

TEST REPORT

Regulation : **FCC Part15B – Scanning Receiver**
Industry Canada RSS-135

: **FCC Part15B Class B**
CANADA ICES-003 Class B

Applicant	Testing Laboratory
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Equipment Type	144/440MHz FM DUAL BANDER
Category	Scanning Receiver & Peripherals
Trademark	KENWOOD
Model (s)	TM-D710A, TM-V71A
Serial No.	None
FCC ID	K44397700
IC	282F-397700
Test Result	Complied
Report Number	ESJ-107031
Report Issue Date	March 2, 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) (IC File No. : IC 2065-1)
EUT Received	February 08, 2007
Test Started	February 09, 2007
Test Completed	February 23, 2007
Standard Applied	FCC Part15B – Scanning Receiver Industry Canada RSS-135 FCC Part15B Class B - Peripherals and Canada ICES-003 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 | DIP = Dipole Antenna |
| AMN = Artificial Mains Network | DoC = Device for Declaration of Conformity |
| AMP = Amplifier, ATT = Attenuator | EUT = Equipment Under Test |
| ANT = Antenna, BBA = Broadband Antenna | ISN = Impedance Stabilization Network |
| AVG = Average | LISN = Line Impedance Stabilization Network |
| Cal = Calibration | PK = Peak |
| CDN = Coupling Decoupling Network | Q-P = Quasi-peak |
| LCD = Liquid-Crystal Display | RX = Receive |
| SPKR = Speaker | |

SECTION 2. SUMMARY OF TEST RESULTS

This test report clearly shows that the EUT is in compliance with the **FCC Part15B** (- Scanner Receivers with Industry Canada RSS-135) and **FCC Part15B Class B** (- Peripheral with Canada ICES-003 Class B) specification.

The minimum margins to the limits are as follows:

Conducted Voltages on Mains Port	RX mode 118MHz(A)/800MHz(B)	24.6 dB	at	0.4856 MHz
Radiated Electric Field	RX mode 524MHz(A)/1300MHz(B)	12.0 dB	at	404.32 MHz
Conducted Power on Antenna Port	VFO Scan mode (B Band)	16.3 dB	at	219.95 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	Main Unit (FM Dual Bander)	TM-D710A (TM-V71A)	None	KENWOOD	EUT	K44397700
A2	Operation Panel	TM-D710A (RC-D710)	None	KENWOOD	EUT (Option : for TM-V71A)	N.A.
A3	Operation Panel	TM-V71A	None	KENWOOD	EUT	N.A.
A4	Microphone (with Keypad)	MC-59	None	KENWOOD	EUT (Accessory)	N.A.
A5	DC Power Supply	PS-53	None	KENWOOD	Option	N.A.
A6	External Speaker	SP-50B	None	KENWOOD	Option	N.A.
A7	External Speaker	SP-50B	None	KENWOOD	Option	N.A.
Power Ratings of EUT : DC 13.8V, 13A (Max) AC 120V, 60Hz, 5A (PS-53)						
Power Supply : AC 120V, 60 Hz						
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	A Band : 118 – 524 MHz B Band : 136 – 524 MHz, 800 – 824 MHz, 849 – 869 MHz, 894 – 1300 MHz
Receiver Type	Double Conversion Super-heterodyne
Mode of Operation	F2D, F3E, F1D(:TM-D710A)

3.3 Intermediate Frequencies :

1st	A Band : 45.05MHz / B Band : 49.95MHz
2nd	A Band : 455kHz (Upper) / B Band : 450kHz (Upper)

3.4 Oscillator(s) / Crystal (s) :

Oscillator	Operating Frequency	Board Name	Notes
338 MHz	1350 MHz	TX-RX UNIT	(Highest)

3.5 Port(s)/Connector(s) :

Port Name	Connector Type	Connector Pin	Notes
ANT	M-type	1 pin	Main Unit
DATA	Mini DIN	6 pin	Main Unit
PC	Mini DIN	8 pin	Main Unit
SP1	Mini jack (3.5φ)	1 pin	Main Unit
SP2	Mini jack (3.5φ)	1 pin	Main Unit
DC13.8V	Wire to wire connector	2 pin	Main Unit
MIC	Modular	8pin	Main Unit
PANEL	Modular	8pin	Main Unit
PANEL	Modular	8pin	Operation Panel (TM-D710A)
PANEL	Modular	6pin	Operation Panel (TM-V71A)
PC	Mini DIN	6 pin	Operation Panel (TM-D710A)
GPS	Mini jack (2.5φ)	1pin	Operation Panel (TM-D710A)

3.6 Frequency Range of Measurements

	Measured Frequency Range
Conducted Voltages on Mains Port	0.15 – 30 MHz
Radiated Electric Field	30 – 6500 MHz
Conducted Power on Antenna Port	30 – 6500 MHz
38dB Rejection	A Band : 118 – 524 MHz B Band : 136 – 524 MHz 800 – 1300 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	GPS Receiver	GPS II	40041874	Garmin	IPH-17300	
C	Computer	Dimension2400 MTC2	GZNPG1X	Dell Computer	DoC	
D	LCD Monitor	E152FPc	CN-0N1546- 64180-443-12QH	Dell Computer	DoC	
E	Mouse	M-S34	LNA12785508	Dell Computer	DZL211029	
F	Keyboard	SK-8110	CN-0C6227- 71616-46O-05B7	Dell Computer	DoC	
G	Printer	C6490B	MY35G1R1KT	Hewlett Packard	DoC	
H	AC Adapter	ADP-32BBA	PLT031803	Hewlett Packard	N.A.	
I	ANT Terminator	CT-01	A003CON50	TME	N.A.	
Power Supply :						
C, D, H	AC120V, 60Hz					

SECTION 5. USED CABLE (S)

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

No.	Name	Length (m)	Shield	Connector Type	Ferrite Core
1	Operation Control cable	4.0 m	Yes	Plastic	
2	Extension cable (PG-5F)	4.0 m	Yes	Plastic	
3	Microphone cable	0.6 m	Yes	Plastic	
4	Extension cable (PG-5F)	4.0 m	Yes	Plastic	
5	Serial Communication cable (PG-5H)	2.0 m	Yes	Metal	
6	Data Communication cable (PG-5H)	2.0 m	Yes	Metal	
7	Extension cable (PG-5F)	2.0 m	Yes	Metal	
8	Speaker cable	2.5 m	Yes	Metal	
9	Speaker cable	2.5 m	Yes	Metal	
10	Serial Communication cable (PG-5G)	2.0 m	Yes	Metal	
11	GPS Receiver cable	4.0 m	Yes	Metal	
12	LCD Monitor cable	1.4 m	Yes	Metal	Fixed ×1
13	Mouse cable	1.8 m	Yes	Metal	
14	Keyboard cable	2.0 m	Yes	Metal	
15	Printer cable	2.3 m	Yes	Metal	
16	Power cable (DC) for EUT (PG-5F)	6.0 m	No	-	
17	Power cable (AC) for DC Supply	1.8 m	No	-	
18	Power cable for Computer	1.9 m	No	-	
19	Power cable for LCD Monitor	1.8 m	No	-	
20	Power cable for Printer (DC)	1.7 m	No	-	Fixed ×1
21	Power cable for Printer (AC)	2.0 m	No	-	

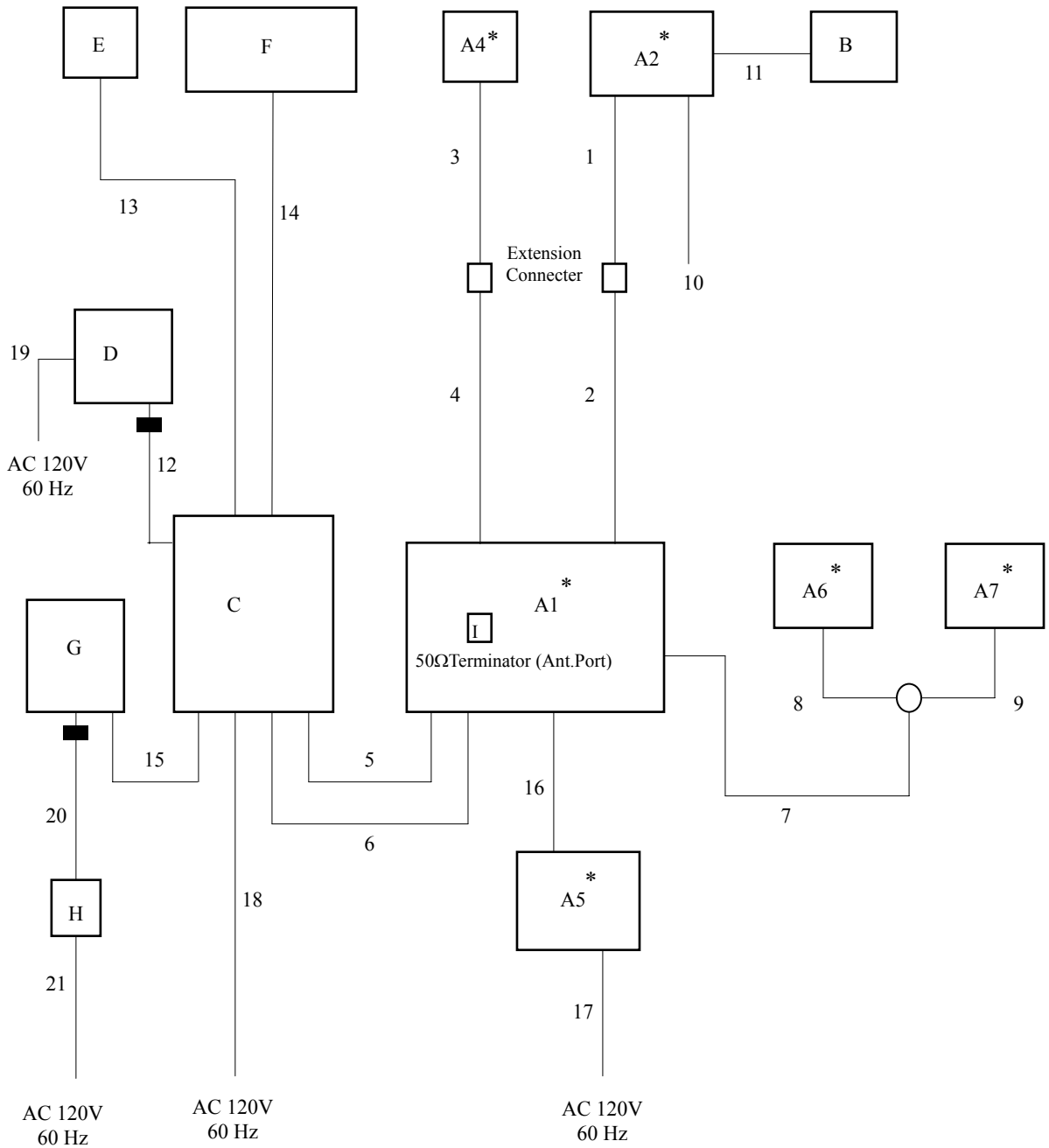
No.2, No.4, No.5, No.6, No.7, No.10 and No.16 cables are EUT Optional (Kit) cables.

SECTION 6. CONSTRUCTION OF EQUIPMENT

6.1 Conducted Voltages on Mains Port Radiated Electric Field

System configuration for 'TM-D710A'

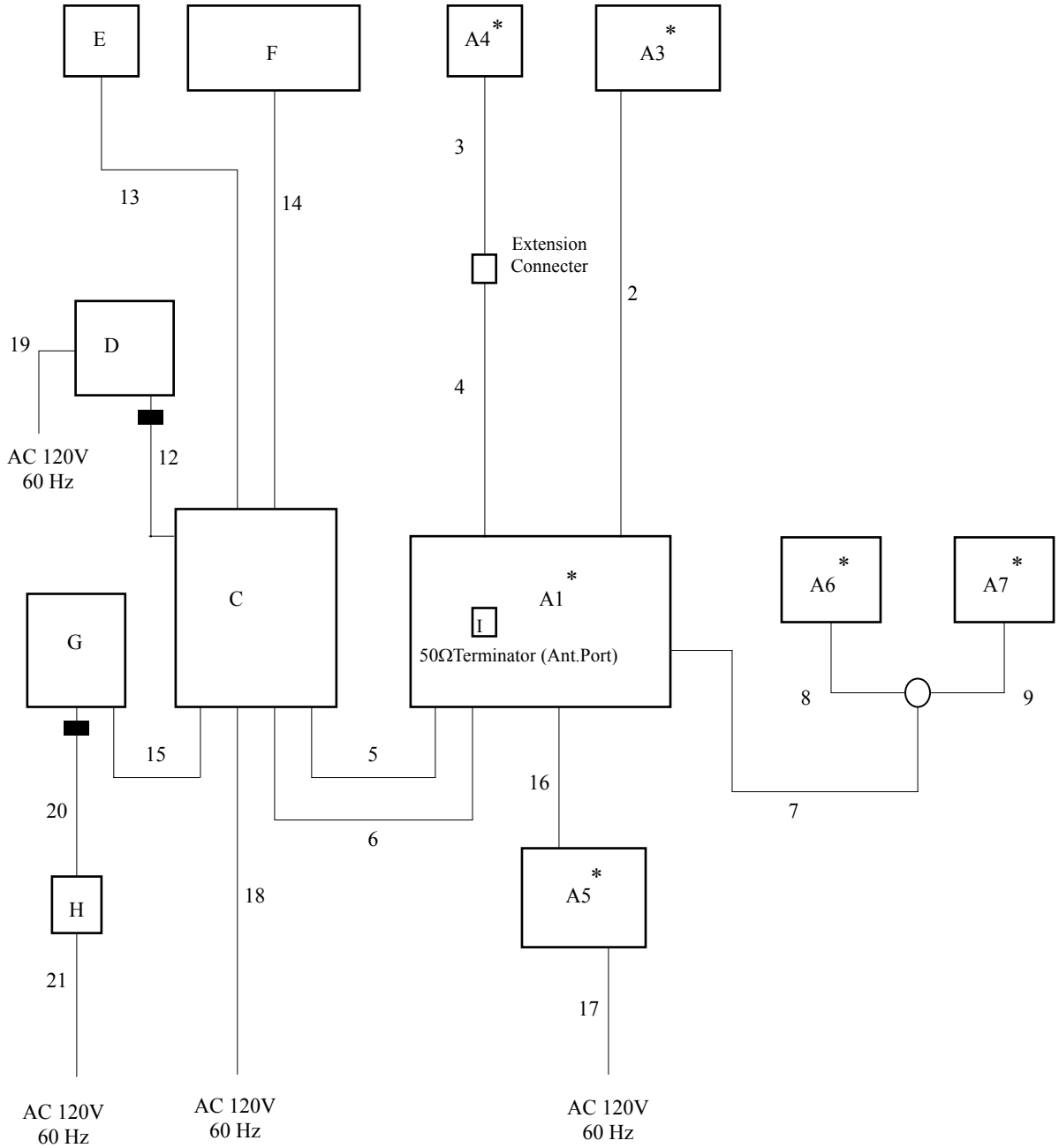
* : EUT
 ■ : Ferrite core



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

System configuration for 'TM-V71A'

* : EUT
 ■ : Ferrite core

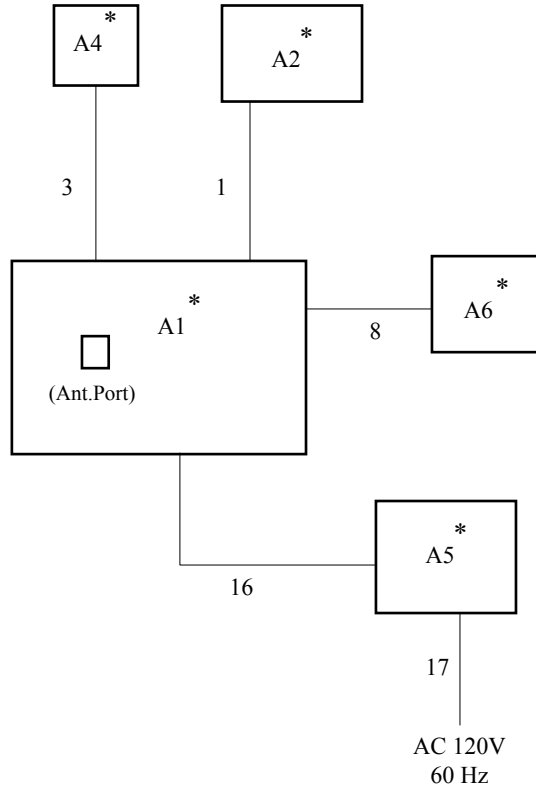


The symbols and numbers assigned to the equipments and cables on this diagram correspond to the ones in Sections 3 to 5.

6.2 Conducted Power on Antenna Port

System configuration

* : EUT

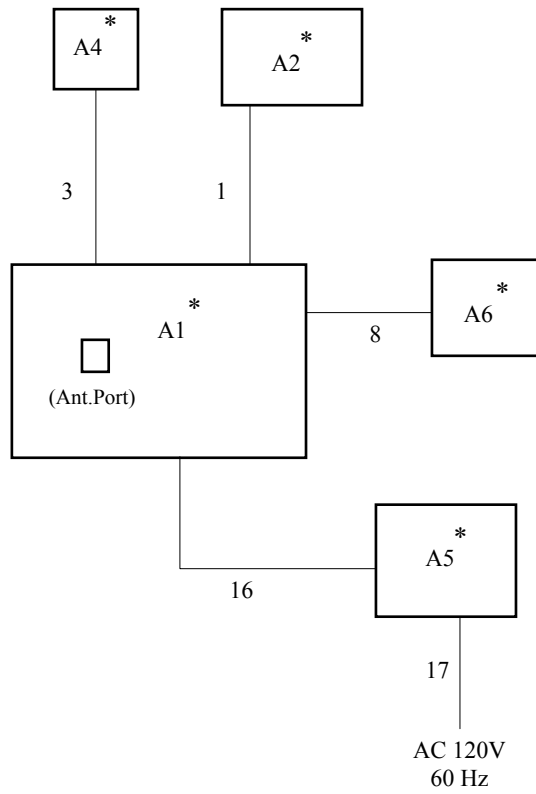


The symbols and numbers assigned to the equipments and cables on this diagram correspond to the ones in Sections 3 to 5.

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.

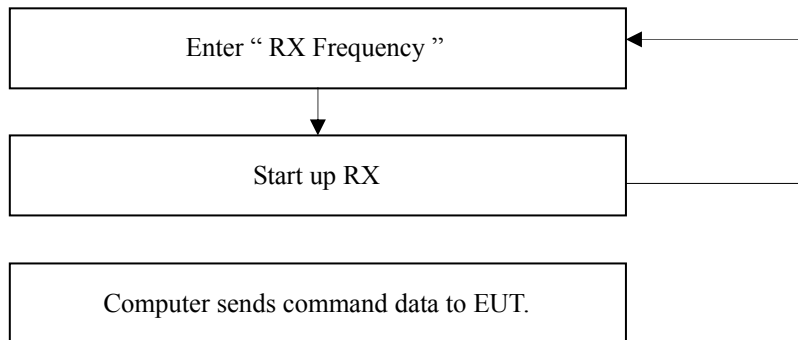
7.1 Operating Condition

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]

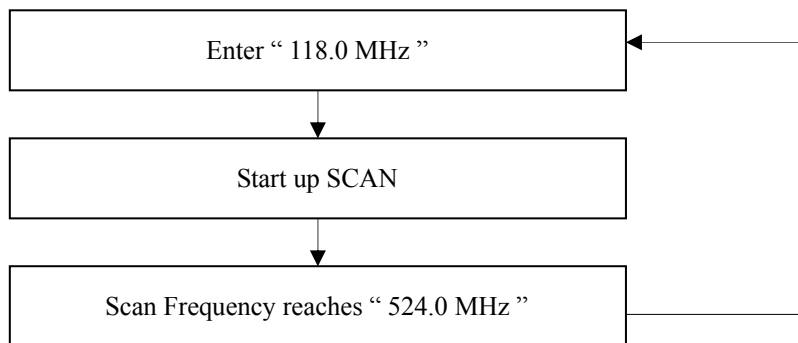
Following operations were performed continuously.

7.2.1 RX mode

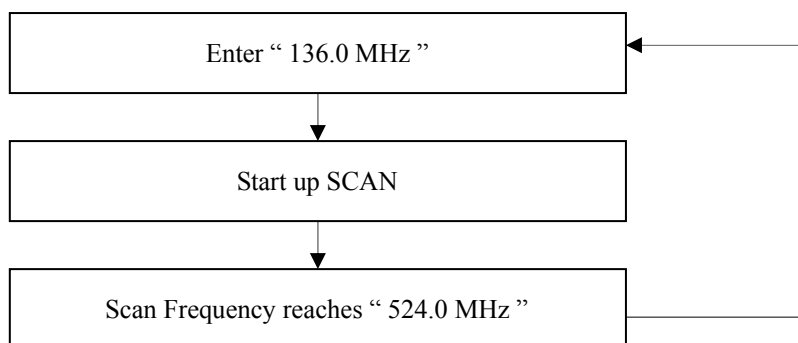


7.2.2 VFO Scan mode

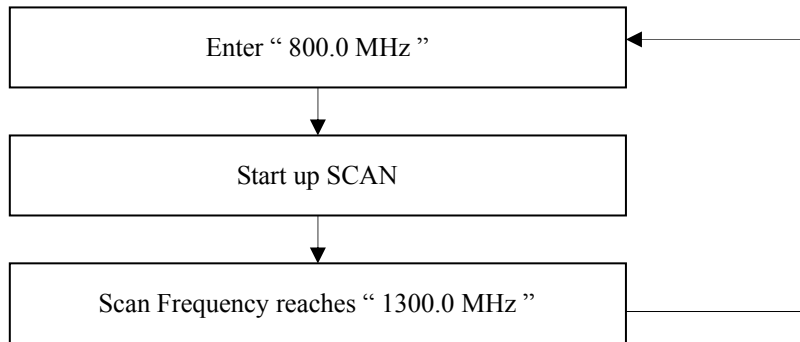
A Band



B Band



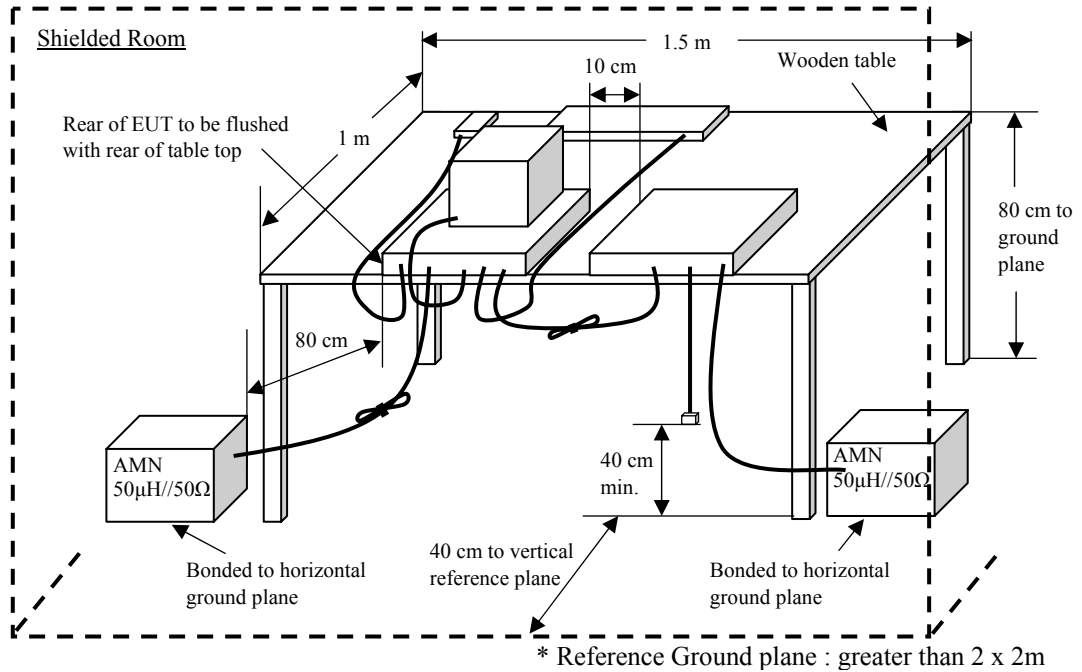
B Band



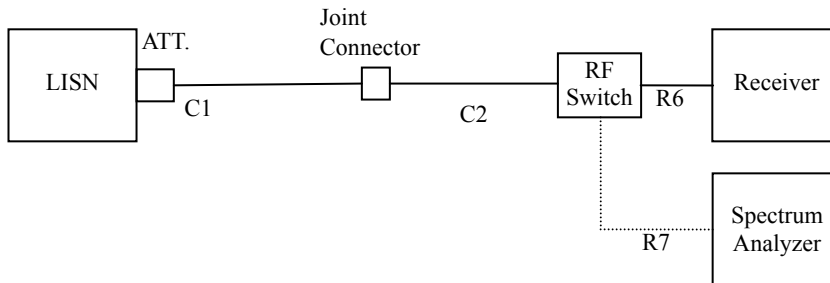
SECTION 8. TEST PROCEDURE(S)

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.

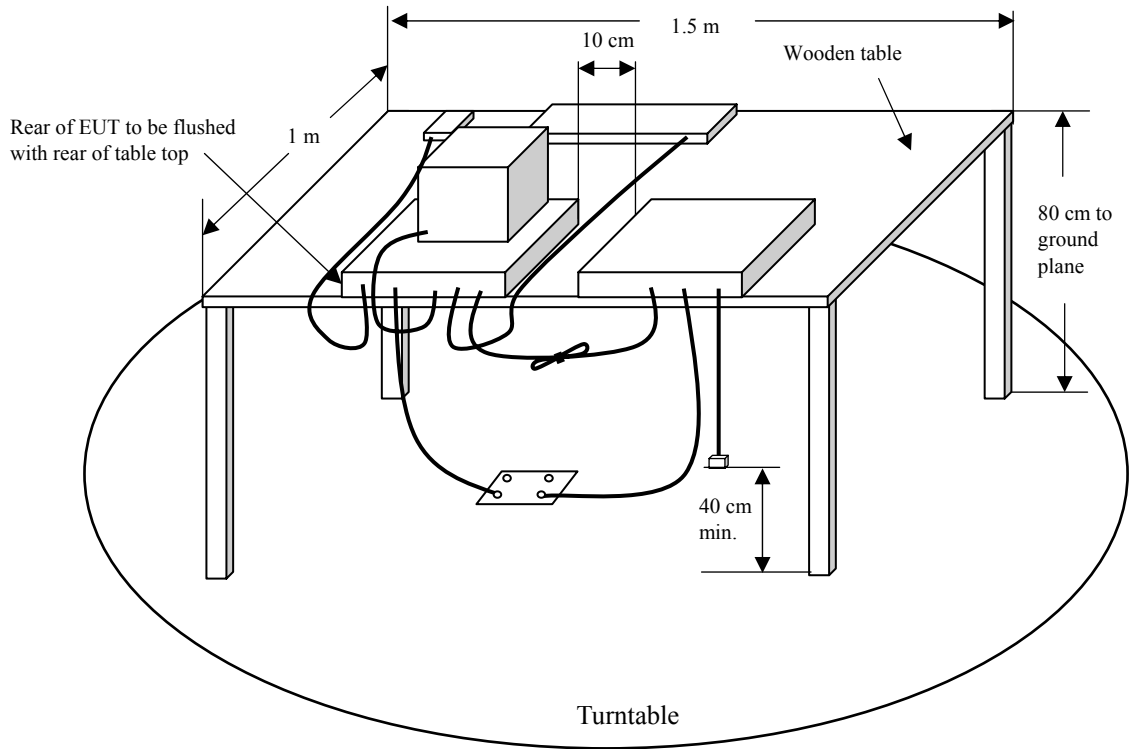
[Final Measurement]

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

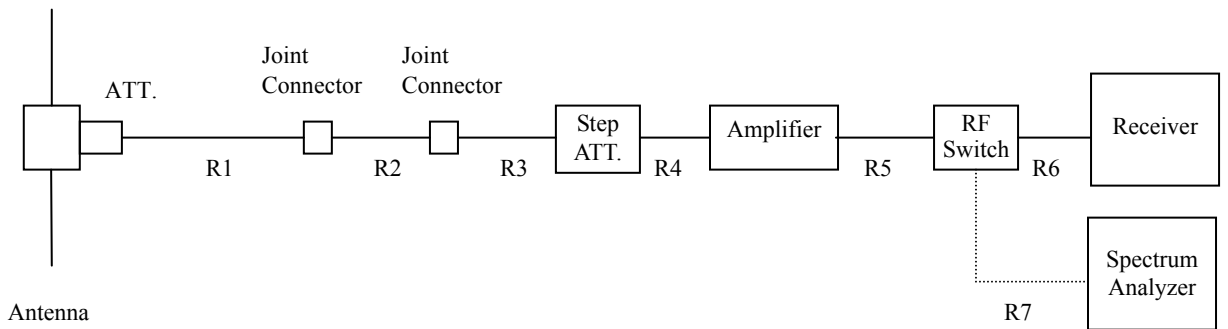
The equipment and cables are arranged or manipulated within the range of the test standard in the above condition.

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

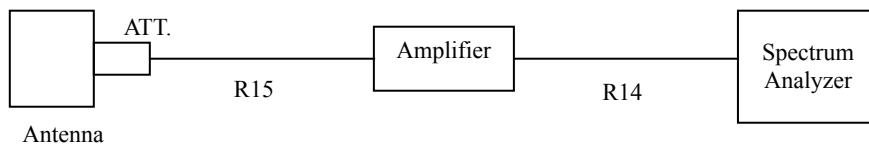
Radiated Electric Field



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.

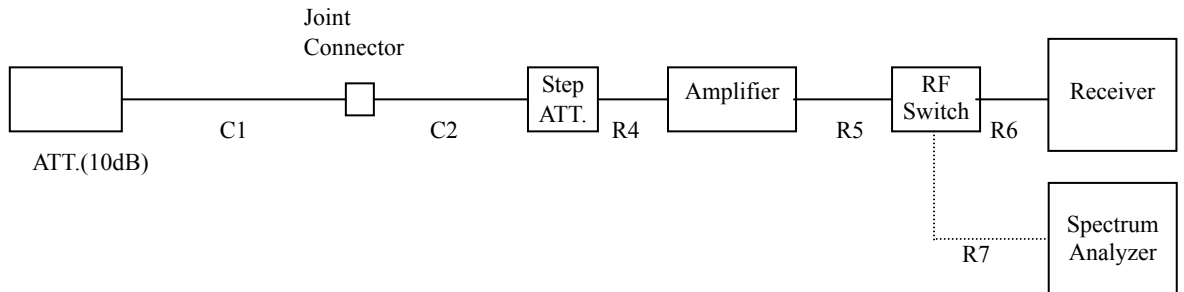
The equipment and cables are arranged or manipulated within the range of the test standard in the above condition.

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

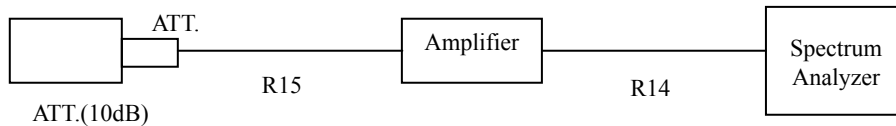
When the uncertain result was obtained, the measurement is retried by using the half wave dipole antenna instead of the broadband antenna.

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 = 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 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

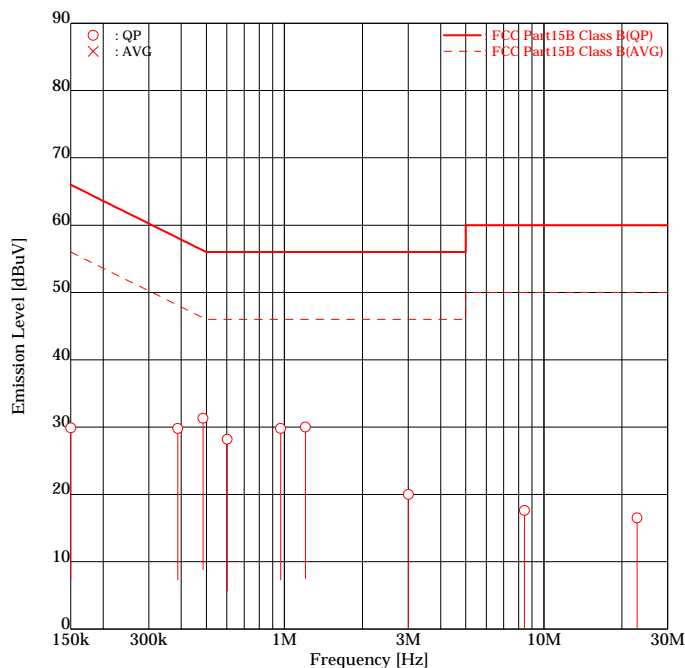
9.1.1 RX 118MHz(A)/136MHz(B) mode (TM-D710A)

ETL SEMKO Japan K.K.

Kashima No.1 Test Site

Conducted Voltages on Mains Port

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A
 SERIAL NO. : None
 TEST MODE : RX 118MHz(A)/136MHz(B)
 POWER SOURCE : AC120V/60Hz (EUT:DC13.8V)
 DATE TESTED : Feb 15 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 36.0 [%]
 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	23.1	23.8	6.1	6.1	29.2	29.9	66.0	36.8	36.1
2	0.3879	QP	23.5	23.7	6.1	6.1	29.6	29.8	58.1	28.5	28.3
3	0.4856	QP	24.6	<u>25.1</u>	6.2	6.2	30.8	<u>31.3</u>	56.2	25.4	<u>24.9</u>
4	0.6020	QP	21.0	<u>22.0</u>	6.3	6.2	27.3	<u>28.2</u>	56.0	28.7	<u>27.8</u>
5	0.9672	QP	<u>23.6</u>	21.1	6.2	6.2	<u>29.8</u>	27.3	56.0	<u>26.2</u>	28.7
6	1.2053	QP	23.5	<u>23.8</u>	6.2	6.2	29.7	<u>30.0</u>	56.0	26.3	<u>26.0</u>
7	3.0084	QP	<u>13.6</u>	12.4	6.4	6.4	<u>20.0</u>	18.8	56.0	<u>36.0</u>	37.2
8	8.4265	QP	10.8	11.1	6.5	6.5	17.3	17.6	60.0	42.7	42.4
9	22.8647	QP	9.0	9.4	6.8	7.1	15.8	16.5	60.0	44.2	43.5

Higher six points are underlined.

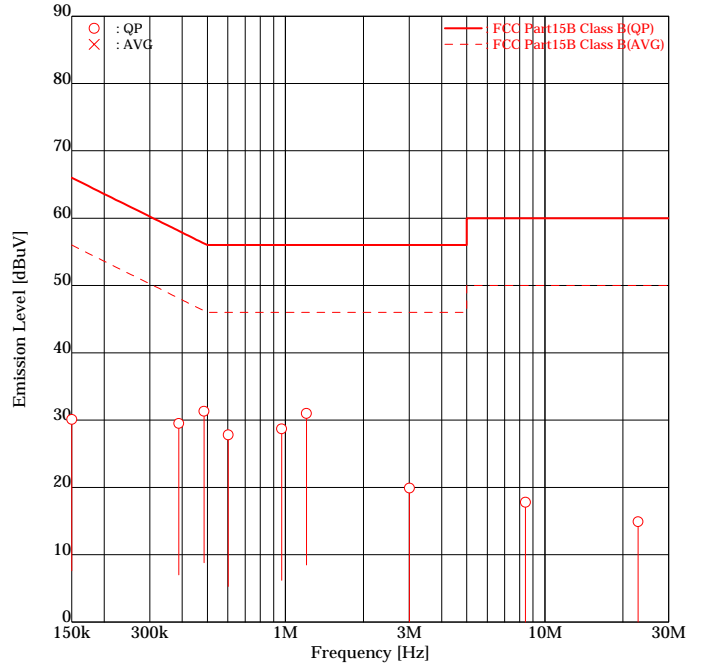
Other frequencies : Below the FCC Part15B Class B limit

Emission Level = Read + Factor(LISN,Pad,Cable)

9.1.2 RX 321MHz(A)/321MHz(B) mode (TM-D710A)

ETL SEMKO Japan K.K.
Kashima No.1 Test Site
 Conducted Voltages on Mains Port

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A
 SERIAL NO. : None
 TEST MODE : RX 321MHz(A)/321MHz(B)
 POWER SOURCE : AC120V/60Hz (EUT:DC13.8V)
 DATE TESTED : Feb 15 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 36.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

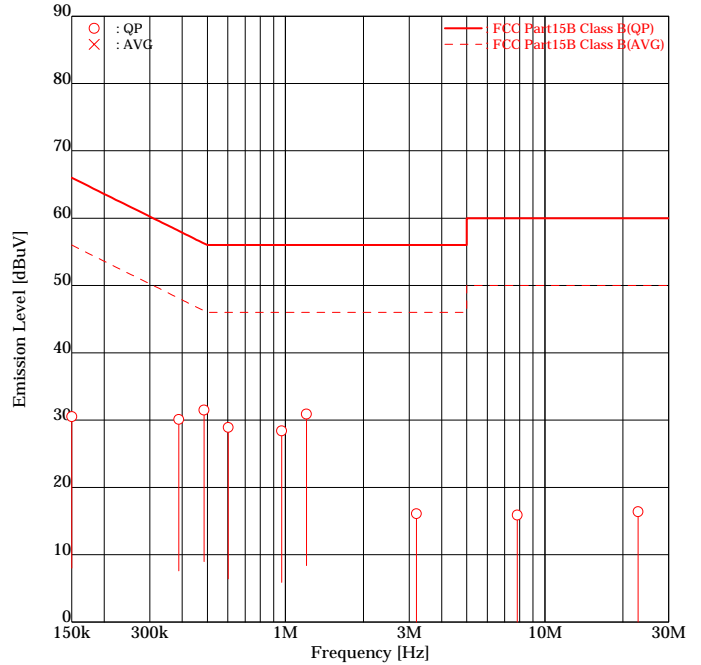
FREQUENCY [No]	MODE [MHz]	READING [dBuV]		FACTOR [dB]		EMISSION [dBuV]		LIMIT [dBuV]	MARGIN [dB]		
		Line1	Line2	Line1	Line2	Line1	Line2		Line1	Line2	
1	0.1500	QP	23.1	<u>24.0</u>	6.1	6.1	29.2	<u>30.1</u>	66.0	36.8	<u>35.9</u>
2	0.3879	QP	23.3	<u>23.4</u>	6.1	6.1	29.4	<u>29.5</u>	58.1	28.7	<u>28.6</u>
3	0.4856	QP	24.9	<u>25.1</u>	6.2	6.2	31.1	<u>31.3</u>	56.2	25.1	<u>24.9</u>
4	0.6020	QP	21.4	<u>21.6</u>	6.3	6.2	27.7	<u>27.8</u>	56.0	28.3	<u>28.2</u>
5	0.9672	QP	22.3	<u>22.5</u>	6.2	6.2	28.5	<u>28.7</u>	56.0	27.5	<u>27.3</u>
6	1.2053	QP	24.3	<u>24.8</u>	6.2	6.2	30.5	<u>31.0</u>	56.0	25.5	<u>25.0</u>
7	3.0084	QP	13.4	13.5	6.4	6.4	19.8	19.9	56.0	36.2	36.1
8	8.4265	QP	11.0	11.3	6.5	6.5	17.5	17.8	60.0	42.5	42.2
9	22.8647	QP	8.1	7.2	6.8	7.1	14.9	14.3	60.0	45.1	45.7

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 524MHz(A)/524MHz(B) mode (TM-D710A)

ETL SEMKO Japan K.K.
Kashima No.1 Test Site
 Conducted Voltages on Mains Port

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A
 SERIAL NO. : None
 TEST MODE : RX 524MHz(A)/524MHz(B)
 POWER SOURCE : AC120V/60Hz (EUT:DC13.8V)
 DATE TESTED : Feb 15 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 36.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

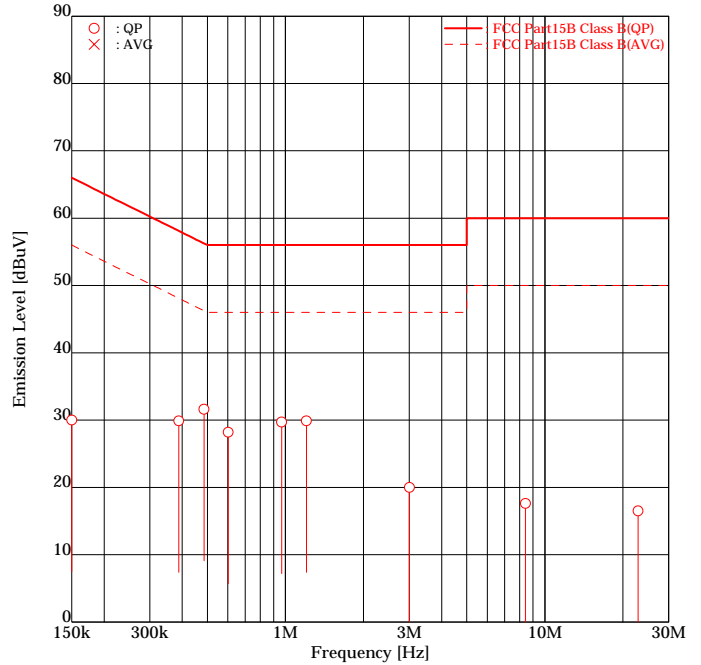
FREQUENCY [No]	MODE [MHz]	READING [dBuV]		FACTOR [dB]		EMISSION [dBuV]		LIMIT [dBuV]	MARGIN [dB]		
		Line1	Line2	Line1	Line2	Line1	Line2		Line1	Line2	
1	0.1500	QP	<u>24.4</u>	24.2	6.1	6.1	<u>30.5</u>	30.3	66.0	<u>35.5</u>	35.7
2	0.3879	QP	<u>24.0</u>	23.6	6.1	6.1	<u>30.1</u>	29.7	58.1	<u>28.0</u>	28.4
3	0.4856	QP	25.1	<u>25.3</u>	6.2	6.2	31.3	<u>31.5</u>	56.2	24.9	<u>24.7</u>
4	0.6020	QP	<u>22.6</u>	22.5	6.3	6.2	<u>28.9</u>	28.7	56.0	<u>27.1</u>	27.3
5	0.9672	QP	<u>22.2</u>	21.5	6.2	6.2	<u>28.4</u>	27.7	56.0	<u>27.6</u>	28.3
6	1.2053	QP	24.5	<u>24.7</u>	6.2	6.2	30.7	<u>30.9</u>	56.0	25.3	<u>25.1</u>
7	3.2021	QP	9.7	9.6	6.4	6.4	16.1	16.0	56.0	39.9	40.0
8	7.8258	QP	9.4	9.1	6.5	6.5	15.9	15.6	60.0	44.1	44.4
9	22.8647	QP	8.9	9.3	6.8	7.1	15.7	16.4	60.0	44.3	43.6

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

9.1.4 RX 118MHz(A)/800MHz(B) mode (TM-D710A)

ETL SEMKO Japan K.K.
Kashima No.1 Test Site
 Conducted Voltages on Mains Port

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A
 SERIAL NO. : None
 TEST MODE : RX 118MHz(A)/800MHz(B)
 POWER SOURCE : AC120V/60Hz (EUT:DC13.8V)
 DATE TESTED : Feb 15 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 36.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

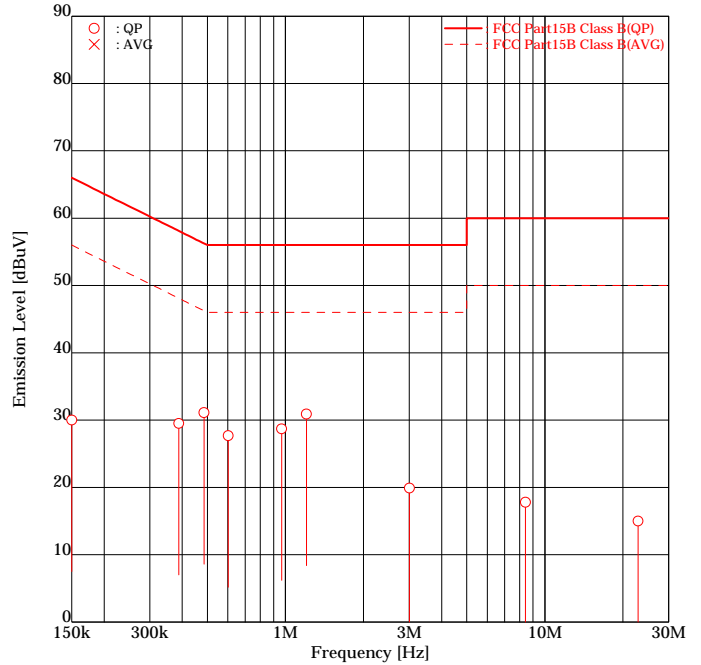
FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB]		EMISSION [dBuV]		LIMIT [dBuV]	MARGIN [dB]	
			Line1	Line2	Line1	Line2	Line1	Line2		Line1	Line2
1	0.1500	QP	23.1	<u>23.9</u>	6.1	6.1	29.2	<u>30.0</u>	66.0	36.8	<u>36.0</u>
2	0.3879	QP	23.5	<u>23.8</u>	6.1	6.1	29.6	<u>29.9</u>	58.1	28.5	<u>28.2</u>
3	0.4856	QP	24.8	<u>25.4</u>	6.2	6.2	31.0	<u>31.6</u>	56.2	25.2	<u>24.6</u>
4	0.6020	QP	21.0	<u>22.0</u>	6.3	6.2	27.3	<u>28.2</u>	56.0	28.7	<u>27.8</u>
5	0.9672	QP	<u>23.5</u>	21.1	6.2	6.2	<u>29.7</u>	27.3	56.0	<u>26.3</u>	28.7
6	1.2053	QP	23.5	<u>23.7</u>	6.2	6.2	29.7	<u>29.9</u>	56.0	26.3	<u>26.1</u>
7	3.0084	QP	<u>13.6</u>	12.5	6.4	6.4	<u>20.0</u>	18.9	56.0	<u>36.0</u>	37.1
8	8.4265	QP	10.9	11.1	6.5	6.5	17.4	17.6	60.0	42.6	42.4
9	22.8647	QP	8.9	9.4	6.8	7.1	15.7	16.5	60.0	44.3	43.5

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

9.1.5 RX 321MHz(A)/1050MHz(B) mode (TM-D710A)

ETL SEMKO Japan K.K.
Kashima No.1 Test Site
 Conducted Voltages on Mains Port

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A
 SERIAL NO. : None
 TEST MODE : RX 321MHz(A)/1050MHz(B)
 POWER SOURCE : AC120V/60Hz (EUT:DC13.8V)
 DATE TESTED : Feb 15 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 36.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

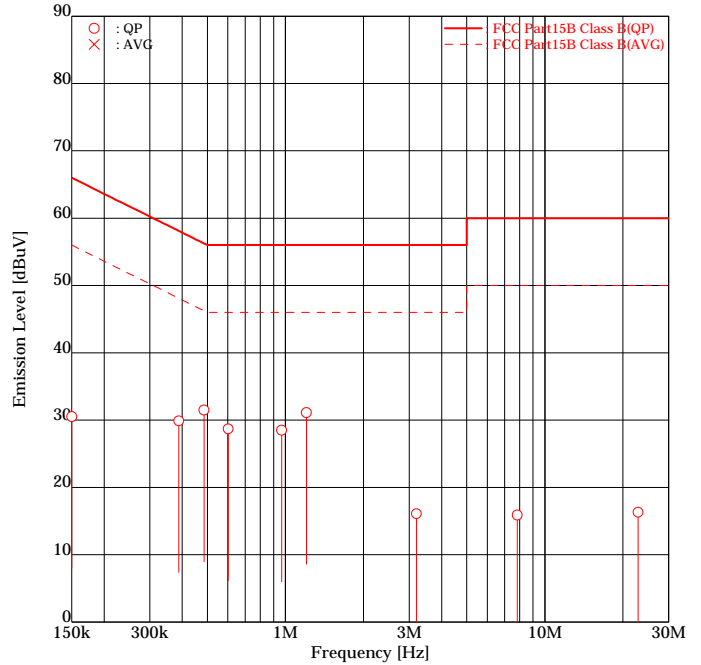
FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB]		EMISSION [dBuV]		LIMIT [dBuV]	MARGIN [dB]	
			Line1	Line2	Line1	Line2	Line1	Line2		Line1	Line2
1	0.1500	QP	23.1	<u>23.9</u>	6.1	6.1	29.2	<u>30.0</u>	66.0	36.8	<u>36.0</u>
2	0.3879	QP	<u>23.4</u>	23.4	6.1	6.1	<u>29.5</u>	29.5	58.1	<u>28.6</u>	28.6
3	0.4856	QP	<u>24.9</u>	24.8	6.2	6.2	<u>31.1</u>	31.0	56.2	<u>25.1</u>	25.2
4	0.6020	QP	<u>21.4</u>	21.4	6.3	6.2	<u>27.7</u>	27.6	56.0	<u>28.3</u>	28.4
5	0.9672	QP	22.3	<u>22.5</u>	6.2	6.2	28.5	<u>28.7</u>	56.0	27.5	<u>27.3</u>
6	1.2053	QP	24.3	<u>24.7</u>	6.2	6.2	30.5	<u>30.9</u>	56.0	25.5	<u>25.1</u>
7	3.0084	QP	13.5	13.5	6.4	6.4	19.9	19.9	56.0	36.1	36.1
8	8.4265	QP	11.1	11.3	6.5	6.5	17.6	17.8	60.0	42.4	42.2
9	22.8647	QP	8.2	7.2	6.8	7.1	15.0	14.3	60.0	45.0	45.7

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

9.1.6 RX 524MHz(A)/1300MHz(B) mode (TM-D710A)

ETL SEMKO Japan K.K.
Kashima No.1 Test Site
 Conducted Voltages on Mains Port

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A
 SERIAL NO. : None
 TEST MODE : RX 524MHz(A)/1300MHz(B)
 POWER SOURCE : AC120V/60Hz (EUT:DC13.8V)
 DATE TESTED : Feb 15 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 36.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

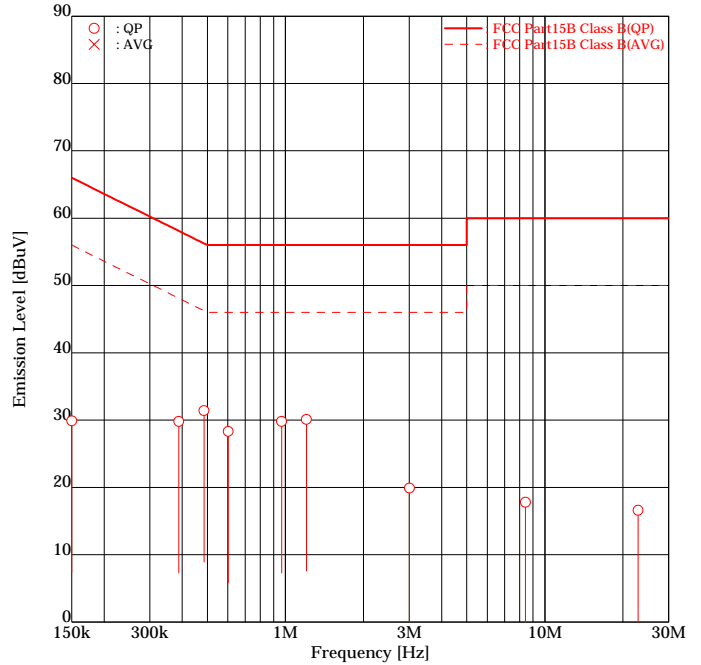
FREQUENCY [No]	MODE [MHz]	READING [dBuV]		FACTOR [dB]		EMISSION [dBuV]		LIMIT [dBuV]	MARGIN [dB]		
		Line1	Line2	Line1	Line2	Line1	Line2		Line1	Line2	
1	0.1500	QP	<u>24.4</u>	24.1	6.1	6.1	<u>30.5</u>	30.2	66.0	<u>35.5</u>	35.8
2	0.3879	QP	<u>23.8</u>	23.6	6.1	6.1	<u>29.9</u>	29.7	58.1	<u>28.2</u>	28.4
3	0.4856	QP	<u>25.3</u>	25.3	6.2	6.2	<u>31.5</u>	31.5	56.2	<u>24.7</u>	24.7
4	0.6020	QP	<u>22.3</u>	<u>22.5</u>	6.3	6.2	<u>28.6</u>	<u>28.7</u>	56.0	<u>27.4</u>	<u>27.3</u>
5	0.9672	QP	<u>22.3</u>	21.5	6.2	6.2	<u>28.5</u>	27.7	56.0	<u>27.5</u>	28.3
6	1.2053	QP	24.5	<u>24.9</u>	6.2	6.2	30.7	<u>31.1</u>	56.0	25.3	<u>24.9</u>
7	3.2021	QP	9.7	9.7	6.4	6.4	16.1	16.1	56.0	39.9	39.9
8	7.8258	QP	9.4	9.3	6.5	6.5	15.9	15.8	60.0	44.1	44.2
9	22.8647	QP	8.9	9.2	6.8	7.1	15.7	16.3	60.0	44.3	43.7

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

9.1.7 RX 118MHz(A)/800MHz(B) mode (TM-V71A)

ETL SEMKO Japan K.K.
Kashima No.1 Test Site
 Conducted Voltages on Mains Port

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-V71A
 SERIAL NO. : None
 TEST MODE : RX 118MHz(A)/800MHz(B)
 POWER SOURCE : AC120V/60Hz (EUT:DC13.8V)
 DATE TESTED : Feb 15 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 36.0 [%]
 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	22.9	<u>23.8</u>	6.1	6.1	29.0	<u>29.9</u>	66.0	37.0	<u>36.1</u>
2	0.3879	QP	23.4	<u>23.7</u>	6.1	6.1	29.5	<u>29.8</u>	58.1	28.6	<u>28.3</u>
3	0.4856	QP	24.6	<u>25.2</u>	6.2	6.2	30.8	<u>31.4</u>	56.2	25.4	<u>24.8</u>
4	0.6020	QP	20.9	<u>22.1</u>	6.3	6.2	27.2	<u>28.3</u>	56.0	28.8	<u>27.7</u>
5	0.9672	QP	<u>23.6</u>	21.0	6.2	6.2	<u>29.8</u>	27.2	56.0	<u>26.2</u>	28.8
6	1.2053	QP	23.4	<u>23.9</u>	6.2	6.2	29.6	<u>30.1</u>	56.0	26.4	<u>25.9</u>
7	3.0084	QP	<u>13.5</u>	12.2	6.4	6.4	<u>19.9</u>	18.6	56.0	<u>36.1</u>	37.4
8	8.4265	QP	11.0	11.3	6.5	6.5	17.5	17.8	60.0	42.5	42.2
9	22.8647	QP	8.7	9.5	6.8	7.1	15.5	16.6	60.0	44.5	43.4

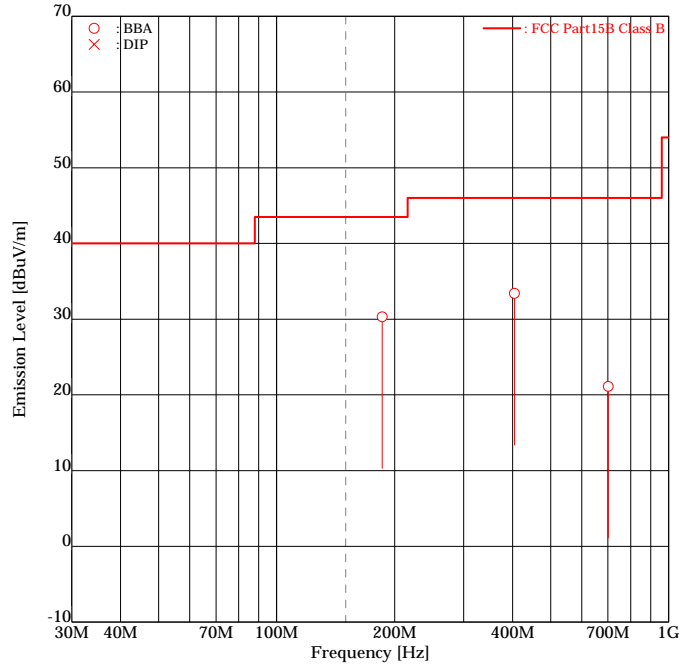
Higher six points are underlined.
 Other frequencies : Below the FCC Part15B Class B limit
 Emission Level = Read + Factor(LISN,Pad,Cable)

9.2 Radiated Electric Field

9.2.1 RX 118MHz(A)/136MHz(B) mode (30 – 1000MHz / TM-D710A)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A
 SERIAL NO. : None
 TEST MODE : RX 118MHz(A)/136MHz(B)
 POWER SOURCE : AC120V/60Hz (EUT:DC13.8V)
 DATE TESTED : Feb 15 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.00 [m]
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 36.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

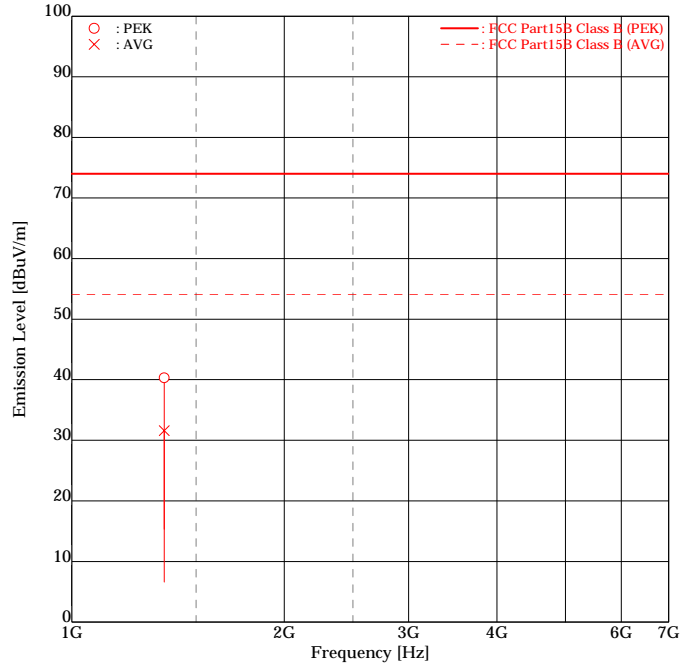
FREQUENCY [No]	ANT. [MHz]		READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]	
			Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert
1	186.00	BBA	31.4	<u>34.8</u>	-4.5	-4.5	26.9	<u>30.3</u>	43.5	16.6	<u>13.2</u>
2	404.32	BBA	21.4	<u>31.0</u>	2.4	2.4	23.8	<u>33.4</u>	46.0	22.2	<u>12.6</u>
3	701.65	BBA	12.2	<u>12.4</u>	8.7	8.7	20.9	<u>21.1</u>	46.0	25.1	<u>24.9</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 118MHz(A)/136MHz(B) mode (1000 – 6500MHz / TM-D710A)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A
 SERIAL NO. : None
 TEST MODE : RX 118MHz(A)/136MHz(B)
 POWER SOURCE : AC120V/60Hz (EUT:DC13.8V)
 DATE TESTED : Feb 23 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.00 [m]
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 46.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

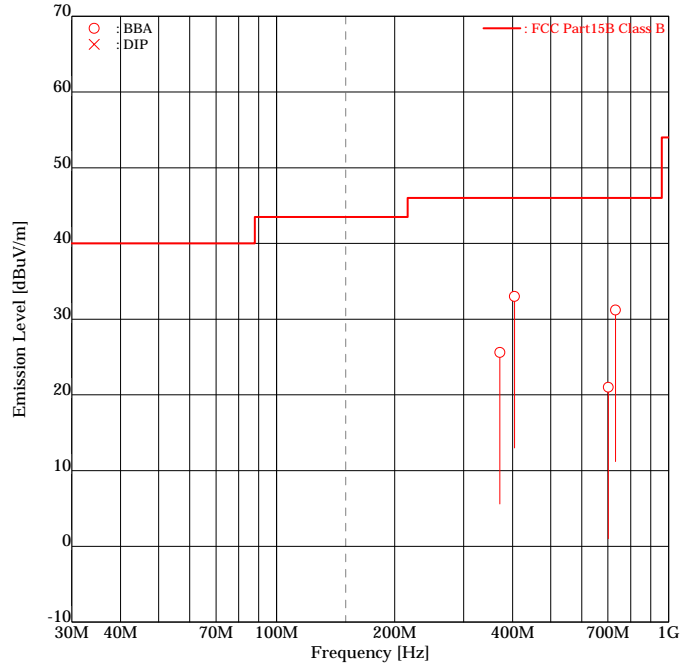
FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]		MARGIN [dB]	
			Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert		
1	1351.60	PEK	40.4	<u>41.0</u>	-0.7	-0.7	39.7	<u>40.3</u>	74.0	34.3	<u>33.7</u>	
2	1351.60	AVG	30.0	<u>32.3</u>	-0.7	-0.7	29.3	<u>31.6</u>	54.0	24.7	<u>22.4</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 321MHz(A)/321MHz(B) mode (30 – 1000MHz / TM-D710A)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A
 SERIAL NO. : None
 TEST MODE : RX 321MHz(A)/321MHz(B)
 POWER SOURCE : AC120V/60Hz (EUT:DC13.8V)
 DATE TESTED : Feb 15 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.00 [m]
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 36.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

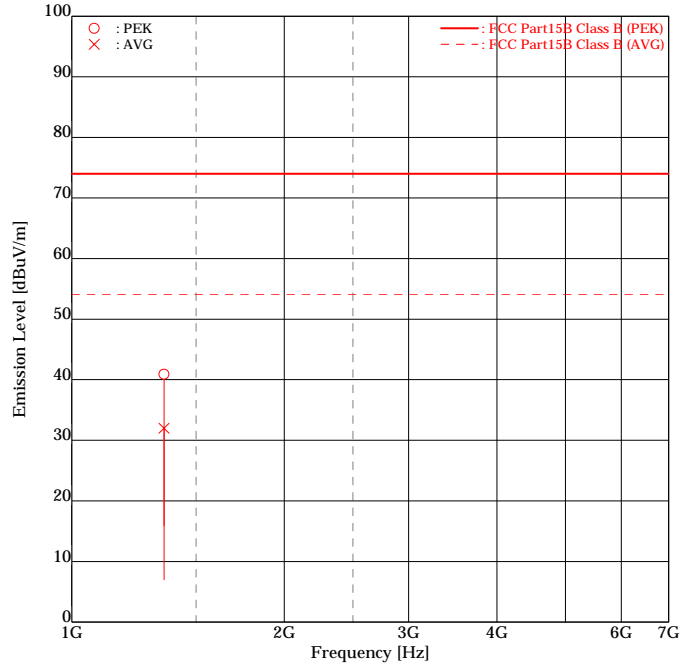
FREQUENCY [No]	ANT. [MHz]	READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]		
		Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert	
1	371.00	BBA	<u>24.4</u>	<u>22.4</u>	1.2	1.2	<u>25.6</u>	23.6	46.0	<u>20.4</u>	22.4
2	404.32	BBA	21.4	<u>30.6</u>	2.4	2.4	23.8	<u>33.0</u>	46.0	22.2	<u>13.0</u>
3	701.65	BBA	12.2	<u>12.3</u>	8.7	8.7	20.9	<u>21.0</u>	46.0	25.1	<u>25.0</u>
4	732.20	BBA	18.0	<u>21.7</u>	9.5	9.5	27.5	<u>31.2</u>	46.0	18.5	<u>14.8</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 321MHz(A)/321MHz(B) mode (1000 – 6500MHz / TM-D710A)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A
 SERIAL NO. : None
 TEST MODE : RX 321MHz(A)/321MHz(B)
 POWER SOURCE : AC120V/60Hz (EUT:DC13.8V)
 DATE TESTED : Feb 23 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.00 [m]
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 46.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

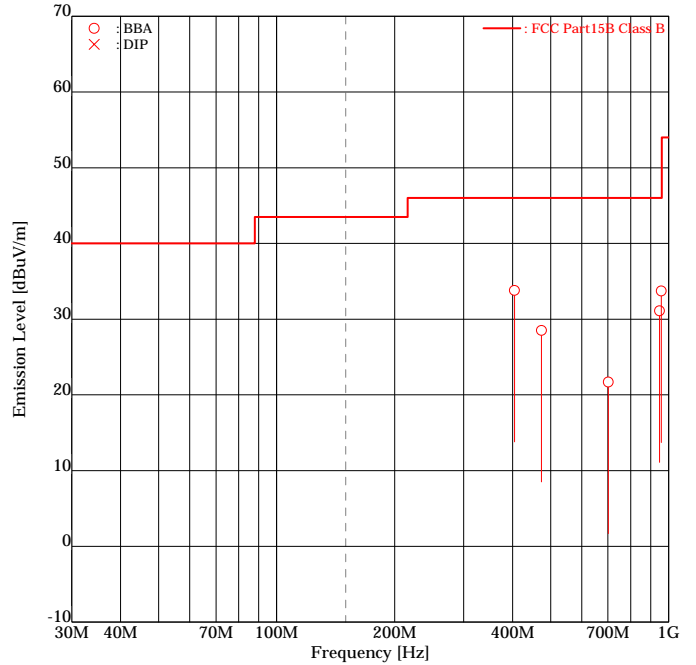
FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]		MARGIN [dB]	
			Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert		
1	1351.58	PEK	40.5	<u>41.6</u>	-0.7	-0.7	39.8	<u>40.9</u>	74.0	34.2	<u>33.1</u>	
2	1351.58	AVG	30.3	<u>32.7</u>	-0.7	-0.7	29.6	<u>32.0</u>	54.0	24.4	<u>22.0</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)

9.2.5 RX 524MHz(A)/524MHz(B) mode (30 – 1000MHz / TM-D710A)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A
 SERIAL NO. : None
 TEST MODE : RX 524MHz(A)/524MHz(B)
 POWER SOURCE : AC120V/60Hz (EUT:DC13.8V)
 DATE TESTED : Feb 15 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.00 [m]
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 36.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

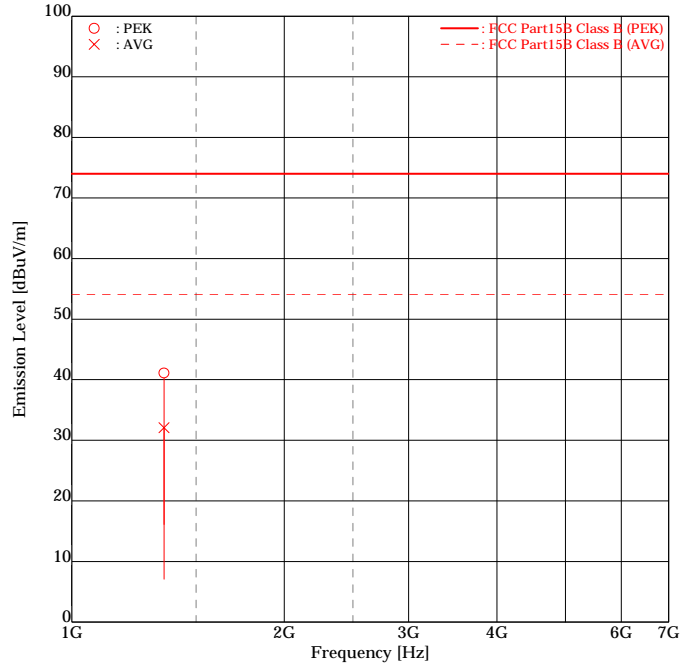
FREQUENCY [No]	ANT. [MHz]	READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]		
		Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert	
1	404.32	BBA	21.4	<u>31.4</u>	2.4	2.4	23.8	<u>33.8</u>	46.0	22.2	<u>12.2</u>
2	474.00	BBA	<u>24.4</u>	21.2	4.1	4.1	<u>28.5</u>	25.3	46.0	17.5	20.7
3	701.65	BBA	12.2	<u>13.0</u>	8.7	8.7	20.9	<u>21.7</u>	46.0	25.1	<u>24.3</u>
4	948.00	BBA	<u>17.0</u>	16.3	14.1	14.1	<u>31.1</u>	30.4	46.0	<u>14.9</u>	15.6
5	957.80	BBA	<u>19.5</u>	19.1	14.2	14.2	<u>33.7</u>	33.3	46.0	<u>12.3</u>	12.7

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 524MHz(A)/524MHz(B) mode (1000 – 6500MHz / TM-D710A)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A
 SERIAL NO. : None
 TEST MODE : RX 524MHz(A)/524MHz(B)
 POWER SOURCE : AC120V/60Hz (EUT:DC13.8V)
 DATE TESTED : Feb 23 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.00 [m]
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 46.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

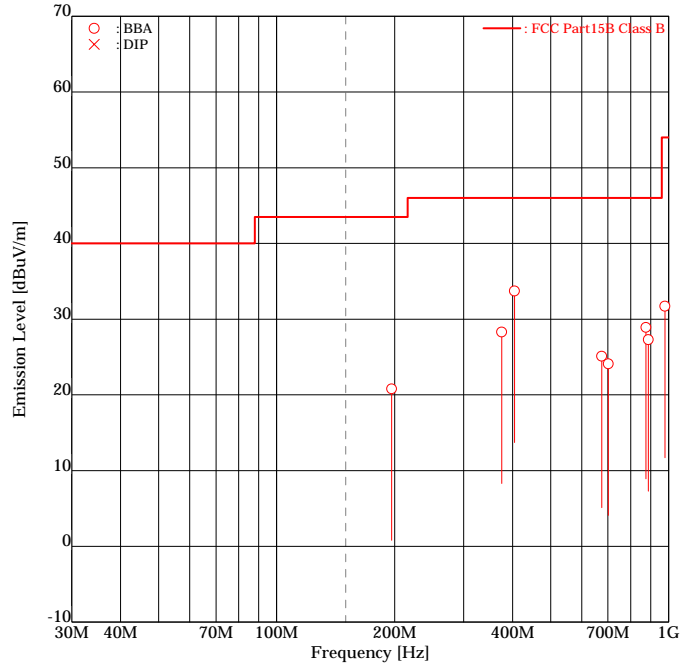
FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]		MARGIN [dB]	
			Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert		
1	1351.58	PEK	40.6	<u>41.8</u>	-0.7	-0.7	39.9	<u>41.1</u>	74.0	34.1	<u>32.9</u>	
2	1351.58	AVG	30.2	<u>32.8</u>	-0.7	-0.7	29.5	<u>32.1</u>	54.0	24.5	<u>21.9</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)

9.2.7 RX 118MHz(A)/800MHz(B) mode (30 – 1000MHz / TM-D710A)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A
 SERIAL NO. : None
 TEST MODE : RX 118MHz(A)/800MHz(B)
 POWER SOURCE : AC120V/60Hz (EUT:DC13.8V)
 DATE TESTED : Feb 15 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.00 [m]
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 36.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

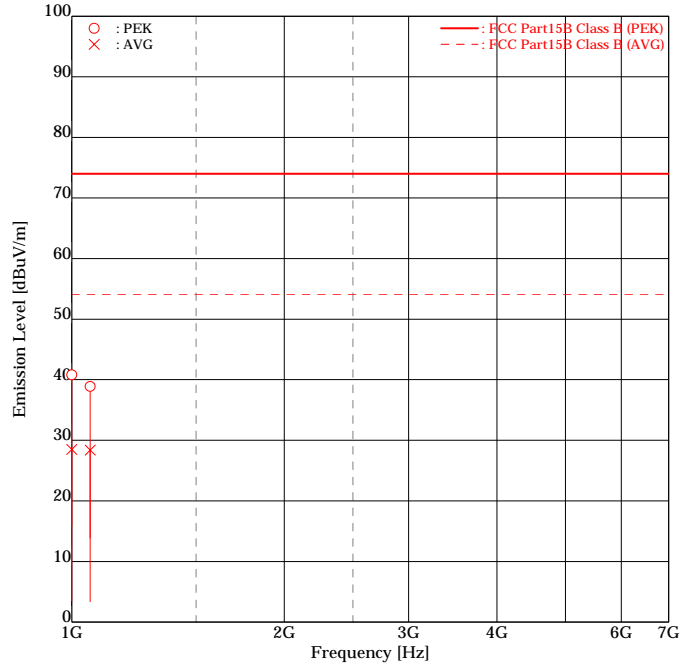
FREQUENCY [No]	ANT. [MHz]	READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]		MARGIN [dB]	
		Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert
1	196.61	BBA	-	26.1	-5.3	-5.3	-	20.8	43.5	-	22.7
2	375.01	BBA	<u>26.8</u>	-	1.5	1.5	<u>28.3</u>	-	46.0	<u>17.7</u>	-
3	404.32	BBA	19.8	<u>31.3</u>	2.4	2.4	22.2	<u>33.7</u>	46.0	23.8	<u>12.3</u>
4	675.00	BBA	<u>16.6</u>	-	8.5	8.5	<u>25.1</u>	-	46.0	<u>20.9</u>	-
5	701.65	BBA	-	<u>15.4</u>	8.7	8.7	-	<u>24.1</u>	46.0	-	<u>21.9</u>
6	875.00	BBA	<u>16.0</u>	-	12.9	12.9	<u>28.9</u>	-	46.0	<u>17.1</u>	-
7	887.80	BBA	<u>14.2</u>	-	13.1	13.1	<u>27.3</u>	-	46.0	<u>18.7</u>	-
8	978.60	BBA	17.1	-	14.6	14.6	31.7	-	54.0	22.3	-

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)

9.2.8 RX 118MHz(A)/800MHz(B) mode (1000 – 6500MHz / TM-D710A)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A
 SERIAL NO. : None
 TEST MODE : RX 118MHz(A)/800MHz(B)
 POWER SOURCE : AC120V/60Hz (EUT:DC13.8V)
 DATE TESTED : Feb 13 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.00 [m]
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 35.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

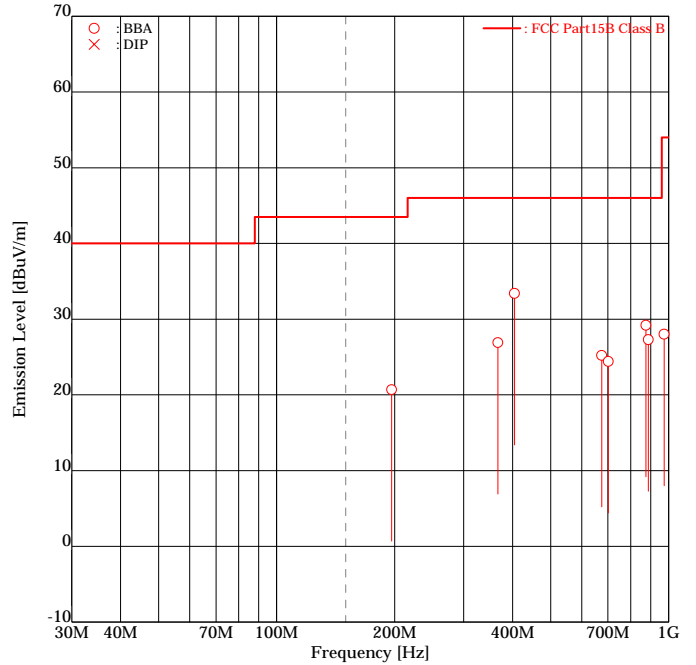
FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]		MARGIN [dB]	
			Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert
1	1000.10	PEK	39.1	<u>41.8</u>	-1.0	-1.0	38.1	<u>40.8</u>	74.0		35.9	<u>33.2</u>
2	1000.10	AVG	28.9	<u>29.5</u>	-1.0	-1.0	27.9	<u>28.5</u>	54.0		26.1	<u>25.5</u>
3	1062.20	PEK	<u>39.8</u>	39.6	-0.9	-0.9	<u>38.9</u>	38.7	74.0		<u>35.1</u>	35.3
4	1062.20	AVG	29.1	<u>29.3</u>	-0.9	-0.9	28.2	<u>28.4</u>	54.0		25.8	<u>25.6</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)

9.2.9 RX 321MHz(A)/1050MHz(B) mode (30 – 1000MHz / TM-D710A)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A
 SERIAL NO. : None
 TEST MODE : RX 321MHz(A)/1050MHz(B)
 POWER SOURCE : AC120V/60Hz (EUT:DC13.8V)
 DATE TESTED : Feb 15 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.00 [m]
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 36.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

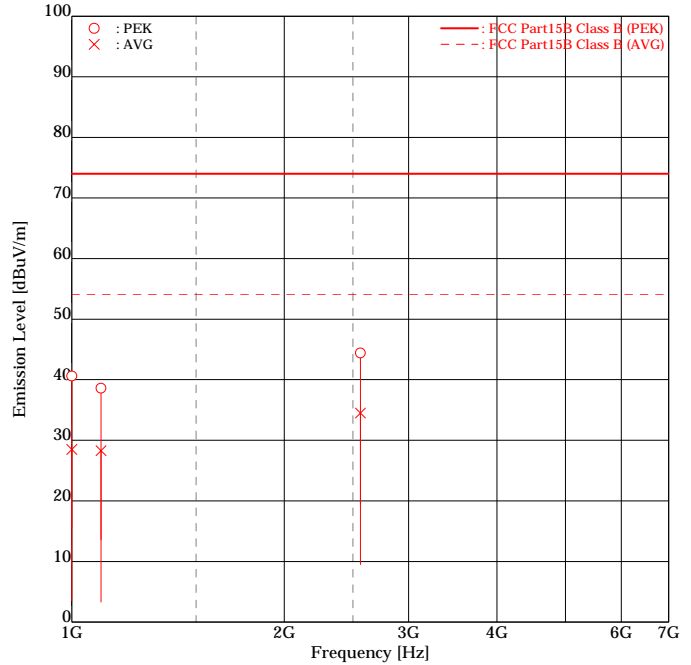
FREQUENCY [No]	ANT. [MHz]	READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]		MARGIN [dB]	
		Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert
1	196.61	BBA	-	26.0	-5.3	-5.3	-	20.7	43.5	-	22.8
2	366.67	BBA	<u>25.8</u>	-	1.1	1.1	<u>26.9</u>	-	46.0	<u>19.1</u>	-
3	404.32	BBA	19.1	<u>31.0</u>	2.4	2.4	21.5	<u>33.4</u>	46.0	24.5	<u>12.6</u>
4	674.95	BBA	<u>16.7</u>	-	8.5	8.5	<u>25.2</u>	-	46.0	<u>20.8</u>	-
5	701.65	BBA	-	<u>15.7</u>	8.7	8.7	-	<u>24.4</u>	46.0	-	<u>21.6</u>
6	875.00	BBA	<u>16.3</u>	-	12.9	12.9	<u>29.2</u>	-	46.0	<u>16.8</u>	-
7	887.80	BBA	<u>14.2</u>	-	13.1	13.1	<u>27.3</u>	-	46.0	<u>18.7</u>	-
8	973.72	BBA	-	13.6	14.4	14.4	-	28.0	54.0	-	26.0

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)

9.2.10 RX 321MHz(A)/1050MHz(B) mode (1000 – 6500MHz / TM-D710A)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A
 SERIAL NO. : None
 TEST MODE : RX 321MHz(A)/1050MHz(B)
 POWER SOURCE : AC120V/60Hz (EUT:DC13.8V)
 DATE TESTED : Feb 13 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.00 [m]
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 35.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

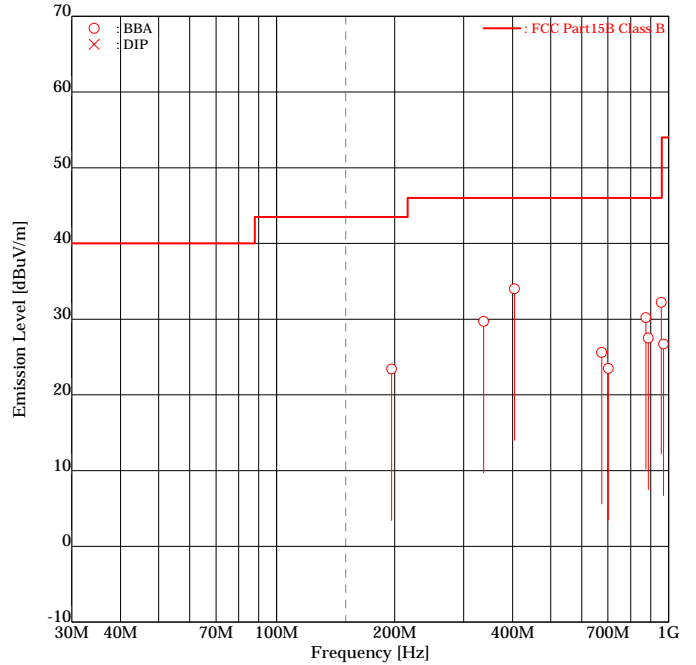
FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]	MARGIN [dB]	
			Hori	Vert	Hori	Vert	Hori	Vert		Hori	Vert
1	1000.10	PEK	<u>38.8</u>	<u>41.6</u>	-1.0	-1.0	37.8	<u>40.6</u>	74.0	36.2	<u>33.4</u>
2	1000.10	AVG	28.7	<u>29.5</u>	-1.0	-1.0	27.7	<u>28.5</u>	54.0	26.3	<u>25.5</u>
3	1099.90	PEK	<u>39.5</u>	38.8	-0.9	-0.9	<u>38.6</u>	37.9	74.0	<u>35.4</u>	36.1
4	1099.90	AVG	<u>29.2</u>	29.0	-0.9	-0.9	<u>28.3</u>	28.1	54.0	<u>25.7</u>	25.9
5	2562.80	PEK	<u>39.3</u>	39.1	5.1	5.1	<u>44.4</u>	44.2	74.0	<u>29.6</u>	29.8
6	2562.80	AVG	<u>29.4</u>	29.2	5.1	5.1	<u>34.5</u>	34.3	54.0	<u>19.5</u>	19.7

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)

9.2.11 RX 524MHz(A)/1300MHz(B) mode (30 – 1000MHz / TM-D710A)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A
 SERIAL NO. : None
 TEST MODE : RX 524MHz(A)/1300MHz(B)
 POWER SOURCE : AC120V/60Hz (EUT:DC13.8V)
 DATE TESTED : Feb 15 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.00 [m]
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 36.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

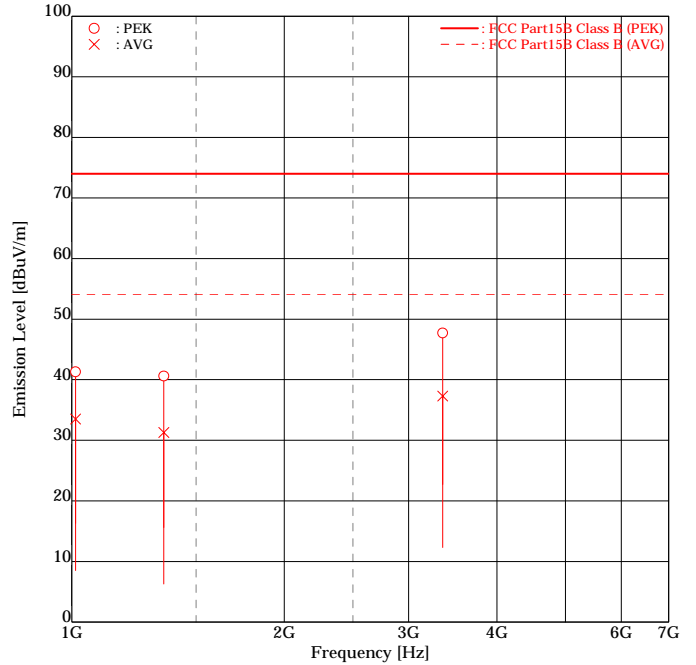
FREQUENCY [No]	ANT. [MHz]	READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]		MARGIN [dB]	
		Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert
1	196.61	BBA	-	<u>28.7</u>	-5.3	-5.3	-	<u>23.4</u>	43.5	-	<u>20.1</u>
2	337.47	BBA	<u>29.6</u>	-	0.1	0.1	<u>29.7</u>	-	46.0	16.3	-
3	404.32	BBA	18.8	<u>31.6</u>	2.4	2.4	21.2	<u>34.0</u>	46.0	24.8	<u>12.0</u>
4	674.95	BBA	17.1	-	8.5	8.5	25.6	-	46.0	20.4	-
5	701.65	BBA	-	14.8	8.7	8.7	-	23.5	46.0	-	22.5
6	875.00	BBA	<u>17.3</u>	-	12.9	12.9	<u>30.2</u>	-	46.0	<u>15.8</u>	-
7	887.80	BBA	<u>14.4</u>	-	13.1	13.1	<u>27.5</u>	-	46.0	<u>18.5</u>	-
8	957.80	BBA	<u>17.8</u>	<u>18.0</u>	14.2	14.2	<u>32.0</u>	<u>32.2</u>	46.0	14.0	<u>13.8</u>
9	970.00	BBA	-	12.3	14.4	14.4	-	26.7	54.0	-	27.3

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)

9.2.12 RX 524MHz(A)/1300MHz(B) mode (1000 – 6500MHz / TM-D710A)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A
 SERIAL NO. : None
 TEST MODE : RX 524MHz(A)/1300MHz(B)
 POWER SOURCE : AC120V/60Hz (EUT:DC13.8V)
 DATE TESTED : Feb 13 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.00 [m]
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 35.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

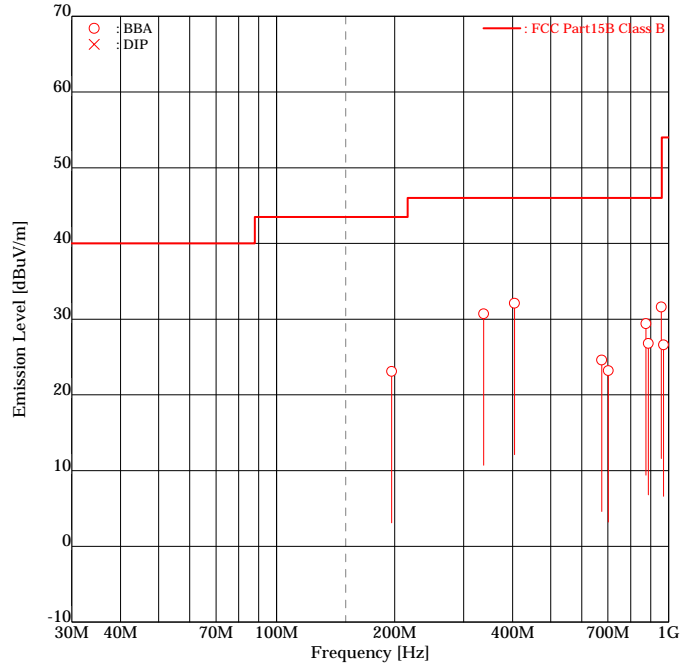
FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]		MARGIN [dB]	
			Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert
1	1012.55	PEK	42.2	<u>42.3</u>	-1.0	-1.0	41.2	<u>41.3</u>	74.0	74.0	32.8	<u>32.7</u>
2	1012.55	AVG	<u>34.5</u>	34.4	-1.0	-1.0	<u>33.5</u>	33.4	54.0	54.0	<u>20.5</u>	20.6
3	1350.10	PEK	41.0	<u>41.3</u>	-0.7	-0.7	40.3	<u>40.6</u>	74.0	74.0	33.7	<u>33.4</u>
4	1350.10	AVG	31.2	<u>32.0</u>	-0.7	-0.7	30.5	<u>31.3</u>	54.0	54.0	23.5	<u>22.7</u>
5	3352.00	PEK	<u>39.4</u>	39.2	8.3	8.3	<u>47.7</u>	47.5	74.0	74.0	<u>26.3</u>	26.5
6	3352.00	AVG	<u>29.0</u>	29.0	8.3	8.3	<u>37.3</u>	37.3	54.0	54.0	<u>16.7</u>	16.7

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)

9.2.13 RX 524MHz(A)/1300MHz(B) mode (30 – 1000MHz / TM-V71A)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-V71A
 SERIAL NO. : None
 TEST MODE : RX 524MHz(A)/1300MHz(B)
 POWER SOURCE : AC120V/60Hz (EUT:DC13.8V)
 DATE TESTED : Feb 15 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.00 [m]
 TEMPERATURE : 21.0 [degC]
 HUMIDITY : 36.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

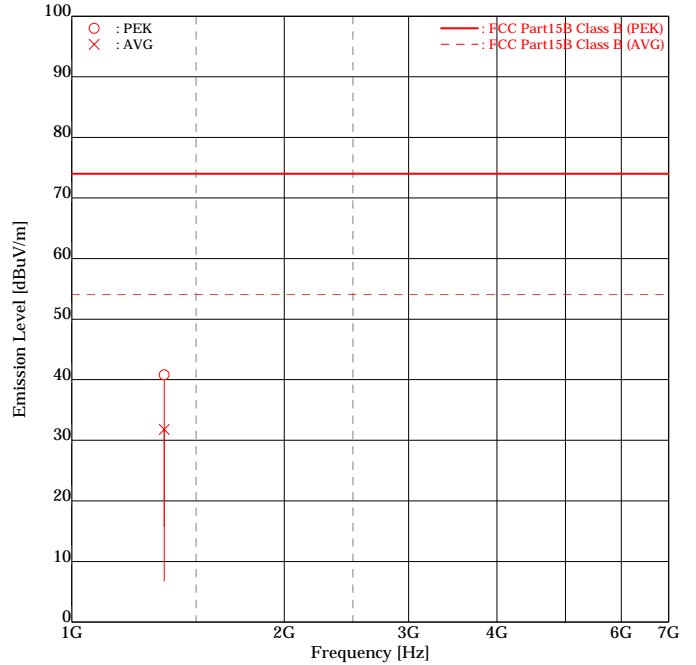
FREQUENCY [No]	ANT. [MHz]	READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]		MARGIN [dB]	
		Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert
1	196.61	BBA	-	<u>28.4</u>	-5.3	-5.3	-	<u>23.1</u>	43.5	-	<u>20.4</u>
2	337.47	BBA	<u>30.6</u>	-	0.1	0.1	<u>30.7</u>	-	46.0	<u>15.3</u>	-
3	404.32	BBA	20.7	<u>29.7</u>	2.4	2.4	23.1	<u>32.1</u>	46.0	22.9	<u>13.9</u>
4	674.95	BBA	16.1	-	8.5	8.5	24.6	-	46.0	21.4	-
5	701.65	BBA	-	14.5	8.7	8.7	-	23.2	46.0	-	22.8
6	875.00	BBA	<u>16.5</u>	-	12.9	12.9	<u>29.4</u>	-	46.0	<u>16.6</u>	-
7	887.80	BBA	<u>13.7</u>	-	13.1	13.1	<u>26.8</u>	-	46.0	<u>19.2</u>	-
8	957.80	BBA	<u>17.4</u>	16.4	14.2	14.2	<u>31.6</u>	30.6	46.0	<u>14.4</u>	15.4
9	970.00	BBA	-	12.2	14.4	14.4	-	26.6	54.0	-	27.4

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)

9.2.14 RX 524MHz(A)/1300MHz(B) mode (1000 – 6500MHz / TM-V71A)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-V71A
 SERIAL NO. : None
 TEST MODE : RX 524MHz(A)/1300MHz(B)
 POWER SOURCE : AC120V/60Hz (EUT:DC13.8V)
 DATE TESTED : Feb 13 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B Class B
 TEST METHOD : ANSI C63.4-2003
 DISTANCE : 3.00 [m]
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 35.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

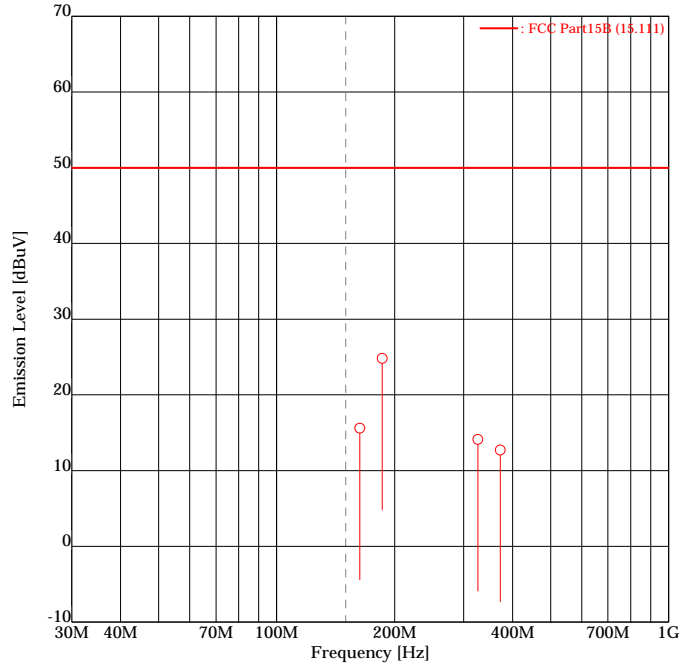
FREQUENCY [No]	MODE [MHz]		READING [dBuV]		FACTOR [dB/m]		EMISSION [dBuV/m]		LIMIT [dBuV/m]		MARGIN [dB]	
			Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert	Hori	Vert
1	1351.59	PEK	40.3	<u>41.5</u>	-0.7	-0.7	39.6	<u>40.8</u>	74.0	34.4	<u>33.2</u>	
2	1351.59	AVG	29.5	<u>32.5</u>	-0.7	-0.7	28.8	<u>31.8</u>	54.0	25.2	<u>22.2</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)

9.3 Conducted Power on Antenna Port
 9.3.1 RX 118MHz(A)/136MHz(B) mode (30 – 1000MHz)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A (TM-V71A)
 SERIAL NO. : None
 TEST MODE : RX 118MHz(A)/136MHz(B)
 POWER SOURCE : DC13.8V
 DATE TESTED : Feb 09 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 22.0 [degC]
 HUMIDITY : 35.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

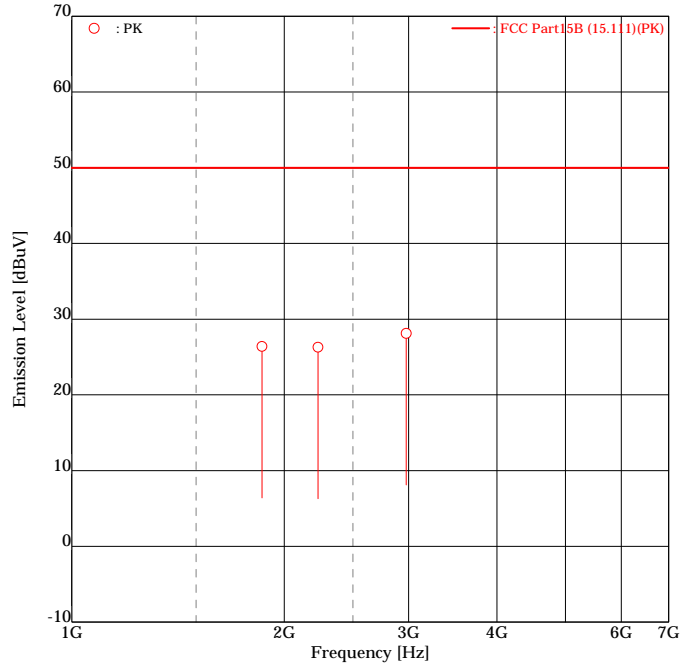
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	163.1000	<u>27.1</u>	-11.5	<u>15.6</u>	50.0	<u>34.4</u>
2	186.0000	<u>36.1</u>	-11.3	<u>24.8</u>	50.0	<u>25.2</u>
3	326.2000	<u>24.6</u>	-10.5	<u>14.1</u>	50.0	<u>35.9</u>
4	372.0000	<u>22.8</u>	-10.1	<u>12.7</u>	50.0	<u>37.3</u>

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

9.3.2 RX 118MHz(A)/136MHz(B) mode (1000 – 6500MHz)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A (TM-V71A)
 SERIAL NO. : None
 TEST MODE : RX 118MHz(A)/136MHz(B)
 POWER SOURCE : DC13.8V
 DATE TESTED : Feb 16 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 22.0 [degC]
 HUMIDITY : 30.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

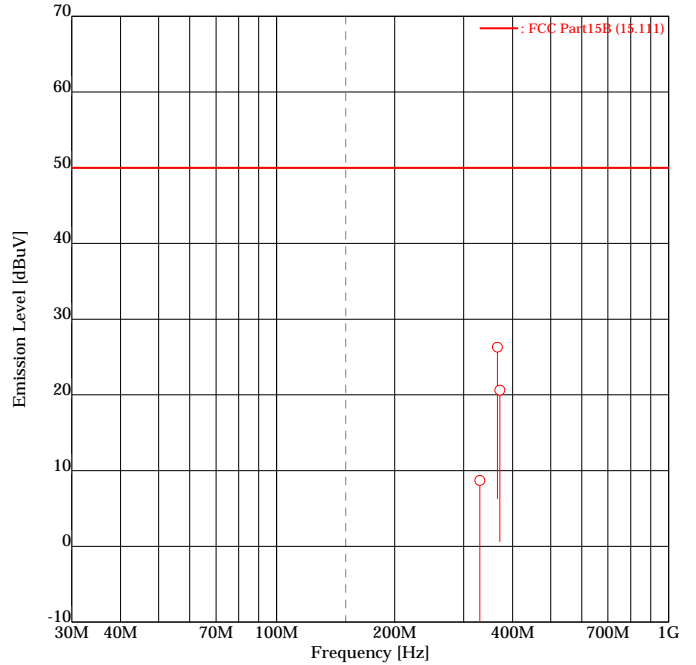
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1859.9400	<u>40.9</u>	-14.5	<u>26.4</u>	50.0	<u>23.6</u>
2	2231.9400	<u>40.0</u>	-13.7	<u>26.3</u>	50.0	<u>23.7</u>
3	2976.0200	<u>40.4</u>	-12.3	<u>28.1</u>	50.0	<u>21.9</u>

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

9.3.3 RX 321MHz(A)/321MHz(B) mode (30 – 1000MHz)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A (TM-V71A)
 SERIAL NO. : None
 TEST MODE : RX 321MHz(A)/321MHz(B)
 POWER SOURCE : DC13.8V
 DATE TESTED : Feb 09 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 22.0 [degC]
 HUMIDITY : 35.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

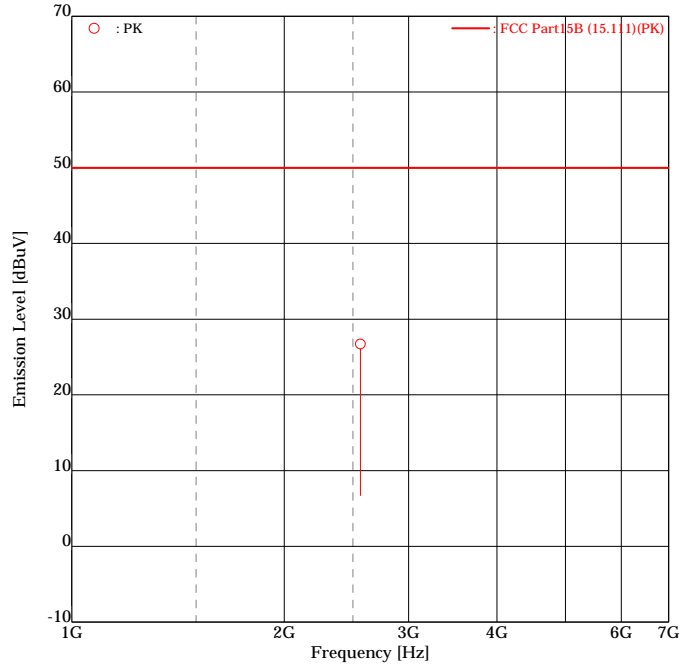
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	330.1000	<u>19.2</u>	-10.5	<u>8.7</u>	50.0	<u>41.3</u>
2	366.1000	<u>36.5</u>	-10.2	<u>26.3</u>	50.0	<u>23.7</u>
3	371.0000	<u>30.7</u>	-10.1	<u>20.6</u>	50.0	<u>29.4</u>

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

9.3.4 RX 321MHz(A)/321MHz(B) mode (1000 – 6500MHz)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A (TM-V71A)
 SERIAL NO. : None
 TEST MODE : RX 321MHz(A)/321MHz(B)
 POWER SOURCE : DC13.8V
 DATE TESTED : Feb 16 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 22.0 [degC]
 HUMIDITY : 30.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

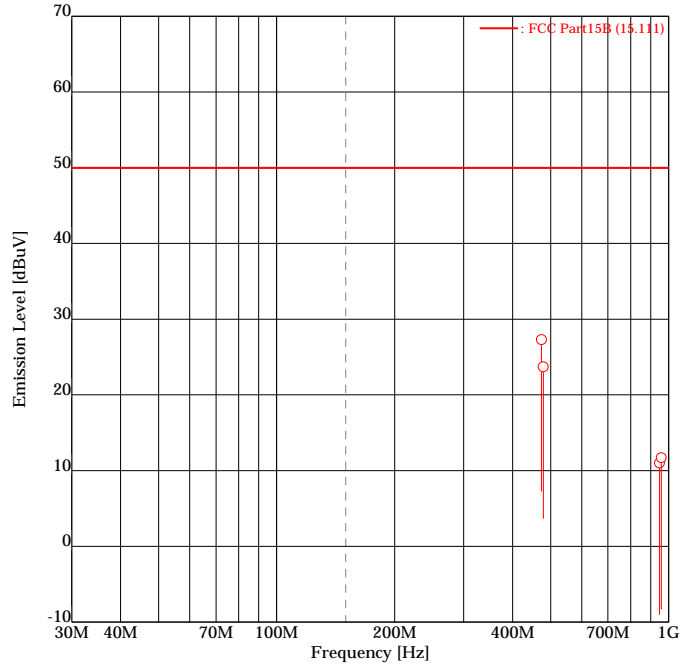
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	2562.6800	<u>39.8</u>	-13.1	<u>26.7</u>	50.0	<u>23.3</u>

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 524MHz(A)/524MHz(B) mode (30 – 1000MHz)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A (TM-V71A)
 SERIAL NO. : None
 TEST MODE : RX 524MHz(A)/524MHz(B)
 POWER SOURCE : DC13.8V
 DATE TESTED : Feb 09 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 22.0 [degC]
 HUMIDITY : 35.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

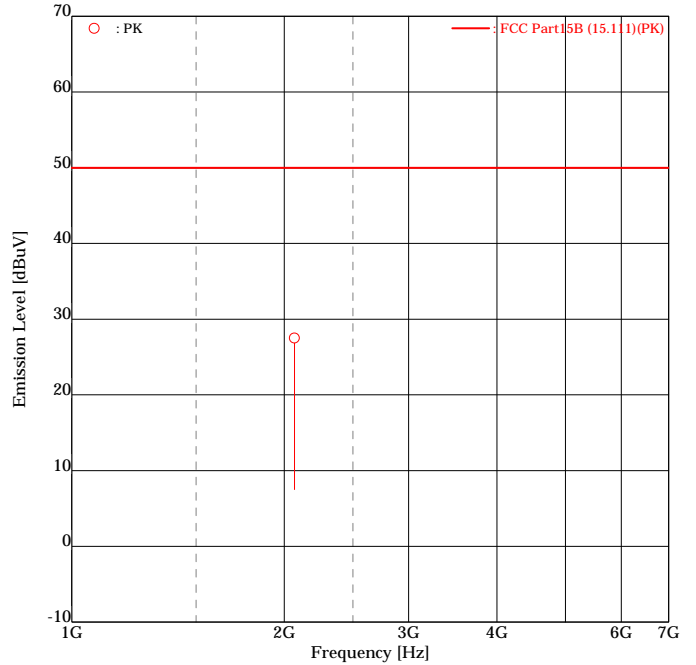
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	474.0000	<u>36.9</u>	-9.6	<u>27.3</u>	50.0	<u>22.7</u>
2	478.9000	<u>33.3</u>	-9.6	<u>23.7</u>	50.0	<u>26.3</u>
3	948.0000	<u>17.9</u>	-6.9	<u>11.0</u>	50.0	<u>39.0</u>
4	957.8000	<u>18.5</u>	-6.8	<u>11.7</u>	50.0	<u>38.3</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 524MHz(A)/524MHz(B) mode (1000 – 6500MHz)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A (TM-V71A)
 SERIAL NO. : None
 TEST MODE : RX 524MHz(A)/524MHz(B)
 POWER SOURCE : DC13.8V
 DATE TESTED : Feb 16 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 22.0 [degC]
 HUMIDITY : 30.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

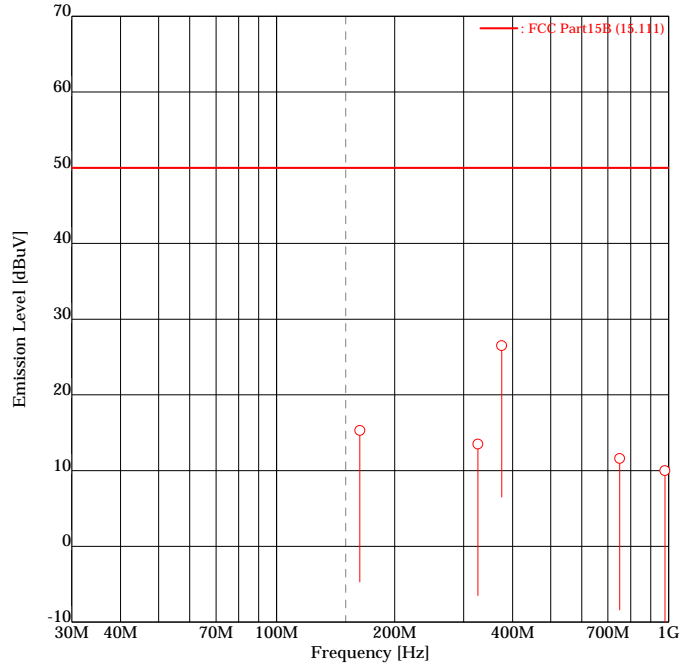
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	2067.0500	<u>41.5</u>	-14.0	<u>27.5</u>	50.0	<u>22.5</u>

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

9.3.7 RX 118MHz(A)/800MHz(B) mode (30 – 1000MHz)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A (TM-V71A)
 SERIAL NO. : None
 TEST MODE : RX 118MHz(A)/800MHz(B)
 POWER SOURCE : DC13.8V
 DATE TESTED : Feb 16 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 22.0 [degC]
 HUMIDITY : 30.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

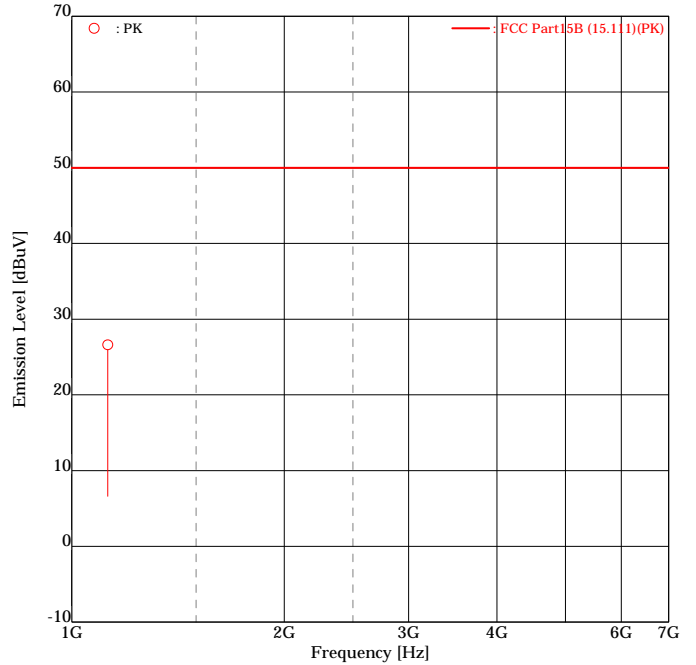
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	163.1000	<u>26.8</u>	-11.5	<u>15.3</u>	50.0	<u>34.7</u>
2	326.2000	<u>24.0</u>	-10.5	<u>13.5</u>	50.0	<u>36.5</u>
3	375.0500	<u>36.6</u>	-10.1	<u>26.5</u>	50.0	<u>23.5</u>
4	750.1000	<u>19.7</u>	-8.1	<u>11.6</u>	50.0	<u>38.4</u>
5	978.6000	<u>16.7</u>	-6.7	<u>10.0</u>	50.0	<u>40.0</u>

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

9.3.8 RX 118MHz(A)/800MHz(B) mode (1000 – 6500MHz)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A (TM-V71A)
 SERIAL NO. : None
 TEST MODE : RX 118MHz(A)/800MHz(B)
 POWER SOURCE : DC13.8V
 DATE TESTED : Feb 16 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 22.0 [degC]
 HUMIDITY : 30.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

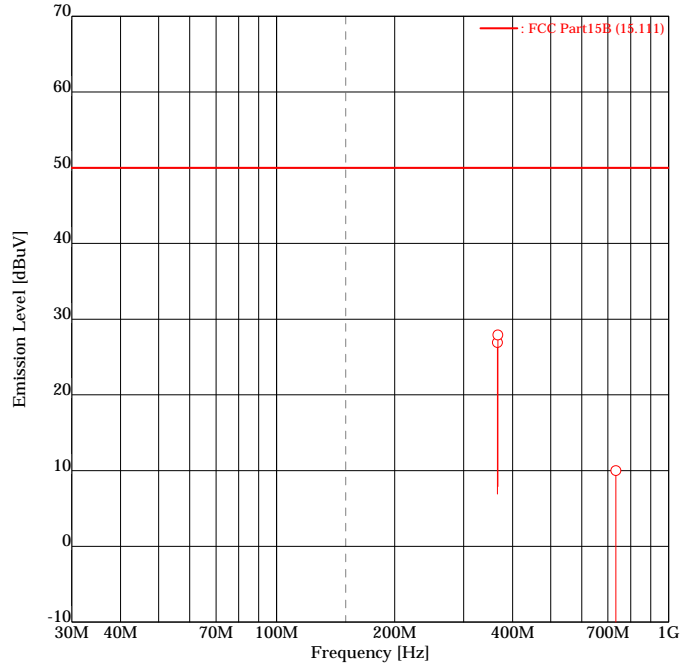
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1125.1800	<u>41.9</u>	-15.3	<u>26.6</u>	50.0	<u>23.4</u>

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

9.3.9 RX 321MHz(A)/1050MHz(B) mode (30 – 1000MHz)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A (TM-V71A)
 SERIAL NO. : None
 TEST MODE : RX 321MHz(A)/1050MHz(B)
 POWER SOURCE : DC13.8V
 DATE TESTED : Feb 16 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 22.0 [degC]
 HUMIDITY : 30.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

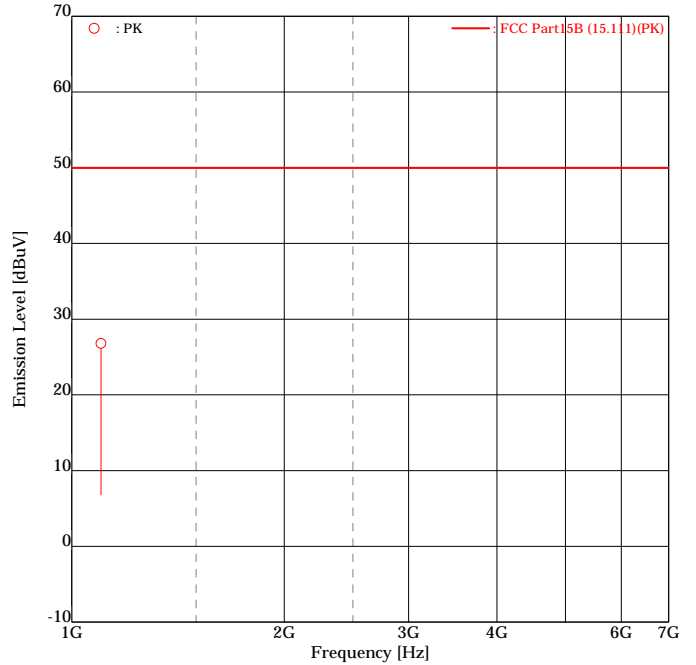
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	366.1000	<u>37.1</u>	-10.2	<u>26.9</u>	50.0	<u>23.1</u>
2	366.6600	<u>38.1</u>	-10.2	<u>27.9</u>	50.0	<u>22.1</u>
3	733.3300	<u>18.2</u>	-8.2	<u>10.0</u>	50.0	<u>40.0</u>

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

9.3.10 RX 321MHz(A)/1050MHz(B) mode (1000 – 6500MHz)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A (TM-V71A)
 SERIAL NO. : None
 TEST MODE : RX 321MHz(A)/1050MHz(B)
 POWER SOURCE : DC13.8V
 DATE TESTED : Feb 16 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 22.0 [degC]
 HUMIDITY : 30.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

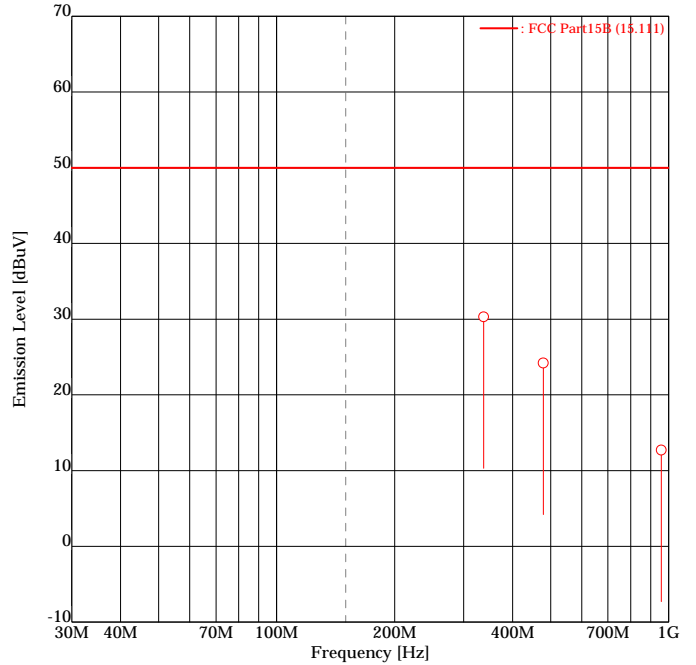
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1099.9900	<u>42.0</u>	-15.2	<u>26.8</u>	50.0	<u>23.2</u>

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

9.3.11 RX 524MHz(A)/1300MHz(B) mode (30 – 1000MHz)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A (TM-V71A)
 SERIAL NO. : None
 TEST MODE : RX 524MHz(A)/1300MHz(B)
 POWER SOURCE : DC13.8V
 DATE TESTED : Feb 16 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 22.0 [degC]
 HUMIDITY : 30.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

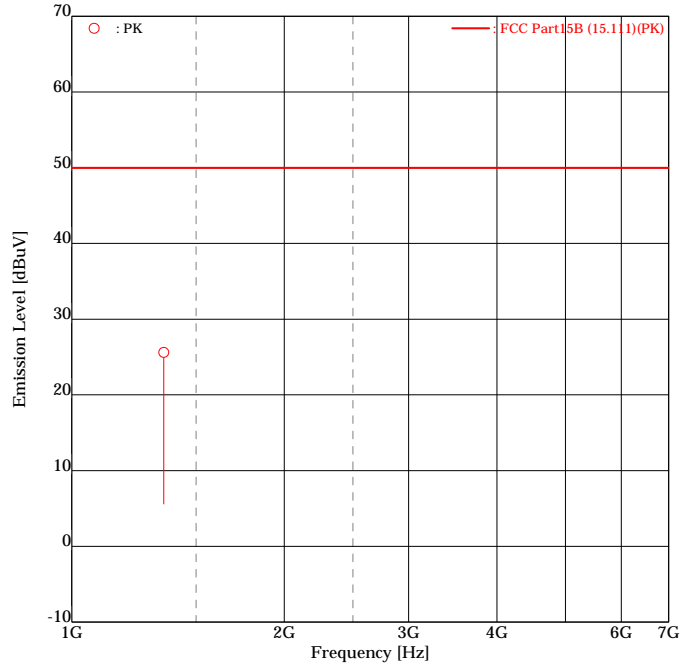
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	337.4700	<u>40.7</u>	-10.4	<u>30.3</u>	50.0	<u>19.7</u>
2	478.9000	<u>33.8</u>	-9.6	<u>24.2</u>	50.0	<u>25.8</u>
3	957.8000	<u>19.5</u>	-6.8	<u>12.7</u>	50.0	<u>37.3</u>

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

9.3.12 RX 524MHz(A)/1300MHz(B) mode (1000 – 6500MHz)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A (TM-V71A)
 SERIAL NO. : None
 TEST MODE : RX 524MHz(A)/1300MHz(B)
 POWER SOURCE : DC13.8V
 DATE TESTED : Feb 16 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 22.0 [degC]
 HUMIDITY : 30.0 [%]
 NOTE :



ENGINEER : Kazuo Masuda

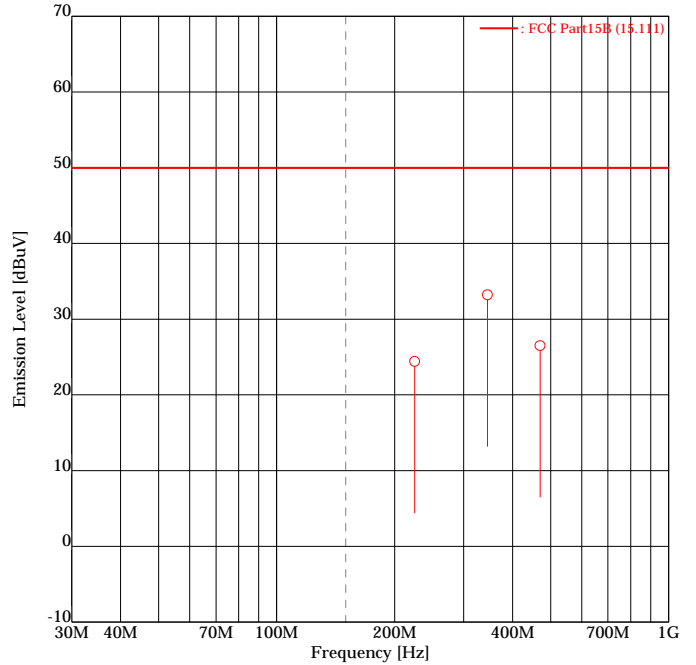
FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	1349.9800	<u>41.1</u>	-15.5	<u>25.6</u>	50.0	<u>24.4</u>

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

9.3.13 VFO Scan mode (A Band : 118 – 524MHz)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A
 SERIAL NO. : None
 TEST MODE : VFO Scan
 POWER SOURCE : DC13.8V
 DATE TESTED : Feb 14 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 44.0 [%]
 NOTE : Band (A) : 118 - 524MHz



ENGINEER : Kazuo Masuda

FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	225.0600	<u>35.6</u>	-11.2	<u>24.4</u>	50.0	<u>25.6</u>
2	345.0500	<u>43.5</u>	-10.3	<u>33.2</u>	50.0	<u>16.8</u>
3	469.9500	<u>36.1</u>	-9.6	<u>26.5</u>	50.0	<u>23.5</u>

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

9.3.13 VFO Scan mode (A Band : 118 – 524MHz)

< Graph number #1 >

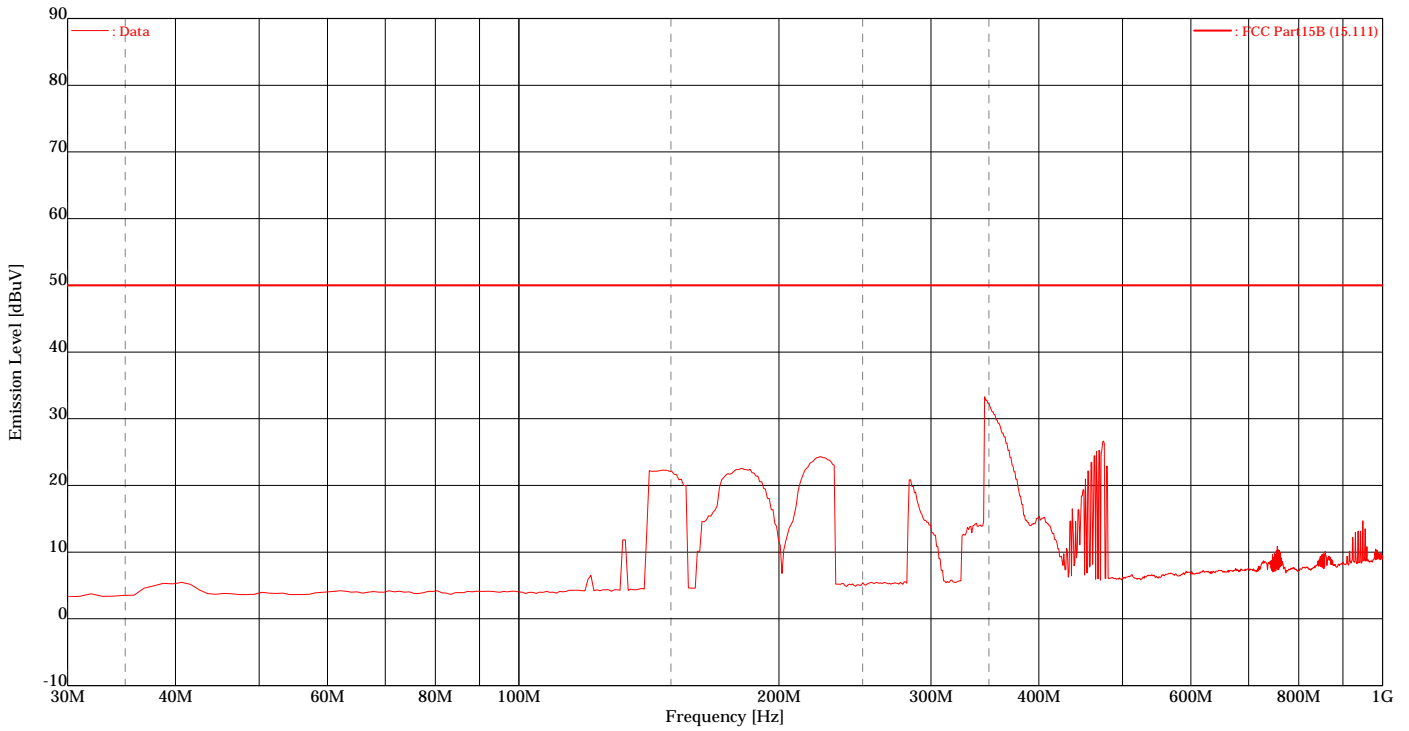
SPECTRUM ANALYSIS

Kashima No.1 Test Site

23.0degC /44.0%

Date tested : Feb 14 2007
Company : Kenwood Corporation
EUT Name : 144/440MHz FM DUAL BANDER
Model number : TM-D710A
Serial number : None

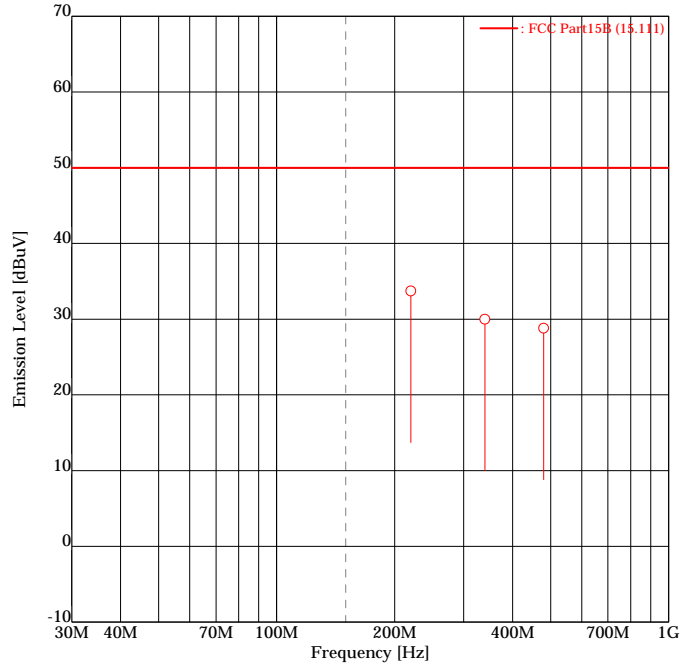
Test mode : VFO Scan
Power source : DC13.8V
File number : ESJ-107031
Engineer : Kazuo Masuda
Note : Band (A) : 118 - 524MHz



9.3.14 VFO Scan mode (B Band : 136 – 1300MHz)

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

APPLICANT : Kenwood Corporation
 EUT NAME : 144/440MHz FM DUAL BANDER
 MODEL NO. : TM-D710A
 SERIAL NO. : None
 TEST MODE : VFO Scan
 POWER SOURCE : DC13.8V
 DATE TESTED : Feb 14 2007
 FILE NO. : ESJ-107031
 REGULATION : FCC Part15B (15.111)
 TEST METHOD : ANSI C63.4-2003
 TEMPERATURE : 23.0 [degC]
 HUMIDITY : 44.0 [%]
 NOTE : Band (B) : 136 - 1300MHz



ENGINEER : Kazuo Masuda

FREQUENCY [No]	FREQUENCY [MHz]	READING [dBuV]	FACTOR [dB]	EMISSION [dBuV]	LIMIT [dBuV]	MARGIN [dB]
1	219.9500	<u>45.0</u>	-11.3	<u>33.7</u>	50.0	<u>16.3</u>
2	339.9800	<u>40.4</u>	-10.4	<u>30.0</u>	50.0	<u>20.0</u>
3	479.9600	<u>38.4</u>	-9.6	<u>28.8</u>	50.0	<u>21.2</u>

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

9.3.14 VFO Scan mode (B Band : 136 – 1300MHz)

< Graph number #2 >

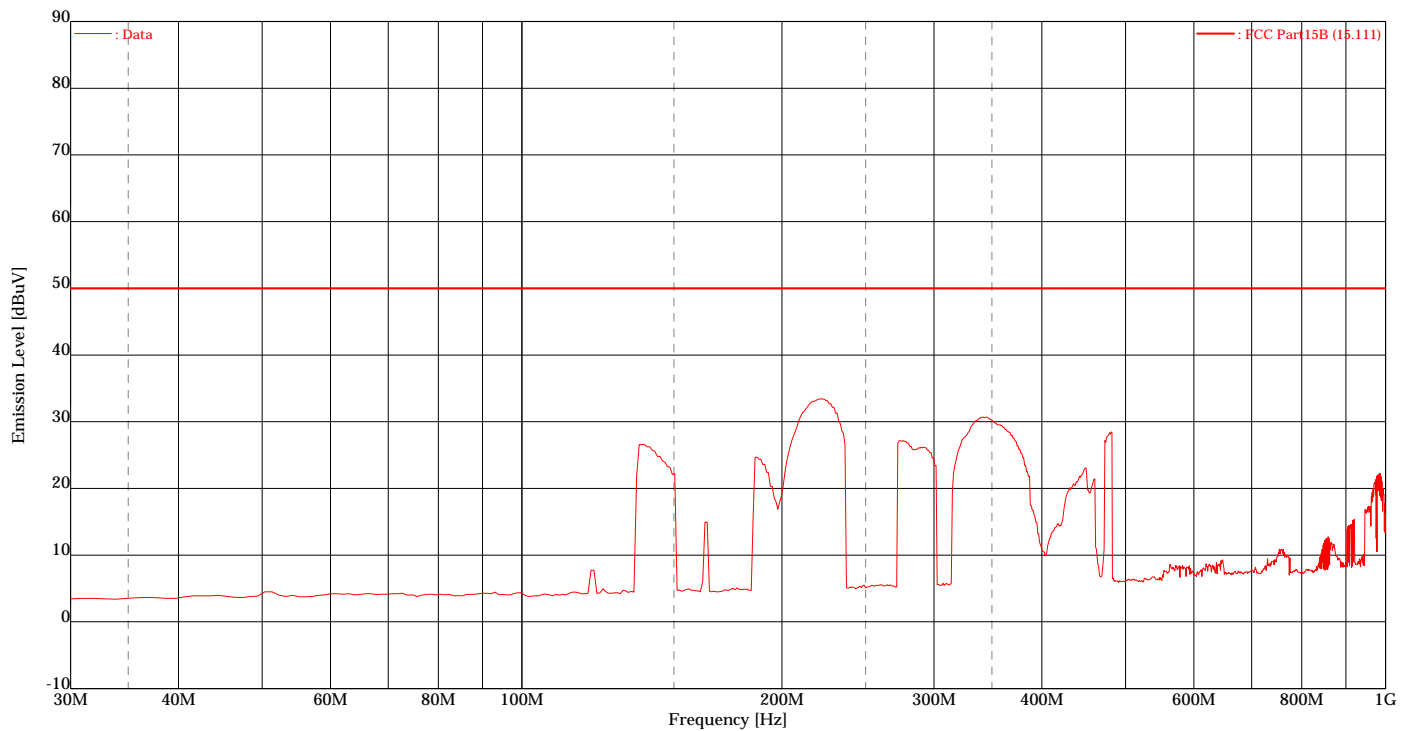
SPECTRUM ANALYSIS

Kashima No.1 Test Site

23.0degC /44.0%

Date tested : Feb 14 2007
Company : Kenwood Corporation
EUT Name : 144/440MHz FM DUAL BANDER
Model number : TM-D710A
Serial number : None

Test mode : VFO Scan
Power source : DC13.8V
File number : ESJ-107031
Engineer : Kazuo Masuda
Note : Band (B) : 136 - 1300MHz



9.4 38dB Rejection Test

9.4.1 VFO Scan mode (A Band : 118 – 524MHz)

Location : Kashima No.1 Test Site
 Date Tested : February. 19, 2007
 Temperature : 21 [degC]
 Humidity : 34 [%]
 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 = 650mV.

9.4.2 VFO Scan mode (B Band : 136 – 524MHz, 800 – 1300MHz)

Location : Kashima No.1 Test Site
 Date Tested : February. 14, 2007
 Temperature : 23 [degC]
 Humidity : 44 [%]
 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 = 650mV.

9.5 Sample Calculations

9.5.1 Conducted Voltages on Mains Port

Example @ 0.4856MHz

Emission Level	=	Meter Reading		25.4	dBuV
	+	Factor		6.2	dB
				<hr/>	
	=			31.6	dBuV
Margin	=	Limit		56.2	dBuV
	-	Emission Level		31.6	dBuV
				<hr/>	
	=			24.6	dB

Factor = LISN Factor + Cable Loss + Pad Loss

9.5.2 Radiated Electric Field

Example @ 404.32MHz

Emission Level	=	Meter Reading		31.6	dBuV
	+	Factor		2.4	dB/m
				<hr/>	
	=			34.0	dBuV/m
Margin	=	Limit		46.0	dBuV/m
	-	Emission Level		34.0	dBuV/m
				<hr/>	
	=			12.0	dB

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

9.5.3 Conducted Power on Antenna Port

Example @ 219.95MHz

Output Power Level	=	Meter Reading		45.0	dBuV
	+	Factor	+	-11.3	dB
			=	33.7	dBuV
Margin	=	Limit (:2.0nW)		50.0	dBuV
	-	Output Power Level	-	33.7	dBuV
			=	16.3	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
			=	N/A	dB
Margin	=	Rejection Level		N/A	dB
	-	Limit	-	38.0	dB
			=	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	-