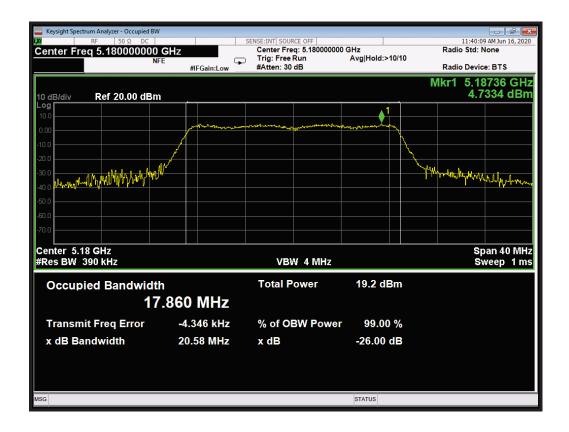
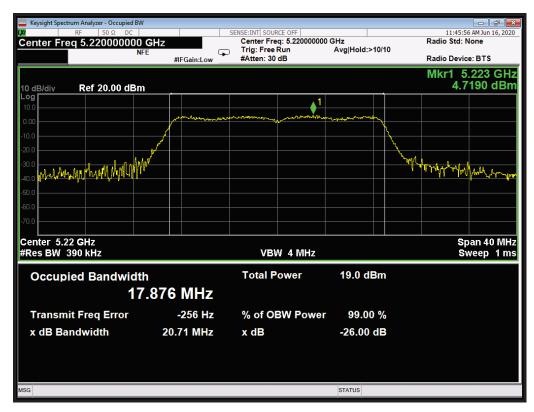
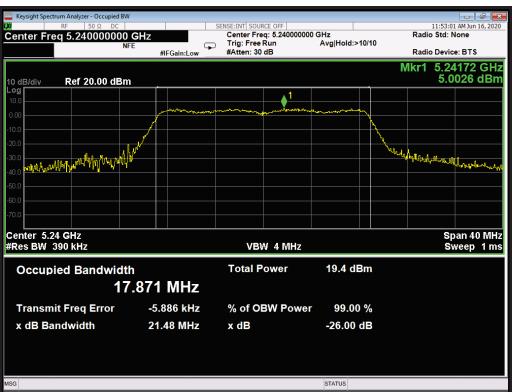
Modulation: 802.11ac-20; Data rate: MCS0 2SS; Main Antenna			
Channel Frequency (MHz)	26dB bandwidth (MHz)	99% bandwidth (MHz)	Result
5180	20.58	17.860	N/A
5220	20.71	17.876	N/A
5240	21.48	17.871	N/A
5260	20.86	17.814	N/A
5280	21.00	17.859	N/A
5320	20.68	17.871	N/A

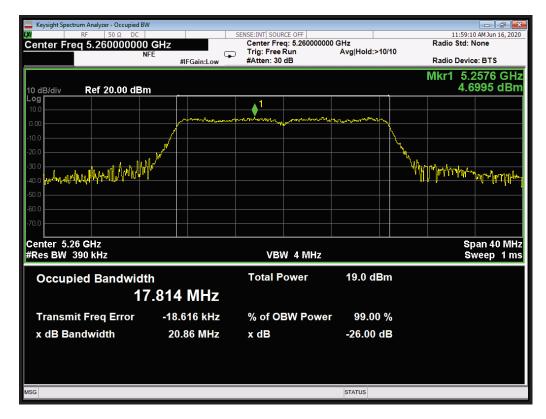


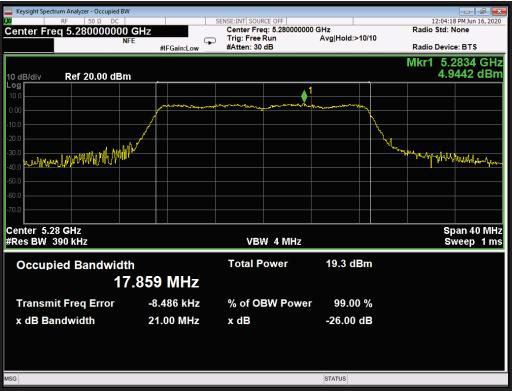
RF930 Page 298 of 350



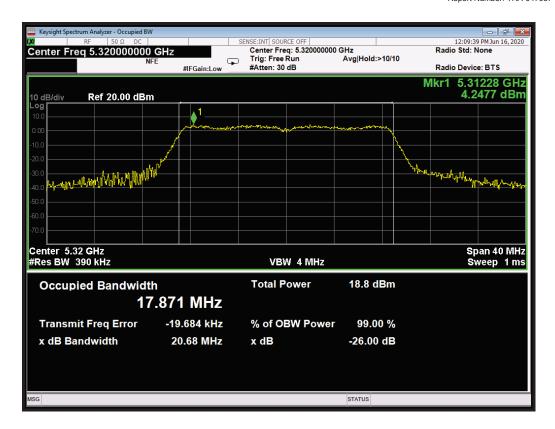


RF930 Page 299 of 350



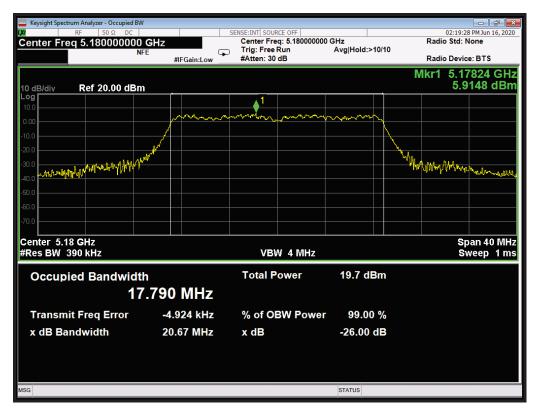


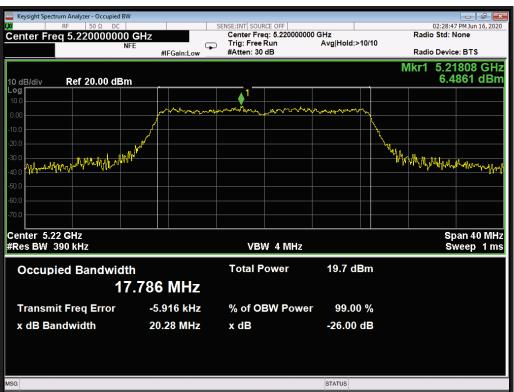
RF930 Page 300 of 350



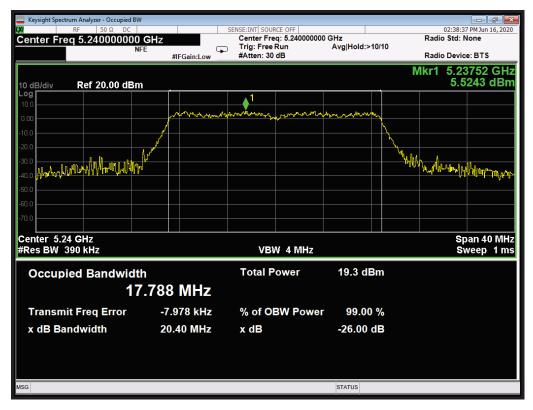
Modulation: 802.11ac-20; Data rate: MCS0 2SS; Aux Antenna			
Channel Frequency (MHz)	26dB bandwidth (MHz)	99% bandwidth (MHz)	Result
5180	20.67	17.790	N/A
5220	20.28	17.786	N/A
5240	20.40	17.788	N/A
5260	21.33	17.780	N/A
5280	20.32	17.799	N/A
5320	20.63	17.800	N/A

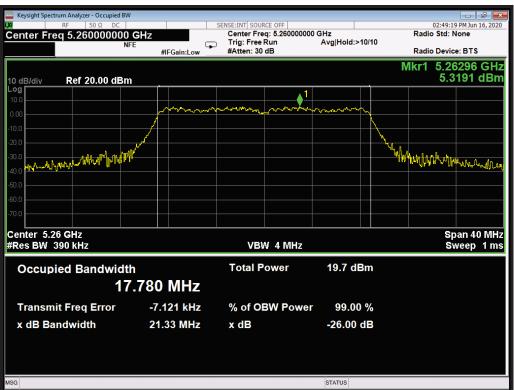
RF930 Page 301 of 350



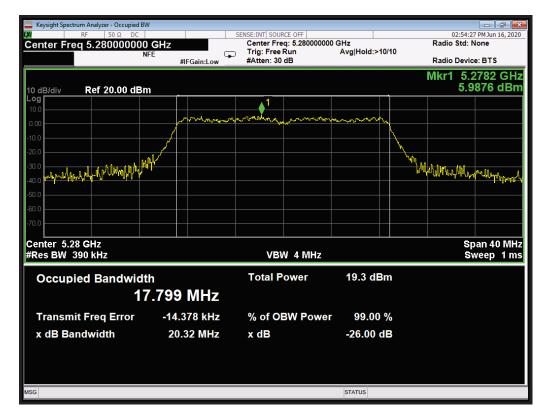


RF930 Page 302 of 350





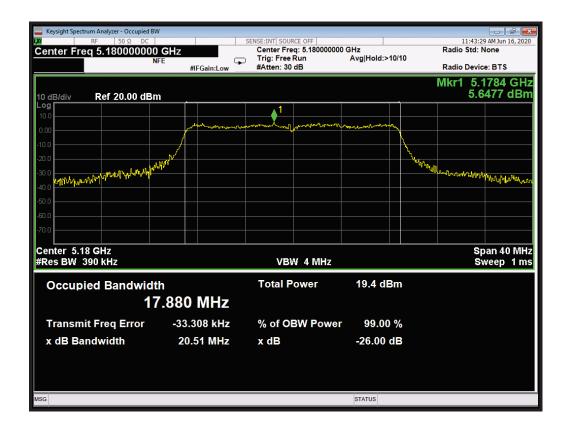
RF930 Page 303 of 350



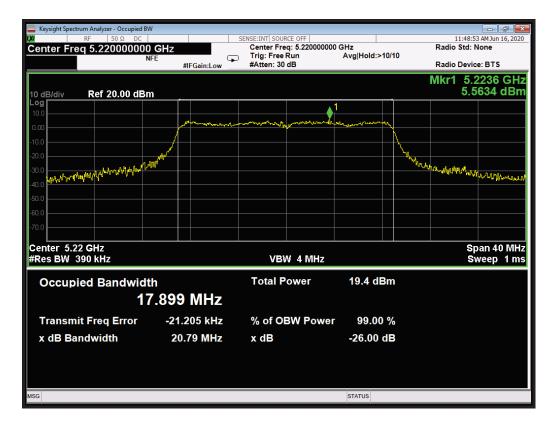


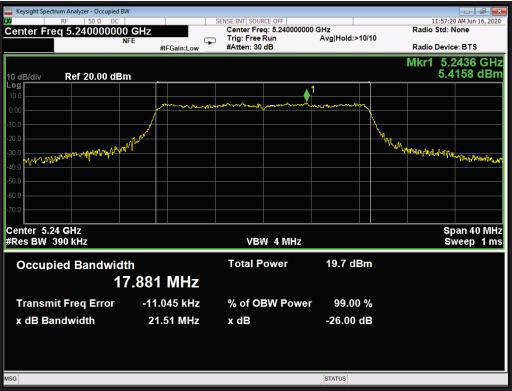
RF930 Page 304 of 350

Modulation: 802.11ac-20; Data rate: MCS8 2SS; Main Antenna			
Channel Frequency (MHz)	26dB bandwidth (MHz)	99% bandwidth (MHz)	Result
5180	20.51	17.880	N/A
5220	20.79	17.899	N/A
5240	21.51	17.881	N/A
5260	21.36	17.880	N/A
5280	20.70	17.826	N/A
5320	20.80	17.88	N/A

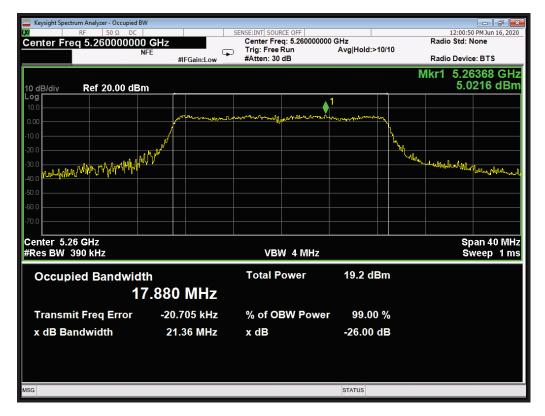


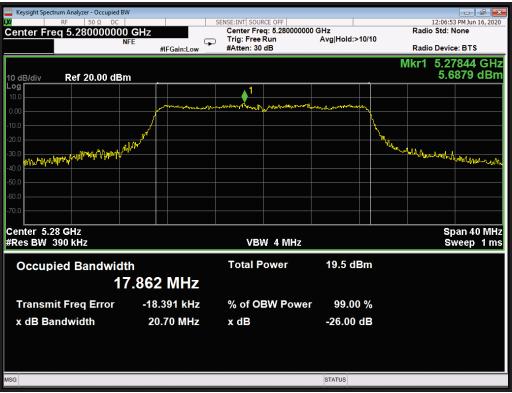
RF930 Page 305 of 350



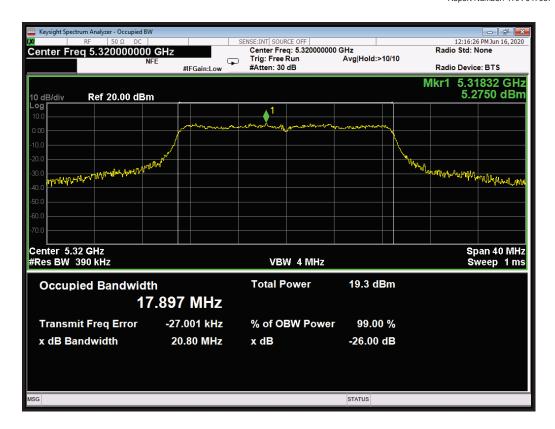


RF930 Page 306 of 350



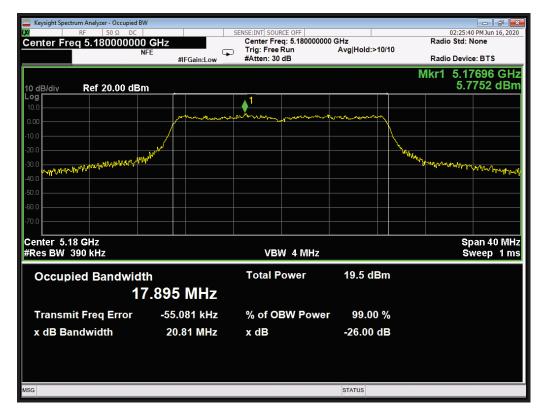


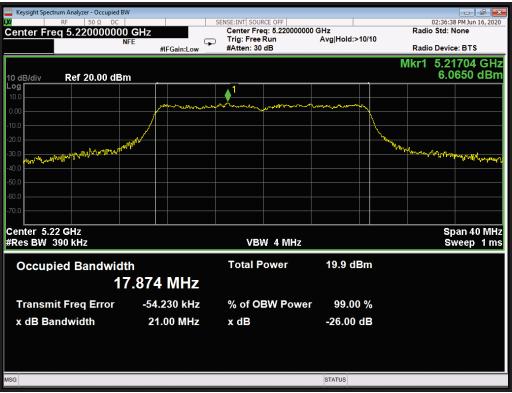
RF930 Page 307 of 350



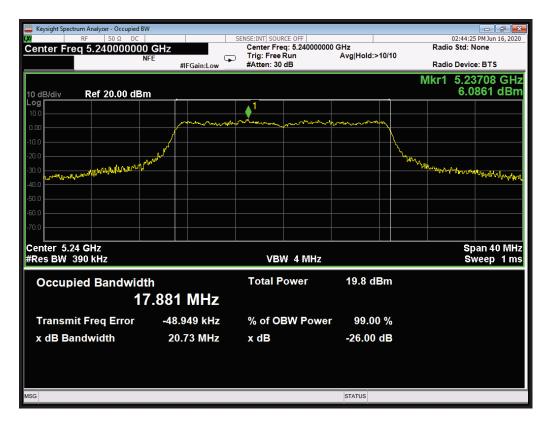
Modulation: 802.11ac-20; Data rate: MCS8 2SS; Aux Antenna			
Channel Frequency (MHz)	26dB bandwidth (MHz)	99% bandwidth (MHz)	Result
5180	20.81	17.895	N/A
5220	21.00	17.874	N/A
5240	20.73	17.881	N/A
5260	20.73	17.833	N/A
5280	20.54	17.826	N/A
5320	21.13	17.888	N/A

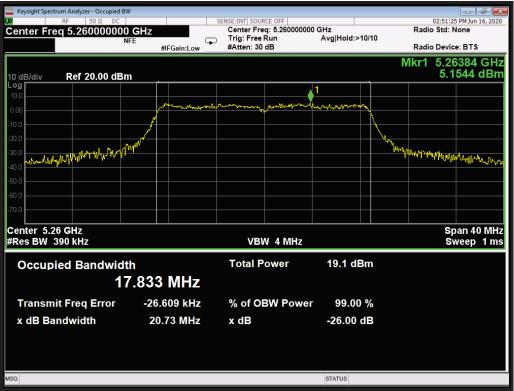
RF930 Page 308 of 350



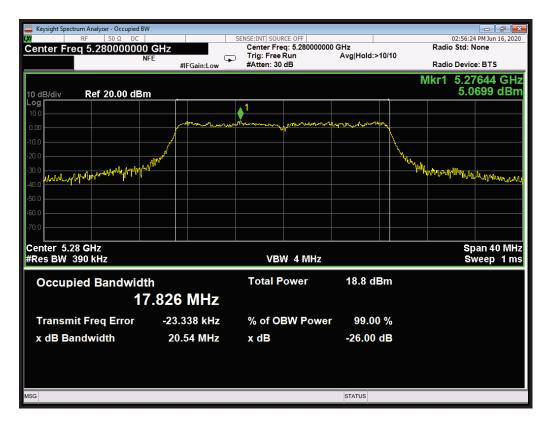


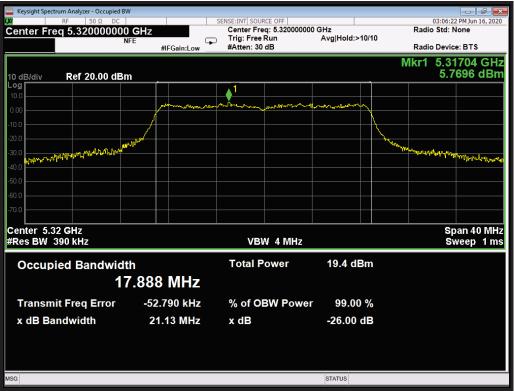
RF930 Page 309 of 350





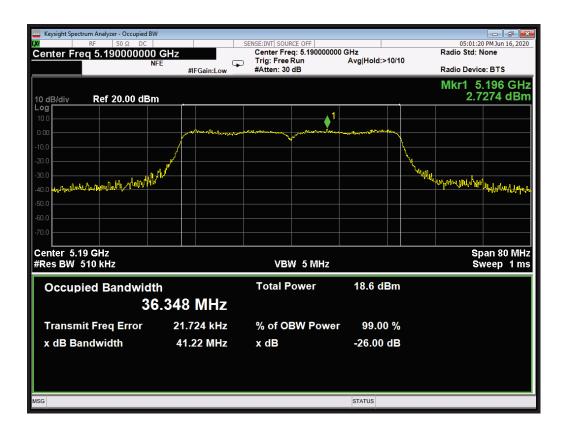
RF930 Page 310 of 350



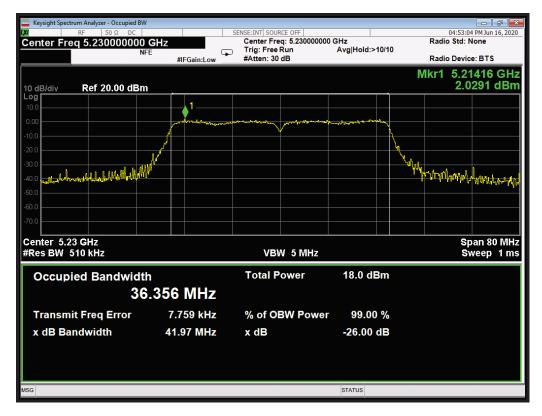


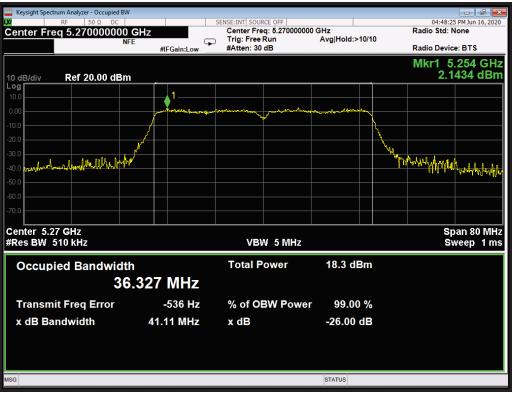
RF930 Page 311 of 350

Modulation: 802.11ac-40; Data rate: MCS0 1SS; Main Antenna			
Channel Frequency (MHz)	26dB bandwidth (MHz)	99% bandwidth (MHz)	Result
5190	41.22	36.348	N/A
5230	41.97	36.356	N/A
5270	41.11	36.327	N/A
5310	41.20	36.301	N/A

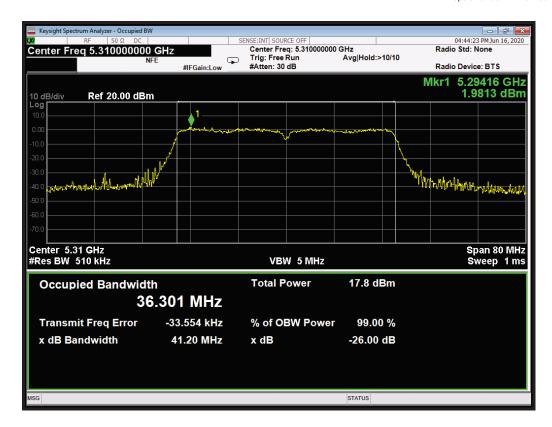


RF930 Page 312 of 350



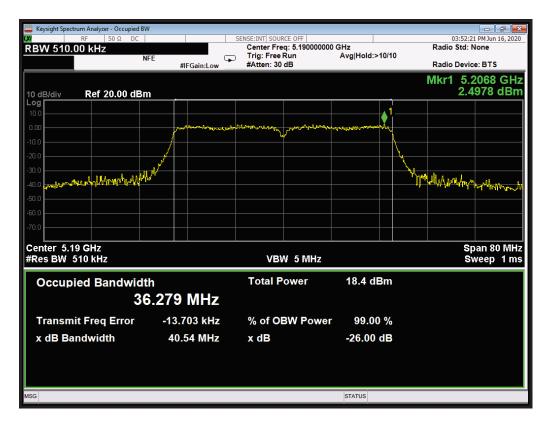


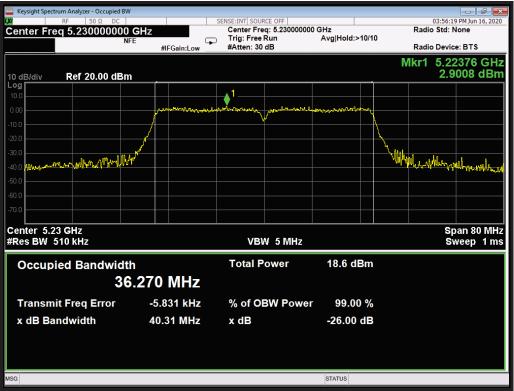
RF930 Page 313 of 350



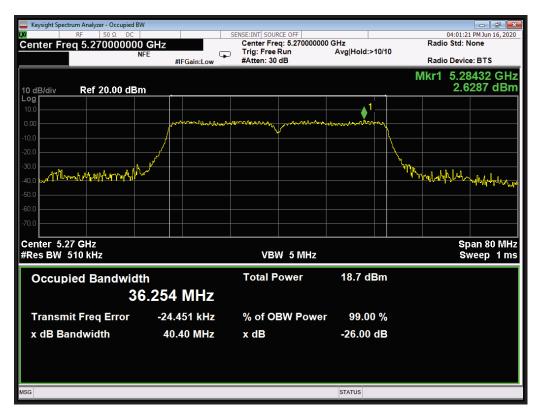
Modulation: 802.11ac-40; Data rate: MCS0 1SS; Aux Antenna			
Channel Frequency (MHz)	26dB bandwidth (MHz)	99% bandwidth (MHz)	Result
5190	40.54	36.279	N/A
5230	40.31	36.270	N/A
5270	40.40	36.254	N/A
5310	40.73	36.239	N/A

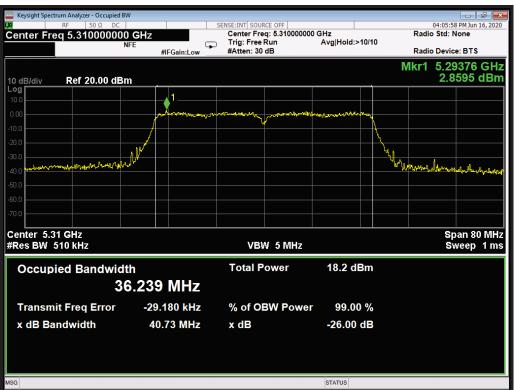
RF930 Page 314 of 350





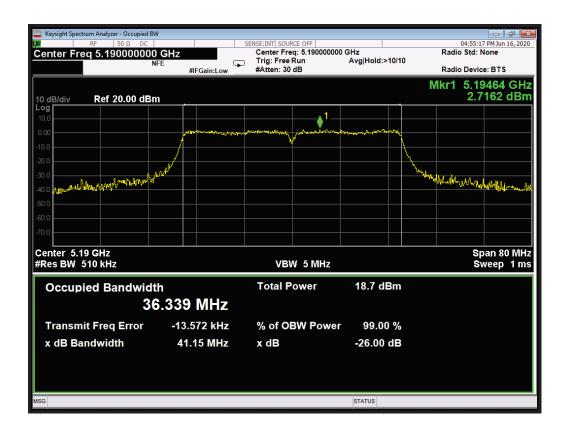
RF930 Page 315 of 350



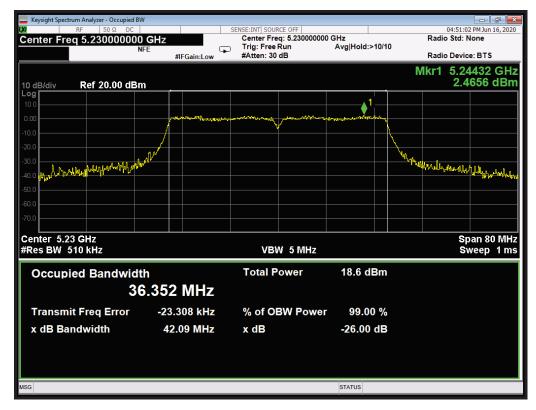


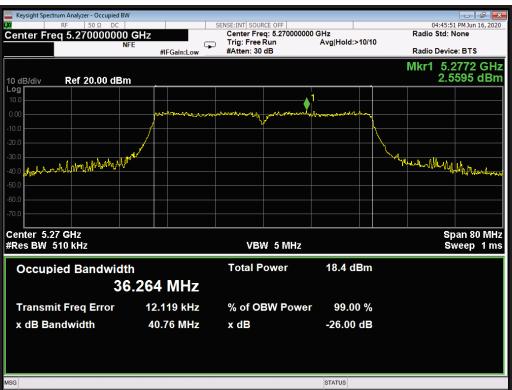
RF930 Page 316 of 350

Modulation: 802.11ac-40; Data rate: MCS9 1SS; Main Antenna			
Channel Frequency (MHz)	26dB bandwidth (MHz)	99% bandwidth (MHz)	Result
5190	41.15	36.339	N/A
5230	42.09	36.352	N/A
5270	40.76	36.264	N/A
5310	40.56	36.293	N/A

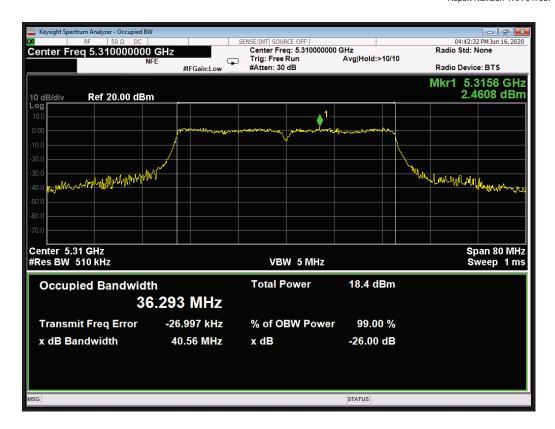


RF930 Page 317 of 350



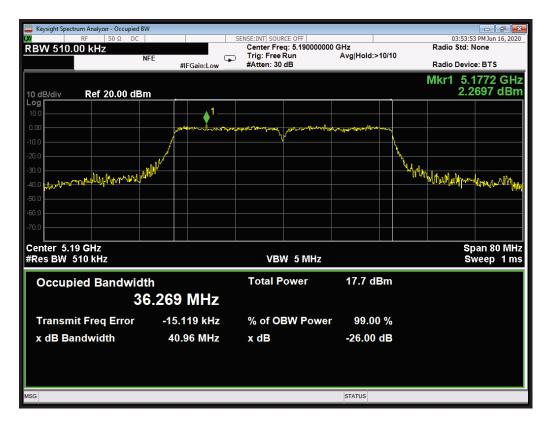


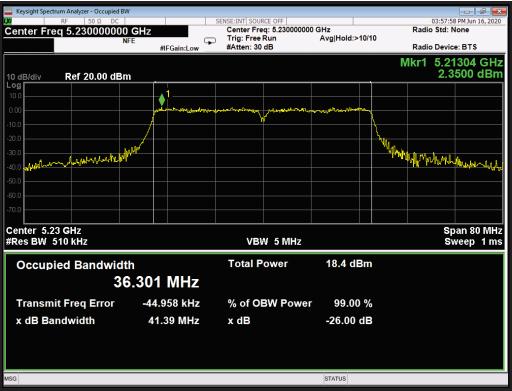
RF930 Page 318 of 350



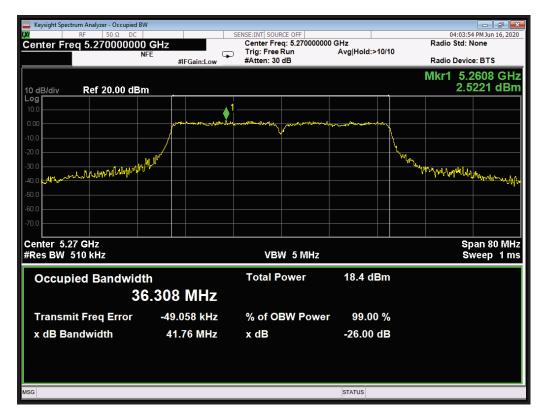
Modulation: 802.11ac-40; Data rate: MCS9 1SS; Aux Antenna			
Channel Frequency (MHz)	26dB bandwidth (MHz)	99% bandwidth (MHz)	Result
5190	40.96	36.269	N/A
5230	41.39	36.301	N/A
5270	41.76	36.308	N/A
5310	41.24	36.294	N/A

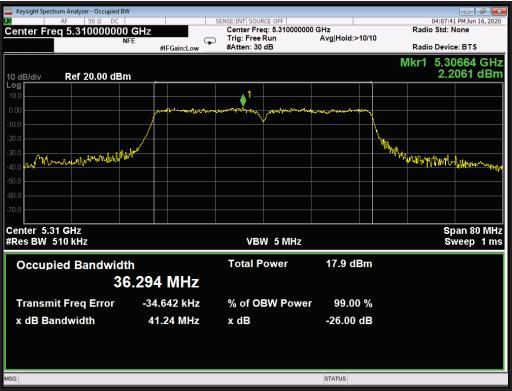
RF930 Page 319 of 350





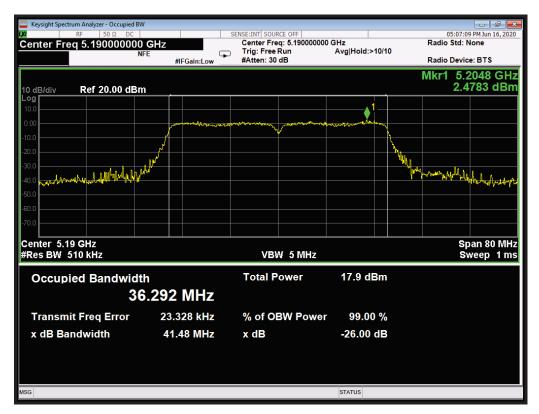
RF930 Page 320 of 350

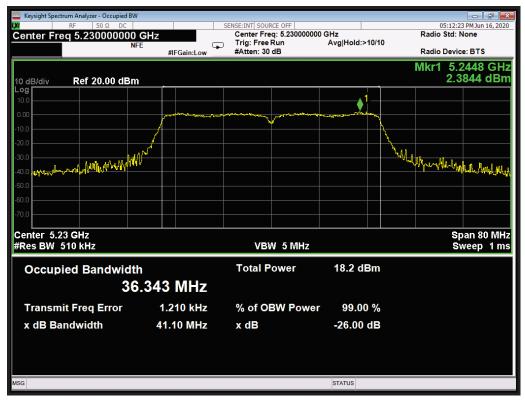




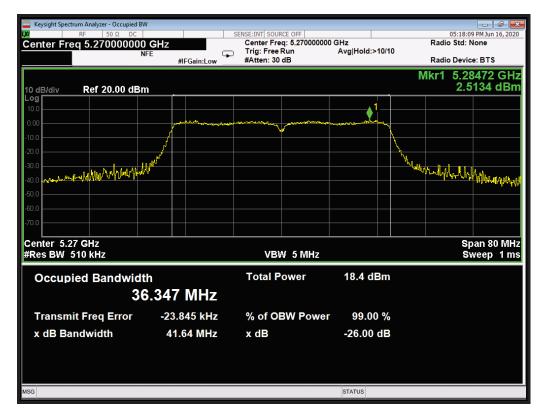
RF930 Page 321 of 350

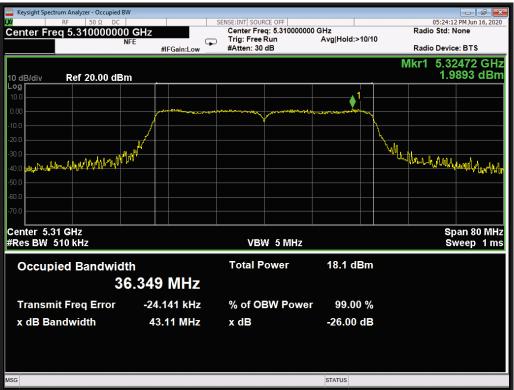
Modulation: 802.11ac-40; Data rate: MCS0 2SS; Main Antenna			
Channel Frequency (MHz)	26dB bandwidth (MHz)	99% bandwidth (MHz)	Result
5190	41.48	36.292	N/A
5230	41.10	36.343	N/A
5270	41.64	36.347	N/A
5310	43.11	36.349	N/A





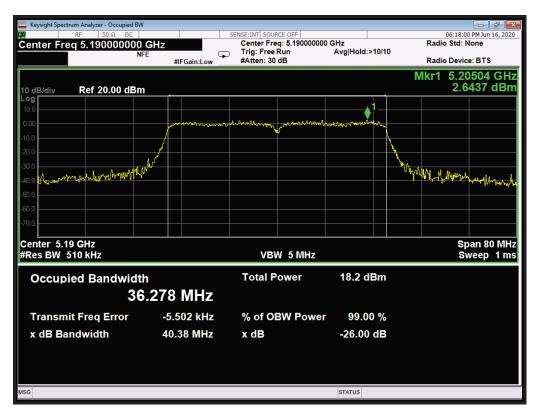
RF930 Page 322 of 350



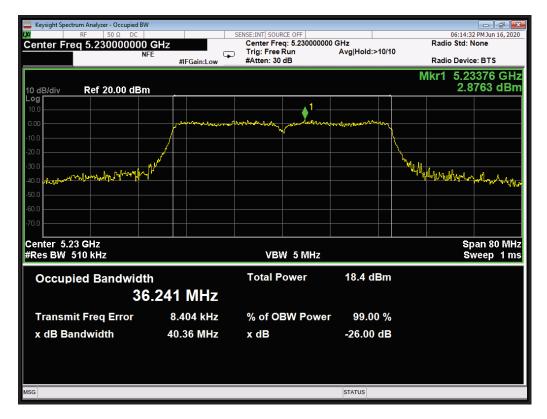


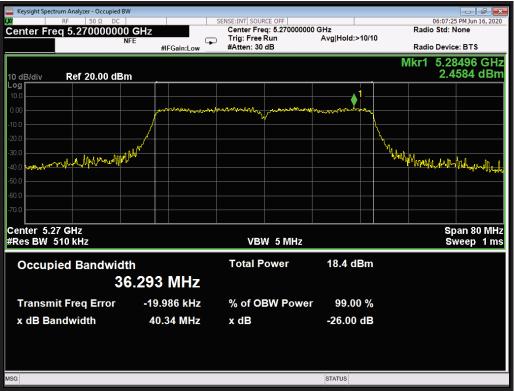
RF930 Page 323 of 350

Modulation: 802.11ac-40; Data rate: MCS0 2SS; Aux Antenna			
Channel Frequency (MHz)	26dB bandwidth (MHz)	99% bandwidth (MHz)	Result
5190	40.38	36.278	N/A
5230	40.36	36.241	N/A
5270	40.34	36.293	N/A
5310	40.75	36.265	N/A

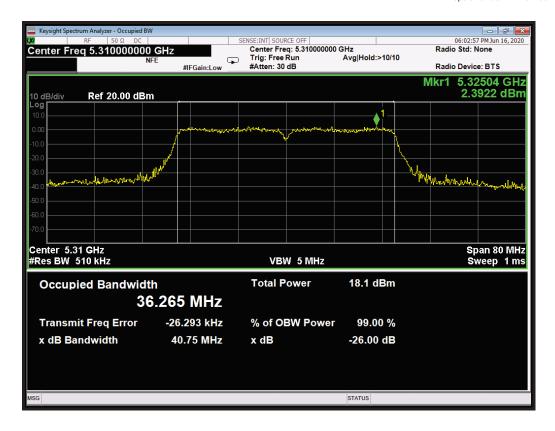


RF930 Page 324 of 350



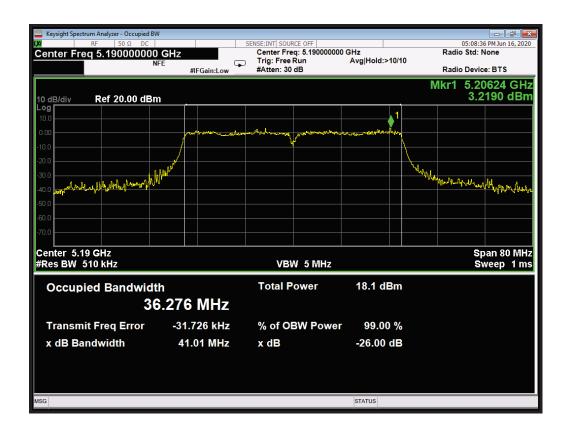


RF930 Page 325 of 350

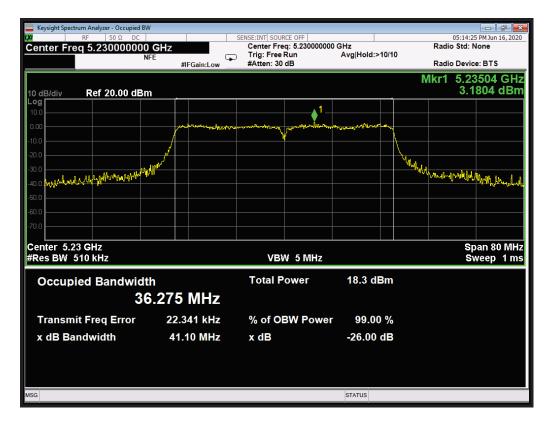


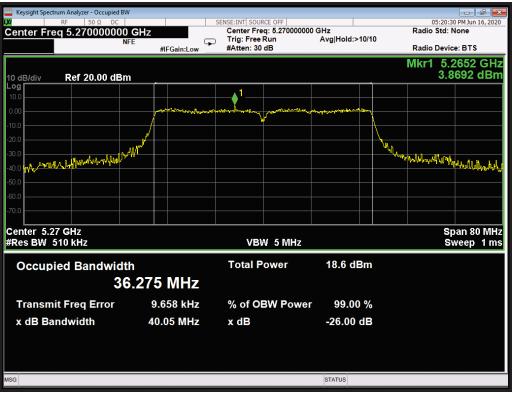
RF930 Page 326 of 350

Modulation: 802.11ac-40; Data rate: MCS9 2SS; Main Antenna			
Channel Frequency (MHz)	26dB bandwidth (MHz)	99% bandwidth (MHz)	Result
5190	41.01	36.276	N/A
5230	41.10	36.275	N/A
5270	40.05	36.275	N/A
5310	40.51	36.271	N/A

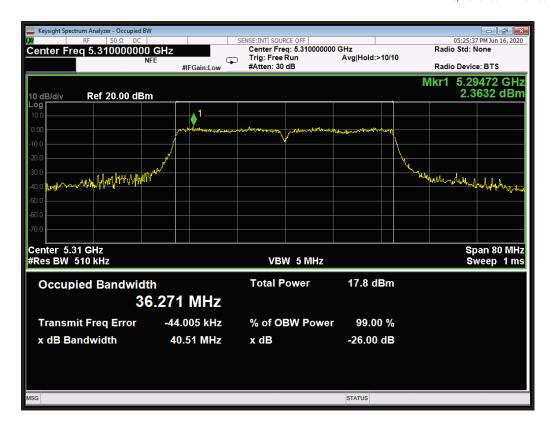


RF930 Page 327 of 350



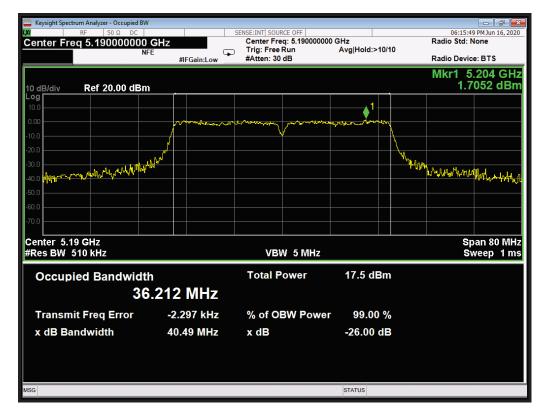


RF930 Page 328 of 350



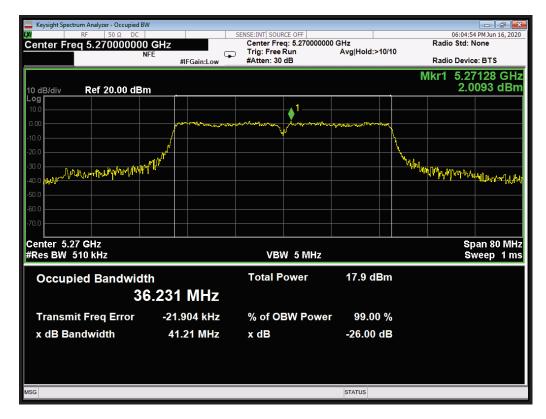
Modulation: 802.11ac-40; Data rate: MCS9 2SS; Aux Antenna			
Channel Frequency (MHz)	26dB bandwidth (MHz)	99% bandwidth (MHz)	Result
5190	40.49	36.212	N/A
5230	42.53	36.316	N/A
5270	41.21	36.231	N/A
5310	40.36	36.304	N/A

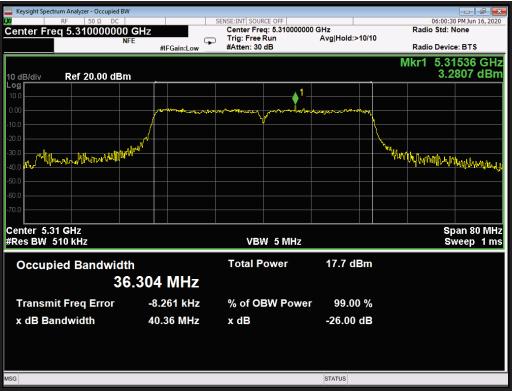
RF930 Page 329 of 350





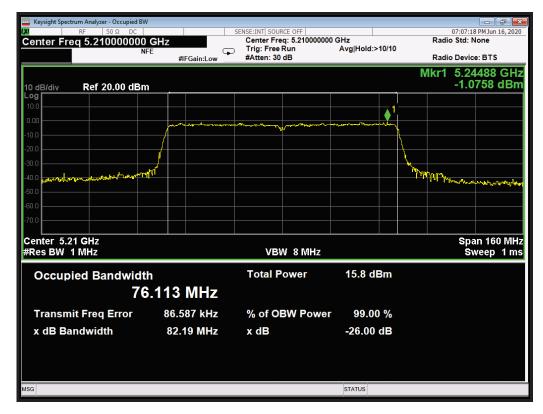
RF930 Page 330 of 350

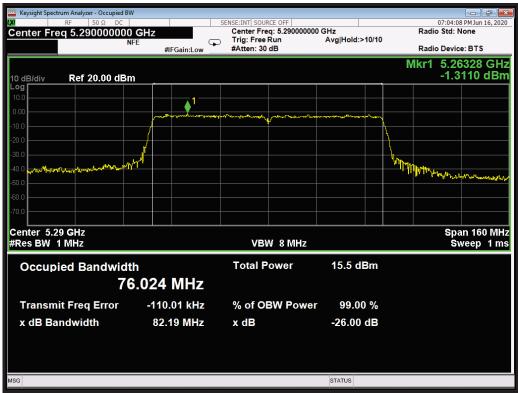




RF930 Page 331 of 350

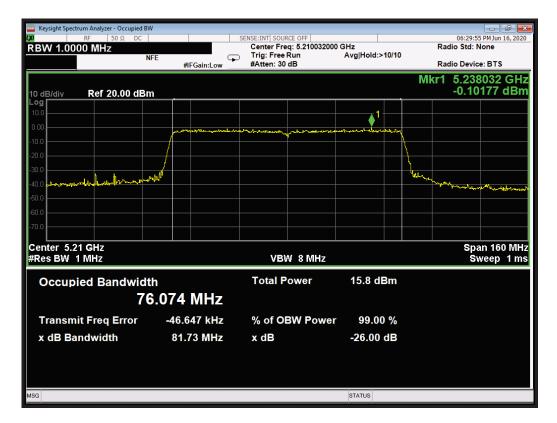
Modulation: 802.11ac-80; Data rate: MCS0 1SS; Main Antenna				
Channel Frequency (MHz)	26dB bandwidth (MHz)	99% bandwidth (MHz)	Result	
5210	82.19	76.113	N/A	
5290	82.19	76.024	N/A	

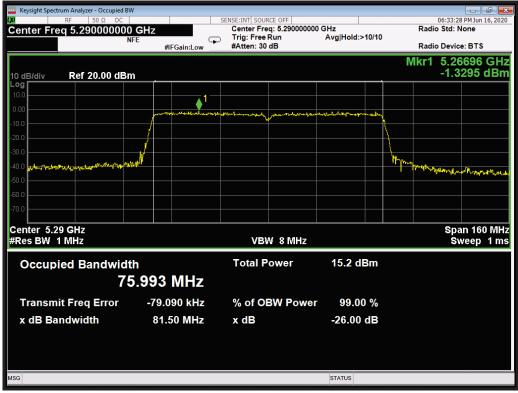




RF930 Page 332 of 350

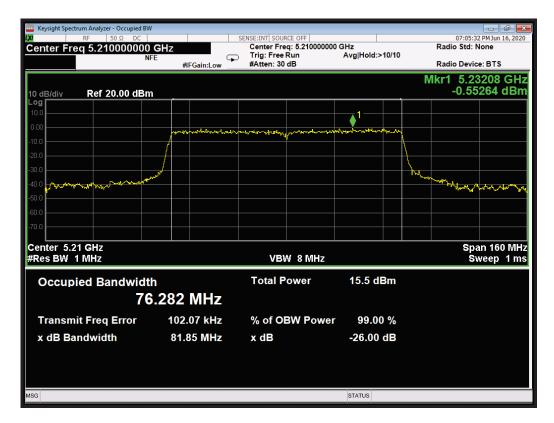
Modulation: 802.11ac-80; Data rate: MCS0 1SS; Aux Antenna				
Channel Frequency (MHz)	26dB bandwidth (MHz)	99% bandwidth (MHz)	Result	
5210	81.73	76.074	N/A	
5290	81.50	75.993	N/A	

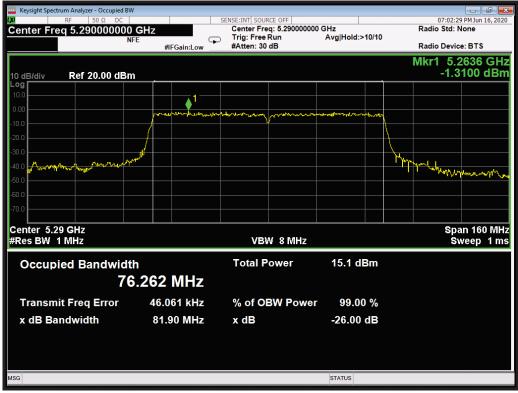




RF930 Page 333 of 350

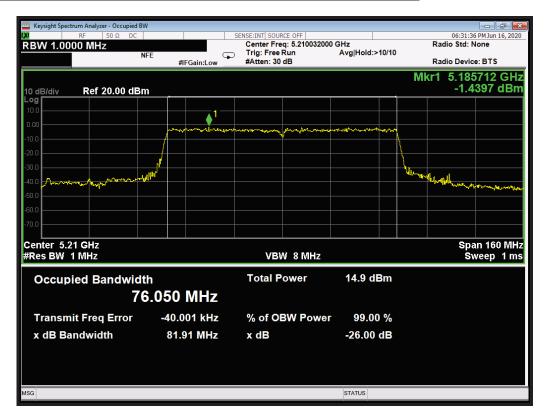
Modulation: 802.11ac-80; Data rate: MCS9 1SS; Main Antenna						
Channel Frequency (MHz) 26dB bandwidth 99% bandwidth (MHz) Result						
5210	81.85	76.282	N/A			
5290	81.90	76.262	N/A			

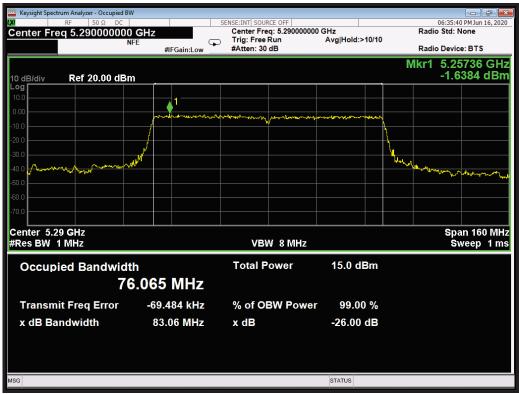




RF930 Page 334 of 350

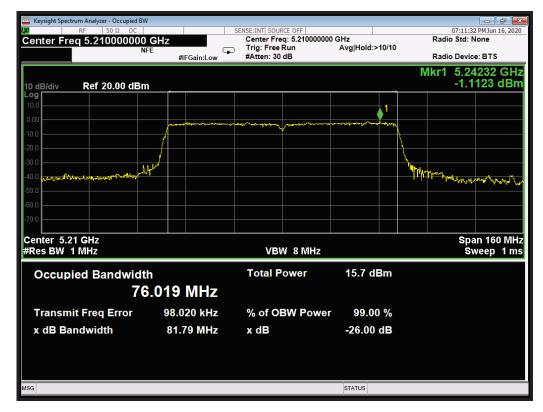
Modulation: 802.11ac-80; Data rate: MCS9 1SS; Aux Antenna						
Channel Frequency (MHz)  26dB bandwidth 99% bandwidth (MHz)  Result						
5210	81.91	76.050	N/A			
5290	83.06	76.065	N/A			

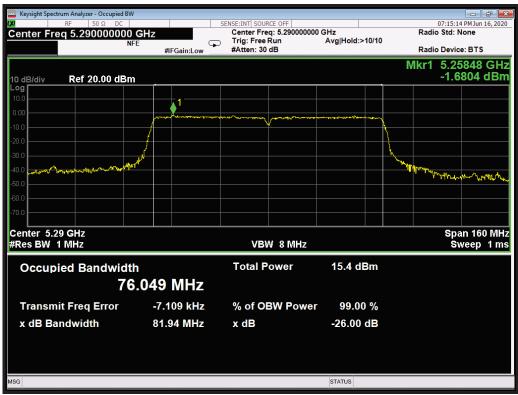




RF930 Page 335 of 350

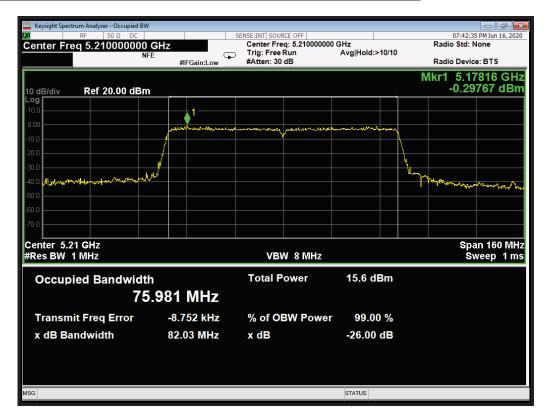
Modulation: 802.11ac-80; Data rate: MCS0 2SS; Main Antenna						
Channel Frequency (MHz) 26dB bandwidth 99% bandwidth Result (MHz)						
5210	81.79	76.019	N/A			
5290	81.94	76.049	N/A			

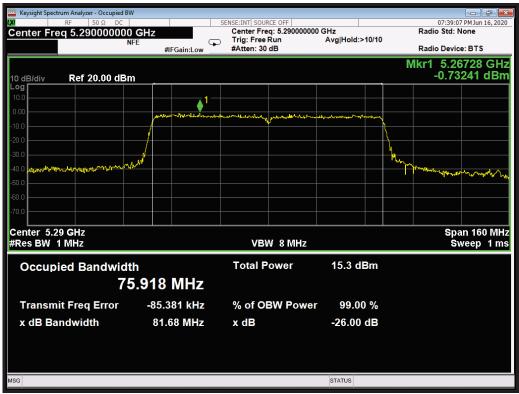




RF930 Page 336 of 350

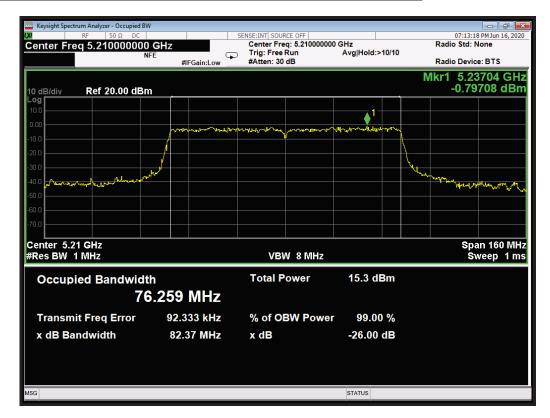
Modulation: 802.11ac-80; Data rate: MCS0 2SS; Aux Antenna						
Channel Frequency (MHz) 26dB bandwidth (MHz) 99% bandwidth (MHz) Result						
5210	82.03	75.981	N/A			
5290	81.68	75.918	N/A			

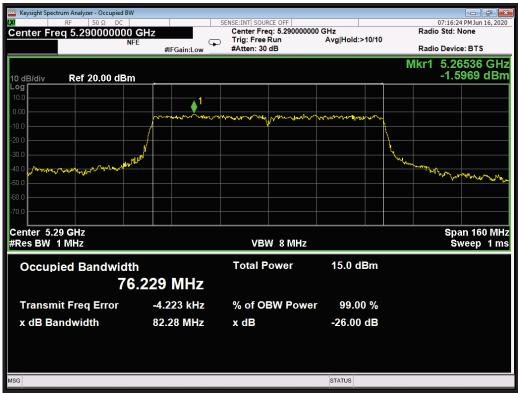




RF930 Page 337 of 350

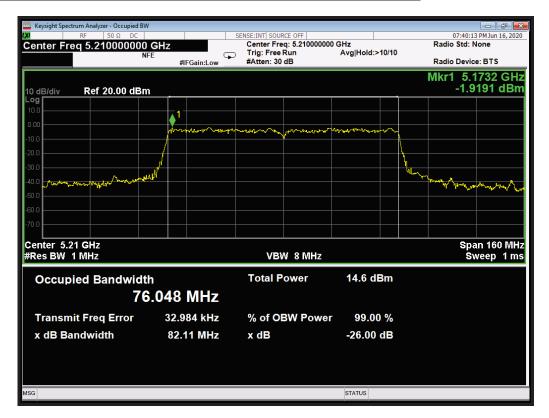
Modulation: 802.11ac-80; Data rate: MCS9 2SS; Main Antenna						
Channel Frequency (MHz) 26dB bandwidth 99% bandwidth (MHz) Result						
5210	82.37	76.259	N/A			
5290	82.28	76.229	N/A			

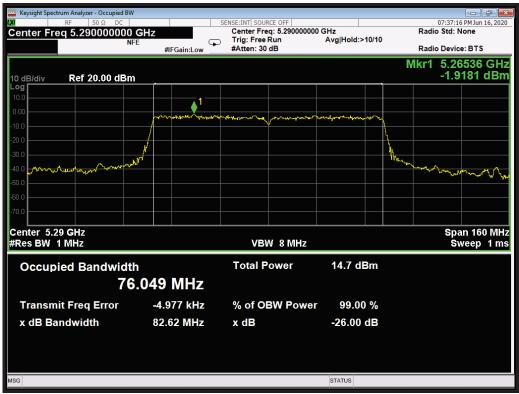




RF930 Page 338 of 350

Modulation: 802.11ac-80; Data rate: MCS9 2SS; Aux Antenna						
Channel Frequency (MHz) 26dB bandwidth (MHz) 99% bandwidth Result						
5210	82.11	76.048	N/A			
5290	82.62	76.049	N/A			





RF930 Page 339 of 350

# 14 Maximum conducted output power

### 14.1 Definition

The maximum conducted output power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level.

#### 14.2 Test Parameters

Test Location: Element Hull

Test Chamber: Wireless Laboratory 1

Test Standard and Clause: ANSI C63.10-2013, Clause 12.3

EUT Occupied Bandwidths: 20 MHz, 40 MHz & 80 MHz

Deviations From Standard: None

Measurement BW: Wideband power meter used

Measurement Span: Wideband power meter used

Measurement Points: Wideband power meter used

Measurement Detector: RMS

### **Environmental Conditions (Normal Environment)**

Temperature: 23 °C +15 °C to +35 °C (as declared)

Humidity: 43 %RH 20%RH to 75%RH (as declared)

### **Test Limits**

For an access point operating in the band 5.15–5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W (30 dBm).

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 (24 dBm).

For the 5.25–5.35 GHz band, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW (24 dBm) or 11 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.

Band	5150 MHz – 5250 MHz	5250 MHz – 5350 MHz
Number of antennas	2	2
Correlated signals	No	No
Maximum gain (dBi)	7.1	7.1
Exceeds 6 dBi by (dB)	1.1	1.1
Spec. limit (dBm)	24	11 + 10 log B
Minimum 26 dB bandwidth (MHz)	20 MHz	20 MHz
Adjusted limit (dBm)	22.9	22.9

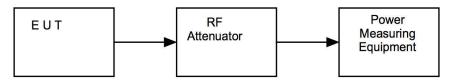
RF930 Page 340 of 350

### 14.3 Test Method

With The EUT was connected as per Figure iv, the power was measured on the power meter, having taken account of all path losses.

The measurements were performed with EUT set at its maximum duty. All modulation schemes, data rates and power settings were used to observe the worst case configuration in each bandwidth.

**Figure iv Test Setup** 



## 14.4 Test Equipment

Equipment		Equipment	Element	Due For
Description	Manufacturer	Туре	No	Calibration
Power Meter	ETS Lindgren	7002-006	REF2279	2022-03-18
Power Meter	ETS Lindgren	7002-006	REF2324	2022-01-29
Power Supply	Farnell	LT30-2	RFG035	Cal with REF887
Multimeter	Agilent	34405A	REF887	2021-10-12

### 14.5 Test Results

	Modulation: 802.11a; Main and Aux ports measured simultaneously; Channel Bandwidth: 20 MHz					
Data Rate (Mbps)	Channel (MHz)	EUT power setting	Measured level (dBm)	Limit (dBm)	Result	
6	5180	15	18.4	22.9	Pass	
6	5220	15	18.4	22.9	Pass	
6	5240	15	18.4	22.9	Pass	
54	5180	15	18.2	22.9	Pass	
54	5220	15	18.3	22.9	Pass	
54	5240	15	18.2	22.9	Pass	
6	5260	15	18.4	22.9	Pass	
6	5280	15	18.3	22.9	Pass	
6	5320	15	18.2	22.9	Pass	
54	5260	15	18.2	22.9	Pass	
54	5280	15	18.2	22.9	Pass	
54	5320	15	18.0	22.9	Pass	

RF930 Page 341 of 350

Modulation: 802.11ac; Main and Aux ports measured simultaneously; Channel Bandwidth: 20 MHz; Spatial Streams: 1					
Data Rate (MCS)	Channel (MHz)	EUT power setting	Measured level (dBm)	Limit (dBm)	Result
0	5180	13	16.6	22.9	Pass
0	5220	13	16.6	22.9	Pass
0	5240	13	16.6	22.9	Pass
8	5180	13	16.6	22.9	Pass
8	5220	13	16.6	22.9	Pass
8	5240	13	16.6	22.9	Pass
0	5260	13	16.6	22.9	Pass
0	5280	13	16.4	22.9	Pass
0	5320	13	16.4	22.9	Pass
8	5260	13	16.6	22.9	Pass
8	5280	13	16.4	22.9	Pass
8	5320	13	16.4	22.9	Pass

	Modulation: 802.11ac; Main and Aux ports measured simultaneously; Channel Bandwidth: 20 MHz; Spatial Streams: 2					
Data Rate (MCS)	Channel (MHz)	EUT power setting	Measured level (dBm)	Limit (dBm)	Result	
0	5180	13	16.6	22.9	Pass	
0	5220	13	16.6	22.9	Pass	
0	5240	13	16.6	22.9	Pass	
8	5180	13	16.6	22.9	Pass	
8	5220	13	16.6	22.9	Pass	
8	5240	13	16.6	22.9	Pass	
0	5260	13	16.6	22.9	Pass	
0	5280	13	16.5	22.9	Pass	
0	5320	13	16.5	22.9	Pass	
8	5260	13	16.6	22.9	Pass	
8	5280	13	16.5	22.9	Pass	
8	5320	13	16.5	22.9	Pass	

Modulation: 802.11ac; Main and Aux ports measured simultaneously; Channel Bandwidth: 40 MHz; Spatial Streams: 1					
Data Rate (MCS)	Channel (MHz)	EUT power setting	Measured level (dBm)	Limit (dBm)	Result
0	5190	12	15.5	22.9	Pass
0	5230	12	15.5	22.9	Pass
9	5190	12	15.6	22.9	Pass
9	5230	12	15.6	22.9	Pass
0	5270	12	15.4	22.9	Pass
0	5310	12	15.4	22.9	Pass
9	5270	12	15.5	22.9	Pass
9	5310	12	15.5	22.9	Pass

RF930 Page 342 of 350

Modulation: 802.11ac; Main and Aux ports measured simultaneously; Channel Bandwidth: 40 MHz; Spatial Streams: 2									
Data Rate (MCS)	Channel (MHz)	EUT power setting	Measured level (dBm)	Limit (dBm)	Result				
0	5190	12	15.6	22.9	Pass				
0	5230	12	15.6	22.9	Pass				
9	5190	12	15.6	22.9	Pass				
9	5230	12	15.6	22.9	Pass				
0	5270	12	15.4	22.9	Pass				
0	5310	12	15.5	22.9	Pass				
9	5270	12	15.5	22.9	Pass				
9	5310	12	15.6	22.9	Pass				

Modulation: 802.11ac; Main and Aux ports measured simultaneously; Channel Bandwidth: 80 MHz; Spatial Streams: 1								
Data Rate (MCS)	Channel (MHz) EUT power Measured level Limit Result							
0	5210	8	12.0	22.9	Pass			
9	5210	8	12.3	22.9	Pass			
0	5290	8	11.8	22.9	Pass			
9	5290	8	12.1	22.9	Pass			

	Modulation: 802.11ac; Main and Aux ports measured simultaneously; Channel Bandwidth: 80 MHz; Spatial Streams: 2								
Data Rate (MCS)	ate Channel (MHz) EUT power Measured level Limit Result								
0	5210	8	12.1	22.9	Pass				
9	5210	8	12.2	22.9	Pass				
0	5290	8	11.8	22.9	Pass				
9	5290	8	12.0	22.9	Pass				

RF930 Page 343 of 350

Measurements in 802.11n mode were only performed for channel and operating mode combinations where the EUT power setting was different from that used for 802.11ac mode. These additional measurements are presented in the tables below:

	Modulation: 802.11n; Main and Aux ports measured simultaneously; Channel Bandwidth: 20 MHz								
Data Rate (MCS)	Channel (MHz)	Channel (MHz) EUT power Measured level Limit Resul							
0	5180	15	18.6	22.9	Pass				
0	5220	15	18.7	22.9	Pass				
0	5240	15	18.7	22.9	Pass				
0	5260	15	18.6	22.9	Pass				
0	5280	15	18.5	22.9	Pass				
0	5320	15	18.5	22.9	Pass				

Modulation: 802.11n; Main and Aux ports measured simultaneously; Channel Bandwidth: 40 MHz							
Data Rate (MCS)	Channel (MHz)	EUT power setting	Measured level (dBm)	Limit (dBm)	Result		
0	5190	14	17.5	22.9	Pass		
0	5230	14	17.5	22.9	Pass		
0	5270	14	17.4	22.9	Pass		
0	5310	14	17.4	22.9	Pass		

RF930 Page 344 of 350

# 15 Power spectral density

### 15.1 Definition

The power spectral density is the total energy output per unit bandwidth from a pulse or sequence of pulses for which the transmit power is at its maximum level, divided by the total duration of the pulses.

#### 15.2 Test Parameters

Test Location: Element Hull

Test Chamber: Wireless Laboratory 1

Test Standard and Clause: ANSI C63.10-2013, Clause 12.5

EUT Channel Bandwidths: 20 MHz, 40 MHz & 80 MHz

Deviations From Standard:

Measurement BW:

Spectrum Analyzer Video BW:

None

1 MHz

3 MHz

Measurement Span: 30 MHz, 60 MHz & 90 MHz

Measurement Detector: RMS

### **Environmental Conditions (Normal Environment)**

Temperature: 21 °C +15 °C to +35 °C (as declared)

Humidity: 42 %RH 20%RH to 75%RH (as declared)

### **Test Limits**

For an access point operating in the band 5.15–5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band.

For client devices in the 5.15–5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band.

For the 5.25-5.35 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz 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.

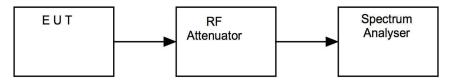
Number of antennas	2
Correlated signals	No
Maximum Gain (dBi)	7.1
Exceeds 6 dBi by (dB)	1.1
Spec. limit (dBm/MHz)	11.0
Adjusted limit (dBm/MHz)	9.9

RF930 Page 345 of 350

## 15.3 Test Method

With the EUT connected as per Figure v, the peak emission of the EUT was measured on a spectrum analyser, with path losses taken into account. The measurements were performed with EUT set at its maximum duty. All modulation schemes, data rates and power settings were used to observe the worst case configuration in each bandwidth.

Figure v Test Setup



## 15.4 Test Equipment

Equipment		Equipment	Element	Due For
Description	Manufacturer	Туре	No	Calibration
Spectrum Analyser	Agilent	N9030A	REF2167	2021-08-19
Power Supply	Farnell	LT30-2	RFG035	Cal with REF887
Multimeter	Agilent	34405A	REF887	2021-10-12

### 15.5 Test Results

	Modulation: 802.11a; Main and Aux ports measured separately and combined; Channel Bandwidth: 20 MHz								
Data Rate (Mbps)	Channel (MHz)	EUT power setting	Measured level Main (dBm/MHz)	Measured level Aux (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Result		
6	5180	15	4.6	4.4	7.5	9.9	Pass		
6	5220	15	4.4	4.6	7.5	9.9	Pass		
6	5240	15	4.4	4.6	7.5	9.9	Pass		
54	5180	15	4.4	4.0	7.2	9.9	Pass		
54	5220	15	4.1	4.4	7.3	9.9	Pass		
54	5240	15	4.1	4.2	7.2	9.9	Pass		
6	5260	15	4.4	4.2	7.3	9.9	Pass		
6	5280	15	4.3	4.3	7.3	9.9	Pass		
6	5320	15	4.3	4.3	7.3	9.9	Pass		
54	5260	15	3.9	3.9	6.9	9.9	Pass		
54	5280	15	3.9	3.9	6.9	9.9	Pass		
54	5320	15	4.2	4.0	7.1	9.9	Pass		

RF930 Page 346 of 350

	Modulation	,	ain and Aux po Bandwidth: 20			combined;	
Data Rate (MCS)	Channel (MHz)	EUT power setting	Measured level Main (dBm/MHz)	Measured level Aux (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Result
0	5180	13	2.5	1.9	5.2	9.9	Pass
0	5220	13	2.3	1.6	5.0	9.9	Pass
0	5240	13	2.4	1.5	5.0	9.9	Pass
8	5180	13	2.1	1.6	4.9	9.9	Pass
8	5220	13	2.2	1.4	4.8	9.9	Pass
8	5240	13	2.2	1.1	4.7	9.9	Pass
0	5260	13	2.4	1.5	5.0	9.9	Pass
0	5280	13	2.3	1.4	4.9	9.9	Pass
0	5320	13	2.5	2.0	5.3	9.9	Pass
8	5260	13	2.1	1.2	4.7	9.9	Pass
8	5280	13	2.1	1.1	4.6	9.9	Pass
8	5320	13	2.0	1.8	4.9	9.9	Pass

	Modulation: 802.11ac; Main and Aux ports measured separately and combined; Channel Bandwidth: 20 MHz; Spatial Streams: 2								
Data Rate (MCS)	Channel (MHz)	EUT power setting	Measured level Main (dBm/MHz)	Measured level Aux (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Result		
0	5180	13	2.4	1.8	5.1	9.9	Pass		
0	5220	13	2.3	2.0	5.2	9.9	Pass		
0	5240	13	2.4	1.9	5.2	9.9	Pass		
8	5180	13	2.1	1.5	4.8	9.9	Pass		
8	5220	13	2.0	1.8	4.9	9.9	Pass		
8	5240	13	2.0	1.5	4.8	9.9	Pass		
0	5260	13	2.5	1.9	5.2	9.9	Pass		
0	5280	13	2.4	1.8	5.1	9.9	Pass		
0	5320	13	2.5	2.2	5.4	9.9	Pass		
8	5260	13	2.2	1.7	5.0	9.9	Pass		
8	5280	13	2.2	1.5	4.9	9.9	Pass		
8	5320	13	2.1	1.9	5.0	9.9	Pass		

RF930 Page 347 of 350

	Modulation: 802.11ac; Main and Aux ports measured separately and combined; Channel Bandwidth: 40 MHz; Spatial Streams: 1								
Data Rate (MCS)	Channel (MHz)	EUT power setting	Measured level Main (dBm/MHz)	Measured level Aux (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Result		
0	5190	12	-1.4	-2.1	1.3	9.9	Pass		
0	5230	12	-1.4	-1.8	1.4	9.9	Pass		
9	5190	12	-1.8	-2.5	0.9	9.9	Pass		
9	5230	12	-1.6	-2.3	1.1	9.9	Pass		
0	5270	12	-1.3	-2.0	1.4	9.9	Pass		
0	5310	12	-1.3	-1.7	1.5	9.9	Pass		
9	5270	12	-1.8	-2.4	0.9	9.9	Pass		
9	5310	12	-1.6	-2.0	1.2	9.9	Pass		

	Modulation: 802.11ac; Main and Aux ports measured separately and combined; Channel Bandwidth: 40 MHz; Spatial Streams: 2								
Data Rate (MCS)	Channel (MHz)	EUT power setting	Measured level Main (dBm/MHz)	Measured level Aux (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Result		
0	5190	12	-1.4	-2.0	1.3	9.9	Pass		
0	5230	12	-1.6	-1.8	1.3	9.9	Pass		
9	5190	12	-1.8	-2.4	0.9	9.9	Pass		
9	5230	12	-2.1	-2.0	1.0	9.9	Pass		
0	5270	12	-1.5	-1.9	1.3	9.9	Pass		
0	5310	12	-1.5	-1.7	1.4	9.9	Pass		
9	5270	12	-2.0	-2.2	0.9	9.9	Pass		
9	5310	12	-1.8	-2.2	1.0	9.9	Pass		

Modulation: 802.11ac; Main and Aux ports measured separately and combined; Channel Bandwidth: 80 MHz; Spatial Streams: 1								
Data Rate (MCS)	Channel (MHz)	EUT power setting	Measured level Main (dBm/MHz)	Measured level Aux (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Result	
0	5210	8	-8.3	-9.2	-5.7	9.9	Pass	
9	5210	8	-8.4	-9.2	-5.8	9.9	Pass	
0	5290	8	-8.7	-9.2	-5.9	9.9	Pass	
9	5290	8	-8.6	-9.2	-5.9	9.9	Pass	

Modulation: 802.11ac; Main and Aux ports measured separately and combined; Channel Bandwidth: 80 MHz; Spatial Streams: 2								
Data Rate (MCS)	Channel (MHz)	EUT power setting	Measured level Main (dBm/MHz)	Measured level Aux (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Result	
0	5210	8	-8.5	-9.3	-5.9	9.9	Pass	
9	5210	8	-8.5	-9.2	-5.8	9.9	Pass	
0	5290	8	-8.8	-9.2	-6.0	9.9	Pass	
9	5290	8	-8.7	-9.0	-5.8	9.9	Pass	

RF930 Page 348 of 350

Measurements in 802.11n mode were only performed for channel and operating mode combinations where the EUT power setting was different from that used for 802.11ac mode. These additional measurements are presented in the tables below:

Modulation: 802.11n; Main and Aux ports measured separately and combined; Channel Bandwidth: 20 MHz								
Data Rate (MCS)	Channel (MHz)	EUT power setting	Measured level Main (dBm/MHz)	Measured level Aux (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Result	
0	5180	15	4.8	4.1	7.5	9.9	Pass	
0	5220	15	4.6	4.2	7.4	9.9	Pass	
0	5240	15	4.6	4.2	7.4	9.9	Pass	
0	5260	15	4.7	4.1	7.4	9.9	Pass	
0	5280	15	4.7	4.1	7.4	9.9	Pass	
0	5320	15	4.2	4.2	7.2	9.9	Pass	

Modulation: 802.11n; Main and Aux ports measured separately and combined; Channel Bandwidth: 40 MHz								
Data Rate (MCS)	Channel (MHz)	EUT power setting	Measured level Main (dBm/MHz)	Measured level Aux (dBm/MHz)	Combined PSD (dBm/MHz)	Limit (dBm/MHz)	Result	
0	5190	14	0.9	0.1	3.5	9.9	Pass	
0	5230	14	0.8	0.2	3.5	9.9	Pass	
0	5270	14	0.9	0.0	3.5	9.9	Pass	
0	5310	14	0.3	0.4	3.4	9.9	Pass	

RF930 Page 349 of 350

# 16 Measurement Uncertainty

### **Calculated Measurement Uncertainties**

All statements of uncertainty are expanded standard uncertainty using a coverage factor of 1.96 to give a 95% confidence:

### [1] Radiated spurious emissions

Uncertainty in test result (30 MHz - 1 GHz) = **4.6 dB** Uncertainty in test result (1 GHz - 18 GHz) = **4.7 dB** 

# [2] AC power line conducted emissions

Uncertainty in test result = 3.4 dB

### [3] Occupied bandwidth

Uncertainty in test result = 15.5%

## [4] Conducted carrier power

Uncertainty in test result (Power Meter) = 1.08 dB

### [5] Conducted / radiated RF power out-of-band

Uncertainty in test result – Up to 8.1 GHz = 3.31 dBUncertainty in test result – 8.1 GHz – 15.3 GHz = 4.43 dBUncertainty in test result (30 MHz – 1 GHz) = 4.6 dBUncertainty in test result (1 GHz – 18 GHz) = 4.7 dB

## [6] Power spectral density

Uncertainty in test result (Spectrum Analyser) = 2.48 dB

### [7] AC Power Line conducted emissions

Uncertainty in test result (Spectrum Analyser) = 3.42 dB

-

RF930 Page 350 of 350