







RADIO TEST REPORT

Test Report No. 14344153S-C-R2

Customer	JVCKENWOOD Corporation
Description of EUT	Monitor with Receiver
Model Number of EUT	DMX809S
FCC ID	IOMJ5284
Test Regulation	FCC Part 15 Subpart E
Test Result	Complied (Refer to SECTION 3)
Issue Date	September 21, 2022
Remarks	WLAN (5 GHz band) part

Representative Test Engineer	Approved By
	
Shiro Kobayashi Engineer	Kazuya Noda Leader
 	
CERTIFICATE 1266.03	
<input type="checkbox"/> The testing in which "Non-accreditation" is displayed is outside the accreditation scopes in UL Japan, Inc.	
<input checked="" type="checkbox"/> There is no testing item of "Non-accreditation".	

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- The information provided from the customer for this report is identified in Section 1.
- For test report(s) referred in this report, the latest version (including any revisions) is always referred.

REVISION HISTORY

Original Test Report No.: 14344153S-C

This report is a revised version of 14344153S-C-R1. 14344153S-C-R1 is replaced with this report.

Revision	Test Report No.	Date	Page Revised Contents
- (Original)	14344153S-C	August 24, 2022	-
1	14344153S-C-R1	September 13, 2022	P.6 Correction of antenna gain of Bluetooth (BR / EDR) From: -6.0 dBi To: -12.3dBi
2	14344153S-C-R2	September 21, 2022	P.5 Added September 21 to Test Date. P.50, P.51, P.52 The value of 5745 MHz has been changed to the same value as P59, P60, and P61 waveform. P.59, P.60, P.61 The 5745 MHz waveform data was incomplete, so it was replaced with the correct waveform. P.92, P.93 Correction of humidity indicator last calibration date from 2021/08/02 to 2022/08/08.

Reference: Abbreviations (Including words undescribed in this report)

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

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SECTION 1: Customer Information

Company Name	JVCKENWOOD Corporation
Address	2967-3, Ishikawa-machi, Hachioji, Tokyo 192-8525 Japan
Telephone Number	+81-42-646-5525
Contact Person	Seigo Tsutsumi

The information provided from the customer is as follows;

- Customer, Description 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 and Test 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

Description	Monitor with Receiver
Model Number	DMX809S
Serial Number	Refer to SECTION 4.2
Condition	Production prototype (Not for Sale: This sample is equivalent to mass-produced items.)
Modification	No Modification by the test lab
Receipt Date	July 19, 2022: Wireless LAN transmitting tests sample July 22, 2022: Wireless LAN and Bluetooth transmitting co-location tests sample
Test Date	July 20 to September 21, 2022

2.2 Product Description

The EUT has following similar model:

Model No.	Difference from the base model
DMX809S	- (Tested model)
DMX8709S	Non HD Radio
KW-M785BW	Brand(JVC), Non HD Radio

General Specification

Rating	DC 12 V
Operating temperature	-10 deg. C to +60 deg. C

Radio Specification

Bluetooth (BR / EDR)

Equipment Type	Transceiver	
Frequency of Operation	2402 MHz to 2480 MHz	
Type of Modulation	FHSS (GFSK, $\pi/4$ DQPSK, 8 DPSK)	
Antenna Gain	-12.3 dBi	

WLAN (IEEE802.11b/11g/11n-20)

Equipment Type	Transceiver	
Frequency of Operation	2412 MHz to 2462 MHz	
Type of Modulation	DSSS, OFDM	
Antenna Gain	-9.4 dBi	

WLAN (IEEE802.11a/11n-20/11n-40/11ac-40/11ac-80)

Equipment Type	Transceiver	
Frequency of Operation	20 MHz Band:	5745 MHz to 5805 MHz
	40 MHz Band:	5755 MHz to 5795 MHz
	80 MHz Band:	5775 MHz
Type of Modulation	OFDM	
Antenna Gain	ANT 0: 1.1 dBi, ANT 1: 0.1 dBi	

SECTION 3: Test specification, Procedures & Results

3.1 Test Specification

Test Specification	FCC Part 15 Subpart E FCC Part 15 final revised on April 1, 2022 and effective May 2, 2022
Title	FCC 47 CFR Part 15 Radio Frequency Device Subpart E Unlicensed National Information Infrastructure Devices Section 15.407 General technical requirements

*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: -	See data	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		Complied a)	Conducted
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		Complied b)	Conducted
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	7.4 dB 223.762 MHz, QP, Hori. Mode: Tx 11n-20 MIMO 5745 MHz with 3DH5 Hopping	Complied c) / d)	Conducted (< 30 MHz) / Radiated (> 30 MHz) *3)
6 dB Emission Bandwidth	FCC: ANSI C63.10-2013 ISED: -	FCC: 15.407 (e) ISED: RSS-247 6.2.4.1	See data	Complied e)	Conducted

Note: UL Japan, Inc.'s EMI Work Procedures: Work Instructions-ULID-003591 and Work Instructions-ULID-003593.

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

- *1) The test is not applicable since the EUT does not have AC Mains.
- *2) The test is not applicable since the EUT support only U-NII-3 band.
- *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 Maximum Conducted Output Power)
- b) Refer to APPENDIX 1 (data of Maximum Power Spectral Density)
- c) Refer to APPENDIX 1 (data of Radiated Spurious Emission)
- d) Refer to APPENDIX 1 (data of Conducted Spurious Emission)
- e) Refer to APPENDIX 1 (data of 6 dB Bandwidth)

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.

FCC Part 15.31 (e)

The EUT provides stable voltage constantly to the wireless transmitter regardless of input voltage. Instead of a new battery, DC power supply was used for the test. That does not affect the test result, therefore the EUT complies with the requirement.

FCC Part 15.203 Antenna requirement

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

3.3 Addition to Standard

Item	Test Procedure	Specification	Worst Margin	Results	Remarks
99 % Occupied Band Width	ISED: RSS-Gen 6.7	ISED: -	N/A	- a)	Conducted

a) Refer to APPENDIX 1 (data of 6 dB Emission Bandwidth and 99 % Occupied Bandwidth)

Other than above, 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 following 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 $k = 2$.

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 to 30 MHz	2.9 dB	2.9 dB	3.0 dB	2.9 dB
Radiated emission (Measurement distance: 3 m)	9 kHz to 30 MHz	3.2 dB	3.1 dB	3.1 dB	-
	30 MHz to 200 MHz	4.6 dB	4.6 dB	4.6 dB	-
	200 MHz to 1 GHz	6.0 dB	6.1 dB	6.1 dB	-
	1 GHz to 6 GHz	4.7 dB	4.7 dB	4.7 dB	-
	6 GHz to 18 GHz	5.2 dB	5.3 dB	5.3 dB	-
	18 GHz to 40 GHz	5.4 dB	5.5 dB	5.5 dB	-
Radiated emission (Measurement distance: 1 m)	1 GHz to 18 GHz	5.6 dB	5.6 dB	5.6 dB	-
	18 GHz to 40 GHz	5.8 dB	5.8 dB	5.8 dB	-

SAC=Semi-Anechoic Chamber

SR= Shielded Room is applied besides radiated emission

Antenna terminal test	Uncertainty (+/-)
Power Measurement above 1 GHz (Average Detector) SPM-06	1.2 dB
Power Measurement above 1 GHz (Peak Detector) SPM-06	2.0 dB
Power Measurement above 1 GHz (Average Detector) SPM-07	1.2 dB
Power Measurement above 1 GHz (Peak Detector) SPM-07	1.3 dB
Power Measurement above 1 GHz (Average Detector) SPM-13	1.3 dB
Power Measurement above 1 GHz (Peak Detector) SPM-13	1.3 dB
Spurious emission (Conducted) below 1 GHz	0.93 dB
Conducted emissions Power Density Measurement 1 GHz to 3 GHz	0.92 dB
Conducted emissions Power Density Measurement 3 GHz to 18 GHz	2.3 dB
Spurious emission (Conducted) 18 GHz to 26.5 GHz	2.3 dB
Spurious emission (Conducted) 26.5 GHz to 40 GHz	2.3 dB
Bandwidth Measurement	0.012 %
Duty cycle and Time Measurement	0.27 %
Temperature_SCH-01	0.93 deg. C.
Humidity_SCH-01	4.1 %
Temperature_SCH-02	2.0 deg. C.
Humidity_SCH-02	6.6 %
Voltage	0.97 %

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
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 and also was judged the necessity of 802.11ac mode by the pre-test.

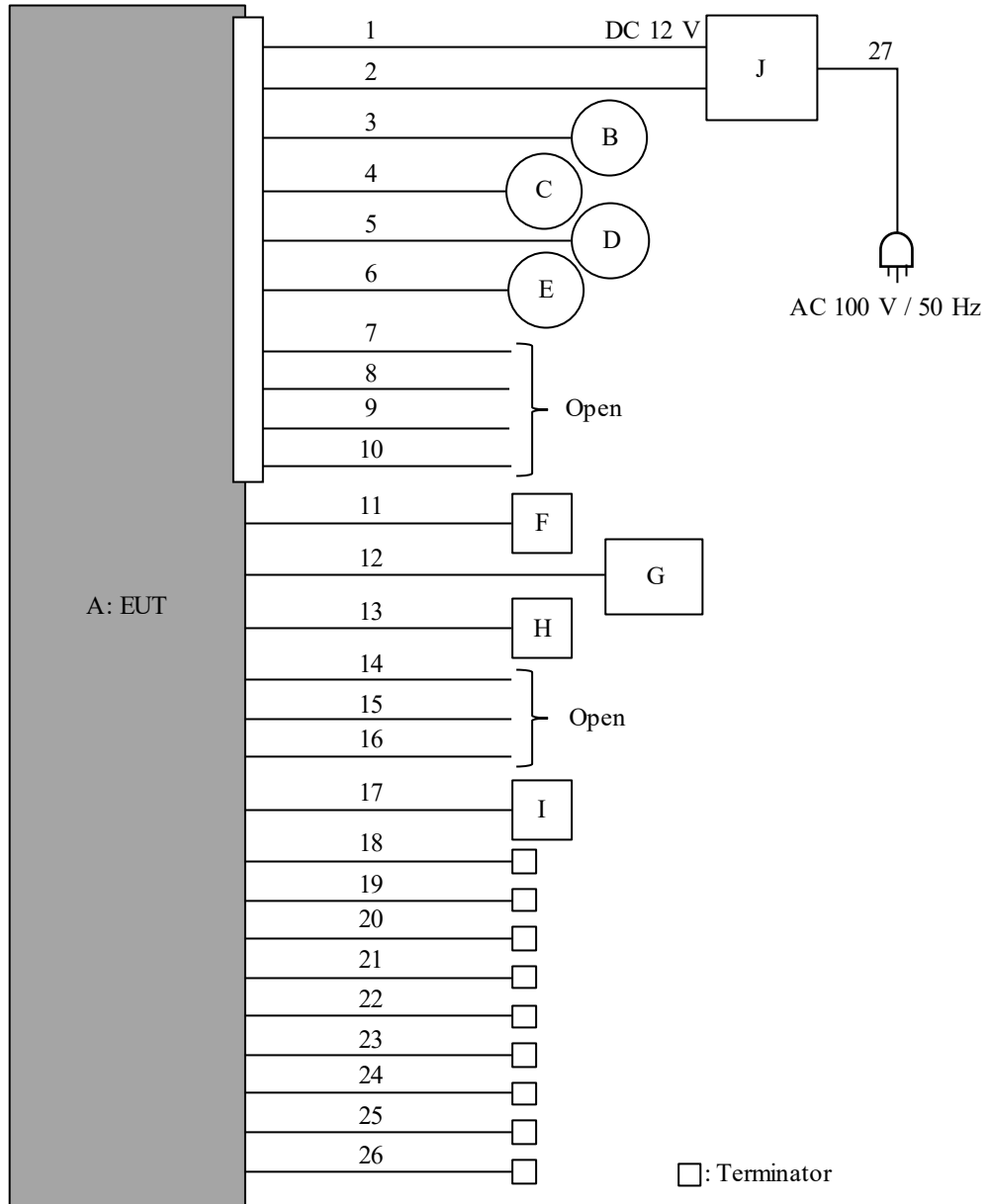
Mode	Worst Data mode*
Transmitting (Tx), IEEE 802.11a (11a)	18 Mbps (ANT 0), PN9
Transmitting (Tx), IEEE 802.11n SISO 20 MHz BW (11n-20 (SISO))	MCS 7 (ANT 0), PN9
Transmitting (Tx), IEEE 802.11n MIMO 20 MHz BW (11n-20 (MIMO))	MCS 15 (2 Streams), PN9
Transmitting (Tx), IEEE 802.11n SISO 40 MHz BW (11n-40 (SISO))	MCS 6 (ANT 0), PN9
Transmitting (Tx), IEEE 802.11ac SISO 40 MHz BW (11ac-40 (SISO))	MCS 8 (ANT 0), PN9
Transmitting (Tx), IEEE 802.11n MIMO 40 MHz BW (11n-40 (MIMO))	MCS 15 (2 Streams), PN9
Transmitting (Tx), IEEE 802.11ac MIMO 40 MHz BW (11ac-40 (MIMO))	MCS 8 (2 Streams), PN9
Transmitting (Tx), IEEE 802.11ac SISO 80 MHz BW (11ac-80 (SISO))	MCS 8 (ANT 0), PN9
Transmitting (Tx), IEEE 802.11ac MIMO 80 MHz BW (11ac-80 (MIMO))	MCS 8 (2 Streams), PN9
*The worst antenna (ANT-1) and condition was determined based on the test result of Maximum Conducted Output Power.	
*Power of the EUT was set by the software as follows; Power settings: 11a/11n-20/40: TPC: 4, Gain: 5, 11ac-40/80: TPC: 4, Gain: 4 (Setting value) Software: for Wireless LAN transmitting tests Application Version: V104.RF10 System Version: V101 (Date: 2022.07 19, Storage location: EUT memory) for Wireless LAN and Bluetooth transmitting co-location tests Application Version: V104.RF13 System Version: V107 (Date: 2022.07 22, Storage location: EUT memory)	
*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	
99 % Occupied Bandwidth, 6 dB Bandwidth	Tx 11a Tx 11n-20 (SISO) Tx 11n-20 (MIMO)	ANT 0	5745 MHz 5785 MHz 5805 MHz	
	Tx 11n-40 (SISO) Tx 11ac-40 (SISO) Tx 11n-40 (MIMO) Tx 11ac-40 (MIMO)	ANT 0	5755 MHz 5795 MHz	
	Tx 11ac-80 (SISO) Tx 11ac-80 (MIMO)	ANT 0	5775 MHz	
	Maximum Conducted Output Power, Maximum Power Spectral Density	Tx 11a Tx 11n-20 (SISO)	ANT 0	5745 MHz 5785 MHz 5805 MHz
		Tx 11n-20 (MIMO)	ANT 0 + ANT 1	
		Tx 11n-40 (SISO) Tx 11ac-40 (SISO)	ANT 0	5755 MHz 5795 MHz
Tx 11n-40 (MIMO) Tx 11ac-40 (MIMO)		ANT 0 + ANT 1		
Tx 11ac-80 (SISO)		ANT 0	5775 MHz	
Tx 11ac-80 (MIMO)		ANT 0 + ANT 1		
Radiated Spurious Emission (Above 1 GHz)	Tx 11n-20 (MIMO)	ANT 0 + ANT 1	5745 MHz 5785 MHz 5805 MHz	
	Tx 11n-40 (MIMO)	ANT 0 + ANT 1	5755 MHz 5795 MHz	
	Tx 11ac-80 (MIMO)	ANT 0 + ANT 1	5775 MHz	
	Tx 11n-20 (MIMO) with 3DH5 Hopping	ANT 0 + ANT 1	5745 MHz 5805 MHz	
	Tx 11n-40 (MIMO) with 3DH5 Hopping	ANT 0 + ANT 1	5755 MHz 5795 MHz	
	Tx 11ac-80 (MIMO) with 3DH5 Hopping	ANT 0 + ANT 1	5775 MHz	
	Radiated Spurious Emission (Below 1 GHz)	Tx 11n-20 (MIMO)	ANT 0 + ANT 1	5745 MHz
Tx 11n-20 (MIMO) with 3DH5 Hopping		ANT 0 + ANT 1	5745 MHz	
Conducted Spurious Emission *1)	Tx 11n-20 (MIMO)	ANT 0	5745 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.				

Configuration and Peripherals

<For Radiated Emission test>



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

Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	Monitor with Receiver	DMX809S	107X0062 *1) 107X0061 *2)	JVCKENWOOD	EUT
B	Speaker	KFC-RS160	-	JVCKENWOOD	-
C	Speaker	KFC-RS160	-	JVCKENWOOD	-
D	Speaker	KFC-RS160	-	JVCKENWOOD	-
E	Speaker	KFC-RS160	-	JVCKENWOOD	-
F	USB Memory	SDDDC2-064G-G46	-	SanDisk	-
G	Handy Cam	HC-W585M	DM7LA002009	Panasonic	-
H	GPS ANTENNA	GPA-GS204	-	JVCKENWOOD	-
I	Microphone	GD-VHM4214A2	-	JVCKENWOOD	-
J	Power Supply (DC)	PAN35-10A	DE001677	KIKUSUI	-

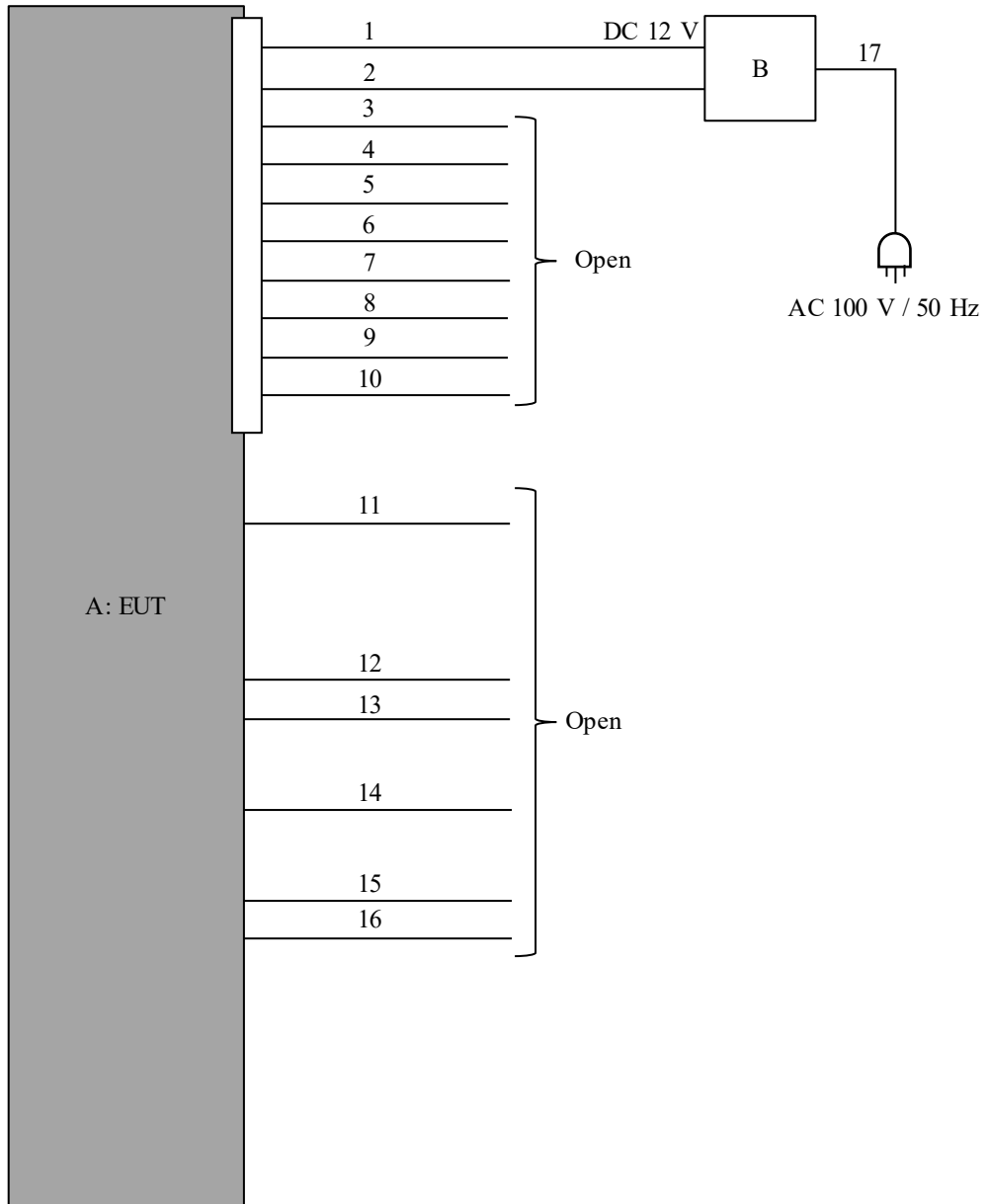
*1) Used for Wireless LAN transmitting tests.

*2) Used for Wireless LAN and Bluetooth transmitting co-location tests

List of cables used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	DC (ACC, B+)	0.15 + 1.8	Unshielded	Unshielded	-
2	DC (GND)	0.15 + 1.8	Unshielded	Unshielded	-
3	Speaker (Front-L) +/-	0.15 + 2.0 + 1.9	Unshielded	Unshielded	-
4	Speaker (Front-R) +/-	0.15 + 2.0 + 1.9	Unshielded	Unshielded	-
5	Speaker (Rear-L) +/-	0.15 + 2.0 + 1.9	Unshielded	Unshielded	-
6	Speaker (Rear-R) +/-	0.15 + 2.0 + 1.9	Unshielded	Unshielded	-
7	ILLUMI	0.15 + 0.9	Unshielded	Unshielded	-
8	ANT Cont	0.15 + 0.9	Unshielded	Unshielded	-
9	Mute	0.15 + 0.9	Unshielded	Unshielded	-
10	REMOTE Cont	0.15 + 0.9	Unshielded	Unshielded	-
11	USB	1.0	Shielded	Shielded	-
12	HDMI	0.1 + 1.7	Shielded	Shielded	-
13	GPS	3.5	Shielded	Shielded	-
14	PRK SW	0.1 + 2.0	Unshielded	Unshielded	-
15	REVERSE	0.1 + 1.0	Unshielded	Unshielded	-
16	EXT IF	1.0	Shielded	Shielded	-
17	Mic	0.15 + 3.0	Shielded	Shielded	-
18	IF	1.0	Shielded	Shielded	-
19	FM/AM	0.15+ 1.8	Shielded	Shielded	-
20	Front View Camera	0.2 +1.5	Shielded	Shielded	-
21	Rear Preout	1.2	Shielded	Shielded	-
22	Front Preout	1.2	Shielded	Shielded	-
23	Subwoofer Preout	1.0	Shielded	Shielded	-
24	VIDEO OUT	3.6	Shielded	Shielded	-
25	R-CAM	2.1	Shielded	Shielded	-
26	AV-IN	1.4	Shielded	Shielded	-
27	AC	2.0	Unshielded	Unshielded	-

<For Antenna Terminal Conducted test>



Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	Monitor with Receiver	DMX809S	107X0065	JVCKENWOOD	EUT
B	Power Supply(DC)	PAN35-10A	BP002287	KIKUSUI	-

List of cables used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	DC (ACC, B+)	1.5	Unshielded	Unshielded	-
2	DC (GND)	1.5	Unshielded	Unshielded	-
3	Speaker (Front-L) +/-	0.15	Unshielded	Unshielded	-
4	Speaker (Front-R) +/-	0.15	Unshielded	Unshielded	-
5	Speaker (Rear-L) +/-	0.15	Unshielded	Unshielded	-
6	Speaker (Rear-R) +/-	0.15	Unshielded	Unshielded	-
7	ILLUMI	0.15	Unshielded	Unshielded	-
8	ANT Cont	0.15	Unshielded	Unshielded	-
9	Mute	0.15	Unshielded	Unshielded	-
10	REMOTE Cont	0.15	Unshielded	Unshielded	-
11	USB	1.0	Shielded	Shielded	-
12	PRK SW	0.1	Unshielded	Unshielded	-
13	REVERSE	0.1	Unshielded	Unshielded	-
14	Mic	0.15	Shielded	Shielded	-
15	FM/AM	0.15	Shielded	Shielded	-
16	Front View Camera	0.2	Shielded	Shielded	-
17	AC	2.0	Unshielded	Unshielded	-

SECTION 5: Radiated Spurious Emission and Band Edge Compliance

Test Procedure

< Below 1GHz >

EUT was placed on a urethane platform of nominal size, 2.0 m by 1.0 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 U-NII-3 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;

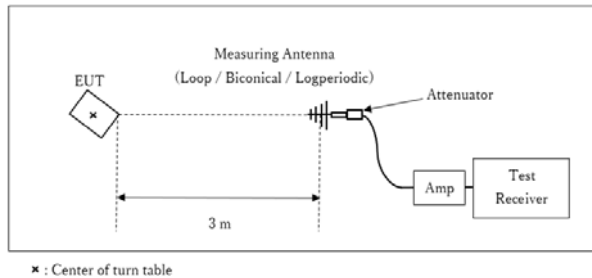
Frequency	30 MHz to 200 MHz	200 MHz to 1 GHz	Above 1 GHz
Antenna Type	Biconical	Logperiodic	Horn

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 RBW: 1 MHz VBW: 1/T MHz (T: Burst length, refer to Appendix) 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".

Figure 2: Test Setup

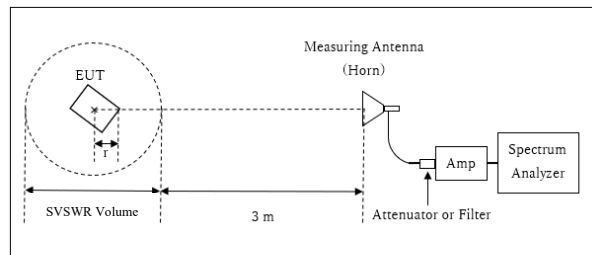
Below 1 GHz



Test Distance: 3 m

× : Center of turn table

1 GHz to 10 GHz

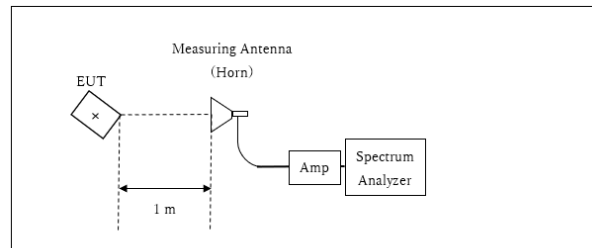


Distance Factor: $20 \times \log(3.89 \text{ m} / 3.0 \text{ m}) = 2.26 \text{ dB}$
* Test Distance: $(3 + \text{SVSWR Volume} / 2) - r = 3.89 \text{ m}$

SVSWR Volume : 2.0 m
(SVSWR Volume has been calibrated based on CISPR 16-1-4.)
 $r = 0.11 \text{ m}$

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

10 GHz to 40 GHz



Distance Factor: $20 \times \log(1.0 \text{ m} / 3.0 \text{ m}) = -9.54 \text{ dB}$
* Test Distance: 1 m

× : Center of turn table

- The carrier level and noise levels were confirmed at each position of 0 deg. and 30 deg. angles of EUT to see the position of maximum noise, and the test was made at the position that has the maximum noise.

Wireless LAN transmitting tests and Wireless LAN and Bluetooth transmitting co-location tests

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	30 deg.	0 deg.	30 deg.	0 deg.	30 deg.	0 deg.	0 deg.
Vertical	30 deg.	0 deg.	30 deg.	0 deg.	30 deg.	0 deg.	0 deg.

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

Measurement Range : 30 MHz to 40 GHz
Test Data : APPENDIX
Test Result : Pass

SECTION 6: Antenna Terminal Conducted Tests

Test Procedure

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

Test	Span	RBW	VBW	Sweep time	Detector	Trace	Instrument used and Test method
99 % Occupied Bandwidth *1)	Enough width to display emission skirts	1 % to 5 % of OBW	≥ 3 RBW	Auto	Peak	Max Hold	Spectrum Analyzer
6 dB Bandwidth	Enough to capture the emission	100 kHz	300 kHz	Auto	Peak	Max Hold	Spectrum Analyzer
Maximum Conducted Output Power	-	-	-	Auto	Average	-	Power Meter (Sensor: 160 MHz BW) (Method PM-G)
Maximum Power Spectral Density	Encompass the entire EBW	100 kHz *2)	≥ 3 RBW	Auto	RMS Power Averaging (100 times)	Clear Write	Spectrum Analyzer
Conducted Spurious Emission*3) *4)	9 kHz to 150 kHz	200 Hz	620 Hz	Auto	Peak	Max Hold	Spectrum Analyzer
	150 kHz to 30 MHz	10 kHz	30 kHz				

* 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".

*1) Peak hold was applied as Worst-case measurement.

*2) KDB 789033 D02 says that RBW is set to be 500 kHz for 5.725 GHz to 5.850 GHz, but it is not possible with spectrum analyzer, so RBW Correction Factor (10 log (500 kHz / 100 kHz)) was added to the test result.

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

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

*4) The limits in CFR 47, Part 15, Subpart C, paragraph 15.209(a), are identical to those in RSS-Gen section 8.9, Table 6, since the measurements are performed in terms of magnetic field strength and converted to electric field strength levels (as reported in the table) using the free space impedance of 377 Ohms. For example, the measurement at frequency 9 kHz resulted in a level of 45.5 dBuV/m, which is equivalent to $45.5 - 51.5 = -6.0$ dBuA/m, which has the same margin, 3 dB, to the corresponding RSS-Gen Table 6 limit as it has to 15.209(a) limit.

The test results and limit are rounded off to two decimals place, so some differences might be observed. The equipment and cables were not used for factor 0 dB of the data sheets.

Test Data : APPENDIX
Test Result : Pass

APPENDIX 1: Test Data

6 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	July 21, 2022	July 22, 2022
Temperature / Humidity	26 deg. C / 45 % RH	25 deg. C / 39 % RH
Engineer	Miku Ikudome	Shiro Kobayashi
Mode	Tx (worst antenna port)	

11a

Antenna	Tested Frequency [MHz]	6 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
ANT 0	5745	15.180	16410.6
	5785	15.262	16434.6
	5805	15.173	16426.2

11n-20 SISO

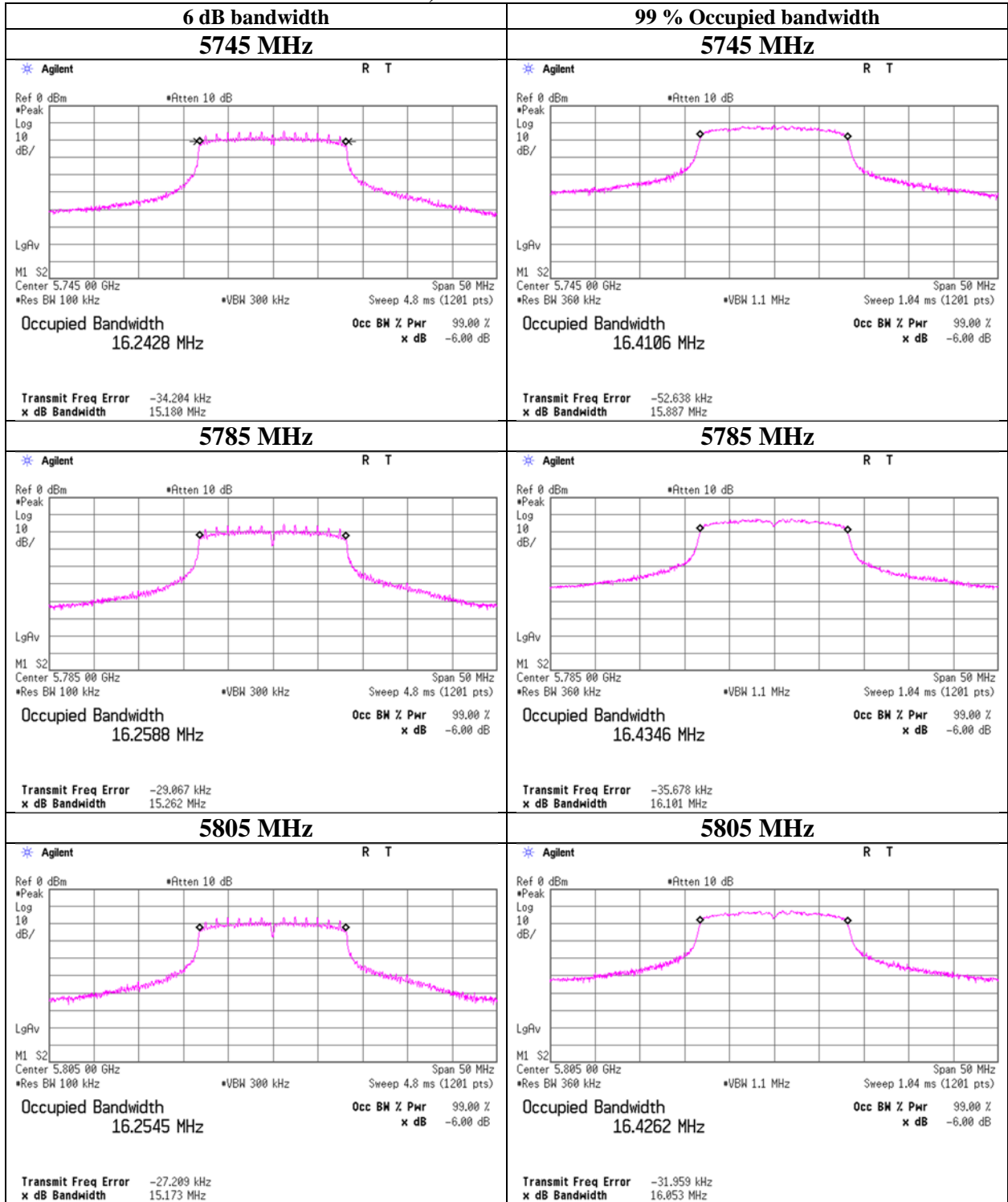
Antenna	Tested Frequency [MHz]	6 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
ANT 0	5745	17.687	18184.3
	5785	17.703	18242.7
	5805	17.694	18239.0

11n-20 MIMO

Antenna	Tested Frequency [MHz]	6 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
ANT 0	5745	17.680	18190.0
	5785	17.689	18243.2
	5805	17.692	18247.5

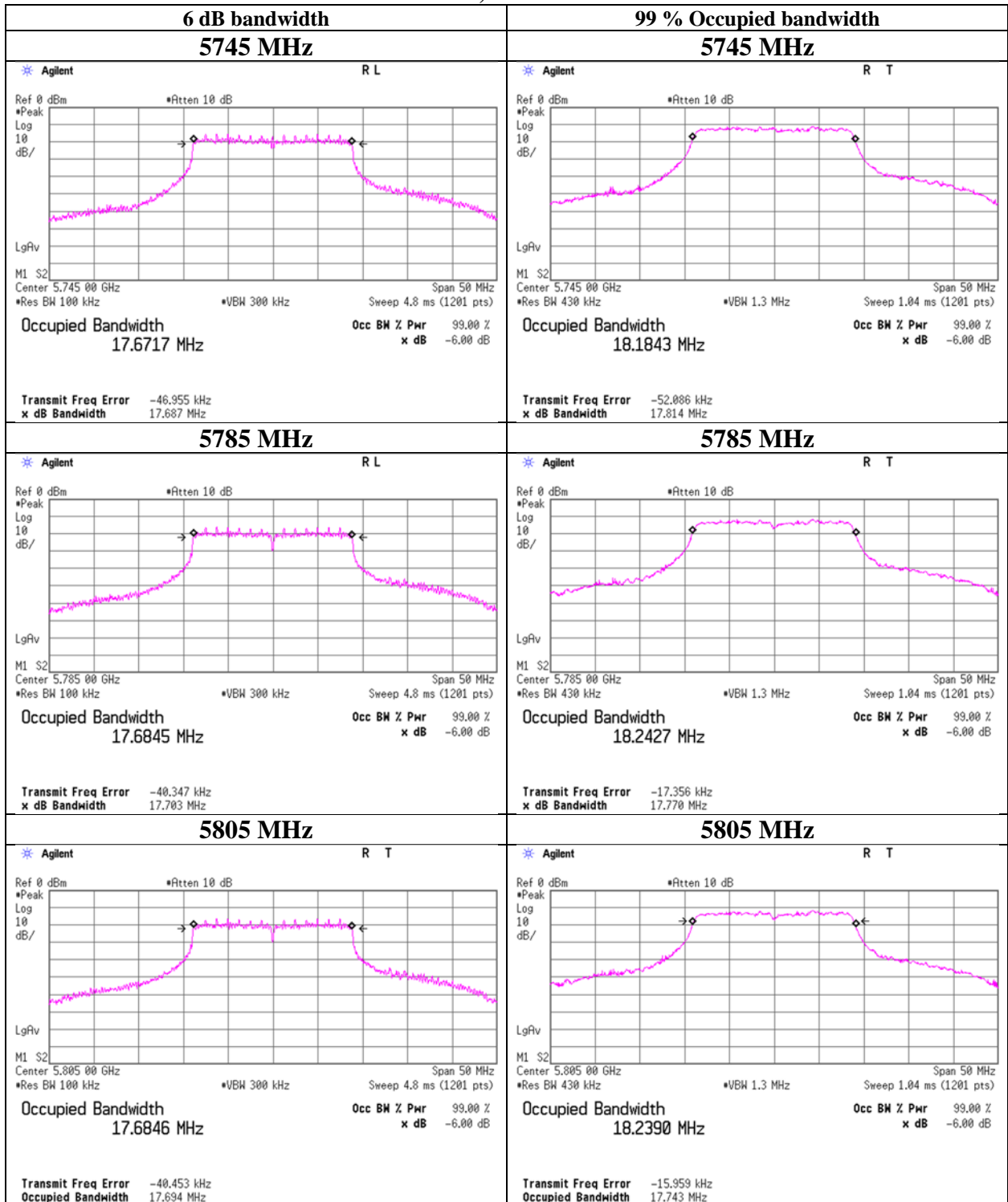
6 dB Emission Bandwidth and 99 % Occupied Bandwidth

11a, Antenna: ANT 0



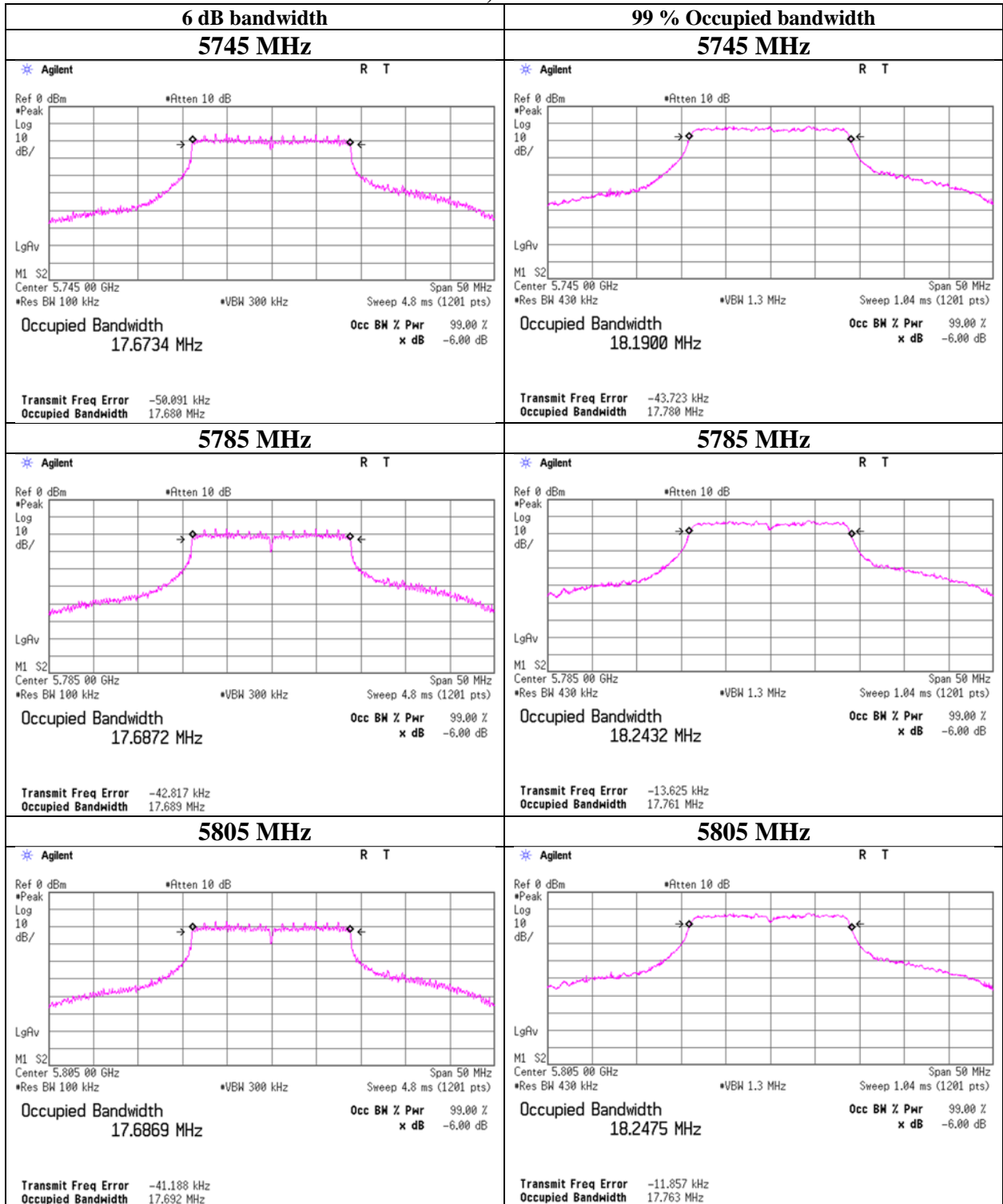
6 dB Emission Bandwidth and 99 % Occupied Bandwidth

11n-20 SISO, Antenna: ANT 0



6 dB Emission Bandwidth and 99 % Occupied Bandwidth

11n-20 MIMO, Antenna: ANT 0



6 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	July 21, 2022	July 22, 2022
Temperature / Humidity	26 deg. C / 45 % RH	25 deg. C / 39 % RH
Engineer	Miku Ikudome	Shiro Kobayashi
Mode	Tx (worst antenna port)	

11n-40 SISO

Antenna	Tested Frequency [MHz]	6 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
ANT0	5755	36.459	37085.2
	5795	36.484	37141.2

11ac-40 SISO

Antenna	Tested Frequency [MHz]	6 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
ANT0	5755	36.466	36956.2
	5795	36.463	36975.3

11n-40 MIMO

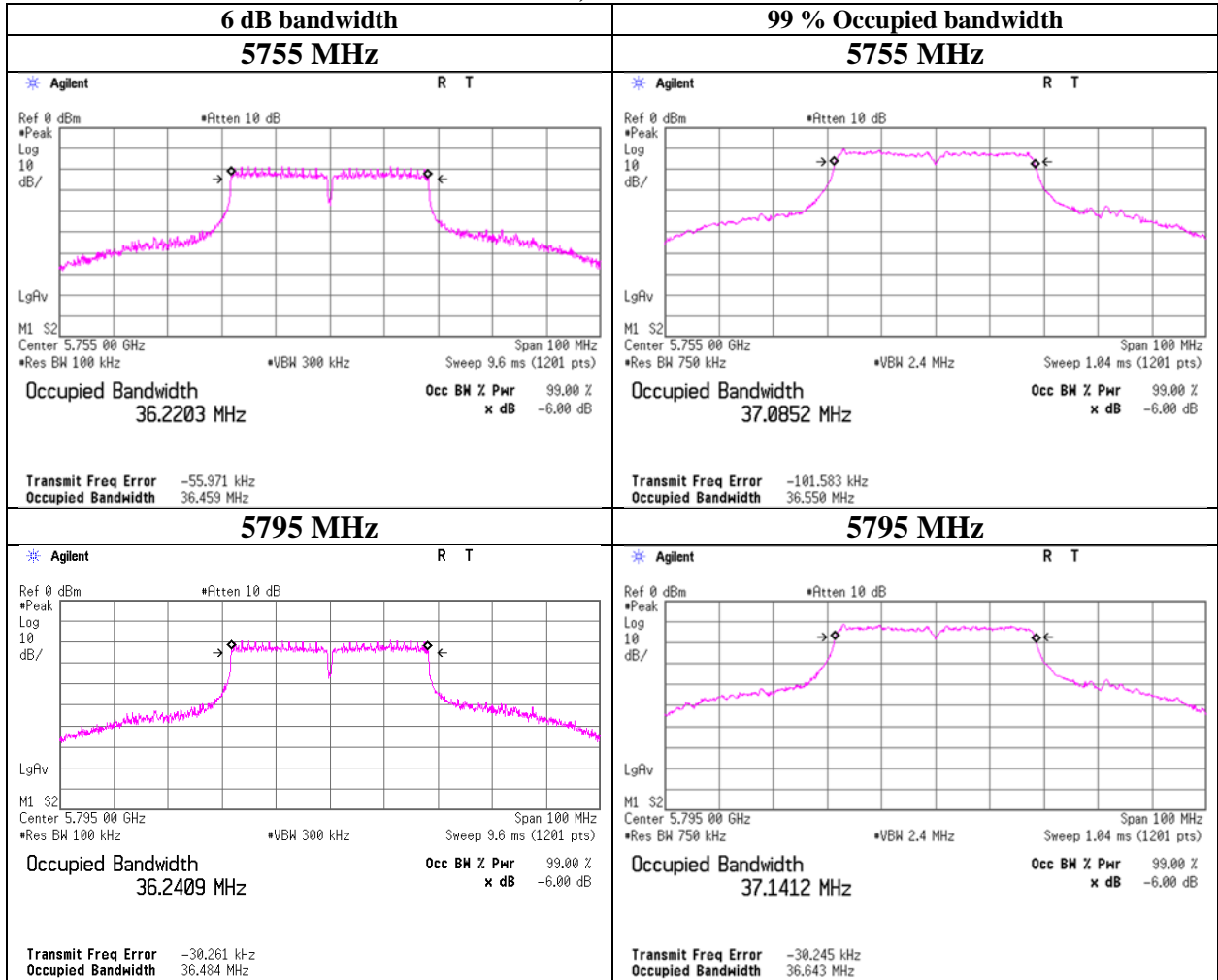
Antenna	Tested Frequency [MHz]	6 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
ANT0	5755	36.438	37193.4
	5795	36.470	37192.1

11ac-40 MIMO

Antenna	Tested Frequency [MHz]	6 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
ANT0	5755	36.480	37251.7
	5795	36.487	37269.9

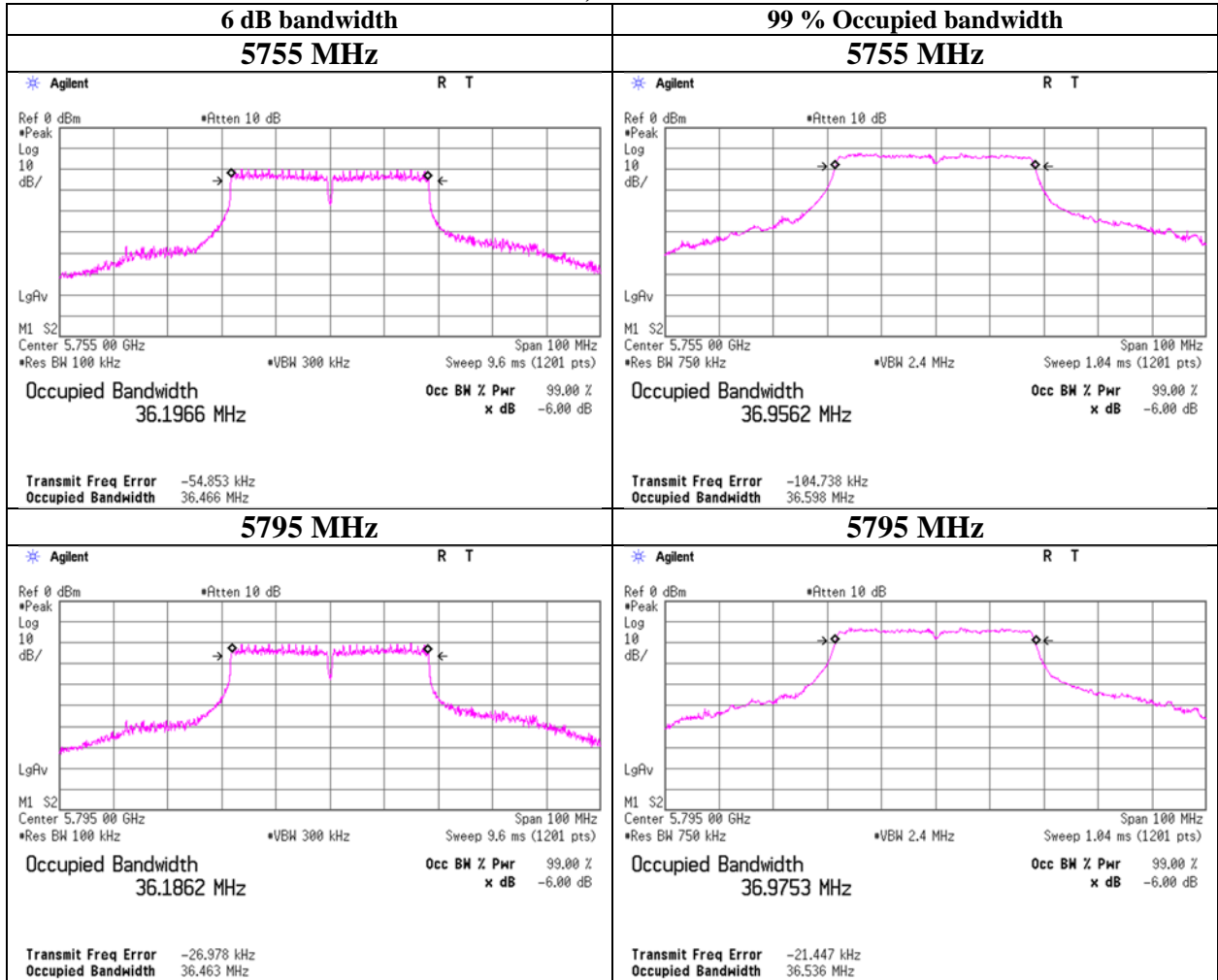
6 dB Emission Bandwidth and 99 % Occupied Bandwidth

11n-40 SISO, Antenna: ANT 0



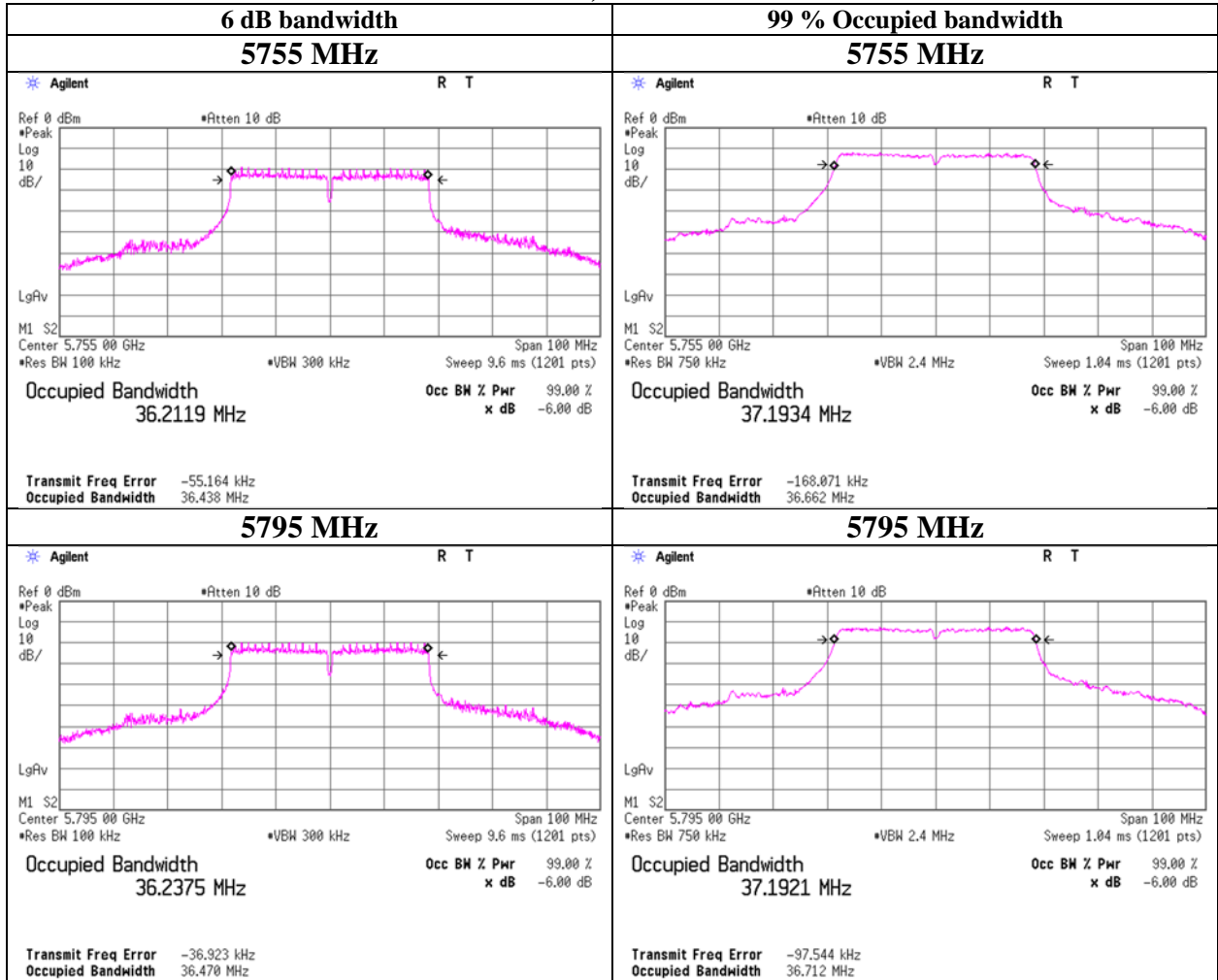
6 dB Emission Bandwidth and 99 % Occupied Bandwidth

11ac-40 SISO, Antenna: ANT 0



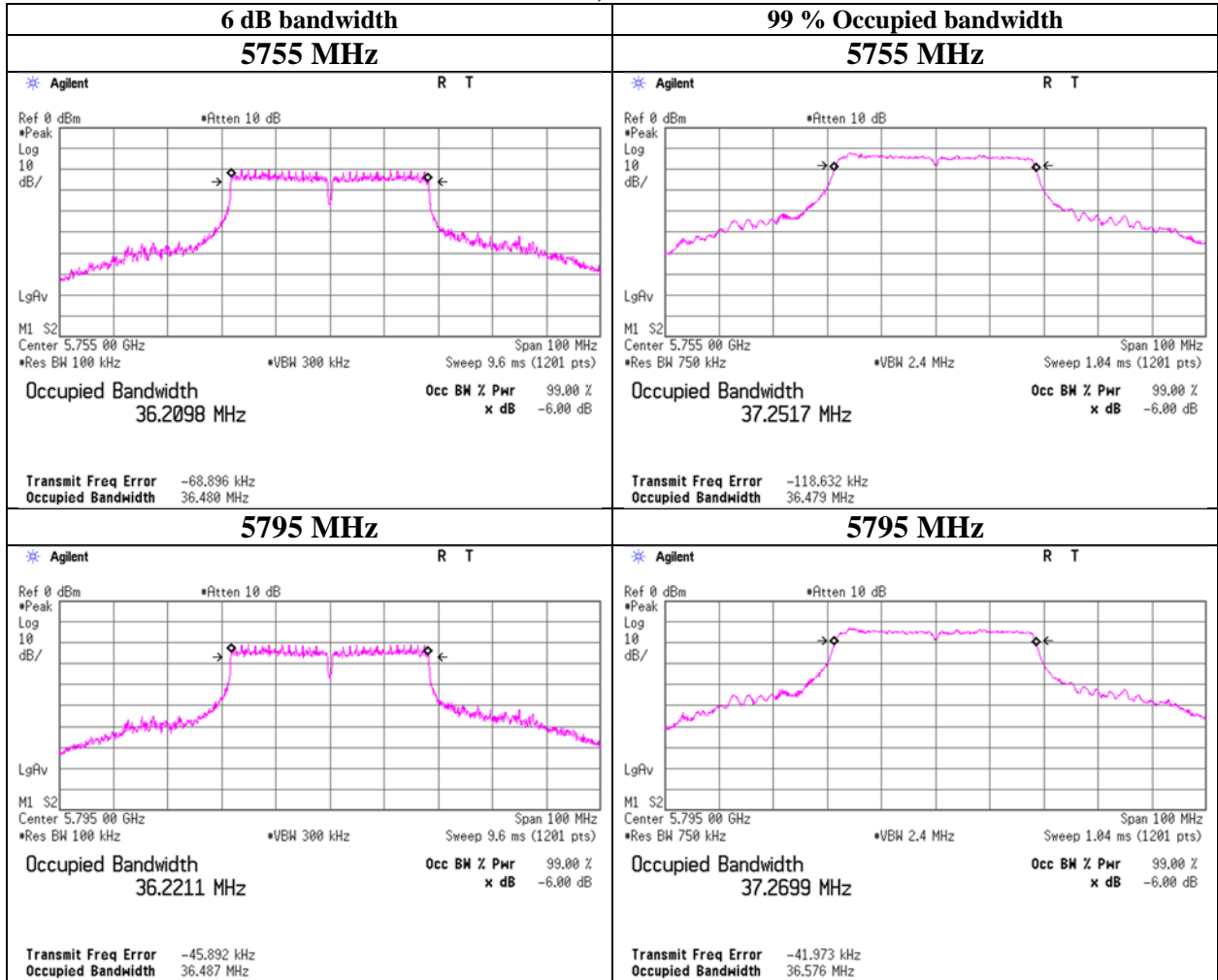
6 dB Emission Bandwidth and 99 % Occupied Bandwidth

11n-40 MIMO, Antenna: ANT 0



6 dB Emission Bandwidth and 99 % Occupied Bandwidth

11ac-40 MIMO, Antenna: ANT 0



6 dB Emission Bandwidth and 99 % Occupied Bandwidth

Test place Shonan EMC Lab. No.5 Shielded Room
Date July 22, 2022
Temperature / Humidity 25 deg. C / 39 % RH
Engineer Shiro Kobayashi
Mode Tx (worst antenna port)

11ac-80 SISO

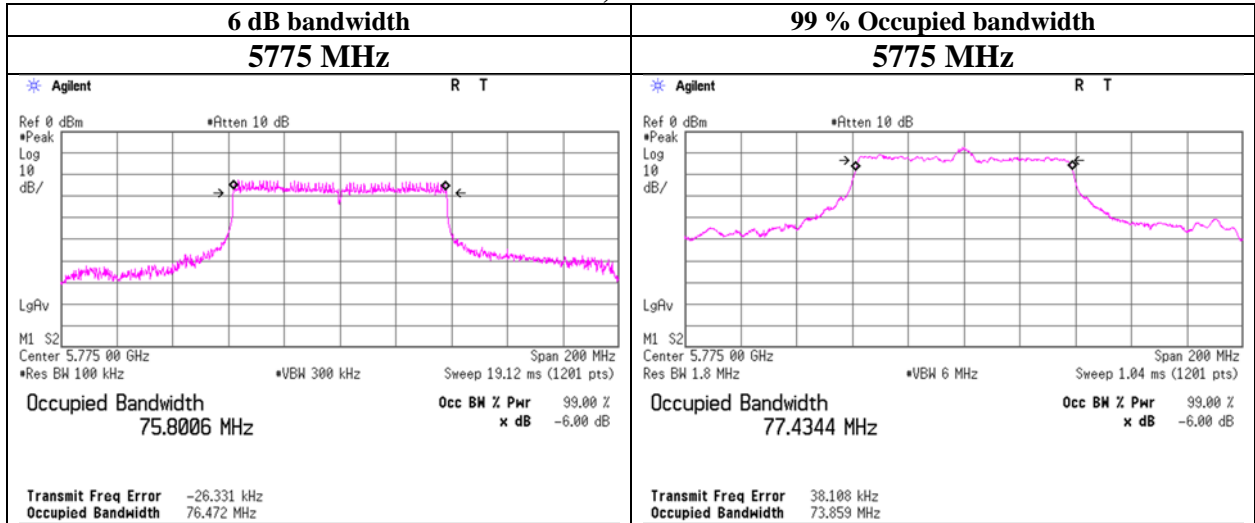
Antenna	Tested Frequency [MHz]	6 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
ANT0	5775	76.472	77434.4

11ac-80 MIMO

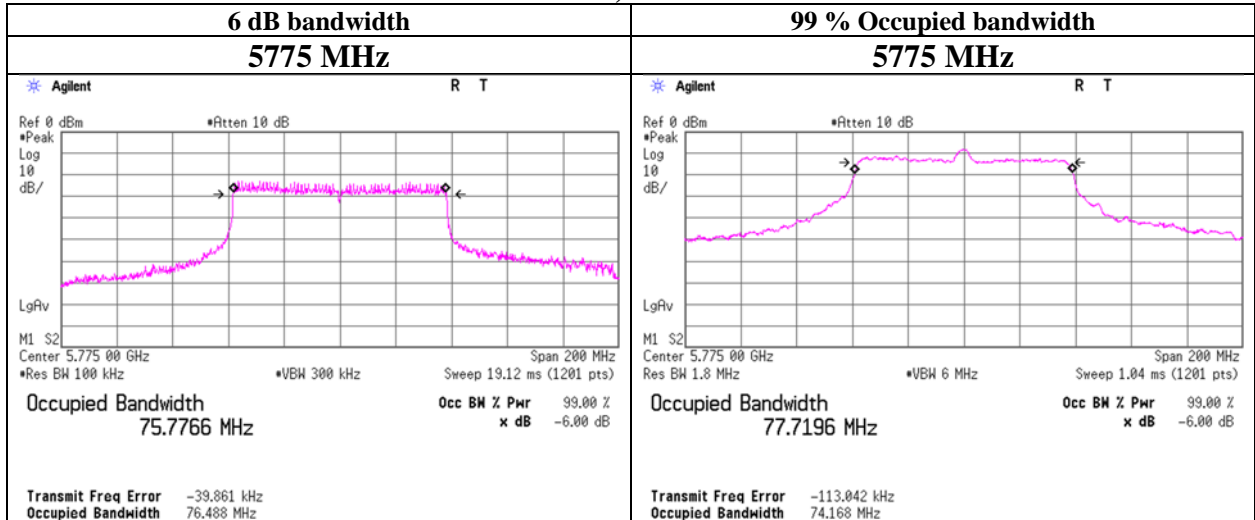
Antenna	Tested Frequency [MHz]	6 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
ANT0	5775	76.488	77719.6

6 dB Emission Bandwidth and 99 % Occupied Bandwidth

11ac-80 SISO, Antenna: ANT 0



11ac-80 MIMO, Antenna: ANT 0



Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 20, 2022
Temperature / Humidity	24 deg. C / 50 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11a

Antenna: ANT 0

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	26 dB EBW (B for FCC) [MHz]	99% OBW (B for ISED) [MHz]	Conducted Power				e.i.r.p.			
								Result [dBm]	Limit [dBm]	Margin [dB]	Result [dBm]	Limit [dBm]	Margin [dB]		
5745	-4.78	3.20	10.22	0.00	1.1	-	16.411	8.65	7.32	30.00	21.35	9.75	9.43	36.00	26.25
5785	-5.36	3.22	10.22	0.00	1.1	-	16.435	8.08	6.42	30.00	21.92	9.18	8.27	36.00	26.82
5805	-5.58	3.23	10.22	0.00	1.1	-	16.426	7.87	6.12	30.00	22.13	8.97	7.88	36.00	27.03

Sample Calculation:

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

e.i.r.p. Result = Conducted Power Result + Antenna Gain

Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Test place Shonan EMC Lab. No.5 Shielded Room
 Date July 20, 2022
 Temperature / Humidity 24 deg. C / 50 % RH
 Engineer Shiro Kobayashi
 Mode Tx 11n-20 SISO

Antenna: ANT 0

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	26 dB EBW (B for FCC) [MHz]	99% OBW (B for ISED) [MHz]	Conducted Power			e.i.r.p.				
								Result		Limit	Margin	Result		Limit	Margin
								[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5745	-4.89	3.20	10.22	0.00	1.1	-	18.184	8.54	7.14	30.00	21.46	9.64	9.19	36.00	26.36
5785	-5.59	3.22	10.22	0.00	1.1	-	18.243	7.85	6.09	30.00	22.15	8.95	7.85	36.00	27.05
5805	-5.75	3.23	10.22	0.00	1.1	-	18.239	7.70	5.89	30.00	22.30	8.80	7.58	36.00	27.20

Sample Calculation:

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

e.i.r.p. Result = Conducted Power Result + Antenna Gain

Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Test place Shonan EMC Lab. No.5 Shielded Room
Date July 20, 2022
Temperature / Humidity 24 deg. C / 50 % RH
Engineer Shiro Kobayashi
Mode Tx 11n-20 MIMO

Antenna: ANT 0 + ANT 1

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	26 dB EBW [MHz] (B for FCC)	99 % OBW [MHz] (B for ISED)	Conducted power							e.i.r.p.					
			Antenna			Result	Limit	Margin	Antenna			Result	Limit	Margin	
			ANT 0	ANT 1	Sum				ANT 0	ANT 1	Sum				
5745	-	18.190	6.17	5.96	12.13	10.84	30.00	19.16	7.95	6.10	14.05	11.48	36.00	24.52	
5785	-	18.243	5.26	5.27	10.53	10.22	30.00	19.78	6.77	5.39	12.17	10.85	36.00	25.15	
5805	-	18.248	5.06	5.57	10.63	10.26	30.00	19.74	6.51	5.70	12.21	10.87	36.00	25.13	

Tested Frequency [MHz]	Duty Factor [dB]	Antenna: ANT 0						Antenna: ANT 1					
		Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	Result		Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	Result	
						Cond. Power [dBm]	e.i.r.p. [dBm]					Cond. Power [dBm]	e.i.r.p. [dBm]
5745	0.00	-5.52	3.20	10.22	1.10	7.91	9.01	-5.09	3.10	9.74	0.10	7.75	7.85
5785	0.00	-6.23	3.22	10.22	1.10	7.21	8.31	-5.63	3.11	9.74	0.10	7.22	7.32
5805	0.00	-6.41	3.23	10.22	1.10	7.04	8.14	-5.40	3.12	9.74	0.10	7.46	7.56

Sample Calculation:

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

e.i.r.p. Result = Conducted Power Result + Antenna Gain

Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 20, 2022
Temperature / Humidity	24 deg. C / 50 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11n-40 SISO

Antenna: ANT 0

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	26 dB EBW (B for FCC) [MHz]	99% OBW (B for ISED) [MHz]	Conducted Power				e.i.r.p.			
								Result [dBm]	Limit [dBm]	Margin [dB]	Result [dBm]	Limit [dBm]	Margin [dB]		
5755	-4.90	3.21	10.22	0.00	1.1	-	37.085	8.53	7.13	30.00	21.47	9.63	9.18	36.00	26.37
5795	-5.53	3.22	10.22	0.00	1.1	-	37.141	7.91	6.18	30.00	22.09	9.01	7.96	36.00	26.99

Sample Calculation:

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

e.i.r.p. Result = Conducted Power Result + Antenna Gain

Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 20, 2022
Temperature / Humidity	24 deg. C / 50 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-40 SISO

Antenna: ANT 0

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	26 dB EBW (B for FCC) [MHz]	99% OBW (B for ISED) [MHz]	Conducted Power				e.i.r.p.			
								Result		Limit	Margin	Result		Limit	Margin
								[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5755	-6.21	3.21	10.22	0.00	1.1	-	36.956	7.22	5.27	30.00	22.78	8.32	6.79	36.00	27.68
5795	-6.79	3.22	10.22	0.00	1.1	-	36.975	6.65	4.62	30.00	23.35	7.75	5.96	36.00	28.25

Sample Calculation:

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

e.i.r.p. Result = Conducted Power Result + Antenna Gain

Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Test place Shonan EMC Lab. No.5 Shielded Room
Date July 20, 2022
Temperature / Humidity 24 deg. C / 50 % RH
Engineer Shiro Kobayashi
Mode Tx 11n-40 MIMO

Antenna: ANT 0 + ANT 1

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	26 dB EBW (B for FCC) [MHz]	99 % OBW (B for ISED) [MHz]	Conducted power						e.i.r.p.					
			Antenna			Result [dBm]	Limit [dBm]	Margin [dB]	Antenna			Result [dBm]	Limit [dBm]	Margin [dB]
			ANT 0 [mW]	ANT 1 [mW]	Sum [mW]				ANT 0 [mW]	ANT 1 [mW]	Sum [mW]			
5755	-	37.193	6.18	5.49	11.66	10.67	30.00	19.33	7.96	5.61	13.57	11.33	36.00	24.67
5795	-	37.192	5.46	5.68	11.13	10.47	30.00	19.53	7.03	5.81	12.84	11.09	36.00	24.91

Tested Frequency [MHz]	Duty Factor [dB]	Antenna: ANT 0						Antenna: ANT 1					
		Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	Result		Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	Result	
						Cond. Power [dBm]	e.i.r.p. [dBm]					Cond. Power [dBm]	e.i.r.p. [dBm]
5755	0.00	-5.52	3.21	10.22	1.10	7.91	9.01	-5.45	3.10	9.74	0.10	7.39	7.49
5795	0.00	-6.07	3.22	10.22	1.10	7.37	8.47	-5.31	3.11	9.74	0.10	7.54	7.64

Sample Calculation:

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

e.i.r.p. Result = Conducted Power Result + Antenna Gain

Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Test place Shonan EMC Lab. No.5 Shielded Room
 Date July 20, 2022
 Temperature / Humidity 24 deg. C / 50 % RH
 Engineer Shiro Kobayashi
 Mode Tx 11ac-40 MIMO

Antenna: ANT 0 + ANT 1

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	26 dB EBW (B for FCC) [MHz]	99 % OBW (B for ISED) [MHz]	Conducted power						e.i.r.p.					
			Antenna			Result [dBm]	Limit [dBm]	Margin [dB]	Antenna			Result [dBm]	Limit [dBm]	Margin [dB]
			ANT 0 [mW]	ANT 1 [mW]	Sum [mW]				ANT 0 [mW]	ANT 1 [mW]	Sum [mW]			
5755	-	37.252	4.90	4.19	9.09	9.58	30.00	20.42	6.31	4.29	10.60	10.25	36.00	25.75
5795	-	37.270	4.33	4.35	8.68	9.39	30.00	20.61	5.58	4.45	10.03	10.01	36.00	25.99

Tested Frequency [MHz]	Duty Factor [dB]	Antenna: ANT 0						Antenna: ANT 1					
		Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	Result		Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	Result	
						Cond. Power [dBm]	e.i.r.p. [dBm]					Cond. Power [dBm]	e.i.r.p. [dBm]
5755	0.00	-6.53	3.21	10.22	1.10	6.90	8.00	-6.62	3.10	9.74	0.10	6.22	6.32
5795	0.00	-7.07	3.22	10.22	1.10	6.37	7.47	-6.47	3.11	9.74	0.10	6.38	6.48

Sample Calculation:

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

e.i.r.p. Result = Conducted Power Result + Antenna Gain

Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 20, 2022
Temperature / Humidity	24 deg. C / 50 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-80 SISO

Antenna: ANT 0

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	26 dB EBW (B for FCC) [MHz]	99% OBW (B for ISED) [MHz]	Conducted Power			e.i.r.p.				
								Result [dBm]	Limit [dBm]	Margin [dB]	Result [dBm]	Limit [dBm]	Margin [dB]		
5775	-6.33	3.21	10.22	0.00	1.1	-	77.434	7.10	5.13	30.00	22.90	8.20	6.61	36.00	27.80

Sample Calculation:

Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
 e.i.r.p. Result = Conducted Power Result + Antenna Gain
 Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Test place Shonan EMC Lab. No.5 Shielded Room
 Date July 20, 2022
 Temperature / Humidity 24 deg. C / 50 % RH
 Engineer Shiro Kobayashi
 Mode Tx 11ac-80 MIMO

Antenna: ANT 0 + ANT 1

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	26 dB EBW (B for FCC) [MHz]	99 % OBW (B for ISED) [MHz]	Conducted power						e.i.r.p.					
			Antenna		Sum [mW]	Result [dBm]	Limit [dBm]	Margin [dB]	Antenna			Result [dBm]	Limit [dBm]	Margin [dB]
ANT 0 [mW]	ANT 1 [mW]	ANT 0 [mW]	ANT 1 [mW]	Sum [mW]					ANT 0 [mW]	ANT 1 [mW]				
5775	-	77.720	4.78	4.40	9.18	9.63	30.00	20.37	6.16	4.51	10.66	10.28	36.00	25.72

Tested Frequency [MHz]	Duty Factor [dB]	Antenna: ANT 0						Antenna: ANT 1					
		Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	Result Cond. Power [dBm]	Result e.i.r.p. [dBm]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	Result Cond. Power [dBm]	Result e.i.r.p. [dBm]
5775	0.00	-6.64	3.21	10.22	1.10	6.79	7.89	-6.41	3.11	9.74	0.10	6.44	6.54

Sample Calculation:

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

e.i.r.p. Result = Conducted Power Result + Antenna Gain

Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 20, 2022
Temperature / Humidity	24 deg. C / 50 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11a

5745 MHz

Antenna	Rate Mbps	P/M (AV) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Burst power [dBm]	Remarks
ANT 0	6	-4.94	3.20	10.22	0.00	8.49	
	9	-4.96	3.20	10.22	0.00	8.47	
	12	-4.97	3.20	10.22	0.00	8.46	
	18	-4.78	3.20	10.22	0.00	8.65 *	
	24	-5.22	3.20	10.22	0.00	8.21	
	36	-5.14	3.20	10.22	0.00	8.29	
	48	-5.01	3.20	10.22	0.00	8.42	
	54	-4.94	3.20	10.22	0.00	8.49	
ANT 1	6	-4.64	3.10	9.74	0.00	8.20	
	9	-4.66	3.10	9.74	0.00	8.18	
	12	-4.67	3.10	9.74	0.00	8.17	
	18	-4.50	3.10	9.74	0.00	8.34	
	24	-4.85	3.10	9.74	0.00	7.99	
	36	-4.77	3.10	9.74	0.00	8.07	
	48	-4.65	3.10	9.74	0.00	8.19	
	54	-4.61	3.10	9.74	0.00	8.23	

* Worst rate

Sample Calculation:

Burst power = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
 All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 20, 2022
Temperature / Humidity	24 deg. C / 50 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11n-20 SISO

5745 MHz

Antenna	MCS	P/M (AV) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Burst power [dBm]	Remarks
ANT 0	0	-5.18	3.20	10.22	0.00	8.25	
	1	-5.17	3.20	10.22	0.00	8.26	
	2	-4.97	3.20	10.22	0.00	8.46	
	3	-5.16	3.20	10.22	0.00	8.27	
	4	-5.06	3.20	10.22	0.00	8.37	
	5	-4.96	3.20	10.22	0.00	8.47	
	6	-4.93	3.20	10.22	0.00	8.50	
	7	-4.89	3.20	10.22	0.00	8.54	*
ANT 1	0	-4.80	3.10	9.74	0.00	8.04	
	1	-4.85	3.10	9.74	0.00	7.99	
	2	-4.63	3.10	9.74	0.00	8.21	
	3	-4.75	3.10	9.74	0.00	8.09	
	4	-4.64	3.10	9.74	0.00	8.20	
	5	-4.57	3.10	9.74	0.00	8.27	
	6	-4.55	3.10	9.74	0.00	8.29	
	7	-4.54	3.10	9.74	0.00	8.30	

* Worst rate

Sample Calculation:

Burst power = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
 All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Test place Shonan EMC Lab. No.5 Shielded Room
 Date July 20, 2022
 Temperature / Humidity 24 deg. C / 50 % RH
 Engineer Shiro Kobayashi
 Mode Tx 11n-20 MIMO

5745 MHz

MCS Index	Conducted power				Result [dBm]	Remarks
	Antenna			Sum [mW]		
	ANT 0 [mW]	ANT 1 [mW]				
8	5.55	5.32	10.88	10.36		
9	5.40	5.20	10.60	10.25		
10	5.77	5.50	11.27	10.52		
11	5.62	5.38	11.00	10.41		
12	5.86	5.61	11.47	10.59		
13	6.02	5.76	11.77	10.71		
14	6.09	5.89	11.98	10.78		
15	6.17	5.96	12.13	10.84	*	

*: Worst Rate

MCS Index	Duty Factor [dB]	ANT 0				ANT 1			
		Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result Cond. Power [dBm]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result Cond. Power [dBm]
8	0.00	-5.98	3.20	10.22	7.45	-5.58	3.10	9.74	7.26
9	0.00	-6.10	3.20	10.22	7.33	-5.68	3.10	9.74	7.16
10	0.00	-5.81	3.20	10.22	7.62	-5.44	3.10	9.74	7.40
11	0.00	-5.93	3.20	10.22	7.50	-5.53	3.10	9.74	7.31
12	0.00	-5.75	3.20	10.22	7.68	-5.35	3.10	9.74	7.49
13	0.00	-5.63	3.20	10.22	7.80	-5.24	3.10	9.74	7.60
14	0.00	-5.58	3.20	10.22	7.85	-5.14	3.10	9.74	7.70
15	0.00	-5.52	3.20	10.22	7.91	-5.09	3.10	9.74	7.75

Sample Calculation:

$$\text{Conducted Power Result} = \text{Reading} + \text{Cable Loss (including the cable(s) customer supplied)} + \text{Atten. Loss} + \text{Duty Factor}$$

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 20, 2022
Temperature / Humidity	24 deg. C / 50 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11n-40 SISO

5755 MHz

Antenna	MCS	P/M (AV) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Burst power [dBm]	Remarks
ANT 0	0	-5.19	3.21	10.22	0.00	8.24	
	1	-5.05	3.21	10.22	0.00	8.38	
	2	-4.92	3.21	10.22	0.00	8.51	
	3	-4.98	3.21	10.22	0.00	8.45	
	4	-5.11	3.21	10.22	0.00	8.32	
	5	-4.96	3.21	10.22	0.00	8.47	
	6	-4.90	3.21	10.22	0.00	8.53 *	
	7	-4.91	3.21	10.22	0.00	8.52	
ANT 1	0	-5.25	3.10	9.74	0.00	7.59	
	1	-5.20	3.10	9.74	0.00	7.64	
	2	-4.97	3.10	9.74	0.00	7.87	
	3	-5.00	3.10	9.74	0.00	7.84	
	4	-5.20	3.10	9.74	0.00	7.64	
	5	-5.05	3.10	9.74	0.00	7.79	
	6	-5.06	3.10	9.74	0.00	7.78	
	7	-5.16	3.10	9.74	0.00	7.68	

* Worst rate

Sample Calculation:

Burst power = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Test place Shonan EMC Lab. No.5 Shielded Room
Date July 20, 2022
Temperature / Humidity 24 deg. C / 50 % RH
Engineer Shiro Kobayashi
Mode Tx 11ac-40 SISO

5755 MHz

Antenna	MCS	P/M (AV) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Burst power [dBm]	Remarks
ANT 0	8 (1 ss)	-6.21	3.21	10.22	0.00	7.22	*
	9 (1 ss)	-6.26	3.21	10.22	0.00	7.17	
ANT 1	8 (1 ss)	-6.45	3.10	9.74	0.00	6.39	
	9 (1 ss)	-6.48	3.10	9.74	0.00	6.36	

* Worst rate

Sample Calculation:

Burst power = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Test place Shonan EMC Lab. No.5 Shielded Room
 Date July 20, 2022
 Temperature / Humidity 24 deg. C / 50 % RH
 Engineer Shiro Kobayashi
 Mode Tx 11n-40 MIMO

5755 MHz

MCS Index	Conducted power				Result [dBm]	Remarks
	Antenna			Sum [mW]		
	ANT 0 [mW]	ANT 1 [mW]	Sum [mW]			
8	5.63	5.07	10.71	10.30		
9	5.54	4.99	10.54	10.23		
10	5.67	5.12	10.79	10.33		
11	5.60	5.05	10.65	10.27		
12	5.87	5.29	11.16	10.48		
13	6.00	5.42	11.42	10.58		
14	6.11	5.46	11.57	10.63		
15	6.18	5.49	11.66	10.67	*	

*: Worst Rate

MCS Index	Duty Factor [dB]	ANT 0				ANT 1			
		Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result Cond. Power [dBm]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result Cond. Power [dBm]
8	0.00	-5.92	3.21	10.22	7.51	-5.79	3.10	9.74	7.05
9	0.00	-5.99	3.21	10.22	7.44	-5.86	3.10	9.74	6.98
10	0.00	-5.89	3.21	10.22	7.54	-5.75	3.10	9.74	7.09
11	0.00	-5.95	3.21	10.22	7.48	-5.81	3.10	9.74	7.03
12	0.00	-5.74	3.21	10.22	7.69	-5.61	3.10	9.74	7.23
13	0.00	-5.65	3.21	10.22	7.78	-5.50	3.10	9.74	7.34
14	0.00	-5.57	3.21	10.22	7.86	-5.47	3.10	9.74	7.37
15	0.00	-5.52	3.21	10.22	7.91	-5.45	3.10	9.74	7.39

Sample Calculation:

$$\text{Conducted Power Result} = \text{Reading} + \text{Cable Loss (including the cable(s) customer supplied)} + \text{Atten. Loss} + \text{Duty Factor}$$

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 20, 2022
Temperature / Humidity	24 deg. C / 50 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-40 MIMO

5755 MHz

MCS Index	Conducted power				Result [dBm]	Remarks
	Antenna			Sum [mW]		
	ANT 0 [mW]	ANT 1 [mW]				
8 (2 ss)	4.90	4.19		9.09	9.58	*
9 (2 ss)	4.84	4.15		8.99	9.54	

*: Worst Rate

MCS Index	Duty Factor [dB]	ANT 0				ANT 1			
		Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result Cond. Power [dBm]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Result Cond. Power [dBm]
8 (2 ss)	0.00	-6.53	3.21	10.22	6.90	-6.62	3.10	9.74	6.22
9 (2 ss)	0.00	-6.58	3.21	10.22	6.85	-6.66	3.10	9.74	6.18

Sample Calculation:

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

Maximum Conducted Output Power

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 20, 2022
Temperature / Humidity	24 deg. C / 50 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-80 SISO

5775 MHz

Antenna	MCS	P/M (AV) Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Burst power [dBm]	Remarks
ANT 0	0 (1 ss)	-6.69	3.21	10.22	0.00	6.74	
	1 (1 ss)	-6.50	3.21	10.22	0.00	6.93	
	2 (1 ss)	-6.48	3.21	10.22	0.00	6.95	
	3 (1 ss)	-6.65	3.21	10.22	0.00	6.78	
	4 (1 ss)	-6.45	3.21	10.22	0.00	6.98	
	5 (1 ss)	-6.49	3.21	10.22	0.00	6.94	
	6 (1 ss)	-6.37	3.21	10.22	0.00	7.06	
	7 (1 ss)	-6.37	3.21	10.22	0.00	7.06	
	8 (1 ss)	-6.33	3.21	10.22	0.00	7.10	*
9 (1 ss)	-6.37	3.21	10.22	0.00	7.06		
ANT 1	0 (1 ss)	-6.76	3.11	9.74	0.00	6.09	
	1 (1 ss)	-6.48	3.11	9.74	0.00	6.37	
	2 (1 ss)	-6.34	3.11	9.74	0.00	6.51	
	3 (1 ss)	-6.55	3.11	9.74	0.00	6.30	
	4 (1 ss)	-6.47	3.11	9.74	0.00	6.38	
	5 (1 ss)	-6.42	3.11	9.74	0.00	6.43	
	6 (1 ss)	-6.36	3.11	9.74	0.00	6.49	
	7 (1 ss)	-6.31	3.11	9.74	0.00	6.54	
	8 (1 ss)	-6.31	3.11	9.74	0.00	6.54	
9 (1 ss)	-6.33	3.11	9.74	0.00	6.52		

* Worst rate

Sample Calculation:

Burst power = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor
All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Test place Shonan EMC Lab. No.5 Shielded Room
 Date July 20, 2022
 Temperature / Humidity 24 deg. C / 50 % RH
 Engineer Shiro Kobayashi
 Mode Tx 11ac-80 MIMO

5775 MHz

MCS Index	Conducted power			Result [dBm]	Remarks
	Antenna		Sum [mW]		
	ANT 0 [mW]	ANT 1 [mW]			
0 (2 ss)	4.35	4.10	8.45	9.27	
1 (2 ss)	4.52	4.26	8.79	9.44	
2 (2 ss)	4.75	4.42	9.17	9.62	
3 (2 ss)	4.53	4.20	8.73	9.41	
4 (2 ss)	4.65	4.28	8.93	9.51	
5 (2 ss)	4.68	4.34	9.02	9.55	
6 (2 ss)	4.68	4.36	9.04	9.56	
7 (2 ss)	4.71	4.36	9.08	9.58	
8 (2 ss)	4.78	4.40	9.18	9.63	*
9 (2 ss)	4.76	4.37	9.13	9.60	

*: Worst Rate

MCS Index	Duty Factor [dB]	ANT 0			Result Cond. Power [dBm]	ANT 1			Result Cond. Power [dBm]
		Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]		Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	
0 (2 ss)	0.00	-7.05	3.21	10.22	6.38	-6.72	3.11	9.74	6.13
1 (2 ss)	0.00	-6.88	3.21	10.22	6.55	-6.55	3.11	9.74	6.30
2 (2 ss)	0.00	-6.67	3.21	10.22	6.76	-6.39	3.11	9.74	6.46
3 (2 ss)	0.00	-6.87	3.21	10.22	6.56	-6.62	3.11	9.74	6.23
4 (2 ss)	0.00	-6.76	3.21	10.22	6.67	-6.53	3.11	9.74	6.32
5 (2 ss)	0.00	-6.73	3.21	10.22	6.70	-6.47	3.11	9.74	6.38
6 (2 ss)	0.00	-6.73	3.21	10.22	6.70	-6.45	3.11	9.74	6.40
7 (2 ss)	0.00	-6.70	3.21	10.22	6.73	-6.45	3.11	9.74	6.40
8 (2 ss)	0.00	-6.64	3.21	10.22	6.79	-6.41	3.11	9.74	6.44
9 (2 ss)	0.00	-6.66	3.21	10.22	6.77	-6.44	3.11	9.74	6.41

Sample Calculation:

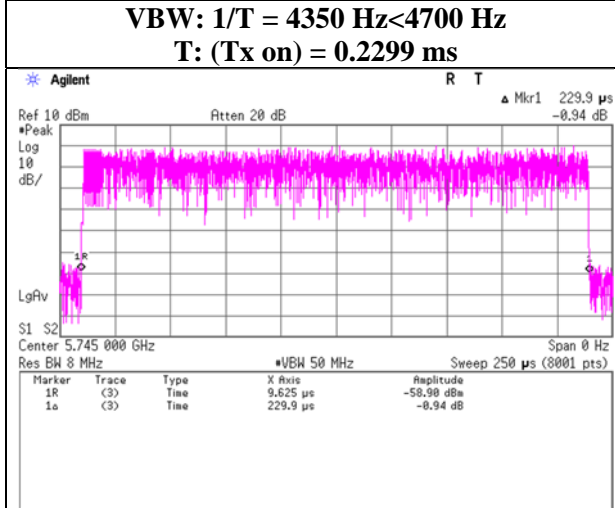
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor

Burst rate confirmation

Test place Shonan EMC Lab. No.5 Shielded Room
Date July 22, 2022
Temperature / Humidity 25 deg. C / 39 % RH
Engineer Shiro Kobayashi
Mode Tx

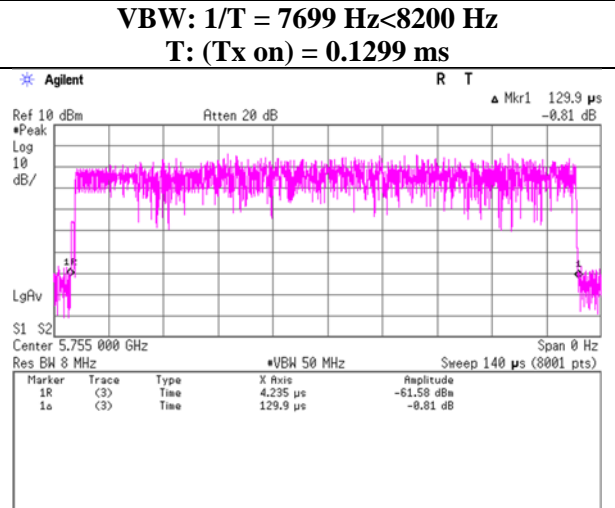
11n-20 MIMO, MCS 15

VBW: 1/T = 4350 Hz < 4700 Hz
T: (Tx on) = 0.2299 ms



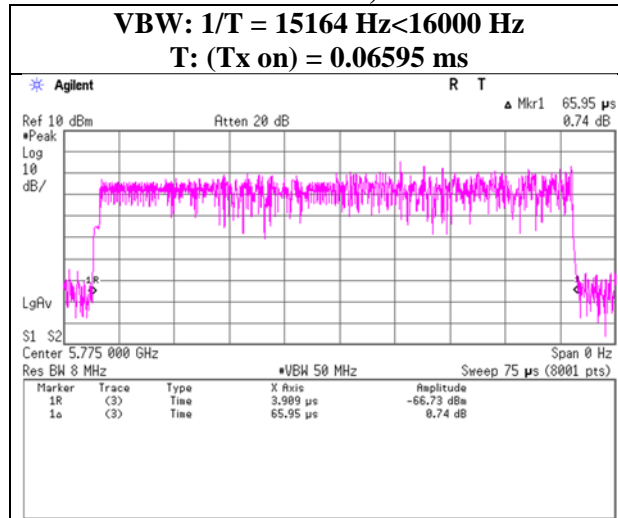
11n-40 MIMO, MC 15

VBW: 1/T = 7699 Hz < 8200 Hz
T: (Tx on) = 0.1299 ms



11ac-80 MIMO, MCS 8

VBW: 1/T = 15164 Hz < 16000 Hz
T: (Tx on) = 0.06595 ms



Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	July 22, 2022	September 21, 2022
Temperature / Humidity	25 deg. C / 39 % RH	27 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Hiromasa Sato
Mode	Tx 11a	

Antenna: ANT 0

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm] /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted)			PSD (e.i.r.p.)		
							Result [dBm] /MHz]	Limit [dBm] /MHz]	Margin [dB]	Result [dBm] /MHz]	Limit [dBm] /MHz]	Margin [dB]
5745	-24.06	3.20	10.22	0.00	1.1	6.99	-3.64	30.00	33.64	-2.54	36.00	38.54
5785	-24.53	3.22	10.22	0.00	1.1	6.99	-4.10	30.00	34.10	-3.00	36.00	39.00
5805	-24.20	3.23	10.22	0.00	1.1	6.99	-3.76	30.00	33.76	-2.66	36.00	38.66

Sample Calculation:

PSD: Power Spectral Density

The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.

RBW Correction Factor = $10 * \log(\text{Specified bandwidth} / \text{Measured bandwidth})$

PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + RBW Correction Factor + Duty Factor

PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	July 22, 2022	September 21, 2022
Temperature / Humidity	25 deg. C / 39 % RH	27 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Hiromasa Sato
Mode	Tx 11n-20 SISO	

Antenna: ANT 0

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted)			PSD (e.i.r.p.)		
							Result [dBm /MHz]	Limit [dBm /MHz]	Margin [dB]	Result [dBm /MHz]	Limit [dBm /MHz]	Margin [dB]
5745	-25.01	3.20	10.22	0.00	1.1	6.99	-4.60	30.00	34.60	-3.50	36.00	39.50
5785	-25.30	3.22	10.22	0.00	1.1	6.99	-4.87	30.00	34.87	-3.77	36.00	39.77
5805	-25.47	3.23	10.22	0.00	1.1	6.99	-5.04	30.00	35.04	-3.94	36.00	39.94

Sample Calculation:

PSD: Power Spectral Density

The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.

RBW Correction Factor = $10 * \log(\text{Specified bandwidth} / \text{Measured bandwidth})$

PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + RBW Correction Factor + Duty Factor

PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	July 22, 2022	September 21, 2022
Temperature / Humidity	25 deg. C / 39 % RH	27 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Hiromasa Sato
Mode	Tx 11n-20 MIMO	

Antenna: ANT 0 + ANT 1

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD (Conducted)						PSD (e.i.r.p.)					
	Antenna			Result	Limit	Margin	Antenna			Result	Limit	Margin
	ANT 0 [mW/MHz]	ANT 1 [mW/MHz]	Sum [mW/MHz]				ANT 0 [mW/MHz]	ANT 1 [mW/MHz]	Sum [mW/MHz]			
5745	0.29	0.35	0.64	-1.95	30.00	31.95	0.37	0.36	0.73	-1.37	36.00	37.37
5785	0.27	0.33	0.60	-2.22	30.00	32.22	0.34	0.34	0.69	-1.64	36.00	37.64
5805	0.27	0.32	0.60	-2.25	30.00	32.25	0.35	0.33	0.68	-1.66	36.00	37.66

Tested Frequency [MHz]	Antenna: ANT 0							Antenna: ANT 1						
	Duty Factor [dB]	RBW Correction Factor [dB]	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result		
			[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5745	0.00	6.99	-25.81	3.20	10.22	1.10	-5.40	-4.30	-24.39	3.10	9.74	0.10	-4.56	-4.46
5785	0.00	6.99	-26.15	3.22	10.22	1.10	-5.72	-4.62	-24.62	3.11	9.74	0.10	-4.78	-4.68
5805	0.00	6.99	-26.07	3.23	10.22	1.10	-5.64	-4.54	-24.76	3.12	9.74	0.10	-4.91	-4.81

Sample Calculation:

PSD: Power Spectral Density

The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.

RBW Correction Factor = $10 * \log(\text{Specified bandwidth} / \text{Measured bandwidth})$

PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + RBW Correction Factor

PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

The conducted PSD limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Maximum Power Spectral Density

Test place Shonan EMC Lab. No.5 Shielded Room
 Date July 22, 2022
 Temperature / Humidity 25 deg. C / 39 % RH
 Engineer Shiro Kobayashi
 Mode Tx 11n-40 SISO

Antenna: ANT 0

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted)			PSD (e.i.r.p.)		
							Result [dBm /MHz]	Limit [dBm /MHz]	Margin [dB]	Result [dBm /MHz]	Limit [dBm /MHz]	Margin [dB]
5755	-27.38	3.21	10.22	0.00	1.1	6.99	-6.97	30.00	36.97	-5.87	36.00	41.87
5795	-27.97	3.22	10.22	0.00	1.1	6.99	-7.54	30.00	37.54	-6.44	36.00	42.44

Sample Calculation:

PSD: Power Spectral Density

The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.

RBW Correction Factor = $10 * \log(\text{Specified bandwidth} / \text{Measured bandwidth})$

PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + RBW Correction Factor + Duty Factor

PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

Maximum Power Spectral Density

Test place Shonan EMC Lab. No.5 Shielded Room
Date July 22, 2022
Temperature / Humidity 25 deg. C / 39 % RH
Engineer Shiro Kobayashi
Mode Tx 11ac-40 SISO

Antenna: ANT 0

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted)			PSD (e.i.r.p.)		
							Result [dBm /MHz]	Limit [dBm /MHz]	Margin [dB]	Result [dBm /MHz]	Limit [dBm /MHz]	Margin [dB]
5755	-28.74	3.21	10.22	0.00	1.1	6.99	-8.32	30.00	38.32	-7.22	36.00	43.22
5795	-29.10	3.22	10.22	0.00	1.1	6.99	-8.67	30.00	38.67	-7.57	36.00	43.57

Sample Calculation:

PSD: Power Spectral Density

The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.

RBW Correction Factor = $10 * \log(\text{Specified bandwidth} / \text{Measured bandwidth})$

PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + RBW Correction Factor + Duty Factor

PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

Maximum Power Spectral Density

Test place Shonan EMC Lab. No.5 Shielded Room
 Date July 22, 2022
 Temperature / Humidity 25 deg. C / 39 % RH
 Engineer Shiro Kobayashi
 Mode Tx 11n-40 MIMO

Antenna: ANT 0 + ANT 1

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD (Conducted)						PSD (e.i.r.p.)					
	Antenna			Result [dBm/MHz]	Limit [dBm/MHz]	Margin [dB]	Antenna			Result [dBm/MHz]	Limit [dBm/MHz]	Margin [dB]
	ANT 0 [mW/MHz]	ANT 1 [mW/MHz]	Sum [mW/MHz]				ANT 0 [mW/MHz]	ANT 1 [mW/MHz]	Sum [mW/MHz]			
5755	0.17	0.16	0.33	-4.80	30.00	34.80	0.22	0.17	0.38	-4.16	36.00	40.16
5795	0.15	0.16	0.32	-4.97	30.00	34.97	0.20	0.17	0.37	-4.35	36.00	40.35

Tested Frequency [MHz]	Duty Factor [dB]	RBW Correction Factor [dB]	Antenna: ANT 0					Antenna: ANT 1						
			PSD Reading [dBm/MHz]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	PSD Result Cond. [dBm/MHz]	e.i.r.p. [dBm/MHz]	PSD Reading [dBm/MHz]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	PSD Result Cond. [dBm/MHz]	e.i.r.p. [dBm/MHz]
			5755	0.00	6.99	-28.13	3.21	10.22	1.10	-7.71	-6.61	-27.74	3.10	9.74
5795	0.00	6.99	-28.55	3.22	10.22	1.10	-8.12	-7.02	-27.68	3.11	9.74	0.10	-7.84	-7.74

Sample Calculation:

PSD: Power Spectral Density

The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.

RBW Correction Factor = $10 \cdot \log(\text{Specified bandwidth} / \text{Measured bandwidth})$

PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + RBW Correction Factor

PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

The conducted PSD limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Maximum Power Spectral Density

Test place Shonan EMC Lab. No.5 Shielded Room
 Date July 22, 2022
 Temperature / Humidity 25 deg. C / 39 % RH
 Engineer Shiro Kobayashi
 Mode Tx 11ac-40 MIMO

Antenna: ANT 0 + ANT 1

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD (Conducted)						PSD (e.i.r.p.)					
	Antenna			Result [dBm/MHz]	Limit [dBm/MHz]	Margin [dB]	Antenna			Result [dBm/MHz]	Limit [dBm/MHz]	Margin [dB]
	ANT 0 [mW/MHz]	ANT 1 [mW/MHz]	Sum [mW/MHz]				ANT 0 [mW/MHz]	ANT 1 [mW/MHz]	Sum [mW/MHz]			
5755	0.14	0.13	0.28	-5.60	30.00	35.60	0.18	0.14	0.32	-4.96	36.00	40.96
5795	0.13	0.15	0.28	-5.56	30.00	35.56	0.17	0.15	0.32	-4.96	36.00	40.96

Tested Frequency [MHz]	Duty Factor [dB]	RBW Correction Factor [dB]	Antenna: ANT 0				Antenna: ANT 1				PSD Result			
			PSD Reading [dBm/MHz]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	PSD Reading [dBm/MHz]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	Cond. [dBm/MHz]	e.i.r.p. [dBm/MHz]		
			5755	0.00	6.99	-28.88	3.21	10.22	1.10	-8.46	-7.36	-28.61	3.10	9.74
5795	0.00	6.99	-29.21	3.22	10.22	1.10	-8.78	-7.68	-28.22	3.11	9.74	0.10	-8.38	-8.28

Sample Calculation:

PSD: Power Spectral Density
 The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.
 RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)
 PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + RBW Correction Factor
 PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain
 The conducted PSD limit was reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Maximum Power Spectral Density

Test place Shonan EMC Lab. No.5 Shielded Room
 Date July 22, 2022
 Temperature / Humidity 25 deg. C / 39 % RH
 Engineer Shiro Kobayashi
 Mode Tx 11ac-80 SISO

Antenna: ANT 0

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD Reading [dBm /MHz]	Cable Loss [dB]	Atten. Loss [dB]	Duty Factor [dB]	Antenna Gain [dBi]	RBW Correction Factor [dB]	PSD (Conducted)			PSD (e.i.r.p.)		
							Result [dBm /MHz]	Limit [dBm /MHz]	Margin [dB]	Result [dBm /MHz]	Limit [dBm /MHz]	Margin [dB]
5775	-32.22	3.21	10.22	0.00	1.1	6.99	-11.80	30.00	41.80	-10.70	36.00	46.70

Sample Calculation:

PSD: Power Spectral Density

The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.

RBW Correction Factor = $10 * \log(\text{Specified bandwidth} / \text{Measured bandwidth})$

PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + RBW Correction Factor + Duty Factor

PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

Maximum Power Spectral Density

Test place Shonan EMC Lab. No.5 Shielded Room
Date July 22, 2022
Temperature / Humidity 25 deg. C / 39 % RH
Engineer Shiro Kobayashi
Mode Tx 11ac-80 MIMO

Antenna: ANT 0 + ANT 1

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	PSD (Conducted)						PSD (e.i.r.p.)					
	Antenna			Result	Limit	Margin	Antenna			Result	Limit	Margin
	ANT 0	ANT 1	Sum				ANT 0	ANT 1	Sum			
[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	
5775	0.06	0.06	0.12	-9.20	30.00	39.20	0.08	0.06	0.14	-8.57	36.00	44.57

Tested Frequency [MHz]	Duty Factor [dB]	RBW Correction Factor [dB]	Antenna: ANT 0					Antenna: ANT 1						
			PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result Cond.	e.i.r.p.	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result Cond.	e.i.r.p.
			[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5775	0.00	6.99	-32.58	3.21	10.22	1.10	-12.16	-11.06	-32.10	3.11	9.74	0.10	-12.27	-12.17

Sample Calculation:

PSD: Power Spectral Density

The PSD within 5725 MHz to 5825 MHz are based on any 500 kHz band.

RBW Correction Factor = 10 * log (Specified bandwidth / Measured bandwidth)

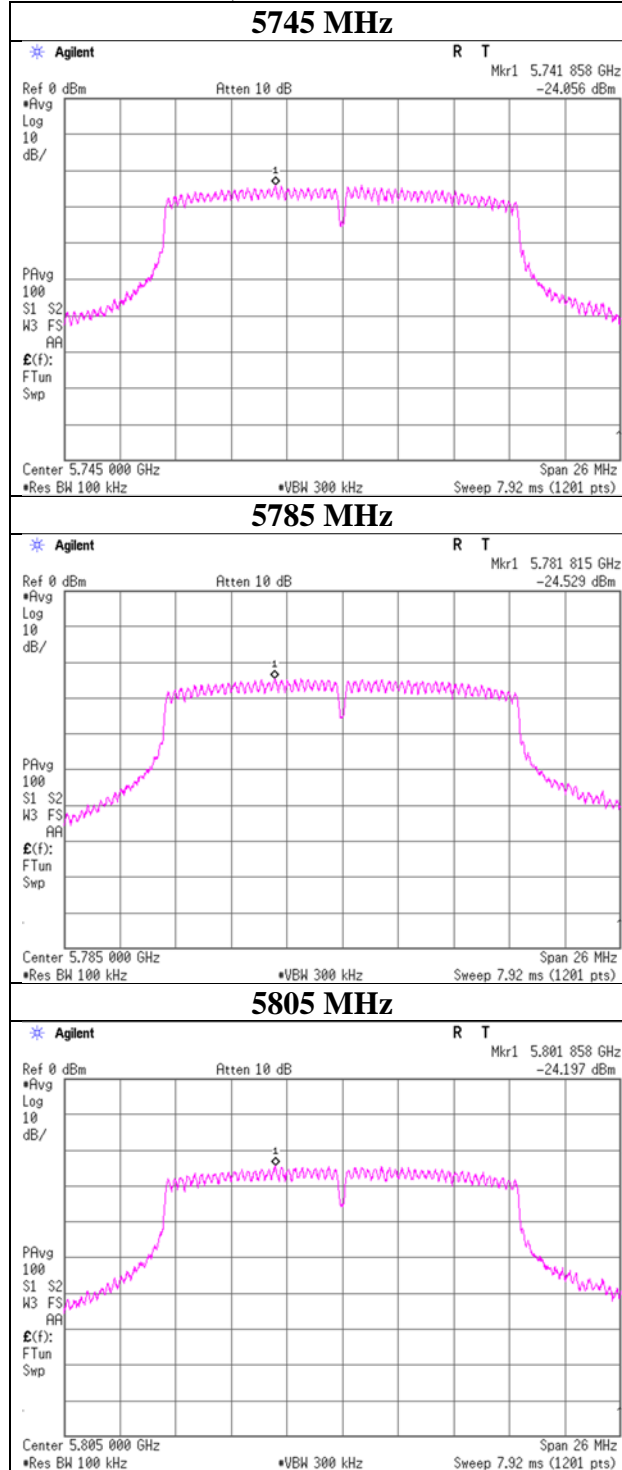
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + RBW Correction Factor

PSD Result (e.i.r.p.) = Conducted PSD Result + Antenna Gain

Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	July 22, 2022	September 21, 2022
Temperature / Humidity	25 deg. C / 39 % RH	27 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Hiromasa Sato
Mode	Tx 11a	

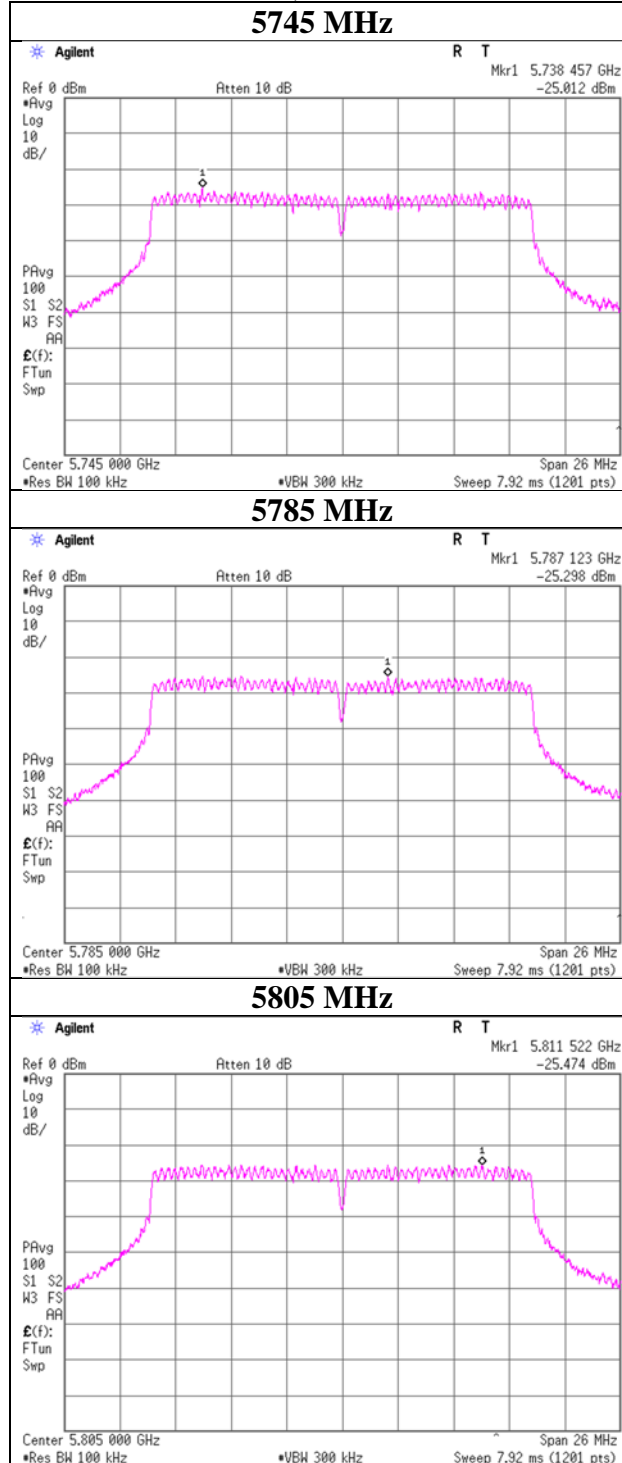
11a, Antenna ANT 0



Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	July 22, 2022	September 21, 2022
Temperature / Humidity	25 deg. C / 39 % RH	27 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Hiromasa Sato
Mode	Tx 11n-20 SISO	

11n-20 SISO, Antenna ANT 0

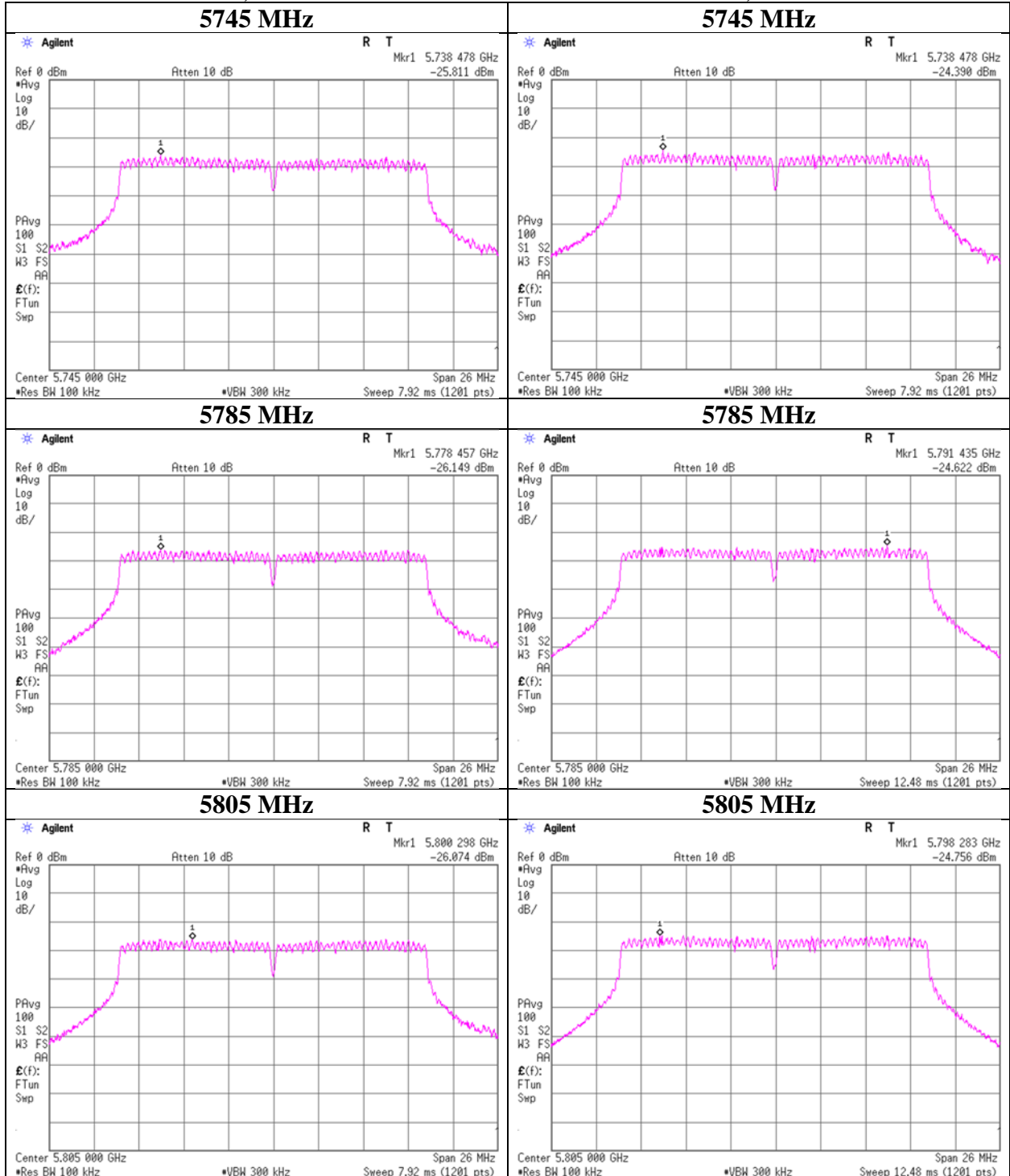


Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	July 22, 2022	September 21, 2022
Temperature / Humidity	25 deg. C / 39 % RH	27 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Hiromasa Sato
Mode	Tx 11n-20 MIMO	

11n-20 MIMO, Antenna ANT 0

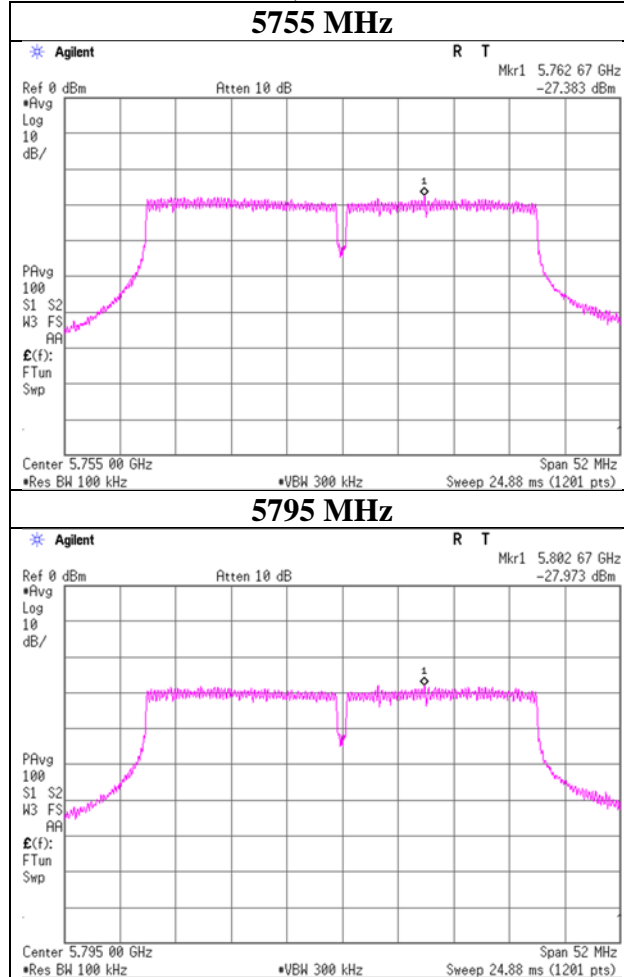
11n-20 MIMO, Antenna ANT 1



Maximum Power Spectral Density

Test place Shonan EMC Lab. No.5 Shielded Room
Date July 22, 2022
Temperature / Humidity 25 deg. C / 39 % RH
Engineer Shiro Kobayashi
Mode Tx 11n-40 SISO

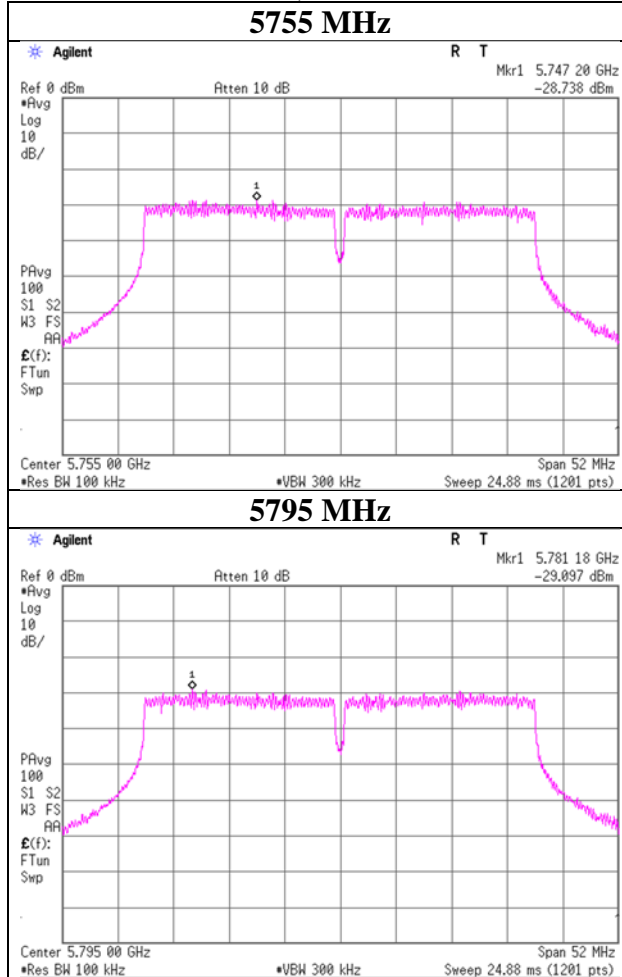
11n-40 SISO, Antenna ANT 0



Maximum Power Spectral Density

Test place Shonan EMC Lab. No.5 Shielded Room
Date July 22, 2022
Temperature / Humidity 25 deg. C / 39 % RH
Engineer Shiro Kobayashi
Mode Tx 11ac-40 SISO

11ac-40 SISO, Antenna ANT 0

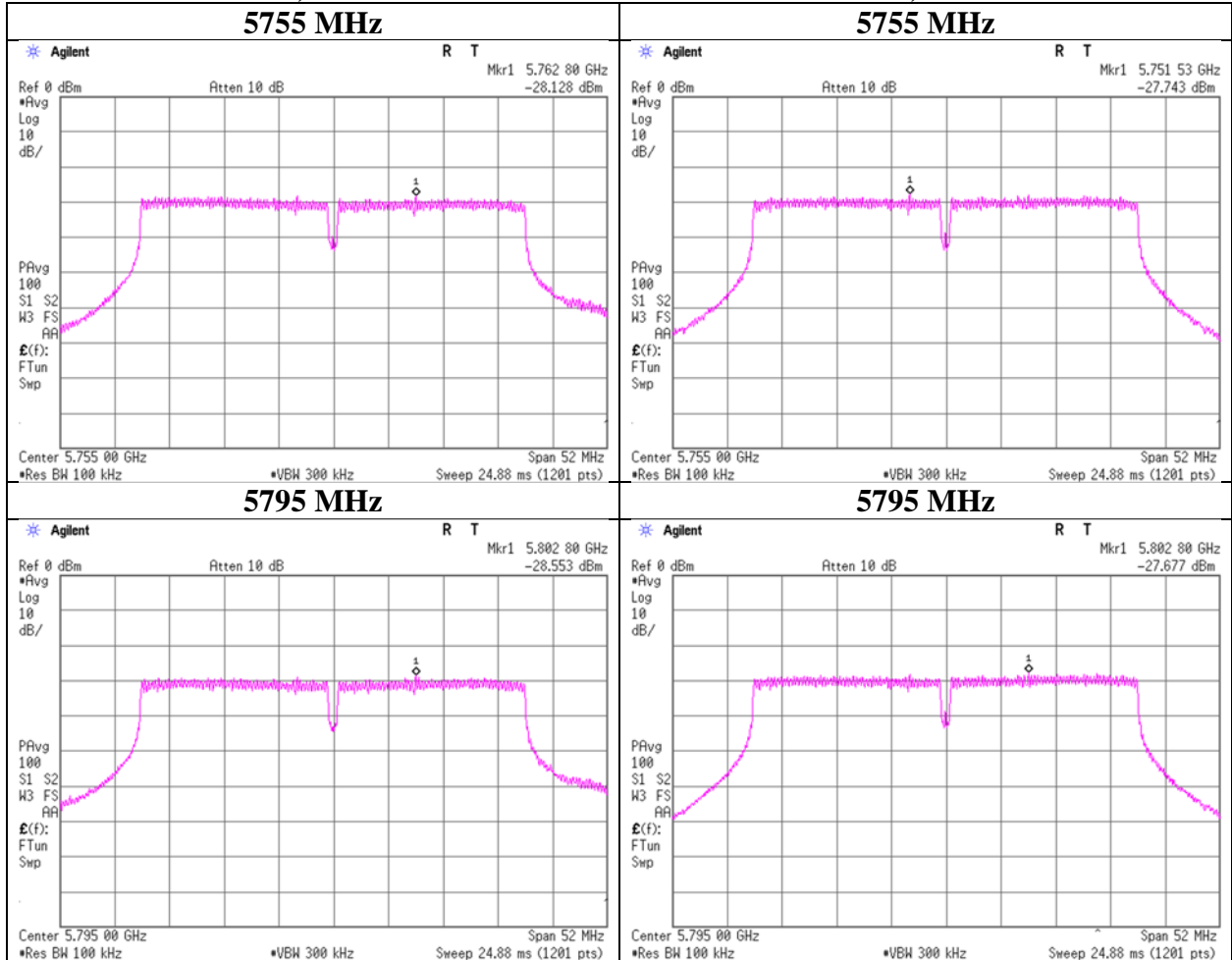


Maximum Power Spectral Density

Test place Shonan EMC Lab. No.5 Shielded Room
Date July 22, 2022
Temperature / Humidity 25 deg. C / 39 % RH
Engineer Shiro Kobayashi
Mode Tx 11n-40 MIMO

11n-40 MIMO, Antenna ANT 0

11n-40 MIMO, Antenna ANT 1

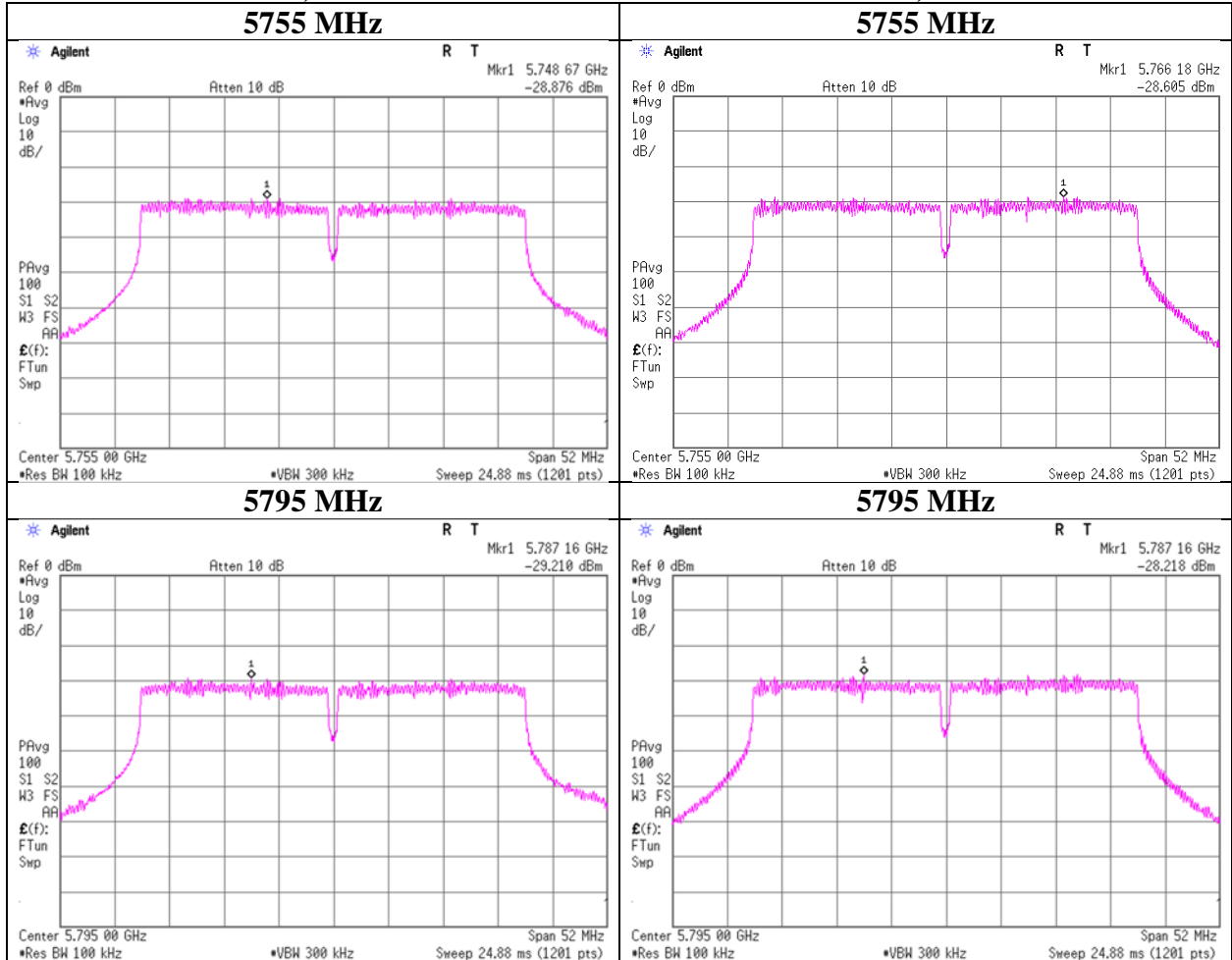


Maximum Power Spectral Density

Test place Shonan EMC Lab. No.5 Shielded Room
Date July 22, 2022
Temperature / Humidity 25 deg. C / 39 % RH
Engineer Shiro Kobayashi
Mode Tx 11ac-40 MIMO

11ac-40 MIMO, Antenna ANT 0

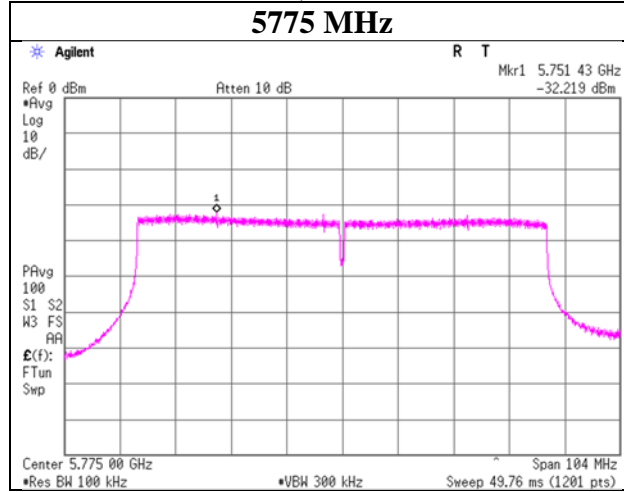
11ac-40 MIMO, Antenna ANT 1



Maximum Power Spectral Density

Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 22, 2022
Temperature / Humidity	25 deg. C / 39 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-80 SISO

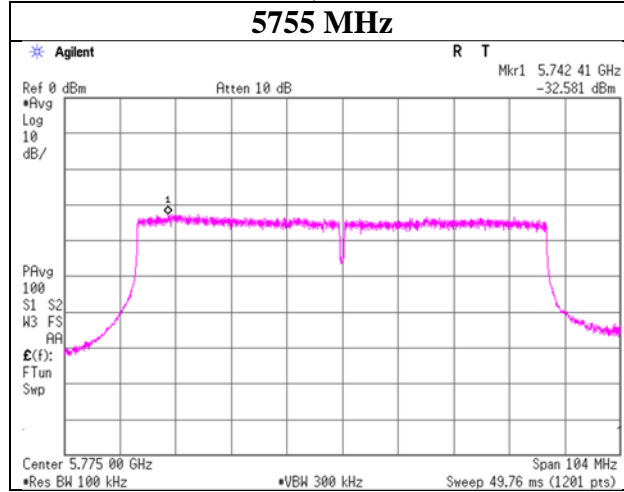
11ac-80 SISO, Antenna ANT 0



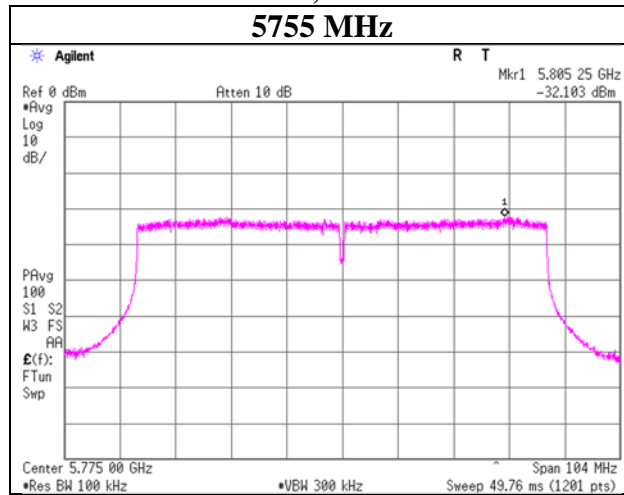
Maximum Power Spectral Density

Test place Shonan EMC Lab. No.5 Shielded Room
Date July 22, 2022
Temperature / Humidity 25 deg. C / 39 % RH
Engineer Shiro Kobayashi
Mode Tx 11ac-80 MIMO

11ac-80 MIMO, Antenna ANT 0

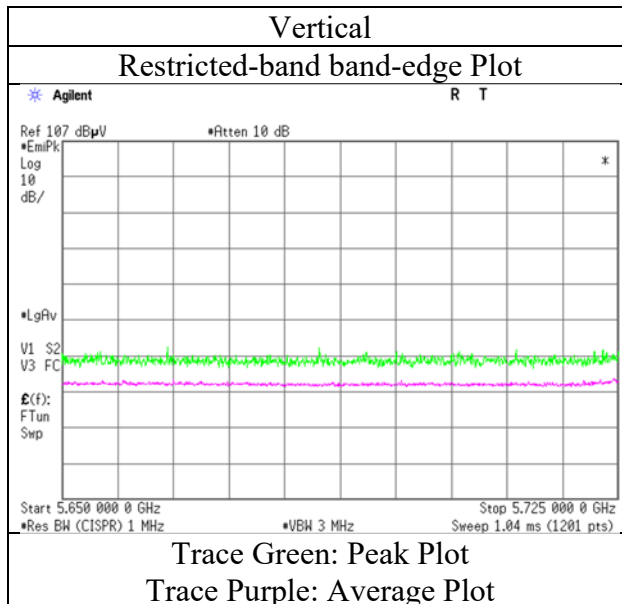
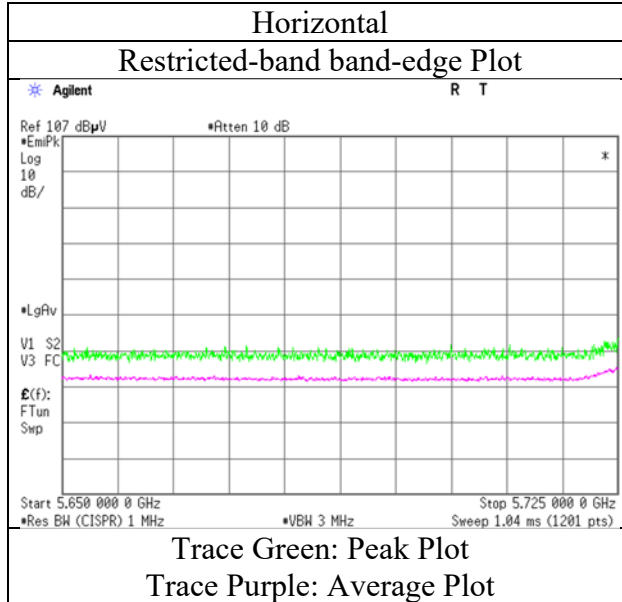


11ac-80 MIMO, Antenna ANT 1



Radiated Spurious Emission

Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date July 21, 2022
Temperature / Humidity 23 deg.C, 57 %RH
Engineer Hiromasa Sato
 (1 GHz -10 GHz)
Mode Tx 11n-20 MIMO, 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 3 3
Date July 21, 2022 July 22, 2022
Temperature / Humidity 23 deg.C, 57 %RH 23 deg.C, 57 %RH
Engineer Hiromasa Sato Hiromasa Sato
 (1 GHz -10 GHz) (10 GHz -40 GHz)
Mode Tx 11n-20 MIMO, 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	48.94	38.25	10.45	42.42	-9.54	45.68	73.9	28.2	152	114	-
Hori.	11570.000	AV	41.16	38.25	10.45	42.42	-9.54	37.90	53.9	16.0	152	114	VBW:4.7 kHz
Vert.	11570.000	PK	48.47	38.25	10.45	42.42	-9.54	45.21	73.9	28.6	136	139	-
Vert.	11570.000	AV	39.33	38.25	10.45	42.42	-9.54	36.07	53.9	17.8	136	139	VBW:4.7 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: $20\log(3.89\text{ m} / 3.0\text{ m}) = 2.26\text{ dB}$
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.	17355.000	PK	45.80	40.10	13.20	40.39	-9.54	49.17	-46.06	-27.0	19.0	150	0	-
Vert.	17355.000	PK	45.83	40.10	13.20	40.39	-9.54	49.20	-46.03	-27.0	19.0	150	0	-

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

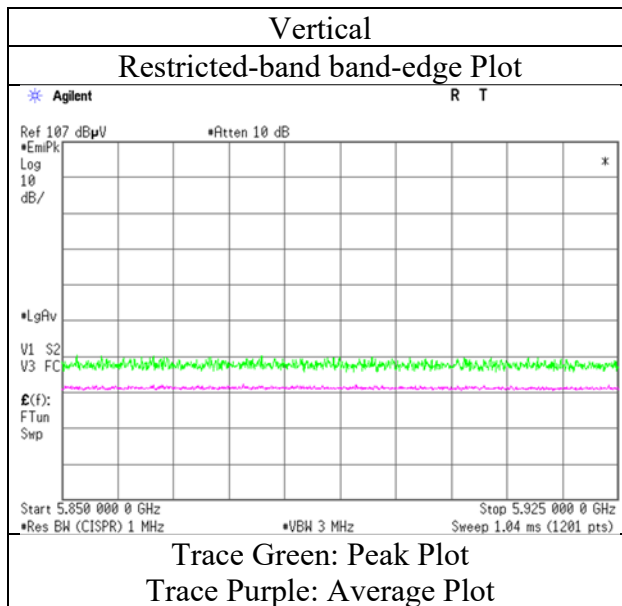
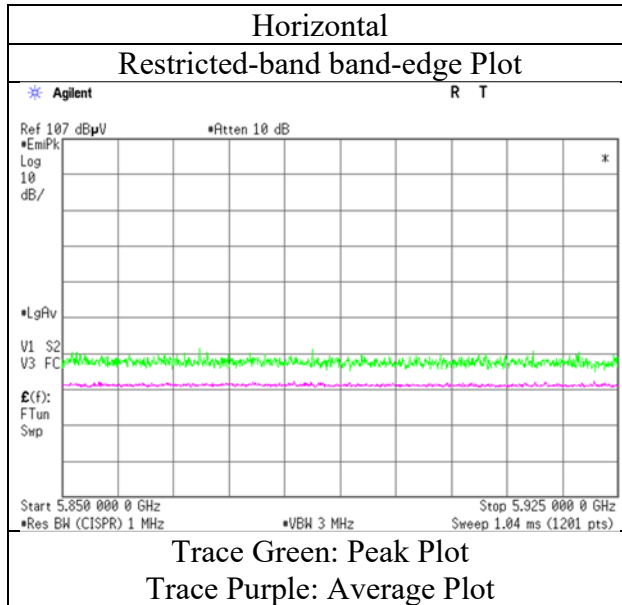
Result (EIRP [dBm]) = $10 * \text{LOG}((10^{(Electric Field Strength [dBuV/m] / 20)} * 10^{(-6)} * \text{Distance} : 3 [\text{m}])^2 / 30 * 10^{(-3)})$

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

Distance factor: 1 GHz - 10 GHz: $20\log(3.89\text{ m} / 3.0\text{ m}) = 2.26\text{ dB}$
10 GHz - 40 GHz: $20\log(1.0\text{ m} / 3.0\text{ m}) = -9.54\text{ dB}$

Radiated Spurious Emission

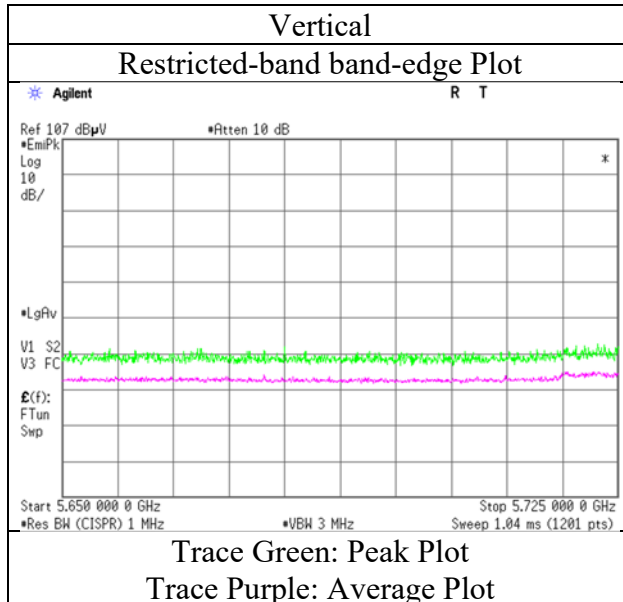
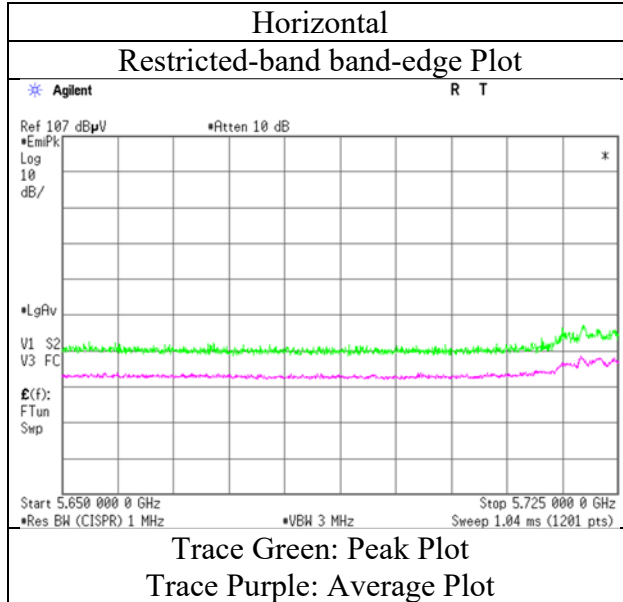
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date July 21, 2022
Temperature / Humidity 23 deg.C, 57 %RH
Engineer Hiromasa Sato
 (1 GHz -10 GHz)
Mode Tx 11n-20 MIMO, 5805 MHz



* 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

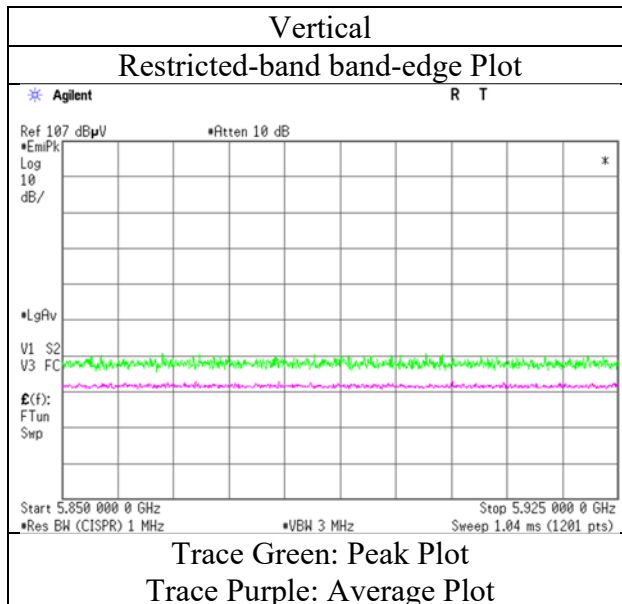
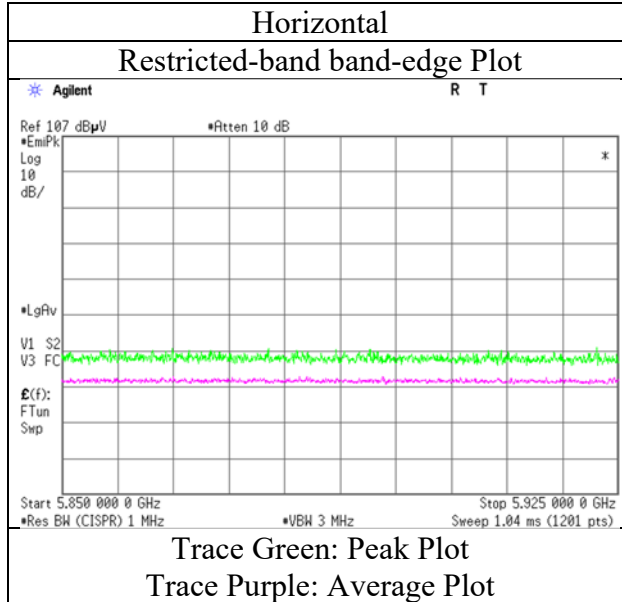
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date July 21, 2022
Temperature / Humidity 23 deg.C, 57 %RH
Engineer Hiromasa Sato
 (1 GHz -10 GHz)
Mode Tx 11n-40 MIMO, 5755 MHz



* 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

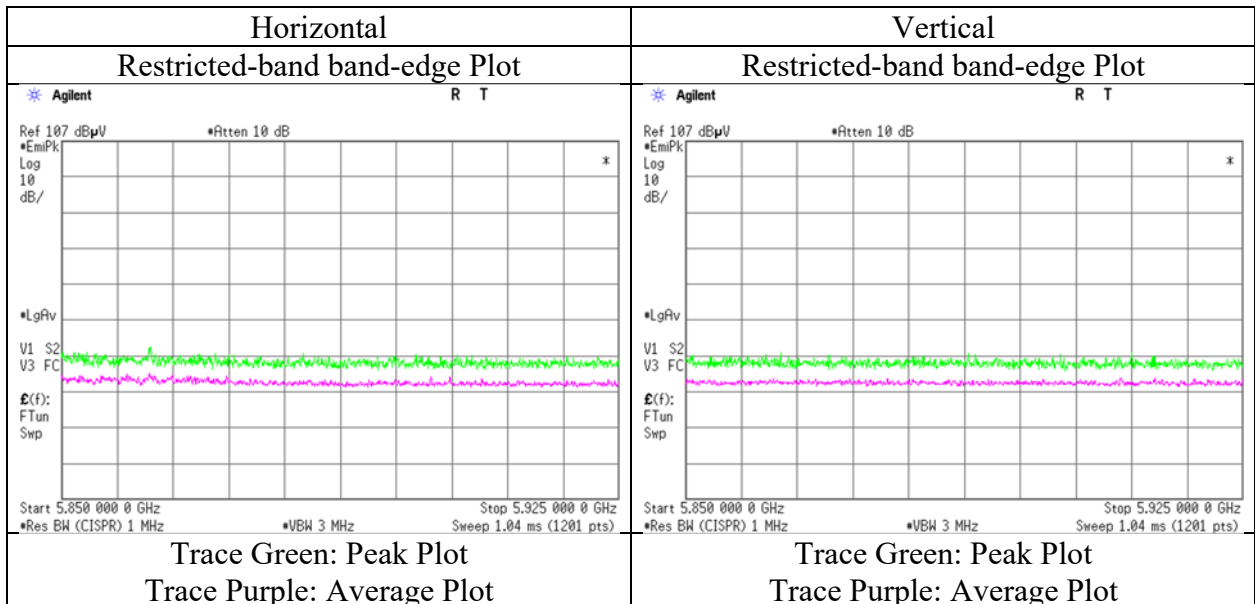
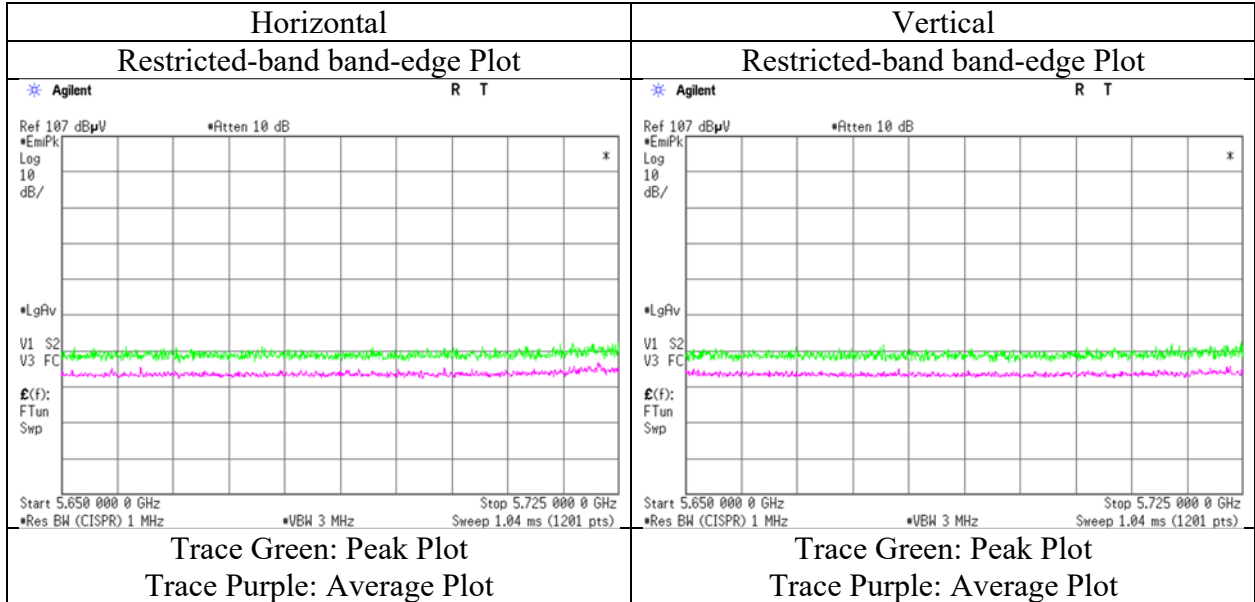
Test place Shonan EMC Lab.
Semi Anechoic Chamber 3
Date July 21, 2022
Temperature / Humidity 23 deg.C, 57 %RH
Engineer Hiromasa Sato
 (1 GHz -10 GHz)
Mode Tx 11n-40 MIMO, 5795 MHz



* 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

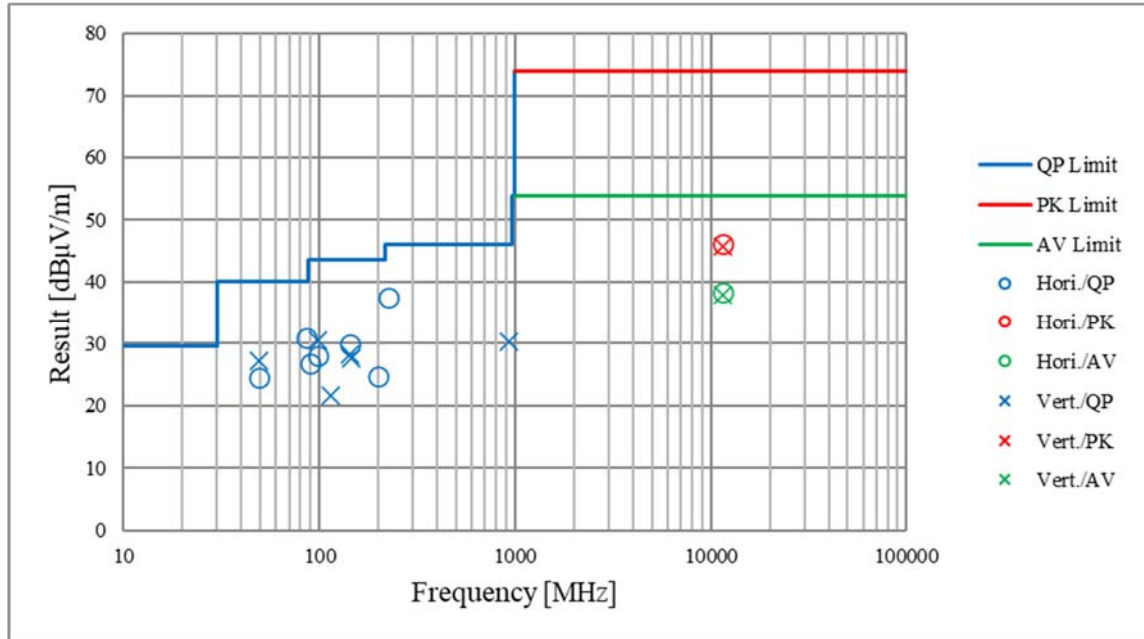
Test place	Shonan EMC Lab.	
Semi Anechoic Chamber	3	3
Date	July 21, 2022	July 22, 2022
Temperature / Humidity	23 deg.C, 57 %RH	23 deg.C, 57 %RH
Engineer	Hiromasa Sato	Hiromasa Sato
	(1 GHz -10 GHz)	(10 GHz -40 GHz)
Mode	Tx 11ac-80 MIMO, 5775 MHz	



* 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 mode for Maximum Conducted Output Power)

Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	2	3	3
Date	July 26, 2022	July 21, 2022	July 22, 2022
Temperature / Humidity	23 deg.C, 69 %RH	23 deg.C, 57 %RH	23 deg.C, 57 %RH
Engineer	Shiro Kobayashi	Hiromasa Sato	Hiromasa Sato
	(30 MHz -1 GHz)	(1 GHz -10 GHz)	(10 GHz -40 GHz)
Mode	Tx 11n-20 MIMO, 5745 MHz		



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

Radiated Spurious Emission

Test place Shonan EMC Lab.
Semi Anechoic Chamber 2 2 2
Date July 26, 2022 July 24, 2022 July 25, 2022
Temperature / Humidity 23 deg.C, 69 %RH 24 deg.C, 41 %RH 22 deg.C, 66 %RH
Engineer Shiro Kobayashi Akihiro Oda Shiro Kobayashi
(30 MHz -1 GHz) (1 GHz -10 GHz) (10 GHz -40 GHz)
Mode Tx 11n-20 MIMO, 5745 MHz with 3DH5 Hopping

(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.	86.067	QP	45.21	7.49	8.23	31.90	0.00	29.03	40.0	10.9	366	65	-
Hori.	98.290	QP	47.70	9.93	8.09	31.89	0.00	33.83	43.5	9.6	307	46	-
Hori.	103.278	QP	45.05	10.85	8.03	31.89	0.00	32.04	43.5	11.4	296	54	-
Hori.	127.639	QP	38.67	13.77	8.16	31.86	0.00	28.74	43.5	14.7	242	47	-
Hori.	129.838	QP	38.96	13.93	8.20	31.86	0.00	29.23	43.5	14.2	250	46	-
Hori.	137.706	QP	41.87	14.34	8.39	31.85	0.00	32.75	43.5	10.7	236	30	-
Hori.	144.004	QP	38.03	14.62	8.54	31.85	0.00	29.34	43.5	14.1	230	22	-
Hori.	147.458	QP	40.56	14.77	8.61	31.84	0.00	32.10	43.5	11.4	219	67	-
Hori.	182.537	QP	37.34	16.17	8.81	31.81	0.00	30.51	43.5	12.9	176	216	-
Hori.	200.048	QP	42.72	11.63	5.72	31.79	0.00	28.28	43.5	15.2	164	334	-
Hori.	223.762	QP	53.09	11.33	5.91	31.77	0.00	38.56	46.0	7.4	201	344	-
Hori.	11490.000	PK	47.25	37.80	9.73	40.45	-9.54	44.79	73.9	29.1	152	108	-
Hori.	11490.000	AV	37.77	37.80	9.73	40.45	-9.54	35.31	53.9	18.5	152	108	VBW: 4.7 kHz
Vert.	131.786	QP	39.07	14.01	8.25	31.86	0.00	29.47	43.5	14.0	100	311	-
Vert.	223.764	QP	46.56	11.33	5.91	31.77	0.00	32.03	46.0	13.9	246	16	-
Vert.	11490.000	PK	45.97	37.80	9.73	40.45	-9.54	43.51	73.9	30.3	149	116	-
Vert.	11490.000	AV	36.26	37.80	9.73	40.45	-9.54	33.80	53.9	20.1	149	116	VBW: 4.7 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 (3.89 m / 3.0 m) = 2.26 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.	5650.000	PK	46.18	32.06	17.58	39.90	2.26	58.18	-37.05	-27.0	10.0	104	139	-
Hori.	5700.000	PK	46.06	32.19	17.62	39.92	2.26	58.21	-37.02	10.0	47.0	104	139	-
Hori.	5720.000	PK	46.71	32.25	17.63	39.92	2.26	58.93	-36.30	15.6	51.9	104	139	-
Hori.	5725.000	PK	47.92	32.27	17.63	39.92	2.26	60.16	-35.07	27.0	62.0	104	139	-
Hori.	17235.000	PK	43.67	39.82	12.48	37.35	-9.54	49.08	-46.15	-27.0	19.1	150	0	-
Vert.	5650.000	PK	46.79	32.06	17.58	39.90	2.26	58.79	-36.44	-27.0	9.4	162	211	-
Vert.	5700.000	PK	46.31	32.19	17.62	39.92	2.26	58.46	-36.77	10.0	46.7	162	211	-
Vert.	5720.000	PK	47.25	32.25	17.63	39.92	2.26	59.47	-35.76	15.6	51.3	162	211	-
Vert.	5725.000	PK	49.22	32.27	17.63	39.92	2.26	61.46	-33.77	27.0	60.7	162	211	-
Vert.	17235.000	PK	43.78	39.82	12.48	37.35	-9.54	49.19	-46.04	-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)

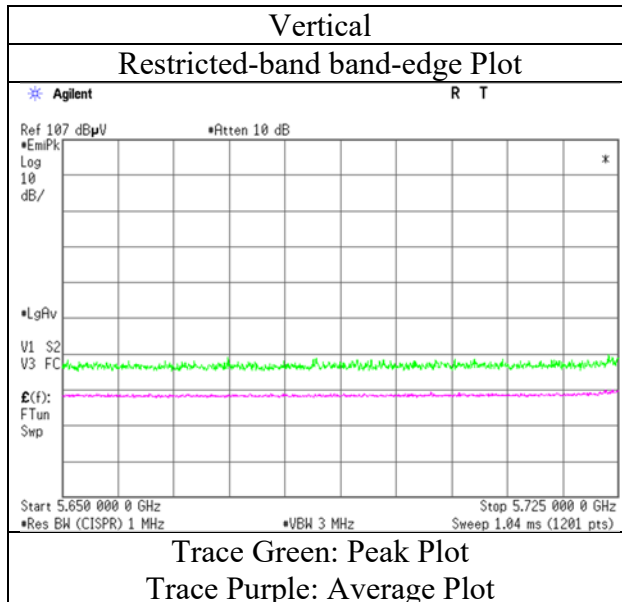
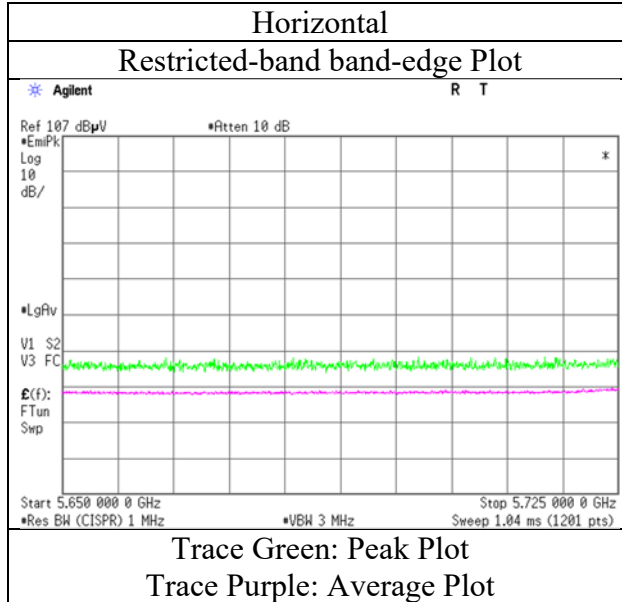
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 10 GHz : 20log (3.89 m / 3.0 m) = 2.26 dB

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

Radiated Spurious Emission

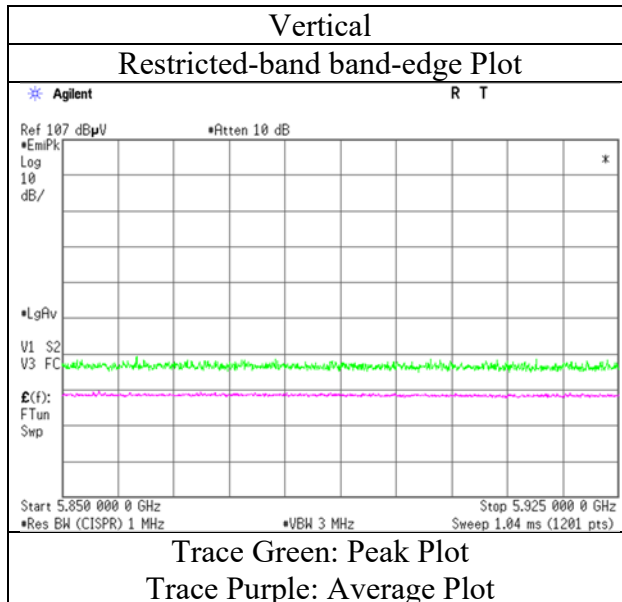
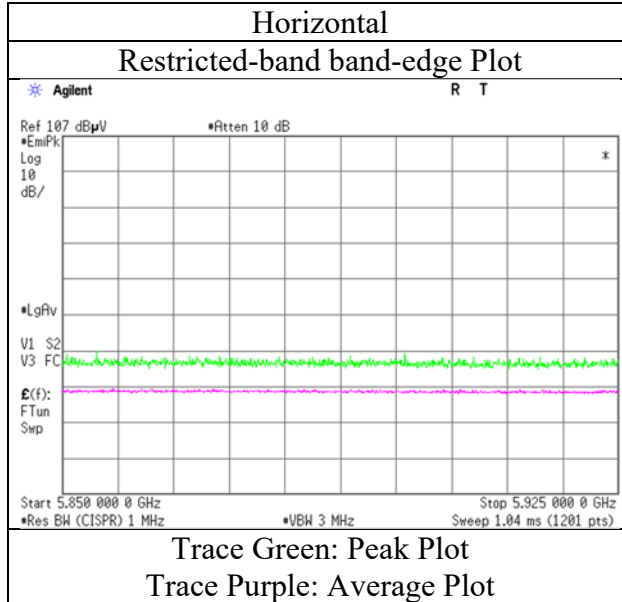
Test place Shonan EMC Lab.
Semi Anechoic Chamber 2
Date July 24, 2022
Temperature / Humidity 24 deg.C, 41 %RH
Engineer Akihiro Oda
 (1 GHz -10 GHz)
Mode Tx 11n-20 MIMO, 5745 MHz with 3DH5 Hopping



* 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 2
Date July 24, 2022
Temperature / Humidity 24 deg.C, 41 %RH
Engineer Akihiro Oda
 (1 GHz -10 GHz)
Mode Tx 11n-20 MIMO, 5805 MHz with 3DH5 Hopping



* 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 2
Date July 24, 2022
Temperature / Humidity 24 deg.C, 41 %RH
Engineer Akihiro Oda
 (1 GHz -6.4 GHz)
Mode Tx 11n-40 MIMO, 5755 MHz with 3DH5 Hopping

(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.	5650.000	PK	46.42	32.06	17.58	39.90	2.26	58.42	-36.81	-27.0	9.8	113	137	-
Hori.	5700.000	PK	45.37	32.19	17.62	39.92	2.26	57.52	-37.71	10.0	47.7	113	137	-
Hori.	5720.000	PK	51.09	32.25	17.63	39.92	2.26	63.31	-31.92	15.6	47.5	113	137	-
Hori.	5720.938	PK	49.28	32.25	17.63	39.92	2.26	61.50	-33.73	17.8	51.5	113	137	-
Hori.	5725.000	PK	49.15	32.27	17.63	39.92	2.26	61.39	-33.84	27.0	60.8	113	137	-
Vert.	5650.000	PK	46.73	32.06	17.58	39.90	2.26	58.73	-36.50	-27.0	9.5	167	210	-
Vert.	5700.000	PK	47.27	32.19	17.62	39.92	2.26	59.42	-35.81	10.0	45.8	167	210	-
Vert.	5720.000	PK	50.78	32.25	17.63	39.92	2.26	63.00	-32.23	15.6	47.8	167	210	-
Vert.	5722.625	PK	49.16	32.26	17.63	39.92	2.26	61.39	-33.84	21.6	55.4	167	210	-
Vert.	5725.000	PK	50.70	32.27	17.63	39.92	2.26	62.94	-32.29	27.0	59.2	167	210	-

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)

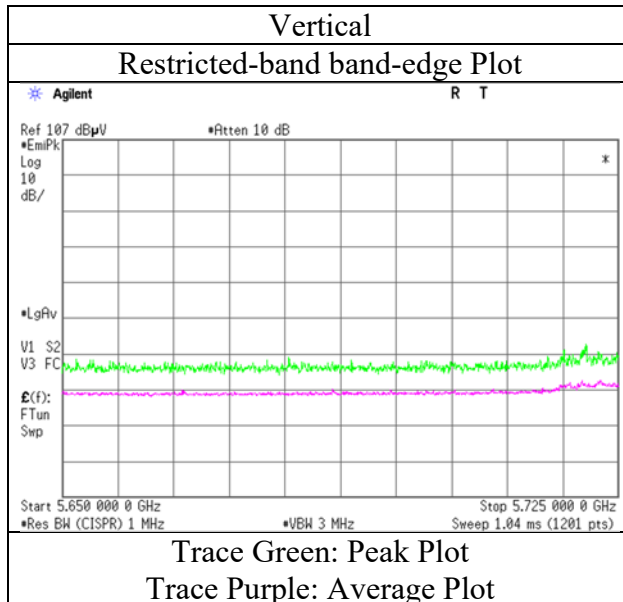
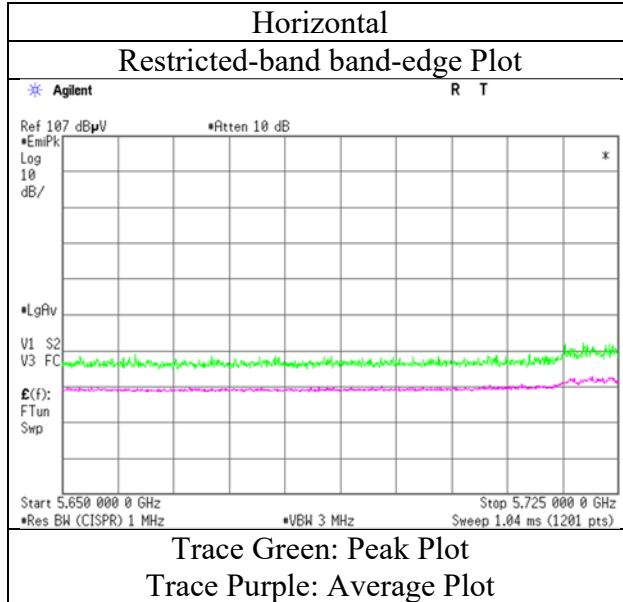
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 10 GHz : 20log (3.89 m / 3.0 m) = 2.26 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 2
Date July 24, 2022
Temperature / Humidity 24 deg.C, 41 %RH
Engineer Akihiro Oda
 (1 GHz -6.4 GHz)
Mode Tx 11n-40 MIMO, 5755 MHz with 3DH5 Hopping



* 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 2
Date July 24, 2022
Temperature / Humidity 24 deg.C, 41 %RH
Engineer Akihiro Oda
 (1 GHz -6.4 GHz)
Mode Tx 11n-40 MIMO, 5795 MHz with 3DH5 Hopping

(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.	5850.000	PK	47.56	32.63	17.72	39.96	2.26	60.21	-35.02	27.0	62.0	114	138	-
Hori.	5855.000	PK	45.49	32.64	17.73	39.96	2.26	58.16	-37.07	15.6	52.6	114	138	-
Hori.	5875.000	PK	46.31	32.68	17.75	39.97	2.26	59.03	-36.20	10.0	46.2	114	138	-
Hori.	5925.000	PK	45.78	32.75	17.78	39.98	2.26	58.59	-36.64	-27.0	9.6	114	138	-
Vert.	5850.000	PK	47.06	32.63	17.72	39.96	2.26	59.71	-35.52	27.0	62.5	153	214	-
Vert.	5855.000	PK	46.69	32.64	17.73	39.96	2.26	59.36	-35.87	15.6	51.4	153	214	-
Vert.	5875.000	PK	47.68	32.68	17.75	39.97	2.26	60.40	-34.83	10.0	44.8	153	214	-
Vert.	5925.000	PK	47.56	32.75	17.78	39.98	2.26	60.37	-34.86	-27.0	7.8	153	214	-

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)

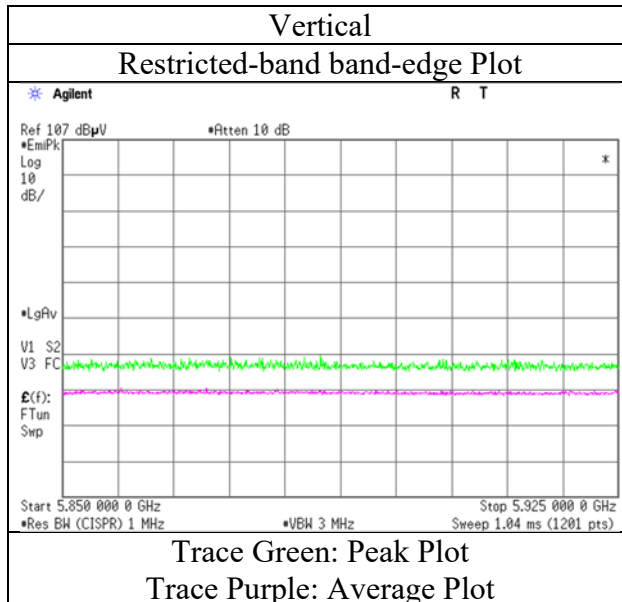
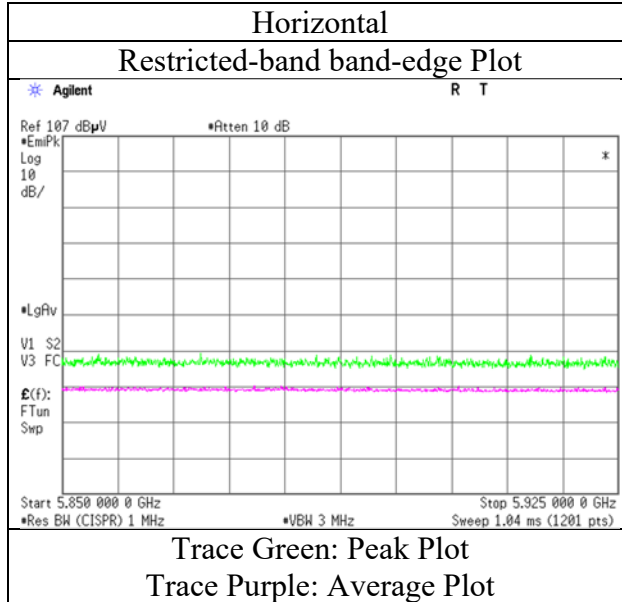
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).

Distance factor : 1 GHz - 10 GHz : 20log (3.89 m / 3.0 m) = 2.26 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 2
Date July 24, 2022
Temperature / Humidity 24 deg.C, 41 %RH
Engineer Akihiro Oda
 (1 GHz -6.4 GHz)
Mode Tx 11n-40 MIMO, 5795 MHz with 3DH5 Hopping



* 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 2
Date July 24, 2022
Temperature / Humidity 24 deg.C, 41 %RH
Engineer Akihiro Oda
 (1 GHz -6.4 GHz)
Mode Tx 11ac-80 MIMO, 5775 MHz with 3DH5 Hopping

(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.	5650.000	PK	45.96	32.06	17.58	39.90	2.26	57.96	-37.27	-27.0	10.2	116	136	-
Hori.	5700.000	PK	46.01	32.19	17.62	39.92	2.26	58.16	-37.07	10.0	47.0	116	136	-
Hori.	5720.000	PK	47.10	32.25	17.63	39.92	2.26	59.32	-35.91	15.6	51.5	116	136	-
Hori.	5725.000	PK	50.35	32.27	17.63	39.92	2.26	62.59	-32.64	27.0	59.6	116	136	-
Hori.	5850.000	PK	47.01	32.63	17.72	39.96	2.26	59.66	-35.57	27.0	62.5	116	136	-
Hori.	5855.000	PK	46.09	32.64	17.73	39.96	2.26	58.76	-36.47	15.6	52.0	116	136	-
Hori.	5875.000	PK	45.42	32.68	17.75	39.97	2.26	58.14	-37.09	10.0	47.0	116	136	-
Hori.	5925.000	PK	45.46	32.75	17.78	39.98	2.26	58.27	-36.96	-27.0	9.9	116	136	-
Vert.	5650.000	PK	46.54	32.06	17.58	39.90	2.26	58.54	-36.69	-27.0	9.6	165	212	-
Vert.	5700.000	PK	46.85	32.19	17.62	39.92	2.26	59.00	-36.23	10.0	46.2	165	212	-
Vert.	5720.000	PK	49.43	32.25	17.63	39.92	2.26	61.65	-33.58	15.6	49.1	165	212	-
Vert.	5725.000	PK	51.94	32.27	17.63	39.92	2.26	64.18	-31.05	27.0	58.0	165	212	-
Vert.	5850.000	PK	47.54	32.63	17.72	39.96	2.26	60.19	-35.04	27.0	62.0	165	212	-
Vert.	5855.000	PK	47.90	32.64	17.73	39.96	2.26	60.57	-34.66	15.6	50.2	165	212	-
Vert.	5875.000	PK	47.33	32.68	17.75	39.97	2.26	60.05	-35.18	10.0	45.1	165	212	-
Vert.	5925.000	PK	47.49	32.75	17.78	39.98	2.26	60.30	-34.93	-27.0	7.9	165	212	-

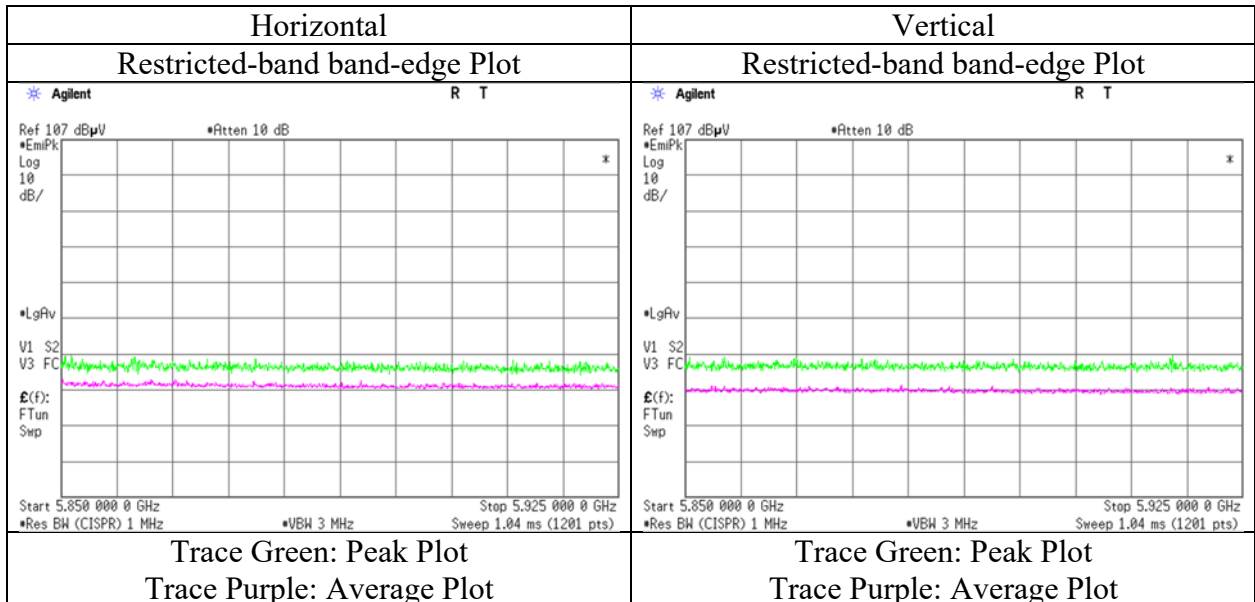
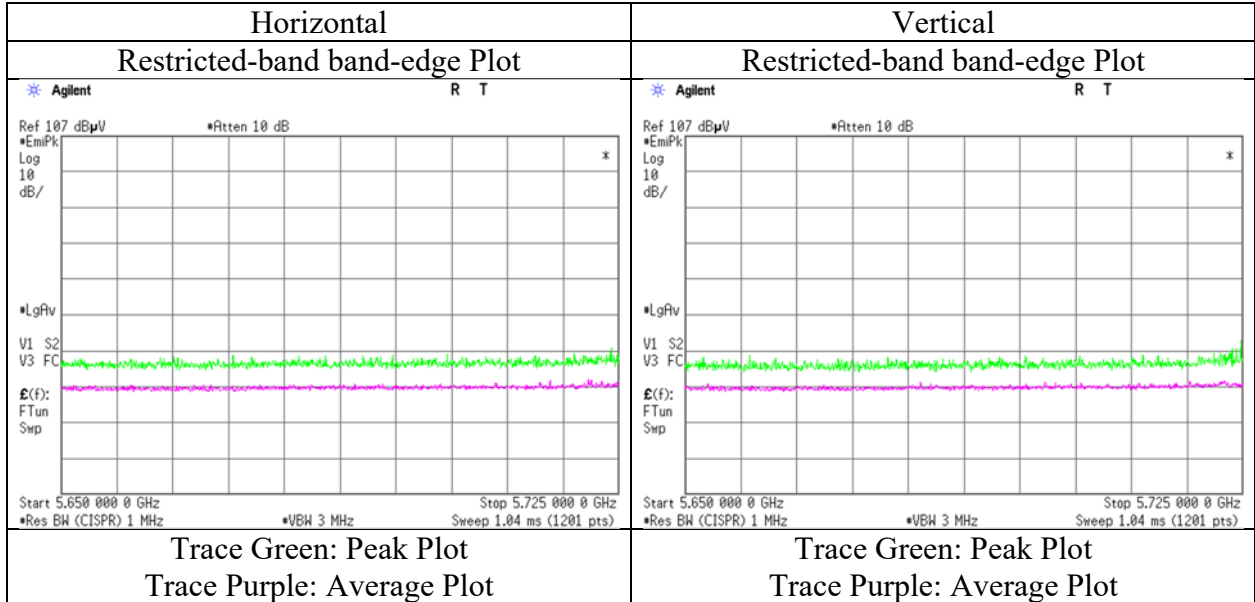
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz) - Gain(Amplifier) + Distance factor
 Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)

*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 (3.89 m/ 3.0 m) = 2.26 dB
 10 GHz - 40 GHz : 20log (1.0 m/ 3.0 m) = -9.54 dB

Radiated Spurious Emission

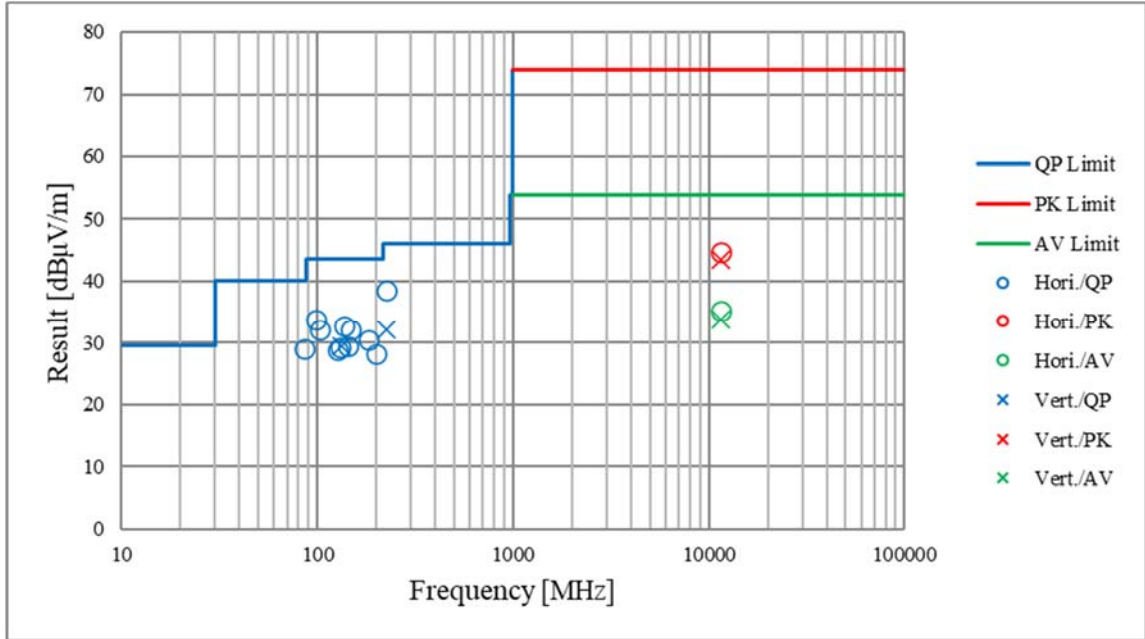
Test place Shonan EMC Lab.
Semi Anechoic Chamber 2
Date July 24, 2022
Temperature / Humidity 24 deg.C, 41 %RH
Engineer Akihiro Oda
 (1 GHz -6.4 GHz)
Mode Tx 11ac-80 MIMO, 5775 MHz with 3DH5 Hopping



* 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 mode for Maximum Conducted Output Power)

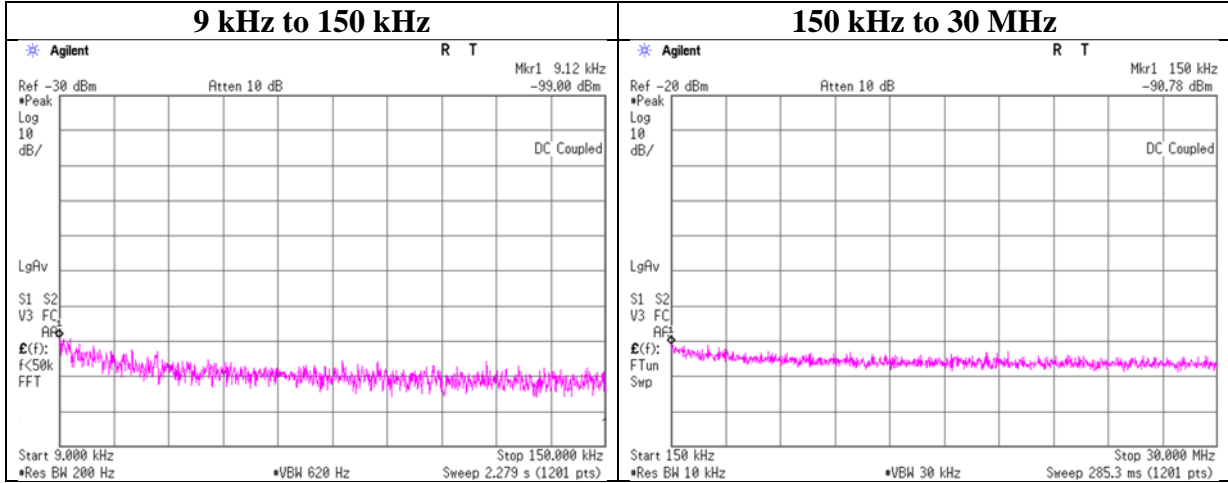
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	2	2	2
Date	July 26, 2022	July 24, 2022	July 25, 2022
Temperature / Humidity	23 deg.C, 69 %RH	24 deg.C, 41 %RH	22 deg.C, 66 %RH
Engineer	Shiro Kobayashi	Akihiro Oda	Shiro Kobayashi
	(30 MHz -1 GHz)	(1 GHz -10 GHz)	(10 GHz -40 GHz)
Mode	Tx 11n-20 MIMO, 5745 MHz with 3DH5 Hopping		



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

Conducted Spurious Emission

Test place Shonan EMC Lab. No.5 Shielded Room
Date July 22, 2022
Temperature / Humidity 25 deg. C / 39 % RH
Engineer Shiro Kobayashi
Mode Tx 11n-20 MIMO, 5745 MHz



Frequency [kHz]	Reading [dBm]	Cable Loss [dB]	Attenuator [dB]	Antenna Gain * [dBi]	N (Number of Output)	EIRP [dBm]	Distance [m]	Ground bounce [dB]	E (field strength) [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Remark
9.120	-99.00	0.01	10.11	2.0	2	-83.9	300	6.0	-22.6	48.4	71.0	-
150.000	-90.78	0.01	10.11	2.0	2	-75.6	300	6.0	-14.4	24.0	38.4	-

$E [dBuV/m] = EIRP [dBm] - 20 \log (Distance [m]) + Ground\ bounce [dB] + 104.8 [dBuV/m]$

$EIRP[dBm] = Reading [dBm] + Cable\ loss [dB] + Attenuator\ Loss [dB] + Antenna\ gain [dBi] + 10 * \log (N)$

N: Number of output

*2.0 dBi was applied to the test result based on KDB 789033 since antenna gain was less than 2.0 dBi.

APPENDIX 2: Test Instruments

Test Equipment [1/2]

Test Item	Local ID	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
AT	SAT10-09	145132	Attenuator	Weinschel Corp.	54A-10	W5692	2021/10/05	12
AT	SAT10-15	160493	Attenuator	Weinschel Corp.	54A-10	83406	2021/12/07	12
AT	SCC-G13	145166	Coaxial Cable	Suhner	SUCOFLEX 102	31599/2	2021/12/06	12
AT	SCC-G14	145175	Coaxial Cable	Suhner	SUCOFLEX 102	31600/2	2021/12/06	12
AT	SOS-27	191845	Humidity Indicator	CUSTOM. Inc	CTH-201	-	2022/08/08	12
AT	SPM-13	169910	Power Meter	Keysight Technologies Inc	8990B	MY51000448	2022/01/25	12
AT	SPSS-06	169911	Power sensor	Keysight Technologies Inc	N1923A	MY57270004	2022/01/25	12
AT	SPSS-07	169912	Power sensor	Keysight Technologies Inc	N1923A	MY57290005	2022/01/25	12
AT	SRENT-15	160899	Spectrum Analyzer	Keysight Technologies Inc	E4440A	MY46185516	2022/02/02	12
AT	STM-G7	171614	Terminator	Weinschel - API Technologies Corp	M1459A	88995	2022/05/12	12
AT	STS-05	146212	Digital Hitester	HIOKI E.E. CORPORATION	3805-50	80997828	2021/09/14	12 *1)
RE	COTS-SEMI-5	170932	EMI Software	TSJ (Techno Science Japan)	TEPTO-DV3(RE,CE,ME,P E)	-	-	-
RE	KJM-02	146432	Measure	TAJIMA	GL19-55	-	-	-
RE	KSA-08	145089	Spectrum Analyzer	Keysight Technologies Inc	E4446A	MY46180525	2021/10/13	12
RE	SAEC-02(NSA)	145563	Semi-Anechoic Chamber	TDK	SAEC-02(NSA)	2	2022/03/20	12
RE	SAEC-02(SVSWR)	145598	Semi-Anechoic Chamber	TDK	SAEC-02(SVSWR)	2	2022/05/16	12
RE	SAEC-03(SVSWR)	145566	Semi-Anechoic Chamber	TDK	SAEC-03(SVSWR)	3	2022/05/18	12
RE	SAF-02	145004	Pre Amplifier	SONOMA	310N	290212	2022/02/24	12
RE	SAF-05	145128	Pre Amplifier	Toyo Corporation	TPA0118-36	1440490	2022/05/12	12
RE	SAF-06	145005	Pre Amplifier	Toyo Corporation	TPA0118-36	1440491	2022/02/04	12
RE	SAF-08	145007	Pre Amplifier	Toyo Corporation	HAP18-26W	19	2022/03/03	12
RE	SAF-10	145129	Pre Amplifier	Toyo Corporation	HAP26-40W	10	2022/03/03	12
RE	SAT10-06	145137	Attenuator	Keysight Technologies Inc	8493C-010	74865	2021/10/05	12
RE	SAT3-11	150921	Attenuator	JFW	50HF-003N	-	2022/02/21	12
RE	SAT6-14	167095	Attenuator	JFW	50HF-006N	-	2022/02/21	12
RE	SBA-02	145022	Biconical Antenna	Schwarzbeck Mess-Elektronik OHG	BBA9106	91032665	2022/04/16	12
RE	SCC-B1/B3/B5/B7/B8/B13/SRSE-02	144975	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/NS4906	-/0901-270(RF Selector)	2022/04/20	12
RE	SCC-B2/B4/B6/B7/B8/B13/SRSE-02	144976	Coaxial Cable&RF Selector	Fujikura/Fujikura/Suhner/Suhner/Suhner/TOYO	8D2W/12DSFA/141PE/141PE/141PE/NS4906	-/0901-270(RF Selector)	2022/04/20	12
RE	SCC-G15	145176	Coaxial Cable	Suhner	SUCOFLEX 102	32703/2	2022/03/03	12
RE	SCC-G41	151617	Coaxial Cable	Junkosha	MWX221-01000NFSNMS/B	1612S006	2022/01/06	12
RE	SCC-G43	156380	Coaxial Cable	Huber+Suhner	SUCOFLEX_104_E	SN MY 13406/4E	2022/05/20	12
RE	SCC-G50	178573	Coaxial Cable	Huber+Suhner	SUCOFLEX_104_E	MY13407/4E	2022/03/03	12
RE	SCC-G51	178572	Coaxial Cable	Huber+Suhner	SUCOFLEX 104	800288 /4A	2022/03/03	12

Test Equipment [2/2]

Test Item	Local ID	LIMS ID	Description	Manufacturer	Model	Serial	Last Calibration Date	Cal Int
RE	SCC-G57	179540	Coaxial Cable	Huber+Suhner	SUCOFLEX 102	802815/2	2022/05/12	12
RE	SCC-G58	183047	Coaxial Cable	Huber+Suhner	SUCOFLEX 104	800287/4A	2022/05/20	12
RE	SCC-G69	200009	Coaxial Cable	Huber+Suhner	SUCOFLEX 104	575617/4	2022/07/21	12
RE	SCC-G70	200010	Coaxial Cable	Huber+Suhner	SUCOFLEX 104	575618/4	2022/07/22	12
RE	SFL-03	145377	Highpass Filter	MICRO-TRONICS	HPM50112	28	2021/10/05	12
RE	SHA-03	145501	Horn Antenna	Schwarzbeck Mess-Elektronik OHG	BBHA9120D	9120D-739	2022/03/16	12
RE	SHA-04	145512	Horn Antenna	ETS-Lindgren	3160-09	00094868	2022/06/06	12
RE	SHA-06	145514	Horn Antenna	ETS-Lindgren	3160-10	00092383	2022/06/06	12
RE	SHA-09	194684	Horn Antenna	Schwarzbeck Mess-Elektronik OHG	BBHA 9120 C	695	2022/03/10	12
RE	SHA-10	194685	Horn Antenna	Schwarzbeck Mess-Elektronik OHG	BBHA 9120 C	711	2022/03/16	12
RE	SJM-20	207277	Measuring	ASKUL	-	-	-	-
RE	SLA-06	145528	Logperiodic Antenna	Schwarzbeck Mess-Elektronik OHG	VUSLP9111B	195	2022/04/16	12
RE	SOS-21	191838	Humidity Indicator	CUSTOM. Inc	CTH-201	-	2022/08/08	12
RE	SOS-23	191840	Humidity Indicator	CUSTOM. Inc	CTH-201	-	2022/08/08	12
RE	SSA-02	145800	Spectrum Analyzer	Keysight Technologies Inc	E4448A	MY48250106	2022/05/17	12
RE	STR-01	145790	Test Receiver	Rohde & Schwarz	ESU40	100093	2022/04/28	12
RE	STS-02	145793	Digital Hitester	HIOKI E.E. CORPORATION	3805-50	80997819	2022/04/07	12
RE	STS-03	146210	Digital Hitester	HIOKI E.E. CORPORATION	3805-50	80997823	2021/09/14	12 *1)

***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.

The expiration*1) This test equipment was used for the tests before the expiration date of the calibration. All equipment is calibrated with valid calibrations. Each measurement data is traceable to the national or international standards.

Test item:

RE: Radiated Emission

AT: Antenna Terminal Conducted test