



RADIO TEST REPORT

Test Report No.: 10241975S-A

Applicant : Sony Corporation
Type of Equipment : Bluetooth Audio System
Model No. : MEX-N6000BH
FCC ID : AK8MEXN6000BH
Test regulation : FCC Part15 Subpart C: 2014
Test result : Complied

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Date of test: March 30 to April 2, 2014

Tested by: 
Kenichi Adachi
Engineer
Consumer Technology Division

Approved by : 
Toyokazu Imamura
Leader
Consumer Technology Division



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 There is no testing item of "Non-accreditation".

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13-EM-F0429

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SECTION 1: Customer information

Company Name : Sony Corporation
Brand Name : SONY
Address : Sony City Osaki, 2-10-1 Osaki, Shinagawa-ku, Tokyo 141-8610 Japan
Telephone Number : +81 50 3750 7634
Facsimile Number : +81 50 3750 6574
Contact Person : Toshihiro Maeda

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

2.1 Identification of E.U.T.

Type of Equipment : Bluetooth Audio System
Model Number : MEX-N6000BH
Serial Number : Refer to 4.2
Rating : DC12V (car battery)
Country of Mass-production : Thailand
Condition of EUT : Engineering prototype
(Not for Sale: This sample is equivalent to mass-produced items.)
Receipt Date of Sample : March 14, 2014
Modification of EUT : No modification by the test lab.

2.2 Product description

Model: MEX-N6000BH (referred to as the EUT in this report) is a Bluetooth Audio System.

Clock frequency(ies) in the system : 32.768kHz, 13.333MHz, 16.9344MHz, 26.000MHz, 28.224MHz,
36.480MHz, 48.000MHz

Bluetooth specification:

Equipment type : Transceiver
Frequency of operation : 2402-2480MHz
Bandwidth & channel spacing : 79MHz & 1MHz
Type of modulation : FHSS
Operation temperature range : -20 to +60 deg.C.
Antenna type : Meander Monopole
Antenna connector type : U-FL Type Interchangeability
Antenna gain : 0.929dBi (Peak)
ITU code : F1D, G1D

FCC 15.31 (e)

The equipment provides the wireless transmitter with stable power supply (DC3.3V). Therefore, the equipment complies with the requirement.

FCC 15.203

The equipment and its antenna comply with the requirement since the antenna is built in the equipment and it cannot be replaced by end users.

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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 15.209 Radiated emission limits, general requirements
Section 15.247 Operation within the bands 902-928MHz, 2400-2483.5MHz,
and 5725-5850MHz

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

The EUT has been tested for compliance with FCC Part 15 Subpart B. Refer to the test report 10241975S-B.

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3.2 Procedures & Results

Item	Test Procedure	Specification	Remarks	Deviation	Worst Margin	Results
Conducted emission	ANSI C63.4:2009 7. AC powerline conducted emission measurements	FCC 15.207	-	N/A *1)	-	-
Carrier frequency separation	FCC Public Notice DA 00-705 & ANSI C63.4:2009 13. Measurement of intentional radiators	FCC 15.247 (a)(1)	Conducted	N/A	*See data.	Complied
20dB bandwidth	FCC Public Notice DA 00-705 & ANSI C63.4:2009 13. Measurement of intentional radiators	FCC 15.247 (a)(1)	Conducted	N/A		Complied
Number of hopping frequency	FCC Public Notice DA 00-705 & ANSI C63.4:2009 13. Measurement of intentional radiators	FCC 15.247 (a)(1)(iii)	Conducted	N/A		Complied
Dwell time	FCC Public Notice DA 00-705 & ANSI C63.4:2009 13. Measurement of intentional radiators	FCC 15.247 (a)(1)(iii)	Conducted	N/A		Complied
Maximum peak output power	FCC Public Notice DA 00-705 & ANSI C63.4:2009 13. Measurement of intentional radiators	FCC 15.247 (b)(1)	Conducted	N/A		Complied
Band edge compliance & Spurious emission	FCC Public Notice DA 00-705 & ANSI C63.4:2009 13. Measurement of intentional radiators	FCC 15.247 (d) 15.209	Conducted/ Radiated	N/A		9.1dB Freq.: 4882.000MHz Polarization: Vertical Detection: Average Mode: Tx 2441MHz, DH5
Note: UL Japan's Work Procedures No. 13-EM-W0420 and 13-EM-W0422						
*1) The test is not applicable since the EUT has no AC mains.						

3.3 Addition to standard

Item	Test Procedure	Specification	Remarks	Worst Margin	Results
Occupied Bandwidth (99%)	ANSI C63.4:2009 13. Measurement of intentional radiators, RSS-Gen 4.6.1	-	Conducted	-	-
Note: UL Japan's Work Procedures No. 13-EM-W0420 and 13-EM-W0422					

* Other than above, no addition, exclusion nor deviation has been made from the standard.

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3.4 Uncertainty

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

Item	Frequency range	No.1 SAC ^{*1} /SR ^{*2} (±)	No.2 SAC/SR (±)	No.3 SAC/SR (±)
Radiated emission (Measurement distance: 3m)	9kHz-30MHz	3.7 dB	3.7 dB	3.6 dB
	30MHz-300MHz	4.8 dB	5.0 dB	4.8 dB
	300MHz-1GHz	5.0 dB	5.0 dB	4.8 dB
	1GHz-15GHz	4.9 dB	4.9 dB	4.9 dB
Radiated emission (Measurement distance: 1m)	15GHz-18GHz	5.7 dB	5.6 dB	5.6 dB
	18GHz-40GHz	5.2 dB	4.3 dB	4.3 dB

*1: SAC=Semi-Anechoic Chamber

*2: SR= Shielded Room is applied besides radiated emission

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

Antenna port conducted test

Power measurement uncertainty above 1GHz for this test was: (±) 1.5dB

Spurious emission (Conducted) measurement (below 1GHz) uncertainty for this test was: (±) 1.6dB

Spurious emission (Conducted) measurement (1G-3GHz) uncertainty for this test was: (±) 1.4dB

Spurious emission (Conducted) measurement (3G-18GHz) uncertainty for this test was: (±) 2.8dB

Spurious emission (Conducted) measurement (18G-26.5GHz) uncertainty for this test was: (±) 2.5dB

Bandwidth measurement uncertainty for this test was: (±) 5.4%

3.5 Test location

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JAB Accreditation No. : RTL02610

	FCC Registration No.	IC Registration No.	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Maximum measurement distance
<input type="checkbox"/> No.1 semi-anechoic chamber	697847	2973D-1	20.6 x 11.3 x 7.65	20.6 x 11.3	10m
<input type="checkbox"/> No.2 semi-anechoic chamber	697847	2973D-2	20.6 x 11.3 x 7.65	20.6 x 11.3	10m
<input checked="" type="checkbox"/> No.3 semi-anechoic chamber	697847	2973D-3	12.7 x 7.7 x 5.35	12.7 x 7.7	5m
<input type="checkbox"/> No.4 semi-anechoic chamber	-	-	8.1 x 5.1 x 3.55	8.1 x 5.1	-
<input type="checkbox"/> No.1 shielded room	-	-	6.8 x 4.1 x 2.7	6.8 x 4.1	-
<input type="checkbox"/> No.2 shielded room	-	-	6.8 x 4.1 x 2.7	6.8 x 4.1	-
<input type="checkbox"/> No.3 shielded room	-	-	6.3 x 4.7 x 2.7	6.3 x 4.7	-
<input type="checkbox"/> No.4 shielded room	-	-	4.4 x 4.7 x 2.7	4.4 x 4.7	-
<input checked="" type="checkbox"/> No.5 shielded room	-	-	7.8 x 6.4 x 2.7	7.8 x 6.4	-
<input type="checkbox"/> No.6 shielded room	-	-	7.8 x 6.4 x 2.7	7.8 x 6.4	-
<input type="checkbox"/> No.1 measurement room	-	-	2.55 x 4.1 x 2.5	-	-

3.6 Test setup, Data of test & Test instruments

Refer to APPENDIX 1 to 3.

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

4.1 Operating mode

Test item	Operating mode	Tested frequency
Carrier frequency separation	Transmitting Hopping ON (DH5 / 3-DH5) / Inquiry, Payload: PRBS9	-
20dB bandwidth	Transmitting Hopping OFF (DH5 / 3-DH5) / Inquiry, Payload: PRBS9	2402MHz, 2441MHz, 2480MHz
Number of hopping frequency	Transmitting Hopping ON (DH5 / 3-DH5) / Inquiry, Payload: PRBS9	-
Dwell time	Transmitting (Hopping ON), Payload: PRBS9 - DH1, - DH3, - DH5 - 3-DH1, - 3-DH3, - 3-DH5	-
	-Inquiry	
Maximum peak output power	Transmitting Hopping OFF, Payload: PRBS9 - DH5, - 2-DH5, - 3-DH5	2402MHz, 2441MHz, 2480MHz
Band edge compliance & Spurious emission (Conducted) (Radiated)	Transmitting (DH5 / 3-DH5), Payload: PRBS9 -Hopping ON -Hopping OFF	Band edge compliance: 2402MHz, 2480MHz
	Transmitting (DH5 / 3-DH5), Payload: PRBS9 -Hopping OFF	Spurious emission: 2402MHz, 2441MHz, 2480MHz
99% occupied bandwidth	Transmitting (DH5 / 3-DH5), Payload: PRBS9 / Inquiry -Hopping ON -Hopping OFF	2402MHz, 2441MHz, 2480MHz

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

*Remarks: Test was not performed at AFH mode, because the decrease of number of channel (min: 20ch) at AFH mode does not affect the output power and bandwidth of the EUT.
As this device had AFH mode and frequency separation could not meet the requirement of over 20dB BW without 2/3 relaxation, 125mW power limit was applied to it.

Software: BlueTest3 ver.2.5.0.93
BtCli ver. 2.5.0.93 (Inquiry mode only)
Power Settings: BDR: Ext PA: 23, Int PA: 39
EDR: Ext PA: 73, Int PA: 48

Justification: The system was configured in typical fashion (as customer would normally use it) for testing.

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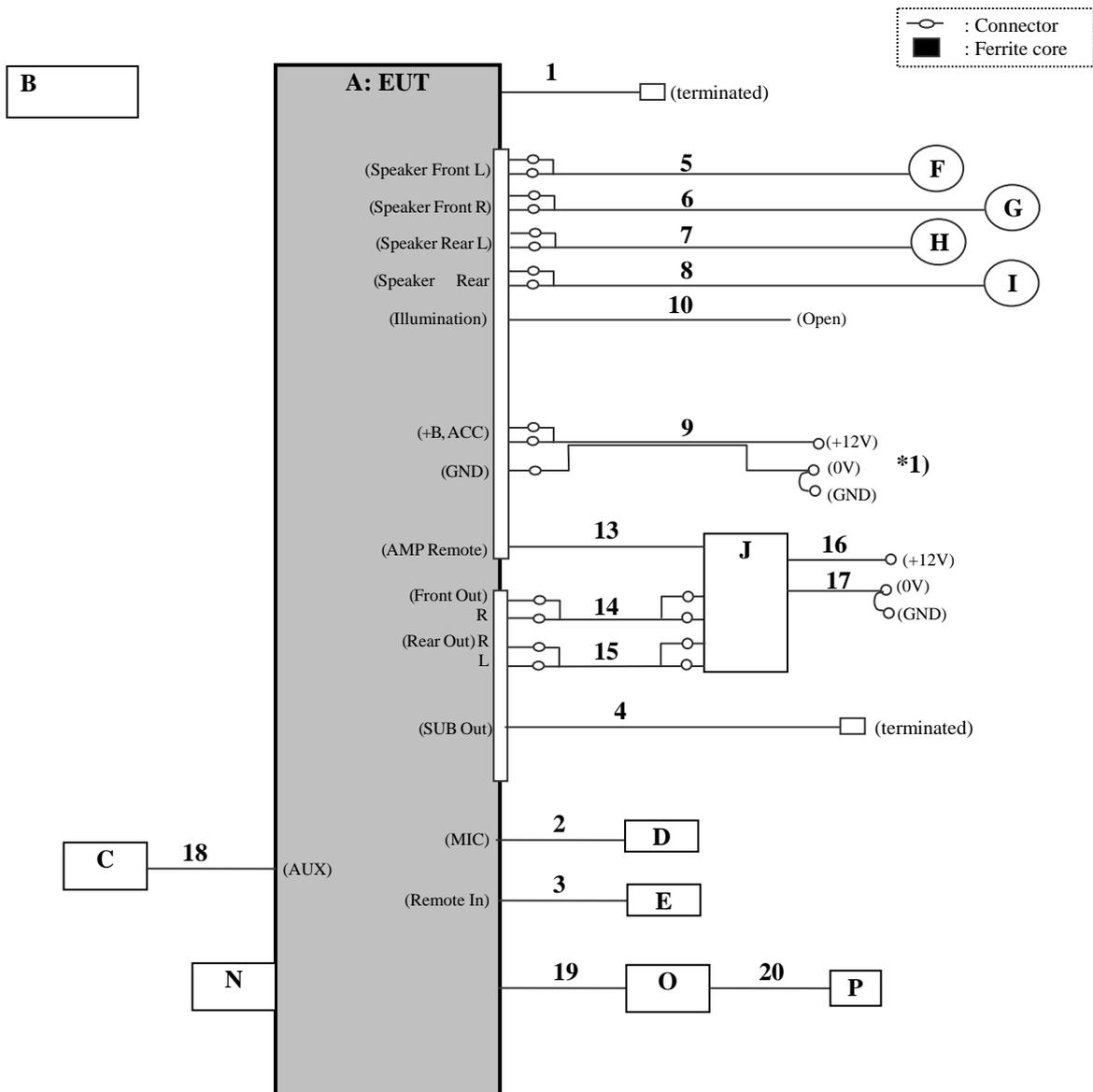
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4.2 Configuration and peripherals



* Cabling and setup were taken into consideration and test data was taken under worse case conditions.

*1) DC power supply (Model No.: PAN35-10A) was used for DC 12V input.

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Description of EUT and support equipment

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	Bluetooth Audio System	MEX-N6000BH	*2)	Sony	EUT
B	Wireless Remote	RM-X231	-	Sony	-
C	Walkman	NWZ-A829	1000200	Sony	-
D	MIC	-	-	Sony	-
E	Rotary Commander	RM-X2S	-	Sony	-
F	Speaker 1	XS-GTF1338	-	Sony	-
G	Speaker 2	XS-GTF1338	-	Sony	-
H	Speaker 3	XS-GTF1338	-	Sony	-
I	Speaker 4	XS-GTF1338	-	Sony	-
J	External Amplifier	XM-4S	-	Sony	-
N	USB Memory	USM4GL	-	Sony	-
O	SXM Receiver	SXV100	REG004RR	Sirius	-
P	SXM Antenna	XVANT1	1046	Sirius	-

*2) 8: Antenna terminal conducted tests, 7: Radiated emission tests

List of cables used

No.	Name	Length (m)	Shield- Cable	Shield- Connector	Remarks
1	FM antenna	1.2	Shielded	Shielded	-
2	MIC	4.0	Shielded	Shielded	-
3	Remote Wire	2.0	Unshielded	Unshielded	-
4	SUB OUT	2.0+0.45	Shielded	Shielded	-
5	Speaker (1)	0.15+2.1	Unshielded	Unshielded	-
6	Speaker (2)	0.15+2.1	Unshielded	Unshielded	-
7	Speaker (3)	0.15+2.1	Unshielded	Unshielded	-
8	Speaker (4)	0.15+2.1	Unshielded	Unshielded	-
9	DC Power	0.15+3.4	Unshielded	Unshielded	-
10	Illumination	0.15+1.0	Unshielded	Unshielded	-
13	AMP Remote	0.15+1.4	Unshielded	Unshielded	-
14	RCA (Front Audio Out)	0.1+5.0	Shielded	Shielded	-
15	RCA (Rear Audio Out)	0.1+5.0	Shielded	Shielded	
16	DC Power (+)	1.3	Unshielded	Unshielded	
17	DC Power (-)	1.3	Unshielded	Unshielded	
18	Audio	2.0	Shielded	Shielded	
19	Sirius XM	0.65	Shielded	Shielded	
20	Sirius XM Antenna	7.0	Shielded	Shielded	

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SECTION 5: Carrier frequency separation

Test procedure

The carrier frequency separation was measured with a spectrum analyzer connected to the antenna port.

Summary of the test results: Pass

Refer to APPENDIX 1.

SECTION 6: 20dB bandwidth & Occupied bandwidth (99%)

Test procedure

The bandwidth was measured with a spectrum analyzer connected to the antenna port.

Summary of the test results: Pass

Refer to APPENDIX 1.

SECTION 7: Number of hopping frequency

Test procedure

The Number of Hopping Frequency was measured with a spectrum analyzer connected to the antenna port.

Summary of the test results: Pass

Refer to APPENDIX 1.

SECTION 8: Dwell time

Test procedure

The Dwell time was measured with a spectrum analyzer connected to the antenna port.

Summary of the test results: Pass

Refer to APPENDIX 1.

SECTION 9: Maximum peak output power

Test procedure

The Maximum Peak Output Power was measured with a power meter connected to the antenna port.

Summary of the test results: Pass

Refer to APPENDIX 1.

SECTION 10: Spurious emissions (Antenna port conducted)

Test procedure

The Out of Band Emissions was measured with a spectrum analyzer connected to the antenna port.

In any 100kHz bandwidth outside the frequency 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.

In the frequency range below 30MHz, RBW was narrowed to separate the noise contents.

Then, wide-band noise near the limit was checked separately, however the noise was not detected as shown in the chart. (9kHz-150kHz:RBW=200Hz, 150kHz-30MHz:RBW=10kHz)

Summary of the test results: Pass

Refer to APPENDIX 1.

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SECTION 11: Radiated emission

11.1 Operating environment

Test room : See test data (APPENDIX 1)
Temperature : See test data (APPENDIX 1)
Humidity : See test data (APPENDIX 1)

11.2 Test configuration

EUT was placed on a platform of nominal size, 1.0m by 2.0m, raised 0.8m above the conducting ground plane. The table is made of Styrofoam and covered with polyvinyl chloride. That has very low permittivity. The rear of EUT, including its peripherals was aligned and flushed with rear of tabletop. I/O cables that were connected to the peripherals were bundled in center. They were folded back and for the forming a bundle 30cm to 40cm long and were hanged at a 40cm height to the ground plane. Photographs of the set up are shown in APPENDIX 3.

11.3 Test conditions

Frequency range : 30MHz - 25GHz
EUT position : Table top

11.4 Test procedure

The Radiated Electric Field Strength intensity has been measured on a semi-anechoic chamber with a ground plane and at a distance of 3m (below 15GHz) / 1m (above 15GHz) (Refer to Figure 1). Measurements were performed with quasi-peak, peak and average detector. The measuring antenna height was varied between 1 and 4m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field intensity. The measurements were performed for both vertical and horizontal antenna polarization.

The radiated emission measurements were made with the following detection.

Frequency	30 - 1000MHz	1 - 25GHz	
Detection Type	Quasi-Peak	Peak	* Average
IF Bandwidth	120kHz	RBW:1MHz VBW:3MHz	RBW:1MHz VBW:10Hz

* When using Spectrum analyzer, the test was made with adjusting span to zero by using peak hold. Although 00-705 accepts VBW=10Hz for AV measurements, confirmed that superfluous smoothing was not performed.

The carrier level and noise levels were confirmed at mounting angle of 0 to +45 deg (lengthwise direction) based on the product specification to see the position of maximum noise, and the test was made at the position that has the maximum noise.

Antenna polarization \ Test item	Carrier	Spurious emission (Below 1GHz)	Spurious emission (1-15GHz)	Spurious emission (Above 15GHz)
Horizontal	0 deg.	0 deg.	45 deg.	45 deg.
Vertical	0 deg.	45 deg.	0 deg.	0 deg.

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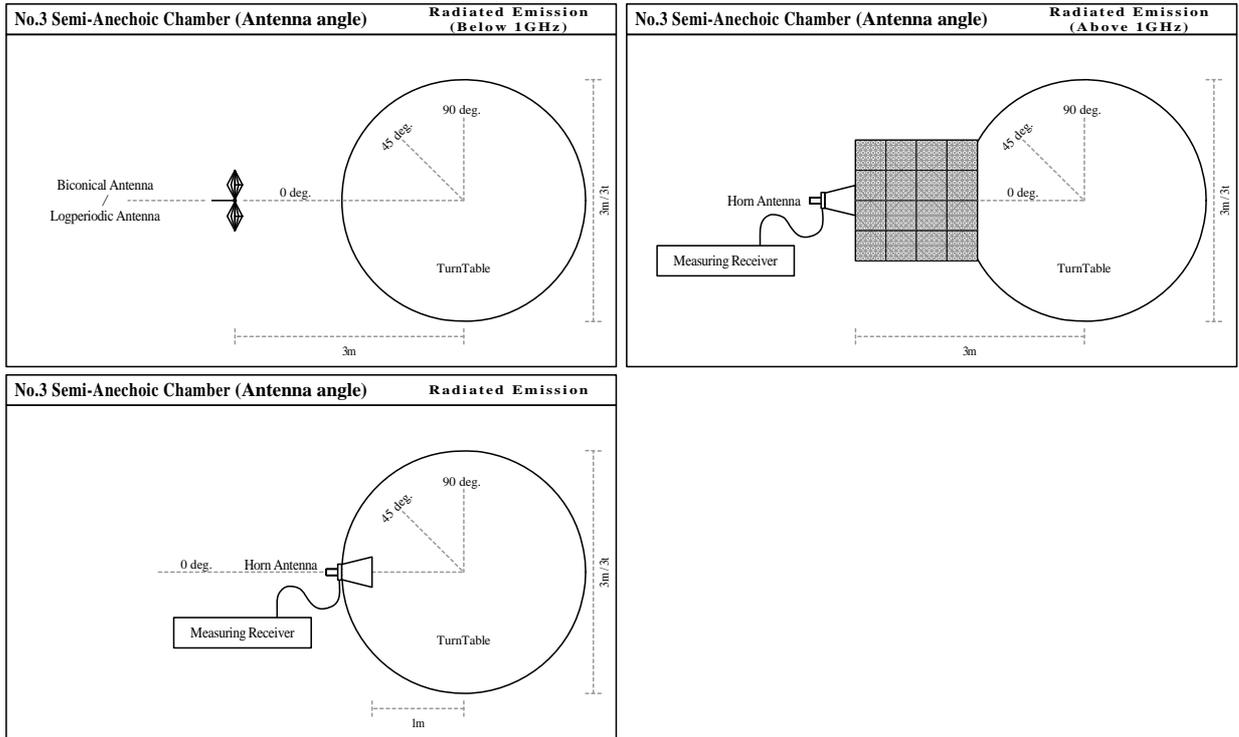
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Figure 1. Antenna angle



11.5 Band edge

Band edge level is below the limits of FCC 15.209. Refer to the data.

11.6 Results

Summary of the test results: Pass *No noise was detected above the 5th order harmonics.

Refer to APPENDIX 1.

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Contents of APPENDIXES

APPENDIX 1: Data of Radio tests

20dB bandwidth and Carrier frequency separation
Number of hopping frequency
Dwell time
Maximum peak output power
Spurious emission (Antenna port conducted)
Radiated emission
Occupied bandwidth

APPENDIX 2: Test instruments

Test instruments

APPENDIX 3: Photographs of test setup

Radiated emission

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APPENDIX 1: Data of Radio tests

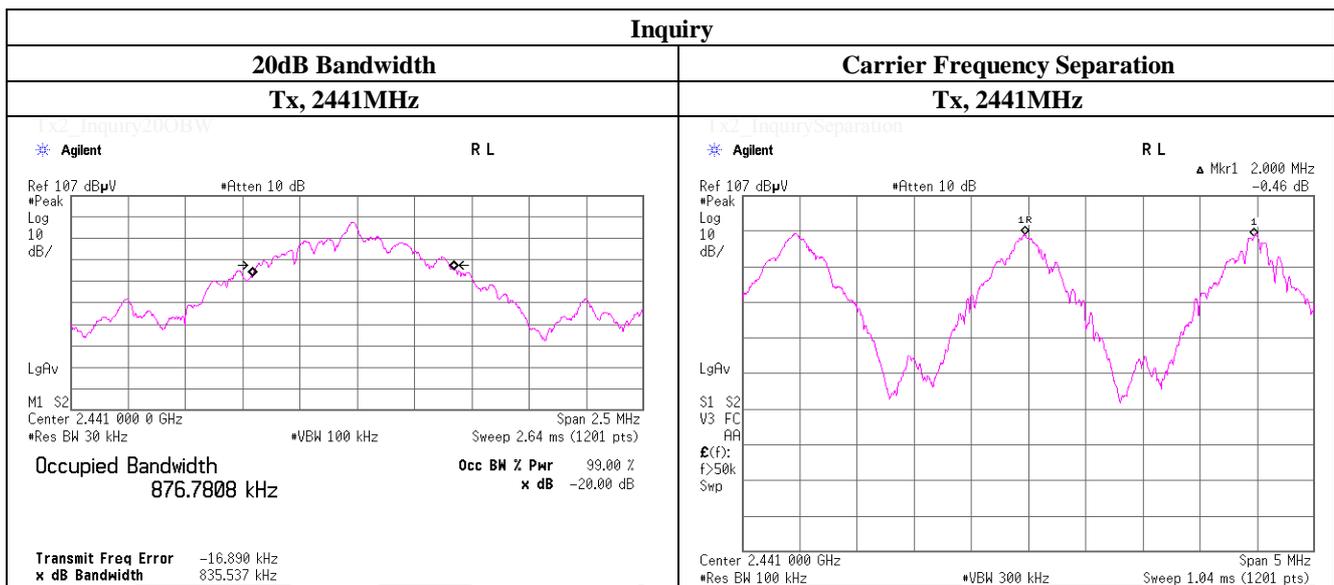
20dB Bandwidth and Carrier Frequency Separation

Test place	UL Japan, Inc. Shonan EMC Lab.	No.5 Shielded Room
Date	April 2, 2014	
Temperature / Humidity	26deg.C , 33%RH	
Engineer	Kenichi Adachi	
Mode	Tx, Bluetooth, BDR, PRBS9	

Mode	Freq. [MHz]	20dB Bandwidth [MHz]	Carrier Frequency Separation [MHz]	Limit for Carrier Frequency Separation [MHz]
DH5	2402.0	0.961	1.000	>= 0.641
DH5	2441.0	0.982	1.000	>= 0.655
DH5	2480.0	0.964	1.000	>= 0.643
Inquiry	2441.0	0.836	2.000	>= 0.557

Limit: Two-thirds of 20dB Bandwidth or 25kHz (whichever is greater).

No limit applies to 20dB Bandwidth.



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20dB Bandwidth and Carrier Frequency Separation

Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
Date April 2, 2014
Temperature / Humidity 26deg.C , 33%RH
Engineer Kenichi Adachi
Mode Tx, Bluetooth, EDR, PRBS9

Mode	Freq. [MHz]	20dB Bandwidth [MHz]	Carrier Frequency Separation [MHz]	Limit for Carrier Frequency Separation [MHz]
3-DH5	2402.0	1.295	1.000	>= 0.863
3-DH5	2441.0	1.286	1.000	>= 0.857
3-DH5	2480.0	1.286	1.000	>= 0.857

Limit: Two-thirds of 20dB Bandwidth or 25kHz (whichever is greater).

No limit applies to 20dB Bandwidth.

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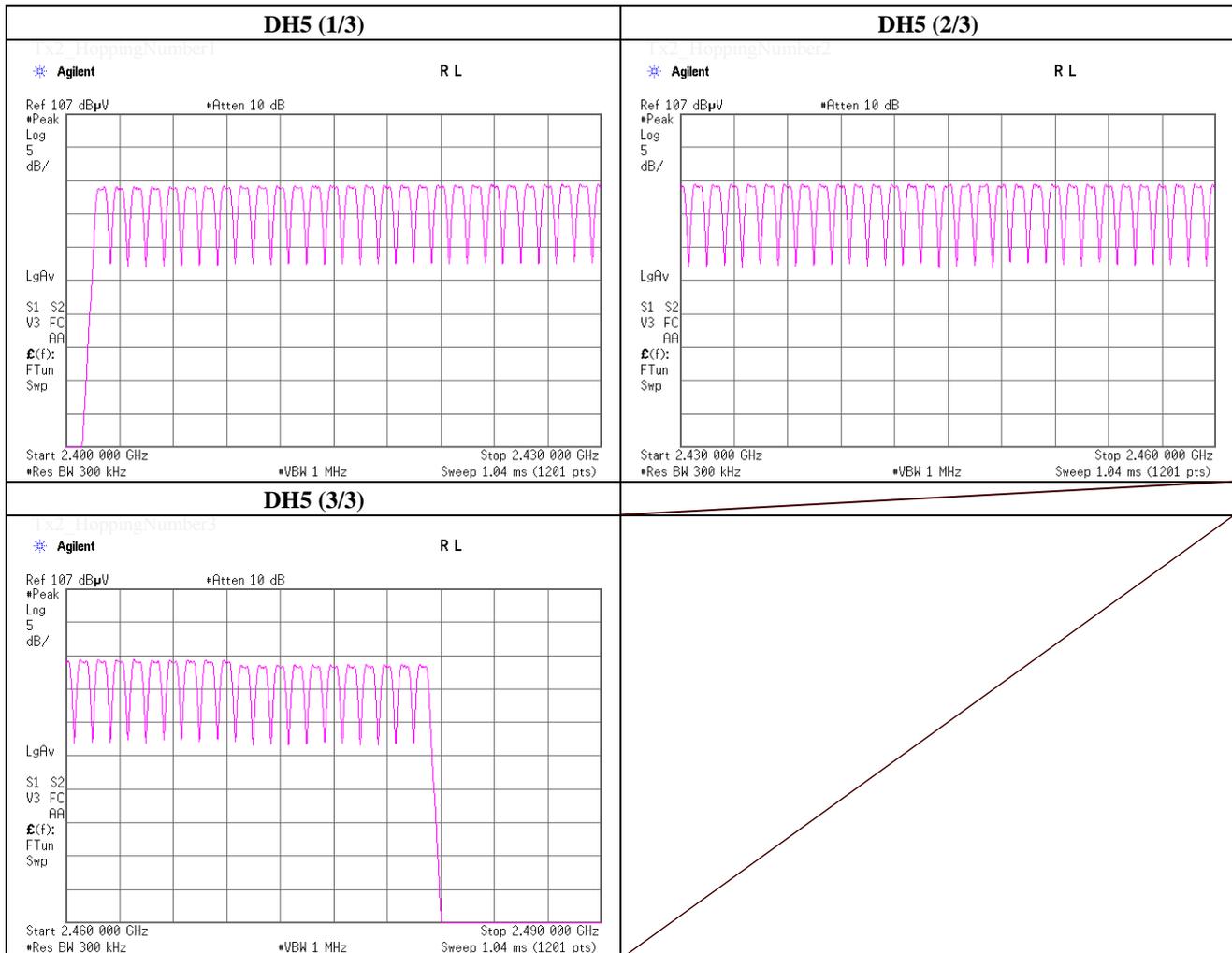
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Number of Hopping Frequency

Test place	UL Japan, Inc. Shonan EMC Lab.	No.5 Shielded Room
Date	April 2, 2014	
Temperature / Humidity	26deg.C , 33%RH	
Engineer	Kenichi Adachi	
Mode	Tx, Bluetooth, BDR, PRBS9	

Mode	Number of Channel [times]	Limit [times]
DH5	79	>= 15

* Test was not performed at AFH mode whose number of hopping channel is 20 channels because this Bluetooth radio is in compliance of Bluetooth Specification.



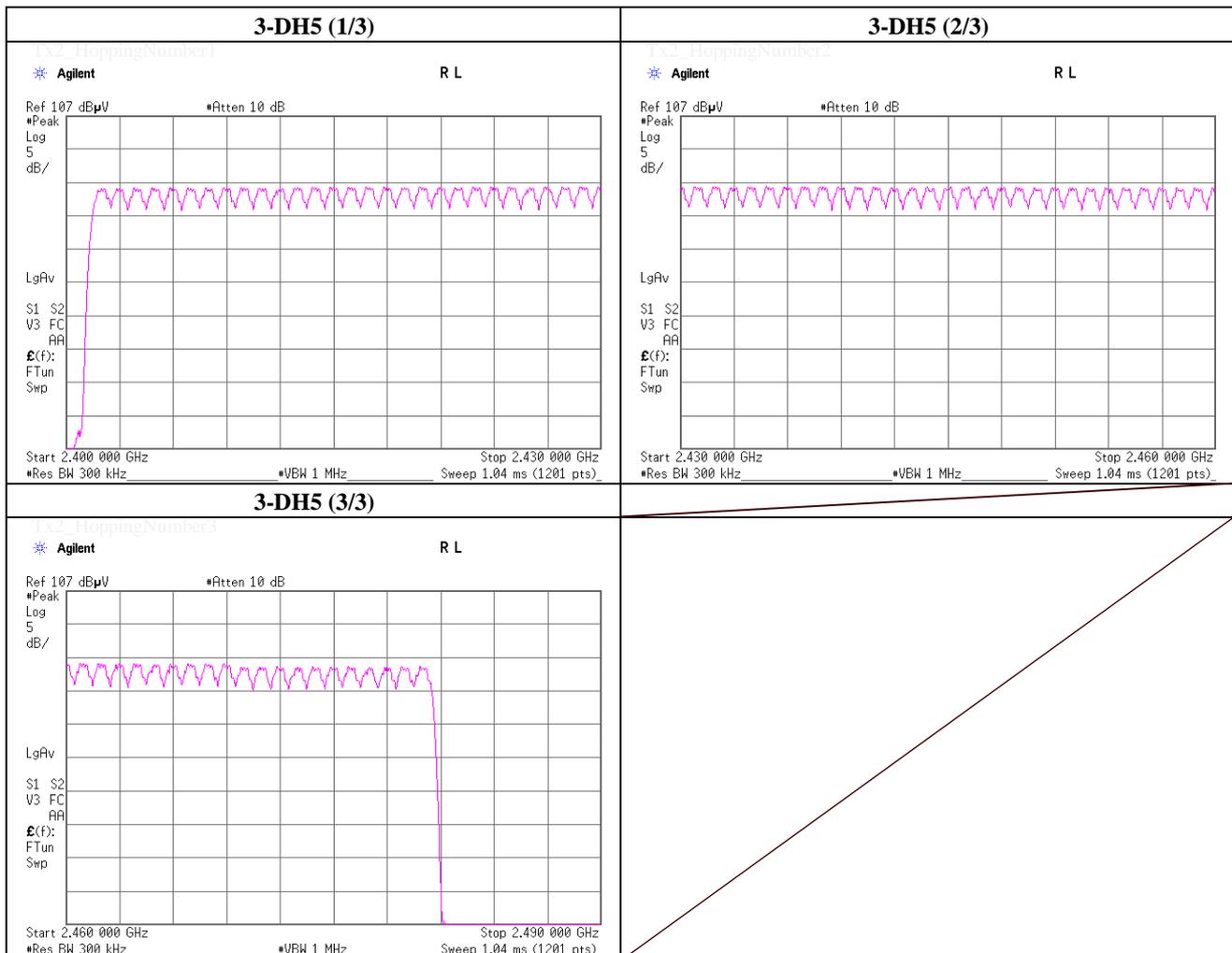
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Number of Hopping Frequency

Test place	UL Japan, Inc. Shonan EMC Lab.	No.5 Shielded Room
Date	April 2, 2014	
Temperature / Humidity	26deg.C , 33%RH	
Engineer	Kenichi Adachi	
Mode	Tx, Bluetooth, EDR, PRBS9	

Mode	Number of Channel [times]	Limit [times]
3-DH5	79	>= 15

* Test was not performed at AFH mode whose number of hopping channel is 20 channels because this Bluetooth radio is in compliance of Bluetooth Specification.

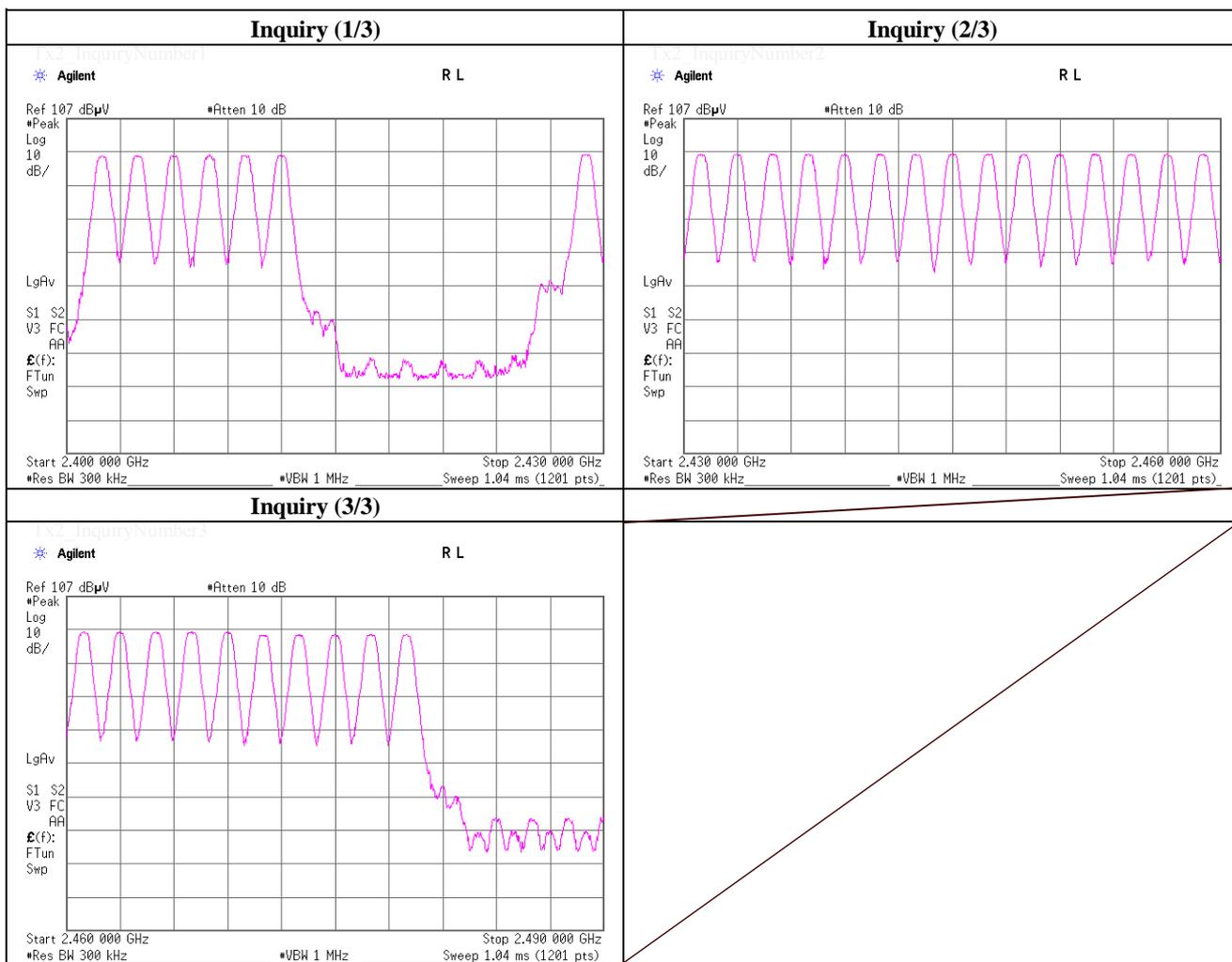


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Number of Hopping Frequency

Test place	UL Japan, Inc. Shonan EMC Lab.	No.5 Shielded Room
Date	April 2, 2014	
Temperature / Humidity	26deg.C , 33%RH	
Engineer	Kenichi Adachi	
Mode	Tx, Bluetooth, Inquiry	

Mode	Number of Channel [times]	Limit [times]
Inquiry	32	>= 15



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Dwell Time

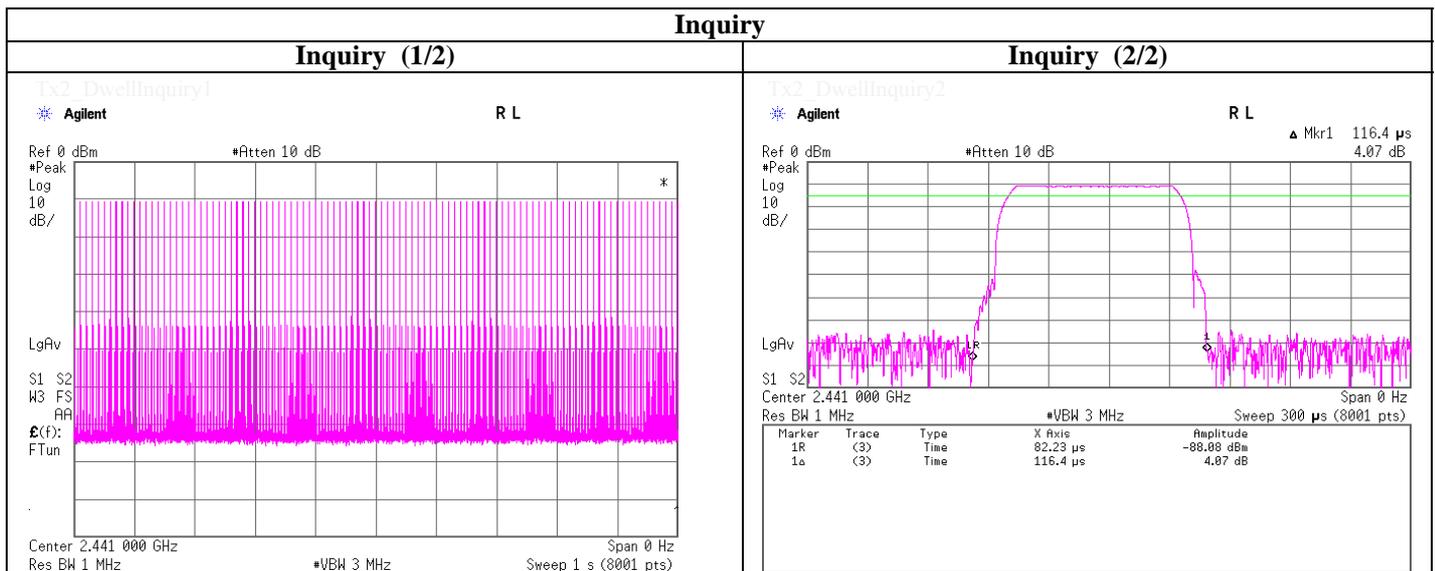
Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
 Date April 2, 2014
 Temperature / Humidity 26deg.C , 33%RH
 Engineer Kenichi Adachi
 Mode Tx, Bluetooth, BDR, PRBS9

Mode	Number of transmission in a 31.6 (79 Hopping x 0.4) / 12.8 (32 Hopping x 0.4) second period	Length of transmission time [msec]	Result [msec]	Limit [msec]
DH1	51.0 / 5.0 sec. x 31.6 sec. = 323 times	0.416	134	400
DH3	26.0 / 5.0 sec. x 31.6 sec. = 165 times	1.676	276	400
DH5	17.0 / 5.0 sec. x 31.6 sec. = 108 times	2.924	316	400
Inquiry	100.0 / 1.0 sec. x 12.8 sec. = 1280 times	0.116	149	400

Sample Calculation

Result = Number of transmission x Length of transmission time

* This device complies with the Bluetooth protocol for FHSS operation, employing a pseudo random channel selection and hopping rate to ensure that the occupancy time in $N \times 0.4s$, where N is the number of channels being used in the hopping sequence ($20 \leq N \leq 79$), is always less than 0.4s regardless of packet size (DH1, DH3 or DH5). This is confirmed in the test report for $N=79$.



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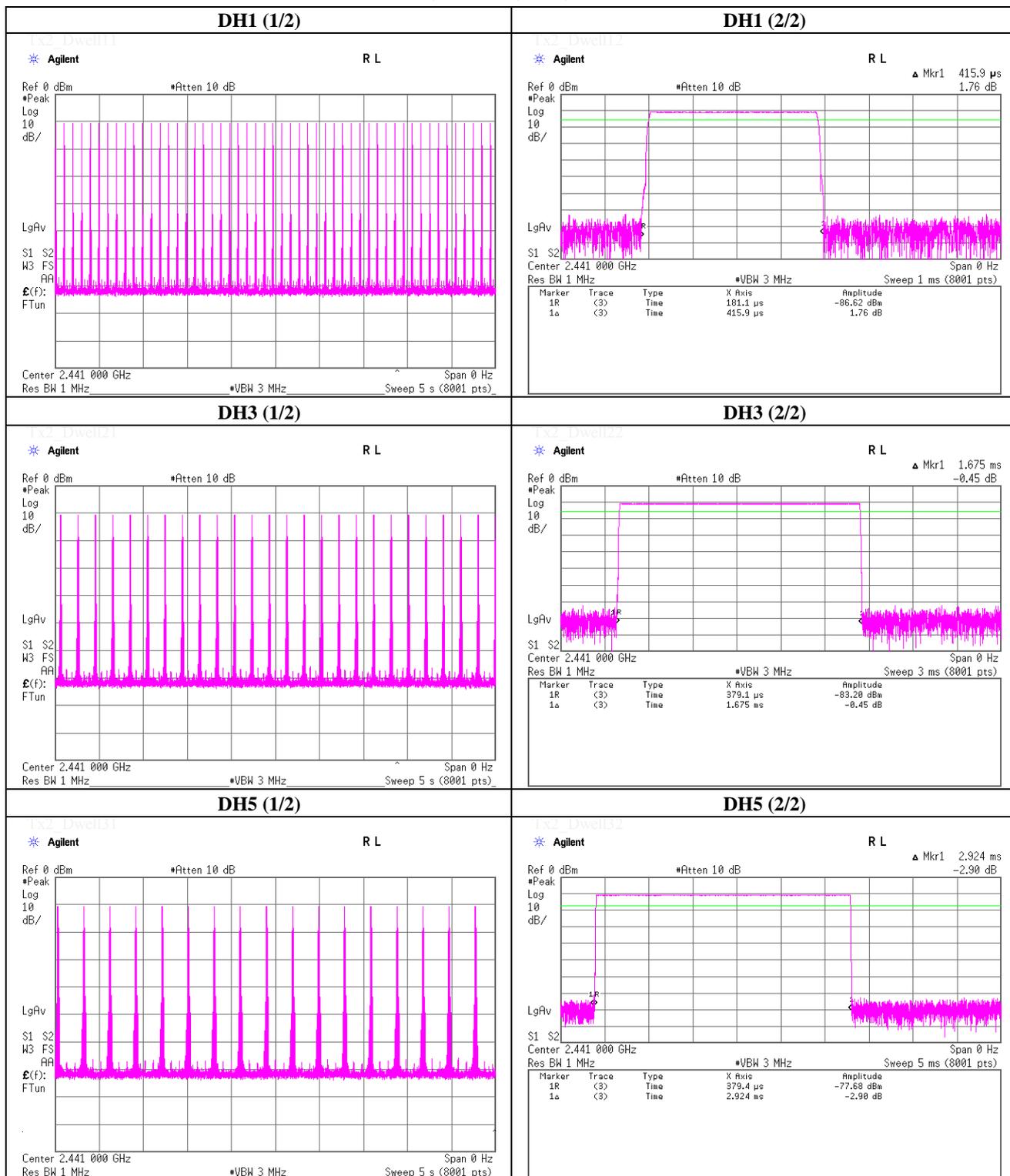
Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
 Date April 2, 2014
 Temperature / Humidity 26deg.C , 33%RH
 Engineer Kenichi Adachi

Dwell time

Tx, Bluetooth, BDR, PRBS9



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Dwell Time

Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
 Date April 2, 2014
 Temperature / Humidity 26deg.C , 33%RH
 Engineer Kenichi Adachi
 Mode Tx, Bluetooth, EDR, PRBS9

Mode	Number of transmission in a 31.6 (79 Hopping x 0.4) second	Length of transmission time [msec]	Result [msec]	Limit [msec]
3-DH1	51.0 / 5.0 sec. x 31.6 sec. = 323 times	0.434	140	400
3-DH3	26.0 / 5.0 sec. x 31.6 sec. = 165 times	1.686	278	400
3-DH5	17.0 / 5.0 sec. x 31.6 sec. = 108 times	2.932	317	400

Sample Calculation

Result = Number of transmission x Length of transmission time

* This device complies with the Bluetooth protocol for FHSS operation, employing a pseudo random channel selection and hopping rate to ensure that the occupancy time in $N \times 0.4s$, where N is the number of channels being used in the hopping sequence ($20 \leq N \leq 79$), is always less than 0.4s regardless of packet size (3-DH1, 3-DH3 or 3-DH5). This is confirmed in the test report for $N=79$.

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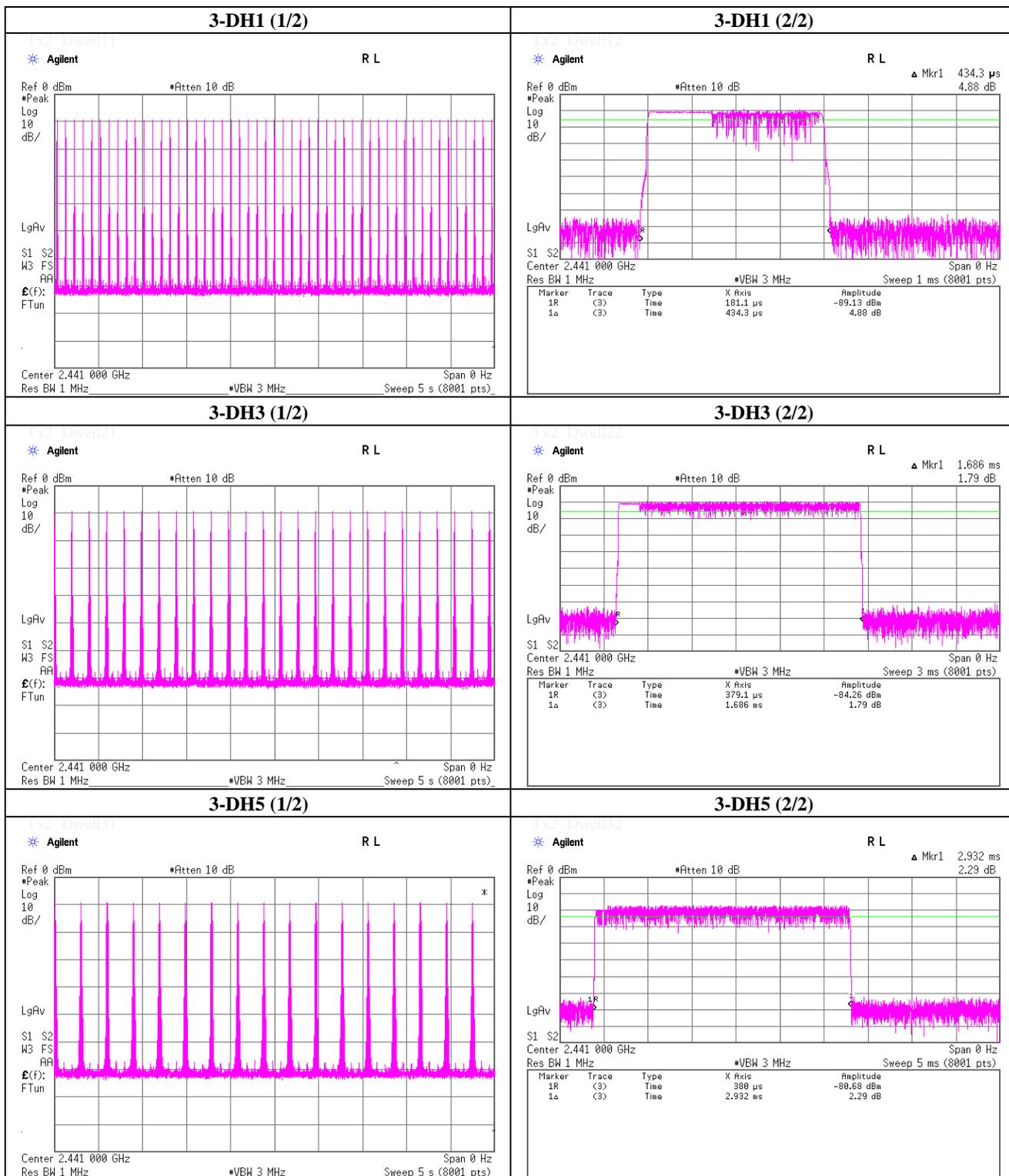
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Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
 Date April 2, 2014
 Temperature / Humidity 26deg.C , 33%RH
 Engineer Kenichi Adachi

Dwell time

Tx, Bluetooth, EDR, PRBS9



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Maximum Peak Conducted Output Power (Conducted)

Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
 Date April 2, 2014
 Temperature / Humidity 26deg.C , 33%RH
 Engineer Kenichi Adachi
 Mode Tx, Bluetooth

(* P/M: Power Meter with power sensor)

	Freq. [MHz]	P/M (Peak) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
DH5	2402.0	-11.59	0.76	10.04	-0.79	0.83	20.97	125	21.76
DH5	2441.0	-11.08	0.77	10.04	-0.27	0.94	20.97	125	21.24
DH5	2480.0	-15.91	0.78	10.04	-5.09	0.31	20.97	125	26.06
2-DH5	2402.0	-11.06	0.76	10.04	-0.26	0.94	20.97	125	21.23
2-DH5	2441.0	-10.75	0.77	10.04	0.06	1.01	20.97	125	20.91
2-DH5	2480.0	-15.25	0.78	10.04	-4.43	0.36	20.97	125	25.40
3-DH5	2402.0	-11.02	0.76	10.04	-0.22	0.95	20.97	125	21.19
3-DH5	2441.0	-10.73	0.77	10.04	0.08	1.02	20.97	125	20.89
3-DH5	2480.0	-15.20	0.78	10.04	-4.38	0.36	20.97	125	25.35

Sample Calculation:

Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss

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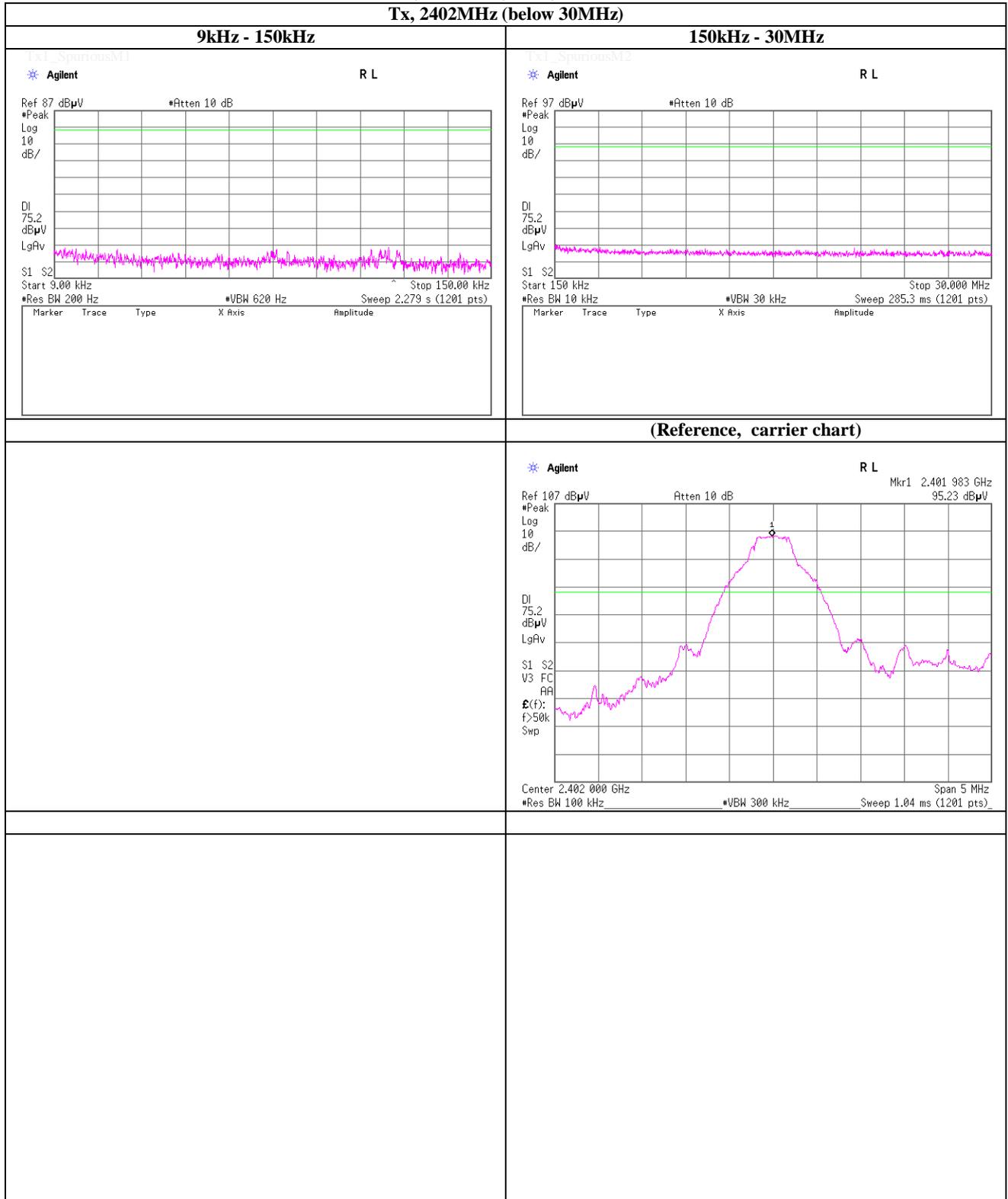
Facsimile : +81 463 50 6401

Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
 Date April 2, 2014
 Temperature / Humidity 26deg.C , 33%RH
 Engineer Kenichi Adachi

Spurious emission (Conducted)

Tx, Bluetooth, BDR, PRBS9

Tx, 2402MHz (below 30MHz)



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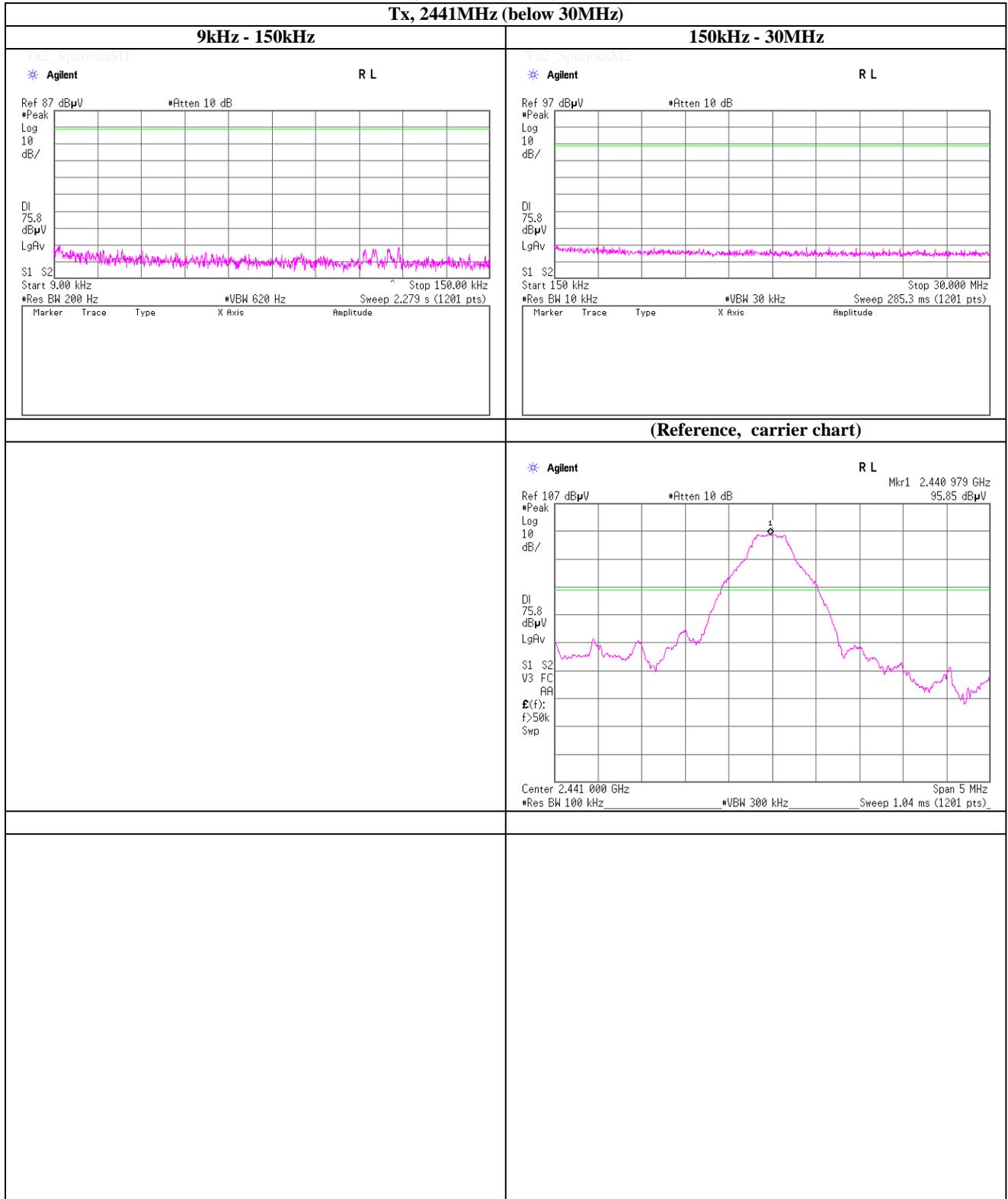
Facsimile : +81 463 50 6401

Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
 Date April 2, 2014
 Temperature / Humidity 26deg.C , 33%RH
 Engineer Kenichi Adachi

Spurious emission (Conducted)

Tx, Bluetooth, BDR, PRBS9

Tx, 2441MHz (below 30MHz)



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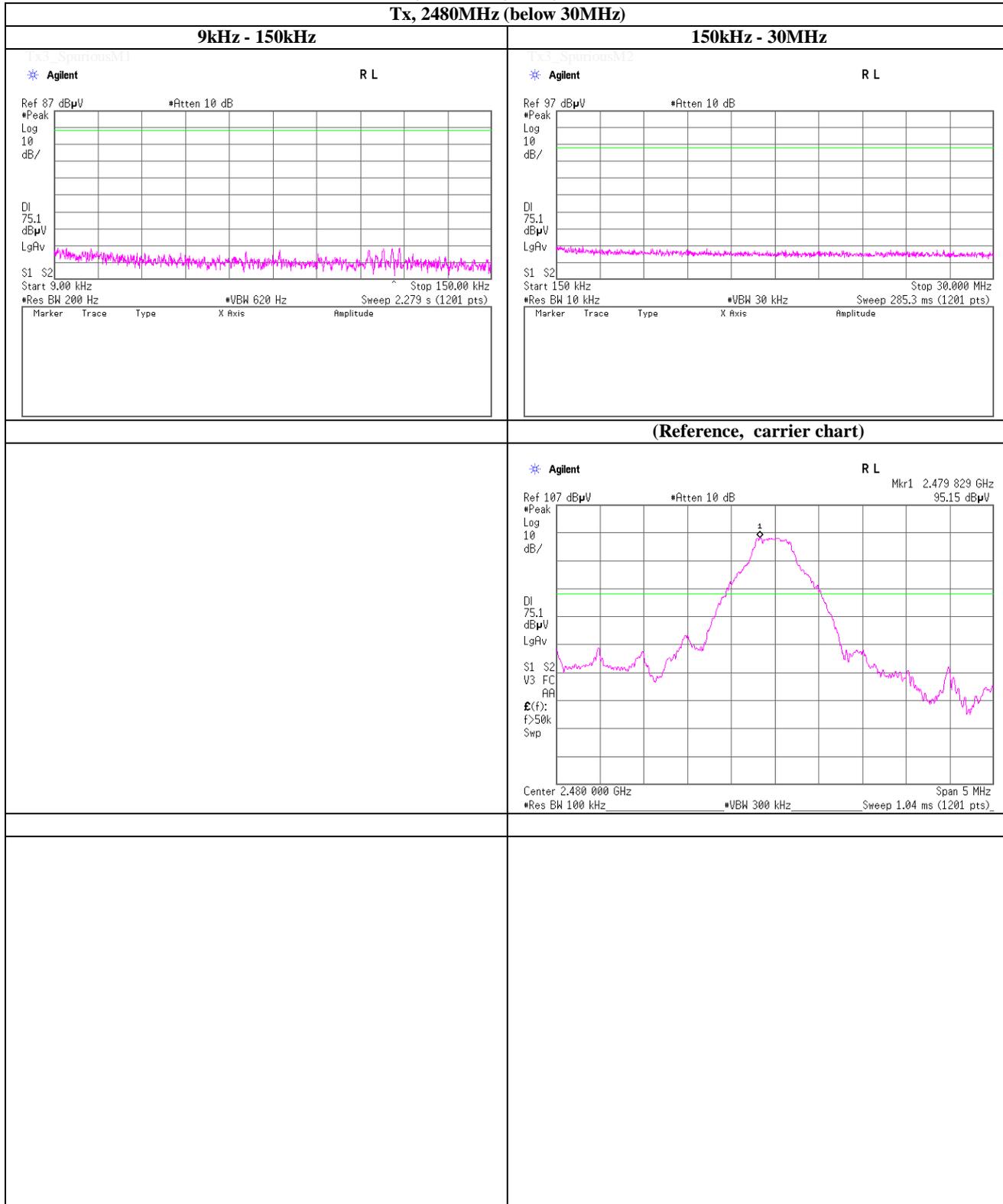
Facsimile : +81 463 50 6401

Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
 Date April 2, 2014
 Temperature / Humidity 26deg.C , 33%RH
 Engineer Kenichi Adachi

Spurious emission (Conducted)

Tx, Bluetooth, BDR, PRBS9

Tx, 2480MHz (below 30MHz)



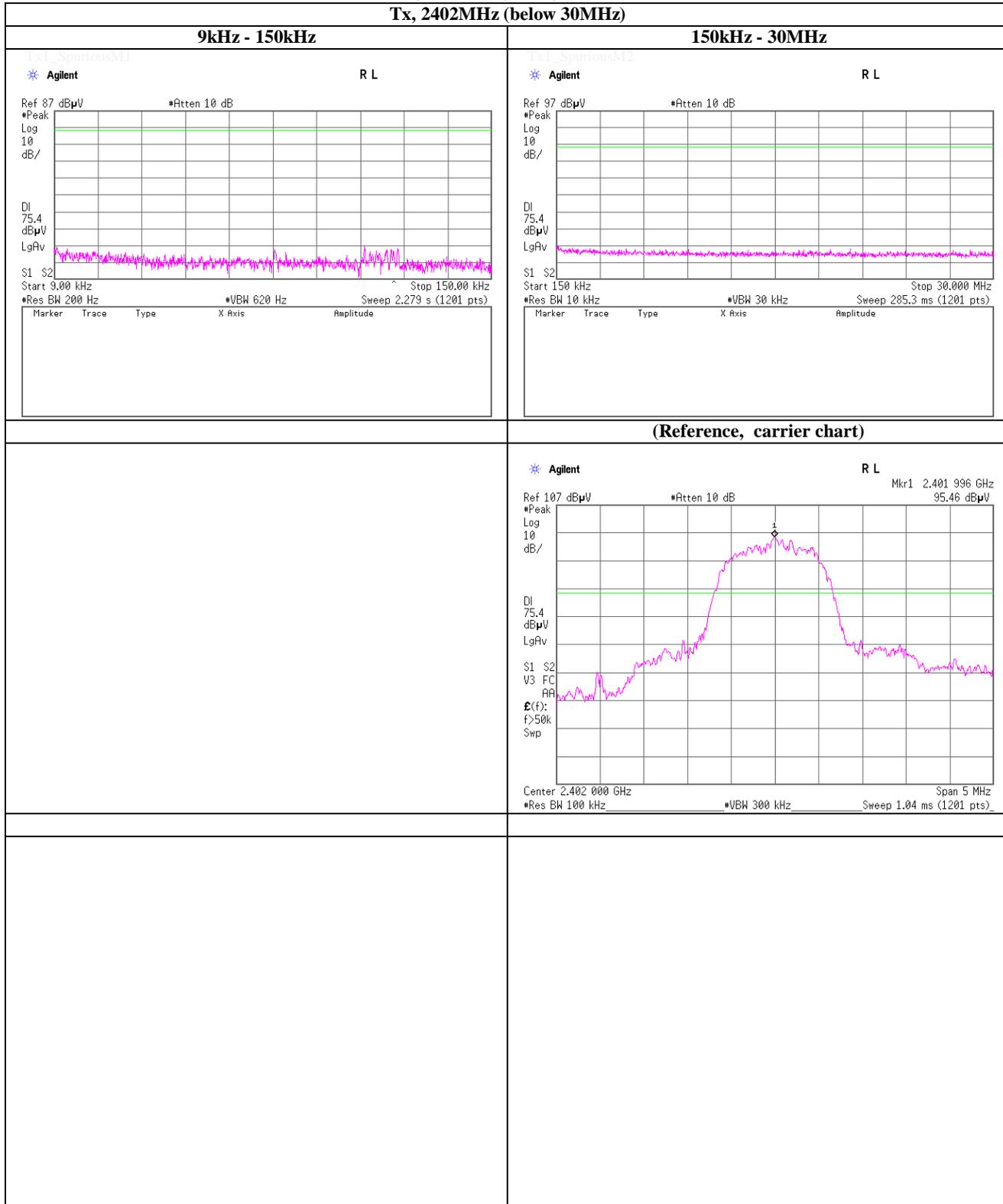
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Shonan EMC Lab.
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Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
 Date April 2, 2014
 Temperature / Humidity 26deg.C , 33%RH
 Engineer Kenichi Adachi

Spurious emission (Conducted)

Tx, Bluetooth, EDR, PRBS9

Tx, 2402MHz (below 30MHz)



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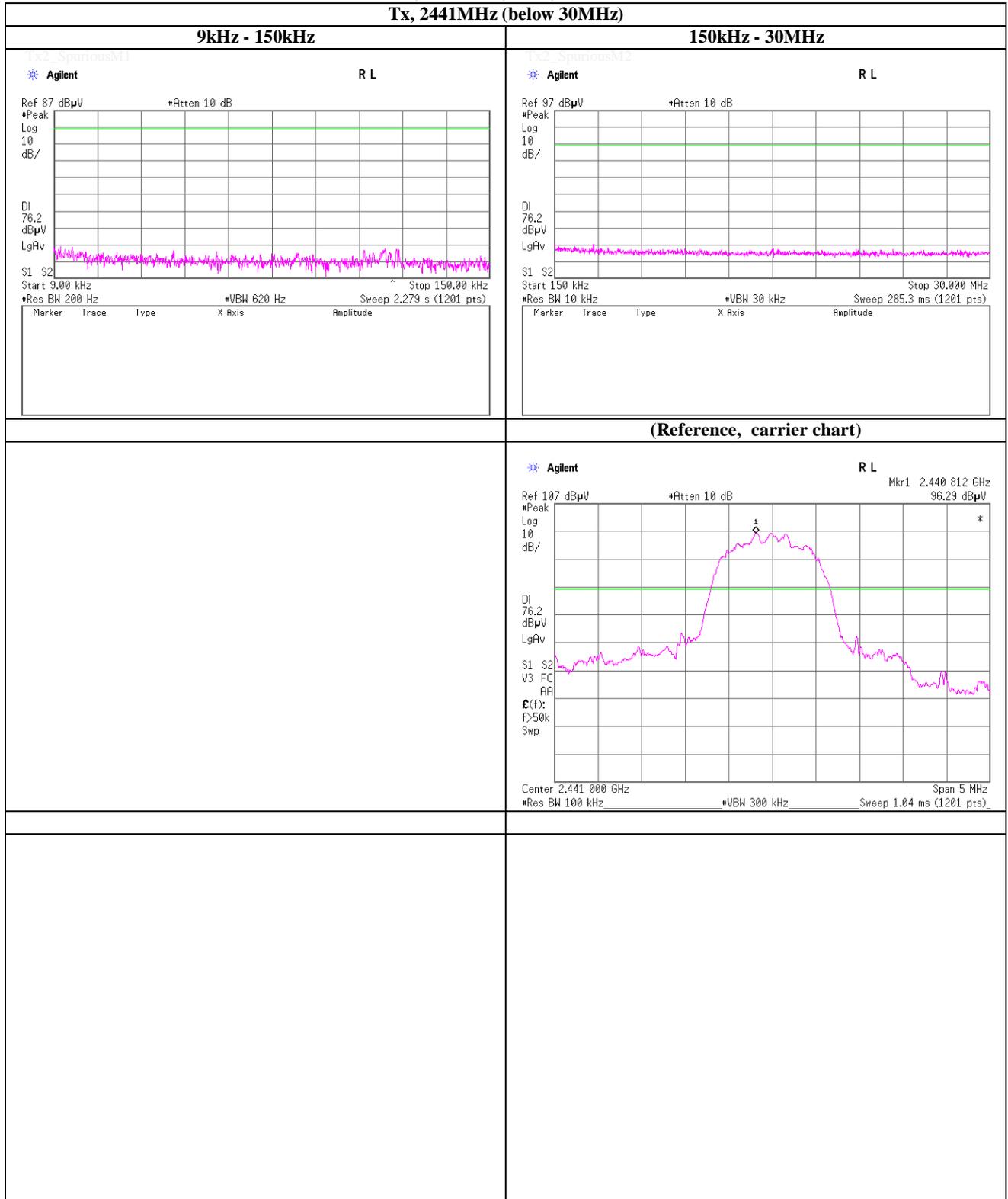
Facsimile : +81 463 50 6401

Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
 Date April 2, 2014
 Temperature / Humidity 26deg.C , 33%RH
 Engineer Kenichi Adachi

Spurious emission (Conducted)

Tx, Bluetooth, EDR, PRBS9

Tx, 2441MHz (below 30MHz)



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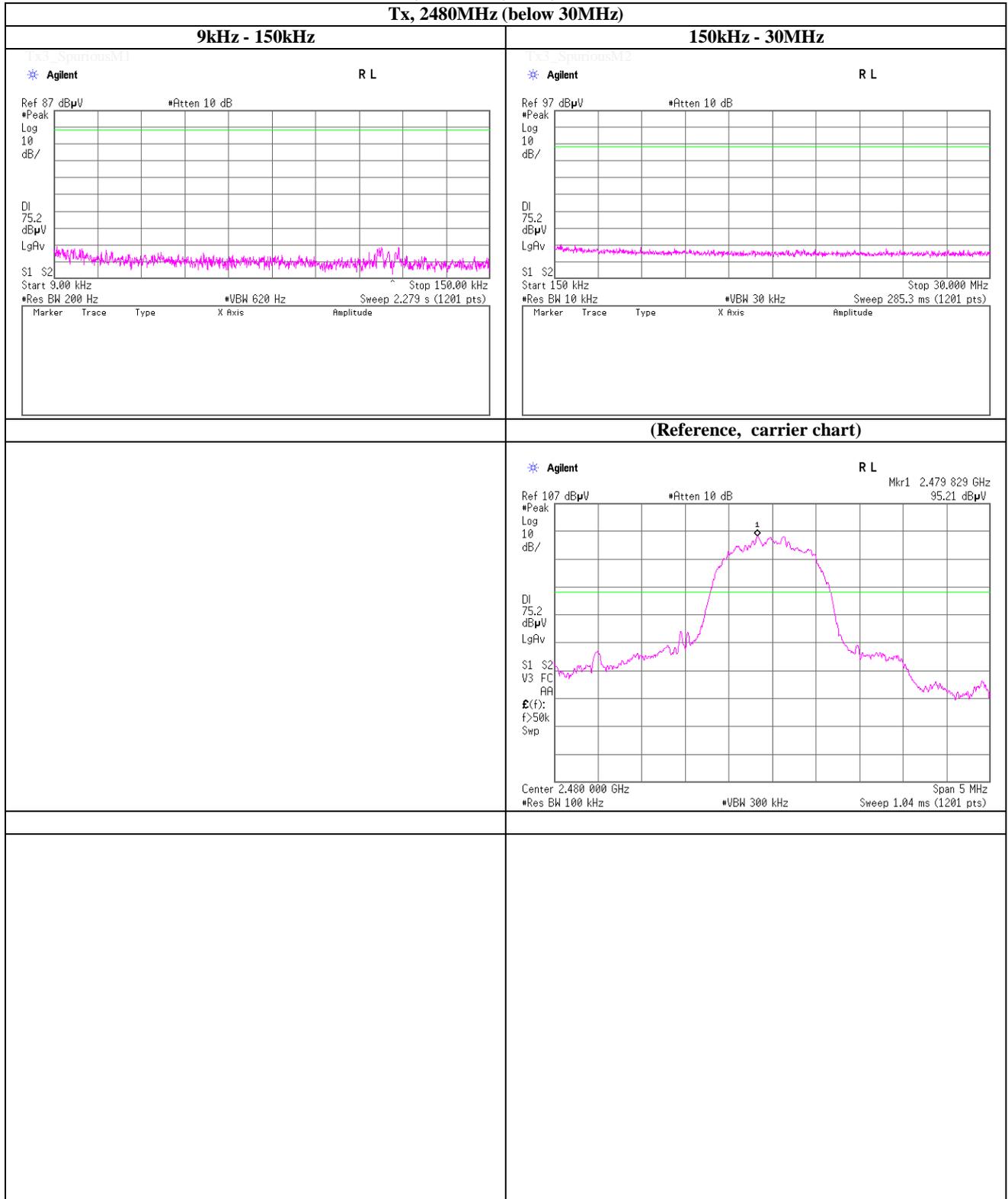
Facsimile : +81 463 50 6401

Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
 Date April 2, 2014
 Temperature / Humidity 26deg.C , 33%RH
 Engineer Kenichi Adachi

Spurious emission (Conducted)

Tx, Bluetooth, EDR, PRBS9

Tx, 2480MHz (below 30MHz)



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Radiated Emission

Test place No.3 Semi Anechoic Chamber
 Date March 30, 2014 April 2, 2014
 Temperature / Humidity 22 deg.C, 46 %RH 21 deg.C, 36 %RH
 Engineer Akio Hayashi Akio Hayashi
 Mode Tx, 2402 MHz
 Tx, Bluetooth, BDR, PRBS9

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	70.561	QP	38.8	6.3	6.8	32.2	19.7	40.0	20.3	237	237	
Hori.	135.336	QP	42.3	14.0	7.4	32.1	31.6	43.5	11.9	233	127	
Hori.	156.376	QP	43.5	14.8	7.8	32.1	34.0	43.5	9.5	208	5	
Hori.	399.768	QP	35.0	16.3	9.0	32.0	28.3	46.0	17.7	100	79	
Hori.	959.999	QP	29.4	22.1	11.0	30.6	31.9	46.0	14.1	195	338	
Hori.	1919.969	PK	47.1	26.5	14.2	38.7	49.1	73.9	24.8	134	304	
Hori.	2390.000	PK	44.0	26.8	14.7	38.2	47.3	73.9	26.6	100	159	
Hori.	2505.975	PK	45.6	26.9	14.9	38.1	49.3	73.9	24.6	115	167	
Hori.	2531.911	PK	46.6	26.9	14.9	38.1	50.3	73.9	23.6	119	164	
Hori.	2558.003	PK	46.0	27.0	15.0	38.1	49.9	73.9	24.0	111	165	
Hori.	4677.486	PK	43.5	30.3	7.8	37.2	44.4	73.9	29.5	100	268	
Hori.	4804.000	PK	46.8	30.9	7.9	37.1	48.5	73.9	25.4	100	156	
Hori.	7206.000	PK	43.3	37.1	9.1	39.4	50.1	73.9	23.8	100	0	
Hori.	9608.000	PK	39.9	38.6	10.2	37.6	51.1	73.9	22.8	100	0	
Hori.	12010.000	PK	41.5	39.6	11.2	38.5	53.8	73.9	20.1	100	0	
Hori.	1919.969	AV	38.4	26.5	14.2	38.7	40.4	53.9	13.5	134	304	
Hori.	2390.000	AV	31.7	26.8	14.7	38.2	35.0	53.9	18.9	100	159	
Hori.	2505.975	AV	36.0	26.9	14.9	38.1	39.7	53.9	14.2	115	167	
Hori.	2531.911	AV	35.6	26.9	14.9	38.1	39.3	53.9	14.6	119	164	
Hori.	2558.003	AV	34.6	27.0	15.0	38.1	38.5	53.9	15.4	111	165	
Hori.	4677.486	AV	33.8	30.3	7.8	37.2	34.7	53.9	19.2	100	268	
Hori.	4804.000	AV	39.8	30.9	7.9	37.1	41.5	53.9	12.4	100	156	
Hori.	7206.000	AV	32.0	37.1	9.1	39.4	38.8	53.9	15.1	100	0	
Hori.	9608.000	AV	28.0	38.6	10.2	37.6	39.2	53.9	14.7	100	0	
Hori.	12010.000	AV	30.0	39.6	11.2	38.5	42.3	53.9	11.6	100	0	
Vert.	32.015	QP	34.6	17.5	6.5	32.2	26.4	40.0	13.6	100	312	
Vert.	95.996	QP	42.0	9.3	7.4	32.1	26.6	43.5	16.9	100	205	
Vert.	1919.969	PK	44.7	26.5	14.2	38.7	46.7	73.9	27.2	119	5	
Vert.	2390.000	PK	43.8	26.8	14.7	38.2	47.1	73.9	26.8	100	220	
Vert.	2505.975	PK	46.8	26.9	14.9	38.1	50.5	73.9	23.4	123	335	
Vert.	2531.911	PK	45.8	26.9	14.9	38.1	49.5	73.9	24.4	119	335	
Vert.	2557.895	PK	46.2	27.0	15.0	38.1	50.1	73.9	23.8	118	337	
Vert.	4677.486	PK	43.4	30.3	7.8	37.2	44.3	73.9	29.6	100	227	
Vert.	4804.000	PK	47.7	30.9	7.9	37.1	49.4	73.9	24.5	100	166	
Vert.	7206.000	PK	44.0	37.1	9.1	39.4	50.8	73.9	23.1	100	0	
Vert.	9608.000	PK	39.9	38.6	10.2	37.6	51.1	73.9	22.8	100	0	
Vert.	12010.000	PK	42.6	39.6	11.2	38.5	54.9	73.9	19.0	100	0	
Vert.	1919.969	AV	34.5	26.5	14.2	38.7	36.5	53.9	17.4	119	5	
Vert.	2390.000	AV	32.2	26.8	14.7	38.2	35.5	53.9	18.4	100	220	
Vert.	2505.975	AV	37.4	26.9	14.9	38.1	41.1	53.9	12.8	123	335	
Vert.	2531.911	AV	36.9	26.9	14.9	38.1	40.6	53.9	13.3	119	335	
Vert.	2557.895	AV	35.7	27.0	15.0	38.1	39.6	53.9	14.3	118	337	
Vert.	4677.486	AV	34.8	30.3	7.8	37.2	35.7	53.9	18.2	100	227	
Vert.	4804.000	AV	40.7	30.9	7.9	37.1	42.4	53.9	11.5	100	166	
Vert.	7206.000	AV	32.5	37.1	9.1	39.4	39.3	53.9	14.6	100	0	
Vert.	9608.000	AV	28.7	38.6	10.2	37.6	39.9	53.9	14.0	100	0	
Vert.	12010.000	AV	30.4	39.6	11.2	38.5	42.7	53.9	11.2	100	0	

Result = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18GHz)-Distance factor(above 15GHz)) - Gain(Amplifier)
 Distance factor : 15GHz -40GHz : 20log(3.0m/1.0m)= 9.5dB

20dBc Data Sheet (RBW 100kHz, VBW 300kHz)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	2402.000	PK	87.5	26.8	14.7	38.2	90.8	-	-	Carrier
Hori.	2400.000	PK	38.8	26.8	14.7	38.2	42.1	70.8	28.7	20dBc
Vert.	2402.000	PK	88.4	26.8	14.7	38.2	91.7	-	-	Carrier
Vert.	2400.000	PK	39.5	26.8	14.7	38.2	42.8	71.7	28.9	

Result = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18GHz)-Distance factor(above 15GHz)) - Gain(Amplifier)
 Distance factor : 15GHz -40GHz : 20log(3.0m/1.0m)= 9.5dB

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Radiated Emission

Test place No.3 Semi Anechoic Chamber
 Date March 30, 2014 April 2, 2014
 Temperature / Humidity 22 deg.C, 46 %RH 21 deg.C, 36 %RH
 Engineer Akio Hayashi Akio Hayashi
 Mode Tx, 2441 MHz
 Tx, Bluetooth, BDR, PRBS9

(*PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	70.556	QP	39.4	6.3	6.8	32.2	20.3	40.0	19.7	250	260	
Hori.	95.997	QP	40.4	9.3	7.4	32.1	25.0	43.5	18.5	208	291	
Hori.	134.856	QP	41.2	14.0	7.4	32.1	30.5	43.5	13.0	240	136	
Hori.	156.946	QP	43.4	14.8	7.8	32.1	33.9	43.5	9.6	275	0	
Hori.	959.999	QP	31.6	22.1	11.0	30.6	34.1	46.0	11.9	119	178	
Hori.	1920.086	PK	47.2	26.5	14.2	38.7	49.2	73.9	24.7	215	295	
Hori.	2284.968	PK	43.2	26.8	14.6	38.4	46.4	73.9	27.5	112	171	
Hori.	2310.100	PK	43.5	26.8	14.6	38.3	46.6	73.9	27.3	100	158	
Hori.	2336.978	PK	43.4	26.8	14.6	38.3	46.5	73.9	27.4	108	60	
Hori.	2362.974	PK	44.4	26.8	14.7	38.3	47.6	73.9	26.3	100	56	
Hori.	2389.013	PK	43.6	26.8	14.7	38.2	46.9	73.9	27.0	100	54	
Hori.	2518.951	PK	44.5	26.9	14.9	38.1	48.2	73.9	25.7	117	172	
Hori.	2544.981	PK	44.0	27.0	15.0	38.1	47.9	73.9	26.0	104	171	
Hori.	2571.001	PK	43.3	27.1	15.0	38.1	47.3	73.9	26.6	100	168	
Hori.	2596.987	PK	44.0	27.1	15.0	38.1	48.0	73.9	25.9	100	169	
Hori.	4677.491	PK	43.5	30.3	7.8	37.2	44.4	73.9	29.5	100	265	
Hori.	4882.000	PK	46.6	31.4	7.9	37.0	48.9	73.9	25.0	100	143	
Hori.	7323.000	PK	43.3	37.2	9.1	39.4	50.2	73.9	23.7	100	0	
Hori.	9764.000	PK	39.8	38.8	10.1	37.5	51.2	73.9	22.7	100	0	
Hori.	12205.000	PK	42.6	39.6	11.3	38.3	55.2	73.9	18.7	100	0	
Hori.	1920.086	AV	39.7	26.5	14.2	38.7	41.7	53.9	12.2	215	295	
Hori.	2284.968	AV	33.0	26.8	14.6	38.4	36.0	53.9	17.9	112	171	
Hori.	2310.100	AV	31.8	26.8	14.6	38.3	34.9	53.9	19.0	100	158	
Hori.	2336.978	AV	32.9	26.8	14.6	38.3	36.0	53.9	17.9	108	60	
Hori.	2362.974	AV	32.1	26.8	14.7	38.3	35.3	53.9	18.6	100	56	
Hori.	2389.013	AV	32.4	26.8	14.7	38.2	35.7	53.9	18.2	100	54	
Hori.	2518.951	AV	32.8	26.9	14.9	38.1	36.5	53.9	17.4	117	172	
Hori.	2544.981	AV	35.1	27.0	15.0	38.1	39.0	53.9	14.9	104	171	
Hori.	2571.001	AV	34.3	27.1	15.0	38.1	38.3	53.9	15.6	100	168	
Hori.	2596.987	AV	33.1	27.1	15.0	38.1	37.1	53.9	16.8	100	169	
Hori.	4677.491	AV	33.9	30.3	7.8	37.2	34.8	53.9	19.1	100	265	
Hori.	4882.000	AV	39.1	31.4	7.9	37.0	41.4	53.9	12.5	100	143	
Hori.	7323.000	AV	31.6	37.2	9.1	39.4	38.5	53.9	15.4	100	0	
Hori.	9764.000	AV	28.6	38.8	10.1	37.5	40.0	53.9	13.9	100	0	
Hori.	12205.000	AV	30.8	39.6	11.3	38.3	43.4	53.9	10.5	100	0	
Vert.	32.061	QP	35.4	17.5	6.5	32.2	27.2	40.0	10.0	289		
Vert.	95.997	QP	41.9	9.3	7.4	32.1	26.5	43.5	17.0	100	231	
Vert.	156.946	QP	41.8	14.8	7.8	32.1	32.3	43.5	11.2	100	292	
Vert.	466.670	QP	23.6	17.0	9.3	32.0	17.9	46.0	28.1	100	174	
Vert.	1920.086	PK	45.8	26.5	14.2	38.7	47.8	73.9	26.1	118	333	
Vert.	2284.968	PK	45.0	26.8	14.6	38.4	48.0	73.9	25.9	100	342	
Vert.	2310.100	PK	45.6	26.8	14.6	38.3	48.7	73.9	25.2	100	345	
Vert.	2336.978	PK	45.4	26.8	14.6	38.3	48.5	73.9	25.4	123	343	
Vert.	2362.974	PK	44.1	26.8	14.7	38.3	47.3	73.9	26.6	123	338	
Vert.	2389.013	PK	44.1	26.8	14.7	38.2	47.4	73.9	26.5	100	340	
Vert.	2518.951	PK	43.8	26.9	14.9	38.1	47.5	73.9	26.4	116	339	
Vert.	2544.981	PK	44.6	27.0	15.0	38.1	48.5	73.9	25.4	118	341	
Vert.	2571.001	PK	44.3	27.1	15.0	38.1	48.3	73.9	25.6	121	338	
Vert.	2596.987	PK	44.1	27.1	15.0	38.1	48.1	73.9	25.8	100	338	
Vert.	4677.491	PK	43.3	30.3	7.8	37.2	44.2	73.9	29.7	100	228	
Vert.	4882.000	PK	48.9	31.4	7.9	37.0	51.2	73.9	22.7	100	167	
Vert.	7323.000	PK	42.8	37.2	9.1	39.4	49.7	73.9	24.2	100	0	
Vert.	9764.000	PK	40.6	38.8	10.1	37.5	52.0	73.9	21.9	100	0	
Vert.	12205.000	PK	42.2	39.6	11.3	38.3	54.8	73.9	19.1	100	0	
Vert.	1920.086	AV	36.2	26.5	14.2	38.7	38.2	53.9	15.7	118	333	
Vert.	2284.968	AV	34.1	26.8	14.6	38.4	37.1	53.9	16.8	100	342	
Vert.	2310.100	AV	35.9	26.8	14.6	38.3	39.0	53.9	14.9	100	345	
Vert.	2336.978	AV	34.8	26.8	14.6	38.3	37.9	53.9	16.0	123	343	
Vert.	2362.974	AV	32.6	26.8	14.7	38.3	35.8	53.9	18.1	123	338	
Vert.	2389.013	AV	32.2	26.8	14.7	38.2	35.5	53.9	18.4	100	340	
Vert.	2518.951	AV	32.4	26.9	14.9	38.1	36.1	53.9	17.8	116	339	
Vert.	2544.981	AV	34.0	27.0	15.0	38.1	37.9	53.9	16.0	118	341	
Vert.	2571.001	AV	33.4	27.1	15.0	38.1	37.4	53.9	16.5	121	338	
Vert.	2596.987	AV	32.7	27.1	15.0	38.1	36.7	53.9	17.2	100	338	
Vert.	4677.491	AV	34.2	30.3	7.8	37.2	35.1	53.9	18.8	100	228	
Vert.	4882.000	AV	42.5	31.4	7.9	37.0	44.8	53.9	9.1	100	167	
Vert.	7323.000	AV	31.8	37.2	9.1	39.4	38.7	53.9	15.2	100	0	
Vert.	9764.000	AV	28.7	38.8	10.1	37.5	40.1	53.9	13.8	100	0	
Vert.	12205.000	AV	30.6	39.6	11.3	38.3	43.2	53.9	10.7	100	0	

Result = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18GHz)-Distance factor(above 15GHz)) - Gain(Amplifier)
 Distance factor : 15GHz ~40GHz : 20log(3.0m/1.0m)= 9.5dB

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Radiated Emission

Test place No.3 Semi Anechoic Chamber
 Date March 30, 2014 April 2, 2014
 Temperature / Humidity 22 deg.C, 46 %RH 21 deg.C, 36 %RH
 Engineer Akio Hayashi Akio Hayashi
 Mode Tx, 2480 MHz
 Tx, Bluetooth, BDR, PRBS9

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	57.660	QP	36.2	8.7	6.5	32.2	19.2	40.0	20.8	400	113	
Hori.	135.324	QP	38.7	14.0	7.4	32.1	28.0	43.5	15.5	243	129	
Hori.	159.968	QP	39.4	14.8	7.8	32.1	29.9	43.5	13.6	238	181	
Hori.	211.489	QP	33.8	16.6	8.0	32.1	26.3	43.5	17.2	133	267	
Hori.	222.240	QP	35.5	16.7	8.1	32.0	28.3	46.0	17.7	132	268	
Hori.	959.999	QP	29.8	22.1	11.0	30.6	32.3	46.0	13.7	118	12	
Hori.	1920.008	PK	46.7	26.5	14.2	38.7	48.7	73.9	25.2	100	290	
Hori.	2349.983	PK	45.7	26.8	14.7	38.3	48.9	73.9	25.0	100	265	
Hori.	2375.967	PK	44.8	26.8	14.7	38.3	48.0	73.9	25.9	128	160	
Hori.	2483.500	PK	44.6	26.9	14.8	38.1	48.2	73.9	25.7	167	168	
Hori.	2583.979	PK	46.1	27.1	15.0	38.1	50.1	73.9	23.8	132	170	
Hori.	2610.000	PK	46.0	27.2	15.0	38.1	50.1	73.9	23.8	116	169	
Hori.	2635.980	PK	45.7	27.2	15.0	38.1	49.8	73.9	24.1	121	169	
Hori.	4677.500	PK	43.1	30.3	7.8	37.2	44.0	73.9	29.9	100	299	
Hori.	4960.000	PK	46.4	31.8	7.8	37.0	49.0	73.9	24.9	100	169	
Hori.	7440.000	PK	44.0	37.4	9.3	39.4	51.3	73.9	22.6	100	0	
Hori.	9920.000	PK	41.4	38.9	10.1	37.5	52.9	73.9	21.0	100	0	
Hori.	12400.000	PK	43.0	39.7	11.4	38.2	55.9	73.9	18.0	100	0	
Hori.	1920.008	AV	37.7	26.5	14.2	38.7	39.7	53.9	14.2	100	290	
Hori.	2349.983	AV	34.9	26.8	14.7	38.3	38.1	53.9	15.8	100	265	
Hori.	2375.967	AV	34.3	26.8	14.7	38.3	37.5	53.9	16.4	128	160	
Hori.	2483.500	AV	32.3	26.9	14.8	38.1	35.9	53.9	18.0	167	168	
Hori.	2583.979	AV	35.9	27.1	15.0	38.1	39.9	53.9	14.0	132	170	
Hori.	2610.000	AV	36.2	27.2	15.0	38.1	40.3	53.9	13.6	116	169	
Hori.	2635.980	AV	35.1	27.2	15.0	38.1	39.2	53.9	14.7	121	169	
Hori.	4677.500	AV	33.9	30.3	7.8	37.2	34.8	53.9	19.1	100	299	
Hori.	4960.000	AV	38.4	31.8	7.8	37.0	41.0	53.9	12.9	100	169	
Hori.	7440.000	AV	32.7	37.4	9.3	39.4	40.0	53.9	13.9	100	0	
Hori.	9920.000	AV	29.5	38.9	10.1	37.5	41.0	53.9	12.9	100	0	
Hori.	12400.000	AV	31.2	39.7	11.4	38.2	44.1	53.9	9.8	100	0	
Vert.	31.646	QP	36.2	17.6	6.5	32.2	28.1	40.0	11.9	100	306	
Vert.	95.999	QP	40.8	9.3	7.4	32.1	25.4	43.5	18.1	100	197	
Vert.	1920.008	PK	45.1	26.5	14.2	38.7	47.1	73.9	26.8	122	329	
Vert.	2349.983	PK	46.5	26.8	14.7	38.3	49.7	73.9	24.2	100	343	
Vert.	2375.967	PK	46.9	26.8	14.7	38.3	50.1	73.9	23.8	100	343	
Vert.	2483.500	PK	45.2	26.9	14.8	38.1	48.8	73.9	25.1	125	335	
Vert.	2583.979	PK	47.0	27.1	15.0	38.1	51.0	73.9	22.9	113	338	
Vert.	2610.000	PK	46.1	27.2	15.0	38.1	50.2	73.9	23.7	100	336	
Vert.	2635.980	PK	45.9	27.2	15.0	38.1	50.0	73.9	23.9	116	337	
Vert.	4677.500	PK	43.5	30.3	7.8	37.2	44.4	73.9	29.5	100	228	
Vert.	4960.000	PK	47.3	31.8	7.8	37.0	49.9	73.9	24.0	100	171	
Vert.	7440.000	PK	44.5	37.4	9.3	39.4	51.8	73.9	22.1	100	0	
Vert.	9920.000	PK	41.6	38.9	10.1	37.5	53.1	73.9	20.8	100	0	
Vert.	12400.000	PK	43.2	39.7	11.4	38.2	56.1	73.9	17.8	100	0	
Vert.	1920.008	AV	34.4	26.5	14.2	38.7	36.4	53.9	17.5	122	329	
Vert.	2349.983	AV	37.6	26.8	14.7	38.3	40.8	53.9	13.1	100	343	
Vert.	2375.967	AV	36.2	26.8	14.7	38.3	39.4	53.9	14.5	100	343	
Vert.	2483.500	AV	32.1	26.9	14.8	38.1	35.7	53.9	18.2	125	335	
Vert.	2583.979	AV	37.5	27.1	15.0	38.1	41.5	53.9	12.4	113	338	
Vert.	2610.000	AV	37.8	27.2	15.0	38.1	41.9	53.9	12.0	100	336	
Vert.	2635.980	AV	36.6	27.2	15.0	38.1	40.7	53.9	13.2	116	337	
Vert.	4677.500	AV	34.5	30.3	7.8	37.2	35.4	53.9	18.5	100	228	
Vert.	4960.000	AV	40.7	31.8	7.8	37.0	43.3	53.9	10.6	100	171	
Vert.	7440.000	AV	32.6	37.4	9.3	39.4	39.9	53.9	14.0	100	0	
Vert.	9920.000	AV	29.6	38.9	10.1	37.5	41.1	53.9	12.8	100	0	
Vert.	12400.000	AV	31.2	39.7	11.4	38.2	44.1	53.9	9.8	100	0	

Result = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18GHz)-Distance factor(above 15GHz)) - Gain(Amplifier)

Distance factor : 15GHz -40GHz : 20log(3.0m/1.0m)= 9.5dB

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Radiated Emission

Test place No.3 Semi Anechoic Chamber
 Date March 30, 2014 April 2, 2014
 Temperature / Humidity 22 deg.C, 46 %RH 21 deg.C, 36 %RH
 Engineer Akio Hayashi Akio Hayashi
 Mode Tx, 2402 MHz
 Tx, Bluetooth, EDR, PRBS9

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	135.777	QP	40.2	14.1	7.4	32.1	29.6	43.5	13.9	212	305	
Hori.	159.968	QP	40.7	14.8	7.8	32.1	31.2	43.5	12.3	192	184	
Hori.	959.999	QP	29.3	22.1	11.0	30.6	31.8	46.0	14.2	126	359	
Hori.	1920.103	PK	47.0	26.5	14.2	38.7	49.0	73.9	24.9	139	302	
Hori.	2390.000	PK	43.0	26.8	14.7	38.2	46.3	73.9	27.6	117	161	
Hori.	2506.050	PK	45.0	26.9	14.9	38.1	48.7	73.9	25.2	114	166	
Hori.	2532.022	PK	44.5	26.9	14.9	38.1	48.2	73.9	25.7	100	165	
Hori.	4677.484	PK	43.6	30.3	7.8	37.2	44.5	73.9	29.4	100	267	
Hori.	4804.000	PK	45.8	30.9	7.9	37.1	47.5	73.9	26.4	100	152	
Hori.	7206.000	PK	44.0	37.1	9.1	39.4	50.8	73.9	23.1	100	0	
Hori.	9608.000	PK	39.5	38.6	10.2	37.6	50.7	73.9	23.2	100	0	
Hori.	12010.000	PK	42.0	39.6	11.2	38.5	54.3	73.9	19.6	100	0	
Hori.	1920.103	AV	38.9	26.5	14.2	38.7	40.9	53.9	13.0	139	302	
Hori.	2390.000	AV	31.7	26.8	14.7	38.2	35.0	53.9	18.9	117	161	
Hori.	2506.050	AV	34.1	26.9	14.9	38.1	37.8	53.9	16.1	114	166	
Hori.	2532.022	AV	34.0	26.9	14.9	38.1	37.7	53.9	16.2	100	165	
Hori.	4677.484	AV	33.7	30.3	7.8	37.2	34.6	53.9	19.3	100	267	
Hori.	4804.000	AV	35.8	30.9	7.9	37.1	37.5	53.9	16.4	100	152	
Hori.	7206.000	AV	32.2	37.1	9.1	39.4	39.0	53.9	14.9	100	0	
Hori.	9608.000	AV	28.2	38.6	10.2	37.6	39.4	53.9	14.5	100	0	
Hori.	12010.000	AV	30.1	39.6	11.2	38.5	42.4	53.9	11.5	100	0	
Vert.	31.585	QP	35.6	17.6	6.5	32.2	27.5	40.0	12.5	100	272	
Vert.	95.998	QP	40.3	9.3	7.4	32.1	24.9	43.5	18.6	100	218	
Vert.	121.895	QP	42.8	13.2	7.2	32.1	31.1	43.5	12.4	100	130	
Vert.	1920.103	PK	45.6	26.5	14.2	38.7	47.6	73.9	26.3	168	0	
Vert.	2390.000	PK	43.5	26.8	14.7	38.2	46.8	73.9	27.1	165	303	
Vert.	2506.050	PK	45.9	26.9	14.9	38.1	49.6	73.9	24.3	121	337	
Vert.	2532.022	PK	45.4	26.9	14.9	38.1	49.1	73.9	24.8	122	335	
Vert.	4677.484	PK	43.5	30.3	7.8	37.2	44.4	73.9	29.5	100	228	
Vert.	4804.000	PK	47.0	30.9	7.9	37.1	48.7	73.9	25.2	100	167	
Vert.	7206.000	PK	44.0	37.1	9.1	39.4	50.8	73.9	23.1	100	0	
Vert.	9608.000	PK	39.5	38.6	10.2	37.6	50.7	73.9	23.2	100	0	
Vert.	12010.000	PK	41.7	39.6	11.2	38.5	54.0	73.9	19.9	100	0	
Vert.	1920.103	AV	35.1	26.5	14.2	38.7	37.1	53.9	16.8	168	0	
Vert.	2390.000	AV	31.7	26.8	14.7	38.2	35.0	53.9	18.9	165	303	
Vert.	2506.050	AV	35.0	26.9	14.9	38.1	38.7	53.9	15.2	121	337	
Vert.	2532.022	AV	34.7	26.9	14.9	38.1	38.4	53.9	15.5	122	335	
Vert.	4677.484	AV	34.8	30.3	7.8	37.2	35.7	53.9	18.2	100	228	
Vert.	4804.000	AV	36.5	30.9	7.9	37.1	38.2	53.9	15.7	100	167	
Vert.	7206.000	AV	32.2	37.1	9.1	39.4	39.0	53.9	14.9	100	0	
Vert.	9608.000	AV	28.2	38.6	10.2	37.6	39.4	53.9	14.5	100	0	
Vert.	12010.000	AV	30.1	39.6	11.2	38.5	42.4	53.9	11.5	100	0	

Result = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18GHz)-Distance factor(above 15GHz)) - Gain(Amplifier)

Distance factor : 15GHz -40GHz : 20log(3.0m/1.0m)= 9.5dB

20dBc Data Sheet (RBW 100kHz, VBW 300kHz)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	2402.000	PK	88.8	26.8	14.7	38.2	92.1	-	-	Carrier
Hori.	2400.000	PK	40.7	26.8	14.7	38.2	44.0	72.1	28.1	20dBc
Vert.	2402.000	PK	90.0	26.8	14.7	38.2	93.3	-	-	Carrier
Vert.	2400.000	PK	41.0	26.8	14.7	38.2	44.3	73.3	29.0	20dBc

Result = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18GHz)-Distance factor(above 15GHz)) - Gain(Amplifier)

Distance factor : 15GHz -40GHz : 20log(3.0m/1.0m)= 9.5dB

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Radiated Emission

Test place No.3 Semi Anechoic Chamber
 Date March 30, 2014 April 2, 2014
 Temperature / Humidity 22 deg.C, 46 %RH 21 deg.C, 36 %RH
 Engineer Akio Hayashi Akio Hayashi
 Mode Tx, 2441 MHz
 Tx, Bluetooth, EDR, PRBS9

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	132.663	QP	40.8	13.9	7.4	32.1	30.0	43.5	13.5	219	133	
Hori.	159.968	QP	40.3	14.8	7.8	32.1	30.8	43.5	12.7	192	191	
Hori.	959.999	QP	28.1	22.1	11.0	30.6	30.6	46.0	15.4	126	359	
Hori.	1920.096	PK	47.0	26.5	14.2	38.7	49.0	73.9	24.9	138	302	
Hori.	2545.001	PK	45.8	27.0	15.0	38.1	49.7	73.9	24.2	100	43	
Hori.	2570.975	PK	44.7	27.1	15.0	38.1	48.7	73.9	25.2	100	41	
Hori.	4677.491	PK	43.8	30.3	7.8	37.2	44.7	73.9	29.2	100	267	
Hori.	4882.000	PK	41.6	31.4	7.9	37.0	43.9	73.9	30.0	100	146	
Hori.	7323.000	PK	44.9	37.2	9.1	39.4	51.8	73.9	22.1	100	0	
Hori.	9764.000	PK	40.1	38.8	10.1	37.5	51.5	73.9	22.4	100	0	
Hori.	12205.000	PK	43.2	39.6	11.3	38.3	55.8	73.9	18.1	100	0	
Hori.	1920.096	AV	38.9	26.5	14.2	38.7	40.9	53.9	13.0	138	302	
Hori.	2545.001	AV	33.8	27.0	15.0	38.1	37.7	53.9	16.2	100	43	
Hori.	2570.975	AV	33.7	27.1	15.0	38.1	37.7	53.9	16.2	100	41	
Hori.	4677.491	AV	34.0	30.3	7.8	37.2	34.9	53.9	19.0	100	267	
Hori.	4882.000	AV	34.6	31.4	7.9	37.0	36.9	53.9	17.0	100	146	
Hori.	7323.000	AV	31.5	37.2	9.1	39.4	38.4	53.9	15.5	100	0	
Hori.	9764.000	AV	28.5	38.8	10.1	37.5	39.9	53.9	14.0	100	0	
Hori.	12205.000	AV	30.4	39.6	11.3	38.3	43.0	53.9	10.9	100	0	
Vert.	31.692	QP	36.2	17.6	6.5	32.2	28.1	40.0	11.9	100	278	
Vert.	95.995	QP	40.5	9.3	7.4	32.1	25.1	43.5	18.4	100	202	
Vert.	112.491	QP	43.5	11.9	7.1	32.1	30.4	43.5	13.1	100	117	
Vert.	1920.096	PK	45.0	26.5	14.2	38.7	47.0	73.9	26.9	116	6	
Vert.	2545.001	PK	45.0	27.0	15.0	38.1	48.9	73.9	25.0	100	335	
Vert.	2570.975	PK	45.5	27.1	15.0	38.1	49.5	73.9	24.4	118	337	
Vert.	4677.491	PK	44.1	30.3	7.8	37.2	45.0	73.9	28.9	100	228	
Vert.	4882.000	PK	47.6	31.4	7.9	37.0	49.9	73.9	24.0	100	167	
Vert.	7323.000	PK	43.0	37.2	9.1	39.4	49.9	73.9	24.0	100	0	
Vert.	9764.000	PK	40.0	38.8	10.1	37.5	51.4	73.9	22.5	100	0	
Vert.	12205.000	PK	41.8	39.6	11.3	38.3	54.4	73.9	19.5	100	0	
Vert.	1920.096	AV	34.8	26.5	14.2	38.7	36.8	53.9	17.1	116	6	
Vert.	2545.001	AV	34.7	27.0	15.0	38.1	38.6	53.9	15.3	100	335	
Vert.	2570.975	AV	34.5	27.1	15.0	38.1	38.5	53.9	15.4	118	337	
Vert.	4677.491	AV	34.9	30.3	7.8	37.2	35.8	53.9	18.1	100	228	
Vert.	4882.000	AV	37.6	31.4	7.9	37.0	39.9	53.9	14.0	100	167	
Vert.	7323.000	AV	31.8	37.2	9.1	39.4	38.7	53.9	15.2	100	0	
Vert.	9764.000	AV	28.7	38.8	10.1	37.5	40.1	53.9	13.8	100	0	
Vert.	12205.000	AV	30.7	39.6	11.3	38.3	43.3	53.9	10.6	100	0	

Result = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18GHz)-Distance factor(above 15GHz)) - Gain(Amplifier)

Distance factor : 15GHz -40GHz : 20log(3.0m/1.0m)= 9.5dB

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Radiated Emission

Test place No.3 Semi Anechoic Chamber
Date March 30, 2014 April 2, 2014
Temperature / Humidity 22 deg.C, 46 %RH 21 deg.C, 36 %RH
Engineer Akio Hayashi Akio Hayashi
Mode Tx, 2480 MHz
 Tx, Bluetooth, EDR, PRBS9

(* PK: Peak, AV: Average, QP: Quasi-Peak)

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	134.996	QP	40.4	14.0	7.4	32.1	29.7	43.5	13.8	232	125	
Hori.	159.193	QP	40.3	14.8	7.8	32.1	30.8	43.5	12.7	179	170	
Hori.	959.999	QP	31.0	22.1	11.0	30.6	33.5	46.0	12.5	114	25	
Hori.	1920.067	PK	48.5	26.5	14.2	38.7	50.5	73.9	23.4	100	305	
Hori.	2349.983	PK	45.0	26.8	14.7	38.3	48.2	73.9	25.7	129	162	
Hori.	2375.967	PK	45.0	26.8	14.7	38.3	48.2	73.9	25.7	100	161	
Hori.	2483.500	PK	44.5	26.9	14.8	38.1	48.1	73.9	25.8	107	157	
Hori.	2583.971	PK	45.5	27.1	15.0	38.1	49.5	73.9	24.4	118	171	
Hori.	2609.958	PK	45.7	27.2	15.0	38.1	49.8	73.9	24.1	115	171	
Hori.	4677.489	PK	43.4	30.3	7.8	37.2	44.3	73.9	29.6	100	262	
Hori.	4960.000	PK	45.5	31.8	7.8	37.0	48.1	73.9	25.8	100	151	
Hori.	7440.000	PK	44.7	37.4	9.3	39.4	52.0	73.9	21.9	100	0	
Hori.	9920.000	PK	41.4	38.9	10.1	37.5	52.9	73.9	21.0	100	0	
Hori.	12400.000	PK	43.9	39.7	11.4	38.2	56.8	73.9	17.1	100	0	
Hori.	1920.067	AV	39.1	26.5	14.2	38.7	41.1	53.9	12.8	100	305	
Hori.	2349.983	AV	33.3	26.8	14.7	38.3	36.5	53.9	17.4	129	162	
Hori.	2375.967	AV	33.0	26.8	14.7	38.3	36.2	53.9	17.7	100	161	
Hori.	2483.500	AV	31.7	26.9	14.8	38.1	35.3	53.9	18.6	107	157	
Hori.	2583.971	AV	34.0	27.1	15.0	38.1	38.0	53.9	15.9	118	171	
Hori.	2609.958	AV	34.3	27.2	15.0	38.1	38.4	53.9	15.5	115	171	
Hori.	4677.489	AV	34.0	30.3	7.8	37.2	34.9	53.9	19.0	100	262	
Hori.	4960.000	AV	34.6	31.8	7.8	37.0	37.2	53.9	16.7	100	151	
Hori.	7440.000	AV	32.7	37.4	9.3	39.4	40.0	53.9	13.9	100	0	
Hori.	9920.000	AV	29.6	38.9	10.1	37.5	41.1	53.9	12.8	100	0	
Hori.	12400.000	AV	31.3	39.7	11.4	38.2	44.2	53.9	9.7	100	0	
Vert.	31.785	QP	35.8	17.6	6.5	32.2	27.7	40.0	12.3	100	297	
Vert.	96.002	QP	40.3	9.3	7.4	32.1	24.9	43.5	18.6	100	214	
Vert.	115.669	QP	42.7	12.4	7.1	32.1	30.1	43.5	13.4	100	99	
Vert.	122.389	QP	43.1	13.2	7.2	32.1	31.4	43.5	12.1	100	99	
Vert.	132.249	QP	42.4	13.9	7.4	32.1	31.6	43.5	11.9	100	159	
Vert.	1920.067	PK	43.0	26.5	14.2	38.7	45.0	73.9	28.9	168	6	
Vert.	2349.983	PK	46.9	26.8	14.7	38.3	50.1	73.9	23.8	100	342	
Vert.	2375.967	PK	45.7	26.8	14.7	38.3	48.9	73.9	25.0	123	345	
Vert.	2483.500	PK	44.0	26.9	14.8	38.1	47.6	73.9	26.3	123	338	
Vert.	2583.971	PK	46.4	27.1	15.0	38.1	50.4	73.9	23.5	115	334	
Vert.	2609.958	PK	46.0	27.2	15.0	38.1	50.1	73.9	23.8	117	338	
Vert.	4677.489	PK	43.0	30.3	7.8	37.2	43.9	73.9	30.0	100	226	
Vert.	4960.000	PK	46.6	31.8	7.8	37.0	49.2	73.9	24.7	100	169	
Vert.	7440.000	PK	45.3	37.4	9.3	39.4	52.6	73.9	21.3	100	0	
Vert.	9920.000	PK	41.0	38.9	10.1	37.5	52.5	73.9	21.4	100	0	
Vert.	12400.000	PK	42.7	39.7	11.4	38.2	55.6	73.9	18.3	100	0	
Vert.	1920.067	AV	35.4	26.5	14.2	38.7	37.4	53.9	16.5	168	6	
Vert.	2349.983	AV	35.2	26.8	14.7	38.3	38.4	53.9	15.5	100	342	
Vert.	2375.967	AV	34.4	26.8	14.7	38.3	37.6	53.9	16.3	123	345	
Vert.	2483.500	AV	31.8	26.9	14.8	38.1	35.4	53.9	18.5	123	338	
Vert.	2583.971	AV	35.6	27.1	15.0	38.1	39.6	53.9	14.3	115	334	
Vert.	2609.958	AV	34.9	27.2	15.0	38.1	39.0	53.9	14.9	117	338	
Vert.	4677.489	AV	34.0	30.3	7.8	37.2	34.9	53.9	19.0	100	226	
Vert.	4960.000	AV	35.9	31.8	7.8	37.0	38.5	53.9	15.4	100	169	
Vert.	7440.000	AV	32.8	37.4	9.3	39.4	40.1	53.9	13.8	100	0	
Vert.	9920.000	AV	29.6	38.9	10.1	37.5	41.1	53.9	12.8	100	0	
Vert.	12400.000	AV	31.3	39.7	11.4	38.2	44.2	53.9	9.7	100	0	

Result = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18GHz)-Distance factor(above 15GHz)) - Gain(Amplifier)

Distance factor : 15GHz -40GHz : 20log(3.0m/1.0m)= 9.5dB

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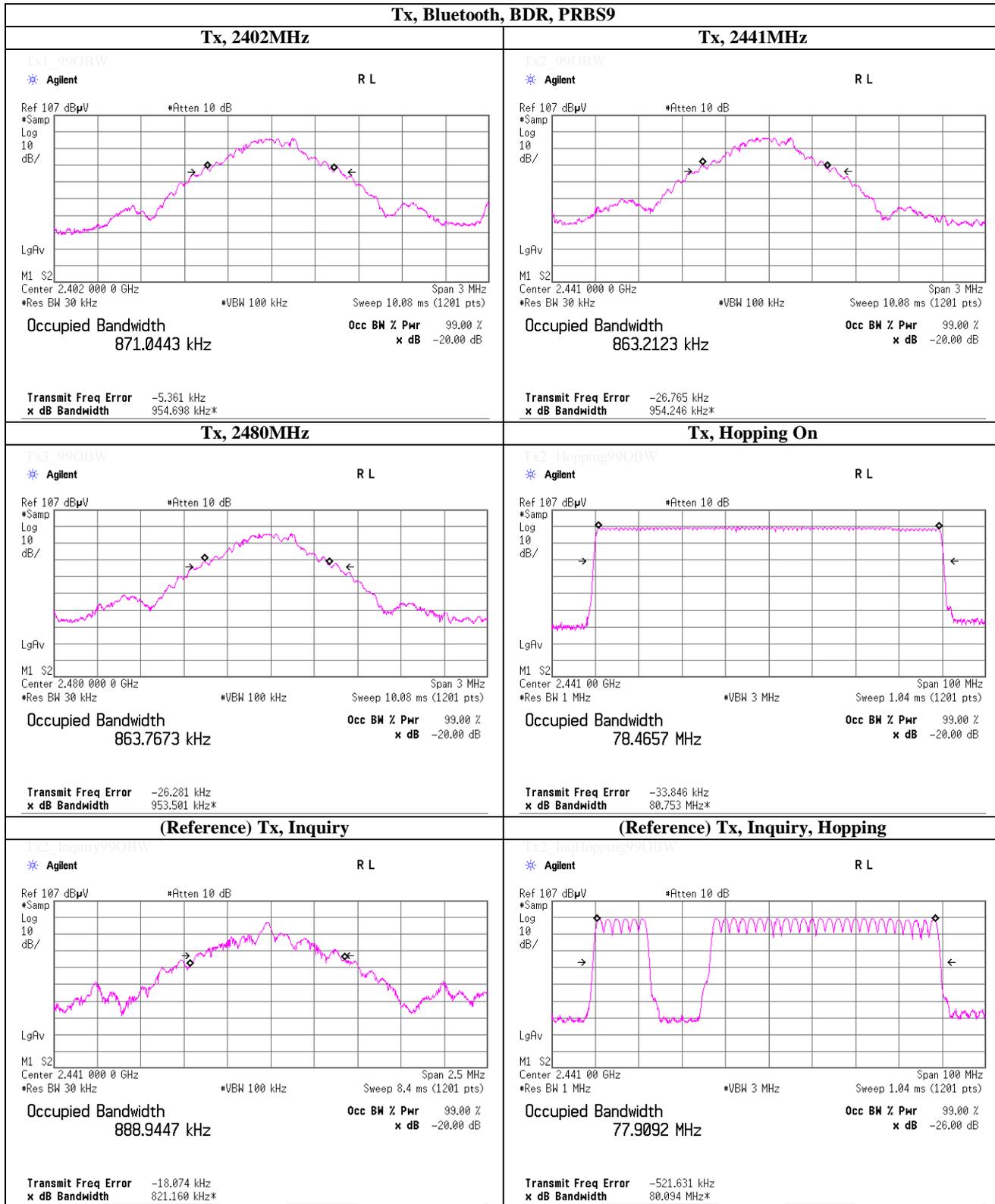
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Test place UL Japan, Inc. Shonan EMC Lab. No.5 Shielded Room
 Date April 2, 2014
 Temperature / Humidity 26deg.C , 33%RH
 Engineer Kenichi Adachi

99% Occupied Bandwidth



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 Date April 2, 2014
 Temperature / Humidity 26deg.C , 33%RH
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99% Occupied Bandwidth

Tx, Bluetooth, EDR, PRBS9	
<p>Tx, 2402MHz</p> <p>Agilent R L Ref 107 dBµV #Atten 10 dB #Samp Log 10 dB/ LgAv M1 S2 Center 2.402 000 0 GHz Span 3 MHz #Res BW 30 kHz #VBW 100 kHz Sweep 10.00 ms (1201 pts) Occupied Bandwidth 1.1602 MHz Occ BW % Pwr 99.00 % x dB -20.00 dB Transmit Freq Error -7.790 kHz x dB Bandwidth 1.285 MHz*</p>	<p>Tx, 2441MHz</p> <p>Agilent R L Ref 107 dBµV #Atten 10 dB #Samp Log 10 dB/ LgAv M1 S2 Center 2.441 000 0 GHz Span 3 MHz #Res BW 30 kHz #VBW 100 kHz Sweep 10.00 ms (1201 pts) Occupied Bandwidth 1.1580 MHz Occ BW % Pwr 99.00 % x dB -20.00 dB Transmit Freq Error -21.671 kHz x dB Bandwidth 1.275 MHz*</p>
<p>Tx, 2480MHz</p> <p>Agilent R L Ref 107 dBµV #Atten 10 dB #Samp Log 10 dB/ LgAv M1 S2 Center 2.480 000 0 GHz Span 3 MHz #Res BW 30 kHz #VBW 100 kHz Sweep 10.00 ms (1201 pts) Occupied Bandwidth 1.1588 MHz Occ BW % Pwr 99.00 % x dB -20.00 dB Transmit Freq Error -21.237 kHz x dB Bandwidth 1.271 MHz*</p>	<p>Tx, Hopping On</p> <p>Agilent R L Ref 107 dBµV #Atten 10 dB #Samp Log 10 dB/ LgAv M1 S2 Center 2.441 00 GHz Span 100 MHz #Res BW 1 MHz #VBW 3 MHz Sweep 1.04 ms (1201 pts) Occupied Bandwidth 78.5877 MHz Occ BW % Pwr 99.00 % x dB -20.00 dB Transmit Freq Error -50.410 kHz x dB Bandwidth 81.021 MHz*</p>
<p>Tx2_Inquiry99%OBW</p>	<p>Tx2_InqHopping99%OBW</p>

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APPENDIX 2 Test Instruments

EMI test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
SAEC-03(NSA)	Semi-Anechoic Chamber	TDK	SAEC-03(NSA)	3	RE	2013/07/09 * 12
SAF-06	Pre Amplifier	TOYO Corporation	TPA0118-36	1440491	RE	2013/07/22 * 12
SCC-G03	Coaxial Cable	Suhner	SUCOFLEX 104A	46499/4A	RE	2013/04/11 * 12
SCC-G23	Coaxial Cable	Suhner	SUCOFLEX 104	297342/4	RE	2013/05/22 * 12
SHA-03	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-739	RE	2013/08/19 * 12
SOS-05	Humidity Indicator	A&D	AD-5681	4062518	RE	2014/02/21 * 12
KSA-08	Spectrum Analyzer	Agilent	E4446A	MY46180525	RE, AT	2014/03/04 * 12
SJM-11	Measure	PROMART	SEN1935	-	RE	-
COTS-SEMI-1	EMI Software	TSJ	TEPTO-DV(RE,CE, RFL,MF)	-	RE	-
SAT10-05	Attenuator(above1GHz)	Agilent	8493C-010	74864	RE	2013/11/22 * 12
SFL-02	Highpass Filter	MICRO-TRONICS	HPM50111	051	RE	2013/11/22 * 12
SHA-04	Horn Antenna	ETS LINDGREN	3160-09	LM3640	RE	2014/03/15 * 12
SAF-08	Pre Amplifier	TOYO Corporation	HAP18-26W	00000019	RE	2014/03/14 * 12
SCC-G15	Coaxial Cable	Suhner	SUCOFLEX 102	32703/2	RE	2014/03/13 * 12
SAF-03	Pre Amplifier	SONOMA	310N	290213	RE	2014/02/14 * 12
SAT6-06	Attenuator	JFW	50HF-006N	-	RE	2014/02/17 * 12
SBA-03	Biconical Antenna	Schwarzbeck	BBA9106	91032666	RE	2013/10/26 * 12
SCC-C1/C2/C3/C4/C5/C10/SRSE-03	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/NS4906	-/0901-271(RF Selector)	RE	2013/04/03 * 12
SLA-03	Logperiodic Antenna	Schwarzbeck	UHALP9108A	UHALP 9108-A 0901	RE	2013/10/26 * 12
STR-06	Test Receiver	Rohde & Schwarz	ESCI	101259	RE	2014/03/04 * 12
SPM-06	Power Meter	Anritsu	ML2495A	0850009	AT	2013/04/09 * 12
SPSS-01	Power Sensor	Anritsu	MA2444D	0738366	AT	2013/04/09 * 12
SAT10-11	Attenuator	Weinschel Corp.	54A-10	37588	AT	2013/04/09 * 12
SCC-G11	Coaxial Cable	Suhner	SUCOFLEX 102	31595/2	AT	2014/03/13 * 12
SOS-09	Humidity Indicator	A&D	AD-5681	4061484	AT	2014/03/07 * 12

The expiration date of the calibration is the end of the expired month .
As for some calibrations performed after the tested dates , those test equipment have been controlled by means of an unbroken chains of calibrations .

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

Test Item :

RE: Radiated emission ,

AT: Antenna terminal conducted tests ,