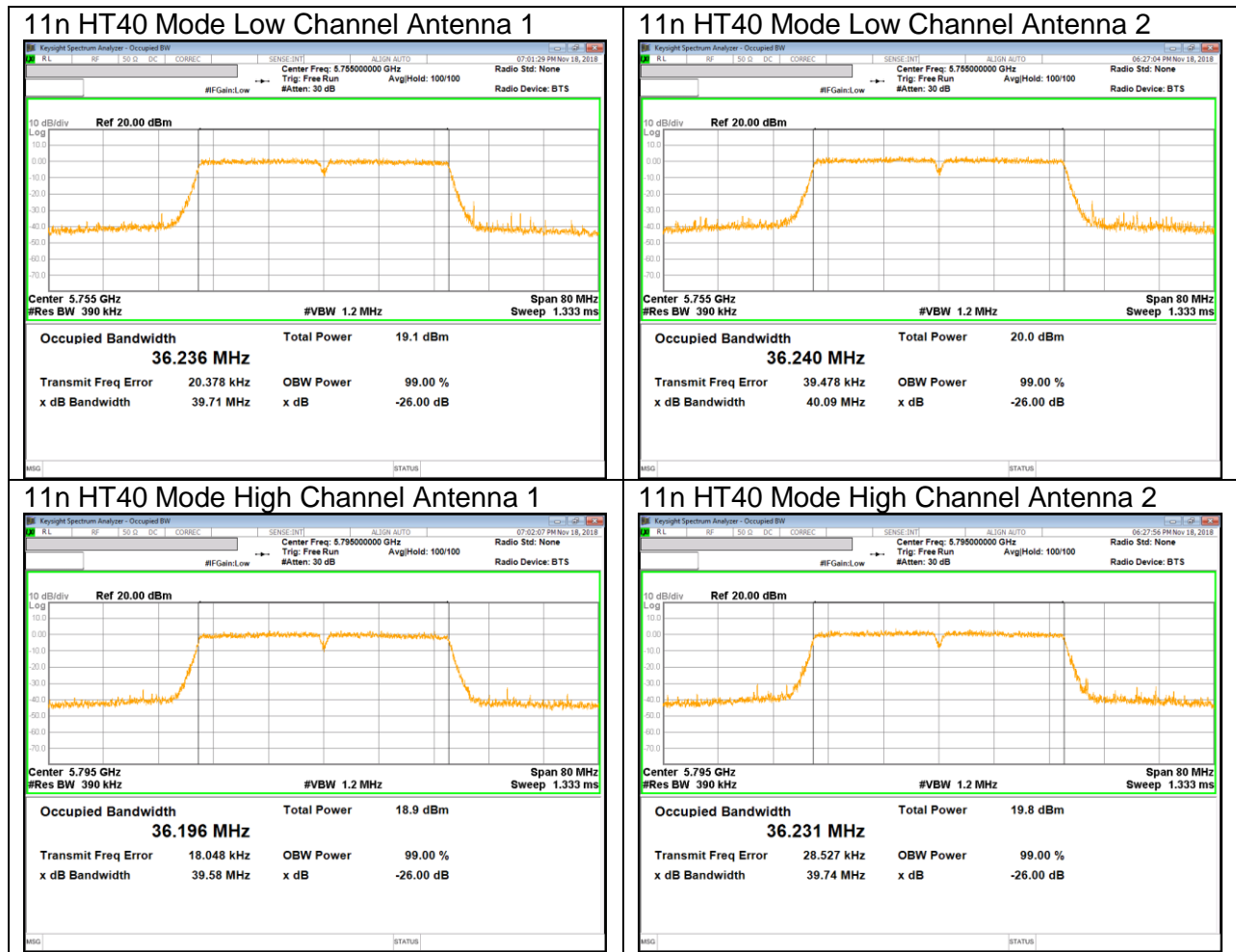
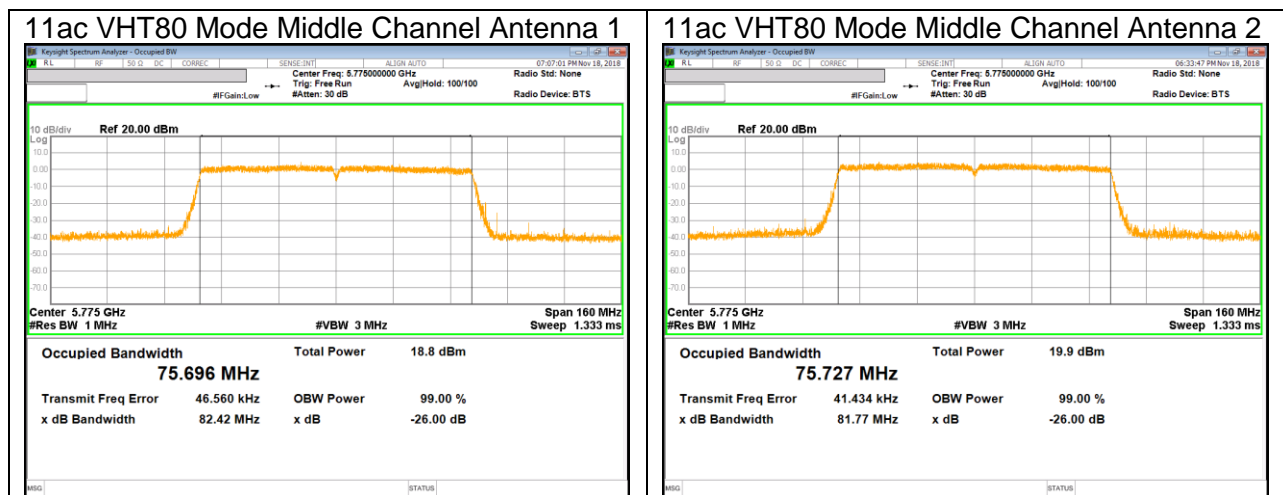


**UNII 5.8 GHz IEEE 802.11n HT40 mode**



**UNII 5.8 GHz IEEE 802.11ac VHT80 mode**



## 9.4. 99% BANDWIDTH

### LIMITS

None; for reporting purposes only.

### TEST PROCEDURE

Reference to 789033 D02 General UNII Test Procedures New Rules v01r04: The transmitter output is connected to a spectrum analyzer with the RBW set to approximately 1% to 5% of OBW, the VBW  $\geq 3 \times$  RBW, single sweep.

### NOTE

- Calculation for 99% Bandwidth of UNII-2C and UNII-3 Straddle Channel
  - ex) Fundamental frequency : 5720MHz
    - 99% BW : 21.00MHz
    - Turning Frequency : 5725MHz
    - 99% Bandwidth of UNII-2C band Portion  
 $= (5725 - (5720 - (21.00 / 2))) = 15.50 \text{ MHz}$
    - 99% Bandwidth of UNII-3 band Portion  
 $= (5720 + (21.00 / 2) - 5725) = 5.50 \text{ MHz}$
- 99% Bandwidth test were performed each antenna port on SISO mode.

### RESULTS

#### 9.4.1.802.11a MODE IN THE 5.2 GHz BAND

Channel	Frequency [MHz]	99% Bandwidth [MHz]	
		Antenna 1	Antenna 2
Low	5180	16.566	16.538
Mid	5200	16.581	16.538
High	5240	16.560	16.565
Worst		16.581	

**9.4.2.802.11n HT20 MODE IN THE 5.2 GHz BAND**

Channel	Frequency [MHz]	99% Bandwidth [MHz]	
		Antenna 1	Antenna 2
Low	5180	17.771	17.729
Mid	5200	17.768	17.762
High	5240	17.760	17.769
Worst		17.771	

**9.4.3.802.11n HT40 MODE IN THE 5.2 GHz BAND**

Channel	Frequency [MHz]	99% Bandwidth [MHz]	
		Antenna 1	Antenna 2
Low	5190	36.264	36.246
High	5230	36.271	36.194
Worst		36.271	

**9.4.4. 802.11ac VHT80 MODE IN THE 5.2 GHz BAND**

Channel	Frequency [MHz]	99% Bandwidth [MHz]	
		Antenna 1	Antenna 2
Middle	5210	75.712	75.753
Worst		75.753	

**9.4.5.802.11a MODE IN THE 5.3 GHz BAND**

Channel	Frequency [MHz]	99% Bandwidth [MHz]	
		Antenna 1	Antenna 2
Low	5260	16.570	16.558
Mid	5300	16.540	16.570
High	5320	16.577	16.554
Worst		16.577	

**9.4.6.802.11n HT20 MODE IN THE 5.3 GHz BAND**

Channel	Frequency [MHz]	99% Bandwidth [MHz]	
		Antenna 1	Antenna 2
Low	5260	17.733	17.787
Mid	5300	17.755	17.763
High	5320	17.740	17.769
Worst		17.787	

**9.4.7.802.11n HT40 MODE IN THE 5.3 GHz BAND**

Channel	Frequency [MHz]	99% Bandwidth [MHz]	
		Antenna 1	Antenna 2
Low	5270	36.239	36.292
High	5310	36.272	36.269
Worst		36.292	

**9.4.8. 802.11ac VHT80 MODE IN THE 5.3 GHz BAND**

Channel	Frequency [MHz]	99% Bandwidth [MHz]	
		Antenna 1	Antenna 2
Middle	5290	75.693	75.539
Worst		75.693	

**9.4.9. 802.11a MODE IN THE 5.5 GHz BAND**

Channel	Frequency [MHz]	99% Bandwidth [MHz]	
		Antenna 1	Antenna 2
Low	5500	16.576	16.574
Mid	5580	16.562	16.546
High	5700	16.547	16.532
Straddle	5720	13.277	13.283
Worst		16.576	

**9.4.10. 802.11n HT20 MODE IN THE 5.5 GHz BAND**

Channel	Frequency [MHz]	99% Bandwidth [MHz]	
		Antenna 1	Antenna 2
Low	5500	17.769	17.758
Mid	5580	17.769	17.742
High	5700	17.772	17.787
Straddle	5720	13.884	13.880
Worst		17.787	

**9.4.11. 802.11n HT40 MODE IN THE 5.5 GHz BAND**

Channel	Frequency [MHz]	99% Bandwidth [MHz]	
		Antenna 1	Antenna 2
Low	5510	36.269	36.265
Mid	5550	36.293	36.256
High	5670	36.235	36.264
Straddle	5710	33.134	33.118
Worst		36.293	

**9.4.12. 802.11ac VHT80 MODE IN THE 5.5 GHz BAND**

Channel	Frequency [MHz]	99% Bandwidth [MHz]	
		Antenna 1	Antenna 2
Low	5530	75.727	75.783
High	5610	75.712	75.699
Straddle	5690	72.883	72.820
Worst		75.783	

**9.4.13. 802.11a MODE IN THE 5.8 GHz BAND**

Channel	Frequency [MHz]	99% Bandwidth [MHz]	
		Antenna 1	Antenna 2
Straddle	5720	3.276	3.283
Low	5745	16.588	16.573
Mid	5785	16.546	16.563
High	5825	16.552	16.561
Worst		16.588	

**9.4.14. 802.11n HT20 MODE IN THE 5.8 GHz BAND**

Channel	Frequency [MHz]	99% Bandwidth [MHz]	
		Antenna 1	Antenna 2
Straddle	5720	3.883	3.880
Low	5745	17.745	17.777
Mid	5785	17.761	17.761
High	5825	17.744	17.767
Worst		17.777	

**9.4.15. 802.11n HT40 MODE IN THE 5.8 GHz BAND**

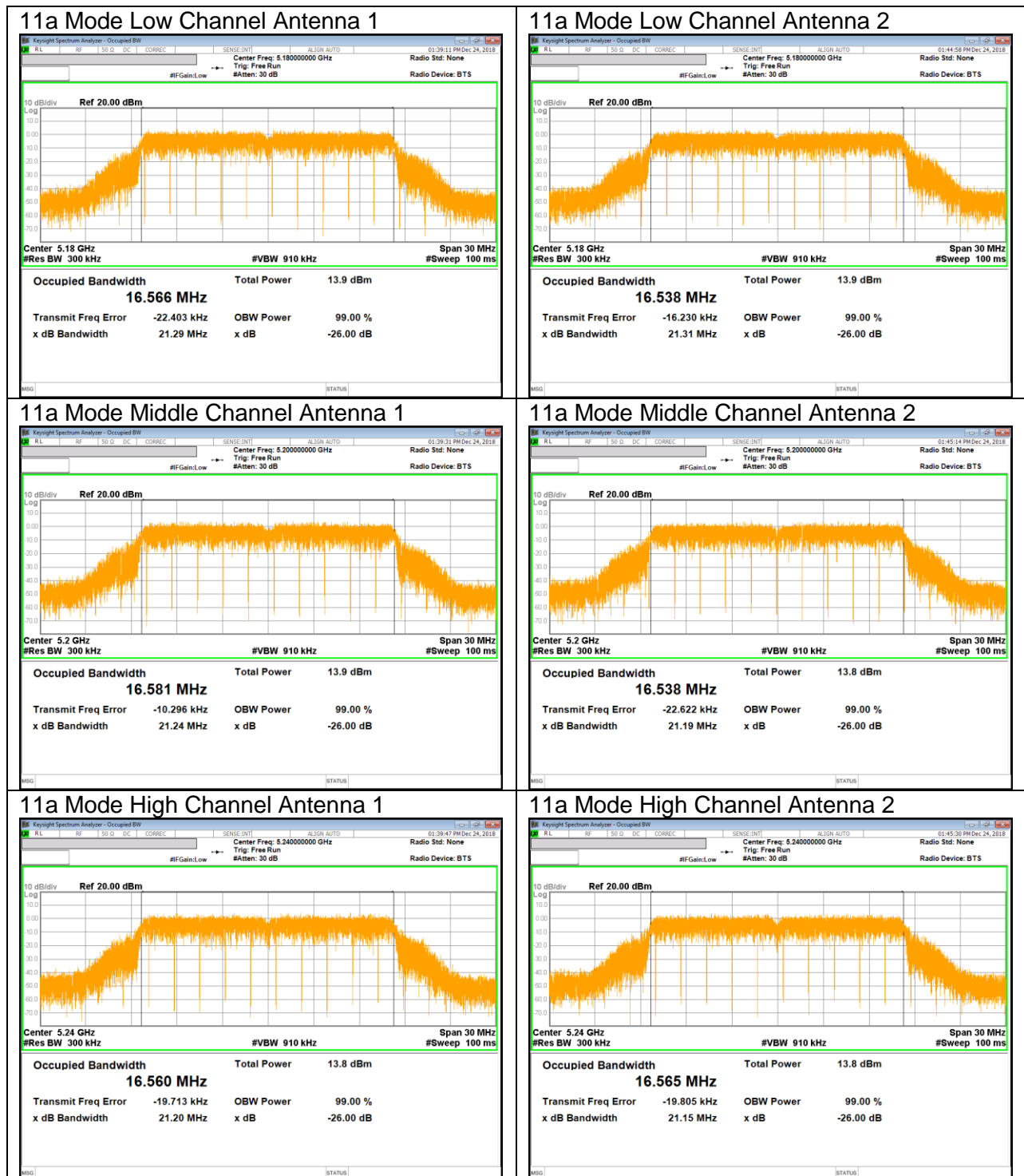
Channel	Frequency [MHz]	99% Bandwidth [MHz]	
		Antenna 1	Antenna 2
Straddle	5710	3.135	3.118
Low	5755	36.197	36.276
High	5795	36.192	36.233
Worst		36.276	

**9.4.16. 802.11ac VHT80 MODE IN THE 5.8 GHz BAND**

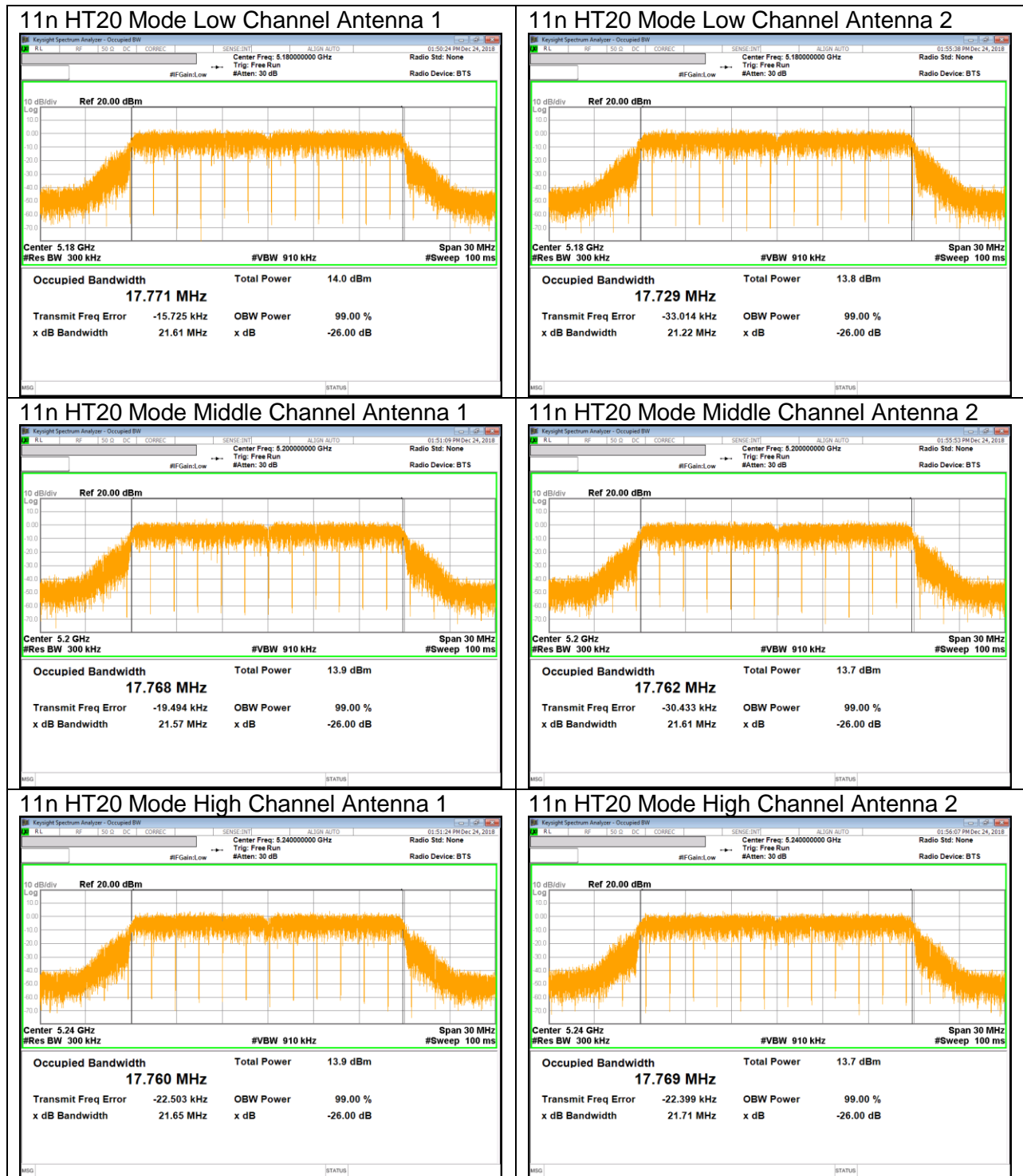
Channel	Frequency [MHz]	99% Bandwidth [MHz]	
		Antenna 1	Antenna 2
Straddle	5690	2.882	2.819
Middle	5775	75.736	75.644
Worst		75.736	

### 9.4.17. 99% BANDWIDTH PLOTS

#### UNII 5.2 GHz IEEE 802.11a mode



**UNII 5.2 GHz IEEE 802.11n HT20 mode**

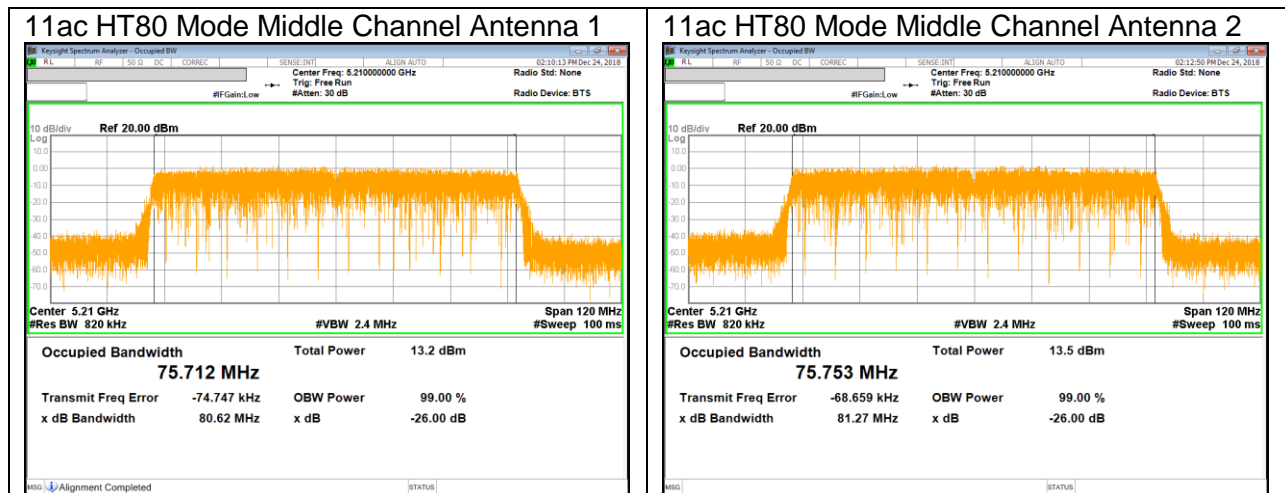




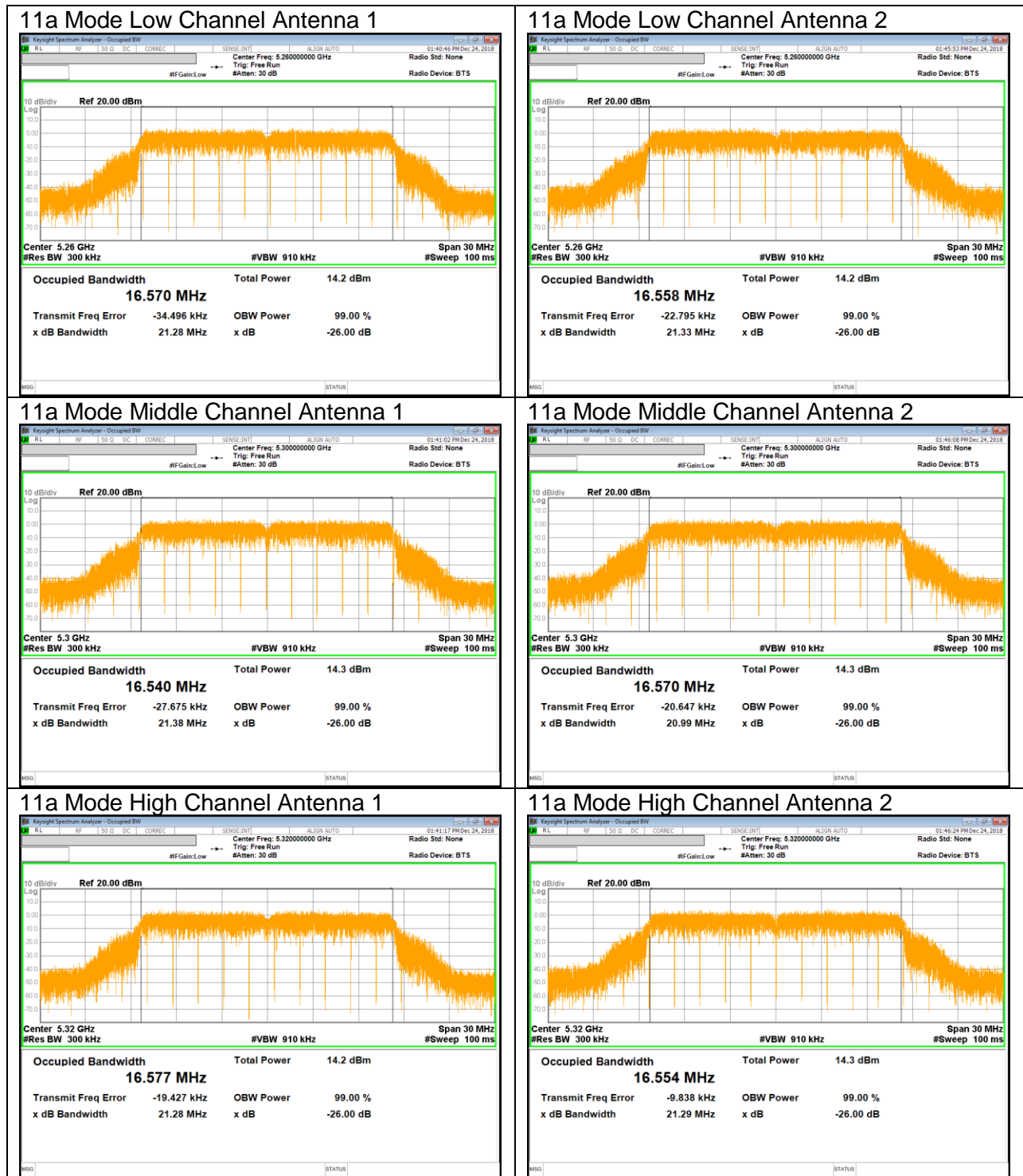
**UNII 5.2 GHz IEEE 802.11n HT40 mode**



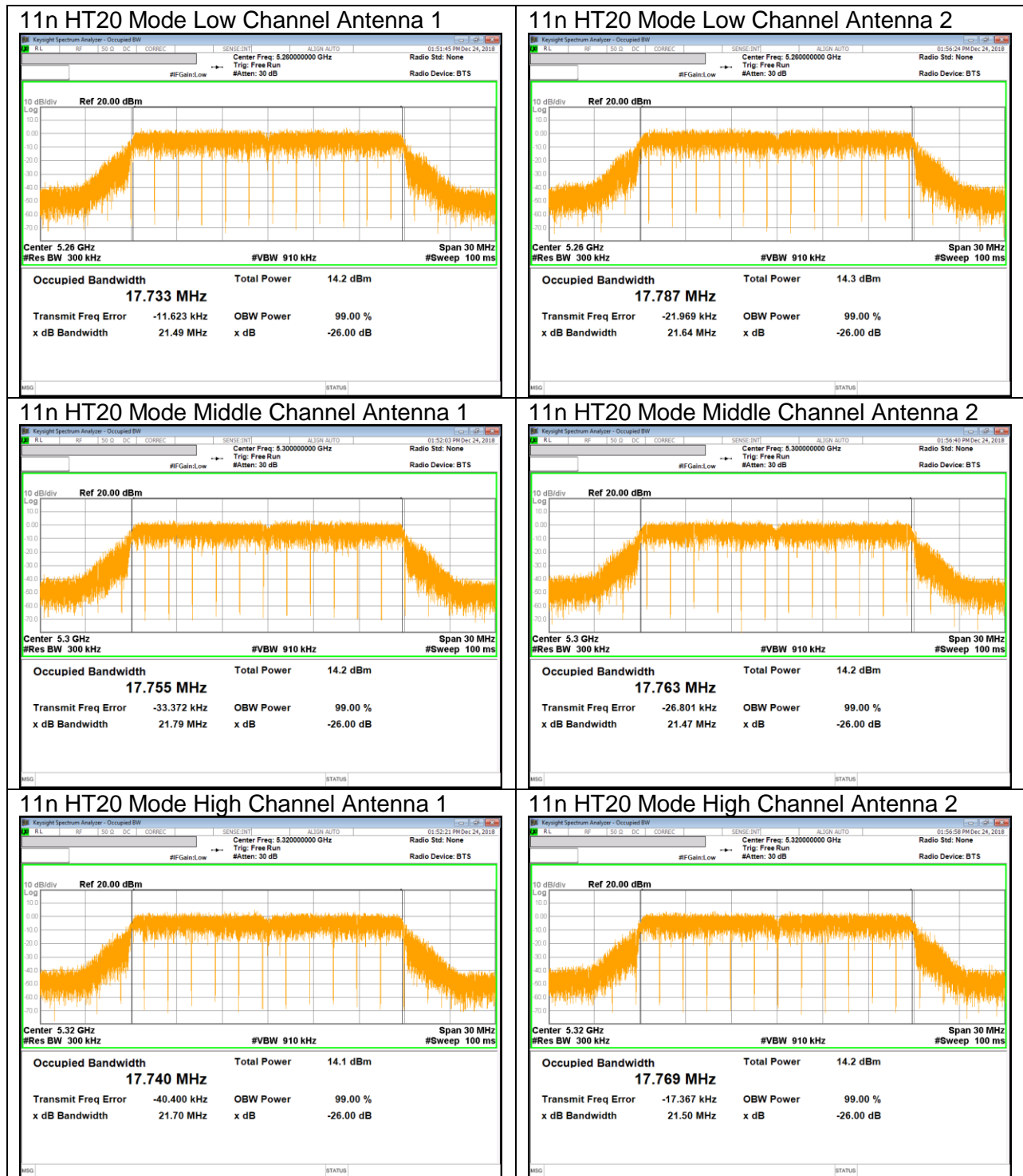
**UNII 5.2 GHz IEEE 802.11ac VHT80 mode**



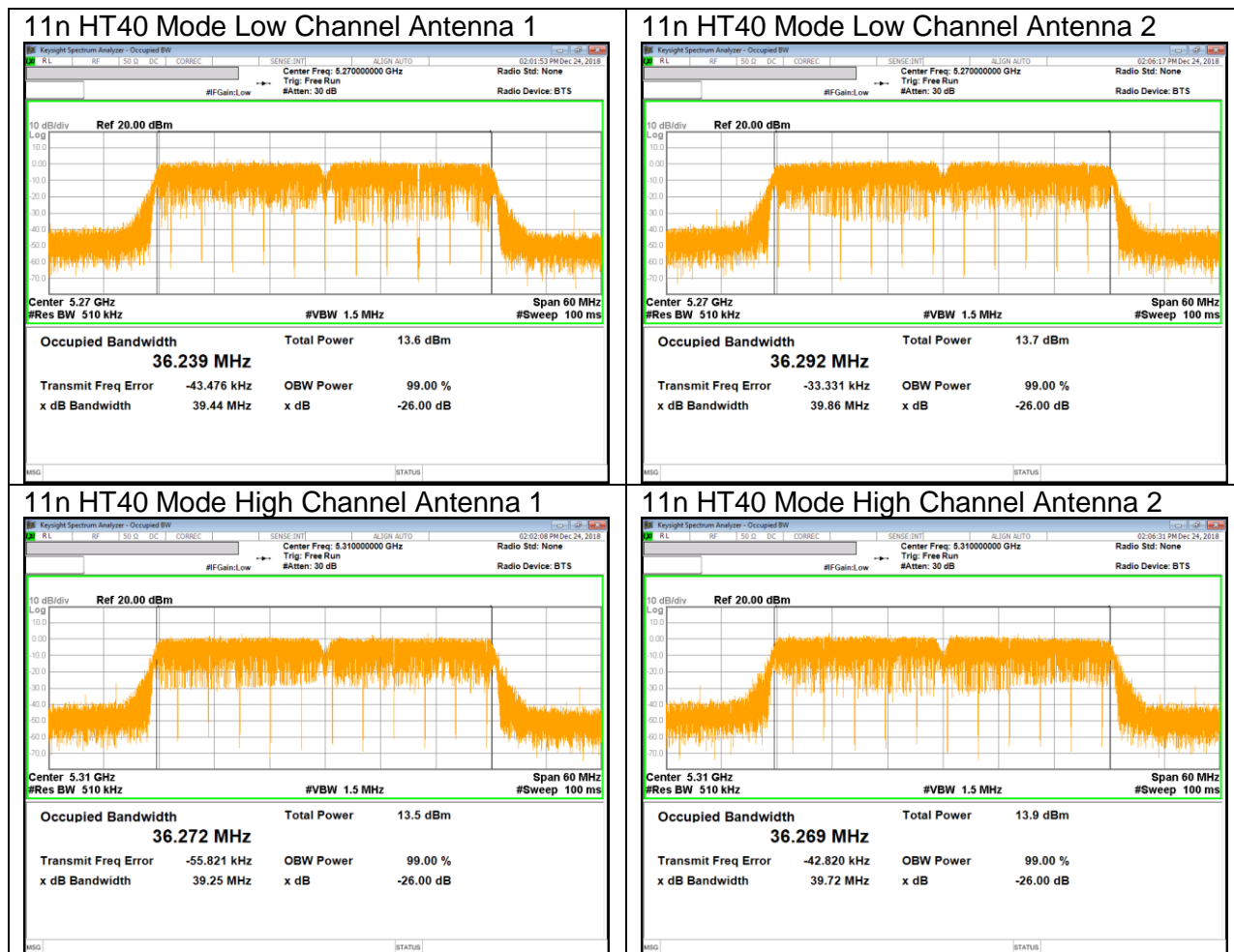
**UNII 5.3 GHz IEEE 802.11a mode**



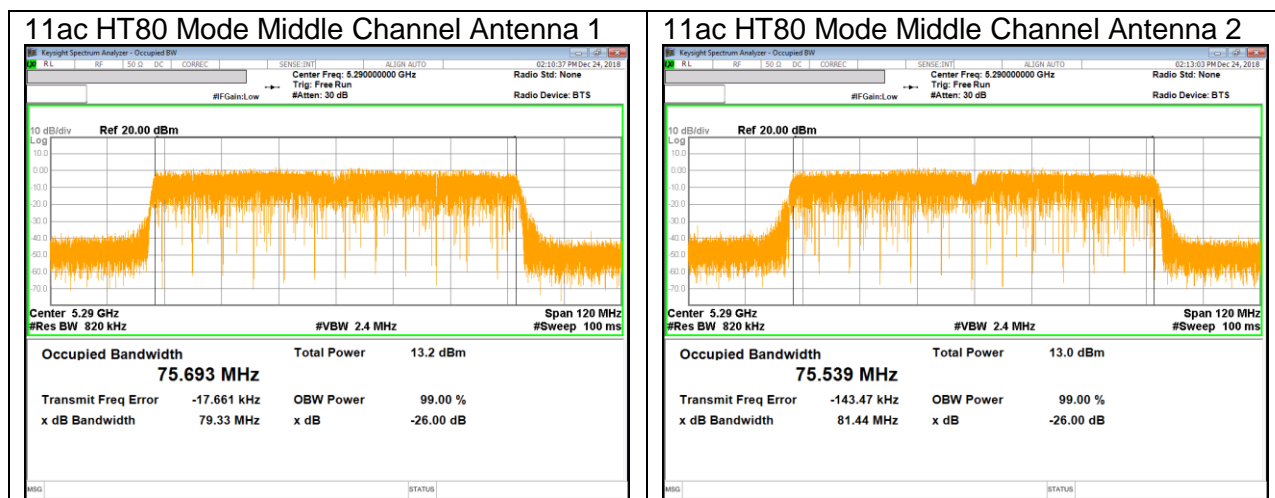
**UNII 5.3 GHz IEEE 802.11n HT20 mode**



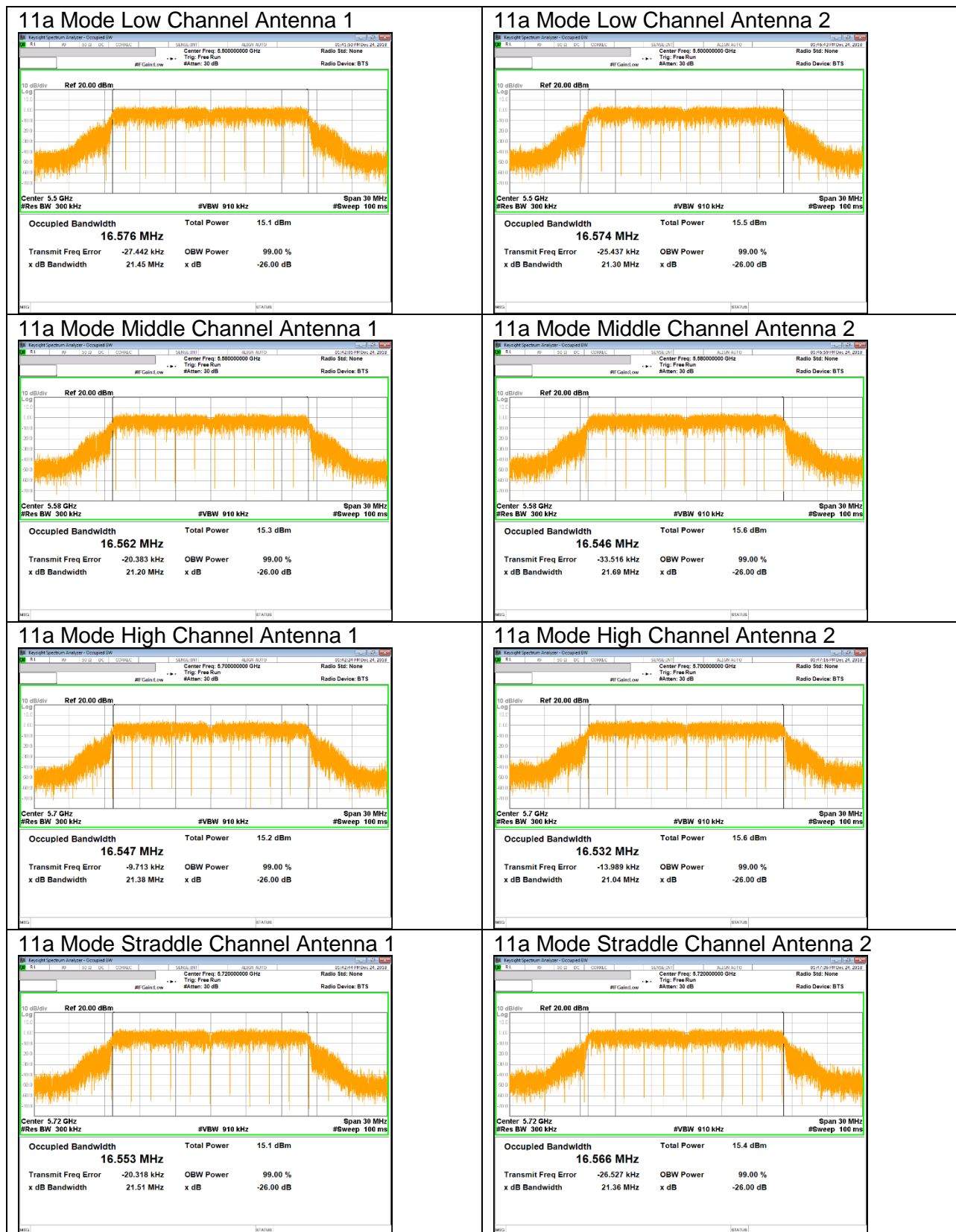
### UNII 5.3 GHz IEEE 802.11n HT40 mode



### UNII 5.3 GHz IEEE 802.11ac VHT80 mode

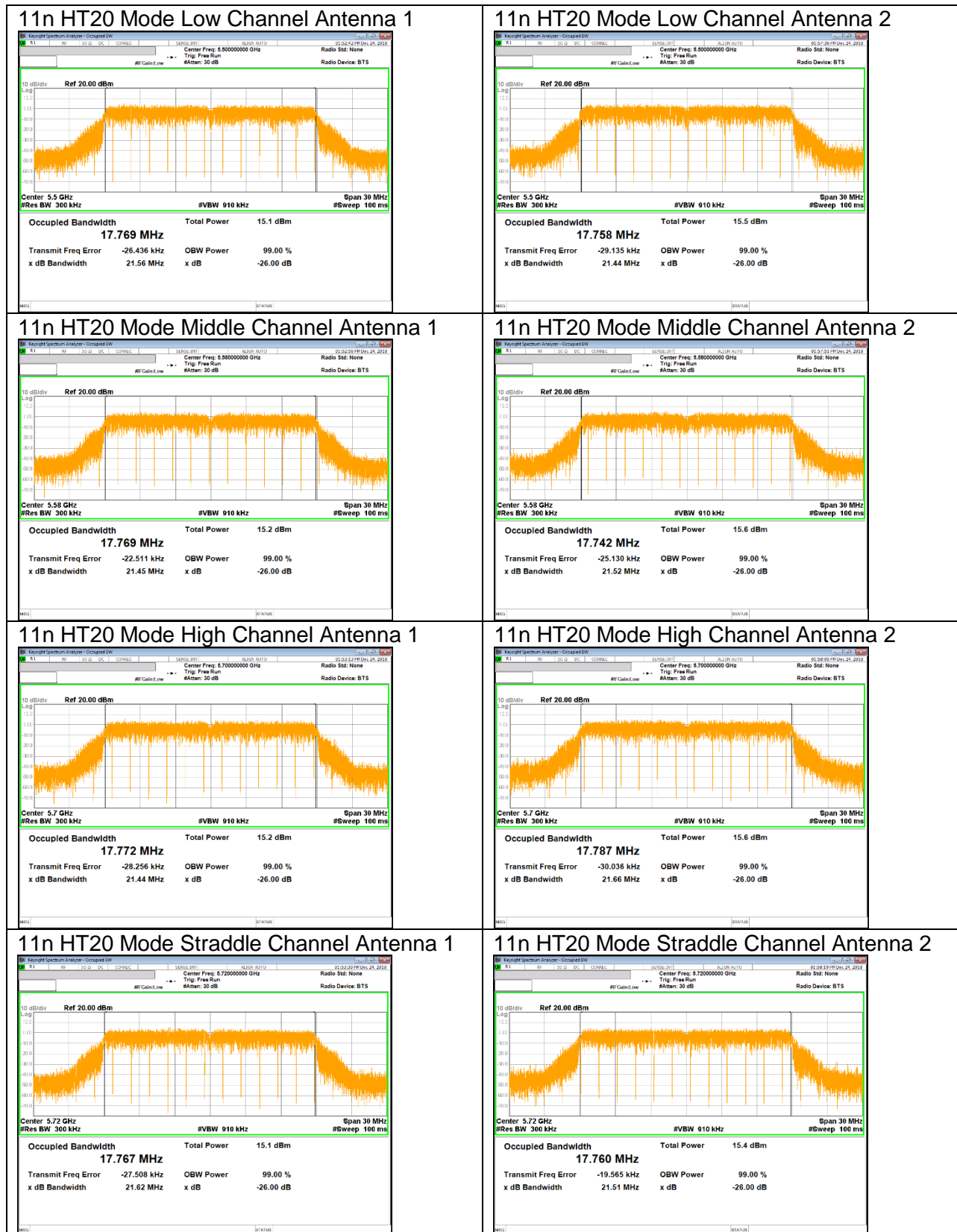


**UNII 5.5 GHz IEEE 802.11a mode**

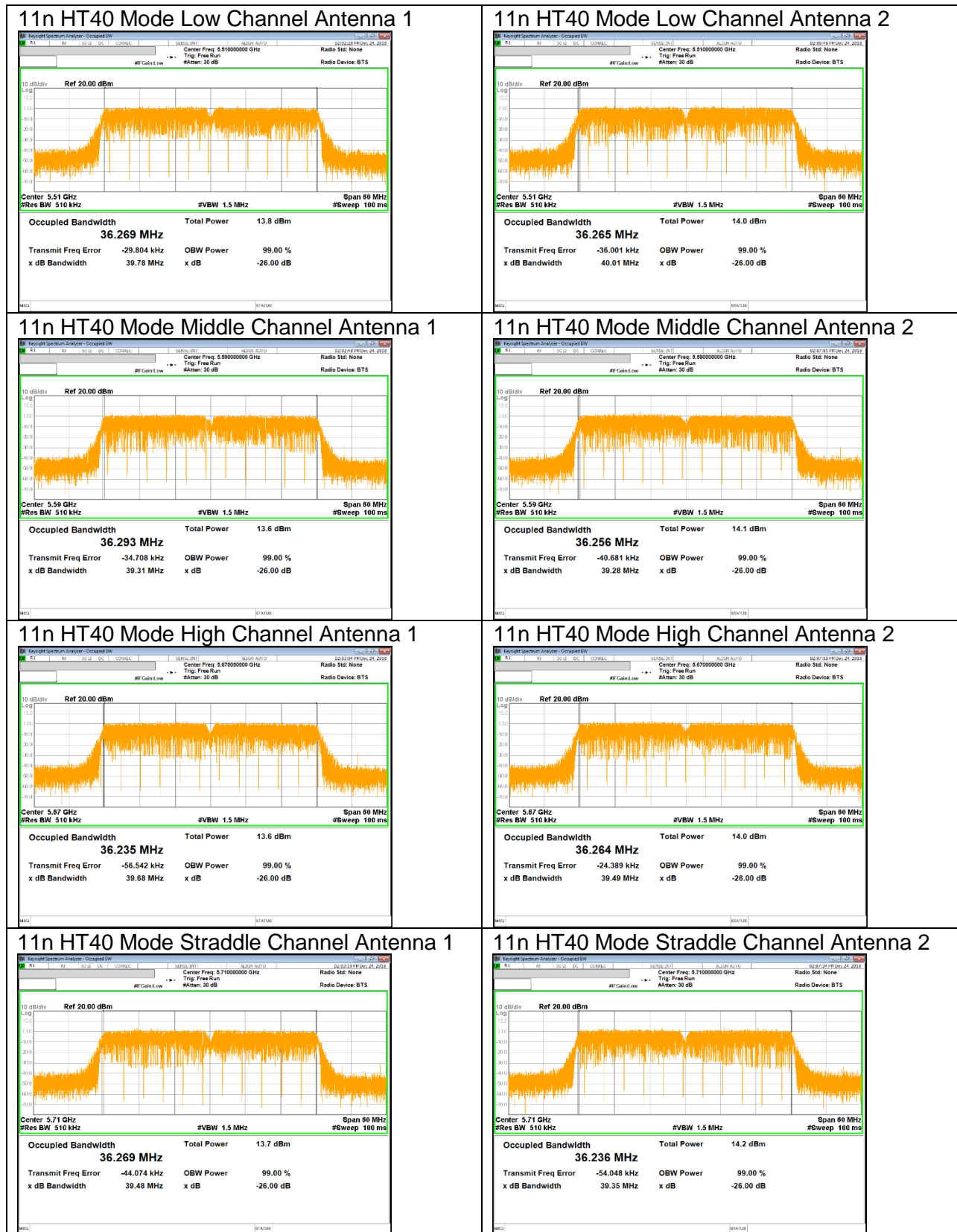




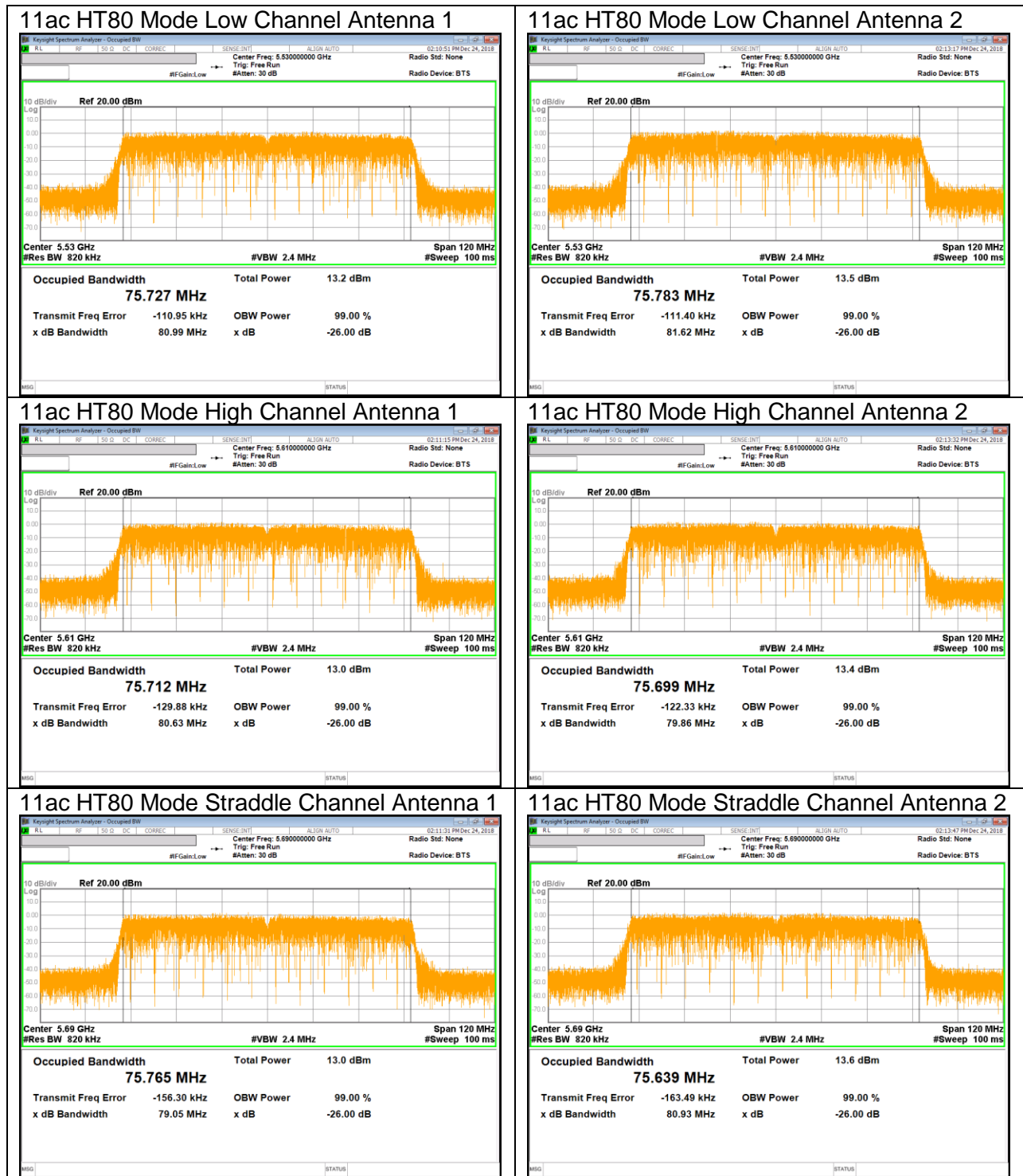
**UNII 5.5 GHz IEEE 802.11n HT20 mode**



**UNII 5.5 GHz IEEE 802.11n HT40 mode**

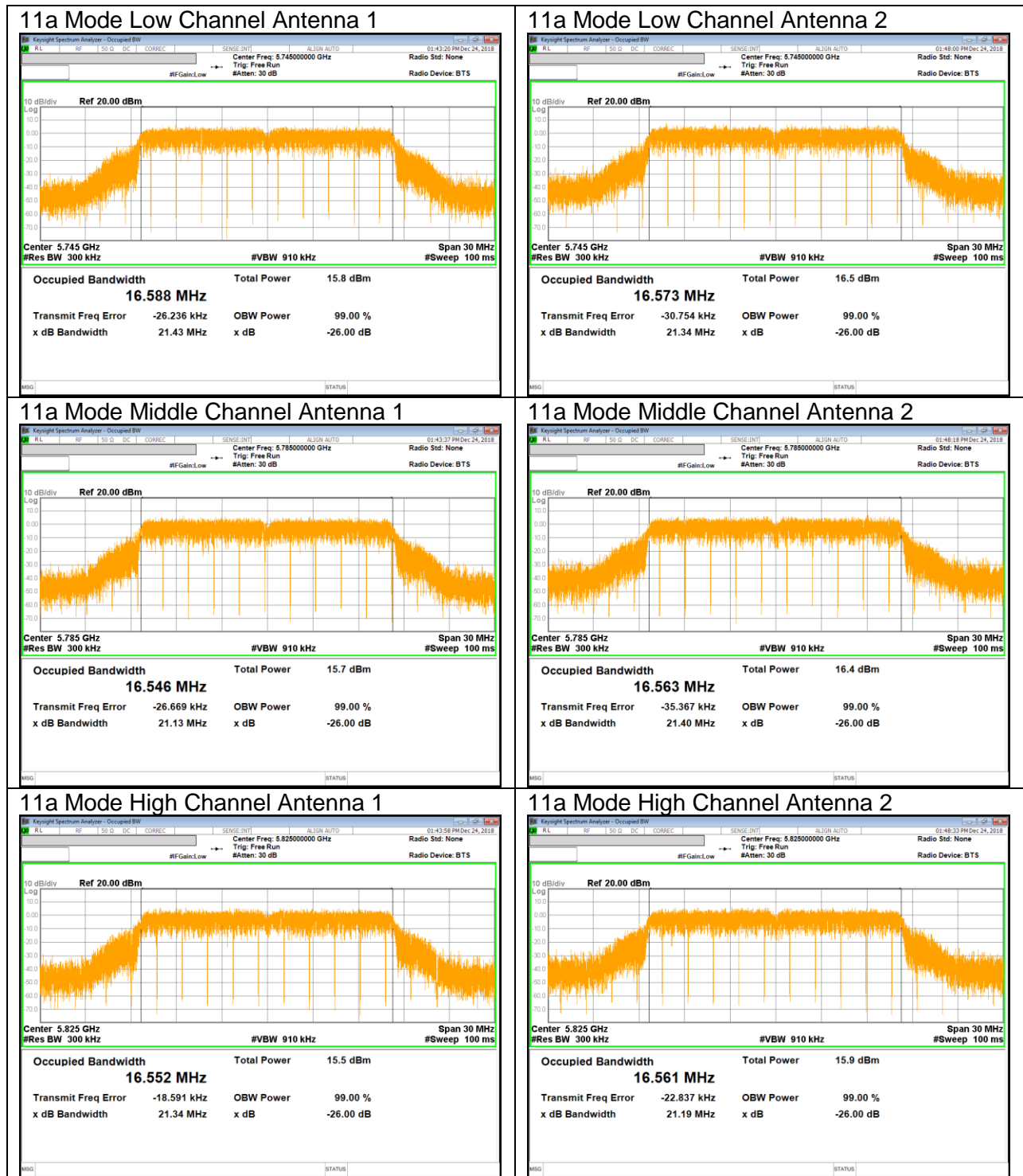


**UNII 5.5 GHz IEEE 802.11ac VHT80 mode**





**UNII 5.8 GHz IEEE 802.11a mode**



**UNII 5.8 GHz IEEE 802.11n HT20 mode**

