RADIO TEST REPORT

Test Report No. : 13385909S-C-R2

Applicant	:	**Panasonic Corporation**
Type of EUT	:	**Car Navigation**
Model Number of EUT	:	**AT2103**
FCC ID	:	**ACJ932AT2103**
Test regulation	:	**FCC Part 15 Subpart E: 2020**
Test result	:	**Complied (Refer to SECTION 3.2)**

1. This test report shall not be reproduced in full or partial, without the written approval of UL Japan, Inc.
2. The results in this report apply only to the sample tested.
3. This sample tested is in compliance with the limits of the above regulation.
4. The test results in this test report are traceable to the national or international standards.
5. This test report must not be used by the customer to claim product certification, approval, or endorsement by the A2LA accreditation body.
6. This test report covers Radio technical requirements.
   It does not cover administrative issues such as Manual or non-Radio test related Requirements. (if applicable)
7. The all test items in this test report are conducted by UL Japan, Inc. Shonan EMC Lab.
8. The opinions and the interpretations to the result of the description in this report are outside scopes where UL Japan has been accredited.
9. The information provided from the customer for this report is identified in SECTION 1.
10. This report is a revised version of 13385909S-C-R1. 13385909S-C-R1 is replaced with this report.

Date of test: June 24 to November 10, 2020

Representative test engineer:
Shiro Kobayashi
Engineer
Consumer Technology Division

Approved by:
Shinichi Takano
Engineer
Consumer Technology Division

CERTIFICATE 1266.03

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

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REVISION HISTORY

Original Test Report No.: 13385909S-C

Revision	Test report No.	Date	Page revised	Contents
- (Original)	13385909S-C	September 15, 2020	-	-
1	13385909S-C-R1	October 1, 2020	P.6	Correction of "Radio Specification": from IEEE802.11ac (80 MHz band): 5210 MHz, 5755 MHz => to IEEE802.11ac (80 MHz band): 5210 MHz, 5775 MHz
2	13385909S-C-R2	November 12, 2020	P.1	Correction of "Date of test": from June 24 to August 3, 2020 to June 24 to November 10, 2020
			P.11	Correction of "Operating Mode" at Radiated Spurious Emission (Above 1 GHz): from 3DH5 Hopping to DH5 Hopping
			P.11	Addition "Operating Mode" at Radiated Spurious Emission (Above 1 GHz): 11ac-40 MIMO with 11g 2437 MHz and DH5 Hopping, 11ac-80 MIMO with 11g 2437 MHz and DH5 Hopping
			P.11	Addition Comment: *3) and *4)
			P.187 to188, P.240 to 243	Addition Data of Radiated Spurious Emission.
			P.245	Addition Test equipment: SAT10-05

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Reference: Abbreviations (Including words undescribed in this report)

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

CONTENTS **PAGE**

SECTION 1: Customer information

Company Name	:	Panasonic Corporation
Address	:	4261 Ikonobe-cho, Tsuzuki-ku, Yokohama-shi, Kanagawa-ken, 224-8520, Japan
Telephone Number	:	+81-50-3689-7112
Contact Person	:	Takahisa Sakai

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

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

SECTION 2: Equipment under test (EUT)

2.1 Identification of EUT

Type	:	Car Navigation
Model Number	:	AT2103
Serial Number	:	Refer to SECTION 4.2
Rating	:	DC 13.2 V
Receipt Date	:	June 11, 2020
Country of Mass-production	:	Japan, Mexico, Czech Republic
Condition	:	Production prototype (Not for Sale: This sample is equivalent to mass-produced items.)
Modification	:	No Modification by the test lab.

2.2 Product Description

Model: AT2103 (referred to as the EUT in this report) is are Car Navigation.

There are 2 type for AT2103; Hi type(14 inch Display) and Lo type(9.8 inch Display). The same RF Part and antenna are installed in these models, however antenna gain and antenna arrangement are different.

Radio Specification

	IEEE802.11b	**IEEE802.11g**	**IEEE802.11n (20 MHz band)**	**IEEE802.11n (40 MHz band)**
Frequency of operation	2412 MHz - 2462 MHz	2412 MHz - 2462 MHz	2412 MHz – 2462 MHz, 5180 MHz – 5240 MHz, 5745 MHz – 5825 MHz	5190 MHz, 5230 MHz, 5755 MHz, 5795 MHz
Channel spacing	5 MHz		2.4 GHz band: 5 MHz 5 GHz band: 20 MHz	40 MHz
Modulation	DSSS (CCK, DQPSK, DBPSK)	OFDM-CCK (64QAM, 16QAM, QPSK, BPSK)	OFDM (64QAM, 16QAM, QPSK, BPSK)	
	IEEE802.11a	**IEEE802.11ac (20 MHz band)**	**IEEE802.11ac (40 MHz band)**	**IEEE802.11ac (80 MHz band)**
Frequency of operation	5180 MHz – 5240 MHz, 5745 MHz – 5825 MHz	5180 MHz – 5240 MHz, 5745 MHz – 5825 MHz	5190 MHz, 5230 MHz, 5755 MHz, 5795 MHz	5210 MHz, 5775 MHz
Channel spacing	20 MHz		40 MHz	80 MHz
Modulation	OFDM (64QAM, 16QAM, QPSK, BPSK)	OFDM (256QAM,16QAM,QPSK,BPSK)		

	Bluetooth (BR/EDR)	**Bluetooth Low Energy**
Frequency of operation	2402 MHz – 2480 MHz	2402 MHz – 2480 MHz
Channel spacing	1 MHz	2 MHz
Modulation	FHSS, GFSK, π/4DQPSK, 8DPSK	FHSS, GFSK

Antenna type	Inverted F type antenna			
Antenna Gain	Hi type (14 inch Display)	RF0	2.4 GHz WLAN	0.07 dBi
			U-NII-1	2.14 dBi
			U-NII-3	1.00 dBi
		RF1	BT, BT LE	1.01 dBi
			U-NII-1	2.43 dBi
			U-NII-3	2.59 dBi
	Lo type (9.8 inch Display)	RF0	2.4 GHz WLAN	4.04 dBi
			U-NII-1	1.19 dBi
			U-NII-3	2.47 dBi
		RF1	BT, BT LE	2.08 dBi
			U-NII-1	1.00 dBi
			U-NII-3	1.43 dBi
Antenna Connector type	U.FL connector			
Operating Temperature	-30 deg. C to + 65 deg. C			

SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification : FCC Part 15 Subpart E
FCC Part 15 final revised on May 26, 2020 and effective July 27, 2020

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

* The revision does not affect the test result conducted before its effective date.
* Also the EUT complies with FCC Part 15 Subpart B.

3.2 Procedures and results

Item	Test Procedure	Specification	Worst margin	Results	Remarks
Conducted Emission	**FCC:** ANSI C63.10-2013	**FCC:** 15.407 (b) (6) / 15.207	-	N/A *1)	-
	ISED: RSS-Gen 8.8	**ISED:** RSS-Gen 8.8			
26 dB Emission Bandwidth	**FCC:** KDB Publication Number 789033	**FCC:** 15.407 (a) (1) (2) (3)	See data	N/A	Conducted
	ISED: -	**ISED:** -			
Maximum Conducted Output Power	**FCC:** KDB Publication Number 789033	**FCC:** 15.407 (a) (1) (2) (3)		Complied a)	Conducted
	ISED: -	**ISED:** RSS-247 6.2.1.1, 6.2.2.1, 6.2.3.1, 6.2.4.1			
Maximum Power Spectral Density	**FCC:** KDB Publication Number 789033	**FCC :** 15.407 (a) (1) (2) (3)		Complied b)	Conducted
	ISED: -	**ISED:** RSS-247 6.2.1.1, 6.2.2.1, 6.2.3.1, 6.2.4.1			
Spurious Emission Restricted Band Edge	**FCC:** ANSI C63.10-2013 KDB Publication Number 789033	**FCC:** 15.407 (b), 15.205 and 15.209	Hi type (14 inch Display) 4.1 dB 5150.000 MHz, AV, Vert. Mode: Tx 11ac-80 MIMO 5210 MHz with 11g 2437 MHz	Hi type (14 inch Display) Complied# c) ,d)	Conducted (< 30 MHz) / Radiated (> 30 MHz) *2)
	ISED: -	**ISED:** RSS-247 6.2.1.2, 6.2.2.2, 6.2.3.2, 6.2.4.2	Lo type (9.8 inch Display) 4.1 dB 5150.000 MHz, AV, Vert. Mode: Tx 11ac-40 MIMO 5190 MHz with 11g 2437 MHz	Lo type (9.8 inch Display) Complied# c) ,d)	
			Mode: Tx 11ac-80 MIMO 5210 MHz with BT Hopping On DH5		
6 dB Emission Bandwidth	**FCC:** ANSI C63.10-2013	**FCC:** 15.407 (e)	See data	Complied e)	Conducted
	ISED: -	**ISED:** RSS-247 6.2.4.1			

Note: UL Japan, Inc.'s EMI Work Procedures No. 13-EM-W0420 and 13-EM-W0422.
*1) The test is not applicable since the EUT does not have AC Mains.
*2) 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.

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

FCC Part 15.31 (e)
The EUT provides stable voltage constantly to the RF Part 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	- f)	Conducted
f) Refer to APPENDIX 1 (data of 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.
Shonan EMC Lab.

Item	Frequency range	Uncertainty (+/-)			
		No. 1 SAC / SR	No. 2 SAC / SR	No. 3 SAC / SR	No. 4,5,6,8 SR
Conducted emission (AC Mains) LISN	150 kHz-30 MHz	2.6 dB	2.6 dB	2.5 dB	2.6 dB
Radiated emission (Measurement distance: 3 m)	9 kHz-30 MHz	3.0 dB	3.0 dB	3.0 dB	-
	30 MHz-200 MHz	4.6 dB	4.6 dB	4.6 dB	-
	200 MHz-1 GHz	6.0 dB	6.0 dB	6.0 dB	-
	1 GHz-6 GHz	4.9 dB	4.9 dB	4.9 dB	-
	6 GHz-18 GHz	5.5 dB	5.5 dB	5.5 dB	-
	18 GHz-40 GHz	5.4 dB	5.4 dB	5.4 dB	-
Radiated emission (Measurement distance: 1 m)	1 GHz-18 GHz	5.8 dB	5.8 dB	5.8 dB	-
	18 GHz-40 GHz	5.7 dB	5.7 dB	5.7 dB	-

SAC=Semi-Anechoic Chamber
SR= Shielded Room is applied besides radiated emission

Antenna terminal test	Uncertainty (+/-)
Power Measurement above 1 GHz (Average Detector)_SPM-06	0.98 dB
Power Measurement above 1 GHz (Peak Detector)_SPM-06	1.75 dB
Power Measurement above 1 GHz (Average Detector)_SPM-07	0.89 dB
Power Measurement above 1 GHz (Peak Detector)_SPM-07	1.12 dB
Power Measurement above 1 GHz (Average Detector)_SPM-13	1.06 dB
Power Measurement above 1 GHz (Peak Detector)_SPM-13	1.24 dB
Spurious emission (Conducted) below 1GHz	0.9 dB
Spurious emission (Conducted) 1 GHz-3 GHz	0.9 dB
Spurious emission (Conducted) 3 GHz-18 GHz	2.9 dB
Spurious emission (Conducted) 18 GHz-26.5 GHz	2.6 dB
Spurious emission (Conducted) 26.5 GHz-40 GHz	2.0 dB
Bandwidth Measurement	0.07 %
Duty cycle and Time Measurement	0.262 %
Temperature	0.95 deg.C.
Voltage	0.83 %

3.5 Test Location

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Telephone: +81 463 50 6400, Facsimile: +81 463 50 6401
A2LA Certificate Number: 1266.03 (FCC Test Firm Registration Number: 626366, ISED Lab Company Number: 2973D)

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	Remarks*
IEEE 802.11a SISO (11a SISO)	54 Mbps (RF0, RF1), PN9
IEEE 802.11a CDD (11a CDD)	54 Mbps (RF0 + RF1), PN9
IEEE 802.11n SISO 20 MHz BW (11n-20 SISO)	MCS 7 (RF0, RF1), PN9
IEEE 802.11n CDD 20 MHz BW (11n-20 CDD)	MCS 7 (RF0 + RF1), PN9
IEEE 802.11n MIMO 20 MHz BW (11n-20 MIMO)	MCS 15 (RF0 + RF1), PN9
IEEE 802.11ac SISO 20 MHz BW (11ac-20 SISO)	MCS 8 (RF0, RF1), PN9
IEEE 802.11ac CDD 20 MHz BW (11ac-20 CDD)	MCS 8 (RF0 + RF1), PN9
IEEE 802.11ac MIMO 20 MHz BW (11ac-20 MIMO)	MCS 8 (RF0 + RF1), PN9
IEEE 802.11n SISO 40 MHz BW (11n-40 SISO)	MCS 5 (RF0, RF1), PN9
IEEE 802.11n CDD 40 MHz BW (11n-40 CDD)	MCS 5 (RF0 + RF1), PN9
IEEE 802.11n MIMO 40 MHz BW (11n-40 MIMO)	MCS 13 (RF0 + RF1), PN9
IEEE 802.11ac SISO 40 MHz BW (11ac-40 SISO)	MCS 7 (RF0, RF1), PN9
IEEE 802.11ac CDD 40 MHz BW (11ac-40 CDD)	MCS 7 (RF0 + RF1), PN9
IEEE 802.11ac MIMO 40 MHz BW (11ac-40 MIMO)	MCS 7 (RF0 + RF1), PN9
IEEE 802.11ac SISO 80 MHz BW (11ac-80 SISO)	MCS 9 (RF0, RF1), PN9
IEEE 802.11ac CDD 80 MHz BW (11ac-80 CDD)	MCS 9 (RF0 + RF1), PN9
IEEE 802.11ac MIMO 80 MHz BW (11ac-80 MIMO)	MCS 9 (RF0 + RF1), PN9
*The worst antenna (RF1) 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: 5 dBm Software: Labtool Version: 2.0.0.71 (Date: 2020.05.29, 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.	

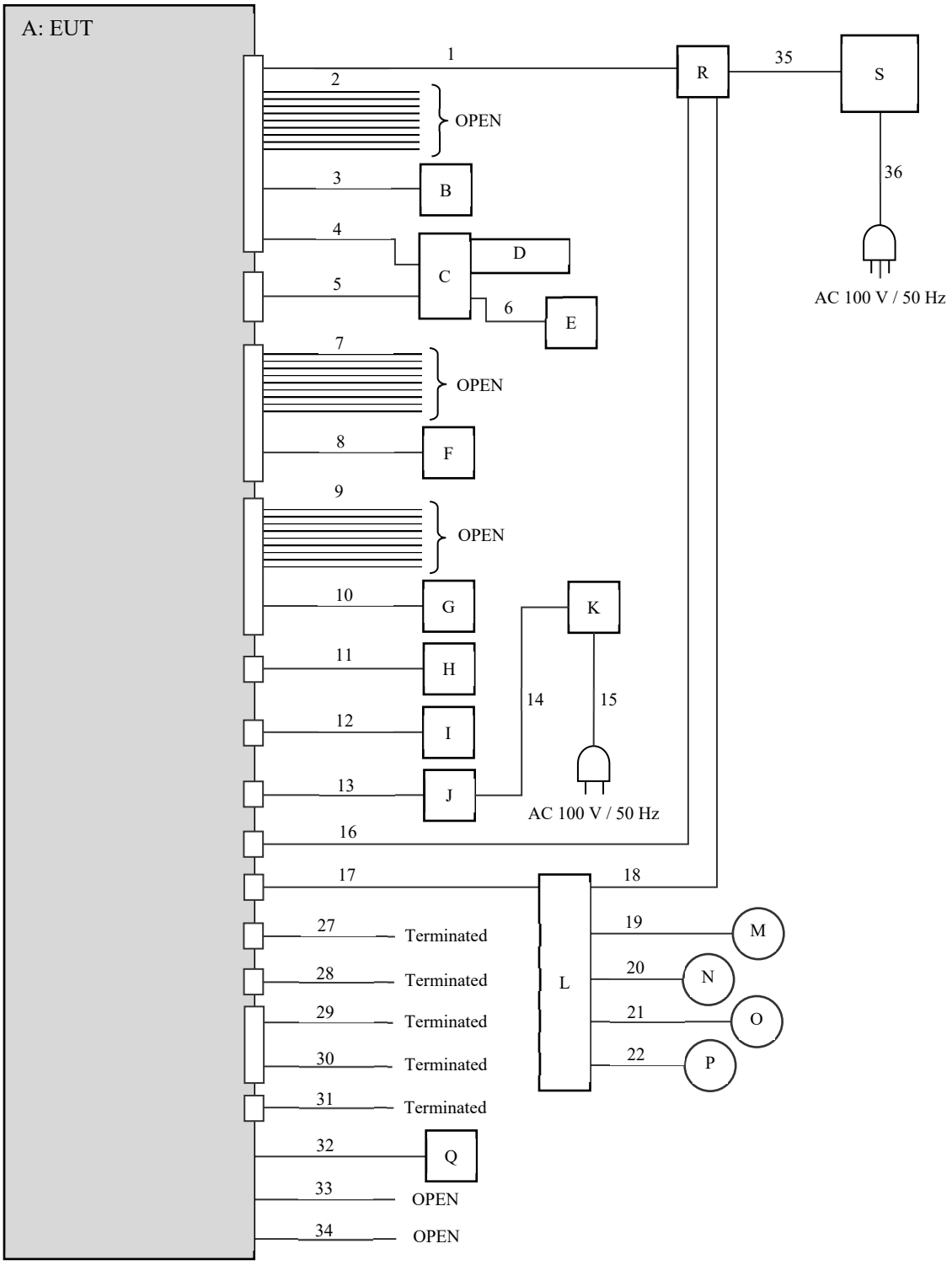
*The details of Operation mode(s)

Test Item	Operating Mode	Tested Antenna	Tested Frequency	
			U-NII-1 Band	U-NII-3 Band
99 % Occupied Bandwidth	11a SISO/CDD 11n-20 SISO/CDD/MIMO 11ac-20 SISO/CDD/MIMO	RF1	5180 MHz 5220 MHz 5240 MHz	5745 MHz 5785 MHz 5825 MHz
	11n-40 SISO/CDD/MIMO 11ac-40 SISO/CDD/MIMO	RF1	5190 MHz 5230 MHz	5755 MHz 5795 MHz
	11ac-80 SISO/CDD/MIMO	RF1	5210 MHz	5775 MHz
Maximum Conducted Output Power, Maximum Power Spectral Density	11a SISO 11n-20 SISO 11ac-20 SISO	RF0, RF1	5180 MHz 5220 MHz 5240 MHz	5745 MHz 5785 MHz 5825 MHz
	11a CDD 11n-20 CDD 11ac-20 CDD	RF0 + RF1	5180 MHz 5220 MHz 5240 MHz	5745 MHz 5785 MHz 5825 MHz
	11n-20 MIMO 11ac-20 MIMO	RF0 + RF1	5180 MHz 5220 MHz 5240 MHz	5745 MHz 5785 MHz 5825 MHz
	11n-40 SISO 11ac-40 SISO	RF0, RF1	5190 MHz 5230 MHz	5755 MHz 5795 MHz
	11n-40 CDD 11ac-40 CDD	RF0 + RF1	5190 MHz 5230 MHz	5755 MHz 5795 MHz
	11n-40 MIMO 11ac-40 MIMO	RF0 + RF1	5190 MHz 5230 MHz	5755 MHz 5795 MHz
	11ac-80 SISO	RF0, RF1	5210 MHz	5775 MHz
	11ac-80 CDD	RF0 + RF1	5210 MHz	5775 MHz
	11ac-80 MIMO	RF0 + RF1	5210 MHz	5775 MHz
6 dB Bandwidth	11a SISO/CDD 11n-20 SISO/CDD/MIMO 11ac-20 SISO/CDD/MIMO	RF1	-	5745 MHz 5785 MHz 5825 MHz
	11n-40 SISO/CDD/MIMO 11ac-40 SISO/CDD/MIMO	RF1	-	5755 MHz 5795 MHz
	11ac-80 SISO/CDD/MIMO	RF1	-	5775 MHz
Radiated Spurious Emission (Below 1 GHz)	11ac-20 MIMO *1)	RF0 + RF1	-	5745 MHz
Radiated Spurious Emission (Above 1 GHz)	11ac-20 MIMO, 11ac-20 MIMO with 11g 2437 MHz, 11ac-20 MIMO with DH5 Hopping,	RF0 + RF1	5180 MHz 5220 MHz 5240 MHz	5745 MHz 5785 MHz 5825 MHz
	11ac-40 MIMO, 11ac-40 MIMO with 11g 2437 MHz, 11ac-40 MIMO with DH5 Hopping,	RF0 + RF1	5190 MHz 5230 MHz	5755 MHz 5795 MHz
	11ac-80 MIMO, 11ac-80 MIMO with 11g 2437 MHz, 11ac-80 MIMO with DH5 Hopping,	RF0 + RF1	5210 MHz	5755 MHz
	11ac-40 MIMO with 11g 2437 MHz and DH5 Hopping *3)	RF0 + RF1	5190 MHz	-
	11ac-80 MIMO with 11g 2437 MHz and DH5 Hopping *4)	RF0 + RF1	5210 MHz	-
Conducted Spurious Emission	11ac-20 MIMO *2)	RF1	-	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.
*3) The worst mode of two simultaneous transmission mode was measured as a representative for Lo type(9.8 inch Display), because the spurious characteristics of three simultaneous transmission was not deteriorated compared to two simultaneous transmission.
*4) The worst mode of two simultaneous transmission mode was measured as a representative for Hi type(14 inch Display) and, Lo type(9.8 inch Display), because the spurious characteristics of three simultaneous transmissions was not deteriorated compared to two simultaneous transmission.

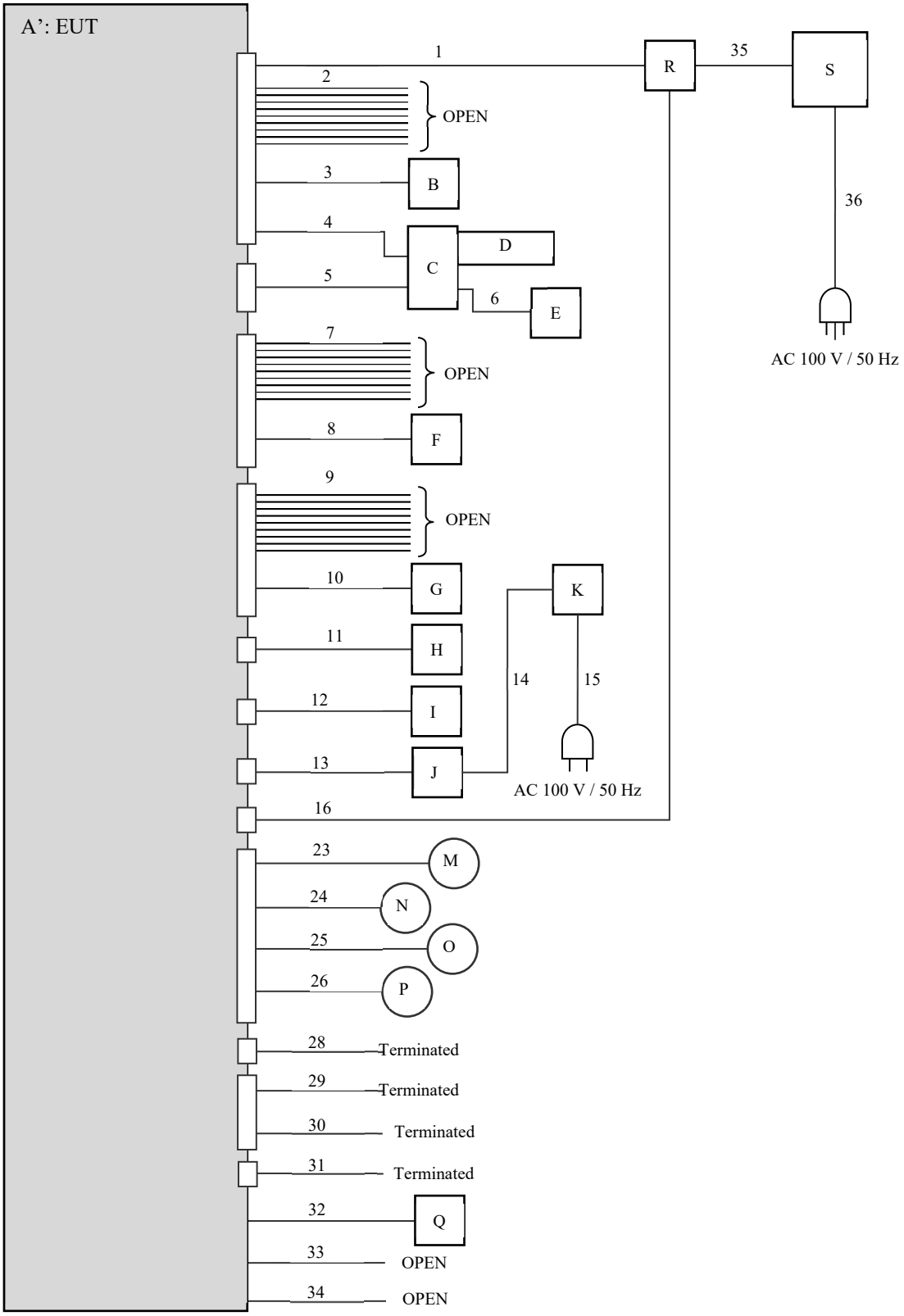
4.2 Configuration and peripherals

< Radiated Emission test for Hi type(14 inch Display) >



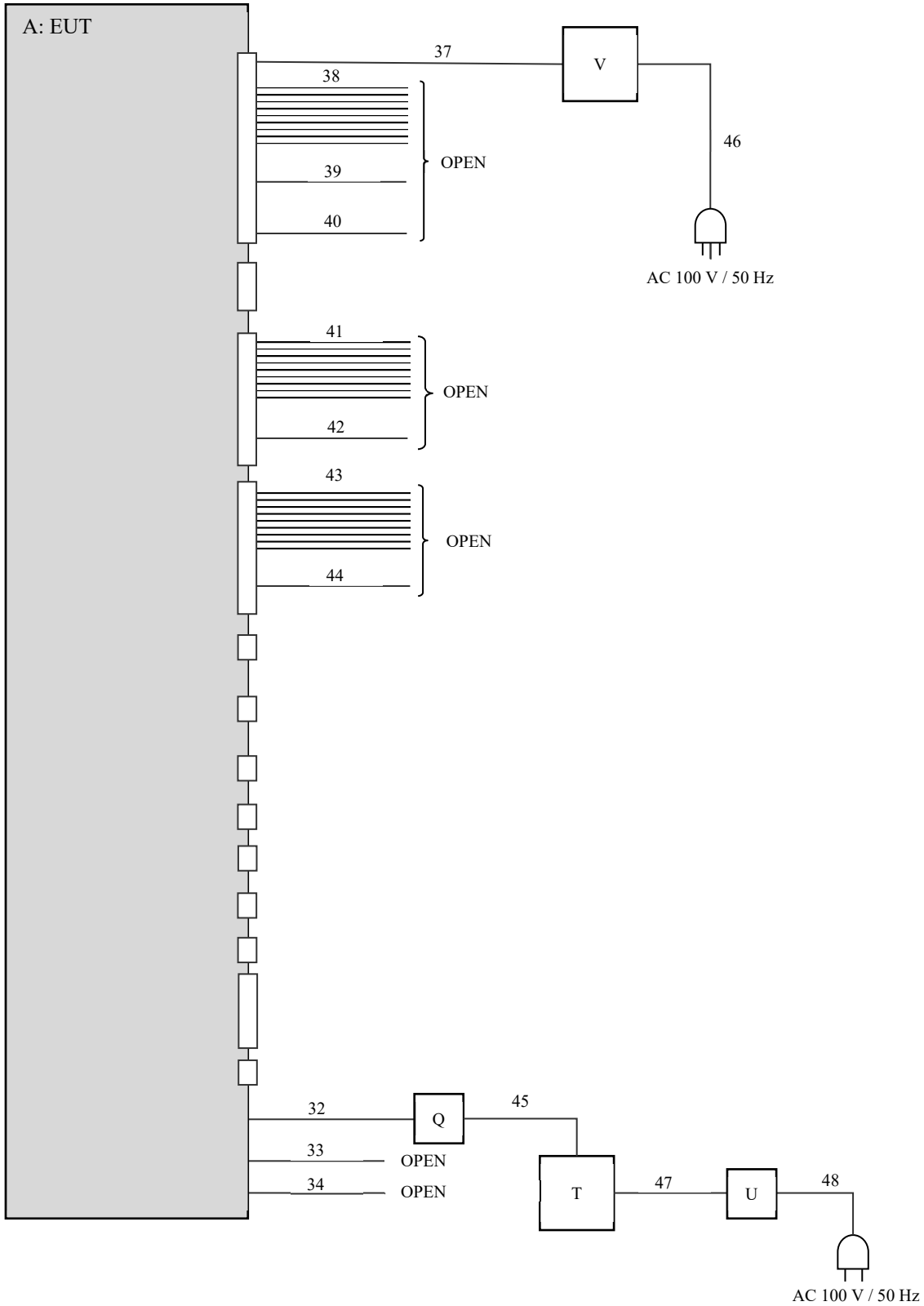
* Cabling and setup(s) were taken into consideration and test data was taken under worse case conditions.

< Radiated Emission test for Lo type(9.8 inch Display) >



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

< Antenna Terminal Conducted test >



Description of EUT and support equipment

No.	Item	Model number	Serial number	Manufacturer	Remarks
A	Car Navigation	AT2103 Hi type (14 inch Display)	500081 *1) 500087 *2)	Panasonic Corporation	EUT
A'	Car Navigation	AT2103 Lo type (9.8 inch Display)	500065 *2)	Panasonic Corporation	EUT
B	Steering Switch	-	1142	Panasonic Corporation	-
C	IF-Box	DEP32-10078	033	Panasonic Corporation	-
D	USB Memory	USM4GU	-	Sony Corporation	-
E	Bluetooth Speaker	SRS-X11	2154715	Sony Corporation	-
F	MIC	GP-SDA3510A	0DC062519	Panasonic Corporation	-
G	MIC	GP-SDA3510A	0DC062856	Panasonic Corporation	-
H	Rear Camera	GP-KDM301RC	92	Panasonic Corporation	-
I	GPS Antenna	ANN-MS	-	U-Blox	-
J	Front Camera Jig	GVIF2OUT_A	1	Panasonic Corporation	-
K	AC Adapter	GF48-US1240	-	GO FORWARD ENTERPRISE CORP.	-
L	MOST AMP	CL-DL47X2AJ Rev.A	513267	Panasonic Corporation	-
M	Speaker	KFC-RS160	-	KENWOOD	-
N	Speaker	KFC-RS160	-	KENWOOD	-
O	Speaker	KFC-RS160	-	KENWOOD	-
P	Speaker	KFC-RS160	-	KENWOOD	-
Q	Jig board	RCarDBG_JTAG2	WR19-4014 *1) WR12-3224 *2)	WESTEK	-
R	Terminal Block	-	-	-	-
S	Power Supply (DC)	PAN35-10A	NA000955	KIKUSUI	-
T	Laptop Computer	7666-77J	LV-B8R1X 08/05	Lenovo	-
U	AC Adapter	42T4422	11S92P1154Z1DXF 1DBFDN	Lenovo	-
V	Power Supply (DC)	PAN35-10A	ML002085	KIKUSUI	-

*1) For Antenna Terminal Conducted test
*2) For Radiated Emission test

List of cables used

No.	Name	Length (m)	Shield		Remarks
			Cable	Connector	
1	DC	2.5 + 0.2	Unshielded	Unshielded	-
2	Signal	2.5	Unshielded	Unshielded	-
3	Signal	2.5 + 0.1	Unshielded	Unshielded	-
4	IF Box Power	2.5 + 0.3	Unshielded	Unshielded	-
5	Signal	2.5	Shielded	Shielded	-
6	USB type C	0.9	Shielded	Shielded	-
7	Signal	2.5	Unshielded	Unshielded	-
8	MIC	2.5 + 0.5	Unshielded	Unshielded	-
9	Signal	2.5	Unshielded	Unshielded	-
10	MIC	2.5 + 0.5	Unshielded	Unshielded	-
11	Rear Camera	3.0 + 0.15	Unshielded	Unshielded	-
12	GPS	3.0 + 0.12	Shielded	Shielded	-
13	Front Camera	10	Shielded	Shielded	-
14	DC	1.6	Unshielded	Unshielded	-
15	AC	1.9	Unshielded	Unshielded	-
16	DC	3.0	Unshielded	Unshielded	-
17	MOST Amp	2.5	Unshielded	Unshielded	-
18	DC	1.0	Unshielded	Unshielded	-
19	Speaker	1.0 + 1.9	Unshielded	Unshielded	-
20	Speaker	1.0 + 1.9	Unshielded	Unshielded	-
21	Speaker	1.0 + 1.9	Unshielded	Unshielded	-
22	Speaker	1.0 + 1.9	Unshielded	Unshielded	-
23	Speaker	3.0 + 1.9	Unshielded	Unshielded	-
24	Speaker	3.0 + 1.9	Unshielded	Unshielded	-
25	Speaker	3.0 + 1.9	Unshielded	Unshielded	-
26	Speaker	3.0 + 1.9	Unshielded	Unshielded	-
27	A2B	3.0	Unshielded	Unshielded	-
28	DCM	3.0	Shielded	Shielded	-
29	FM	2.5	Shielded	Shielded	-
30	FM	2.5	Shielded	Shielded	-
31	Sirius XM	2.5	Shielded	Shielded	-
32	Signal	0.1	Unshielded	Unshielded	*3)
33	Signal	0.2	Unshielded	Unshielded	*3)
34	UART	0.3	Unshielded	Unshielded	*3)
35	DC	2.4	Unshielded	Unshielded	-
36	AC	2.0	Unshielded	Unshielded	-
37	DC	1.0	Unshielded	Unshielded	-
38	Signal	0.2	Unshielded	Unshielded	-
39	Signal	0.2	Unshielded	Unshielded	-
40	IF Box Power	0.2	Unshielded	Unshielded	-
41	Signal	0.2	Unshielded	Unshielded	-
42	MIC	1.0	Unshielded	Unshielded	-
43	Signal	0.2	Unshielded	Unshielded	-
44	MIC	1.0	Unshielded	Unshielded	-
45	USB	1.5	Shielded	Shielded	-
46	AC	2.0	Unshielded	Unshielded	-
47	DC	1.8	Unshielded	Unshielded	-
48	AC	0.9	Unshielded	Unshielded	-

*3) This cable is for testing and is not included with products.

SECTION 5: Radiated Spurious Emission and Band Edge Compliance

Test Procedure

< Below 1GHz >
EUT was placed on a urethane platform of nominal size, 1.0 m by 2.0 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 0.7 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:

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

Test Antennas are used as below;

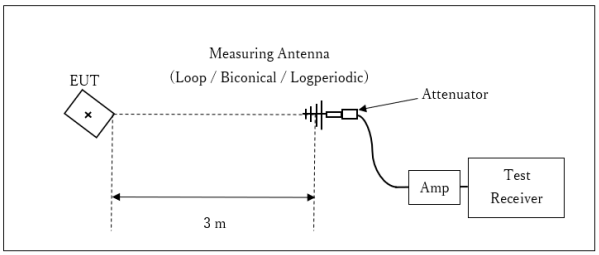
Frequency	30 MHz to 200 MHz	200 MHz to 1 GHz	Above 1 GHz
Antenna Type	Biconical	Logperiodic	Horn

Frequency	Below 1 GHz	Above 1 GHz	
Instrument used	Test Receiver	Spectrum Analyzer	
Detector	QP	Peak	Average
IF Bandwidth	BW: 120 kHz	RBW: 1 MHz VBW: 3 MHz	Method VB *1) RBW: 1 MHz VBW: 1/T MHz (T: Burst length, refer to Appendix) 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 1: Test Setup

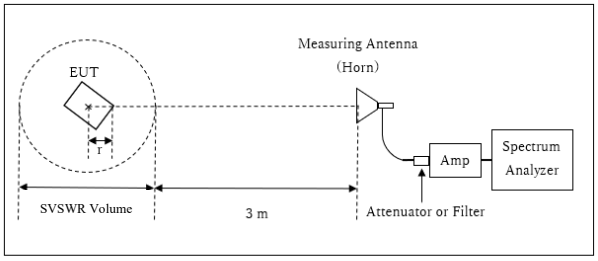
Below 1 GHz



× : Center of turn table

Test Distance: 3 m

1 GHz - 13 GHz

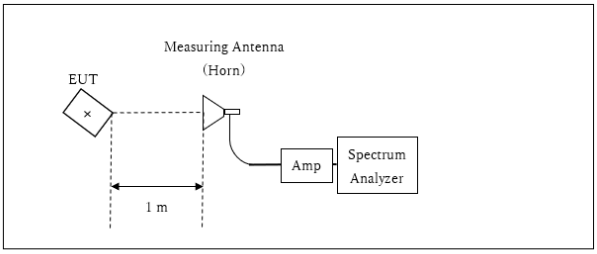


r : Radius of an outer periphery of EUT
× : Center of turn table

Distance Factor: 20 x log (3.83 m / 3.0 m) = 2.13 dB
* Test Distance: (3 + SVSWR Volume /2) - r = 3.83 m

SVSWR Volume : 2.0 m
(SVSWR Volume has been calibrated based on CISPR 16-1-4.)
r = 0.17 m

13 GHz - 40 GHz



× : Center of turn table

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

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

Worst case:

< Hi type(14 inch Display) >

Antenna polarization	Carrier (Band edge)	Spurious				
		Below 1 GHz	Above 1 GHz			
			1 GHz - 6.4 GHz	6.4 GHz - 13 GHz	13 GHz - 18 GHz	18 GHz - 40 GHz
Horizontal	30 deg.	0 deg.	30 deg.	30 deg.	0 deg.	0 deg.
Vertical	30 deg.	0 deg.	30 deg.	30 deg.	0 deg.	0 deg.

< Lo type(9.8 inch Display) >

Antenna polarization	Carrier (Band edge)	Spurious				
		Below 1 GHz	Above 1 GHz			
			1 GHz - 6.4 GHz	6.4 GHz - 13 GHz	13 GHz - 18 GHz	18 GHz - 40 GHz
Horizontal	30 deg.	0 deg.	30 deg.	30 deg.	0 deg.	0 deg.
Vertical	30 deg.	0 deg.	30 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 - 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	-	-	-	-	Average	-	Power Meter (Sensor: 160 MHz BW) (Method PM-G)
Maximum Power Spectral Density	Encompass the entire EBW	1 MHz or 100 kHz *2)	≥ 3 RBW	Auto	RMS Power Averaging (100 times)	Clear Write	Spectrum Analyzer
Conducted Spurious Emission*3) *4)	9 kHz – 150 kHz	200 Hz	620 Hz	Auto	Peak	Max Hold	Spectrum Analyzer
	150 kHz – 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-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 low enough as shown in the chart.
(9 kHz-150 kHz: RBW = 200 Hz, 150 kHz-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 Ohmes. 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

99 % Occupied Bandwidth

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab. No.5 Shielded Room		
Date	July 28, 2020	July 29, 2020	July 30, 2020
Temperature / Humidity	25 deg. C / 55 % RH	26 deg. C / 52 % RH	25 deg. C / 57 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx		

11a SISO

Antenna	Tested Frequency [MHz]	99 % Occupied Bandwidth [kHz]
RF1	5180	16725.9
	5220	16714.3
	5240	16713.5
	5745	16692.5
	5785	16675.6
	5825	16696.0

11n-20 SISO

Antenna	Tested Frequency [MHz]	99 % Occupied Bandwidth [kHz]
RF1	5180	17780.4
	5220	17834.7
	5240	17795.2
	5745	17795.9
	5785	17742.0
	5825	17753.5

11a CDD

Antenna	Tested Frequency [MHz]	99 % Occupied Bandwidth [kHz]
RF1	5180	16719.8
	5220	16731.9
	5240	16717.3
	5745	16707.3
	5785	16689.1
	5825	16709.8

11n-20 CDD

Antenna	Tested Frequency [MHz]	99 % Occupied Bandwidth [kHz]
RF1	5180	17781.4
	5220	17762.4
	5240	17751.1
	5745	17750.9
	5785	17771.9
	5825	17783.9

11n-20 MIMO

Antenna	Tested Frequency [MHz]	99 % Occupied Bandwidth [kHz]
RF1	5180	17809.7
	5220	17769.4
	5240	17783.8
	5745	17774.7
	5785	17807.7
	5825	17795.0

99 % Occupied Bandwidth

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab. No.5 Shielded Room		
Date	July 28, 2020	July 29, 2020	July 30, 2020
Temperature / Humidity	25 deg. C / 55 % RH	26 deg. C / 52 % RH	25 deg. C / 57 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx		

11ac-20 SISO

Antenna	Tested Frequency [MHz]	99 % Occupied Bandwidth [kHz]
RF1	5180	17713.6
	5220	17819.0
	5240	17775.8
	5745	17745.7
	5785	17756.9
	5825	17865.0

11n-40 SISO

Antenna	Tested Frequency [MHz]	99 % Occupied Bandwidth [kHz]
RF1	5190	36304.3
	5230	36247.1
	5755	36308.9
	5795	36212.0

11ac-20 CDD

Antenna	Tested Frequency [MHz]	99 % Occupied Bandwidth [kHz]
RF1	5180	17780.4
	5220	17822.5
	5240	17828.0
	5745	17799.8
	5785	17821.7
	5825	17814.9

11n-40 CDD

Antenna	Tested Frequency [MHz]	99 % Occupied Bandwidth [kHz]
RF1	5190	36297.2
	5230	36276.8
	5755	36311.2
	5795	36309.4

11ac-20 MIMO

Antenna	Tested Frequency [MHz]	99 % Occupied Bandwidth [kHz]
RF1	5180	17783.3
	5220	17795.5
	5240	17780.1
	5745	17793.5
	5785	17787.9
	5825	17815.2

11n-40 MIMO

Antenna	Tested Frequency [MHz]	99 % Occupied Bandwidth [kHz]
RF1	5190	36344.7
	5230	36381.1
	5755	36364.4
	5795	36376.7

99 % Occupied Bandwidth

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab. No.5 Shielded Room		
Date	July 28, 2020	July 29, 2020	July 30, 2020
Temperature / Humidity	25 deg. C / 55 % RH	26 deg. C / 52 % RH	25 deg. C / 57 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx		

11ac-40 SISO

Antenna	Tested Frequency [MHz]	99 % Occupied Bandwidth [kHz]
RF1	5190	36304.9
	5230	36234.7
	5755	36356.7
	5795	36284.9

11ac-80 SISO

Antenna	Tested Frequency [MHz]	99 % Occupied Bandwidth [kHz]
RF1	5210	76680.2
	5775	76691.3

11ac-40 CDD

Antenna	Tested Frequency [MHz]	99 % Occupied Bandwidth [kHz]
RF1	5190	36257.1
	5230	36296.1
	5755	36271.0
	5795	36258.8

11ac-80 CDD

Antenna	Tested Frequency [MHz]	99 % Occupied Bandwidth [kHz]
RF1	5210	76353.9
	5775	76368.6

11ac-40 MIMO

Antenna	Tested Frequency [MHz]	99 % Occupied Bandwidth [kHz]
RF1	5190	36484.7
	5230	36523.8
	5755	36472.1
	5795	36519.6

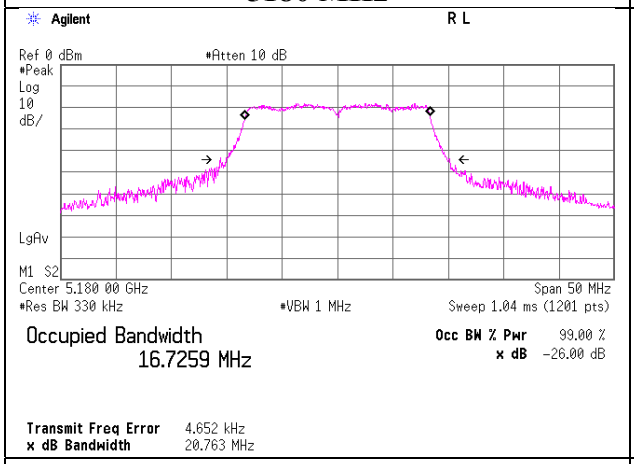
11ac-80 MIMO

Antenna	Tested Frequency [MHz]	99 % Occupied Bandwidth [kHz]
RF1	5210	76341.0
	5775	76299.9

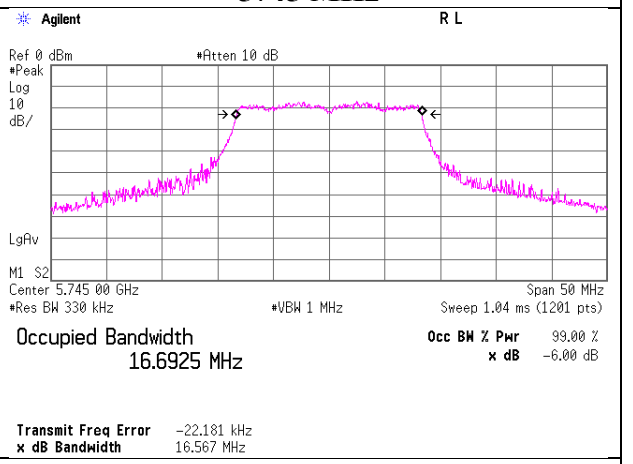
99 % Occupied Bandwidth

11a SISO, RF1

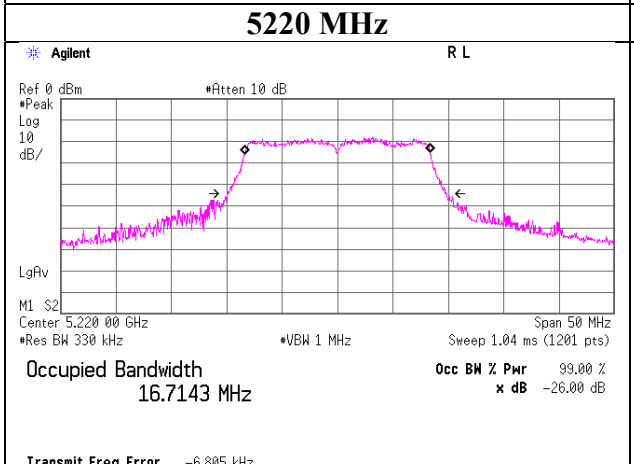
5180 MHz



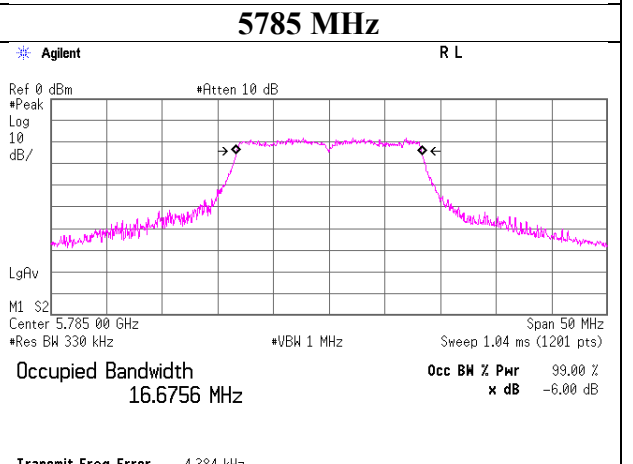
5745 MHz



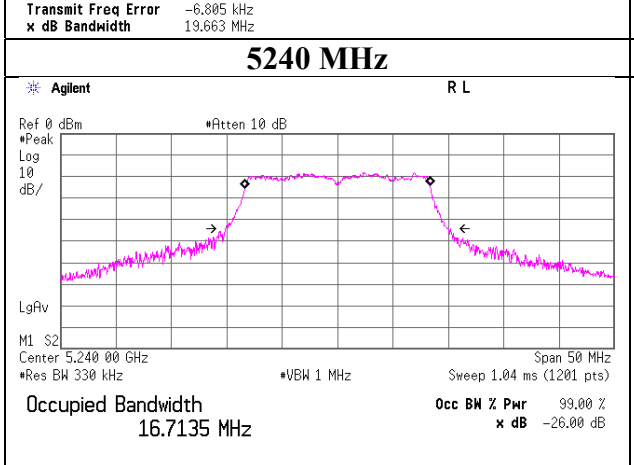
5220 MHz



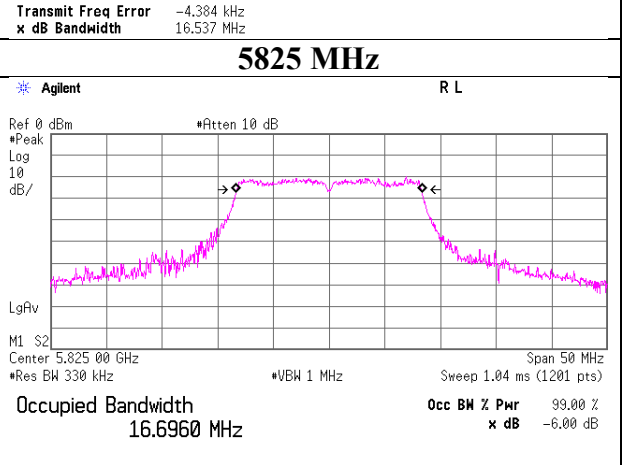
5785 MHz



5240 MHz



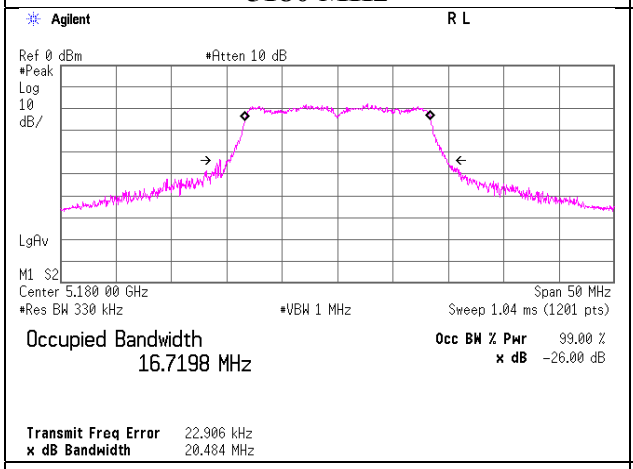
5825 MHz



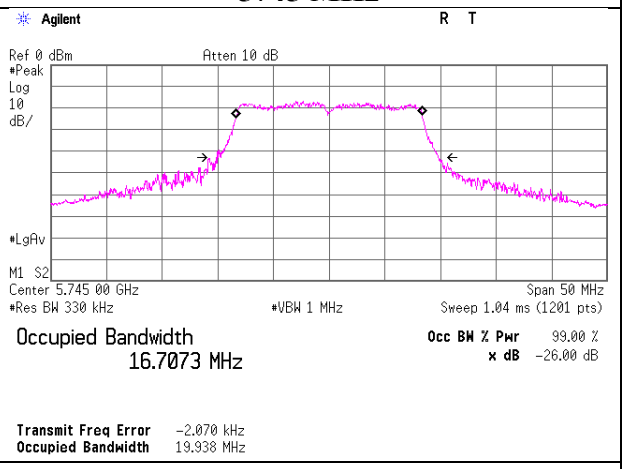
99 % Occupied Bandwidth

11a CDD, RF1

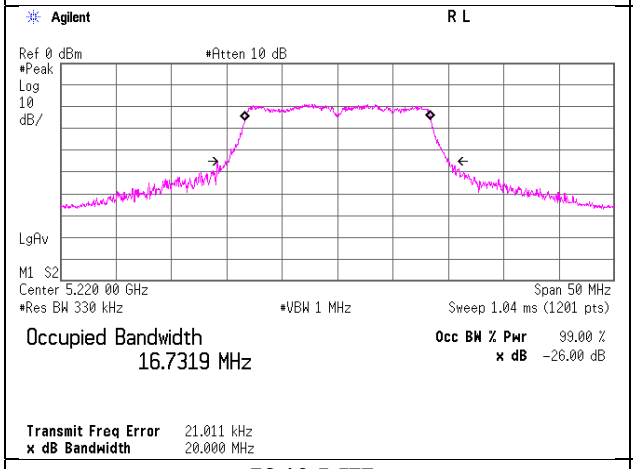
5180 MHz



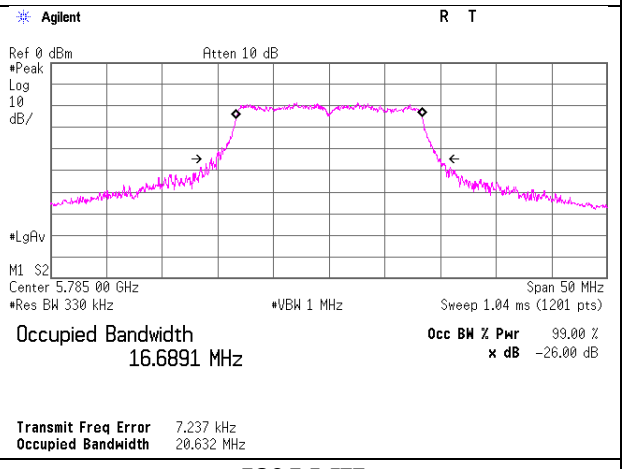
5745 MHz



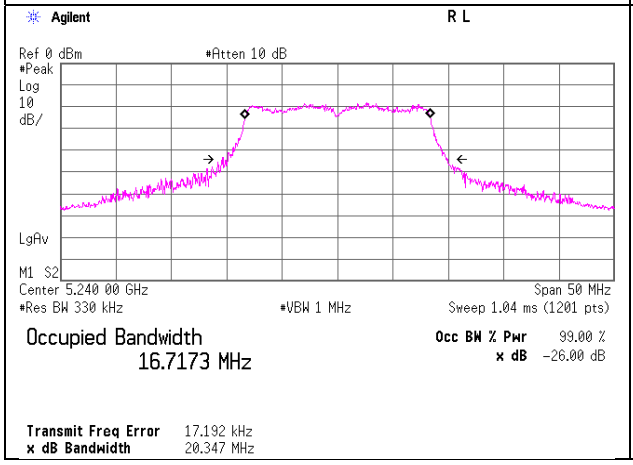
5220 MHz



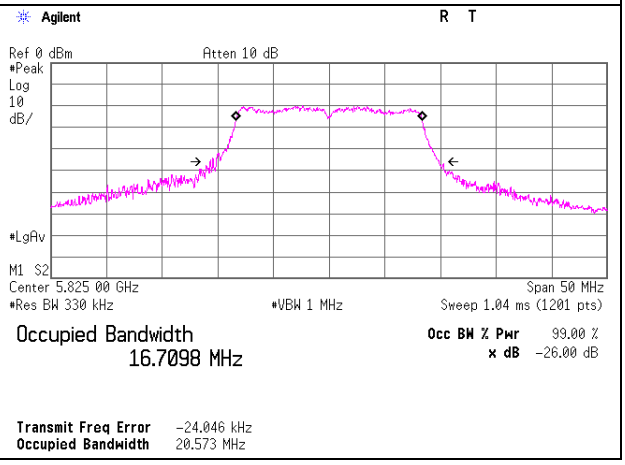
5785 MHz



5240 MHz



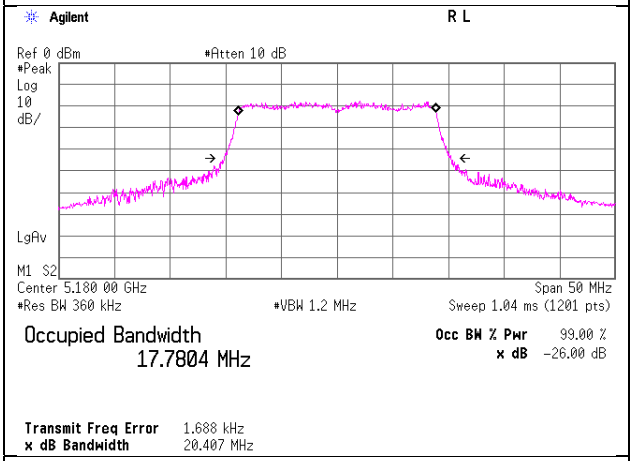
5825 MHz



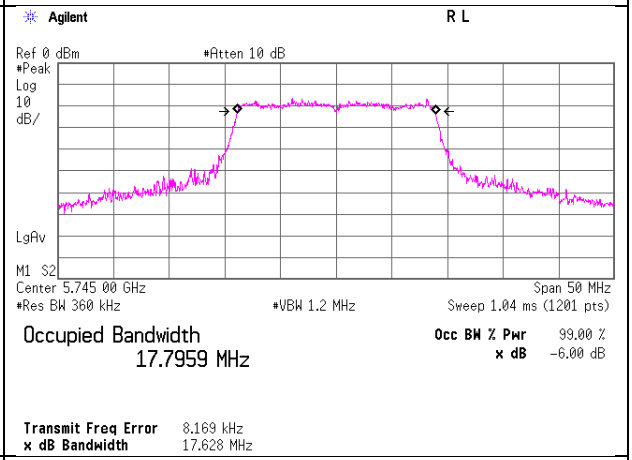
99 % Occupied Bandwidth

11n-20 SISO, RF1

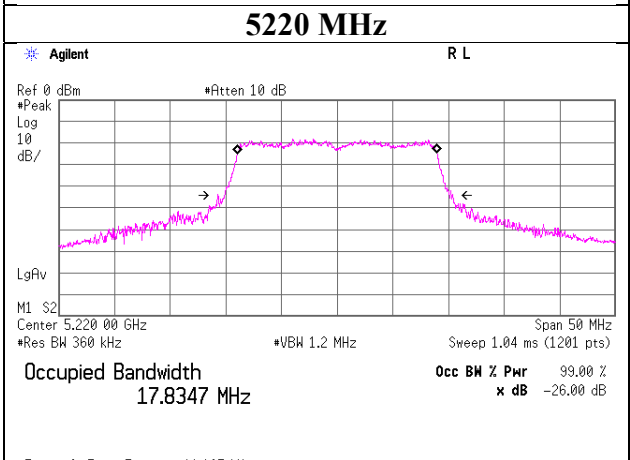
5180 MHz



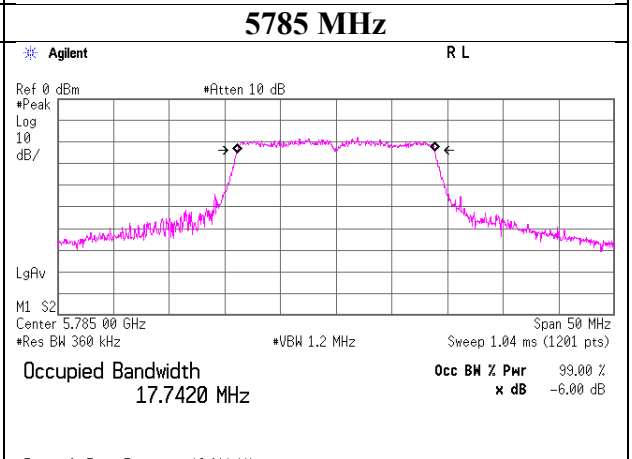
5745 MHz



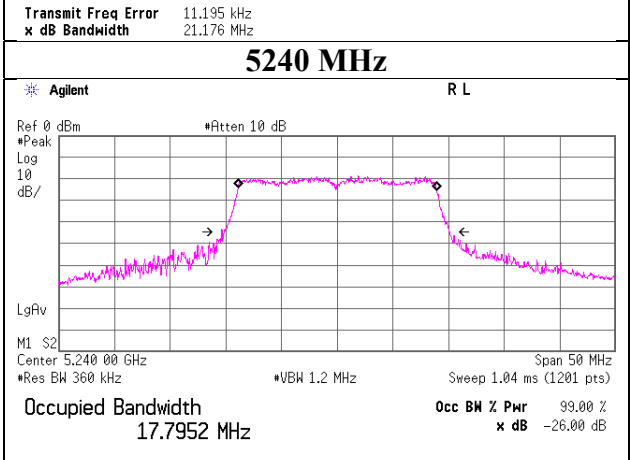
5220 MHz



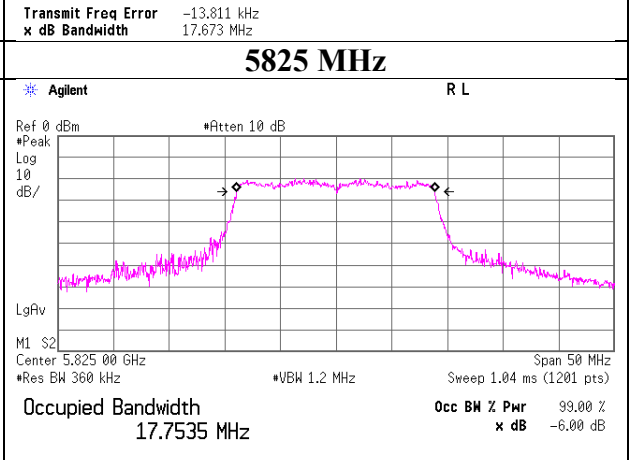
5785 MHz



5240 MHz



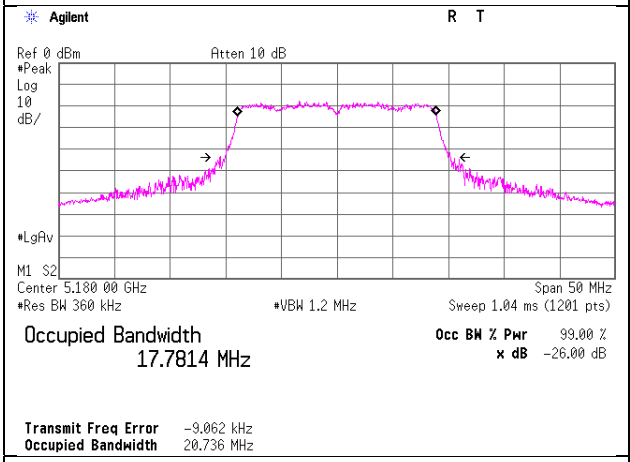
5825 MHz



99 % Occupied Bandwidth

11n-20 CDD, RF1

5180 MHz



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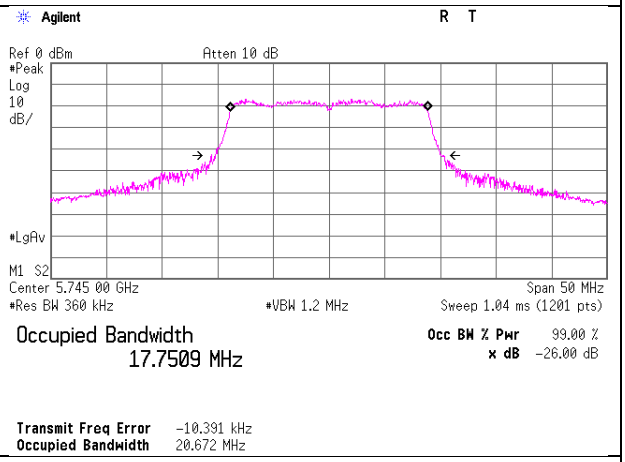

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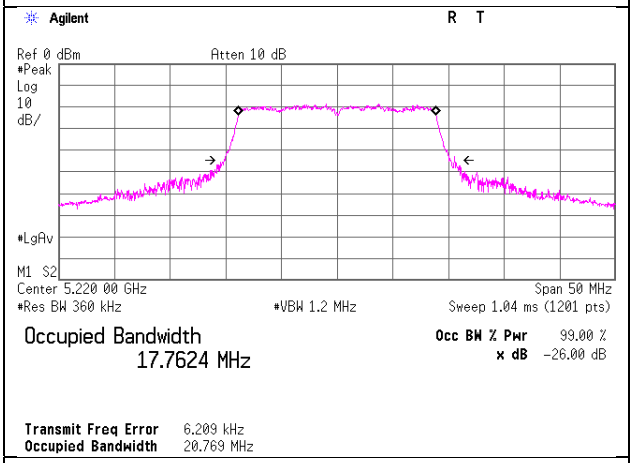

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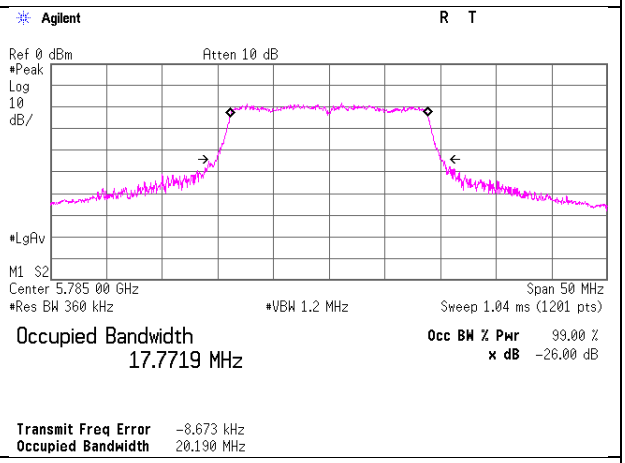

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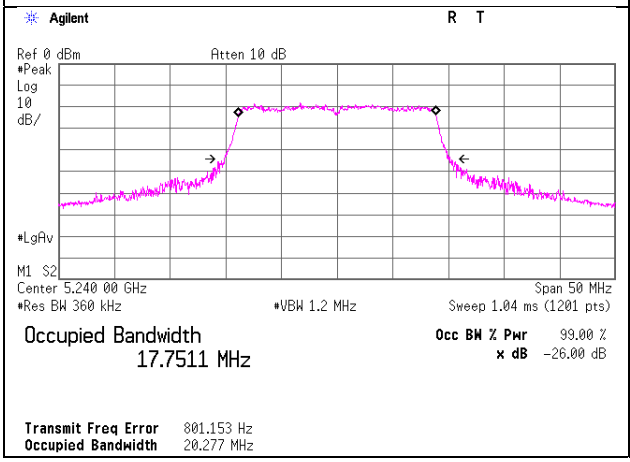

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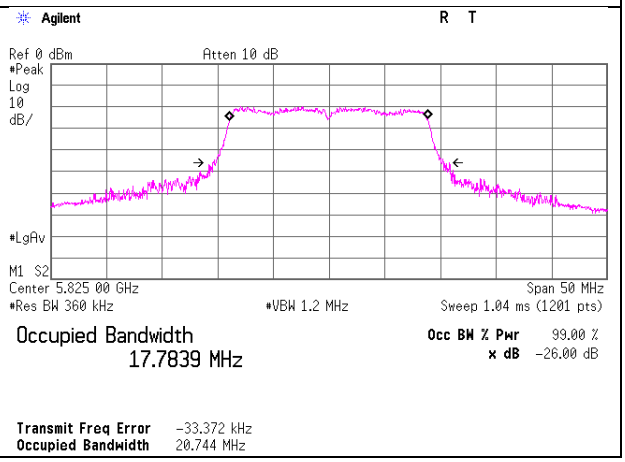
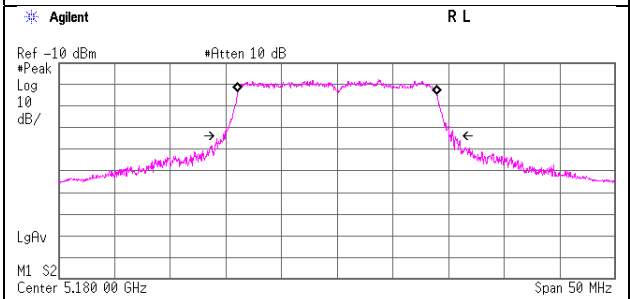


99 % Occupied Bandwidth

11n-20 MIMO, RF1

5180 MHz



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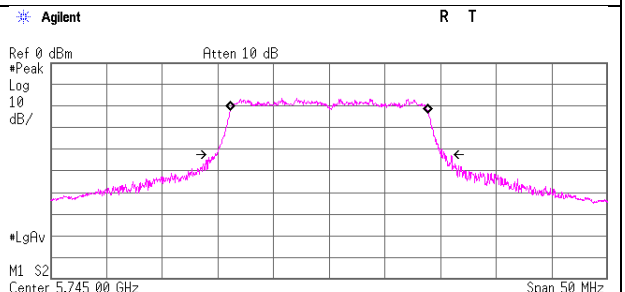

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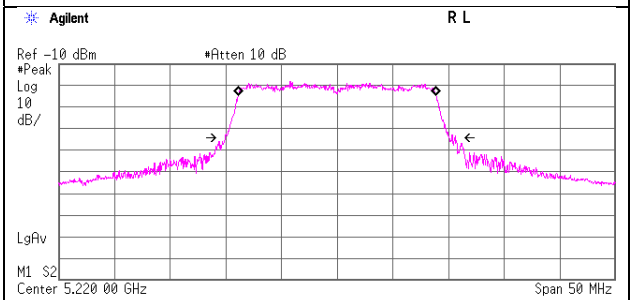

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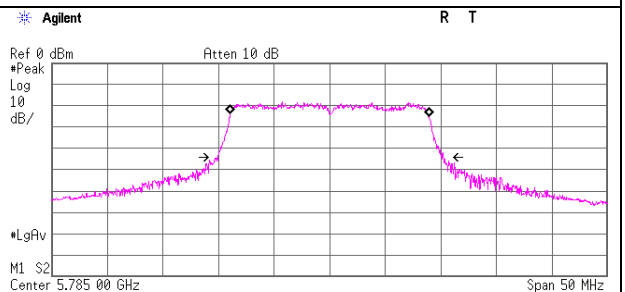

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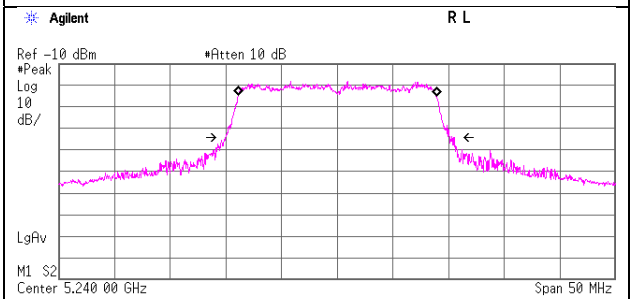

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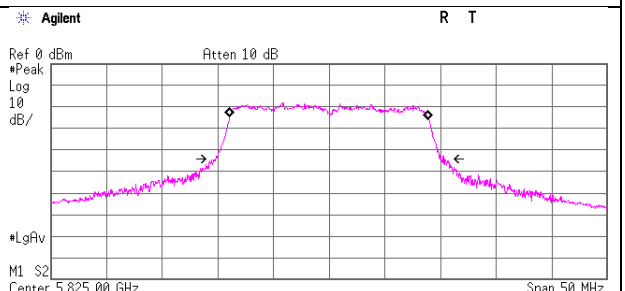

99 % Occupied Bandwidth

11ac-20 SISO, RF1

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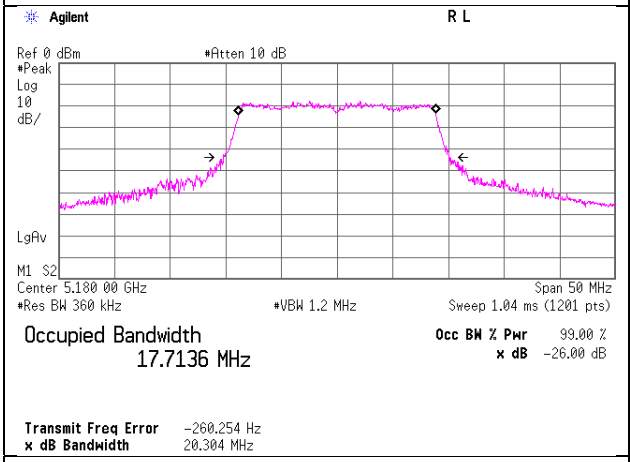

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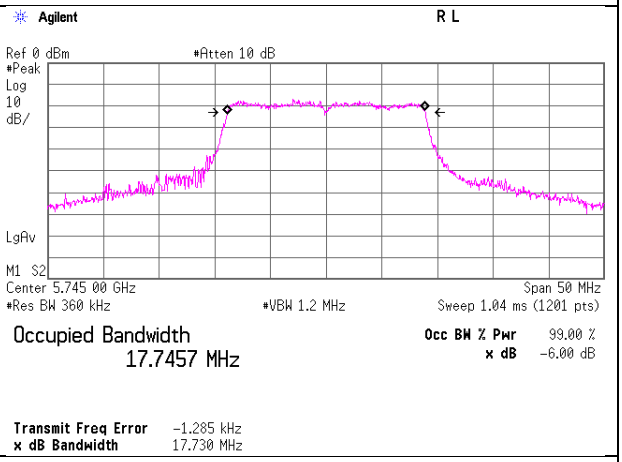

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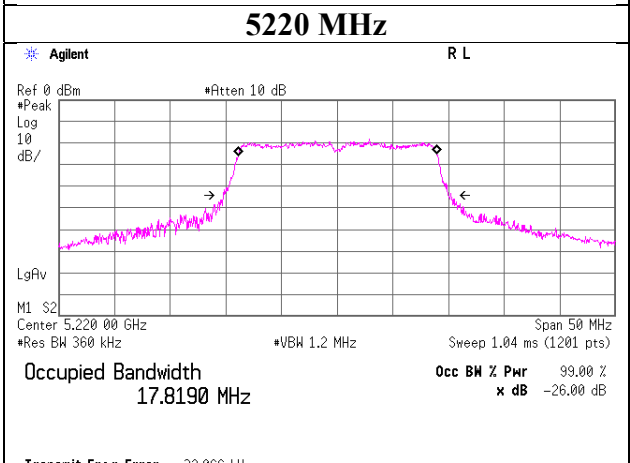

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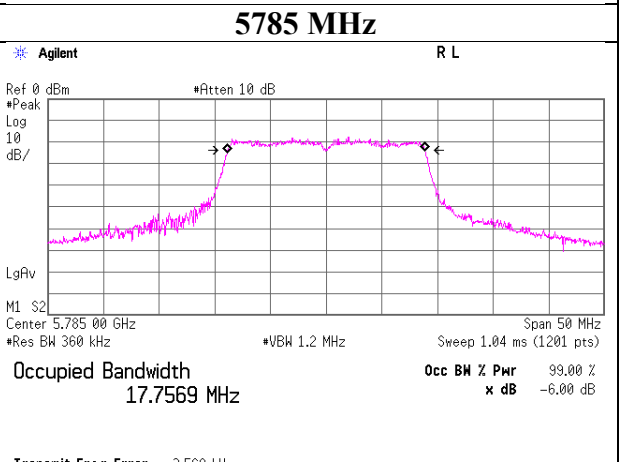

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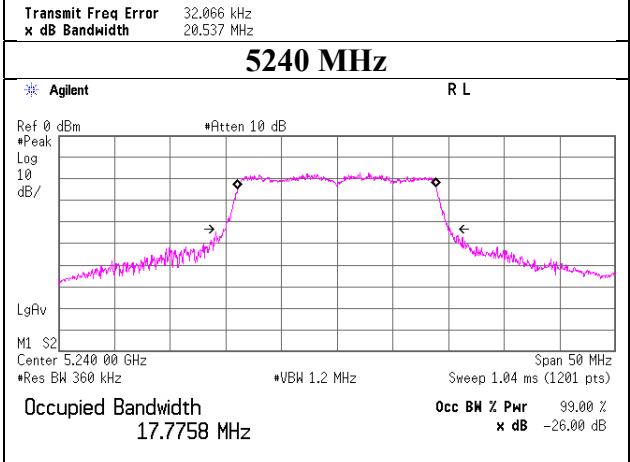

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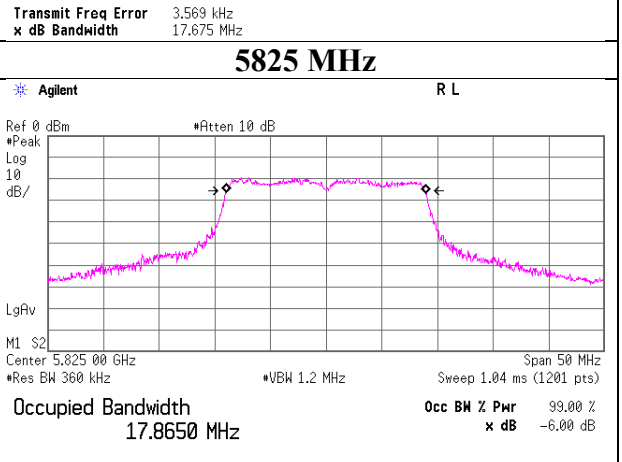

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11ac-20 CDD, RF1

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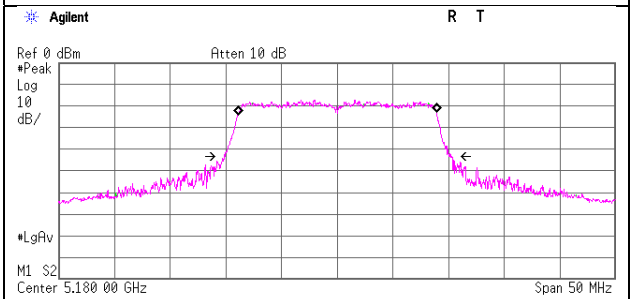

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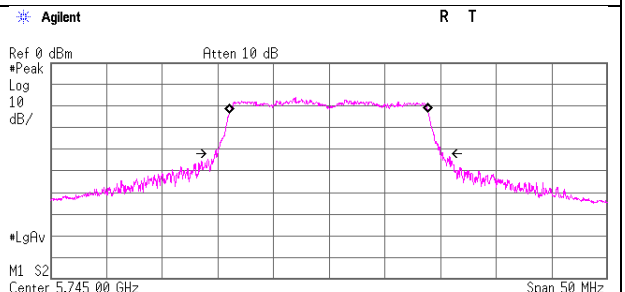

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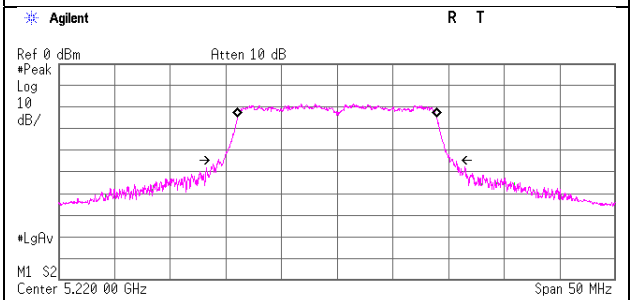

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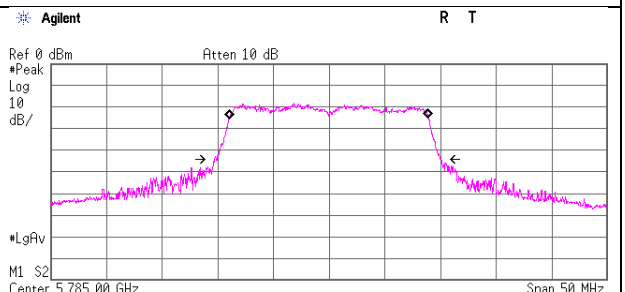

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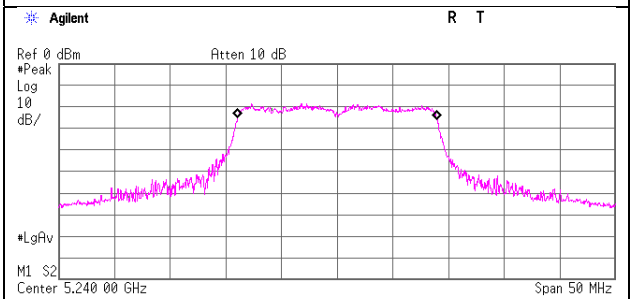

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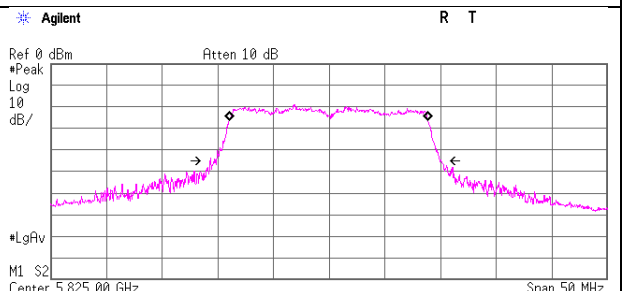

99 % Occupied Bandwidth

11ac-20 MIMO, RF1

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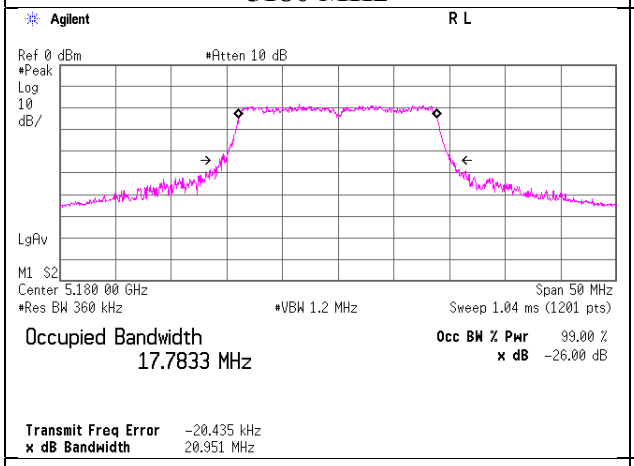

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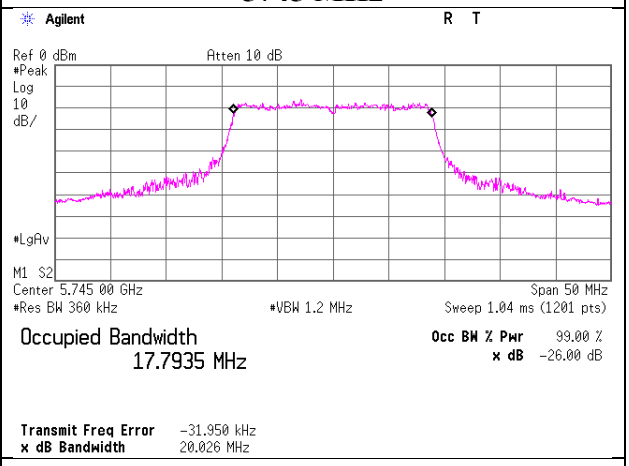

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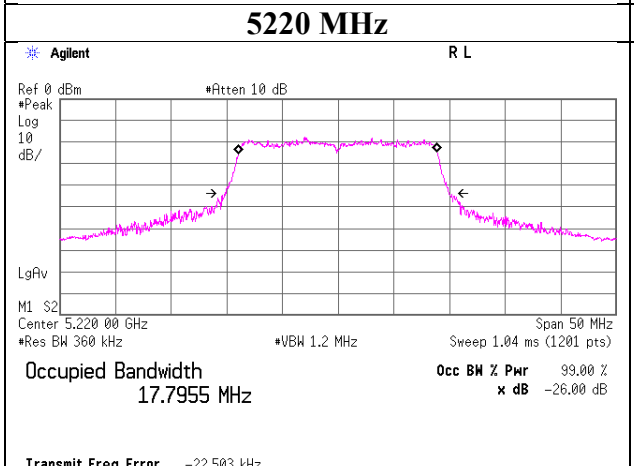

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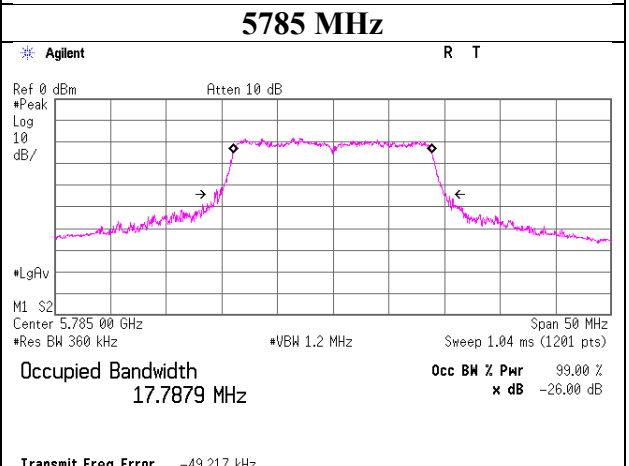

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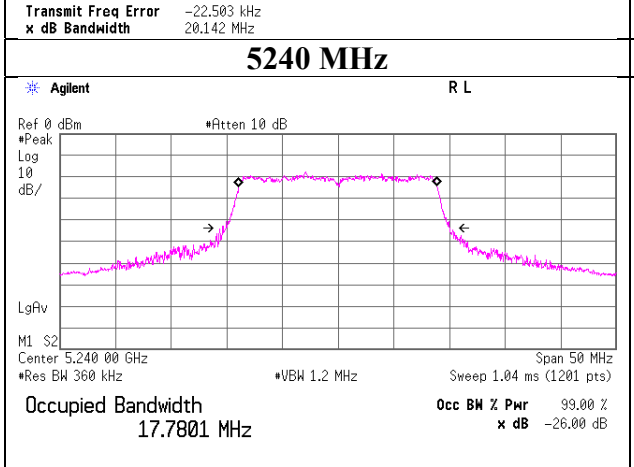

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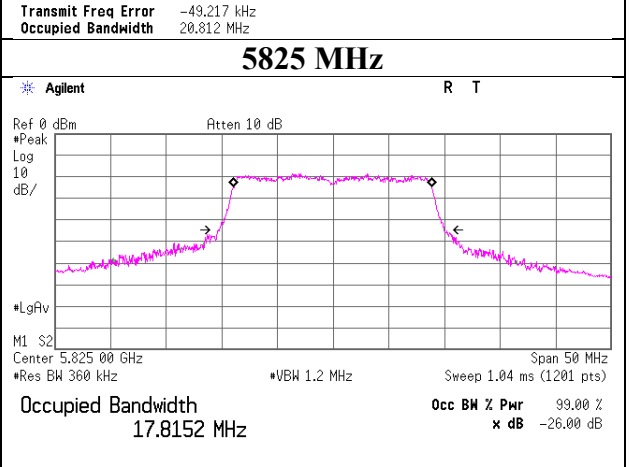

99 % Occupied Bandwidth

11n-40 SISO, RF1

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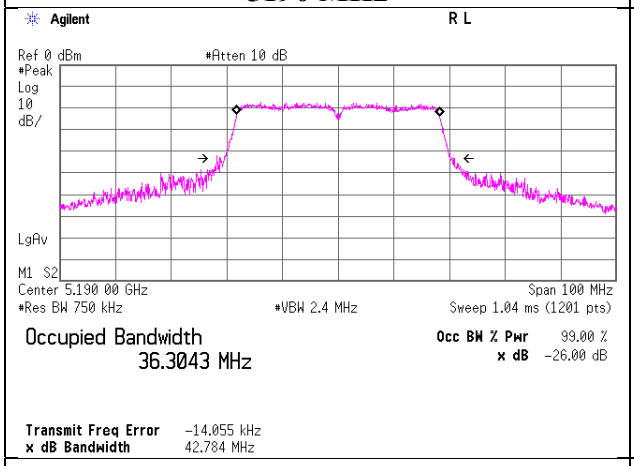

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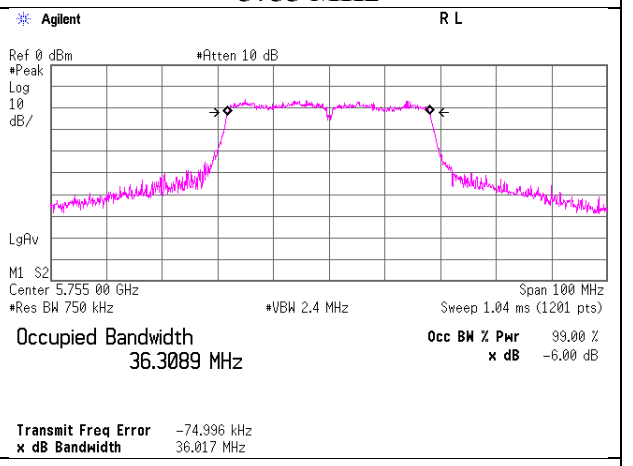

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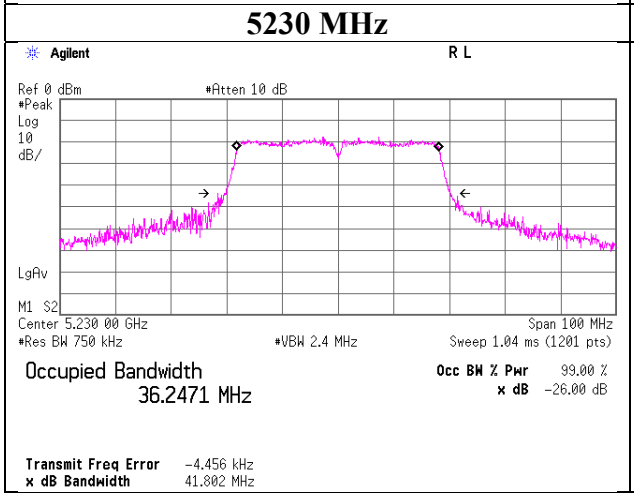

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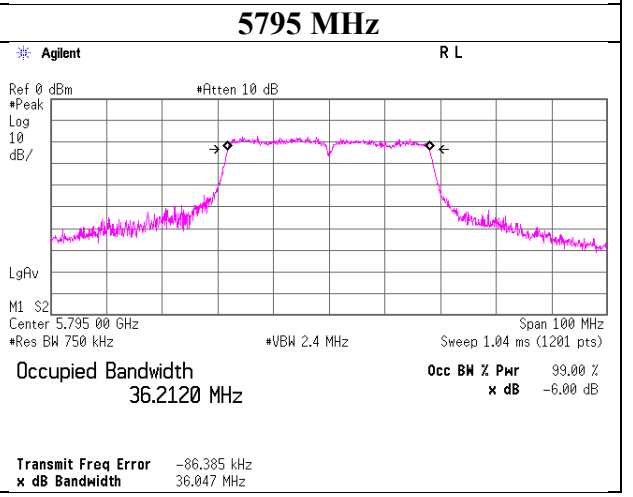
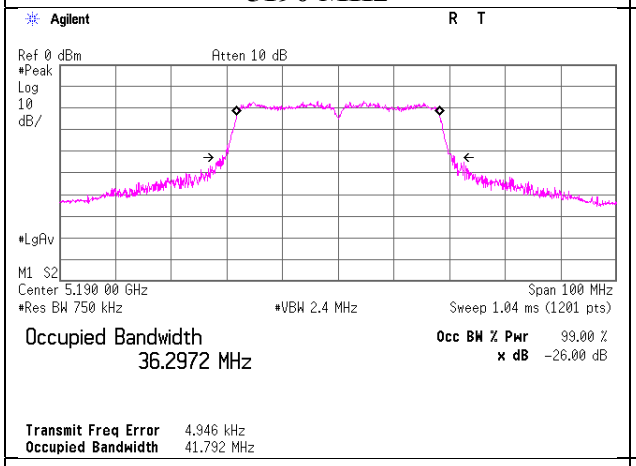


99 % Occupied Bandwidth

11n-40 CDD, RF1

5190 MHz



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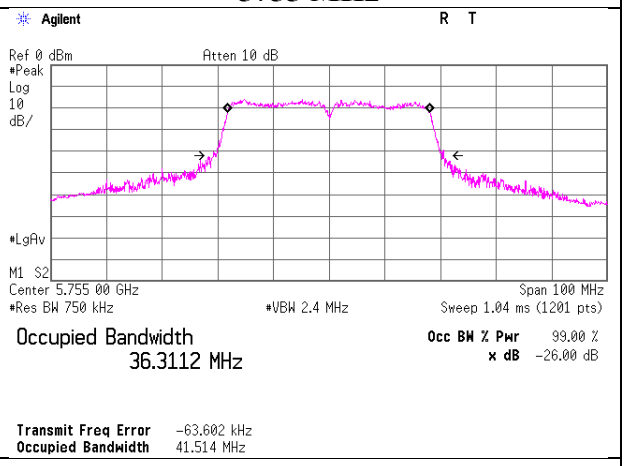

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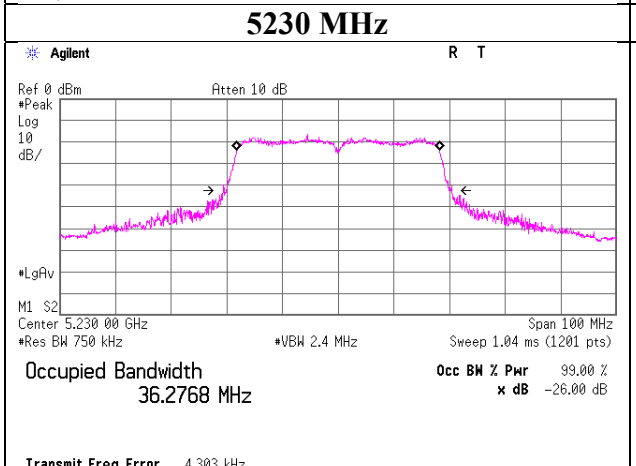

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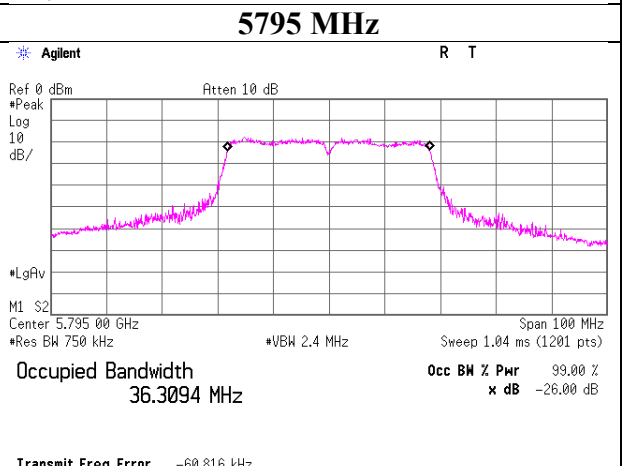

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11n-40 MIMO, RF1

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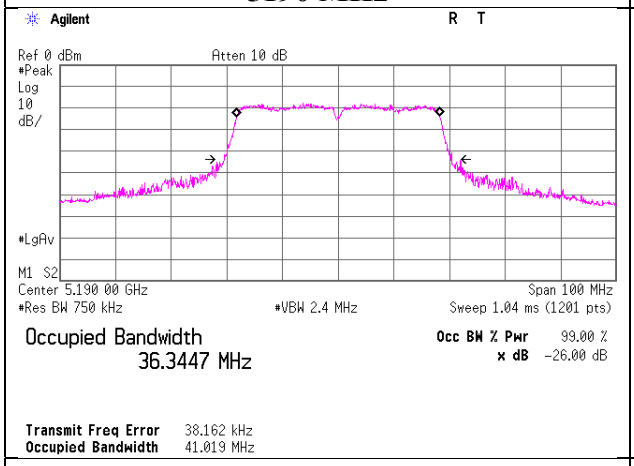

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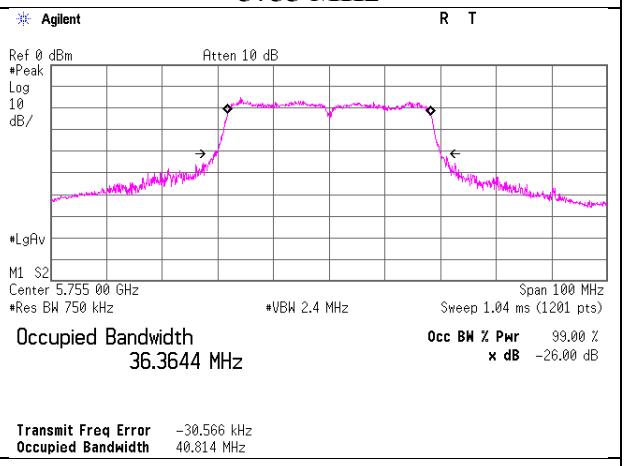

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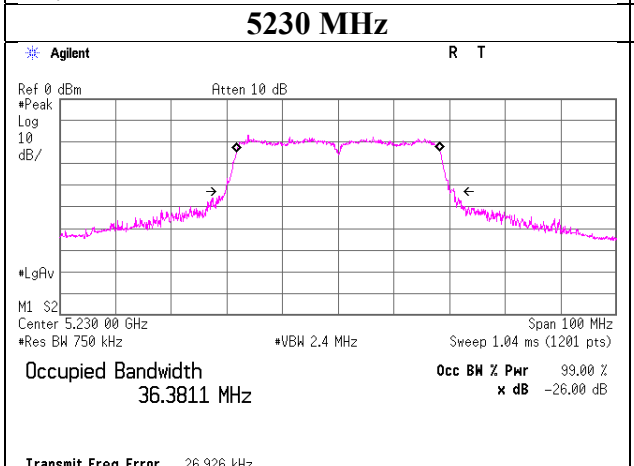

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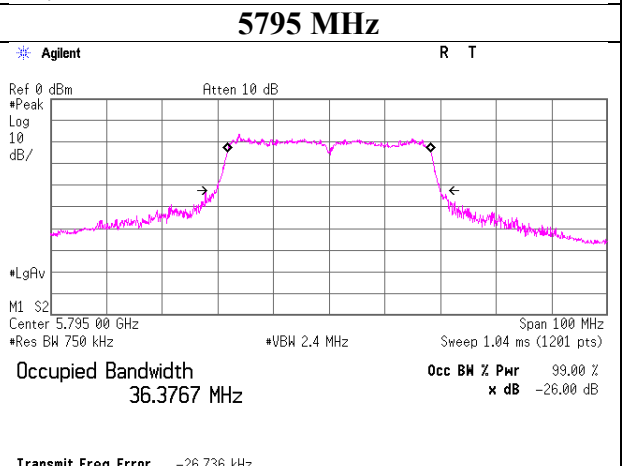

99 % Occupied Bandwidth

11ac-40 SISO, RF1

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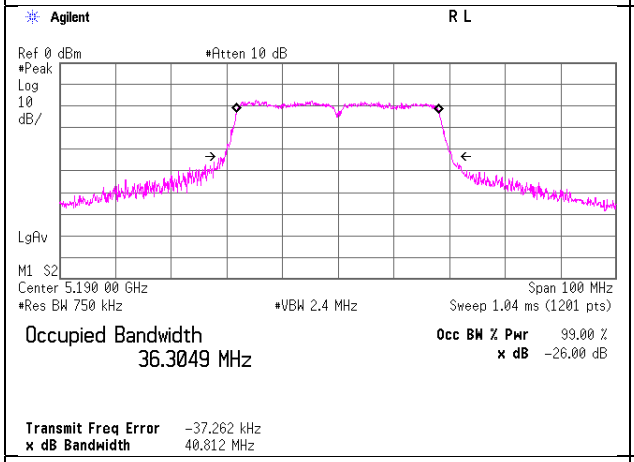

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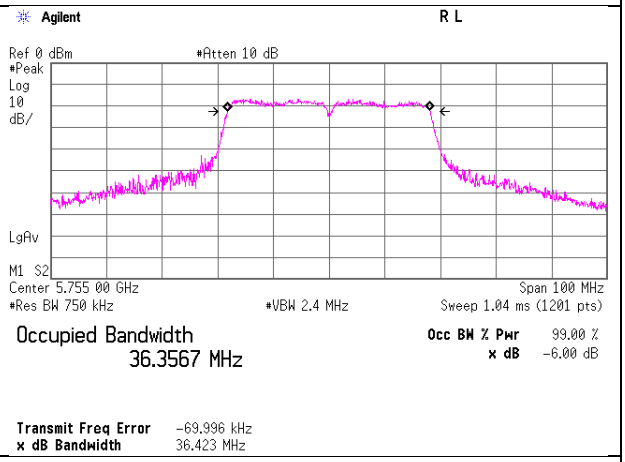

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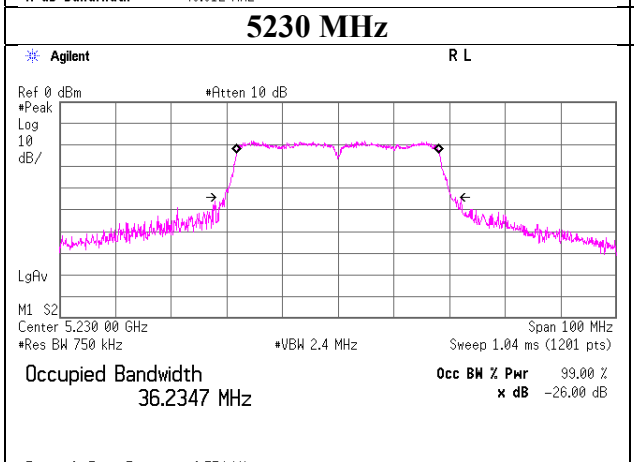

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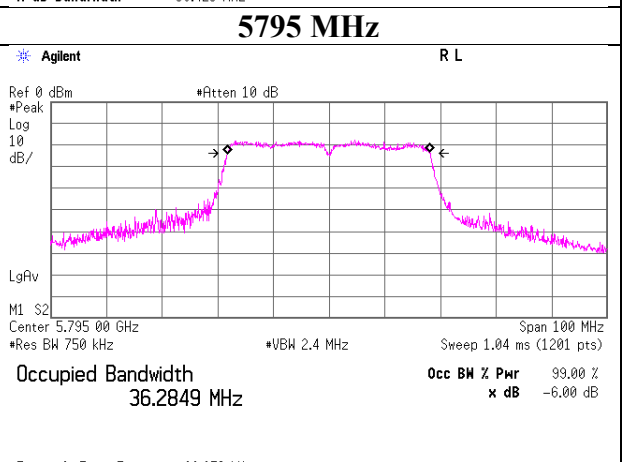
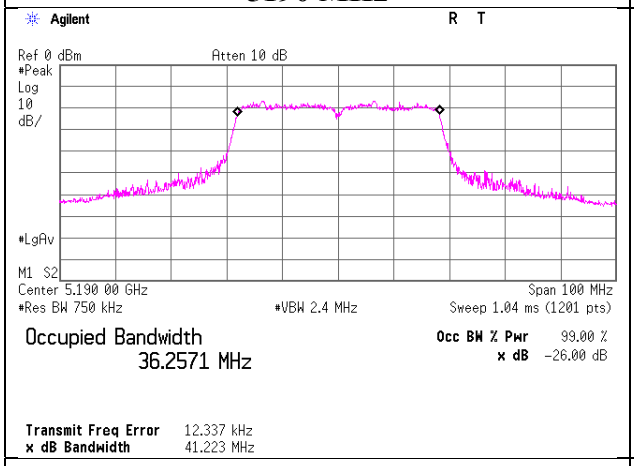


99 % Occupied Bandwidth

11ac-40 CDD, RF1

5190 MHz



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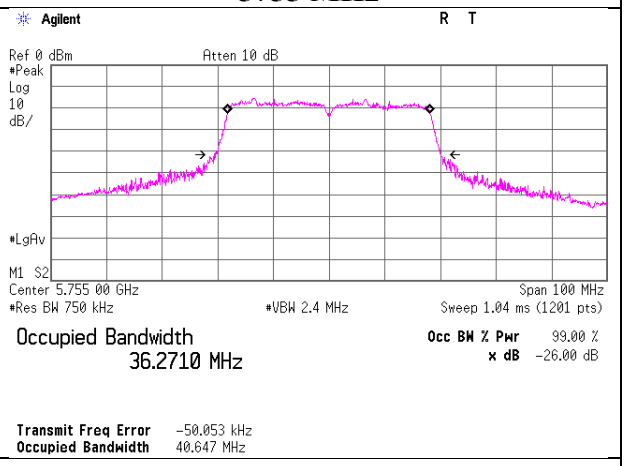

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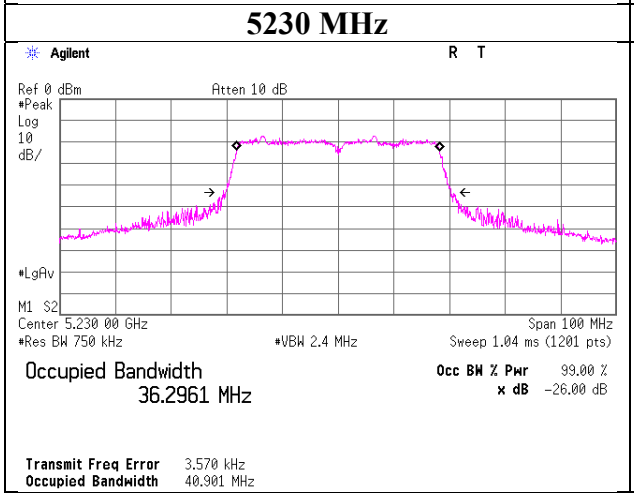

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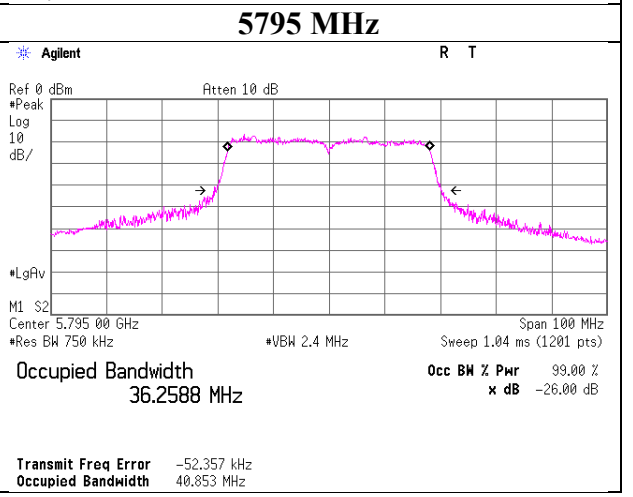
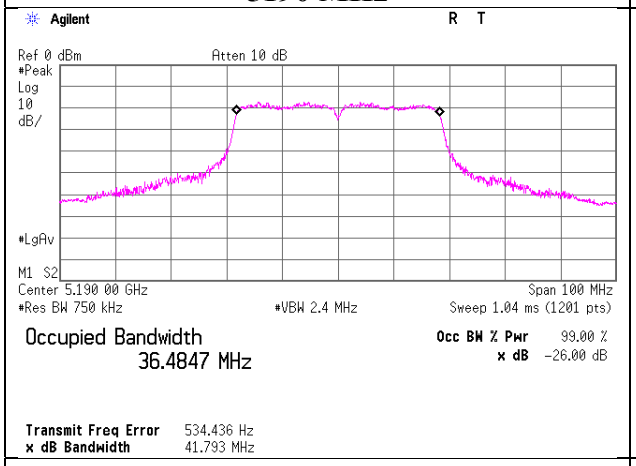


99 % Occupied Bandwidth

11ac-40 MIMO, RF1

5190 MHz



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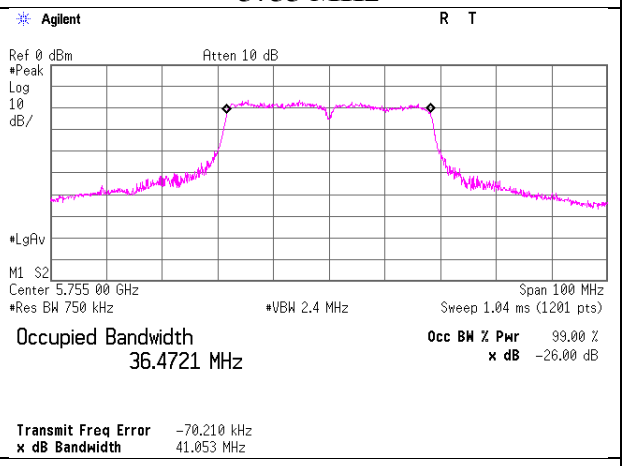

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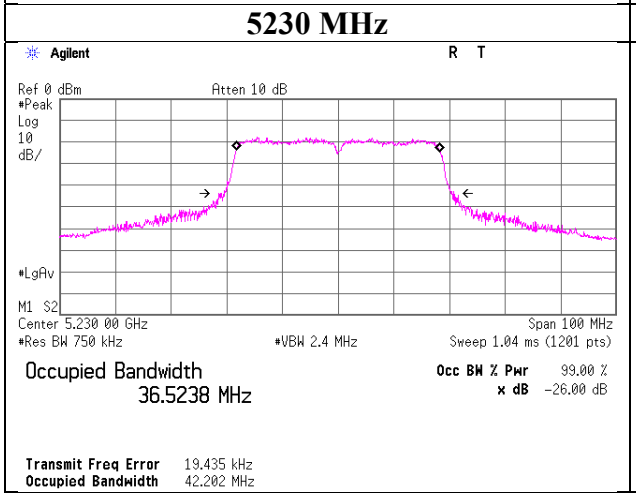

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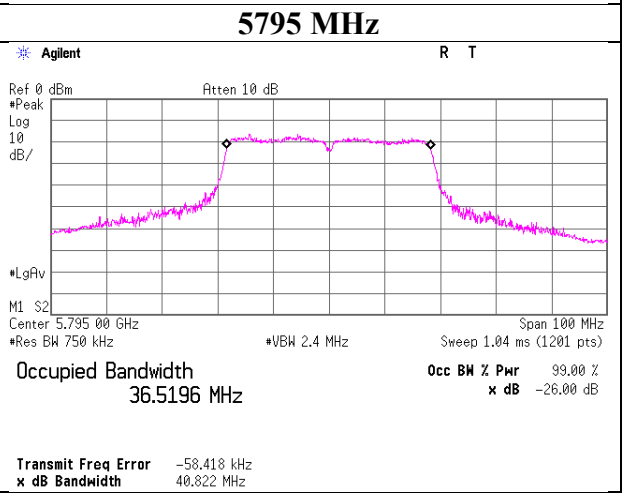
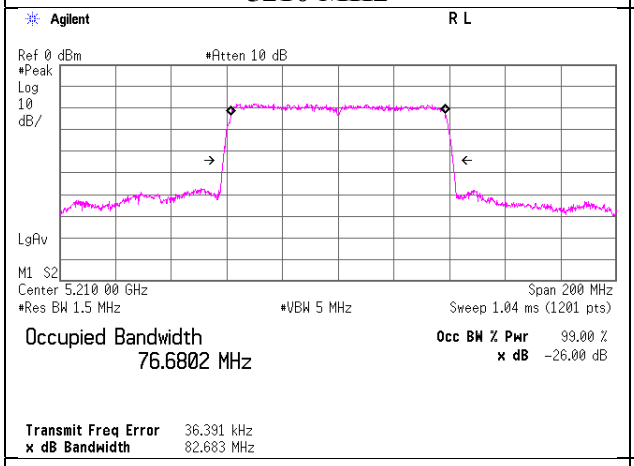


99 % Occupied Bandwidth

11ac-80 SISO, RF1

5210 MHz



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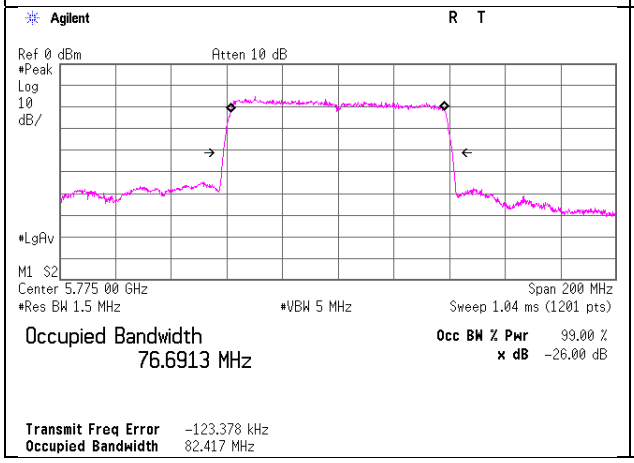

11ac-80 CDD, RF1

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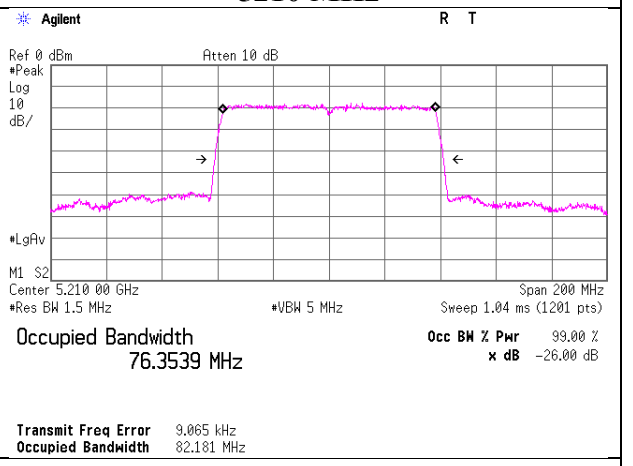
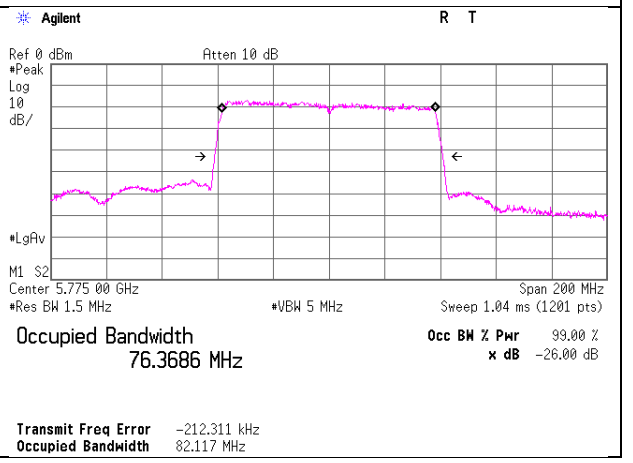


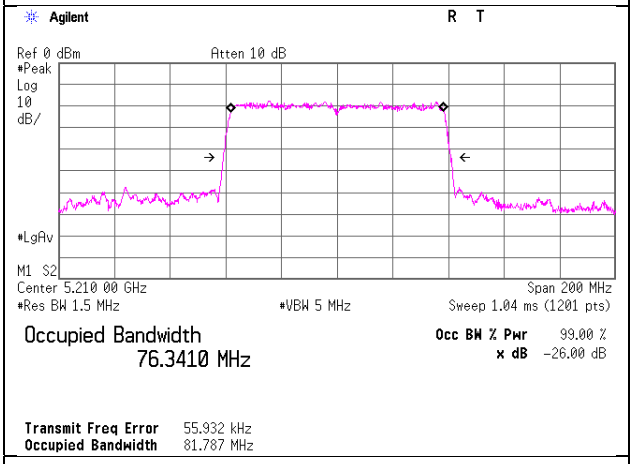
5775 MHz



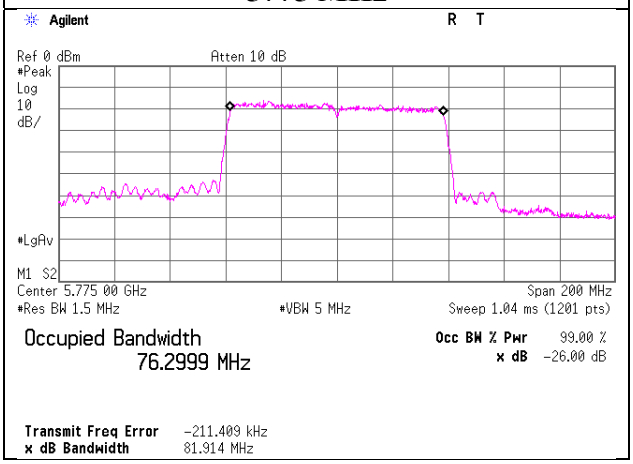
99 % Occupied Bandwidth

11ac-80 MIMO, RF1

5210 MHz



5775 MHz



6 dB Bandwidth

Report No.	13385909S-C-R2	
Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	July 28, 2020	July 30, 2020
Temperature / Humidity	25 deg. C / 55 % RH	25 deg. C / 57 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx	

11a SISO

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
RF1	5745	16.501	> 0.500
	5785	16.467	> 0.500
	5825	16.508	> 0.500

11n-20 SISO

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
RF1	5745	17.677	> 0.500
	5785	17.663	> 0.500
	5825	17.695	> 0.500

11a CDD

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
RF1	5745	16.516	> 0.500
	5785	16.504	> 0.500
	5825	16.458	> 0.500

11n-20 CDD

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
RF1	5745	17.657	> 0.500
	5785	17.652	> 0.500
	5825	17.664	> 0.500

11n-20 MIMO

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
RF1	5745	17.678	> 0.500
	5785	17.578	> 0.500
	5825	17.611	> 0.500

11ac-20 SISO

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
RF1	5745	17.617	> 0.500
	5785	17.655	> 0.500
	5825	17.615	> 0.500

11ac-20 CDD

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
RF1	5745	17.686	> 0.500
	5785	17.655	> 0.500
	5825	17.664	> 0.500

11ac-20 MIMO

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
RF1	5745	17.658	> 0.500
	5785	17.699	> 0.500
	5825	17.697	> 0.500

6 dB Bandwidth

Report No.	13385909S-C-R2	
Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	July 28, 2020	July 30, 2020
Temperature / Humidity	25 deg. C / 55 % RH	25 deg. C / 57 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx	

11n-40 SISO

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
RF1	5755	35.835	> 0.500
	5795	35.857	> 0.500

11ac-40 SISO

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
RF1	5755	36.075	> 0.500
	5795	36.141	> 0.500

11n-40 CDD

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
RF1	5755	36.072	> 0.500
	5795	35.990	> 0.500

11ac-40 CDD

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
RF1	5755	36.118	> 0.500
	5795	36.129	> 0.500

11n-40 MIMO

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
RF1	5755	36.072	> 0.500
	5795	36.309	> 0.500

11ac-40 MIMO

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
RF1	5755	35.839	> 0.500
	5795	35.852	> 0.500

11ac-80 SISO

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
RF1	5775	75.930	> 0.500

11ac-80 CDD

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
RF1	5775	76.157	> 0.500

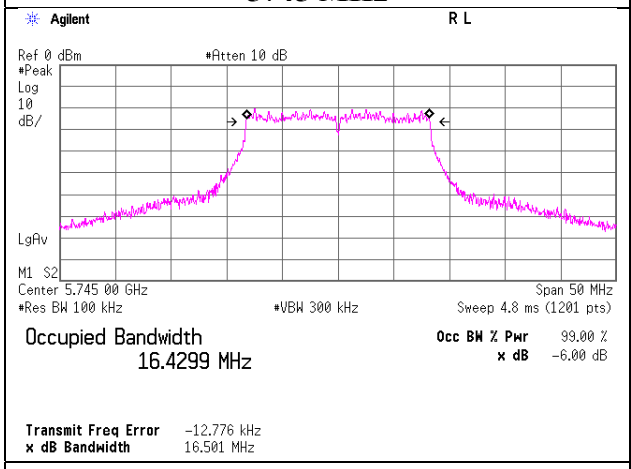
11ac-80 MIMO

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
RF1	5775	75.870	> 0.500

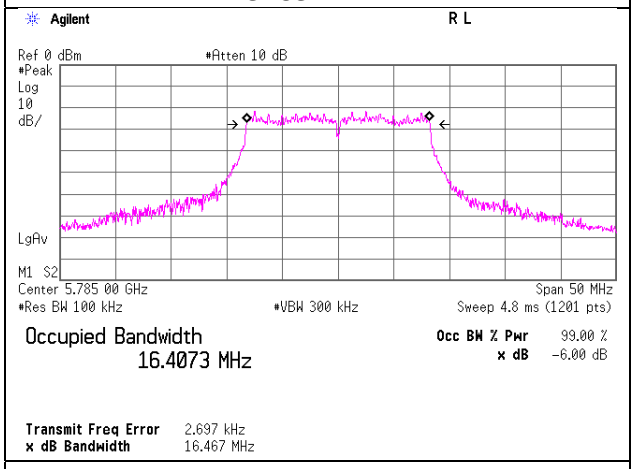
6 dB Bandwidth

11a SISO, RF1

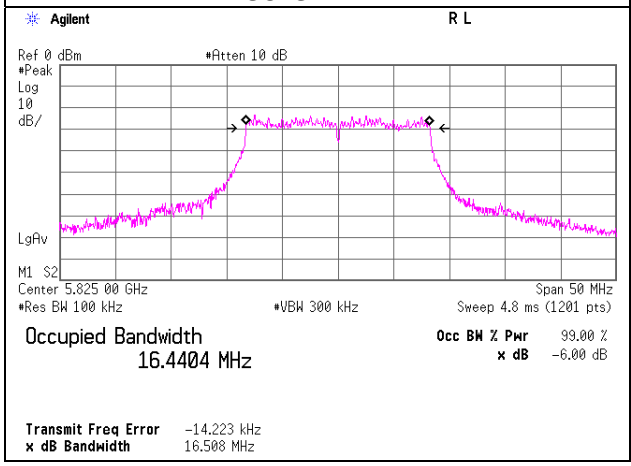
5745 MHz



5785 MHz

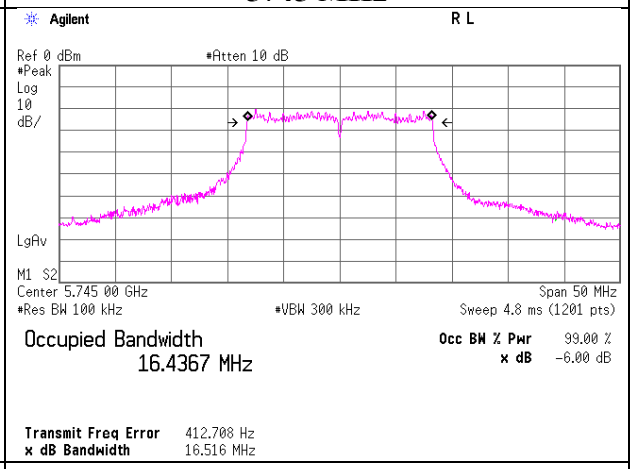


5825 MHz

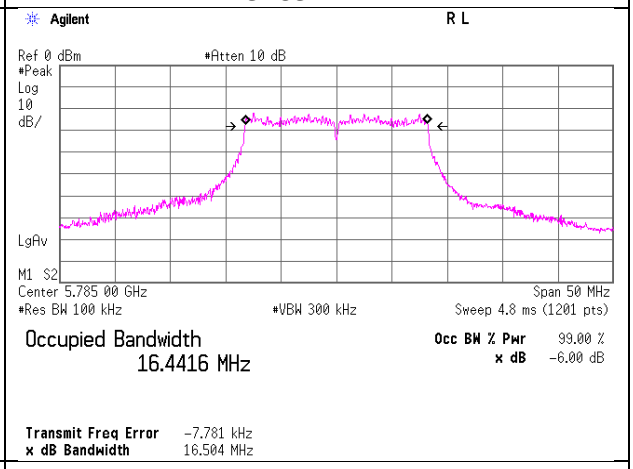


11a CDD, RF1

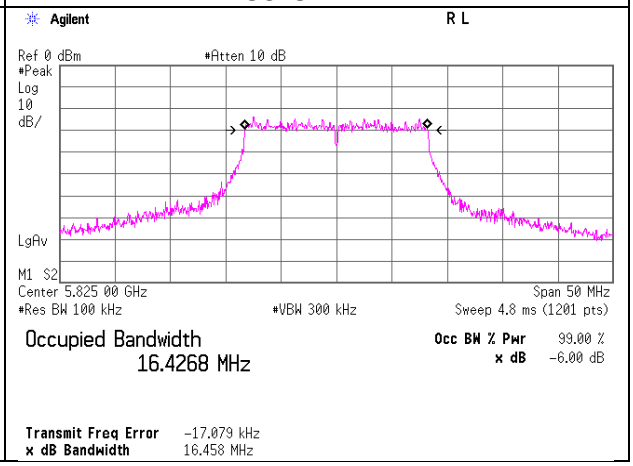
5745 MHz



5785 MHz



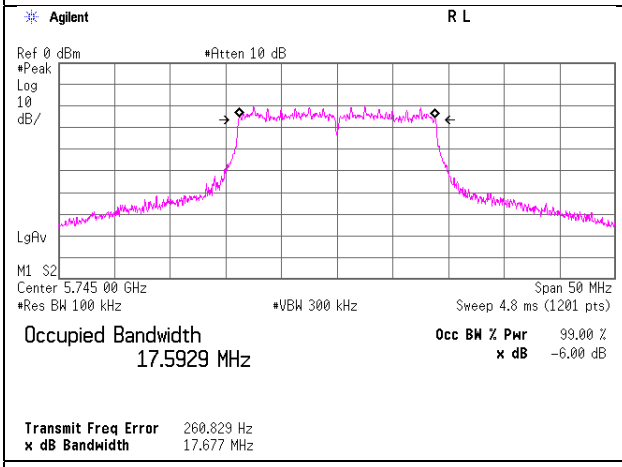
5825 MHz



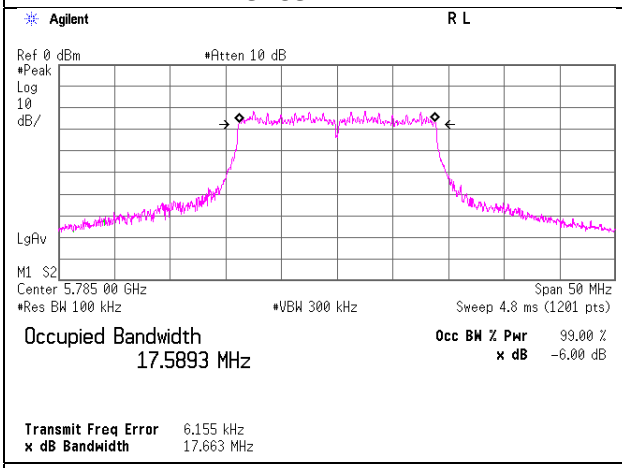
6 dB Bandwidth

11n-20 SISO, RF1

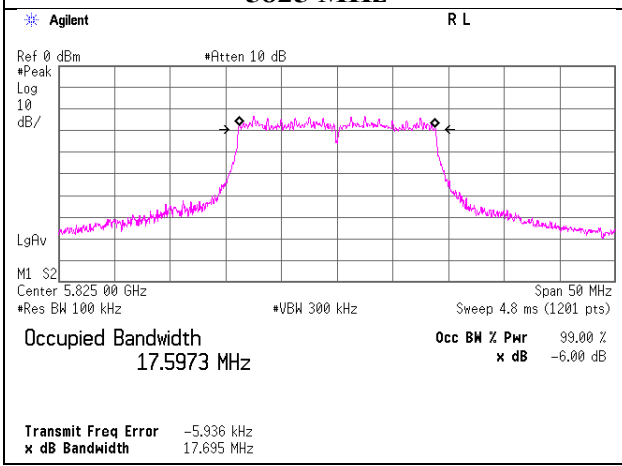
5745 MHz



5785 MHz

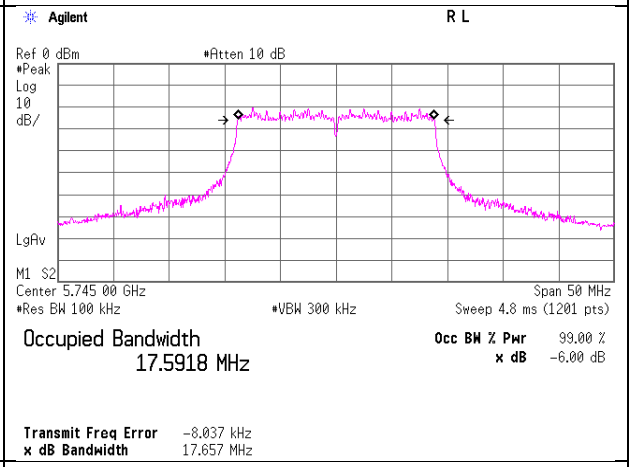


5825 MHz

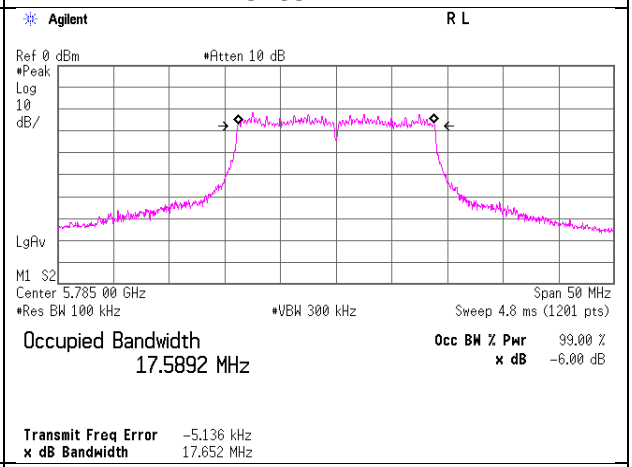


11n-20 CDD, RF1

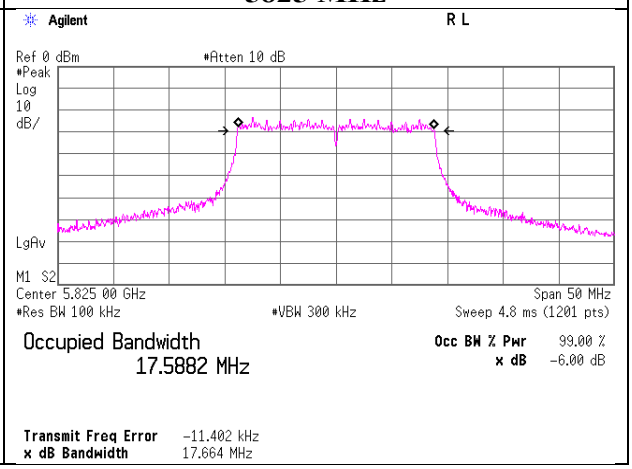
5745 MHz



5785 MHz



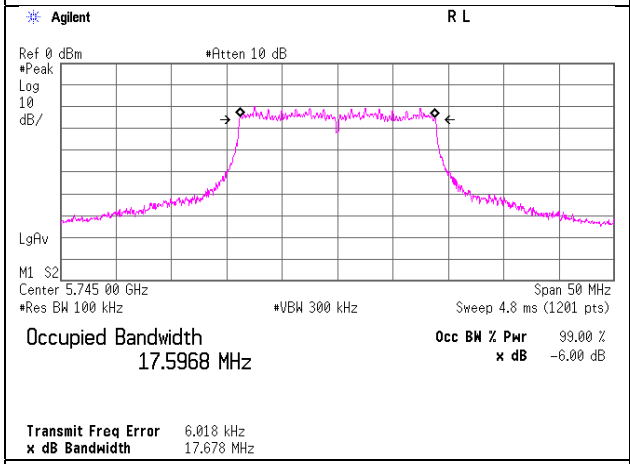
5825 MHz



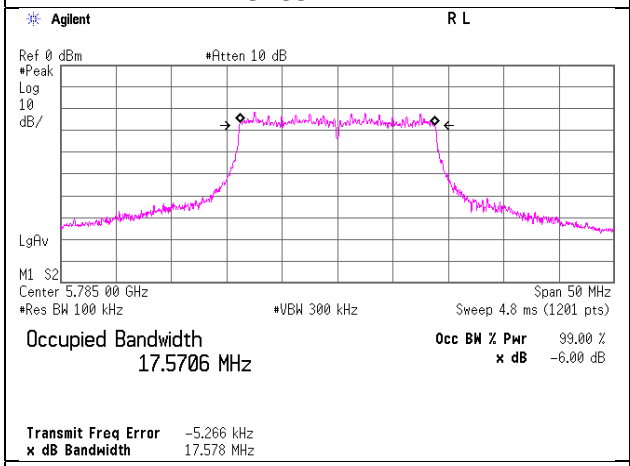
6 dB Bandwidth

11n-20 MIMO, RF1

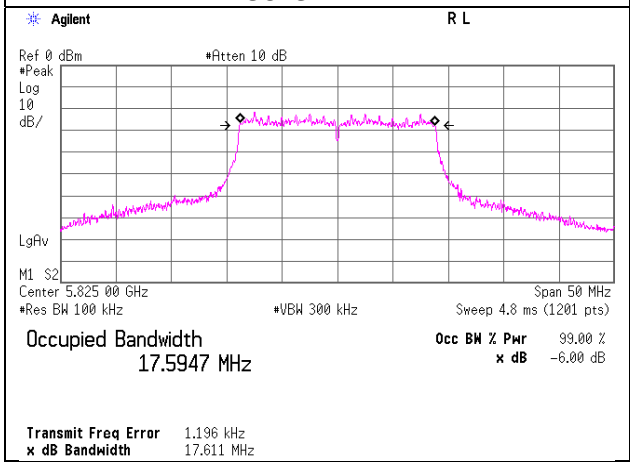
5745 MHz



5785 MHz

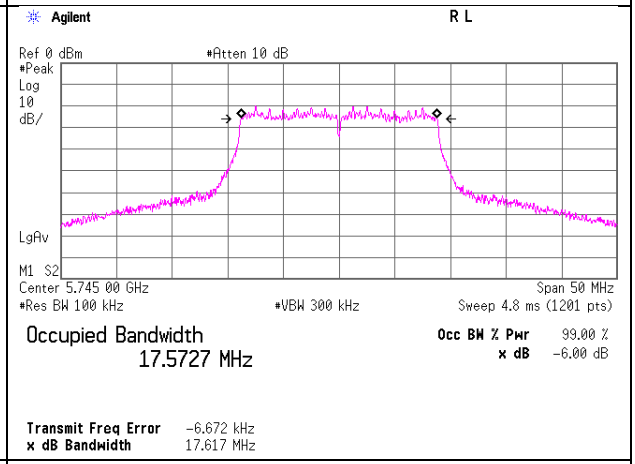


5825 MHz

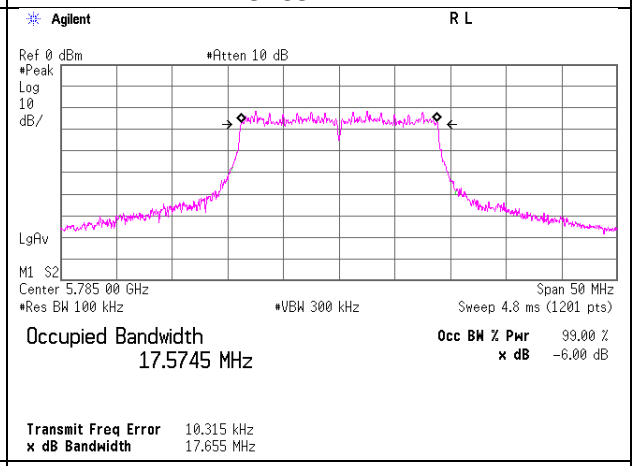


11ac-20 SISO, RF1

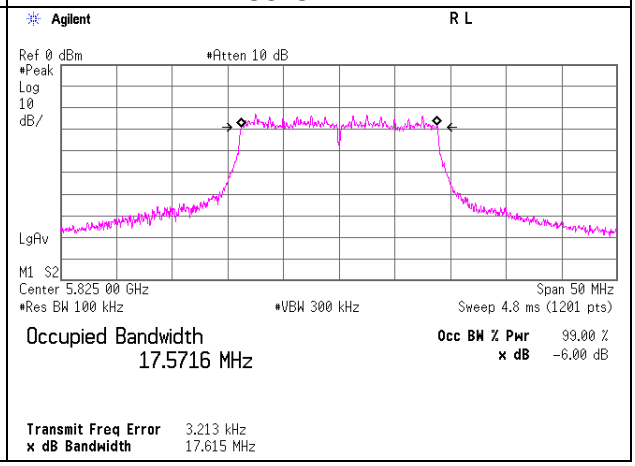
5745 MHz



5785 MHz



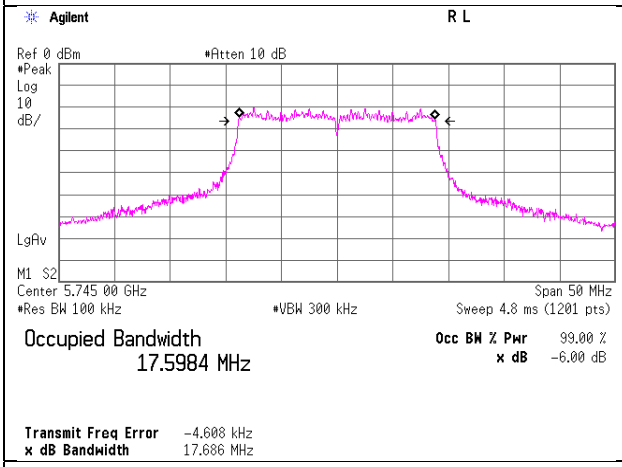
5825 MHz



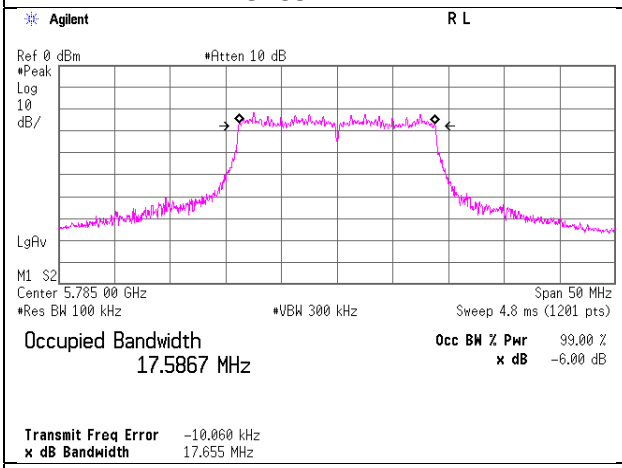
6 dB Bandwidth

11ac-20 CDD, RF1

5745 MHz



5785 MHz



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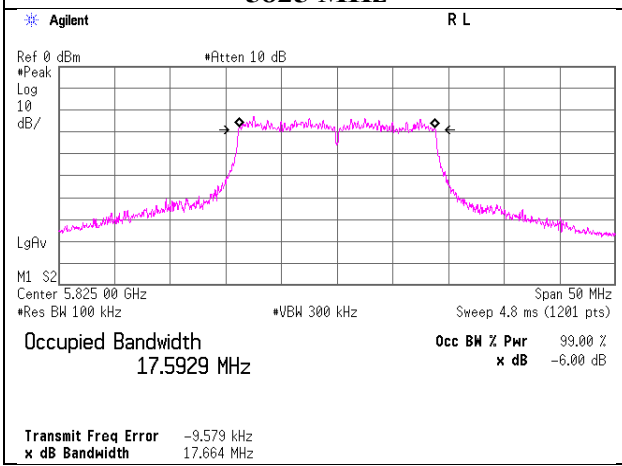
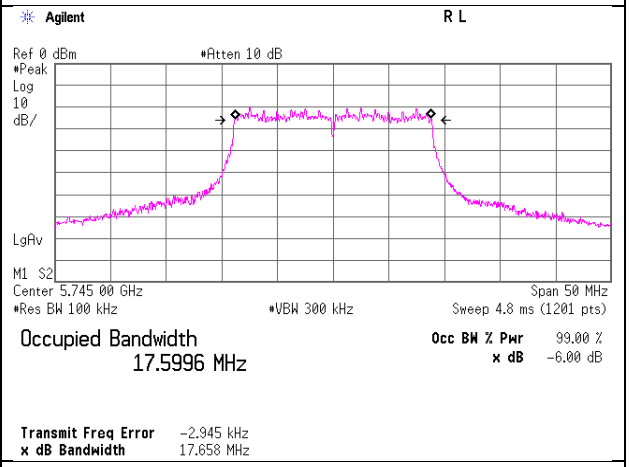
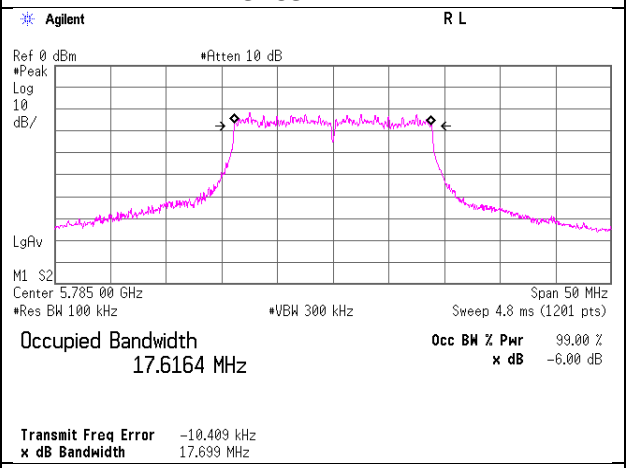


11ac-20 MIMO, RF1

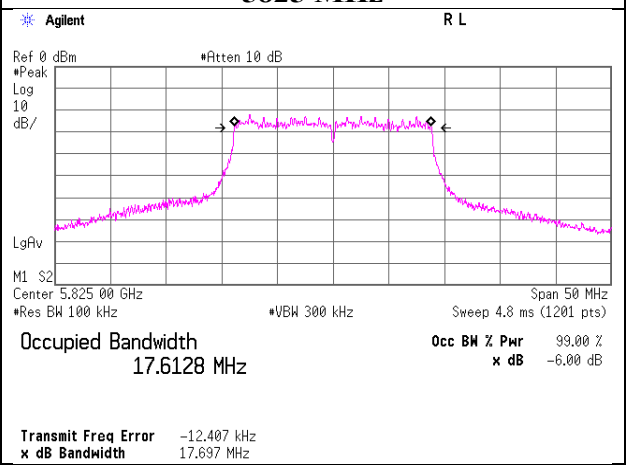
5745 MHz



5785 MHz



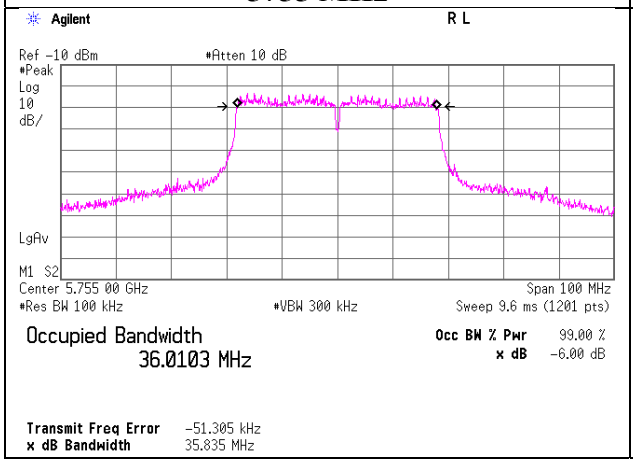
5825 MHz



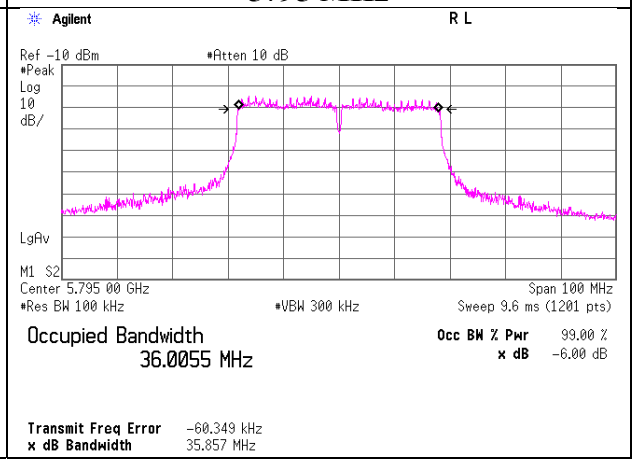
6 dB Bandwidth

11n-40 SISO, RF1

5755 MHz

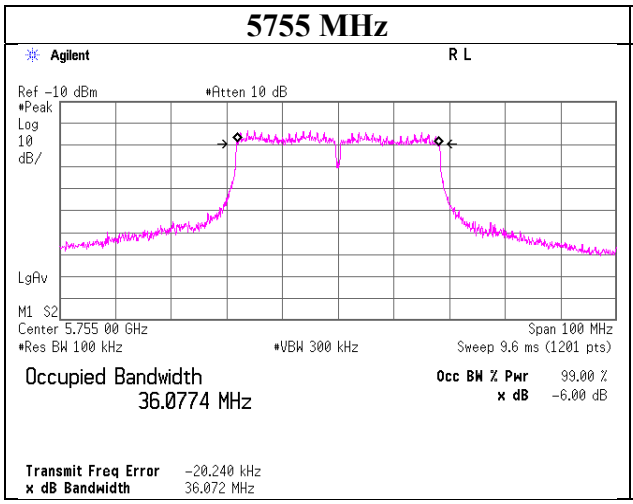


5795 MHz

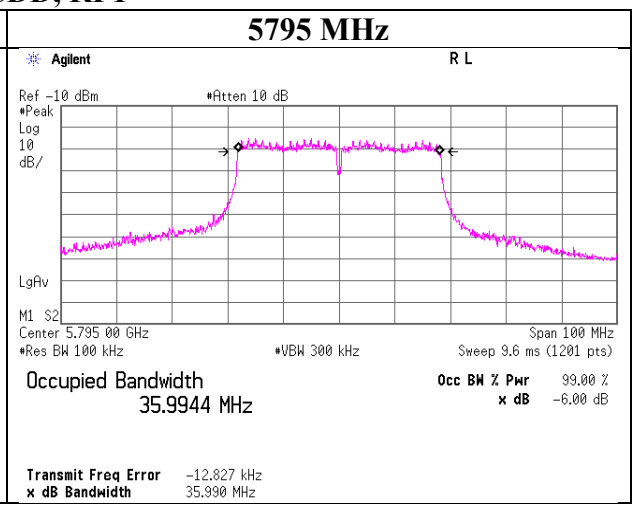


11n-40 CDD, RF1

5755 MHz

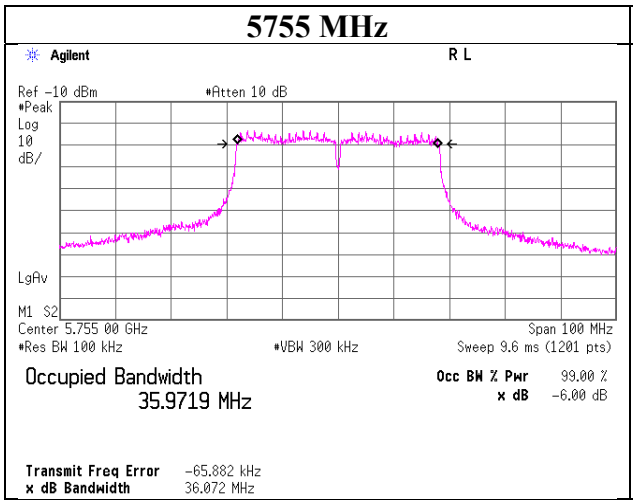


5795 MHz

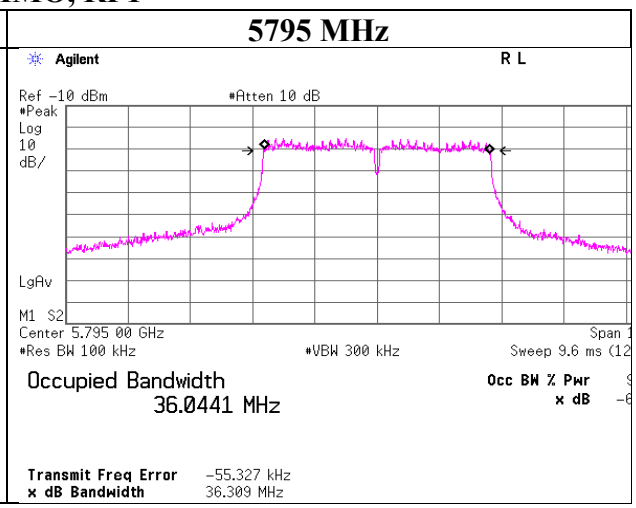


11n-40 MIMO, RF1

5755 MHz



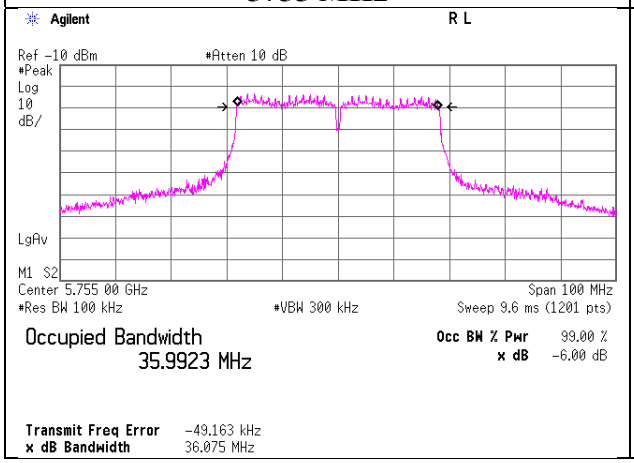
5795 MHz



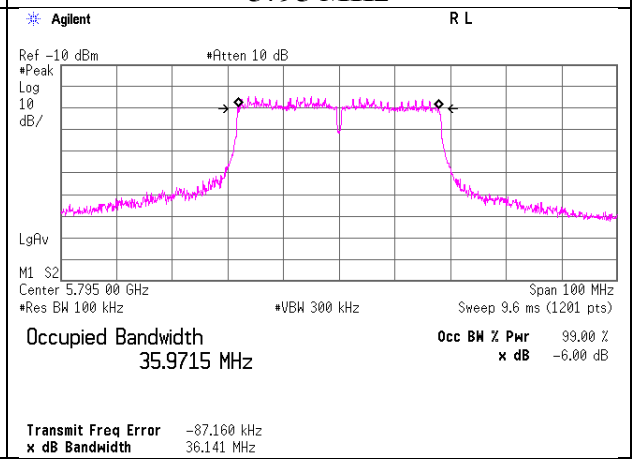
6 dB Bandwidth

11ac-40 SISO, RF1

5755 MHz

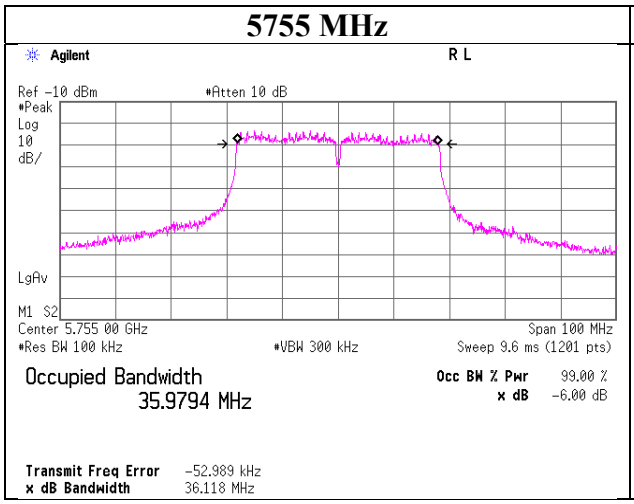


5795 MHz

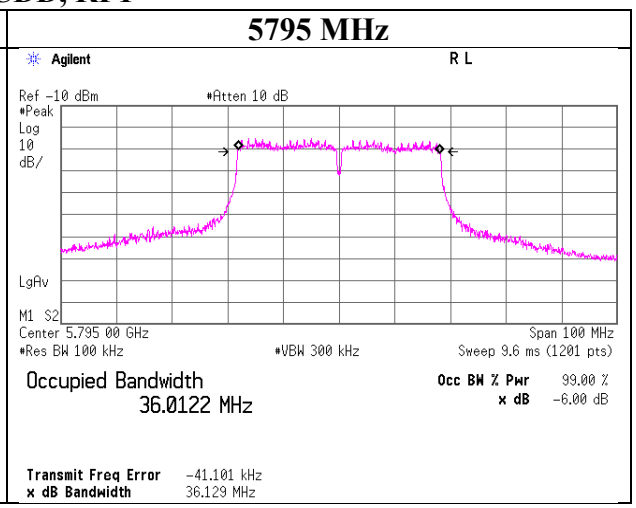


11ac-40 CDD, RF1

5755 MHz

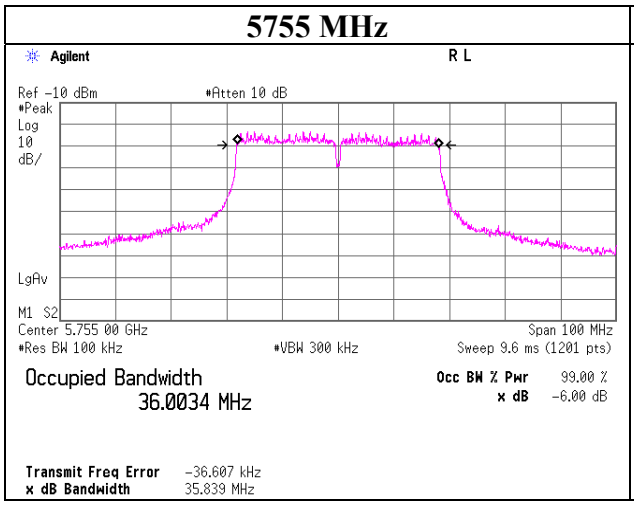


5795 MHz

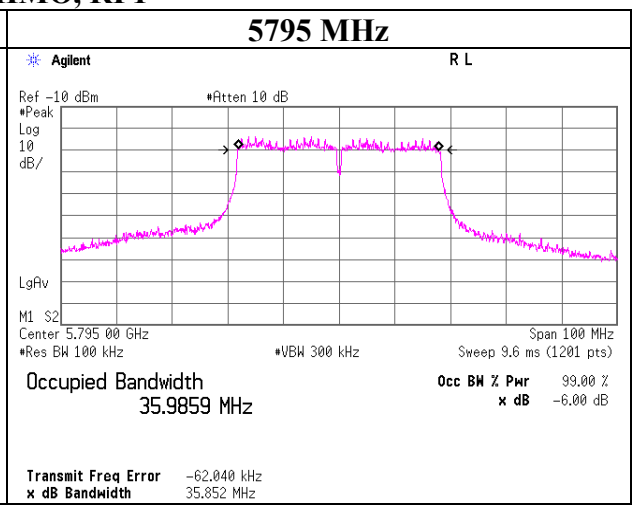


11ac-40 MIMO, RF1

5755 MHz



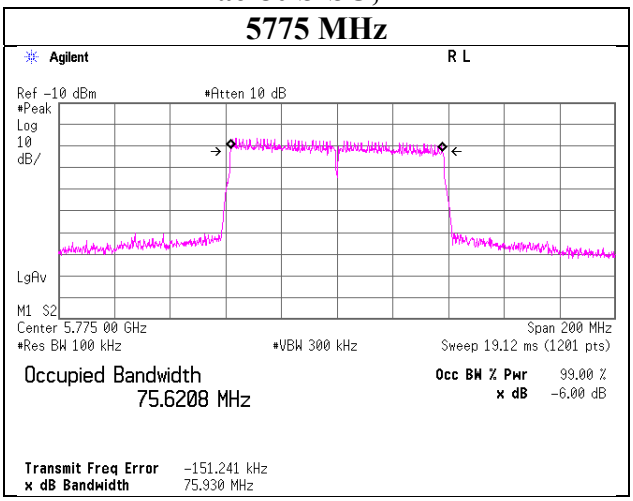
5795 MHz



6 dB Bandwidth

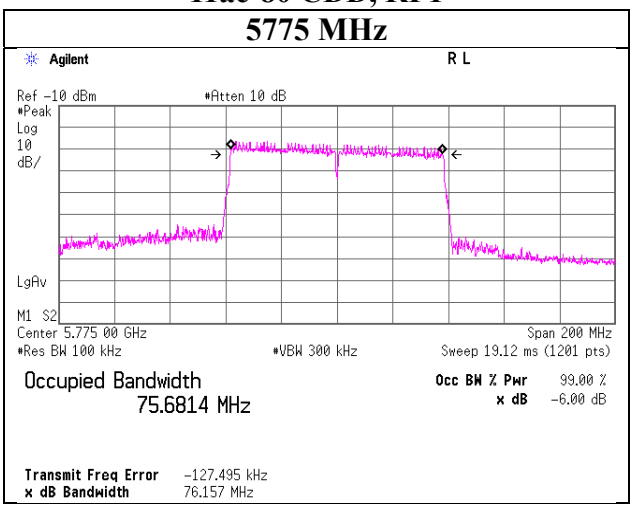
11ac-80 SISO, RF1

5775 MHz



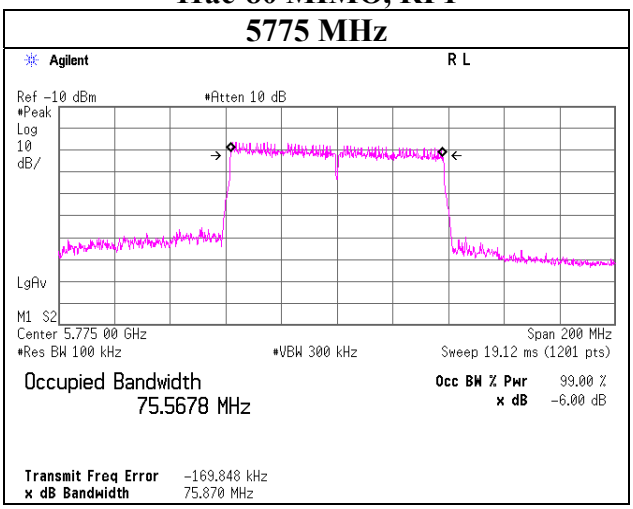
11ac-80 CDD, RF1

5775 MHz



11ac-80 MIMO, RF1

5775 MHz



Maximum Conducted Output Power

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab. No.5 Shielded Room		
Date	July 8, 2020	July 9, 2020	July 20, 2020
Temperature / Humidity	23 deg. C / 65 % RH	25 deg. C / 50 % RH	25 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx 11a SISO		

11a SISO, RF0

Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor *1)	Antenna Gain *2)	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power Result		Limit	Margin	e.i.r.p. Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	-11.73	4.35	9.87	-	2.14	-	16.726	2.49	1.77	23.97	21.48	4.63	2.90	29.97	25.34
5220	-11.14	4.36	9.87	-	2.14	-	16.714	3.09	2.04	23.97	20.88	5.23	3.33	29.97	24.74
5240	-10.90	4.36	9.88	-	2.14	-	16.713	3.34	2.16	23.97	20.63	5.48	3.53	29.97	24.49
5745	-11.39	4.45	9.89	-	2.47	-	16.693	2.95	1.97	30.00	27.05	5.42	3.48	36.00	30.58
5785	-12.07	4.46	9.89	-	2.47	-	16.676	2.28	1.69	30.00	27.72	4.75	2.99	36.00	31.25
5825	-12.58	4.47	9.89	-	2.47	-	16.696	1.78	1.51	30.00	28.22	4.25	2.66	36.00	31.75

*1) Duty Factor is not required because the measurement using a gated RF average power meter.
*2) Antenna Gain applied the higher of the two models.

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

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

11a SISO, RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor *1)	Antenna Gain *2)	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power Result		Limit	Margin	e.i.r.p. Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	-10.99	4.36	9.93	-	2.43	-	16.726	3.30	2.14	23.97	20.67	5.73	3.74	29.97	24.24
5220	-11.45	4.37	9.93	-	2.43	-	16.714	2.85	1.93	23.97	21.12	5.28	3.37	29.97	24.69
5240	-11.60	4.37	9.93	-	2.43	-	16.713	2.70	1.86	23.97	21.27	5.13	3.26	29.97	24.84
5745	-9.69	4.46	9.93	-	2.59	-	16.693	4.70	2.95	30.00	25.30	7.29	5.36	36.00	28.71
5785	-11.18	4.47	9.93	-	2.59	-	16.676	3.22	2.10	30.00	26.78	5.81	3.81	36.00	30.19
5825	-12.59	4.47	9.93	-	2.59	-	16.696	1.81	1.52	30.00	28.19	4.40	2.75	36.00	31.60

*1) Duty Factor is not required because the measurement using a gated RF average power meter.
*2) Antenna Gain applied the higher of the two models.

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

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab. No.5 Shielded Room		
Date	July 8, 2020	July 9, 2020	July 20, 2020
Temperature / Humidity	23 deg. C / 65 % RH	25 deg. C / 50 % RH	25 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx 11a CDD		

RF0 + RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted power Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin	e.i.r.p. Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5180	-	16.720	1.69	1.90	3.59	5.55	23.97	18.42	2.96	3.32	6.28	7.98	29.97	21.99
5220	-	16.732	1.94	1.71	3.65	5.62	23.97	18.35	3.39	3.00	6.39	8.05	29.97	21.92
5240	-	16.717	2.05	1.66	3.71	5.69	23.97	18.28	3.58	2.90	6.48	8.12	29.97	21.85
5745	-	16.707	1.80	2.56	4.36	6.40	30.00	23.60	3.27	4.65	7.92	8.99	36.00	27.01
5785	-	16.689	1.58	1.82	3.39	5.31	30.00	24.69	2.86	3.30	6.16	7.90	36.00	28.10
5825	-	16.710	1.40	1.33	2.73	4.36	30.00	25.64	2.54	2.42	4.95	6.95	36.00	29.05

		RF0						**RF1**					
Tested Frequency	Duty Factor *1)	Power Meter Reading	Cable Loss	Atten. Loss	Directional Gain	Result Cond. Power	Result e.i.r.p.	Power Meter Reading	Cable Loss	Atten. Loss	Directional Gain	Result Cond. Power	Result e.i.r.p.
[MHz]	[dB]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]
5180	-	-11.94	4.35	9.87	2.43	2.28	4.71	-11.51	4.36	9.93	2.43	2.78	5.21
5220	-	-11.36	4.36	9.87	2.43	2.87	5.30	-11.96	4.37	9.93	2.43	2.34	4.77
5240	-	-11.13	4.36	9.88	2.43	3.11	5.54	-12.10	4.37	9.93	2.43	2.20	4.63
5745	-	-11.78	4.45	9.89	2.59	2.56	5.15	-10.31	4.46	9.93	2.59	4.08	6.67
5785	-	-12.37	4.46	9.89	2.59	1.98	4.57	-11.81	4.47	9.93	2.59	2.59	5.18
5825	-	-12.91	4.47	9.89	2.59	1.45	4.04	-13.16	4.47	9.93	2.59	1.24	3.83

*1) Duty Factor is not required because the measurement using a gated RF average power meter.

Sample Calculation:

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

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

Directional Gain = G_{ANT}(Antenna Gain *2)) + Array Gain

Array Gain = 0 dB(i.e.,no array gain) for $N_{ANT} < 4$

N_{ANT} = number of transmit antennas = 2

*2) Antenna Gain applied the highest gain of the two models.

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW

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

Maximum Conducted Output Power

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab. No.5 Shielded Room		
Date	July 8, 2020	July 9, 2020	July 20, 2020
Temperature / Humidity	23 deg. C / 65 % RH	25 deg. C / 50 % RH	25 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx 11n-20 SISO		

11n-20 SISO, RF0

Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor *1)	Antenna Gain *2)	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power				e.i.r.p.			
								Result		Limit	Margin	Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	-11.68	4.35	9.87	-	2.14	-	17.780	2.54	1.79	23.97	21.43	4.68	2.94	29.97	25.29
5220	-11.09	4.36	9.87	-	2.14	-	17.835	3.14	2.06	23.97	20.83	5.28	3.37	29.97	24.69
5240	-10.86	4.36	9.88	-	2.14	-	17.795	3.38	2.18	23.97	20.59	5.52	3.56	29.97	24.45
5745	-11.33	4.45	9.89	-	2.47	-	17.796	3.01	2.00	30.00	26.99	5.48	3.53	36.00	30.52
5785	-12.01	4.46	9.89	-	2.47	-	17.742	2.34	1.71	30.00	27.66	4.81	3.03	36.00	31.19
5825	-12.53	4.47	9.89	-	2.47	-	17.753	1.83	1.52	30.00	28.17	4.30	2.69	36.00	31.70

*1) Duty Factor is not required because the measurement using a gated RF average power meter.
*2) Antenna Gain applied the higher of the two models.

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

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

11n-20 SISO, RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor *1)	Antenna Gain *2)	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power				e.i.r.p.			
								Result		Limit	Margin	Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	-10.93	4.36	9.93	-	2.43	-	17.780	3.36	2.17	23.97	20.61	5.79	3.79	29.97	24.18
5220	-11.38	4.37	9.93	-	2.43	-	17.835	2.92	1.96	23.97	21.05	5.35	3.43	29.97	24.62
5240	-11.53	4.37	9.93	-	2.43	-	17.795	2.77	1.89	23.97	21.20	5.20	3.31	29.97	24.77
5745	-9.60	4.46	9.93	-	2.59	-	17.796	4.79	3.01	30.00	25.21	7.38	5.47	36.00	28.62
5785	-11.06	4.47	9.93	-	2.59	-	17.742	3.34	2.16	30.00	26.66	5.93	3.92	36.00	30.07
5825	-12.49	4.47	9.93	-	2.59	-	17.753	1.91	1.55	30.00	28.09	4.50	2.82	36.00	31.50

*1) Duty Factor is not required because the measurement using a gated RF average power meter.
*2) Antenna Gain applied the higher of the two models.

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

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab. No.5 Shielded Room		
Date	July 8, 2020	July 9, 2020	July 20, 2020
Temperature / Humidity	23 deg. C / 65 % RH	25 deg. C / 50 % RH	25 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx 11n-20 CDD		

RF0 + RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted power Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin	e.i.r.p. Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5180	-	17.781	1.72	2.00	3.72	5.70	23.97	18.27	3.01	3.49	6.50	8.13	29.97	21.84
5220	-	17.762	1.98	1.75	3.73	5.72	23.97	18.25	3.46	3.07	6.53	8.15	29.97	21.82
5240	-	17.751	2.07	1.72	3.79	5.79	23.97	18.18	3.63	3.01	6.64	8.22	29.97	21.75
5745	-	17.751	1.86	2.49	4.35	6.39	30.00	23.61	3.37	4.53	7.90	8.98	36.00	27.02
5785	-	17.772	1.60	1.79	3.39	5.30	30.00	24.70	2.90	3.25	6.15	7.89	36.00	28.11
5825	-	17.784	1.42	1.33	2.75	4.39	30.00	25.61	2.58	2.42	4.99	6.98	36.00	29.02

		RF0						**RF1**					
Tested Frequency	Duty Factor *1)	Power Meter Reading	Cable Loss	Atten. Loss	Directional Gain	Result Cond. Power	Result e.i.r.p.	Power Meter Reading	Cable Loss	Atten. Loss	Directional Gain	Result Cond. Power	Result e.i.r.p.
[MHz]	[dB]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]
5180	-	-11.86	4.35	9.87	2.43	2.36	4.79	-11.29	4.36	9.93	2.43	3.00	5.43
5220	-	-11.27	4.36	9.87	2.43	2.96	5.39	-11.86	4.37	9.93	2.43	2.44	4.87
5240	-	-11.07	4.36	9.88	2.43	3.17	5.60	-11.95	4.37	9.93	2.43	2.35	4.78
5745	-	-11.65	4.45	9.89	2.59	2.69	5.28	-10.42	4.46	9.93	2.59	3.97	6.56
5785	-	-12.31	4.46	9.89	2.59	2.04	4.63	-11.87	4.47	9.93	2.59	2.53	5.12
5825	-	-12.84	4.47	9.89	2.59	1.52	4.11	-13.16	4.47	9.93	2.59	1.24	3.83

*1) Duty Factor is not required because the measurement using a gated RF average power meter.

Sample Calculation:

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

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

Directional Gain = G_{ANT}(Antenna Gain *2)) + Array Gain

Array Gain = 0 dB(i.e.,no array gain) for $N_{ANT} < 4$

N_{ANT} = number of transmit antennas = 2

*2) Antenna Gain applied the highest gain of the two models.

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW

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

Maximum Conducted Output Power

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab. No.5 Shielded Room		
Date	July 8, 2020	July 9, 2020	July 20, 2020
Temperature / Humidity	23 deg. C / 65 % RH	25 deg. C / 50 % RH	25 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx 11n-20 MIMO		

RF0 + RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted power Antenna			Result	Limit	Margin	e.i.r.p. Antenna			Result	Limit	Margin
			RF0	RF1	Sum				RF0	RF1	Sum			
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5180	-	17.810	1.73	1.98	3.72	5.70	23.97	18.27	2.84	3.47	6.31	8.00	29.97	21.97
5220	-	17.769	1.98	1.78	3.76	5.75	23.97	18.22	3.24	3.11	6.36	8.03	29.97	21.94
5240	-	17.784	2.09	1.72	3.81	5.81	23.97	18.16	3.42	3.01	6.43	8.08	29.97	21.89
5745	-	17.775	1.88	2.62	4.50	6.53	30.00	23.47	3.33	4.75	8.08	9.07	36.00	26.93
5785	-	17.808	1.63	1.85	3.49	5.42	30.00	24.58	2.88	3.37	6.25	7.96	36.00	28.04
5825	-	17.795	1.45	1.36	2.81	4.49	30.00	25.51	2.56	2.47	5.03	7.02	36.00	28.98

		RF0						**RF1**					
Tested Frequency	Duty Factor *1)	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain *2)	Result Cond. Power	Result e.i.r.p.	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain *2)	Result Cond. Power	Result e.i.r.p.
[MHz]	[dB]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]
5180	-	-11.83	4.35	9.87	2.14	2.39	4.53	-11.32	4.36	9.93	2.43	2.97	5.40
5220	-	-11.26	4.36	9.87	2.14	2.97	5.11	-11.80	4.37	9.93	2.43	2.50	4.93
5240	-	-11.04	4.36	9.88	2.14	3.20	5.34	-11.94	4.37	9.93	2.43	2.36	4.79
5745	-	-11.59	4.45	9.89	2.47	2.75	5.22	-10.21	4.46	9.93	2.59	4.18	6.77
5785	-	-12.22	4.46	9.89	2.47	2.13	4.60	-11.72	4.47	9.93	2.59	2.68	5.27
5825	-	-12.74	4.47	9.89	2.47	1.62	4.09	-13.07	4.47	9.93	2.59	1.33	3.92

*1) Duty Factor is not required because the measurement using a gated RF average power meter.
*2) Antenna Gain applied the higher of the two models.

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

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab. No.5 Shielded Room		
Date	July 8, 2020	July 9, 2020	July 20, 2020
Temperature / Humidity	23 deg. C / 65 % RH	25 deg. C / 50 % RH	25 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx 11ac-20 SISO		

11ac-20 SISO, RF0 Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor *1)	Antenna Gain *2)	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power Result		Limit	Margin	e.i.r.p. Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	-11.66	4.35	9.87	-	2.14	-	17.714	2.56	1.80	23.97	21.41	4.70	2.95	29.97	25.27
5220	-11.04	4.36	9.87	-	2.14	-	17.819	3.19	2.08	23.97	20.78	5.33	3.41	29.97	24.64
5240	-10.82	4.36	9.88	-	2.14	-	17.776	3.42	2.20	23.97	20.55	5.56	3.60	29.97	24.41
5745	-11.29	4.45	9.89	-	2.47	-	17.746	3.05	2.02	30.00	26.95	5.52	3.56	36.00	30.48
5785	-11.99	4.46	9.89	-	2.47	-	17.757	2.36	1.72	30.00	27.64	4.83	3.04	36.00	31.17
5825	-12.53	4.47	9.89	-	2.47	-	17.865	1.83	1.52	30.00	28.17	4.30	2.69	36.00	31.70

*1) Duty Factor is not required because the measurement using a gated RF average power meter.
*2) Antenna Gain applied the higher of the two models.

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

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

11ac-20 SISO, RF1 Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor *1)	Antenna Gain *2)	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power Result		Limit	Margin	e.i.r.p. Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	-11.04	4.36	9.93	-	2.43	-	17.714	3.25	2.11	23.97	20.72	5.68	3.70	29.97	24.29
5220	-11.52	4.37	9.93	-	2.43	-	17.819	2.78	1.90	23.97	21.19	5.21	3.32	29.97	24.76
5240	-11.61	4.37	9.93	-	2.43	-	17.776	2.69	1.86	23.97	21.28	5.12	3.25	29.97	24.85
5745	-9.60	4.46	9.93	-	2.59	-	17.746	4.79	3.01	30.00	25.21	7.38	5.47	36.00	28.62
5785	-11.10	4.47	9.93	-	2.59	-	17.757	3.30	2.14	30.00	26.70	5.89	3.88	36.00	30.11
5825	-12.50	4.47	9.93	-	2.59	-	17.865	1.90	1.55	30.00	28.10	4.49	2.81	36.00	31.51

*1) Duty Factor is not required because the measurement using a gated RF average power meter.
*2) Antenna Gain applied the higher of the two models.

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

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab. No.5 Shielded Room		
Date	July 8, 2020	July 9, 2020	July 20, 2020
Temperature / Humidity	23 deg. C / 65 % RH	25 deg. C / 50 % RH	25 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx 11ac-20 CDD		

RF0 + RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted power Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin	e.i.r.p. Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5180	-	17.780	1.68	1.94	3.62	5.59	23.97	18.38	2.94	3.39	6.33	8.02	29.97	21.95
5220	-	17.823	1.93	1.76	3.69	5.67	23.97	18.30	3.38	3.08	6.46	8.10	29.97	21.87
5240	-	17.828	2.04	1.67	3.71	5.69	23.97	18.28	3.57	2.92	6.49	8.12	29.97	21.85
5745	-	17.800	1.84	2.59	4.43	6.46	30.00	23.54	3.33	4.71	8.04	9.05	36.00	26.95
5785	-	17.822	1.59	1.85	3.44	5.36	30.00	24.64	2.89	3.35	6.24	7.95	36.00	28.05
5825	-	17.815	1.41	1.35	2.76	4.41	30.00	25.59	2.55	2.45	5.01	7.00	36.00	29.00

		RF0						**RF1**					
Tested Frequency	Duty Factor *1)	Power Meter Reading	Cable Loss	Atten. Loss	Directional Gain	Result Cond. Power	Result e.i.r.p.	Power Meter Reading	Cable Loss	Atten. Loss	Directional Gain	Result Cond. Power	Result e.i.r.p.
[MHz]	[dB]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]
5180	-	-11.96	4.35	9.87	2.43	2.26	4.69	-11.42	4.36	9.93	2.43	2.87	5.30
5220	-	-11.37	4.36	9.87	2.43	2.86	5.29	-11.85	4.37	9.93	2.43	2.45	4.88
5240	-	-11.14	4.36	9.88	2.43	3.10	5.53	-12.08	4.37	9.93	2.43	2.22	4.65
5745	-	-11.70	4.45	9.89	2.59	2.64	5.23	-10.25	4.46	9.93	2.59	4.14	6.73
5785	-	-12.33	4.46	9.89	2.59	2.02	4.61	-11.74	4.47	9.93	2.59	2.66	5.25
5825	-	-12.88	4.47	9.89	2.59	1.48	4.07	-13.09	4.47	9.93	2.59	1.31	3.90

*1) Duty Factor is not required because the measurement using a gated RF average power meter.

Sample Calculation:

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

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

Directional Gain = G_{ANT}(Antenna Gain *2)) + Array Gain

Array Gain = 0 dB(i.e.,no array gain) for $N_{ANT} < 4$

N_{ANT} = number of transmit antennas = 2

*2) Antenna Gain applied the highest gain of the two models.

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW

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

Maximum Conducted Output Power

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab. No.5 Shielded Room		
Date	July 8, 2020	July 9, 2020	July 20, 2020
Temperature / Humidity	23 deg. C / 65 % RH	25 deg. C / 50 % RH	25 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx 11ac-20 MIMO		

RF0 + RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted power Antenna RF0	RF1	Sum	Result	Limit	Margin	e.i.r.p. Antenna RF0	RF1	Sum	Result	Limit	Margin
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5180	-	17.783	1.73	2.00	3.73	5.72	23.97	18.25	2.83	3.50	6.33	8.01	29.97	21.96
5220	-	17.796	1.98	1.77	3.76	5.75	23.97	18.22	3.24	3.10	6.35	8.03	29.97	21.94
5240	-	17.780	2.08	1.75	3.83	5.83	23.97	18.14	3.40	3.06	6.47	8.11	29.97	21.86
5745	-	17.794	1.88	2.62	4.51	6.54	30.00	23.46	3.33	4.76	8.09	9.08	36.00	26.92
5785	-	17.788	1.62	1.87	3.48	5.42	30.00	24.58	2.86	3.39	6.25	7.96	36.00	28.04
5825	-	17.815	1.45	1.35	2.80	4.47	30.00	25.53	2.55	2.45	5.01	7.00	36.00	29.00

		RF0						**RF1**					
Tested Frequency	Duty Factor *1)	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain *2)	Result Cond. Power	e.i.r.p.	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain *2)	Result Cond. Power	e.i.r.p.
[MHz]	[dB]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]
5180	-	-11.84	4.35	9.87	2.14	2.38	4.52	-11.28	4.36	9.93	2.43	3.01	5.44
5220	-	-11.26	4.36	9.87	2.14	2.97	5.11	-11.81	4.37	9.93	2.43	2.49	4.92
5240	-	-11.06	4.36	9.88	2.14	3.18	5.32	-11.87	4.37	9.93	2.43	2.43	4.86
5745	-	-11.59	4.45	9.89	2.47	2.75	5.22	-10.20	4.46	9.93	2.59	4.19	6.78
5785	-	-12.26	4.46	9.89	2.47	2.09	4.56	-11.69	4.47	9.93	2.59	2.71	5.30
5825	-	-12.76	4.47	9.89	2.47	1.60	4.07	-13.09	4.47	9.93	2.59	1.31	3.90

*1) Duty Factor is not required because the measurement using a gated RF average power meter.
*2) Antenna Gain applied the higher of the two models.

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

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab. No.5 Shielded Room		
Date	July 8, 2020	July 9, 2020	July 20, 2020
Temperature / Humidity	23 deg. C / 65 % RH	25 deg. C / 50 % RH	25 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx 11n-40 SISO		

11n-40 SISO, RF0

Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor *1)	Antenna Gain *2)	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power				e.i.r.p.			
								Result		Limit	Margin	Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5190	-11.55	4.35	9.87	-	2.14	-	36.304	2.67	1.85	23.97	21.30	4.81	3.03	29.97	25.16
5230	-10.87	4.36	9.87	-	2.14	-	36.247	3.36	2.17	23.97	20.61	5.50	3.55	29.97	24.47
5755	-11.46	4.46	9.89	-	2.47	-	36.309	2.89	1.95	30.00	27.11	5.36	3.44	36.00	30.64
5795	-11.98	4.46	9.89	-	2.47	-	36.212	2.37	1.73	30.00	27.63	4.84	3.05	36.00	31.16

*1) Duty Factor is not required because the measurement using a gated RF average power meter.
*2) Antenna Gain applied the higher of the two models.

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

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

11n-40 SISO, RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor *1)	Antenna Gain *2)	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power				e.i.r.p.			
								Result		Limit	Margin	Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5190	-11.00	4.36	9.93	-	2.43	-	36.304	3.29	2.13	23.97	20.68	5.72	3.73	29.97	24.25
5230	-11.47	4.37	9.93	-	2.43	-	36.247	2.83	1.92	23.97	21.14	5.26	3.36	29.97	24.71
5755	-9.96	4.46	9.93	-	2.59	-	36.309	4.43	2.77	30.00	25.57	7.02	5.04	36.00	28.98
5795	-11.56	4.47	9.93	-	2.59	-	36.212	2.84	1.92	30.00	27.16	5.43	3.49	36.00	30.57

*1) Duty Factor is not required because the measurement using a gated RF average power meter.
*2) Antenna Gain applied the higher of the two models.

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

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab. No.5 Shielded Room		
Date	July 8, 2020	July 9, 2020	July 20, 2020
Temperature / Humidity	23 deg. C / 65 % RH	25 deg. C / 50 % RH	25 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx 11n-40 CDD		

RF0 + RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted power Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin	e.i.r.p. Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5190	-	36.297	1.74	1.92	3.66	5.64	23.97	18.33	3.05	3.37	6.41	8.07	29.97	21.90
5230	-	36.277	2.03	1.73	3.76	5.75	23.97	18.22	3.55	3.03	6.58	8.18	29.97	21.79
5755	-	36.311	1.79	2.43	4.22	6.25	30.00	23.75	3.25	4.41	7.66	8.84	36.00	27.16
5795	-	36.309	1.58	1.69	3.28	5.15	30.00	24.85	2.88	3.07	5.95	7.74	36.00	28.26

		RF0						**RF1**					
Tested Frequency	Duty Factor *1)	Power Meter Reading	Cable Loss	Atten. Loss	Directional Gain	Result Cond. Power	Result e.i.r.p.	Power Meter Reading	Cable Loss	Atten. Loss	Directional Gain	Result Cond. Power	Result e.i.r.p.
[MHz]	[dB]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]
5190	-	-11.81	4.35	9.87	2.43	2.41	4.84	-11.45	4.36	9.93	2.43	2.84	5.27
5230	-	-11.16	4.36	9.87	2.43	3.07	5.50	-11.91	4.37	9.93	2.43	2.39	4.82
5755	-	-11.82	4.46	9.89	2.59	2.53	5.12	-10.54	4.46	9.93	2.59	3.85	6.44
5795	-	-12.35	4.46	9.89	2.59	2.00	4.59	-12.12	4.47	9.93	2.59	2.28	4.87

*1) Duty Factor is not required because the measurement using a gated RF average power meter.

Sample Calculation:

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

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

Directional Gain = G_{ANT}(Antenna Gain *2)) + Array Gain

Array Gain = 0 dB(i.e.,no array gain) for $N_{ANT} < 4$

N_{ANT} = number of transmit antennas = 2

*2) Antenna Gain applied the highest gain of the two models.

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW

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

Maximum Conducted Output Power

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab. No.5 Shielded Room		
Date	July 8, 2020	July 9, 2020	July 20, 2020
Temperature / Humidity	23 deg. C / 65 % RH	25 deg. C / 50 % RH	25 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx 11n-40 MIMO		

RF0 + RF1

Applied limit: 15.407, mobile and portable client device

Tested	26 dB	99%	Conducted power						e.i.r.p.					
Frequency	EBW	OBW	Antenna			Result	Limit	Margin	Antenna			Result	Limit	Margin
	(B for FCC)	(B for IC)	RF0	RF1	Sum				RF0	RF1	Sum			
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5190	-	36.345	1.76	1.95	3.72	5.70	23.97	18.27	2.88	3.42	6.30	8.00	29.97	21.97
5230	-	36.381	2.04	1.76	3.80	5.80	23.97	18.17	3.33	3.08	6.42	8.07	29.97	21.90
5755	-	36.364	1.79	2.47	4.27	6.30	30.00	23.70	3.17	4.49	7.66	8.84	36.00	27.16
5795	-	36.377	1.58	1.71	3.29	5.17	30.00	24.83	2.79	3.10	5.89	7.70	36.00	28.30

		RF0						**RF1**					
Tested	Duty	Power	Cable	Atten.	Antenna	Result		Power	Cable	Atten.	Antenna	Result	
Frequency	Factor	Meter	Loss	Loss	Gain	Cond.	e.i.r.p.	Meter	Loss	Loss	Gain	Cond.	e.i.r.p.
	*1)	Reading			*2)	Power		Reading			*2)	Power	
[MHz]	[dB]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]
5190	-	-11.76	4.35	9.87	2.14	2.46	4.60	-11.38	4.36	9.93	2.43	2.91	5.34
5230	-	-11.14	4.36	9.87	2.14	3.09	5.23	-11.84	4.37	9.93	2.43	2.46	4.89
5755	-	-11.81	4.46	9.89	2.47	2.54	5.01	-10.46	4.46	9.93	2.59	3.93	6.52
5795	-	-12.36	4.46	9.89	2.47	1.99	4.46	-12.08	4.47	9.93	2.59	2.32	4.91

*1) Duty Factor is not required because the measurement using a gated RF average power meter.
*2) Antenna Gain applied the higher of the two models.

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

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab. No.5 Shielded Room		
Date	July 8, 2020	July 9, 2020	July 20, 2020
Temperature / Humidity	23 deg. C / 65 % RH	25 deg. C / 50 % RH	25 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx 11ac-40 SISO		

11ac-40 SISO, RF0 Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor *1)	Antenna Gain *2)	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power				e.i.r.p.			
								Result		Limit	Margin	Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5190	-11.55	4.35	9.87	-	2.14	-	36.305	2.67	1.85	23.97	21.30	4.81	3.03	29.97	25.16
5230	-10.91	4.36	9.87	-	2.14	-	36.235	3.32	2.15	23.97	20.65	5.46	3.52	29.97	24.51
5755	-11.48	4.46	9.89	-	2.47	-	36.357	2.87	1.94	30.00	27.13	5.34	3.42	36.00	30.66
5795	-12.00	4.46	9.89	-	2.47	-	36.285	2.35	1.72	30.00	27.65	4.82	3.03	36.00	31.18

*1) Duty Factor is not required because the measurement using a gated RF average power meter.
*2) Antenna Gain applied the higher of the two models.

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

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

11ac-40 SISO, RF1 Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor *1)	Antenna Gain *2)	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power				e.i.r.p.			
								Result		Limit	Margin	Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5190	-11.05	4.36	9.93	-	2.43	-	36.305	3.24	2.11	23.97	20.73	5.67	3.69	29.97	24.30
5230	-11.47	4.37	9.93	-	2.43	-	36.235	2.83	1.92	23.97	21.14	5.26	3.36	29.97	24.71
5755	-10.04	4.46	9.93	-	2.59	-	36.357	4.35	2.72	30.00	25.65	6.94	4.94	36.00	29.06
5795	-11.58	4.47	9.93	-	2.59	-	36.285	2.82	1.91	30.00	27.18	5.41	3.48	36.00	30.59

*1) Duty Factor is not required because the measurement using a gated RF average power meter.
*2) Antenna Gain applied the higher of the two models.

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

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab. No.5 Shielded Room		
Date	July 8, 2020	July 9, 2020	July 20, 2020
Temperature / Humidity	23 deg. C / 65 % RH	25 deg. C / 50 % RH	25 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx 11ac-40 CDD		

RF0 + RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted power Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin	e.i.r.p. Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5190	-	36.257	1.73	1.92	3.65	5.63	23.97	18.34	3.03	3.36	6.39	8.06	29.97	21.91
5230	-	36.296	2.02	1.73	3.75	5.74	23.97	18.23	3.53	3.03	6.57	8.17	29.97	21.80
5755	-	36.271	1.79	2.43	4.22	6.26	30.00	23.74	3.25	4.42	7.67	8.85	36.00	27.15
5795	-	36.259	1.60	1.68	3.28	5.16	30.00	24.84	2.91	3.05	5.96	7.75	36.00	28.25

		RF0						**RF1**					
Tested Frequency	Duty Factor *1)	Power Meter Reading	Cable Loss	Atten. Loss	Directional Gain	Result Cond. Power	Result e.i.r.p.	Power Meter Reading	Cable Loss	Atten. Loss	Directional Gain	Result Cond. Power	Result e.i.r.p.
[MHz]	[dB]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]
5190	-	-11.83	4.35	9.87	2.43	2.39	4.82	-11.46	4.36	9.93	2.43	2.83	5.26
5230	-	-11.18	4.36	9.87	2.43	3.05	5.48	-11.91	4.37	9.93	2.43	2.39	4.82
5755	-	-11.82	4.46	9.89	2.59	2.53	5.12	-10.53	4.46	9.93	2.59	3.86	6.45
5795	-	-12.30	4.46	9.89	2.59	2.05	4.64	-12.15	4.47	9.93	2.59	2.25	4.84

*1) Duty Factor is not required because the measurement using a gated RF average power meter.

Sample Calculation:

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

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

Directional Gain = G_{ANT}(Antenna Gain *2)) + Array Gain

Array Gain = 0 dB(i.e.,no array gain) for $N_{ANT} < 4$

N_{ANT} = number of transmit antennas = 2

*2) Antenna Gain applied the highest gain of the two models.

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW

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

Maximum Conducted Output Power

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab. No.5 Shielded Room		
Date	July 8, 2020	July 9, 2020	July 20, 2020
Temperature / Humidity	23 deg. C / 65 % RH	25 deg. C / 50 % RH	25 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx 11ac-40 MIMO		

RF0 + RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted power Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin	e.i.r.p. Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5190	-	36.485	1.73	1.94	3.67	5.65	23.97	18.32	2.83	3.40	6.23	7.94	29.97	22.03
5230	-	36.524	2.02	1.75	3.77	5.76	23.97	18.21	3.31	3.05	6.37	8.04	29.97	21.93
5755	-	36.472	1.82	2.48	4.30	6.34	30.00	23.66	3.22	4.50	7.72	8.88	36.00	27.12
5795	-	36.520	1.62	1.72	3.34	5.24	30.00	24.76	2.86	3.13	5.99	7.77	36.00	28.23

		RF0						**RF1**					
Tested Frequency	Duty Factor *1)	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain *2)	Result Cond. Power	Result e.i.r.p.	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain *2)	Result Cond. Power	Result e.i.r.p.
[MHz]	[dB]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]
5190	-	-11.84	4.35	9.87	2.14	2.38	4.52	-11.41	4.36	9.93	2.43	2.88	5.31
5230	-	-11.17	4.36	9.87	2.14	3.06	5.20	-11.88	4.37	9.93	2.43	2.42	4.85
5755	-	-11.74	4.46	9.89	2.47	2.61	5.08	-10.45	4.46	9.93	2.59	3.94	6.53
5795	-	-12.25	4.46	9.89	2.47	2.10	4.57	-12.04	4.47	9.93	2.59	2.36	4.95

*1) Duty Factor is not required because the measurement using a gated RF average power meter.
*2) Antenna Gain applied the higher of the two models.

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

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab. No.5 Shielded Room		
Date	July 8, 2020	July 9, 2020	July 20, 2020
Temperature / Humidity	23 deg. C / 65 % RH	25 deg. C / 50 % RH	25 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx 11ac-80 SISO		

11ac-80 SISO, RF0

Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor *1)	Antenna Gain *2)	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power				e.i.r.p.			
								Result		Limit	Margin	Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5210	-11.07	4.36	9.87	-	2.14	-	76.680	3.16	2.07	23.97	20.81	5.30	3.39	29.97	24.67
5775	-11.53	4.46	9.89	-	2.47	-	76.691	2.82	1.91	30.00	27.18	5.29	3.38	36.00	30.71

*1) Duty Factor is not required because the measurement using a gated RF average power meter.
*2) Antenna Gain applied the higher of the two models.

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

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

11ac-80 SISO, RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Duty Factor *1)	Antenna Gain *2)	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted Power				e.i.r.p.			
								Result		Limit	Margin	Result		Limit	Margin
[MHz]	[dBm]	[dB]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5210	-10.98	4.37	9.93	-	2.43	-	76.680	3.32	2.15	23.97	20.65	5.75	3.76	29.97	24.22
5775	-10.31	4.47	9.93	-	2.59	-	76.691	4.09	2.56	30.00	25.91	6.68	4.66	36.00	29.32

*1) Duty Factor is not required because the measurement using a gated RF average power meter.
*2) Antenna Gain applied the higher of the two models.

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

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab. No.5 Shielded Room		
Date	July 8, 2020	July 9, 2020	July 20, 2020
Temperature / Humidity	23 deg. C / 65 % RH	25 deg. C / 50 % RH	25 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx 11ac-80 CDD		

RF0 + RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	26 dB EBW (B for FCC)	99% OBW (B for IC)	Conducted power Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin	e.i.r.p. Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5210	-	76.354	1.97	1.95	3.92	5.93	23.97	18.04	3.44	3.41	6.86	8.36	29.97	21.61
5775	-	76.369	1.79	2.28	4.07	6.10	30.00	23.90	3.25	4.14	7.39	8.69	36.00	27.31

		RF0						**RF1**					
Tested Frequency	Duty Factor *1)	Power Meter Reading	Cable Loss	Atten. Loss	Directional Gain	Result Cond. Power	Result e.i.r.p.	Power Meter Reading	Cable Loss	Atten. Loss	Directional Gain	Result Cond. Power	Result e.i.r.p.
[MHz]	[dB]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]
5210	-	-11.29	4.36	9.87	2.43	2.94	5.37	-11.40	4.37	9.93	2.43	2.90	5.33
5775	-	-11.82	4.46	9.89	2.59	2.53	5.12	-10.82	4.47	9.93	2.59	3.58	6.17

*1) Duty Factor is not required because the measurement using a gated RF average power meter.

Sample Calculation:

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

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

Directional Gain = G_{ANT}(Antenna Gain *2)) + Array Gain

Array Gain = 0 dB(i.e.,no array gain) for $N_{ANT} < 4$

N_{ANT} = number of transmit antennas = 2

*2) Antenna Gain applied the highest gain of the two models.

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW

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

Maximum Conducted Output Power

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab. No.5 Shielded Room		
Date	July 8, 2020	July 9, 2020	July 20, 2020
Temperature / Humidity	23 deg. C / 65 % RH	25 deg. C / 50 % RH	25 deg. C / 44 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx 11ac-80 MIMO		

RF0 + RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	26 dB EBW	99% OBW	Conducted power						e.i.r.p.					
			Antenna			Result	Limit	Margin	Antenna			Result	Limit	Margin
	(B for FCC)	(B for IC)	RF0	RF1	Sum				RF0	RF1	Sum			
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5210	-	76.341	1.97	1.97	3.94	5.96	23.97	18.01	3.23	3.45	6.68	8.25	29.97	21.72
5775	-	76.300	1.81	2.32	4.13	6.16	30.00	23.84	3.20	4.21	7.41	8.70	36.00	27.30

		RF0						**RF1**					
Tested Frequency	Duty Factor *1)	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain *2)	Result Cond. Power	Result e.i.r.p.	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain *2)	Result Cond. Power	Result e.i.r.p.
[MHz]	[dB]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]
5210	-	-11.28	4.36	9.87	2.14	2.95	5.09	-11.35	4.37	9.93	2.43	2.95	5.38
5775	-	-11.77	4.46	9.89	2.47	2.58	5.05	-10.75	4.47	9.93	2.59	3.65	6.24

*1) Duty Factor is not required because the measurement using a gated RF average power meter.
*2) Antenna Gain applied the higher of the two models.

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

Conducted Power Limit (5150 MHz-5250 MHz) = 250 mW
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 8, 2020
Temperature / Humidity	23 deg. C / 65 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11a SISO

5180 MHz

Antenna	Rate [Mbps]	Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty factor *1) [dB]	Conducted Power Result [dBm]	Remarks
RF0	6	-11.84	4.35	9.87	-	2.38	-
	9	-11.84	4.35	9.87	-	2.38	-
	12	-11.82	4.35	9.87	-	2.40	-
	18	-11.79	4.35	9.87	-	2.43	-
	24	-11.79	4.35	9.87	-	2.43	-
	36	-11.76	4.35	9.87	-	2.46	-
	48	-11.75	4.35	9.87	-	2.47	-
	54	-11.73	4.35	9.87	-	2.49	-
RF1	6	-11.23	4.36	9.93	-	3.06	-
	9	-11.22	4.36	9.93	-	3.07	-
	12	-11.18	4.36	9.93	-	3.11	-
	18	-11.16	4.36	9.93	-	3.13	-
	24	-11.12	4.36	9.93	-	3.17	-
	36	-11.06	4.36	9.93	-	3.23	-
	48	-11.03	4.36	9.93	-	3.26	-
	54	-10.99	4.36	9.93	-	3.30	*

* Worst Rate

Sample Calculation:

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

*1) Duty facotr is not required because the measurement use a gated average power meter.

Maximum Conducted Output Power

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 8, 2020
Temperature / Humidity	23 deg. C / 65 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11a CDD

5180 MHz

Rate	Conducted power				Remarks
	Antenna			Result	
	RF0	RF1	Sum		
[Mbps]	[mW]	[mW]	[mW]	[dBm]	
6	1.62	1.76	3.38	5.29	-
9	1.62	1.76	3.38	5.29	-
12	1.63	1.75	3.39	5.30	-
18	1.64	1.77	3.41	5.33	-
24	1.64	1.78	3.42	5.34	-
36	1.66	1.84	3.50	5.44	-
48	1.67	1.86	3.53	5.48	-
54	1.69	1.90	3.59	5.55	*

* Worst Rate

		RF0				**RF1**			
Rate	Duty Factor *1)	Reading	Cable Loss	Atten. Loss	Result Cond. Power	Reading	Cable Loss	Atten. Loss	Result Cond. Power
[Mbps]	[dB]	[dBm]	[dB]	[dB]	[dBm]	[dBm]	[dB]	[dB]	[dBm]
6	-	-12.13	4.35	9.87	2.09	-11.83	4.36	9.93	2.46
9	-	-12.13	4.35	9.87	2.09	-11.83	4.36	9.93	2.46
12	-	-12.09	4.35	9.87	2.13	-11.85	4.36	9.93	2.44
18	-	-12.07	4.35	9.87	2.15	-11.80	4.36	9.93	2.49
24	-	-12.06	4.35	9.87	2.16	-11.79	4.36	9.93	2.50
36	-	-12.02	4.35	9.87	2.20	-11.64	4.36	9.93	2.65
48	-	-11.99	4.35	9.87	2.23	-11.59	4.36	9.93	2.70
54	-	-11.94	4.35	9.87	2.28	-11.51	4.36	9.93	2.78

*1) Duty Factor is not required because the measurement using a gated RF average power meter.

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss

Maximum Conducted Output Power

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 8, 2020
Temperature / Humidity	23 deg. C / 65 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11n-20 SISO

5180 MHz

Antenna	Rate [MCS]	Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty factor *1) [dB]	Conducted Power Result [dBm]	Remarks
RF0	0	-11.79	4.35	9.87	-	2.43	-
	1	-11.83	4.35	9.87	-	2.39	-
	2	-11.78	4.35	9.87	-	2.44	-
	3	-11.77	4.35	9.87	-	2.45	-
	4	-11.74	4.35	9.87	-	2.48	-
	5	-11.70	4.35	9.87	-	2.52	-
	6	-11.69	4.35	9.87	-	2.53	-
	7	-11.68	4.35	9.87	-	2.54	-
RF1	0	-11.13	4.36	9.93	-	3.16	-
	1	-11.13	4.36	9.93	-	3.16	-
	2	-11.10	4.36	9.93	-	3.19	-
	3	-11.10	4.36	9.93	-	3.19	-
	4	-11.03	4.36	9.93	-	3.26	-
	5	-10.94	4.36	9.93	-	3.35	-
	6	-10.96	4.36	9.93	-	3.33	-
	7	-10.93	4.36	9.93	-	3.36	*

* Worst Rate

Sample Calculation:

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

*1) Duty facotr is not required because the measurement use a gated average power meter.

Maximum Conducted Output Power

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 8, 2020
Temperature / Humidity	23 deg. C / 65 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11n-20 CDD

5180 MHz

Rate	Conducted power				Remarks
	Antenna			Result	
	RF0	RF1	Sum		
[MCS]	[mW]	[mW]	[mW]	[dBm]	
0	1.63	1.82	3.44	5.37	-
1	1.64	1.80	3.44	5.37	-
2	1.65	1.84	3.48	5.42	-
3	1.67	1.85	3.52	5.47	-
4	1.69	1.90	3.59	5.55	-
5	1.71	1.95	3.66	5.64	-
6	1.72	1.96	3.68	5.66	-
7	1.72	2.00	3.72	5.70	*

* Worst Rate

		RF0				RF1			
Rate	Duty Factor *1)	Reading	Cable Loss	Atten. Loss	Result Cond. Power	Reading	Cable Loss	Atten. Loss	Result Cond. Power
[MCS]	[dB]	[dBm]	[dB]	[dB]	[dBm]	[dBm]	[dB]	[dB]	[dBm]
0	-	-12.11	4.35	9.87	2.11	-11.70	4.36	9.93	2.59
1	-	-12.08	4.35	9.87	2.14	-11.73	4.36	9.93	2.56
2	-	-12.05	4.35	9.87	2.17	-11.65	4.36	9.93	2.64
3	-	-12.00	4.35	9.87	2.22	-11.61	4.36	9.93	2.68
4	-	-11.94	4.35	9.87	2.28	-11.51	4.36	9.93	2.78
5	-	-11.90	4.35	9.87	2.32	-11.38	4.36	9.93	2.91
6	-	-11.87	4.35	9.87	2.35	-11.36	4.36	9.93	2.93
7	-	-11.86	4.35	9.87	2.36	-11.29	4.36	9.93	3.00

*1) Duty Factor is not required because the measurement using a gated RF average power meter.

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss

Maximum Conducted Output Power

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 8, 2020
Temperature / Humidity	23 deg. C / 65 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11n-20 MIMO

5180 MHz

Rate	Conducted power				Remarks
	Antenna			Result	
	RF0	RF1	Sum		
[MCS]	[mW]	[mW]	[mW]	[dBm]	
8	1.61	1.80	3.41	5.33	-
9	1.63	1.82	3.46	5.39	-
10	1.64	1.85	3.49	5.43	-
11	1.66	1.86	3.53	5.47	-
12	1.67	1.92	3.59	5.56	-
13	1.71	1.93	3.63	5.60	-
14	1.74	1.97	3.71	5.69	-
15	1.73	1.98	3.72	5.70	*

* Worst Rate

		RF0				**RF1**			
Rate	Duty Factor *1)	Reading	Cable Loss	Atten. Loss	Result Cond. Power	Reading	Cable Loss	Atten. Loss	Result Cond. Power
[MCS]	[dB]	[dBm]	[dB]	[dB]	[dBm]	[dBm]	[dB]	[dB]	[dBm]
8	-	-12.16	4.35	9.87	2.06	-11.73	4.36	9.93	2.56
9	-	-12.09	4.35	9.87	2.13	-11.68	4.36	9.93	2.61
10	-	-12.06	4.35	9.87	2.16	-11.62	4.36	9.93	2.67
11	-	-12.01	4.35	9.87	2.21	-11.59	4.36	9.93	2.70
12	-	-11.98	4.35	9.87	2.24	-11.46	4.36	9.93	2.83
13	-	-11.90	4.35	9.87	2.32	-11.44	4.36	9.93	2.85
14	-	-11.82	4.35	9.87	2.40	-11.34	4.36	9.93	2.95
15	-	-11.83	4.35	9.87	2.39	-11.32	4.36	9.93	2.97

*1) Duty Factor is not required because the measurement using a gated RF average power meter.

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss

Maximum Conducted Output Power

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 8, 2020
Temperature / Humidity	23 deg. C / 65 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-20 SISO

5180 MHz

Antenna	Rate [MCS]	Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty factor *1) [dB]	Conducted Power Result [dBm]	Remarks
RF0	0	-11.82	4.35	9.87	-	2.40	-
	1	-11.82	4.35	9.87	-	2.40	-
	2	-11.79	4.35	9.87	-	2.43	-
	3	-11.77	4.35	9.87	-	2.45	-
	4	-11.72	4.35	9.87	-	2.50	-
	5	-11.68	4.35	9.87	-	2.54	-
	6	-11.66	4.35	9.87	-	2.56	-
	7	-11.60	4.35	9.87	-	2.62	-
	8	-11.66	4.35	9.87	-	2.56	-
RF1	0	-11.35	4.36	9.93	-	2.94	-
	1	-11.32	4.36	9.93	-	2.97	-
	2	-11.26	4.36	9.93	-	3.03	-
	3	-11.22	4.36	9.93	-	3.07	-
	4	-11.17	4.36	9.93	-	3.12	-
	5	-11.09	4.36	9.93	-	3.20	-
	6	-11.05	4.36	9.93	-	3.24	-
	7	-11.06	4.36	9.93	-	3.23	-
	8	-11.04	4.36	9.93	-	3.25	*

* Worst Rate

Sample Calculation:

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

Maximum Conducted Output Power

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 8, 2020
Temperature / Humidity	23 deg. C / 65 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-20 CDD

5180 MHz

Rate	Conducted power				Remarks
	Antenna			Result	
	RF0	RF1	Sum		
[MCS]	[mW]	[mW]	[mW]	[dBm]	
0	1.58	1.73	3.32	5.21	-
1	1.59	1.75	3.33	5.23	-
2	1.60	1.77	3.37	5.27	-
3	1.61	1.78	3.39	5.31	-
4	1.63	1.82	3.46	5.39	-
5	1.65	1.85	3.49	5.43	-
6	1.67	1.89	3.57	5.52	-
7	1.67	1.93	3.60	5.57	-
8	1.68	1.94	3.62	5.59	*

* Worst Rate

		RF0				RF1			
Rate	Duty Factor *1)	Reading	Cable Loss	Atten. Loss	Result Cond. Power	Reading	Cable Loss	Atten. Loss	Result Cond. Power
[MCS]	[dB]	[dBm]	[dB]	[dB]	[dBm]	[dBm]	[dB]	[dB]	[dBm]
0	-	-12.22	4.35	9.87	2.00	-11.90	4.36	9.93	2.39
1	-	-12.21	4.35	9.87	2.01	-11.87	4.36	9.93	2.42
2	-	-12.19	4.35	9.87	2.03	-11.81	4.36	9.93	2.48
3	-	-12.14	4.35	9.87	2.08	-11.79	4.36	9.93	2.50
4	-	-12.09	4.35	9.87	2.13	-11.68	4.36	9.93	2.61
5	-	-12.05	4.35	9.87	2.17	-11.63	4.36	9.93	2.66
6	-	-11.98	4.35	9.87	2.24	-11.52	4.36	9.93	2.77
7	-	-11.98	4.35	9.87	2.24	-11.44	4.36	9.93	2.85
8	-	-11.96	4.35	9.87	2.26	-11.42	4.36	9.93	2.87

*1) Duty Factor is not required because the measurement using a gated RF average power meter.

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss

Maximum Conducted Output Power

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 8, 2020
Temperature / Humidity	23 deg. C / 65 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-20 MIMO

5180 MHz

Rate	Conducted power				Remarks
	Antenna			Result	
	RF0	RF1	Sum		
[MCS]	[mW]	[mW]	[mW]	[dBm]	
0	1.64	1.84	3.48	5.42	-
1	1.64	1.84	3.47	5.41	-
2	1.66	1.87	3.53	5.47	-
3	1.66	1.88	3.54	5.49	-
4	1.70	1.95	3.65	5.63	-
5	1.71	1.96	3.67	5.65	-
6	1.73	1.97	3.70	5.68	-
7	1.72	2.01	3.73	5.71	-
8	1.73	2.00	3.73	5.72	*

* Worst Rate

		RF0				**RF1**			
Rate	Duty Factor *1)	Reading	Cable Loss	Atten. Loss	Result Cond. Power	Reading	Cable Loss	Atten. Loss	Result Cond. Power
[MCS]	[dB]	[dBm]	[dB]	[dB]	[dBm]	[dBm]	[dB]	[dB]	[dBm]
0	-	-12.06	4.35	9.87	2.16	-11.65	4.36	9.93	2.64
1	-	-12.08	4.35	9.87	2.14	-11.65	4.36	9.93	2.64
2	-	-12.03	4.35	9.87	2.19	-11.57	4.36	9.93	2.72
3	-	-12.01	4.35	9.87	2.21	-11.55	4.36	9.93	2.74
4	-	-11.91	4.35	9.87	2.31	-11.39	4.36	9.93	2.90
5	-	-11.89	4.35	9.87	2.33	-11.36	4.36	9.93	2.93
6	-	-11.85	4.35	9.87	2.37	-11.34	4.36	9.93	2.95
7	-	-11.87	4.35	9.87	2.35	-11.26	4.36	9.93	3.03
8	-	-11.84	4.35	9.87	2.38	-11.28	4.36	9.93	3.01

*1) Duty Factor is not required because the measurement using a gated RF average power meter.

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss

Maximum Conducted Output Power

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 8, 2020
Temperature / Humidity	23 deg. C / 65 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11n-40 SISO

5190 MHz

Antenna	Rate [MCS]	Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty factor *1) [dB]	Conducted Power Result [dBm]	Remarks
RF0	0	-11.75	4.35	9.87	-	2.47	-
	1	-11.73	4.35	9.87	-	2.49	-
	2	-11.70	4.35	9.87	-	2.52	-
	3	-11.62	4.35	9.87	-	2.60	-
	4	-11.60	4.35	9.87	-	2.62	-
	5	-11.55	4.35	9.87	-	2.67	-
	6	-11.54	4.35	9.87	-	2.68	-
	7	-11.56	4.35	9.87	-	2.66	-
RF1	0	-11.35	4.36	9.93	-	2.94	-
	1	-11.31	4.36	9.93	-	2.98	-
	2	-11.25	4.36	9.93	-	3.04	-
	3	-11.15	4.36	9.93	-	3.14	-
	4	-11.11	4.36	9.93	-	3.18	-
	5	-11.00	4.36	9.93	-	3.29	*
	6	-11.02	4.36	9.93	-	3.27	-
	7	-11.01	4.36	9.93	-	3.28	-

* Worst Rate

Sample Calculation:

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

*1) Duty facotr is not required because the measurement use a gated average power meter.

Maximum Conducted Output Power

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 8, 2020
Temperature / Humidity	23 deg. C / 65 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11n-40 CDD

5190 MHz

Rate	Conducted power				Remarks
	Antenna			Result	
	RF0	RF1	Sum		
[MCS]	[mW]	[mW]	[mW]	[dBm]	
0	1.63	1.75	3.38	5.29	-
1	1.64	1.77	3.41	5.32	-
2	1.65	1.80	3.45	5.38	-
3	1.69	1.85	3.54	5.48	-
4	1.70	1.89	3.59	5.55	-
5	1.74	1.92	3.66	5.64	*
6	1.72	1.94	3.66	5.63	-
7	1.73	1.92	3.66	5.63	-

* Worst Rate

		RF0				**RF1**			
Rate	Duty Factor *1)	Reading	Cable Loss	Atten. Loss	Result Cond. Power	Reading	Cable Loss	Atten. Loss	Result Cond. Power
[MCS]	[dB]	[dBm]	[dB]	[dB]	[dBm]	[dBm]	[dB]	[dB]	[dBm]
0	-	-12.10	4.35	9.87	2.12	-11.85	4.36	9.93	2.44
1	-	-12.07	4.35	9.87	2.15	-11.82	4.36	9.93	2.47
2	-	-12.05	4.35	9.87	2.17	-11.73	4.36	9.93	2.56
3	-	-11.95	4.35	9.87	2.27	-11.62	4.36	9.93	2.67
4	-	-11.92	4.35	9.87	2.30	-11.53	4.36	9.93	2.76
5	-	-11.81	4.35	9.87	2.41	-11.45	4.36	9.93	2.84
6	-	-11.86	4.35	9.87	2.36	-11.42	4.36	9.93	2.87
7	-	-11.83	4.35	9.87	2.39	-11.45	4.36	9.93	2.84

*1) Duty Factor is not required because the measurement using a gated RF average power meter.

Sample Calculation:

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

Maximum Conducted Output Power

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 8, 2020
Temperature / Humidity	23 deg. C / 65 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11n-40 MIMO

5190 MHz

Rate	Conducted power				Remarks
	Antenna			Result	
	RF0	RF1	Sum		
[MCS]	[mW]	[mW]	[mW]	[dBm]	
8	1.62	1.74	3.36	5.27	-
9	1.65	1.78	3.43	5.35	-
10	1.67	1.82	3.49	5.43	-
11	1.68	1.86	3.54	5.49	-
12	1.72	1.91	3.62	5.59	-
13	1.76	1.95	3.72	5.70	*
14	1.74	1.96	3.70	5.68	-
15	1.75	1.96	3.70	5.69	-

* Worst Rate

		RF0				**RF1**			
Rate	Duty Factor *1)	Reading	Cable Loss	Atten. Loss	Result Cond. Power	Reading	Cable Loss	Atten. Loss	Result Cond. Power
[MCS]	[dB]	[dBm]	[dB]	[dB]	[dBm]	[dBm]	[dB]	[dB]	[dBm]
8	-	-12.12	4.35	9.87	2.10	-11.88	4.36	9.93	2.41
9	-	-12.04	4.35	9.87	2.18	-11.79	4.36	9.93	2.50
10	-	-11.99	4.35	9.87	2.23	-11.68	4.36	9.93	2.61
11	-	-11.97	4.35	9.87	2.25	-11.60	4.36	9.93	2.69
12	-	-11.87	4.35	9.87	2.35	-11.49	4.36	9.93	2.80
13	-	-11.76	4.35	9.87	2.46	-11.38	4.36	9.93	2.91
14	-	-11.82	4.35	9.87	2.40	-11.37	4.36	9.93	2.92
15	-	-11.80	4.35	9.87	2.42	-11.37	4.36	9.93	2.92

*1) Duty Factor is not required because the measurement using a gated RF average power meter.

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss

Maximum Conducted Output Power

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 8, 2020
Temperature / Humidity	23 deg. C / 65 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-40 SISO

5190 MHz

Antenna	Rate [MCS]	Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty factor *1) [dB]	Conducted Power Result [dBm]	Remarks
RF0	0	-11.73	4.35	9.87	-	2.49	-
	1	-11.73	4.35	9.87	-	2.49	-
	2	-11.69	4.35	9.87	-	2.53	-
	3	-11.66	4.35	9.87	-	2.56	-
	4	-11.61	4.35	9.87	-	2.61	-
	5	-11.59	4.35	9.87	-	2.63	-
	6	-11.55	4.35	9.87	-	2.67	-
	7	-11.55	4.35	9.87	-	2.67	-
	8	-11.55	4.35	9.87	-	2.67	-
	9	-11.56	4.35	9.87	-	2.66	-
RF1	0	-11.33	4.36	9.93	-	2.96	-
	1	-11.32	4.36	9.93	-	2.97	-
	2	-11.25	4.36	9.93	-	3.04	-
	3	-11.21	4.36	9.93	-	3.08	-
	4	-11.18	4.36	9.93	-	3.11	-
	5	-11.13	4.36	9.93	-	3.16	-
	6	-11.07	4.36	9.93	-	3.22	-
	7	-11.05	4.36	9.93	-	3.24	*
	8	-11.10	4.36	9.93	-	3.19	-
	9	-11.10	4.36	9.93	-	3.19	-

* Worst Rate

Sample Calculation:

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

*1) Duty facotr is not required because the measurement use a gated average power meter.

Maximum Conducted Output Power

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 8, 2020
Temperature / Humidity	23 deg. C / 65 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-40 CDD

5190 MHz

Rate	Conducted power				Remarks
	Antenna			Result	
	RF0	RF1	Sum		
[MCS]	[mW]	[mW]	[mW]	[dBm]	
0	1.62	1.73	3.35	5.25	-
1	1.63	1.75	3.39	5.30	-
2	1.65	1.77	3.42	5.34	-
3	1.67	1.81	3.49	5.42	-
4	1.70	1.85	3.55	5.50	-
5	1.71	1.88	3.59	5.56	-
6	1.71	1.92	3.63	5.60	-
7	1.73	1.92	3.65	5.63	*
8	1.68	1.94	3.62	5.59	-
9	1.67	1.92	3.59	5.55	-

* Worst Rate

		RF0				RF1			
Rate	Duty Factor *1)	Reading	Cable Loss	Atten. Loss	Result Cond. Power	Reading	Cable Loss	Atten. Loss	Result Cond. Power
[MCS]	[dB]	[dBm]	[dB]	[dB]	[dBm]	[dBm]	[dB]	[dB]	[dBm]
0	-	-12.12	4.35	9.87	2.10	-11.92	4.36	9.93	2.37
1	-	-12.09	4.35	9.87	2.13	-11.85	4.36	9.93	2.44
2	-	-12.05	4.35	9.87	2.17	-11.81	4.36	9.93	2.48
3	-	-11.98	4.35	9.87	2.24	-11.71	4.36	9.93	2.58
4	-	-11.91	4.35	9.87	2.31	-11.62	4.36	9.93	2.67
5	-	-11.89	4.35	9.87	2.33	-11.54	4.36	9.93	2.75
6	-	-11.88	4.35	9.87	2.34	-11.46	4.36	9.93	2.83
7	-	-11.83	4.35	9.87	2.39	-11.46	4.36	9.93	2.83
8	-	-11.96	4.35	9.87	2.26	-11.41	4.36	9.93	2.88
9	-	-12.00	4.35	9.87	2.22	-11.45	4.36	9.93	2.84

*1) Duty Factor is not required because the measurement using a gated RF average power meter.

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss

Maximum Conducted Output Power

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 8, 2020
Temperature / Humidity	23 deg. C / 65 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-40 MIMO

5190 MHz

Rate	Conducted power				Remarks
	Antenna			Result	
	RF0	RF1	Sum		
[MCS]	[mW]	[mW]	[mW]	[dBm]	
0	1.65	1.80	3.45	5.38	-
1	1.66	1.81	3.47	5.40	-
2	1.66	1.83	3.49	5.43	-
3	1.69	1.87	3.57	5.53	-
4	1.71	1.90	3.61	5.57	-
5	1.73	1.94	3.66	5.64	-
6	1.73	1.94	3.67	5.64	-
7	1.73	1.94	3.67	5.65	*
8	1.71	1.95	3.67	5.64	-
9	1.71	1.95	3.66	5.63	-

* Worst Rate

		RF0				**RF1**			
Rate	Duty Factor *1)	Reading	Cable Loss	Atten. Loss	Result Cond. Power	Reading	Cable Loss	Atten. Loss	Result Cond. Power
[MCS]	[dB]	[dBm]	[dB]	[dB]	[dBm]	[dBm]	[dB]	[dB]	[dBm]
0	-	-12.04	4.35	9.87	2.18	-11.73	4.36	9.93	2.56
1	-	-12.03	4.35	9.87	2.19	-11.71	4.36	9.93	2.58
2	-	-12.01	4.35	9.87	2.21	-11.67	4.36	9.93	2.62
3	-	-11.93	4.35	9.87	2.29	-11.56	4.36	9.93	2.73
4	-	-11.89	4.35	9.87	2.33	-11.51	4.36	9.93	2.78
5	-	-11.85	4.35	9.87	2.37	-11.42	4.36	9.93	2.87
6	-	-11.84	4.35	9.87	2.38	-11.42	4.36	9.93	2.87
7	-	-11.84	4.35	9.87	2.38	-11.41	4.36	9.93	2.88
8	-	-11.88	4.35	9.87	2.34	-11.38	4.36	9.93	2.91
9	-	-11.89	4.35	9.87	2.33	-11.40	4.36	9.93	2.89

*1) Duty Factor is not required because the measurement using a gated RF average power meter.

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss

Maximum Conducted Output Power

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 8, 2020
Temperature / Humidity	23 deg. C / 65 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-80 SISO

5210 MHz

Antenna	Rate [MCS]	Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Duty factor *1) [dB]	Conducted Power Result [dBm]	Remarks
RF0	0	-11.23	4.36	9.87	-	3.00	-
	1	-11.23	4.36	9.87	-	3.00	-
	2	-11.19	4.36	9.87	-	3.04	-
	3	-11.15	4.36	9.87	-	3.08	-
	4	-11.13	4.36	9.87	-	3.10	-
	5	-11.08	4.36	9.87	-	3.15	-
	6	-11.09	4.36	9.87	-	3.14	-
	7	-11.10	4.36	9.87	-	3.13	-
	8	-11.07	4.36	9.87	-	3.16	-
	9	-11.07	4.36	9.87	-	3.16	-
RF1	0	-11.25	4.37	9.93	-	3.05	-
	1	-11.23	4.37	9.93	-	3.07	-
	2	-11.18	4.37	9.93	-	3.12	-
	3	-11.13	4.37	9.93	-	3.17	-
	4	-11.08	4.37	9.93	-	3.22	-
	5	-11.00	4.37	9.93	-	3.30	-
	6	-11.03	4.37	9.93	-	3.27	-
	7	-11.03	4.37	9.93	-	3.27	-
	8	-11.00	4.37	9.93	-	3.30	-
	9	-10.98	4.37	9.93	-	3.32	*

* Worst Rate

Sample Calculation:

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

*1) Duty facotr is not required because the measurement use a gated average power meter.

Maximum Conducted Output Power

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 8, 2020
Temperature / Humidity	23 deg. C / 65 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-80 CDD

5210 MHz

Rate	Conducted power				Remarks
	Antenna			Result	
	RF0	RF1	Sum		
[MCS]	[mW]	[mW]	[mW]	[dBm]	
0	1.87	1.79	3.66	5.63	-
1	1.88	1.80	3.68	5.66	-
2	1.88	1.82	3.70	5.69	-
3	1.90	1.85	3.75	5.74	-
4	1.93	1.86	3.79	5.79	-
5	1.96	1.93	3.90	5.91	-
6	1.96	1.94	3.90	5.91	-
7	1.97	1.93	3.90	5.92	-
8	1.96	1.95	3.91	5.92	-
9	1.97	1.95	3.92	5.93	*

* Worst Rate

		RF0				**RF1**			
Rate	Duty Factor *1)	Reading	Cable Loss	Atten. Loss	Result Cond. Power	Reading	Cable Loss	Atten. Loss	Result Cond. Power
[MCS]	[dB]	[dBm]	[dB]	[dB]	[dBm]	[dBm]	[dB]	[dB]	[dBm]
0	-	-11.52	4.36	9.87	2.71	-11.77	4.37	9.93	2.53
1	-	-11.49	4.36	9.87	2.74	-11.74	4.37	9.93	2.56
2	-	-11.48	4.36	9.87	2.75	-11.70	4.37	9.93	2.60
3	-	-11.44	4.36	9.87	2.79	-11.63	4.37	9.93	2.67
4	-	-11.37	4.36	9.87	2.86	-11.60	4.37	9.93	2.70
5	-	-11.30	4.36	9.87	2.93	-11.44	4.37	9.93	2.86
6	-	-11.30	4.36	9.87	2.93	-11.43	4.37	9.93	2.87
7	-	-11.28	4.36	9.87	2.95	-11.44	4.37	9.93	2.86
8	-	-11.30	4.36	9.87	2.93	-11.41	4.37	9.93	2.89
9	-	-11.29	4.36	9.87	2.94	-11.40	4.37	9.93	2.90

*1) Duty Factor is not required because the measurement using a gated RF average power meter.

Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss

Maximum Conducted Output Power

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 8, 2020
Temperature / Humidity	23 deg. C / 65 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-80 MIMO

5210 MHz

Rate	Conducted power				Remarks
	Antenna			Result	
	RF0	RF1	Sum		
[MCS]	[mW]	[mW]	[mW]	[dBm]	
0	1.89	1.79	3.68	5.66	-
1	1.91	1.81	3.71	5.70	-
2	1.93	1.86	3.79	5.79	-
3	1.94	1.89	3.82	5.83	-
4	1.94	1.90	3.84	5.84	-
5	1.96	1.91	3.87	5.88	-
6	1.96	1.91	3.86	5.87	-
7	1.95	1.92	3.88	5.89	-
8	1.95	1.90	3.85	5.85	-
9	1.97	1.96	3.93	5.94	*

* Worst Rate

		RF0				**RF1**			
Rate	Duty Factor *1)	Reading	Cable Loss	Atten. Loss	Result Cond. Power	Reading	Cable Loss	Atten. Loss	Result Cond. Power
[MCS]	[dB]	[dBm]	[dB]	[dB]	[dBm]	[dBm]	[dB]	[dB]	[dBm]
0	-	-11.47	4.36	9.87	2.76	-11.77	4.37	9.93	2.53
1	-	-11.43	4.36	9.87	2.80	-11.73	4.37	9.93	2.57
2	-	-11.38	4.36	9.87	2.85	-11.60	4.37	9.93	2.70
3	-	-11.36	4.36	9.87	2.87	-11.54	4.37	9.93	2.76
4	-	-11.35	4.36	9.87	2.88	-11.52	4.37	9.93	2.78
5	-	-11.31	4.36	9.87	2.92	-11.48	4.37	9.93	2.82
6	-	-11.31	4.36	9.87	2.92	-11.50	4.37	9.93	2.80
7	-	-11.32	4.36	9.87	2.91	-11.46	4.37	9.93	2.84
8	-	-11.34	4.36	9.87	2.89	-11.51	4.37	9.93	2.79
9	-	-11.29	4.36	9.87	2.94	-11.38	4.37	9.93	2.92

*1) Duty Factor is not required because the measurement using a gated RF average power meter.

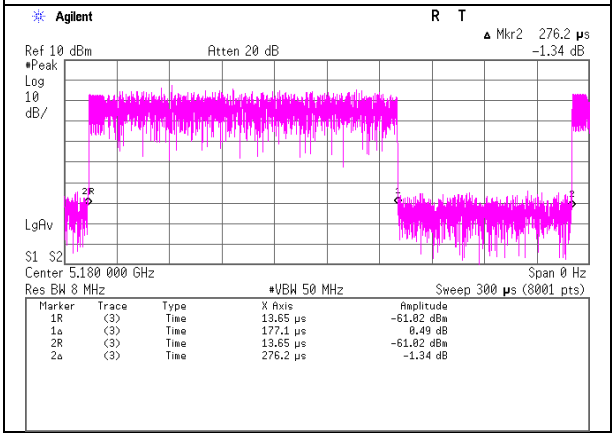
Sample Calculation:
Conducted Power Result = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss

Burst rate confirmation

Report No.	13385909S-C-R2	
Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	June 26, 2020	July 31, 2020
Temperature / Humidity	23 deg. C / 47 % RH	23 deg. C / 61 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx	

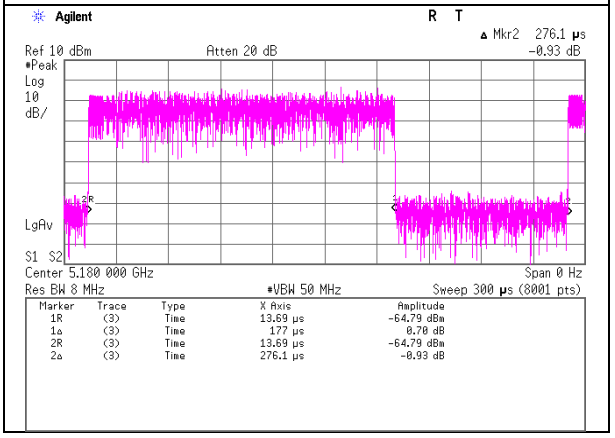
11a SISO, 54 Mbps

Tx on / (Tx on + Tx off) = 0.641
Tx on / (Tx on + Tx off) * 100 = 64.1 %
Duty factor = 10 * log (276.2 / 177.1) = 1.94 dB



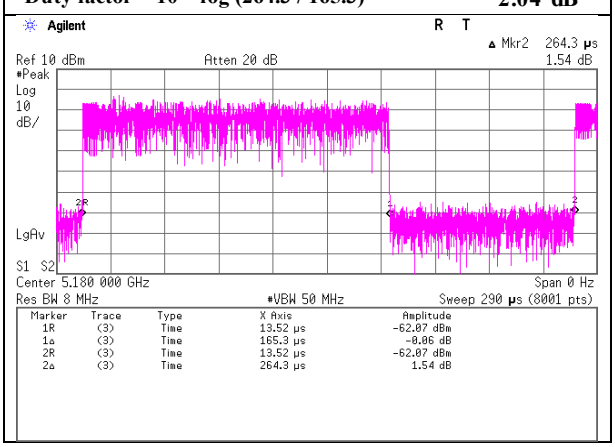
11a CDD, 54 Mbps

Tx on / (Tx on + Tx off) = 0.641
Tx on / (Tx on + Tx off) * 100 = 64.1 %
Duty factor = 10 * log (276.1 / 177) = 1.94 dB



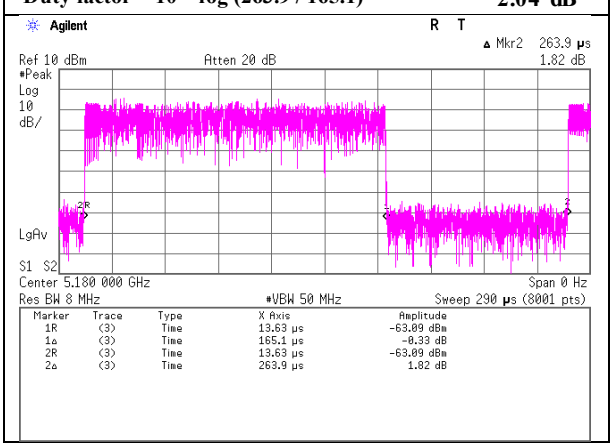
11n-20 SISO, MCS 7

Tx on / (Tx on + Tx off) = 0.625
Tx on / (Tx on + Tx off) * 100 = 62.5 %
Duty factor = 10 * log (264.3 / 165.3) = 2.04 dB



11n-20 CDD, MCS 7

Tx on / (Tx on + Tx off) = 0.626
Tx on / (Tx on + Tx off) * 100 = 62.6 %
Duty factor = 10 * log (263.9 / 165.1) = 2.04 dB

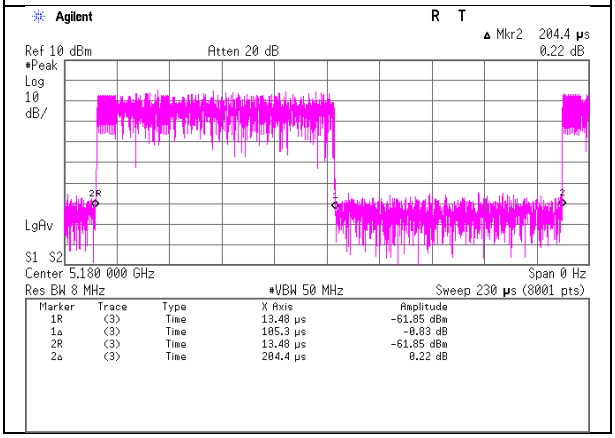


Burst rate confirmation

Report No.	13385909S-C-R2	
Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	June 26, 2020	July 31, 2020
Temperature / Humidity	23 deg. C / 47 % RH	23 deg. C / 61 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx	

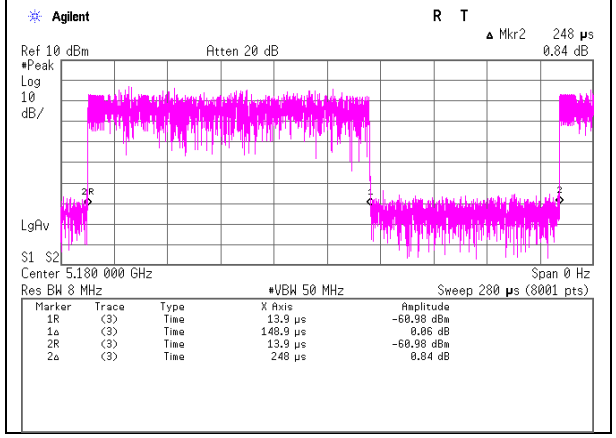
11n-20 MIMO, MCS 15

Tx on / (Tx on + Tx off) = 0.515
Tx on / (Tx on + Tx off) * 100 = 51.5 %
Duty factor = 10 * log (204.4 / 105.3) = 2.89 dB



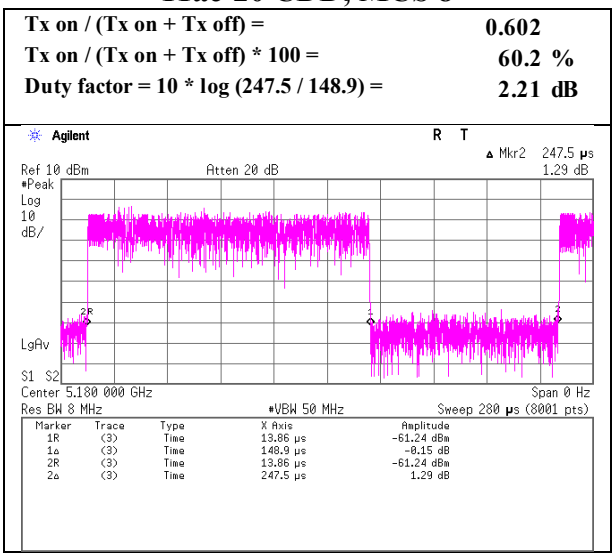
11ac-20 SISO, MCS 8

Tx on / (Tx on + Tx off) = 0.600
Tx on / (Tx on + Tx off) * 100 = 60.0 %
Duty factor = 10 * log (248 / 148.9) = 2.22 dB



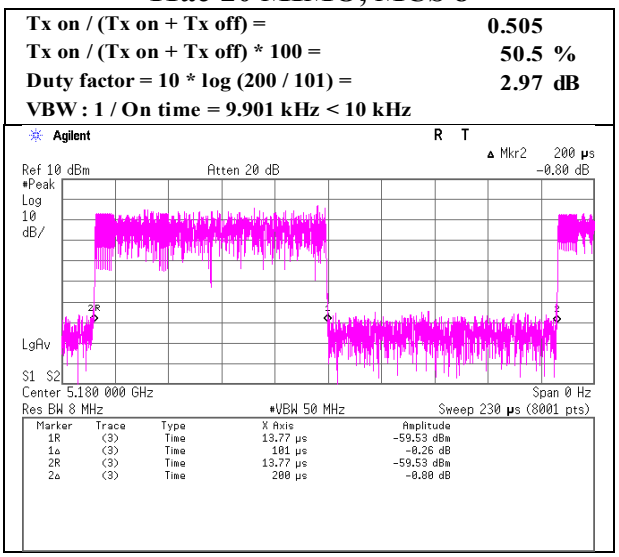
11ac-20 CDD, MCS 8

Tx on / (Tx on + Tx off) = 0.602
Tx on / (Tx on + Tx off) * 100 = 60.2 %
Duty factor = 10 * log (247.5 / 148.9) = 2.21 dB



11ac-20 MIMO, MCS 8

Tx on / (Tx on + Tx off) = 0.505
Tx on / (Tx on + Tx off) * 100 = 50.5 %
Duty factor = 10 * log (200 / 101) = 2.97 dB
VBW : 1 / On time = 9.901 kHz < 10 kHz

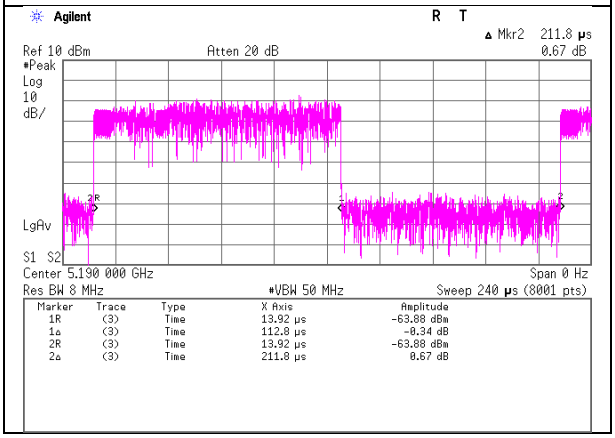


Burst rate confirmation

Report No.	13385909S-C-R2	
Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	June 26, 2020	July 31, 2020
Temperature / Humidity	23 deg. C / 47 % RH	23 deg. C / 61 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx	

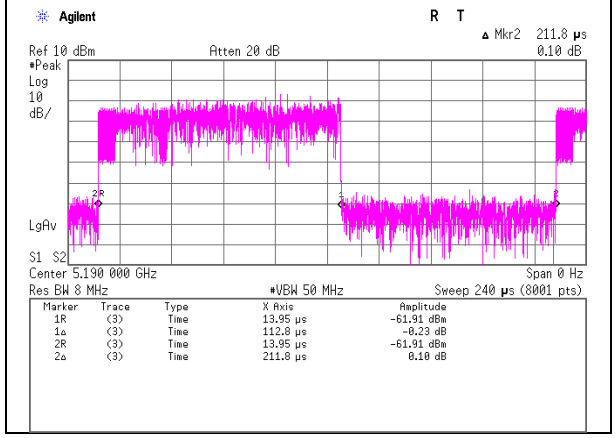
11n-40 SISO, MCS 5

Tx on / (Tx on + Tx off) = 0.533
Tx on / (Tx on + Tx off) * 100 = 53.3 %
Duty factor = 10 * log (211.8 / 112.8) = 2.74 dB



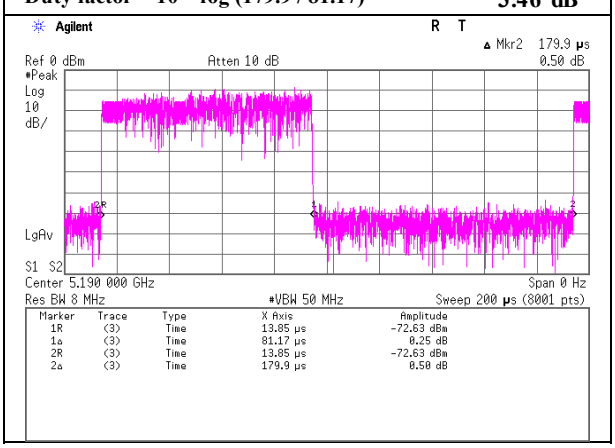
11n-40 CDD, MCS 5

Tx on / (Tx on + Tx off) = 0.533
Tx on / (Tx on + Tx off) * 100 = 53.3 %
Duty factor = 10 * log (211.8 / 112.8) = 2.74 dB



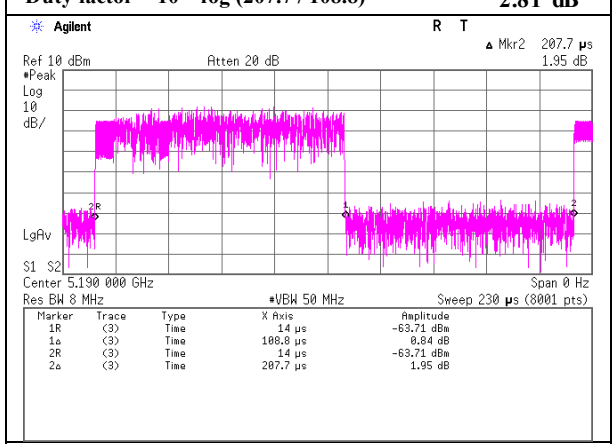
11n-40 MIMO, MCS 13

Tx on / (Tx on + Tx off) = 0.451
Tx on / (Tx on + Tx off) * 100 = 45.1 %
Duty factor = 10 * log (179.9 / 81.17) = 3.46 dB



11ac-40 SISO, MCS 7

Tx on / (Tx on + Tx off) = 0.524
Tx on / (Tx on + Tx off) * 100 = 52.4 %
Duty factor = 10 * log (207.7 / 108.8) = 2.81 dB

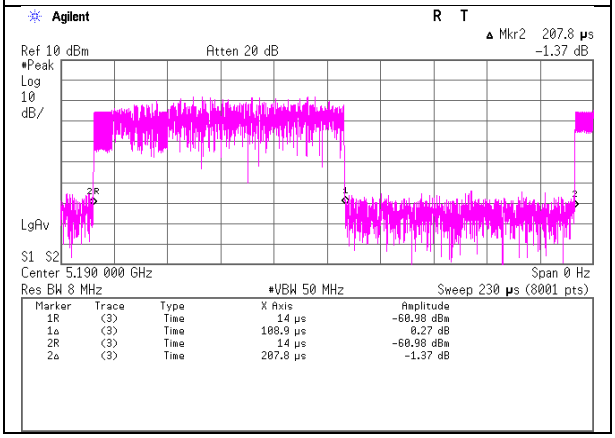


Burst rate confirmation

Report No.	13385909S-C-R2	
Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	June 26, 2020	July 31, 2020
Temperature / Humidity	23 deg. C / 47 % RH	23 deg. C / 61 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx	

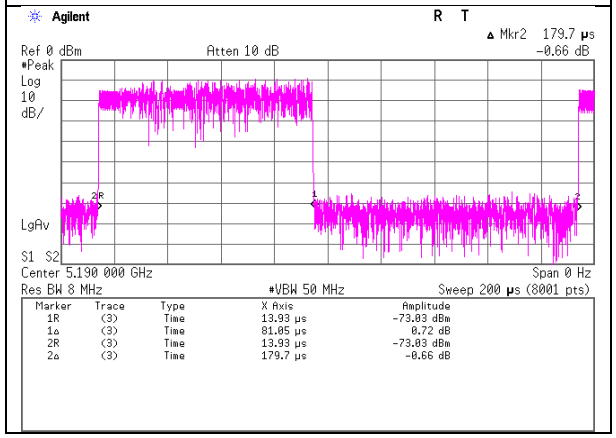
11ac-40 CDD, MCS 7

Tx on / (Tx on + Tx off) = 0.524
Tx on / (Tx on + Tx off) * 100 = 52.4 %
Duty factor = 10 * log (207.8 / 108.9) = 2.81 dB



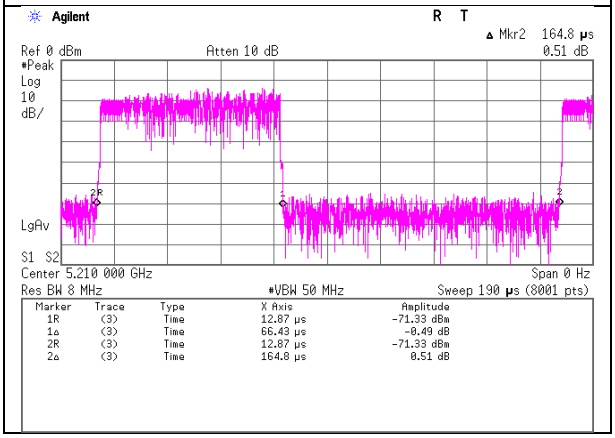
11ac-40 MIMO, MCS 7

Tx on / (Tx on + Tx off) = 0.451
Tx on / (Tx on + Tx off) * 100 = 45.1 %
Duty factor = 10 * log (179.7 / 81.05) = 3.46 dB
VBW : 1 / On time = 12.339 kHz < 13 kHz



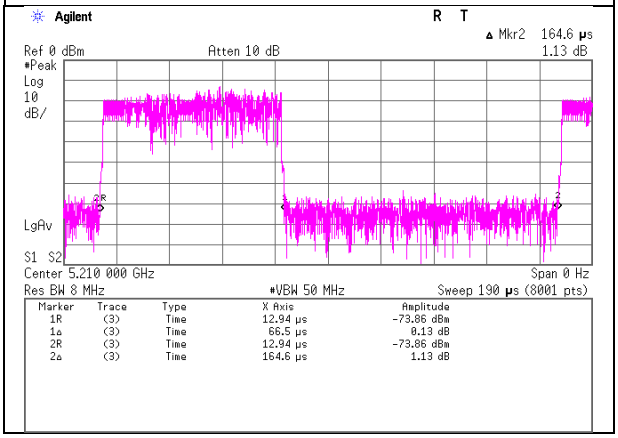
11ac-80 SISO, MCS 9

Tx on / (Tx on + Tx off) = 0.403
Tx on / (Tx on + Tx off) * 100 = 40.3 %
Duty factor = 10 * log (164.8 / 66.43) = 3.95 dB



11ac-80 CDD, MCS 9

Tx on / (Tx on + Tx off) = 0.404
Tx on / (Tx on + Tx off) * 100 = 40.4 %
Duty factor = 10 * log (164.6 / 66.5) = 3.94 dB

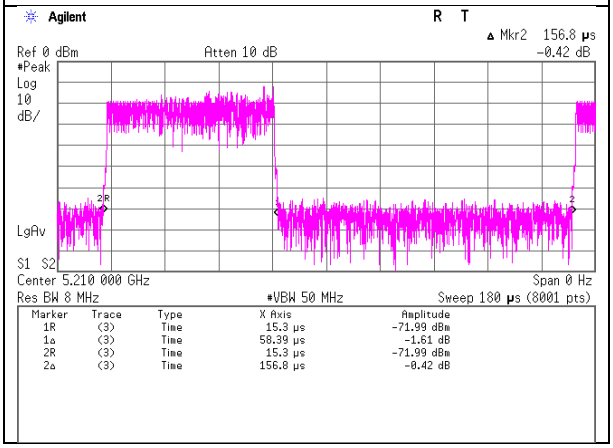


Burst rate confirmation

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	June 26, 2020
Temperature / Humidity	23 deg. C / 47 % RH
Engineer	Shiro Kobayashi
Mode	Tx

11ac-80 MIMO, MCS 7

Tx on / (Tx on + Tx off) =	**0.372**
Tx on / (Tx on + Tx off) * 100 =	**37.2 %**
Duty factor = 10 * log (156.8 / 58.39) =	**4.30 dB**
VBW : 1 / On time = 17.127 kHz < 18 kHz	



Maximum Power Spectral Density

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 30, 2020
Temperature / Humidity	25 deg. C / 57 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11a SISO

11a SISO, RF0

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 *1) [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5180	-23.65	4.45	9.71	1.94	2.14	0.00	-7.55	11.00	18.55	-5.41	17.00	22.41
5220	-23.03	4.46	9.71	1.94	2.14	0.00	-6.92	11.00	17.92	-4.78	17.00	21.78
5240	-22.81	4.46	9.71	1.94	2.14	0.00	-6.70	11.00	17.70	-4.56	17.00	21.56
5745	-31.88	4.56	9.73	1.94	2.47	6.99	-8.66	30.00	38.66	-6.19	36.00	42.19
5785	-32.37	4.56	9.73	1.94	2.47	6.99	-9.15	30.00	39.15	-6.68	36.00	42.68
5825	-33.33	4.57	9.73	1.94	2.47	6.99	-10.10	30.00	40.10	-7.63	36.00	43.63

*1) Antenna Gain applied the higher of the two models.

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 + Duty Factor + RBW Correction Factor

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

11a SISO, RF1

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 *1) [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5180	-23.27	4.52	9.94	1.94	2.43	0.00	-6.87	11.00	17.87	-4.44	17.00	21.44
5220	-23.94	4.53	9.94	1.94	2.43	0.00	-7.53	11.00	18.53	-5.10	17.00	22.10
5240	-24.14	4.53	9.94	1.94	2.43	0.00	-7.73	11.00	18.73	-5.30	17.00	22.30
5745	-29.89	4.66	9.94	1.94	2.59	6.99	-6.36	30.00	36.36	-3.77	36.00	39.77
5785	-31.38	4.67	9.94	1.94	2.59	6.99	-7.84	30.00	37.84	-5.25	36.00	41.25
5825	-33.40	4.68	9.94	1.94	2.59	6.99	-9.85	30.00	39.85	-7.26	36.00	43.26

*1) Antenna Gain applied the higher of the two models.

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 + Duty Factor + RBW Correction Factor

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

Maximum Power Spectral Density

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 31, 2020
Temperature / Humidity	23 deg. C / 61 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11a CDD

RF0 + RF1 Applied limit: 15.407, mobile and portable client device

Tested Frequency	PSD (Conducted) Antenna RF0	Antenna RF1	Sum	Result	Limit	Margin	PSD (e.i.r.p.) Antenna RF0	Antenna RF1	Sum	Result	Limit	Margin
[MHz]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]
5180	0.18	0.20	0.37	-4.28	11.00	15.28	0.62	0.68	1.30	1.16	17.00	15.84
5220	0.20	0.19	0.39	-4.09	11.00	15.09	0.70	0.66	1.36	1.35	17.00	15.65
5240	0.23	0.19	0.43	-3.69	11.00	14.69	0.82	0.68	1.50	1.75	17.00	15.25
5745	0.18	0.20	0.38	-4.20	30.00	34.20	0.67	0.71	1.38	1.40	36.00	34.60
5785	0.11	0.14	0.26	-5.89	30.00	35.89	0.41	0.53	0.94	-0.29	36.00	36.29
5825	0.10	0.10	0.20	-6.93	30.00	36.93	0.36	0.37	0.74	-1.33	36.00	37.33

			RF0						**RF1**					
Tested Frequency	Duty Factor	RBW Correction Factor	PSD Reading	Cable Loss	Atten. Loss	Directional Gain	PSD Result Cond.	PSD Result e.i.r.p.	PSD Reading	Cable Loss	Atten. Loss	Directional Gain	PSD Result Cond.	PSD Result e.i.r.p.
[MHz]	[dB]	[dB]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5180	1.94	0.00	-23.68	4.35	9.87	5.44	-7.52	-2.08	-23.31	4.36	9.93	5.44	-7.08	-1.64
5220	1.94	0.00	-23.16	4.36	9.87	5.44	-6.99	-1.55	-23.46	4.37	9.93	5.44	-7.22	-1.78
5240	1.94	0.00	-22.50	4.36	9.88	5.44	-6.32	-0.88	-23.36	4.37	9.93	5.44	-7.12	-1.68
5745	1.94	6.99	-30.61	4.45	9.89	5.60	-7.34	-1.74	-30.41	4.46	9.93	5.60	-7.09	-1.49
5785	1.94	6.99	-32.76	4.46	9.89	5.60	-9.48	-3.87	-31.72	4.47	9.93	5.60	-8.39	-2.79
5825	1.94	6.99	-33.31	4.47	9.89	5.60	-10.02	-4.42	-33.20	4.47	9.93	5.60	-9.87	-4.27

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 + Duty Factor + RBW Correction Factor

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

Directional Gain = G_{ANT}(Antenna Gain *1)) + Array Gain

*1) Antenna Gain applied the highest gain of the two models.

Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

N_{ANT} = number of transmit antennas = 2

N_{SS} = number of spatial streams = 1

Maximum Power Spectral Density

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 30, 2020
Temperature / Humidity	25 deg. C / 57 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11n-20 SISO

11n-20 SISO, RF0

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 *1) [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5180	-23.92	4.45	9.71	2.04	2.14	0.00	-7.72	11.00	18.72	-5.58	17.00	22.58
5220	-23.23	4.46	9.71	2.04	2.14	0.00	-7.02	11.00	18.02	-4.88	17.00	21.88
5240	-22.38	4.46	9.71	2.04	2.14	0.00	-6.17	11.00	17.17	-4.03	17.00	21.03
5745	-31.49	4.56	9.73	2.04	2.47	6.99	-8.17	30.00	38.17	-5.70	36.00	41.70
5785	-32.45	4.56	9.73	2.04	2.47	6.99	-9.13	30.00	39.13	-6.66	36.00	42.66
5825	-32.19	4.57	9.73	2.04	2.47	6.99	-8.86	30.00	38.86	-6.39	36.00	42.39

*1) Antenna Gain applied the higher of the two models.

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 + Duty Factor + RBW Correction Factor

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

11n-20 SISO, RF1

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 *1) [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5180	-23.20	4.52	9.94	2.04	2.43	0.00	-6.70	11.00	17.70	-4.27	17.00	21.27
5220	-24.09	4.53	9.94	2.04	2.43	0.00	-7.58	11.00	18.58	-5.15	17.00	22.15
5240	-23.49	4.53	9.94	2.04	2.43	0.00	-6.98	11.00	17.98	-4.55	17.00	21.55
5745	-29.73	4.66	9.94	2.04	2.59	6.99	-6.10	30.00	36.10	-3.51	36.00	39.51
5785	-31.29	4.67	9.94	2.04	2.59	6.99	-7.65	30.00	37.65	-5.06	36.00	41.06
5825	-32.41	4.68	9.94	2.04	2.59	6.99	-8.76	30.00	38.76	-6.17	36.00	42.17

*1) Antenna Gain applied the higher of the two models.

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 + Duty Factor + RBW Correction Factor

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

Maximum Power Spectral Density

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 31, 2020
Temperature / Humidity	23 deg. C / 61 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11n-20 CDD

RF0 + RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	PSD (Conducted) Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin	PSD (e.i.r.p.) Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin
[MHz]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]
5180	0.20	0.21	0.41	-3.84	11.00	14.84	0.71	0.74	1.45	1.60	17.00	15.40
5220	0.20	0.17	0.37	-4.32	11.00	15.32	0.71	0.58	1.29	1.12	17.00	15.88
5240	0.21	0.17	0.38	-4.19	11.00	15.19	0.73	0.60	1.33	1.25	17.00	15.75
5745	0.16	0.19	0.35	-4.59	30.00	34.59	0.58	0.68	1.26	1.01	36.00	34.99
5785	0.13	0.14	0.27	-5.69	30.00	35.69	0.46	0.52	0.98	-0.09	36.00	36.09
5825	0.12	0.10	0.22	-6.64	30.00	36.64	0.43	0.36	0.79	-1.04	36.00	37.04

			RF0						**RF1**					
Tested Frequency	Duty Factor	RBW Correction Factor	PSD Reading	Cable Loss	Atten. Loss	Directional Gain	PSD Result Cond.	PSD Result e.i.r.p.	PSD Reading	Cable Loss	Atten. Loss	Directional Gain	PSD Result Cond.	PSD Result e.i.r.p.
[MHz]	[dB]	[dB]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5180	2.04	0.00	-23.19	4.35	9.87	5.44	-6.93	-1.49	-23.11	4.36	9.93	5.44	-6.78	-1.33
5220	2.04	0.00	-23.17	4.36	9.87	5.44	-6.90	-1.46	-24.14	4.37	9.93	5.44	-7.80	-2.36
5240	2.04	0.00	-23.08	4.36	9.88	5.44	-6.80	-1.36	-23.99	4.37	9.93	5.44	-7.65	-2.21
5745	2.04	6.99	-31.33	4.45	9.89	5.60	-7.96	-2.35	-30.69	4.46	9.93	5.60	-7.27	-1.67
5785	2.04	6.99	-32.35	4.46	9.89	5.60	-8.97	-3.36	-31.88	4.47	9.93	5.60	-8.45	-2.85
5825	2.04	6.99	-32.64	4.47	9.89	5.60	-9.25	-3.65	-33.52	4.47	9.93	5.60	-10.09	-4.49

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 + Duty Factor + RBW Correction Factor

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

Directional Gain = G_{ANT}(Antenna Gain *1)) + Array Gain

*1) Antenna Gain applied the highest gain of the two models.

Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

N_{ANT} = number of transmit antennas = 2

N_{SS} = number of spatial streams = 1

Maximum Power Spectral Density

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 31, 2020
Temperature / Humidity	23 deg. C / 61 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11n-20 MIMO

RF0 + RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	PSD (Conducted) Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin	PSD (e.i.r.p.) Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin
[MHz]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]
5180	0.18	0.20	0.38	-4.18	11.00	15.18	0.29	0.36	0.65	-1.89	17.00	18.89
5220	0.20	0.20	0.39	-4.06	11.00	15.06	0.32	0.34	0.67	-1.77	17.00	18.77
5240	0.23	0.19	0.42	-3.79	11.00	14.79	0.38	0.33	0.70	-1.52	17.00	18.52
5745	0.17	0.33	0.50	-3.03	30.00	33.03	0.30	0.60	0.90	-0.48	36.00	36.48
5785	0.18	0.20	0.38	-4.18	30.00	34.18	0.32	0.37	0.68	-1.65	36.00	37.65
5825	0.19	0.17	0.37	-4.34	30.00	34.34	0.34	0.32	0.66	-1.81	36.00	37.81

	RF0								RF1					
Tested Frequency	Duty Factor	RBW Correction Factor	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain *1)	PSD Result Cond.	PSD Result e.i.r.p.	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain *1)	PSD Result Cond.	PSD Result e.i.r.p.
[MHz]	[dB]	[dB]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5180	2.89	0.00	-24.62	4.35	9.87	2.14	-7.51	-5.37	-24.09	4.36	9.93	2.43	-6.91	-4.48
5220	2.89	0.00	-24.17	4.36	9.87	2.14	-7.05	-4.91	-24.28	4.37	9.93	2.43	-7.09	-4.66
5240	2.89	0.00	-23.50	4.36	9.88	2.14	-6.37	-4.23	-24.47	4.37	9.93	2.43	-7.28	-4.85
5745	2.89	6.99	-31.92	4.45	9.89	2.47	-7.70	-5.23	-29.11	4.46	9.93	2.59	-4.84	-2.25
5785	2.89	6.99	-31.70	4.46	9.89	2.47	-7.47	-5.00	-31.21	4.47	9.93	2.59	-6.93	-4.34
5825	2.89	6.99	-31.35	4.47	9.89	2.47	-7.11	-4.64	-31.88	4.47	9.93	2.59	-7.60	-5.01

*1) Antenna Gain applied the highest gain of the two models.

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 + Duty Factor + RBW Correction Factor

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

Maximum Power Spectral Density

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 30, 2020
Temperature / Humidity	25 deg. C / 57 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-20 SISO

11ac-20 SISO, RF0 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 *1) [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5180	-24.07	4.45	9.71	2.22	2.14	0.00	-7.69	11.00	18.69	-5.55	17.00	22.55
5220	-23.21	4.46	9.71	2.22	2.14	0.00	-6.82	11.00	17.82	-4.68	17.00	21.68
5240	-22.67	4.46	9.71	2.22	2.14	0.00	-6.28	11.00	17.28	-4.14	17.00	21.14
5745	-31.92	4.56	9.73	2.22	2.47	6.99	-8.42	30.00	38.42	-5.95	36.00	41.95
5785	-32.11	4.56	9.73	2.22	2.47	6.99	-8.61	30.00	38.61	-6.14	36.00	42.14
5825	-33.06	4.57	9.73	2.22	2.47	6.99	-9.55	30.00	39.55	-7.08	36.00	43.08

*1) Antenna Gain applied the higher of the two models.

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 + Duty Factor + RBW Correction Factor

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

11ac-20 SISO, RF1 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 *1) [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5180	-23.62	4.52	9.94	2.22	2.43	0.00	-6.94	11.00	17.94	-4.51	17.00	21.51
5220	-24.47	4.53	9.94	2.22	2.43	0.00	-7.78	11.00	18.78	-5.35	17.00	22.35
5240	-23.57	4.53	9.94	2.22	2.43	0.00	-6.88	11.00	17.88	-4.45	17.00	21.45
5745	-29.91	4.66	9.94	2.22	2.59	6.99	-6.10	30.00	36.10	-3.51	36.00	39.51
5785	-31.36	4.67	9.94	2.22	2.59	6.99	-7.54	30.00	37.54	-4.95	36.00	40.95
5825	-33.64	4.68	9.94	2.22	2.59	6.99	-9.81	30.00	39.81	-7.22	36.00	43.22

*1) Antenna Gain applied the higher of the two models.

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 + Duty Factor + RBW Correction Factor

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

Maximum Power Spectral Density

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 31, 2020
Temperature / Humidity	23 deg. C / 61 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-20 CDD

RF0 + RF1 Applied limit: 15.407, mobile and portable client device

Tested Frequency	PSD (Conducted) Antenna			Result	Limit	Margin	PSD (e.i.r.p.) Antenna			Result	Limit	Margin
	RF0	RF1	Sum				RF0	RF1	Sum			
[MHz]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]
5180	0.23	0.23	0.46	-3.36	11.00	14.36	0.80	0.81	1.62	2.08	17.00	14.92
5220	0.21	0.19	0.39	-4.04	11.00	15.04	0.73	0.65	1.38	1.40	17.00	15.60
5240	0.21	0.18	0.39	-4.09	11.00	15.09	0.74	0.63	1.37	1.35	17.00	15.65
5745	0.15	0.23	0.38	-4.19	30.00	34.19	0.55	0.83	1.39	1.41	36.00	34.59
5785	0.14	0.16	0.30	-5.30	30.00	35.30	0.50	0.57	1.07	0.31	36.00	35.69
5825	0.11	0.11	0.22	-6.59	30.00	36.59	0.41	0.38	0.80	-0.98	36.00	36.98

			RF0						**RF1**					
Tested Frequency	Duty Factor	RBW Correction Factor	PSD Reading	Cable Loss	Atten. Loss	Directional Gain	PSD Result Cond.	PSD Result e.i.r.p.	PSD Reading	Cable Loss	Atten. Loss	Directional Gain	PSD Result Cond.	PSD Result e.i.r.p.
[MHz]	[dB]	[dB]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5180	2.21	0.00	-22.83	4.35	9.87	5.44	-6.40	-0.96	-22.83	4.36	9.93	5.44	-6.33	-0.89
5220	2.21	0.00	-23.23	4.36	9.87	5.44	-6.79	-1.35	-23.83	4.37	9.93	5.44	-7.32	-1.88
5240	2.21	0.00	-23.22	4.36	9.88	5.44	-6.77	-1.33	-23.96	4.37	9.93	5.44	-7.45	-2.01
5745	2.21	6.99	-31.72	4.45	9.89	5.60	-8.18	-2.58	-29.98	4.46	9.93	5.60	-6.39	-0.79
5785	2.21	6.99	-32.18	4.46	9.89	5.60	-8.62	-3.02	-31.61	4.47	9.93	5.60	-8.01	-2.41
5825	2.21	6.99	-33.01	4.47	9.89	5.60	-9.45	-3.85	-33.35	4.47	9.93	5.60	-9.75	-4.15

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 + Duty Factor + RBW Correction Factor

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

Directional Gain = G_{ANT}(Antenna Gain *1)) + Array Gain

*1) Antenna Gain applied the highest gain of the two models.

Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

N_{ANT} = number of transmit antennas = 2

N_{SS} = number of spatial streams = 1

Maximum Power Spectral Density

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 31, 2020
Temperature / Humidity	23 deg. C / 61 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-20 MIMO

RF0 + RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	PSD (Conducted) Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin	PSD (e.i.r.p.) Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin
[MHz]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]
5180	0.16	0.23	0.39	-4.04	11.00	15.04	0.26	0.41	0.67	-1.73	17.00	18.73
5220	0.22	0.18	0.41	-3.91	11.00	14.91	0.37	0.32	0.69	-1.64	17.00	18.64
5240	0.19	0.17	0.36	-4.40	11.00	15.40	0.32	0.30	0.61	-2.12	17.00	19.12
5745	0.18	0.30	0.48	-3.15	30.00	33.15	0.32	0.55	0.87	-0.61	36.00	36.61
5785	0.15	0.19	0.33	-4.77	30.00	34.77	0.26	0.34	0.60	-2.23	36.00	38.23
5825	0.19	0.18	0.36	-4.39	30.00	34.39	0.33	0.32	0.65	-1.86	36.00	37.86

	RF0								**RF1**					
Tested Frequency	Duty Factor	RBW Correction Factor	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result Cond.	PSD Result e.i.r.p.	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result Cond.	PSD Result e.i.r.p.
[MHz]	[dB]	[dB]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5180	2.97	0.00	-25.12	4.35	9.87	2.14	-7.93	-5.79	-23.58	4.36	9.93	2.43	-6.32	-3.89
5220	2.97	0.00	-23.71	4.36	9.87	2.14	-6.51	-4.37	-24.66	4.37	9.93	2.43	-7.39	-4.96
5240	2.97	0.00	-24.35	4.36	9.88	2.14	-7.14	-5.00	-24.97	4.37	9.93	2.43	-7.70	-5.27
5745	2.97	6.99	-31.70	4.45	9.89	2.47	-7.40	-4.93	-29.55	4.46	9.93	2.59	-5.20	-2.61
5785	2.97	6.99	-32.67	4.46	9.89	2.47	-8.36	-5.89	-31.63	4.47	9.93	2.59	-7.27	-4.68
5825	2.97	6.99	-31.59	4.47	9.89	2.47	-7.27	-4.80	-31.89	4.47	9.93	2.59	-7.53	-4.94

*1) Antenna Gain applied the highest gain of the two models.

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 + Duty Factor + RBW Correction Factor

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

Maximum Power Spectral Density

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 30, 2020
Temperature / Humidity	25 deg. C / 57 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11n-40 SISO

11n-40 SISO, RF0

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 *1) [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5190	-27.40	4.45	9.71	2.74	2.14	0.00	-10.50	11.00	21.50	-8.36	17.00	25.36
5230	-26.32	4.46	9.71	2.74	2.14	0.00	-9.41	11.00	20.41	-7.27	17.00	24.27
5755	-34.31	4.56	9.73	2.74	2.47	6.99	-10.29	30.00	40.29	-7.82	36.00	43.82
5795	-35.57	4.56	9.73	2.74	2.47	6.99	-11.55	30.00	41.55	-9.08	36.00	45.08

*1) Antenna Gain applied the higher of the two models.

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 + Duty Factor + RBW Correction Factor

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

11n-40 SISO, RF1

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 *1) [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5190	-26.46	4.52	9.94	2.74	2.43	0.00	-9.26	11.00	20.26	-6.83	17.00	23.83
5230	-27.36	4.53	9.94	2.74	2.43	0.00	-10.15	11.00	21.15	-7.72	17.00	24.72
5755	-32.85	4.66	9.94	2.74	2.59	6.99	-8.52	30.00	38.52	-5.93	36.00	41.93
5795	-33.20	4.67	9.94	2.74	2.59	6.99	-8.86	30.00	38.86	-6.27	36.00	42.27

*1) Antenna Gain applied the higher of the two models.

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 + Duty Factor + RBW Correction Factor

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

Maximum Power Spectral Density

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 31, 2020
Temperature / Humidity	23 deg. C / 61 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11n-40 CDD

RF0 + RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	PSD (Conducted) Antenna RF0	RF1	Sum	Result	Limit	Margin	PSD (e.i.r.p.) Antenna RF0	RF1	Sum	Result	Limit	Margin
[MHz]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]
5190	0.08	0.09	0.18	-7.51	11.00	18.51	0.29	0.33	0.62	-2.07	17.00	19.07
5230	0.12	0.09	0.21	-6.78	11.00	17.78	0.42	0.32	0.73	-1.34	17.00	18.34
5755	0.11	0.14	0.25	-6.06	30.00	36.06	0.40	0.51	0.90	-0.45	36.00	36.45
5795	0.08	0.10	0.18	-7.52	30.00	37.52	0.28	0.36	0.64	-1.92	36.00	37.92

			RF0						RF1					
Tested Frequency	Duty Factor	RBW Correction Factor	PSD Reading	Cable Loss	Atten. Loss	Directional Gain	PSD Result Cond.	e.i.r.p.	PSD Reading	Cable Loss	Atten. Loss	Directional Gain	PSD Result Cond.	e.i.r.p.
[MHz]	[dB]	[dB]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5190	2.74	0.00	-27.73	4.35	9.87	5.44	-10.77	-5.33	-27.31	4.36	9.93	5.44	-10.28	-4.83
5230	2.74	0.00	-26.20	4.36	9.87	5.44	-9.23	-3.79	-27.49	4.37	9.93	5.44	-10.45	-5.00
5755	2.74	6.99	-33.71	4.46	9.89	5.60	-9.63	-4.03	-32.69	4.46	9.93	5.60	-8.57	-2.96
5795	2.74	6.99	-35.20	4.46	9.89	5.60	-11.12	-5.51	-34.14	4.47	9.93	5.60	-10.01	-4.41

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 + Duty Factor + RBW Correction Factor

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

Directional Gain = G_{ANT}(Antenna Gain *1)) + Array Gain

Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

N_{ANT} = number of transmit antennas = 2

N_{SS} = number of spatial streams = 1

*1) Antenna Gain applied the highest gain of the two models.

Maximum Power Spectral Density

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 31, 2020
Temperature / Humidity	23 deg. C / 61 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11n-40 MIMO

RF0 + RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	PSD (Conducted) Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin	PSD (e.i.r.p.) Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin
[MHz]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]
5190	0.09	0.11	0.20	-7.09	11.00	18.09	0.14	0.19	0.33	-4.79	17.00	21.79
5230	0.12	0.11	0.23	-6.40	11.00	17.40	0.19	0.19	0.39	-4.12	17.00	21.12
5755	0.10	0.18	0.29	-5.43	30.00	35.43	0.18	0.33	0.51	-2.88	36.00	38.88
5795	0.09	0.12	0.20	-6.96	30.00	36.96	0.15	0.21	0.36	-4.42	36.00	40.42

			RF0						**RF1**					
Tested Frequency	Duty Factor	RBW Correction Factor	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result Cond.	PSD Result e.i.r.p.	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result Cond.	PSD Result e.i.r.p.
[MHz]	[dB]	[dB]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5190	3.46	0.00	-28.22	4.35	9.87	2.14	-10.54	-8.40	-27.45	4.36	9.93	2.43	-9.70	-7.27
5230	3.46	0.00	-26.96	4.36	9.87	2.14	-9.27	-7.13	-27.31	4.37	9.93	2.43	-9.55	-7.12
5755	3.46	6.99	-34.69	4.46	9.89	2.47	-9.89	-7.42	-32.20	4.46	9.93	2.59	-7.36	-4.77
5795	3.46	6.99	-35.47	4.46	9.89	2.47	-10.67	-8.20	-34.22	4.47	9.93	2.59	-9.37	-6.78

*1) Antenna Gain applied the highest gain of the two models.

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 + Duty Factor + RBW Correction Factor

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

Maximum Power Spectral Density

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 30, 2020
Temperature / Humidity	25 deg. C / 57 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-40 SISO

11ac-40 SISO, RF0

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 *1) [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5190	-26.90	4.45	9.71	2.81	2.14	0.00	-9.93	11.00	20.93	-7.79	17.00	24.79
5230	-26.08	4.46	9.71	2.81	2.14	0.00	-9.10	11.00	20.10	-6.96	17.00	23.96
5755	-34.79	4.56	9.73	2.81	2.47	6.99	-10.70	30.00	40.70	-8.23	36.00	44.23
5795	-35.79	4.56	9.73	2.81	2.47	6.99	-11.70	30.00	41.70	-9.23	36.00	45.23

*1) Antenna Gain applied the higher of the two models.

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 + Duty Factor + RBW Correction Factor

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

11ac-40 SISO, RF1

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 *1) [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5190	-27.46	4.52	9.94	2.81	2.43	0.00	-10.19	11.00	21.19	-7.76	17.00	24.76
5230	-27.12	4.53	9.94	2.81	2.43	0.00	-9.84	11.00	20.84	-7.41	17.00	24.41
5755	-32.72	4.66	9.94	2.81	2.59	6.99	-8.32	30.00	38.32	-5.73	36.00	41.73
5795	-33.93	4.67	9.94	2.81	2.59	6.99	-9.52	30.00	39.52	-6.93	36.00	42.93

*1) Antenna Gain applied the higher of the two models.

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 + Duty Factor + RBW Correction Factor

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

Maximum Power Spectral Density

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 31, 2020
Temperature / Humidity	23 deg. C / 61 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-40 CDD

RF0 + RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	PSD (Conducted) Antenna RF0	RF1	Sum	Result	Limit	Margin	PSD (e.i.r.p.) Antenna RF0	RF1	Sum	Result	Limit	Margin
[MHz]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]
5190	0.09	0.10	0.20	-7.09	11.00	18.09	0.33	0.36	0.68	-1.65	17.00	18.65
5230	0.11	0.09	0.20	-6.97	11.00	17.97	0.38	0.32	0.70	-1.53	17.00	18.53
5755	0.08	0.12	0.20	-6.98	30.00	36.98	0.30	0.43	0.73	-1.38	36.00	37.38
5795	0.08	0.09	0.17	-7.74	30.00	37.74	0.28	0.33	0.61	-2.14	36.00	38.14

			RF0						RF1					
Tested Frequency	Duty Factor	RBW Correction Factor	PSD Reading	Cable Loss	Atten. Loss	Directional Gain	PSD Result Cond.	e.i.r.p.	PSD Reading	Cable Loss	Atten. Loss	Directional Gain	PSD Result Cond.	e.i.r.p.
[MHz]	[dB]	[dB]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5190	2.81	0.00	-27.32	4.35	9.87	5.44	-10.29	-4.85	-27.02	4.36	9.93	5.44	-9.92	-4.47
5230	2.81	0.00	-26.64	4.36	9.87	5.44	-9.60	-4.16	-27.50	4.37	9.93	5.44	-10.39	-4.95
5755	2.81	6.99	-34.98	4.46	9.89	5.60	-10.83	-5.23	-33.48	4.46	9.93	5.60	-9.29	-3.69
5795	2.81	6.99	-35.32	4.46	9.89	5.60	-11.17	-5.57	-34.57	4.47	9.93	5.60	-10.37	-4.77

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 + Duty Factor + RBW Correction Factor

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

Directional Gain = G_{ANT}(Antenna Gain *1)) + Array Gain

*1) Antenna Gain applied the highest gain of the two models.

Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

N_{ANT} = number of transmit antennas = 2

N_{SS} = number of spatial streams = 1

Maximum Power Spectral Density

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 31, 2020
Temperature / Humidity	23 deg. C / 61 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-40 MIMO

RF0 + RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	PSD (Conducted) Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin	PSD (e.i.r.p.) Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin
[MHz]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]
5190	0.09	0.11	0.20	-6.96	11.00	17.96	0.15	0.19	0.34	-4.66	17.00	21.66
5230	0.11	0.09	0.20	-7.09	11.00	18.09	0.18	0.15	0.33	-4.81	17.00	21.81
5755	0.10	0.15	0.26	-5.92	30.00	35.92	0.18	0.28	0.46	-3.38	36.00	39.38
5795	0.10	0.13	0.23	-6.38	30.00	36.38	0.17	0.24	0.41	-3.84	36.00	39.84

			RF0						RF1					
Tested Frequency	Duty Factor	RBW Correction Factor	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result Cond.	PSD Result e.i.r.p.	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result Cond.	PSD Result e.i.r.p.
[MHz]	[dB]	[dB]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5190	3.46	0.00	-28.14	4.35	9.87	2.14	-10.46	-8.32	-27.28	4.36	9.93	2.43	-9.53	-7.10
5230	3.46	0.00	-27.39	4.36	9.87	2.14	-9.70	-7.56	-28.30	4.37	9.93	2.43	-10.54	-8.11
5755	3.46	6.99	-34.75	4.46	9.89	2.47	-9.95	-7.48	-32.95	4.46	9.93	2.59	-8.11	-5.52
5795	3.46	6.99	-34.86	4.46	9.89	2.47	-10.06	-7.59	-33.67	4.47	9.93	2.59	-8.82	-6.23

*1) Antenna Gain applied the highest gain of the two models.

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 + Duty Factor + RBW Correction Factor

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

Maximum Power Spectral Density

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 30, 2020
Temperature / Humidity	25 deg. C / 57 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-80 SISO

11ac-80 SISO, RF0

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 *1) [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5210	-30.87	4.46	9.71	3.95	2.14	0.00	-12.75	11.00	23.75	-10.61	17.00	27.61
5775	-37.87	4.56	9.73	3.95	2.47	6.99	-12.64	30.00	42.64	-10.17	36.00	46.17

*1) Antenna Gain applied the higher of the two models.

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 + Duty Factor + RBW Correction Factor

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

11ac-80 SISO, RF1

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 *1) [dBi]	RBW Correction Factor [dB]	PSD (Conducted) Result [dBm /MHz]	PSD (Conducted) Limit [dBm /MHz]	PSD (Conducted) Margin [dB]	PSD (e.i.r.p.) Result [dBm /MHz]	PSD (e.i.r.p.) Limit [dBm /MHz]	PSD (e.i.r.p.) Margin [dB]
5210	-31.27	4.52	9.94	3.95	2.43	0.00	-12.86	11.00	23.86	-10.43	17.00	27.43
5775	-36.15	4.67	9.94	3.95	2.59	6.99	-10.60	30.00	40.60	-8.01	36.00	44.01

*1) Antenna Gain applied the higher of the two models.

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 + Duty Factor + RBW Correction Factor

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

Maximum Power Spectral Density

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 31, 2020
Temperature / Humidity	23 deg. C / 61 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-80 CDD

RF0 + RF1 Applied limit: 15.407, mobile and portable client device

Tested Frequency	PSD (Conducted) Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin	PSD (e.i.r.p.) Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin
[MHz]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]
5210	0.05	0.05	0.10	-10.03	11.00	21.03	0.18	0.17	0.35	-4.59	17.00	21.59
5775	0.05	0.07	0.12	-9.24	30.00	39.24	0.18	0.25	0.43	-3.64	36.00	39.64

			RF0						**RF1**					
Tested Frequency	Duty Factor	RBW Correction Factor	PSD Reading	Cable Loss	Atten. Loss	Directional Gain	PSD Result Cond.	PSD Result e.i.r.p.	PSD Reading	Cable Loss	Atten. Loss	Directional Gain	PSD Result Cond.	PSD Result e.i.r.p.
[MHz]	[dB]	[dB]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5210	3.94	0.00	-31.14	4.36	9.87	5.44	-12.97	-7.53	-31.34	4.37	9.93	5.44	-13.10	-7.66
5775	3.94	6.99	-38.29	4.46	9.89	5.60	-13.01	-7.41	-36.93	4.47	9.93	5.60	-11.60	-6.00

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 + Duty Factor + RBW Correction Factor

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

Directional Gain = G_{ANT}(Antenna Gain *1)) + Array Gain

*1) Antenna Gain applied the highest gain of the two models.

Array Gain = 10 log(N_{ANT}/N_{SS}) dB.

N_{ANT} = number of transmit antennas = 2

N_{SS} = number of spatial streams = 1

Maximum Power Spectral Density

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	July 31, 2020
Temperature / Humidity	23 deg. C / 61 % RH
Engineer	Shiro Kobayashi
Mode	Tx 11ac-80 MIMO

RF0 + RF1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	PSD (Conducted) Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin	PSD (e.i.r.p.) Antenna RF0	Antenna RF1	Antenna Sum	Result	Limit	Margin
[MHz]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[mW/MHz]	[mW/MHz]	[mW/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]
5210	0.05	0.05	0.10	-10.09	11.00	21.09	0.08	0.08	0.17	-7.80	17.00	24.80
5775	0.05	0.07	0.12	-9.22	30.00	39.22	0.08	0.13	0.21	-6.68	36.00	42.68

			RF0						**RF1**					
Tested Frequency	Duty Factor	RBW Correction Factor	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result Cond.	PSD Result e.i.r.p.	PSD Reading	Cable Loss	Atten. Loss	Antenna Gain	PSD Result Cond.	PSD Result e.i.r.p.
[MHz]	[dB]	[dB]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]	[dBm/MHz]	[dB]	[dB]	[dBi]	[dBm/MHz]	[dBm/MHz]
5210	4.30	0.00	-31.58	4.36	9.87	2.14	-13.05	-10.91	-31.75	4.37	9.93	2.43	-13.15	-10.72
5775	4.30	6.99	-38.86	4.46	9.89	2.47	-13.22	-10.75	-37.13	4.47	9.93	2.59	-11.44	-8.85

*1) Antenna Gain applied the highest gain of the two models.

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)

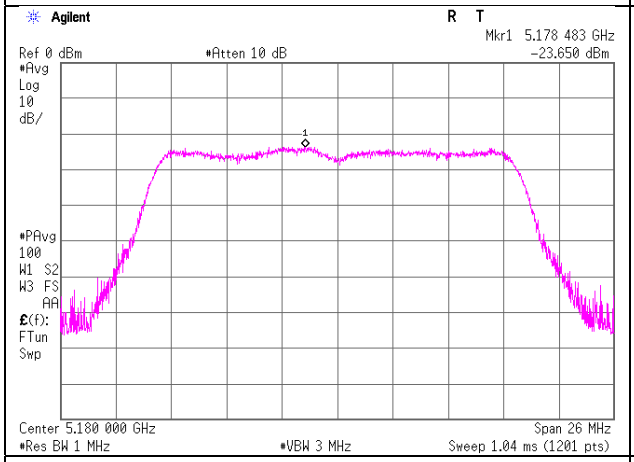
PSD Result (Conducted) = Reading + Cable Loss (including the cable(s) customer supplied) + Atten. Loss + Duty Factor + RBW Correction Factor

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

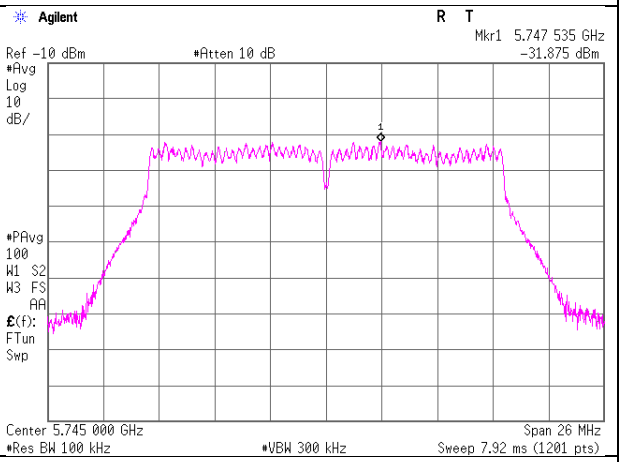
Maximum Power Spectral Density

11a SISO, RF0

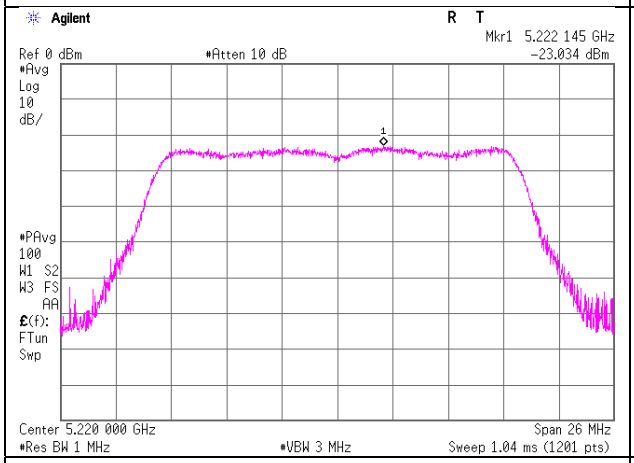
5180 MHz



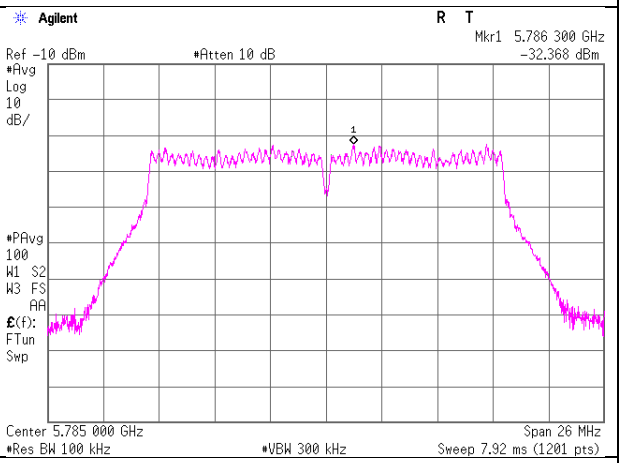
5745 MHz



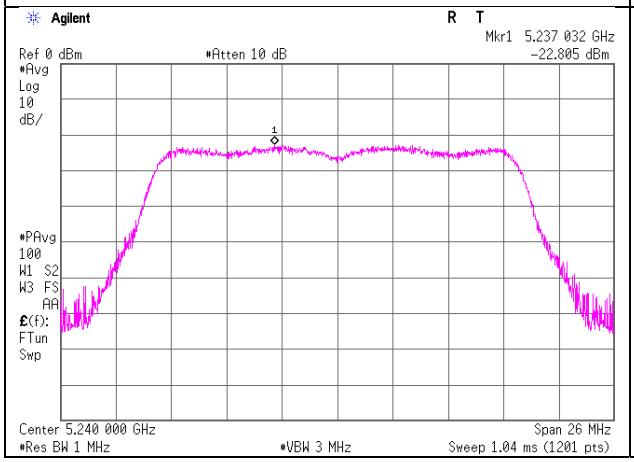
5220 MHz



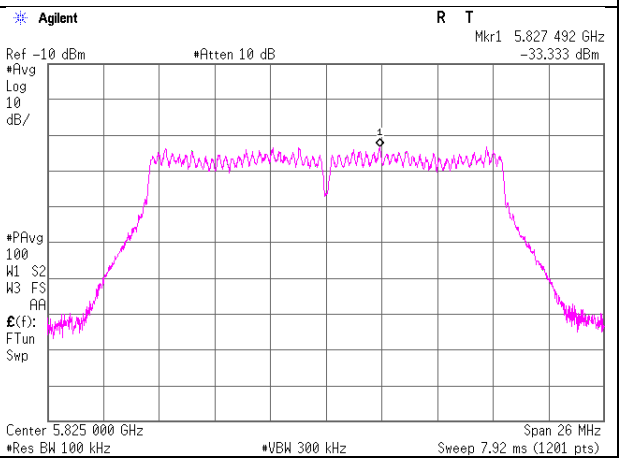
5785 MHz



5240 MHz



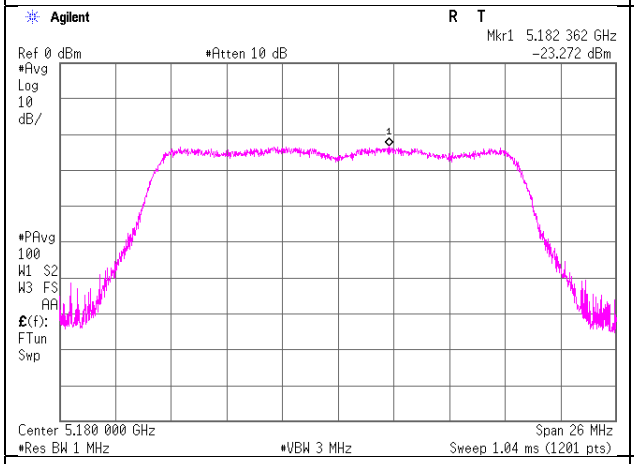
5825 MHz



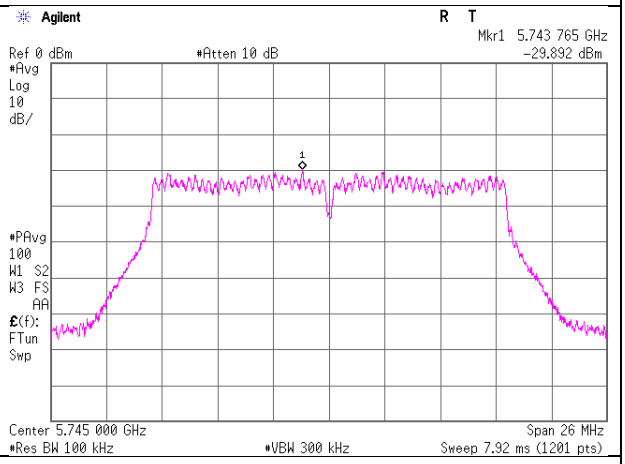
Maximum Power Spectral Density

11a SISO, RF1

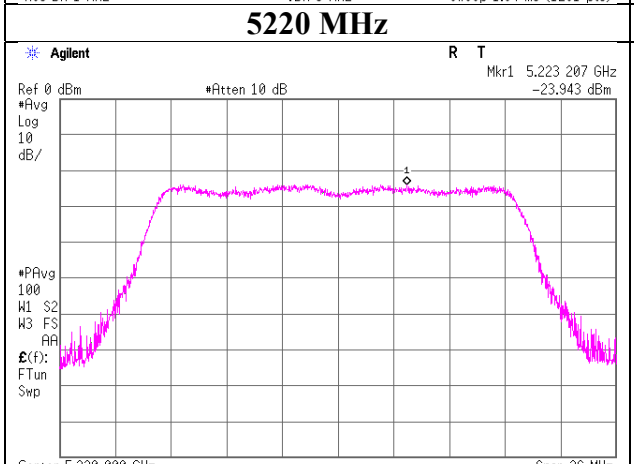
5180 MHz



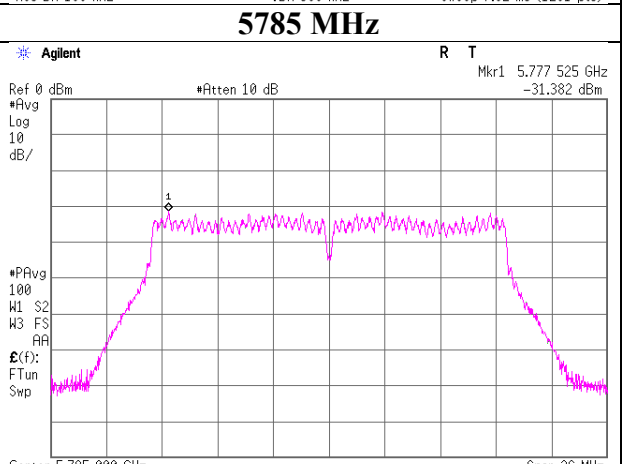
5745 MHz



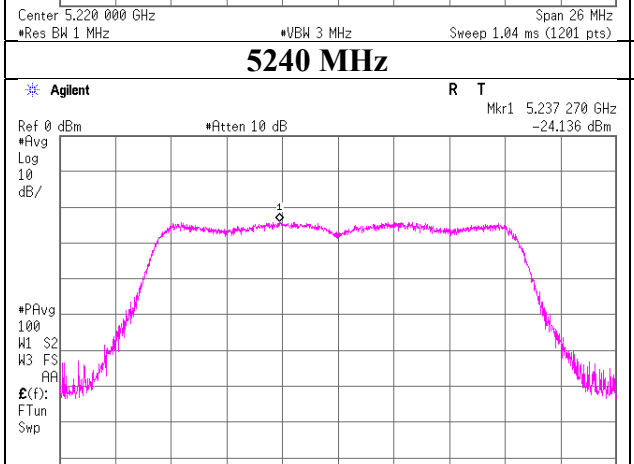
5220 MHz



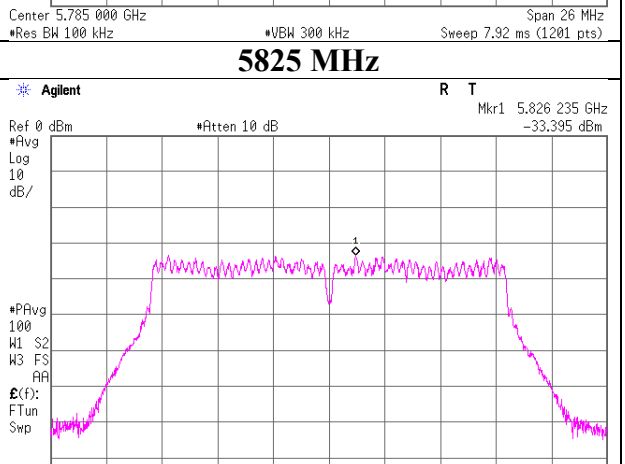
5785 MHz



5240 MHz



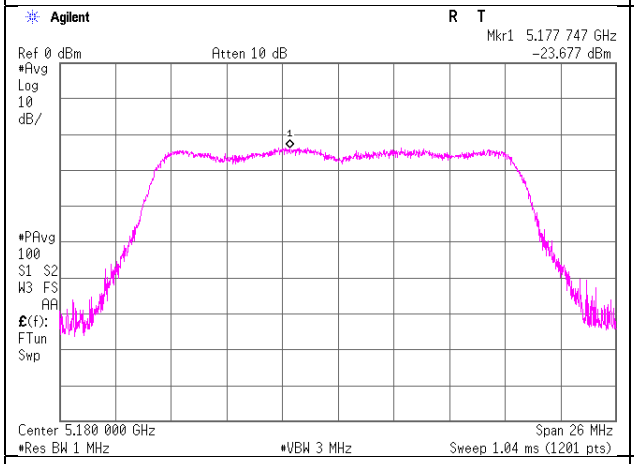
5825 MHz



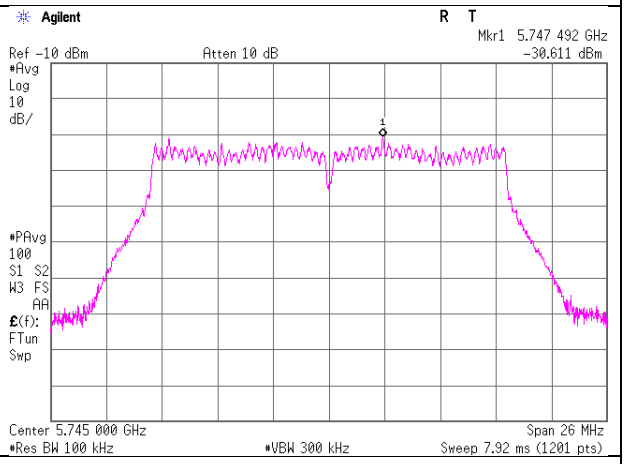
Maximum Power Spectral Density

11a CDD, RF0

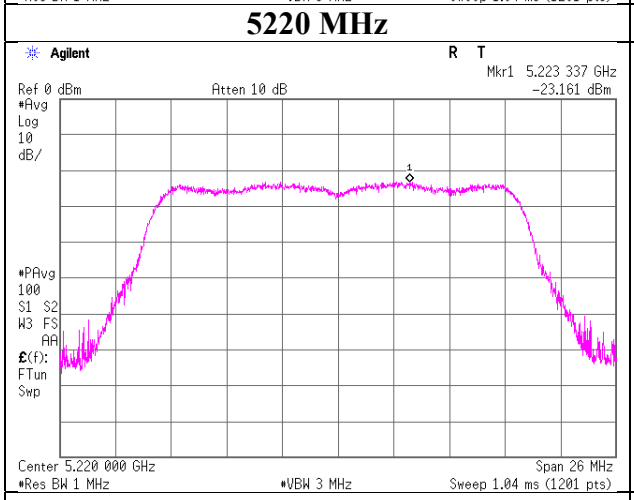
5180 MHz



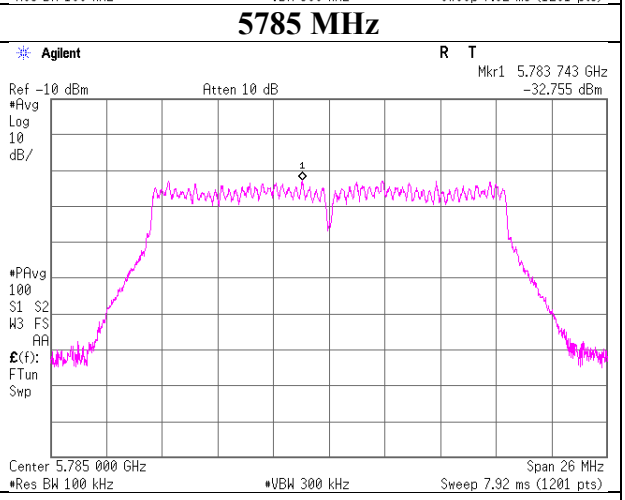
5745 MHz



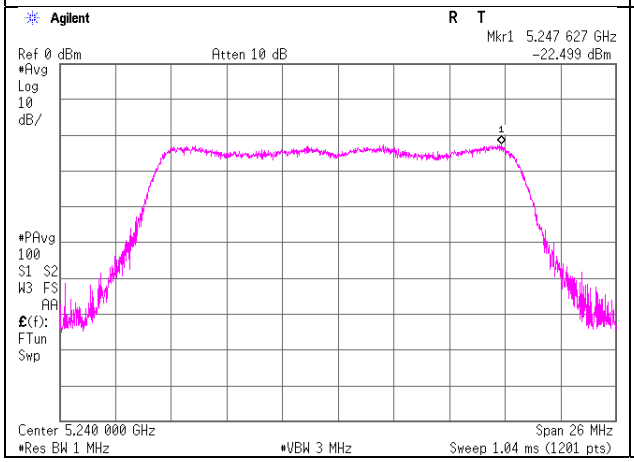
5220 MHz



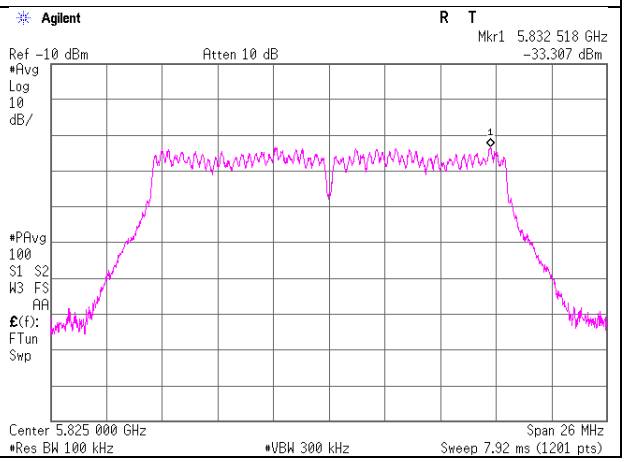
5785 MHz



5240 MHz



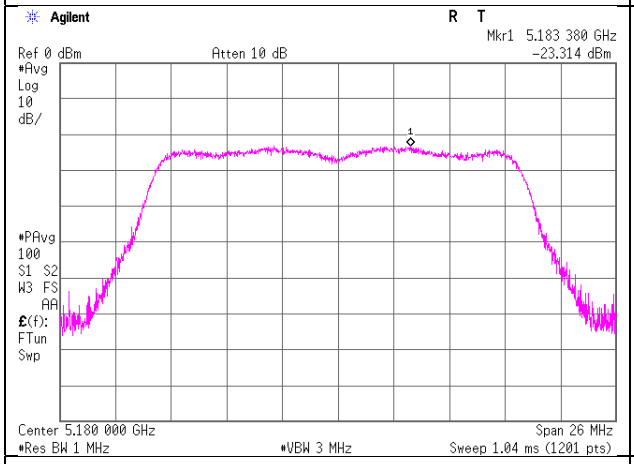
5825 MHz



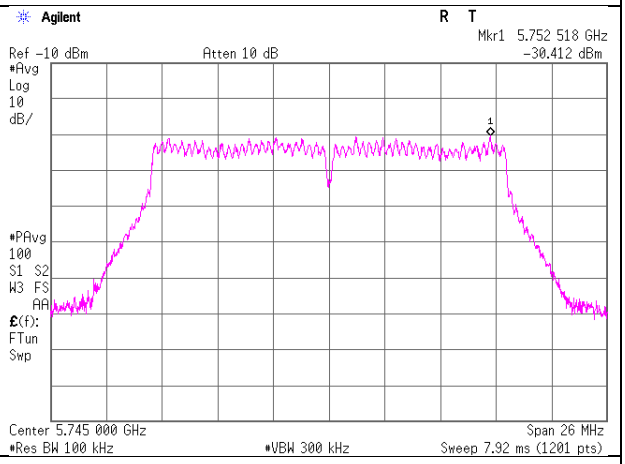
Maximum Power Spectral Density

11a CDD, RF1

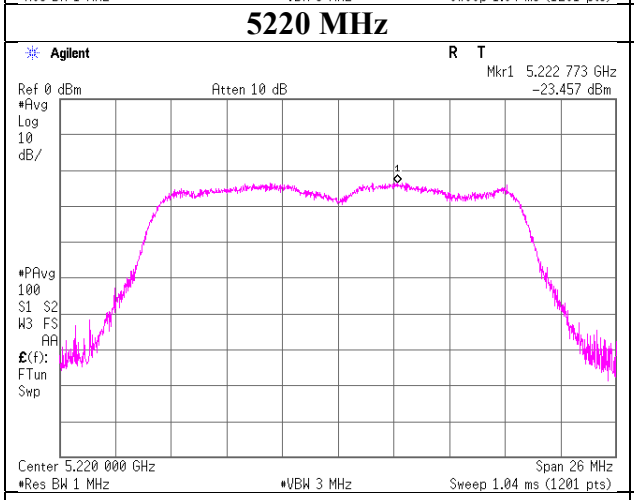
5180 MHz



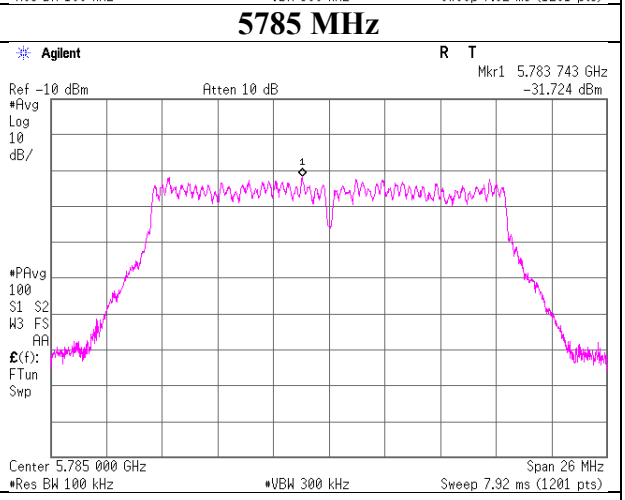
5745 MHz



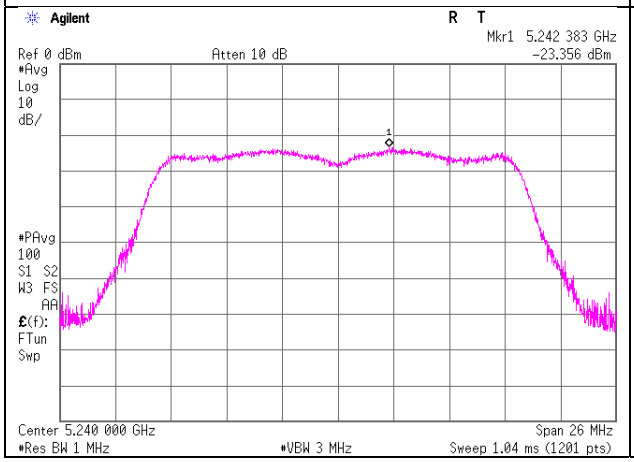
5220 MHz



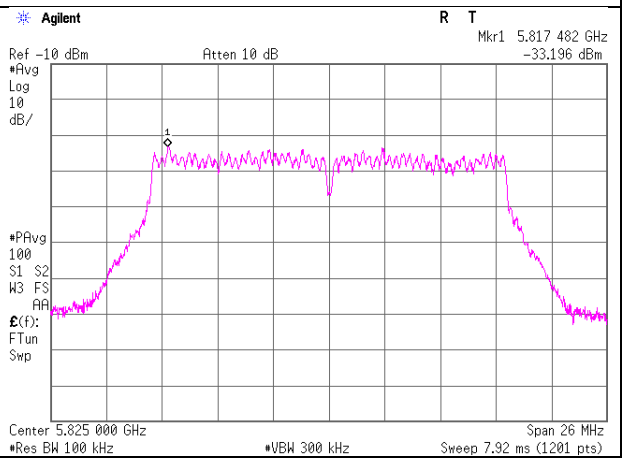
5785 MHz



5240 MHz



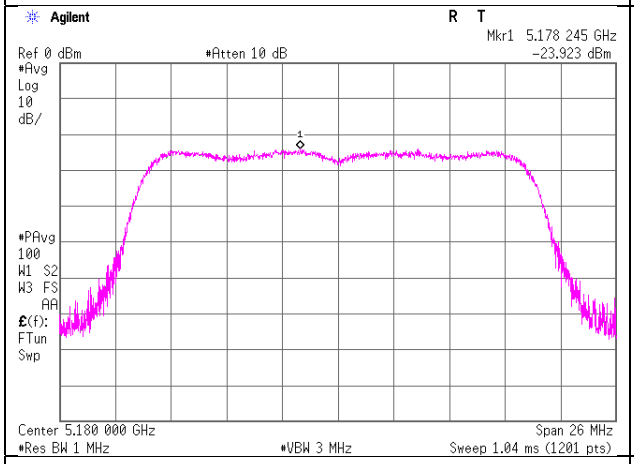
5825 MHz



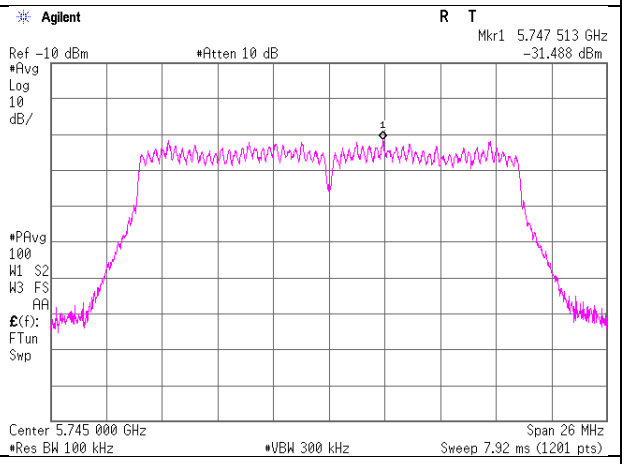
Maximum Power Spectral Density

11n-20 SISO, RF0

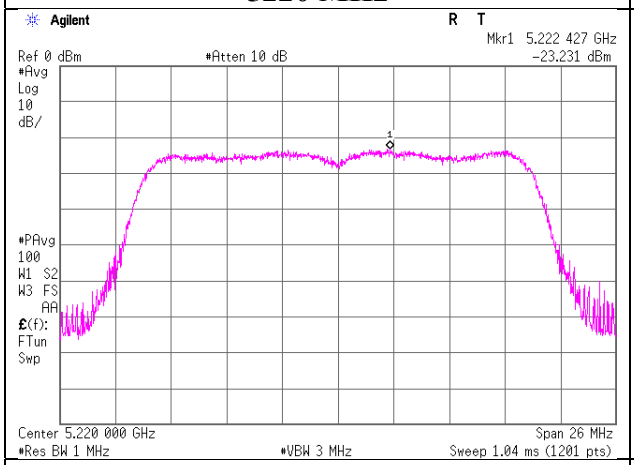
5180 MHz



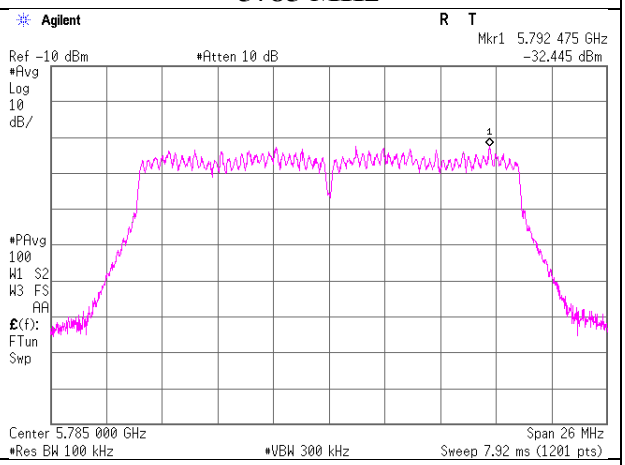
5745 MHz



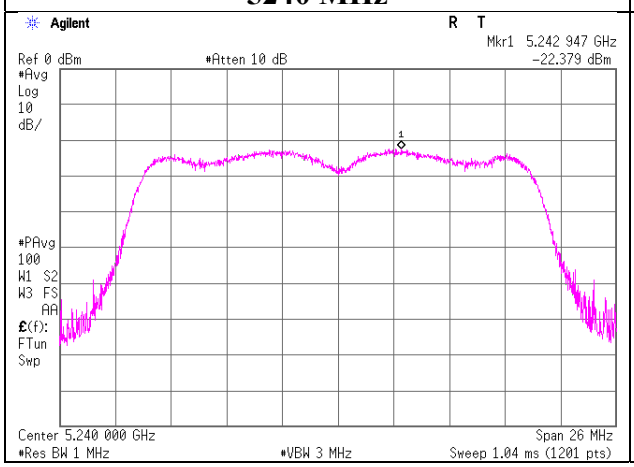
5220 MHz



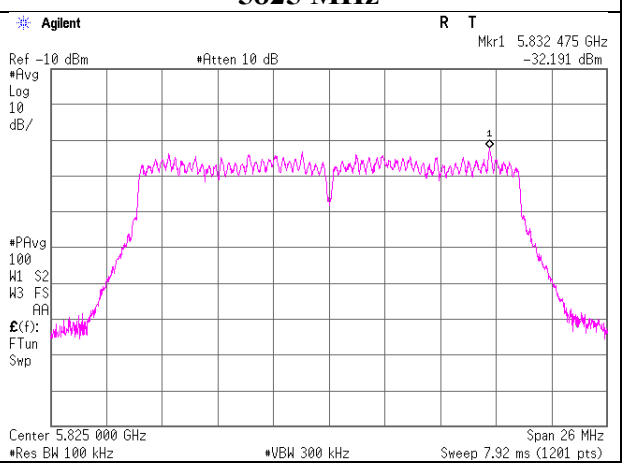
5785 MHz



5240 MHz



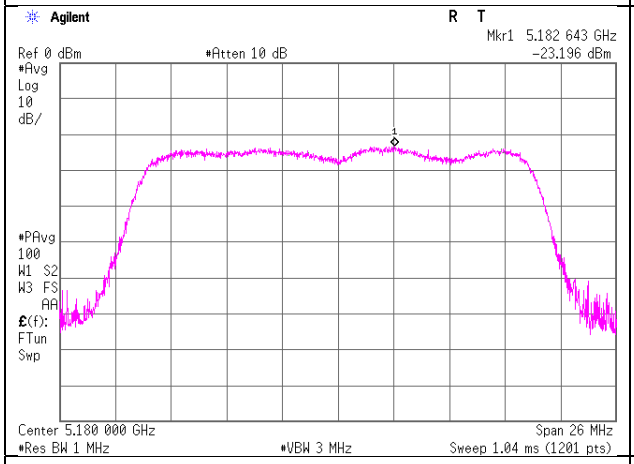
5825 MHz



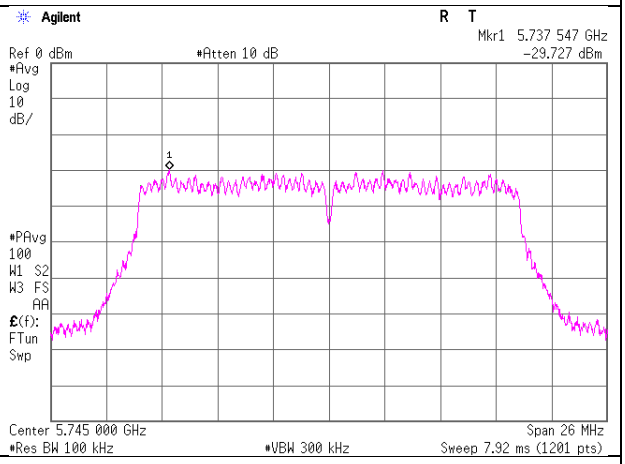
Maximum Power Spectral Density

11n-20 SISO, RF1

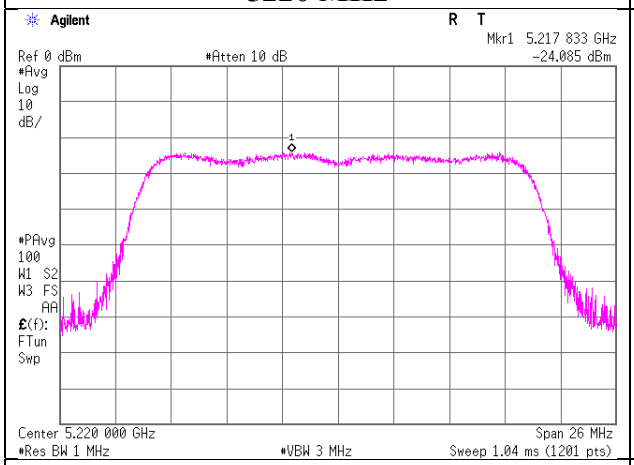
5180 MHz



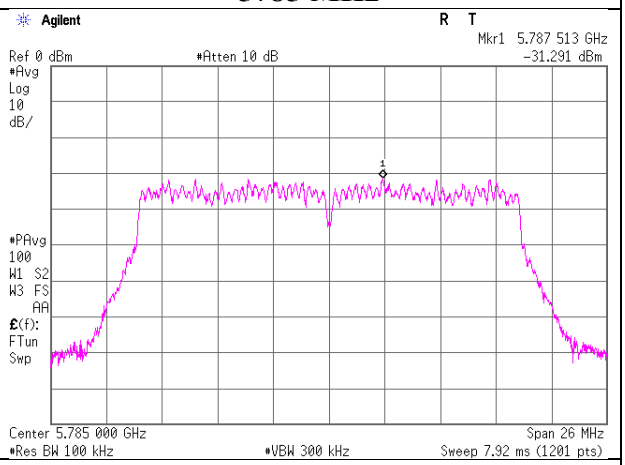
5745 MHz



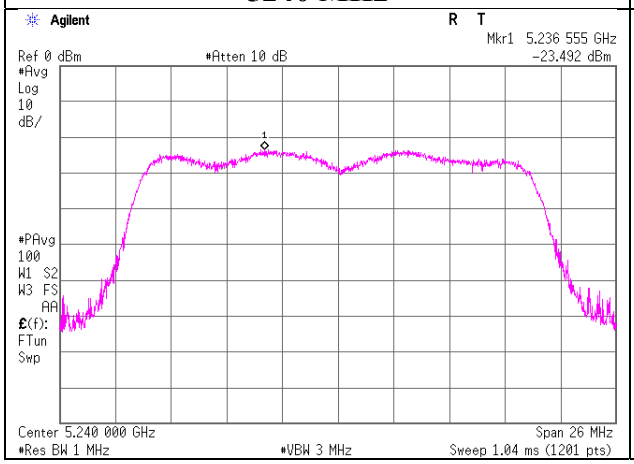
5220 MHz



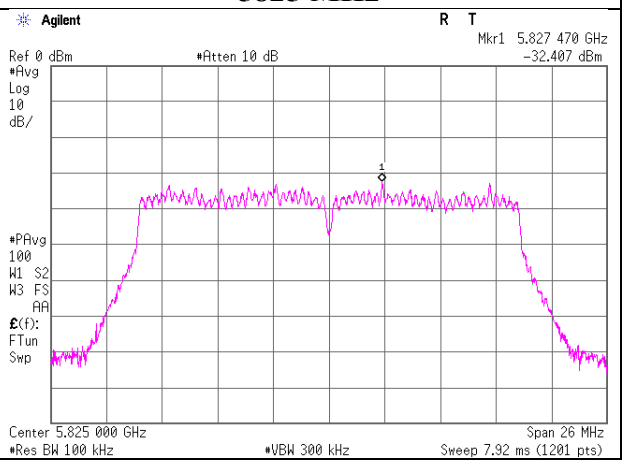
5785 MHz



5240 MHz



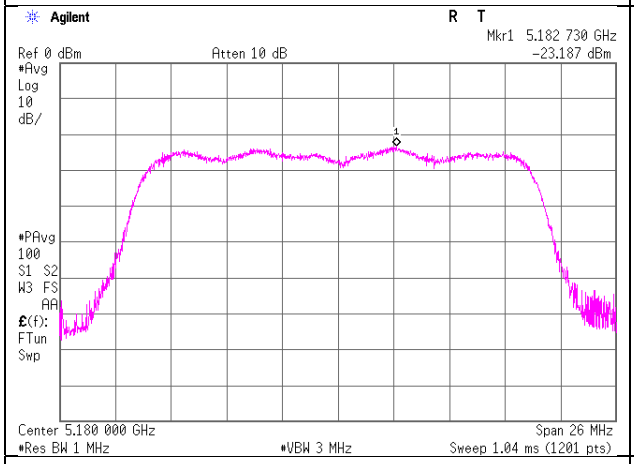
5825 MHz



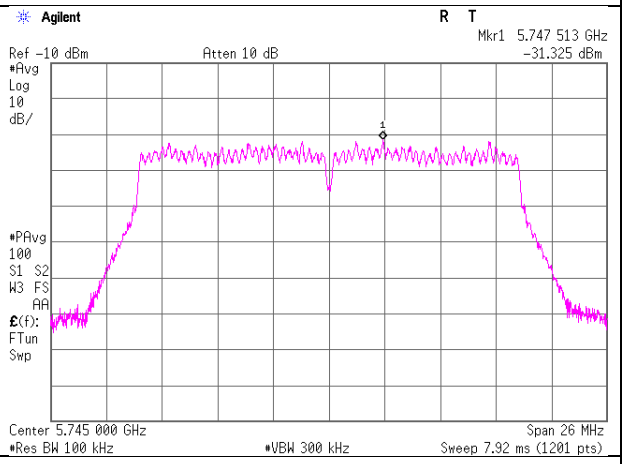
Maximum Power Spectral Density

11n-20 CDD, RF0

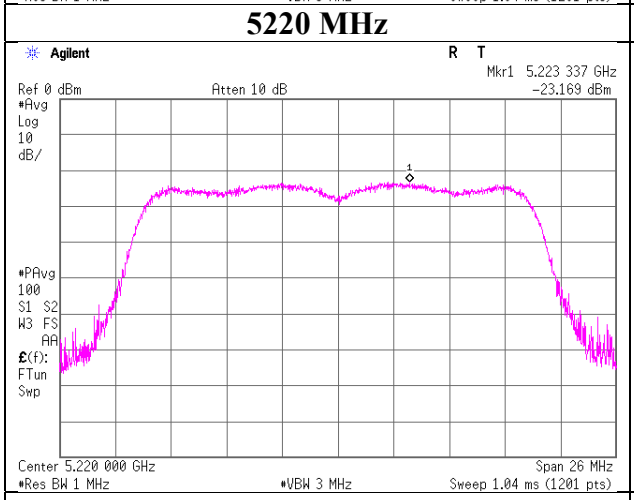
5180 MHz



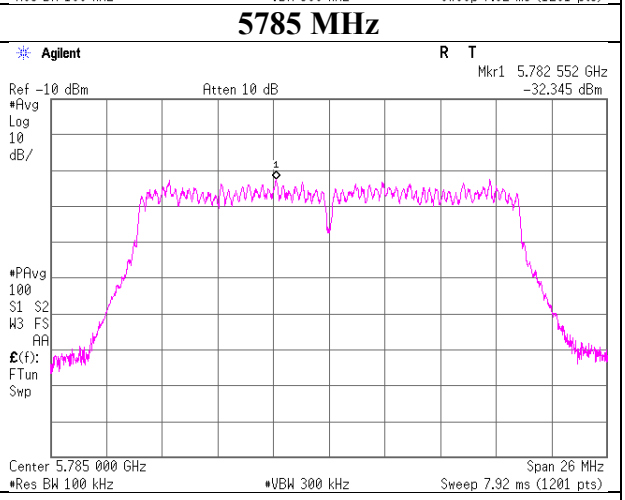
5745 MHz



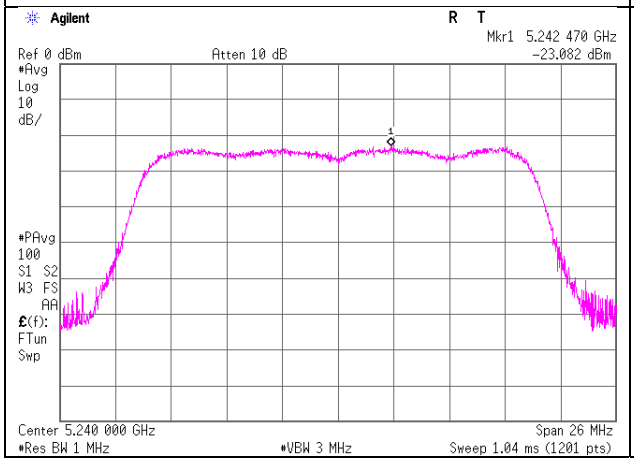
5220 MHz



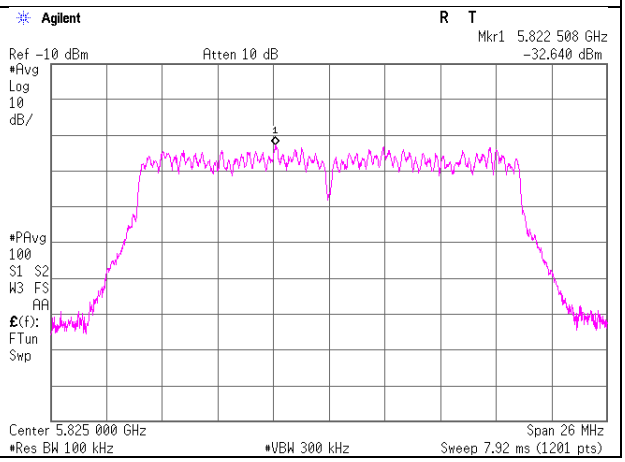
5785 MHz



5240 MHz



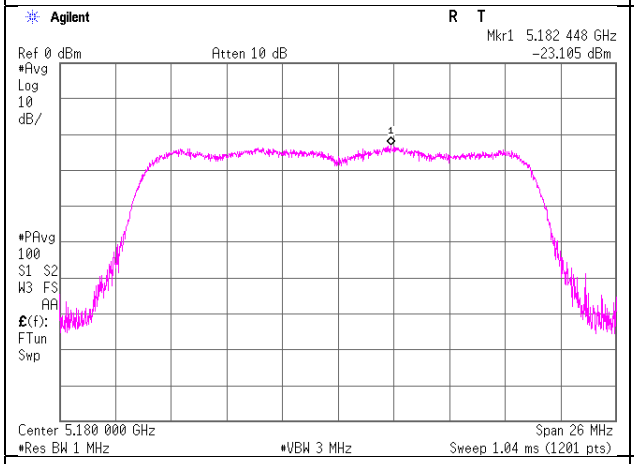
5825 MHz



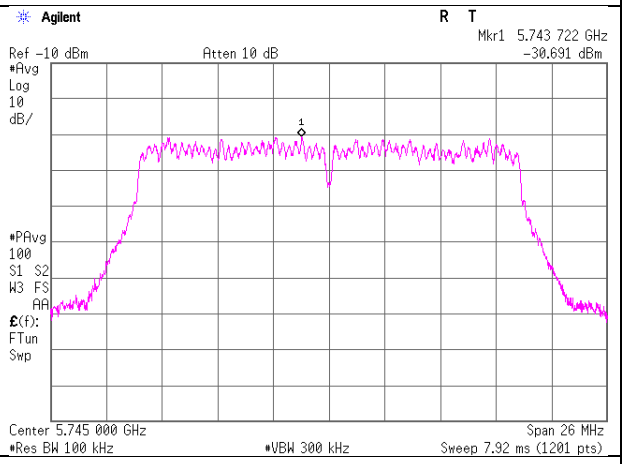
Maximum Power Spectral Density

11n-20 CDD, RF1

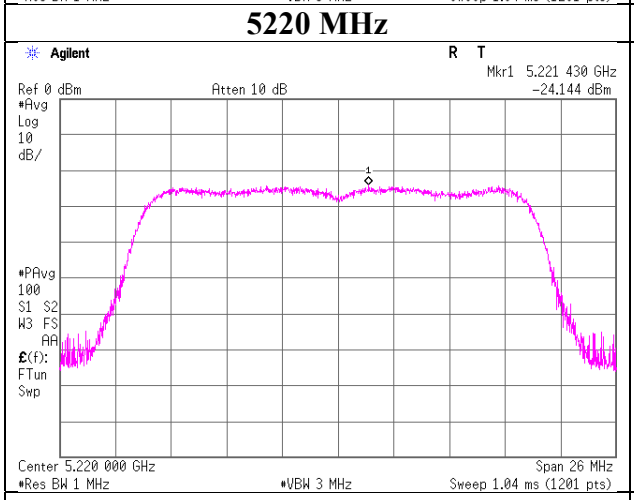
5180 MHz



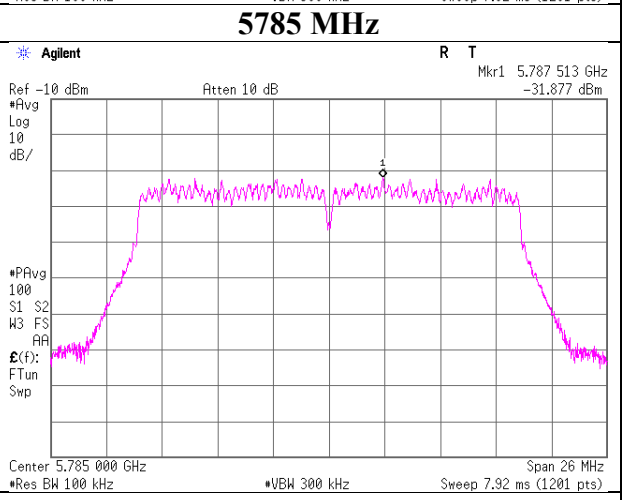
5745 MHz



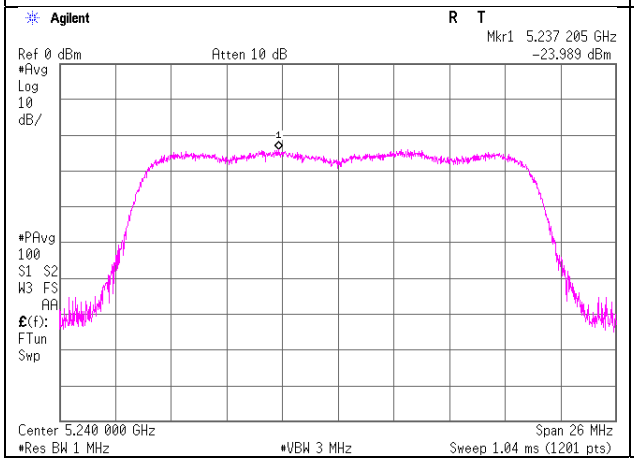
5220 MHz



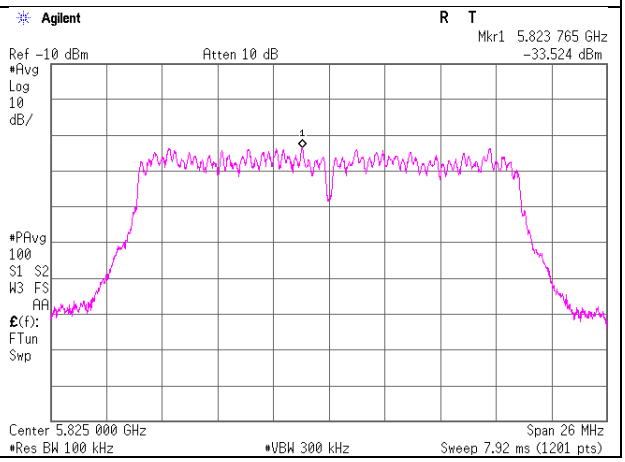
5785 MHz



5240 MHz



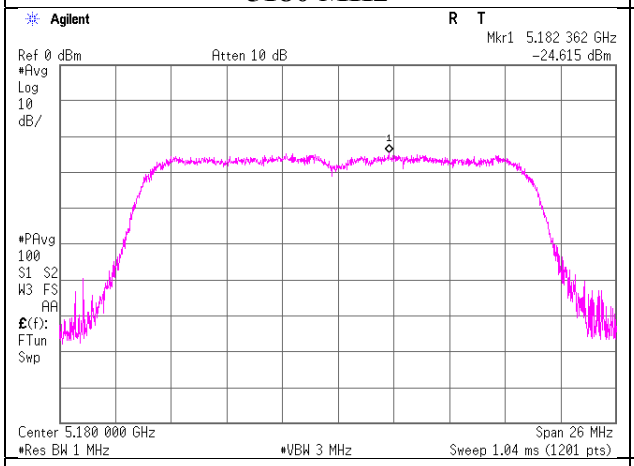
5825 MHz



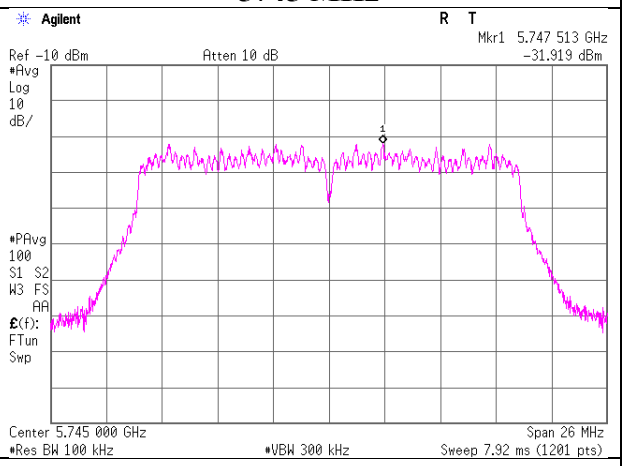
Maximum Power Spectral Density

11n-20 MIMO, RF0

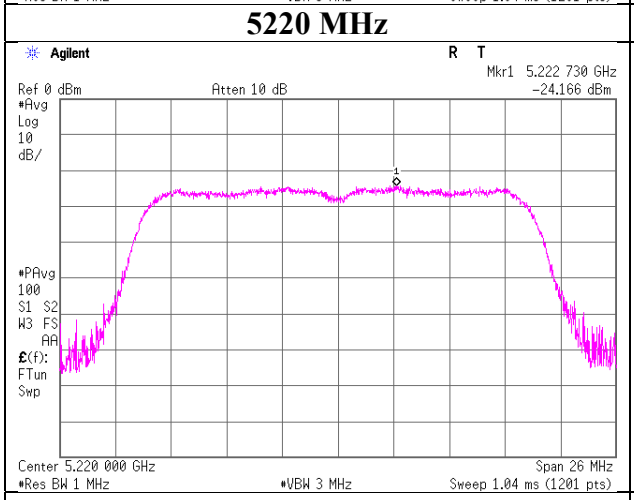
5180 MHz



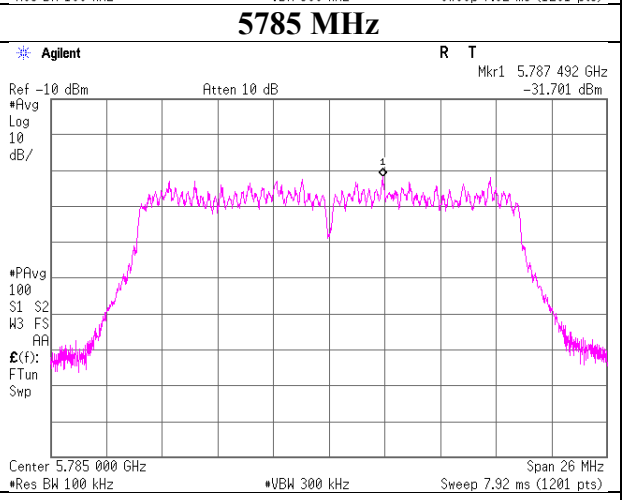
5745 MHz



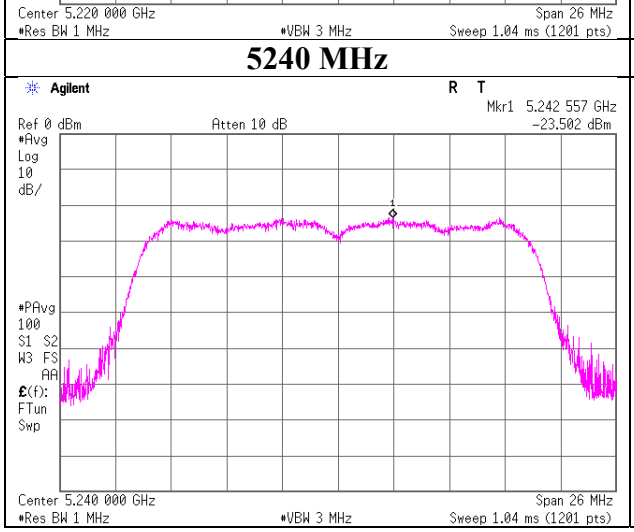
5220 MHz



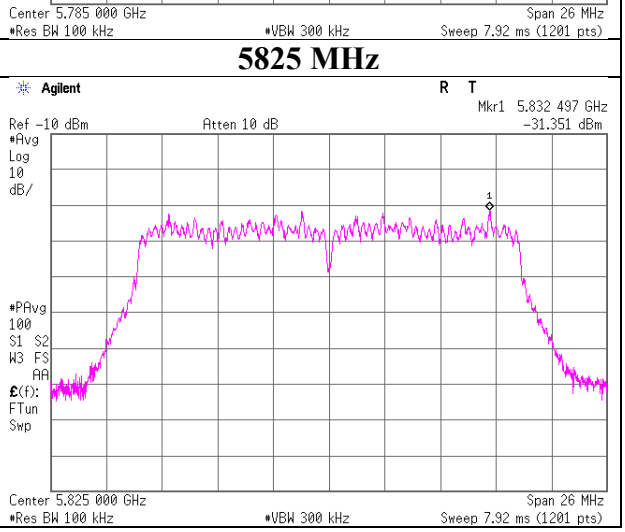
5785 MHz



5240 MHz



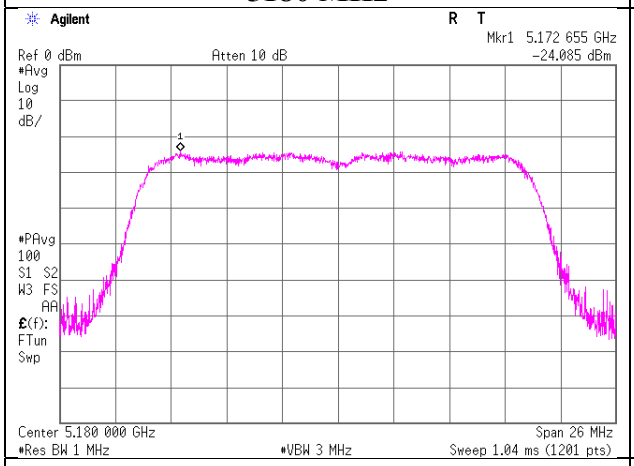
5825 MHz



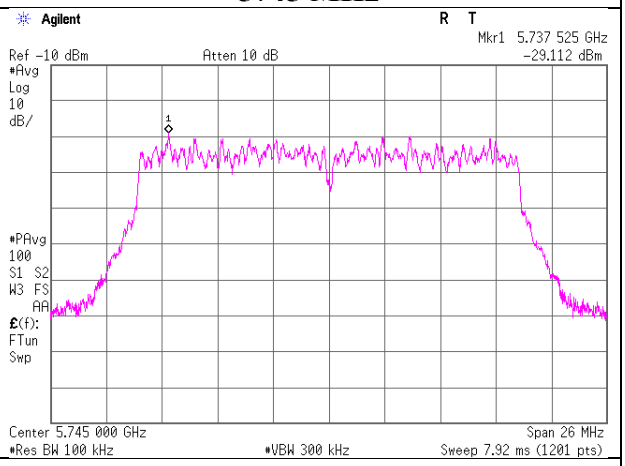
Maximum Power Spectral Density

11n-20 MIMO, RF1

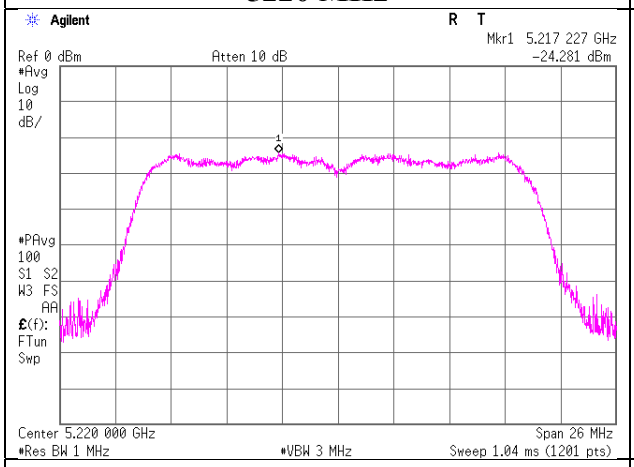
5180 MHz



5745 MHz



5220 MHz



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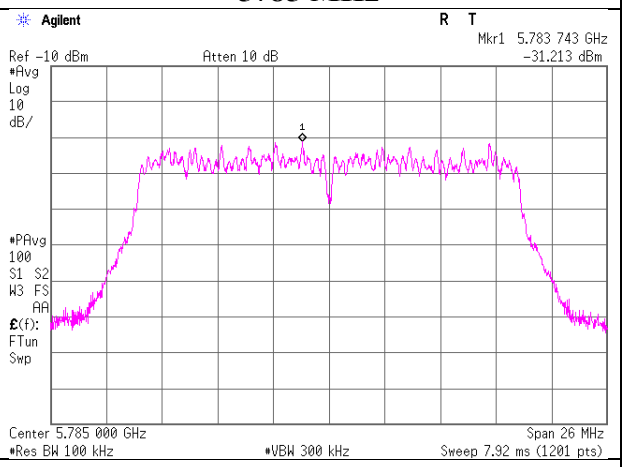

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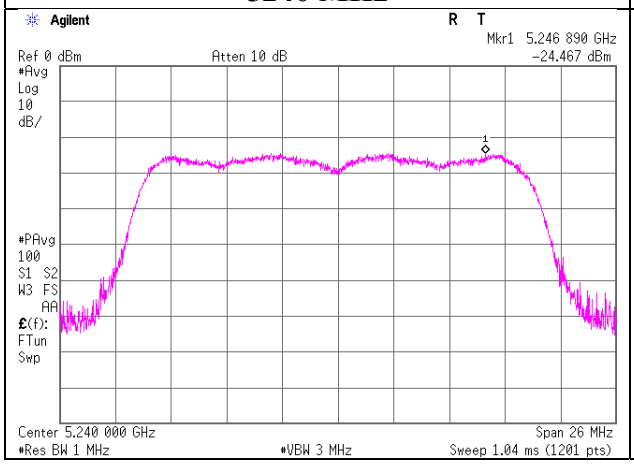
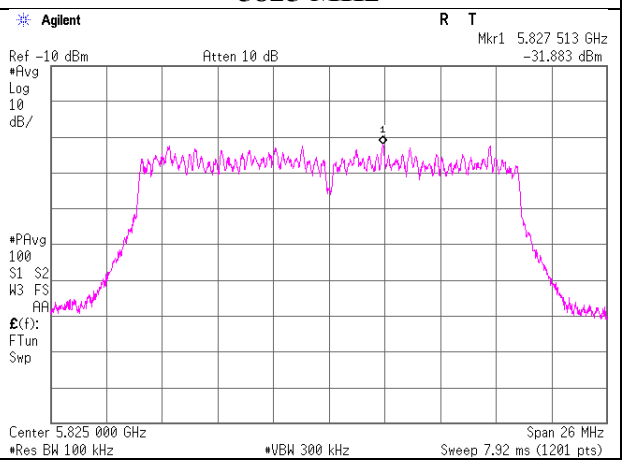


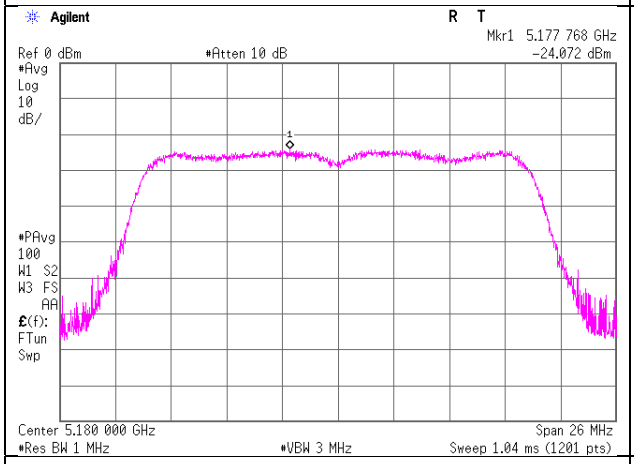
5825 MHz



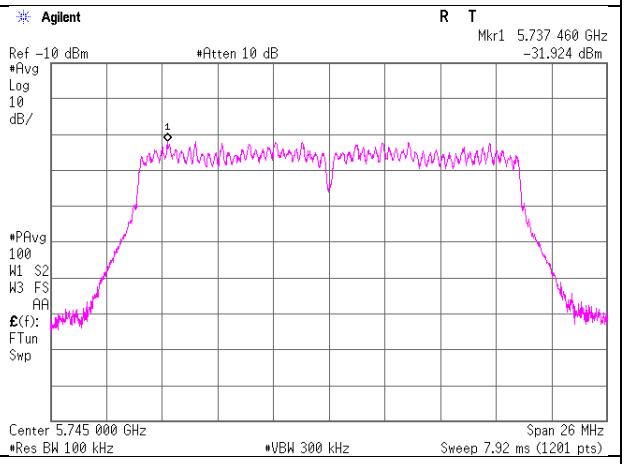
Maximum Power Spectral Density

11ac-20 SISO, RF0

5180 MHz



5745 MHz



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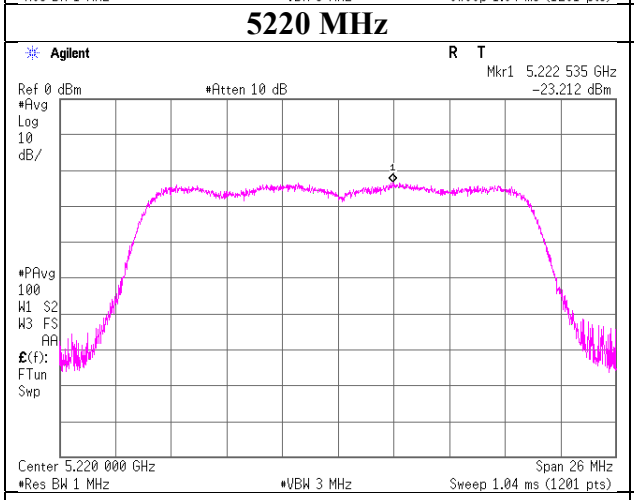

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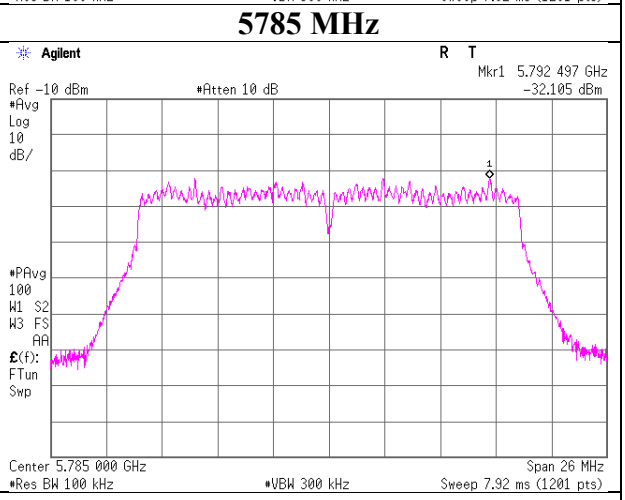

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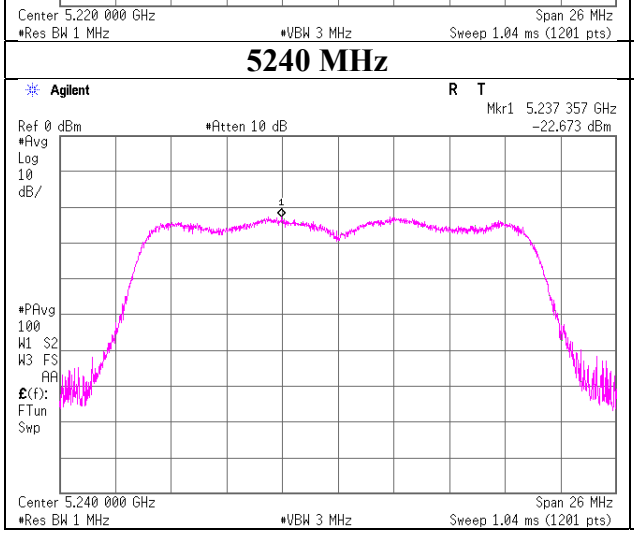

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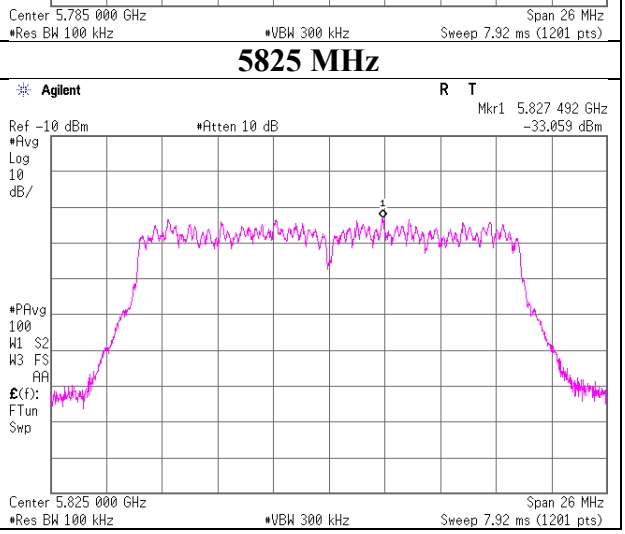
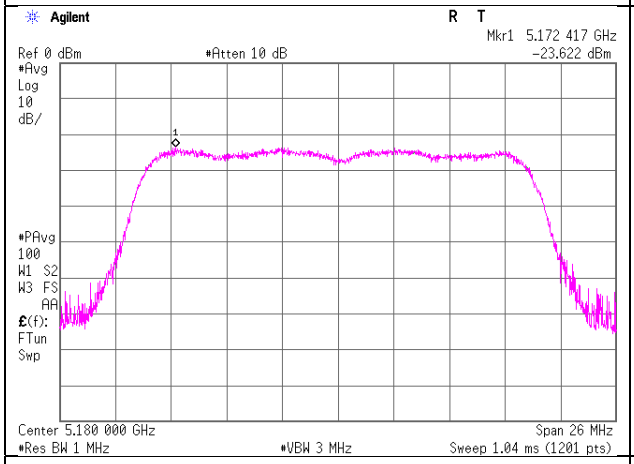


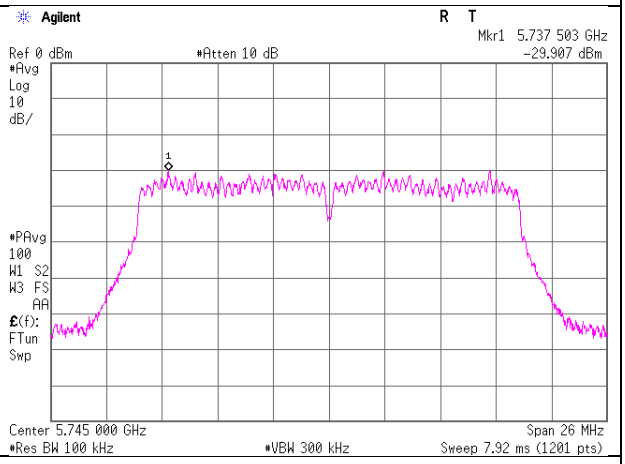
Maximum Power Spectral Density

11ac-20 SISO, RF1

5180 MHz



5745 MHz



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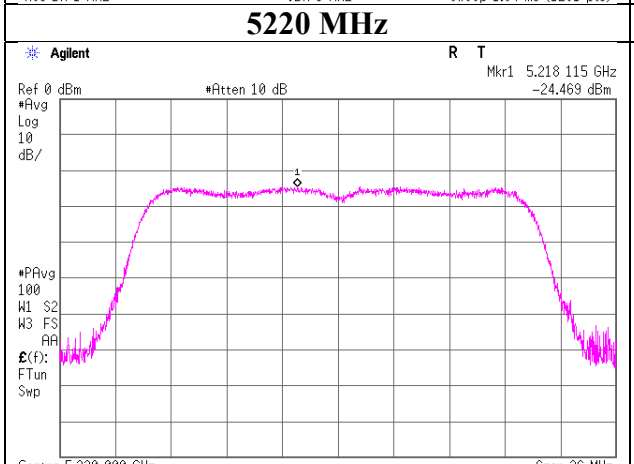
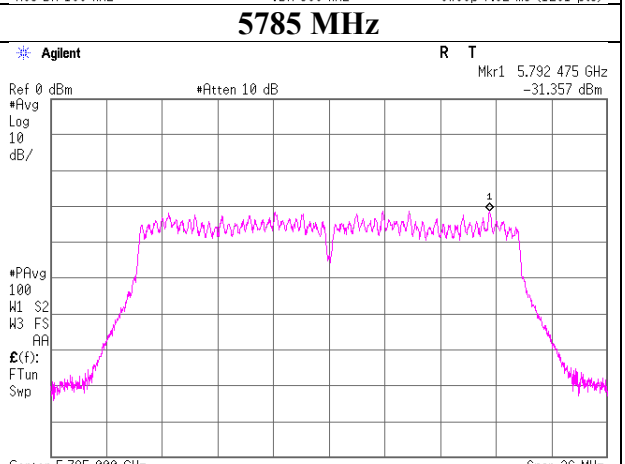


5785 MHz



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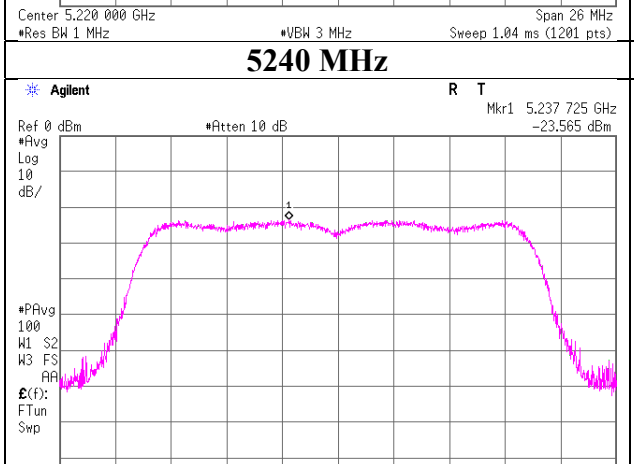

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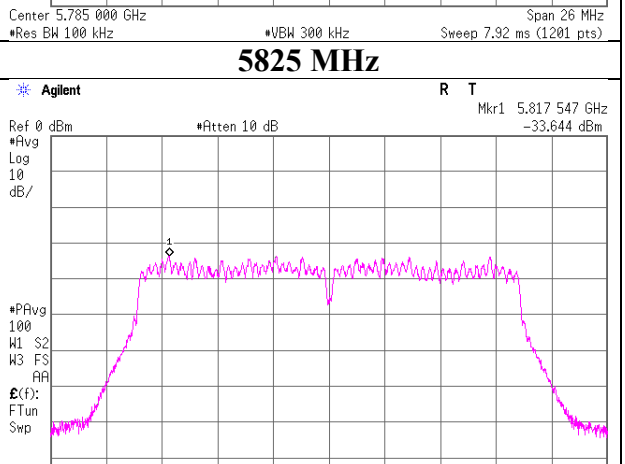
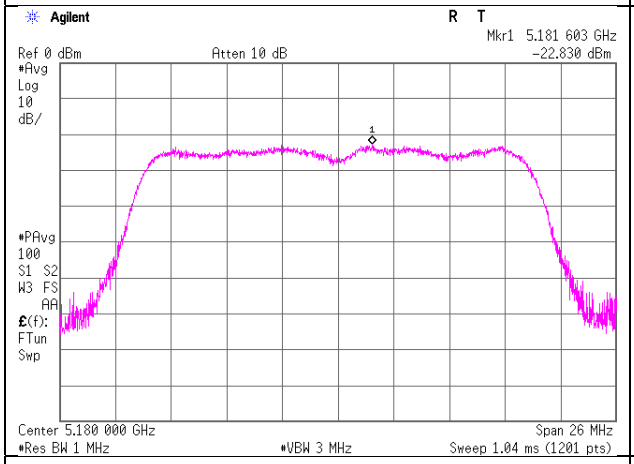


Maximum Power Spectral Density

11ac-20 CDD, RF0

5180 MHz



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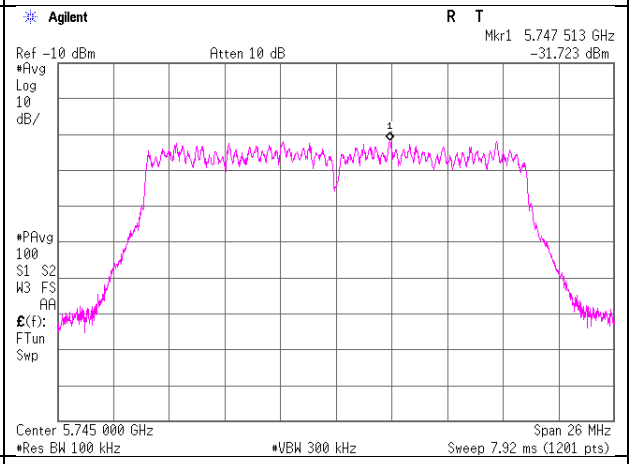
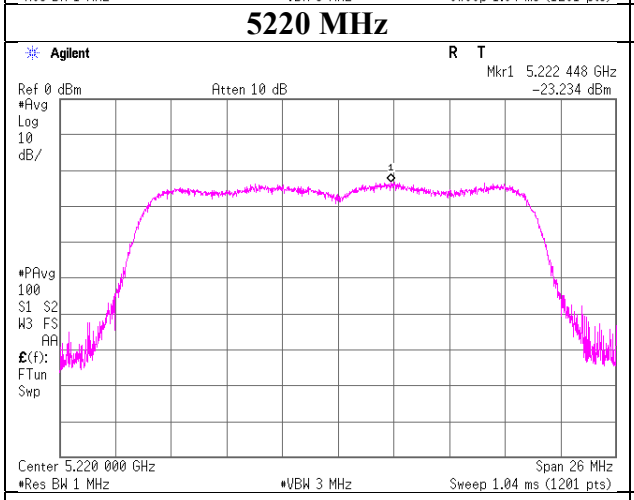
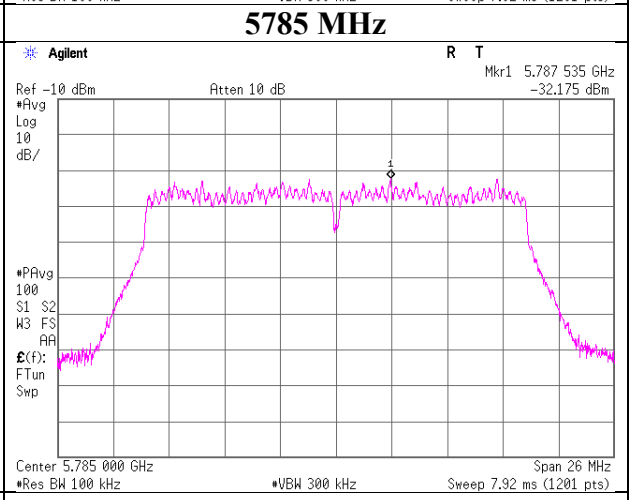


5220 MHz



5785 MHz



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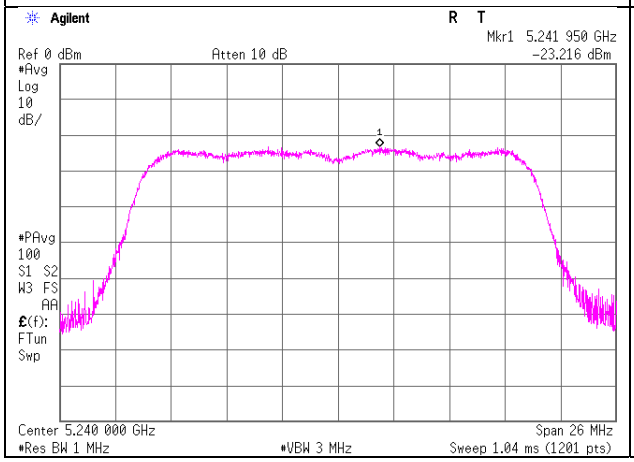
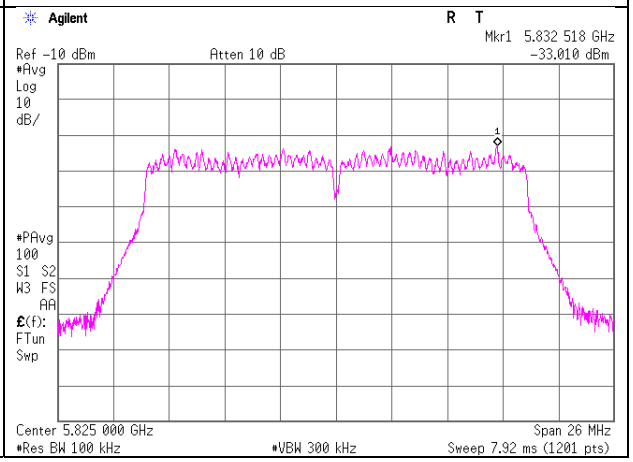


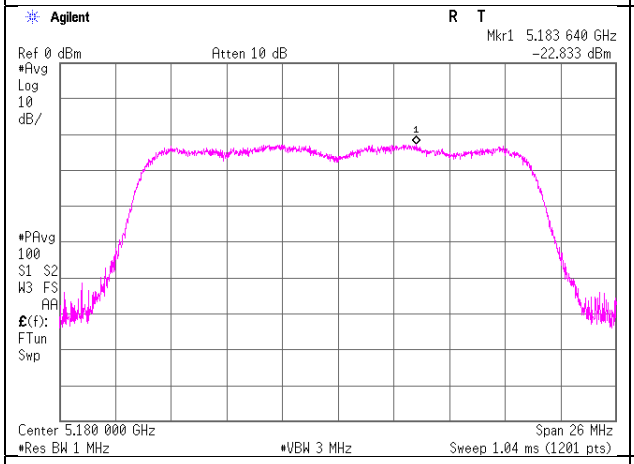
5825 MHz



Maximum Power Spectral Density

11ac-20 CDD, RF1

5180 MHz



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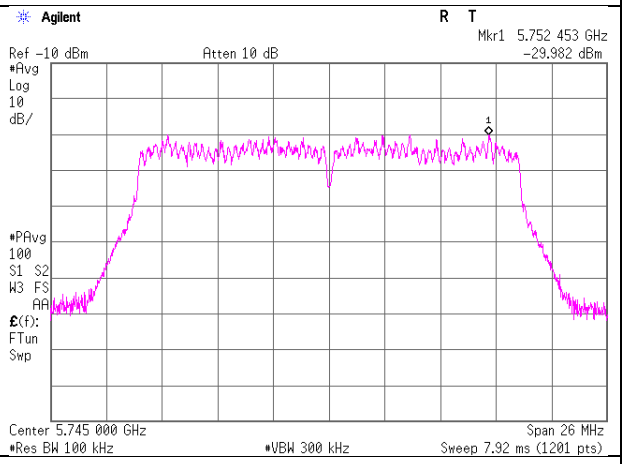
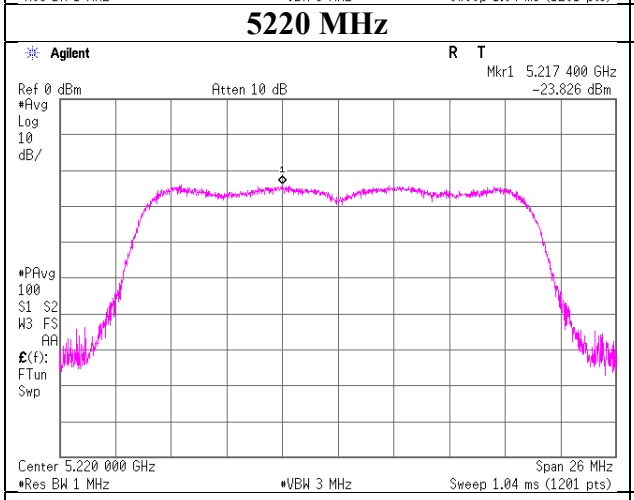


5220 MHz



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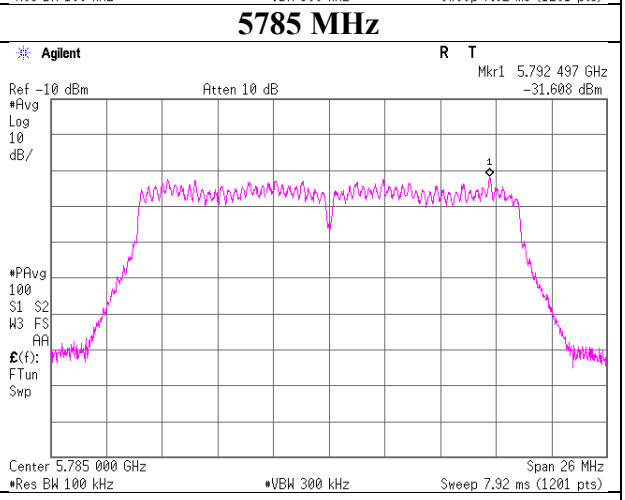

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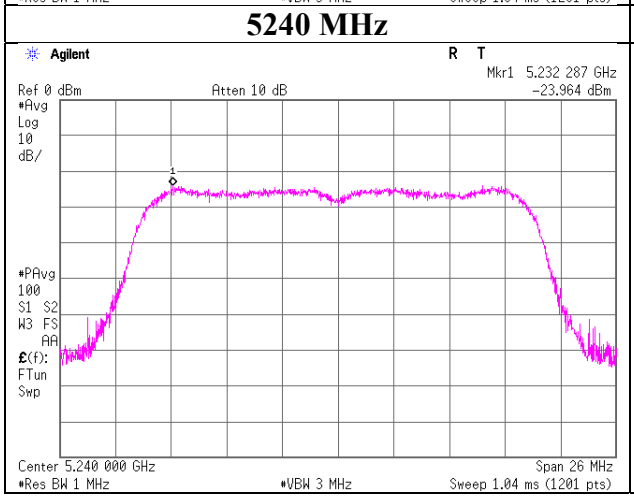
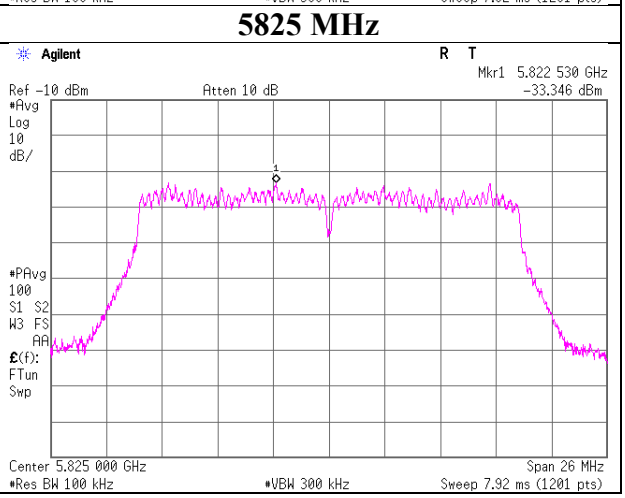


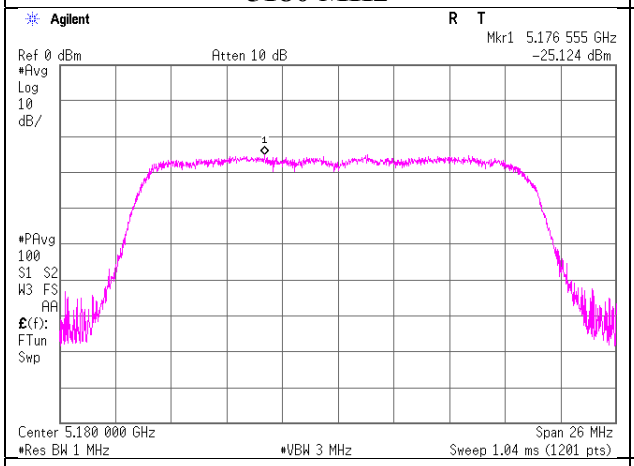
5825 MHz



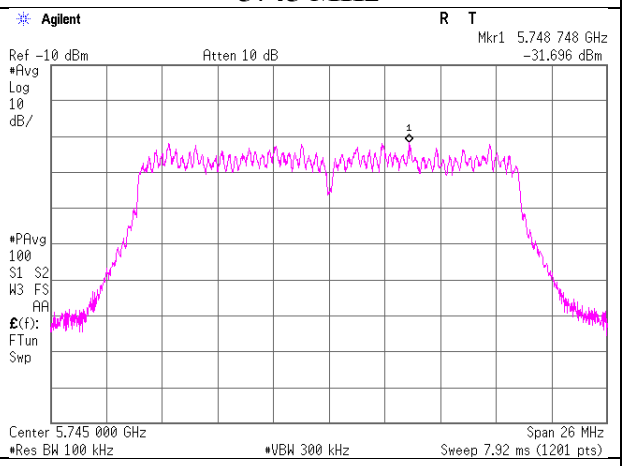
Maximum Power Spectral Density

11ac-20 MIMO, RF0

5180 MHz



5745 MHz



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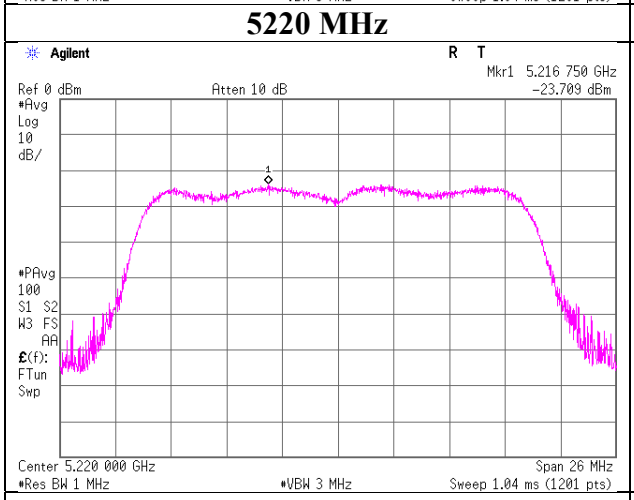
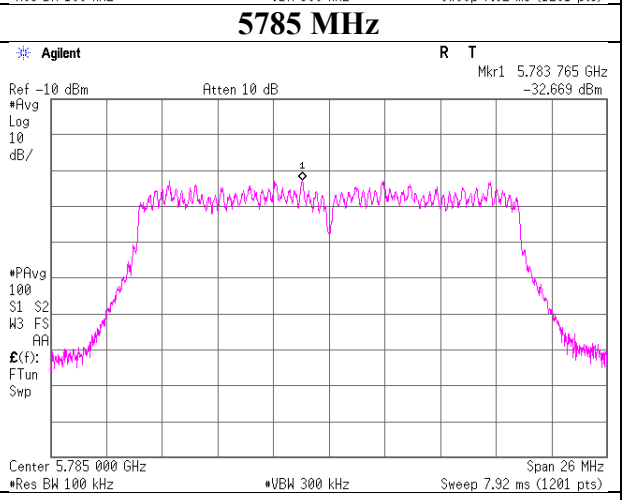
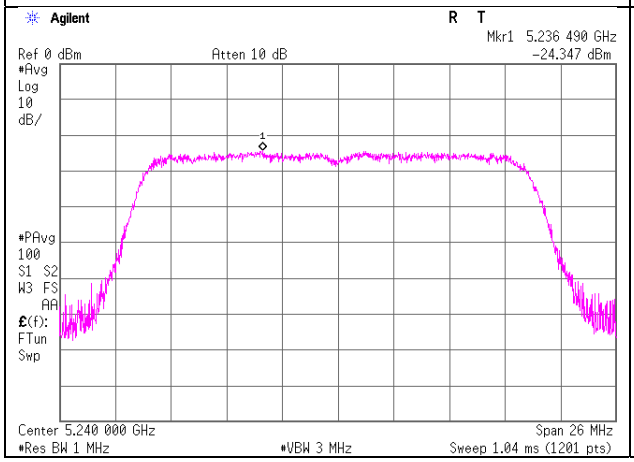


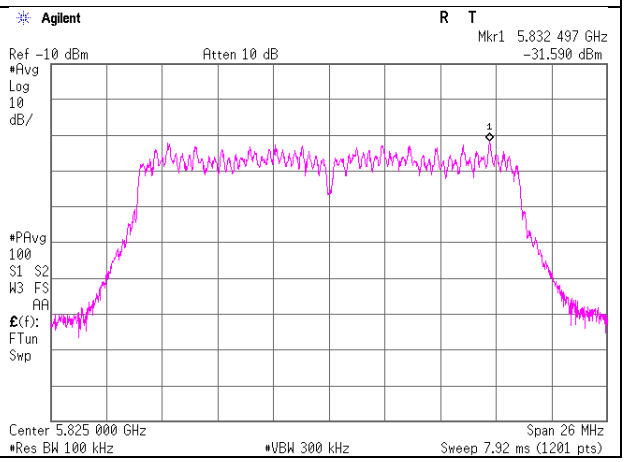
5785 MHz



5240 MHz



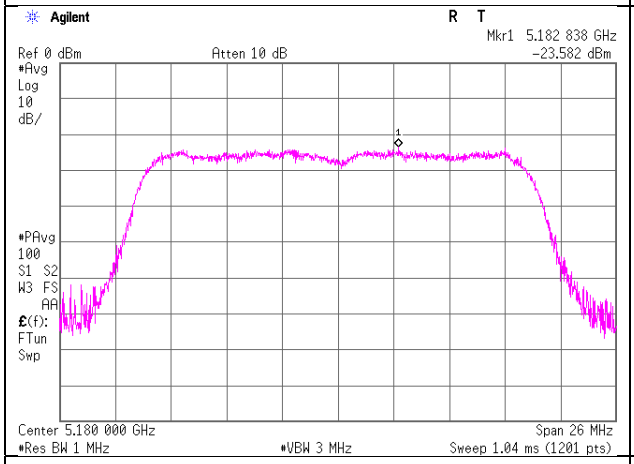
5825 MHz



Maximum Power Spectral Density

11ac-20 MIMO, RF1

5180 MHz



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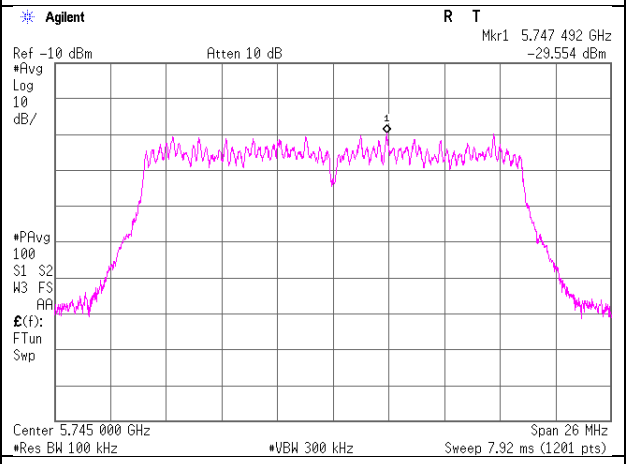

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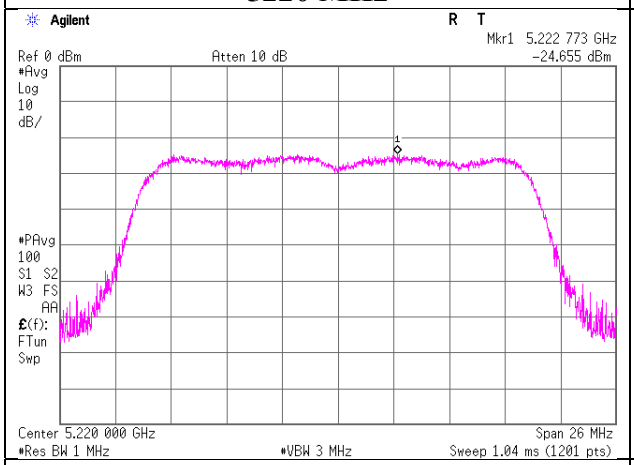

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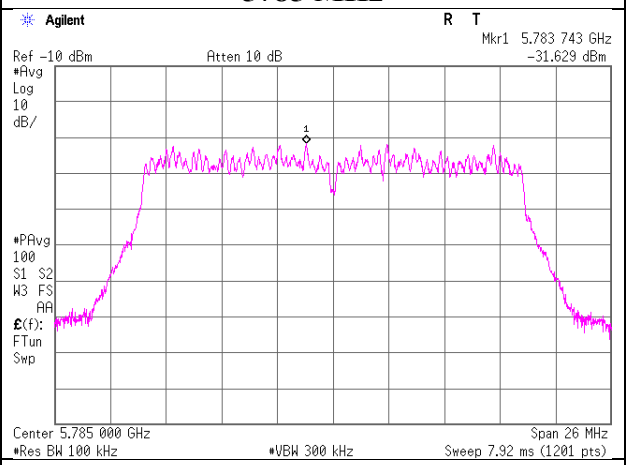

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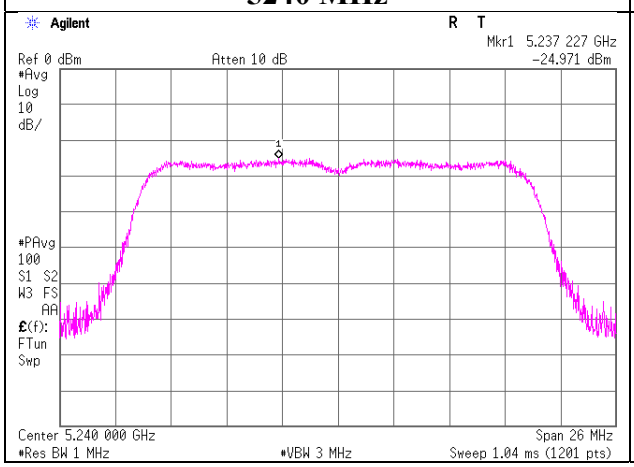
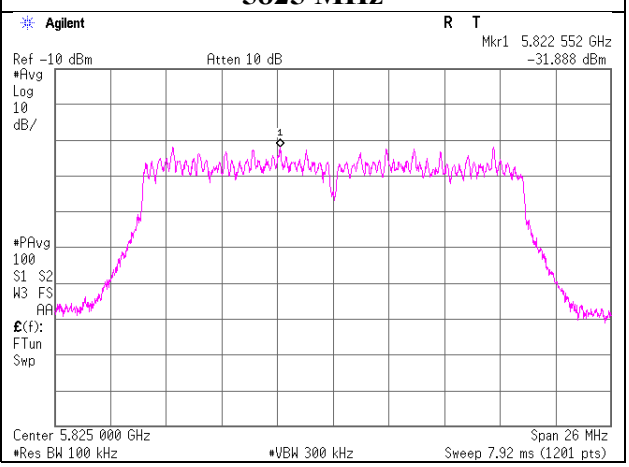


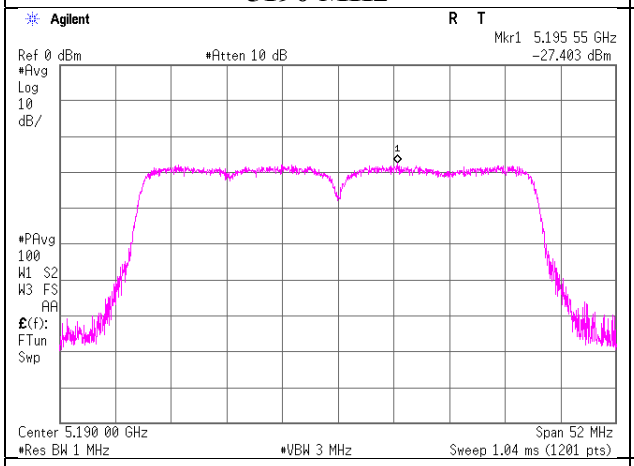
5825 MHz



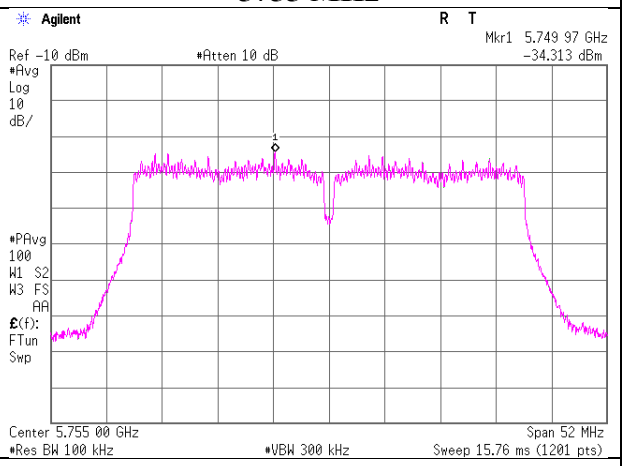
Maximum Power Spectral Density

11n-40 SISO, RF0

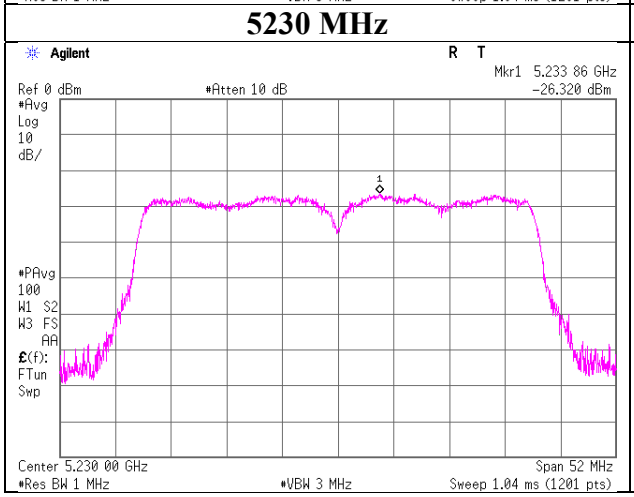
5190 MHz



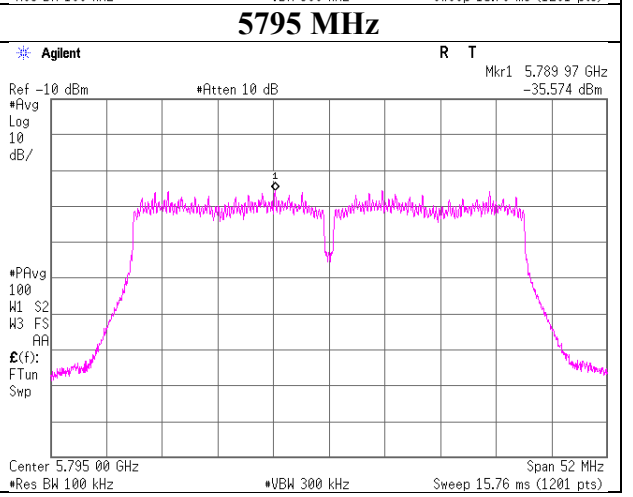
5755 MHz



5230 MHz



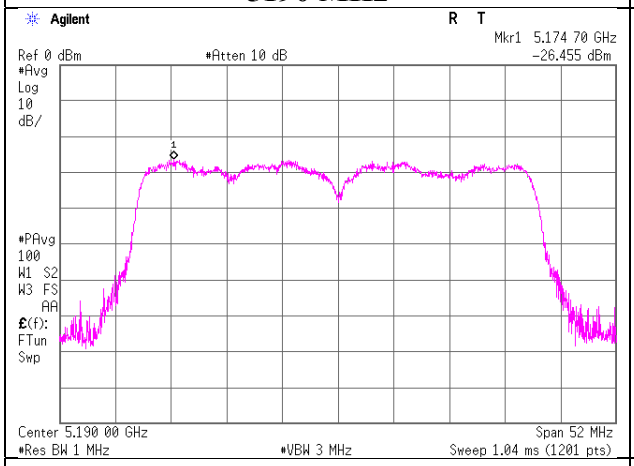
5795 MHz



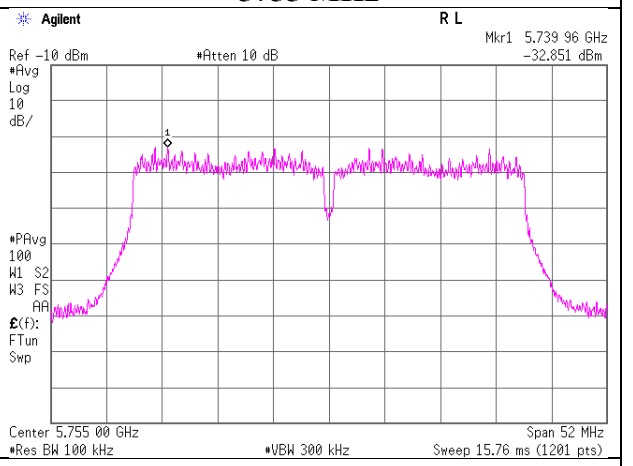
Maximum Power Spectral Density

11n-40 SISO, RF0

5190 MHz



5755 MHz



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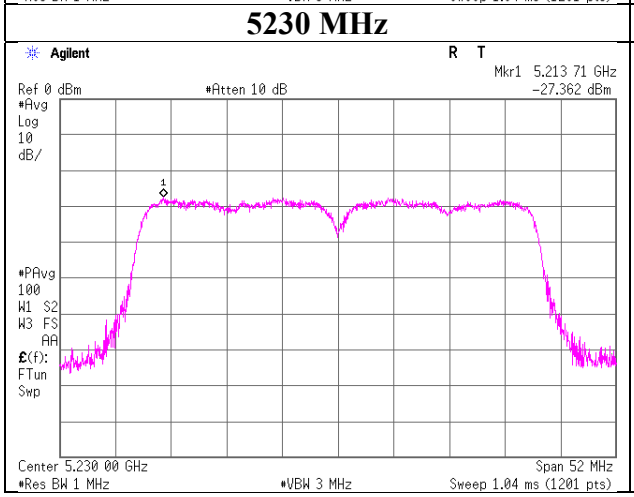

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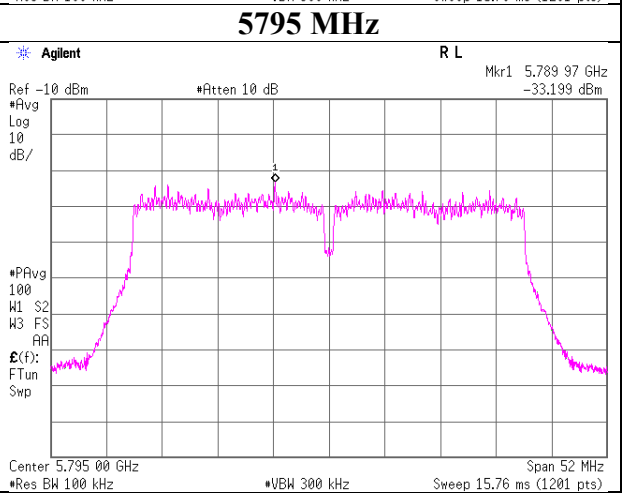
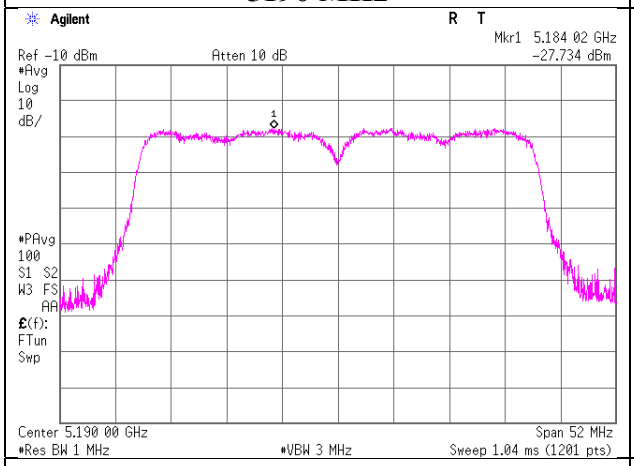


Maximum Power Spectral Density

11n-40 CDD, RF0

5190 MHz



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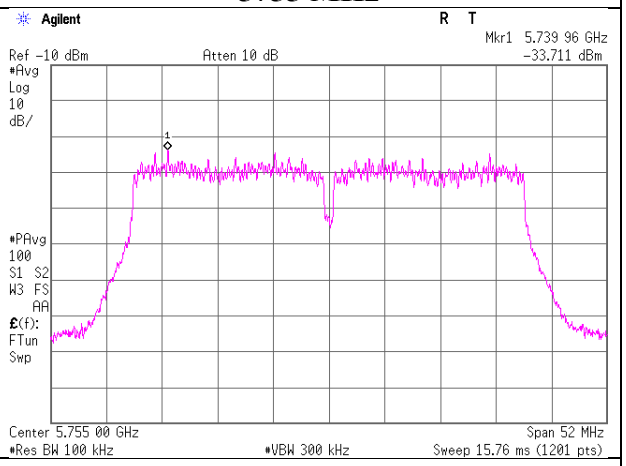
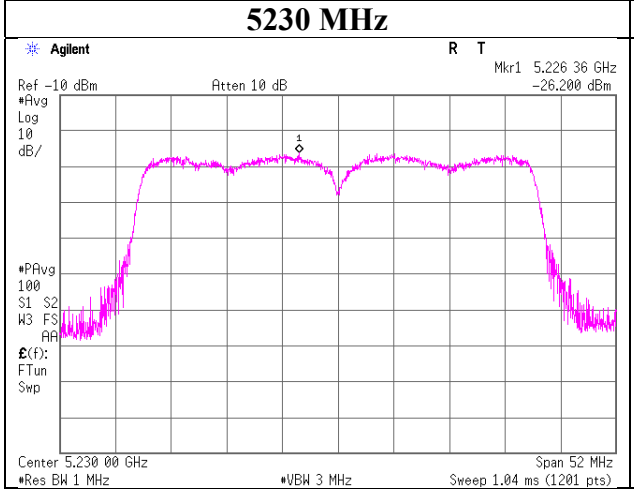
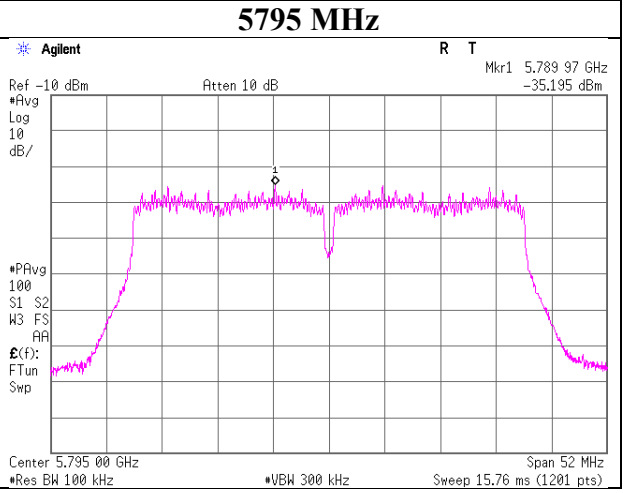


5230 MHz



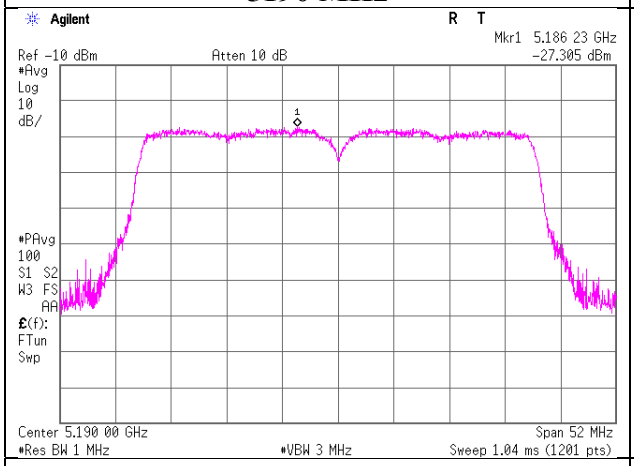
5795 MHz



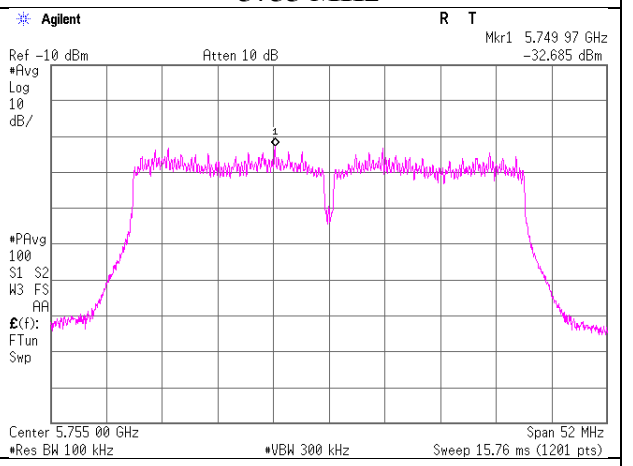
Maximum Power Spectral Density

11n-40 CDD, RF1

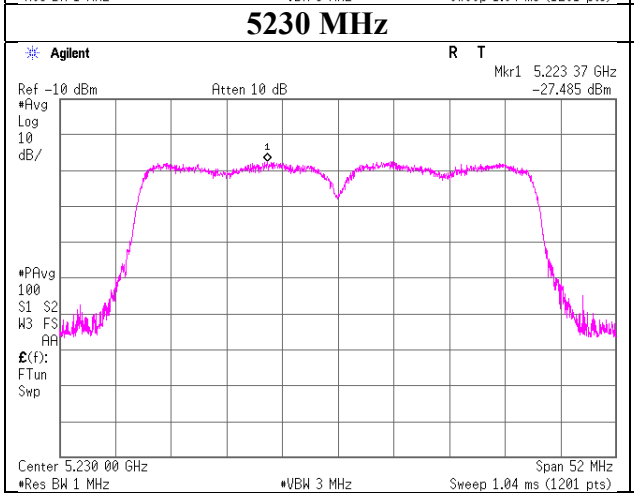
5190 MHz



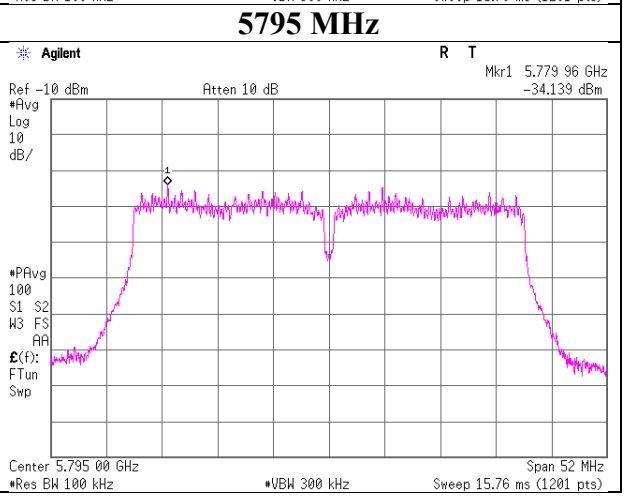
5755 MHz



5230 MHz



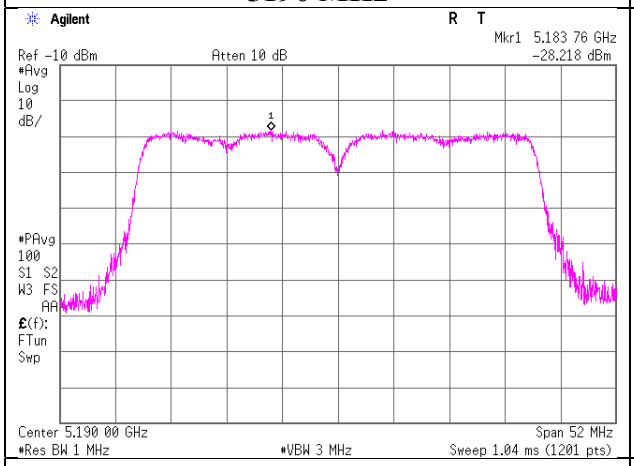
5795 MHz



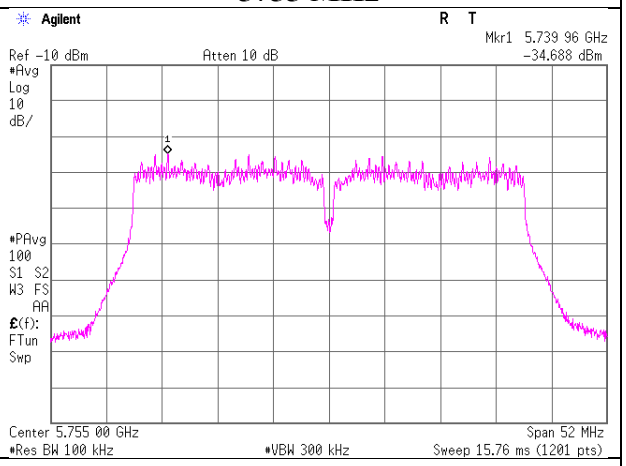
Maximum Power Spectral Density

11n-40 MIMO, RF0

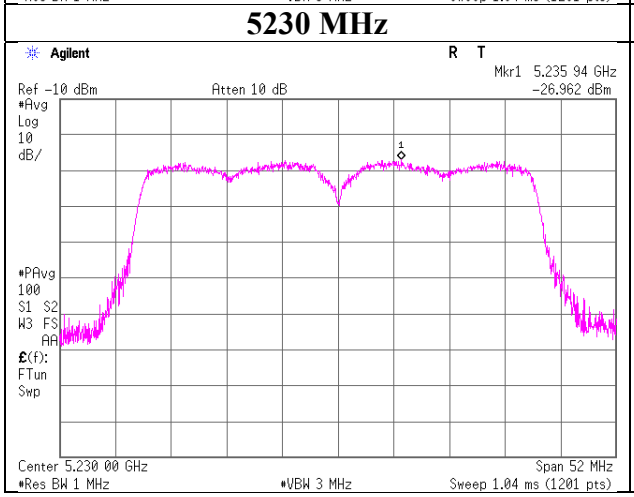
5190 MHz



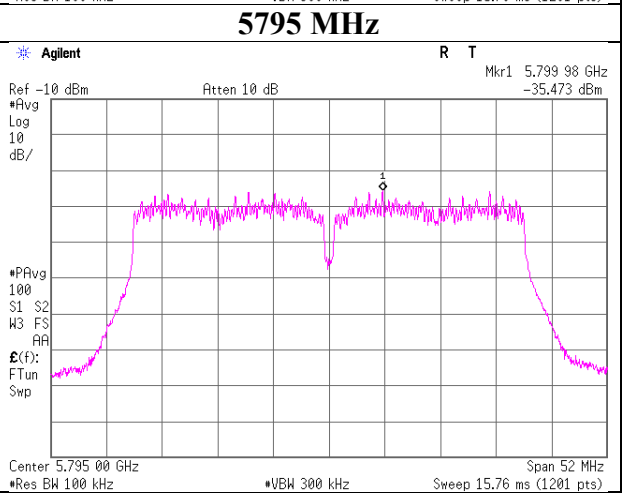
5755 MHz



5230 MHz



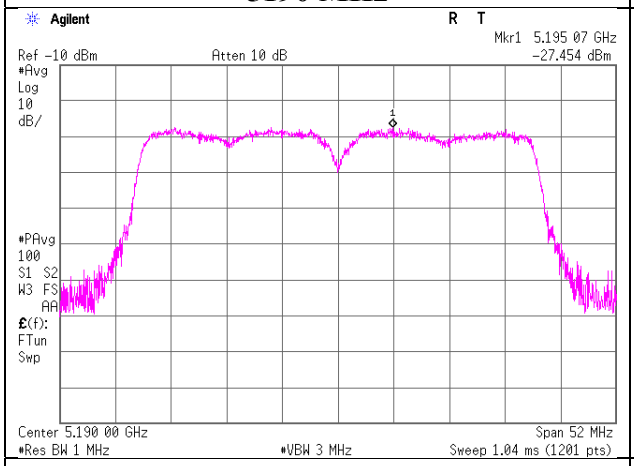
5795 MHz



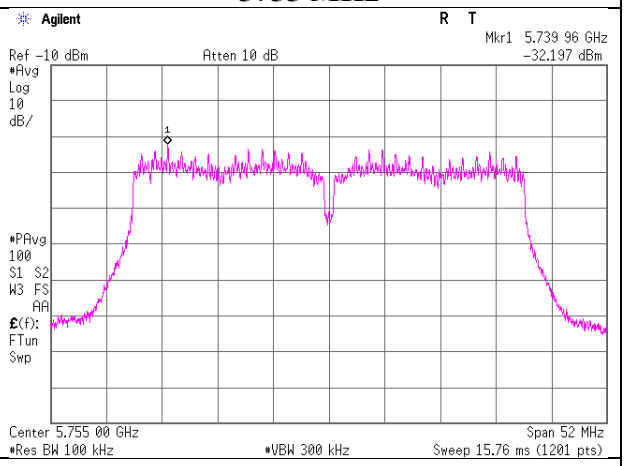
Maximum Power Spectral Density

11n-40 MIMO, RF1

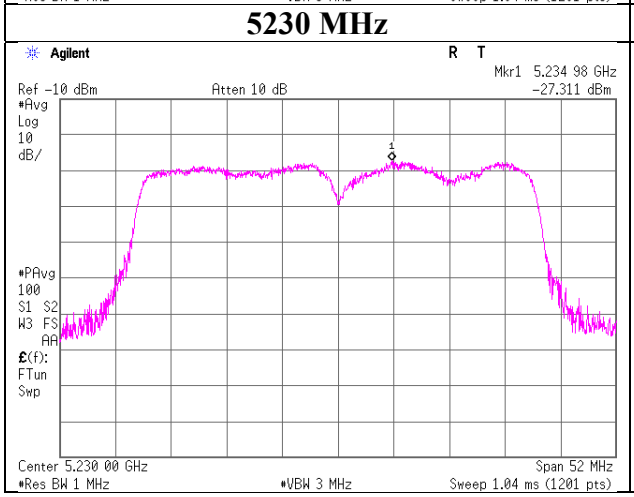
5190 MHz



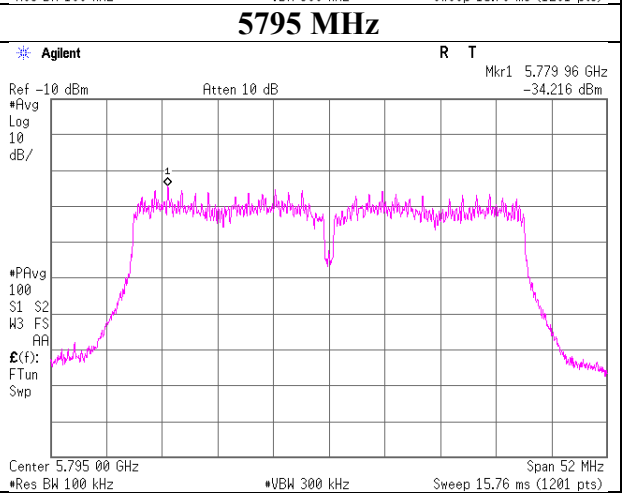
5755 MHz



5230 MHz



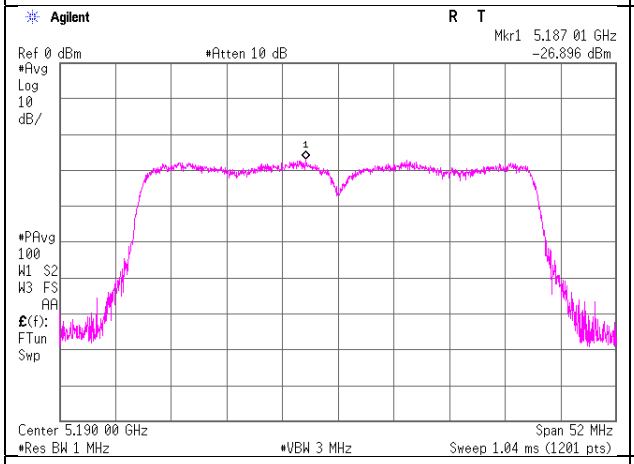
5795 MHz



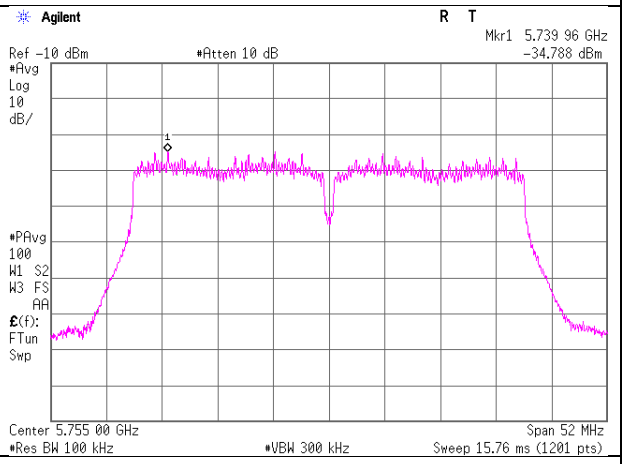
Maximum Power Spectral Density

11ac-40 SISO, RF0

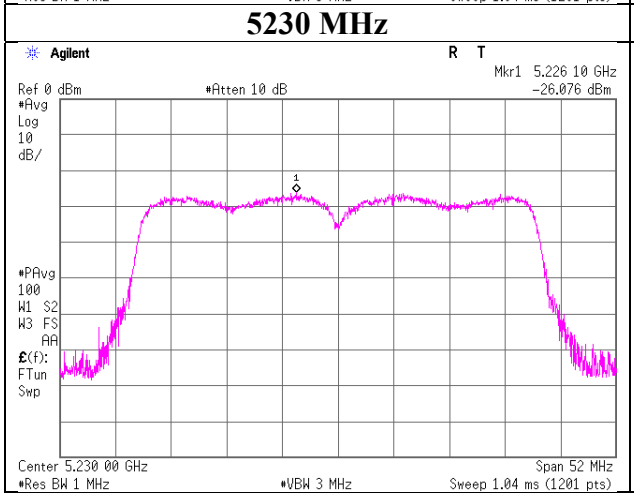
5190 MHz



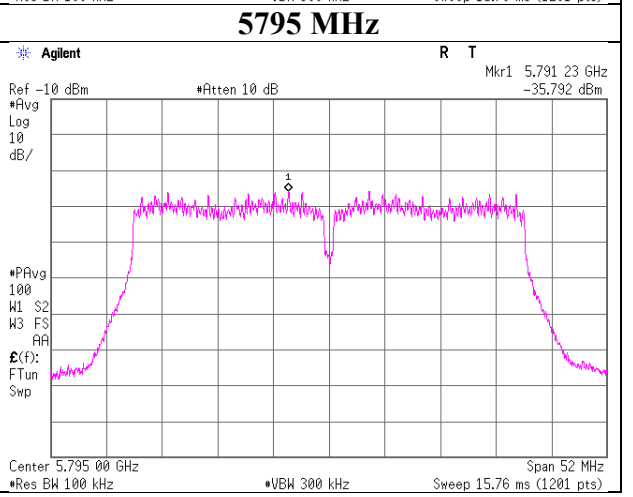
5755 MHz



5230 MHz



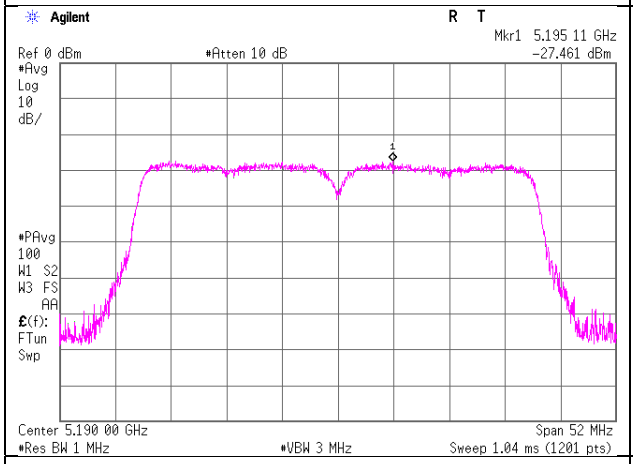
5795 MHz



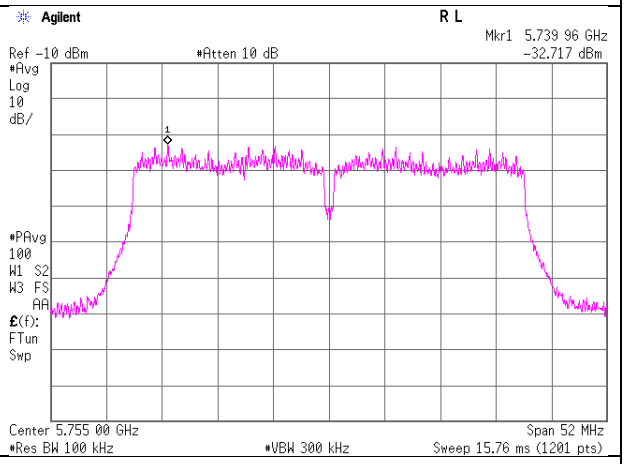
Maximum Power Spectral Density

11ac-40 SISO, RF1

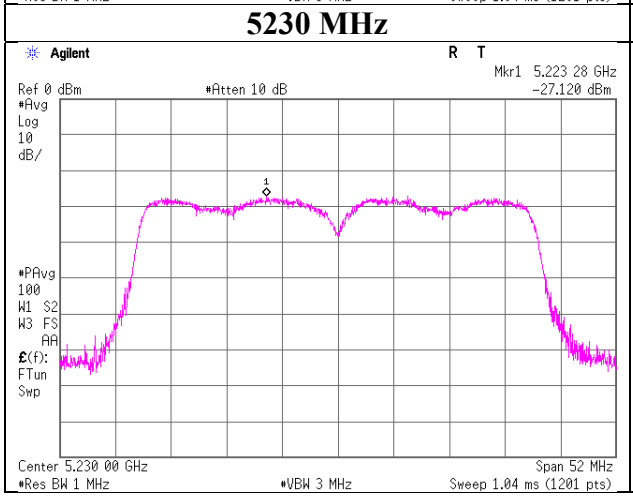
5190 MHz



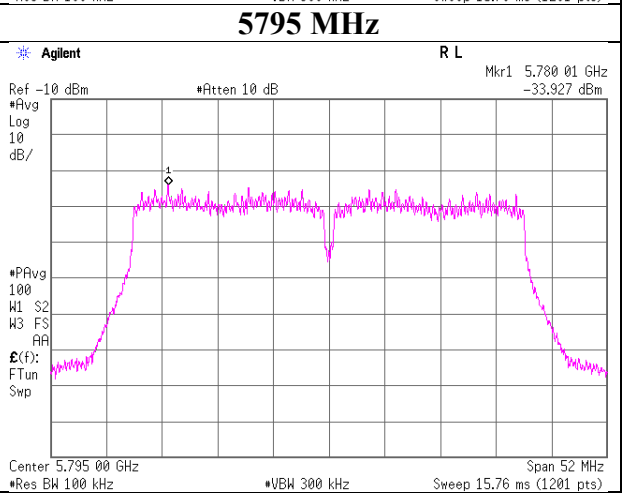
5755 MHz



5230 MHz



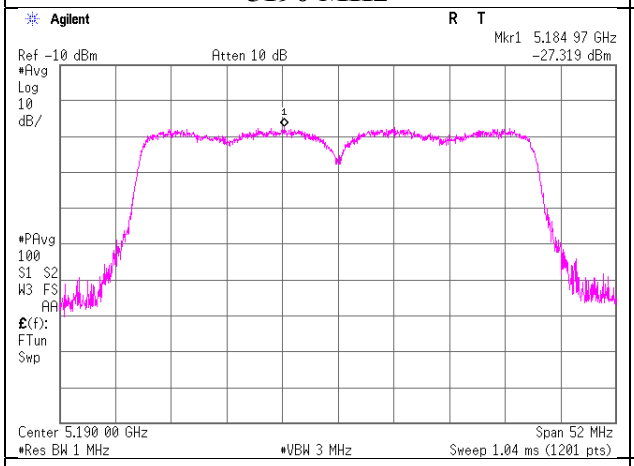
5795 MHz



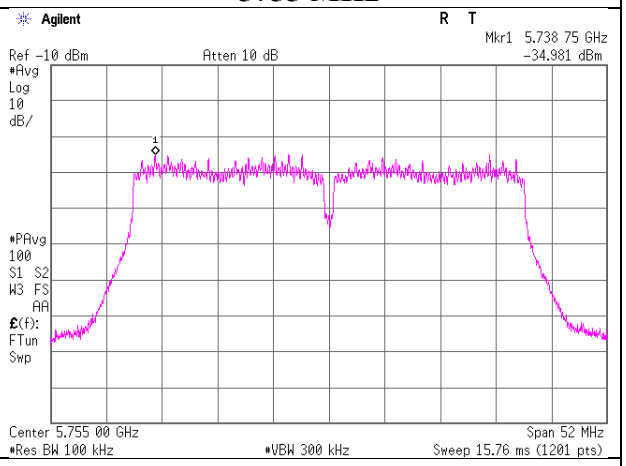
Maximum Power Spectral Density

11ac-40 CDD, RF0

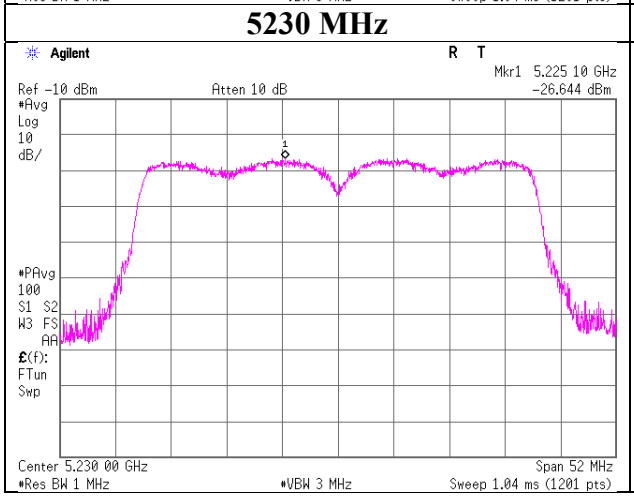
5190 MHz



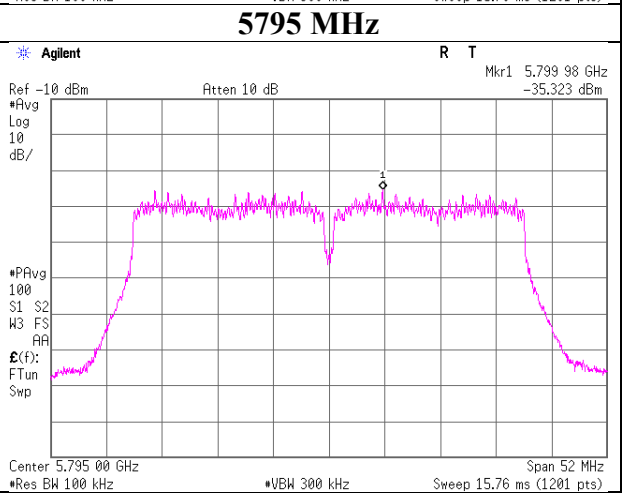
5755 MHz



5230 MHz



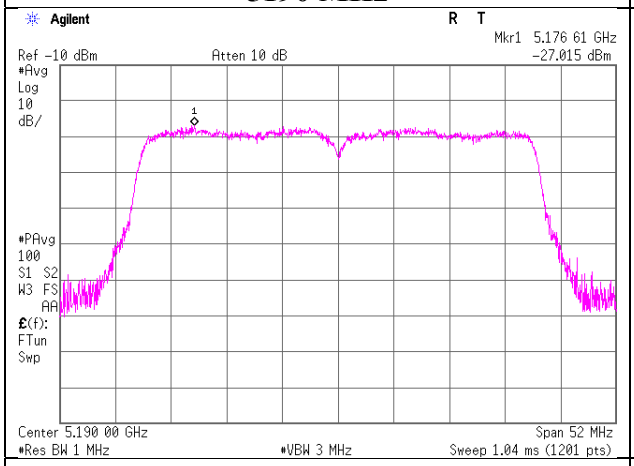
5795 MHz



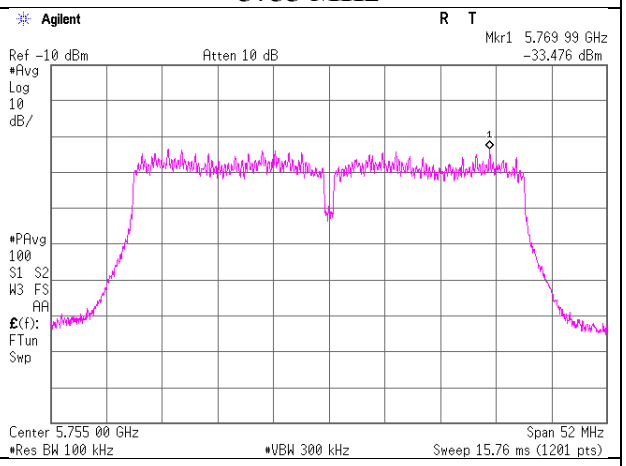
Maximum Power Spectral Density

11ac-40 CDD, RF1

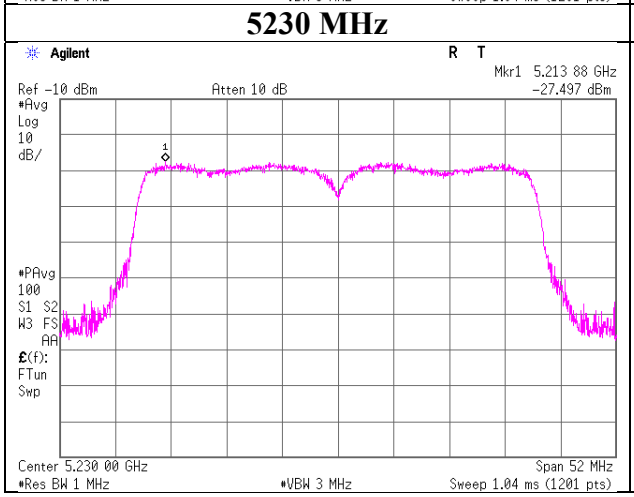
5190 MHz



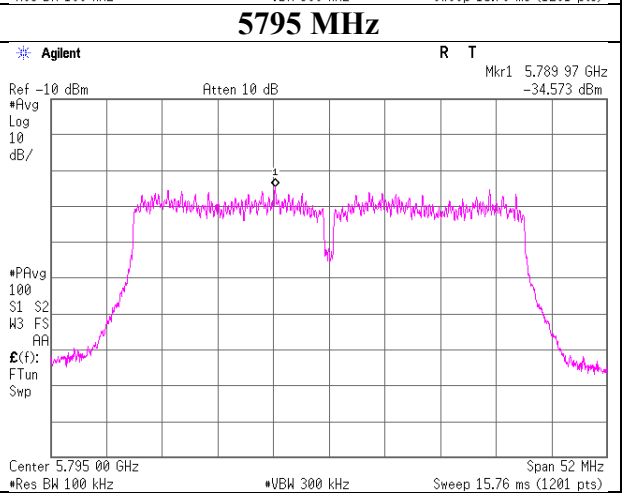
5755 MHz



5230 MHz



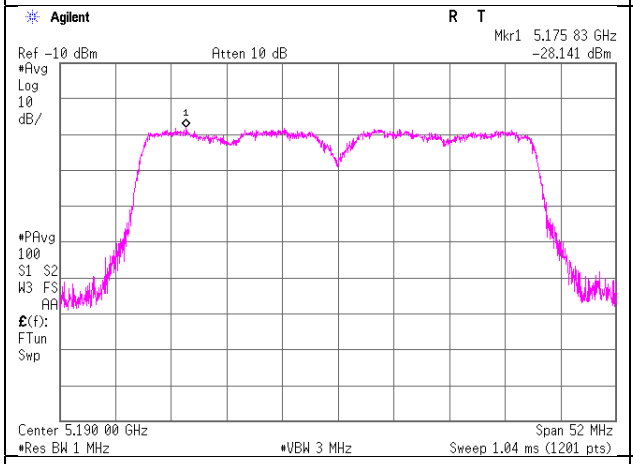
5795 MHz



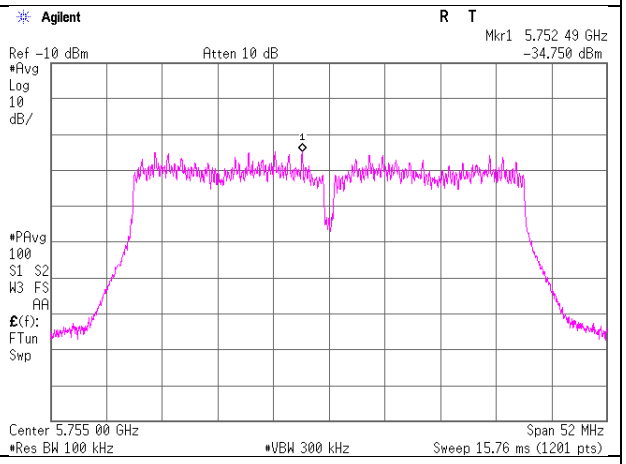
Maximum Power Spectral Density

11ac-40 MIMO, RF0

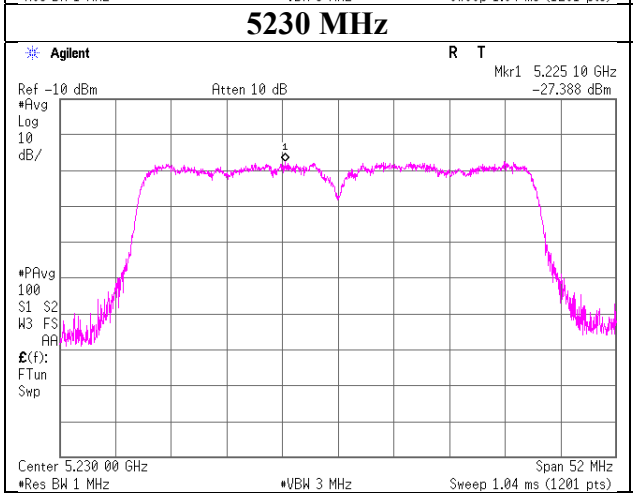
5190 MHz



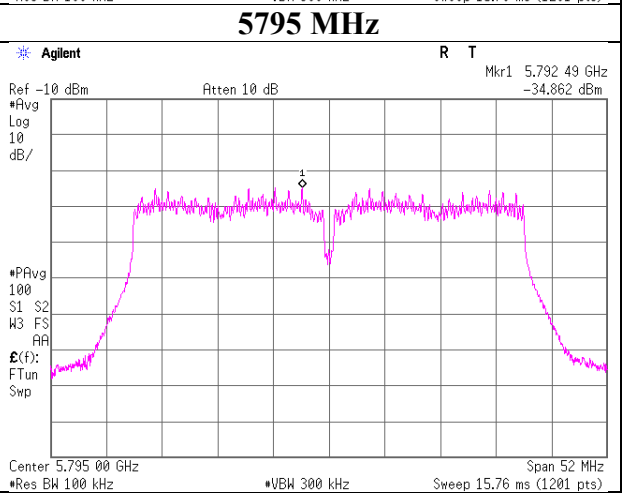
5755 MHz



5230 MHz



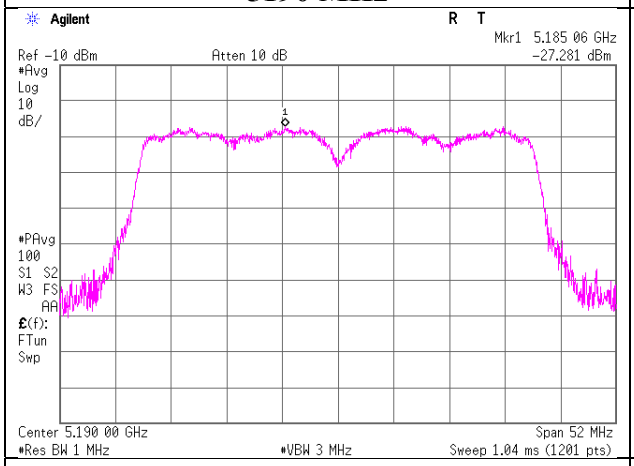
5795 MHz



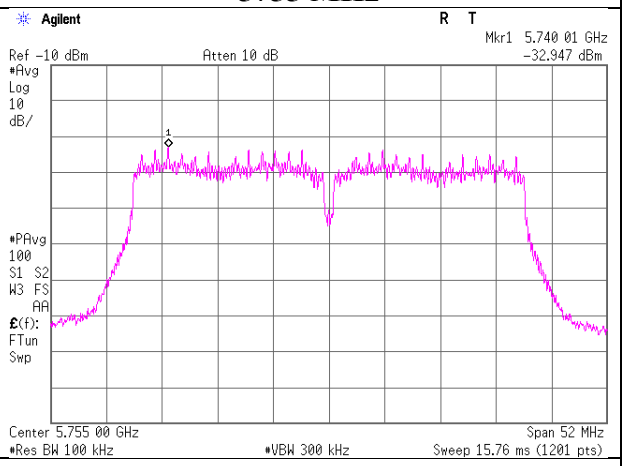
Maximum Power Spectral Density

11ac-40 MIMO, RF1

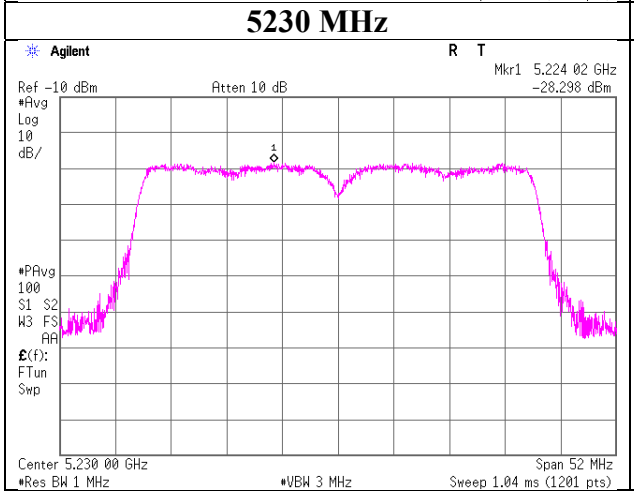
5190 MHz



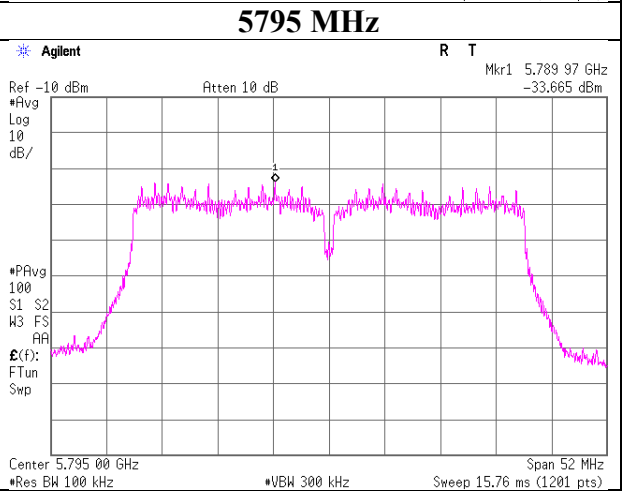
5755 MHz



5230 MHz



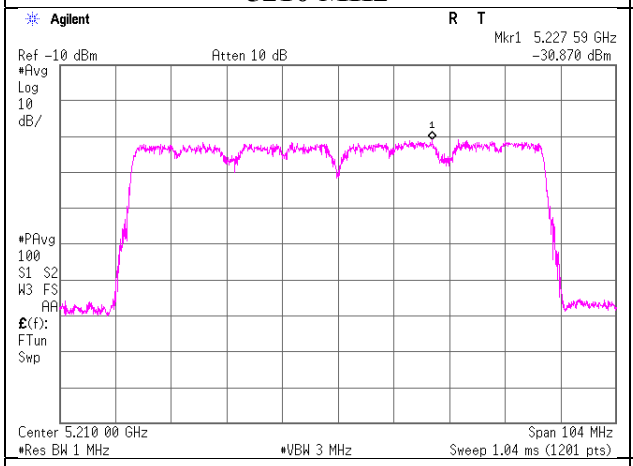
5795 MHz



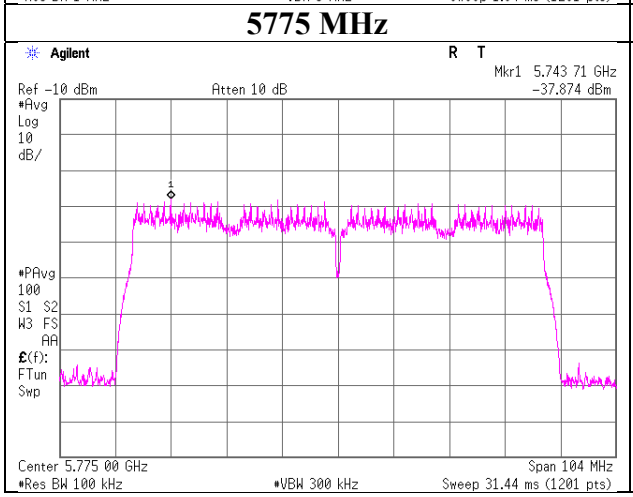
Maximum Power Spectral Density

11ac-80 SISO, RF0

5210 MHz

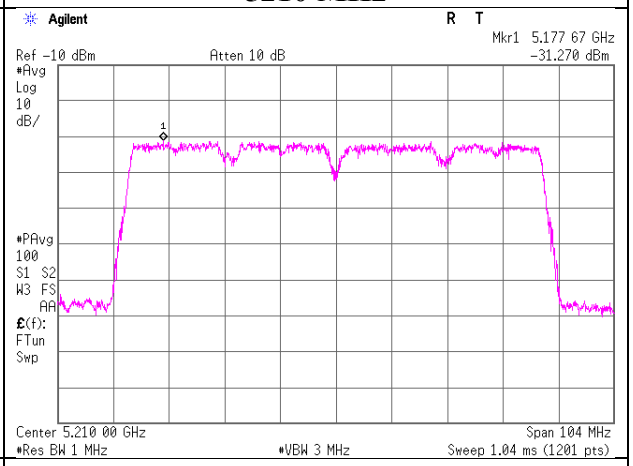


5775 MHz

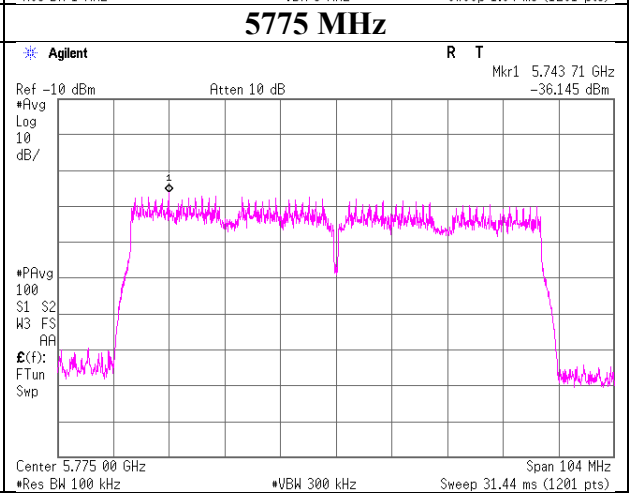


11ac-80 SISO, RF1

5210 MHz



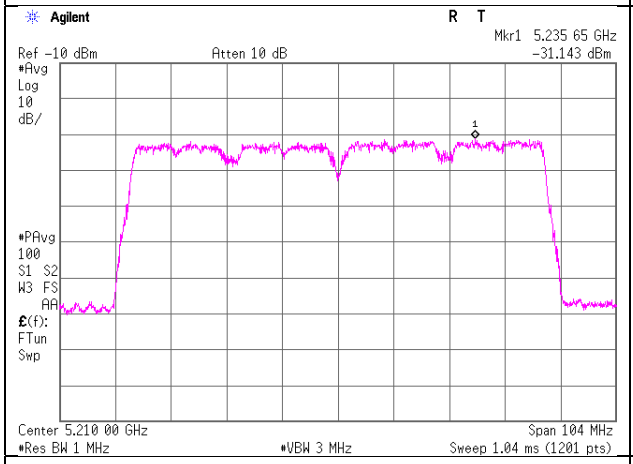
5775 MHz



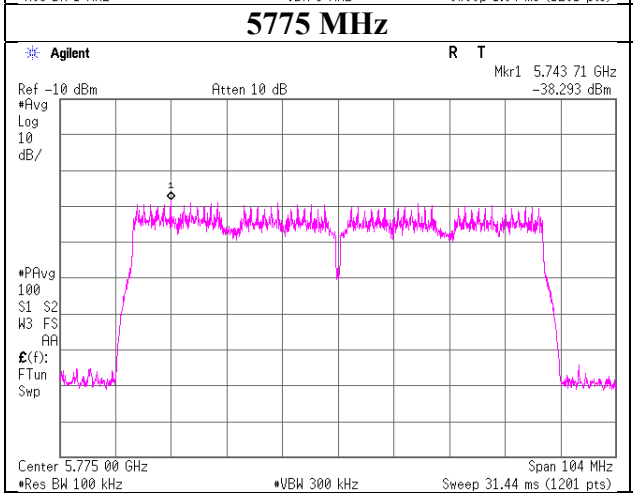
Maximum Power Spectral Density

11ac-80 CDD, RF0

5210 MHz

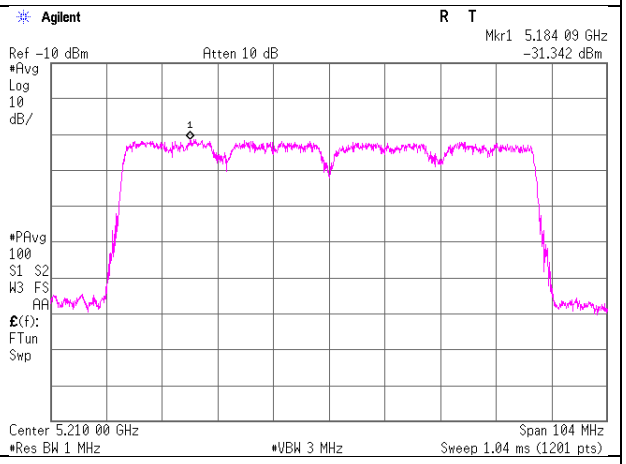


5775 MHz

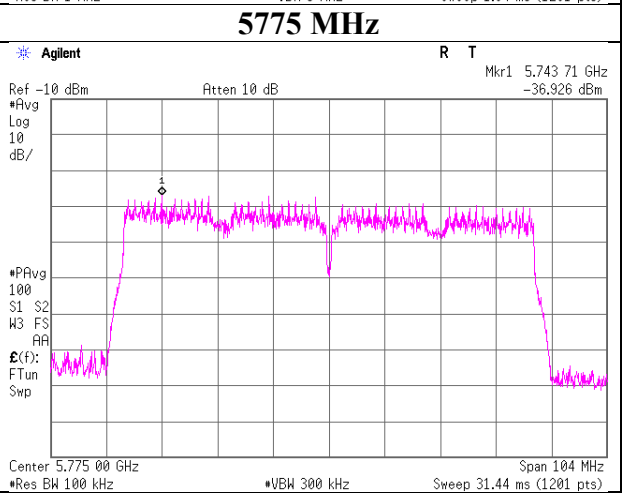


11ac-80 CDD, RF1

5210 MHz



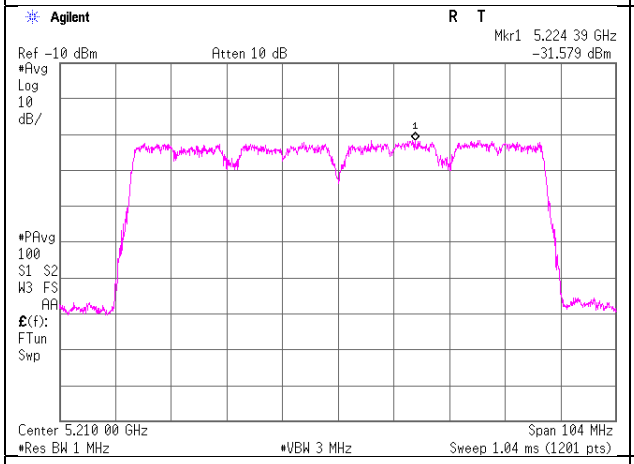
5775 MHz



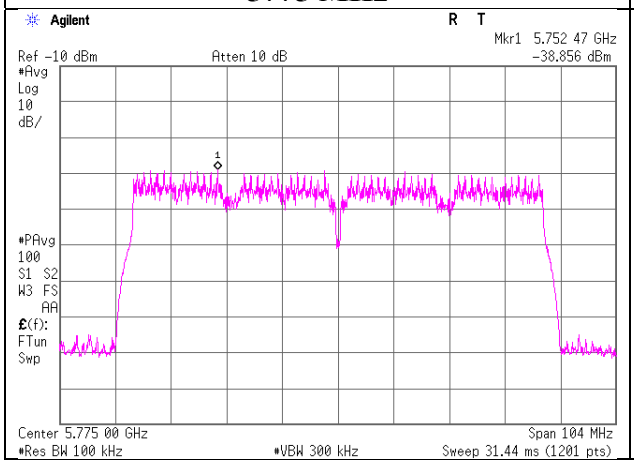
Maximum Power Spectral Density

11ac-80 MIMO, RF0

5210 MHz

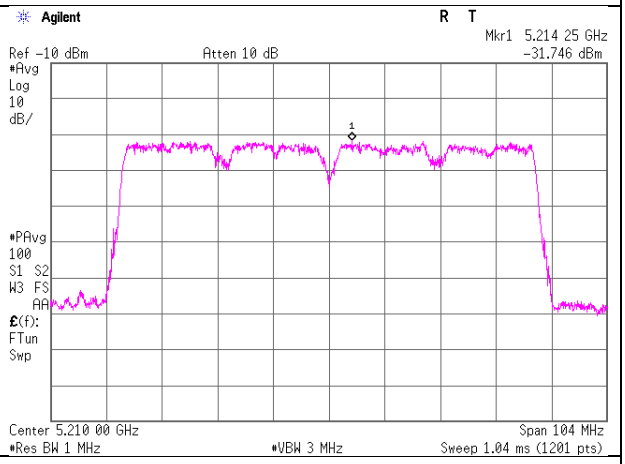


5775 MHz

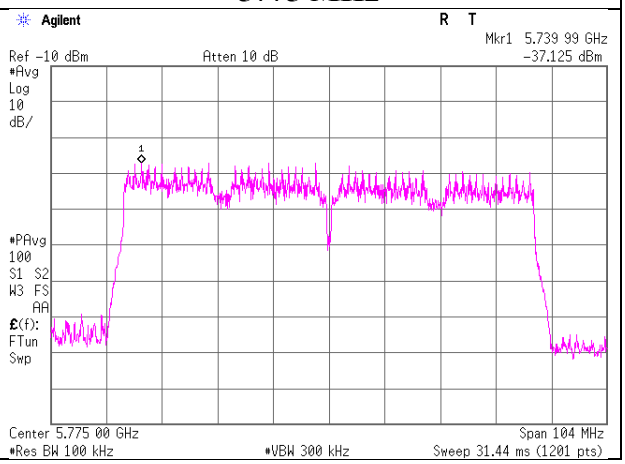


11ac-80 MIMO, RF1

5210 MHz



5775 MHz



Radiated Spurious Emission

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 10, 2020	July 24, 2020	July 26, 2020
Temperature / Humidity	22 deg. C / 65 % RH	23 deg. C / 65 % RH	23 deg. C / 69 % RH
Engineer	Kazuya Noda	Toshinori Yamada	Takahiro Suzuki
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz) (26.5 GHz – 40 GHz)	(18 GHz - 26.5 GHz)
Mode	Tx 11ac-20 MIMO 5180 MHz		
EUT	Hi type(14 inch Display)		

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	49.26	32.12	16.41	43.11	2.13	56.81	73.9	17.0	144	39	
Hori.	15540.000	PK	47.98	39.60	11.93	40.42	-9.54	49.55	73.9	24.3	100	0	
Hori.	5150.000	AV	39.63	32.12	16.41	43.11	2.13	47.18	53.9	**6.7**	144	39	VBW:10 kHz
Hori.	15540.000	AV	38.75	39.60	11.93	40.42	-9.54	40.32	53.9	13.5	100	0	VBW:10 kHz
Vert.	5150.000	PK	48.83	32.12	16.41	43.11	2.13	56.38	73.9	17.5	117	180	
Vert.	15540.000	PK	47.74	39.60	11.93	40.42	-9.54	49.31	73.9	24.5	100	0	
Vert.	5150.000	AV	39.42	32.12	16.41	43.11	2.13	46.97	53.9	6.9	117	180	VBW:10 kHz
Vert.	15540.000	AV	38.82	39.60	11.93	40.42	-9.54	40.39	53.9	13.5	100	0	VBW:10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10360.000	PK	48.55	39.48	9.49	42.70	2.13	56.95	-38.27	-27.0	11.2	100	0	-
Vert.	10360.000	PK	48.71	39.48	9.49	42.70	2.13	57.11	-38.11	-27.0	11.1	100	0	

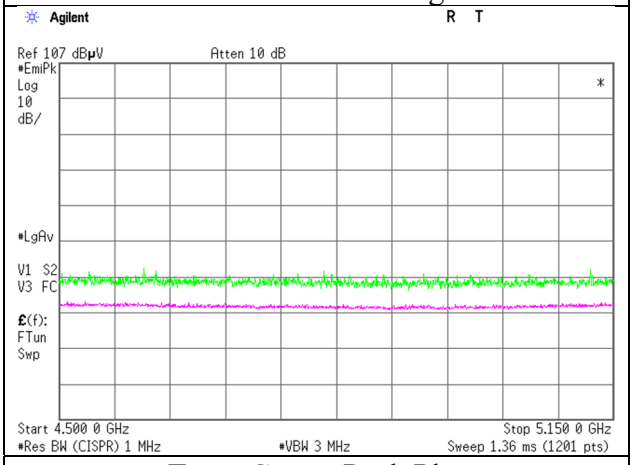
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 10, 2020
Temperature / Humidity	22 deg. C / 65 % RH
Engineer	Kazuya Noda
Mode	Tx 11ac-20 MIMO 5180 MHz
EUT	Hi type(14 inch Display)

Horizontal

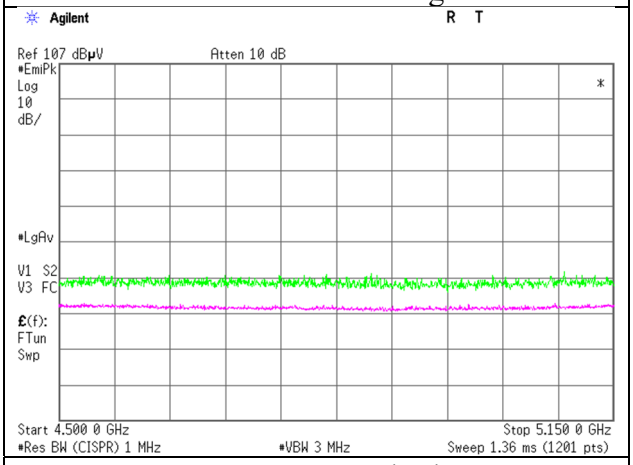
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 10, 2020	July 24, 2020	July 26, 2020
Temperature / Humidity	22 deg. C / 65 % RH	23 deg. C / 65 % RH	23 deg. C / 69 % RH
Engineer	Kazuya Noda	Toshinori Yamada	Takahiro Suzuki
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz) (26.5 GHz – 40 GHz)	(18 GHz - 26.5 GHz)
Mode	Tx 11ac-20 MIMO 5220 MHz		
EUT	Hi type(14 inch Display)		

(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.	15660.000	PK	48.12	39.15	11.93	40.37	-9.54	49.29	73.9	24.6	100	0	
Hori.	15660.000	AV	38.70	39.15	11.93	40.37	-9.54	39.87	53.9	14.0	100	0	VBW:10 kHz
Vert.	15660.000	PK	48.06	39.15	11.93	40.37	-9.54	49.23	73.9	24.6	100	0	
Vert.	15660.000	AV	38.65	39.15	11.93	40.37	-9.54	39.82	53.9	14.0	100	0	VBW:10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 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.	10440.000	PK	48.21	39.69	9.51	42.70	2.13	56.84	-38.38	-27.0	11.3	100	0	-
Vert.	10440.000	PK	47.98	39.69	9.51	42.70	2.13	56.61	-38.61	-27.0	11.6	100	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + 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 - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 10, 2020	July 24, 2020	July 26, 2020
Temperature / Humidity	22 deg. C / 65 % RH	23 deg. C / 65 % RH	23 deg. C / 69 % RH
Engineer	Kazuya Noda	Toshinori Yamada	Takahiro Suzuki
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz) (26.5 GHz – 40 GHz)	(18 GHz - 26.5 GHz)
Mode	Tx 11ac-20 MIMO 5240 MHz		
EUT	Hi type(14 inch Display)		

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	49.14	31.83	16.56	43.33	2.13	56.33	73.9	17.5	187	34	
Hori.	15720.000	PK	47.60	38.93	11.92	40.35	-9.54	48.56	73.9	25.3	100	0	
Hori.	5350.000	AV	39.51	31.83	16.56	43.33	2.13	46.70	53.9	7.2	187	34	VBW:10 kHz
Hori.	15720.000	AV	38.25	38.93	11.92	40.35	-9.54	39.21	53.9	14.6	100	0	VBW:10 kHz
Vert.	5350.000	PK	49.21	31.83	16.56	43.33	2.13	56.40	73.9	17.5	215	284	
Vert.	15720.000	PK	47.34	38.93	11.92	40.35	-9.54	48.30	73.9	25.6	100	0	
Vert.	5350.000	AV	39.47	31.83	16.56	43.33	2.13	46.66	53.9	7.2	215	284	VBW:10 kHz
Vert.	15720.000	AV	38.19	38.93	11.92	40.35	-9.54	39.15	53.9	14.7	100	0	VBW:10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 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.	10480.000	PK	48.38	39.77	9.51	42.70	2.13	57.09	-38.13	-27.0	11.1	100	0	-
Vert.	10480.000	PK	48.31	39.77	9.51	42.70	2.13	57.02	-38.20	-27.0	11.2	100	0	

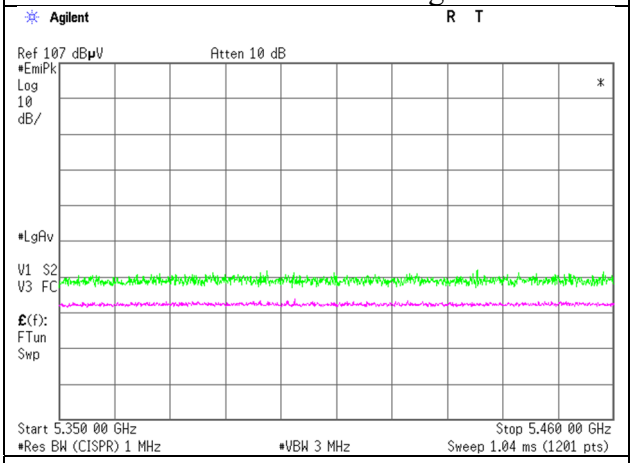
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 10, 2020
Temperature / Humidity	22 deg. C / 65 % RH
Engineer	Kazuya Noda
Mode	Tx 11ac-20 MIMO 5240 MHz
EUT	Hi type(14 inch Display)

Horizontal

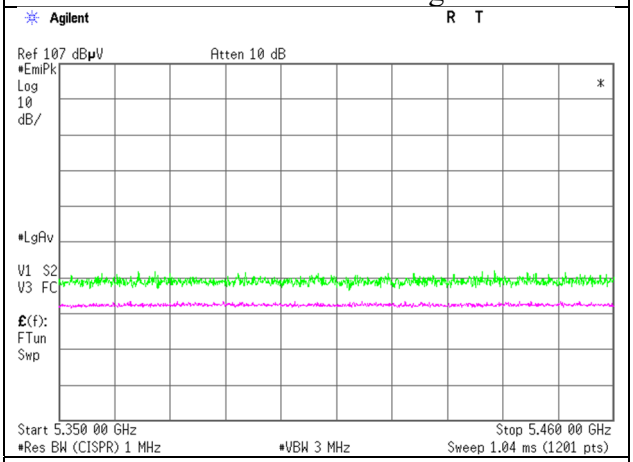
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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

Report No.	13385909S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	July 28, 2020	July 10, 2020	July 24, 2020	July 26, 2020
Temperature / Humidity	25 deg. C / 64 % RH	22 deg. C / 65 % RH	23 deg. C / 65 % RH	23 deg. C / 69 % RH
Engineer	Makoto Hosaka	Kazuya Noda	Toshinori Yamada	Takahiro Suzuki
	(30 MHz - 1 GHz)	(1 GHz - 13 GHz)	(13 GHz - 18 GHz) (26.5 GHz – 40 GHz)	(18 GHz - 26.5 GHz)
Mode	Tx 11ac-20 MIMO 5745 MHz			
EUT	Hi type(14 inch Display)			

(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.	583.275	QP	34.90	18.87	9.74	31.96	0.00	31.55	46.0	14.4	155	185	
Hori.	592.257	QP	34.60	19.15	9.77	31.95	0.00	31.57	46.0	14.4	153	174	
Hori.	640.002	QP	35.60	19.27	9.94	31.95	0.00	32.86	46.0	13.1	151	211	
Hori.	768.903	QP	35.50	20.43	10.40	31.71	0.00	34.62	46.0	11.3	121	202	
Hori.	827.804	QP	32.20	21.01	10.59	31.47	0.00	32.33	46.0	13.6	100	228	
Hori.	851.211	QP	30.70	21.51	10.67	31.31	0.00	31.57	46.0	14.4	100	234	
Hori.	913.973	QP	32.80	22.13	10.86	30.94	0.00	34.85	46.0	11.1	183	134	
Hori.	11490.000	PK	48.45	39.69	10.05	42.63	2.13	57.69	73.9	16.2	100	0	
Hori.	11490.000	AV	38.52	39.69	10.05	42.63	2.13	47.76	53.9	**6.1**	100	0	VBW:10 kHz
Vert.	130.569	QP	37.00	13.92	7.39	32.10	0.00	26.21	43.5	17.2	100	181	
Vert.	913.973	QP	29.20	22.13	10.86	30.94	0.00	31.25	46.0	14.7	100	132	
Vert.	943.500	QP	25.10	21.99	10.96	30.70	0.00	27.35	46.0	18.6	100	17	
Vert.	11490.000	PK	48.51	39.69	10.05	42.63	2.13	57.75	73.9	16.1	100	0	
Vert.	11490.000	AV	38.48	39.69	10.05	42.63	2.13	47.72	53.9	**6.1**	100	0	VBW:10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 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	48.88	32.49	16.76	43.46	2.13	56.80	-38.42	-27.0	11.4	272	113	-
Hori.	5700.000	PK	50.02	32.60	16.79	43.45	2.13	58.09	-37.13	10.0	47.1	272	113	
Hori.	5720.000	PK	52.62	32.66	16.80	43.44	2.13	60.77	-34.45	15.6	50.0	272	113	
Hori.	5725.000	PK	55.56	32.68	16.81	43.44	2.13	63.74	-31.48	27.0	58.4	272	113	
Hori.	17235.000	PK	47.21	41.57	12.73	40.31	-9.54	51.66	-43.56	-27.0	16.5	100	0	
Vert.	5650.000	PK	48.66	32.49	16.76	43.46	2.13	56.58	-38.64	-27.0	11.6	152	191	
Vert.	5700.000	PK	49.06	32.60	16.79	43.45	2.13	57.13	-38.09	10.0	48.0	152	191	
Vert.	5720.000	PK	50.45	32.66	16.80	43.44	2.13	58.60	-36.62	15.6	52.2	152	191	
Vert.	5725.000	PK	52.51	32.68	16.81	43.44	2.13	60.69	-34.53	27.0	61.5	152	191	
Vert.	17235.000	PK	47.48	41.57	12.73	40.31	-9.54	51.93	-43.29	-27.0	16.2	100	0	

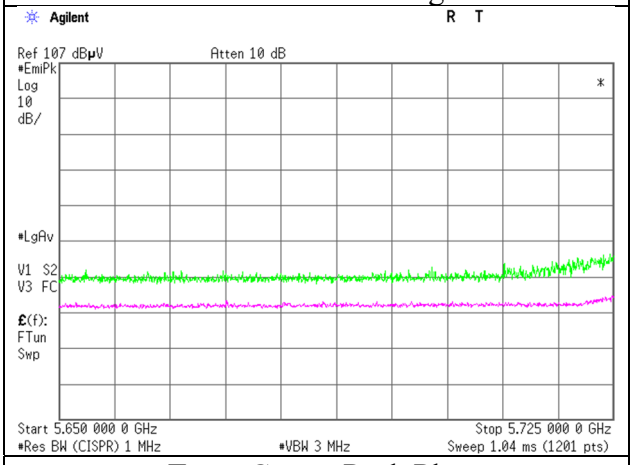
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 10, 2020
Temperature / Humidity	22 deg. C / 65 % RH
Engineer	Kazuya Noda
Mode	Tx 11ac-20 MIMO 5745 MHz
EUT	Hi type(14 inch Display)

Horizontal

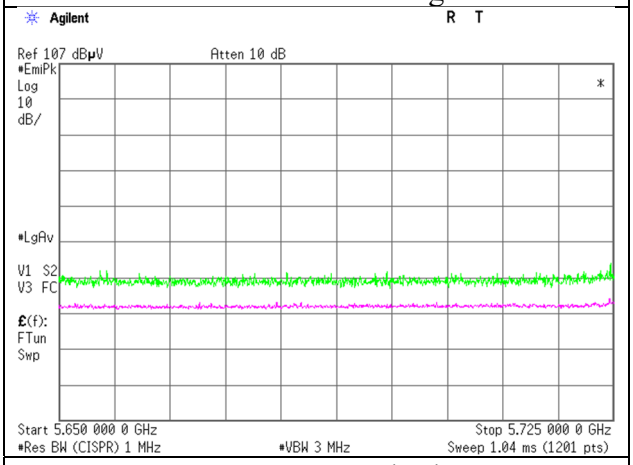
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 10, 2020	July 24, 2020	July 26, 2020
Temperature / Humidity	22 deg. C / 65 % RH	23 deg. C / 65 % RH	23 deg. C / 69 % RH
Engineer	Kazuya Noda	Toshinori Yamada	Takahiro Suzuki
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz) (26.5 GHz – 40 GHz)	(18 GHz - 26.5 GHz)
Mode	Tx 11ac-20 MIMO 5785 MHz		
EUT	Hi type(14 inch Display)		

(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	48.05	39.65	10.09	42.62	2.13	57.30	73.9	16.6	100	0	
Hori.	11570.000	AV	38.22	39.65	10.09	42.62	2.13	47.47	53.9	6.4	100	0	VBW:10 kHz
Vert.	11570.000	PK	48.21	39.65	10.09	42.62	2.13	57.46	73.9	16.4	100	0	
Vert.	11570.000	AV	38.17	39.65	10.09	42.62	2.13	47.42	53.9	6.4	100	0	VBW:10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 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.	17355.000	PK	47.09	42.40	12.75	40.28	-9.54	52.42	-42.80	-27.0	15.8	100	0	-
Vert.	17355.000	PK	47.23	42.40	12.75	40.28	-9.54	52.56	-42.66	-27.0	15.6	100	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + 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 - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 10, 2020	July 24, 2020	July 26, 2020
Temperature / Humidity	22 deg. C / 65 % RH	23 deg. C / 65 % RH	23 deg. C / 69 % RH
Engineer	Kazuya Noda	Toshinori Yamada	Takahiro Suzuki
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz - 26.5 GHz)
		(26.5 GHz – 40 GHz)	
Mode	Tx 11ac-20 MIMO 5825 MHz		
EUT	Hi type(14 inch Display)		

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11650.000	PK	47.56	39.50	10.16	42.61	2.13	56.74	73.9	17.1	100	0	
Hori.	11650.000	AV	37.87	39.50	10.16	42.61	2.13	47.05	53.9	6.8	100	0	VBW:10 kHz
Vert.	11650.000	PK	47.82	39.50	10.16	42.61	2.13	57.00	73.9	16.9	100	0	
Vert.	11650.000	AV	37.91	39.50	10.16	42.61	2.13	47.09	53.9	6.8	100	0	VBW:10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 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.	5850.000	PK	49.94	33.07	16.89	43.41	2.13	58.62	-36.60	27.0	63.6	263	114	-
Hori.	5855.000	PK	49.54	33.08	16.89	43.41	2.13	58.23	-36.99	15.6	52.5	263	114	
Hori.	5875.000	PK	49.04	33.12	16.92	43.41	2.13	57.80	-37.42	10.0	47.4	263	114	
Hori.	5925.000	PK	49.47	33.21	16.94	43.40	2.13	58.35	-36.87	-27.0	9.8	263	114	
Hori.	17475.000	PK	46.13	43.11	12.79	40.26	-9.54	52.23	-42.99	-27.0	15.9	100	0	
Vert.	5850.000	PK	49.65	33.07	16.89	43.41	2.13	58.33	-36.89	27.0	63.8	167	276	
Vert.	5855.000	PK	49.54	33.08	16.89	43.41	2.13	58.23	-36.99	15.6	52.5	167	276	
Vert.	5875.000	PK	49.35	33.12	16.92	43.41	2.13	58.11	-37.11	10.0	47.1	167	276	
Vert.	5925.000	PK	49.56	33.21	16.94	43.40	2.13	58.44	-36.78	-27.0	9.7	167	276	
Vert.	17475.000	PK	46.27	43.11	12.79	40.26	-9.54	52.37	-42.85	-27.0	15.8	100	0	

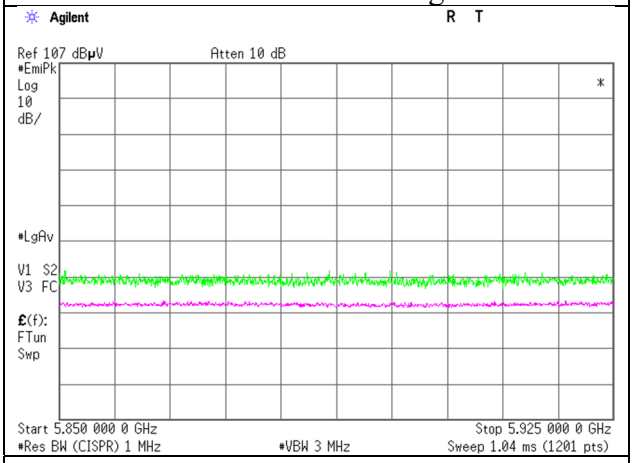
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 10, 2020
Temperature / Humidity	22 deg. C / 65 % RH
Engineer	Kazuya Noda
Mode	Tx 11ac-20 MIMO 5825 MHz
EUT	Hi type(14 inch Display)

Horizontal

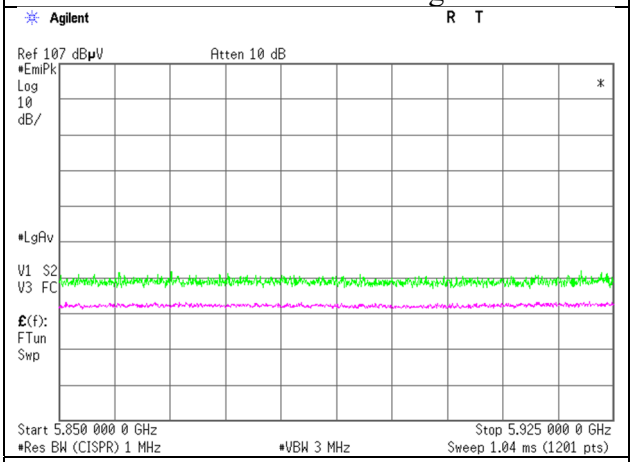
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 10, 2020	July 24, 2020	July 26, 2020
Temperature / Humidity	22 deg. C / 65 % RH	23 deg. C / 65 % RH	23 deg. C / 69 % RH
Engineer	Kazuya Noda	Toshinori Yamada	Takahiro Suzuki
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz - 26.5 GHz)
		(26.5 GHz – 40 GHz)	
Mode	Tx 11ac-40 MIMO 5190 MHz		
EUT	Hi type(14 inch Display)		

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	49.53	32.12	16.41	43.11	2.13	57.08	73.9	16.8	123	48	
Hori.	15570.000	PK	47.81	39.49	11.93	40.41	-9.54	49.28	73.9	24.6	100	0	
Hori.	5150.000	AV	39.82	32.12	16.41	43.11	2.13	47.37	53.9	6.5	123	48	VBW:13 kHz
Hori.	15570.000	AV	38.78	39.49	11.93	40.41	-9.54	40.25	53.9	13.6	100	0	VBW:13 kHz
Vert.	5150.000	PK	49.05	32.12	16.41	43.11	2.13	56.60	73.9	17.3	284	285	
Vert.	15570.000	PK	47.70	39.49	11.93	40.41	-9.54	49.17	73.9	24.7	100	0	
Vert.	5150.000	AV	39.76	32.12	16.41	43.11	2.13	47.31	53.9	6.5	284	285	VBW:13 kHz
Vert.	15570.000	AV	38.85	39.49	11.93	40.41	-9.54	40.32	53.9	13.5	100	0	VBW:13 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10380.000	PK	48.06	39.54	9.49	42.70	2.13	56.52	-38.70	-27.0	11.7	100	0	-
Vert.	10380.000	PK	48.44	39.54	9.49	42.70	2.13	56.90	-38.32	-27.0	11.3	100	0	

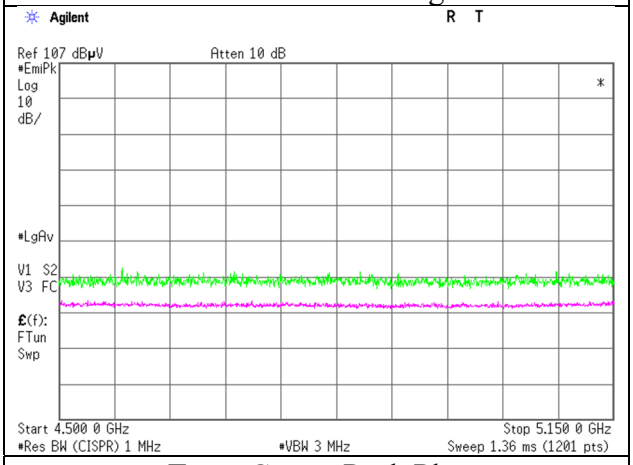
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 10, 2020
Temperature / Humidity	22 deg. C / 65 % RH
Engineer	Kazuya Noda
Mode	Tx 11ac-40 MIMO 5190 MHz
EUT	Hi type(14 inch Display)

Horizontal

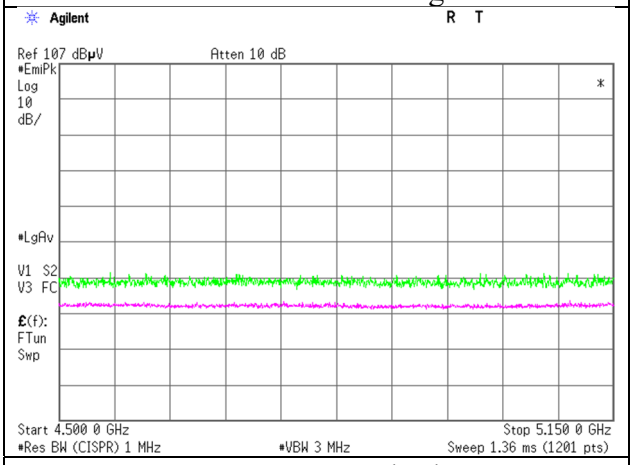
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 10, 2020	July 24, 2020	July 26, 2020
Temperature / Humidity	22 deg. C / 65 % RH	23 deg. C / 65 % RH	23 deg. C / 69 % RH
Engineer	Kazuya Noda	Toshinori Yamada	Takahiro Suzuki
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz - 26.5 GHz)
		(26.5 GHz – 40 GHz)	
Mode	Tx 11ac-40 MIMO 5230 MHz		
EUT	Hi type(14 inch Display)		

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	49.17	31.83	16.56	43.33	2.13	56.36	73.9	17.5	146	46	
Hori.	15690.000	PK	47.51	39.03	11.93	40.36	-9.54	48.57	73.9	25.3	100	0	
Hori.	5350.000	AV	40.12	31.83	16.56	43.33	2.13	47.31	53.9	6.5	146	46	VBW:13 kHz
Hori.	15690.000	AV	38.54	39.03	11.93	40.36	-9.54	39.60	53.9	14.3	100	0	VBW:13 kHz
Vert.	5350.000	PK	49.05	31.83	16.56	43.33	2.13	56.24	73.9	17.6	283	283	
Vert.	15690.000	PK	47.80	39.03	11.93	40.36	-9.54	48.86	73.9	25.0	100	0	
Vert.	5350.000	AV	40.18	31.83	16.56	43.33	2.13	47.37	53.9	6.5	283	283	VBW:13 kHz
Vert.	15690.000	AV	38.76	39.03	11.93	40.36	-9.54	39.82	53.9	14.0	100	0	VBW:13 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10460.000	PK	48.51	39.73	9.51	42.70	2.13	57.18	-38.04	-27.0	11.0	100	0	-
Vert.	10460.000	PK	48.55	39.73	9.51	42.70	2.13	57.22	-38.00	-27.0	11.0	100	0	

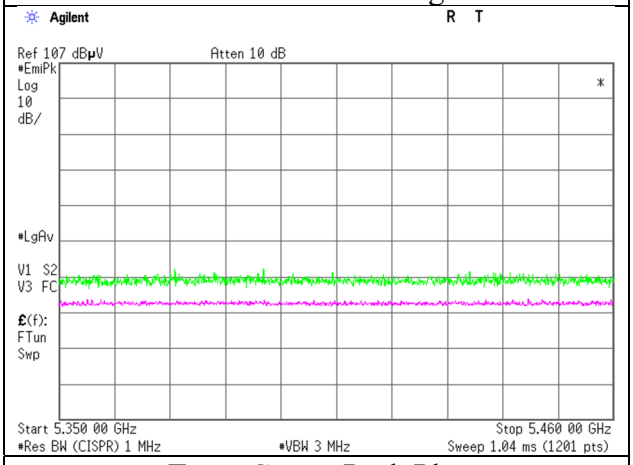
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 10, 2020
Temperature / Humidity	22 deg. C / 65 % RH
Engineer	Kazuya Noda
Mode	Tx 11ac-40 MIMO 5230 MHz
EUT	Hi type(14 inch Display)

Horizontal

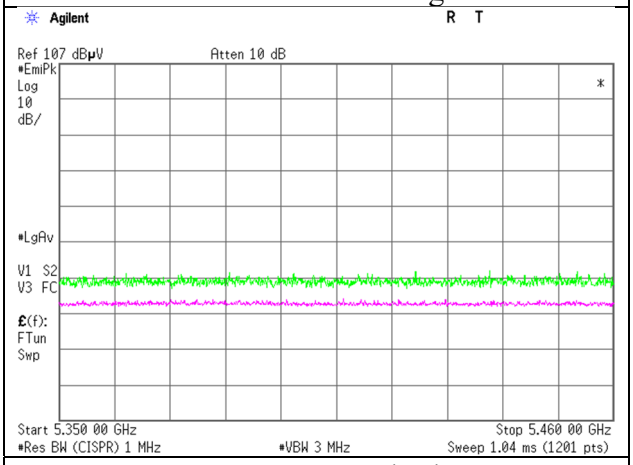
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 10, 2020	July 24, 2020	July 26, 2020
Temperature / Humidity	22 deg. C / 65 % RH	23 deg. C / 65 % RH	23 deg. C / 69 % RH
Engineer	Kazuya Noda	Toshinori Yamada	Takahiro Suzuki
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz - 26.5 GHz)
		(26.5 GHz – 40 GHz)	
Mode	Tx 11ac-40 MIMO 5755 MHz		
EUT	Hi type(14 inch Display)		

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11510.000	PK	47.93	39.69	10.05	42.62	2.13	57.18	73.9	16.7	100	0	
Hori.	11510.000	AV	39.12	39.69	10.05	42.62	2.13	48.37	53.9	5.5	100	0	VBW:13 kHz
Vert.	11510.000	PK	48.13	39.69	10.05	42.62	2.13	57.38	73.9	16.5	100	0	
Vert.	11510.000	AV	38.98	39.69	10.05	42.62	2.13	48.23	53.9	5.6	100	0	VBW:13 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 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	49.46	32.49	16.76	43.46	2.13	57.38	-37.84	-27.0	10.8	272	115	-
Hori.	5700.000	PK	49.31	32.60	16.79	43.45	2.13	57.38	-37.84	10.0	47.8	272	115	
Hori.	5720.000	PK	53.45	32.66	16.80	43.44	2.13	61.60	-33.62	15.6	49.2	272	115	
Hori.	5725.000	PK	56.73	32.68	16.81	43.44	2.13	64.91	-30.31	27.0	57.3	272	115	
Hori.	17265.000	PK	47.47	41.76	12.74	40.30	-9.54	52.13	-43.09	-27.0	16.0	100	0	
Vert.	5650.000	PK	49.32	32.49	16.76	43.46	2.13	57.24	-37.98	-27.0	10.9	213	284	
Vert.	5700.000	PK	49.13	32.60	16.79	43.45	2.13	57.20	-38.02	10.0	48.0	213	284	
Vert.	5720.000	PK	50.18	32.66	16.80	43.44	2.13	58.33	-36.89	15.6	52.4	213	284	
Vert.	5725.000	PK	52.79	32.68	16.81	43.44	2.13	60.97	-34.25	27.0	61.2	213	284	
Vert.	17265.000	PK	47.14	41.76	12.74	40.30	-9.54	51.80	-43.42	-27.0	16.4	100	0	

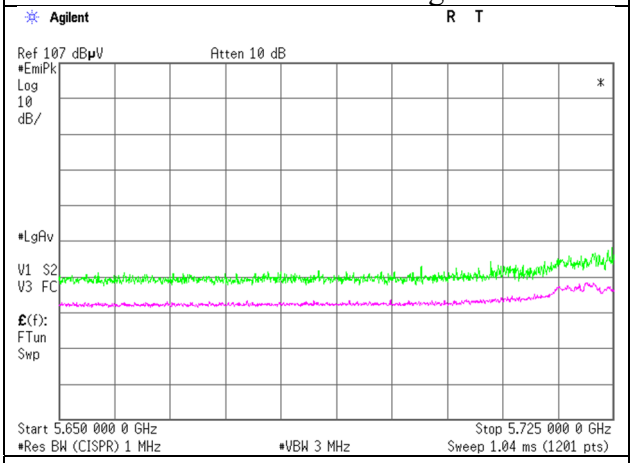
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 10, 2020
Temperature / Humidity	22 deg. C / 65 % RH
Engineer	Kazuya Noda
Mode	Tx 11ac-40 MIMO 5755 MHz
EUT	Hi type(14 inch Display)

Horizontal

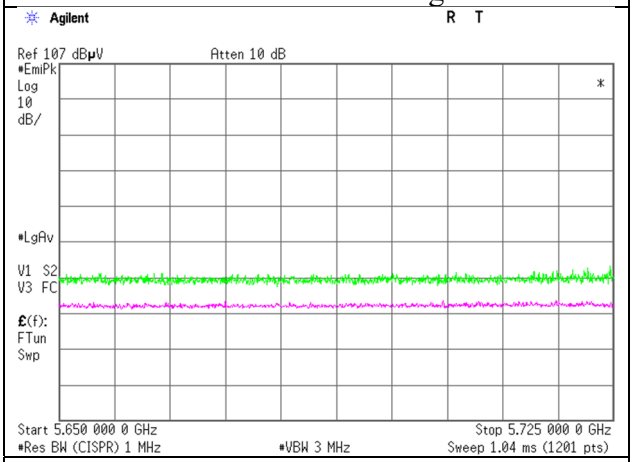
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 10, 2020	July 24, 2020	July 26, 2020
Temperature / Humidity	22 deg. C / 65 % RH	23 deg. C / 65 % RH	23 deg. C / 69 % RH
Engineer	Kazuya Noda	Toshinori Yamada	Takahiro Suzuki
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz) (26.5 GHz – 40 GHz)	(18 GHz - 26.5 GHz)
Mode	Tx 11ac-40 MIMO 5795 MHz		
EUT	Hi type(14 inch Display)		

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	11590.000	PK	48.25	39.63	10.12	42.62	2.13	57.51	73.9	16.3	100	0	
Hori.	11590.000	AV	39.24	39.63	10.12	42.62	2.13	48.50	53.9	5.4	100	0	VBW:13 kHz
Vert.	11590.000	PK	48.19	39.63	10.12	42.62	2.13	57.45	73.9	16.4	100	0	
Vert.	11590.000	AV	39.13	39.63	10.12	42.62	2.13	48.39	53.9	5.5	100	0	VBW:13 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 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.	5850.000	PK	49.55	33.07	16.89	43.41	2.13	58.23	-36.99	27.0	63.9	269	113	-
Hori.	5855.000	PK	49.14	33.08	16.89	43.41	2.13	57.83	-37.39	15.6	52.9	269	113	
Hori.	5875.000	PK	49.44	33.12	16.92	43.41	2.13	58.20	-37.02	10.0	47.0	269	113	
Hori.	5925.000	PK	49.39	33.21	16.94	43.40	2.13	58.27	-36.95	-27.0	9.9	269	113	
Hori.	17385.000	PK	47.14	42.61	12.77	40.28	-9.54	52.70	-42.52	-27.0	15.5	100	0	
Vert.	5850.000	PK	49.16	33.07	16.89	43.41	2.13	57.84	-37.38	27.0	64.3	183	279	
Vert.	5855.000	PK	49.46	33.08	16.89	43.41	2.13	58.15	-37.07	15.6	52.6	183	279	
Vert.	5875.000	PK	49.04	33.12	16.92	43.41	2.13	57.80	-37.42	10.0	47.4	183	279	
Vert.	5925.000	PK	49.12	33.21	16.94	43.40	2.13	58.00	-37.22	-27.0	10.2	183	279	
Vert.	17385.000	PK	47.33	42.61	12.77	40.28	-9.54	52.89	-42.33	-27.0	15.3	100	0	

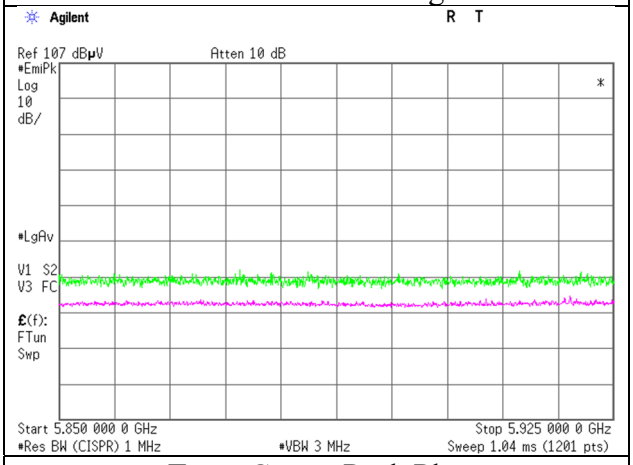
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 10, 2020
Temperature / Humidity	22 deg. C / 65 % RH
Engineer	Kazuya Noda
Mode	Tx 11ac-40 MIMO 5795 MHz
EUT	Hi type(14 inch Display)

Horizontal

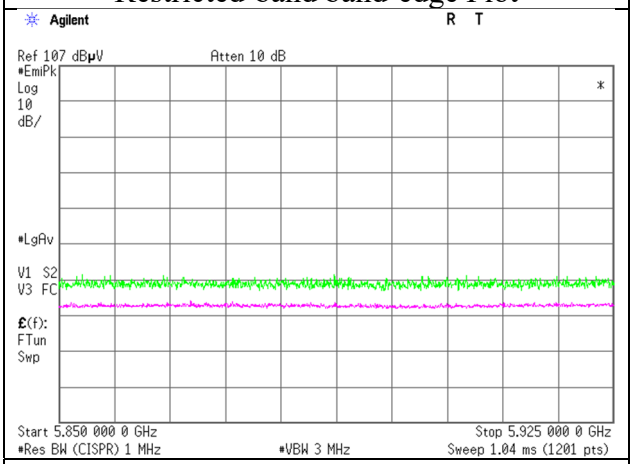
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 10, 2020	July 24, 2020	July 26, 2020
Temperature / Humidity	22 deg. C / 65 % RH	23 deg. C / 65 % RH	23 deg. C / 69 % RH
Engineer	Kazuya Noda	Toshinori Yamada	Takahiro Suzuki
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz - 26.5 GHz)
		(26.5 GHz – 40 GHz)	
Mode	Tx 11ac-80 MIMO 5210 MHz		
EUT	Hi type(14 inch Display)		

(above 1 GHz Inside of the restricted band)

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

Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	49.03	32.12	16.41	43.11	2.13	56.58	73.9	17.3	246	104	
Hori.	5350.000	PK	49.08	31.83	16.56	43.33	2.13	56.27	73.9	17.6	246	104	
Hori.	15630.000	PK	48.24	39.24	11.93	40.39	-9.54	49.48	73.9	24.4	100	0	
Hori.	5150.000	AV	40.38	32.12	16.41	43.11	2.13	47.93	53.9	5.9	246	104	VBW:18 kHz
Hori.	5350.000	AV	40.56	31.83	16.56	43.33	2.13	47.75	53.9	6.1	246	104	VBW:18 kHz
Hori.	15630.000	AV	39.72	39.24	11.93	40.39	-9.54	40.96	53.9	12.9	100	0	VBW:18 kHz
Vert.	5150.000	PK	49.14	32.12	16.41	43.11	2.13	56.69	73.9	17.2	287	283	
Vert.	5350.000	PK	49.27	31.83	16.56	43.33	2.13	56.46	73.9	17.4	287	283	
Vert.	15630.000	PK	48.05	39.24	11.93	40.39	-9.54	49.29	73.9	24.6	100	0	
Vert.	5150.000	AV	40.52	32.12	16.41	43.11	2.13	48.07	53.9	5.8	287	283	VBW:18 kHz
Vert.	5350.000	AV	40.63	31.83	16.56	43.33	2.13	47.82	53.9	6.0	287	283	VBW:18 kHz
Vert.	15630.000	AV	39.78	39.24	11.93	40.39	-9.54	41.02	53.9	12.8	100	0	VBW:18 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

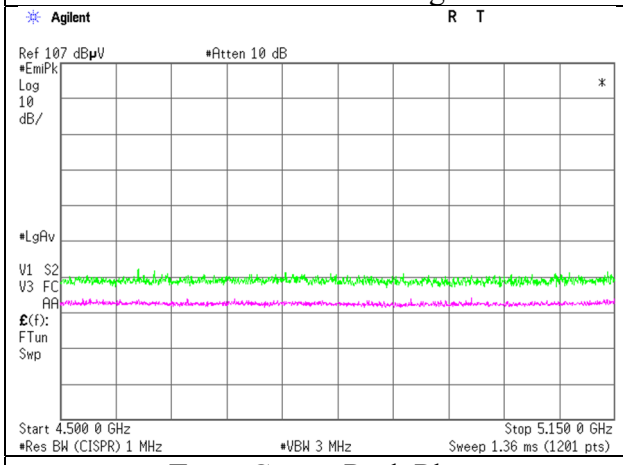
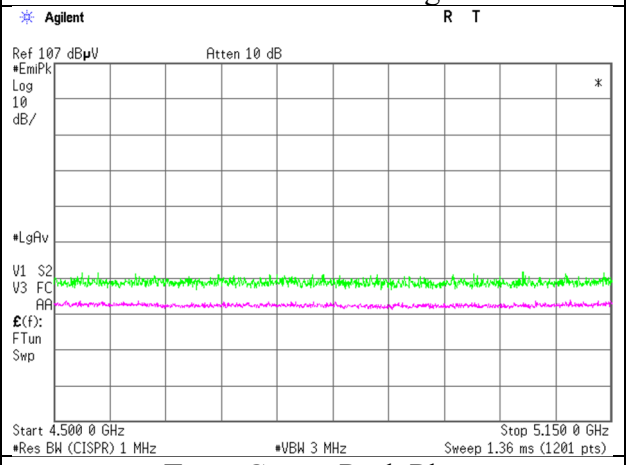
(* PK: Peak, AV: Average, QP: Quasi-Peak)

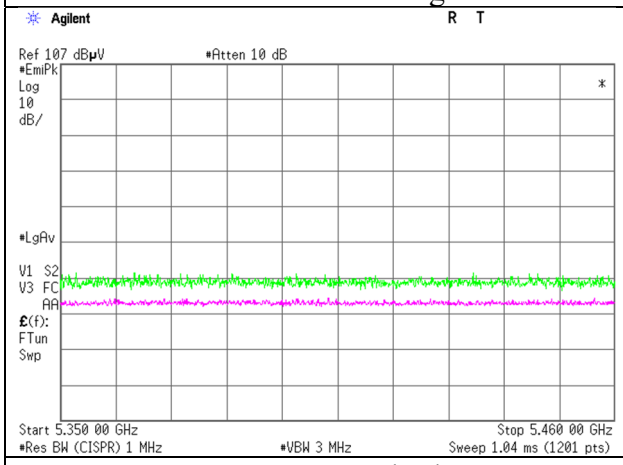
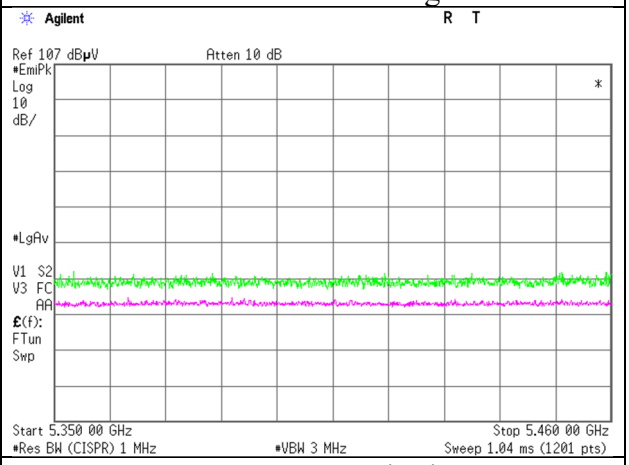
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	10420.000	PK	48.61	39.64	9.51	42.70	2.13	57.19	-38.03	-27.0	11.0	100	0	-
Vert.	10420.000	PK	48.55	39.64	9.51	42.70	2.13	57.13	-38.09	-27.0	11.0	100	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + 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 - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 10, 2020
Temperature / Humidity	22 deg. C / 65 % RH
Engineer	Kazuya Noda
Mode	Tx 11ac-80 MIMO 5210 MHz
EUT	Hi type(14 inch Display)

Horizontal	Vertical
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	Trace Green: Peak Plot Trace Purple: Average Plot

Horizontal	Vertical
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	Trace Green: Peak Plot Trace Purple: Average Plot

* 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

Report No.	13385909S-C-R2		
Test place	Shonan EMC Lab.		
Semi Anechoic Chamber	3	3	3
Date	July 10, 2020	July 24, 2020	July 26, 2020
Temperature / Humidity	22 deg. C / 65 % RH	23 deg. C / 65 % RH	23 deg. C / 69 % RH
Engineer	Kazuya Noda	Toshinori Yamada	Takahiro Suzuki
	(1 GHz - 13 GHz)	(13 GHz - 18 GHz)	(18 GHz - 26.5 GHz)
		(26.5 GHz – 40 GHz)	
Mode	Tx 11ac-80 MIMO 5775 MHz		
EUT	Hi type(14 inch Display)		

(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.	11550.000	PK	48.05	39.69	10.08	42.62	2.13	57.33	73.9	16.5	100	0	
Hori.	11550.000	AV	39.35	39.69	10.08	42.62	2.13	48.63	53.9	5.2	100	0	VBW:18 kHz
Vert.	11550.000	PK	47.76	39.69	10.08	42.62	2.13	57.04	73.9	16.8	191	0	
Vert.	11550.000	AV	39.28	39.69	10.08	42.62	2.13	48.56	53.9	5.3	191	0	VBW:18 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

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

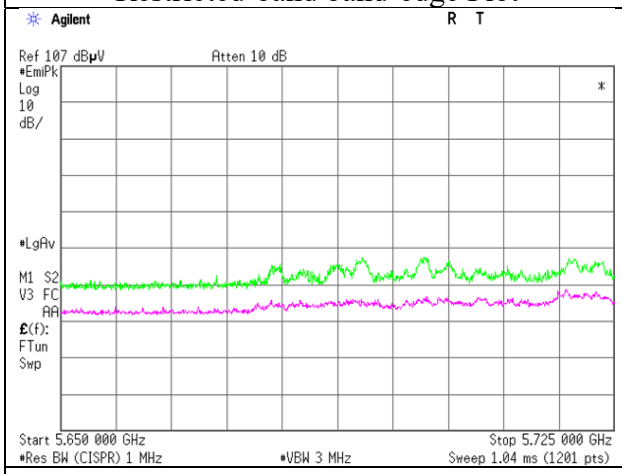
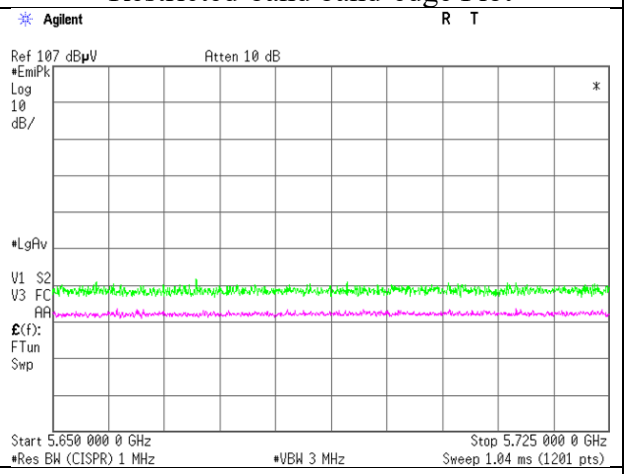
(* PK: Peak, AV: Average, QP: Quasi-Peak)

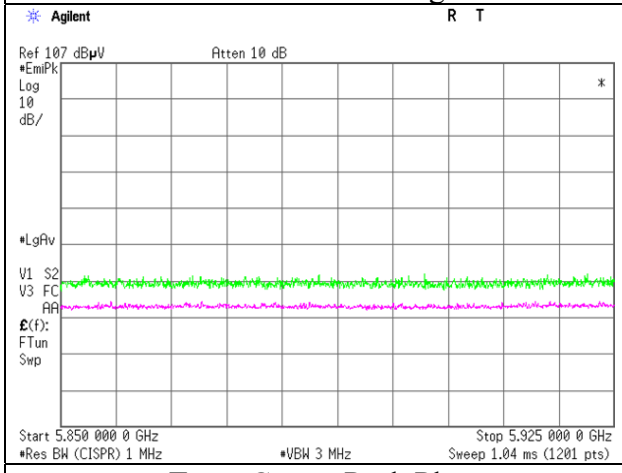
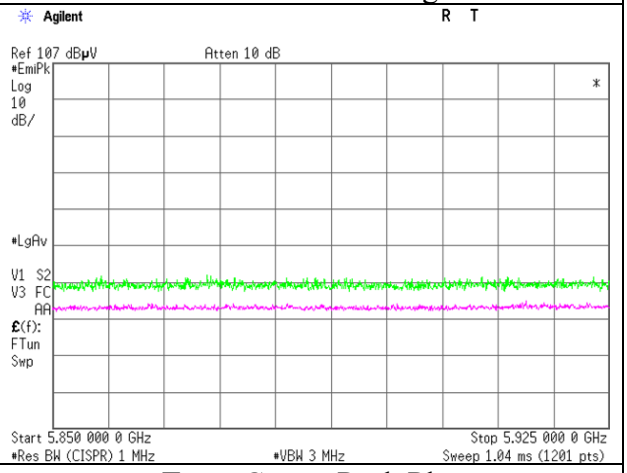
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Result (EIRP) [dBm]	Limit [dBm]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5650.000	PK	48.70	32.49	16.76	43.46	2.13	56.62	-38.60	-27.0	11.6	273	115	-
Hori.	5679.333	PK	52.98	32.55	16.77	43.45	2.13	60.98	-34.24	-5.2	29.0	273	115	
Hori.	5690.896	PK	55.28	32.57	16.79	43.45	2.13	63.32	-31.90	3.2	35.1	273	115	
Hori.	5699.433	PK	54.93	32.60	16.79	43.45	2.13	63.00	-32.22	9.5	41.7	273	115	
Hori.	5700.000	PK	53.61	32.60	16.79	43.45	2.13	61.68	-33.54	10.0	43.5	273	115	
Hori.	5702.487	PK	53.61	32.61	16.80	43.45	2.13	61.70	-33.52	10.7	44.2	273	115	
Hori.	5719.592	PK	54.78	32.66	16.80	43.44	2.13	62.93	-32.29	15.4	47.6	273	115	
Hori.	5720.000	PK	54.39	32.66	16.80	43.44	2.13	62.54	-32.68	15.6	48.2	273	115	
Hori.	5722.900	PK	54.20	32.67	16.81	43.44	2.13	62.37	-32.85	22.2	55.0	273	115	
Hori.	5725.000	PK	52.12	32.68	16.81	43.44	2.13	60.30	-34.92	27.0	61.9	273	115	
Hori.	5850.000	PK	48.69	33.07	16.89	43.41	2.13	57.37	-37.85	27.0	64.8	273	115	
Hori.	5855.000	PK	48.65	33.08	16.89	43.41	2.13	57.34	-37.88	15.6	53.4	273	115	
Hori.	5875.000	PK	48.98	33.12	16.92	43.41	2.13	57.74	-37.48	10.0	47.4	273	115	
Hori.	5925.000	PK	49.40	33.21	16.94	43.40	2.13	58.28	-36.94	-27.0	9.9	273	115	
Hori.	17325.000	PK	47.21	42.22	12.75	40.29	-9.54	52.35	-42.87	-27.0	15.8	100	0	
Vert.	5650.000	PK	49.25	32.49	16.76	43.46	2.13	57.17	-38.05	-27.0	11.0	191	280	
Vert.	5700.000	PK	49.11	32.60	16.79	43.45	2.13	57.18	-38.04	10.0	48.0	191	280	
Vert.	5720.000	PK	49.30	32.66	16.80	43.44	2.13	57.45	-37.77	15.6	53.3	191	280	
Vert.	5725.000	PK	49.09	32.68	16.81	43.44	2.13	57.27	-37.95	27.0	64.9	191	280	
Vert.	5850.000	PK	49.12	33.07	16.89	43.41	2.13	57.80	-37.42	27.0	64.4	191	280	
Vert.	5855.000	PK	48.85	33.08	16.89	43.41	2.13	57.54	-37.68	15.6	53.2	191	280	
Vert.	5875.000	PK	49.38	33.12	16.92	43.41	2.13	58.14	-37.08	10.0	47.0	191	280	
Vert.	5925.000	PK	49.92	33.21	16.94	43.40	2.13	58.80	-36.42	-27.0	9.4	191	280	
Vert.	17325.000	PK	47.50	42.22	12.75	40.29	-9.54	52.64	-42.58	-27.0	15.5	100	0	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + 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 - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 10, 2020
Temperature / Humidity	22 deg. C / 65 % RH
Engineer	Kazuya Noda
Mode	Tx 11ac-80 MIMO 5775 MHz
EUT	Hi type(14 inch Display)

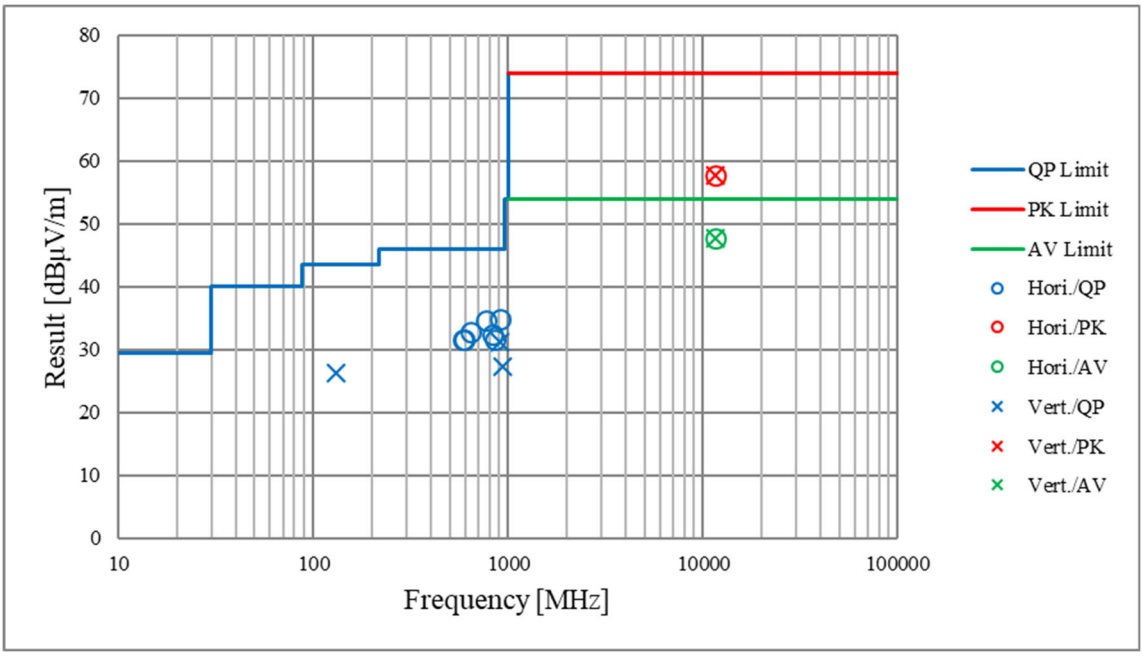
Horizontal	Vertical
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	Trace Green: Peak Plot Trace Purple: Average Plot

Horizontal	Vertical
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	Trace Green: Peak Plot Trace Purple: Average Plot

* 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)

Report No.	13385909S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	July 28, 2020	July 10, 2020	July 24, 2020	July 26, 2020
Temperature / Humidity	25 deg. C / 64 % RH	22 deg. C / 65 % RH	23 deg. C / 65 % RH	23 deg. C / 69 % RH
Engineer	Makoto Hosaka	Kazuya Noda	Toshinori Yamada	Takahiro Suzuki
	(30 MHz - 1 GHz)	(1 GHz - 13 GHz)	(13 GHz - 18 GHz) (26.5 GHz – 40 GHz)	(18 GHz - 26.5 GHz)
Mode	Tx 11ac-20 MIMO 5745 MHz			
EUT	Hi type(14 inch Display)			



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

Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 21, 2020
Temperature / Humidity	24 deg. C / 58 % RH
Engineer	Toshinori Yamada
	(1 GHz – 6.4 GHz)
Mode	Tx 11ac-20 MIMO 5180 MHz with 11g 2437 MHz
EUT	Hi type(14 inch Display)

(above 1 GHz Inside of the restricted band)

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

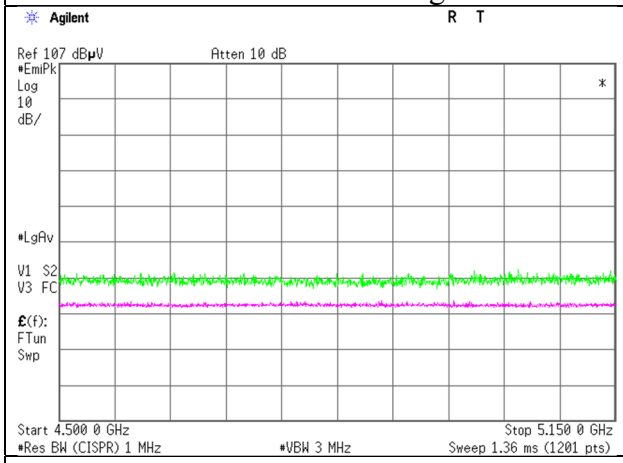
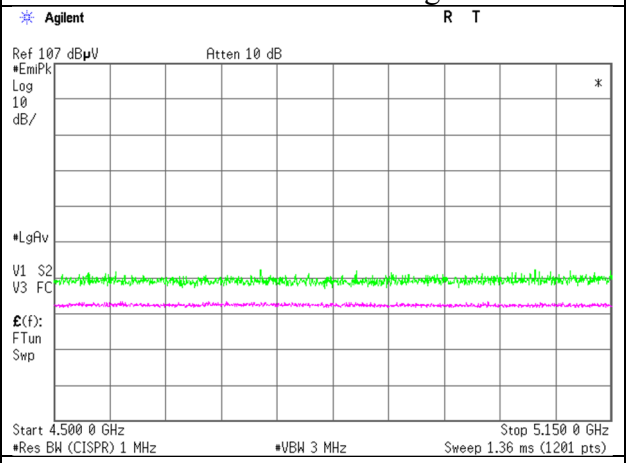
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	49.27	32.12	17.10	43.11	2.13	57.51	73.9	16.4	108	102	
Hori.	5150.000	AV	40.00	32.12	17.10	43.11	2.13	48.24	53.9	**5.7**	108	102	VBW:10 kHz
Vert.	5150.000	PK	48.95	32.12	17.10	43.11	2.13	57.19	73.9	16.7	103	301	
Vert.	5150.000	AV	39.78	32.12	17.10	43.11	2.13	48.02	53.9	5.9	103	301	VBW:10 kHz

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

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

Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB

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

Horizontal	Vertical
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	Trace Green: Peak Plot Trace Purple: Average Plot

* 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

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 21, 2020
Temperature / Humidity	24 deg. C / 58 % RH
Engineer	Toshinori Yamada
	(1 GHz – 6.4 GHz)
Mode	Tx 11ac-20 MIMO 5240 MHz with 11g 2437 MHz
EUT	Hi type(14 inch Display)

(above 1 GHz Inside of the restricted band)

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

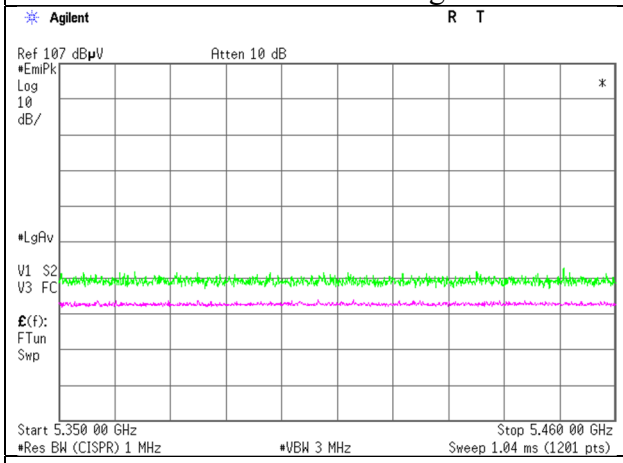
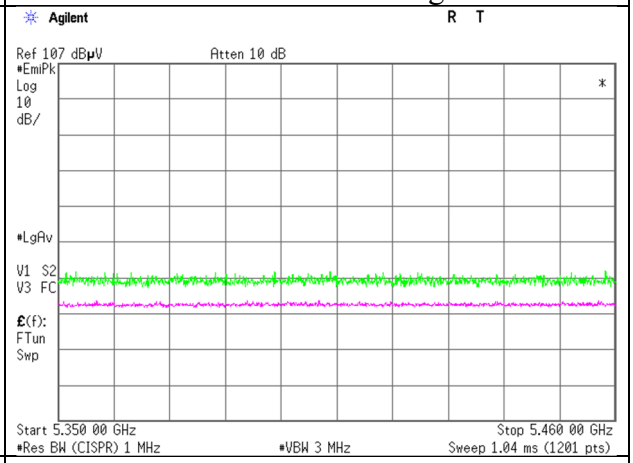
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	49.34	31.83	17.27	43.33	2.13	57.24	73.9	16.7	164	46	
Hori.	5350.000	AV	40.32	31.83	17.27	43.33	2.13	48.22	53.9	**5.7**	164	46	VBW:10 kHz
Vert.	5350.000	PK	49.29	31.83	17.27	43.33	2.13	57.19	73.9	16.7	100	304	
Vert.	5350.000	AV	39.95	31.83	17.27	43.33	2.13	47.85	53.9	6.1	100	304	VBW:10 kHz

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

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

Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB

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

Horizontal	Vertical
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	Trace Green: Peak Plot Trace Purple: Average Plot

* 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

Report No.	13385909S-C-R2			
Test place	Shonan EMC Lab.			
Semi Anechoic Chamber	3	3	3	3
Date	July 28, 2020	July 21, 2020	July 24, 2020	July 26, 2020
Temperature / Humidity	25 deg. C / 64 % RH	24 deg. C / 58 % RH	23 deg. C / 65 % RH	23 deg. C / 69 % RH
Engineer	Makoto Hosaka (30 MHz - 1 GHz)	Toshinori Yamada (1 GHz - 13 GHz)	Toshinori Yamada (13 GHz - 18 GHz) (26.5 GHz – 40 GHz)	Takahiro Suzuki (18 GHz - 26.5 GHz)
Mode	Tx 11ac-20 MIMO 5745 MHz with 11g 2437 MHz			
EUT	Hi type(14 inch Display)			

(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.	580.180	QP	36.20	18.76	9.73	31.96	0.00	32.73	46.0	13.2	163	191	
Hori.	591.900	QP	36.10	19.14	9.77	31.95	0.00	33.06	46.0	12.9	157	192	
Hori.	640.002	QP	33.70	19.27	9.94	31.95	0.00	30.96	46.0	15.0	144	221	
Hori.	768.594	QP	35.10	20.43	10.40	31.71	0.00	34.22	46.0	11.7	116	202	
Hori.	827.546	QP	32.90	21.00	10.59	31.47	0.00	33.02	46.0	12.9	100	227	
Hori.	851.188	QP	32.50	21.51	10.67	31.31	0.00	33.37	46.0	12.6	185	223	
Hori.	913.973	QP	29.60	22.13	10.86	30.94	0.00	31.65	46.0	14.3	178	133	
Hori.	952.319	QP	28.50	22.10	10.99	30.62	0.00	30.97	46.0	15.0	198	220	
Hori.	11490.000	PK	48.36	39.69	10.05	42.63	2.13	57.60	73.9	16.3	100	0	
Hori.	11490.000	AV	39.54	39.69	10.05	42.63	2.13	48.78	53.9	**5.1**	100	0	VBW:10 kHz
Vert.	130.567	QP	37.10	13.92	7.39	32.10	0.00	26.31	43.5	17.1	100	169	
Vert.	913.969	QP	28.50	22.13	10.86	30.94	0.00	30.55	46.0	15.4	100	134	
Vert.	11490.000	PK	48.45	39.69	10.05	42.63	2.13	57.69	73.9	16.2	100	0	
Vert.	11490.000	AV	39.50	39.69	10.05	42.63	2.13	48.74	53.9	**5.1**	100	0	VBW:10 kHz

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 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	49.36	32.49	17.48	43.46	2.13	58.00	-37.22	-27.0	10.2	231	117	-
Hori.	5700.000	PK	49.50	32.60	17.51	43.45	2.13	58.29	-36.93	10.0	46.9	231	117	
Hori.	5720.000	PK	53.31	32.66	17.52	43.44	2.13	62.18	-33.04	15.6	48.6	231	117	
Hori.	5725.000	PK	55.96	32.68	17.53	43.44	2.13	64.86	-30.36	27.0	57.3	231	117	
Hori.	17235.000	PK	47.00	41.57	12.73	40.31	-9.54	51.45	-43.77	-27.0	16.7	100	0	
Vert.	5650.000	PK	49.33	32.49	17.48	43.46	2.13	57.97	-37.25	-27.0	10.2	100	178	
Vert.	5700.000	PK	49.68	32.60	17.51	43.45	2.13	58.47	-36.75	10.0	46.7	100	178	
Vert.	5720.000	PK	50.72	32.66	17.52	43.44	2.13	59.59	-35.63	15.6	51.2	100	178	
Vert.	5725.000	PK	51.61	32.68	17.53	43.44	2.13	60.51	-34.71	27.0	61.7	100	178	
Vert.	17235.000	PK	47.41	41.57	12.73	40.31	-9.54	51.86	-43.36	-27.0	16.3	100	0	

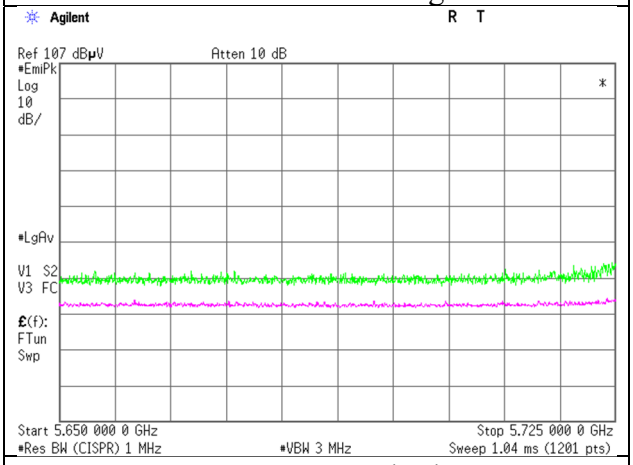
Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + Distance factor
Result (EIRP [dBm]) = 10 * LOG ((10 ^ (Electric Field Strength [dBuV/m] / 20) * 10 ^ (-6) * Distance : 3 [m]) ^ 2 / 30 * 10 ^ 3)
*Other frequency noises omitted in this report were not seen or have enough margin (more than 20 dB).
Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Radiated Spurious Emission

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 21, 2020
Temperature / Humidity	24 deg. C / 58 % RH
Engineer	Toshinori Yamada
Mode	Tx 11ac-20 MIMO 5745 MHz with 11g 2437 MHz
EUT	Hi type(14 inch Display)

Horizontal

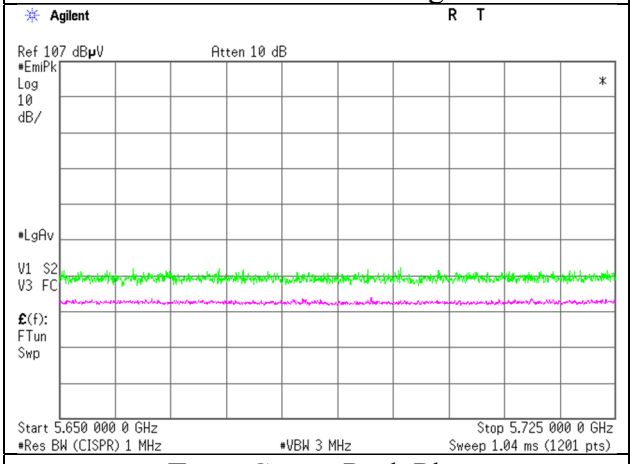
Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

Vertical

Restricted-band band-edge Plot



Trace Green: Peak Plot
Trace Purple: Average Plot

* 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

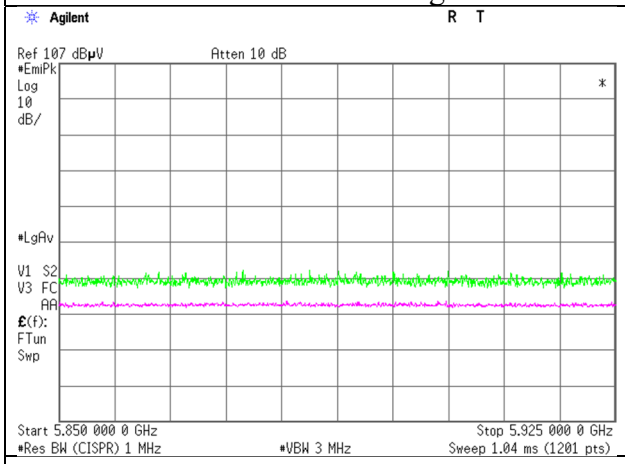
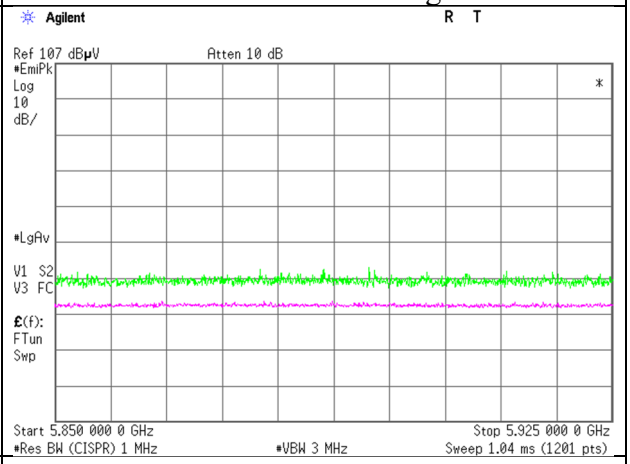
Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 21, 2020
Temperature / Humidity	24 deg. C / 58 % RH
Engineer	Toshinori Yamada
	(1 GHz – 6.4 GHz)
Mode	Tx 11ac-20 MIMO 5825 MHz with 11g 2437 MHz
EUT	Hi type(14 inch Display)

(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	50.11	33.07	17.60	43.41	2.13	59.50	-35.72	27.0	62.7	281	118	-
Hori.	5855.000	PK	49.83	33.08	17.60	43.41	2.13	59.23	-35.99	15.6	51.6	281	118	
Hori.	5875.000	PK	49.60	33.12	17.63	43.41	2.13	59.07	-36.15	10.0	46.2	281	118	
Hori.	5925.000	PK	49.45	33.21	17.64	43.40	2.13	59.03	-36.19	-27.0	9.2	281	118	
Vert.	5850.000	PK	50.46	33.07	17.60	43.41	2.13	59.85	-35.37	27.0	62.4	313	247	
Vert.	5855.000	PK	50.23	33.08	17.60	43.41	2.13	59.63	-35.59	15.6	51.2	313	247	
Vert.	5875.000	PK	50.19	33.12	17.63	43.41	2.13	59.66	-35.56	10.0	45.6	313	247	
Vert.	5925.000	PK	49.54	33.21	17.64	43.40	2.13	59.12	-36.10	-27.0	**9.1**	313	247	

Result [dBuV/m] = Reading + Ant.Fac. + Loss (Cable+(Attenuator or Filter)(below 18 GHz)) - Gain(Amprifier) + 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 - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB
13 GHz - 40 GHz : 20log (1.0 m / 3.0 m) = -9.54 dB

Horizontal	Vertical
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	Trace Green: Peak Plot Trace Purple: Average Plot

* 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

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 21, 2020
Temperature / Humidity	24 deg. C / 58 % RH
Engineer	Toshinori Yamada
	(1 GHz – 6.4 GHz)
Mode	Tx 11ac-40 MIMO 5190 MHz with 11g 2437 MHz
EUT	Hi type(14 inch Display)

(above 1 GHz Inside of the restricted band)

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

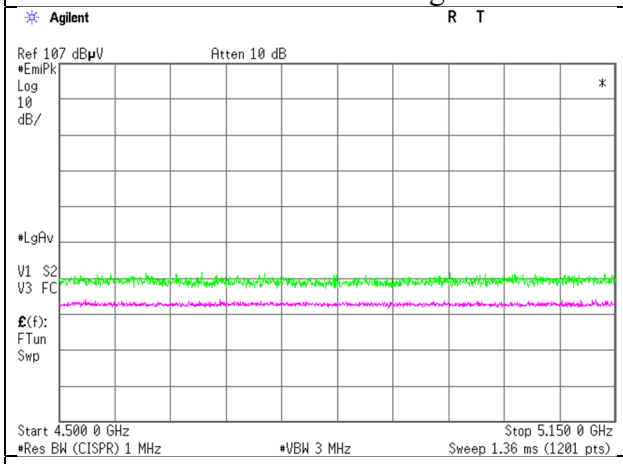
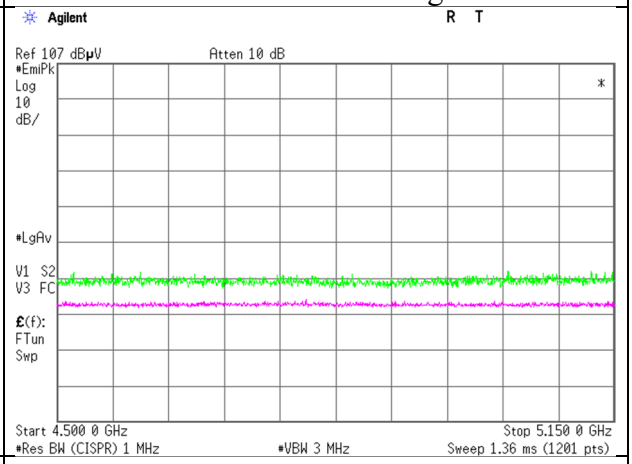
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5150.000	PK	51.01	32.12	17.10	43.11	2.13	59.25	73.9	14.6	160	45	
Hori.	5150.000	AV	40.52	32.12	17.10	43.11	2.13	48.76	53.9	**5.1**	160	45	VBW:13 kHz
Vert.	5150.000	PK	50.32	32.12	17.10	43.11	2.13	58.56	73.9	15.3	258	243	
Vert.	5150.000	AV	40.40	32.12	17.10	43.11	2.13	48.64	53.9	5.2	258	243	VBW:13 kHz

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

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

Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB

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

Horizontal	Vertical
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	Trace Green: Peak Plot Trace Purple: Average Plot

* 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

Report No.	13385909S-C-R2
Test place	Shonan EMC Lab.
Semi Anechoic Chamber	3
Date	July 21, 2020
Temperature / Humidity	24 deg. C / 58 % RH
Engineer	Toshinori Yamada
	(1 GHz – 6.4 GHz)
Mode	Tx 11ac-40 MIMO 5230 MHz with 11g 2437 MHz
EUT	Hi type(14 inch Display)

(above 1 GHz Inside of the restricted band)

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

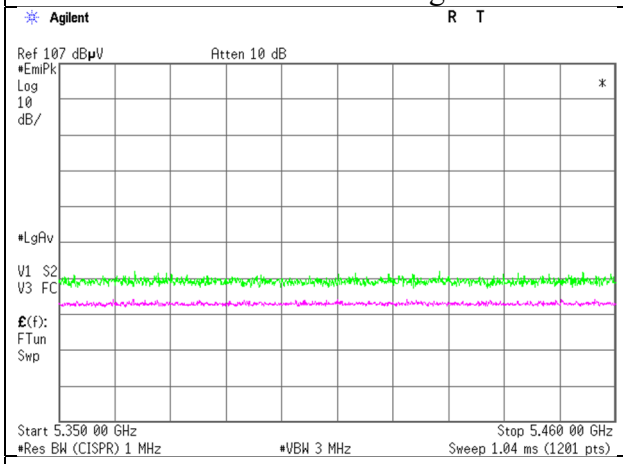
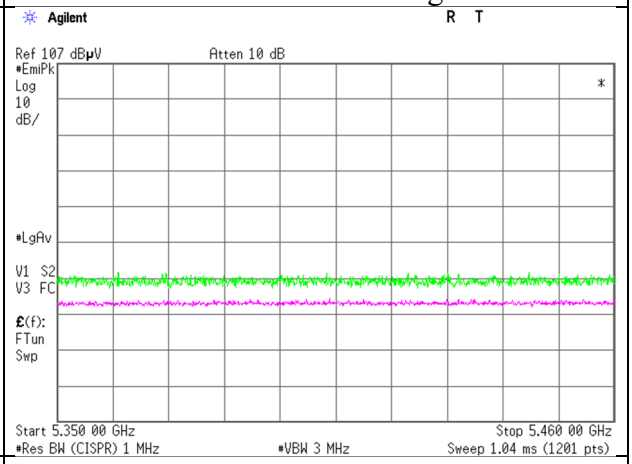
Polarity	Frequency [MHz]	Detector	Reading [dBuV]	Ant.Fac. [dB/m]	Loss [dB]	Gain [dB]	Distance Factor [dB]	Result [dBuV/m]	Limit [dBuV/m]	Margin [dB]	Height [cm]	Angle [deg.]	Remark
Hori.	5350.000	PK	49.95	31.83	17.27	43.33	2.13	57.85	73.9	16.0	198	110	
Hori.	5350.000	AV	40.52	31.83	17.27	43.33	2.13	48.42	53.9	**5.4**	198	110	VBW:13 kHz
Vert.	5350.000	PK	49.62	31.83	17.27	43.33	2.13	57.52	73.9	16.3	273	246	
Vert.	5350.000	AV	40.27	31.83	17.27	43.33	2.13	48.17	53.9	5.7	273	246	VBW:13 kHz

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

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

Distance factor : 1 GHz - 13 GHz : 20log (3.83 m / 3.0 m) = 2.13 dB

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

Horizontal	Vertical
Restricted-band band-edge Plot	Restricted-band band-edge Plot
	
Trace Green: Peak Plot Trace Purple: Average Plot	Trace Green: Peak Plot Trace Purple: Average Plot

* 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.