



FCC RF Test Report

APPLICANT : VINFAST TRADING AND PRODUCTION JOINT
STOCK COMPANY
EQUIPMENT : MULTIMEDIA HEAD UNIT
BRAND NAME : VINFAST
MODEL NAME : VF-EC22U
FCC ID : 2A6HEVF-EC22U
STANDARD : FCC Part 15 Subpart E §15.407
CLASSIFICATION : (NII) Unlicensed National Information Infrastructure
TEST DATE(S) : Jul. 28, 2022 ~ Aug. 11, 2022

We, Sporton International Inc. (Kunshan), would like to declare that the tested sample has been evaluated in accordance with the test procedures and has been in compliance with the applicable technical standards.

The test results in this report apply exclusively to the tested model / sample. Without written approval of Sporton International Inc. (Kunshan), the test report shall not be reproduced except in full.

Jason Jia

Approved by: Jason Jia



Sporton International Inc. (Kunshan)

No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300
People's Republic of China



TABLE OF CONTENTS

REVISION HISTORY	3
SUMMARY OF TEST RESULT	4
1 GENERAL DESCRIPTION	5
1.1 Applicant	5
1.2 Manufacturer	5
1.3 Product Feature of Equipment Under Test	5
1.4 Product Specification of Equipment Under Test	6
1.5 Modification of EUT	6
1.6 Testing Location	7
1.7 Test Software	7
1.8 Applicable Standards	7
2 TEST CONFIGURATION OF EQUIPMENT UNDER TEST	8
2.1 Carrier Frequency and Channel	8
2.2 Test Mode	9
2.3 Connection Diagram of Test System	11
2.4 Support Unit used in test configuration and system	11
2.5 EUT Operation Test Setup	11
2.6 Measurement Results Explanation Example	12
3 TEST RESULT	13
3.1 6dB and 26dB and 99% Occupied Bandwidth Measurement	13
3.2 Maximum Conducted Output Power Measurement	15
3.3 Power Spectral Density Measurement	16
3.4 Unwanted Emissions Measurement	19
3.5 Antenna Requirements	24
4 LIST OF MEASURING EQUIPMENT	25
5 UNCERTAINTY OF EVALUATION	26
APPENDIX A. CONDUCTED TEST RESULTS	
APPENDIX B. RADIATED SPURIOUS EMISSION	
APPENDIX C. DUTY CYCLE PLOTS	
APPENDIX D. SETUP PHOTOGRAPHS	



REVISION HISTORY

REPORT NO.	VERSION	DESCRIPTION	ISSUED DATE
FR233104D	Rev. 01	Initial issue of report	Aug. 23, 2022

SUMMARY OF TEST RESULT

Report Section	FCC Rule	Description	Limit for U-NII-1	Limit for U-NII-3	Result	Remark
3.1	2.1049 & 15.403(i)	6dB, 26dB & 99% Bandwidth	-	> 500kHz	Pass	-
3.2	15.407(a)	Maximum Conducted Output Power	≤ 24 dBm	≤ 30 dBm	Pass	-
3.3	15.407(a)	Power Spectral Density	≤ 11 dBm	≤ 30 dBm/500kHz	Pass	-
3.4	15.407(b)	Unwanted Emissions	15.407(b) & 15.209(a)	15.407(b)(4)(i) & 15.209(a)	Pass	Under limit 4.18 dB at 53.280 MHz
-	15.207	AC Conducted Emission	15.207(a)	15.207(a)	Not Applicable	-
3.5	15.203 & 15.407(a)	Antenna Requirement	N/A	N/A	Pass	-

Note: Not Applicable means after assessing, test items are not necessary to carry out.

Declaration of Conformity:

The test results with all measurement uncertainty excluded are presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.



1 General Description

1.1 Applicant

VINFAST TRADING AND PRODUCTION JOINT STOCK COMPANY

Dinh Vu - Cat Hai Economic Zone, Cat Hai Island, Cat Hai Town, Cat Hai District, Hai Phong City, Vietnam

1.2 Manufacturer

VINFAST TRADING AND PRODUCTION JOINT STOCK COMPANY

Dinh Vu - Cat Hai Economic Zone, Cat Hai Island, Cat Hai Town, Cat Hai District, Hai Phong City, Vietnam

1.3 Product Feature of Equipment Under Test

Product Feature	
Equipment	MULTIMEDIA HEAD UNIT
Brand Name	VINFAST
Model Name	VF-EC22U
IMEI Code	Conducted: 864694040039112 Radiation: 864694040048055
FCC ID	2A6HEVF-EC22U
HW Version	C2.2
SW Version	SOW30005092
EUT Stage	Identical Prototype

Remark:

1. The above EUT's information was declared by manufacturer. Please refer to the specifications or user's manual for more detailed description.
2. This is a vehicle device, only supports 12Vdc and does not use AC charger.

1.4 Product Specification of Equipment Under Test

Standards-related Product Specification	
Tx/Rx Frequency Range	5180 MHz ~ 5240 MHz 5745 MHz ~ 5825 MHz
Maximum Output Power to Antenna	<5180 MHz ~ 5240 MHz> 802.11a : 10.25 dBm / 0.0106 W 802.11n HT20 : 10.23 dBm / 0.0105 W 802.11n HT40 : 7.65 dBm / 0.0058 W 802.11ac VHT20: 10.28 dBm / 0.0107 W 802.11ac VHT40: 7.67 dBm / 0.0058 W 802.11ac VHT80: 6.86 dBm / 0.0049 W <5745 MHz ~ 5825 MHz> 802.11a : 9.98 dBm / 0.0100 W 802.11n HT20 : 9.76 dBm / 0.0095 W 802.11n HT40 : 7.45 dBm / 0.0056 W 802.11ac VHT20: 9.85 dBm / 0.0097 W 802.11ac VHT40: 7.49 dBm / 0.0056 W 802.11ac VHT80: 6.61 dBm / 0.0046 W
99% Occupied Bandwidth	<5180 MHz ~ 5240 MHz> 802.11a : 17.742 MHz 802.11ac VHT20 : 18.581 MHz 802.11ac VHT40 : 36.444 MHz 802.11ac VHT80 : 75.924 MHz <5745 MHz ~ 5825 MHz> 802.11a : 17.702 MHz 802.11ac VHT20 : 18.541 MHz 802.11ac VHT40 : 36.364 MHz 802.11ac VHT80 : 75.924 MHz
Antenna Type / Gain	<5180 MHz ~ 5240 MHz> Fixed Internal Antenna with gain 1.305 dBi <5745 MHz ~ 5825 MHz> Fixed Internal Antenna with gain 2.685 dBi
Type of Modulation	802.11a/n : OFDM (BPSK / QPSK / 16QAM / 64QAM) 802.11ac : OFDM (BPSK / QPSK / 16QAM / 64QAM / 256QAM)

Note: For 802.11n HT20 / ac VHT20 and 802.11n HT40 / ac VHT40 mode, the whole testing has assessed only 802.11ac VHT20/ VHT40 by referring to their higher conducted power.

1.5 Modification of EUT

No modifications are made to the EUT during all test items.

1.6 Testing Location

Sporton International Inc. (Kunshan) is accredited to ISO/IEC 17025:2017 by American Association for Laboratory Accreditation with Certificate Number 5145.02.

Test Firm	Sporton International Inc. (Kunshan)		
Test Site Location	No. 1098, Pengxi North Road, Kunshan Economic Development Zone Jiangsu Province 215300 People's Republic of China TEL : +86-512-57900158 FAX : +86-512-57900958		
Test Site No.	Sporton Site No.	FCC Designation No.	FCC Test Firm Registration No.
	03CH05-KS TH01-KS	CN1257	314309

1.7 Test Software

Item	Site	Manufacturer	Name	Version
1.	03CH05-KS	AUDIX	E3	6.2009-8-24al

1.8 Applicable Standards

According to the specifications of the manufacturer, the EUT must comply with the requirements of the following standards:

- ♦ 47 CFR Part 15 Subpart E
- ♦ FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.
- ♦ ANSI C63.10-2013

Remark:

1. All test items were verified and recorded according to the standards and without any deviation during the test.
2. This EUT has also been tested and complied with the requirements of FCC Part 15, Subpart B, recorded in a separate test report.

2 Test Configuration of Equipment Under Test

- a. The EUT has been associated with peripherals and configuration operated in a manner tended to maximize its emission characteristics in a typical application. Frequency range investigated:, radiation emission (9 kHz to the 10th harmonic of the highest fundamental frequency or to 40 GHz, whichever is lower). For radiated measurement, pre-scanned in three orthogonal panels, X, Y, Z. The worst cases (X plane) were recorded in this report.

2.1 Carrier Frequency and Channel

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5180-5240 MHz U-NII-1	36	5180	44	5220
	38*	5190	46*	5230
	40	5200	48	5240
	42 [#]	5210		

Frequency Band	Channel	Freq. (MHz)	Channel	Freq. (MHz)
5745-5825 MHz U-NII-3	149	5745	157	5785
	151*	5755	159*	5795
	153	5765	161	5805
	155 [#]	5775	165	5825

Note:

1. The above Frequency and Channel in "*" were 802.11n HT40 and 802.11ac VHT40.
2. The above Frequency and Channel in "[#]" were 802.11ac VHT80.



2.2 Test Mode

Final test modes are considering the modulation and worse data rates as below table.

Modulation	Data Rate
802.11a	6 Mbps
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0

Simultaneous transmission
802.11ac VHT20 CH36(5180MHz)Tx + BLE_CH39(2480MHz)Tx + LTE Band13 Tx

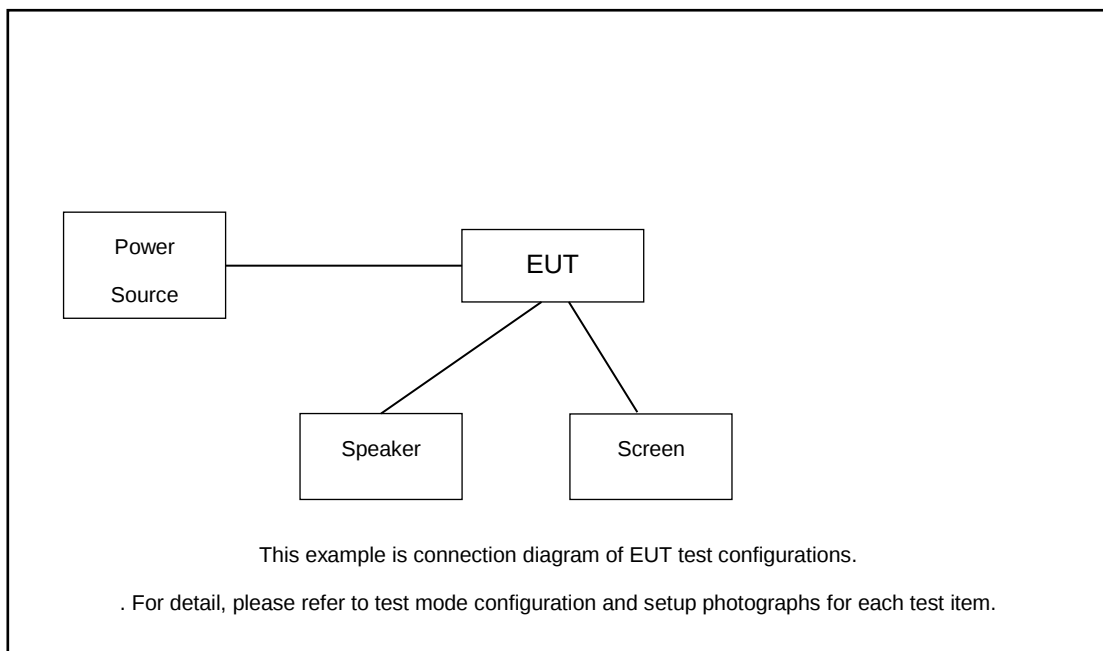
Ch. #		U-NII-1 5180-5240 MHz	U-NII-3 5745-5825 MHz
		802.11a	802.11a
L	Low	36	149
M	Middle	44	157
H	High	48	165

Ch. #		U-NII-1 5180-5240 MHz	U-NII-3 5745-5825 MHz
		802.11n HT20	802.11n HT20
L	Low	36	149
M	Middle	44	157
H	High	48	165

Ch. #		U-NII-1 5180-5240 MHz	U-NII-3 5745-5825 MHz
		802.11n HT40	802.11n HT40
L	Low	38	151
M	Middle	-	-
H	High	46	159

Ch. #		U-NII-1 5180-5240 MHz	U-NII-3 5745-5825 MHz
		802.11ac VHT80	802.11ac VHT80
L	Low	-	-
M	Middle	42	155
H	High	-	-

2.3 Connection Diagram of Test System



2.4 Support Unit used in test configuration and system

Item	Equipment	Trade Name	Model Name	FCC ID	Data Cable	Power Cord
1.	DC Power	GWINSTEK	PLR36-10	N/A	N/A	Unshielded,1.8m
2.	WWAN Antenna	N/A	N/A	N/A	N/A	N/A
3.	WLAN Antenna	N/A	N/A	N/A	N/A	N/A
4.	GNSS Antenna	N/A	N/A	N/A	N/A	N/A
5.	Speaker	N/A	N/A	N/A	N/A	N/A
6.	Screen	N/A	N/A	N/A	N/A	N/A

2.5 EUT Operation Test Setup

For WLAN RF test items, an engineering test program was provided and enabled to make EUT continuously transmit/receive.



2.6 Measurement Results Explanation Example

For all conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator factor between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

Example :

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

Following shows an offset computation example with cable loss 6.75 dB and 10dB attenuator.

$$\begin{aligned}\text{Offset(dB)} &= \text{RF cable loss(dB)} + \text{attenuator factor(dB)} \\ &= 6.75 + 10 = 16.75 \text{ (dB)}\end{aligned}$$

3 Test Result

3.1 6dB and 26dB and 99% Occupied Bandwidth Measurement

3.1.1 Description of 6dB and 26dB and 99% Occupied Bandwidth

The minimum 6 dB bandwidth shall be at least 500 kHz.

26dB and 99% Occupied bandwidth are reporting only.

3.1.2 Measuring Instruments

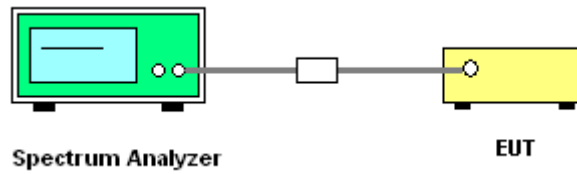
The measuring equipment is listed in the section 4 of this test report.

3.1.3 Test Procedures

- The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v02r01.

☒	Section C) Bandwidth Measurement 1. Emission Bandwidth (EBW)
	- Set RBW = approximately 1% of the emission bandwidth. - Set the VBW > RBW. - Detector = Peak. - Trace mode = max hold - Measure the maximum width of the emission that is 26 dB down from the peak of the emission. Compare this with the RBW setting of the analyzer. Readjust RBW and repeat measurement as needed until the RBW/EBW ratio is approximately 1%. - For 99% Bandwidth Measurement, the spectrum analyzer's resolution bandwidth (RBW) is set 1%~5%OBW and set the Video bandwidth (VBW) $\geq 3 * RBW$. - Measure and record the results in the test report.
☒	Section C) Bandwidth Measurement 2. Minimum Emission Bandwidth for the band 5.725 - 5.85 GHz
	- Set RBW = 100kHz. - Set the VBW $\geq 3 \times RBW$. - Detector = Peak. - Trace mode = max hold - Measure the maximum width of the emission that is 6 dB down from the peak of the emission. - Measure and record the results in the test report.

3.1.4 Test Setup



3.1.5 Test Result

Please refer to Appendix A.

3.2 Maximum Conducted Output Power Measurement

3.2.1 Limit of Maximum Conducted Output Power

<FCC 14-30 CFR 15.407>

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW.

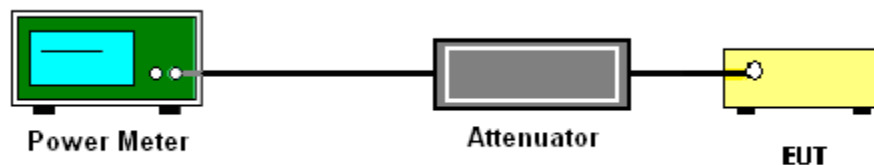
For the band 5.725–5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.2.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.2.3 Test Setup



3.2.4 Test Result of Maximum Conducted Output Power

Please refer to Appendix A.



3.3 Power Spectral Density Measurement

3.3.1 Limit of Power Spectral Density

<FCC 14-30 CFR 15.407>

For mobile and portable client devices in the 5.15–5.25 GHz band, the maximum power spectral density shall not exceed 11dBm in any 1 megahertz band.

For the band 5.725–5.85 GHz, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.

If transmitting antennas of directional gain greater than 6 dBi are used, the peak output power shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.3.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.3.3 Test Procedures

The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04.

Section F) Maximum power spectral density.

For devices operating in the bands 5.15 - 5.25 GHz

Method SA-2

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 1 MHz.
- Set VBW $\geq$ 3 MHz.
- Number of points in sweep $\geq$ 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- Add $10 \log(1/x)$, where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add $10 \log(1/0.25) = 6$ dB if the duty cycle is 25 percent.

For devices operating in the band 5.725 - 5.85 GHz

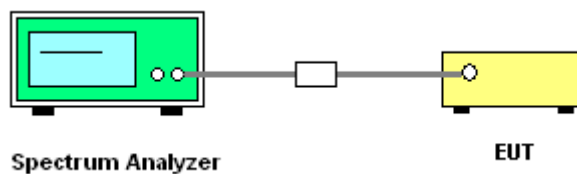
Method SA-2

(trace averaging across on and off times of the EUT transmissions, followed by duty cycle correction).

- Measure the duty cycle.
- Set span to encompass the entire emission bandwidth (EBW) of the signal.
- Set RBW = 500 kHz.
- Set VBW $\geq$ 1 MHz.
- Number of points in sweep $\geq$ 2 Span / RBW.
- Sweep time = auto.
- Detector = RMS
- Trace average at least 100 traces in power averaging mode.
- Add $10 \log(1/x)$, where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times. For example, add $10 \log(1/0.25) = 6$ dB if the duty cycle is 25 percent.

1. The RF output of EUT was connected to the spectrum analyzer by a low loss cable.
2. Each plot has already offset with cable loss, and attenuator loss. Measure the PPSD and record it.

3.3.4 Test Setup



3.3.5 Test Result of Power Spectral Density

Please refer to Appendix A.



3.4 Unwanted Emissions Measurement

This section as specified in FCC Part 15.407(b) is to measure unwanted emissions through radiated measurement for band edge spurious emissions and out of band emissions measurement. The unwanted emissions shall comply with 15.407(b)(1) to (6), and restricted bands per FCC Part 15.205.

3.4.1 Limit of Unwanted Emissions

- (1) For transmitters operating in the 5150-5250 MHz band: all emissions outside of the 5150-5350 MHz band shall not exceed an EIRP of -27dBm/MHz .

- (2) For transmitters operating in the 5.725-5.85 GHz band:
15.407(b)(4)(i) All emissions shall be limited to a level of -27 dBm/MHz at 75 MHz or more above or below the band edge increasing linearly to 10 dBm/MHz at 25 MHz above or below the band edge, and from 25 MHz above or below the band edge increasing linearly to a level of 15.6 dBm/MHz at 5 MHz above or below the band edge, and from 5 MHz above or below the band edge increasing linearly to a level of 27 dBm/MHz at the band edge.

(3) Unwanted spurious emissions fallen in restricted bands shall comply with the general field strength limits as below table,

Frequency (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
0.009 – 0.490	2400/F(kHz)	300
0.490 – 1.705	24000/F(kHz)	30
1.705 – 30.0	30	30
30 – 88	100	3
88 – 216	150	3
216 - 960	200	3
Above 960	500	3

(4) EIRP (dBm)	Field Strength at 3m (dBμV/m)
- 27	68.3

Note: The following formula is used to convert the EIRP to field strength.

$$\text{EIRP} = E_{\text{Meas}} + 20\log(d_{\text{Meas}}) - 104.77$$

where

EIRP is the equivalent isotropically radiated power, in dBm

E_{Meas} is the field strength of the emission at the measurement distance, in dBμV/m

d_{Meas} is the measurement distance, in m

3.4.2 Measuring Instruments

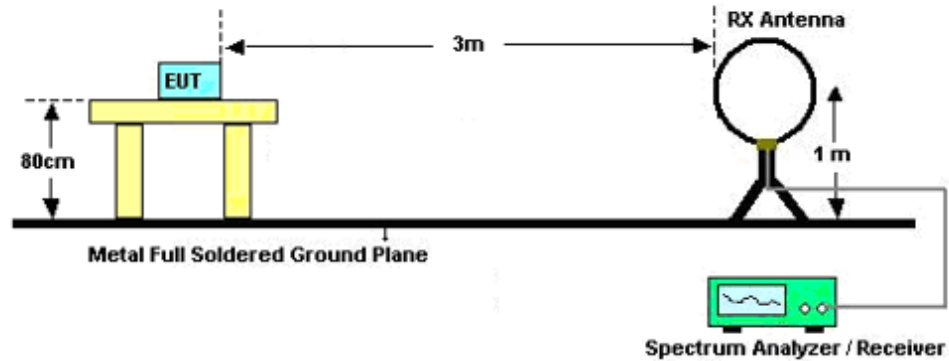
The measuring equipment is listed in the section 4 of this test report.

3.4.3 Test Procedures

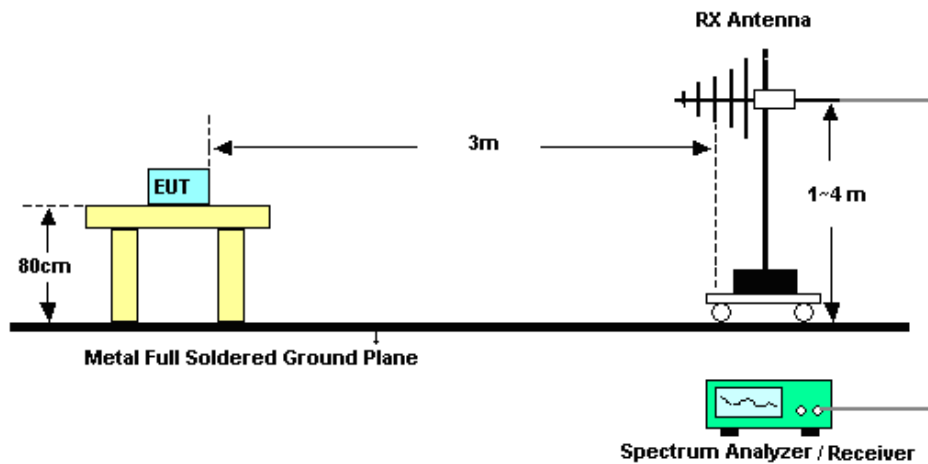
1. The testing follows FCC KDB 789033 D02 General UNII Test Procedures New Rules v01r04. Section G) Unwanted emissions measurement.
 - (1) Procedure for Unwanted Emissions Measurements Below 1000MHz
 - RBW = 120 kHz
 - VBW = 300 kHz
 - Detector = Peak
 - Trace mode = max hold
 - (2) Procedure for Peak Unwanted Emissions Measurements Above 1000 MHz
 - RBW = 1 MHz
 - VBW $\geq$ 3 MHz
 - Detector = Peak
 - Sweep time = auto
 - Trace mode = max hold
 - (3) Procedures for Average Unwanted Emissions Measurements Above 1000MHz
 - RBW = 1 MHz
 - VBW = 10 Hz, when duty cycle is no less than 98 percent.
 - VBW $\geq$ 1/T, when duty cycle is less than 98 percent where T is the minimum transmission duration over which the transmitter is on and is transmitting at its maximum power control level for the tested mode of operation.
2. The EUT was placed on a turntable with 0.8 meter for frequency below 1GHz and 1.5 meter for frequency above 1GHz respectively above ground.
3. The EUT was set 3 meters from the interference receiving antenna which was mounted on the top of a variable height antenna tower.
4. The antenna is a broadband antenna and its height is adjusted between one meter and four meters above ground to find the maximum value of the field strength for both horizontal polarization and vertical polarization of the antenna.
5. For each suspected emission, the EUT was arranged to its worst case and then adjust the antenna tower (from 1 m to 4 m) and turntable (from 0 degree to 360 degrees) to find the maximum reading.
6. For testing below 1GHz, if the emission level of the EUT in peak mode was 3 dB lower than the limit specified, then peak values of EUT will be reported, otherwise, the emissions will be repeated one by one using the CISPR quasi-peak method and reported.
7. For testing above 1GHz, the emission level of the EUT in peak mode was 20dB lower than average limit (that means the emission level in average mode also complies with the limit in average mode), then peak values of EUT will be reported, otherwise, the emissions will be measured in average mode again and reported.

3.4.4 Test Setup

For radiated emissions below 30MHz



For radiated emissions from 30MHz to 1GHz



**3.4.5 Test Results of Radiated Spurious Emissions (9 kHz ~ 30 MHz)**

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

3.4.6 Test Result of Radiated Spurious at Band Edges

Please refer to Appendix B.

3.4.7 Duty Cycle

Please refer to Appendix C.

3.4.8 Test Result of Radiated Spurious Emissions (30MHz ~ 10th Harmonic)

Please refer to Appendix B.



3.5 Antenna Requirements

3.5.1 Standard Applicable

According to FCC 47 CFR Section 15.407(a)(1)(2), if transmitting antenna directional gain is greater than 6 dBi, both the peak transmit power and the peak power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

3.5.2 Antenna Anti-Replacement Construction

An embedded-in antenna design is used.

3.5.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.



4 List of Measuring Equipment

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Test Date	Due Date	Remark
EMI Test Receiver	Keysight	N9038A	MY56400004	3Hz~8.5GHz;Max 30dBm	Oct. 16, 2021	Jul. 28, 2022 ~Aug. 11, 2022	Oct. 15, 2022	Radiation (03CH05-KS)
EXA Spectrum Analyzer	Keysight	N9010A	MY55150244	10Hz~44G,MAX 30dB	Mar. 24, 2022	Jul. 28, 2022 ~Aug. 11, 2022	Mar. 23, 2023	Radiation (03CH05-KS)
Loop Antenna	R&S	HFH2-Z2	100321	9kHz~30MHz	Oct. 30, 2021	Jul. 28, 2022 ~Aug. 11, 2022	Oct. 29, 2022	Radiation (03CH05-KS)
Bilog Antenna	TeseQ	CBL6111D	49922	30MHz~1GHz	May 24, 2022	Jul. 28, 2022 ~Aug. 11, 2022	May 23, 2023	Radiation (03CH05-KS)
Double Ridge Horn Antenna	ETS-Lindgren	3117	75957	1GHz~18GHz	Nov. 08, 2021	Jul. 28, 2022 ~Aug. 11, 2022	Nov. 07, 2022	Radiation (03CH05-KS)
SHF-EHF Horn	Com-power	AH-840	101070	18GHz~40GHz	Jan. 05, 2022	Jul. 28, 2022 ~Aug. 11, 2022	Jan. 04, 2023	Radiation (03CH05-KS)
Amplifier	SONOMA	310N	380826	9KHz~1GHz	Jul. 11, 2022	Jul. 28, 2022 ~Aug. 11, 2022	Jul. 10, 2023	Radiation (03CH05-KS)
Amplifier	MITEQ	EM18G40GGA	060728	18~40GHz	Jan. 05, 2022	Jul. 28, 2022 ~Aug. 11, 2022	Jan. 04, 2023	Radiation (03CH05-KS)
high gain Amplifier	MITEQ	AMF-7D-0010 1800-30-10P	2012228	1Ghz~18Ghz	Oct. 16, 2021	Jul. 28, 2022 ~Aug. 11, 2022	Oct. 15, 2022	Radiation (03CH05-KS)
Amplifier	Keysight	83017A	MY53270316	500MHz~26.5G Hz	Oct. 16, 2021	Jul. 28, 2022 ~Aug. 11, 2022	Oct. 15, 2022	Radiation (03CH05-KS)
AC Power Source	Chroma	61601	F104090004	N/A	NCR	Jul. 28, 2022 ~Aug. 11, 2022	NCR	Radiation (03CH05-KS)
Turn Table	ChamPro	EM 1000-T	060762-T	0~360 degree	NCR	Jul. 28, 2022 ~Aug. 11, 2022	NCR	Radiation (03CH05-KS)
Antenna Mast	ChamPro	EM 1000-A	060762-A	1 m~4 m	NCR	Jul. 28, 2022 ~Aug. 11, 2022	NCR	Radiation (03CH05-KS)
Spectrum Analyzer	R&S	FSV40	101040	10Hz~40GHz	Oct. 14, 2021	Aug. 01, 2022 ~Aug. 08, 2022	Oct. 13, 2022	Conducted (TH01-KS)
Pulse Power Sensor	Anritsu	MA2411B	0917070	300MHz~40GHz	Jan. 05, 2022	Aug. 01, 2022 ~Aug. 08, 2022	Jan. 04, 2023	Conducted (TH01-KS)
Power Meter	Anritsu	ML2495A	1005002	50MHz Bandwidth	Jan. 05, 2022	Aug. 01, 2022 ~Aug. 08, 2022	Jan. 04, 2023	Conducted (TH01-KS)

NCR: No Calibration Required

5 Uncertainty of Evaluation

The measurement uncertainties shown below were calculated in accordance with the requirements of ANSI 63.10-2013. All the measurement uncertainty value were shown with a coverage K=2 to indicate 95% level of confidence. The measurement data show herein meets or exceeds the CISPR measurement uncertainty values specified in CISPR 16-4-2 and can be compared directly to specified limit to determine compliance.

Uncertainty of Conducted Measurement

Test Item	Uncertainty
Conducted Power	± 0.56 dB
Conducted Emissions	± 0.92 dB
Occupied Channel Bandwidth	± 0.03 %
Conducted Power Spectral Density	± 0.54 dB

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.0dB
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Uncertainty of Radiated Emission Measurement (1000 MHz ~ 18000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.0dB
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Uncertainty of Radiated Emission Measurement (18000 MHz ~ 40000 MHz)

Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$)	5.0dB
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Appendix A. Conducted Test Results

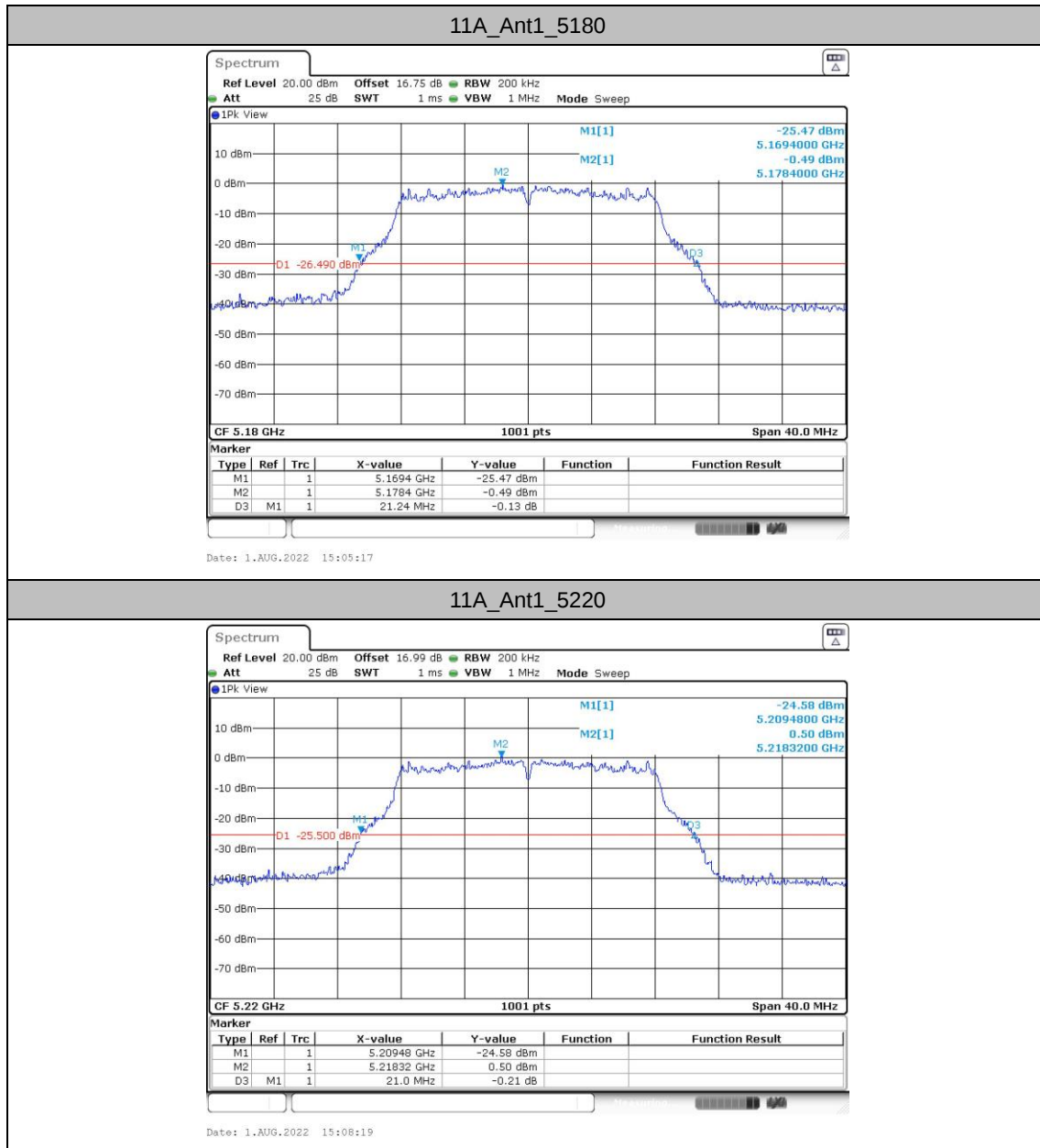
Emission Bandwidth

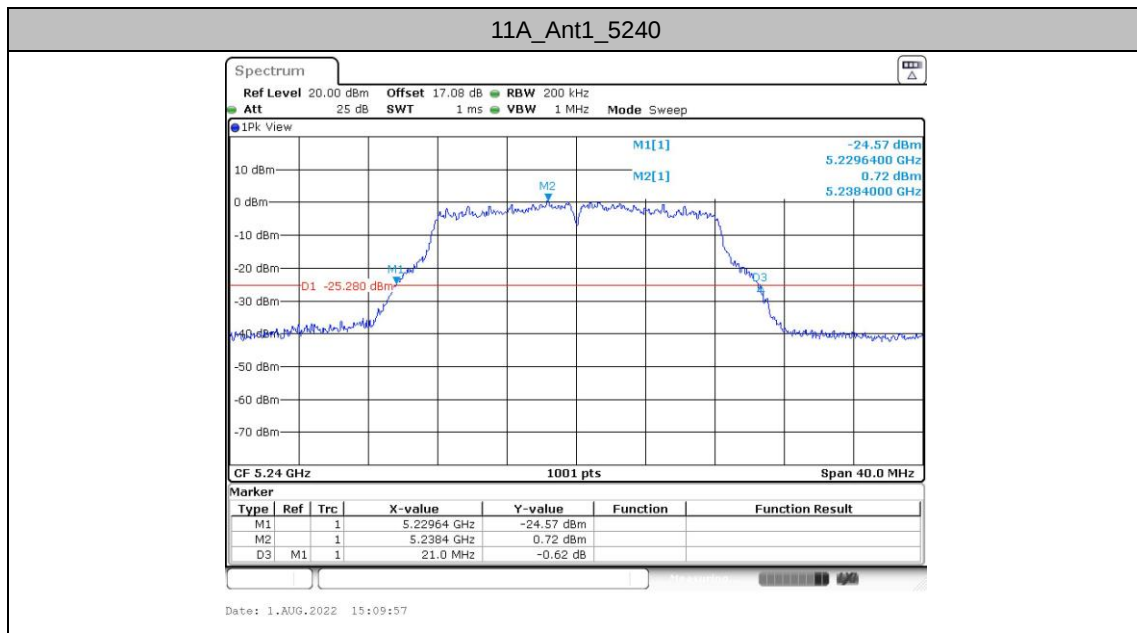
Test Result

TestMode	Antenna	Frequency[MHz]	26db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	21.24	5169.40	5190.64	---	---
		5220	21.00	5209.48	5230.48	---	---
		5240	21.00	5229.64	5250.64	---	---
		5745	21.08	5734.60	5755.68	---	---
		5785	21.08	5774.56	5795.64	---	---
		5825	20.72	5814.64	5835.36	---	---
11AC20SISO	Ant1	5180	21.28	5169.44	5190.72	---	---
		5220	21.24	5209.40	5230.64	---	---
		5240	21.36	5229.28	5250.64	---	---
		5745	21.44	5734.44	5755.88	---	---
		5785	21.36	5774.36	5795.72	---	---
		5825	21.40	5814.20	5835.60	---	---
11AC40SISO	Ant1	5190	40.00	5170.08	5210.08	---	---
		5230	40.24	5209.92	5250.16	---	---
		5755	40.00	5735.08	5775.08	---	---
		5795	39.84	5775.16	5815.00	---	---
11AC80SISO	Ant1	5210	81.60	5169.52	5251.12	---	---
		5775	81.60	5734.36	5815.96	---	---



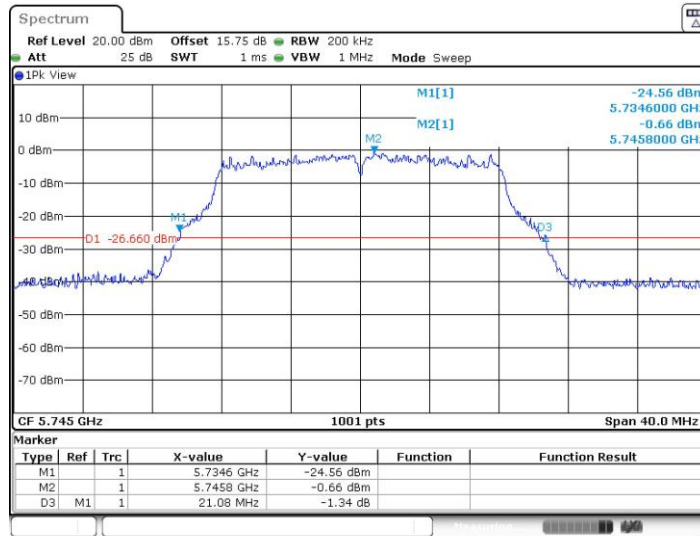
Test Graphs





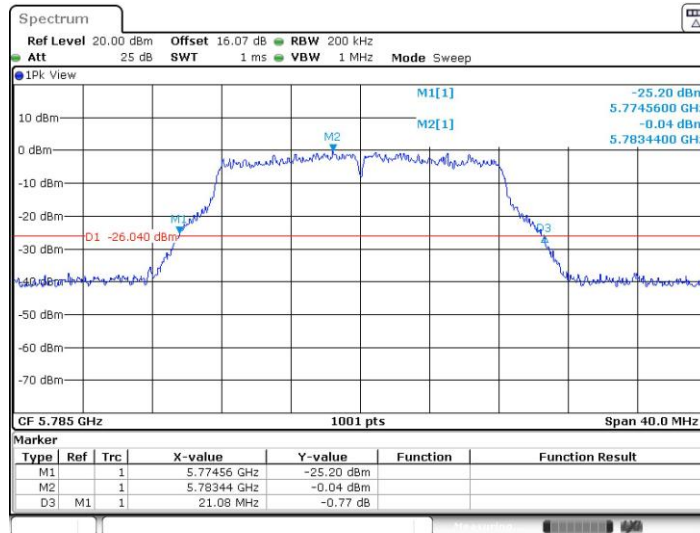


11A_Ant1_5745



Date: 1.AUG.2022 15:28:02

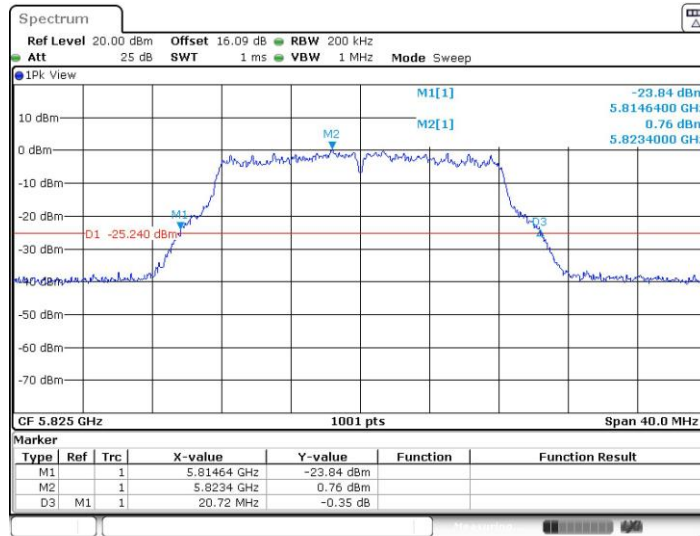
11A_Ant1_5785



Date: 1.AUG.2022 15:29:21

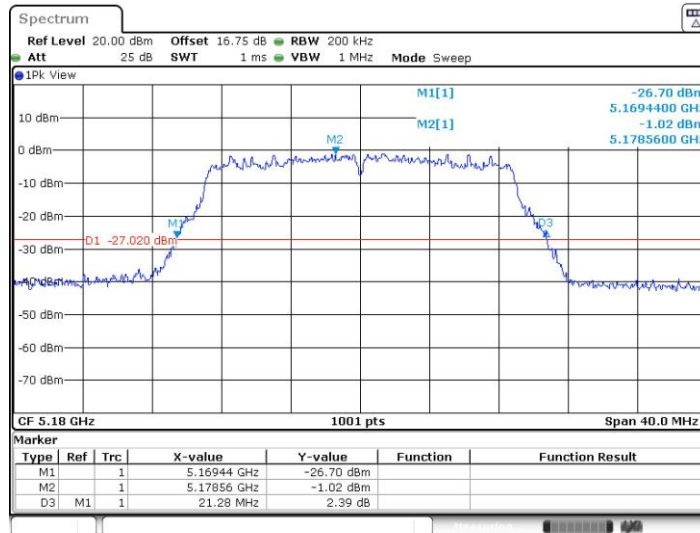


11A_Ant1_5825



Date: 1.AUG.2022 15:30:34

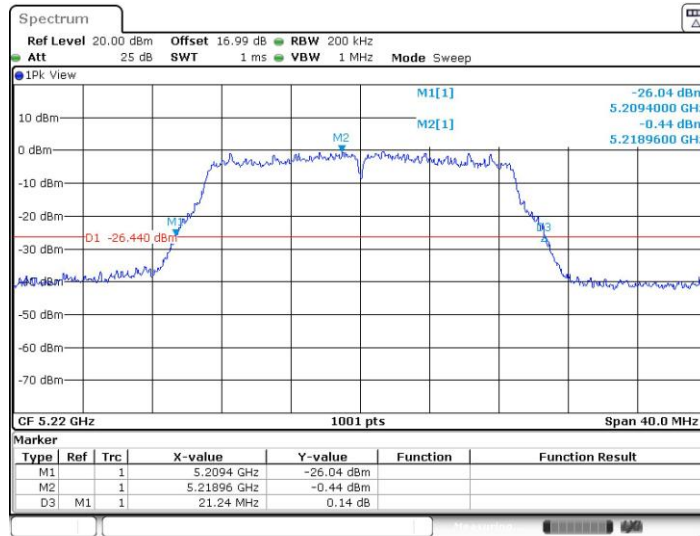
11AC20SISO_Ant1_5180



Date: 1.AUG.2022 15:35:08

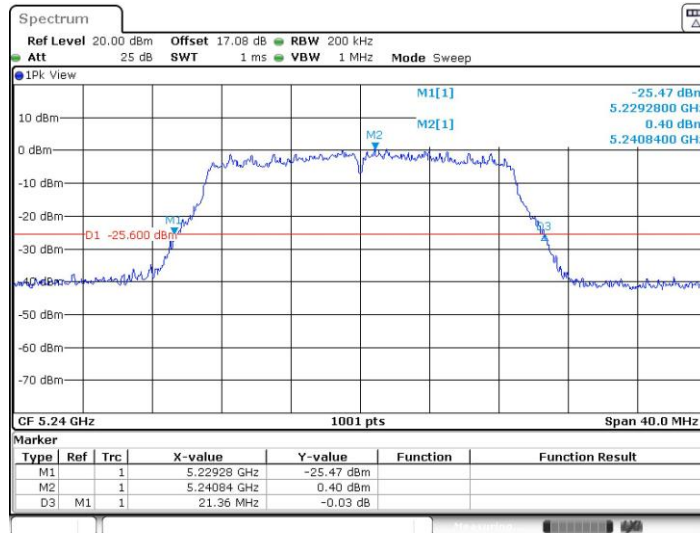


11AC20SISO_Ant1_5220

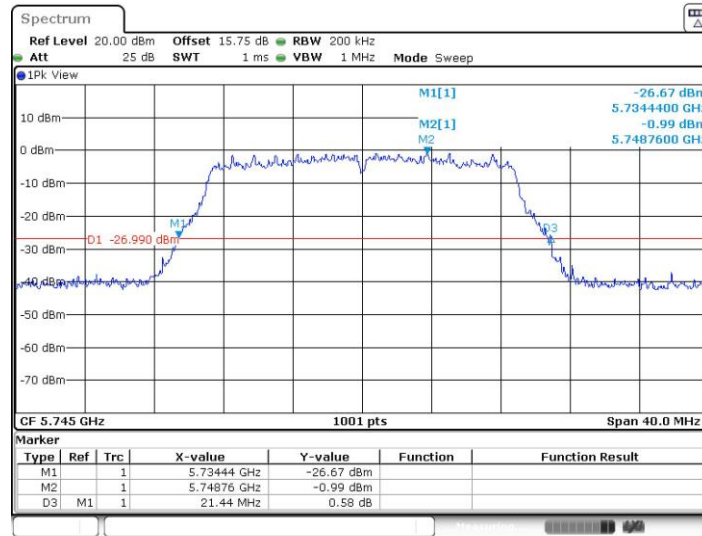


Date: 1.AUG.2022 15:36:29

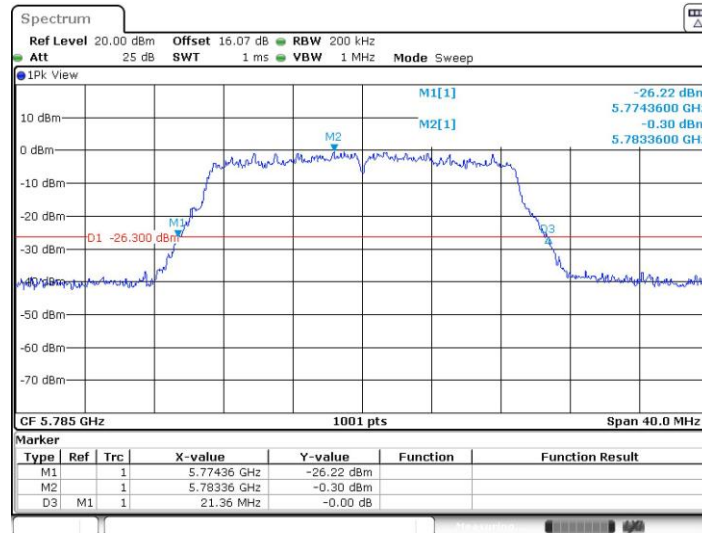
11AC20SISO_Ant1_5240



Date: 1.AUG.2022 15:37:42

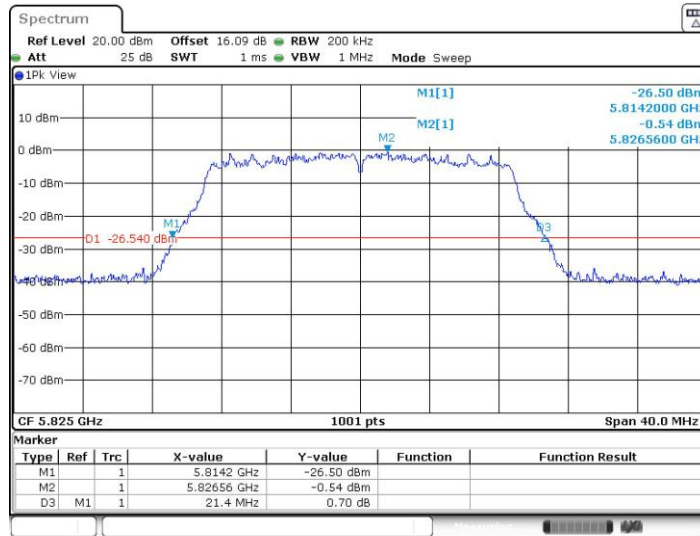
11AC20SISO_Ant1_5745


Date: 1.AUG.2022 15:46:54

11AC20SISO_Ant1_5785


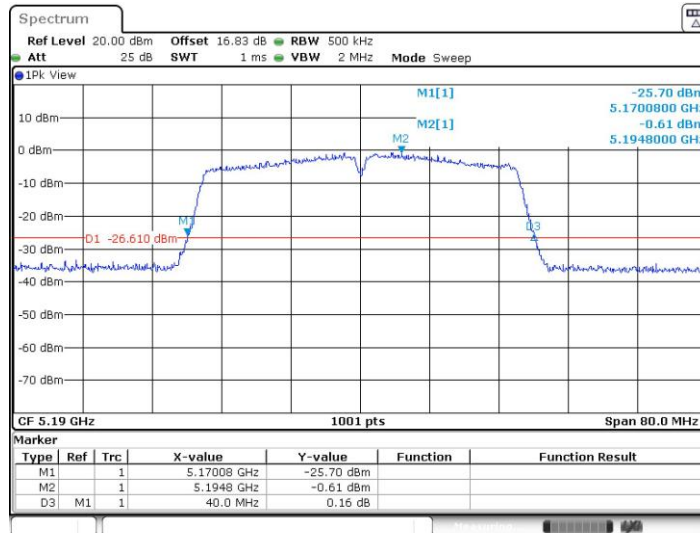
Date: 1.AUG.2022 15:48:14

11AC20SISO_Ant1_5825



Date: 1.AUG.2022 15:49:21

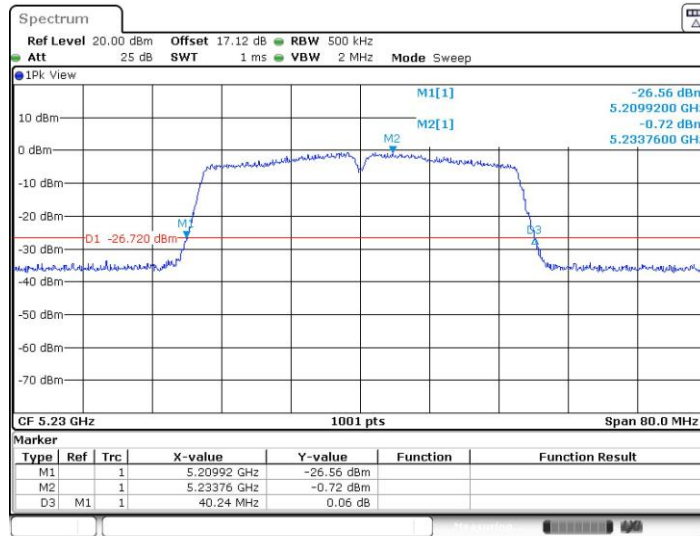
11AC40SISO_Ant1_5190



Date: 1.AUG.2022 15:53:40

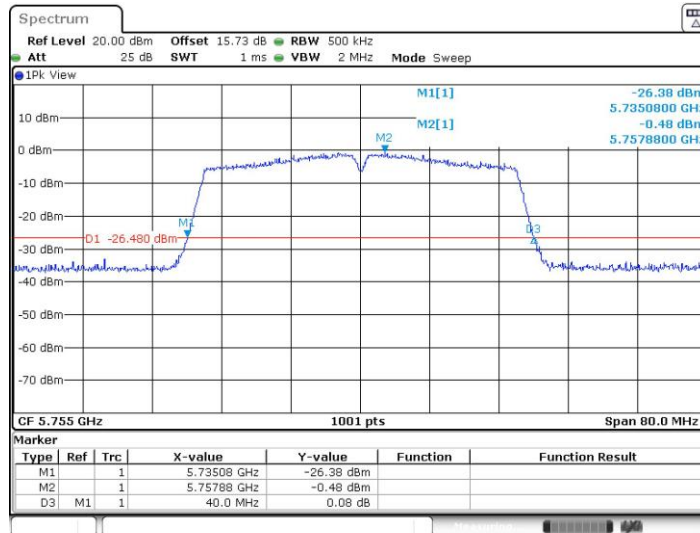


11AC40SISO_Ant1_5230



Date: 1.AUG.2022 15:54:55

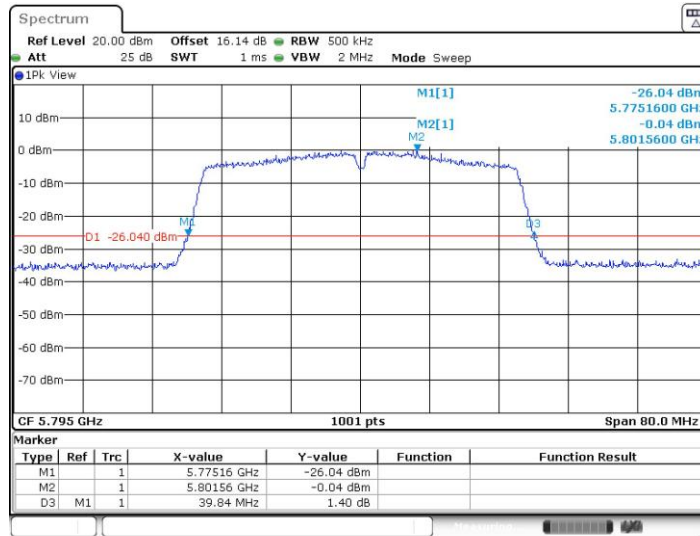
11AC40SISO_Ant1_5755



Date: 1.AUG.2022 16:02:33

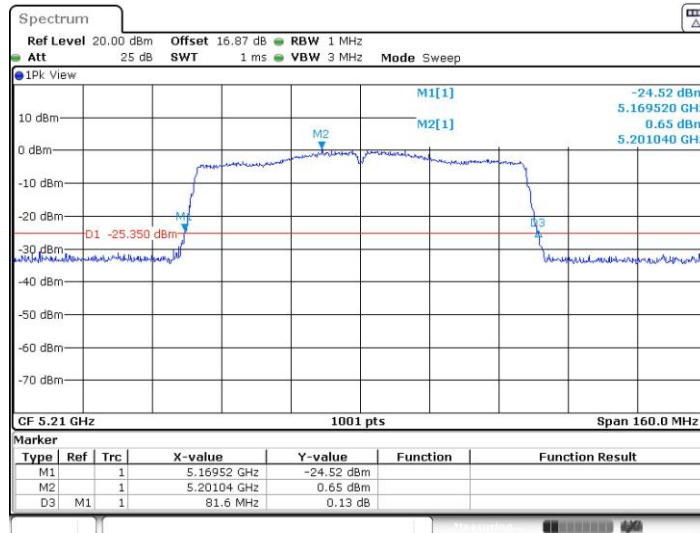


11AC40SISO_Ant1_5795

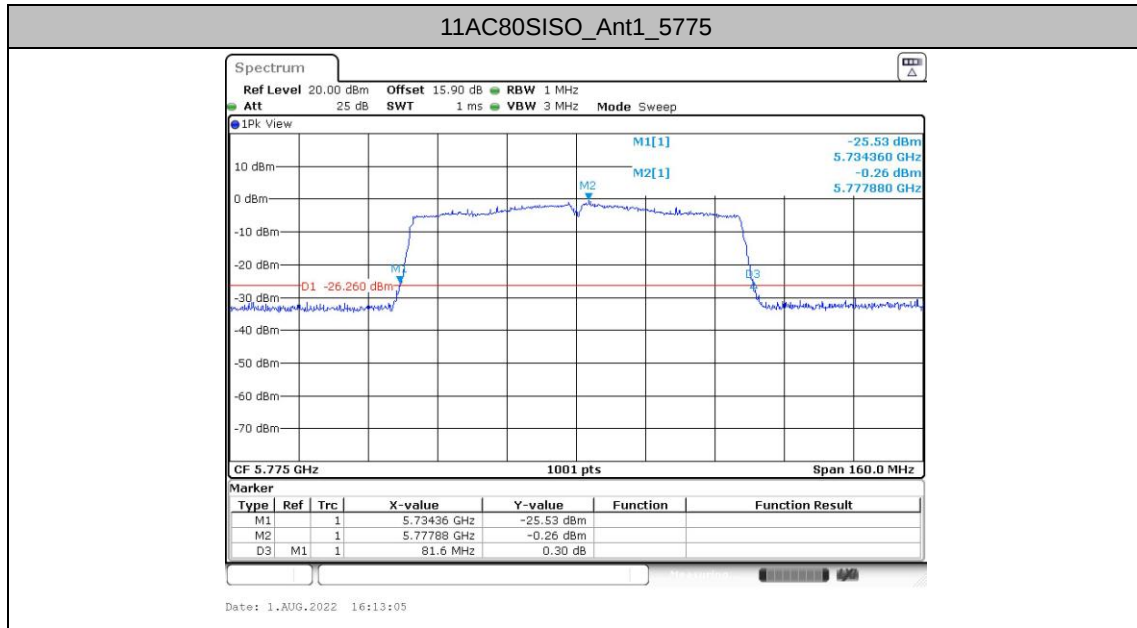


Date: 1.AUG.2022 16:03:45

11AC80SISO_Ant1_5210



Date: 1.AUG.2022 16:05:50



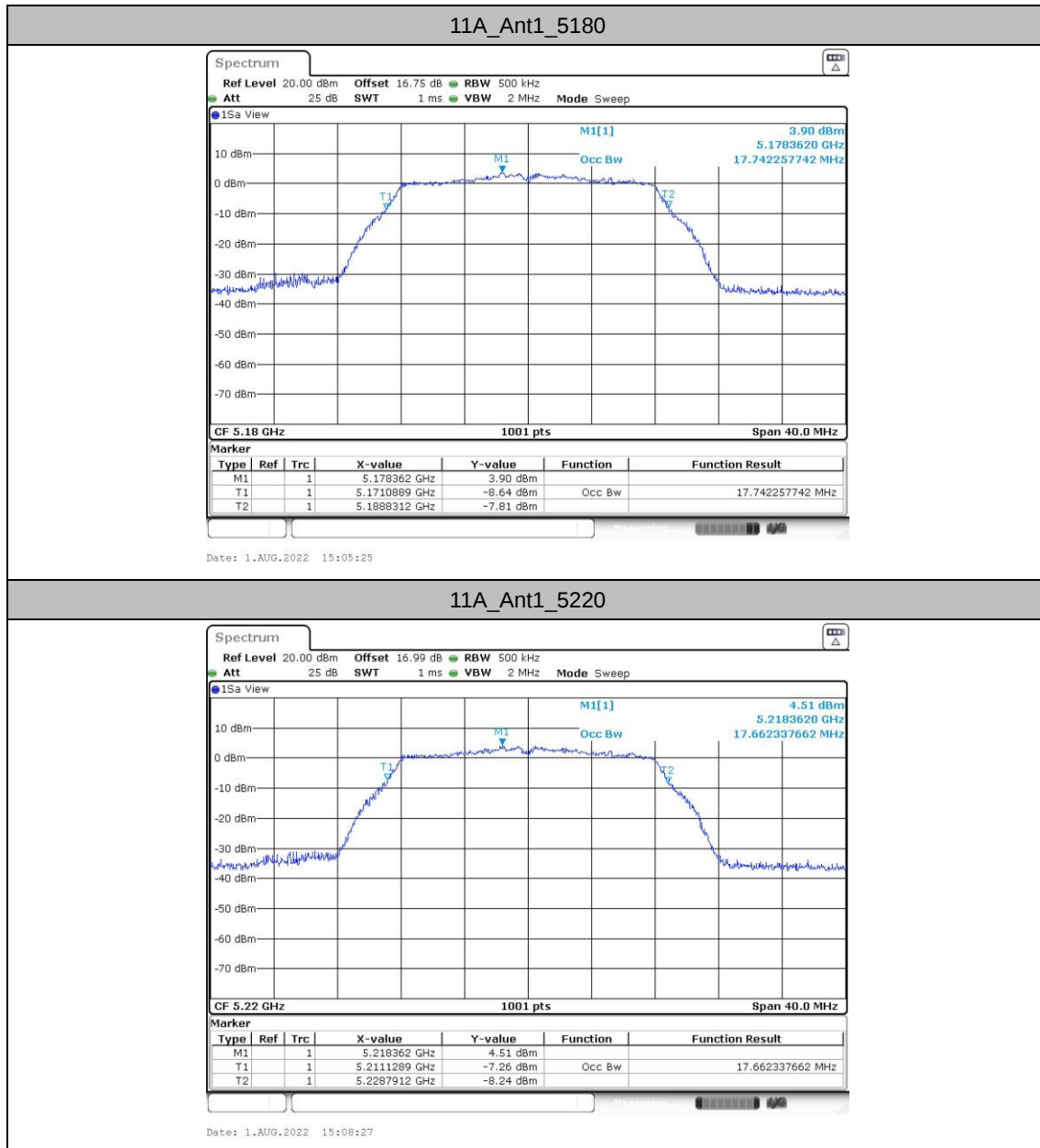
Occupied channel bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	OCB [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5180	17.742	5171.089	5188.831	---	---
		5220	17.662	5211.129	5228.791	---	---
		5240	17.582	5231.209	5248.791	---	---
		5745	17.702	5736.129	5753.831	---	---
		5785	17.702	5776.129	5793.831	---	---
		5825	17.622	5816.129	5833.751	---	---
11AC20SISO	Ant1	5180	18.581	5170.689	5189.271	---	---
		5220	18.541	5210.689	5229.231	---	---
		5240	18.462	5230.769	5249.231	---	---
		5745	18.501	5735.729	5754.231	---	---
		5785	18.541	5775.729	5794.271	---	---
		5825	18.541	5815.689	5834.231	---	---
11AC40SISO	Ant1	5190	36.444	5171.858	5208.302	---	---
		5230	36.444	5211.778	5248.222	---	---
		5755	36.364	5736.778	5773.142	---	---
		5795	36.284	5776.858	5813.142	---	---
11AC80SISO	Ant1	5210	75.924	5172.118	5248.042	---	---
		5775	75.924	5737.118	5813.042	---	---

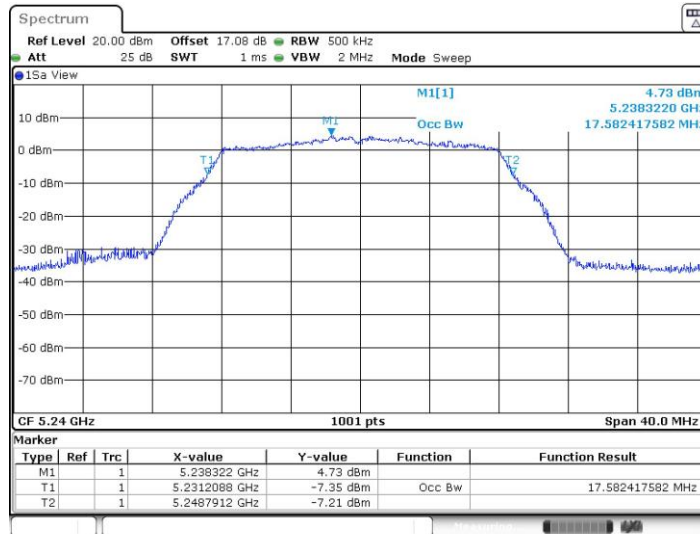


Test Graphs



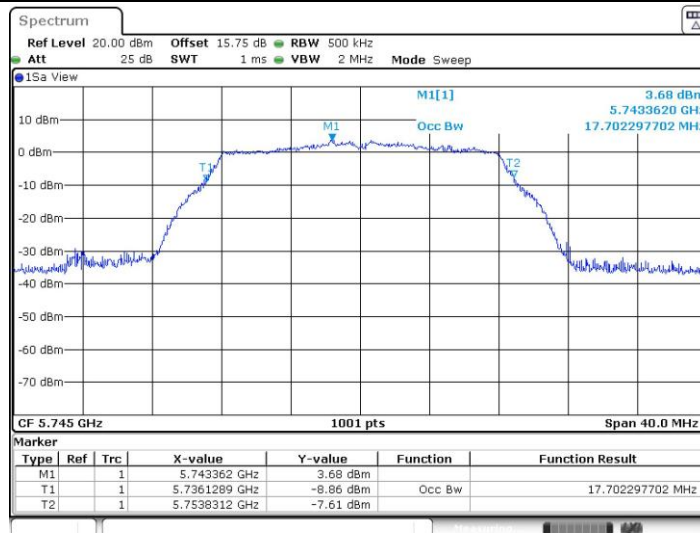


11A_Ant1_5240



Date: 1.AUG.2022 15:10:08

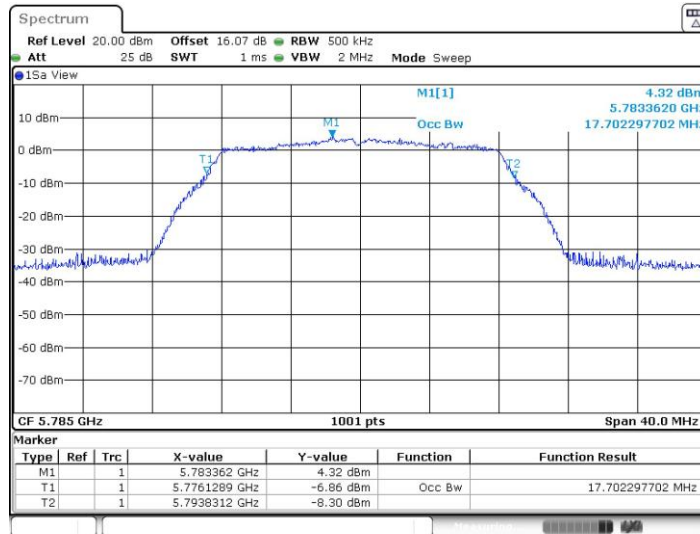
11A_Ant1_5745



Date: 1.AUG.2022 15:28:12

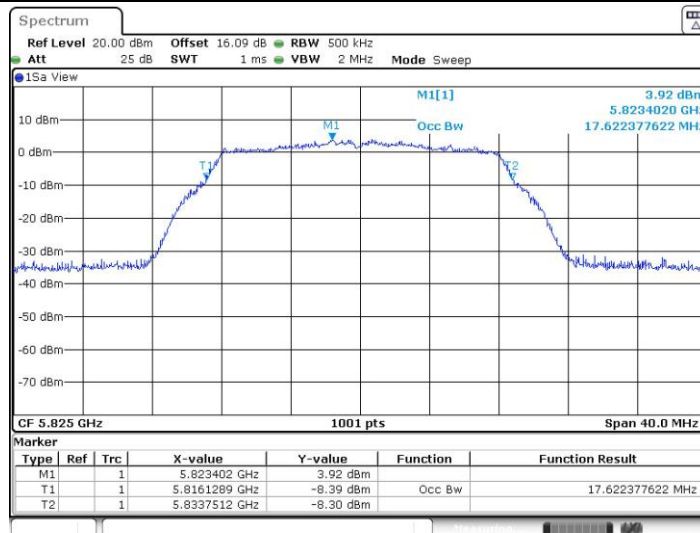


11A_Ant1_5785



Date: 1.AUG.2022 15:29:32

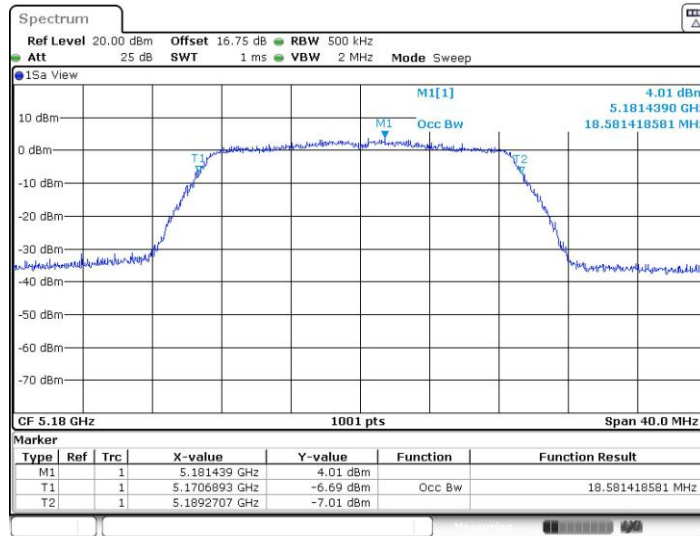
11A_Ant1_5825



Date: 1.AUG.2022 15:30:45

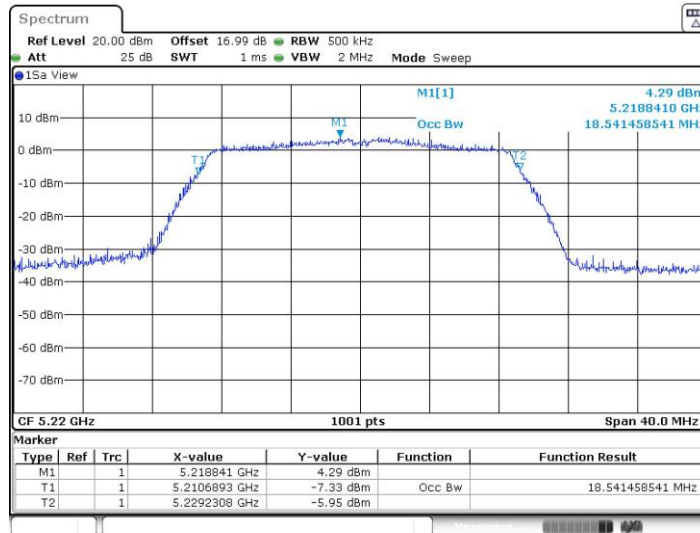


11AC20SISO_Ant1_5180



Date: 1.AUG.2022 15:35:17

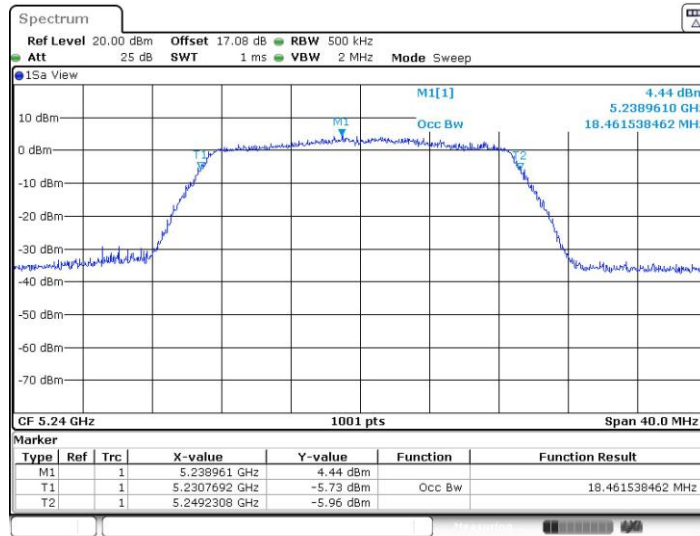
11AC20SISO_Ant1_5220



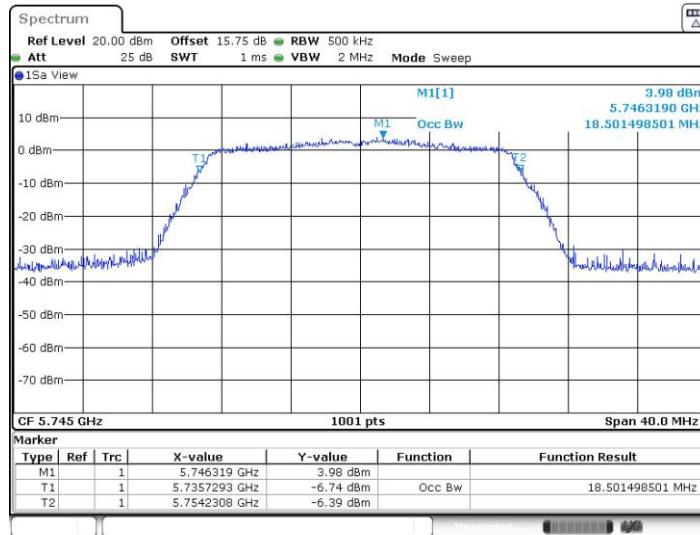
Date: 1.AUG.2022 15:36:38



11AC20SISO_Ant1_5240

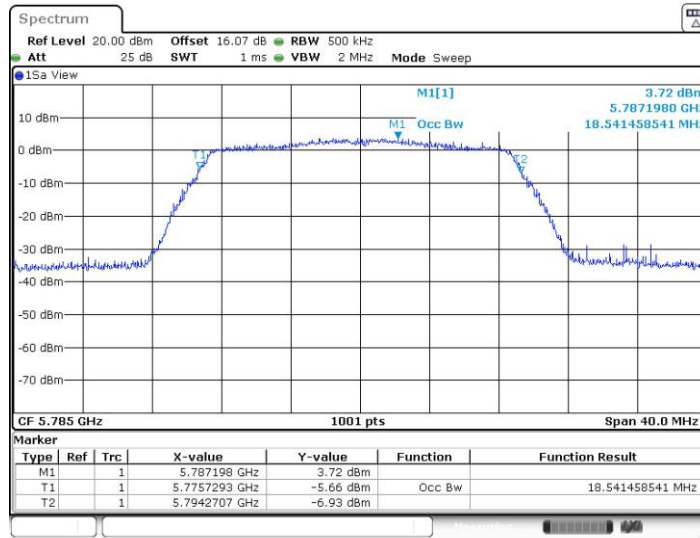


11AC20SISO_Ant1_5745



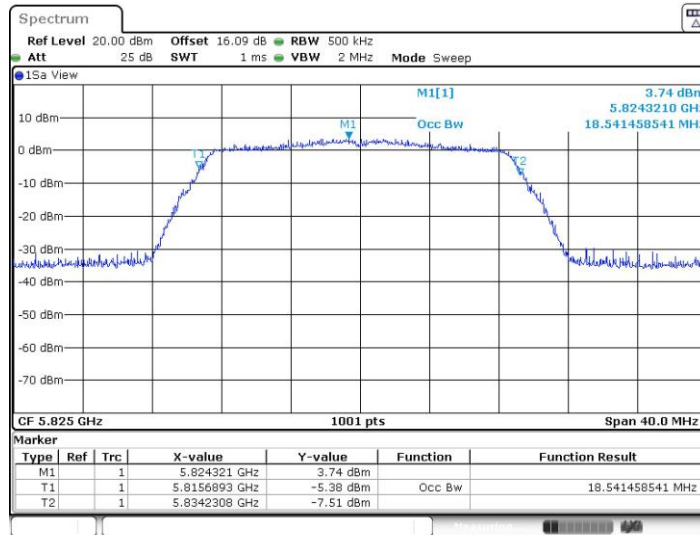


11AC20SISO_Ant1_5785



Date: 1.AUG.2022 15:48:24

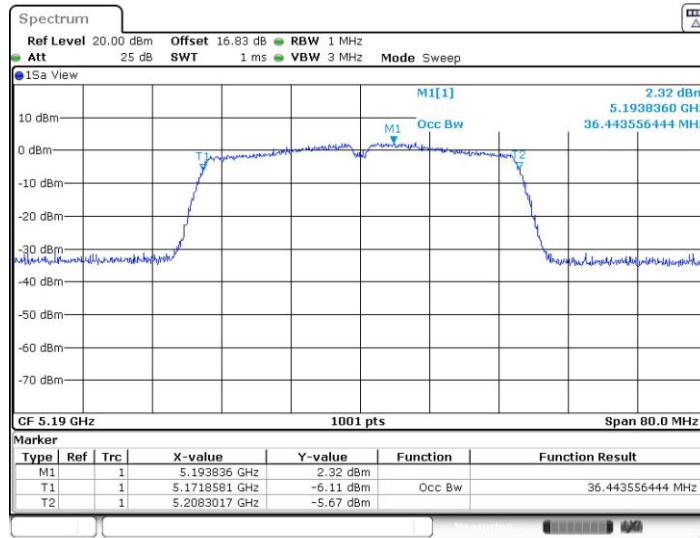
11AC20SISO_Ant1_5825



Date: 1.AUG.2022 15:49:32

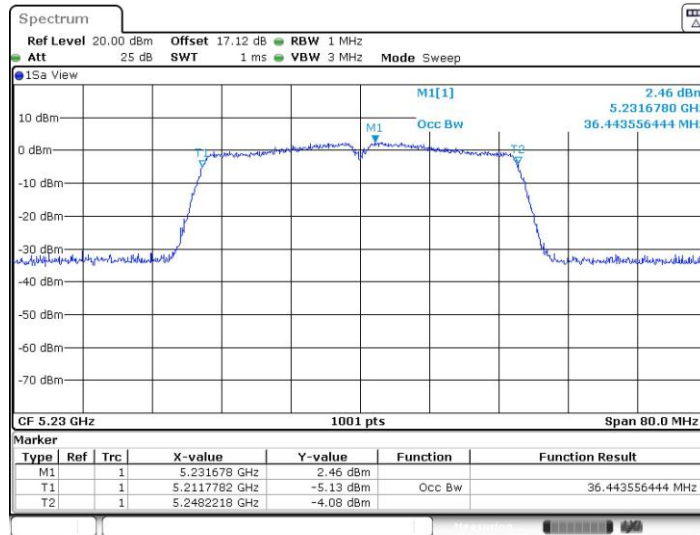


11AC40SISO_Ant1_5190



Date: 1.AUG.2022 15:53:48

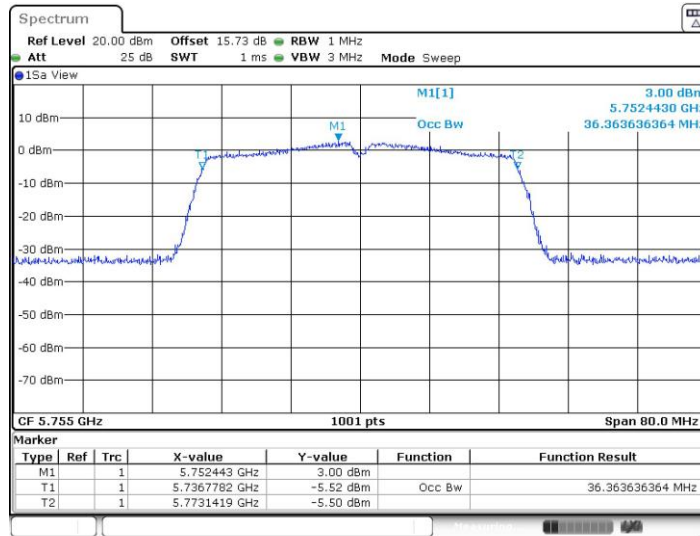
11AC40SISO_Ant1_5230



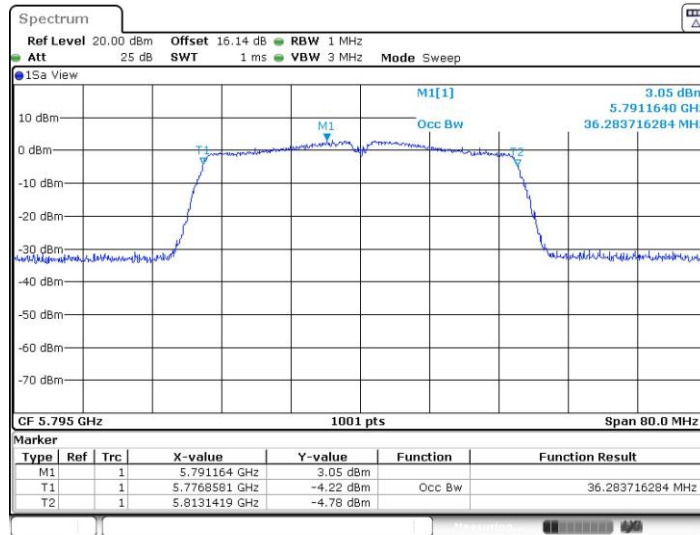
Date: 1.AUG.2022 15:55:04



11AC40SISO_Ant1_5755

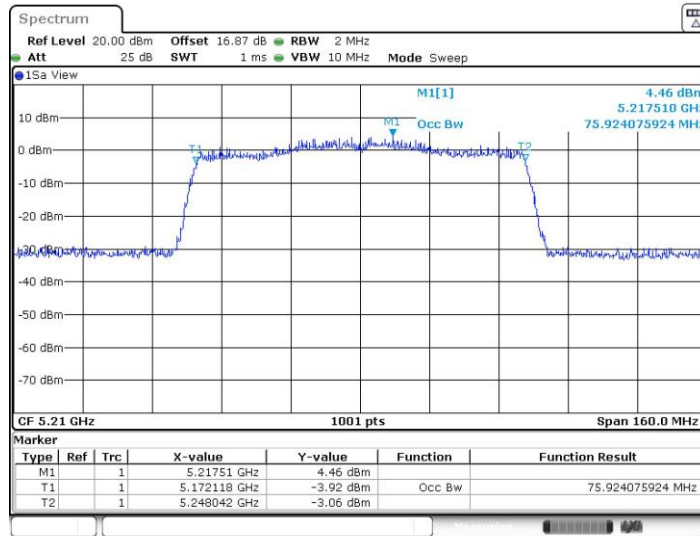


11AC40SISO_Ant1_5795

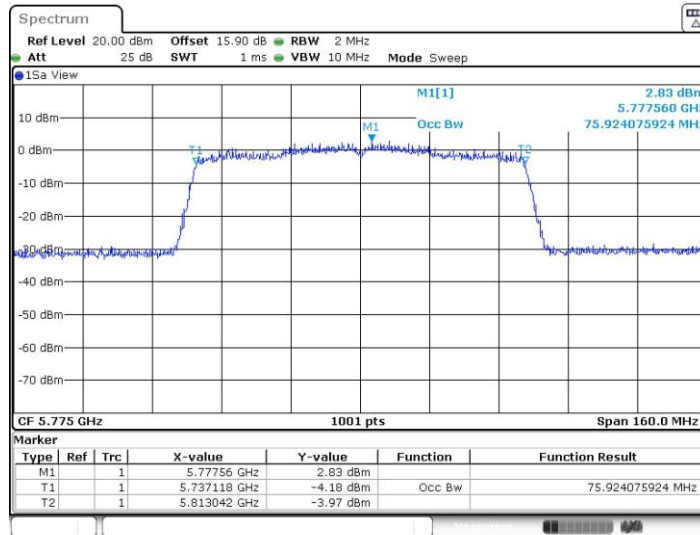




11AC80SISO_Ant1_5210



11AC80SISO_Ant1_5775





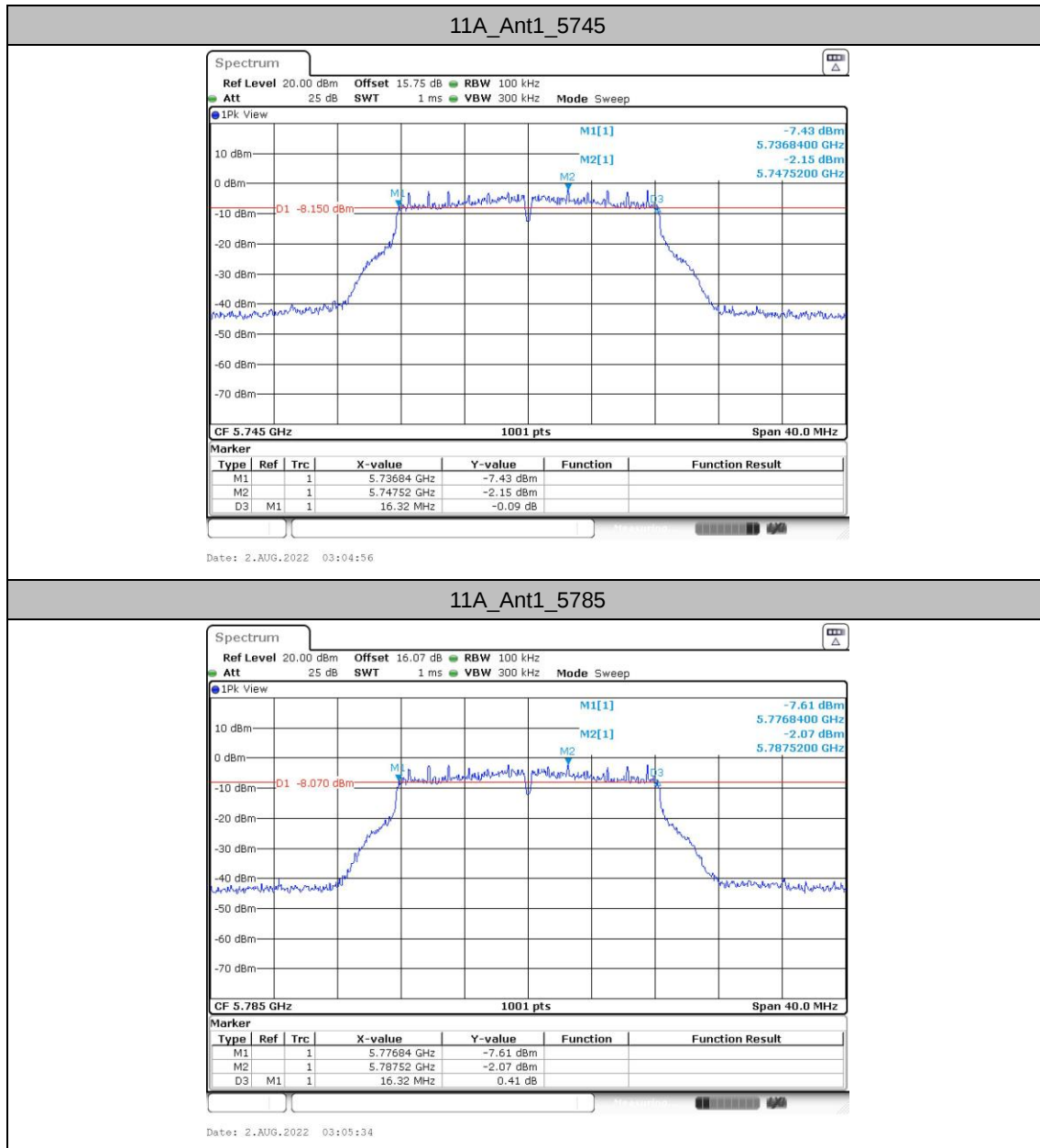
Min emission bandwidth

Test Result

TestMode	Antenna	Frequency[MHz]	6db EBW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11A	Ant1	5745	16.32	5736.84	5753.16	0.5	PASS
		5785	16.32	5776.84	5793.16	0.5	PASS
		5825	16.32	5816.84	5833.16	0.5	PASS
11AC20SISO	Ant1	5745	17.52	5736.24	5753.76	0.5	PASS
		5785	17.56	5776.24	5793.80	0.5	PASS
		5825	17.56	5816.20	5833.76	0.5	PASS
11AC40SISO	Ant1	5755	35.68	5737.24	5772.92	0.5	PASS
		5795	35.20	5777.40	5812.60	0.5	PASS
11AC80SISO	Ant1	5775	75.20	5737.40	5812.60	0.5	PASS

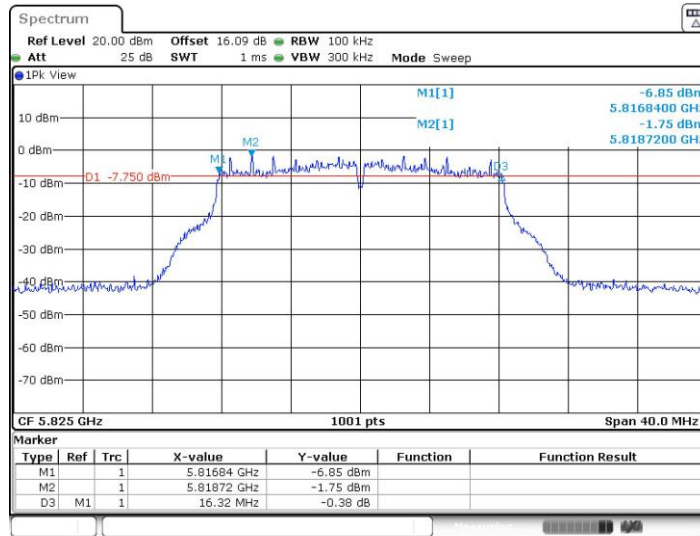


Test Graphs



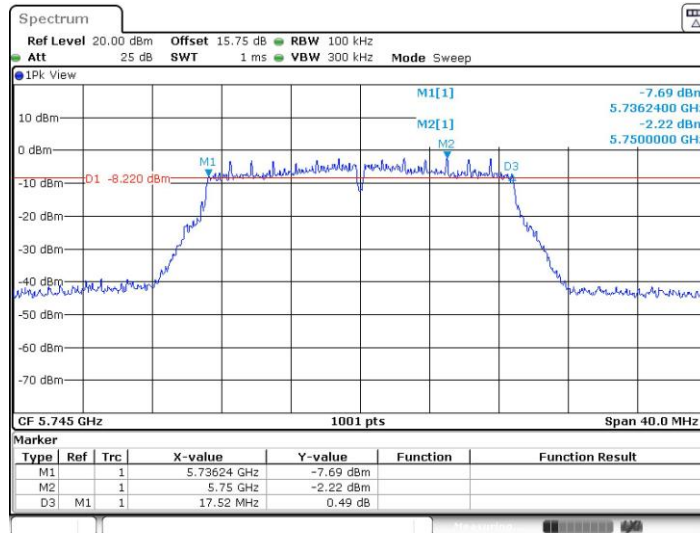


11A_Ant1_5825



Date: 2.AUG.2022 03:06:09

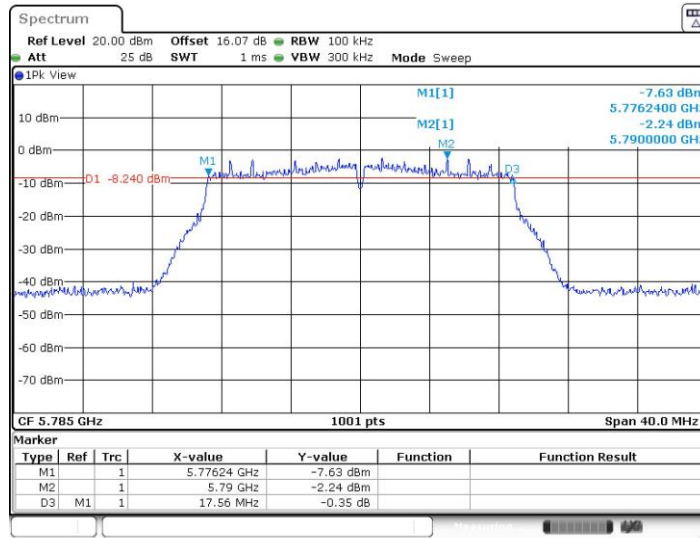
11AC20SISO_Ant1_5745



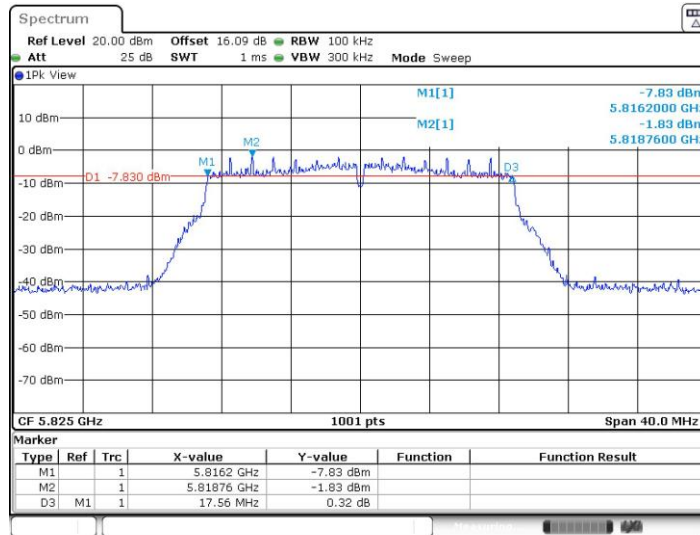
Date: 2.AUG.2022 03:07:30



11AC20SISO_Ant1_5785

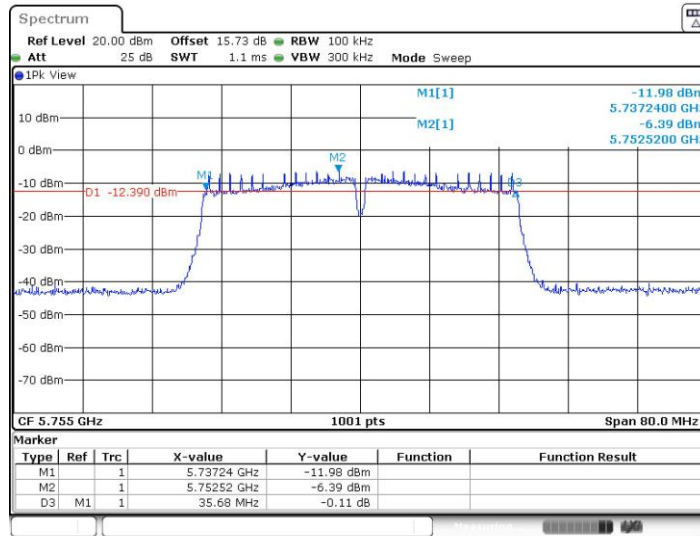


11AC20SISO_Ant1_5825



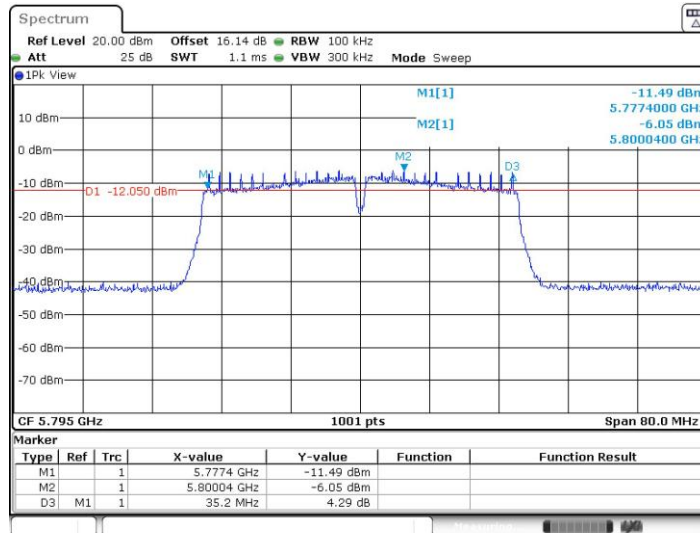


11AC40SISO_Ant1_5755

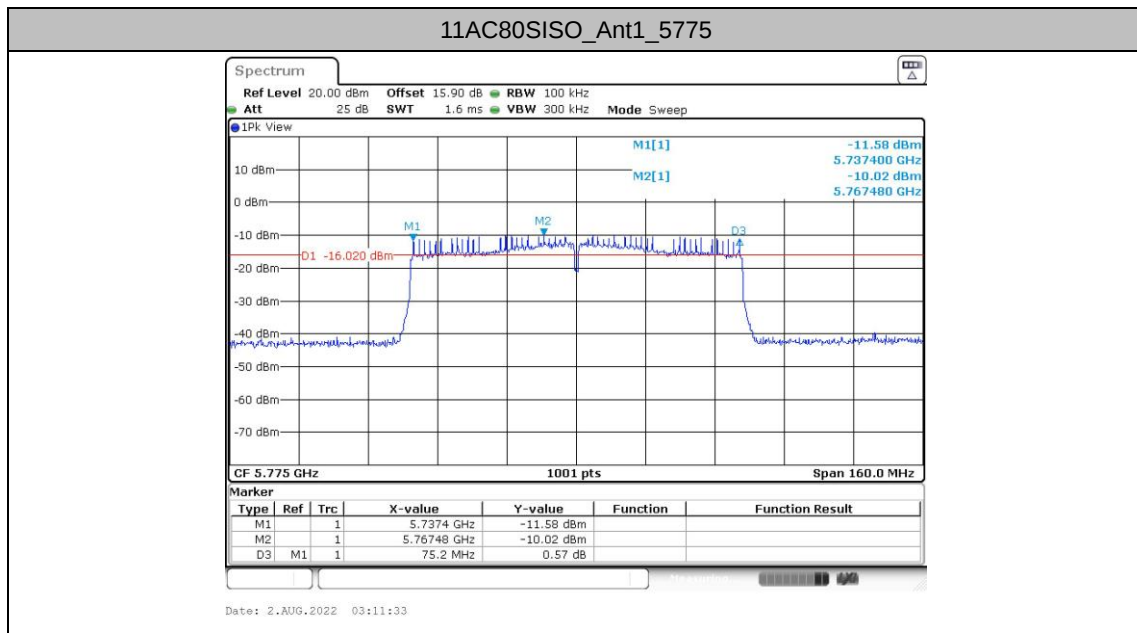


Date: 2.AUG.2022 03:10:16

11AC40SISO_Ant1_5795



Date: 2.AUG.2022 03:10:35



Power spectral density

Test Result

TestMode	Antenna	Frequency[MHz]	Result [dBm/MHz]	Limit[dBm/MHz]	Verdict
11A	Ant1	5180	-1.22	≤11.00	PASS
		5220	-0.72	≤11.00	PASS
		5240	-0.24	≤11.00	PASS
		5745	-3.71	≤30.00	PASS
		5785	-3.54	≤30.00	PASS
		5825	-3.71	≤30.00	PASS
11AC20SISO	Ant1	5180	-1.61	≤11.00	PASS
		5220	-0.99	≤11.00	PASS
		5240	-0.67	≤11.00	PASS
		5745	-4.01	≤30.00	PASS
		5785	-3.67	≤30.00	PASS
		5825	-4.04	≤30.00	PASS
11AC40SISO	Ant1	5190	-6.32	≤11.00	PASS
		5230	-6.04	≤11.00	PASS
		5755	-8.93	≤30.00	PASS
		5795	-8.37	≤30.00	PASS
11AC80SISO	Ant1	5210	-9.72	≤11.00	PASS
		5775	-12.65	≤30.00	PASS

Note: 1.The Result and Limit Unit is dBm/500 kHz in the band 5.725–5.85 GHz.

2.The Duty Cycle Factor is compensated in the graph.

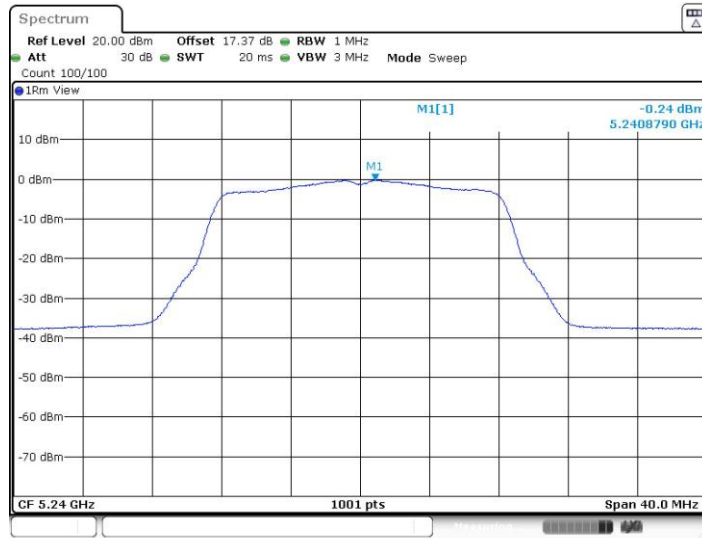


Test Graphs





11A_Ant1_5240

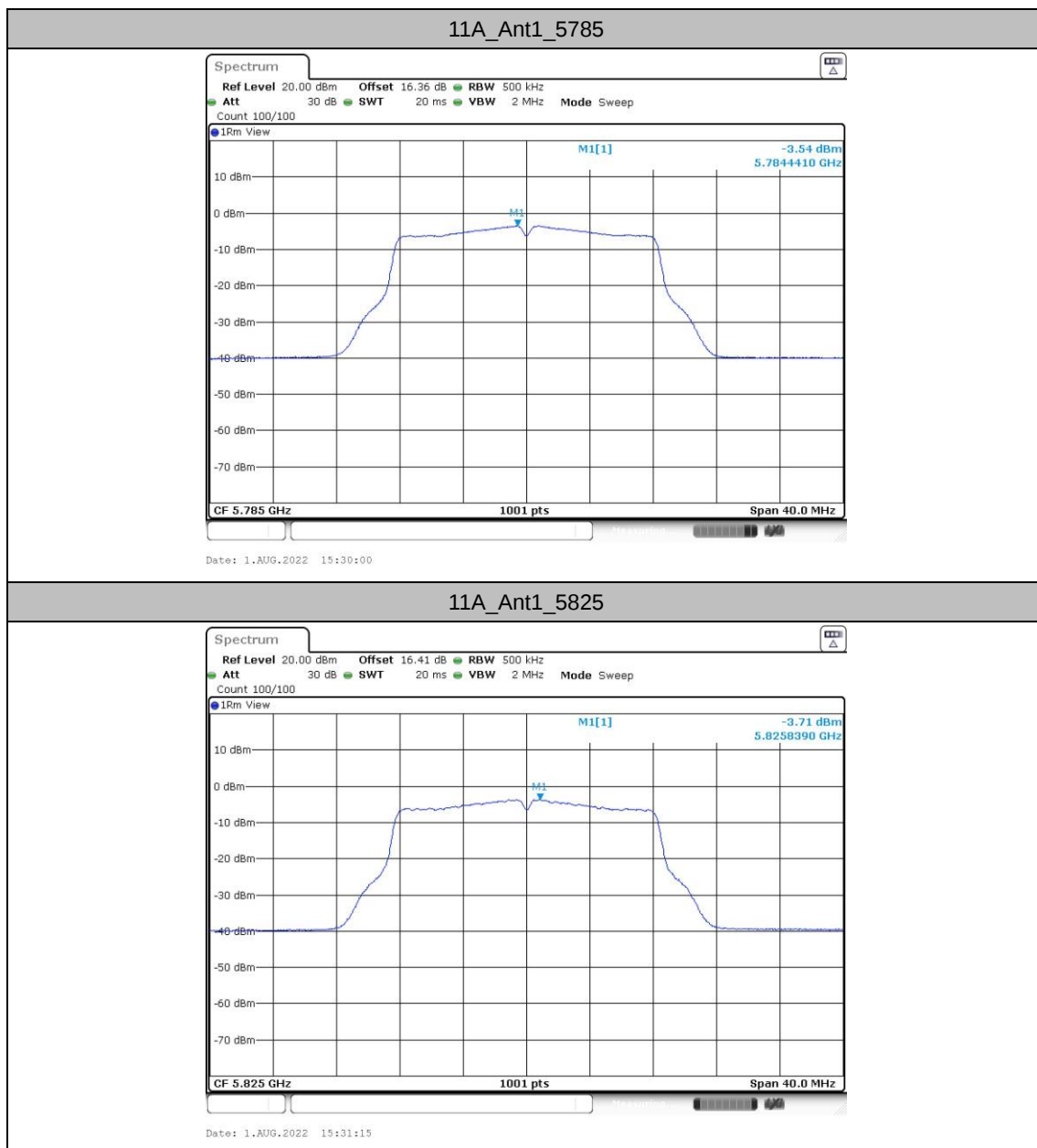


Date: 1.AUG.2022 15:10:37

11A_Ant1_5745



Date: 1.AUG.2022 15:28:43







11AC20SISO_Ant1_5240



Date: 1.AUG.2022 15:38:19

11AC20SISO_Ant1_5745



Date: 1.AUG.2022 15:47:36



11AC20SISO_Ant1_5785



Date: 1.AUG.2022 15:48:52

11AC20SISO_Ant1_5825



Date: 1.AUG.2022 15:49:59

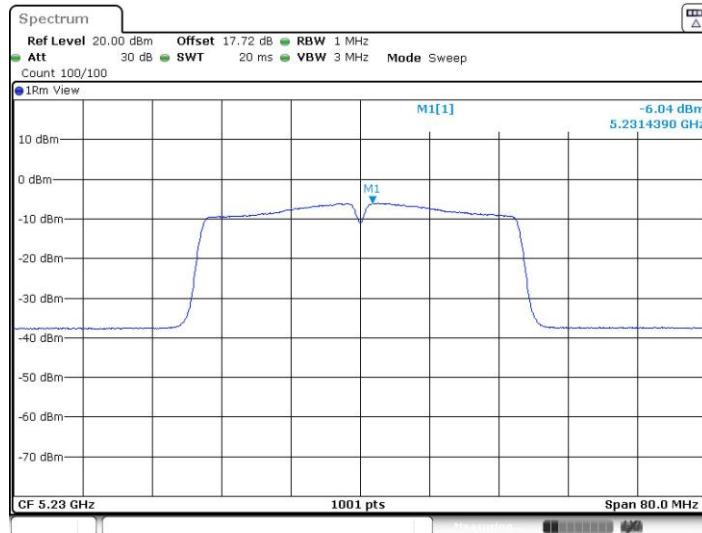


11AC40SISO_Ant1_5190



Date: 1.AUG.2022 15:54:16

11AC40SISO_Ant1_5230



Date: 1.AUG.2022 15:55:33



11AC40SISO_Ant1_5755



Date: 1.AUG.2022 16:03:10

11AC40SISO_Ant1_5795



Date: 1.AUG.2022 16:04:22



11AC80SISO_Ant1_5210



Date: 1.AUG.2022 16:08:24

11AC80SISO_Ant1_5775



Date: 1.AUG.2022 16:13:42



Maximum Output Power

Test Result

FCC U-NII-1 single antenna											
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power with duty factor (dBm)		FCC Conducted Power Limit (dBm)		DG(dBi)		Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	1	36	5180	10.25	-	24.00	-	1.305	-	Pass
11a	6Mbps	1	44	5220	10.07	-	24.00	-	1.305	-	Pass
11a	6Mbps	1	48	5240	10.17	-	24.00	-	1.305	-	Pass
HT20	MCS0	1	36	5180	10.23	-	24.00	-	1.305	-	Pass
HT20	MCS0	1	44	5220	9.95	-	24.00	-	1.305	-	Pass
HT20	MCS0	1	48	5240	10.06	-	24.00	-	1.305	-	Pass
HT40	MCS0	1	38	5190	7.65	-	24.00	-	1.305	-	Pass
HT40	MCS0	1	46	5230	7.53	-	24.00	-	1.305	-	Pass
VHT20	MCS0	1	36	5180	10.28	-	24.00	-	1.305	-	Pass
VHT20	MCS0	1	44	5220	9.99	-	24.00	-	1.305	-	Pass
VHT20	MCS0	1	48	5240	10.08	-	24.00	-	1.305	-	Pass
VHT40	MCS0	1	38	5190	7.67	-	24.00	-	1.305	-	Pass
VHT40	MCS0	1	46	5230	7.59	-	24.00	-	1.305	-	Pass
VHT80	MCS0	1	42	5210	6.86	-	24.00	-	1.305	-	Pass

U-NII-3 single antenna											
Mod.	Data Rate	NTX	CH.	Freq. (MHz)	Average Conducted Power with duty factor (dBm)		FCC Conducted Power Limit (dBm)		DG(dBi)		Pass/Fail
					Ant 1	Ant 2	Ant 1	Ant 2	Ant 1	Ant 2	
11a	6Mbps	1	149	5745	9.98	-	30.00	-	2.685	-	Pass
11a	6Mbps	1	157	5785	9.51	-	30.00	-	2.685	-	Pass
11a	6Mbps	1	165	5825	9.89	-	30.00	-	2.685	-	Pass
HT20	MCS0	1	149	5745	9.74	-	30.00	-	2.685	-	Pass
HT20	MCS0	1	157	5785	9.50	-	30.00	-	2.685	-	Pass
HT20	MCS0	1	165	5825	9.76	-	30.00	-	2.685	-	Pass
HT40	MCS0	1	151	5755	7.43	-	30.00	-	2.685	-	Pass
HT40	MCS0	1	159	5795	7.45	-	30.00	-	2.685	-	Pass
VHT20	MCS0	1	149	5745	9.80	-	30.00	-	2.685	-	Pass
VHT20	MCS0	1	157	5785	9.55	-	30.00	-	2.685	-	Pass
VHT20	MCS0	1	165	5825	9.85	-	30.00	-	2.685	-	Pass
VHT40	MCS0	1	151	5755	7.45	-	30.00	-	2.685	-	Pass
VHT40	MCS0	1	159	5795	7.49	-	30.00	-	2.685	-	Pass
VHT80	MCS0	1	155	5775	6.61	-	30.00	-	2.685	-	Pass



Appendix B. Radiated Spurious Emission

Test Engineer :	Carry Xu	Temperature :	22~23°C
		Relative Humidity :	41~42%

UNII-1 - 5150~5250MHz

WIFI 802.11a (Band Edge @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		5143.04	59.2	-14.8	74	50.91	34.42	10.6	36.73	264	172	P	H
		5149.9	46.72	-7.28	54	38.43	34.42	10.6	36.73	264	172	A	H
	*	5176	103.19	-	-	94.79	34.45	10.64	36.69	264	172	P	H
		5176	97.06	-	-	88.66	34.45	10.64	36.69	264	172	A	H
		5146.08	51.51	-22.49	74	43.22	34.42	10.6	36.73	108	156	P	V
		5149.9	41.35	-12.65	54	33.06	34.42	10.6	36.73	108	156	A	V
	*	5182	96.09	-	-	87.69	34.45	10.64	36.69	108	156	P	V
		5182	89.76	-	-	81.36	34.45	10.64	36.69	108	156	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

UNII-1 5150~5250MHz

WIFI 802.11a (Harmonic @ 3m)

WIFI	Note	Frequency	Level	Over	Limit	Read	Antenna	Path	Preamp	Ant	Table	Peak	Pol.
Ant.				Limit	Line	Level	Factor	Loss	Factor	Pos	Pos	Avg.	
1		(MHz)	(dBμV/m)	(dB)	(dBμV/m)	(dBμV)	(dB/m)	(dB)	(dB)	(cm)	(deg)	(P/A)	(H/V)
802.11a CH 36 5180MHz		10355	48.82	-19.48	68.3	63.03	37.38	15.44	67.03	300	0	P	H
		10355	45.3	-23	68.3	59.51	37.38	15.44	67.03	100	0	P	V
802.11a CH 44 5220MHz		10443	49.21	-19.09	68.3	63.22	37.45	15.53	66.99	300	0	P	H
		10443	45.55	-22.75	68.3	59.56	37.45	15.53	66.99	100	0	P	V
802.11a CH 48 5240MHz		10487	49.85	-18.45	68.3	63.76	37.49	15.56	66.96	300	0	P	H
		10476	45	-23.3	68.3	58.94	37.47	15.56	66.97	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII-1 5150~5250MHz
WIFI 802.11ac VHT20 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 36 5180MHz		5149.44	62.4	-11.6	74	54.11	34.42	10.6	36.73	279	167	P	H
		5148.8	47.96	-6.04	54	39.67	34.42	10.6	36.73	279	167	A	H
	*	5182	104.33	-	-	95.93	34.45	10.64	36.69	279	167	P	H
		5182	97.42	-	-	89.02	34.45	10.64	36.69	279	167	A	H
		5148.48	51.01	-22.99	74	42.72	34.42	10.6	36.73	107	151	P	V
		5148.16	41.25	-12.75	54	32.96	34.42	10.6	36.73	107	151	A	V
	*	5182	95.92	-	-	87.52	34.45	10.64	36.69	107	151	P	V
		5182	89.65	-	-	81.25	34.45	10.64	36.69	107	151	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

UNII-1 5150~5250MHz
WIFI 802.11ac VHT20 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT20 CH 36 5180MHz		10360	48.66	-19.64	68.3	62.83	37.39	15.46	67.02	300	0	P	H
		10360	44.85	-23.45	68.3	59.02	37.39	15.46	67.02	100	0	P	V
802.11ac VHT20 CH 44 5220MHz		10443	48.23	-20.07	68.3	62.24	37.45	15.53	66.99	300	0	P	H
		10443	44.39	-23.91	68.3	58.4	37.45	15.53	66.99	100	0	P	V
802.11ac VHT20 CH 48 5240MHz		10476	49.03	-19.27	68.3	62.97	37.47	15.56	66.97	300	0	P	H
		10476	44.78	-23.52	68.3	58.72	37.47	15.56	66.97	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII-1 5150~5250MHz
WIFI 802.11ac VHT40 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 38 5190MHz		5149.76	58.09	-15.91	74	49.8	34.42	10.6	36.73	296	167	P	H
		5149.92	47.22	-6.78	54	38.93	34.42	10.6	36.73	296	167	A	H
	*	5194	99.85	-	-	91.41	34.46	10.66	36.68	296	167	P	H
		5194	92.6	-	-	84.16	34.46	10.66	36.68	296	167	A	H
		5356.26	47.38	-26.62	74	38.57	34.58	10.75	36.52	296	167	P	H
		5350.32	39.29	-14.71	54	30.48	34.58	10.75	36.52	296	167	A	H
		5132.8	51.08	-22.92	74	42.81	34.41	10.6	36.74	107	152	P	V
		5148.96	41.73	-12.27	54	33.44	34.42	10.6	36.73	107	152	A	V
	*	5188	90.47	-	-	82.07	34.45	10.64	36.69	107	152	P	V
		5188	84.22	-	-	75.82	34.45	10.64	36.69	107	152	A	V
		5395.86	46.45	-27.55	74	37.53	34.62	10.77	36.47	107	152	P	V
		5397.3	38.06	-15.94	54	29.14	34.62	10.77	36.47	107	152	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

UNII-1 5150~5250MHz
WIFI 802.11ac VHT40 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT40 CH 38 5190MHz		10377	44.84	-23.46	68.3	58.97	37.41	15.47	67.01	300	0	P	H
		10377	44.47	-23.83	68.3	58.6	37.41	15.47	67.01	100	0	P	V
802.11ac VHT40 CH 46 5230MHz		10465	44.88	-23.42	68.3	58.84	37.47	15.54	66.97	300	0	P	H
		10465	43.96	-24.34	68.3	57.92	37.47	15.54	66.97	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												



UNII-1 5150~5250MHz
WIFI 802.11ac VHT80 (Band Edge @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 42 5210MHz		5149.28	55.54	-18.46	74	47.25	34.42	10.6	36.73	307	183	P	H
		5149.44	47.11	-6.89	54	38.82	34.42	10.6	36.73	307	183	A	H
	*	5218	94.57	-	-	86.09	34.47	10.67	36.66	307	183	P	H
		5218	88.76	-	-	80.28	34.47	10.67	36.66	307	183	A	H
		5350.68	52	-22	74	43.19	34.58	10.75	36.52	307	183	P	H
		5350.86	43.7	-10.3	54	34.89	34.58	10.75	36.52	307	183	A	H
		5122.72	49.48	-24.52	74	41.23	34.41	10.58	36.74	107	154	P	V
		5149.6	41.57	-12.43	54	33.28	34.42	10.6	36.73	107	154	A	V
	*	5218	87.11	-	-	78.63	34.47	10.67	36.66	107	154	P	V
		5218	81.01	-	-	72.53	34.47	10.67	36.66	107	154	A	V
		5383.44	49.14	-24.86	74	40.25	34.61	10.77	36.49	107	154	P	V
		5384.7	38.97	-15.03	54	30.08	34.61	10.77	36.49	107	154	A	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												

UNII-1 5150~5250MHz
WIFI 802.11ac VHT80 (Harmonic @ 3m)

WIFI Ant. 1	Note	Frequency (MHz)	Level (dBμV/m)	Over Limit (dB)	Limit Line (dBμV/m)	Read Level (dBμV)	Antenna Factor (dB/m)	Path Loss (dB)	Preamp Factor (dB)	Ant Pos (cm)	Table Pos (deg)	Peak Avg. (P/A)	Pol. (H/V)
802.11ac VHT80 CH 42 5210MHz		10421	44.64	-23.66	68.3	58.69	37.43	15.51	66.99	300	0	P	H
		10421	45.48	-22.82	68.3	59.53	37.43	15.51	66.99	100	0	P	V
Remark	1. No other spurious found. 2. All results are PASS against Peak and Average limit line.												