

Issue Date : February 8, 1999

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EMC EMISSION - TEST REPORTJQA APPLICATION No. : KL8080661Model/Type No. : IC-T81AName of Product : Multi-Band FM TransceiverFCC ID : AFJ IC-T81AApplicant : 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: 200191-0

DIRECTORY

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TEST REGULATION

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

- ☐ - Class A Digital Device
- ☐ - 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: 200191-0
- 3) Average Measurement Method
FCC filing No. : 950523A 1300F2

Description of the Equipment Under Test (EUT):

- 1) Name : Multi-Band FM Transceiver
- 2) Model/Type No. : IC-T81A
- 3) Product Type : Pre-Production (S/N 00305)
- 4) Category : Scanning Receiver
- 5) EUT Authorization : ☐ - Verification ☒ - Certification ☐ - D.o.C.
- 6) Highest frequency used/generated : 1230.550 MHz
- 7) Power Rating : DC 13.5 V (Ni-MH Battery Pack BP-200, AC Adapter BC-110A)

Definitions for symbols used in this test report:

- ☒ - Black box indicates that the listed condition, standard or equipment is applicable for this Report.
- ☐ - 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

○ - Shielded room

○ - On metal plane of open site

Used test instruments and sites:

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

Environmental conditions:

Temperature: 22 °C Humidity: 29 %

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

● - 1st site (3 meters)

○ - 2nd site (3 meters)

KAMEOKA EMC Branch

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

○ - 3 meters

○ - 10 meters

Validation of Site Attenuation:

1) Last Confirmed Date: November 27, 1998

2) Interval : 1 Year

Used test instruments:

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

Environmental conditions:

Temperature: 16 °C Humidity: 32 %

The measurement of the Radiated Emission (Electric Field)

was performed in horizontal and vertical polarization, in the frequency range of 1000 MHz - 2500 MHz, in the following test site.

Test location:

KITA-KANSAI Testing Center

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

● - 1st site (3 meters)

○ - 2nd site (3 meters)

KAMEOKA EMC Branch

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

○ - 3 meters

○ - 10 meters

Used test instruments:

Model No.	Device I.D No.	Last Cal. Date	Cal. Interval
● - 8566B	A - 13	October, 1998	1 Year
○ - 8593A	A - 15		
○ - 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
● - WJ-6882-824	A - 21	May, 1998	1 Year
○ - DBL-0618N515	A - 33		
● - 91888-2	C - 41 - 1	May, 1998	1 Year
● - 91889-2	C - 41 - 2	May, 1998	1 Year
○ - 94613-1	C - 41 - 3		
○ - 91891-2	C - 41 - 4		
○ - 94614-1	C - 41 - 5		
○ - 3160-09	C - 48		
○ - TRA-603D	D - 24		
○ - 8494H/8595H	D - 76		
○ - MZ5010C	D - 81		
● - Cable	C - 40 - 11	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: 16 °C Humidity: 32 %

The measurement of the Antenna-Conducted Power

was performed in the frequency range of 30 MHz - 2500 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
- - Anechoic Chamber

KAMEOKA EMC Branch

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

- - Shielded Room

Used test instruments:

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

Environmental conditions:

Temperature: 21 °C Humidity: 30 %

CONFIGURATION OF EUT

The Equipment Under Test (EUT) consists of:

Description	Applicant (Manufacturer)	Model No. (Serial No.)	FCC ID
Multi-Band FM Transceiver	ICOM Incorporated (ICOM Incorporated)	IC-T81A (00305)	AFJ IC-T81A
Antenna	ICOM Incorporated (ICOM Incorporated)	FA-S6270A (--)	N/A
Ni-MH Battery Pack	ICOM Incorporated (ICOM Incorporated)	BP-200 (--)	N/A
AC Adapter	ICOM Incorporated (ICOM Incorporated)	BC-110A (--)	N/A

The measurement was carried out with the following equipment connected:

Description	Grantee/Distributor	Model No. (Serial No.)	FCC ID
Speaker Microphone	ICOM Incorporated	HM-75A (--)	N/A

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

No.	Cable	Shielded	Ferrite Core	Length
1	EUT "SP/MIC" / Speaker Microphone	NO	NO	0.4m
2	EUT "ANT" / 50Ω termination	--	--	--
3	DC Power Cord (EUT / AC Adapter) with 2-pin plug	NO	NO	1.9m

Detailed receiver portion:

1) Relation between Receiving Frequency and Local Frequency

No.	Receiving Frequency [MHz]	1st Local Frequency [MHz]	VCO Frequency [MHz]	2nd Local Frequency [MHz]
1	50.000 - 53.995	119.450 - 123.445	119.450 - 123.445	69.000
2	76.000 - 107.995	89.350 - 121.345	89.350 - 121.345	13.800
3	118.000 - 173.995	187.450 - 243.445	187.450 - 243.445	69.000
4	400.000 - 469.995	330.550 - 400.545	330.550 - 400.545	69.000
5	1240.000 - 1300.000	1170.550 - 1230.550	585.275 - 615.275	69.000

2) Respective Intermediate Frequency

No.	Receiving Frequency [MHz]	1st IF [MHz]	2nd IF [MHz]
1	50.000 - 53.995	69.45 (Upper)	0.45 (Lower)
2	76.000 - 107.995	13.35 (Upper)	0.45 (Upper)
3	118.000 - 173.995	69.45 (Upper)	0.45 (Lower)
4	400.000 - 469.995	69.45 (Lower)	0.45 (Lower)
5	1240.000 - 1300.000	69.45 (Lower)	0.45 (Lower)

- 3) The highest Local Frequency : 1230.550 MHz
- 4) Type of Antenna Terminal : SMA-Type connector / 50Ω (Unbalanced)
- 5) Receiving mode : FM (Nos.1, 3-5) / WFM (No.2)

Test system:

The EUT has an ANT terminal, a SP/MIC port and a DC IN port.

Special accessories:

None

The used (generated) frequencies in the EUT:

Intermediate Frequency 1st IF : 69.450 MHz (FM,AM) / 13.350 MHz (WFM)
2nd IF : 0.450 MHz

CPU : 5.039 MHz

Local Frequency : Refer to the top of this page.

JQA Application No. : KL8080661
Model No. : IC-T81A
FCC ID : AFJ IC-T81A

Regulation : CFR 47 FCC Rules Part 15
Issue Date : February 8, 1999

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EUT Modification

- - No modifications were conducted by JQA to achieve compliance to applied levels.
- - 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 : N/A Date : N/A

Typed Name : N/A Position : N/A

Responsible Party

Responsible Party of Test Item(Product)

Responsible party :

Contact Person :

Signatory

TEST RESULTS

Conducted Emission 450 kHz - 30 MHz

The requirements are	● - KEPT	○ - NOT KEPT
Min. limit margin	More than <u>+37.1</u> dB	at <u>30.00</u> MHz
Max. limit exceeding	<u> </u> dB	at <u> </u> MHz
Uncertainty of measurement results	<u>+ 2.1</u> dB(2 σ)	<u>- 2.1</u> dB(2 σ)

Remarks: _____

Radiated Emission (Electric Field) 30 MHz - 2500 MHz

The requirements are	● - KEPT	○ - NOT KEPT
Min. limit margin	<u>+10.0</u> dB	at <u>215.450</u> MHz
Max. limit exceeding	<u> </u> dB	at <u> </u> MHz
Uncertainty of measurement results (below 1000 MHz)	<u>+ 4.1</u> dB(2 σ)	<u>- 4.2</u> dB(2 σ)
Uncertainty of measurement results (above 1000 MHz)	<u>+ 3.1</u> dB(2 σ)	<u>- 3.2</u> dB(2 σ)

Remarks: _____

Antenna-Conducted Power 30 MHz - 2500 MHz

The requirements are	● - KEPT	○ - NOT KEPT
Min. limit margin	<u>+17.0</u> dB	at <u>1170.550</u> MHz and <u>2341.100</u> MHz
Max. limit exceeding	<u> </u> dB	at <u> </u> MHz
Uncertainty of measurement results	<u>+ 2.3</u> dB(2 σ)	<u>- 2.3</u> dB(2 σ)

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 13.

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;

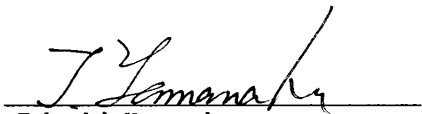
- - fulfill the test requirements of the regulation mentioned on page 3.
- - fulfill the test requirements of the regulation mentioned on page 3, but with certain qualifications.
- - doesn't fulfill the test regulation mentioned on page 3.

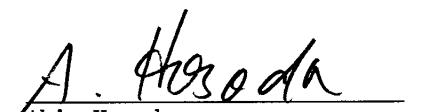
Begin of testing : January 21, 1999

End of testing : January 29, 1999

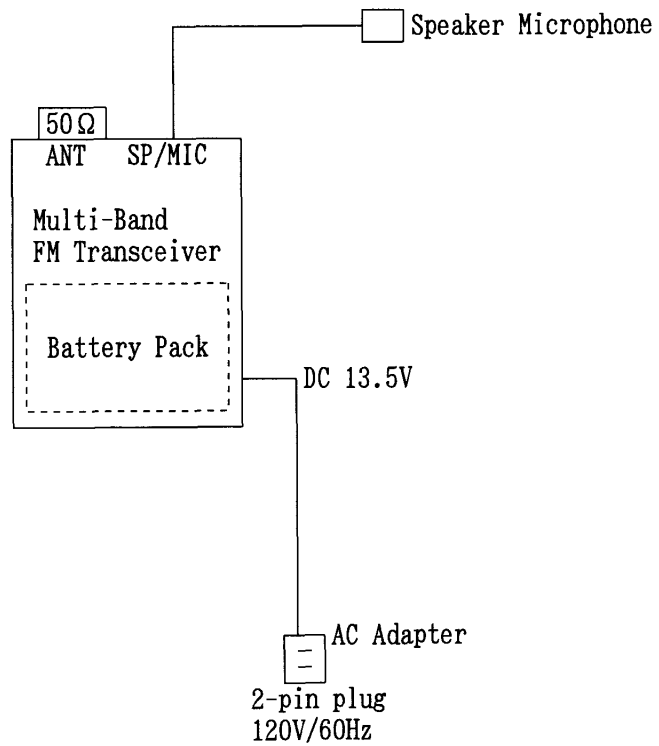
- JAPAN QUALITY ASSURANCE ORGANIZATION -

Approved Signatory :


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


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

Test System-Arrangement (Drawings)



Preliminary Test and Test-setup(Drawings)

Conducted Emission 450 kHz - 30 MHz:

The preliminary test was performed according to the description of ANSI C63.4-1992 Sec.7.2.3 (Preliminary AC Powerline Conducted Emissions Tests) and Sec.6.2.1 (Tabletop Equipment Tests). The preliminary test was carried out to investigate the frequency of the emission that has the highest amplitude relative to the limits within normal operating modes, cable positions, and a typical system configuration. In order to find out to the maximum emission, the preliminary test and a final test were performed in accordance with the following steps.

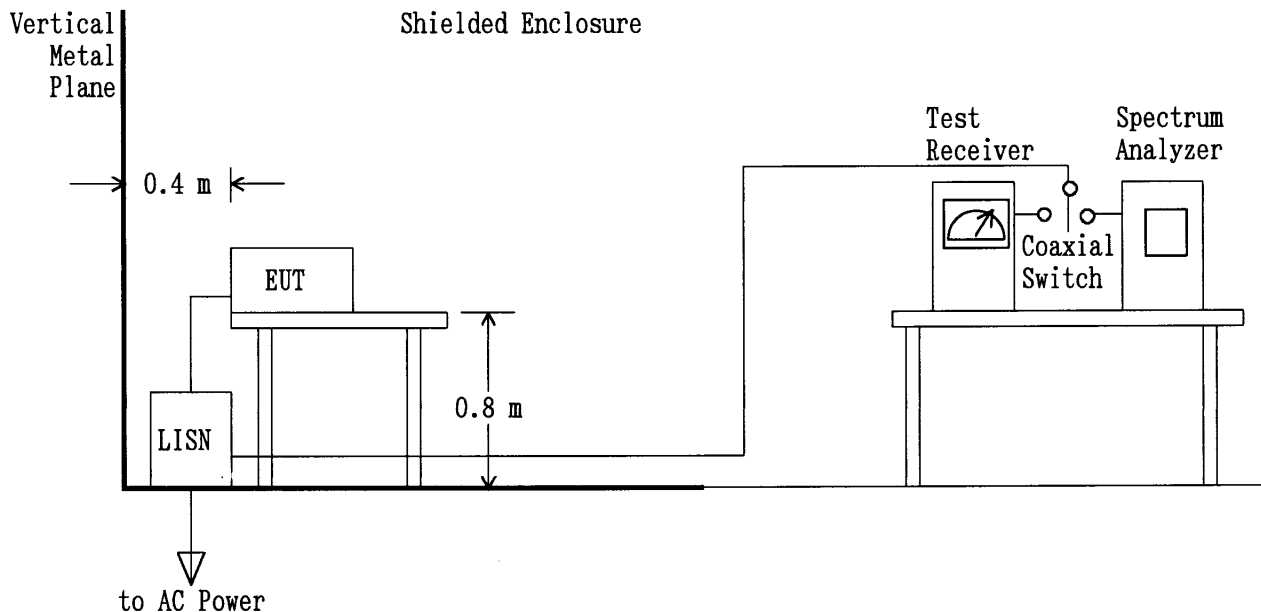
Step 1: One operation mode of the test system was setting.

Step 2: Using both of a spectrum analyzer and a test receiver, the emission's circumstance from the system was monitored in one of ten divided frequency bands of the specified frequency range (450 kHz - 30 MHz). The maximum emission in the band was found by changing the typical cable positions or cable manipulation under a typical system configuration and by selecting of current-carrying conductor. The level and the frequency at the one point which are regarded as relative high emission in the band was measured and recorded. This step was repeated until the ending frequency band.

Step 3: Return to step 1, if the other operation mode was possible to be setting.

Step 4: Based on the collected results, the operation mode produced the maximum emission was selected. The final test on the selected operation mode was performed. But if it was difficult to select the operation mode, the final tests on all operation modes were performed.

Step 5: Based on the same data, as result if the final measurement, at the worst point that has the highest amplitude relative to the limit the repeatability of the worst was reconfirmed. The photographs of the test system setup on the worst point were taken and recorded.



Radiated Emission (Electric Field) 30 MHz - 1000 MHz:

The preliminary test was performed according to the description of ANSI C63.4-1992 Sec.8.3.1.1 (Preliminary Radiated Emissions Tests) and Sec.6.2.1 (Tabletop Equipment Tests).

The preliminary test was carried out to investigate the frequency of the emission that has the highest amplitude relative to the limits within normal operating modes, cable positions, and a typical system configuration. In order to find out to the maximum emission, the preliminary test and a final test were performed in accordance with the following steps.

Step 1: One operation mode of the test system was setting.

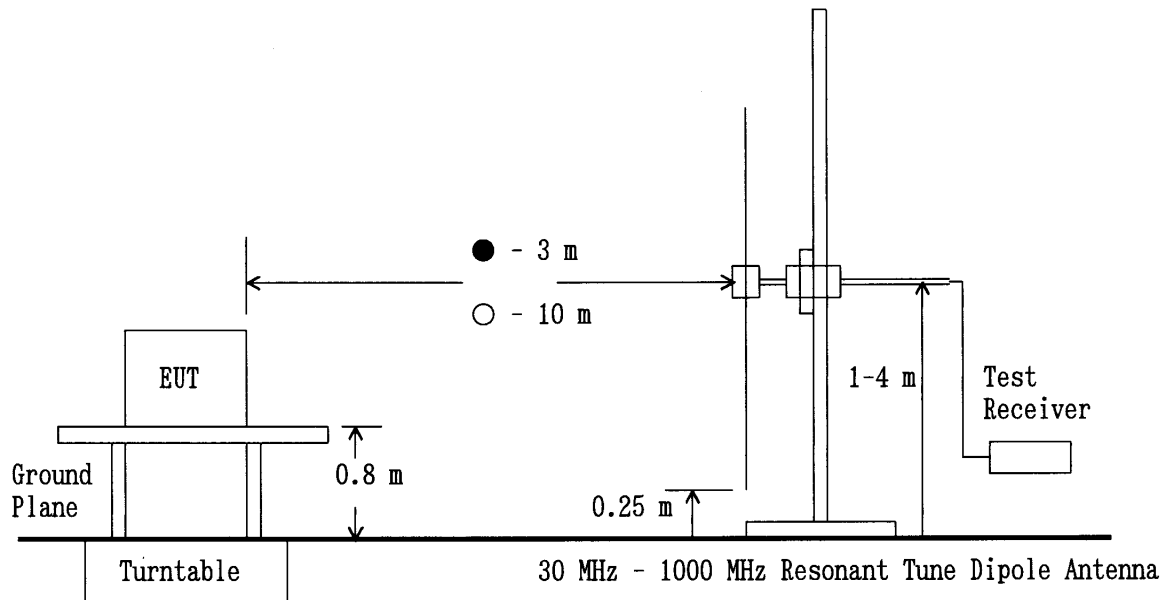
Step 2: Using a test receiver and a test antenna probe, the significant frequency of the emission's circumstance from the test system were investigated. These data were recorded every one of 22 divided bands in the specified frequency band (30 MHz - 1000 MHz).

Step 3: Using a test receiver and a resonant tuned dipole antenna, the emission's circumstance from the test system was measured in according with ANSI C63.4-1992 Sec.8.3.1.2 (Final Radiated Emissions Tests) at each frequency which was found the higher emission referred to level vs. frequency on the list and which was measured by the resonant tuned dipole antenna. The maximum emission was found by changing the cable positions or cable manipulation under a typical system configuration.

Step 4: Return to step 1, if the other operation mode was possible to be setting.

Step 5: The worst result was reported arranging data of which was obtained and performed by one or plural operation modes as the final test.

At the worst point that has the highest amplitude relative to the limit the repeatability of the level was reconfirmed. The photographs of the tests system setup on the the worst point were taken and recorded.



Radiated Emission (Electric Field) 1000 MHz - 2500 MHz:

The preliminary test was performed according to the description of ANSI C63.4-1992 Sec.8.3.1.1 (Preliminary Radiated Emissions Tests) and Sec.6.2.1 (Tabletop Equipment Tests).

The preliminary test was carried out to investigate the frequency of the emission that has the highest amplitude relative to the limits within normal operating modes, cable positions, and a typical system configuration. In order to find out to the maximum emission, the preliminary test and a final test were performed in accordance with the following steps.

Step 1: One operation mode of the test system was setting.

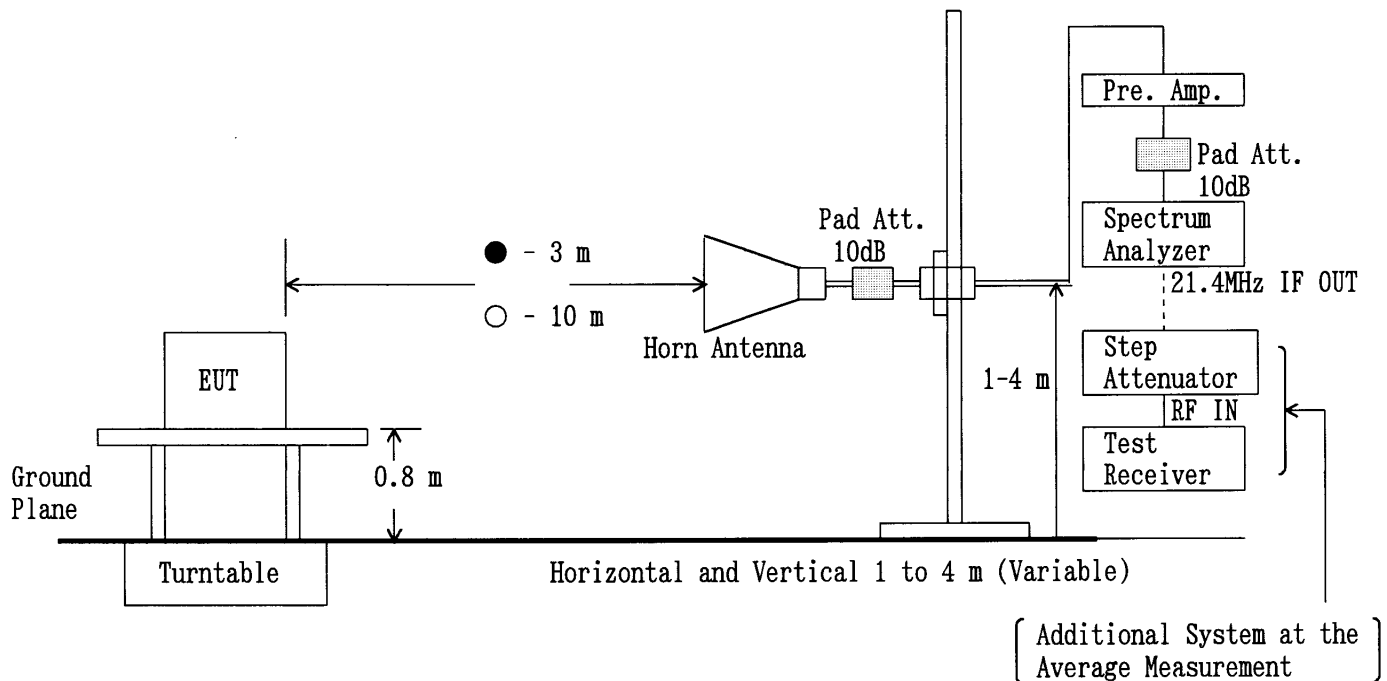
Step 2: In order to investigate the frequencies of maximum emissions, the horn antenna position was approached to the EUT and the significant frequency of the emission's circumstance from the test system were investigated. These data were recorded in the specified frequency band (1000 MHz - 2500 MHz).

Step 3: The emission's circumstance from the test system was measured in accordance with ANSI C63.4-1992, Sec.8.3.1.2 (Final Radiated Emissions Tests) at each frequency which was found higher emission referred to level vs. frequency on the list and which was measured in the specified distance using the horn antenna.

Step 4: Return to step 1, if the other operation mode was possible to be setting.

Step 5: The worst result was reported arranging data of which was obtained and performed by one or plural operation modes as the final test.

At the worst point that has the highest amplitude relative to the limit the repeatability of the level was reconfirmed. The photographs of the tests system setup on the worst point were taken and recorded.



Spectrum Analyzer Setting:

Detector	Peak	*)Average
RES BW	1 MHz	3 MHz
VIDEO BW	1 MHz	3 MHz
SPAN	0 Hz	0 Hz

Test Receiver Setting:

SCALE	LINEAR
I.F.B.W.	1 MHz
Detector	Average

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

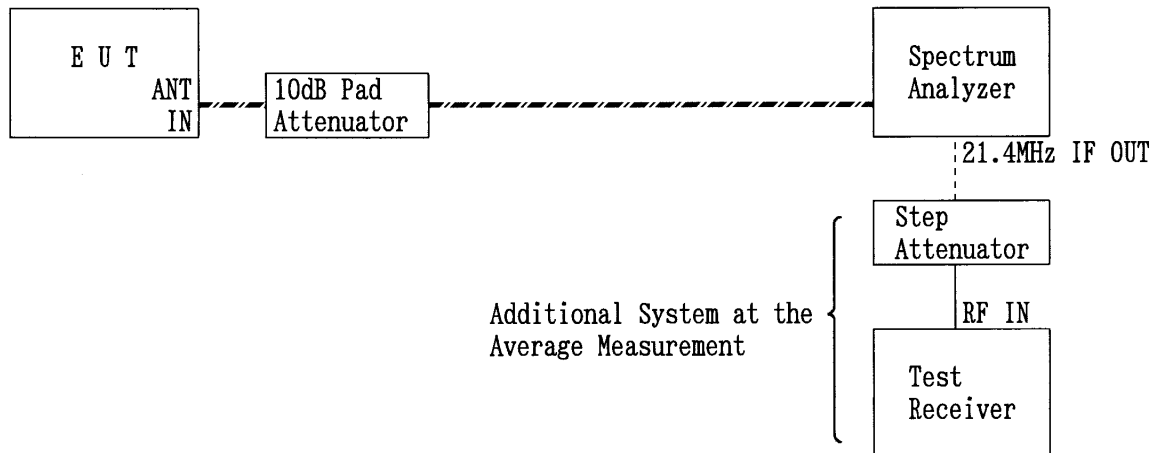
Antenna-Conducted Power 30 MHz - 2500 MHz:

The test was performed according to the description of ANSI C63.4-1992 Sec.12.1.5 (Antenna-Conducted Power Measurements).

1. Frequency range 30 MHz - 1000 MHz



2. Frequency range 1000 MHz - 2500 MHz



Spectrum Analyzer Setting:

Detector	Peak	*)Average
RES BW	1 MHz	3 MHz
VIDEO BW	1 MHz	3 MHz
SPAN	0 Hz	0 Hz

Test Receiver Setting:

SCALE	LINEAR
I.F.B.W.	1 MHz
Detector	Average

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

Mains terminal Disturbance Measurement
Scanning Receiver

Tuning Frequency : 144.000 MHz (FM)

Test Date: January 28, 1999
Temp.: 22 °C ; Humi.: 29 %

Frequency [MHz]	Correction Factor [dB]	Meter Readings [dB(μV)]				Limits [dB(μV)]	Results [dB(μV)]		Margin [dB]	Remarks (Note 2)
		VA-QP	VA-AV	VB-QP	VB-AV		QP	AV		
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
6.00	0.4	< 10.0	-	< 10.0	-	48.0	< 10.4	-	>+37.6	A
6.25	0.4	< 10.0	-	< 10.0	-	48.0	< 10.4	-	>+37.6	A
10.00	0.5	< 10.0	-	< 10.0	-	48.0	< 10.5	-	>+37.5	A
13.30	0.6	< 10.0	-	< 10.0	-	48.0	< 10.6	-	>+37.4	A
15.04	0.7	< 10.0	-	< 10.0	-	48.0	< 10.7	-	>+37.3	A
22.00	0.8	< 10.0	-	< 10.0	-	48.0	< 10.8	-	>+37.2	A
27.53	0.9	< 10.0	-	< 10.0	-	48.0	< 10.9	-	>+37.1	A
30.00	0.9	< 10.0	-	< 10.0	-	48.0	< 10.9	-	>+37.1	A

Sample of calculated result at 30.00 MHz, as the Minimum Margin point:

Correction Factor = 0.9 dB

+) Meter Reading = <10.0 dB(μV)

Result = <10.9 dB(μV)

Minimum Margin : 48.0 - <10.9 = >37.1(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
A	CISPR QP	9 kHz
B	Average	10 kHz

Tester Signature :

A. Hosoda

Type Name

: Akio Hosoda

Electromagnetic Radiation Disturbance Measurement

Scanning Receiver

Test Date: January 21, 1999
 Temp.: 16 °C ; Humi.: 32 %

Tuning range : 50.000 MHz - 53.995 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB(1/m)]	Meter Readings [dB(μV)]	Pola- rity	Limits [dB(μV/m)]	Results [dB(μV/m)]	Margin [dB]	Remarks (Note 2)
50.000	119.450	12.5	< 0.0	-	43.5	< 12.5	>+31.0	A
	238.900	19.6	< 0.0	-	46.0	< 19.6	>+26.4	A
	358.350	24.0	< -5.0	-	46.0	< 19.0	>+27.0	A
	477.800	27.4	< -5.0	-	46.0	< 22.4	>+23.6	A
	597.250	30.2	< -5.0	-	46.0	< 25.2	>+20.8	A
	716.700	32.5	<-10.0	-	46.0	< 22.5	>+23.5	A
	836.150	34.5	<-10.0	-	46.0	< 24.5	>+21.5	A
	955.600	36.5	<-10.0	-	46.0	< 26.5	>+19.5	A
	1075.050	-5.5	< 30.0	-	54.0	< 24.5	>+29.5	B
	1194.500	-5.3	< 30.0	-	54.0	< 24.7	>+29.3	B
	1313.950	-4.0	< 30.0	-	54.0	< 26.0	>+28.0	B
	1433.400	-3.5	< 30.0	-	54.0	< 26.5	>+27.5	B
	1552.850	-5.1	< 30.0	-	54.0	< 24.9	>+29.1	B
	1672.300	-4.3	< 30.0	-	54.0	< 25.7	>+28.3	B
	1791.750	-6.9	< 30.0	-	54.0	< 23.1	>+30.9	B
	1911.200	-6.7	< 30.0	-	54.0	< 23.3	>+30.7	B
	2030.650	-0.4	< 30.0	-	54.0	< 29.6	>+24.4	B
	2150.100	-0.2	< 30.0	-	54.0	< 29.8	>+24.2	B
	2269.550	-0.4	< 30.0	-	54.0	< 29.6	>+24.4	B
	2389.000	-0.3	< 30.0	-	54.0	< 29.7	>+24.3	B
53.995	123.445	12.8	< 0.0	-	43.5	< 12.8	>+30.7	A
	246.890	20.0	< 0.0	-	46.0	< 20.0	>+26.0	A
	370.335	24.4	< -5.0	-	46.0	< 19.4	>+26.6	A
	493.780	27.9	< -5.0	-	46.0	< 22.9	>+23.1	A
	617.225	30.6	< -5.0	-	46.0	< 25.6	>+20.4	A
	740.670	32.9	<-10.0	-	46.0	< 22.9	>+23.1	A
	864.115	35.0	<-10.0	-	46.0	< 25.0	>+21.0	A
	987.560	37.0	<-10.0	-	54.0	< 27.0	>+27.0	A
	1111.005	-5.4	< 30.0	-	54.0	< 24.6	>+29.4	B
	1234.450	-5.0	< 30.0	-	54.0	< 25.0	>+29.0	B
	1357.895	-3.4	< 30.0	-	54.0	< 26.6	>+27.4	B
	1481.340	-4.1	< 30.0	-	54.0	< 25.9	>+28.1	B
	1604.785	-5.0	< 30.0	-	54.0	< 25.0	>+29.0	B
	1728.230	-5.6	< 30.0	-	54.0	< 24.4	>+29.6	B
	1851.675	-6.9	< 30.0	-	54.0	< 23.1	>+30.9	B
	1975.120	-6.4	< 30.0	-	54.0	< 23.6	>+30.4	B
	2098.565	-0.1	< 30.0	-	54.0	< 29.9	>+24.1	B
	2222.010	-0.4	< 30.0	-	54.0	< 29.6	>+24.4	B
	2345.455	-0.3	< 30.0	-	54.0	< 29.7	>+24.3	B

Tuning range : 76.000 MHz - 107.995 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB(1/m)]	Meter Readings [dB(μV)]	Pola- rity	Limits [dB(μV/m)]	Results [dB(μV/m)]	Margin [dB]	Remarks (Note 2)
76.000	89.350	9.7	< 0.0	-	43.5	< 9.7	>+33.8	A
	178.700	16.5	< 0.0	-	43.5	< 16.5	>+27.0	A
	268.050	20.8	< 0.0	-	46.0	< 20.8	>+25.2	A
	357.400	24.0	< -5.0	-	46.0	< 19.0	>+27.0	A
	446.750	26.6	< -5.0	-	46.0	< 21.6	>+24.4	A
	536.100	28.8	< -5.0	-	46.0	< 23.8	>+22.2	A
	625.450	30.7	< -5.0	-	46.0	< 25.7	>+20.3	A
	714.800	32.5	< -10.0	-	46.0	< 22.5	>+23.5	A
	804.150	34.0	< -10.0	-	46.0	< 24.0	>+22.0	A
	893.500	35.5	< -10.0	-	46.0	< 25.5	>+20.5	A
	982.850	36.9	< -10.0	-	54.0	< 26.9	>+27.1	A
	1072.200	-5.5	< 30.0	-	54.0	< 24.5	>+29.5	B
	1161.550	-5.2	< 30.0	-	54.0	< 24.8	>+29.2	B
	1250.900	-4.8	< 30.0	-	54.0	< 25.2	>+28.8	B
	1340.250	-3.7	< 30.0	-	54.0	< 26.3	>+27.7	B
	1429.600	-3.3	< 30.0	-	54.0	< 26.7	>+27.3	B
	1518.950	-4.7	< 30.0	-	54.0	< 25.3	>+28.7	B
	1608.300	-5.0	< 30.0	-	54.0	< 25.0	>+29.0	B
	1697.650	-4.7	< 30.0	-	54.0	< 25.3	>+28.7	B
	1787.000	-6.8	< 30.0	-	54.0	< 23.2	>+30.8	B
	1876.350	-6.8	< 30.0	-	54.0	< 23.2	>+30.8	B
	1965.700	-6.4	< 30.0	-	54.0	< 23.6	>+30.4	B
	2055.050	-0.3	< 30.0	-	54.0	< 29.7	>+24.3	B
	2144.400	-0.2	< 30.0	-	54.0	< 29.8	>+24.2	B
	2233.750	-0.4	< 30.0	-	54.0	< 29.6	>+24.4	B
	2323.100	-0.4	< 30.0	-	54.0	< 29.6	>+24.4	B
	2412.450	-0.3	< 30.0	-	54.0	< 29.7	>+24.3	B

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB(1/m)]	Meter Readings [dB(μV)]	Pola- rity	Limits [dB(μV/m)]	Results [dB(μV/m)]	Margin [dB]	Remarks (Note 2)
92.000	105.350	11.3	< 0.0	-	43.5	< 11.3	>+32.2	A
	210.700	18.3	12.0	H	43.5	30.3	+13.2	A
	316.050	22.6	< -5.0	-	46.0	< 17.6	>+28.4	A
	421.400	25.9	< -5.0	-	46.0	< 20.9	>+25.1	A
	526.750	28.7	< -5.0	-	46.0	< 23.7	>+22.3	A
	632.100	30.9	< -5.0	-	46.0	< 25.9	>+20.1	A
	737.450	32.9	<-10.0	-	46.0	< 22.9	>+23.1	A
	842.800	34.7	<-10.0	-	46.0	< 24.7	>+21.3	A
	948.150	36.4	<-10.0	-	46.0	< 26.4	>+19.6	A
	1053.500	-5.5	< 30.0	-	54.0	< 24.5	>+29.5	B
	1158.850	-5.2	< 30.0	-	54.0	< 24.8	>+29.2	B
	1264.200	-4.6	< 30.0	-	54.0	< 25.4	>+28.6	B
	1369.550	-3.3	< 30.0	-	54.0	< 26.7	>+27.3	B
	1474.900	-4.1	< 30.0	-	54.0	< 25.9	>+28.1	B
	1580.250	-5.2	< 30.0	-	54.0	< 24.8	>+29.2	B
	1685.600	-4.4	< 30.0	-	54.0	< 25.6	>+28.4	B
	1790.950	-6.9	< 30.0	-	54.0	< 23.1	>+30.9	B
	1896.300	-6.7	< 30.0	-	54.0	< 23.3	>+30.7	B
	2001.650	-0.5	< 30.0	-	54.0	< 29.5	>+24.5	B
	2107.000	-0.1	< 30.0	-	54.0	< 29.9	>+24.1	B
	2212.350	-0.3	< 30.0	-	54.0	< 29.7	>+24.3	B
	2317.700	-0.4	< 30.0	-	54.0	< 29.6	>+24.4	B
	2423.050	-0.3	< 30.0	-	54.0	< 29.7	>+24.3	B
107.995	121.345	12.7	< 0.0	-	43.5	< 12.7	>+30.8	A
	242.690	19.7	< 0.0	-	46.0	< 19.7	>+26.3	A
	364.035	24.2	< -5.0	-	46.0	< 19.2	>+26.8	A
	485.380	27.6	< -5.0	-	46.0	< 22.6	>+23.4	A
	606.725	30.3	< -5.0	-	46.0	< 25.3	>+20.7	A
	728.070	32.7	<-10.0	-	46.0	< 22.7	>+23.3	A
	849.415	34.7	<-10.0	-	46.0	< 24.7	>+21.3	A
	970.760	36.7	<-10.0	-	54.0	< 26.7	>+27.3	A
	1092.105	-5.4	< 30.0	-	54.0	< 24.6	>+29.4	B
	1213.450	-5.2	< 30.0	-	54.0	< 24.8	>+29.2	B
	1334.795	-3.7	< 30.0	-	54.0	< 26.3	>+27.7	B
	1456.140	-3.8	< 30.0	-	54.0	< 26.2	>+27.8	B
	1577.485	-5.1	< 30.0	-	54.0	< 24.9	>+29.1	B
	1698.830	-4.7	< 30.0	-	54.0	< 25.3	>+28.7	B
	1820.175	-7.0	< 30.0	-	54.0	< 23.0	>+31.0	B
	1941.520	-6.5	< 30.0	-	54.0	< 23.5	>+30.5	B
	2062.865	-0.3	< 30.0	-	54.0	< 29.7	>+24.3	B
	2184.210	-0.2	< 30.0	-	54.0	< 29.8	>+24.2	B
	2305.555	-0.4	< 30.0	-	54.0	< 29.6	>+24.4	B
	2426.900	-0.3	< 30.0	-	54.0	< 29.7	>+24.3	B

Tuning range : 118.000 MHz - 173.995 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB(1/m)]	Meter Readings [dB(μV)]	Pola- rity	Limits [dB(μV/m)]	Results [dB(μV/m)]	Margin [dB]	Remarks (Note 2)
118.000	187.450	17.1	< 0.0	-	43.5	< 17.1	>+26.4	A
	374.900	24.5	< -5.0	-	46.0	< 19.5	>+26.5	A
	562.350	29.4	< -5.0	-	46.0	< 24.4	>+21.6	A
	749.800	33.0	<-10.0	-	46.0	< 23.0	>+23.0	A
	937.250	36.2	<-10.0	-	46.0	< 26.2	>+19.8	A
	1124.700	-5.3	< 30.0	-	54.0	< 24.7	>+29.3	B
	1312.150	-4.0	< 30.0	-	54.0	< 26.0	>+28.0	B
	1499.600	-4.4	< 30.0	-	54.0	< 25.6	>+28.4	B
	1687.050	-4.5	< 30.0	-	54.0	< 25.5	>+28.5	B
	1874.500	-6.9	< 30.0	-	54.0	< 23.1	>+30.9	B
	2061.950	-0.3	< 30.0	-	54.0	< 29.7	>+24.3	B
	2249.400	-0.4	< 30.0	-	54.0	< 29.6	>+24.4	B
	2436.850	-0.4	< 30.0	-	54.0	< 29.6	>+24.4	B
146.000	215.450	18.5	15.0	H	43.5	33.5	+10.0	A
	430.900	26.3	< -5.0	-	46.0	< 21.3	>+24.7	A
	646.350	31.1	< -5.0	-	46.0	< 26.1	>+19.9	A
	861.800	35.0	<-10.0	-	46.0	< 25.0	>+21.0	A
	1077.250	-5.5	< 30.0	-	54.0	< 24.5	>+29.5	B
	1292.700	-4.3	< 30.0	-	54.0	< 25.7	>+28.3	B
	1508.150	-4.5	< 30.0	-	54.0	< 25.5	>+28.5	B
	1722.600	-5.5	< 30.0	-	54.0	< 24.5	>+29.5	B
	1939.050	-6.5	< 30.0	-	54.0	< 23.5	>+30.5	B
	2154.500	-0.2	< 30.0	-	54.0	< 29.8	>+24.2	B
	2369.950	-0.3	< 30.0	-	54.0	< 29.7	>+24.3	B
173.995	243.445	19.7	< 0.0	-	46.0	< 19.7	>+26.3	A
	486.890	27.7	< -5.0	-	46.0	< 22.7	>+23.3	A
	730.335	32.7	<-10.0	-	46.0	< 22.7	>+23.3	A
	973.780	36.7	<-10.0	-	54.0	< 26.7	>+27.3	A
	1217.225	-5.2	< 30.0	-	54.0	< 24.8	>+29.2	B
	1460.670	-3.8	< 30.0	-	54.0	< 26.2	>+27.8	B
	1704.115	-4.9	< 30.0	-	54.0	< 25.1	>+28.9	B
	1947.560	-6.5	< 30.0	-	54.0	< 23.5	>+30.5	B
	2191.005	-0.2	< 30.0	-	54.0	< 29.8	>+24.2	B
	2434.450	-0.4	< 30.0	-	54.0	< 29.6	>+24.4	B

Tuning range : 400.000 MHz - 469.995 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB(1/m)]	Meter Readings [dB(μV)]	Pola- rity	Limits [dB(μV/m)]	Results [dB(μV/m)]	Margin [dB]	Remarks (Note 2)
400.000	330.550	23.1	6.0	H	46.0	29.1	+16.9	A
	661.100	31.4	< -5.0	-	46.0	< 26.4	>+19.6	A
	991.650	37.0	<-10.0	-	54.0	< 27.0	>+27.0	A
	1322.200	-3.9	< 30.0	-	54.0	< 26.1	>+27.9	B
	1652.750	-4.0	< 30.0	-	54.0	< 26.0	>+28.0	B
	1983.300	-6.4	< 30.0	-	54.0	< 23.6	>+30.4	B
	2313.850	-0.4	< 30.0	-	54.0	< 29.6	>+24.4	B
435.000	365.550	24.3	1.0	H	46.0	25.3	+20.7	A
	731.100	32.7	<-10.0	-	46.0	< 22.7	>+23.3	A
	1096.650	-5.4	< 30.0	-	54.0	< 24.6	>+29.4	B
	1462.200	-3.9	< 30.0	-	54.0	< 26.1	>+27.9	B
	1827.750	-7.0	< 30.0	-	54.0	< 23.0	>+31.0	B
	2193.300	-0.2	< 30.0	-	54.0	< 29.8	>+24.2	B
469.995	400.545	25.4	< -5.0	-	46.0	< 20.4	>+25.6	A
	801.090	34.0	<-10.0	-	46.0	< 24.0	>+22.0	A
	1201.635	-5.3	< 30.0	-	54.0	< 24.7	>+29.3	B
	1602.180	-5.1	< 30.0	-	54.0	< 24.9	>+29.1	B
	2002.725	-0.4	< 30.0	-	54.0	< 29.6	>+24.4	B
	2403.270	-0.3	< 30.0	-	54.0	< 29.7	>+24.3	B

Tuning range : 1240.000 MHz - 1300.000 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB(1/m)]	Meter Readings [dB(μV)]	Pola- rity	Limits [dB(μV/m)]	Results [dB(μV/m)]	Margin [dB]	Remarks (Note 2)
1240.000	585.275	29.9	0.0	H	46.0	29.9	+16.1	A
	1170.550	-5.2	47.0	V	54.0	41.8	+12.2	B
	1755.825	-6.4	31.0	H	54.0	24.6	+29.4	B
	2341.100	-0.3	35.0	V	54.0	34.7	+19.3	B
1270.000	600.275	30.2	< -5.0	-	46.0	< 25.2	>+20.8	A
	1200.550	-5.3	45.0	V	54.0	39.7	+14.3	B
	1800.825	-7.1	33.0	H	54.0	25.9	+28.1	B
	2401.100	-0.3	32.0	V	54.0	31.7	+22.3	B
1300.000	615.275	30.6	< -5.0	-	46.0	< 25.6	>+20.4	A
	1230.550	-5.0	42.0	V	54.0	37.0	+17.0	B
	1845.825	-6.9	33.0	V	54.0	26.1	+27.9	B
	2461.100	-0.4	33.0	H	54.0	32.6	+21.4	B

Sample of calculated result at 215.450 MHz, as the Minimum Margin point:

$$\begin{aligned}\text{Corretion Factor} &= 18.5 \text{ dB(1/m)} \\ +) \text{Meter Reading} &= 15.0 \text{ dB(}\mu\text{V)} \\ \hline \text{Result} &= 33.5 \text{ dB(}\mu\text{V/m)}\end{aligned}$$

Minimum Margin : $43.5 - 33.5 = 10.0 \text{ (dB)}$

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

Note 1:

- 1)The highest frequency generated or used in the EUT: 1230.550 MHz
- 2)The upper frequency of measurement range : 2461.100 MHz
- 3)The spectrum was scanned 30 MHz to 2500 MHz and all emissions not reported were more than 20dB below the applied limits.
- 4)Correction Factor (below 1GHz) : Antenna Factor[dB(1/m)] + Cable Loss[dB]
Correction Factor (above 1GHz) : Antenna Factor[dB(1/m)] + Cable Loss[dB] + 20dB Pad Attenuator[dB]
- Pre-Amplifier 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 29, 1999
 Temp.: 21 °C ; Humi.: 30 %

Tuning range : 50.000 MHz - 53.995 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB]	Meter Readings [dB(μV)]	Limits at 50Ω [dB(μV)]	Results [dB(μV)]	Margin [dB]	Remarks (Note 2)
50.000	119.450	10.0	10.0	50.0	20.0	+30.0	A
	238.900	10.0	18.0	50.0	28.0	+22.0	A
	358.350	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	477.800	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	597.250	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	716.700	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	836.150	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	955.600	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	1075.050	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1194.500	10.0	16.0	50.0	26.0	+24.0	B
	1313.950	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1433.400	10.0	17.0	50.0	27.0	+23.0	B
	1552.850	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1672.300	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1791.750	10.0	13.0	50.0	23.0	+27.0	B
	1911.200	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2030.650	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2150.100	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2269.550	10.0	12.0	50.0	22.0	+28.0	B
	2389.000	10.0	< 10.0	50.0	< 20.0	>+30.0	B
53.995	123.445	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	246.890	10.0	18.0	50.0	28.0	+22.0	A
	370.335	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	493.780	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	617.225	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	740.670	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	864.115	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	987.560	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	1111.005	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1234.450	10.0	16.0	50.0	26.0	+24.0	B
	1357.895	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1481.340	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1604.785	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1728.230	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1851.675	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1975.120	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2098.565	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2222.010	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2345.455	10.0	< 10.0	50.0	< 20.0	>+30.0	B

Tuning range : 76.000 MHz - 107.995 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB]	Meter Readings [dB(μ V)]	Limits at 50 Ω [dB(μ V)]	Results [dB(μ V)]	Margin [dB]	Remarks (Note 2)
76.000	89.350	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	178.700	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	268.050	10.0	10.0	50.0	20.0	+30.0	A
	357.400	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	446.750	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	536.100	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	625.450	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	714.800	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	804.150	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	893.500	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	982.850	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	1072.200	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1161.550	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1250.900	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1340.250	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1429.600	10.0	11.0	50.0	21.0	+29.0	B
	1518.950	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1608.300	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1697.650	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1787.000	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1876.350	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1965.700	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2055.050	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2144.400	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2233.750	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2323.100	10.0	13.0	50.0	23.0	+27.0	B
	2412.450	10.0	< 10.0	50.0	< 20.0	>+30.0	B

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB]	Meter Readings [dB(μ V)]	Limits at 50 Ω [dB(μ V)]	Results [dB(μ V)]	Margin [dB]	Remarks (Note 2)
92.000	105.350	10.0	11.0	50.0	21.0	+29.0	A
	210.700	10.0	10.0	50.0	20.0	+30.0	A
	316.050	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	421.400	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	526.750	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	632.100	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	737.450	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	842.800	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	948.150	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	1053.500	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1158.850	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1264.200	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1369.550	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1474.900	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1580.250	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1685.600	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1790.950	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1896.300	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2001.650	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2107.000	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2212.350	10.0	< 10.0	50.0	< 20.0	>+30.0	B
107.995	2317.700	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2423.050	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	121.345	10.0	10.0	50.0	20.0	+30.0	A
	242.690	10.0	17.0	50.0	27.0	+23.0	A
	364.035	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	485.380	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	606.725	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	728.070	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	849.415	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	970.760	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	1092.105	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1213.450	10.0	13.0	50.0	23.0	+27.0	B
	1334.795	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1456.140	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1577.485	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1698.830	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1820.175	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1941.520	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2062.865	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2184.210	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2305.555	10.0	13.0	50.0	23.0	+27.0	B
	2426.900	10.0	< 10.0	50.0	< 20.0	>+30.0	B

Tuning range : 118.000 MHz - 173.995 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB]	Meter Readings [dB(μ V)]	Limits at 50 Ω [dB(μ V)]	Results [dB(μ V)]	Margin [dB]	Remarks (Note 2)
118.000	187.450	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	374.900	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	562.350	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	749.800	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	937.250	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	1124.700	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1312.150	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1499.600	10.0	14.0	50.0	24.0	+26.0	B
	1687.050	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1874.500	10.0	13.0	50.0	23.0	+27.0	B
	2061.950	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2249.400	10.0	14.0	50.0	24.0	+26.0	B
146.000	2436.850	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	215.450	10.0	16.0	50.0	26.0	+24.0	A
	430.900	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	646.350	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	861.800	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	1077.250	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1292.700	10.0	14.0	50.0	24.0	+26.0	B
	1508.150	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1723.600	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1939.050	10.0	< 10.0	50.0	< 20.0	>+30.0	B
173.995	2154.500	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2369.950	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	243.445	10.0	19.0	50.0	29.0	+21.0	A
	486.890	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	730.335	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	973.780	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	1217.225	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	1460.670	10.0	16.0	50.0	26.0	+24.0	B
	1704.115	10.0	14.0	50.0	24.0	+26.0	B
	1947.560	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2191.005	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2434.450	10.0	< 10.0	50.0	< 20.0	>+30.0	B

Tuning range : 400.000 MHz - 469.995 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB]	Meter Readings [dB(μV)]	Limits at 50Ω [dB(μV)]	Results [dB(μV)]	Margin [dB]	Remarks (Note 2)
400.000	330.550	10.0	16.0	50.0	26.0	+24.0	A
	661.100	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	991.650	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	1322.200	10.0	12.0	50.0	22.0	+28.0	B
	1652.750	10.0	11.0	50.0	21.0	+29.0	B
	1983.300	10.0	14.0	50.0	24.0	+26.0	B
	2313.850	10.0	21.0	50.0	31.0	+19.0	B
435.000	365.550	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	731.100	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	1096.650	10.0	13.0	50.0	23.0	+27.0	B
	1462.200	10.0	13.0	50.0	23.0	+27.0	B
	1827.750	10.0	13.0	50.0	23.0	+27.0	B
	2193.300	10.0	19.0	50.0	29.0	+21.0	B
469.995	400.545	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	801.090	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	1201.635	10.0	12.0	50.0	22.0	+28.0	B
	1602.180	10.0	13.0	50.0	23.0	+27.0	B
	2002.725	10.0	13.0	50.0	23.0	+27.0	B
	2403.270	10.0	22.0	50.0	32.0	+18.0	B

Tuning range : 1240.000 MHz - 1300.000 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Correction Factor [dB]	Meter Readings [dB(μV)]	Limits at 50Ω [dB(μV)]	Results [dB(μV)]	Margin [dB]	Remarks (Note 2)
1240.000	585.275	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	1170.550	10.0	23.0	50.0	33.0	+17.0	B
	1755.825	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2341.100	10.0	23.0	50.0	33.0	+17.0	B
1270.000	600.275	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	1200.550	10.0	18.0	50.0	28.0	+22.0	B
	1800.825	10.0	10.0	50.0	20.0	+30.0	B
	2401.100	10.0	20.0	50.0	30.0	+20.0	B
1300.000	615.275	10.0	< 10.0	50.0	< 20.0	>+30.0	A
	1230.550	10.0	21.0	50.0	31.0	+19.0	B
	1845.825	10.0	< 10.0	50.0	< 20.0	>+30.0	B
	2461.100	10.0	20.0	50.0	30.0	+20.0	B

Sample of calculated result at 1170.550 MHz, as the Minimum Margin point:

Correction Factor = 10.0 dB
+) Meter Reading = 23.0 dB(μ V)
Result = 33.0 dB(μ V)

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: 1230.550 MHz
- 2)The upper frequency of measurement range : 2461.100 MHz
- 3)The spectrum was scanned 30 MHz to 2500 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.

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