RADIO TEST REPORT

Test Report No. : 12563995S-A-R1

Applicant	:	**Sony Corporation**
Type of Equipment	:	**Wireless Stereo Headset**
Model No.	:	**WH-XB700**
FCC ID	:	**AK8WHXB700**
Test regulation	:	**FCC Part 15 Subpart C: 2018 (* Bluetooth part)**
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 limits of the above regulation.
4. The test results in this test report are traceable to the national or international standards.
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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)
7. The all test items in this test report are conducted by UL Japan, Inc. Shonan EMC Lab.
8. The opinions and the interpretations to the result of the description in this report are outside scopes where UL Japan has been accredited.
9. This report is a revised version of 12563995S-A. 12563995S-A is replaced with this report.

Date of test: October 13 to 18, 2018

Representative test engineer:
Makoto Hosaka
Engineer
Consumer Technology Division

Approved by:
Toyokazu Imamura
Leader
Consumer Technology Division

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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REVISION HISTORY

Original Test Report No.: 12563995S-A

Revision	Test report No.	Date	Page revised	Contents
- (Original)	12563995S-A	November 21, 2018	-	-
1	12563995S-A-R1	November 27, 2018	4	Modification of address: 1-7-1 Konan Minato-ku, Tokyo, 108-0075 Japan →1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan

CONTENTS **PAGE**

SECTION 1: Customer information

Company Name	:	Sony Corporation
Address	:	1-7-1 Konan Minato-ku Tokyo, 108-0075 Japan
Telephone Number	:	+604-3835075
Contact Person	:	Teh Cheong Chieh

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

2.1 Identification of E.U.T.

Type of Equipment	:	Wireless Stereo Headset
Model No.	:	WH-XB700
Serial No.	:	Refer to Section 4, Clause 4.2
Rating	:	DC 3.7 V: Built-in lithium-ion rechargeable battery DC 5 V: When charged using USB
Receipt Date of Sample	:	October 11, 2018
Country of Mass-production	:	China
Condition of EUT	:	Engineering 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: WH-XB700 (referred to as the EUT in this report) is a Wireless Stereo Headset.

Radio Specification

Bluetooth

Radio Type	:	Transceiver
Frequency of Operation	:	2402 MHz - 2480 MHz
Modulation	:	GFSK, π/4-DQPSK, 8DPSK
Power Supply (radio part input)	:	DC 1.35 V
Antenna type	:	Chip Antenna
Antenna Gain	:	1.6 dBi
Clock frequency	:	crystal (X211: 26 MHz)

SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification	:	FCC Part 15 Subpart C FCC Part 15 final revised on March 12, 2018 and effective April 11, 2018
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

* Also the EUT complies with FCC Part 15 Subpart B.

3.2 Procedures and results

Item	Procedure	cification	Worst Margin	Results	Remarks
Conducted Emission	**FCC:** ANSI C63.10-2013 6. Standard test methods	**FCC:** Section 15.207	N/A	N/A	*1)
	IC: RSS-Gen 8.8	**IC:** RSS-Gen 8.8			
Carrier Frequency Separation	**FCC:** KDB 558074 D01 15.247 Meas Guidance v05	**FCC:** Section15.247(a)(1)	See data.	Complied	Conducted
	IC: -	**IC:** RSS-247 5.1 (b)			
20dB Bandwidth	**FCC:** KDB 558074 D01 15.247 Meas Guidance v05	**FCC:** Section15.247(a)(1)		Complied	Conducted
	IC: -	**IC:** RSS-247 5.1 (a)			
Number of Hopping Frequency	**FCC:** KDB 558074 D01 15.247 Meas Guidance v05	**FCC:** Section15.247(a)(1)(iii)		Complied	Conducted
	IC: -	**IC:** RSS-247 5.1 (d)			
Dwell time	**FCC:** KDB 558074 D01 15.247 Meas Guidance v05	**FCC:** Section15.247(a)(1)(iii)		Complied	Conducted
	IC: -	**IC:** RSS-247 5.1 (d)			
Maximum Peak Output Power	**FCC:** KDB 558074 D01 15.247 Meas Guidance v05	**FCC:** Section15.247(a)(b)(1)		Complied	Conducted
	IC: RSS-Gen 6.12	**IC:** RSS-247 5.4 (b)			
Spurious Emission & Band Edge Compliance	**FCC:** KDB 558074 D01 15.247 Meas Guidance v05	**FCC:** Section15.247(d)	8.9 dB 9608.000 MHz, AV, Vert. Tx, DH5 2402 MHz	Complied	Conducted/ Radiated (above 30 MHz) *2)
	IC: RSS-Gen 6.13	**IC:** RSS-247 5.5 RSS-Gen 8.9 RSS-Gen 8.10			

Note: UL Japan, Inc.'s EMI Work Procedures No. 13-EM-W0420 and 13-EM-W0422.
*1) The EUT operates with a battery. AC Line can be connected to the EUT via other device's USB port; however, the EUT stops transmission during recharging. Therefore, the test is not applicable to the EUT.
*2) Radiated test was selected over 30 MHz based on section 15.247(d).

Symbols:

Complied	The data of this test item has enough margin, more than the measurement uncertainty.
Complied#	The data of this test item meets the limits unless the measurement uncertainty is taken into consideration.

* In case any questions arise about test procedure, ANSI C63.10: 2013 is also referred.

FCC Part 15.31 (e)
The EUT is a battery-operated device and test was performed with the full-charged battery. Therefore, this EUT complies with the requirement.

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

3.3 Addition to standard

Item	Test Procedure	Specification	Worst margin	Results	Remarks
99% Occupied Bandwidth	RSS-Gen 6.7	**IC:** -	N/A	-	Conducted

Symbols:

Complied	The data of this test item has enough margin, more than the measurement uncertainty.
Complied#	The data of this test item meets the limits unless the measurement uncertainty is taken into consideration.

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

3.4 Uncertainty

EMI

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

Shonan EMC Lab.

Item	Frequency range	Uncertainty (+/-)				
		No. 1 SAC / SR	No. 2 SAC / SR	No. 3 SAC / SR	No. 4 SAC / SR	No. 5,6,8 SR
Conducted emission (AC Mains) LISN	150 kHz-30 MHz	2.5 dB	2.5 dB	2.5 dB	2.6 dB	2.6 dB
Radiated emission (Measurement distance: 3 m)	9 kHz-30 MHz	3.2 dB	3.2 dB	3.3 dB	-	-
	30 MHz-200 MHz	4.9 dB	4.8 dB	4.9 dB	-	-
	200 MHz-1 GHz	6.1 dB	6.1 dB	6.1 dB	-	-
	1 GHz-6 GHz	4.7 dB	4.7 dB	4.7 dB	-	-
	6 GHz-18 GHz	5.3 dB	5.3 dB	5.3 dB	-	-
	18 GHz-40 GHz	5.6 dB	5.6 dB	5.6 dB	-	-
Radiated emission (Measurement distance: 1 m)	1 GHz-18 GHz	5.6 dB	5.6 dB	5.6 dB	-	-
	18 GHz-40 GHz	5.9 dB	5.9 dB	5.9 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	0.48 dB
Power Measurement above 1 GHz (Peak Detector)_SPM-06	0.66 dB
Power Measurement above 1 GHz (Average Detector)_SPM-07	0.47 dB
Power Measurement above 1 GHz (Peak Detector)_SPM-07	0.64 dB
Power Measurement above 1 GHz (Average Detector)_SPM-13	0.90 dB
Power Measurement above 1 GHz (Peak Detector)_SPM-13	1.04 dB
Spurious emission (Conducted) below 1GHz	1.8 dB
Spurious emission (Conducted) 1 GHz-3 GHz	1.7 dB
Spurious emission (Conducted) 3 GHz-18 GHz	2.5 dB
Spurious emission (Conducted) 18 GHz-26.5 GHz	2.5 dB
Spurious emission (Conducted) 26.5 GHz-40 GHz	2.7 dB
Bandwidth Measurement	1.01 %
Duty cycle and Time Measurement	0.012 %

3.5 Test Location

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1-22-3, Megumigaoka, Hiratsuka-shi, Kanagawa-ken 259-1220 JAPAN
Telephone: +81 463 50 6400, Facsimile: +81 463 50 6401
JAB Accreditation No. RTL02610
FCC Test Firm Registration Number: 839876

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	10 m
No.2 Semi-anechoic chamber	2973D-2	20.6 x 11.3 x 7.65	20.6 x 11.3	10 m
No.3 Semi-anechoic chamber	2973D-3	12.7 x 7.7 x 5.35	12.7 x 7.7	5 m
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

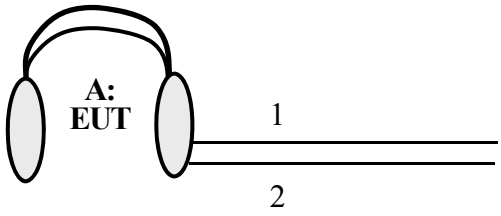
Details of Operating Mode(s)

Test Item	Mode	Tested frequency
Spurious Emission (Radiated)	Tx (Hopping Off) DH5, 3DH5	2402 MHz 2441 MHz 2480 MHz
Carrier Frequency Separation	Tx (Hopping On) DH5, 3DH5	2402 MHz 2441 MHz 2480 MHz
20dB Bandwidth	Tx (Hopping Off) DH5, 3DH5	2402 MHz 2441 MHz 2480 MHz
Number of Hopping Frequency	Tx (Hopping On) DH5, 3DH5	-
Dwell time	Tx (Hopping On), -DH1, DH3, DH5 -3DH1, 3DH3, 3DH5	-
Maximum Peak Output Power	Tx (Hopping Off) DH5, 2DH5, 3DH5	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

*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.
* It is considered that the non-tested packet type (e.g. inquiry) can be omitted as it is complied with above all the test items based on Bluetooth Core specification.

*EUT has the power settings by the software as follows;
Power settings: BDR: Ext.=7, Int.=30
EDR: Ext.=72, Int.=41
Software: CSR BlueSuite BlueTest3 Version 2.6.6.1 311
*This setting of software is the worst case.
Any conditions under the normal use do not exceed the condition of setting.
In addition, end users cannot change the settings of the output power of the product.

4.2 Configuration and peripherals



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

Description of EUT

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	Wireless Stereo Headset	WH-XB700	9000004 *1) 9000064 *2)	Sony Corporation	EUT

*1) Used for Antenna Terminal conducted test
*2) Used for Radiated Emission test

List of cables used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	USB Cable	0.2 + 2.0	Shielded	Shielded	-
2	Stereo Cable	1.2	Shielded	Shielded	-

SECTION 5: Radiated Spurious Emission

Test Procedure

[For below 1 GHz]
EUT was placed on a urethane platform of nominal size, 0.5 m by 0.5 m, raised 0.8 m above the conducting ground plane. The Radiated Electric Field Strength has been measured in a Semi Anechoic Chamber with a ground plane.

[For above 1 GHz]
EUT was placed on a urethane 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 absorbent materials lined on a ground plane.

The height of the measuring antenna varied between 1 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 200 MHz	200 MHz to 1 GHz	Above 1 GHz
Antenna Type	Biconical	Logperiodic	Horn

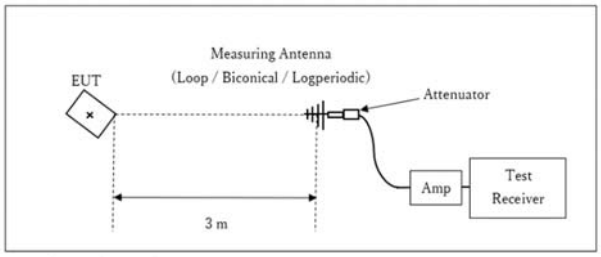
In any 100 kHz bandwidth outside the restricted band in which the spread spectrum intentional radiator is operating, the radio frequency power that is produced by the intentional radiator confirmed 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired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

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

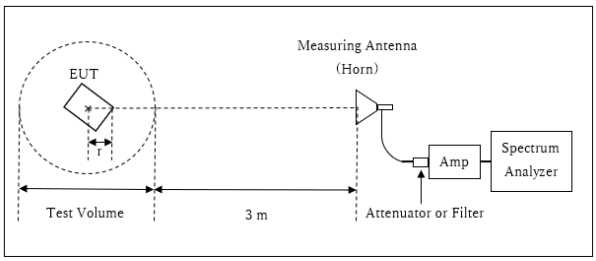
Below 1 GHz



× : Center of turn table

Test Distance: 3 m

1 GHz - 13 GHz

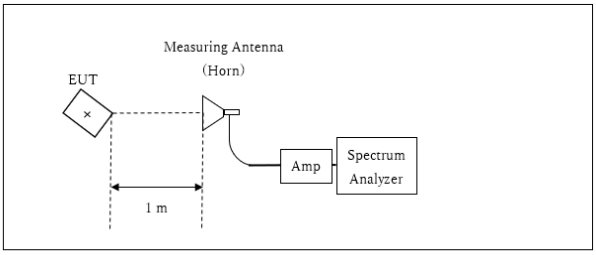


r : Radius of an outer periphery of EUT
× : Center of turn table

Distance Factor: 20 x log (3.91 m*/3.0 m) = 2.31 dB
* Test Distance: (3 + Test Volume /2) - r = 3.91 m

Test Volume: 2 m
(Test Volume has been calibrated based on CISPR 16-1-4.)
r = 0.09 m

13 GHz - 26.5 GHz



× : Center of turn table

Distance Factor: 20 x log (1.0 m* / 3.0 m) = -9.54 dB
*Test Distance: 1 m

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

Antenna polarization	Frequency				
	Below 1 GHz	1 GHz - 2.8 GHz	2.8 GHz - 13 GHz	13 GHz - 18 GHz	18 GHz - 26.5 GHz
Horizontal	Y	Y	Z	X	Y
Vertical	Z	Z	Y	X	Y

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

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

SECTION 6: Antenna Terminal Conducted Tests

Test Procedure

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

Test	Span	RBW	VBW	Sweep time	Detector	Trace	Instrument used
20dB Bandwidth	3 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	Peak	Max Hold	Spectrum Analyzer
Maximum Peak Output Power	-	-	-	Auto	Peak Average *2)	-	Power Meter (Sensor: 50MHz BW)
Carrier Frequency Separation	3 MHz	300 kHz	1 MHz	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 *3)	9 kHz to 150 kHz	200 Hz	620 Hz	Auto	Peak	Max Hold	Spectrum Analyzer
	150 kHz to 30 MHz	10 kHz	30 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) Peak hold was applied as Worst-case measurement.
*2) Reference data
*3) 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 = 10 kHz)

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

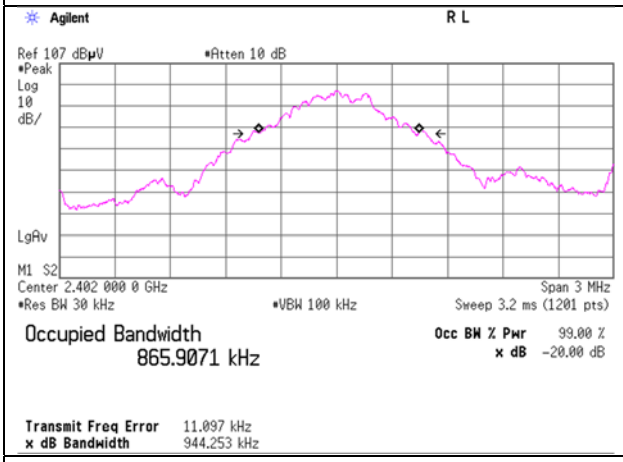
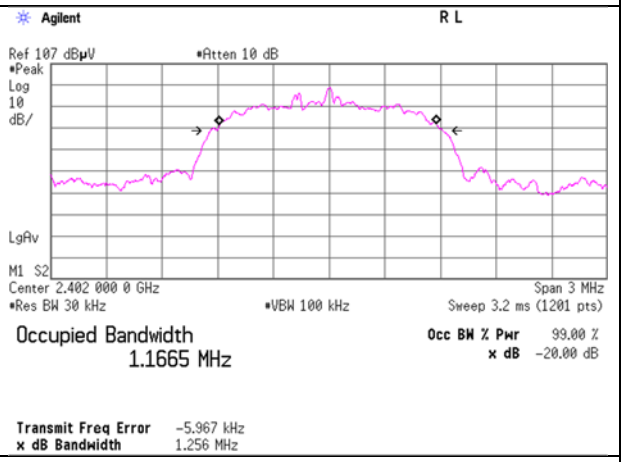
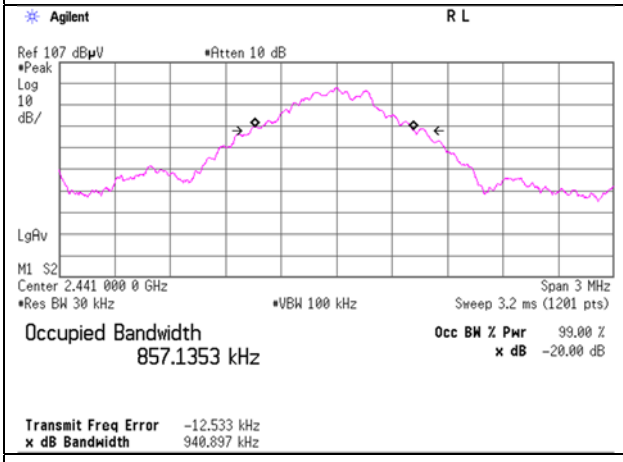
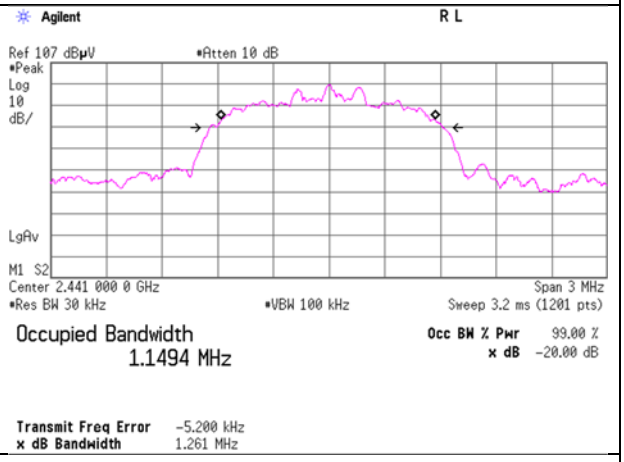
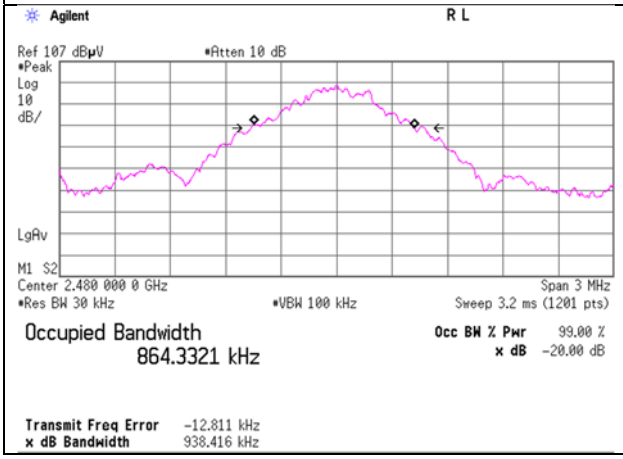
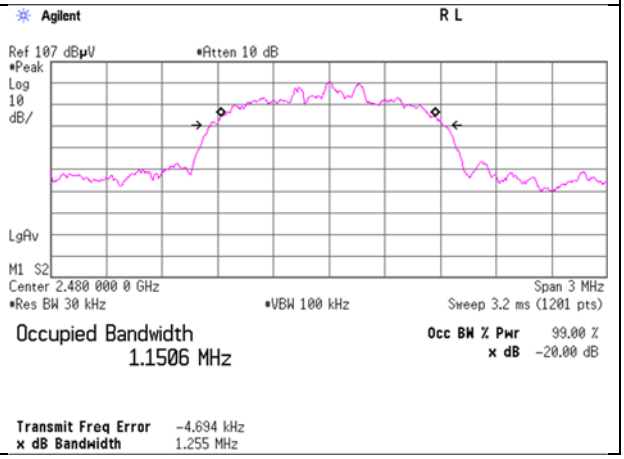
20dB Bandwidth, 99%Occupied Bandwidth and Carrier Frequency Separation

Report No.	12563995S-A-R1
Test place	Shonan EMC Lab. No.2 Shielded Room
Date	October 13, 2018
Temperature / Humidity	24 deg. C / 35 % RH
Engineer	Makoto Hosaka
Mode	Tx, Hopping Off, Tx, Hopping On

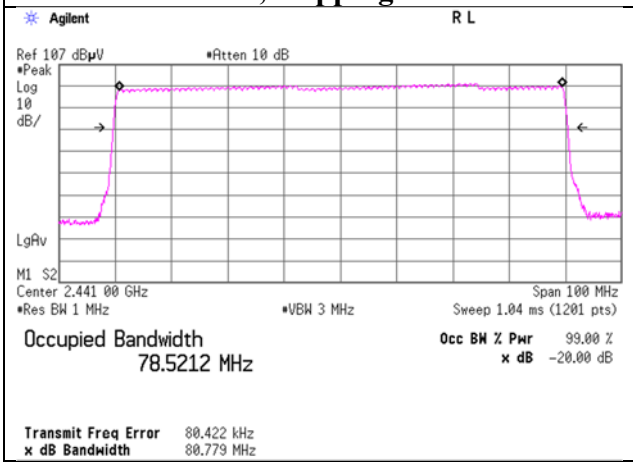
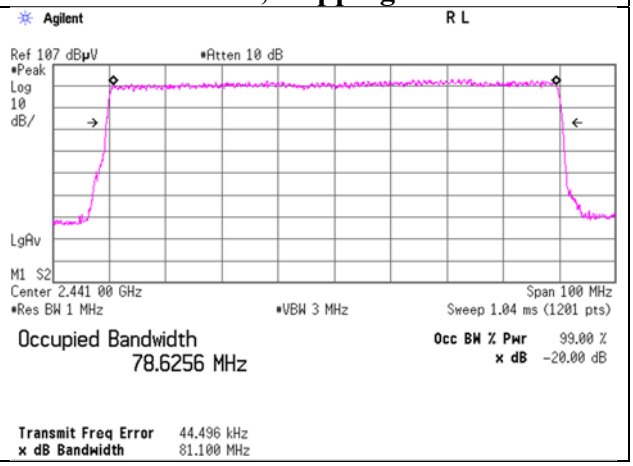
Mode	Freq. [MHz]	20dB Bandwidth [MHz]	99% Occupied Bandwidth [kHz]	Carrier Frequency Separation [MHz]	Limit for Carrier Frequency separation [MHz]
DH5	2402.0	0.944	865.907	1.000	>= 0.630
DH5	2441.0	0.941	857.135	1.000	>= 0.627
DH5	2480.0	0.938	864.332	1.000	>= 0.626
DH5	Hopping On	-	78521.2	-	-
3DH5	2402.0	1.256	1166.5	1.000	>= 0.837
3DH5	2441.0	1.261	1149.4	1.000	>= 0.841
3DH5	2480.0	1.255	1150.6	1.000	>= 0.837
3DH5	Hopping On	-	78625.6	-	-

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

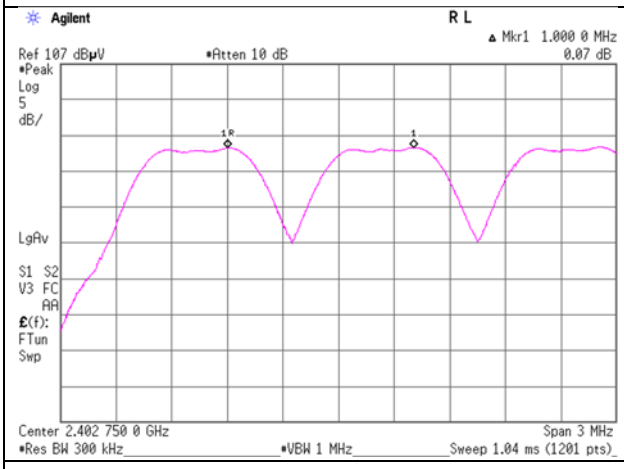
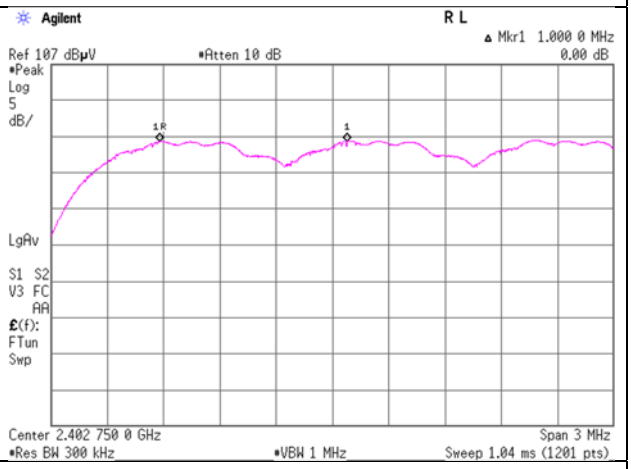
20dB Bandwidth and 99% Occupied Bandwidth

DH5	3DH5
2402 MHz	2402 MHz
	
2441 MHz	2441 MHz
	
2480 MHz	2480 MHz
	

20dB Bandwidth and 99% Occupied Bandwidth

DH5, Hopping On	3DH5, Hopping On
	

Carrier Frequency Separation

DH5	3DH5
2402 MHz	2402 MHz
	
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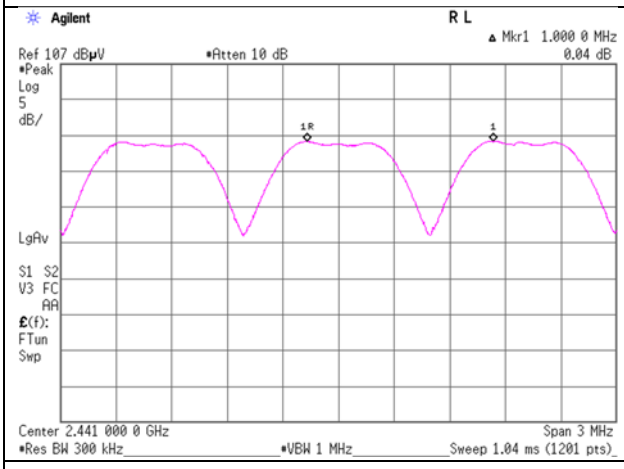
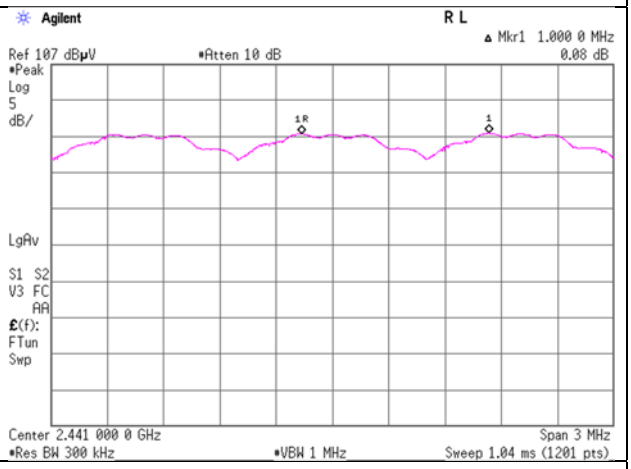
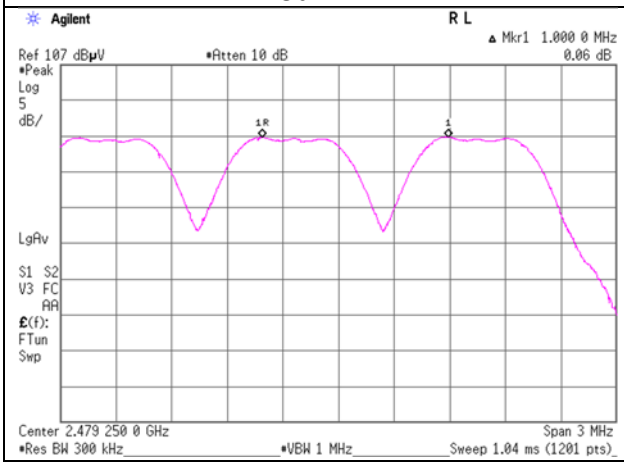
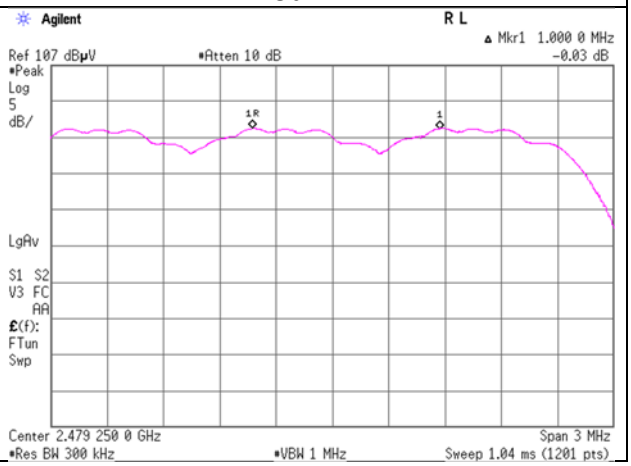
	
2480 MHz	2480 MHz
	

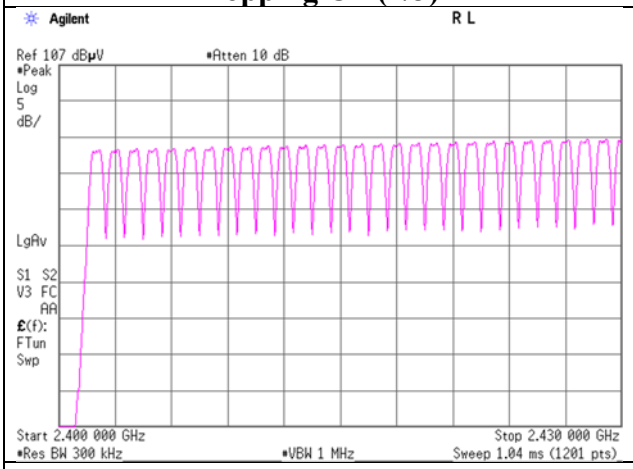
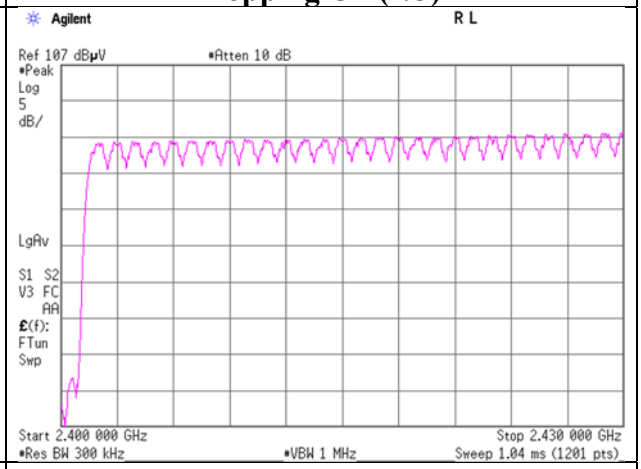
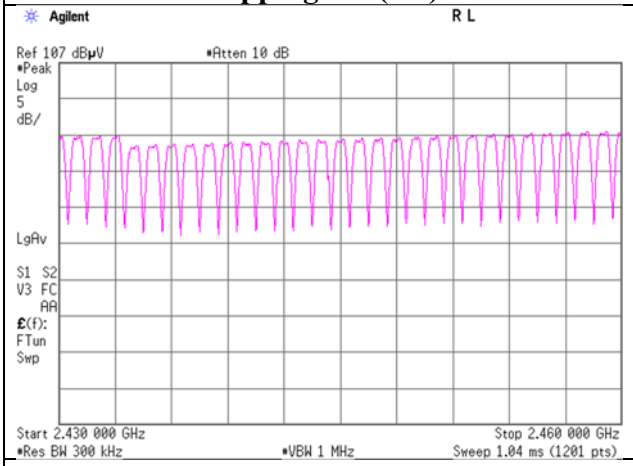
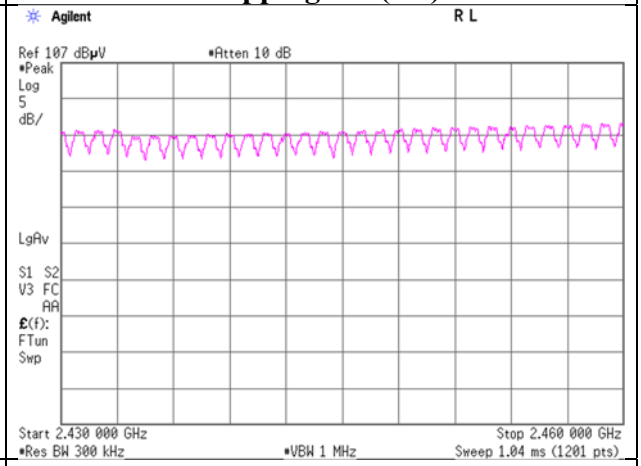
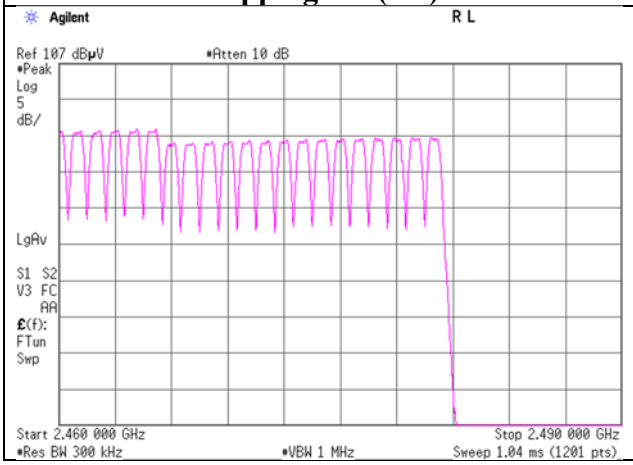
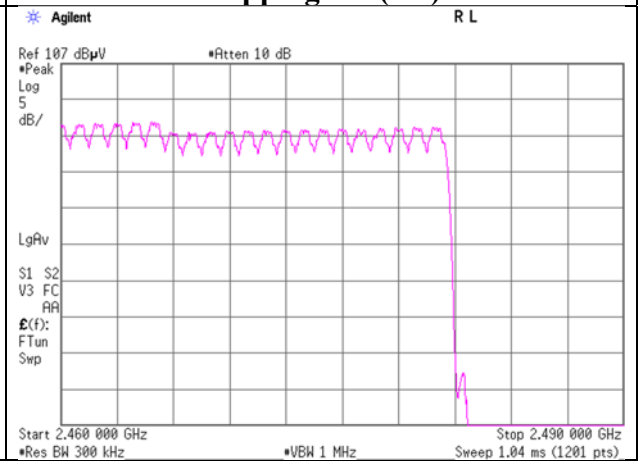
Number of Hopping Frequency

Report No.	12563995S-A-R1
Test place	Shonan EMC Lab. No.2 Shielded Room
Date	October 13, 2018
Temperature / Humidity	24 deg. C / 35 % RH
Engineer	Makoto Hosaka
Mode	Tx, Hopping On

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

Number of Hopping Frequency

DH5	3DH5
Hopping On (1/3)	**Hopping On (1/3)**
	
Hopping On (2/3)	**Hopping On (2/3)**
	
Hopping On (3/3)	**Hopping On (3/3)**
	

Dwell time

Report No.	12563995S-A-R1
Test place	Shonan EMC Lab. No.2 Shielded Room
Date	October 13, 2018
Temperature / Humidity	24 deg. C / 35 % RH
Engineer	Makoto Hosaka
Mode	Tx, Hopping On

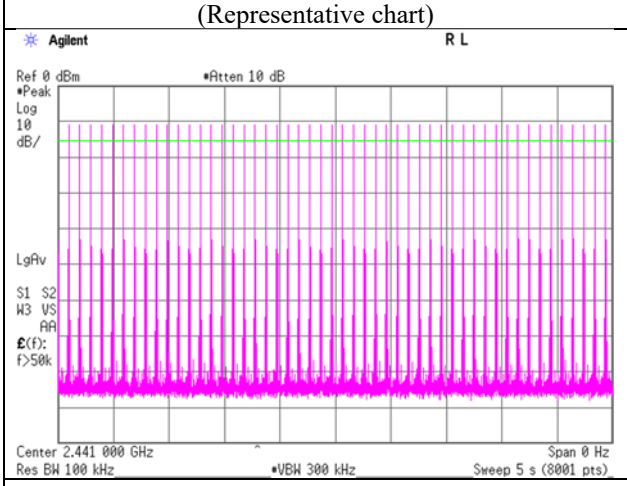
Mode	Number of transmission in a 31.6(79 Hopping x 0.4) / 12.8 (32 Hopping x 0.4) second period	Length of transmission [msec]	Result [msec]	Limit [msec]
DH1	51.0 times / 5 sec. x 31.6 sec. = 323 times	0.416	134	400
DH3	26.0 times / 5 sec. x 31.6 sec. = 165 times	1.672	276	400
DH5	17.0 times / 5 sec. x 31.6 sec. = 108 times	2.920	315	400
3DH1	51.0 times / 5 sec. x 31.6 sec. = 323 times	0.437	141	400
3DH3	26.0 times / 5 sec. x 31.6 sec. = 165 times	1.686	278	400
3DH5	17.0 times / 5 sec. x 31.6 sec. = 108 times	2.937	317	400

Sample Calculation
Result = Number of transmission x Length of transmission

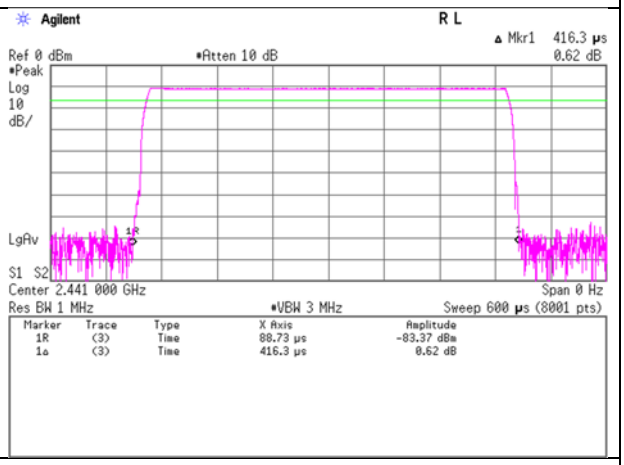
This device complies with the Bluetooth protocol for FHSS operation, employing a pseudo random channel selection and hopping rate to ensure that the occupancy time in N x 0.4s, where N is the number of channels being used in the hopping sequence ($20 \leq N \leq 79$), is always less than 0.4s regardless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

Dwell time

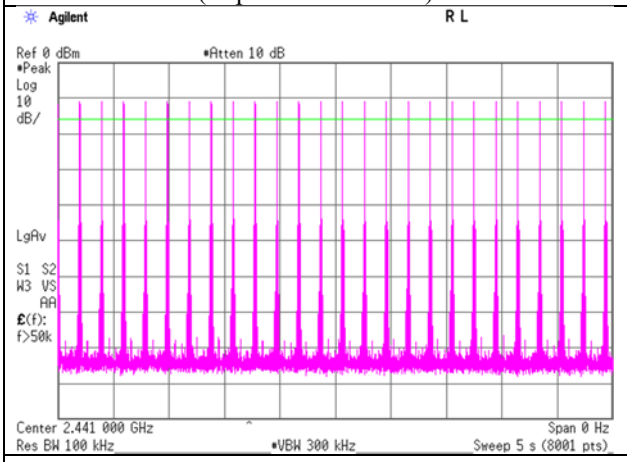
DH1 (1/2)
(Representative chart)



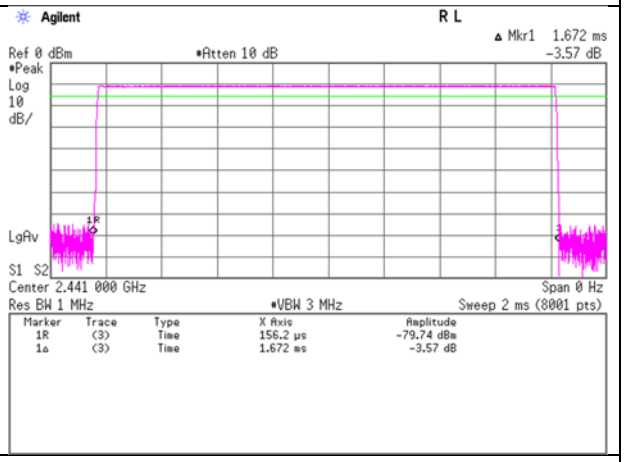
DH1 (2/2)



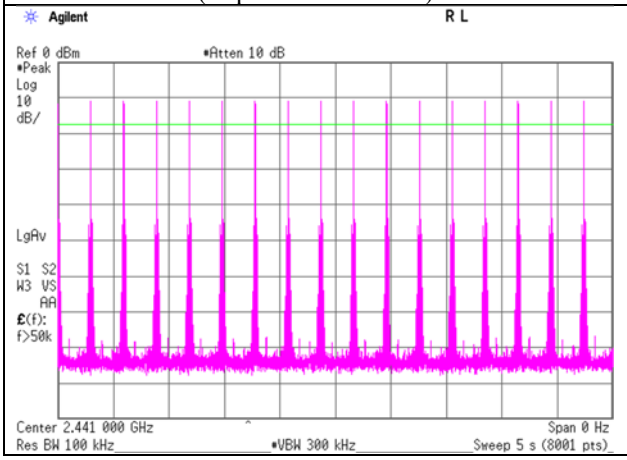
DH3 (1/2)
(Representative chart)



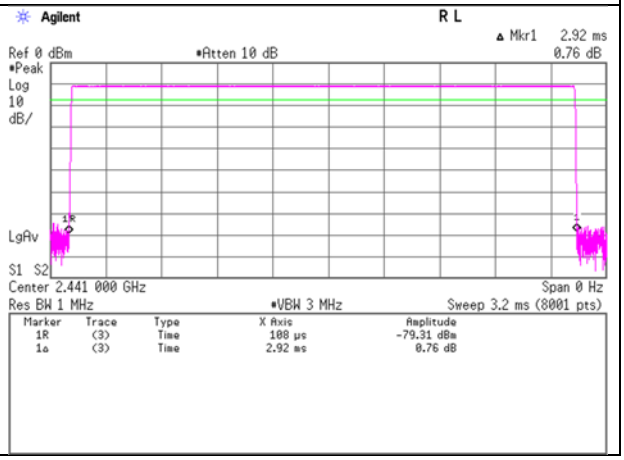
DH3 (2/2)



DH5 (1/2)
(Representative chart)

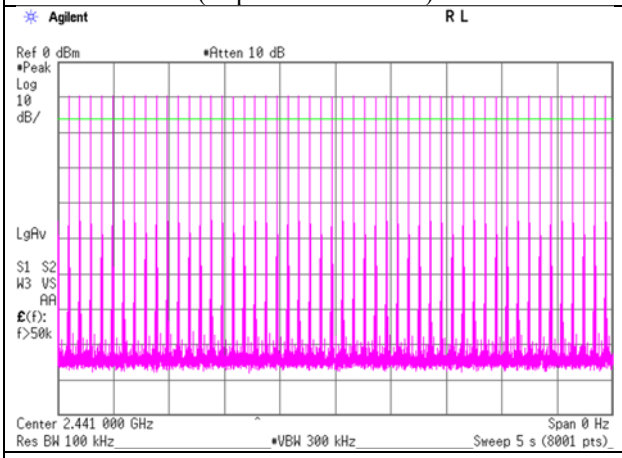


DH5 (2/2)

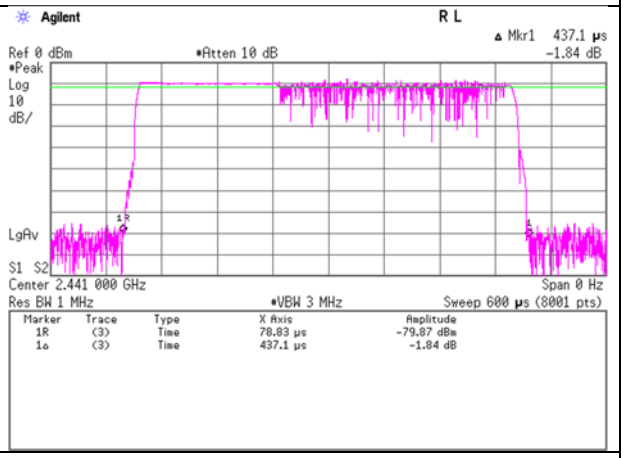


Dwell time

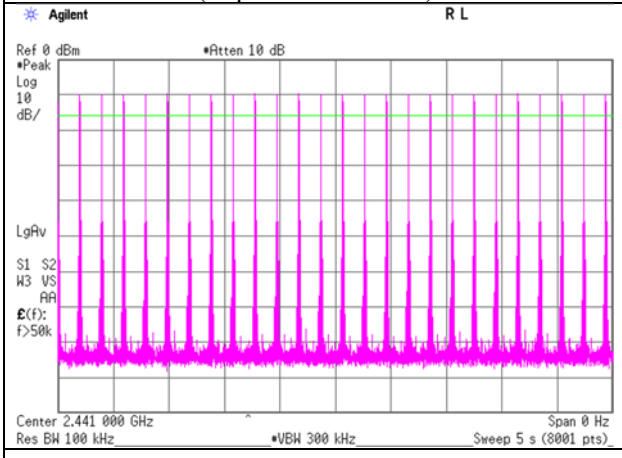
3DH1 (1/2)
(Representative chart)



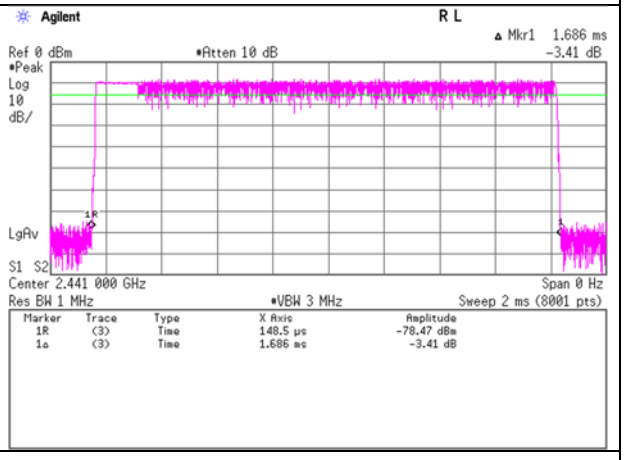
3DH1 (2/2)



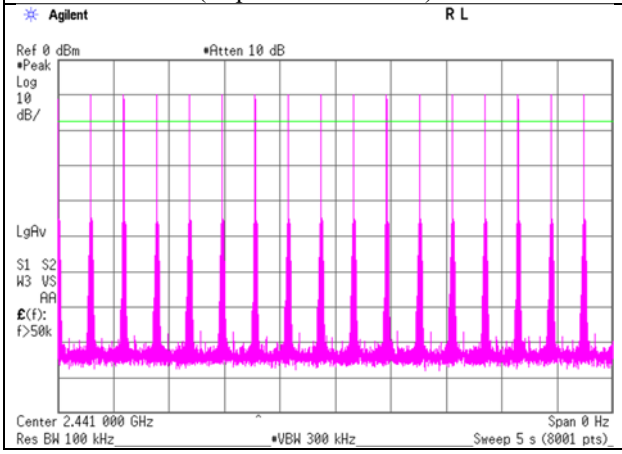
3DH3 (1/2)
(Representative chart)



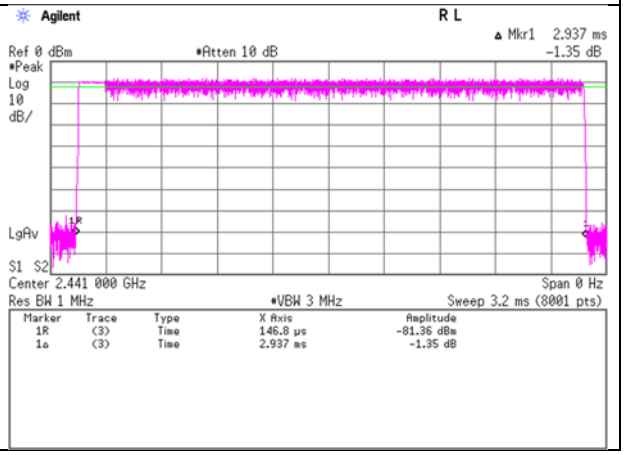
3DH3 (2/2)



3DH5 (1/2)
(Representative chart)



3DH5 (2/2)



Maximum Peak Output Power

Report No.	12563995S-A-R1
Test place	Shonan EMC Lab. No.2 Shielded Room
Date	October 13, 2018
Temperature / Humidity	24 deg. C / 35 % RH
Engineer	Makoto Hosaka
Mode	Tx, Hopping Off

					Conducted Power					e.i.r.p. for RSS-247					
Mode	Freq.	Reading	Cable Loss	Atten. Loss	Result		Limit		Margin	Antenna Gain	Result		Limit		Margin
	[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[dBm]	[mW]	[dB]	[dBi]	[dBm]	[mW]	[dBm]	[mW]	[dB]
DH5	2402.0	-11.58	1.52	10.18	0.12	1.03	20.96	125	20.84	1.60	1.72	1.49	36.02	4000	34.30
DH5	2441.0	-10.50	1.53	10.18	1.21	1.32	20.96	125	19.75	1.60	2.81	1.91	36.02	4000	33.21
DH5	2480.0	-9.84	1.54	10.18	1.88	1.54	20.96	125	19.08	1.60	3.48	2.23	36.02	4000	32.54
2DH5	2402.0	-9.03	1.52	10.18	2.67	1.85	20.96	125	18.29	1.60	4.27	2.67	36.02	4000	31.75
2DH5	2441.0	-7.97	1.53	10.18	3.74	2.37	20.96	125	17.22	1.60	5.34	3.42	36.02	4000	30.68
2DH5	2480.0	-7.20	1.54	10.18	4.52	2.83	20.96	125	16.44	1.60	6.12	4.09	36.02	4000	29.90
3DH5	2402.0	-8.52	1.52	10.18	3.18	2.08	20.96	125	17.78	1.60	4.78	3.01	36.02	4000	31.24
3DH5	2441.0	-7.60	1.53	10.18	4.11	2.58	20.96	125	16.85	1.60	5.71	3.72	36.02	4000	30.31
3DH5	2480.0	-6.71	1.54	10.18	5.01	3.17	20.96	125	15.95	1.60	6.61	4.58	36.02	4000	29.41

Sample Calculation:
Result = Reading + Cable Loss (including the cable(s) customer supplied) + Attenuator Loss
e.i.r.p. Result = Conducted Power Result + Antenna Gain

Test was not performed at AFH mode, because the decrease of number of channel (min: 20ch) at AFH mode does not influence on 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.

Average Output Power
(Reference data for RF Exposure)

Report No.	12563995S-A-R1
Test place	Shonan EMC Lab. No.2 Shielded Room
Date	October 13, 2018
Temperature / Humidity	24 deg. C / 35 % RH
Engineer	Makoto Hosaka
Mode	Tx, Hopping Off

Mode	Freq.	Reading	Cable Loss	Atten. Loss	Result (Time average)		Duty factor	Result (Burst power average)	
	[MHz]	[dBm]	[dB]	[dB]	[dBm]	[mW]	[dB]	[dBm]	[mW]
DH5	2402.0	-13.61	1.52	10.18	-1.91	0.64	1.09	-0.82	0.83
DH5	2441.0	-12.42	1.53	10.18	-0.71	0.85	1.09	0.38	1.09
DH5	2480.0	-11.74	1.54	10.18	-0.02	1.00	1.09	1.07	1.28
2DH5	2402.0	-13.42	1.52	10.18	-1.72	0.67	1.07	-0.65	0.86
2DH5	2441.0	-12.37	1.53	10.18	-0.66	0.86	1.07	0.41	1.10
2DH5	2480.0	-11.51	1.54	10.18	0.21	1.05	1.07	1.28	1.34
3DH5	2402.0	-13.44	1.52	10.18	-1.74	0.67	1.07	-0.67	0.86
3DH5	2441.0	-12.46	1.53	10.18	-0.75	0.84	1.07	0.32	1.08
3DH5	2480.0	-11.52	1.54	10.18	0.20	1.05	1.07	1.27	1.34

Sample Calculation:
Result (Time average) = Reading + Cable Loss (including the cable(s) customer supplied) + Attenuator Loss
Result (Burst power average) = Time average + Duty factor

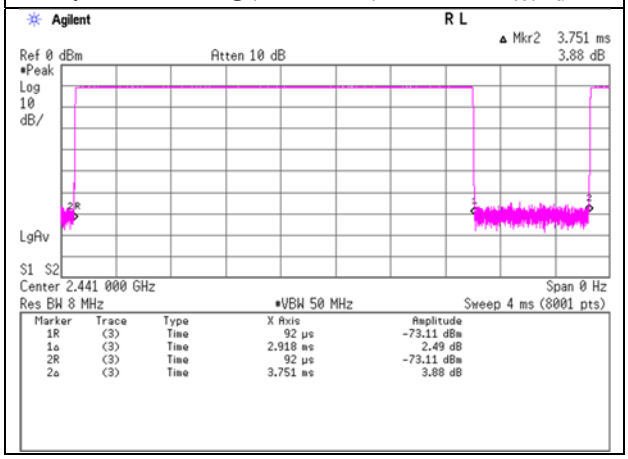
*The equipment and cables were not used for factor 0 dB of the data sheets.

Burst Rate Confirmation

Report No.	12563995S-A-R1
Test place	Shonan EMC Lab. No.2 Shielded Room
Date	October 13, 2018
Temperature / Humidity	24 deg. C / 35 % RH
Engineer	Makoto Hosaka
Mode	Tx, Hopping Off

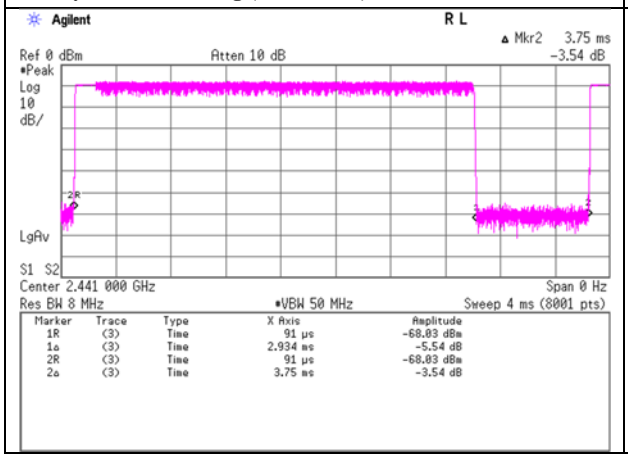
DH5

Tx on / (Tx on + Tx off) =	**0.778**
Tx on / (Tx on + Tx off) * 100 =	**77.8 %**
Duty factor = 10 * log (3.751 / 2.918) =	**1.09 dB**



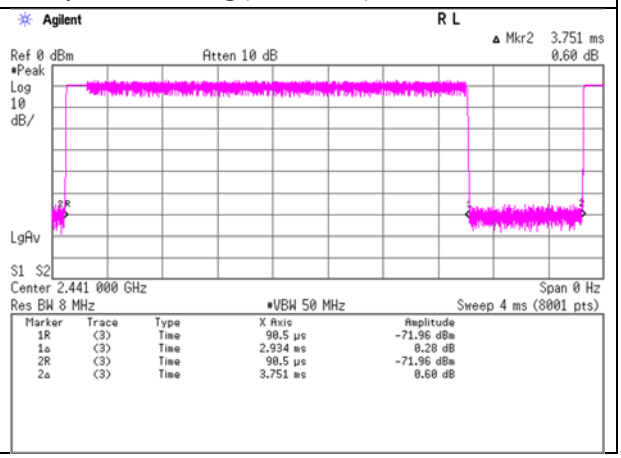
2DH5

Tx on / (Tx on + Tx off) =	**0.782**
Tx on / (Tx on + Tx off) * 100 =	**78.2 %**
Duty factor = 10 * log (3.75 / 2.934) =	**1.07 dB**



3DH5

Tx on / (Tx on + Tx off) =	**0.782**
Tx on / (Tx on + Tx off) * 100 =	**78.2 %**
Duty factor = 10 * log (3.751 / 2.934) =	**1.07 dB**



Radiated Spurious Emission

Report No.	12563995S-A-R1		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	No.2	No.2	No.1
Date	October 17, 2018	October 15, 2018	October 18, 2018
Temperature / Humidity	24 deg. C / 49 % RH	24 deg. C / 51 % RH	23 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
	(30 MHz -1 GHz)	(1 GHz -13 GHz)	(13 GHz -26.5 GHz)
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.	308.000	QP	32.36	13.76	6.30	31.70	0.00	20.72	46.00	25.2	100	39	
Hori.	312.001	QP	33.12	13.88	6.33	31.69	0.00	21.64	46.00	24.3	102	226	
Hori.	412.002	QP	29.22	15.94	7.10	31.67	0.00	20.59	46.00	25.4	105	74	
Hori.	660.006	QP	25.27	19.28	8.10	31.65	0.00	21.00	46.00	25.0	109	141	
Hori.	2390.000	PK	43.22	27.91	13.93	36.58	2.31	50.79	73.90	23.1	149	228	
Hori.	4804.000	PK	46.97	31.31	6.53	36.88	2.31	50.24	73.90	23.6	297	73	
Hori.	7206.000	PK	44.89	36.77	7.58	37.26	2.31	54.29	73.90	19.6	150	0	
Hori.	9608.000	PK	45.39	38.11	8.65	38.47	2.31	55.99	73.90	17.9	150	0	
Hori.	19216.000	PK	48.67	40.14	11.69	48.16	-9.54	42.80	73.90	31.1	139	326	
Hori.	2390.000	AV	31.88	27.91	13.93	36.58	2.31	39.45	53.90	14.4	149	228	
Hori.	4804.000	AV	38.53	31.31	6.53	36.88	2.31	41.80	53.90	12.1	297	73	
Hori.	7206.000	AV	33.41	36.77	7.58	37.26	2.31	42.81	53.90	11.0	150	0	
Hori.	9608.000	AV	34.16	38.11	8.65	38.47	2.31	44.76	53.90	9.1	150	0	
Hori.	19216.000	AV	41.81	40.14	11.69	48.16	-9.54	35.94	53.90	17.9	139	326	
Vert.	300.000	QP	31.11	13.58	6.23	31.70	0.00	19.22	46.00	26.7	100	33	
Vert.	368.007	QP	32.35	15.06	6.80	31.66	0.00	22.55	46.00	23.4	142	215	
Vert.	604.004	QP	24.81	19.32	7.86	31.64	0.00	20.35	46.00	25.6	164	102	
Vert.	2390.000	PK	43.32	27.91	13.93	36.58	2.31	50.89	73.90	23.0	145	168	
Vert.	4804.000	PK	46.53	31.31	6.53	36.88	2.31	49.80	73.90	24.1	107	21	
Vert.	7206.000	PK	45.30	36.77	7.58	37.26	2.31	54.70	73.90	19.2	150	0	
Vert.	9608.000	PK	45.67	38.11	8.65	38.47	2.31	56.27	73.90	17.6	150	0	
Vert.	19216.000	PK	48.32	40.14	11.69	48.17	-9.54	42.44	73.90	31.4	131	319	
Vert.	2390.000	AV	31.90	27.91	13.93	36.58	2.31	39.47	53.90	14.4	145	168	
Vert.	4804.000	AV	37.77	31.31	6.53	36.88	2.31	41.04	53.90	12.8	107	21	
Vert.	7206.000	AV	33.51	36.77	7.58	37.26	2.31	42.91	53.90	10.9	150	0	
Vert.	9608.000	AV	34.35	38.11	8.65	38.47	2.31	44.95	53.90	**8.9**	150	0	
Vert.	19216.000	AV	41.91	40.14	11.69	48.17	-9.54	36.03	53.90	17.8	131	319	

Result = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Distance factor : 1 GHz - 13 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB
* These results have sufficient margin without taking account Dwell time factor.

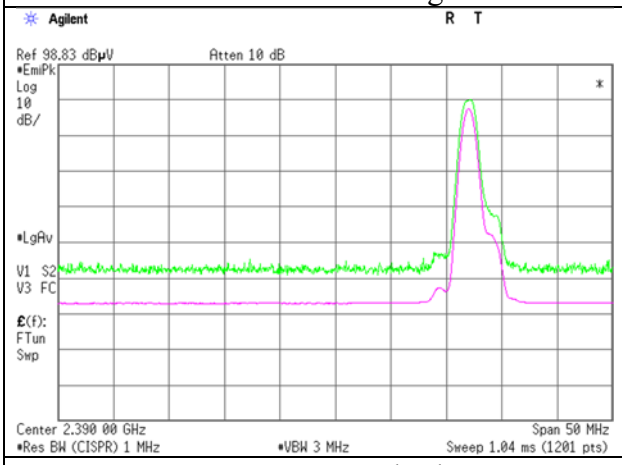
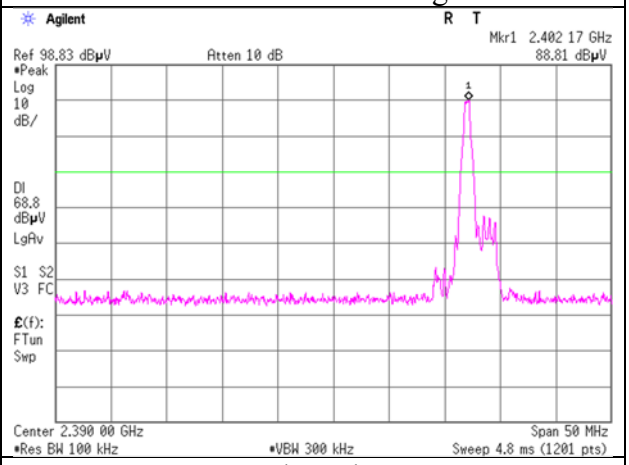
20 dBc Data Sheet **(RBW 100 kHz, VBW 300 kHz)**

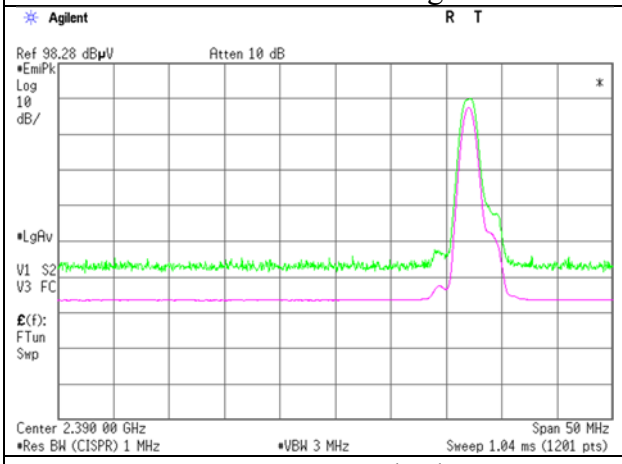
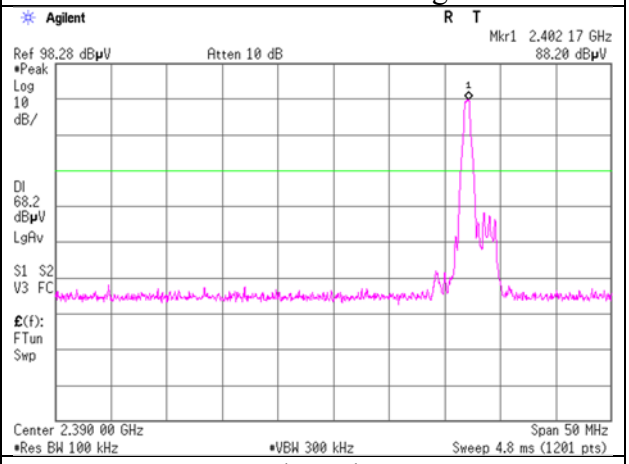
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	2402.000	PK	88.75	27.90	13.94	36.57	2.31	96.33	-	-	Carrier
Hori.	2399.156	PK	40.74	27.91	13.94	36.58	2.31	48.32	76.33	28.0	
Hori.	2400.000	PK	41.47	27.91	13.94	36.58	2.31	49.05	76.33	27.3	
Vert.	2402.000	PK	88.15	27.90	13.94	36.57	2.31	95.73	-	-	Carrier
Vert.	2399.164	PK	40.17	27.91	13.94	36.58	2.31	47.75	75.73	28.0	
Vert.	2400.000	PK	40.33	27.91	13.94	36.58	2.31	47.91	75.73	27.8	

Result = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Distance factor : 1 GHz - 13 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission
(Reference Plot for band-edge)

Report No.	12563995S-A-R1
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.2
Date	October 15, 2018
Temperature / Humidity	24 deg. C / 51 % RH
Engineer	Shiro Kobayashi (1 GHz -13 GHz)
Mode	Tx, Hopping Off, DH5 2402 MHz

Horizontal	
Restricted-band band-edge Plot	Authorized-band band-edge Plot
	
Trace Green : Peak Plot Trace Purple : Average Plot	20dBc Plot

Vertical	
Restricted-band band-edge Plot	Authorized-band band-edge Plot
	
Trace Green : Peak Plot Trace Purple : Average Plot	20dBc Plot

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

Radiated Spurious Emission

Report No.	12563995S-A-R1		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	No.2	No.2	No.1
Date	October 17, 2018	October 15, 2018	October 18, 2018
Temperature / Humidity	24 deg. C / 49 % RH	24 deg. C / 51 % RH	23 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
	(30 MHz -1 GHz)	(1 GHz -13 GHz)	(13 GHz -26.5 GHz)
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.	336.001	QP	30.14	14.74	6.54	31.67	0.00	19.75	46.00	26.2	100	169	
Hori.	348.000	QP	34.10	15.00	6.64	31.66	0.00	24.08	46.00	21.9	227	27	
Hori.	443.991	QP	24.01	16.42	7.24	31.67	0.00	16.00	46.00	30.0	102	107	
Hori.	599.979	QP	24.89	19.22	7.84	31.64	0.00	20.31	46.00	25.6	104	122	
Hori.	4882.000	PK	46.78	31.14	6.56	36.91	2.31	49.88	73.90	24.0	258	85	
Hori.	7323.000	PK	44.19	36.84	7.64	37.44	2.31	53.54	73.90	20.3	150	0	
Hori.	9764.000	PK	45.10	38.59	8.80	38.66	2.31	56.14	73.90	17.7	150	0	
Hori.	19528.000	PK	45.66	40.08	11.88	47.70	-9.54	40.38	73.90	33.5	145	308	
Hori.	4882.000	AV	37.40	31.14	6.56	36.91	2.31	40.50	53.90	13.4	258	85	
Hori.	7323.000	AV	32.72	36.84	7.64	37.44	2.31	42.07	53.90	11.8	150	0	
Hori.	9764.000	AV	33.54	38.59	8.80	38.66	2.31	44.58	53.90	**9.3**	150	0	
Hori.	19528.000	AV	34.11	40.08	11.88	47.70	-9.54	28.83	53.90	25.0	145	308	
Vert.	348.019	QP	24.11	15.00	6.64	31.66	0.00	14.09	46.00	31.9	183	211	
Vert.	388.000	QP	29.77	15.33	6.96	31.66	0.00	20.40	46.00	25.6	119	244	
Vert.	598.404	QP	22.30	19.18	7.83	31.64	0.00	17.67	46.00	28.3	208	0	
Vert.	4882.000	PK	47.29	31.14	6.56	36.91	2.31	50.39	73.90	23.5	124	353	
Vert.	7323.000	PK	43.94	36.84	7.64	37.44	2.31	53.29	73.90	20.6	150	0	
Vert.	9764.000	PK	45.01	38.59	8.80	38.66	2.31	56.05	73.90	17.8	150	0	
Vert.	19528.000	PK	48.11	40.08	11.88	47.70	-9.54	42.83	73.90	31.0	146	318	
Vert.	4882.000	AV	37.56	31.14	6.56	36.91	2.31	40.66	53.90	13.2	124	353	
Vert.	7323.000	AV	32.58	36.84	7.64	37.44	2.31	41.93	53.90	11.9	150	0	
Vert.	9764.000	AV	33.24	38.59	8.80	38.66	2.31	44.28	53.90	9.6	150	0	
Vert.	19528.000	AV	39.97	40.08	11.88	47.70	-9.54	34.69	53.90	19.2	146	318	

Result = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Distance factor : 1 GHz - 13 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB
* These results have sufficient margin without taking account Dwell time factor.

Radiated Spurious Emission

Report No.	12563995S-A-R1		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	No.2	No.2	No.1
Date	October 17, 2018	October 15, 2018	October 18, 2018
Temperature / Humidity	24 deg. C / 49 % RH	24 deg. C / 51 % RH	23 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
	(30 MHz -1 GHz)	(1 GHz -13 GHz)	(13 GHz -26.5 GHz)
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.	312.000	QP	33.72	13.88	6.33	31.69	0.00	22.24	46.00	23.7	100	227	
Hori.	384.013	QP	34.17	15.24	6.93	31.66	0.00	24.68	46.00	21.3	112	79	
Hori.	420.001	QP	23.81	16.03	7.13	31.67	0.00	15.30	46.00	30.7	113	262	
Hori.	652.001	QP	27.84	19.22	8.07	31.66	0.00	23.47	46.00	22.5	103	104	
Hori.	2483.500	PK	44.22	27.67	14.00	36.52	2.31	51.68	73.90	22.2	116	245	
Hori.	4960.000	PK	47.24	31.33	6.61	36.93	2.31	50.56	73.90	23.3	210	79	
Hori.	7440.000	PK	43.45	36.97	7.69	37.63	2.31	52.79	73.90	21.1	150	0	
Hori.	9920.000	PK	44.25	38.80	8.97	38.84	2.31	55.49	73.90	18.4	150	0	
Hori.	19840.000	PK	42.97	39.94	12.02	47.72	-9.54	37.67	73.90	36.2	148	316	
Hori.	2483.500	AV	32.61	27.67	14.00	36.52	2.31	40.07	53.90	13.8	116	245	
Hori.	4960.000	AV	38.18	31.33	6.61	36.93	2.31	41.50	53.90	12.4	210	79	
Hori.	7440.000	AV	32.09	36.97	7.69	37.63	2.31	41.43	53.90	12.4	150	0	
Hori.	9920.000	AV	32.63	38.80	8.97	38.84	2.31	43.87	53.90	**10.0**	150	0	
Hori.	19840.000	AV	31.21	39.94	12.02	47.72	-9.54	25.91	53.90	27.9	148	316	
Vert.	380.005	QP	28.11	15.15	6.89	31.66	0.00	18.49	46.00	27.5	100	201	
Vert.	396.000	QP	32.33	15.57	7.02	31.66	0.00	23.26	46.00	22.7	100	200	
Vert.	564.003	QP	22.31	18.13	7.70	31.71	0.00	16.43	46.00	29.5	100	213	
Vert.	2483.500	PK	43.96	27.67	14.00	36.52	2.31	51.42	73.90	22.4	148	199	
Vert.	4960.000	PK	46.31	31.33	6.61	36.93	2.31	49.63	73.90	24.2	106	356	
Vert.	7440.000	PK	43.93	36.97	7.69	37.63	2.31	53.27	73.90	20.6	150	0	
Vert.	9920.000	PK	44.66	38.80	8.97	38.84	2.31	55.90	73.90	18.0	150	0	
Vert.	19840.000	PK	46.88	39.94	12.02	47.72	-9.54	41.58	73.90	32.3	145	322	
Vert.	2483.500	AV	32.36	27.67	14.00	36.52	2.31	39.82	53.90	14.0	148	199	
Vert.	4960.000	AV	37.04	31.33	6.61	36.93	2.31	40.36	53.90	13.5	106	356	
Vert.	7440.000	AV	32.05	36.97	7.69	37.63	2.31	41.39	53.90	12.5	150	0	
Vert.	9920.000	AV	32.58	38.80	8.97	38.84	2.31	43.82	53.90	**10.0**	150	0	
Vert.	19840.000	AV	38.68	39.94	12.02	47.72	-9.54	33.38	53.90	20.5	145	322	

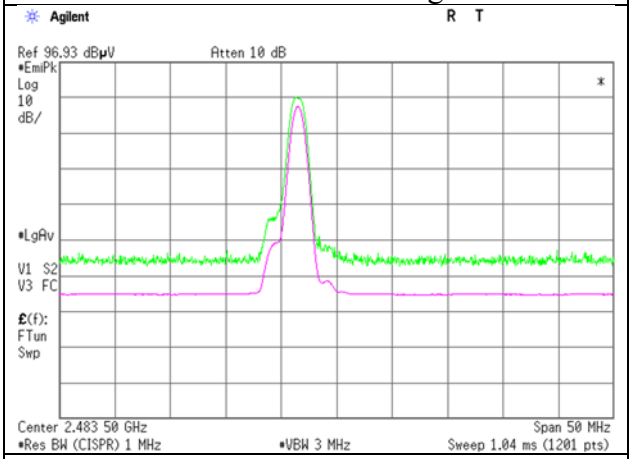
Result = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Distance factor : 1 GHz - 13 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB
* These results have sufficient margin without taking account Dwell time factor.

Radiated Spurious Emission
(Reference Plot for band-edge)

Report No.	12563995S-A-R1
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.2
Date	October 15, 2018
Temperature / Humidity	24 deg. C / 51 % RH
Engineer	Shiro Kobayashi (1 GHz -13 GHz)
Mode	Tx, Hopping Off, DH5 2480 MHz

Horizontal

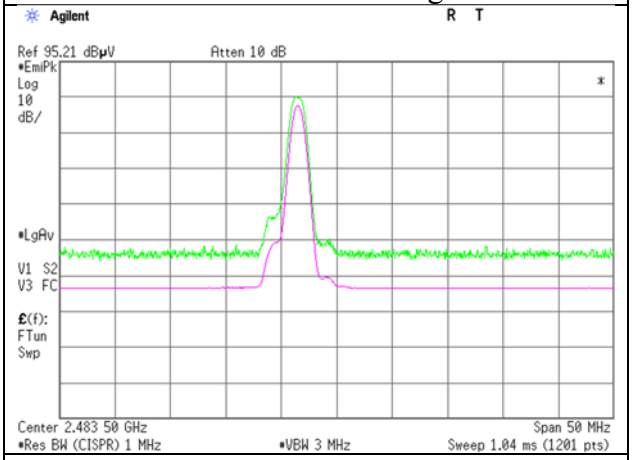
Restricted-band band-edge Plot



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission

Report No.	12563995S-A-R1		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	No.2	No.2	No.1
Date	October 17, 2018	October 15, 2018	October 18, 2018
Temperature / Humidity	24 deg. C / 49 % RH	24 deg. C / 51 % RH	23 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
	(30 MHz -1 GHz)	(1 GHz -13 GHz)	(13 GHz -26.5 GHz)
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.	312.001	QP	33.62	13.88	6.33	31.69	0.00	22.14	46.00	23.8	100	50	
Hori.	316.001	QP	31.11	14.02	6.37	31.69	0.00	19.81	46.00	26.1	100	47	
Hori.	380.002	QP	36.22	15.15	6.89	31.66	0.00	26.60	46.00	19.4	149	117	
Hori.	663.997	QP	25.71	19.36	8.12	31.64	0.00	21.55	46.00	24.4	100	297	
Hori.	2390.000	PK	43.54	27.91	13.93	36.58	2.31	51.11	73.90	22.7	158	271	
Hori.	4804.000	PK	46.89	31.31	6.53	36.88	2.31	50.16	73.90	23.7	336	61	
Hori.	7206.000	PK	45.64	36.77	7.58	37.26	2.31	55.04	73.90	18.8	150	0	
Hori.	9608.000	PK	46.16	38.11	8.65	38.47	2.31	56.76	73.90	17.1	150	0	
Hori.	19216.000	PK	44.79	40.13	11.68	48.18	-9.54	38.88	73.90	35.0	152	312	
Hori.	2390.000	AV	31.89	27.91	13.93	36.58	2.31	39.46	53.90	14.4	158	271	
Hori.	4804.000	AV	36.59	31.31	6.53	36.88	2.31	39.86	53.90	14.0	336	61	
Hori.	7206.000	AV	33.46	36.77	7.58	37.26	2.31	42.86	53.90	11.0	150	0	
Hori.	9608.000	AV	34.28	38.11	8.65	38.47	2.31	44.88	53.90	**9.0**	150	0	
Hori.	19216.000	AV	32.53	40.13	11.68	48.18	-9.54	26.62	53.90	27.2	152	312	
Vert.	312.000	QP	25.60	13.88	6.33	31.69	0.00	14.12	46.00	31.8	100	12	
Vert.	388.002	QP	30.91	15.33	6.96	31.66	0.00	21.54	46.00	24.4	156	208	
Vert.	596.003	QP	22.63	19.12	7.82	31.65	0.00	17.92	46.00	28.0	183	162	
Vert.	2390.000	PK	43.51	27.91	13.93	36.58	2.31	51.08	73.90	22.8	141	195	
Vert.	4804.000	PK	46.47	31.31	6.53	36.88	2.31	49.74	73.90	24.1	100	16	
Vert.	7206.000	PK	45.23	36.77	7.58	37.26	2.31	54.63	73.90	19.2	150	0	
Vert.	9608.000	PK	46.05	38.11	8.65	38.47	2.31	56.65	73.90	17.2	150	0	
Vert.	19216.000	PK	49.02	40.13	11.68	48.18	-9.54	43.11	73.90	30.7	142	324	
Vert.	2390.000	AV	31.88	27.91	13.93	36.58	2.31	39.45	53.90	14.4	141	195	
Vert.	4804.000	AV	35.64	31.31	6.53	36.88	2.31	38.91	53.90	14.9	100	16	
Vert.	7206.000	AV	33.46	36.77	7.58	37.26	2.31	42.86	53.90	11.0	150	0	
Vert.	9608.000	AV	34.30	38.11	8.65	38.47	2.31	44.90	53.90	**9.0**	150	0	
Vert.	19216.000	AV	42.51	40.13	11.68	48.18	-9.54	36.60	53.90	17.3	142	324	

Result = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Distance factor : 1 GHz - 13 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB
* These results have sufficient margin without taking account Dwell time factor.

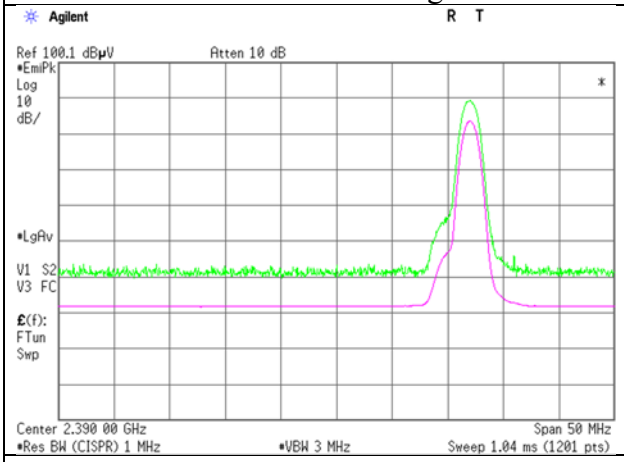
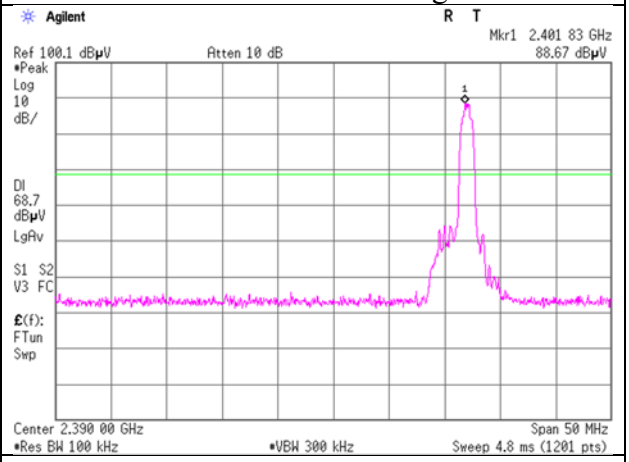
20 dBc Data Sheet **(RBW 100 kHz, VBW 300 kHz)**

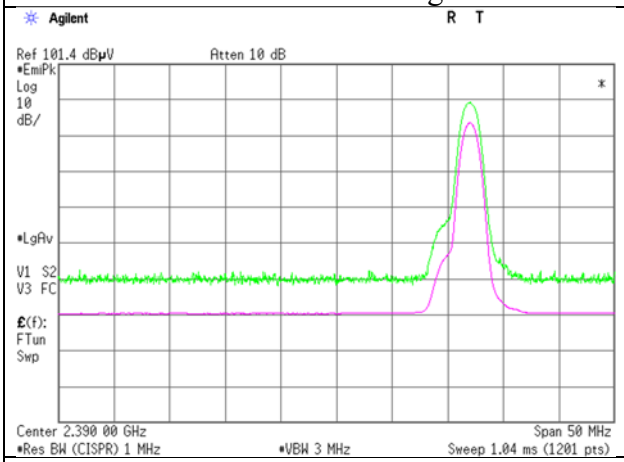
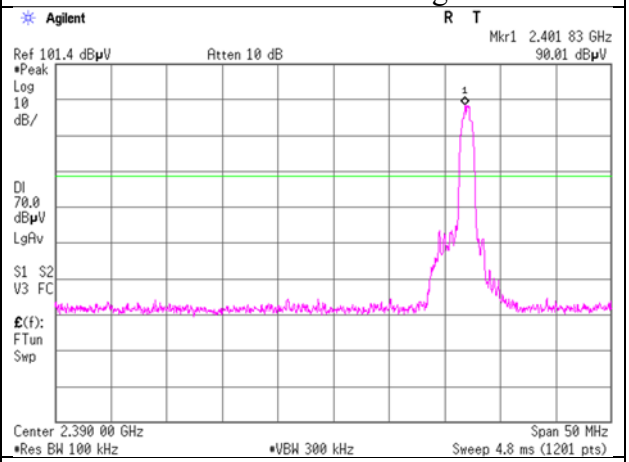
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
Hori.	2402.000	PK	88.64	27.90	13.94	36.57	2.31	96.22	-	-	Carrier
Hori.	2399.501	PK	53.97	27.91	13.94	36.58	2.31	61.55	76.22	14.7	
Hori.	2400.000	PK	54.24	27.91	13.94	36.58	2.31	61.82	76.22	14.4	
Vert.	2402.000	PK	90.00	27.90	13.94	36.57	2.31	97.58	-	-	Carrier
Vert.	2399.498	PK	55.10	27.91	13.94	36.58	2.31	62.68	77.58	14.9	
Vert.	2400.000	PK	55.69	27.91	13.94	36.58	2.31	63.27	77.58	14.3	

Result = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Distance factor : 1 GHz - 13 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission
(Reference Plot for band-edge)

Report No.	12563995S-A-R1
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.2
Date	October 15, 2018
Temperature / Humidity	24 deg. C / 51 % RH
Engineer	Shiro Kobayashi (1 GHz -13 GHz)
Mode	Tx, Hopping Off, 3DH5 2402 MHz

Horizontal	
Restricted-band band-edge Plot	Authorized-band band-edge Plot
	
Trace Green : Peak Plot Trace Purple : Average Plot	20dBc Plot

Vertical	
Restricted-band band-edge Plot	Authorized-band band-edge Plot
	
Trace Green : Peak Plot Trace Purple : Average Plot	20dBc Plot

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

Radiated Spurious Emission

Report No.	12563995S-A-R1		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	No.2	No.2	No.1
Date	October 17, 2018	October 15, 2018	October 18, 2018
Temperature / Humidity	24 deg. C / 49 % RH	24 deg. C / 51 % RH	23 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
	(30 MHz -1 GHz)	(1 GHz -13 GHz)	(13 GHz -26.5 GHz)
Mode	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.	312.003	QP	33.60	13.88	6.33	31.69	0.00	22.12	46.00	23.8	100	65	
Hori.	388.001	QP	30.81	15.33	6.96	31.66	0.00	21.44	46.00	24.5	168	239	
Hori.	396.001	QP	32.32	15.57	7.02	31.66	0.00	23.25	46.00	22.7	120	215	
Hori.	628.013	QP	24.63	19.44	7.97	31.65	0.00	20.39	46.00	25.6	141	39	
Hori.	4882.000	PK	46.19	31.14	6.56	36.91	2.31	49.29	73.90	24.6	248	84	
Hori.	7323.000	PK	43.82	36.84	7.64	37.44	2.31	53.17	73.90	20.7	150	0	
Hori.	9764.000	PK	44.77	38.59	8.80	38.66	2.31	55.81	73.90	18.0	150	0	
Hori.	19528.000	PK	46.57	40.08	11.88	47.70	-9.54	41.29	73.90	32.6	144	237	
Hori.	4882.000	AV	35.39	31.14	6.56	36.91	2.31	38.49	53.90	15.4	248	84	
Hori.	7323.000	AV	32.44	36.84	7.64	37.44	2.31	41.79	53.90	12.1	150	0	
Hori.	9764.000	AV	33.11	38.59	8.80	38.66	2.31	44.15	53.90	9.7	150	0	
Hori.	19528.000	AV	37.29	40.08	11.88	47.70	-9.54	32.01	53.90	21.8	144	237	
Vert.	364.001	QP	29.01	15.07	6.77	31.66	0.00	19.19	46.00	26.8	100	255	
Vert.	376.020	QP	35.22	15.13	6.86	31.66	0.00	25.55	46.00	20.4	100	238	
Vert.	628.019	QP	23.32	19.44	7.97	31.65	0.00	19.08	46.00	26.9	209	354	
Vert.	4882.000	PK	46.60	31.14	6.56	36.91	2.31	49.70	73.90	24.2	104	10	
Vert.	7323.000	PK	44.09	36.84	7.64	37.44	2.31	53.44	73.90	20.4	150	0	
Vert.	9764.000	PK	44.95	38.59	8.80	38.66	2.31	55.99	73.90	17.9	150	0	
Vert.	19528.000	PK	48.73	40.08	11.88	47.70	-9.54	43.45	73.90	30.4	148	322	
Vert.	4882.000	AV	35.73	31.14	6.56	36.91	2.31	38.83	53.90	15.0	104	10	
Vert.	7323.000	AV	32.50	36.84	7.64	37.44	2.31	41.85	53.90	12.0	150	0	
Vert.	9764.000	AV	33.23	38.59	8.80	38.66	2.31	44.27	53.90	**9.6**	150	0	
Vert.	19528.000	AV	41.69	40.08	11.88	47.70	-9.54	36.41	53.90	17.4	148	322	

Result = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Distance factor : 1 GHz - 13 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB
* These results have sufficient margin without taking account Dwell time factor.

Radiated Spurious Emission

Report No.	12563995S-A-R1		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	No.2	No.2	No.1
Date	October 17, 2018	October 15, 2018	October 18, 2018
Temperature / Humidity	24 deg. C / 49 % RH	24 deg. C / 51 % RH	23 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
	(30 MHz -1 GHz)	(1 GHz -13 GHz)	(13 GHz -26.5 GHz)
Mode	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.	312.001	QP	33.42	13.88	6.33	31.69	0.00	21.94	46.00	24.0	100	41	
Hori.	320.003	QP	31.67	14.19	6.40	31.69	0.00	20.57	46.00	25.4	100	53	
Hori.	415.999	QP	30.52	16.00	7.11	31.67	0.00	21.96	46.00	24.0	100	0	
Hori.	672.012	QP	24.81	19.50	8.15	31.63	0.00	20.83	46.00	25.1	100	118	
Hori.	2483.500	PK	44.18	27.67	14.00	36.52	2.31	51.64	73.90	22.2	142	256	
Hori.	4960.000	PK	46.48	31.33	6.61	36.93	2.31	49.80	73.90	24.1	195	83	
Hori.	7440.000	PK	43.61	36.97	7.69	37.63	2.31	52.95	73.90	20.9	150	0	
Hori.	9920.000	PK	43.95	38.80	8.97	38.84	2.31	55.19	73.90	18.7	150	0	
Hori.	19840.000	PK	47.00	39.94	12.02	47.72	-9.54	41.70	73.90	32.2	138	241	
Hori.	2483.500	AV	32.57	27.67	14.00	36.52	2.31	40.03	53.90	13.8	142	256	
Hori.	4960.000	AV	35.63	31.33	6.61	36.93	2.31	38.95	53.90	14.9	195	83	
Hori.	7440.000	AV	31.92	36.97	7.69	37.63	2.31	41.26	53.90	12.6	150	0	
Hori.	9920.000	AV	32.64	38.80	8.97	38.84	2.31	43.88	53.90	**10.0**	150	0	
Hori.	19840.000	AV	36.30	39.94	12.02	47.72	-9.54	31.00	53.90	22.9	138	241	
Vert.	387.001	QP	30.61	15.30	6.95	31.66	0.00	21.20	46.00	24.8	100	213	
Vert.	400.001	QP	32.50	15.68	7.05	31.67	0.00	23.56	46.00	22.4	100	235	
Vert.	663.994	QP	24.73	19.36	8.12	31.64	0.00	20.57	46.00	25.4	100	257	
Vert.	2483.500	PK	44.11	27.68	14.00	36.52	2.31	51.58	73.90	22.3	176	174	
Vert.	4960.000	PK	46.30	31.33	6.61	36.93	2.31	49.62	73.90	24.2	102	17	
Vert.	7440.000	PK	43.79	36.97	7.69	37.63	2.31	53.13	73.90	20.7	150	0	
Vert.	9920.000	PK	43.89	38.80	8.97	38.84	2.31	55.13	73.90	18.7	150	0	
Vert.	19840.000	PK	46.71	39.94	12.02	47.72	-9.54	41.41	73.90	32.4	141	311	
Vert.	2483.500	AV	32.61	27.68	14.00	36.52	2.31	40.08	53.90	13.8	176	174	
Vert.	4960.000	AV	35.23	31.33	6.61	36.93	2.31	38.55	53.90	15.3	102	17	
Vert.	7440.000	AV	31.89	36.97	7.69	37.63	2.31	41.23	53.90	12.6	150	0	
Vert.	9920.000	AV	32.61	38.80	8.97	38.84	2.31	43.85	53.90	**10.0**	150	0	
Vert.	19840.000	AV	39.20	39.94	12.02	47.72	-9.54	33.90	53.90	20.0	141	311	

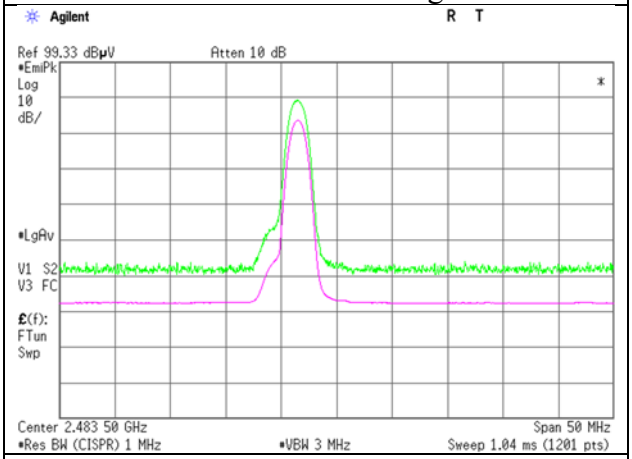
Result = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Distance factor : 1 GHz - 13 GHz : 20log (3.91 m / 3.0 m) = 2.31 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB
* These results have sufficient margin without taking account Dwell time factor.

Radiated Spurious Emission
(Reference Plot for band-edge)

Report No.	12563995S-A-R1
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	No.2
Date	October 15, 2018
Temperature / Humidity	24 deg. C / 51 % RH
Engineer	Shiro Kobayashi (1 GHz -13 GHz)
Mode	Tx, Hopping Off, 3DH5 2480 MHz

Horizontal

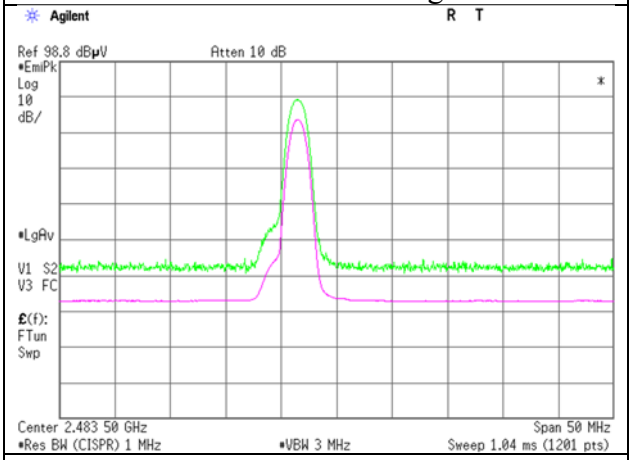
Restricted-band band-edge Plot



Trace Green : Peak Plot
Trace Purple : Average Plot

Vertical

Restricted-band band-edge Plot

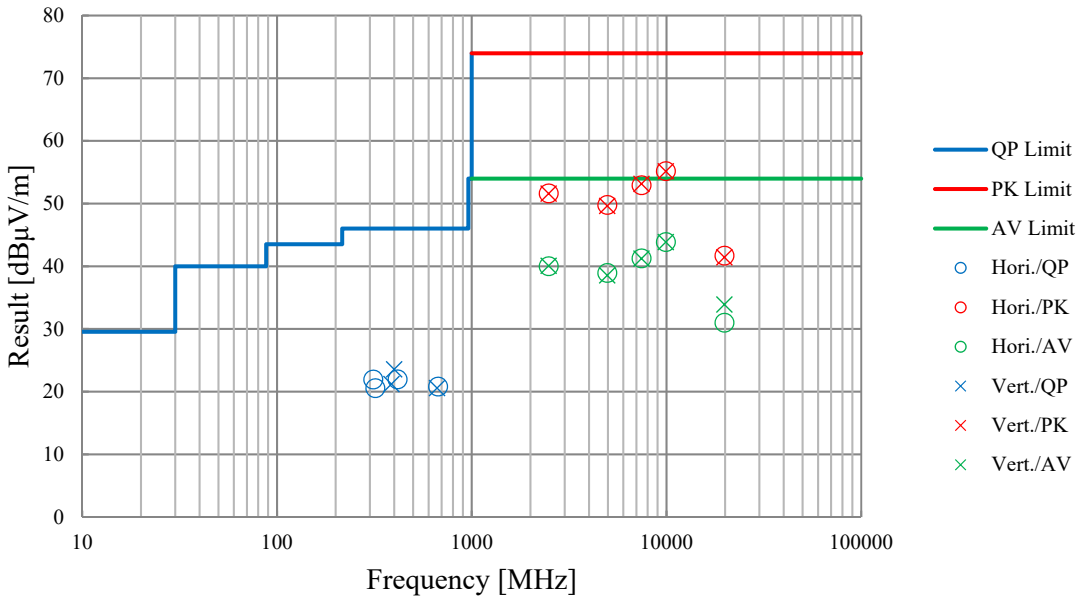


Trace Green : Peak Plot
Trace Purple : Average Plot

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

Radiated Spurious Emission
(Plot data, Worst case)

Report No.	12563995S-A-R1		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	No.2	No.2	No.1
Date	October 17, 2018	October 15, 2018	October 18, 2018
Temperature / Humidity	24 deg. C / 49 % RH	24 deg. C / 51 % RH	23 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
	(30 MHz -1 GHz)	(1 GHz -13 GHz)	(13 GHz -26.5 GHz)
Mode	Tx, Hopping Off, 3DH5 2480 MHz		



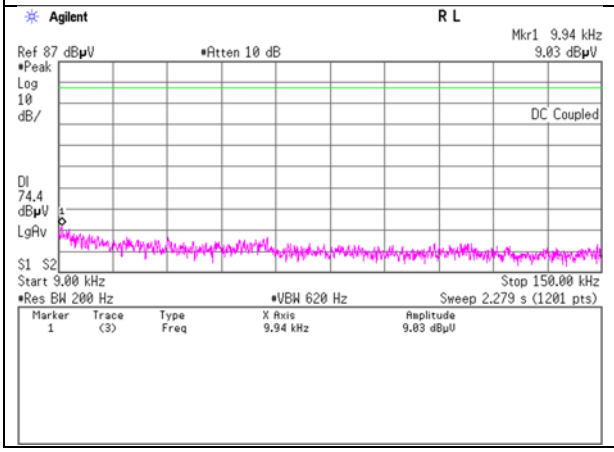
*These plots data contains sufficient number to show the trend of characteristic features for EUT.

Conducted Spurious Emission

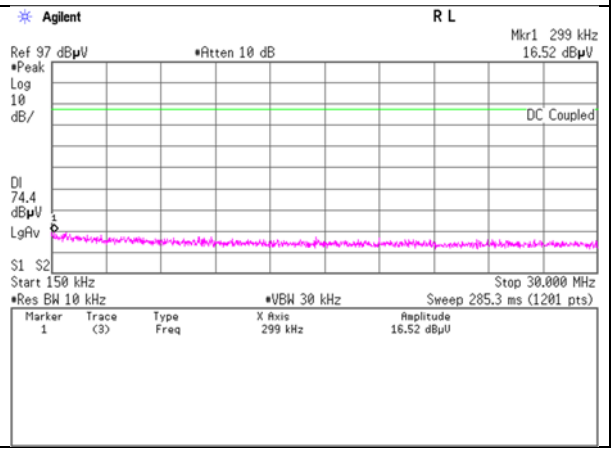
Report No.	12563995S-A-R1
Test place	Shonan EMC Lab. No.2 Shielded Room
Date	October 13, 2018
Temperature / Humidity	24 deg. C / 35 % RH
Engineer	Makoto Hosaka
Mode	Tx, Hopping Off, DH5

2402 MHz

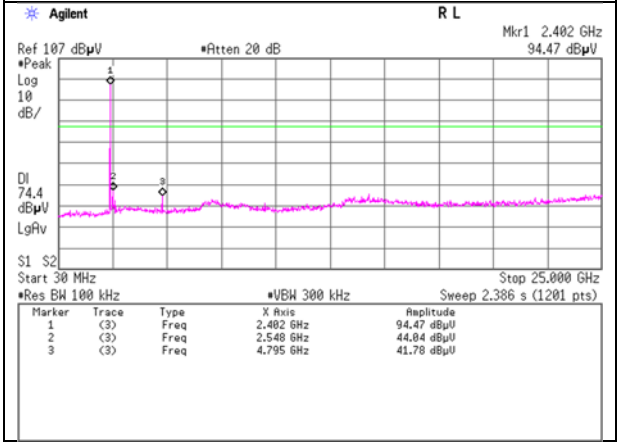
9 kHz - 150 kHz



150 kHz - 30 MHz



30 MHz - 25 GHz

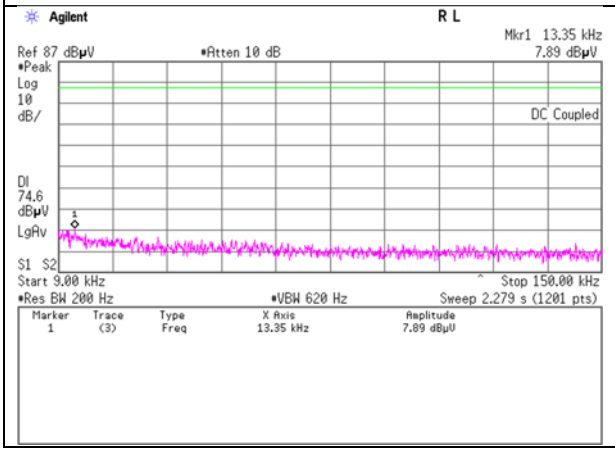


Conducted Spurious Emission

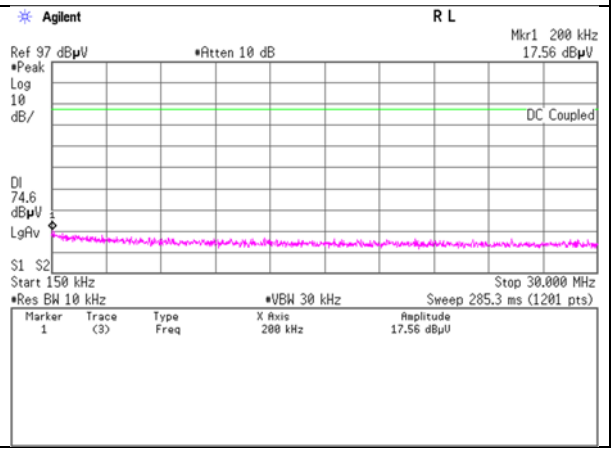
Report No.	12563995S-A-R1
Test place	Shonan EMC Lab. No.2 Shielded Room
Date	October 13, 2018
Temperature / Humidity	24 deg. C / 35 % RH
Engineer	Makoto Hosaka
Mode	Tx, Hopping Off, DH5

2441 MHz

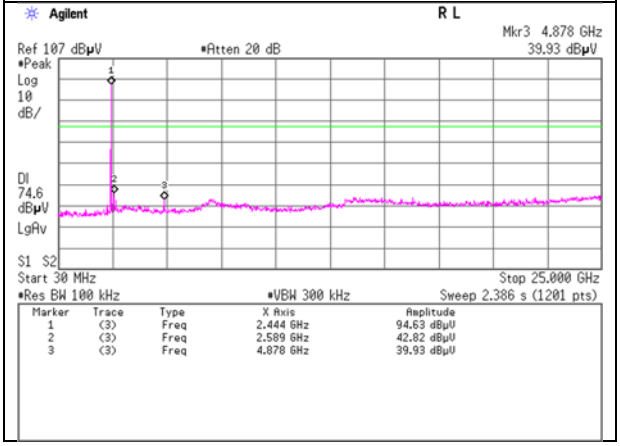
9 kHz – 150 kHz



150 kHz – 30 MHz



30 MHz – 25 GHz

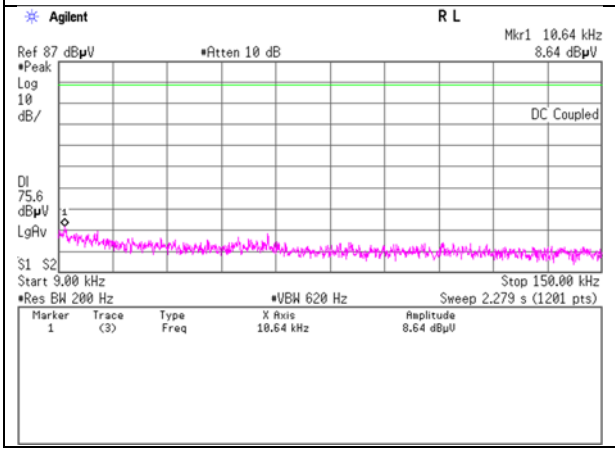


Conducted Spurious Emission

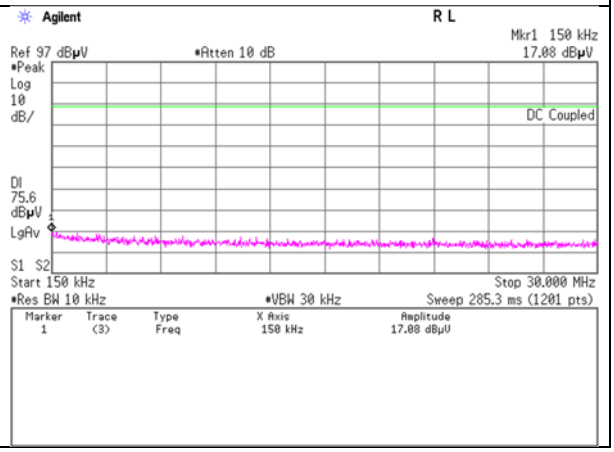
Report No.	12563995S-A-R1
Test place	Shonan EMC Lab. No.2 Shielded Room
Date	October 13, 2018
Temperature / Humidity	24 deg. C / 35 % RH
Engineer	Makoto Hosaka
Mode	Tx, Hopping Off, DH5

2480 MHz

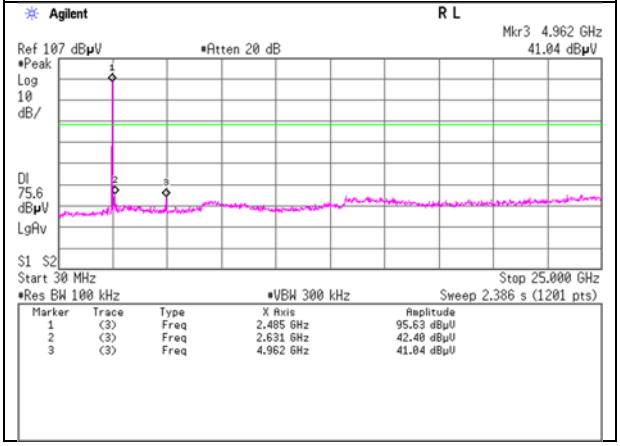
9 kHz – 150 kHz



150 kHz – 30 MHz



30 MHz – 25 GHz

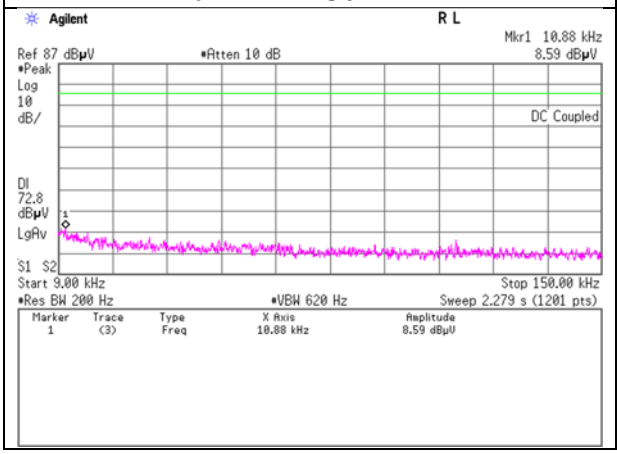


Conducted Spurious Emission

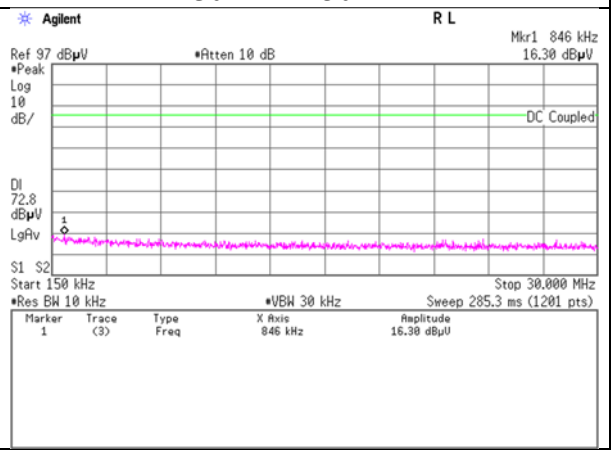
Report No.	12563995S-A-R1
Test place	Shonan EMC Lab. No.2 Shielded Room
Date	October 13, 2018
Temperature / Humidity	24 deg. C / 35 % RH
Engineer	Makoto Hosaka
Mode	Tx, Hopping Off, 3DH5

2402 MHz

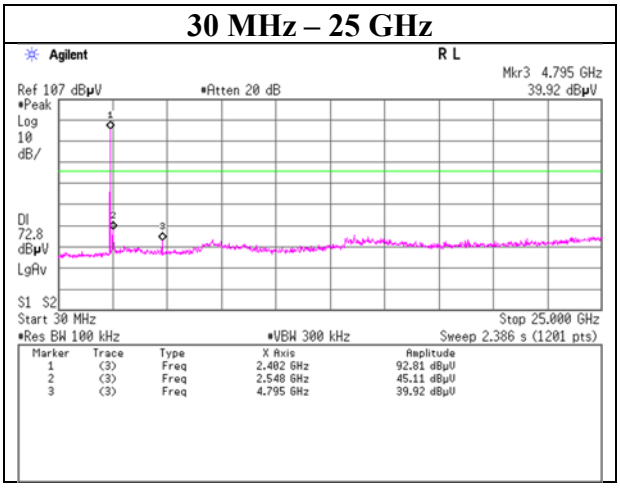
9 kHz – 150 kHz



150 kHz – 30 MHz



30 MHz – 25 GHz

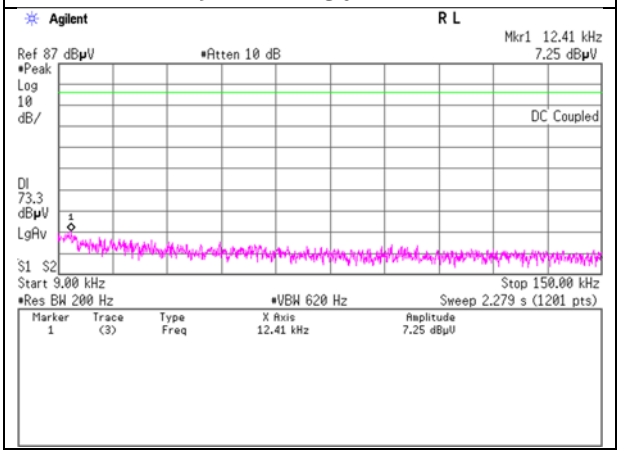


Conducted Spurious Emission

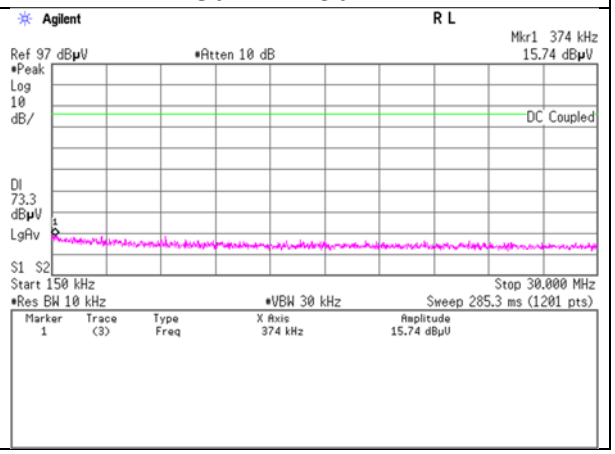
Report No.	12563995S-A-R1
Test place	Shonan EMC Lab. No.2 Shielded Room
Date	October 13, 2018
Temperature / Humidity	24 deg. C / 35 % RH
Engineer	Makoto Hosaka
Mode	Tx, Hopping Off, 3DH5

2441 MHz

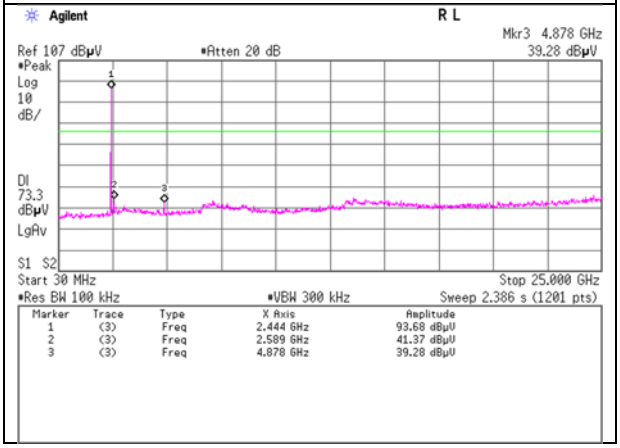
9 kHz - 150 kHz



150 kHz - 30 MHz



30 MHz - 25 GHz

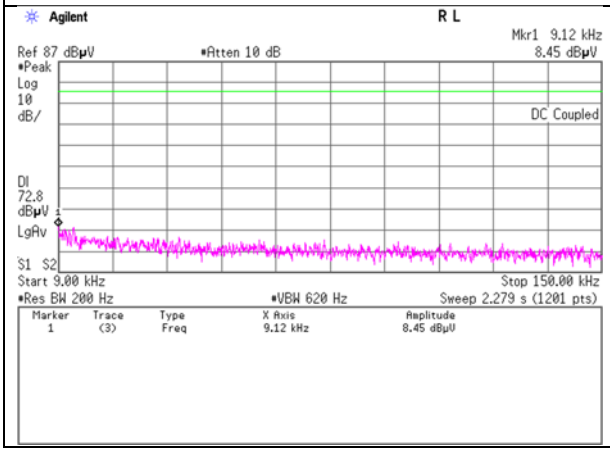


Conducted Spurious Emission

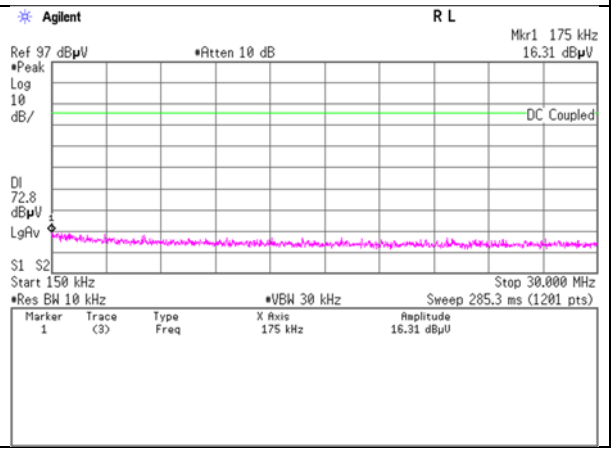
Report No.	12563995S-A-R1
Test place	Shonan EMC Lab. No.2 Shielded Room
Date	October 13, 2018
Temperature / Humidity	24 deg. C / 35 % RH
Engineer	Makoto Hosaka
Mode	Tx, Hopping Off, 3DH5

2480 MHz

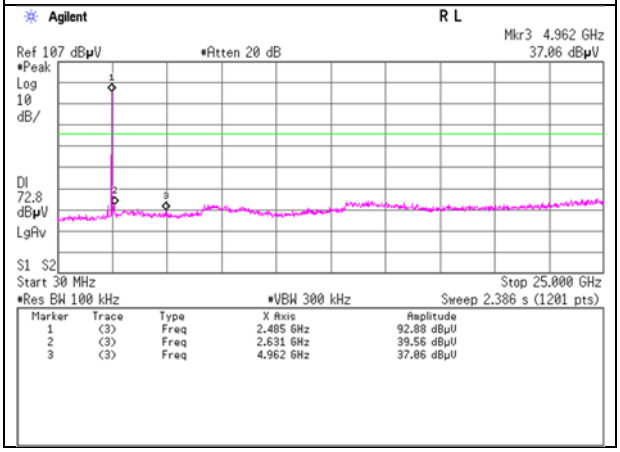
9 kHz - 150 kHz



150 kHz - 30 MHz



30 MHz - 25 GHz

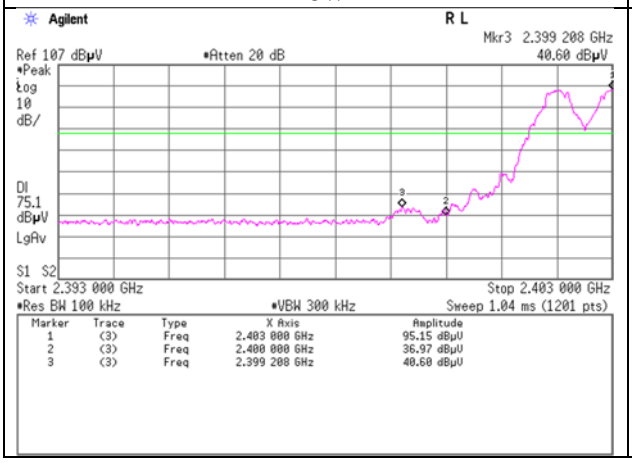


Conducted Emission Band Edge compliance

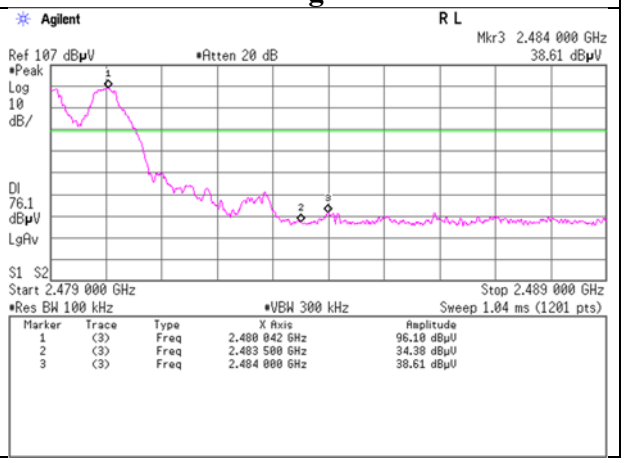
Report No.	12563995S-A-R1
Test place	Shonan EMC Lab. No.2 Shielded Room
Date	October 13, 2018
Temperature / Humidity	24 deg. C / 35 % RH
Engineer	Makoto Hosaka
Mode	Tx DH5

Hopping On

Low

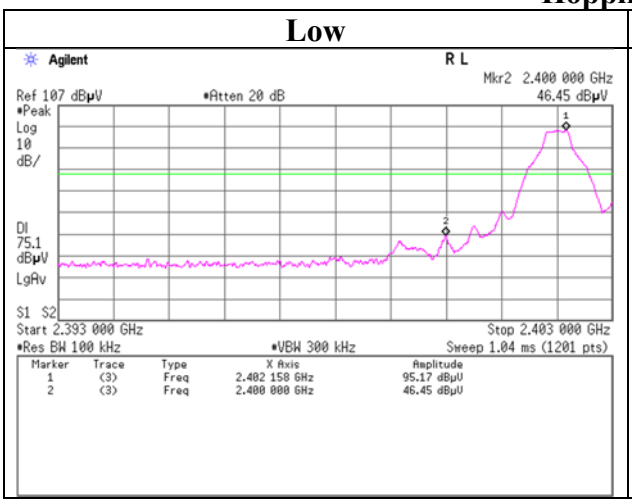


High

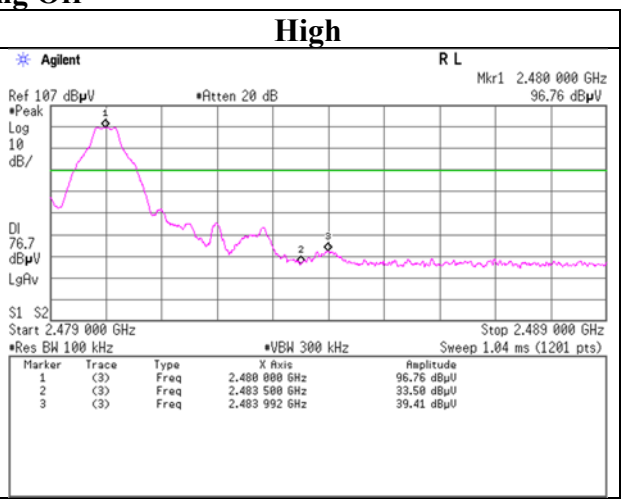


Hopping Off

Low



High

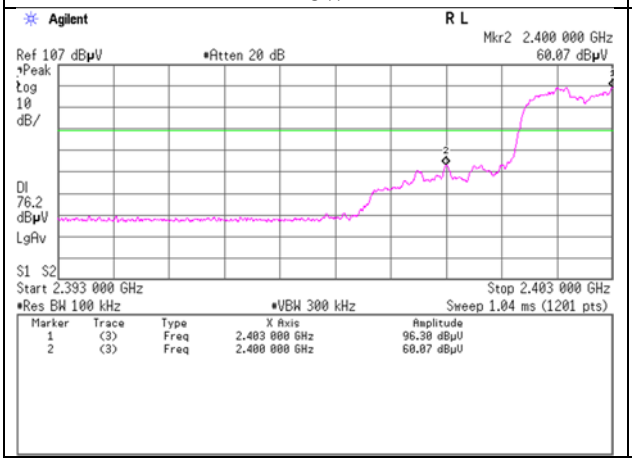


Conducted Emission Band Edge compliance

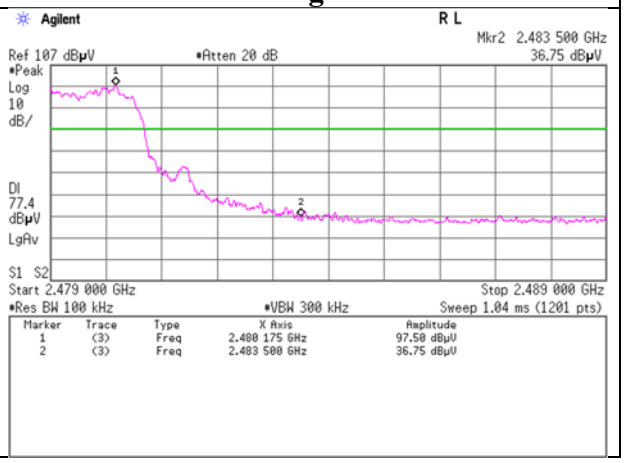
Report No.	12563995S-A-R1
Test place	Shonan EMC Lab. No.2 Shielded Room
Date	October 13, 2018
Temperature / Humidity	24 deg. C / 35 % RH
Engineer	Makoto Hosaka
Mode	Tx 3DH5

Hopping On

Low

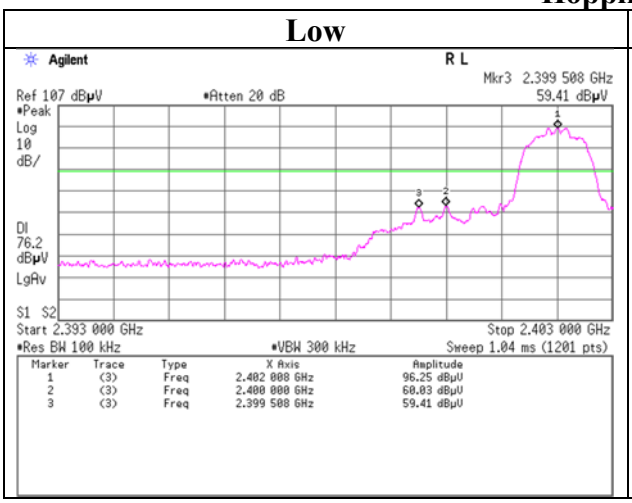


High

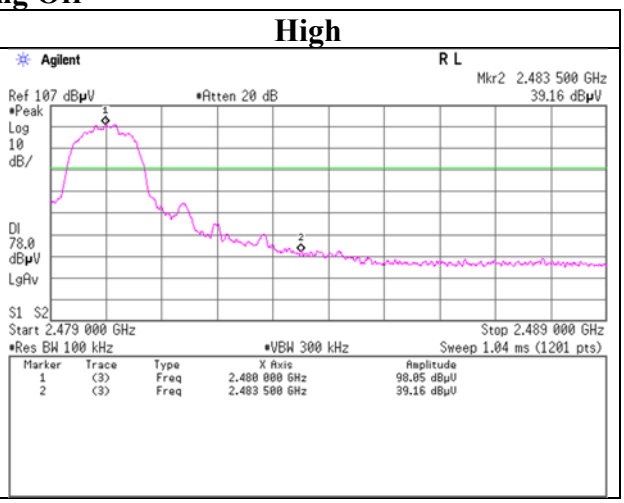


Hopping Off

Low



High



APPENDIX 2: Test instruments

Test Instruments (1 / 2)

Local ID	Test Name	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Calibration Due Date	Calibration Interval (Month)
SAT10-15	AT	160493	Attenuator	Weinschel Corp.	54A-10	83406	2017/12/8	2018/12/31	12
SCC-G14	AT	145175	Coaxial Cable	Suhner	SUCOFLEX 102	31600/2	2018/3/19	2019/3/31	12
SOS-04	AT	146292	Humidity Indicator	A&D	AD-5681	4061512	2017/12/21	2018/12/31	12
SPM-07	AT	146247	Power Meter	AGILENT	8990B	MY51002702	2018/7/13	2019/7/31	12
SPSS-04	AT	146310	Power sensor	AGILENT	N1923A	MY53260009	2018/7/13	2019/7/31	12
SRENT-15	AT	160899	Spectrum Analyzer	AGILENT (KEYSIGHT)	E4440A	MY46185516	2017/12/26	2018/12/31	12
COTS-SEMI-1	RE	144865	EMI Software	TSJ	TEPTO-DV(RE,CE,RFI,MF)	-	-	-	-
KJM-09	RE	145929	Measure	KOMELON	KMC-36	-	-	-	-
SAEC-01 (SVSWR)	RE	145561	Semi-Anechoic Chamber	TDK	SAEC-01 (SVSWR)	1	2018/7/19	2019/7/31	12
SAEC-02 (NSA)	RE	145563	Semi-Anechoic Chamber	TDK	SAEC-02 (NSA)	2	2018/5/31	2019/5/31	12
SAEC-02 (SVSWR)	RE	145598	Semi-Anechoic Chamber	TDK	SAEC-02 (SVSWR)	2	2018/7/15	2019/7/31	12
SAF-02	RE	145004	Pre Amplifier	SONOMA	310N	290212	2018/2/16	2019/2/28	12
SAF-04	RE	145127	Pre Amplifier	Toyo Corporation	TPA0118-36	2072554	2018/6/26	2019/6/30	12
SAF-05	RE	145128	Pre Amplifier	Toyo Corporation	TPA0118-36	1440490	2018/2/15	2019/2/28	12
SAF-08	RE	145007	Pre Amplifier	Toyo Corporation	HAP18-26W	19	2018/3/27	2019/3/31	12
SAT10-06	RE	145137	Attenuator	AGILENT	8493C-010	74865	2017/11/22	2018/11/30	12
SAT3-11	RE	150921	Attenuator	JFW	50HF-003N	-	2018/2/22	2019/2/28	12
SAT6-02	RE	145045	Attenuator	JFW	50HF-006N	-	2018/2/16	2019/2/28	12
SBA-02	RE	145022	Biconical Antenna	Schwarzbeck	BBA9106	91032665	2018/6/5	2019/6/30	12
SCC-B1/B3/B5/B7/B8/B13/SRSE-02	RE	144975	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141P	-/0901-270(RF Selector)	2018/4/9	2019/4/30	12
SCC-B2/B4/B6/B7/B8/B13/SRSE-02	RE	144976	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/141P	-/0901-270(RF Selector)	2018/4/7	2019/4/30	12
SCC-G05	RE	145039	Coaxial Cable	Junkosha	J12J102207-00	APR-30-15-037	2018/1/29	2019/1/31	12
SCC-G22	RE	145180	Coaxial Cable	Suhner	SUCOFLEX 104	296199/4	2018/5/11	2019/5/31	12
SCC-G33	RE	145184	Coaxial Cable	Junkosha	MWX241-01000KMSKMS	-	2018/4/20	2019/4/30	12
SCC-G40	RE	166491	Coaxial Cable	Junkosha	MWX221-01000NFSNMS/B	1612S005	2018/1/29	2019/1/31	12
SCC-G43	RE	156380	Coaxial Cable	HUBER+SUNER	SUCOFLEX_104_E	SN MY 13406/4E	2018/7/10	2019/7/31	12
SCC-G44	RE	168300	Coaxial Cable	HUBER+SUNER	SUCOFLEX 104	800070/4A	2018/3/28	2019/3/31	12

Test Instruments (2 / 2)

Local ID	Test Name	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Calibration Due Date	Calibration Interval (Month)
SCC-G45	RE	168301	Coaxial Cable	HUBER+SUNER	SUCOFLEX 102 E	800137/2EA	2018/3/28	2019/3/31	12
SFL-18	RE	145305	Highpass Filter	MICRO-TRONICS	HPM50111	119	2018/4/20	2019/4/30	12
SHA-01	RE	145383	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-725	2018/7/23	2019/7/31	12
SHA-02	RE	145384	Horn Antenna	Schwarzbeck	BBHA9120D	9120D-726	2018/7/23	2019/7/31	12
SHA-04	RE	145512	Horn Antenna	ETS LINDGREN	Sep-60	LM3640	2018/7/23	2019/7/31	12
SJM-09	RE	145336	Measure	PROMART	SEN1935	-	-	-	-
SLA-06	RE	145528	Logperiodic Antenna	Schwarzbeck	VUSLP9111B	195	2018/6/5	2019/6/30	12
SOS-01	RE	146316	Humidity Indicator	A&D	AD-5681	4062555	2017/10/30	2018/10/31 *1)	12
SOS-03	RE	146317	Humidity Indicator	A&D	AD-5681	4063325	2017/10/30	2018/10/31 *1)	12
SSA-02	RE	145800	Spectrum Analyzer	AGILENT	E4448A	MY48250106	2018/3/5	2019/3/31	12
STR-07	RE	146209	Test Receiver	Rohde & Schwarz	ESU26	100484	2018/9/26	2019/9/30	12
STS-01	RE	145792	Digital Hitester	HIOKI	3805-50	80997812	2017/10/16	2018/10/31	12
STS-02	RE	145793	Digital Hitester	HIOKI	3805-50	80997819	2018/3/8	2019/3/31	12

***1) This test equipment was used for the tests before the expiration date of the calibration.**

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: RE: Radiated Emission test
AT: Antenna Terminal Conducted test