



# RADIO TEST REPORT

Test Report No. : 11038900S-E

**Applicant** : Sony Corporation  
**Type of Equipment** : AV Center  
**Model No.** : XAV-V750BT  
**FCC ID** : AK8XAVV750BT  
**Test regulation** : FCC Part 15 Subpart C: 2015  
**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. The opinions and the interpretations to the result of the description in this report are outside scopes where UL Japan has been accredited.
6. This test report covers Radio technical requirements. It does not cover administrative issues such as Manual or non-Radio test related Requirements. (if applicable)

**Date of test:**

November 10 to 20, 2015

**Representative test engineer:**

Hiroyuki Morikawa  
Engineer  
Consumer Technology Division

**Approved by:**

Toyokazu Imamura  
Leader  
Consumer Technology Division



**JAB**  
Testing  
RTL02610

- The testing in which "Non-accreditation" is displayed is outside the accreditation scopes in UL Japan.  
 There is no testing item of "Non-accreditation".

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**Shonan EMC Lab.**

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## **SECTION 1: Customer information**

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

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

### **2.1 Identification of E.U.T.**

Type of Equipment : AV Center  
Model No. : XAV-V750BT  
Serial No. : Refer to Section 4, Clause 4.2  
Rating : DC 12 V  
Receipt Date of Sample : November 11, 2015  
Country of Mass-production : China  
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: XAV-V750BT (referred to as the EUT in this report) is an AV Center.

### **General Specification**

Clock frequency(ies) in the system : 37.05 MHz, 27 MHz, 8 MHz, 26 MHz

### **Radio Specification**

Radio Type : Transceiver  
Frequency of Operation : 2402 MHz - 2480 MHz  
Modulation : FHSS  
Antenna type : METAL  
Antenna Gain : -0.1 dBi  
Operating Temperature : 0 deg. C to +40 deg. C

## **SECTION 3: Test specification, procedures & results**

### **3.1 Test Specification**

Test Specification : FCC Part 15 Subpart C: 2015, final revised on November 23, 2015  
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

\*Some parts are effective on and after December 17, 2015 or December 23, 2015. The revision does not affect the test specification applied to the EUT.

### **3.2 Procedures and results**

Item	Test Procedure	Specification	Worst Margin	Results	Remarks
Conducted Emission	FCC: ANSI C63.4-2009 7. AC powerline conducted emission measurements IC: RSS-Gen 8.8	FCC: Section 15.207 IC: RSS-Gen 8.8	-	N/A *1)	-
Carrier Frequency Separation	FCC: FCC Public Notice DA 00-705 IC: -	FCC: Section15.247(a)(1) IC: RSS-247 5.1 (2)	See data.	Complied	Conducted
20dB Bandwidth	FCC: FCC Public Notice DA 00-705 IC: -	FCC: Section15.247(a)(1) IC: RSS-247 5.1 (1)		-	Conducted
Number of Hopping Frequency	FCC: FCC Public Notice DA 00-705 IC: -	FCC: Section15.247(a)(1)(iii) IC: RSS-247 5.1 (4)		Complied	Conducted
Dwell time	FCC: FCC Public Notice DA 00-705 IC: -	FCC: Section15.247(a)(1)(iii) IC: RSS-247 5.1 (4)		Complied	Conducted
Maximum Peak Output Power	FCC: FCC Public Notice DA 00-705 IC: RSS-Gen 6.12	FCC: Section15.247(a)(b)(1) IC: RSS-247 5.4 (2)		Complied	Conducted
Spurious Emission & Band Edge Compliance	FCC: FCC Public Notice DA 00-705 IC: RSS-Gen 6.13	FCC: Section15.247(d) IC: RSS-247 5.5 RSS-Gen 8.9 RSS-Gen 8.10	9.2 dB 378.001 MHz, QP, Horizontal Tx 2402 MHz, DH5	Complied	Conducted/ Radiated (above 30 MHz) *2)

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

\*1) The test is not applicable since the EUT has no AC mains.

\*2) Radiated test was selected over 30 MHz based on section 15.247(d).

\* In case any questions arise about test procedure, ANSI C63.10: 2013 is also referred. (ANSI C63.10:2013 is Non-accreditation)

#### **FCC Part 15.31 (e)**

The equipment provides the wireless transmitter with stable power supply (DC 3.3 V).

Instead of a new battery, DC power supply was used for the test. That does not affect the test result, therefore the EUT complies with the requirement.

#### **FCC Part 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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### 3.3 Addition to standard

Item	Test Procedure	Specification	Worst margin	Results	Remarks
99% Occupied Bandwidth	IC: RSS-Gen 6.6	IC: -	N/A	-	Conducted

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

### 3.4 Uncertainty

The following uncertainties have been calculated to provide a confidence level of 95 % using a coverage factor  $k = 2$ .  
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Item	Frequency range	Uncertainty (+/-)		
		No. 1 SAC / SR	No. 2 SAC / SR	No. 3 SAC / SR
Conducted emission (AC Mains) LISN	150 kHz-30 MHz	3.6 dB	3.4 dB	3.4 dB
Radiated emission (Measurement distance: 3 m)	9 kHz-30 MHz	3.7 dB	3.5 dB	3.5 dB
	30 MHz-300 MHz	4.9 dB	4.9 dB	4.7 dB
	300 MHz-1 GHz	5.0 dB	5.0 dB	4.8 dB
	1 GHz-13 GHz	4.9 dB	4.9 dB	4.9 dB
Radiated emission (Measurement distance: 1 m)	13 GHz-18 GHz	5.7 dB	5.7 dB	5.7 dB
	18 GHz-40 GHz	4.5 dB	4.3 dB	4.3 dB

SAC=Semi-Anechoic Chamber

SR= Shielded Room is applied besides radiated emission

Antenna terminal test	Uncertainty (+/-)
Power Measurement above 1 GHz (Average Detector)_SPM-06	0.76 dB
Power Measurement above 1 GHz (Peak Detector)_SPM-06	0.79 dB
Power Measurement above 1 GHz (Average Detector)_SPM-07	0.74 dB
Power Measurement above 1 GHz (Peak Detector)_SPM-07	1.08 dB
Spurious emission (Conducted) below 1GHz	1.5 dB
Spurious emission (Conducted) 1 GHz-3 GHz	1.7 dB
Spurious emission (Conducted) 3 GHz-18 GHz	2.4 dB
Spurious emission (Conducted) 18 GHz-26.5 GHz	2.5 dB
Spurious emission (Conducted) 26.5 GHz-40 GHz	2.5 dB
Bandwidth Measurement	0.66 %
Duty cycle and Time Measurement	0.012 %

#### Radiated emission test

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

### 3.5 Test Location

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JAB Accreditation No. RTL02610

Test site	IC Registration Number	Width x Depth x Height (m)	Size of reference ground plane (m) / horizontal conducting plane	Maximum measurement distance
No.1 Semi-anechoic chamber	2973D-1	20.6 x 11.3 x 7.65	20.6 x 11.3	10m
No.2 Semi-anechoic chamber	2973D-2	20.6 x 11.3 x 7.65	20.6 x 11.3	10m
No.3 Semi-anechoic chamber	2973D-3	12.7 x 7.7 x 5.35	12.7 x 7.7	5m
No.4 Semi-anechoic chamber	-	8.1 x 5.1 x 3.55	8.1 x 5.1	-
No.1 Shielded room	-	6.8 x 4.1 x 2.7	6.8 x 4.1	-
No.2 Shielded room	-	6.8 x 4.1 x 2.7	6.8 x 4.1	-
No.3 Shielded room	-	6.3 x 4.7 x 2.7	6.3 x 4.7	-
No.4 Shielded room	-	4.4 x 4.7 x 2.7	4.4 x 4.7	-
No.5 Shielded room	-	7.8 x 6.4 x 2.7	7.8 x 6.4	-
No.6 Shielded room	-	7.8 x 6.4 x 2.7	7.8 x 6.4	-
No.8 shielded room	-	3.45 x 5.5 x 2.4	3.45 x 5.5	-
No.1 Measurement room	-	2.55 x 4.1 x 2.5	-	-

### 3.6 Test data, Test instruments, and Test set up

Refer to APPENDIX.

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

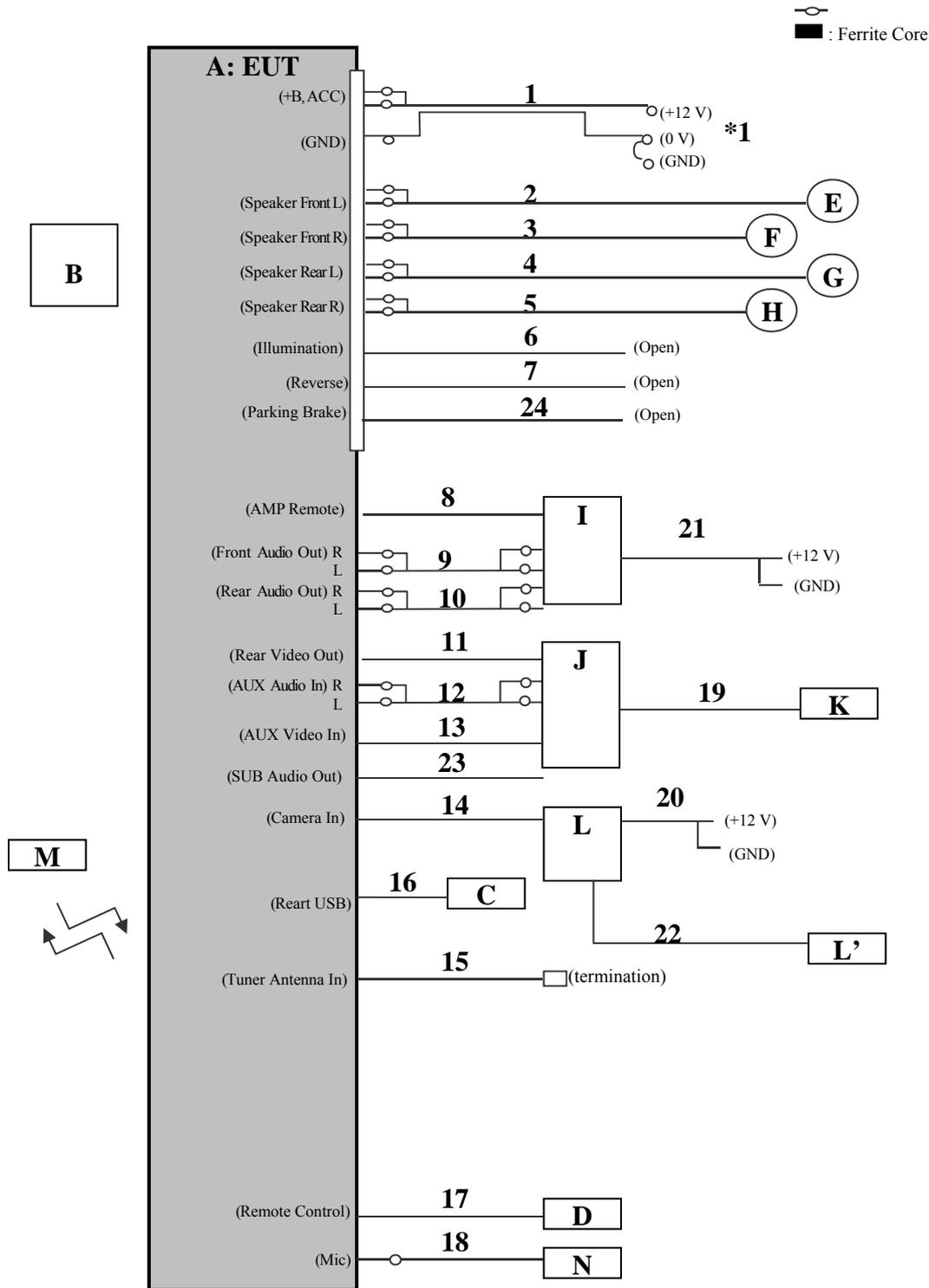
### **4.1 Operating Mode(s)**

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

Details of Operating Mode(s)

<b>Test Item</b>	<b>Mode</b>	<b>Tested frequency</b>
Spurious Emission (Conducted/Radiated)	Tx (Hopping Off) DH5, 3DH5	2402 MHz 2441 MHz 2480 MHz
Carrier Frequency Separation	Tx (Hopping On) DH5, 3DH5 Inquiry	2402 MHz 2441 MHz 2480 MHz
20dB Bandwidth	Tx (Hopping Off) DH5, 3DH5 Inquiry	2402 MHz 2441 MHz 2480 MHz
Number of Hopping Frequency	Tx (Hopping On) DH5, 3DH5 Inquiry	-
Dwell time	Tx (Hopping On), -DH1, DH3, DH5 -3DH1, 3DH3, 3DH5 Inquiry	-
Maximum Peak Output Power	Tx (Hopping Off) DH5, 2DH5, 3DH5 Inquiry	2402 MHz 2441 MHz 2480 MHz
Band Edge Compliance (Conducted)	Tx DH5, 3DH5 -Hopping On -Hopping Off	2402 MHz 2480 MHz
99% Occupied Bandwidth	Tx DH5, 3DH5 -Hopping On -Hopping Off	2402 MHz 2441 MHz 2480 MHz
<p>*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 for other tests than power measurement by using 3DH mode (3 Mb/s EDR: 8DPSK) as a representative.  *EUT has the power settings by the software as follows;  Power settings:   BDR:   Ext.=255,           Int.=41                            EDR:   Ext.=255,           Int.=43  Software:         CSR BlueSuite BlueTest Version 2.2.0.0                            CSR BlueSuite BtCliCtrl Version 2.2.0.0 (Inquiry mode only)</p>		

## 4.2 Configuration and peripherals



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

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**Description of EUT and support equipment**

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	AV Center	XAV-V750BT	ET00041	Sony	EUT
B	Remote commander	RM-X170	-	Sony	-
C	USB memory	SDK-USM4GL(B)	-	Sony	-
D	Wired Remote Controller	RM-X4S	-	Sony	-
E	Speaker 1	IS-10	-	Sony	-
F	Speaker 2	IS-10	-	Sony	-
G	Speaker 3	XS-GTF1625R	-	Sony	-
H	Speaker 4	XS-GTF1625R	-	Sony	-
I	Monaural Power Amplifier	XM-1S	1520145	Sony	-
J	Connection Box	XA-124	3509530	Sony	-
K	MOBILE MONITOR	XVM-F65	350934	Sony	-
L	Camera unit	XA-R800C	100114	Sony	-
L'					
M	Walkman	NW-A828	5072265	Sony	-
N	Mic	-	-	Sony	-

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

**List of cables used**

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	DC Power+	0.15+2.3	Unshielded	Unshielded	-
2	Speaker (1)	0.15+2.6	Unshielded	Unshielded	-
3	Speaker (2)	0.15+2.6	Unshielded	Unshielded	-
4	Speaker (3)	0.15+2.0	Unshielded	Unshielded	-
5	Speaker (4)	0.15+2.0	Unshielded	Unshielded	-
6	Illumination	0.15+1.5	Unshielded	Unshielded	-
7	Reverse	0.15+1.5	Unshielded	Unshielded	-
8	AMP Remote	0.15+1.5+1.4	Unshielded	Unshielded	-
9	RCA (Front Audio Out)	5.0	Shielded	Shielded	-
10	RCA (Rear Audio Out)	5.0	Shielded	Shielded	-
11	RCA (Rear VIDEO Out)	6.0	Shielded	Shielded	-
12	RCA (AUX Audio In)	3.2	Shielded	Shielded	-
13	RCA (AUX Video In)	5.0	Shielded	Shielded	-
14	RCA (Camera In)	3.0	Shielded	Shielded	-
15	Tuner Antenna In	1.0	Shielded	Shielded	-
16	USB	1.5	Shielded	Shielded	-
17	REMOTE Control	2.0	Shielded	Shielded	-
18	Mic	0.15+3.5	Shielded	Shielded	-
19	Signal	3.0	Shielded	Shielded	-
20	DC Power	1.0	Unshielded	Unshielded	-
21	DC Power	1.3	Unshielded	Unshielded	-
22	Camera	3.0	Shielded	Shielded	-
23	RCA (SUB Audio Out)	5.0	Shielded	Shielded	-
24	Parking brake	2.0	Unshielded	Unshielded	-

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## **SECTION 5: Radiated Spurious Emission**

### **Test Procedure**

Below 1 GHz

EUT was placed on a platform of nominal size, 1.0 m by 2.0 m, raised 0.8 m above the conducting ground plane. The table is made of Styrofoam and covered with polyvinyl chloride. That has very low permittivity.

Above 1 GHz

EUT was placed on a polystyrene platform of nominal size, 0.5 m by 0.5 m raised 1.5 m 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 m and 4 m 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	30 MHz to 300 MHz	300 MHz to 1 GHz	Above 1 GHz
Antenna Type	Biconical	Logperiodic	Horn

In any 100 kHz 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 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on a radiated measurement.

### **20 dBc was applied to the frequency over the limit of FCC 15.209 / Table 4 of RSS-Gen 8.9 (IC) and outside the restricted band of FCC15.205 / Table 6 of RSS-Gen 8.10 (IC).**

Frequency	Below 1 GHz	Above 1 GHz		20 dBc
Instrument used	Test Receiver	Spectrum Analyzer		Spectrum Analyzer
Detector	QP	PK	AV	PK
IF Bandwidth	BW 120 kHz	RBW: 1 MHz VBW: 3 MHz	RBW: 1 MHz VBW: 10 Hz *1)	RBW: 100 kHz VBW: 300 kHz
Test Distance	3 m	3 m (below 13 GHz), 1 m*2) (above 13 GHz),		3 m (below 13 GHz), 1 m*2) (above 13 GHz),

\*1) Although DA 00-705 accepts VBW = 10 Hz 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 angle of 0 to 45 deg. 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.

	<b>30-1000 MHz</b>	<b>1-2.8 GHz</b>	<b>2.8-13 GHz</b>	<b>13-18 GHz</b>	<b>18-26.5 GHz</b>
<b>Horizontal</b>	0 deg	45 deg	0 deg	0 deg	0 deg
<b>Vertical</b>	0 deg	45 deg	45 deg	0 deg	0 deg

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

**Measurement range** : 30 M - 26.5 GHz  
**Test data** : APPENDIX  
**Test result** : Pass

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## **SECTION 6: Antenna Terminal Conducted Tests**

### **Test Procedure**

The tests were made with below setting connected to the antenna port.

<b>Test</b>	<b>Span</b>	<b>RBW</b>	<b>VBW</b>	<b>Sweep time</b>	<b>Detector</b>	<b>Trace</b>	<b>Instrument used</b>
20dB Bandwidth	3 MHz / 2.5 MHz	30 kHz	100 kHz	Auto	Peak	Max Hold	Spectrum Analyzer
99% Occupied Bandwidth *1)	Enough width to display emission skirts	1 to 5 % of OBW	Three times of RBW	Auto	Sample	Max Hold *1)	Spectrum Analyzer
Maximum Peak Output Power	-	-	-	Auto	Peak Average *3)	-	Power Meter (Sensor: 50MHz BW)
Carrier Frequency Separation	5 MHz or 3 MHz	100 kHz	300 kHz	Auto	Peak	Max Hold	Spectrum Analyzer
Number of Hopping Frequency	30 MHz	300 kHz	1 MHz	Auto	Peak	Max Hold	Spectrum Analyzer
Dwell Time	Zero Span	100 kHz, 1 MHz	300 kHz, 3 MHz	As necessary capture the entire dwell time per hopping channel	Peak	Clear Write	Spectrum Analyzer
Conducted Spurious Emission *2)	9 kHz to 150 kHz	200 Hz	620 Hz	Auto	Peak	Max Hold	Spectrum Analyzer
	150 kHz to 30 MHz	9.1 kHz	27 kHz				
	30 MHz to 25 GHz	100 kHz	300 kHz				
Conducted Spurious Emission Band Edge compliance	10 MHz	100 kHz	300 kHz	Auto	Peak	Max Hold	Spectrum Analyzer

\*1) The measurement was performed with Max Hold since the duty cycle was not 100 %. Peak hold was applied as Worst-case measurement.

\*2) 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.

(9 kHz -150 kHz: RBW = 200 Hz, 150 kHz - 30 MHz: RBW = 9.1 kHz)

\*3) Reference data

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

**Test data** : **APPENDIX**  
**Test result** : **Pass**

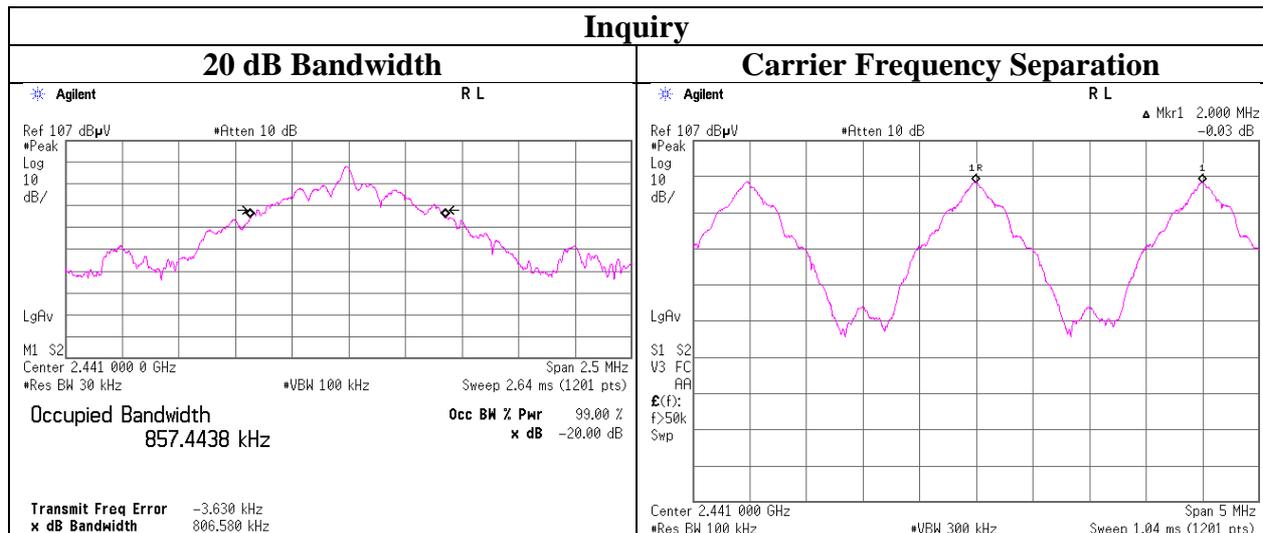
**APPENDIX 1: Test data**

**20dB Bandwidth and Carrier Frequency Separation**

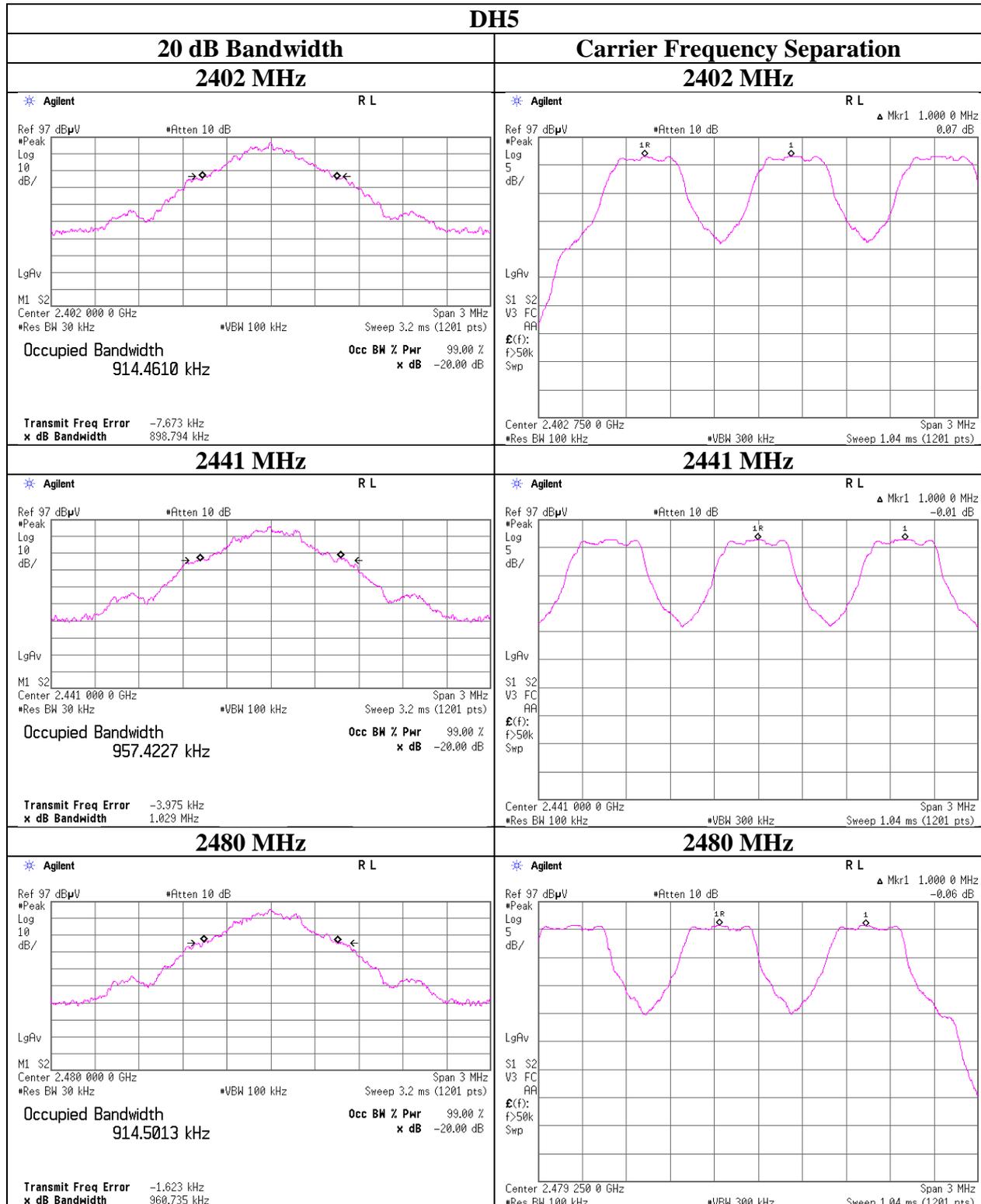
Test place : Shonan EMC Lab. No.5 Shielded Room  
Report No. : 11038900S-E  
Date : November 10, 2015  
Temperature / Humidity : 24 deg. C / 54 % RH  
Engineer : Hiroyuki Morikawa  
Mode : Tx, Hopping On

Mode	Freq. [MHz]	20dB Bandwidth [MHz]	Carrier Frequency Separation [MHz]	Limit for Carrier Frequency separation [MHz]
DH5	2402.0	0.899	1.000	>= 0.599
DH5	2441.0	1.029	1.000	>= 0.686
DH5	2480.0	0.961	1.000	>= 0.640
3DH5	2402.0	1.288	1.000	>= 0.859
3DH5	2441.0	1.282	1.000	>= 0.855
3DH5	2480.0	1.282	1.000	>= 0.855
Inquiry	2441.0	0.807	2.000	>= 0.538

Limit: Two-thirds of 20dB Bandwidth or 25kHz (whichever is great)  
No limit applies to 20dB Bandwidth.



## 20dB Bandwidth and Carrier Frequency Separation



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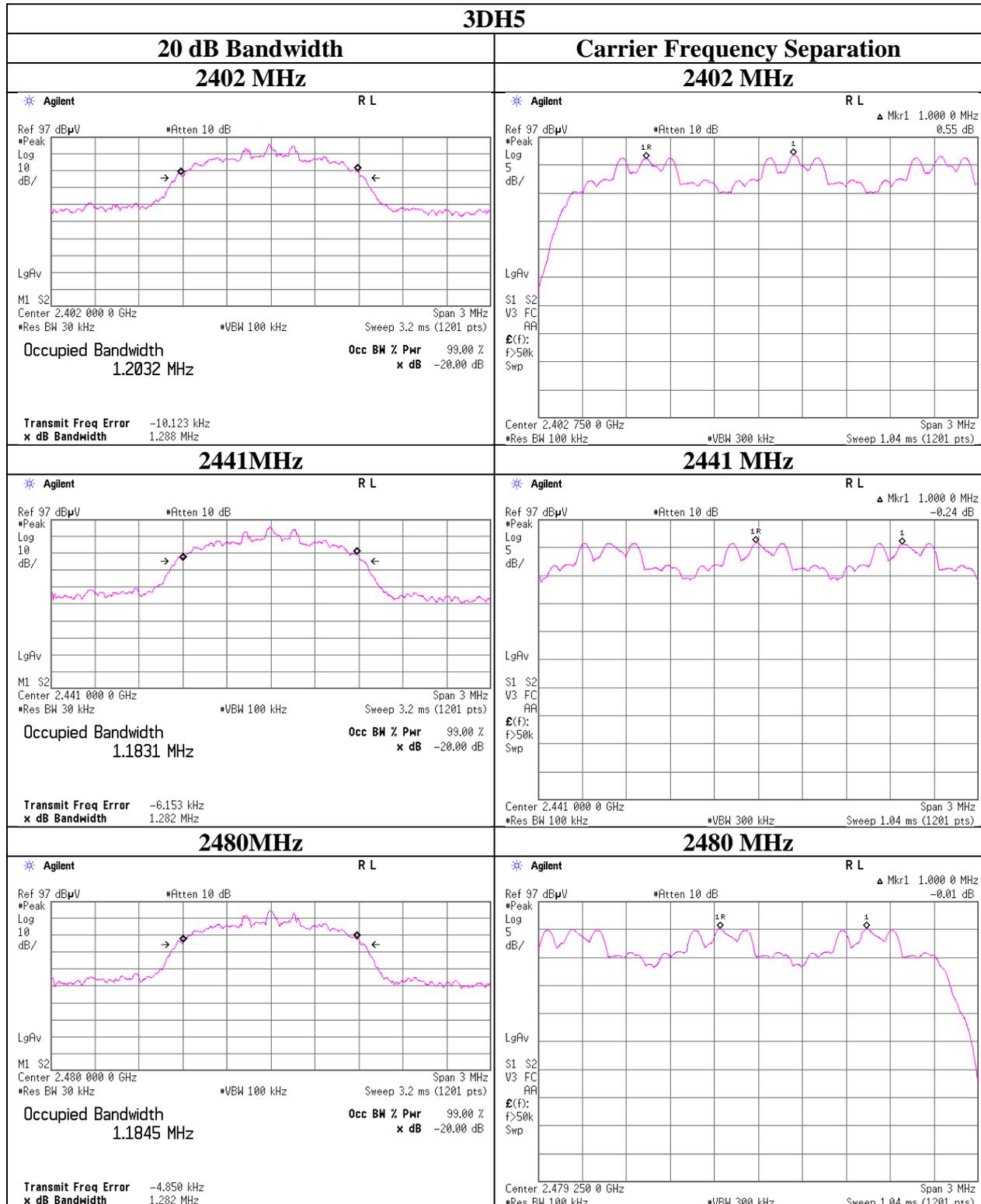
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## 20dB Bandwidth and Carrier Frequency Separation



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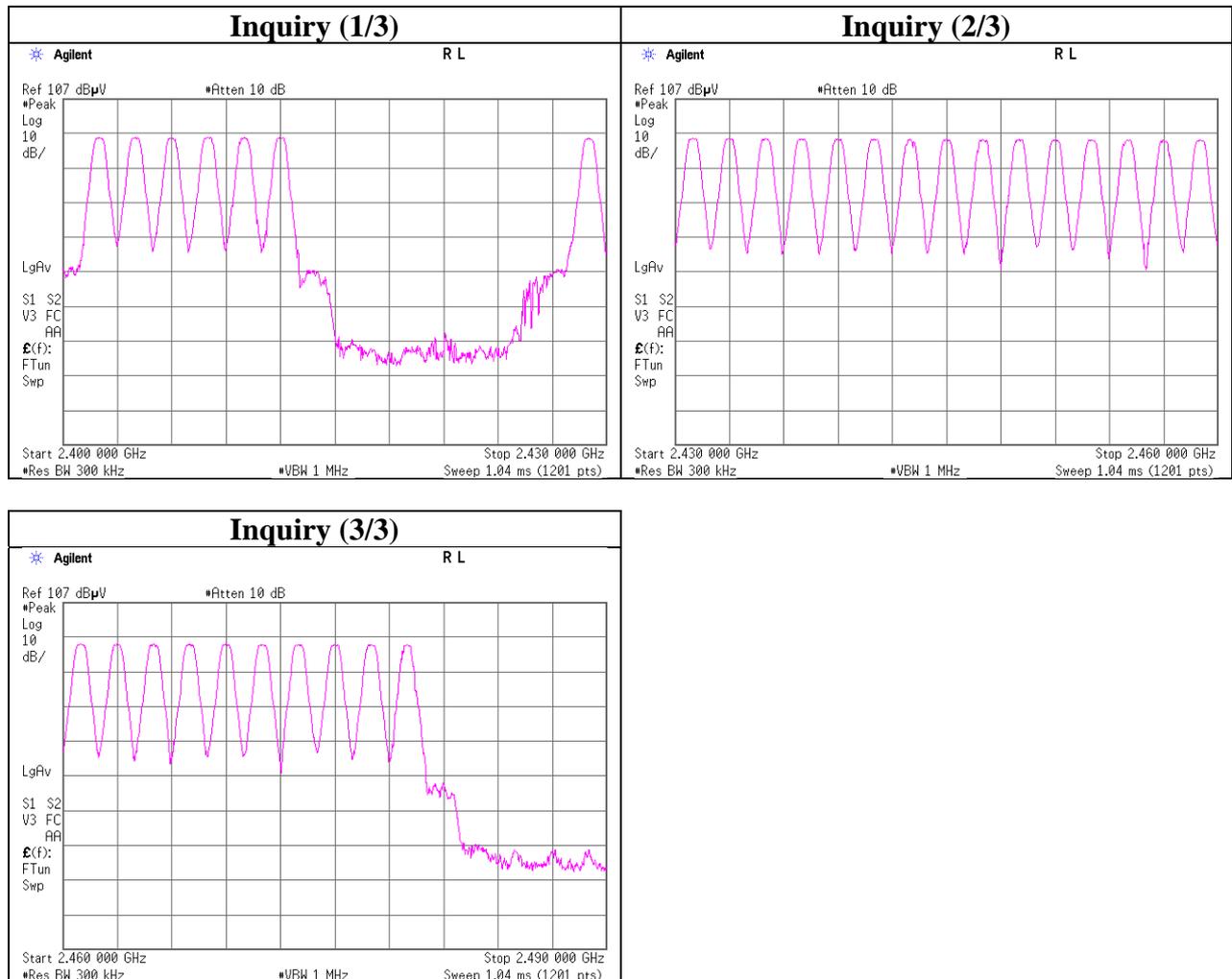
Facsimile : +81 463 50 6401

## Number of Hopping Frequency

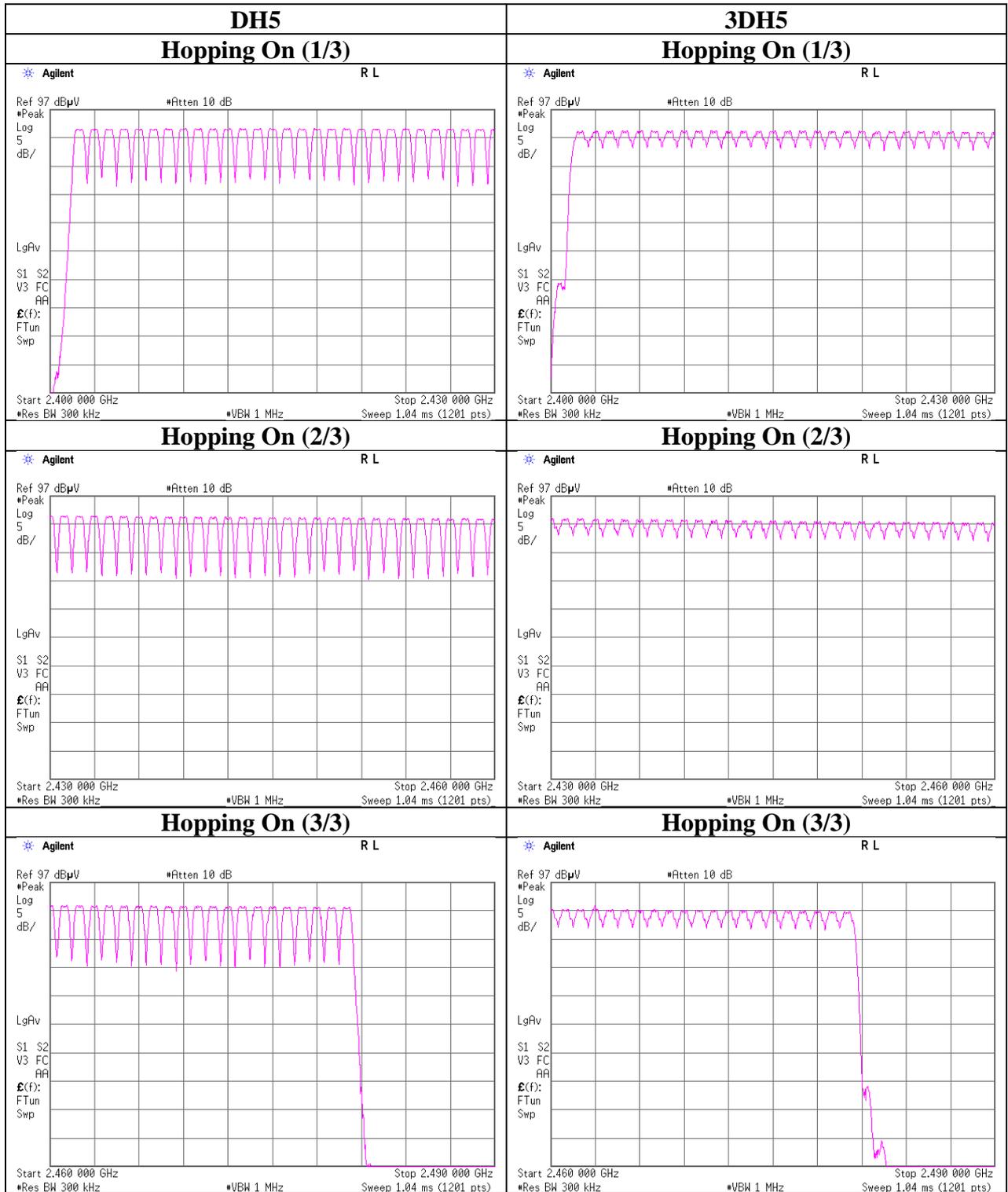
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11038900S-E
Date	November 10, 2015
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx, Hopping On

Mode	Number of channel [channels]	Limit [channels]
DH5	79	>= 15
3DH5	79	>= 15
Inquiry	32	>= 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.



### Number of Hopping Frequency



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## Dwell time

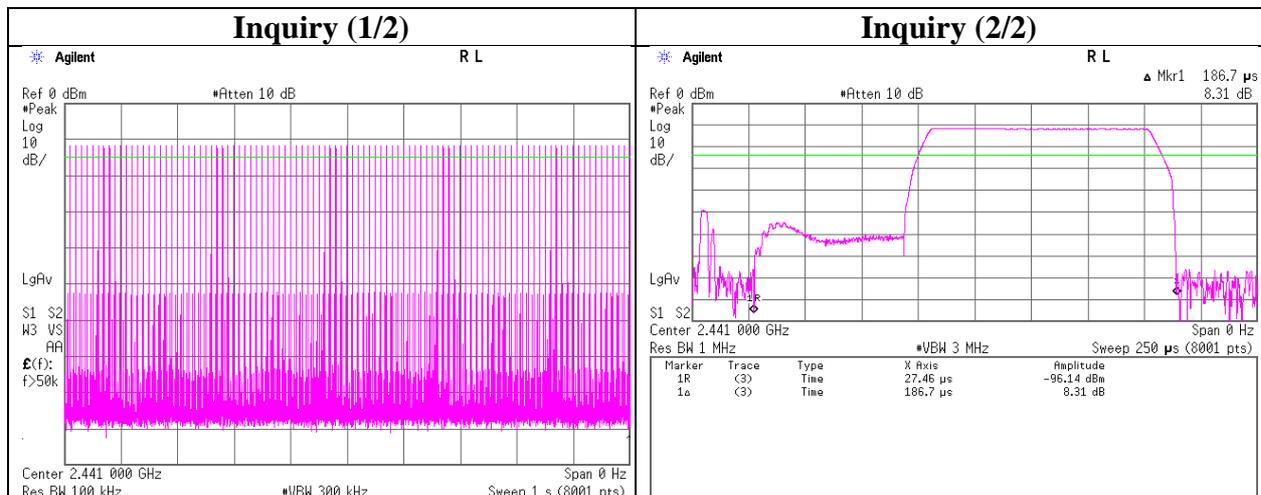
Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11038900S-E
Date	November 10, 2015
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx, Hopping On

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 [msec]	Result [msec]	Limit [msec]
DH1	50.0 times / 5 sec. x	31.6 sec. =	316 times	0.512	162	400
DH3	26.0 times / 5 sec. x	31.6 sec. =	165 times	1.769	292	400
DH5	17.0 times / 5 sec. x	31.6 sec. =	108 times	3.017	326	400
3DH1	50.0 times / 5 sec. x	31.6 sec. =	316 times	0.526	166	400
3DH3	26.0 times / 5 sec. x	31.6 sec. =	165 times	1.780	294	400
3DH5	17.0 times / 5 sec. x	31.6 sec. =	108 times	3.033	328	400
Inquiry	100.0 times / 1 sec. x	12.8 sec. =	1280 times	0.187	239	400

Sample Calculation

Result = Number of transmission x Length of transmission

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. This is confirmed in the test report for  $N = 79$ .



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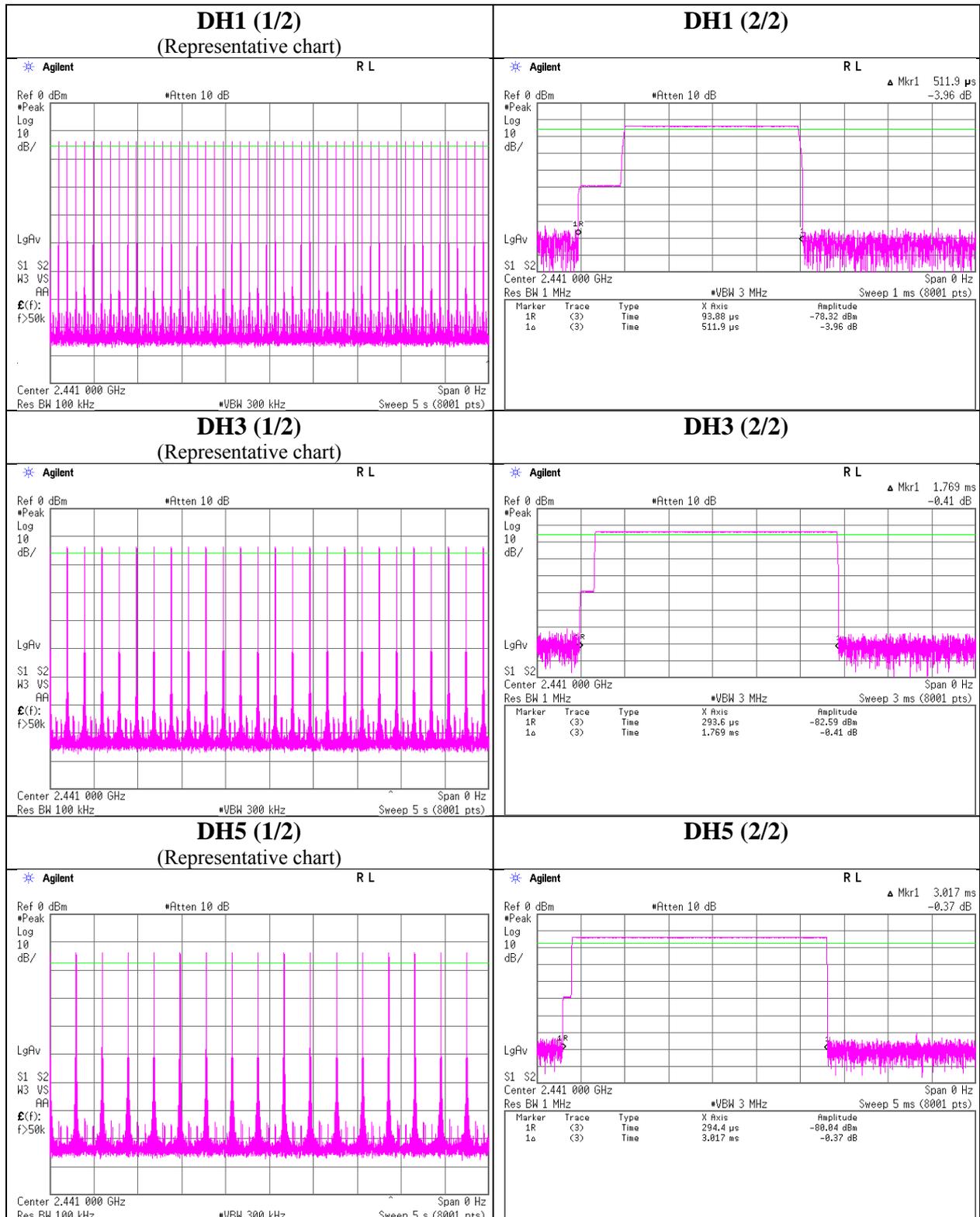
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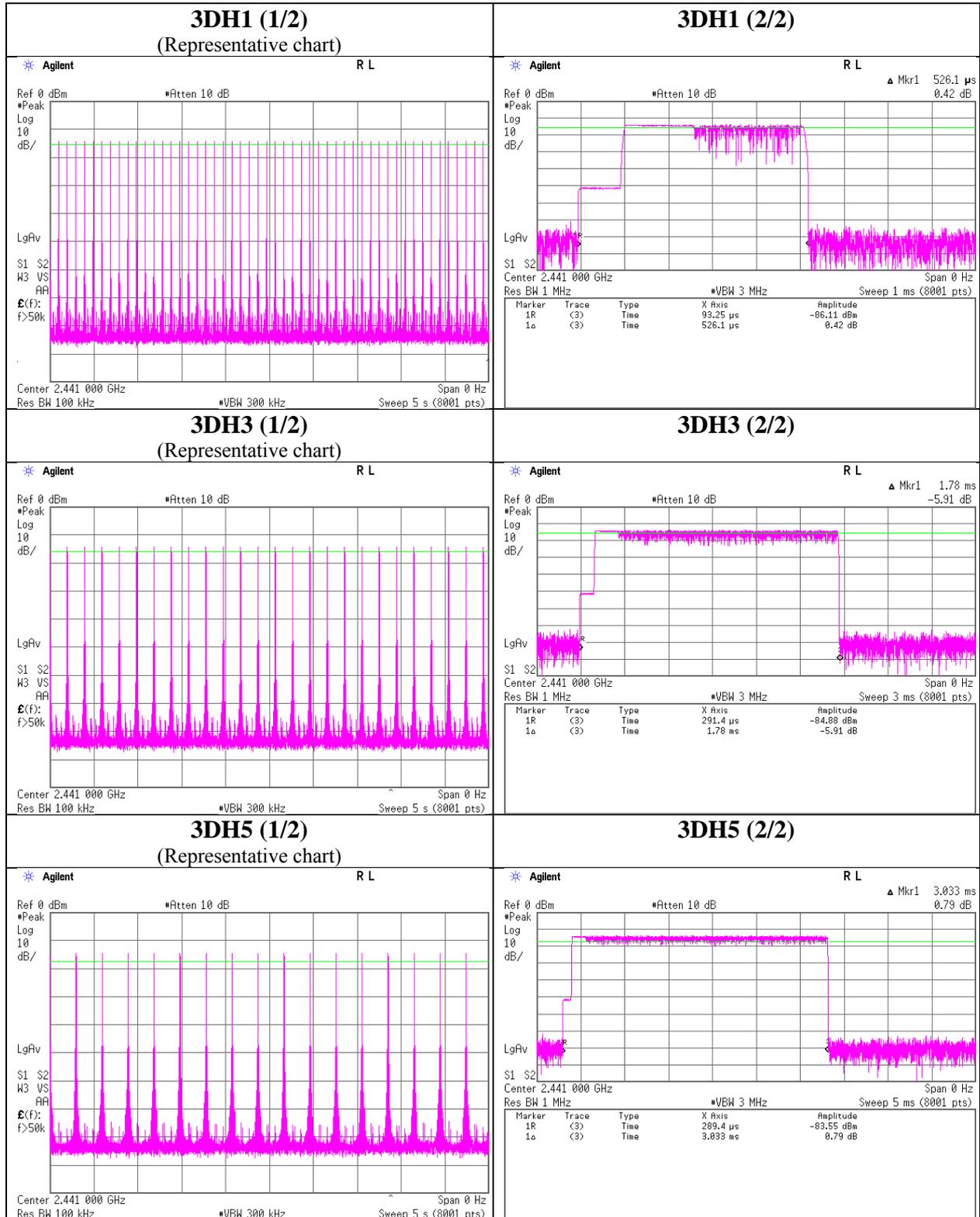
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**Dwell time**



**Dwell time**



## Maximum Peak Output Power

Test place : Shonan EMC Lab. No.5 Shielded Room  
Report No. : 11038900S-E  
Date : November 10, 2015  
Temperature / Humidity : 24 deg. C / 54 % RH  
Engineer : Hiroyuki Morikawa  
Mode : Tx, Hopping Off

Mode	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result		Limit		Margin [dB]
					[dBm]	[mW]	[dBm]	[mW]	
DH5	2402.0	-12.89	1.78	9.93	-1.18	0.76	20.96	125	22.14
DH5	2441.0	-13.17	1.79	9.93	-1.45	0.72	20.96	125	22.41
DH5	2480.0	-13.69	1.81	9.93	-1.95	0.64	20.96	125	22.91
2DH5	2402.0	-12.57	1.78	9.93	-0.86	0.82	20.96	125	21.82
2DH5	2441.0	-12.97	1.79	9.93	-1.25	0.75	20.96	125	22.21
2DH5	2480.0	-13.74	1.81	9.93	-2.00	0.63	20.96	125	22.96
3DH5	2402.0	-12.56	1.78	9.93	-0.85	0.82	20.96	125	21.81
3DH5	2441.0	-12.99	1.79	9.93	-1.27	0.75	20.96	125	22.23
3DH5	2480.0	-13.65	1.81	9.93	-1.91	0.64	20.96	125	22.87

Sample Calculation:

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

\*The equipment and cables were not used for factor 0 dB of the data sheets.

**Average Output Power**  
**(Reference data for)**

Test place : Shonan EMC Lab. No.5 Shielded Room  
Report No. : 11038900S-E  
Date : November 10, 2015  
Temperature / Humidity : 24 deg. C / 54 % RH  
Engineer : Hiroyuki Morikawa  
Mode : Tx, Hopping Off

Mode	Freq. [MHz]	Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result (Frame power)		Duty factor [dB]	Result (Burst power)	
					[dBm]	[mW]		[dBm]	[mW]
DH5	2402.0	-14.76	1.78	9.93	-3.05	0.50	0.94	-2.11	0.62
DH5	2441.0	-14.78	1.79	9.93	-3.06	0.49	0.94	-2.12	0.61
DH5	2480.0	-15.68	1.81	9.93	-3.94	0.40	0.94	-3.00	0.50
2DH5	2402.0	-16.17	1.78	9.93	-4.46	0.36	0.92	-3.54	0.44
2DH5	2441.0	-16.70	1.79	9.93	-4.98	0.32	0.92	-4.06	0.39
2DH5	2480.0	-17.59	1.81	9.93	-5.85	0.26	0.92	-4.93	0.32
3DH5	2402.0	-16.12	1.78	9.93	-4.41	0.36	0.92	-3.49	0.45
3DH5	2441.0	-16.65	1.79	9.93	-4.93	0.32	0.92	-4.01	0.40
3DH5	2480.0	-17.56	1.81	9.93	-5.82	0.26	0.92	-4.90	0.32

Sample Calculation:

Result (Frame power) = Reading + Cable Loss (including the cable(s) customer supplied) + Attenuator Loss

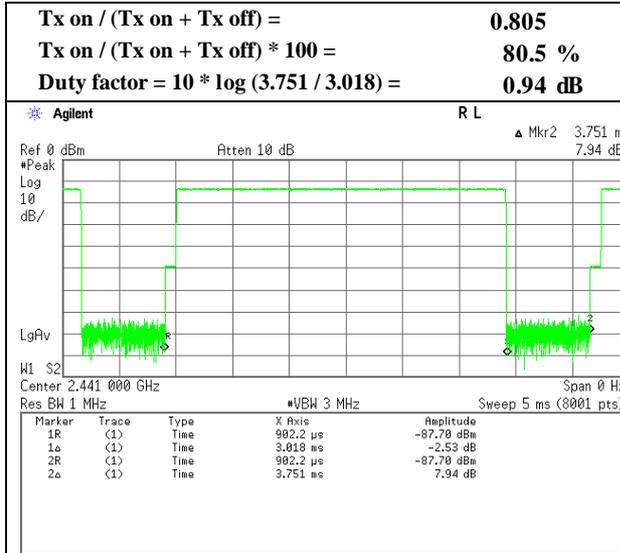
Result (Burst power) = Frame power + Duty factor

\*The equipment and cables were not used for factor 0 dB of the data sheets.

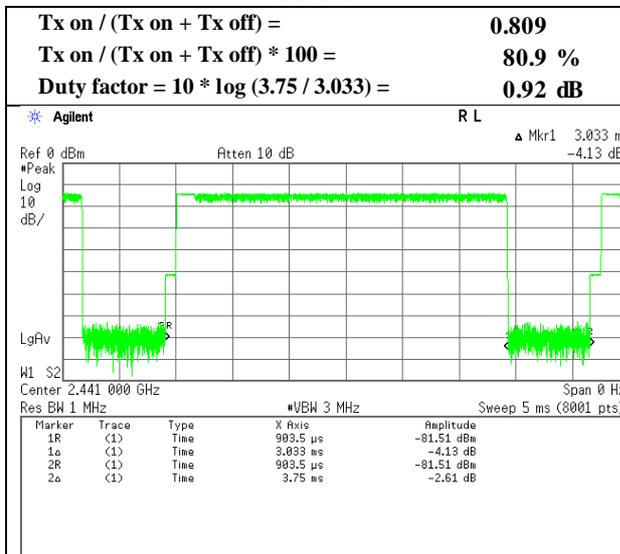
### Burst Rate Confirmation

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11038900S-E
Date	November 10, 2015
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx, Hopping Off

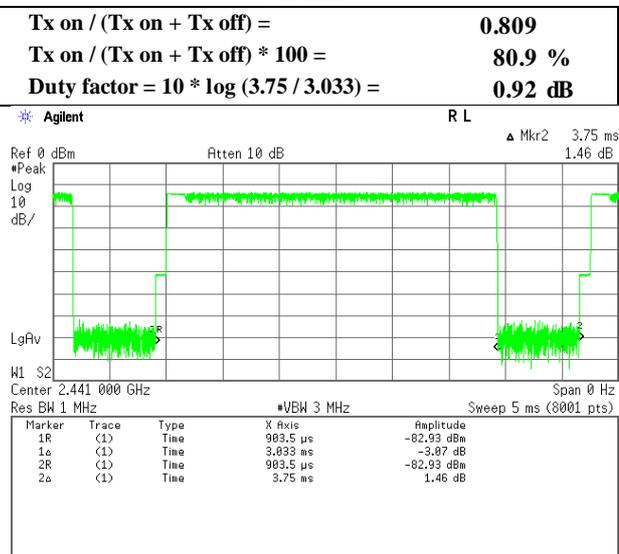
#### DH5



#### 2DH5



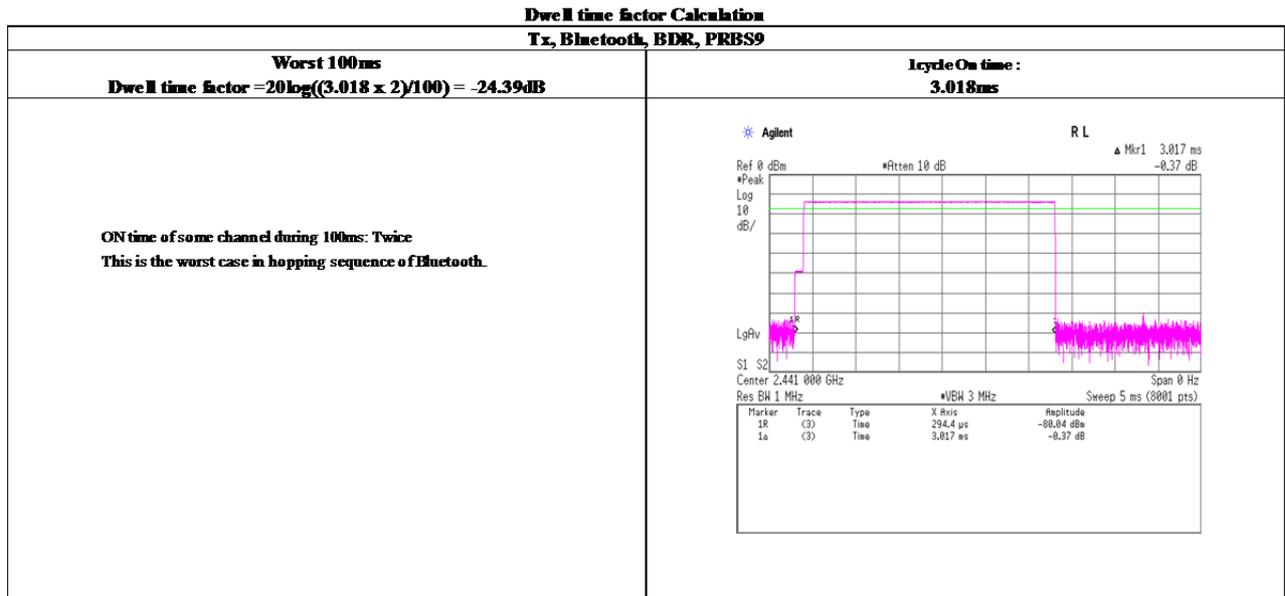
#### 3DH5



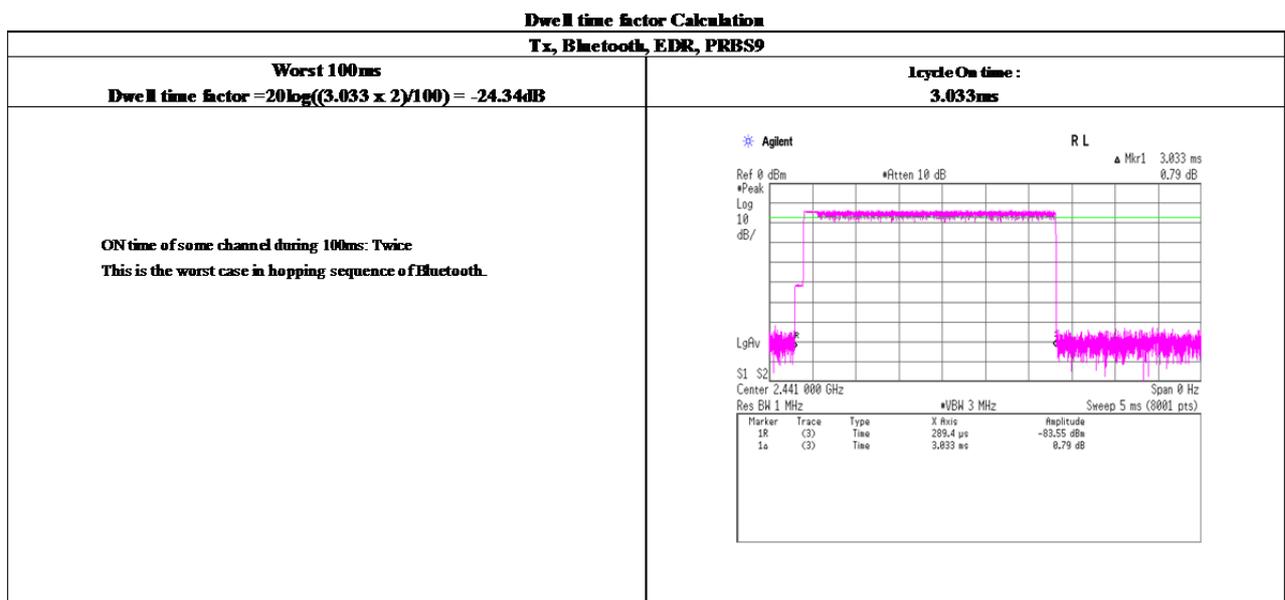
## Dwell time factor

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11038900S-E
Date	October 10, 2015
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx, Hopping On

### Dwell time factor Calculation chart



### Dwell time factor Calculation chart



## Radiated Spurious Emission

Test place : Shonan EMC Lab. No.3 Semi Anechoic Chamber  
Report No. : 11038900S-E  
Date : November 19, 2015      November 20, 2015  
Temperature / Humidity : 25 deg. C / 40 % RH      25 deg. C / 42 % RH  
Engineer : Akira Sato      Akira Sato  
            (1-26.5GHz)      (30-1000MHz)  
Mode : Tx, Hopping Off, DH5 2402 MHz

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	105.599	QP	46.1	10.5	7.4	32.1	0.0	31.9	43.5	11.6	296	88	
Hori.	297.005	QP	33.9	19.1	8.6	32.0	0.0	29.6	46.0	16.4	161	213	
Hori.	324.002	QP	43.2	14.4	8.8	31.9	0.0	34.5	46.0	11.5	100	224	
Hori.	378.001	QP	44.2	15.5	9.0	31.9	0.0	36.8	46.0	9.2	100	197	
Hori.	432.004	QP	42.3	16.4	9.3	31.9	0.0	36.1	46.0	9.9	100	226	
Hori.	1601.868	PK	48.4	25.3	13.0	40.8	1.7	47.6	73.9	26.3	108	159	
Hori.	2390.000	PK	47.6	27.8	13.7	41.0	1.7	49.8	73.9	24.1	246	324	
Hori.	4804.000	PK	63.5	31.4	5.7	39.6	1.7	62.7	73.9	11.2	100	180	
Hori.	7206.000	PK	45.9	36.9	7.1	40.1	1.7	51.5	73.9	22.4	100	0	
Hori.	9608.000	PK	45.7	38.5	8.2	39.6	1.7	54.5	73.9	19.4	100	0	
Hori.	12010.000	PK	46.3	39.7	9.3	39.3	1.7	57.7	73.9	16.2	100	0	
Hori.	1601.868	AV	40.2	25.3	13.0	40.8	1.7	39.4	53.9	14.5	108	159	
Hori.	2390.000	AV	33.7	27.8	13.7	41.0	1.7	35.9	53.9	18.0	246	324	
Vert.	54.002	QP	43.5	9.0	6.9	32.1	0.0	27.3	40.0	12.7	100	83	
Vert.	378.001	QP	40.0	15.5	9.0	31.9	0.0	32.6	46.0	13.4	100	306	
Vert.	760.855	QP	28.2	20.7	10.5	31.7	0.0	27.7	46.0	18.3	100	355	
Vert.	1601.950	PK	46.8	25.3	13.0	40.8	1.7	46.0	73.9	27.9	113	290	
Vert.	2390.000	PK	47.9	27.8	13.7	41.0	1.7	50.1	73.9	23.8	100	167	
Vert.	4804.000	PK	60.6	31.4	5.7	39.6	1.7	59.8	73.9	14.1	107	153	
Vert.	7206.000	PK	46.2	36.9	7.1	40.1	1.7	51.8	73.9	22.1	100	0	
Vert.	9608.000	PK	45.7	38.5	8.2	39.6	1.7	54.5	73.9	19.4	100	0	
Vert.	12010.000	PK	45.9	39.7	9.3	39.3	1.7	57.3	73.9	16.6	100	0	
Vert.	1601.950	AV	35.3	25.3	13.0	40.8	1.7	34.5	53.9	19.4	113	290	
Vert.	2390.000	AV	33.2	27.8	13.7	41.0	1.7	35.4	53.9	18.5	100	167	

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

Distance factor : 1 GHz - 13 GHz : 20log(3.63 m / 3.0 m) = 1.7 dB

13 GHz - 40 GHz : 20log(1.0 m / 3.0 m) = -9.5 dB

### Dwell time factor relaxation

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Dwell Factor [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	4804.000	AV	59.6	31.4	5.7	39.6	-24.4	1.7	34.4	53.9	19.5	
Hori.	7206.000	AV	33.6	36.9	7.1	40.1	-24.4	1.7	14.8	53.9	39.1	
Hori.	9608.000	AV	34.0	38.5	8.2	39.6	-24.4	1.7	18.4	53.9	35.5	
Hori.	12010.000	AV	34.4	39.7	9.3	39.3	-24.4	1.7	21.4	53.9	32.5	
Vert.	4804.000	AV	56.1	31.4	5.7	39.6	-24.4	1.7	30.9	53.9	23.0	
Vert.	7206.000	AV	34.0	36.9	7.1	40.1	-24.4	1.7	15.2	53.9	38.7	
Vert.	9608.000	AV	34.3	38.5	8.2	39.6	-24.4	1.7	18.7	53.9	35.2	
Vert.	12010.000	AV	34.8	39.7	9.3	39.3	-24.4	1.7	21.8	53.9	32.1	

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

Distance factor : 1 GHz - 13 GHz : 20log(3.63 m / 3.0 m) = 1.7 dB

13 GHz - 40 GHz : 20log(1.0 m / 3.0 m) = -9.5 dB

Dwell (time) factor refer to "Dwell time factor Calculation chart" sheet.

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	2402.000	PK	92.2	27.8	13.7	41.0	1.7	94.4	-	-	Carrier
Hori.	2400.000	PK	55.0	27.8	13.7	41.0	1.7	57.2	74.4	17.2	
Vert.	2402.000	PK	87.0	27.8	13.7	41.0	1.7	89.2	-	-	Carrier
Vert.	2400.000	PK	50.0	27.8	13.7	41.0	1.7	52.2	69.2	17.0	

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

Distance factor : 1 GHz - 13 GHz : 20log(3.63 m / 3.0 m) = 1.7 dB

13 GHz - 40 GHz : 20log(1.0 m / 3.0 m) = -9.5 dB

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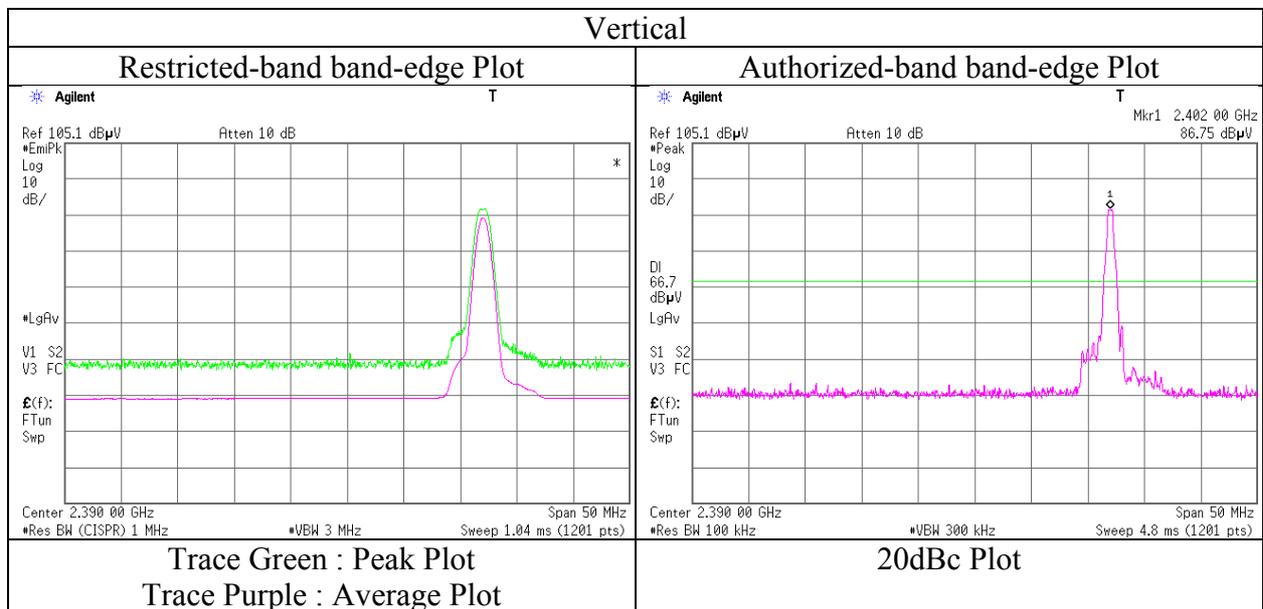
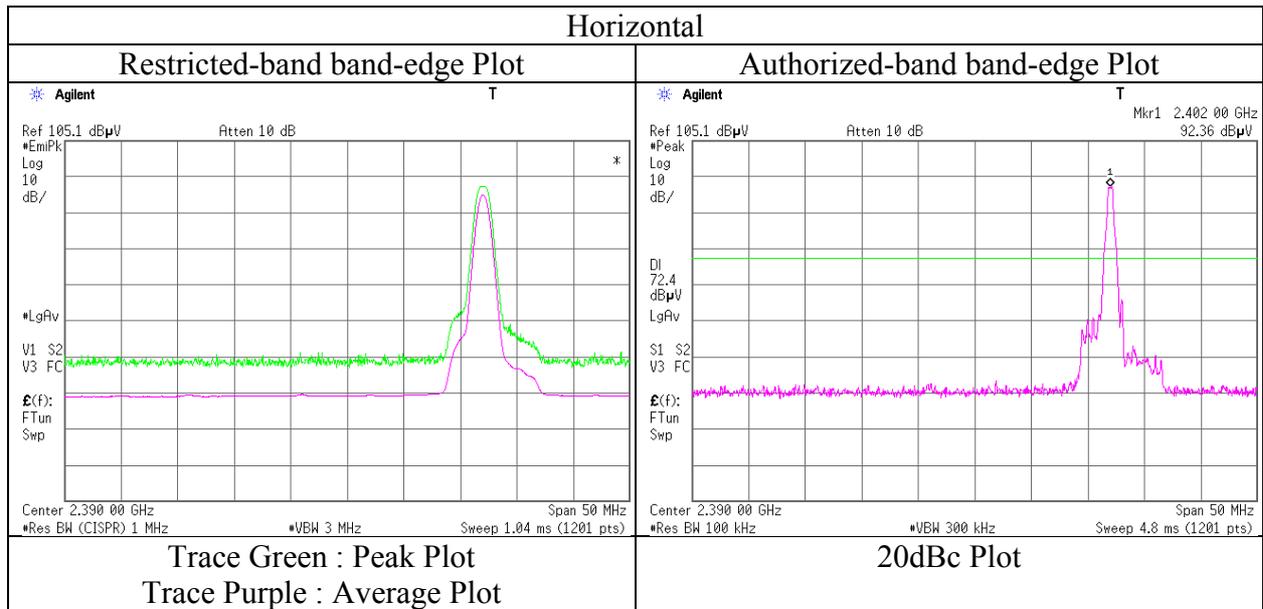
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**Radiated Spurious Emission**  
**(Reference Plot for band-edge)**

Test place : Shonan EMC Lab. No.3 Semi Anechoic Chamber  
Report No. : 11038900S-E  
Date : November 19, 2015  
Temperature / Humidity : 25 deg. C / 40 % RH  
Engineer : Akira Sato  
(1-26.5GHz)  
Mode : Tx, Hopping Off, DH5 2402 MHz



\* Final result of restricted band edge was shown in tabular data.

## Radiated Spurious Emission

Test place : Shonan EMC Lab. No.3 Semi Anechoic Chamber  
Report No. : 11038900S-E  
Date : November 19, 2015      November 20, 2015  
Temperature / Humidity : 25 deg. C / 40 % RH      25 deg. C / 42 % RH  
Engineer : Akira Sato      Akira Sato  
            (1-26.5GHz)      (30-1000MHz)  
Mode : Tx, Hopping Off, DH5 2441 MHz

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	131.318	QP	37.1	13.5	7.6	32.1	0.0	26.1	43.5	17.4	240	82	
Hori.	270.003	QP	36.5	18.0	8.5	32.0	0.0	31.0	46.0	15.0	135	113	
Hori.	324.001	QP	41.9	14.4	8.8	31.9	0.0	33.2	46.0	12.8	100	123	
Hori.	378.003	QP	43.2	15.5	9.0	31.9	0.0	35.8	46.0	<b>10.2</b>	100	189	
Hori.	431.998	QP	38.4	16.4	9.3	31.9	0.0	32.2	46.0	13.8	100	197	
Hori.	1626.780	PK	48.9	25.4	13.0	40.8	1.7	48.2	73.9	25.7	100	221	
Hori.	4882.000	PK	56.5	31.7	5.8	39.5	1.7	56.2	73.9	17.7	100	154	
Hori.	7323.000	PK	45.1	36.9	7.2	40.2	1.7	50.7	73.9	23.2	100	0	
Hori.	9764.000	PK	44.7	38.5	8.2	39.5	1.7	53.6	73.9	20.3	100	0	
Hori.	12205.000	PK	45.1	39.6	9.4	39.4	1.7	56.4	73.9	17.5	100	0	
Hori.	1626.780	AV	41.7	25.4	13.0	40.8	1.7	41.0	53.9	12.9	100	221	
Vert.	105.607	QP	43.9	10.5	7.4	32.1	0.0	29.7	43.5	13.8	100	245	
Vert.	851.628	QP	24.4	21.7	10.8	31.2	0.0	25.7	46.0	20.3	100	281	
Vert.	888.632	QP	23.1	22.2	10.9	31.0	0.0	25.2	46.0	20.8	100	331	
Vert.	1626.734	PK	49.2	25.4	13.0	40.8	1.7	48.5	73.9	25.4	100	173	
Vert.	4882.000	PK	61.7	31.7	5.8	39.5	1.7	61.4	73.9	12.5	100	153	
Vert.	7323.000	PK	45.8	36.9	7.2	40.2	1.7	51.4	73.9	22.5	100	0	
Vert.	9764.000	PK	45.5	38.5	8.2	39.5	1.7	54.4	73.9	19.5	100	0	
Vert.	12205.000	PK	45.0	39.6	9.4	39.4	1.7	56.3	73.9	17.6	100	0	
Vert.	1626.734	AV	42.6	25.4	13.0	40.8	1.7	41.9	53.9	12.0	100	173	

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

Distance factor : 1 GHz - 13 GHz : 20log(3.63 m / 3.0 m) = 1.7 dB

13 GHz - 40 GHz : 20log(1.0 m / 3.0 m) = -9.5 dB

### Dwell time factor relaxation

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Dwell Factor [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	4882.000	AV	51.4	31.7	5.8	39.5	-24.4	1.7	26.7	53.9	27.2	
Hori.	7323.000	AV	33.0	36.9	7.2	40.2	-24.4	1.7	14.2	53.9	39.7	
Hori.	9764.000	AV	32.4	38.5	8.2	39.5	-24.4	1.7	16.9	53.9	37.0	
Hori.	12205.000	AV	32.3	39.6	9.4	39.4	-24.4	1.7	19.2	53.9	34.7	
Vert.	4882.000	AV	57.1	31.7	5.8	39.5	-24.4	1.7	32.4	53.9	<b>21.5</b>	
Vert.	7323.000	AV	33.2	36.9	7.2	40.2	-24.4	1.7	14.4	53.9	39.5	
Vert.	9764.000	AV	32.8	38.5	8.2	39.5	-24.4	1.7	17.3	53.9	36.6	
Vert.	12205.000	AV	32.3	39.6	9.4	39.4	-24.4	1.7	19.2	53.9	34.7	

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

Distance factor : 1 GHz - 13 GHz : 20log(3.63 m / 3.0 m) = 1.7 dB

13 GHz - 40 GHz : 20log(1.0 m / 3.0 m) = -9.5 dB

Dwell (time) factor refer to "Dwell time factor Calculation chart" sheet.

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## Radiated Spurious Emission

Test place : Shonan EMC Lab. No.3 Semi Anechoic Chamber  
Report No. : 11038900S-E  
Date : November 19, 2015      November 20, 2015  
Temperature / Humidity : 25 deg. C / 40 % RH      25 deg. C / 42 % RH  
Engineer : Akira Sato      Akira Sato  
            (1-26.5GHz)      (30-1000MHz)  
Mode : Tx, Hopping Off, DH5 2480 MHz

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	324.001	QP	43.5	14.4	8.8	31.9	0.0	34.8	46.0	11.2	100	134	
Hori.	378.005	QP	44.0	15.5	9.0	31.9	0.0	36.6	46.0	9.4	100	197	
Hori.	432.000	QP	38.7	16.4	9.3	31.9	0.0	32.5	46.0	13.5	100	228	
Hori.	1652.607	PK	48.7	25.5	13.1	40.8	1.7	48.2	73.9	25.7	232	25	
Hori.	2483.500	PK	46.6	27.9	13.8	41.0	1.7	49.0	73.9	24.9	232	19	
Hori.	4960.000	PK	63.5	32.0	5.8	39.4	1.7	63.6	73.9	10.3	131	231	
Hori.	7440.000	PK	49.0	37.0	7.2	40.4	1.7	54.5	73.9	19.4	100	0	
Hori.	9920.000	PK	47.3	38.4	8.2	39.4	1.7	56.2	73.9	17.7	100	0	
Hori.	12400.000	PK	47.6	39.5	9.6	39.6	1.7	58.8	73.9	15.1	100	0	
Hori.	1652.607	AV	40.4	25.5	13.1	40.8	1.7	39.9	53.9	14.0	232	25	
Hori.	2483.500	AV	34.9	27.9	13.8	41.0	1.7	37.3	53.9	16.6	232	19	
Vert.	105.596	QP	43.8	10.5	7.4	32.1	0.0	29.6	43.5	13.9	100	244	
Vert.	378.003	QP	37.7	15.5	9.0	31.9	0.0	30.3	46.0	15.7	100	28	
Vert.	759.792	QP	26.9	20.7	10.5	31.7	0.0	26.4	46.0	19.6	119	2	
Vert.	851.506	QP	25.0	21.7	10.8	31.2	0.0	26.3	46.0	19.7	100	358	
Vert.	900.863	QP	22.8	22.3	11.0	30.9	0.0	25.2	46.0	20.8	100	360	
Vert.	1652.532	PK	51.4	25.5	13.1	40.8	1.7	50.9	73.9	23.0	100	192	
Vert.	2483.500	PK	47.9	27.9	13.8	41.0	1.7	50.3	73.9	23.6	142	181	
Vert.	4960.000	PK	60.4	32.0	5.8	39.4	1.7	60.5	73.9	13.4	159	247	
Vert.	7440.000	PK	48.9	37.0	7.2	40.4	1.7	54.4	73.9	19.5	100	0	
Vert.	9920.000	PK	46.7	38.4	8.2	39.4	1.7	55.6	73.9	18.3	100	0	
Vert.	12400.000	PK	48.5	39.5	9.6	39.6	1.7	59.7	73.9	14.2	100	0	
Vert.	1652.532	AV	43.9	25.5	13.1	40.8	1.7	43.4	53.9	10.5	100	192	
Vert.	2483.500	AV	33.8	27.9	13.8	41.0	1.7	36.2	53.9	17.7	142	181	

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

Distance factor : 1 GHz - 13 GHz : 20log(3.63 m / 3.0 m) = 1.7 dB

13 GHz - 40 GHz : 20log(1.0 m / 3.0 m) = -9.5 dB

### Dwell time factor relaxation

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Dwell Factor [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	4960.000	AV	59.5	32.0	5.8	39.4	-24.4	1.7	35.2	53.9	18.7	
Hori.	7440.000	AV	33.1	37.0	7.2	40.4	-24.4	1.7	14.2	53.9	39.7	
Hori.	9920.000	AV	32.1	38.4	8.2	39.4	-24.4	1.7	16.6	53.9	37.3	
Hori.	12400.000	AV	31.5	39.5	9.6	39.6	-24.4	1.7	18.3	53.9	35.6	
Vert.	4960.000	AV	55.8	32.0	5.8	39.4	-24.4	1.7	31.5	53.9	22.4	
Vert.	7440.000	AV	32.4	37.0	7.2	40.4	-24.4	1.7	13.5	53.9	40.4	
Vert.	9920.000	AV	31.4	38.4	8.2	39.4	-24.4	1.7	15.9	53.9	38.0	
Vert.	12400.000	AV	31.3	39.5	9.6	39.6	-24.4	1.7	18.1	53.9	35.8	

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

Distance factor : 1 GHz - 13 GHz : 20log(3.63 m / 3.0 m) = 1.7 dB

13 GHz - 40 GHz : 20log(1.0 m / 3.0 m) = -9.5 dB

Dwell (time) factor refer to "Dwell time factor Calculation chart" sheet.

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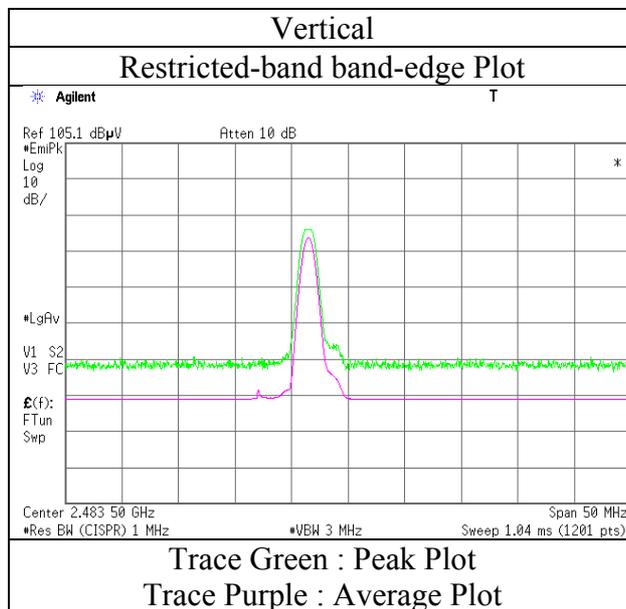
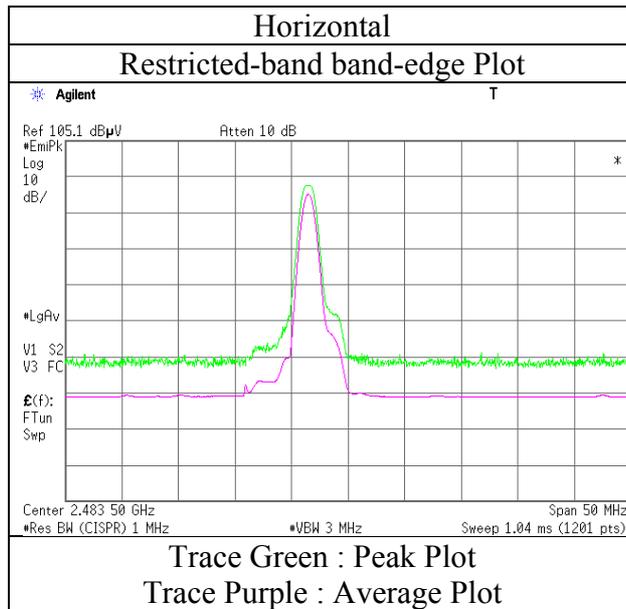
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**Radiated Spurious Emission**  
**(Reference Plot for band-edge)**

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11038900S-E
Date	November 20, 2015
Temperature / Humidity	25 deg. C / 40 % RH
Engineer	Akira Sato (1-26.5GHz)
Mode	Tx, Hopping Off, DH5 2480 MHz



\* Final result of restricted band edge was shown in tabular data.

## Radiated Spurious Emission

Test place : Shonan EMC Lab. No.3 Semi Anechoic Chamber  
Report No. : 11038900S-E  
Date : November 19, 2015      November 20, 2015  
Temperature / Humidity : 25 deg. C / 40 % RH      25 deg. C / 42 % RH  
Engineer : Akira Sato      Akira Sato  
            (1-26.5GHz)      (30-1000MHz)  
Mode : Tx, Hopping Off, 3DH5 2402 MHz

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	316.586	QP	39.2	14.3	8.8	31.9	0.0	30.4	46.0	15.6	100	130	
Hori.	324.007	QP	41.6	14.4	8.8	31.9	0.0	32.9	46.0	13.1	100	126	
Hori.	378.004	QP	43.8	15.5	9.0	31.9	0.0	36.4	46.0	9.6	100	190	
Hori.	432.002	QP	38.7	16.4	9.3	31.9	0.0	32.5	46.0	13.5	100	189	
Hori.	852.184	QP	25.3	21.7	10.8	31.2	0.0	26.6	46.0	19.4	118	206	
Hori.	1601.808	PK	49.8	25.3	13.0	40.8	1.7	49.0	73.9	24.9	100	157	
Hori.	2390.000	PK	46.0	27.8	13.7	41.0	1.7	48.2	73.9	25.7	239	331	
Hori.	4804.000	PK	57.7	31.4	5.7	39.6	1.7	56.9	73.9	17.0	100	201	
Hori.	7206.000	PK	45.8	36.9	7.1	40.1	1.7	51.4	73.9	22.5	100	0	
Hori.	9608.000	PK	45.7	38.5	8.2	39.6	1.7	54.5	73.9	19.4	100	0	
Hori.	12010.000	PK	46.9	39.7	9.3	39.3	1.7	58.3	73.9	15.6	100	0	
Hori.	1601.842	AV	41.2	25.3	13.0	40.8	1.7	40.4	53.9	13.5	100	157	
Hori.	2390.000	AV	33.8	27.8	13.7	41.0	1.7	36.0	53.9	17.9	239	331	
Vert.	105.603	QP	43.7	10.5	7.4	32.1	0.0	29.5	43.5	14.0	100	246	
Vert.	594.006	QP	35.8	18.9	9.9	31.9	0.0	32.7	46.0	13.3	142	0	
Vert.	789.619	QP	29.0	20.9	10.6	31.5	0.0	29.0	46.0	17.0	114	358	
Vert.	1601.842	PK	48.6	25.3	13.0	40.8	1.7	47.8	73.9	26.1	100	359	
Vert.	2390.000	PK	45.8	27.8	13.7	41.0	1.7	48.0	73.9	25.9	199	152	
Vert.	4804.000	PK	53.8	31.4	5.7	39.6	1.7	53.0	73.9	20.9	100	156	
Vert.	7206.000	PK	45.8	36.9	7.1	40.1	1.7	51.4	73.9	22.5	100	0	
Vert.	9608.000	PK	46.2	38.5	8.2	39.6	1.7	55.0	73.9	18.9	100	0	
Vert.	12010.000	PK	45.6	39.7	9.3	39.3	1.7	57.0	73.9	16.9	100	4	
Vert.	1601.842	AV	34.1	25.3	13.0	40.8	1.7	33.3	53.9	20.6	100	359	
Vert.	2390.000	AV	32.2	27.8	13.7	41.0	1.7	34.4	53.9	19.5	199	152	

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

Distance factor : 1 GHz - 13 GHz : 20log(3.63 m / 3.0 m) = 1.7 dB

13 GHz - 40 GHz : 20log(1.0 m / 3.0 m) = -9.5 dB

### Dwell time factor relaxation

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Dwell Factor [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	4804.000	AV	48.0	31.4	5.7	39.6	-24.3	1.7	22.9	53.9	31.0	
Hori.	7206.000	AV	34.1	36.9	7.1	40.1	-24.3	1.7	15.4	53.9	38.5	
Hori.	9608.000	AV	34.4	38.5	8.2	39.6	-24.3	1.7	18.9	53.9	35.0	
Hori.	12010.000	AV	34.6	39.7	9.3	39.3	-24.3	1.7	21.7	53.9	32.2	
Vert.	4804.000	AV	43.7	31.4	5.7	39.6	-24.3	1.7	18.6	53.9	35.3	
Vert.	7206.000	AV	34.1	36.9	7.1	40.1	-24.3	1.7	15.4	53.9	38.5	
Vert.	9608.000	AV	34.5	38.5	8.2	39.6	-24.3	1.7	19.0	53.9	34.9	
Vert.	12010.000	AV	34.5	39.7	9.3	39.3	-24.3	1.7	21.6	53.9	32.3	

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

Distance factor : 1 GHz - 13 GHz : 20log(3.63 m / 3.0 m) = 1.7 dB

13 GHz - 40 GHz : 20log(1.0 m / 3.0 m) = -9.5 dB

Dwell (time) factor refer to "Dwell time factor Calculation chart" sheet.

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	2402.000	PK	91.6	27.8	13.7	41.0	1.7	93.8	-	-	Carrier
Hori.	2400.000	PK	51.1	27.8	13.7	41.0	1.7	53.3	73.8	20.5	
Vert.	2402.000	PK	85.1	27.8	13.7	41.0	1.7	87.3	-	-	Carrier
Vert.	2400.000	PK	45.5	27.8	13.7	41.0	1.7	47.7	67.3	19.6	

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

Distance factor : 1 GHz - 13 GHz : 20log(3.63 m / 3.0 m) = 1.7 dB

13 GHz - 40 GHz : 20log(1.0 m / 3.0 m) = -9.5 dB

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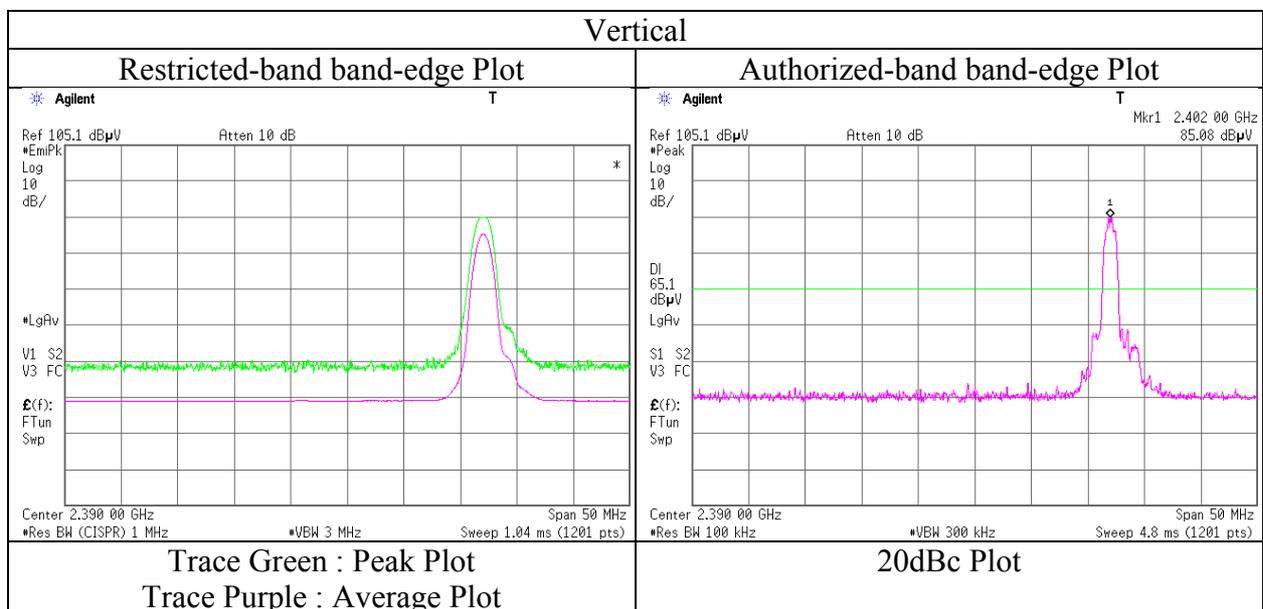
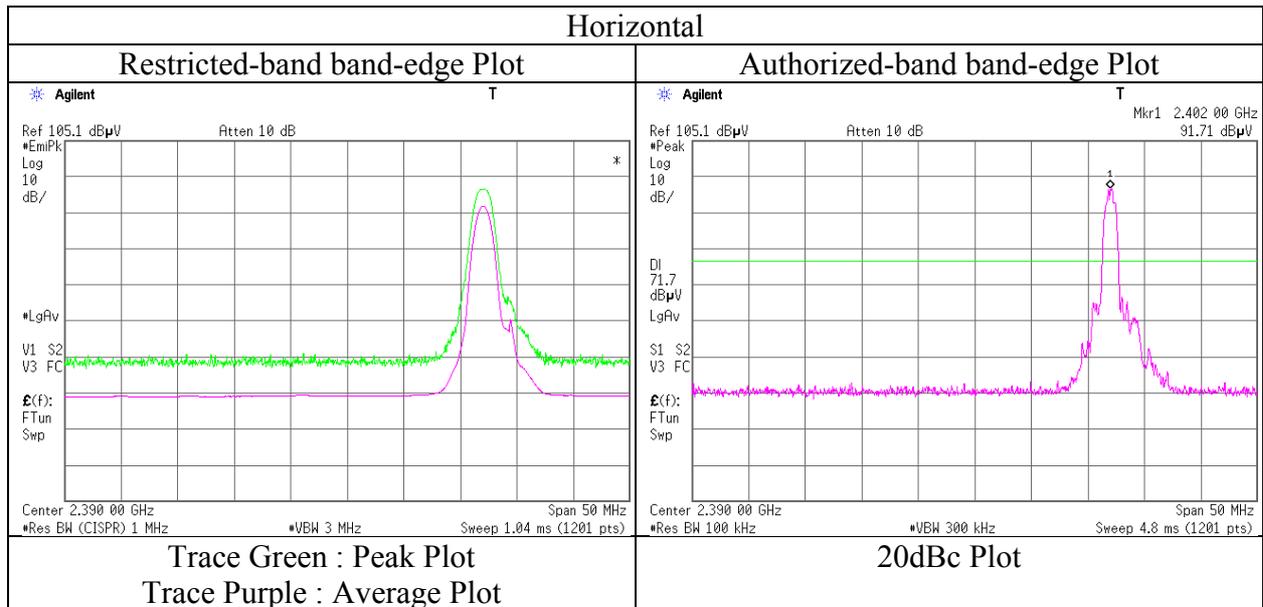
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## Radiated Spurious Emission (Reference Plot for band-edge)

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11038900S-E
Date	November 19, 2015
Temperature / Humidity	25 deg. C / 40 % RH
Engineer	Akira Sato (1-26.5GHz)
Mode	Tx, Hopping Off, 3DH5 2402 MHz



\* Final result of restricted band edge was shown in tabular data.

## Radiated Spurious Emission

Test place : Shonan EMC Lab. No.3 Semi Anechoic Chamber  
Report No. : 11038900S-E  
Date : November 19, 2015      November 20, 2015  
Temperature / Humidity : 25 deg. C / 40 % RH      25 deg. C / 42 % RH  
Engineer : Akira Sato      Akira Sato  
Mode : (1-26.5GHz)      (30-1000MHz)  
Tx, Hopping Off, 3DH5 2441 MHz

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	277.825	QP	33.8	18.3	8.5	32.0	0.0	28.6	46.0	17.4	129	118	
Hori.	324.003	QP	42.6	14.4	8.8	31.9	0.0	33.9	46.0	12.1	100	128	
Hori.	378.003	QP	43.5	15.5	9.0	31.9	0.0	36.1	46.0	9.9	100	199	
Hori.	432.006	QP	38.5	16.4	9.3	31.9	0.0	32.3	46.0	13.7	100	189	
Hori.	1626.713	PK	49.2	25.4	13.0	40.8	1.7	48.5	73.9	25.4	100	222	
Hori.	4882.000	PK	51.8	31.7	5.8	39.5	1.7	51.5	73.9	22.4	100	168	
Hori.	7323.000	PK	44.9	36.9	7.2	40.2	1.7	50.5	73.9	23.4	100	0	
Hori.	9764.000	PK	44.4	38.5	8.2	39.5	1.7	53.3	73.9	20.6	100	0	
Hori.	12205.000	PK	44.4	39.6	9.4	39.4	1.7	55.7	73.9	18.2	100	0	
Hori.	1626.713	AV	41.1	25.4	13.0	40.8	1.7	40.4	53.9	13.5	100	222	
Vert.	105.600	QP	42.8	10.5	7.4	32.1	0.0	28.6	43.5	14.9	100	243	
Vert.	378.004	QP	37.6	15.5	9.0	31.9	0.0	30.2	46.0	15.8	100	37	
Vert.	765.513	QP	26.3	20.7	10.5	31.6	0.0	25.9	46.0	20.1	100	351	
Vert.	793.324	QP	28.3	20.9	10.6	31.5	0.0	28.3	46.0	17.7	112	359	
Vert.	1626.740	PK	48.7	25.4	13.0	40.8	1.7	48.0	73.9	25.9	100	188	
Vert.	4882.000	PK	55.5	31.7	5.8	39.5	1.7	55.2	73.9	18.7	100	202	
Vert.	7323.000	PK	45.1	36.9	7.2	40.2	1.7	50.7	73.9	23.2	100	0	
Vert.	9764.000	PK	44.0	38.5	8.2	39.5	1.7	52.9	73.9	21.0	100	0	
Vert.	12205.000	PK	44.0	39.6	9.4	39.4	1.7	55.3	73.9	18.6	100	0	
Vert.	1626.740	AV	41.7	25.4	13.0	40.8	1.7	41.0	53.9	12.9	100	188	

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

Distance factor : 1 GHz - 13 GHz :  $20\log(3.63\text{ m} / 3.0\text{ m}) = 1.7\text{ dB}$

13 GHz - 40 GHz :  $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.5\text{ dB}$

### Dwell time factor relaxation

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Dwell Factor [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	4882.000	AV	42.5	31.7	5.8	39.5	-24.3	1.7	17.9	53.9	36.0	
Hori.	7323.000	AV	33.9	36.9	7.2	40.2	-24.3	1.7	15.2	53.9	38.7	
Hori.	9764.000	AV	33.7	38.5	8.2	39.5	-24.3	1.7	18.3	53.9	35.6	
Hori.	12205.000	AV	33.1	39.6	9.4	39.4	-24.3	1.7	20.1	53.9	33.8	
Vert.	4882.000	AV	45.7	31.7	5.8	39.5	-24.3	1.7	21.1	53.9	32.8	
Vert.	7323.000	AV	33.7	36.9	7.2	40.2	-24.3	1.7	15.0	53.9	38.9	
Vert.	9764.000	AV	33.3	38.5	8.2	39.5	-24.3	1.7	17.9	53.9	36.0	
Vert.	12205.000	AV	33.1	39.6	9.4	39.4	-24.3	1.7	20.1	53.9	33.8	

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

Distance factor : 1 GHz - 13 GHz :  $20\log(3.63\text{ m} / 3.0\text{ m}) = 1.7\text{ dB}$

13 GHz - 40 GHz :  $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.5\text{ dB}$

Dwell (time) factor refer to "Dwell time factor Calculation chart" sheet.

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## Radiated Spurious Emission

Test place : Shonan EMC Lab. No.3 Semi Anechoic Chamber  
Report No. : 11038900S-E  
Date : November 19, 2015      November 20, 2015  
Temperature / Humidity : 25 deg. C / 40 % RH      25 deg. C / 42 % RH  
Engineer : Akira Sato      Akira Sato  
Mode : (1-26.5GHz)      (30-1000MHz)  
Tx, Hopping Off, 3DH5 2480 MHz

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg]	Remark
Hori.	297.006	QP	34.0	19.1	8.6	32.0	0.0	29.7	46.0	16.3	122	133	
Hori.	324.004	QP	41.9	14.4	8.8	31.9	0.0	33.2	46.0	12.8	104	224	
Hori.	378.004	QP	43.8	15.5	9.0	31.9	0.0	36.4	46.0	<b>9.6</b>	100	195	
Hori.	432.009	QP	38.8	16.4	9.3	31.9	0.0	32.6	46.0	13.4	100	196	
Hori.	1652.697	PK	50.0	25.5	13.1	40.8	1.7	49.5	73.9	24.4	115	289	
Hori.	2483.500	PK	46.7	27.9	13.8	41.0	1.7	49.1	73.9	24.8	237	30	
Hori.	4960.000	PK	57.9	32.0	5.8	39.4	1.7	58.0	73.9	15.9	131	231	
Hori.	7440.000	PK	44.9	37.0	7.2	40.4	1.7	50.4	73.9	23.5	100	0	
Hori.	9920.000	PK	42.8	38.4	8.2	39.4	1.7	51.7	73.9	22.2	100	0	
Hori.	12400.000	PK	45.0	39.5	9.6	39.6	1.7	56.2	73.9	17.7	100	0	
Hori.	1652.697	AV	40.6	25.5	13.1	40.8	1.7	40.1	53.9	13.8	115	289	
Hori.	2483.500	AV	35.1	27.9	13.8	41.0	1.7	37.5	53.9	16.4	237	30	
Vert.	105.608	QP	42.6	10.5	7.4	32.1	0.0	28.4	43.5	15.1	100	244	
Vert.	594.006	QP	36.1	18.9	9.9	31.9	0.0	33.0	46.0	13.0	137	1	
Vert.	837.007	QP	30.2	21.5	10.8	31.3	0.0	31.2	46.0	14.8	100	358	
Vert.	854.185	QP	24.9	21.7	10.8	31.2	0.0	26.2	46.0	19.8	100	291	
Vert.	1652.697	PK	49.5	25.5	13.1	40.8	1.7	49.0	73.9	24.9	100	174	
Vert.	2483.500	PK	45.7	27.9	13.8	41.0	1.7	48.1	73.9	25.8	176	149	
Vert.	4960.000	PK	54.4	32.0	5.8	39.4	1.7	54.5	73.9	19.4	175	244	
Vert.	7440.000	PK	44.2	37.0	7.2	40.4	1.7	49.7	73.9	24.2	100	0	
Vert.	9920.000	PK	43.7	38.4	8.2	39.4	1.7	52.6	73.9	21.3	100	0	
Vert.	12400.000	PK	43.1	39.5	9.6	39.6	1.7	54.3	73.9	19.6	100	0	
Vert.	1652.697	AV	44.7	25.5	13.1	40.8	1.7	44.2	53.9	9.7	100	174	
Vert.	2483.500	AV	33.6	27.9	13.8	41.0	1.7	36.0	53.9	17.9	176	149	

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

Distance factor : 1 GHz - 13 GHz : 20log(3.63 m / 3.0 m) = 1.7 dB

13 GHz - 40 GHz : 20log(1.0 m / 3.0 m) = -9.5 dB

### Dwell time factor relaxation

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Dwell Factor [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	4960.000	AV	47.3	32.0	5.8	39.4	-24.3	1.7	23.1	53.9	<b>30.8</b>	
Hori.	7440.000	AV	33.2	37.0	7.2	40.4	-24.3	1.7	14.4	53.9	39.5	
Hori.	9920.000	AV	32.1	38.4	8.2	39.4	-24.3	1.7	16.7	53.9	37.2	
Hori.	12400.000	AV	31.6	39.5	9.6	39.6	-24.3	1.7	18.5	53.9	35.4	
Vert.	4960.000	AV	44.8	32.0	5.8	39.4	-24.3	1.7	20.6	53.9	33.3	
Vert.	7440.000	AV	32.6	37.0	7.2	40.4	-24.3	1.7	13.8	53.9	40.1	
Vert.	9920.000	AV	31.5	38.4	8.2	39.4	-24.3	1.7	16.1	53.9	37.8	
Vert.	12400.000	AV	30.9	39.5	9.6	39.6	-24.3	1.7	17.8	53.9	36.1	

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

Distance factor : 1 GHz - 13 GHz : 20log(3.63 m / 3.0 m) = 1.7 dB

13 GHz - 40 GHz : 20log(1.0 m / 3.0 m) = -9.5 dB

Dwell (time) factor refer to "Dwell time factor Calculation chart" sheet.

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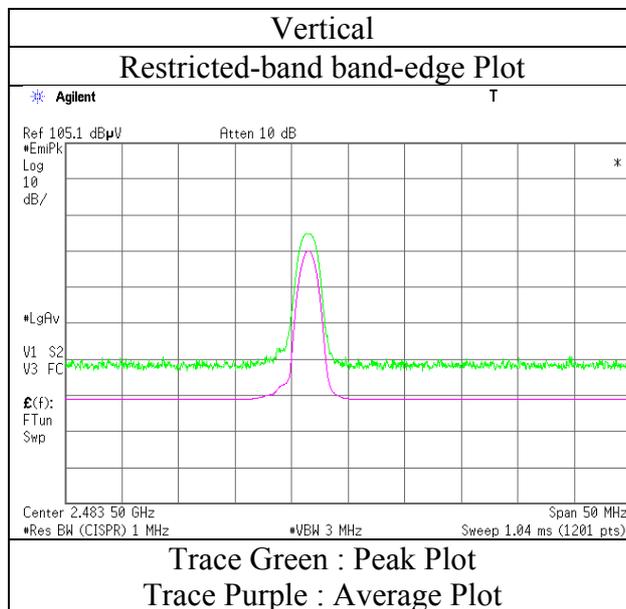
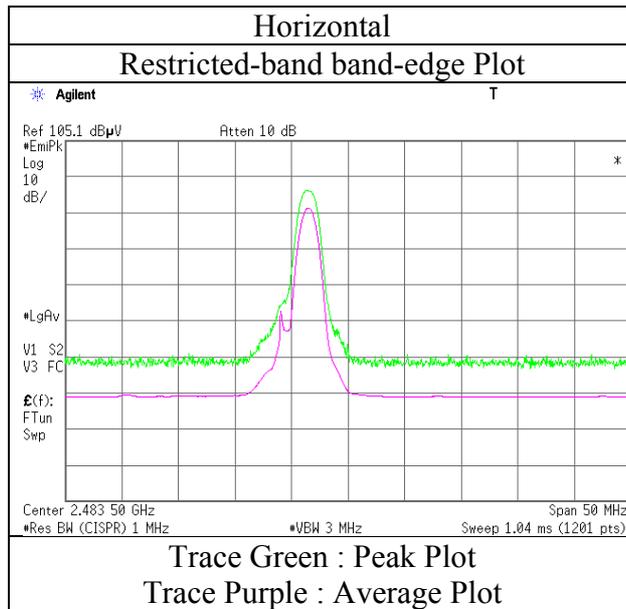
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**Radiated Spurious Emission**  
**(Reference Plot for band-edge)**

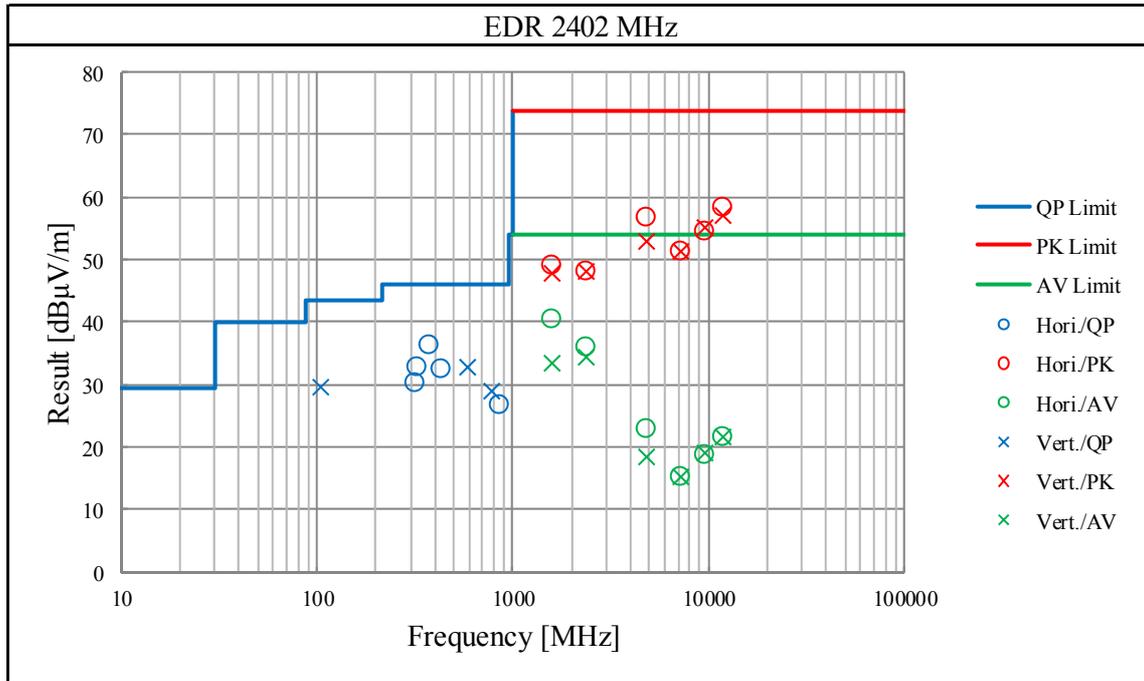
Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber
Report No.	11038900S-E
Date	November 19, 2015
Temperature / Humidity	25 deg. C / 40 % RH
Engineer	Akira Sato (1-26.5GHz)
Mode	Tx, Hopping Off, 3DH5 2480 MHz



\* Final result of restricted band edge was shown in tabular data.

**Radiated Spurious Emission**  
**(Plot data, Worst case)**

Test place	Shonan EMC Lab. No.3 Semi Anechoic Chamber	
Report No.	11038900S-E	
Date	November 19, 2015	November 20, 2015
Temperature / Humidity	25 deg. C / 40 % RH	25 deg. C / 42 % RH
Engineer	Akira Sato	Akira Sato
	(1-26.5GHz)	(30-1000MHz)
Mode	Tx, Hopping Off, 3DH5 2402 MHz	

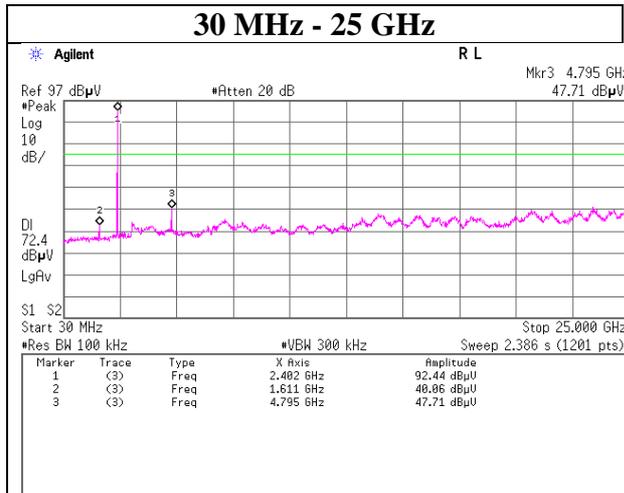
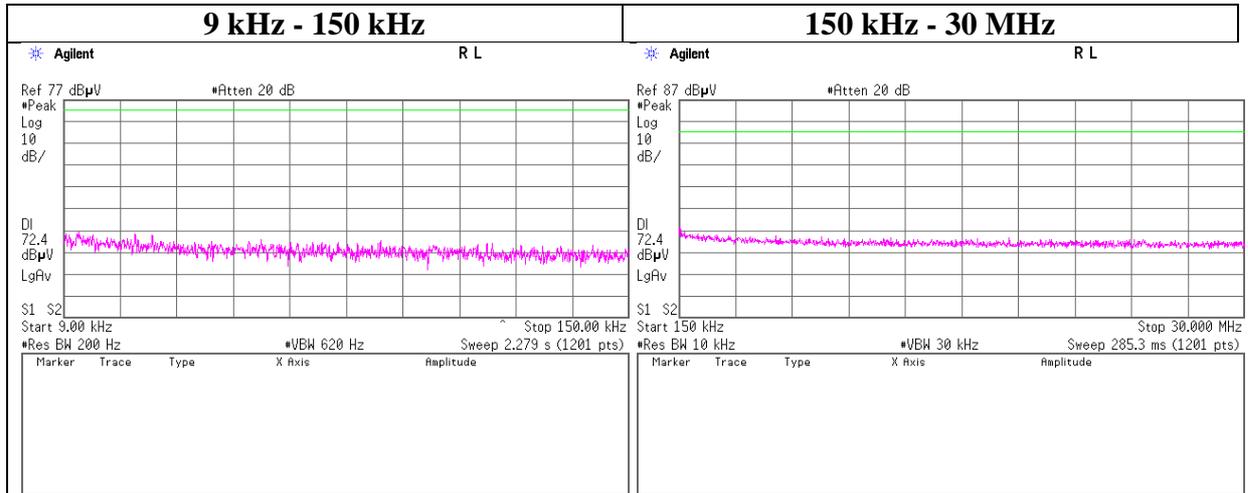


\*These plots data contains sufficient number to show the trend of characteristic features for EUT.

## Conducted Spurious Emission

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11038900S-E
Date	November 10, 2015
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx, Hopping Off, DH5

### 2402 MHz



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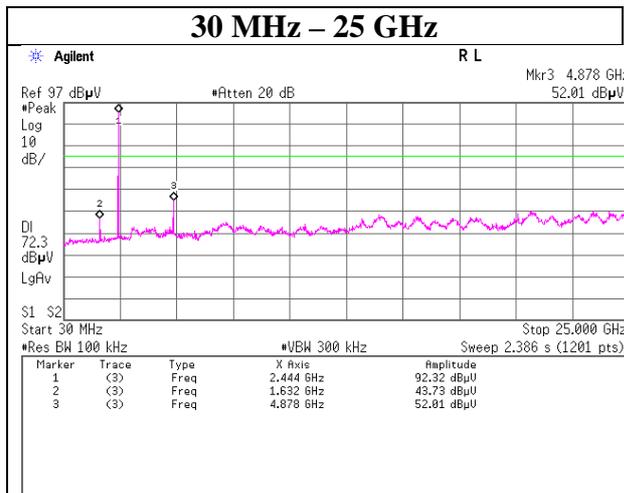
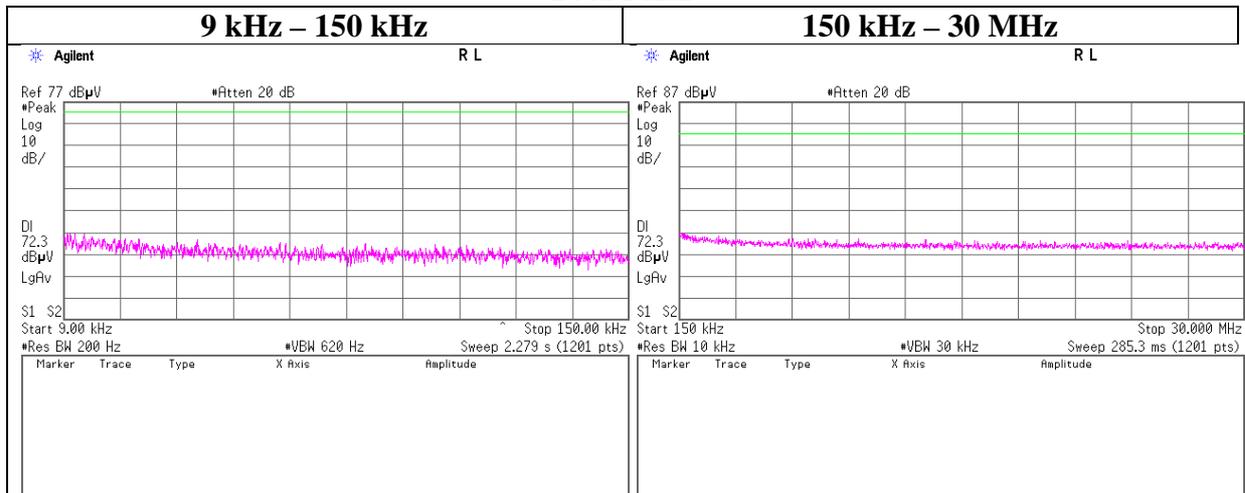
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## Conducted Spurious Emission

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11038900S-E
Date	November 10, 2015
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx, Hopping Off, DH5

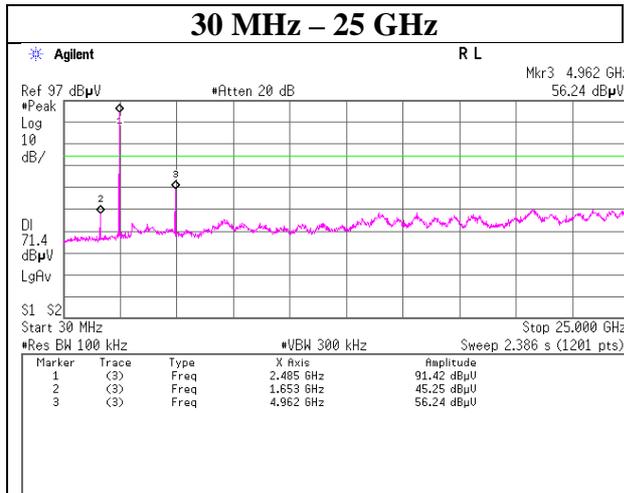
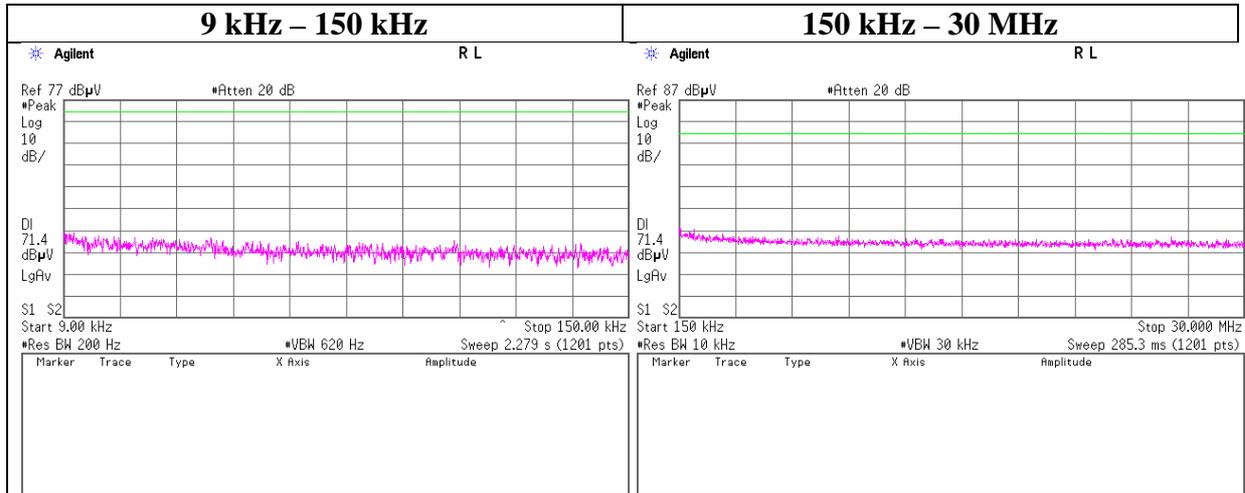
### 2441 MHz



## Conducted Spurious Emission

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11038900S-E
Date	November 10, 2015
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx, Hopping Off, DH5

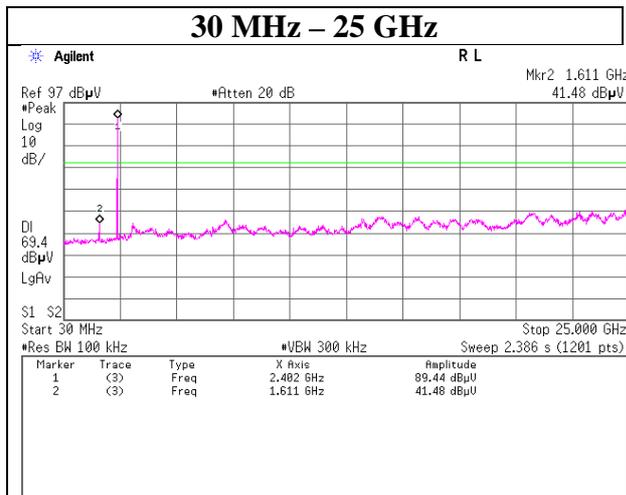
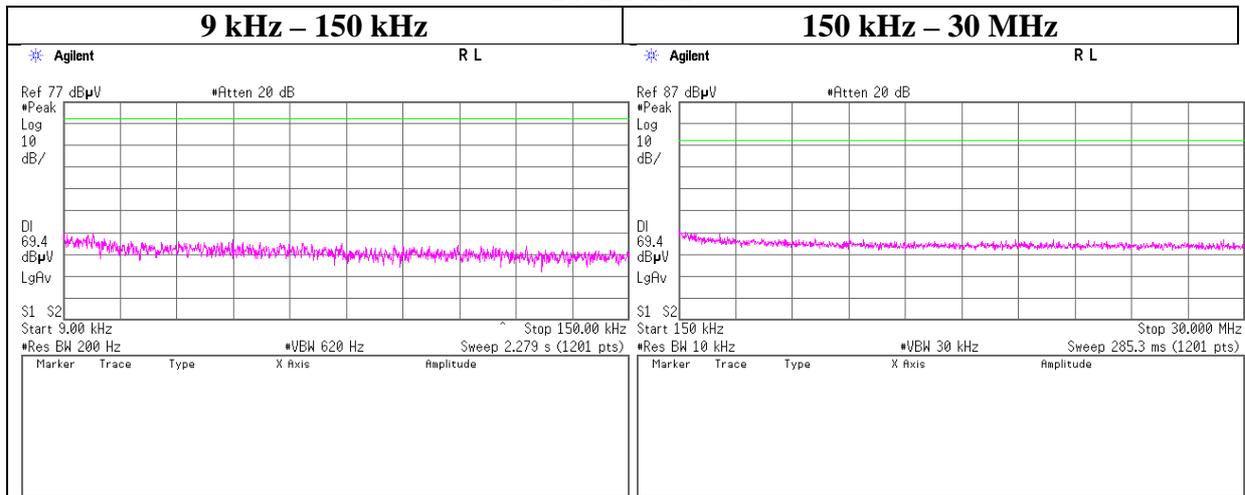
### 2480 MHz



## Conducted Spurious Emission

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11038900S-E
Date	November 10, 2015
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx, Hopping Off, 3DH5

### 2402 MHz



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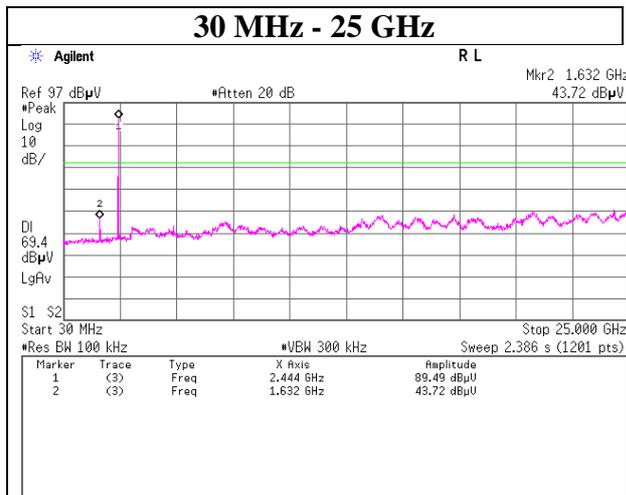
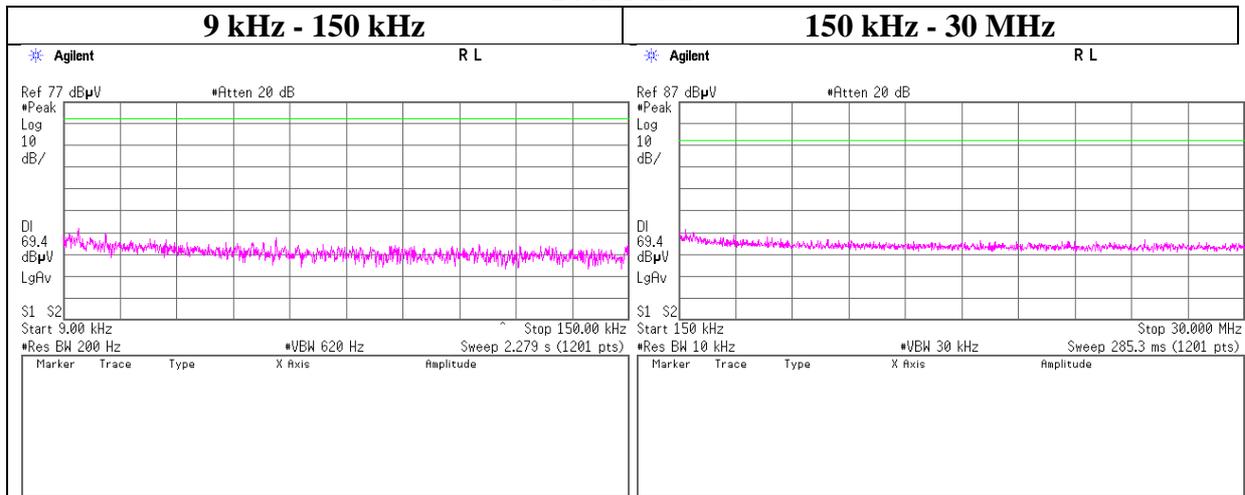
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Facsimile : +81 463 50 6401

## Conducted Spurious Emission

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11038900S-E
Date	November 10, 2015
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx, Hopping Off, 3DH5

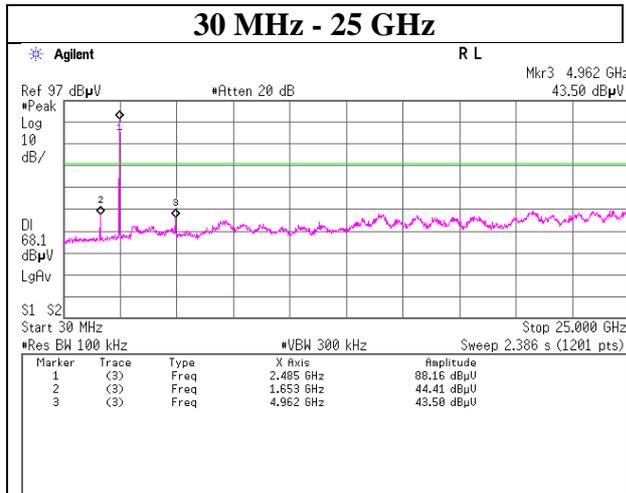
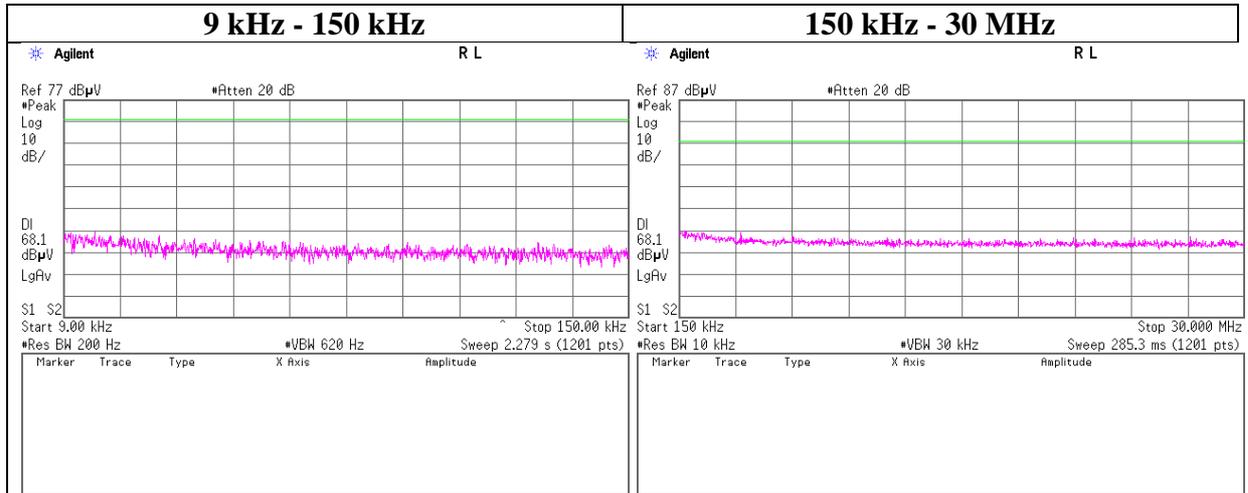
### 2441 MHz



## Conducted Spurious Emission

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11038900S-E
Date	November 10, 2015
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx, Hopping Off, 3DH5

### 2480 MHz



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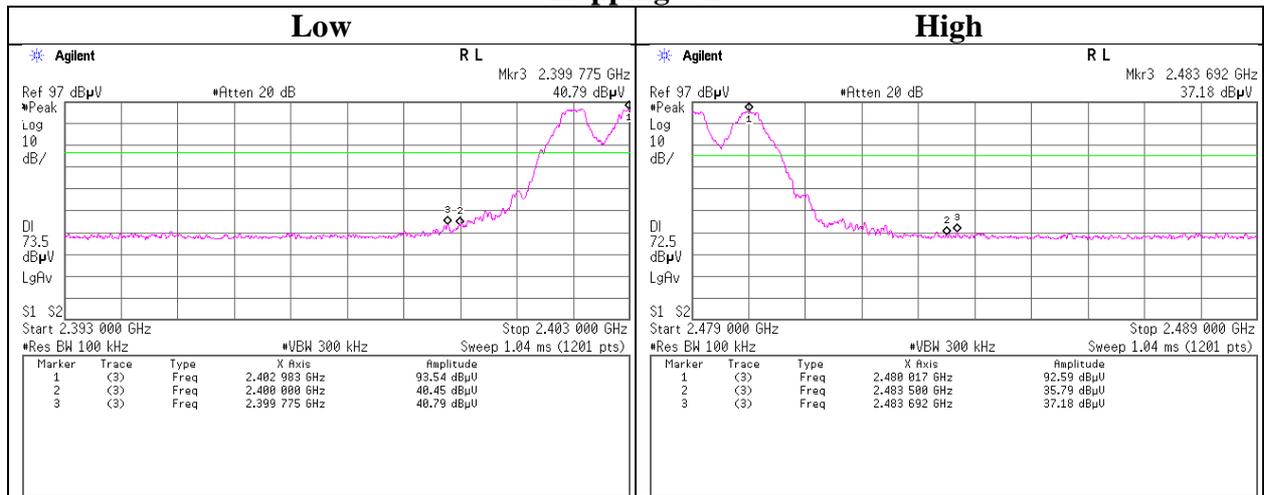
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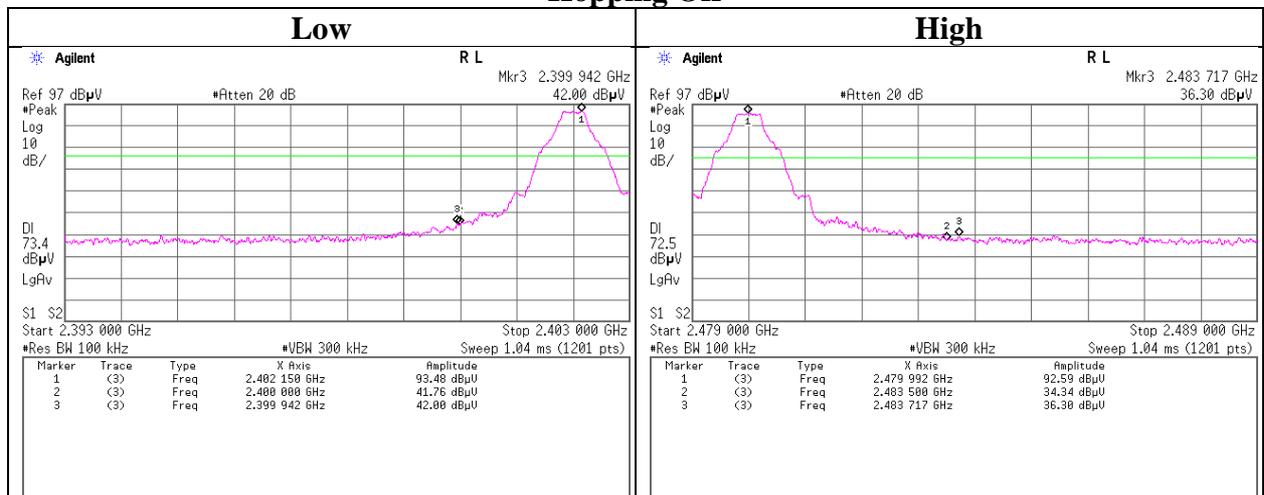
## Conducted Emission Band Edge compliance

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11038900S-E
Date	November 10, 2015
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx DH5

### Hopping On



### Hopping Off



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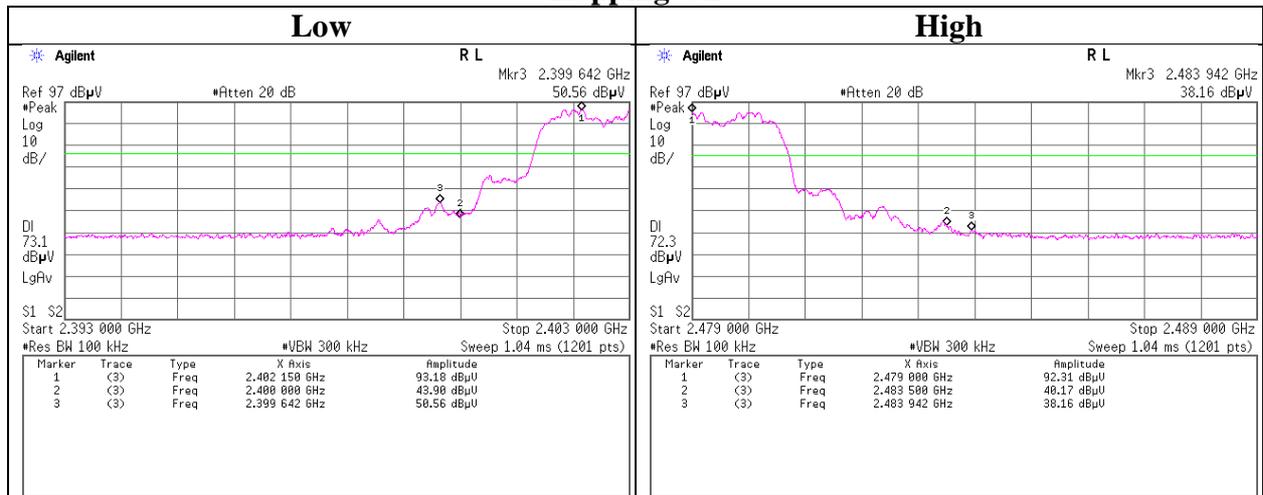
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Facsimile : +81 463 50 6401

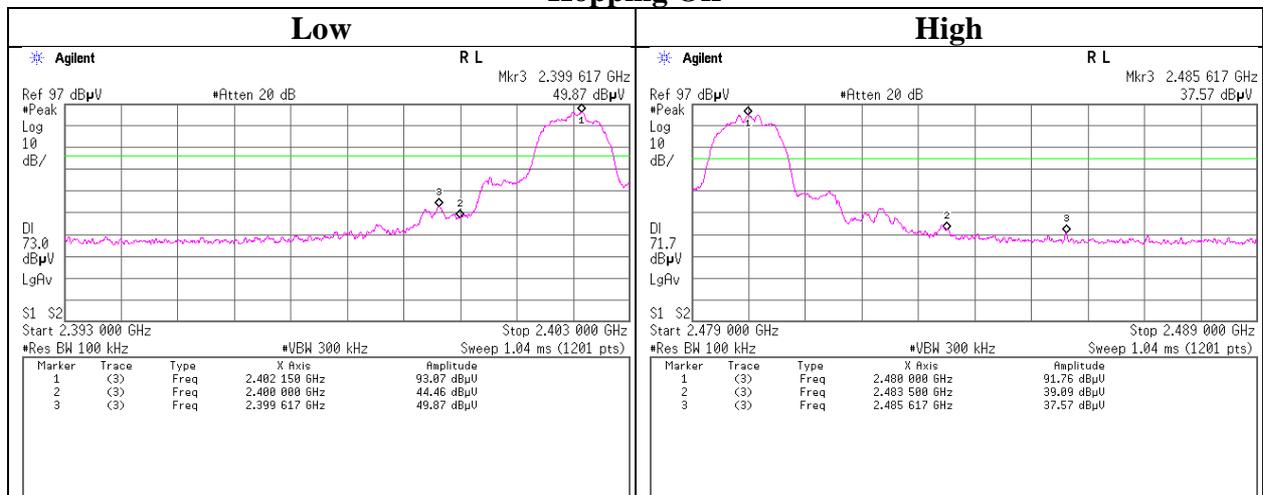
## Conducted Emission Band Edge compliance

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11038900S-E
Date	November 10, 2015
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx 3DH5

### Hopping On



### Hopping Off



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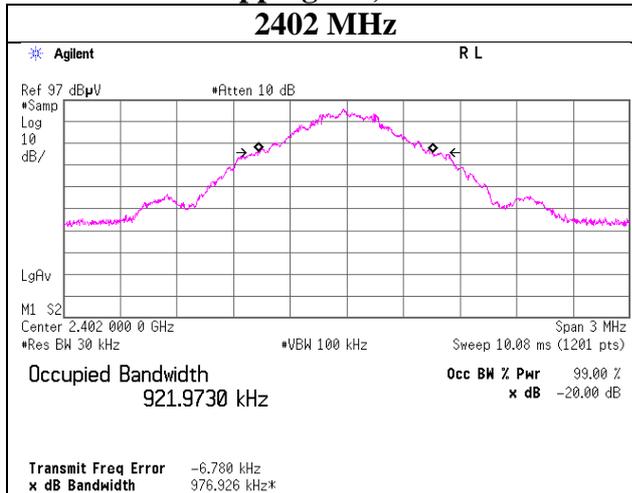
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## 99% Occupied Bandwidth

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11038900S-E
Date	November 10, 2015
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx Hopping Off

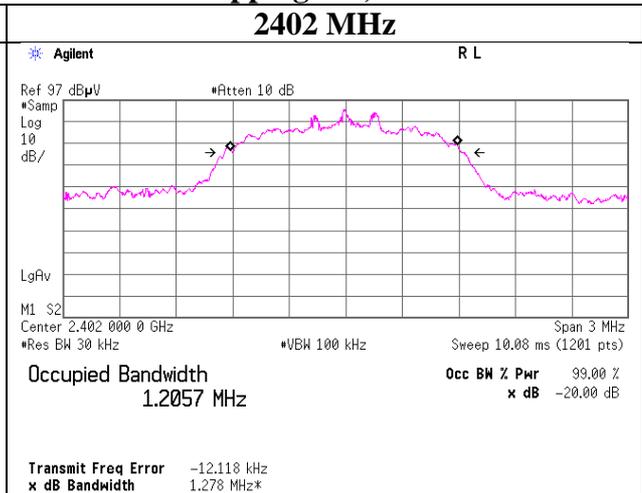
### Hopping Off, DH5

2402 MHz

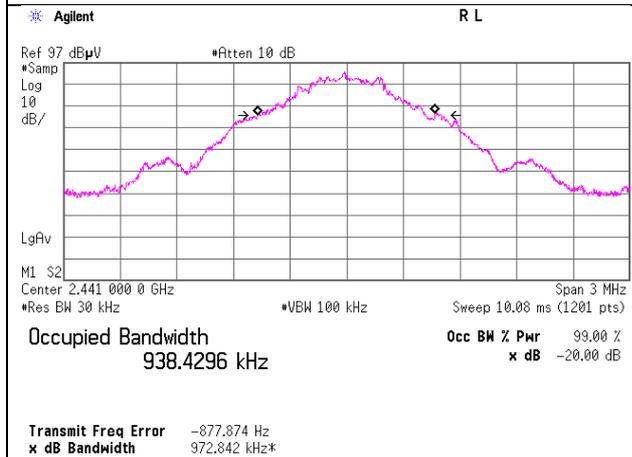


### Hopping Off, 3DH5

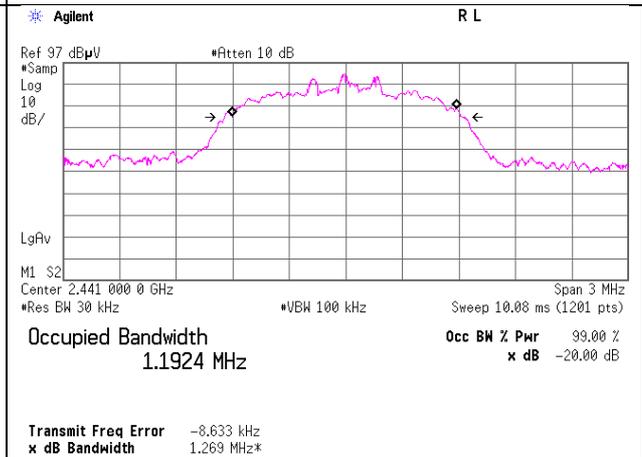
2402 MHz



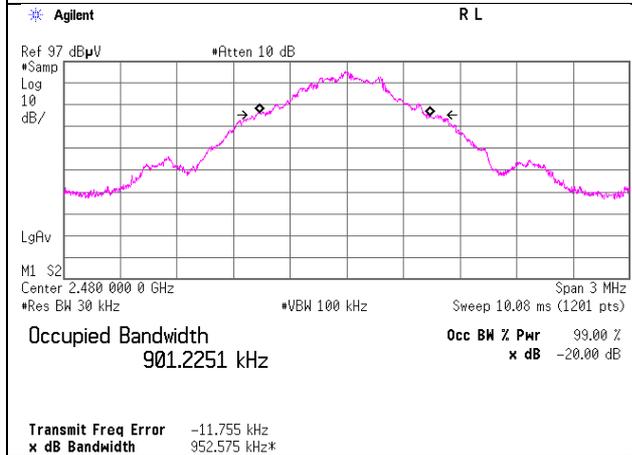
2441 MHz



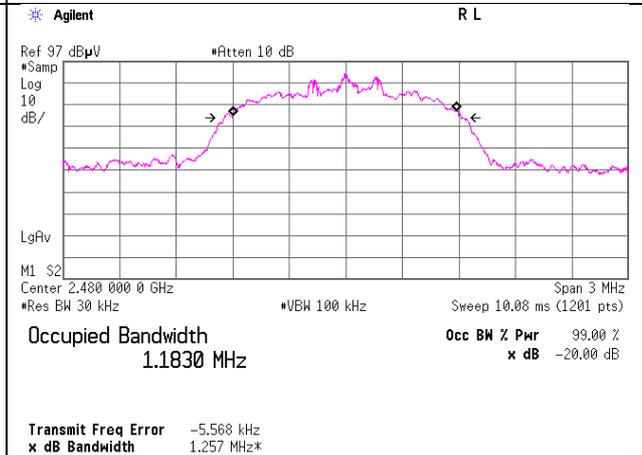
2441 MHz



2480 MHz



2480 MHz



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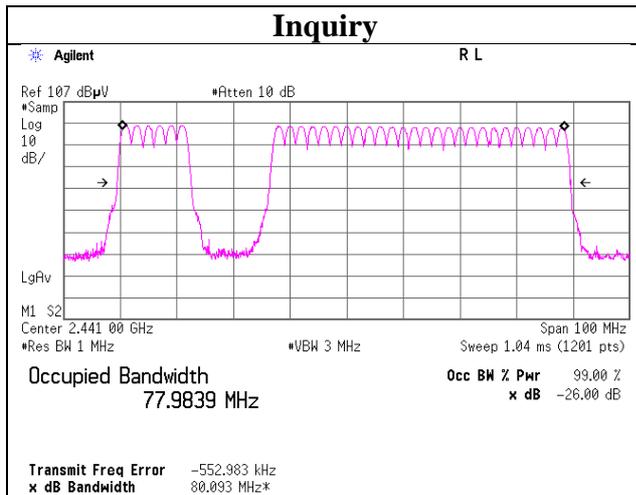
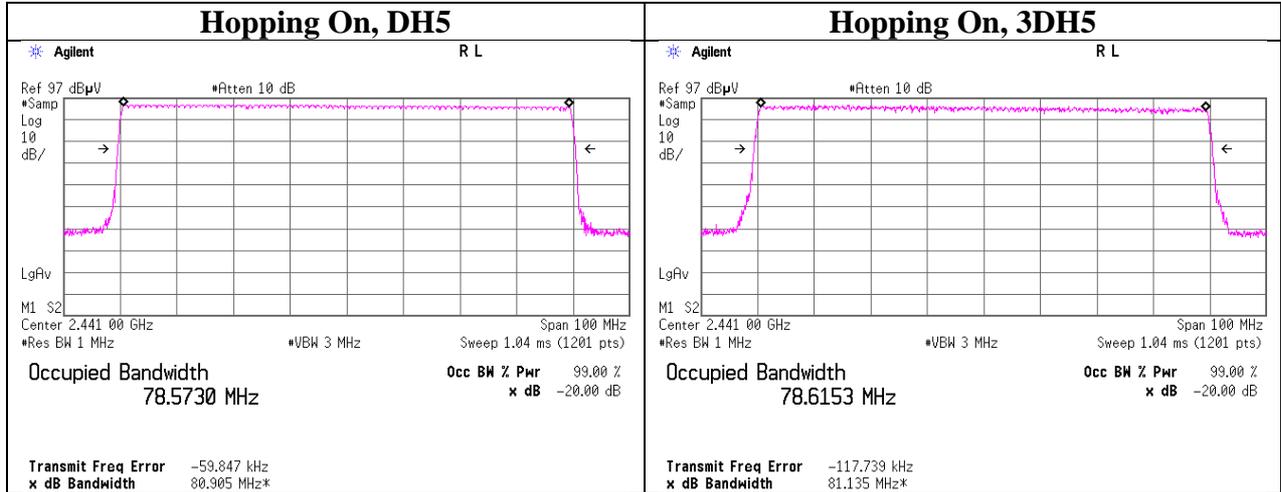
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## 99% Occupied Bandwidth

Test place	Shonan EMC Lab. No.5 Shielded Room
Report No.	11038900S-E
Date	November 10, 2015
Temperature / Humidity	24 deg. C / 54 % RH
Engineer	Hiroyuki Morikawa
Mode	Tx Hopping On



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## APPENDIX 2: Test instruments

### Test equipment

Control No.	Instrument	Manufacturer	Model No	Serial No	Test Item	Calibration Date * Interval(month)
SSA-03	Spectrum Analyzer	Agilent	E4448A	MY48250152	AT	2015/09/16 * 12
SPM-07	Power Meter	Agilent	8990B	MY5100272	AT	2015/04/02 * 12
SPSS-04	Power sensor	Agilent	N1923A	MY5326009	AT	2015/04/02 * 12
SCC-G13	Coaxial Cable	Suhner	SUCOFLEX 102	31599/2	AT	2015/03/11 * 12
SAT10-10	Attenuator	Weinschel Corp.	54A-10	37584	AT	2015/04/09 * 12
KTS-07	Digital Tester	SANWA	PC500	7019232	AT	2015/11/18 * 12
SOS-09	Humidity Indicator	A&D	AD-5681	4061484	AT	2014/12/24 * 12
SAF-06	Pre Amplifier	TOYO Corporation	TPA0118-36	1440491	RE	2015/05/27 * 12
SAF-08	Pre Amplifier	TOYO Corporation	HAP18-26W	00000019	RE	2015/03/23 * 12
SAT10-06	Attenuator	Agilent	8493C-010	74865	RE	2015/11/04 * 12
SFL-02	Highpass Filter	MICRO-TRONICS	HPM50111	051	RE	2014/11/21 * 12
SCC-G05	Coaxial Cable	Junkosha	J12J102207-00	APR-30-15-037	RE	2015/05/11 * 12
SCC-G15	Coaxial Cable	Suhner	SUCOFLEX 102	32703/2	RE	2015/03/11 * 12
SCC-G22	Coaxial Cable	Suhner	SUCOFLEX 104	296199/4	RE	2015/05/19 * 12
SHA-03	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-739	RE	2015/08/11 * 12
SHA-04	Horn Antenna	ETS LINDGREN	3160-09	LM3640	RE	2015/03/17 * 12
SOS-05	Humidity Indicator	A&D	AD-5681	4062518	RE	2015/10/22 * 12
SSA-02	Spectrum Analyzer	Agilent	E4448A	MY48250106	RE	2015/03/26 * 12
SJM-15	Measure	ASKUL	-	-	RE	-
SAEC-03(SVSWR)	Semi-Anechoic Chamber	TDK	SAEC-03(SVSWR)	3	RE	2015/08/28 * 12
COTS-SEMI-1	EMI Software	TSJ	TEPTO-DV(RE,CE,RFI, MF)	-	RE	-
STS-03	Digital Hitester	Hioki	3805-50	080997823	RE	2015/11/18 * 12
SAEC-03(NSA)	Semi-Anechoic Chamber	TDK	SAEC-03(NSA)	3	RE	2015/07/16 * 12
SBA-03	Biconical Antenna	Schwarzbeck	BBA9106	91032666	RE	2015/10/11 * 12
SLA-03	Logperiodic Antenna	Schwarzbeck	UHALP9108A	UHALP 9108-A 0901	RE	2015/10/11 * 12
SAT6-08	Attenuator	HIROSE ELECTRIC CO.,LTD.	AT-406(40)	-	RE	2015/08/31 * 12
SCC-C1/C2/C3/C4/C5/C10/SRS E-03	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/T OYO	8D2W/12DSFA/141PE /141PE/141PE/141PE /NS4906	-/0901-271(RF Selector)	RE	2015/04/17 * 12
SAF-03	Pre Amplifier	SONOMA	310N	290213	RE	2015/02/18 * 12
STR-06	Test Receiver	Rohde & Schwarz	ESCI	101259	RE	2015/03/24 * 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 test  
RE: Radiated Emission test  
AT: Antenna Terminal Conducted test

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