TEST REPORT

Product	:	WIFI+BT Module
Trade mark	:	GSD
Model/Type reference	:	WCT1BR2201D, WCT1BR2701T
Serial Number	:	N/A
Report Number	:	EED32K00249904
FCC ID	:	2AC23-WCT1B
Date of Issue	:	Nov. 30, 2018
Test Standards	:	47 CFR Part 15Subpart E
Test result	:	PASS

Prepared for:

Hui Zhou Gaoshengda Technology Co., LTD
No. 75 Zhongkai Development Area Huizhou,Guangdong,China

Prepared by:

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	Tom chen		Kevin yang
Date:	Nov. 30, 2018		Check No.:3096372854

2 Version

Version No.	Date	Description
00	Nov. 30, 2018	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

Model No.: WCT1BR2201D, WCT1BR2701T

Only the model WCT1BR2701T was tested, since the electrical circuit design, layout, components used and internal wiring were identical for the above models, with difference being of the antenna connection.

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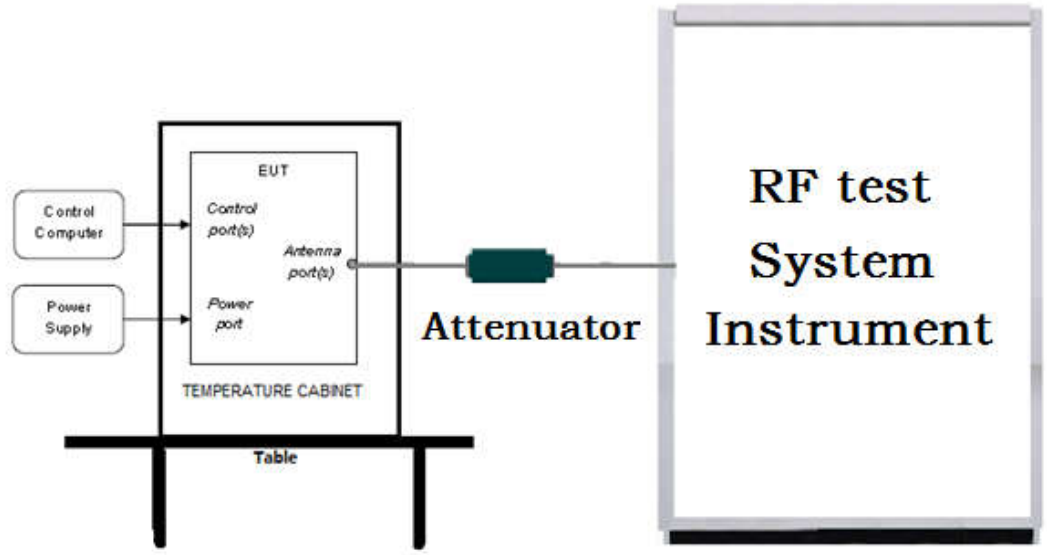
5 Test Requirement

5.1 Test setup

5.1.1 For Conducted test setup



5.1.2 For Radiated Emissions test setup

Radiated Emissions setup:

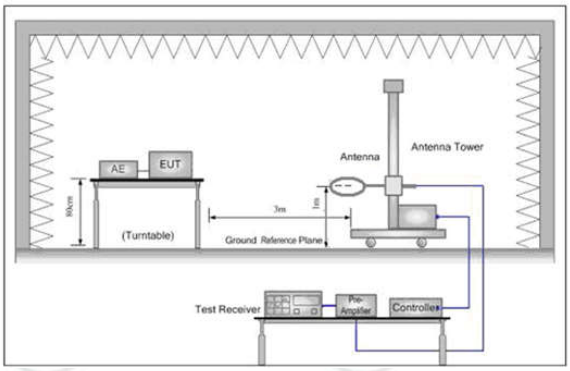


Figure 1. Below 30MHz

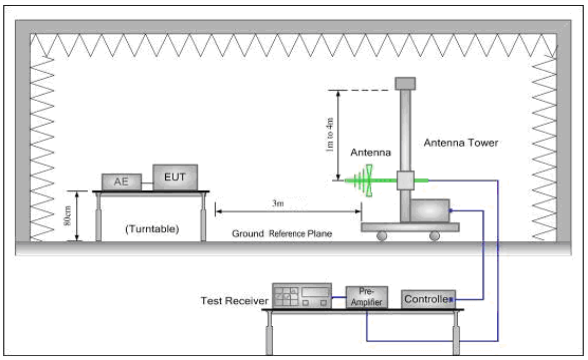


Figure 2. 30MHz to 1GHz

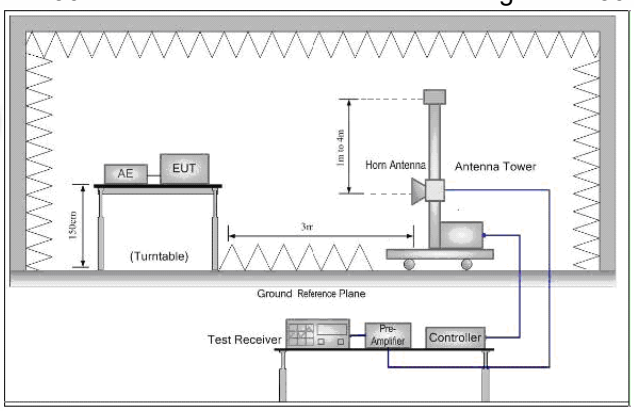
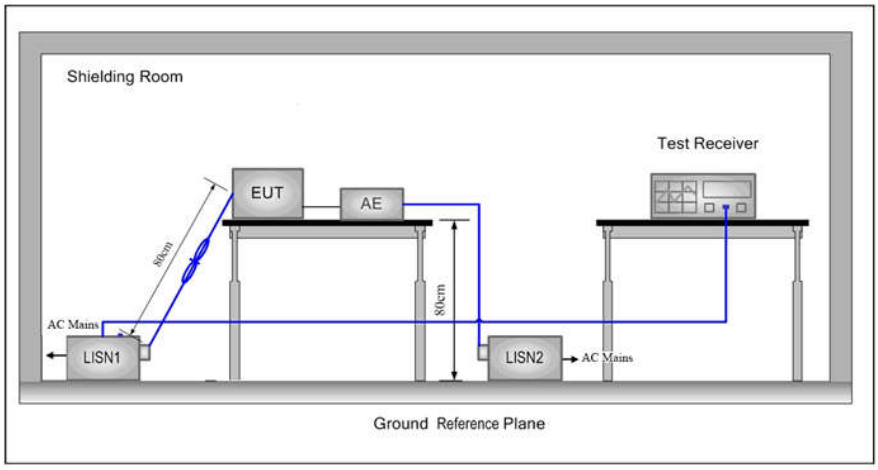


Figure 3. Above 1GHz

5.1.3 For Conducted Emissions test setup

Conducted Emissions setup



5.2 Test Environment

Operating Environment:	
Temperature:	24°C
Humidity:	56 % 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/ac(20M)	5150MHz ~5250 MHz	Channel 36	Channel 40	Channel 48
		5180MHz	5200MHz	5240MHz
802.11n/ac(40M)	5150MHz ~5250 MHz	Channel 38	N/A	Channel 46
		5190MHz	N/A	5230MHz
802.11ac(80M)	5150MHz ~5250 MHz	N/A	Channel 42	N/A
		N/A	5210MHz	N/A
802.11a/n/ac(20M)	5725MHz ~5850 MHz	Channel 149	Channel 157	Channel 165
		5745MHz	5785MHz	5825MHz
802.11n/ac(40M)	5725MHz ~5850 MHz	Channel 151	N/A	Channel 159
		5755MHz	N/A	5795MHz
802.11ac(80M)	5725MHz ~5850 MHz	N/A	Channel 155	N/A
		N/A	5775MHz	N/A

Test mode:
Pre-scan under all rate at lowest channel for Ant1

Mode	802.11a for 5150MHz ~5250 MHz							
Data Rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Power(dBm)	15.87	15.75	15.58	15.42	15.39	15.20	15.18	15.07
Mode	802.11n (20M) for 5150MHz ~5250 MHz							
Data Rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Power(dBm)	12.31	12.20	12.07	11.99	11.82	11.67	11.68	11.52
Mode	802.11ac (20M) for 5150MHz ~5250 MHz							
Data Rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Power(dBm)	11.05	10.89	10.75	10.61	10.48	10.37	10.30	10.24
Mode	802.11n(40M) for 5150MHz ~5250 MHz							
Data Rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Power(dBm)	12.43	12.29	12.13	12.05	11.89	11.81	11.65	11.51
Mode	802.11ac (40M) for 5150MHz ~5250 MHz							
Data Rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Power(dBm)	9.34	9.25	9.22	9.10	9.04	8.89	8.76	8.62
Mode	802.11ac(80M)for 5150MHz ~5250 MHz							
Data Rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Power(dBm)	10.89	10.70	10.64	10.52	10.42	10.33	10.25	10.03
Mode	802.11a for 5725MHz ~5850 MHz							
Data Rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Power(dBm)	14.62	14.49	14.33	14.25	14.20	14.12	14.05	13.95
Mode	802.11n (20M) for 5725MHz ~5850 MHz							
Data Rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Power(dBm)	11.64	11.52	11.39	11.25	11.17	11.01	10.87	10.73
Mode	802.11ac (20M) for 5725MHz ~5850 MHz							
Data Rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Power(dBm)	11.05	10.92	10.84	10.69	10.60	10.48	10.39	10.25
Mode	802.11n (40M) for 5725MHz ~5850 MHz							
Data Rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Power(dBm)	12.43	12.31	12.20	12.12	12.07	11.86	11.77	11.62
Mode	802.11ac (40M) for 5725MHz ~5850 MHz							
Data Rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Power(dBm)	9.34	9.23	9.15	9.06	8.88	8.72	8.63	8.57
Mode	802.11ac(80M)for 5725MHz ~5850 MHz							
Data Rate	MCS0	MCS1	MCS2	MCS3	MCS4	MCS5	MCS6	MCS7
Power(dBm)	10.89	10.70	10.65	10.54	10.42	10.32	10.17	10.04

Through Pre-scan, MCS0 is the worst case of 802.11a (20M) for 5150MHz ~5250 MH;MCS0 is the worst case of 802.11n (20M) for 5150MHz ~5250 MHz;MCS0 is the worst case of 802.11ac (20M) for 5150MHz ~5250 MH;MCS0 is the worst case of 802.11n(40M) for 5150MHz ~5250 MHz;MCS0 is the worst case of 802.11ac (40M) for 5150MHz ~5250 MHz;MCS0 is the worst case of 802.11ac(80M)for 5150MHz ~5250 MHz;MCS0 is the worst case of 802.11a (20M) for 5725MHz ~5850 MHz;MCS0 is the worst case of 802.11n (20M) for 5725MHz ~5850 MH;MCS0 is the worst case of 802.11ac (20M) for 5725MHz ~5850 MHz;MCS0 is the worst case of 802.11n (40M) for 5725MHz ~5850 MHz;MCS0 is the worst case of 802.11ac (40M) for 5725MHz ~5850 MHz;MCS0 is the worst case of 802.11ac(80M)for 5725MHz ~5850 MHz.

6 General Information

6.1 Client Information

Applicant:	Hui Zhou Gaoshengda Technology Co., LTD
Address of Applicant:	No. 75 Zhongkai Development Area Huizhou,Guangdong,China
Manufacturer:	Hui Zhou Gaoshengda Technology Co., LTD
Address of Manufacturer:	No. 75 Zhongkai Development Area Huizhou,Guangdong,China
Factory:	Hui Zhou Gaoshengda Technology Co., LTD
Address of Factory:	No. 75 Zhongkai Development Area Huizhou,Guangdong,China

6.2 General Description of EUT

Product Name:	WIFI+BT Module
Model No.(EUT):	WCT1BR2201D, WCT1BR2701T
Test Model No.:	WCT1BR2701T
Trade Mark:	GSD
EUT Supports Radios application:	BT 4.2 Dual mode, 2402-2480MHz 2.4G WiFi, 802.11b/g/n(20MHz)/n(40MHz) ,2412-2462MHz 5G WiFi, 802.11a/n(HT20)/n(HT40)/ac(HT20)/ac(HT40)/ac(HT80) 5G WiFi, 5150-5250MHz; 5725-5850MHz
Power Supply:	DC 3.3V
Sample Received Date:	Sep. 12, 2018
Sample tested Date:	Sep. 12, 2018 to Nov. 30, 2018

6.3 Product Specification subjective to this standard

Operation Frequency:	IEEE 802.11a/n/ac(20M): 5150MHz ~5250 MHz IEEE802.11n/ac(40M): 5150MHz ~5250 MHz IEEE802.11ac(80M): 5150MHz ~5250 MHz IEEE 802.11a/n/ac(20M): 5725MHz ~5850 MHz IEEE802.11n/ac(40M): 5725MHz ~5850 MHz IEEE802.11ac(80M): 5725MHz ~5850 MHz
Channel Numbers:	IEEE 802.11a/n/ac(20M): 5150MHz ~5250MHz/ 4 channel IEEE 802.11n/ac(40M): 5150MHz ~5250MHz/ 2 channel IEEE 802.11ac(80M): 5150MHz ~5250MHz/ 1 channel IEEE 802.11a/n/ac(20M): 5725MHz ~5850MHz/ 5 channel IEEE 802.11n/ac(40M): 5725MHz ~5850MHz/ 2 channel IEEE 802.11ac(80M): 5725MHz ~5850MHz/ 1 channel
Type of Modulation:	OFDM
Sample Type:	mobile production
Firmware version of the sample:	V1.0(manufacturer declare)
Hardware version of the sample:	V1.0(manufacturer declare)
Test Power Grade:	N/A
Test Software of EUT:	Realtek 11ac 8822B USB WLAN MP Diagnostic Program 0.0005.01.20180205(manufacturer declare)
Antenna Type:	PIFA Antenna
Antenna gain:	4.57dBi
Test Voltage:	DC 3.3V

Operation Frequency each of channel

For 802.11a/n/ac(20M) Operation in the 5150MHz ~5250 MHz band			
Channel	Frequency	Channel	Frequency
36	5180MHz	44	5220MHz
40	5200MHz	48	5240MHz
For 802.11a/n/ac(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/ac(40M) Operation in the 5150MHz ~5250 MHz band			
Channel	Frequency	Channel	Frequency
38	5190MHz	46	5230MHz
For 802.11n/ac(40M) Operation in the 5725MHz ~5850 MHz band			
Channel	Frequency	Channel	Frequency
151	5755MHz	159	5795MHz

For 802.11ac(80M) Operation in the 5150MHz ~5250 MHz band			
Channel	Frequency	NA	NA
42	5210MHz	NA	NA
For 802.11ac(80M) Operation in the 5725MHz ~5850 MHz band			
Channel	Frequency	NA	NA
155	5775MHz	NA	NA

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	Laptop	HP	430 G3	5CD6082JLC	CTI	FCC
AE2	Mouse	L.Selectron	OP-308	G1103000147VJKJ	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	01-09-2019
High-pass filter	MICRO-TRONICS	SPA-F-63029-4	---	01-10-2018	01-09-2019
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

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	05-25-2018	05-24-2019
Temperature/ Humidity Indicator	Defu	TH128	/	07-02-2018	07-01-2019
Communication test set	Agilent	E5515C	GB47050534	03-16-2018	03-15-2019
Communication test set	R&S	CMW500	152394	03-16-2018	03-15-2019
LISN	R&S	ENV216	100098	05-10-2018	05-10-2019
LISN	schwarzbeck	NNLK8121	8121-529	05-10-2018	05-10-2019
Voltage Probe	R&S	ESH2-Z3 0299.7810.56	100042	06-13-2017	06-11-2020
Current Probe	R&S	EZ-17 816.2063.03	100106	05-30-2018	05-29-2019
ISN	TESEQ	ISN T800	30297	02-06-2018	02-05-2019

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	10-28-2018	10-27-2019
TRILOG Broadband Antenna	Schwarzbeck	VULB9163	9163-618	07-30-2018	07-29-2019
Microwave Preamplifier	Agilent	8449B	3008A02425	08-21-2018	08-20-2019
Microwave Preamplifier	Tonscend	EMC051845SE	980380	01-19-2018	01-18-2019
Horn Antenna	Schwarzbeck	BBHA 9120D	9120D-1869	04-25-2018	04-23-2021
Horn Antenna	ETS-LINDGREN	3117	00057410	06-05-2018	06-03-2021
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	06-05-2018	06-04-2021
Loop Antenna	ETS	6502	00071730	06-22-2017	06-21-2019
Spectrum Analyzer	R&S	FSP40	100416	05-11-2018	05-10-2019
Receiver	R&S	ESCI	100435	05-25-2018	05-24-2019
Multi device Controller	maturo	NCD/070/10711112	---	01-10-2018	01-09-2019
LISN	schwarzbeck	NNBM8125	81251547	05-11-2018	05-10-2019
LISN	schwarzbeck	NNBM8125	81251548	05-11-2018	05-10-2019
Signal Generator	Agilent	E4438C	MY45095744	03-13-2018	03-12-2019
Signal Generator	Keysight	E8257D	MY53401106	03-13-2018	03-12-2019
Temperature/ Humidity Indicator	TAYLOR	1451	1905	05-02-2018	05-01-2019
Communication test set	Agilent	E5515C	GB47050534	03-16-2018	03-15-2019
Cable line	Fulai(7M)	SF106	5219/6A	01-10-2018	01-09-2019
Cable line	Fulai(6M)	SF106	5220/6A	01-10-2018	01-09-2019
Cable line	Fulai(3M)	SF106	5216/6A	01-10-2018	01-09-2019
Cable line	Fulai(3M)	SF106	5217/6A	01-10-2018	01-09-2019
Communication test set	R&S	CMW500	104466	02-05-2018	02-04-2019
High-pass filter	Sinoscite	FL3CX03WG18NM12-0398-002	---	01-10-2018	01-09-2019
High-pass filter	MICRO-TRONICS	SPA-F-63029-4	---	01-10-2018	01-09-2019
band rejection filter	Sinoscite	FL5CX01CA09CL12-0395-001	---	01-10-2018	01-09-2019
band rejection filter	Sinoscite	FL5CX01CA08CL12-0393-001	---	01-10-2018	01-09-2019
band rejection filter	Sinoscite	FL5CX02CA04CL12-0396-002	---	01-10-2018	01-09-2019
band rejection filter	Sinoscite	FL5CX02CA03CL12-0394-001	---	01-10-2018	01-09-2019

8 Radio Technical Requirements Specification

Reference documents for testing:

No.	Identity	Document Title
1	FCC Part15E (2015)	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): Emission Bandwidth

Result Table

Test Mode	Antenna	Channel	EBW[MHz]	OBW[MHz]	Verdict
11A	Ant1	5180	20.46	16.523	PASS
11A	Ant2	5180	19.81	16.517	PASS
11A	Ant1	5200	19.93	16.444	PASS
11A	Ant2	5200	19.73	16.479	PASS
11A	Ant1	5240	20.00	16.535	PASS
11A	Ant2	5240	20.01	16.518	PASS
11A	Ant1	5745	16.32	16.430	PASS
11A	Ant2	5745	16.30	16.440	PASS
11A	Ant1	5785	16.40	16.449	PASS
11A	Ant2	5785	16.38	16.402	PASS
11A	Ant1	5825	16.33	16.423	PASS
11A	Ant2	5825	16.28	16.420	PASS
Test Mode	**Antenna**	**Channel**	**EBW[MHz]**	**OBW[MHz]**	**Verdict**
11N20SISO	Ant1	5180	20.23	17.586	PASS
11N20SISO	Ant2	5180	20.24	17.613	PASS
11N20SISO	Ant1	5200	20.81	17.624	PASS
11N20SISO	Ant2	5200	20.18	17.628	PASS
11N20SISO	Ant1	5240	20.41	17.682	PASS
11N20SISO	Ant2	5240	20.47	17.604	PASS
11N20SISO	Ant1	5745	17.09	17.597	PASS
11N20SISO	Ant2	5745	16.91	17.572	PASS
11N20SISO	Ant1	5785	16.46	17.577	PASS
11N20SISO	Ant2	5785	17.16	17.607	PASS
11N20SISO	Ant1	5825	15.64	17.603	PASS
11N20SISO	Ant2	5825	17.60	17.605	PASS
11N40SISO	Ant1	5190	42.41	36.316	PASS
11N40SISO	Ant2	5190	43.02	36.318	PASS
11N40SISO	Ant1	5230	41.64	36.396	PASS
11N40SISO	Ant2	5230	42.48	36.321	PASS

11N40SISO	Ant1	5755	36.01	36.247	PASS
11N40SISO	Ant2	5755	36.04	36.184	PASS
11N40SISO	Ant1	5795	35.53	36.216	PASS
11N40SISO	Ant2	5795	35.77	36.215	PASS

Test Mode	Antenna	Channel	EBW[MHz]	OBW[MHz]	Verdict
11AC20SISO	Ant1	5180	20.39	17.653	PASS
11AC20SISO	Ant2	5180	20.44	17.647	PASS
11AC20SISO	Ant1	5200	19.84	17.609	PASS
11AC20SISO	Ant2	5200	20.46	17.649	PASS
11AC20SISO	Ant1	5240	20.53	17.647	PASS
11AC20SISO	Ant2	5240	20.33	17.644	PASS
11AC20SISO	Ant1	5745	17.52	17.601	PASS
11AC20SISO	Ant2	5745	17.60	17.602	PASS
11AC20SISO	Ant1	5785	16.98	17.600	PASS
11AC20SISO	Ant2	5785	17.16	17.595	PASS
11AC20SISO	Ant1	5825	16.94	17.599	PASS
11AC20SISO	Ant2	5825	17.72	17.592	PASS
11AC40SISO	Ant1	5190	43.43	36.351	PASS
11AC40SISO	Ant2	5190	41.46	36.315	PASS
11AC40SISO	Ant1	5230	42.95	36.351	PASS
11AC40SISO	Ant2	5230	43.61	36.297	PASS
11AC40SISO	Ant1	5755	36.04	36.224	PASS
11AC40SISO	Ant2	5755	35.94	36.228	PASS
11AC40SISO	Ant1	5795	36.00	36.224	PASS
11AC40SISO	Ant2	5795	35.46	36.184	PASS
11AC80SISO	Ant1	5210	82.67	75.671	PASS
11AC80SISO	Ant2	5210	82.31	75.686	PASS
11AC80SISO	Ant1	5775	75.06	75.541	PASS
11AC80SISO	Ant2	5775	75.12	75.561	PASS

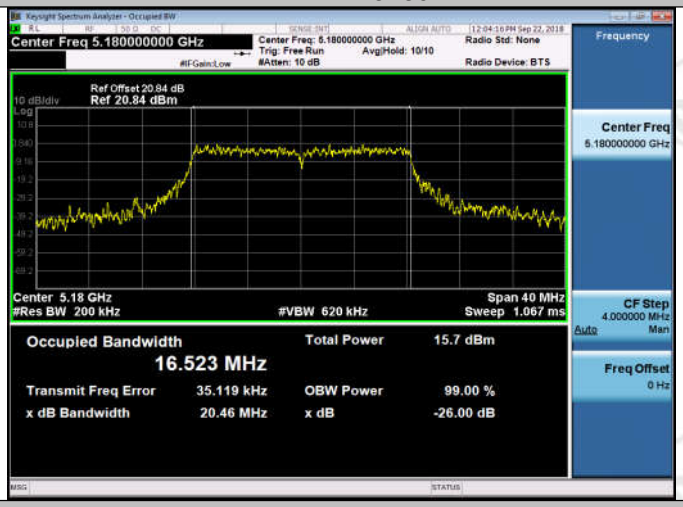
Test Mode	Antenna	Channel	EBW[MHz]	OBW[MHz]	Verdict
11N20MIMO	Ant1	5180	20.48	17.600	PASS
11N20MIMO	Ant2	5180	20.73	17.629	PASS
11N20MIMO	Ant1	5200	20.38	17.639	PASS
11N20MIMO	Ant2	5200	20.35	17.628	PASS
11N20MIMO	Ant1	5240	20.22	17.600	PASS
11N20MIMO	Ant2	5240	20.38	17.657	PASS
11N20MIMO	Ant1	5745	17.67	17.578	PASS
11N20MIMO	Ant2	5745	17.18	17.583	PASS
11N20MIMO	Ant1	5785	17.65	17.590	PASS
11N20MIMO	Ant2	5785	15.60	17.574	PASS
11N20MIMO	Ant1	5825	16.15	17.582	PASS
11N20MIMO	Ant2	5825	16.04	17.568	PASS
11N40MIMO	Ant1	5190	43.13	36.335	PASS
11N40MIMO	Ant2	5190	40.89	36.241	PASS
11N40MIMO	Ant1	5230	41.27	36.398	PASS
11N40MIMO	Ant2	5230	43.16	36.307	PASS
11N40MIMO	Ant1	5755	36.31	36.237	PASS
11N40MIMO	Ant2	5755	36.31	36.230	PASS
11N40MIMO	Ant1	5795	35.91	36.192	PASS
11N40MIMO	Ant2	5795	36.08	36.223	PASS

Test Mode	Antenna	Channel	EBW[MHz]	OBW[MHz]	Verdict
11AC20MIMO	Ant1	5180	20.59	17.634	PASS
11AC20MIMO	Ant2	5180	20.22	17.673	PASS
11AC20MIMO	Ant1	5200	20.64	17.623	PASS
11AC20MIMO	Ant2	5200	20.82	17.654	PASS
11AC20MIMO	Ant1	5240	20.47	17.642	PASS
11AC20MIMO	Ant2	5240	20.53	17.599	PASS
11AC20MIMO	Ant1	5745	17.56	17.591	PASS
11AC20MIMO	Ant2	5745	17.30	17.608	PASS

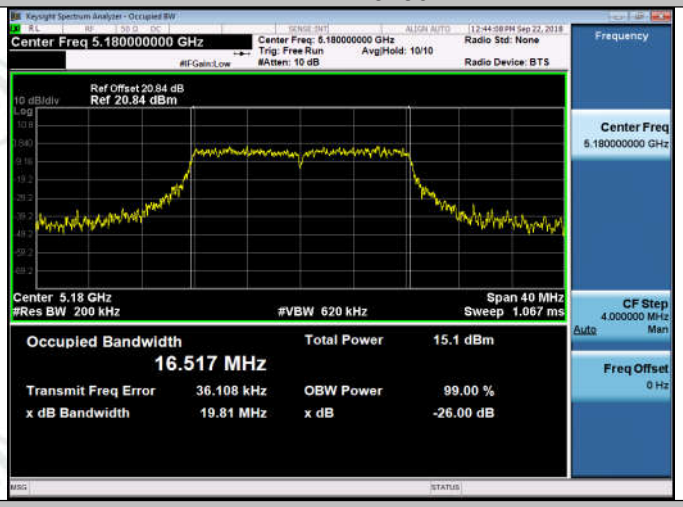
11AC20MIMO	Ant1	5785	17.61	17.588	PASS
11AC20MIMO	Ant2	5785	17.59	17.607	PASS
11AC20MIMO	Ant1	5825	17.71	17.620	PASS
11AC20MIMO	Ant2	5825	17.21	17.603	PASS
11AC40MIMO	Ant1	5190	41.66	36.331	PASS
11AC40MIMO	Ant2	5190	42.53	36.353	PASS
11AC40MIMO	Ant1	5230	41.56	36.401	PASS
11AC40MIMO	Ant2	5230	42.39	36.267	PASS
11AC40MIMO	Ant1	5755	36.04	36.225	PASS
11AC40MIMO	Ant2	5755	36.28	36.235	PASS
11AC40MIMO	Ant1	5795	35.54	36.246	PASS
11AC40MIMO	Ant2	5795	35.69	36.244	PASS
11AC80MIMO	Ant1	5210	82.61	75.762	PASS
11AC80MIMO	Ant2	5210	81.79	75.755	PASS
11AC80MIMO	Ant1	5775	74.83	75.472	PASS
11AC80MIMO	Ant2	5775	74.21	75.580	PASS

Test Graph

11A-Ant1-5180

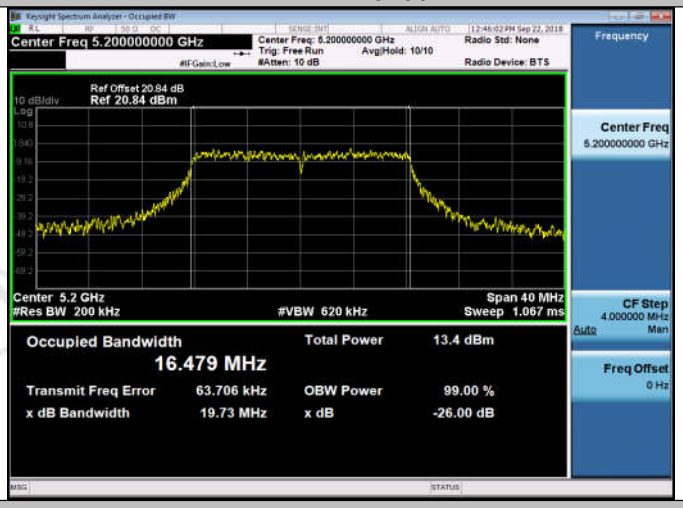


11A-Ant2-5180

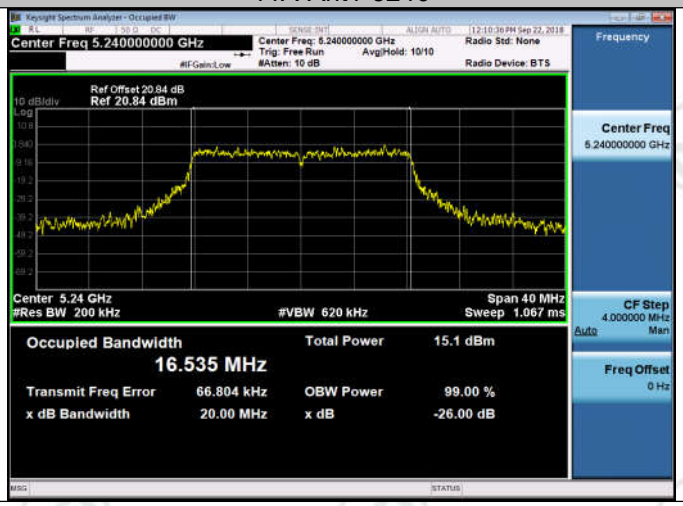


11A-Ant1-5200

11A-Ant2-5200



11A-Ant1-5240



11A-Ant2-5240

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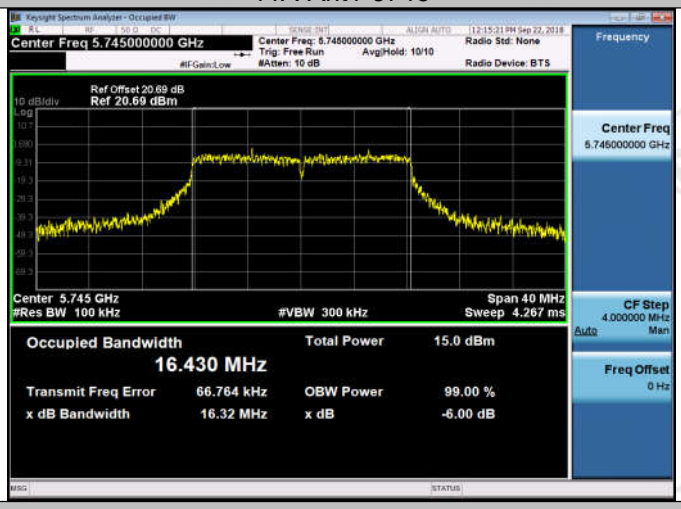	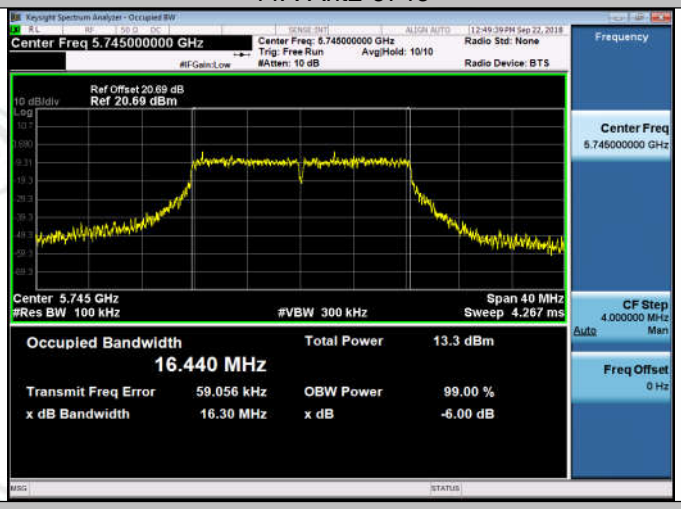
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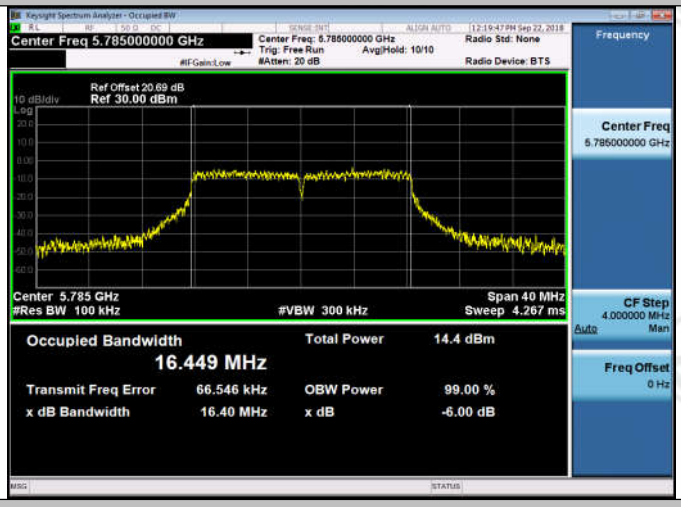	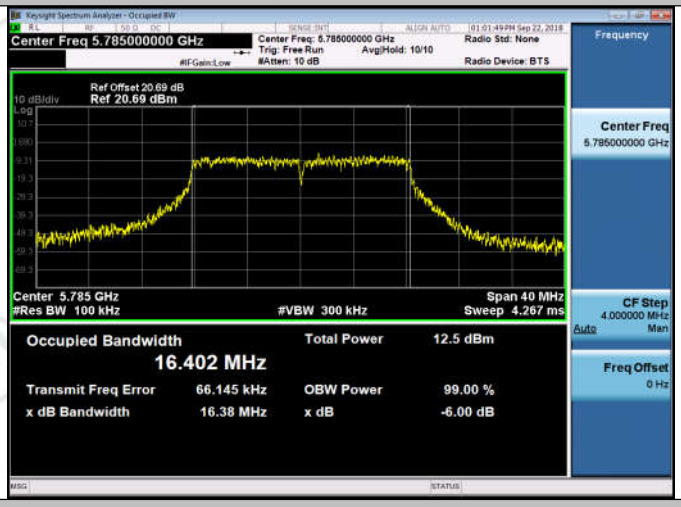
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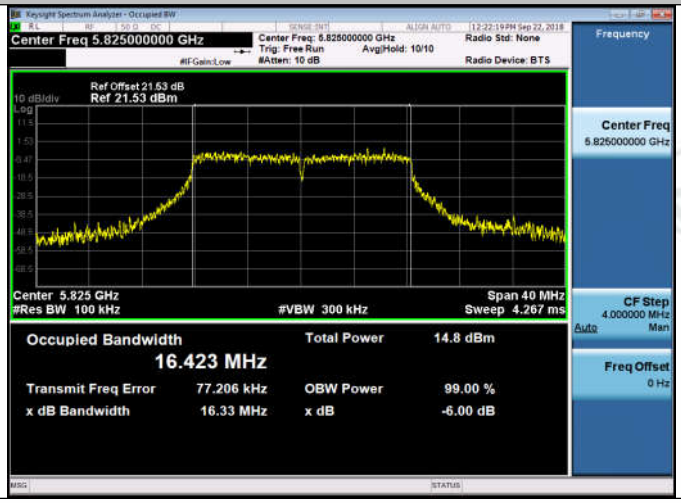	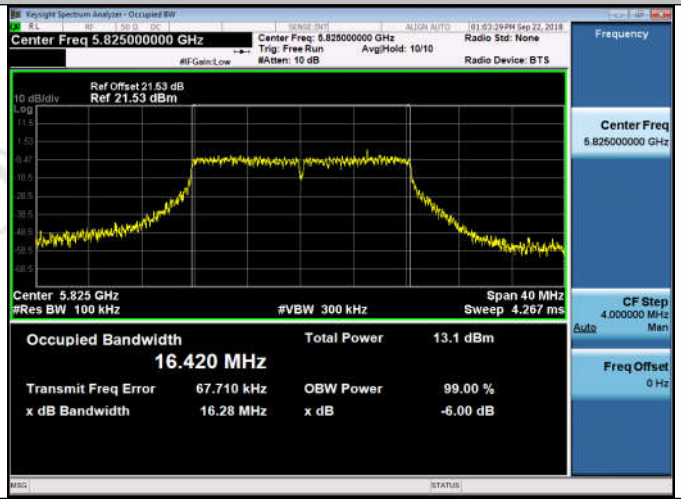

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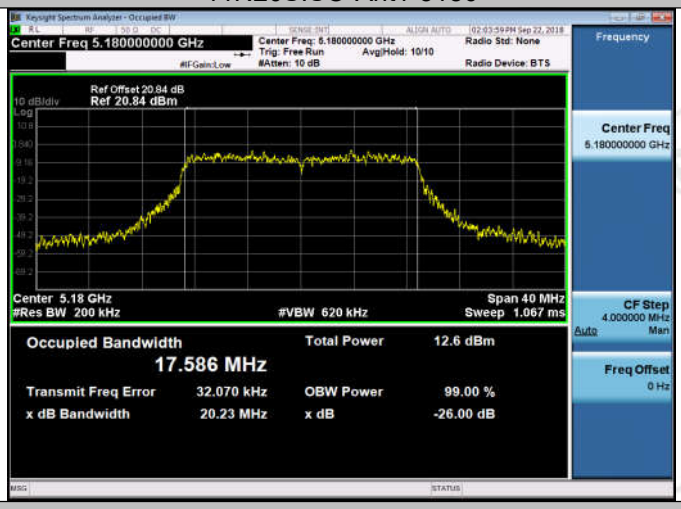	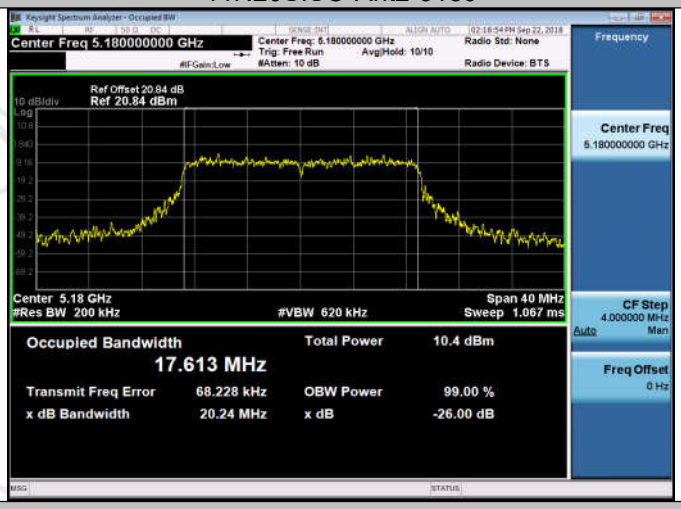
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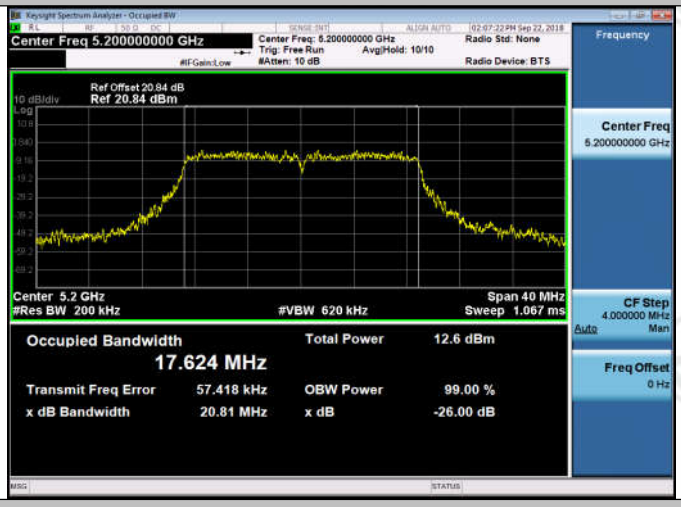	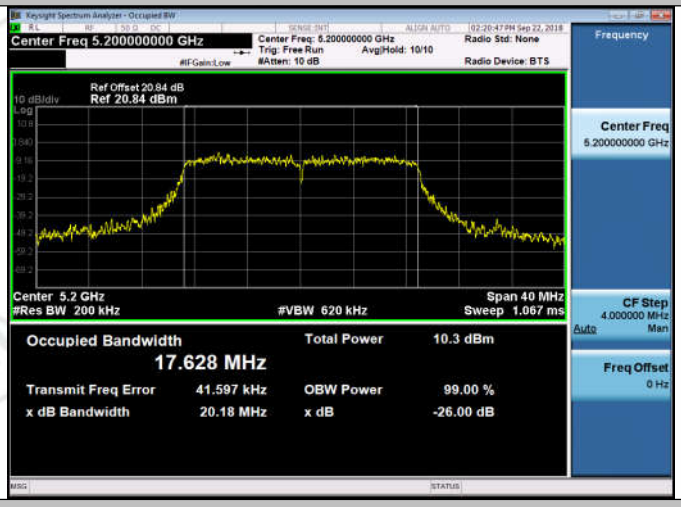
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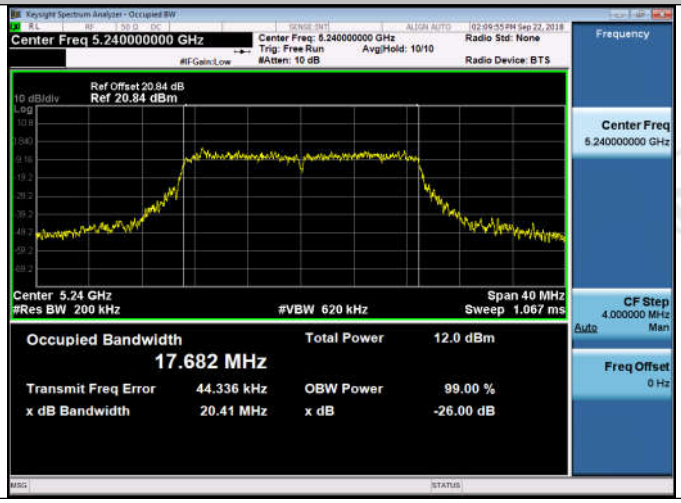	

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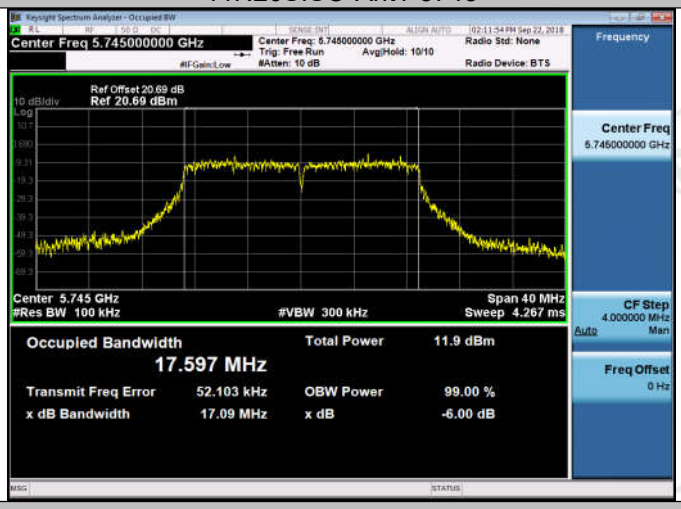	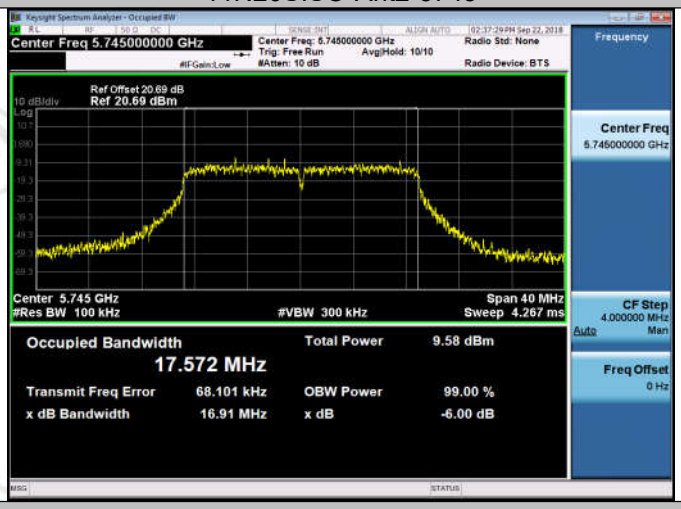
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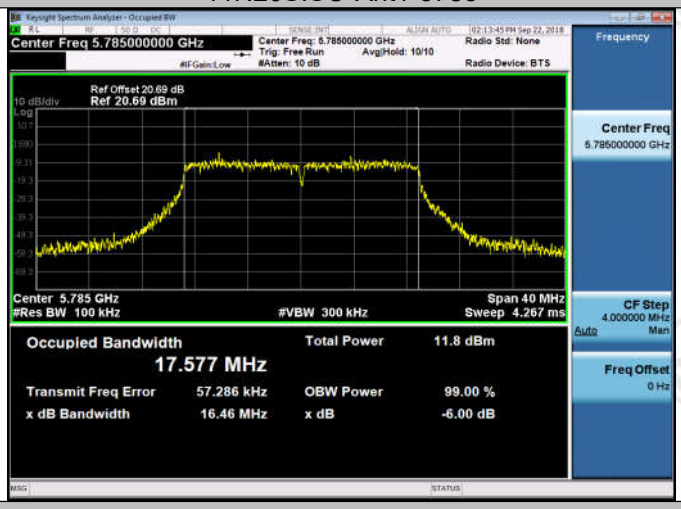	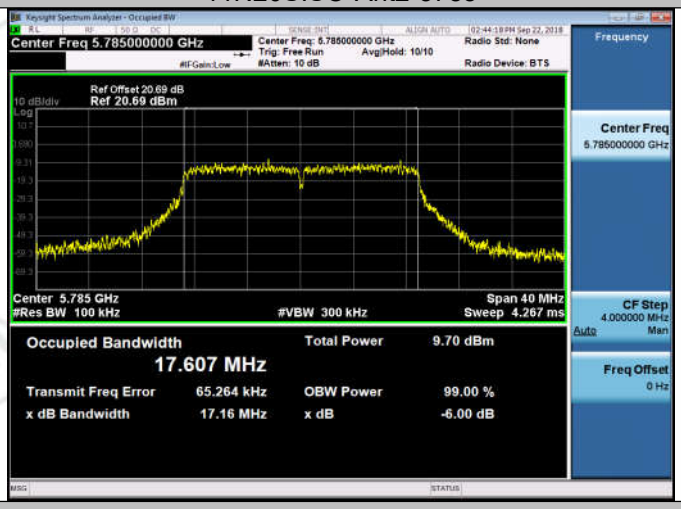
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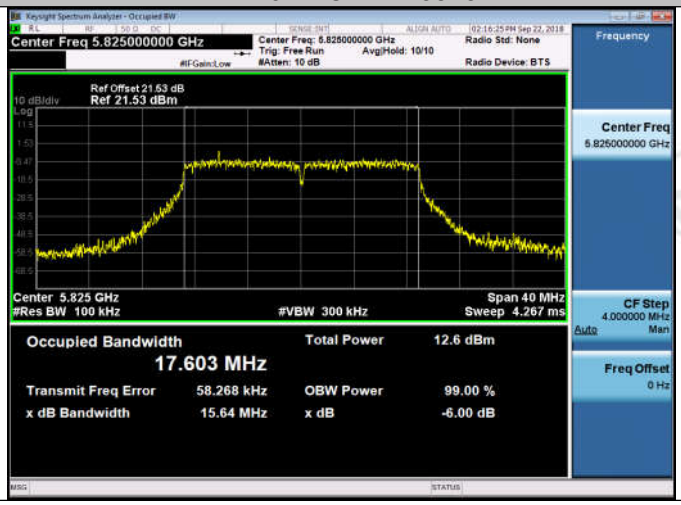	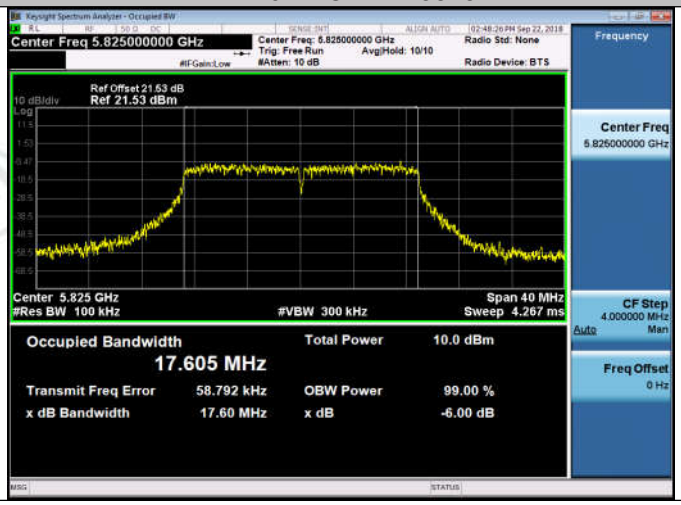

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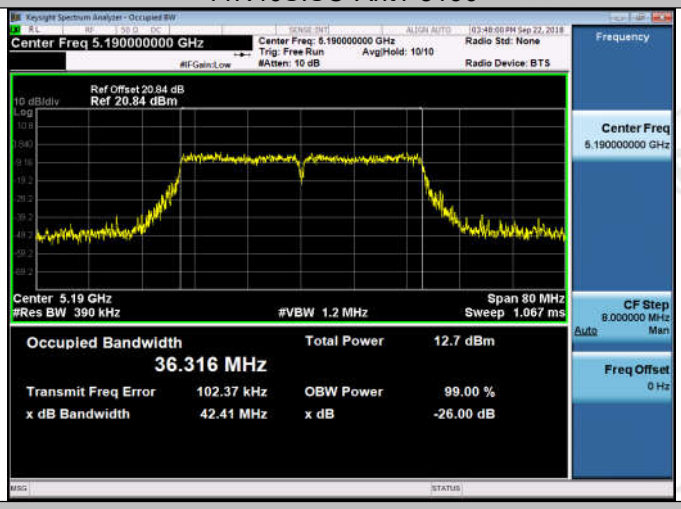	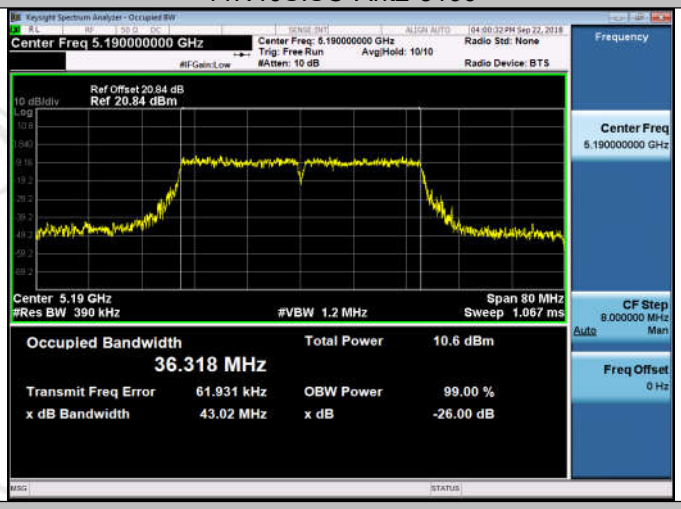
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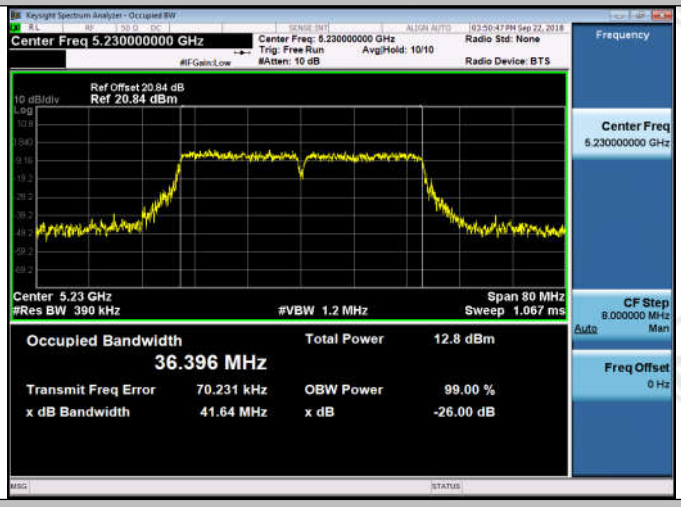	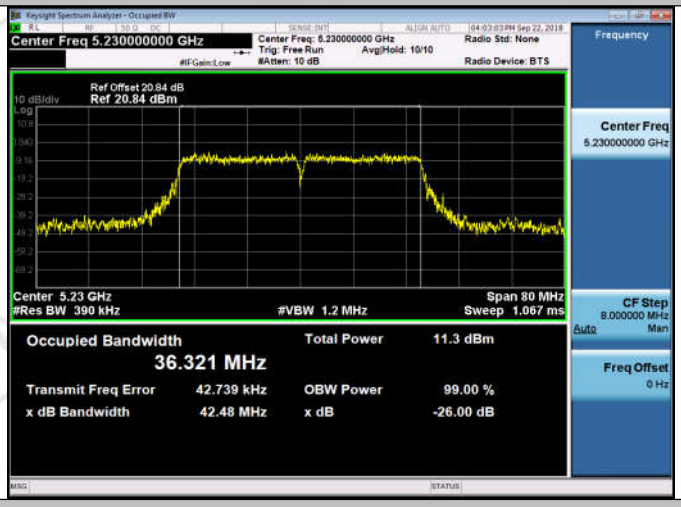
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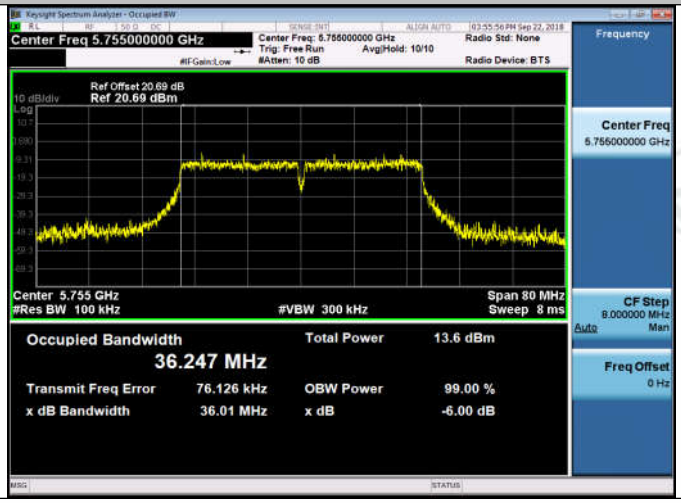	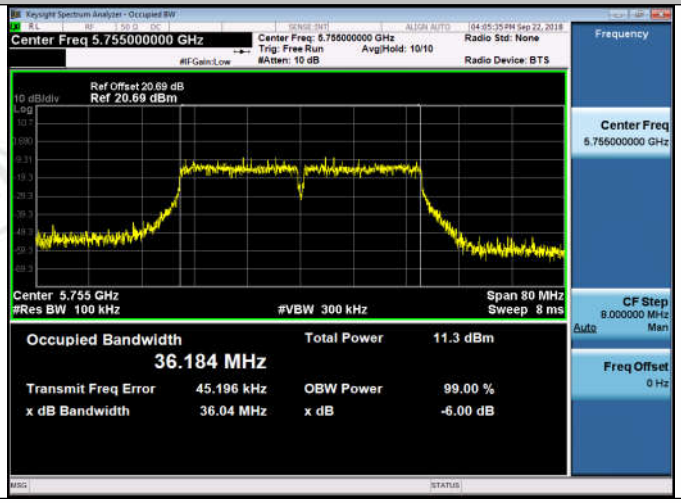

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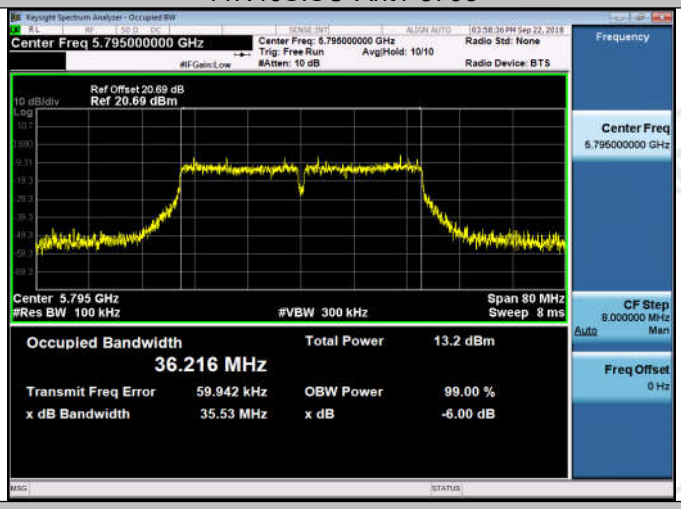	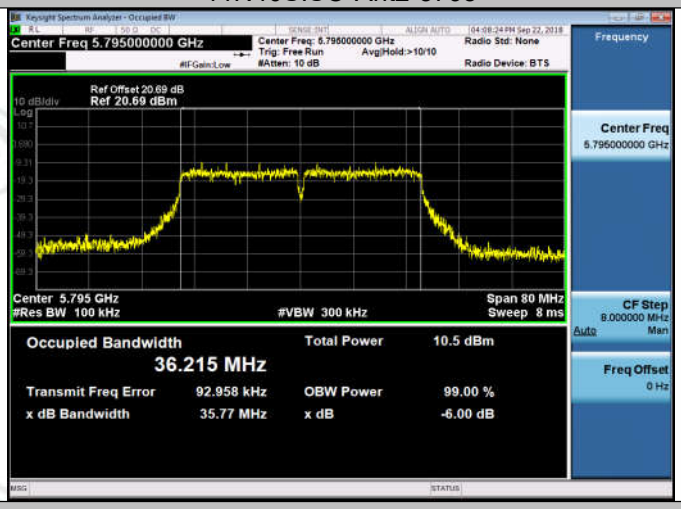
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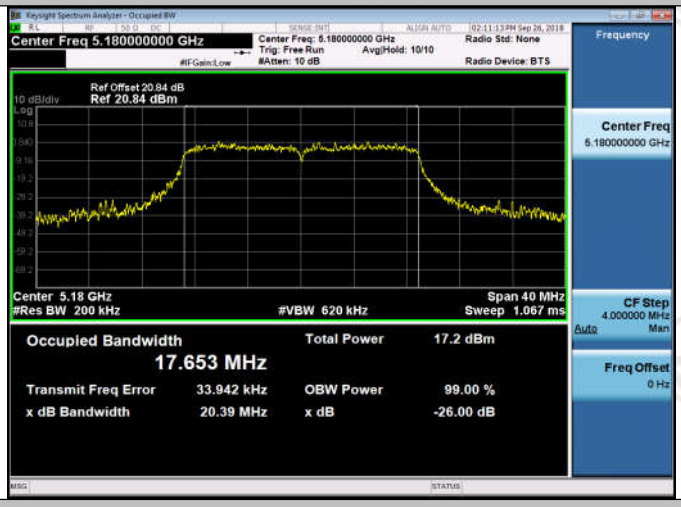	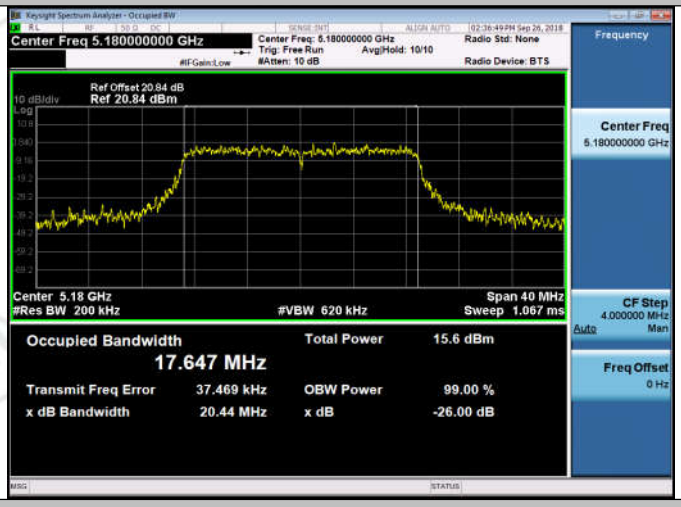
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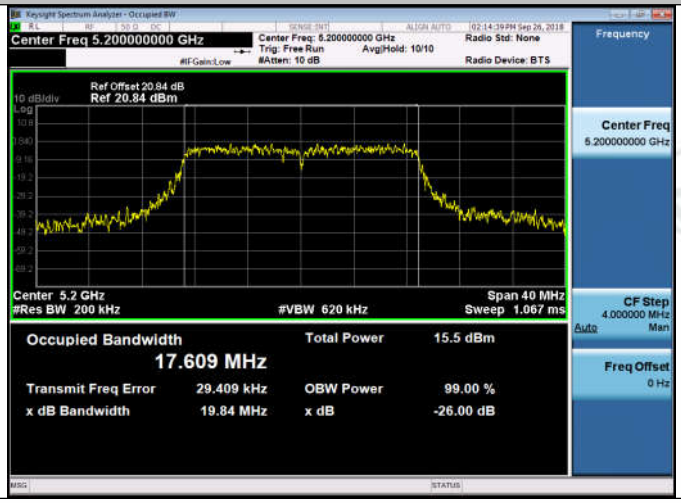	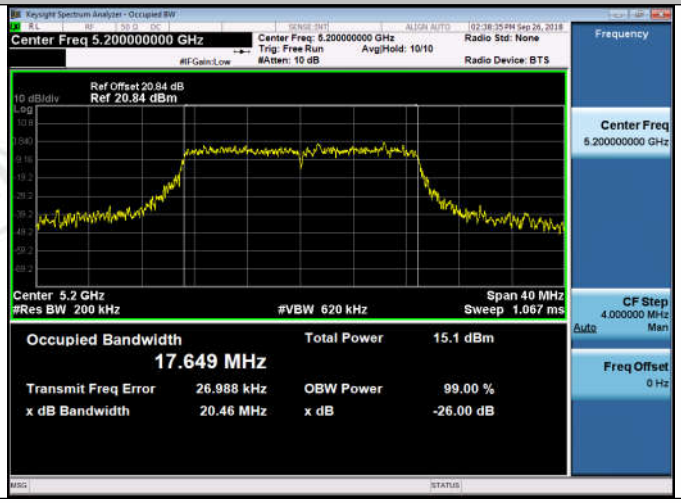

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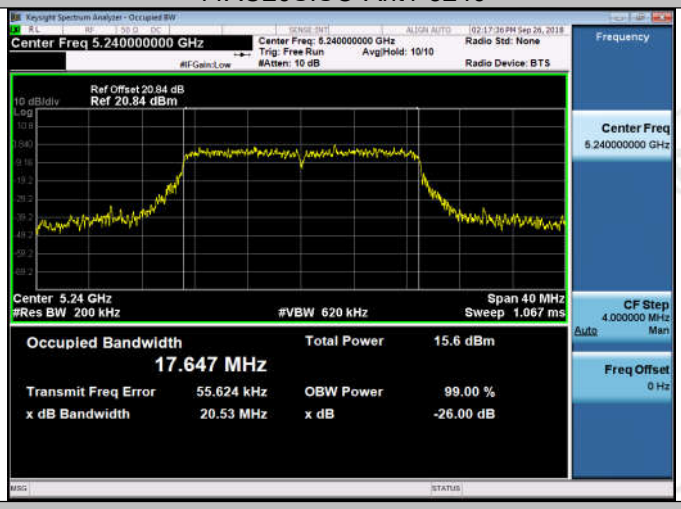	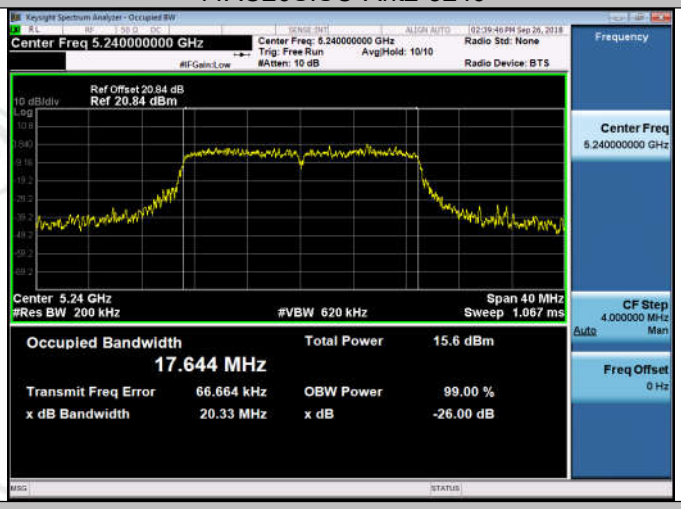
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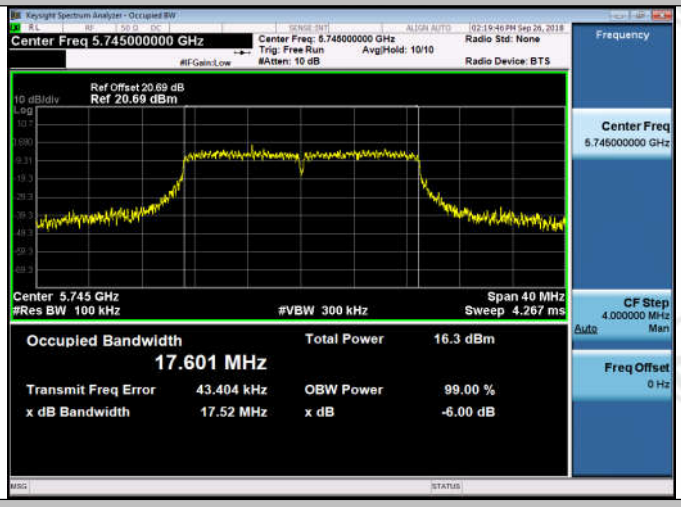	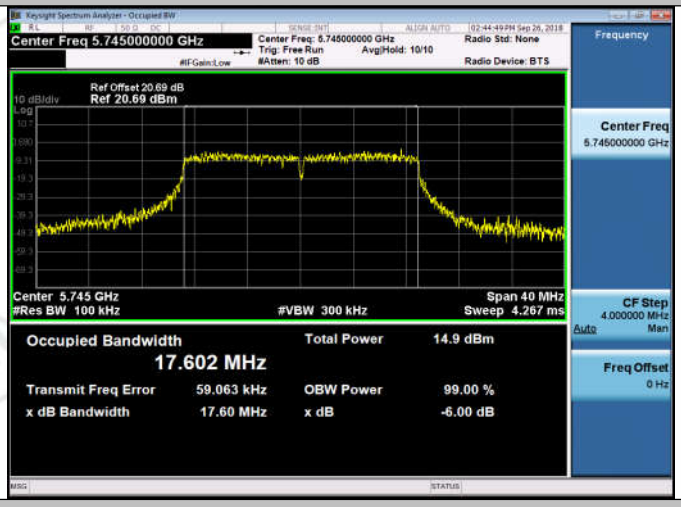
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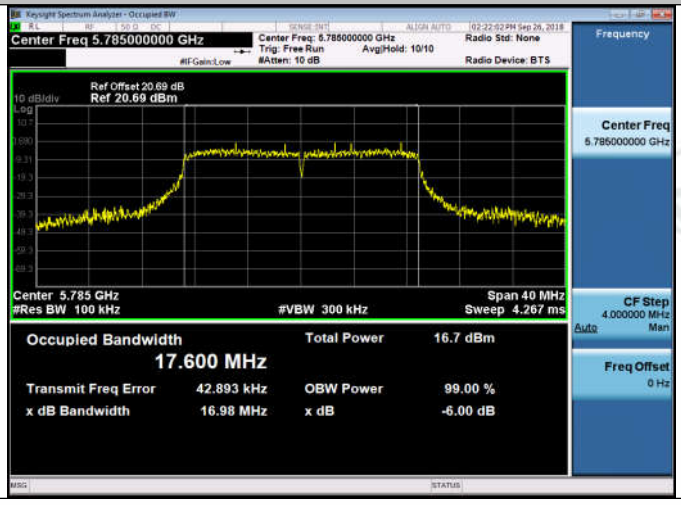	

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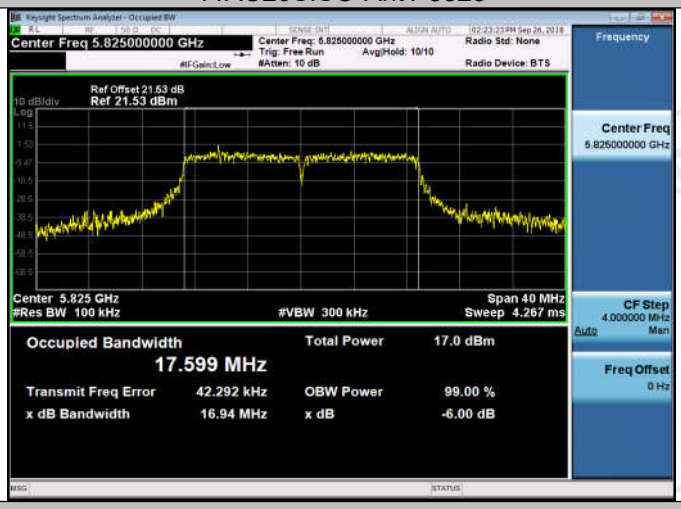	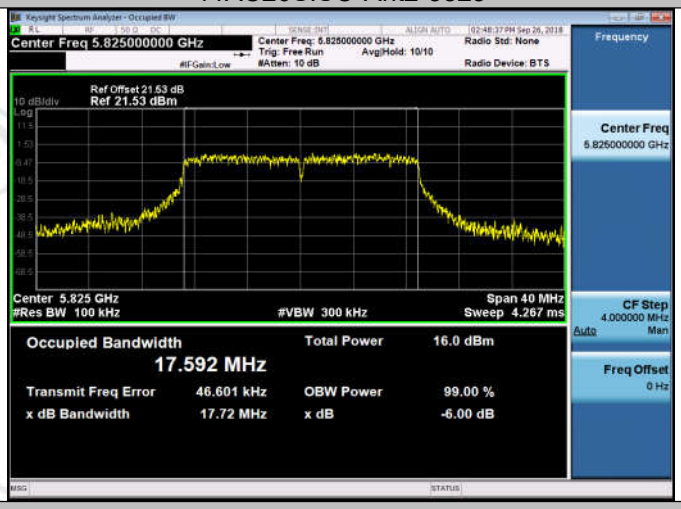
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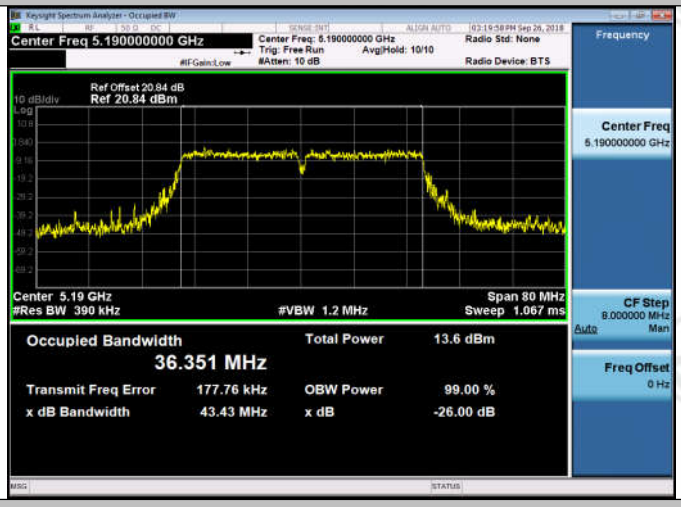	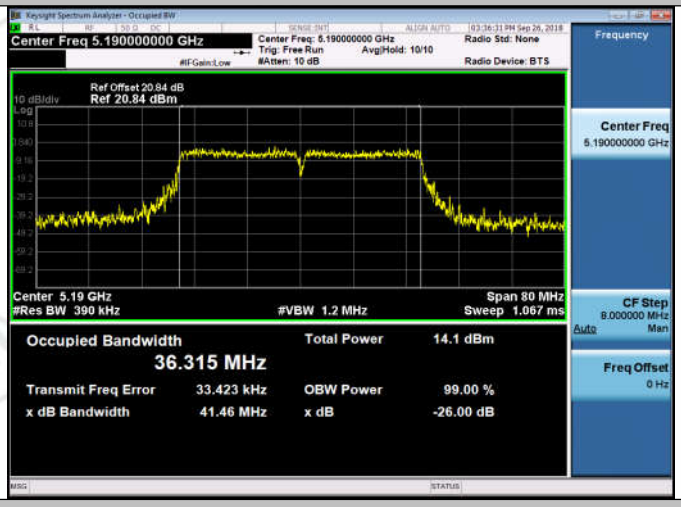
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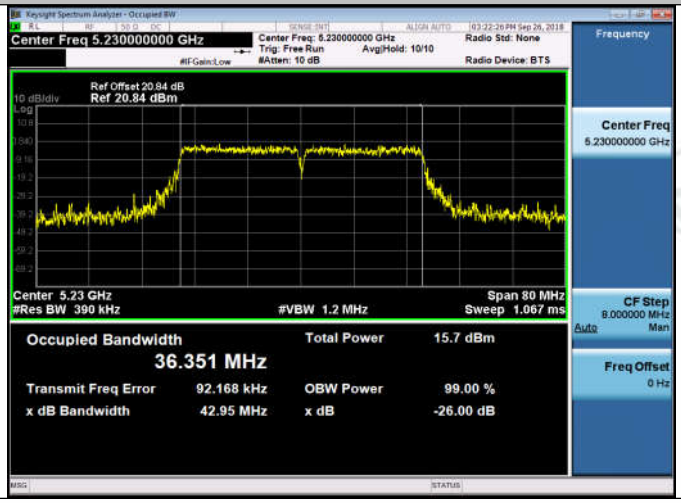	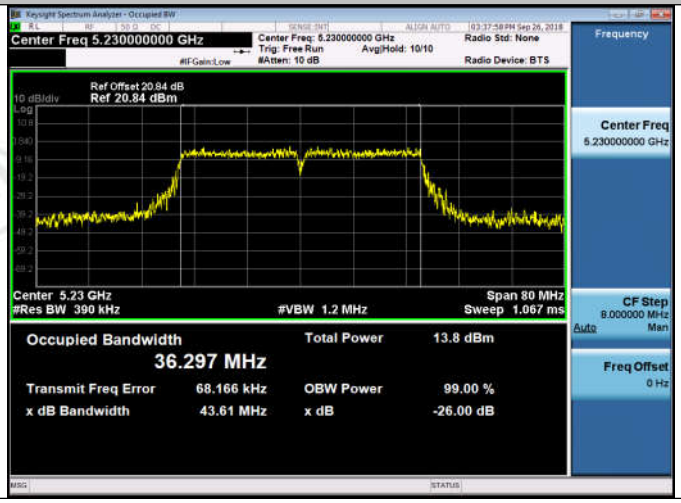

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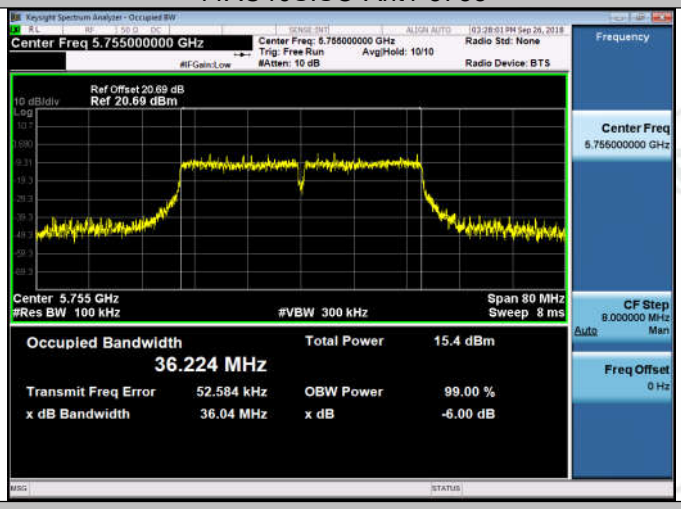	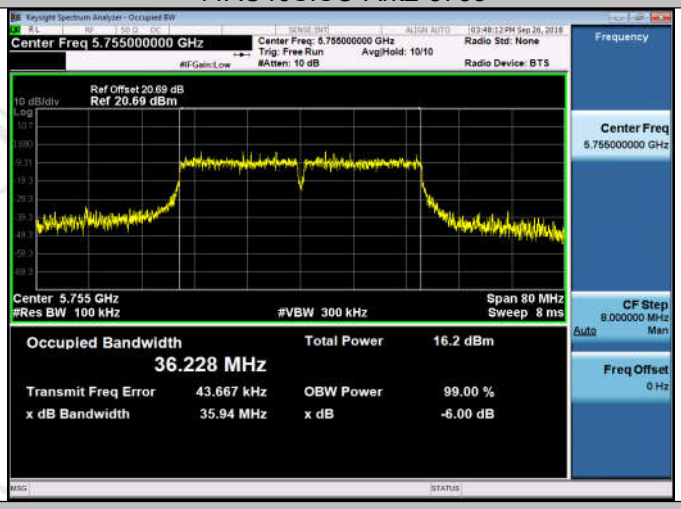
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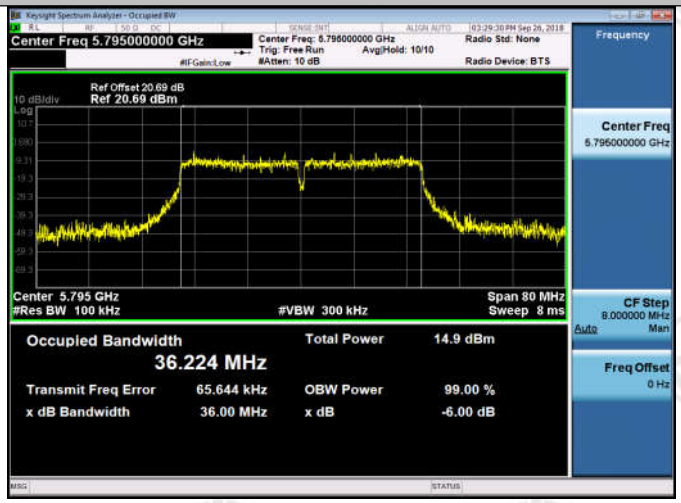	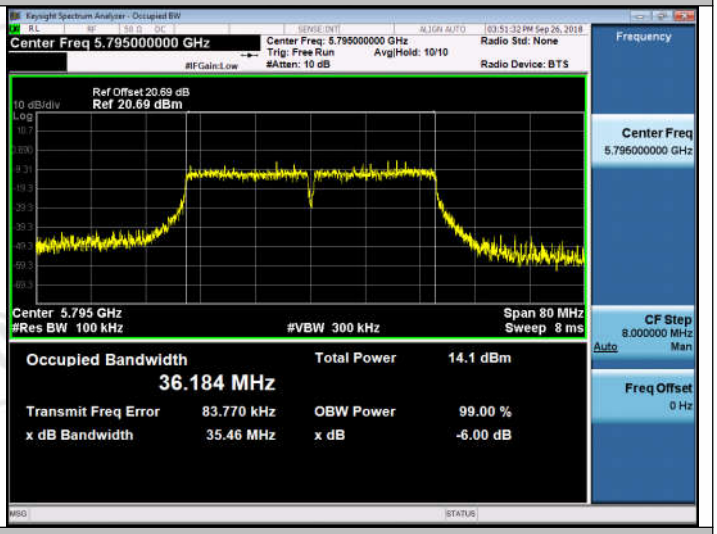
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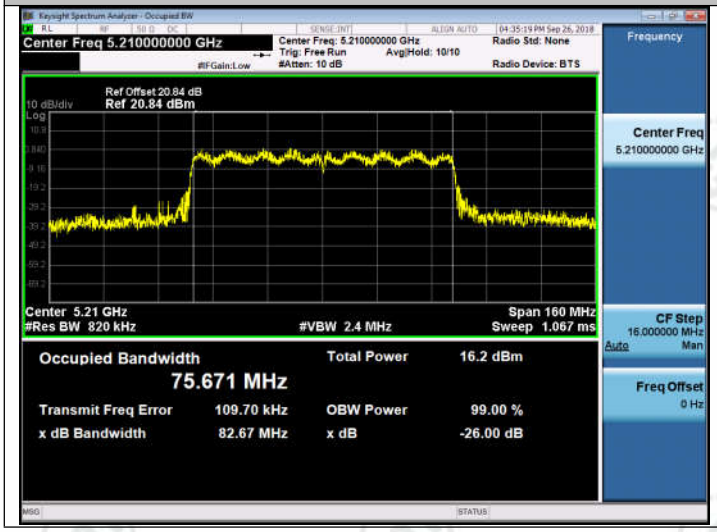	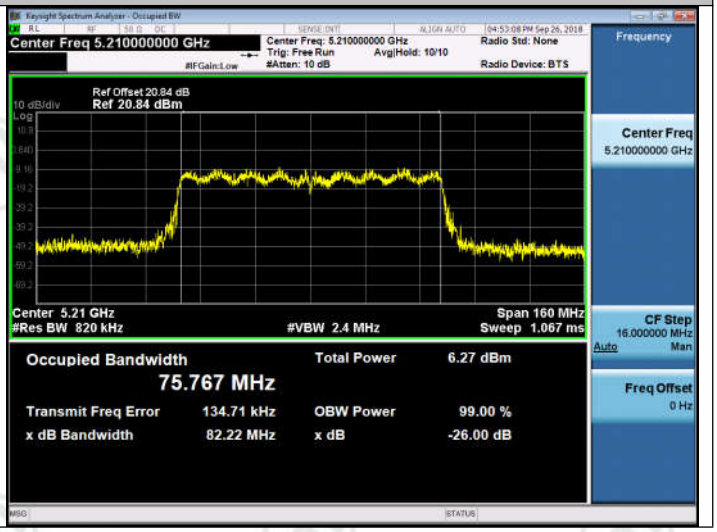

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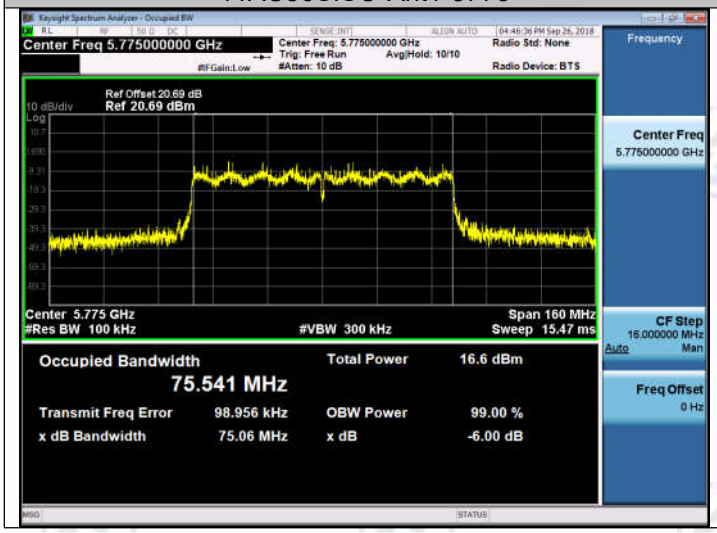	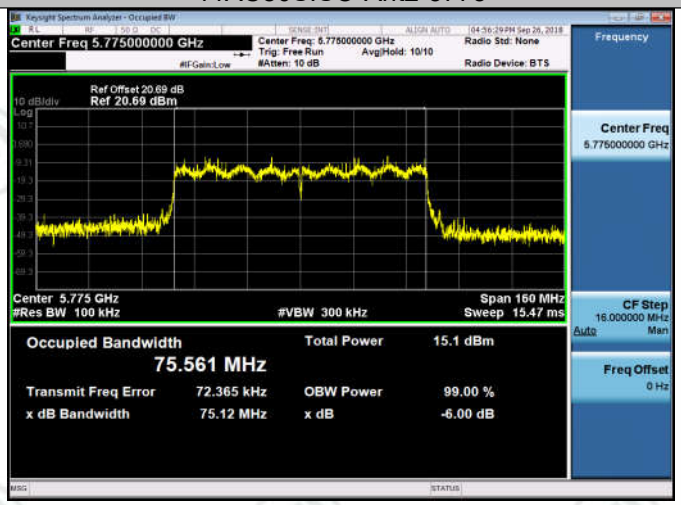
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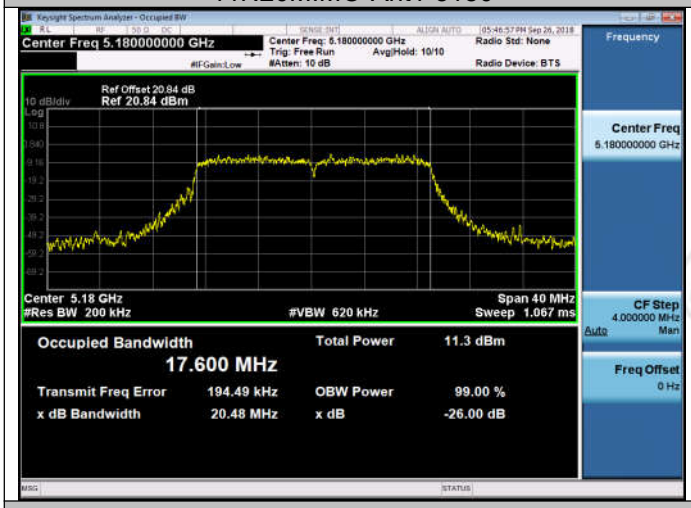	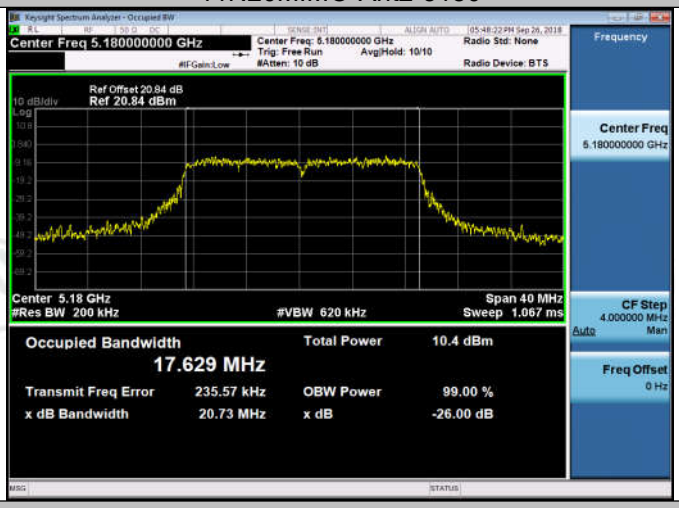
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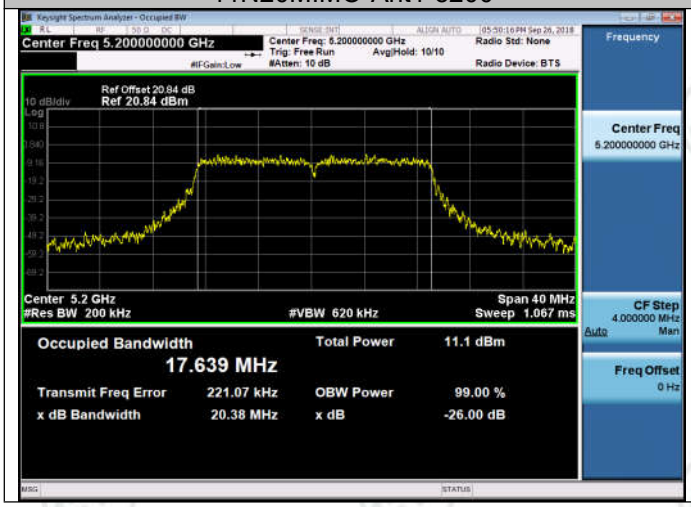	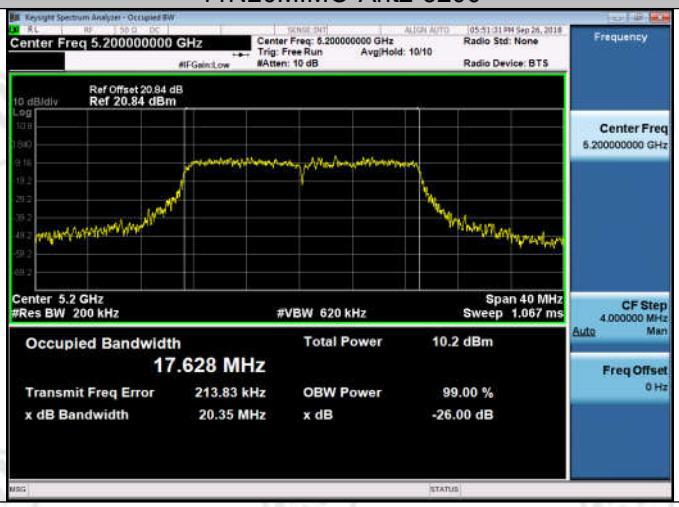

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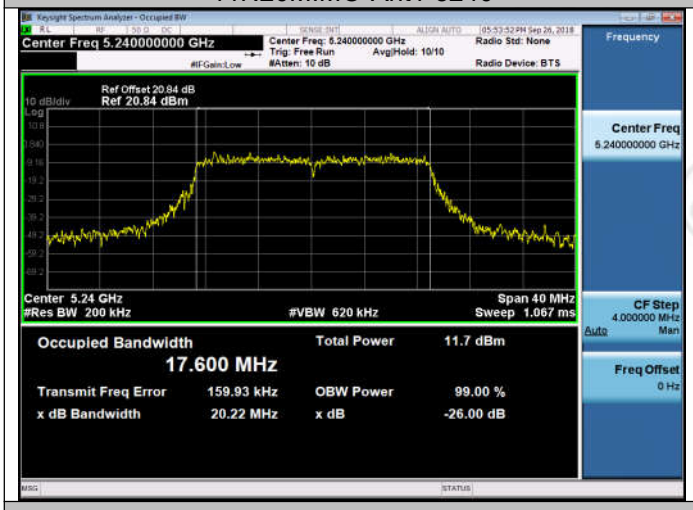	
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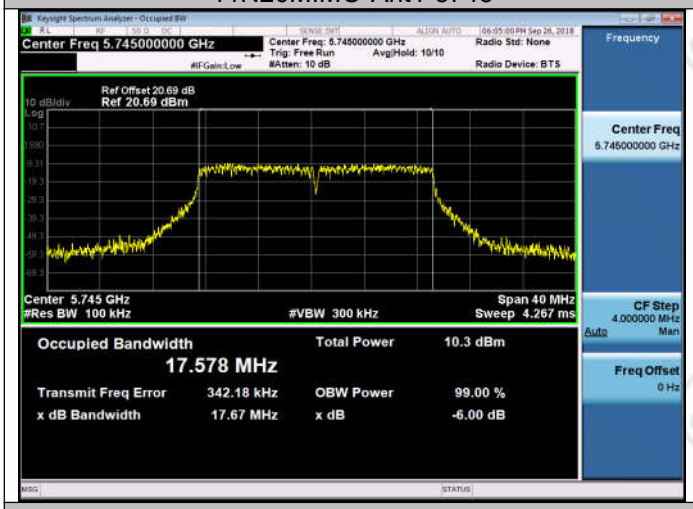	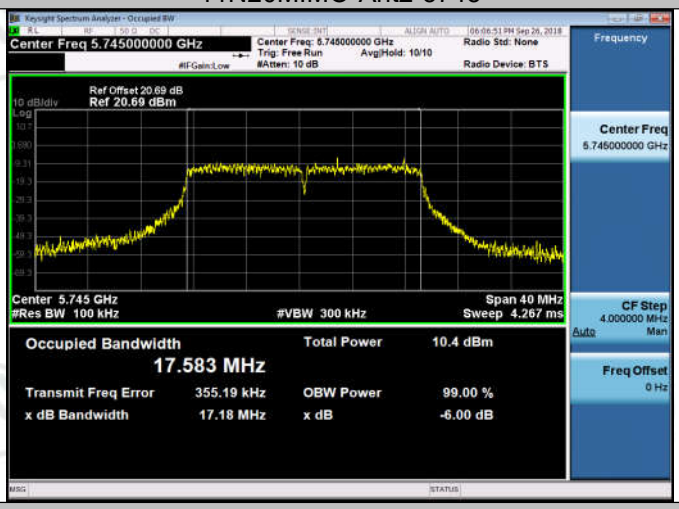
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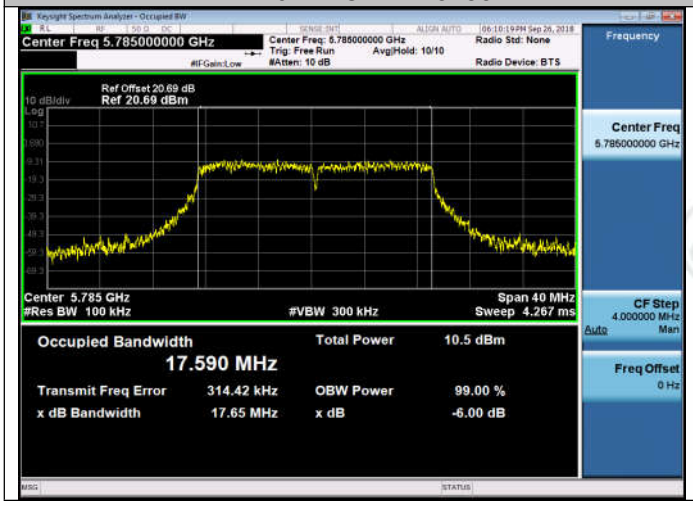	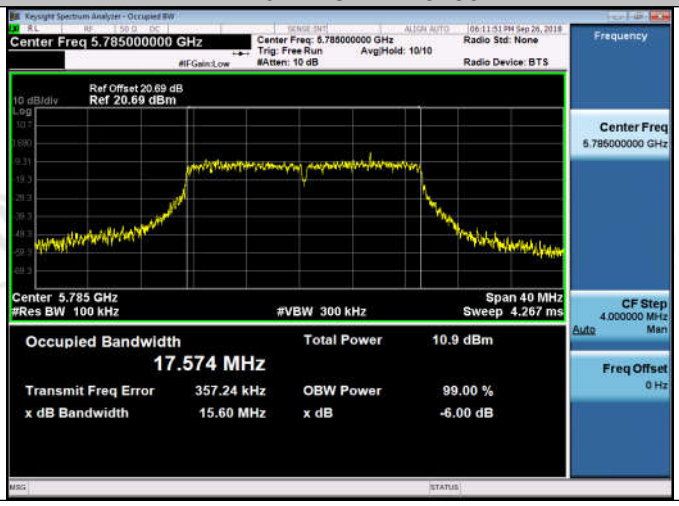

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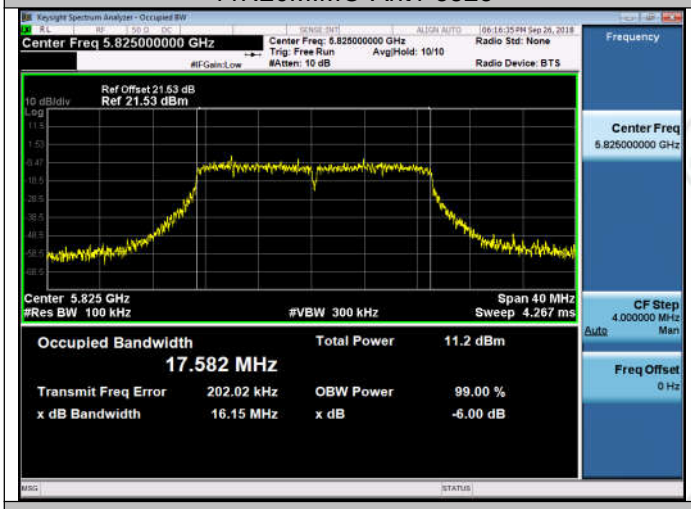	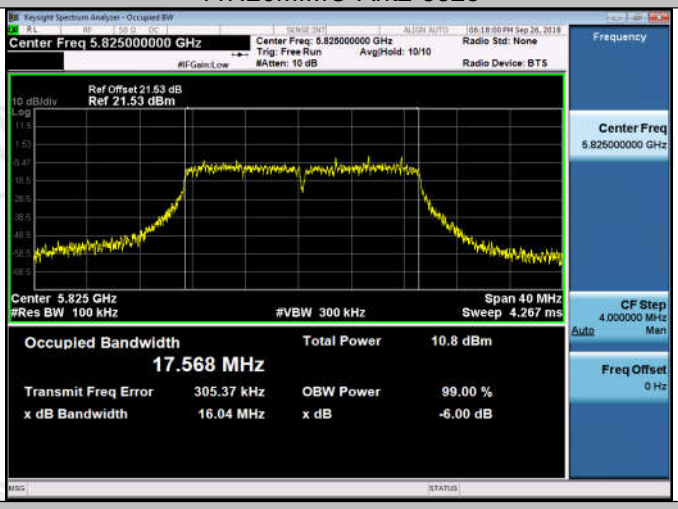
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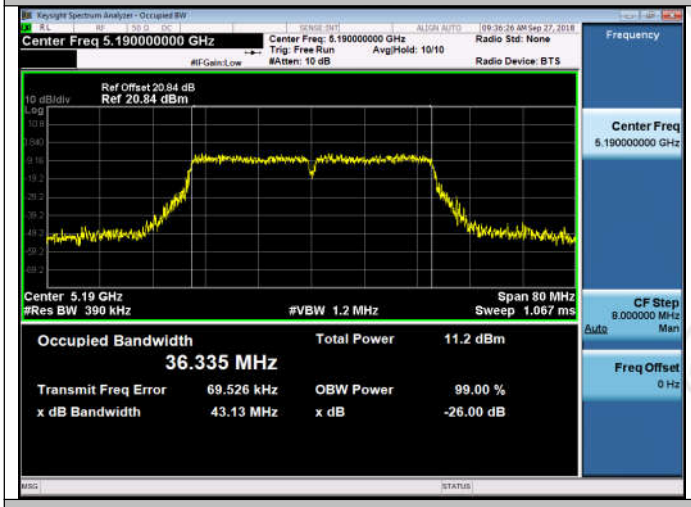	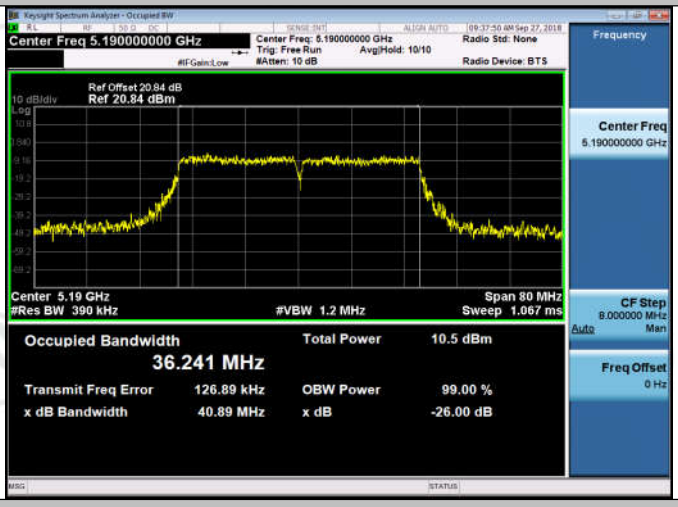
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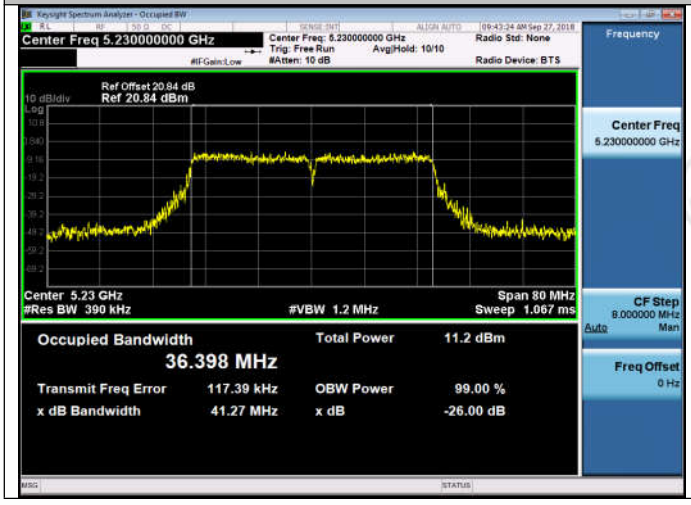	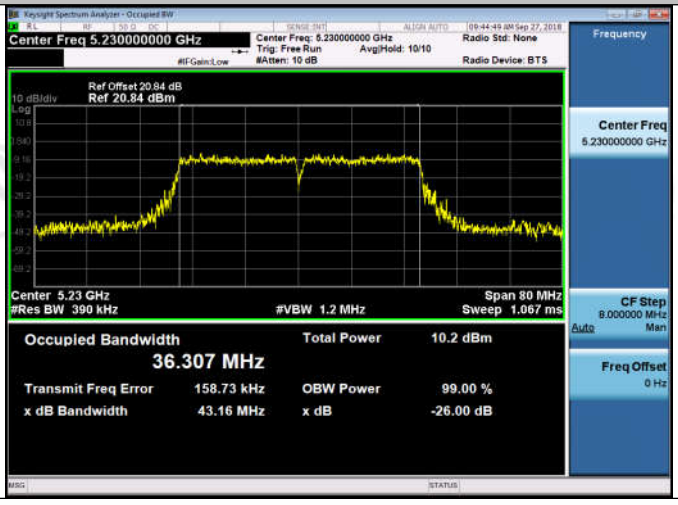

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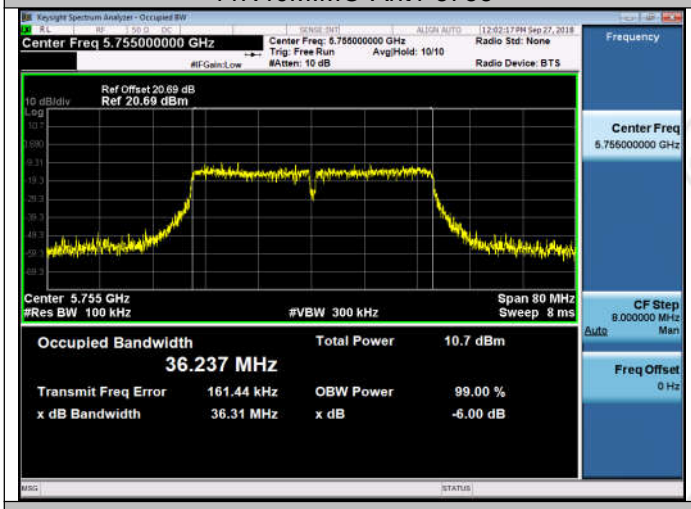	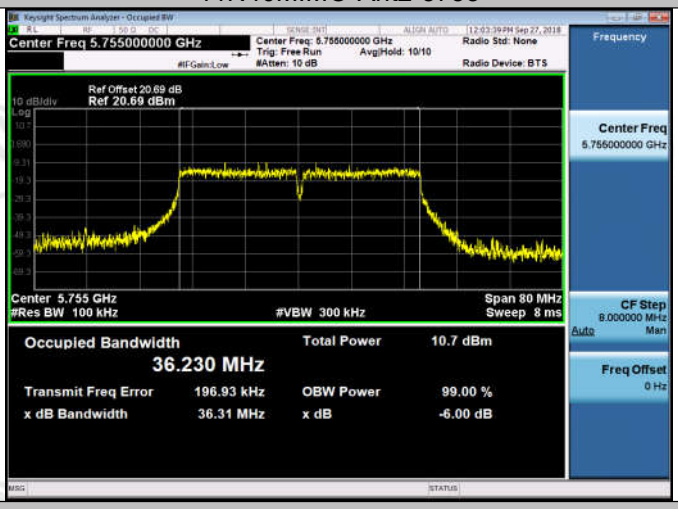
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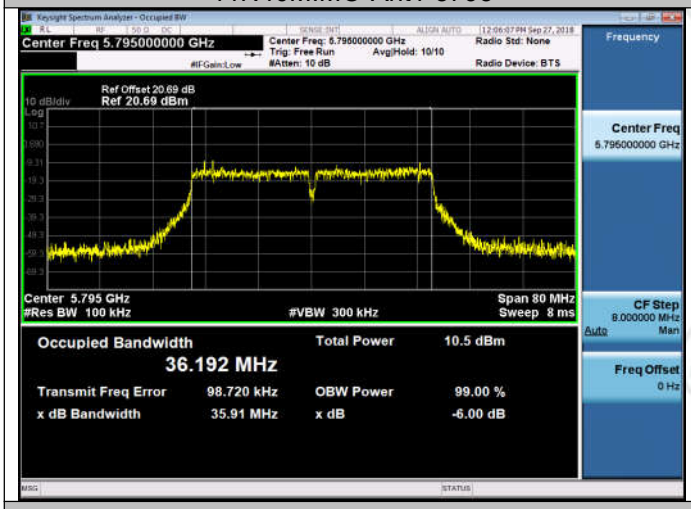	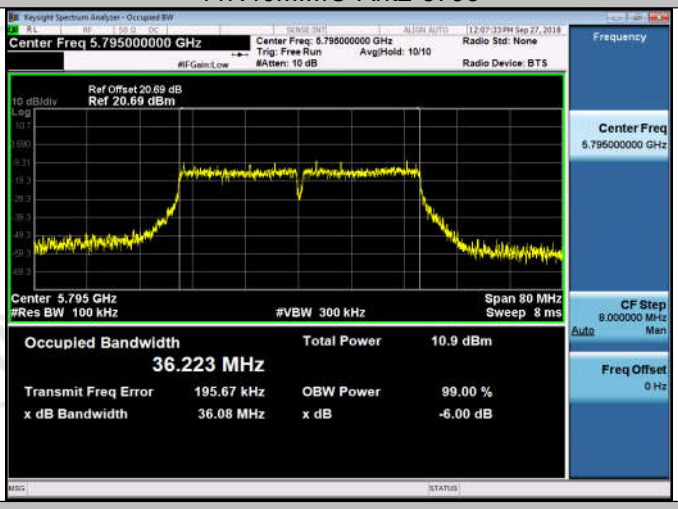
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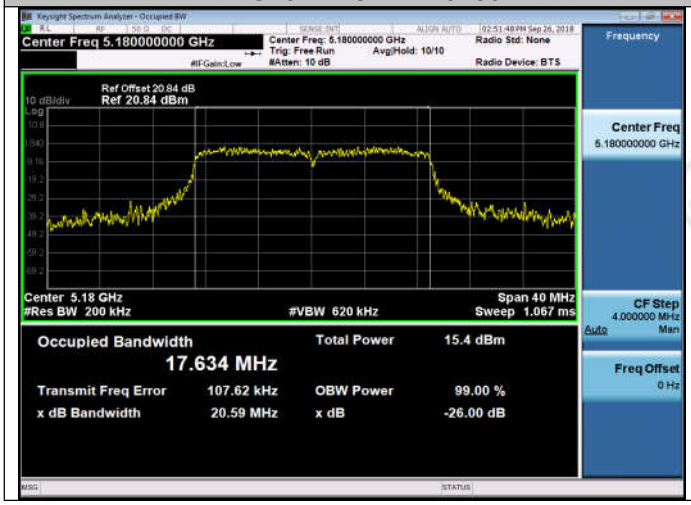	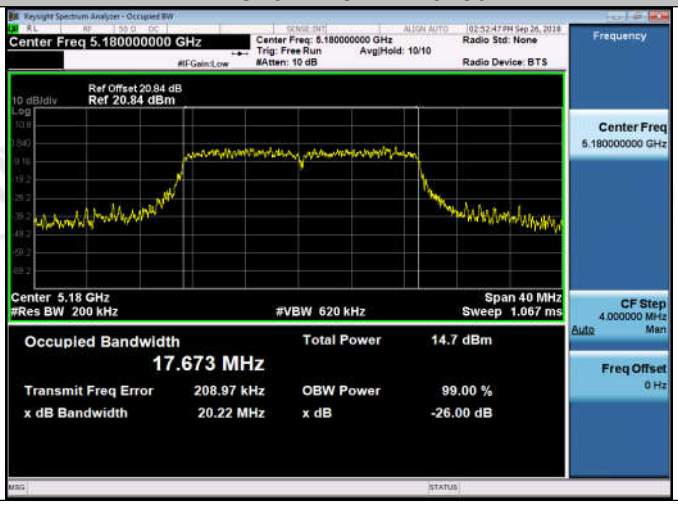

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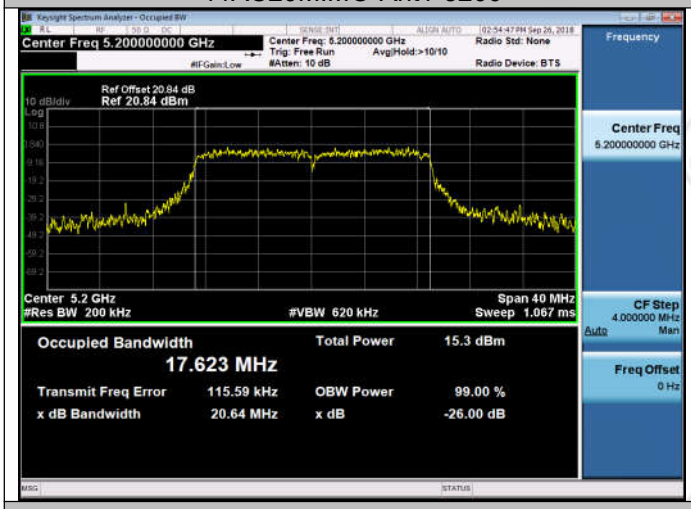	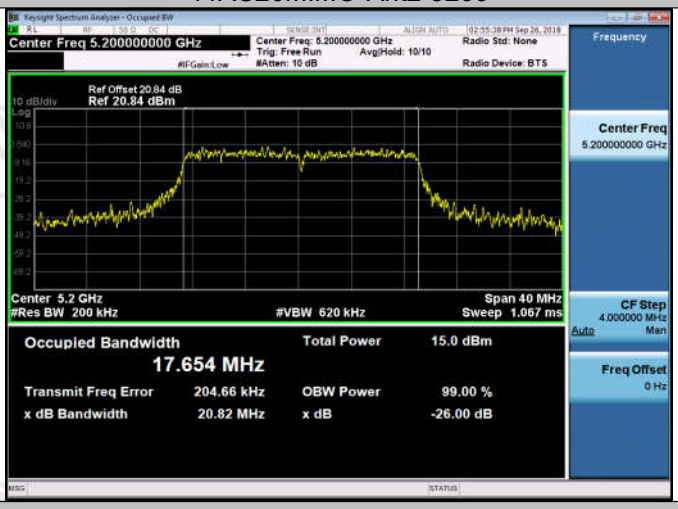
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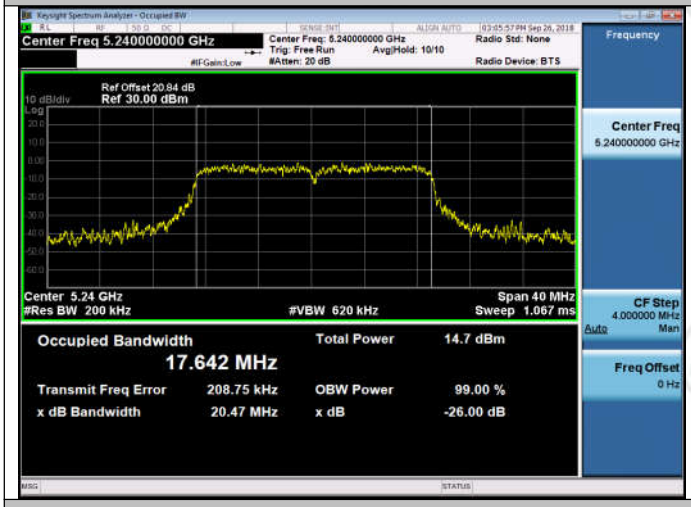	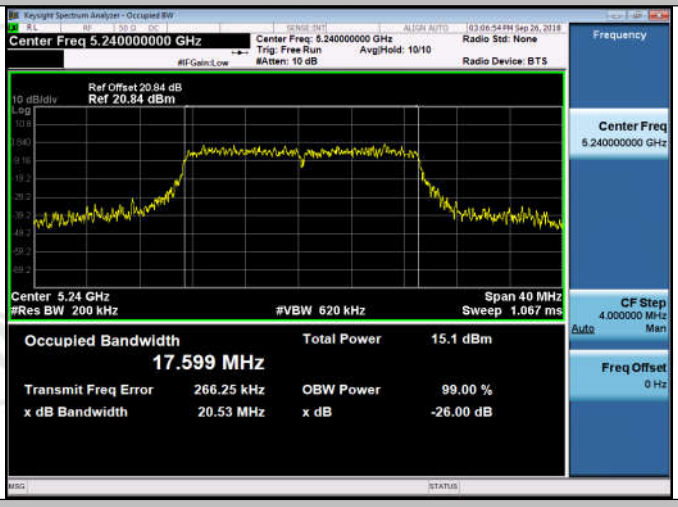
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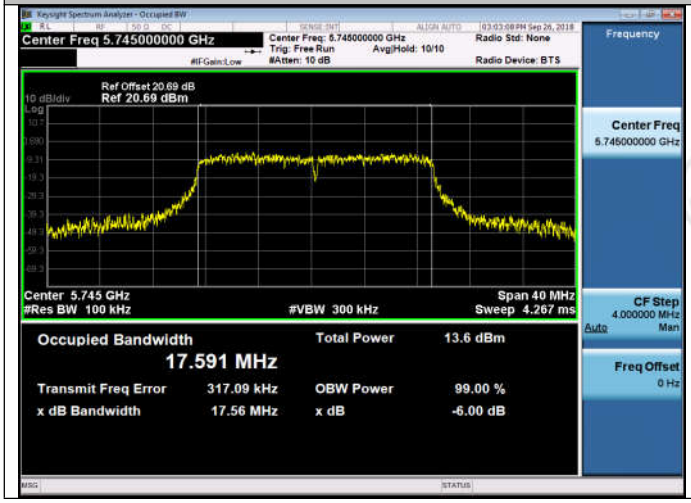	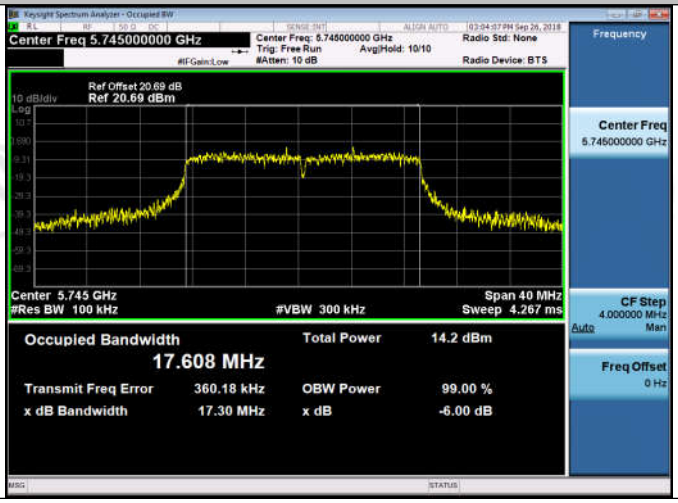

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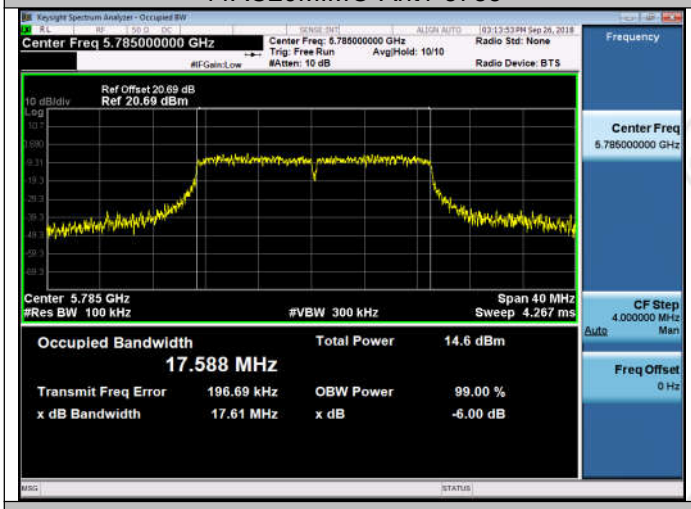	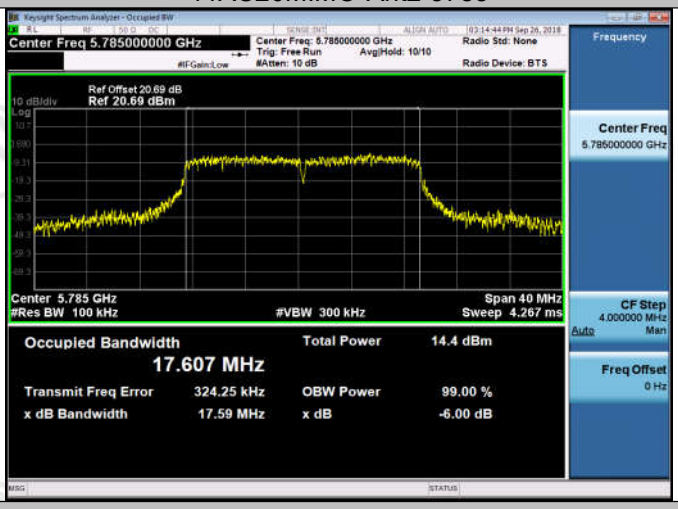
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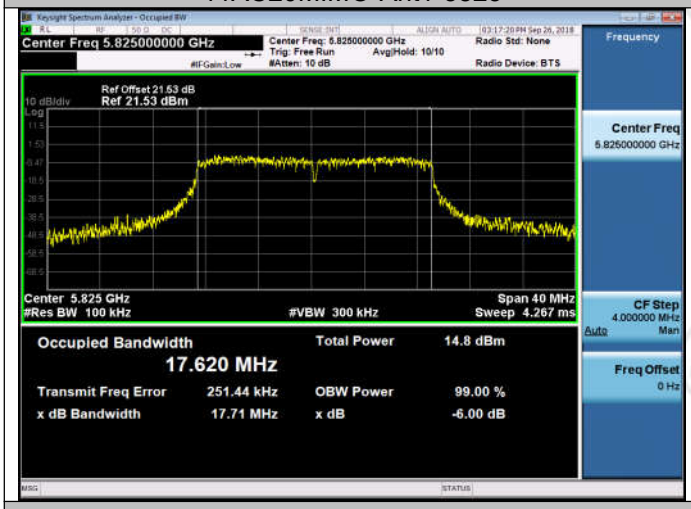	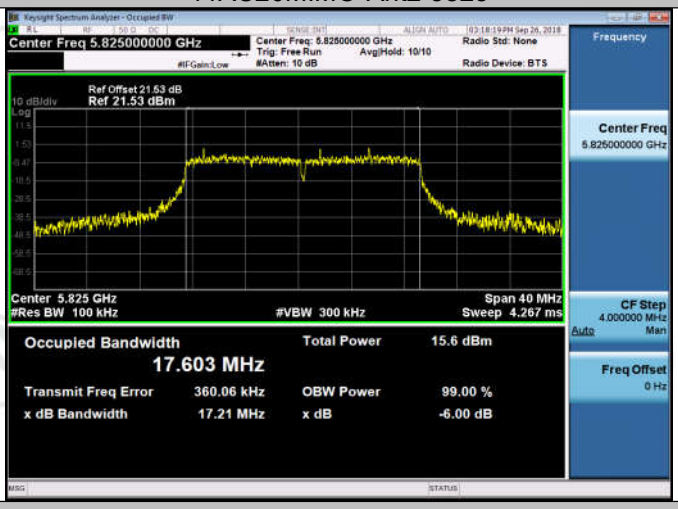
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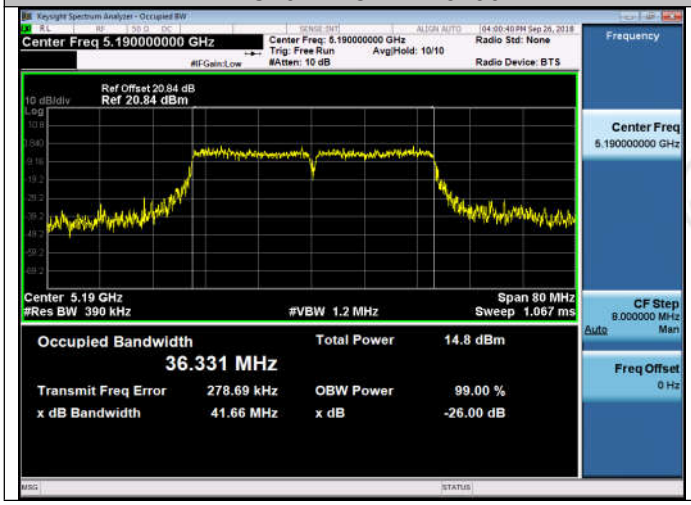	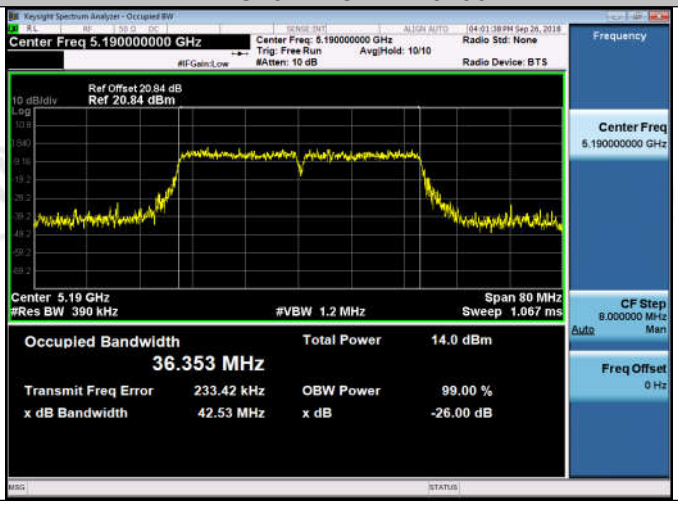

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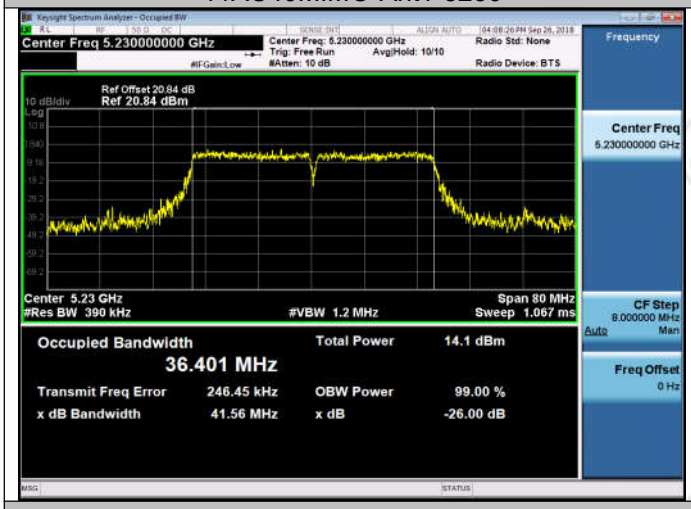	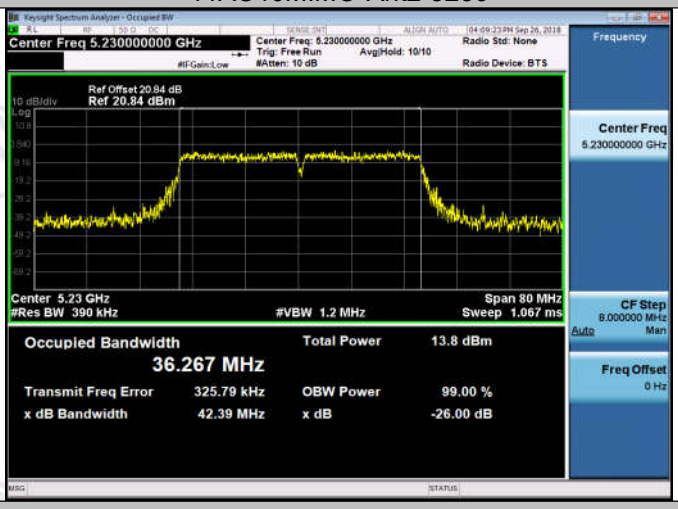
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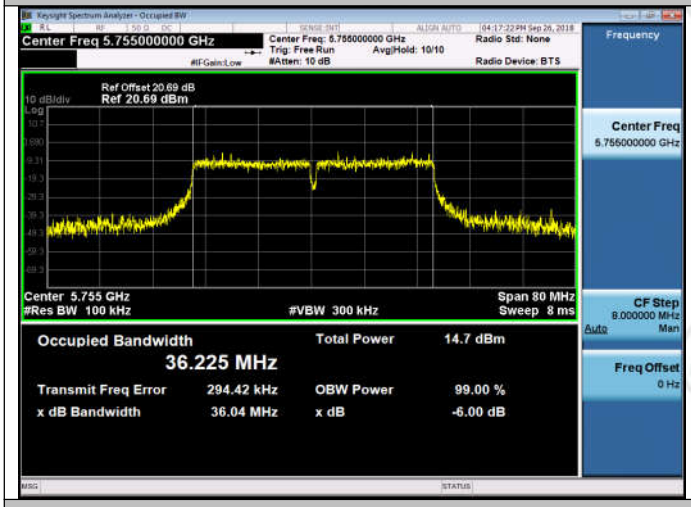	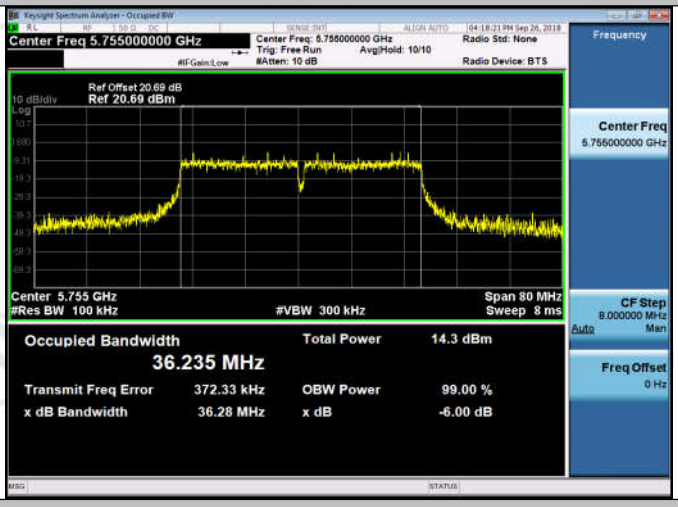
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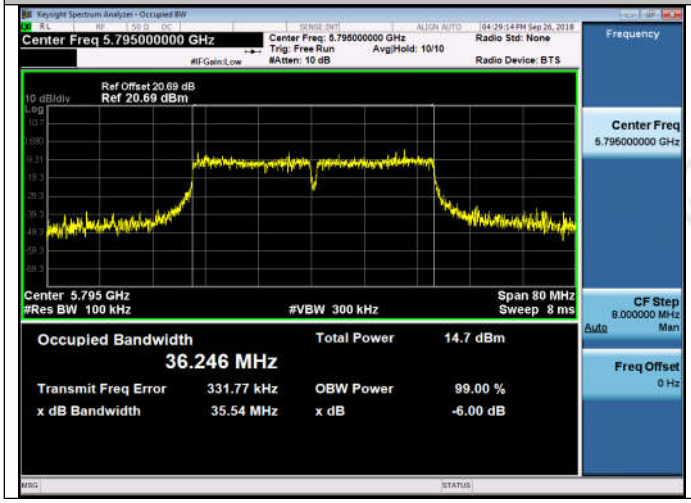	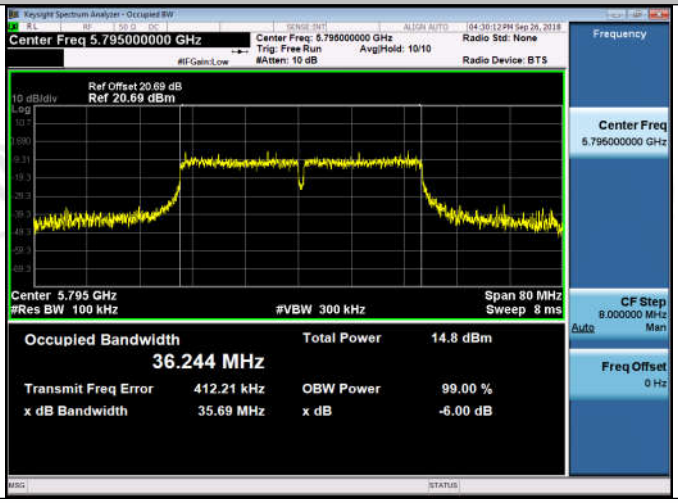

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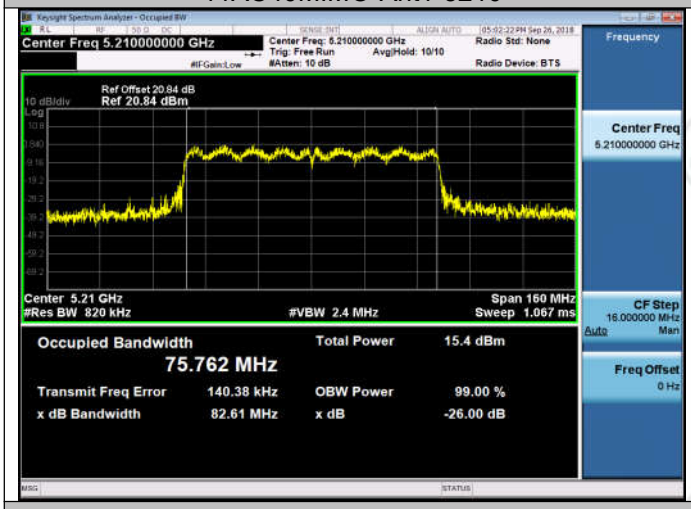	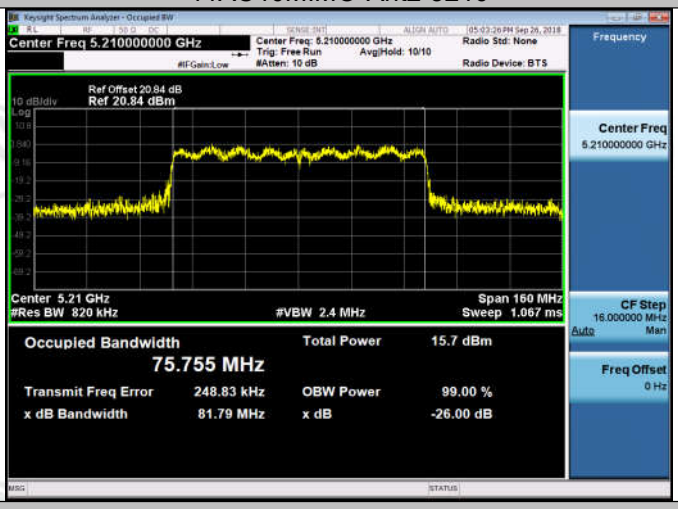
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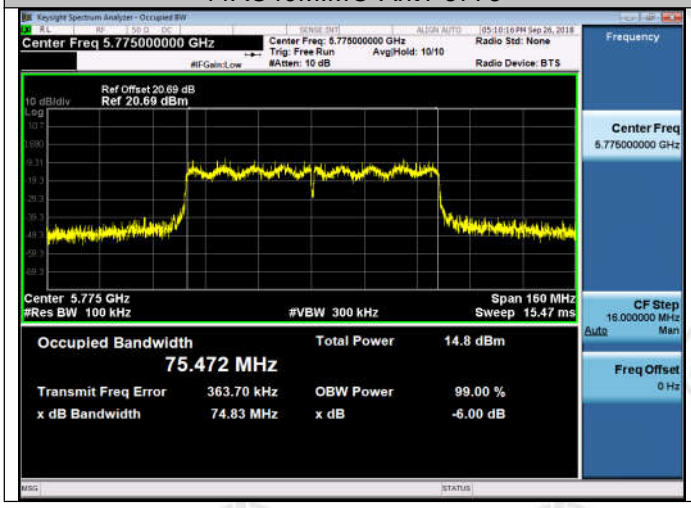	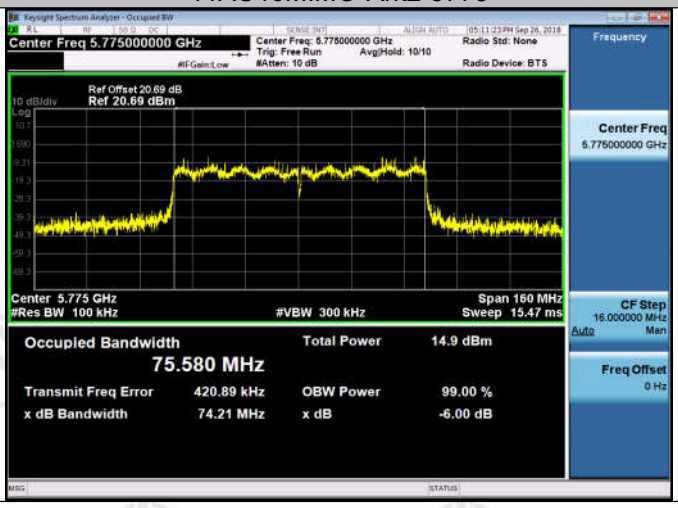

Appendix B): Maximum Conduct Output Power

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 gainis:

Antenna 1 Gain(dBi)	Antenna 2 Gain(dBi)	Correlated Chains DirectionalGain(dBi)
4.57	4.57	7.58

Duty Cycle:

Test Mode	Channel	Duty Cycle[%]	Verdict
11ASISO	5180	100	PASS
11ASISO	5200	100	PASS
11ASISO	5240	100	PASS
11ASISO	5745	100	PASS
11ASISO	5785	100	PASS
11ASISO	5825	100	PASS
11N20SISO	5180	100	PASS
11N20SISO	5200	100	PASS
11N20SISO	5240	100	PASS
11N20SISO	5745	100	PASS
11N20SISO	5785	100	PASS
11N20SISO	5825	100	PASS
11N40SISO	5190	100	PASS
11N40SISO	5230	100	PASS
11N40SISO	5755	100	PASS
11N40SISO	5795	100	PASS
11N20MIMO	5180	100	PASS
11N20MIMO	5200	100	PASS
11N20MIMO	5240	100	PASS
11N20MIMO	5745	100	PASS
11N20MIMO	5785	100	PASS
11N20MIMO	5825	100	PASS
11N40MIMO	5190	100	PASS
11N40MIMO	5230	100	PASS

11N40MIMO	5755	100	PASS
11N40MIMO	5795	100	PASS
11AC20SISO	5180	100	PASS
11AC20SISO	5200	100	PASS
11AC20SISO	5240	100	PASS
11AC20SISO	5745	100	PASS
11AC20SISO	5785	100	PASS
11AC20SISO	5825	100	PASS
11AC40SISO	5190	100	PASS
11AC40SISO	5230	100	PASS
11AC40SISO	5755	100	PASS
11AC40SISO	5795	100	PASS
11AC80SISO	5210	100	PASS
11AC80SISO	5775	100	PASS
11AC20MIMO	5180	100	PASS
11AC20MIMO	5200	100	PASS
11AC20MIMO	5240	100	PASS
11AC20MIMO	5745	100	PASS
11AC20MIMO	5785	100	PASS
11AC20MIMO	5825	100	PASS
11AC40MIMO	5190	100	PASS
11AC40MIMO	5230	100	PASS
11AC40MIMO	5755	100	PASS
11AC40MIMO	5795	100	PASS
11AC80MIMO	5210	100	PASS
11AC80MIMO	5775	100	PASS

Duty Cycle Test Graph

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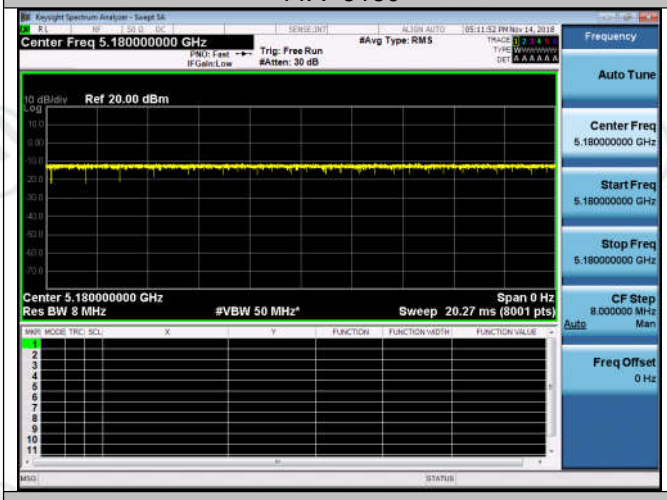
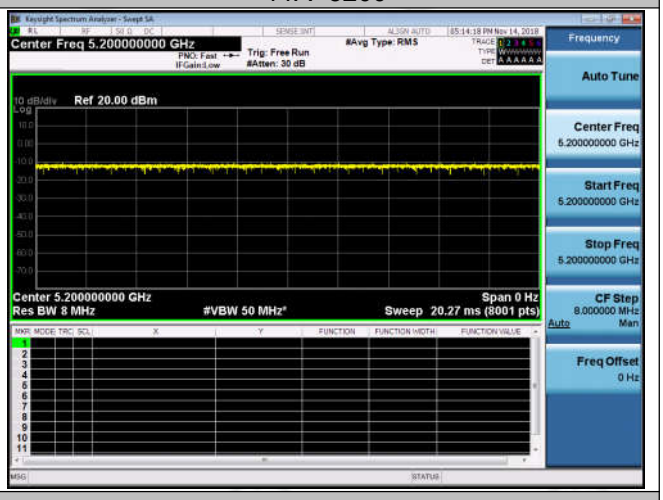
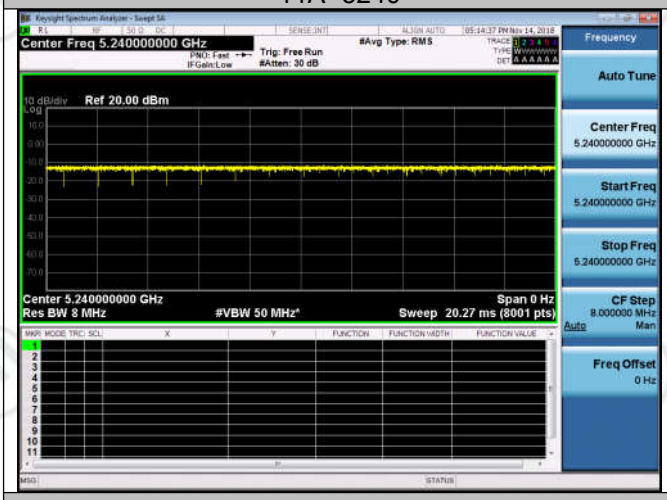
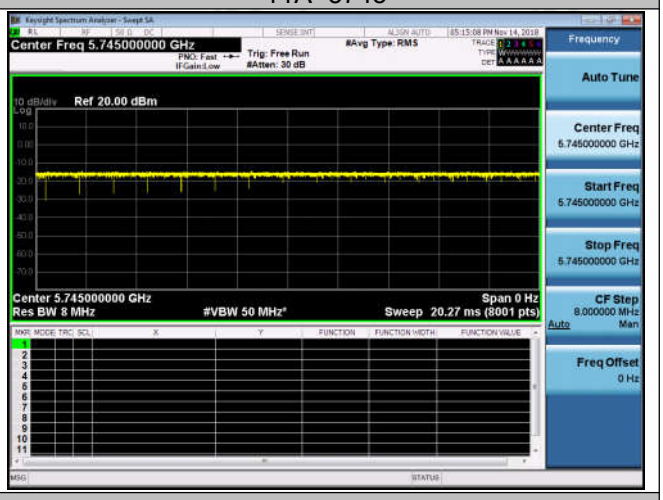
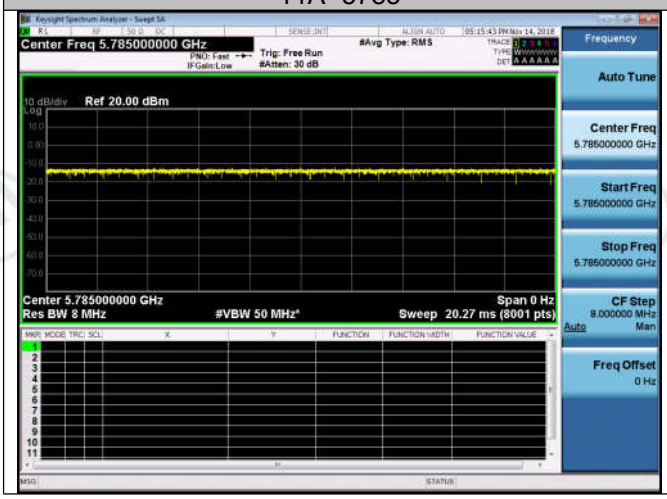
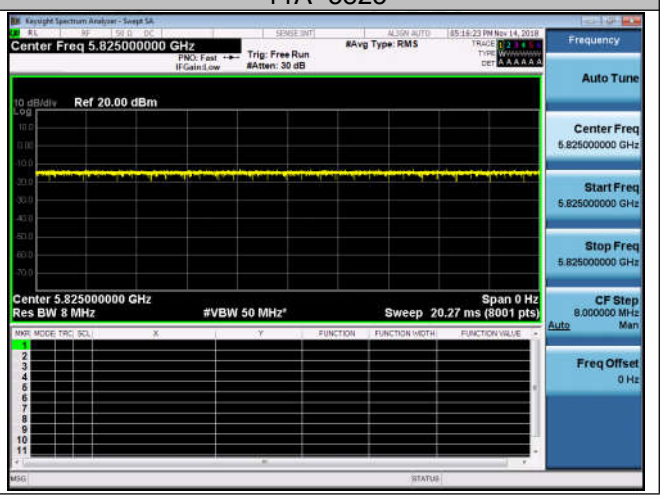
	
11A -5240	11A -5745
	
11A -5785	11A -5825
	

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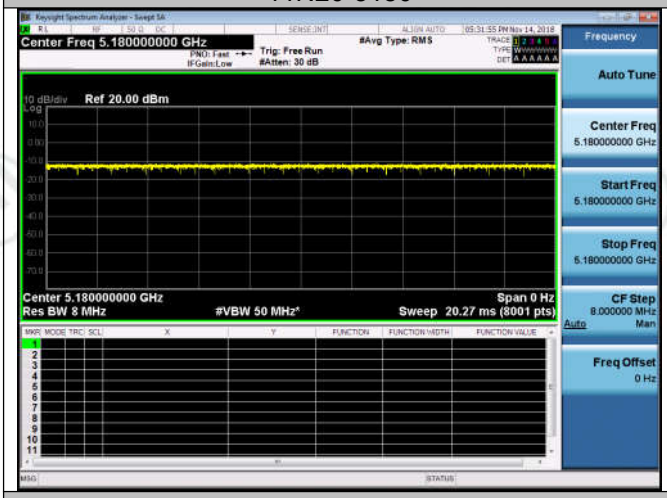	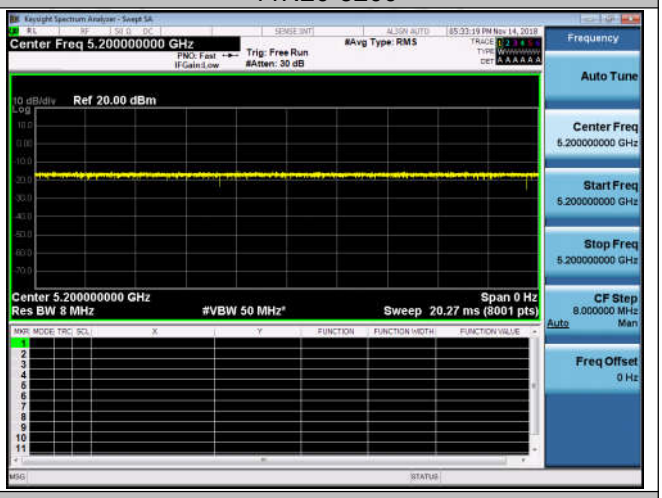
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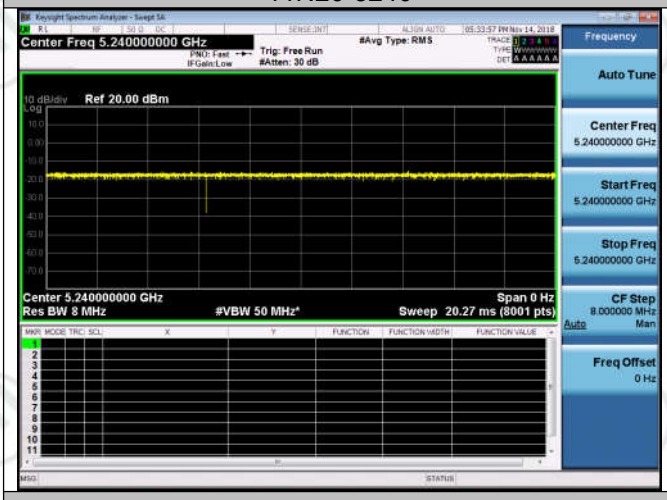	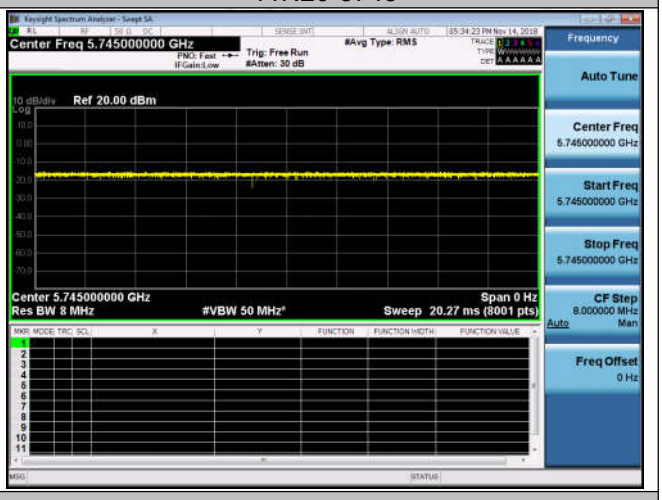
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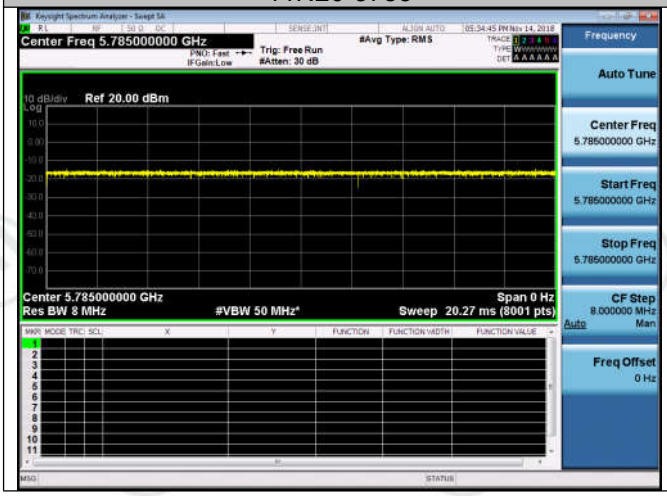	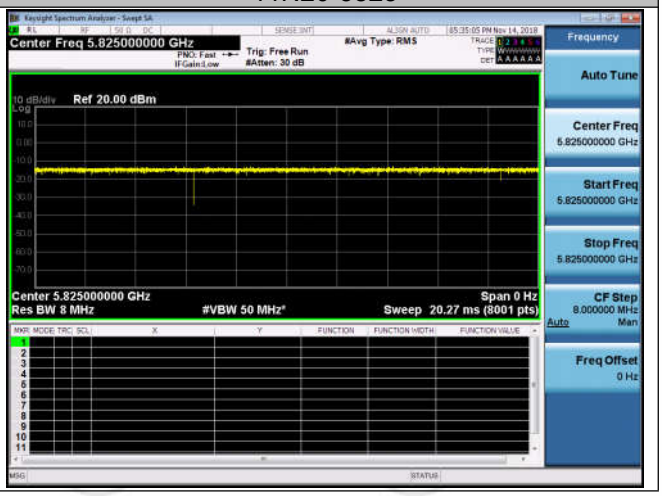

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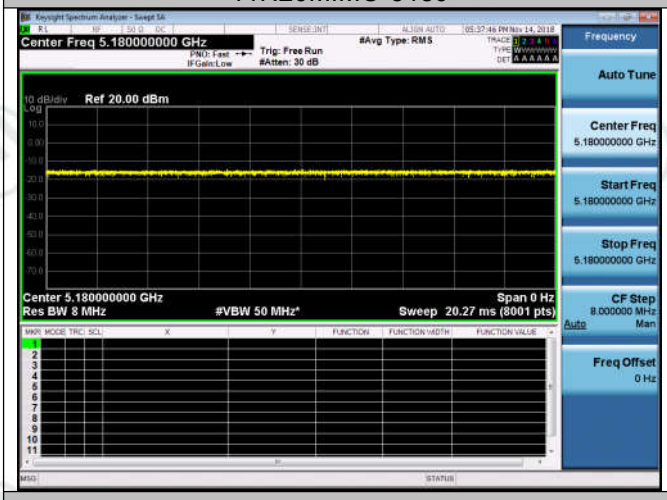	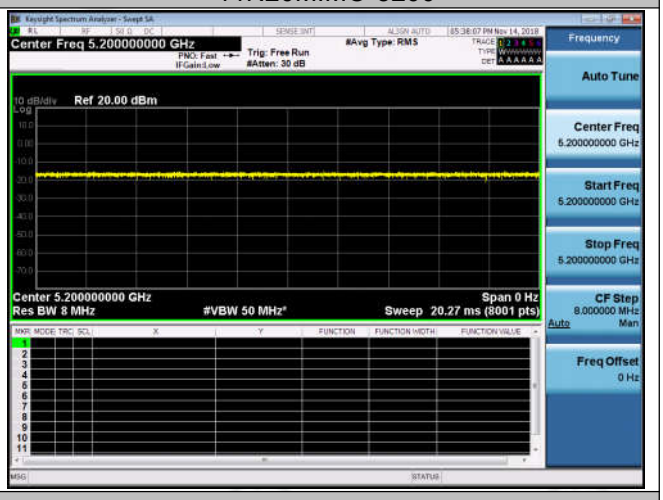
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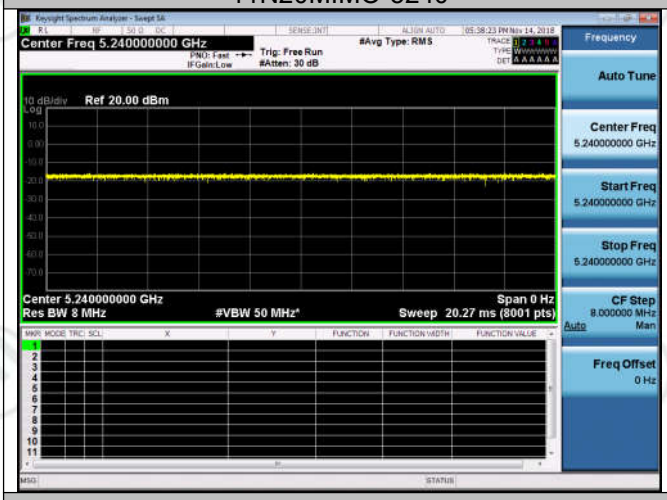	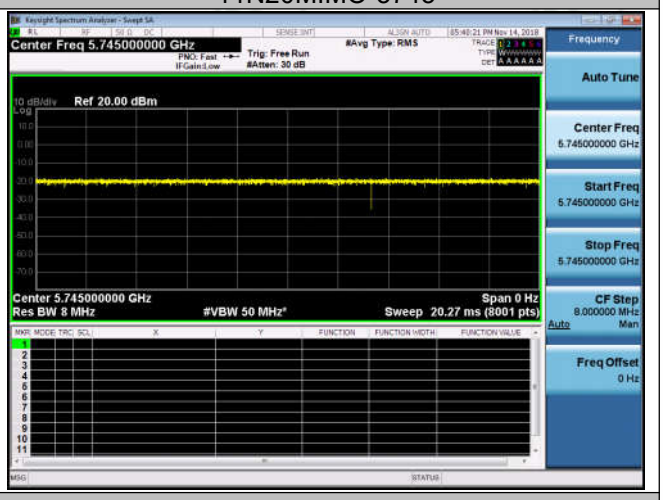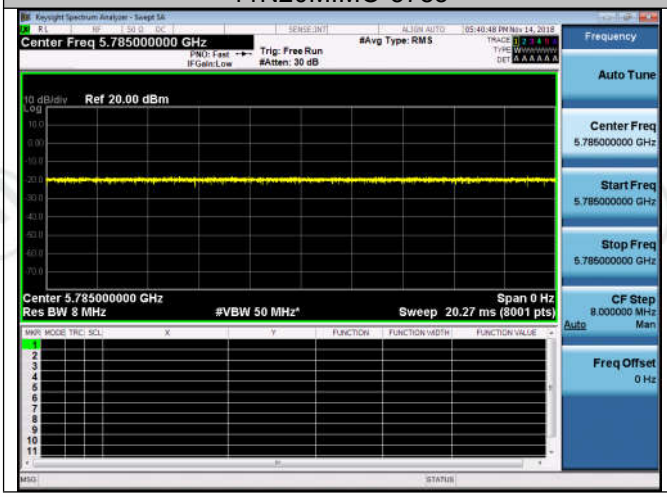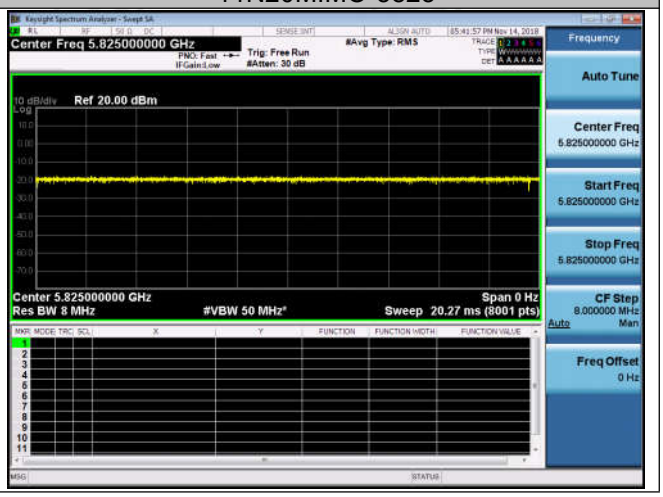
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