



RADIO TEST REPORT

Test Report No. : 13568152S-O-R1

Applicant : KONICA MINOLTA, INC.
Type of EUT : SKR 3000
Model Number of EUT : P-75
FCC ID : YR7SKR3000P7
Test regulation : FCC Part 15 Subpart E: 2021
Test item : Radiated emission test
Test Result : Complied (Refer to SECTION 3.2)

1. This test report shall not be reproduced in full or partial, without the written approval of UL Japan, Inc.
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.
5. This test report must not be used by the customer to claim product certification, approval, or endorsement by the A2LA accreditation body.
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. The information provided from the customer for this report is identified in SECTION 1.
10. This report is a revised version of 13568152S-O. 13568152S-O is replaced with this report.

Date of test: January 5 to 12, 2021

Representative test engineer: *Y. Murakami*
Yosuke Murakami
Engineer

Approved by: *T. Imamura*
Toyokazu Imamura
Leader



CERTIFICATE 1266.03

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

UL Japan, Inc.
Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN
Telephone : +81 463 50 6400
Facsimile : +81 463 50 6401

REVISION HISTORY

Original Test Report No.: 13568152S-O

Revision	Test report No.	Date	Page revised	Contents
- (Original)	13568152S-O	March 1, 2021	-	-
1	13568152S-O-R1	May 26, 2021	6	Update of "Worst margin": Spurious Emission Restricted Band Edge: From "6.4 dB" to "6.6 dB"
			13	Correction of formula for 1 GHz - 10 GHz: From "Distance Factor: $20 \times \log(3.77 \text{ m} / 3.0 \text{ m}) = 1.99 \text{ dB}$ * Test Distance: $(3 + \text{SVSWR Volume} / 2) - r = 3.77 \text{ m}$ SVSWR Volume : 2.0 m (SVSWR Volume has been calibrated based on CISPR 16-1- 4.) $r = 0.19 \text{ m}$ " to "Distance Factor: $20 \times \log(3.68 \text{ m} / 3.0 \text{ m}) = 1.77 \text{ dB}$ * Test Distance: $(3 + \text{SVSWR Volume} / 2) - r = 3.68 \text{ m}$ SVSWR Volume : 2.0 m (SVSWR Volume has been calibrated based on CISPR 16-1- 4.) $r = 0.32 \text{ m}$ " Correction of Antenna polarization: From "Spurious (1 GHz -2.8 GHz)" to "Spurious (1 GHz -6.4 GHz)", From "Spurious (2.8 GHz -10 GHz)" to "Spurious (6.4 GHz -10 GHz)",
			14,16-17, 19,21-22, 24,26-27, 29,31-32, 34,36-37, 39,41-42, 44,46-47, 49,51-52, 54,56	Replacement of Test data by correction of Distance Factor for 1 GHz - 10 GHz: From " $20 \times \log(3.77 \text{ m} / 3.0 \text{ m}) = 1.99 \text{ dB}$ " to " $20 \times \log(3.68 \text{ m} / 3.0 \text{ m}) = 1.77 \text{ dB}$ "

UL Japan, Inc.

Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Reference: Abbreviations (Including words undescribed in this report)

A2LA	The American Association for Laboratory Accreditation	MCS	Modulation and Coding Scheme
AC	Alternating Current	MRA	Mutual Recognition Arrangement
AFH	Adaptive Frequency Hopping	N/A	Not Applicable
AM	Amplitude Modulation	NIST	National Institute of Standards and Technology
Amp, AMP	Amplifier	NS	No signal detect.
ANSI	American National Standards Institute	NSA	Normalized Site Attenuation
Ant, ANT	Antenna	NVLAP	National Voluntary Laboratory Accreditation Program
AP	Access Point	OBW	Occupied Band Width
ASK	Amplitude Shift Keying	OFDM	Orthogonal Frequency Division Multiplexing
Atten., ATT	Attenuator	P/M	Power meter
AV	Average	PCB	Printed Circuit Board
BPSK	Binary Phase-Shift Keying	PER	Packet Error Rate
BR	Bluetooth Basic Rate	PHY	Physical Layer
BT	Bluetooth	PK	Peak
BT LE	Bluetooth Low Energy	PN	Pseudo random Noise
BW	BandWidth	PRBS	Pseudo-Random Bit Sequence
Cal Int	Calibration Interval	PSD	Power Spectral Density
CCK	Complementary Code Keying	QAM	Quadrature Amplitude Modulation
Ch., CH	Channel	QP	Quasi-Peak
CISPR	Comite International Special des Perturbations Radioelectriques	QPSK	Quadri-Phase Shift Keying
CW	Continuous Wave	RBW	Resolution Band Width
DBPSK	Differential BPSK	RDS	Radio Data System
DC	Direct Current	RE	Radio Equipment
D-factor	Distance factor	RF	Radio Frequency
DFS	Dynamic Frequency Selection	RMS	Root Mean Square
DQPSK	Differential QPSK	RSS	Radio Standards Specifications
DSSS	Direct Sequence Spread Spectrum	Rx	Receiving
EDR	Enhanced Data Rate	SA, S/A	Spectrum Analyzer
EIRP, e.i.r.p.	Equivalent Isotropically Radiated Power	SG	Signal Generator
EMC	ElectroMagnetic Compatibility	SVSWR	Site-Voltage Standing Wave Ratio
EMI	ElectroMagnetic Interference	TR	Test Receiver
EN	European Norm	Tx	Transmitting
ERP, e.r.p.	Effective Radiated Power	VBW	Video BandWidth
EU	European Union	Vert.	Vertical
EUT	Equipment Under Test	WLAN	Wireless LAN
Fac.	Factor		
FCC	Federal Communications Commission		
FHSS	Frequency Hopping Spread Spectrum		
FM	Frequency Modulation		
Freq.	Frequency		
FSK	Frequency Shift Keying		
GFSK	Gaussian Frequency-Shift Keying		
GNSS	Global Navigation Satellite System		
GPS	Global Positioning System		
Hori.	Horizontal		
ICES	Interference-Causing Equipment Standard		
IEC	International Electrotechnical Commission		
IEEE	Institute of Electrical and Electronics Engineers		
IF	Intermediate Frequency		
ILAC	International Laboratory Accreditation Conference		
ISED	Innovation, Science and Economic Development Canada		
ISO	International Organization for Standardization		
JAB	Japan Accreditation Board		
LAN	Local Area Network		
LIMS	Laboratory Information Management System		

UL Japan, Inc.

Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

CONTENTS	PAGE
SECTION 1: Customer information.....	5
SECTION 2: Equipment under test (EUT).....	5
SECTION 3: Test specification, procedures & results.....	6
SECTION 4: Operation of EUT during testing	9
SECTION 5: Radiated Spurious Emission and Band Edge Compliance	11
APPENDIX 1: Test data	14
Radiated Spurious Emission	14
APPENDIX 2: Test instruments	59
APPENDIX 3: Photographs of test setup	60
Radiated Spurious Emission	60
Worst Case Position	61

SECTION 1: Customer information

Company Name : KONICA MINOLTA, INC.
Address : 1, Sakura-machi, Hino-shi, Tokyo, Japan 191-8511
Telephone Number : +81-42-589-8429
Facsimile Number : +81-42-589-8053
Contact Person : Yukihiro Niekawa

The information provided from the customer is as follows;

- Applicant, Type of EUT, Model Number of EUT, FCC ID on the cover and other relevant pages
- Operating/Test Mode(s) (Mode(s)) on all the relevant pages
- SECTION 1: Customer information
- SECTION 2: Equipment under test (EUT) other than the Receipt Date
- SECTION 4: Operation of EUT during testing

* The laboratory is exempted from liability of any test results affected from the above information in SECTION 2 and 4.

SECTION 2: Equipment under test (EUT)

2.1 Identification of EUT

Type : SKR 3000
Model Number : P-75
Serial Number : Refer to SECTION 4.2
Rating : DC 15 V
Receipt Date : November 24, 2020
Country of Mass-production : Japan
Condition : Production prototype
(Not for Sale: This sample is equivalent to mass-produced items.)
Modification : No Modification by the test lab.

2.2 Product Description

Model: P-75 (referred to as the EUT in this report) is SKR 3000.

Clock frequency(ies) in the system : 532 MHz

Radio Specification:

Equipment Type : Transceiver

Type of radio	IEEE802.11b	IEEE802.11g	IEEE802.11a	IEEE802.11n (20 M band)	IEEE802.11n (40 M band)
Frequency of operation	2412 MHz-2462 MHz	2412 MHz-2462 MHz	5180 MHz-5240 MHz 5260 MHz-5320 MHz 5500 MHz-5700 MHz 5745 MHz-5825 MHz	2412 MHz-2462 MHz 5180 MHz-5240 MHz 5260 MHz-5320 MHz 5500 MHz-5700 MHz 5745 MHz-5825 MHz	5190 MHz-5230 MHz 5270 MHz-5310 MHz 5510 MHz-5670 MHz 5755 MHz-5795 MHz
Type of modulation	DSSS (CCK, DQPSK, DBPSK)	OFDM-CCK (64QAM, 16QAM, QPSK, BPSK)	OFDM (64QAM, 16QAM, QPSK, BPSK)		OFDM (BPSK, QPSK, 16QAM, 64QAM)
Channel spacing	5 MHz		20 MHz	2.4 GHz band: 5 MHz 5 GHz band: 20 MHz	40 MHz
Antenna type	[Main Antenna (chain 0) /Sub Antenna (chain 1)] PIFA (Planar Inverted F Antenna)				
Antenna Gain	Main Antenna (chain 0) -1.95 dBi (2.4 GHz Band), -0.98 dBi (5 GHz Band) Sub Antenna (chain 1) -2.21 dBi (2.4 GHz Band), -1.54 dBi (5 GHz Band)				
Antenna Connector type	[Main Antenna (chain 0) /Sub Antenna (chain 1)] Connector; PCB side: U.FL, Antenna side: soldered				

UL Japan, Inc.

Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification : FCC Part 15 Subpart E
FCC Part 15 final revised on January 12, 2021 and effective February 11, 2021

Title : FCC 47 CFR Part 15 Radio Frequency Device Subpart E
Unlicensed National Information Infrastructure Devices
Section 15.407 General technical requirements

* The revisions do not affect the test result conducted before its effective date.

* The customer has declared that the EUT has complies with FCC Part 15 Subpart B as SDoC.

3.2 Procedures and results

Item	Test Procedure	Specification	Worst margin	Results	Remarks
Conducted Emission	FCC: ANSI C63.10-2013 ISED: RSS-Gen 8.8	FCC: 15.407 (b) (6) / 15.207 ISED: RSS-Gen 8.8	-	N/A	*1)
26 dB Emission Bandwidth	FCC: KDB Publication Number 789033 ISED: -	FCC: 15.407 (a) (1) (2) (3) ISED: -	-	N/A	*2)
Maximum Conducted Output Power	FCC: KDB Publication Number 789033 ISED: -	FCC: 15.407 (a) (1) (2) (3) ISED: RSS-247 6.2.1.1 6.2.2.1 6.2.3.1 6.2.4.1	-	N/A	*2)
Maximum Power Spectral Density	FCC: KDB Publication Number 789033 ISED: -	FCC : 15.407 (a) (1) (2) (3) ISED: RSS-247 6.2.1.1 6.2.2.1 6.2.3.1 6.2.4.1	-	N/A	*2)
Spurious Emission Restricted Band Edge	FCC: ANSI C63.10-2013 KDB Publication Number 789033 ISED: -	FCC: 15.407 (b), 15.205 and 15.209 ISED: RSS-247 6.2.1.2 6.2.2.2 6.2.3.2 6.2.4.2	6.6 dB 5460 MHz AV, Horizontal Tx 11n-40 5510 MHz	Complied a)	Conducted (< 30 MHz) *2) *3)
6 dB Emission Bandwidth	FCC: ANSI C63.10-2013 ISED: -	FCC: 15.407 (e) ISED: RSS-247 6.2.4.1	-	N/A	*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. Wireless LAN does not operate during charging.

*2) For these items, refer to the test report: 13568152S-L. The test was carried out with the same module (SX-SDMAN2) which is installed in the EUT.

*3) Radiated test was selected over 30 MHz based on FCC 15.407 (b) and KDB 789033 D02 G.3.b).

a) Refer to APPENDIX 1 (data of Radiated Spurious Emission).

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.

* For test report(s) referred in this report, the latest version (including any revisions) is always referred.

FCC Part 15.31 (e)

This EUT provides the stable voltage constantly to RF part regardless of input voltage. Therefore, this EUT complies with the requirement.

FCC Part 15.203 Antenna requirement

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

UL Japan, Inc.

Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

3.3 Addition to standard

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

3.4 Uncertainty

There is no applicable rule of uncertainty in this applied standard. Therefore, the results are derived depending on whether or not laboratory uncertainty is applied.

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. 4,5,6,8 SR
Conducted emission (AC Mains) LISN	150 kHz-30 MHz	2.6 dB	2.6 dB	2.56dB	2.9 dB
Radiated emission (Measurement distance: 3 m)	9 kHz-30 MHz	3.0 dB	2.7 dB	2.7 dB	-
	30 MHz-200 MHz	4.6 dB	4.6 dB	4.6 dB	-
	200 MHz-1 GHz	6.0 dB	6.0 dB	6.0 dB	-
	1 GHz-6 GHz	4.8 dB	4.8 dB	4.8 dB	-
	6 GHz-18 GHz	5.4 dB	5.4 dB	5.4 dB	-
	18 GHz-40 GHz	5.3 dB	5.3 dB	5.3 dB	-
Radiated emission (Measurement distance: 1 m)	1 GHz-18 GHz	5.7 dB	5.7 dB	5.7 dB	-
	18 GHz-40 GHz	5.6 dB	5.6 dB	5.6 dB	-

SAC=Semi-Anechoic Chamber

SR= Shielded Room is applied besides radiated emission

3.5 Test Location

UL Japan, Inc. Shonan EMC Lab.

1-22-3, Megumigaoka, Hiratsuka-shi, Kanagawa-ken 259-1220 JAPAN

Telephone: +81 463 50 6400, Facsimile: +81 463 50 6401

A2LA Certificate Number: 1266.03

(FCC test firm registration number: 626366, ISED lab company number: 2973D / CAB identifier: JP0001)

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 EUT during testing

4.1 Operating Mode(s)

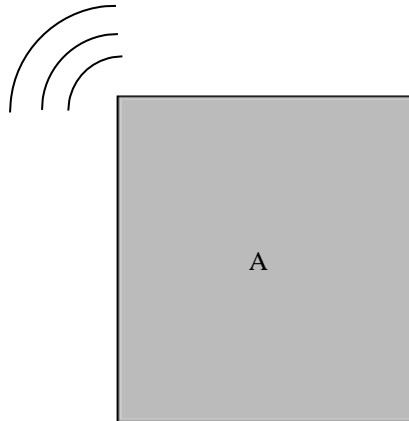
Test operating mode was determined as follows according to “Section 1 of 6 802.11 a/b/g/n testing - Managing Complex Regulatory Approvals - ” of TCB Council Workshop October 2009.

Mode	Remarks*
IEEE 802.11a (11a)	18 Mbps, PN9
IEEE 802.11n MIMO 20 MHz BW (11n-20)	MCS 11 (Long GI), PN9
IEEE 802.11n SISO 20 MHz BW (11n-20)	MCS 2 (Long GI), PN9
IEEE 802.11n MIMO 40 MHz BW (11n-40)	MCS 10 (Long GI), PN9
IEEE 802.11n SISO 40 MHz BW (11n-40)	MCS 2 (Long GI), PN9
*The worst antenna (Ant: x) and condition was determined based on the test result of Maximum Conducted Output Power. (Report No. 13568152S-L)	
*Power of the EUT was set by the software as follows; Power settings: 8 dBm Software: Wireless authentication test tool: Version 1.3.0.3, Date: 2017.4.18 (Storage location: Driven by connected PC)	
*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.	

*The details of Operation mode(s)

Test Item	Operating Mode	Tested Antenna *2)	Tested Frequency			
			Lower Band	Middle Band	Additional Band	Upper Band
Radiated Spurious Emission (Below 1 GHz)	11n-20 (MIMO) *1)	Main + Sub	5180 MHz	-	-	-
Radiated Spurious Emission (Above 1 GHz)	11a	Sub	5180 MHz 5240 MHz	5320 MHz	5500 MHz 5580 MHz 5700 MHz	5745 MHz 5785 MHz 5825 MHz
	11n-20 (MIMO)	Main + Sub	5180 MHz 5240 MHz	5320 MHz	5500 MHz 5580 MHz 5700 MHz	5745 MHz 5785 MHz 5825 MHz
	11n-40(MIMO)	Main + Sub	5190 MHz 5230 MHz	5310 MHz	5510 MHz 5550 MHz 5670 MHz	5755 MHz 5795 MHz
*1) The mode was tested as a representative, because it had the highest power at antenna terminal test.						
*2) The test was performed with the antenna that had higher power as a representative.						

4.2 Configuration and peripherals



Description of EUT

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	SKR 3000	P-75	A9YH-S003	KONICA MINOLTA Inc.	EUT

SECTION 5: Radiated Spurious Emission and Band Edge Compliance

Test Procedure

< Below 1GHz >

EUT was placed on a urethane platform of nominal size, 1.0 m by 1.5 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.

< Above 1GHz >

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 m and 4 m and EUT was rotated a full revolution in order to obtain the maximum value of the electric field strength.

Test antenna was aimed at the EUT for receiving the maximum signal and always kept within the illumination area of the 3 dB beamwidth of the antenna.

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.

< Below 1GHz >

The result also satisfied with the general limits specified in section 15.209 (a).

< Above 1GHz >

Inside of restricted bands (Section 15.205):

Apply to limit in the Section 15.209 (a).

Outside of the restricted bands:

Apply to limit 68.2 dBuV/m, 3 m (-27 dBm e.i.r.p.*) in the Section 15.407 (b) (1) (2) (3).

For W58 Bandedge

-27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge in the section 15.407(b)(4)(i).

Restricted band edge:

Apply to limit in the Section 15.209 (a).

Since this limit is severer than the limit of the inside of restricted bands.

*Electric field strength to e.i.r.p. conversion:

$$E = \frac{1000000 \sqrt{30P}}{3} \text{ (uV/m)} \quad :P \text{ is the e.i.r.p. (Watts)}$$

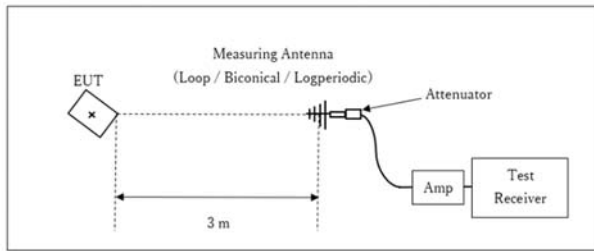
Test Antennas are used as below;

Frequency	30 MHz to 200 MHz	200 MHz to 1 GHz	Above 1 GHz
Antenna Type	Biconical	Logperiodic	Horn

Frequency	Below 1 GHz	Above 1 GHz	
Instrument used	Test Receiver	Spectrum Analyzer	
Detector	QP	Peak	Average
IF Bandwidth	BW: 120 kHz	RBW: 1 MHz VBW: 3 MHz	Method VB *1) RBW: 1 MHz VBW: 1/T MHz (T: Burst length, refer to Appendix [Report No. 13568152S-L]) Detector: Peak Trace mode: Max hold

*1) The test method was also referred to KDB 789033 D02 General UNII Test Procedures New Rules v02r01 "Guidelines for Compliance Testing of Unlicensed National Information Infrastructure (U-NII) Devices Part 15, Subpart E".

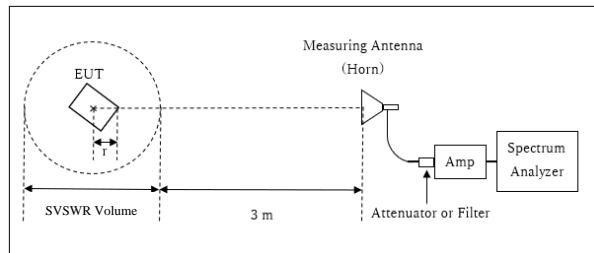
Below 1 GHz



× : Center of turn table

Test Distance: 3 m

1 GHz - 10 GHz

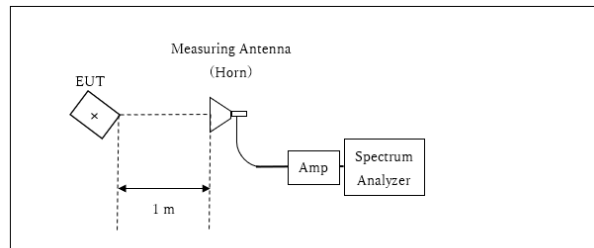


r : Radius of an outer periphery of EUT
 × : Center of turn table

Distance Factor: $20 \times \log(3.68 \text{ m} / 3.0 \text{ m}) = 1.77 \text{ dB}$
 * Test Distance: $(3 + \text{SVSWR Volume} / 2) - r = 3.68 \text{ m}$

SVSWR Volume : 2.0 m
 (SVSWR Volume has been calibrated based on CISPR 16-1-4.)
 $r = 0.32 \text{ m}$

10 GHz - 40 GHz



× : Center of turn table

Distance Factor: $20 \times \log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$
 *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	Carrier	Spurious (30 MHz - 1 GHz)	Spurious (1 GHz - 6.4 GHz)	Spurious (6.4 GHz - 10 GHz)	Spurious (10 GHz - 18 GHz)	Spurious (18 GHz - 26.5 GHz)	Spurious (26.5 GHz - 40 GHz)
Horizontal	Z	Y	Z	X	X	X	X
Vertical	X	Z	X	X	X	X	X

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

Measurement range : 30 MHz - 40 GHz
Test data : APPENDIX
Test result : Pass

APPENDIX 1: Test data

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 10, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	25 deg.C, 31 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Toshinori Yamada	Kenichi Adachi	Toshinori Yamada	Takahiro Kawakami
	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11a 5180 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	5150.000	PK	45.11	32.25	16.76	39.72	1.77	56.17	73.9	17.7	231	81	-
Hori.	15540.000	PK	46.39	39.60	12.67	39.13	-9.54	49.99	73.9	23.9	150	0	-
Hori.	5150.000	AV	34.14	32.25	16.76	39.72	1.77	45.20	53.9	8.7	231	81	VBW : 1.5 kHz
Hori.	15540.000	AV	34.99	39.60	12.67	39.13	-9.54	38.59	53.9	15.3	150	0	VBW : 1.5 kHz
Vert.	5150.000	PK	45.46	32.25	16.76	39.72	1.77	56.52	73.9	17.3	102	7	-
Vert.	15540.000	PK	45.95	39.60	12.67	39.13	-9.54	49.55	73.9	24.3	150	0	-
Vert.	5150.000	AV	34.25	32.25	16.76	39.72	1.77	45.31	53.9	8.5	102	7	VBW : 1.5 kHz
Vert.	15540.000	AV	35.01	39.60	12.67	39.13	-9.54	38.61	53.9	15.2	150	0	VBW : 1.5 kHz

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

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

Distance factor : 1 GHz - 10 GHz : 20log (3.68 m/ 3.0 m) = 1.77 dB

10 GHz - 40 GHz : 20log (1.0 m/ 3.0 m) = -9.54 dB

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10360.000	PK	45.74	36.57	9.99	39.88	-9.54	42.88	-52.35	-27.0	25.3	150	0	-
Vert.	10360.000	PK	45.86	36.57	9.99	39.88	-9.54	43.00	-52.23	-27.0	25.2	150	0	-

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

Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)

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

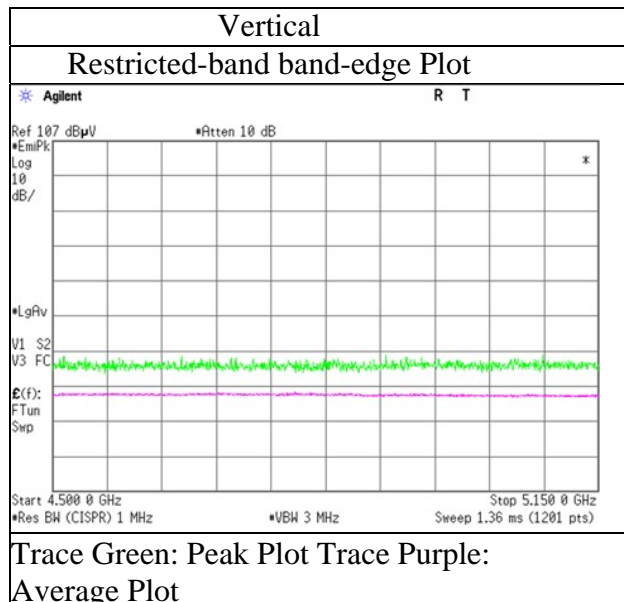
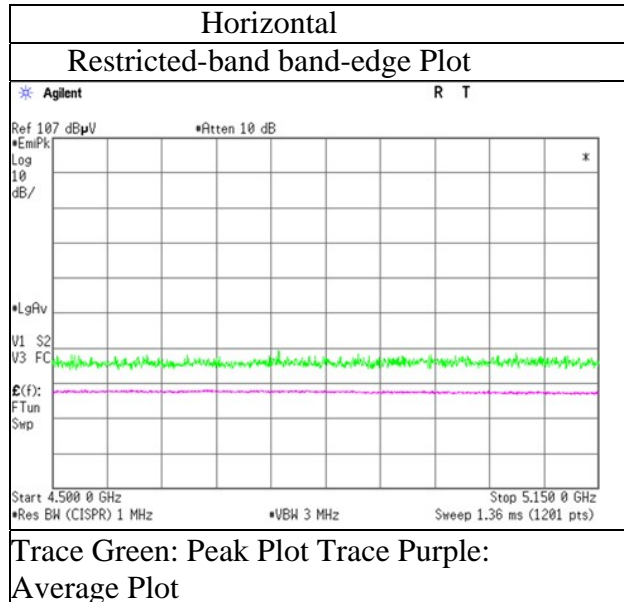
Distance factor : 1 GHz - 10 GHz : 20log (3.68 m/ 3.0 m) = 1.77 dB

10 GHz - 40 GHz : 20log (1.0 m/ 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place
 Semi Anechoic Chamber
 Date
 Temperature / Humidity
 Engineer
 Mode

Shonan EMC Lab.
 1
 January 6, 2021
 21 deg.C, 32 %RH
 Toshinori Yamada
 Tx 11a 5180 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
 Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 10, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	25 deg.C, 31 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Toshinori Yamada	Kenichi Adachi	Toshinori Yamada	Takahiro Kawakami
	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11a 5240 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	15720.000	PK	46.41	39.85	12.65	39.37	-9.54	50.00	73.9	23.9	150	0	-
Hori.	15720.000	AV	34.62	39.85	12.65	39.37	-9.54	38.21	53.9	15.6	150	0	VBW : 1.5 kHz
Vert.	15720.000	PK	45.06	39.85	12.65	39.37	-9.54	48.65	73.9	25.2	150	0	-
Vert.	15720.000	AV	34.68	39.85	12.65	39.37	-9.54	38.27	53.9	15.6	150	0	VBW : 1.5 kHz

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

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

Distance factor : 1 GHz - 10 GHz : $20\log(3.68\text{ m} / 3.0\text{ m}) = 1.77\text{ dB}$

10 GHz - 40 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.54\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10480.000	PK	45.96	36.73	10.03	40.11	-9.54	43.07	-52.16	-27.0	25.1	150	0	-
Vert.	10480.000	PK	45.35	36.73	10.03	40.11	-9.54	42.46	-52.77	-27.0	25.7	150	0	-

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

Result (EIRP [dBm]) = $10 * \text{LOG}((10^{\wedge}(\text{Electric Field Strength [dBuV/m]} / 20)) * 10^{\wedge}(-6) * \text{Distance} : 3 [\text{m}])^{\wedge}2 / 30 * 10^{\wedge}3)$

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

Distance factor : 1 GHz - 10 GHz : $20\log(3.68\text{ m} / 3.0\text{ m}) = 1.77\text{ dB}$

10 GHz - 40 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.54\text{ dB}$

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 10, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	25 deg.C, 31 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Toshinori Yamada	Kenichi Adachi	Toshinori Yamada	Takahiro Kawakami
	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11a 5320 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	5350.000	PK	45.84	31.99	16.91	39.74	1.77	56.77	73.9	17.1	220	88	-
Hori.	10640.000	PK	45.26	37.39	10.12	40.02	-9.54	43.21	73.9	30.6	150	0	-
Hori.	15960.000	PK	45.77	40.19	12.62	39.70	-9.54	49.34	73.9	24.5	150	0	-
Hori.	5350.000	AV	34.68	31.99	16.91	39.74	1.77	45.61	53.9	8.2	220	88	VBW : 1.5 kHz
Hori.	10640.000	AV	34.46	37.39	10.12	40.02	-9.54	32.41	53.9	21.4	150	0	VBW : 1.5 kHz
Hori.	15960.000	AV	34.47	40.19	12.62	39.70	-9.54	38.04	53.9	15.8	150	0	VBW : 1.5 kHz
Vert.	5350.000	PK	46.25	31.99	16.91	39.74	1.77	57.18	73.9	16.7	146	16	-
Vert.	10640.000	PK	45.12	37.39	10.12	40.02	-9.54	43.07	73.9	30.8	150	0	-
Vert.	15960.000	PK	45.87	40.19	12.62	39.70	-9.54	49.44	73.9	24.4	150	0	-
Vert.	5350.000	AV	34.44	31.99	16.91	39.74	1.77	45.37	53.9	8.5	146	16	VBW : 1.5 kHz
Vert.	10640.000	AV	34.62	37.39	10.12	40.02	-9.54	32.57	53.9	21.3	150	0	VBW : 1.5 kHz
Vert.	15960.000	AV	34.42	40.19	12.62	39.70	-9.54	37.99	53.9	15.9	150	0	VBW : 1.5 kHz

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

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

Distance factor : 1 GHz - 10 GHz : $20\log(3.68\text{ m} / 3.0\text{ m}) = 1.77\text{ dB}$

10 GHz - 40 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.54\text{ dB}$

UL Japan, Inc.

Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

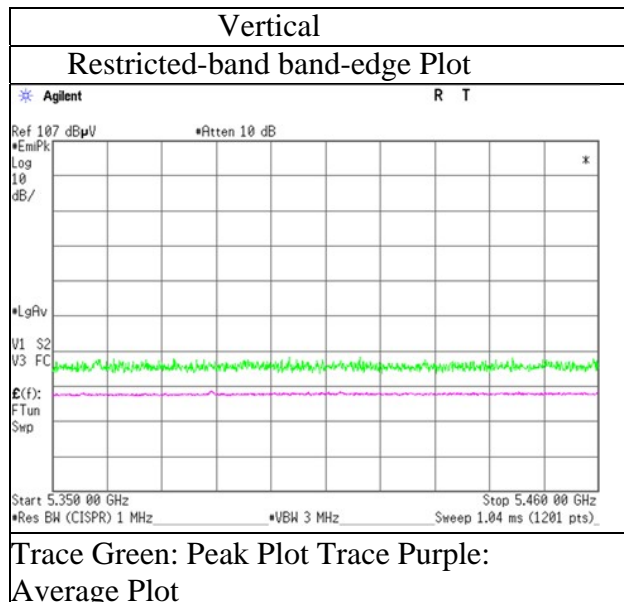
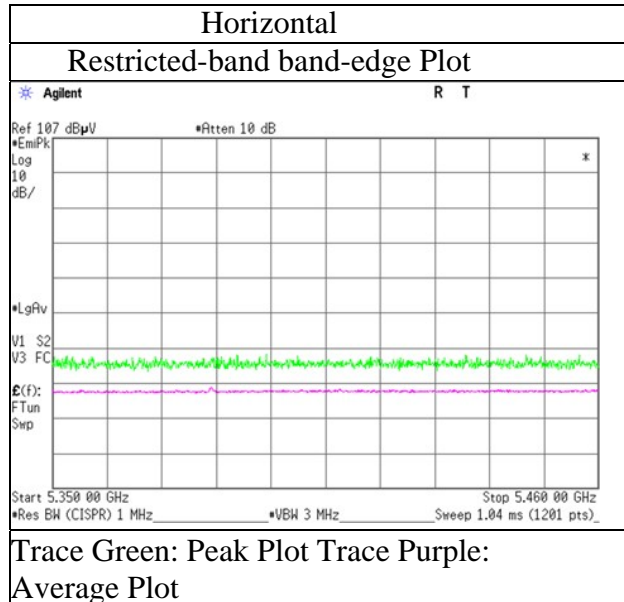
Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Test place
Semi Anechoic Chamber
Date
Temperature / Humidity
Engineer
Mode

Shonan EMC Lab.
1
January 6, 2021
21 deg.C, 32 %RH
Toshinori Yamada
Tx 11a 5320 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 10, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	25 deg.C, 31 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Toshinori Yamada	Kenichi Adachi	Toshinori Yamada	Takahiro Kawakami
	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11a 5500 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	5460.000	PK	46.60	32.22	16.99	39.75	1.77	57.83	73.9	16.0	218	81	-
Hori.	11000.000	PK	46.60	37.63	10.32	39.68	-9.54	45.33	73.9	28.5	150	0	-
Hori.	5460.000	AV	35.25	32.22	16.99	39.75	1.77	46.48	53.9	7.4	218	81	VBW : 1.5 kHz
Hori.	11000.000	AV	34.80	37.63	10.32	39.68	-9.54	33.53	53.9	20.3	150	0	VBW : 1.5 kHz
Vert.	5460.000	PK	46.03	32.22	16.99	39.75	1.77	57.26	73.9	16.6	149	15	-
Vert.	11000.000	PK	46.69	37.63	10.32	39.68	-9.54	45.42	73.9	28.4	150	0	-
Vert.	5460.000	AV	35.09	32.22	16.99	39.75	1.77	46.32	53.9	7.5	149	15	VBW : 1.5 kHz
Vert.	11000.000	AV	34.85	37.63	10.32	39.68	-9.54	33.58	53.9	20.3	150	0	VBW : 1.5 kHz

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

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

Distance factor : 1 GHz - 10 GHz : 20log (3.68 m/ 3.0 m) = 1.77 dB

10 GHz - 40 GHz : 20log (1.0 m/ 3.0 m) = -9.54 dB

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5330.009	PK	46.42	31.94	16.88	39.73	1.77	57.28	-37.95	-27.0	10.9	146	75	-
Hori.	5470.000	PK	45.92	32.24	16.99	39.75	1.77	57.17	-38.06	-27.0	11.0	218	81	-
Hori.	16500.000	PK	46.49	40.10	13.34	40.47	-9.54	49.92	-45.31	-27.0	18.3	150	0	-
Vert.	5329.995	PK	46.16	31.94	16.88	39.73	1.77	57.02	-38.21	-27.0	11.2	147	5	-
Vert.	5470.000	PK	45.85	32.24	16.99	39.75	1.77	57.10	-38.13	-27.0	11.1	149	15	-
Vert.	16500.000	PK	46.72	40.10	13.34	40.47	-9.54	50.15	-45.08	-27.0	18.0	150	0	-

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

Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)

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

Distance factor : 1 GHz - 10 GHz : 20log (3.68 m/ 3.0 m) = 1.77 dB

10 GHz - 40 GHz : 20log (1.0 m/ 3.0 m) = -9.54 dB

UL Japan, Inc.

Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

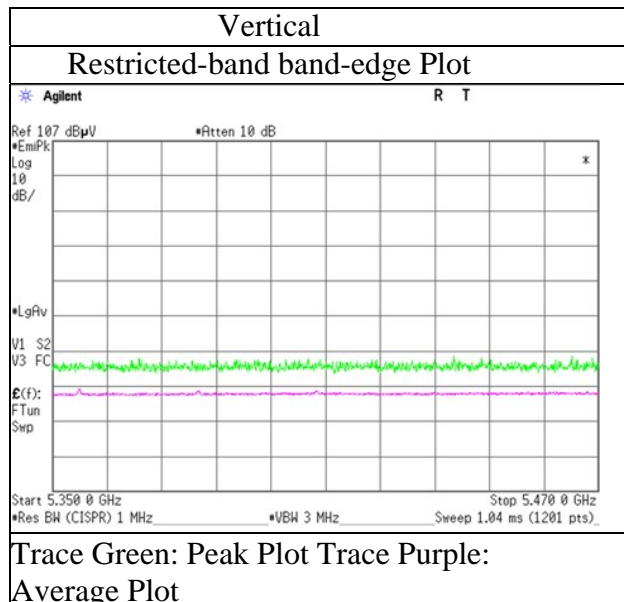
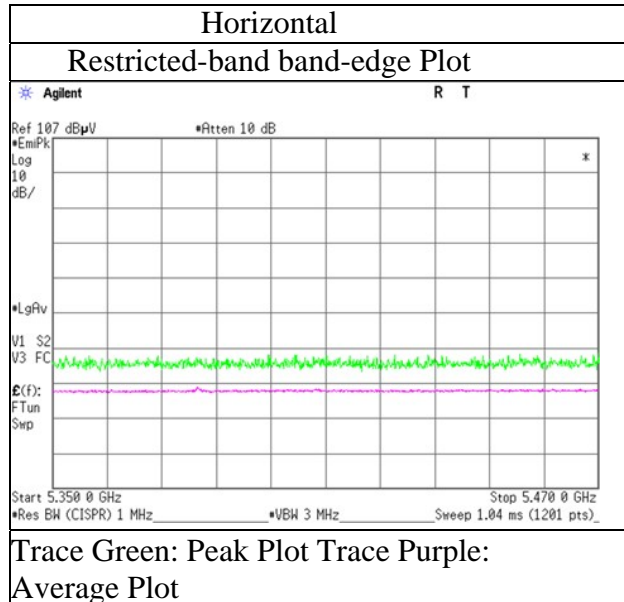
Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Test place
 Semi Anechoic Chamber
 Date
 Temperature / Humidity
 Engineer
 Mode

Shonan EMC Lab.
 1
 January 6, 2021
 21 deg.C, 32 %RH
 Toshinori Yamada
 Tx 11a 5500 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
 Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 10, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	25 deg.C, 31 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Toshinori Yamada	Kenichi Adachi	Toshinori Yamada	Takahiro Kawakami
	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11a 5580 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	11160.000	PK	45.31	37.52	10.39	39.61	-9.54	44.07	73.9	29.8	150	0	-
Hori.	11160.000	AV	34.55	37.52	10.39	39.61	-9.54	33.31	53.9	20.5	150	0	VBW : 1.5 kHz
Vert.	11160.000	PK	45.96	37.52	10.39	39.61	-9.54	44.72	73.9	29.1	150	0	-
Vert.	11160.000	AV	34.64	37.52	10.39	39.61	-9.54	33.40	53.9	20.5	150	0	VBW : 1.5 kHz

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

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

Distance factor : 1 GHz - 10 GHz : 20log (3.68 m / 3.0 m) = 1.77 dB

10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5329.995	PK	46.82	31.94	16.88	39.73	1.77	57.68	-37.55	-27.0	10.5	147	77	-
Hori.	16740.000	PK	45.36	39.75	13.40	40.11	-9.54	48.86	-46.37	-27.0	19.3	150	0	-
Vert.	5329.994	PK	46.32	31.94	16.88	39.73	1.77	57.18	-38.05	-27.0	11.0	148	4	-
Vert.	16740.000	PK	45.27	39.75	13.40	40.11	-9.54	48.77	-46.46	-27.0	19.4	150	0	-

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

Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)

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

Distance factor : 1 GHz - 10 GHz : 20log (3.68 m / 3.0 m) = 1.77 dB

10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 10, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	25 deg.C, 31 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Toshinori Yamada	Kenichi Adachi	Toshinori Yamada	Takahiro Kawakami
	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11a 5700 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	11400.000	PK	45.22	38.10	10.53	39.50	-9.54	44.81	73.9	29.0	150	0	-
Hori.	11400.000	AV	34.04	38.10	10.53	39.50	-9.54	33.63	53.9	20.2	150	0	VBW : 1.5kHz
Vert.	11400.000	PK	45.94	38.10	10.53	39.50	-9.54	45.53	73.9	28.3	150	0	-
Vert.	11400.000	AV	34.30	38.10	10.53	39.50	-9.54	33.89	53.9	20.0	150	0	VBW : 1.5kHz

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

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

Distance factor : 1 GHz - 10 GHz : $20\log(3.68\text{ m} / 3.0\text{ m}) = 1.77\text{ dB}$

10 GHz - 40 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.54\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5329.996	PK	46.92	31.94	16.88	39.73	1.77	57.78	-37.45	-27.0	10.4	147	78	-
Hori.	5725.000	PK	45.72	32.64	17.16	39.92	1.77	57.37	-37.86	-27.0	10.8	142	96	-
Hori.	17100.000	PK	45.63	39.90	13.51	39.41	-9.54	50.09	-45.14	-27.0	18.1	150	0	-
Vert.	5329.999	PK	46.89	31.94	16.88	39.73	1.77	57.75	-37.48	-27.0	10.4	147	5	-
Vert.	5725.000	PK	45.39	32.64	17.16	39.92	1.77	57.04	-38.19	-27.0	11.1	144	6	-
Vert.	17100.000	PK	45.99	39.90	13.51	39.41	-9.54	50.45	-44.78	-27.0	17.7	150	0	-

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

Result (EIRP [dBm]) = $10 * \log((10^{\wedge}(\text{Electric Field Strength [dBuV/m] / 20)) * 10^{\wedge}(-6) * \text{Distance} : 3[\text{m}])^{\wedge}2 / 30 * 10^{\wedge}3)$

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

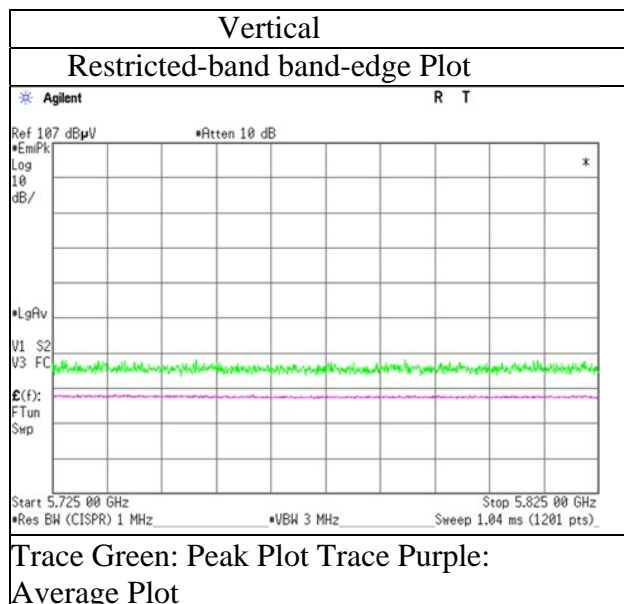
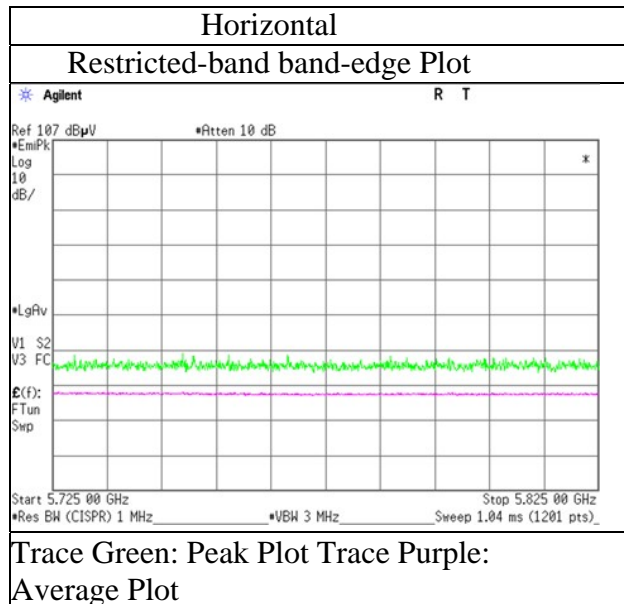
Distance factor : 1 GHz - 10 GHz : $20\log(3.68\text{ m} / 3.0\text{ m}) = 1.77\text{ dB}$

10 GHz - 40 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.54\text{ dB}$

Radiated Spurious Emission

Test place
Semi Anechoic Chamber
Date
Temperature / Humidity
Engineer
Mode

Shonan EMC Lab.
1
January 6, 2021
21 deg.C, 32 %RH
Toshinori Yamada
Tx 11a 5700 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 10, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	25 deg.C, 31 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Toshinori Yamada (1 GHz -10 GHz)	Kenichi Adachi (10 GHz -18 GHz)	Toshinori Yamada (18 GHz -26.5 GHz)	Takahiro Kawakami (26.5 GHz -40 GHz)
Mode	Tx 11a 5745 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	11490.000	PK	44.24	38.26	10.58	39.46	-9.54	44.08	73.9	29.8	150	0	-
Hori.	11490.000	AV	33.78	38.26	10.58	39.46	-9.54	33.62	53.9	20.2	150	0	VBW : 1.5 kHz
Vert.	11490.000	PK	44.28	38.26	10.58	39.46	-9.54	44.12	73.9	29.7	150	0	-
Vert.	11490.000	AV	32.42	38.26	10.58	39.46	-9.54	32.26	53.9	21.6	150	0	VBW : 1.5 kHz

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

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

Distance factor : 1 GHz - 10 GHz : $20 \log (3.68 \text{ m} / 3.0 \text{ m}) = 1.77 \text{ dB}$

10 GHz - 40 GHz : $20 \log (1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5329.990	PK	47.73	31.94	16.88	39.73	1.77	58.59	-36.64	-27.0	9.6	146	74	-
Hori.	5650.000	PK	46.40	32.44	17.11	39.86	1.77	57.86	-37.37	-27.0	10.3	100	75	-
Hori.	5700.000	PK	45.66	32.56	17.14	39.90	1.77	57.23	-38.00	10.0	48.0	100	75	-
Hori.	5720.000	PK	46.30	32.62	17.15	39.92	1.77	57.92	-37.31	15.6	52.9	100	75	-
Hori.	5725.000	PK	46.33	32.64	17.16	39.92	1.77	57.98	-37.25	27.0	64.2	100	75	-
Hori.	17235.000	PK	45.72	40.18	13.57	39.01	-9.54	50.92	-44.31	-27.0	17.3	150	0	-
Vert.	5329.970	PK	46.91	31.94	16.88	39.73	1.77	57.77	-37.46	-27.0	10.4	158	4	-
Vert.	5650.000	PK	45.26	32.44	17.11	39.86	1.77	56.72	-38.51	-27.0	11.5	148	353	-
Vert.	5700.000	PK	45.56	32.56	17.14	39.90	1.77	57.13	-38.10	10.0	48.1	148	353	-
Vert.	5720.000	PK	46.08	32.62	17.15	39.92	1.77	57.70	-37.53	15.6	53.1	148	353	-
Vert.	5725.000	PK	46.04	32.64	17.16	39.92	1.77	57.69	-37.54	27.0	64.5	148	353	-
Vert.	17235.000	PK	45.27	40.18	13.57	39.01	-9.54	50.47	-44.76	-27.0	17.7	150	0	-

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

Result (EIRP [dBm]) = $10 * \text{LOG} ((10^{\wedge} \text{Electric Field Strength [dBuV/m]} / 20) * 10^{\wedge} (-6) * \text{Distance} : 3 [\text{m}])^{\wedge} 2 / 30 * 10^{\wedge} 3)$

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

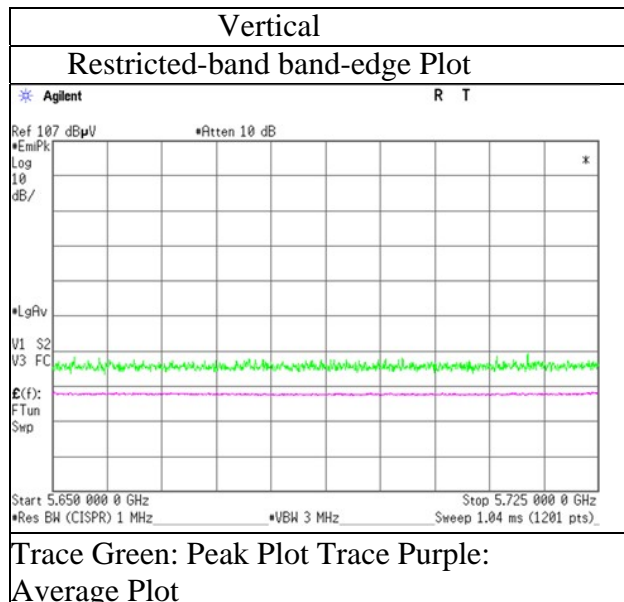
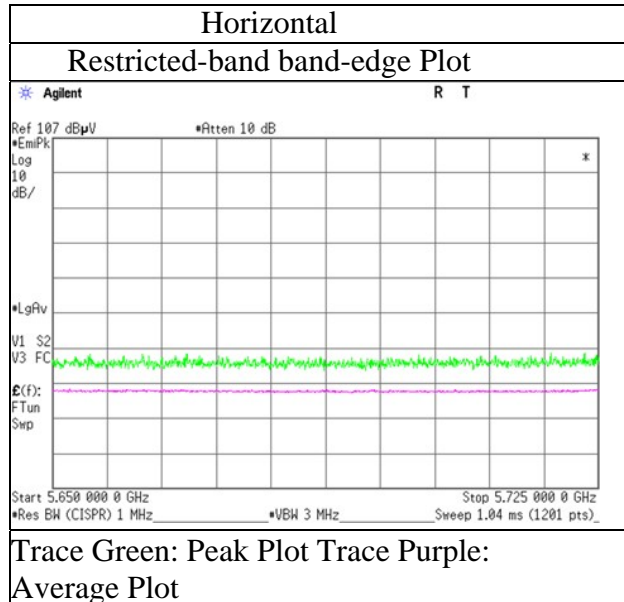
Distance factor : 1 GHz - 10 GHz : $20 \log (3.68 \text{ m} / 3.0 \text{ m}) = 1.77 \text{ dB}$

10 GHz - 40 GHz : $20 \log (1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

Radiated Spurious Emission

Test place
Semi Anechoic Chamber
Date
Temperature / Humidity
Engineer
Mode

Shonan EMC Lab.
1
January 6, 2021
21 deg.C, 32 %RH
Toshinori Yamada
Tx 11a 5745 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 10, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	25 deg.C, 31 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Toshinori Yamada	Kenichi Adachi	Toshinori Yamada	Takahiro Kawakami
	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11a 5785 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	11570.000	PK	44.21	38.31	10.62	39.41	-9.54	44.19	73.9	29.7	150	0	-
Hori.	11570.000	AV	32.45	38.31	10.62	39.41	-9.54	32.43	53.9	21.4	150	0	VBW : 1.5 kHz
Vert.	11570.000	PK	44.50	38.31	10.62	39.41	-9.54	44.48	73.9	29.4	150	0	-
Vert.	11570.000	AV	32.34	38.31	10.62	39.41	-9.54	32.32	53.9	21.5	150	0	VBW : 1.5 kHz

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

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

Distance factor : 1 GHz - 10 GHz : $20\log(3.68\text{ m} / 3.0\text{ m}) = 1.77\text{ dB}$

10 GHz - 40 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.54\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5329.946	PK	48.48	31.94	16.88	39.73	1.77	59.34	-35.89	-27.0	8.8	147	75	-
Hori.	17355.000	PK	45.32	40.39	13.61	38.65	-9.54	51.13	-44.10	-27.0	17.1	150	0	-
Vert.	5329.942	PK	46.73	31.94	16.88	39.73	1.77	57.59	-37.64	-27.0	10.6	156	4	-
Vert.	17355.000	PK	45.40	40.39	13.61	38.65	-9.54	51.21	-44.02	-27.0	17.0	150	0	-

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

Result (EIRP [dBm]) = $10 * \text{LOG} ((10^{\wedge}(\text{Electric Field Strength [dBuV/m] / 20}) * 10^{\wedge}(-6) * \text{Distance} : 3 [\text{m}])^{\wedge}2 / 30 * 10^{\wedge}3)$

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

Distance factor : 1 GHz - 10 GHz : $20\log(3.68\text{ m} / 3.0\text{ m}) = 1.77\text{ dB}$

10 GHz - 40 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.54\text{ dB}$

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 10, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	25 deg.C, 31 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Toshinori Yamada	Kenichi Adachi	Toshinori Yamada	Takahiro Kawakami
	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11a 5825 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	11650.000	PK	45.39	38.35	10.68	39.34	-9.54	45.54	73.9	28.3	150	0	-
Hori.	11650.000	AV	33.23	38.35	10.68	39.34	-9.54	33.38	53.9	20.5	150	0	VBW : 1.5 kHz
Vert.	11650.000	PK	44.90	38.35	10.68	39.34	-9.54	45.05	73.9	28.8	150	0	-
Vert.	11650.000	AV	33.18	38.35	10.68	39.34	-9.54	33.33	53.9	20.5	150	0	VBW : 1.5 kHz

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

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

Distance factor : 1 GHz - 10 GHz : $20 \log (3.68 \text{ m} / 3.0 \text{ m}) = 1.77 \text{ dB}$
10 GHz - 40 GHz : $20 \log (1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5329.944	PK	47.45	31.94	16.88	39.73	1.77	58.31	-36.92	-27.0	9.9	149	73	-
Hori.	5850.000	PK	46.64	32.91	17.24	40.02	1.77	58.54	-36.69	27.0	63.6	121	87	-
Hori.	5855.000	PK	45.25	32.92	17.24	40.02	1.77	57.16	-38.07	15.6	53.6	121	87	-
Hori.	5875.000	PK	45.19	32.95	17.27	40.04	1.77	57.14	-38.09	10.0	48.0	121	87	-
Hori.	5925.000	PK	45.09	32.99	17.29	40.07	1.77	57.07	-38.16	-27.0	11.1	121	87	-
Hori.	17475.000	PK	44.63	40.51	13.66	38.29	-9.54	50.97	-44.26	-27.0	17.2	150	0	-
Vert.	5329.948	PK	47.03	31.94	16.88	39.73	1.77	57.89	-37.34	-27.0	10.3	156	5	-
Vert.	5850.000	PK	45.43	32.91	17.24	40.02	1.77	57.33	-37.90	27.0	64.9	147	354	-
Vert.	5855.000	PK	45.61	32.92	17.24	40.02	1.77	57.52	-37.71	15.6	53.3	147	354	-
Vert.	5875.000	PK	45.93	32.95	17.27	40.04	1.77	57.88	-37.35	10.0	47.3	147	354	-
Vert.	5925.000	PK	44.90	32.99	17.29	40.07	1.77	56.88	-38.35	-27.0	11.3	147	354	-
Vert.	17475.000	PK	44.36	40.51	13.66	38.29	-9.54	50.70	-44.53	-27.0	17.5	150	0	-

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

Result (EIRP [dBm]) = $10 * \text{LOG} ((10^{\wedge} (\text{Electric Field Strength [dBuV/m] / 20}) * 10^{\wedge} (-6) * \text{Distance} : 3 [\text{m}])^{\wedge} 2 / 30 * 10^{\wedge} 3)$

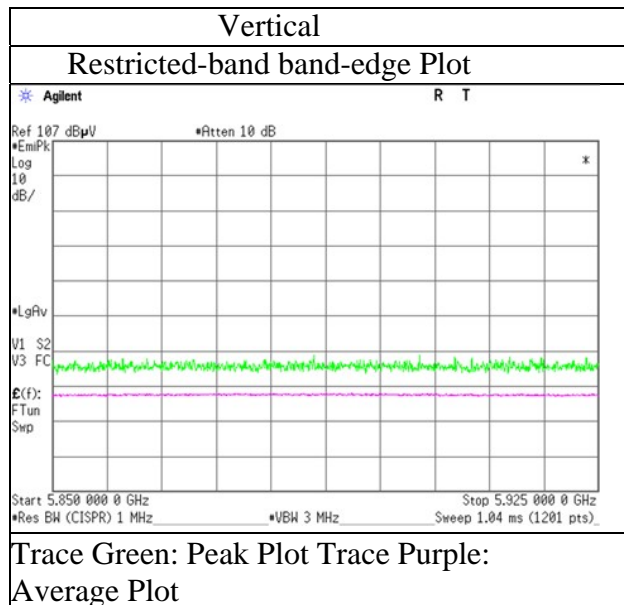
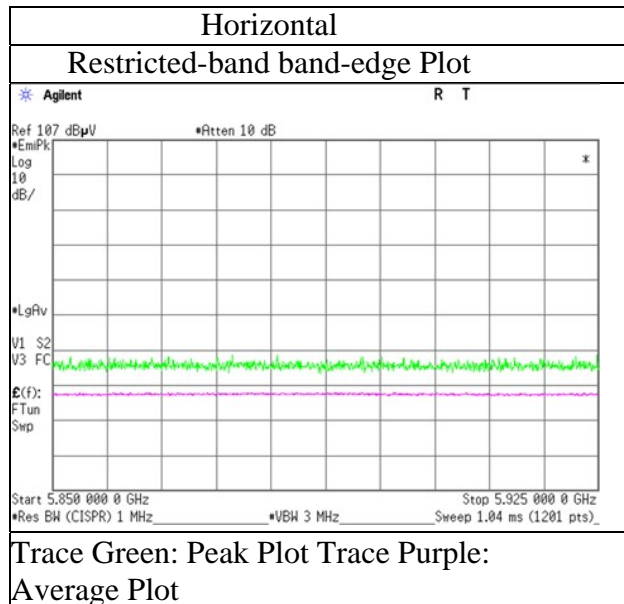
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 10 GHz : $20 \log (3.68 \text{ m} / 3.0 \text{ m}) = 1.77 \text{ dB}$
10 GHz - 40 GHz : $20 \log (1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

Radiated Spurious Emission

Test place
Semi Anechoic Chamber
Date
Temperature / Humidity
Engineer
Mode

Shonan EMC Lab.
1
January 6, 2021
21 deg.C, 32 %RH
Toshinori Yamada
Tx 11a 5825 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Test place	Shonan EMC Lab.				
Semi Anechoic Chamber	1	1	1	1	1
Date	January 12, 2021	January 6, 2021	January 11, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	24 deg.C, 29 %RH	21 deg.C, 32 %RH	20 deg.C, 30 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Yosuke Murakami	Toshinori Yamada	Yasumasa Owaki	Toshinori Yamada	Takahiro Kawakami
	(30 MHz -1 GHz)	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11n-20 5180 MHz				

(below 1 GHz and above 1 GHz Inside of the restricted band)

(* 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.	249.994	QP	32.00	11.78	6.20	31.76	0.00	18.22	46.0	27.7	152	355	-
Hori.	449.994	QP	37.20	16.45	7.47	31.93	0.00	29.19	46.0	16.8	165	143	-
Hori.	549.995	QP	30.00	17.81	8.02	32.09	0.00	23.74	46.0	22.2	119	353	-
Hori.	799.987	QP	24.40	20.74	9.18	32.03	0.00	22.29	46.0	23.7	100	104	-
Hori.	849.995	QP	25.50	21.49	9.43	31.72	0.00	24.70	46.0	21.3	100	14	-
Hori.	899.981	QP	25.60	22.07	9.64	31.49	0.00	25.82	46.0	20.1	144	94	-
Hori.	949.990	QP	26.20	22.07	9.81	31.12	0.00	26.96	46.0	19.0	106	188	-
Hori.	5150.000	PK	45.59	32.25	16.76	39.72	1.77	56.65	73.9	17.2	216	69	-
Hori.	15540.000	PK	46.25	39.60	12.67	39.13	-9.54	49.85	73.9	24.0	150	0	-
Hori.	5150.000	AV	35.02	32.25	16.76	39.72	1.77	46.08	53.9	7.8	216	69	VBW : 3.6 kHz
Hori.	15540.000	AV	35.66	39.60	12.67	39.13	-9.54	39.26	53.9	14.6	150	0	VBW : 3.6 kHz
Vert.	250.000	QP	27.80	11.78	6.20	31.76	0.00	14.02	46.0	31.9	227	167	-
Vert.	449.997	QP	37.10	16.45	7.47	31.93	0.00	29.09	46.0	16.9	112	102	-
Vert.	549.996	QP	31.40	17.81	8.02	32.09	0.00	25.14	46.0	20.8	162	106	-
Vert.	799.988	QP	23.90	20.74	9.18	32.03	0.00	21.79	46.0	24.2	100	292	-
Vert.	849.985	QP	25.20	21.49	9.43	31.72	0.00	24.40	46.0	21.6	148	299	-
Vert.	899.992	QP	26.60	22.07	9.64	31.49	0.00	26.82	46.0	19.1	135	291	-
Vert.	949.988	QP	25.60	22.07	9.81	31.12	0.00	26.36	46.0	19.6	124	293	-
Vert.	5150.000	PK	45.22	32.25	16.76	39.72	1.77	56.28	73.9	17.6	153	11	-
Vert.	15540.000	PK	45.98	39.60	12.67	39.13	-9.54	49.58	73.9	24.3	150	0	-
Vert.	5150.000	AV	35.27	32.25	16.76	39.72	1.77	46.33	53.9	7.5	153	11	VBW : 3.6 kHz
Vert.	15540.000	AV	35.31	39.60	12.67	39.13	-9.54	38.91	53.9	14.9	150	0	VBW : 3.6 kHz

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

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

Distance factor : 1 GHz - 10 GHz : 20log (3.68 m / 3.0 m) = 1.77 dB

10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10360.000	PK	46.73	36.57	9.99	39.88	-9.54	43.87	-51.36	-27.0	24.3	150	0	-
Vert.	10360.000	PK	46.32	36.57	9.99	39.88	-9.54	43.46	-51.77	-27.0	24.7	150	0	-

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

Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)

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

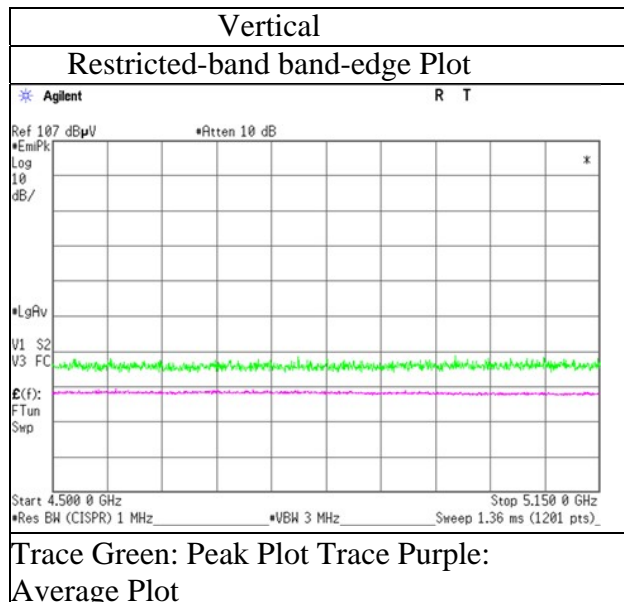
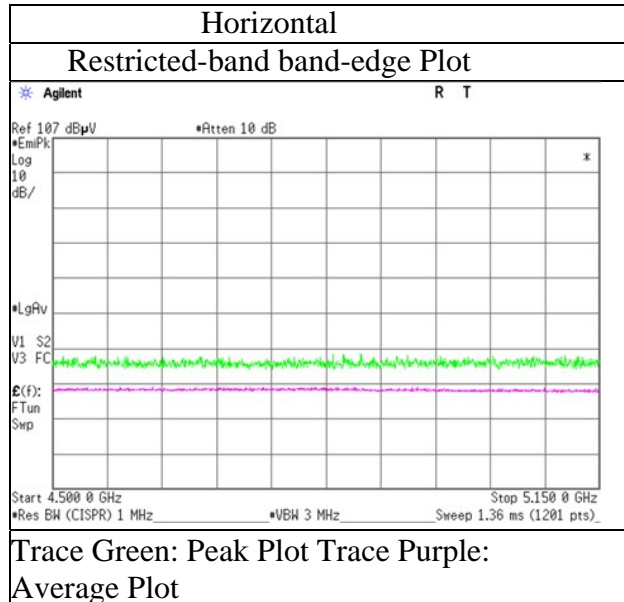
Distance factor : 1 GHz - 10 GHz : 20log (3.68 m / 3.0 m) = 1.77 dB

10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place
Semi Anechoic Chamber
Date
Temperature / Humidity
Engineer
Mode

Shonan EMC Lab.
1
January 6, 2021
21 deg.C, 32 %RH
Toshinori Yamada
Tx 11n-20 5180 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 11, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	20 deg.C, 30 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Toshinori Yamada (1 GHz -10 GHz)	Yasumasa Owaki (10 GHz -18 GHz)	Toshinori Yamada (18 GHz -26.5 GHz)	Takahiro Kawakami (26.5 GHz -40 GHz)
Mode	Tx 11n-20 5240 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	15720.000	PK	45.79	39.85	12.65	39.37	-9.54	49.38	73.9	24.5	150	0	-
Hori.	15720.000	AV	35.28	39.85	12.65	39.37	-9.54	38.87	53.9	15.0	150	0	VBW : 3.6 kHz
Vert.	15720.000	PK	45.61	39.85	12.65	39.37	-9.54	49.20	73.9	24.7	150	0	-
Vert.	15720.000	AV	35.20	39.85	12.65	39.37	-9.54	38.79	53.9	15.1	150	0	VBW : 3.6 kHz

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

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

Distance factor : 1 GHz - 10 GHz : $20\log(3.68\text{ m} / 3.0\text{ m}) = 1.77\text{ dB}$
10 GHz - 40 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.54\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10480.000	PK	45.96	36.73	10.03	40.11	-9.54	43.07	-52.16	-27.0	25.1	150	0	-
Vert.	10480.000	PK	45.77	36.73	10.03	40.11	-9.54	42.88	-52.35	-27.0	25.3	150	0	-

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

Result (EIRP [dBm]) = $10 * \text{LOG}((10^{\wedge}(\text{Electric Field Strength [dBuV/m]} / 20) * 10^{\wedge}(-6) * \text{Distance} : 3\text{ [m]})^2 / 30 * 10^{\wedge}3)$

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

Distance factor : 1 GHz - 10 GHz : $20\log(3.68\text{ m} / 3.0\text{ m}) = 1.77\text{ dB}$
10 GHz - 40 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.54\text{ dB}$

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 11, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	20 deg.C, 30 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Toshinori Yamada (1 GHz -10 GHz)	Yasumasa Owaki (10 GHz -18 GHz)	Toshinori Yamada (18 GHz -26.5 GHz)	Takahiro Kawakami (26.5 GHz -40 GHz)
Mode	Tx 11n-20 5320 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	5350.000	PK	45.93	31.99	16.91	39.74	1.77	56.86	73.9	17.0	210	80	-
Hori.	10640.000	PK	45.74	37.39	10.12	40.02	-9.54	43.69	73.9	30.2	150	0	-
Hori.	15960.000	PK	46.50	40.19	12.62	39.70	-9.54	50.07	73.9	23.8	150	0	-
Hori.	5350.000	AV	35.09	31.99	16.91	39.74	1.77	46.02	53.9	7.8	210	80	VBW : 3.6 kHz
Hori.	10640.000	AV	34.95	37.39	10.12	40.02	-9.54	32.90	53.9	21.0	150	0	VBW : 3.6 kHz
Hori.	15960.000	AV	35.25	40.19	12.62	39.70	-9.54	38.82	53.9	15.0	150	0	VBW : 3.6 kHz
Vert.	5350.000	PK	46.03	31.99	16.91	39.74	1.77	56.96	73.9	16.9	114	86	-
Vert.	10640.000	PK	45.20	37.39	10.12	40.02	-9.54	43.15	73.9	30.7	150	0	-
Vert.	15960.000	PK	45.49	40.19	12.62	39.70	-9.54	49.06	73.9	24.8	150	0	-
Vert.	5350.000	AV	35.58	31.99	16.91	39.74	1.77	46.51	53.9	7.3	114	86	VBW : 3.6 kHz
Vert.	10640.000	AV	34.81	37.39	10.12	40.02	-9.54	32.76	53.9	21.1	150	0	VBW : 3.6 kHz
Vert.	15960.000	AV	35.08	40.19	12.62	39.70	-9.54	38.65	53.9	15.2	150	0	VBW : 3.6 kHz

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

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

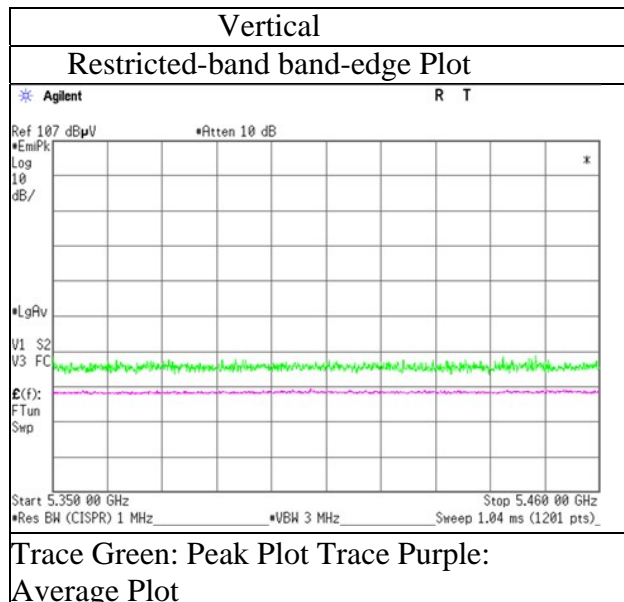
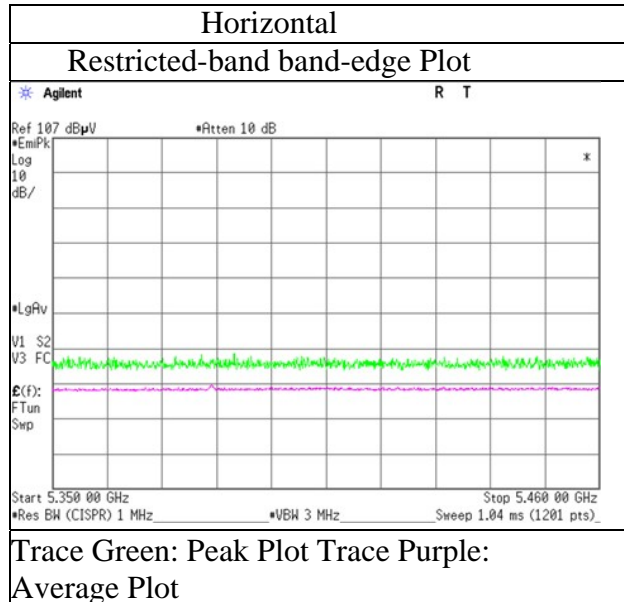
Distance factor : 1 GHz - 10 GHz : $20\log(3.68\text{ m} / 3.0\text{ m}) = 1.77\text{ dB}$

10 GHz - 40 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.54\text{ dB}$

Radiated Spurious Emission

Test place
Semi Anechoic Chamber
Date
Temperature / Humidity
Engineer
Mode

Shonan EMC Lab.
1
January 6, 2021
21 deg.C, 32 %RH
Toshinori Yamada
Tx 11n-20 5320 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 11, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	20 deg.C, 30 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Takahiro Kawakami	Yasumasa Owaki	Toshinori Yamada	Takahiro Kawakami
	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11n-20 5500 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	5460.000	PK	45.97	32.22	16.99	39.75	1.77	57.20	73.9	16.7	195	105	-
Hori.	11000.000	PK	47.34	37.63	10.32	39.68	-9.54	46.07	73.9	27.8	150	0	-
Hori.	5460.000	AV	35.85	32.22	16.99	39.75	1.77	47.08	53.9	6.8	195	105	VBW : 3.6 kHz
Hori.	11000.000	AV	35.46	37.63	10.32	39.68	-9.54	34.19	53.9	19.7	150	0	VBW : 3.6 kHz
Vert.	5460.000	PK	46.41	32.22	16.99	39.75	1.77	57.64	73.9	16.2	239	94	-
Vert.	11000.000	PK	46.52	37.63	10.32	39.68	-9.54	45.25	73.9	28.6	150	0	-
Vert.	5460.000	AV	35.70	32.22	16.99	39.75	1.77	46.93	53.9	6.9	239	94	VBW : 3.6 kHz
Vert.	11000.000	AV	35.55	37.63	10.32	39.68	-9.54	34.28	53.9	19.6	150	0	VBW : 3.6 kHz

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

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

Distance factor : 1 GHz - 10 GHz : 20log (3.68 m / 3.0 m) = 1.77 dB

10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5329.897	PK	47.56	31.94	16.88	39.73	1.77	58.42	-36.81	-27.0	9.8	215	82	-
Hori.	5470.000	PK	46.25	32.24	16.99	39.75	1.77	57.50	-37.73	-27.0	10.7	195	105	-
Hori.	16500.000	PK	46.82	40.10	13.34	40.47	-9.54	50.25	-44.98	-27.0	17.9	150	0	-
Vert.	5329.931	PK	46.24	31.94	16.88	39.73	1.77	57.10	-38.13	-27.0	11.1	226	16	-
Vert.	5470.000	PK	46.23	32.24	16.99	39.75	1.77	57.48	-37.75	-27.0	10.7	239	94	-
Vert.	16500.000	PK	45.80	40.10	13.34	40.47	-9.54	49.23	-46.00	-27.0	19.0	150	0	-

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

Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)

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

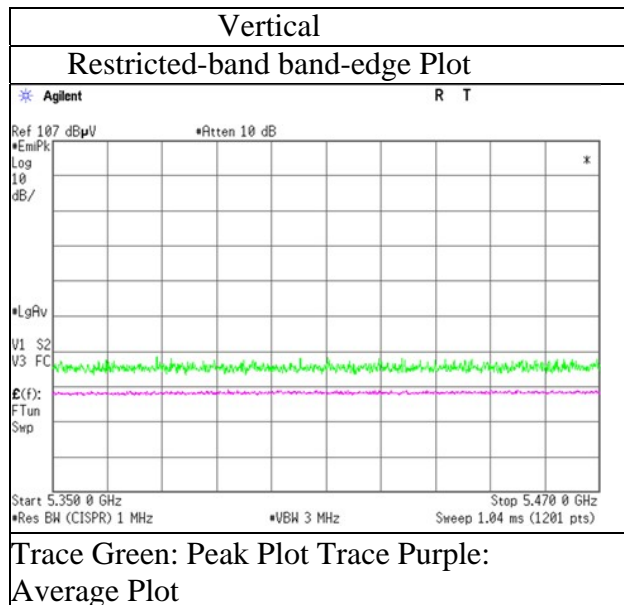
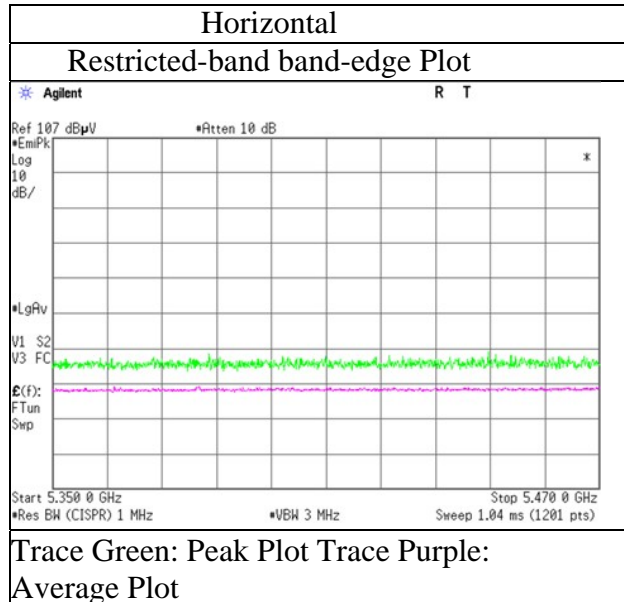
Distance factor : 1 GHz - 10 GHz : 20log (3.68 m / 3.0 m) = 1.77 dB

10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place
Semi Anechoic Chamber
Date
Temperature / Humidity
Engineer
Mode

Shonan EMC Lab.
1
January 6, 2021
21 deg.C, 32 %RH
Takahiro Kawakami
Tx 11n-20 5500 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 11, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	20 deg.C, 30 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Takahiro Kawakami	Yasumasa Owaki	Toshinori Yamada	Takahiro Kawakami
	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11n-20 5580 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	11160.000	PK	46.81	37.52	10.39	39.61	-9.54	45.57	73.9	28.3	150	0	-
Hori.	11160.000	AV	35.31	37.52	10.39	39.61	-9.54	34.07	53.9	19.8	150	0	VBW : 3.6 kHz
Vert.	11160.000	PK	46.15	37.52	10.39	39.61	-9.54	44.91	73.9	28.9	150	0	-
Vert.	11160.000	AV	35.46	37.52	10.39	39.61	-9.54	34.22	53.9	19.6	150	0	VBW : 3.6 kHz

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

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

Distance factor : 1 GHz - 10 GHz : $20\log(3.68\text{ m} / 3.0\text{ m}) = 1.77\text{ dB}$

10 GHz - 40 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.54\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5329.962	PK	47.63	31.94	16.88	39.73	1.77	58.49	-36.74	-27.0	9.7	165	60	-
Hori.	16740.000	PK	45.51	39.75	13.40	40.11	-9.54	49.01	-46.22	-27.0	19.2	150	0	-
Vert.	5329.767	PK	47.01	31.94	16.88	39.73	1.77	57.87	-37.36	-27.0	10.3	259	186	-
Vert.	16740.000	PK	44.83	39.75	13.40	40.11	-9.54	48.33	-46.90	-27.0	19.9	150	0	-

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

Result (EIRP [dBm]) = $10 * \text{LOG} ((10^{\wedge} \text{Electric Field Strength [dBuV/m]} / 20) * 10^{\wedge} (-6) * \text{Distance} : 3 [\text{m}])^{\wedge} 2 / 30 * 10^{\wedge} 3$

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

Distance factor : 1 GHz - 10 GHz : $20\log(3.68\text{ m} / 3.0\text{ m}) = 1.77\text{ dB}$

10 GHz - 40 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.54\text{ dB}$

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 11, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	20 deg.C, 30 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Takahiro Kawakami	Yasumasa Owaki	Toshinori Yamada	Takahiro Kawakami
	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11n-20 5700 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	11400.000	PK	45.71	38.10	10.53	39.50	-9.54	45.30	73.9	28.6	150	0	-
Hori.	11400.000	AV	34.29	38.10	10.53	39.50	-9.54	33.88	53.9	20.0	150	0	VBW : 3.6 kHz
Vert.	11400.000	PK	46.27	38.10	10.53	39.50	-9.54	45.86	73.9	28.0	150	0	-
Vert.	11400.000	AV	34.55	38.10	10.53	39.50	-9.54	34.14	53.9	19.7	150	0	VBW : 3.6 kHz

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

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

Distance factor : 1 GHz - 10 GHz : $20\log(3.68\text{ m} / 3.0\text{ m}) = 1.77\text{ dB}$

10 GHz - 40 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.54\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5329.977	PK	47.69	31.94	16.88	39.73	1.77	58.55	-36.68	-27.0	9.6	263	74	-
Hori.	5725.000	PK	46.66	32.64	17.16	39.92	1.77	58.31	-36.92	-27.0	9.9	139	102	-
Hori.	17100.000	PK	45.50	39.90	13.51	39.41	-9.54	49.96	-45.27	-27.0	18.2	150	0	-
Vert.	5329.969	PK	47.39	31.94	16.88	39.73	1.77	58.25	-36.98	-27.0	9.9	256	358	-
Vert.	5725.000	PK	46.43	32.64	17.16	39.92	1.77	58.08	-37.15	-27.0	10.1	259	98	-
Vert.	17100.000	PK	44.66	39.90	13.51	39.41	-9.54	49.12	-46.11	-27.0	19.1	150	0	-

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

Result (EIRP [dBm]) = $10 * \text{LOG}((10 \wedge (\text{Electric Field Strength [dBuV/m]} / 20)) * 10 \wedge (-6) * \text{Distance} : 3 [\text{m}]) \wedge 2 / 30 * 10 \wedge 3)$

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

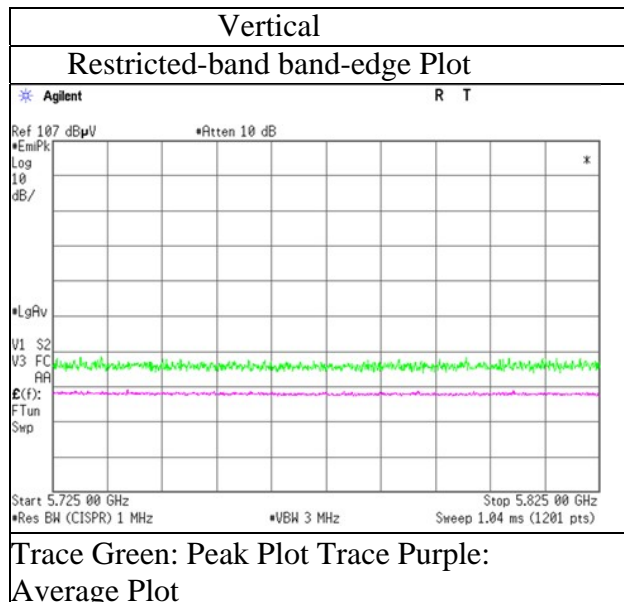
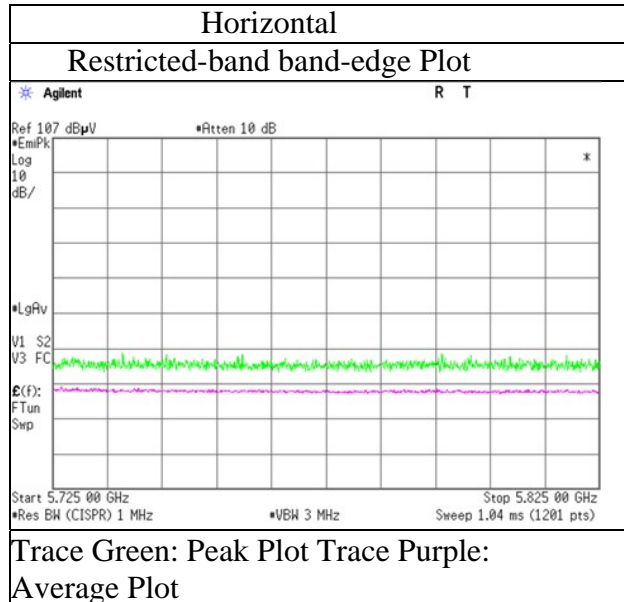
Distance factor : 1 GHz - 10 GHz : $20\log(3.68\text{ m} / 3.0\text{ m}) = 1.77\text{ dB}$

10 GHz - 40 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.54\text{ dB}$

Radiated Spurious Emission

Test place
Semi Anechoic Chamber
Date
Temperature / Humidity
Engineer
Mode

Shonan EMC Lab.
1
January 6, 2021
21 deg.C, 32 %RH
Takahiro Kawakami
Tx 11n-20 5700 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 11, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	20 deg.C, 30 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Takahiro Kawakami	Yasumasa Owaki	Toshinori Yamada	Takahiro Kawakami
	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11n-20 5745 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	11490.000	PK	44.21	38.26	10.58	39.46	-9.54	44.05	73.9	29.8	150	0-	
Hori.	11490.000	AV	33.43	38.26	10.58	39.46	-9.54	33.27	53.9	20.6	150	0	VBW : 3.6 kHz
Vert.	11490.000	PK	44.06	38.26	10.58	39.46	-9.54	43.90	73.9	30.0	150	0-	
Vert.	11490.000	AV	33.63	38.26	10.58	39.46	-9.54	33.47	53.9	20.4	150	0	VBW : 3.6 kHz

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

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

Distance factor : 1 GHz - 10 GHz : $20 \log (3.68 \text{ m} / 3.0 \text{ m}) = 1.77 \text{ dB}$

10 GHz - 40 GHz : $20 \log (1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5329.996	PK	46.89	31.94	16.88	39.73	1.77	57.75	-37.48	-27.0	10.4	193	87	-
Hori.	5650.000	PK	45.94	32.44	17.11	39.86	1.77	57.40	-37.83	-27.0	10.8	145	103	-
Hori.	5700.000	PK	46.26	32.56	17.14	39.90	1.77	57.83	-37.40	10.0	47.4	145	103	-
Hori.	5720.000	PK	46.92	32.62	17.15	39.92	1.77	58.54	-36.69	15.6	52.2	145	103	-
Hori.	5725.000	PK	51.20	32.64	17.16	39.92	1.77	62.85	-32.38	27.0	59.3	145	103	-
Hori.	17235.000	PK	45.57	40.18	13.57	39.01	-9.54	50.77	-44.46	-27.0	17.4	150	0	-
Vert.	5329.000	PK	47.96	31.94	16.88	39.73	1.77	58.82	-36.41	-27.0	9.4	125	1	-
Vert.	5650.000	PK	46.22	32.44	17.11	39.86	1.77	57.68	-37.55	-27.0	10.5	102	91	-
Vert.	5700.000	PK	46.10	32.56	17.14	39.90	1.77	57.67	-37.56	10.0	47.5	102	91	-
Vert.	5720.000	PK	46.24	32.62	17.15	39.92	1.77	57.86	-37.37	15.6	52.9	102	91	-
Vert.	5725.000	PK	51.19	32.64	17.16	39.92	1.77	62.84	-32.39	27.0	59.3	102	91	-
Vert.	17235.000	PK	45.22	40.18	13.57	39.01	-9.54	50.42	-44.81	-27.0	17.8	150	0	-

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

Result (EIRP [dBm]) = $10 * \text{LOG} ((10^{\wedge} \text{Electric Field Strength [dBuV/m]} / 20) * 10^{\wedge} (-6) * \text{Distance} : 3 [\text{m}])^{\wedge} 2 / 30 * 10^{\wedge} 3)$

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

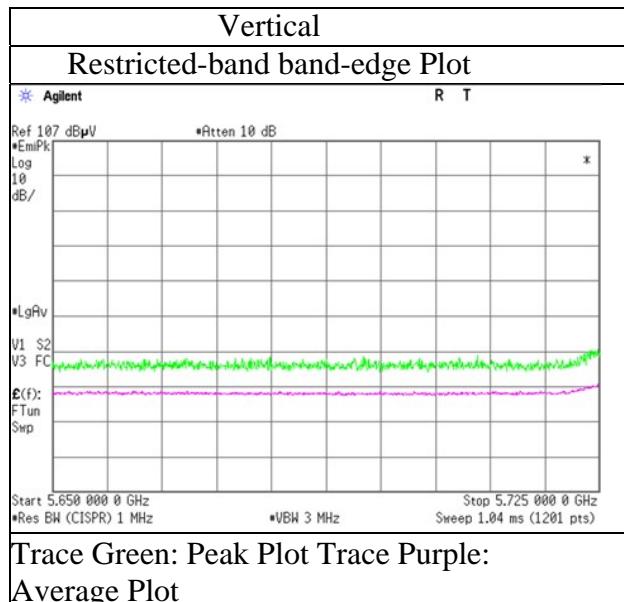
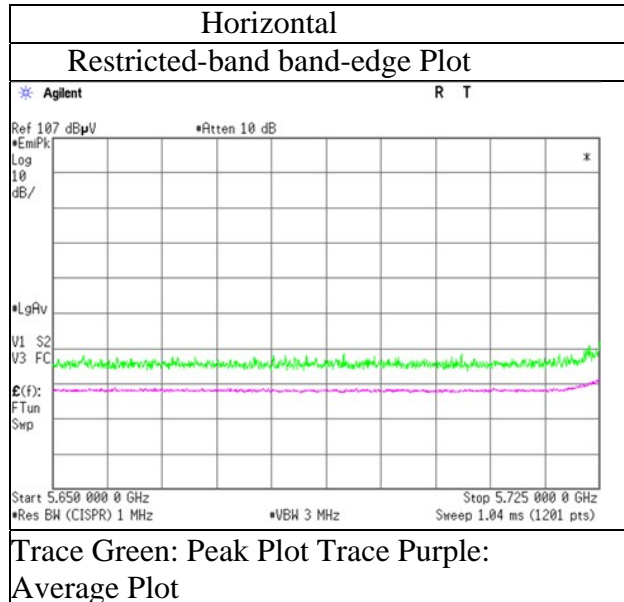
Distance factor : 1 GHz - 10 GHz : $20 \log (3.68 \text{ m} / 3.0 \text{ m}) = 1.77 \text{ dB}$

10 GHz - 40 GHz : $20 \log (1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

Radiated Spurious Emission

Test place
Semi Anechoic Chamber
Date
Temperature / Humidity
Engineer
Mode

Shonan EMC Lab.
1
January 6, 2021
21 deg.C, 32 %RH
Takahiro Kawakami
Tx 11n-20 5745 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 11, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	20 deg.C, 30 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Takahiro Kawakami	Yasumasa Owaki	Toshinori Yamada	Takahiro Kawakami
	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11n-20 5785 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	11570.000	PK	43.60	38.31	10.62	39.41	-9.54	43.58	73.9	30.3	150	0	-
Hori.	11570.000	AV	33.19	38.31	10.62	39.41	-9.54	33.17	53.9	20.7	150	0	VBW : 3.6 kHz
Vert.	11570.000	PK	43.36	38.31	10.62	39.41	-9.54	43.34	73.9	30.5	150	0	-
Vert.	11570.000	AV	33.20	38.31	10.62	39.41	-9.54	33.18	53.9	20.7	150	0	VBW : 3.6 kHz

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

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

Distance factor : 1 GHz - 10 GHz : $20\log(3.68\text{ m} / 3.0\text{ m}) = 1.77\text{ dB}$

10 GHz - 40 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.54\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5329.991	PK	46.74	31.94	16.88	39.73	1.77	57.60	-37.63	-27.0	10.6	107	100	-
Hori.	17355.000	PK	45.21	40.39	13.61	38.65	-9.54	51.02	-44.21	-27.0	17.2	150	0	-
Vert.	5329.909	PK	47.43	31.94	16.88	39.73	1.77	58.29	-36.94	-27.0	9.9	168	8	-
Vert.	17355.000	PK	45.33	40.39	13.61	38.65	-9.54	51.14	-44.09	-27.0	17.0	150	0	-

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

Result (EIRP [dBm]) = $10 * \text{LOG} ((10^{\wedge}(\text{Electric Field Strength [dBuV/m] / 20}) * 10^{\wedge}(-6) * \text{Distance} : 3 [\text{m}])^{\wedge}2 / 30 * 10^{\wedge}3)$

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

Distance factor : 1 GHz - 10 GHz : $20\log(3.68\text{ m} / 3.0\text{ m}) = 1.77\text{ dB}$

10 GHz - 40 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.54\text{ dB}$

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 11, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	20 deg.C, 30 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Takahiro Kawakami	Yasumasa Owaki	Toshinori Yamada	Takahiro Kawakami
	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11n-20 5825 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	11650.000	PK	44.38	38.35	10.68	39.34	-9.54	44.53	73.9	29.3	150	0	-
Hori.	11650.000	AV	33.55	38.35	10.68	39.34	-9.54	33.70	53.9	20.2	150	0	VBW : 3.6 kHz
Vert.	11650.000	PK	44.36	38.35	10.68	39.34	-9.54	44.51	73.9	29.3	150	0	-
Vert.	11650.000	AV	33.43	38.35	10.68	39.34	-9.54	33.58	53.9	20.3	150	0	VBW : 3.6 kHz

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

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

Distance factor : 1 GHz - 10 GHz : $20 \log (3.68 \text{ m} / 3.0 \text{ m}) = 1.77 \text{ dB}$

10 GHz - 40 GHz : $20 \log (1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5329.570	PK	47.40	31.94	16.88	39.73	1.77	58.26	-36.97	-27.0	9.9	164	97	-
Hori.	5850.000	PK	45.95	32.91	17.24	40.02	1.77	57.85	-37.38	27.0	64.3	151	104	-
Hori.	5855.000	PK	45.76	32.92	17.24	40.02	1.77	57.67	-37.56	15.6	53.1	151	104	-
Hori.	5875.000	PK	46.02	32.95	17.27	40.04	1.77	57.97	-37.26	10.0	47.2	151	104	-
Hori.	5925.000	PK	45.78	32.99	17.29	40.07	1.77	57.76	-37.47	-27.0	10.4	151	104	-
Hori.	17475.000	PK	44.25	40.51	13.66	38.29	-9.54	50.59	-44.64	-27.0	17.6	150	0	-
Vert.	5329.655	PK	47.14	31.94	16.88	39.73	1.77	58.00	-37.23	-27.0	10.2	135	357	-
Vert.	5850.000	PK	45.73	32.91	17.24	40.02	1.77	57.63	-37.60	27.0	64.6	100	97	-
Vert.	5855.000	PK	46.03	32.92	17.24	40.02	1.77	57.94	-37.29	15.6	52.8	100	97	-
Vert.	5875.000	PK	46.50	32.95	17.27	40.04	1.77	58.45	-36.78	10.0	46.7	100	97	-
Vert.	5925.000	PK	46.53	32.99	17.29	40.07	1.77	58.51	-36.72	-27.0	9.7	100	97	-
Vert.	17475.000	PK	45.25	40.51	13.66	38.29	-9.54	51.59	-43.64	-27.0	16.6	150	0	-

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

Result (EIRP [dBm]) = $10 * \text{LOG} ((10^{\wedge} \text{Electric Field Strength [dBuV/m]} / 20) * 10^{\wedge} (-6) * \text{Distance : 3 [m]})^{\wedge} 2 / 30 * 10^{\wedge} 3)$

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

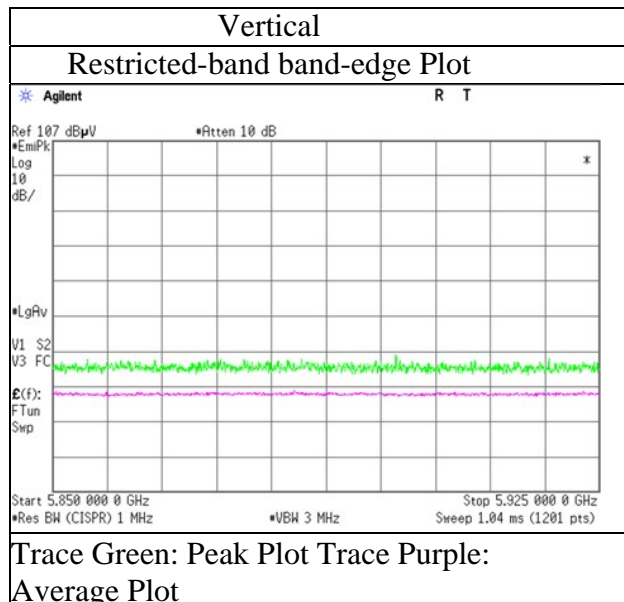
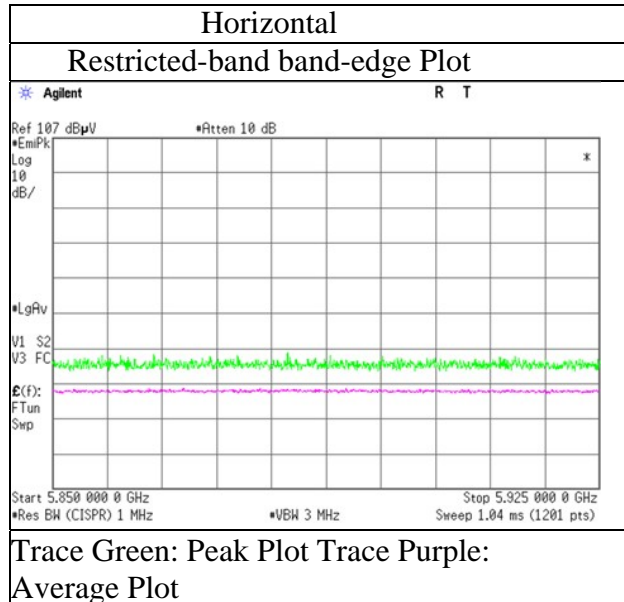
Distance factor : 1 GHz - 10 GHz : $20 \log (3.68 \text{ m} / 3.0 \text{ m}) = 1.77 \text{ dB}$

10 GHz - 40 GHz : $20 \log (1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

Radiated Spurious Emission

Test place
Semi Anechoic Chamber
Date
Temperature / Humidity
Engineer
Mode

Shonan EMC Lab.
1
January 6, 2021
21 deg.C, 32 %RH
Takahiro Kawakami
Tx 11n-20 5825 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 11, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	20 deg.C, 30 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Takahiro Kawakami	Yasumasa Owaki	Toshinori Yamada	Takahiro Kawakami
Mode	(1 GHz -10 GHz) Tx 11n-40 5190 MHz	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)	(26.5 GHz -40 GHz)

(above 1 GHz Inside of the restricted band)

(* 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.	5150.000	PK	46.03	32.25	16.76	39.72	1.77	57.09	73.9	16.8	255	77	-
Hori.	15570.000	PK	46.25	39.68	12.66	39.17	-9.54	49.88	73.9	24.0	150	0	-
Hori.	5150.000	AV	35.57	32.25	16.76	39.72	1.77	46.63	53.9	7.2	255	77	VBW : 5.6 kHz
Hori.	15570.000	AV	36.60	39.68	12.66	39.17	-9.54	40.23	53.9	13.6	150	0	VBW : 5.6 kHz
Vert.	5150.000	PK	46.02	32.25	16.76	39.72	1.77	57.08	73.9	16.8	301	98	-
Vert.	15570.000	PK	46.66	39.68	12.66	39.17	-9.54	50.29	73.9	23.6	150	0	-
Vert.	5150.000	AV	35.99	32.25	16.76	39.72	1.77	47.05	53.9	6.8	301	98	VBW : 5.6 kHz
Vert.	15570.000	AV	36.34	39.68	12.66	39.17	-9.54	39.97	53.9	13.9	150	0	VBW : 5.6 kHz

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

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

Distance factor : 1 GHz - 10 GHz : 20log (3.68 m / 3.0 m) = 1.77 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10380.000	PK	46.62	36.57	10.01	39.92	-9.54	43.74	-51.49	-27.0	24.4	150	0	-
Vert.	10380.000	PK	45.77	36.57	10.01	39.92	-9.54	42.89	-52.34	-27.0	25.3	150	0	-

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

Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)

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

Distance factor : 1 GHz - 10 GHz : 20log (3.68 m / 3.0 m) = 1.77 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

UL Japan, Inc.

Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

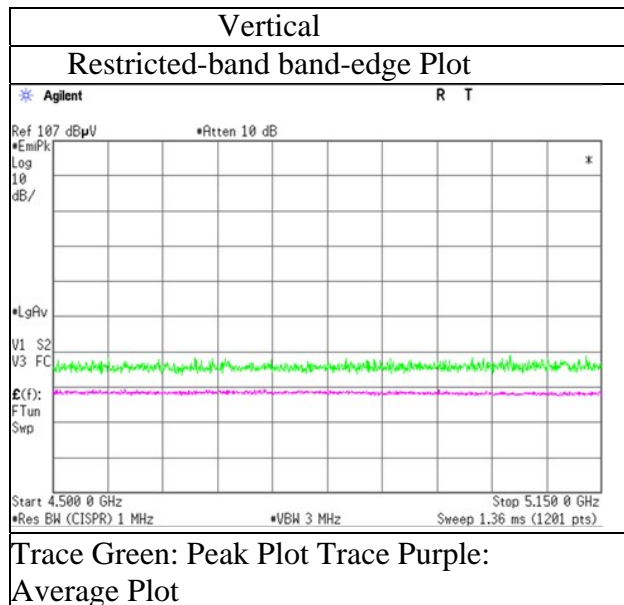
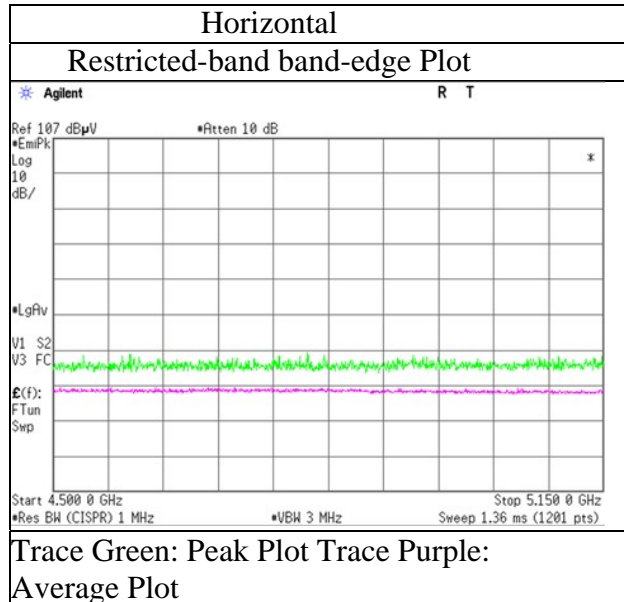
Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Test place
Semi Anechoic Chamber
Date
Temperature / Humidity
Engineer
Mode

Shonan EMC Lab.
1
January 6, 2021
21 deg.C, 32 %RH
Takahiro Kawakami
Tx 11n-40 5190 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 11, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	20 deg.C, 30 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Takahiro Kawakami	Yasumasa Owaki	Toshinori Yamada	Takahiro Kawakami
	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11n-40 5230 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	15690.000	PK	46.20	39.82	12.65	39.33	-9.54	49.80	73.9	24.1	150	0	-
Hori.	15690.000	AV	36.27	39.82	12.65	39.33	-9.54	39.87	53.9	14.0	150	0	VBW : 5.6 kHz
Vert.	15690.000	PK	46.15	39.82	12.65	39.33	-9.54	49.75	73.9	24.1	150	0	-
Vert.	15690.000	AV	35.69	39.82	12.65	39.33	-9.54	39.29	53.9	14.6	150	0	VBW : 5.6 kHz

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

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

Distance factor : 1 GHz - 10 GHz : 20log (3.68 m / 3.0 m) = 1.77 dB

10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10460.000	PK	46.72	36.69	10.03	40.07	-9.54	43.83	-51.40	-27.0	24.4	150	0	-
Vert.	10460.000	PK	46.35	36.69	10.03	40.07	-9.54	43.46	-51.77	-27.0	24.7	150	0	-

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

Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)

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

Distance factor : 1 GHz - 10 GHz : 20log (3.68 m / 3.0 m) = 1.77 dB

10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 11, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	20 deg.C, 30 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Takahiro Kawakami	Yasumasa Owaki	Toshinori Yamada	Takahiro Kawakami
	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11n-40 5310 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	5350.000	PK	46.04	31.99	16.91	39.74	1.77	56.97	73.9	16.9	196	70	-
Hori.	10620.000	PK	46.44	37.30	10.11	40.04	-9.54	44.27	73.9	29.6	150	0	-
Hori.	15930.000	PK	45.71	40.17	12.63	39.66	-9.54	49.31	73.9	24.5	150	0	-
Hori.	5350.000	AV	35.75	31.99	16.91	39.74	1.77	46.68	53.9	7.2	196	70	VBW : 5.6 kHz
Hori.	10620.000	AV	35.56	37.30	10.11	40.04	-9.54	33.39	53.9	20.5	150	0	VBW : 5.6 kHz
Hori.	15930.000	AV	35.81	40.17	12.63	39.66	-9.54	39.41	53.9	14.4	150	0	VBW : 5.6 kHz
Vert.	5350.000	PK	46.20	31.99	16.91	39.74	1.77	57.13	73.9	16.7	112	95	-
Vert.	10620.000	PK	45.24	37.30	10.11	40.04	-9.54	43.07	73.9	30.8	150	0	-
Vert.	15930.000	PK	46.10	40.17	12.63	39.66	-9.54	49.70	73.9	24.2	150	0	-
Vert.	5350.000	AV	35.95	31.99	16.91	39.74	1.77	46.88	53.9	7.0	112	95	VBW : 5.6 kHz
Vert.	10620.000	AV	35.78	37.30	10.11	40.04	-9.54	33.61	53.9	20.2	150	0	VBW : 5.6 kHz
Vert.	15930.000	AV	35.82	40.17	12.63	39.66	-9.54	39.42	53.9	14.4	150	0	VBW : 5.6 kHz

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

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

Distance factor : 1 GHz - 10 GHz : $20\log(3.68\text{ m}/3.0\text{ m}) = 1.77\text{ dB}$

10 GHz - 40 GHz : $20\log(1.0\text{ m}/3.0\text{ m}) = -9.54\text{ dB}$

UL Japan, Inc.

Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN

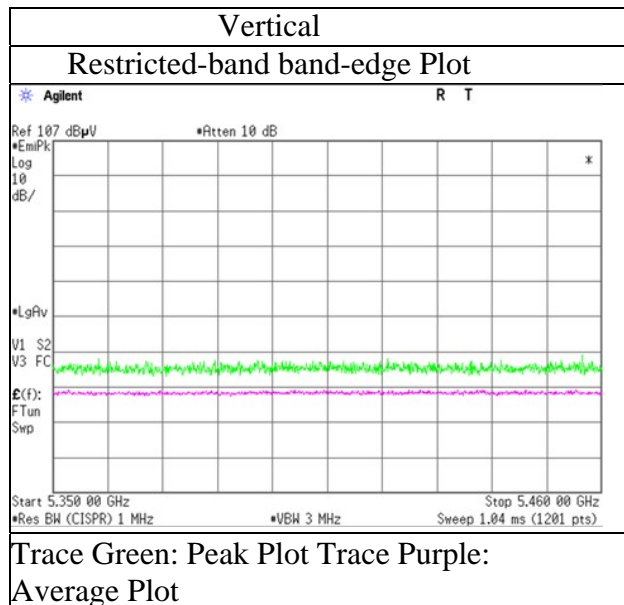
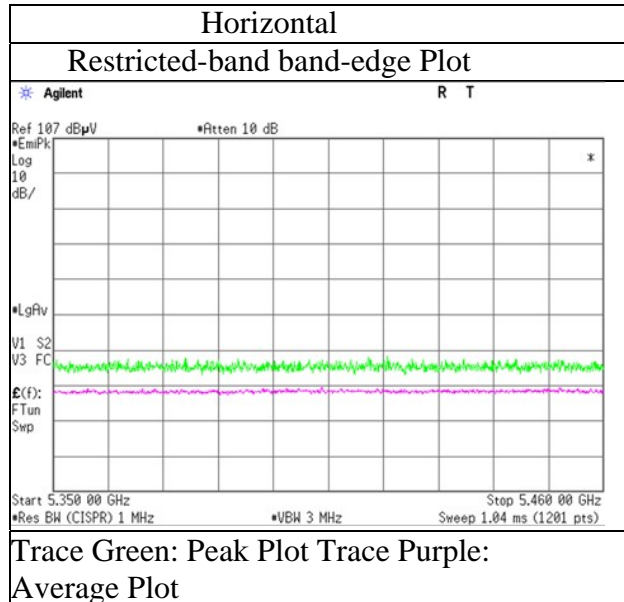
Telephone : +81 463 50 6400

Facsimile : +81 463 50 6401

Radiated Spurious Emission

Test place
Semi Anechoic Chamber
Date
Temperature / Humidity
Engineer
Mode

Shonan EMC Lab.
1
January 6, 2021
21 deg.C, 32 %RH
Takahiroy Kawakami
Tx 11n-40 5310 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 11, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	20 deg.C, 30 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Takahiro Kawakami	Yasumasa Owaki	Toshinori Yamada	Takahiro Kawakami
	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11n-40 5510 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	5460.000	PK	46.31	32.22	16.99	39.75	1.77	57.54	73.9	16.3	102	71	-
Hori.	11020.000	PK	47.09	37.58	10.33	39.67	-9.54	45.79	73.9	28.1	150	0	-
Hori.	5460.000	AV	35.76	32.22	16.99	39.75	1.77	46.99	53.9	6.9	102	71	VBW : 5.6 kHz
Hori.	11020.000	AV	35.97	37.58	10.33	39.67	-9.54	34.67	53.9	19.2	150	0	VBW : 5.6 kHz
Vert.	5460.000	PK	46.21	32.22	16.99	39.75	1.77	57.44	73.9	16.4	268	93	-
Vert.	11020.000	PK	46.43	37.58	10.33	39.67	-9.54	45.13	73.9	28.7	150	0	-
Vert.	5460.000	AV	36.00	32.22	16.99	39.75	1.77	47.23	53.9	6.6	268	93	VBW : 5.6 kHz
Vert.	11020.000	AV	35.76	37.58	10.33	39.67	-9.54	34.46	53.9	19.4	150	0	VBW : 5.6 kHz

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

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

Distance factor : 1 GHz - 10 GHz : 20log (3.68 m / 3.0 m) = 1.77 dB

10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5330.018	PK	47.44	31.94	16.88	39.73	1.77	58.30	-36.93	-27.0	9.9	238	63	-
Hori.	5470.000	PK	46.79	32.24	16.99	39.75	1.77	58.04	-37.19	-27.0	10.1	102	71	-
Hori.	16530.000	PK	45.66	40.05	13.35	40.42	-9.54	49.10	-46.13	-27.0	19.1	150	0	-
Vert.	5329.988	PK	47.04	31.94	16.88	39.73	1.77	57.90	-37.33	-27.0	10.3	118	358	-
Vert.	5470.000	PK	47.06	32.24	16.99	39.75	1.77	58.31	-36.92	-27.0	9.9	268	93	-
Vert.	16530.000	PK	45.23	40.05	13.35	40.42	-9.54	48.67	-46.56	-27.0	19.5	150	0	-

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

Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)

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

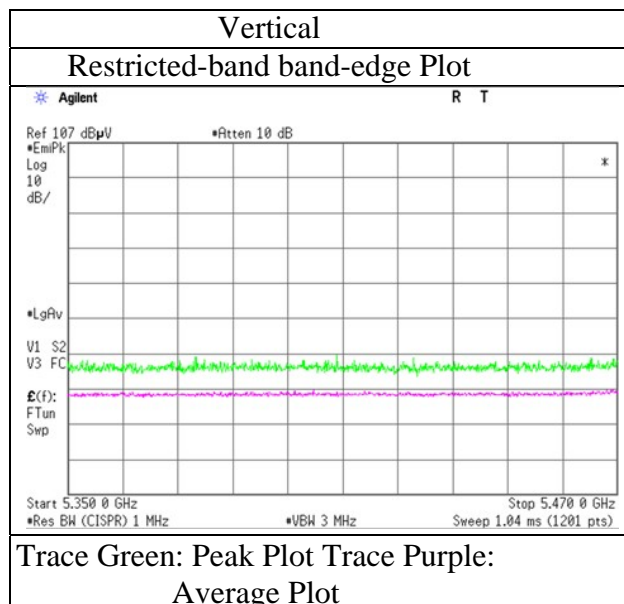
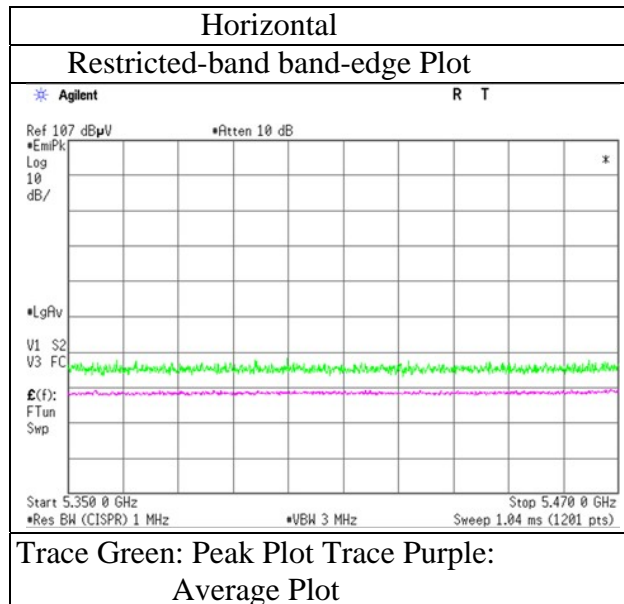
Distance factor : 1 GHz - 10 GHz : 20log (3.68 m / 3.0 m) = 1.77 dB

10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place
Semi Anechoic Chamber
Date
Temperature / Humidity
Engineer
Mode

Shonan EMC Lab.
1
January 6, 2021
21 deg.C, 32 %RH
Takahiro Kawakami
Tx 11n-40 5510 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 11, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	20 deg.C, 30 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Takahiro Kawakami	Yasumasa Owaki	Toshinori Yamada	Takahiro Kawakami
	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11n-40 5550 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	11100.000	PK	46.47	37.49	10.37	39.64	-9.54	45.15	73.9	28.7	150	0	-
Hori.	11100.000	AV	36.18	37.49	10.37	39.64	-9.54	34.86	53.9	19.0	150	0	VBW : 5.6 kHz
Vert.	11100.000	PK	46.21	37.49	10.37	39.64	-9.54	44.89	73.9	29.0	150	0	-
Vert.	11100.000	AV	36.30	37.49	10.37	39.64	-9.54	34.98	53.9	18.9	150	0	VBW : 5.6 kHz

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

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

Distance factor : 1 GHz - 10 GHz : $20 \log (3.68 \text{ m} / 3.0 \text{ m}) = 1.77 \text{ dB}$

10 GHz - 40 GHz : $20 \log (1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5330.058	PK	46.57	31.94	16.88	39.73	1.77	57.43	-37.80	-27.0	10.8	161	0	-
Hori.	16650.000	PK	45.25	39.86	13.38	40.24	-9.54	48.71	-46.52	-27.0	19.5	150	0	-
Vert.	5329.992	PK	47.42	31.94	16.88	39.73	1.77	58.28	-36.95	-27.0	9.9	267	356	-
Vert.	16650.000	PK	46.31	39.86	13.38	40.24	-9.54	49.77	-45.46	-27.0	18.4	150	0	-

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

Result (EIRP [dBm]) = $10 * \text{LOG} ((10^{\wedge} (\text{Electric Field Strength [dBuV/m]} / 20) * 10^{\wedge} (-6) * \text{Distance} : 3 [\text{m}])^{\wedge} 2 / 30 * 10^{\wedge} 3)$

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

Distance factor : 1 GHz - 10 GHz : $20 \log (3.68 \text{ m} / 3.0 \text{ m}) = 1.77 \text{ dB}$

10 GHz - 40 GHz : $20 \log (1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 6, 2021	January 11, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	21 deg.C, 32 %RH	20 deg.C, 30 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Takahiro Kawakami	Yasumasa Owaki	Toshinori Yamada	Takahiro Kawakami
	(1 GHz -10 GHz)	(10 GHz -18 GHz)	(18 GHz -26.5 GHz)	(26.5 GHz -40 GHz)
Mode	Tx 11n-40 5670 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	11340.000	PK	45.07	37.97	10.51	39.53	-9.54	44.48	73.9	29.4	150	0	-
Hori.	11340.000	AV	35.10	37.97	10.51	39.53	-9.54	34.51	53.9	19.3	150	0	VBW : 5.6 kHz
Vert.	11340.000	PK	45.14	37.97	10.51	39.53	-9.54	44.55	73.9	29.3	150	0	-
Vert.	11340.000	AV	35.27	37.97	10.51	39.53	-9.54	34.68	53.9	19.2	150	0	VBW : 5.6 kHz

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

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

Distance factor : 1 GHz - 10 GHz : $20\log(3.68\text{ m} / 3.0\text{ m}) = 1.77\text{ dB}$

10 GHz - 40 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.54\text{ dB}$

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5329.909	PK	47.09	31.94	16.88	39.73	1.77	57.95	-37.28	-27.0	10.2	199	72	-
Hori.	5725.000	PK	45.93	32.64	17.16	39.92	1.77	57.58	-37.65	-27.0	10.6	136	103	-
Hori.	17010.000	PK	45.40	39.75	13.48	39.68	-9.54	49.41	-45.82	-27.0	18.8	150	0	-
Vert.	5330.024	PK	46.98	31.94	16.88	39.73	1.77	57.84	-37.39	-27.0	10.3	225	356	-
Vert.	5725.000	PK	46.64	32.64	17.16	39.92	1.77	58.29	-36.94	-27.0	9.9	262	98	-
Vert.	17010.000	PK	45.27	39.75	13.48	39.68	-9.54	49.28	-45.95	-27.0	18.9	150	0	-

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

Result (EIRP [dBm]) = $10 * \log((10^{\wedge}(\text{Electric Field Strength [dBuV/m] / 20)) * 10^{\wedge}(-6) * \text{Distance} : 3[\text{m}])^{\wedge}2 / 30 * 10^{\wedge}3)$

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

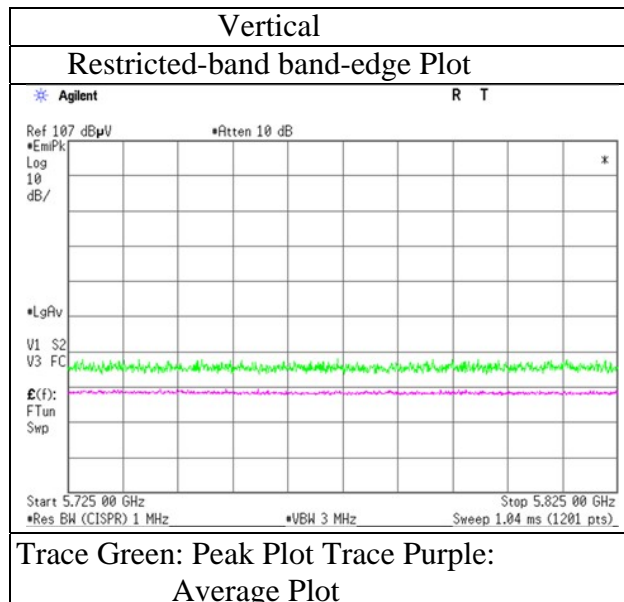
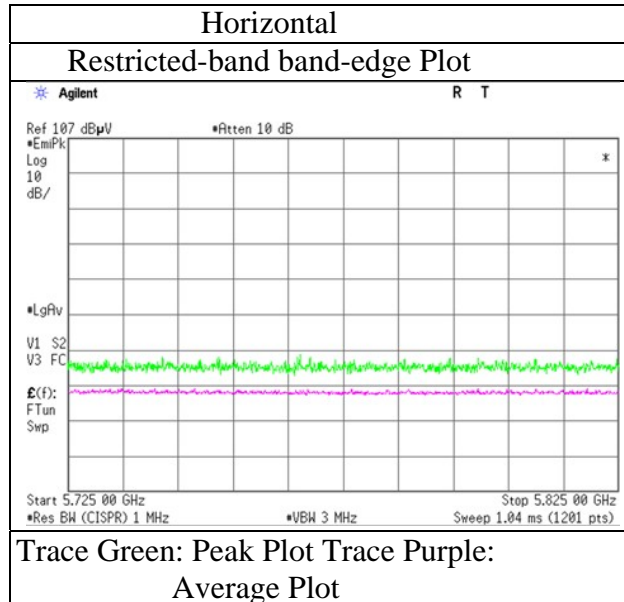
Distance factor : 1 GHz - 10 GHz : $20\log(3.68\text{ m} / 3.0\text{ m}) = 1.77\text{ dB}$

10 GHz - 40 GHz : $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.54\text{ dB}$

Radiated Spurious Emission

Test place
Semi Anechoic Chamber
Date
Temperature / Humidity
Engineer
Mode

Shonan EMC Lab.
1
January 6, 2021
21 deg.C, 32 %RH
Takahiroy Kawakami
Tx 11n-40 5670 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 8, 2021	January 11, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	20 deg.C, 29 %RH	20 deg.C, 30 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Yohsuke Matsuzawa (1 GHz -10 GHz)	Yasumasa Owaki (10 GHz -18 GHz)	Toshinori Yamada (18 GHz -26.5 GHz)	Takahiro Kawakami (26.5 GHz -40 GHz)
Mode	Tx 11n-40 5755 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	11510.000	PK	44.23	38.27	10.58	39.45	-9.54	44.09	73.9	29.8	150	0	VBW : 5.6 kHz
Hori.	11510.000	AV	33.77	38.27	10.58	39.45	-9.54	33.63	53.9	20.2	150	0	
Vert.	11510.000	PK	43.92	38.27	10.58	39.45	-9.54	43.78	73.9	30.1	150	0	
Vert.	11510.000	AV	33.72	38.27	10.58	39.45	-9.54	33.58	53.9	20.3	150	0	

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

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

Distance factor : 1 GHz - 10 GHz : 20log (3.68 m / 3.0 m) = 1.77 dB

10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5329.939	PK	46.05	31.94	16.88	39.73	1.77	56.91	-38.32	-27.0	11.3	149	74	-
Hori.	5650.000	PK	44.56	32.44	17.11	39.86	1.77	56.02	-39.21	-27.0	12.2	137	103	-
Hori.	5700.000	PK	46.13	32.56	17.14	39.90	1.77	57.70	-37.53	10.0	47.5	137	103	-
Hori.	5720.000	PK	48.76	32.62	17.15	39.92	1.77	60.38	-34.85	15.6	50.4	137	103	-
Hori.	5723.724	PK	50.72	32.63	17.16	39.92	1.77	62.36	-32.87	24.1	56.9	137	103	-
Hori.	5725.000	PK	49.86	32.64	17.16	39.92	1.77	61.51	-33.72	27.0	60.7	137	103	-
Hori.	17265.000	PK	45.26	40.22	13.57	38.92	-9.54	50.59	-44.64	-27.0	17.6	150	0	-
Vert.	5329.939	PK	47.03	31.94	16.88	39.73	1.77	57.89	-37.34	-27.0	10.3	163	359	-
Vert.	5650.000	PK	45.44	32.44	17.11	39.86	1.77	56.90	-38.33	-27.0	11.3	108	96	-
Vert.	5700.000	PK	45.22	32.56	17.14	39.90	1.77	56.79	-38.44	10.0	48.4	108	96	-
Vert.	5720.000	PK	47.72	32.62	17.15	39.92	1.77	59.34	-35.89	15.6	51.4	108	96	-
Vert.	5723.776	PK	49.71	32.63	17.16	39.92	1.77	61.35	-33.88	24.3	58.1	108	96	-
Vert.	5725.000	PK	49.31	32.64	17.16	39.92	1.77	60.96	-34.27	27.0	61.2	108	96	-
Vert.	17265.000	PK	45.98	40.22	13.57	38.92	-9.54	51.31	-43.92	-27.0	16.9	150	0	-

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

Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)

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

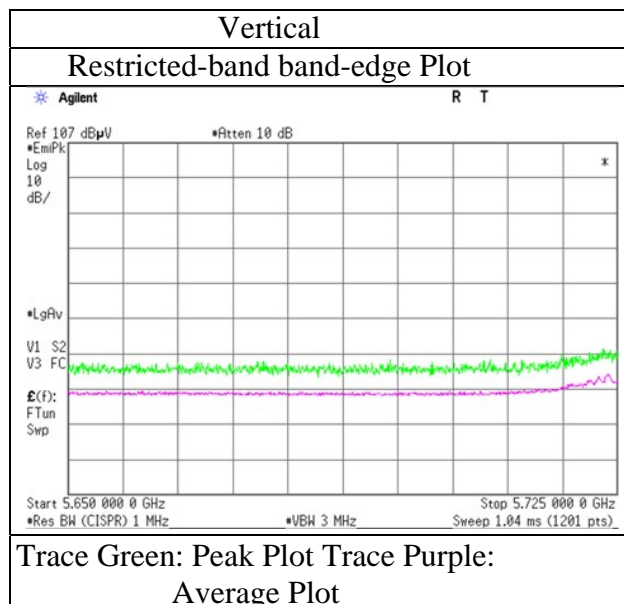
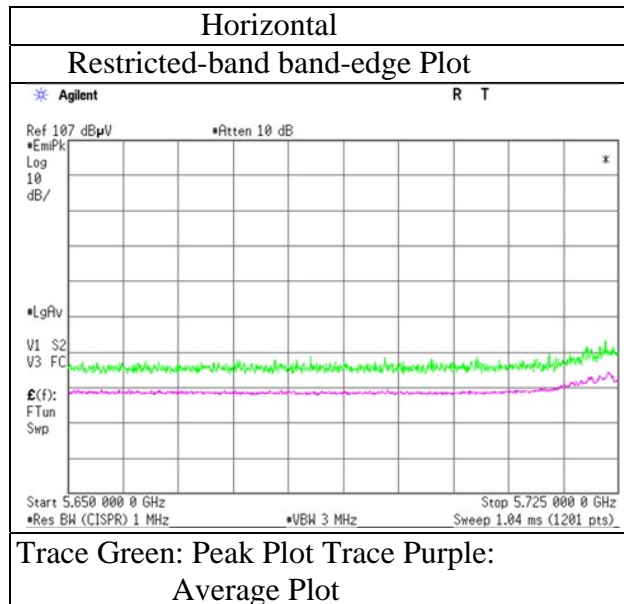
Distance factor : 1 GHz - 10 GHz : 20log (3.68 m / 3.0 m) = 1.77 dB

10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place
Semi Anechoic Chamber
Date
Temperature / Humidity
Engineer
Mode

Shonan EMC Lab.
1
January 8, 2021
20 deg.C, 29 %RH
Yohsuke Matsuzawa
Tx 11n-40 5755 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission

Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	1	1	1	1
Date	January 8, 2021	January 11, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	20 deg.C, 29 %RH	20 deg.C, 30 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH
Engineer	Yohsuke Matsuzawa (1 GHz -10 GHz)	Yasumasa Owaki (10 GHz -18 GHz)	Toshinori Yamada (18 GHz -26.5 GHz)	Takahiro Kawakami (26.5 GHz -40 GHz)
Mode	Tx 11n-40 5795 MHz			

(above 1 GHz Inside of the restricted band)

(* 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.	11590.000	PK	44.11	38.33	10.64	39.39	-9.54	44.15	73.9	29.7	150	0	-
Hori.	11590.000	AV	33.82	38.33	10.64	39.39	-9.54	33.86	53.9	20.0	150	0	VBW : 5.6 kHz
Vert.	11590.000	PK	44.13	38.33	10.64	39.39	-9.54	44.17	73.9	29.7	150	0	-
Vert.	11590.000	AV	33.64	38.33	10.64	39.39	-9.54	33.68	53.9	20.2	150	0	VBW : 5.6 kHz

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

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

Distance factor : 1 GHz - 10 GHz : 20log (3.68 m / 3.0 m) = 1.77 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

(Calculation) (above 1 GHz Outside of the restricted band)

(* 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]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5329.961	PK	46.48	31.94	16.88	39.73	1.77	57.34	-37.89	-27.0	10.8	148	88	-
Hori.	5850.000	PK	45.77	32.91	17.24	40.02	1.77	57.67	-37.56	27.0	64.5	147	106	-
Hori.	5855.000	PK	45.29	32.92	17.24	40.02	1.77	57.20	-38.03	15.6	53.6	147	106	-
Hori.	5875.000	PK	45.18	32.95	17.27	40.04	1.77	57.13	-38.10	10.0	48.1	147	106	-
Hori.	5925.000	PK	45.19	32.99	17.29	40.07	1.77	57.17	-38.06	-27.0	11.0	147	106	-
Hori.	17385.000	PK	45.11	40.41	13.63	38.56	-9.54	51.05	-44.18	-27.0	17.1	150	0	-
Vert.	5329.970	PK	46.44	31.94	16.88	39.73	1.77	57.30	-37.93	-27.0	10.9	162	357	-
Vert.	5850.000	PK	44.90	32.91	17.24	40.02	1.77	56.80	-38.43	27.0	65.4	100	94	-
Vert.	5855.000	PK	45.83	32.92	17.24	40.02	1.77	57.74	-37.49	15.6	53.0	100	94	-
Vert.	5875.000	PK	45.51	32.95	17.27	40.04	1.77	57.46	-37.77	10.0	47.7	100	94	-
Vert.	5925.000	PK	45.46	32.99	17.29	40.07	1.77	57.44	-37.79	-27.0	10.7	100	94	-
Vert.	17385.000	PK	45.27	40.41	13.63	38.56	-9.54	51.21	-44.02	-27.0	17.0	150	0	-

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

Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)

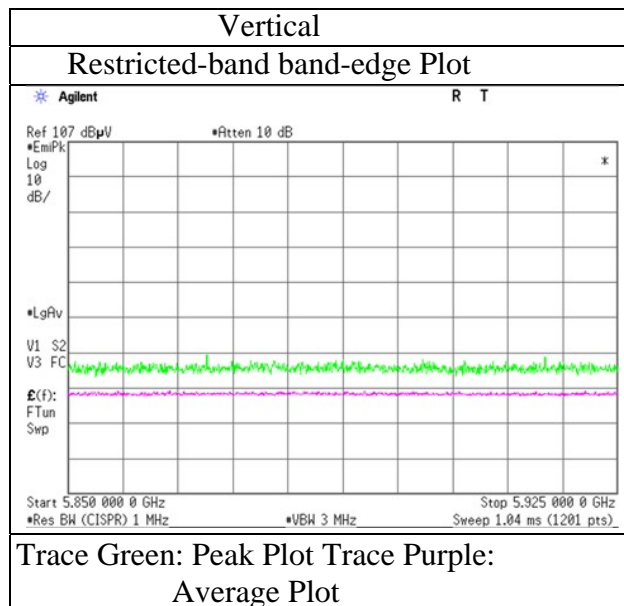
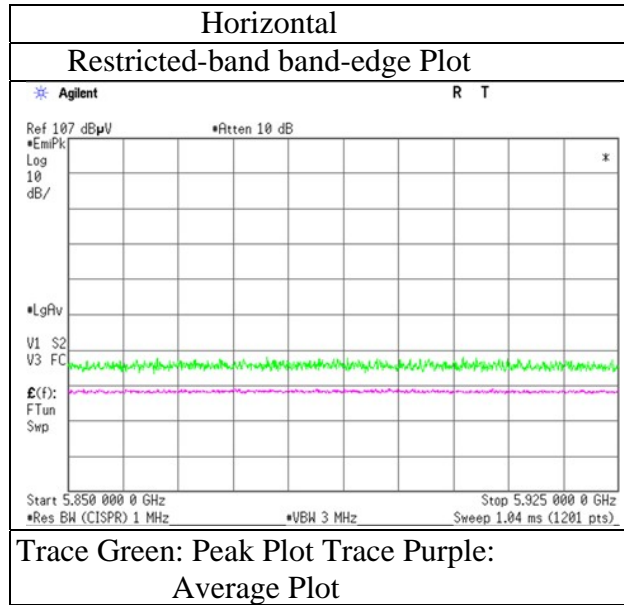
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 10 GHz : 20log (3.68 m / 3.0 m) = 1.77 dB
10 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Test place
Semi Anechoic Chamber
Date
Temperature / Humidity
Engineer
Mode

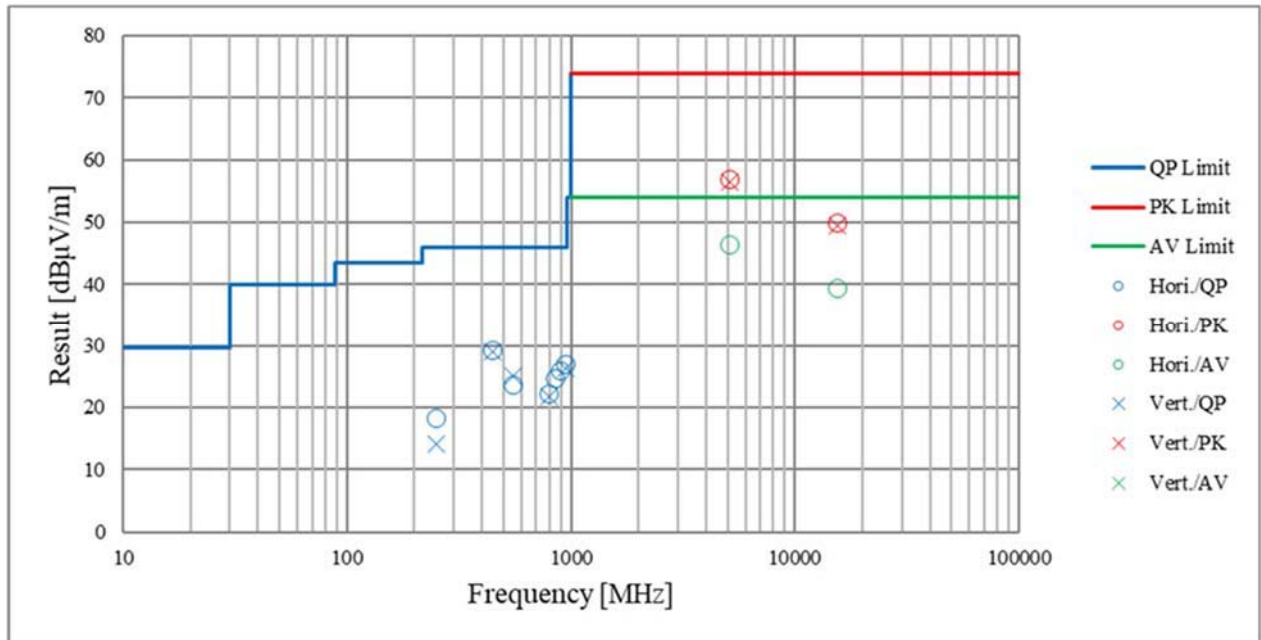
Shonan EMC Lab.
1
January 6, 2021
21 deg.C, 32 %RH
Takahiro Kawakami
Tx 11n-40 5795 MHz



* The measurement was conducted for a sufficiently long enough time to detect any possible spurious emissions.
Final result of restricted band edge was shown in tabular data.

Radiated Spurious Emission
(Plot data, Worst case)

Test place	Shonan EMC Lab.					
Semi Anechoic Chamber	1	1	1	1	1	1
Date	January 12, 2021	January 6, 2021	January 11, 2021	January 5, 2021	January 5, 2021	January 5, 2021
Temperature / Humidity	24 deg.C, 29 %RH	21 deg.C, 32 %RH	20 deg.C, 30 %RH	21 deg.C, 30 %RH	24 deg.C, 29 %RH	24 deg.C, 29 %RH
Engineer	Yosuke Murakami (30 MHz -1 GHz)	Toshinori Yamada (1 GHz -10 GHz)	Yasumasa Owaki (10 GHz -18 GHz)	Toshinori Yamada (18 GHz -26.5 GHz)	Takahiro Kawakami (26.5 GHz -40 GHz)	
Mode	Tx 11n-20 5180 MHz					



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

APPENDIX 2: Test instruments

Test equipment

Test Item	Local ID	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
RE	COTS-SEMI-5	170932	EMI Software	TSJ (Techno Science Japan)	TEPTO-DV3(RE,CE,ME,PE)	-	-	-
RE	KAT6-04	144899	Attenuator	Inmet	18N-6dB	-	2020/12/10	12
RE	KJM-09	145929	Measure	KOMELON	KMC-36	-	-	-
RE	KSA-08	145089	Spectrum Analyzer	Keysight Technologies Inc	E4446A	MY46180525	2020/11/24	12
RE	SAEC-01(NSA)	145597	Semi-Anechoic Chamber	TDK	SAEC-01(NSA)	1	2020/04/08	12
RE	SAEC-01(SVSWR)	145561	Semi-Anechoic Chamber	TDK	SAEC-01(SVSWR)	1	2020/05/04	12
RE	SAF-01	145003	Pre Amplifier	SONOMA	310N	290211	2020/02/19	12
RE	SAF-04	145127	Pre Amplifier	Toyo Corporation	TPA0118-36	2072554	2020/06/02	12
RE	SAF-09	145008	Pre Amplifier	Toyo Corporation	HAP18-26W	18	2020/09/02	12
RE	SAF-10	145129	Pre Amplifier	Toyo Corporation	HAP26-40W	10	2020/03/03	12
RE	SAT10-06	145137	Attenuator	Keysight Technologies Inc	8493C-010	74865	2020/10/05	12
RE	SAT3-09	144959	Attenuator	JFW	50HF-003N	-	2020/08/18	12
RE	SBA-01	145161	Biconical Antenna	Schwarzbeck Mess - Elektronik	BBA9106	91032664	2020/04/04	12
RE	SCC-A1/A3/A5/A7/A8/A13/SRSE-01	144967	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/T OYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/141PE/141PE/NS4906	-/0901-269(RF Selector)	2020/04/12	12
RE	SCC-A2/A4/A6/A7/A8/A13/SRSE-01	144968	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/T OYO	8D2W/12DSFA/141PE/141PE/141PE/141PE/141PE/NS4906	-/0901-269(RF Selector)	2020/04/12	12
RE	SCC-G05	145039	Coaxial Cable	Junkosha	J12J102207-00	APR-30-15-037	2020/01/31	12
RE	SCC-G19	145178	Coaxial Cable	Suhner	SUCOFLEX 102A	1188/2A	2020/03/04	12
RE	SCC-G41	151617	Coaxial Cable	Junkosha	MWX221-01000NFSNMS/B	1612S006	2020/01/08	12
RE	SCC-G62	196985	Coaxial Cable	HUBER+SUNER	SUCOFLEX 102	803650/2	2020/03/10	12
RE	SCC-G68	200008	Coaxial Cable	HUBER+SUNER	SUCOFLEX 104	575616/4	2020/07/07	12
RE	SFL-03	145377	Highpass Filter	MICRO-TRONICS	HPM50112	28	2020/10/05	12
RE	SHA-01	145383	Horn Antenna	Schwarzbeck Mess - Elektronik	BBHA9120D	9120D-725	2020/05/27	12
RE	SHA-05	145513	Horn Antenna	ETS LINDGREN	3160-09	00094867	2020/06/15	12
RE	SHA-06	145514	Horn Antenna	ETS LINDGREN	3160-10	00092383	2020/07/16	12
RE	SHA-08	194683	Horn Antenna	Schwarzbeck Mess - Elektronik	BBHA 9120 C	694	2020/02/17	12
RE	SLA-05	145527	Logperiodic Antenna	Schwarzbeck Mess - Elektronik	VUSLP9111B	193	2020/04/04	12
RE	SOS-20	191837	Humidity Indicator	CUSTOM. Inc	CTH-201	-	2020/09/28	12
RE	STR-01	145790	Test Receiver	Rohde & Schwarz	ESU40	100093	2020/04/24	12
RE	STS-01	145792	Digital Hitester	HIOKI E.E. CORPORATION	3805-50	80997812	2020/10/19	12

*Hyphens for Last Calibration Date and Cal Int (month) are instruments that Calibration is not required (e.g. software), or instruments checked in advance before use.

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

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

Test item: RE: Radiated Emission

UL Japan, Inc.
Shonan EMC Lab.

1-22-3 Megumigaoka, Hiratsuka-shi, Kanagawa-ken, 259-1220 JAPAN
Telephone : +81 463 50 6400
Facsimile : +81 463 50 6401