JQA File No. : KL80130663R
Issue Date : April 1, 2014

TEST REPORT

Applicant	:	Sharp Corporation, Communication Systems Division
Address	:	2-13-1, Iida Hachihonmatsu, Higashi-Hiroshima City, Hiroshima, 739-0192, JAPAN
Products	:	Cellular Phone
Model No.	:	SH-04F
SERIAL NO.	:	004401115065456 004401115065449
FCC ID	:	APYHRO00207
Test Standard	:	CFR 47 FCC Rules and Regulations Part 15
Test Results	:	**Passed**
Date of Test	:	March 7 ~ April 1, 2014

Kousei Shibata
Manager
Japan Quality Assurance Organization
KITA-KANSAI Testing Center
SAITO EMC Branch
7-3-10, Saito-asagi, Ibaraki-shi, Osaka 567-0085, Japan

VLAC Lab Accreditation VLAC-001-2

- The measurement values stated in Test Report was made with traceable to National Institute of Advanced Industrial Science and Technology (AIST) of Japan and National Institute of Information and Communications Technology (NICT) of Japan.
- The applicable standard, testing condition and testing method which were used for the tests are based on the request of the applicant.
- The test results presented in this report relate only to the offered test sample.
- The contents of this test report cannot be used for the purposes, such as advertisement for consumers.
- This test report shall not be reproduced except in full without the written approval of JQA.
- VLAC does not approve, certify or warrant the product by this test report.

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DEFINITIONS FOR ABBREVIATION AND SYMBOLS USED IN THIS TEST REPORT

EUT : Equipment Under Test
AE : Associated Equipment
N/A : Not Applicable
N/T : Not Tested
EMC : Electromagnetic Compatibility
EMI : Electromagnetic Interference
EMS : Electromagnetic Susceptibility

☒ - indicates that the listed condition, standard or equipment is applicable for this report.
☐ - indicates that the listed condition, standard or equipment is not applicable for this report.

1 Description of the Equipment Under Test

1.	Manufacturer	:	Sharp Corporation, Communication Systems Division 2-13-1, Iida Hachihonmatsu, Higashi-Hiroshima City, Hiroshima, 739-0192, JAPAN
2.	Products	:	Cellular Phone
3.	Model No.	:	SH-04F
4.	Serial No.	:	004401115065456
		:	004401115065449
5.	Product Type	:	Pre-production
6.	Date of Manufacture	:	February, 2014
7.	Power Rating	:	4.0VDC (Lithium-ion Battery UBATIA242FN1 3300mAh)
8.	EUT Grounding	:	None
9.	Transmitting Frequency	:	2402.0 MHz(02CH) – 2480.0MHz(80CH)
10.	Receiving Frequency	:	2402.0 MHz(02CH) – 2480.0MHz(80CH)
11.	EUT Authorization	:	Certification
12.	Received Date of EUT	:	March 5, 2014

13. Channel Plan

The carrier spacing is 1 MHz.
The carrier frequency is designated by the absolute frequency channel number (ARFCN).
The carrier frequency is expressed in the equation shown as follows:

Normal Mode:
Transmitting Frequency (in MHz) = 2402.0 + (n - 2)
Receiving Frequency (in MHz) = 2402.0 + (n - 2)
where, n : channel number ($2 \leq n \leq 80$)

2 Summary of Test Results

Applied Standard : CFR 47 FCC Rules and Regulations Part 15
Subpart C – Intentional Radiators

The EUT described in clause 1 was tested according to the applied standard shown above.
Details of the test configuration is shown in clause 6.
The conclusion for the test items of which are required by the applied standard is indicated under the test result.

☒ - The test result was **passed** for the test requirements of the applied standard.

☐ - The test result was **failed** for the test requirements of the applied standard.

☐ - The test result was **not judged** the test requirements of the applied standard.

In the approval of test results,
- Determining compliance with the limits in this report was based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
- No deviations were employed from the applied standard.
- No modifications were conducted by JQA to achieve compliance to the limitations.

Reviewed by:

S. Kino

Shigeru Kinoshita
Deputy Manager
JQA KITA-KANSAI Testing Center
SAITO EMC Branch

Tested by:

Shigeru Osawa

Shigeru Osawa
Deputy Manager
JQA KITA-KANSAI Testing Center
SAITO EMC Branch

3 Test Procedure

Test Requirements : §15.249, §15.207 and §15.209

Test Procedure : ANSI C63.4–2003, ANSI C63.10–2009

4 Test Location

Japan Quality Assurance Organization (JQA)
KITA-KANSAI Testing Center
7-7, Ishimaru, 1-chome, Minoh-shi, Osaka, 562-0027, Japan
SAITO EMC Branch
7-3-10, Saito-asagi, Ibaraki-shi, Osaka 567-0085, Japan

5 Recognition of Test Laboratory

JQA KITA-KANSAI Testing Center SAITO EMC Branch is accredited under ISO/IEC 17025 by following accreditation bodies and the test facility is registered by the following bodies.

VLAC Accreditation No.	:	VLAC-001-2 (Expiry date : March 30, 2016)
VCCI Registration No.	:	A-0002 (Expiry date : March 30, 2016)
BSMI Registration No.	:	SL2-IS-E-6006, SL2-IN-E-6006, SL2-R1/R2-E-6006, SL2-A1-E-6006 (Expiry date : September 14, 2016)
IC Registration No.	:	2079E-3, 2079E-4 (Expiry date : July 20, 2014)

Accredited as conformity assessment body for Japan electrical appliances and material law by METI. (Expiry date : February 22, 2016)

6 Details of the Equipment Under Test

6.1 Operating Condition

Transmitting/Receiving
ANT+
Transmitting frequency : 2402.0 MHz(2CH) – 2480.0 MHz(80CH)
Receiver frequency : 2402.0 MHz(2CH) – 2480.0 MHz(80CH)

Modulation Type : GFSK
The worst case TX duty cycle for normal protocol operation of 60Kbps burst transfer mode.
The test is performed under the upper condition.

Other Clock Frequency
32.768 kHz, 19.2 MHz, 27 MHz, 27.12 MHz, 48 MHz

The EUT was rotated through three orthogonal axis (X, Y and Z axis) in radiated measurement.
The EUT with temporary antenna port was used in conducted measurement.

6.2 Test Configuration

The equipment under test (EUT) consists of :

	Item	Manufacturer	Model No.	Serial No.	FCC ID
A	Cellular Phone	Sharp	SH-04F	004401115065456*1) 004401115065449*2)	APYHRO00207
B	AC Adapter	Fujitsu Corporation	04	WDA	N/A
C	Stereo Handsfree	Sharp	SHLDL1	--	N/A

*1) Used for AC Powerline Conducted Emission and Field Strength of Spurious Emission
*2) Used for Antenna Conducted Emission

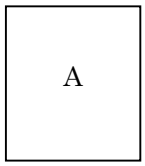
The auxiliary equipment used for testing :
None

Type of Cable:

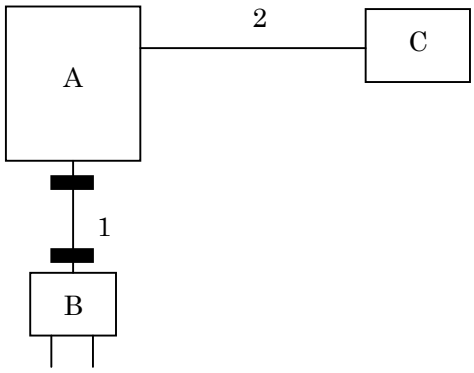
No.	Description	Identification (Manu. etc.)	Connector Shielded	Cable Shielded	Ferrite Core	Length (m)
1	USB conversion cable	--	--	NO	YES	1.1
2	Handsfree Cable	--	--	NO	NO	1.5

6.3 Test Arrangement (Drawings)

a) Single Unit

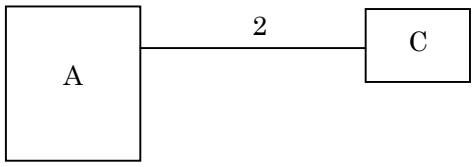


b) AC Adapter used



120VAC 60Hz

c) Handsfree used



▌: Ferrite Core

7 Details of the Test Item

7.0 Summary of the Test Results

Test Item	FCC Specification	Reference of the Test Report	Results	Remarks
Occupied Bandwidth	Section 15.215(c)	Section 7.1	Passed	-
AC Powerline Conducted Emission	Section 15.207	Section 7.2	Passed	-
Radiated Emission	Section 15.249(a)(d)(e)	Section 7.3	Passed	-

7.1 Occupied Bandwidth

For the requirements, ☒ - Applicable [☒ - Tested. ☐ - Not tested by applicant request.]
☐ - Not Applicable

For the limits, ☒ **- Passed** ☐ **- Failed** ☐ **- Not judged**

7.1.1 Worst Point and Measurement Uncertainty

The 99% Bandwidth is 1007.7 kHz at 2402.0 MHz
The 20dB Bandwidth is 1046.0 kHz at 2402/2441/2480 MHz

Uncertainty of Measurement Results +/-0.9 %(2σ)

Remarks :

7.1.2 Test Site and Instruments

7.1.2.1 Test Site

KITA-KANSAI Testing Center

Test site : SAITO

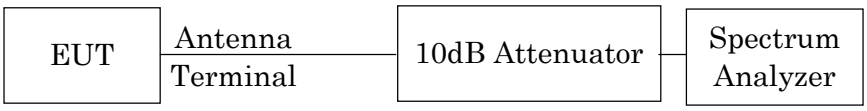
☐ - Anechoic chamber (A1) ☐ - Measurement room (M1)
☐ - Measurement room (M2) ☐ - Measurement room (M3)
☐ - Shielded room (S1) ☐ - Shielded room (S2)
☐ - Shielded room (S3) ☒ - Shielded room (S4)

7.1.2.2 Test Instruments

Type	Model	Manufacturer	ID No.	Last Cal.	Interval
Spectrum Analyzer	E4446A	Agilent	A-39	2013/9	1 Year
Attenuator	54A-10	Weinschel	D-28	2013/9	1 Year
RF Cable	SUCOFLEX102	SUHNER	C-52	2013/7	1 Year

7.1.3 Test Method and Test Setup (Diagrammatic illustration)

The test system is shown as follows:



The setting of the spectrum analyzer are shown as follows:

Res. Bandwidth	30 kHz
Video Bandwidth	100 kHz
Span	3 MHz
Sweep Time	AUTO
Trace	Maxhold

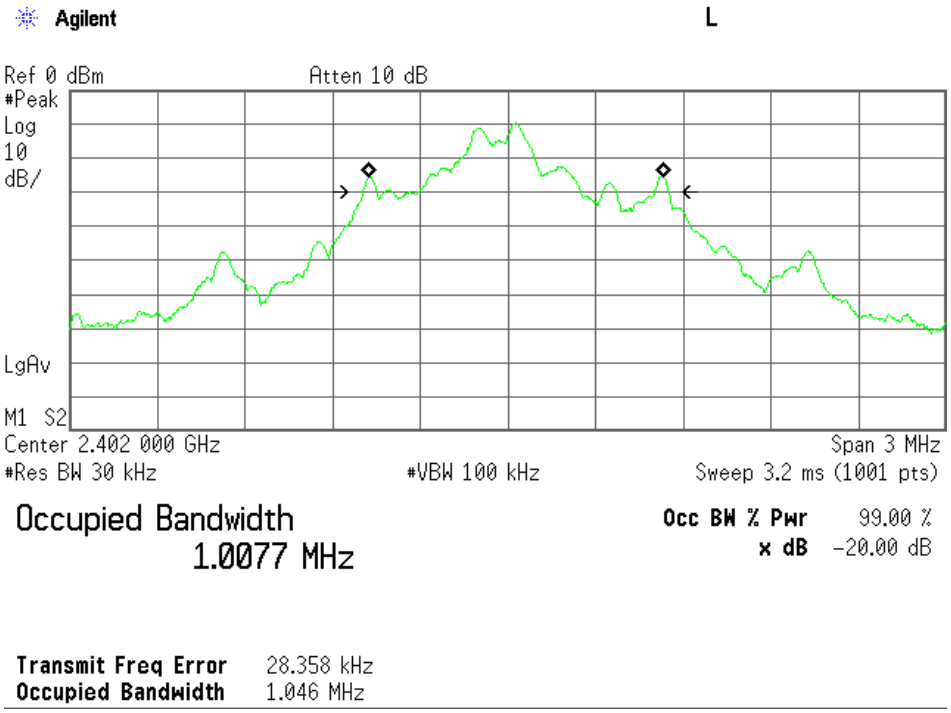
7.1.4 Test Data

Test Date : March 11, 2014
Temp.:21°C, Humi:23%

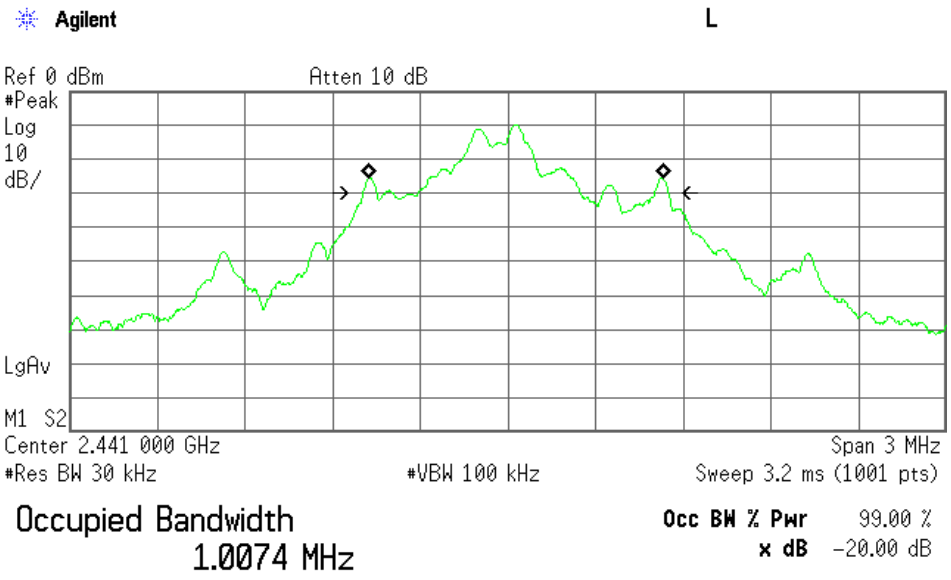
The resolution bandwidth was set to about 1% of emission bandwidth, -20dBc display line was placed on the screen (or 99% bandwidth), the occupied bandwidth is the delta frequency between the two points where the display line intersects the signal trace.

Channel	Frequency (MHz)	99% Bandwidth (kHz)	-20dBc Bandwidth (kHz)
02	2402.0	1007.7	1046.0
41	2441.0	1007.4	1046.0
80	2480.0	1007.4	1046.0

Low Channel

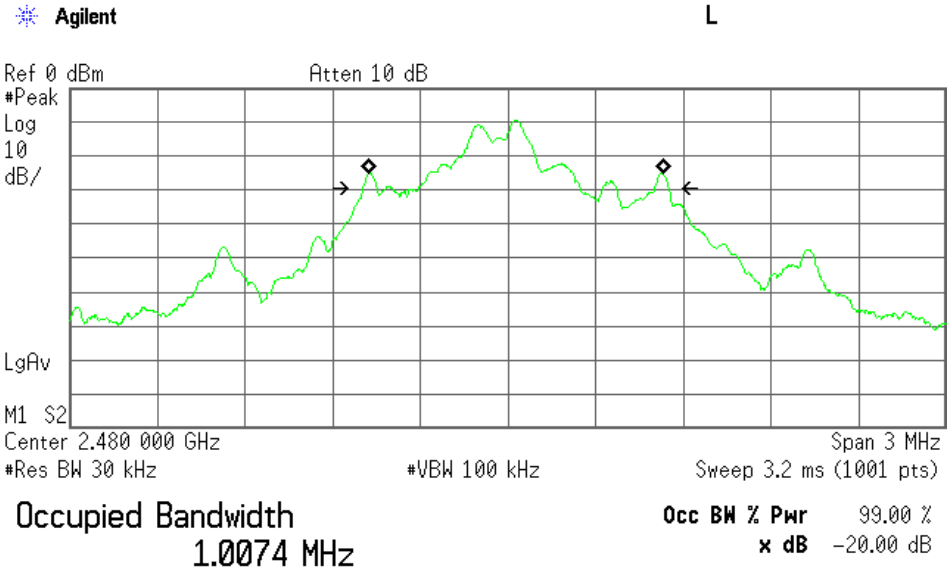


Middle Channel



Transmit Freq Error	27.980 kHz
Occupied Bandwidth	1.046 MHz

High Channel



Transmit Freq Error	28.269 kHz
Occupied Bandwidth	1.046 MHz

7.2 AC Powerline Conducted Emission

For the requirements, ☒ - Applicable [☒ - Tested. ☐ - Not tested by applicant request.]
☐ - Not Applicable

For the limits, ☒ **- Passed** ☐ **- Failed** ☐ **- Not judged**

7.2.1 Worst Point and Measurement Uncertainty

Min. Limit Margin (Quasi-Peak) 10.0 dB at 2.65 MHz

Uncertainty of Measurement Results +/-2.7 dB(2σ)

Remarks :

7.2.2 Test Site and Instruments

7.2.2.1 Test Site

KITA-KANSAI Testing Center

Test site : SAITO

☐ - Anechoic chamber (A1) ☐ - Measurement room (M1)
☒ - Measurement room (M2) ☐ - Measurement room (M3)
☐ - Shielded room (S1) ☐ - Shielded room (S2)
☐ - Shielded room (S3) ☐ - Shielded room (S4)

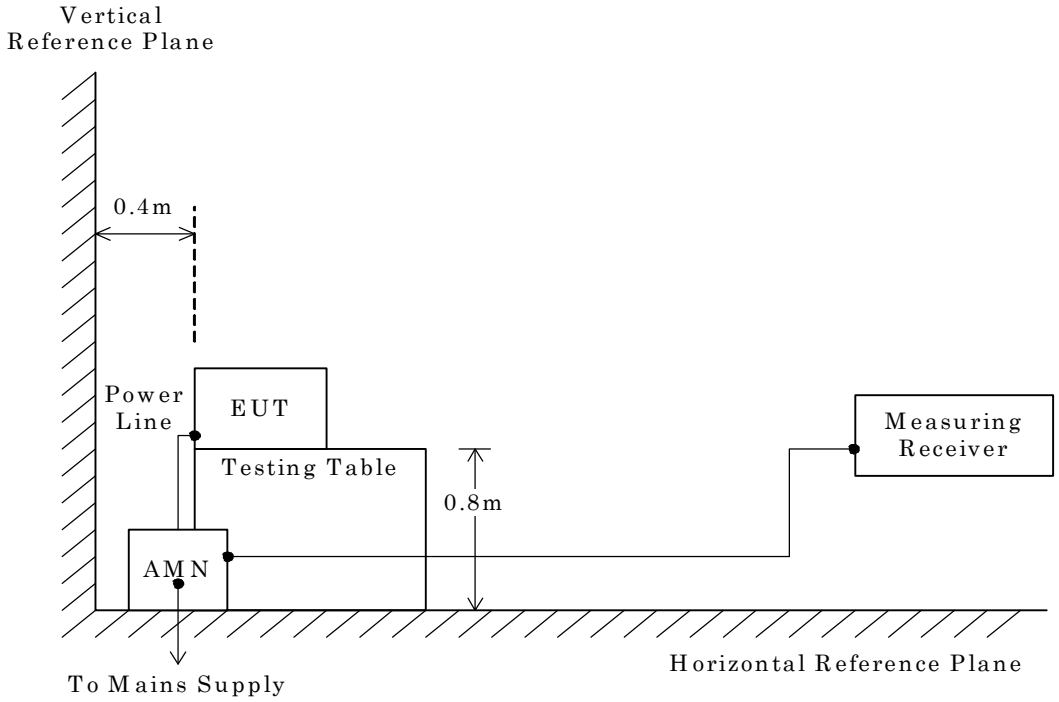
7.2.2.2 Test Instruments

Type	Model	Manufacturer	ID No.	Last Cal.	Interval
Test Receiver	ESU 26	Rohde & Schwarz	A-6	2013/4	1 Year
AMN (main)	KNW-407R	Kyoritsu	D-39	2013/9	1 Year
RF Cable	RG223/U	SUHNER	H-7	2013/11	1 Year

7.2.3 Test Method and Test Setup (Diagrammatic illustration)

The preliminary tests were performed using the scan mode of test receiver or spectrum analyzer to observe the emissions characteristics of the EUT.
The EUT configuration, cable configuration and mode of operation were determined for producing the maximum level of emissions.
This configurations was used for final tests.

– Side View –

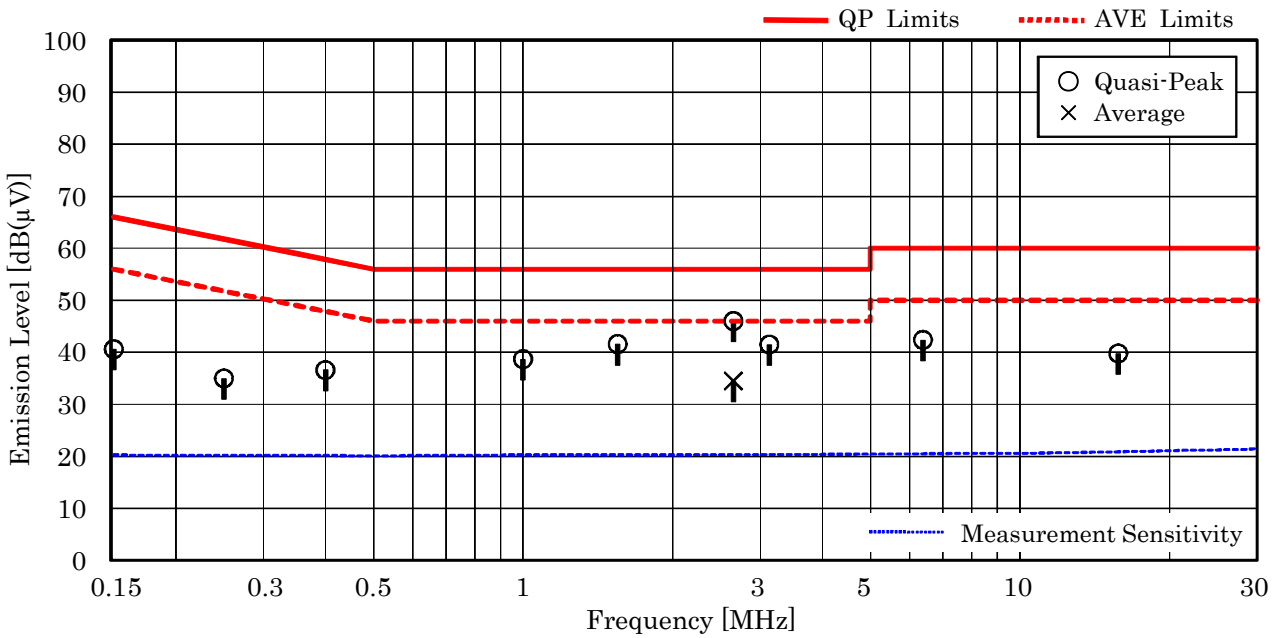


NOTE
AMN : Artificial Mains Network

7.2.4 Test Data

Test Date: March 14, 2014
Temp.: 20 °C, Humi.: 39 %

Frequency [MHz]	Corr. Factor [dB]	Meter Readings [dB(μV)] VA QP	VA AVE	VB QP	VB AVE	Limits [dB(μV)] QP	Limits [dB(μV)] AVE	Results [dB(μV)] QP	Results [dB(μV)] AVE	Margin [dB]	Remarks
0.15	10.3	30.3	--	26.7	--	66.0	56.0	40.6	--	+25.4	-
0.25	10.2	23.4	--	24.8	--	61.8	51.8	35.0	--	+26.8	-
0.40	10.2	17.1	--	26.4	--	57.9	47.9	36.6	--	+21.3	-
1.00	10.3	28.4	--	25.4	--	56.0	46.0	38.7	--	+17.3	-
1.55	10.3	31.3	--	25.4	--	56.0	46.0	41.6	--	+14.4	-
2.65	10.3	35.7	24.2	33.8	18.1	56.0	46.0	46.0	34.5	+10.0	-
3.13	10.3	31.2	--	27.2	--	56.0	46.0	41.5	--	+14.5	-
6.38	10.5	29.3	--	31.9	--	60.0	50.0	42.4	--	+17.6	-
15.77	10.8	28.6	--	29.0	--	60.0	50.0	39.8	--	+20.2	-



NOTES
1. The spectrum was checked from 0.15 MHz to 30 MHz.
2. The correction factor includes the AMN insertion loss and the cable loss.
3. The symbol of "<" means "or less".
4. The symbol of ">" means "more than".
5. The symbol of "--" means "not applicable".
6. Calculated result at 2.65 MHz, as the worst point shown on underline:
   Correction Factor + Meter Reading = 10.3 + 35.7 = 46.0 dB(μV)
7. QP : Quasi-Peak Detector / AVE : Average Detector
8. Test receiver setting(s) : CISPR QP 9 kHz / Average 9 kHz

7.3 Radiated Emission

The requirements are ☒ - Applicable [☒ - Tested. ☐ - Not tested by applicant request.]
☐ - Not Applicable

☒ - **Passed** ☐ - **Failed** ☐ - **Not judged**

7.3.1 Worst Point and Measurement Uncertainty

Min. Limit Margin (Average) (Fundamental)	18.0	dB	at	2480.0 MHz
Min. Limit Margin (Average) (Other)	>12.9	dB	at	24800.0 MHz

Uncertainty of Measurement Results

9 kHz – 30 MHz	+/-1.9	dB(2σ)
30 MHz – 300 MHz	+/-4.3	dB(2σ)
300 MHz – 1000 MHz	+/-5.4	dB(2σ)
1 GHz – 6 GHz	+/-4.6	dB(2σ)
6 GHz – 18 GHz	+/-5.2	dB(2σ)
18 GHz – 40 GHz	+/-5.4	dB(2σ)

Remarks : _____

7.3.2 Test Site and Instruments

7.3.2.1 Test Site

KITA-KANSAI Testing Center SAITO EMC Branch

☐ - Anechoic chamber A1 ☒ - Anechoic chamber A2

7.3.2.2 Test Instruments

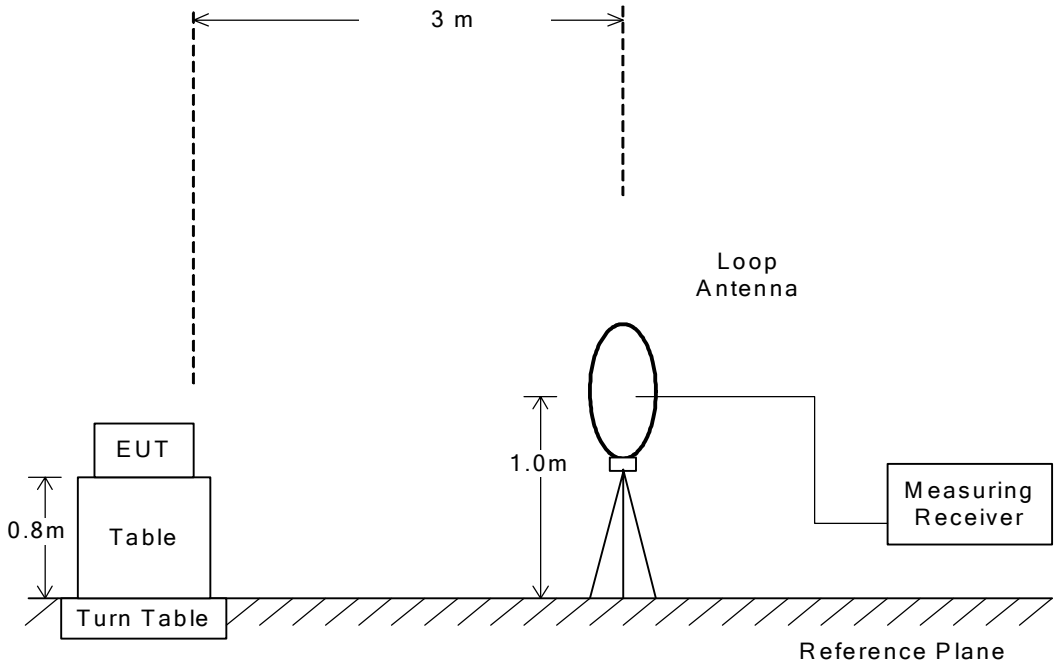
Type	Model	Manufacturer	ID No.	Last Cal.	Interval
Test Receiver	ESU 26	Rohde & Schwarz	A-6	2013/4	1 Year
Loop Antenna	HFH2-Z2	Rohde & Schwarz	C-2	2013/8	1 Year
RF Cable	RG213/U	SUHNER	H-28	2013/8	1 Year
Biconical Antenna	VHA9103/BBA9106	Schwarzbeck	C-30	2013/5	1 Year
Log-periodic Antenna	UHALP9108-A1	Schwarzbeck	C-31	2013/5	1 Year
RF Cable	S 10162 B-11 etc.	SUHNER	H-4	2013/4	1 Year
Site Attenuation	--	----	H-15	2014/1	1 Year
Pre-Amplifier	WJ-6882-824	Watkins Johnson	A-21	2014/1	1 Year
Pre-Amplifier	WJ-6611-513	Watkins Johnson	A-23	2014/1	1 Year
Pre-Amplifier	BZ1840LD1	B&Z	A-29	2014/1	1 Year
Pre-Amplifier	DBL-0618N515	DBS Microwave	A-33	2014/1	1 Year
Horn Antenna	91888-2	EATON	C-41-1	2013/6	1 Year
Horn Antenna	91889-2	EATON	C-41-2	2013/6	1 Year
Horn Antenna	3160-04	EMCO	C-55	2013/7	1 Year
Horn Antenna	3160-05	EMCO	C-56	2013/7	1 Year
Horn Antenna	3160-06	EMCO	C-57	2013/7	1 Year
Horn Antenna	3160-07	EMCO	C-58	2013/7	1 Year
Horn Antenna	3160-08	EMCO	C-59	2013/7	1 Year
Horn Antenna	3160-09	EMCO	C-48	2013/7	1 Year
Attenuator	54A-10	Weinschel	D-29	2013/9	1 Year
Attenuator	2-10	Weinschel	D-79	2013/11	1 Year
Band Rejection Filter	BRM50701	MICRO-TRONICS	D-93	2014/2	1 Year
RF Cable	SUCOFLEX102E	HUBER+SUHNER	C-75	2014/2	1 Year
RF Cable	SUCOFLEX104	SUHNER	C-66	2014/1	1 Year
RF Cable	SUCOFLEX104	SUHNER	C-67	2014/1	1 Year
RF Cable	SUCOFLEX102EA	SUHNER	C-69	2014/2	1 Year
SVSWR	--	----	H-19	2013/9	1 Year
Pre-Amplifier	310N	SONOMA	A-17	2013/4	1 Year

7.3.3 Test Method and Test Setup (Diagrammatic illustration)

7.3.3.1 Radiated Emission 9 kHz – 30 MHz

The preliminary tests were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT.
The EUT configuration(in X, Y and Z axis), cable configuration and mode of operation were determined for producing the maximum level of emissions.
This configurations was used for the final tests.

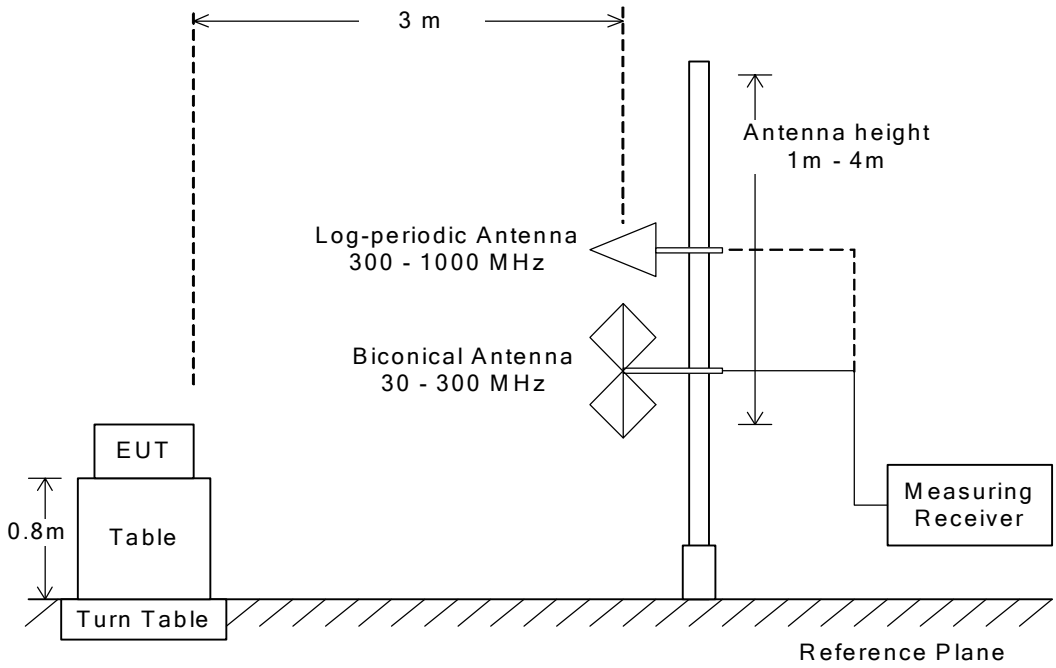
– Side View –



7.3.3.2 Radiated Emission 30 MHz – 1000 MHz

The preliminary tests were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT.
The EUT configuration(in X, Y and Z axis), cable configuration and mode of operation were determined for producing the maximum level of emissions.
This configurations was used for the final tests.

– Side View –



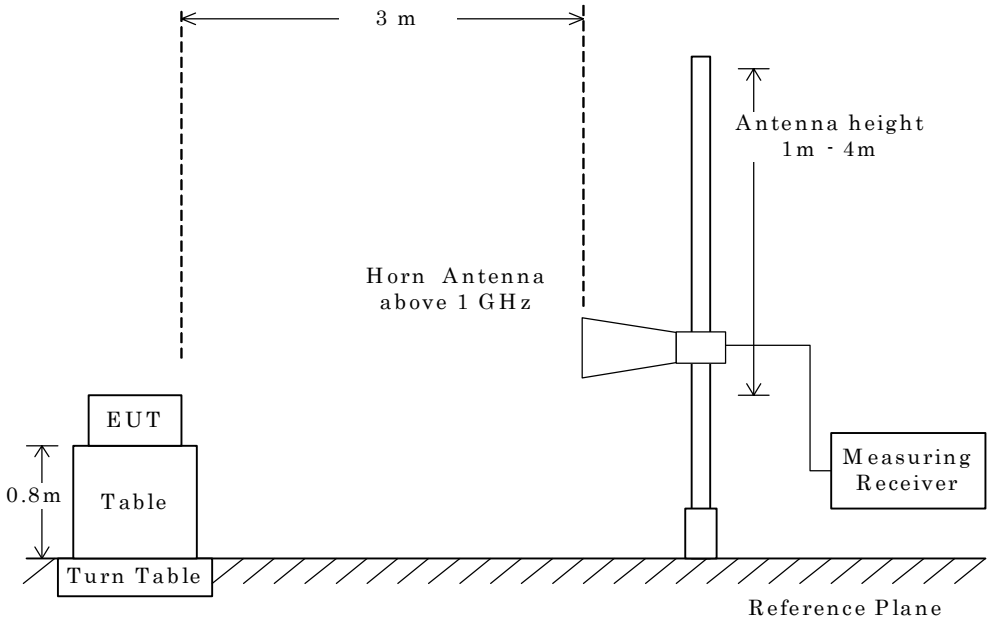
7.3.3.3 Radiated Emission above 1 GHz

The preliminary tests were performed at the measurement distance that specified for compliance to determine the emission characteristics of the EUT.
The EUT configuration(in X, Y and Z axis), cable configuration and mode of operation were determined for producing the maximum level of emissions.
This configurations was used for the final tests.

The setting of the measuring instruments are shown as follows:

Type	Peak	Average
Detector Function	Peak	Peak
Res. Bandwidth	1 MHz	1 MHz
Video Bandwidth	3 MHz	10 Hz
Sweep Time	AUTO	AUTO
Trace	Max Hold	Max Hold

– Side View –



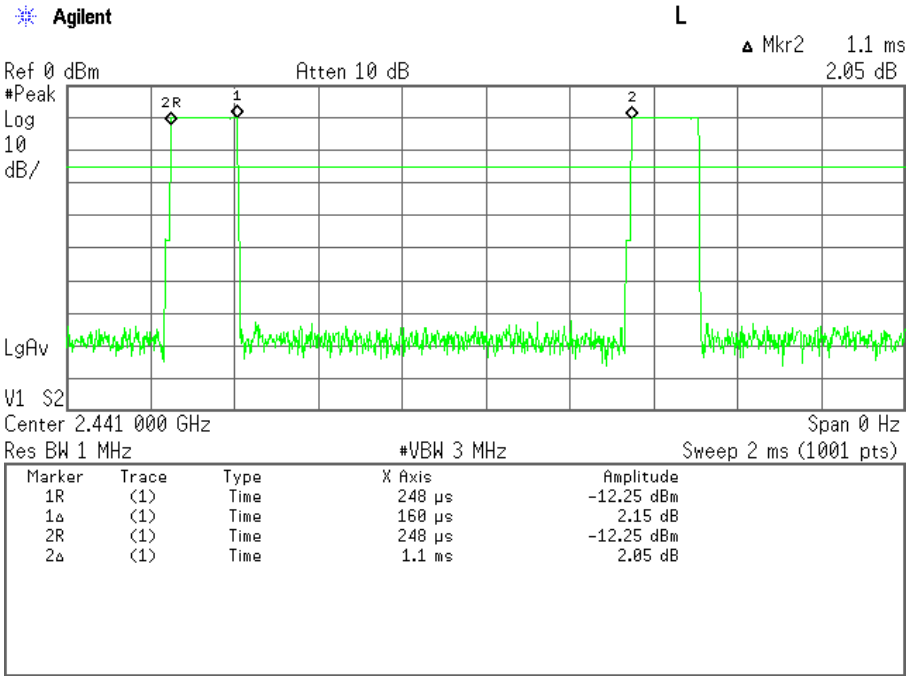
NOTE
The antenna height is scanned depending on the EUT's size and mounting height.

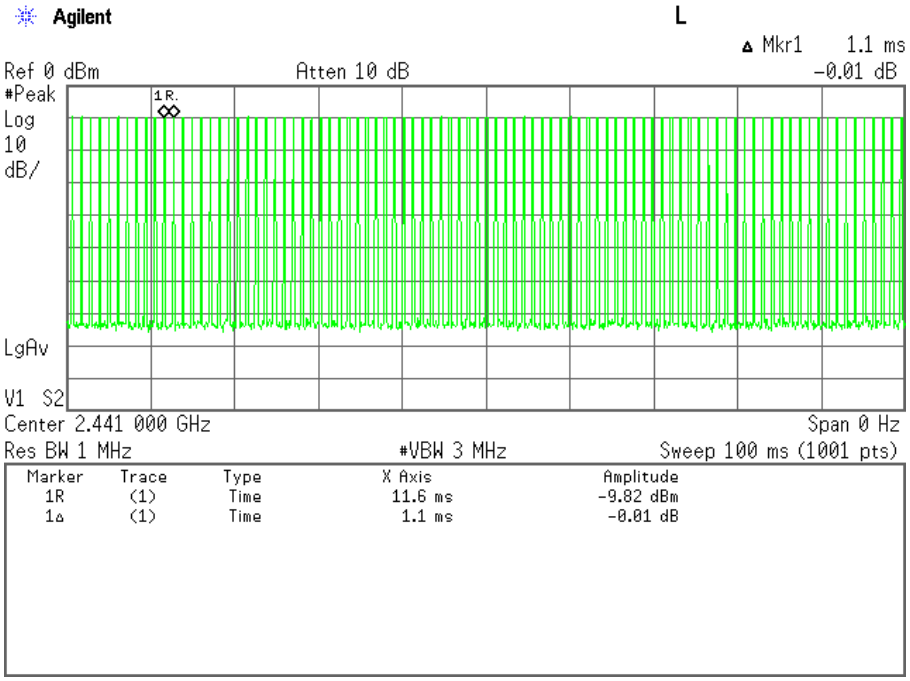
7.3.4 Test Data

7.3.4.1 Duty Cycle

Pulse On-Time (msec)	Duty Cycle (msec)	Peak to Average Factor (dB)
0.160	1.100	-16.7

Note: Peak to Average Factor = 20 Log ((Pulse On-Time)/(Duty Cycle))
= 20 Log (0.160/1.100)
= -16.7 (dB)

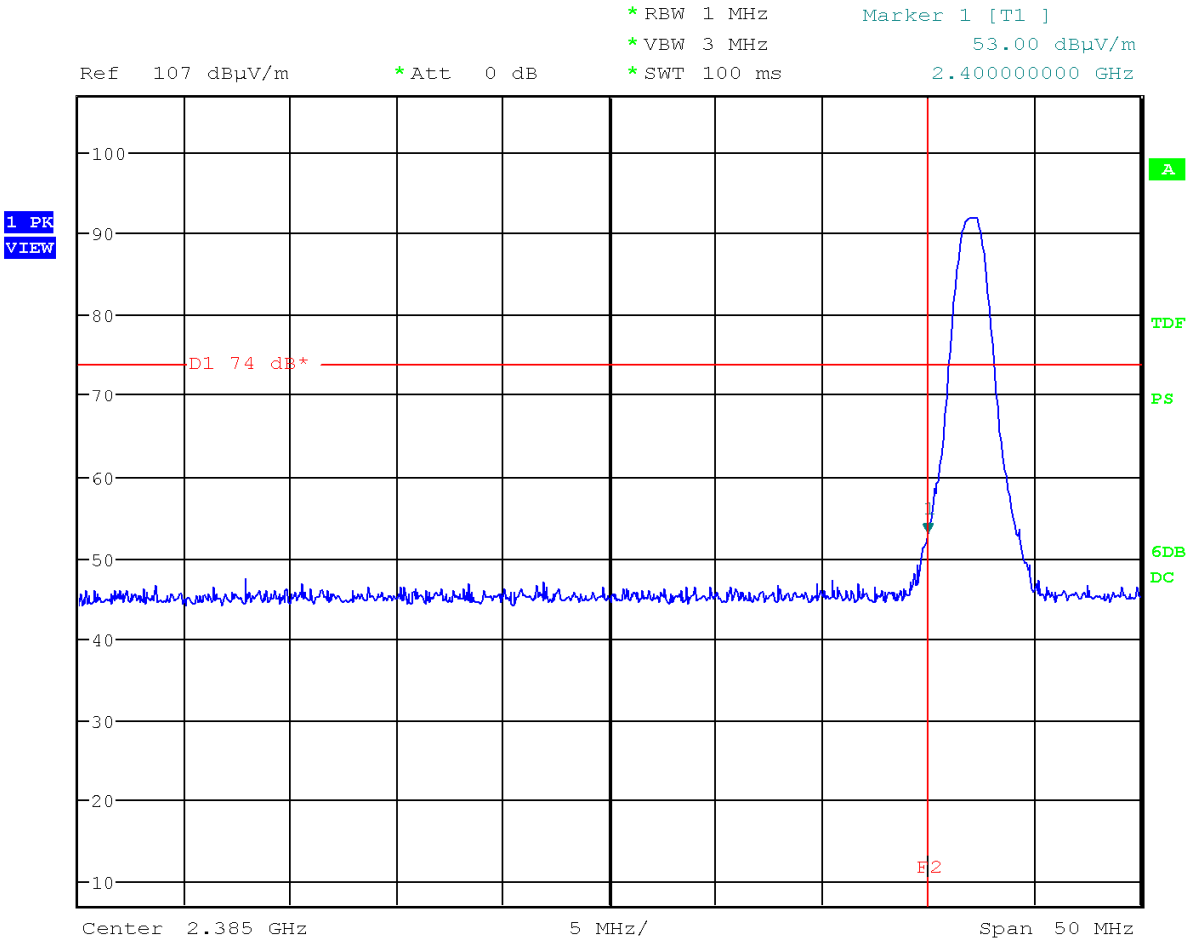




7.3.4.2 Band-edge Compliance

Test Date : March 7, 2014
Temp.:18°C, Humi:35%

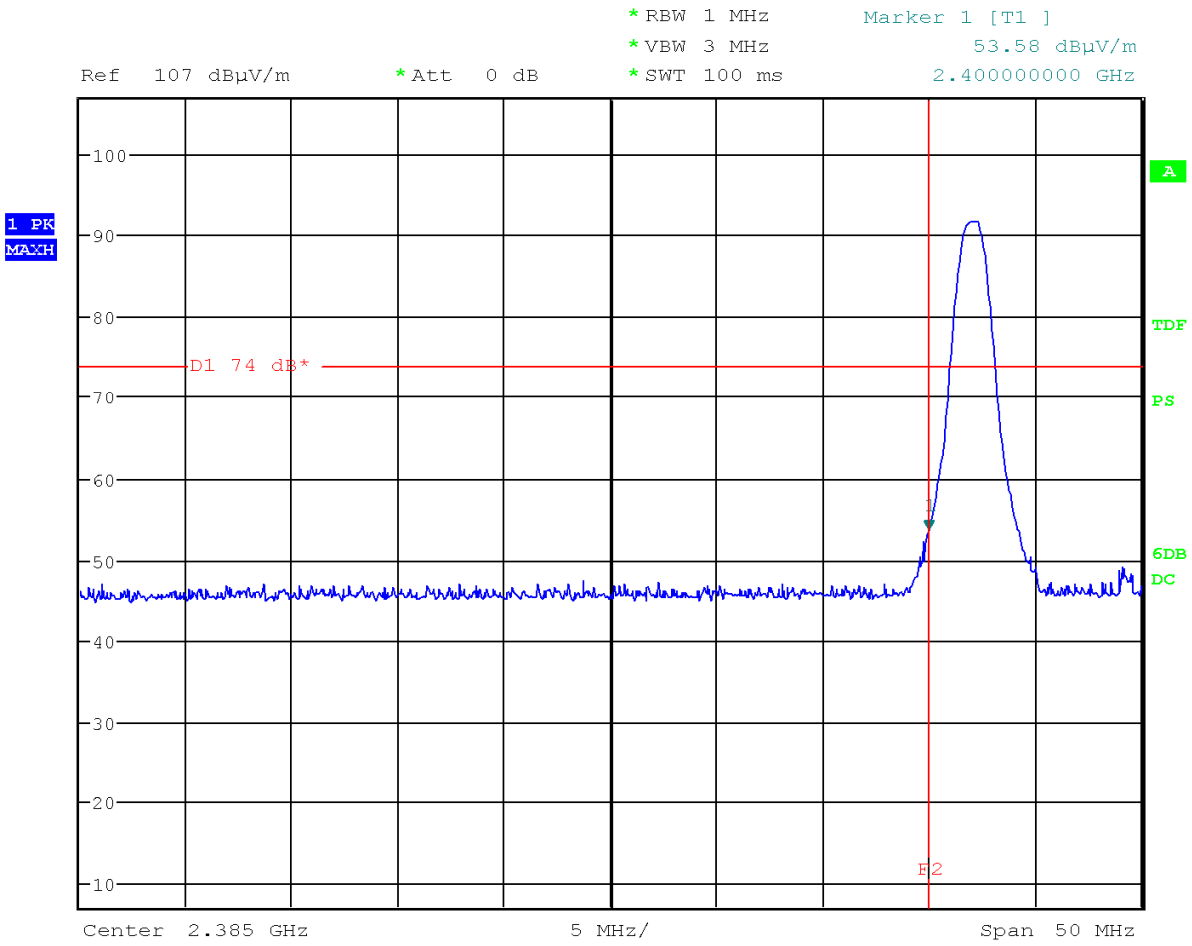
Mode of EUT : 2ch: 2402 MHz
Antenna Polarization : Horizontal



Frequency (MHz)	Results [dB(µV/m)]		Limits [dB(µV/m)]		Margin (dB)
	Peak	Average(*	Peak	Average	
2400.0	53.0	36.3	74.0	54.0	17.7

Note: Results(Average) = Results(Peak) + (Peak to Average Factor)

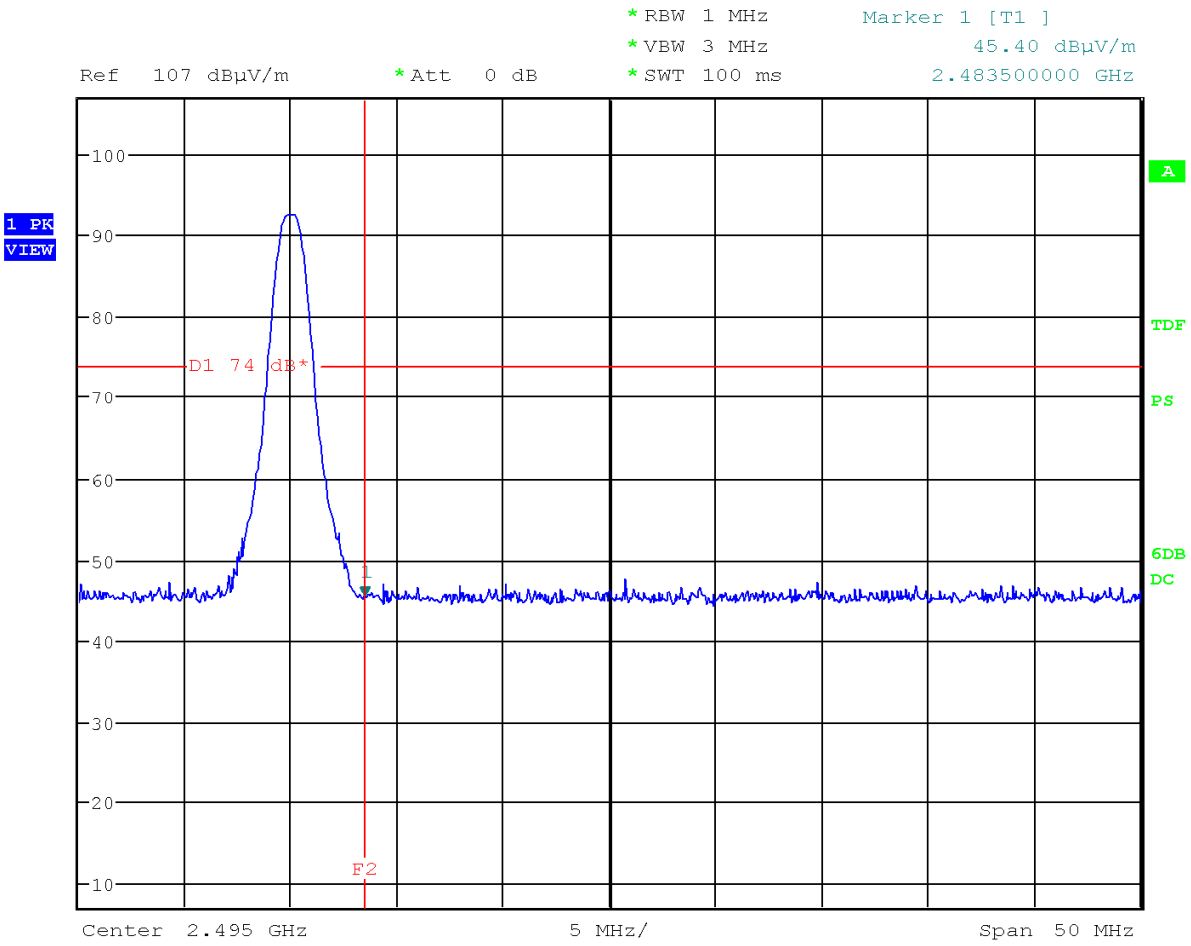
Mode of EUT : 2ch: 2402 MHz
Antenna Polarization : Vertical



Frequency (MHz)	Results [dB(µV/m)]		Limits [dB(µV/m)]		Margin (dB)
	Peak	Average(*	Peak	Average	
2400.0	53.6	36.9	74.0	54.0	17.1

Note: Results(Average) = Results(Peak) + (Peak to Average Factor)

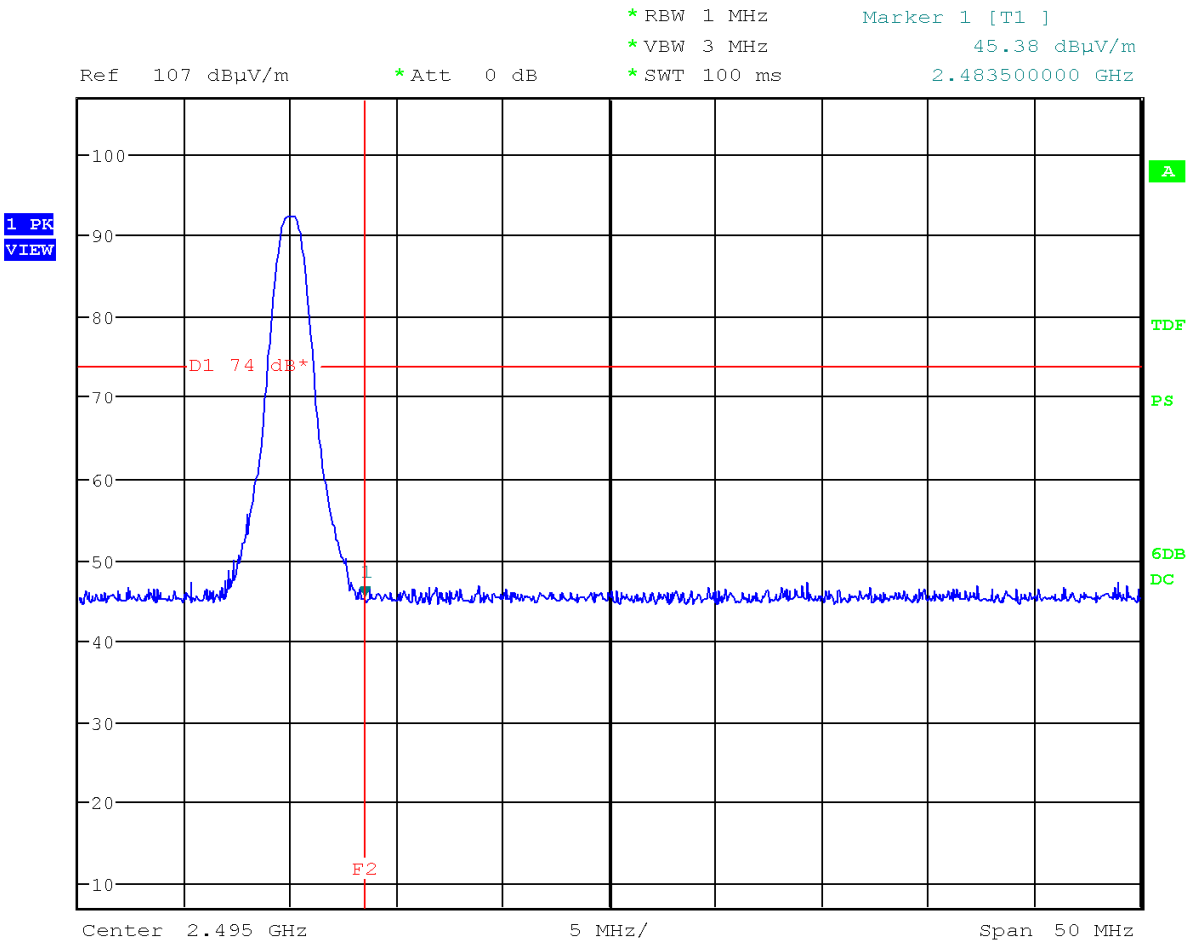
Mode of EUT : 80ch: 2480 MHz
Antenna Polarization : Horizontal



Frequency (MHz)	Results [dB(µV/m)]		Limits [dB(µV/m)]		Margin (dB)
	Peak	Average(*	Peak	Average	
2483.5	45.4	28.7	74.0	54.0	25.3

Note: Results(Average) = Results(Peak) + (Peak to Average Factor)

Mode of EUT : 80ch: 2480 MHz
Antenna Polarization : Vertical



Frequency (MHz)	Results [dB(µV/m)]		Limits [dB(µV/m)]		Margin (dB)
	Peak	Average(*	Peak	Average	
2483.5	45.4	28.7	74.0	54.0	25.3

Note: Results(Average) = Results(Peak) + (Peak to Average Factor)

7.3.4.3 Other Spurious Emission (9kHz – 30MHz)

Test Date : March 13, 2014
Temp.:21°C, Humi:36%

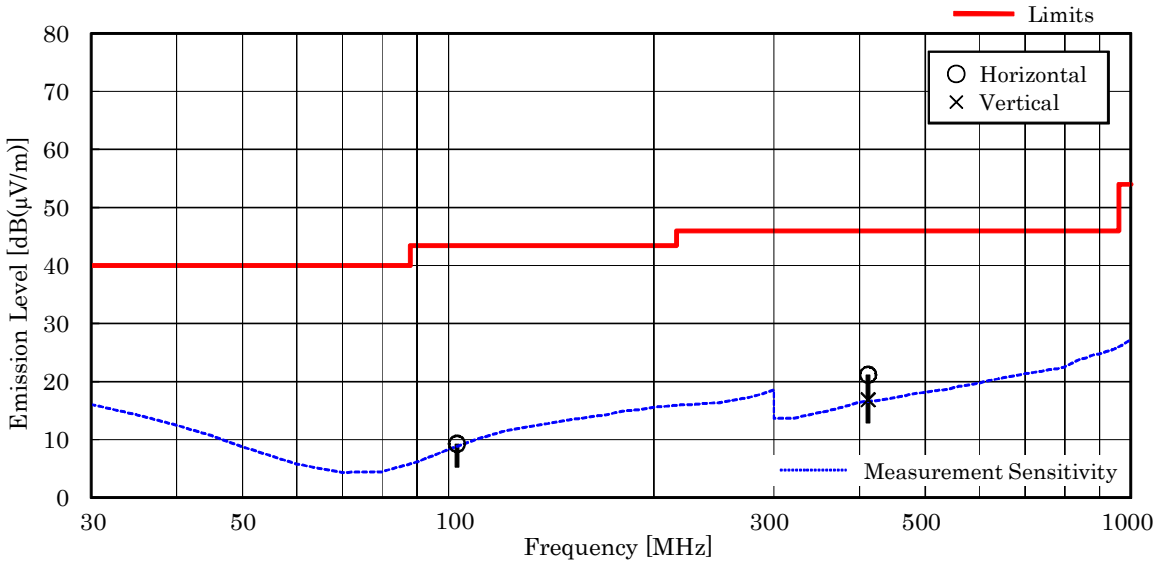
Mode of EUT : All modes have been investigated and the worst case mode has been listed.
Results : No spurious emissions in the range 20dB below the limit.

7.3.4.4 Other Spurious Emission (30MHz – 1000MHz)

Mode of EUT : All modes have been investigated and the worst case mode has been listed.

Test Date: March 13, 2014
Temp.: 20 °C, Humi: 47 %

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
103.0	10.6	-26.8	25.5	< 25.0	43.5	9.3	< 8.8	+34.2	-
412.2	16.4	-24.8	29.6	25.3	46.0	21.2	16.9	+24.8	-



NOTES
1. Test Distance : 3 m
2. The spectrum was checked from 30 MHz to 1000 MHz.
3. The symbol of "<" means "or less".
4. The symbol of ">" means "more than".
5. Calculated result at 412.2 MHz, as the worst point shown on underline:
   Antenna Factor + Cable Loss + Meter Reading = 16.4 + -24.8 + 29.6 = 21.2 dB(μV/m)
6. Test receiver setting(s) : CISPR QP 120 kHz (QP : Quasi-Peak)

7.3.4.5 Other Spurious Emission (Above 1000MHz)

Test Date: March 10, 2014
Temp.: 19 °C, Humi: 33 %

Frequency	Antenna Factor	Corr. Factor	Meter Readings [dB(μV)] Horizontal		Vertical		Limits [dB(μV/m)]		Results [dB(μV/m)]		Margin [dB]	Remarks
[MHz]	[dB(1/m)]	[dB]	PK	AVE(*	PK	AVE(*	PK	AVE	PK	AVE		
Test condition : Tx Low Ch												
2402.0	21.4	0.8	70.4	53.7	69.9	53.2	114.0	94.0	92.6	75.9	+18.1	
4804.0	27.2	-20.9	< 40.0	< 23.3	< 40.0	< 23.3	74.0	54.0	< 46.3	< 29.6	> +24.4	
7206.0	30.1	-19.7	< 40.0	< 23.3	< 40.0	< 23.3	74.0	54.0	< 50.4	< 33.7	> +20.3	
9608.0	33.5	-27.0	44.6	27.9	41.2	24.5	74.0	54.0	51.1	34.4	+19.6	
12010.0	33.7	-27.1	< 40.0	< 23.3	< 40.0	< 23.3	74.0	54.0	< 46.6	< 29.9	> +24.1	
14412.0	37.0	-26.0	< 40.0	< 23.3	< 40.0	< 23.3	74.0	54.0	< 51.0	< 34.3	> +19.7	
16814.0	36.0	-26.6	< 40.0	< 23.3	< 40.0	< 23.3	74.0	54.0	< 49.4	< 32.7	> +21.3	
19216.0	40.5	-22.2	< 38.0	< 21.3	< 38.0	< 21.3	74.0	54.0	< 56.3	< 39.6	> +14.4	
21618.0	40.5	-21.5	< 38.0	< 21.3	< 38.0	< 21.3	74.0	54.0	< 57.0	< 40.3	> +13.7	
24020.0	40.4	-20.8	< 38.0	< 21.3	< 38.0	< 21.3	74.0	54.0	< 57.6	< 40.9	> +13.1	
Test condition : TX Middle Ch												
2441.0	21.6	0.8	69.7	53.0	69.6	52.9	114.0	94.0	92.1	75.4	+18.6	
4882.0	27.2	-21.1	< 40.0	< 23.3	< 40.0	< 23.3	74.0	54.0	< 46.1	< 29.4	> +24.6	
7323.0	30.0	-19.6	< 40.0	< 23.3	< 40.0	< 23.3	74.0	54.0	< 50.4	< 33.7	> +20.3	
9764.0	33.4	-26.8	43.5	26.8	< 40.0	< 23.3	74.0	54.0	50.1	33.4	+20.6	
12205.0	33.5	-26.9	< 40.0	< 23.3	< 40.0	< 23.3	74.0	54.0	< 46.6	< 29.9	> +24.1	
14646.0	36.9	-26.2	< 40.0	< 23.3	< 40.0	< 23.3	74.0	54.0	< 50.7	< 34.0	> +20.0	
17087.0	35.9	-26.6	< 40.0	< 23.3	< 40.0	< 23.3	74.0	54.0	< 49.3	< 32.6	> +21.4	
19528.0	40.4	-22.2	< 38.0	< 21.3	< 38.0	< 21.3	74.0	54.0	< 56.2	< 39.5	> +14.5	
21969.0	40.5	-21.4	< 38.0	< 21.3	< 38.0	< 21.3	74.0	54.0	< 57.1	< 40.4	> +13.6	
24410.0	40.5	-20.8	< 38.0	< 21.3	< 38.0	< 21.3	74.0	54.0	< 57.7	< 41.0	> +13.0	
Test condition : TX High Ch												
2480.0	21.4	0.8	70.5	53.8	70.5	53.8	114.0	94.0	92.7	76.0	+18.0	
4960.0	27.2	-21.2	< 40.0	< 23.3	< 40.0	< 23.3	74.0	54.0	< 46.0	< 29.3	> +24.7	
7440.0	29.9	-19.5	< 40.0	< 23.3	< 40.0	< 23.3	74.0	54.0	< 50.4	< 33.7	> +20.3	
9920.0	33.4	-26.7	41.4	24.7	< 40.0	< 23.3	74.0	54.0	48.1	31.4	+22.6	
12400.0	33.6	-26.6	< 40.0	< 23.3	< 40.0	< 23.3	74.0	54.0	< 47.0	< 30.3	> +23.7	
14880.0	36.8	-26.2	< 40.0	< 23.3	< 40.0	< 23.3	74.0	54.0	< 50.6	< 33.9	> +20.1	
17360.0	35.8	-27.0	< 40.0	< 23.3	< 40.0	< 23.3	74.0	54.0	< 48.8	< 32.1	> +21.9	
19840.0	40.4	-22.2	< 38.0	< 21.3	< 38.0	< 21.3	74.0	54.0	< 56.2	< 39.5	> +14.5	
22320.0	40.6	-21.2	< 38.0	< 21.3	< 38.0	< 21.3	74.0	54.0	< 57.4	< 40.7	> +13.3	
24800.0	40.5	-20.7	< 38.0	< 21.3	< 38.0	< 21.3	74.0	54.0	< 57.8	< 41.1	> +12.9	

Calculated result at 24800.0 MHz, as the worst point shown on underline:

	Antenna Factor	=	40.5 dB(1/m)
	Corr. Factor	=	-20.7 dB
+)	Meter Reading	=	<21.3 dB(μV)
	Result	=	<41.1 dB(μV/m)

Minimum Margin: 54.0 - <41.1 = >12.9 (dB)

NOTES
1. Test Distance : 3 m
2. The spectrum was checked from 1 GHz to 25 GHz (10th harmonic of the highest fundamental frequency).
3. The correction factor is shown as follows:
   Corr. Factor [dB] = Cable Loss + 20dB Pad Att. - Pre-Amp. Gain [dB] (1.0 - 7.6GHz)
   Corr. Factor [dB] = Cable Loss + 10dB Pad Att. - Pre-Amp. Gain [dB] (7.6 - 18.0GHz)
   Corr. Factor [dB] = Cable Loss - Pre-Amp. Gain [dB] (over 18 GHz)
4. The symbol of "<" means "or less".
5. The symbol of ">" means "more than".
6. PK : Peak / AVE : Average
7. Meter Readings(AVE) = Meter Readings(PK) + Peak to Average Factor

Test Date: March 10, 2014
Temp.: 19 °C, Humi: 33 %

Frequency	Antenna Factor	Corr. Factor	Meter Readings [dB(μV)] Horizontal		Vertical		Limits [dB(μV/m)]		Results [dB(μV/m)]		Margin [dB]	Remarks
[MHz]	[dB(1/m)]	[dB]	PK	AVE	PK	AVE	PK	AVE	PK	AVE		
Test condition : RX Middle Ch												
2441.0	21.6	-21.7	< 40.0	< 30.0	< 40.0	< 30.0	74.0	54.0	< 39.9	< 29.9	> +24.1	
4882.0	27.2	-21.4	< 40.0	< 30.0	< 40.0	< 30.0	74.0	54.0	< 45.8	< 35.8	> +18.2	
7323.0	30.0	-19.9	< 40.0	< 30.0	< 40.0	< 30.0	74.0	54.0	< 50.1	< 40.1	> +13.9	

Calculated result at 7323.0 MHz, as the worst point shown on underline:

	Antenna Factor	=	30.0 dB(1/m)
	Corr. Factor	=	-19.9 dB
+)	Meter Reading	=	<30.0 dB(μV)
	Result	=	<40.1 dB(μV/m)

Minimum Margin: 54.0 - <40.1 = >13.9 (dB)

NOTES
1. Test Distance : 3 m
2. The spectrum was checked from 1 GHz to 7.5 GHz .
3. The correction factor is shown as follows:
   Corr. Factor [dB] = Cable Loss + 20dB Pad Att. - Pre-Amp. Gain [dB] (1.0 - 7.6GHz)
4. The symbol of "<" means "or less".
5. The symbol of ">" means "more than".
6. PK : Peak / AVE : Average