



RADIO TEST REPORT

Test Report No. : 10240264H-F

Applicant : Sony Computer Entertainment Inc.
Type of Equipment : Computer Entertainment System
Model No. : CECH-4301x
FCC ID : AK8CBEH19C1
Test regulation : FCC Part 15 Subpart C: 2014 (Bluetooth Part)
Class II Permissive Change
*Conducted emission and Radiated spurious emission tests only
Test Result : Complied

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2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with the above regulation.
4. The test results in this report are traceable to the national or international standards.
5. This test report must not be used by the customer to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the Federal Government.

Date of test: March 11 to 28, 2014

Representative test engineer:

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Takumi Shimada
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Approved by:

M. Nishiyama

Masanori Nishiyama
Manager
Consumer Technology Division



NVLAP LAB CODE: 200572-0

This laboratory is accredited by the NVLAP LAB CODE 200572-0, U.S.A. The tests reported herein have been performed in accordance with its terms of accreditation. *As for the range of Accreditation in NVLAP, you may refer to the WEB address, <http://www.ul.com/japan/jpn/pages/services/emc/about/mark1/index.jsp#nvlap>

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SECTION 1: Customer information

Company Name	Sony Computer Entertainment Inc.
Brand Name	SONY
Address	1-7-1 Konan, Minato-ku, Tokyo 108-0075, Japan
Telephone Number	+81-3-6748-6333
Facsimile Number	+81-3-6748-6383
Contact Person	Kiyoto Sasaki

SECTION 2: Equipment under test (E.U.T.)

2.1 Identification of E.U.T.

Type of Equipment	Computer Entertainment System
Model No	CECH-4301x
Serial No	0260001 (Power Supply: SONY) 0260004 (Power Supply: DELTA) 0260006 (Power Supply: Chicony)
Rating	AC120V / 60Hz
Country of Manufacture	JAPAN/CHINA
Receipt Date of Sample	March 10, 2014
Condition of EUT	Production prototype (Not for Sale: This sample is equivalent to mass-produced items.)
Modification of EUT	No modification by the test lab.

2.2 Product Description

Model:CECH-4301x, referred to as the EUT in this report, is a Computer Entertainment System.
The EUT contains Bluetooth (Ver. 2.0+EDR) module and IEEE802.11b/g WLAN module. Those modules do not transmit simultaneously.

Details of model name CECH-4301x:

“x” will be replaced by an alphabet denoting the different capacity of storage.

The difference of the capacity of storage does not influence on radio specification.

The clock frequencies used in the EUT: Max clock frequency is 3.2GHz.

Bluetooth (Ver. 2.0+EDR)

Equipment Type	Transceiver
Frequency of Operation	2402-2480MHz
Type of Modulation	FHSS (GFSK, $\pi/4$ -DQPSK, 8DPSK)
Bandwidth & Channel spacing	1MHz & 1MHz
Power Supply (inner)	DC3.3V/1.8V
Antenna Type	PIFA
Antenna Gain	4.5 dBi (max)
Antenna Connector Type	U.FL

IEEE802.11b/g WLAN

Equipment Type	Transceiver	
Frequency of Operation	2412-2462MHz	
Type of Modulation	DSSS/OFDM	
Bandwidth & Channel spacing	20MHz & 5MHz	
Power Supply (inner)	DC3.3V/1.8V	
Antenna Type	Antenna 0: IFA	Antenna 1: IFA
Antenna Gain	Antenna 0: 1.5 dBi (max)	Antenna 1: 3.0 dBi (max)
Antenna Connector Type	Antenna 0: N/A	Antenna 1: N/A

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SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification : FCC Part 15 Subpart C: 2014, final revised on March 6, 2014 and effective April 7, 2014

Title : FCC 47CFR Part15 Radio Frequency Device Subpart C Intentional Radiators
Section 15.207 Conducted limits
Section 15.247 Operation within the bands 902-928MHz,
2400-2483.5MHz, and 5725-5850MHz
*Conducted emission and Radiated spurious emission tests only

*The revision on March 6, 2014 does not affect the test specification applied to the EUT.

*The EUT complies with FCC Part 15 Subpart B: 2014, final revised on March 6, 2014 and effective April 7, 2014.

3.2 Procedures and results

Item	Test Procedure	Specification	Worst margin	Results	Remarks
Conducted Emission	FCC: ANSI C63.4:2003 7. AC powerline Conducted Emission measurements	FCC: Section 15.207	QP 7.0dB, 0.15001MHz, N	Complied	-
	IC: RSS-Gen 7.2.4	IC: RSS-Gen 7.2.4	AV 12.5dB, 0.20168MHz, N		
Spurious Emission Restricted Band Edges	FCC: "Guidance on Measurement of Digital Transmission Systems Operating under Section15.247"	FCC: Section15.247(d)	4.9dB	Complied	Radiated
	IC: RSS-Gen 4.9	IC: RSS-210 A8.5 RSS-Gen 7.2.3	576.003MHz, Horizontal, QP		

Note: UL Japan, Inc.'s EMI Work Procedures No. 13-EM-W0420 and 13-EM-W0422.

* In case any questions arise about test procedure, ANSI C63.4: 2003 is also referred.

FCC 15.31 (e)

This EUT provides stable voltage (DC3.3/1.8V) constantly to RF part regardless of input voltage. Therefore, this EUT complies with the requirement.

FCC Part 15.203 Antenna requirement

It is impossible for end users to replace the antenna, because the antenna is mounted inside of the EUT. Therefore, the equipment complies with the antenna requirement of Section 15.203.

3.3 Addition to standard

No addition, exclusion nor deviation has been made from the standard.

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3.4 Uncertainty

EMI

The following uncertainties have been calculated to provide a confidence level of 95% using a coverage factor k=2.

Test room (semi-anechoic chamber)	Conducted emission (+dB)
	150kHz-30MHz
No.1	3.5dB
No.2	3.5dB
No.3	3.6dB
No.4	3.5dB

Test room (semi-anechoic chamber)	Radiated emission						
	(3m*)(+dB)				(1m*)(+dB)		(0.5m*)(+dB)
	9kHz -30MHz	30MHz -300MHz	300MHz -1GHz	1GHz -10GHz	10GHz -18GHz	18GHz -26.5GHz	26.5GHz -40GHz
No.1	4.0dB	5.1dB	5.0dB	5.1dB	6.0dB	4.9dB	4.3dB
No.2	3.9dB	5.2dB	5.0dB	4.9dB	5.9dB	4.7dB	4.2dB
No.3	4.3dB	5.1dB	5.2dB	5.2dB	6.0dB	4.8dB	4.2dB
No.4	4.6dB	5.2dB	5.0dB	5.2dB	6.0dB	5.7dB	4.2dB

*3m/1m/0.5m = Measurement distance

Conducted Emission test

The data listed in this test report has enough margin, more than the site margin.

Radiated emission test(3m)

The data listed in this report meets the limits unless the uncertainty is taken into consideration.

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3.5 Test Location

UL Japan, Inc. Ise HQ EMC Lab. *NVLAP Lab. code: 200572-0
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	FCC Registration Number	IC Registration Number	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Other rooms
No.1 semi-anechoic chamber	313583	2973C-1	19.2 x 11.2 x 7.7m	7.0 x 6.0m	No.1 Power source room
No.2 semi-anechoic chamber	655103	2973C-2	7.5 x 5.8 x 5.2m	4.0 x 4.0m	-
No.3 semi-anechoic chamber	148738	2973C-3	12.0 x 8.5 x 5.9m	6.8 x 5.75m	No.3 Preparation room
No.3 shielded room	-	-	4.0 x 6.0 x 2.7m	N/A	-
No.4 semi-anechoic chamber	134570	2973C-4	12.0 x 8.5 x 5.9m	6.8 x 5.75m	No.4 Preparation room
No.4 shielded room	-	-	4.0 x 6.0 x 2.7m	N/A	-
No.5 semi-anechoic chamber	-	-	6.0 x 6.0 x 3.9m	6.0 x 6.0m	-
No.6 shielded room	-	-	4.0 x 4.5 x 2.7m	4.0 x 4.5 m	-
No.6 measurement room	-	-	4.75 x 5.4 x 3.0m	4.75 x 4.15 m	-
No.7 shielded room	-	-	4.7 x 7.5 x 2.7m	4.7 x 7.5m	-
No.8 measurement room	-	-	3.1 x 5.0 x 2.7m	N/A	-
No.9 measurement room	-	-	8.0 x 4.6 x 2.8m	2.4 x 2.4m	-
No.11 measurement room	-	-	6.2 x 4.7 x 3.0m	4.8 x 4.6m	-

* Size of vertical conducting plane (for Conducted Emission test) : 2.0 x 2.0m for No.1, No.2, No.3, and No.4 semi-anechoic chambers and No.3 and No.4 shielded rooms.

3.6 Data of EMI, Test instruments, and Test set up

Refer to APPENDIX.

SECTION 4: Operation of E.U.T. during testing

4.1 Operating Mode(s)

Bluetooth (BT): Transmitting (Tx), Payload: PRBS9
Inquiry

Details of Operating Mode(s)

Test Item	Mode	Tested frequency
Conducted Emission	Tx (Hopping off) DH5, 3DH5	2402MHz 2441MHz 2480MHz
Spurious Emission (Radiated)	Tx (Hopping off) DH5, 3DH5	2402MHz 2441MHz 2480MHz

*As a result of preliminary test, the formal test was performed with the above modes, which had the maximum payload length (except Dwell time test)

*2DH mode (2Mb/s EDR: pi/4DQPSK) was excluded by using 3DH mode (3 Mb/s EDR: 8DPSK) as a representative

*EUT has the power settings by the software as follows;

Power settings: Same as production model

Software/Version: LABTOOL_LV2DIAG_20111206

*This setting of software is the worst case.

Any conditions under the normal use do not exceed the condition of setting.

In addition, end users cannot change the settings of the output power of the product.

*Conducted Emission and Spurious Emission (Radiated) were performed only as the antenna position was changed from the original model.

*Antenna has two kinds of manufacturer's antennas (TE Connectivity and LuxShare-ICT) and the test was performed only with TE Connectivity antenna according to the customer's request, because these have similar antenna characteristics and equal maximum gain.

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4.2 Configuration and peripherals

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SECTION 5: Conducted Emission

Test Procedure and conditions

EUT was placed on a urethane platform of nominal size, 1.0m by 1.5m, raised 0.8m above the conducting ground plane.

The rear of tabletop was located 40cm to the vertical conducting plane. The rear of EUT, including peripherals aligned and flushed with rear of tabletop. All other surfaces of tabletop were at least 80cm from any other grounded conducting surface. EUT was located 80cm from a Line Impedance Stabilization Network (LISN)/ Artificial mains Network (AMN) and excess AC cable was bundled in center.

For the tests on EUT with other peripherals (as a whole system)

I/O cables that were connected to the peripherals were bundled in center. They were folded back and forth forming a bundle 30cm to 40cm long and were hanged at a 40cm height to the ground plane. All unused 50ohm connectors of the LISN(AMN) were resistivity terminated in 50ohm when not connected to the measuring equipment.

The AC Mains Terminal Continuous disturbance Voltage has been measured with the EUT in a Semi Anechoic Chamber .

The EUT was connected to a LISN (AMN).

An overview sweep with peak detection has been performed.

The test results and limit are rounded off to one decimal place, so some differences might be observed.

Detector	: QP and CISPR AV
Measurement range	: 0.15-30MHz
Test data	: APPENDIX
Test result	: Pass

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SECTION 6: Radiated Spurious Emission

Test Procedure

EUT was placed on a urethane platform of nominal size, 1.5m by 1.0m, raised 0.8m above the conducting ground plane.

The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with a ground plane.

The height of the measuring antenna varied between 1 and 4m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field strength.

The measurements were performed for both vertical and horizontal antenna polarization with the Test Receiver, or the Spectrum Analyzer.

The measurements were made with the following detector function of the test receiver and the Spectrum analyzer (in linear mode).

The test was made with the detector (RBW/VBW) in the following table.

When using Spectrum analyzer, the test was made with adjusting span to zero by using peak hold.

Test Antennas are used as below;

Frequency	Below 30MHz	30MHz to 300MHz	300MHz to 1GHz	Above 1GHz
Antenna Type	Loop	Biconical	Logperiodic	Horn

In any 100kHz bandwidth outside the restricted band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator confirmed 20dB below that in the 100kHz bandwidth within the band that contains the highest level of the desired power, based on a radiated measurement.

20dBc was applied to the frequency over the limit of FCC 15.209 / Table 5 of RSS-Gen 7.2.5 (IC) and outside the restricted band of FCC15.205 / Table 3 of RSS-Gen 7.2.2 (IC).

Frequency	Below 1GHz	Above 1GHz		20dBc
Instrument used	Test Receiver	Spectrum Analyzer		Spectrum Analyzer
Detector	QP	PK	AV	PK
IF Bandwidth	BW 120kHz(T/R)	RBW: 1MHz VBW: 3MHz	RBW: 1MHz VBW: 10Hz *1)	RBW: 100kHz VBW: 300kHz (S/A)
Test Distance	3m	3m (below 10GHz) 1m*2) (above 10GHz)		3m (below 10GHz) 1m*2) (above 10GHz)

*1) Although 00-705 accepts VBW=10Hz for AV measurements, it was confirmed that superfluous smoothing was not performed.

*2) Distance Factor: $20 \times \log(3.0\text{m}/1.0\text{m}) = 9.5\text{dB}$

- The carrier level and noise levels were confirmed at each position of X and Y axes of EUT to see the position of maximum noise, and the test was made at the position that has the maximum noise.

The test results and limit are rounded off to one decimal place, so some differences might be observed.

Measurement range : 30M-25GHz
Test data : APPENDIX
Test result : Pass

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APPENDIX 1: Data of EMI test

Conducted Emission
(Power Supply: SONY)

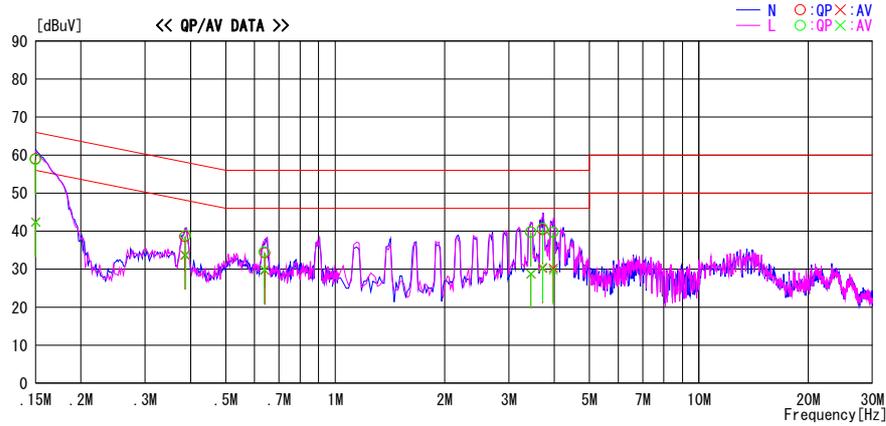
DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2014/03/28

Report No. : 10240264H
Temp./Humi. : 20deg. C / 47% RH
Engineer : Keisuke Kawamura

Mode / Remarks : BT Tx DHS 2402MHz

LIMIT : FCC15.207 QP
FCC15.207 AV

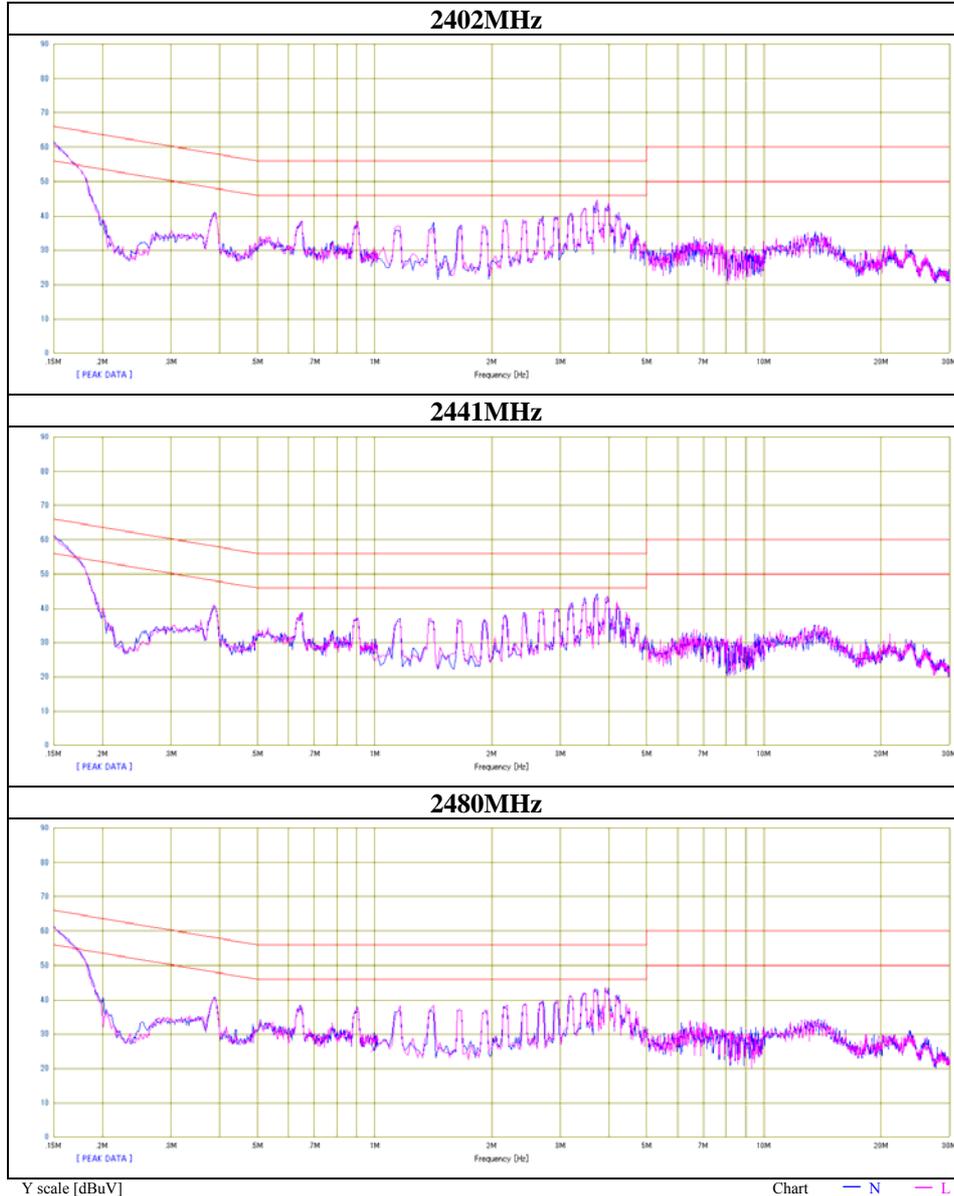


Frequency [MHz]	Reading Level		Corr. Factor [dB]	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.15001	45.9	29.3	13.1	59.0	42.4	66.0	56.0	7.0	13.6	N	
0.38623	25.5	20.6	13.1	38.6	33.7	58.1	48.1	19.5	14.4	N	
0.64002	21.2	16.6	13.1	34.3	29.7	56.0	46.0	21.7	16.3	N	
3.45198	26.3	15.4	13.4	39.7	28.8	56.0	46.0	16.3	17.2	N	
3.71523	27.0	16.8	13.4	40.4	30.2	56.0	46.0	15.6	15.8	N	
3.97557	26.3	16.8	13.4	39.7	30.2	56.0	46.0	16.3	15.8	N	
0.15001	45.7	29.2	13.1	58.8	42.3	66.0	56.0	7.2	13.7	L	
0.38835	25.8	20.6	13.1	38.9	33.7	58.1	48.1	19.2	14.4	L	
0.63787	21.5	16.8	13.1	34.6	29.9	56.0	46.0	21.4	16.1	L	
3.45198	26.3	15.4	13.4	39.7	28.8	56.0	46.0	16.3	17.2	L	
3.71463	27.3	17.1	13.4	40.7	30.5	56.0	46.0	15.3	15.5	L	
3.97644	26.3	16.3	13.4	39.7	29.7	56.0	46.0	16.3	16.3	L	

CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT=READING+C.F(LISN LOSS + ATT LOSS + CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission
(Power Supply: SONY)

Test place	Ise HQ EMC Lab. No.1 Semi Anechoic Chamber
Report No.	10240264H
Date	03/27/2014
Temperature/ Humidity	20 deg. C / 47% RH
Engineer	Keisuke Kawamura
Mode	Tx DH5



Conducted Emission (Power Supply: SONY)

DATA OF CONDUCTED EMISSION TEST

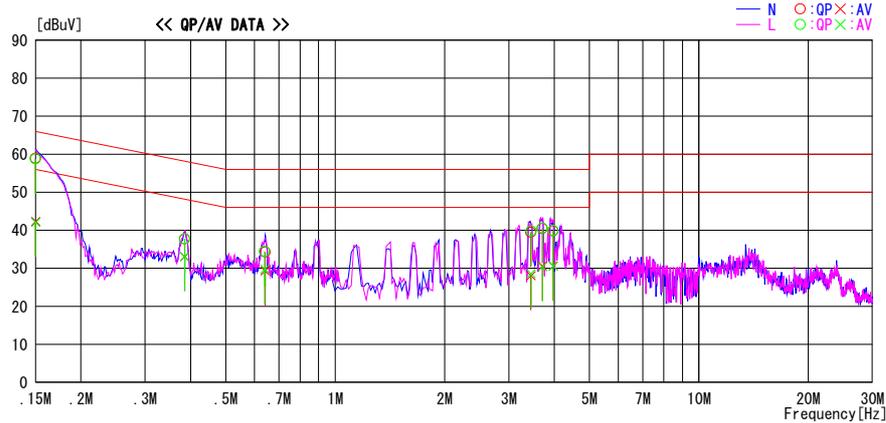
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
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Report No. : 10240264H

Temp./Humi. : 20deg. C / 47% RH
Engineer : Keisuke Kawamura

Mode / Remarks : BT Tx 3DH5 2402MHz

LIMIT : FCC15.207 QP
FCC15.207 AV

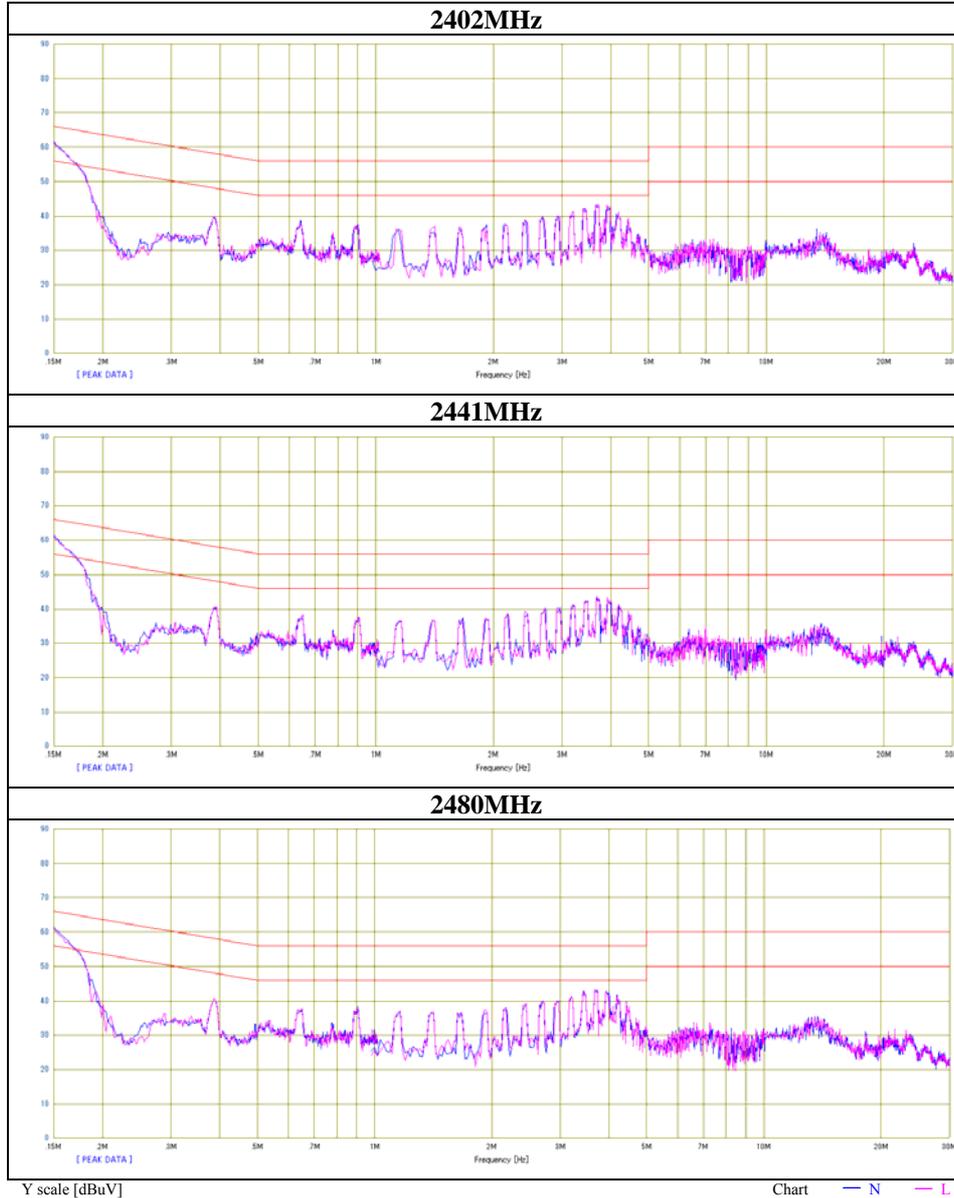


Frequency [MHz]	Reading Level		Corr. Factor [dB]	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.15001	45.8	29.2	13.1	58.9	42.3	66.0	56.0	7.1	13.7	N	
0.38537	24.6	20.0	13.1	37.7	33.1	58.2	48.2	20.5	15.1	N	
0.64167	21.2	16.2	13.1	34.3	29.3	56.0	46.0	21.7	16.7	N	
3.45029	26.1	14.7	13.4	39.5	28.1	56.0	46.0	16.5	17.9	N	
3.71356	27.1	17.2	13.4	40.5	30.6	56.0	46.0	15.5	15.4	N	
3.97423	26.4	17.2	13.4	39.8	30.6	56.0	46.0	16.2	15.4	N	
0.15001	45.6	29.0	13.1	58.7	42.1	66.0	56.0	7.3	13.9	L	
0.38537	24.6	20.0	13.1	37.7	33.1	58.2	48.2	20.5	15.1	L	
0.63951	21.4	16.7	13.1	34.5	29.8	56.0	46.0	21.5	16.2	L	
3.45463	26.4	15.2	13.4	39.8	28.6	56.0	46.0	16.2	17.4	L	
3.71211	27.2	17.0	13.4	40.6	30.4	56.0	46.0	15.4	15.6	L	
3.97395	26.5	17.2	13.4	39.9	30.6	56.0	46.0	16.1	15.4	L	

CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT=READING+C.F(LISN LOSS + ATT LOSS + CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission
(Power Supply: SONY)

Test place	Ise HQ EMC Lab. No.1 Semi Anechoic Chamber
Report No.	10240264H
Date	03/27/2014
Temperature/ Humidity	20 deg. C / 47% RH
Engineer	Keisuke Kawamura
Mode	Tx 3DH5



Conducted Emission
 (Power Supply: DELTA)

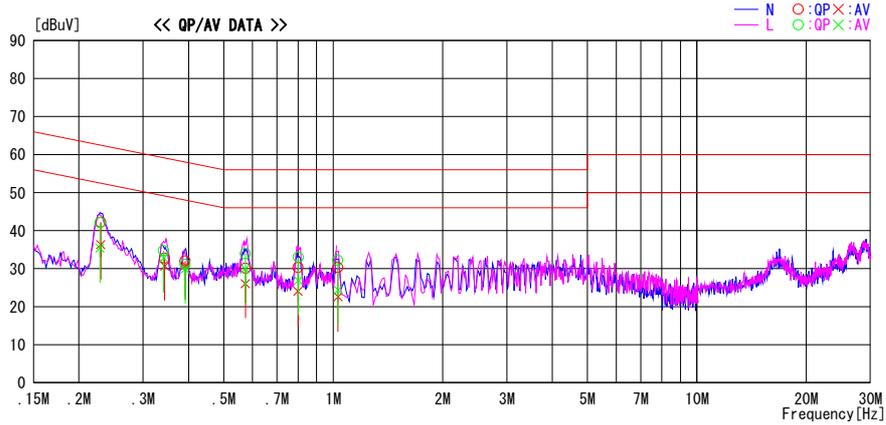
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 Temp./Humi. : 20deg. C / 47% RH
 Engineer : Keisuke Kawamura

Mode / Remarks : BT Tx DH5 2402MHz

LIMIT : FCC15.207 QP
 FCC15.207 AV

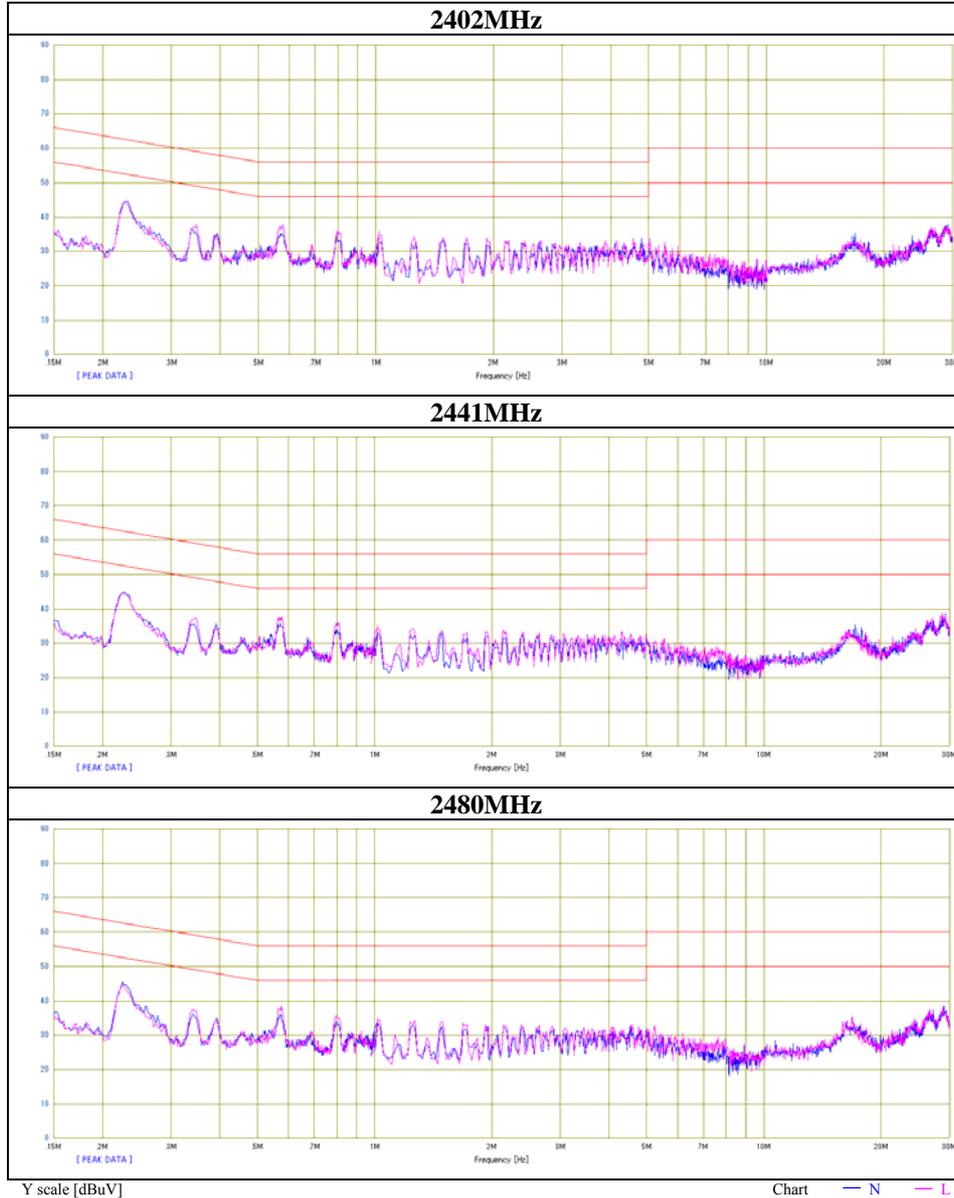


Frequency [MHz]	Reading Level		Corr. Factor [dB]	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.22946	29.1	23.2	13.1	42.2	36.3	62.5	52.5	20.3	16.2	N	
0.34391	19.6	17.6	13.1	32.7	30.7	59.1	49.1	26.4	18.4	N	
0.39163	18.9	17.8	13.1	32.0	30.9	58.0	48.0	26.0	17.1	N	
0.57314	17.0	13.0	13.1	30.1	26.1	56.0	46.0	25.9	19.9	N	
0.80035	17.1	10.9	13.2	30.3	24.1	56.0	46.0	25.7	21.9	N	
1.03036	17.1	9.4	13.2	30.3	22.6	56.0	46.0	25.7	23.4	N	
0.22846	29.0	22.3	13.1	42.1	35.4	62.5	52.5	20.4	17.1	L	
0.34178	21.6	19.7	13.1	34.7	32.8	59.2	49.2	24.5	16.4	L	
0.39139	18.0	16.8	13.1	31.1	29.9	58.0	48.0	26.9	18.1	L	
0.57333	20.8	16.9	13.1	33.9	30.0	56.0	46.0	22.1	16.0	L	
0.80207	19.8	13.7	13.2	33.0	26.9	56.0	46.0	23.0	19.1	L	
1.03036	19.0	11.2	13.2	32.2	24.4	56.0	46.0	23.8	21.6	L	

CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT=READING+C.F(LISN LOSS + ATT LOSS + CABLE LOSS)
 Except for the above table : adequate margin data below the limits.

Conducted Emission
(Power Supply: DELTA)

Test place	Ise HQ EMC Lab. No.1 Semi Anechoic Chamber
Report No.	10240264H
Date	03/27/2014
Temperature/ Humidity	20 deg. C / 47% RH
Engineer	Keisuke Kawamura
Mode	Tx DH5



Conducted Emission (Power Supply: DELTA)

DATA OF CONDUCTED EMISSION TEST

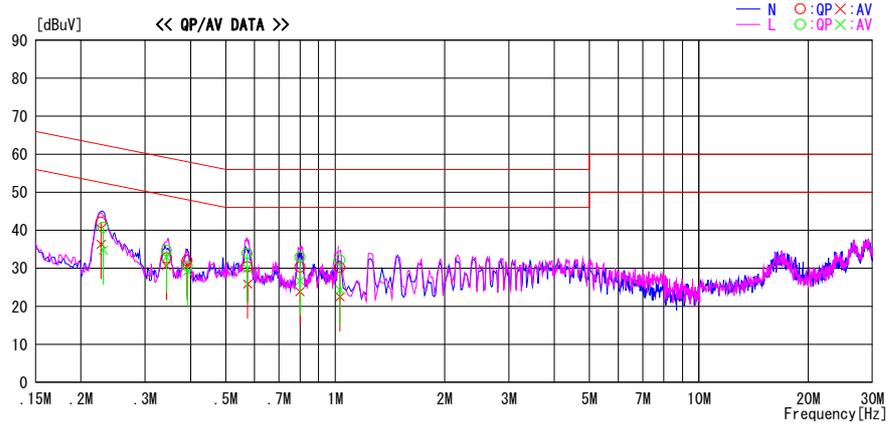
UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2014/03/27

Report No. : 10240264H

Temp./Humi. : 20deg. C / 47% RH
Engineer : Keisuke Kawamura

Mode / Remarks : BT Tx 3DH5 2402MHz

LIMIT : FCC15.207 QP
FCC15.207 AV

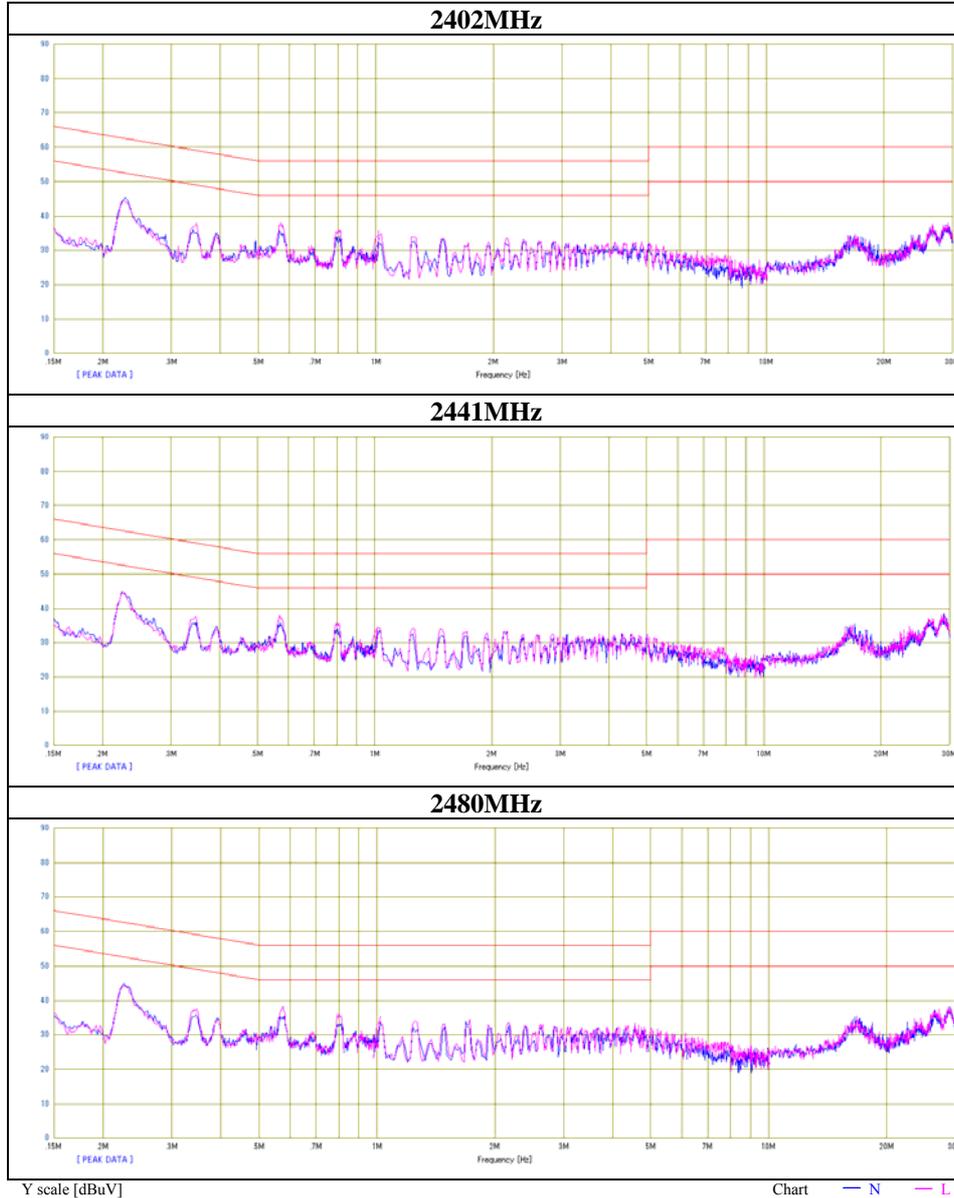


Frequency [MHz]	Reading Level		Corr. Factor [dB]	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.22729	29.0	23.2	13.1	42.1	36.3	62.5	52.5	20.4	16.2	N	
0.34345	19.6	17.6	13.1	32.7	30.7	59.1	49.1	26.4	18.4	N	
0.39163	18.9	17.8	13.1	32.0	30.9	58.0	48.0	26.0	17.1	N	
0.57388	17.3	12.8	13.1	30.4	25.9	56.0	46.0	25.6	20.1	N	
0.80032	17.1	10.7	13.2	30.3	23.9	56.0	46.0	25.7	22.1	N	
1.02951	17.0	9.3	13.2	30.2	22.5	56.0	46.0	25.8	23.5	N	
0.23021	27.6	21.7	13.1	40.7	34.8	62.4	52.4	21.7	17.6	L	
0.34351	21.6	19.8	13.1	34.7	32.9	59.1	49.1	24.4	16.2	L	
0.39252	17.5	16.1	13.1	30.6	29.2	58.0	48.0	27.4	18.8	L	
0.57255	20.8	16.9	13.1	33.9	30.0	56.0	46.0	22.1	16.0	L	
0.80026	19.7	13.5	13.2	32.9	26.7	56.0	46.0	23.1	19.3	L	
1.02951	19.0	11.1	13.2	32.2	24.3	56.0	46.0	23.8	21.7	L	

CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT=READING+C.F(LISN LOSS + ATT LOSS + CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission
(Power Supply: DELTA)

Test place	Ise HQ EMC Lab. No.1 Semi Anechoic Chamber
Report No.	10240264H
Date	03/27/2014
Temperature/ Humidity	20 deg. C / 47% RH
Engineer	Keisuke Kawamura
Mode	Tx 3DH5



Conducted Emission
(Power Supply: Chicony)

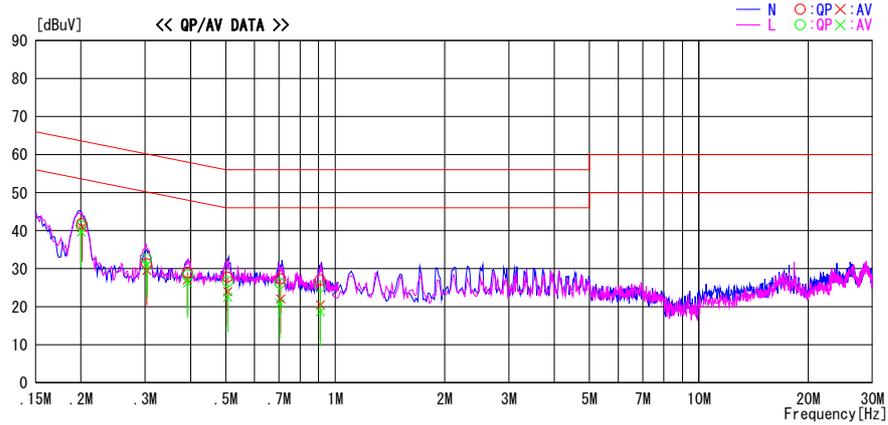
DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2014/03/27

Report No. : 10240264H
Temp./Humi. : 20deg. C / 47% RH
Engineer : Keisuke Kawamura

Mode / Remarks : BT Tx DH5 2402MHz

LIMIT : FCC15.207 QP
FCC15.207 AV

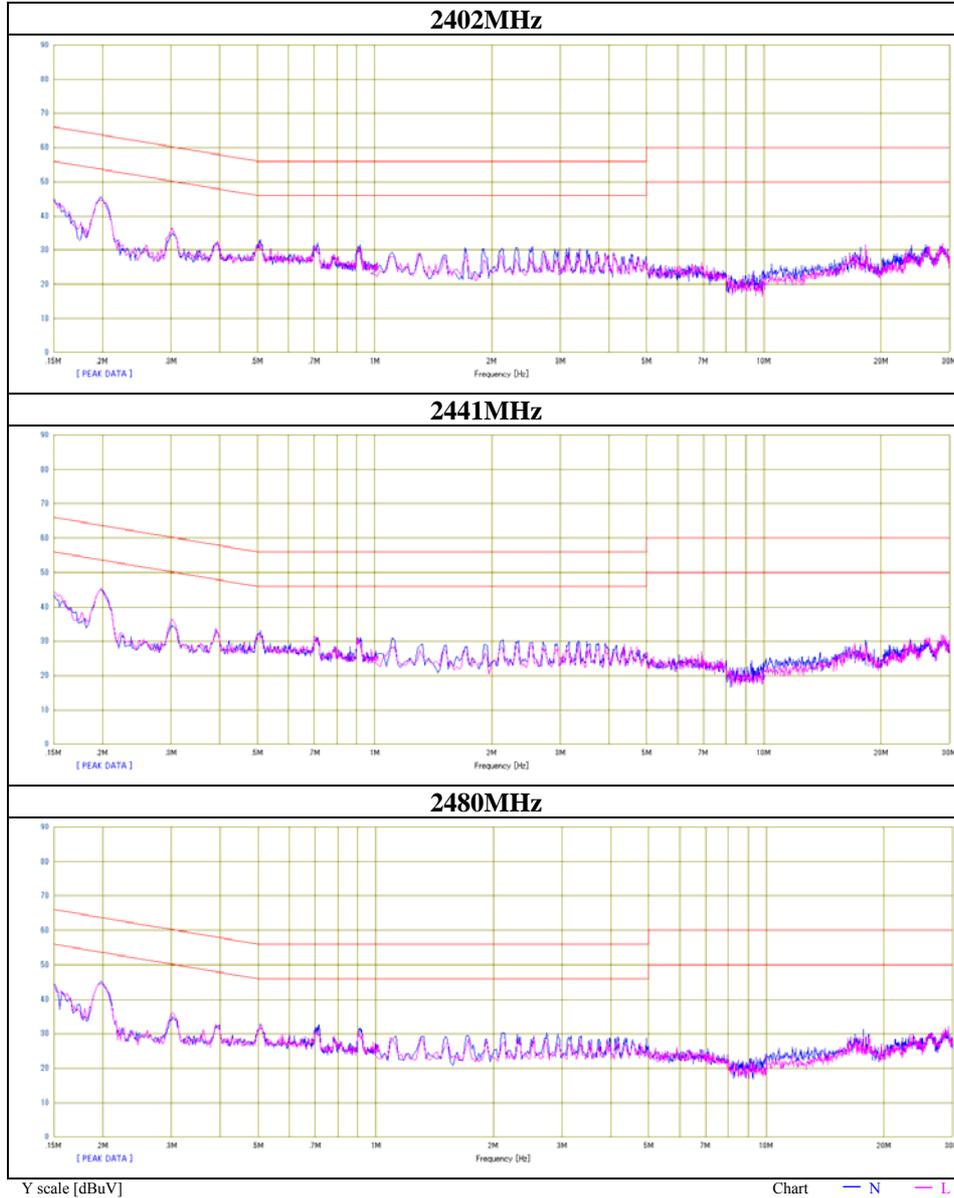


Frequency [MHz]	Reading Level		Corr. Factor	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.20115	28.7	27.8	13.1	41.8	40.9	63.6	53.6	21.8	12.7	N	
0.30343	18.2	16.4	13.1	31.3	29.5	60.1	50.1	28.8	20.6	N	
0.39235	15.9	14.0	13.1	29.0	27.1	58.0	48.0	29.0	20.9	N	
0.50592	14.6	10.9	13.1	27.7	24.0	56.0	46.0	28.3	22.0	N	
0.70792	14.1	8.9	13.2	27.3	22.1	56.0	46.0	28.7	23.9	N	
0.91052	13.8	7.3	13.2	27.0	20.5	56.0	46.0	29.0	25.5	N	
0.20023	28.2	26.5	13.1	41.3	39.6	63.6	53.6	22.3	14.0	L	
0.30343	19.5	18.0	13.1	32.6	31.1	60.1	50.1	27.5	19.0	L	
0.39333	15.2	13.1	13.1	28.3	26.2	58.0	48.0	29.7	21.8	L	
0.50661	13.5	9.4	13.1	26.6	22.5	56.0	46.0	29.4	23.5	L	
0.70443	13.0	7.7	13.1	26.1	20.8	56.0	46.0	29.9	25.2	L	
0.91052	12.1	5.5	13.2	25.3	18.7	56.0	46.0	30.7	27.3	L	

CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT=READING+C.F (LISN LOSS + ATT LOSS + CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission
(Power Supply: Chicony)

Test place	Ise HQ EMC Lab. No.1 Semi Anechoic Chamber
Report No.	10240264H
Date	03/27/2014
Temperature/ Humidity	20 deg. C / 47% RH
Engineer	Keisuke Kawamura
Mode	Tx DH5



Conducted Emission
(Power Supply: Chicony)

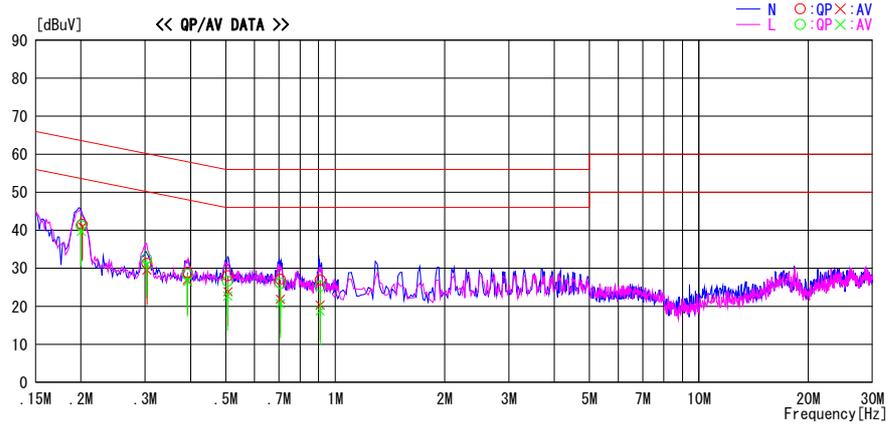
DATA OF CONDUCTED EMISSION TEST

UL Japan, Inc. Head Office EMC Lab. No.1 Semi Anechoic Chamber
Date : 2014/03/27

Report No. : 10240264H
Power : AC 120V / 60Hz
Temp./Humi. : 20deg. C / 47% RH
Engineer : Keisuke Kawamura

Mode / Remarks : BT Tx 3DH5 2402MHz

LIMIT : FCC15.207 QP
FCC15.207 AV

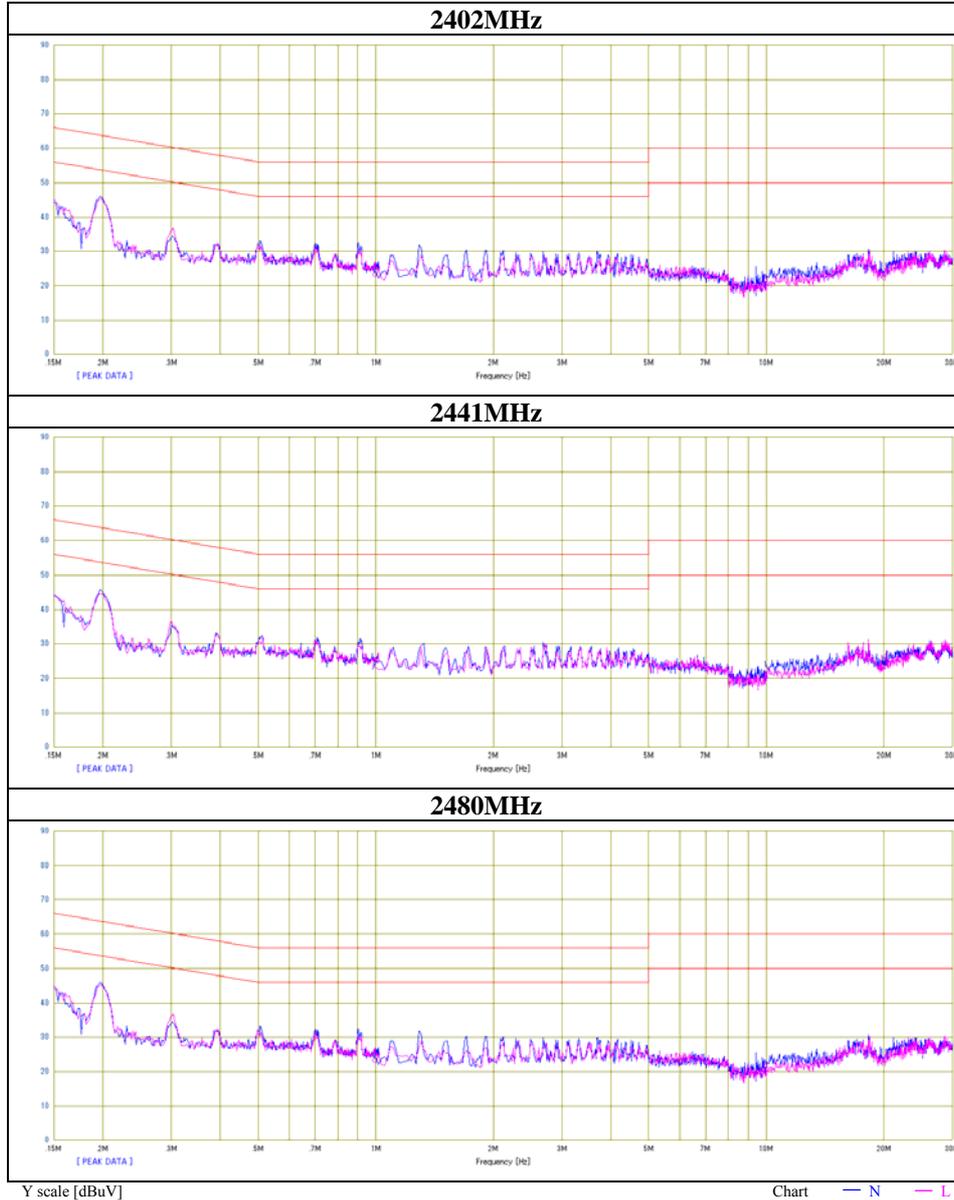


Frequency [MHz]	Reading Level		Corr. Factor [dB]	Results		Limit		Margin		Phase	Comment
	QP [dBuV]	AV [dBuV]		QP [dBuV]	AV [dBuV]	QP [dBuV]	AV [dBuV]	QP [dB]	AV [dB]		
0.20168	28.5	27.9	13.1	41.6	41.0	63.5	53.5	21.9	12.5	N	
0.30356	18.2	16.4	13.1	31.3	29.5	60.1	50.1	28.8	20.6	N	
0.39235	15.8	13.9	13.1	28.9	27.0	58.0	48.0	29.1	21.0	N	
0.50704	14.9	10.8	13.1	28.0	23.9	56.0	46.0	28.0	22.1	N	
0.70591	14.0	8.8	13.1	27.1	21.9	56.0	46.0	28.9	24.1	N	
0.90974	13.7	7.1	13.2	26.9	20.3	56.0	46.0	29.1	25.7	N	
0.20032	28.1	26.6	13.1	41.2	39.7	63.6	53.6	22.4	13.9	L	
0.30332	19.5	18.0	13.1	32.6	31.1	60.2	50.2	27.6	19.1	L	
0.39254	15.4	13.4	13.1	28.5	26.5	58.0	48.0	29.5	21.5	L	
0.50617	13.5	9.6	13.1	26.6	22.7	56.0	46.0	29.4	23.3	L	
0.70676	12.9	7.6	13.1	26.0	20.7	56.0	46.0	30.0	25.3	L	
0.90974	12.1	5.6	13.2	25.3	18.8	56.0	46.0	30.7	27.2	L	

CHART: WITH FACTOR, Peak hold data. CALCULATION: RESULT=READING+C.F(LISN LOSS + ATT LOSS + CABLE LOSS)
Except for the above table : adequate margin data below the limits.

Conducted Emission
(Power Supply: Chicony)

Test place	Ise HQ EMC Lab. No.1 Semi Anechoic Chamber
Report No.	10240264H
Date	03/27/2014
Temperature/ Humidity	20 deg. C / 47% RH
Engineer	Keisuke Kawamura
Mode	Tx 3DH5



Radiated Spurious Emission
(Power Supply: SONY)

Test place Ise HQ EMC Lab. No.3&No.2 Semi Anechoic Chamber
Report No. 10240264H
Date 03/12/2014 03/18/2014 03/19/2014
Temperature/ Humidity 24 deg. C / 33% RH 23 deg. C / 35% RH 23 deg. C / 35% RH
Engineer Kazuya Yoshioka Kazuya Yoshioka Kazuya Yoshioka
(1-10GHz) (10-26.5GHz) (30-1000MHz)
Mode Tx, DH5 2402MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	62.972	QP	37.7	7.4	7.1	28.5	23.7	40.0	16.3	
Hori	108.783	QP	36.9	11.3	7.5	28.4	27.3	43.5	16.2	
Hori	177.149	QP	32.8	16.0	8.0	28.0	28.8	43.5	14.7	
Hori	324.002	QP	40.6	15.0	8.8	27.8	36.6	46.0	9.4	
Hori	576.003	QP	36.2	19.2	9.8	28.8	36.4	46.0	9.6	
Hori	901.150	QP	32.3	22.2	11.1	27.9	37.7	46.0	8.3	
Hori	2390.000	PK	42.3	28.2	3.1	32.4	41.2	73.9	32.7	
Hori	4804.000	PK	NS	-	-	-	-	73.9	-	
Hori	7206.000	PK	NS	-	-	-	-	73.9	-	
Hori	9608.000	PK	NS	-	-	-	-	73.9	-	
Hori	2390.000	AV	30.3	28.2	3.1	32.4	29.2	53.9	24.7	
Hori	4804.000	AV	NS	-	-	-	-	53.9	-	
Hori	7206.000	AV	NS	-	-	-	-	53.9	-	
Hori	9608.000	AV	NS	-	-	-	-	53.9	-	
Vert	39.236	QP	36.5	14.8	6.8	28.6	29.5	40.0	10.5	
Vert	106.737	QP	43.5	11.0	7.5	28.4	33.6	43.5	9.9	
Vert	209.549	QP	33.7	16.7	8.2	27.8	30.8	43.5	12.7	
Vert	405.016	QP	34.0	17.3	9.1	28.3	32.1	46.0	13.9	
Vert	576.003	QP	32.7	19.2	9.8	28.8	32.9	46.0	13.1	
Vert	901.150	QP	31.2	22.2	11.1	27.9	36.6	46.0	9.4	
Vert	2390.000	PK	44.4	28.2	3.1	32.4	43.3	73.9	30.6	
Vert	4804.000	PK	NS	-	-	-	-	73.9	-	
Vert	7206.000	PK	NS	-	-	-	-	73.9	-	
Vert	9608.000	PK	NS	-	-	-	-	73.9	-	
Vert	2390.000	AV	31.8	28.2	3.1	32.4	30.7	53.9	23.2	
Vert	4804.000	AV	NS	-	-	-	-	53.9	-	
Vert	7206.000	AV	NS	-	-	-	-	53.9	-	
Vert	9608.000	AV	NS	-	-	-	-	53.9	-	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

*The 10th harmonic was not seen so the result was its base noise level.

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission
20dBc Data Sheet
(Power Supply: SONY)

Test place : Ise HQ EMC Lab. No.3 Semi Anechoic Chamber
Report No. : 10240264H
Date : 03/12/2014
Temperature/ Humidity : 24 deg. C / 33% RH
Engineer : Kazuya Yoshioka
Mode : Tx, DH5 2402MHz

20dBc Data Sheet

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant Factor [dB/m]	Loss [dB]	Gain [dB]	Result dBuV/m	Limit dBuV/m	Margin [dB]	Remark
Hori	2402.000	PK	96.5	28.2	3.1	32.4	95.4	-	-	Carrier
Hori	2397.425	PK	48.8	28.2	3.1	32.4	47.7	75.4	27.7	
Hori	2400.000	PK	42.2	28.2	3.1	32.4	41.1	75.4	34.3	
Vert	2402.000	PK	96.3	28.2	3.1	32.4	95.2	-	-	Carrier
Vert	2397.425	PK	48.2	28.2	3.1	32.4	47.1	75.2	28.1	
Vert	2400.000	PK	42.0	28.2	3.1	32.4	40.9	75.2	34.3	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

Radiated Spurious Emission
(Power Supply : SONY)

Test place Ise HQ EMC Lab. No.3&No.2 Semi Anechoic Chamber
Report No. 10240264H
Date 03/12/2014 03/18/2014 03/19/2014
Temperature/ Humidity 24 deg. C / 33% RH 23 deg. C / 35% RH 23 deg. C / 35% RH
Engineer Kazuya Yoshioka Kazuya Yoshioka Kazuya Yoshioka
(1-10GHz) (10-26.5GHz) (30-1000MHz)
Mode Tx, DH5 2441MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	62.911	QP	36.8	7.4	7.1	28.5	22.8	40.0	17.2	
Hori	108.779	QP	36.7	11.3	7.5	28.4	27.1	43.5	16.4	
Hori	177.027	QP	32.7	16.0	8.0	28.0	28.7	43.5	14.8	
Hori	324.000	QP	40.7	15.0	8.8	27.8	36.7	46.0	9.3	
Hori	576.002	QP	35.8	19.2	9.8	28.8	36.0	46.0	10.0	
Hori	901.152	QP	32.0	22.2	11.1	27.9	37.4	46.0	8.6	
Hori	4882.000	PK	NS	-	-	-	-	73.9	-	
Hori	7323.000	PK	NS	-	-	-	-	73.9	-	
Hori	9764.000	PK	NS	-	-	-	-	73.9	-	
Hori	4882.000	AV	NS	-	-	-	-	53.9	-	
Hori	7323.000	AV	NS	-	-	-	-	53.9	-	
Hori	9764.000	AV	NS	-	-	-	-	53.9	-	
Vert	39.156	QP	36.2	14.8	6.8	28.6	29.2	40.0	10.8	
Vert	106.719	QP	43.4	11.0	7.5	28.4	33.5	43.5	10.0	
Vert	209.117	QP	33.5	16.7	8.2	27.8	30.6	43.5	12.9	
Vert	405.001	QP	33.6	17.3	9.1	28.3	31.7	46.0	14.3	
Vert	576.004	QP	32.3	19.2	9.8	28.8	32.5	46.0	13.5	
Vert	901.152	QP	31.0	22.2	11.1	27.9	36.4	46.0	9.6	
Vert	4882.000	PK	NS	-	-	-	-	73.9	-	
Vert	7323.000	PK	NS	-	-	-	-	73.9	-	
Vert	9764.000	PK	NS	-	-	-	-	73.9	-	
Vert	4882.000	AV	NS	-	-	-	-	53.9	-	
Vert	7323.000	AV	NS	-	-	-	-	53.9	-	
Vert	9764.000	AV	NS	-	-	-	-	53.9	-	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

*The 10th harmonic was not seen so the result was its base noise level.
Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB

Radiated Spurious Emission
(Power Supply : SONY)

Test place Ise HQ EMC Lab. No.3&No.2 Semi Anechoic Chamber
Report No. 10240264H
Date 03/12/2014 03/18/2014 03/19/2014
Temperature/ Humidity 24 deg. C / 33% RH 23 deg. C / 35% RH 23 deg. C / 35% RH
Engineer Kazuya Yoshioka Kazuya Yoshioka Kazuya Yoshioka
(1-10GHz) (10-26.5GHz) (30-1000MHz)
Mode Tx, DH5 2480MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	62.997	QP	37.3	7.4	7.1	28.5	23.3	40.0	16.7	
Hori	109.001	QP	37.1	11.4	7.5	28.4	27.6	43.5	15.9	
Hori	177.137	QP	32.6	16.0	8.0	28.0	28.6	43.5	14.9	
Hori	323.999	QP	40.4	15.0	8.8	27.8	36.4	46.0	9.6	
Hori	576.001	QP	36.3	19.2	9.8	28.8	36.5	46.0	9.5	
Hori	901.162	QP	32.2	22.2	11.1	27.9	37.6	46.0	8.4	
Hori	2483.500	PK	44.4	28.4	3.1	32.3	43.6	73.9	30.3	
Hori	2484.521	PK	50.1	28.4	3.1	32.3	49.3	73.9	24.6	
Hori	4960.000	PK	NS	-	-	-	-	73.9	-	
Hori	7440.000	PK	NS	-	-	-	-	73.9	-	
Hori	9920.000	PK	NS	-	-	-	-	73.9	-	
Hori	2483.500	AV	31.7	28.4	3.1	32.3	30.9	53.9	23.0	
Hori	2484.521	AV	44.9	28.4	3.1	32.3	44.1	53.9	9.8	
Hori	4960.000	AV	NS	-	-	-	-	53.9	-	
Hori	7440.000	AV	NS	-	-	-	-	53.9	-	
Hori	9920.000	AV	NS	-	-	-	-	53.9	-	
Vert	39.650	QP	36.2	14.7	6.8	28.6	29.1	40.0	10.9	
Vert	106.783	QP	43.6	11.0	7.5	28.4	33.7	43.5	9.8	
Vert	208.114	QP	34.0	16.7	8.2	27.8	31.1	43.5	12.4	
Vert	405.019	QP	34.1	17.3	9.1	28.3	32.2	46.0	13.8	
Vert	576.002	QP	32.5	19.2	9.8	28.8	32.7	46.0	13.3	
Vert	901.163	QP	32.1	22.2	11.1	27.9	37.5	46.0	8.5	
Vert	2483.500	PK	43.3	28.4	3.1	32.3	42.5	73.9	31.4	
Vert	2484.521	PK	49.5	28.4	3.1	32.3	48.7	73.9	25.2	
Vert	4960.000	PK	NS	-	-	-	-	73.9	-	
Vert	7440.000	PK	NS	-	-	-	-	73.9	-	
Vert	9920.000	PK	NS	-	-	-	-	73.9	-	
Vert	2483.500	AV	31.3	28.4	3.1	32.3	30.5	53.9	23.4	
Vert	2484.521	AV	43.6	28.4	3.1	32.3	42.8	53.9	11.1	
Vert	4960.000	AV	NS	-	-	-	-	53.9	-	
Vert	7440.000	AV	NS	-	-	-	-	53.9	-	
Vert	9920.000	AV	NS	-	-	-	-	53.9	-	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

*The 10th harmonic was not seen so the result was its base noise level.

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission
20dBc Data Sheet
(Power Supply: SONY)

Test place : Ise HQ EMC Lab. No.3Semi Anechoic Chamber
Report No. : 10240264H
Date : 03/12/2014
Temperature/ Humidity : 24 deg. C / 33% RH
Engineer : Kazuya Yoshioka
Mode : Tx, 3DH5 2402MHz

20dBc Data Sheet

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant Factor [dB/m]	Loss [dB]	Gain [dB]	Result dBuV/m	Limit dBuV/m	Margin [dB]	Remark
Hori	2402.000	PK	89.7	28.2	3.1	32.4	88.6	-	-	Carrier
Hori	2397.167	PK	41.3	28.2	3.1	32.4	40.2	68.6	28.4	
Hori	2400.000	PK	44.5	28.2	3.1	32.4	43.4	68.6	25.2	
Vert	2402.000	PK	92.9	28.2	3.1	32.4	91.8	-	-	Carrier
Vert	2397.167	PK	43.9	28.2	3.1	32.4	42.8	71.8	29.0	
Vert	2400.000	PK	47.3	28.2	3.1	32.4	46.2	71.8	25.6	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

Radiated Spurious Emission
(Power Supply: SONY)

Test place Ise HQ EMC Lab. No.3&No.2 Semi Anechoic Chamber
Report No. 10240264H
Date 03/12/2014 03/18/2014 03/19/2014
Temperature/ Humidity 24 deg. C / 33% RH 23 deg. C / 35% RH 24 deg. C / 36% RH
Engineer Kazuya Yoshioka Kazuya Yoshioka Kazuya Yoshioka
(1-10GHz) (10-26.5GHz) (30-1000MHz)
Mode Tx, 3DH5 2480MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	62.922	QP	39.8	7.4	7.1	28.5	25.8	40.0	14.2	
Hori	108.785	QP	36.8	11.3	7.5	28.4	27.2	43.5	16.3	
Hori	224.032	QP	34.3	16.8	8.3	27.7	31.7	46.0	14.3	
Hori	324.002	QP	40.9	15.0	8.8	27.8	36.9	46.0	9.1	
Hori	576.022	QP	36.7	19.2	9.8	28.8	36.9	46.0	9.1	
Hori	901.185	QP	31.8	22.2	11.1	27.9	37.2	46.0	8.8	
Hori	2483.500	PK	53.4	28.4	3.1	32.3	52.6	73.9	21.3	
Hori	2484.539	PK	53.0	28.4	3.1	32.3	52.2	73.9	21.8	
Hori	4960.000	PK	NS	-	-	-	-	73.9	-	
Hori	7440.000	PK	NS	-	-	-	-	73.9	-	
Hori	9920.000	PK	NS	-	-	-	-	73.9	-	
Hori	2483.500	AV	33.7	28.4	3.1	32.3	32.9	53.9	21.0	
Hori	2484.539	AV	42.8	28.4	3.1	32.3	42.0	53.9	11.9	
Hori	4960.000	AV	NS	-	-	-	-	53.9	-	
Hori	7440.000	AV	NS	-	-	-	-	53.9	-	
Hori	9920.000	AV	NS	-	-	-	-	53.9	-	
Vert	43.672	QP	36.6	13.3	6.9	28.6	28.2	40.0	11.8	
Vert	106.755	QP	43.1	11.0	7.5	28.4	33.2	43.5	10.3	
Vert	208.841	QP	33.1	16.7	8.2	27.8	30.2	43.5	13.3	
Vert	405.009	QP	33.5	17.3	9.1	28.3	31.6	46.0	14.4	
Vert	576.012	QP	32.8	19.2	9.8	28.8	33.0	46.0	13.0	
Vert	901.182	QP	31.0	22.2	11.1	27.9	36.4	46.0	9.6	
Vert	2483.500	PK	52.9	28.4	3.1	32.3	52.1	73.9	21.8	
Vert	2484.539	PK	52.6	28.4	3.1	32.3	51.8	73.9	22.2	
Vert	4960.000	PK	NS	-	-	-	-	73.9	-	
Vert	7440.000	PK	NS	-	-	-	-	73.9	-	
Vert	9920.000	PK	NS	-	-	-	-	73.9	-	
Vert	2483.500	AV	33.4	28.4	3.1	32.3	32.6	53.9	21.3	
Vert	2484.539	AV	40.7	28.4	3.1	32.3	39.9	53.9	14.1	
Vert	4960.000	AV	NS	-	-	-	-	53.9	-	
Vert	7440.000	AV	NS	-	-	-	-	53.9	-	
Vert	9920.000	AV	NS	-	-	-	-	53.9	-	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

*The 10th harmonic was not seen so the result was its base noise level.

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission
20dBc Data Sheet
(Power Supply: DELTA)

Test place Ise HQ EMC Lab. No.3 Semi Anechoic Chamber
Report No. 10240264H
Date 03/12/2014
Temperature/ Humidity 24 deg. C / 33% RH
Engineer Kazuya Yoshioka
Mode Tx, DH5 2402MHz

20dBc Data Sheet

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant Factor [dB/m]	Loss [dB]	Gain [dB]	Result dBuV/m	Limit dBuV/m	Margin [dB]	Remark
Hori	2402.000	PK	96.3	28.2	3.1	32.4	95.2	-	-	Carrier
Hori	2397.448	PK	47.7	28.2	3.1	32.4	46.6	75.2	28.6	
Hori	2400.000	PK	45.1	28.2	3.1	32.4	44.0	75.2	31.2	
Vert	2402.000	PK	97.3	28.2	3.1	32.4	96.2	-	-	Carrier
Vert	2397.448	PK	48.9	28.2	3.1	32.4	47.8	76.2	28.4	
Vert	2400.000	PK	45.8	28.2	3.1	32.4	44.7	76.2	31.5	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

Radiated Spurious Emission
(Power Supply: DELTA)

Test place Ise HQ EMC Lab. No.3&No.2 Semi Anechoic Chamber
Report No. 10240264H
Date 03/12/2014 03/18/2014 03/19/2014
Temperature/ Humidity 24 deg. C / 33% RH 23 deg. C / 35% RH 24 deg. C / 36% RH
Engineer Kazuya Yoshioka Kazuya Yoshioka Kazuya Yoshioka
(1-10GHz) (10-26.5GHz) (30-1000MHz)
Mode Tx, DH5 2441MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	134.994	QP	39.3	14.1	7.7	28.3	32.8	43.5	10.7	
Hori	206.155	QP	33.7	16.7	8.2	27.8	30.8	43.5	12.7	
Hori	323.987	QP	39.4	15.0	8.8	27.8	35.4	46.0	10.6	
Hori	405.002	QP	33.2	17.3	9.1	28.3	31.3	46.0	14.7	
Hori	576.053	QP	37.4	19.2	9.8	28.8	37.6	46.0	8.4	
Hori	901.156	QP	32.2	22.2	11.1	27.9	37.6	46.0	8.4	
Hori	4882.000	PK	NS	-	-	-	-	73.9	-	
Hori	7323.000	PK	NS	-	-	-	-	73.9	-	
Hori	9764.000	PK	NS	-	-	-	-	73.9	-	
Hori	4882.000	AV	NS	-	-	-	-	53.9	-	
Hori	7323.000	AV	NS	-	-	-	-	53.9	-	
Hori	9764.000	AV	NS	-	-	-	-	53.9	-	
Vert	39.724	QP	38.4	14.7	6.8	28.6	31.3	40.0	8.7	
Vert	108.013	QP	45.3	11.2	7.5	28.4	35.6	43.5	7.9	
Vert	120.322	QP	40.3	12.9	7.6	28.4	32.4	43.5	11.1	
Vert	135.003	QP	43.6	14.1	7.7	28.3	37.1	43.5	6.4	
Vert	405.042	QP	34.6	17.3	9.1	28.3	32.7	46.0	13.3	
Vert	575.996	QP	33.2	19.2	9.8	28.8	33.4	46.0	12.6	
Vert	901.154	QP	32.0	22.2	11.1	27.9	37.4	46.0	8.6	
Vert	4882.000	PK	NS	-	-	-	-	73.9	-	
Vert	7323.000	PK	NS	-	-	-	-	73.9	-	
Vert	9764.000	PK	NS	-	-	-	-	73.9	-	
Vert	4882.000	AV	NS	-	-	-	-	53.9	-	
Vert	7323.000	AV	NS	-	-	-	-	53.9	-	
Vert	9764.000	AV	NS	-	-	-	-	53.9	-	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

*The 10th harmonic was not seen so the result was its base noise level.

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB

Radiated Spurious Emission
(Power Supply: DELTA)

Test place Ise HQ EMC Lab. No.3&No.2 Semi Anechoic Chamber
Report No. 10240264H
Date 03/12/2014 03/18/2014 03/19/2014
Temperature/ Humidity 24 deg. C / 33% RH 23 deg. C / 35% RH 24 deg. C / 36% RH
Engineer Kazuya Yoshioka Kazuya Yoshioka Kazuya Yoshioka
(1-10GHz) (10-26.5GHz) (30-1000MHz)
Mode Tx, DH5 2480MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	134.994	QP	39.2	14.1	7.7	28.3	32.7	43.5	10.8	
Hori	206.155	QP	33.5	16.7	8.2	27.8	30.6	43.5	12.9	
Hori	323.987	QP	39.4	15.0	8.8	27.8	35.4	46.0	10.6	
Hori	405.012	QP	33.5	17.3	9.1	28.3	31.6	46.0	14.4	
Hori	576.051	QP	37.4	19.2	9.8	28.8	37.6	46.0	8.4	
Hori	901.156	QP	32.4	22.2	11.1	27.9	37.8	46.0	8.2	
Hori	2483.500	PK	44.7	28.4	3.1	32.3	43.9	73.9	30.0	
Hori	2484.511	PK	49.6	28.4	3.1	32.3	48.8	73.9	25.1	
Hori	4960.000	PK	NS	-	-	-	-	73.9	-	
Hori	7440.000	PK	NS	-	-	-	-	73.9	-	
Hori	9920.000	PK	NS	-	-	-	-	73.9	-	
Hori	2483.500	AV	31.9	28.4	3.1	32.3	31.1	53.9	22.8	
Hori	2484.511	AV	44.4	28.4	3.1	32.3	43.6	53.9	10.4	
Hori	4960.000	AV	NS	-	-	-	-	53.9	-	
Hori	7440.000	AV	NS	-	-	-	-	53.9	-	
Hori	9920.000	AV	NS	-	-	-	-	53.9	-	
Vert	39.724	QP	38.3	14.7	6.8	28.6	31.2	40.0	8.8	
Vert	108.011	QP	45.3	11.2	7.5	28.4	35.6	43.5	7.9	
Vert	120.321	QP	40.2	12.9	7.6	28.4	32.3	43.5	11.2	
Vert	135.003	QP	43.6	14.1	7.7	28.3	37.1	43.5	6.4	
Vert	405.041	QP	34.7	17.3	9.1	28.3	32.8	46.0	13.2	
Vert	575.995	QP	33.5	19.2	9.8	28.8	33.7	46.0	12.3	
Vert	901.153	QP	32.2	22.2	11.1	27.9	37.6	46.0	8.4	
Vert	2483.500	PK	43.4	28.4	3.1	32.3	42.6	73.9	31.3	
Vert	2484.511	PK	49.9	28.4	3.1	32.3	49.1	73.9	24.8	
Vert	4960.000	PK	NS	-	-	-	-	73.9	-	
Vert	7440.000	PK	NS	-	-	-	-	73.9	-	
Vert	9920.000	PK	NS	-	-	-	-	73.9	-	
Vert	2483.500	AV	31.5	28.4	3.1	32.3	30.7	53.9	23.2	
Vert	2484.511	AV	43.4	28.4	3.1	32.3	42.6	53.9	11.4	
Vert	4960.000	AV	NS	-	-	-	-	53.9	-	
Vert	7440.000	AV	NS	-	-	-	-	53.9	-	
Vert	9920.000	AV	NS	-	-	-	-	53.9	-	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

*The 10th harmonic was not seen so the result was its base noise level.

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

Radiated Spurious Emission
(Power Supply: DELTA)

Test place Ise HQ EMC Lab. No.3&No.2 Semi Anechoic Chamber
Report No. 10240264H
Date 03/12/2014 03/18/2014 03/19/2014
Temperature/ Humidity 24 deg. C / 33% RH 23 deg. C / 35% RH 24 deg. C / 36% RH
Engineer Kazuya Yoshioka Kazuya Yoshioka Kazuya Yoshioka
(1-10GHz) (10-26.5GHz) (30-1000MHz)
Mode Tx, 3DH5 2402MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	134.995	QP	39.3	14.1	7.7	28.3	32.8	43.5	10.7	
Hori	206.152	QP	33.3	16.7	8.2	27.8	30.4	43.5	13.1	
Hori	323.986	QP	39.5	15.0	8.8	27.8	35.5	46.0	10.5	
Hori	405.011	QP	33.6	17.3	9.1	28.3	31.7	46.0	14.3	
Hori	576.021	QP	37.2	19.2	9.8	28.8	37.4	46.0	8.6	
Hori	901.154	QP	32.2	22.2	11.1	27.9	37.6	46.0	8.4	
Hori	2390.000	PK	42.7	28.2	3.1	32.4	41.6	73.9	32.3	
Hori	4804.000	PK	NS	-	-	-	-	73.9	-	
Hori	7206.000	PK	NS	-	-	-	-	73.9	-	
Hori	9608.000	PK	NS	-	-	-	-	73.9	-	
Hori	2390.000	AV	30.2	28.2	3.1	32.4	29.1	53.9	24.8	
Hori	4804.000	AV	NS	-	-	-	-	53.9	-	
Hori	7206.000	AV	NS	-	-	-	-	53.9	-	
Hori	9608.000	AV	NS	-	-	-	-	53.9	-	
Vert	39.725	QP	38.5	14.7	6.8	28.6	31.4	40.0	8.6	
Vert	108.020	QP	45.2	11.2	7.5	28.4	35.5	43.5	8.0	
Vert	120.322	QP	40.1	12.9	7.6	28.4	32.2	43.5	11.3	
Vert	135.011	QP	43.6	14.1	7.7	28.3	37.1	43.5	6.4	
Vert	405.051	QP	34.2	17.3	9.1	28.3	32.3	46.0	13.7	
Vert	575.970	QP	33.4	19.2	9.8	28.8	33.6	46.0	12.4	
Vert	901.156	QP	32.1	22.2	11.1	27.9	37.5	46.0	8.5	
Vert	2390.000	PK	44.5	28.2	3.1	32.4	43.4	73.9	30.5	
Vert	4804.000	PK	NS	-	-	-	-	73.9	-	
Vert	7206.000	PK	NS	-	-	-	-	73.9	-	
Vert	9608.000	PK	NS	-	-	-	-	73.9	-	
Vert	2390.000	AV	30.9	28.2	3.1	32.4	29.8	53.9	24.2	
Vert	4804.000	AV	NS	-	-	-	-	53.9	-	
Vert	7206.000	AV	NS	-	-	-	-	53.9	-	
Vert	9608.000	AV	NS	-	-	-	-	53.9	-	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

*The 10th harmonic was not seen so the result was its base noise level.

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB

Radiated Spurious Emission
20dBc Data Sheet
(Power Supply: DELTA)

Test place : Ise HQ EMC Lab. No.3 Semi Anechoic Chamber
Report No. : 10240264H
Date : 03/12/2014
Temperature/ Humidity : 24 deg. C / 33% RH
Engineer : Kazuya Yoshioka
Mode : Tx, 3DH5 2402MHz

20dBc Data Sheet

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant Factor [dB/m]	Loss [dB]	Gain [dB]	Result dBuV/m	Limit dBuV/m	Margin [dB]	Remark
Hori	2402.000	PK	92.5	28.2	3.1	32.4	91.4	-	-	Carrier
Hori	2397.488	PK	43.0	28.2	3.1	32.4	41.9	71.4	29.5	
Hori	2400.000	PK	50.1	28.2	3.1	32.4	49.0	71.4	22.4	
Vert	2402.000	PK	95.5	28.2	3.1	32.4	94.4	-	-	Carrier
Vert	2397.488	PK	46.9	28.2	3.1	32.4	45.8	74.4	28.6	
Vert	2400.000	PK	54.0	28.2	3.1	32.4	52.9	74.4	21.5	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

Radiated Spurious Emission
20dBc Data Sheet
(Power Supply: Chicony)

Test place Ise HQ EMC Lab. No.3 Semi Anechoic Chamber
Report No. 10240264H
Date 03/11/2014
Temperature/ Humidity 23 deg. C / 32% RH
Engineer Kazuya Yoshioka
Mode Tx, DH5 2402MHz

20dBc Data Sheet

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant Factor [dB/m]	Loss [dB]	Gain [dB]	Result dBuV/m	Limit dBuV/m	Margin [dB]	Remark
Hori	2402.000	PK	94.6	28.2	3.1	32.4	93.5	-	-	Carrier
Hori	2397.450	PK	48.8	28.2	3.1	32.4	47.7	73.5	25.8	
Hori	2400.000	PK	40.5	28.2	3.1	32.4	39.4	73.5	34.1	
Vert	2402.000	PK	97.4	28.2	3.1	32.4	96.3	-	-	Carrier
Vert	2397.450	PK	49.7	28.2	3.1	32.4	48.6	76.3	27.7	
Vert	2400.000	PK	41.6	28.2	3.1	32.4	40.5	76.3	35.8	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

Radiated Spurious Emission
(Power Supply: Chicony)

Test place Ise HQ EMC Lab. No.3&No.2 Semi Anechoic Chamber
Report No. 10240264H
Date 03/11/2014 03/18/2014 03/20/2014
Temperature/ Humidity 24 deg. C / 33% RH 23 deg. C / 35% RH 24 deg. C / 36% RH
Engineer Kazuya Yoshioka Kazuya Yoshioka Takumi Shimada
(1-10GHz) (10-26.5GHz) (30-1000MHz)
Mode Tx, 3DH5 2402MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	108.110	QP	39.0	11.2	7.5	28.4	29.3	43.5	14.2	
Hori	131.902	QP	32.4	13.8	7.7	28.3	25.6	43.5	17.9	
Hori	323.970	QP	40.4	15.0	8.8	27.8	36.4	46.0	9.6	
Hori	405.025	QP	32.3	17.3	9.1	28.3	30.4	46.0	15.6	
Hori	576.044	QP	40.8	19.2	9.8	28.8	41.0	46.0	5.0	
Hori	901.124	QP	33.4	22.2	11.1	27.9	38.8	46.0	7.2	
Hori	2390.000	PK	43.9	28.2	3.1	32.4	42.8	73.9	31.1	
Hori	4804.000	PK	NS	-	-	-	-	73.9	-	
Hori	7206.000	PK	NS	-	-	-	-	73.9	-	
Hori	9608.000	PK	NS	-	-	-	-	73.9	-	
Hori	2390.000	AV	31.1	28.2	3.1	32.4	30.0	53.9	23.9	
Hori	4804.000	AV	NS	-	-	-	-	53.9	-	
Hori	7206.000	AV	NS	-	-	-	-	53.9	-	
Hori	9608.000	AV	NS	-	-	-	-	53.9	-	
Vert	43.633	QP	37.9	13.3	6.9	28.6	29.5	40.0	10.5	
Vert	106.792	QP	44.4	11.0	7.5	28.4	34.5	43.5	9.0	
Vert	120.522	QP	39.2	12.9	7.6	28.4	31.3	43.5	12.2	
Vert	207.851	QP	33.5	16.7	8.2	27.8	30.6	43.5	12.9	
Vert	405.013	QP	35.7	17.3	9.1	28.3	33.8	46.0	12.2	
Vert	576.021	QP	33.0	19.2	9.8	28.8	33.2	46.0	12.8	
Vert	901.055	QP	30.7	22.2	11.1	27.9	36.1	46.0	9.9	
Vert	2390.000	PK	46.9	28.2	3.1	32.4	45.8	73.9	28.1	
Vert	4804.000	PK	NS	-	-	-	-	73.9	-	
Vert	7206.000	PK	NS	-	-	-	-	73.9	-	
Vert	9608.000	PK	NS	-	-	-	-	73.9	-	
Vert	2390.000	AV	32.7	28.2	3.1	32.4	31.6	53.9	22.3	
Vert	4804.000	AV	NS	-	-	-	-	53.9	-	
Vert	7206.000	AV	NS	-	-	-	-	53.9	-	
Vert	9608.000	AV	NS	-	-	-	-	53.9	-	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

*The 10th harmonic was not seen so the result was its base noise level.

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB

Radiated Spurious Emission
20dBc Data Sheet
(Power Supply: Chicony)

Test place	Ise HQ EMC Lab. No.3Semi Anechoic Chamber
Report No.	10240264H
Date	03/11/2014
Temperature/ Humidity	24 deg. C / 33% RH
Engineer	Kazuya Yoshioka
Mode	Tx, 3DH5 2402MHz

20dBc Data Sheet

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant Factor [dB/m]	Loss [dB]	Gain [dB]	Result dBuV/m	Limit dBuV/m	Margin [dB]	Remark
Hori	2402.000	PK	91.7	28.2	3.1	32.4	90.6	-	-	Carrier
Hori	2397.583	PK	45.0	28.2	3.1	32.4	43.9	70.6	26.7	
Hori	2400.000	PK	45.8	28.2	3.1	32.4	44.7	70.6	25.9	
Vert	2402.000	PK	94.8	28.2	3.1	32.4	93.7	-	-	Carrier
Vert	2397.583	PK	47.8	28.2	3.1	32.4	46.7	73.7	27.0	
Vert	2400.000	PK	48.5	28.2	3.1	32.4	47.4	73.7	26.3	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

Radiated Spurious Emission
(Power Supply: Chicony)

Test place Ise HQ EMC Lab. No.3&No.2 Semi Anechoic Chamber
Report No. 10240264H
Date 03/11/2014 03/18/2014 03/20/2014
Temperature/ Humidity 24 deg. C / 33% RH 23 deg. C / 35% RH 24 deg. C / 36% RH
Engineer Kazuya Yoshioka Kazuya Yoshioka Takumi Shimada
(1-10GHz) (10-26.5GHz) (30-1000MHz)
Mode Tx, 3DH5 2480MHz

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori	108.023	QP	39.6	11.2	7.5	28.4	29.9	43.5	13.6	
Hori	131.956	QP	32.3	13.8	7.7	28.3	25.5	43.5	18.0	
Hori	323.973	QP	40.5	15.0	8.8	27.8	36.5	46.0	9.5	
Hori	405.028	QP	32.7	17.3	9.1	28.3	30.8	46.0	15.2	
Hori	576.056	QP	40.8	19.2	9.8	28.8	41.0	46.0	5.0	
Hori	901.155	QP	33.3	22.2	11.1	27.9	38.7	46.0	7.3	
Hori	2483.500	PK	54.2	28.4	3.1	32.3	53.4	73.9	20.5	
Hori	2484.557	PK	53.5	28.4	3.1	32.3	52.7	73.9	21.3	
Hori	4960.000	PK	NS	-	-	-	-	73.9	-	
Hori	7440.000	PK	NS	-	-	-	-	73.9	-	
Hori	9920.000	PK	NS	-	-	-	-	73.9	-	
Hori	2483.500	AV	34.2	28.4	3.1	32.3	33.4	53.9	20.5	
Hori	2484.557	AV	41.9	28.4	3.1	32.3	41.1	53.9	12.8	
Hori	4960.000	AV	NS	-	-	-	-	53.9	-	
Hori	7440.000	AV	NS	-	-	-	-	53.9	-	
Hori	9920.000	AV	NS	-	-	-	-	53.9	-	
Vert	43.689	QP	38.1	13.3	6.9	28.6	29.7	40.0	10.3	
Vert	106.812	QP	44.7	11.1	7.5	28.4	34.9	43.5	8.6	
Vert	120.521	QP	39.1	12.9	7.6	28.4	31.2	43.5	12.3	
Vert	207.799	QP	34.0	16.7	8.2	27.8	31.1	43.5	12.4	
Vert	405.103	QP	36.0	17.3	9.1	28.3	34.1	46.0	11.9	
Vert	576.106	QP	33.3	19.2	9.8	28.8	33.5	46.0	12.5	
Vert	901.123	QP	31.1	22.2	11.1	27.9	36.5	46.0	9.5	
Vert	2483.500	PK	54.7	28.4	3.1	32.3	53.9	73.9	20.0	
Vert	2484.557	PK	53.6	28.4	3.1	32.3	52.8	73.9	21.1	
Vert	4960.000	PK	NS	-	-	-	-	73.9	-	
Vert	7440.000	PK	NS	-	-	-	-	73.9	-	
Vert	9920.000	PK	NS	-	-	-	-	73.9	-	
Vert	2483.500	AV	34.1	28.4	3.1	32.3	33.3	53.9	20.6	
Vert	2484.557	AV	41.6	28.4	3.1	32.3	40.8	53.9	13.1	
Vert	4960.000	AV	NS	-	-	-	-	53.9	-	
Vert	7440.000	AV	NS	-	-	-	-	53.9	-	
Vert	9920.000	AV	NS	-	-	-	-	53.9	-	

Result = Reading + Ant Factor + Loss (Cable+Attenuator+Filter-Distance factor(above 10GHz)) - Gain(Amplifier)

*Other frequency noises omitted in this report were not seen or had enough margin (more than 20dB).

*The 10th harmonic was not seen so the result was its base noise level.

Distance factor: 10GHz-26.5GHz 20log(3.0m/1.0m)= 9.5dB
26.5GHz-40GHz 20log(3.0m/0.5m)=15.6dB

APPENDIX 2: Test instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
MAEC-03	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-10005	RE	2014/02/27 * 12
MOS-13	Thermo-Hygrometer	Custom	CTH-180	1301	RE	2014/02/20 * 12
MJM-16	Measure	KOMELON	KMC-36	-	RE	-
COTS-MEMI	EMI measurement program	TSJ	TEPTO-DV	-	RE/CE	-
MSA-04	Spectrum Analyzer	Agilent	E4448A	US44300523	RE	2013/11/25 * 12
MHA-20	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	258	RE	2013/05/17 * 12
MCC-133	Microwave Cable	HUBER+SUHNER	SUCOFLEX104	336164/4(1m) / 340640(5m)	RE	2013/09/27 * 12
MPA-11	MicroWave System Amplifier	Agilent	83017A	MY39500779	RE	2014/03/24 * 12
MHF-25	High Pass Filter 3.5-18.0GHz	UL Japan	HPF SELECTOR	001	RE	2013/09/01 * 12
MAEC-02	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 3m	DA-06902	RE	2013/06/30 * 12
MOS-22	Thermo-Hygrometer	Custom	CTH-201	0003	RE	2014/02/20 * 12
MJM-14	Measure	KOMELON	KMC-36	-	RE	-
MHA-06	Horn Antenna 1-18GHz	Schwarzbeck	BBHA9120D	254	RE	2014/02/21 * 12
MCC-166	Microwave Cable	Junkosha	MWX221	1303S120(1m) / 1311S167(5m)	RE	2013/11/27 * 12
MPA-10	Pre Amplifier	Agilent	8449B	3008A02142	RE	2014/01/21 * 12
MHA-16	Horn Antenna 15-40GHz	Schwarzbeck	BBHA9170	BBHA9170306	RE	2013/05/17 * 12
MSA-13	Spectrum Analyzer	Agilent	E4440A	MY46185823	RE	2013/06/14 * 12
MTR-03	Test Receiver	Rohde & Schwarz	ESCI	100300	RE	2013/06/11 * 12
MBA-02	Biconical Antenna	Schwarzbeck	BBA9106	VHA91032008	RE	2013/10/13 * 12
MLA-02	Logperiodic Antenna	Schwarzbeck	USLP9143	201	RE	2013/10/13 * 12
MCC-12	Coaxial Cable	Fujikura/Agilent	-	-	RE	2014/02/20 * 12
MAT-07	Attenuator(6dB)	Weinschel Corp	2	BK7970	RE	2013/11/26 * 12
MPA-09	Pre Amplifier	Agilent	8447D	2944A10845	RE	2013/09/12 * 12
MAEC-01	Semi Anechoic Chamber(NSA)	TDK	Semi Anechoic Chamber 10m	DA-06881	CE	2013/08/01 * 12
MOS-27	Thermo-Hygrometer	CUSTOM	CTH-201	A08Q26	CE	2014/02/20 * 12
MJM-21	Measure	KOMELON	KMC-36	-	CE	-
MTR-09	EMI Test Receiver	Rohde & Schwarz	ESU26	100412	CE	2013/06/07 * 12
MLS-02	LISN(AMN)	Schwarzbeck	NSLK8127	8127383	CE(AE)	2013/07/11 * 12
MLS-03	LISN(AMN)	Schwarzbeck	NSLK8127	8127384	CE(EUT)	2014/03/10 * 12
MTA-30	Terminator	TME	CT-01	-	CE	2014/01/20 * 12
MCC-59	Coaxial cable	Suhner	-	-	CE	2013/07/22 * 12
MAT-64	Attenuator(13dB)	JFW Industries, Inc.	50FP-013H2 N	-	CE	2014/01/29 * 12

The expiration date of the calibration is the end of the expired month.

All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or international standards.

As for some calibrations performed after the tested dates, those test equipment have been controlled by means of an unbroken chains of calibrations.

**Test Item: CE: Conducted Emission
RE: Radiated Emission**