

TEST REPORT

Product : Grid Pad 15
Trade mark : Smartbox
Model/Type reference : GP15A
Serial Number : N/A
Report Number : EED32M00138904
FCC ID : 2APXM-GP15A
Date of Issue : Aug.10, 2020
Test Standards : 47 CFR Part 15 Subpart E
Test result : PASS

Prepared for:

Smartbox Assistive Technology Limited
Ysobel House, Enigma Commercial Centre,
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Prepared by:

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Date:

Aug.10, 2020



Check No.:3096327781

2 Version

Version No.	Date	Description
00	Aug.10, 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	N/A
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

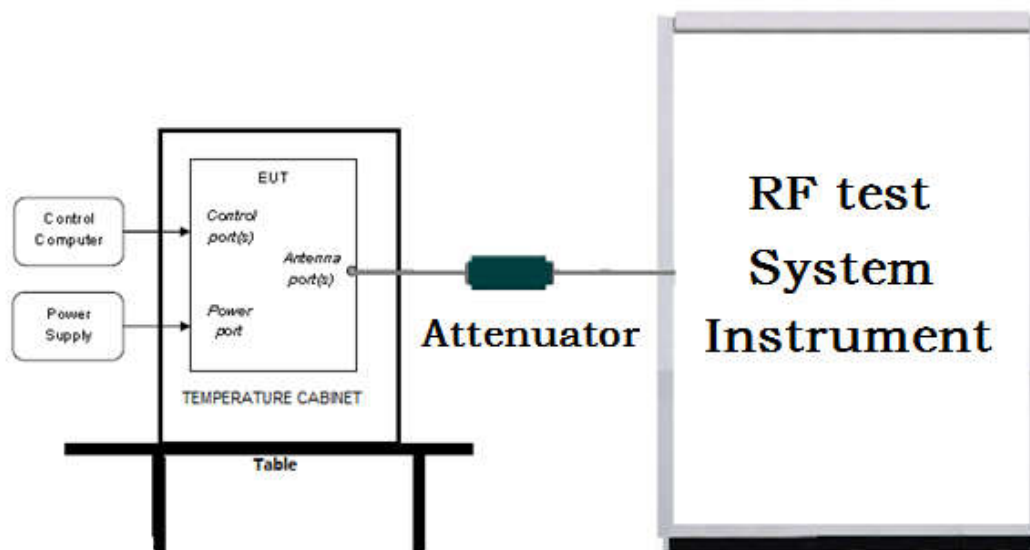
4 Content

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.....	6
5.2 TEST ENVIRONMENT.....	6
5.3 TEST CONDITION.....	7
6 GENERAL INFORMATION.....	8
6.1 CLIENT INFORMATION.....	8
6.2 GENERAL DESCRIPTION OF EUT.....	8
6.3 PRODUCT SPECIFICATION SUBJECTIVE TO THIS STANDARD.....	9
6.4 DESCRIPTION OF SUPPORT UNITS.....	13
6.5 TEST LOCATION.....	13
6.6 DEVIATION FROM STANDARDS.....	13
6.7 ABNORMALITIES FROM STANDARD CONDITIONS.....	13
6.8 OTHER INFORMATION REQUESTED BY THE CUSTOMER.....	13
6.9 MEASUREMENT UNCERTAINTY (95% CONFIDENCE LEVELS, K=2).....	13
7 EQUIPMENT LIST.....	14
8 RADIO TECHNICAL REQUIREMENTS SPECIFICATION.....	17
Appendix A):DUTY CYCLE.....	18
Appendix B): Emission Bandwidth.....	36
Appendix C): Maximum Conduct Output Power.....	69
Appendix D): Power Spectral Density.....	112
Appendix E): Band Edge Measurements.....	141
Appendix F): Frequency Stability.....	155
Appendix G) Antenna Requirement.....	175
Appendix H) AC Power Line Conducted Emission.....	176
Appendix I) Restricted bands around fundamental frequency (Radiated Emission).....	179
Appendix J) Unwanted Emissions in the Restricted Bands (Radiated Emission).....	268
Appendix K) Unwanted Emissions that fall Outside of the Restricted Bands.....	350
Appendix L) Dynamic Frequency Selection.....	423
PHOTOGRAPHS OF TEST SETUP.....	435
PHOTOGRAPHS OF EUT CONSTRUCTIONAL DETAILS.....	438

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:

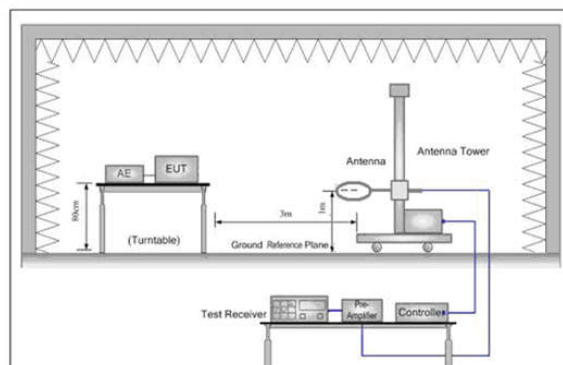


Figure 1. Below 30MHz

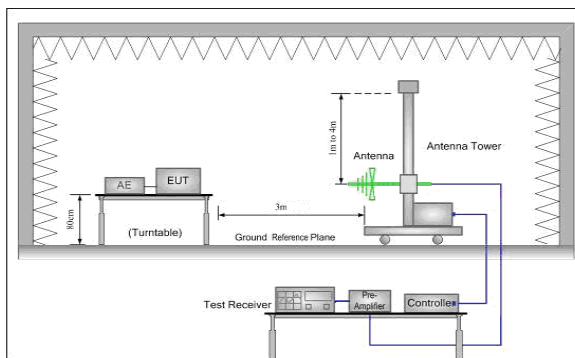


Figure 2. 30MHz to 1GHz

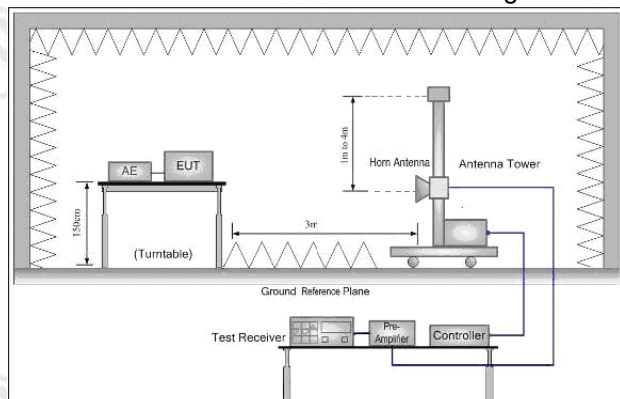
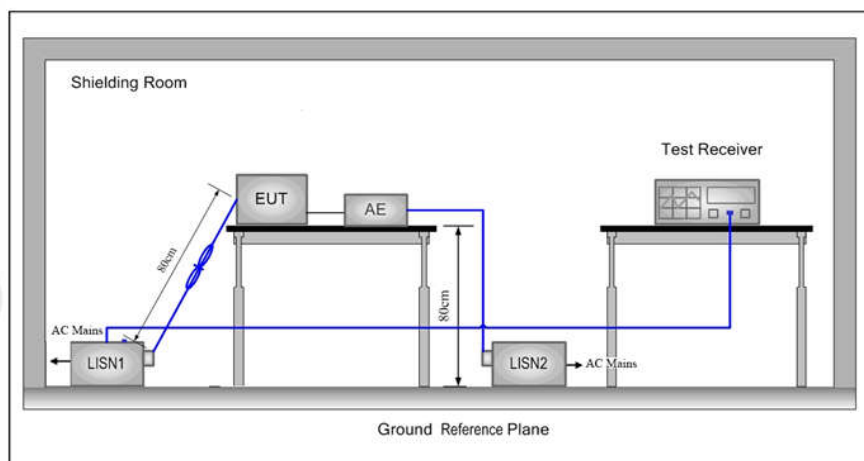


Figure 3. Above 1GHz

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
		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
		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)	5725MHz ~5850 MHz	Channel 155	N/A	N/A
		5775MHz	N/A	N/A

6 General Information

6.1 Client Information

Applicant:	Smartbox Assistive Technology Limited
Address of Applicant:	Ysobel House, Enigma Commercial Centre, Sandys Road, Malvern, Worcestershire, UK WR14 1JJ
Manufacturer:	Smartbox Assistive Technology Limited
Address of Manufacturer:	Ysobel House, Enigma Commercial Centre, Sandys Road, Malvern, Worcestershire, UK WR14 1JJ
Factory:	Estone Technology LTD
Address of Factory:	2F, Building No.1, Jia'an Industrial Park, No.2 Long Chang Road, Bao'an, Shenzhen 518101, China.

6.2 General Description of EUT

Product Name:	Grid Pad 15	
Model No.(EUT):	GP15A	
Trade Mark:	Smartbox	
EUT Supports Radios application:	U-NII-1: 5.15-5.25GHz; U-NII-2A: 5.25-5.35GHz; U-NII-3: 5.725-5.850GHz	
Power Supply:	AC Adapter	MODEL:MANGO40S-12BB-ES INPUT:100-240V~,50/60Hz ,1.0A Max OUTPUT:12V---3.33A
	Battery	Model:5080115P Capacity:10000mAh/74Wh Nominal Voltage:7.4V--- Limited Charge Voltage:8.4V---
Sample Received Date:	May. 22, 2020	
Sample tested Date:	May. 22, 2020 to Jul. 17, 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 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) 5755MHz ~5795 MHz IEEE802.11ac(HT80) 5210 IEEE802.11ac(HT80) 5290 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 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) 5755MHz ~5795 MHz / 2 channel IEEE802.11ac(HT80) 5210 / 1 channel IEEE802.11ac(HT80) 5290 / 1 channel IEEE802.11ac(HT80) 5775 / 1 channel
Type of Modulation:	DSSS,OFDM
Test Power Grade:	Reference Table 1
Test Software of EUT:	DRTU
Antenna Type and Gain:	PCB antenna, Gain: 1.95 dBi
Test Voltage:	Battery 7.4V

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 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 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 5775 MHz band					
Channel	Frequency	Channel	Frequency	Channel	Frequency
155	5775MHz	N/A	N/A	N/A	N/A

Table 1:

Power Setting-1TX					
Mode	Channel	Frequency	Data Rate	Power Setting	
				chain0	chain1
IEEE 802.11a	36	5180	6Mbps	14.25	14.5
	40	5200		14.25	14.5
	48	5240		15	14.75
IEEE 802.11n 20MHz	36	5180	MCS0	14.5	14.5
	40	5200		14.5	14.5
	48	5240		14.75	14.5
IEEE 802.11n 40MHz	38	5190	MCS0	14.5	14
	46	5230		14.5	14
IEEE 802.11ac 20MHz	36	5180	MCS0	14.5	14.5
	40	5200		14.5	14.5
	48	5240		14.75	14.5
IEEE 802.11ac 40MHz	38	5190	MCS0	14.5	14
	46	5230		14.5	14
IEEE 802.11ac 80MHz	42	5210	MCS0	18	18
IEEE 802.11a	52	5260	6Mbps	14.5	14.75
	56	5280		14.5	14.25
	64	5320		14.5	14.25
IEEE 802.11n 20MHz	52	5260	MCS0	14.75	15
	56	5280		14.75	14.5
	64	5320		14.5	14.25
IEEE 802.11n 40MHz	54	5270	MCS0	14.5	14
	62	5310		14.5	13.5
IEEE 802.11ac 20MHz	52	5260	MCS0	14.75	15
	56	5280		14.75	14.5
	64	5320		14.5	14.25
IEEE 802.11ac 40MHz	54	5270	MCS0	14.5	14
	62	5310		14.5	13.5
IEEE 802.11ac 80MHz	58	5290	MCS0	18	18
IEEE 802.11a	149	5745	6Mbps	13.75	13.75
	157	5785		13.75	13.75
	165	5825		14	13.75
IEEE 802.11n 20MHz	149	5745	MCS0	14	14
	157	5785		13.5	14
	165	5825		14.25	13.5
IEEE 802.11n 40MHz	151	5755	MCS0	14.5	13.5
	159	5795		14.5	13.5
IEEE 802.11ac 20MHz	149	5745	MCS0	14	14
	157	5785		13.5	14
	165	5825		14.25	13.5

IEEE 802.11ac 40MHz	151	5755	MCS0	14.5	13.5
	159	5795		14.5	13.5
IEEE 802.11ac 80MHz	155	5775	MCS0	18	18
Power Setting-MIMO					
Mode	Channel	Frequency	Data Rate	Power Setting	
				chain0	chain1
IEEE 802.11n 20MHz	36	5180	MCS8	11.5	11.5
	40	5200		11.25	11.25
	48	5240		11.25	11.25
IEEE 802.11n 40MHz	38	5190	MCS8	12	12
	46	5230		12	12
IEEE 802.11ac 20MHz	36	5180	MCS0	11.5	11.5
	40	5200		11.25	11.25
	48	5240		11.25	11.25
IEEE 802.11ac 40MHz	38	5190	MCS0	12	12
	46	5230		12	12
IEEE 802.11ac 80MHz	42	5210	MCS0	14	14
IEEE 802.11n 20MHz	52	5260	MCS0	11.25	11.25
	56	5280		11.25	11.25
	64	5320		11	11
IEEE 802.11n 40MHz	54	5270	MCS0	12	12
	62	5310		11.5	11.5
IEEE 802.11ac 20MHz	52	5260	MCS0	11.25	11.25
	56	5280		11.25	11.25
	64	5320		11	11
IEEE 802.11ac 40MHz	54	5270	MCS0	12	12
	62	5310		11.5	11.5
IEEE 802.11ac 80MHz	58	5290	MCS0	15	13.5
IEEE 802.11n 20MHz	149	5745	MCS0	10.75	10.75
	157	5785		11	11
	165	5825		11	11
IEEE 802.11n 40MHz	151	5755	MCS0	10.75	10.75
	159	5795		10.75	10.75
IEEE 802.11ac 20MHz	149	5745	MCS0	10.75	10.75
	157	5785		11	11
	165	5825		11	11
IEEE 802.11ac 40MHz	151	5755	MCS0	10.75	10.75
	159	5795		10.75	10.75
IEEE 802.11ac 80MHz	155	5775	MCS0	13.75	13.5

6.4 Description of Support Units

The EUT has been tested with associated equipment below

Associated equipment name		Manufacture	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	04-28-2020	04-27-2021
Temperature/ Humidity Indicator	Defu	TH128	/	---	---
LISN	R&S	ENV216	100098	03-05-2020	03-04-2021
Barometer	changchun	DYM3	1188	---	---

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
TRILOG 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	maturo	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
TRILOG 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	05-20-2020	05-19-2021
Preamplifier	EMCI	EMC001330	980563	04-22-2020	04-21-2021
Preamplifier	JS Tonscend	980380	EMC051845 SE	01-09-2020	01-08-2021
Temperature/ Humidity Indicator	biaozhi	GM1360	EE1186631	04-27-2020	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:

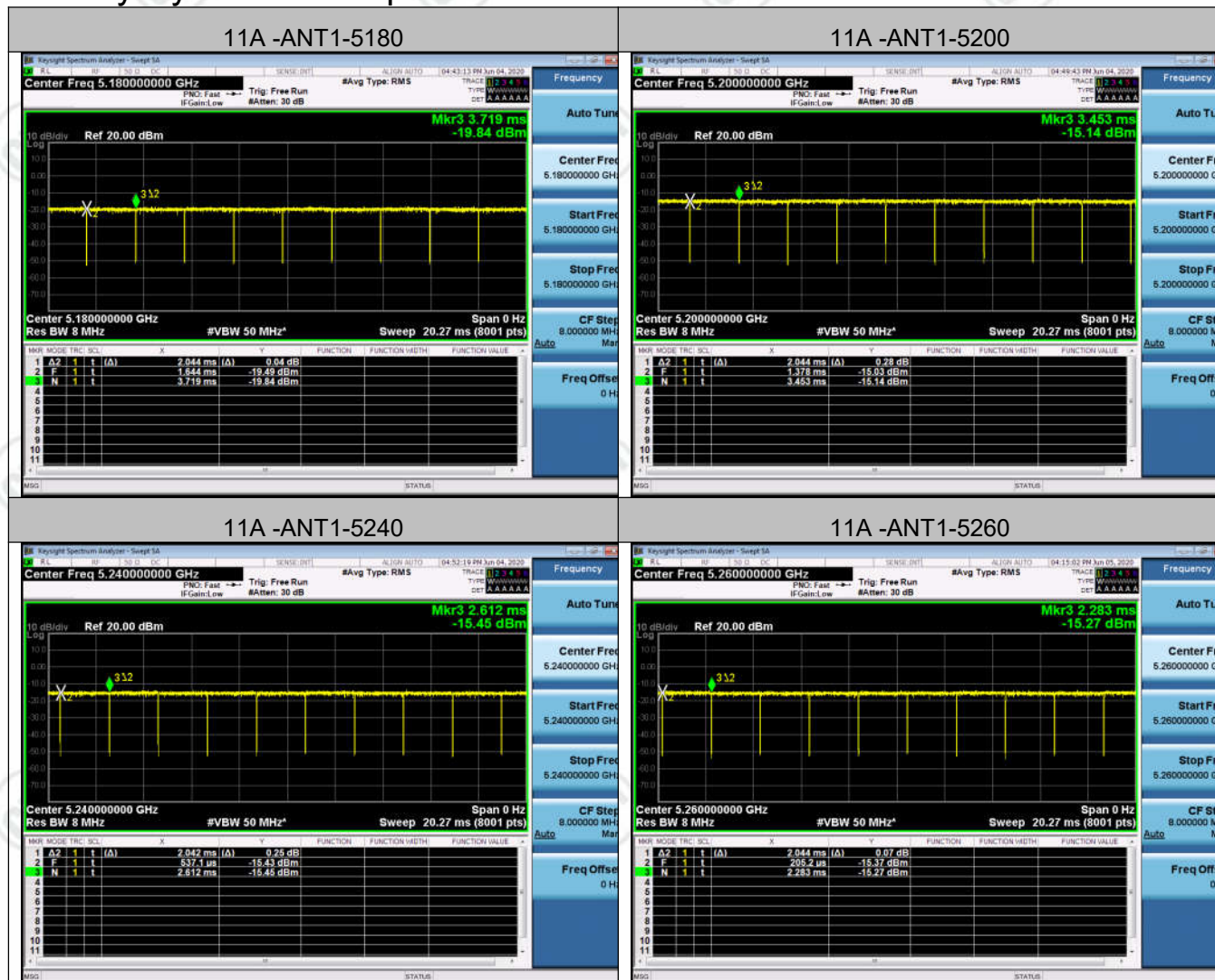
Test Requirement	Test method	Test item	Verdict	Note
Part15E Section 15.407 (a)(6)	ANSI C63.10-2013	Duty Cycle	PASS	Appendix A)
Part15E Section 15.407 (a)(1)(2)	KDB789033 D02v01	26dB Occupied Bandwidth	PASS	Appendix B)
Part15E Section 15.407 (a)(1)(2)(4)(h)(1)	KDB789033 D02v01	Conducted Output Power and transmit power control mechanism	PASS	Appendix C)
Part15E Section 15.407 (a)(1)(2)(5)	KDB789033 D02v01	Power Spectral Density	PASS	Appendix D)
47 CFR Part 15 Subpart E Section 15.407(b)(1)to(6)	ANSI C63.10-2013	Conducted Band-edge Measurements	PASS	Appendix E)
Part15E Section 15.407 (g)	KDB789033 D02v01	Frequency stability	PASS	Appendix F)
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	N/A
Part15E Section 15.407 (b)(6)	ANSI C63.10	AC Power Line Conducted Emission	PASS	Appendix H)
Part15E Section 15.407 (b)(6)(7)(8)	KDB789033 D02v01	Restricted bands around fundamental frequency (Radiated Emission)	PASS	Appendix I)
Part15E Section 15.407 (b)(6)(7)(8)	KDB789033 D02v01	Unwanted Emissions in the Restricted Bands	PASS	Appendix J)
Part15E Section 15.407 (b)(1)(2)(3)(5)	KDB789033 D02v01	Unwanted Emissions that fall Outside of the Restricted Bands	PASS	Appendix K)
47 CFR Part 15 Subpart E Section 15.407 (h)	KDB905462 D02	Dynamic Frequency Selection	PASS	Appendix L)

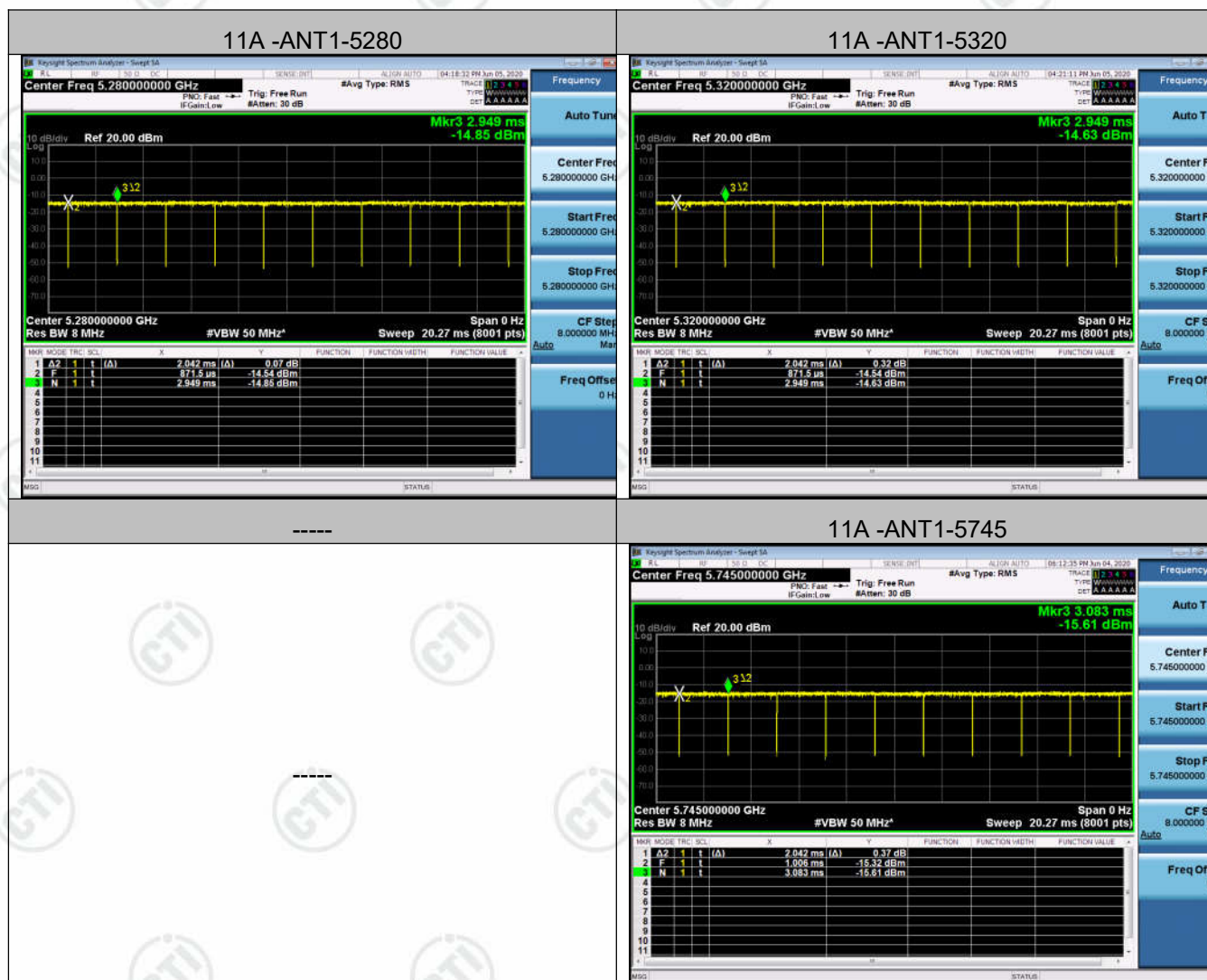
Appendix A):DUTY CYCLE

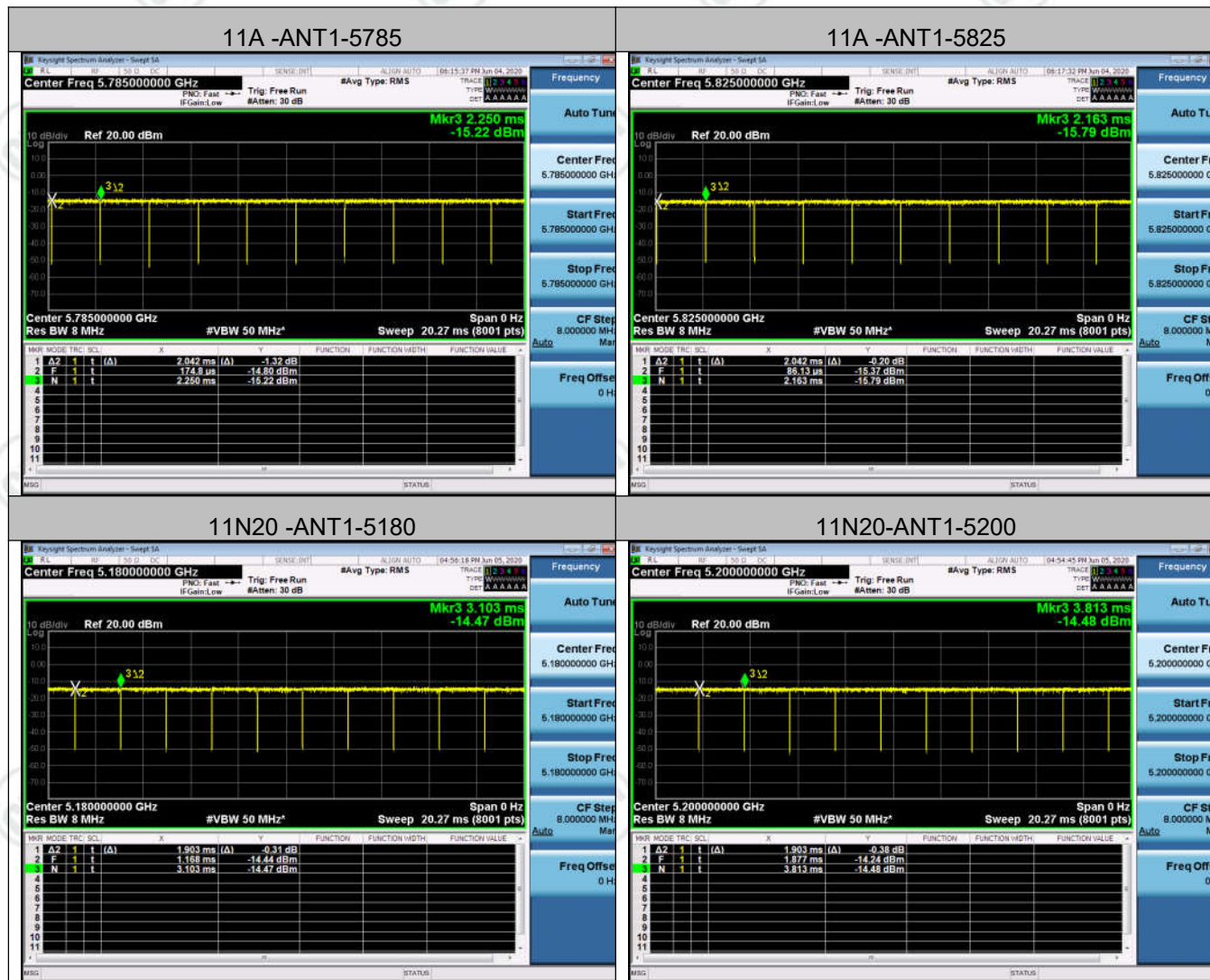
ANT1			
Test Mode	Channel	Duty Cycle[%]	Verdict
11A	5180	98.53	PASS
11A	5200	98.53	PASS
11A	5240	98.41	PASS
11A	5260	98.41	PASS
11A	5280	98.29	PASS
11A	5320	98.29	PASS
11A	5745	98.29	PASS
11A	5785	98.41	PASS
11A	5825	98.29	PASS
11N20SISO	5180	98.3	PASS
11N20SISO	5200	98.3	PASS
11N20SISO	5240	98.43	PASS
11N20SISO	5260	98.3	PASS
11N20SISO	5280	98.3	PASS
11N20SISO	5320	98.3	PASS
11N20SISO	5745	98.3	PASS
11N20SISO	5785	98.3	PASS
11N20SISO	5825	98.3	PASS
11N40SISO	5190	96.58	PASS
11N40SISO	5230	96.58	PASS
11N40SISO	5270	96.58	PASS
11N40SISO	5310	96.59	PASS
11N40SISO	5755	96.58	PASS
11N40SISO	5795	96.58	PASS
11AC80SISO	5210	93.26	PASS
11AC80SISO	5290	93.26	PASS
11AC80SISO	5775	93.26	PASS

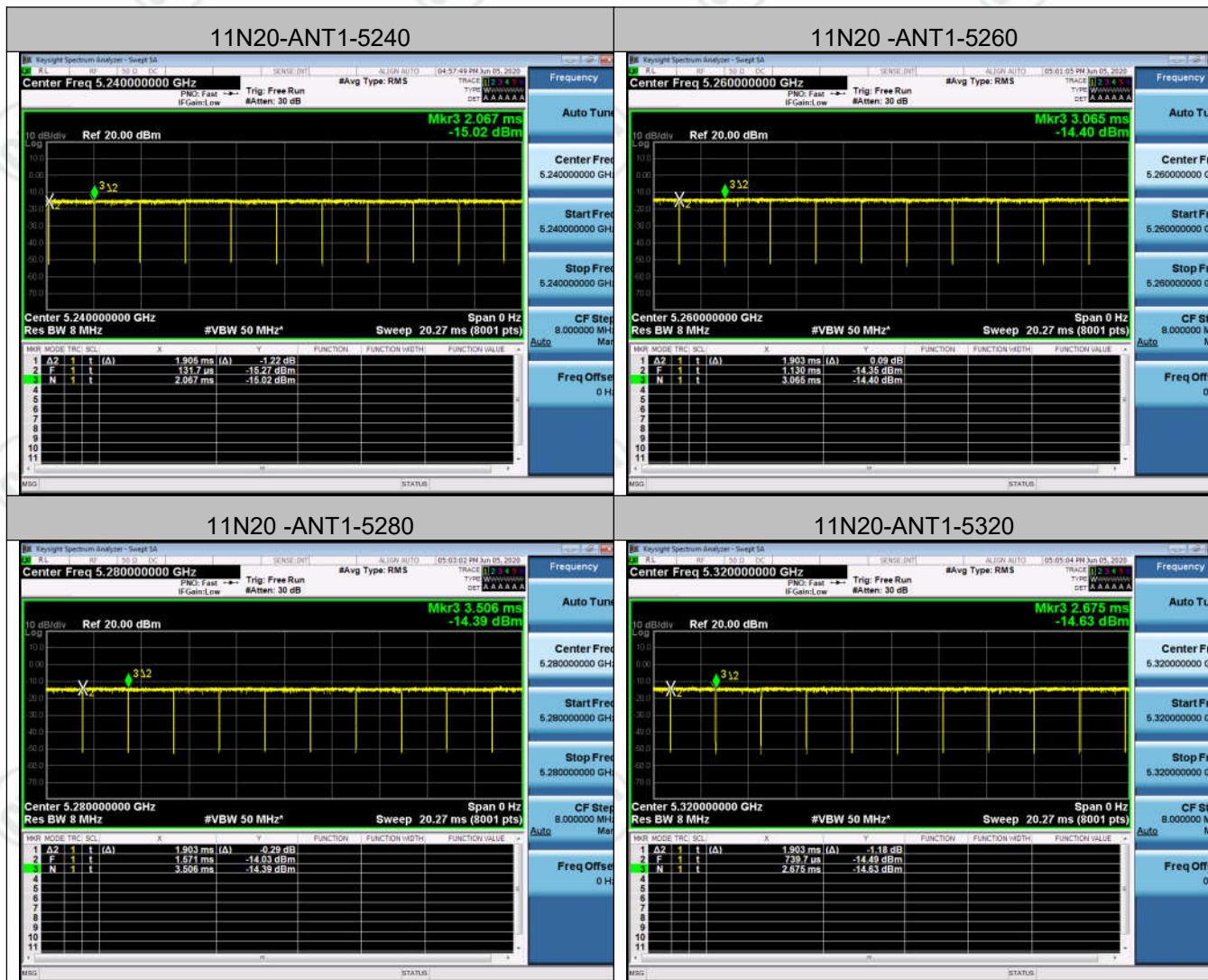
ANT2			
Test Mode	Channel	Duty Cycle[%]	Verdict
11A	5180	98.41	PASS
11A	5200	98.41	PASS
11A	5240	98.29	PASS
11A	5260	98.29	PASS
11A	5280	98.41	PASS
11A	5320	98.41	PASS
11A	5745	98.41	PASS
11A	5785	98.29	PASS
11A	5825	98.41	PASS
11N20SISO	5180	98.3	PASS
11N20SISO	5200	98.43	PASS
11N20SISO	5240	98.3	PASS
11N20SISO	5260	98.3	PASS
11N20SISO	5280	98.3	PASS
11N20SISO	5320	98.3	PASS
11N20SISO	5745	98.3	PASS
11N20SISO	5785	98.3	PASS
11N20SISO	5825	98.3	PASS
11N40SISO	5190	96.58	PASS
11N40SISO	5230	96.84	PASS
11N40SISO	5270	96.58	PASS
11N40SISO	5310	96.59	PASS
11N40SISO	5755	96.58	PASS
11N40SISO	5795	96.58	PASS
11AC80SISO	5210	93.26	PASS
11AC80SISO	5290	93.23	PASS
11AC80SISO	5775	93.26	PASS

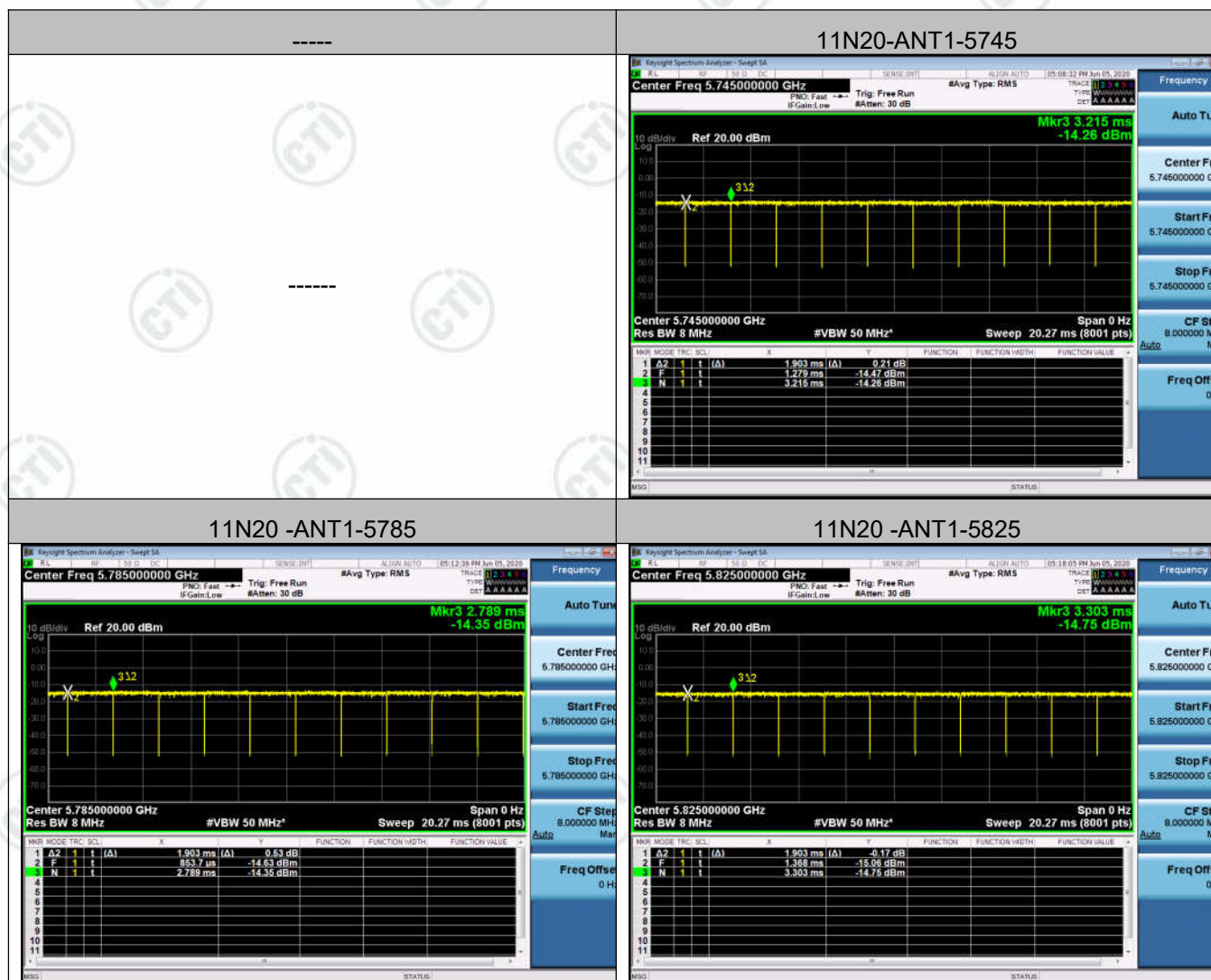
Duty Cycle Test Graph

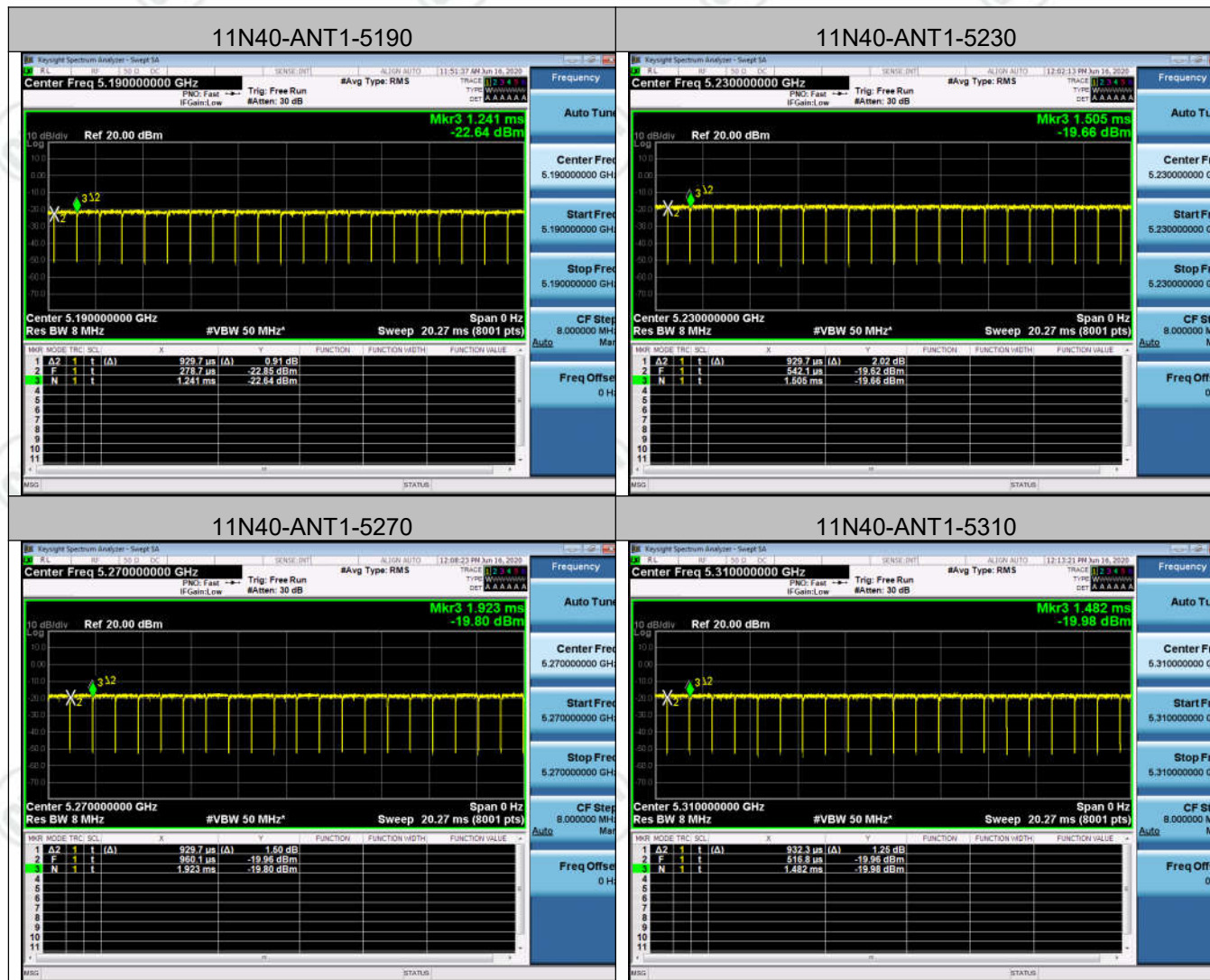




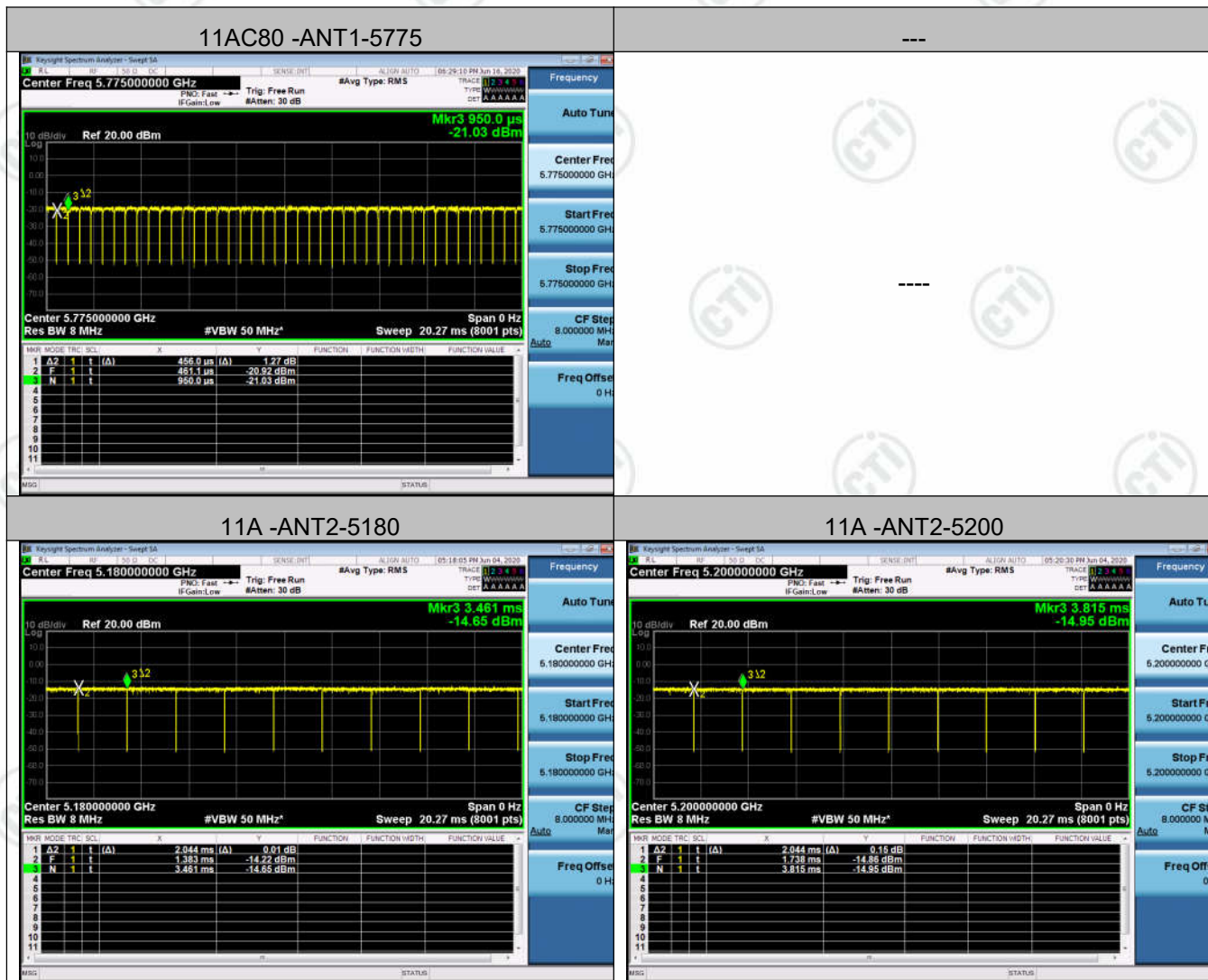


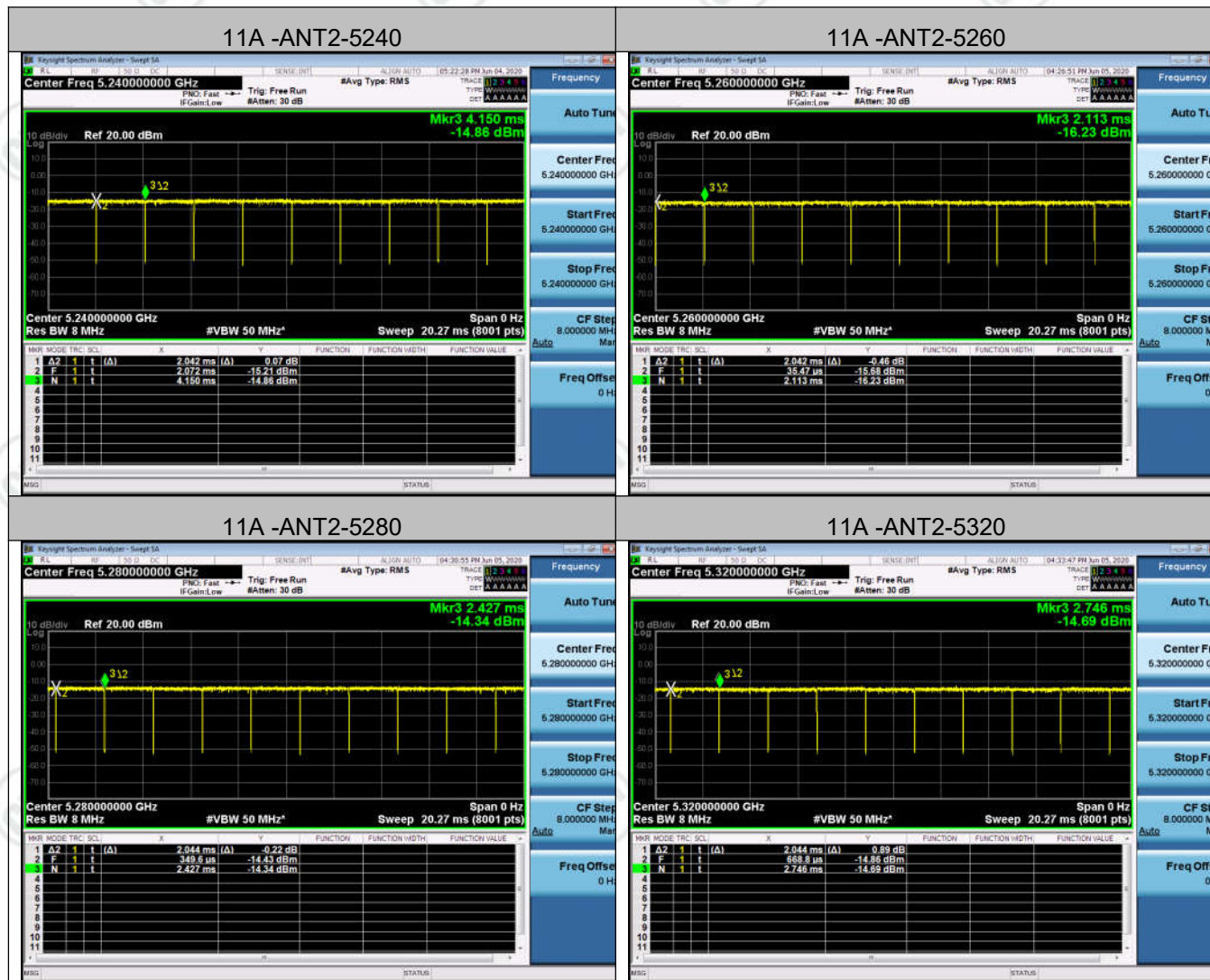


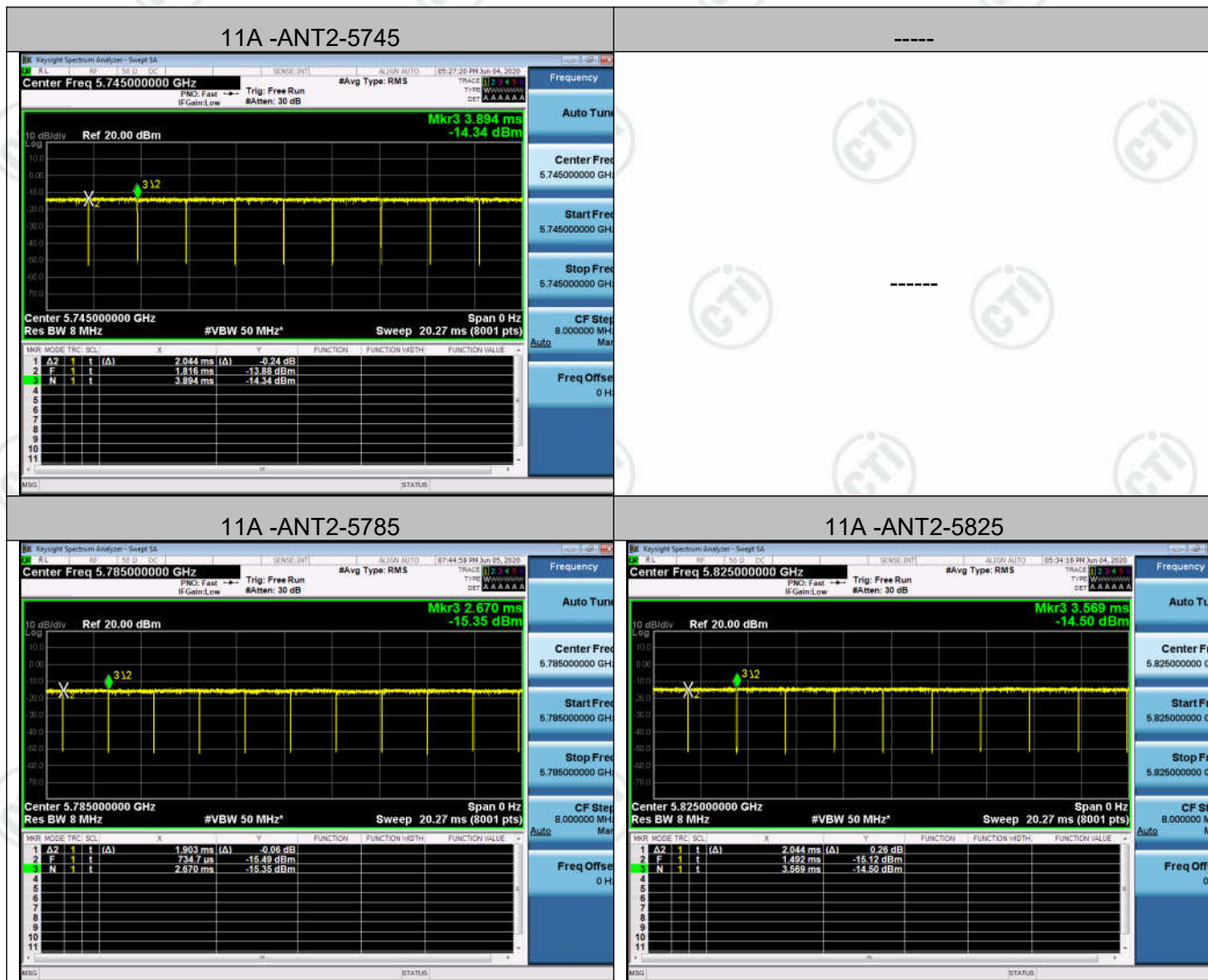


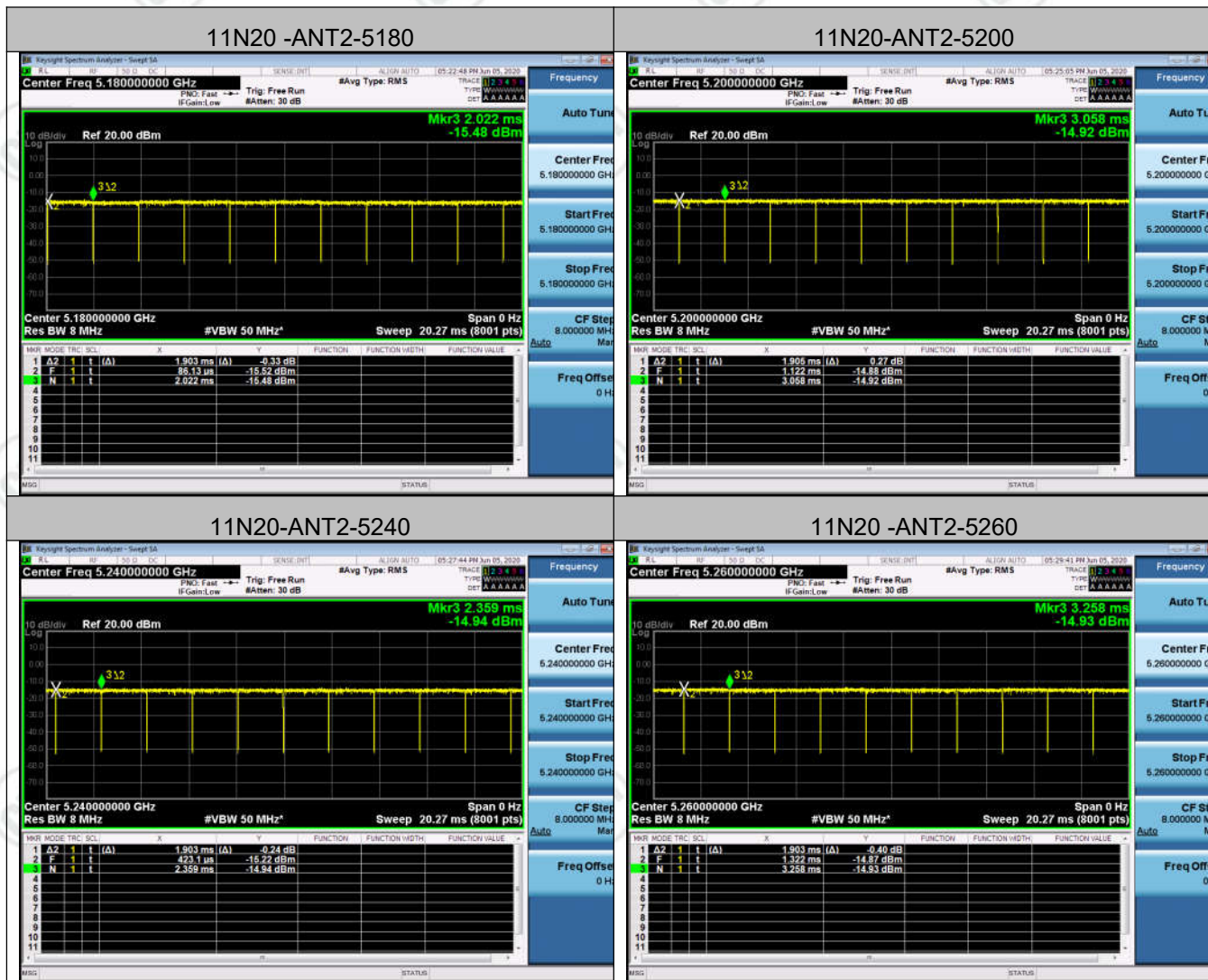


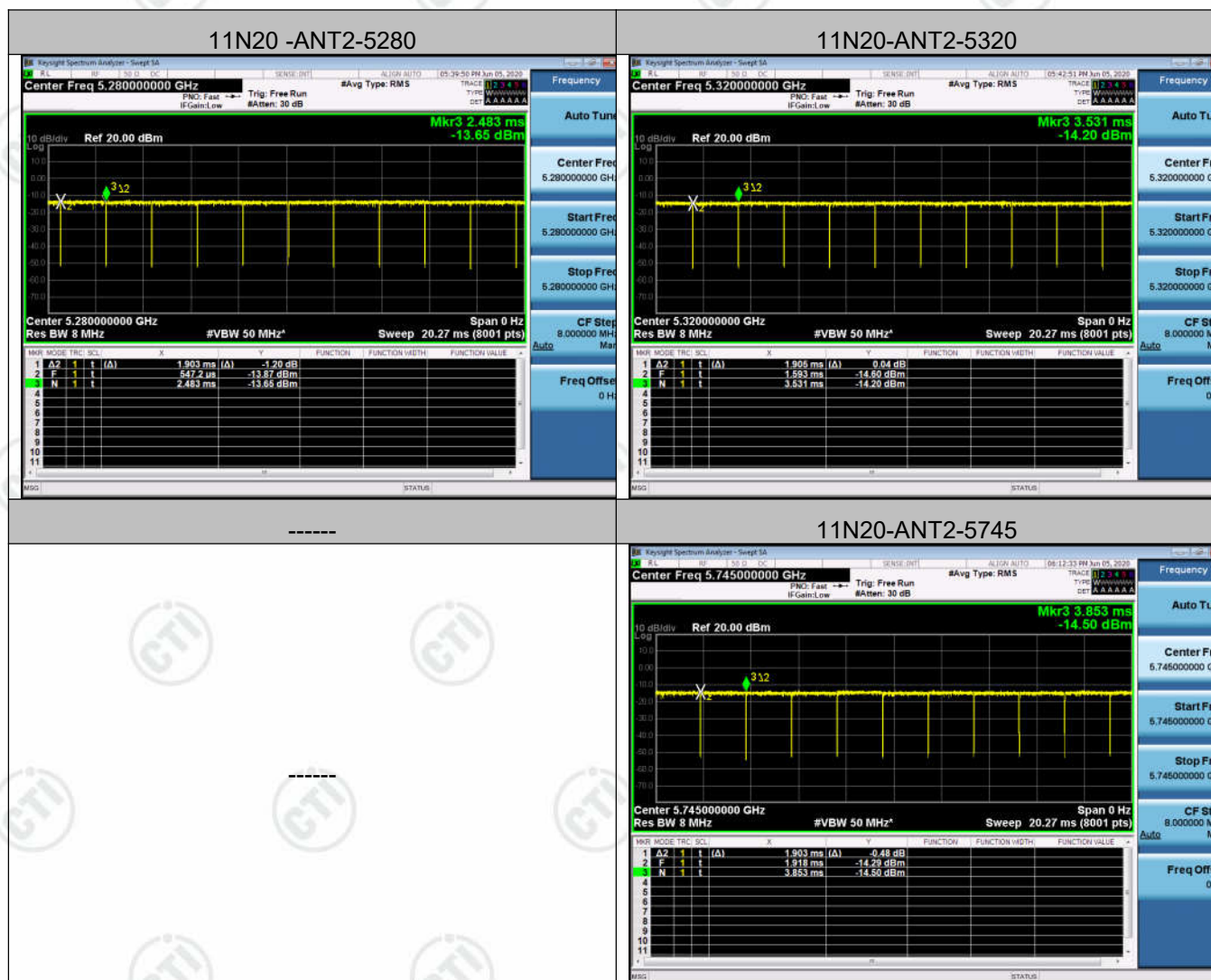


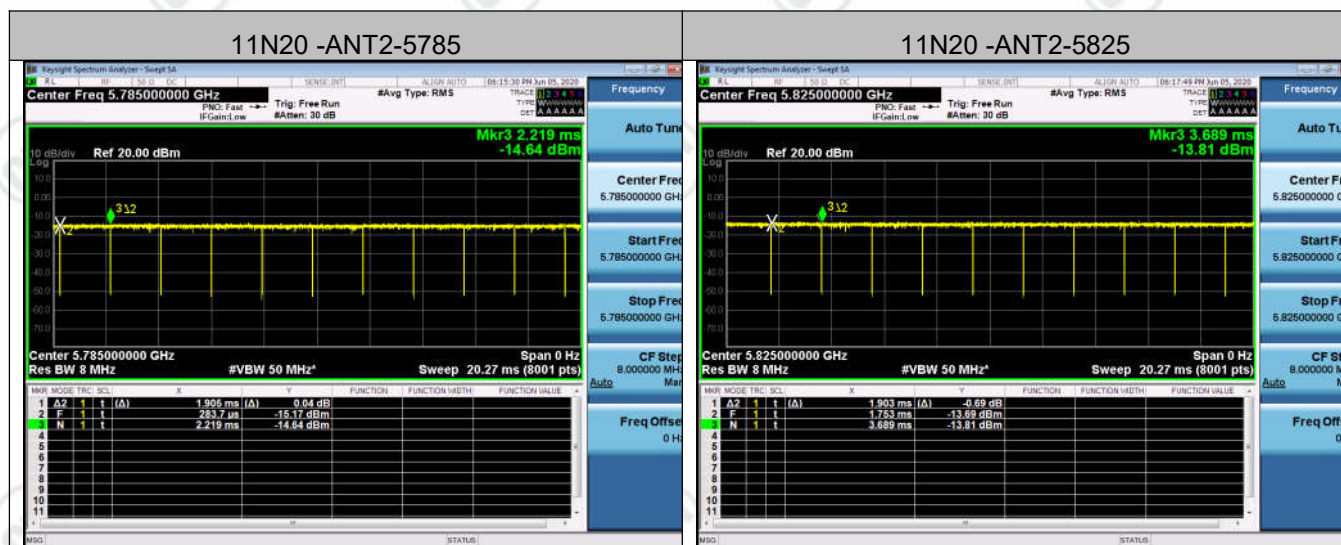


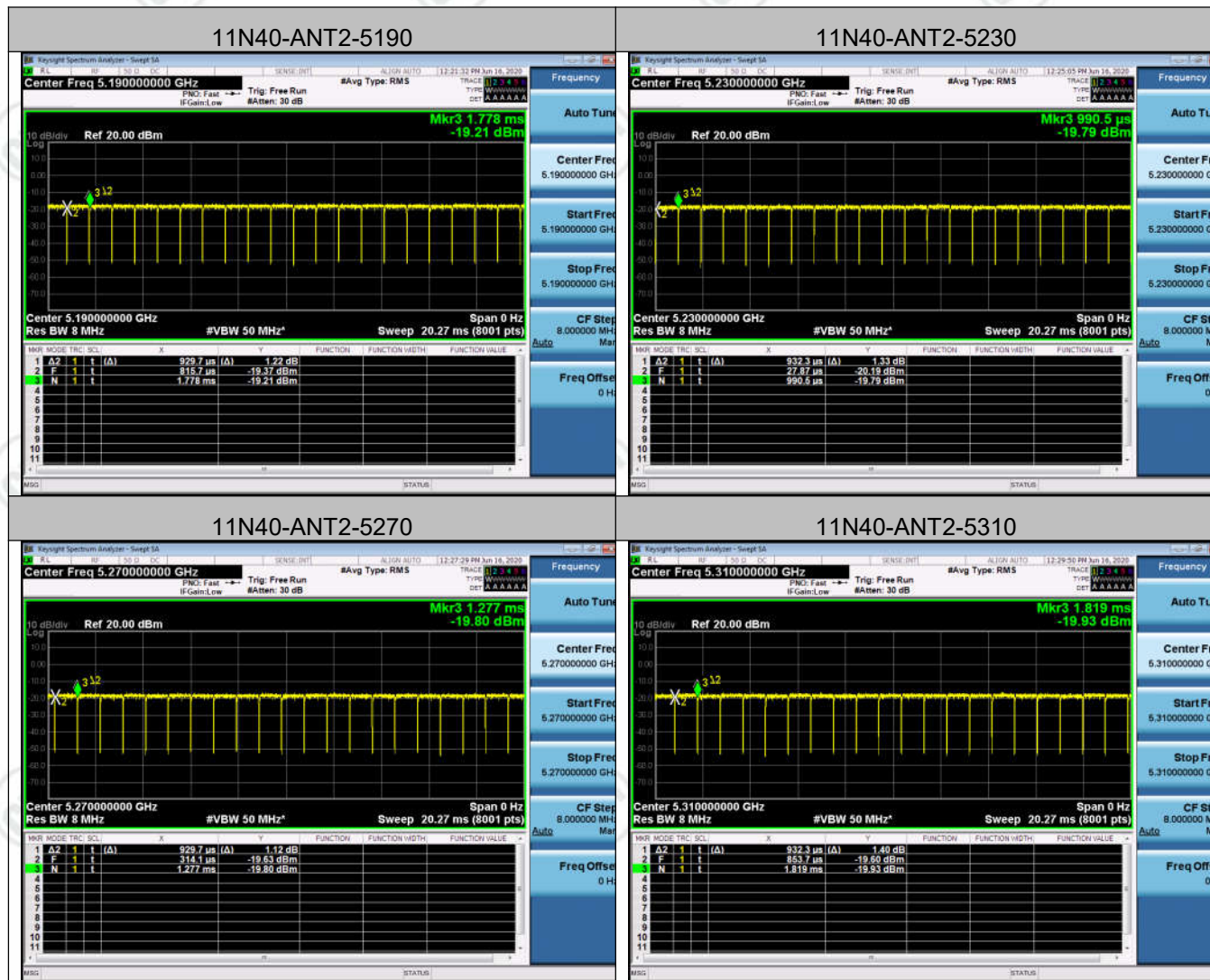


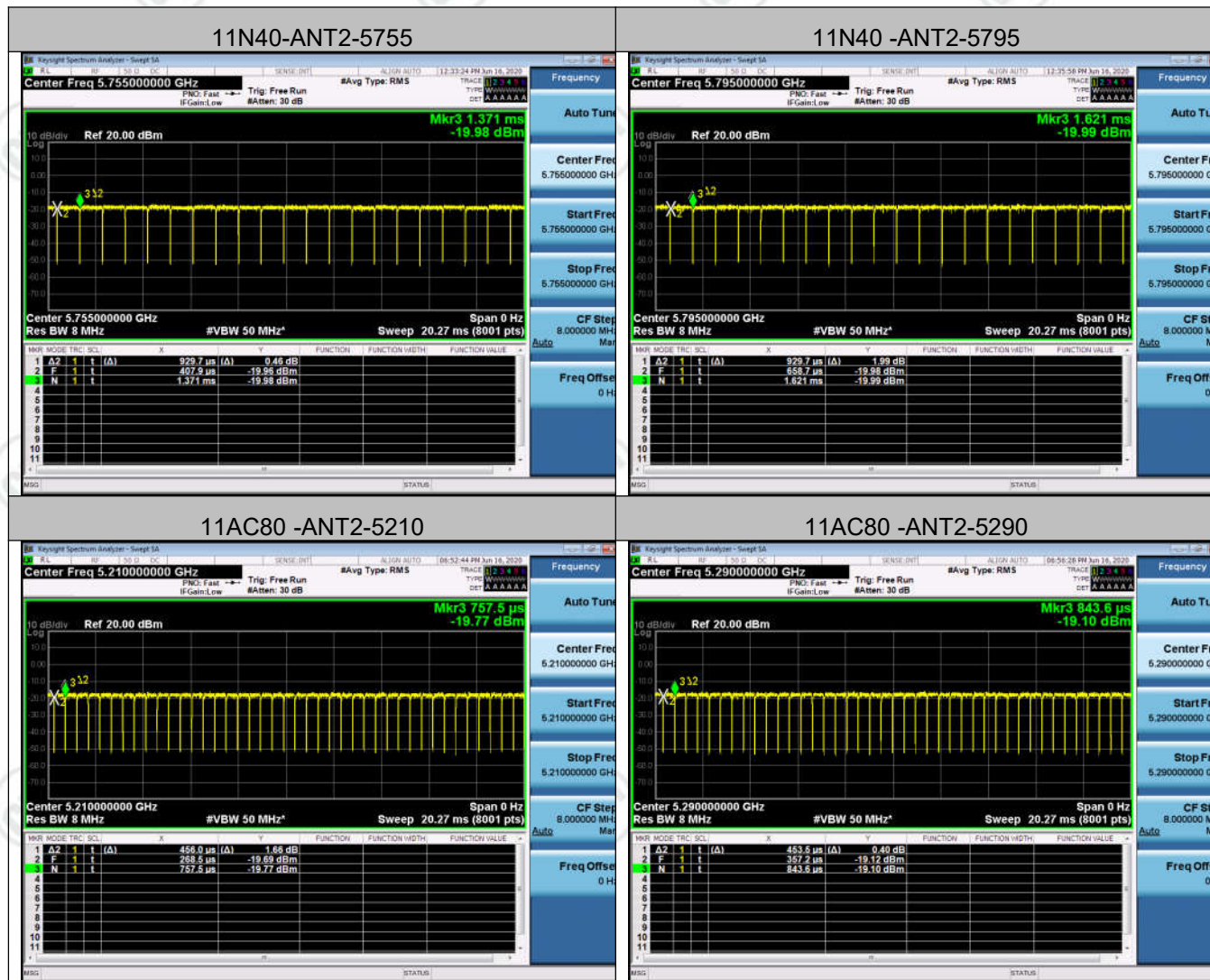


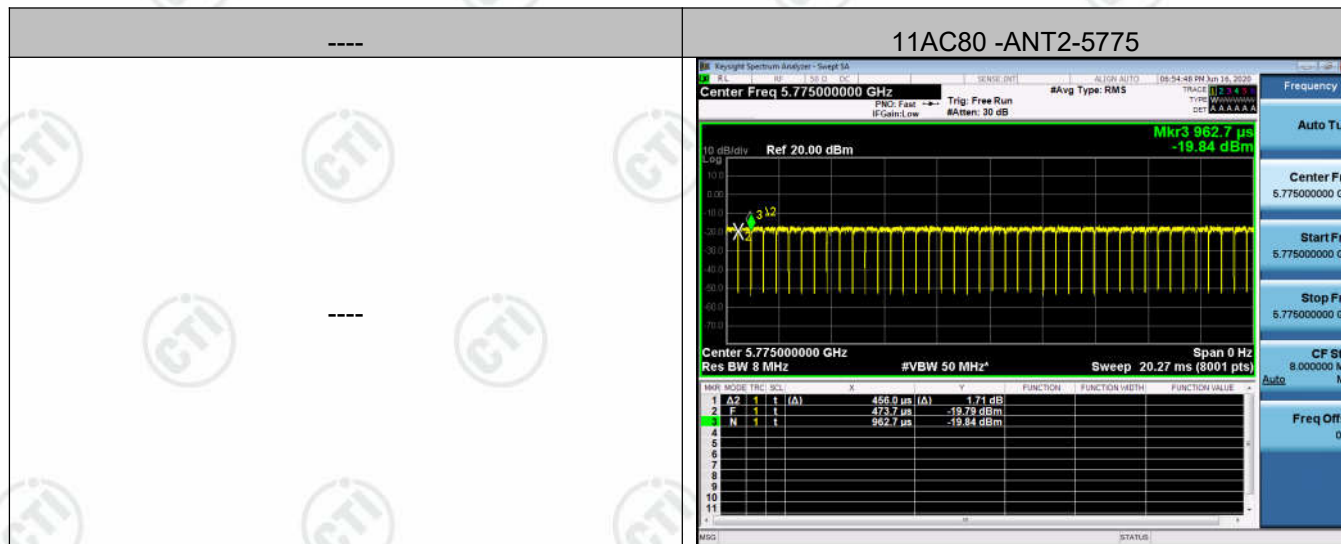












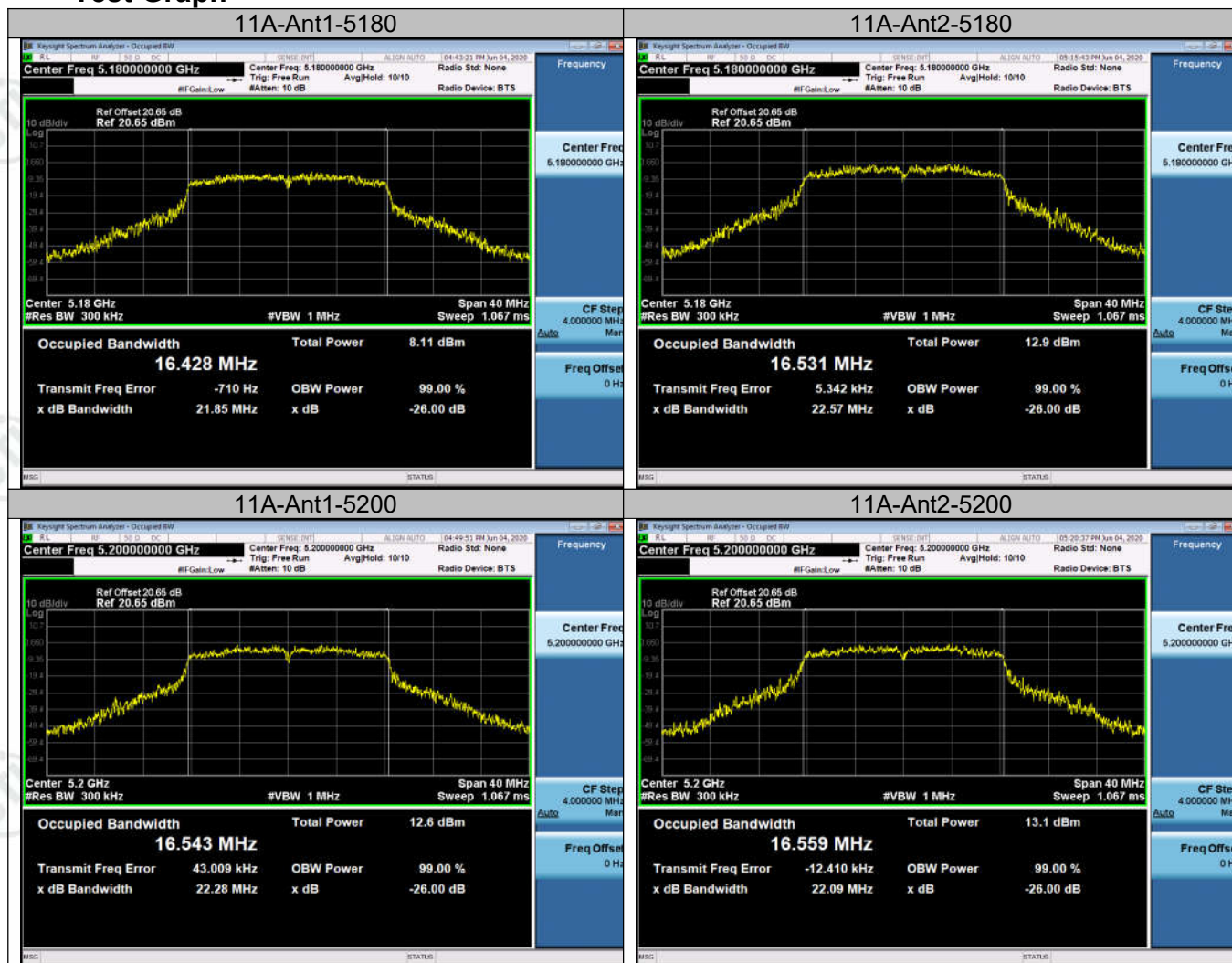
Appendix B): Emission Bandwidth Result Table

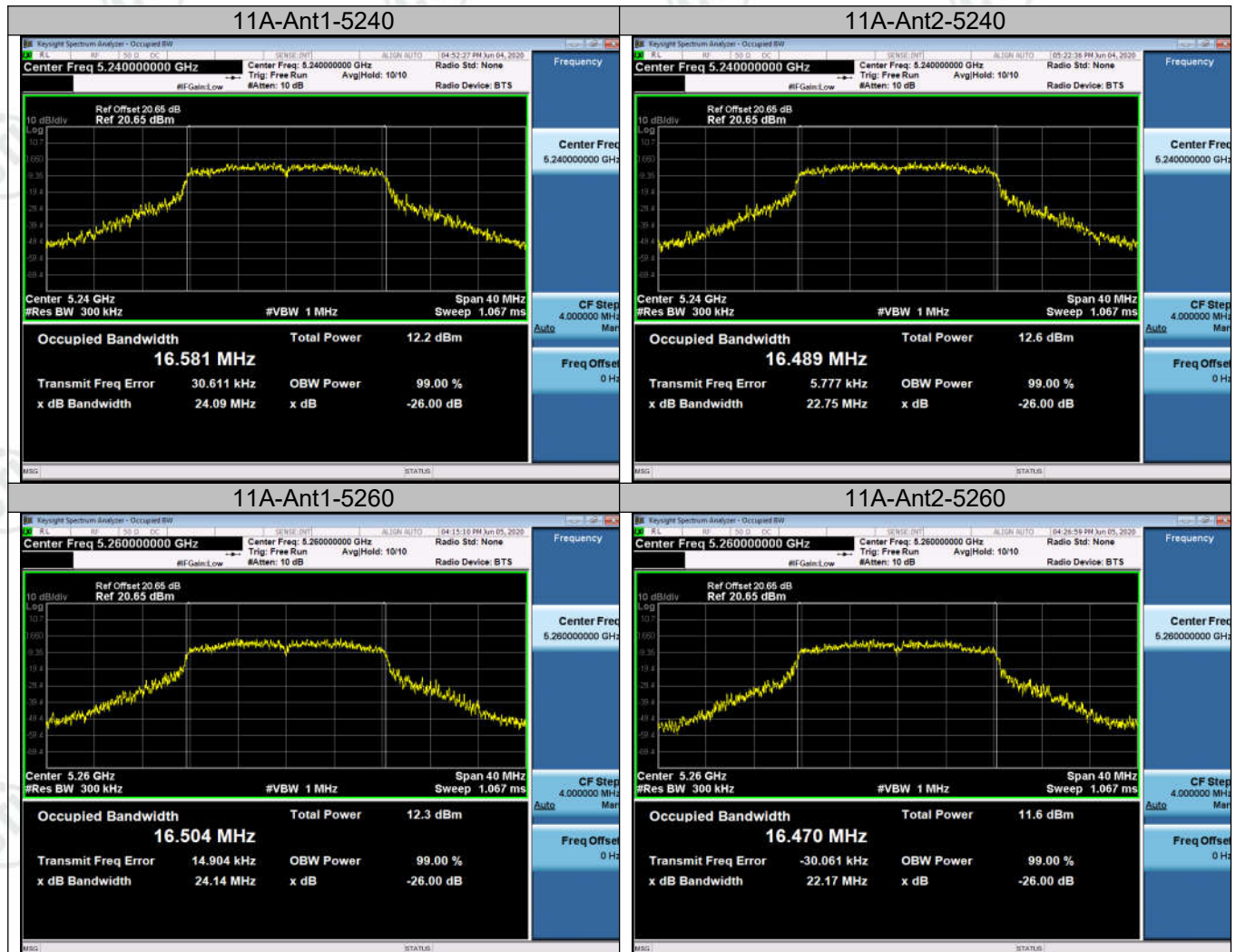
Test Mode	Antenna	Channel	EBW[MHz]	OBW[MHz]	Verdict
11A	Ant1	5180	21.85	16.428	PASS
11A	Ant2	5180	22.57	16.531	PASS
11A	Ant1	5200	22.28	16.543	PASS
11A	Ant2	5200	22.09	16.559	PASS
11A	Ant1	5240	24.09	16.581	PASS
11A	Ant2	5240	22.75	16.489	PASS
11A	Ant1	5260	24.14	16.504	PASS
11A	Ant2	5260	22.17	16.470	PASS
11A	Ant1	5280	21.60	16.492	PASS
11A	Ant2	5280	21.50	16.570	PASS
11A	Ant1	5320	21.93	16.453	PASS
11A	Ant2	5320	22.33	16.481	PASS
11A	Ant1	5745	10.78	16.350	PASS
11A	Ant2	5745	16.32	16.373	PASS
11A	Ant1	5785	13.90	16.340	PASS
11A	Ant2	5785	16.33	16.385	PASS
11A	Ant1	5825	12.53	16.348	PASS
11A	Ant2	5825	13.77	16.364	PASS

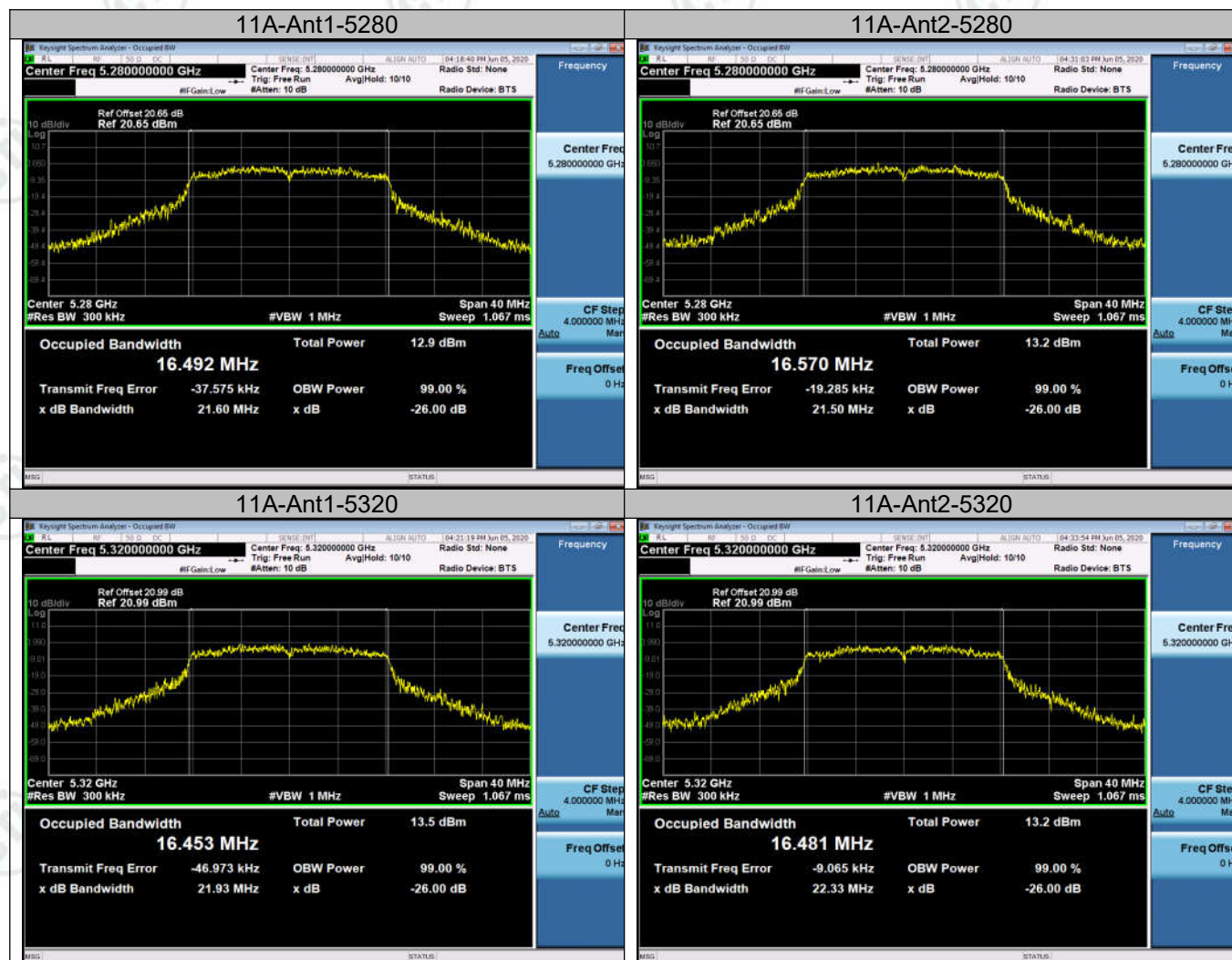
Test Mode	Antenna	Channel	EBW[MHz]	OBW[MHz]	Verdict
11N20SISO	Ant1	5180	23.25	17.700	PASS
11N20SISO	Ant2	5180	22.45	17.630	PASS
11N20SISO	Ant1	5200	23.35	17.727	PASS
11N20SISO	Ant2	5200	24.26	17.679	PASS
11N20SISO	Ant1	5240	24.84	17.708	PASS
11N20SISO	Ant2	5240	22.92	17.697	PASS
11N20SISO	Ant1	5260	22.00	17.665	PASS
11N20SISO	Ant2	5260	22.83	17.697	PASS
11N20SISO	Ant1	5280	22.54	17.649	PASS
11N20SISO	Ant2	5280	22.30	17.740	PASS
11N20SISO	Ant1	5320	22.96	17.672	PASS
11N20SISO	Ant2	5320	21.84	17.704	PASS
11N20SISO	Ant1	5745	17.19	17.563	PASS
11N20SISO	Ant2	5745	17.33	17.626	PASS
11N20SISO	Ant1	5785	10.15	17.555	PASS
11N20SISO	Ant2	5785	12.31	17.603	PASS
11N20SISO	Ant1	5825	16.43	17.604	PASS
11N20SISO	Ant2	5825	17.40	17.591	PASS
11N40SISO	Ant1	5190	43.29	36.277	PASS
11N40SISO	Ant2	5190	45.29	36.169	PASS
11N40SISO	Ant1	5230	43.46	36.172	PASS
11N40SISO	Ant2	5230	44.02	36.161	PASS
11N40SISO	Ant1	5270	44.10	36.222	PASS
11N40SISO	Ant2	5270	44.13	36.338	PASS
11N40SISO	Ant1	5310	44.31	36.282	PASS
11N40SISO	Ant2	5310	44.56	36.224	PASS
11N40SISO	Ant1	5755	29.42	36.068	PASS
11N40SISO	Ant2	5755	28.94	36.039	PASS
11N40SISO	Ant1	5795	32.21	36.025	PASS
11N40SISO	Ant2	5795	35.02	36.077	PASS

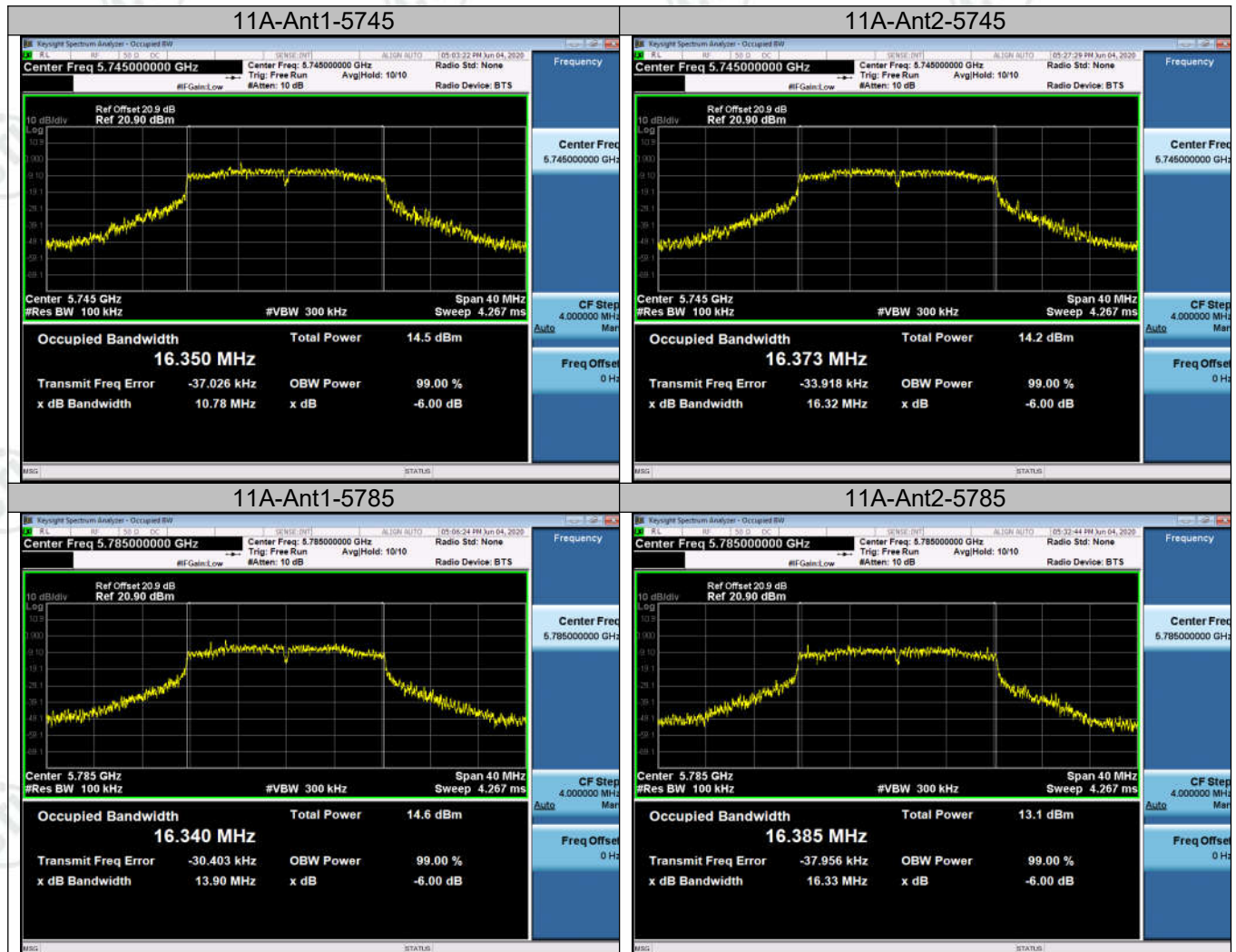
Test Mode	Antenna	Channel	EBW[MHz]	OBW[MHz]	Verdict
11AC80SISO	Ant1	5210	81.69	74.809	PASS
11AC80SISO	Ant2	5210	84.18	74.812	PASS
11AC80SISO	Ant1	5290	81.10	74.937	PASS
11AC80SISO	Ant2	5290	81.41	74.829	PASS
11AC80SISO	Ant1	5775	68.84	74.993	PASS
11AC80SISO	Ant2	5775	72.54	75.299	PASS

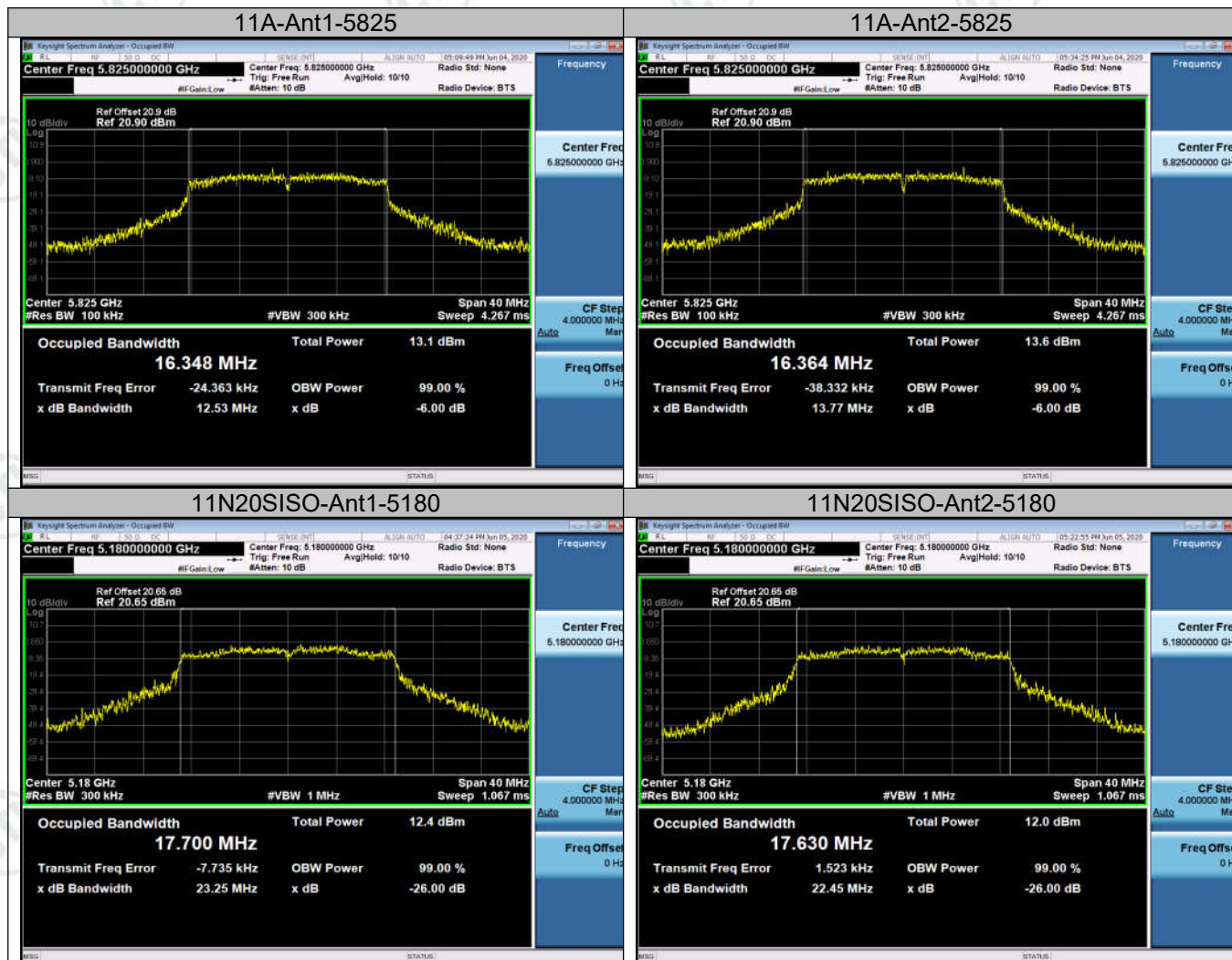
Test Graph

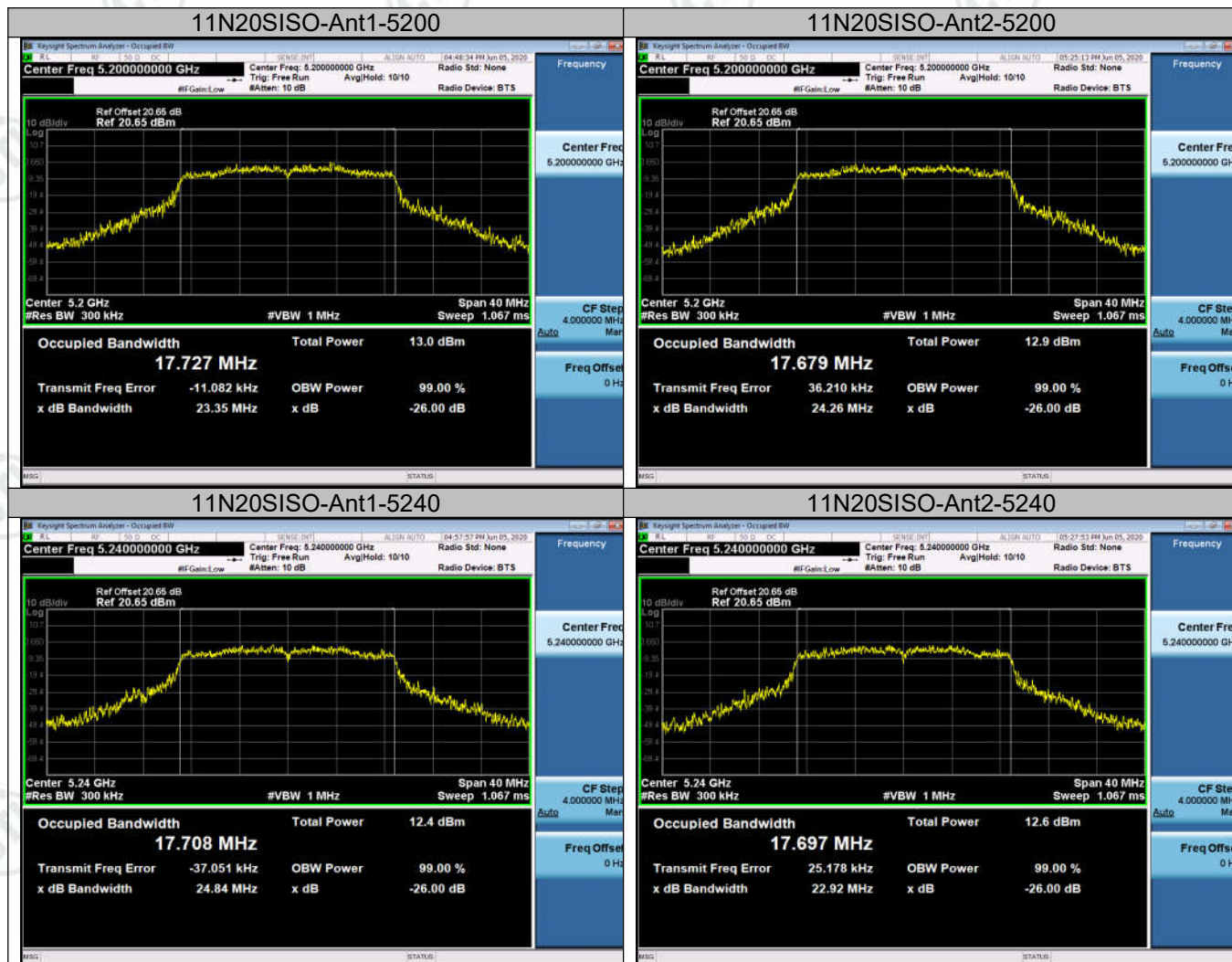


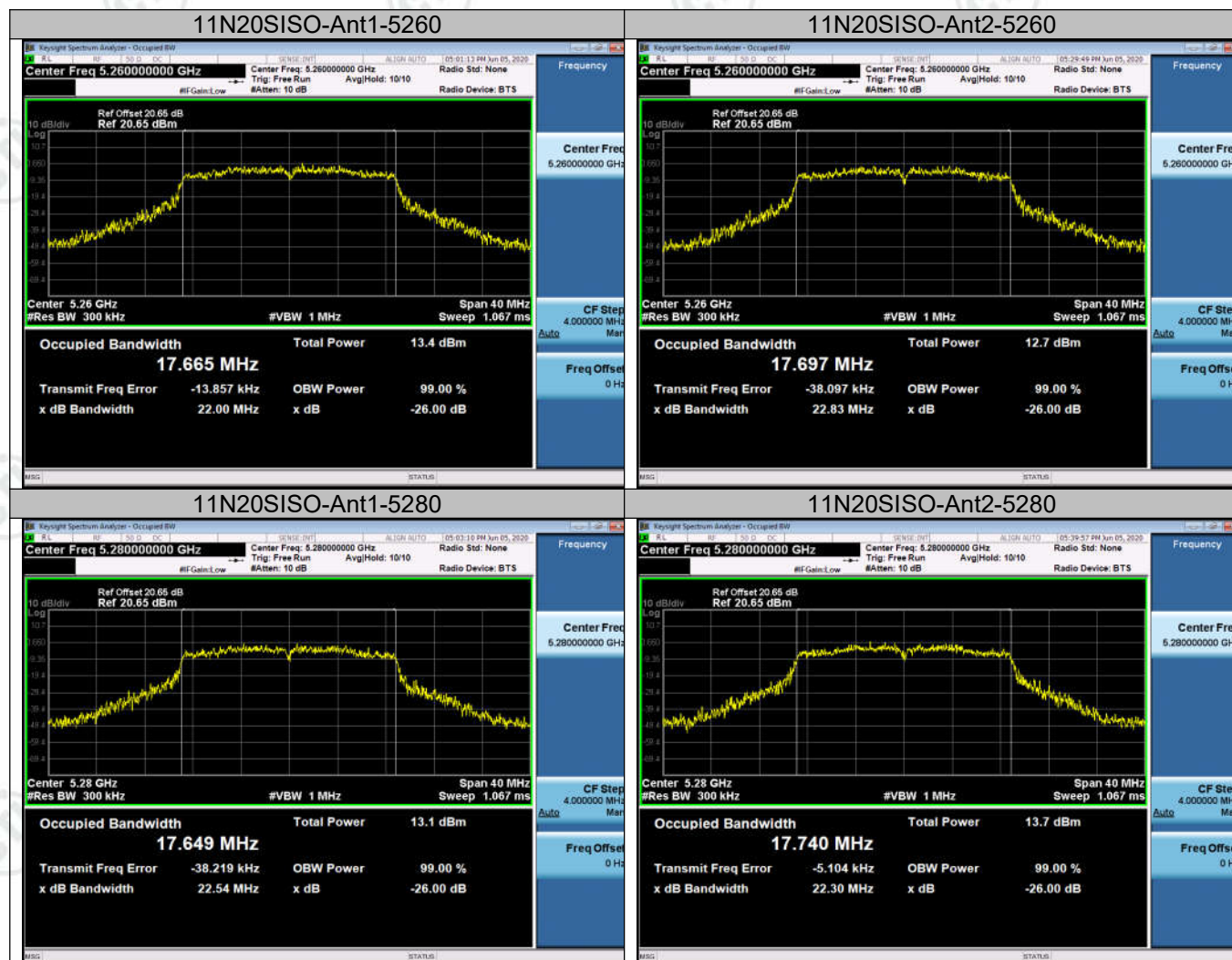


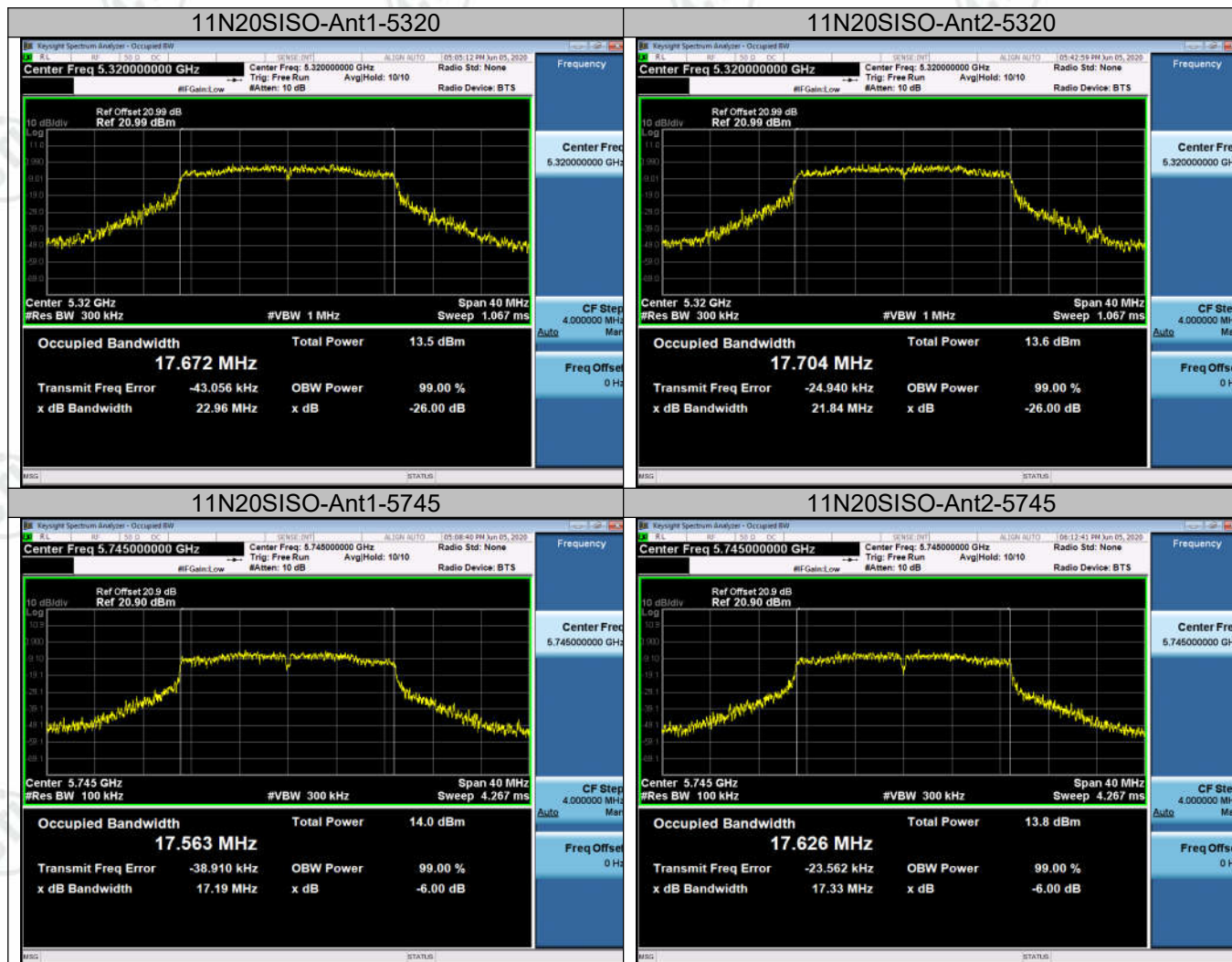


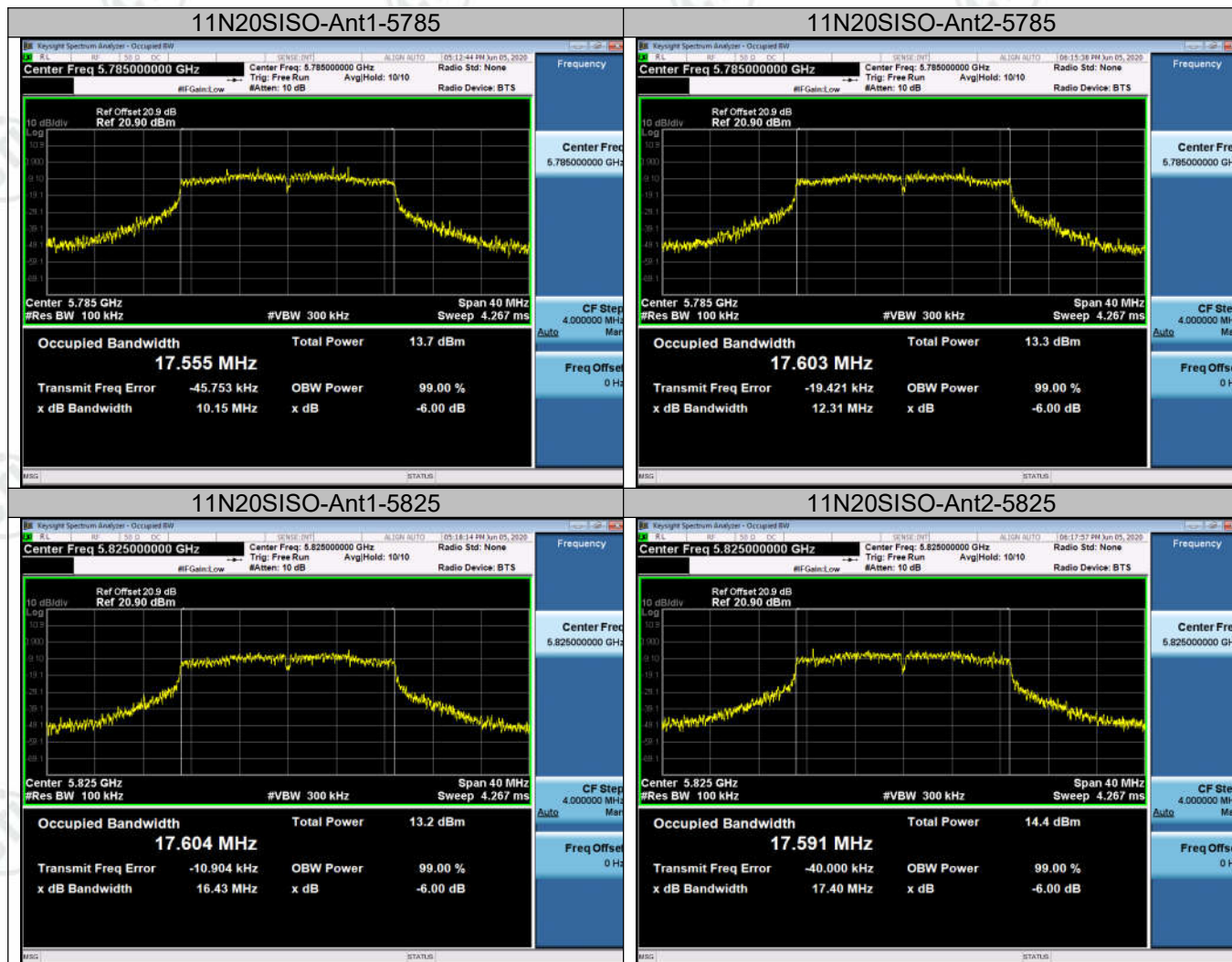


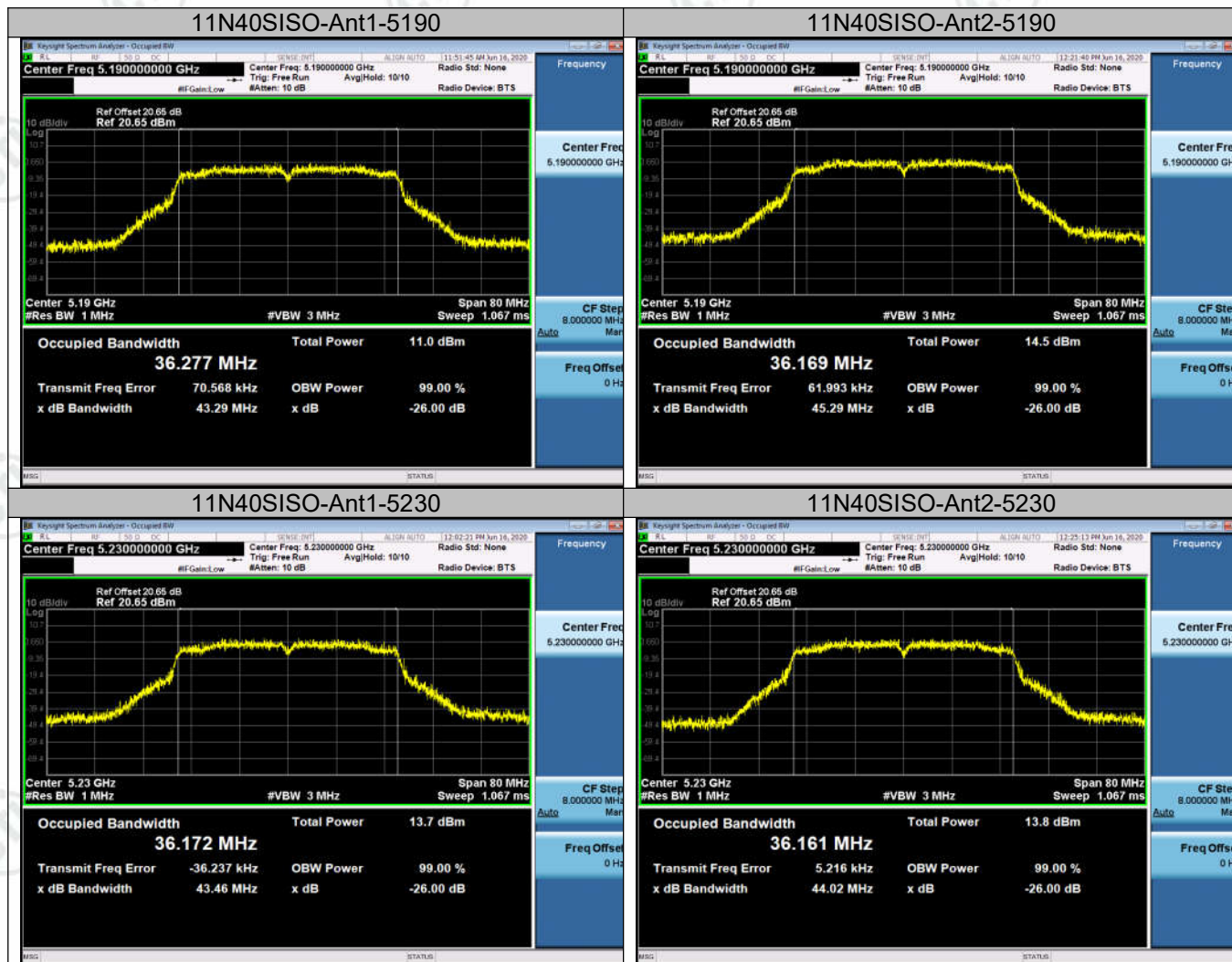


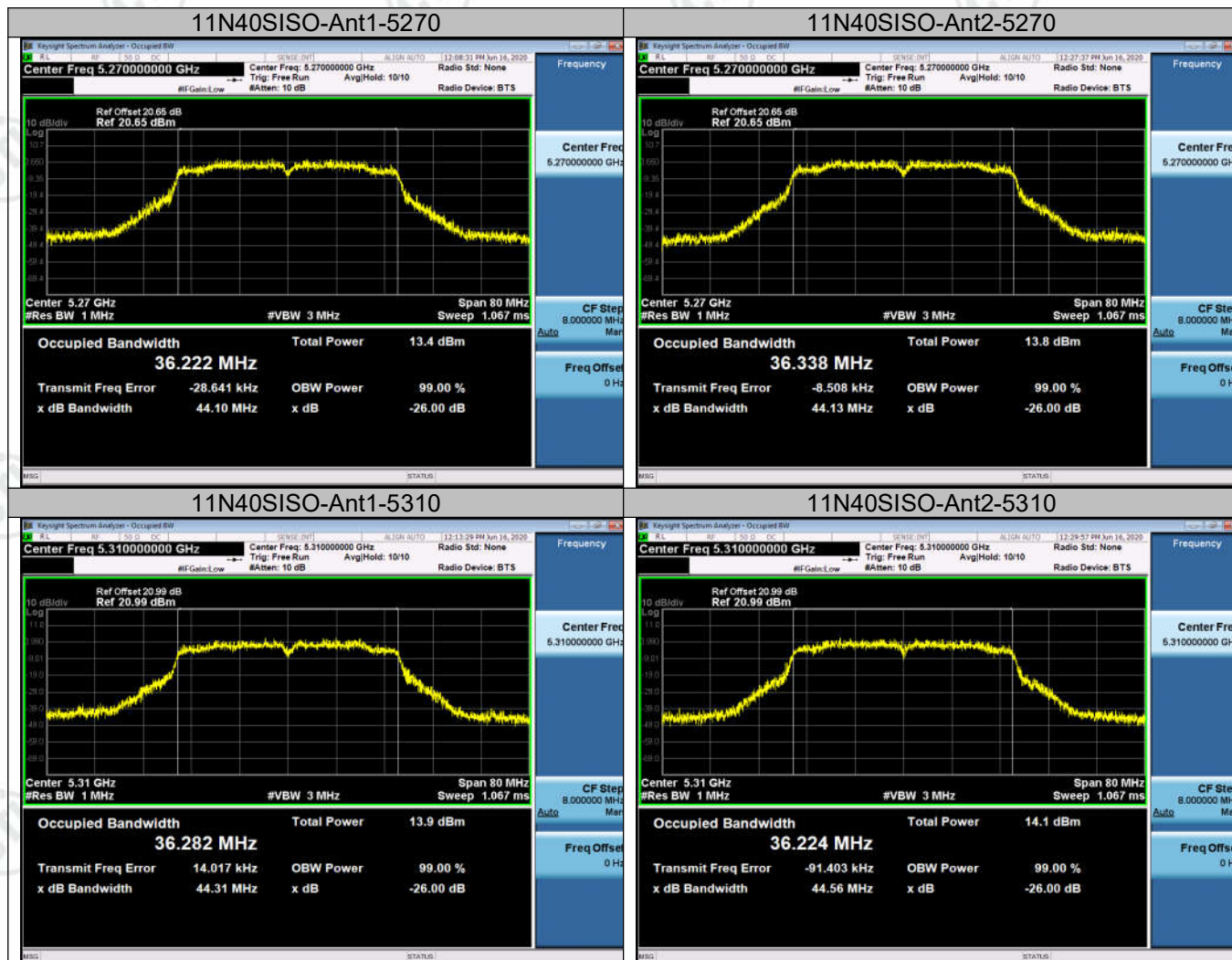


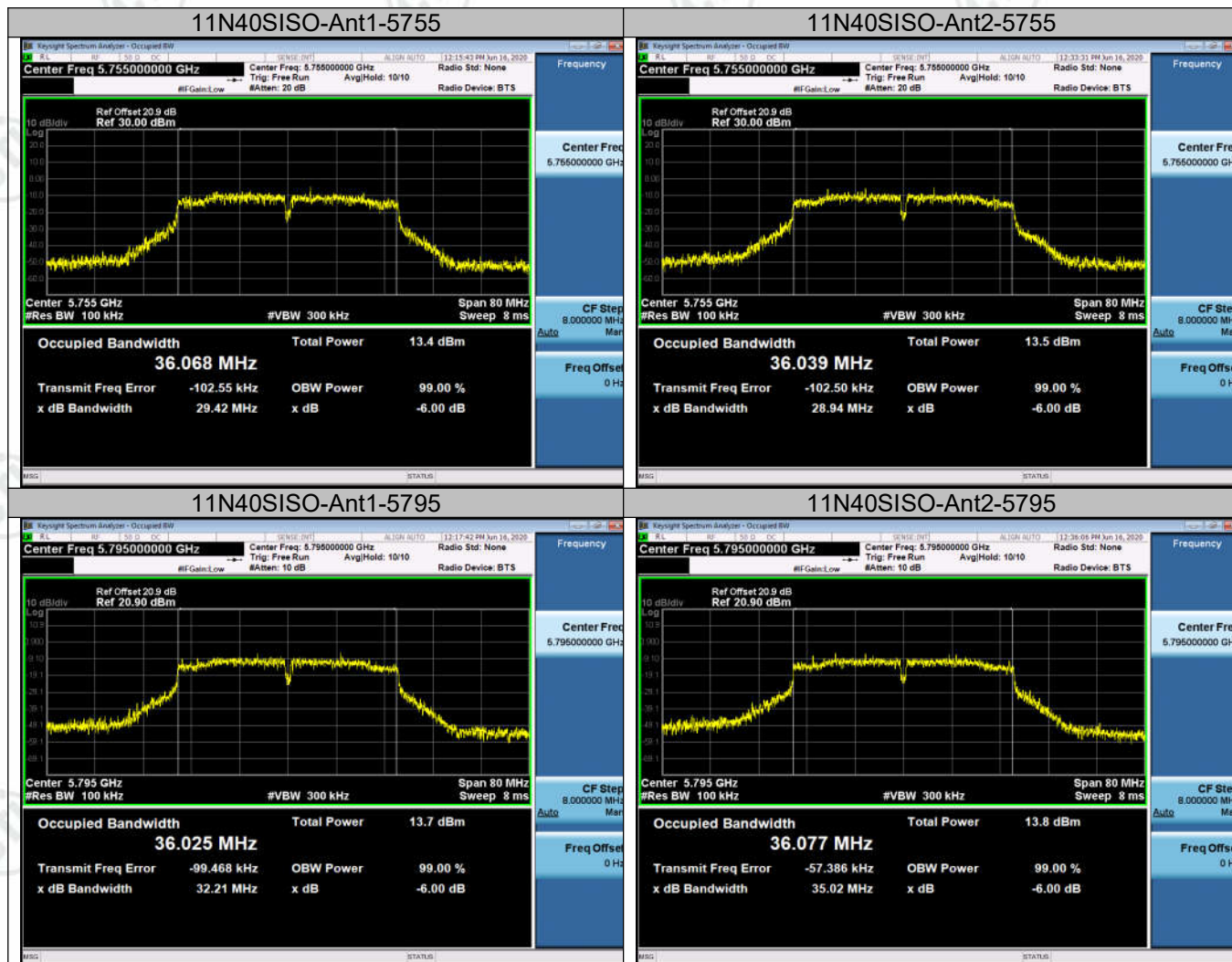


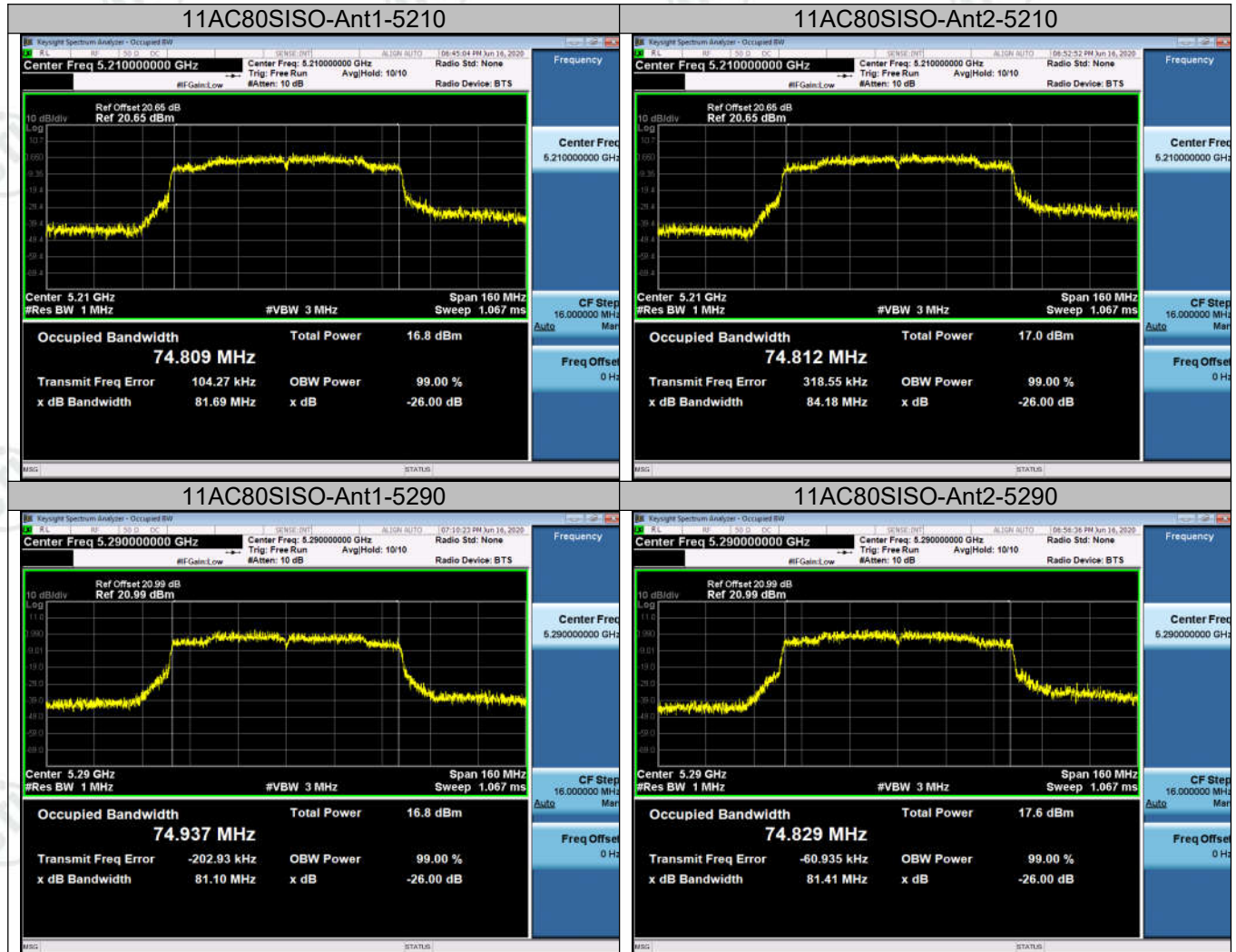


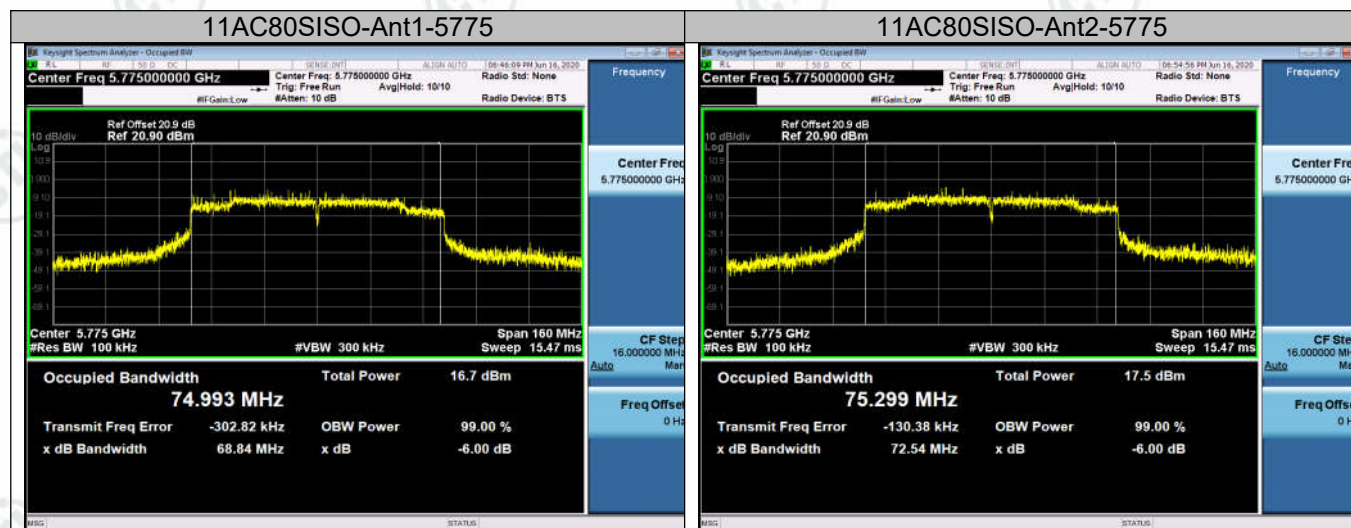












99%Bandwidth
Result Table

Test Mode	Antenna	Channel	EBW[MHz]	OBW[MHz]	Verdict
11A	Ant1	5180	22.31	17.658	PASS
11A	Ant2	5180	22.36	17.604	PASS
11A	Ant1	5200	21.58	17.662	PASS
11A	Ant2	5200	22.03	17.641	PASS
11A	Ant1	5240	20.37	17.610	PASS
11A	Ant2	5240	23.23	17.637	PASS
11A	Ant1	5260	22.74	17.604	PASS
11A	Ant2	5260	22.51	17.608	PASS
11A	Ant1	5280	22.23	17.620	PASS
11A	Ant2	5280	22.69	17.610	PASS
11A	Ant1	5320	22.13	17.641	PASS
11A	Ant2	5320	21.73	16.454	PASS
11A	Ant1	5745	16.13	17.608	PASS
11A	Ant2	5745	16.69	17.649	PASS
11A	Ant1	5785	17.07	17.643	PASS
11A	Ant2	5785	17.49	17.609	PASS
11A	Ant1	5825	14.02	17.617	PASS
11A	Ant2	5825	16.97	17.637	PASS

Test Mode	Antenna	Channel	EBW[MHz]	OBW[MHz]	Verdict
11N20SISO	Ant1	5180	21.29	17.657	PASS
11N20SISO	Ant2	5180	22.99	17.644	PASS
11N20SISO	Ant1	5200	22.10	17.658	PASS
11N20SISO	Ant2	5200	22.54	17.617	PASS
11N20SISO	Ant1	5240	20.84	17.630	PASS
11N20SISO	Ant2	5240	22.30	17.641	PASS
11N20SISO	Ant1	5260	21.39	17.624	PASS
11N20SISO	Ant2	5260	22.49	17.617	PASS
11N20SISO	Ant1	5280	24.26	17.634	PASS
11N20SISO	Ant2	5280	21.58	17.640	PASS
11N20SISO	Ant1	5320	21.88	17.656	PASS
11N20SISO	Ant2	5320	21.88	17.639	PASS
11N20SISO	Ant1	5745	15.44	17.639	PASS
11N20SISO	Ant2	5745	14.56	17.596	PASS
11N20SISO	Ant1	5785	16.89	17.574	PASS
11N20SISO	Ant2	5785	17.24	17.618	PASS
11N20SISO	Ant1	5825	17.01	17.617	PASS
11N20SISO	Ant2	5825	17.00	17.649	PASS
11N40SISO	Ant1	5190	44.12	36.036	PASS
11N40SISO	Ant2	5190	42.95	36.049	PASS
11N40SISO	Ant1	5230	44.13	36.048	PASS
11N40SISO	Ant2	5230	44.45	36.016	PASS
11N40SISO	Ant1	5270	43.67	35.942	PASS
11N40SISO	Ant2	5270	43.23	36.035	PASS
11N40SISO	Ant1	5310	44.58	36.080	PASS
11N40SISO	Ant2	5310	43.42	35.982	PASS
11N40SISO	Ant1	5755	35.36	35.969	PASS
11N40SISO	Ant2	5755	35.84	35.991	PASS
11N40SISO	Ant1	5795	35.41	35.933	PASS
11N40SISO	Ant2	5795	33.99	35.984	PASS

Test Mode	Antenna	Channel	EBW[MHz]	OBW[MHz]	Verdict
11AC80SISO	Ant1	5210	82.40	74.731	PASS
11AC80SISO	Ant2	5210	80.99	74.677	PASS
11AC80SISO	Ant1	5290	83.63	75.012	PASS
11AC80SISO	Ant2	5290	82.23	74.818	PASS
11AC80SISO	Ant1	5775	71.48	75.014	PASS
11AC80SISO	Ant2	5775	72.57	74.785	PASS

Test Graph

