

Issue Date : January 8, 1999

Page 1 of 37

EMC EMISSION -TEST REPORTJQA APPLICATION No. : KL8080582Model/Type No. : IC-706MK II GName of Product : HP/VHF/UHF TransceiverFCC ID : AFJ IC-706MK2GApplicant : ICOM IncorporatedAddress : 1-6-19, Kuratsukuri, Kami, Hirano-ku, Osaka, JapanManufacturer : ICOM IncorporatedAddress : 1-6-19, Kuratsukuri, Kami, Hirano-ku, Osaka, Japan**Final Judgement** : Passed

TEST RESULTS **IN THIS REPORT** are obtained in use of equipment that is traceable to Electro-technical Lab. of MITI Japan and Communications Research Lab. of PTT Japan.

THE TEST RESULTS only responds to the test sample. This test report shall not be reproduced except in full.

JAPAN QUALITY ASSURANCE ORGANIZATION (JQA)
KITA-KANSAI TESTING CENTER
EMC DIVISION



LAB CODE: 200191-o

DIRECTORY

	Page
A) Documentation	
Test report	<u>1 - 20</u>
Directory	<u>2</u>
Test Regulation / General Information	<u>3</u>
Test conditions	<u>4 - 7</u>
Configuration of EUT / Operation of EUT	<u>8 - 11</u>
EUT Modification / Responsible Party	<u>12</u>
Test results / Uncertainty	<u>13</u>
Summary	<u>14</u>
EUT-Arrangement (Drawings)	<u>15</u>
Preliminary Test and Test-setup (Drawings)	<u>16 - 19</u>
Test-setup (Photographs) at worst case	<u>20</u>
B) Test data	
Conducted Emission	450 kHz - 30 MHz <u>21</u>
Radiated Emission (Electric Field)	30 MHz - 1080 MHz <u>22 - 29</u>
Antenna Conducted Power	30 MHz - 1080 MHz <u>30 - 37</u>

TEST REGULATION

FCC Rules and Regulations Part 15 Subpart A and B (April 17, 1997)

- 0 - Class A Digital Device
- 0 - Class B Digital Device
- - Scanning Receiver (employing superheterodyne techniques)

Test procedure:

Conducted emission, radiated emission and antenna conducted power test were performed according to the procedures in ANSI C63.4-1992.

GENERAL INFORMATION

Test facility:

- 1) Test Facility located at Kita-Kansai : 1st and 2nd Open Sites (3 m Site)
Test Facility located at Kameoka Open Site (3, 10 and 30 m, on common plane)
FCC filing No. : **31040/SIT 1300F2**
- 2) KITA-KANSAI TESTING CENTER is recognized under the National Voluntary Laboratory Accreditation Program for satisfactory compliance established in Title 15, Part 285 Code of Federal Regulations.
NAVLAP Lab Code: 200191-o
- 3) Average Measurement Method
FCC filing No. : 950523A **1300F2**

Description of the Equipment Under Test (EUT):

- 1) Name : HF/VHF/UHF Transceiver
- 2) Model/Type No. : IC-706MK II G
- 3) Product Type : Pre-Production (S/N 00008)
- 4) Category : Scanning Receiver
- 5) EUT Authorization : ○ - Verification ● - Certification 0 - D.o.C.
- 6) Highest frequency used/generated : 539.011500 MHz
- 7) Power Rating : DC 13.8 V (DC Power Supply IC-5P : AC120V 60Hz)

Definitions for symbols used in this test report:

- - Black box indicates that the listed condition, standard or equipment is applicable for this Report.
- 0 - Blank box indicates that the listed condition, standard or equipment is not applicable for this Report.

TEST CONDITIONS

The **measurement of the Conducted Emission (Disturbance Voltage)** was performed in the following test site.

Test location:

KITA-KANSAI Testing Center

7-7, Ishimaru, 1-Chome, Minoh-Shi, Osaka, 562-0027, Japan

● - Shielded room

KAMEOKA EMC Branch

9-1, Ozaki, Inukanno, Nishibetsuin-Cho, Kameoka-Shi, Kyoto, 621-0126, Japan

0 - Shielded room

0 - On metal plane of open site

Used test instruments and sites:

Model No.	Device I.D No.	Last Cal. Date	Cal. Interval
0 - ESH 3	A - 1		
● - ESH 2	A - 2	December, 1998	1 Year
0 - ESH 2	A - 3		
● - KNW-407	D - 6	February, 1998	1 Year
0 - KNW-408	D - 11		
0 - KNW-242	D - 7		
0 - ESH3-Z5	D - 12		
0 - KNW-341C	D - 13		
0 - KNW-408	D - 14		
0 - KNW-244C	D - 77		
0 - KNW-408	D - 78		
0 - ESH2-Z5	D - 10		
0 - ESH2-Z3	D - 17		
0 - 8568B	A - 10		
0 - 8566B	A - 13		
0 - 8593A	A - 15		
● - Cable	H - 8	February, 1998	1 Year

Environmental conditions:

Temperature: 18 °C **Humidity:** 34 %

The measurement of the Radiated Emission (Electric Field)

was performed in horizontal and vertical polarization, in the frequency range of 30 MHz - 1000 MHz, in the following test site.

Test location:

KITA-KANSAI Testing Center

7-7, Ishimaru, 1-Chome, Minoh-Shi, Osaka, 562-0027, Japan

0 - 1st site (3 meters)

● - 2nd site (3 meters)

KAMEOKA EMC Branch

9-1, Ozaki, Inukanno, Nishibetsuin-Cho, Kameoka-Shi, Kyoto, 621-0126, Japan

0 - 3 meters

0 - 10 meters

Validation of Site Attenuation:

1) Last Confirmed Date: November 28, 1998

2) Interval : 1 Year

Used test instruments:

Model No.	Device I.D No.	Last Cal. Date	Cal.	Interval
0 - ESV/ESV-Z3	A - 7 / A - 17	December, 1998	1 Year	
● - ESV/ESV-Z3	A - 6 / A - 18			
0 - ESV/ESV-Z3	A - 5 / A - 16			
0 - ESV/ESV-Z3	A - 4 / A - 20			
0 - ESV/ESV-Z3	A - 8 / A - 19			
0 - KBA-511A	c - 12	November, 1998	1 Year	
0 - KBA-611	c - 22			
● - KBA-511A	c - 13			
● - KBA-611	c - 19			
0 - KBA-511A	c - 11			
0 - KBA-611	c - 21	November, 1998	1 Year	
● - Cable	H - 6			

Environmental conditions:

Temperature : 15 °C Humidity: 45 %

The measurement of the Radiated Emission (Electric Field)

was performed in horizontal and vertical polarization, in the frequency range of 1000 MHz ~ 1080 MHz, in the following test site.

Test location:

KITA-KANSAI Testing Center

7-7, Ishimaru, 1-Chome, Minoh-Shi, Osaka, 562-0027, Japan

0 - 1st site (3 meters)

● - 2nd site (3 meters)

KAMEOKA EMC Branch

9-1, Ozaki, Inukanno, Nishibetsuin-Cho, Kameoka-Shi, Kyoto, 621-0126, Japan

0 - 3 meters

0 - 10 meters

Used test instruments:

Model No.	Device I.D No.	Last Cal. Date	Cal. Interval
● - 8566B	A - 13	October, 1998	1 Year
0 - 8593A	A - 15		
0 - ESV	A - 5		
● - 4T-10	D - 73	May, 1998	1 Year
● - 4T-10	D - 74	May, 1998	1 Year
● - WJ-6611-513	A - 23	May, 1998	1 Year
0 - WJ-6882-824	A - 21		
0 - DBL-0618N515	A - 33		
● - 91888-2	c - 4 1 - 1	May, 1998	1 Year
0 - 91889-2	c - 41 - 2		
0 - 94613-1	c - 41 - 3		
0 - 91891-2	c - 41 - 4		
0 - 94614-1	c - 41 - 5		
0 - 3160-09	C - 48		
0 - TRA-603D	D - 24		
0 - 8494H/8595H	D - 76		
0 - MZ5010C	D - 81		
● - Cable	c - 4 0 - 1 1	May, 1998	1 Year
● - Cable	c - 40 - 12	May, 1998	1 Year

Setting of the spectrum analyzer:

RES B.W : 1 MHz Video B.W : 1 MHz
SCALE : LINEAR Sweep Time: 20 msec

Environmental conditions:

Temperature : 15 °C Humidity: 45 %

The measurement of the Antenna Conducted Power

was performed in the frequency range of 30 MHz - 1080 MHz, in the following test site.

Test location:

KITA-KANSAI Testing Center

7-7, Ishimaru, 1-Chome, Minoh-Shi, Osaka, 562-0027, Japan

● - Shielded Room

0 - Anechoic Chamber

KAMEOKA EMC Branch

9-1, Ozaki, Inukanno, Nishibetsuin-Cho, Kameoka-Shi, Kyoto, 621-0126, Japan

0 - Shielded Room

Used test instruments:

Model No.	Device I.D No.	Last Cal. Date	Cal. Interval
● - ESV	A - 5	December, 1998	1 Year
0 - 8568B	A - 10		
● - 8566B	A - 13	October, 1998	1 Year
0 - 8593A	A - 15		
0 - LSG-221	B - 15		
0 - 216/1	B - 16		
0 - MP614A	D - 56		
0 - 12B50/75	D - 55		
0 - 12N50/75B	D - 72		
● - 2-10	D - 40	June, 1998	1 Year
0 - 1506A	D - 21		
● - Cable	c - 41 - 9	June, 1998	1 Year

Environmental conditions:

Temperature : 21 °C Humidity: 34 %

CONFIGURATION OF EUT

The Equipment Under Test (EUT) consists of:

Description	Applicant (Manufacturer)	Model No. (Serial No.)	FCC ID
HF/VHF/UHF Transceiver (Base and Display)	ICOM Incorporated (ICOM Incorporated)	IC-706MK II G (00008)	AFJ IC-706MK2G

The measurement ~~was~~ carried out with the following equipment connected:

Description	Grantee/Distributor	Model No. (Serial No.)	FCC ID
DC Power Supply	ICOM Incorporated	IC-5P (1793)	N/A
Antenna Tuner 1	ICOM Incorporated	AT-180 (23)	N/A
Antenna Tuner 2	ICOM Incorporated	AH-4 (0008)	N/A
Telereader	TASCO ELECTRONIC CO., LTD.	TNC-291G (3911179)	N / A
Telegraph Key	HI -MOUND ELECTRO CO.,	HK-706 (--)	N/A
External Speaker	ICOM Incorporated	SP-12 (--)	N/A
Headphones	P I ONEER	SE-M300 (--)	N/A
Microphone	ICOM Incorporated	I-m-103 (--)	N/A

Type of Interference Cable(s) and the AC Power Cord used with the **EUT**:

No.	Cable	Shielded	Ferrite Core	Length
1	EUT(Base) "DATA" / Telereader	YES	NO	1.5m
2	EUT(Base) "ACC" / Antenna Tuner 1	YES	NO	1.0m
3	EUT(Base) "MIC" / Microphone	NO	NO	0.4m
4	EUT(Base) "KEY" / Telegraph Key	NO	NO	0.7m
5	EUT(Base) "EXT SP" / External Speaker	NO	NO	2.0m
6	EUT(Base) "Tuner" / Antenna Tuner 2	NO	NO	4.8m
7	EUT(Base) "RTTY" / No termination	NO	NO	1.9m
8	EUT(Base) "REMOTE" / No termination	NO	NO	0.8m
9	EUT(Base) / EUT(Display)	NO	NO	3.6m
10	EUT(Display) "PHONES" / Headphones	NO	NO	2.8m
11	EUT(Display) "MIC" / No termination	--	--	--
12	DC Power Cord (EUT / DC Power Supply)	NO	NO	3.0m
13	DC Power Cord (Telereader / DC Power Supply)	NO	NO	1.5m
14	AC Power Cord (DC Power Supply) with 2-pin plug	NO	NO	1.5m
15	Earth Cord (EUT)	NO	NO	1.9m
16	Earth Cord (DC Power Supply)	NO	NO	1.4m

Operation - mode of the EUT:

The EUT has some receiving modes shown as follows:

1. Double-Superheterodyne techniques

AM : 1st IF / 69.0115 MHz

2nd IF / 9.0115 MHz

WFM : 1st IF / 70.7000 MHz

2nd IF / 10.7000 MHz

2. Triple Superheterodyne techniques

FM : 1st IF / 69.0115 MHz

2nd IF / 9.0115 MHz

3rd IF / 0.4550 MHz

The test was performed "FM receiving (Triple-Superheterodyne techniques)" mode.

Test system:

7

The EUT consists of a Base Unit and a Display Unit.

The Base Unit has an ANT 1 port, an ANT 2 port, a DATA port, an ACC port, a MIC port, a KEY port, an EXT SP port, an RTTY port, a REMOTE port, a TUNER port and a DC POWER port.

The Display Unit has a MIC port and a PHONES port.

Special accessories:

None

The used (generated) frequencies in the EUT:

Intermediate Frequency	AM	: 1st IF / 69.0115 MHz
		2nd IF / 9.0115 MHz
WFM	: 1st IF / 70.7000 MHz	
		2nd IF / 10.7000 MHz
FM	: 1st IF / 69.0115 MHz	
		2nd IF / 9.0115 MHz
		3rd IF / 0.4550 MHz

Other Clock : 39.98 MHz, 15.99 MHz, 14.7456 MHz, 9.8304 MHz, 0.8 MHz

Local Frequency and VCO Frequency : Refer to Page 11

Detailed receiver portion:

1) Relation between Receiving Frequency and Local Frequency

No.	Receiving Frequency [MHz]	1st Local Frequency [MHz]	VCO Frequency [MHz]
1	0.030000 - 29.999999	69.041500 - 99.011499	69.0115000 - 99.0114990
2	30.000000 - 59.999999	99.011500 - 129.011499	99.0115000 - 129.0114990
3	60.000000 - 128.999999	129.011500 - 198.011499	64.5057500 - 99.0057495
4	129.000000 - 143.999999	198.011500 - 213.011499	99.0057500 - 106.5057495
5	144.000000 - 148.000000	213.011500 - 217.011500	106.5057500 - 108.5057500
6	148.000001 - 199.999999	217.011501 - 269.011499	108.5057505 - 134.5057495
7	400.000000 - 470.000000	469.011500 - 539.011500	234.5057500 - 269.5057500

2nd Local Frequency : 60.000000 MHz

3rd Local Frequency : 9.466500 MHz

- 2) Respective Intermediate Frequency :
1st IF / 69.0115 MHz (Upper)
2nd IF / 9.0115 MHz (Lower)
3rd IF / 0.4550 MHz (Upper)
- 3) The highest Local Frequency : 539.011500 MHz
- 4) Type of Antenna Terminal : **M-Type** connector / 50 Ω (Unbalanced)
- 5) Receiving mode : FM

EUT Modification

● - No modifications were conducted by JQA to **achive** compliance to applied levels.

0 - To achieve compliance to applied levels, the following change(s) were made by JQA during the compliance test.

The modification(s) will be implemented in all production models of this equipment.

Applicant : _____ Date :

Typed Name : _____ Position :

Responsible Party

Responsible Party of Test Item(Product) _____

Responsibe party :

Contact Person :

Signatory

Remarks : _____

SUMMARY

GENERAL REMARKS :

The EUT was tested according to the requirements of FCC Rules and Regulations Part 15 Subpart A and B (April 17, 1997) under the test configuration, as shown in page 15.

The conclusion for the test items of which are required by the applied regulation is indicated under the final judgement.

FINAL JUDGEMENT :

The "as received" sample;

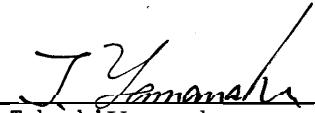
- - fulfill the test requirements of the regulation mentioned on page 3.
- 0 - fulfill the test requirements of the regulation mentioned on page 3, but with certain qualifications.
- 0 - doesn't fulfill the test regulation mentioned on page 3.

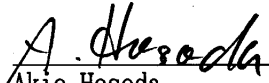
Begin of testing : January 5, 1999

End of testing : January 6, 1999

- JAPAN QUALITY ASSURANCE ORGANIZATION -

Approved Signatory :


Takashi Yamanaka
Manager
EMC Div.
JQA KITA-KANSAI Testing Center


Akio Hosoda
Project Manager
EMC Div.
JQA KITA-KANSAI Testing Center

Mains terminal Disturbance Measurement

Scanning Receiver

Tuning Frequency : 7.094 MHz (AM)
145.020 MHz (FM)
432.000 MHz (FM)

Test Date: January 6, 1999
Temp.: 3 18 °C ; Humi.: %

Frequency [MHz]	Correction Factor [dB]	Meter Readings dB(μV)				Limits dB(μV)	Results dB(μV)		Margin [dB]	Remarks (Note 2)
		VA-QE'	VA-AV	VB-QP	VB-AV		QP	AV		
0.45	0.1	< 10.0	-	10.0	-	48.0	10.1	-	+37.9	A
0.65	0.1	< 10.0	-	< 10.0	-	48.0	< 10.1	-	>+37.9	A
1.45	0.2	< 10.0	-	< 10.0	-	48.0	< 10.2	-	>+37.8	A
2.00	0.2	< 10.0	-	< 10.0	-	48.0	< 10.2	-	>+37.8	A
3.50	0.3	< 10.0	-	< 10.0	-	48.0	< 10.3	-	>+37.7	A
4.43	0.3	< 10.0	-	< 10.0	-	48.0	< 10.3	-	H37.7	A
9.83	0.5	< 10.0	-	< 10.0	-	48.0	< 10.5	-	>+37.5	A
10.50	0.5	< 10.0	-	< 10.0	-	48.0	< 10.5	-	>+37.5	A
19.66	0.8	< 10.0	-	< 10.0	-	48.0	< 10.8	-	>+37.2	A
29.49	0.9	< 10.0	-	< 10.0	-	48.0	< 10.9	-	>+37.1	A

Sample of calculated result at 0.45 MHz, as the Minimum Margin point:

Correction Factor = 0.1 dB

+)Meter Reading = 10.0 dB(μV)

Result = 10.1 dB(μV)

Minimum Margin : 48.0 - 10.1 = 37.9(dB)

The point shown on "____" is the Minimum Margin Point.

Note 1:

1. The correction factors includes the LISN insertion loss and the cable loss.

Remarks :

Note 2	Detector Function	IF Bandwidth
	CISPR QP	9 kHz
	Average	10 kHz

Tester Signature : A. Hosoda

Type Name : Akio Hosoda

Electromagnetic Radiation Disturbance Measurement

Scanning Receiver

Test Date: January 5, 1999

Temp. : 15 °C ; Humi. : 45 %

Tuning range : 0.030000 MHz - 29.999999 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB(1/m)]	Meter Readings [dB(μV/m)]	Pola- rity	Limits [dB(μV/m)]	Results [dB(μV/m)]	Remarks (Note 2)
0.030000	69.0415000	6.8	2.0	V	40.0	8.8	A
	138.0830000	13.4	< 0.0		43.5	< 13.4	A
	207.1245000	17.3	< 0.0		43.5	< 17.3	A
	276.1660000	20.1	< 0.0		46.0	< 20.1	A
	345.2075000	22.4	< 0.0		46.0	< 22.4	A
	414.2490000	24.4	< 0.0		46.0	< 24.4	A
	483.2905000	26.1	< 0.0		46.0	< 26.1	A
	552.3320000	27.5	< 0.0		46.0	< 27.5	A
	621.3735000	28.9	< 0.0		46.0	< 28.9	A
	690.4150000	30.1	< 0.0		46.0	< 30.1	A
	759.4565000	31.2	< 0.0		46.0	< 31.2	A
	828.4980000	32.2	< 0.0		46.0	< 32.2	A
	897.5395000	33.3	< 0 . 0		46 . 0	< 33.3	A
	966.5810000	34.4	< 0.0		54.0	< 34.4	A
	1035.6225000	-5.4	<30.0		54.0	< 24.6	B
15.000000	84.0115000	8.7	4.0	H	40.0	12.7	A
	168.0230000	15.2	< 0.0		43.5	< 15.2	A
	252.0345000	19.2	< 0.0		46.0	< 19.2	A
	336.0460000	22.2	< 0.0		46.0	< 22.2	A
	420.0575000	24.6	< 0.0		46.0	< 24.6	A
	504.0690000	26.6	< 0.0		46.0	< 26.6	A
	588.0805000	28.2	< 0.0		46.0	< 28.2	A
	672.0920000	29.7	< 0.0		46.0	< 29.7	A
	756.1035000	31.1	< 0.0		46.0	< 31.1	A
	840.1150000	32.4	< 0 . 0		46.0	< 32.4	A
	924.1265000	33.7	< 0.0		46.0	< 33.7	A
	1008.1380000	-5.2	<30.0		54.0	< 24.8	B
29.999999	99.0114990	10.2	4.0	H	43.5	14.2	A
	198.0229980	16.8	< 0.0		43.5	< 16.8	A
	297.0344970	20.9	< 0.0		46.0	< 20.9	A
	396.0459960	24.0	< 0.0		46.0	< 24.0	A
	495.0574950	26.4	< 0.0		46.0	< 26.4	A
	594.0689940	28.3	< 0.0		46.0	< 28.3	A
	693.0804930	30.1	< 0.0		46.0	< 30.1	A
	792.0919920	31.7	< 0.0		46.0	< 31.7	A
	891.1034910	33.2	< 0.0		46.0	< 33.2	A
	990.1149900	34.7	< 0.0		54.0	< 34.7	A

Tuning range : 30.000000 MHz - 59.999999 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB(1/m)]	Meter Readings [dB(μV/m)]	Pola- rity	Limits [dB(μV/m)]	Results [dB(μV/m)]	Remarks (Note 2)
30.000000	99.0115000	10.2	4.0	H	43.5	14.2	A
	198.0230000	16.8	< 0.0		43.5	< 16.8	A
	297.0345000	20.9	< 0.0	-	46.0	< 20.9	A
	396.0460000	24.0	< 0.0		46.0	< 24.0	A
	495.0575000	26.4	< 0.0		46.0	< 26.4	A
	594.0690000	28.3	< 0.0		46.0	< 28.3	A
	693.0805000	30.1	< 0.0		46.0	< 30.1	A
	792.0920000	31.7	< 0.0		46.0	< 31.7	A
	891.1035000	33.2	< 0.0		46.0	< 33.2	A
	990.1150000	34.7	< 0.0		54.0	< 34.7	A
45.000000	114.0115000	11.5	1.0	H	43.5	12.5	A
	228.0230000	18.3	< 0.0		46.0	< 18.3	A
	342.0345000	22.3	< 0.0		46.0	< 22.3	A
	456.0460000	25.5	< 0.0	-	46.0	< 25.5	A
	570.0575000	27.9	< 0.0	-	46.0	< 27.9	A
	684.0690000	30.0	< 0.0	-	46.0	< 30.0	A
	798.0805000	31.7	< 0.0	-	46.0	< 31.7	A
	912.0920000	33.5	< 0.0	-	46.0	< 33.5	A
	1026.1035000	-5.3	<30.0	-	54.0	< 24.7	B
59.999999	129.0114990	12.7	2.0	V	43.5	14.7	A
	258.0229980	19.4	< 0.0	-	46.0	< 19.4	A
	387.0344970	23.7	< 0.0	-	46.0	< 23.7	A
	516.0459960	26.8	< 0.0		46.0	< 26.8	A
	645.0574950	29.3	< 0.0		46.0	< 29.3	A
	774.0689940	31.4	< 0.0		46.0	< 31.4	A
	903.0804930	33.4	< 0.0		46.0	< 33.4	A
	1032.0919920	-5.4	x30.0		54.0	< 24.6	B

[Tuning range : 60.000000 MHz - 128.999999 MHz]

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB(1/m)]	Meter Readings [dB(μV/m)]	Pola- rity	Limits [dB(μV/m)]	Results [dB(μV/m)]	Remarks (Note 2)
60.000000	64.5057500	6.2	3.0	V	40.0	9.2	A
	129.0115000	12.7	< 0.0	-	43.5	< 12.7	A
	193.5172500	16.6	< 0.0	-	43.5	< 16.6	A
	258.0230000	19.4	< 0.0		46.0	< 19.4	A
	322.5287500	21.7	< 0.0		46.0	< 21.7	A
	387.0345000	23.7	< 0.0		46.0	< 23.7	A
	451.5402500	25.4	< 0.0		46.0	< 25.4	A
	516.0460000	26.8	< 0.0		46.0	< 26.8	A
	580.5517500	28.1	< 0.0		46.0	< 28.1	A
	645.0575000	29.3	< 0.0		46.0	< 29.3	A
	709.5632500	30.3	< 0.0		46.0	< 30.3	A
	774.0690000	31.4	< 0.0		46.0	< 31.4	A
	838.5747500	32.4	< 0.0		46.0	< 32.4	A
	903.0805000	33.4	< 0.0		46.0	< 33.4	A
	967.5862500	34.4	< 0.0		54.0	< 34.4	A
	1032.0920000	-5.4	<30.0		54.0	< 24.6	B
94.500000	81.7557500	8.4	6.0	V	40.0	14.4	A
	163.5115000	15.0	2.0	V	43.5	17.0	A
	245.2672500	19.0	< 0.0	-	46.0	< 19.0	A
	327.0230000	21.8	< 0.0	-	46.0	< 21.8	A
	408.7787500	24.3	< 0.0	-	46.0	< 24.3	A
	490.5345000	26.3	< 0.0		46.0	< 26.3	A
	572.2902500	28.0	< 0.0		46.0	< 28.0	A
	654.0460000	29.4	< 0.0		46.0	< 29.4	A
	735.8017500	30.8	< 0.0		46.0	< 30.8	A
	817.5575000	32.1	< 0.0		46.0	< 32.1	A
	899.3132500	33.3	< 0.0		46.0	< 33.3	A
	981.0690000	34.6	< 0.0		54.0	< 34.6	A
	1062.8247500	-5.5	<30.0	-	54.0	< 24.5	B
128.999999	99.0057495	10.2	11.0	H	43.5	21.2	A
	198.0114990	16.8	9.0	H	43.5	25.8	A
	297.0172485	20.9	0.0	H	46.0	20.9	A
	396.0229980	23.9	< 0.0		46.0	< 23.9	A
	495.0287475	26.4	< 0.0		46.0	< 26.4	A
	594.0344970	28.3	< 0.0		46.0	< 28.3	A
	693.0402465	30.1	< 0.0		46.0	< 30.1	A
	792.0459960	31.7	< 0.0		46.0	< 31.7	A
	891.0517455	33.2	< 0.0		46.0	< 33.2	A
	990.0574950	34.7	< 0.0		54.0	< 34.7	A

Tuning range : 129.000000 MHz - 143.999999 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB(1/m)]	Meter Readings [dB(μV/m)] ₁	Pola- rity	Limits [dB(μV/m)]	Results [dB(μV/m)]	Remarks (Note 2)
129.000000	99.0057500	10.2	6.0	V	43.5	16.2	A
	198.0115000	16.8	7.0	H	43.5	23.8	A
	297.0172500	20.9	< 0.0		46.0	< 20.9	A
	396.0230000	23.9	< 0.0		46.0	< 23.9	A
	495.0287500	26.4	< 0.0		46.0	< 26.4	A
	594.0345000	28.3	< 0.0		46.0	< 28.3	A
	693.0402500	30.1	< 0.0		46.0	< 30.1	A
	792.0460000	31.7	< 0.0		46.0	< 31.7	A
	891.0517500	33.2	< 0.0		46.0	< 33.2	A
	990.0575000	34.7	< 0.0		54.0	< 34.7	A
136.500000	102.7557500	10.5	7.0	V	43.5	17.5	A
	205.5115000	17.3	4.0	H	43.5	21.3	A
	308.2672500	21.3	< 0.0	—	46.0	< 21.3	A
	411.0230000	24.3	< 0.0	—	46.0	< 24.3	A
	513.7787500	26.7	< 0.0	—	46.0	< 26.7	A
	616.5345000	28.8	< 0.0	—	46.0	< 28.8	A
	719.2902500	30.6	< 0.0	—	46.0	< 30.6	A
	822.0460000	32.1	< 0.0	—	46.0	< 32.1	A
	924.8017500	33.8	< 0.0	—	46.0	< 33.8	A
	1027.5575000	-5.3	<30.0	—	54.0	< 24.7	B
143.999999	106.5057495	10.8	7.0	V	43.5	17.8	A
	213.0114990	17.6	4.0	H	43.5	21.6	A
	319.5172485	21.6	< 0.0	—	46.0	< 21.6	A
	426.0229980	24.7	< 0.0	—	46.0	< 24.7	A
	532.5287475	27.2	< 0.0	—	46.0	< 27.2	A
	639.0344970	29.1	< 0.0	—	46.0	< 29.1	A
	745.5402465	30.9	< 0.0	—	46.0	< 30.9	A
	852.0459960	32.6	< 0.0		46.0	< 32.6	A
	958.5517455	34.2	< 0.0		46.0	< 34.2	A
	1065.0574950	-5.5	x30.0		54.0	< 24.5	B

Tuning range : 144.000000 MHz - 148.000000 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB(1/m)]	Meter Readings [dB(μV/m)]	Pola- rity	Limits [dB(μV/m)]	Results [dB(μV/m)]	Remarks (Note 2)
144.000000	106.5057500	10.8	7.0	V	43.5	17.8	A
	213.0115000	17.6	4.0	H	43.5	21.6	A
	319.5172500	21.6	3.0	H	46.0	24.6	A
	426.0230000	24.7	< 0.0		46.0	< 24.7	A
	532.5287500	27.2	< 0.0		46.0	< 27.2	A
	639.0345000	29.1	< 0.0		46.0	< 29.1	A
	745.5402500	30.9	< 0.0		46.0	< 30.9	A
	852.0460000	32.6	< 0.0		46.0	< 32.6	A
	958.5517500	34.2	< 0.0		46.0	< 34.2	A
	1065.0575000	-5.5	<30.0		54.0	< 24.5	B
146.000000	107.5057500	10.9	6.0	V	43.5	16.9	A
	215.0115000	17.6	4.0	H	43.5	21.6	A
	322.5172500	21.7	3.0	H	46.0	24.7	A
	430.0230000	24.8	< 0.0	-	46.0	< 24.8	A
	537.5287500	27.3	< 0.0	-	46.0	< 27.3	A
	645.0345000	29.3	< 0.0	-	46.0	< 29.3	A
	752.5402500	31.1	< 0.0	-	46.0	< 31.1	A
	860.0460000	32.8	< 0.0	-	46.0	< 32.8	A
	967.5517500	34.4	< 0.0	-	54.0	< 34.4	A
	1075.0575000	-5.5	<30.0	-	54.0	< 24.5	B
148.000000	108.5057500	11.0	6.0	V	43.5	17.0	A
	217.0115000	17.7	4.0	H	46.0	21.7	A
	325.5172500	21.8	3.0	H	46.0	24.8	A
	434.0230000	24.9	< 0.0		46.0	< 24.9	A
	542.5287500	27.4	< 0.0		46.0	< 27.4	A
	651.0345000	29.4	< 0.0		46.0	< 29.4	A
	759.5402500	31.2	< 0.0		46.0	< 31.2	A
	868.0460000	32.8	< 0.0		46.0	< 32.8	A
	976.5517500	34.6	< 0.0		54.0	< 34.6	A

Tuning range : 148.000001 MHz - 199.999999 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB(1/m)]	Meter Readings [dB(μV/m)]	Pola- rity	Limits [dB(μV/m)]	Results [dB(μV/m)]	Remarks (Note 2)
148.000001	108.5057505	11.0	6.0	V	43.5	17.0	A
	217.0115010	17.7	1.0	H	46.0	18.7	A
	325.5172515	21.8	< 0.0	-	46.0	< 21.8	A
	434.0230020	24.9	< 0.0	-	46.0	< 24.9	A
	542.5287525	27.4	< 0.0	-	46.0	< 27.4	A
	65 1.0345030	29.4	< 0.0	-	46.0	< 29.4	A
	759.5402535	31.2	< 0.0	-	46.0	< 31.2	A
	868.0460040	32.8	< 0.0	-	46.0	< 32.8	A
174.000000	976.5517545	34.6	< 0.0	-	54.0	< 34.6	A
	121.5057500	12.1	0.0	H	43.5	12.1	A
	243.0115000	18.9	4.0	H	46.0	22.9	A
	364.5172500	23.1	< 0.0	-	46.0	< 23.1	A
	486.0230000	26.2	< 0.0	-	46.0	< 26.2	A
	607.5287500	28.6	< 0.0	-	46.0	< 28.6	A
	729.0345000	30.7	< 0.0	-	46.0	< 30.7	A
	850.5402500	32.6	< 0.0	-	46.0	< 32.6	A
199.999999	972.0460000	34.4	< 0.0	-	54.0	< 34.4	A
	134.5057495	13.1	< 0.0	-	43.5	< 13.1	A
	269.0114990	19.9	3.0	H	46.0	22.9	A
	403.5 172485	24.1	< 0.0	-	46.0	< 24.1	A
	538.0229980	27.3	< 0.0	-	46.0	< 27.3	A
	672.5287475	29.7	< 0.0	-	46.0	< 29.7	A
	807.03449 70	31.9	< 0.0	-	46.0	< 31.9	A
	941.5402465	34.0	< 0.0	-	46.0	< 34.0	A
1076.0459960	1076.0459960	-5.5	<30.0	-	54.0	< 24.5	B

[Tuning range : 400.000000 MHz - 470.000000 MHz]

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB(1/m)]	Meter Readings [dB(μV/m)]	Polarity	Limits [dB(μV/m)]	Results [dB(μV/m)]	Remarks (Note 2)
400.000000	234.5057500	18.5	< 0.0	-	46.0	< 18.5	A
	469.0115000	25.8	7.0	H	46.0	32.8	A
	703.5172500	30.2	< 0.0	-	46.0	< 30.2	A
	938.0230000	33.9	< 0.0	-	46.0	< 33.9	A
435.000000	252.0057500	19.2	< 0.0	-	46.0	< 19.2	A
	504.0115000	26.6	4.0	V	46.0	30.6	A
	756.0172500	31.1	< 0.0	-	46.0	< 31.1	A
	1008.0230000	-5.2	<30.0	-	54.0	< 24.8	B
470.000000	269.5057500	19.9	< 0.0	-	46.0	< 19.9	A
	539.0115000	27.3	< 0.0	-	46.0	< 27.3	A
	808.5172500	32.0	< 0.0	-	46.0	< 32.0	A
	1078.0230000	-5.5	<30.0	-	54.0	< 24.5	B

[Other frequency (include 2nd/3rd local frequency)]

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB(1/m)]	Meter Readings [dB(μV/m)]	Polarity	Limits [dB(μV/m)]	Results [dB(μV/m)]	Remarks (Note 2)
470.000000	30.0000	0.2	< 0.0	-	40.0	< 0.2	A
	37.8660	1.5	< 0.0	-	40.0	< 1.5	A
	39.3216	1.8	< 0.0	-	40.0	< 1.8	A
	49.1520	3.7	1.0	V	40.0	4.7	A
	56.7990	5.0	< 0.0	-	40.0	< 5.0	A
	60.0000	5.6	16.0	H	40.0	21.6	A
	75.7320	7.7	< 0.0	-	40.0	< 7.7	A
	90.0000	9.3	< 0.0	-	43.5	< 9.3	A
	108.1344	11.0	6.0	H	43.5	17.0	A
	117.9648	11.8	6.0	H	43.5	17.8	A
	120.0000	12.0	3.0	H	43.5	15.0	A
	132.7104	13.0	14.0	H	43.5	27.0	A
	137.6256	13.3	16.0	H	43.5	29.3	A
	157.2864	14.6	10.0	H	43.5	24.6	A
	201.0656	17.0	7.0	H	43.5	24.0	A
	265.4208	19.8	8.0	H	46.0	27.8	A
	324.4032	21.7	< 0.0	-	46.0	< 16.7	A
	398.1312	24.0	< 0.0	-	46.0	< 19.0	A

Sample of calculated result at 469.0115000 MHz (Tuning frequency 400.000000 MHz),
as the Minimum Margin point:

$$\begin{aligned}\text{Corretion Factor} &= 25.8 \text{ dB(1/m)} \\ +) \text{Meter Reading} &= 7.0 \text{ dB(}\mu\text{V/m)} \\ \text{Result} &= 32.8 \text{ dB(}\mu\text{V/m)}\end{aligned}$$

Minimum Margin : $46.0 - 32.8 = 13.2(\text{dB})$

The point shown on "____" is the Minimum Margin Point.

Note 1:

- 1)The highest frequency generated or used in the EUT: 539.0115000 MHz
- 2)The upper frequency of measurement range : 1078.0230000 MHz
- 3)The spectrum was scanned 30 MHz to 1080 MHz and all emissions not reported were more than 20dB below the applied limits.
- 4)Correction Factor (below 1GHz) : Antenna Factor(dB) + Cable Loss(dB)
Correction Factor (above 1GHz) : Antenna Factor(dB) + Cable Loss(dB) + 20dB Pad Attenuator(dB)
- Pre-Amp1 if ier Gain(dB)

Remarks :

Note 2	Detector Function	IF Bandwidth
A	CISPR QP	120 KHz

Note 2	Detector Function	RES. B.W	V.B.W	Sweep T	Span
B	Peak (SP)	1 MHz	1 MHz	20 msec	0 Hz
C	Peak (SP)	100 kHz	100 kHz	20 msec	0 Hz
*) D	Average (ESV)	1 MHz (3 MHz)	3 MHz	20 msec	0 Hz

(): Setting of spectrum analyzer

*)For the average measurement method, it is made measurement using a test receiver, a step attenuater and a spectrum analyzer.

Tester Signature : A. Hosoda
Type Name : Akio Hosoda

Antenna Terminal Disturbance Voltage Measurement

Scanning Receiver

Test Date: January 6, 1999

Temp.: 21 °C ; Humi.: 34 %

Tuning range : 0.030000 MHz - 29.999999 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB]	Meter Readings [dB(μV)]	Limits at 50Ω [dB(μV)]	Results [dB(μV)] ₁	Remarks (Note 2)
0.030000	69.0415000	10.0	< 10.0	50.0	< 20.0	A
	138.0830000	10.0	< 10.0	50.0	< 20.0	A
	207.1245000	10.0	< 10.0	50.0	< 20.0	A
	276.1660000	10.0	< 10.0	50.0	< 20.0	A
	345.2075000	10.0	< 10.0	50.0	< 20.0	A
	414.2490000	10.0	< 10.0	50.0	< 20.0	A
	483.2905000	10.0	< 10.0	50.0	< 20.0	A
	552.3320000	10.0	< 10.0	50.0	< 20.0	A
	621.3735000	10.0	< 10.0	50.0	< 20.0	A
	690.4150000	10.0	< 10.0	50.0	< 20.0	A
	759.4565000	10.0	< 10.0	50.0	< 20.0	A
	828.4980000	10.0	< 10.0	50.0	< 20.0	A
	897.5395000	10.0	< 10.0	50.0	< 20.0	A
	966.5810000	10.0	< 10.0	50.0	< 20.0	A
	1035.6225000	10.0	< 10.0	50.0	< 20.0	B
15.000000	84.0115000	10.0	< 10.0	50.0	< 20.0	A
	168.0230000	10.0	< 10.0	50.0	< 20.0	A
	252.0345000	10.0	< 10.0	50.0	< 20.0	A
	336.0460000	10.0	< 10.0	50.0	< 20.0	A
	420.0575000	10.0	< 10.0	50.0	< 20.0	A
	504.0690000	10.0	< 10.0	50.0	< 20.0	A
	588.0805000	10.0	< 10.0	50.0	< 20.0	A
	672.0920000	10.0	< 10.0	50.0	< 20.0	A
	756.1035000	10.0	< 10.0	50.0	< 20.0	A
	840.1150000	10.0	< 10.0	50.0	< 20.0	A
	924.1265000	10.0	< 10.0	50.0	< 20.0	A
	1008.1380000	10.0	< 10.0	50.0	< 20.0	B
29.999999	99.0114990	10.0	< 10.0	50.0	< 20.0	A
	198.0229980	10.0	< 10.0	50.0	< 20.0	A
	297.0344970	10.0	< 10.0	50.0	< 20.0	A
	396.0459960	10.0	< 10.0	50.0	< 20.0	A
	495.0574950	10.0	< 10.0	50.0	< 20.0	A
	594.0689940	10.0	< 10.0	50.0	< 20.0	A
	693.0804930	10.0	< 10.0	50.0	< 20.0	A
	792.0919920	10.0	< 10.0	50.0	< 20.0	A
	891.1034910	10.0	< 10.0	50.0	< 20.0	A
	990.1149900	10.0	< 10.0	50.0	< 20.0	A

Tuning range : 30.000000 MHz - 59.999999 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correct ion Factor [dB]	Meter Readings [dB(μV)]	Limits at 50Ω [dB(μV)]	Results [dB(μV)]	Remarks (Note 2)
30.000000	99.0115000	10.0	< 10.0	50.0	< 20.0	A
	198.0230000	10.0	< 10.0	50.0	< 20.0	A
	297.0345000	10.0	< 10.0	50.0	< 20.0	A
	396.0460000	10.0	< 10.0	50.0	< 20.0	A
	495.0575000	10.0	< 10.0	50.0	< 20.0	A
	594.0690000	10.0	< 10.0	50.0	< 20.0	A
	693.0805000	10.0	< 10.0	50.0	< 20.0	A
	792.0920000	10.0	< 10.0	50.0	< 20.0	A
	891.1035000	10.0	< 10.0	50.0	< 20.0	A
	990.1150000	10.0	< 10.0	50.0	< 20.0	A
45.000000	114.0115000	10.0	< 10.0	50.0	< 20.0	A
	228.0230000	10.0	< 10.0	50.0	< 20.0	A
	342.0345000	10.0	< 10.0	50.0	< 20.0	A
	456.0460000	10.0	< 10.0	50.0	< 20.0	A
	570.0575000	10.0	< 10.0	50.0	< 20.0	A
	684.0690000	10.0	< 10.0	50.0	< 20.0	A
	798.0805000	10.0	< 10.0	50.0	< 20.0	A
	912.0920000	10.0	< 10.0	50.0	< 20.0	A
	1026.1035000	10.0	< 10.0	50.0	< 20.0	B
59.999999	129.0114990	10.0	< 10.0	50.0	< 20.0	A
	258.0229980	10.0	< 10.0	50.0	< 20.0	A
	387.0344970	10.0	< 10.0	50.0	< 20.0	A
	516.0459960	10.0	< 10.0	50.0	< 20.0	A
	645.0574950	10.0	< 10.0	50.0	< 20.0	A
	774.0689940	10.0	< 10.0	50.0	< 20.0	A
	903.0804930	10.0	< 10.0	50.0	< 20.0	A
	1032.0919920	10.0	< 10.0	50.0	< 20.0	B

Tuning range : 60.000000 MHz - 128.999999 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB]	Meter Readings [dB(μV)]	Limits at 50Ω [dB(μV)]	Results [dB(μV)]	Remarks (Note 2)
60.000000	64.5057500	10.0	< 10.0	50.0	< 20.0	A
	129.0115000	10.0	< 10.0	50.0	< 20.0	A
	193.5172500	10.0	< 10.0	50.0	< 20.0	A
	258.0230000	10.0	< 10.0	50.0	< 20.0	A
	322.5287500	10.0	< 10.0	50.0	< 20.0	A
	387.0345000	10.0	< 10.0	50.0	< 20.0	A
	45 1.5402500	10.0	< 10.0	50.0	< 20.0	A
	516.0460000	10.0	< 10.0	50.0	< 20.0	A
	580.5517500	10.0	< 10.0	50.0	< 20.0	A
	645.0575000	10.0	< 10.0	50.0	< 20.0	A
	709.5632500	10.0	< 10.0	50.0	< 20.0	A
	774.0690000	10.0	< 10.0	50.0	< 20.0	A
	838.5747500	10.0	< 10.0	50.0	< 20.0	A
	903.0805000	10.0	< 10.0	50.0	< 20.0	A
	967.5862500	10.0	< 10.0	50.0	< 20.0	A
	1032.0920000	10.0	< 10.0	50.0	< 20.0	B
94.500000	81.7557500	10.0	< 10.0	50.0	< 20.0	A
	163.5115000	10.0	< 10.0	50.0	< 20.0	A
	245.2672500	10.0	< 10.0	50.0	< 20.0	A
	327.0230000	10.0	< 10.0	50.0	< 20.0	A
	408.7787500	10.0	< 10.0	50.0	< 20.0	A
	490.5345000	10.0	< 10.0	50.0	< 20.0	A
	572.2902500	10.0	< 10.0	50.0	< 20.0	A
	654.0460000	10.0	< 10.0	50.0	< 20.0	A
	735.8017500	10.0	< 10.0	50.0	< 20.0	A
	817.5575000	10.0	< 10.0	50.0	< 20.0	A
	899.3132500	10.0	< 10.0	50.0	< 20.0	A
	981.0690000	10.0	< 10.0	50.0	< 20.0	A
	1062.8247500	10.0	< 10.0	50.0	< 20.0	B
128.999999	99.0057495	10.0	< 10.0	50.0	< 20.0	A
	198.0114990	10.0	13.0	50.0	23.0	A
	297.0172485	10.0	< 10.0	50.0	< 20.0	A
	396.0229980	10.0	< 10.0	50.0	< 20.0	A
	495.0287475	10.0	< 10.0	50.0	< 20.0	A
	594.0344970	10.0	< 10.0	50.0	< 20.0	A
	693.0402465	10.0	< 10.0	50.0	< 20.0	A
	792.0459960	10.0	< 10.0	50.0	< 20.0	A
	891.0517455	10.0	< 10.0	50.0	< 20.0	A
	990.0574950	10.0	< 10.0	50.0	< 20.0	A

[Tuning range : 129.000000 MHz ~ 143.999999 MHz]

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB]	Meter Readings [dB(μV)]	Limits at 50Ω [dB(μV)]	Results [dB(μV)] ₁	Remarks (Note 2)
129.000000	99.0057500	10.0	< 10.0	50.0	< 20.0	A
	198.0115000	10.0	< 10.0	50.0	< 20.0	A
	297.0172500	10.0	< 10.0	50.0	< 20.0	A
	396.0230000	10.0	< 10.0	50.0	< 20.0	A
	495.0287500	10.0	< 10.0	50.0	< 20.0	A
	594.0345000	10.0	< 10.0	50.0	< 20.0	A
	693.0402500	10.0	< 10.0	50.0	< 20.0	A
	792.0460000	10.0	< 10.0	50.0	< 20.0	A
	891.0517500	10.0	< 10.0	50.0	< 20.0	A
	990.0575000	10.0	< 10.0	50.0	< 20.0	A
136.500000	102.7557500	10.0	< 10.0	50.0	< 20.0	A
	205.5115000	10.0	< 10.0	50.0	< 20.0	A
	308.2672500	10.0	< 10.0	50.0	< 20.0	A
	411.0230000	10.0	< 10.0	50.0	< 20.0	A
	513.7787500	10.0	< 10.0	50.0	< 20.0	A
	616.5345000	10.0	< 10.0	50.0	< 20.0	A
	719.2902500	10.0	< 10.0	50.0	< 20.0	A
	822.0460000	10.0	< 10.0	50.0	< 20.0	A
	924.8017500	10.0	< 10.0	50.0	< 20.0	A
	1027.5575000	10.0	< 10.0	50.0	< 20.0	B
143.999999	106.5057495	10.0	< 10.0	50.0	< 20.0	A
	213.0114990	10.0	< 10.0	50.0	< 20.0	A
	319.5172485	10.0	< 10.0	50.0	< 20.0	A
	426.0229980	10.0	< 10.0	50.0	< 20.0	A
	532.5287475	10.0	< 10.0	50.0	< 20.0	A
	639.0344970	10.0	< 10.0	50.0	< 20.0	A
	745.5402465	10.0	< 10.0	50.0	< 20.0	A
	852.0459960	10.0	< 10.0	50.0	< 20.0	A
	958.5517455	10.0	< 10.0	50.0	< 20.0	A
	1065.0574950	10.0	< 10.0	50.0	< 20.0	B

Tuning range : 144.000000 MHz - 148.000000 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB]	Meter Readings [dB(μV)]	Limits at 50Ω [dB(μV)]	Results [dB(μV)]	Remarks (Note 2)
144.000000	106.5057500	10.0	< 10.0	50.0	< 20.0	A
	213.0115000	10.0	< 10.0	50.0	< 20.0	A
	319.5172500	10.0	< 10.0	50.0	< 20.0	A
	426.0230000	10.0	< 10.0	50.0	< 20.0	A
	532.5287500	10.0	< 10.0	50.0	< 20.0	A
	639.0345000	10.0	< 10.0	50.0	< 20.0	A
	745.5402500	10.0	< 10.0	50.0	< 20.0	A
	852.0460000	10.0	< 10.0	50.0	< 20.0	A
	958.5517500	10.0	< 10.0	50.0	< 20.0	A
	1065.0575000	10.0	< 10.0	50.0	< 20.0	B
146.000000	107.5057500	10.0	< 10.0	50.0	< 20.0	A
	215.0115000	10.0	< 10.0	50.0	< 20.0	A
	322.5172500	10.0	< 10.0	50.0	< 20.0	A
	430.0230000	10.0	< 10.0	50.0	< 20.0	A
	537.5287500	10.0	< 10.0	50.0	< 20.0	A
	645.0345000	10.0	< 10.0	50.0	< 20.0	A
	752.5402500	10.0	< 10.0	50.0	< 20.0	A
	860.0460000	10.0	< 10.0	50.0	< 20.0	A
	967.5517500	10.0	< 10.0	50.0	< 20.0	A
	1075.0575000	10.0	< 10.0	50.0	< 20.0	B
148.000000	108.5057500	10.0	< 10.0	50.0	< 20.0	A
	217.0115000	10.0	< 10.0	50.0	< 20.0	A
	325.5 172500	10.0	< 10.0	50.0	< 20.0	A
	434.0230000	10.0	< 10.0	50.0	< 20.0	A
	542.5287500	10.0	< 10.0	50.0	< 20.0	A
	65 1.0345000	10.0	< 10.0	50.0	< 20.0	A
	759.5402500	10.0	< 10.0	50.0	< 20.0	A
	868.0460000	10.0	< 10.0	50.0	< 20.0	A
	976.5517500	10.0	< 10.0	50.0	< 20.0	A

Tuning range : 148.000001 MHz - 199.999999 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB]	Meter Readings [dB(μV)]	Limits at 50Ω [dB(μV)]	Results [dB(μV)]	Remarks (Note 2)
148.000001	108.5057505	10.0	< 10.0	50.0	< 20.0	A
	217.0115010	10.0	< 10.0	50.0	< 20.0	A
	325.5172515	10.0	< 10.0	50.0	< 20.0	A
	434.0230020	10.0	< 10.0	50.0	< 20.0	A
	542.5287525	10.0	< 10.0	50.0	< 20.0	A
	65 1.0345030	10.0	< 10.0	50.0	< 20.0	A
	759.5402535	10.0	< 10.0	50.0	< 20.0	A
	868.0460040	10.0	< 10.0	50.0	< 20.0	A
	976.5517545	10.0	< 10.0	50.0	< 20.0	A
174.000000	121.5057500	10.0	< 10.0	50.0	< 20.0	A
	243.0115000	10.0	12.0	50.0	22.0	A
	364.5172500	10.0	< 10.0	50.0	< 20.0	A
	486.0230000	10.0	< 10.0	50.0	< 20.0	A
	607.5287500	10.0	< 10.0	50.0	< 20.0	A
	729.0345000	10.0	< 10.0	50.0	< 20.0	A
	850.5402500	10.0	< 10.0	50.0	< 20.0	A
	972.0460000	10.0	< 10.0	50.0	< 20.0	A
199.999999	134.5057495	10.0	< 10.0	50.0	< 20.0	A
	269.0114990	10.0	13.0	50.0	23.0	A
	403.5 172485	10.0	< 10.0	50.0	< 20.0	A
	538.0229980	10.0	< 10.0	50.0	< 20.0	A
	672.5287475	10.0	< 10.0	50.0	< 20.0	A
	807.0344970	10.0	< 10.0	50.0	< 20.0	A
	941.5402465	10.0	< 10.0	50.0	< 20.0	A
	1076.0459960	10.0	< 10.0	50.0	< 20.0	B

Tuning range : 400.000000 MHz - 470.000000 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB]	Meter Readings [dB(μV)]	Limits at 50Ω [dB(μV)]	Results [dB(μV)]	Remarks (Note 2)
400.000000	234.5057500	10.0	< 10.0	50.0	< 20.0	A
	469.0115000	10.0	16.0	50.0	26.0	A
	703.5172500	10.0	< 10.0	50.0	< 20.0	A
	938.0230000	10.0	< 10.0	50.0	< 20.0	A
435.000000	252.0057500	10.0	< 10.0	50.0	< 20.0	A
	504.0115000	10.0	23.0	50.0	33.0	A
	756.0172500	10.0	< 10.0	50.0	< 20.0	A
	1008.0230000	10.0	< 10.0	50.0	< 20.0	B
470.000000	269.5057500	10.0	< 10.0	50.0	< 20.0	A
	539.0115000	10.0	19.0	50.0	29.0	A
	808.5172500	10.0	< 10.0	50.0	< 20.0	A
	1078.0230000	10.0	< 10.0	50.0	< 20.0	B

Other frequency (include 2nd/3rd local frequency)

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB]	Meter Readings [dB(μV)]	Limits at 50Ω [dB(μV)]	Results [dB(μV)]	Remarks (Note 2)
470.000000	30.0000	10.0	< 10.0	50.0	< 20.0	A
	37.8660	10.0	< 10.0	50.0	< 20.0	A
	39.3216	10.0	< 10.0	50.0	< 20.0	A
	56.7990	10.0	< 10.0	50.0	< 20.0	A
	60.0000	10.0	< 10.0	50.0	< 20.0	A
	90.0000	10.0	< 10.0	50.0	< 20.0	A
	120.0000	10.0	< 10.0	50.0	< 20.0	A
	147.4560	10.0	< 10.0	50.0	< 20.0	A
	240.0000	10.0	< 10.0	50.0	< 20.0	A
	398.1312	10.0	< 10.0	50.0	< 20.0	A
	427.6224	10.0	< 10.0	50.0	< 20.0	A
	457.1136	10.0	< 10.0	50.0	< 20.0	A
	486.6048	10.0	< 10.0	50.0	< 20.0	A
	50 1.3504	10.0	< 10.0	50.0	< 20.0	A

Sample of calculated result at 504.0115000 MHz (Tuning frequency 435.000000 MHz),

as the Minimum Margin point:

Correction Factor = 10.0 dB

+)Meter Reading = 23.0 dB(μV)

Result = 33.0 dB(μV)

Minimum Margin : 50.0 - 33.0 = 17.0(dB)

The point shown on "____" is the Minimum Margin Point.

Conversion of applied limits (refer to § 15.111(a))

$$50.0 \text{ [dB(}\mu\text{V)}] = 20\log\{\sqrt{2}[\text{nW}]\times 10^{-9} \times 50[\Omega]\times 10^6\}$$

Note 1:

1)The highest frequency generated or used in the EUT: 539.0115000 MHz

2)The upper frequency of measurement range : 1078.0230000 MHz

3)The spectrum was scanned 30 MHz to 1080 MHz and all emissions not reported were more than 20dB below the applied limits.

4)Correction Factor = 10dB Pad Attenuator (dB)

Remarks :

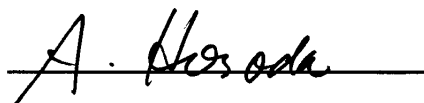
Note 2	Detector Function	IF Bandwidth
A	CISPR QP	120 KHz

Note 2	Detector Function	RES. B.W	V.B.W	Sweep T	Span
B	Peak (SP)	1 MHz	1 MHz	20 msec	0 Hz
C	Peak (SP)	100 kHz	100 kHz	20 msec	0 Hz
*) D	Average (ESV)	1 MHz (3 MHz)	3 MHz	20 msec	0 Hz

():Setting of spectrum analyzer

*)For the average measurement method, it is made measurement using a test receiver, a step attenuator and a spectrum analyzer.

Tester Signature :



Type Name

: Akio Hosoda