

TEST REPORT

Regulation : FCC Part15B – Scanning Receiver
: FCC Part15B Class B

Applicant	Testing Laboratory
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Equipment Type	144MHz FM TRANSCEIVER
Category	Scanning Receiver
Trademark	KENWOOD
Model (s)	TH-255A
Serial No.	None
FCC ID	K44408000
Test Result	Complied
Report Number	ESJ-107053
Report Issue Date	March 22, 2007

This equipment has been shown to be capable of compliance with the applicable standard(s) as indicated in the test report. I attest to the accuracy of data. All measurements reported herein were performed by me or were made under my supervision and are correct to the best of my knowledge and belief. I assume full responsibility for the completeness of these measurements and vouch for the qualifications of all persons taking them.

This test report shall not be reproduced partially, or in full, without the prior written approval of ETL SEMKO Japan K.K. The results and statements contained in this report pertain only to the equipment evaluated.

Approved by

Tested by




Kazuo Gokita
[Assistant Manager]

Kazuo Masuda

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SECTION 1. GENERAL INFORMATION

TEST PERFORMED

Location	Kashima No.1 Test Site (FCC Reg. : 934283)
EUT Received	February 23, 2007
Test Started	February 26, 2007
Test Completed	March 1, 2007
Standard Applied	FCC Part15B – Scanning Receiver FCC Part15B Class B
Test Setup	ANSI C63.4-2003
Deviation from Standard (s)	No deviation

TEST TRACEABILITY

Traceability to national standards of test result is achieved by means of calibration traceability to national or international standards.

LIMITATIONS ON RESULTS

The test result of this report is effective for equipment under test itself and under the test configuration described on the report.

This test report does not assure that whether the test result taken in other testing laboratory is compatible or reproducible to the test result on this report or not.

ABBREVIATIONS

AE = Associated Equipment

AMN = Artificial Mains Network

AMP = Amplifier, ATT = Attenuator

ANT = Antenna, BBA = Broadband Antenna

AVG = Average

Cal = Calibration

CDN = Coupling Decoupling Network

LCD = Liquid-Crystal Display

SPKR = Speaker

DIP = Dipole Antenna

DoC = Device for Declaration of Conformity

EUT = Equipment Under Test

ISN = Impedance Stabilization Network

LISN = Line Impedance Stabilization Network

PK = Peak

Q-P = Quasi-peak

RX = Receive

SECTION 2. SUMMARY OF TEST RESULTS

This test report clearly shows that the EUT is in compliance with the **FCC Part15B** (- Scanner Receivers) and **FCC Part15B Class B** specification.

The minimum margins to the limits are as follows:

Conducted Voltages on Mains Port	RX 155MHz mode	15.3 dB	at	0.5095 MHz
Radiated Electric Field	RX 136MHz mode	1.8 dB	at	1923.97 MHz
Conducted Power on Antenna Port	RX 136MHz mode	4.9 dB	at	1749.05 MHz
38dB Rejection Test (15.121(b))	No frequency of response was detected. - Passed -			

Note : See Section 9 for details.

SECTION 3. INFORMATION ABOUT EUT

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

3.1 List of System Configuration

Symbol	Item	Model No.	Serial No.	Manufacturer	Notes	FCC ID
A1	144MHz FM Transceiver	TH-255A	None	KENWOOD	EUT	K44408000
A2	Speaker Microphone	SMC-34	None	KENWOOD	Option	N.A.
A3	Ni-MH Battery Pack	PB-43N	None	KENWOOD	Option	N.A.
A4	Rapid Charger	KSC-24	None	KENWOOD	Option	N.A.
A5	AC Adapter	KSC-24	None	KENWOOD	Option	N.A.
Power Ratings of EUT : DC 7.5V, 2.6A (Max) AC 120V, 60Hz, 22A (AC Adapter)						
Power Supply : AC 120V, 60 Hz						
Condition of Equipment	Prototype					
Type	Handheld					
Suppression Devices	No Modifications by the laboratory were made to the device					

3.2 Overview of EUT :

Frequency Ranges	136 – 174 MHz
Receiver Type	Double Conversion Super-heterodyne
Mode of Operation	F3E,

3.3 Intermediate Frequencies :

1st	38.85MHz (Upper)
2nd	450kHz (Lower)

3.4 Oscillator(s) / Crystal (s) :

Oscillator	Operating Frequency	Board Name	Notes
213 MHz	213 MHz	TX-RX UNIT	(Highest)

3.5 Port(s)/Connector(s) :

Port Name	Connector Type	Connector Pin	Notes
ANT	SMA-type	1 pin	
MIC	Mini jack (3.5φ)	1 pin	
SP	Mini jack (2.5φ)	1 pin	

3.6 Frequency Range of Measurements

	Measured Frequency Range
Conducted Voltages on Mains Port	0.15 – 30 MHz
Radiated Electric Field	30 – 2000 MHz
Conducted Power on Antenna Port	30 – 2000 MHz
38dB Rejection	136 – 174 MHz

SECTION 4. SUPPORT EQUIPMENT(S)

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

Symbol	Item	Model No.	Serial No.	Manufacturer	FCC ID / DoC	Note
B	Resistor Load Board	None	None	KENWOOD	N.A.	(8Ω)
Power Supply :						

SECTION 5. USED CABLE (S)

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

No.	Name	Length (m)	Shield	Connector Type	Ferrite Core
1	Microphone cable	0.6 m	Yes	Metal	
2	Power cable (DC) for AC Adapter	1.5 m	No	-	
3	Power cable (AC) for AC Adapter	1.8 m	No	-	
4	Speaker cable	0.6 m	Yes	Metal	

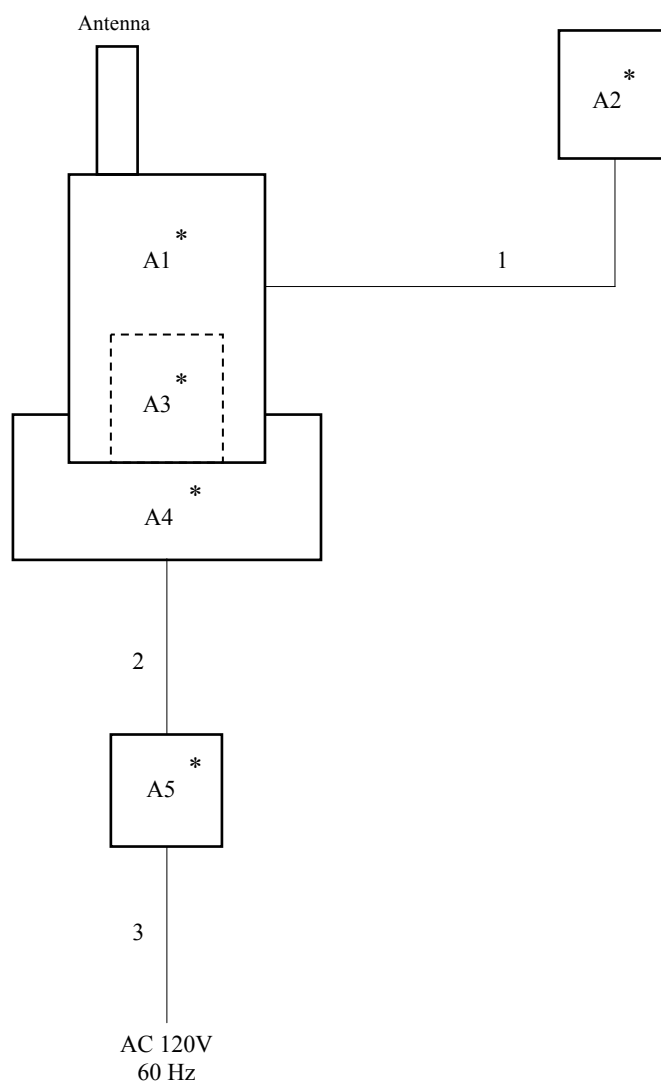
No.1, No.2 and No.3 cables are EUT Optional cables.

SECTION 6. CONSTRUCTION OF EQUIPMENT

6.1 Conducted Voltages on Mains Port Radiated Electric Field

System configuration

* : EUT
■ : Ferrite core

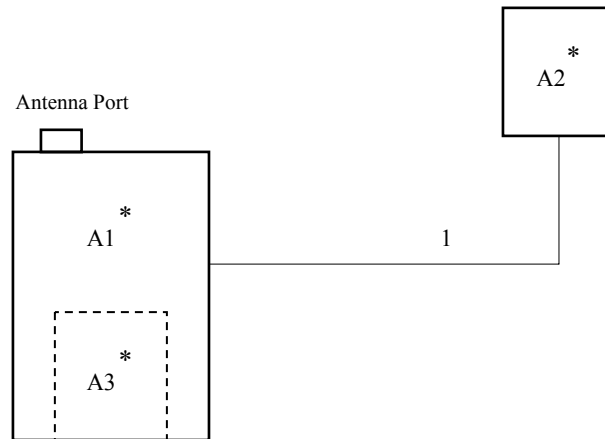


The symbols and numbers assigned to the equipments and cables on this diagram correspond to the ones in Sections 3 to 5.

6.2 Conducted Power on Antenna Port

System configuration

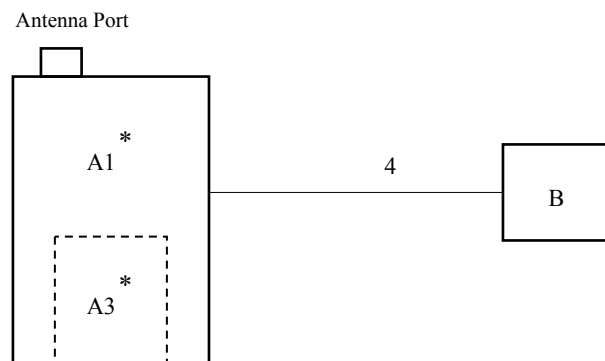
* : EUT



6.3 38dB Rejection

System configuration

* : EUT



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.

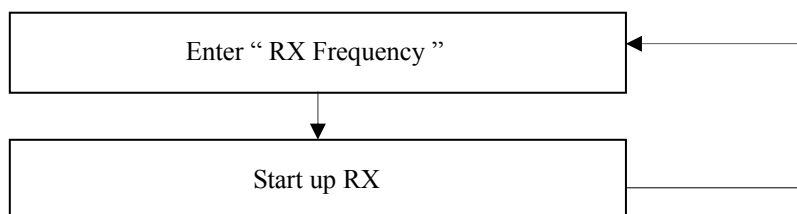
7.1 Operating Condition

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

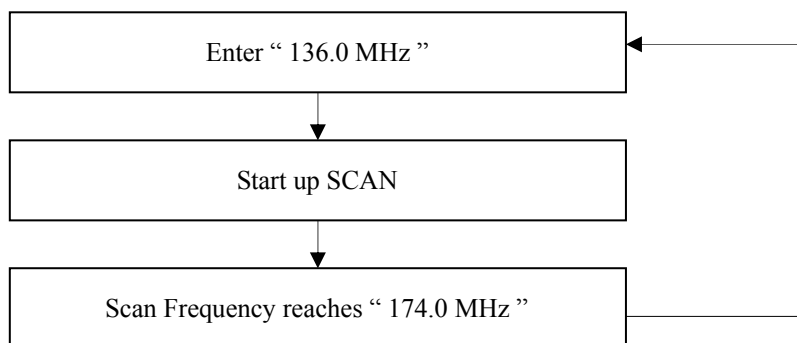
7.2 Operating Flow [RX mode and VFO Scan mode]

Following operations were performed continuously.

7.2.1 RX mode



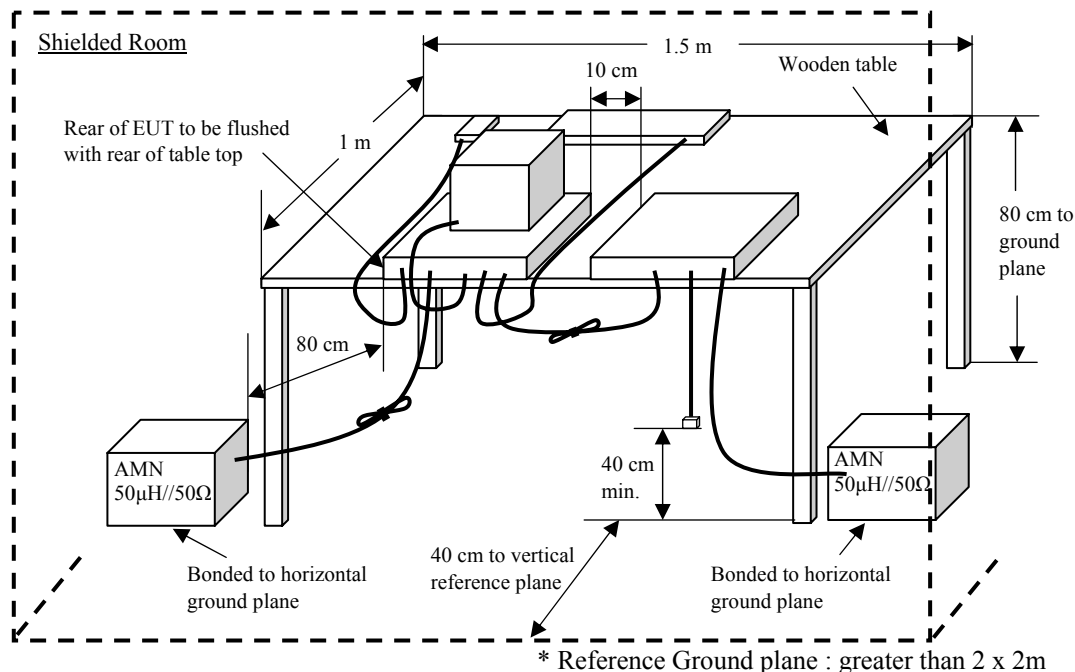
7.2.2 VFO Scan mode



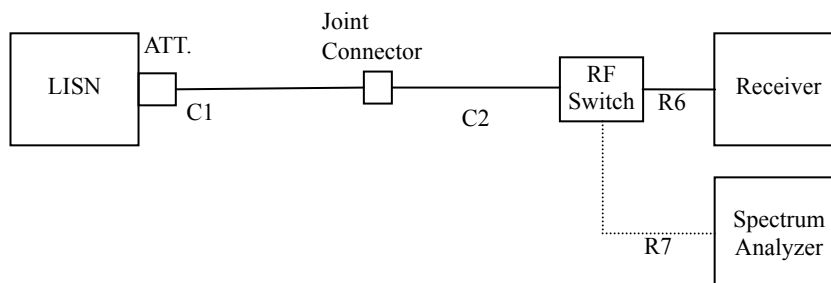
SECTION 8. TEST PROCEDURE(S)

Test was carried out under the following conditions.

Conducted Voltages on Mains Port



Schema for the conducted voltages on mains port measurement



[Instrument Setup]

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 are 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.

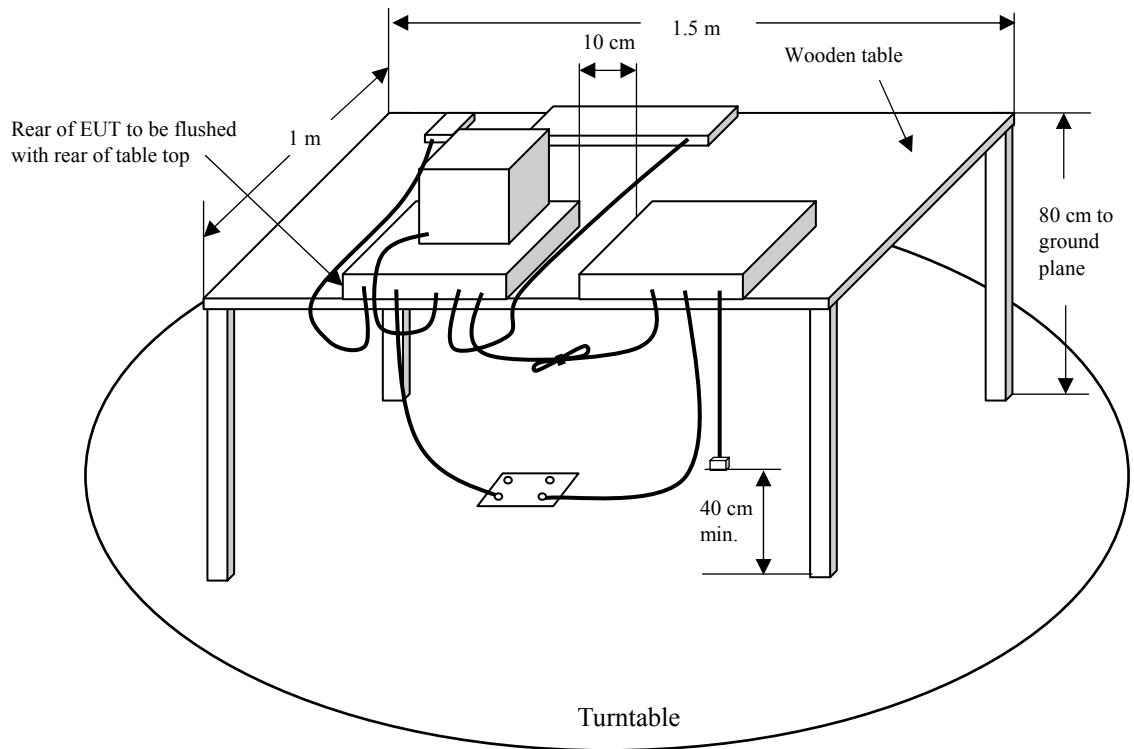
[Final Measurement]

The EUT is operated in the worst emission condition found by the preliminary test.

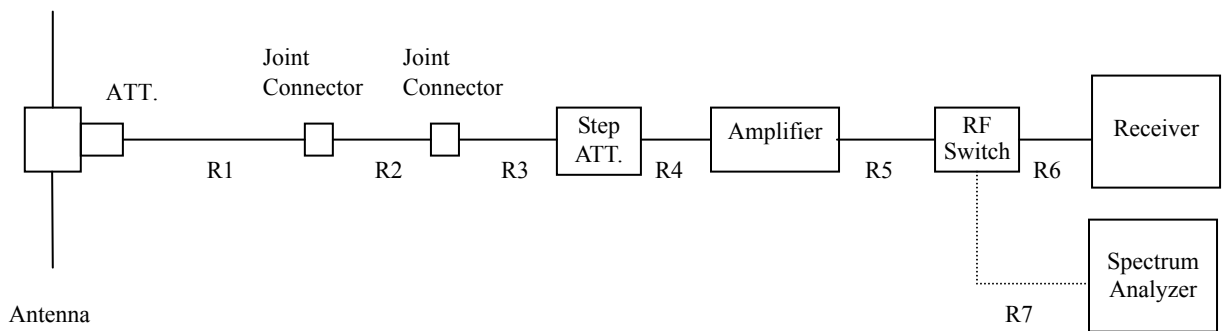
The equipment and cables are arranged or manipulated within the range of the test standard in the above condition.

At least six highest spectrum are measured in quasi-peak and average (if necessary) using the test receiver.

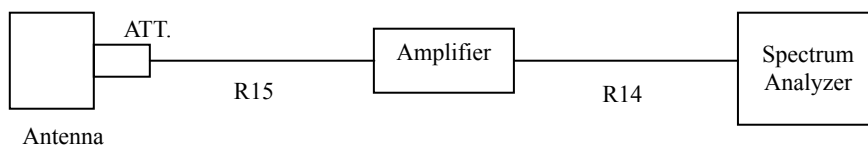
Radiated Electric Field



Schema for the radiated electric field measurement (30-1000MHz)



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
		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 are 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.

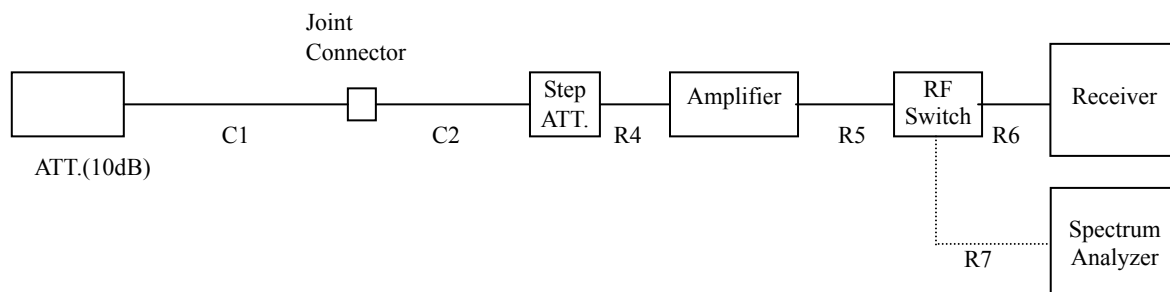
The equipment and cables are arranged or manipulated within the range of the test standard in the above condition.

At least six highest spectrum are measured by the test receiver (quasi-peak) and spectrum analyzer (peak and average).

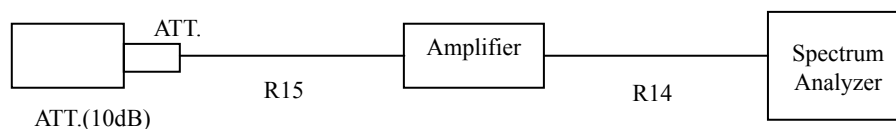
When the uncertain result was obtained, the measurement is retried by using the half wave dipole antenna instead of the broadband antenna.

Conducted Power on Antenna port

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
		Average	1 MHz	10 Hz

[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 in quasi-peak using the test receiver.

38dB Rejection

Schema for the 38dB rejection measurement



[Preliminary Measurement]

The Signal Generator 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 = 136.0 MHz – 174.0 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 Generator condition :

Frequency = Cellular point

Detected 12dB SINAD Reading (SG RF Output)

The EUT condition :

Frequency = Scan stopped point

The Signal Generator condition :

Frequency = Scan stopped point

Under the requirements of Section 15.121(b) of the Rule.

Injected 12dB SINAD Reading – Detected 12dB SINAD Reading = 38 dB or more.

SECTION 9. EVALUATION OF TEST RESULTS

9.1 Conducted Voltages on Mains Port

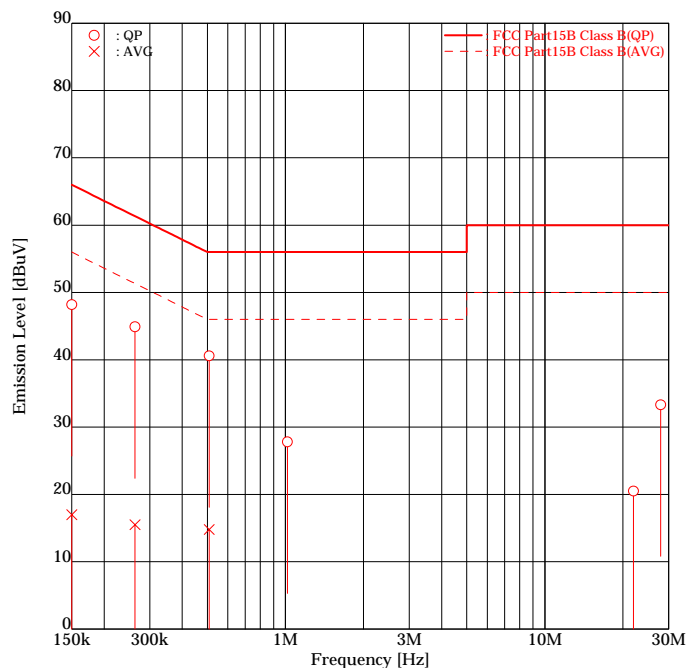
9.1.1 RX 136MHz mode

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Kashima No.1 Test Site

Conducted Voltages on Mains Port

APPLICANT : Kenwood Corporation
 EUT NAME : 144MHz FM Transceiver
 MODEL NO. : TH-255A
 SERIAL NO. : None
 TEST MODE : RX 136MHz
 POWER SOURCE : AC120V/60Hz (EUT : DC7.5V)
 DATE TESTED : Feb 28 2007
 FILE NO. : ESJ-107053
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 22.0 [degC]
 HUMIDITY : 31.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

FREQUENCY [No]	MODE [MHz]	READING [dBuV]		FACTOR [dB]		EMISSION [dBuV]		LIMIT [dBuV]	MARGIN [dB]		
		Line1	Line2	Line1	Line2	Line1	Line2		Line1	Line2	
1	0.1500	QP	<u>42.1</u>	42.0	6.1	6.1	<u>48.2</u>	48.1	66.0	<u>17.8</u>	17.9
2	0.1500	AVG	10.9	10.7	6.1	6.1	17.0	16.8	56.0	39.0	39.2
3	0.2631	QP	<u>38.8</u>	38.6	6.1	6.1	<u>44.9</u>	44.7	61.3	<u>16.4</u>	16.6
4	0.2631	AVG	9.4	9.0	6.1	6.1	15.5	15.1	51.3	35.8	36.2
5	0.5080	QP	<u>34.4</u>	32.1	6.2	6.2	<u>40.6</u>	38.3	56.0	<u>15.4</u>	17.7
6	0.5080	AVG	<u>8.6</u>	6.5	6.2	6.2	<u>14.8</u>	12.7	46.0	<u>31.2</u>	33.3
7	1.0174	QP	<u>21.6</u>	17.9	6.2	6.2	<u>27.8</u>	24.1	56.0	<u>28.2</u>	31.9
8	21.9630	QP	11.1	13.4	6.9	7.1	18.0	20.5	60.0	42.0	39.5
9	27.9875	QP	<u>26.5</u>	22.5	6.8	7.3	<u>33.3</u>	29.8	60.0	<u>26.7</u>	30.2

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

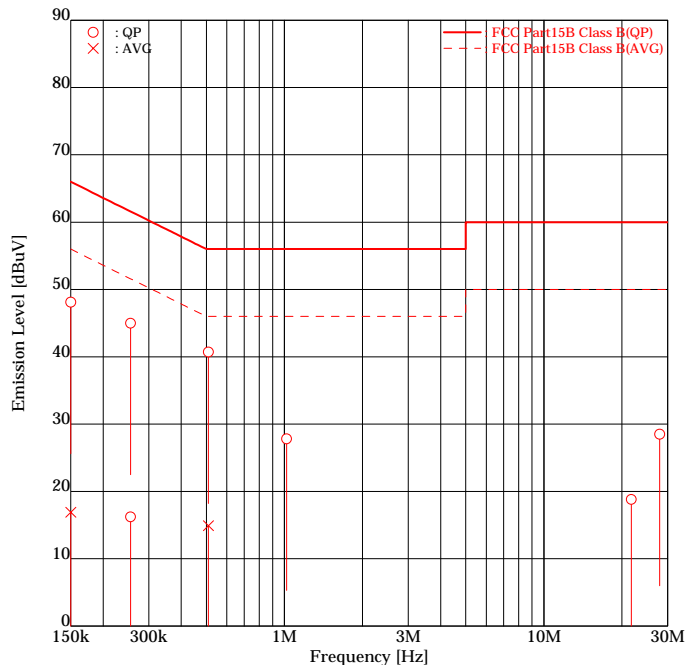
9.1.2 RX 155MHz mode

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Kashima No.1 Test Site

Conducted Voltages on Mains Port

APPLICANT : Kenwood Corporation
 EUT NAME : 144MHz FM Transceiver
 MODEL NO. : TH-255A
 SERIAL NO. : None
 TEST MODE : RX 155MHz
 POWER SOURCE : AC120V/60Hz (EUT : DC7.5V)
 DATE TESTED : Feb 28 2007
 FILE NO. : ESJ-107053
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 22.0 [degC]
 HUMIDITY : 31.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

FREQUENCY [No]	MODE [MHz]	READING [dBuV]		FACTOR [dB]		EMISSION [dBuV]		LIMIT [dBuV]	MARGIN [dB]		
		Line1	Line2	Line1	Line2	Line1	Line2		Line1	Line2	
1	0.1500	QP	<u>42.0</u>	41.7	6.1	6.1	<u>48.1</u>	47.8	66.0	<u>17.9</u>	18.2
2	0.1500	AVG	10.8	10.5	6.1	6.1	16.9	16.6	56.0	39.1	39.4
3	0.2554	QP	<u>38.9</u>	38.0	6.1	6.1	<u>45.0</u>	44.1	61.6	<u>16.6</u>	17.5
4	0.2554	QP	10.1	8.6	6.1	6.1	16.2	14.7	61.6	45.4	46.9
5	0.5095	QP	<u>34.5</u>	32.1	6.2	6.2	<u>40.7</u>	38.3	56.0	<u>15.3</u>	17.7
6	0.5095	AVG	<u>8.7</u>	6.6	6.2	6.2	<u>14.9</u>	12.8	46.0	<u>31.1</u>	33.2
7	1.0191	QP	<u>21.6</u>	17.9	6.2	6.2	<u>27.8</u>	24.1	56.0	<u>28.2</u>	31.9
8	21.7309	QP	10.5	11.7	6.9	7.1	17.4	18.8	60.0	42.6	41.2
9	27.9897	QP	21.0	<u>21.2</u>	6.8	7.3	27.8	<u>28.5</u>	60.0	32.2	<u>31.5</u>

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

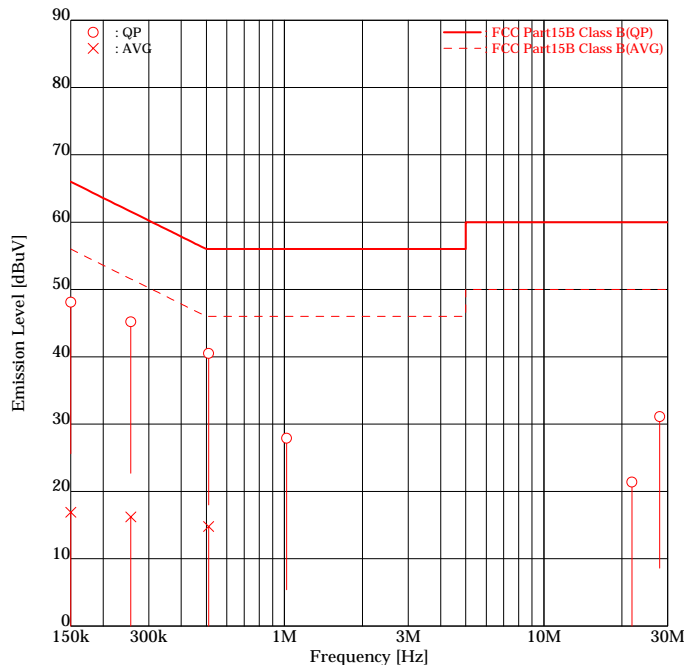
9.1.3 RX 174MHz mode

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Kashima No.1 Test Site

Conducted Voltages on Mains Port

APPLICANT : Kenwood Corporation
 EUT NAME : 144MHz FM Transceiver
 MODEL NO. : TH-255A
 SERIAL NO. : None
 TEST MODE : RX 174MHz
 POWER SOURCE : AC120V/60Hz (EUT : DC7.5V)
 DATE TESTED : Feb 28 2007
 FILE NO. : ESJ-107053
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 22.0 [degC]
 HUMIDITY : 31.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

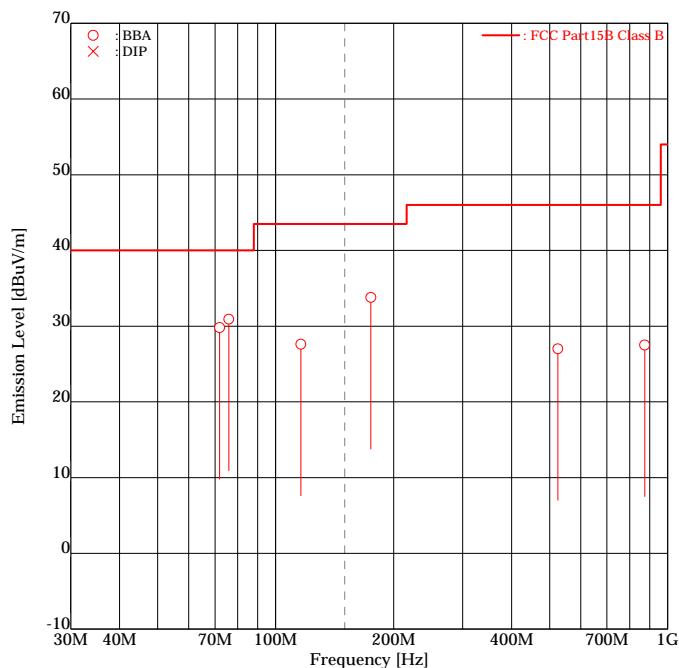
FREQUENCY [No]	MODE [MHz]	READING [dBuV]		FACTOR [dB]		EMISSION [dBuV]		LIMIT [dBuV]	MARGIN [dB]		
		Line1	Line2	Line1	Line2	Line1	Line2		Line1	Line2	
1	0.1500	QP	<u>42.0</u>	41.7	6.1	6.1	<u>48.1</u>	47.8	66.0	<u>17.9</u>	18.2
2	0.1500	AVG	10.8	10.5	6.1	6.1	16.9	16.6	56.0	39.1	39.4
3	0.2559	QP	<u>39.1</u>	38.3	6.1	6.1	<u>45.2</u>	44.4	61.6	<u>16.4</u>	17.2
4	0.2559	AVG	10.1	8.2	6.1	6.1	16.2	14.3	51.6	35.4	37.3
5	0.5099	QP	<u>34.3</u>	32.1	6.2	6.2	<u>40.5</u>	38.3	56.0	<u>15.5</u>	17.7
6	0.5099	AVG	<u>8.6</u>	6.6	6.2	6.2	<u>14.8</u>	12.8	46.0	<u>31.2</u>	33.2
7	1.0205	QP	<u>21.7</u>	18.0	6.2	6.2	<u>27.9</u>	24.2	56.0	<u>28.1</u>	31.8
8	21.8402	QP	12.7	14.3	6.9	7.1	19.6	21.4	60.0	40.4	38.6
9	27.9893	QP	<u>24.3</u>	22.6	6.8	7.3	<u>31.1</u>	29.9	60.0	<u>28.9</u>	30.1

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

9.2 Radiated Electric Field
 9.2.1 RX 136MHz mode (30 – 1000MHz)

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Kashima No.1 Test Site
Radiated Electric Field

APPLICANT : Kenwood Corporation
 EUT NAME : 144MHz FM Transceiver
 MODEL NO. : TH-255A
 SERIAL NO. : None
 TEST MODE : RX 136MHz
 POWER SOURCE : AC120V/60Hz (EUT : DC7.5V)
 DATE TESTED : Feb 27 2007
 FILE NO. : ESJ-107053
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.00 [m]
 TEMPERATURE : 24.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

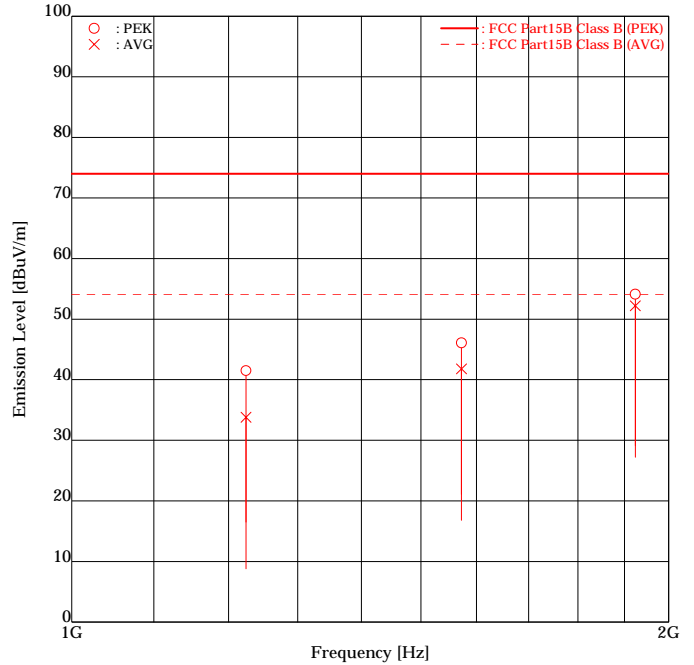
FREQUENCY [No]	ANT. [MHz]	READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]		
		Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert	
1	71.98	BBA	-	<u>35.5</u>	-5.7	-5.7	-	<u>29.8</u>	40.0	-	<u>10.2</u>
2	75.98	BBA	-	<u>37.5</u>	-6.6	-6.6	-	<u>30.9</u>	40.0	-	<u>9.1</u>
3	115.97	BBA	-	<u>32.3</u>	-4.7	-4.7	-	<u>27.6</u>	43.5	-	<u>15.9</u>
4	174.92	BBA	<u>37.2</u>	34.5	-3.4	-3.4	<u>33.8</u>	31.1	43.5	9.7	12.4
5	524.70	BBA	19.3	<u>21.5</u>	5.5	5.5	24.8	<u>27.0</u>	46.0	21.2	<u>19.0</u>
6	874.50	BBA	14.0	<u>14.6</u>	12.9	12.9	26.9	<u>27.5</u>	46.0	19.1	<u>18.5</u>

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

9.2.2 RX 136MHz mode (1000 – 2000MHz)

ETL SEMKO Japan K.K.
Kashima No.1 Test Site
Radiated Electric Field

APPLICANT : Kenwood Corporation
 EUT NAME : 144MHz FM Transceiver
 MODEL NO. : TH-255A
 SERIAL NO. : None
 TEST MODE : RX 136MHz
 POWER SOURCE : AC120V/60Hz (EUT : DC7.5V)
 DATE TESTED : Feb 27 2007
 FILE NO. : ESJ-107053
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.00 [m]
 TEMPERATURE : 24.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

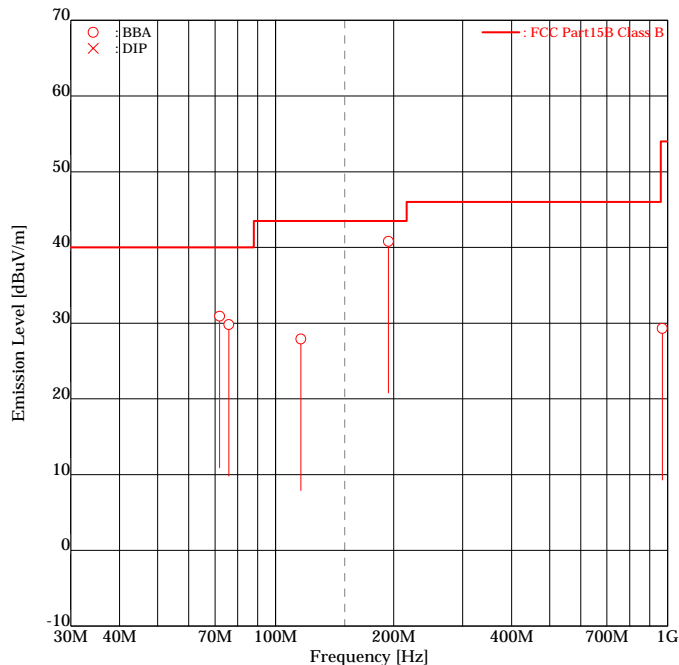
FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]		MARGIN [dB]	
			Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert		
1	1224.34	PEK	39.3	<u>42.3</u>	-0.8	-0.8	38.5	<u>41.5</u>	74.0	35.5	<u>32.5</u>	
2	1224.34	AVG	29.1	<u>34.6</u>	-0.8	-0.8	28.3	<u>33.8</u>	54.0	25.7	<u>20.2</u>	
3	1572.42	PEK	44.3	<u>46.1</u>	0.0	0.0	44.3	<u>46.1</u>	74.0	29.7	<u>27.9</u>	
4	1572.42	AVG	38.0	<u>41.8</u>	0.0	0.0	38.0	<u>41.8</u>	54.0	16.0	<u>12.2</u>	
5	1923.97	PEK	47.4	<u>51.3</u>	2.8	2.8	50.2	<u>54.1</u>	74.0	23.8	<u>19.9</u>	
6	1923.97	AVG	43.7	<u>49.4</u>	2.8	2.8	46.5	<u>52.2</u>	54.0	7.5	<u>1.8</u>	

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

9.2.3 RX 155MHz mode (30 – 1000MHz)

ETL SEMKO Japan K.K.
Kashima No.1 Test Site
Radiated Electric Field

APPLICANT : Kenwood Corporation
EUT NAME : 144MHz FM Transceiver
MODEL NO. : TH-255A
SERIAL NO. : None
TEST MODE : RX 155MHz
POWER SOURCE : AC120V/60Hz (EUT : DC7.5V)
DATE TESTED : Feb 27 2007
FILE NO. : ESJ-107053
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2003
DISTANCE : 3.00 [m]
TEMPERATURE : 24.0 [degC]
HUMIDITY : 33.0 [%]
NOTE :



ENGINEER : Kazuo Masuda

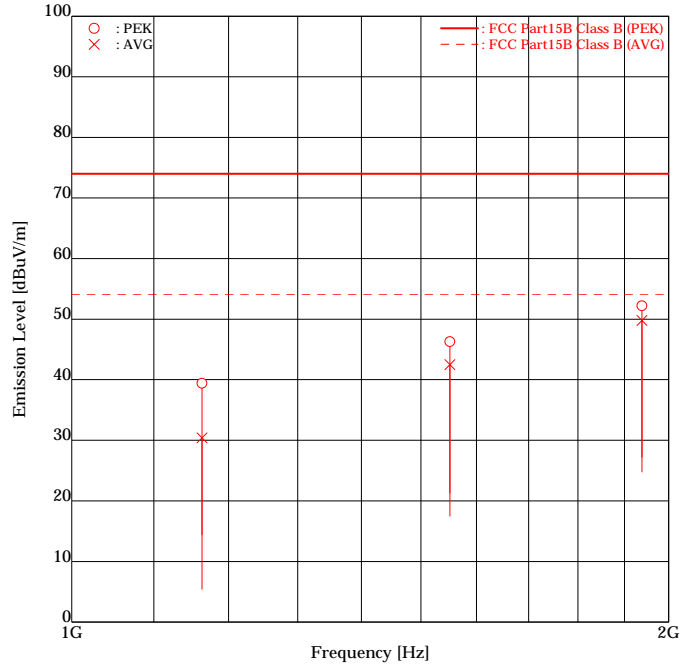
FREQUENCY [No]	ANT. [MHz]	READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]		
		Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert	
1	71.98	BBA	-	<u>36.6</u>	-5.7	-5.7	-	<u>30.9</u>	40.0	-	<u>9.1</u>
2	75.98	BBA	-	<u>36.4</u>	-6.6	-6.6	-	<u>29.8</u>	40.0	-	<u>10.2</u>
3	115.97	BBA	-	<u>32.6</u>	-4.7	-4.7	-	<u>27.9</u>	43.5	-	<u>15.6</u>
4	193.90	BBA	39.3	<u>45.9</u>	-5.1	-5.1	34.2	<u>40.8</u>	43.5	9.3	<u>2.7</u>
5	969.50	BBA	13.4	<u>14.9</u>	14.4	14.4	27.8	<u>29.3</u>	54.0	26.2	<u>24.7</u>

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

9.2.4 RX 155MHz mode (1000 – 2000MHz)

ETL SEMKO Japan K.K.
Kashima No.1 Test Site
Radiated Electric Field

APPLICANT : Kenwood Corporation
 EUT NAME : 144MHz FM Transceiver
 MODEL NO. : TH-255A
 SERIAL NO. : None
 TEST MODE : RX 155MHz
 POWER SOURCE : AC120V/60Hz (EUT : DC7.5V)
 DATE TESTED : Feb 27 2007
 FILE NO. : ESJ-107053
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.00 [m]
 TEMPERATURE : 24.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

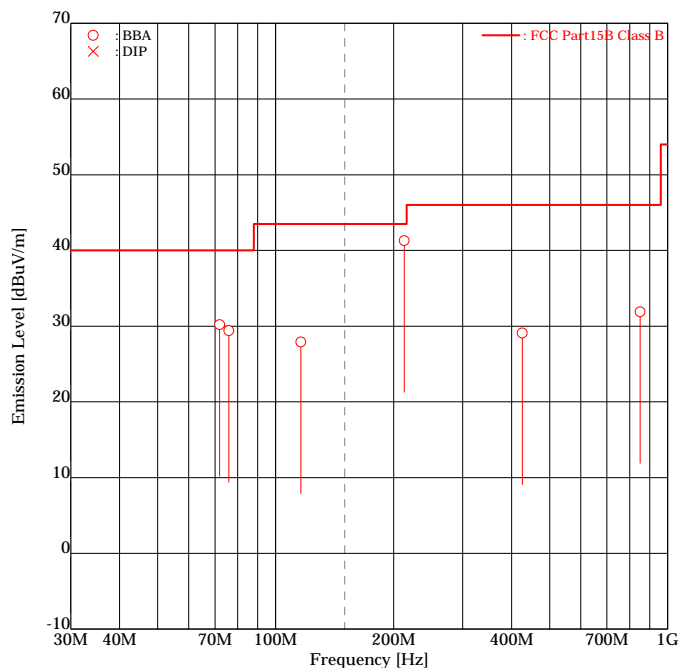
FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]		MARGIN [dB]	
			Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert
1	1163.44	PEK	38.9	<u>40.3</u>	-0.9	-0.9	38.0	<u>39.4</u>	74.0	36.0	<u>34.6</u>	
2	1163.44	AVG	28.3	<u>31.3</u>	-0.9	-0.9	27.4	<u>30.4</u>	54.0	26.6	<u>23.6</u>	
3	1551.25	PEK	44.3	<u>46.5</u>	-0.2	-0.2	44.1	<u>46.3</u>	74.0	29.9	<u>27.7</u>	
4	1551.25	AVG	38.5	<u>42.7</u>	-0.2	-0.2	38.3	<u>42.5</u>	54.0	15.7	<u>11.5</u>	
5	1939.06	PEK	45.2	<u>49.3</u>	2.9	2.9	48.1	<u>52.2</u>	74.0	25.9	<u>21.8</u>	
6	1939.06	AVG	40.3	<u>46.9</u>	2.9	2.9	43.2	<u>49.8</u>	54.0	10.8	<u>4.2</u>	

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

9.2.5 RX 174MHz mode (30 – 1000MHz)

ETL SEMKO Japan K.K.
Kashima No.1 Test Site
Radiated Electric Field

APPLICANT : Kenwood Corporation
EUT NAME : 144MHz FM Transceiver
MODEL NO. : TH-255A
SERIAL NO. : None
TEST MODE : RX 174MHz
POWER SOURCE : AC120V/60Hz (EUT : DC7.5V)
DATE TESTED : Feb 27 2007
FILE NO. : ESJ-107053
REGULATION : FCC Part15B Class B
TEST METHOD : ANSI C63.4-2003
DISTANCE : 3.00 [m]
TEMPERATURE : 24.0 [degC]
HUMIDITY : 33.0 [%]
NOTE :



ENGINEER : Kazuo Masuda

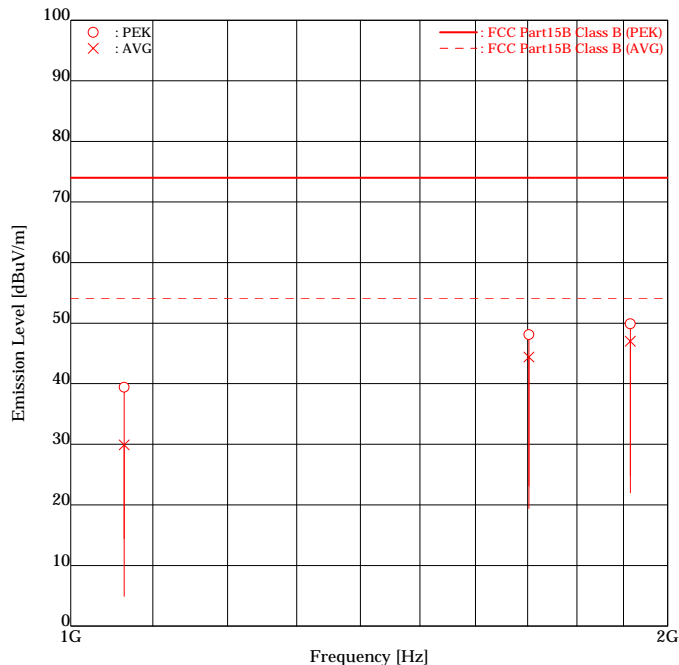
FREQUENCY [No]	ANT. [MHz]	READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]		
		Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert	
1	71.98	BBA	-	<u>35.9</u>	-5.7	-5.7	-	<u>30.2</u>	40.0	-	<u>9.8</u>
2	75.98	BBA	-	<u>36.0</u>	-6.6	-6.6	-	<u>29.4</u>	40.0	-	<u>10.6</u>
3	115.97	BBA	-	<u>32.6</u>	-4.7	-4.7	-	<u>27.9</u>	43.5	-	<u>15.6</u>
4	212.80	BBA	<u>46.1</u>	44.0	-4.8	-4.8	<u>41.3</u>	39.2	43.5	<u>2.2</u>	4.3
5	425.60	BBA	<u>26.1</u>	23.1	3.0	3.0	<u>29.1</u>	26.1	46.0	<u>16.9</u>	19.9
6	851.20	BBA	15.4	<u>19.8</u>	12.1	12.1	27.5	<u>31.9</u>	46.0	18.5	<u>14.1</u>

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

9.2.6 RX 174MHz mode (1000 – 2000MHz)

ETL SEMKO Japan K.K.
Kashima No.1 Test Site
Radiated Electric Field

APPLICANT : Kenwood Corporation
 EUT NAME : 144MHz FM Transceiver
 MODEL NO. : TH-255A
 SERIAL NO. : None
 TEST MODE : RX 174MHz
 POWER SOURCE : AC120V/60Hz (EUT : DC7.5V)
 DATE TESTED : Feb 27 2007
 FILE NO. : ESJ-107053
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.00 [m]
 TEMPERATURE : 24.0 [degC]
 HUMIDITY : 33.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

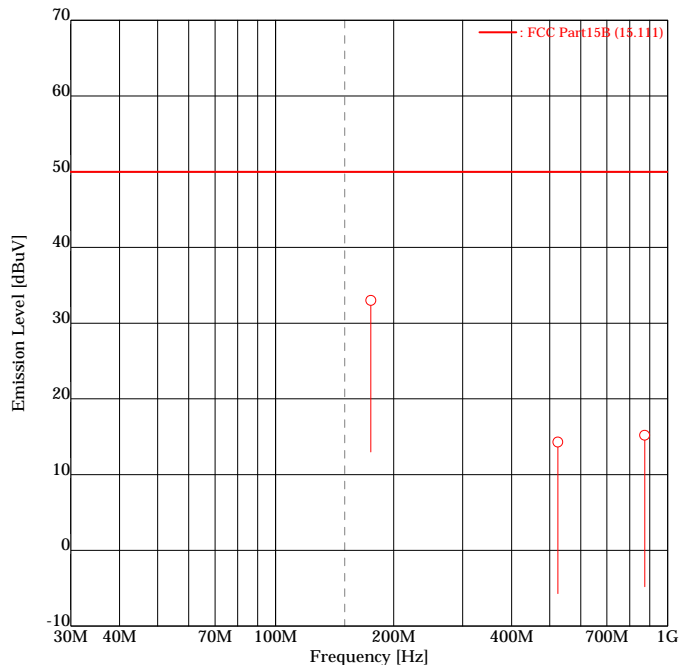
FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]		MARGIN [dB]	
			Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert		
1	1064.13	PEK	38.6	<u>40.3</u>	-0.9	-0.9	37.7	<u>39.4</u>	74.0		36.3	<u>34.6</u>
2	1064.13	AVG	28.6	<u>30.8</u>	-0.9	-0.9	27.7	<u>29.9</u>	54.0		26.3	<u>24.1</u>
3	1702.43	PEK	43.3	<u>47.1</u>	1.0	1.0	44.3	<u>48.1</u>	74.0		29.7	<u>25.9</u>
4	1702.43	AVG	37.2	<u>43.4</u>	1.0	1.0	38.2	<u>44.4</u>	54.0		15.8	<u>9.6</u>
5	1915.27	PEK	44.3	<u>47.2</u>	2.7	2.7	47.0	<u>49.9</u>	74.0		27.0	<u>24.1</u>
6	1915.27	AVG	39.2	<u>44.3</u>	2.7	2.7	41.9	<u>47.0</u>	54.0		12.1	<u>7.0</u>

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

9.3 Conducted Power on Antenna Port
 9.3.1 RX 136MHz mode (30 – 1000MHz)

ETL SEMKO Japan K.K.
Kashima No.1 Test Site
Conducted Power on Antenna Port

APPLICANT : Kenwood Corporation
 EUT NAME : 144MHz FM Transceiver
 MODEL NO. : TH-255A
 SERIAL NO. : None
 TEST MODE : RX 136MHz
 POWER SOURCE : DC7.5V
 DATE TESTED : Feb 26 2007
 FILE NO. : ESJ-107053
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 30.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

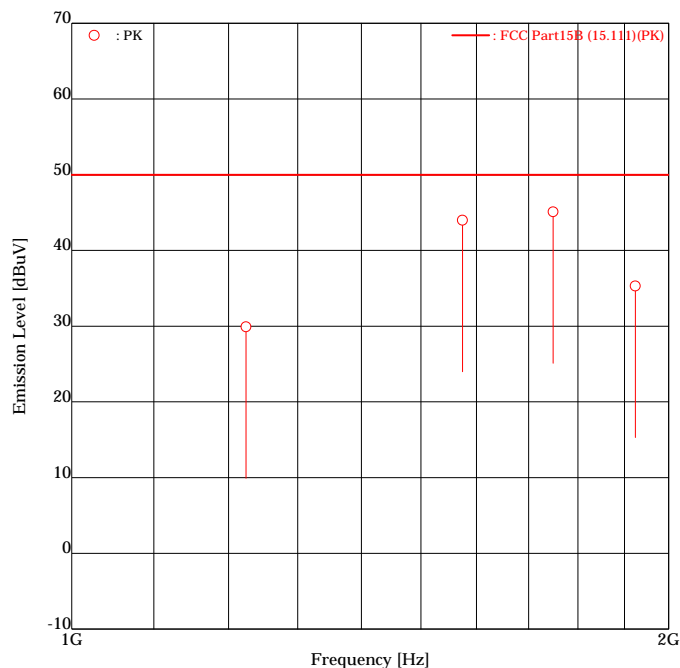
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	174.9000	<u>44.6</u>	-11.6	<u>33.0</u>	50.0	<u>17.0</u>
2	524.7000	<u>23.7</u>	-9.4	<u>14.3</u>	50.0	<u>35.7</u>
3	874.5000	<u>22.4</u>	-7.2	<u>15.2</u>	50.0	<u>34.8</u>

Higher six points are underlined.
 Other frequencies : Below the FCC Part15B (15.111) limit
 Emission Level = Read + Factor(Pad,Cable,Preamplifier)

9.3.2 RX 136MHz mode (1000 – 2000MHz)

ETL SEMKO Japan K.K.
Kashima No.1 Test Site
Conducted Power on Antenna Port

APPLICANT : Kenwood Corporation
 EUT NAME : 144MHz FM Transceiver
 MODEL NO. : TH-255A
 SERIAL NO. : None
 TEST MODE : RX 136MHz
 POWER SOURCE : DC7.5V
 DATE TESTED : Feb 26 2007
 FILE NO. : ESJ-107053
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 30.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1224.2600	<u>45.3</u>	-15.4	<u>29.9</u>	50.0	<u>20.1</u>
2	1574.0900	<u>59.3</u>	-15.3	<u>44.0</u>	50.0	<u>6.0</u>
3	1749.0500	<u>60.0</u>	-14.9	<u>45.1</u>	50.0	<u>4.9</u>
4	1923.9400	<u>49.7</u>	-14.4	<u>35.3</u>	50.0	<u>14.7</u>

Higher six points are underlined.
 Other frequencies : Below the FCC Part15B (15.111) limit
 Emission Level = Read + Factor(Pad,Cable,Preamp)

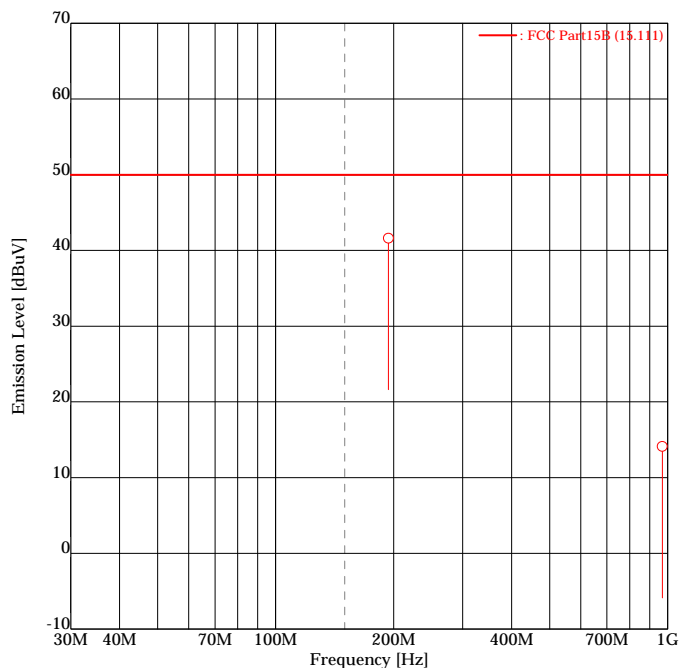
9.3.3 RX 155MHz mode (30 – 1000MHz)

ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Power on Antenna Port

APPLICANT : Kenwood Corporation
 EUT NAME : 144MHz FM Transceiver
 MODEL NO. : TH-255A
 SERIAL NO. : None
 TEST MODE : RX 155MHz
 POWER SOURCE : DC7.5V
 DATE TESTED : Feb 26 2007
 FILE NO. : ESJ-107053
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 30.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

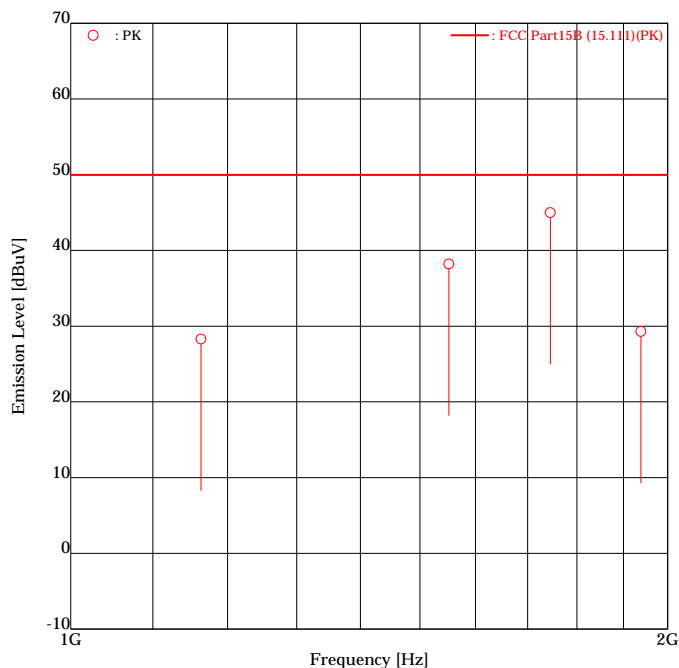
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	193.9000	<u>53.0</u>	-11.4	<u>41.6</u>	50.0	<u>8.4</u>
2	969.5000	<u>20.9</u>	-6.8	<u>14.1</u>	50.0	<u>35.9</u>

Higher six points are underlined.
 Other frequencies : Below the FCC Part15B (15.111) limit
 Emission Level = Read + Factor(Pad,Cable,Preamp)

9.3.4 RX 155MHz mode (1000 – 2000MHz)

ETL SEMKO Japan K.K.
Kashima No.1 Test Site
 Conducted Power on Antenna Port

APPLICANT : Kenwood Corporation
 EUT NAME : 144MHz FM Transceiver
 MODEL NO. : TH-255A
 SERIAL NO. : None
 TEST MODE : RX 155MHz
 POWER SOURCE : DC7.5V
 DATE TESTED : Feb 26 2007
 FILE NO. : ESJ-107053
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 30.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1163.4100	<u>43.6</u>	-15.3	<u>28.3</u>	50.0	<u>21.7</u>
2	1551.2500	<u>53.6</u>	-15.4	<u>38.2</u>	50.0	<u>11.8</u>
3	1745.1500	<u>59.9</u>	-14.9	<u>45.0</u>	50.0	<u>5.0</u>
4	1939.0800	<u>43.6</u>	-14.3	<u>29.3</u>	50.0	<u>20.7</u>

Higher six points are underlined.
 Other frequencies : Below the FCC Part15B (15.111) limit
 Emission Level = Read + Factor(Pad,Cable,Preamp)

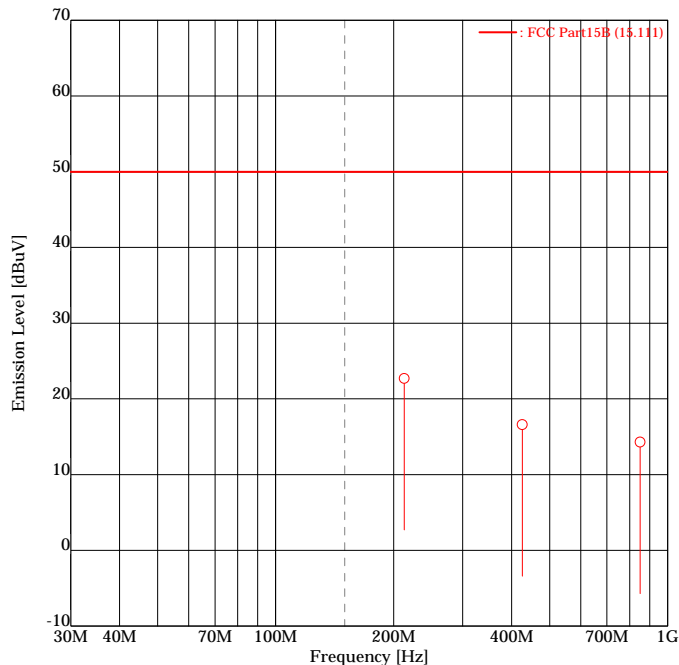
9.3.5 RX 174MHz mode (30 – 1000MHz)

ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Power on Antenna Port

APPLICANT : Kenwood Corporation
 EUT NAME : 144MHz FM Transceiver
 MODEL NO. : TH-255A
 SERIAL NO. : None
 TEST MODE : RX 174MHz
 POWER SOURCE : DC7.5V
 DATE TESTED : Feb 26 2007
 FILE NO. : ESJ-107053
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 30.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	212.8000	<u>34.0</u>	-11.3	<u>22.7</u>	50.0	<u>27.3</u>
2	425.6000	<u>26.4</u>	-9.8	<u>16.6</u>	50.0	<u>33.4</u>
3	851.2000	<u>21.7</u>	-7.4	<u>14.3</u>	50.0	<u>35.7</u>

Higher six points are underlined.
 Other frequencies : Below the FCC Part15B (15.111) limit
 Emission Level = Read + Factor(Pad,Cable,Preamp)

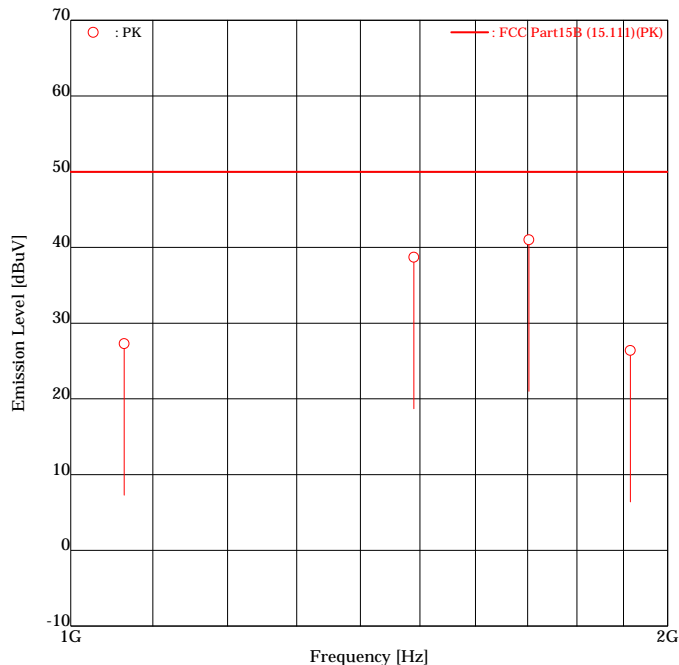
9.3.6 RX 174MHz mode (1000 – 2000MHz)

ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Power on Antenna Port

APPLICANT : Kenwood Corporation
 EUT NAME : 144MHz FM Transceiver
 MODEL NO. : TH-255A
 SERIAL NO. : None
 TEST MODE : RX 174MHz
 POWER SOURCE : DC7.5V
 DATE TESTED : Feb 26 2007
 FILE NO. : ESJ-107053
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 30.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1064.0500	<u>42.5</u>	-15.2	<u>27.3</u>	50.0	<u>22.7</u>
2	1489.6200	<u>54.3</u>	-15.6	<u>38.7</u>	50.0	<u>11.3</u>
3	1702.4000	<u>56.0</u>	-15.0	<u>41.0</u>	50.0	<u>9.0</u>
4	1915.2700	<u>40.8</u>	-14.4	<u>26.4</u>	50.0	<u>23.6</u>

Higher six points are underlined.
 Other frequencies : Below the FCC Part15B (15.111) limit
 Emission Level = Read + Factor(Pad,Cable,Preamplifier)

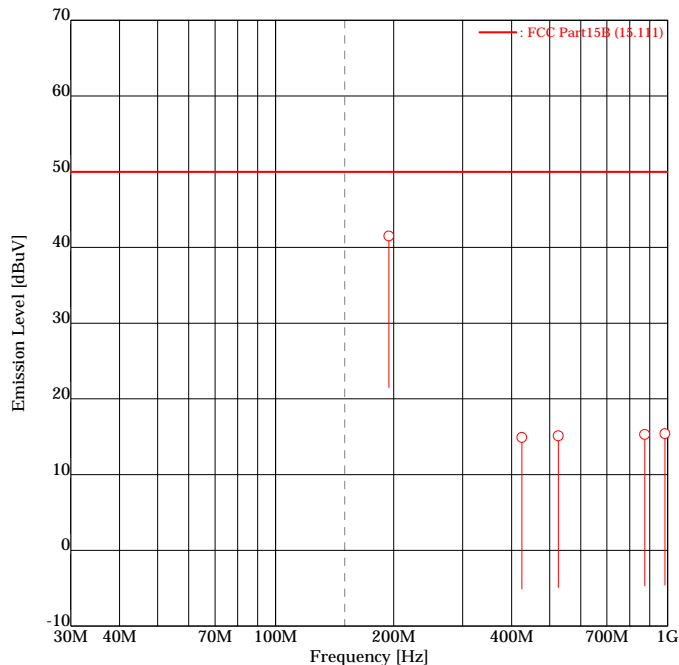
9.3.7 VFO Scan mode

ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Power on Antenna Port

APPLICANT : Kenwood Corporation
 EUT NAME : 144MHz FM Transceiver
 MODEL NO. : TH-255A
 SERIAL NO. : None
 TEST MODE : VFO Scan
 POWER SOURCE : DC7.5V
 DATE TESTED : Feb 26 2007
 FILE NO. : ESJ-107053
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 30.0 [%]
 NOTE : Band : 136 - 174MHz



ENGINEER : Kazuo Masuda

FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	194.3500	<u>52.9</u>	-11.4	<u>41.5</u>	50.0	<u>8.5</u>
2	424.7000	<u>24.7</u>	-9.8	<u>14.9</u>	50.0	<u>35.1</u>
3	526.0500	<u>24.5</u>	-9.4	<u>15.1</u>	50.0	<u>34.9</u>
4	874.5000	<u>22.5</u>	-7.2	<u>15.3</u>	50.0	<u>34.7</u>
5	984.2500	<u>22.1</u>	-6.7	<u>15.4</u>	50.0	<u>34.6</u>

Higher six points are underlined.
 Other frequencies : Below the FCC Part15B (15.111) limit
 Emission Level = Read + Factor(Pad,Cable,Preamp)

9.3.7 VFO Scan mode

< Graph number #1 >

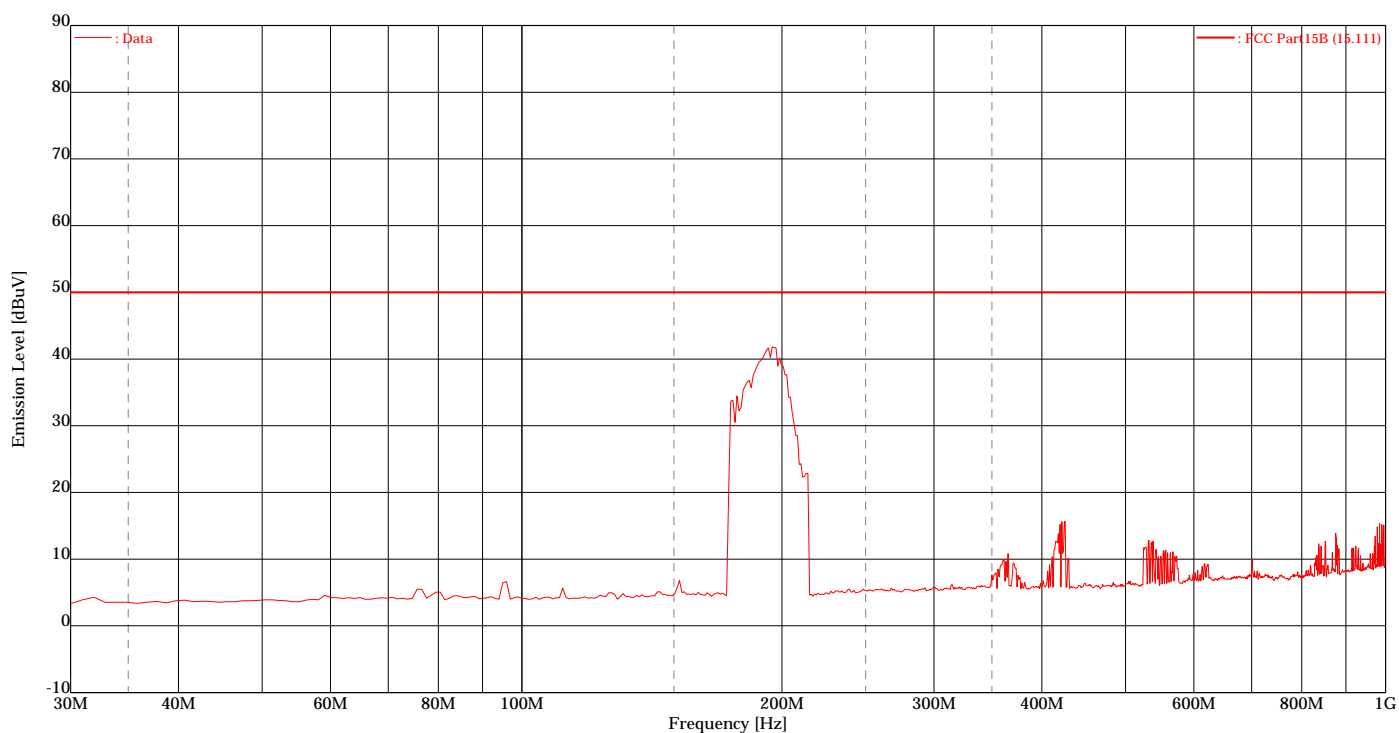
SPECTRUM ANALYSIS

Kashima No.1 Test Site

23.0degC/30.0%

Date tested : Feb 26 2007
Company : Kenwood Corporation
EUT Name : 144MHz FM Transceiver
Model number : TH-255A
Serial number : None

Test mode : VFO Scan
Power source : DC7.5V
File number : ESJ-107053
Engineer : Kazuo Masuda
Note : Band : 136 - 174MHz



9.4 38dB Rejection Test

9.4.1 VFO Scan mode

Location : Kashima No.1 Test Site
 Date Tested : March. 1, 2007
 Temperature : 23 [degC]
 Humidity : 30 [%]
 Engineer : Kazuo Masuda

Injected Frequency [MHz]	Detected Frequency [MHz]	12dB SINAD Reading Injected Frequency [dBm]	12dB SINAD Reading Detected Frequency [dBm]	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

The Audio Analyzer condition :
 12dB SINAD measurement level = 400mV.

9.5 Sample Calculations

9.5.1 Conducted Voltages on Mains Port

Example @ 0.5095MHz

Emission Level	=	Meter Reading		34.5	dBuV
	+	Factor		6.2	dB
				<hr/>	
				=	40.7
					dBuV
Margin	=	Limit		56.0	dBuV
	-	Emission Level		40.7	dBuV
				<hr/>	
				=	15.3
					dB

Factor = LISN Factor + Cable Loss + Pad Loss

9.5.2 Radiated Electric Field

Example @ 1923.97MHz (AV)

Emission Level	=	Meter Reading		49.4	dBuV
	+	Factor		2.8	dB/m
				<hr/>	
				=	52.2
					dBuV/m
Margin	=	Limit		54.0	dBuV/m
	-	Emission Level		52.2	dBuV/m
				<hr/>	
				=	1.8
					dB

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

9.5.3 Conducted Power on Antenna Port

Example @ 1749.05MHz

Output Power Level	=	Meter Reading		60.0	dBuV
	+	Factor		-14.9	dB
				<hr/>	
				=	45.1 dBuV
Margin	=	Limit (:2.0nW)		50.0	dBuV
	-	Output Power Level		45.1	dBuV
				<hr/>	
				=	4.9 dB

Factor = Cable Loss + Amplifier Gain + Pad Loss

9.5.4 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
				<hr/>	
				=	N/A dB
Margin	=	Rejection Level		N/A	dB
	-	Limit		38.0	dB
				<hr/>	
				=	N/A dB

SECTION 10. LIST OF MEASURING INSTRUMENTS

Instrument	Model No.	Serial No.	Manufacturer	Cal. Date	Calibration Expired
LISN (EUT)	ESH2-Z5	882395/022	Rohde & Schwarz	Sep. 29, 06	Sep. 30, 07
6dB Attenuator	CFA-01	None	TME	Nov. 13, 06	Nov. 30, 07
LISN (Peripheral)	KNW-242	8-851-21	Kyoritsu	Feb. 03, 07	Feb. 29, 08
50Ω Termination	CT-01	A010CON50	TME	Sep. 29, 06	Sep. 30, 07
Coaxial cable	5D-2W (7.0 m)	C1	ETL SEMKO	Nov. 13, 06	Nov. 30, 07
Coaxial cable	5D-2W (2.0 m)	C2	ETL SEMKO	Nov. 13, 06	Nov. 30, 07
Coaxial cable	5D-2W (1.0 m)	R6	ETL SEMKO	Nov. 13, 06	Nov. 30, 07
Coaxial cable	5D-2W (1.0 m)	R7	ETL SEMKO	Nov. 13, 06	Nov. 30, 07
Tri-Log antenna	VULB9168	106	Schwarzbeck	Aug. 29, 06	Aug. 31, 07
6dB Attenuator	MP721B	M57593	Anritsu	Jan. 15, 07	Jan. 31, 08
Step Attenuator	8494B	2726A14513	Hewlett Packard	Jan. 15, 07	Jan. 31, 08
Amplifier	ZX60-3018G	001	ETL SEMKO	Jan. 15, 07	Jan. 31, 08
Double Ridged Antenna	3115	5044	EMCO	Jun. 08, 06	Jun. 30, 07
3dB Attenuator	4768-3	79	narda	Sep. 27, 06	Sep. 30, 07
Amplifier	83051A	3332A00329	Hewlett Packard	Sep. 27, 06	Sep. 30, 07
Coaxial cable	5D-2W (9.0 m)	R1	ETL SEMKO	Jan. 15, 07	Jan. 31, 08
Coaxial cable	10D-2W (5.5 m)	R2	ETL SEMKO	Jan. 15, 07	Jan. 31, 08
Coaxial cable	5D-2W (2.0 m)	R3	ETL SEMKO	Jan. 15, 07	Jan. 31, 08
Coaxial cable	5D-2W (0.2 m)	R4	ETL SEMKO	Jan. 15, 07	Jan. 31, 08
Coaxial cable	5D-2W (1.0 m)	R5	ETL SEMKO	Jan. 15, 07	Jan. 31, 08
Coaxial cable	5D-2W (1.0 m)	R6	ETL SEMKO	Jan. 15, 07	Jan. 31, 08
Coaxial cable	5D-2W (1.0 m)	R7	ETL SEMKO	Jan. 15, 07	Jan. 31, 08
Coaxial cable	SUCOFLEX102(1.0m)	R14 712/2	SUHNER	Sep. 27, 06	Sep. 30, 07
Coaxial cable	KPS-1501-2362-KPS(6.0m)	R15 03292004	Insulated Wire	Sep. 27, 06	Sep. 30, 07
Spectrum Analyzer	8564E	3643A00665	Hewlett Packard	Aug. 17, 06	Aug. 31, 07
Site Attenuation				Jun. 14, 06	Jun. 30, 07
Test receiver	ESS (Firmware Version 1.07)	844861/004	Rohde & Schwarz	Mar. 10, 06	Mar. 31, 07
RF Switch	ACX-150-1	None	ETL SEMKO	Nov. 13, 06	Nov. 30, 07
Testing Software : emiT (Version 2.0.2.0)					
Attenuator (10dB)	CFA-05NPJ-10	262843	TME	Aug. 01, 06	Aug. 31, 07
RF Signal Generator	SMG	860289/011	Rohde & Schwarz	Apr. 14, 06	Apr. 30, 07
Audio Analyzer	8903B	2948A07326	Hewlett Packard	Apr. 18, 06	Apr. 30, 07

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

SECTION 11. MEASUREMENT UNCERTAINTY

The uncertainty of the measurements performed for this report lies:

Radiated Electric Field at 3m		
30 MHz – 1000 MHz	± 3.7 dB	
Above 1 GHz	± 4.1 dB	
Radiated Electric Field at 10m		
30 MHz – 1000 MHz	± 3.8 dB	
Above 1 GHz	± 4.1 dB	
Radiated Electric Field at 30m		
Under consideration		
Radiated Effective Power		
11.7 GHz – 12.7 GHz	± 3.8 dB	
Conducted Voltages on Mains Port		
9 kHz – 30 MHz	± 3.0 dB	
Conducted Voltages on Telecommunication Port		
9 kHz – 30 MHz	± 3.4 dB	
Conducted Current on Telecommunication Port		
9 kHz – 30 MHz	± 1.3 dB	
Conducted Voltages on Terminals		
150 kHz – 30 MHz	± 1.0 dB	
Radiated Power		
30 MHz – 300 MHz	± 3.3 dB	

Note on Radiated Electric Field measurement uncertainty

The following items are not included in the calculations in spite of their own uncertainty components because it is impracticable to find the value.

It is our problem awaiting solution in future.

(1) Repeatability of measurement

It is not possible to calculate repeatability since the measurement was carried out only one time.

(2) Antenna factor variation

The definition of measured (radiated electric field strength) is not completed on the referred standard(s).




(3) Loss of EUT radiation propagation




It is certainly one of the uncertainty components, however is not able to calculate.

Please note that these uncertainties are not reflected to the compliance judgment of the test results in this report.

SECTION 12. DESCRIPTION OF TEST LABORATORY

ETL SEMKO is a division of Intertek plc (LSE: ITRK), a global leader in testing, inspection and certification services, operating in 273 laboratories and 521 offices in 100 countries throughout the world. The ETL SEMKO division of Intertek provides access to global markets through its local services, which include product safety testing and certification, EMC testing and performance testing for customers in such industries as wireless technology, security, appliances, HVAC, cables and wiring accessories, industrial machinery, medical devices, telecommunications, lighting, automotive, semiconductor, building products and electronics.

ACCREDITATION	SCOPE	LAB. CODE
 NVLAP USA <small>LAB CODE 100290-0</small>	EMC Testing	100290-0
 VLAC JAPAN	EMC Testing	VLAC-008-1
 BSMI TAIWAN	EMC Testing	SL2-IN-E-6008

FILING	SCOPE	LAB. CODE
 VCCI JAPAN	EMC Testing	-
 FCC USA	EMC Testing	Registration Number 934283
 IC CANADA	EMC Testing Telecom Testing	IC 2065
	EMC Testing	-