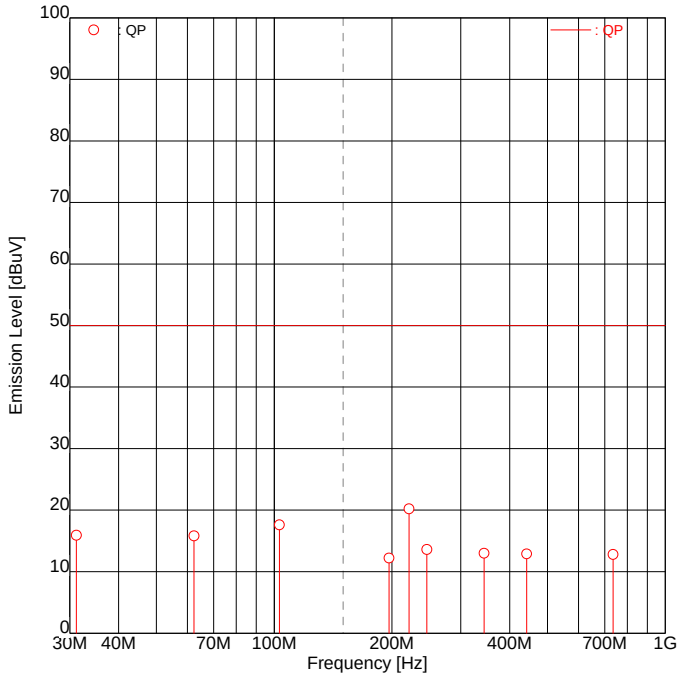
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Conducted Power on Antenna Port

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (30.000MHz:ANT1) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jun 30 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B (15.111) |
| TEST METHOD | : ANSI C63.4-2003 |
| TEMPERATURE | : 25.0 [degC] |
| HUMIDITY | : 60.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | READING [dBuV] | FACTOR [dB] | EMISSION [dBuV] | LIMIT [dBuV] | MARGIN [dB] |
|---|---|---|---|---|---|---|
| 1 | 31.1987 | 31.9 | -16.0 | 15.9 | 50.0 | 34.1 |
| 2 | 62.4008 | 31.4 | -15.6 | 15.8 | 50.0 | 34.2 |
| 3 | 103.0920 | 32.6 | -15.0 | 17.6 | 50.0 | 32.4 |
| 4 | 196.7990 | 26.0 | -13.8 | 12.2 | 50.0 | 37.8 |
| 5 | 221.1900 | 33.6 | -13.4 | 20.2 | 50.0 | **29.8** |
| 6 | 245.7700 | 26.8 | -13.2 | 13.6 | 50.0 | 36.4 |
| 7 | 344.0750 | 25.8 | -12.8 | 13.0 | 50.0 | 37.0 |
| 8 | 442.3800 | 26.0 | -13.1 | 12.9 | 50.0 | 37.1 |
| 9 | 735.6510 | 24.9 | -12.1 | 12.8 | 50.0 | 37.2 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
Limit: 2nW = 50dBuV (50ohm impedance)

emiT 3, 0, 0, 0

10.3.4 RX mode(30.000MHz :ANT 1) [1000 – 2000MHz]

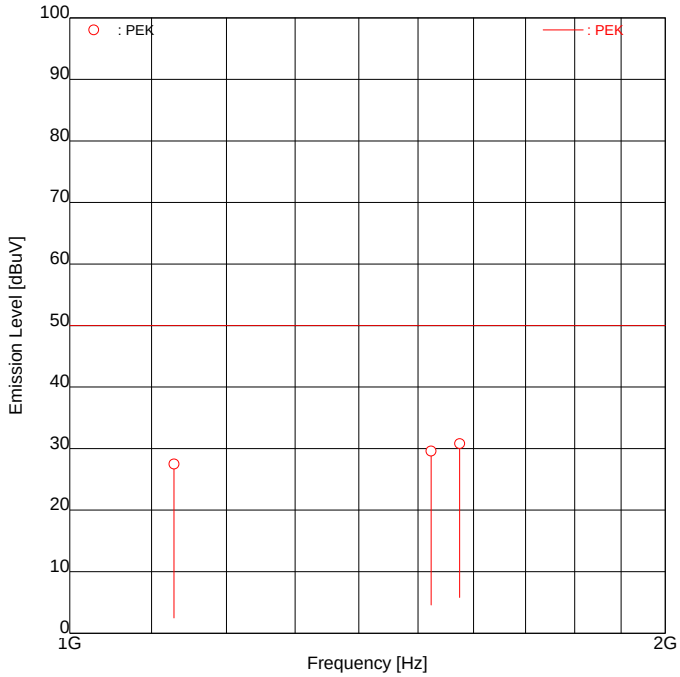
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Conducted Power on Antenna Port

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (30.000MHz :ANT1) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jun 30 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B (15.111) |
| TEST METHOD | : ANSI C63.4-2003 |
| TEMPERATURE | : 24.0 [degC] |
| HUMIDITY | : 65.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | READING [dBuV] | FACTOR [dB] | EMISSION [dBuV] | LIMIT [dBuV] | MARGIN [dB] |
|---|---|---|---|---|---|---|
| 1 | 1129.2330 | 48.1 | -20.6 | 27.5 | 50.0 | 22.5 |
| 2 | 1522.8170 | 49.3 | -19.7 | 29.6 | 50.0 | 20.4 |
| 3 | 1574.2870 | 50.5 | -19.7 | 30.8 | 50.0 | **19.2** |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
Limit: 2nW = 50dBuV (50ohm impedance)

emiT 3, 0, 0, 0

10.3.5 RX mode(60.000MHz :ANT 1) [30 – 1000MHz]

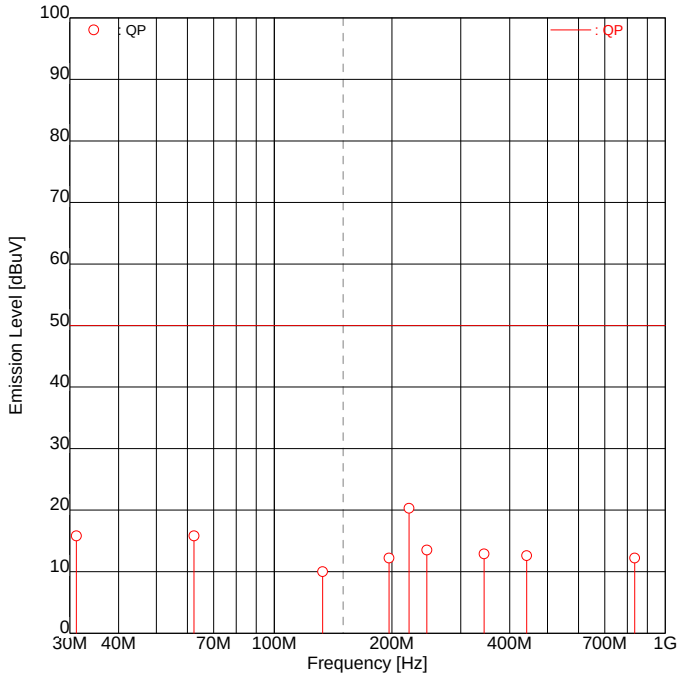
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Conducted Power on Antenna Port

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (60.000MHz:ANT1) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jun 30 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B (15.111) |
| TEST METHOD | : ANSI C63.4-2003 |
| TEMPERATURE | : 25.0 [degC] |
| HUMIDITY | : 60.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | READING [dBuV] | FACTOR [dB] | EMISSION [dBuV] | LIMIT [dBuV] | MARGIN [dB] |
|---|---|---|---|---|---|---|
| 1 | 31.1987 | 31.8 | -16.0 | 15.8 | 50.0 | 34.2 |
| 2 | 62.4000 | 31.4 | -15.6 | 15.8 | 50.0 | 34.2 |
| 3 | 133.0900 | 24.6 | -14.6 | 10.0 | 50.0 | 40.0 |
| 4 | 196.7990 | 26.0 | -13.8 | 12.2 | 50.0 | 37.8 |
| 5 | 221.1900 | 33.7 | -13.4 | 20.3 | 50.0 | **29.7** |
| 6 | 245.7690 | 26.7 | -13.2 | 13.5 | 50.0 | 36.5 |
| 7 | 344.0750 | 25.7 | -12.8 | 12.9 | 50.0 | 37.1 |
| 8 | 442.3800 | 25.7 | -13.1 | 12.6 | 50.0 | 37.4 |
| 9 | 835.6150 | 23.6 | -11.4 | 12.2 | 50.0 | 37.8 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
Limit: 2nW = 50dBuV (50ohm impedance)

emiT 3, 0, 0, 0

10.3.6 RX mode(60.000MHz :ANT 1) [1000 – 2000MHz]

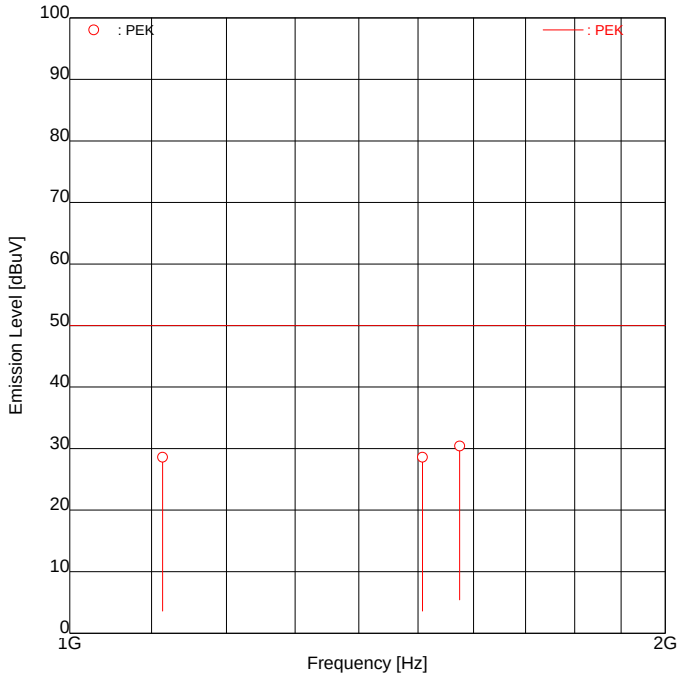
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Conducted Power on Antenna Port

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (60.000MHz :ANT1) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jun 30 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B (15.111) |
| TEST METHOD | : ANSI C63.4-2003 |
| TEMPERATURE | : 24.0 [degC] |
| HUMIDITY | : 65.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | READING [dBuV] | FACTOR [dB] | EMISSION [dBuV] | LIMIT [dBuV] | MARGIN [dB] |
|---|---|---|---|---|---|---|
| 1 | 1114.2500 | 49.3 | -20.7 | 28.6 | 50.0 | 21.4 |
| 2 | 1507.8580 | 48.3 | -19.7 | 28.6 | 50.0 | 21.4 |
| 3 | 1574.2750 | 50.1 | -19.7 | 30.4 | 50.0 | **19.6** |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
Limit: 2nW = 50dBuV (50ohm impedance)

emiT 3, 0, 0, 0

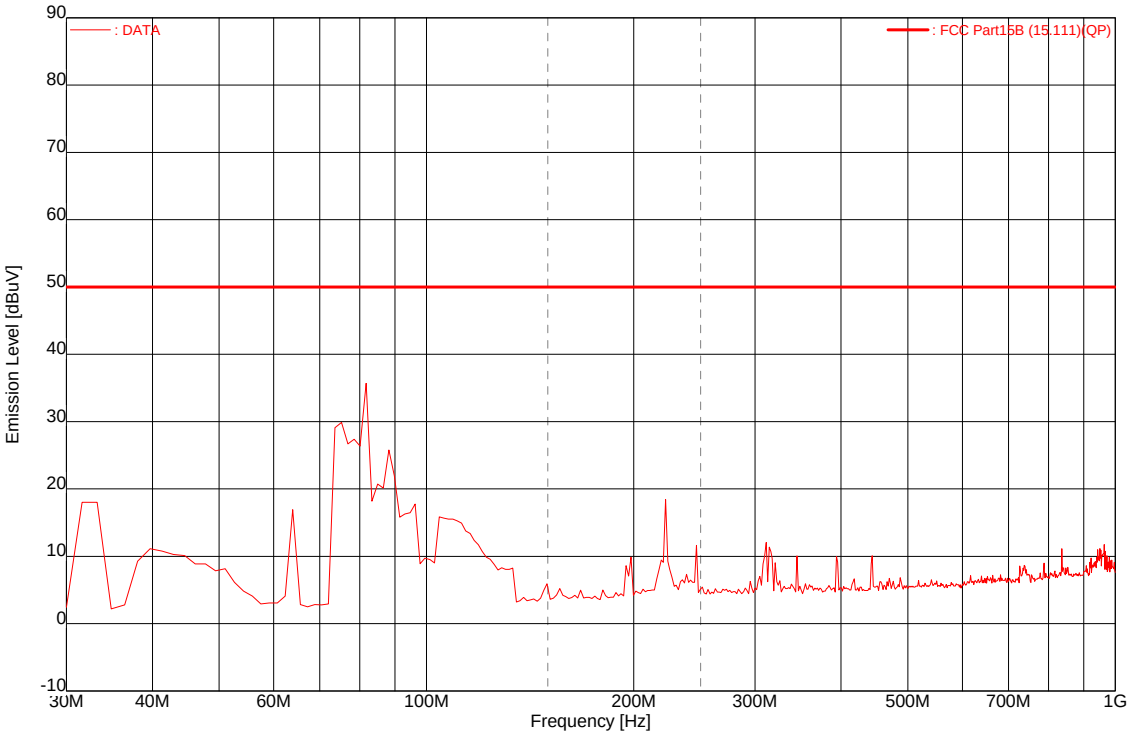
10.3.7 RX mode(VFO SCAN :ANT 1) [30 – 1000MHz]

# SPECTRUM ANALYSIS

Tochigi No.2 Test Site

25.0degC /60.0%

| | | | |
|---|---|---|---|
| Date tested | : Jun 30 2010 | Test mode | : RX mode (VFO SCAN :ANT1) |
| Company | : Kenwood Corporation | Power source | : DC 13.8 V |
| EUT Name | : HF/50MHz ALL MODE RECEIVER | File number | : JT10070001 |
| Model number | : TS-590S | Engineer | : Atsuyuki Morishima |
| Serial number | : None | Note | : |




| Frequency [ MHz ] | Reading [ dBuV ] | Factor [ dB ] | Emission [ dBuV ] | Limit [ dBuV ] | Margin [ dB ] |
|---|---|---|---|---|---|
| 31.20 | 35.4 | -16.0 | 19.4 | 50.0 | 30.6 |
| 74.79 | 46.3 | -15.4 | 30.9 | 50.0 | 19.1 |
| 80.00 | 52.0 | -15.3 | 36.7 | 50.0 | 13.3 |
| 87.03 | 41.7 | -15.2 | 26.5 | 50.0 | 23.5 |
| 103.32 | 32.0 | -15.0 | 17.0 | 50.0 | 33.0 |
| 221.19 | 32.8 | -13.4 | 19.4 | 50.0 | 30.6 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emission Level = Read + Factor ( Pad, Cable, Preamp)
Limit : 2nW = 50dBuV (50ohm impedance)

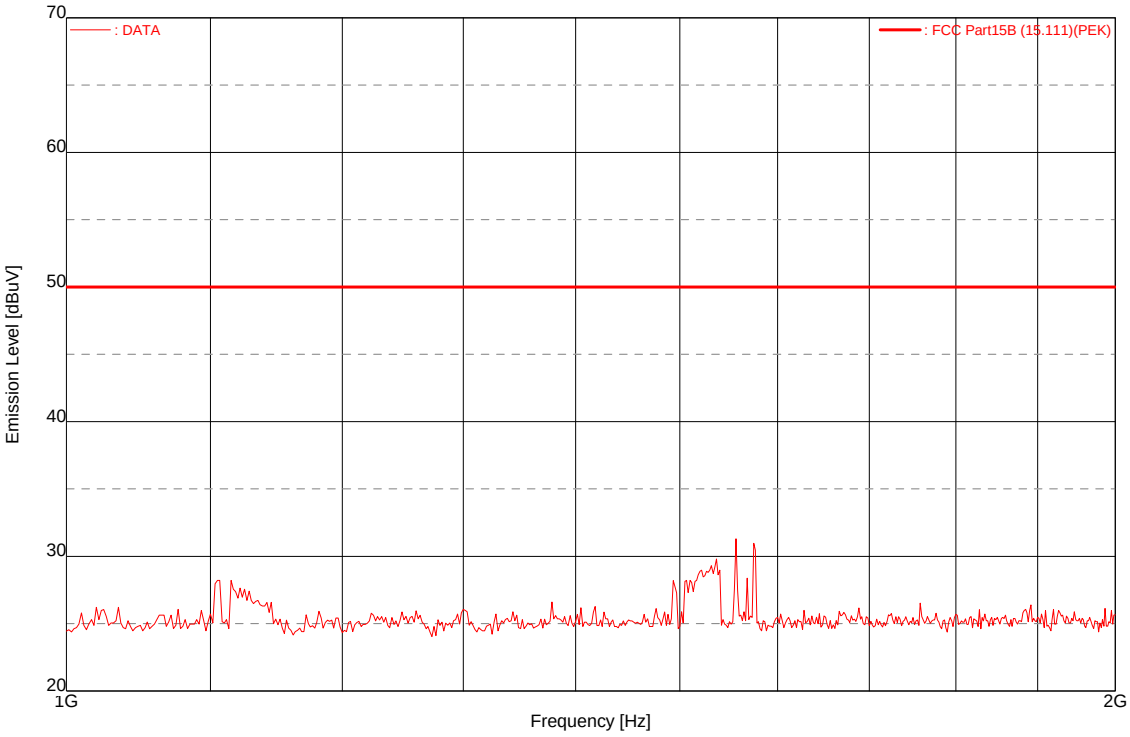
10.3.8 RX mode(VFO SCAN :ANT 1) [1000 – 2000MHz]

# SPECTRUM ANALYSIS

## Tochigi No.2 Test Site

24.0degC /65.0%

| | | | |
|---|---|---|---|
| Date tested | : Jun 30 2010 | Test mode | : RX mode (VFO SCAN: ANT1) |
| Company | : Kenwood Corporation | Power source | : DC 13.8 V |
| EUT Name | : HF/50MHz ALL MODE RECEIVER | File number | : JT10070001 |
| Model number | : TS-590S | Engineer | : Atsuyuki Morishima |
| Serial number | : None | Note | : |




| Frequency [ MHz ] | Reading [ dBuV ] | Factor [ dB ] | Emission [ dBuV ] | Limit [ dBuV ] | Margin [ dB ] |
|---|---|---|---|---|---|
| 1555.24 | 52.1 | -19.7 | 32.4 | 50.0 | 17.6 |
| 1574.30 | 51.0 | -19.7 | 31.3 | 50.0 | 18.7 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emission Level = Read + Factor ( Pad, Cable, Preamp)
Limit : 2nW = 50dBuV (50ohm impedance)
Note : There is the margin of 20dB over expect for the above points.

10.3.9 RX mode(0.03MHz :ANT 2) [30 – 1000MHz]

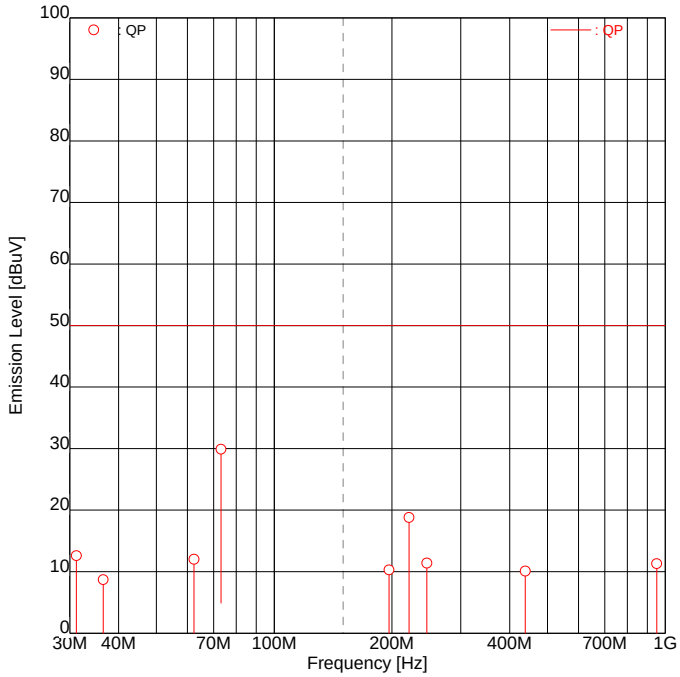
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Conducted Power on Antenna Port

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (0.03MHz:ANT2) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jun 30 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B (15.111) |
| TEST METHOD | : ANSI C63.4-2003 |
| TEMPERATURE | : 25.0 [degC] |
| HUMIDITY | : 60.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | READING [dBuV] | FACTOR [dB] | EMISSION [dBuV] | LIMIT [dBuV] | MARGIN [dB] |
|---|---|---|---|---|---|---|
| 1 | 31.1977 | 28.6 | -16.0 | 12.6 | 50.0 | 37.4 |
| 2 | 36.5633 | 24.6 | -15.9 | 8.7 | 50.0 | 41.3 |
| 3 | 62.3997 | 27.6 | -15.6 | 12.0 | 50.0 | 38.0 |
| 4 | 73.1237 | 45.3 | -15.4 | 29.9 | 50.0 | **20.1** |
| 5 | 196.8000 | 24.1 | -13.8 | 10.3 | 50.0 | 39.7 |
| 6 | 221.1900 | 32.2 | -13.4 | 18.8 | 50.0 | 31.2 |
| 7 | 245.7700 | 24.6 | -13.2 | 11.4 | 50.0 | 38.6 |
| 8 | 438.7500 | 23.2 | -13.1 | 10.1 | 50.0 | 39.9 |
| 9 | 950.6250 | 21.9 | -10.6 | 11.3 | 50.0 | 38.7 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
Limit: 2nW = 50dBuV (50ohm impedance)

emiT 3, 0, 0, 0

10.3.10 RX mode(0.03MHz :ANT 2) [1000 . 2000MHz]

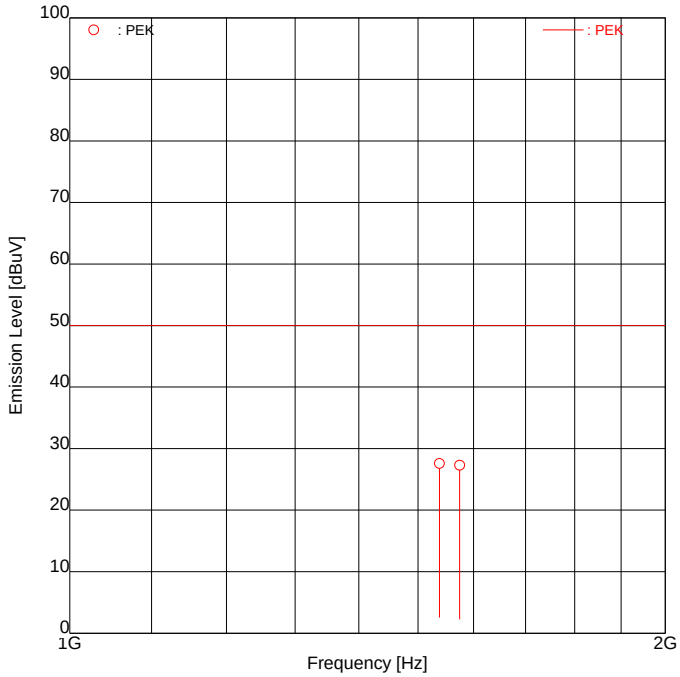
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Conducted Power on Antenna Port

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (0.03MHz :ANT2) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jun 30 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B (15.111) |
| TEST METHOD | : ANSI C63.4-2003 |
| TEMPERATURE | : 24.0 [degC] |
| HUMIDITY | : 65.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | READING [dBuV] | FACTOR [dB] | EMISSION [dBuV] | LIMIT [dBuV] | MARGIN [dB] |
|---|---|---|---|---|---|---|
| 1 | 1537.9680 | 47.3 | -19.7 | 27.6 | 50.0 | **22.4** |
| 2 | 1574.4300 | 47.0 | -19.7 | 27.3 | 50.0 | 22.7 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
Limit: 2nW = 50dBuV (50ohm impedance)

emiT 3, 0, 0, 0

10.3.11 RX mode(30.000MHz :ANT 2) [30 – 1000MHz]

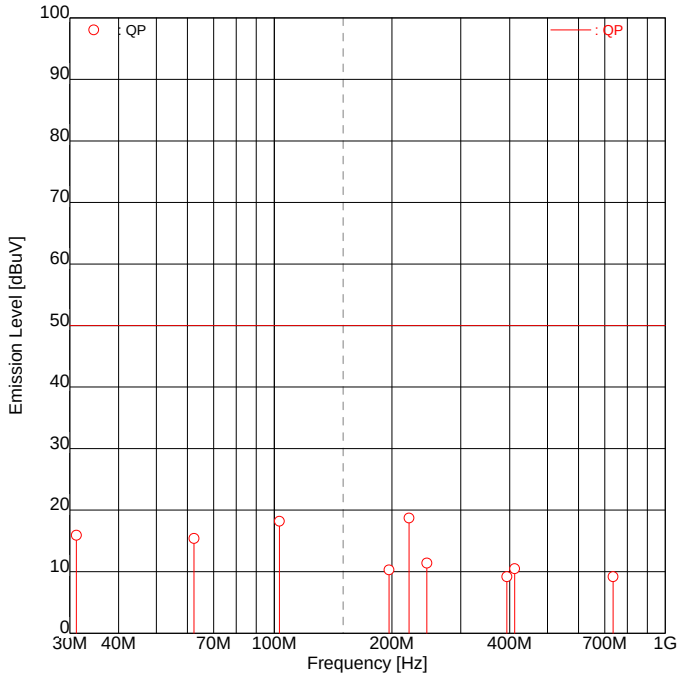
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Conducted Power on Antenna Port

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (30.000MHz:ANT2) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jun 30 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B (15.111) |
| TEST METHOD | : ANSI C63.4-2003 |
| TEMPERATURE | : 25.0 [degC] |
| HUMIDITY | : 60.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | READING [dBuV] | FACTOR [dB] | EMISSION [dBuV] | LIMIT [dBuV] | MARGIN [dB] |
|---|---|---|---|---|---|---|
| 1 | 31.1987 | 31.9 | -16.0 | 15.9 | 50.0 | 34.1 |
| 2 | 62.4008 | 31.0 | -15.6 | 15.4 | 50.0 | 34.6 |
| 3 | 103.0920 | 33.2 | -15.0 | 18.2 | 50.0 | 31.8 |
| 4 | 196.7990 | 24.1 | -13.8 | 10.3 | 50.0 | 39.7 |
| 5 | 221.1900 | 32.1 | -13.4 | 18.7 | 50.0 | **31.3** |
| 6 | 245.7700 | 24.6 | -13.2 | 11.4 | 50.0 | 38.6 |
| 7 | 393.6020 | 22.2 | -13.0 | 9.2 | 50.0 | 40.8 |
| 8 | 412.3810 | 23.5 | -13.0 | 10.5 | 50.0 | 39.5 |
| 9 | 735.6510 | 21.3 | -12.1 | 9.2 | 50.0 | 40.8 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
Limit: 2nW = 50dBuV (50ohm impedance)

emiT 3, 0, 0, 0

10.3.12 RX mode(30.000MHz :ANT 2) [1000 – 2000MHz]

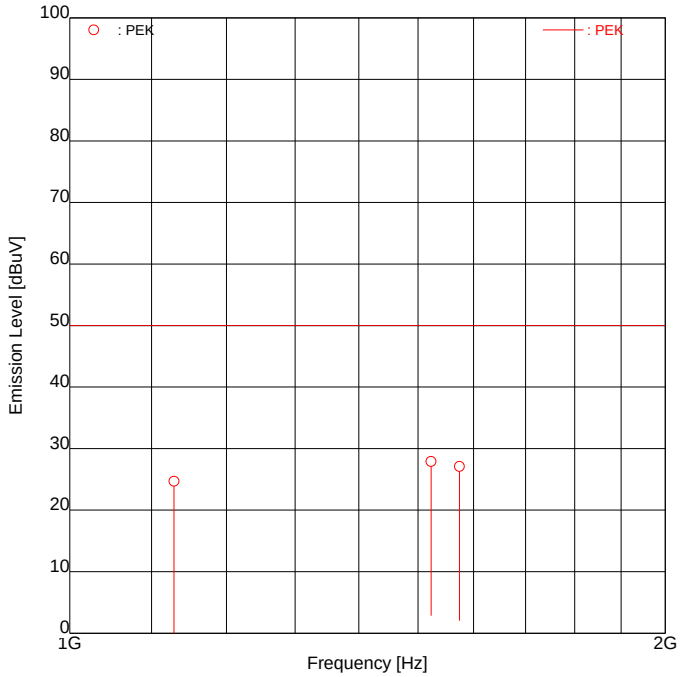
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Conducted Power on Antenna Port

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (30.000MHz :ANT2) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jun 30 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B (15.111) |
| TEST METHOD | : ANSI C63.4-2003 |
| TEMPERATURE | : 24.0 [degC] |
| HUMIDITY | : 65.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | READING [dBuV] | FACTOR [dB] | EMISSION [dBuV] | LIMIT [dBuV] | MARGIN [dB] |
|---|---|---|---|---|---|---|
| 1 | 1129.1720 | 45.3 | -20.6 | 24.7 | 50.0 | 25.3 |
| 2 | 1522.8200 | 47.6 | -19.7 | 27.9 | 50.0 | **22.1** |
| 3 | 1574.2730 | 46.8 | -19.7 | 27.1 | 50.0 | 22.9 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
Limit: 2nW = 50dBuV (50ohm impedance)

emiT 3, 0, 0, 0

10.3.13 RX mode(60.000MHz :ANT 2) [30 – 1000MHz]

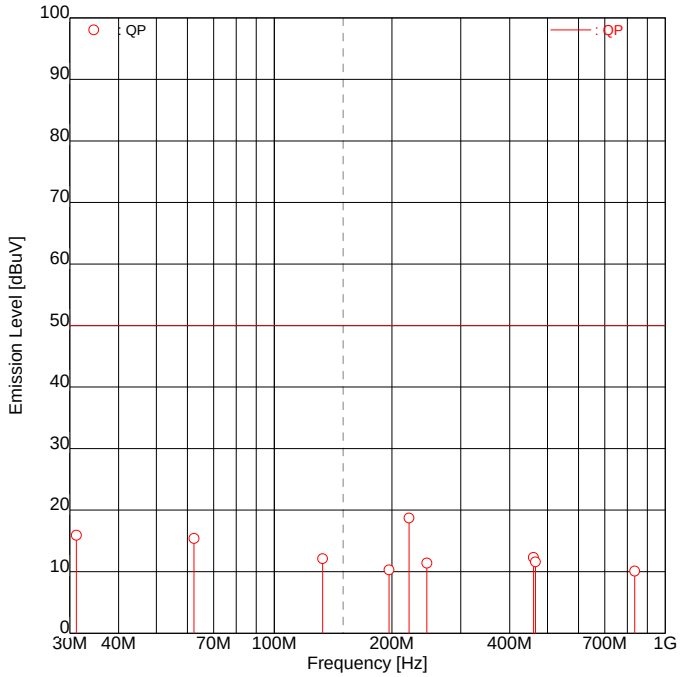
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Conducted Power on Antenna Port

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (60.000MHz:ANT2) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jun 30 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B (15.111) |
| TEST METHOD | : ANSI C63.4-2003 |
| TEMPERATURE | : 25.0 [degC] |
| HUMIDITY | : 60.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | READING [dBuV] | FACTOR [dB] | EMISSION [dBuV] | LIMIT [dBuV] | MARGIN [dB] |
|---|---|---|---|---|---|---|
| 1 | 31.1987 | 31.9 | -16.0 | 15.9 | 50.0 | 34.1 |
| 2 | 62.4000 | 31.0 | -15.6 | 15.4 | 50.0 | 34.6 |
| 3 | 133.0900 | 26.7 | -14.6 | 12.1 | 50.0 | 37.9 |
| 4 | 196.7990 | 24.1 | -13.8 | 10.3 | 50.0 | 39.7 |
| 5 | 221.1900 | 32.1 | -13.4 | 18.7 | 50.0 | **31.3** |
| 6 | 245.7690 | 24.6 | -13.2 | 11.4 | 50.0 | 38.6 |
| 7 | 460.1490 | 25.4 | -13.1 | 12.3 | 50.0 | 37.7 |
| 8 | 465.8330 | 24.7 | -13.1 | 11.6 | 50.0 | 38.4 |
| 9 | 835.6150 | 21.5 | -11.4 | 10.1 | 50.0 | 39.9 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
Limit: 2nW = 50dBuV (50ohm impedance)

emiT 3, 0, 0, 0

10.3.14 RX mode(60.000MHz :ANT 2) [1000 – 2000MHz]

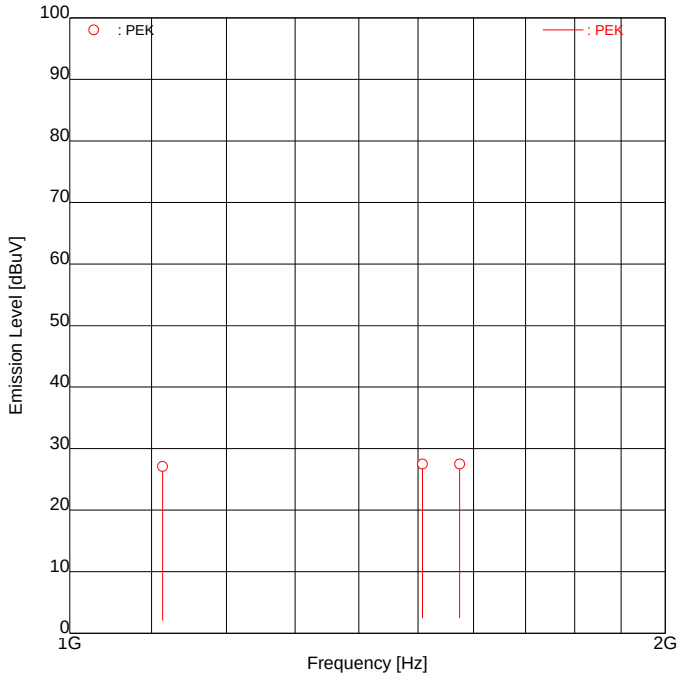
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Conducted Power on Antenna Port

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (60.000MHz :ANT2) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jun 30 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B (15.111) |
| TEST METHOD | : ANSI C63.4-2003 |
| TEMPERATURE | : 24.0 [degC] |
| HUMIDITY | : 68.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | READING [dBuV] | FACTOR [dB] | EMISSION [dBuV] | LIMIT [dBuV] | MARGIN [dB] |
|---|---|---|---|---|---|---|
| 1 | 1114.1830 | 47.8 | -20.7 | 27.1 | 50.0 | 22.9 |
| 2 | 1507.7270 | 47.2 | -19.7 | 27.5 | 50.0 | **22.5** |
| 3 | 1574.2970 | 47.2 | -19.7 | 27.5 | 50.0 | 22.5 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
Limit: 2nW = 50dBuV (50ohm impedance)

emiT 3, 0, 0, 0

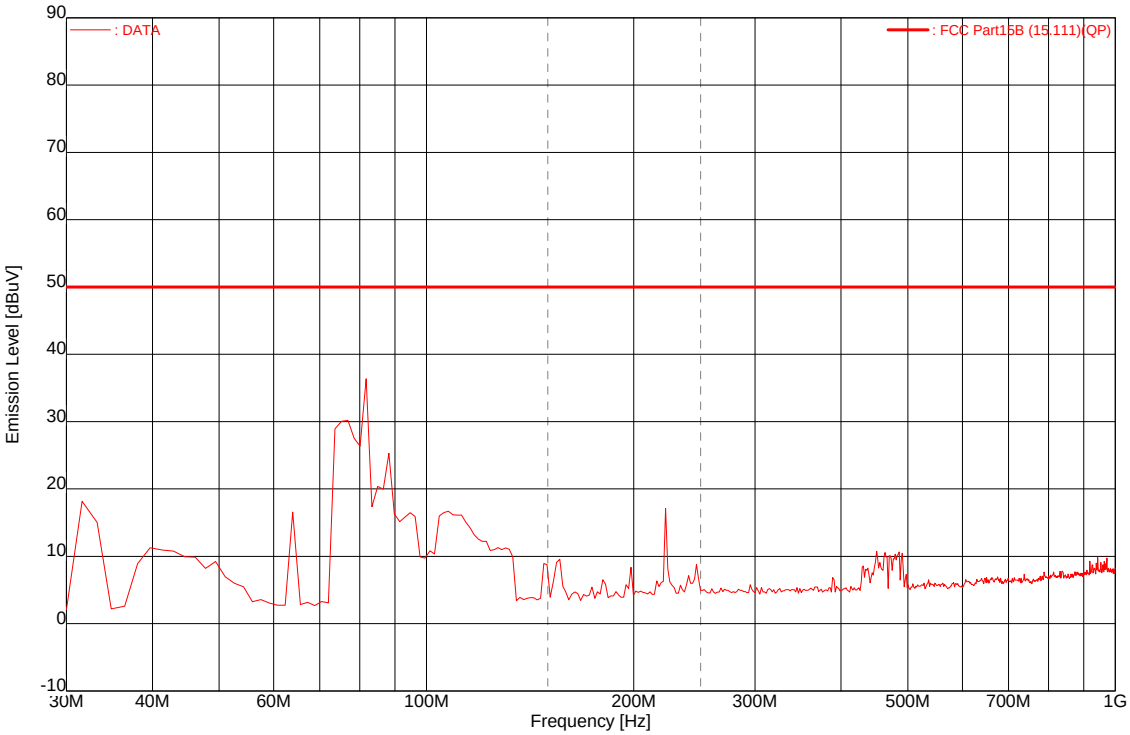
10.3.15 RX mode(VFO SCAN :ANT 2) [30 – 1000MHz]

# SPECTRUM ANALYSIS

Tochigi No.2 Test Site

25.0degC /60.0%

| | | | |
|---|---|---|---|
| Date tested | : Jun 30 2010 | Test mode | : RX mode (VFO SCAN: ANT2) |
| Company | : Kenwood Corporation | Power source | : DC 13.8 V |
| EUT Name | : HF/50MHz ALL MODE RECEIVER | File number | : JT10070001 |
| Model number | : TS-590S | Engineer | : Atsuyuki Morishima |
| Serial number | : None | Note | : |




| Frequency [ MHz ] | Reading [ dBuV ] | Factor [ dB ] | Emission [ dBuV ] | Limit [ dBuV ] | Margin [ dB ] |
|---|---|---|---|---|---|
| 31.20 | 35.5 | -16.0 | 19.5 | 50.0 | 30.5 |
| 74.77 | 46.4 | -15.4 | 31.0 | 50.0 | 19.0 |
| 80.00 | 52.5 | -15.3 | 37.2 | 50.0 | 12.8 |
| 87.09 | 41.6 | -15.2 | 26.4 | 50.0 | 23.6 |
| 106.07 | 33.2 | -15.0 | 18.2 | 50.0 | 31.8 |
| 221.19 | 32.0 | -13.4 | 18.6 | 50.0 | 31.4 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emission Level = Read + Factor ( Pad, Cable, Preamp)
Limit : 2nW = 50dBuV (50ohm impedance)

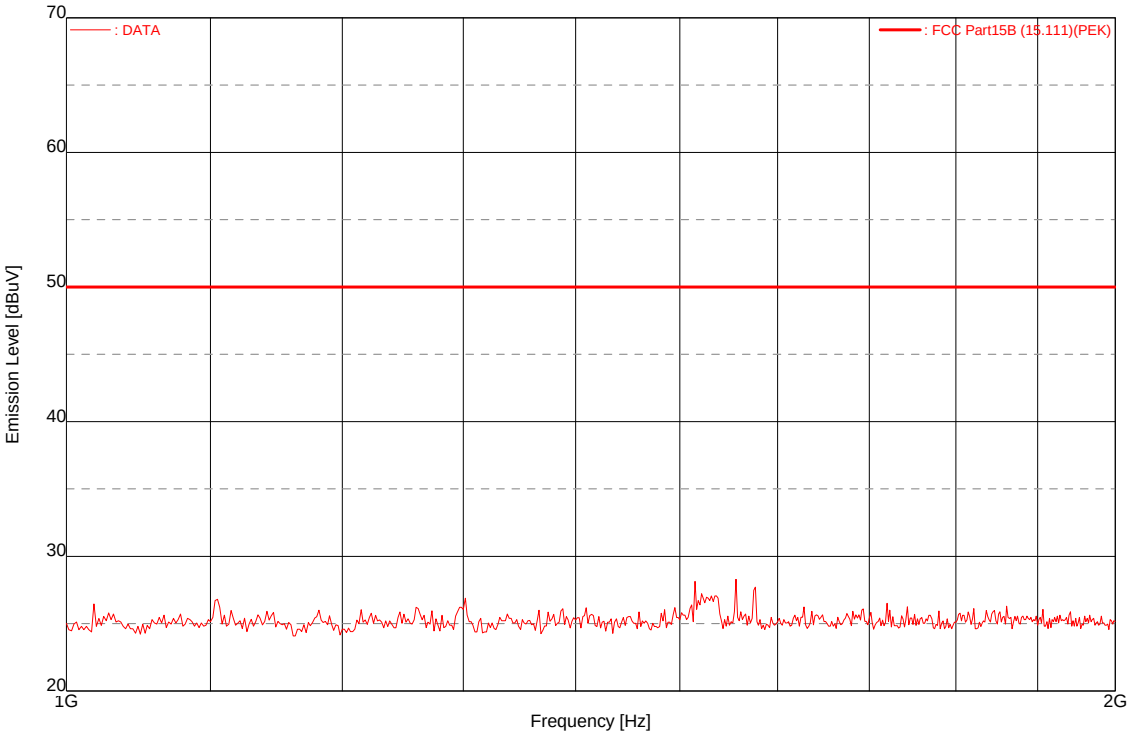
10.3.16 RX mode(VFO SCAN :ANT 2) [1000 – 2000MHz]

# SPECTRUM ANALYSIS

## Tochigi No.2 Test Site

24.0degC /68.0%

| | | | |
|---|---|---|---|
| Date tested | : Jun 30 2010 | Test mode | : RX mode (VFO SCAN: ANT2) |
| Company | : Kenwood Corporation | Power source | : DC 13.8 V |
| EUT Name | : HF/50MHz ALL MODE RECEIVER | File number | : JT10070001 |
| Model number | : TS-590S | Engineer | : Atsuyuki Morishima |
| Serial number | : None | Note | : |




| Frequency [ MHz ] | Reading [ dBuV ] | Factor [ dB ] | Emission [ dBuV ] | Limit [ dBuV ] | Margin [ dB ] |
|---|---|---|---|---|---|
| 1555.24 | 49.1 | -19.7 | 29.4 | 50.0 | 20.6 |
| 1574.38 | 47.9 | -19.7 | 28.2 | 50.0 | 21.8 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emission Level = Read + Factor ( Pad, Cable, Preamp)
Limit : 2nW = 50dBuV (50ohm impedance)
Note : There is the margin of 20dB over expect for the above points.

10.3.17 RX mode(0.03MHz :RX ANT ) [30 – 1000MHz]

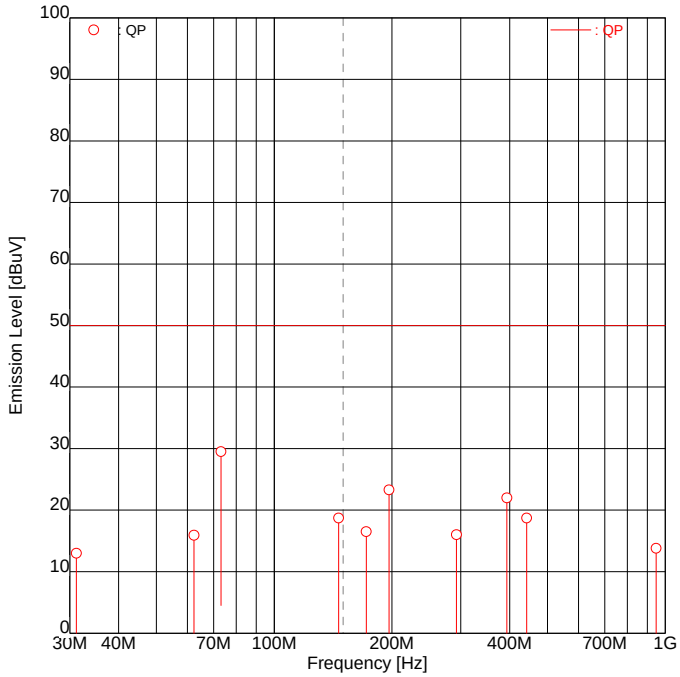
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Conducted Power on Antenna Port

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (0.03MHz:RX ANT) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jun 30 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B (15.111) |
| TEST METHOD | : ANSI C63.4-2003 |
| TEMPERATURE | : 25.0 [degC] |
| HUMIDITY | : 60.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | READING [dBuV] | FACTOR [dB] | EMISSION [dBuV] | LIMIT [dBuV] | MARGIN [dB] |
|---|---|---|---|---|---|---|
| 1 | 31.1987 | 29.0 | -16.0 | 13.0 | 50.0 | 37.0 |
| 2 | 62.3993 | 31.5 | -15.6 | 15.9 | 50.0 | 34.1 |
| 3 | 73.1243 | 44.9 | -15.4 | 29.5 | 50.0 | **20.5** |
| 4 | 146.2500 | 33.1 | -14.4 | 18.7 | 50.0 | 31.3 |
| 5 | 172.0380 | 30.6 | -14.1 | 16.5 | 50.0 | 33.5 |
| 6 | 196.8000 | 37.1 | -13.8 | 23.3 | 50.0 | 26.7 |
| 7 | 292.4990 | 28.9 | -12.9 | 16.0 | 50.0 | 34.0 |
| 8 | 393.5980 | 35.0 | -13.0 | 22.0 | 50.0 | 28.0 |
| 9 | 442.3840 | 31.8 | -13.1 | 18.7 | 50.0 | 31.3 |
| 10 | 947.4380 | 24.5 | -10.7 | 13.8 | 50.0 | 36.2 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
Limit: 2nW = 50dBuV (50ohm impedance)

emiT 3, 0, 0, 0

10.3.18 RX mode(0.03MHz :RX ANT ) [1000 – 2000MHz]

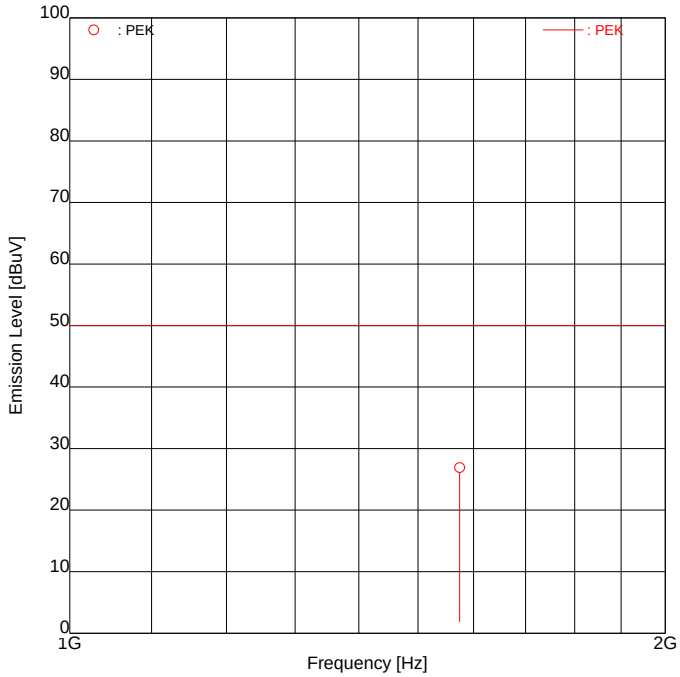
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Conducted Power on Antenna Port

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (0.03MHz :RX ANT) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jun 30 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B (15.111) |
| TEST METHOD | : ANSI C63.4-2003 |
| TEMPERATURE | : 24.0 [degC] |
| HUMIDITY | : 65.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | READING [dBuV] | FACTOR [dB] | EMISSION [dBuV] | LIMIT [dBuV] | MARGIN [dB] |
|---|---|---|---|---|---|---|
| 1 | 1574.2800 | 46.6 | -19.7 | 26.9 | 50.0 | **23.1** |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
Limit: 2nW = 50dBuV (50ohm impedance)

emiT 3, 0, 0, 0

10.3.19 RX mode(30.000MHz :RX ANT ) [30 – 1000MHz]

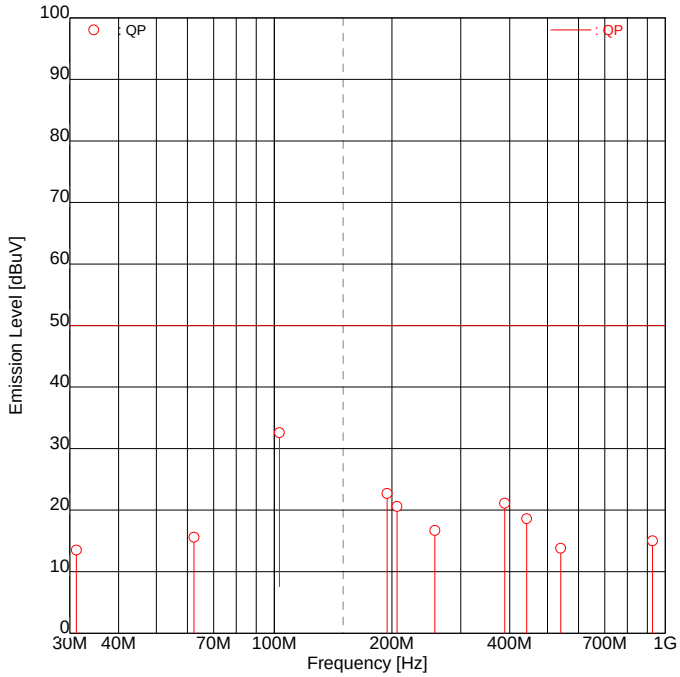
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Conducted Power on Antenna Port

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (30.000MHz:RX ANT) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jun 30 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B (15.111) |
| TEST METHOD | : ANSI C63.4-2003 |
| TEMPERATURE | : 26.0 [degC] |
| HUMIDITY | : 58.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | READING [dBuV] | FACTOR [dB] | EMISSION [dBuV] | LIMIT [dBuV] | MARGIN [dB] |
|---|---|---|---|---|---|---|
| 1 | 31.1987 | 29.5 | -16.0 | 13.5 | 50.0 | 36.5 |
| 2 | 62.3998 | 31.2 | -15.6 | 15.6 | 50.0 | 34.4 |
| 3 | 103.0940 | 47.6 | -15.0 | 32.6 | 50.0 | **17.4** |
| 4 | 194.4000 | 36.6 | -13.9 | 22.7 | 50.0 | 27.3 |
| 5 | 206.1900 | 34.3 | -13.7 | 20.6 | 50.0 | 29.4 |
| 6 | 257.7380 | 29.8 | -13.1 | 16.7 | 50.0 | 33.3 |
| 7 | 388.8000 | 34.1 | -13.0 | 21.1 | 50.0 | 28.9 |
| 8 | 442.3840 | 31.7 | -13.1 | 18.6 | 50.0 | 31.4 |
| 9 | 540.6920 | 26.8 | -13.0 | 13.8 | 50.0 | 36.2 |
| 10 | 927.8550 | 25.8 | -10.8 | 15.0 | 50.0 | 35.0 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
Limit: 2nW = 50dBuV (50ohm impedance)

emiT 3, 0, 0, 0

10.3.20 RX mode(30.000MHz :RX ANT ) [1000 – 2000MHz]

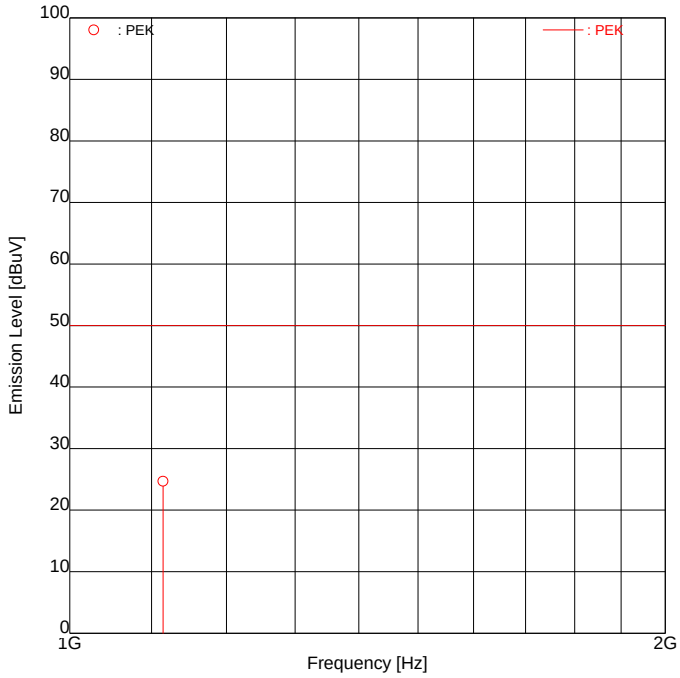
# Intertek Japan K.K.

## Tochigi No.2 Test Site

Conducted Power on Antenna Port

| | |
|---|---|
| APPLICANT | : Kenwood Corporation |
| EUT NAME | : HF/50MHz ALL MODE TRANSCEIVER |
| MODEL NO. | : TS-590S |
| SERIAL NO. | : None |
| TEST MODE | : RX mode (30.000MHz :RX ANT) |
| POWER SOURCE | : DC 13.8 V |
| DATE TESTED | : Jun 30 2010 |
| FILE NO. | : JT10070001 |
| REGULATION | : FCC Part15B (15.111) |
| TEST METHOD | : ANSI C63.4-2003 |
| TEMPERATURE | : 24.0 [degC] |
| HUMIDITY | : 65.0 [%] |
| NOTE | : |

ENGINEER : Atsuyuki Morishima




| [No] | FREQUENCY [MHz] | READING [dBuV] | FACTOR [dB] | EMISSION [dBuV] | LIMIT [dBuV] | MARGIN [dB] |
|---|---|---|---|---|---|---|
| 1 | 1114.8200 | 45.4 | -20.7 | 24.7 | 50.0 | **25.3** |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emisson Level = Read + Factor(Antenna,Antenna Pad,Cable,Preamp)
Limit: 2nW = 50dBuV (50ohm impedance)

emiT 3, 0, 0, 0

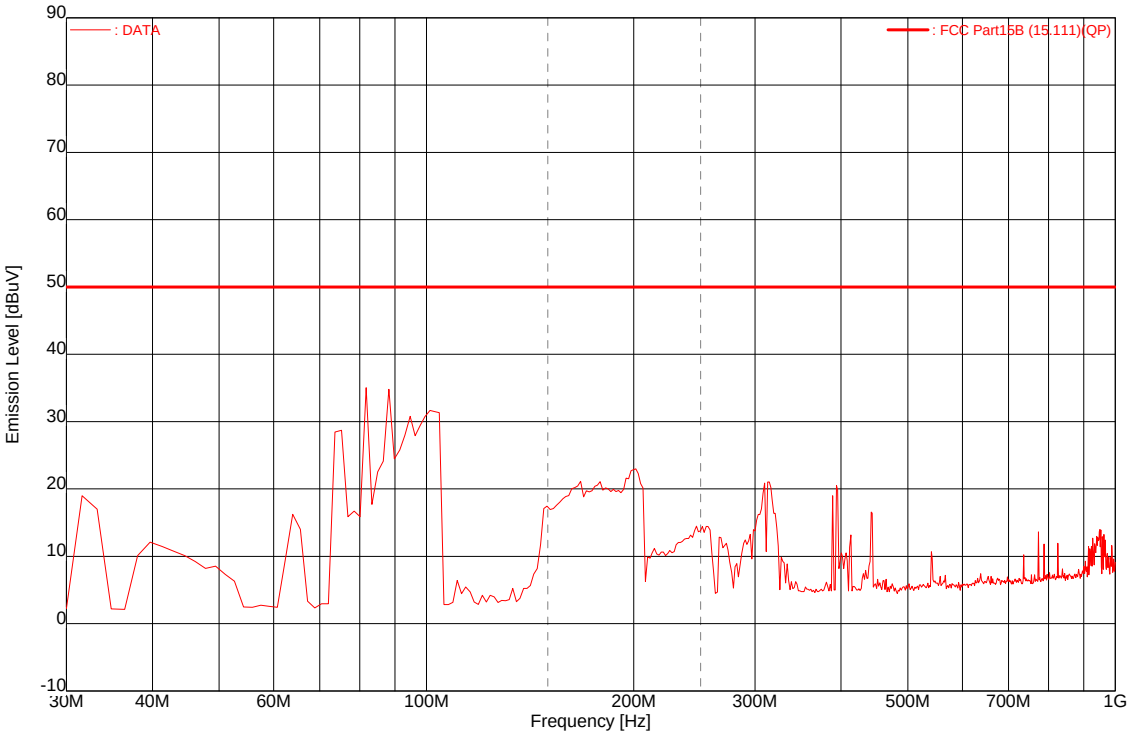
10.3.21 RX mode(VFO SCAN :RX ANT ) [30 – 1000MHz]

# SPECTRUM ANALYSIS

## Tochigi No.2 Test Site

25.0degC /58.0%

| | | | |
|---|---|---|---|
| Date tested | : Jun 30 2010 | Test mode | : RX mode (VFO SCAN :RX ANT) |
| Company | : Kenwood Corporation | Power source | : DC 13.8 V |
| EUT Name | : HF/50MHz ALL MODE RECEIVER | File number | : JT10070001 |
| Model number | : TS-590S | Engineer | : Atsuyuki Morishima |
| Serial number | : None | Note | : |




| Frequency [ MHz ] | Reading [ dBuV ] | Factor [ dB ] | Emission [ dBuV ] | Limit [ dBuV ] | Margin [ dB ] |
|---|---|---|---|---|---|
| 31.20 | 36.4 | -16.0 | 20.4 | 50.0 | 29.6 |
| 80.04 | 51.9 | -15.3 | 36.6 | 50.0 | 13.4 |
| 87.07 | 51.1 | -15.2 | 35.9 | 50.0 | 14.1 |
| 101.13 | 47.6 | -15.0 | 32.6 | 50.0 | 17.4 |
| 196.82 | 41.1 | -13.8 | 27.3 | 50.0 | 22.7 |
| 310.69 | 35.8 | -12.8 | 23.0 | 50.0 | 27.0 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emission Level = Read + Factor ( Pad, Cable, Preamp)
Limit : 2nW = 50dBuV (50ohm impedance)

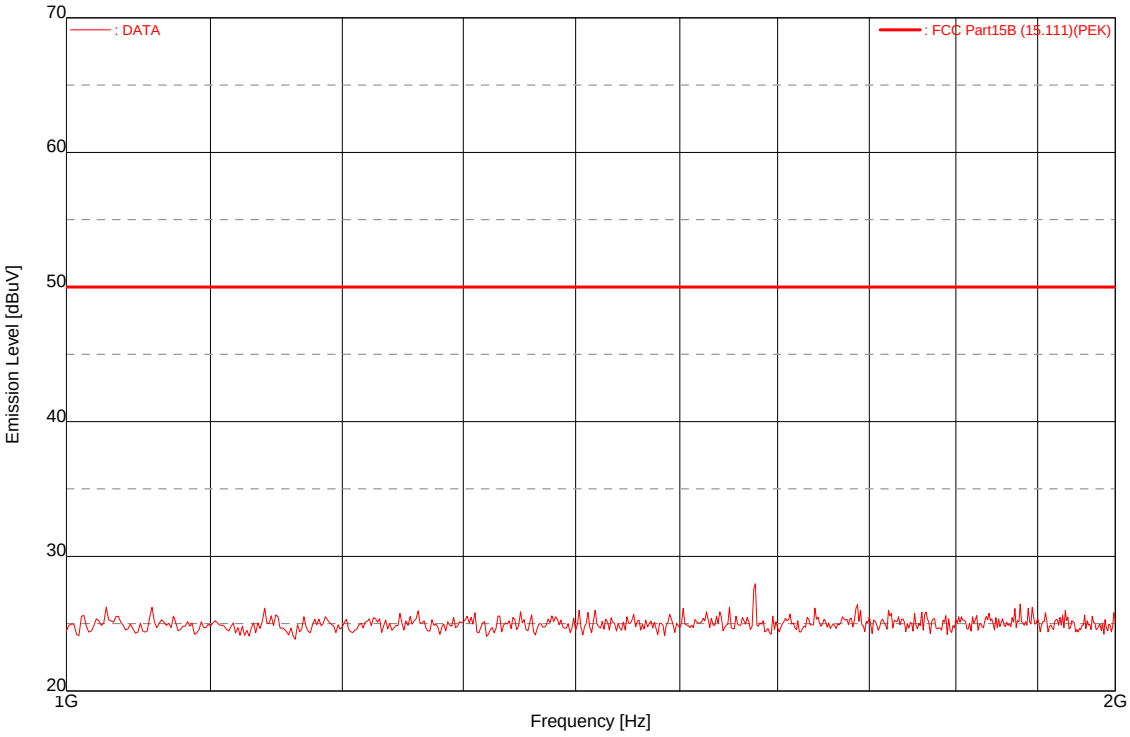
10.3.22 RX mode(VFO SCAN :RX ANT ) [1000 – 2000MHz]

# SPECTRUM ANALYSIS

## Tochigi No.2 Test Site

24.0degC /65.0%

| | | | |
|---|---|---|---|
| Date tested | : Jun 30 2010 | Test mode | : RX mode (VFO SCAN: RX ANT) |
| Company | : Kenwood Corporation | Power source | : DC 13.8 V |
| EUT Name | : HF/50MHz ALL MODE RECEIVER | File number | : JT10070001 |
| Model number | : TS-590S | Engineer | : Atsuyuki Morishima |
| Serial number | : None | Note | : |




| Frequency [ MHz ] | Reading [ dBuV ] | Factor [ dB ] | Emission [ dBuV ] | Limit [ dBuV ] | Margin [ dB ] |
|---|---|---|---|---|---|
| 1574.57 | 48.0 | -19.7 | 28.3 | 50.0 | 21.7 |

Higher six points are underlined.
Other frequencies : Below the FCC Part15B (15.111) limit
Emission Level = Read + Factor ( Pad, Cable, Preamp)
Limit : 2nW = 50dBuV (50ohm impedance)
Note : There is the margin of 20dB over expect for the above points.

**10.4 38dB Rejection Test (15.121(b))**

10.4.1 VFO SCAN (ANT1)

| | | |
|---|---|---|
| Location | : | Tochigi No.2 Test Site |
| Date Tested | : | July 5, 2010 to July 6, 2010 |
| Temperature | : | 22 to 25 [degC] |
| Humidity | : | 50 to 69 [%] |
| Engineer | : | Atsuyuki Morishima |

| Injected Frequency [MHz] | Detected Frequency [MHz] | 12dB SINAD Reading Injected Frequency [dBm] | 12dB SINAD Reading Detected Frequency | Rejection Level [dB] | Margin [dB] |
|---|---|---|---|---|---|
| 824.040 | No Point Detected | N / A | N / A | N / A | N / A |
| 836.505 | No Point Detected | N / A | N / A | N / A | N / A |
| 848.970 | No Point Detected | N / A | N / A | N / A | N / A |
| 869.040 | No Point Detected | N / A | N / A | N / A | N / A |
| 881.505 | No Point Detected | N / A | N / A | N / A | N / A |
| 893.970 | No Point Detected | N / A | N / A | N / A | N / A |

SG Reference Level = 4.4dBuV (the worst case sensitivity)

10.4.2 VFO SCAN (ANT2)

| | | |
|---|---|---|
| Location | : | Tochigi No.2 Test Site |
| Date Tested | : | July 5, 2010 to July 6, 2010 |
| Temperature | : | 22 to 25 [degC] |
| Humidity | : | 50 to 69 [%] |
| Engineer | : | Atsuyuki Morishima |

| Injected Frequency [MHz] | Detected Frequency [MHz] | 12dB SINAD Reading Injected Frequency [dBm] | 12dB SINAD Reading Detected Frequency | Rejection Level [dB] | Margin [dB] |
|---|---|---|---|---|---|
| 824.040 | No Point Detected | N / A | N / A | N / A | N / A |
| 836.505 | No Point Detected | N / A | N / A | N / A | N / A |
| 848.970 | No Point Detected | N / A | N / A | N / A | N / A |
| 869.040 | No Point Detected | N / A | N / A | N / A | N / A |
| 881.505 | No Point Detected | N / A | N / A | N / A | N / A |
| 893.970 | No Point Detected | N / A | N / A | N / A | N / A |

SG Reference Level = 4.4dBuV (the worst case sensitivity)

10.4.3 VFO SCAN (RX ANT)

| | | |
|---|---|---|
| Location | : | Tochigi No.2 Test Site |
| Date Tested | : | July 5, 2010 to July 6, 2010 |
| Temperature | : | 22 to 25 [degC] |
| Humidity | : | 50 to 69 [%] |
| Engineer | : | Atsuyuki Morishima |

| Injected Frequency [MHz] | Detected Frequency [MHz] | 12dB SINAD Reading Injected Frequency [dBm] | 12dB SINAD Reading Detected Frequency | Rejection Level [dB] | Margin [dB] |
|---|---|---|---|---|---|
| 824.040 | No Point Detected | N / A | N / A | N / A | N / A |
| 836.505 | No Point Detected | N / A | N / A | N / A | N / A |
| 848.970 | No Point Detected | N / A | N / A | N / A | N / A |
| 869.040 | No Point Detected | N / A | N / A | N / A | N / A |
| 881.505 | No Point Detected | N / A | N / A | N / A | N / A |
| 893.970 | No Point Detected | N / A | N / A | N / A | N / A |

SG Reference Level = 4.4dBuV (the worst case sensitivity)

## 10.5 Sample Calculations

### 10.5.1 Conducted disturbance at mains terminals

Example @ 3.9980MHz (AVG)

| | | | | | |
|---|---|---|---|---|---|
| Emission Level | = | Meter Reading | | 21.5 | dBuV |
| | + | Factor | + | 11.0 | dB |
| | | | = | 32.5 | dBuV |
| Margin | = | Limit | | 46.0 | dBuV |
| | - | Emission Level | - | 32.5 | dBuV |
| | | | = | 13.5 | dB |

Factor = LISN Factor + Cable Loss + Pad Loss

### 10.5.2 Radiated disturbance

Example @ 412.37MHz

| | | | | | |
|---|---|---|---|---|---|
| Emission Level | = | Meter Reading | | 42.7 | dBuV |
| | + | Factor | + | 0.7 | dB/m |
| | | | = | 43.4 | dBuV/m |
| Margin | = | Limit | | 46.0 | dBuV/m |
| | - | Emission Level | - | 43.4 | dBuV/m |
| | | | = | 2.6 | dB |

Factor = Antenna Factor + Cable Loss + Amplifier Gain + Pad Loss

10.5.3 Conducted Power on Antenna Port

Example @ 80.00MHz

| | | | | | |
|---|---|---|---|---|---|
| Output Power Level | = | Meter Reading | | 52.5 | dBuV |
| | + | Factor | + | -15.3 | dB |
| | | | = | 37.2 | dBuV |
| Margin | = | Limit (:2.0nW) | | 50.0 | dBuV |
| | - | Output Power Level | - | 37.2 | dBuV |
| | | | = | 12.8 | dB |

Factor = Cable Loss + Amplifier Gain + Pad Loss

10.5.4 38dB Rejection

Example @ N/A MHz

| | | | | | |
|---|---|---|---|---|---|
| Rejection Level | = | 12dB SINAD Reading at Injected Frequency | | N/A | dBm |
| | - | 12dB SINAD Reading at Detected Frequency | - | N/A | dBm |
| | | | = | N/A | dB |
| Margin | = | Rejection Level | | N/A | dB |
| | - | Limit | - | 38.0 | dB |
| | | | = | N/A | dB |

## SECTION 11. LIST OF MEASURING INSTRUMENTS

| Instrument | Model No. | Serial No. | Manufacturer | Cal. date | Due date |
|---|---|---|---|---|---|
| **Conducted disturbance at mains terminals** | | | | | |
| LISN (EUT) | ESH2-Z5 | 892377/021 | ROHDE & SCHWARZ | Jul. 06, 09 | Jul. 31, 10 |
| 10dB Attenuator | CFA-01(BPJ-10) | None | TAMAGAWA | May 13, 10 | May 31, 11 |
| LISN (Peripheral) | KNW-242 | 8-851-27 | KYORITSU | Jul. 14, 09 | Jul. 31, 10 |
| 50Ω Termination | CT-01 | None | TAMAGAWA | Jul. 14, 09 | Jul. 31, 10 |
| Coaxial cable(C1) | 5D-2W(6.0 m) | 2CL01a | INTERTEK | May 13, 10 | May 31, 11 |
| Coaxial cable(C2) | RG-5A/U(7.0 m) | 2CL02 | INTERTEK | May 13, 10 | May 31, 11 |
| Coaxial cable(C3) | 5D-2W(0.2 m) | 2CL03 | INTERTEK | May 13, 10 | May 31, 11 |
| Coaxial cable(C4) | 5D-2W(1.7 m) | 2CL04 | INTERTEK | May 13, 10 | May 31, 11 |
| **Radiated disturbance** | | | | | |
| Broad Band antenna | VULB9168 | 218 | Schwarzbeck | Mar. 31, 10 | Mar. 31, 11 |
| Double ridged antenna | 3115 | 9903-5699 | EMCO | Apr. 21, 10 | Apr. 30, 11 |
| 6dB Attenuator | CFA-01(NPJ-6) | None | TAMAGAWA | May 13, 10 | May 31, 11 |
| 6dB Attenuator | 8493C | 75550 | Agilent | Apr. 13, 10 | Apr. 30, 11 |
| Amplifier | 8449B | 3008A01182 | HEWLETT PACKARD | Apr. 13, 10 | Apr. 30, 11 |
| Step Attenuator | 8494B | 2805A14563 | HEWLETT PACKARD | May 13, 10 | May 31, 11 |
| Amplifier | 8447D | 2944A06342 | HEWLETT PACKARD | May 13, 10 | May 31, 11 |
| Spectrum analyzer | 8563E (Firmware Revision 971024) | 3821A09565 | HEWLETT PACKARD | Dec. 24, 09 | Dec. 31, 10 |
| Site Attenuation | | | | Aug. 18, 09 | Aug. 31, 10 |
| **Conducted Power on Antenna Port** | | | | | |
| 3dB Attenuator | 8493C | 07818 | HEWLETT PACKARD | Apr. 13, 10 | Apr. 30, 11 |
| 10dB Attenuator | CFA-05NPJ-10 | 262856 | TAMAGAWA | Nov. 06, 09 | Nov. 30, 10 |
| 10dB Attenuator | 6810.17.B | 5061 | SUHNER | Nov. 06, 09 | Nov. 30, 10 |
| Spectrum analyzer | 8563E (Firmware Revision 971024) | 3821A09565 | HEWLETT PACKARD | Dec. 24, 09 | Dec. 31, 10 |
| Coaxial cable(C001a) | 5D-2W(18.0m) | C001a | INTERTEK | Nov. 06,09 | Nov. 30, 10 |
| **38dB Rejection** | | | | | |
| Audio analyzer | 8903B | 2818A04372 | HEWLETT PACKARD | Apr. 09, 10 | Apr. 30, 11 |
| Signal Generator | SMY06 | 100684 | ROHDE & SCHWARZ | Dec. 24, 10 | Dec. 31, 11 |
| **Common (Radiated disturbance, Conducted Power on Antenna Port )** | | | | | |
| Coaxial cable(R1) | 5D-2W(10.0 m) | 2R1001a | INTERTEK | May 13, 10 | May 31, 11 |
| Coaxial cable(R2) | RG-177/U(20.0 m) | 2R1002 | INTERTEK | May 13, 10 | May 31, 11 |
| Coaxial cable(R3) | RG-5A/U(1.3 m) | 2R1003 | INTERTEK | May 13, 10 | May 31, 11 |
| Coaxial cable(R4) | RG-5A/U(0.2 m) | 2R1004 | INTERTEK | May 13, 10 | May 31, 11 |
| Coaxial cable(R5) | 5D-2W(0.7 m) | 2R1005 | INTERTEK | May 13, 10 | May 31, 11 |
| Coaxial cable(R6) | 5D-2W(0.2 m) | 2R1006 | INTERTEK | May 13, 10 | May 31, 11 |
| Coaxial cable(R7) | 5D-2W(1.7 m) | 2R1007 | INTERTEK | May 13, 10 | May 31, 11 |
| Coaxial cable(R8) | 5D-2W(6.0 m) | 2R1008a | INTERTEK | May 13, 10 | May 31, 11 |
| Coaxial cable(RG1) | SUCOFLEX(1.5 m) | 290799/4 | SUHNER | Apr. 13, 10 | Apr. 30, 11 |
| Coaxial cable(RG2) | SUCOFLEX(6.0 m) | 290800/4 | SUHNER | Apr. 13, 10 | Apr. 30, 11 |

| Instrument | Model No. | Serial No. | Manufacturer | Cal. date | Due date |
|---|---|---|---|---|---|
| **Common** | | | | | |
| Test receiver | ESS (Firmware Version 1.07) | 842886/013 | ROHDE & SCHWARZ | Jan. 06, 10 | Jan. 31, 11 |
| RF Switch | ACX-150 | None | INTERTEK | May 13, 10 | May 31, 11 |
| Testing Software | emiT (Version 3,0,0,0) | | | | |

Note: Test instruments are calibrated according to Quality Manual and Calibration Rules of Intertek Japan K.K.