EMC EMISSION - TEST REPORT

JQA APPLICATION No. : KL80000598

Name of Product : 900MHz Cordless Telephone(Base Unit)

Model / Type No. : KX-TC1743

FCC ID : ACJ96NKX-TC1743

Applicant : Kyushu Matsushita Electric Co., Ltd.

Address : 1-62, 4-chome, Minoshima, Hakata-ku, Fukuoka 812-8531, Japan

Manufacturer : Kyushu Matsushita Electric Co., Ltd.

Address : 1-62, 4-chome, Minoshima, Hakata-ku, Fukuoka 812-8531, Japan

Receive date of EUT : February 9, 2001

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

DIRECTORY

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TEST REGULATION

FCC Rules and Regulations Part 15 Subpart A and C (September 20, 2000)

○ - Class A Digital Device
○ - Class B Digital Device
● - Intentional Radiator(Sec.15.249)
○ - Receiver

Test items:

○ - Sec.15.203 : Antenna requirement
● - Sec.15.205 : Restricted bands of operation
● - Sec.15.207 : Conducted limits
● - Sec.15.209 : Radiated emission limits general requirements
○ - Sec.15.214 : Cordless Telephones
● - Sec.15.249 : Operation within the bands 902-928MHz, 2400-2483.5MHz, 5725-5875MHz, and 24.0-24.25GHz

Test procedure:

Conducted emission and radiated emission 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.
NVLAP Lab Code: 200191-0

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.

Description of the Equipment Under Test (EUT):

1)	Name	: 900MHz Cordless Telephone(Base Unit)
2)	Model/Type No.	: KX-TC1743
3)	Product Type	: Pre-Production (S/N: ---)
4)	Category	: Intentional Radiator
5)	EUT Authorization	: ○ - Verification ● - Certification ○ - D.o.C.
6)	Transmitting Frequency	: 902.713 MHz(1ch) - 927.289 MHz(109ch)
7)	Receiving Frequency	: 902.713 MHz(1ch) - 927.289 MHz(109ch)
8)	Emission Designations	: F1E
9)	Type of Antenna	: Permanently Dipole Antenna
10)	Power Rating	: AC 120V 60Hz 1ϕ 2-pin plug(AC adaptor : KX-TCA1)

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	December, 2000	1 Year
● - KNW-407	D - 6	January, 2001	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		
○ - 65 BNC-50-0-1	H - 26		
○ - 65 BNC-50-0-1	H - 27		
○ - Cable	H - 7		
● - Cable	H - 8	January, 2001	1 Year

Environmental conditions:

Temperature: 24 °C Humidity: 30 %

Magnetic Field Radiated Emission Measurement
was performed in the frequency range of 9 kHz - 30 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

Used test instruments:

Model No.	Device ID	Last Cal. Date	Cal. Interval
○ - ESCS 30	A - 1		
○ - ESH 2	A - 2		
● - ESH 2	A - 3	December, 2000	1 Year
○ - HFH2-Z2	C - 2		
● - HFH2-Z2	C - 3	July, 2000	1 Year

Environmental conditions:

Temperature: 15 °C Humidity: 32 %

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 24, 2000
2) Interval : 1 Year

Used test instruments:

Model No.	Device ID	Last Cal. Date	Cal. Interval
● - ESV/ESV-Z3	A - 7 / A - 17	December, 2000	1 Year
○ - 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		
● - KBA-511A	C - 12	November, 2000	1 Year
● - KBA-611	C - 22	November, 2000	1 Year
○ - KBA-511A	C - 13		
○ - KBA-611	C - 19		
○ - KBA-511A	C - 11		
○ - KBA-611	C - 21		
○ - Cable	H - 1		
○ - Cable	H - 2		
● - Cable	H - 5	November, 2000	1 Year
○ - Cable	H - 6		
○ - Cable	H - 9		

Environmental conditions:

Temperature: 15 °C Humidity: 32 %

Electromagnetic Field Radiated Emission Measurement
was performed in horizontal and vertical polarization, in the frequency range of 1 GHz - 10 GHz, 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, 2000	1 Year
● - 8566B	A - 13	December, 2000	1 Year
○ - 8593A	A - 15		
○ - ESV	A - 6		
● - 4T-10	D - 73	May, 2000	1 Year
○ - 4T-10	D - 74		
● - WJ-6611-513	A - 23	May, 2000	1 Year
● - WJ-6882-824	A - 21	May, 2000	1 Year
● - DBL-0618N515	A - 33	May, 2000	1 Year
● - 91888-2	C - 41 - 1	May, 2000	1 Year
● - 91889-2	C - 41 - 2	May, 2000	1 Year
○ - 94613-1	C - 41 - 3		
○ - 91891-2	C - 41 - 4		
○ - 94614-1	C - 41 - 5		
● - 3160-04	C - 55	May, 2000	1 Year
● - 3160-05	C - 56	May, 2000	1 Year
● - 3160-06	C - 57	May, 2000	1 Year
● - 3160-07	C - 58	May, 2000	1 Year
○ - 3160-08	C - 59		
○ - 3160-09	C - 48		
○ - 355C	D - 22		
○ - 355D	D - 23		
○ - 8494H/8595H	D - 76		
○ - MZ5010C	D - 81		
● - Cable	C - 40 - 11	May, 2000	1 Year
● - Cable	C - 40 - 12	May, 2000	1 Year

Environmental conditions:

Temperature: 15 °C Humidity: 32 %

CONFIGURATION OF EUT

The Equipment Under Test (EUT) consists of:

Description	Applicant (Manufacturer)	Model No. (Serial No.)	FCC ID
900MHz Cordless Telephone (Base Unit)	Kyushu Matsushita Electric Co., Ltd. (Kyushu Matsushita Electric Co., Ltd.)	KX-TC1743 (--)	ACJ96NKX-TC1743
AC Adaptor	Kyushu Matsushita Electric Co., Ltd. (Kyushu Matsushita Electric Co., Ltd.)	KX-TCA1 (--)	N/A

The measurement was carried out with the following equipment connected:

Description	Grantee/Distributor	Model No. (Serial No.)	FCC ID
900MHz Cordless Telephone (Handset)	Matsushita Electric Ind. Co., Ltd.	KX-TC1743 (--)	ACJ96NKX-TC1743

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

	Description	Port	Shielded Cable	Shell Material	Ferrite Core	Cable Length
1	EUT (DC power cord)	DC IN	NO	--	NO	2.0 m
	AC Adaptor 1ϕ-2Pin Plug	--		--		
2	EUT	TEL	NO	--	NO	2.0 m
	No termination	--		--		

Operation - mode of the EUT:

The EUT was operated during the test under the following specification:

1) Transmitting on communicating with the handset.(Modulation signal : random digital signal)
2) Charging the handest(The handset is set on the base unit.)

Test system:

The EUT has two ports, one DC IN port and one TEL port.

Special accessories:

None

Detailed Transmitter portion(Channel plan):

Transmitting frequency	:	902.713 MHz(1ch) - 927.289 MHz(109ch)
Number of channel	:	109
Channel Separation	:	227.56 kHz

Modulation System Information:

Type	:	TDD-FSK(Frequency Deviation : Typical +/-60kHz)
Bit Rate	:	128Kbit/sec

Time-division duplex(TDD) Frame format:
The TDD frame is 2msec in length, and is composed of two symmetrical 797μsec TX and RX subframes. Each subframe contains 102 bits of 7.8 μsec duration, with 203 μsec gap times between both TX and RX subframes.

Digital Security Code	:	28bits

Detailed Receiver portion:

Receiving frequency	:	902.713 MHz(1ch) - 927.289 MHz(109ch)
Local frequency	:	913.408 MHz(1ch) - 925.469 MHz(54ch) 904.306 MHz(55ch) - 916.594 MHz(109ch)
Intermediate frequency	:	10.695 MHz

The used (generated) frequencies in the EUT:

PLL Circuit	:	902.713 MHz - 927.289 MHz
Reference Clock	:	4.096 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 450 kHz - 30 MHz(Sec.15.207(a))

The requirements are ● - **Passed** ○ - **Not Passed**

Min. limit margin	+20.1	dB	at	28.67	MHz
Max. limit exceeding		dB	at		MHz
Uncertainty of measurement results	+ 2.1	dB(2σ)		- 2.1	dB(2σ)

Remarks:

Electromagnetic Field Radiated Emission 9 kHz - 10 GHz

Fundamental and Harmonics(Sec.15.249(a))

The requirements are ● - **Passed** ○ - **Not Passed**

Min. limit margin	6.8	dB	at	927.289	MHz
Max. limit exceeding		dB	at		MHz

Spurious and Band-edge(Sec.15.249(c))

The requirements are ● - **Passed** ○ - **Not Passed**

Min. limit margin	2.6	dB	at	294.9	MHz
Max. limit exceeding		dB	at		MHz
Uncertainty of measurement results (≤ 30 MHz)	+ 2.5	dB(2σ)		- 2.5	dB(2σ)
Uncertainty of measurement results (30 MHz - 1000 MHz)	+ 4.1	dB(2σ)		- 4.2	dB(2σ)
Uncertainty of measurement results (≥ 1000 MHz)	+ 3.1	dB(2σ)		- 3.2	dB(2σ)

Remarks:

SUMMARY

GENERAL REMARKS :

The EUT was tested according to the requirements of FCC Rules and Regulations Part 15 Subpart A and C (September 20, 2000) under the test configuration, as shown in page 14.

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 : February 9, 2001

End of testing : February 13, 2001

- JAPAN QUALITY ASSURANCE ORGANIZATION -

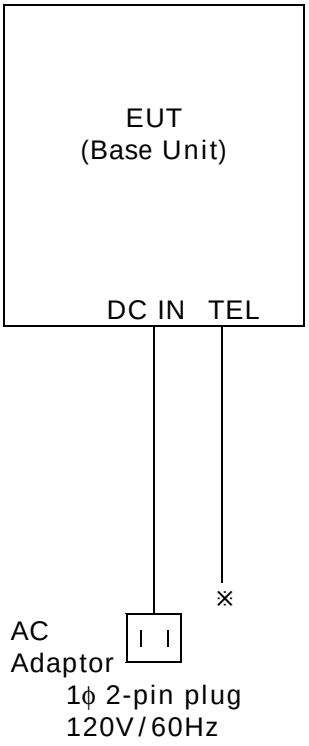
Approved by :

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

Issued by :

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

Test System-Arrangement (Drawings)

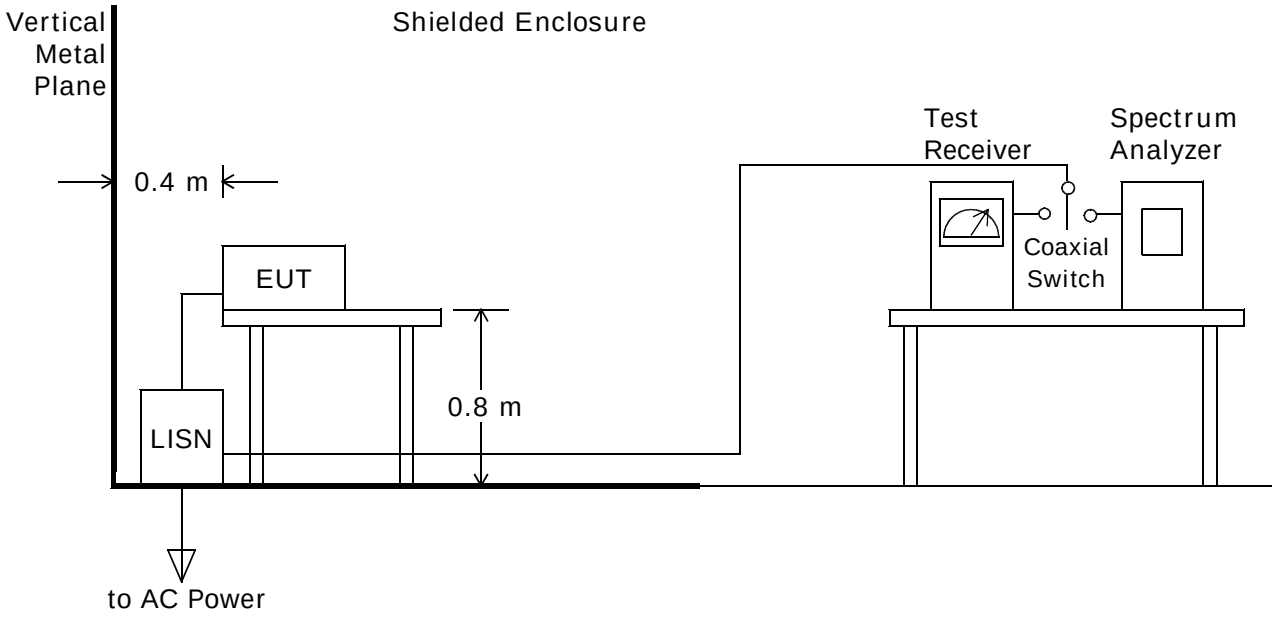


Note) ※: No termination

Preliminary Test and Test-setup(Drawings)

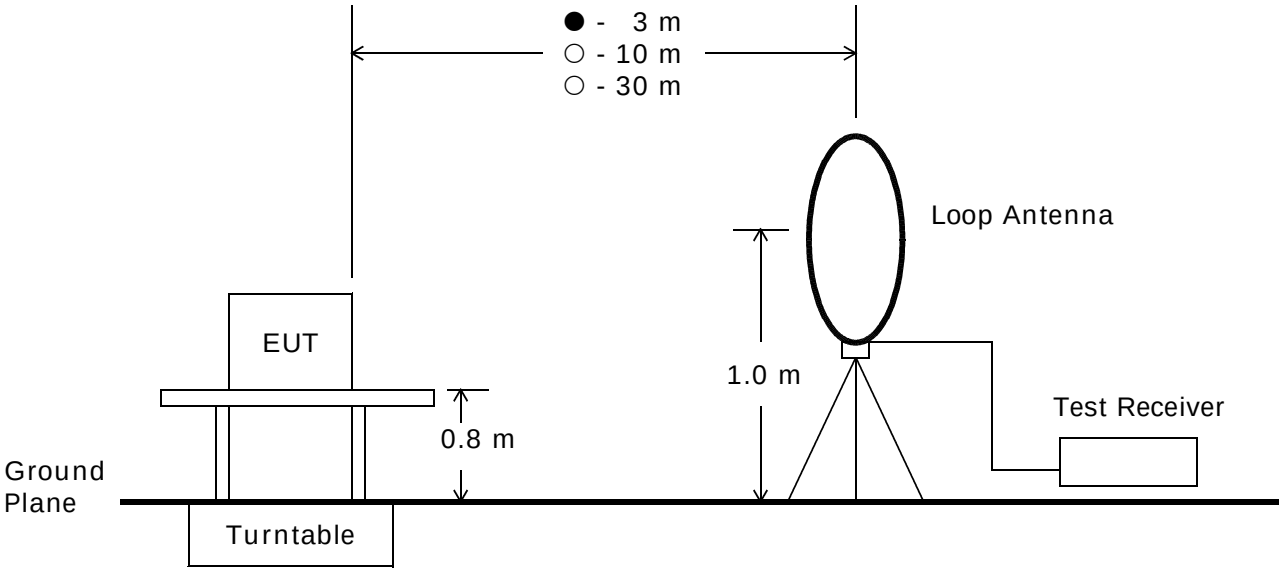
AC Powerline Conducted Emission 450 kHz - 30 MHz:

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.



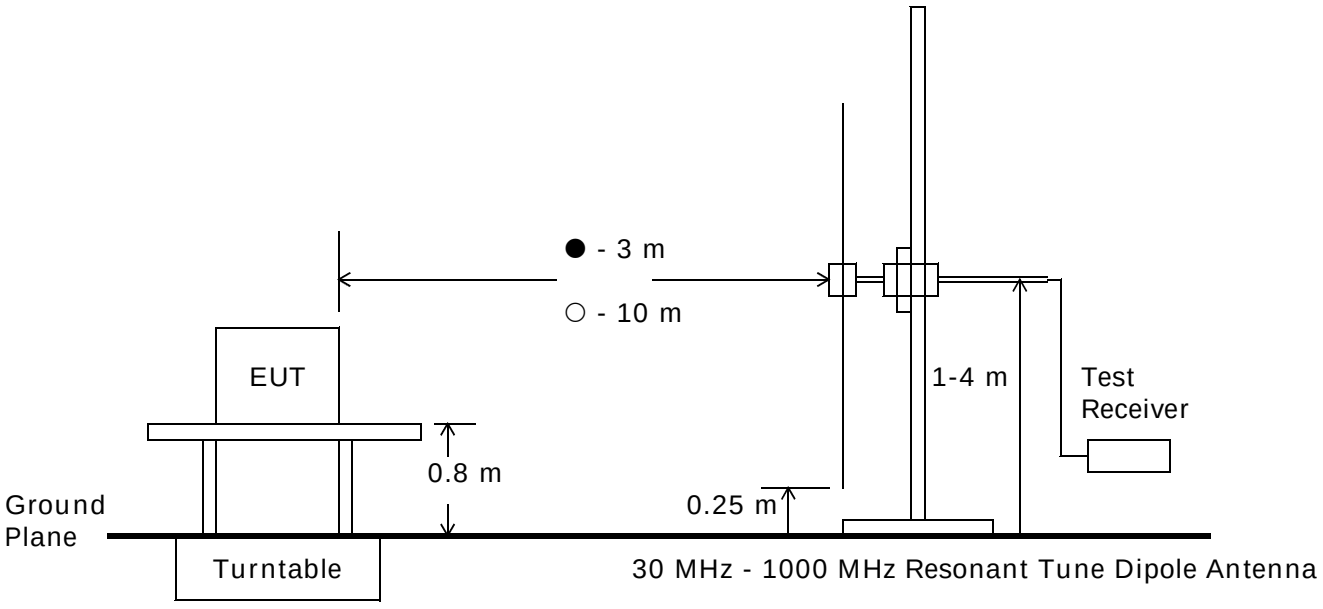
Radiated Emission (Magnetic Field) 9 kHz - 30 MHz:

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 loop 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 (9 kHz - 30 MHz).
Step 3: Using a test receiver and a loop 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 loop antenna. The maximum emission was found by changing the cable positions, the antenna position 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 worst point were taken and recorded.



Electromagnetic Field Radiated Emission 30 MHz - 1000 MHz:

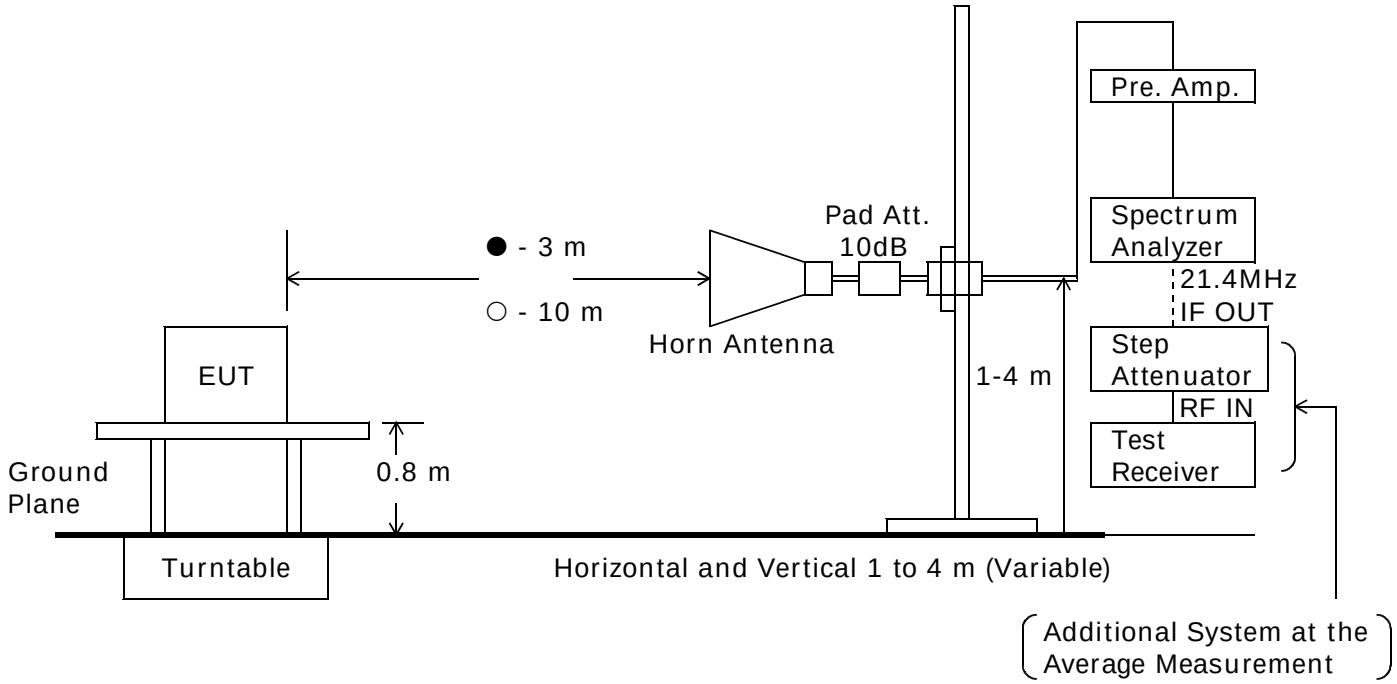
The preliminary test was performed according to the description of ANSI C63.4-1992 Sec.8.3.1.1 (Preliminary Radiated Emissions Tests) and Sec.6.2.1 (Tabletop Equipment Tests).
The preliminary test was carried out to investigate the frequency of the emission that has the highest amplitude relative to 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, the antenna position 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 worst point were taken and recorded.



Electromagnetic Field Radiated Emission 1 GHz - 10 GHz:

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 (1 GHz - 10 GHz).
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. The maximum emission was found by changing the cable positions, the antenna position 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 worst point were taken and recorded.



Spectrum Analyzer Setting:

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

Test Receiver Setting:

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

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

Test-Setup (Photographs) at worst case

Conducted Emission 450kHz - 30MHz:

Front View

Side View

Radiated Emission 9 kHz - 10 GHz

Horizontal polarization

Vertical polarization

AC Powerline Conducted Emission Measurement

Intentional Radiator

Based on the test result of every test mode, the mode of operation that produce the conducted emission that has the highest amplitude is shown as follows:

Test Date: February 13, 2001
Temp.: 25 °C ; Humi.: 30 %

Opearting Condition : Charging

Frequency [MHz]	Correction Factor [dB]	Meter Readings [dB(µV)] VA QP	VA AV	VB QP	VB AV	Limits [dB(µV)]	Results [dB(µV)] QP	Results [dB(µV)] AV	Margin [dB]	Remarks (Note 2)
0.45	0.1	<10.0	-	<10.0	-	48.0	<10.1	-	>+37.9	A
1.00	0.1	<10.0	-	<10.0	-	48.0	<10.1	-	>+37.9	A
2.00	0.2	<10.0	-	<10.0	-	48.0	<10.2	-	>+37.8	A
4.09	0.3	<10.0	-	<10.0	-	48.0	<10.3	-	>+37.7	A
8.19	0.5	13.0	-	13.0	-	48.0	13.5	-	+34.5	A
12.29	0.6	15.0	-	15.0	-	48.0	15.6	-	+32.4	A
16.38	0.7	15.0	-	16.0	-	48.0	16.7	-	+31.3	A
20.48	0.8	24.0	-	24.0	-	48.0	24.8	-	+23.2	A
24.58	0.9	21.0	-	21.0	-	48.0	21.9	-	+26.1	A
28.67	0.9	27.0	-	27.0	-	48.0	27.9	-	+20.1	A

Sample of calculated result at 28.67 MHz, as the Minimum Margin point:

	Correction Factor	=	0.9 dB
+)	Meter Reading	=	27.0 dB(µV)
	Result	=	27.9 dB(µV)

Minimum Margin : 48.0 - 27.9 = 20.1(dB)
The point shown on "____" is the Minimum Margin Point.

Note 1:
1)The correction factor 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 : Yasuhisa Sakai

Electromagnetic Field Radiated Emission Measurement

Intentional Radiator

Spurious emission except fundamental and harmonics(9kHz - 1GHz)

Test Date: February 13, 2001
Temp.: 15 °C ; Humi.: 32 %

Transmitting Frequency : 915.001 MHz (55 ch)

Frequency [MHz]	Antenna Factor [dB(1/m)]	Cable Loss [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)
122.9	10.7	1.9	20.0	12.0	43.5	32.6	24.6	+10.9	C
167.9	13.4	2.3	19.0	10.0	43.5	34.7	25.7	+ 8.8	C
200.7	15.0	2.5	19.5	10.0	43.5	37.0	27.5	+ 6.5	C
213.0	15.5	2.6	18.0	8.0	43.5	36.1	26.1	+ 7.4	C
237.6	16.4	2.7	17.0	8.0	46.0	36.1	27.1	+ 9.9	C
294.9	18.3	3.1	22.0	12.0	46.0	43.4	33.4	+ 2.6	C
303.1	18.5	3.1	21.0	10.0	46.0	42.6	31.6	+ 3.4	C
426.0	21.7	3.9	10.0	<5.0	46.0	35.6	<30.6	+10.4	C
700.4	26.5	5.2	10.0	5.0	46.0	41.7	36.7	+ 4.3	C
770.1	27.4	5.4	3.0	1.0	46.0	35.8	33.8	+10.2	C

Sample of calculated result at 294.9 MHz, as the Minimum Margin point:

	Antenna Factor	=	18.3 dB(1/m)
	Cable Loss	=	3.1 dB
+)	Meter Reading	=	22.0 dB(μV)
	Result	=	43.4 dB(μV/m)

Minimum Margin : 46.0 - 43.4 = 2.6(dB)

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

Note 1:

1)The highest frequency generated or used in the EUT: 927.289 MHz

2)The upper frequency of measurement range : 10 GHz

Remarks:

Note 2	Detector Function	IF Bandwidth
A	CISPR QP	200 Hz
B	CISPR QP	9 kHz
C	CISPR QP	120 kHz
D	Average	120 kHz
E	Average	12 kHz
F	Average	7.5 kHz

Tester : Yasuhisa Sakai

Electromagnetic Field Radiated Emission Measurement

Intentional Radiator

Fundamental and harmonics(above 900MHz)

Test Date: February 9, 2001
Temp.: 21 °C ; Humi.: 33 %

Transmitting Frequency : 902.713 MHz (1 ch)

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)
Fundamental and Band-edge									
902.000	28.9	5.9	0.0	0.0	46.0	34.8	34.8	+11.2	C
902.713	28.9	5.9	50.0	50.0	94.0	84.8	84.8	+ 9.2	C
Harmonics at Average Detector									
1805.426	21.5	-38.9	50.0	46.0	54.0	32.6	28.6	+21.4	F
2708.139	21.2	-31.6	41.0	49.0	54.0	30.6	38.6	+15.4	F
3610.852	23.8	-31.0	30.0	34.0	54.0	22.8	26.8	+27.2	F
4513.565	27.3	-31.1	<20.0	<20.0	54.0	<16.2	<16.2	>+37.8	F
5416.277	27.3	-31.1	<20.0	<20.0	54.0	<16.2	<16.2	>+37.8	F
6318.990	29.9	-30.1	<20.0	<20.0	54.0	<19.8	<19.8	>+34.2	F
7221.703	29.9	-29.7	<20.0	<20.0	54.0	<20.2	<20.2	>+33.8	F
8124.416	30.0	-27.8	<20.0	<20.0	54.0	<22.2	<22.2	>+31.8	F
9027.129	33.4	-27.8	<20.0	<20.0	54.0	<25.6	<25.6	>+28.4	F
9929.842	33.5	-27.5	<20.0	<20.0	54.0	<26.0	<26.0	>+28.0	F
Harmonics at Peak Detector									
1805.426	21.5	-38.9	68.0	59.0	74.0	50.6	41.6	+23.4	G
2708.139	21.2	-31.6	54.0	61.0	74.0	43.6	50.6	+23.4	G
3610.852	23.8	-31.0	45.0	48.0	74.0	37.8	40.8	+33.2	G
4513.565	27.3	-31.1	<40.0	<40.0	74.0	<36.2	<36.2	>+37.8	G
5416.277	27.3	-31.1	<40.0	<40.0	74.0	<36.2	<36.2	>+37.8	G
6318.990	29.9	-30.1	<40.0	<40.0	74.0	<39.8	<39.8	>+34.2	G
7221.703	29.9	-29.7	<40.0	<40.0	74.0	<40.2	<40.2	>+33.8	G
8124.416	30.0	-27.8	<40.0	<40.0	74.0	<42.2	<42.2	>+31.8	G
9027.129	33.4	-27.8	<40.0	<40.0	74.0	<45.6	<45.6	>+28.4	G
9929.842	33.5	-27.5	<40.0	<40.0	74.0	<46.0	<46.0	>+28.0	G

Transmitting Frequency : 915.001 MHz (55 ch)

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)
Fundamental									
915.001	29.1	5.9	49.0	49.0	94.0	84.0	84.0	+10.0	C
Harmonics at Average Detector									
1830.002	21.6	-38.6	57.0	50.0	54.0	40.0	33.0	+14.0	F
2745.003	21.4	-31.5	38.0	47.0	54.0	27.9	36.9	+17.1	F
3660.004	23.8	-30.9	34.0	39.0	54.0	26.9	31.9	+22.1	F
4575.005	27.3	-31.1	<20.0	<20.0	54.0	<16.2	<16.2	>+37.8	F
5490.005	27.4	-31.1	<20.0	<20.0	54.0	<16.3	<16.3	>+37.7	F
6405.006	29.9	-30.1	<20.0	<20.0	54.0	<19.8	<19.8	>+34.2	F
7320.007	29.9	-29.6	<20.0	<20.0	54.0	<20.3	<20.3	>+33.7	F
8235.008	30.0	-27.8	<20.0	<20.0	54.0	<22.2	<22.2	>+31.8	F
9150.009	33.4	-27.8	<20.0	<20.0	54.0	<25.6	<25.6	>+28.4	F
Harmonics at Peak Detector									
1830.002	21.6	-38.6	67.0	61.0	74.0	50.0	44.0	+24.0	G
2745.003	21.4	-31.5	51.0	59.0	74.0	40.9	48.9	+25.1	G
3660.004	23.8	-30.9	45.0	48.0	74.0	37.9	40.9	+33.1	G
4575.005	27.3	-31.1	<40.0	<40.0	74.0	<36.2	<36.2	>+37.8	G
5490.005	27.4	-31.1	<40.0	<40.0	74.0	<36.3	<36.3	>+37.7	G
6405.006	29.9	-30.1	<40.0	<40.0	74.0	<39.8	<39.8	>+34.2	G
7320.007	29.9	-29.6	<40.0	<40.0	74.0	<40.3	<40.3	>+33.7	G
8235.008	30.0	-27.8	<40.0	<40.0	74.0	<42.2	<42.2	>+31.8	G
9150.009	33.4	-27.8	<40.0	<40.0	74.0	<45.6	<45.6	>+28.4	G

Transmitting Frequency : 927.289 MHz (109 ch)

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)
Fundamental and Band-edge									
927.289	29.2	6.0	52.0	51.0	94.0	87.2	86.2	+6.8	C
928.000	29.2	6.0	4.5	3.5	46.0	39.7	38.7	+6.3	C
Harmonics at Average Detector									
1854.578	21.6	-38.6	50.0	45.0	54.0	33.0	28.0	+21.0	F
2781.867	21.4	-31.5	38.0	46.0	54.0	27.9	35.9	+18.1	F
3709.156	23.8	-30.9	31.0	32.0	54.0	23.9	24.9	+29.1	F
4636.445	27.3	-31.2	<20.0	<20.0	54.0	<16.1	<16.1	>+37.9	F
5563.733	27.4	-31.0	<20.0	<20.0	54.0	<16.4	<16.4	>+37.6	F
6491.022	29.9	-30.1	<20.0	<20.0	54.0	<19.8	<19.8	>+34.2	F
7418.311	30.0	-29.5	<20.0	<20.0	54.0	<20.5	<20.5	>+33.5	F
8345.600	33.4	-27.8	<20.0	<20.0	54.0	<25.6	<25.6	>+28.4	F
9272.889	33.4	-27.7	<20.0	<20.0	54.0	<25.7	<25.7	>+28.3	F
Harmonics at Peak Detector									
1854.578	21.6	-38.6	65.0	59.0	74.0	48.0	42.0	+26.0	G
2781.867	21.4	-31.5	50.0	58.0	74.0	39.9	47.9	+26.1	G
3709.156	23.8	-30.9	45.0	47.0	74.0	37.9	39.9	+34.1	G
4636.445	27.3	-31.2	<40.0	<40.0	74.0	<36.1	<36.1	>+37.9	G
5563.733	27.4	-31.0	<40.0	<40.0	74.0	<36.4	<36.4	>+37.6	G
6491.022	29.9	-30.1	<40.0	<40.0	74.0	<39.8	<39.8	>+34.2	G
7418.311	30.0	-29.5	<40.0	<40.0	74.0	<40.5	<40.5	>+33.5	G
8345.600	33.4	-27.8	<40.0	<40.0	74.0	<45.6	<45.6	>+28.4	G
9272.889	33.4	-27.7	<40.0	<40.0	74.0	<45.7	<45.7	>+28.3	G

Sample of calculated result at 928.000 MHz, as the Minimum Margin point:

	Antenna Factor	=	29.2 dB(1/m)
	Corr. Factor	=	6.0 dB
+)	Meter Reading	=	4.5 dB(μV)
	Result	=	39.7 dB(μV/m)

Minimum Margin : 46.0 - 39.7 = 6.3(dB)
The point shown on "___ " is the Minimum Margin Point.

Note 1:
1)The highest frequency generated or used in the EUT: 927.289 MHz
2)The upper frequency of measurement range : 10 GHz
3)The spectrum was scanned 9 kHz to 10 GHz and all emissions not reported were more than 20 dB below the applied limits.
4)Corr. Factor [dB] (below 1 GHz) = Cable Loss [dB]
Corr. Factor [dB] (above 1 GHz) = Cable Loss [dB] + 10 dB Pad Attenuator [dB] - Pre-Amplifier Gain [dB]

Remarks:

Note 2	Detector Function	IF Bandwidth
A	CISPR QP	200 Hz
B	CISPR QP	9 kHz
C	CISPR QP	120 kHz

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

( ):Setting of spectrum analyzer
*)For the average/peak measurement method, it is made measurement using a test receiver, a step attenuator or and a spectrum analyzer(FCC REPLY No. 950523A).

Tester : Hiroshi Fujimoto