EMC EMISSION - TEST REPORT

JQA APPLICATION No. : KL80020253

Name of Product : VHF/UHF Transceiver

Model/Type No. : IC-2720H

FCC ID : AFJ IC-2720H

Applicant : ICOM Incorporated

Address : 1-6-19, Kuratsukuri, Kami, Hirano-ku, Osaka, Japan

Manufacturer : ICOM Incorporated

Address : 1-6-19, Kuratsukuri, Kami, Hirano-ku, Osaka, Japan

Receive date of EUT : September 11, 2002

Final Judgement : Passed

TEST RESULTS IN THIS REPORT are obtained in use of equipment that is traceable to National Institute of Advanced Industrial Science and Technology(AIST) under METI Japan and Communications Research Lab.(CRL) under MPHPT Japan.

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

Authorized by:

Takashi Yamanaka, Director
JQA KITA-KANSAI Testing Center

DIRECTORY

TEST REGULATION

FCC Rules and Regulations Part 15 Subpart A and B (August 20, 2002)

○ - Class A Digital Device
○ - Class B Digital Device
● - Scanning Receiver

Test procedure:

The tests 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 : 1st Open Site (3, 10 and 30 m, on common plane)
: 2nd Open Site (3 and 10 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.
NVLAP Lab Code: 200191-0

Description of the Equipment Under Test (EUT):

1) Name	:	VHF/UHF Ttransceiver
2) Model/Type No.	:	IC-2720H
3) Product Type	:	Pre-Production (S/N: 0006)
4) Category	:	Scanning Receiver
5) EUT Authorization	:	○ - Verification ● - Certification ○ - D.o.C.
6) Highest frequency used/generated	:	19.6608 MHz
7) Highest local frequency	:	516.070 MHz
8) Power Rating	:	DC 13.8V

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

AC Powerline Conducted Emission Measurement
was performed in the following test site.

Test location:

KITA-KANSAI Testing Center
7-7, Ishimaru, 1-Chome, Mino-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 ID	Last Cal. Date	Cal. Interval
○ - ESCS 30	A - 1		
○ - ESH 2	A - 2		
○ - ESH 2	A - 3		
○ - KNW-407	D - 6		
○ - 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		
○ - 65 BNC-50-0-1	H - 26		
○ - 65 BNC-50-0-1	H - 27		
○ - Cable	H - 7		
○ - Cable	H - 8		

Environmental conditions:

Temperature: ____ °C Humidity: ____ %

Electromagnetic Field Radiated Emission Measurement
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, Mino-Shi, Osaka, 562-0027, Japan
● - 1st open test site (3 meters)
○ - 2nd open test site (3 meters)
KAMEOKA EMC Branch
9-1, Ozaki, Inukanno, Nishibetsuin-Cho, Kameoka-Shi, Kyoto, 621-0126, Japan
○ - 1st open test site ○ - 3 m ○ - 10 m ○ - 30 m
○ - 2nd open test site ○ - 3 m ○ - 10 m

Validation of Site Attenuation:

1) Last Confirmed Date : October 4, 2002
2) Interval : 1 Year

Used test instruments:

Model No.	Device ID	Last Cal. Date	Cal. Interval
○ - ESV/ESV-Z3	A - 7 / A - 17		
○ - ESV/ESV-Z3	A - 6 / A - 18		
○ - ESV/ESV-Z3	A - 4 / A - 20		
○ - ESV/ESV-Z3	A - 8 / A - 19		
○ - ESVS 10	A - 5		
● - ESCS 30	A - 1	August, 2002	1 Year
○ - KBA-511A	C - 11		
○ - KBA-611	C - 21		
● - VHA9103/BBA9106	C - 43	August, 2002	1 Year
● - UHALP9107	C - 42	August, 2002	1 Year
○ - VHA9103/FBAB9177	C - 25		
○ - UHALP9108-A1	C - 28		
● - Cable	H - 5	November, 2001	1 Year

Environmental conditions:

Temperature: 27 °C Humidity: 39 %

Electromagnetic Field Radiated Emission Measurement
was performed in horizontal and vertical polarization, in the frequency range of 1 GHz - 1.05GHz, in the following test site.

Test location:

KITA-KANSAI Testing Center
7-7, Ishimaru, 1-Chome, Mino-Shi, Osaka, 562-0027, Japan
● - 1st open test site (3 meters)
○ - 2nd open test site (3 meters)
KAMEOKA EMC Branch
9-1, Ozaki, Inukanno, Nishibetsuin-Cho, Kameoka-Shi, Kyoto, 621-0126, Japan
○ - 1st open test site ○ - 3 m ○ - 10 m ○ - 30 m
○ - 2nd open test site ○ - 3 m ○ - 10 m

Used test instruments:

Model No.	Device ID	Last Cal. Date	Cal. Interval
● - ESCS 30	A - 1	August, 2002	1 Year
○ - 8566B	A - 13		
○ - 8593A	A - 15		
○ - ESV	A - 6		
● - 4T-10	D - 73	May, 2002	1 Year
● - 4T-10	D - 74	May, 2002	1 Year
● - WJ-6611-513	A - 23	May, 2002	1 Year
○ - WJ-6882-824	A - 21		
○ - DBL-0618N515	A - 33		
● - 91888-2	C - 41 - 1	May, 2002	1 Year
○ - 91889-2	C - 41 - 2		
○ - 94613-1	C - 41 - 3		
○ - 91891-2	C - 41 - 4		
○ - 94614-1	C - 41 - 5		
○ - 3160-09	C - 48		
○ - 355C	D - 22		
○ - 355D	D - 23		
○ - MZ5010C	D - 81		
● - Cable	C - 40 - 11	May, 2002	1 Year
● - Cable	C - 40 - 12	May, 2002	1 Year

Environmental conditions:

Temperature: 27 °C Humidity: 39 %

Antenna-Conducted Power Measurement
was performed in the frequency range of 30 MHz - 1050 MHz, in the following test site.

Test location:

KITA-KANSAI Testing Center
7-7, Ishimaru, 1-Chome, Mino-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 ID	Last Cal. Date	Cal. Interval
● - ESCS 30	A - 1	August, 2002	1 Year
○ - 8566B	A - 13		
○ - 8593A	A - 15		
○ - ESV	A - 6		
○ - LSG-221	B - 15		
○ - 216/1	B - 16		
○ - MP614A	D - 56		
○ - 12B50/75	D - 55		
○ - 12N50/75B	D - 72		
● - 2-10	D - 40	June, 2002	1 Year
○ - 1506A	D - 21		
● - Cable	C - 40 - 9	June, 2002	1 Year

Environmental conditions:

Temperature: 26 °C Humidity: 54 %

38dB Rejection Test (§15.121(b))
was performed in the following test site.

Test location:

KITA-KANSAI Testing Center
7-7, Ishimaru, 1-Chome, Mino-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 ID	Last Cal. Date	Cal. Interval
● - MG3681A	B - 3	January, 2002	1 Year
● - E-2001B	N47099003	October, 2001	1 Year
○ - 339A			

Environmental conditions:

Temperature: 24 °C Humidity: 60 %

CONFIGURATION OF EUT

The Equipment Under Test (EUT) consists of:

Description	Applicant (Manufacturer)	Model No. (Serial No.)	FCC ID
Main Unit	ICOM Incorporated (ICOM Incorporated)	IC-2720H (0006)	AFJ IC-2720H
Controller	ICOM Incorporated (ICOM Incorporated)		
Microphone	ICOM Incorporated (ICOM Incorporated)	HM-133 (---)	N/A

The measurement was carried out with the following equipment connected:

Description	Grantee/Distributor	Model No. (Serial No.)	FCC ID
External Speaker (x 2)	ICOM Incorporated	SP-10 (---)	N/A
DC Power Supply	ICOM Incorporated	IC-5P (1793)	N/A

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

	Description	Port	Shielded Cable	Shell Material	Ferrite Core	Cable Length
1	Main Unit 50 Ohms termination	ANT --	--	-- --	--	-- m
2	Main Unit Controller	CONTROLLER --	NO	-- --	YES (1)	3.5 m
3	Main Unit External Speaker	SP-1 --	NO	-- --	YES (1)	1.4 m
4	Main Unit External Speaker	SP-2 --	NO	-- --	YES (1)	1.4 m
5	Main Unit Microphone	MIC --	NO	-- --	NO	0.5 m
6	Main Unit No termination	DATA --	YES	Metal --	NO	4.0 m
7	Main Unit DC Power Supply	DC IN --	YES	-- --	NO	3.0 m
8	Controller No termination	MIC --	--	-- --	--	-- m
9	AC Power Cord (DC Power Supply) 1ϕ 2-pin plug	--	NO	-- --	NO	1.5 m
10	Earth line (DC Power Supply)	--	NO	-- --	NO	1.4 m

Operation - mode of the EUT:

1) Relation between receiving frequency, local frequency and Intermediate Frequency

No.	Receiving Frequency [MHz]	1st LO Equation	Local Frequency [MHz] 1st LO	2nd LO
Left-Band			1st IF = 38.850 MHz	2nd IF = 450 kHz
1	118.000 - 179.995	F+IF	156.850 - 218.845	38.400
1(Rev.)	118.000 - 160.000	F-IF	79.150 - 121.150	38.400
2	180.000 - 259.995	F-IF	141.150 - 221.145	38.400
3	260.000 - 309.995	(F+IF)/2	149.425 - 174.4225	38.400
4	310.000 - 549.995	(F-IF)/2	135.575 - 255.5725	38.400

No.	Receiving Frequency [MHz]	1st LO Equation	Local Frequency [MHz] 1st LO	2nd LO
Right-Band			1st IF = 46.050 MHz	2nd IF = 455 kHz
5	118.000 - 174.000	F+IF	164.050 - 220.050	45.595
6	375.000 - 399.995	F+IF	421.050 - 446.045	45.595
7	400.000 - 549.995	F-IF	353.950 - 503.945	45.595
7(Rev.)	400.000 - 450.000	F+IF	446.050 - 496.050	45.595
8	810.000 - 999.990	(F-IF)/2	381.975 - 476.970	45.595
9	916.110 - 941.090	(F+IF)/2	481.080 - 493.570	45.595
10	961.110 - 986.090	(F+IF)/2	503.580 - 516.070	45.595

2) Type of Antenna Terminal : M-Type 50 Ω (Unbalanced)

Test system:

The EUT consists of one Main Unit, one Controller and one Microphone.
The Main Unit has one ANT port, one CONTROLLER port, one DATA port, one MIC port, two SP ports(SP-1, SP-2) and one DC IN port.
The Controller has one port for the Main Unit and one MIC port.

Special accessories:

The Controller cable with one ferrite core is an exclusive use of the EUT as the special accessory of which is defined §15.27 in FCC rule.
This cable is to be marketed together with the EUT.
The External Speaker cable with one ferrite core is an exclusive use of the External Speaker as the special accessory of which is defined §15.27 in FCC rule.
This cable is to be marketed together with the External Speaker.

The used (generated) frequencies in the EUT:

VCO Unit : 12.8 MHz
Control Unit : 4.915 MHz
CPU : 19.6608 MHz

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

Deviation from Standard

● - No deviations from the standard described in page 3.

○ - The following deviations were employed from the standard described in page 3.

TEST RESULTS

AC Powerline Conducted Emission 150 kHz - 30 MHz

The requirements are	○ - **Passed**	○ - **Not Passed**
Min. limit margin	_____ dB at	_____ MHz
Max. limit exceeding	_____ dB at	_____ MHz
Uncertainty of measurement results	_____ dB(2σ)	_____ dB(2σ)

Remarks: Not Applicable

Electromagnetic Field Radiated Emission 30 MHz - 1050 MHz

The requirements are	● - **Passed**	○ - **Not Passed**
Min. limit margin	9.6 dB at	942.10 MHz
	and at	1032.14 MHz
Max. limit exceeding	_____ dB at	_____ MHz
Uncertainty of measurement results(30MHz - 1GHz)	+4.1 dB(2σ)	- 4.2 dB(2σ)
Uncertainty of measurement results(1GHz - 1.05GHz)	+3.1 dB(2σ)	- 3.2 dB(2σ)

Remarks:

Antenna-Conducted Power 30 MHz - 1050 MHz

The requirements are	● - **Passed**	○ - **Not Passed**
Min. limit margin	13.0 dB at	763.950 MHz
Max. limit exceeding	_____ dB at	_____ MHz
Uncertainty of measurement results	+ 2.3 dB(2σ)	- 2.3 dB(2σ)

Remarks:

38dB Rejection Test (§15.121(b))

The requirements are	● - **Passed**			○ - **Not Passed**	
Min. limit margin	4.2	dB	at	209.875	MHz
			at	303.200	MHz
Max. limit exceeding		dB	at		MHz
Uncertainty of measurement results	-	dB(2σ)		-	dB(2σ)

Remarks: .

SUMMARY

GENERAL REMARKS :

The EUT was tested according to the requirements of FCC Rules and Regulations Part 15 Subpart A and B (August 20, 2002) under the test configuration, as shown in page 16.

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 : September 27, 2002

End of testing : October 21, 2002

- JAPAN QUALITY ASSURANCE ORGANIZATION -

Approved by :

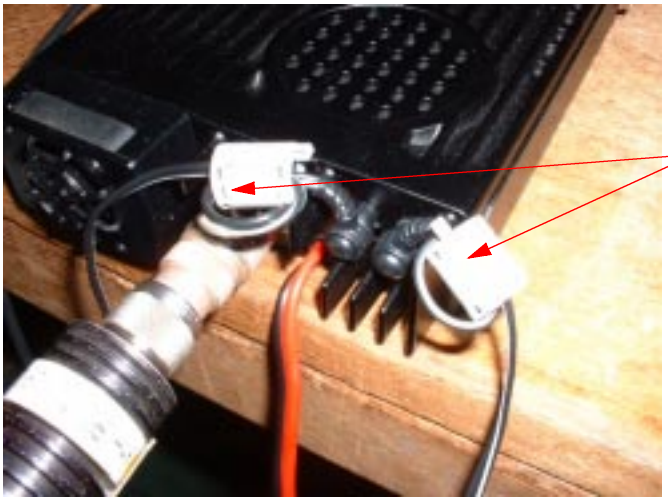
Akio Hosoda
Manager
EMC Div.
JQA KITA-KANSAI Testing Center

Issued by :

Shigeru Kinoshita
Deputy Manager
EMC Div.
JQA KITA-KANSAI Testing Center

Ferrite Core

Controller Cable



External Speaker Cable

Electromagnetic Field Radiated Emission Measurement

Scanning Receiver

Test Date: October 17, 2002
Temp.: 27 °C ; Humi.: 39 %

Left Band 1
Tuning Range : 118.000 MHz -179.995MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Antenna Factor [dB(1/m)]	Corr. Factor [dB]	Meter Readings [dB(µV)] Hori.	Meter Readings [dB(µV)] Vert.	Limits [dB(µV/m)]	Results [dB(µV/m)] Hori.	Results [dB(µV/m)] Vert.	Margin [dB]	Remarks (Note 2)
118.000	156.850	15.0	1.7	< 0.0	< 0.0	43.5	< 16.7	< 16.7	> +26.8	A
	313.700	16.6	2.5	< -5.0	< -5.0	46.0	< 14.1	< 14.1	> +31.9	A
	470.550	18.8	3.1	< -5.0	< -5.0	46.0	< 16.9	< 16.9	> +29.1	A
	627.400	21.9	3.7	< -5.0	< -5.0	46.0	< 20.6	< 20.6	> +25.4	A
	784.250	22.7	4.1	< -5.0	< -5.0	46.0	< 21.8	< 21.8	> +24.2	A
	941.100	24.7	4.6	< -5.0	< -5.0	46.0	< 24.3	< 24.3	> +21.7	A
149.000	187.850	16.3	1.9	< 0.0	< 0.0	43.5	< 18.2	< 18.2	> +25.3	A
	375.700	17.2	2.8	< -5.0	< -5.0	46.0	< 15.0	< 15.0	> +31.0	A
	563.550	20.9	3.4	< -5.0	< -5.0	46.0	< 19.3	< 19.3	> +26.7	A
	751.400	22.6	4.0	< -5.0	< -5.0	46.0	< 21.6	< 21.6	> +24.4	A
	939.250	24.7	4.6	< -5.0	< -5.0	46.0	< 24.3	< 24.3	> +21.7	A
179.995	218.845	16.8	2.1	< 0.0	< 0.0	46.0	< 18.9	< 18.9	> +27.1	A
	437.690	18.2	3.0	< -5.0	< -5.0	46.0	< 16.2	< 16.2	> +29.8	A
	656.535	22.1	3.8	< -5.0	< -5.0	46.0	< 20.9	< 20.9	> +25.1	A
	875.380	23.7	4.4	< -5.0	< -5.0	46.0	< 23.1	< 23.1	> +22.9	A

Left Band 1(Reverse)
Tuning Range : 118.000 MHz -160.000 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Antenna Factor [dB(1/m)]	Corr. Factor [dB]	Meter Readings [dB(µV)] Hori.	Meter Readings [dB(µV)] Vert.	Limits [dB(µV/m)]	Results [dB(µV/m)] Hori.	Results [dB(µV/m)] Vert.	Margin [dB]	Remarks (Note 2)
118.000	79.150	6.3	1.2	< 0.0	< 0.0	40.0	< 7.5	< 7.5	> +32.5	A
	158.300	15.1	1.7	< 0.0	< 0.0	43.5	< 16.8	< 16.8	> +26.7	A
	237.450	17.0	2.1	< 0.0	< 0.0	46.0	< 19.1	< 19.1	> +26.9	A
	316.600	16.6	2.5	< -5.0	< -5.0	46.0	< 14.1	< 14.1	> +31.9	A
	395.750	17.4	2.8	< -5.0	< -5.0	46.0	< 15.2	< 15.2	> +30.8	A
	474.900	18.9	3.1	< -5.0	< -5.0	46.0	< 17.0	< 17.0	> +29.0	A
	554.050	20.6	3.4	< -5.0	< -5.0	46.0	< 19.0	< 19.0	> +27.0	A
	633.200	21.9	3.7	< -5.0	< -5.0	46.0	< 20.6	< 20.6	> +25.4	A
	712.350	22.4	3.9	< -5.0	< -5.0	46.0	< 21.3	< 21.3	> +24.7	A
	791.500	22.8	4.2	< -5.0	< -5.0	46.0	< 22.0	< 22.0	> +24.0	A
	870.650	23.6	4.4	< -5.0	< -5.0	46.0	< 23.0	< 23.0	> +23.0	A
	949.800	24.9	4.6	< -5.0	< -5.0	46.0	< 24.5	< 24.5	> +21.5	A
	1028.950	21.0	-26.6	< 30.0	< 30.0	54.0	< 24.4	< 24.4	> +29.6	B
139.000	100.150	10.1	1.3	< 0.0	< 0.0	43.5	< 11.4	< 11.4	> +32.1	A
	200.300	16.6	2.0	< 0.0	< 0.0	43.5	< 18.6	< 18.6	> +24.9	A
	300.450	16.5	2.4	< -5.0	< -5.0	46.0	< 13.9	< 13.9	> +32.1	A
	400.600	17.4	2.9	< -5.0	< -5.0	46.0	< 15.3	< 15.3	> +30.7	A
	500.750	19.4	3.2	< -5.0	< -5.0	46.0	< 17.6	< 17.6	> +28.4	A
	600.900	21.7	3.6	< -5.0	< -5.0	46.0	< 20.3	< 20.3	> +25.7	A
	701.050	22.4	3.9	< -5.0	< -5.0	46.0	< 21.3	< 21.3	> +24.7	A
	801.200	22.8	4.2	< -5.0	< -5.0	46.0	< 22.0	< 22.0	> +24.0	A
	901.350	24.0	4.5	< -5.0	< -5.0	46.0	< 23.5	< 23.5	> +22.5	A
	1001.500	21.1	-26.6	< 30.0	< 30.0	54.0	< 24.5	< 24.5	> +29.5	B
160.000	121.150	13.1	1.5	< 0.0	< 0.0	43.5	< 14.6	< 14.6	> +28.9	A
	242.300	17.0	2.2	< 0.0	< 0.0	46.0	< 19.2	< 19.2	> +26.8	A
	363.450	17.1	2.7	< -5.0	< -5.0	46.0	< 14.8	< 14.8	> +31.2	A
	484.600	19.1	3.2	< -5.0	< -5.0	46.0	< 17.3	< 17.3	> +28.7	A
	605.750	21.7	3.6	< -5.0	< -5.0	46.0	< 20.3	< 20.3	> +25.7	A
	726.900	22.5	4.0	< -5.0	< -5.0	46.0	< 21.5	< 21.5	> +24.5	A
	848.050	23.4	4.4	< -5.0	< -5.0	46.0	< 22.8	< 22.8	> +23.2	A
	969.200	25.2	4.7	< -5.0	< -5.0	54.0	< 24.9	< 24.9	> +29.1	A

Left Band 2
Tuning Range : 180.000 MHz -259.995MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Antenna Factor [dB(1/m)]	Corr. Factor [dB]	Meter Readings [dB(µV)] Hori.	Meter Readings [dB(µV)] Vert.	Limits [dB(µV/m)]	Results [dB(µV/m)] Hori.	Results [dB(µV/m)] Vert.	Margin [dB]	Remarks (Note 2)
180.000	141.150	14.3	1.6	< 0.0	< 0.0	43.5	< 15.9	< 15.9	> +27.6	A
	282.300	19.0	2.4	< 0.0	< 0.0	46.0	< 21.4	< 21.4	> +24.6	A
	423.450	17.9	2.9	< -5.0	< -5.0	46.0	< 15.8	< 15.8	> +30.2	A
	564.600	20.9	3.4	< -5.0	< -5.0	46.0	< 19.3	< 19.3	> +26.7	A
	705.750	22.4	3.9	< -5.0	< -5.0	46.0	< 21.3	< 21.3	> +24.7	A
	846.900	23.4	4.4	< -5.0	< -5.0	46.0	< 22.8	< 22.8	> +23.2	A
	988.050	25.6	4.8	< -5.0	< -5.0	54.0	< 25.4	< 25.4	> +28.6	A
220.000	181.150	16.1	1.9	< 0.0	4.0	43.5	< 18.0	22.0	+21.5	A
	362.300	17.1	2.7	< -5.0	< -5.0	46.0	< 14.8	< 14.8	> +31.2	A
	543.450	20.4	3.4	< -5.0	< -5.0	46.0	< 18.8	< 18.8	> +27.2	A
	724.600	22.5	4.0	< -5.0	< -5.0	46.0	< 21.5	< 21.5	> +24.5	A
	905.750	24.1	4.5	-5.0	-5.0	46.0	23.6	23.6	+22.4	A
259.995	221.145	16.8	2.1	< 10.0	< 3.0	46.0	< 28.9	< 21.9	> +17.1	A
	442.290	18.2	3.0	< -5.0	< -5.0	46.0	< 16.2	< 16.2	> +29.8	A
	663.435	22.1	3.8	< -5.0	< -5.0	46.0	< 20.9	< 20.9	> +25.1	A
	884.580	23.8	4.4	< -5.0	< -5.0	46.0	< 23.2	< 23.2	> +22.8	A

Left Band 3
Tuning Range : 260.000 MHz -309.995MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Antenna Factor [dB(1/m)]	Corr. Factor [dB]	Meter Readings [dB(µV)] Hori.	Meter Readings [dB(µV)] Vert.	Limits [dB(µV/m)]	Results [dB(µV/m)] Hori.	Results [dB(µV/m)] Vert.	Margin [dB]	Remarks (Note 2)
260.000	149.425	14.7	1.7	< 0.0	< 0.0	43.5	< 16.4	< 16.4	> +27.1	A
	298.850	20.0	2.4	< 0.0	< 0.0	46.0	< 22.4	< 22.4	> +23.6	A
	448.275	18.4	3.0	< -5.0	< -5.0	46.0	< 16.4	< 16.4	> +29.6	A
	597.700	21.6	3.6	< -5.0	< -5.0	46.0	< 20.2	< 20.2	> +25.8	A
	747.125	22.6	4.0	< -5.0	< -5.0	46.0	< 21.6	< 21.6	> +24.4	A
	896.550	24.0	4.5	< -5.0	< -5.0	46.0	< 23.5	< 23.5	> +22.5	A
285.000	161.925	15.3	1.8	< 0.0	< 0.0	43.5	< 17.1	< 17.1	> +26.4	A
	323.850	16.7	2.5	-4.0	< -5.0	46.0	15.2	< 14.2	+30.8	A
	485.775	19.1	3.2	< -5.0	< -5.0	46.0	< 17.3	< 17.3	> +28.7	A
	647.700	22.0	3.7	< -5.0	< -5.0	46.0	< 20.7	< 20.7	> +25.3	A
	809.625	22.9	4.2	< -5.0	< -5.0	46.0	< 22.1	< 22.1	> +23.9	A
	971.550	25.3	4.7	-5.0	< -5.0	54.0	25.0	< 25.0	+29.0	A
309.995	174.423	15.9	1.8	< 6.0	< 4.0	43.5	< 23.7	< 21.7	> +19.8	A
	348.845	16.9	2.6	-4.0	< -5.0	46.0	15.5	< 14.5	+30.5	A
	523.268	19.9	3.3	< -5.0	< -5.0	46.0	< 18.2	< 18.2	> +27.8	A
	697.690	22.4	3.9	-5.0	-3.0	46.0	21.3	23.3	+22.7	A
	872.113	23.7	4.4	< -5.0	< -5.0	46.0	< 23.1	< 23.1	> +22.9	A

Left Band 4
Tuning Range : 310.000 MHz -549.995MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Antenna Factor [dB(1/m)]	Corr. Factor [dB]	Meter Readings [dB(µV)] Hori.	Meter Readings [dB(µV)] Vert.	Limits [dB(µV/m)]	Results [dB(µV/m)] Hori.	Results [dB(µV/m)] Vert.	Margin [dB]	Remarks (Note 2)
310.000	135.575	13.9	1.6	< 0.0	< 0.0	43.5	< 15.5	< 15.5	> +28.0	A
	271.150	18.4	2.3	< 0.0	< 0.0	46.0	< 20.7	< 20.7	> +25.3	A
	406.725	17.5	2.9	< -5.0	< -5.0	46.0	< 15.4	< 15.4	> +30.6	A
	542.300	20.4	3.4	< -5.0	< -5.0	46.0	< 18.8	< 18.8	> +27.2	A
	677.875	22.2	3.8	< -5.0	< -5.0	46.0	< 21.0	< 21.0	> +25.0	A
	813.450	23.0	4.2	< -5.0	< -5.0	46.0	< 22.2	< 22.2	> +23.8	A
	949.025	24.9	4.6	< -5.0	< -5.0	46.0	< 24.5	< 24.5	> +21.5	A
430.000	195.575	16.5	1.9	< 0.0	< 0.0	43.5	< 18.4	< 18.4	> +25.1	A
	391.150	17.3	2.8	-5.0	< -5.0	46.0	15.1	< 15.1	+30.9	A
	586.725	21.4	3.5	< -5.0	< -5.0	46.0	< 19.9	< 19.9	> +26.1	A
	782.300	22.7	4.1	< -5.0	< -5.0	46.0	< 21.8	< 21.8	> +24.2	A
	977.875	25.4	4.7	< -5.0	< -5.0	54.0	< 25.1	< 25.1	> +28.9	A
549.995	255.573	17.4	2.2	< 0.0	< 0.0	46.0	< 19.6	< 19.6	> +26.4	A
	511.145	19.7	3.3	< 6.0	< 4.0	46.0	< 29.0	< 27.0	> +17.0	A
	766.718	22.7	4.1	< -5.0	< -5.0	46.0	< 21.8	< 21.8	> +24.2	A
	1022.290	21.0	-26.6	35.0	31.0	54.0	29.4	25.4	+24.6	B

Right Band 5
Tuning Range : 118.000 MHz -174.000 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Antenna Factor [dB(1/m)]	Corr. Factor [dB]	Meter Readings [dB(µV)] Hori.	Meter Readings [dB(µV)] Vert.	Limits [dB(µV/m)]	Results [dB(µV/m)] Hori.	Results [dB(µV/m)] Vert.	Margin [dB]	Remarks (Note 2)
118.000	164.050	15.4	1.8	< 0.0	< 0.0	43.5	< 17.2	< 17.2	> +26.3	A
	328.100	16.8	2.6	< -5.0	< -5.0	46.0	< 14.4	< 14.4	> +31.6	A
	492.150	19.2	3.2	< -5.0	< -5.0	46.0	< 17.4	< 17.4	> +28.6	A
	656.200	22.1	3.8	< -5.0	< -5.0	46.0	< 20.9	< 20.9	> +25.1	A
	820.250	23.0	4.2	< -5.0	< -5.0	46.0	< 22.2	< 22.2	> +23.8	A
	984.300	25.5	4.7	< -5.0	< -5.0	54.0	< 25.2	< 25.2	> +28.8	A
146.000	192.050	16.4	1.9	< 0.0	< 0.0	43.5	< 18.3	< 18.3	> +25.2	A
	384.100	17.3	2.8	< -5.0	< -5.0	46.0	< 15.1	< 15.1	> +30.9	A
	576.150	21.2	3.5	< -5.0	< -5.0	46.0	< 19.7	< 19.7	> +26.3	A
	768.200	22.7	4.1	< -5.0	< -5.0	46.0	< 21.8	< 21.8	> +24.2	A
	960.250	25.1	4.7	< -5.0	< -5.0	54.0	< 24.8	< 24.8	> +29.2	A
174.000	220.050	16.8	2.1	< 2.0	< 0.0	46.0	< 20.9	< 18.9	> +25.1	A
	440.100	18.2	3.0	< -5.0	< -5.0	46.0	< 16.2	< 16.2	> +29.8	A
	660.150	22.1	3.8	< -5.0	< -5.0	46.0	< 20.9	< 20.9	> +25.1	A
	880.200	23.8	4.4	< -5.0	< -5.0	46.0	< 23.2	< 23.2	> +22.8	A

Right Band 6
Tuning Range : 375.000 MHz - 399.995 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Antenna Factor [dB(1/m)]	Corr. Factor [dB]	Meter Readings [dB(µV)] Hori.	Meter Readings [dB(µV)] Vert.	Limits [dB(µV/m)]	Results [dB(µV/m)] Hori.	Results [dB(µV/m)] Vert.	Margin [dB]	Remarks (Note 2)
375.000	421.050	17.8	2.9	1.0	-1.0	46.0	23.7	23.7	+22.3	A
	842.100	23.3	4.3	-1.0	1.0	46.0	27.6	31.6	+14.4	A
387.500	433.550	18.1	3.0	0.0	-1.0	46.0	23.1	23.1	+22.9	A
	867.100	23.6	4.4	3.0	2.0	46.0	31.0	32.0	+14.0	A
399.995	446.045	18.3	3.0	-1.0	2.0	46.0	24.3	23.3	+21.7	A
	892.090	23.9	4.4	5.0	0.0	46.0	33.3	28.3	+12.7	A

Right Band 7
Tuning Range : 400.000 MHz - 549.995 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Antenna Factor [dB(1/m)]	Corr. Factor [dB]	Meter Readings [dB(μV)] Hori.	Meter Readings [dB(μV)] Vert.	Limits [dB(μV/m)]	Results [dB(μV/m)] Hori.	Results [dB(μV/m)] Vert.	Margin [dB]	Remarks (Note 2)
400.000	353.950	17.0	2.7	0.0	< 0.0	46.0	22.7	< 19.7	+23.3	A
	707.900	22.4	3.9	< -5.0	< -5.0	46.0	< 21.3	< 21.3	> +24.7	A
475.000	428.950	18.0	3.0	-1.0	0.0	46.0	24.0	21.0	+22.0	A
	857.900	23.5	4.4	4.0	5.0	46.0	32.9	32.9	+13.1	A
549.995	503.945	19.5	3.2	0.0	-2.0	46.0	27.7	20.7	+18.3	A
	1007.890	21.1	-26.6	33.0	31.0	54.0	27.5	25.5	+26.5	B

Right Band 7(Reverse)
Tuning Range : 400.000 MHz - 450.000 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Antenna Factor [dB(1/m)]	Corr. Factor [dB]	Meter Readings [dB(µV)] Hori.	Meter Readings [dB(µV)] Vert.	Limits [dB(µV/m)]	Results [dB(µV/m)] Hori.	Results [dB(µV/m)] Vert.	Margin [dB]	Remarks (Note 2)
400.000	446.050	18.3	3.0	-1.0	-1.0	46.0	24.3	24.3	+21.7	A
	892.100	23.9	4.4	6.0	3.0	46.0	35.3	32.3	+10.7	A
425.000	471.050	18.8	3.1	4.0	2.0	46.0	30.9	28.9	+15.1	A
	942.100	24.8	4.6	6.0	0.0	46.0	36.4	29.4	+ 9.6	A
450.000	496.050	19.3	3.2	3.0	-2.0	46.0	27.5	20.5	+18.5	A
	992.100	25.7	4.8	-3.0	< -5.0	54.0	27.5	< 25.5	+26.5	A

Right Band 8
Tuning Range : 810.000 MHz - 999.990 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Antenna Factor [dB(1/m)]	Corr. Factor [dB]	Meter Readings [dB(μV)] Hori.	Meter Readings [dB(μV)] Vert.	Limits [dB(μV/m)]	Results [dB(μV/m)] Hori.	Results [dB(μV/m)] Vert.	Margin [dB]	Remarks (Note 2)
810.000	381.975	17.2	2.8	< -5.0	< -5.0	46.0	< 15.0	< 15.0	> +31.0	A
	763.950	22.7	4.1	8.0	7.0	46.0	34.8	33.8	+11.2	A
905.000	429.475	18.0	3.0	-3.0	< -5.0	46.0	18.0	< 16.0	+28.0	A
	858.950	23.5	4.4	3.0	3.0	46.0	30.9	30.9	+15.1	A
999.990	476.970	18.9	3.1	-3.0	< -5.0	46.0	19.0	< 17.0	+27.0	A
	953.940	25.0	4.6	6.0	5.0	46.0	35.6	34.6	+10.4	A

Right Band 9
Tuning Range : 916.110 MHz - 941.090 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Antenna Factor [dB(1/m)]	Corr. Factor [dB]	Meter Readings [dB(µV)] Hori.	Meter Readings [dB(µV)] Vert.	Limits [dB(µV/m)]	Results [dB(µV/m)] Hori.	Results [dB(µV/m)] Vert.	Margin [dB]	Remarks (Note 2)
916.110	481.080	19.0	3.1	0.0	< -5.0	46.0	22.1	< 17.1	+23.9	A
	962.160	25.1	4.7	9.0	6.0	54.0	38.8	35.8	+15.2	A
928.600	487.325	19.1	3.2	1.0	< -5.0	46.0	23.3	< 17.3	+22.7	A
	974.650	25.3	4.7	9.0	4.0	54.0	39.0	34.0	+15.0	A
941.090	493.570	19.3	3.2	2.0	< -5.0	46.0	24.5	< 17.5	+21.5	A
	987.140	25.6	4.8	8.0	5.0	54.0	38.4	35.4	+15.6	A

Right Band 10
Tuning Range : 961.110 MHz - 986.090 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Antenna Factor [dB(1/m)]	Corr. Factor [dB]	Meter Readings [dB(µV)] Hori.	Meter Readings [dB(µV)] Vert.	Limits [dB(µV/m)]	Results [dB(µV/m)] Hori.	Results [dB(µV/m)] Vert.	Margin [dB]	Remarks (Note 2)
961.110	503.580	19.5	3.2	2.0	< -5.0	46.0	24.7	< 17.7	+21.3	A
	1007.160	21.1	-26.6	46.0	40.0	54.0	40.5	34.5	+13.5	B
973.600	509.825	19.6	3.3	3.0	< -5.0	46.0	25.9	< 17.9	+20.1	A
	1019.650	21.1	-26.6	49.0	42.0	54.0	43.5	36.5	+10.5	B
986.090	516.070	19.8	3.3	1.0	< -5.0	46.0	24.1	< 18.1	+21.9	A
	1032.140	21.0	-26.6	50.0	45.0	54.0	44.4	39.4	+ 9.6	B

Other Disturbance

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Antenna Factor [dB(1/m)]	Corr. Factor [dB]	Meter Readings [dB(μV)] Hori.	Meter Readings [dB(μV)] Vert.	Limits [dB(μV/m)]	Results [dB(μV/m)] Hori.	Results [dB(μV/m)] Vert.	Margin [dB]	Remarks (Note 2)
400.000	30.000	18.5	0.7	< 0.0	< 0.0	40.0	< 19.2	< 19.2	> +20.8	A
	50.000	11.1	0.9	< 0.0	< 0.0	40.0	< 12.0	< 12.0	> +28.0	A
	100.000	10.1	1.3	< 0.0	< 0.0	43.5	< 11.4	< 11.4	> +32.1	A
	200.000	16.6	2.0	< 0.0	< 0.0	43.5	< 18.6	< 18.6	> +24.9	A
	300.000	16.5	2.4	< -5.0	< -5.0	46.0	< 13.9	< 13.9	> +32.1	A
	500.000	19.4	3.2	< -5.0	< -5.0	46.0	< 17.6	< 17.6	> +28.4	A
	700.000	22.4	3.9	< -5.0	< -5.0	46.0	< 21.3	< 21.3	> +24.7	A
	1000.000	25.8	4.8	< -5.0	< -5.0	54.0	< 25.6	< 25.6	> +28.4	A
	1050.000	20.9	-26.6	< 30.0	< 30.0	54.0	< 24.3	< 24.3	> +29.7	B

Sample of calculated result at 942.100 MHz, as the Minimum Margin point:

	Antenna Factor	=	24.8 dB(1/m)
	Corr. Factor	=	4.6 dB
+)	Meter Reading	=	7.0 dB(μV)
	Result	=	36.4 dB(μV/m)

Minimum Margin : 46.0 - 36.4 = 9.4(dB)
The point shown on "___ " is the Minimum Margin Point.

Note 1:
1)The highest frequency generated or used in the EUT : 19.6608 MHz
2)The highest local frequency generated in the EUT : 516.070 MHz
3)The upper frequency of measurement range : 1050 MHz
4)Corr. Factor [dB] (below 1 GHz) = Cable Loss [dB]
Corr. Factor (dB) (above 1 GHz) = Cable Loss(dB) + Pad Attenuator(dB) - Amp. Gain(dB)

Remarks:

Note 2	Detector Function	IF Bandwidth
A	CISPR QP	120 kHz
B	Peak	1 MHz
C	Average	1 MHz

Tester : Yuzo Tanaka

Antenna-Conducted Power Measurement

Scanning Receiver

Test Date: October 16, 2002
Temp.: 26 °C ; Humi.: 54 %

Left Band 1

Tuning range: 118.000MHz - 179.995 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Attenuation Pad Loss [dB]	Meter Readings [dB(µV)]	Limits at 50Ω [dB(µV)]	Results [dB(µV)]	Margin [dB]	Remark (Note 2
118.000	156.850	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	313.700	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	470.550	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	627.400	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	784.250	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	941.100	10.0	< 10.0	50.0	< 20.0	> +30.0	A
149.000	187.850	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	375.700	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	563.550	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	751.400	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	939.250	10.0	< 10.0	50.0	< 20.0	> +30.0	A
179.995	218.845	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	437.690	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	656.535	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	875.380	10.0	< 10.0	50.0	< 20.0	> +30.0	A

Left Band 1(Reverse)

Tuning range: 118.000MHz - 160.000 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Attenuation Pad Loss [dB]	Meter Readings [dB(µV)]	Limits at 50Ω [dB(µV)]	Results [dB(µV)]	Margin [dB]	Rema (Note
118.000	79.150	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	158.300	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	237.450	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	316.600	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	395.750	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	474.900	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	554.050	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	633.200	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	712.350	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	791.500	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	870.650	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	949.800	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	1028.950	10.0	< 10.0	50.0	< 20.0	> +30.0	B
139.000	100.150	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	200.300	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	300.450	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	400.600	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	500.750	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	600.900	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	701.050	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	801.200	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	901.350	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	1001.500	10.0	< 10.0	50.0	< 20.0	> +30.0	B
160.000	121.150	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	242.300	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	363.450	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	484.600	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	605.750	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	726.900	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	848.050	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	969.200	10.0	< 10.0	50.0	< 20.0	> +30.0	A

Left Band 2

Tuning range: 180.000MHz - 259.995 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Attenuation Pad Loss [dB]	Meter Readings [dB(μV)]	Limits at 50Ω [dB(μV)]	Results [dB(μV)]	Margin [dB]	Remarks (Note 2)
180.000	141.150	10.0	13.0	50.0	23.0	+27.0	A
	282.300	10.0	23.0	50.0	33.0	+17.0	A
	423.450	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	564.600	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	705.750	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	846.900	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	988.050	10.0	< 10.0	50.0	< 20.0	> +30.0	A
220.000	181.150	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	362.300	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	543.450	10.0	14.0	50.0	24.0	+26.0	A
	724.600	10.0	12.0	50.0	22.0	+28.0	A
	905.750	10.0	16.0	50.0	26.0	+24.0	A
259.995	221.145	10.0	22.0	50.0	32.0	+18.0	A
	442.290	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	663.435	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	884.580	10.0	< 10.0	50.0	< 20.0	> +30.0	A

Left Band 3

Tuning range: 260.000MHz - 309.995 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Attenuation Pad Loss [dB]	Meter Readings [dB(µV)]	Limits at 50Ω [dB(µV)]	Results [dB(µV)]	Margin [dB]	Remarks (Note 2)
260.000	149.425	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	298.850	10.0	22.0	50.0	32.0	+18.0	A
	448.275	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	597.700	10.0	13.0	50.0	23.0	+27.0	A
	747.125	10.0	10.0	50.0	20.0	+30.0	A
	896.550	10.0	< 10.0	50.0	< 20.0	> +30.0	A
285.000	161.925	10.0	11.0	50.0	21.0	+29.0	A
	323.850	10.0	19.0	50.0	29.0	+21.0	A
	485.775	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	647.700	10.0	12.0	50.0	22.0	+28.0	A
	809.625	10.0	17.0	50.0	27.0	+23.0	A
	971.550	10.0	< 10.0	50.0	< 20.0	> +30.0	A
309.995	174.423	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	348.845	10.0	18.0	50.0	28.0	+22.0	A
	523.268	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	697.690	10.0	19.0	50.0	29.0	+21.0	A
	872.113	10.0	12.0	50.0	22.0	+28.0	A

Left Band 4

Tuning range: 310.000MHz - 549.995 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Attenuation Pad Loss [dB]	Meter Readings [dB(µV)]	Limits at 50Ω [dB(µV)]	Results [dB(µV)]	Margin [dB]	Remarks (Note 2)
310.000	135.575	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	271.150	10.0	26.0	50.0	36.0	+14.0	A
	406.725	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	542.300	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	677.875	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	813.450	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	949.025	10.0	< 10.0	50.0	< 20.0	> +30.0	A
430.000	195.575	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	391.150	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	586.725	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	782.300	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	977.875	10.0	< 10.0	50.0	< 20.0	> +30.0	A
549.995	255.573	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	511.145	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	766.718	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	1022.290	10.0	21.0	50.0	31.0	+19.0	B

Right Band 5

Tuning range: 118.000MHz - 173.995 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Attenuation Pad Loss [dB]	Meter Readings [dB(µV)]	Limits at 50Ω [dB(µV)]	Results [dB(µV)]	Margin [dB]	Remarks (Note 2)
118.000	164.050	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	328.100	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	492.150	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	656.200	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	820.250	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	984.300	10.0	< 10.0	50.0	< 20.0	> +30.0	A
146.000	192.050	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	384.100	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	576.150	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	768.200	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	960.250	10.0	< 10.0	50.0	< 20.0	> +30.0	A
173.995	220.045	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	440.090	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	660.135	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	880.180	10.0	< 10.0	50.0	< 20.0	> +30.0	A

Right Band 6

Tuning range: 375.000MHz - 399.995 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Attenuation Pad Loss [dB]	Meter Readings [dB(µV)]	Limits at 50Ω [dB(µV)]	Results [dB(µV)]	Margin [dB]	Remarks (Note 2)
375.000	421.050	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	842.100	10.0	< 10.0	50.0	< 20.0	> +30.0	A
387.500	433.550	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	867.100	10.0	12.0	50.0	22.0	+28.0	A
399.995	446.045	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	892.090	10.0	< 10.0	50.0	< 20.0	> +30.0	A

Right Band 7

Tuning range: 400.000 MHz - 549.995 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Attenuation Pad Loss [dB]	Meter Readings [dB(µV)]	Limits at 50Ω [dB(µV)]	Results [dB(µV)]	Margin [dB]	Remarks (Note 2)
400.000	353.950	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	707.900	10.0	< 10.0	50.0	< 20.0	> +30.0	A
475.000	428.950	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	857.900	10.0	11.0	50.0	21.0	+29.0	A
549.995	503.945	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	1007.890	10.0	< 10.0	50.0	< 20.0	> +30.0	B

Right Band 7(Reverse)

Tuning range: 400.000 MHz - 450.000 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Attenuation Pad Loss [dB]	Meter Readings [dB(µV)]	Limits at 50Ω [dB(µV)]	Results [dB(µV)]	Margin [dB]	Remarks (Note 2)
400.000	446.050	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	892.100	10.0	< 10.0	50.0	< 20.0	> +30.0	A
425.000	471.050	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	942.100	10.0	< 10.0	50.0	< 20.0	> +30.0	A
450.000	496.050	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	992.100	10.0	< 10.0	50.0	< 20.0	> +30.0	A

Right Band 8

Tuning range: 810.000 MHz - 999.990 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Attenuation Pad Loss [dB]	Meter Readings [dB(µV)]	Limits at 50Ω [dB(µV)]	Results [dB(µV)]	Margin [dB]	Remarks (Note 2)
810.000	381.975	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	763.950	10.0	27.0	50.0	37.0	+13.0	A
905.000	429.475	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	858.950	10.0	17.0	50.0	27.0	+23.0	A
999.990	476.970	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	953.940	10.0	12.0	50.0	22.0	+28.0	A

Right Band 9

Tuning range: 916.110 MHz - 941.090 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Attenuation Pad Loss [dB]	Meter Readings [dB(µV)]	Limits at 50Ω [dB(µV)]	Results [dB(µV)]	Margin [dB]	Remarks (Note 2)
916.110	481.080	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	962.160	10.0	13.0	50.0	23.0	+27.0	A
973.600	509.825	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	1019.650	10.0	16.0	50.0	26.0	+24.0	B
941.090	493.570	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	987.140	10.0	18.0	50.0	28.0	+22.0	A

Right Band 10

Tuning range: 961.110 MHz - 986.090 MHz

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Attenuation Pad Loss [dB]	Meter Readings [dB(µV)]	Limits at 50Ω [dB(µV)]	Results [dB(µV)]	Margin [dB]	Remarks (Note 2)
961.110	503.580	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	1007.160	10.0	20.0	50.0	30.0	+20.0	B
973.600	509.825	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	1019.650	10.0	21.0	50.0	31.0	+19.0	B
986.090	516.070	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	1032.140	10.0	22.0	50.0	32.0	+18.0	B

Other Disturbance

Frequency to which tuned [MHz]	Measured Frequency [MHz]	Attenuation Pad Loss [dB]	Meter Readings [dB(μV)]	Limits at 50Ω [dB(μV)]	Results [dB(μV)]	Margin [dB]	Remarks (Note 2)
500.0000	30.0	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	50.0	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	100.0	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	300.0	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	500.0	10.0	< 10.0	50.0	< 20.0	> +30.0	A
	1000.0	10.0	< 10.0	50.0	< 20.0	> +30.0	B
	1050.0	10.0	< 10.0	50.0	< 20.0	> +30.0	B

Sample of calculated result at 763.950 MHz , as the Minimum Margin point:

	Attenuation Pad Loss	=	10.0 dB
+)	Meter Reading	=	27.0 dB(μV)
	Result	=	37.0 dB(μV)

Minimum Margin : 50.0 - 37.0 = 13.0(dB)
The point shown on "___ " is the Minimum Margin Point.

Conversion of applied limits (refer to §15.111(a))
$50.0\ [dB(\mu V)] = 20\log\{\sqrt{2}[nW]\times10^{-9}\times50[\Omega]\times10^{6}\}$

Note 1:
1)The highest frequency generated or used in the EUT : 19.6608 MHz
2)The highest local frequency generated in the EUT : 516.070 MHz
3)The upper frequency of measurement range : 1050 MHz

Remarks:

Note 2	Detector Function	IF Bandwidth
A	CISPR QP	120 kHz
B	Peak	1 MHz
C	Average	1 MHz

Tester : Yuzo Tanaka

38dB Rejection Test

Scanning Receiver

Test Date: October 16, 2002
Temp.: 24 °C ; Humi.: 60 %

Injected Frequency [MHz]	Detected Frequency [MHz]	12dB SINAD Level at Injected Frequency [dB(µV)]	12dB SINAD Level at Detected Frequency [dB(µV)]	Rejection [dB]	Limits [dB]	Margin [dB]
Left Band						
824.040	118.190	42.6	-16.7	59.3	38.0	+21.3
	133.730	42.4	-17.2	59.6	38.0	+21.6
	157.450	55.9	-17.5	73.4	38.0	+35.4
	182.665	68.7	3.8	64.9	38.0	+26.9
	195.890	54.4	-11.2	65.6	38.0	+27.6
	211.430	47.8	- 9.1	56.9	38.0	+18.9
	235.150	63.1	-14.9	78.0	38.0	+40.0
	275.225	57.4	-10.6	68.0	38.0	+30.0
	306.305	62.8	- 5.2	68.0	38.0	+30.0
	326.480	56.2	- 7.2	63.4	38.0	+25.4
	352.925	61.7	-13.1	74.8	38.0	+36.8
	384.005	69.5	-14.6	84.1	38.0	+46.1
	431.445	55.0	-16.7	71.7	38.0	+33.7
	470.295	56.9	-14.7	71.6	38.0	+33.6
Right Band						
824.040	811.240	66.0	- 6.0	72.0	38.0	+34.0
	849.640	74.0	- 3.3	77.3	38.0	+39.3
	854.740	69.7	- 3.0	72.7	38.0	+34.7
	903.340	66.7	- 2.8	69.5	38.0	+31.5
	941.740	74.1	- 1.9	76.0	38.0	+38.0

Injected Frequency [MHz]	Detected Frequency [MHz]	12dB SINAD Level at Injected Frequency [dB(µV)]	12dB SINAD Level at Detected Frequency [dB(µV)]	Rejection [dB]	Limits [dB]	Margin [dB]
Left Band						
835.020	120.385	42.9	-16.9	59.8	38.0	+21.8
	135.925	42.6	-17.1	59.7	38.0	+21.7
	160.195	57.5	-16.9	74.4	38.0	+36.4
	184.495	65.3	0.4	64.9	38.0	+26.9
	198.085	50.2	-11.5	61.7	38.0	+23.7
	213.625	45.2	-11.5	56.7	38.0	+18.7
	237.895	67.6	-14.9	82.5	38.0	+44.5
	279.620	54.5	-11.7	66.2	38.0	+28.2
	330.140	59.4	- 0.8	60.2	38.0	+22.2
	357.320	66.0	-12.9	78.9	38.0	+40.9
	436.935	55.4	-17.3	72.7	38.0	+34.7
	475.785	55.4	-14.5	69.9	38.0	+31.9
Right Band						
835.020	822.220	68.1	- 5.4	73.5	38.0	+35.5
	858.040	52.9	- 3.1	56.0	38.0	+18.0
	860.620	72.5	- 3.1	75.6	38.0	+37.6
	865.720	71.8	- 3.2	75.0	38.0	+37.0
	904.100	57.7	- 2.7	60.4	38.0	+22.4
	914.320	67.0	- 2.4	69.4	38.0	+31.4
	952.720	76.2	- 1.3	77.5	38.0	+39.5

Injected Frequency [MHz]	Detected Frequency [MHz]	12dB SINAD Level at Injected Frequency [dB(µV)]	12dB SINAD Level at Detected Frequency [dB(µV)]	Rejection [dB]	Limits [dB]	Margin [dB]
Left Band						
848.970	123.175	41.7	-17.1	58.8	38.0	+20.8
	138.715	43.9	-17.3	61.2	38.0	+23.2
	163.680	57.3	-16.3	73.6	38.0	+35.6
	186.820	59.5	- 3.7	63.2	38.0	+25.2
	200.875	47.6	-11.8	59.4	38.0	+21.4
	216.415	42.6	-12.8	55.4	38.0	+17.4
	241.380	59.6	-14.4	74.0	38.0	+36.0
	285.200	51.2	-11.0	62.2	38.0	+24.2
	334.790	58.7	- 0.5	59.2	38.0	+21.2
	362.900	75.0	-12.9	87.9	38.0	+49.9
	443.915	55.8	-17.2	73.0	38.0	+35.0
	482.760	53.7	-13.5	67.2	38.0	+29.2
Reverse mode						
848.970	140.115	69.1	-16.8	85.9	38.0	+47.9
Right Band						
848.970	953.870	68.0	- 1.2	69.2	38.0	+31.2

Injected Frequency [MHz]	Detected Frequency [MHz]	12dB SINAD Level at Injected Frequency [dB(µV)]	12dB SINAD Level at Detected Frequency [dB(µV)]	Rejection [dB]	Limits [dB]	Margin [dB]
Left Band						
869.040	127.190	40.8	-17.3	58.1	38.0	+20.1
	142.730	45.6	-17.5	63.1	38.0	+25.1
	168.700	58.3	-14.8	73.1	38.0	+35.1
	190.165	54.7	- 7.6	62.3	38.0	+24.3
	204.890	42.2	- 9.2	51.4	38.0	+13.4
	220.430	39.4	-14.1	53.5	38.0	+15.5
	246.400	57.9	-13.7	71.6	38.0	+33.6
	293.225	47.1	- 7.2	54.3	38.0	+16.3
	315.580	53.5	-11.9	65.4	38.0	+27.4
	341.480	53.5	-10.1	63.6	38.0	+25.6
	370.925	58.6	-11.2	69.8	38.0	+31.8
	402.005	70.1	-16.3	86.4	38.0	+48.4
	453.945	54.8	-16.6	71.4	38.0	+33.4
	492.795	51.2	-12.7	63.9	38.0	+25.9
Right Band						
869.040	856.240	74.8	- 3.1	77.9	38.0	+39.9
	894.640	69.9	- 3.0	72.9	38.0	+34.9

Injected Frequency [MHz]	Detected Frequency [MHz]	12dB SINAD Level at Injected Frequency [dB(µV)]	12dB SINAD Level at Detected Frequency [dB(µV)]	Rejection [dB]	Limits [dB]	Margin [dB]
Left Band						
880.020	129.385	41.0	-17.2	58.2	38.0	+20.2
	144.925	47.7	-17.2	64.9	38.0	+26.9
	171.445	60.4	-13.5	73.9	38.0	+35.9
	191.995	60.6	- 1.8	62.4	38.0	+24.4
	207.085	39.4	- 3.1	42.5	38.0	+ 4.5
	222.625	37.8	-14.4	52.2	38.0	+14.2
	249.145	57.2	-12.9	70.1	38.0	+32.1
	297.620	45.0	- 3.3	48.3	38.0	+10.3
	319.240	45.1	-11.6	56.7	38.0	+18.7
	345.140	49.1	-11.8	60.9	38.0	+22.9
	375.320	55.5	-13.8	69.3	38.0	+31.3
	459.435	55.3	-15.8	71.1	38.0	+33.1
	498.285	50.4	-12.1	62.5	38.0	+24.5
Right Band						
880.020	903.040	54.9	- 2.7	57.6	38.0	+19.6
	905.620	71.9	- 2.7	74.6	38.0	+36.6
	949.100	57.8	- 1.6	59.4	38.0	+21.4

Injected Frequency [MHz]	Detected Frequency [MHz]	12dB SINAD Level at Injected Frequency [dB(µV)]	12dB SINAD Level at Detected Frequency [dB(µV)]	Rejection [dB]	Limits [dB]	Margin [dB]
Left Band						
893.970	132.175	41.9	-17.3	59.2	38.0	+21.2
	147.715	50.7	-16.8	67.5	38.0	+29.5
	174.930	62.8	-12.4	75.2	38.0	+37.2
	181.370	57.0	8.4	48.6	38.0	+10.6
	194.320	50.3	-10.4	60.7	38.0	+22.7
	209.875	36.1	- 6.1	42.2	38.0	+ 4.2
	225.415	36.8	-14.6	51.4	38.0	+13.4
	252.630	57.3	-12.2	69.5	38.0	+31.5
	303.200	43.9	1.7	42.2	38.0	+ 4.2
	323.890	41.5	- 9.3	50.8	38.0	+12.8
	349.790	45.8	-13.1	58.9	38.0	+20.9
	380.900	60.7	-14.5	75.2	38.0	+37.2
	466.415	53.6	-15.2	68.8	38.0	+30.8
	505.260	47.5	-11.2	58.7	38.0	+20.7
Reverse mode						
893.970	145.740	69.4	-17.3	86.7	38.0	+48.7
Right Band						
893.970	998.870	66.7	2.3	64.4	38.0	+26.4

Sample of calculated result at 209.875 MHz, as the Minimum Margin point:

	12dB SINAD Level at Detected Frequency	=	36.1 dB(µV)
-)	12dB SINAD Level at Injected Frequency	=	-6.1 dB(µV)
	Rejection	=	42.2 dB

Minimum Margin : 42.2 - 38.0 = 4.2(dB)
The point shown on "___ " is the Minimum Margin Point.

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