

TEST REPORT

Product : Artificial Intelligence Terminal Computer
Trade mark : N/A
Model/Type reference : PP23TQB
Serial Number : N/A
Report Number : EED32M00052604
FCC ID : 2AWMI-PP23TQB
Date of Issue : Jul.14, 2020
Test Standards : 47 CFR Part 15 Subpart E
Test result : PASS

Prepared for:

Beijing Puppy Robotics Co.,Ltd.
Room 103, building 1, Yard 33,
Yanqi Road, Huairou District, Beijing, China

Prepared by:

Centre Testing International Group Co., Ltd.
Hongwei Industrial Zone, Bao'an 70 District,
Shenzhen, Guangdong, China
TEL: +86-755-3368 3668
FAX: +86-755-3368 3385

Compiled by:

Sunlight Sun

Sunlight Sun

Reviewed by:

Jok Yang

Jok Yang

Approved by:

Sam Chuang

Sam Chuang

Date:

Jul.14, 2020



Check No.:3915652268

2 Version

Version No.	Date	Description
00	Jul.14, 2020	Original

3 Test Summary

Test Item	Test Requirement	Test method	Result
Antenna Requirement	47 CFR Part 15 Subpart C Section 15.203	ANSI C63.10-2013	PASS
AC Power Line Conducted Emission	47 CFR Part 15 Subpart E Section 15.407 (b)(6)	ANSI C63.10-2013	PASS
Conducted Output Power and transmit power control mechanism	47 CFR Part 15 Subpart E Section 15.407 (a)(1)(2)(4)(h)(1)	ANSI C63.10-2013	PASS
26dB emission bandwidth	47 CFR Part 15 Subpart E Section 15.407 (a)(1)(2)	ANSI C63.10-2013	PASS
Peak Power Spectral Density	47 CFR Part 15 Subpart E Section 15.407 (a)(1)(2)(5)	ANSI C63.10-2013	PASS
Duty Cycle	47 CFR Part 15 Subpart E Section 15.407 (a)(6)	ANSI C63.10-2013	PASS
Frequency stability	47 CFR Part 15 Subpart E Section 15.407 (g)	ANSI C63.10-2013	PASS
Conducted Band-edge Measurements	47 CFR Part 15 Subpart E Section 15.407(b)(1)to(6)	ANSI C63.10-2013	PASS
Dynamic Frequency Selection	47 CFR Part 15 Subpart E Section 15.407 (h)	KDB905462 D02	PASS
Operation in the absence of information to the transmit	47 CFR Part 15 Subpart E Section 15.407 (c)	47 CFR Part 15 Subpart E	PASS
Unwanted Emissions that fall Outside of the Restricted Bands	47 CFR Part 15 Subpart E Section 15.407 (b)(1)(2)(3)(5)	ANSI C63.10-2013	PASS
Unwanted Emissions in the Restricted Bands	47 CFR Part 15 Subpart E Section 15.407 (b)(6)(7)(8)	ANSI C63.10-2013	PASS
Restricted bands around fundamental frequency (Radiated Emission)	47 CFR Part 15 Subpart E Section 15.407 (b)(6)(7)(8)	ANSI C63.10-2013	PASS

Remark:

The tested sample(s) and the sample information are provided by the client.

Tx: In this whole report Tx (or tx) means Transmitter.

Rx: In this whole report Rx (or rx) means Receiver.

RF: In this whole report RF means Radiated Frequency.

CH: In this whole report CH means channel.

Volt: In this whole report Volt means Voltage.

Temp: In this whole report Temp means Temperature.

Humid: In this whole report Humid means humidity.

Press: In this whole report Press means Pressure.

N/A: In this whole report not application

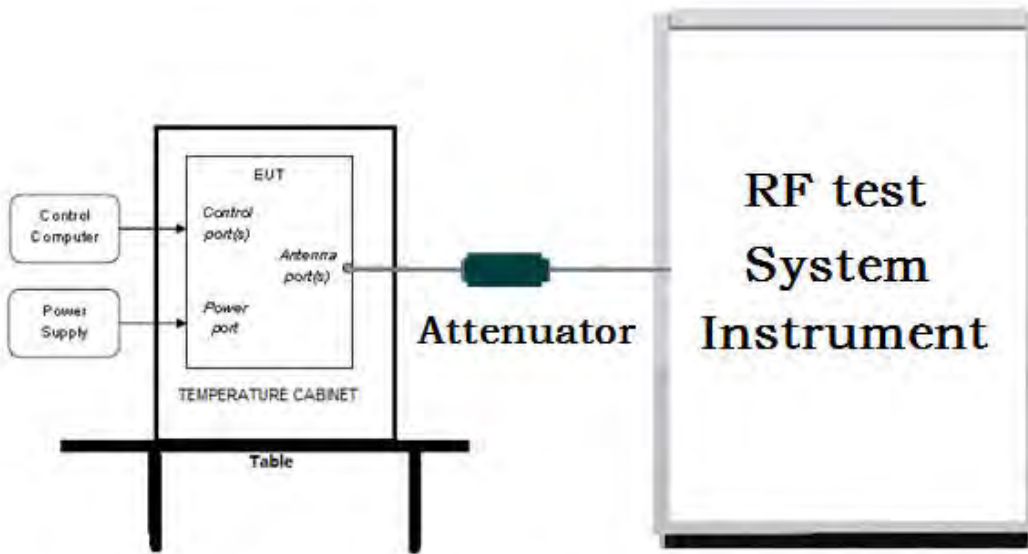
4 Content

1 COVER PAGE.....	1
2 VERSION.....	2
3 TEST SUMMARY.....	3
4 CONTENT.....	4
5 TEST REQUIREMENT.....	5
5.1 TEST SETUP.....	5
5.1.1 For Conducted test setup.....	5
5.1.2 For Radiated Emissions test setup.....	5
5.1.3 For Conducted Emissions test setup.....	7
5.2 TEST ENVIRONMENT.....	7
5.3 TEST CONDITION.....	7
6 GENERAL INFORMATION.....	9
6.1 CLIENT INFORMATION.....	9
6.2 GENERAL DESCRIPTION OF EUT.....	9
6.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD.....	10
6.4 DESCRIPTION OF SUPPORT UNITS.....	16
6.5 TEST LOCATION.....	16
6.6 DEVIATION FROM STANDARDS.....	16
6.7 ABNORMALITIES FROM STANDARD CONDITIONS.....	16
6.8 OTHER INFORMATION REQUESTED BY THE CUSTOMER.....	16
6.9 MEASUREMENT UNCERTAINTY (95% CONFIDENCE LEVELS, K=2).....	16
7 EQUIPMENT LIST.....	17
8 RADIO TECHNICAL REQUIREMENTS SPECIFICATION.....	20
Appendix A):Duty Cycle.....	22
Appendix B): Emission Bandwidth.....	40
Appendix C): Maximum Conduct Output Power.....	56
Appendix D): Power Spectral Density.....	103
Appendix E): Band Edge Measurements.....	132
Appendix F): Frequency Stability.....	145
Appendix G) Antenna Requirement.....	175
Appendix H) Operation in the absence of information to the transmit.....	176
Appendix I) AC Power Line Conducted Emission.....	177
Appendix J) Restricted bands around fundamental frequency (Radiated Emission).....	180
Appendix K) Unwanted Emissions in the Restricted Bands (Radiated Emission).....	313
Appendix L) Unwanted Emissions that fall Outside of the Restricted Bands.....	425
Appendix M) Dynamic Frequency Selection.....	523
PHOTOGRAPHS OF TEST SETUP.....	535
PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS.....	538

5 Test Requirement

5.1 Test setup

5.1.1 For Conducted test setup



5.1.2 For Radiated Emissions test setup

Radiated Emissions setup:

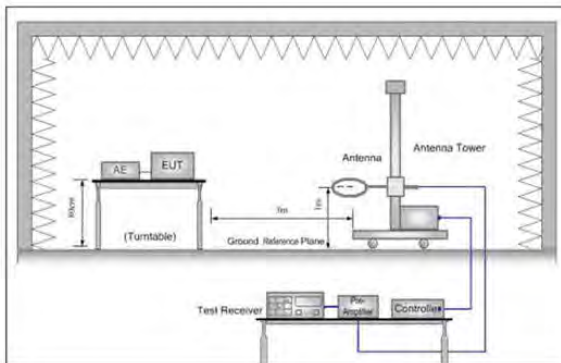


Figure 1. Below 30MHz

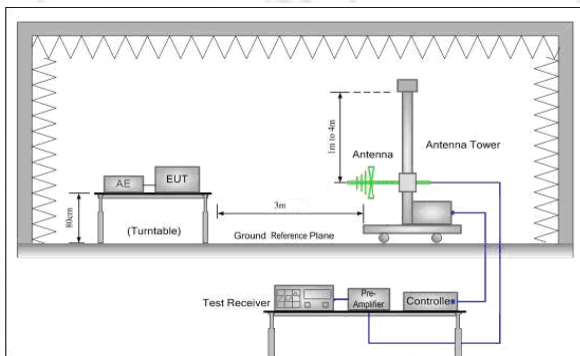


Figure 2. 30MHz to 1GHz

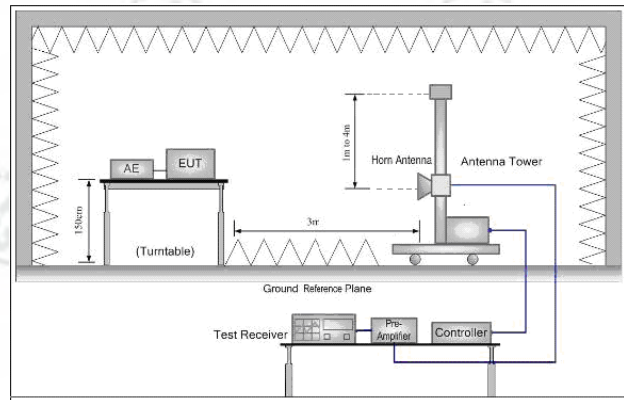
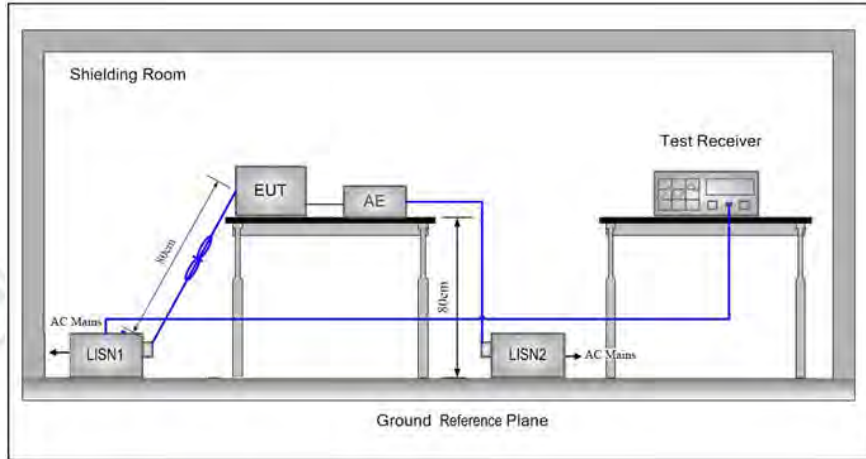


Figure 3. Above 1GHz

5.1.3 For Conducted Emissions test setup Conducted Emissions setup



5.2 Test Environment

Operating Environment:	
Temperature:	23.0 °C
Humidity:	54 % RH
Atmospheric Pressure:	1010mbar

5.3 Test Condition

Test channel:

Test Mode	Tx/Rx	RF Channel		
		Low(L)	Middle(cm)	High(H)
802.11a/n/ac(HT20)	5150MHz ~5250 MHz	Channel 36	Channel 40	Channel 48
		5180MHz	5200MHz	5240MHz
802.11a/n/ac(HT20)	5250MHz ~5350 MHz	Channel 52	Channel 56	Channel 64
		5260MHz	5280MHz	5320MHz
802.11a/n/ac(HT20)	5470MHz ~5600 MHz	Channel 100	Channel108	Channel116
		5500MHz	5600MHz	5580MHz
802.11a/n/ac(HT20)	5650MHz ~5725 MHz	Channel 132	Channel136	Channel140
		5660MHz	5680MHz	5700MHz
802.11a/n/ac(HT20)	5725MHz ~5850 MHz	Channel 149	Channel157	Channel165
		5745MHz	5785MHz	5825MHz
802.11n/ac(HT40)	5150MHz ~5250 MHz	Channel 38	N/A	Channel 46
		5190MHz	N/A	5230MHz
802.11n/ac(HT40)	5250MHz ~5350 MHz	Channel54	N/A	Channel62
		5270MHz	N/A	5310MHz
802.11n/ac(HT40)	5470MHz ~5600 MHz	Channel 102	N/A	Channel 110
		5510MHz	N/A	5550MHz
802.11n/ac(HT40)	5650MHz ~5725 MHz	Channel 134	N/A	N/A
		5670MHz	N/A	N/A

802.11n/ac(HT40)	5725MHz ~5850 MHz	Channel 151	N/A	Channel 159
		5755MHz	N/A	5795MHz
802.11ac(HT80)	5150MHz ~5250 MHz	Channel 42	N/A	N/A
		5210MHz	N/A	N/A
802.11ac(HT80)	5250MHz ~5350 MHz	Channel58	N/A	N/A
		5290MHz	N/A	N/A
802.11ac(HT80)	5470MHz ~5600 MHz	Channel 106	N/A	N/A
		5530MHz	N/A	N/A
802.11ac(HT80)	5725MHz ~5850 MHz	Channel 155	N/A	N/A
		5775MHz	N/A	N/A

6 General Information

6.1 Client Information

Applicant:	Beijing Puppy Robotics Co., Ltd.
Address of Applicant:	Room 103, building 1, Yard 33, Yanqi Road, Huairou District, Beijing, China
Manufacturer:	Beijing Puppy Robotics Co., Ltd.
Address of Manufacturer:	Room 103, building 1, Yard 33, Yanqi Road, Huairou District, Beijing, China
Factory:	Zhang zhou Wanlida Technology Co., Ltd.
Address of Factory:	Wanlida Industrial Zone, Jingcheng Town, Nanjing, Zhangzhou, Fujian, China

6.2 General Description of EUT

Product Name:	Artificial Intelligence Terminal Computer	
Model No.(EUT):	PP23TQB	
Trade Mark:	N/A	
EUT Supports Radios application:	802.11b/g/n(HT20)(HT40): 2412MHz ~2462 MHz; U-NII-1: 5.15-5.25GHz; U-NII-2A: 5.25-5.35GHz; U-NII-2C: 5.470-5.725GHz; U-NII-3: 5.725-5.850GHz	
Power Supply:	AC Adapter	MODEL:AP065G-19300 INPUT:100-240V~50/60Hz 1.5A Max OUTPUT:19V---3A
	Battery	Model:BT-J003 3LPC5/60/102 Rated Capacity:5000mAh Power Rating:11.55V---5000mAh 57.75Wh
Sample Received Date:	Mar. 19, 2020	
Sample tested Date:	Mar. 19, 2020 to Jun. 23, 2020	

6.3 Product Specification subjective to this standard

Operation Frequency:	IEEE 802.11a/n/ac(HT20): 5180MHz ~5240 MHz IEEE 802.11a/n/ac(HT20): 5260MHz ~5320 MHz IEEE 802.11a/n/ac(HT20): 5500MHz ~5700 MHz IEEE802.11a/n/ac(HT20): 5745MHz ~5825 MHz IEEE802.11n/ac(HT40) 5190MHz ~5230 MHz IEEE802.11n/ac(HT40) 5270MHz ~5310 MHz IEEE802.11n/ac(HT40) 5510MHz ~5670 MHz IEEE802.11n/ac(HT40) 5755MHz ~5795 MHz IEEE802.11ac(HT80) 5210 IEEE802.11ac(HT80) 5290 IEEE802.11ac(HT80) 5530 ~ 5690 IEEE802.11ac(HT80) 5775
Channel Numbers:	IEEE 802.11a/n/ac(HT20): 5180MHz ~5240 MHz / 4 channel IEEE 802.11a/n/ac(HT20): 5260MHz ~5320 MHz / 4 channel IEEE 802.11a/n/ac(HT20): 5500MHz ~5700 MHz / 11 channel IEEE802.11a/n/ac(HT20): 5745MHz ~5825 MHz / 5 channel IEEE802.11n/ac(HT40) 5190MHz ~5230 MHz/ 2 channel IEEE802.11n/ac(HT40) 5270MHz ~5310 MHz / 2 channel IEEE802.11n/ac(HT40) 5510MHz ~5670 MHz/ 5 channel IEEE802.11n/ac(HT40) 5755MHz ~5795 MHz / 2 channel IEEE802.11ac(HT80) 5210 / 1 channel IEEE802.11ac(HT80) 5290 / 1 channel IEEE802.11ac(HT80) 5530 ~ 5690 / 2 channel IEEE802.11ac(HT80) 5775 /1 channel
Type of Modulation:	DSSS,OFDM
Test Power Grade:	Reference Table
Test Software of EUT:	QRCT
Antenna Type and Gain:	FPC antenna, Gain: 4.1 dBi
Test Voltage:	AC120V/60Hz

Operation Frequency each of channel

For 802.11a/n/ac(HT20) Operation in the 5180 ~ 5240 band							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
36	5180MHz	40	5200MHz	44	5220MHz	48	5240MHz

For 802.11a/n/ac(HT20) Operation in the 5260MHz ~5320 MHz band							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
52	5260MHz	56	5280MHz	60	5300MHz	64	5320MHz

For 802.11a/n/ac(HT20) Operation in the 5500MHz ~5700 MHz band							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
100	5500MHz	104	5520MHz	108	5540MHz	112	5560MHz
116	5580MHz	120	5600MHz	124	5620MHz	128	5640MHz
132	5660MHz	136	5680MHz	140	5700MHz	N/A	N/A

For 802.11a/n/ac(HT20) Operation in the 5745MHz ~5825 MHz band							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
149	5745MHz	153	5765MHz	157	5785MHz	161	5805MHz
165	5825MHz	N/A	N/A	N/A	N/A	N/A	N/A

For 802.11n/ac(HT40) Operation in the 5190MHz ~5230MHz band			
Channel	Frequency	Channel	Frequency
38	5190MHz	46	5230MHz

For 802.11n/ac(HT40) Operation in the 5270MHz ~5310 MHz band			
Channel	Frequency	Channel	Frequency
54	5190MHz	46	5310MHz

For 802.11n/ac(HT40) Operation in the 5510MHz ~5670 MHz band							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
102	5510MHz	110	5550MHz	118	5590MHz	126	5630MHz
134	5670MHz	N/A	N/A	N/A	N/A	N/A	N/A

For 802.11n/ac(HT40) Operation in the 5755MHz ~5795 MHz band					
Channel	Frequency	Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz	N/A	N/A

For 802.11ac(HT80) Operation in the 5210 MHz band					
Channel	Frequency	Channel	Frequency	Channel	Frequency
42	5210MHz	N/A	N/A	N/A	N/A

For 802.11ac(HT80) Operation in the 5290 MHz band					
Channel	Frequency	Channel	Frequency	Channel	Frequency
58	5290MHz	N/A	N/A	N/A	N/A

For 802.11ac(HT80) Operation in the 5530MHz ~5690 MHz band					
Channel	Frequency	Channel	Frequency	Channel	Frequency
106	5530MHz	122	5690	N/A	N/A

For 802.11ac(HT80) Operation in the 5775 MHz band					
Channel	Frequency	Channel	Frequency	Channel	Frequency
155	5775MHz	N/A	N/A	N/A	N/A

Table 1:

SISO				
Mode	Channel	Frequency	Power Setting	
			Chain1	Chain2
IEEE 802.11a	36	5180	14	15
	40	5200	14	15
	48	5240	14	14
	52	5260	14	13.5
	56	5280	14.5	14
	64	5320	14.5	13.5
	100	5500	13	13
	116	5580	14	13.5
	140	5700	13	12
	149	5745	13	12.5
	157	5785	13.5	13
	165	5825	14.5	13
	IEEE 802.11n 20MHz	36	5180	13.5
40		5200	13.5	15.5
48		5240	14	15.5
52		5260	14.5	14.5
56		5280	14.5	15
64		5320	14.5	14
100		5500	13.5	14
116		5580	13.5	14
140		5700	13	13.5
149		5745	13	13.5
157		5785	15.5	13.5
165		5825	14	14

IEEE 802.11ac 20MHz	36	5180	13.5	15.5
	40	5200	13.5	15.5
	48	5240	14	15.5
	52	5260	14.5	14.5
	56	5280	14.5	15
	64	5320	14.5	14
	100	5500	13.5	14
	116	5580	13.5	14
	140	5700	13	13.5
	149	5745	13	13.5
	157	5785	15.5	13.5
	165	5825	14	14
IEEE 802.11n 40MHz	38	5190	13.5	15
	46	5230	13.5	15
	54	5270	14.5	14
	62	5310	15	14
	102	5510	13.5	15.5
	110	5550	13.5	14.5
	134	5670	14	13
	151	5755	13	13.5
	159	5795	13.5	14
IEEE 802.11ac 40MHz	38	5190	13.5	15
	46	5230	13.5	15
	54	5270	14.5	14
	62	5310	15	14
	102	5510	13.5	15.5
	110	5550	13.5	14.5
	134	5670	14	13
	151	5755	13	13.5
	159	5795	13.5	14
IEEE 802.11ac 80MHz	42	5210	13	13.5
	58	5290	14	14
	106	5530	13	14
	155	5775	15	15

MIMO			
Mode	Channel	Frequency	Power Setting
IEEE 802.11n 20MHz	36	5180	12.5
	40	5200	12.5
	48	5240	12.5
	52	5260	12
	56	5280	12.5
	64	5320	12.5
	100	5500	12.5
	116	5580	12
	140	5700	11
	149	5745	11.5
	157	5785	12
	165	5825	12.5
	IEEE 802.11ac 20MHz	36	5180
40		5200	12.5
48		5240	12.5
52		5260	12
56		5280	12.5
64		5320	12.5
100		5500	12.5
116		5580	12
140		5700	11
149		5745	11.5
157		5785	12
165		5825	12.5
IEEE 802.11n 40MHz		38	5190
	46	5230	11.5
	54	5270	11.5
	62	5310	11.5
	102	5510	12
	110	5550	12
	134	5670	11

	151	5755	11
	159	5795	11.5
IEEE 802.11ac 40MHz	38	5190	11.5
	46	5230	11.5
	54	5270	11.5
	62	5310	11.5
	102	5510	12
	110	5550	12
	134	5670	11
	151	5755	11
	159	5795	11.5
	IEEE 802.11ac 80MHz	42	5210
58		5290	11.5
106		5530	10
155		5775	11

6.4 Description of Support Units

The EUT has been tested with associated equipment below

Associated equipment name		Manufact ure	model	S/N serial number	Supplied by	Certification
AE1	Notebook	DELL	DELL 3490	D245DX2	DELL	CE&FCC

6.5 Test Location

All tests were performed at:

Centre Testing International Group Co., Ltd

Building C, Hongwei Industrial Park Block 70, Bao'an District, Shenzhen, China

Telephone: +86 (0) 755 33683668 Fax: +86 (0) 755 33683385

No tests were sub-contracted.

FCC Designation No.: CN1164

6.6 Deviation from Standards

None.

6.7 Abnormalities from Standard Conditions

None.

6.8 Other Information Requested by the Customer

None.

6.9 Measurement Uncertainty (95% confidence levels, k=2)

No.	Item	Measurement Uncertainty
1	Radio Frequency	7.9×10^{-8}
2	RF power, conducted	0.46dB (30MHz-1GHz)
		0.55dB (1GHz-18GHz)
3	Radiated Spurious emission test	4.5dB (30MHz-1GHz)
		4.8dB (1GHz-12.75GHz)
4	Conduction emission	3.5dB (9kHz to 150kHz)
		3.1dB (150kHz to 30MHz)
5	Temperature test	0.64°C
6	Humidity test	3.8%
7	DC power voltages	0.026%

7 Equipment List

RF test system					
Equipment	Manufacturer	Mode No.	Serial Number	Cal. Date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Spectrum Analyzer	Keysight	N9010A	MY54510339	02-17-2020	02-16-2021
Signal Generator	Keysight	N5182B	MY53051549	02-17-2020	02-16-2021
Temperature/ Humidity Indicator	biaozhi	HM10	1804186	07-26-2019	07-25-2020
High-pass filter	Sinoscite	FL3CX03WG18N M12-0398-002	---	---	---
High-pass filter	MICRO-TRONICS	SPA-F-63029-4	---	---	---
DC Power	Keysight	E3642A	MY56376072	02-17-2020	02-16-2021
PC-1	Lenovo	R4960d	---	---	---
BT&WI-FI Automatic control	R&S	OSP120	101374	02-17-2020	02-16-2021
RF control unit	JS Tonscend	JS0806-2	158060006	02-17-2020	02-16-2021
BT&WI-FI Automatic test software	JS Tonscend	JS1120-3	---	---	---

Conducted disturbance Test					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
Receiver	R&S	ESCI	100435	05-20-2019 04-28-2020	05-19-2020 04-27-2021
Temperature/ Humidity Indicator	Defu	TH128	/	06-14-2019 05-29-2020	06-13-2020 05-28-2021
LISN	R&S	ENV216	100098	03-05-2020	03-04-2021
Barometer	changchun	DYM3	1188	06-20-2019 06-11-2020	06-19-2020 06-10-2021

3M Semi/full-anechoic Chamber					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
3M Chamber & Accessory Equipment	TDK	SAC-3	---	05-24-2019	05-23-2022
TRIALOG Broadband Antenna	Schwarzbeck	VULB9163	9163-618	07-26-2019	07-25-2020
Loop Antenna	Schwarzbeck	FMZB 1519B	1519B-076	04-25-2018	04-24-2021
Receiver	R&S	ESCI7	100938-003	10-21-2019	10-20-2020
Multi device Controller	matturo	NCD/070/107 11112	---	---	---
Temperature/ Humidity Indicator	Shanghai qixiang	HM10	1804298	07-26-2019	07-25-2020
Cable line	Fulai(7M)	SF106	5219/6A	---	---
Cable line	Fulai(6M)	SF106	5220/6A	---	---
Cable line	Fulai(3M)	SF106	5216/6A	---	---
Cable line	Fulai(3M)	SF106	5217/6A	---	---

3M full-anechoic Chamber					
Equipment	Manufacturer	Model No.	Serial Number	Cal. date (mm-dd-yyyy)	Cal. Due date (mm-dd-yyyy)
RSE Automatic test software	JS Tonscend	JS36-RSE	10166	---	---
Receiver	Keysight	N9038A	MY57290136	03-05-2020	03-04-2021
Spectrum Analyzer	Keysight	N9020B	MY57111112	03-05-2020	03-04-2021
Spectrum Analyzer	Keysight	N9030B	MY57140871	03-05-2020	03-04-2021
TRIOLOG Broadband Antenna	Schwarzbeck	VULB 9163	9163-1148	04-25-2018	04-24-2021
Horn Antenna	Schwarzbeck	BBHA 9170	9170-832	04-25-2018	04-24-2021
Horn Antenna	ETS-LINDGREN	3117	00057407	07-10-2018	07-09-2021
Preamplifier	EMCI	EMC184055SE	980596	05-22-2019 05-20-2020	05-21-2020 05-19-2021
Preamplifier	EMCI	EMC001330	980563	05-08-2019 04-22-2020	05-07-2020 04-21-2021
Preamplifier	JS Tonscend	980380	EMC051845 SE	01-09-2020	01-08-2021
Temperature/ Humidity Indicator	biaozhi	GM1360	EE1186631	04-30-2019 04-27-2020	04-29-2020 04-26-2021
Fully Anechoic Chamber	TDK	FAC-3	---	01-17-2018	01-16-2021
Filter bank	JS Tonscend	JS0806-F	188060094	04-10-2018	04-09-2021
Cable line	Times	SFT205-NMSM-2.50M	394812-0001	---	---
Cable line	Times	SFT205-NMSM-2.50M	394812-0002	---	---
Cable line	Times	SFT205-NMSM-2.50M	394812-0003	---	---
Cable line	Times	SFT205-NMSM-2.50M	393495-0001	---	---
Cable line	Times	EMC104-NMNM-1000	SN160710	---	---
Cable line	Times	SFT205-NMSM-3.00M	394813-0001	---	---
Cable line	Times	SFT205-NMNM-1.50M	381964-0001	---	---
Cable line	Times	SFT205-NMSM-7.00M	394815-0001	---	---
Cable line	Times	HF160-KMKM-3.00M	393493-0001	---	---

8 Radio Technical Requirements Specification

Reference documents for testing:

No.	Identity	Document Title
1	FCC Part15E	Subpart C-Intentional Radiators
2	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices
3	KDB789033 D02 General UNII Test Procedures New Rules v01	Guidelines for compliance testing of unlicensed national information infrastructure (U-NII) device part 15 subpart E

Test Results List:

Test Requirement	Test method	Test item	Verdict	Note
Part15E Section 15.407 (a)(1)(2)(4)(h)(1)	KDB789033 D02v01	Conducted Output Power and transmit power control mechanism	PASS	Appendix C)
Part15E Section 15.407 (a)(1)(2)	KDB789033 D02v01	26dB Occupied Bandwidth	PASS	Appendix B)
Part15E Section 15.407 (a)(1)(2)(5)	KDB789033 D02v01	Power Spectral Density	PASS	Appendix D)
Part15E Section 15.407 (a)(6)	ANSI C63.10-2013	Duty Cycle	PASS	Appendix A)
Part15E Section 15.407 (g)	KDB789033 D02v01	Frequency stability	PASS	Appendix F)
47 CFR Part 15 Subpart E Section 15.407(b)(1)to(6)	ANSI C63.10-2013	Conducted Band-edge Measurements	PASS	Appendix E)
Part15C Section 15.203	ANSI C63.10	Antenna Requirement	PASS	Appendix G)
Part15E Section 15.407 (c)	Section 15.407	Operation in the absence of information to the transmit	PASS	Appendix H)
Part15E Section 15.407 (b)(6)	ANSI C63.10	AC Power Line Conducted Emission	PASS	Appendix I)
Part15E Section 15.407 (b)(6)(7)(8)	KDB789033 D02v01	Restricted bands around fundamental frequency (Radiated Emission)	PASS	Appendix J)

Part15E Section 15.407 (b)(6)(7)(8)	KDB789033 D02v01	Unwanted Emissions in the Restricted Bands	PASS	Appendix K)
Part15E Section 15.407 (b)(1)(2)(3)(5)	KDB789033 D02v01	Unwanted Emissions that fall Outside of the Restricted Bands	PASS	Appendix L)
47 CFR Part 15 Subpart E Section 15.407 (h)	KDB905462 D02	Dynamic Frequency Selection	PASS	Appendix M)

Appendix A):Duty Cycle

Directional Antenna Gain

The TX chains are correlated, the antenna gain is equal among the chains. Employs an antenna that operates simultaneously on multiple directional beams using the

same frequency channels. No carrier aggregation techniques.

The directional gain is:

Antenna 1 Gain(dBi)	Antenna 2 Gain(dBi)	Correlated Chains Directional Gain(dBi)
4.1	4.1	7.11

Duty Cycle

ANT1			
Test Mode	Channel	Duty Cycle[%]	Verdict
11A	5180	97.95	PASS
11A	5200	98.07	PASS
11A	5240	98.07	PASS
11A	5260	98.07	PASS
11A	5280	97.95	PASS
11A	5320	98.07	PASS
11A	5500	97.95	PASS
11A	5580	97.95	PASS
11A	5700	97.95	PASS
11A	5745	97.95	PASS
11A	5785	97.95	PASS
11A	5825	98.07	PASS
11N20SISO	5180	97.8	PASS
11N20SISO	5200	97.93	PASS
11N20SISO	5240	97.93	PASS
11N20SISO	5260	97.8	PASS

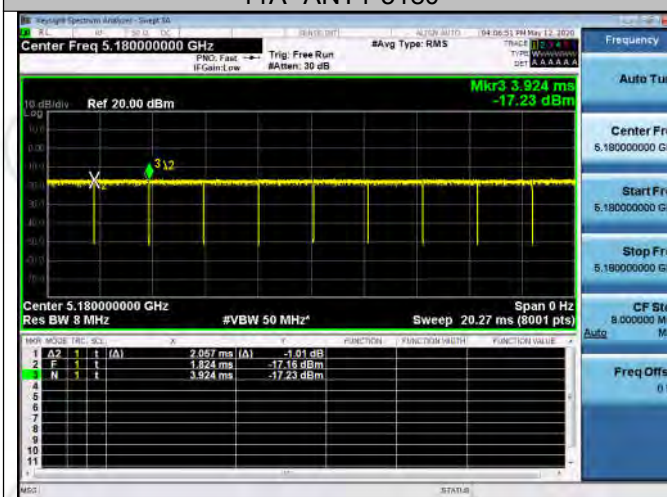
11N20SISO	5280	97.93	PASS
11N20SISO	5320	97.8	PASS
11N20SISO	5500	97.93	PASS
11N20SISO	5580	97.8	PASS
11N20SISO	5700	97.93	PASS
11N20SISO	5745	97.93	PASS
11N20SISO	5785	97.93	PASS
11N20SISO	5825	97.8	PASS
11N40SISO	5190	95.88	PASS
11N40SISO	5230	95.88	PASS
11N40SISO	5270	95.89	PASS
11N40SISO	5310	95.88	PASS
11N40SISO	5510	95.63	PASS
11N40SISO	5550	95.88	PASS
11N40SISO	5670	95.89	PASS
11N40SISO	5755	95.88	PASS
11N40SISO	5795	95.63	PASS
11AC80SISO	5210	91.88	PASS
11AC80SISO	5290	91.88	PASS
11AC80SISO	5530	91.88	PASS
11AC80SISO	5775	91.41	PASS

ANT2			
Test Mode	Channel	Duty Cycle[%]	Verdict
11A	5180	97.95	PASS
11A	5200	97.95	PASS
11A	5240	98.07	PASS
11A	5260	97.95	PASS
11A	5280	97.95	PASS
11A	5320	98.07	PASS
11A	5500	98.07	PASS
11A	5580	97.95	PASS
11A	5700	97.95	PASS
11A	5745	97.95	PASS
11A	5785	98.07	PASS
11A	5825	97.95	PASS
11N20SISO	5180	97.93	PASS
11N20SISO	5200	97.93	PASS
11N20SISO	5240	97.8	PASS
11N20SISO	5260	97.8	PASS
11N20SISO	5280	97.8	PASS
11N20SISO	5320	97.93	PASS
11N20SISO	5500	97.93	PASS
11N20SISO	5580	97.8	PASS
11N20SISO	5700	97.93	PASS
11N20SISO	5745	97.8	PASS
11N20SISO	5785	97.8	PASS
11N20SISO	5825	97.93	PASS
11N40SISO	5190	95.88	PASS
11N40SISO	5230	95.88	PASS
11N40SISO	5270	95.88	PASS

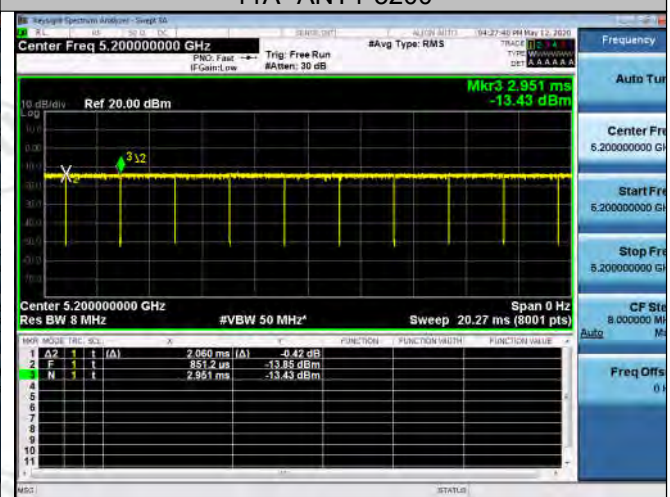
11N40SISO	5310	95.88	PASS
11N40SISO	5510	95.88	PASS
11N40SISO	5550	95.88	PASS
11N40SISO	5670	95.88	PASS
11N40SISO	5755	95.88	PASS
11N40SISO	5795	95.89	PASS
11AC80SISO	5210	91.88	PASS
11AC80SISO	5290	91.88	PASS
11AC80SISO	5530	91.88	PASS
11AC80SISO	5775	91.88	PASS

Duty Cycle Test Graph

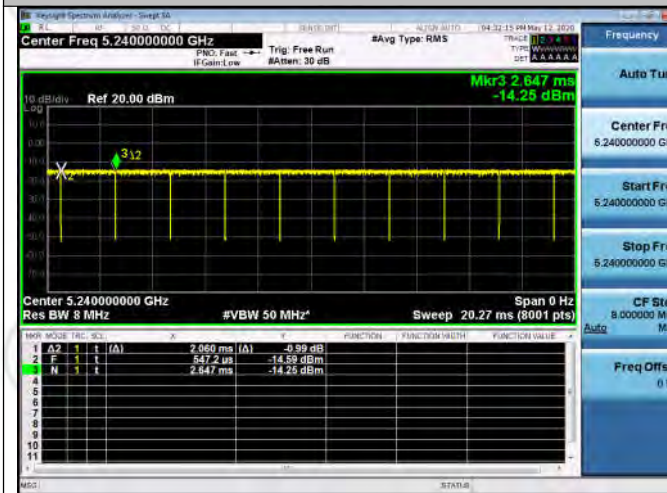
11A -ANT1-5180



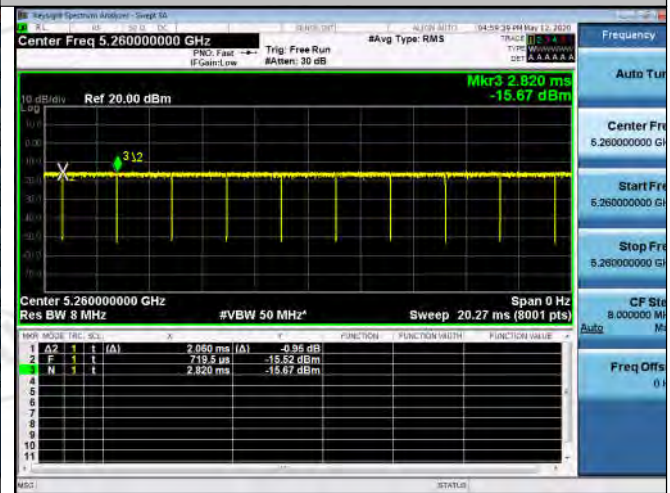
11A -ANT1-5200



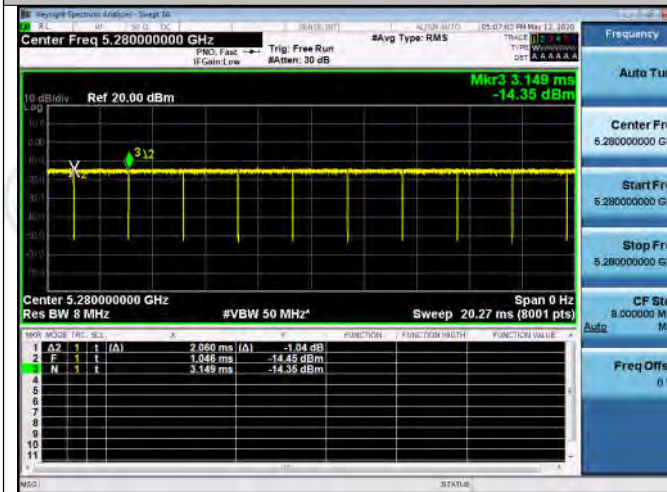
11A -ANT1-5240



11A -ANT1-5260



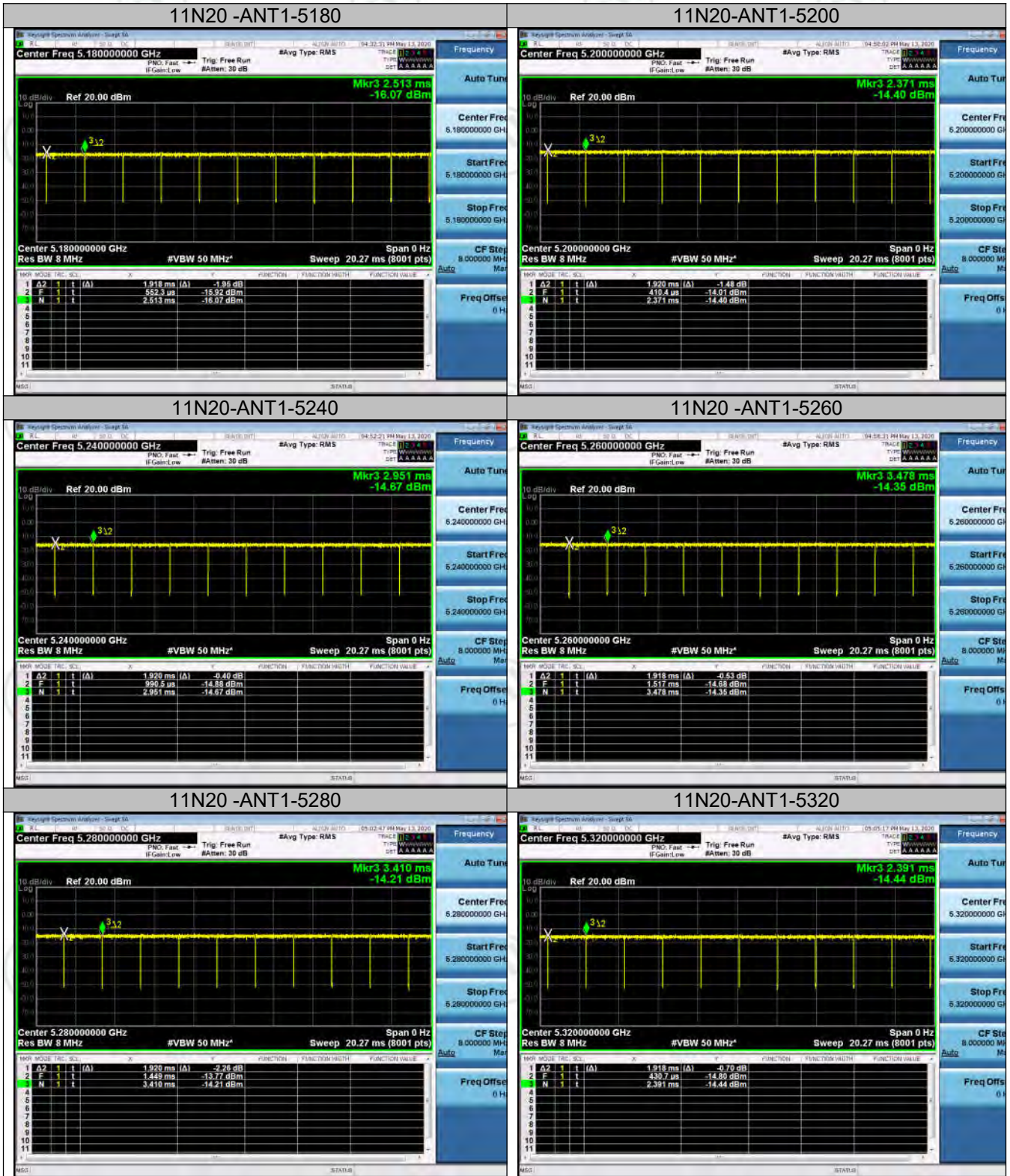
11A -ANT1-5280



11A -ANT1-5320

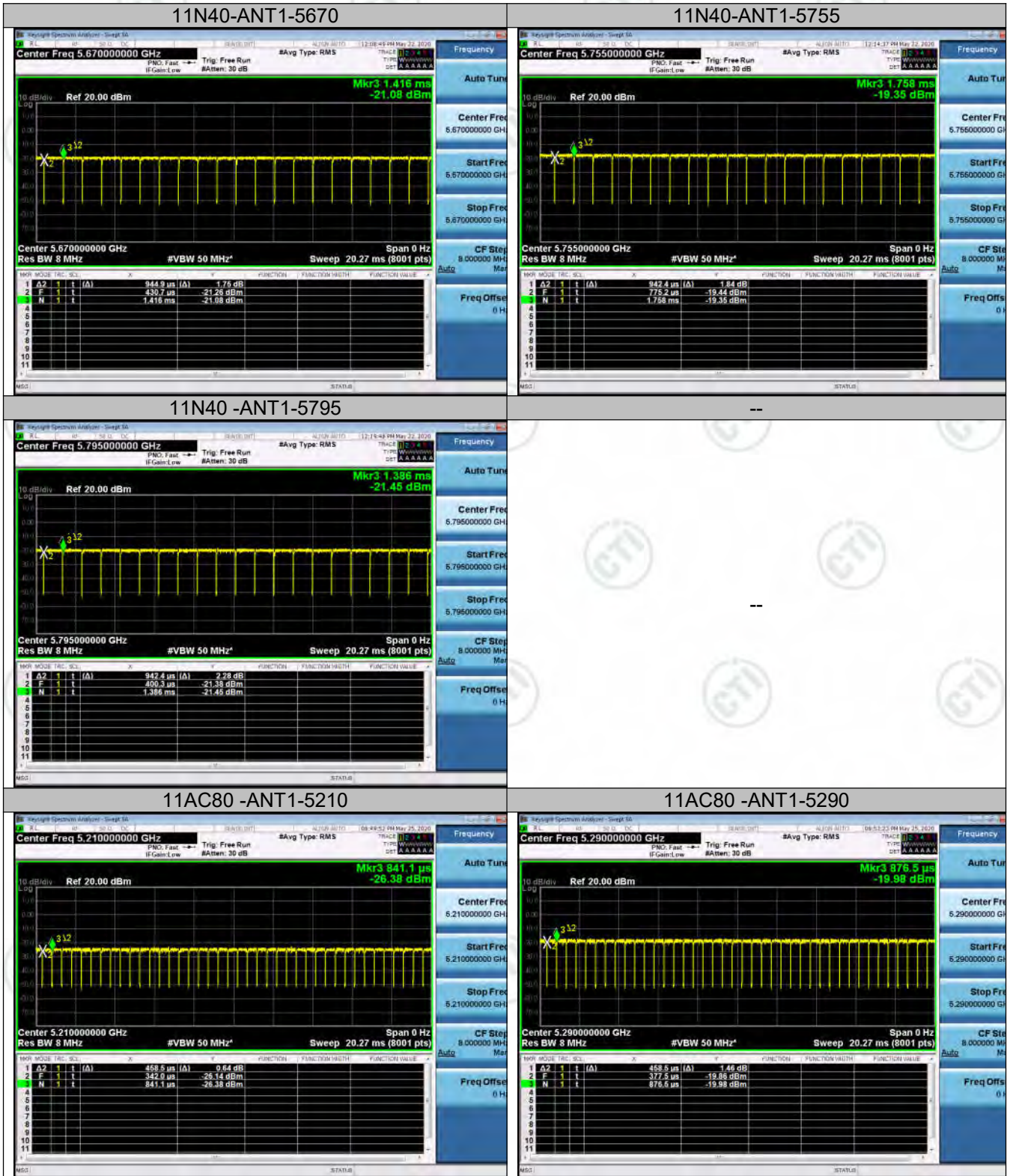


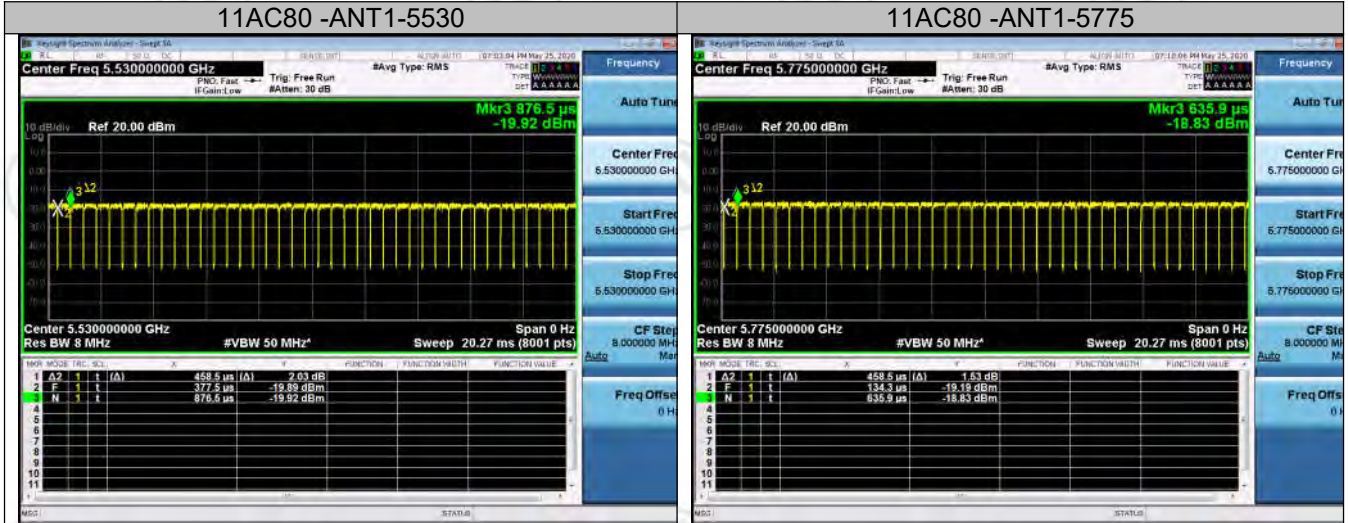


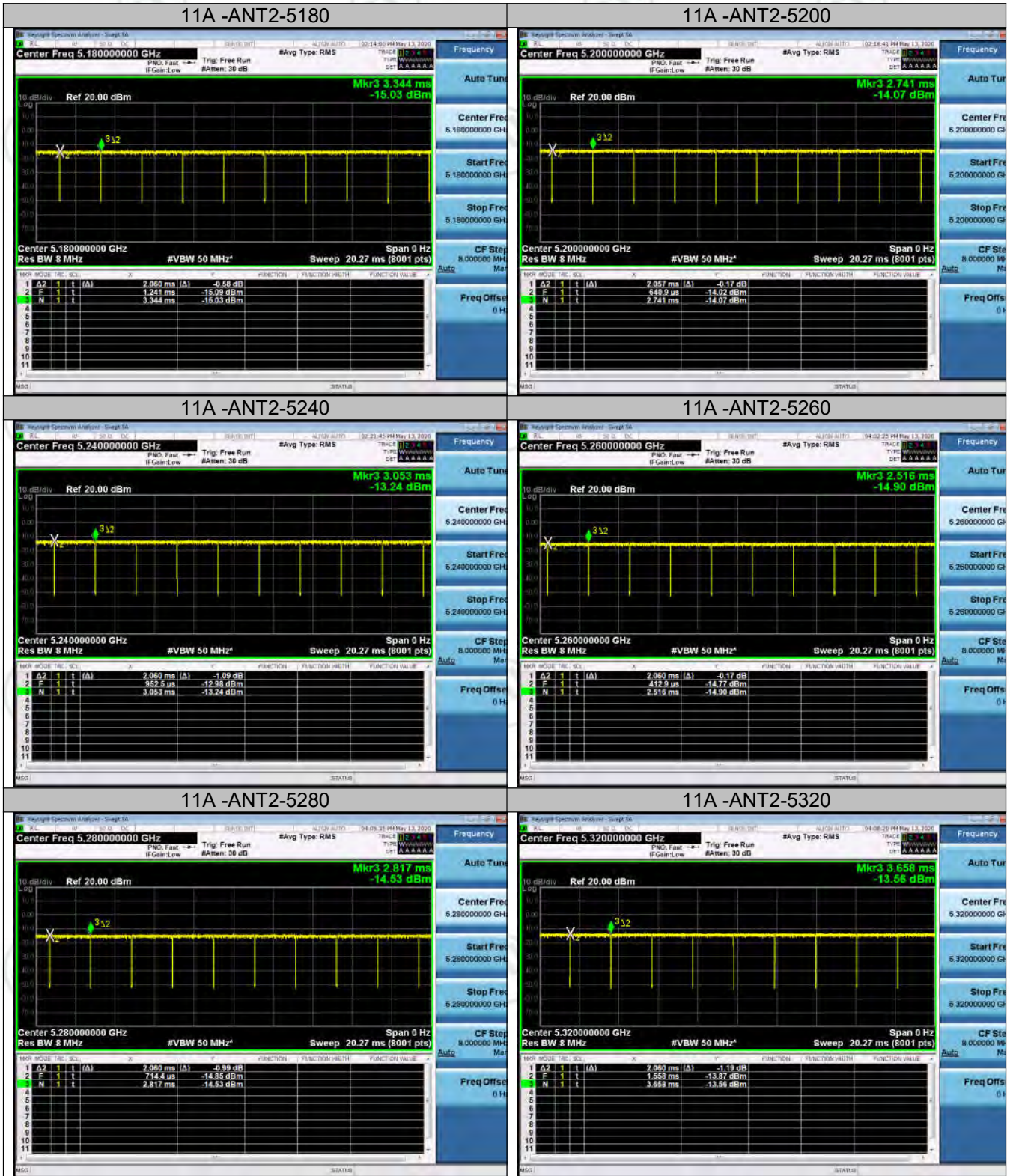


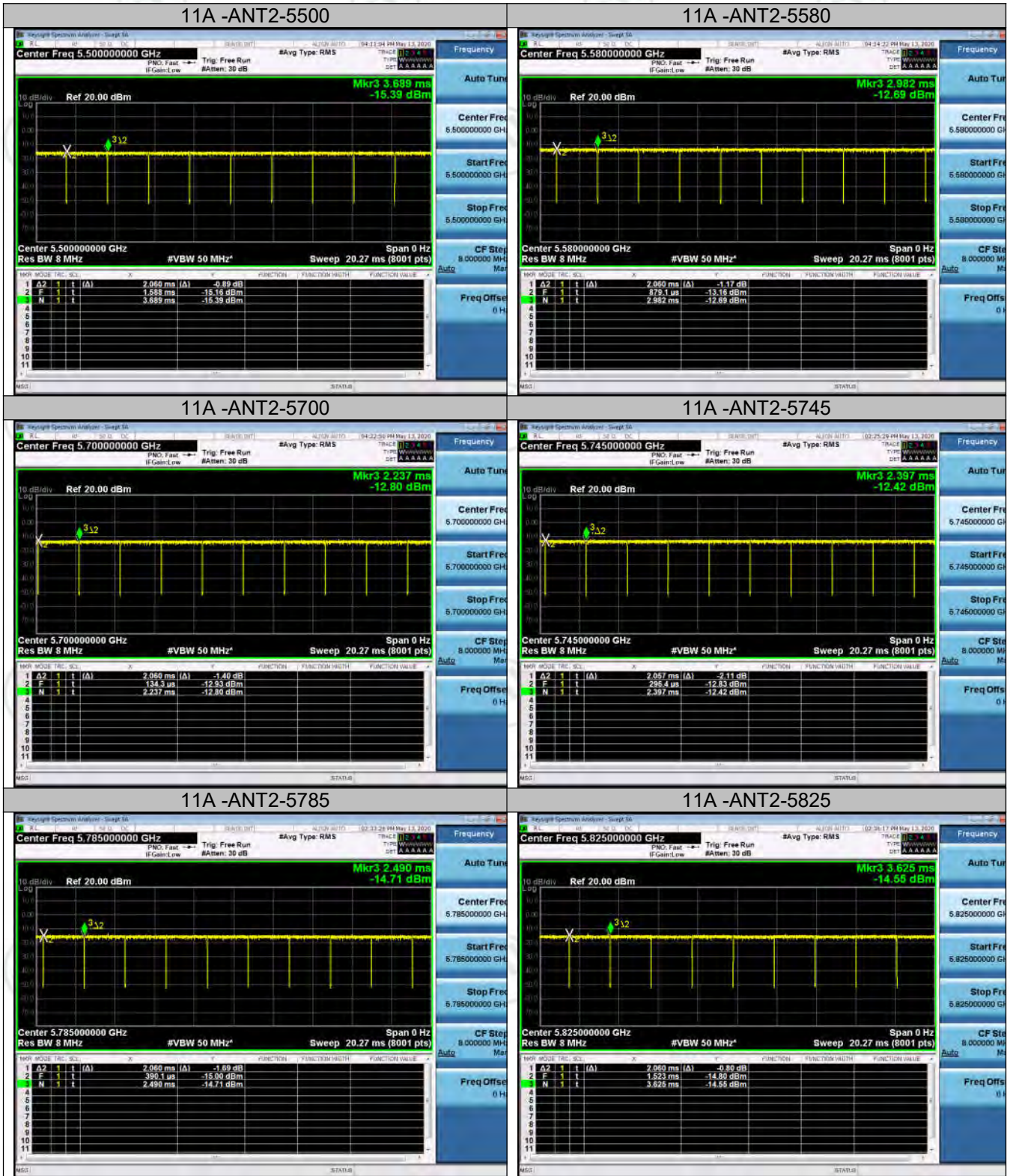


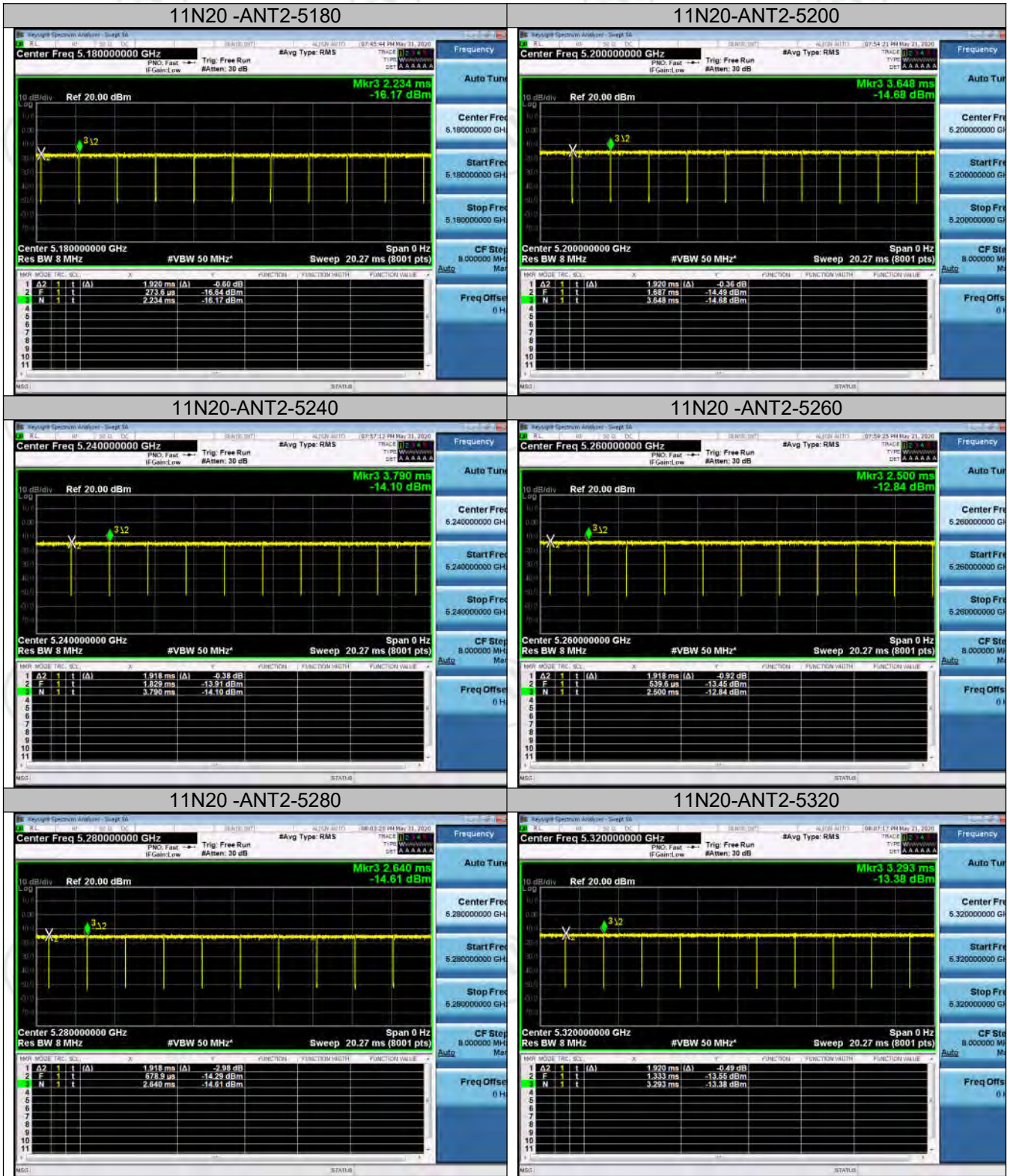






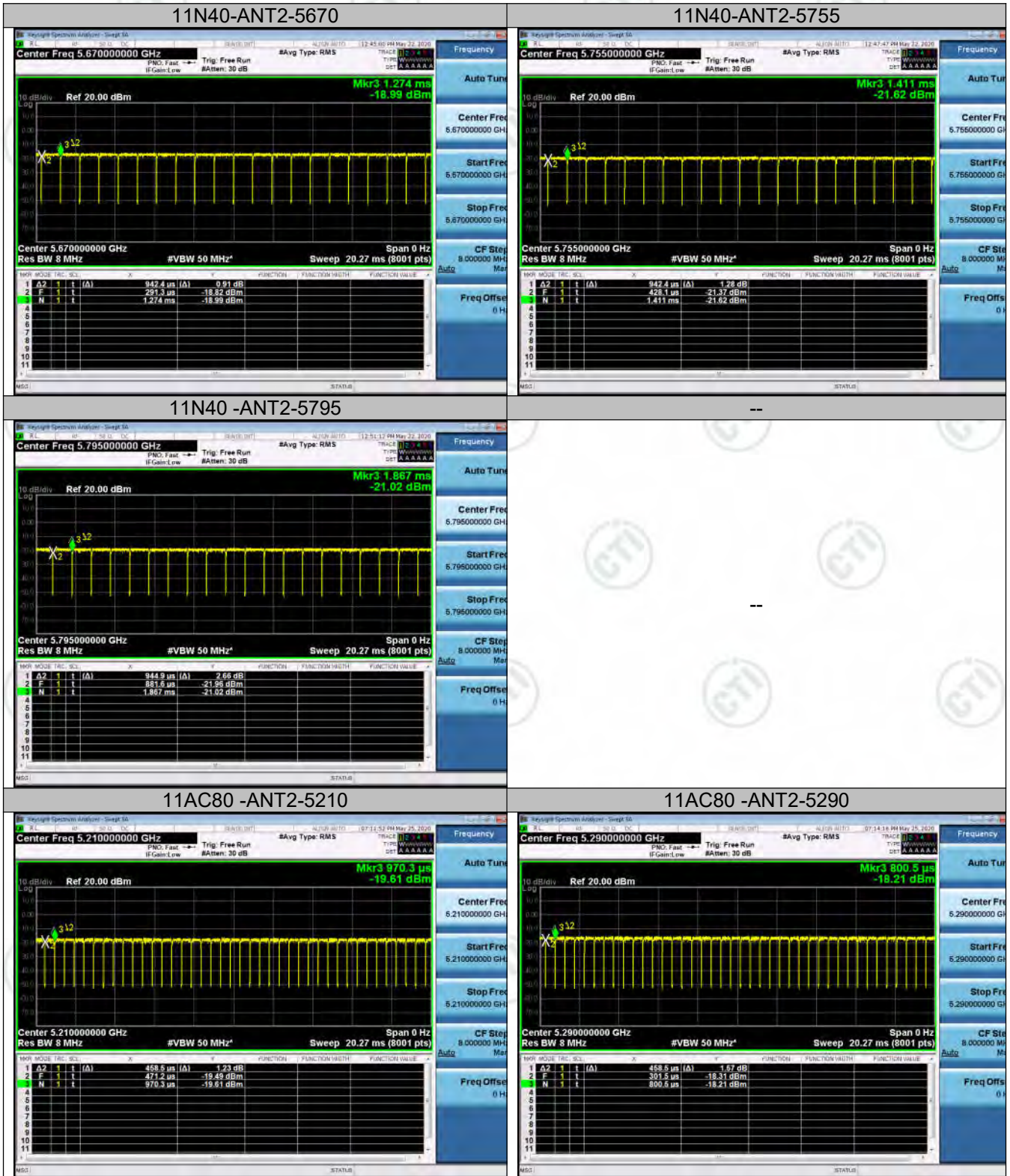














Appendix B): Emission Bandwidth Result Table

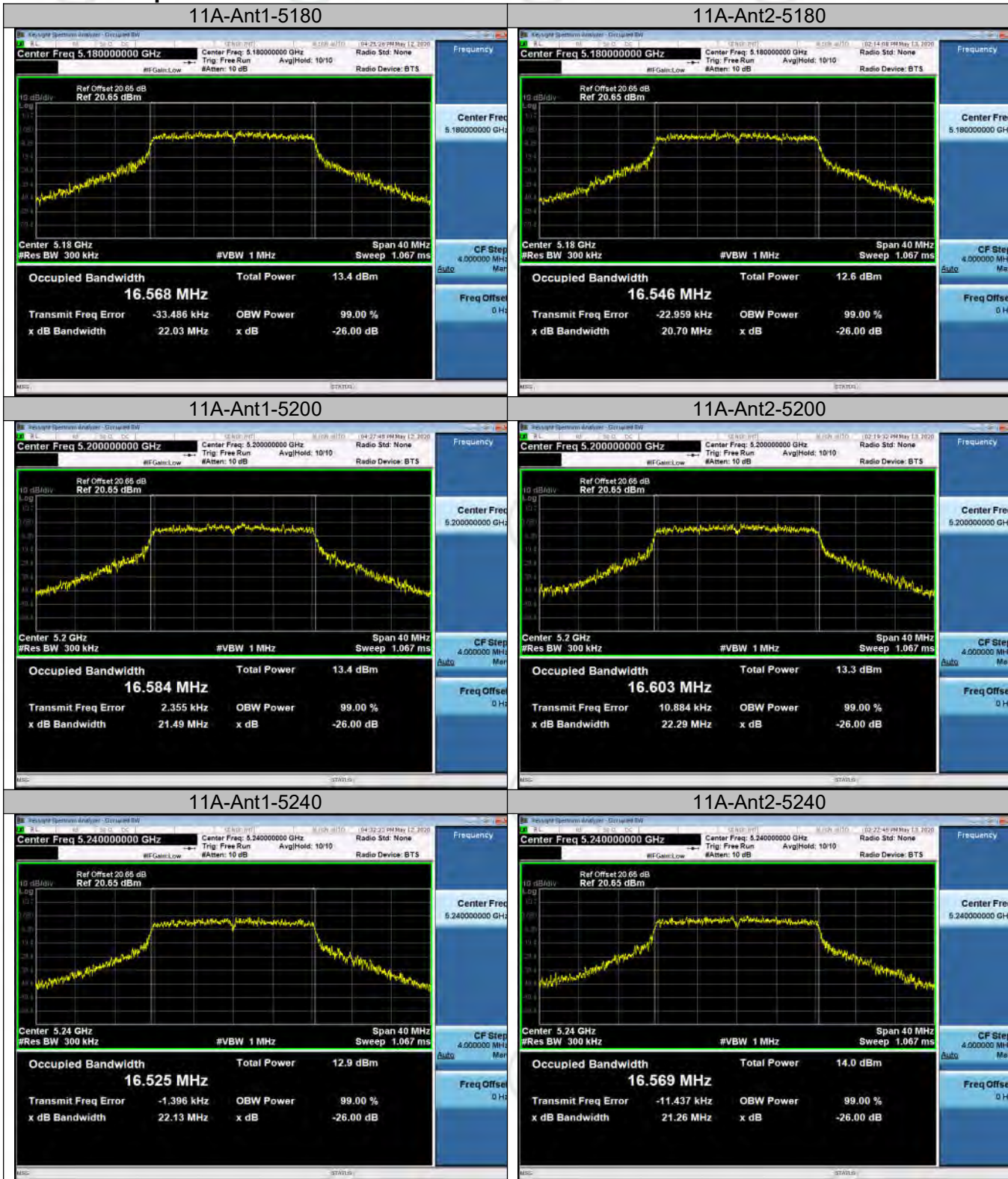
Test Mode	Antenna	Channel	EBW[MHz]	OBW[MHz]	Verdict
11A	Ant1	5180	22.03	16.568	PASS
11A	Ant2	5180	20.70	16.546	PASS
11A	Ant1	5200	21.49	16.584	PASS
11A	Ant2	5200	22.29	16.603	PASS
11A	Ant1	5240	22.13	16.525	PASS
11A	Ant2	5240	21.26	16.569	PASS
11A	Ant1	5260	23.39	16.608	PASS
11A	Ant2	5260	21.76	16.600	PASS
11A	Ant1	5280	21.38	16.556	PASS
11A	Ant2	5280	20.79	16.527	PASS
11A	Ant1	5320	22.30	16.631	PASS
11A	Ant2	5320	21.07	16.506	PASS
11A	Ant1	5500	20.56	16.496	PASS
11A	Ant2	5500	23.51	16.623	PASS
11A	Ant1	5580	21.52	16.552	PASS
11A	Ant2	5580	21.10	16.502	PASS
11A	Ant1	5700	21.58	16.527	PASS
11A	Ant2	5700	20.72	16.587	PASS
11A	Ant1	5745	16.36	16.417	PASS
11A	Ant2	5745	16.10	16.384	PASS
11A	Ant1	5785	16.09	16.437	PASS
11A	Ant2	5785	15.74	16.397	PASS
11A	Ant1	5825	15.28	16.391	PASS
11A	Ant2	5825	14.01	16.402	PASS

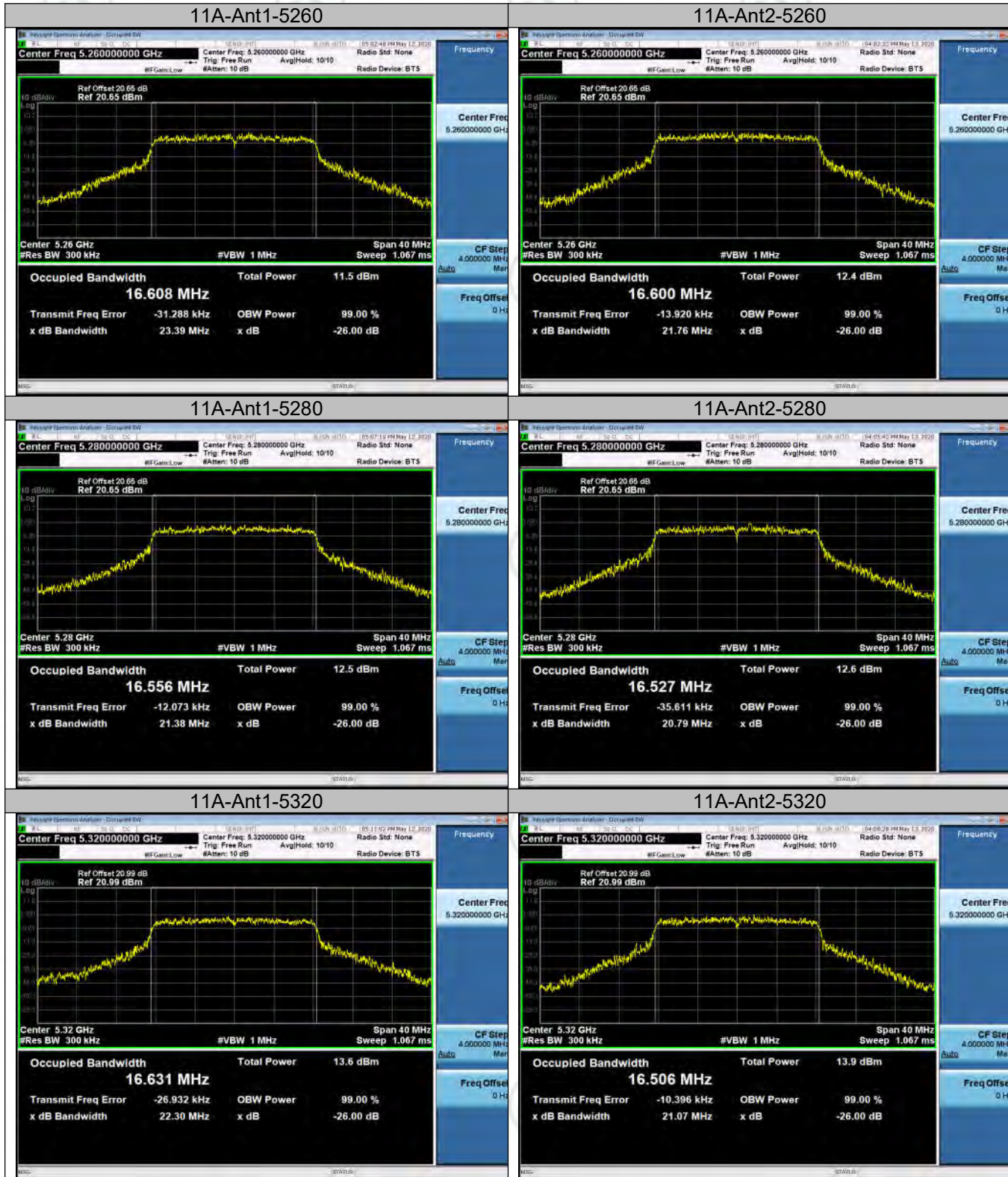
Test Mode	Antenna	Channel	EBW[MHz]	OBW[MHz]	Verdict
11N20SISO	Ant1	5180	21.60	17.766	PASS
11N20SISO	Ant2	5180	22.70	17.762	PASS
11N20SISO	Ant1	5200	22.86	17.688	PASS
11N20SISO	Ant2	5200	22.63	17.750	PASS
11N20SISO	Ant1	5240	23.12	17.700	PASS
11N20SISO	Ant2	5240	21.67	17.809	PASS
11N20SISO	Ant1	5260	22.89	17.752	PASS
11N20SISO	Ant2	5260	22.55	17.733	PASS
11N20SISO	Ant1	5280	22.72	17.743	PASS
11N20SISO	Ant2	5280	22.64	17.755	PASS
11N20SISO	Ant1	5320	23.88	17.725	PASS
11N20SISO	Ant2	5320	21.34	17.689	PASS
11N20SISO	Ant1	5500	21.81	17.725	PASS
11N20SISO	Ant2	5500	23.41	17.771	PASS
11N20SISO	Ant1	5580	22.71	17.768	PASS
11N20SISO	Ant2	5580	22.07	17.791	PASS
11N20SISO	Ant1	5700	22.31	17.731	PASS
11N20SISO	Ant2	5700	22.27	17.788	PASS
11N20SISO	Ant1	5745	17.65	17.670	PASS
11N20SISO	Ant2	5745	17.70	17.653	PASS
11N20SISO	Ant1	5785	10.06	17.634	PASS
11N20SISO	Ant2	5785	16.79	17.627	PASS
11N20SISO	Ant1	5825	17.60	17.623	PASS
11N20SISO	Ant2	5825	16.35	17.642	PASS
11N40SISO	Ant1	5190	41.42	36.475	PASS
11N40SISO	Ant2	5190	41.39	36.499	PASS
11N40SISO	Ant1	5230	41.28	36.473	PASS
11N40SISO	Ant2	5230	40.97	36.400	PASS

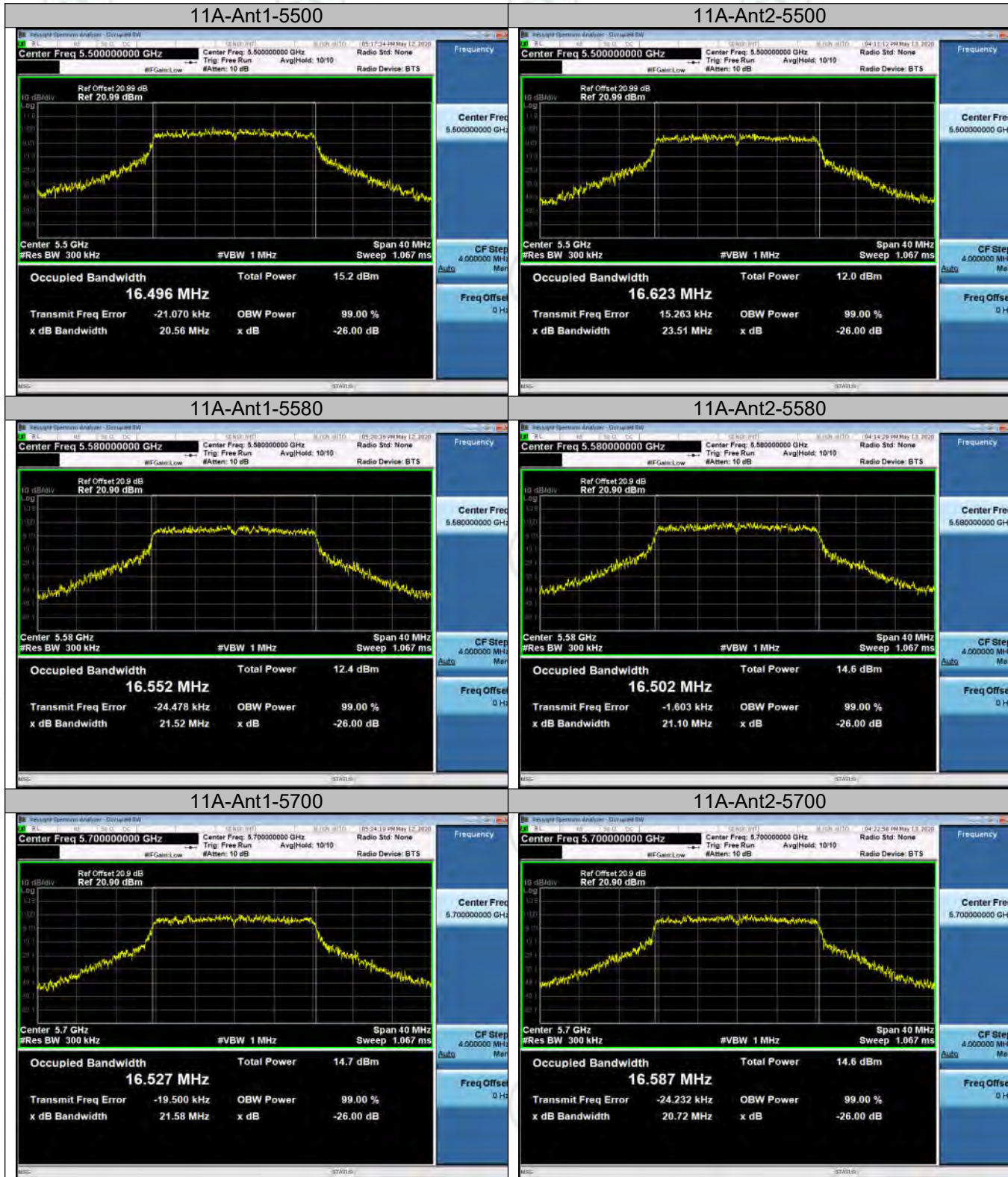
11N40SISO	Ant1	5270	41.17	36.583	PASS
11N40SISO	Ant2	5270	40.96	36.376	PASS
11N40SISO	Ant1	5310	40.92	36.490	PASS
11N40SISO	Ant2	5310	41.11	36.353	PASS
11N40SISO	Ant1	5510	41.52	36.337	PASS
11N40SISO	Ant2	5510	41.28	36.408	PASS
11N40SISO	Ant1	5550	40.50	36.326	PASS
11N40SISO	Ant2	5550	41.00	36.473	PASS
11N40SISO	Ant1	5670	41.18	36.447	PASS
11N40SISO	Ant2	5670	40.50	36.356	PASS
11N40SISO	Ant1	5755	35.07	36.136	PASS
11N40SISO	Ant2	5755	35.61	36.114	PASS
11N40SISO	Ant1	5795	36.34	36.178	PASS
11N40SISO	Ant2	5795	36.27	36.100	PASS

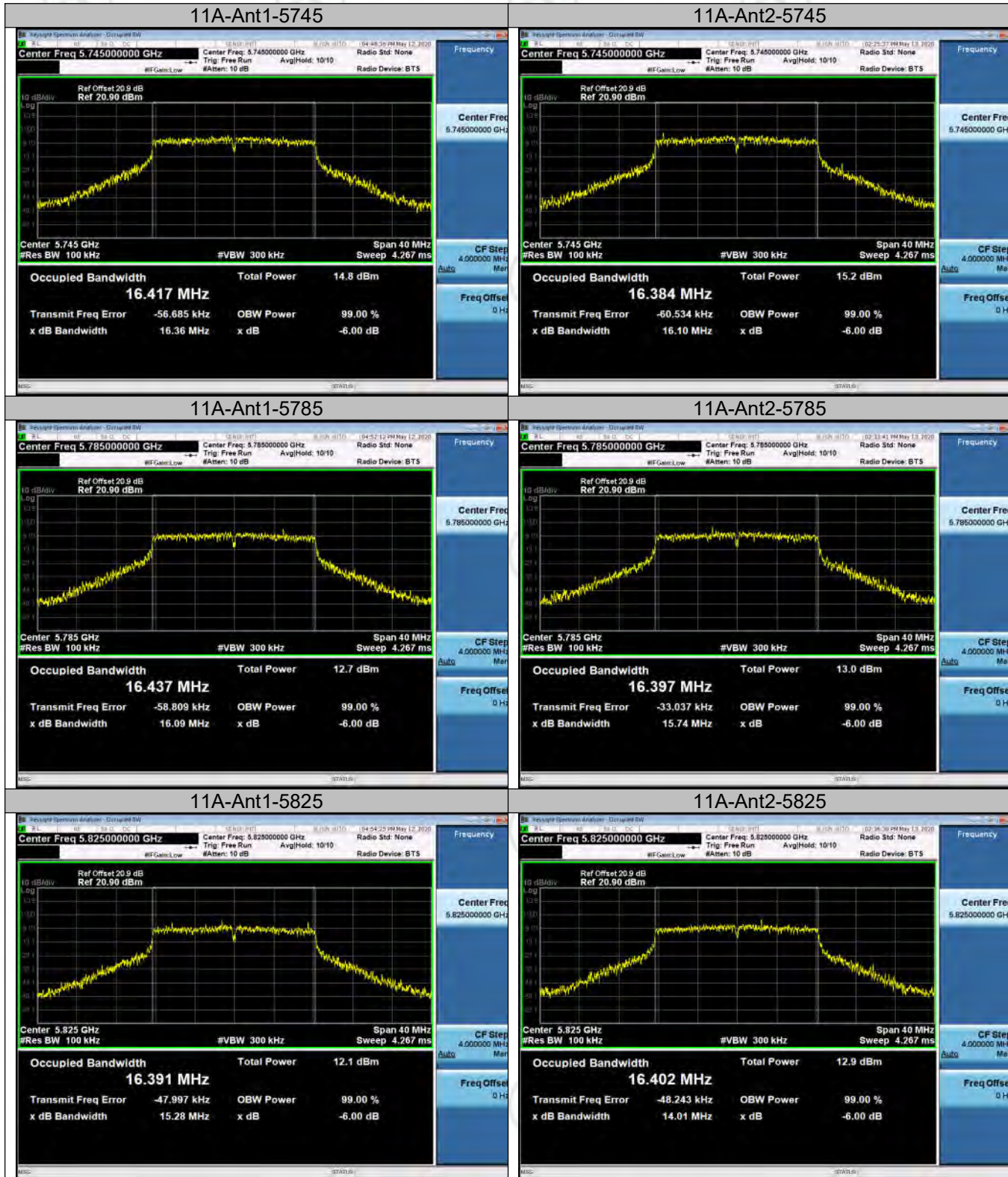
Test Mode	Antenna	Channel	EBW[MHz]	OBW[MHz]	Verdict
11AC80SISO	Ant1	5210	81.29	75.817	PASS
11AC80SISO	Ant2	5210	81.19	75.720	PASS
11AC80SISO	Ant1	5290	81.99	75.868	PASS
11AC80SISO	Ant2	5290	80.63	75.874	PASS
11AC80SISO	Ant1	5530	81.54	75.681	PASS
11AC80SISO	Ant2	5530	81.66	75.677	PASS
11AC80SISO	Ant1	5775	72.86	75.596	PASS
11AC80SISO	Ant2	5775	71.39	75.854	PASS

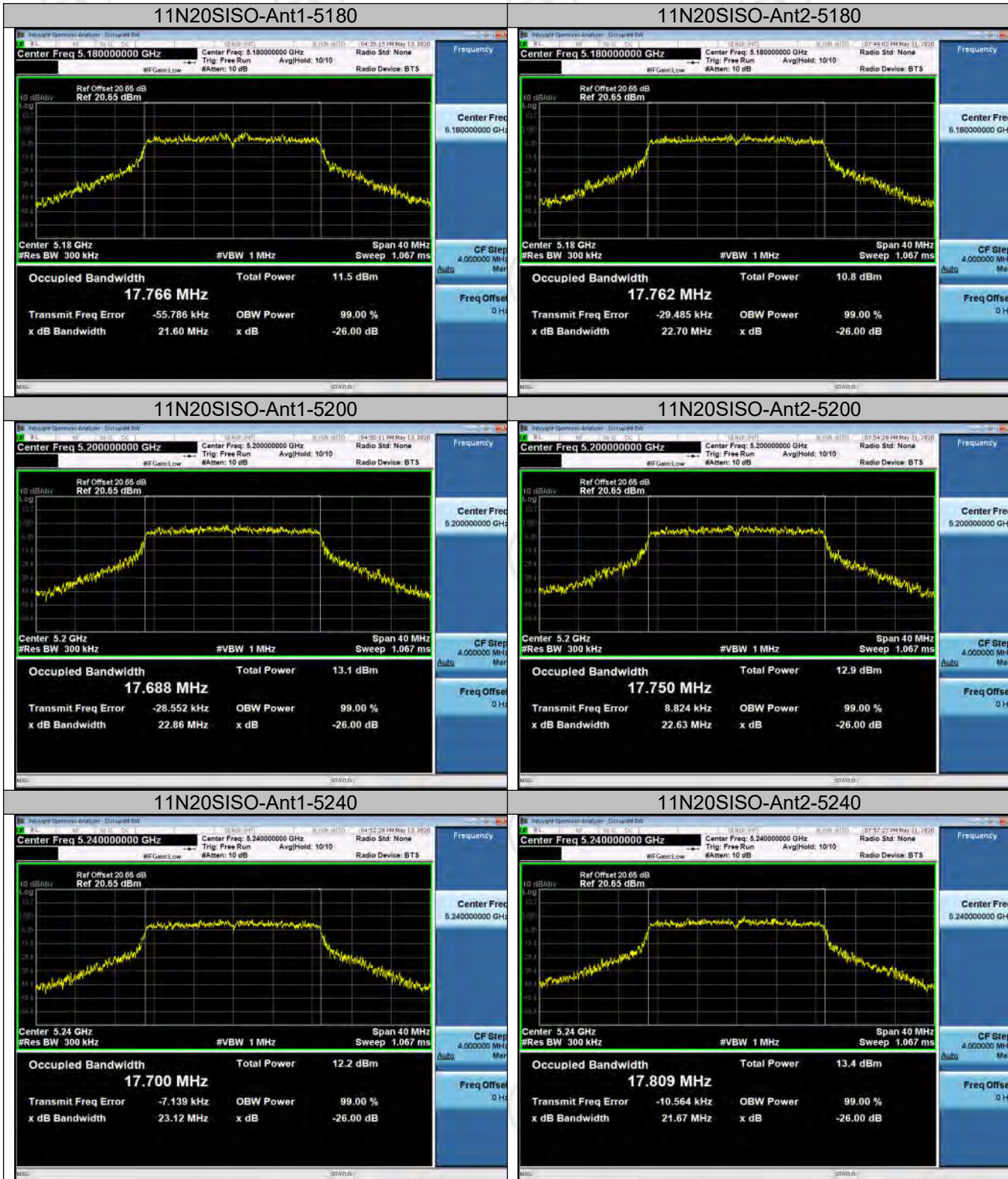
Test Graph

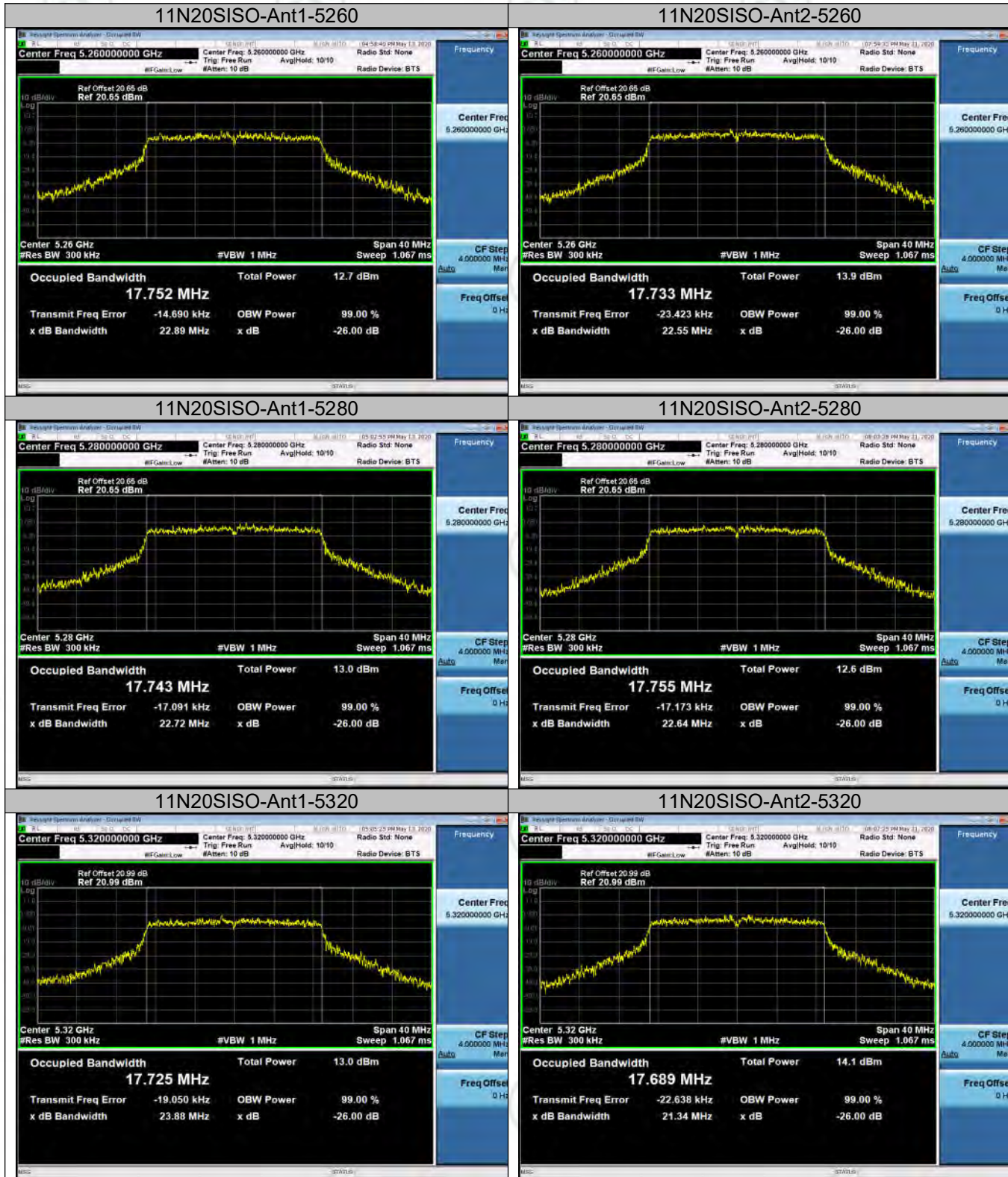


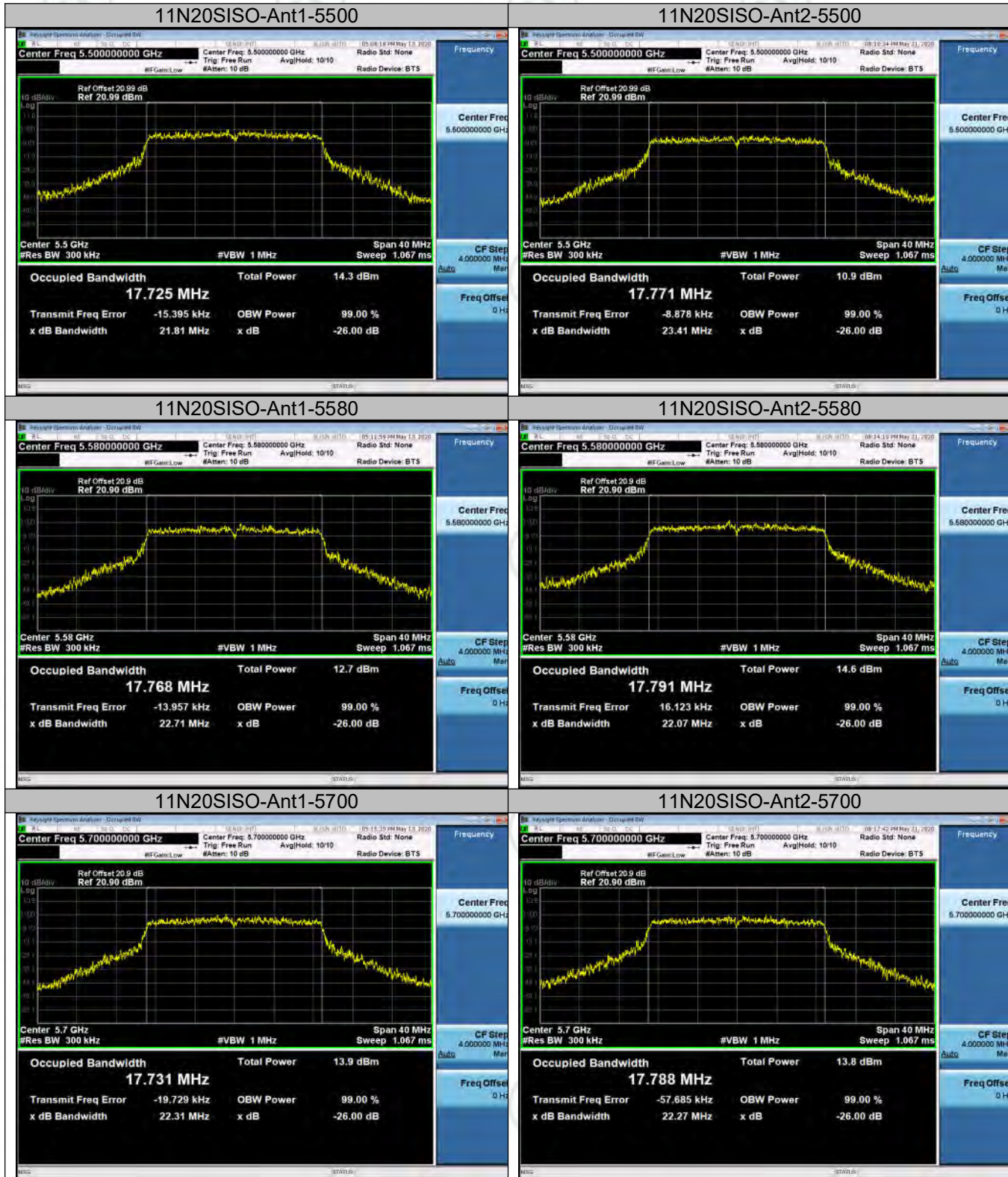


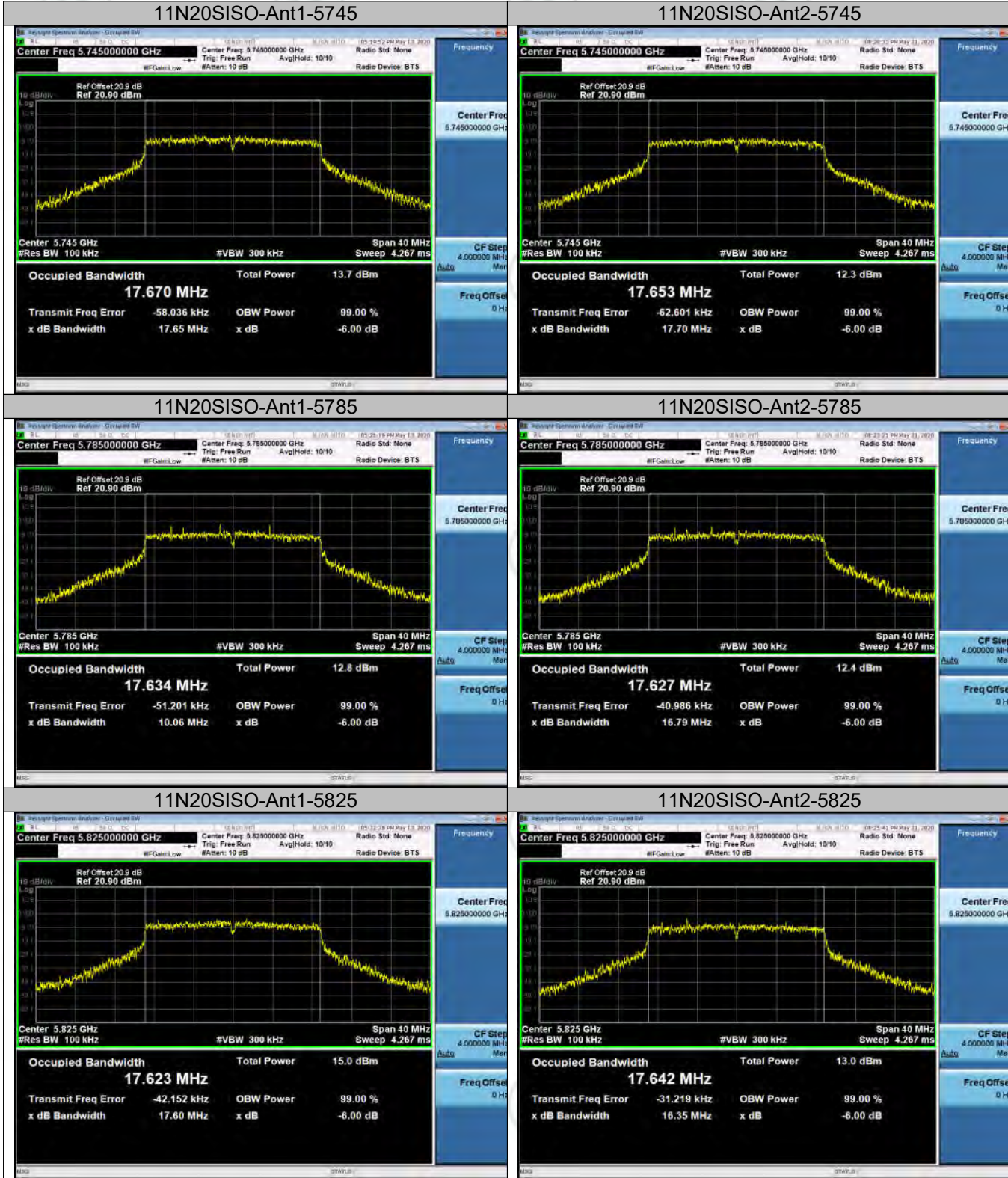


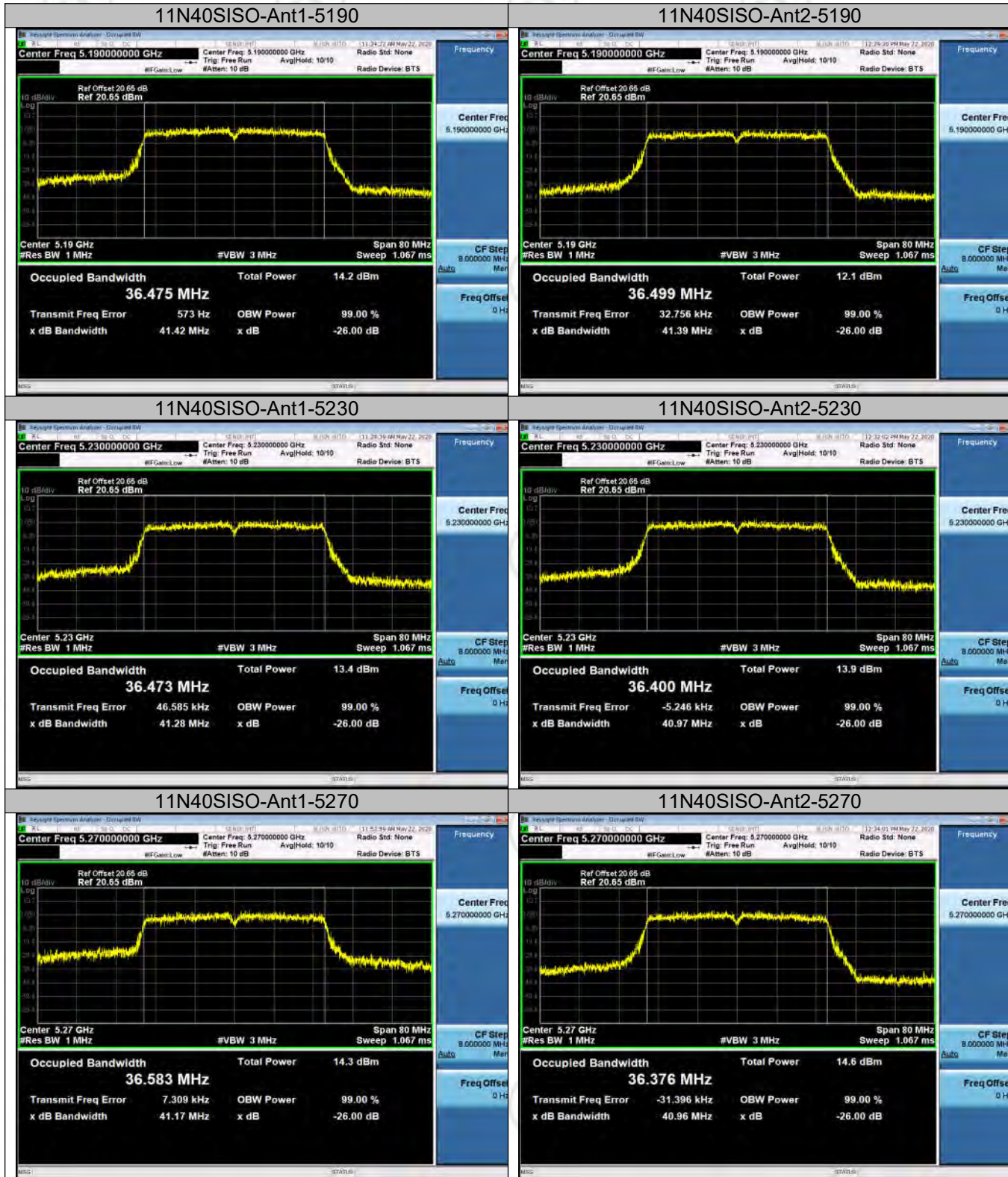


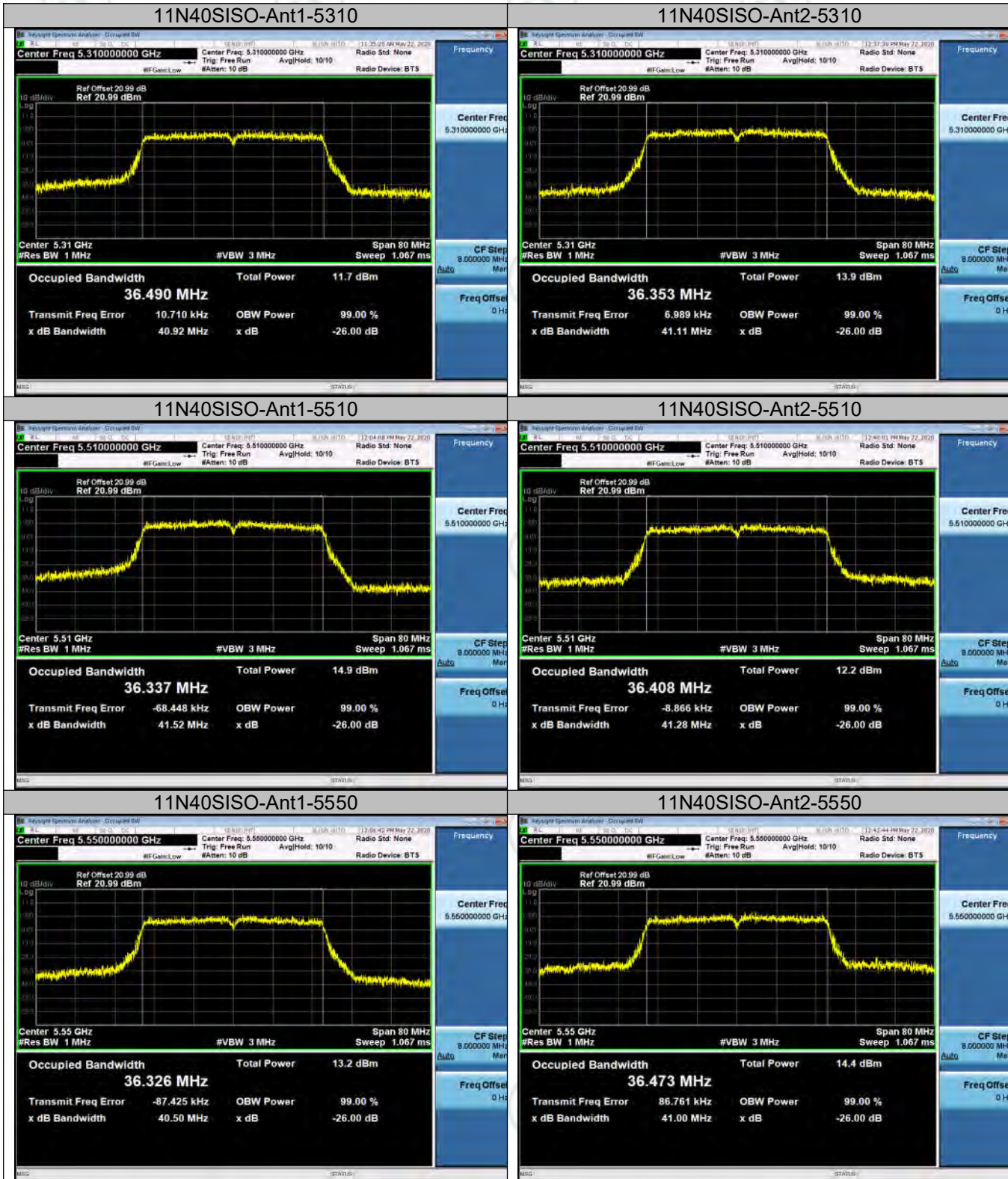


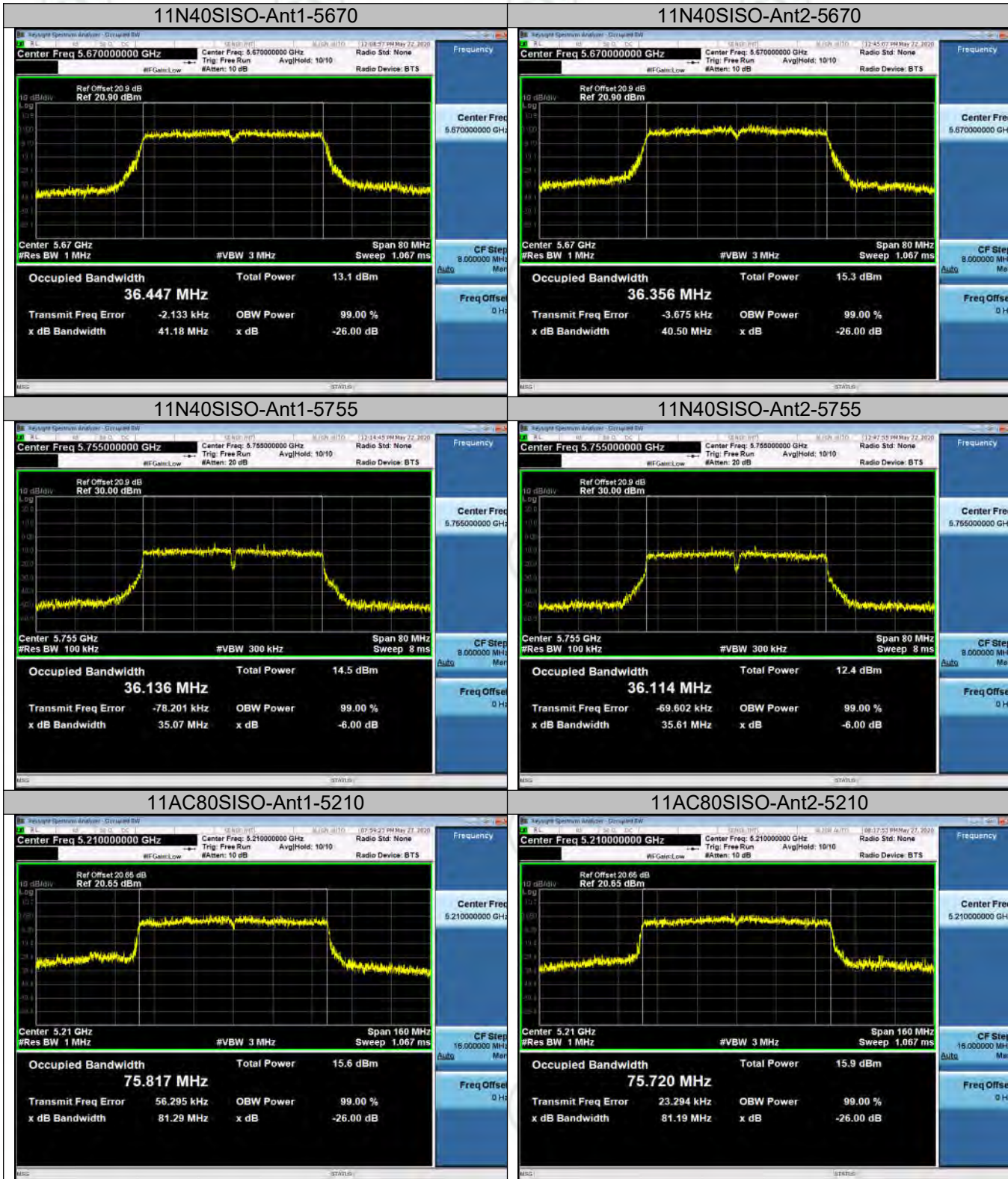


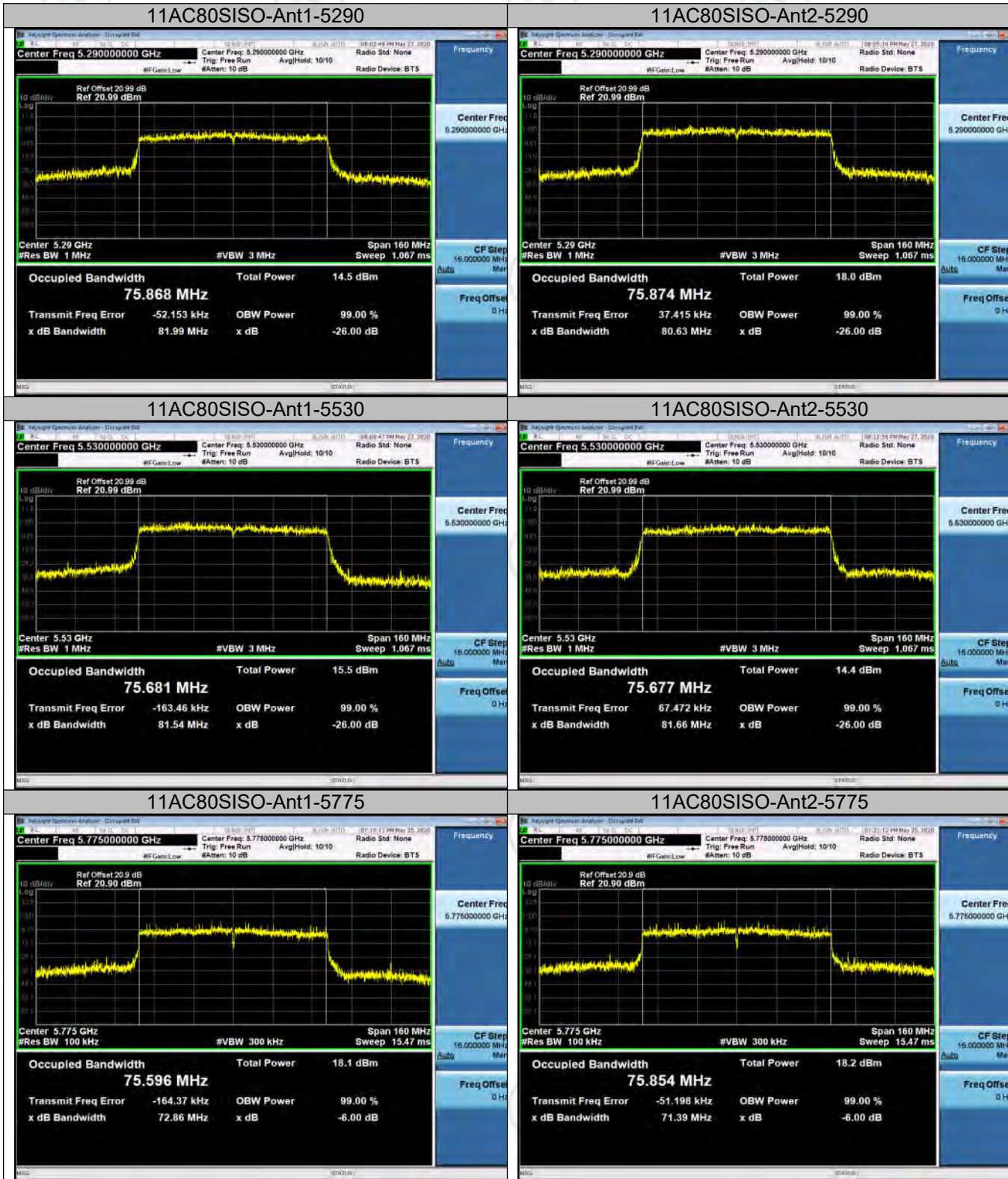












Appendix C): Maximum Conduct Output Power Result Table

Test Mode	Antenna	Channel	Meas.Level [dBm]	Av.Power [dBm]	Verdict
11A	Ant1	5180	13.59	13.68	PASS
11A	Ant2	5180	13.69	13.78	PASS
11A	Ant1	5200	13.62	13.7	PASS
11A	Ant2	5200	13.53	13.62	PASS
11A	Ant1	5240	12.99	13.07	PASS
11A	Ant2	5240	13.1	13.18	PASS
11A	Ant1	5260	12.98	13.06	PASS
11A	Ant2	5260	13.18	13.27	PASS
11A	Ant1	5280	13.33	13.42	PASS
11A	Ant2	5280	13.3	13.39	PASS
11A	Ant1	5320	13.28	13.36	PASS
11A	Ant2	5320	13.53	13.61	PASS
11A	Ant1	5500	13.15	13.24	PASS
11A	Ant2	5500	13.28	13.36	PASS
11A	Ant1	5580	13.8	13.89	PASS
11A	Ant2	5580	13.67	13.76	PASS
11A	Ant1	5700	13.71	13.8	PASS
11A	Ant2	5700	13.19	13.28	PASS
11A	Ant1	5745	13.68	13.77	PASS
11A	Ant2	5745	13.4	13.49	PASS
11A	Ant1	5785	13.22	13.31	PASS
11A	Ant2	5785	13.35	13.43	PASS
11A	Ant1	5825	13.5	13.58	PASS
11A	Ant2	5825	13.34	13.43	PASS

Test Mode	Antenna	Channel	Meas.Level [dBm]	Av.Power [dBm]	Verdict
11N20SISO	Ant1	5180	13.07	13.17	PASS
11N20SISO	Ant2	5180	13.16	13.25	PASS
11N20SISO	Ant1	5200	13.17	13.26	PASS
11N20SISO	Ant2	5200	13.01	13.1	PASS
11N20SISO	Ant1	5240	13.11	13.2	PASS
11N20SISO	Ant2	5240	13.57	13.67	PASS
11N20SISO	Ant1	5260	13.45	13.55	PASS
11N20SISO	Ant2	5260	13.24	13.34	PASS
11N20SISO	Ant1	5280	13.31	13.4	PASS
11N20SISO	Ant2	5280	13.45	13.55	PASS
11N20SISO	Ant1	5320	13.17	13.27	PASS
11N20SISO	Ant2	5320	13.28	13.37	PASS
11N20SISO	Ant1	5500	13.5	13.59	PASS
11N20SISO	Ant2	5500	13.09	13.18	PASS
11N20SISO	Ant1	5580	13.05	13.15	PASS
11N20SISO	Ant2	5580	13.01	13.11	PASS
11N20SISO	Ant1	5700	13.59	13.68	PASS
11N20SISO	Ant2	5700	13.55	13.64	PASS
11N20SISO	Ant1	5745	13.69	13.78	PASS
11N20SISO	Ant2	5745	13.05	13.15	PASS
11N20SISO	Ant1	5785	13.51	13.6	PASS
11N20SISO	Ant2	5785	13.31	13.41	PASS
11N20SISO	Ant1	5825	13.11	13.21	PASS
11N20SISO	Ant2	5825	13.04	13.13	PASS
11N40SISO	Ant1	5190	13.54	13.72	PASS
11N40SISO	Ant2	5190	13.27	13.45	PASS
11N40SISO	Ant1	5230	13.47	13.65	PASS
11N40SISO	Ant2	5230	13.59	13.77	PASS
11N40SISO	Ant1	5270	13.20	13.38	PASS

11N40SISO	Ant2	5270	13.19	13.37	PASS
11N40SISO	Ant1	5310	13.15	13.33	PASS
11N40SISO	Ant2	5310	13.66	13.84	PASS
11N40SISO	Ant1	5510	13.36	13.55	PASS
11N40SISO	Ant2	5510	13.41	13.59	PASS
11N40SISO	Ant1	5550	13.01	13.19	PASS
11N40SISO	Ant2	5550	13.17	13.35	PASS
11N40SISO	Ant1	5670	13.3	13.48	PASS
11N40SISO	Ant2	5670	13.4	13.58	PASS
11N40SISO	Ant1	5755	13.27	13.45	PASS
11N40SISO	Ant2	5755	13.25	13.43	PASS
11N40SISO	Ant1	5795	13	13.19	PASS
11N40SISO	Ant2	5795	13.18	13.36	PASS

Test Mode	Antenna	Channel	Meas.Level [dBm]	Av.Power [dBm]	Verdict
11AC20SISO	Ant1	5180	12.98	13.07	PASS
11AC20SISO	Ant2	5180	12.14	12.24	PASS
11AC20SISO	Ant1	5200	13.09	13.18	PASS
11AC20SISO	Ant2	5200	12.91	13	PASS
11AC20SISO	Ant1	5240	12.53	12.63	PASS
11AC20SISO	Ant1	5260	12.35	12.45	PASS
11AC20SISO	Ant2	5260	13.26	13.36	PASS
11AC20SISO	Ant1	5280	12.11	12.2	PASS
11AC20SISO	Ant2	5280	12.94	13.04	PASS
11AC20SISO	Ant1	5320	11.69	11.78	PASS
11AC20SISO	Ant2	5320	13.26	13.35	PASS
11AC20SISO	Ant1	5500	12.18	12.28	PASS
11AC20SISO	Ant2	5500	13.38	13.48	PASS
11AC20SISO	Ant1	5580	11.5	11.59	PASS
11AC20SISO	Ant2	5580	12.99	13.08	PASS
11AC20SISO	Ant1	5700	11.72	11.81	PASS
11AC20SISO	Ant2	5700	13.59	13.69	PASS
11AC20SISO	Ant2	5240	13.46	13.56	PASS
11AC20SISO	Ant1	5745	12.52	12.62	PASS
11AC20SISO	Ant2	5745	12.86	12.96	PASS
11AC20SISO	Ant1	5785	12.55	12.64	PASS
11AC20SISO	Ant2	5785	13.19	13.28	PASS
11AC20SISO	Ant1	5825	12.44	12.54	PASS
11AC20SISO	Ant2	5825	13.01	13.11	PASS
11AC40SISO	Ant1	5190	12.75	12.93	PASS
11AC40SISO	Ant2	5190	13.48	13.66	PASS
11AC40SISO	Ant1	5230	12.56	12.74	PASS
11AC40SISO	Ant2	5230	13.36	13.54	PASS

11AC40SISO	Ant1	5270	12.99	13.17	PASS
11AC40SISO	Ant2	5270	13.48	13.66	PASS
11AC40SISO	Ant1	5310	12.82	13	PASS
11AC40SISO	Ant2	5310	13.8	13.98	PASS
11AC40SISO	Ant1	5510	12.72	12.9	PASS
11AC40SISO	Ant2	5510	13.71	13.89	PASS
11AC40SISO	Ant1	5550	12.33	12.52	PASS
11AC40SISO	Ant2	5550	13.33	13.51	PASS
11AC40SISO	Ant1	5670	12.76	12.94	PASS
11AC40SISO	Ant2	5670	13.49	13.67	PASS
11AC40SISO	Ant1	5755	12.92	13.1	PASS
11AC40SISO	Ant2	5755	13.44	13.63	PASS
11AC40SISO	Ant1	5795	12.31	12.49	PASS
11AC40SISO	Ant2	5795	13.34	13.52	PASS
11AC80SISO	Ant1	5210	6.62	6.99	PASS
11AC80SISO	Ant2	5210	6.40	6.77	PASS
11AC80SISO	Ant1	5290	7.06	7.43	PASS
11AC80SISO	Ant2	5290	7.74	8.11	PASS
11AC80SISO	Ant1	5530	6.56	6.93	PASS
11AC80SISO	Ant2	5530	6.93	7.30	PASS
11AC80SISO	Ant1	5775	8.78	9.17	PASS
11AC80SISO	Ant2	5775	9.47	9.84	PASS

Test Mode	Antenna	Channel	Meas.Level [dBm]	Av.Power [dBm]	Verdict
11N20MIMO	Ant1	5180	10.75	10.85	PASS
11N20MIMO	Ant2	5180	10.04	10.14	PASS
11N20MIMO	Ant1+2	5180	13.42	13.52	PASS
11N20MIMO	Ant1	5200	10.91	11	PASS
11N20MIMO	Ant2	5200	9.8	9.9	PASS
11N20MIMO	Ant1+2	5200	13.40	13.50	PASS
11N20MIMO	Ant1	5240	10.41	10.51	PASS
11N20MIMO	Ant2	5240	10.45	10.55	PASS
11N20MIMO	Ant1+2	5240	13.44	13.54	PASS
11N20MIMO	Ant1	5260	9.68	9.78	PASS
11N20MIMO	Ant2	5260	10.31	10.4	PASS
11N20MIMO	Ant1+2	5260	13.02	13.11	PASS
11N20MIMO	Ant1	5280	9.77	9.86	PASS
11N20MIMO	Ant2	5280	10.89	10.98	PASS
11N20MIMO	Ant1+2	5280	13.38	13.47	PASS
11N20MIMO	Ant1	5320	9.36	9.46	PASS
11N20MIMO	Ant2	5320	11.55	11.65	PASS
11N20MIMO	Ant1+2	5320	13.60	13.70	PASS
11N20MIMO	Ant1	5500	11.08	11.18	PASS
11N20MIMO	Ant2	5500	9.55	9.64	PASS
11N20MIMO	Ant 1+2	5500	13.39	13.49	PASS
11N20MIMO	Ant1	5580	9.68	9.78	PASS
11N20MIMO	Ant2	5580	10.91	11.01	PASS
11N20MIMO	Ant1+2	5580	13.35	13.45	PASS
11N20MIMO	Ant1	5700	9.63	9.73	PASS
11N20MIMO	Ant2	5700	10.93	11.02	PASS
11N20MIMO	Ant1+2	5700	13.34	13.43	PASS
11N20MIMO	Ant1	5745	10.51	10.61	PASS

11N20MIMO	Ant2	5745	10.65	10.74	PASS
11N20MIMO	Ant 1+2	5745	13.59	13.69	PASS
11N20MIMO	Ant1	5785	10.39	10.48	PASS
11N20MIMO	Ant2	5785	10.24	10.33	PASS
11N20MIMO	Ant1+2	5785	13.33	13.42	PASS
11N20MIMO	Ant1	5825	10.1	10.2	PASS
11N20MIMO	Ant2	5825	10.48	10.57	PASS
11N20MIMO	Ant1+2	5825	13.30	13.40	PASS
11N40MIMO	Ant1	5190	10.49	10.67	PASS
11N40MIMO	Ant2	5190	9.59	9.77	PASS
11N40MIMO	Ant1+2	5190	13.07	13.25	PASS
11N40MIMO	Ant1	5230	10.11	10.29	PASS
11N40MIMO	Ant2	5230	9.99	10.18	PASS
11N40MIMO	Ant1+2	5230	13.06	13.25	PASS
11N40MIMO	Ant1	5270	9.59	9.77	PASS
11N40MIMO	Ant2	5270	10.54	10.73	PASS
11N40MIMO	Ant1+2	5270	13.10	13.29	PASS
11N40MIMO	Ant1	5310	8.92	9.1	PASS
11N40MIMO	Ant2	5310	10.88	11.07	PASS
11N40MIMO	Ant1+2	5310	13.02	13.21	PASS
11N40MIMO	Ant1	5510	10.77	10.95	PASS
11N40MIMO	Ant2	5510	9.85	10.04	PASS
11N40MIMO	Ant1+2	5510	13.34	13.53	PASS
11N40MIMO	Ant1	5550	10.76	10.94	PASS
11N40MIMO	Ant2	5550	10.1	10.28	PASS
11N40MIMO	Ant1+2	5550	13.45	13.63	PASS
11N40MIMO	Ant1	5670	9.48	9.67	PASS
11N40MIMO	Ant2	5670	11.17	11.36	PASS
11N40MIMO	Ant1+2	5670	13.42	13.61	PASS
11N40MIMO	Ant1	5755	10.36	10.54	PASS

11N40MIMO	Ant2	5755	10.39	10.58	PASS
11N40MIMO	Ant1+2	5755	13.39	13.57	PASS
11N40MIMO	Ant1	5795	10.22	10.4	PASS
11N40MIMO	Ant2	5795	10.38	10.57	PASS
11N40MIMO	Ant1+2	5795	13.31	13.50	PASS

Test Mode	Antenna	Channel	Meas.Level [dBm]	Av.Power [dBm]	Verdict
11AC20MIMO	Ant1	5180	10.52	10.62	PASS
11AC20MIMO	Ant2	5180	9.94	10.04	PASS
11AC20MIMO	Ant 1+2	5180	13.25	13.35	PASS
11AC20MIMO	Ant1	5200	10.62	10.72	PASS
11AC20MIMO	Ant2	5200	9.82	9.92	PASS
11AC20MIMO	Ant 1+2	5200	13.25	13.35	PASS
11AC20MIMO	Ant1	5240	10.16	10.25	PASS
11AC20MIMO	Ant2	5240	10.25	10.35	PASS
11AC20MIMO	Ant 1+2	5240	13.22	13.31	PASS
11AC20MIMO	Ant1	5260	9.53	9.63	PASS
11AC20MIMO	Ant2	5260	10.43	10.52	PASS
11AC20MIMO	Ant1+2	5260	13.01	13.11	PASS
11AC20MIMO	Ant1	5280	9.19	9.28	PASS
11AC20MIMO	Ant2	5280	10.37	10.47	PASS
11AC20MIMO	Ant1+2	5280	12.83	12.93	PASS
11AC20MIMO	Ant1	5320	9.21	9.31	PASS
11AC20MIMO	Ant2	5320	11.47	11.56	PASS
11AC20MIMO	Ant1+2	5320	13.50	13.59	PASS
11AC20MIMO	Ant1	5500	10.9	10.99	PASS
11AC20MIMO	Ant2	5500	9.54	9.64	PASS
11AC20MIMO	Ant 1+2	5500	13.28	13.38	PASS
11AC20MIMO	Ant1	5580	9.83	9.93	PASS
11AC20MIMO	Ant2	5580	10.87	10.97	PASS
11AC20MIMO	Ant1+2	5580	13.39	13.49	PASS
11AC20MIMO	Ant1	5700	9.59	9.68	PASS
11AC20MIMO	Ant2	5700	10.86	10.95	PASS
11AC20MIMO	Ant1+2	5700	13.28	13.37	PASS
11AC20MIMO	Ant1	5745	10.32	10.41	PASS

11AC20MIMO	Ant2	5745	9.58	9.68	PASS
11AC20MIMO	Ant 1+2	5745	12.98	13.07	PASS
11AC20MIMO	Ant1	5785	9.73	9.83	PASS
11AC20MIMO	Ant2	5785	10.04	10.14	PASS
11AC20MIMO	Ant 1+2	5785	12.90	13.00	PASS
11AC20MIMO	Ant1	5825	9.44	9.54	PASS
11AC20MIMO	Ant2	5825	9.81	9.9	PASS
11AC20MIMO	Ant 1+2	5825	12.64	12.73	PASS
11AC40MIMO	Ant1	5190	10.51	10.69	PASS
11AC40MIMO	Ant2	5190	9.82	10	PASS
11AC40MIMO	Ant 1+2	5190	13.19	13.37	PASS
11AC40MIMO	Ant1	5230	10.28	10.46	PASS
11AC40MIMO	Ant2	5230	10.22	10.41	PASS
11AC40MIMO	Ant 1+2	5230	13.26	13.45	PASS
11AC40MIMO	Ant1	5270	9.45	9.63	PASS
11AC40MIMO	Ant2	5270	10.56	10.74	PASS
11AC40MIMO	Ant1+2	5270	13.05	13.23	PASS
11AC40MIMO	Ant1	5310	8.94	9.13	PASS
11AC40MIMO	Ant2	5310	11.1	11.28	PASS
11AC40MIMO	Ant1+2	5310	13.16	13.35	PASS
11AC40MIMO	Ant1	5510	11.03	11.21	PASS
11AC40MIMO	Ant2	5510	10.03	10.21	PASS
11AC40MIMO	Ant1+2	5510	13.57	13.75	PASS
11AC40MIMO	Ant1	5550	10.74	10.92	PASS
11AC40MIMO	Ant2	5550	10.25	10.43	PASS
11AC40MIMO	Ant1+2	5550	13.51	13.69	PASS
11AC40MIMO	Ant1	5670	9.6	9.79	PASS
11AC40MIMO	Ant2	5670	11.27	11.45	PASS
11AC40MIMO	Ant1+2	5670	13.53	13.71	PASS
11AC40MIMO	Ant1	5755	10.48	10.67	PASS

11AC40MIMO	Ant2	5755	10.41	10.59	PASS
11AC40MIMO	Ant 1+2	5755	13.46	13.64	PASS
11AC40MIMO	Ant1	5795	10.59	10.77	PASS
11AC40MIMO	Ant2	5795	10.91	11.09	PASS
11AC40MIMO	Ant 1+2	5795	13.76	13.94	PASS
11AC80MIMO	Ant1	5210	6.83	7.20	PASS
11AC80MIMO	Ant2	5210	5.85	6.22	PASS
11AC80MIMO	Ant 1+2	5210	9.38	9.75	PASS
11AC80MIMO	Ant1	5290	4.18	4.55	PASS
11AC80MIMO	Ant2	5290	4.99	5.38	PASS
11AC80MIMO	Ant 1+2	5290	7.61	8.00	PASS
11AC80MIMO	Ant1	5530	3.09	3.46	PASS
11AC80MIMO	Ant2	5530	2.44	2.81	PASS
11AC80MIMO	Ant 1+2	5530	5.79	6.16	PASS
11AC80MIMO	Ant1	5775	4.28	4.67	PASS
11AC80MIMO	Ant2	5775	5.14	5.51	PASS
11AC80MIMO	Ant 1+2	5775	7.74	8.12	PASS

Remark: Duty Factor(dB) = $10 * \text{Log}(1/\text{Duty Cycle})$
 Av. Power(dBm) = Meas. Level(dBm) + Duty Factor(dB)

Test Graph

