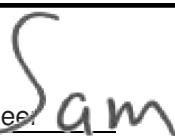


Prüfbericht-Nr.: <i>Test Report No.:</i>	50140127 001	Auftrags-Nr.: <i>Order No.:</i>	114076042	Seite 1 von 141 <i>Page 1 of 141</i>
Kunden-Referenz-Nr.: <i>Client Reference No.:</i>	N/A	Auftragsdatum: <i>Order date:</i>	30-Mar-2018	
Auftraggeber: <i>Client:</i>	Hon Hai Precision Industry Co., Ltd. No.151, Sec. 1, Nankan Rd., Lujhu Township, Taoyuan County, Taiwan			
Prüfgegenstand: <i>Test item:</i>	802.11 a/b/g/n/ac module			
Bezeichnung / Typ-Nr.: <i>Identification / Type No.:</i>	WFU033			
Auftrags-Inhalt: <i>Order content:</i>	FCC / IC Test report			
Prüfgrundlage: <i>Test specification:</i>	CFR 47 Part 15 Subpart E Section 15.407 CFR 47 Part 15 Subpart J Section 2.1091 ISED RSS-247 Issue2 ISED RSS-GEN issue4			
Wareneingangsdatum: <i>Date of receipt:</i>	10-Apr-2018			
Prüfmuster-Nr.: <i>Test sample No.:</i>	A000721430-001 A000721430-002			
Prüfzeitraum: <i>Testing period:</i>	11-Apr-2018 - 30-Apr-2018			
Ort der Prüfung: <i>Place of testing:</i>	EMC/RF Laboratory Taipei			
Prüflaboratorium: <i>Testing laboratory:</i>	TUV Rheinland Taiwan Ltd.			
Prüfergebnis*: <i>Test result*:</i>	Pass			
geprüft von / tested by:		kontrolliert von / reviewed by:		
2018-05-02	Sam C.J. Kuo/Project Engineer		2018-05-02	Arvin Ho/Vize General Manager
Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>	Unterschrift <i>Signature</i>	Datum <i>Date</i>	Name / Stellung <i>Name / Position</i>
Sonstiges / Other:				
Zustand des Prüfgegenstandes bei Anlieferung: <i>Condition of the test item at delivery:</i>		Prüfmuster vollständig und unbeschädigt <i>Test item complete and undamaged</i>		
* Legende: 1 = sehr gut 2 = gut 3 = befriedigend 4 = ausreichend 5 = mangelhaft P(ass) = entspricht o.g. Prüfgrundlage(n) F(ail) = entspricht nicht o.g. Prüfgrundlage(n) N/A = nicht anwendbar N/T = nicht getestet Legend: 1 = very good 2 = good 3 = satisfactory 4 = sufficient 5 = poor P(ass) = passed a.m. test specification(s) F(ail) = failed a.m. test specification(s) N/A = not applicable N/T = not tested				
Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens. <i>This test report only relates to the a. m. test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.</i>				

v04

TEST SUMMARY

5.1.1 ANTENNA REQUIREMENT

RESULT: Passed

5.1.2 MAXIMUM CONDUCTED OUTPUT POWER

RESULT: Passed

5.1.3 ON TIME AND DUTY CYCLE**5.1.4 26 dB BANDWIDTH AND 99% BANDWIDTH**

RESULT: Passed

5.1.5 6 dB BANDWIDTH

RESULT: Passed

5.1.6 POWER SPECTRAL DENSITY

RESULT: Passed

5.1.7 MASK EMISSION

RESULT: Passed

5.1.8 SPURIOUS EMISSION

RESULT: Passed

6.1.1 ELECTROMAGNETIC FIELDS

RESULT: Passed

6.2.1 MAINS CONDUCTED EMISSIONS

RESULT: Passed

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1. General Remarks

1.1 Complementary Materials

All attachments are integral parts of this test report. This applies especially to the following appendix:

- Appendix P: Photo Documentation internal view**
(File Name: 50140127APPENDIXP)
- Appendix D: Test Result of Radiated Emissions**
(File Name: 50140127APPENDIXD)

Test Specifications

The following standards were applied:

Table 1: Applied Standard and Test Levels

Radio
CFR 47 Part 15 Subpart E Section 15.407
CFR 47 Part 15 Subpart J Section 2.1091
ISED RSS-247 Issue2
ISED RSS-GEN issue4ANSI C63.10:2013
FCC KDB 789033 D02
FCC KDB 662911
FCC KDB 644545
FCC KDB 447498 D01 General RF Exposure Guidance v06

2. Test Sites

2.1 Test Facilities

TUV Rheinland Taiwan Ltd.
Taipei Office

11F. No.758, Sec. 4, Bade Rd., Songshan Dist.
Taipei City 105
Taiwan (R.O.C.)

FCC Registration No.: 340738
IC Canada Registration No.: 9465A-1
TAF Accredited NCC Test Lab. No.:0759
TAF ISO17025 Certification effective periods: 2016-Jul-1st to 2019-Jun-30th



Testing Laboratory
0759

2.2 List of Test and Measurement Instruments

Table 2: List of Test and Measurement Equipment

Kind of Equipment	Manufacturer	Type	S/N	Last Calibration	Next Calibration
Test Software	Farad	EZ_EMG	Ver. TUV3A1	N/A	N/A
EMI Test Receiver	R&S	ESR 7	101549	2017/11/10	2018/11/10
Spectrum Analyzer	R&S	FSV 40	100921	2017/05/02	2018/05/02
Spectrum Analyzer	Agilent	N9010A	MY53470241	2017/05/23	2018/05/23
Preamplifier (30MHz -1GHz)	HP	8447F	2805A03335	2017/08/14	2018/08/14
Preamplifier (18 GHz -40 GHz)	COM-POWER	PAM-840	461257	2018/01/18	2019/01/18
Pre-Amplifier (1GHz~18GHz)	EM Electronics	EM01G18G	60558	2017/11/21	2018/11/21
Bilog Antenna	TESEQ	CBL6111D	29804	2017/08/18	2018/08/18
Horn Antenna	ETS-Lindgren	3117	201918	2017/08/18	2018/08/18
Horn Antenna (18GHz~40GHz)	COM-POWER	AH-840	101029	2017/11/28	2018/11/28
Loop Antenna	Schwarzbeck	FMZB 1513	1513-076	2017/06/14	2018/06/14
EMI Test Receiver	R&S	ESR 7	101549	2017/11/10	2018/11/10
Spectrum Analyzer	R&S	FSL3	101943	2015/09/07	2018/09/07
Temp. & Humid. Chamber	Giant Force	GCT-099-40-S	MAF0103-007	2017/03/09	2019/03/09
LISN (1 phase)	R&S	ENV216	101243	2017/06/18	2018/06/18
LISN	R&S	ENV216	101262	2017/06/22	2018/06/21

2.3 Traceability

All measurement equipment calibrations are traceable to NML(Taiwan)/NIST(USA) or where calibration is performed outside Taiwan, to equivalent nationally recognized standards organizations.

2.4 Calibration

Equipment requiring calibration is calibrated periodically in a suitably accredited Calibration Lab. Additionally all equipment is verified for proper performance on a regular schedule using in house standards or comparisons.

2.5 Measurement Uncertainty

The estimated combined standard uncertainty for radiated emissions and conducted emissions measurements are:

Table 3: Emission Measurement Uncertainty

Parameter	Uncertainty
Radio Frequency	$\pm 1 \times 10^{-7}$
RF power, conducted	± 1.5 dB
Adjacent channel power	± 3 dB
Radiated emission of transmitter, valid up to 40 GHz	± 6 dB
Radiated emission of receiver, valid up to 40 GHz	± 6 dB
Temperature	± 2 °C
Humidity	± 10 %

3. General Product Information

3.1 Product Function and Intended Use

The EUT is a 802.11 a/b/g/n/ac module. It contains a WiFi 2.4GHz and 5GHz compatible module enabling the user to communicate data through a Wireless interface. For details refer to the User Guide, Data Sheet and Circuit Diagram.

3.2 Ratings and System Details

Table 4: Basic Information of EUT

Item	EUT information
Kind of Equipment	802.11 a/b/g/n/ac module
Type Designation	WFU033
Product Type	WLAN (2TX, 2RX)
FCC ID	RX3-WFU033
IC ID	2878F-WFU033
HVIN	WFU033

Table 5: Technical Specification of EUT

Operating Frequency	5150 ~ 5350MHz, 5470 ~ 5725MHz, 5725 ~ 5850MHz
Operation Voltage	5V
Channel number	Refer to Table 6
Modulation	OFDM with BPSK, QPSK, QAM
Antenna gain	2.5dBi for Ant1, 3.54dBi for Ant2
Antenna Type	PCB Antenna

Table 6: Channel Frequency Table

There are three bandwidth systems.

For 20MHz bandwidth systems, use channel 36, 40, 44, 48, 52, 56, 60, 64, 100, 104, 108, 112, 116, 120, 124, 128, 132, 136, 140, 144, 149, 153, 157, 161, 165.

For 40MHz Bandwidth systems, use channel 38, 46, 54, 62, 102, 110, 118, 126, 134, 142, 151, 159.

For 80MHz Bandwidth systems, use channel 42, 58, 106, 122, 138, 155

	CH	Frequency
		(MHz)
5150 ~ 5250MHz	36	5180
	38	5190
	40	5200
	42	5210
	44	5220
	46	5230
	48	5240
5250 ~ 5350MHz	52	5260
	54	5270
	56	5280
	58	5290
	60	5300
	62	5310
	64	5320

	CH	Frequency
		(MHz)
5470 ~ 5725MHz	100	5500
	102	5510
	104	5520
	106	5530
	108	5540
	110	5550
	112	5560
	116	5580
	118	5590
	120	5600
	122	5610
	124	5620
	126	5630
	128	5640
	132	5660
	134	5670
	136	5680
	138	5690
140	5700	
142	5710	
144	5720	
5725 ~ 5850MHz	149	5745
	151	5755
	153	5765
	155	5775
	157	5785
	159	5795
	161	5805
165	5825	

3.3 Independent Operation Modes

The basic operation modes are:

- A. Transmitting
- B. Receiving
- C. Normal link
- D. Off

3.4 Noise Generating and Noise Suppressing Parts

Refer to the Circuit Diagram.

3.5 Submitted Documents

- Circuit Diagram
- Instruction Manual
- Rating Label
- Technical Description

4. Description of Test Setup

4.1 Principle of Configuration Selection

The equipment under test (EUT) was configured to measure its maximum power level. The test modes were adapted accordingly in reference to the instructions for use.

4.2 Test Operation and Test Software

Setup for testing: Test samples are provided with a SPI interface which makes it possible to control them through test software installed on a notebook computer.

This software, MT7662UQA was running on the laptop computer connected to the EUT. It was used to enable the operation modes listed in section 3.3 as appropriate.

Full test was applied on all test modes, but only worst case was shown.

ANT1 stands for Antenna port one.

ANT2 stands for Antenna port two.

4.3 Special Accessories and Auxiliary Equipment

The product has been tested together with the following additional accessories:

Description	Manufacturer	Model No.	Serial No.
Notebook(EMC-06)	Lenovo	TP00048A	PB-0F8B2

4.4 Countermeasures to achieve EMC Compliance

The test sample which has been tested contained the noise suppression parts as described in the Constructional Data Form or the Technical Construction File. No additional measures were employed to achieve compliance.

4.5 Test Setup Diagram

Diagram of Measurement Configuration for Radiation Test

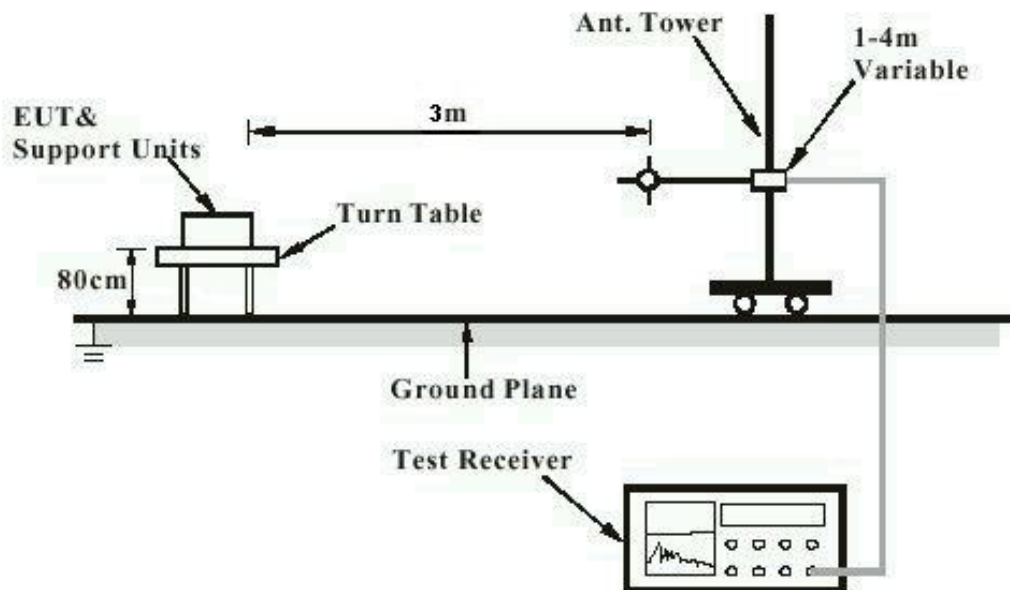


Diagram of Measurement Equipment Configuration for Mains Conduction Measurement

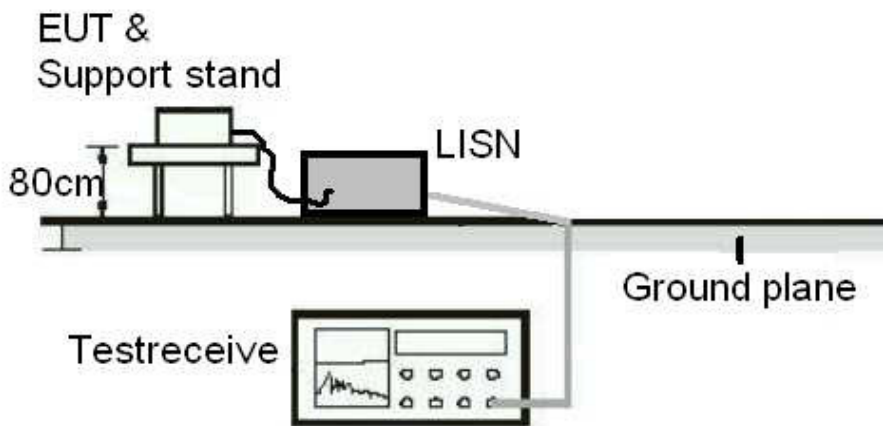
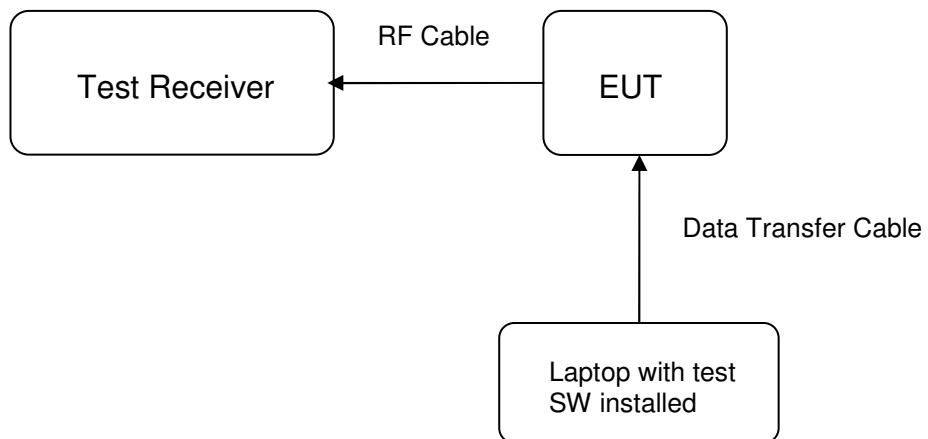


Diagram of Measurement Equipment Configuration for Conducted Transmitter Measurement

ANT1 or ANT2 testing



4.6 Environmental Conditions

Temperature	18 - 25°C
Humidity	35 – 75%

5. Antenna Port Test Results

5.1 Transmitter Requirement & Test Suites

5.1.1 Antenna Requirement

RESULT:**Passed**

Test standard : FCC Part 15.407(a), Part 15.203 and RSS-Gen 7.1.4
Limit : the use of antennas with directional gains that do not exceed 6 dBi

According to the antenna report, the EUT has two antennas. The antenna is PCB antenna with no possibility of replacement with a non-approved antenna by the end-user. Therefore, the EUT is considered to comply with this provision.

	Ant1	Ant2
Frequency (MHz)	Peak Gain (dBi)	Peak Gain (dBi)
5150	1.05	3.54
5550	2.5	3.1
5850	2.34	2.92

Refer to EUT photo and antenna report for detailed information.

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5.1.2 Maximum Conducted Output Power

RESULT:**Passed**

Test standard : FCC Part 15.407(a), RSS-247 6.2

Kind of test site : Shielded room/Conducted room

Test setup

Test Channel : Refer to the Table 7 ~ 10

Operation Mode : A

Limit

For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi.

For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or $11 \text{ dBm} + 10 \log B$, where B is the 26 dB emission bandwidth in megahertz. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

For the band 5.725-5.85 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. In addition, the maximum power spectral density shall not exceed 30 dBm in any 500-kHz band. If transmitting antennas of directional gain greater than 6 dBi are used, both the maximum conducted output power and the maximum power spectral density shall be reduced by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

Table 7: Test result of Transmit Power (802.11a)

Channel	Frequency	Conducted power (dBm)			Max. Limit (dBm)	Result	Duty fac.
		Aux1	Aux2				
36	5180 MHz	15.67	15.84		24	Pass	0.56
40	5200 MHz	15.77	15.92		24	Pass	0.56
48	5240 MHz	15.62	15.77		24	Pass	0.56
56	5280 MHz	15.72	15.70		24	Pass	0.56
60	5300 MHz	15.57	15.73		24	Pass	0.56
64	5320 MHz	15.77	15.85		24	Pass	0.56
100	5500 MHz	15.76	15.86		24	Pass	0.56
112	5560 MHz	15.84	15.79		24	Pass	0.56
140	5700 MHz	15.95	15.93		24	Pass	0.56
144	5720 MHz	15.72	15.70		24	Pass	0.56
149	5745 MHz	15.96	15.94		30	Pass	0.56
157	5785 MHz	15.79	15.97		30	Pass	0.56
165	5825 MHz	15.79	15.92		30	Pass	0.56

Note: Conducted power is equal to measured power plus duty factor, where duty factor is $10\log(1/0.88)$.

Table 8: Test result of Transmit Power (802.11ac VHT20)

Channel	Frequency	Conducted power (dBm)			Max. Limit (dBm)	Result	Duty fac.
		Aux1	Aux2	Total			
36	5180 MHz	11.90	11.90	14.92	24	Pass	0.6
40	5200 MHz	11.86	11.62	14.76	24	Pass	0.6
48	5240 MHz	12.00	11.89	14.96	24	Pass	0.6
56	5280 MHz	11.94	11.79	14.88	24	Pass	0.6
60	5300 MHz	11.98	11.80	14.91	24	Pass	0.6
64	5320 MHz	11.84	11.74	14.81	24	Pass	0.6
100	5500 MHz	11.75	11.68	14.73	24	Pass	0.6
112	5560 MHz	12.07	11.79	14.95	24	Pass	0.6
140	5700 MHz	11.81	11.80	14.82	24	Pass	0.6
144	5720 MHz	11.8	11.9	14.87	24	Pass	0.6
149	5745 MHz	12.09	11.80	14.96	30	Pass	0.6
157	5785 MHz	12.00	11.61	14.82	30	Pass	0.6
165	5825 MHz	11.80	11.66	14.75	30	Pass	0.6

Note: Conducted power is equal to measured power plus duty factor, where duty factor is $10\log(1/0.87)$.

Table 9: Test result of Transmit Power (802.11ac VHT40)

Channel	Frequency	Conducted power (dBm)			Max. Limit (dBm)	Result	Duty fac.
		Aux1	Aux2	Total			
38	5190 MHz	11.59	11.90	14.76	24	Pass	1.19
46	5230 MHz	11.67	11.89	14.79	24	Pass	1.19
54	5270 MHz	11.93	11.89	14.92	24	Pass	1.19
62	5310 MHz	11.79	11.98	14.90	24	Pass	1.19
102	5510 MHz	11.81	11.89	14.86	24	Pass	1.19
118	5590 MHz	11.76	11.76	14.77	24	Pass	1.19
134	5670 MHz	11.83	11.59	14.72	24	Pass	1.19
142	5710 MHz	11.61	11.6	14.62	24	Pass	1.19
151	5755 MHz	11.88	11.78	14.84	30	Pass	1.19
159	5795 MHz	11.86	11.75	14.82	30	Pass	1.19

Note: Conducted power is equal to measured power plus duty factor, where duty factor is $10\log(1/0.76)$.

Table 10: Test result of Transmit Power (802.11ac VHT80)

Channel	Frequency	Conducted power (dBm)			Max. Limit (dBm)	Result	Duty fac.
		Aux1	Aux2	Total			
42	5210 MHz	10.77	10.48	13.63	24	Pass	2.01
58	5290 MHz	10.81	10.75	13.79	24	Pass	2.01
106	5530 MHz	10.57	10.68	13.63	24	Pass	2.01
122	5610 MHz	10.70	10.49	13.60	24	Pass	2.01
138	5690 MHz	10.62	10.59	13.61	24	Pass	2.01
155	5775 MHz	10.51	10.31	13.42	30	Pass	2.01

Note: Conducted power is equal to measured power plus duty factor, where duty factor is $10\log(1/0.63)$.

5.1.3 On Time and Duty Cycle

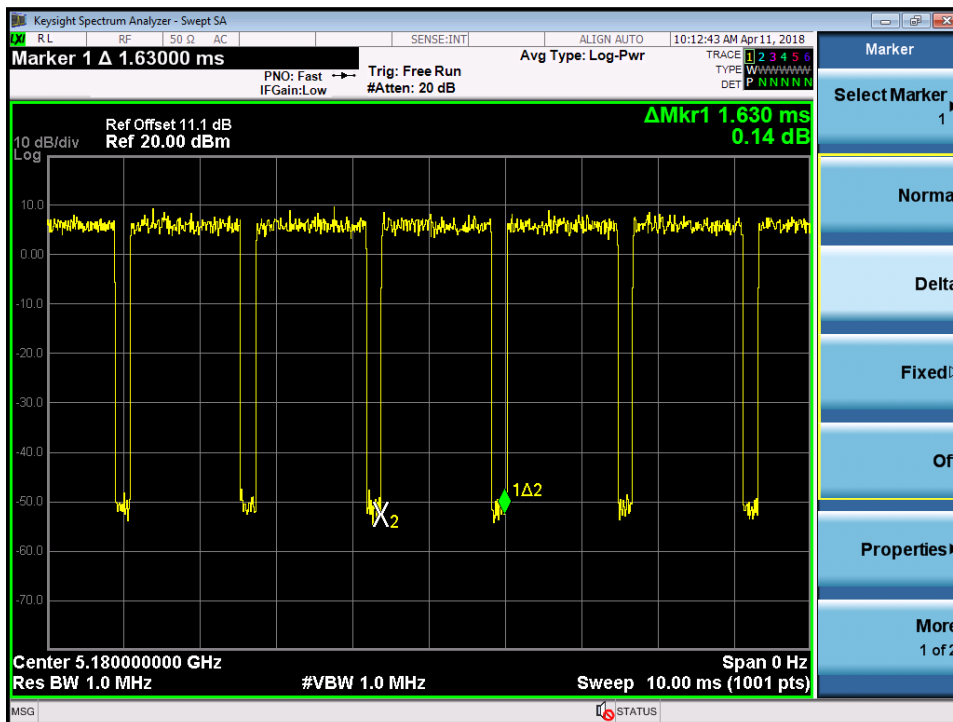
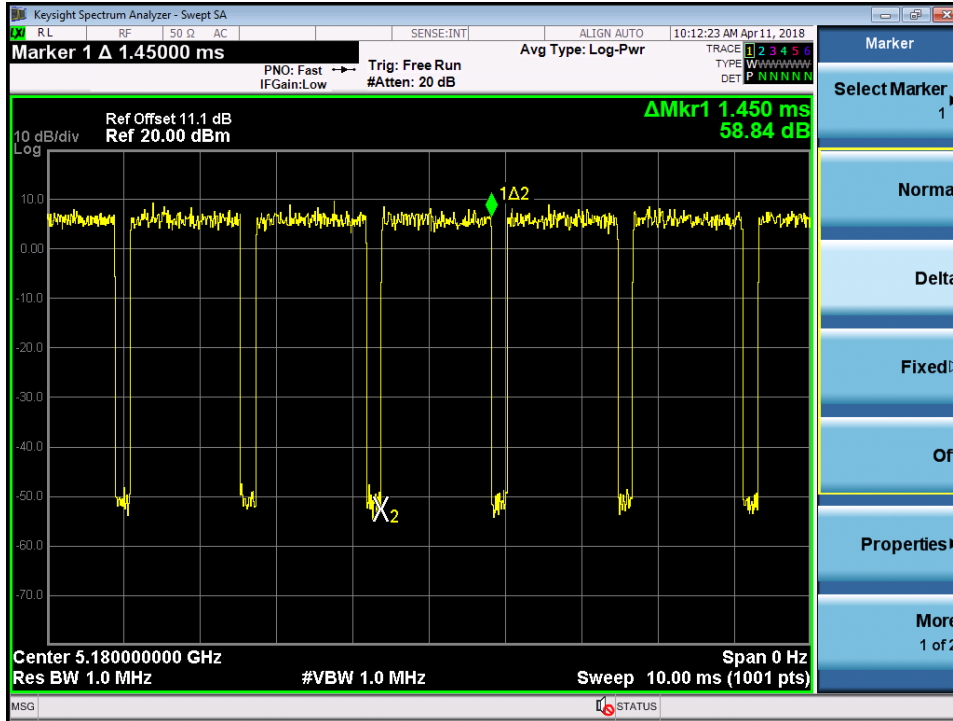
Test standard : KDB 789033 Zero-Span Spectrum Analyzer Method
 Limit : None; for reporting purposes only
 Kind of test site : Shielded room/Conducted room

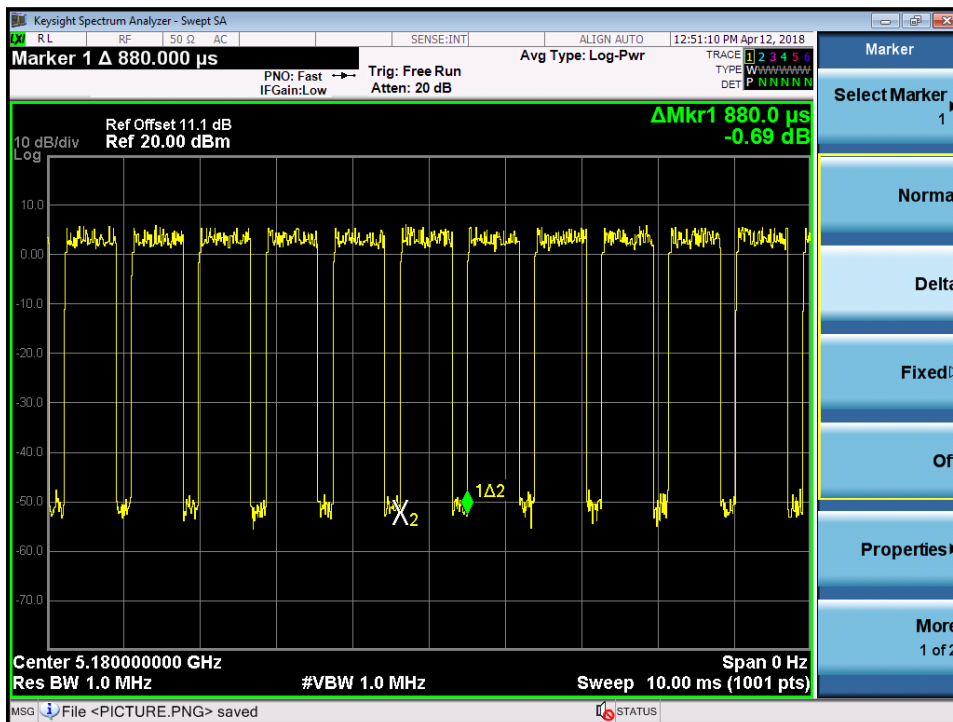
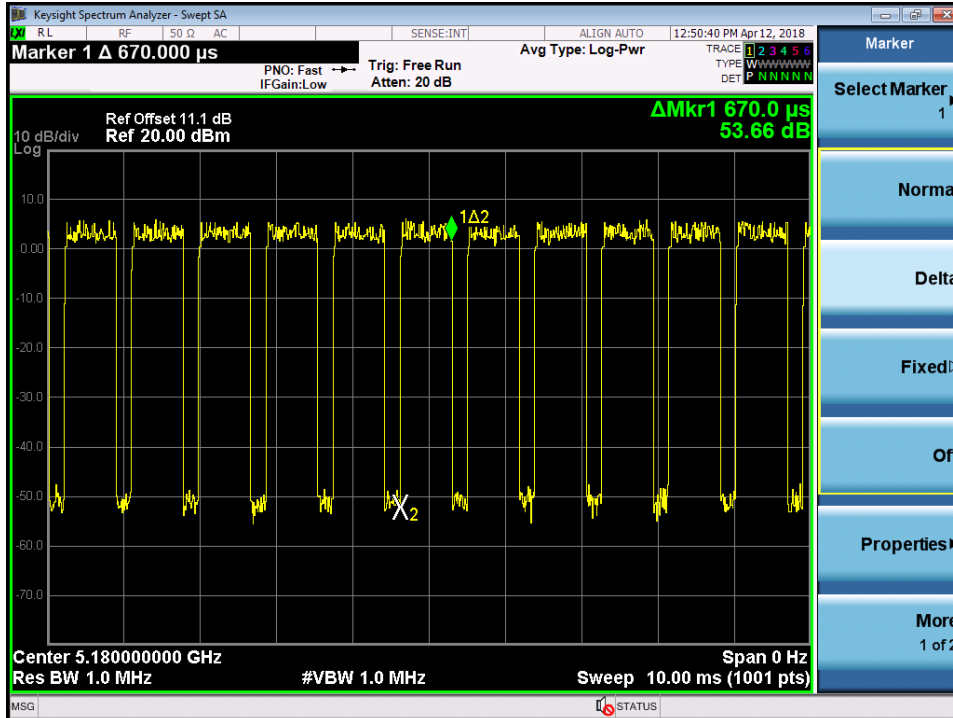
Test setup

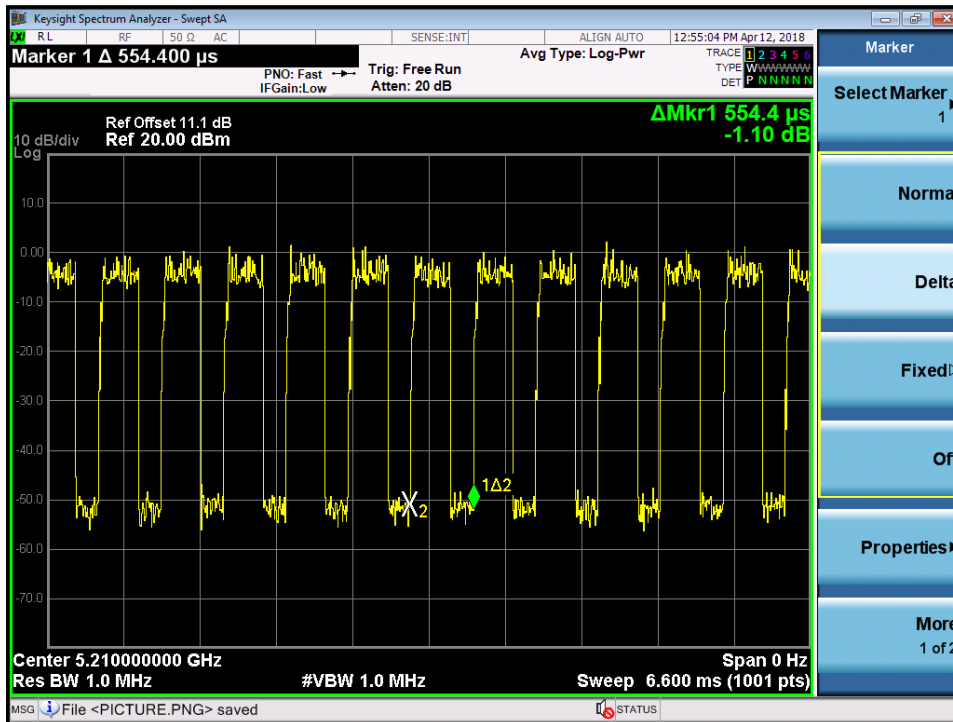
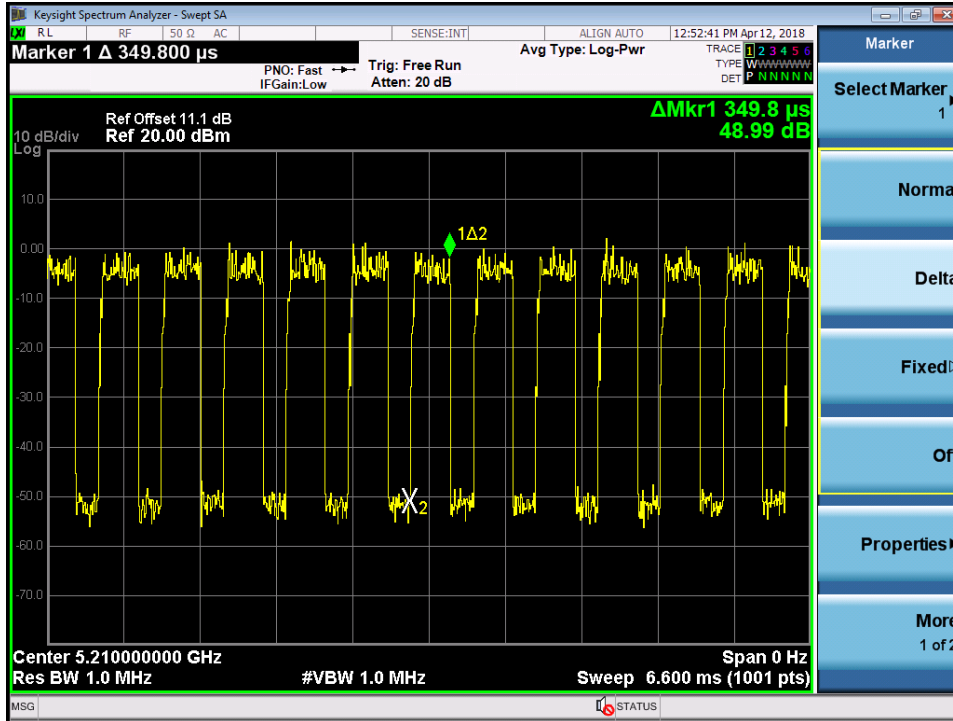
Test Channel : 36 (5180MHz)
 Operation Mode : A

Table 11: Result of Duty Cycle

Mode	ON Time (msec)	Period (msec)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)
802.11a 5180MHz	1.45	1.63	88	0.56
802.11ac VHT20 5180MHz	1.36	1.56	87	0.6
802.11ac VHT40 5180MHz	0.67	0.88	76	1.19
802.11ac VHT80 5180MHz	0.35	0.554	63	2.01

DUTY CYCLE PLOTS, 802.11a 5180MHz


DUTY CYCLE PLOTS, 802.11ac VHT40 5180MHZ


DUTY CYCLE PLOTS, 802.11ac VHT80 5180MHz


5.1.4 26 dB Bandwidth and 99% Bandwidth

RESULT:
Passed

Test standard : FCC Part 15.407(a), RSS-247;
 Limit : FCC Part 15.407(a), RSS-247;
 Kind of test site : Shielded room/Conducted room

Test setup

Test Channel : Refer to the Table 11 ~14
 Operation Mode : A

Table 12: Test result of 26dB/99% Bandwidth (802.11a)

Channel	Channel Frequency (MHz)	26dB Bandwidth ANT1 (MHz)	99% Bandwidth ANT1 (MHz)
36	5180	30.39	17.585
40	5200	29.02	17.3
48	5240	28.09	16.972
56	5280	30.09	17.375
60	5300	26.47	17.022
64	5320	21.54	16.832
100	5500	22.58	16.845
112	5560	22.15	16.888
140	5700	27.38	16.979
149	5745	31.31	17.279
157	5785	31.88	17.37
165	5825	29.06	17.124
144 ₁	5720	20.52	17.12

Note1: Channel 144 is operated in both U-NII-2C and U-NII-3

Table 13: Test result of 26dB/99% Bandwidth (802.11ac VHT20)

Channel	Channel Frequency (MHz)	26dB Bandwidth ANT0+ANT1 (MHz)	99% Bandwidth ANT0+ANT1 (MHz)
36	5180	20.53	17.8
40	5200	20.61	17.768
48	5240	20.33	17.773
56	5280	20.28	17.743
60	5300	20.39	17.723
64	5320	20.48	17.695
100	5500	20.61	17.761
112	5560	20.26	17.745
140	5700	20.43	17.727
149	5745	20.55	17.781
157	5785	20.37	17.685
165	5825	20.54	17.756
144 ₁	5720	20.28	17.751

Note1: Channel 144 is operated in both U-NII-2C and U-NII-3

Table 14: Test result of 26dB/99% Bandwidth (802.11ac VHT40)

Channel	Channel Frequency (MHz)	26dB Bandwidth ANT0+ANT1 (MHz)	99% Bandwidth ANT0+ANT1 (MHz)
38	5190	40.91	36.245
46	5230	41.77	36.332
54	5270	41.9	36.492
62	5310	41.53	36.31
102	5510	41.41	36.307
118	5590	42.06	36.509
134	5670	41.18	36.428
151	5755	41.57	36.385
159	5795	41.13	36.18
142 ₁	5710	41.5	36.751

Note1: Channel 142 is operated in both U-NII-2C and U-NII-3

Table 15: Test result of 26dB/99% Bandwidth (802.11ac VHT80)

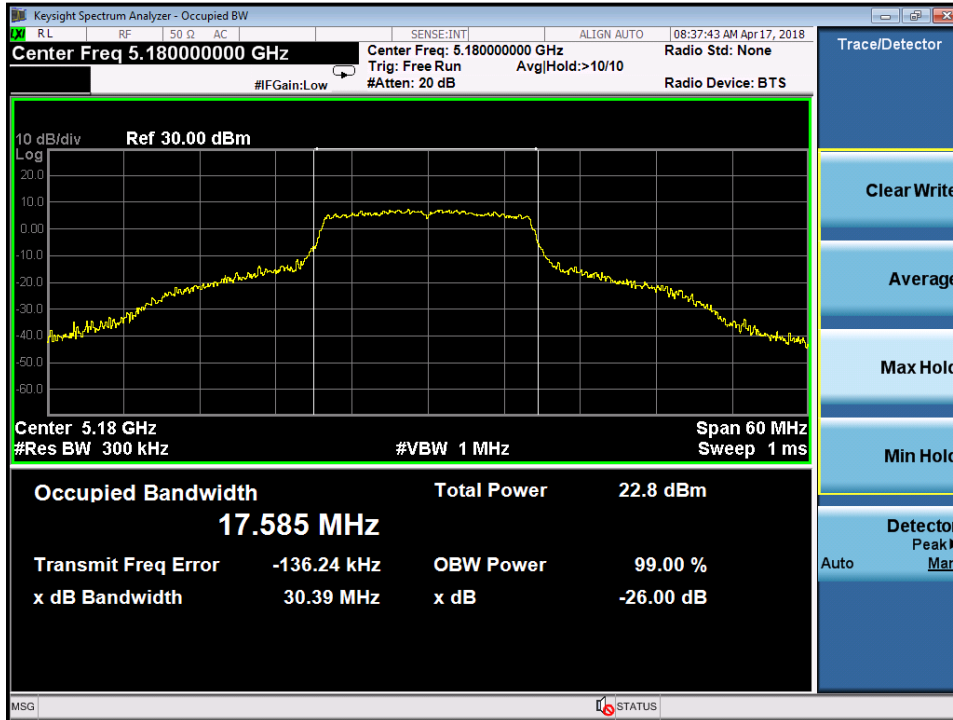
Channel	Channel Frequency (MHz)	26dB Bandwidth ANT0+ANT1 (MHz)	99% Bandwidth ANT0+ANT1 (MHz)
42	5210	80.65	74.763
58	5290	80.67	74.712
106	5530	80.33	74.913
122	5610	80.61	74.768
151	5755	81.04	74.999
138 ₁	5690	80	74.81

Note1: Channel 138 is operated in both U-NII-2C and U-NII-3

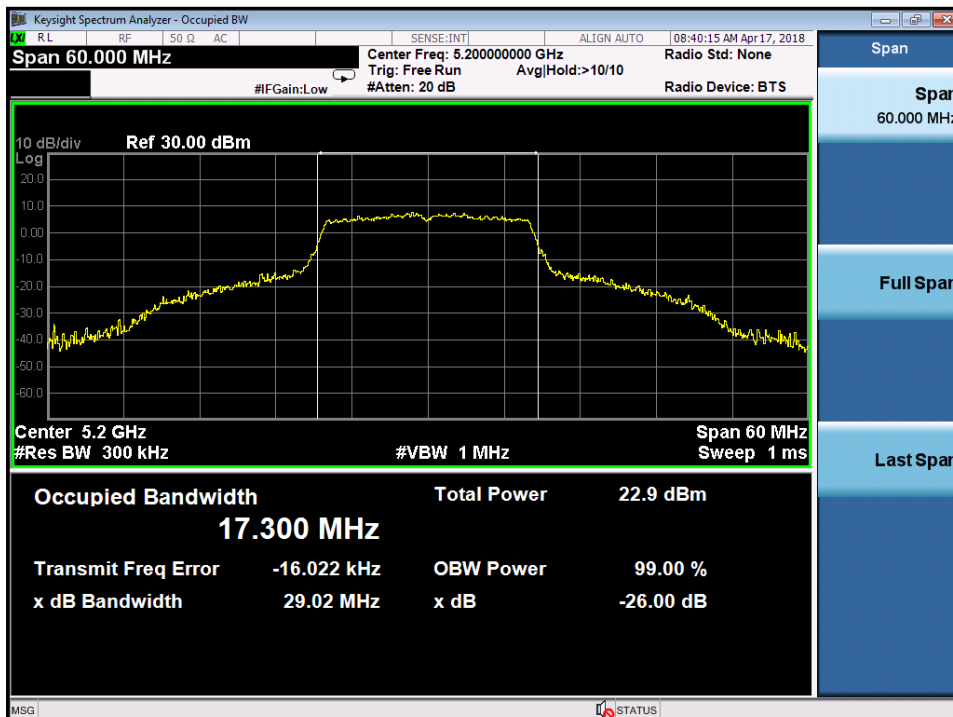
Test Plot of 26dB Bandwidth (802.11a)

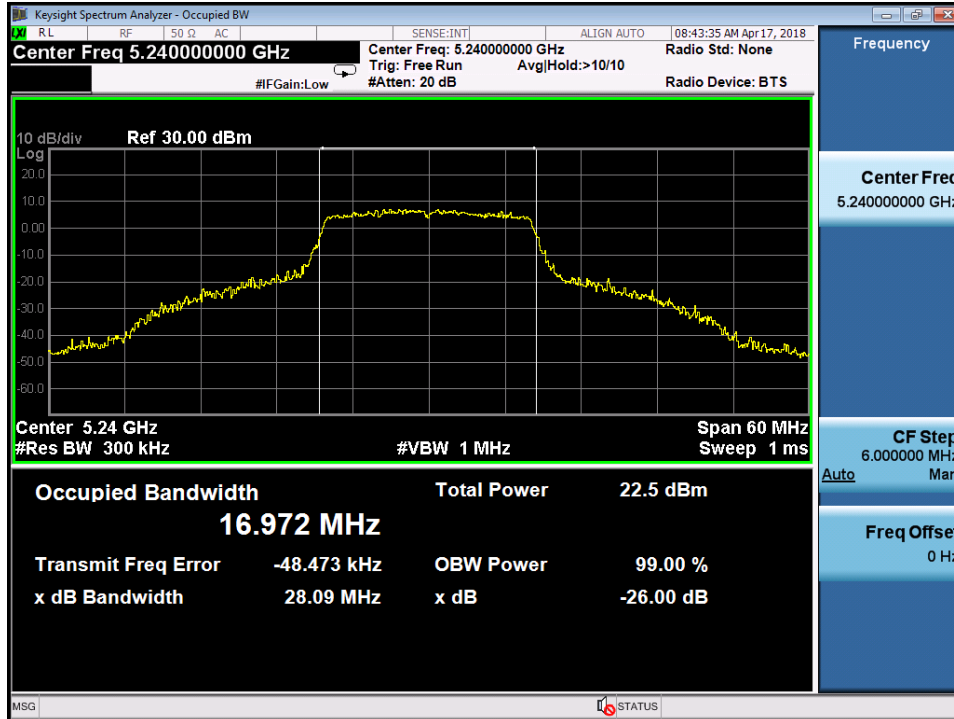
Antenna 1

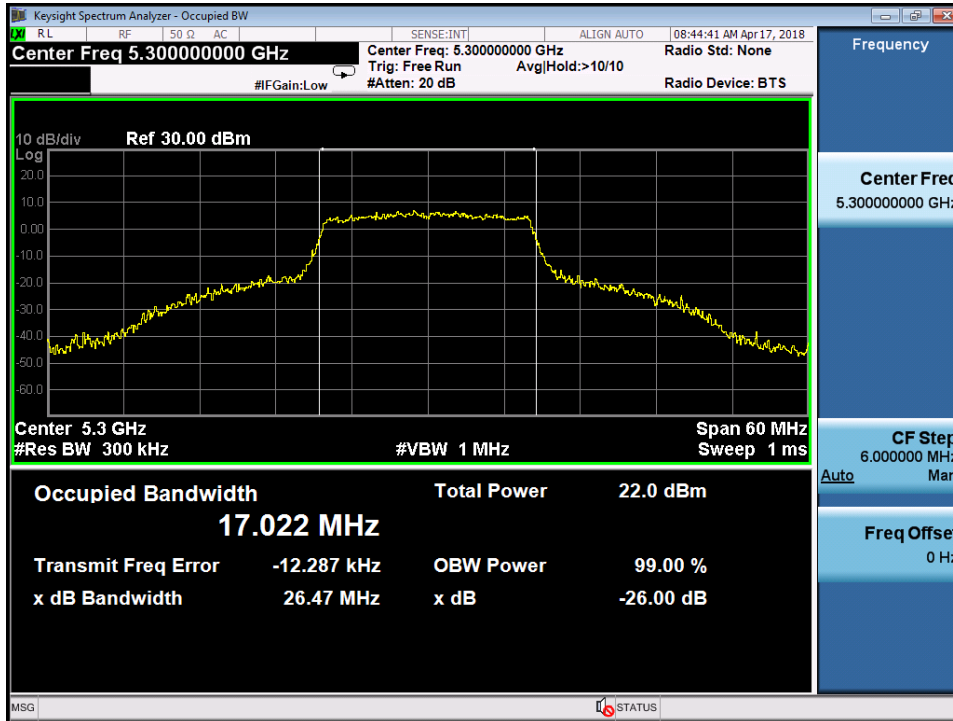
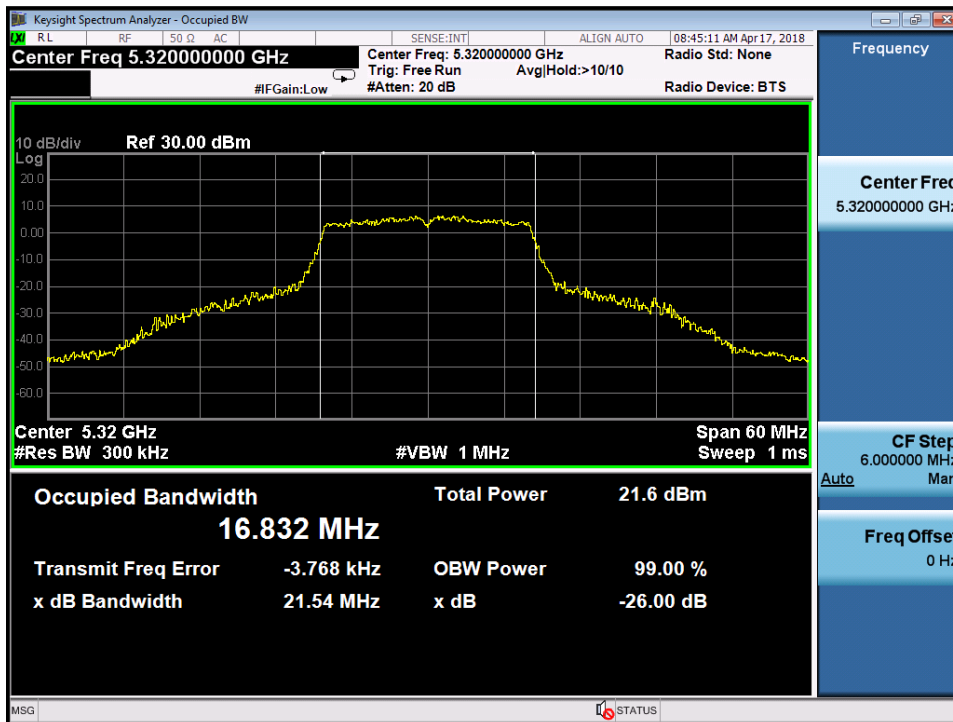
5180MHz

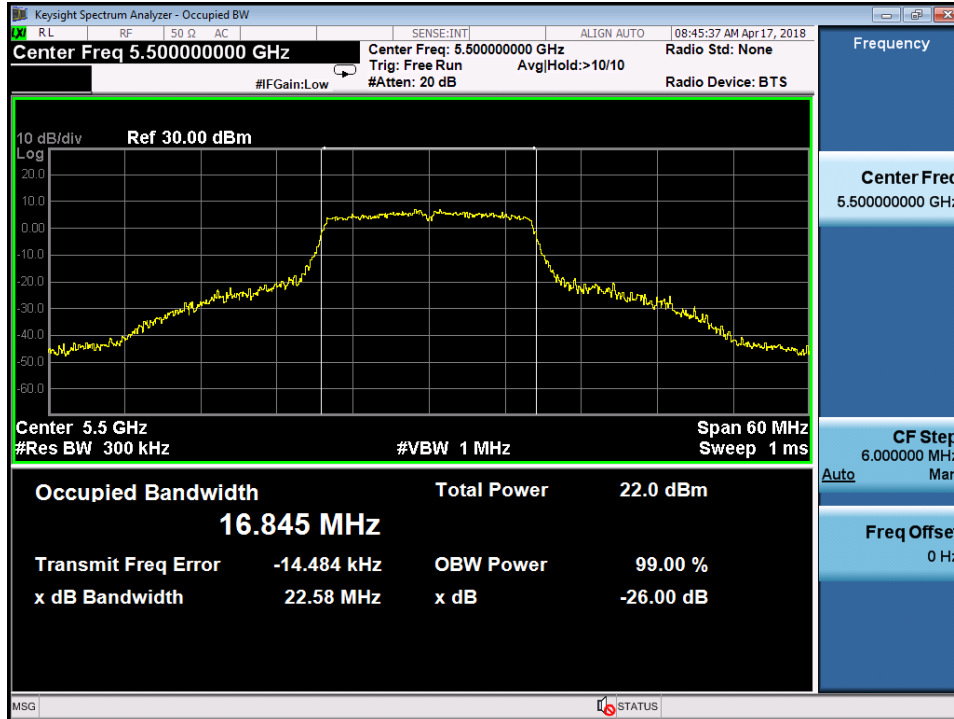
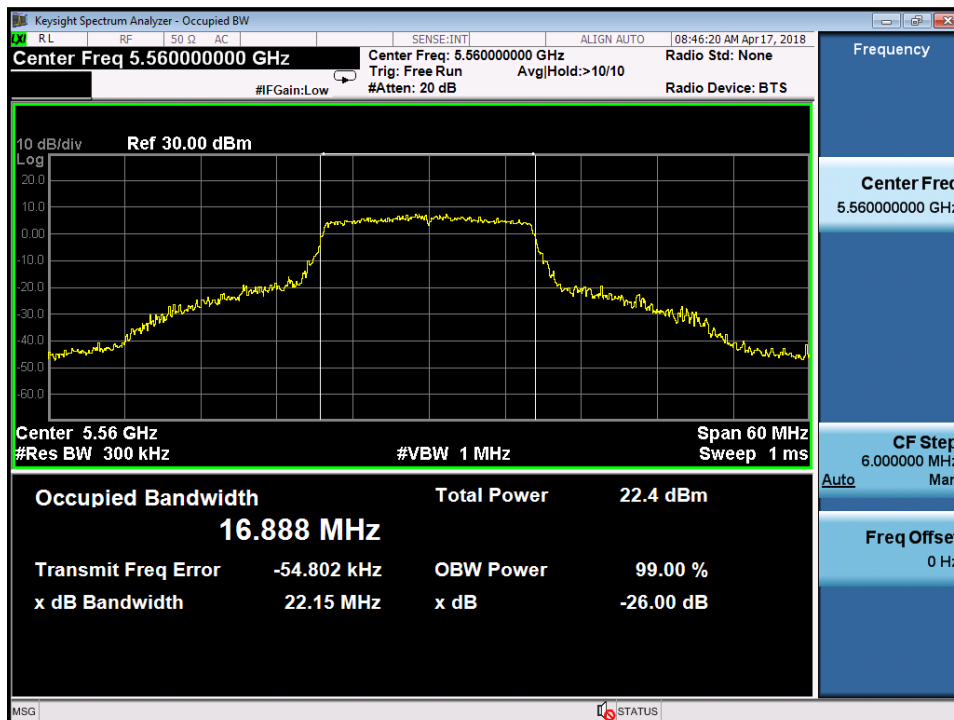


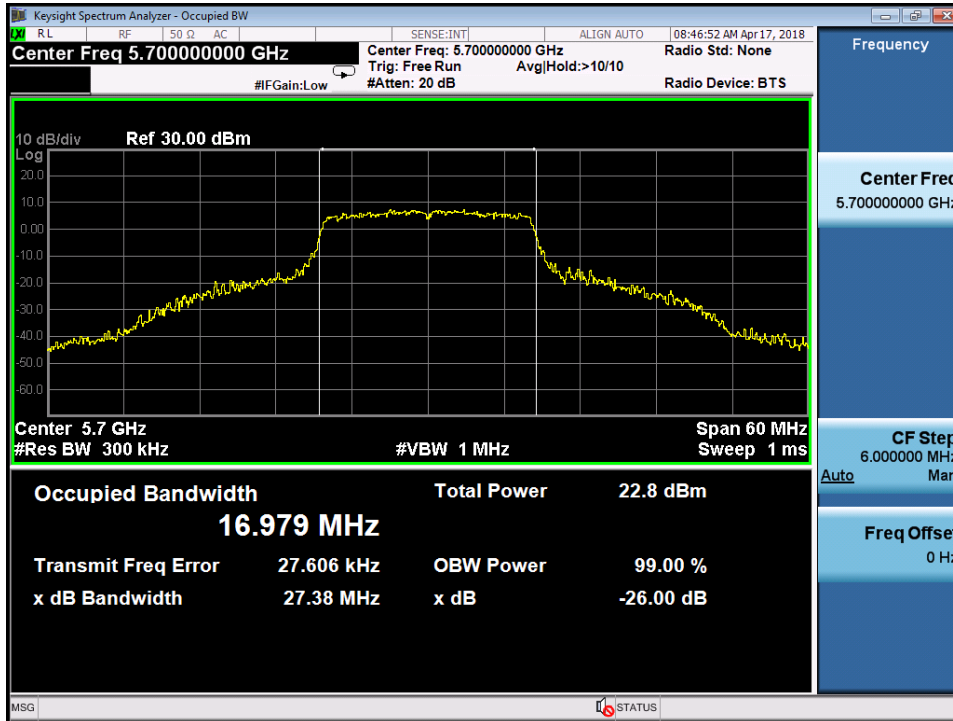
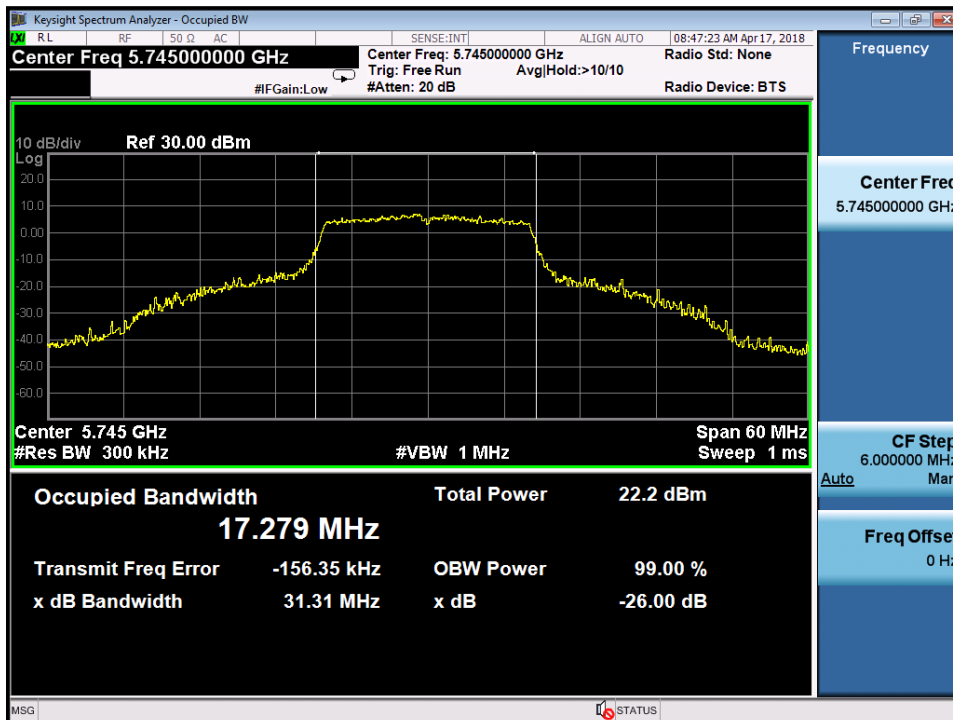
5200MHz

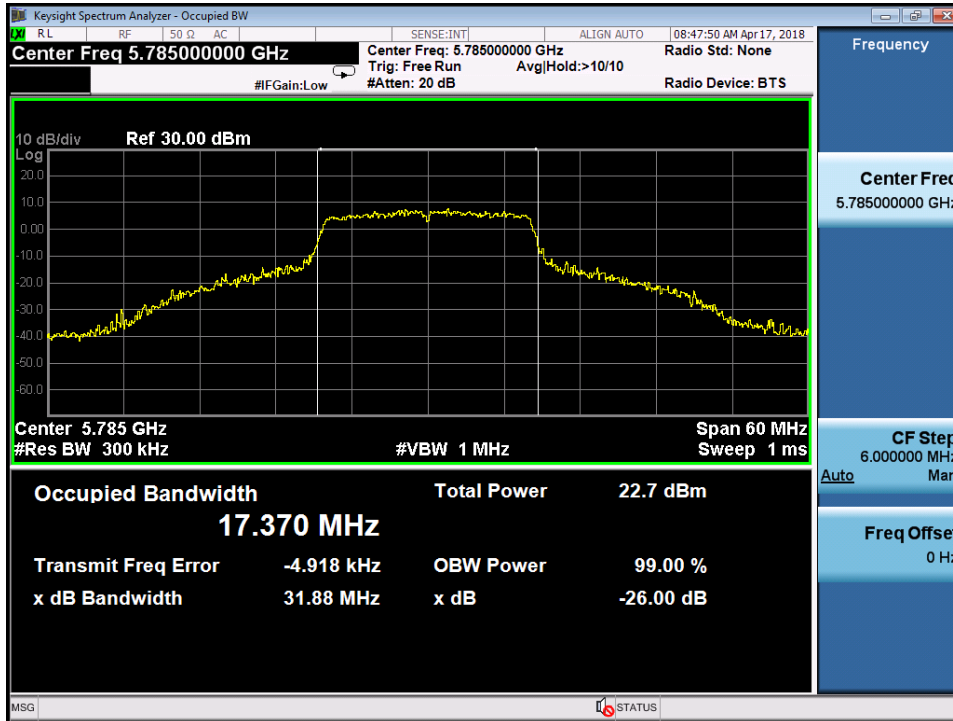
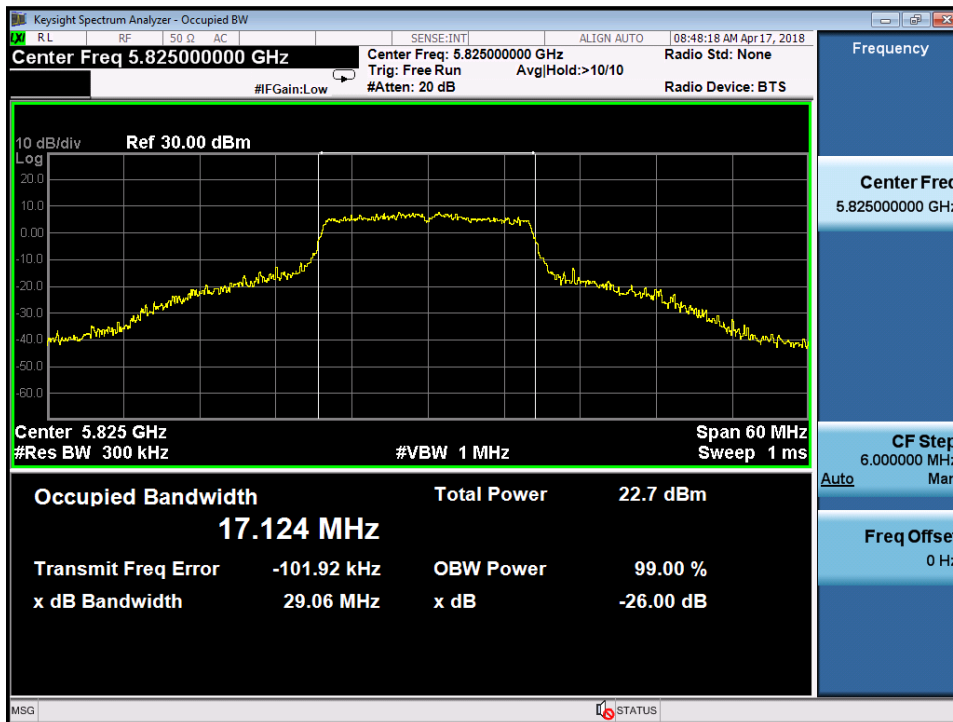


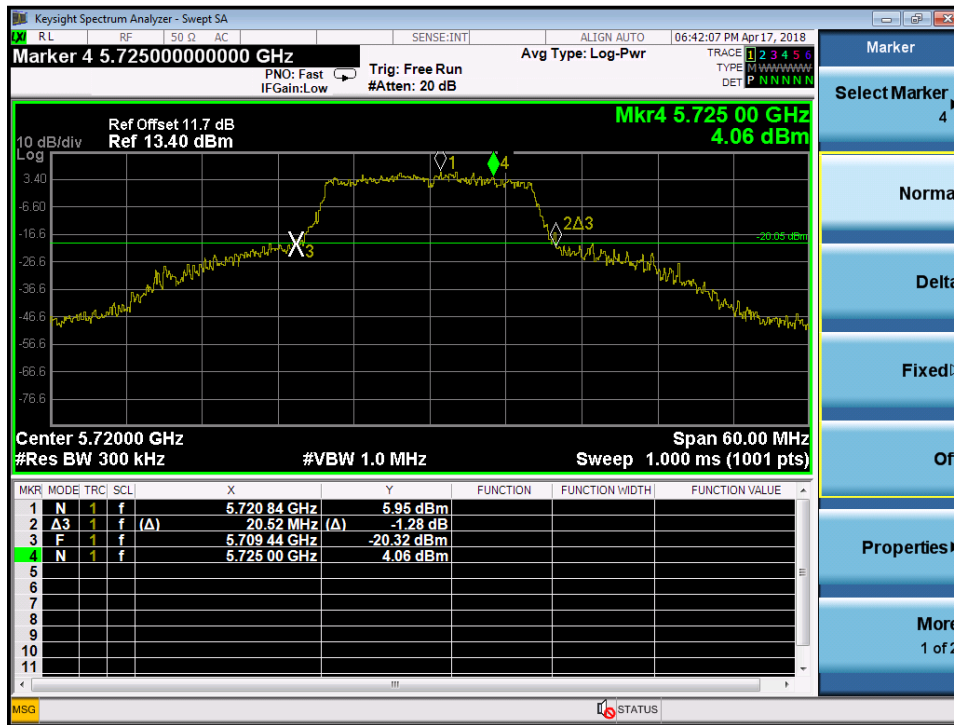
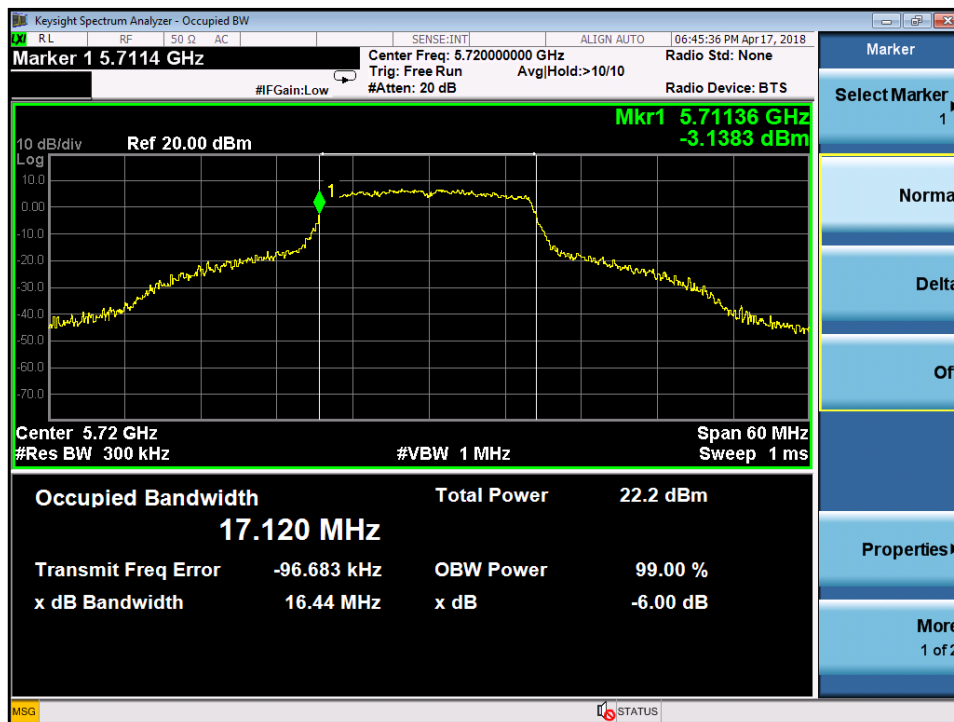
5240MHz

5280MHz


5300MHz

5320MHz


5500MHz

5560MHz


5700MHz

5745MHz


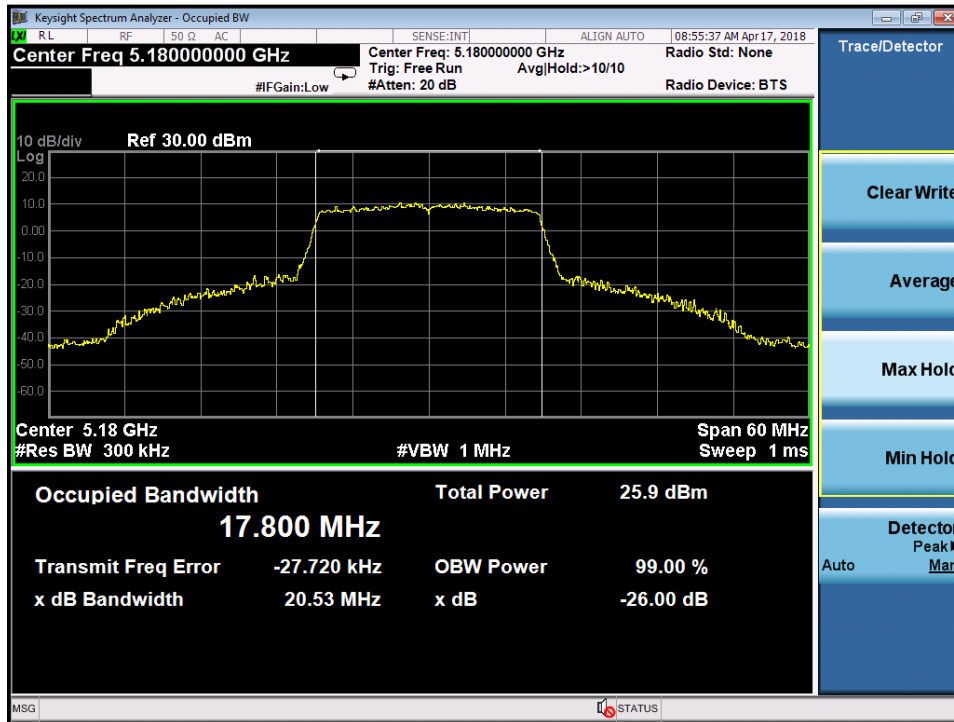
5785MHz

5825MHz


5720MHz (Straddle Channel), 26dB

5720MHz (Straddle Channel), 99%


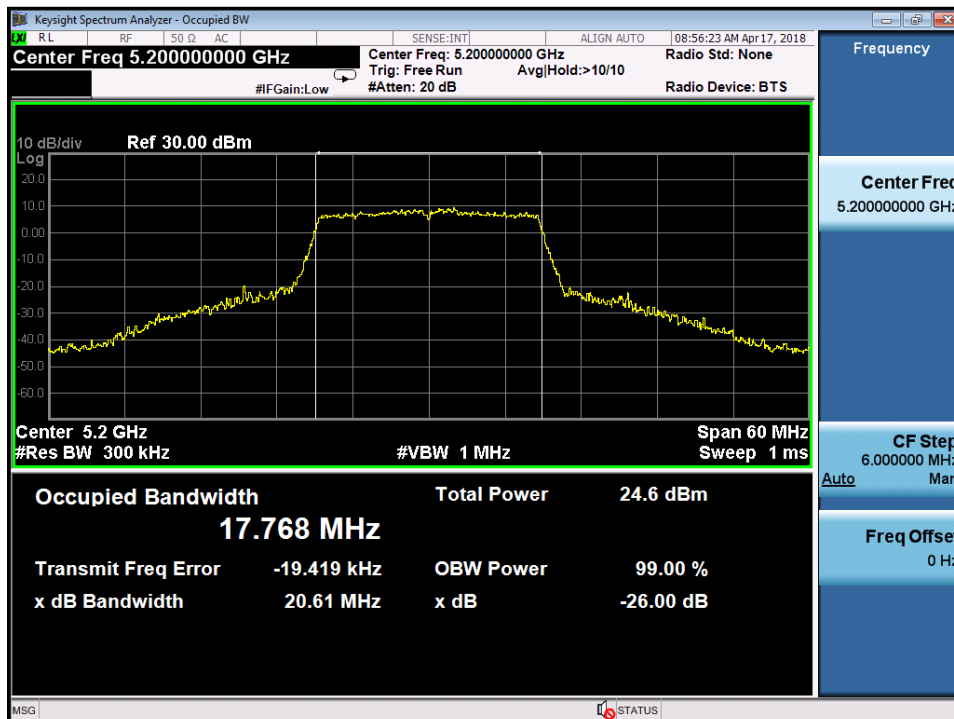
Test Plot of 26dB Bandwidth (802.11ac VHT20)

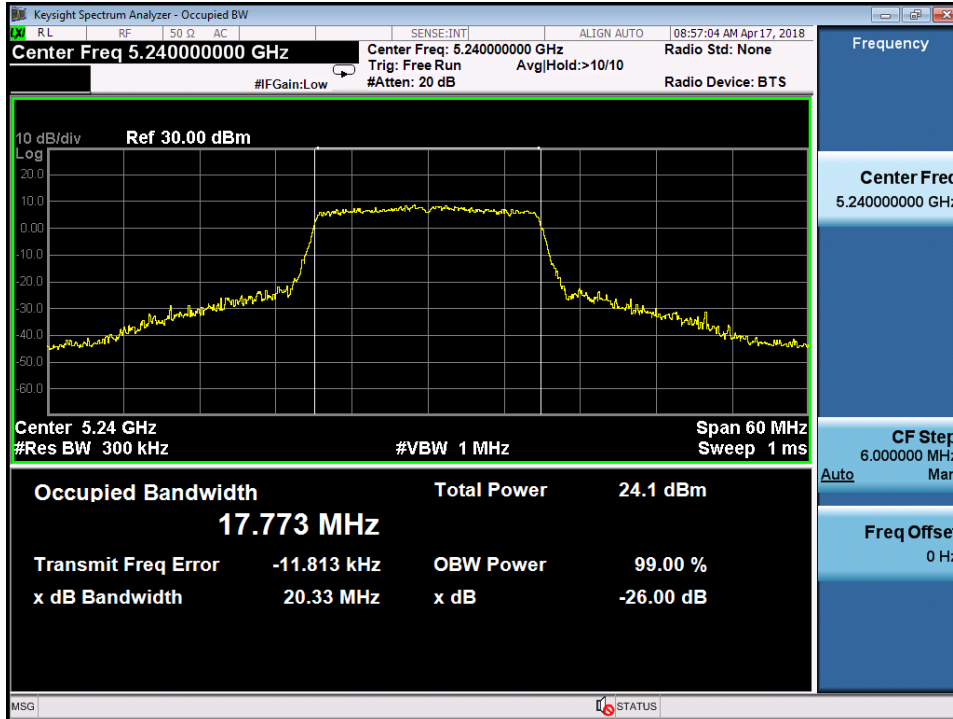
Antenna 1 + Antenna 2

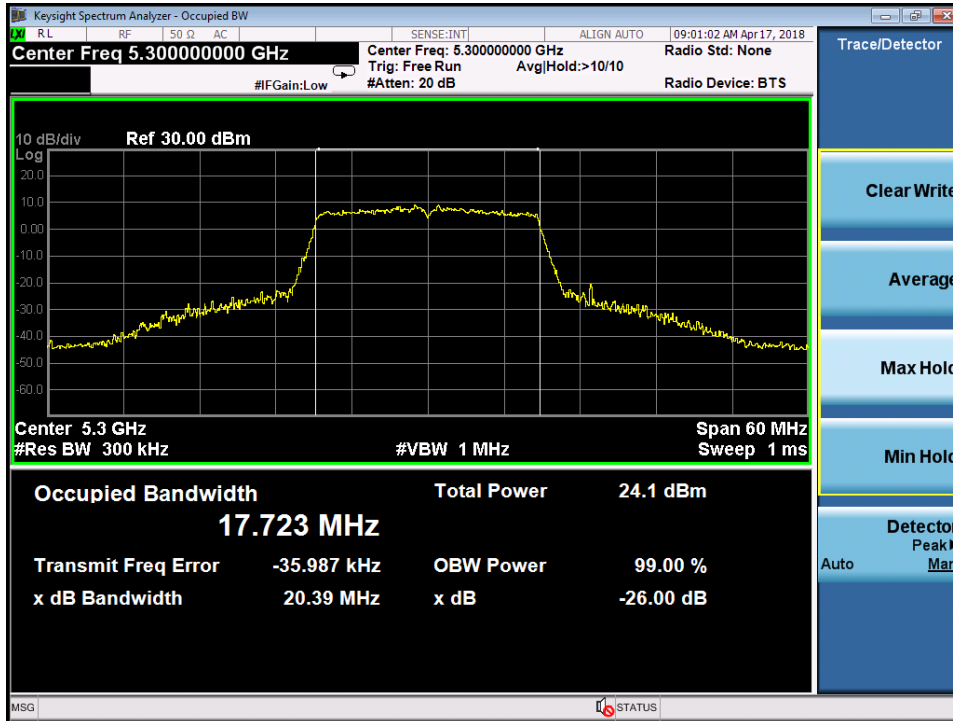
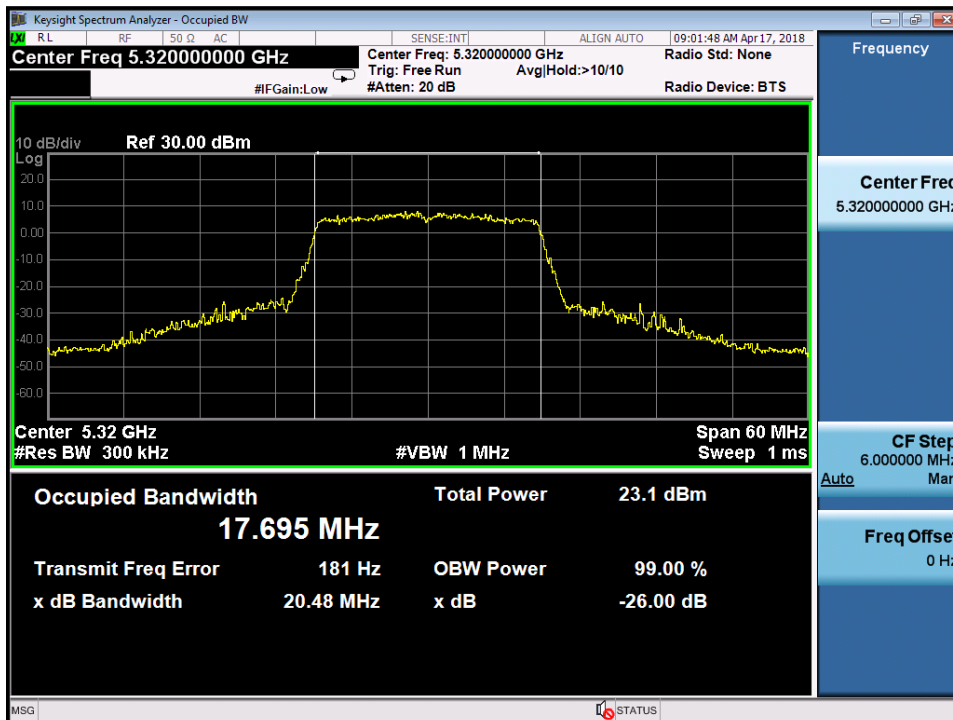
5180MHz

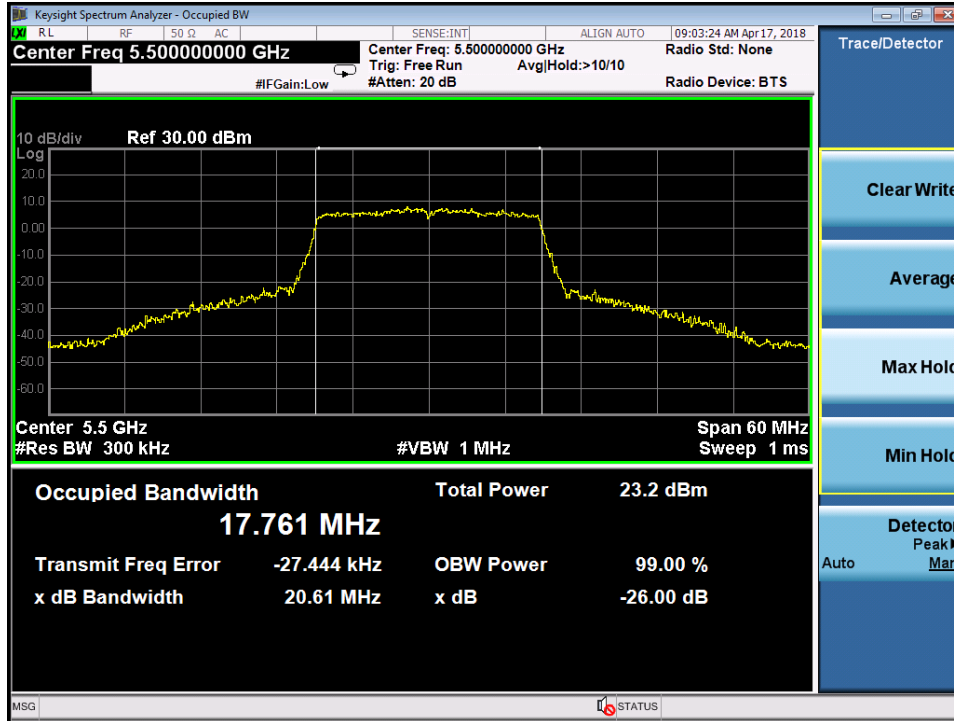
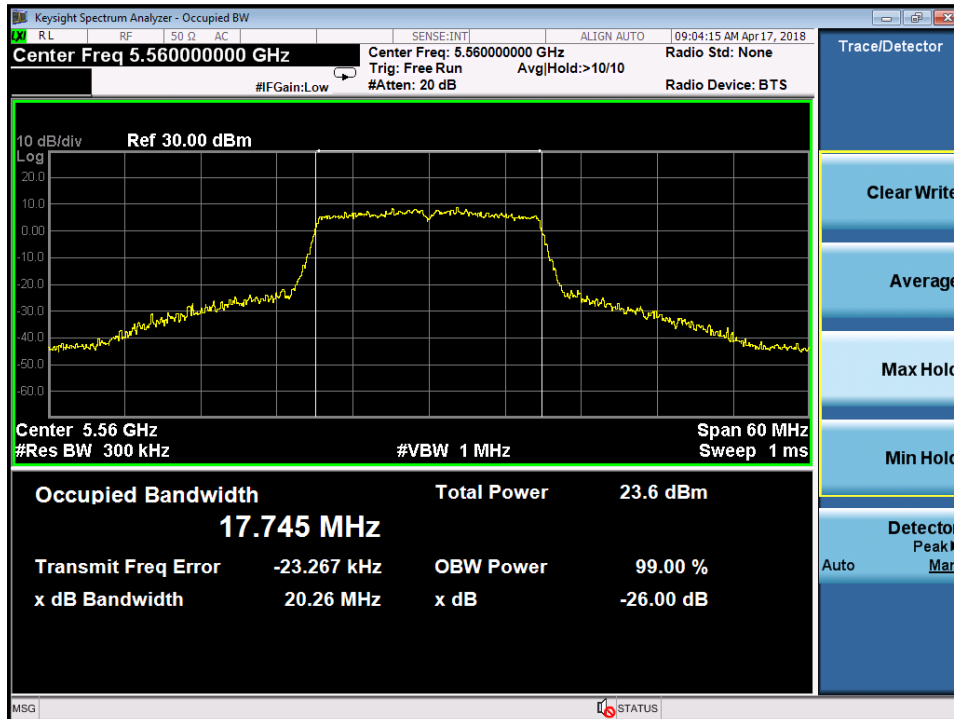


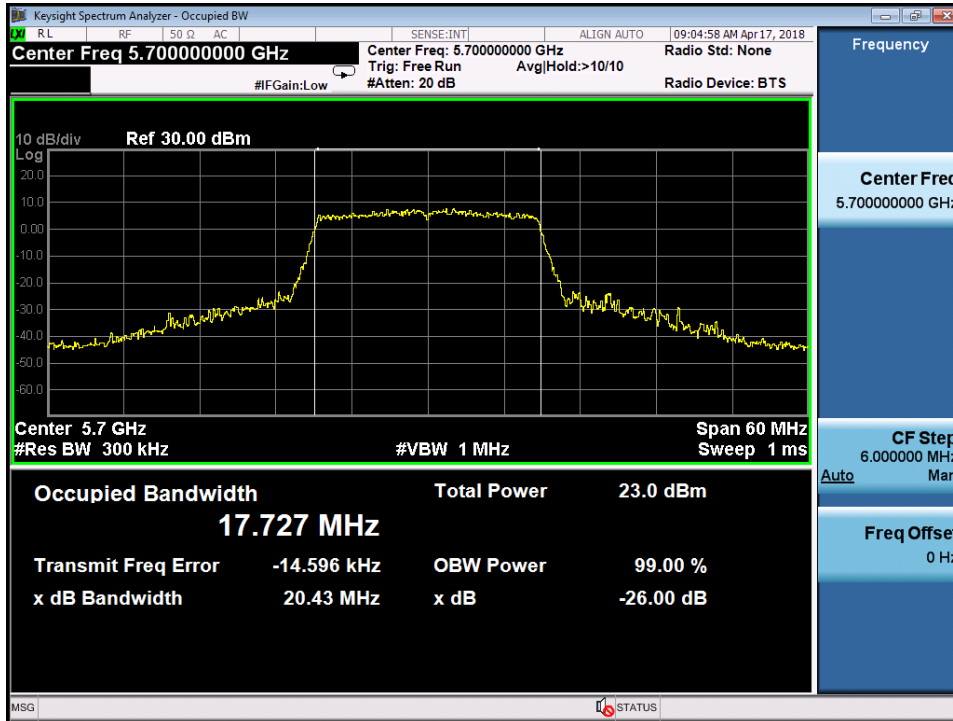
5200MHz

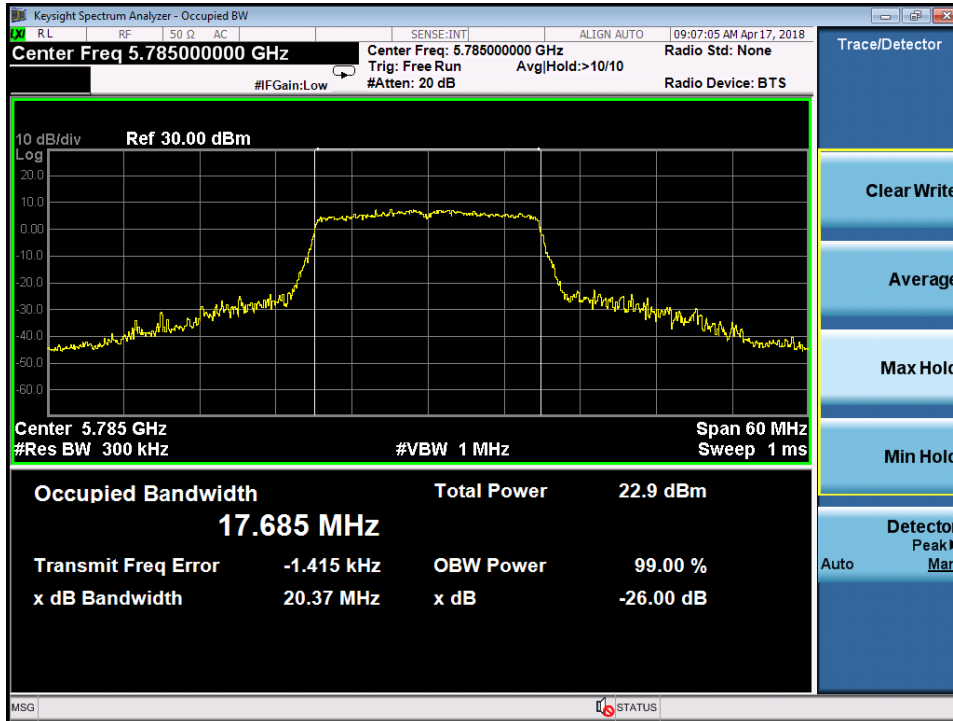
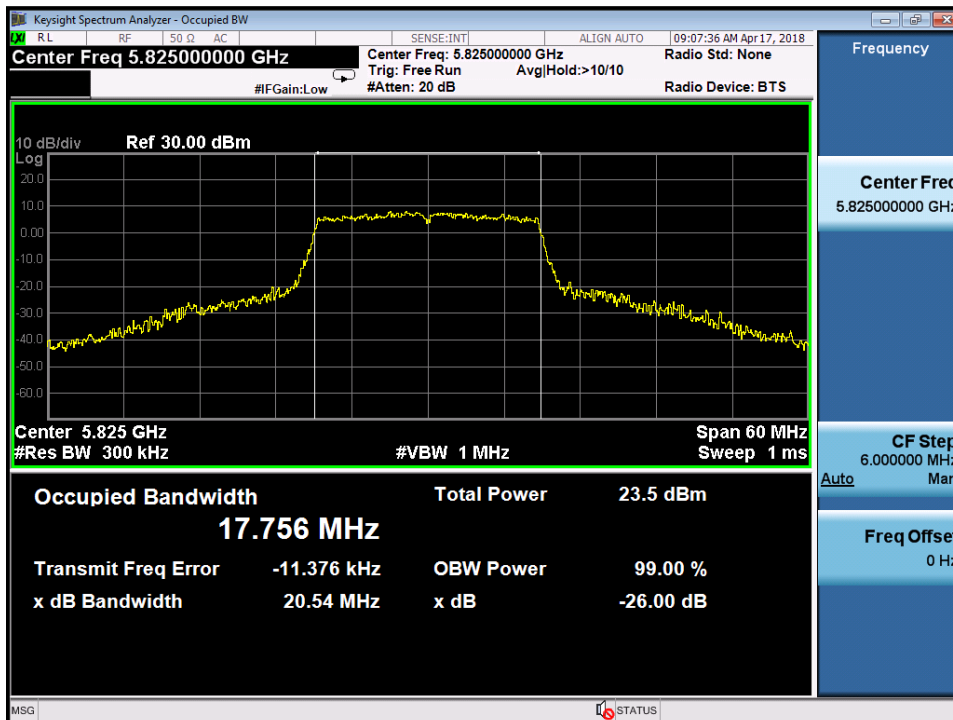


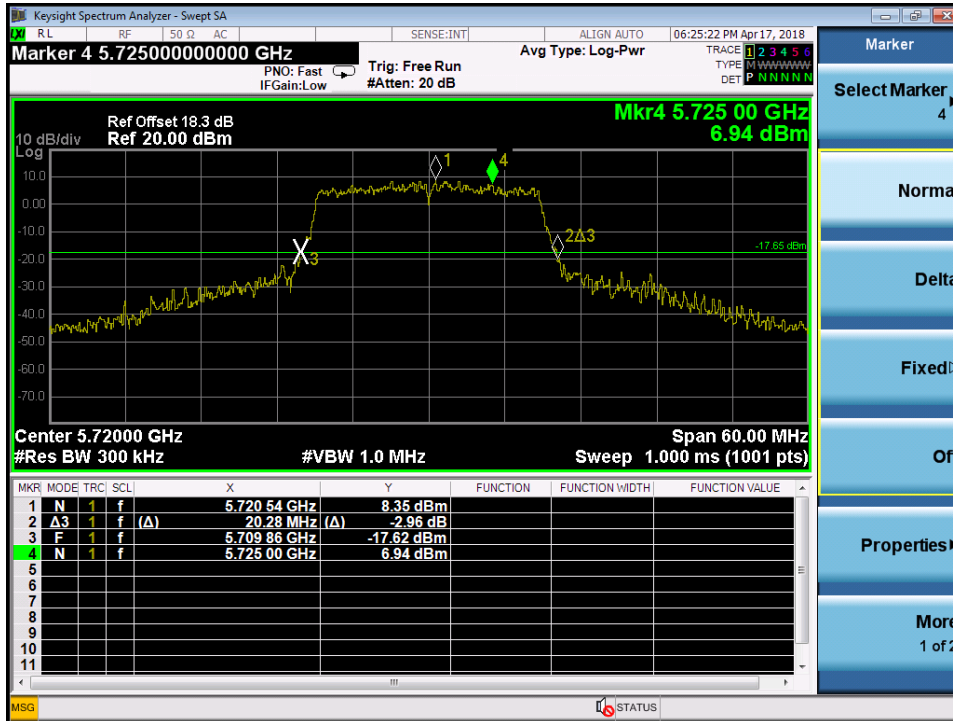
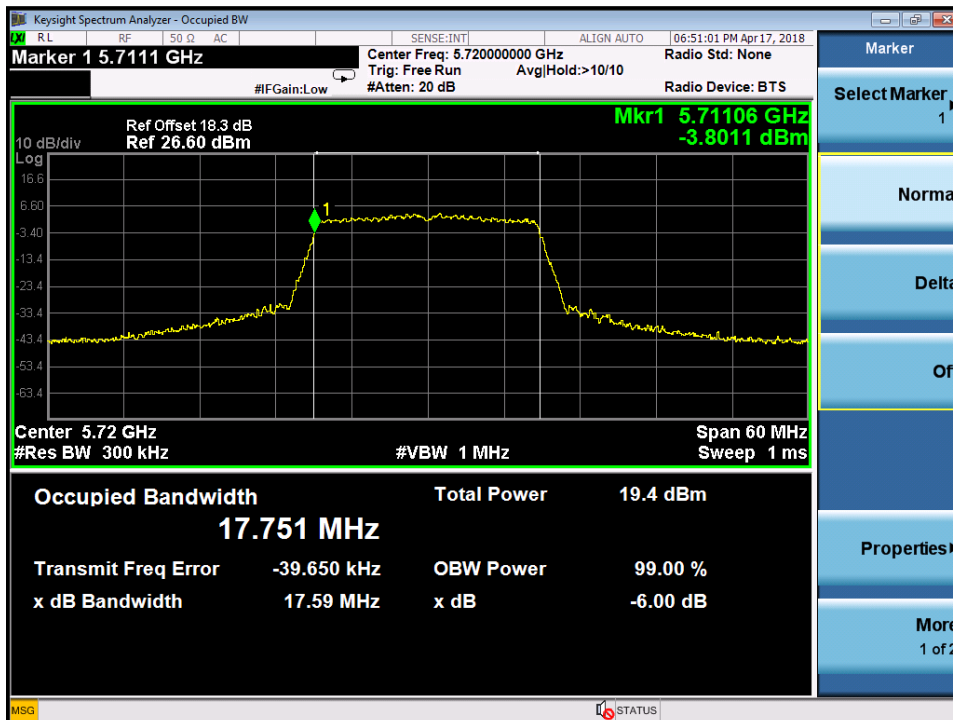
5240MHz

5280MHz


5300MHz

5320MHz


5500MHz

5560MHz


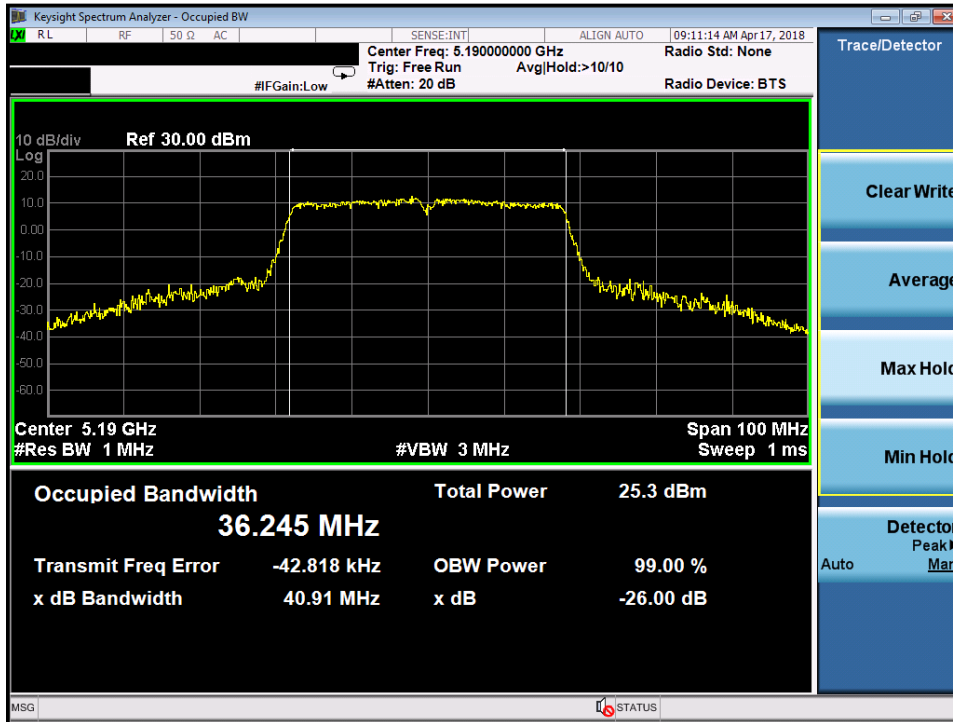
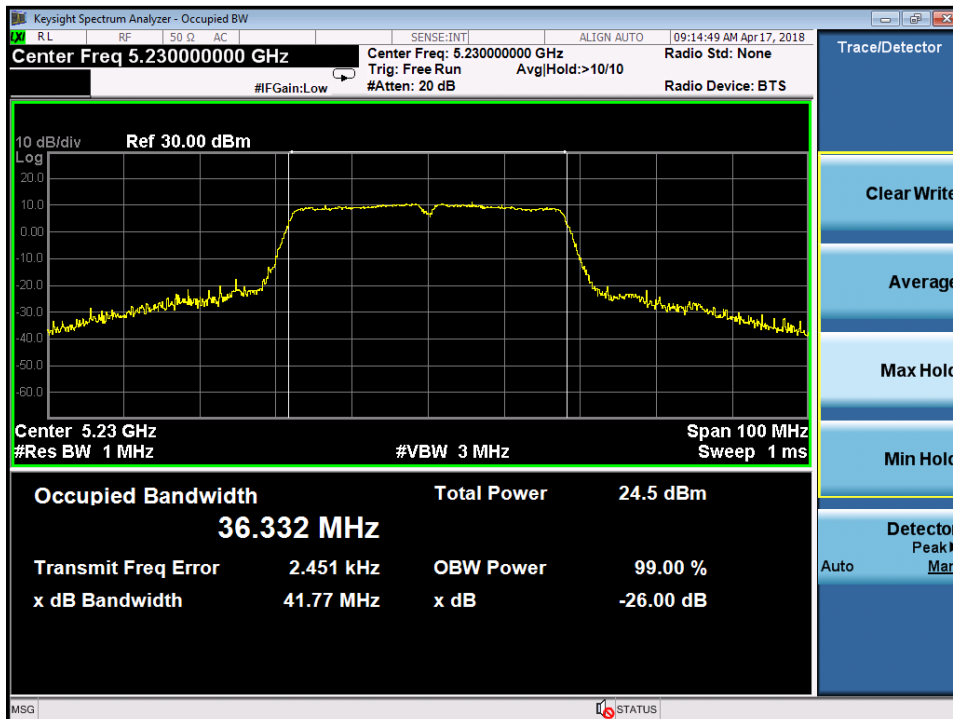
5700MHz

5745MHz

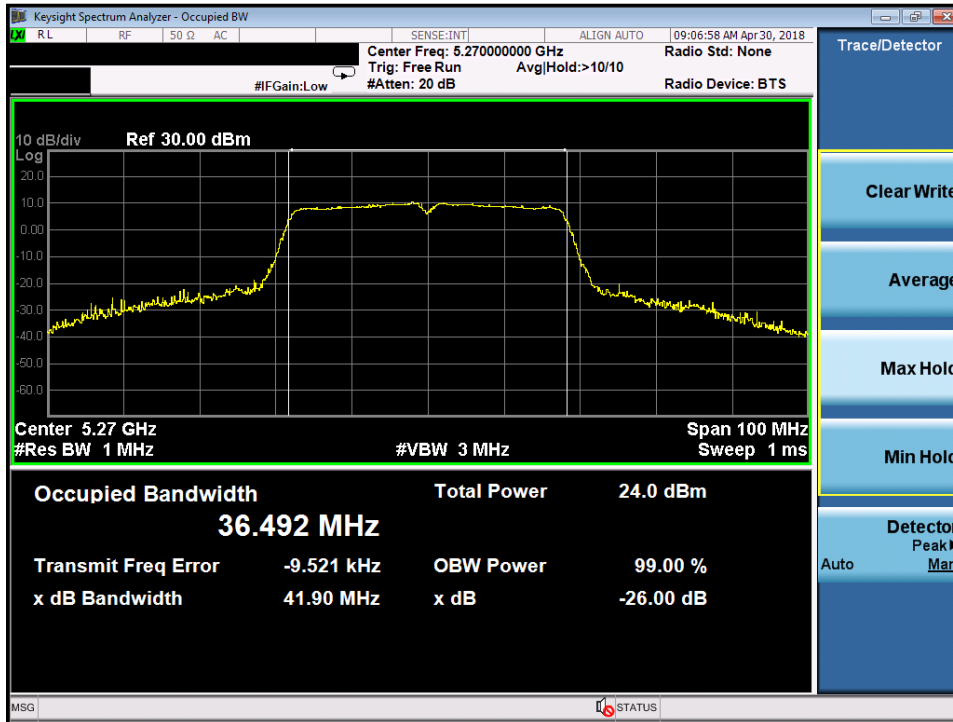
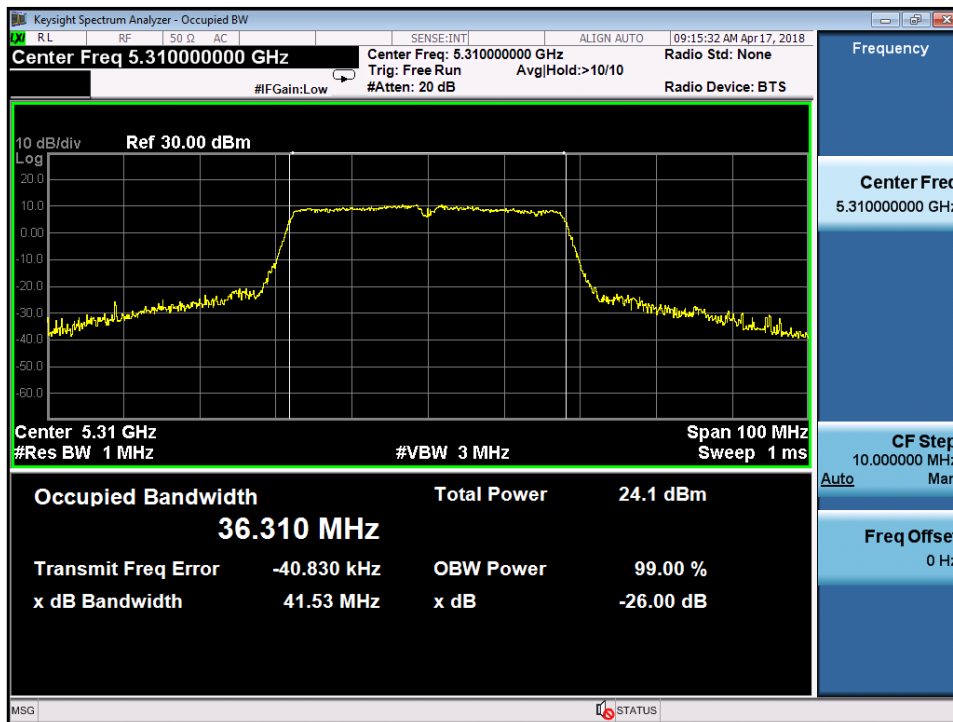

5785MHz

5825MHz


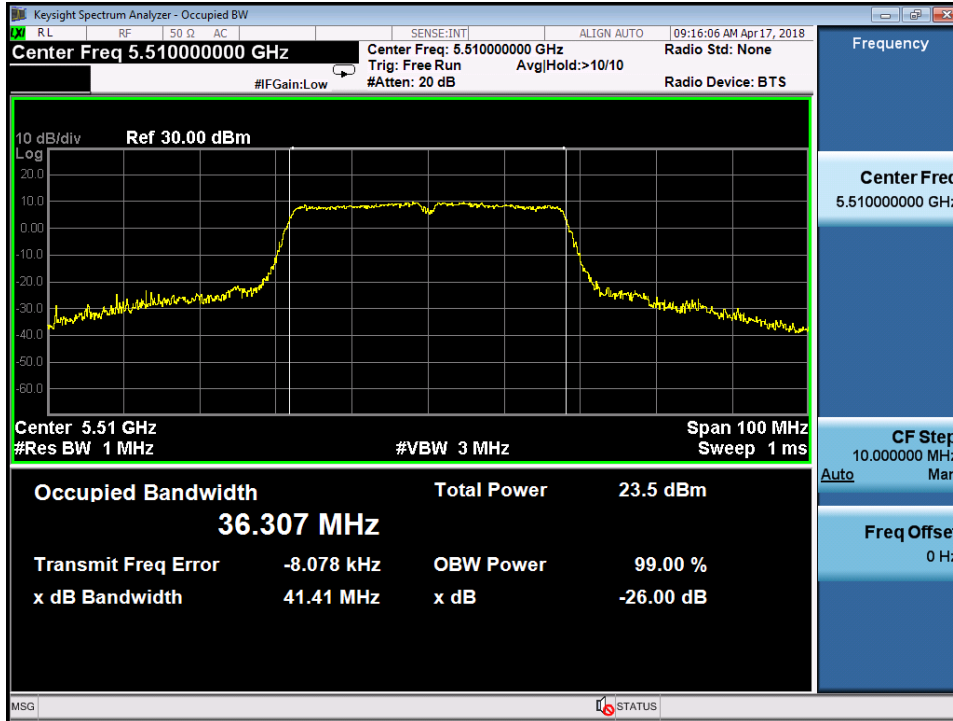
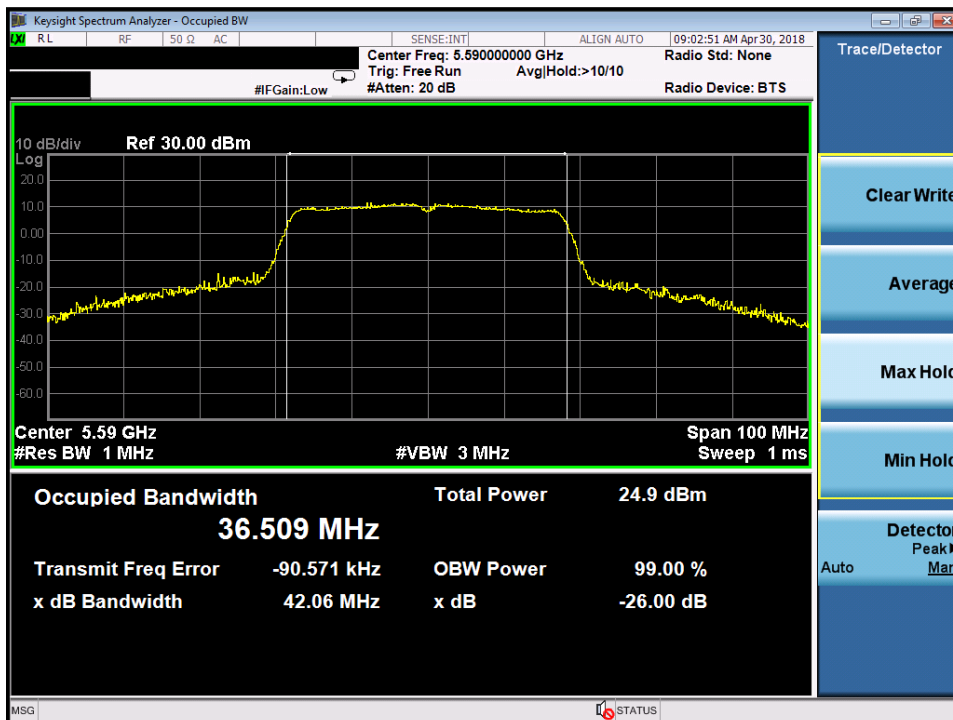
5720MHz (Straddle Channel), 26dB

5720MHz (Straddle Channel), 99%


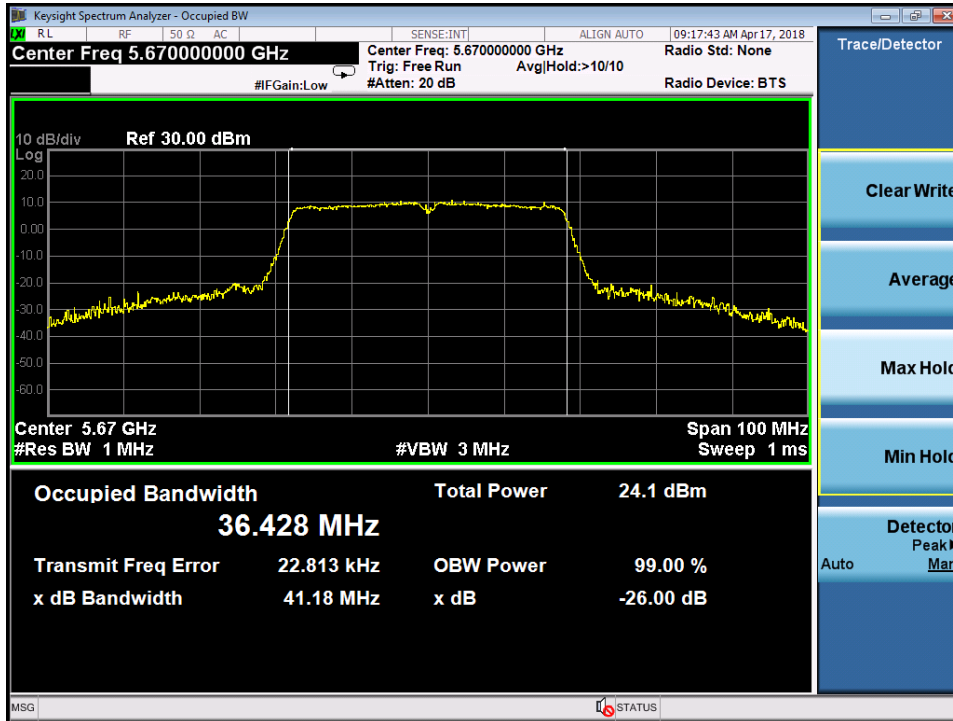
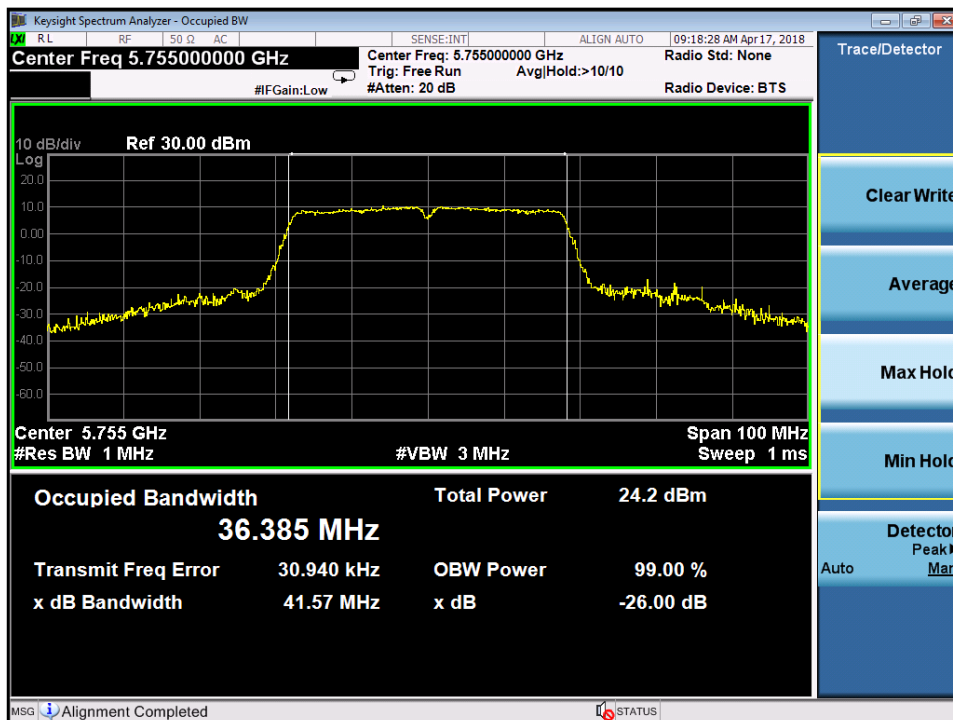
Test Plot of 26dB Bandwidth (802.11ac VHT40)

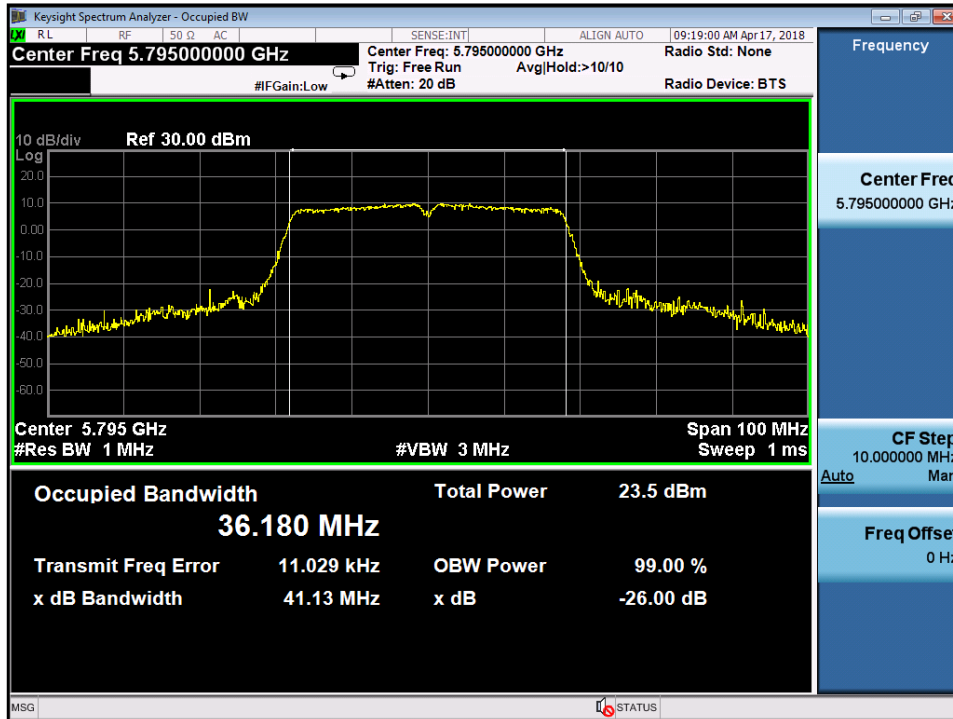
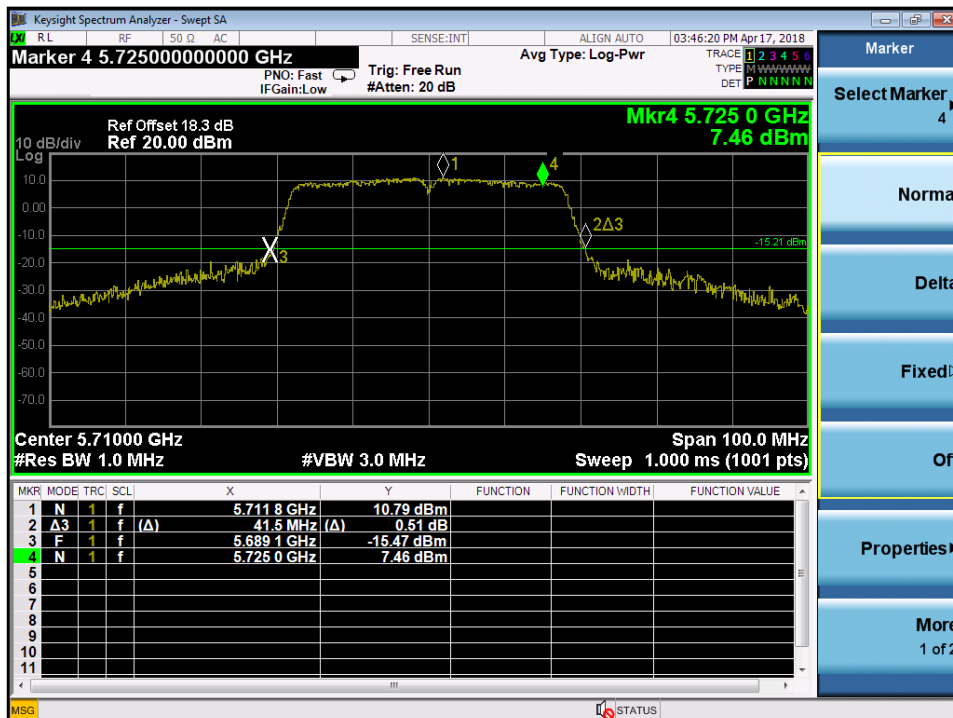
Antenna 1 + Antenna 2

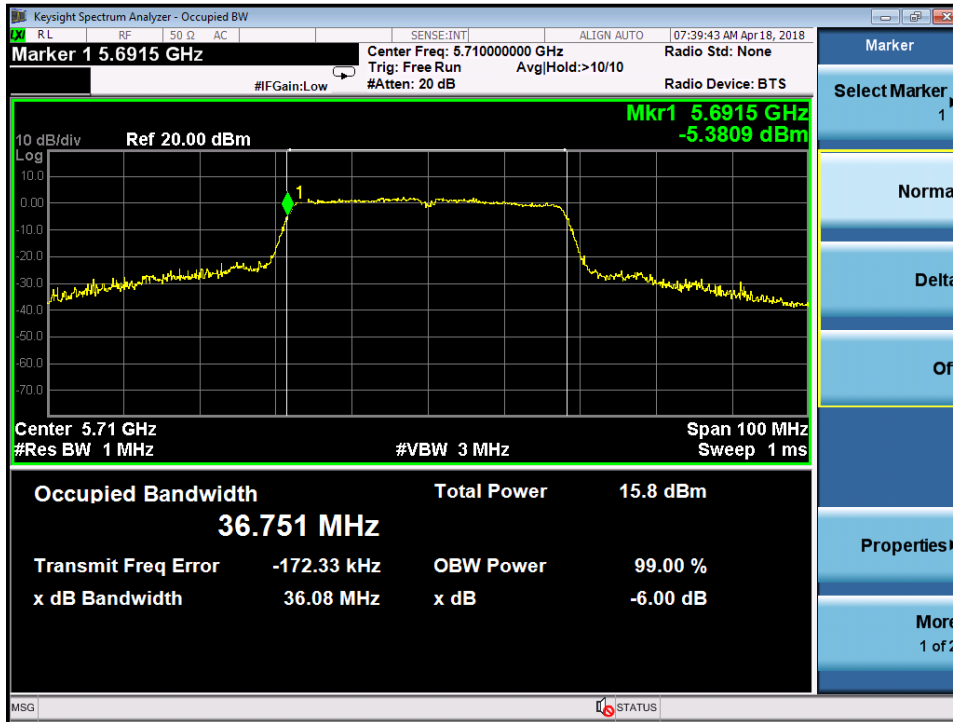
5190MHz

5230MHz


5270MHz

5310MHz


5510MHz

5590MHz


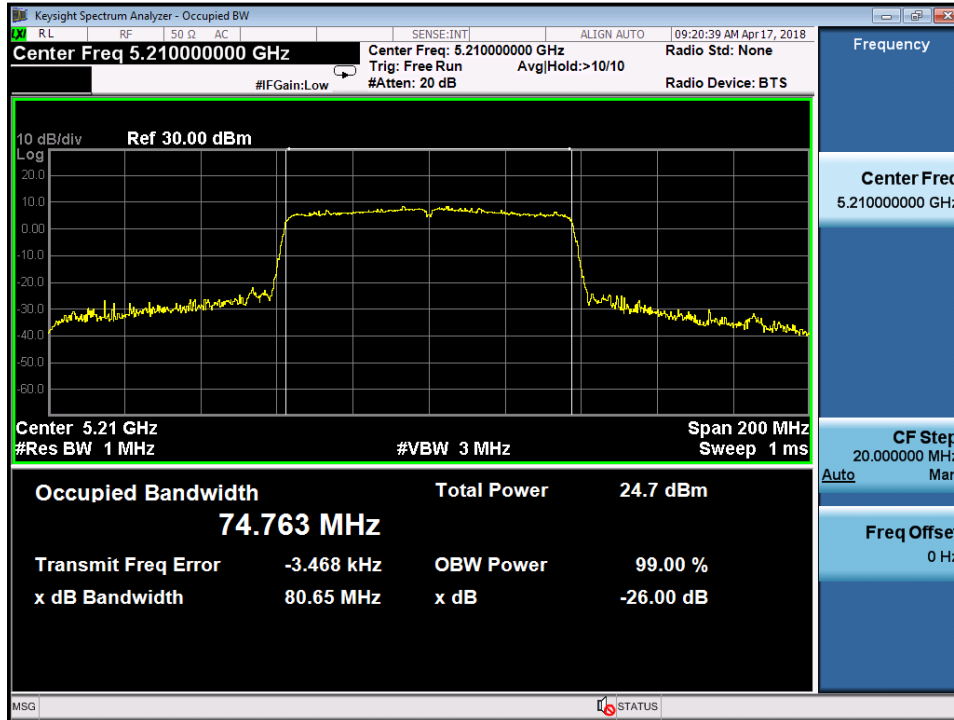
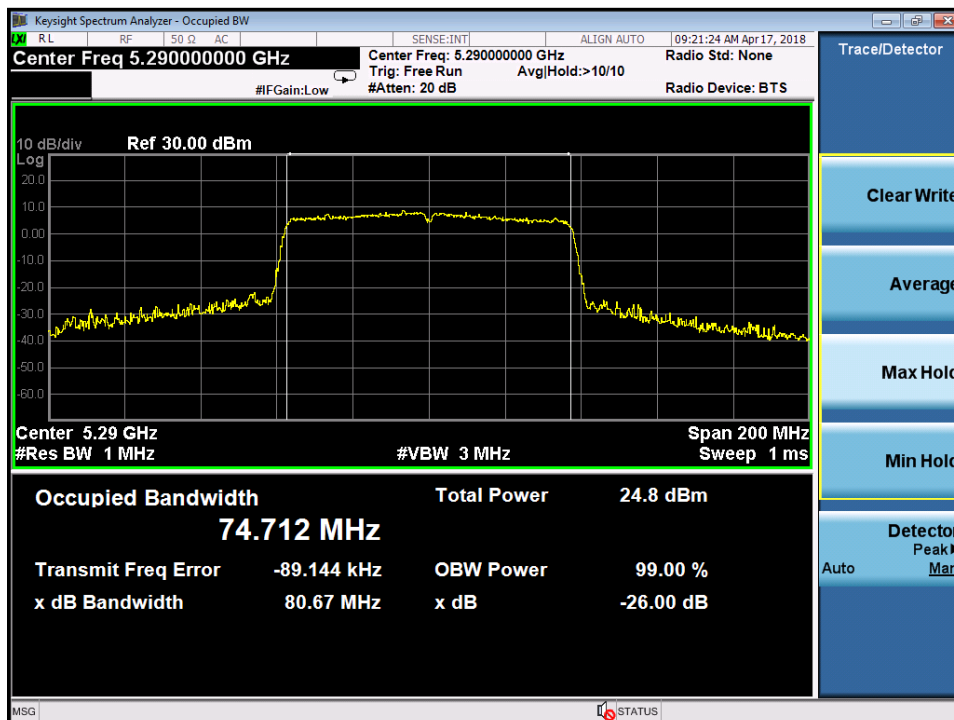
5670MHz

5755MHz


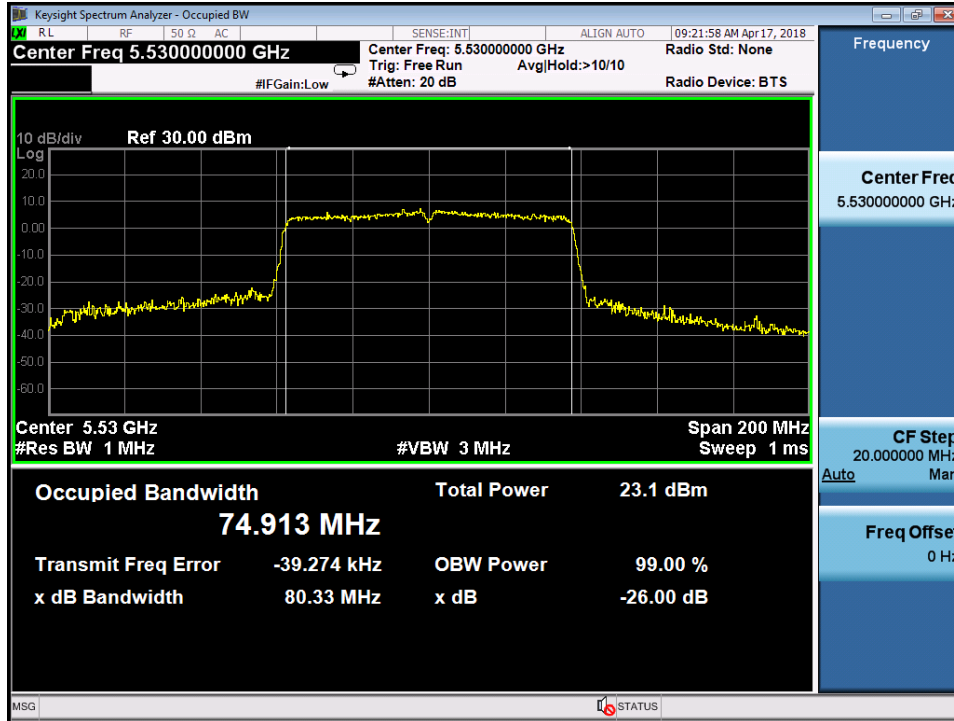
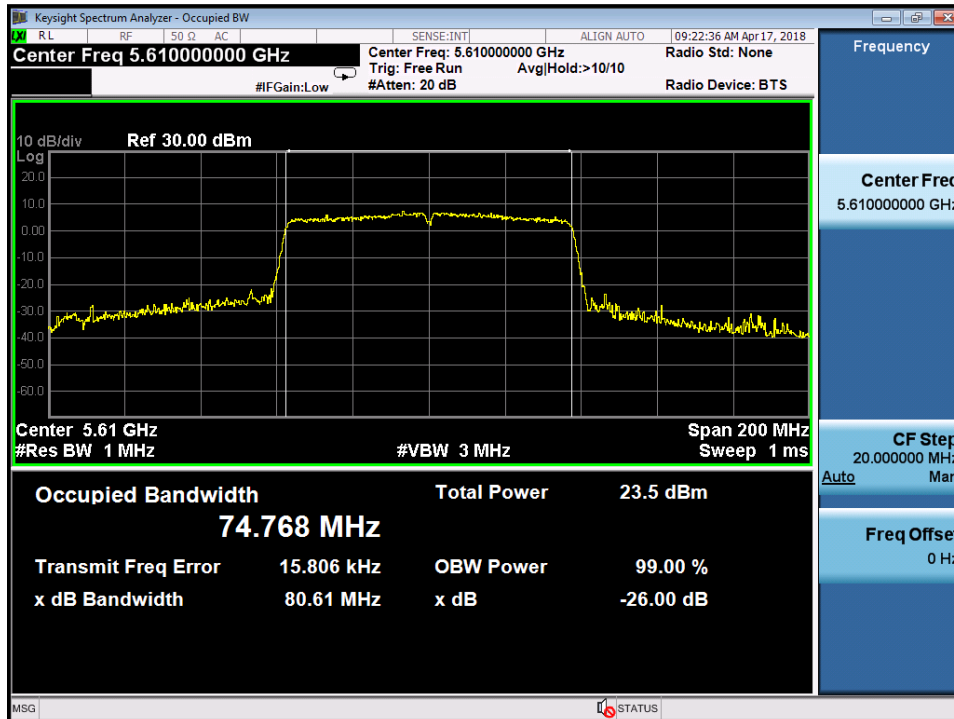
5795MHz

5710MHz (Straddle Channel), 26dB


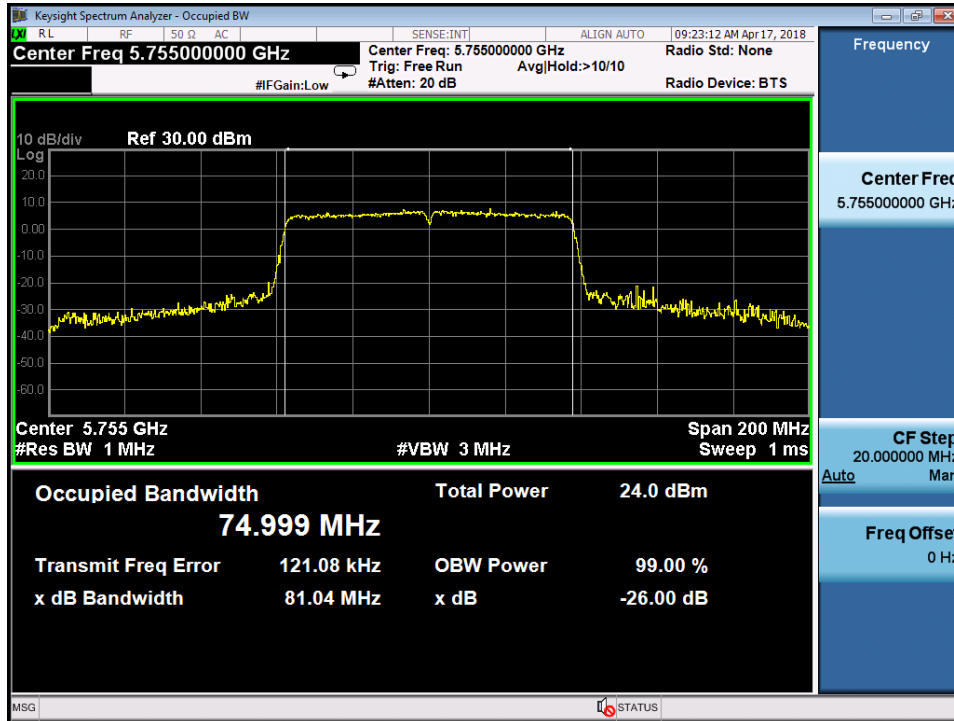
5710MHz (Straddle Channel), 99%


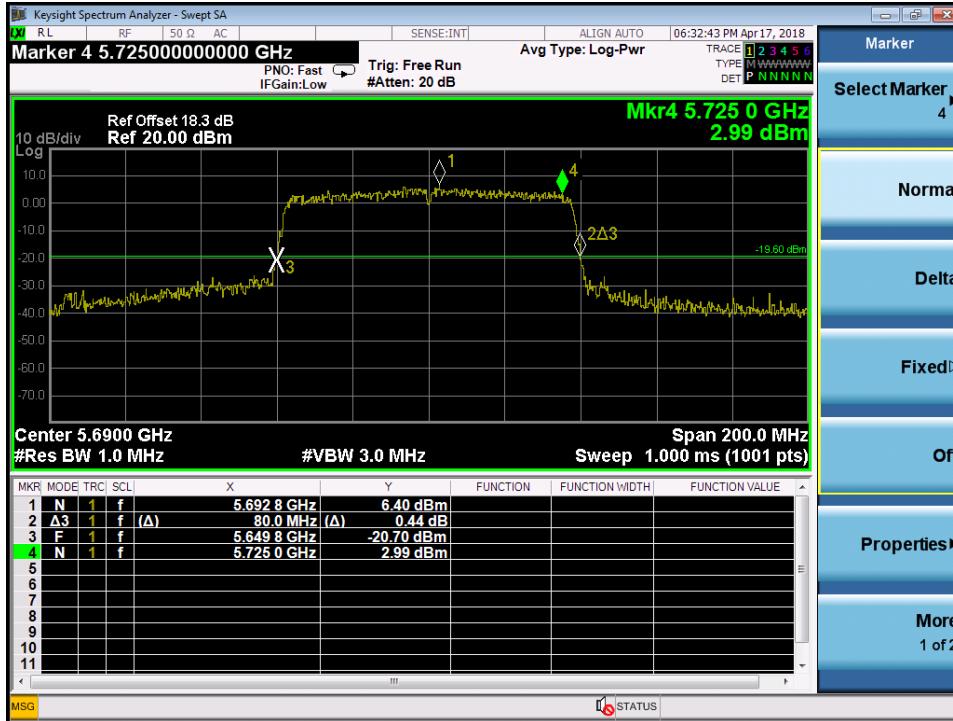
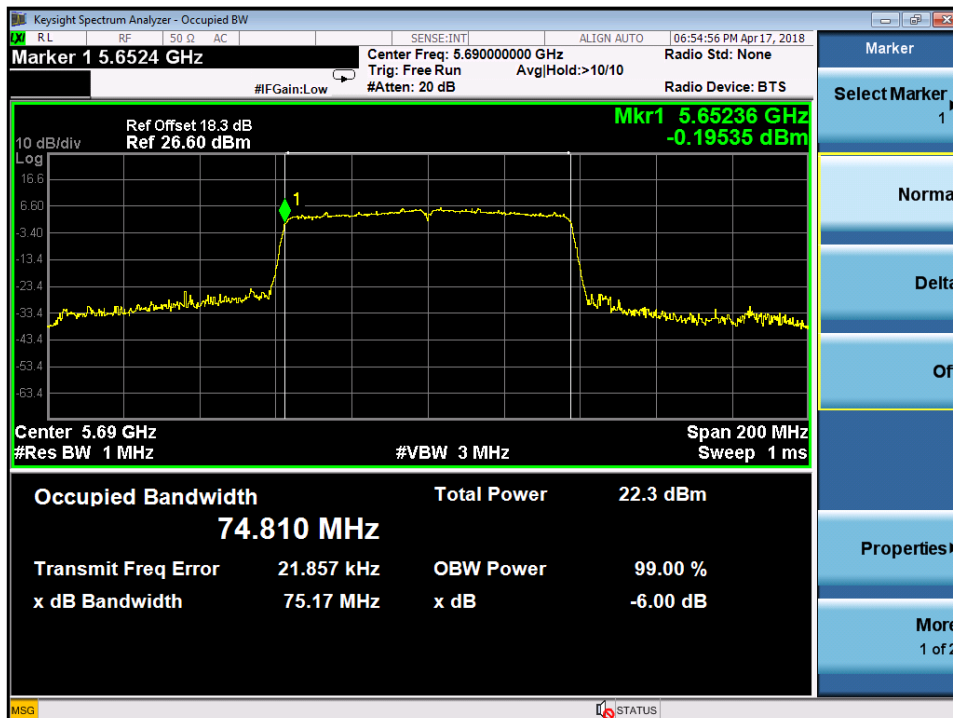
Test Plot of 26dB Bandwidth (802.11ac VHT80)

Antenna 1 + Antenna 2

5210MHz

5290MHz


5530MHz

5610MHz


5755MHz


5690MHz (Straddle Channel), 26dB

5690MHz (Straddle Channel), 99%


5.1.5 6 dB Bandwidth

RESULT:
Passed

Test standard : FCC Part 15.407, RSS-247 6.2.4
 Limit : FCC Part 15.407, RSS-247 6.2.4
 Kind of test site : Shielded room/Conducted room

Test setup

Test Channel : Refer to the table 16 ~ 19
 Operation Mode : A

Table 16: Test result of 6dB Bandwidth (802.11a)

Channel	Channel Frequency (MHz)	6dB Bandwidth ANT1 (MHz)	Limit (MHz)
149	5745	15.78	> 0.5
157	5785	16.33	> 0.5
165	5825	16.4	> 0.5

Table 17: Test result of 6dB Bandwidth (802.11ac VHT20)

Channel	Channel Frequency (MHz)	6dB Bandwidth ANT1 (MHz)	Limit (MHz)
149	5745	17.01	> 0.5
157	5785	16.33	> 0.5
165	5825	16.4	> 0.5

Table 18: Test result of 6dB Bandwidth (802.11ac VHT40)

Channel	Channel Frequency (MHz)	6dB Bandwidth ANT1 (MHz)	Limit (MHz)
151	5755	35.36	> 0.5
159	5795	35.25	> 0.5

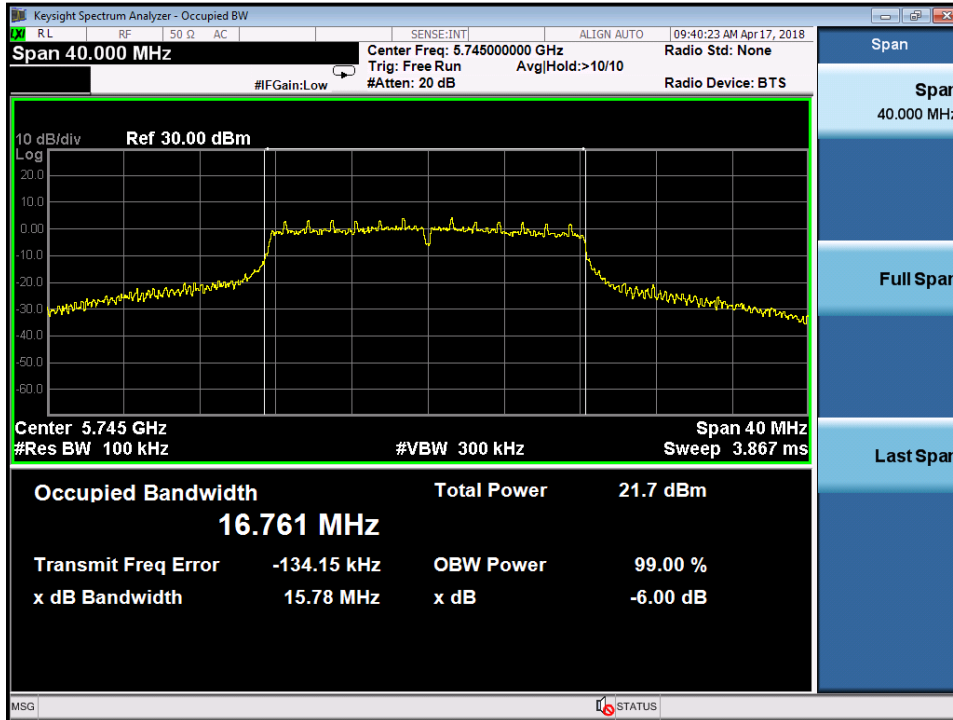
Prüfbericht - Nr.: 50140127 001
*Test Report No.***Seite 55 von 141**
*Page 55 of 141***Table 19: Test result of 6dB Bandwidth (802.11ac VHT80)**

Channel	Channel Frequency (MHz)	6dB Bandwidth TX1 (MHz)	Limit (MHz)
155	5775	75.28	> 0.5

Test Plot of 6dB Bandwidth (802.11a)

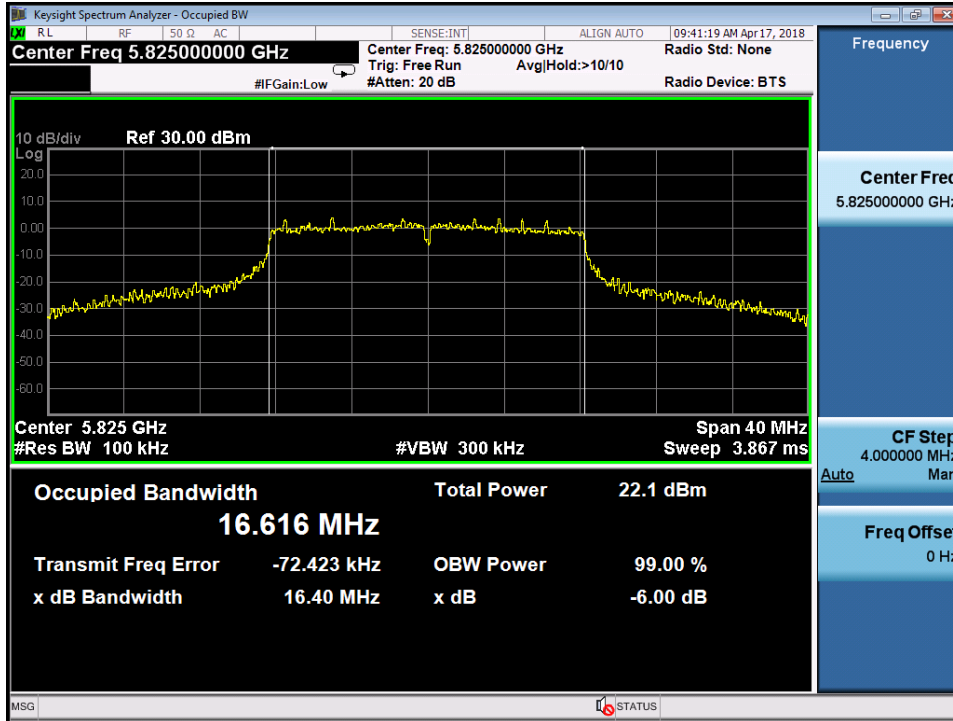
Antenna 1

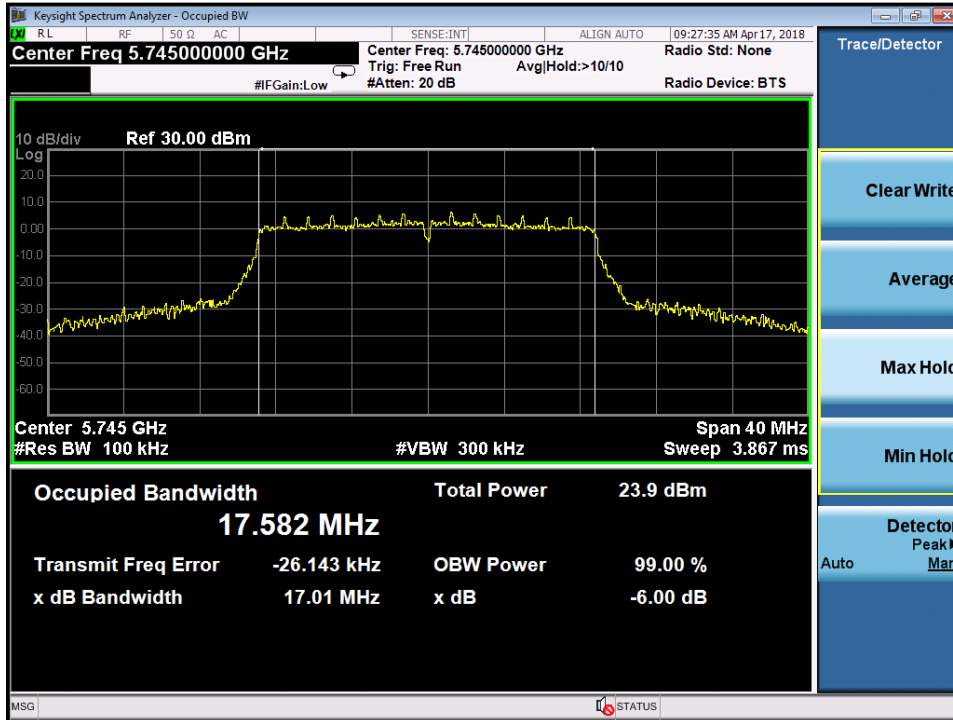
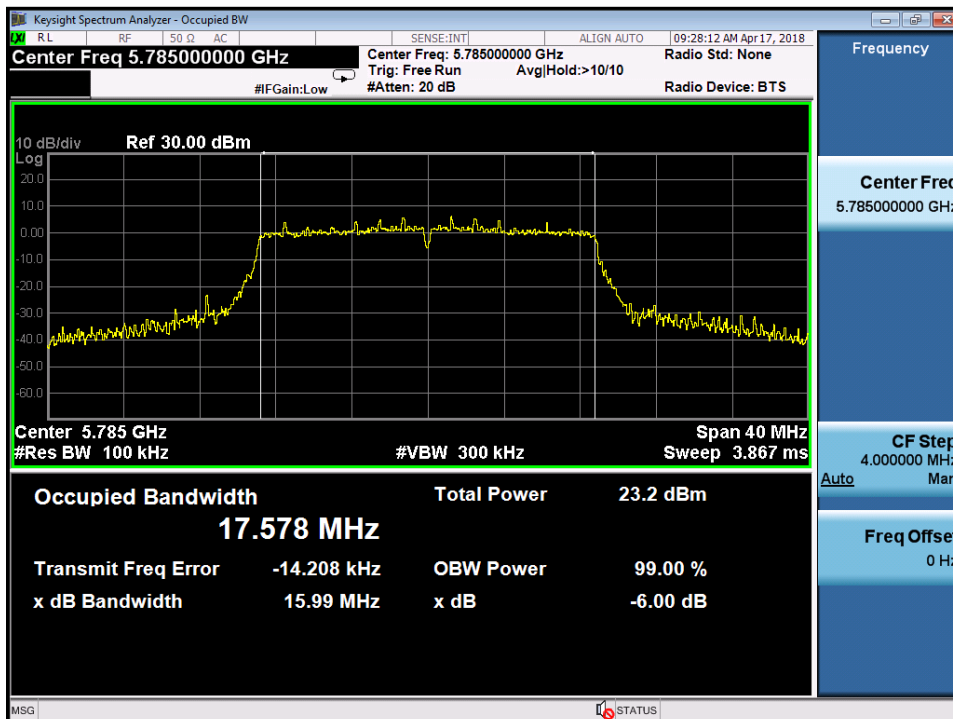
5745MHz

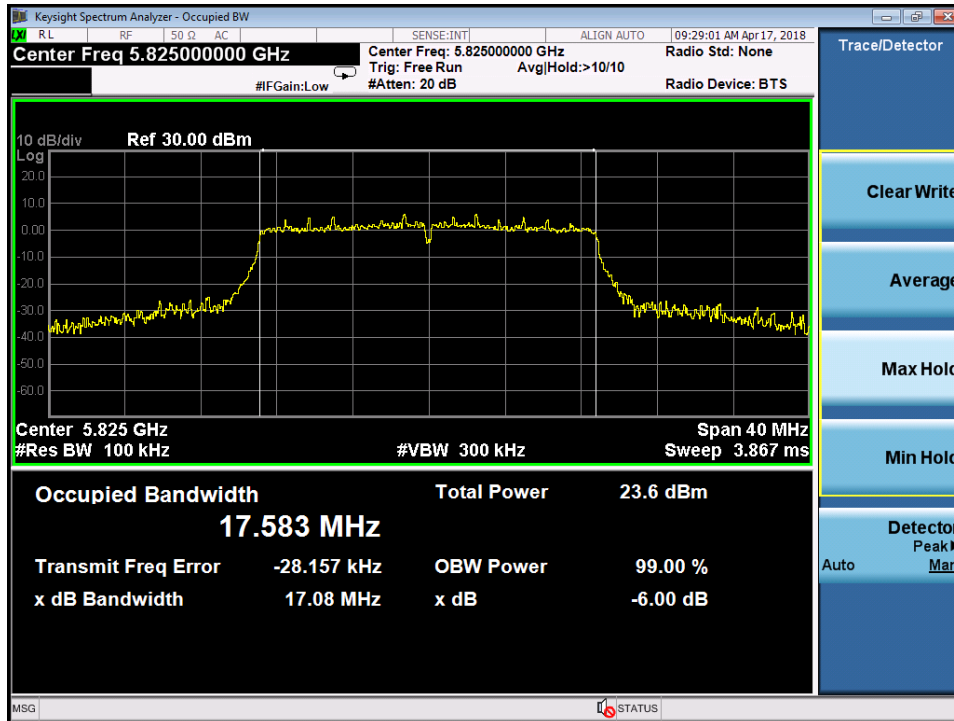


5785MHz



5825MHz


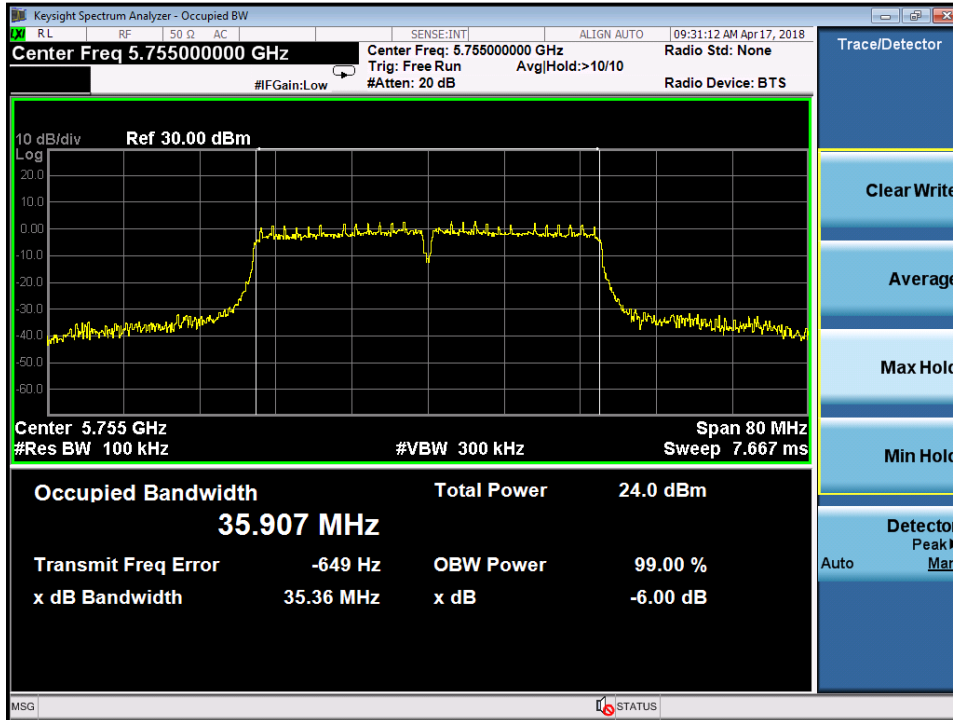
Test Plot of 6dB Bandwidth (802.11ac VHT20)
Antenna 1+Antenna 2
5745MHz

5785MHz


5825MHz


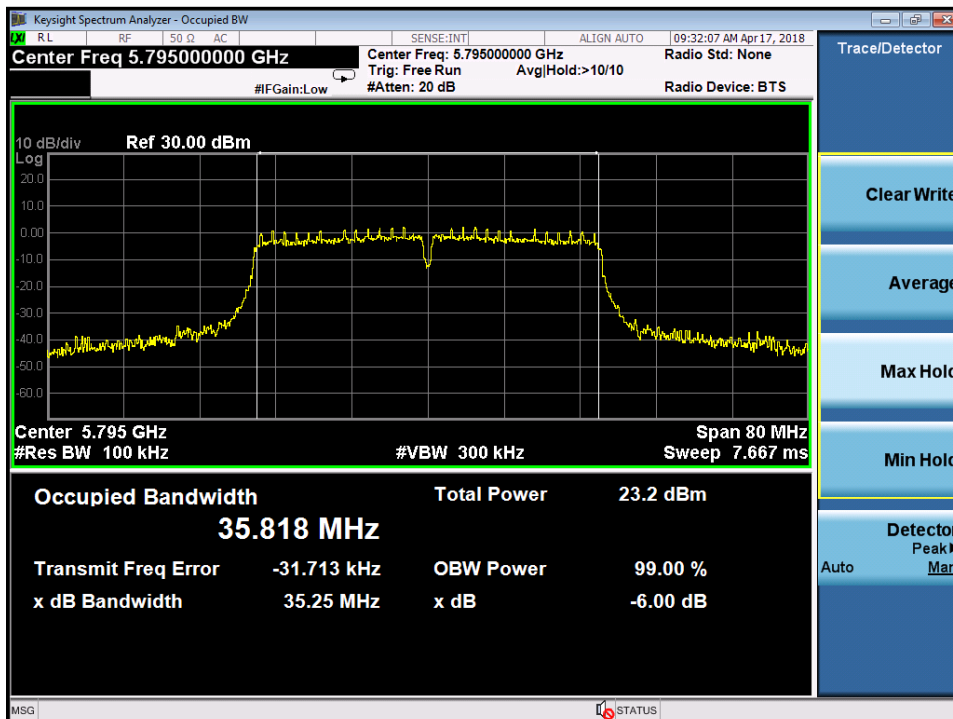
Test Plot of 6dB Bandwidth (802.11ac VHT40)

Antenna 1+Antenna 2

5755MHz



5795MHz



Test Plot of 6dB Bandwidth (802.11ac VHT80)
Antenna 1+Antenna 2
5775MHz
