TEST REPORT

Product	:	Handheld UHF Reader
Trade mark	:	CHAINWAY
Model/Type reference	:	C76
Serial Number	:	N/A
Report Number	:	EED32K00243604
FCC ID	:	2AC6AC76
Date of Issue	:	Mar. 28, 2019
Test Standards	:	47 CFR Part 15Subpart E
Test result	:	PASS

Prepared for:

Shenzhen Chainway Information Technology Co., Ltd.
9/F, Building 2, Daqian Industrial Park, Longchang Rd., District 67, Bao'an, Shenzhen

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

Tested By:	Jay Zheng	Compiled by:	Kevin Lan
	Jay Zheng		Kevin Lan
Reviewed by:	Ware Xin	Approved by:	Kevin yang
	Ware Xin		Kevin yang
Date:	Mar. 28, 2019		

Check No.:3096338075

2 Version

Version No.	Date	Description
00	Mar. 28, 2019	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
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
Frequency stability	47 CFR Part 15 Subpart E Section 15.407 (g)	ANSI C63.10-2013	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

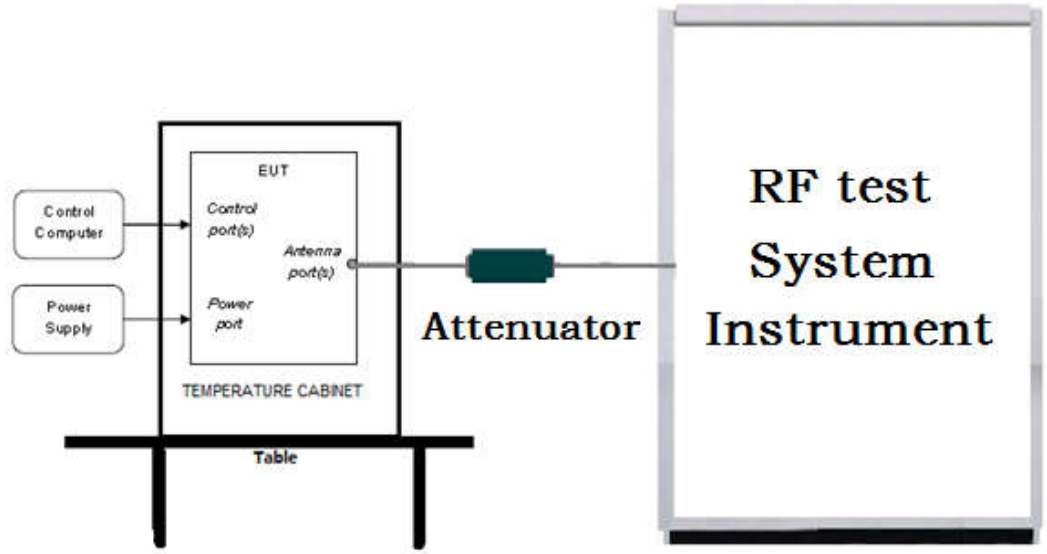
Remark:
The tested sample(s) and the sample information are provided by the client.
Tx: In this whole report Tx (or tx) means Transmitter.
Rx: In this whole report Rx (or rx) means Receiver.
RF: In this whole report RF means Radiated Frequency.
CH: In this whole report CH means channel.
Volt: In this 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

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:

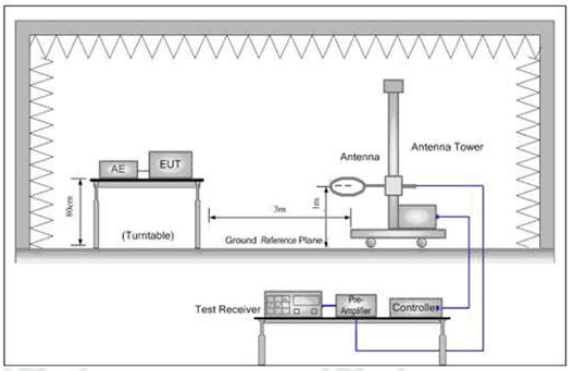


Figure 1. Below 30MHz

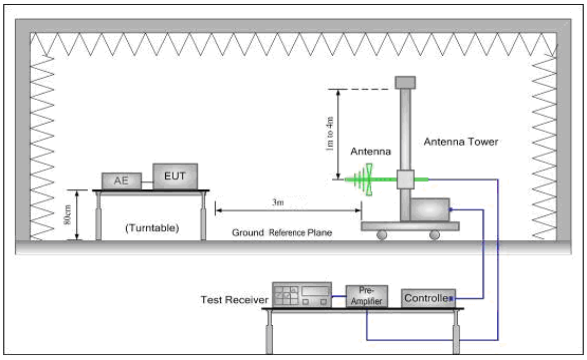


Figure 2. 30MHz to 1GHz

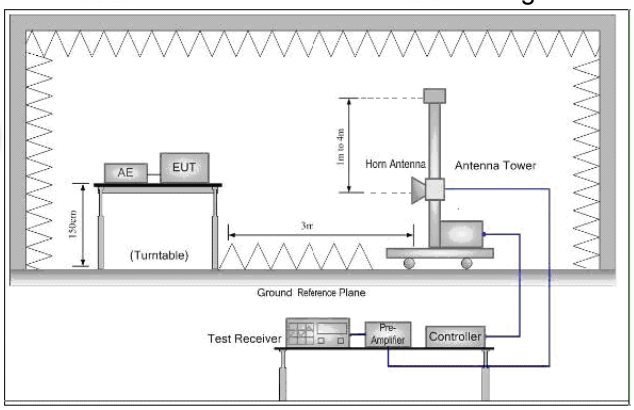
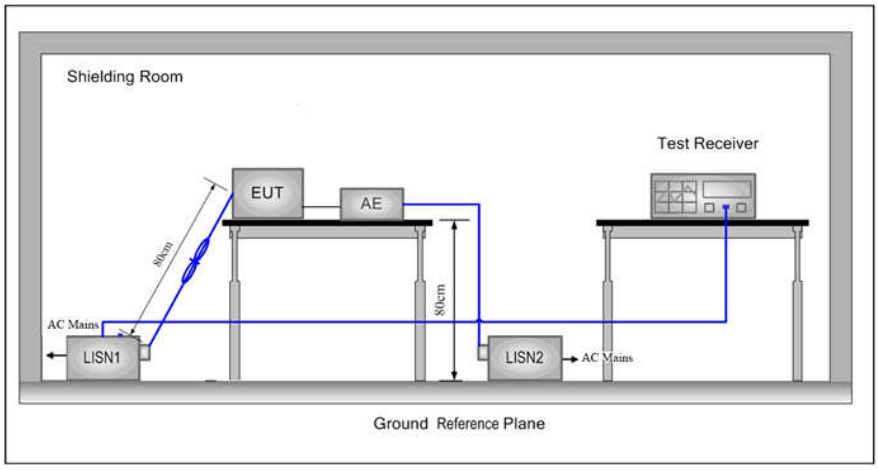


Figure 3. Above 1GHz

5.1.3 For Conducted Emissions test setup

Conducted Emissions setup



5.2 Test Environment

Operating Environment:	
Temperature:	25.0 °C
Humidity:	49 % RH
Atmospheric Pressure:	1010mbar

5.3 Test Condition

Test channel:

Test Mode	Tx/Rx	RF Channel		
		Low(L)	Middle(M)	High(H)
802.11a/n(20M)	5150MHz ~5250 MHz	Channel 36	Channel 40	Channel 48
		5180MHz	5200MHz	5240MHz
802.11n(40M)	5150MHz ~5250 MHz	Channel 38	N/A	Channel 46
		5190MHz	N/A	5230MHz
802.11a/n(20M)	5250MHz ~5350 MHz	Channel 52	Channel 56	Channel 64
		5260MHz	5280MHz	5320MHz
802.11n(40M)	5250MHz ~5350 MHz	Channel 54	N/A	Channel 62
		5270MHz	N/A	5310MHz
802.11a/n20M)	5470MHz ~5725 MHz	Channel 100	Channel 116	Channel 140
		5500MHz	5580MHz	5700MHz
802.11n(40M)	5470MHz ~5725 MHz	Channel 102	Channel 110	Channel 134
		5510MHz	5550MHz	5670MHz
802.11a/n(20M)	5725MHz ~5850 MHz	Channel 149	Channel 157	Channel 165
		5745MHz	5785MHz	5825MHz
802.11n(40M)	5725MHz ~5850 MHz	Channel 151	N/A	Channel 159
		5755MHz	N/A	5795MHz

Test mode:
Pre-scan under all rate for Ant1

Mode	**802.11a**							
Data Rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Power(dBm)	12.4	12.00	11.95	11.90	11.82	11.75	11.70	11.61
Mode	**802.11n (20M)**							
Data Rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Power(dBm)	11.85	11.79	11.72	11.68	11.60	11.55	11.43	11.38
Mode	**802.11n(40M)**							
Data Rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Power(dBm)	12.35	12.32	12.21	12.18	12.11	12.01	11.95	11.80

Through Pre-scan, MCS0 is the worst case of 802.11a (20M);MCS0 is the worst case of 802.11n (20M) ;MCS0 is the worst case of 802.11n(40M) ;

6 General Information

6.1 Client Information

Applicant:	Shenzhen Chainway Information Technology Co., Ltd.
Address of Applicant:	9/F, Building 2, Daqian Industrial Park, Longchang Rd., District 67, Bao'an, Shenzhen
Manufacturer:	Shenzhen Chainway Information Technology Co., Ltd.
Address of Manufacturer:	9/F, Building 2, Daqian Industrial Park, Longchang Rd., District 67, Bao'an, Shenzhen
Factory:	Shenzhen Chainway Information Technology Co., Ltd.
Address of Factory:	9/F, Building 2, Daqian Industrial Park, Longchang Rd., District 67, Bao'an, Shenzhen

6.2 General Description of EUT

Product Name:	Handheld UHF Reader	
Model No.(EUT):	C76	
Trade Mark:	CHAINWAY	
EUT Supports Radios application:	BT 4.0 Single mode: 2402MHz to 2480MHz; 2.4GHz Wi-Fi:802.11b/g/n(HT20)(HT40): 2412MHz ~2462 MHz; 5GHz Wi-Fi: 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; 802.11a; 802.11n(20MHz/40MHz); RFID: 902MHz to 928MHz; NFC: 13.56MHz; GPS: 1559MHz to 1610MHz	
Power Supply:	Adapter:	Model: GME10D-050200FUu Input: 100-240V~ 50/60Hz, 0.28A Output: 5V⎓2A
	Battery:	Rechargeable Li-ion Battery 3.8V, 4000mAh, 15.2Wh
Sample Received Date:	Sep. 05, 2018	
Sample tested Date:	Sep. 12, 2018 to Feb. 20, 2019	

6.3 Product Specification subjective to this standard

Operation Frequency:	IEEE 802.11a/n(20M): 5150MHz ~5250 MHz IEEE802.11n(40M): 5150MHz ~5250 MHz IEEE 802.11a/n(20M): 5250MHz ~5350 MHz IEEE802.11n(40M): 5250MHz ~5350 MHz IEEE 802.11a/n(20M): 5470MHz ~5725 MHz IEEE802.11n(40M): 5470MHz ~5725 MHz IEEE 802.11a/n(20M): 5725MHz ~5850 MHz IEEE802.11n(40M): 5725MHz ~5850 MHz
Channel Numbers:	IEEE 802.11a/n(20M): 5150MHz ~5250MHz/ 4 channel IEEE 802.11n(40M): 5150MHz ~5250MHz/ 2 channel IEEE 802.11a/n(20M): 5250MHz ~5350 MHz/ 4 channel IEEE802.11n(40M): 5250MHz ~5350 MHz/ 2 channel IEEE 802.11a/n(20M): 5470MHz ~5725 MHz/ 8 channel IEEE802.11n(40M): 5470MHz ~5725 MHz/ 3 channel IEEE 802.11a/n(20M): 5725MHz ~5850MHz/ 5 channel IEEE 802.11n(40M): 5725MHz ~5850MHz/ 2 channel
Firmware version:	C76E_LWG_M0_V0.4.6_S171219
Hardware version:	C70SEA_MB_V11
Test Power Grade:	N/A
Test Software of EUT:	N/A

Antenna Type:	PFC antenna
Antenna gain:	0.43dBi
Test Voltage:	AC 120V, 60Hz

Operation Frequency each of channel

For 802.11a/n(20M) Operation in the 5150MHz ~5250 MHz band			
Channel	Frequency	Channel	Frequency
36	5180MHz	44	5220MHz
40	5200MHz	48	5240MHz
For 802.11a/n(20M) Operation in the 5250MHz ~5350 MHz band			
Channel	Frequency	Channel	Frequency
52	5260MHz	56	5280MHz
60	5300MHz	64	5320MHz
For 802.11a/n(20M) Operation in the 5470MHz ~5725 MHz band			
Channel	Frequency	Channel	Frequency
100	5500MHz	104	5520MHz
108	5540MHz	112	5560MHz
116	5580MHz	132	5660MHz
136	5680MHz	140	5700MHz
For 802.11a/n(20M) Operation in the 5725MHz ~5850 MHz band			
Channel	Frequency	Channel	Frequency
149	5745MHz	161	5805MHz
153	5765MHz	165	5825MHz
157	5785MHz	NA	NA

For 802.11n(40M) Operation in the 5150MHz ~5250 MHz band			
Channel	Frequency	Channel	Frequency
38	5190MHz	46	5230MHz
For 802.11n(40M) Operation in the 5250MHz ~5350 MHz band			
Channel	Frequency	Channel	Frequency
54	5270MHz	62	5310MHz
For 802.11n(40M) Operation in the 5470MHz ~5725 MHz band			
Channel	Frequency	Channel	Frequency
102	5510MHz	110	5550MHz
134	5670MHz	NA	NA
For 802.11n(40M) Operation in the 5725MHz ~5850 MHz band			
Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

6.4 Description of Support Units

The EUT has been tested with associated equipment below.

Associated equipment name		Manufacture	model	serial number	Supplied by	Certification
AE1	Phone	Apple	A1367	TTF20120027	CTI	FCC
AE2	Router	HuaWei	WS550	K8E8W15314002784	CTI	FCC
AE3	PC	Apple	MMGF2ZP/A	ODN20170212	CTI	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**	**Model No.**	**Serial Number**	**Cal. Date (mm-dd-yyyy)**	**Cal. Due date (mm-dd-yyyy)**
Signal Generator	Keysight	E8257D	MY53401106	03-13-2018	03-12-2019
Spectrum Analyzer	Keysight	N9010A	MY54510339	03-13-2018	03-12-2019
Signal Generator	Keysight	N5182B	MY53051549	03-13-2018	03-12-2019
High-pass filter	Sinoscite	FL3CX03WG18NM12-0398-002	---	01-10-2018 01-08-2019	01-09-2019 01-07-2020
High-pass filter	MICRO-TRONICS	SPA-F-63029-4	---	01-10-2018 01-08-2019	01-09-2019 01-07-2020
DC Power	Keysight	E3642A	MY54426035	03-13-2018	03-12-2019
PC-1	Lenovo	R4960d	---	03-13-2018	03-12-2019
BT&WI-FI Automatic control	R&S	OSP120	101374	03-13-2018	03-12-2019
RF control unit	JS Tonscend	JS0806-2	15860006	03-13-2018	03-12-2019
RF control unit	JS Tonscend	JS0806-1	15860004	03-13-2018	03-12-2019
RF control unit	JS Tonscend	JS0806-4	158060007	03-13-2018	03-12-2019
BT&WI-FI Automatic test software	JS Tonscend	JS1120-2	---	03-13-2018	03-12-2019
Temperature/ Humidity Indicator	biaozhi	HM10	1804186	10-13-2017 10-12-2018	10-12-2018 10-11-2019

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	03-13-2018	03-12-2019
Temperature/ Humidity Indicator	Defu	TH128	/	03-13-2018	03-12-2019
Communication test set	Agilent	E5515C	GB47050534	03-13-2018	03-12-2019
Communication test set	R&S	CMW500	152394	01-10-2018 01-08-2019	01-09-2019 01-07-2020
LISN	R&S	ENV216	100098	01-10-2018 01-08-2019	01-09-2019 01-07-2020
LISN	schwarzbeck	NNLK8121	8121-529	03-13-2018	03-12-2019
Voltage Probe	R&S	ESH2-Z3 0299.7810.56	100042	03-13-2018	03-12-2019
Current Probe	R&S	EZ-17 816.2063.03	100106	03-13-2018	03-12-2019
ISN	TESEQ	ISN T800	30297	03-13-2018	03-12-2019
Barometer	changchun	DYM3	1188	03-13-2018	03-12-2019

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	---	06-04-2016	06-03-2019
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-401	12-22-2017 07-30-2018	12-21-2018 07-29-2019
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-618	08-21-2018	08-20-2019
Microwave Preamplifier	Agilent	8449B	3008A024 25	01-17-2018 01-16-2019	01-16-2019 01-15-2020
Microwave Preamplifier	Tonscend	EMC051845SE	980380	04-25-2018	04-23-2021
Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-1869	06-05-2018	06-03-2021
Horn Antenna	ETS-LINDGREN	3117	00057410	06-05-2018	06-04-2021
Double ridge horn antenna	A.H.SYSTEMS	SAS-574	6042	06-05-2018	06-04-2021
Pre-amplifier	A.H.SYSTEMS	PAP-1840-60	6041	06-22-2017	06-21-2019
Loop Antenna	ETS	6502	00071730	05-11-2018	05-10-2019
Spectrum Analyzer	R&S	FSP40	100416	05-25-2018	05-24-2019
Receiver	R&S	ESCI	100435	11-23-2018	11-22-2019
Receiver	R&S	ESCI7	100938-003	01-09-2018 01-07-2019	01-08-2019 01-06-2020
Multi device Controller	maturo	NCD/070/10711112	---	05-11-2018	05-10-2019
LISN	schwarzbeck	NNBM8125	81251547	05-11-2018	05-10-2019
LISN	schwarzbeck	NNBM8125	81251548	03-13-2018	03-12-2019
Signal Generator	Agilent	E4438C	MY45095 744	03-13-2018	03-12-2019
Signal Generator	Keysight	E8257D	MY53401 106	10-11-2017 10-12-2018	10-12-2018 10-11-2019
Temperature/ Humidity Indicator	Shanghai qixiang	HM10	1804298	03-16-2018	03-15-2019
Communication test set	Agilent	E5515C	GB47050 534	01-10-2018 01-09-2019	01-09-2019 01-08-2020
Cable line	Fulai(7M)	SF106	5219/6A	01-10-2018 01-09-2019	01-09-2019 01-08-2020
Cable line	Fulai(6M)	SF106	5220/6A	01-10-2018 01-09-2019	01-09-2019 01-08-2020
Cable line	Fulai(3M)	SF106	5216/6A	01-10-2018 01-09-2019	01-09-2019 01-08-2020
Cable line	Fulai(3M)	SF106	5217/6A	01-19-2017 01-18-2018	01-18-2018 01-17-2019
Communication test set	R&S	CMW500	104466	01-10-2018 01-09-2019	01-09-2019 01-08-2020
High-pass filter	Sinoscite	FL3CX03WG18NM1 2-0398-002	---	01-10-2018 01-09-2019	01-09-2019 01-08-2020
High-pass filter	MICRO-TRONICS	SPA-F-63029-4	---	01-10-2018 01-09-2019	01-09-2019 01-08-2020
band rejection filter	Sinoscite	FL5CX01CA09CL12 -0395-001	---	01-10-2018 01-09-2019	01-09-2019 01-08-2020
band rejection filter	Sinoscite	FL5CX01CA08CL12 -0393-001	---	01-10-2018 01-09-2019	01-09-2019 01-08-2020
band rejection filter	Sinoscite	FL5CX02CA04CL12 -0396-002	---	01-10-2018 01-09-2019	01-09-2019 01-08-2020
band rejection filter	Sinoscite	FL5CX02CA03CL12 -0394-001	---	06-04-2016	06-03-2019

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 Unlicesed Wireless Devices
3	KDB 789033 D02 General U-NII Test Procedures New Rules v02r01	Guidelines for compliance testing of unlicensed national information infrastructure (U-NII) device part 15, subpart E
4	KDB 662911 D01 Multiple Transmitter Output v02r01	Emissions Testing of Transmitters with Multiple Outputs in the Same Band

Test Results List:

Test Requirement	Test method	Test item	Verdict	Note
Part15E Section 15.407 (a)(1)(2)	KDB789033	Emission Bandwidth and Occupied Bandwidth	PASS	Appendix A)
Part15E Section 15.407 (a)(1)(2)(4)(h)(1)	KDB789033 / KDB 662911	Conducted Output Power and transmit power control mechanism	PASS	Appendix B)
Part15E Section 15.407 (a)(1)(2)(5)	KDB789033 / KDB 662911	Power Spectral Density	PASS	Appendix C)
Part15E Section 15.407 (b)(1)to(6)	KDB789033 / KDB 662911	Band Edge Measurements	PASS	Appendix D)
Part15E Section 15.407 (g)	KDB789033	Frequency stability	PASS	Appendix E)
Part15C Section 15.203	ANSI C63.10	Antenna Requirement	PASS	Appendix F)
Part15E Section 15.407 (c)	Section 15.407	Operation in the absence of information to the transmit	PASS	Appendix G)
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	Restricted bands around fundamental frequency (Radiated Emission)	PASS	Appendix I)
Part15E Section 15.407 (b)(6)(7)(8)	KDB789033	Unwanted Emissions in the Restricted Bands	PASS	Appendix J)
Part15E Section 15.407 (b)(1)(2)(3)(5)	KDB789033	Unwanted Emissions that fall Outside of the Restricted Bands	PASS	Appendix K)

Appendix A): Duty Cycle

Test Mode	Channel	Duty Cycle[%]	Verdict
11A	5180	97.16	PASS
11A	5200	96.99	PASS
11A	5240	97.16	PASS
11A	5260	97.16	PASS
11A	5280	97.16	PASS
11A	5320	97.16	PASS
11A	5500	96.99	PASS
11A	5580	97.16	PASS
11A	5700	97.16	PASS
11A	5745	97.16	PASS
11A	5785	97.16	PASS
11A	5825	97.16	PASS
11N20SISO	5180	96.78	PASS
11N20SISO	5200	96.96	PASS
11N20SISO	5240	96.78	PASS
11N20SISO	5260	96.96	PASS
11N20SISO	5280	96.96	PASS
11N20SISO	5320	96.78	PASS
11N20SISO	5500	96.96	PASS
11N20SISO	5580	96.96	PASS
11N20SISO	5700	96.96	PASS
11N20SISO	5745	96.96	PASS
11N20SISO	5785	96.96	PASS
11N20SISO	5825	96.96	PASS
11N40SISO	5190	94.05	PASS
11N40SISO	5230	94.07	PASS
11N40SISO	5270	94.07	PASS
11N40SISO	5310	94.07	PASS
11N40SISO	5510	94.07	PASS
11N40SISO	5550	94.07	PASS
11N40SISO	5670	94.07	PASS
11N40SISO	5755	94.05	PASS
11N40SISO	5795	94.07	PASS

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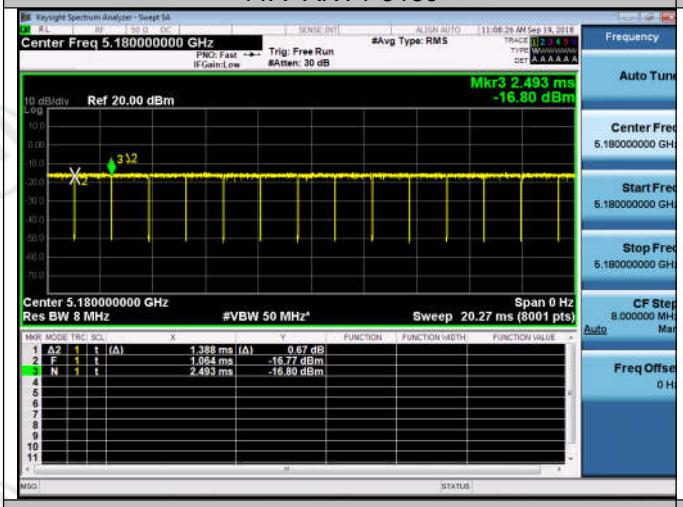	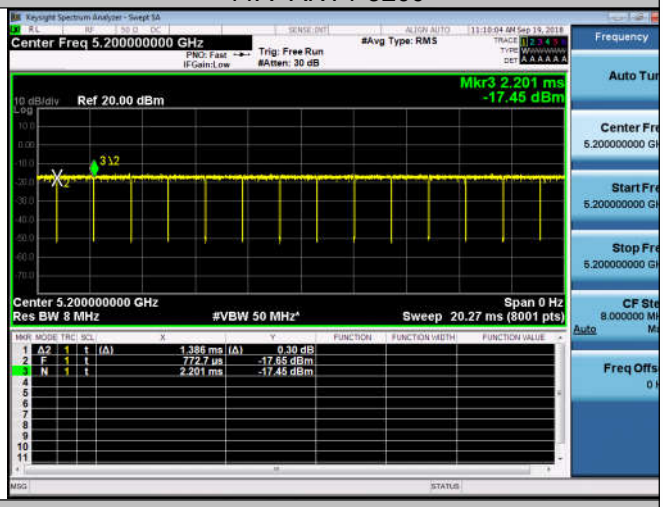
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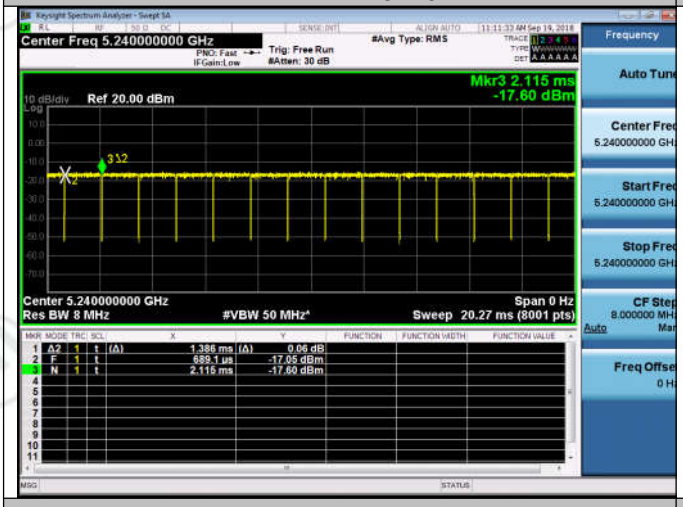
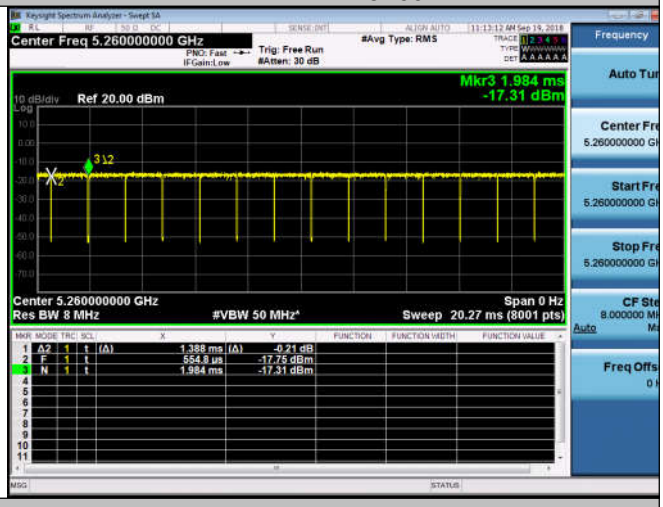
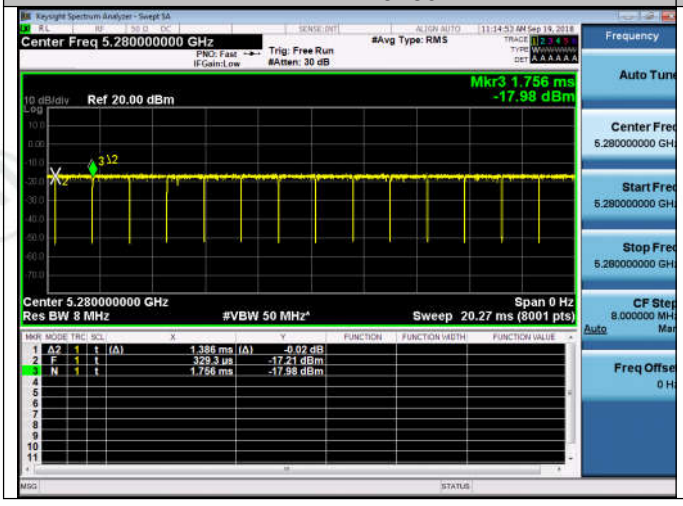
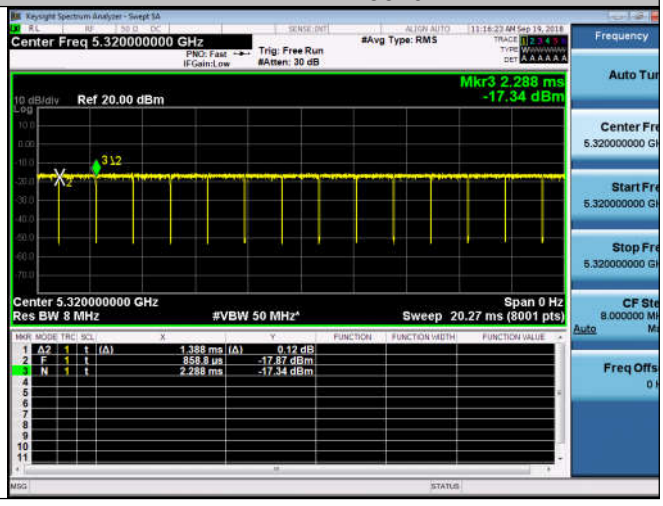
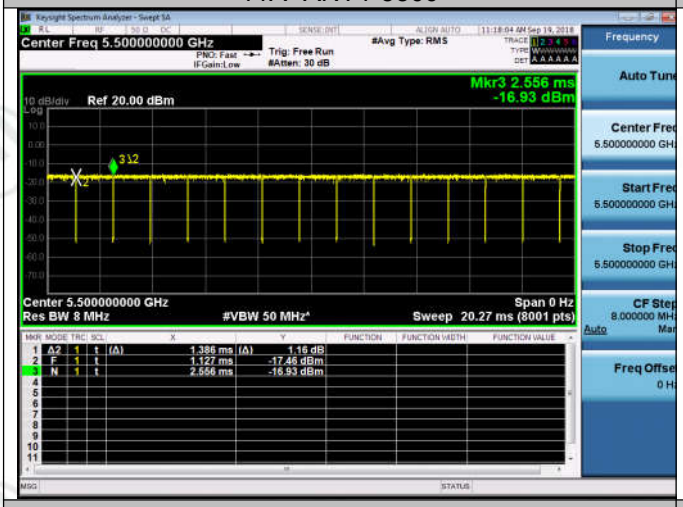
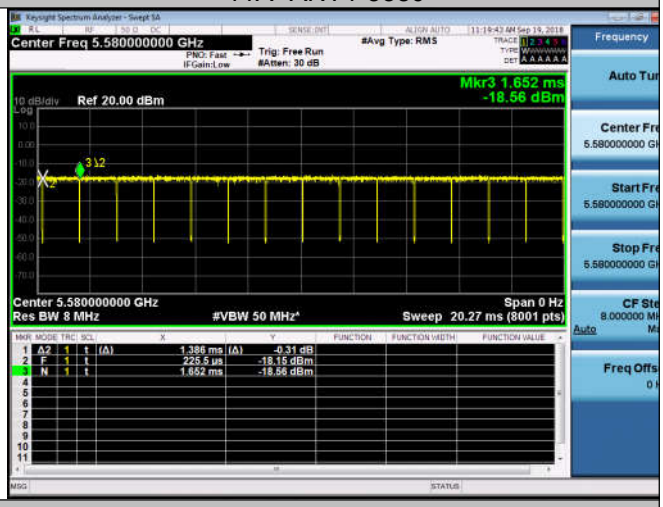
	
11A -ANT1-5280	11A -ANT1-5320
	

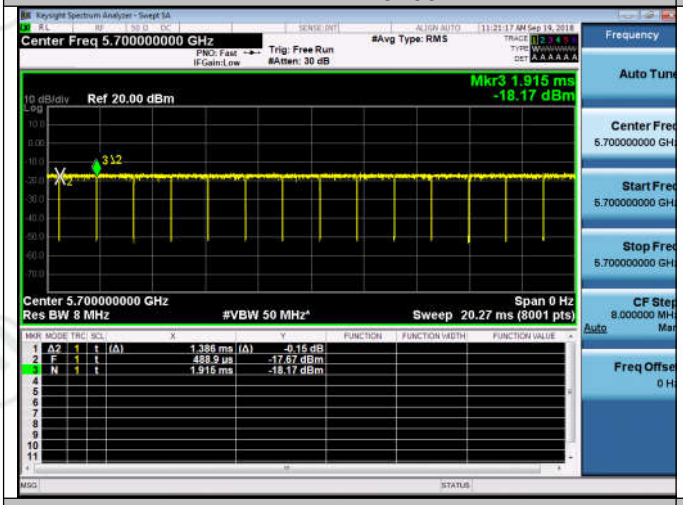
11A -ANT1-5500



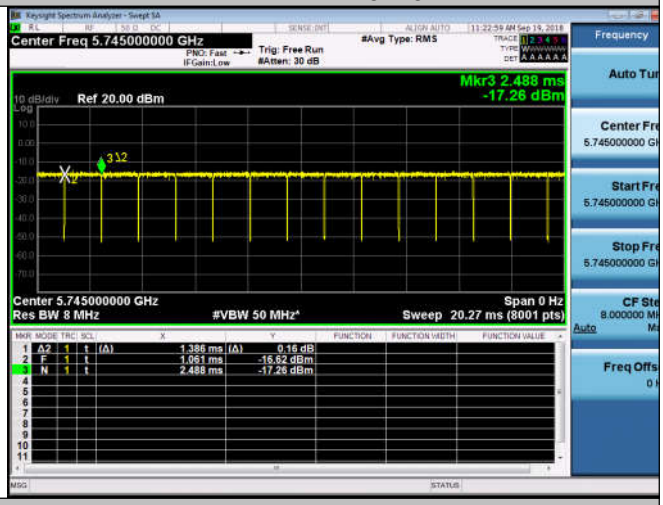
11A -ANT1-5580



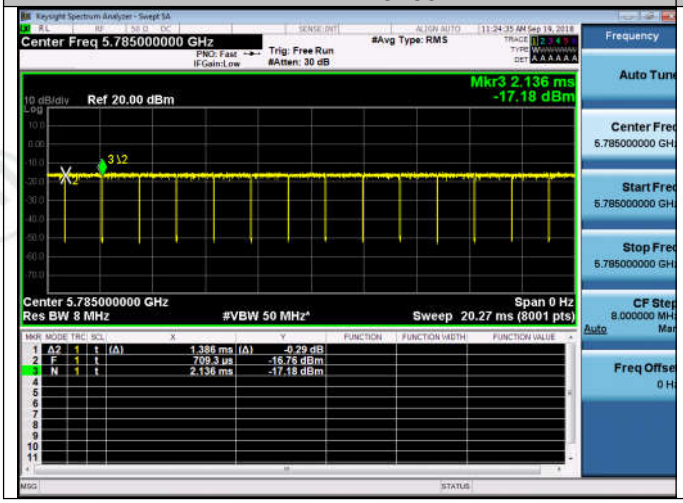
11A -ANT1-5700



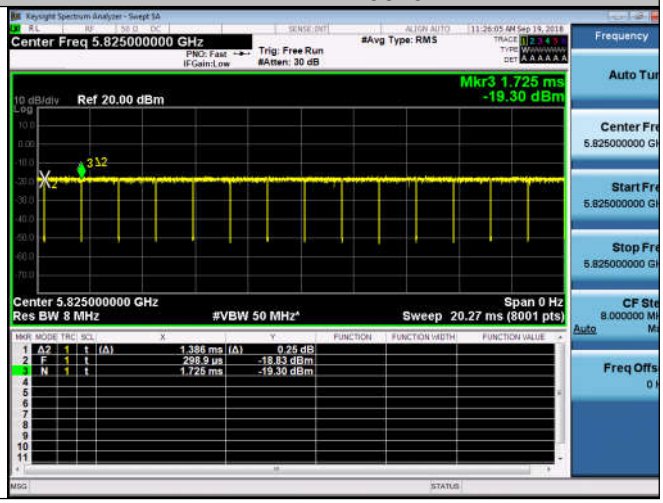
11A -ANT1-5745



11A -ANT1-5785



11A -ANT1-5825



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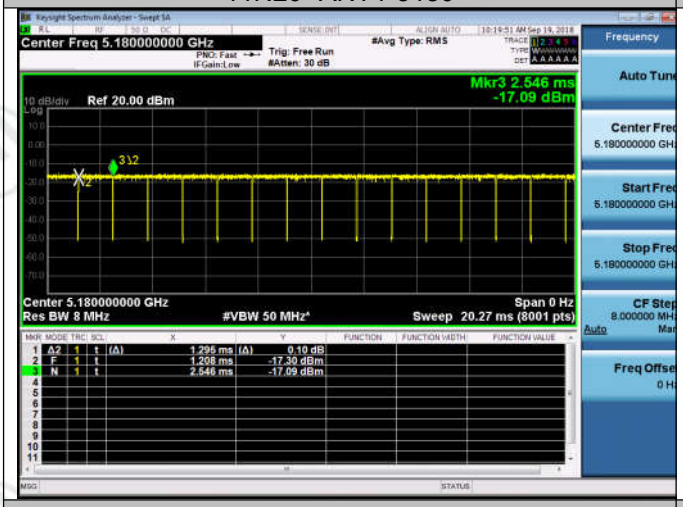	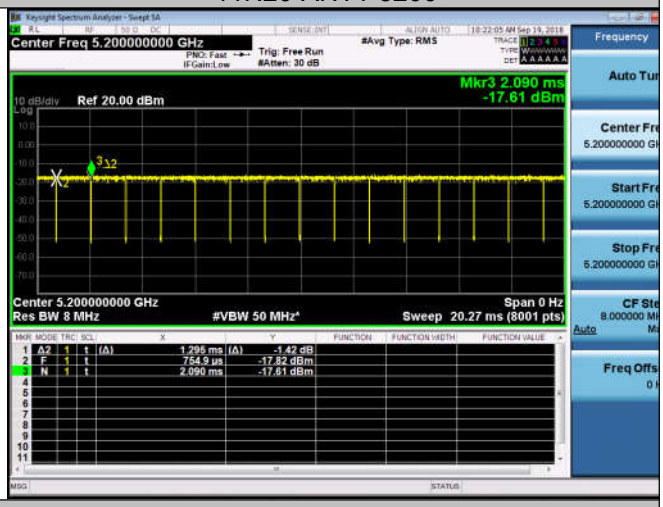
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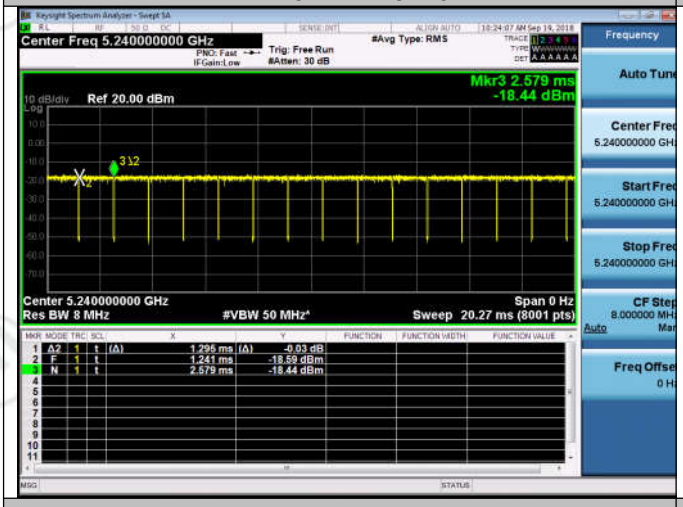	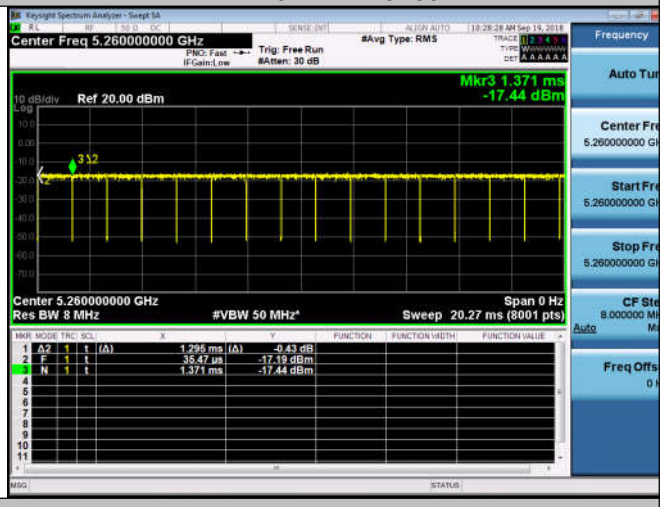
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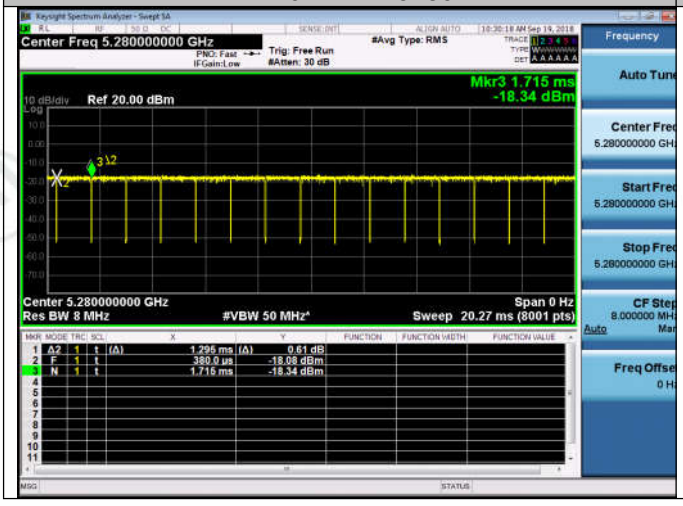
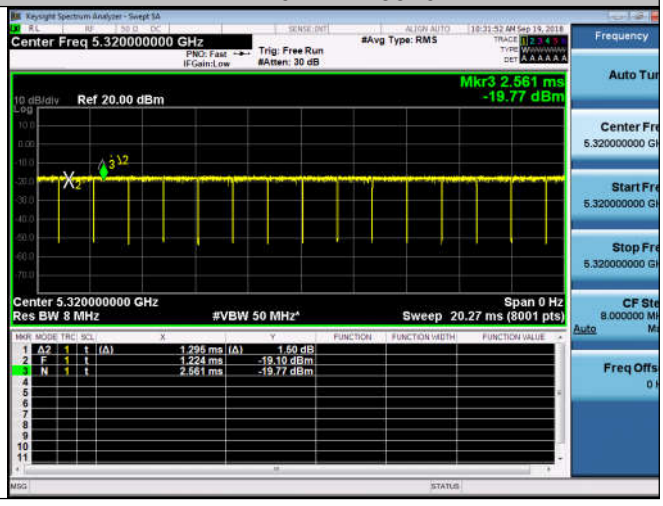
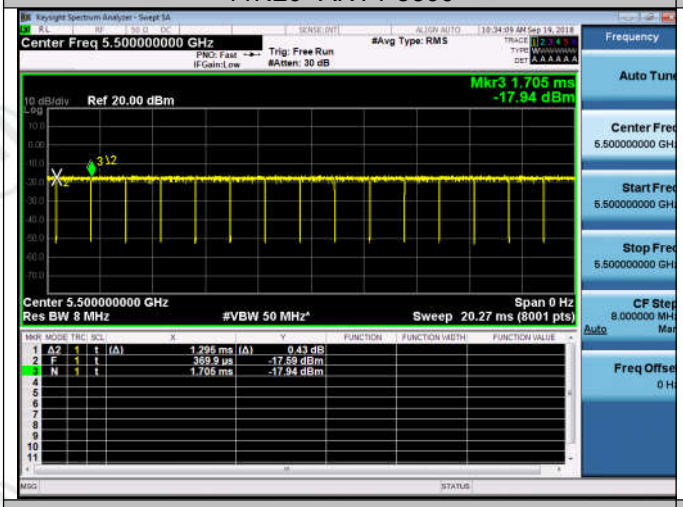
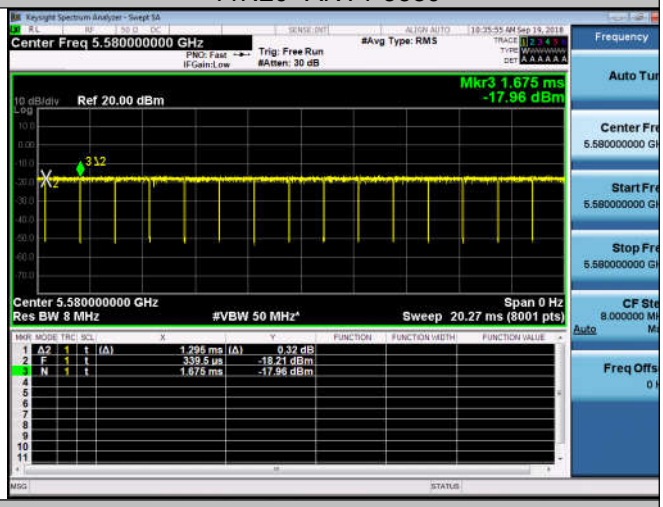
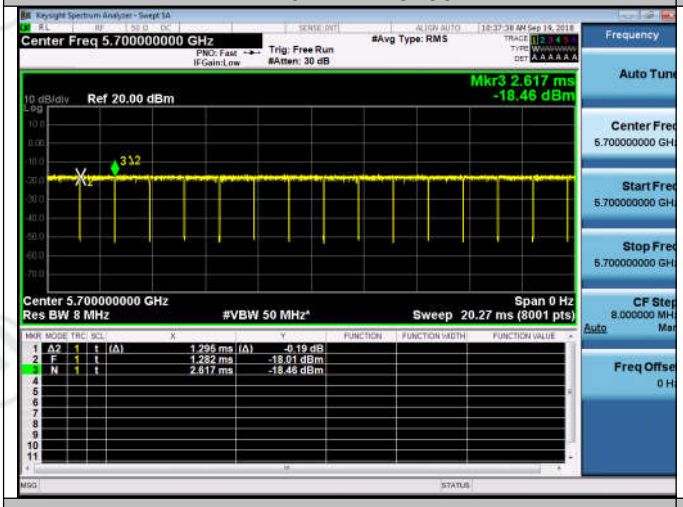
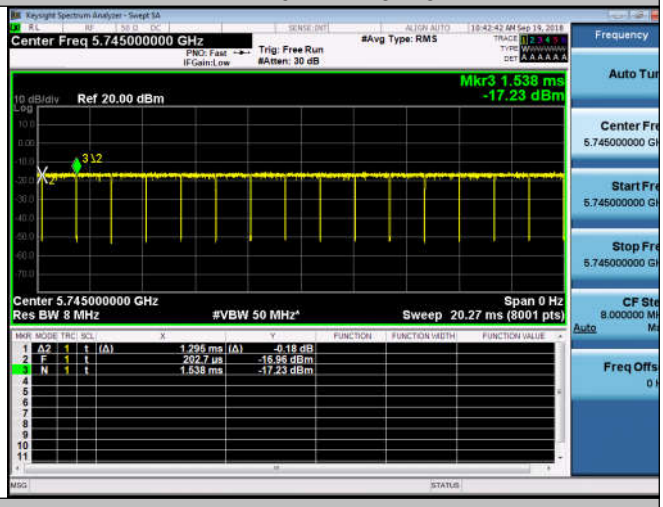
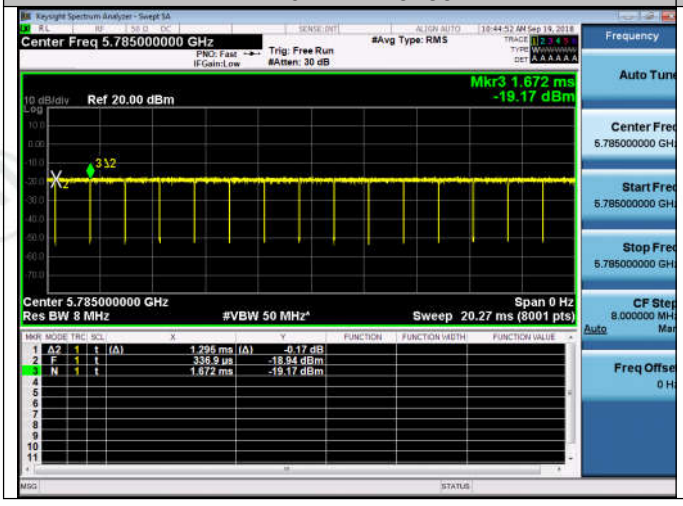
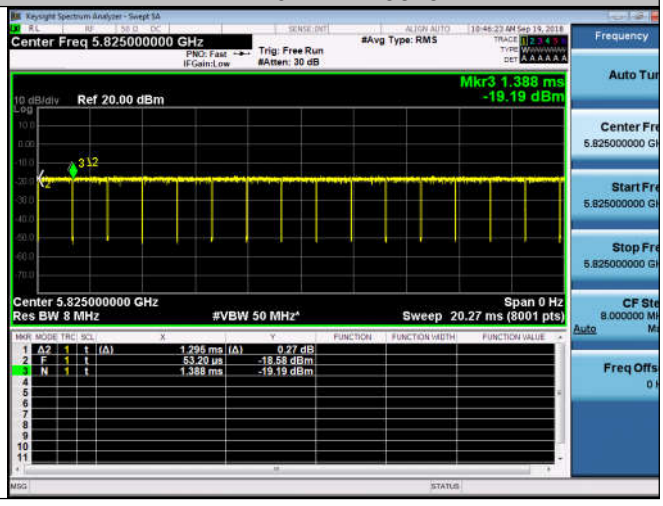
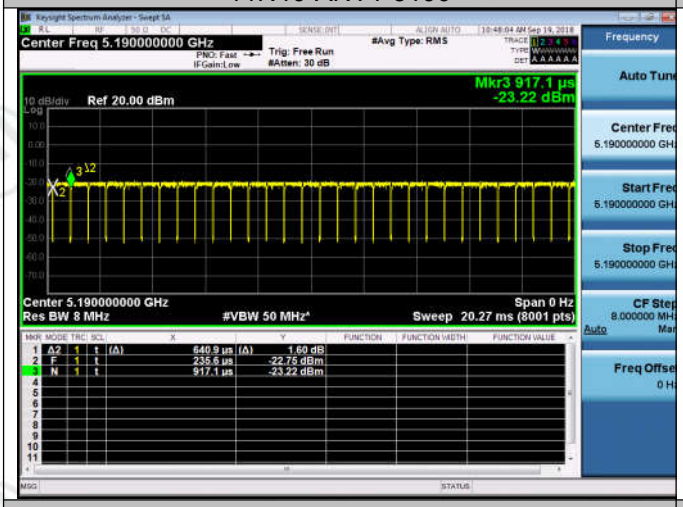
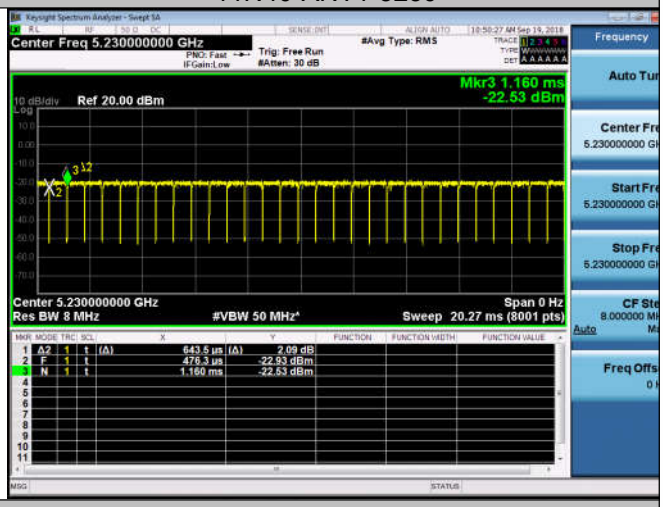
	

11N20 -ANT1-5500	11N20 -ANT1-5580
	
11N20 -ANT1-5700	11N20-ANT1-5745
	
11N20 -ANT1-5785	11N20 -ANT1-5825
	

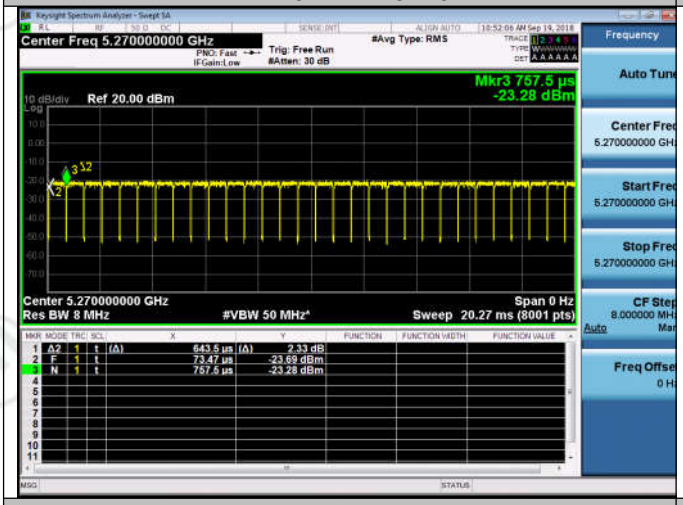
11N40-ANT1-5190



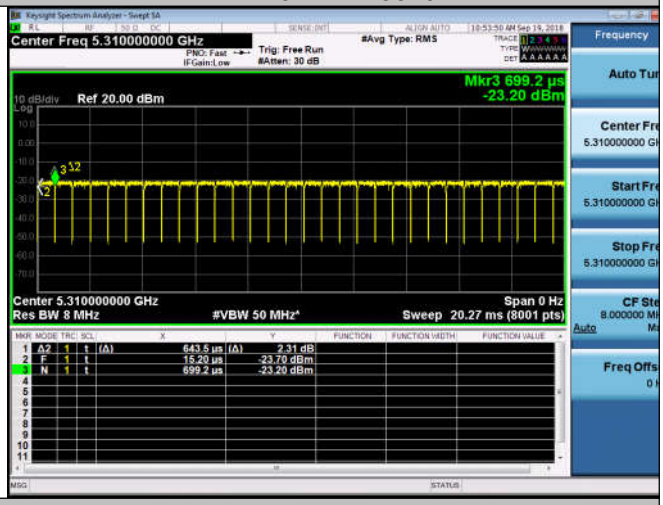
11N40-ANT1-5230



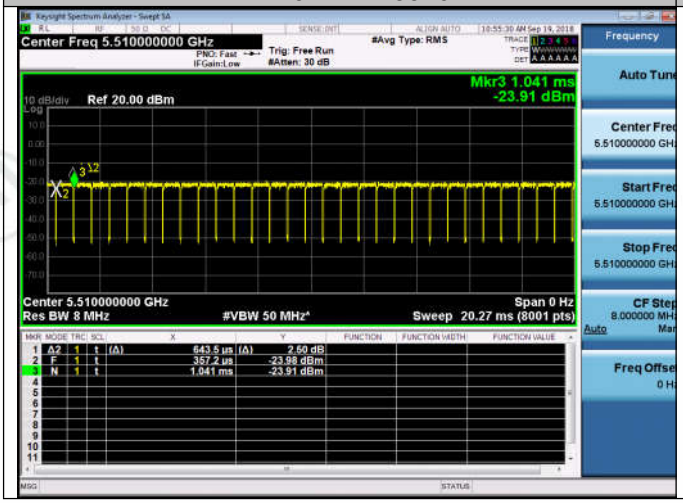
11N40-ANT1-5270



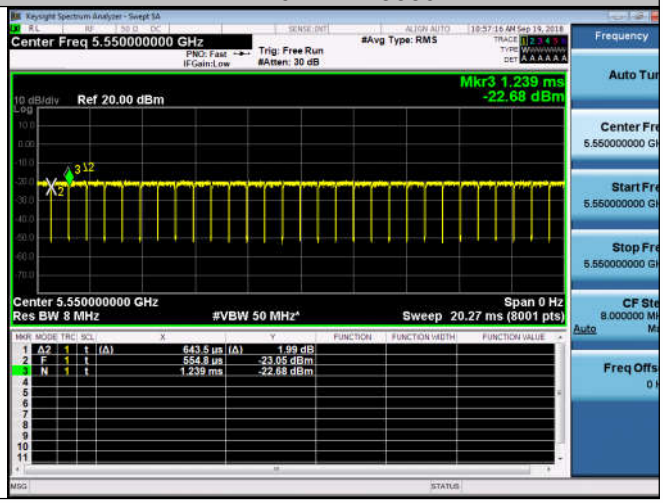
11N40-ANT1-5310

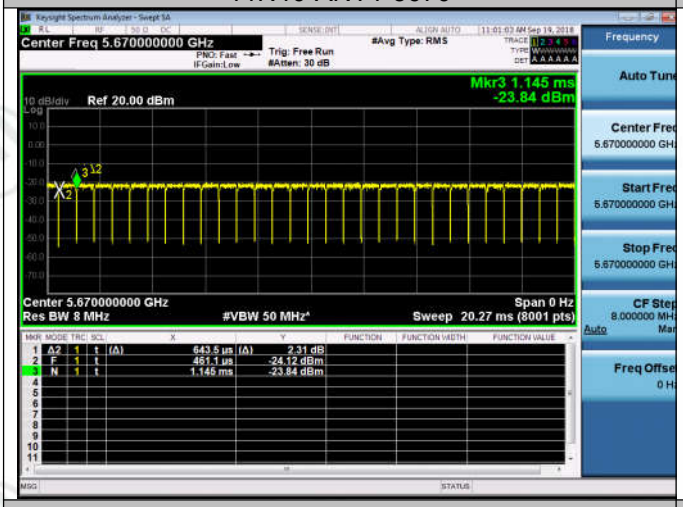
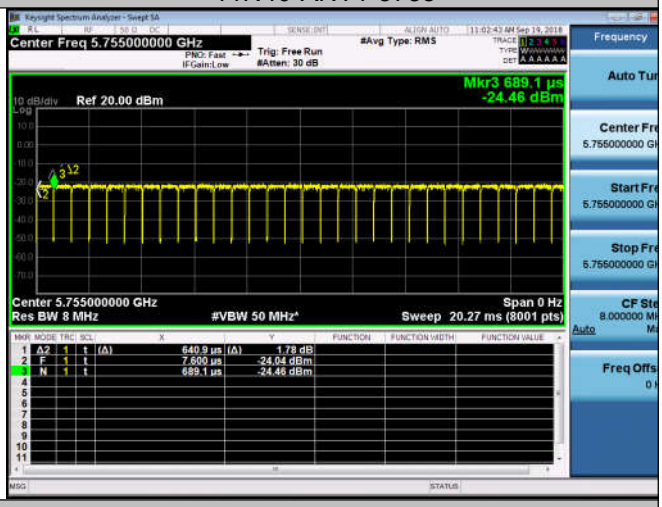
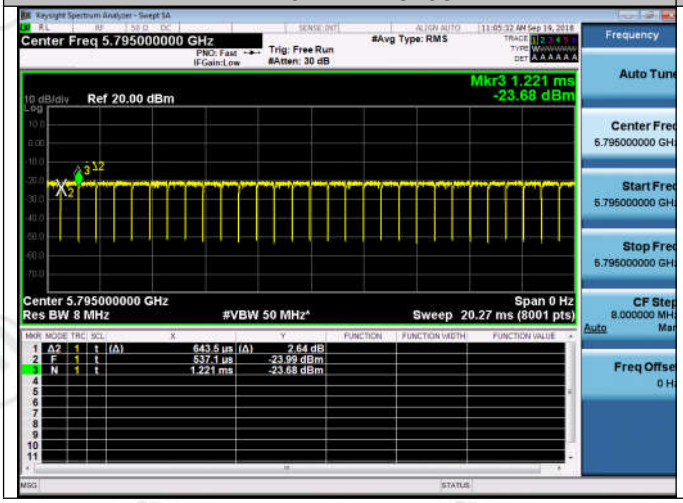


11N40-ANT1-5510



11N40-ANT1-5550



11N40-ANT1-5670	11N40-ANT1-5755
	
11N40 -ANT1-5795	--
	--

Appendix B): Emission Bandwidth

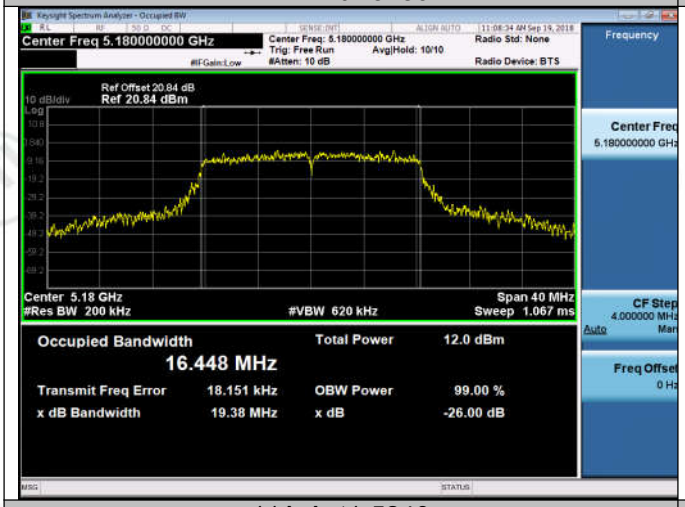
Result Table

Test Mode	Antenna	Channel	EBW[MHz]	OBW[MHz]	Verdict
11A	Ant1	5180	19.38	16.448	PASS
11A	Ant1	5200	19.20	16.596	PASS
11A	Ant1	5240	19.44	16.579	PASS
11A	Ant1	5260	19.18	16.711	PASS
11A	Ant1	5280	19.18	16.574	PASS
11A	Ant1	5320	19.54	16.575	PASS
11A	Ant1	5500	19.45	16.595	PASS
11A	Ant1	5580	19.19	16.519	PASS
11A	Ant1	5700	19.50	16.621	PASS
11A	Ant1	5745	16.33	16.384	PASS
11A	Ant1	5785	16.30	16.368	PASS
11A	Ant1	5825	16.52	16.462	PASS
11N20SISO	Ant1	5180	19.54	17.581	PASS
11N20SISO	Ant1	5200	19.89	17.707	PASS
11N20SISO	Ant1	5240	19.72	17.690	PASS
11N20SISO	Ant1	5260	19.89	17.734	PASS
11N20SISO	Ant1	5280	19.89	17.728	PASS
11N20SISO	Ant1	5320	19.53	17.720	PASS
11N20SISO	Ant1	5500	19.50	17.728	PASS
11N20SISO	Ant1	5580	19.50	17.661	PASS
11N20SISO	Ant1	5700	19.87	17.732	PASS
11N20SISO	Ant1	5745	17.67	17.575	PASS
11N20SISO	Ant1	5785	17.50	17.656	PASS
11N20SISO	Ant1	5825	17.61	17.641	PASS

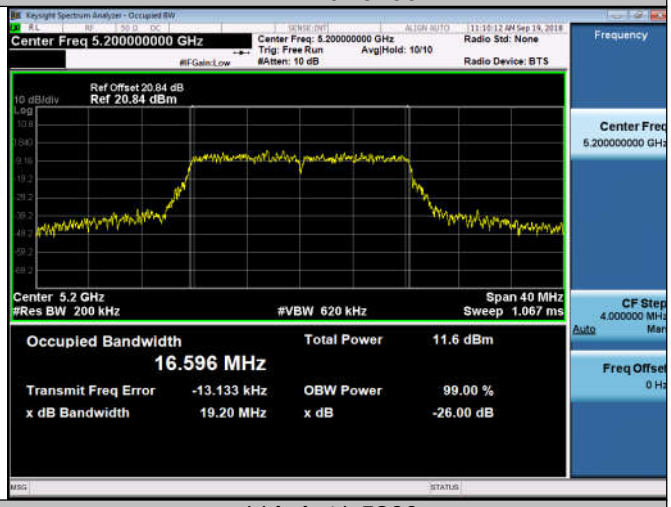
11N40SISO	Ant1	5190	39.81	36.194	PASS
11N40SISO	Ant1	5230	39.32	36.101	PASS
11N40SISO	Ant1	5270	39.72	36.157	PASS
11N40SISO	Ant1	5310	39.49	36.165	PASS
11N40SISO	Ant1	5510	39.33	36.122	PASS
11N40SISO	Ant1	5550	39.10	36.157	PASS
11N40SISO	Ant1	5670	38.98	36.062	PASS
11N40SISO	Ant1	5755	35.81	36.101	PASS
11N40SISO	Ant1	5795	35.15	35.923	PASS

Test Graph

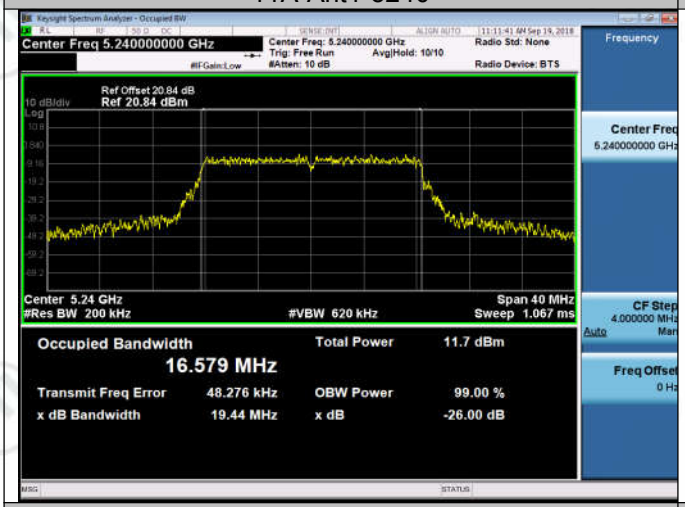
11A-Ant1-5180



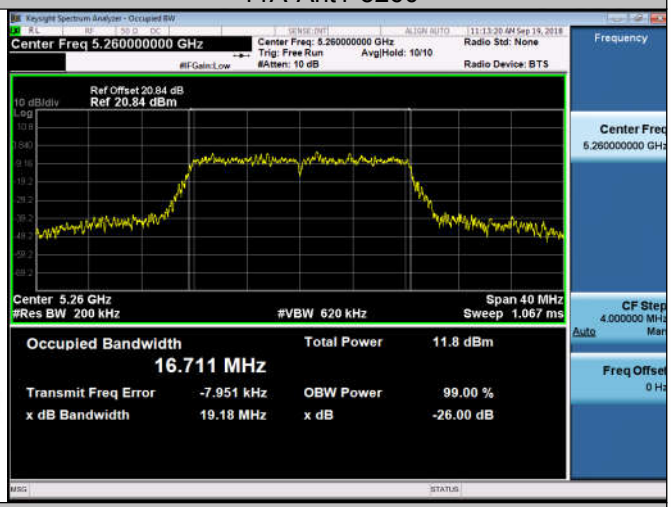
11A-Ant1-5200



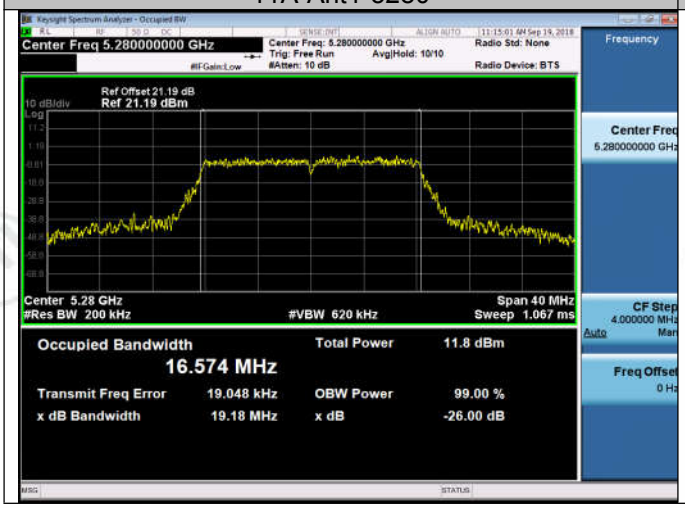
11A-Ant1-5240



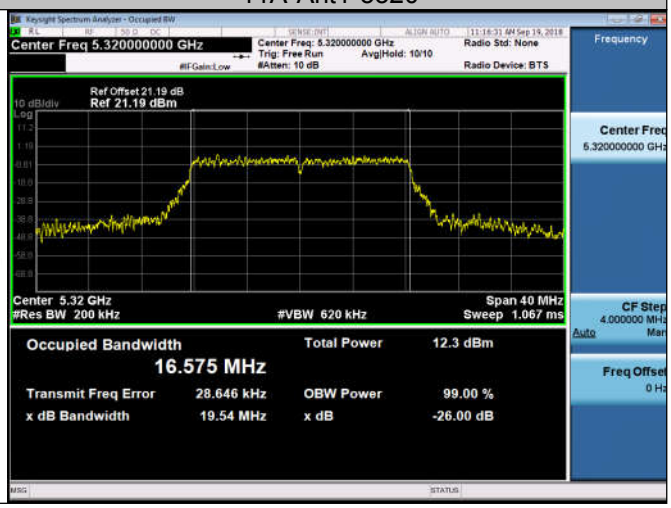
11A-Ant1-5260



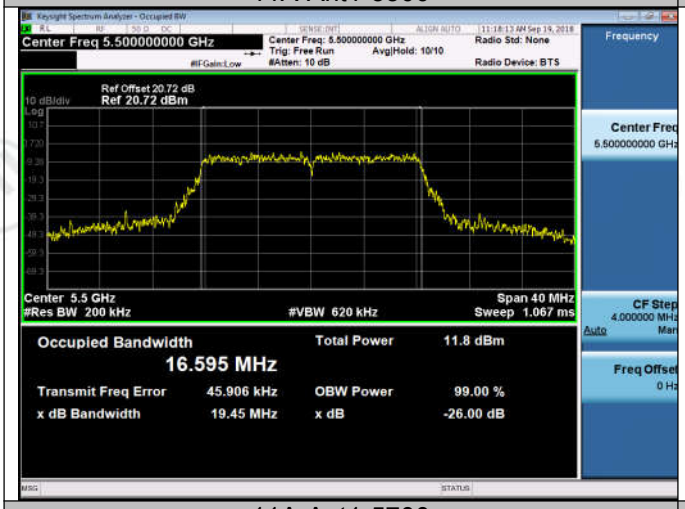
11A-Ant1-5280



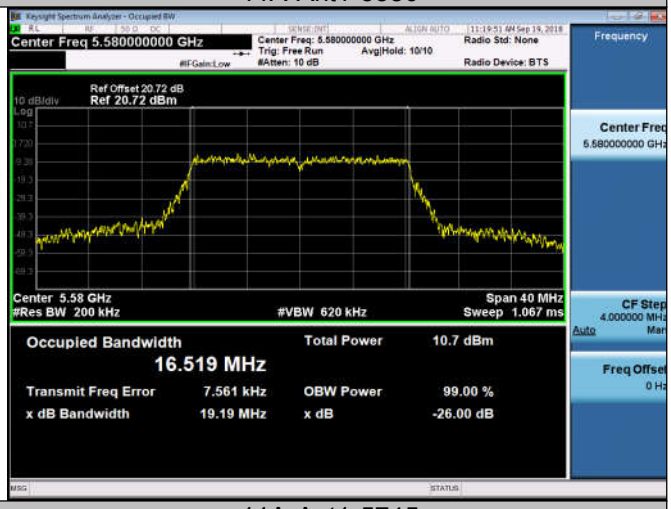
11A-Ant1-5320



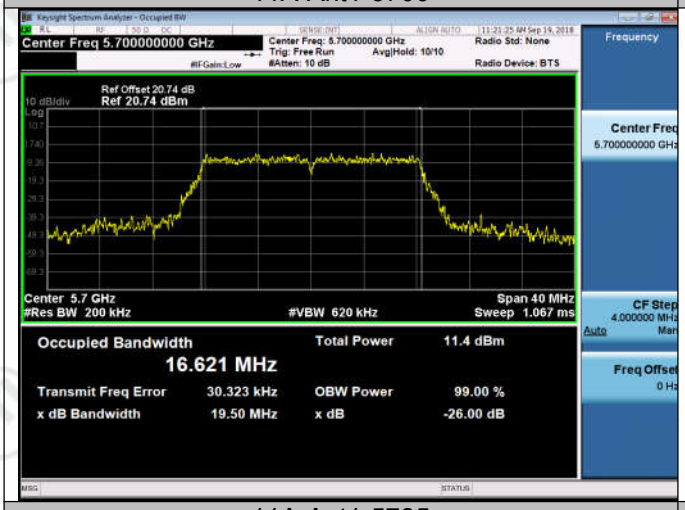
11A-Ant1-5500



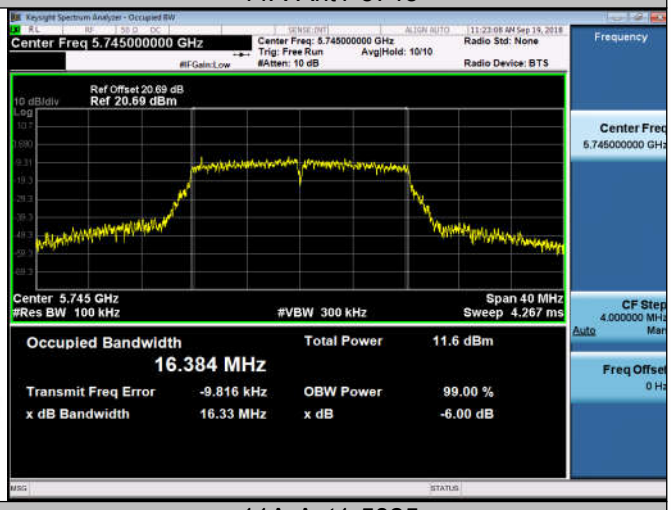
11A-Ant1-5580



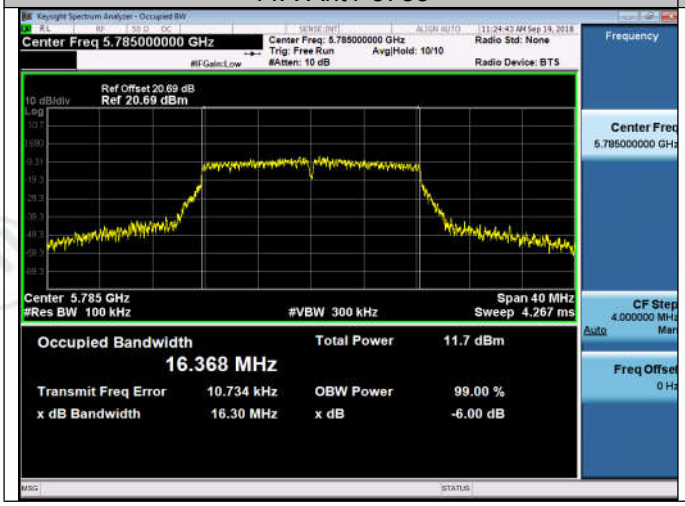
11A-Ant1-5700



11A-Ant1-5745



11A-Ant1-5785



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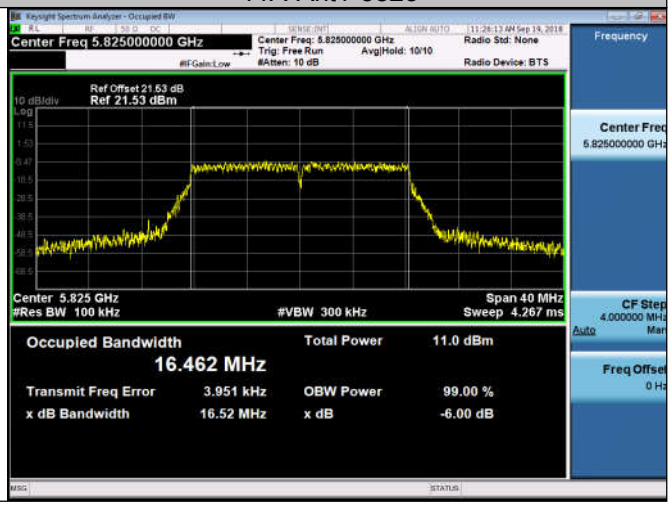

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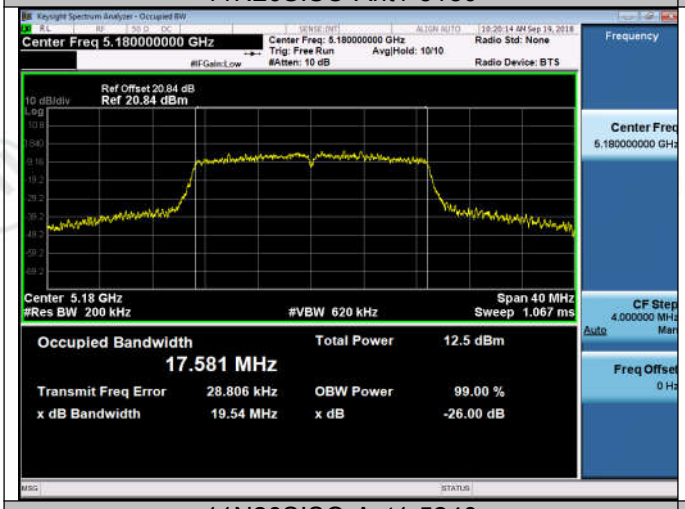
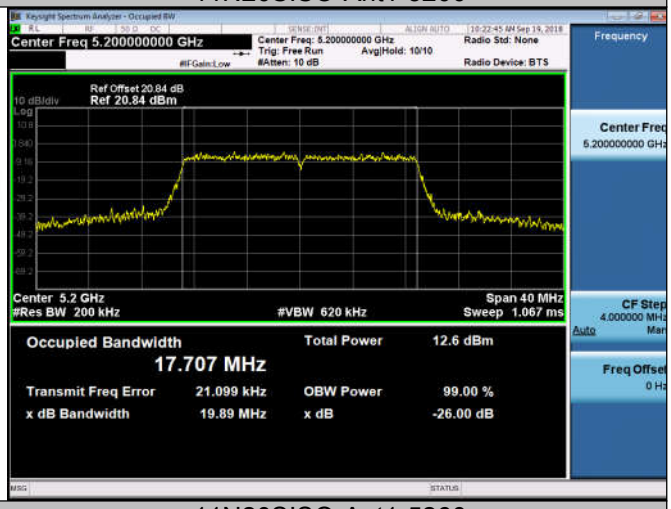
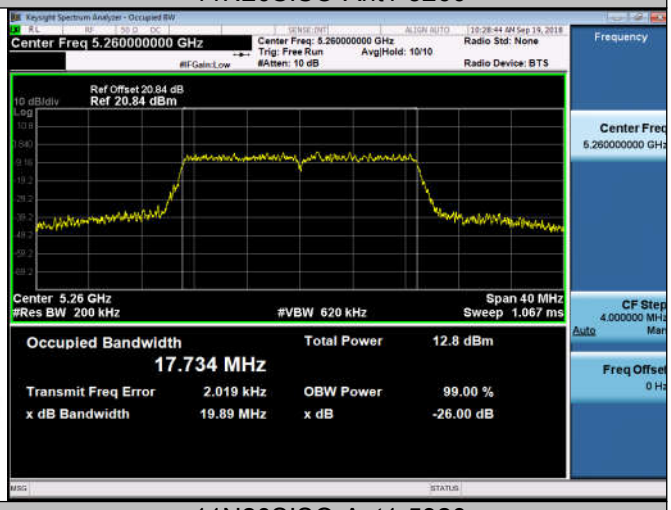


11N20SISO-Ant1-5200

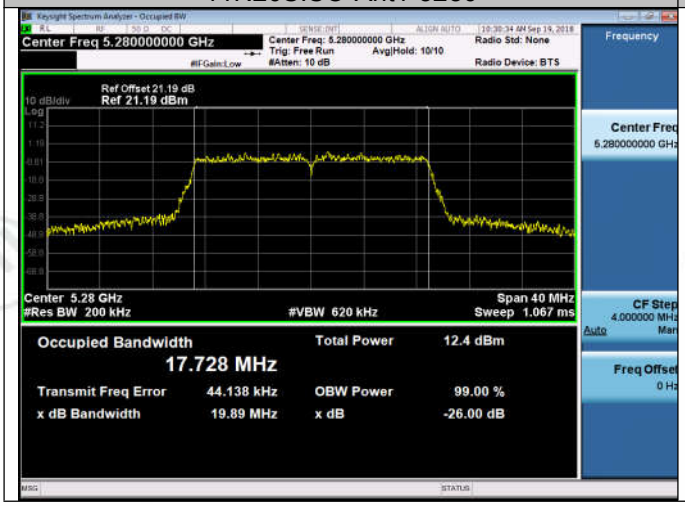


11N20SISO-Ant1-5240

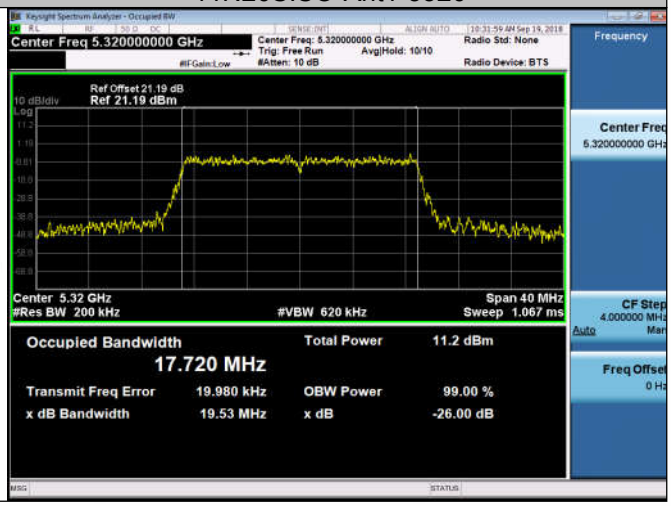
11N20SISO-Ant1-5260



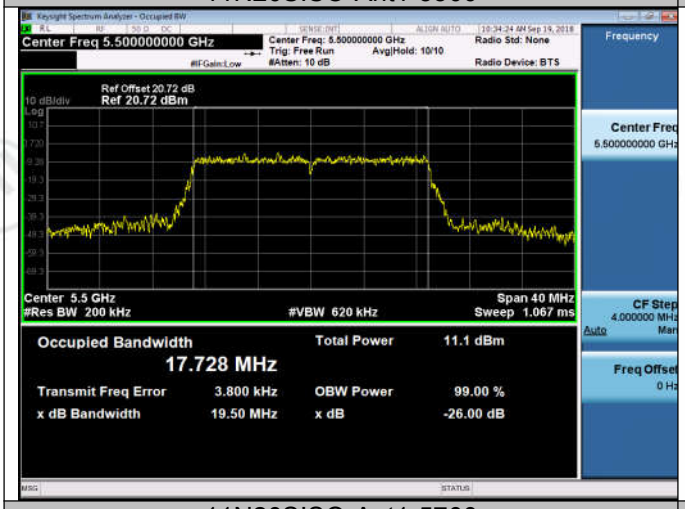
11N20SISO-Ant1-5280



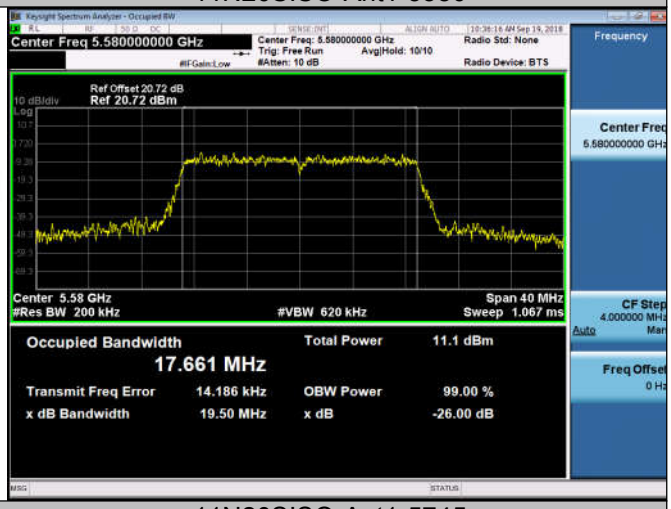
11N20SISO-Ant1-5320



11N20SISO-Ant1-5500



11N20SISO-Ant1-5580



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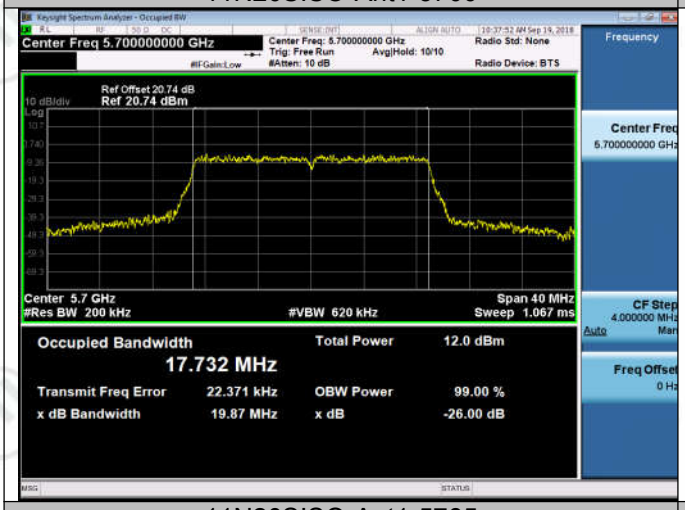

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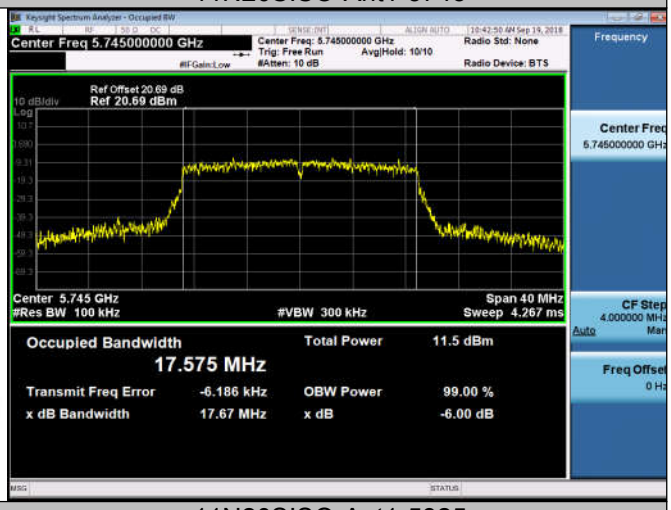
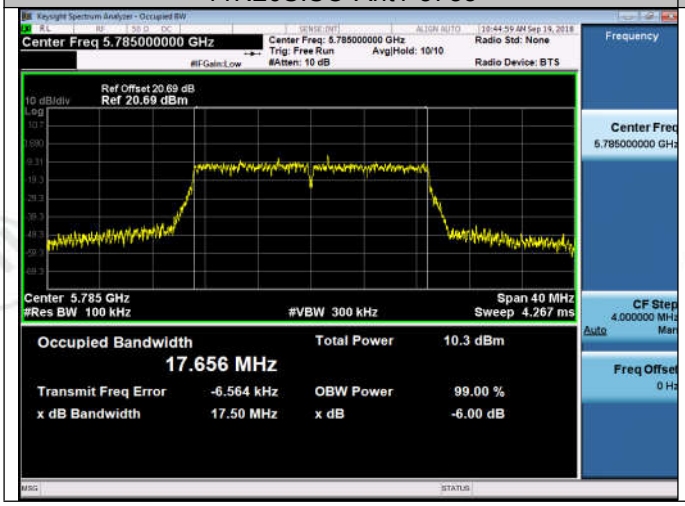
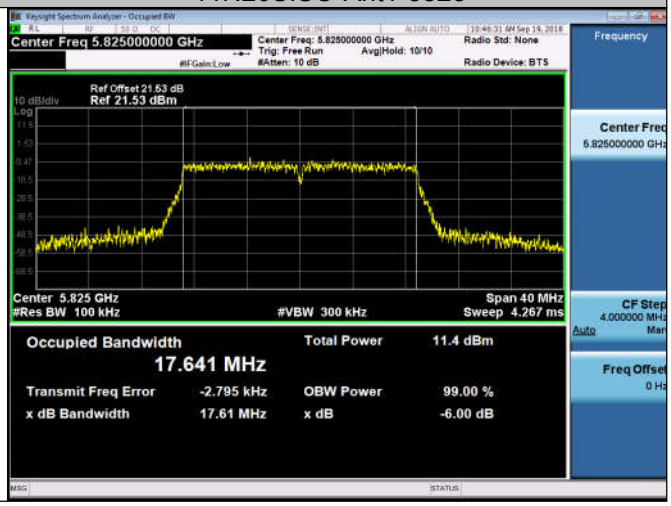
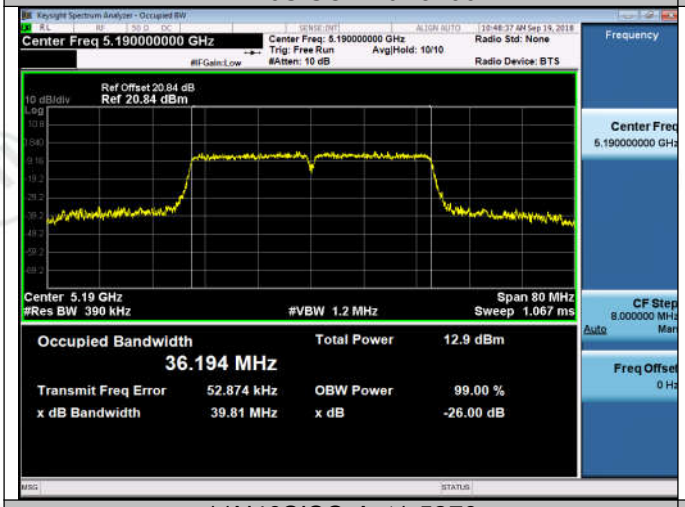
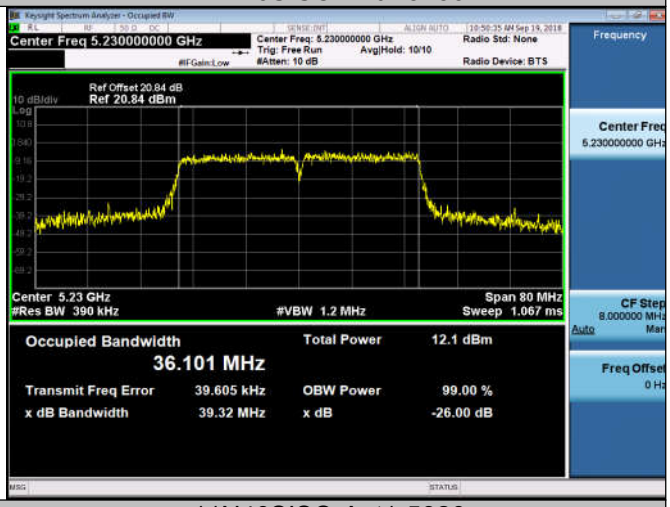
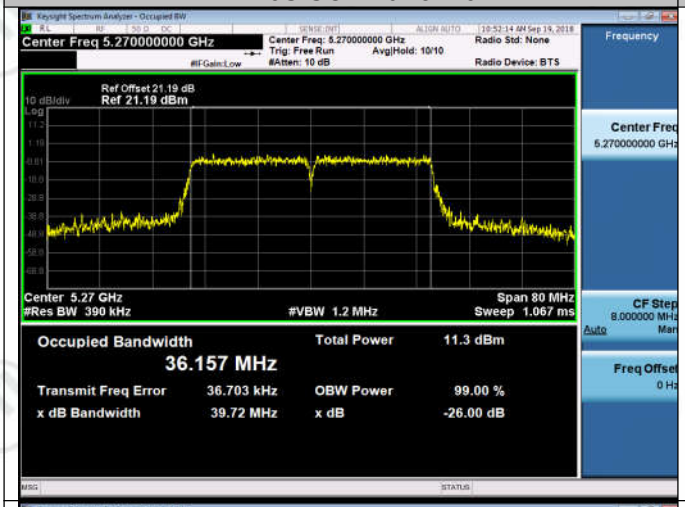
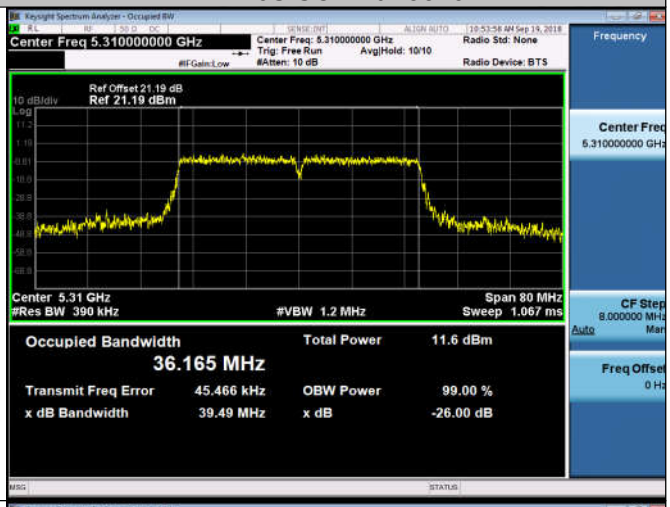
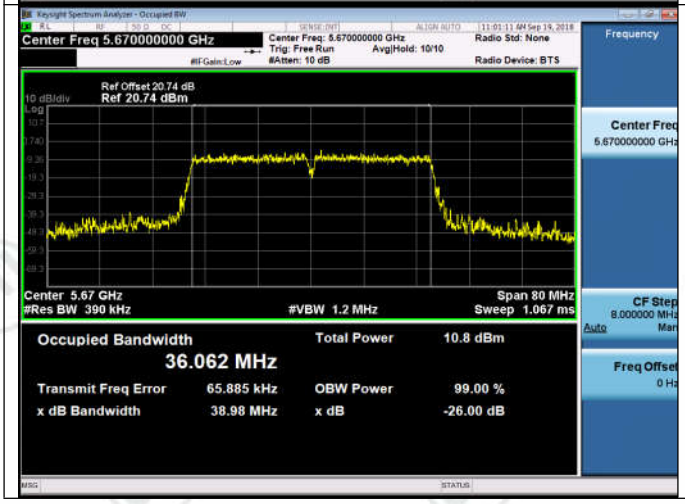
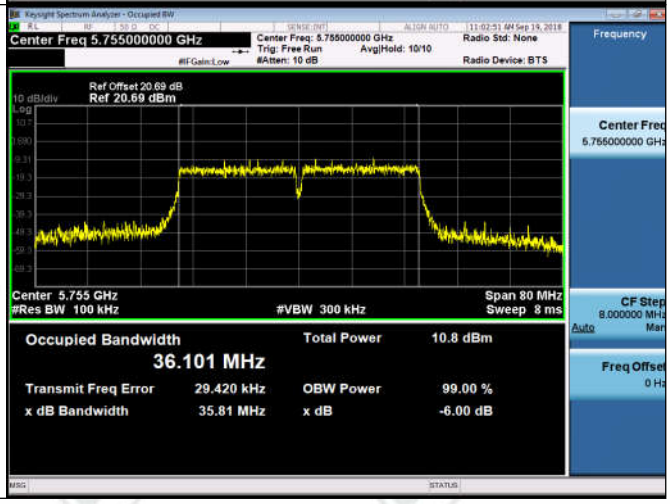


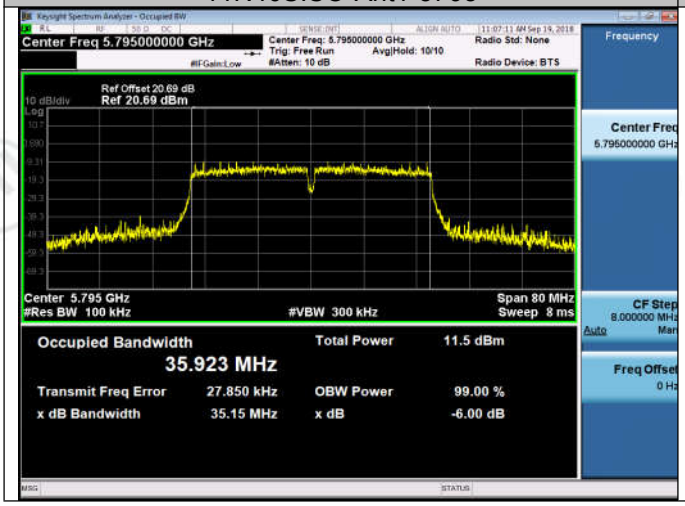
11N20SISO-Ant1-5785



11N20SISO-Ant1-5825



11N40SISO-Ant1-5190	11N40SISO-Ant1-5230
	
11N40SISO-Ant1-5270	**11N40SISO-Ant1-5320**
	
	

11N40SISO-Ant1-5795	N/A
	

Appendix C): Maximum Conduct Output Power

Result Table

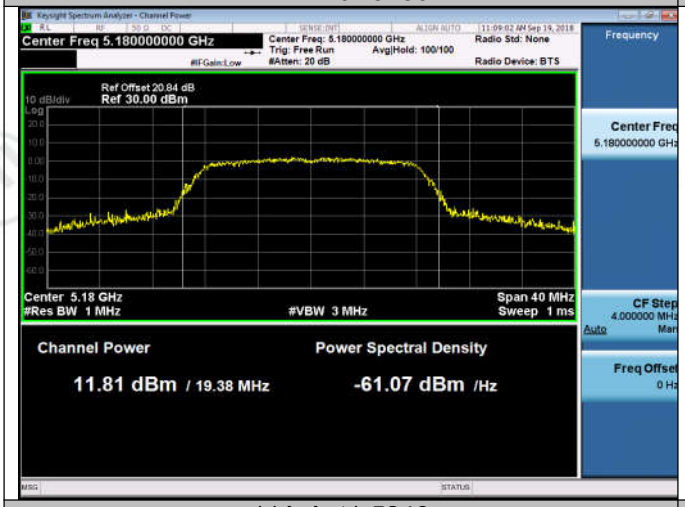
Test Mode	Antenna	Channel	Meas.Level [dBm]	Av.Power [dBm]	Verdict
11A	Ant1	5180	11.81	11.94	PASS
11A	Ant1	5200	11.55	11.68	PASS
11A	Ant1	5240	11.81	11.94	PASS
11A	Ant1	5260	11.81	11.94	PASS
11A	Ant1	5280	12.15	12.28	PASS
11A	Ant1	5320	12.27	12.4	PASS
11A	Ant1	5500	11.92	12.05	PASS
11A	Ant1	5580	10.93	11.06	PASS
11A	Ant1	5700	11.52	11.65	PASS
11A	Ant1	5745	11.71	11.84	PASS
11A	Ant1	5785	11.95	12.08	PASS
11A	Ant1	5825	11.14	11.27	PASS
11N20SISO	Ant1	5180	11.37	11.51	PASS
11N20SISO	Ant1	5200	11.6	11.73	PASS
11N20SISO	Ant1	5240	11.12	11.26	PASS
11N20SISO	Ant1	5260	11.68	11.81	PASS
11N20SISO	Ant1	5280	11.4	11.53	PASS
11N20SISO	Ant1	5320	11.34	11.48	PASS
11N20SISO	Ant1	5500	11.29	11.42	PASS
11N20SISO	Ant1	5580	11.09	11.22	PASS
11N20SISO	Ant1	5700	11.09	11.22	PASS
11N20SISO	Ant1	5745	11.5	11.63	PASS
11N20SISO	Ant1	5785	10.42	10.55	PASS
11N20SISO	Ant1	5825	11.72	11.85	PASS

11N40SISO	Ant1	5190	11.87	12.14	PASS
11N40SISO	Ant1	5230	12.08	12.35	PASS
11N40SISO	Ant1	5270	11.49	11.76	PASS
11N40SISO	Ant1	5310	11.51	11.78	PASS
11N40SISO	Ant1	5510	11.19	11.46	PASS
11N40SISO	Ant1	5550	11.82	12.09	PASS
11N40SISO	Ant1	5670	10.8	11.07	PASS
11N40SISO	Ant1	5755	10.62	10.89	PASS
11N40SISO	Ant1	5795	10.62	10.89	PASS

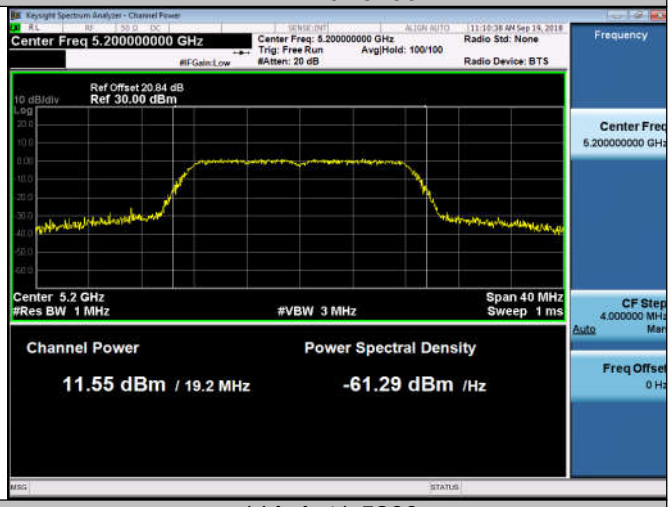
Remark:
1. According KDB789033 D02, If continuous transmission cannot be achieved the 10 log (1/duty cycle) should be add.
Av.Power=Meas.Level+10 log (1/duty cycle)
E.i.r.p=Av.Power+G, G = antenna gain in dBi.
2. Duty Cycle value in report Appendix A, Meas.Level value in report Appendix C,
For band 1, MCS0 mode, 802.11a channel 36:5180MHz, Duty Cycle value is 97.16%=0.9716, Meas.Level value is 10.6dBm, Av.Power=11.94+10 log (1/0.9716) =12.06dBm. E.i.r.p=12.06+0.43=12.49dBm.

Test Graph

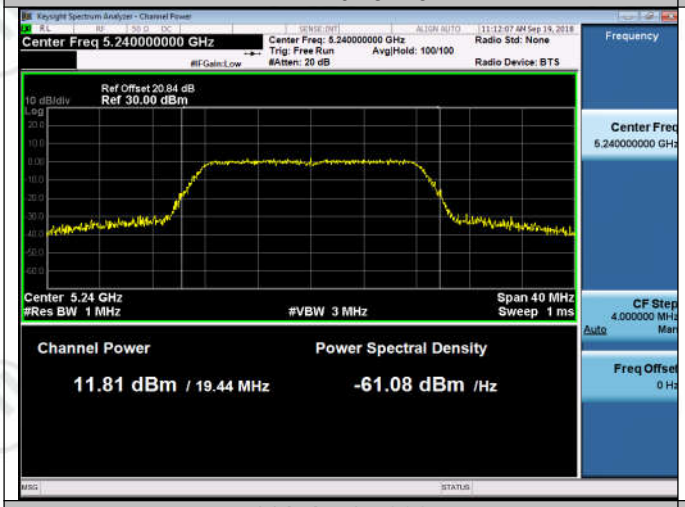
11A-Ant1-5180



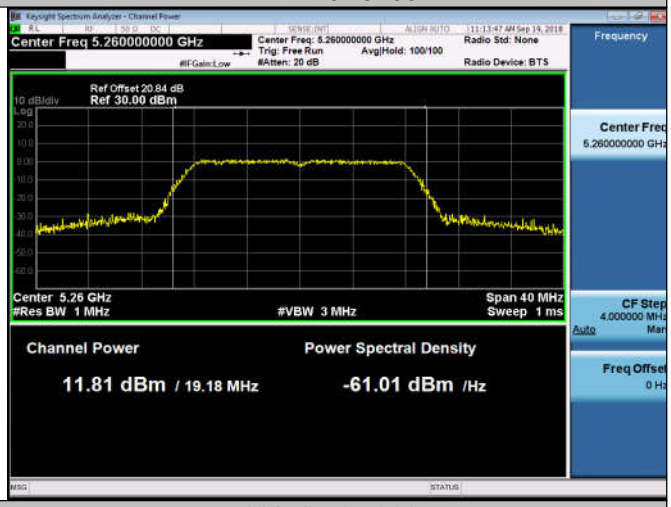
11A-Ant1-5200



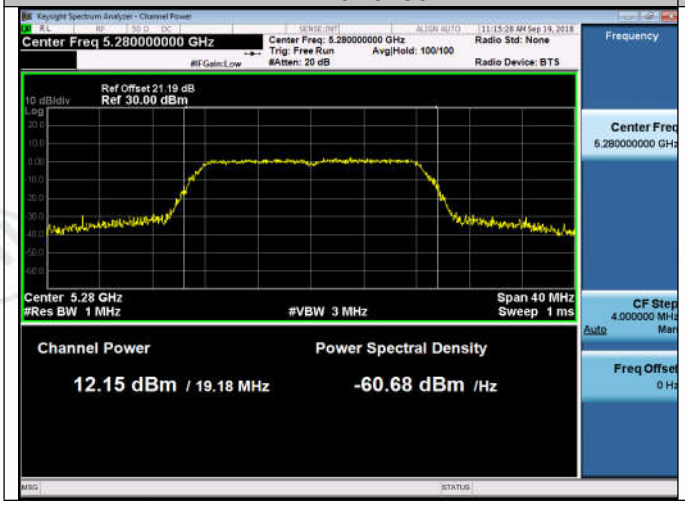
11A-Ant1-5240



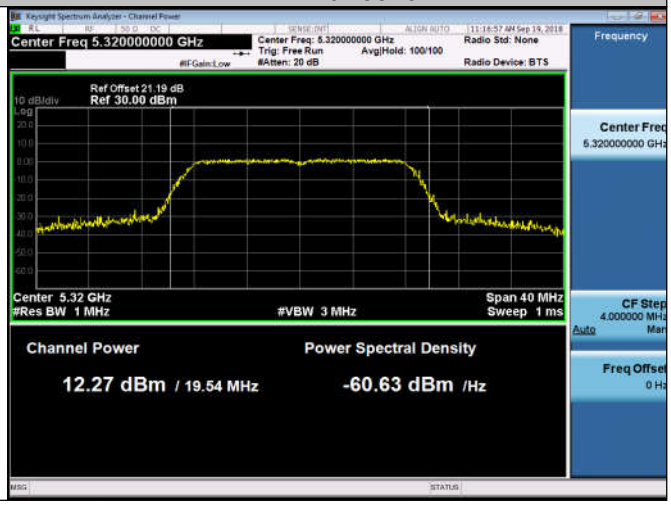
11A-Ant1-5260



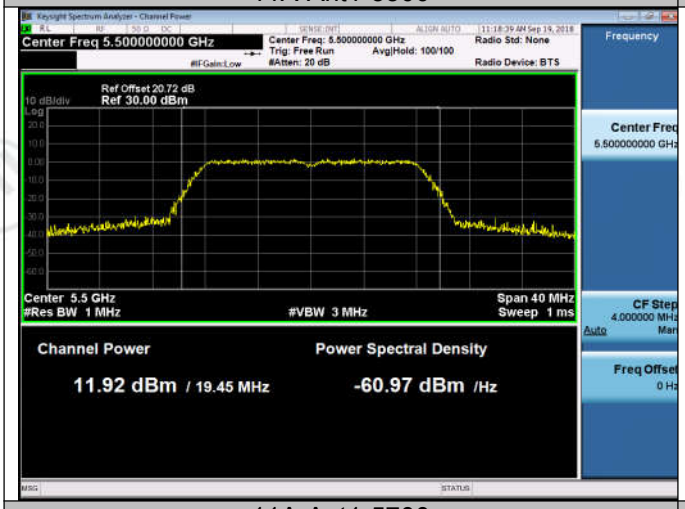
11A-Ant1-5280



11A-Ant1-5320



11A-Ant1-5500

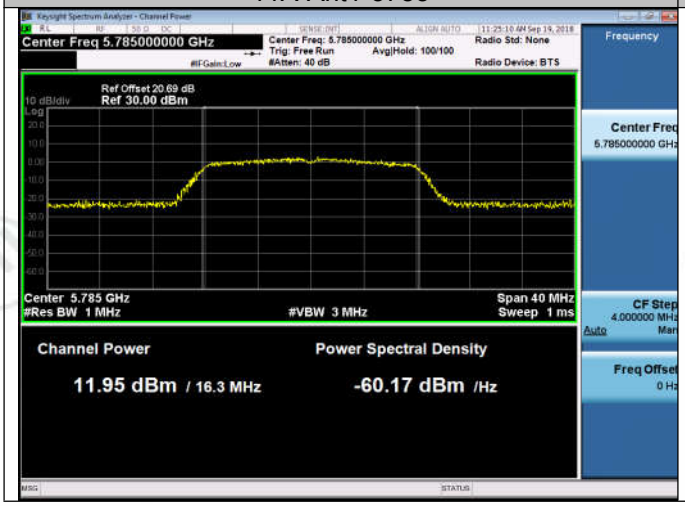


11A-Ant1-5580

11A-Ant1-5700

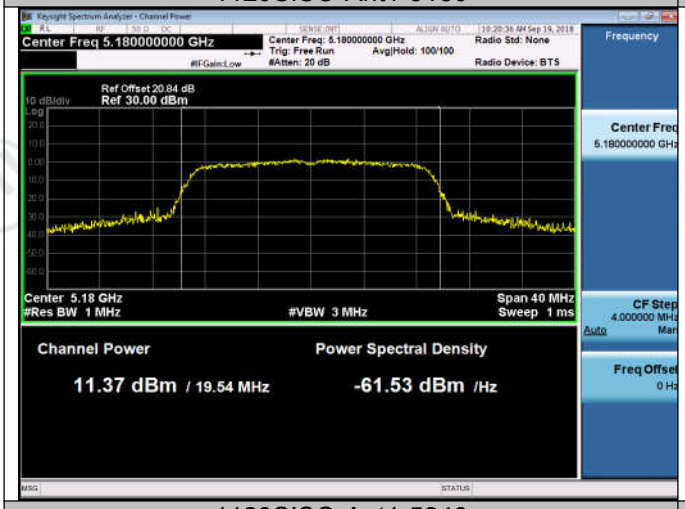
11A-Ant1-5745

11A-Ant1-5785



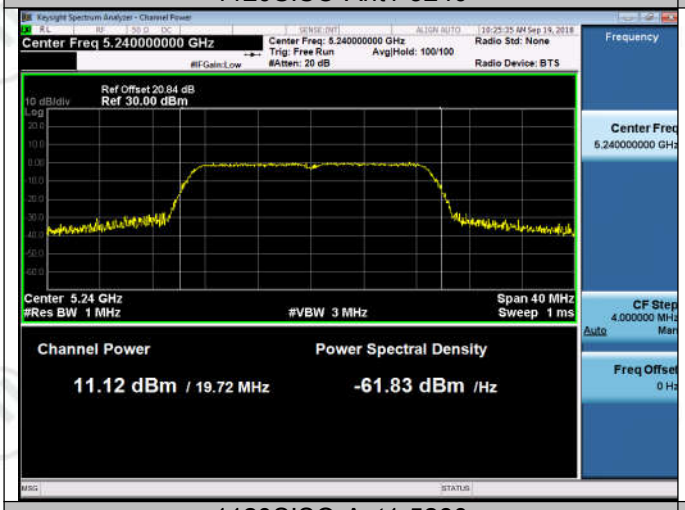
11A-Ant1-5825

1120SISO-Ant1-5180



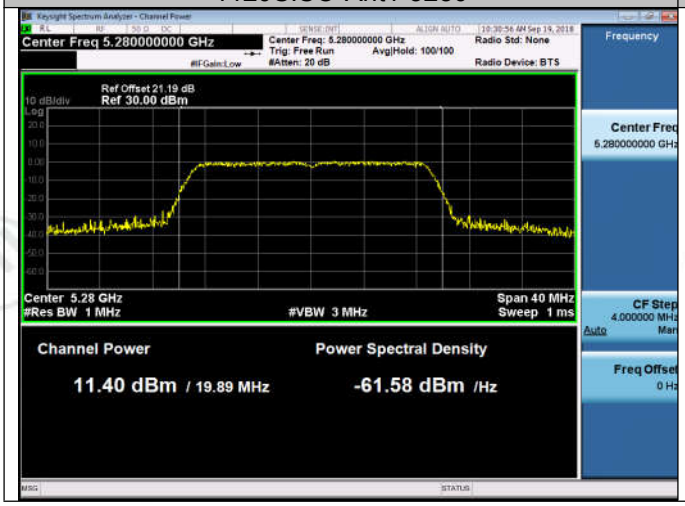
1120SISO-Ant1-5200

1120SISO-Ant1-5240

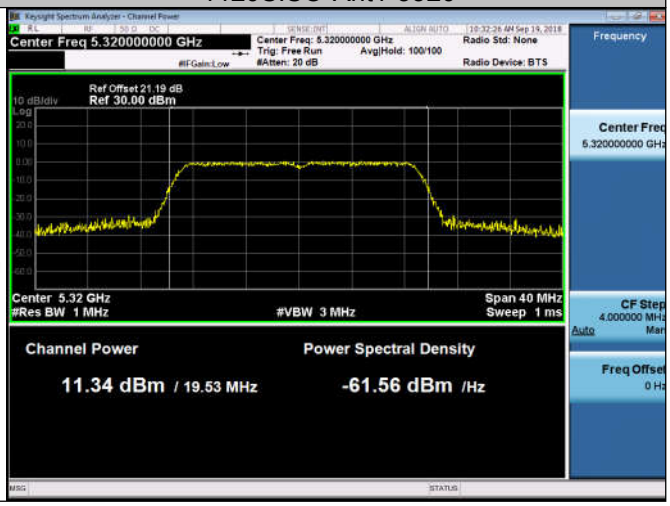


1120SISO-Ant1-5260

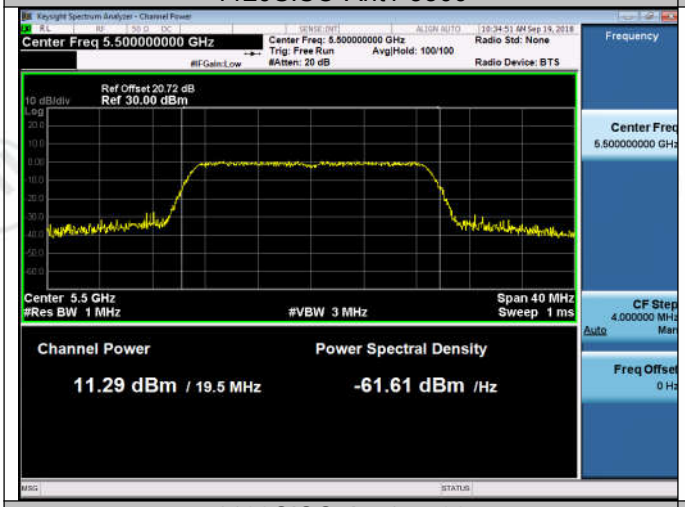
1120SISO-Ant1-5280



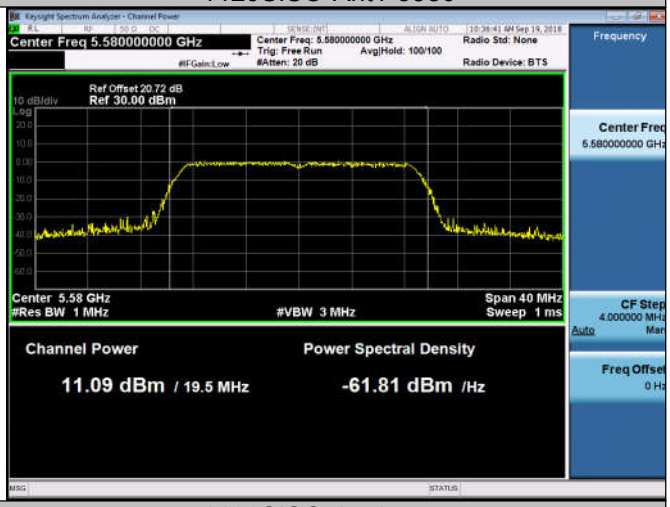
1120SISO-Ant1-5320



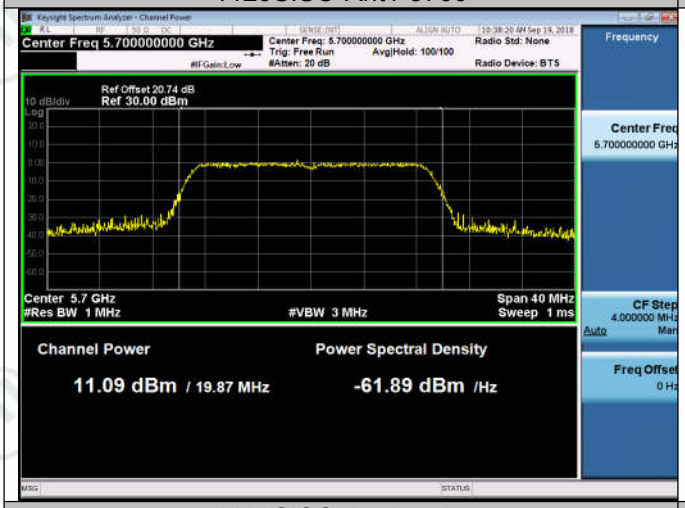
1120SISO-Ant1-5500



1120SISO-Ant1-5580

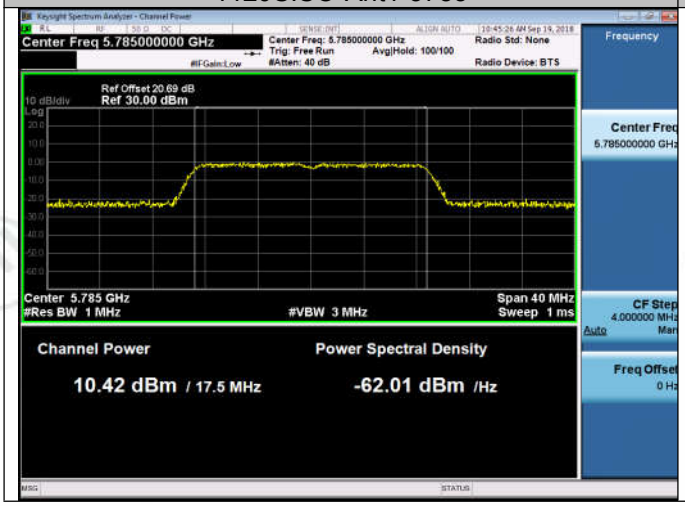


1120SISO-Ant1-5700

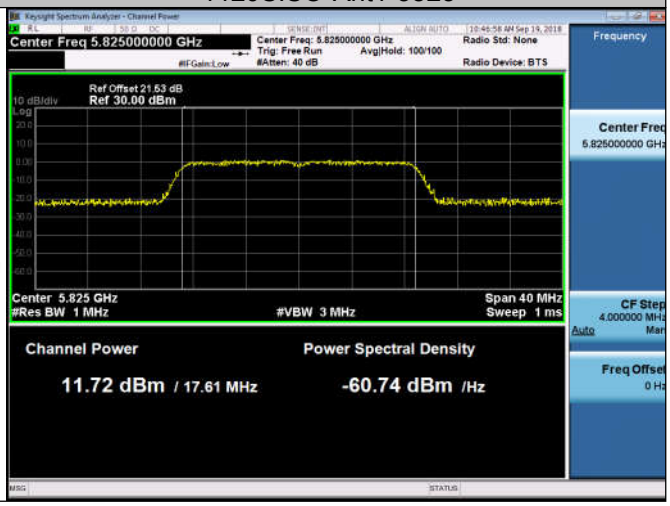


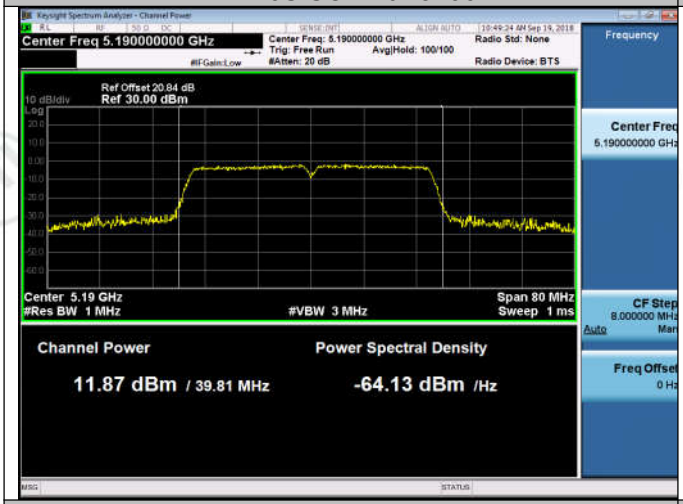
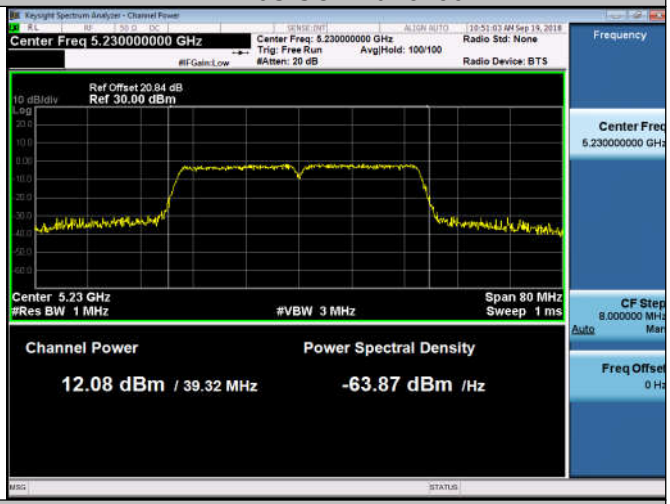
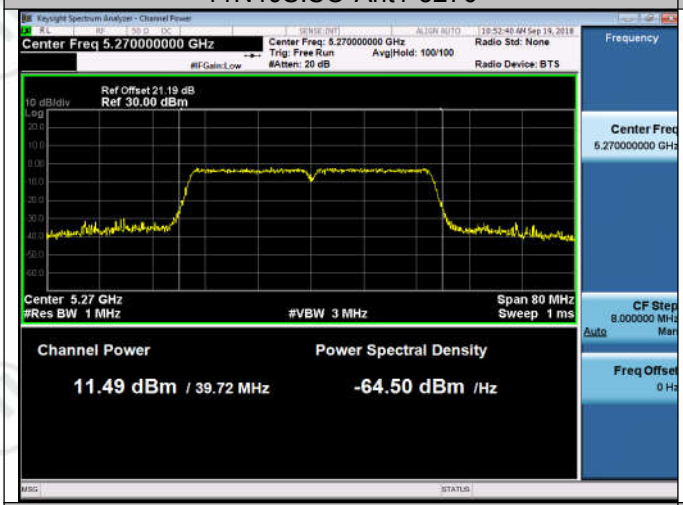
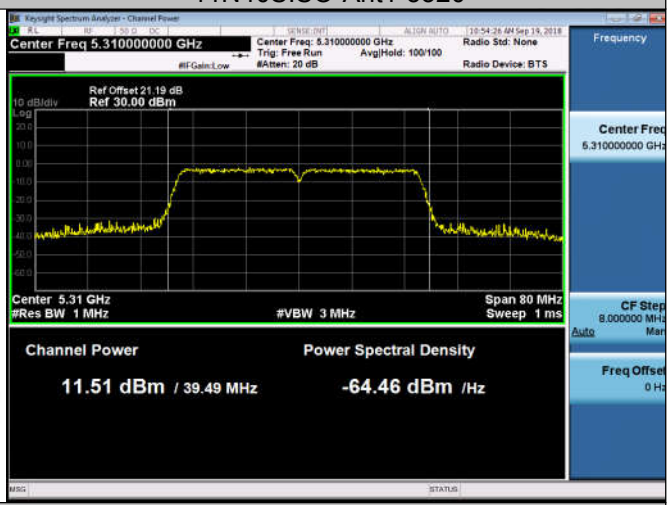
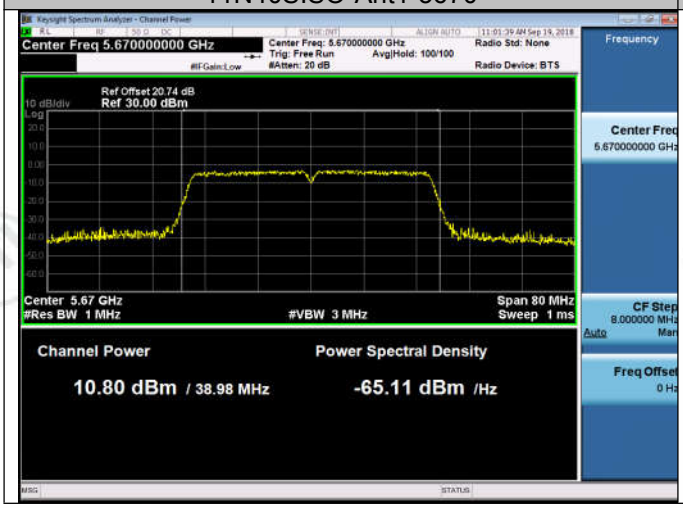
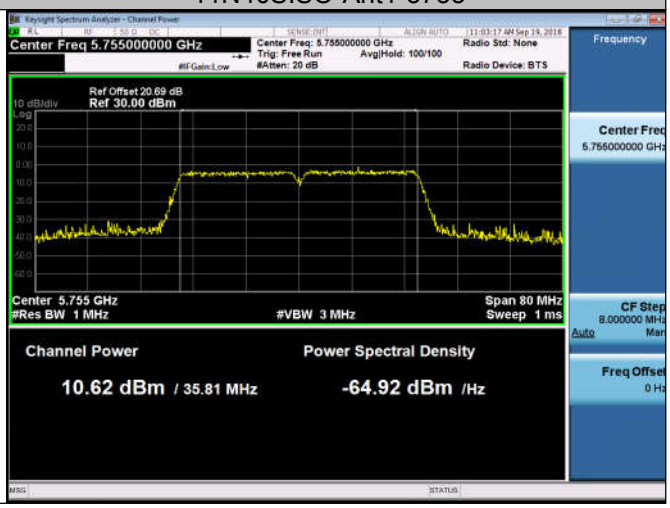
1120SISO-Ant1-5745

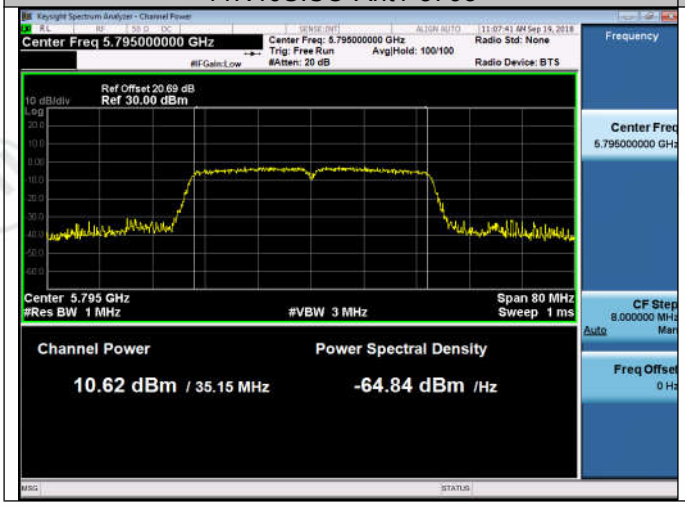
1120SISO-Ant1-5785



1120SISO-Ant1-5825



11N40SISO-Ant1-5190	11N40SISO-Ant1-5230
	
11N40SISO-Ant1-5270	11N40SISO-Ant1-5320
	
11N40SISO-Ant1-5670	11N40SISO-Ant1-5755
	

11N40SISO-Ant1-5795	N/A
	

Appendix D): Power Spectral Density

Result Table

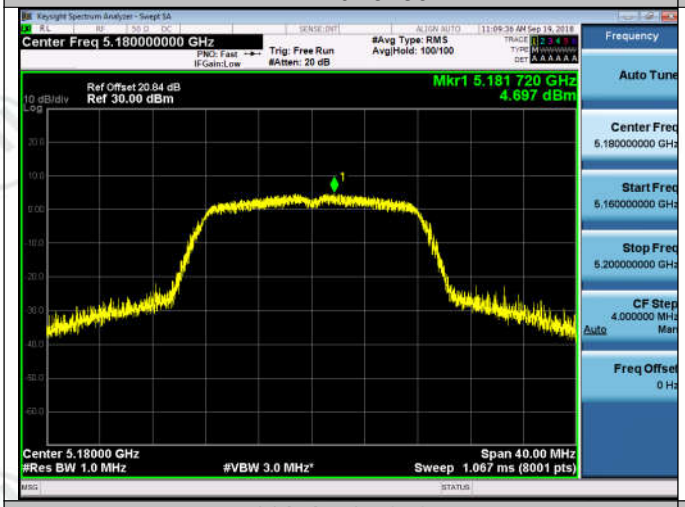
Test Mode	Antenna	Channel	Meas.Level [dBm]	PSD [dBm/MHz]	Verdict
11A	Ant1	5180	4.70	4.82	PASS
11A	Ant1	5200	3.68	3.82	PASS
11A	Ant1	5240	4.39	4.52	PASS
11A	Ant1	5260	3.78	3.91	PASS
11A	Ant1	5280	4.09	4.22	PASS
11A	Ant1	5320	4.63	4.76	PASS
11A	Ant1	5500	3.86	3.99	PASS
11A	Ant1	5580	3.92	4.05	PASS
11A	Ant1	5700	3.33	3.45	PASS
Test Mode	**Antenna**	**Channel**	**Meas.Level [dBm]**	**PSD [dBm/500kHz]**	**Verdict**
11A	Ant1	5745	2.23	2.36	PASS
11A	Ant1	5785	1.41	1.54	PASS
11A	Ant1	5825	-0.18	-0.06	PASS
Test Mode	**Antenna**	**Channel**	**Meas.Level [dBm]**	**PSD [dBm/MHz]**	**Verdict**
11N20SISO	Ant1	5180	3.96	4.10	PASS
11N20SISO	Ant1	5200	4.00	4.13	PASS
11N20SISO	Ant1	5240	2.74	2.89	PASS
11N20SISO	Ant1	5260	3.97	4.11	PASS
11N20SISO	Ant1	5280	3.31	3.44	PASS
11N20SISO	Ant1	5320	3.65	3.79	PASS
11N20SISO	Ant1	5500	3.28	3.41	PASS
11N20SISO	Ant1	5580	3.17	3.30	PASS
11N20SISO	Ant1	5700	3.09	3.23	PASS
Test Mode	**Antenna**	**Channel**	**Meas.Level [dBm]**	**PSD [dBm/500kHz]**	**Verdict**
11N20SISO	Ant1	5745	1.21	1.34	PASS
11N20SISO	Ant1	5785	0.54	0.67	PASS
11N20SISO	Ant1	5825	0.24	0.38	PASS

Test Mode	Antenna	Channel	Meas.Level [dBm]	PSD [dBm/MHz]	Verdict
11N40SISO	Ant1	5190	0.63	0.89	PASS
11N40SISO	Ant1	5230	1.34	1.61	PASS
11N40SISO	Ant1	5270	0.86	1.12	PASS
11N40SISO	Ant1	5310	1.29	1.56	PASS
11N40SISO	Ant1	5510	0.16	0.43	PASS
11N40SISO	Ant1	5550	0.36	0.63	PASS
11N40SISO	Ant1	5670	-0.20	0.07	PASS
Test Mode	**Antenna**	**Channel**	**Meas.Level [dBm]**	**PSD [dBm/500kHz]**	**Verdict**
11N40SISO	Ant1	5755	-3.70	-3.44	PASS
11N40SISO	Ant1	5795	-3.15	-2.89	PASS

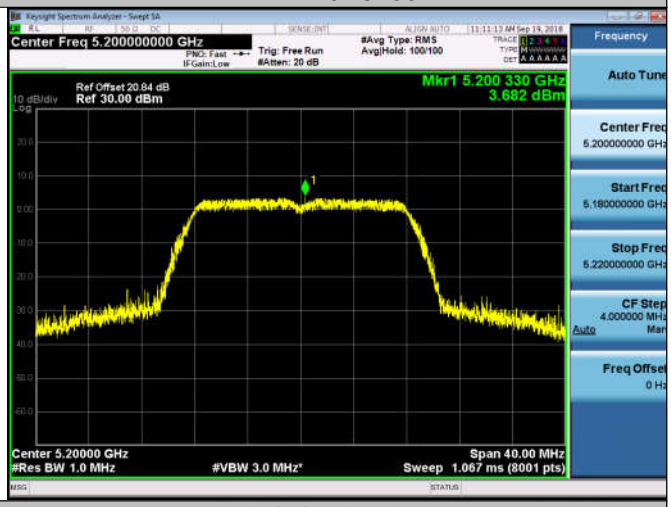
Remark:
1. According KDB789033 D02, If continuous transmission cannot be achieved the 10 log (1/duty cycle) should be add.
PSD=Meas.Level+10 log (1/duty cycle)
E.i.r.p spectral density=PSD+G, G = antenna gain in dBi.
2. Duty Cycle value in report Appendix A, Meas.Level value in report Appendix D,
For band 1, MCS0 mode, 802.11a channel 36:5180MHz, Duty Cycle value is 97.16%=0.9716, Meas.Level value is 4.82 in report Appendix D, PSD=4.82+10 log (1/0.9716)=5.85.
E.i.r.p spectral density=5.85+0.43=6.28.

Test Graph

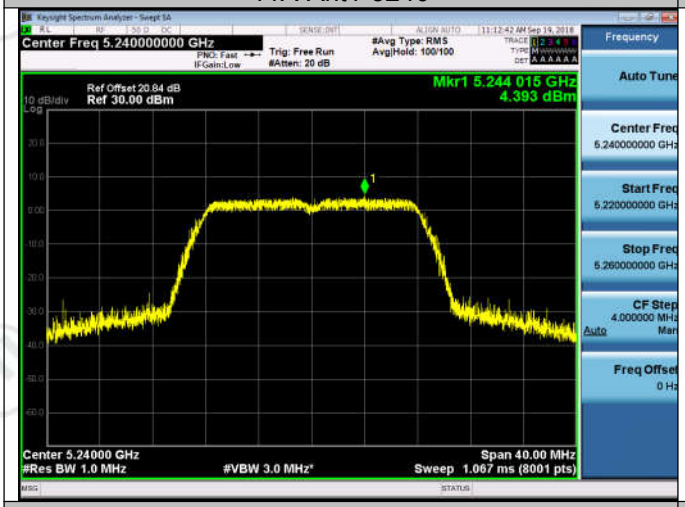
11A-Ant1-5180



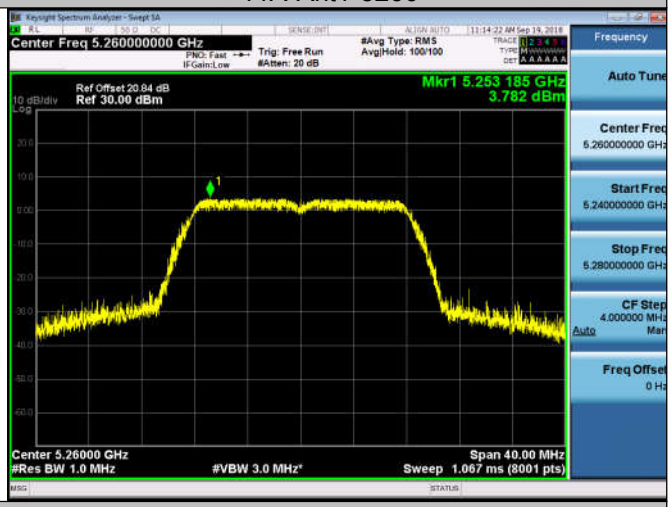
11A-Ant1-5200



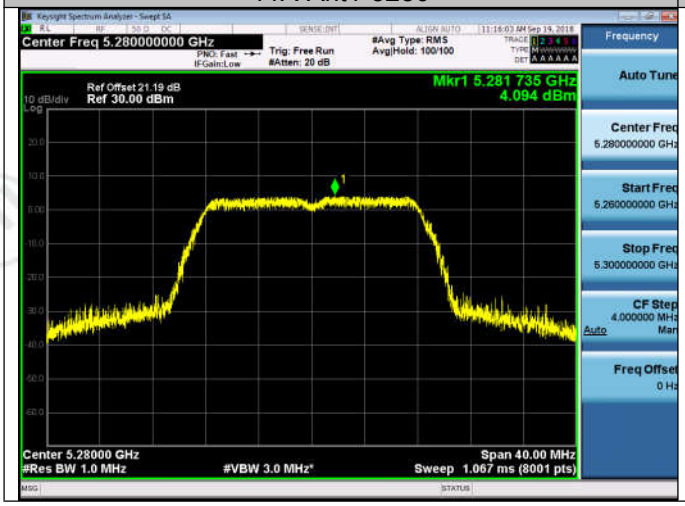
11A-Ant1-5240



11A-Ant1-5260



11A-Ant1-5280



11A-Ant1-5320