RADIO TEST REPORT

Test Report No. : 13977035S-C-R1

Applicant	:	**ALPS ALPINE CO., LTD.**
Type of EUT	:	**Head unit**
Model Number of EUT	:	**AH00ICB**
FCC ID	:	**A269ZUA165**
Test regulation	:	**FCC Part 15 Subpart E: 2021**
Test item	:	**Antenna Terminal Conducted Tests (Except for DFS test)**
Test result	:	**Complied (Refer to SECTION 3)**

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3. This sample tested is in compliance with the limits of the above regulation.
4. The test results in this test report are traceable to the national or international standards.
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6. This test report covers Radio technical requirements.
   It does not cover administrative issues such as Manual or non-Radio test related Requirements. (if applicable)
7. The all test items in this test report are conducted by UL Japan, Inc. Shonan EMC Lab.
8. The opinions and the interpretations to the result of the description in this report are outside scopes where UL Japan has been accredited.
9. The information provided from the customer for this report is identified in SECTION 1.
10. This report is a revised version of 13977035S-C. 13977035S-C is replaced with this report.

Date of test: October 21 to December 3, 2021 and March 14, 2022

Representative test engineer:
Shiro Kobayashi
Engineer

Approved by:
Kazuya Noda
Leader

CERTIFICATE 1266.03

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

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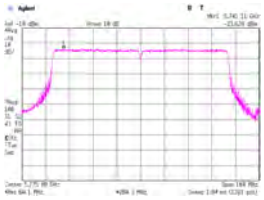
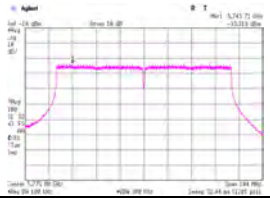
REVISION HISTORY

Original Test Report No.: 13977035S-C

Revision	Test report No.	Date	Page revised	Contents
- (Original)	13977035S-C	January 31, 2022	-	-
1	13977035S-C-R1	March 14, 2022	1	Update of “Date of test”: From: “October 21 to December 3, 2021” To: “October 21 to December 3 and March 14, 2022”
			142	Update of 5775 MHz data: PSD Reading: From: “-23.63”, To: “-33.32” Cable Loss: From: “2.72”, To: “2.78” PSD (Conducted) Result: From: “-4.18”, To: “-13.81” PSD (Conducted) Margin: From: “34.18”, To: “43.81” PSD (e.i.r.p.) Result: From: “-1.47”, To: “-11.10” PSD (e.i.r.p.) Margin: From: “37.47”, To: “47.10”
			199	Update of 5775 MHz chart: From:  To: 
			205	Update of “SCC-G14” Last Calibration Date: From: “2020/12/21”, To: “2021/12/06”
				Addition of Test equipment: “SCC-H22”, “SCC-H23”, “SOS-27”, “STS-05”
				Addition of “*1)”:

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
DUT	Device Under Test
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
ETSI	European Telecommunications Standards Institute
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
OBW	Occupied BandWidth
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	Quadrature Phase Shift Keying
RBW	Resolution BandWidth
RDS	Radio Data System
RE	Radio Equipment
RF	Radio Frequency
RMS	Root Mean Square
RNSS	Radio Navigation Satellite Service
RSS	Radio Standards Specifications
Rx	Receiving
SA, S/A	Spectrum Analyzer
SG	Signal Generator
SVSWR	Site-Voltage Standing Wave Ratio
TR, T/R	Test Receiver
Tx	Transmitting
VBW	Video BandWidth
Vert.	Vertical
WLAN	Wireless LAN

CONTENTS PAGE

SECTION 1: Customer information....5
SECTION 2: Equipment under test (EUT)....5
SECTION 3: Test specification, procedures & results....7
SECTION 4: Operation of EUT during testing....10
SECTION 5: Antenna Terminal Conducted Tests....14
APPENDIX 1: Test data....15
26 dB Emission Bandwidth and 99 % Occupied Bandwidth....15
6 dB Bandwidth....82
Maximum Conducted Output Power....92
Burst rate confirmation....126
Maximum Power Spectral Density....128
Conducted Spurious Emission....204
APPENDIX 2: Test instruments....205
APPENDIX 3: Photographs of test setup....206
Antenna Terminal Conducted Tests....206

SECTION 1: Customer information

Company Name	:	ALPS ALPINE CO., LTD.
Address	:	20-1 Yoshima Industrial park, Iwaki, Fukushima, Japan 970-1192
Telephone Number	:	+81-246-36-4111
Contact Person	:	Kenji Nagase

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	:	Head unit
Model Number	:	AH00ICB
Serial Number	:	Refer to SECTION 4.2
Receipt Date	:	October 18, 2021
Condition	:	Engineering prototype (Not for Sale: This sample is equivalent to mass-produced items.)
Modification	:	No Modification by the test lab.

2.2 Product Description

Model: AH00ICB (referred to as the EUT in this report) is a Head unit.

The EUT has following similar model:

Model Name	Details
AH00ICB (EUT)	External amplifier model
AH00ICB 1	Internal amplifier model

General Specification

Rating	:	DC 13.2 V
Operating Temperature	:	-30 deg. C - +70 deg. C

Radio Specification

Bluetooth

Radio Type	:	Transceiver
Frequency of Operation	:	2402 MHz - 2480 MHz
Antenna type	:	Planar Inverted-F Antenna
Modulation	:	FHSS (GFSK, π/4-DQPSK, 8DPSK)
Antenna Gain	:	-0.2 dBi

Bluetooth Low Energy

Radio Type	:	Transceiver
Frequency of Operation	:	2402 MHz - 2480 MHz
Antenna type	:	Planar Inverted-F Antenna
Modulation	:	GFSK
Antenna Gain	:	-0.2 dBi

WLAN 2.4 GHz (IEEE802.11b/g/n-20)

Radio Type	:	Transceiver
Frequency of Operation	:	2412 MHz - 2462 MHz
Antenna type	:	Planar Inverted-F Antenna
Modulation	:	DSSS (CCK, DQPSK, DBPSK) OFDM (64QAM, 16QAM, QPSK, BPSK)
Antenna Gain	:	-0.2 dBi

WLAN 5 GHz (IEEE802.11a/n-20/n-40/ac-20/ac-40/ac-80)

Radio Type	:	Transceiver
Frequency of Operation	:	5180 MHz - 5825 MHz
Antenna type	:	Planar Inverted-F Antenna
Modulation	:	OFDM (256QAM, 64QAM, 16QAM, QPSK, BPSK)
Antenna Gain	:	+2.71 dBi (Chain1) +2.71 dBi (Chain2)

SECTION 3: Test specification, procedures & results

3.1 Test Specification

Test Specification : FCC Part 15 Subpart E
FCC Part 15 final revised on May 3, 2021 and effective July 2, 2021

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

* 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	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	Complied a)	Conducted
	ISED: -	**ISED:** -			
Maximum Conducted Output Power	**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			
Maximum Power Spectral Density	**FCC:** KDB Publication Number 789033	**FCC :** 15.407 (a) (1) (2) (3)		Complied c)	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	See data	Complied d)	Conducted (< 30 MHz)
	ISED: -	**ISED:** RSS-247 6.2.1.2 6.2.2.2 6.2.3.2 6.2.4.2			
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.

a) Refer to APPENDIX 1 (data of 26 dB Emission Bandwidth and 99 % Occupied Bandwidth)
b) Refer to APPENDIX 1 (data of Maximum Conducted Output Power)
c) Refer to APPENDIX 1 (data of Maximum Power Spectral Density)
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	Complied a)	Conducted
a) Refer to APPENDIX 1 (data of 26 dB Emission Bandwidth and 99 % Occupied Bandwidth)					

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

3.4 Uncertainty

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

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

Shonan EMC Lab.

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

3.5 Test Location

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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 / CAB identifier: JP0001)

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

3.6 Test data, Test instruments, and Test set up

Refer to APPENDIX.

SECTION 4: Operation of EUT during testing

4.1 Operating Mode(s)

Test operating mode was determined as follows according to "Section 1 of 6 802.11 a/b/g/n testing - Managing Complex Regulatory Approvals -" of TCB Council Workshop October 2009 and also was judged the necessity of 802.11ac mode by the pre-test.

Mode	Remarks*
Transmitting (Tx), IEEE 802.11a SISO (11a(SISO))	18 Mbps (Chain1), PN9
Transmitting (Tx), IEEE 802.11n SISO 20 MHz BW (11n-20(SISO))	MCS 3 (Chain1), PN9
Transmitting (Tx), IEEE 802.11ac SISO 20 MHz BW (11ac-20(SISO))	MCS 3 (Chain1), PN9
Transmitting (Tx), IEEE 802.11a CDD (11a(CDD))	18 Mbps (CDD), PN9
Transmitting (Tx), IEEE 802.11n CDD 20 MHz BW (11n-20(CDD))	MCS 3 (1 Streams), PN9
Transmitting (Tx), IEEE 802.11ac CDD 20 MHz BW (11ac-20(CDD))	MCS 3 (1 Streams), PN9
Transmitting (Tx), IEEE 802.11n SDM (MIMO) 20 MHz BW (11n-20(MIMO))	MCS 11 (2 Streams), PN9
Transmitting (Tx), IEEE 802.11ac SDM (MIMO) 20 MHz BW (11ac-20(MIMO))	MCS 3 (2 Streams), PN9
Transmitting (Tx), IEEE 802.11n SISO 40 MHz BW (11n-40(SISO))	MCS 3 (Chain1), PN9
Transmitting (Tx), IEEE 802.11ac SISO 40 MHz BW (11ac-40(SISO))	MCS 3 (Chain1), PN9
Transmitting (Tx), IEEE 802.11n CDD 40 MHz BW (11n-40(CDD))	MCS 3 (1 Streams), PN9
Transmitting (Tx), IEEE 802.11ac CDD 40 MHz BW (11ac-40(CDD))	MCS 3 (1 Streams), PN9
Transmitting (Tx), IEEE 802.11n SDM (MIMO) 40 MHz BW (11n-40(MIMO))	MCS 11 (2 Streams), PN9
Transmitting (Tx), IEEE 802.11ac SDM (MIMO) 40 MHz BW (11ac-40(MIMO))	MCS 3 (2 Streams), PN9
Transmitting (Tx), IEEE 802.11ac SISO 80 MHz BW (11ac-80(SISO))	MCS 5 (Chain1), PN9
Transmitting (Tx), IEEE 802.11ac CDD 80 MHz BW (11ac-80(CDD))	MCS 3 (1 Streams), PN9
Transmitting (Tx), IEEE 802.11ac SDM (MIMO) 80 MHz BW (11ac-80(MIMO))	MCS 3 (2 Streams), PN9
*The worst antenna (Chain1) 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: (SISO) 11a/11n-20/11n-40:10 dBm, 11ac-20/11ac-40/11ac-80:6 dBm
(MIMO) 11a/11n-20/11n-40:7 dBm, 11ac-20/11ac-40/11ac-80:3 dBm
Software: QRCT (Qualcomm Radio Control Toolkit) v4.0.00195.0
(Date: 2021.10.18, Storage location: Driven by connected PC)
*This setting of software is the worst case.
Any conditions under the normal use do not exceed the condition of setting.
In addition, end users cannot change the settings of the output power of the product.

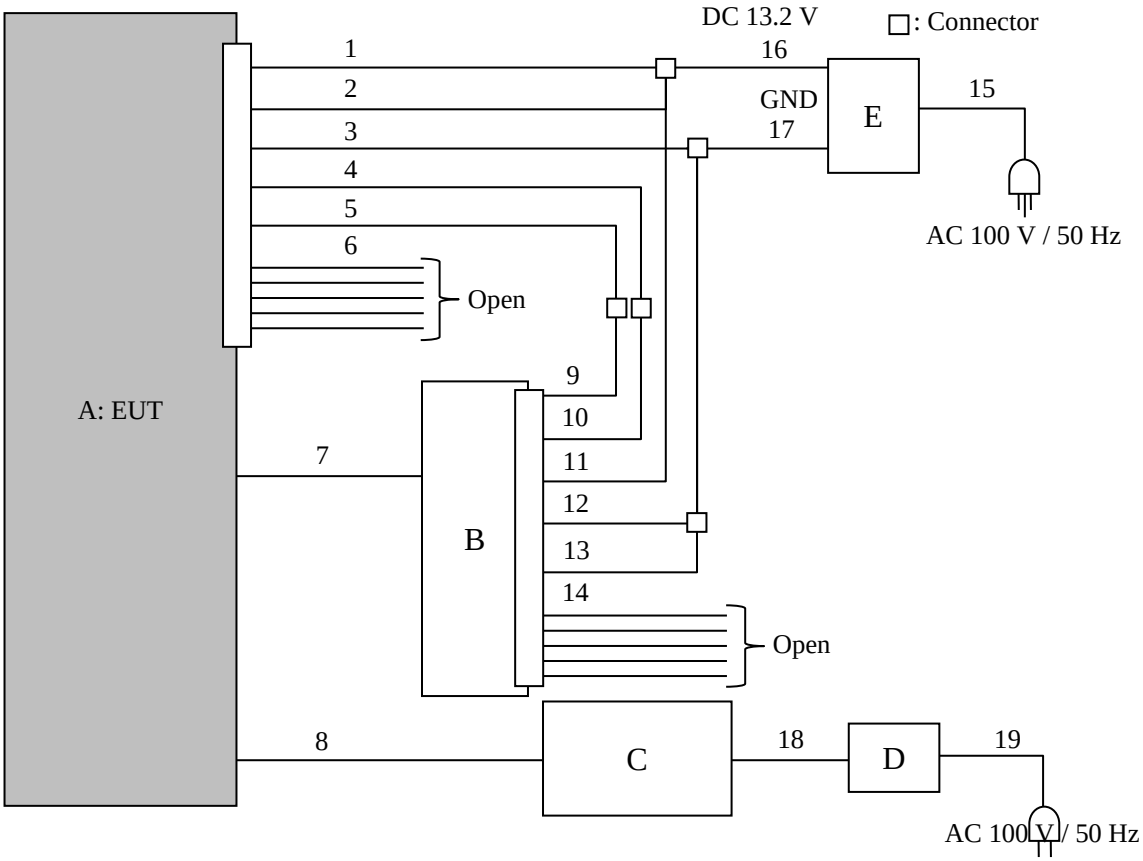
* SISO: Single input single output, MIMO: Multi input multi output,
CDD: Cyclic delay diversity, SDM: Space division multiplexing

*The details of Operation mode(s)

Test Item	Operating Mode	Tested Antenna *2)	Tested Frequency
99 % Occupied Bandwidth, Maximum Conducted Output Power Maximum Power Spectral Density	Tx 11a (SISO), Tx 11n-20 (SISO), Tx 11ac-20 (SISO)	Chain1, Chain2 *3)	5180 MHz, 5220 MHz, 5240 MHz, 5260 MHz, 5300 MHz, 5320 MHz, 5500 MHz, 5580 MHz, 5700 MHz, 5720 MHz, 5745 MHz, 5785 MHz, 5825 MHz
	Tx 11a (CDD), Tx 11n-20 (CDD), Tx 11ac-20 (CDD), Tx 11n-20 (MIMO), Tx 11ac-20 (MIMO)	Chain1+ Chain2 *4)	
	Tx 11n-40 (SISO), Tx 11ac-40 (SISO)	Chain1, Chain2 *3)	5190 MHz, 5230 MHz, 5270 MHz, 5310 MHz, 5510 MHz, 5550 MHz, 5670 MHz, 5710 MHz, 5755 MHz, 5795 MHz
	Tx 11n-40 (CDD), Tx 11ac-40 (CDD), Tx 11n-40 (MIMO), Tx 11ac-40 (MIMO)	Chain1+ Chain2 *4)	
	Tx 11ac-80 (SISO)	Chain1, Chain2 *3)	5210 MHz, 5290 MHz, 5530 MHz, 5610 MHz, 5690 MHz, 5775 MHz
	Tx 11ac-80 (CDD), Tx 11ac-80 (MIMO)	Chain1 + Chain2 *4)	
26 dB Emission Bandwidth	Tx 11a (SISO), Tx 11n-20 (SISO), Tx 11ac-20 (SISO), Tx 11a (CDD), Tx 11n-20 (CDD), Tx 11ac-20 (CDD), Tx 11n-20 (MIMO), Tx 11ac-20 (MIMO)	Chain1	5260 MHz, 5300 MHz, 5320 MHz, 5500 MHz, 5580 MHz, 5700 MHz, 5720 MHz
	Tx 11n-40 (SISO), Tx 11ac-40 (SISO), Tx 11n-40 (CDD), Tx 11ac-40 (CDD), Tx 11n-40 (MIMO), Tx 11ac-40 (MIMO)		5270 MHz, 5310 MHz, 5510 MHz, 5550 MHz, 5670 MHz, 5710 MHz
	Tx 11ac-80 (SISO) Tx 11ac-80 (CDD), Tx 11ac-80 (MIMO)		5290 MHz, 5530 MHz, 5610 MHz, 5690 MHz
6 dB Bandwidth	Tx 11a (SISO), Tx 11n-20 (SISO), Tx 11ac-20 (SISO), Tx 11a (CDD), Tx 11n-20 (CDD), Tx 11ac-20 (CDD), Tx 11n-20 (MIMO), Tx 11ac-20 (MIMO)	Chain1	5745 MHz, 5785 MHz, 5825 MHz
	Tx 11n-40 (SISO), Tx 11ac-40 (SISO), Tx 11n-40 (CDD), Tx 11ac-40 (CDD), Tx 11n-40 (MIMO), Tx 11ac-40 (MIMO)		5755 MHz, 5795 MHz
	Tx 11ac-80 (SISO), Tx 11ac-80 (CDD), Tx 11ac-80 (MIMO)		5775 MHz
Conducted Spurious Emission *1)	Tx 11a (SISO)	Chain1	5700 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) Only Maximum Conducted Output Power, measured both antenna port (chain 1 and Chain2).
*4) Only 99 % Occupied Bandwidth, measured worst antenna port (Chain1).

4.2 Configuration and peripherals



Description of EUT and Support equipment

No.	Item	Model number	Serial number	Manufacturer	Remark
A	Head unit	AH00ICB	73	ALPS ALPINE	EUT
B	Display	QH00159A	114	ALPS ALPINE	-
C	Laptop Computer	7666-77J	LV-B8R1X 08/05	Lenovo	-
D	AC Adapter	42T4422	11S92P1154Z1DXF1DBFDN	Lenovo	-
E	Power Supply (DC)	PW16-5ADP	19100034	TEXIO	-

List of cables used

No.	Name	Length (m)	Shield		Remark
			Cable	Connector	
1	+B	2.2	Unshielded	Unshielded	-
2	ACC	2.2	Unshielded	Unshielded	-
3	GND	2.2	Unshielded	Unshielded	-
4	BCAN H	2.2	Unshielded	Unshielded	-
5	BCAN L	2.2	Unshielded	Unshielded	-
6	Signal	2.2	Unshielded	Unshielded	-
7	GVIF	2.4	Shielded	Shielded	-
8	USB	2.2 + 1.0	Shielded	Shielded	-
9	BCAN L	0.6	Unshielded	Unshielded	-
10	BCAN H	0.6	Unshielded	Unshielded	-
11	+B	0.6	Unshielded	Unshielded	-
12	GND	0.6	Unshielded	Unshielded	-
13	DISP CONT	0.6	Unshielded	Unshielded	-
14	Signal	0.6	Unshielded	Unshielded	-
15	AC	2.0	Unshielded	Unshielded	-
16	DC+	2.0	Unshielded	Unshielded	-
17	DC-	2.0	Unshielded	Unshielded	-
18	DC	1.8	Unshielded	Unshielded	-
19	AC	0.9	Unshielded	Unshielded	-

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

* 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 not detected 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.
*5) Power was measured with using the gate function.

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

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Report No.	13977035S-C-R1		
Test place	Shonan EMC Lab. No.5 Shielded Room		
Date	November 1, 2021	November 2, 2021	November 4, 2021
Temperature / Humidity	23 deg. C / 43 % RH	25 deg. C / 40 % RH	25 deg. C / 34 % RH
Engineer	Takahiro Kawakami	Takahiro Kawakami	Shiro Kobayashi
Mode	Tx (measured worst antenna port)		

11a(SISO)

Antenna	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
Chain 1	5180	-	16730.4
	5220	-	16778.9
	5240	-	16773.4
	5260	20.326	16776.5
	5300	19.720	16726.1
	5320	19.788	16708.7
	5500	19.582	16707.6
	5580	19.779	16658.6
	5700	19.888	16779.2
	5720	20.020	16746.7
	5745	-	16756.0
	5785	-	16786.3
	5825	-	16786.3

11n-20(SISO)

Antenna	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
Chain 1	5180	-	17788.5
	5220	-	17788.2
	5240	-	17873.0
	5260	20.512	17826.4
	5300	19.956	17819.9
	5320	20.052	17829.7
	5500	20.586	17853.4
	5580	20.446	17835.9
	5700	20.301	17807.3
	5720	20.407	17834.8
	5745	-	17859.5
	5785	-	17853.4
	5825	-	17868.5

11ac-20(SISO)

Antenna	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
Chain 1	5180	-	17860.8
	5220	-	17805.7
	5240	-	17820.2
	5260	20.564	17812.0
	5300	20.684	17805.9
	5320	20.525	17796.9
	5500	20.443	17821.7
	5580	20.457	17849.8
	5700	20.470	17808.1
	5720	20.435	17842.9
	5745	-	17900.3
	5785	-	17848.0
	5825	-	17876.9

11a(CDD)

Antenna	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
Chain 1	5180	-	16760.4
	5220	-	16748.6
	5240	-	16773.0
	5260	19.596	16736.8
	5300	19.346	16779.9
	5320	19.293	16719.3
	5500	20.061	16784.3
	5580	19.990	16755.8
	5700	19.731	16749.6
	5720	19.621	16701.1
	5745	-	16753.8
	5785	-	16742.9
	5825	-	16813.0

11n-20(CDD)

Antenna	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
Chain 1	5180	-	17842.1
	5220	-	17839.6
	5240	-	17859.7
	5260	20.661	17851.0
	5300	20.597	17845.6
	5320	20.573	17854.5
	5500	20.745	17845.5
	5580	20.772	17844.9
	5700	20.482	17841.7
	5720	20.603	17860.9
	5745	-	17843.7
	5785	-	17864.6
	5825	-	17843.8

11ac-20(CDD)

Antenna	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
Chain 1	5180	-	17900.3
	5220	-	17897.6
	5240	-	17903.4
	5260	20.533	17878.6
	5300	20.524	17898.5
	5320	20.547	17903.5
	5500	20.496	17899.0
	5580	20.525	17884.7
	5700	20.622	17896.6
	5720	20.549	17906.1
	5745	-	17862.0
	5785	-	17899.5
	5825	-	17897.7

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Report No.	13977035S-C-R1			
Test place	Shonan EMC Lab. No.5 Shielded Room			
Date	November 1, 2021	November 2, 2021	November 4, 2021	November 22, 2021
Temperature / Humidity	23 deg. C / 43 % RH	25 deg. C / 40 % RH	25 deg. C / 34 % RH	23 deg. C / 40 % RH
Engineer	Takahiro Kawakami	Takahiro Kawakami	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx (measured worst antenna port)			

11n-20(MIMO)

Antenna	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
Chain 1	5180	-	17807.7
	5220	-	17799.7
	5240	-	17840.6
	5260	20.520	17798.6
	5300	20.361	17837.1
	5320	20.385	17885.7
	5500	20.127	17809.5
	5580	20.653	17780.2
	5700	20.369	17847.9
	5720	20.280	17806.7
	5745	-	17908.9
	5785	-	17909.0
	5825	-	17907.7

11ac-20(MIMO)

Antenna	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
Chain 1	5180	-	17903.5
	5220	-	17851.0
	5240	-	17852.9
	5260	20.439	17871.5
	5300	20.602	17783.6
	5320	20.216	17774.0
	5500	20.377	17826.2
	5580	20.501	17779.5
	5700	20.173	17847.2
	5720	20.489	17807.8
	5745	-	17885.8
	5785	-	17857.6
	5825	-	17905.8

11n-40(SISO)

Antenna	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
Chain 1	5190	-	36407.4
	5230	-	36356.3
	5270	41.280	36440.7
	5310	40.821	36340.5
	5510	40.916	36445.2
	5550	40.547	36497.3
	5670	40.757	36470.8
	5710	41.080	36519.1
	5755	-	36471.2
	5795	-	36506.5

11ac-40(SISO)

Antenna	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
Chain 1	5190	-	36431.7
	5230	-	36460.4
	5270	41.340	36442.2
	5310	40.409	36372.0
	5510	41.505	36400.2
	5550	41.219	36433.8
	5670	41.198	36466.6
	5710	41.567	36526.4
	5755	-	36476.1
	5795	-	36455.3

11n-40(CDD)

Antenna	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
Chain 1	5190	-	36560.0
	5230	-	36596.3
	5270	41.725	36650.3
	5310	41.577	36572.8
	5510	41.830	36649.3
	5550	42.324	36617.4
	5670	41.863	36615.7
	5710	41.562	36655.5
	5755	-	36616.9
	5795	-	36584.1

11ac-40(CDD)

Antenna	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
Chain 1	5190	-	36452.4
	5230	-	36505.2
	5270	41.115	36437.5
	5310	40.903	36467.0
	5510	41.042	36467.5
	5550	41.004	36426.0
	5670	41.025	36425.0
	5710	40.840	36488.6
	5755	-	36454.2
	5795	-	36447.1

26 dB Emission Bandwidth and 99 % Occupied Bandwidth

Report No.	13977035S-C-R1			
Test place	Shonan EMC Lab. No.5 Shielded Room			
Date	November 1, 2021	November 2, 2021	November 4, 2021	November 5, 2021
Temperature / Humidity	23 deg. C / 43 % RH	25 deg. C / 40 % RH	25 deg. C / 34 % RH	24 deg. C / 40 % RH
Engineer	Takahiro Kawakami	Takahiro Kawakami	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx (measured worst antenna port)			

11n-40(MIMO)

Antenna	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
Chain 1	5190	-	36410.9
	5230	-	36455.1
	5270	41.180	36420.1
	5310	40.971	36441.7
	5510	40.880	36493.3
	5550	40.744	36456.0
	5670	41.329	36484.4
	5710	41.229	36507.8
	5755	-	36479.4
	5795	-	36441.2

11ac-40(MIMO)

Antenna	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
Chain 1	5190	-	36605.2
	5230	-	36646.1
	5270	40.676	36663.7
	5310	40.986	36618.6
	5510	40.961	36637.6
	5550	41.333	36619.8
	5670	41.193	36602.8
	5710	41.633	36644.3
	5755	-	36616.5
	5795	-	36572.0

11ac-80(SISO)

Antenna	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
Chain 1	5210	-	77331.0
	5290	90.831	77222.6
	5530	90.738	77330.5
	5610	89.718	77324.2
	5690	89.193	77502.2
	5775	-	77329.4

11ac-80(CDD)

Antenna	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
Chain 1	5210	-	76456.8
	5290	84.410	76458.5
	5530	85.399	76554.4
	5610	85.476	76600.0
	5690	84.403	76423.6
	5775	-	76450.4

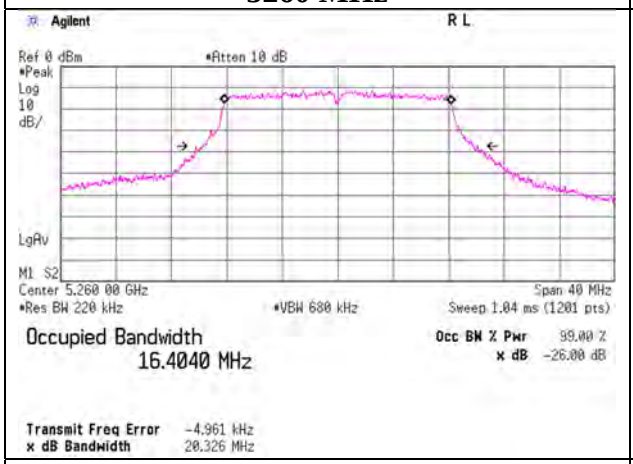
11ac-80(MIMO)

Antenna	Tested Frequency [MHz]	26 dB Emission Bandwidth [MHz]	99 % Occupied Bandwidth [kHz]
Chain 1	5210	-	76360.5
	5290	82.956	76235.7
	5530	84.150	76250.6
	5610	83.614	76262.1
	5690	84.847	76343.6
	5775	-	76285.5

26 dB Emission Bandwidth

11a(SISO), Chain 1

5260 MHz



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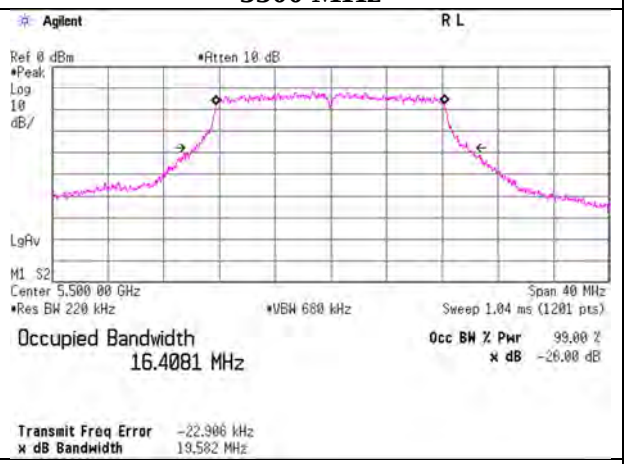

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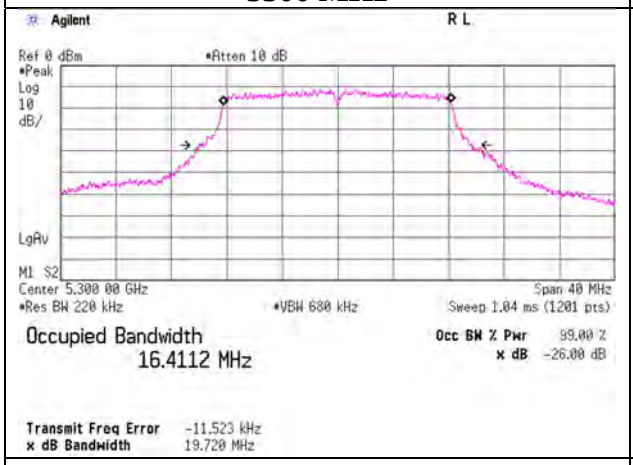
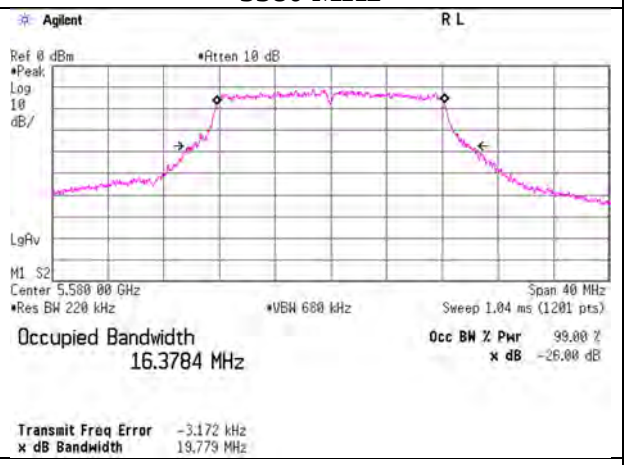
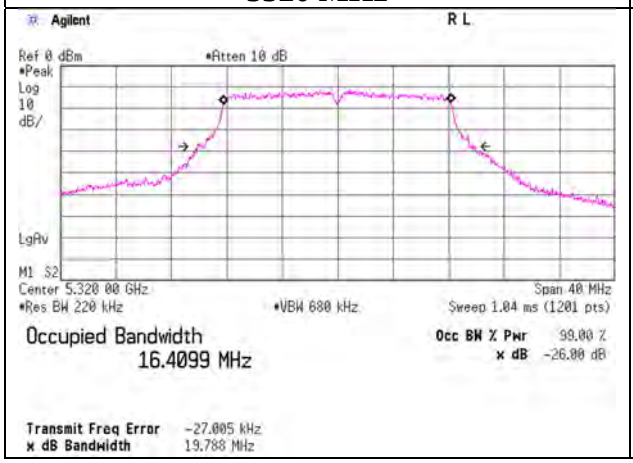


5580 MHz



5320 MHz



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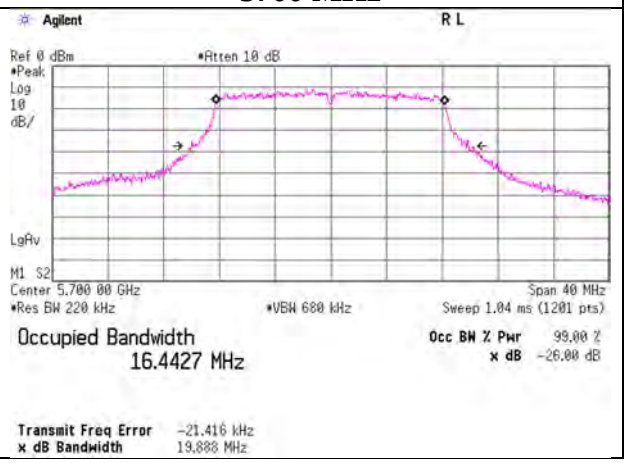
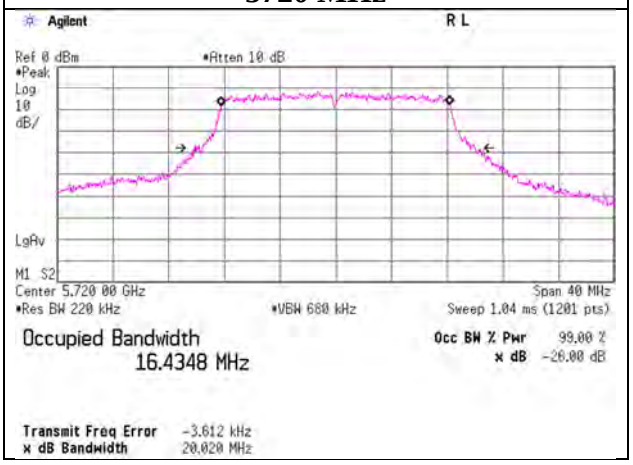


26 dB Emission Bandwidth

11a(SISO), Chain 1

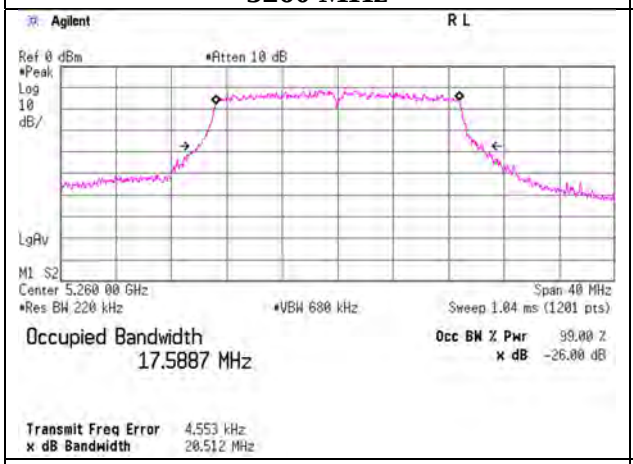
5720 MHz



26 dB Emission Bandwidth

11n-20(SISO), Chain 1

5260 MHz



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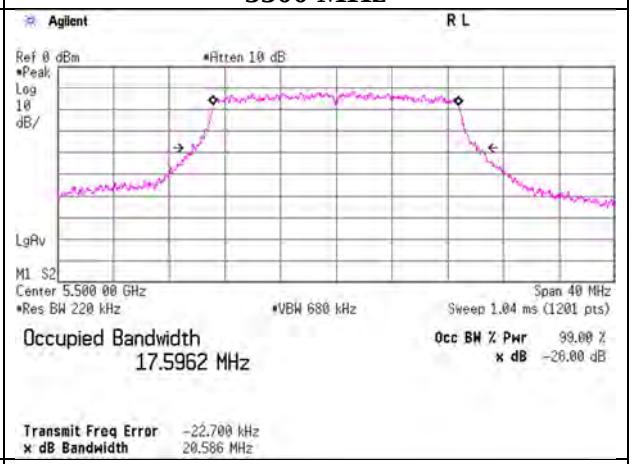

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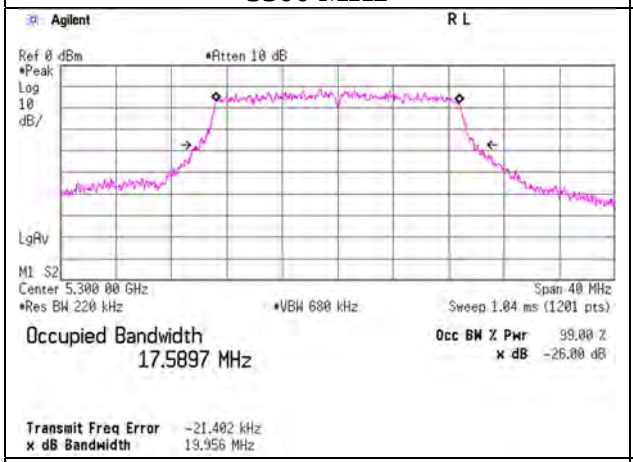
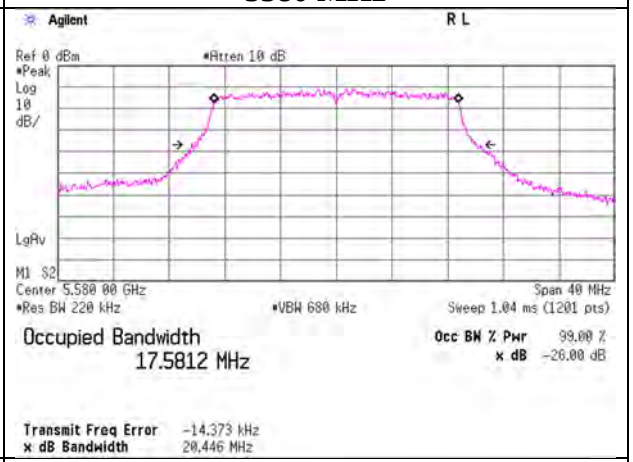


5580 MHz



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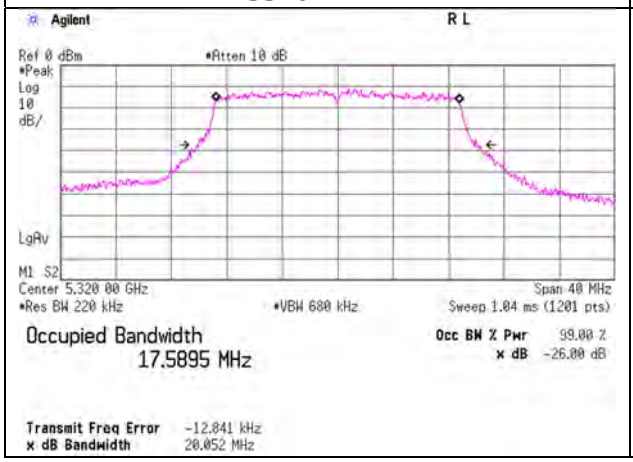

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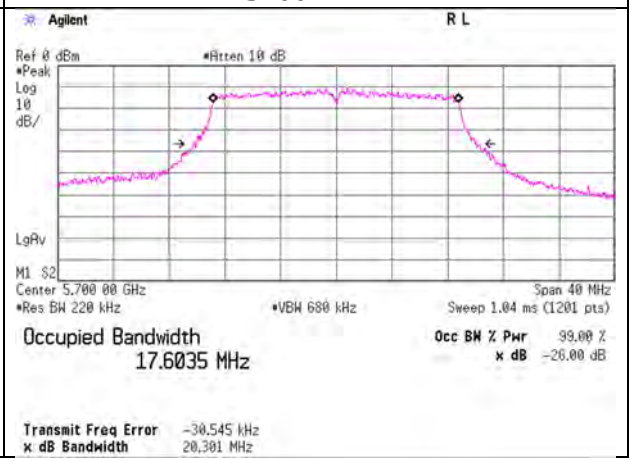
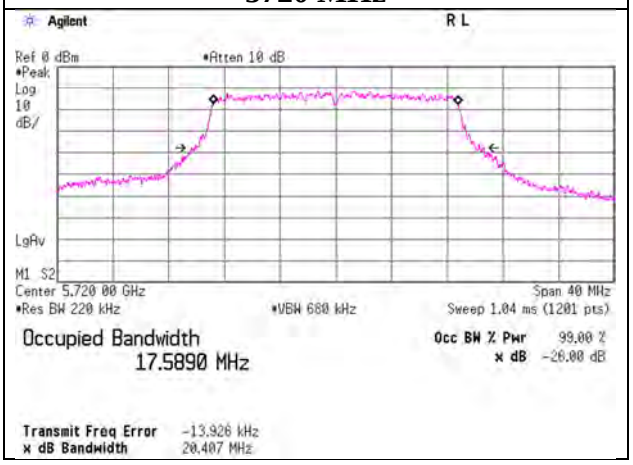


26 dB Emission Bandwidth

11n-20(SISO), Chain 1

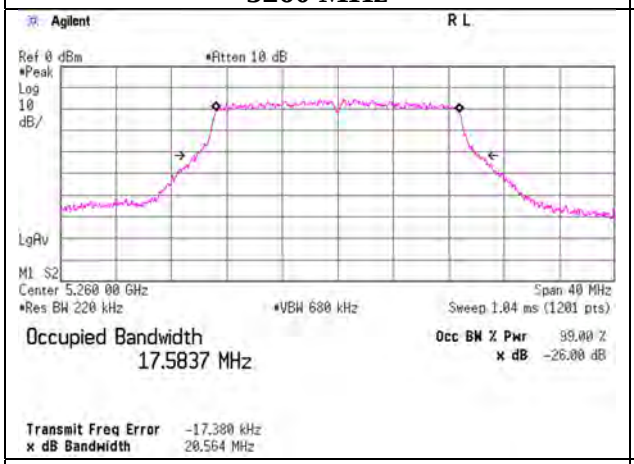
5720 MHz



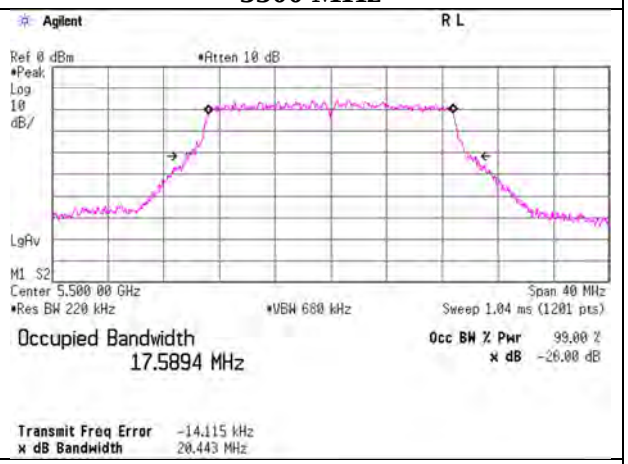
26 dB Emission Bandwidth

11ac-20(SISO), Chain 1

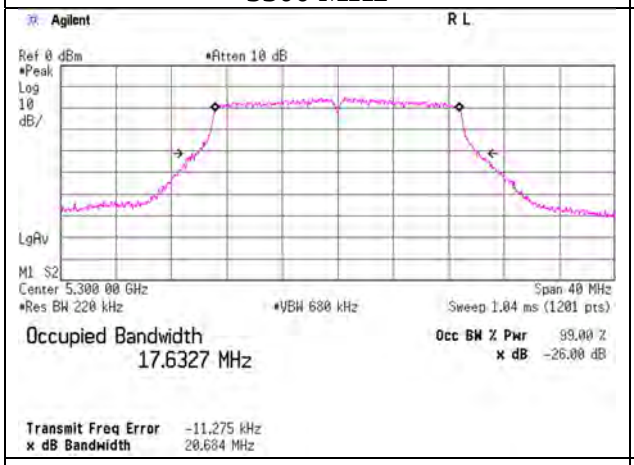
5260 MHz



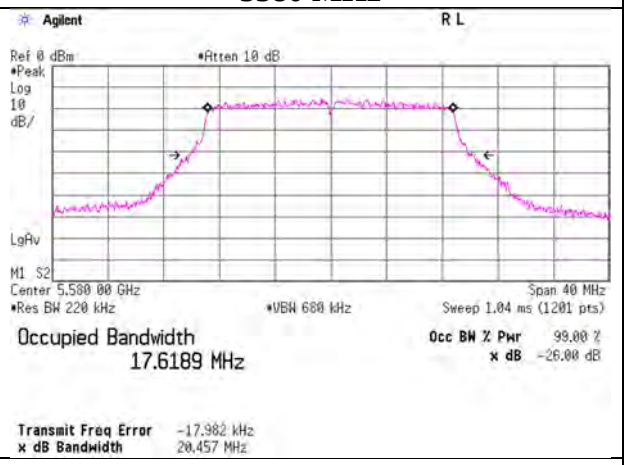
5500 MHz



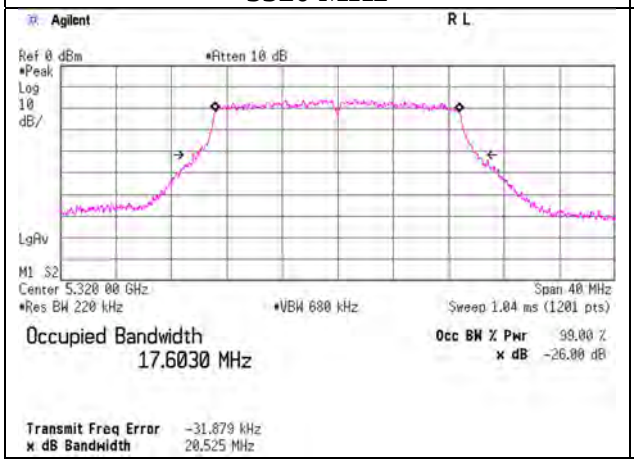
5300 MHz



5580 MHz



5320 MHz



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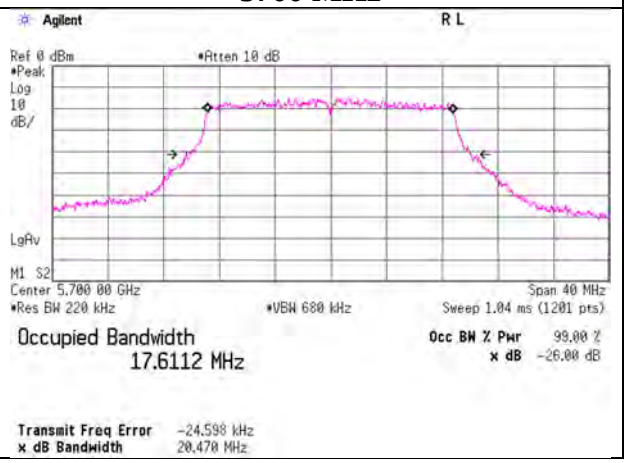
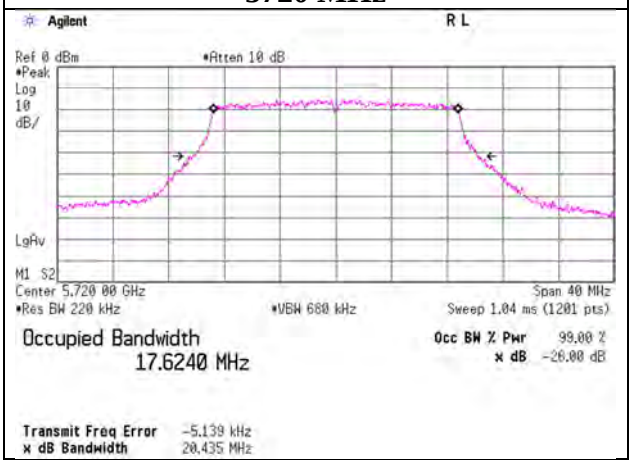


26 dB Emission Bandwidth

11ac-20(SISO), Chain 1

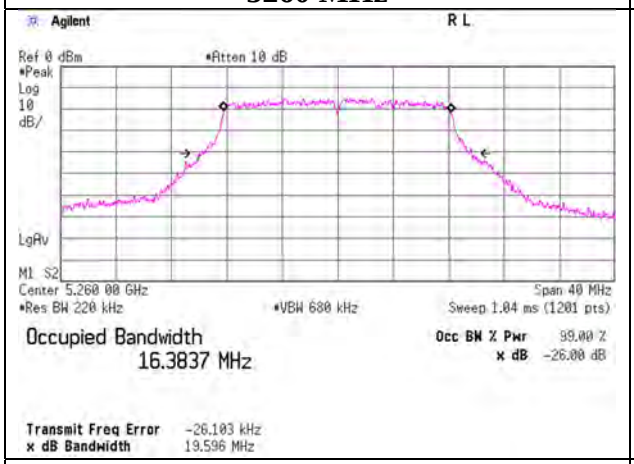
5720 MHz



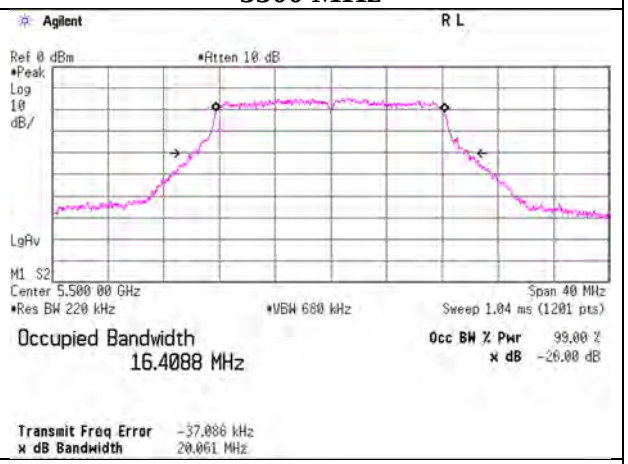
26 dB Emission Bandwidth

11a(CDD), Chain 1

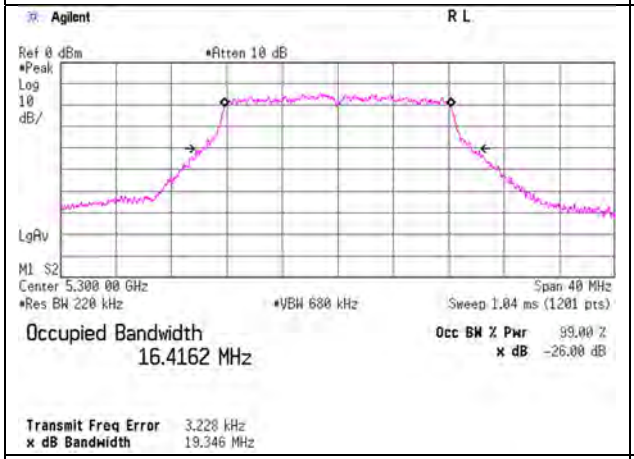
5260 MHz



5500 MHz



5300 MHz



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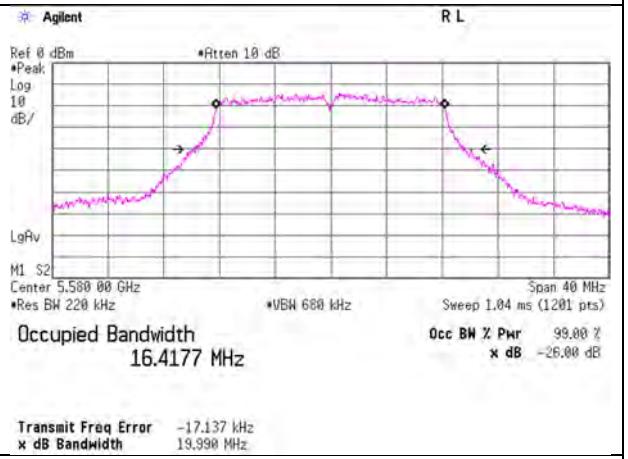
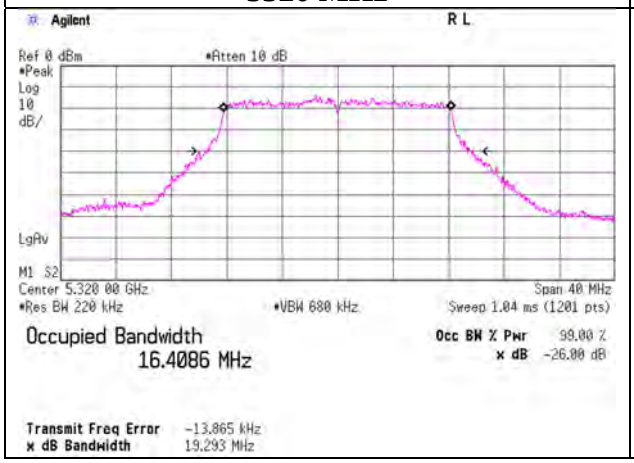
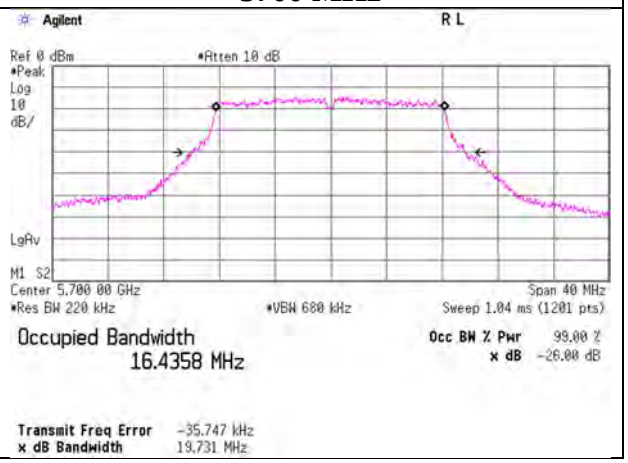


5320 MHz



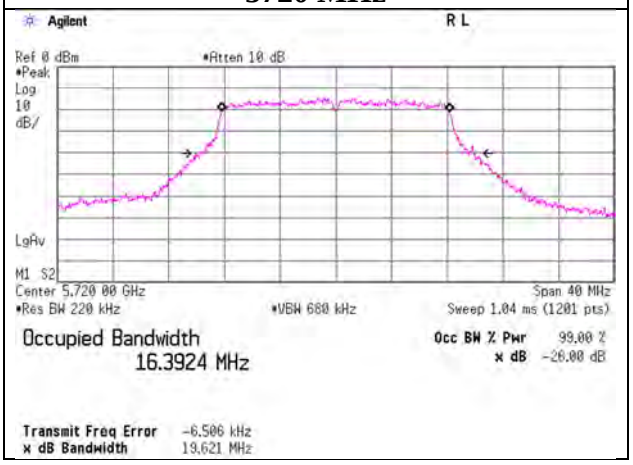
5700 MHz



26 dB Emission Bandwidth

11a(CDD), Chain 1

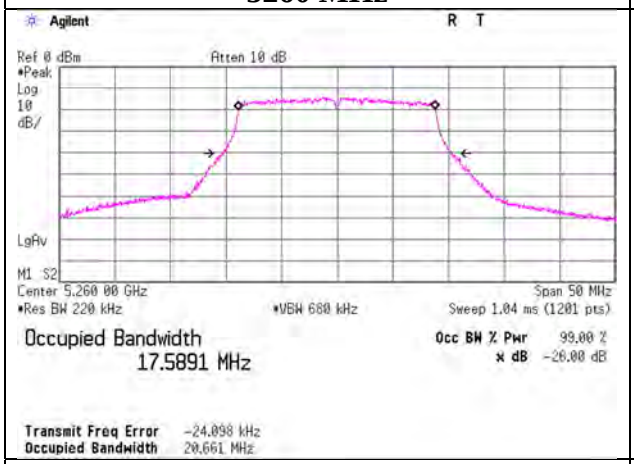
5720 MHz



26 dB Emission Bandwidth

11n-20(CDD), Chain 1

5260 MHz



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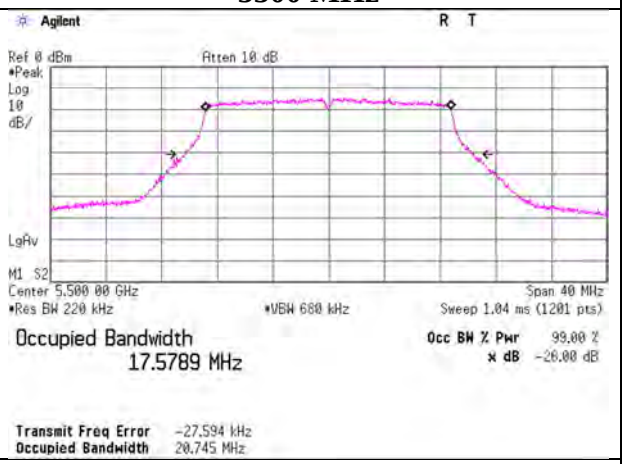
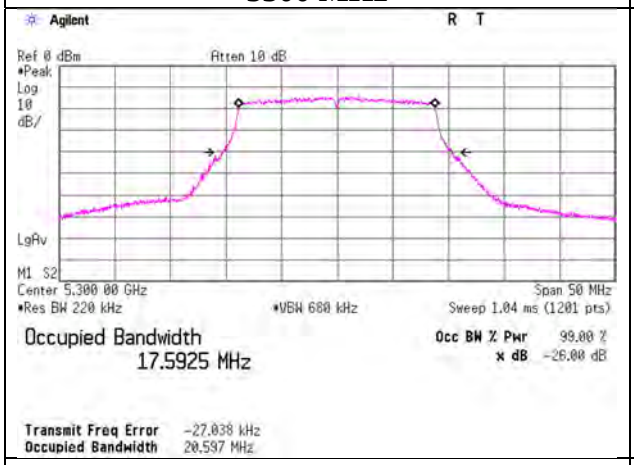
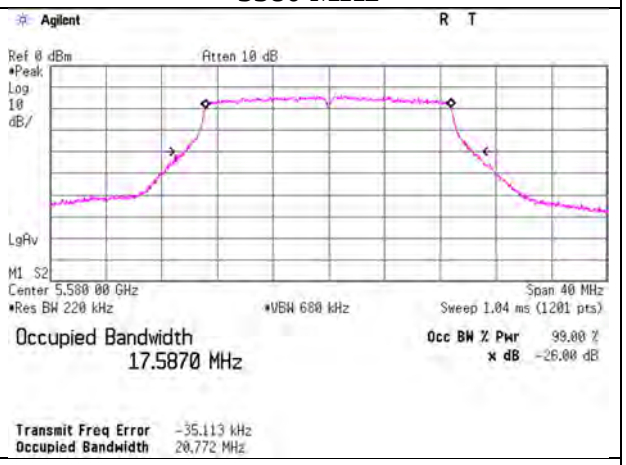


5300 MHz



5580 MHz



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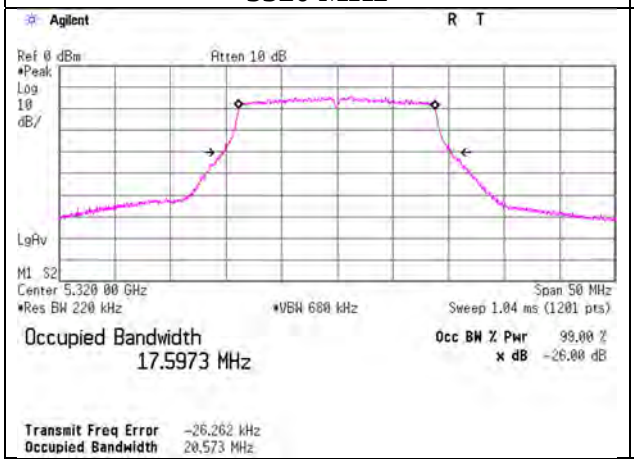
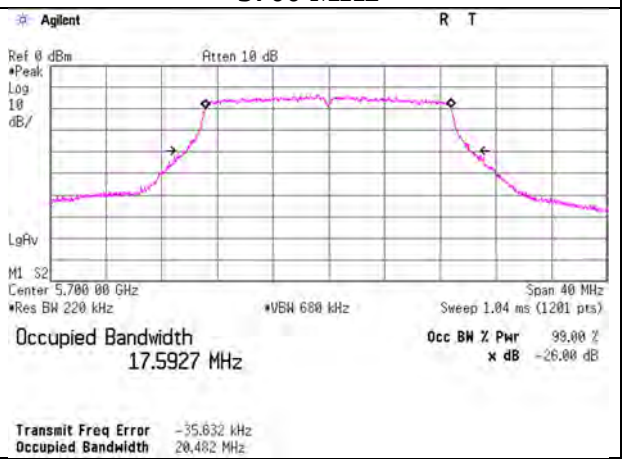


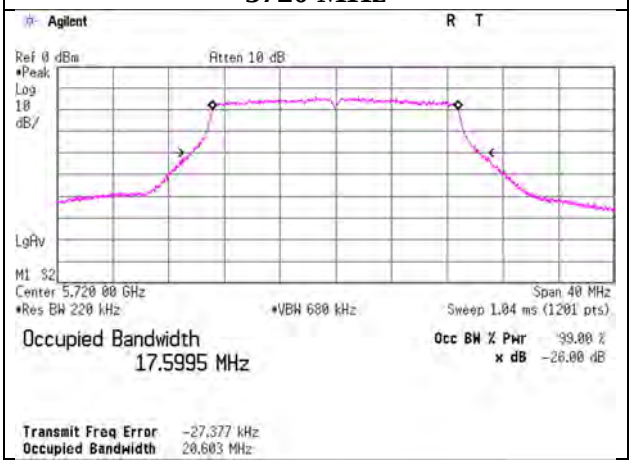
5700 MHz



26 dB Emission Bandwidth

11n-20(CDD), Chain 1

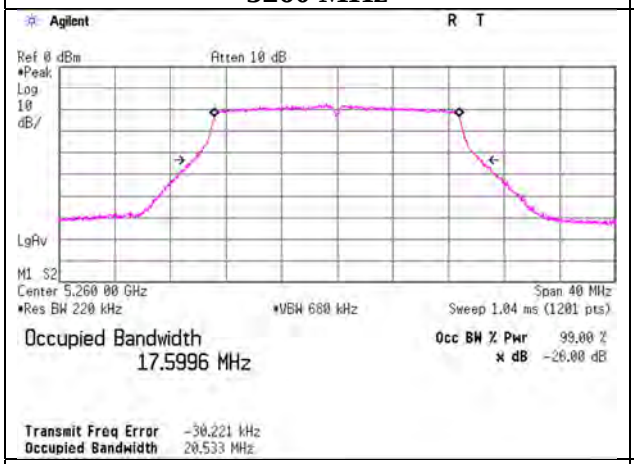
5720 MHz



26 dB Emission Bandwidth

11ac-20(CDD), Chain 1

5260 MHz



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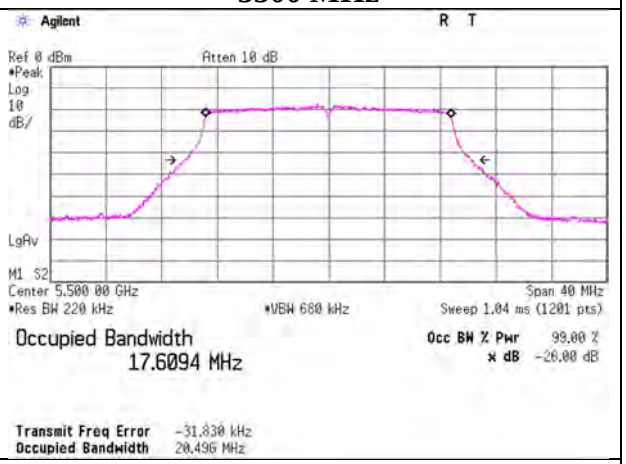

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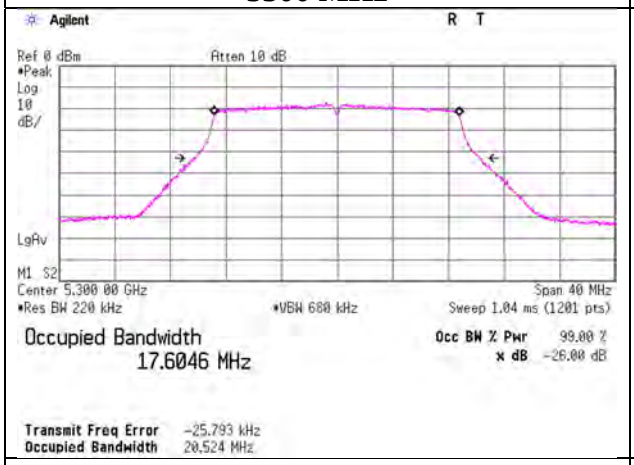

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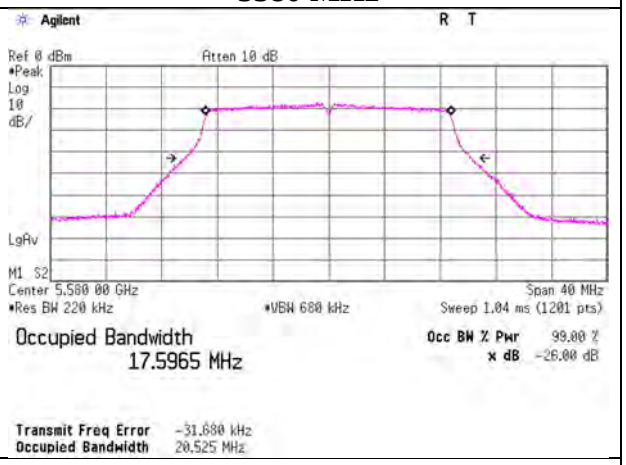

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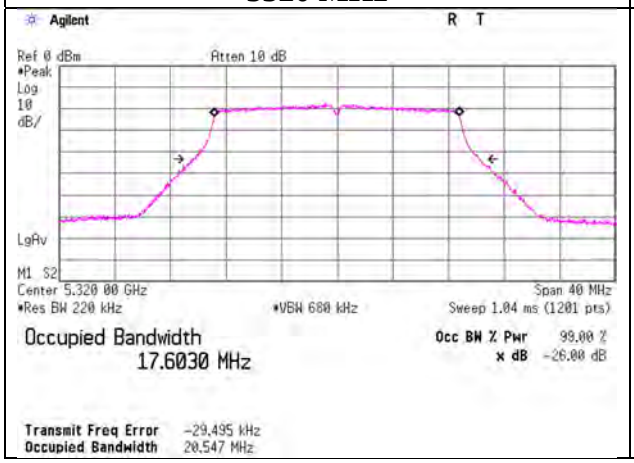

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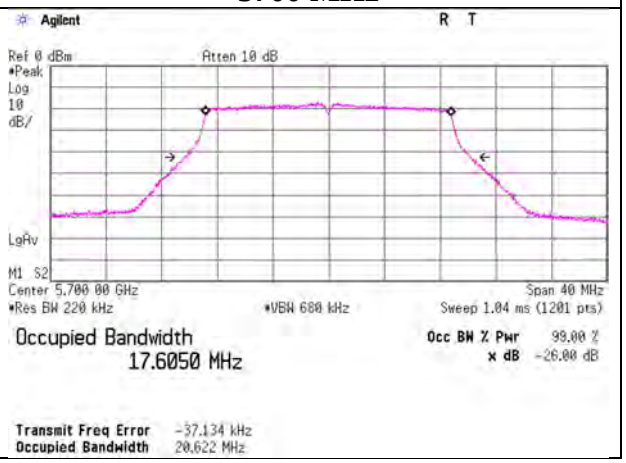
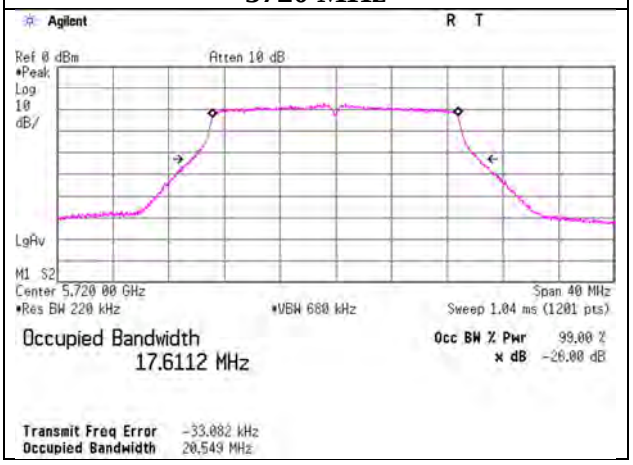


26 dB Emission Bandwidth

11ac-20(CDD), Chain 1

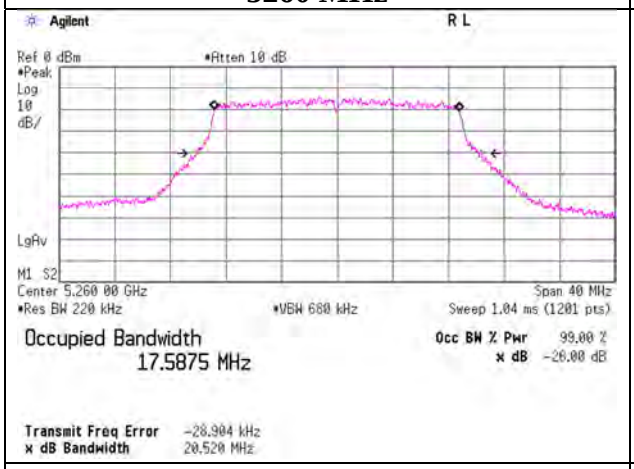
5720 MHz



26 dB Emission Bandwidth

11n-20(MIMO), Chain 1

5260 MHz



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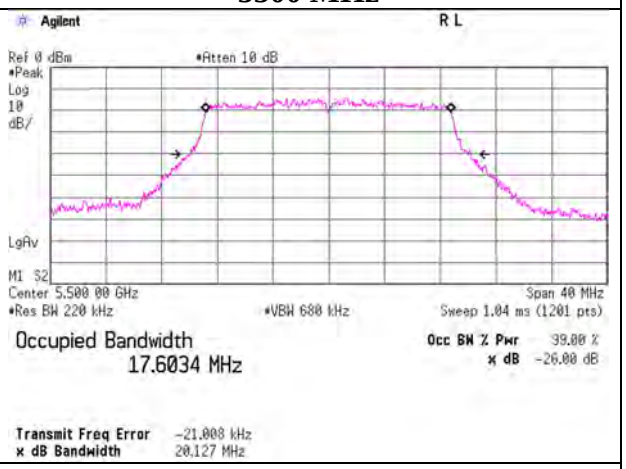

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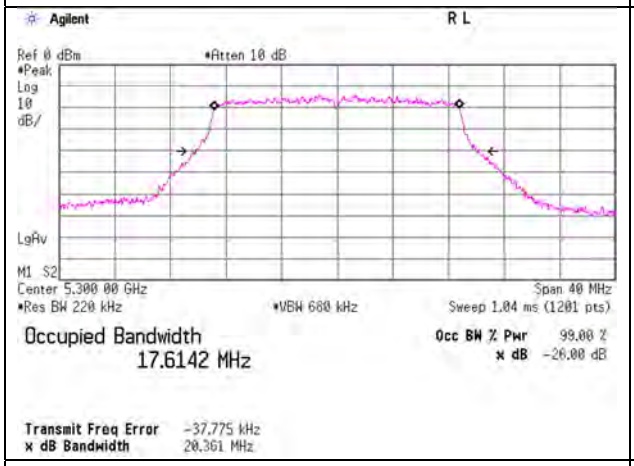

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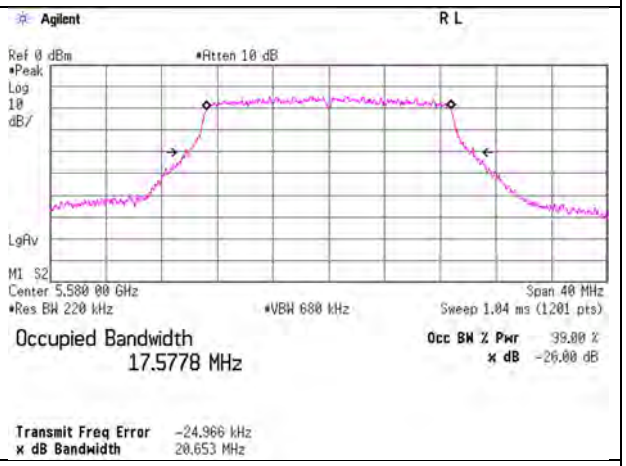
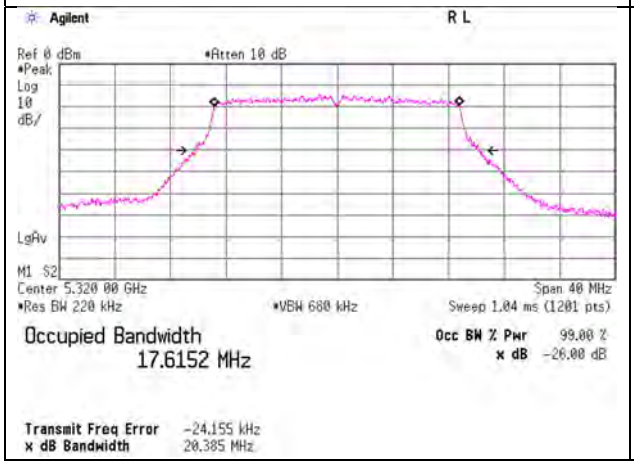


5320 MHz



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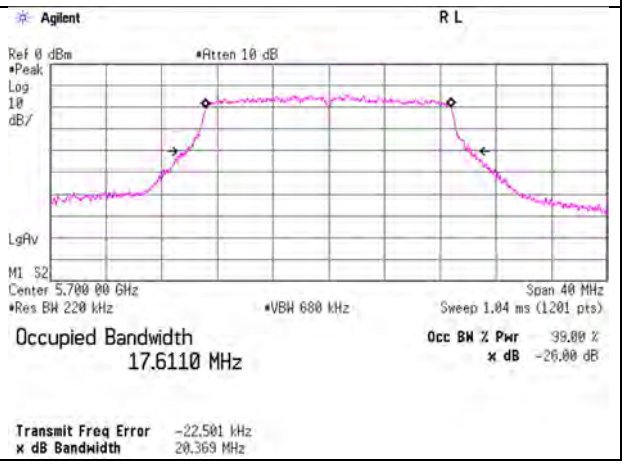
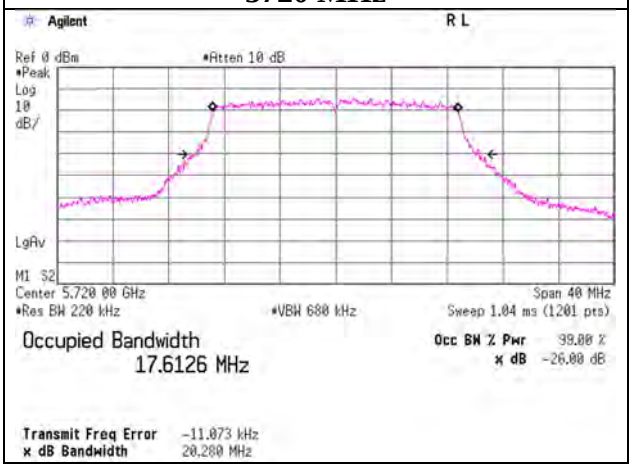


26 dB Emission Bandwidth

11n-20(MIMO), Chain 1

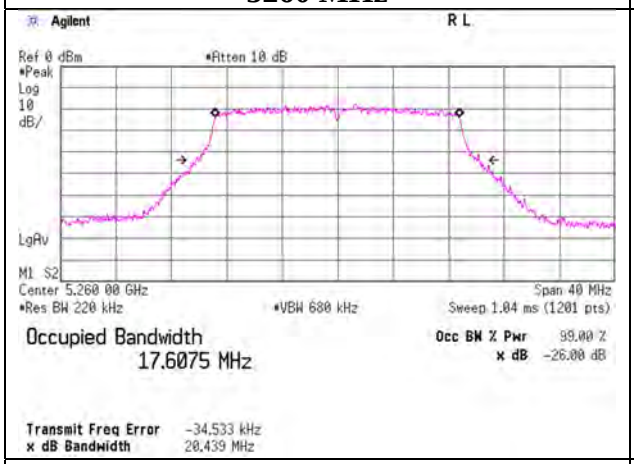
5720 MHz



26 dB Emission Bandwidth

11ac-20(MIMO), Chain 1

5260 MHz



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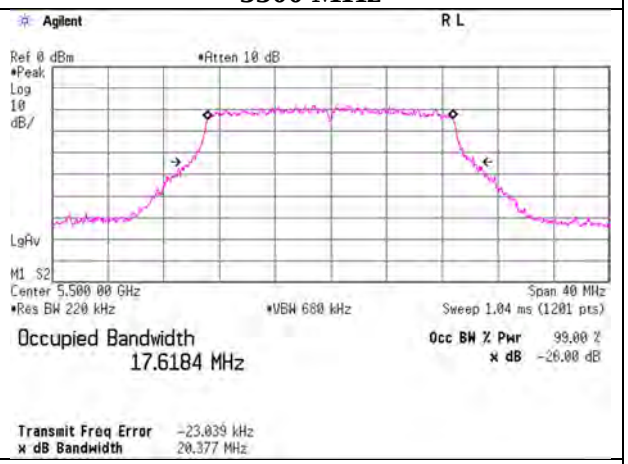

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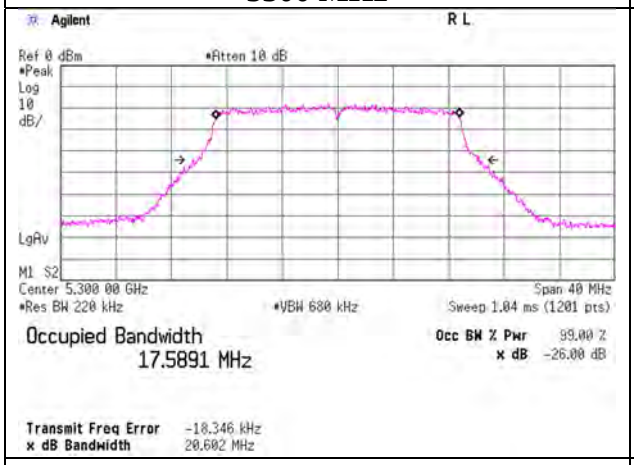

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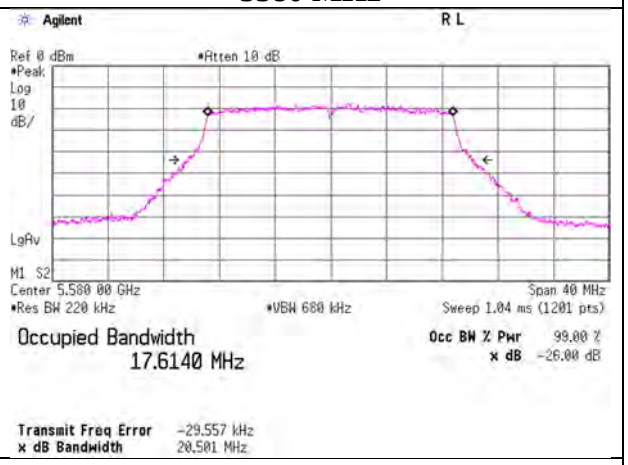

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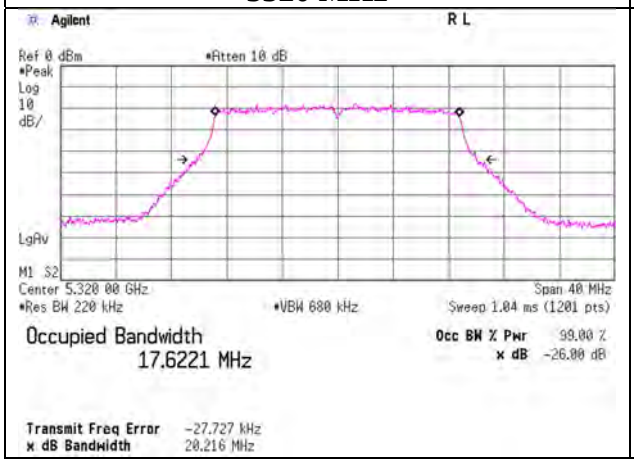

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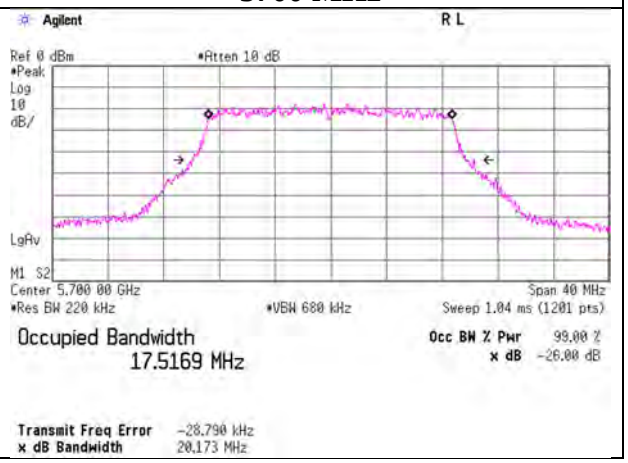
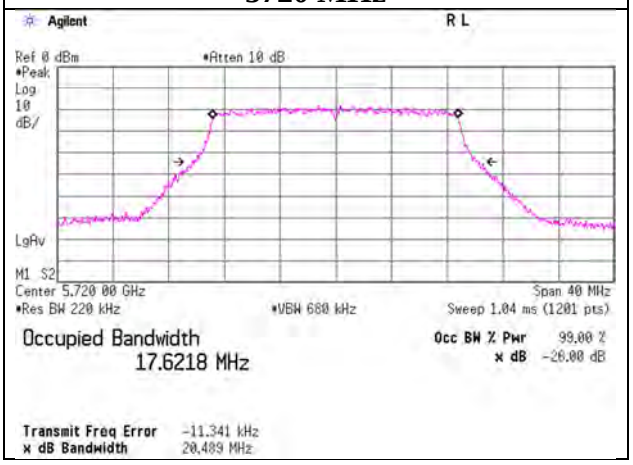


26 dB Emission Bandwidth

11ac-20(MIMO), Chain 1

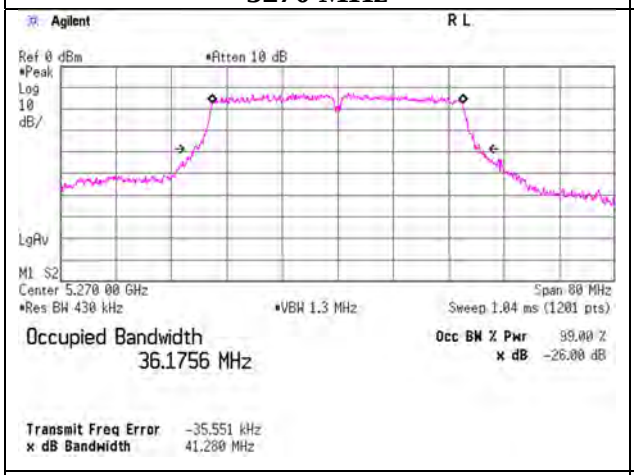
5720 MHz



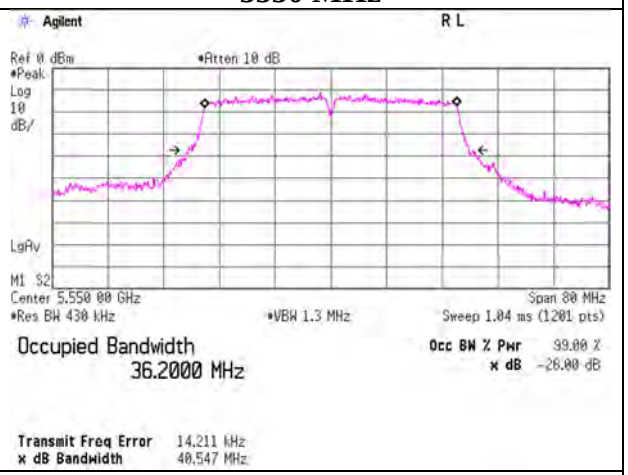
26 dB Emission Bandwidth

11n-40(SISO), Chain 1

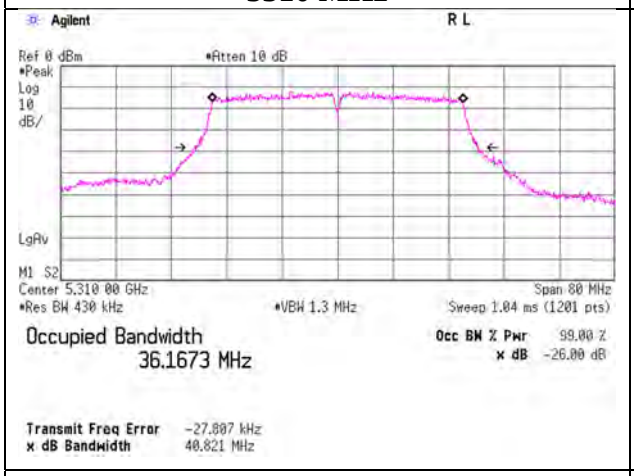
5270 MHz



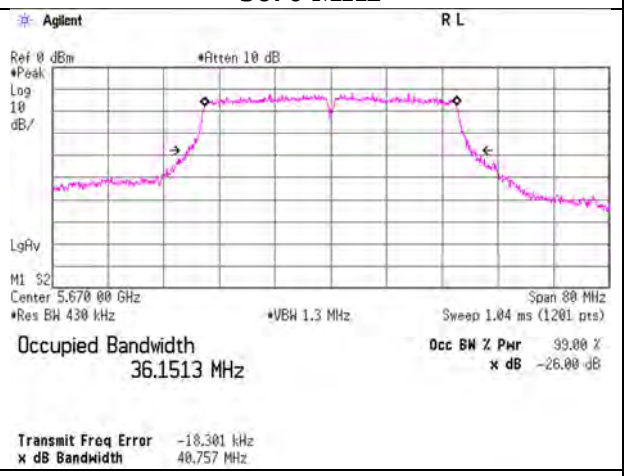
5550 MHz



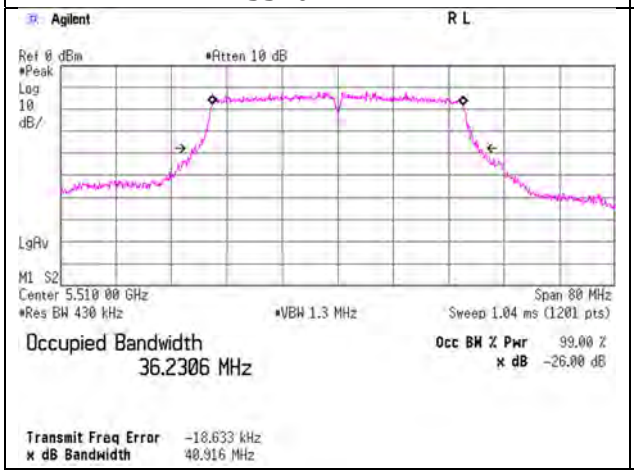
5310 MHz



5670 MHz



5510 MHz



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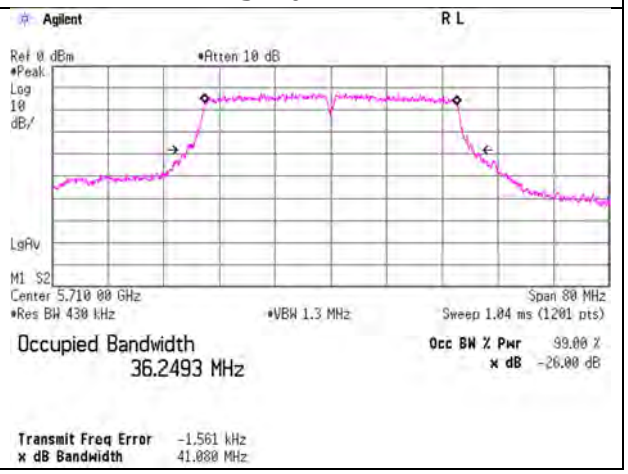
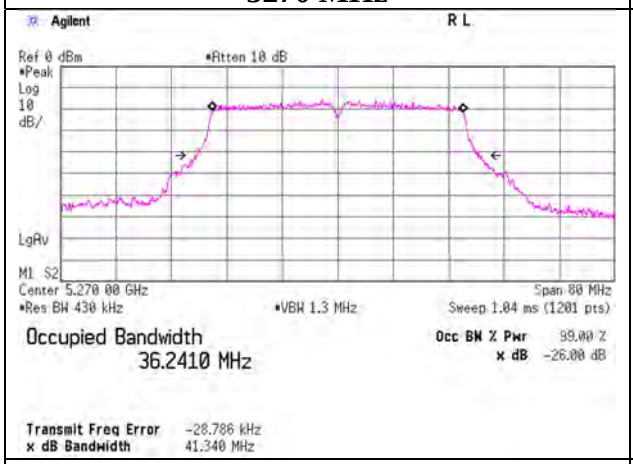


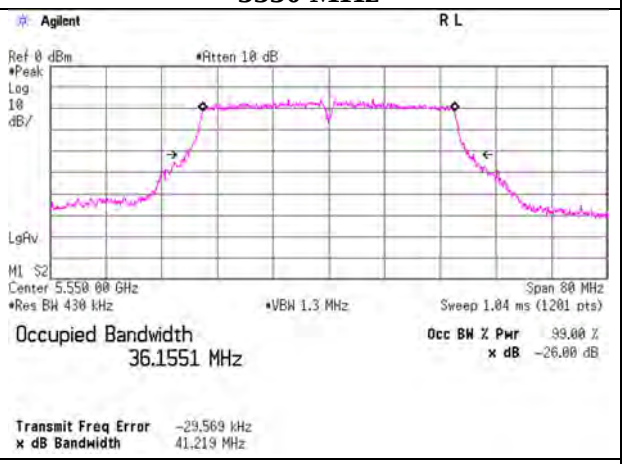
26 dB Emission Bandwidth

11ac-40(SISO), Chain 1

5270 MHz



5550 MHz



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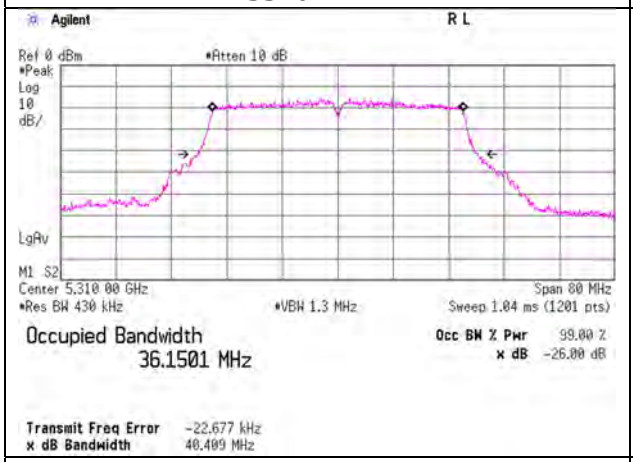
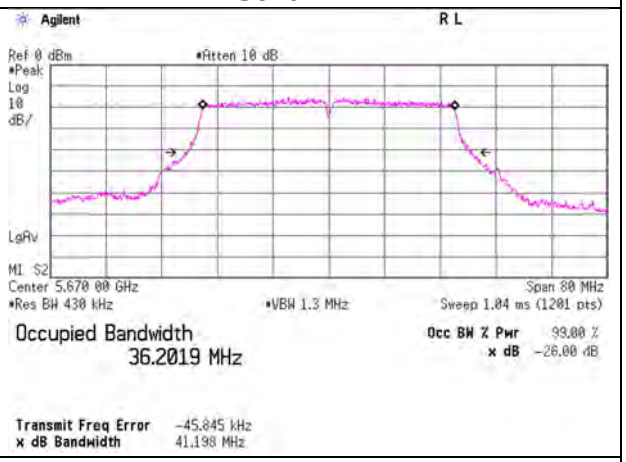
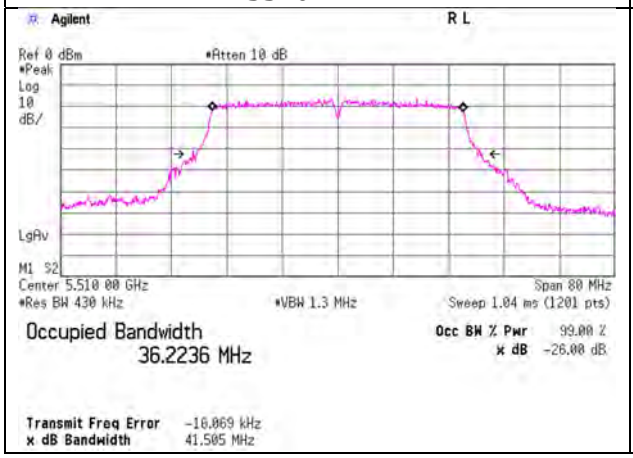


5670 MHz



5510 MHz



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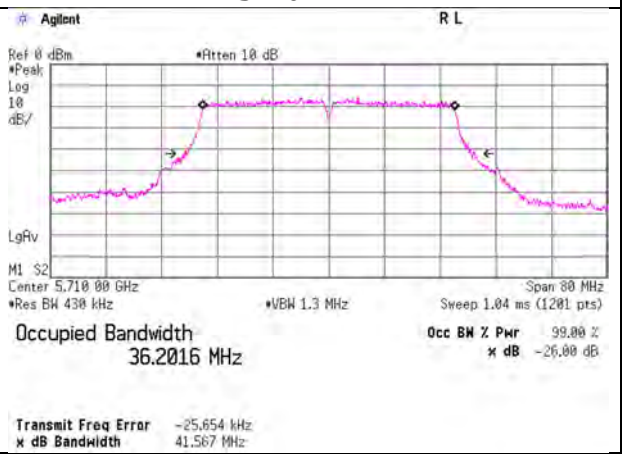
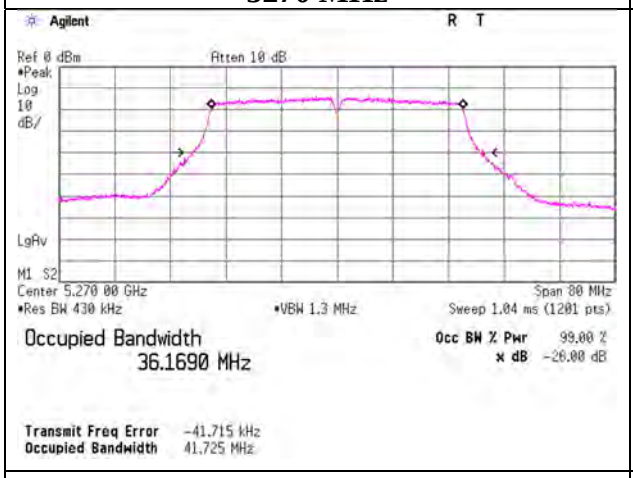


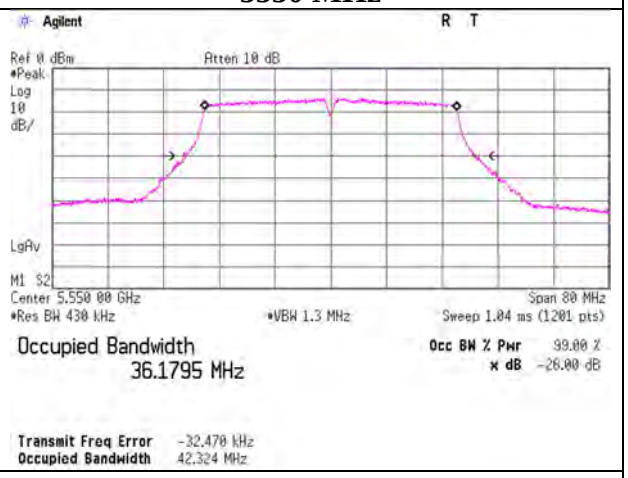
26 dB Emission Bandwidth

11n-40(CDD), Chain 1

5270 MHz



5550 MHz



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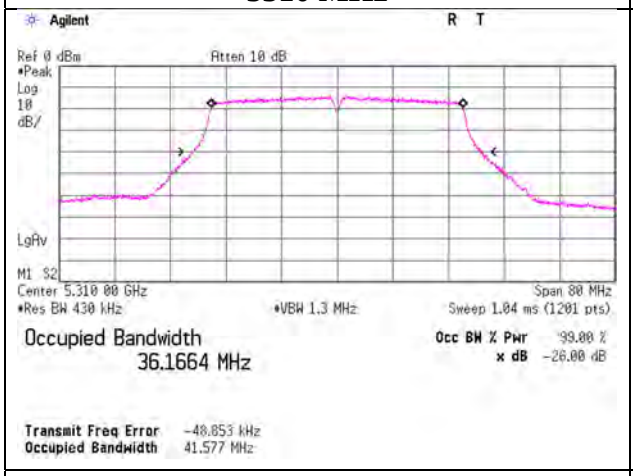
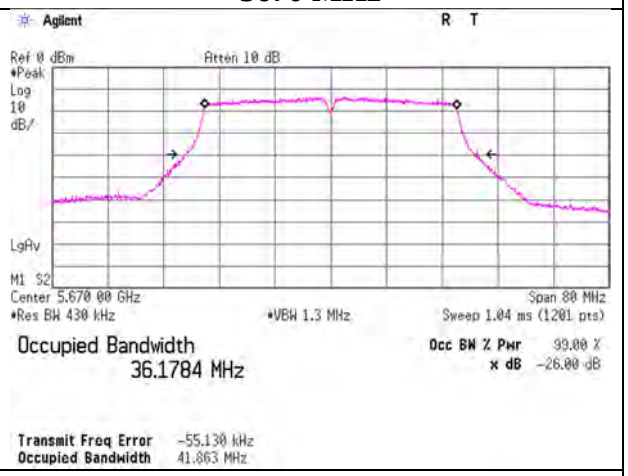


5670 MHz



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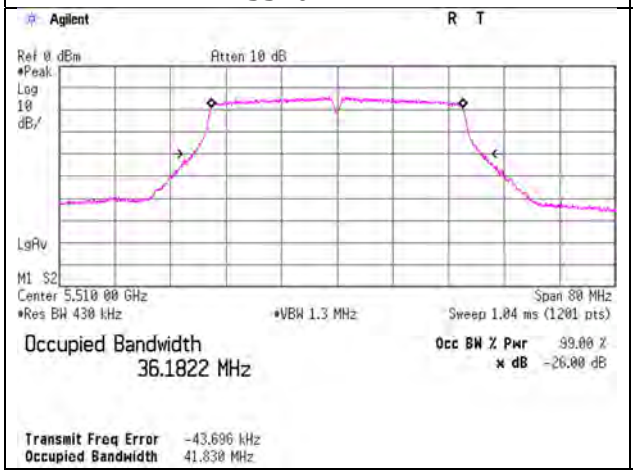

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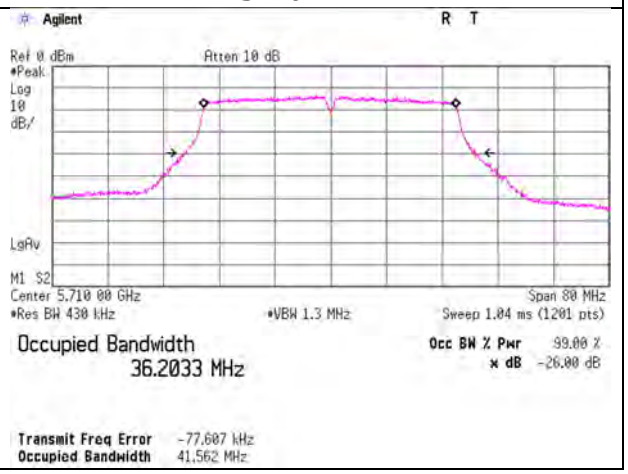
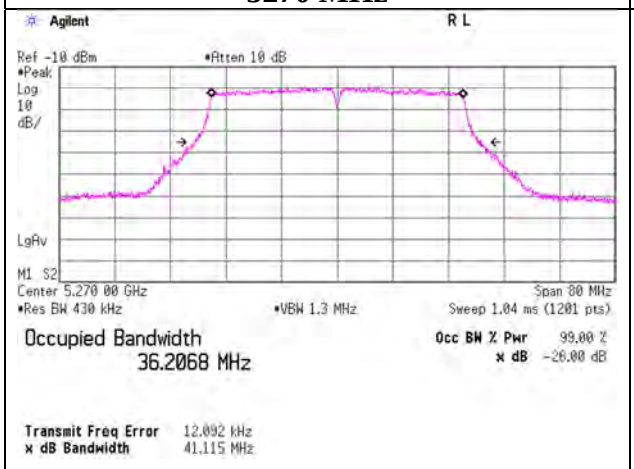


26 dB Emission Bandwidth

11ac-40(CDD), Chain 1

5270 MHz



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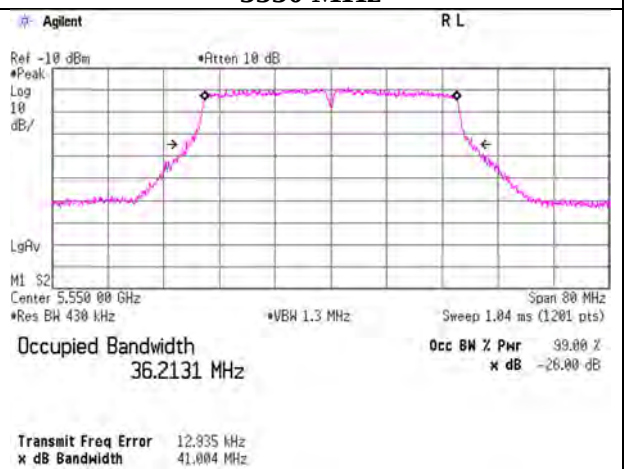

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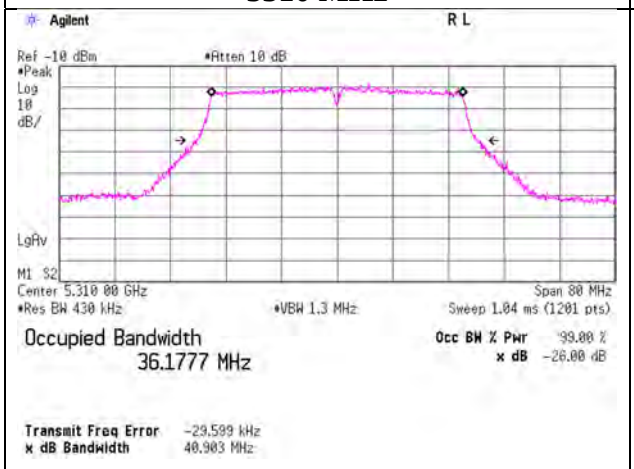
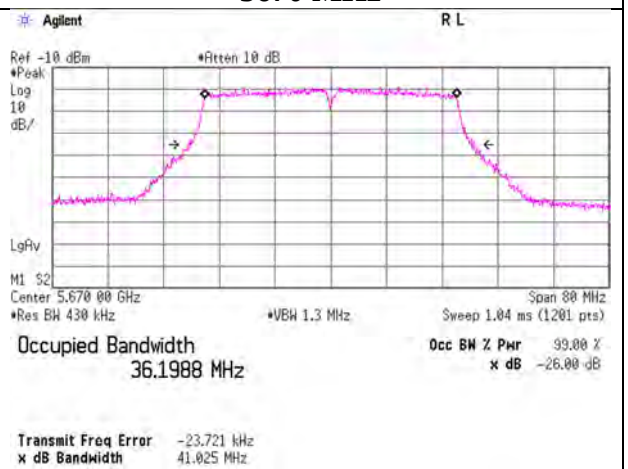


5670 MHz



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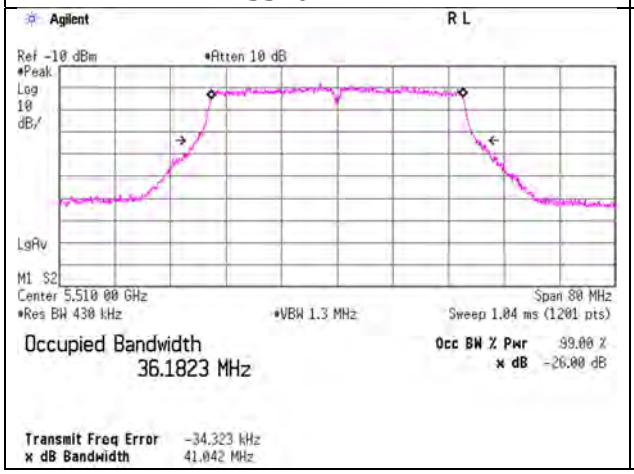
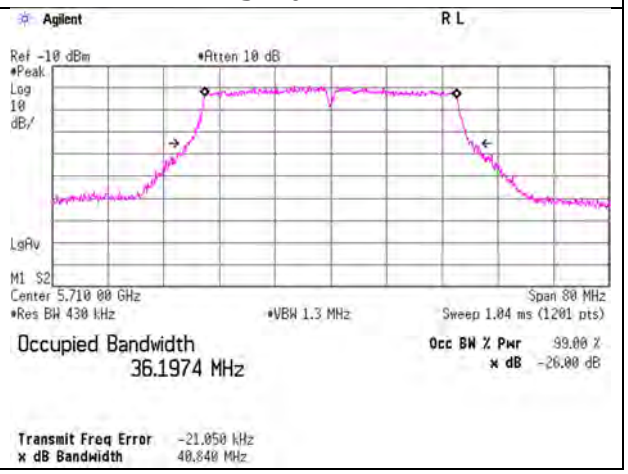


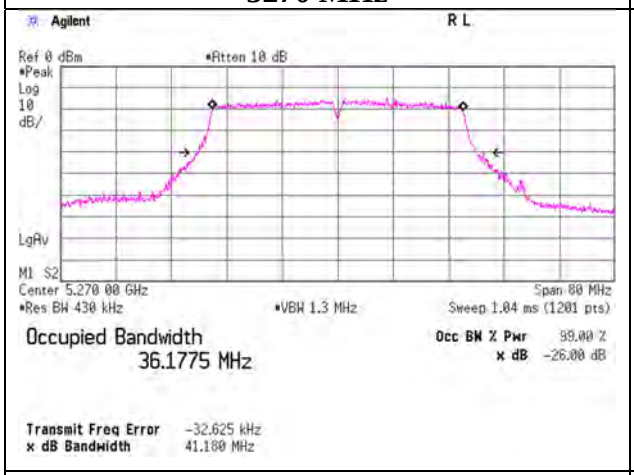
5710 MHz



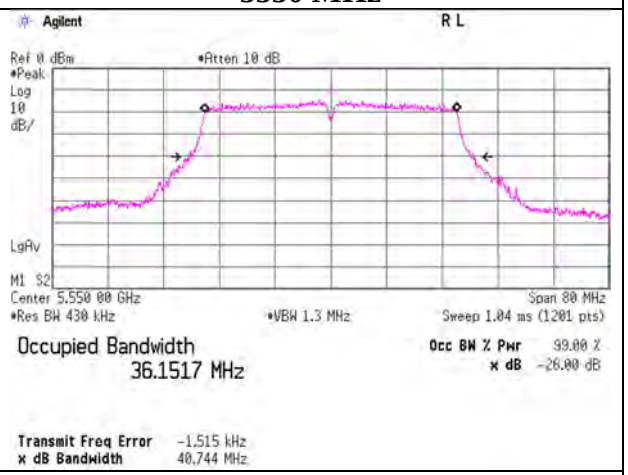
26 dB Emission Bandwidth

11n-40(MIMO), Chain 1

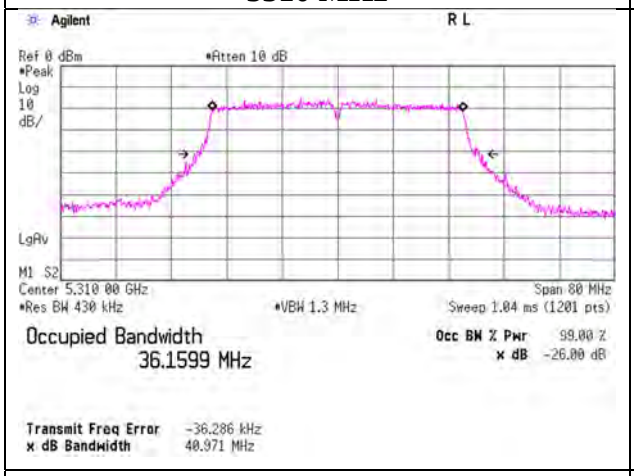
5270 MHz



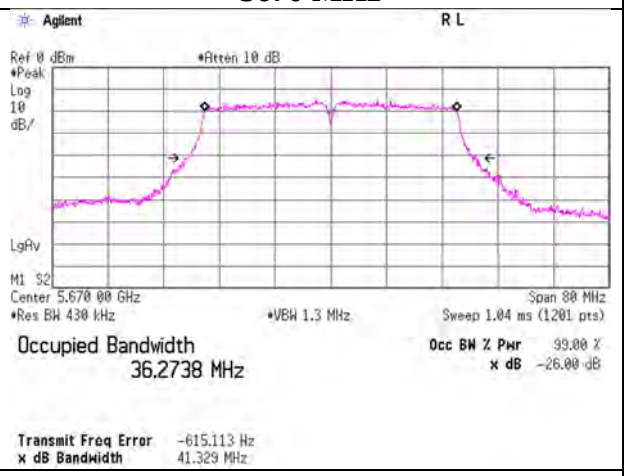
5550 MHz



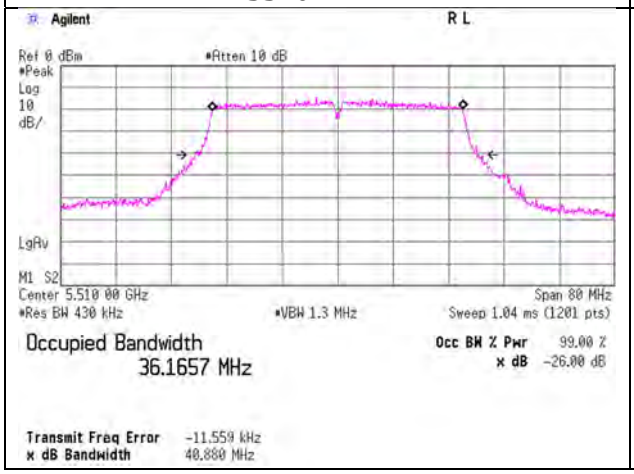
5310 MHz



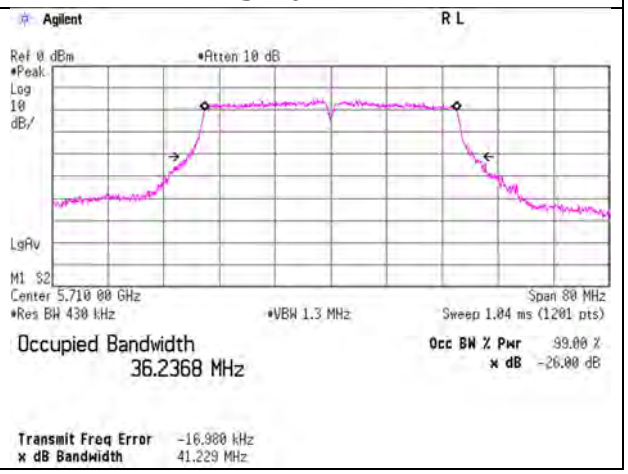
5670 MHz



5510 MHz



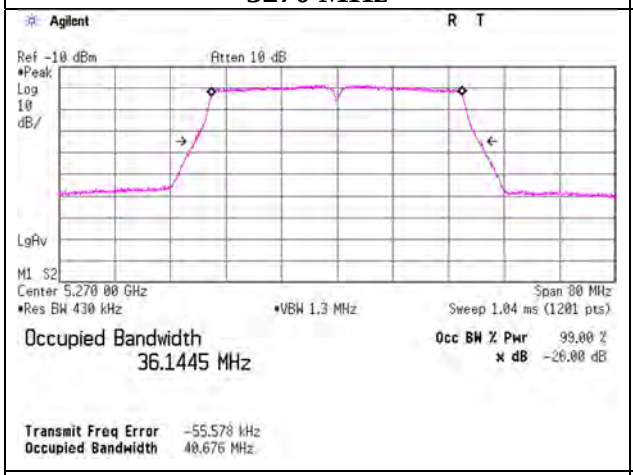
5710 MHz



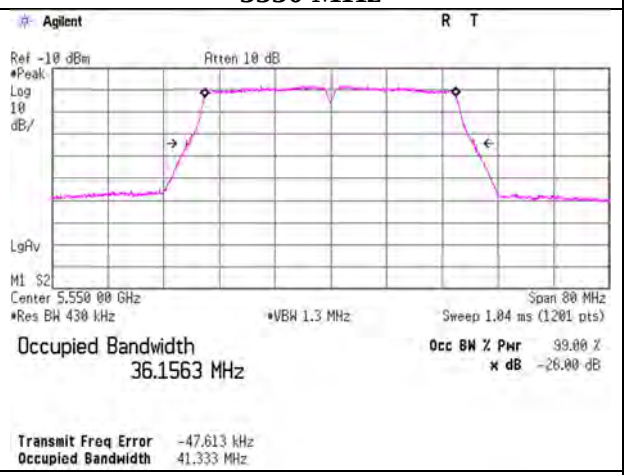
26 dB Emission Bandwidth

11ac-40(MIMO), Chain 1

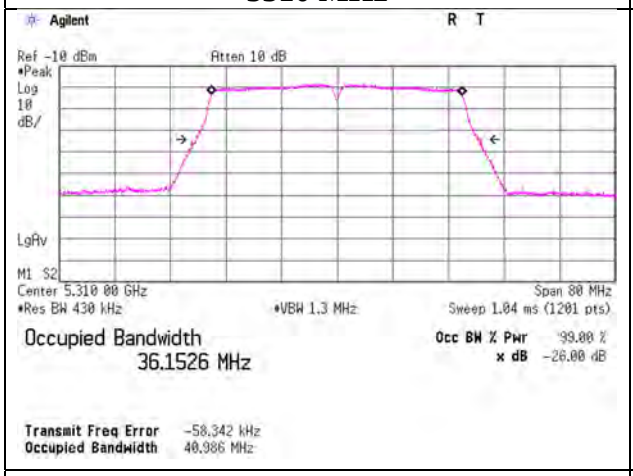
5270 MHz



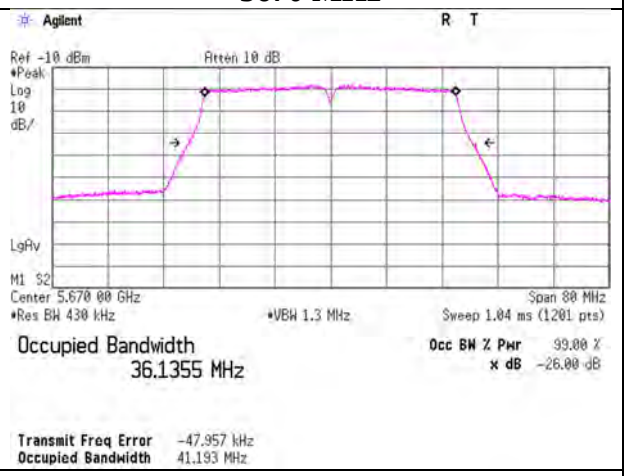
5550 MHz



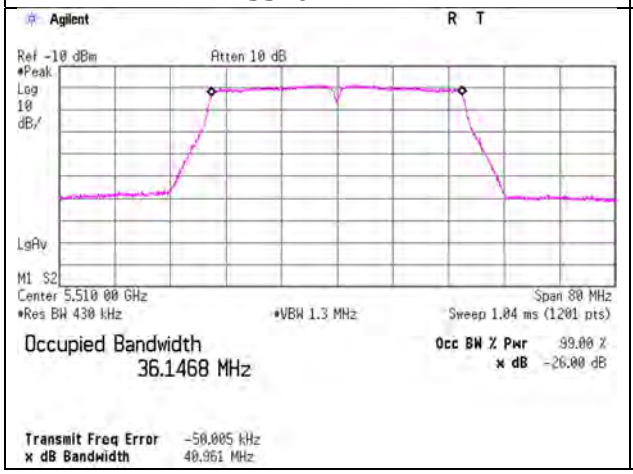
5310 MHz



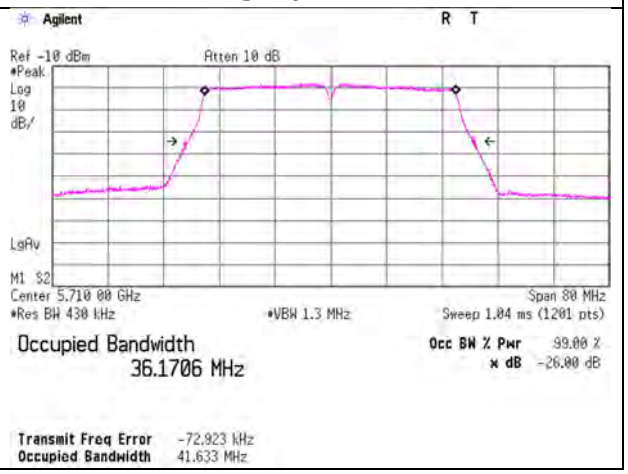
5670 MHz



5510 MHz



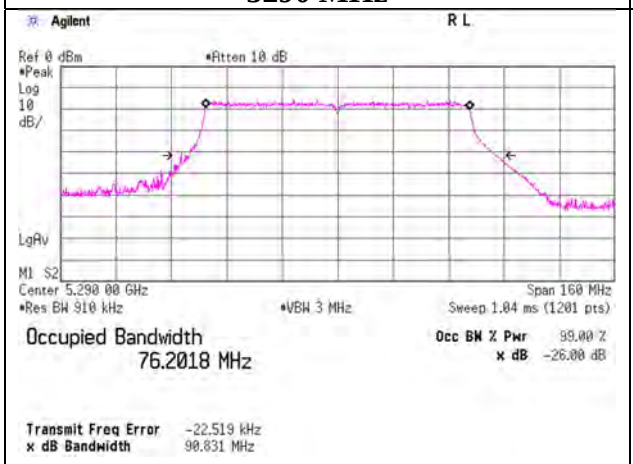
5710 MHz



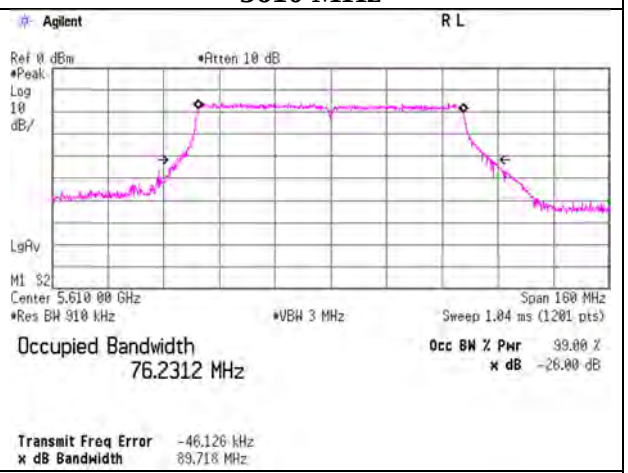
26 dB Emission Bandwidth

11ac-80(SISO), Chain 1

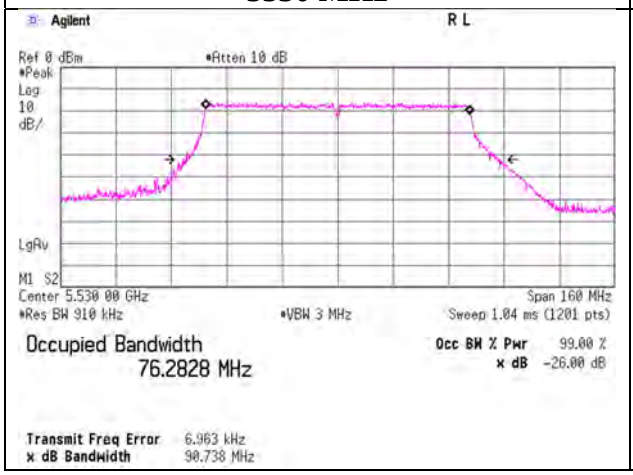
5290 MHz



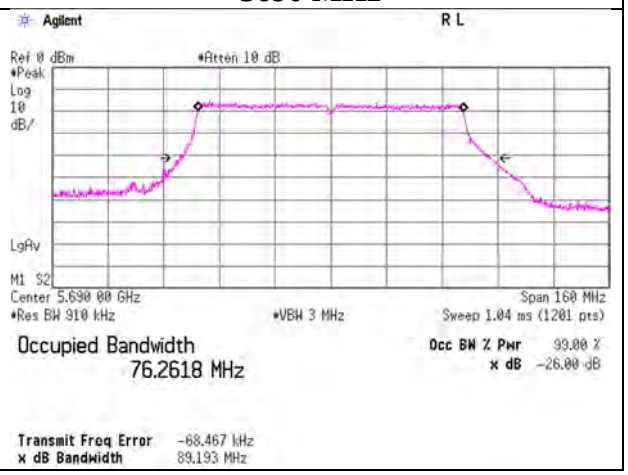
5610 MHz



5530 MHz



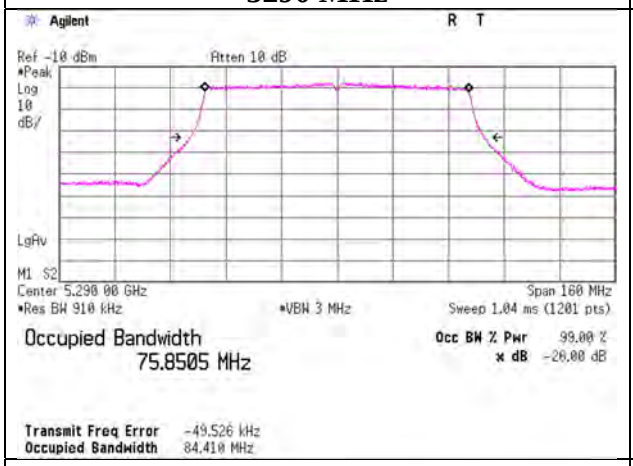
5690 MHz



26 dB Emission Bandwidth

11ac-80(CDD), Chain 1

5290 MHz



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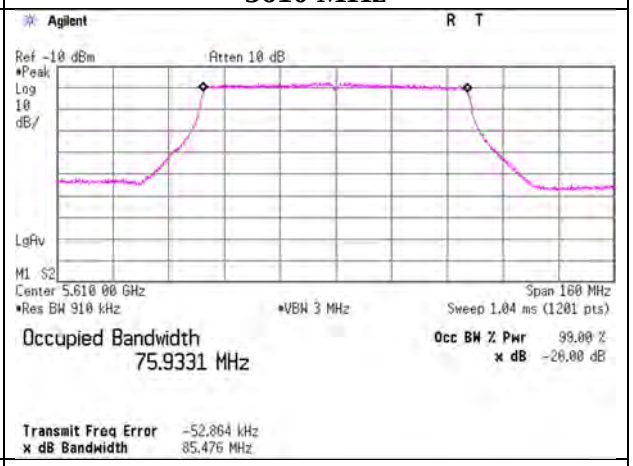

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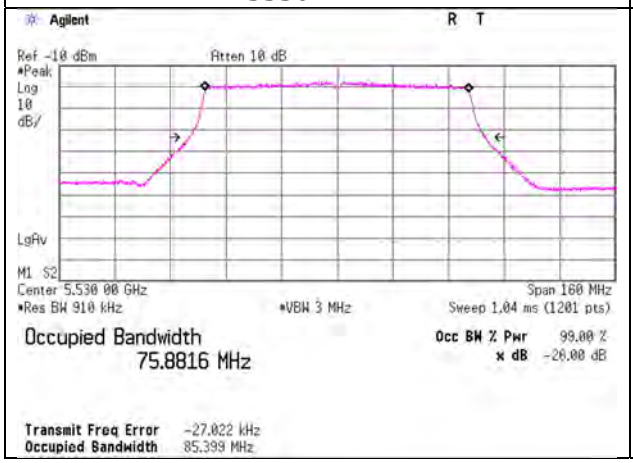
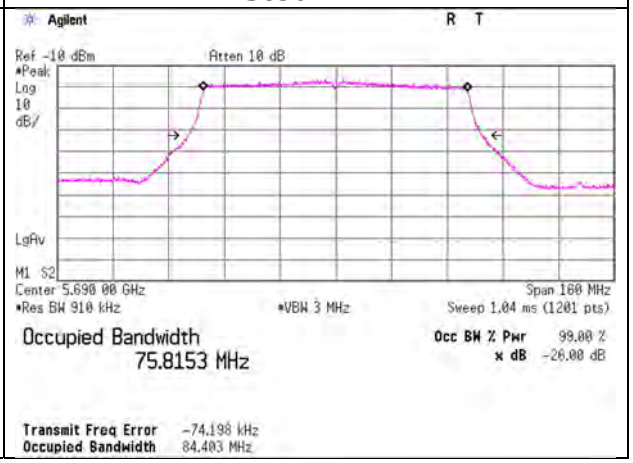


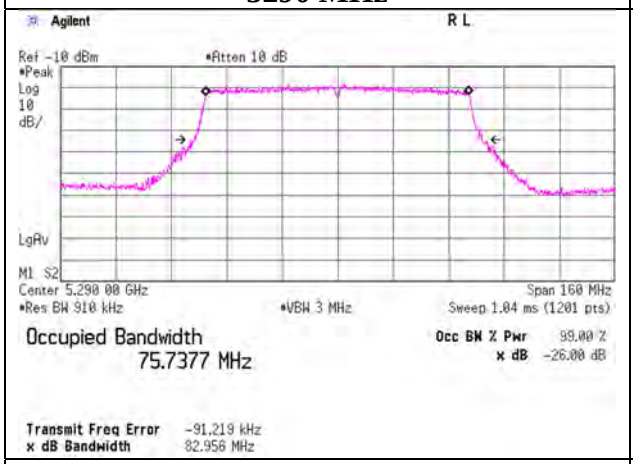
5690 MHz



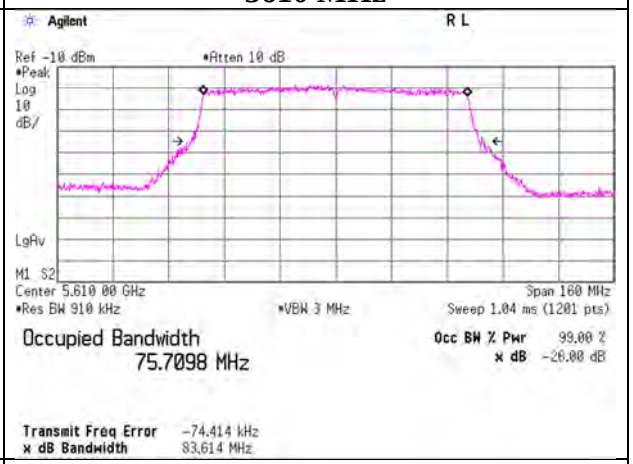
26 dB Emission Bandwidth

11ac-80(MIMO), Chain 1

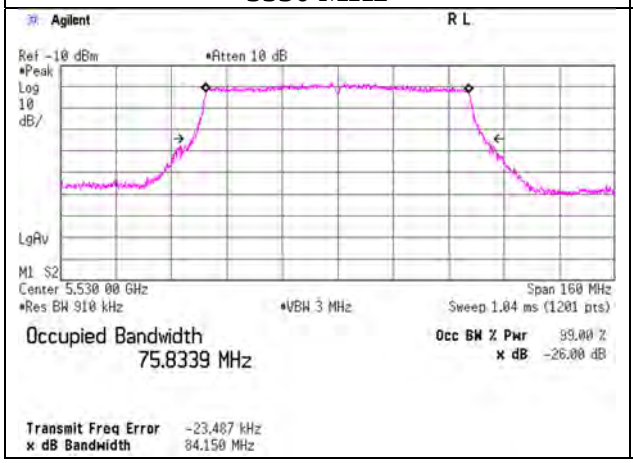
5290 MHz



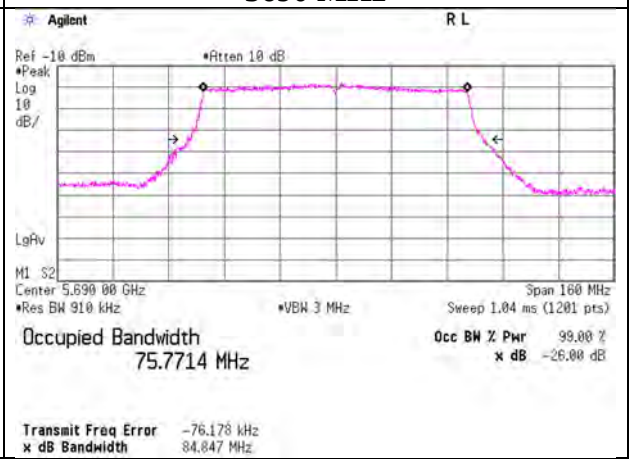
5610 MHz



5530 MHz



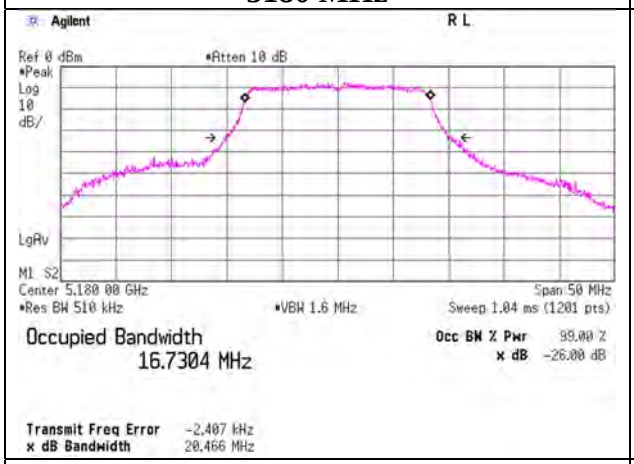
5690 MHz



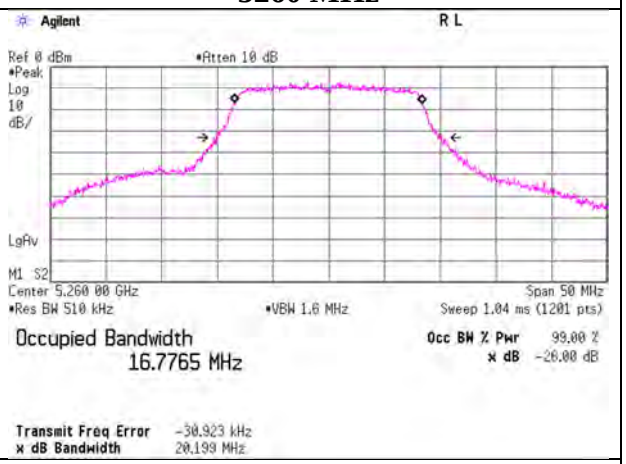
99 % Occupied Bandwidth

11a(SISO), Chain 1

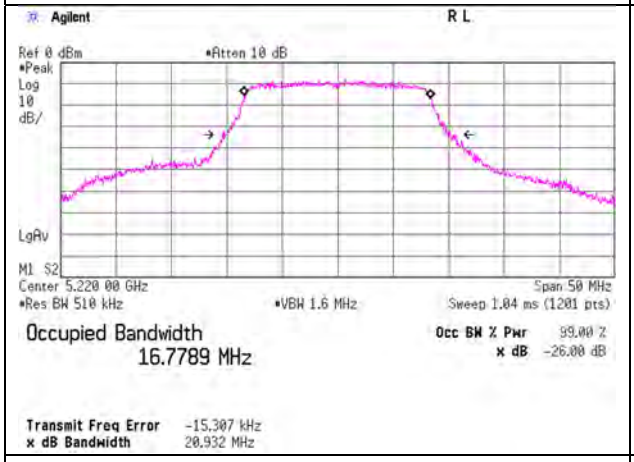
5180 MHz



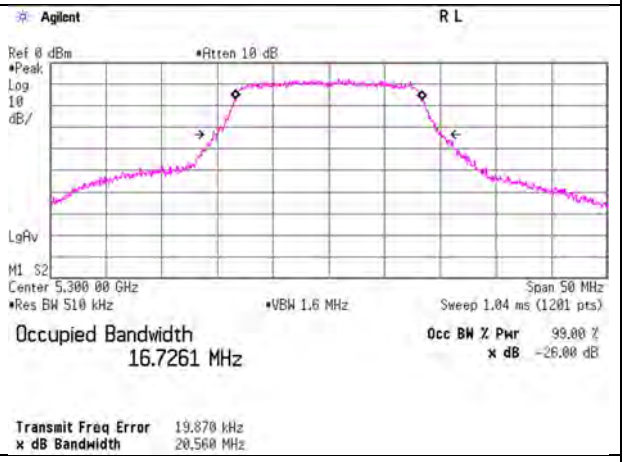
5260 MHz



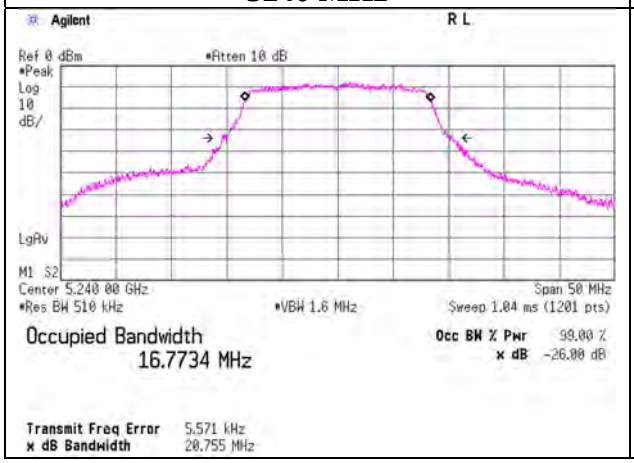
5220 MHz



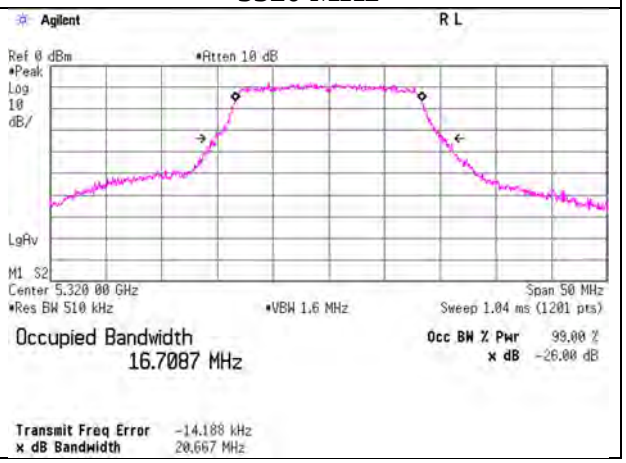
5300 MHz



5240 MHz



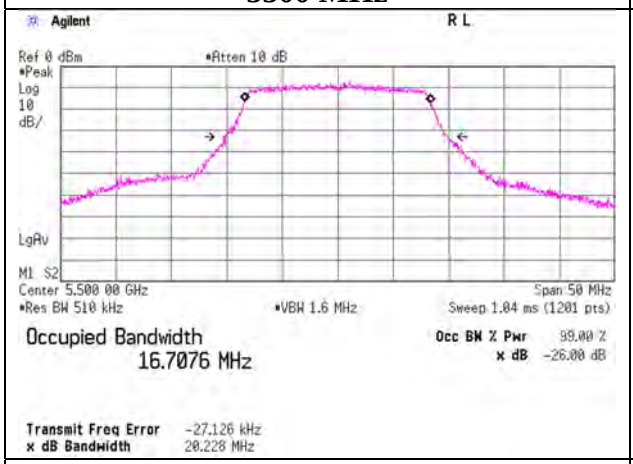
5320 MHz



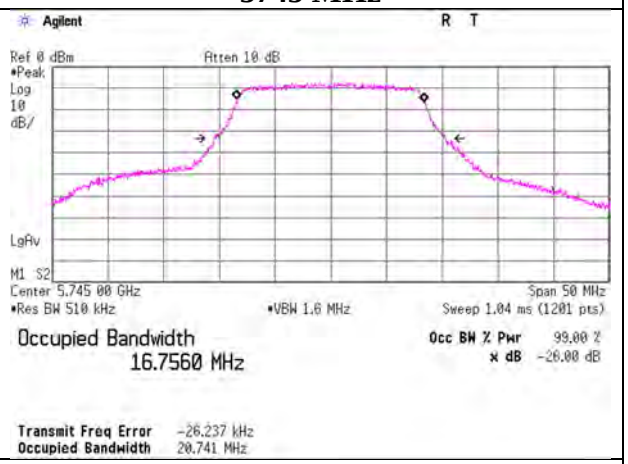
99 % Occupied Bandwidth

11a(SISO), Chain 1

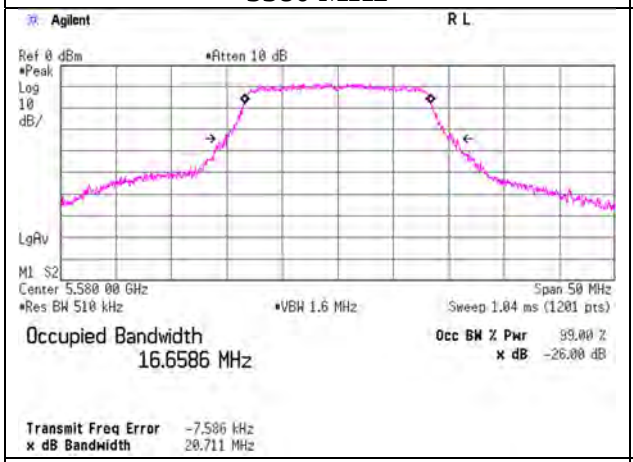
5500 MHz



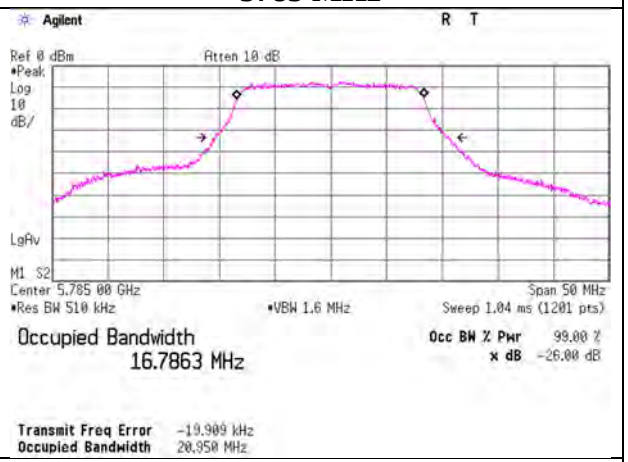
5745 MHz



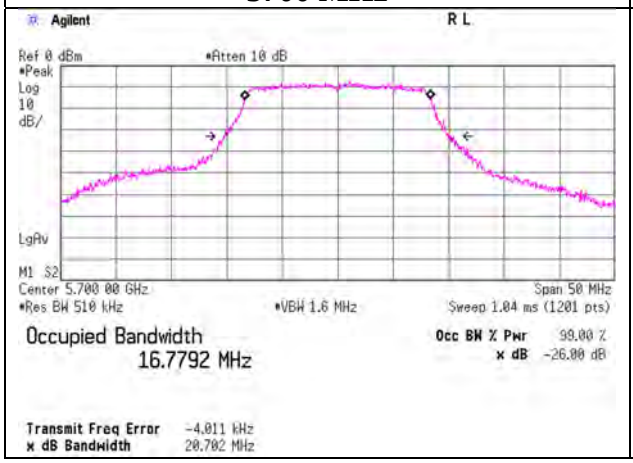
5580 MHz



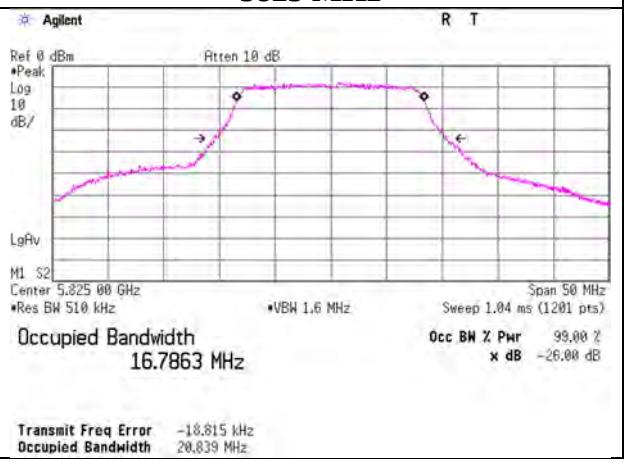
5785 MHz



5700 MHz



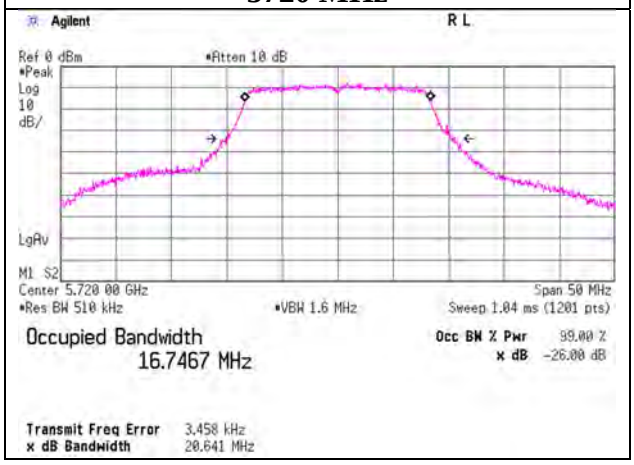
5825 MHz



99 % Occupied Bandwidth

11a(SISO), Chain 1

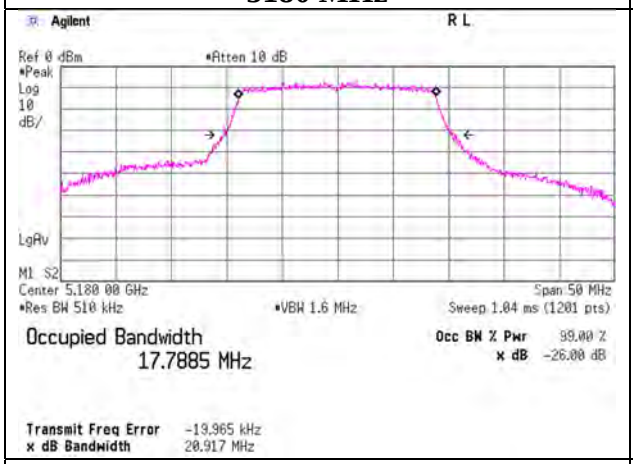
5720 MHz



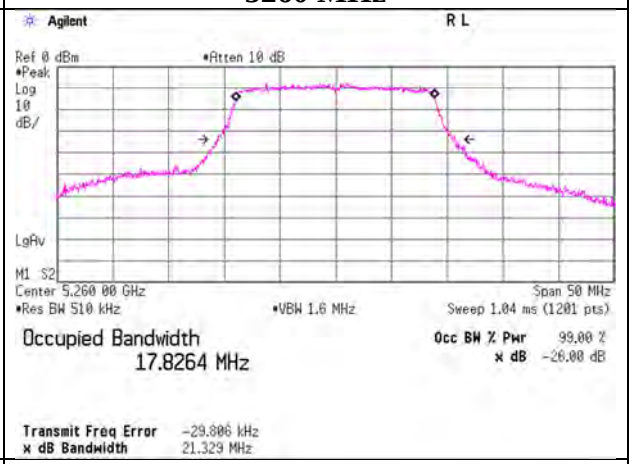
99 % Occupied Bandwidth

11n-20(SISO), Chain 1

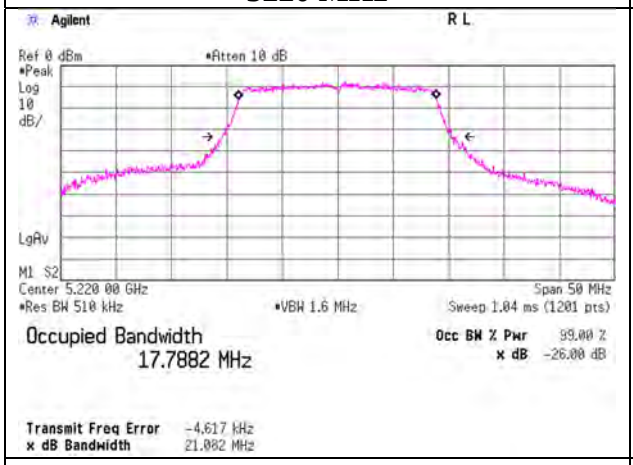
5180 MHz



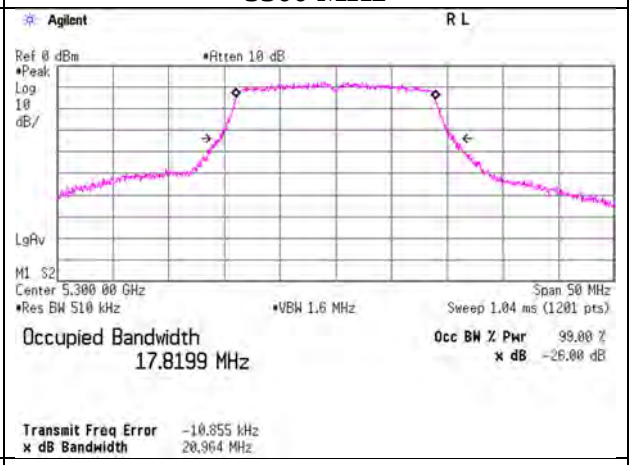
5260 MHz



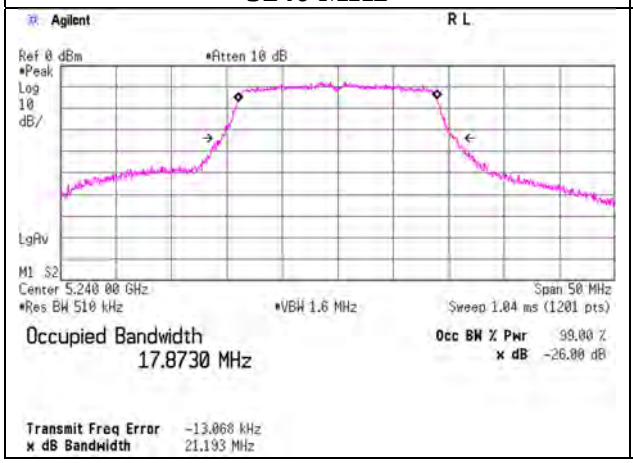
5220 MHz



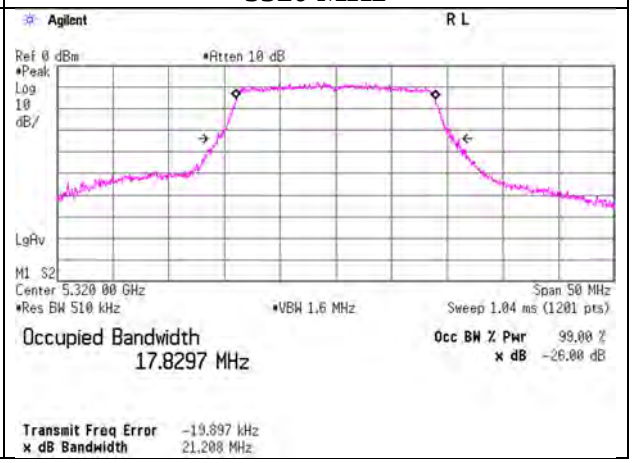
5300 MHz



5240 MHz



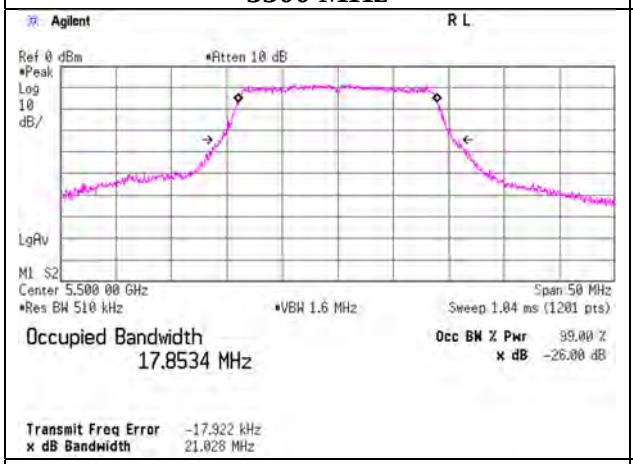
5320 MHz



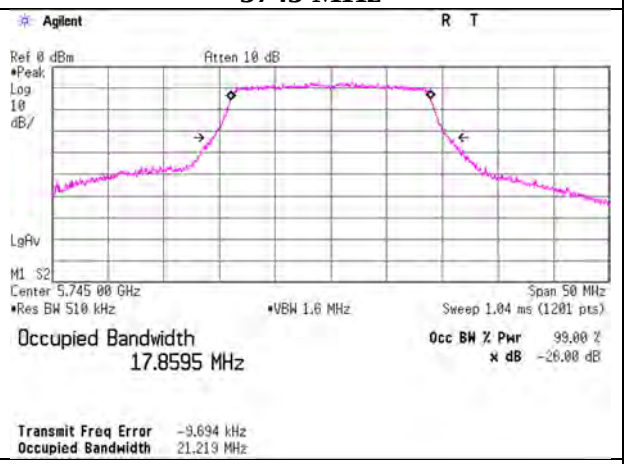
99 % Occupied Bandwidth

11n-20(SISO), Chain 1

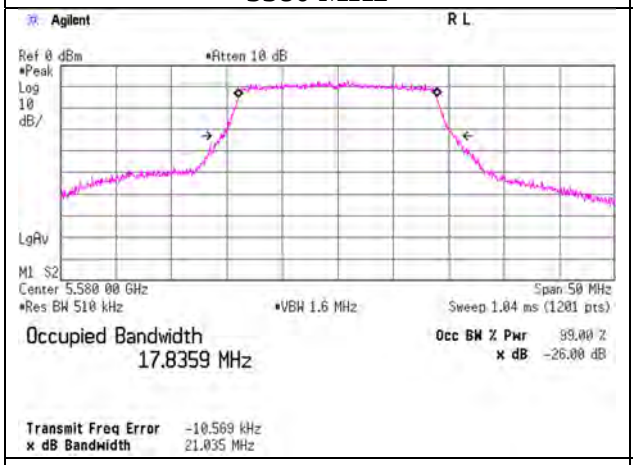
5500 MHz



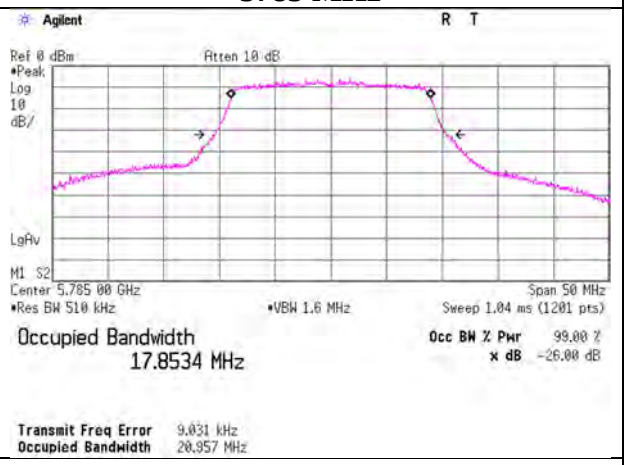
5745 MHz



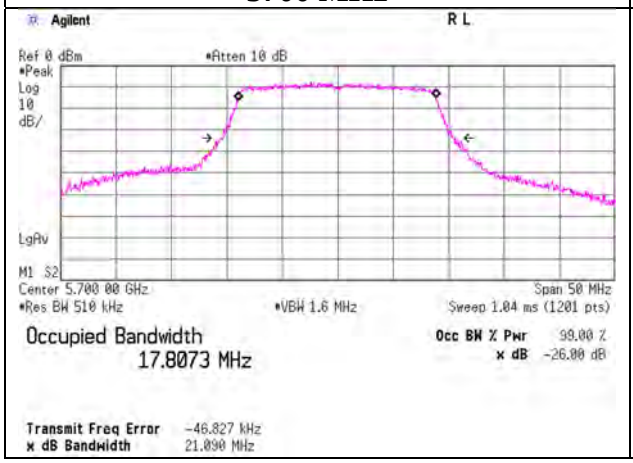
5580 MHz



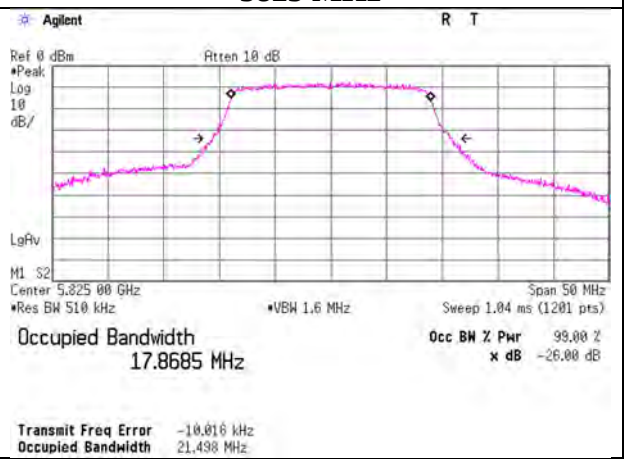
5785 MHz



5700 MHz



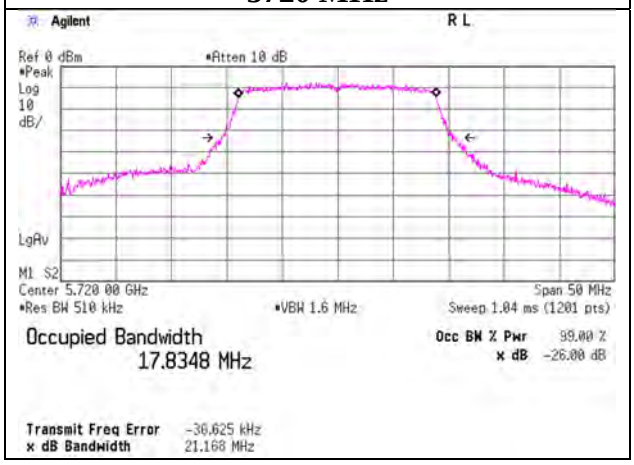
5825 MHz



99 % Occupied Bandwidth

11n-20(SISO), Chain 1

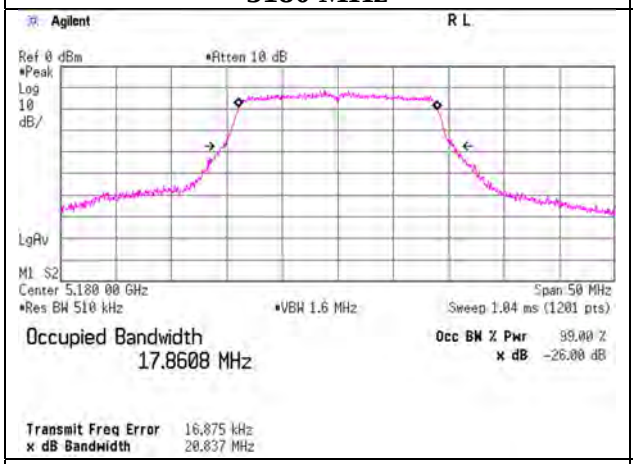
5720 MHz



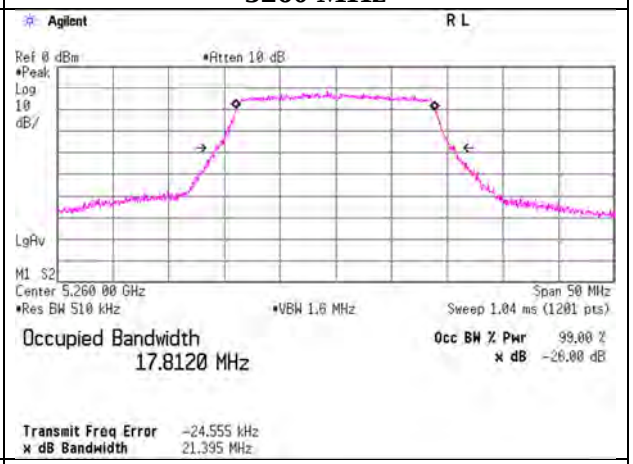
99 % Occupied Bandwidth

11ac-20(SISO), Chain 1

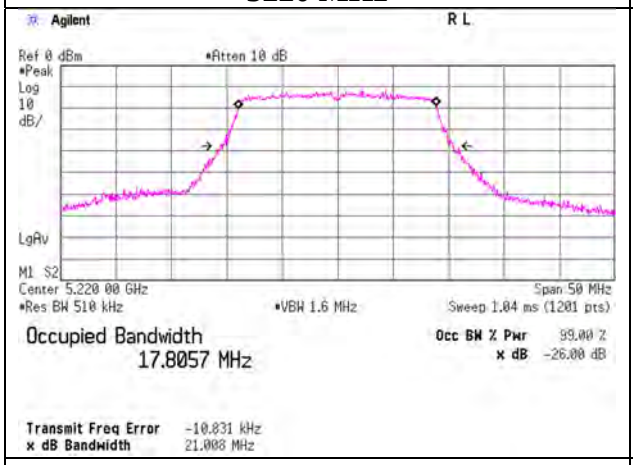
5180 MHz



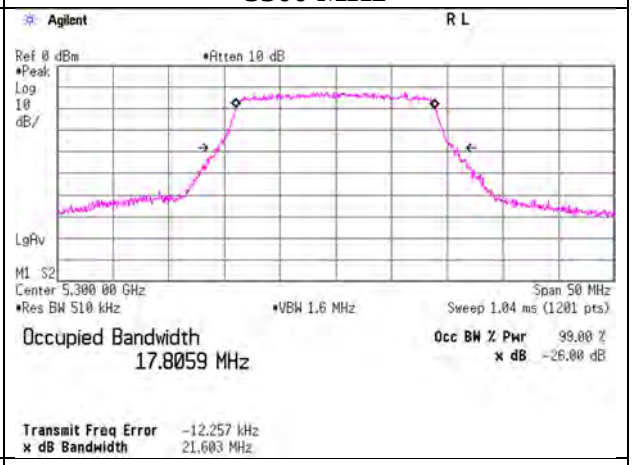
5260 MHz



5220 MHz



5300 MHz



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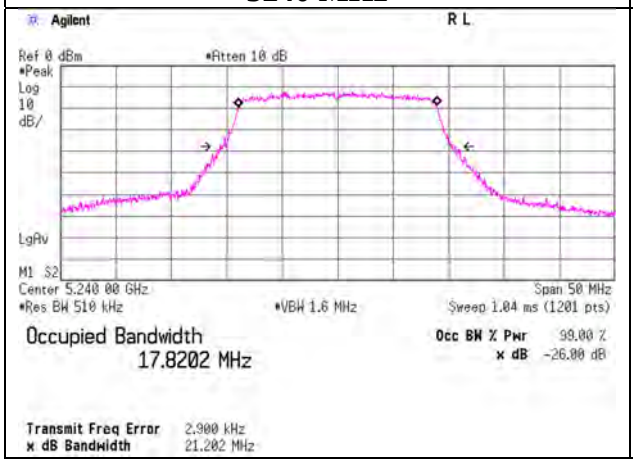
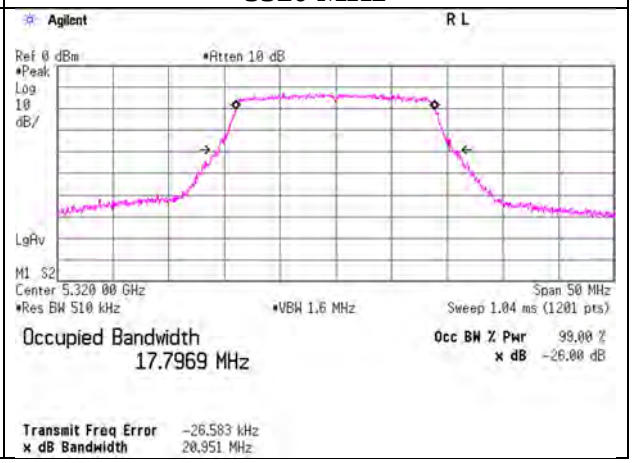


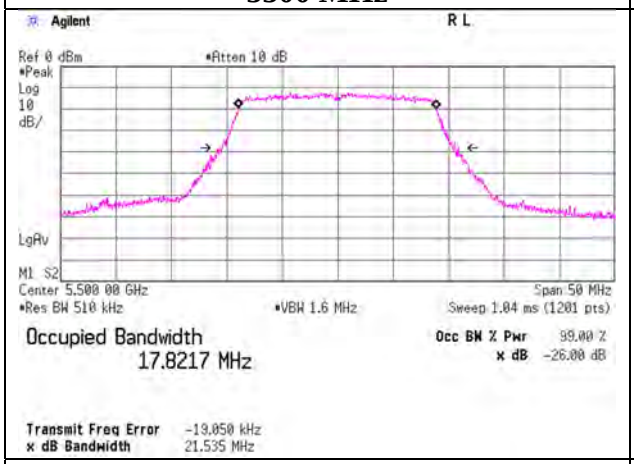
5320 MHz



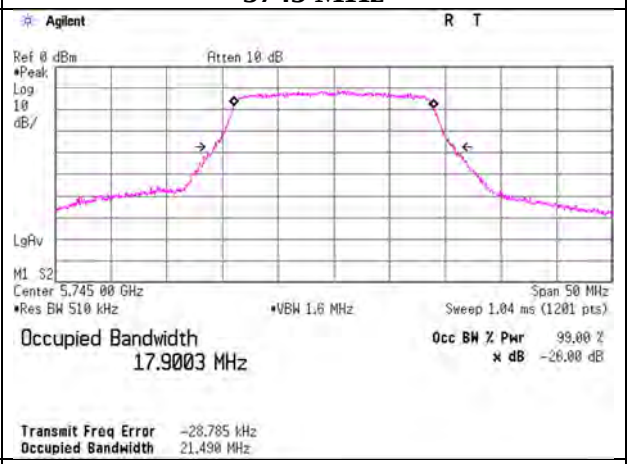
99 % Occupied Bandwidth

11ac-20(SISO), Chain 1

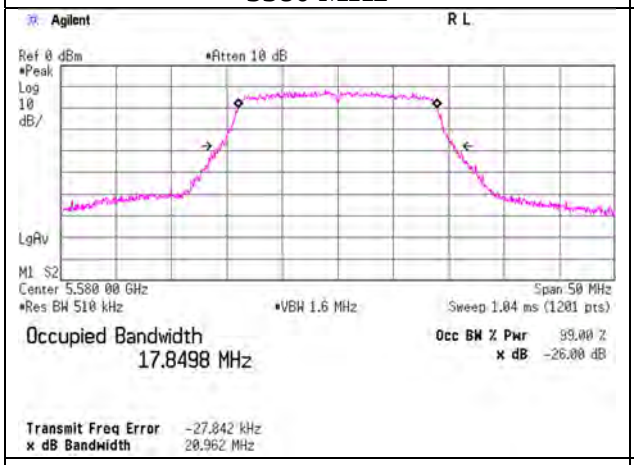
5500 MHz



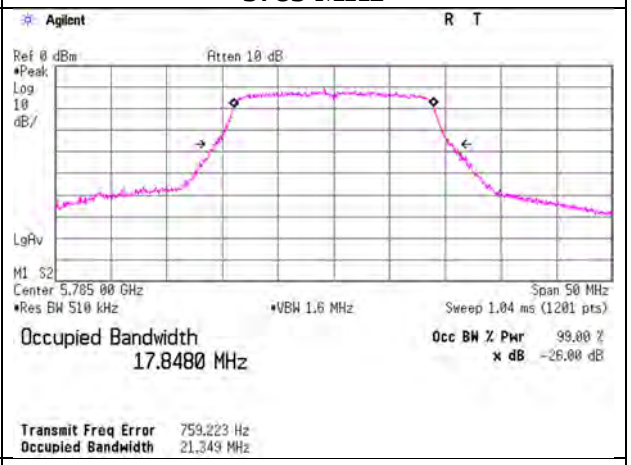
5745 MHz



5580 MHz



5785 MHz



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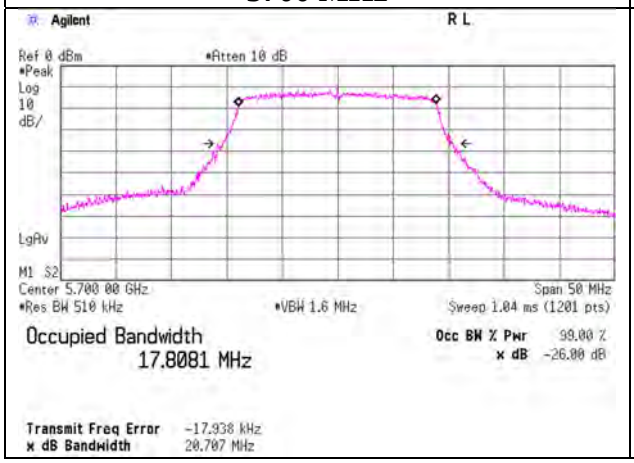
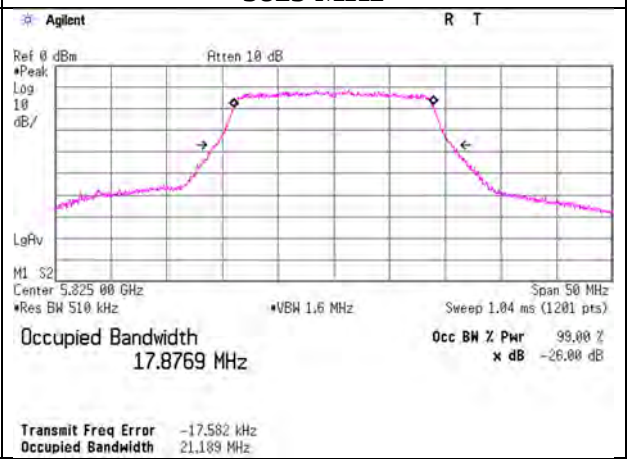


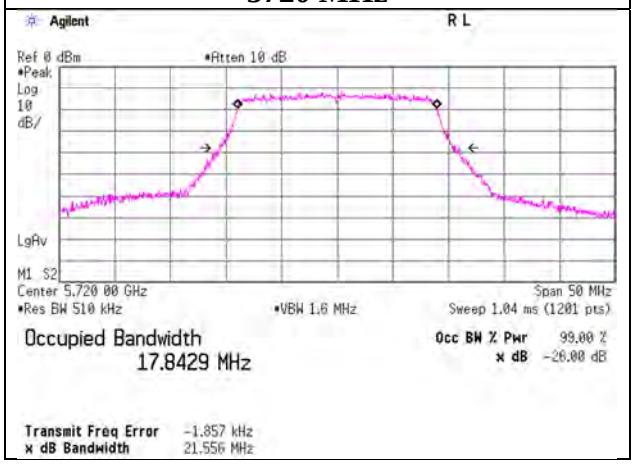
5825 MHz



99 % Occupied Bandwidth

11ac-20(SISO), Chain 1

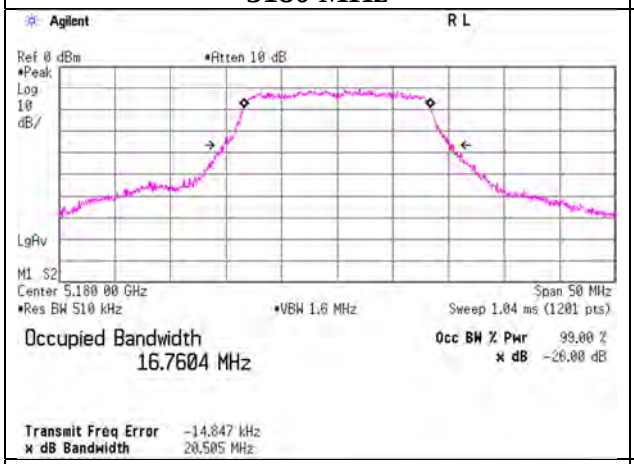
5720 MHz



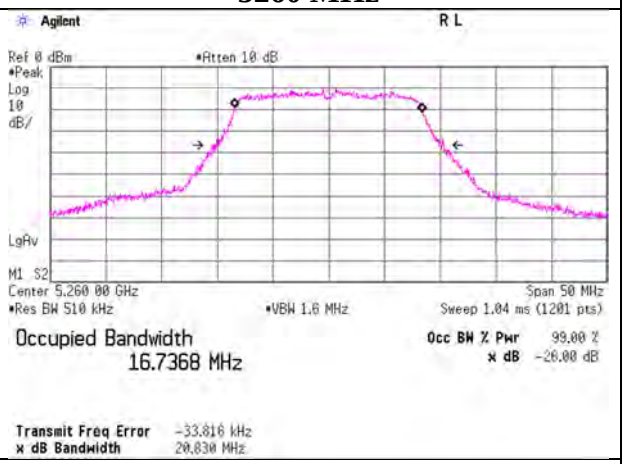
99 % Occupied Bandwidth

11a(CDD), Chain 1

5180 MHz



5260 MHz



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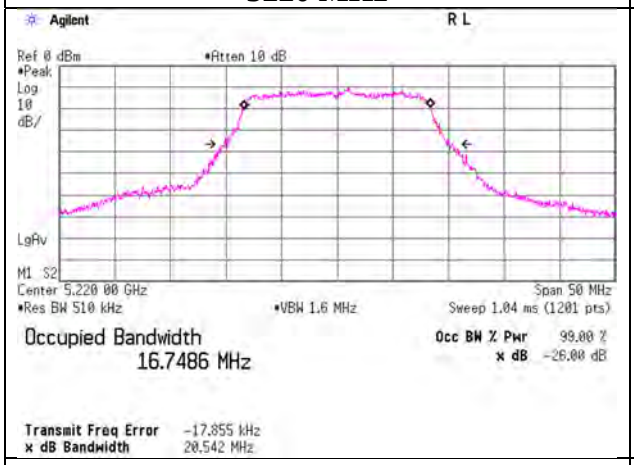
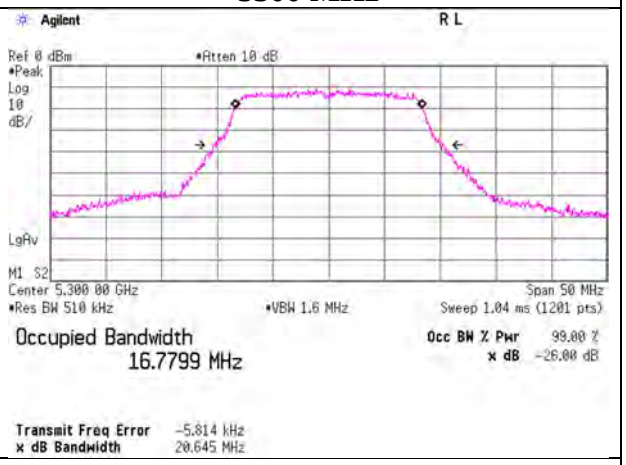
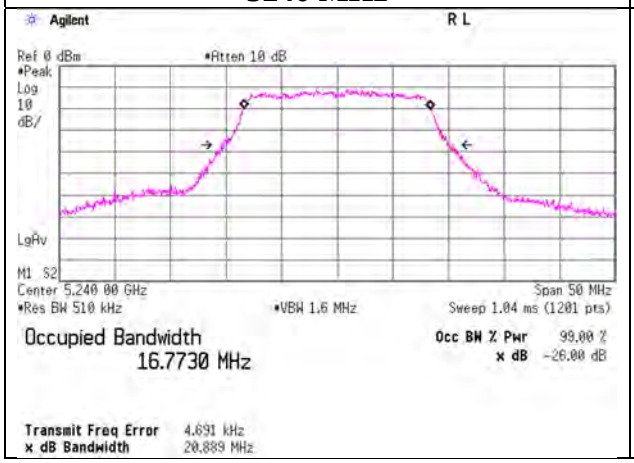


5300 MHz



5240 MHz



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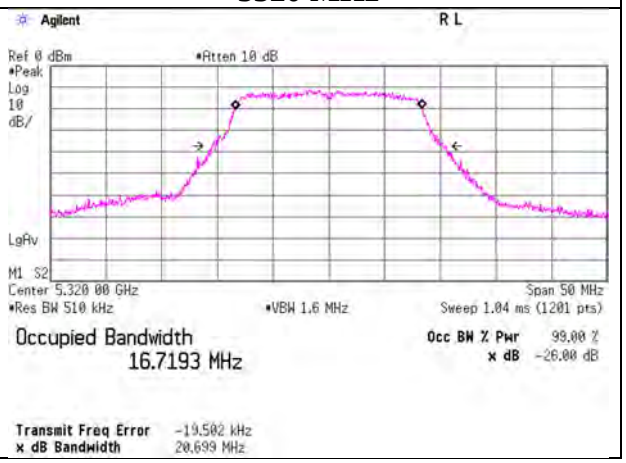
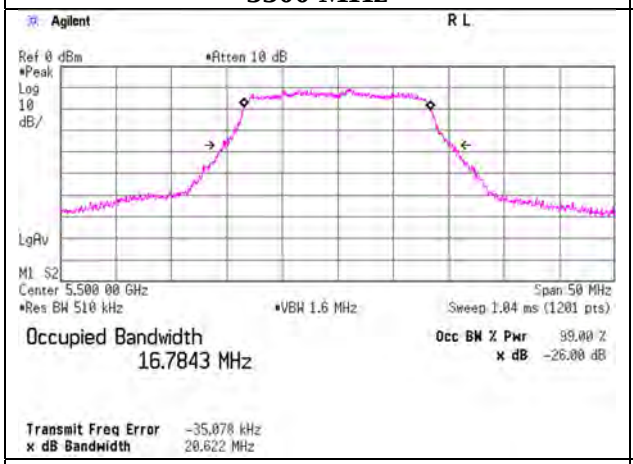


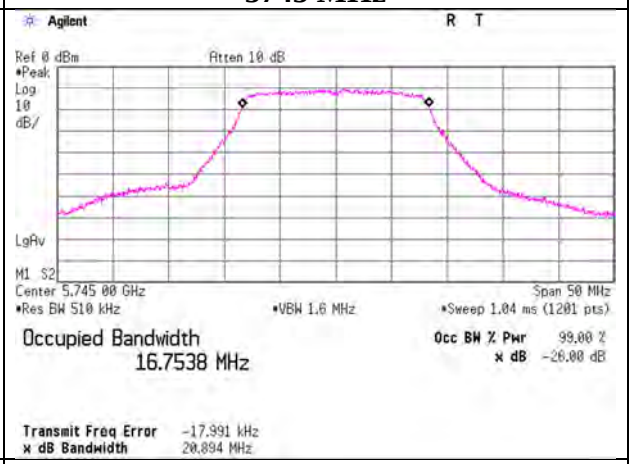
99 % Occupied Bandwidth

11a(CDD), Chain 1

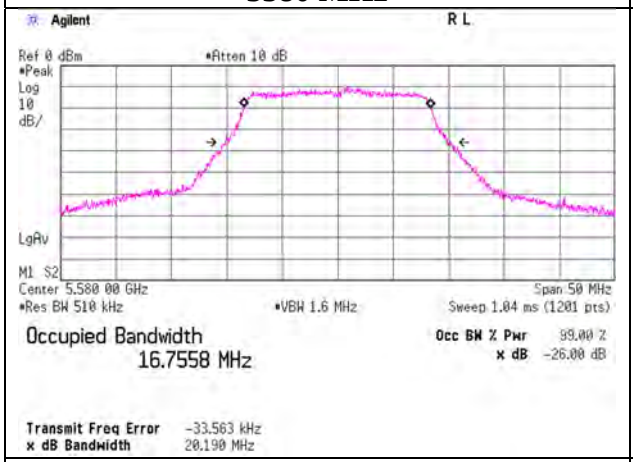
5500 MHz



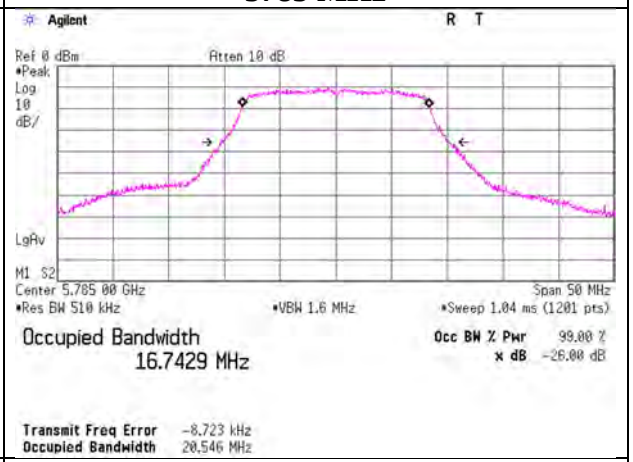
5745 MHz



5580 MHz



5785 MHz



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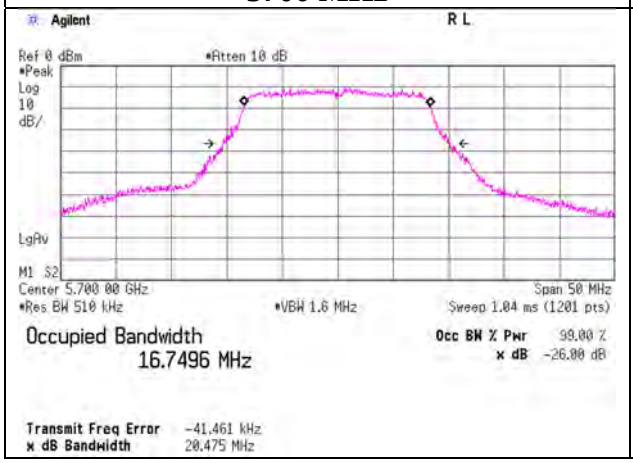
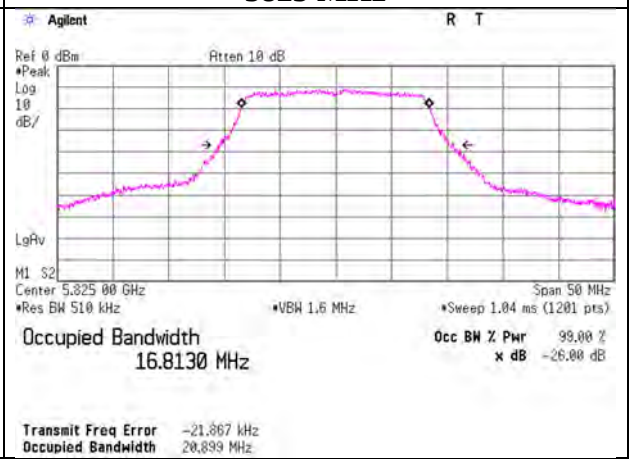


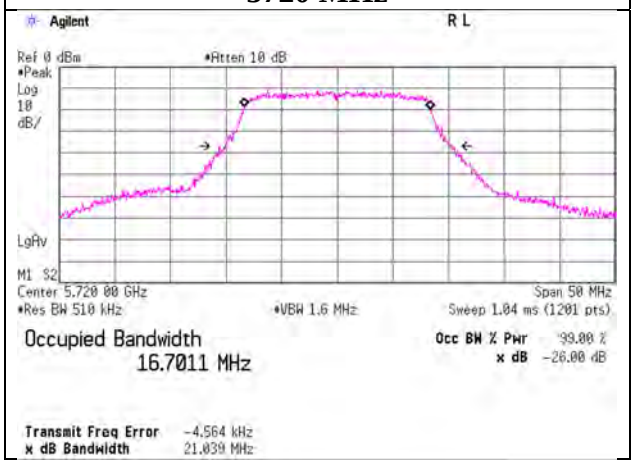
5825 MHz



99 % Occupied Bandwidth

11a(CDD), Chain 1

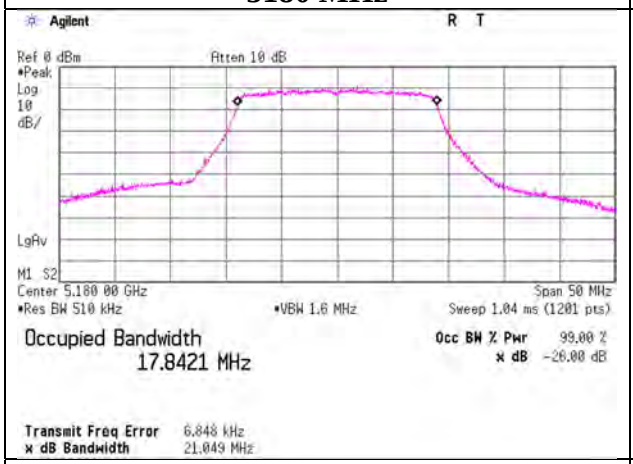
5720 MHz



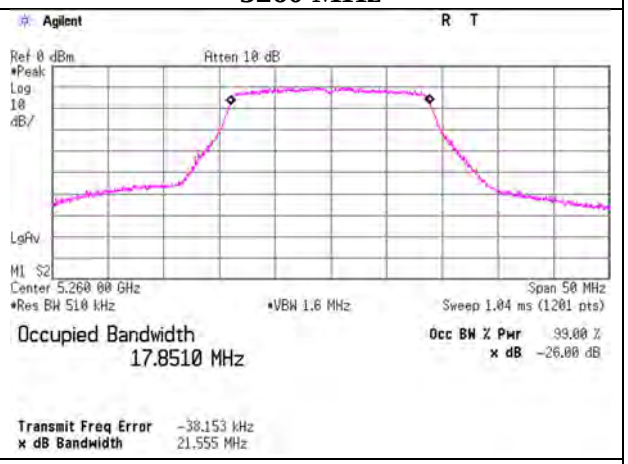
99 % Occupied Bandwidth

11n-20(CDD), Chain 1

5180 MHz



5260 MHz



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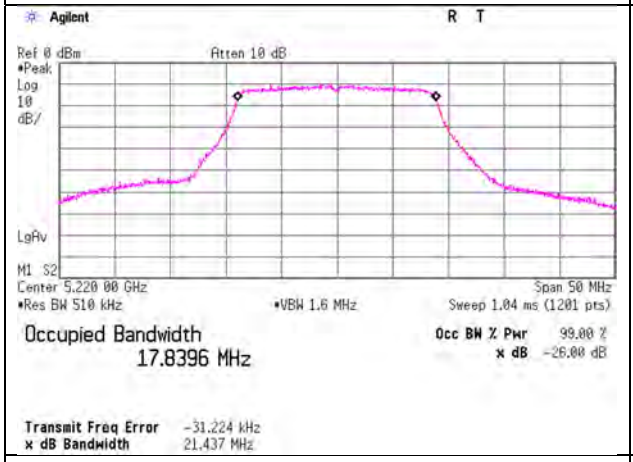

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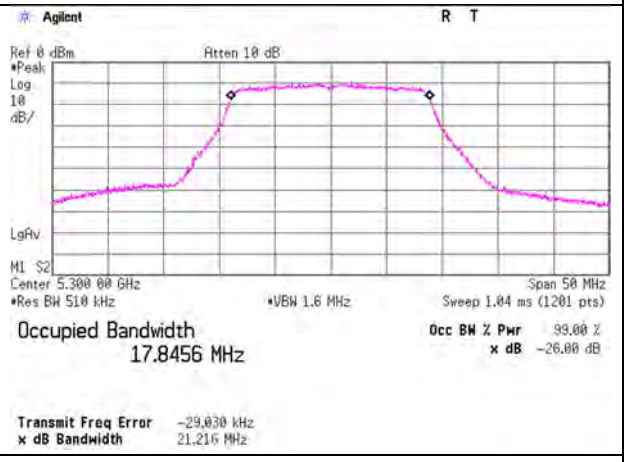

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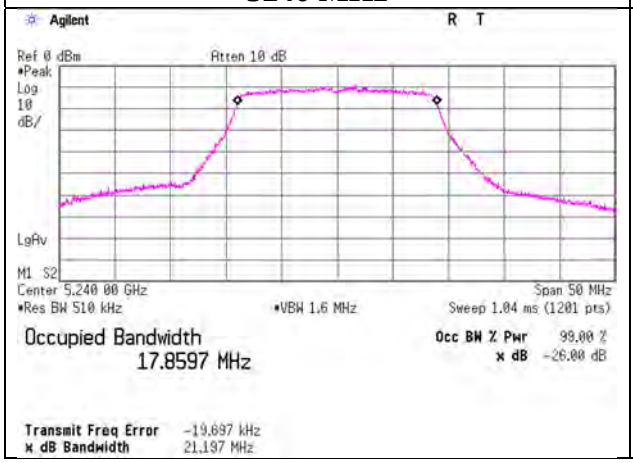

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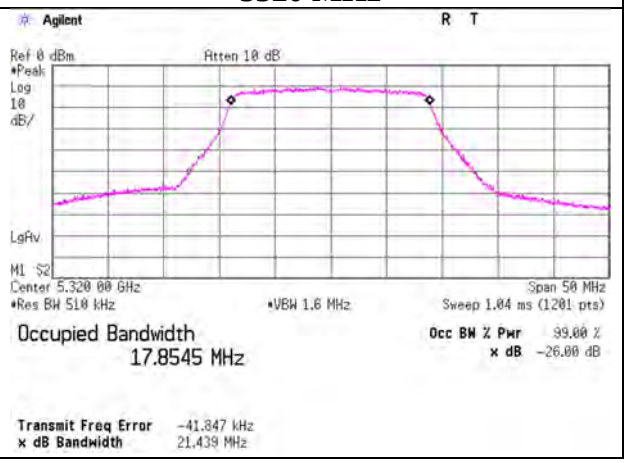
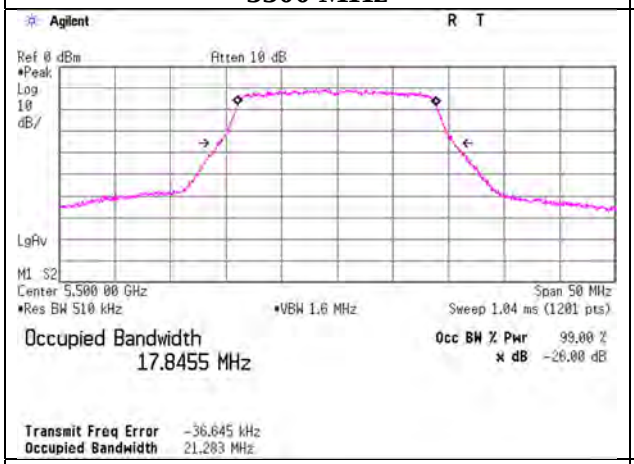


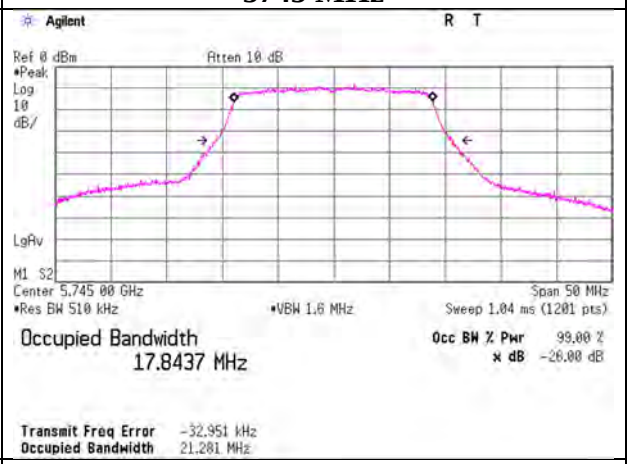
99 % Occupied Bandwidth

11n-20(CDD), Chain 1

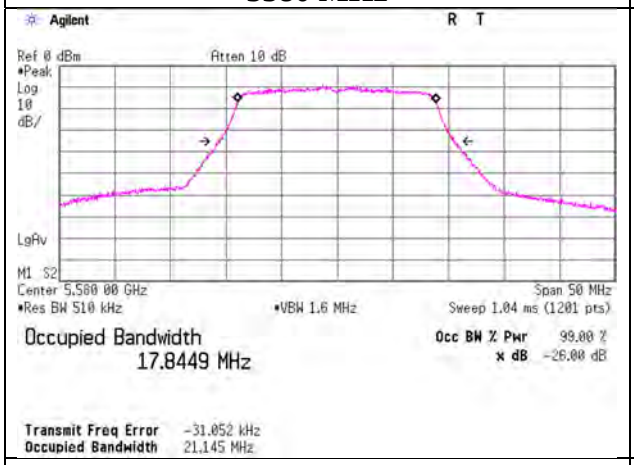
5500 MHz



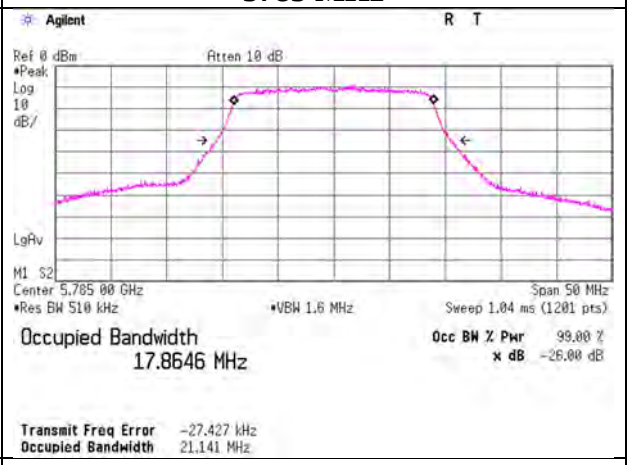
5745 MHz



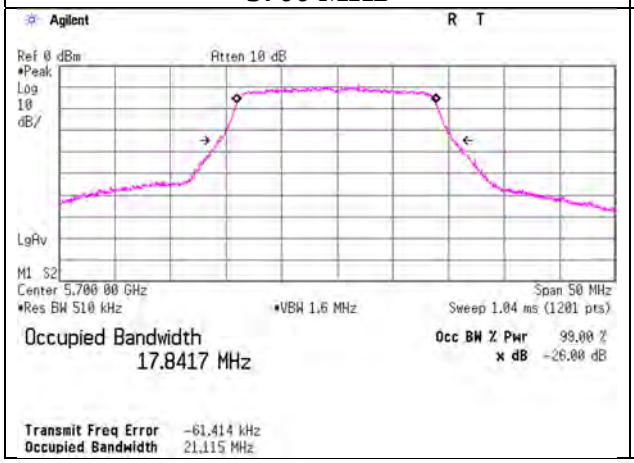
5580 MHz



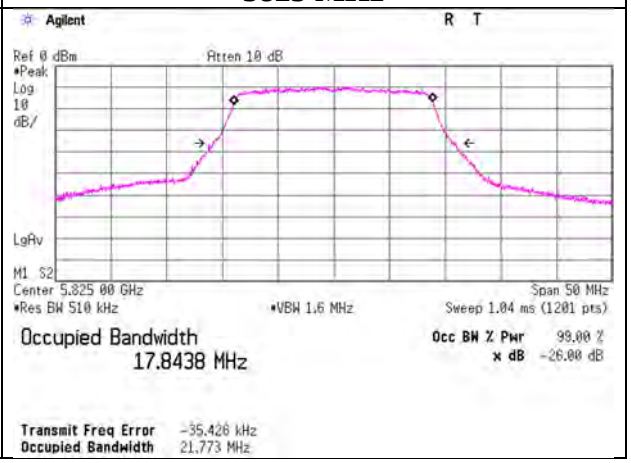
5785 MHz



5700 MHz



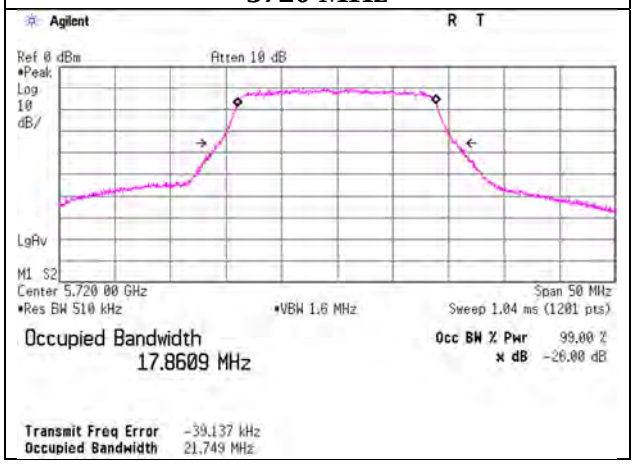
5825 MHz



99 % Occupied Bandwidth

11n-20(CDD), Chain 1

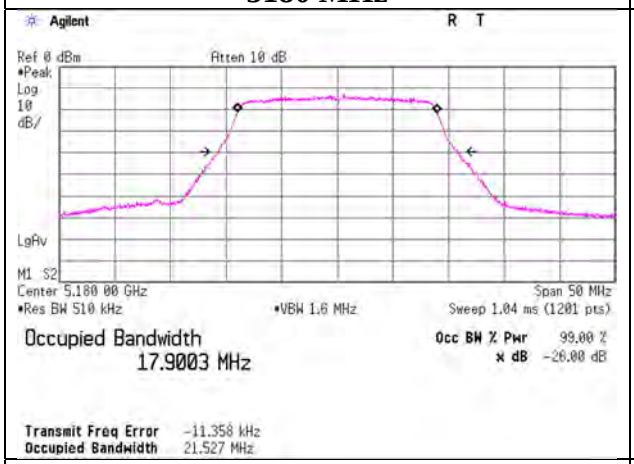
5720 MHz



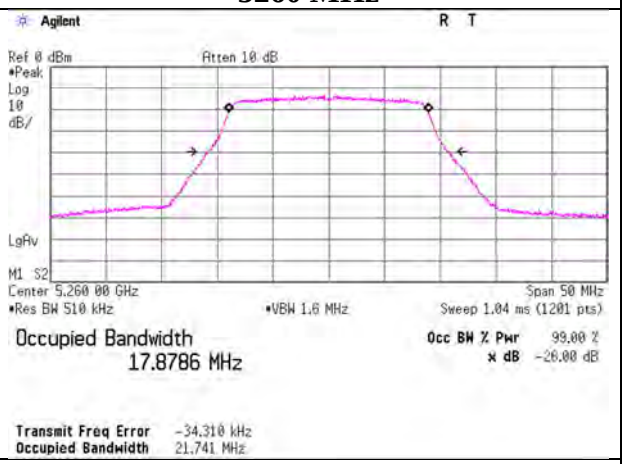
99 % Occupied Bandwidth

11ac-20(CDD), Chain 1

5180 MHz



5260 MHz



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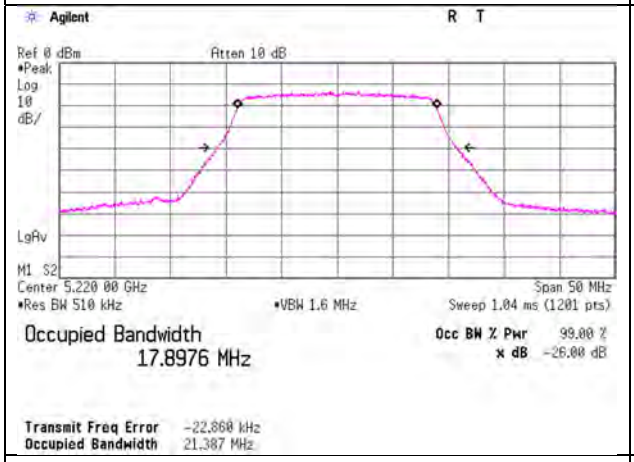
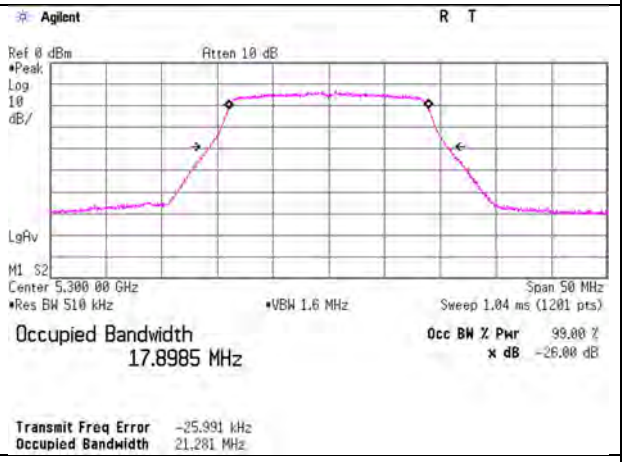
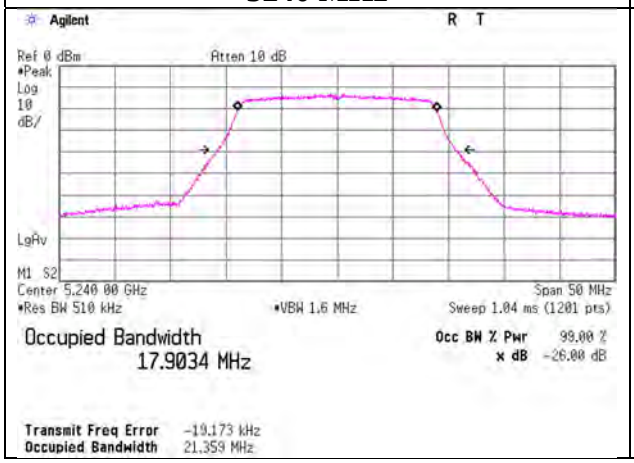


5300 MHz



5240 MHz



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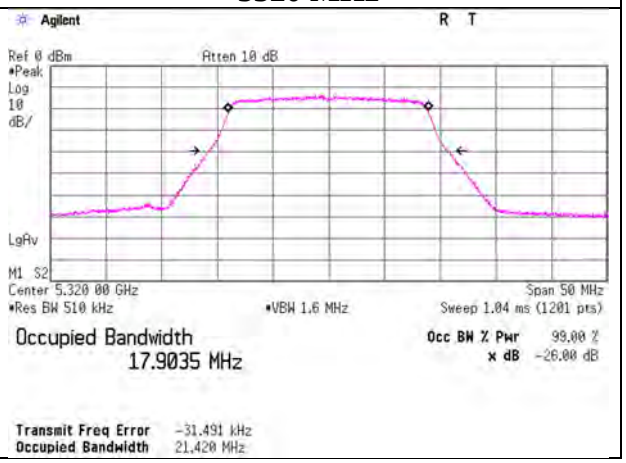
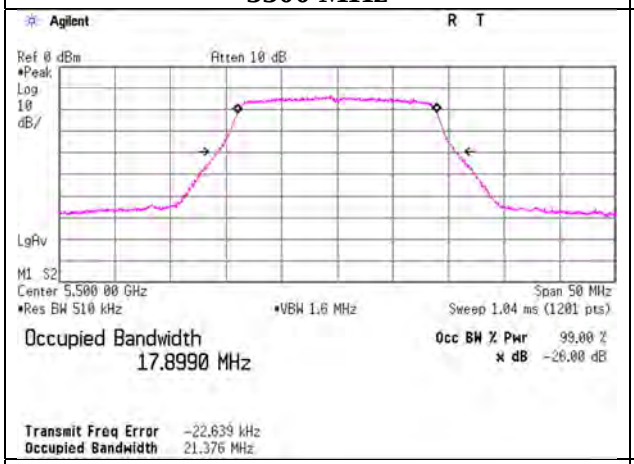


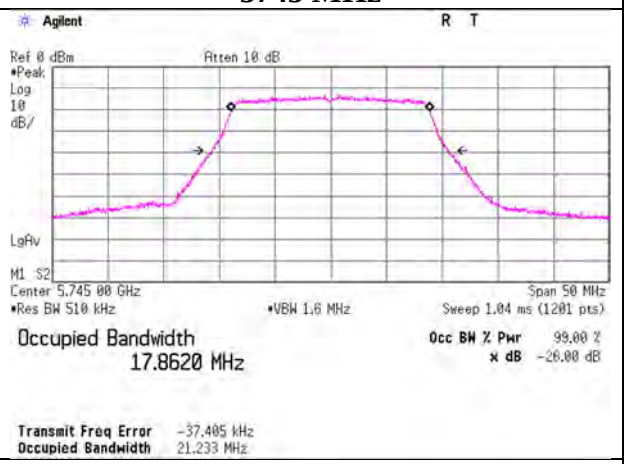
99 % Occupied Bandwidth

11ac-20(CDD), Chain 1

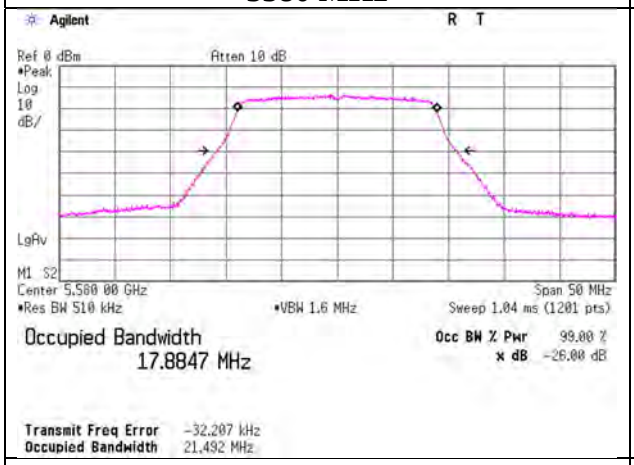
5500 MHz



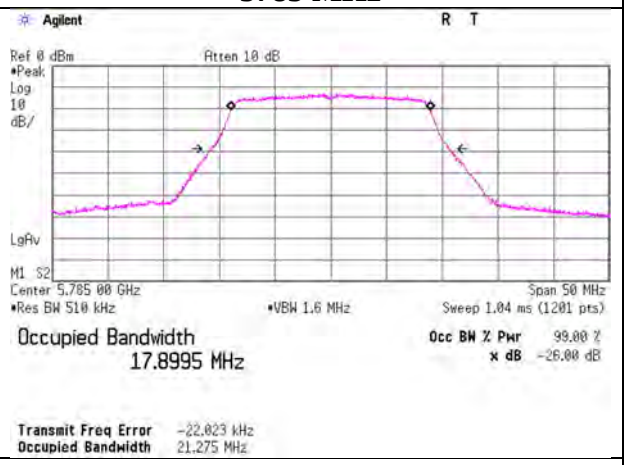
5745 MHz



5580 MHz



5785 MHz



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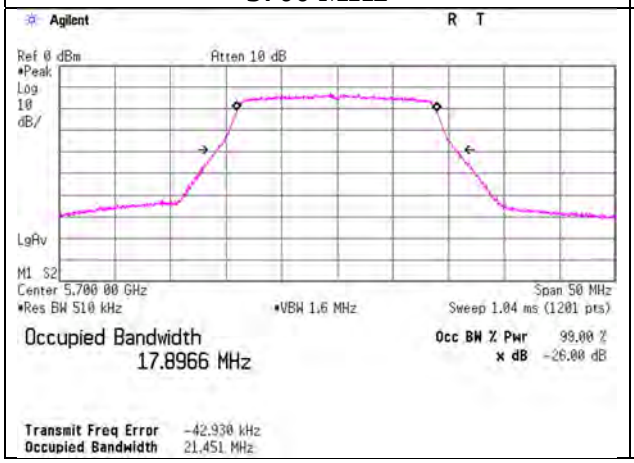
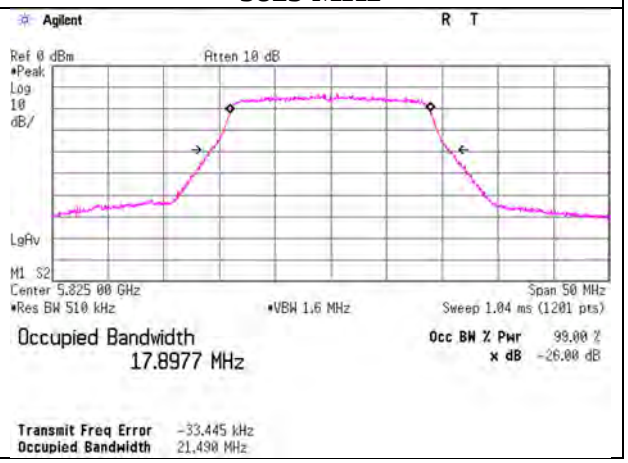


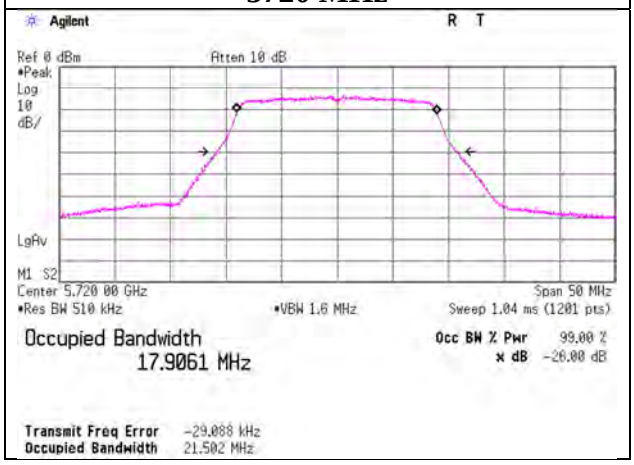
5825 MHz



99 % Occupied Bandwidth

11ac-20(CDD), Chain 1

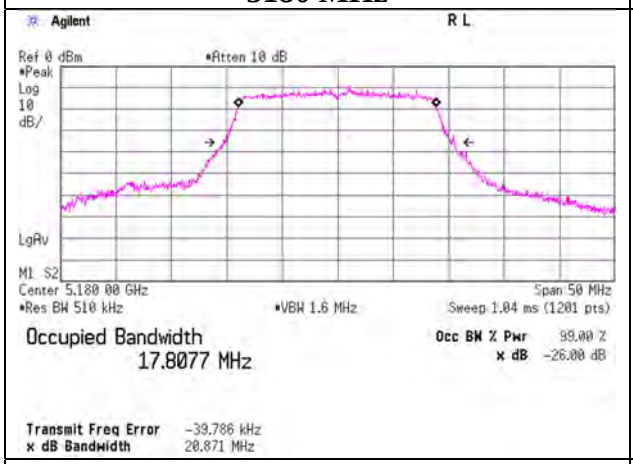
5720 MHz



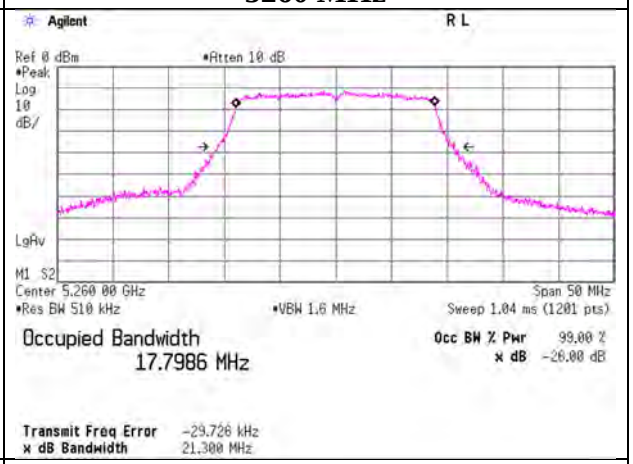
99 % Occupied Bandwidth

11n-20(MIMO), Chain 1

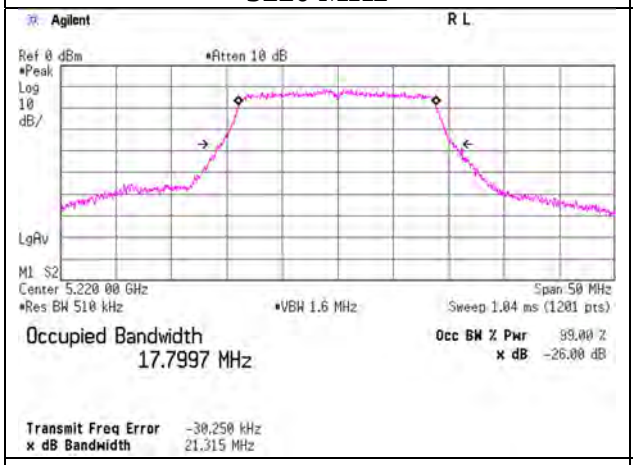
5180 MHz



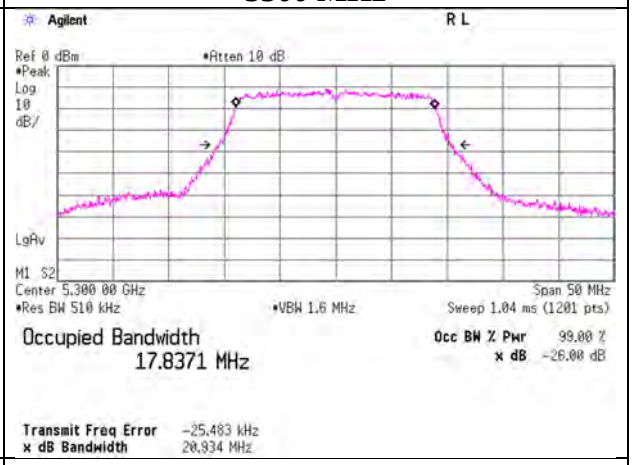
5260 MHz



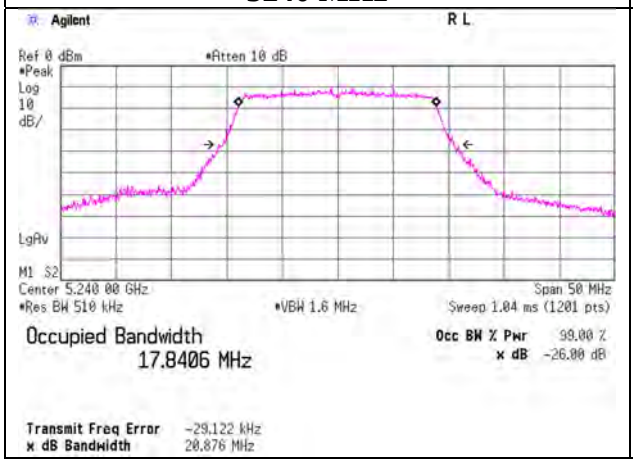
5220 MHz



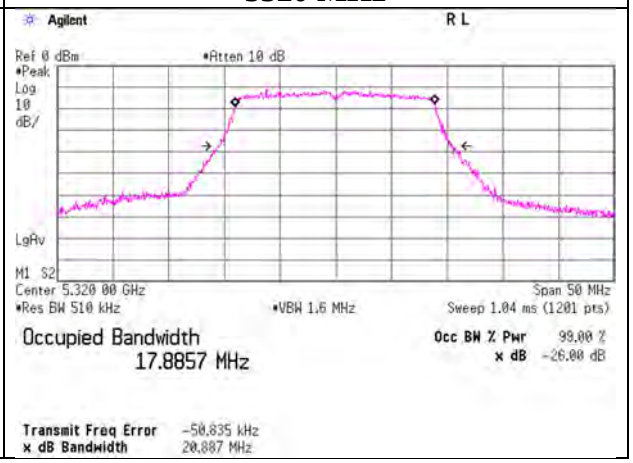
5300 MHz



5240 MHz



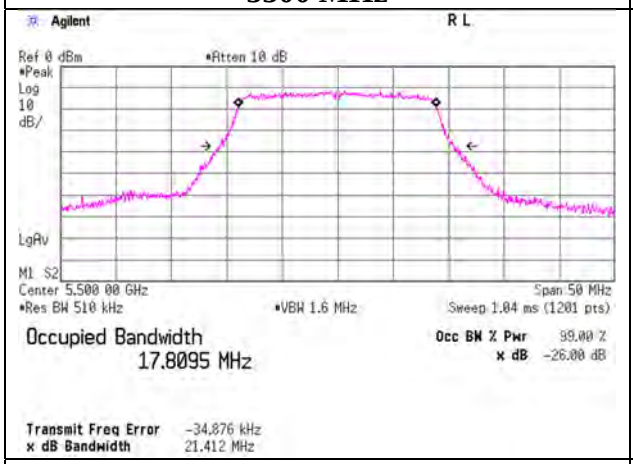
5320 MHz



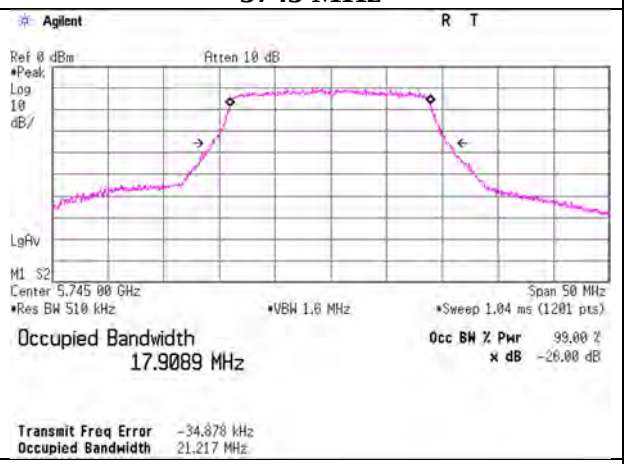
99 % Occupied Bandwidth

11n-20(MIMO), Chain 1

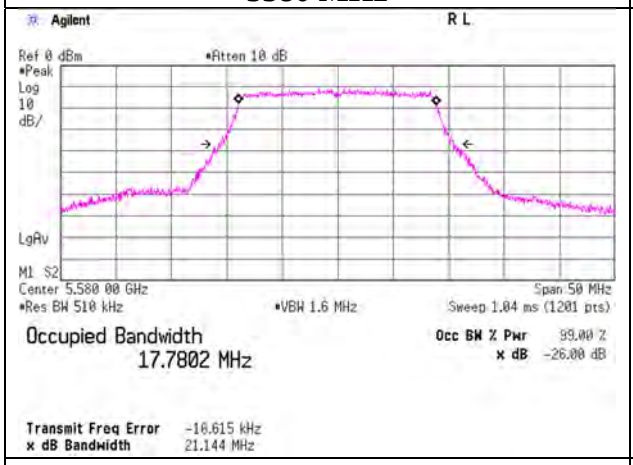
5500 MHz



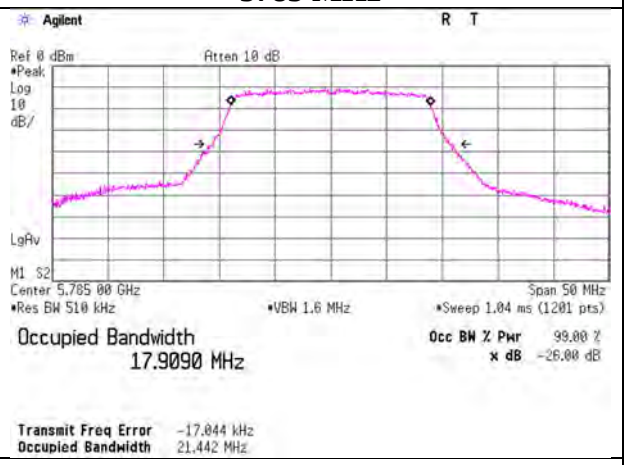
5745 MHz



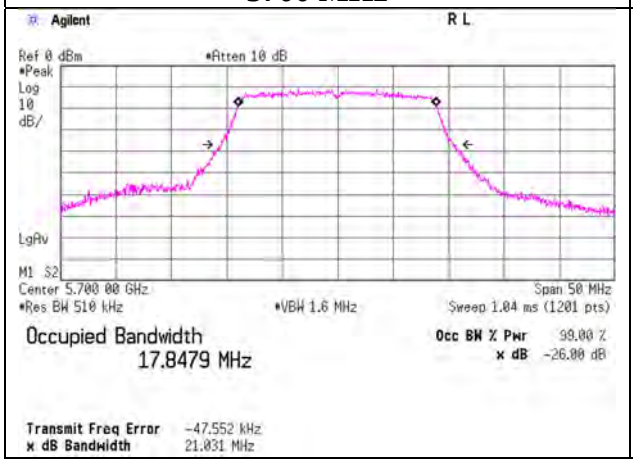
5580 MHz



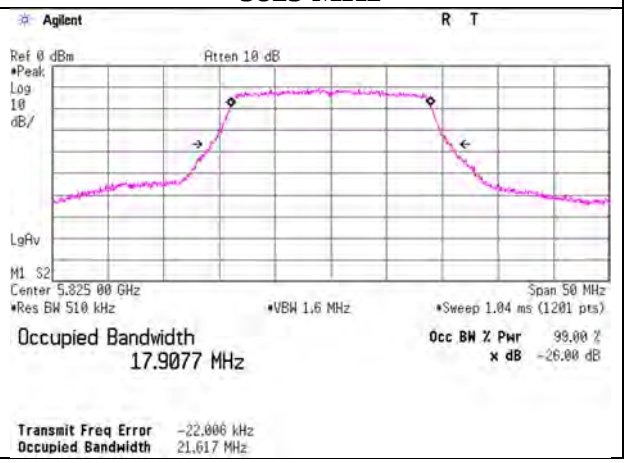
5785 MHz



5700 MHz



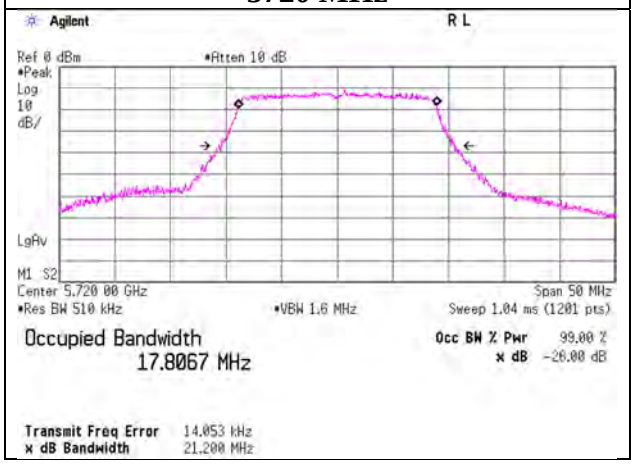
5825 MHz



99 % Occupied Bandwidth

11n-20(MIMO), Chain 1

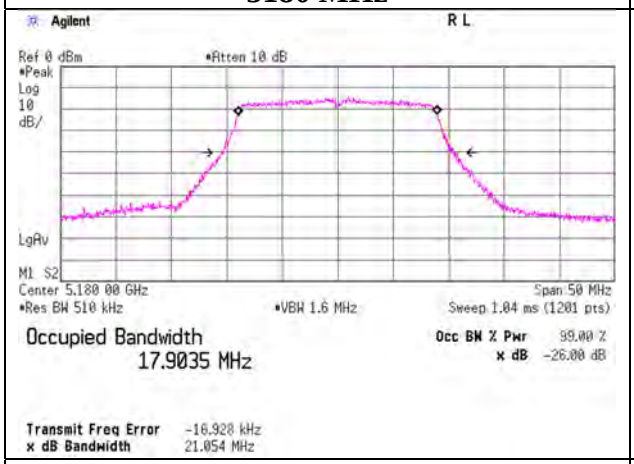
5720 MHz



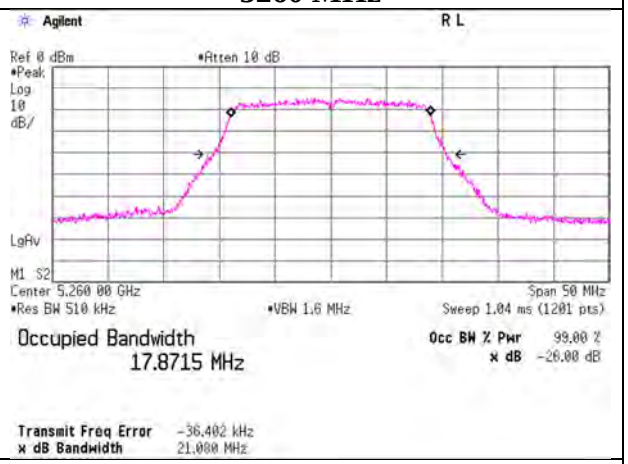
99 % Occupied Bandwidth

11ac-20(MIMO), Chain 1

5180 MHz



5260 MHz



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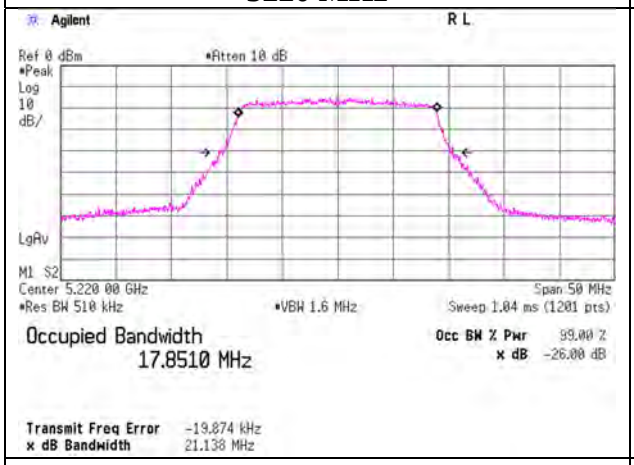

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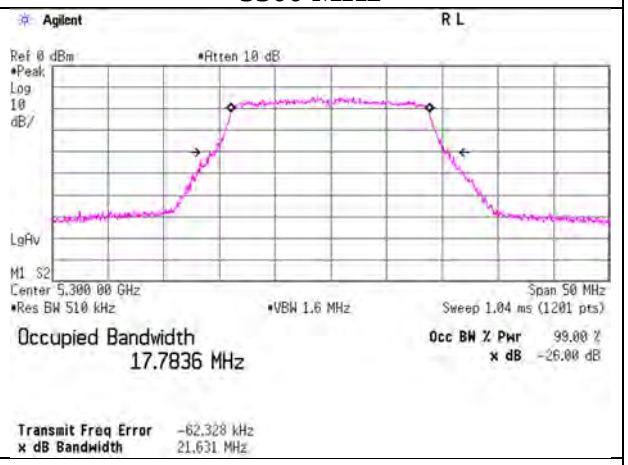
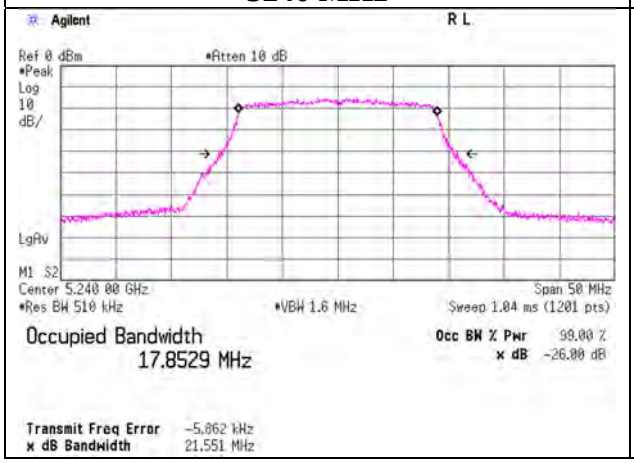
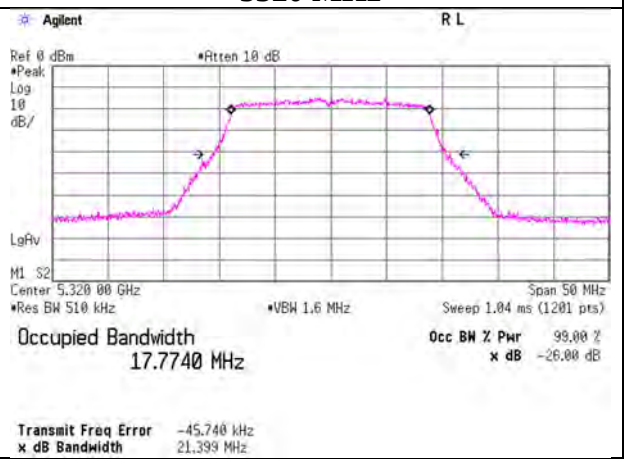


5240 MHz



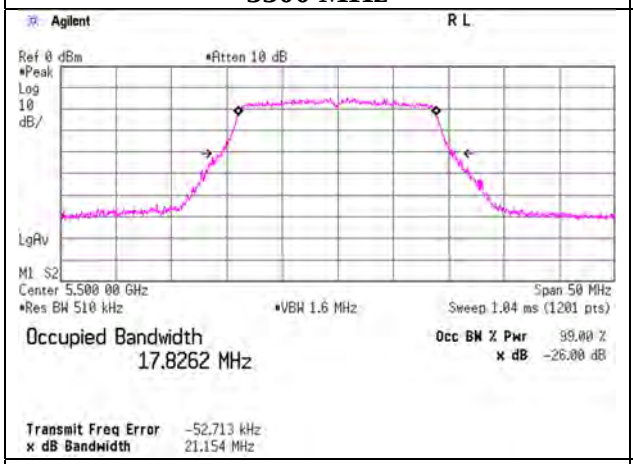
5320 MHz



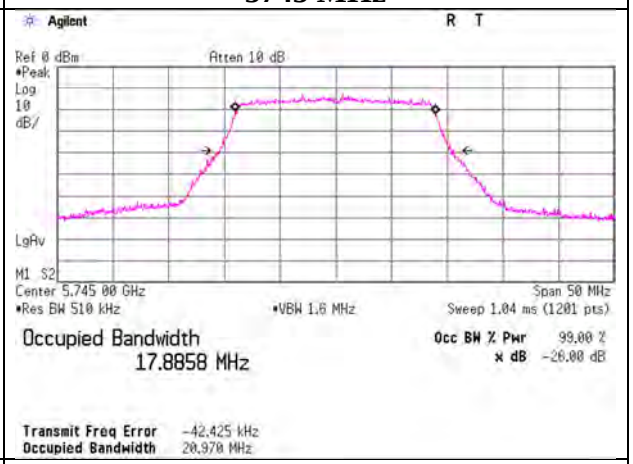
99 % Occupied Bandwidth

11ac-20(MIMO), Chain 1

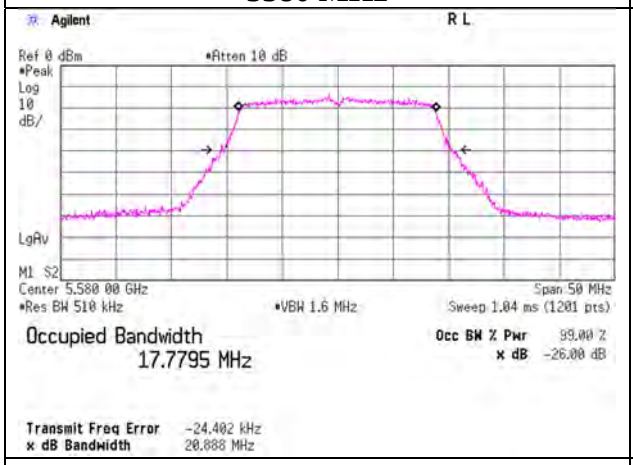
5500 MHz



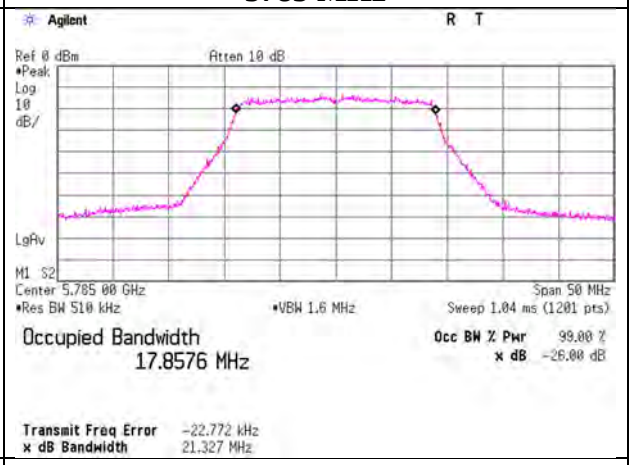
5745 MHz



5580 MHz



5785 MHz



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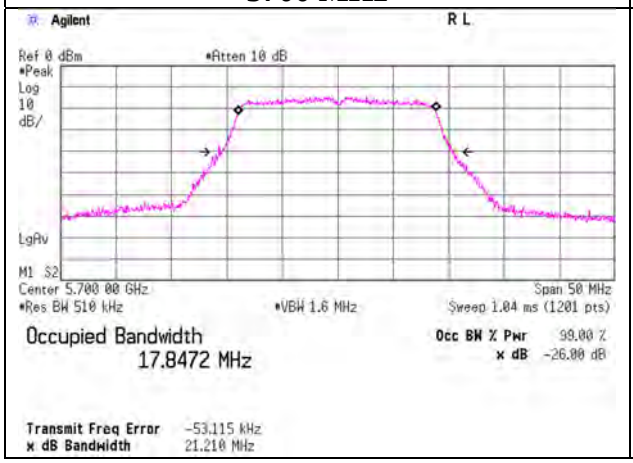
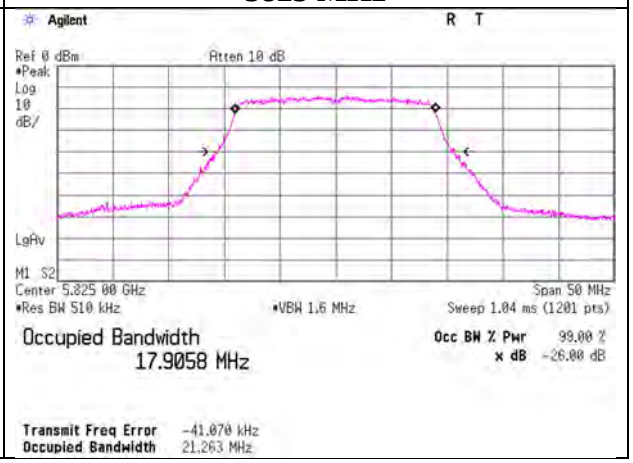


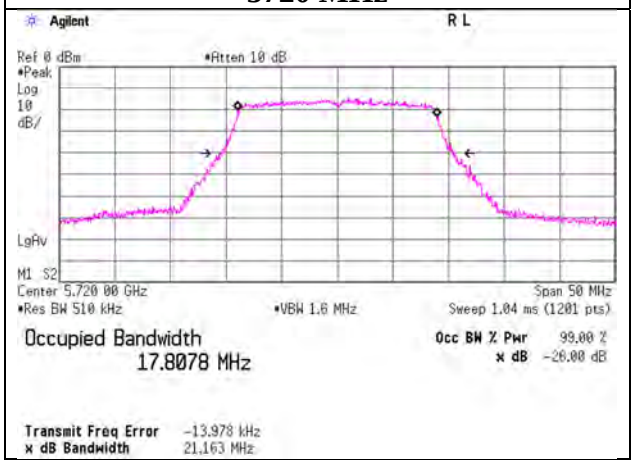
5825 MHz



99 % Occupied Bandwidth

11ac-20(MIMO), Chain 1

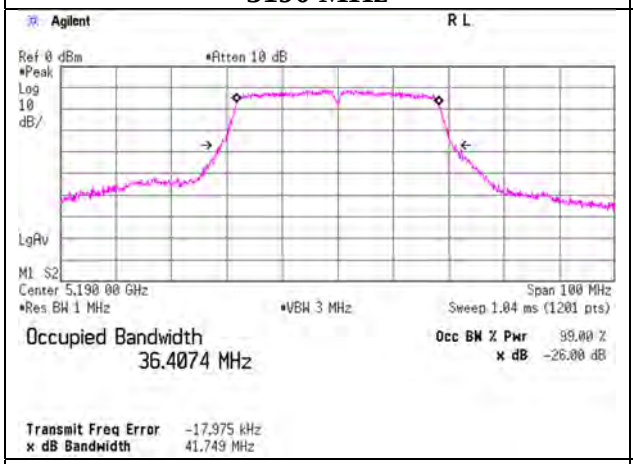
5720 MHz



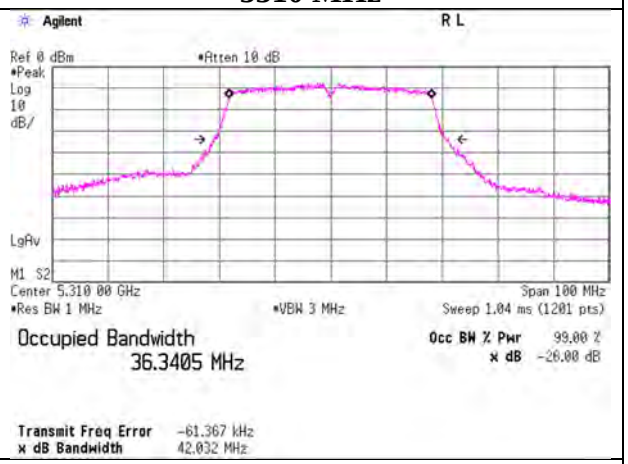
99 % Occupied Bandwidth

11n-40(SISO), Chain 1

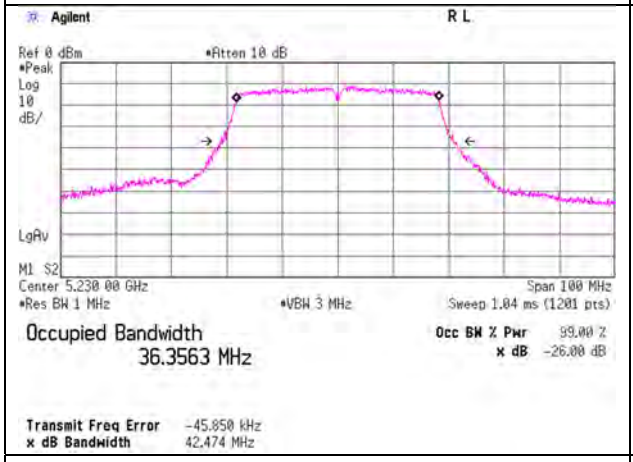
5190 MHz



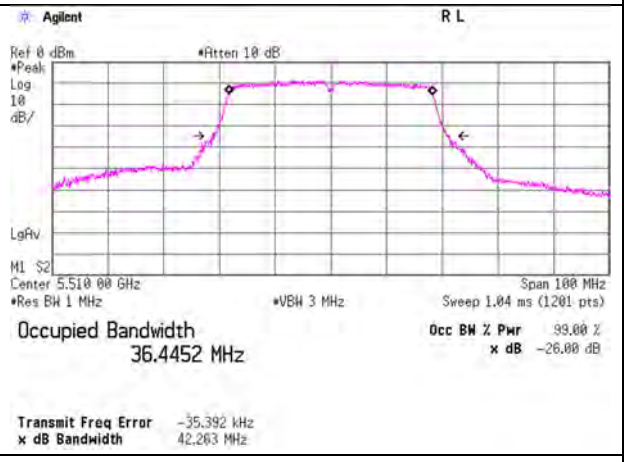
5310 MHz



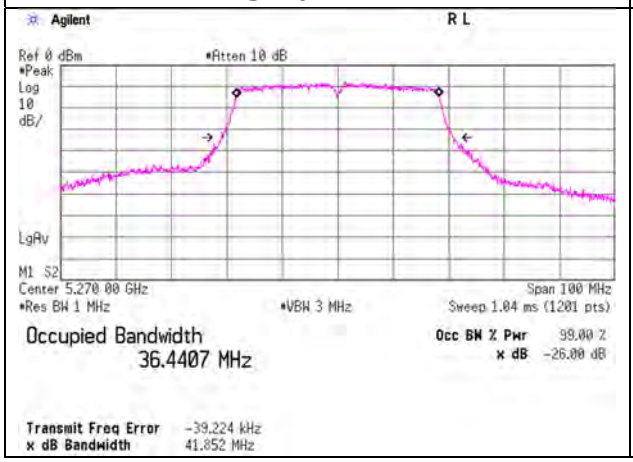
5230 MHz



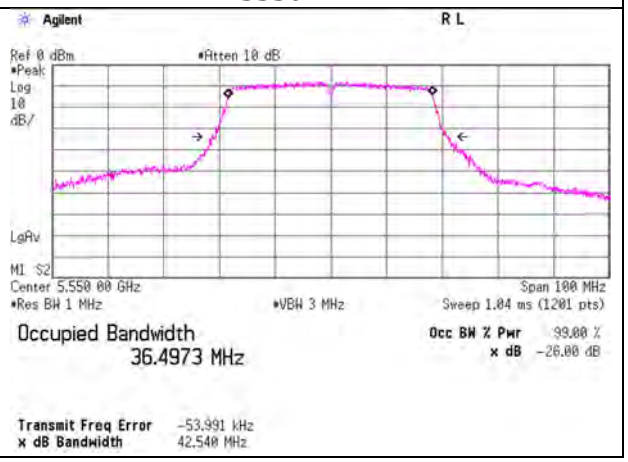
5510 MHz



5270 MHz



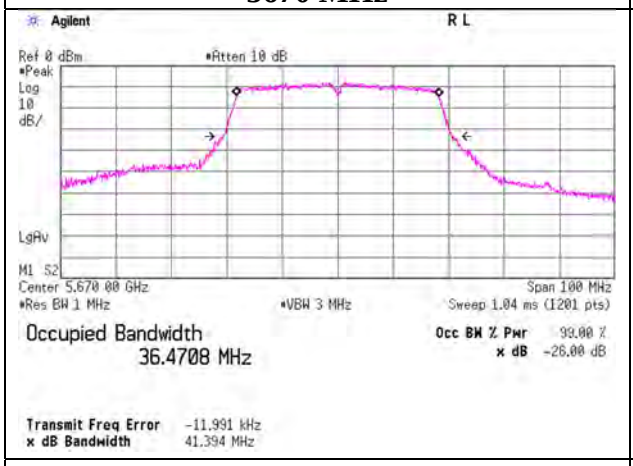
5550 MHz



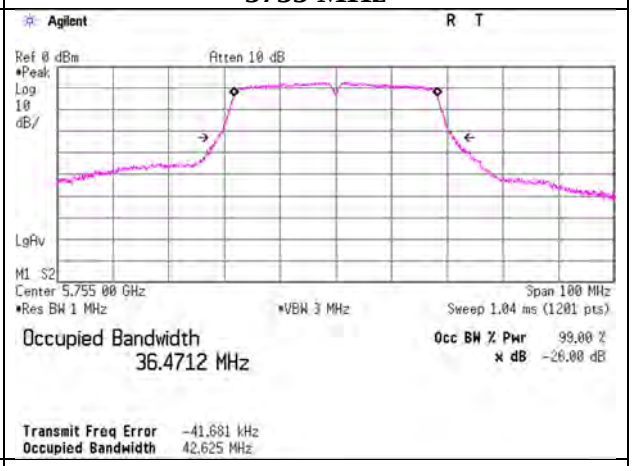
99 % Occupied Bandwidth

11n-40(SISO), Chain 1

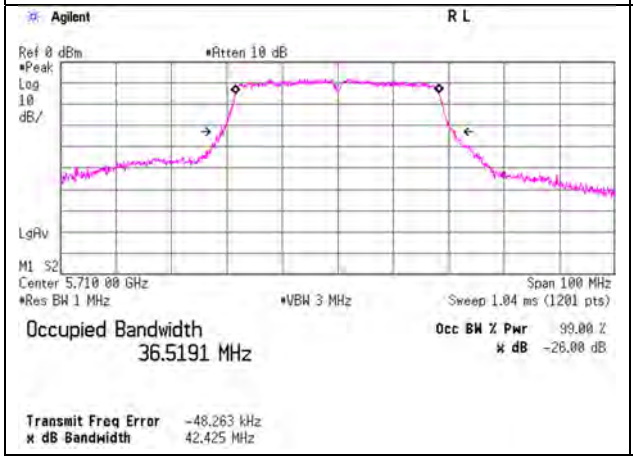
5670 MHz



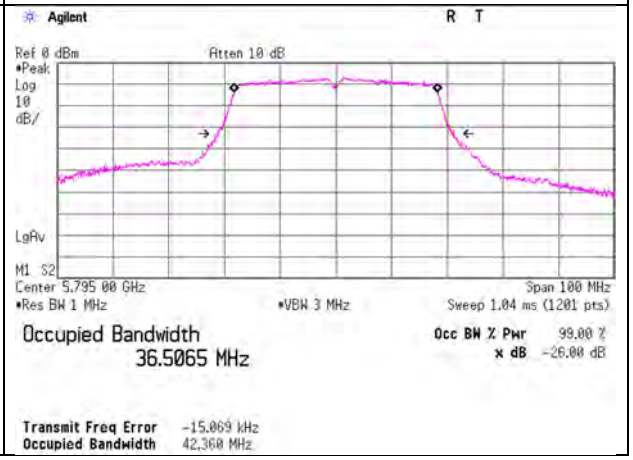
5755 MHz



5710 MHz



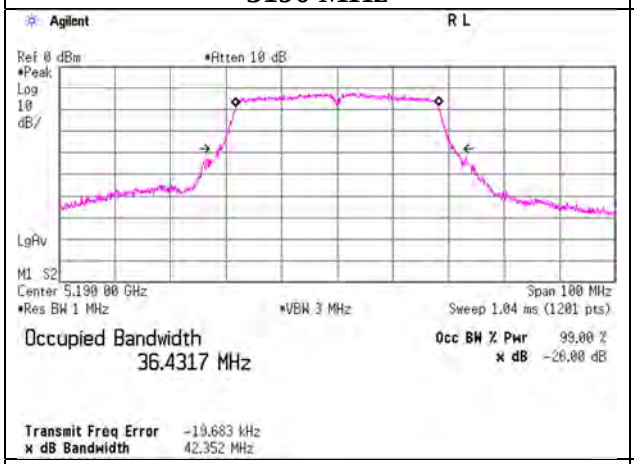
5795 MHz



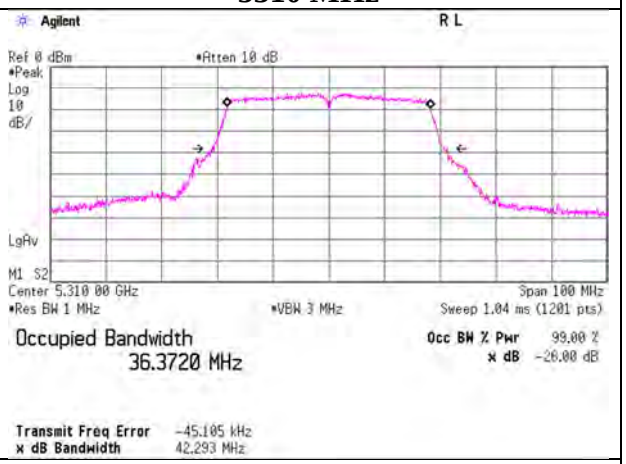
99 % Occupied Bandwidth

11ac-40(SISO), Chain 1

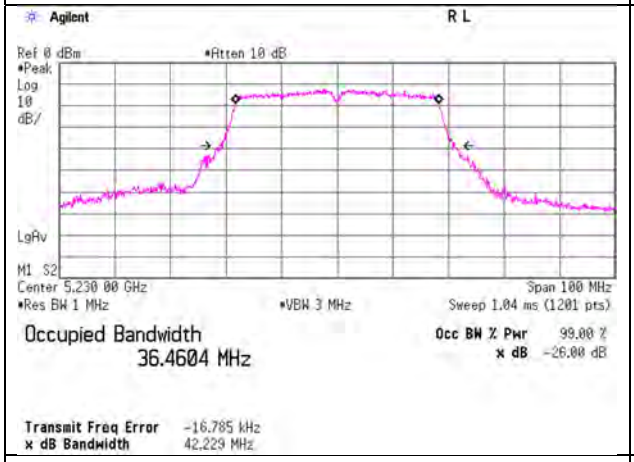
5190 MHz



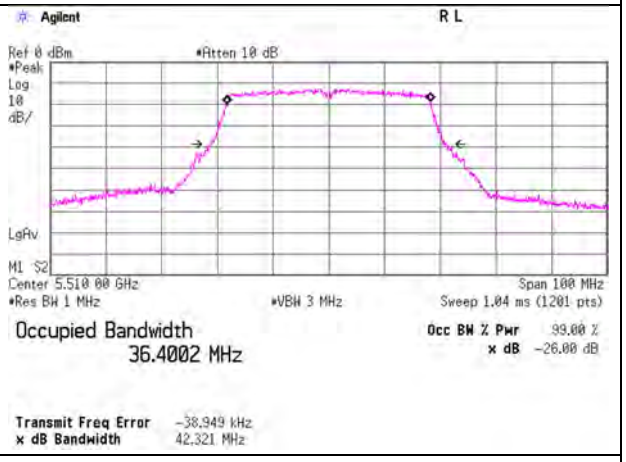
5310 MHz



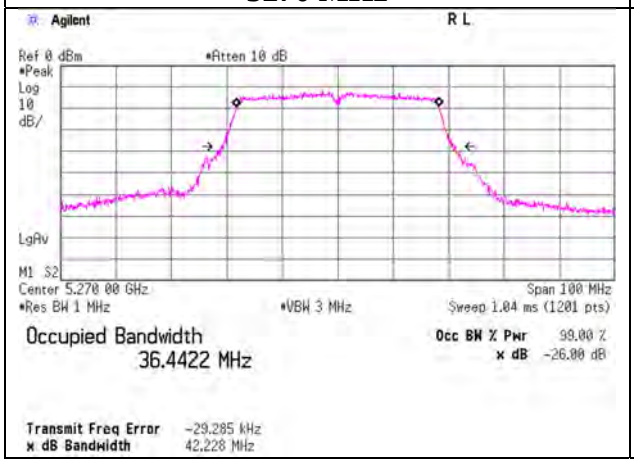
5230 MHz



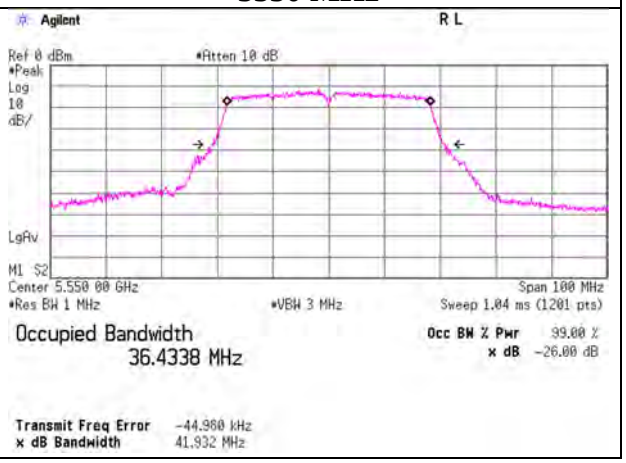
5510 MHz



5270 MHz



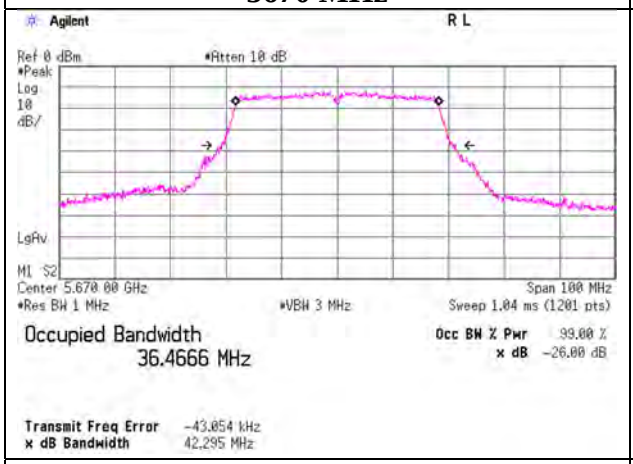
5550 MHz



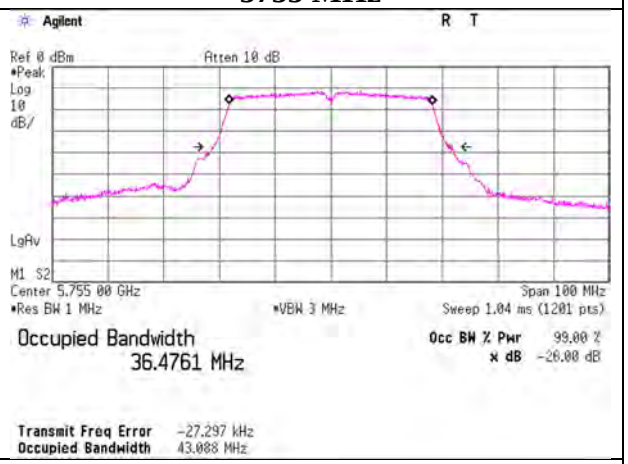
99 % Occupied Bandwidth

11ac-40(SISO), Chain 1

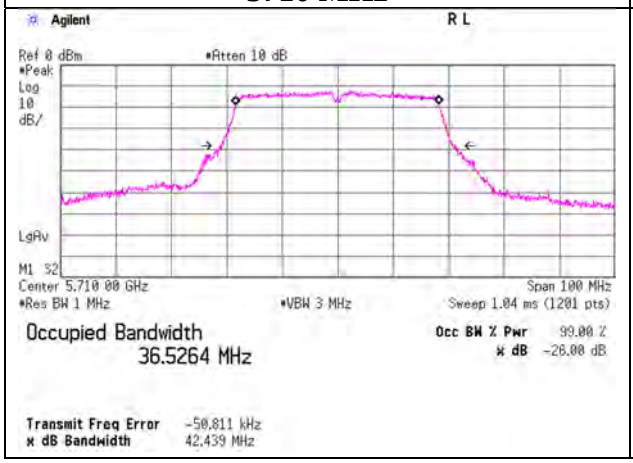
5670 MHz



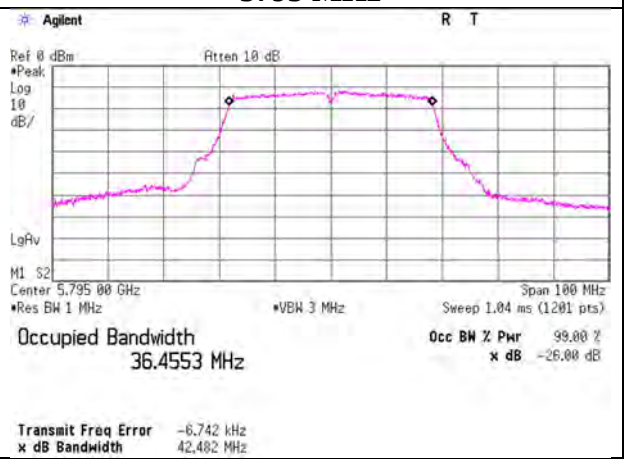
5755 MHz



5710 MHz



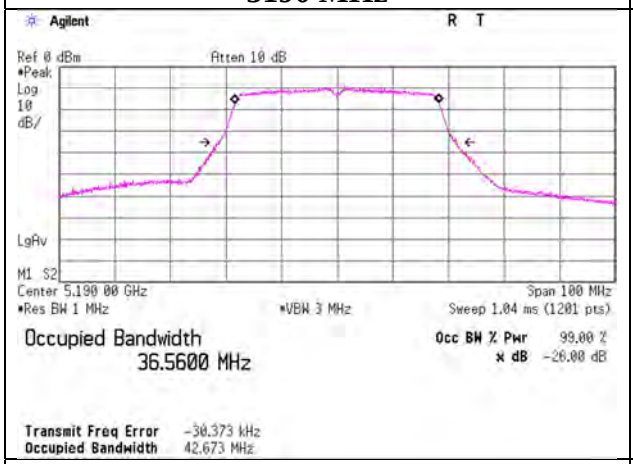
5795 MHz



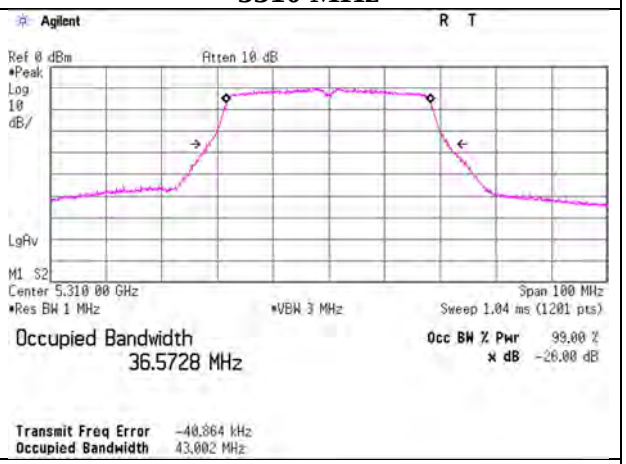
99 % Occupied Bandwidth

11n-40(CDD), Chain 1

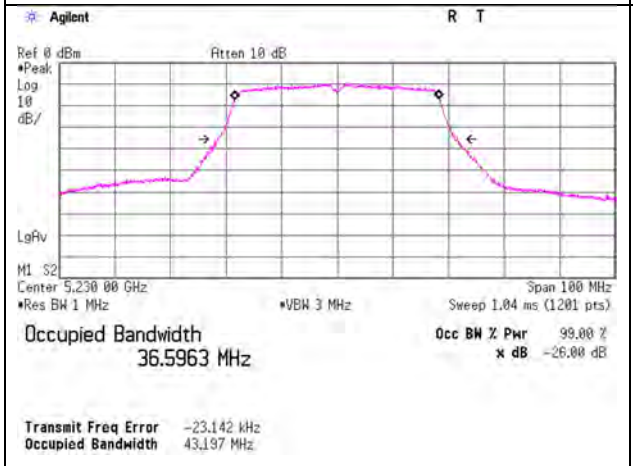
5190 MHz



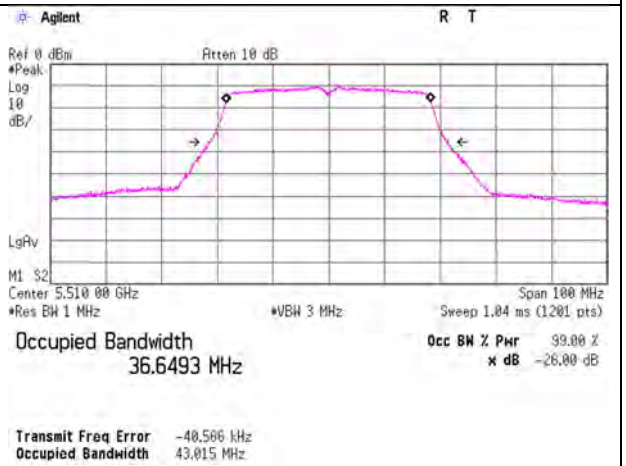
5310 MHz



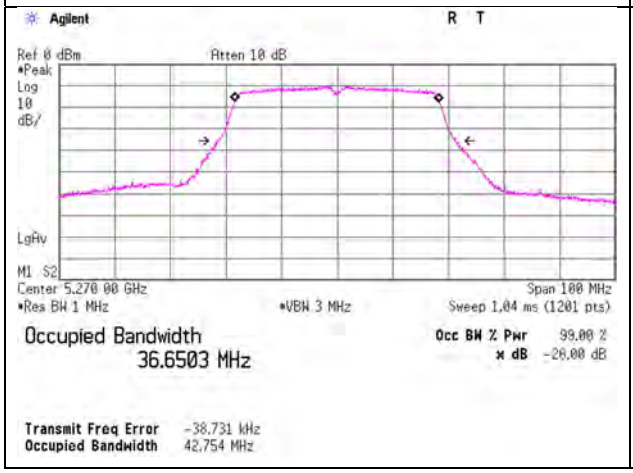
5230 MHz



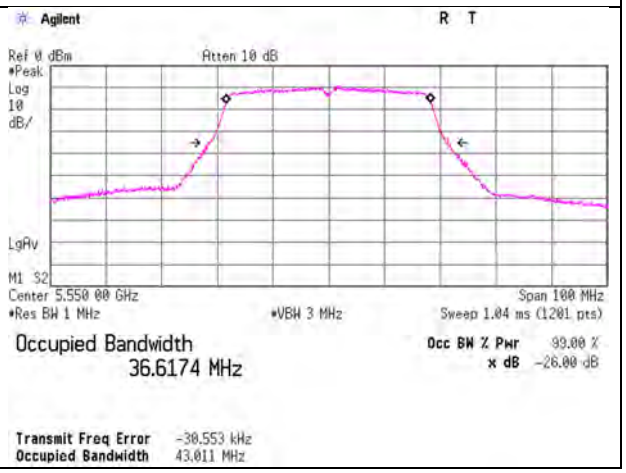
5510 MHz



5270 MHz



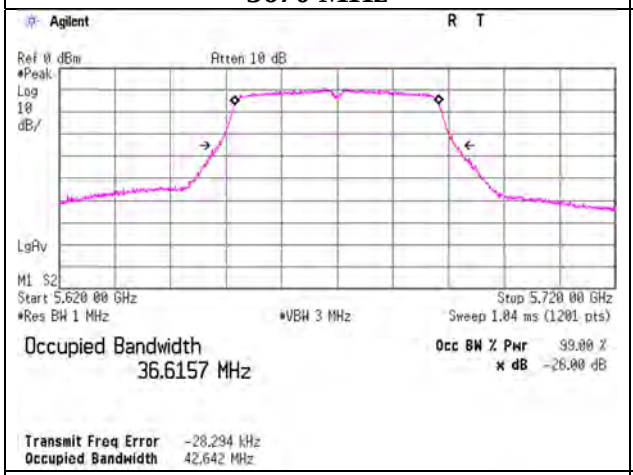
5550 MHz



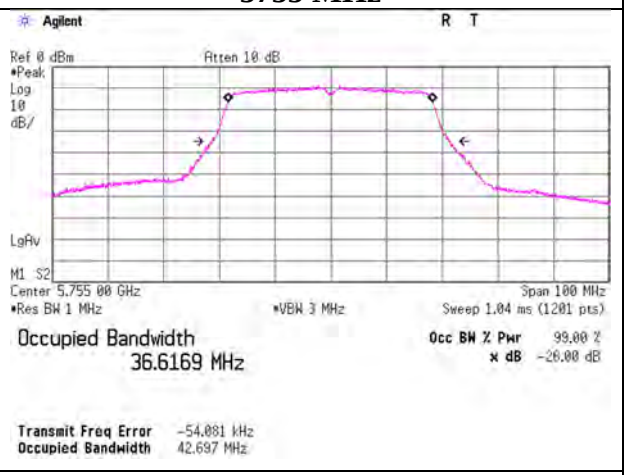
99 % Occupied Bandwidth

11n-40(CDD), Chain 1

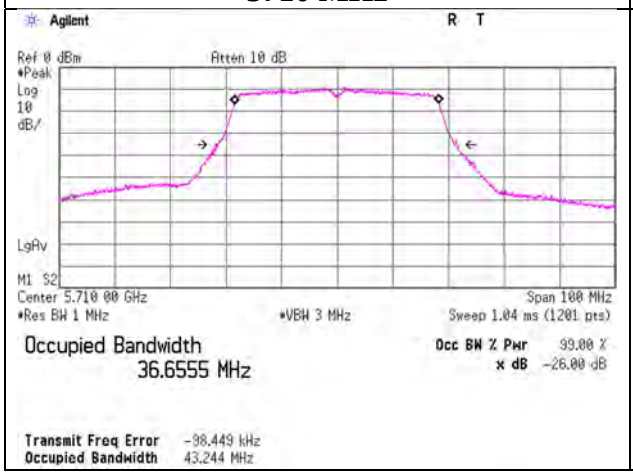
5670 MHz



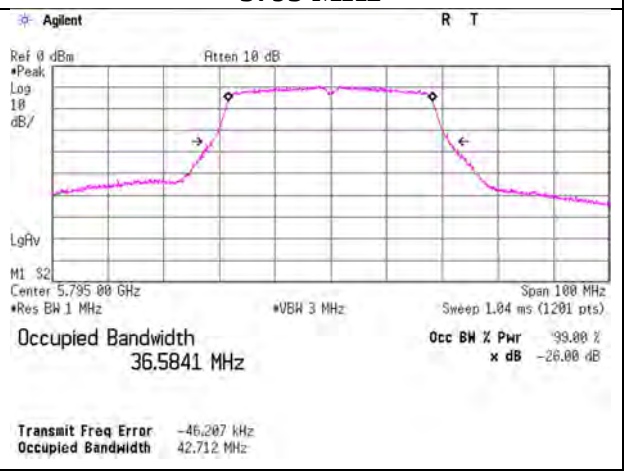
5755 MHz



5710 MHz



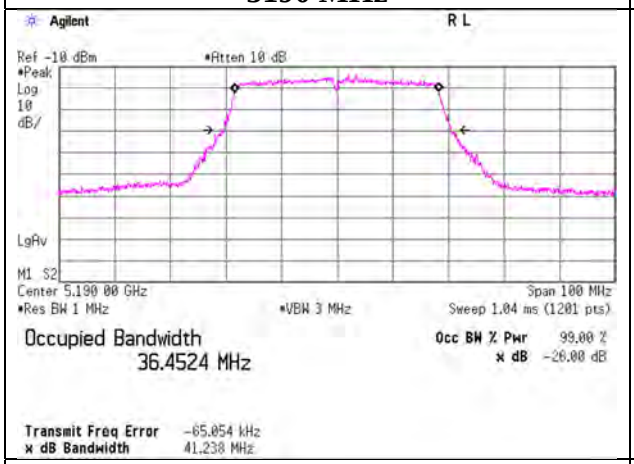
5795 MHz



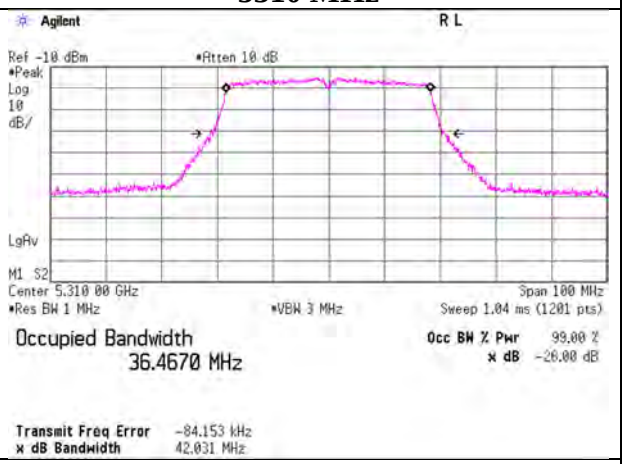
99 % Occupied Bandwidth

11ac-40(CDD), Chain 1

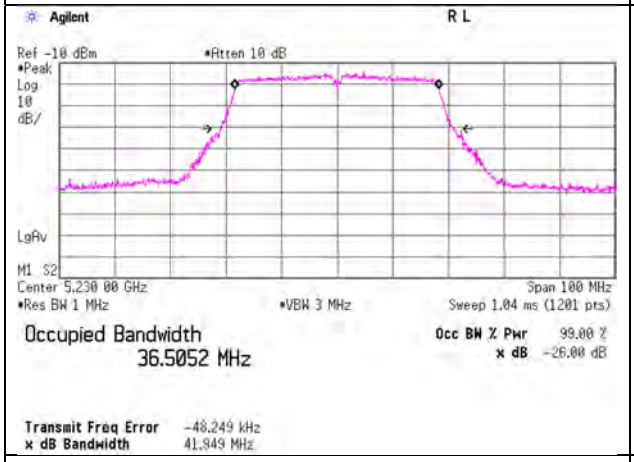
5190 MHz



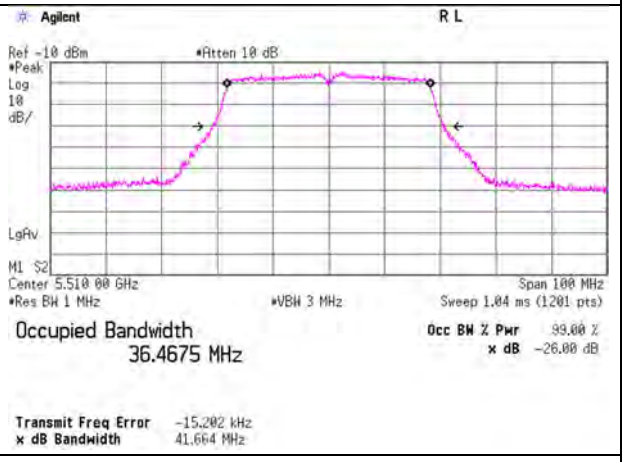
5310 MHz



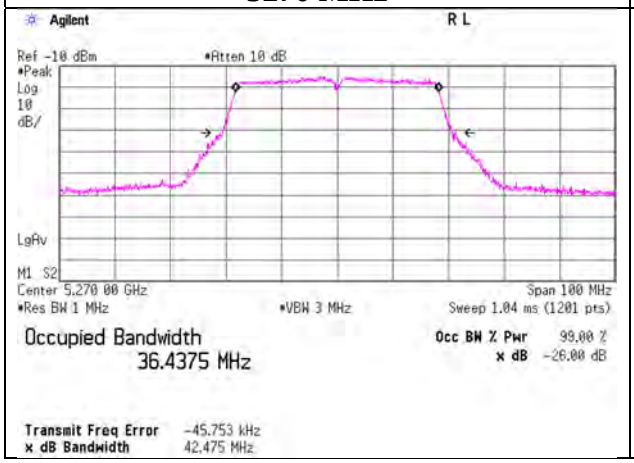
5230 MHz



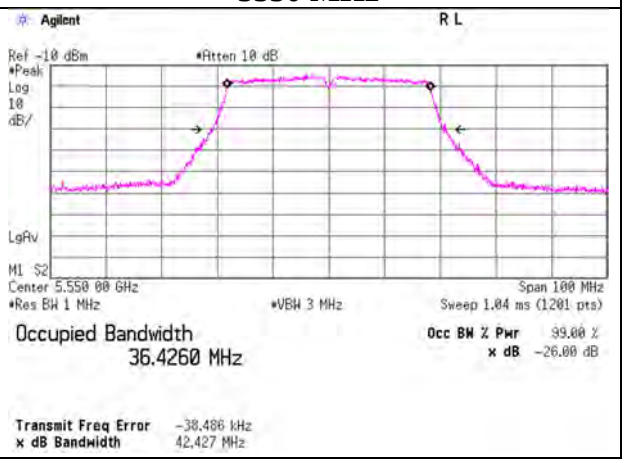
5510 MHz



5270 MHz



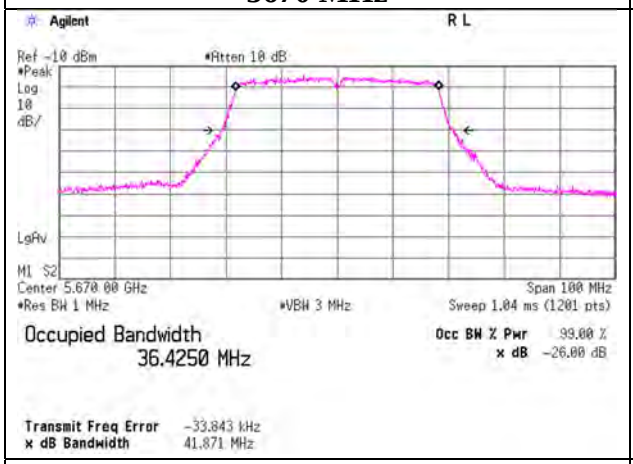
5550 MHz



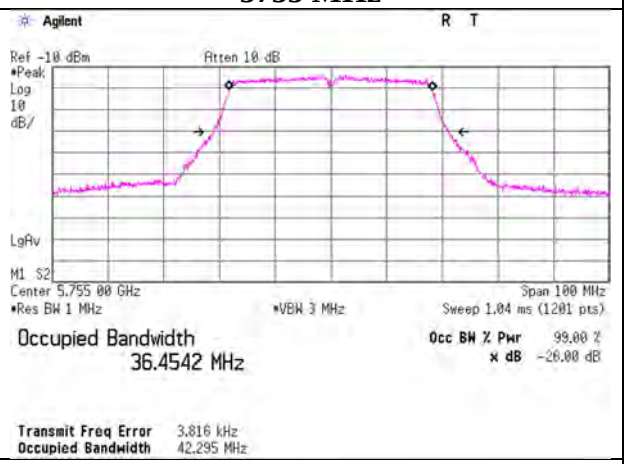
99 % Occupied Bandwidth

11ac-40(CDD), Chain 1

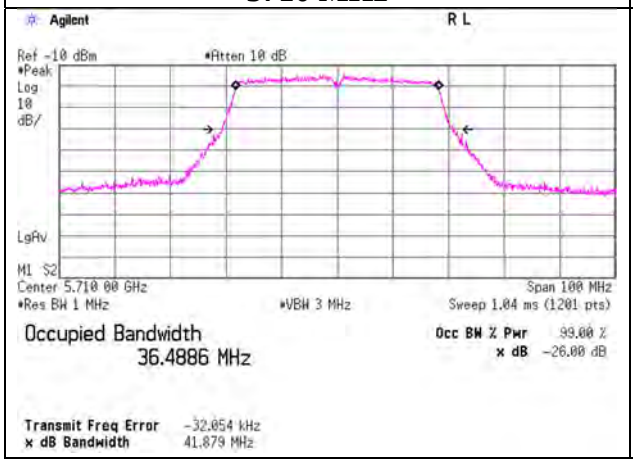
5670 MHz



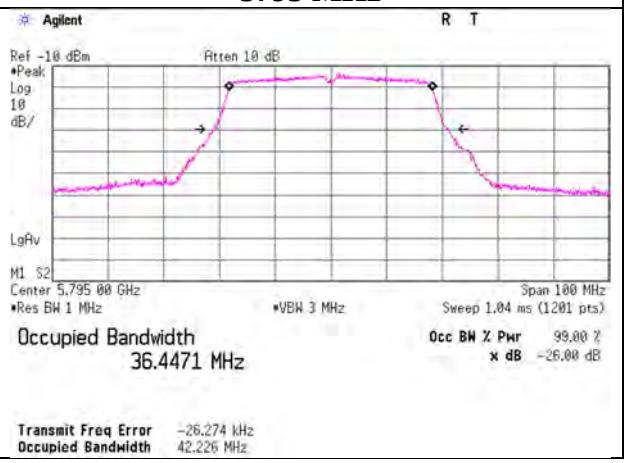
5755 MHz



5710 MHz



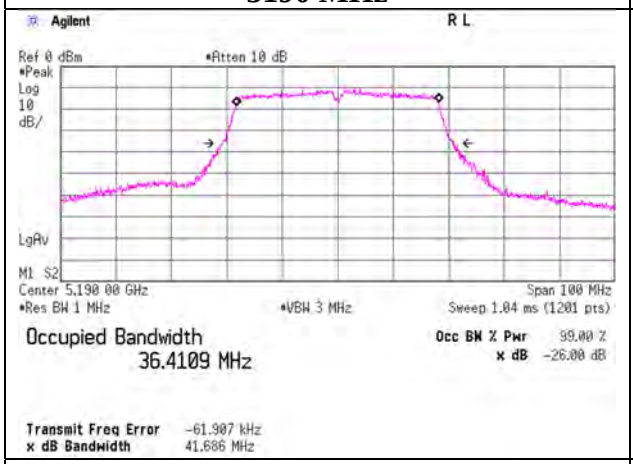
5795 MHz



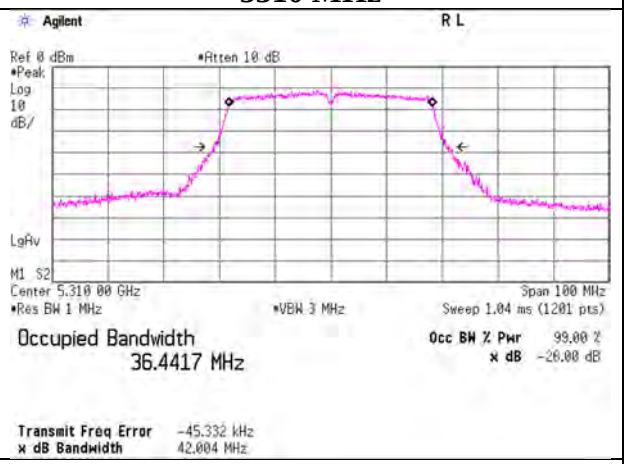
99 % Occupied Bandwidth

11n-40(MIMO), Chain 1

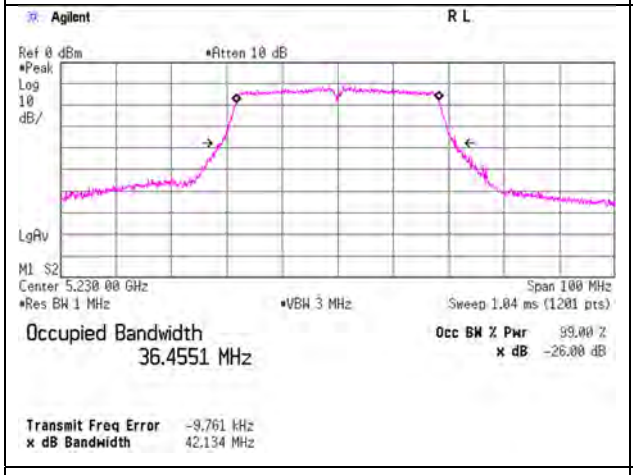
5190 MHz



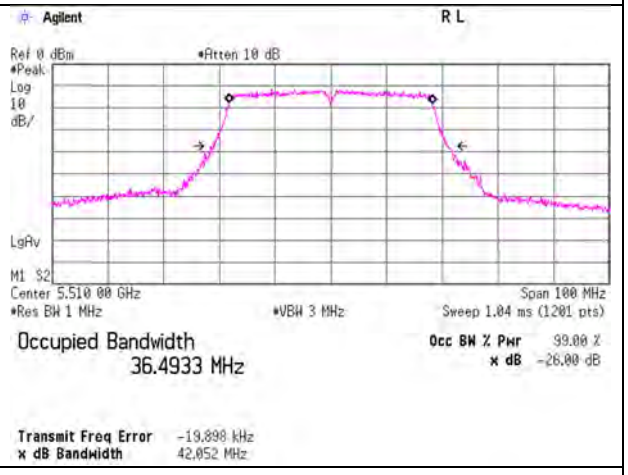
5310 MHz



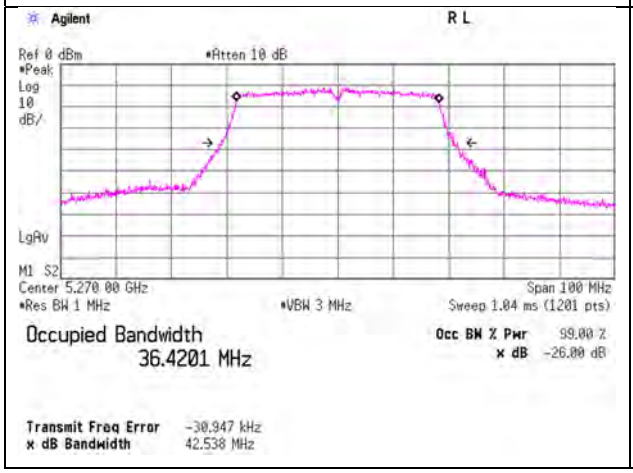
5230 MHz



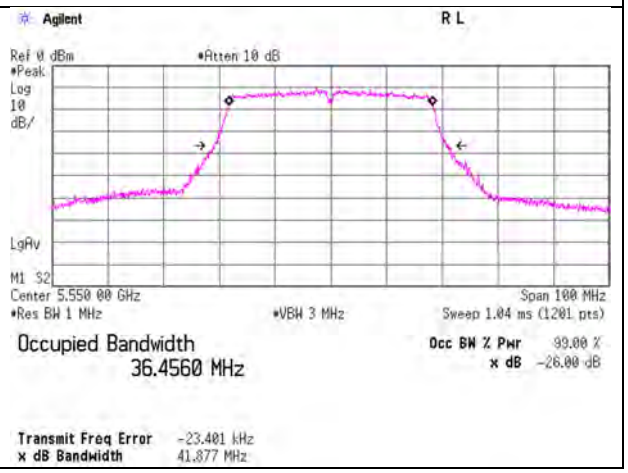
5510 MHz



5270 MHz



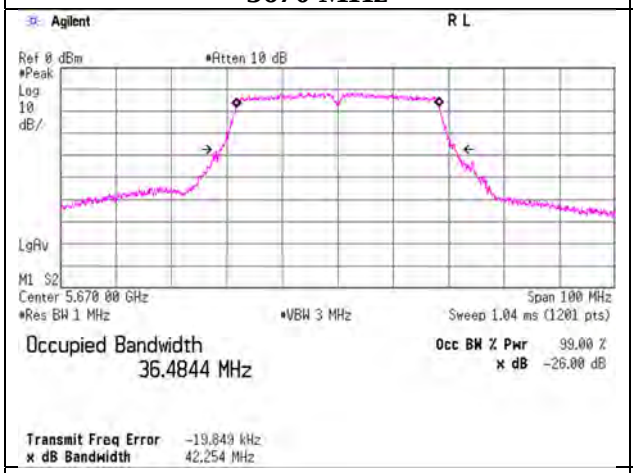
5550 MHz



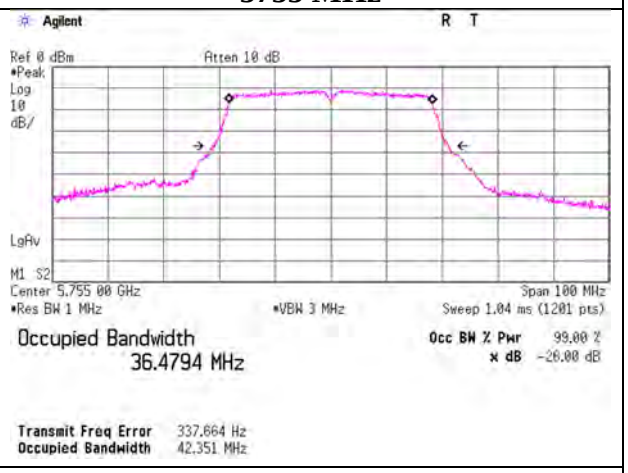
99 % Occupied Bandwidth

11n-40(MIMO), Chain 1

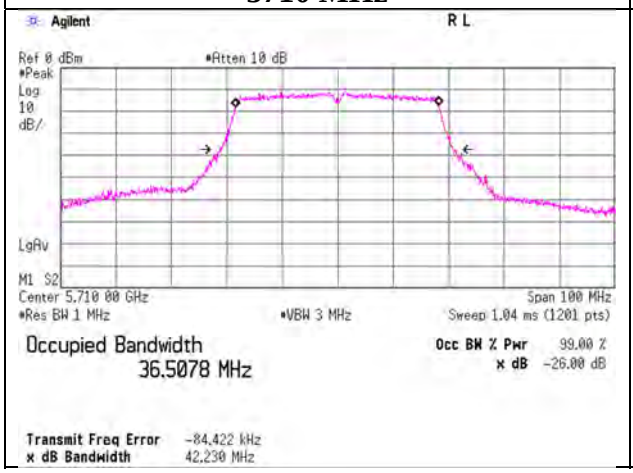
5670 MHz



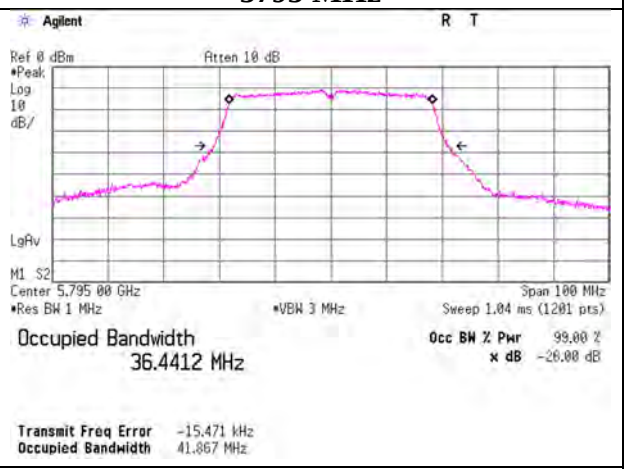
5755 MHz



5710 MHz



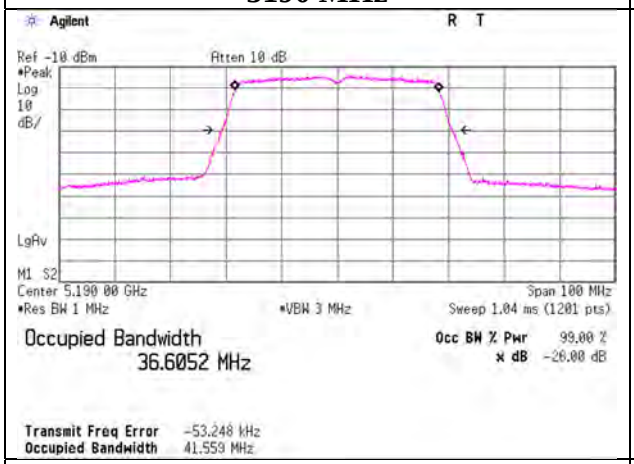
5795 MHz



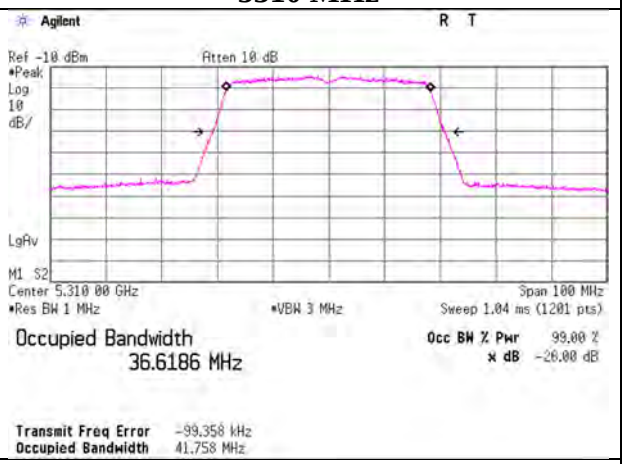
99 % Occupied Bandwidth

11ac-40(MIMO), Chain 1

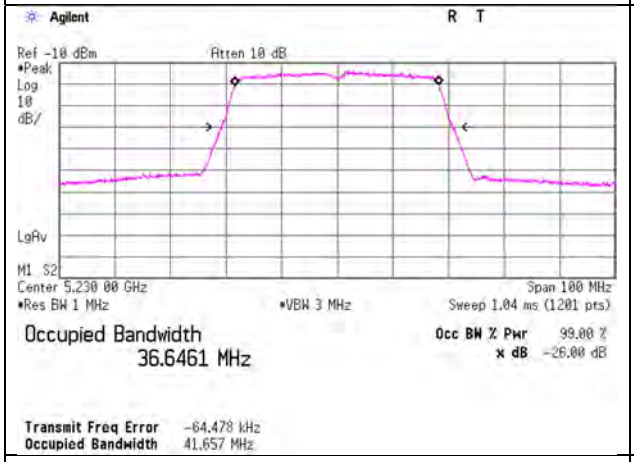
5190 MHz



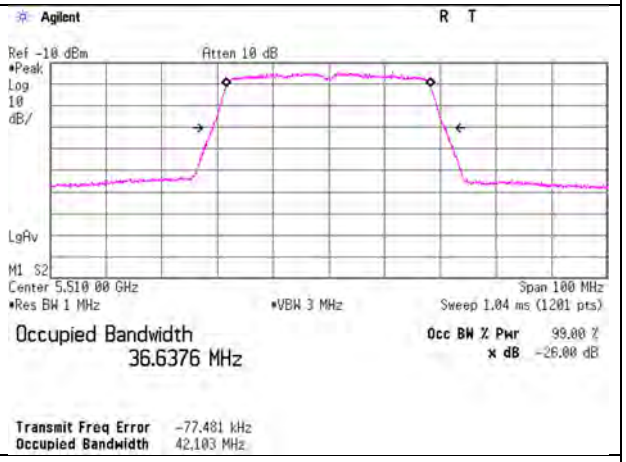
5310 MHz



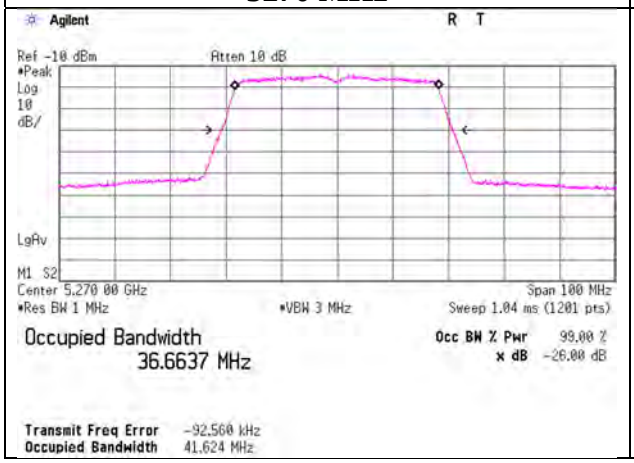
5230 MHz



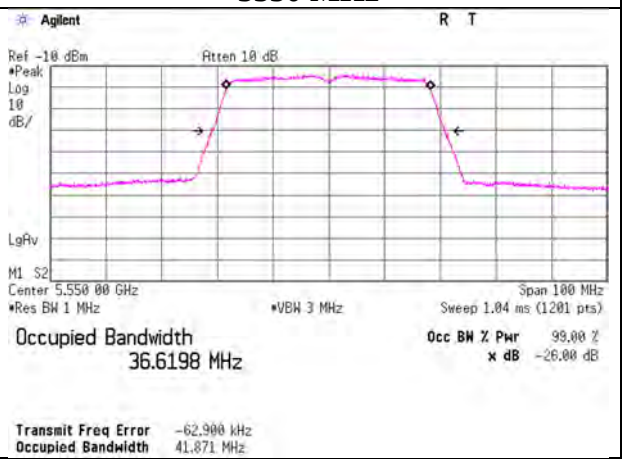
5510 MHz



5270 MHz



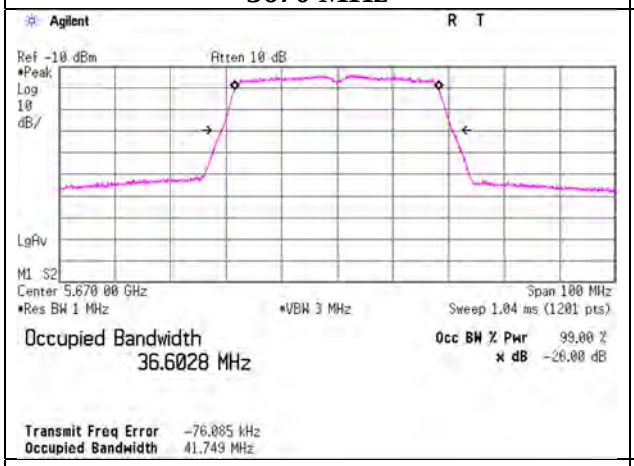
5550 MHz



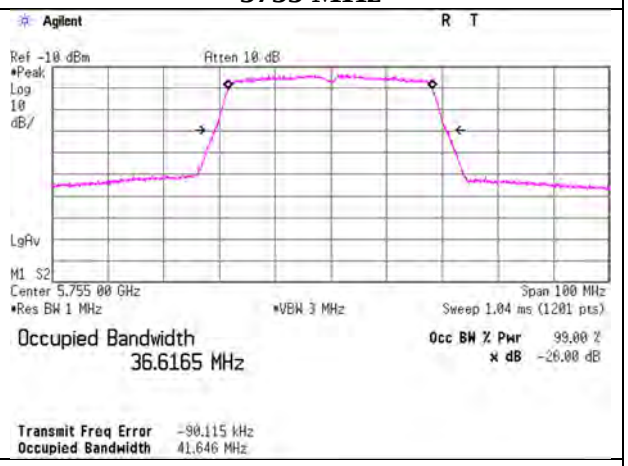
99 % Occupied Bandwidth

11ac-40(MIMO), Chain 1

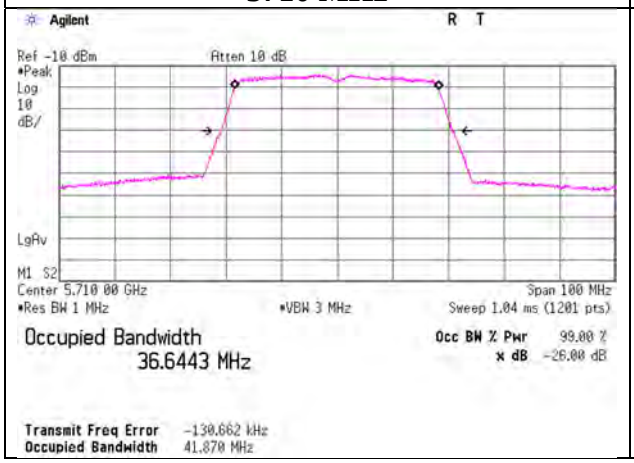
5670 MHz



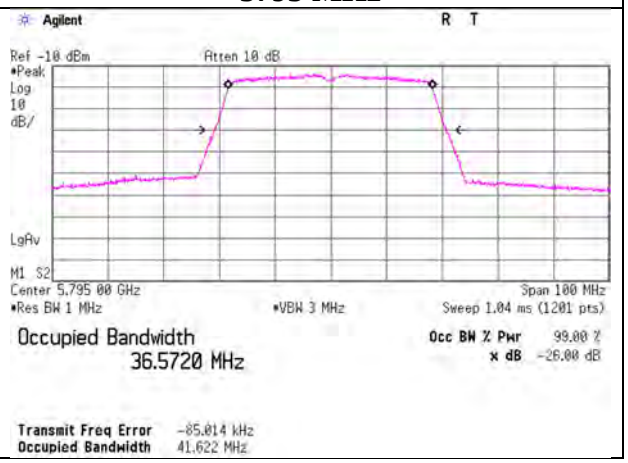
5755 MHz



5710 MHz



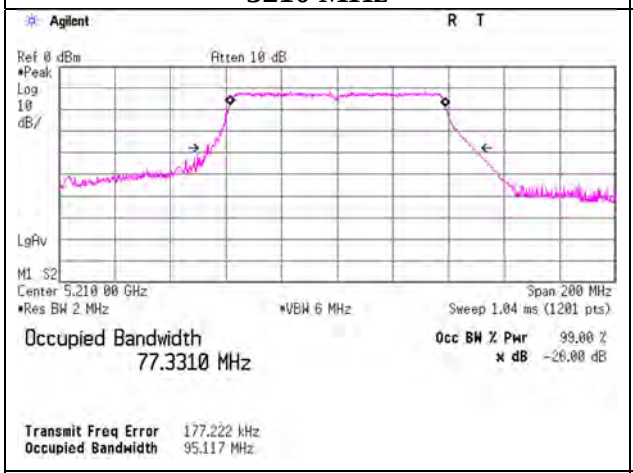
5795 MHz



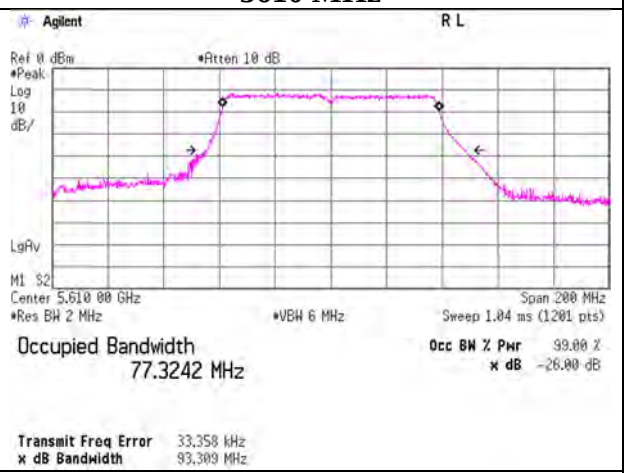
99 % Occupied Bandwidth

11ac-80(SISO), Chain 1

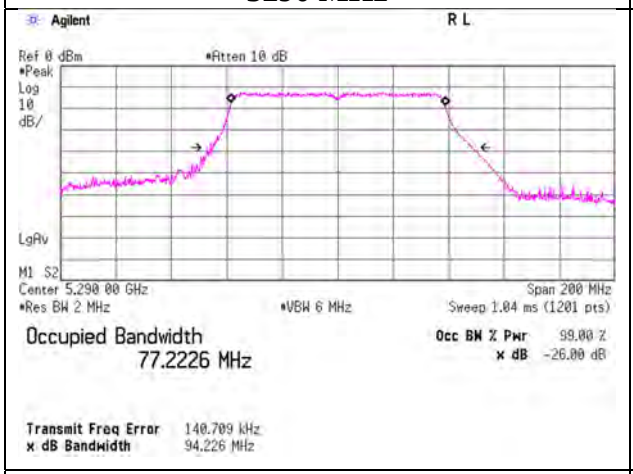
5210 MHz



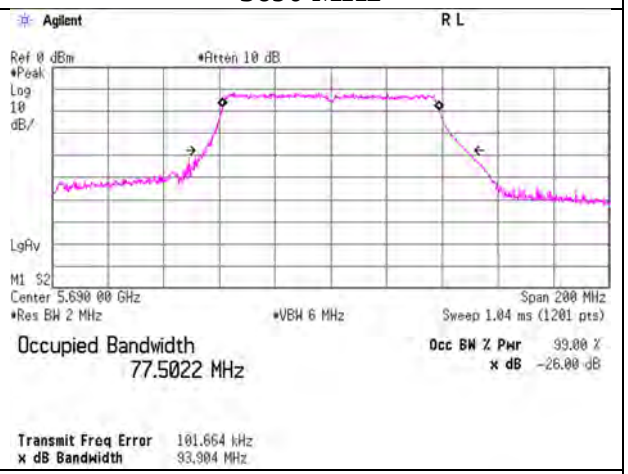
5610 MHz



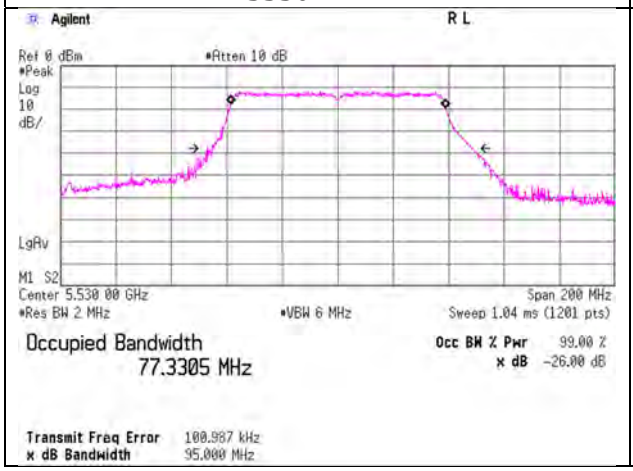
5290 MHz



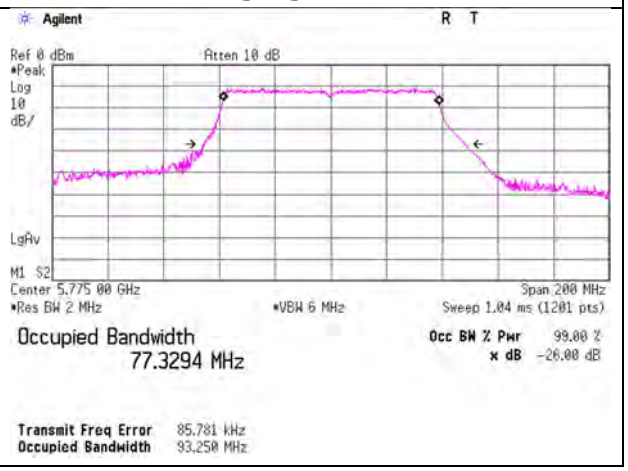
5690 MHz



5530 MHz



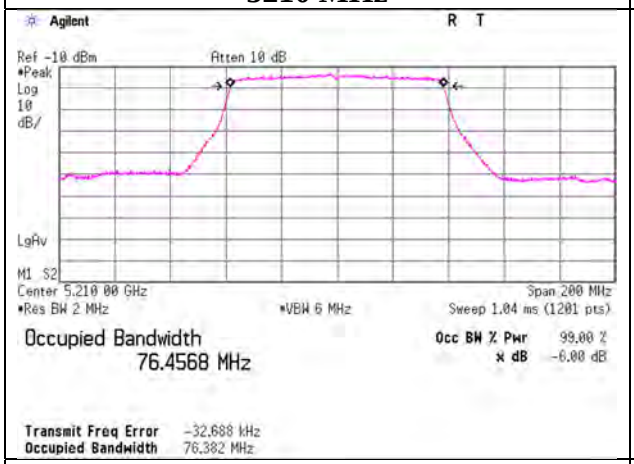
5775 MHz



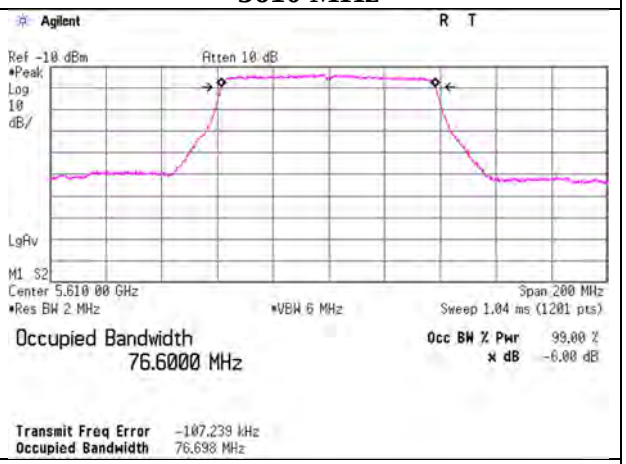
99 % Occupied Bandwidth

11ac-80(CDD), Chain 1

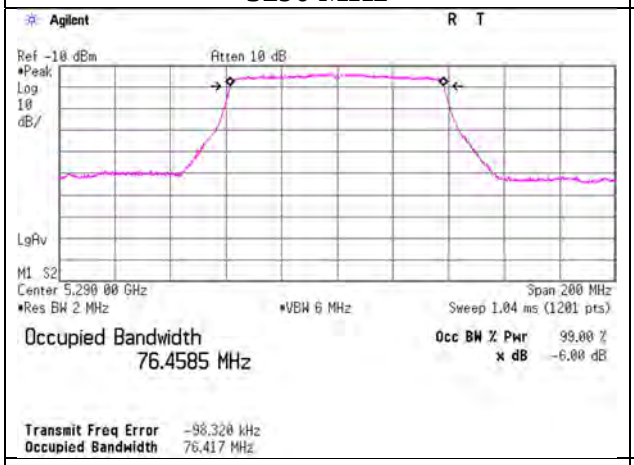
5210 MHz



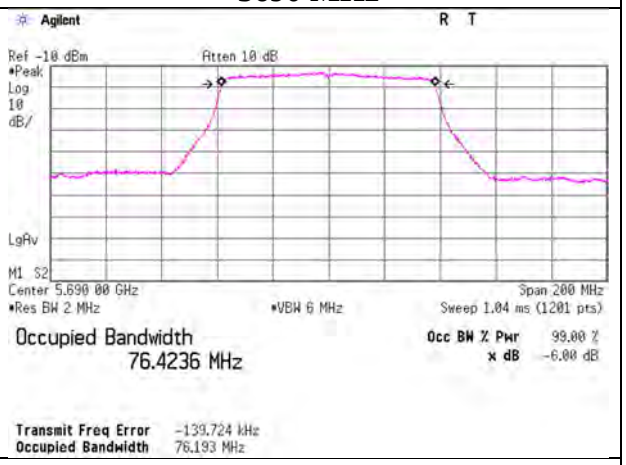
5610 MHz



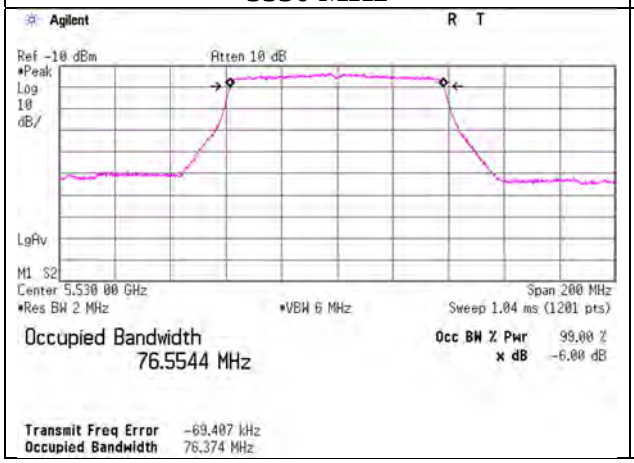
5290 MHz



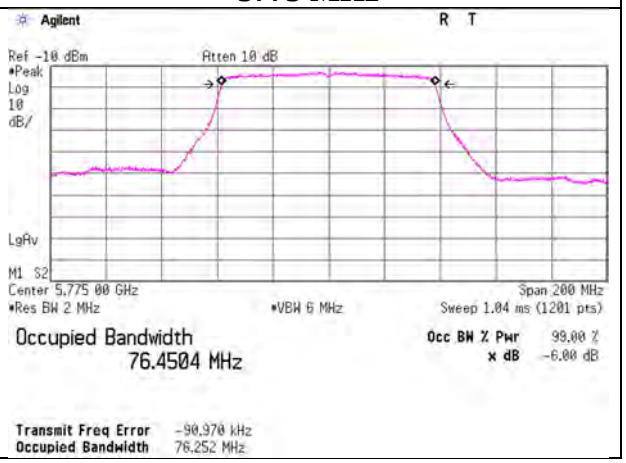
5690 MHz



5530 MHz



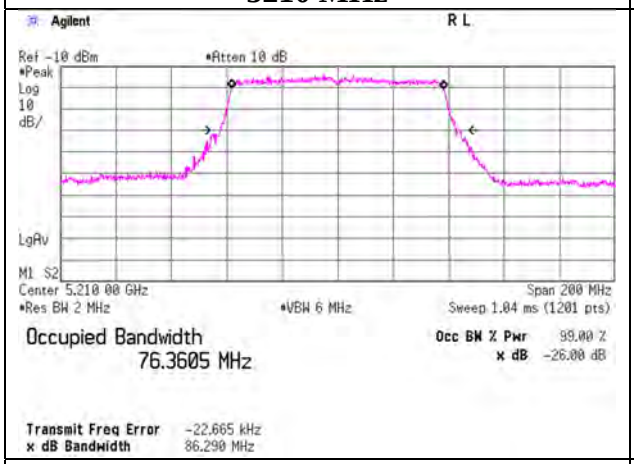
5775 MHz



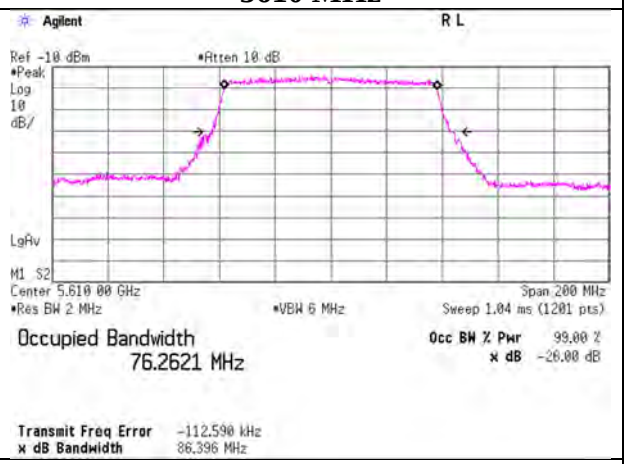
99 % Occupied Bandwidth

11ac-80(MIMO), Chain 1

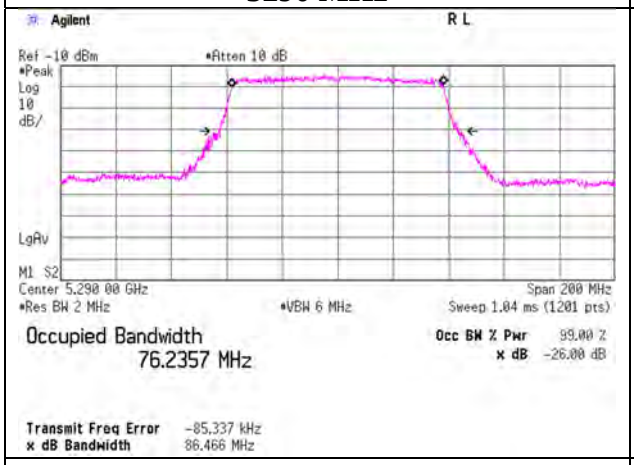
5210 MHz



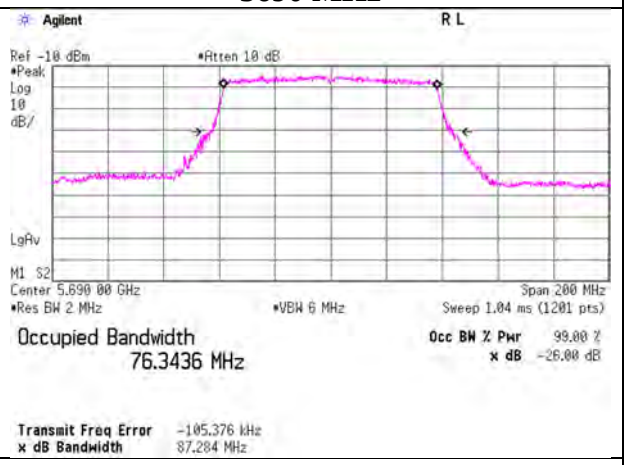
5610 MHz



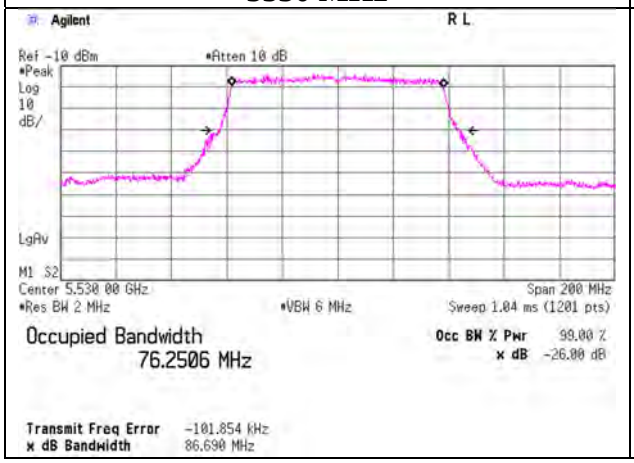
5290 MHz



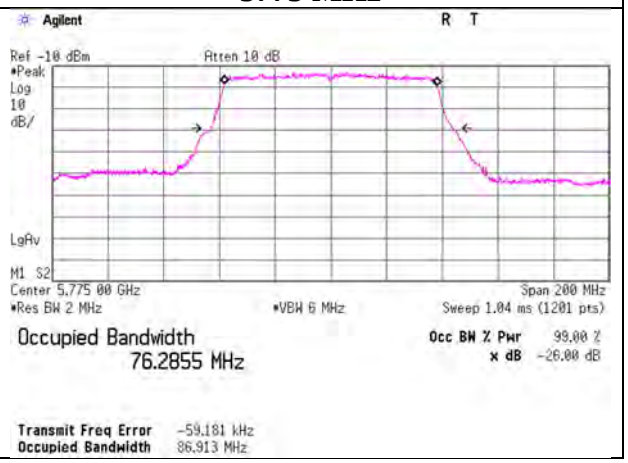
5690 MHz



5530 MHz



5775 MHz



6 dB Bandwidth

Report No.	13977035S-C-R1	
Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	November 4, 2021	November 22, 2021
Temperature / Humidity	25 deg. C / 34 % RH	23 deg. C / 40 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx (measured worst antenna port)	

11a (SISO)

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
Chain 1	5745	15.755	> 0.500
	5785	15.690	> 0.500
	5825	15.723	> 0.500

11n-20 (SISO)

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
Chain 1	5745	17.363	> 0.500
	5785	17.286	> 0.500
	5825	17.570	> 0.500

11ac-20 (SISO)

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
Chain 1	5745	17.446	> 0.500
	5785	17.351	> 0.500
	5825	17.584	> 0.500

11a (CDD)

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
Chain 1	5745	15.751	> 0.500
	5785	15.633	> 0.500
	5825	15.724	> 0.500

11n-20 (CDD)

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
Chain 1	5745	17.566	> 0.500
	5785	17.496	> 0.500
	5825	17.575	> 0.500

11ac-20 (CDD)

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
Chain 1	5745	17.624	> 0.500
	5785	17.638	> 0.500
	5825	17.605	> 0.500

11n-20 (MIMO)

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
Chain 1	5745	17.637	> 0.500
	5785	17.592	> 0.500
	5825	17.611	> 0.500

11ac-20 (MIMO)

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
Chain 1	5745	17.628	> 0.500
	5785	17.357	> 0.500
	5825	17.654	> 0.500

11n-40 (SISO)

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
Chain 1	5755	36.434	> 0.500
	5795	36.452	> 0.500

11ac-40 (SISO)

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
Chain 1	5755	36.475	> 0.500
	5795	36.443	> 0.500

6 dB Bandwidth

Report No.	13977035S-C-R1	
Test place	Shonan EMC Lab. No.5 Shielded Room	
Date	November 4, 2021	November 22, 2021
Temperature / Humidity	25 deg. C / 34 % RH	23 deg. C / 40 % RH
Engineer	Shiro Kobayashi	Shiro Kobayashi
Mode	Tx (measured worst antenna port)	

11n-40 (CDD)

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
Chain 1	5755	36.437	> 0.500
	5795	36.442	> 0.500

11ac-40 (CDD)

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
Chain 1	5755	36.429	> 0.500
	5795	36.442	> 0.500

11n-40 (MIMO)

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
Chain 1	5755	36.412	> 0.500
	5795	36.410	> 0.500

11ac-40 (MIMO)

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
Chain 1	5755	36.021	> 0.500
	5795	35.475	> 0.500

11ac-80 (SISO)

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
Chain 1	5775	76.620	> 0.500

11ac-80 (CDD)

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
Chain 1	5775	76.513	> 0.500

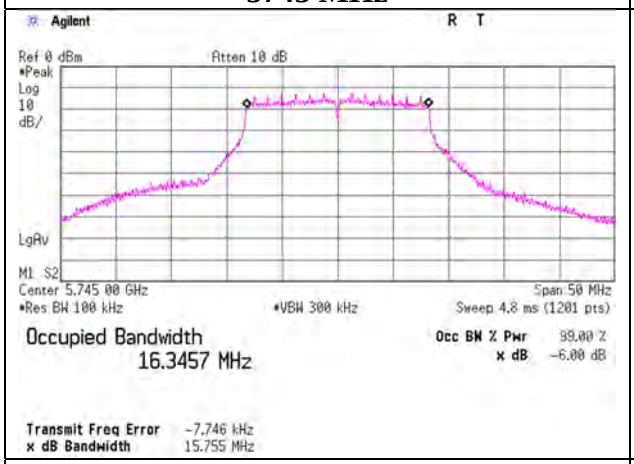
11ac-80 (MIMO)

Antenna	Tested Frequency [MHz]	6 dB Bandwidth [MHz]	Limit [MHz]
Chain 1	5775	76.460	> 0.500

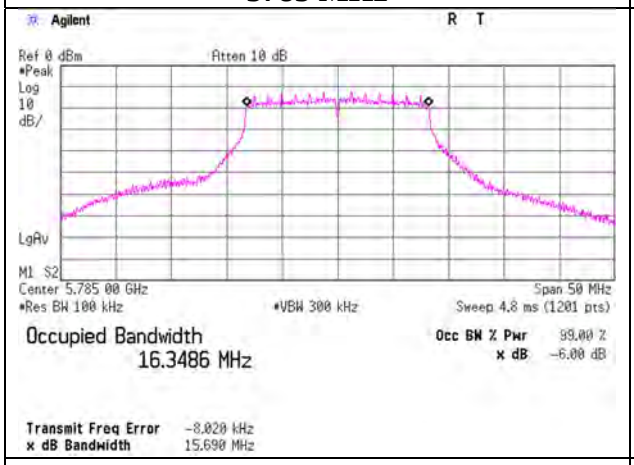
6 dB Bandwidth

11a (SISO), Chain 1

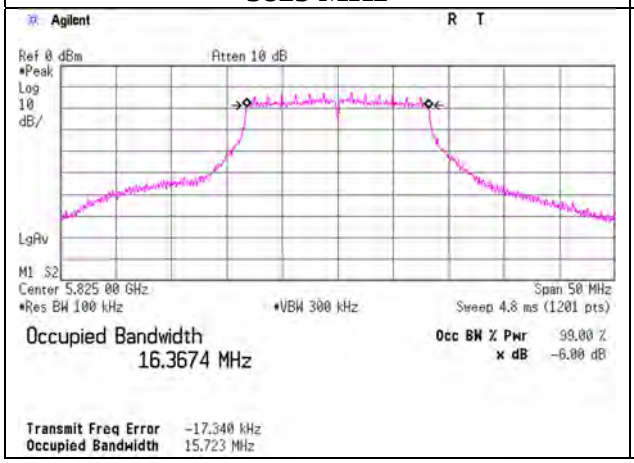
5745 MHz



5785 MHz

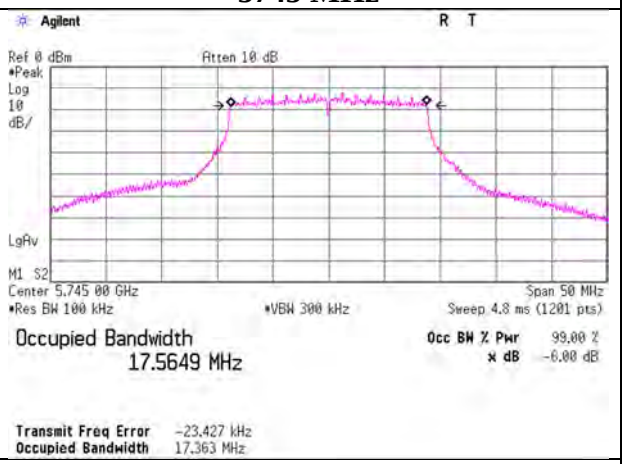


5825 MHz

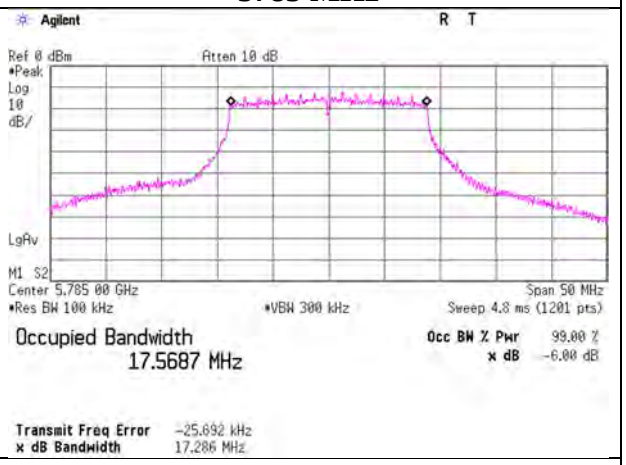


11n-20 (SISO), Chain 1

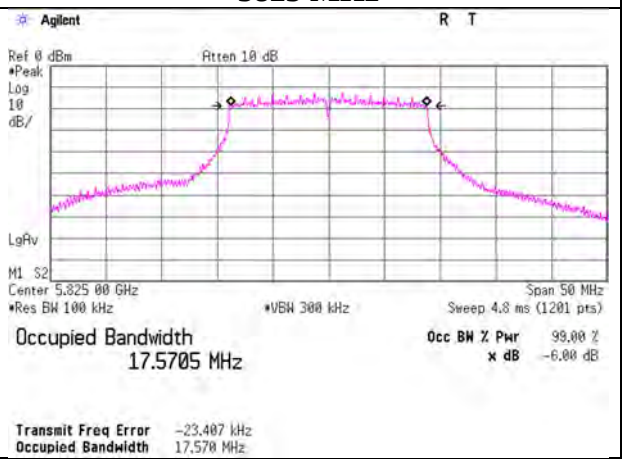
5745 MHz



5785 MHz



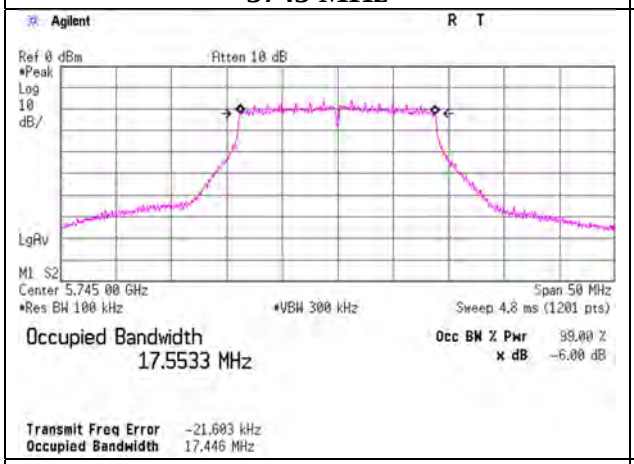
5825 MHz



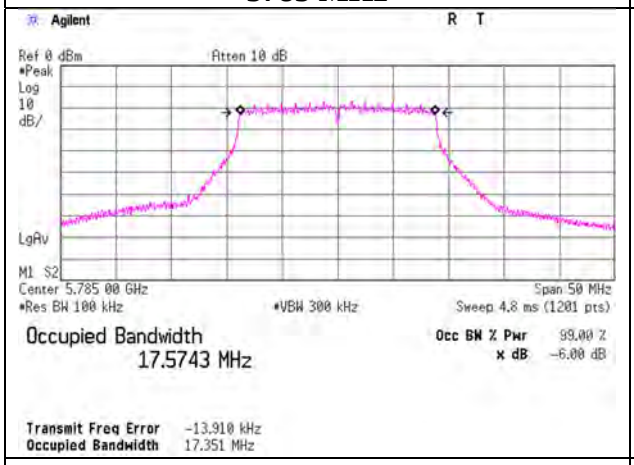
6 dB Bandwidth

11ac-20 (SISO), Chain 1

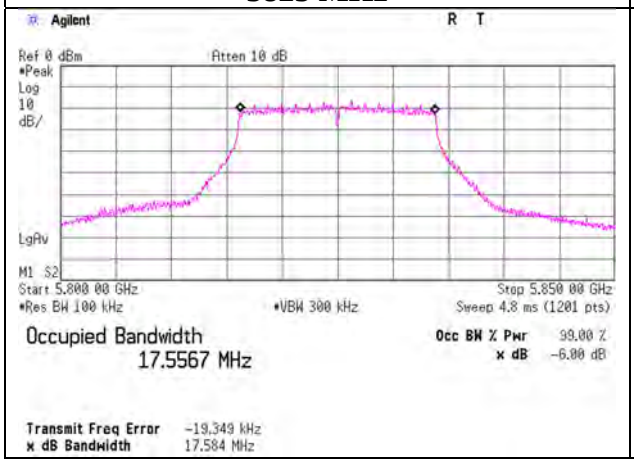
5745 MHz



5785 MHz

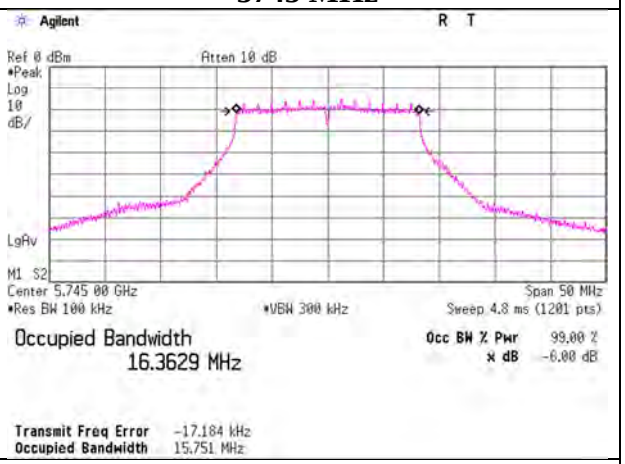


5825 MHz

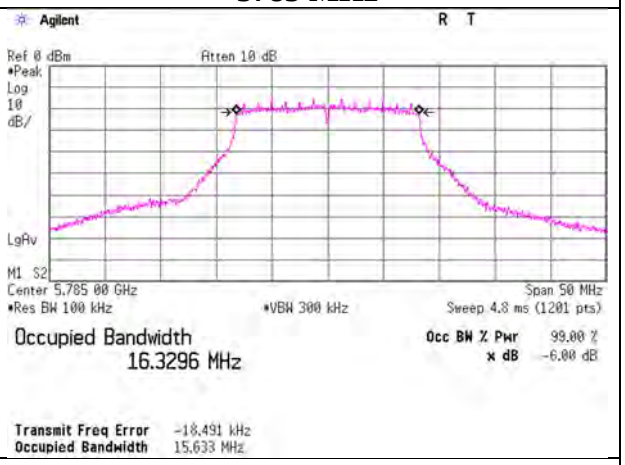


11a (CDD), Chain 1

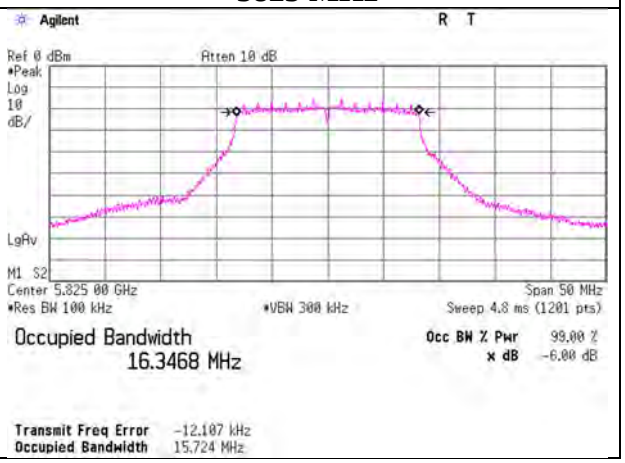
5745 MHz



5785 MHz



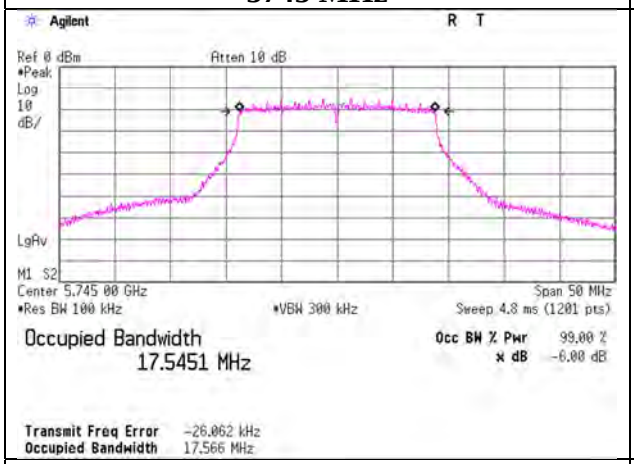
5825 MHz



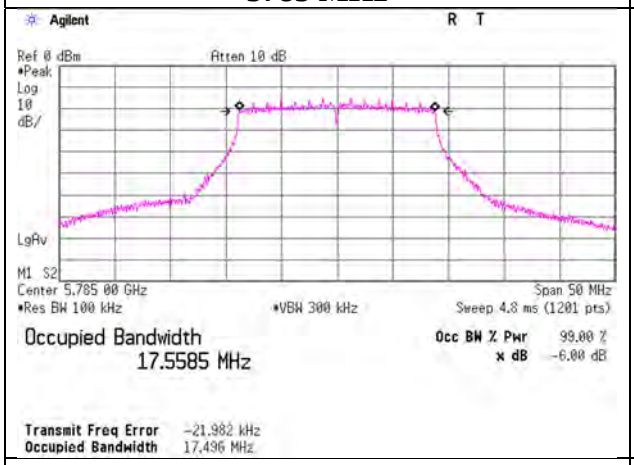
6 dB Bandwidth

11n-20 (CDD), Chain 1

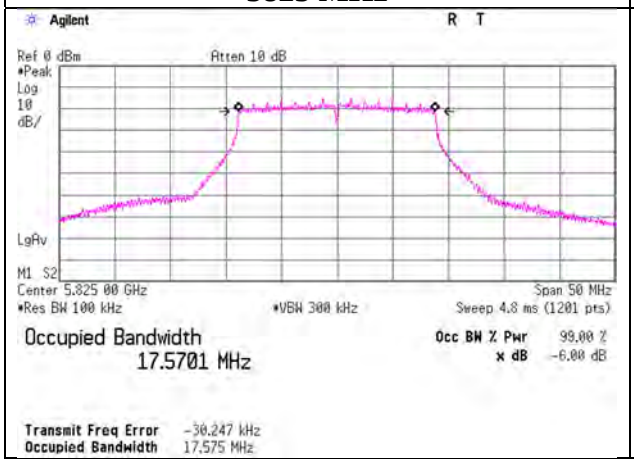
5745 MHz



5785 MHz

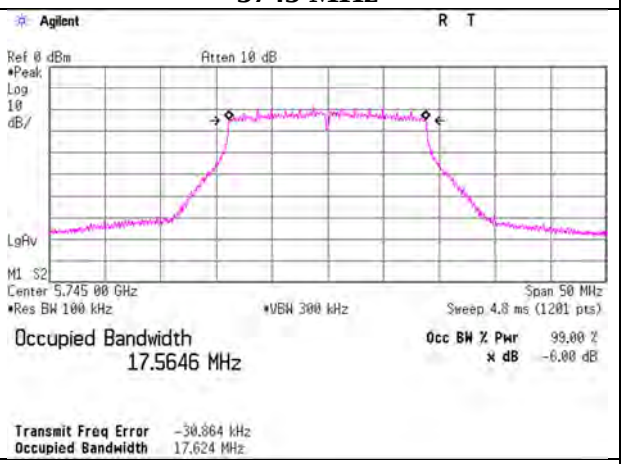


5825 MHz

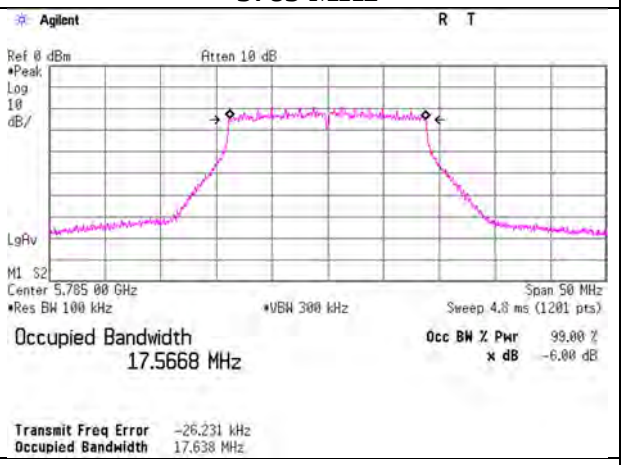


11ac-20 (CDD), Chain 1

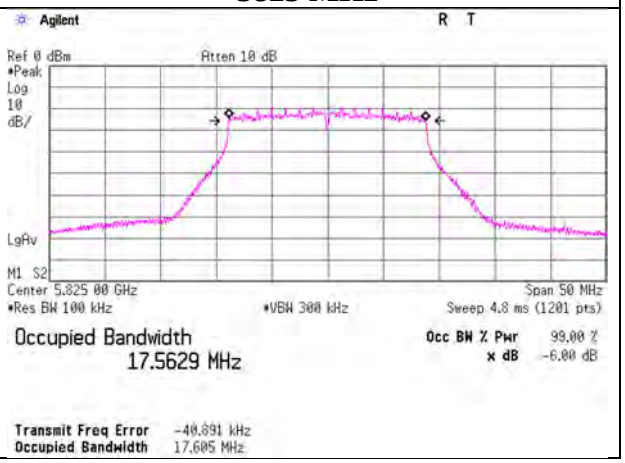
5745 MHz



5785 MHz



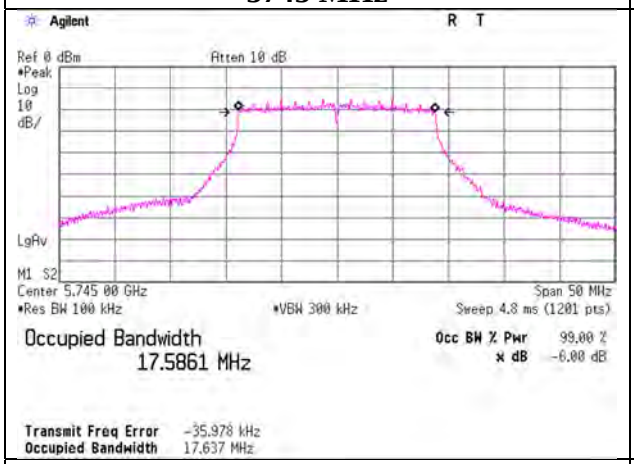
5825 MHz



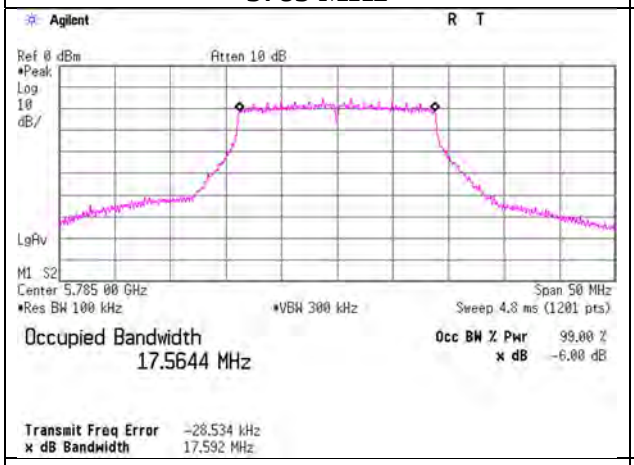
6 dB Bandwidth

11n-20 (MIMO), Chain 1

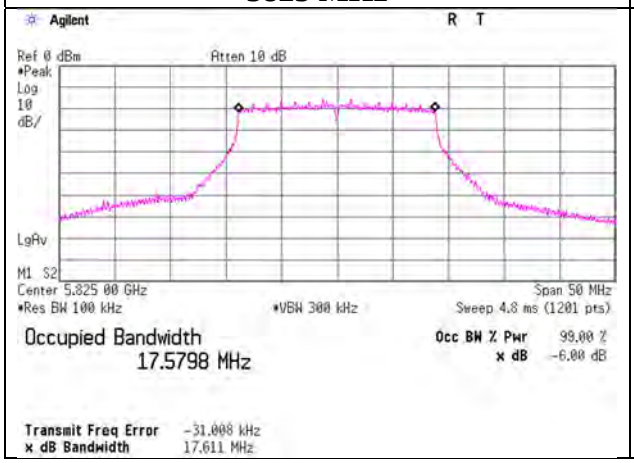
5745 MHz



5785 MHz

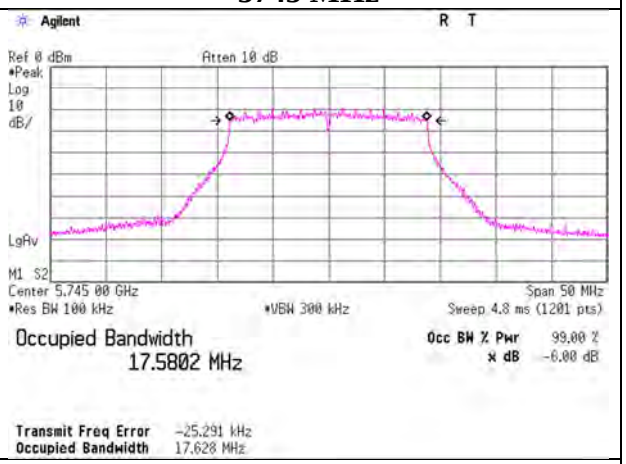


5825 MHz

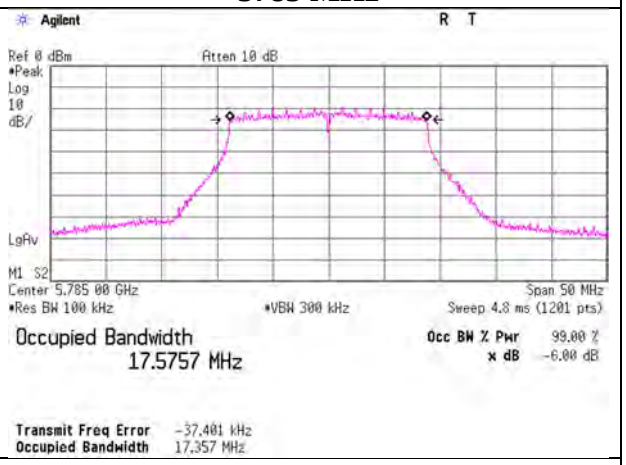


11ac-20 (MIMO), Chain 1

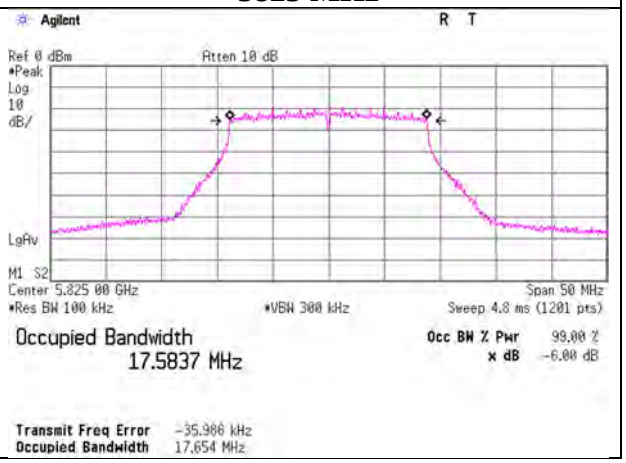
5745 MHz



5785 MHz



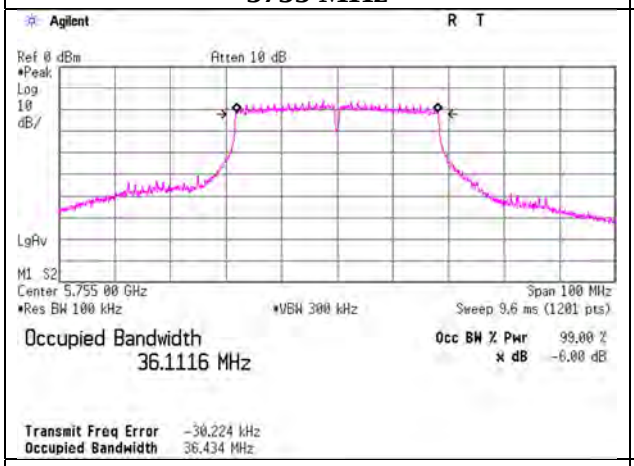
5825 MHz



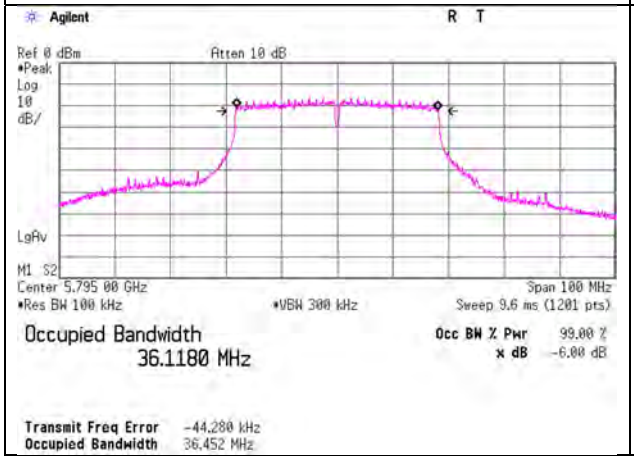
6 dB Bandwidth

11n-40 (SISO), Chain 1

5755 MHz

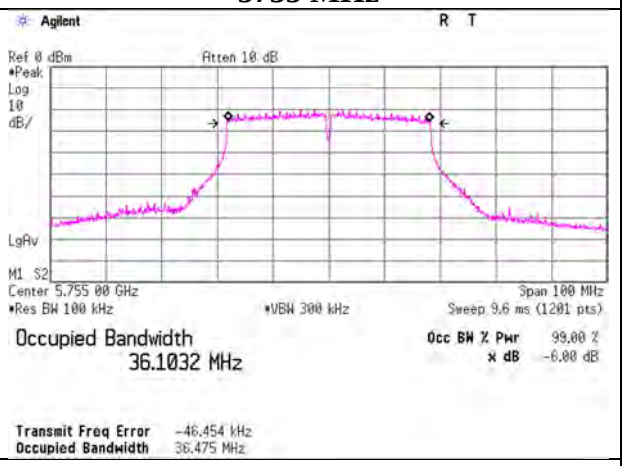


5795 MHz

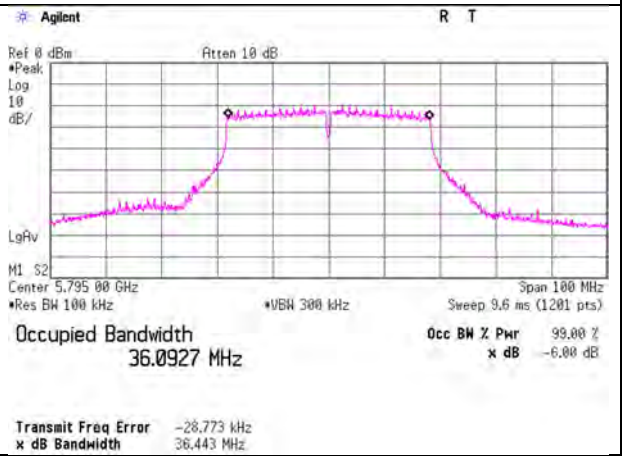


11ac-40 (SISO), Chain 1

5755 MHz



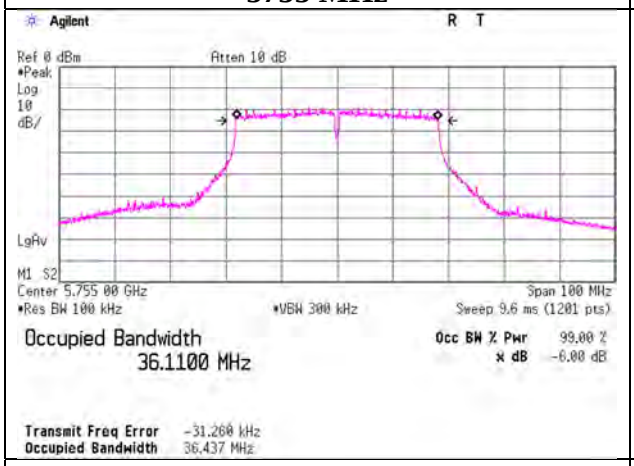
5795 MHz



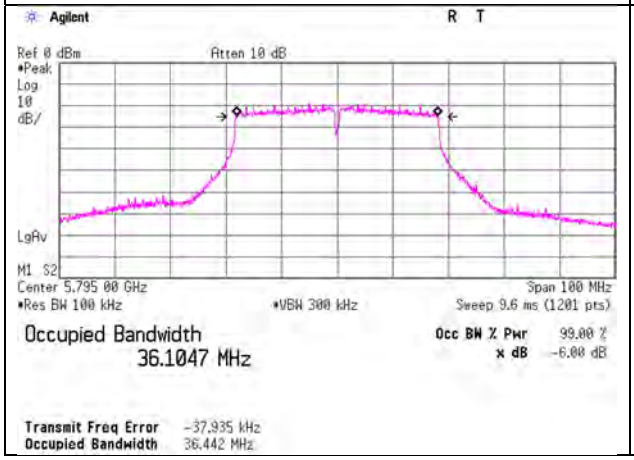
6 dB Bandwidth

11n-40 (CDD), Chain 1

5755 MHz

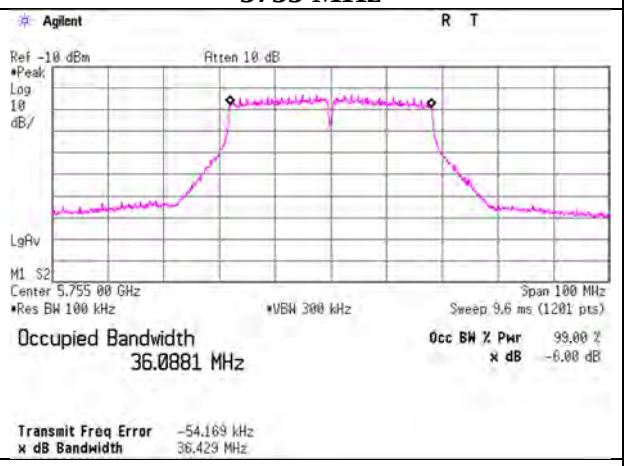


5795 MHz

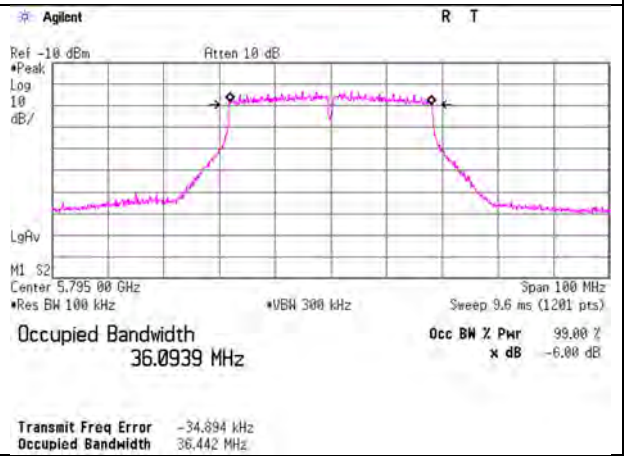


11ac-40 (CDD), Chain 1

5755 MHz



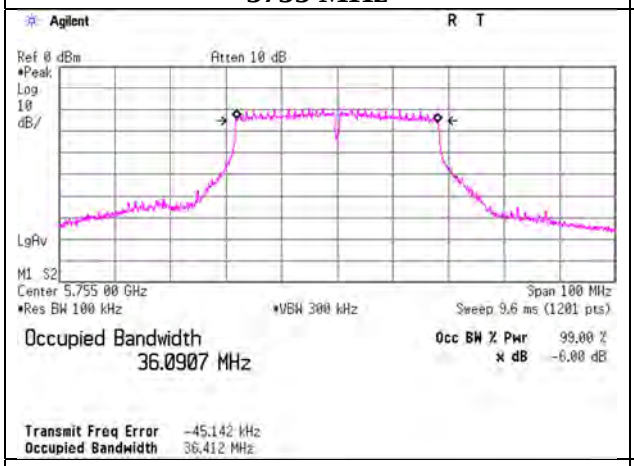
5795 MHz



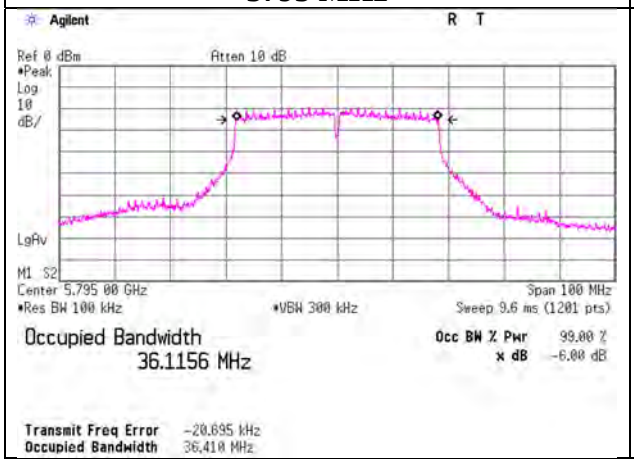
6 dB Bandwidth

11n-40 (MIMO), Chain 1

5755 MHz

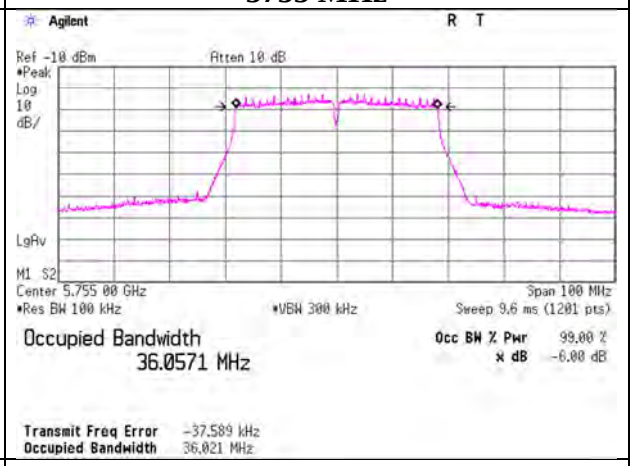


5795 MHz

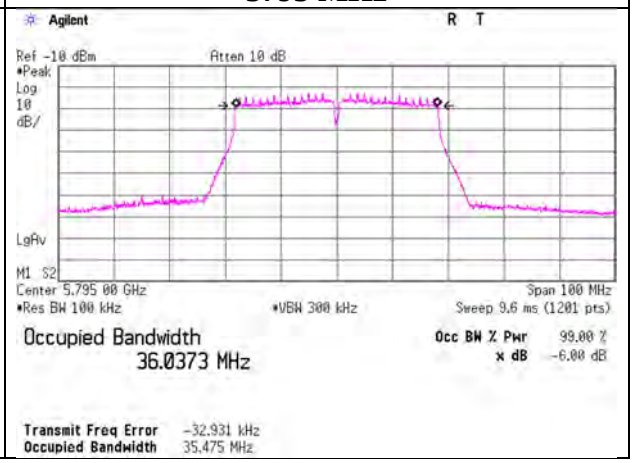


11ac-40 (MIMO), Chain 1

5755 MHz



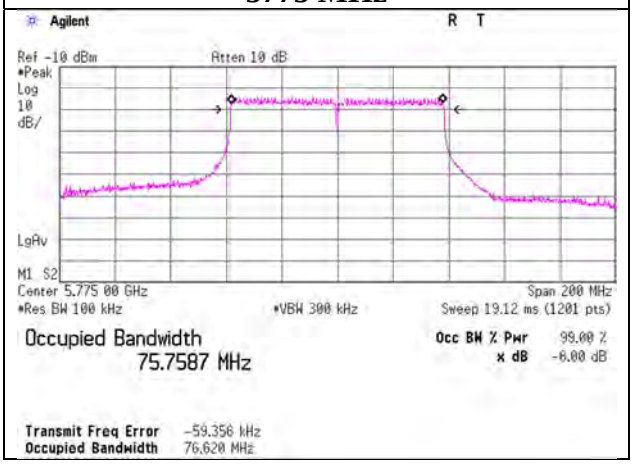
5795 MHz



6 dB Bandwidth

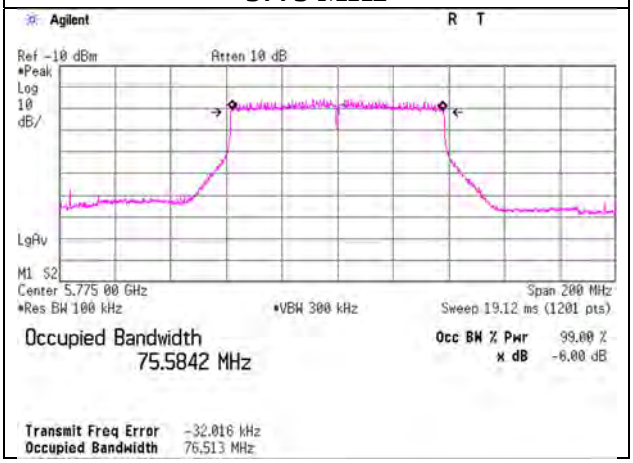
11ac-80 (SISO), Chain 1

5775 MHz



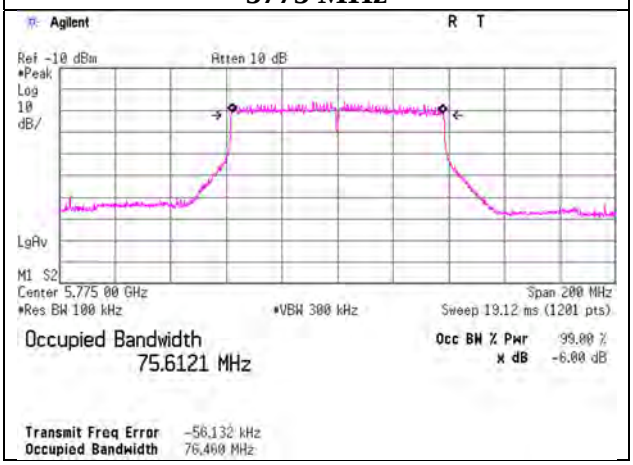
11ac-80 (CDD), Chain 1

5775 MHz



11ac-80 (MIMO), Chain 1

5775 MHz



Maximum Conducted Output Power

Report No.	13977035S-C-R1		
Test place	Shonan EMC Lab. No.1 Measurement Room / No. 5 Shielded Room		
Date	October 21, 2021	October 27, 2021	December 3, 2021
Temperature / Humidity	24 deg. C / 43 % RH	25 deg. C / 37 % RH	24 deg. C / 37 % RH
Engineer	Kenichi Adachi	Kenichi Adachi	Shunsaku Yumi
Mode	Tx 11a (SISO)		

11a (SISO), Chain 1

Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain	26 dB EBW (B for FCC)	99 % OBW (B for ISED)	Conducted Power Result		Conducted Power Limit	Conducted Power Margin	e.i.r.p. Result		e.i.r.p. Limit	e.i.r.p. Margin
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	-2.24	2.61	9.72	2.71	-	16.730	10.09	10.21	23.97	13.88	12.80	19.05	29.97	17.17
5220	-2.46	2.62	9.72	2.71	-	16.779	9.88	9.73	23.97	14.09	12.59	18.16	29.97	17.38
5240	-2.56	2.58	9.72	2.71	-	16.773	9.74	9.42	23.97	14.23	12.45	17.58	29.97	17.52
5260	-2.39	2.60	9.72	2.71	20.326	16.777	9.93	9.84	23.97	14.04	12.64	18.37	29.97	17.33
5300	-2.46	2.61	9.72	2.71	19.720	16.726	9.87	9.71	23.94	14.07	12.58	18.11	29.97	17.39
5320	-2.49	2.62	9.72	2.71	19.788	16.709	9.85	9.66	23.96	14.11	12.56	18.03	29.97	17.41
5500	-2.54	2.71	9.73	2.71	19.582	16.708	9.90	9.77	23.91	14.01	12.61	18.24	29.97	17.36
5580	-2.11	2.70	9.73	2.71	19.779	16.659	10.32	10.76	23.96	13.64	13.03	20.09	29.97	16.94
5700	-1.86	2.71	9.74	2.71	19.888	16.779	10.59	11.46	23.97	13.38	13.30	21.38	29.97	16.67
5720	-2.24	2.71	9.74	2.71	20.020	16.747	10.21	10.50	23.97	13.76	12.92	19.59	29.97	17.05
5745	-1.90	2.71	9.74	2.71	-	16.756	10.55	11.35	30.00	19.45	13.26	21.18	36.00	22.74
5785	-2.05	2.73	9.74	2.71	-	16.786	10.42	11.02	30.00	19.58	13.13	20.56	36.00	22.87
5825	-2.29	2.75	9.74	2.71	-	16.786	10.20	10.47	30.00	19.80	12.91	19.54	36.00	23.09

11a (SISO), Chain 2

Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain	26 dB EBW (B for FCC)	99 % OBW (B for ISED)	Conducted Power Result		Conducted Power Limit	Conducted Power Margin	e.i.r.p. Result		e.i.r.p. Limit	e.i.r.p. Margin
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	-2.51	2.61	9.72	2.71	-	16.730	9.82	9.59	23.97	14.15	12.53	17.91	29.97	17.44
5220	-2.75	2.62	9.72	2.71	-	16.779	9.59	9.10	23.97	14.38	12.30	16.98	29.97	17.67
5240	-2.67	2.58	9.72	2.71	-	16.773	9.63	9.18	23.97	14.34	12.34	17.14	29.97	17.63
5260	-2.56	2.60	9.72	2.71	20.326	16.777	9.76	9.46	23.97	14.21	12.47	17.66	29.97	17.50
5300	-2.65	2.61	9.72	2.71	19.720	16.726	9.68	9.29	23.94	14.26	12.39	17.34	29.97	17.58
5320	-2.92	2.62	9.72	2.71	19.788	16.709	9.42	8.75	23.96	14.54	12.13	16.33	29.97	17.84
5500	-3.47	2.71	9.73	2.71	19.582	16.708	8.97	7.89	23.91	14.94	11.68	14.72	29.97	18.29
5580	-2.83	2.70	9.73	2.71	19.779	16.659	9.60	9.12	23.96	14.36	12.31	17.02	29.97	17.66
5700	-3.04	2.71	9.74	2.71	19.888	16.779	9.41	8.73	23.97	14.56	12.12	16.29	29.97	17.85
5720	-2.95	2.71	9.74	2.71	20.020	16.747	9.50	8.91	23.97	14.47	12.21	16.63	29.97	17.76
5745	-2.57	2.71	9.74	2.71	-	16.756	9.88	9.73	30.00	20.12	12.59	18.16	36.00	23.41
5785	-2.56	2.73	9.74	2.71	-	16.786	9.91	9.79	30.00	20.09	12.62	18.28	36.00	23.38
5825	-2.73	2.75	9.74	2.71	-	16.786	9.76	9.46	30.00	20.24	12.47	17.66	36.00	23.53

Sample Calculation:

Conducted Power Result = Reading + Cable Loss + Atten. Loss

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

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower

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

Maximum Conducted Output Power

Report No.	13977035S-C-R1		
Test place	Shonan EMC Lab. No.1 Measurement Room / No. 5 Shielded Room		
Date	October 21, 2021	October 27, 2021	December 3, 2021
Temperature / Humidity	24 deg. C / 43 % RH	25 deg. C / 37 % RH	24 deg. C / 37 % RH
Engineer	Kenichi Adachi	Kenichi Adachi	Shunsaku Yumi
Mode	Tx 11n-20 (SISO)		

11n-20 (SISO), Chain 1 Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain	26 dB EBW (B for FCC)	99 % OBW (B for ISED)	Conducted Power Result		Conducted Power Limit	Conducted Power Margin	e.i.r.p. Result		e.i.r.p. Limit	e.i.r.p. Margin
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	-2.32	2.61	9.72	2.71	-	17.789	10.01	10.02	23.97	13.96	12.72	18.71	29.97	17.25
5220	-2.51	2.62	9.72	2.71	-	17.788	9.83	9.62	23.97	14.14	12.54	17.95	29.97	17.43
5240	-2.69	2.58	9.72	2.71	-	17.873	9.61	9.14	23.97	14.36	12.32	17.06	29.97	17.65
5260	-2.47	2.60	9.72	2.71	20.512	17.826	9.85	9.66	23.97	14.12	12.56	18.03	29.97	17.41
5300	-2.46	2.61	9.72	2.71	19.956	17.820	9.87	9.71	23.97	14.10	12.58	18.11	29.97	17.39
5320	-2.58	2.62	9.72	2.71	20.052	17.830	9.76	9.46	23.97	14.21	12.47	17.66	29.97	17.50
5500	-2.66	2.71	9.73	2.71	20.586	17.853	9.78	9.51	23.97	14.19	12.49	17.74	29.97	17.48
5580	-2.19	2.70	9.73	2.71	20.446	17.836	10.24	10.57	23.97	13.73	12.95	19.72	29.97	17.02
5700	-2.05	2.71	9.74	2.71	20.301	17.807	10.40	10.96	23.97	13.57	13.11	20.46	29.97	16.86
5720	-2.31	2.71	9.74	2.71	20.407	17.835	10.14	10.33	23.97	13.83	12.85	19.28	29.97	17.12
5745	-2.00	2.71	9.74	2.71	-	17.860	10.45	11.09	30.00	19.55	13.16	20.70	36.00	22.84
5785	-2.13	2.73	9.74	2.71	-	17.853	10.34	10.81	30.00	19.66	13.05	20.18	36.00	22.95
5825	-2.49	2.75	9.74	2.71	-	17.869	10.00	10.00	30.00	20.00	12.71	18.66	36.00	23.29

11n-20 (SISO), Chain 2 Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain	26 dB EBW (B for FCC)	99 % OBW (B for ISED)	Conducted Power Result		Conducted Power Limit	Conducted Power Margin	e.i.r.p. Result		e.i.r.p. Limit	e.i.r.p. Margin
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	-2.72	2.61	9.72	2.71	-	17.789	9.61	9.14	23.97	14.36	12.32	17.06	29.97	17.65
5220	-2.83	2.62	9.72	2.71	-	17.788	9.51	8.93	23.97	14.46	12.22	16.67	29.97	17.75
5240	-2.81	2.58	9.72	2.71	-	17.873	9.49	8.89	23.97	14.48	12.20	16.60	29.97	17.77
5260	-2.67	2.60	9.72	2.71	20.512	17.826	9.65	9.23	23.97	14.32	12.36	17.22	29.97	17.61
5300	-2.73	2.61	9.72	2.71	19.956	17.820	9.60	9.12	23.97	14.37	12.31	17.02	29.97	17.66
5320	-2.97	2.62	9.72	2.71	20.052	17.830	9.37	8.65	23.97	14.60	12.08	16.14	29.97	17.89
5500	-3.55	2.71	9.73	2.71	20.586	17.853	8.89	7.74	23.97	15.08	11.60	14.45	29.97	18.37
5580	-2.93	2.70	9.73	2.71	20.446	17.836	9.50	8.91	23.97	14.47	12.21	16.63	29.97	17.76
5700	-3.09	2.71	9.74	2.71	20.301	17.807	9.36	8.63	23.97	14.61	12.07	16.11	29.97	17.90
5720	-3.09	2.71	9.74	2.71	20.407	17.835	9.36	8.63	23.97	14.61	12.07	16.11	29.97	17.90
5745	-2.64	2.71	9.74	2.71	-	17.860	9.81	9.57	30.00	20.19	12.52	17.86	36.00	23.48
5785	-2.65	2.73	9.74	2.71	-	17.853	9.82	9.59	30.00	20.18	12.53	17.91	36.00	23.47
5825	-2.85	2.75	9.74	2.71	-	17.869	9.64	9.20	30.00	20.36	12.35	17.18	36.00	23.65

Sample Calculation:

Conducted Power Result = Reading + Cable Loss + Atten. Loss

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

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower

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

Maximum Conducted Output Power

Report No.	13977035S-C-R1		
Test place	Shonan EMC Lab. No.1 Measurement Room / No. 5 Shielded Room		
Date	October 21, 2021	October 27, 2021	December 3, 2021
Temperature / Humidity	24 deg. C / 43 % RH	25 deg. C / 37 % RH	24 deg. C / 37 % RH
Engineer	Kenichi Adachi	Kenichi Adachi	Shunsaku Yumi
Mode	Tx 11ac-20 (SISO)		

11ac-20 (SISO), Chain 1 Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain	26 dB EBW (B for FCC)	99 % OBW (B for ISED)	Conducted Power Result		Conducted Power Limit	Conducted Power Margin	e.i.r.p. Result		e.i.r.p. Limit	e.i.r.p. Margin
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	-6.40	2.61	9.72	2.71	-	17.861	5.93	3.92	23.97	18.04	8.64	7.31	29.97	21.33
5220	-6.63	2.62	9.72	2.71	-	17.806	5.71	3.72	23.97	18.26	8.42	6.95	29.97	21.55
5240	-6.77	2.58	9.72	2.71	-	17.820	5.53	3.57	23.97	18.44	8.24	6.67	29.97	21.73
5260	-6.59	2.60	9.72	2.71	20.564	17.812	5.73	3.74	23.97	18.24	8.44	6.98	29.97	21.53
5300	-6.44	2.61	9.72	2.71	20.684	17.806	5.89	3.88	23.97	18.08	8.60	7.24	29.97	21.37
5320	-6.67	2.62	9.72	2.71	20.525	17.797	5.67	3.69	23.97	18.30	8.38	6.89	29.97	21.59
5500	-6.71	2.71	9.73	2.71	20.443	17.822	5.73	3.74	23.97	18.24	8.44	6.98	29.97	21.53
5580	-6.32	2.70	9.73	2.71	20.457	17.850	6.11	4.08	23.97	17.86	8.82	7.62	29.97	21.15
5700	-5.93	2.71	9.74	2.71	20.470	17.808	6.52	4.49	23.97	17.45	9.23	8.38	29.97	20.74
5720	-6.34	2.71	9.74	2.71	20.435	17.843	6.11	4.08	23.97	17.86	8.82	7.62	29.97	21.15
5745	-5.83	2.71	9.74	2.71	-	17.900	6.62	4.59	30.00	23.38	9.33	8.57	36.00	26.67
5785	-6.18	2.73	9.74	2.71	-	17.848	6.29	4.26	30.00	23.71	9.00	7.94	36.00	27.00
5825	-6.34	2.75	9.74	2.71	-	17.877	6.15	4.12	30.00	23.85	8.86	7.69	36.00	27.14

11ac-20 (SISO), Chain 2 Applied limit: 15.407, mobile and portable client device

Tested Frequency	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain	26 dB EBW (B for FCC)	99 % OBW (B for ISED)	Conducted Power Result		Conducted Power Limit	Conducted Power Margin	e.i.r.p. Result		e.i.r.p. Limit	e.i.r.p. Margin
[MHz]	[dBm]	[dB]	[dB]	[dBi]	[MHz]	[MHz]	[dBm]	[mW]	[dBm]	[dB]	[dBm]	[mW]	[dBm]	[dB]
5180	-6.63	2.61	9.72	2.71	-	17.861	5.70	3.72	23.97	18.27	8.41	6.93	29.97	21.56
5220	-6.74	2.62	9.72	2.71	-	17.806	5.60	3.63	23.97	18.37	8.31	6.78	29.97	21.66
5240	-6.93	2.58	9.72	2.71	-	17.820	5.37	3.44	23.97	18.60	8.08	6.43	29.97	21.89
5260	-6.69	2.60	9.72	2.71	20.564	17.812	5.63	3.66	23.97	18.34	8.34	6.82	29.97	21.63
5300	-6.68	2.61	9.72	2.71	20.684	17.806	5.65	3.67	23.97	18.32	8.36	6.85	29.97	21.61
5320	-6.92	2.62	9.72	2.71	20.525	17.797	5.42	3.48	23.97	18.55	8.13	6.50	29.97	21.84
5500	-7.49	2.71	9.73	2.71	20.443	17.822	4.95	3.13	23.97	19.02	7.66	5.83	29.97	22.31
5580	-6.98	2.70	9.73	2.71	20.457	17.850	5.45	3.51	23.97	18.52	8.16	6.55	29.97	21.81
5700	-7.00	2.71	9.74	2.71	20.470	17.808	5.45	3.51	23.97	18.52	8.16	6.55	29.97	21.81
5720	-7.05	2.71	9.74	2.71	20.435	17.843	5.40	3.47	23.97	18.57	8.11	6.47	29.97	21.86
5745	-6.62	2.71	9.74	2.71	-	17.900	5.83	3.83	30.00	24.17	8.54	7.14	36.00	27.46
5785	-6.61	2.73	9.74	2.71	-	17.848	5.86	3.85	30.00	24.14	8.57	7.19	36.00	27.43
5825	-6.79	2.75	9.74	2.71	-	17.877	5.70	3.72	30.00	24.30	8.41	6.93	36.00	27.59

Sample Calculation:

Conducted Power Result = Reading + Cable Loss + Atten. Loss

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

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower

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

Maximum Conducted Output Power

Report No.	13977035S-C-R1	
Test place	Shonan EMC Lab. No.1 Measurement Room / No. 5 Shielded Room	
Date	October 21, 2021	October 27, 2021
Temperature / Humidity	24 deg. C / 43 % RH	25 deg. C / 37 % RH
Engineer	Kenichi Adachi	Kenichi Adachi
Mode	Tx 11a (CDD)	

Chain 1 + Chain 2

Applied limit: 15.407, mobile and portable client device

Tested Frequency	26 dB EBW (B for FCC)	99 % OBW (B for ISED)	Conducted power Chain 1	Chain 2	Sum	Result	Limit	Margin	e.i.r.p. Chain 1	Chain 2	Sum	Result	Limit	Margin
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5180	-	16.760	5.12	4.91	10.03	10.01	23.97	13.96	9.55	9.16	18.71	12.72	29.97	17.25
5220	-	16.749	5.12	5.00	10.12	10.05	23.97	13.92	9.55	9.33	18.88	12.76	29.97	17.21
5240	-	16.773	5.09	4.73	9.82	9.92	23.97	14.05	9.51	8.83	18.34	12.63	29.97	17.34
5260	19.596	16.737	4.85	4.52	9.37	9.72	23.92	14.20	9.06	8.43	17.49	12.43	29.97	17.54
5300	19.346	16.780	4.76	4.58	9.35	9.71	23.86	14.15	8.89	8.55	17.44	12.42	29.97	17.55
5320	19.293	16.719	4.75	4.47	9.22	9.65	23.85	14.20	8.87	8.34	17.21	12.36	29.97	17.61
5500	20.061	16.784	4.79	3.78	8.57	9.33	23.97	14.64	8.93	7.06	16.00	12.04	29.97	17.93
5580	19.990	16.756	5.26	4.11	9.37	9.72	23.97	14.25	9.82	7.67	17.49	12.43	29.97	17.54
5700	19.731	16.750	5.58	4.52	10.10	10.04	23.95	13.91	10.42	8.43	18.86	12.75	29.97	17.22
5720	19.621	16.701	5.16	4.17	9.33	9.70	23.92	14.22	9.64	7.78	17.42	12.41	29.97	17.56
5745	-	16.754	5.79	4.74	10.54	10.23	30.00	19.77	10.81	8.85	19.67	12.94	36.00	23.06
5785	-	16.743	5.48	5.12	10.60	10.25	30.00	19.75	10.23	9.55	19.78	12.96	36.00	23.04
5825	-	16.813	5.26	4.69	9.95	9.98	30.00	20.02	9.82	8.75	18.57	12.69	36.00	23.31

		Chain 1						Chain 2					
Tested Frequency	Duty Factor	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	0.00	-5.24	2.61	9.72	2.71	7.09	9.80	-5.42	2.61	9.72	2.71	6.91	9.62
5220	0.00	-5.25	2.62	9.72	2.71	7.09	9.80	-5.35	2.62	9.72	2.71	6.99	9.70
5240	0.00	-5.23	2.58	9.72	2.71	7.07	9.78	-5.55	2.58	9.72	2.71	6.75	9.46
5260	0.00	-5.46	2.60	9.72	2.71	6.86	9.57	-5.77	2.60	9.72	2.71	6.55	9.26
5300	0.00	-5.55	2.61	9.72	2.71	6.78	9.49	-5.72	2.61	9.72	2.71	6.61	9.32
5320	0.00	-5.57	2.62	9.72	2.71	6.77	9.48	-5.84	2.62	9.72	2.71	6.50	9.21
5500	0.00	-5.64	2.71	9.73	2.71	6.80	9.51	-6.66	2.71	9.73	2.71	5.78	8.49
5580	0.00	-5.22	2.70	9.73	2.71	7.21	9.92	-6.29	2.70	9.73	2.71	6.14	8.85
5700	0.00	-4.98	2.71	9.74	2.71	7.47	10.18	-5.90	2.71	9.74	2.71	6.55	9.26
5720	0.00	-5.32	2.71	9.74	2.71	7.13	9.84	-6.25	2.71	9.74	2.71	6.20	8.91
5745	0.00	-4.82	2.71	9.74	2.71	7.63	10.34	-5.69	2.71	9.74	2.71	6.76	9.47
5785	0.00	-5.08	2.73	9.74	2.71	7.39	10.10	-5.38	2.73	9.74	2.71	7.09	9.80
5825	0.00	-5.28	2.75	9.74	2.71	7.21	9.92	-5.78	2.75	9.74	2.71	6.71	9.42

Sample Calculation:

Conducted Power Result = Reading + Cable Loss + Atten. Loss

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

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

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

N_{ANT}(number of transmit antennas) = 2

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower

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

Maximum Conducted Output Power

Report No.	13977035S-C-R1	
Test place	Shonan EMC Lab. No.1 Measurement Room / No. 5 Shielded Room	
Date	October 22, 2021	November 18, 2021
Temperature / Humidity	23 deg. C / 33 % RH	23 deg. C / 42 % RH
Engineer	Kenichi Adachi	Hiromasa Sato
Mode	Tx 11n-20 (CDD)	

Chain 1 + Chain 2

Applied limit: 15.407, mobile and portable client device

Tested Frequency	26 dB EBW (B for FCC)	99 % OBW (B for ISED)	Conducted power Chain 1	Chain 2	Sum	Result	Limit	Margin	e.i.r.p. Chain 1	Chain 2	Sum	Result	Limit	Margin
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5180	-	17.842	5.09	4.81	9.90	9.96	23.97	14.01	9.51	8.97	18.48	12.67	29.97	17.30
5220	-	17.840	5.18	4.50	9.67	9.86	23.97	14.11	9.66	8.39	18.06	12.57	29.97	17.40
5240	-	17.860	4.98	4.65	9.62	9.83	23.97	14.14	9.29	8.67	17.96	12.54	29.97	17.43
5260	20.661	17.851	4.59	4.29	8.88	9.48	23.97	14.49	8.57	8.00	16.57	12.19	29.97	17.78
5300	20.597	17.846	4.57	4.31	8.88	9.48	23.97	14.49	8.53	8.04	16.57	12.19	29.97	17.78
5320	20.573	17.855	4.51	4.21	8.72	9.40	23.97	14.57	8.41	7.85	16.27	12.11	29.97	17.86
5500	20.745	17.846	4.63	3.58	8.22	9.15	23.97	14.82	8.65	6.68	15.33	11.86	29.97	18.11
5580	20.772	17.845	5.04	3.93	8.96	9.52	23.97	14.45	9.40	7.33	16.73	12.23	29.97	17.74
5700	20.482	17.842	5.41	4.10	9.51	9.78	23.97	14.19	10.09	7.66	17.75	12.49	29.97	17.48
5720	20.603	17.861	5.13	3.92	9.05	9.56	23.97	14.41	9.57	7.31	16.88	12.27	29.97	17.70
5745	-	17.844	5.66	4.54	10.20	10.09	30.00	19.91	10.57	8.47	19.04	12.80	36.00	23.20
5785	-	17.865	5.42	4.81	10.23	10.10	30.00	19.90	10.12	8.97	19.09	12.81	36.00	23.19
5825	-	17.844	5.32	4.39	9.71	9.87	30.00	20.13	9.93	8.18	18.12	12.58	36.00	23.42

		Chain 1						Chain 2					
Tested Frequency	Duty Factor	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	0.00	-5.26	2.61	9.72	2.71	7.07	9.78	-5.51	2.61	9.72	2.71	6.82	9.53
5220	0.00	-5.20	2.62	9.72	2.71	7.14	9.85	-5.81	2.62	9.72	2.71	6.53	9.24
5240	0.00	-5.33	2.58	9.72	2.71	6.97	9.68	-5.63	2.58	9.72	2.71	6.67	9.38
5260	0.00	-5.70	2.60	9.72	2.71	6.62	9.33	-6.00	2.60	9.72	2.71	6.32	9.03
5300	0.00	-5.73	2.61	9.72	2.71	6.60	9.31	-5.99	2.61	9.72	2.71	6.34	9.05
5320	0.00	-5.80	2.62	9.72	2.71	6.54	9.25	-6.10	2.62	9.72	2.71	6.24	8.95
5500	0.00	-5.78	2.71	9.73	2.71	6.66	9.37	-6.90	2.71	9.73	2.71	5.54	8.25
5580	0.00	-5.41	2.70	9.73	2.71	7.02	9.73	-6.49	2.70	9.73	2.71	5.94	8.65
5700	0.00	-5.12	2.71	9.74	2.71	7.33	10.04	-6.32	2.71	9.74	2.71	6.13	8.84
5720	0.00	-5.35	2.71	9.74	2.71	7.10	9.81	-6.52	2.71	9.74	2.71	5.93	8.64
5745	0.00	-4.92	2.71	9.74	2.71	7.53	10.24	-5.88	2.71	9.74	2.71	6.57	9.28
5785	0.00	-5.13	2.73	9.74	2.71	7.34	10.05	-5.65	2.73	9.74	2.71	6.82	9.53
5825	0.00	-5.23	2.75	9.74	2.71	7.26	9.97	-6.07	2.75	9.74	2.71	6.42	9.13

Sample Calculation:

Conducted Power Result = Reading + Cable Loss + Atten. Loss

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

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

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

N_{ANT}(number of transmit antennas) = 2

Conducted Power Limit (5470 MHz-5600 MHz, 5650 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower

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

Maximum Conducted Output Power

Report No.	13977035S-C-R1	
Test place	Shonan EMC Lab. No.1 Measurement Room / No. 5 Shielded Room	
Date	October 22, 2021	November 18, 2021
Temperature / Humidity	23 deg. C / 33 % RH	23 deg. C / 42 % RH
Engineer	Kenichi Adachi	Hiromasa Sato
Mode	Tx 11ac-20 (CDD)	

Chain 1 + Chain 2

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	26 dB EBW (B for FCC) [MHz]	99 % OBW (B for ISED) [MHz]	Conducted power Chain 1 [mW]	Chain 2 [mW]	Sum [mW]	Result [dBm]	Limit [dBm]	Margin [dB]	e.i.r.p. Chain 1 [mW]	Chain 2 [mW]	Sum [mW]	Result [dBm]	Limit [dBm]	Margin [dB]
5180	-	17.900	2.19	1.92	4.12	6.14	23.97	17.83	4.09	3.59	7.68	8.85	29.97	21.12
5220	-	17.898	2.07	1.87	3.94	5.96	23.97	18.01	3.87	3.48	7.36	8.67	29.97	21.30
5240	-	17.903	2.08	1.81	3.89	5.90	23.97	18.07	3.89	3.37	7.26	8.61	29.97	21.36
5260	20.533	17.879	1.96	1.72	3.68	5.66	23.97	18.31	3.66	3.21	6.87	8.37	29.97	21.60
5300	20.524	17.899	2.02	1.77	3.79	5.78	23.97	18.19	3.77	3.30	7.07	8.49	29.97	21.48
5320	20.547	17.904	1.92	1.76	3.68	5.66	23.97	18.31	3.59	3.28	6.87	8.37	29.97	21.60
5500	20.496	17.899	1.98	1.44	3.42	5.34	23.97	18.63	3.70	2.69	6.38	8.05	29.97	21.92
5580	20.525	17.885	2.11	1.57	3.68	5.66	23.97	18.31	3.94	2.93	6.87	8.37	29.97	21.60
5700	20.622	17.897	2.24	1.64	3.88	5.88	23.97	18.09	4.18	3.05	7.23	8.59	29.97	21.38
5720	20.549	17.906	2.10	1.53	3.64	5.61	23.97	18.36	3.93	2.86	6.79	8.32	29.97	21.65
5745	-	17.862	2.31	1.79	4.10	6.13	30.00	23.87	4.32	3.34	7.66	8.84	36.00	27.16
5785	-	17.900	2.24	1.92	4.16	6.19	30.00	23.81	4.18	3.59	7.77	8.90	36.00	27.10
5825	-	17.898	2.19	1.77	3.96	5.97	30.00	24.03	4.08	3.30	7.39	8.68	36.00	27.32

		Chain 1						Chain 2					
Tested Frequency [MHz]	Duty Factor [dB]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Directional Gain [dBi]	Result Cond. Power [dBm]	Result e.i.r.p. [dBm]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Directional Gain [dBi]	Result Cond. Power [dBm]	Result e.i.r.p. [dBm]
5180	0.00	-8.92	2.61	9.72	2.71	3.41	6.12	-9.49	2.61	9.72	2.71	2.84	5.55
5220	0.00	-9.17	2.62	9.72	2.71	3.17	5.88	-9.63	2.62	9.72	2.71	2.71	5.42
5240	0.00	-9.11	2.58	9.72	2.71	3.19	5.90	-9.73	2.58	9.72	2.71	2.57	5.28
5260	0.00	-9.40	2.60	9.72	2.71	2.92	5.63	-9.96	2.60	9.72	2.71	2.36	5.07
5300	0.00	-9.28	2.61	9.72	2.71	3.05	5.76	-9.85	2.61	9.72	2.71	2.48	5.19
5320	0.00	-9.50	2.62	9.72	2.71	2.84	5.55	-9.89	2.62	9.72	2.71	2.45	5.16
5500	0.00	-9.47	2.71	9.73	2.71	2.97	5.68	-10.86	2.71	9.73	2.71	1.58	4.29
5580	0.00	-9.19	2.70	9.73	2.71	3.24	5.95	-10.47	2.70	9.73	2.71	1.96	4.67
5700	0.00	-8.95	2.71	9.74	2.71	3.50	6.21	-10.31	2.71	9.74	2.71	2.14	4.85
5720	0.00	-9.22	2.71	9.74	2.71	3.23	5.94	-10.59	2.71	9.74	2.71	1.86	4.57
5745	0.00	-8.81	2.71	9.74	2.71	3.64	6.35	-9.92	2.71	9.74	2.71	2.53	5.24
5785	0.00	-8.97	2.73	9.74	2.71	3.50	6.21	-9.63	2.73	9.74	2.71	2.84	5.55
5825	0.00	-9.09	2.75	9.74	2.71	3.40	6.11	-10.01	2.75	9.74	2.71	2.48	5.19

Sample Calculation:

Conducted Power Result = Reading + Cable Loss + Atten. Loss

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

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

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

N_{ANT}(number of transmit antennas) = 2

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower

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

Maximum Conducted Output Power

Report No.	13977035S-C-R1	
Test place	Shonan EMC Lab. No.1 Measurement Room / No. 5 Shielded Room	
Date	October 22, 2021	October 28, 2021
Temperature / Humidity	23 deg. C / 33 % RH	24 deg. C / 46 % RH
Engineer	Kenichi Adachi	Kenichi Adachi
Mode	Tx 11n-20 (MIMO)	

Chain 1 + Chain 2

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	26 dB EBW (B for FCC) [MHz]	99 % OBW (B for ISED) [MHz]	Conducted power Chain 1 [mW]	Chain 2 [mW]	Sum [mW]	Result [dBm]	Limit [dBm]	Margin [dB]	e.i.r.p. Chain 1 [mW]	Chain 2 [mW]	Sum [mW]	Result [dBm]	Limit [dBm]	Margin [dB]
5180	-	17.808	5.11	4.88	9.98	9.99	23.97	13.98	9.53	9.10	18.63	12.70	29.97	17.27
5220	-	17.800	5.27	5.12	10.39	10.17	23.97	13.80	9.84	9.55	19.39	12.88	29.97	17.09
5240	-	17.841	5.09	4.97	10.06	10.03	23.97	13.94	9.51	9.27	18.77	12.74	29.97	17.23
5260	20.520	17.799	4.80	4.20	8.99	9.54	23.97	14.43	8.95	7.83	16.79	12.25	29.97	17.72
5300	20.361	17.837	4.76	4.34	9.10	9.59	23.97	14.38	8.89	8.09	16.98	12.30	29.97	17.67
5320	20.385	17.886	4.76	4.23	8.99	9.54	23.97	14.43	8.89	7.89	16.78	12.25	29.97	17.72
5500	20.127	17.810	4.79	3.67	8.46	9.27	23.97	14.70	8.93	6.85	15.79	11.98	29.97	17.99
5580	20.653	17.780	5.26	4.29	9.55	9.80	23.97	14.17	9.82	8.00	17.82	12.51	29.97	17.46
5700	20.369	17.848	5.61	4.50	10.11	10.05	23.97	13.92	10.47	8.39	18.87	12.76	29.97	17.21
5720	20.280	17.807	5.12	4.21	9.32	9.70	23.97	14.27	9.55	7.85	17.40	12.41	29.97	17.56
5745	-	17.909	5.87	4.72	10.60	10.25	30.00	19.75	10.96	8.81	19.78	12.96	36.00	23.04
5785	-	17.909	5.48	5.05	10.53	10.22	30.00	19.78	10.23	9.42	19.65	12.93	36.00	23.07
5825	-	17.908	5.35	4.54	9.89	9.95	30.00	20.05	9.98	8.47	18.45	12.66	36.00	23.34

		Chain 1						Chain 2					
Tested Frequency [MHz]	Duty Factor [dB]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	Result Cond. Power [dBm]	Result e.i.r.p. [dBm]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	Result Cond. Power [dBm]	Result e.i.r.p. [dBm]
5180	0.00	-5.25	2.61	9.72	2.71	7.08	9.79	-5.45	2.61	9.72	2.71	6.88	9.59
5220	0.00	-5.12	2.62	9.72	2.71	7.22	9.93	-5.25	2.62	9.72	2.71	7.09	9.80
5240	0.00	-5.23	2.58	9.72	2.71	7.07	9.78	-5.34	2.58	9.72	2.71	6.96	9.67
5260	0.00	-5.51	2.60	9.72	2.71	6.81	9.52	-6.09	2.60	9.72	2.71	6.23	8.94
5300	0.00	-5.55	2.61	9.72	2.71	6.78	9.49	-5.96	2.61	9.72	2.71	6.37	9.08
5320	0.00	-5.56	2.62	9.72	2.71	6.78	9.49	-6.08	2.62	9.72	2.71	6.26	8.97
5500	0.00	-5.64	2.71	9.73	2.71	6.80	9.51	-6.79	2.71	9.73	2.71	5.65	8.36
5580	0.00	-5.22	2.70	9.73	2.71	7.21	9.92	-6.11	2.70	9.73	2.71	6.32	9.03
5700	0.00	-4.96	2.71	9.74	2.71	7.49	10.20	-5.92	2.71	9.74	2.71	6.53	9.24
5720	0.00	-5.36	2.71	9.74	2.71	7.09	9.80	-6.21	2.71	9.74	2.71	6.24	8.95
5745	0.00	-4.76	2.71	9.74	2.71	7.69	10.40	-5.71	2.71	9.74	2.71	6.74	9.45
5785	0.00	-5.08	2.73	9.74	2.71	7.39	10.10	-5.44	2.73	9.74	2.71	7.03	9.74
5825	0.00	-5.21	2.75	9.74	2.71	7.28	9.99	-5.92	2.75	9.74	2.71	6.57	9.28

Sample Calculation:

Conducted Power Result = Reading + Cable Loss + Atten. Loss

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

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower

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

Maximum Conducted Output Power

Report No.	13977035S-C-R1	
Test place	Shonan EMC Lab. No.1 Measurement Room / No. 5 Shielded Room	
Date	October 22, 2021	October 28, 2021
Temperature / Humidity	23 deg. C / 33 % RH	24 deg. C / 46 % RH
Engineer	Kenichi Adachi	Kenichi Adachi
Mode	Tx 11ac-20 (MIMO)	

Chain 1 + Chain 2

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	26 dB EBW (B for FCC) [MHz]	99 % OBW (B for ISED) [MHz]	Conducted power Chain 1 [mW]	Chain 2 [mW]	Sum [mW]	Result [dBm]	Limit [dBm]	Margin [dB]	e.i.r.p. Chain 1 [mW]	Chain 2 [mW]	Sum [mW]	Result [dBm]	Limit [dBm]	Margin [dB]
5180	-	17.904	2.17	2.06	4.23	6.26	23.97	17.71	4.06	3.84	7.89	8.97	29.97	21.00
5220	-	17.851	2.22	2.01	4.23	6.27	23.97	17.70	4.14	3.76	7.90	8.98	29.97	20.99
5240	-	17.853	2.18	1.95	4.14	6.17	23.97	17.80	4.07	3.65	7.72	8.88	29.97	21.09
5260	20.439	17.872	2.05	1.85	3.90	5.91	23.97	18.06	3.83	3.44	7.27	8.62	29.97	21.35
5300	20.602	17.784	2.03	1.86	3.89	5.90	23.97	18.07	3.79	3.47	7.26	8.61	29.97	21.36
5320	20.216	17.774	2.00	1.82	3.82	5.82	23.97	18.15	3.74	3.39	7.13	8.53	29.97	21.44
5500	20.377	17.826	2.08	1.55	3.63	5.60	23.97	18.37	3.88	2.89	6.77	8.31	29.97	21.66
5580	20.501	17.780	2.22	1.72	3.94	5.95	23.97	18.02	4.14	3.21	7.35	8.66	29.97	21.31
5700	20.173	17.847	2.34	1.83	4.17	6.20	23.97	17.77	4.37	3.41	7.78	8.91	29.97	21.06
5720	20.489	17.808	2.15	1.64	3.80	5.79	23.97	18.18	4.02	3.07	7.09	8.50	29.97	21.47
5745	-	17.886	2.42	1.94	4.36	6.39	30.00	23.61	4.52	3.61	8.13	9.10	36.00	26.90
5785	-	17.858	2.29	2.07	4.35	6.39	30.00	23.61	4.27	3.85	8.12	9.10	36.00	26.90
5825	-	17.906	2.19	1.81	4.00	6.03	30.00	23.97	4.09	3.38	7.47	8.74	36.00	27.26

		Chain 1						Chain 2					
Tested Frequency [MHz]	Duty Factor [dB]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	Result Cond. Power [dBm]	Result e.i.r.p. [dBm]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	Result Cond. Power [dBm]	Result e.i.r.p. [dBm]
5180	0.00	-8.96	2.61	9.72	2.71	3.37	6.08	-9.20	2.61	9.72	2.71	3.13	5.84
5220	0.00	-8.88	2.62	9.72	2.71	3.46	6.17	-9.30	2.62	9.72	2.71	3.04	5.75
5240	0.00	-8.91	2.58	9.72	2.71	3.39	6.10	-9.39	2.58	9.72	2.71	2.91	5.62
5260	0.00	-9.20	2.60	9.72	2.71	3.12	5.83	-9.66	2.60	9.72	2.71	2.66	5.37
5300	0.00	-9.25	2.61	9.72	2.71	3.08	5.79	-9.64	2.61	9.72	2.71	2.69	5.40
5320	0.00	-9.32	2.62	9.72	2.71	3.02	5.73	-9.75	2.62	9.72	2.71	2.59	5.30
5500	0.00	-9.26	2.71	9.73	2.71	3.18	5.89	-10.54	2.71	9.73	2.71	1.90	4.61
5580	0.00	-8.97	2.70	9.73	2.71	3.46	6.17	-10.08	2.70	9.73	2.71	2.35	5.06
5700	0.00	-8.76	2.71	9.74	2.71	3.69	6.40	-9.83	2.71	9.74	2.71	2.62	5.33
5720	0.00	-9.12	2.71	9.74	2.71	3.33	6.04	-10.29	2.71	9.74	2.71	2.16	4.87
5745	0.00	-8.61	2.71	9.74	2.71	3.84	6.55	-9.58	2.71	9.74	2.71	2.87	5.58
5785	0.00	-8.88	2.73	9.74	2.71	3.59	6.30	-9.32	2.73	9.74	2.71	3.15	5.86
5825	0.00	-9.08	2.75	9.74	2.71	3.41	6.12	-9.91	2.75	9.74	2.71	2.58	5.29

Sample Calculation:

Conducted Power Result = Reading + Cable Loss + Atten. Loss

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

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower

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

Maximum Conducted Output Power

Report No.	13977035S-C-R1		
Test place	Shonan EMC Lab. No.1 Measurement Room / No. 5 Shielded Room		
Date	October 21, 2021	October 27, 2021	December 3, 2021
Temperature / Humidity	24 deg. C / 43 % RH	25 deg. C / 37 % RH	24 deg. C / 37 % RH
Engineer	Kenichi Adachi	Kenichi Adachi	Shunsaku Yumi
Mode	Tx 11n-40 (SISO)		

11n-40 (SISO), Chain 1

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	26 dB EBW (B for FCC) [MHz]	99 % OBW (B for ISED) [MHz]	Conducted Power Result [dBm]	Conducted Power Result [mW]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	e.i.r.p. Result [dBm]	e.i.r.p. Result [mW]	e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
5190	-3.13	2.61	9.72	2.71	-	36.407	9.20	8.32	23.97	14.77	11.91	15.52	29.97	18.06
5230	-3.44	2.62	9.72	2.71	-	36.356	8.90	7.76	23.97	15.07	11.61	14.49	29.97	18.36
5270	-3.16	2.60	9.72	2.71	41.280	36.441	9.16	8.24	23.97	14.81	11.87	15.38	29.97	18.10
5310	-3.21	2.61	9.72	2.71	40.821	36.341	9.12	8.17	23.97	14.85	11.83	15.24	29.97	18.14
5510	-3.23	2.71	9.73	2.71	40.916	36.445	9.21	8.34	23.97	14.76	11.92	15.56	29.97	18.05
5550	-2.83	2.70	9.73	2.71	40.547	36.497	9.60	9.12	23.97	14.37	12.31	17.02	29.97	17.66
5670	-2.62	2.70	9.74	2.71	40.757	36.471	9.82	9.59	23.97	14.15	12.53	17.91	29.97	17.44
5710	-2.63	2.71	9.74	2.71	41.080	36.519	9.82	9.59	23.97	14.15	12.53	17.91	29.97	17.44
5755	-2.52	2.71	9.74	2.71	-	36.471	9.93	9.84	30.00	20.07	12.64	18.37	36.00	23.36
5795	-2.69	2.74	9.74	2.71	-	36.507	9.79	9.53	30.00	20.21	12.50	17.78	36.00	23.50

11n-40 (SISO), Chain 2

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	26 dB EBW (B for FCC) [MHz]	99 % OBW (B for ISED) [MHz]	Conducted Power Result [dBm]	Conducted Power Result [mW]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	e.i.r.p. Result [dBm]	e.i.r.p. Result [mW]	e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
5190	-3.44	2.61	9.72	2.71	-	36.407	8.89	7.74	23.97	15.08	11.60	14.45	29.97	18.37
5230	-3.45	2.58	9.72	2.71	-	36.356	8.85	7.67	23.97	15.12	11.56	14.32	29.97	18.41
5270	-3.51	2.60	9.72	2.71	41.280	36.441	8.81	7.60	23.97	15.16	11.52	14.19	29.97	18.45
5310	-3.58	2.62	9.72	2.71	40.821	36.341	8.76	7.52	23.97	15.21	11.47	14.03	29.97	18.50
5510	-4.13	2.71	9.73	2.71	40.916	36.445	8.31	6.78	23.97	15.66	11.02	12.65	29.97	18.95
5550	-4.22	2.70	9.73	2.71	40.547	36.497	8.21	6.62	23.97	15.76	10.92	12.36	29.97	19.05
5670	-3.48	2.71	9.74	2.71	40.757	36.471	8.97	7.89	23.97	15.00	11.68	14.72	29.97	18.29
5710	-3.71	2.71	9.74	2.71	41.080	36.519	8.74	7.48	23.97	15.23	11.45	13.96	29.97	18.52
5755	-3.52	2.71	9.74	2.71	-	36.471	8.93	7.82	30.00	21.07	11.64	14.59	36.00	24.36
5795	-3.27	2.75	9.74	2.71	-	36.507	9.22	8.36	30.00	20.78	11.93	15.60	36.00	24.07

Sample Calculation:

Conducted Power Result = Reading + Cable Loss + Atten. Loss

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

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower

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

Maximum Conducted Output Power

Report No.	13977035S-C-R1		
Test place	Shonan EMC Lab. No.1 Measurement Room / No. 5 Shielded Room		
Date	October 21, 2021	October 27, 2021	December 3, 2021
Temperature / Humidity	24 deg. C / 43 % RH	25 deg. C / 37 % RH	24 deg. C / 37 % RH
Engineer	Kenichi Adachi	Kenichi Adachi	Shunsaku Yumi
Mode	Tx 11ac-40 (SISO)		

11ac-40 (SISO), Chain 1 Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	26 dB EBW (B for FCC) [MHz]	99 % OBW (B for ISED) [MHz]	Conducted Power Result [dBm]	Conducted Power Result [mW]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	e.i.r.p. Result [dBm]	e.i.r.p. Result [mW]	e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
5190	-7.21	2.61	9.72	2.71	-	36.432	5.12	3.25	23.97	18.85	7.83	6.07	29.97	22.14
5230	-7.54	2.62	9.72	2.71	-	36.460	4.80	3.02	23.97	19.17	7.51	5.64	29.97	22.46
5270	-7.26	2.60	9.72	2.71	41.340	36.442	5.06	3.21	23.97	18.91	7.77	5.98	29.97	22.20
5310	-7.13	2.61	9.72	2.71	40.409	36.372	5.20	3.31	23.97	18.77	7.91	6.18	29.97	22.06
5510	-7.15	2.71	9.73	2.71	41.505	36.400	5.29	3.38	23.97	18.68	8.00	6.31	29.97	21.97
5550	-6.88	2.70	9.73	2.71	41.219	36.434	5.55	3.59	23.97	18.42	8.26	6.70	29.97	21.71
5670	-6.70	2.70	9.74	2.71	41.198	36.467	5.74	3.75	23.97	18.23	8.45	7.00	29.97	21.52
5710	-6.88	2.71	9.74	2.71	41.567	36.526	5.57	3.61	23.97	18.40	8.28	6.73	29.97	21.69
5755	-6.70	2.71	9.74	2.71	-	36.476	5.75	3.76	30.00	24.25	8.46	7.01	36.00	27.54
5795	-6.92	2.74	9.74	2.71	-	36.455	5.56	3.60	30.00	24.44	8.27	6.71	36.00	27.73

11ac-40 (SISO), Chain 2 Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	26 dB EBW (B for FCC) [MHz]	99 % OBW (B for ISED) [MHz]	Conducted Power Result [dBm]	Conducted Power Result [mW]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	e.i.r.p. Result [dBm]	e.i.r.p. Result [mW]	e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
5190	-7.61	2.61	9.72	2.71	-	36.432	4.72	2.96	23.97	19.25	7.43	5.53	29.97	22.54
5230	-7.56	2.58	9.72	2.71	-	36.460	4.74	2.98	23.97	19.23	7.45	5.56	29.97	22.52
5270	-7.47	2.60	9.72	2.71	41.340	36.442	4.85	3.05	23.97	19.12	7.56	5.70	29.97	22.41
5310	-7.48	2.62	9.72	2.71	40.409	36.372	4.86	3.06	23.97	19.11	7.57	5.71	29.97	22.40
5510	-8.11	2.71	9.73	2.71	41.505	36.400	4.33	2.71	23.97	19.64	7.04	5.06	29.97	22.93
5550	-8.04	2.70	9.73	2.71	41.219	36.434	4.39	2.75	23.97	19.58	7.10	5.13	29.97	22.87
5670	-7.98	2.71	9.74	2.71	41.198	36.467	4.47	2.80	23.97	19.50	7.18	5.22	29.97	22.79
5710	-7.56	2.71	9.74	2.71	41.567	36.526	4.89	3.08	23.97	19.08	7.60	5.75	29.97	22.37
5755	-7.54	2.71	9.74	2.71	-	36.476	4.91	3.10	30.00	25.09	7.62	5.78	36.00	28.38
5795	-7.25	2.75	9.74	2.71	-	36.455	5.24	3.34	30.00	24.76	7.95	6.24	36.00	28.05

Sample Calculation:

Conducted Power Result = Reading + Cable Loss + Atten. Loss

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

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower

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

Maximum Conducted Output Power

Report No.	13977035S-C-R1	
Test place	Shonan EMC Lab. No.1 Measurement Room / No. 5 Shielded Room	
Date	October 26, 2021	November 18, 2021
Temperature / Humidity	25 deg. C / 36 % RH	23 deg. C / 42 % RH
Engineer	Kenichi Adachi	Hiromasa Sato
Mode	Tx 11n-40 (CDD)	

Chain 1 + Chain 2

Applied limit: 15.407, mobile and portable client device

Tested Frequency	26 dB EBW (B for FCC)	99 % OBW (B for ISED)	Conducted power Chain 1	Chain 2	Sum	Result	Limit	Margin	e.i.r.p. Chain 1	Chain 2	Sum	Result	Limit	Margin
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5190	-	36.560	4.37	4.06	8.43	9.26	23.97	14.71	8.15	7.59	15.73	11.97	29.97	18.00
5230	-	36.596	4.22	3.76	7.98	9.02	23.97	14.95	7.87	7.01	14.89	11.73	29.97	18.24
5270	41.725	36.650	3.88	3.50	7.38	8.68	23.97	15.29	7.24	6.53	13.78	11.39	29.97	18.58
5310	41.577	36.573	3.97	3.55	7.52	8.76	23.97	15.21	7.41	6.62	14.04	11.47	29.97	18.50
5510	41.830	36.649	4.02	3.13	7.15	8.54	23.97	15.43	7.50	5.85	13.35	11.25	29.97	18.72
5550	42.324	36.617	4.45	3.18	7.62	8.82	23.97	15.15	8.30	5.93	14.23	11.53	29.97	18.44
5670	41.863	36.616	4.65	3.78	8.43	9.26	23.97	14.71	8.67	7.06	15.73	11.97	29.97	18.00
5710	41.562	36.656	4.73	3.45	8.18	9.13	23.97	14.84	8.83	6.44	15.27	11.84	29.97	18.13
5755	-	36.617	4.84	3.76	8.60	9.35	30.00	20.65	9.04	7.01	16.05	12.06	36.00	23.94
5795	-	36.584	4.52	3.97	8.49	9.29	30.00	20.71	8.43	7.41	15.85	12.00	36.00	24.00

		Chain 1						Chain 2					
Tested Frequency	Duty Factor	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	0.00	-5.93	2.61	9.72	2.71	6.40	9.11	-6.24	2.61	9.72	2.71	6.09	8.80
5230	0.00	-6.09	2.62	9.72	2.71	6.25	8.96	-6.59	2.62	9.72	2.71	5.75	8.46
5270	0.00	-6.43	2.60	9.72	2.71	5.89	8.60	-6.88	2.60	9.72	2.71	5.44	8.15
5310	0.00	-6.34	2.61	9.72	2.71	5.99	8.70	-6.83	2.61	9.72	2.71	5.50	8.21
5510	0.00	-6.40	2.71	9.73	2.71	6.04	8.75	-7.48	2.71	9.73	2.71	4.96	7.67
5550	0.00	-5.95	2.70	9.73	2.71	6.48	9.19	-7.41	2.70	9.73	2.71	5.02	7.73
5670	0.00	-5.77	2.70	9.74	2.71	6.67	9.38	-6.66	2.70	9.74	2.71	5.78	8.49
5710	0.00	-5.70	2.71	9.74	2.71	6.75	9.46	-7.07	2.71	9.74	2.71	5.38	8.09
5755	0.00	-5.60	2.71	9.74	2.71	6.85	9.56	-6.70	2.71	9.74	2.71	5.75	8.46
5795	0.00	-5.93	2.74	9.74	2.71	6.55	9.26	-6.49	2.74	9.74	2.71	5.99	8.70

Sample Calculation:

Conducted Power Result = Reading + Cable Loss + Atten. Loss

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

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

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

N_{ANT}(number of transmit antennas) = 2

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower

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

Maximum Conducted Output Power

Report No.	13977035S-C-R1	
Test place	Shonan EMC Lab. No.1 Measurement Room / No. 5 Shielded Room	
Date	October 26, 2021	November 18, 2021
Temperature / Humidity	25 deg. C / 36 % RH	23 deg. C / 42 % RH
Engineer	Kenichi Adachi	Hiromasa Sato
Mode	Tx 11ac-40 (CDD)	

Chain 1 + Chain 2

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	26 dB EBW (B for FCC) [MHz]	99 % OBW (B for ISED) [MHz]	Conducted power Chain 1 [mW]	Chain 2 [mW]	Sum [mW]	Result [dBm]	Limit [dBm]	Margin [dB]	e.i.r.p. Chain 1 [mW]	Chain 2 [mW]	Sum [mW]	Result [dBm]	Limit [dBm]	Margin [dB]
5190	-	36.452	1.88	1.34	3.23	5.09	23.97	18.88	3.52	2.51	6.02	7.80	29.97	22.17
5230	-	36.505	1.85	1.25	3.10	4.92	23.97	19.05	3.46	2.33	5.79	7.63	29.97	22.34
5270	41.115	36.438	1.72	1.55	3.27	5.15	23.97	18.82	3.21	2.89	6.10	7.86	29.97	22.11
5310	40.903	36.467	1.74	1.61	3.36	5.26	23.97	18.71	3.25	3.01	6.26	7.97	29.97	22.00
5510	41.042	36.468	1.79	1.32	3.11	4.93	23.97	19.04	3.34	2.47	5.81	7.64	29.97	22.33
5550	41.004	36.426	1.92	1.33	3.25	5.12	23.97	18.85	3.59	2.48	6.07	7.83	29.97	22.14
5670	41.025	36.425	1.99	1.63	3.62	5.58	23.97	18.39	3.72	3.03	6.75	8.29	29.97	21.68
5710	40.840	36.489	1.94	1.52	3.46	5.39	23.97	18.58	3.61	2.84	6.46	8.10	29.97	21.87
5755	-	36.454	2.00	1.65	3.65	5.63	30.00	24.37	3.73	3.08	6.82	8.34	36.00	27.66
5795	-	36.447	1.92	1.72	3.64	5.61	30.00	24.39	3.59	3.21	6.80	8.32	36.00	27.68

Tested Frequency [MHz]	Duty Factor [dB]	Chain 1 Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Directional Gain [dBi]	Result Cond. Power [dBm]	Result e.i.r.p. [dBm]	Chain 2 Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Directional Gain [dBi]	Result Cond. Power [dBm]	Result e.i.r.p. [dBm]
5190	0.00	-9.58	2.61	9.72	2.71	2.75	5.46	-11.05	2.61	9.72	2.71	1.28	3.99
5230	0.00	-9.66	2.62	9.72	2.71	2.68	5.39	-11.37	2.62	9.72	2.71	0.97	3.68
5270	0.00	-9.96	2.60	9.72	2.71	2.36	5.07	-10.42	2.60	9.72	2.71	1.90	4.61
5310	0.00	-9.92	2.61	9.72	2.71	2.41	5.12	-10.25	2.61	9.72	2.71	2.08	4.79
5510	0.00	-9.91	2.71	9.73	2.71	2.53	5.24	-11.23	2.71	9.73	2.71	1.21	3.92
5550	0.00	-9.59	2.70	9.73	2.71	2.84	5.55	-11.19	2.70	9.73	2.71	1.24	3.95
5670	0.00	-9.45	2.70	9.74	2.71	2.99	5.70	-10.33	2.70	9.74	2.71	2.11	4.82
5710	0.00	-9.58	2.71	9.74	2.71	2.87	5.58	-10.62	2.71	9.74	2.71	1.83	4.54
5755	0.00	-9.44	2.71	9.74	2.71	3.01	5.72	-10.27	2.71	9.74	2.71	2.18	4.89
5795	0.00	-9.64	2.74	9.74	2.71	2.84	5.55	-10.13	2.74	9.74	2.71	2.35	5.06

Sample Calculation:

Conducted Power Result = Reading + Cable Loss + Atten. Loss

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

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

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

N_{ANT}(number of transmit antennas) = 2

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Report No.	13977035S-C-R1	
Test place	Shonan EMC Lab. No.1 Measurement Room / No. 5 Shielded Room	
Date	October 26, 2021	October 28, 2021
Temperature / Humidity	25 deg. C / 36 % RH	24 deg. C / 46 % RH
Engineer	Kenichi Adachi	Kenichi Adachi
Mode	Tx 11n-40 (MIMO)	

Chain 1 + Chain 2

Applied limit: 15.407, mobile and portable client device

Tested Frequency	26 dB EBW (B for FCC)	99 % OBW (B for ISED)	Conducted power Chain 1	Chain 2	Sum	Result	Limit	Margin	e.i.r.p. Chain 1	Chain 2	Sum	Result	Limit	Margin
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5190	-	36.411	4.48	4.08	8.56	9.32	23.97	14.65	8.36	7.62	15.98	12.03	29.97	17.94
5230	-	36.455	4.35	3.90	8.24	9.16	23.97	14.81	8.11	7.28	15.39	11.87	29.97	18.10
5270	41.180	36.420	4.01	3.72	7.73	8.88	23.97	15.09	7.48	6.95	14.43	11.59	29.97	18.38
5310	40.971	36.442	4.16	3.81	7.97	9.01	23.97	14.96	7.76	7.11	14.87	11.72	29.97	18.25
5510	40.880	36.493	4.21	3.46	7.67	8.85	23.97	15.12	7.85	6.46	14.31	11.56	29.97	18.41
5550	40.744	36.456	4.66	3.33	7.99	9.03	23.97	14.94	8.69	6.22	14.91	11.74	29.97	18.23
5670	41.329	36.484	4.83	4.05	8.88	9.48	23.97	14.49	9.02	7.55	16.57	12.19	29.97	17.78
5710	41.229	36.508	4.86	3.83	8.69	9.39	23.97	14.58	9.08	7.14	16.22	12.10	29.97	17.87
5755	-	36.479	4.92	4.03	8.95	9.52	30.00	20.48	9.18	7.52	16.70	12.23	36.00	23.77
5795	-	36.441	4.72	4.25	8.97	9.53	30.00	20.47	8.81	7.93	16.74	12.24	36.00	23.76

		Chain 1						Chain 2					
Tested Frequency	Duty Factor	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain	Result Cond. Power	Result e.i.r.p.	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain	Result Cond. Power	Result e.i.r.p.
[MHz]	[dB]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]
5190	0.00	-5.82	2.61	9.72	2.71	6.51	9.22	-6.22	2.61	9.72	2.71	6.11	8.82
5230	0.00	-5.96	2.62	9.72	2.71	6.38	9.09	-6.43	2.62	9.72	2.71	5.91	8.62
5270	0.00	-6.29	2.60	9.72	2.71	6.03	8.74	-6.61	2.60	9.72	2.71	5.71	8.42
5310	0.00	-6.14	2.61	9.72	2.71	6.19	8.90	-6.52	2.61	9.72	2.71	5.81	8.52
5510	0.00	-6.20	2.71	9.73	2.71	6.24	8.95	-7.05	2.71	9.73	2.71	5.39	8.10
5550	0.00	-5.75	2.70	9.73	2.71	6.68	9.39	-7.20	2.70	9.73	2.71	5.23	7.94
5670	0.00	-5.60	2.70	9.74	2.71	6.84	9.55	-6.37	2.70	9.74	2.71	6.07	8.78
5710	0.00	-5.58	2.71	9.74	2.71	6.87	9.58	-6.62	2.71	9.74	2.71	5.83	8.54
5755	0.00	-5.53	2.71	9.74	2.71	6.92	9.63	-6.40	2.71	9.74	2.71	6.05	8.76
5795	0.00	-5.74	2.74	9.74	2.71	6.74	9.45	-6.20	2.74	9.74	2.71	6.28	8.99

Sample Calculation:

Conducted Power Result = Reading + Cable Loss + Atten. Loss

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

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower

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

Maximum Conducted Output Power

Report No.	13977035S-C-R1	
Test place	Shonan EMC Lab. No.1 Measurement Room / No. 5 Shielded Room	
Date	October 26, 2021	November 18, 2021
Temperature / Humidity	25 deg. C / 36 % RH	23 deg. C / 42 % RH
Engineer	Kenichi Adachi	Hiromasa Sato
Mode	Tx 11ac-40 (MIMO)	

Chain 1 + Chain 2

Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	26 dB EBW (B for FCC) [MHz]	99 % OBW (B for ISED) [MHz]	Conducted power Chain 1 [mW]	Chain 2 [mW]	Sum [mW]	Result [dBm]	Limit [dBm]	Margin [dB]	e.i.r.p. Chain 1 [mW]	Chain 2 [mW]	Sum [mW]	Result [dBm]	Limit [dBm]	Margin [dB]
5190	-	36.605	1.87	1.29	3.16	5.00	23.97	18.97	3.49	2.42	5.91	7.71	29.97	22.26
5230	-	36.646	1.73	1.22	2.95	4.70	23.97	19.27	3.24	2.28	5.51	7.41	29.97	22.56
5270	40.676	36.664	1.61	1.52	3.13	4.95	23.97	19.02	3.00	2.84	5.84	7.66	29.97	22.31
5310	40.986	36.619	1.67	1.51	3.18	5.03	23.97	18.94	3.11	2.82	5.94	7.74	29.97	22.23
5510	40.961	36.638	1.68	1.32	3.00	4.77	23.97	19.20	3.14	2.46	5.60	7.48	29.97	22.49
5550	41.333	36.620	1.81	1.23	3.04	4.84	23.97	19.13	3.38	2.30	5.68	7.55	29.97	22.42
5670	41.193	36.603	1.96	1.42	3.38	5.29	23.97	18.68	3.66	2.65	6.30	8.00	29.97	21.97
5710	41.633	36.644	1.89	1.39	3.28	5.16	23.97	18.81	3.53	2.59	6.13	7.87	29.97	22.10
5755	-	36.617	1.90	1.47	3.37	5.28	30.00	24.72	3.54	2.75	6.29	7.99	36.00	28.01
5795	-	36.572	1.88	1.63	3.52	5.46	30.00	24.54	3.52	3.05	6.56	8.17	36.00	27.83

		Chain 1						Chain 2					
Tested Frequency [MHz]	Duty Factor [dB]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	Result Cond. Power [dBm]	Result e.i.r.p. [dBm]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	Result Cond. Power [dBm]	Result e.i.r.p. [dBm]
5190	0.00	-9.61	2.61	9.72	2.71	2.72	5.43	-11.21	2.61	9.72	2.71	1.12	3.83
5230	0.00	-9.95	2.62	9.72	2.71	2.39	5.10	-11.48	2.62	9.72	2.71	0.86	3.57
5270	0.00	-10.26	2.60	9.72	2.71	2.06	4.77	-10.50	2.60	9.72	2.71	1.82	4.53
5310	0.00	-10.11	2.61	9.72	2.71	2.22	4.93	-10.53	2.61	9.72	2.71	1.80	4.51
5510	0.00	-10.18	2.71	9.73	2.71	2.26	4.97	-11.24	2.71	9.73	2.71	1.20	3.91
5550	0.00	-9.85	2.70	9.73	2.71	2.58	5.29	-11.52	2.70	9.73	2.71	0.91	3.62
5670	0.00	-9.52	2.70	9.74	2.71	2.92	5.63	-10.92	2.70	9.74	2.71	1.52	4.23
5710	0.00	-9.68	2.71	9.74	2.71	2.77	5.48	-11.02	2.71	9.74	2.71	1.43	4.14
5755	0.00	-9.67	2.71	9.74	2.71	2.78	5.49	-10.77	2.71	9.74	2.71	1.68	4.39
5795	0.00	-9.73	2.74	9.74	2.71	2.75	5.46	-10.35	2.74	9.74	2.71	2.13	4.84

Sample Calculation:
Conducted Power Result = Reading + Cable Loss + Atten. Loss
e.i.r.p. Result = Conducted Power Result + Antenna Gain

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Report No.	13977035S-C-R1		
Test place	Shonan EMC Lab. No.1 Measurement Room / No. 5 Shielded Room		
Date	October 21, 2021	October 27, 2021	December 3, 2021
Temperature / Humidity	24 deg. C / 43 % RH	25 deg. C / 37 % RH	24 deg. C / 37 % RH
Engineer	Kenichi Adachi	Kenichi Adachi	Shunsaku Yumi
Mode	Tx 11ac-80 (SISO)		

11ac-80 (SISO), Chain 1 Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	26 dB EBW (B for FCC) [MHz]	99 % OBW (B for ISED) [MHz]	Conducted Power Result [dBm]	Conducted Power Result [mW]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	e.i.r.p. Result [dBm]	e.i.r.p. Result [mW]	e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
5210	-7.06	2.62	9.72	2.71	-	77.331	5.28	3.37	23.97	18.69	7.99	6.30	29.97	21.98
5290	-7.32	2.61	9.72	2.71	90.831	77.223	5.01	3.17	23.97	18.96	7.72	5.92	29.97	22.25
5530	-7.10	2.71	9.73	2.71	90.738	77.331	5.34	3.42	23.97	18.63	8.05	6.38	29.97	21.92
5610	-6.90	2.70	9.74	2.71	89.718	77.324	5.54	3.58	23.97	18.43	8.25	6.68	29.97	21.72
5690	-6.90	2.70	9.74	2.71	89.193	77.502	5.54	3.58	23.97	18.43	8.25	6.68	29.97	21.72
5775	-6.75	2.72	9.74	2.71	-	77.329	5.71	3.72	30.00	24.29	8.42	6.95	36.00	27.58

11ac-80 (SISO), Chain 2 Applied limit: 15.407, mobile and portable client device

Tested Frequency [MHz]	Power Meter Reading [dBm]	Cable Loss [dB]	Atten. Loss [dB]	Antenna Gain [dBi]	26 dB EBW (B for FCC) [MHz]	99 % OBW (B for ISED) [MHz]	Conducted Power Result [dBm]	Conducted Power Result [mW]	Conducted Power Limit [dBm]	Conducted Power Margin [dB]	e.i.r.p. Result [dBm]	e.i.r.p. Result [mW]	e.i.r.p. Limit [dBm]	e.i.r.p. Margin [dB]
5210	-7.21	2.61	9.72	2.71	-	77.331	5.12	3.25	23.97	18.85	7.83	6.07	29.97	22.14
5290	-7.63	2.60	9.72	2.71	90.831	77.223	4.69	2.94	23.97	19.28	7.40	5.50	29.97	22.57
5530	-7.93	2.71	9.73	2.71	90.738	77.331	4.51	2.82	23.97	19.46	7.22	5.27	29.97	22.75
5610	-7.78	2.70	9.73	2.71	89.718	77.324	4.65	2.92	23.97	19.32	7.36	5.45	29.97	22.61
5690	-7.64	2.71	9.74	2.71	89.193	77.502	4.81	3.03	23.97	19.16	7.52	5.65	29.97	22.45
5775	-7.44	2.71	9.74	2.71	-	77.329	5.01	3.17	30.00	24.99	7.72	5.92	36.00	28.28

Sample Calculation:

Conducted Power Result = Reading + Cable Loss + Atten. Loss

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

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower

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

Maximum Conducted Output Power

Report No.	13977035S-C-R1	
Test place	Shonan EMC Lab. No.1 Measurement Room / No. 5 Shielded Room	
Date	October 26, 2021	November 18, 2021
Temperature / Humidity	25 deg. C / 36 % RH	23 deg. C / 42 % RH
Engineer	Kenichi Adachi	Hiromasa Sato
Mode	Tx 11ac-80 (CDD)	

Chain 1 + Chain 2

Applied limit: 15.407, mobile and portable client device

Tested Frequency	26 dB EBW (B for FCC)	99 % OBW (B for ISED)	Conducted power Chain 1	Chain 2	Sum	Result	Limit	Margin	e.i.r.p. Chain 1	Chain 2	Sum	Result	Limit	Margin
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5210	-	76.457	1.79	1.66	3.45	5.38	23.97	18.59	3.33	3.10	6.44	8.09	29.97	21.88
5290	84.410	76.459	1.64	1.55	3.19	5.04	23.97	18.93	3.06	2.89	5.95	7.75	29.97	22.22
5530	85.399	76.554	1.71	1.28	3.00	4.77	23.97	19.20	3.20	2.39	5.59	7.48	29.97	22.49
5610	85.476	76.600	1.84	1.31	3.15	4.98	23.97	18.99	3.44	2.44	5.87	7.69	29.97	22.28
5690	84.403	76.424	1.91	1.44	3.35	5.25	23.97	18.72	3.56	2.69	6.26	7.96	29.97	22.01
5775	-	76.450	2.03	1.50	3.54	5.48	30.00	24.52	3.79	2.81	6.60	8.19	36.00	27.81

		Chain 1						Chain 2					
Tested Frequency	Duty Factor	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	0.00	-9.82	2.62	9.72	2.71	2.52	5.23	-10.13	2.62	9.72	2.71	2.21	4.92
5290	0.00	-10.18	2.61	9.72	2.71	2.15	4.86	-10.43	2.61	9.72	2.71	1.90	4.61
5530	0.00	-10.10	2.71	9.73	2.71	2.34	5.05	-11.36	2.71	9.73	2.71	1.08	3.79
5610	0.00	-9.79	2.70	9.74	2.71	2.65	5.36	-11.28	2.70	9.74	2.71	1.16	3.87
5690	0.00	-9.63	2.70	9.74	2.71	2.81	5.52	-10.85	2.70	9.74	2.71	1.59	4.30
5775	0.00	-9.38	2.72	9.74	2.71	3.08	5.79	-10.69	2.72	9.74	2.71	1.77	4.48

Sample Calculation:

Conducted Power Result = Reading + Cable Loss + Atten. Loss

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

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

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

N_{ANT}(number of transmit antennas) = 2

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower

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

Maximum Conducted Output Power

Report No.	13977035S-C-R1	
Test place	Shonan EMC Lab. No.1 Measurement Room / No. 5 Shielded Room	
Date	October 26, 2021	October 28, 2021
Temperature / Humidity	25 deg. C / 36 % RH	24 deg. C / 46 % RH
Engineer	Kenichi Adachi	Kenichi Adachi
Mode	Tx 11ac-80 (MIMO)	

Chain 1 + Chain 2

Applied limit: 15.407, mobile and portable client device

Tested Frequency	26 dB EBW (B for FCC)	99 % OBW (B for ISED)	Conducted power Chain 1	Chain 2	Sum	Result	Limit	Margin	e.i.r.p. Chain 1	Chain 2	Sum	Result	Limit	Margin
[MHz]	[MHz]	[MHz]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]	[mW]	[mW]	[mW]	[dBm]	[dBm]	[dB]
5210	-	76.361	1.83	1.75	3.57	5.53	23.97	18.44	3.41	3.26	6.67	8.24	29.97	21.73
5290	82.956	76.236	1.75	1.53	3.28	5.16	23.97	18.81	3.27	2.85	6.12	7.87	29.97	22.10
5530	84.150	76.251	1.82	1.32	3.14	4.97	23.97	19.00	3.39	2.47	5.86	7.68	29.97	22.29
5610	83.614	76.262	1.85	1.42	3.26	5.13	23.97	18.84	3.44	2.64	6.09	7.84	29.97	22.13
5690	84.847	76.344	1.92	1.58	3.50	5.45	23.97	18.52	3.59	2.95	6.54	8.16	29.97	21.81
5775	-	76.286	2.04	1.60	3.64	5.61	30.00	24.39	3.80	2.99	6.79	8.32	36.00	27.68

		Chain 1						Chain 2					
Tested Frequency	Duty Factor	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain	Result Cond. Power	Result e.i.r.p.	Power Meter Reading	Cable Loss	Atten. Loss	Antenna Gain	Result Cond. Power	Result e.i.r.p.
[MHz]	[dB]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]	[dBm]	[dB]	[dB]	[dBi]	[dBm]	[dBm]
5210	0.00	-9.72	2.62	9.72	2.71	2.62	5.33	-9.92	2.62	9.72	2.71	2.42	5.13
5290	0.00	-9.89	2.61	9.72	2.71	2.44	5.15	-10.49	2.61	9.72	2.71	1.84	4.55
5530	0.00	-9.85	2.71	9.73	2.71	2.59	5.30	-11.22	2.71	9.73	2.71	1.22	3.93
5610	0.00	-9.78	2.70	9.74	2.71	2.66	5.37	-10.93	2.70	9.74	2.71	1.51	4.22
5690	0.00	-9.60	2.70	9.74	2.71	2.84	5.55	-10.45	2.70	9.74	2.71	1.99	4.70
5775	0.00	-9.37	2.72	9.74	2.71	3.09	5.80	-10.41	2.72	9.74	2.71	2.05	4.76

Sample Calculation:
Conducted Power Result = Reading + Cable Loss + Atten. Loss
e.i.r.p. Result = Conducted Power Result + Antenna Gain

Conducted Power Limit (5250 MHz-5350 MHz, 5470 MHz-5725 MHz) = 250 mW or (11 + 10logB) dBm, whichever is lower
Conducted Power Limit (5725 MHz-5850 MHz) = 1 W

Maximum Conducted Output Power

Report No.	13977035S-C-R1
Test place	Shonan EMC Lab. No.1 Measurement Room
Date	October 21, 2021
Temperature / Humidity	24 deg. C / 43 % RH
Engineer	Kenichi Adachi
Mode	Tx 11a (SISO)

5180 MHz

Mode	Rate Mbps	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
Chain1	6	-2.98	0.00	-2.98	-
	9	-2.99	0.00	-2.99	-
	12	-3.04	0.00	-3.04	-
	18	-2.24	0.00	-2.24	*
	24	-2.28	0.00	-2.28	-
	36	-2.93	0.00	-2.93	-
	48	-3.01	0.00	-3.01	-
	54	-2.97	0.00	-2.97	-
Chain2	6	-3.43	0.00	-3.43	-
	9	-3.42	0.00	-3.42	-
	12	-3.40	0.00	-3.40	-
	18	-2.51	0.00	-2.51	-
	24	-2.69	0.00	-2.69	-
	36	-3.27	0.00	-3.27	-
	48	-3.40	0.00	-3.40	-
	54	-3.32	0.00	-3.32	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Report No.	13977035S-C-R1
Test place	Shonan EMC Lab. No.1 Measurement Room
Date	October 21, 2021
Temperature / Humidity	24 deg. C / 43 % RH
Engineer	Kenichi Adachi
Mode	Tx 11n-20 (SISO)

5180 MHz

Mode	MCS Number	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
Chain1	0	-3.26	0.00	-3.26	-
	1	-3.17	0.00	-3.17	-
	2	-2.33	0.00	-2.33	-
	3	-2.32	0.00	-2.32	*
	4	-2.86	0.00	-2.86	-
	5	-2.82	0.00	-2.82	-
	6	-2.85	0.00	-2.85	-
	7	-2.80	0.00	-2.80	-
Chain2	0	-3.52	0.00	-3.52	-
	1	-3.55	0.00	-3.55	-
	2	-2.73	0.00	-2.73	-
	3	-2.72	0.00	-2.72	-
	4	-3.32	0.00	-3.32	-
	5	-3.40	0.00	-3.40	-
	6	-3.38	0.00	-3.38	-
	7	-3.42	0.00	-3.42	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Report No.	13977035S-C-R1
Test place	Shonan EMC Lab. No.1 Measurement Room
Date	October 21, 2021
Temperature / Humidity	24 deg. C / 43 % RH
Engineer	Kenichi Adachi
Mode	Tx 11ac-20 (SISO)

5180 MHz

Mode	MCS Number	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
Chain1	0	-7.29	0.00	-7.29	-
	1	-7.26	0.00	-7.26	-
	2	-6.43	0.00	-6.43	-
	3	-6.40	0.00	-6.40	*
	4	-7.02	0.00	-7.02	-
	5	-7.00	0.00	-7.00	-
	6	-6.93	0.00	-6.93	-
	7	-7.03	0.00	-7.03	-
	8	-6.99	0.00	-6.99	-
Chain2	0	-7.41	0.00	-7.41	-
	1	-7.48	0.00	-7.48	-
	2	-6.71	0.00	-6.71	-
	3	-6.63	0.00	-6.63	-
	4	-7.36	0.00	-7.36	-
	5	-7.33	0.00	-7.33	-
	6	-7.38	0.00	-7.38	-
	7	-7.39	0.00	-7.39	-
	8	-7.42	0.00	-7.42	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Report No.	13977035S-C-R1
Test place	Shonan EMC Lab. No.1 Measurement Room
Date	October 22, 2021
Temperature / Humidity	23 deg. C / 33 % RH
Engineer	Kenichi Adachi
Mode	Tx 11a (CDD)

5180 MHz

Rate	Reading (timed average) Chain						Duty factor	Burst power Chain			Remarks
	1	2	1	2	1+2	1+2		1	2	1+2	
Mbps	[dBm]	[dBm]	[mW]	[mW]	[mW]	[dBm]	[dB]	[dBm]	[dBm]	[dBm]	
6	-5.98	-6.16	0.25	0.24	0.49	-3.06	0.00	-	-	-3.06	-
9	-5.97	-6.21	0.25	0.24	0.49	-3.08	0.00	-	-	-3.08	-
12	-6.03	-6.25	0.25	0.24	0.49	-3.13	0.00	-	-	-3.13	-
18	-5.24	-5.42	0.30	0.29	0.59	-2.32	0.00	-	-	-2.32	*
24	-5.31	-5.51	0.29	0.28	0.58	-2.40	0.00	-	-	-2.40	-
36	-5.94	-6.09	0.25	0.25	0.50	-3.00	0.00	-	-	-3.00	-
48	-5.95	-6.12	0.25	0.24	0.50	-3.02	0.00	-	-	-3.02	-
54	-6.26	-6.34	0.24	0.23	0.47	-3.29	0.00	-	-	-3.29	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Report No.	13977035S-C-R1
Test place	Shonan EMC Lab. No.1 Measurement Room
Date	October 22, 2021
Temperature / Humidity	23 deg. C / 33 % RH
Engineer	Kenichi Adachi
Mode	Tx 11n-20 (CDD)

5180 MHz

MCS Number	Reading (timed average) Chain						Duty factor	Burst power Chain			Remarks
	1 [dBm]	2 [dBm]	1 [mW]	2 [mW]	1+2 [mW]	1+2 [dBm]	[dB]	1 [dBm]	2 [dBm]	1+2 [dBm]	
0	-6.20	-6.13	0.24	0.24	0.48	-3.15	0.00	-	-	-3.15	-
1	-6.15	-6.22	0.24	0.24	0.48	-3.17	0.00	-	-	-3.17	-
2	-5.27	-5.57	0.30	0.28	0.57	-2.41	0.00	-	-	-2.41	-
3	-5.26	-5.51	0.30	0.28	0.58	-2.37	0.00	-	-	-2.37	*
4	-5.96	-6.01	0.25	0.25	0.50	-2.97	0.00	-	-	-2.97	-
5	-6.07	-6.02	0.25	0.25	0.50	-3.03	0.00	-	-	-3.03	-
6	-5.99	-6.08	0.25	0.25	0.50	-3.02	0.00	-	-	-3.02	-
7	-5.97	-6.20	0.25	0.24	0.49	-3.07	0.00	-	-	-3.07	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Report No.	13977035S-C-R1
Test place	Shonan EMC Lab. No.1 Measurement Room
Date	October 22, 2021
Temperature / Humidity	23 deg. C / 33 % RH
Engineer	Kenichi Adachi
Mode	Tx 11ac-20 (CDD)

5180 MHz

MCS Number	Reading (timed average) Chain						Duty factor	Burst power Chain			Remarks
	1 [dBm]	2 [dBm]	1 [mW]	2 [mW]	1+2 [mW]	1+2 [dBm]	[dB]	1 [dBm]	2 [dBm]	1+2 [dBm]	
0(1ss)	-9.65	-10.23	0.11	0.09	0.20	-6.92	0.00	-	-	-6.92	-
1(1ss)	-9.70	-10.16	0.11	0.10	0.20	-6.91	0.00	-	-	-6.91	-
2(1ss)	-8.94	-9.50	0.13	0.11	0.24	-6.20	0.00	-	-	-6.20	-
3(1ss)	-8.92	-9.49	0.13	0.11	0.24	-6.19	0.00	-	-	-6.19	*
4(1ss)	-9.61	-9.97	0.11	0.10	0.21	-6.78	0.00	-	-	-6.78	-
5(1ss)	-9.68	-9.97	0.11	0.10	0.21	-6.81	0.00	-	-	-6.81	-
6(1ss)	-9.64	-9.92	0.11	0.10	0.21	-6.77	0.00	-	-	-6.77	-
7(1ss)	-9.60	-9.88	0.11	0.10	0.21	-6.73	0.00	-	-	-6.73	-
8(1ss)	-9.72	-9.89	0.11	0.10	0.21	-6.79	0.00	-	-	-6.79	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Report No.	13977035S-C-R1
Test place	Shonan EMC Lab. No.1 Measurement Room
Date	October 22, 2021
Temperature / Humidity	23 deg. C / 33 % RH
Engineer	Kenichi Adachi
Mode	Tx 11n-20 (MIMO)

5180 MHz

MCS Number	Reading (timed average) Chain						Duty factor	Burst power Chain			Remarks
	1 [dBm]	2 [dBm]	1 [mW]	2 [mW]	1+2 [mW]	1+2 [dBm]	[dB]	1 [dBm]	2 [dBm]	1+2 [dBm]	
8	-5.82	-6.26	0.26	0.24	0.50	-3.02	0.00	-	-	-3.02	-
9	-5.89	-6.25	0.26	0.24	0.49	-3.06	0.00	-	-	-3.06	-
10	-5.27	-5.60	0.30	0.28	0.57	-2.42	0.00	-	-	-2.42	-
11	-5.25	-5.45	0.30	0.29	0.58	-2.34	0.00	-	-	-2.34	*
12	-5.86	-6.13	0.26	0.24	0.50	-2.98	0.00	-	-	-2.98	-
13	-5.87	-6.06	0.26	0.25	0.51	-2.95	0.00	-	-	-2.95	-
14	-5.83	-6.05	0.26	0.25	0.51	-2.93	0.00	-	-	-2.93	-
15	-5.78	-6.10	0.26	0.25	0.51	-2.93	0.00	-	-	-2.93	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Report No.	13977035S-C-R1
Test place	Shonan EMC Lab. No.1 Measurement Room
Date	October 22, 2021
Temperature / Humidity	23 deg. C / 33 % RH
Engineer	Kenichi Adachi
Mode	Tx 11ac-20 (MIMO)

5180 MHz

MCS Number	Reading (timed average) Chain						Duty factor	Burst power Chain			Remarks
	1 [dBm]	2 [dBm]	1 [mW]	2 [mW]	1+2 [mW]	1+2 [dBm]	[dB]	1 [dBm]	2 [dBm]	1+2 [dBm]	
0(2ss)	-9.52	-10.24	0.11	0.09	0.21	-6.85	0.00	-	-	-6.85	-
1(2ss)	-9.48	-10.23	0.11	0.09	0.21	-6.83	0.00	-	-	-6.83	-
2(2ss)	-9.03	-9.35	0.13	0.12	0.24	-6.18	0.00	-	-	-6.18	-
3(2ss)	-8.96	-9.20	0.13	0.12	0.25	-6.07	0.00	-	-	-6.07	*
4(2ss)	-9.64	-9.84	0.11	0.10	0.21	-6.73	0.00	-	-	-6.73	-
5(2ss)	-9.51	-9.86	0.11	0.10	0.22	-6.67	0.00	-	-	-6.67	-
6(2ss)	-9.54	-9.97	0.11	0.10	0.21	-6.74	0.00	-	-	-6.74	-
7(2ss)	-9.55	-9.77	0.11	0.11	0.22	-6.65	0.00	-	-	-6.65	-
8(2ss)	-9.69	-9.74	0.11	0.11	0.21	-6.70	0.00	-	-	-6.70	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Report No.	13977035S-C-R1
Test place	Shonan EMC Lab. No.1 Measurement Room
Date	October 21, 2021
Temperature / Humidity	24 deg. C / 43 % RH
Engineer	Kenichi Adachi
Mode	Tx 11n-40 (SISO)

5190 MHz

Mode	MCS Number	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
Chain1	0	-3.17	0.00	-3.17	-
	1	-3.18	0.00	-3.18	-
	2	-3.14	0.00	-3.14	-
	3	-3.13	0.00	-3.13	*
	4	-3.33	0.00	-3.33	-
	5	-3.26	0.00	-3.26	-
	6	-3.19	0.00	-3.19	-
	7	-3.25	0.00	-3.25	-
Chain2	0	-3.54	0.00	-3.54	-
	1	-3.60	0.00	-3.60	-
	2	-3.58	0.00	-3.58	-
	3	-3.44	0.00	-3.44	-
	4	-3.63	0.00	-3.63	-
	5	-3.80	0.00	-3.80	-
	6	-3.73	0.00	-3.73	-
	7	-3.75	0.00	-3.75	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Report No.	13977035S-C-R1
Test place	Shonan EMC Lab. No.1 Measurement Room
Date	October 21, 2021
Temperature / Humidity	24 deg. C / 43 % RH
Engineer	Kenichi Adachi
Mode	Tx 11ac-40 (SISO)

5190 MHz

Mode	MCS Number	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
Chain1	0	-7.29	0.00	-7.29	-
	1	-7.29	0.00	-7.29	-
	2	-7.22	0.00	-7.22	-
	3	-7.21	0.00	-7.21	*
	4	-7.40	0.00	-7.40	-
	5	-7.43	0.00	-7.43	-
	6	-7.38	0.00	-7.38	-
	7	-7.50	0.00	-7.50	-
	8	-7.38	0.00	-7.38	-
	9	-7.47	0.00	-7.47	-
Chain2	0	-7.75	0.00	-7.75	-
	1	-7.73	0.00	-7.73	-
	2	-7.63	0.00	-7.63	-
	3	-7.61	0.00	-7.61	-
	4	-7.78	0.00	-7.78	-
	5	-7.81	0.00	-7.81	-
	6	-7.80	0.00	-7.80	-
	7	-7.82	0.00	-7.82	-
	8	-7.88	0.00	-7.88	-
	9	-7.89	0.00	-7.89	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Report No.	13977035S-C-R1
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	October 26, 2021
Temperature / Humidity	25 deg. C / 36 % RH
Engineer	Kenichi Adachi
Mode	Tx 11n-40 (CDD)

5190 MHz

MCS Number	Reading (timed average) Chain						Duty factor	Burst power Chain			Remarks
	1 [dBm]	2 [dBm]	1 [mW]	2 [mW]	1+2 [mW]	1+2 [dBm]	[dB]	1 [dBm]	2 [dBm]	1+2 [dBm]	
0	-5.89	-6.30	0.26	0.23	0.49	-3.08	0.00	-	-	-3.08	-
1	-6.03	-6.24	0.25	0.24	0.49	-3.12	0.00	-	-	-3.12	-
2	-5.96	-6.22	0.25	0.24	0.49	-3.08	0.00	-	-	-3.08	-
3	-5.93	-6.24	0.26	0.24	0.49	-3.07	0.00	-	-	-3.07	*
4	-6.30	-6.54	0.23	0.22	0.46	-3.41	0.00	-	-	-3.41	-
5	-6.16	-6.47	0.24	0.23	0.47	-3.30	0.00	-	-	-3.30	-
6	-6.34	-6.64	0.23	0.22	0.45	-3.48	0.00	-	-	-3.48	-
7	-6.22	-6.59	0.24	0.22	0.46	-3.39	0.00	-	-	-3.39	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Report No.	13977035S-C-R1
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	October 26, 2021
Temperature / Humidity	25 deg. C / 36 % RH
Engineer	Kenichi Adachi
Mode	Tx 11ac-40 (CDD)

5190 MHz

MCS Number	Reading (timed average) Chain						Duty factor	Burst power Chain			Remarks
	1 [dBm]	2 [dBm]	1 [mW]	2 [mW]	1+2 [mW]	1+2 [dBm]	[dB]	1 [dBm]	2 [dBm]	1+2 [dBm]	
0(1ss)	-9.73	-11.07	0.11	0.08	0.18	-7.34	0.00	-	-	-7.34	-
1(1ss)	-9.75	-11.32	0.11	0.07	0.18	-7.45	0.00	-	-	-7.45	-
2(1ss)	-9.61	-11.12	0.11	0.08	0.19	-7.29	0.00	-	-	-7.29	-
3(1ss)	-9.58	-11.05	0.11	0.08	0.19	-7.24	0.00	-	-	-7.24	*
4(1ss)	-10.15	-11.56	0.10	0.07	0.17	-7.79	0.00	-	-	-7.79	-
5(1ss)	-10.21	-11.35	0.10	0.07	0.17	-7.73	0.00	-	-	-7.73	-
6(1ss)	-10.22	-11.46	0.10	0.07	0.17	-7.79	0.00	-	-	-7.79	-
7(1ss)	-10.09	-11.41	0.10	0.07	0.17	-7.69	0.00	-	-	-7.69	-
8(1ss)	-10.19	-11.47	0.10	0.07	0.17	-7.77	0.00	-	-	-7.77	-
9(1ss)	-10.15	-11.56	0.10	0.07	0.17	-7.79	0.00	-	-	-7.79	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Report No.	13977035S-C-R1
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	October 26, 2021
Temperature / Humidity	25 deg. C / 36 % RH
Engineer	Kenichi Adachi
Mode	Tx 11n-40 (MIMO)

5190 MHz

MCS Number	Reading (timed average) Chain						Duty factor	Burst power Chain			Remarks
	1 [dBm]	2 [dBm]	1 [mW]	2 [mW]	1+2 [mW]	1+2 [dBm]	[dB]	1 [dBm]	2 [dBm]	1+2 [dBm]	
8	-5.93	-6.22	0.26	0.24	0.49	-3.06	0.00	-	-	-3.06	-
9	-5.93	-6.22	0.26	0.24	0.49	-3.06	0.00	-	-	-3.06	-
10	-5.97	-6.25	0.25	0.24	0.49	-3.10	0.00	-	-	-3.10	-
11	-5.82	-6.22	0.26	0.24	0.50	-3.01	0.00	-	-	-3.01	*
12	-6.27	-6.53	0.24	0.22	0.46	-3.39	0.00	-	-	-3.39	-
13	-6.25	-6.47	0.24	0.23	0.46	-3.35	0.00	-	-	-3.35	-
14	-6.35	-6.42	0.23	0.23	0.46	-3.37	0.00	-	-	-3.37	-
15	-6.34	-6.46	0.23	0.23	0.46	-3.39	0.00	-	-	-3.39	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Report No.	13977035S-C-R1
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	October 26, 2021
Temperature / Humidity	25 deg. C / 36 % RH
Engineer	Kenichi Adachi
Mode	Tx 11ac-40 (MIMO)

5190 MHz

MCS Number	Reading (timed average) Chain						Duty factor	Burst power Chain			Remarks
	1 [dBm]	2 [dBm]	1 [mW]	2 [mW]	1+2 [mW]	1+2 [dBm]	[dB]	1 [dBm]	2 [dBm]	1+2 [dBm]	
0(2ss)	-9.67	-11.18	0.11	0.08	0.18	-7.35	0.00	-	-	-7.35	-
1(2ss)	-9.74	-11.28	0.11	0.07	0.18	-7.43	0.00	-	-	-7.43	-
2(2ss)	-9.66	-11.16	0.11	0.08	0.18	-7.34	0.00	-	-	-7.34	-
3(2ss)	-9.61	-11.21	0.11	0.08	0.19	-7.33	0.00	-	-	-7.33	*
4(2ss)	-10.19	-11.52	0.10	0.07	0.17	-7.79	0.00	-	-	-7.79	-
5(2ss)	-10.05	-11.50	0.10	0.07	0.17	-7.70	0.00	-	-	-7.70	-
6(2ss)	-10.15	-11.51	0.10	0.07	0.17	-7.77	0.00	-	-	-7.77	-
7(2ss)	-10.08	-11.46	0.10	0.07	0.17	-7.71	0.00	-	-	-7.71	-
8(2ss)	-10.12	-11.56	0.10	0.07	0.17	-7.77	0.00	-	-	-7.77	-
9(2ss)	-10.18	-11.60	0.10	0.07	0.17	-7.82	0.00	-	-	-7.82	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Report No.	13977035S-C-R1
Test place	Shonan EMC Lab. No.1 Measurement Room
Date	October 22, 2021
Temperature / Humidity	23 deg. C / 33 % RH
Engineer	Kenichi Adachi
Mode	Tx 11ac-80 (SISO)

5210 MHz

Mode	MCS Number	Reading (timed average) [dBm]	Duty factor [dB]	Burst power [dBm]	Remarks
Chain1	0	-7.27	0.00	-7.27	-
	1	-7.23	0.00	-7.23	-
	2	-7.19	0.00	-7.19	-
	3	-7.11	0.00	-7.11	-
	4	-7.09	0.00	-7.09	-
	5	-7.06	0.00	-7.06	*
	6	-7.09	0.00	-7.09	-
	7	-7.10	0.00	-7.10	-
	8	-7.12	0.00	-7.12	-
	9	-7.18	0.00	-7.18	-
Chain2	0	-7.41	0.00	-7.41	-
	1	-7.34	0.00	-7.34	-
	2	-7.30	0.00	-7.30	-
	3	-7.27	0.00	-7.27	-
	4	-7.23	0.00	-7.23	-
	5	-7.21	0.00	-7.21	-
	6	-7.34	0.00	-7.34	-
	7	-7.28	0.00	-7.28	-
	8	-7.31	0.00	-7.31	-
	9	-7.29	0.00	-7.29	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Report No.	13977035S-C-R1
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	October 26, 2021
Temperature / Humidity	25 deg. C / 36 % RH
Engineer	Kenichi Adachi
Mode	Tx 11ac-80 (CDD)

5210 MHz

MCS Number	Reading (timed average) Chain						Duty factor	Burst power Chain			Remarks
	1 [dBm]	2 [dBm]	1 [mW]	2 [mW]	1+2 [mW]	1+2 [dBm]	[dB]	1 [dBm]	2 [dBm]	1+2 [dBm]	
0(1ss)	-9.89	-10.20	0.10	0.10	0.20	-7.03	0.00	-	-	-7.03	-
1(1ss)	-9.93	-10.31	0.10	0.09	0.19	-7.11	0.00	-	-	-7.11	-
2(1ss)	-9.88	-10.07	0.10	0.10	0.20	-6.96	0.00	-	-	-6.96	-
3(1ss)	-9.82	-10.13	0.10	0.10	0.20	-6.96	0.00	-	-	-6.96	*
4(1ss)	-9.90	-10.12	0.10	0.10	0.20	-7.00	0.00	-	-	-7.00	-
5(1ss)	-9.92	-10.15	0.10	0.10	0.20	-7.02	0.00	-	-	-7.02	-
6(1ss)	-9.96	-10.17	0.10	0.10	0.20	-7.05	0.00	-	-	-7.05	-
7(1ss)	-9.98	-10.23	0.10	0.09	0.20	-7.09	0.00	-	-	-7.09	-
8(1ss)	-9.95	-10.26	0.10	0.09	0.20	-7.09	0.00	-	-	-7.09	-
9(1ss)	-9.87	-10.21	0.10	0.10	0.20	-7.03	0.00	-	-	-7.03	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

All comparison were carried out on same frequency and measurement factors.

Maximum Conducted Output Power

Report No.	13977035S-C-R1
Test place	Shonan EMC Lab. No.5 Shielded Room
Date	October 26, 2021
Temperature / Humidity	25 deg. C / 36 % RH
Engineer	Kenichi Adachi
Mode	Tx 11ac-80 (MIMO)

5210 MHz

MCS Number	Reading (timed average) Chain						Duty factor	Burst power Chain			Remarks
	1 [dBm]	2 [dBm]	1 [mW]	2 [mW]	1+2 [mW]	1+2 [dBm]	[dB]	1 [dBm]	2 [dBm]	1+2 [dBm]	
0(2ss)	-9.90	-10.13	0.10	0.10	0.20	-7.00	0.00	-	-	-7.00	-
1(2ss)	-9.94	-10.19	0.10	0.10	0.20	-7.05	0.00	-	-	-7.05	-
2(2ss)	-9.88	-9.96	0.10	0.10	0.20	-6.91	0.00	-	-	-6.91	-
3(2ss)	-9.72	-9.92	0.11	0.10	0.21	-6.81	0.00	-	-	-6.81	*
4(2ss)	-9.84	-10.24	0.10	0.09	0.20	-7.03	0.00	-	-	-7.03	-
5(2ss)	-9.78	-10.23	0.11	0.09	0.20	-6.99	0.00	-	-	-6.99	-
6(2ss)	-9.73	-10.20	0.11	0.10	0.20	-6.95	0.00	-	-	-6.95	-
7(2ss)	-9.85	-10.19	0.10	0.10	0.20	-7.01	0.00	-	-	-7.01	-
8(2ss)	-9.79	-10.29	0.10	0.09	0.20	-7.02	0.00	-	-	-7.02	-
9(2ss)	-9.79	-10.12	0.10	0.10	0.20	-6.94	0.00	-	-	-6.94	-

* Worst rate

Sample Calculation:

Burst power = Reading (timed average) + Duty factor

All comparison were carried out on same frequency and measurement factors.