

APPENDIX A – TEST DATA OF CONDUCTED EMISSION

In order to find the worst case condition, Pre-tests are needed at the presence of different data rate. Data rate below means worst-case rate of each test item.

Worst-case data rates are shown as following table.

Test Mode	Data Rate
802.11a	6Mbps
802.11n HT20	MCS0
802.11n HT40	MCS0
802.11ac VHT20	MCS0
802.11ac VHT40	MCS0
802.11ac VHT80	MCS0

We chose the Worst-modes are shown as following table:

Test Mode	Chain	Note
802.11a	Chain0/Chain1	---
802.11n HT20	Chain0/Chain1	Cover 802.11ac VHT20
802.11n HT40	Chain0/Chain1	Cover 802.11ac VHT40
802.11ac VHT80	Chain0/Chain1	---

Duty cycle

Test Mode	Duty Cycle (%)	Correction Factor(dB)
802.11a	98.73%	0.06
802.11n HT20	98.67%	0.06
802.11n HT40	97.28%	0.12
802.11ac VHT80	94.66%	0.24

Output Power
UNII-1

Mode	Tones/ RU Index	Freq (MHz)	Chain	Conducted average power output(dBm)
802.11a	NA	5180	Chain0	16.00
			Chain1	15.24
		5220	Chain0	15.30
			Chain1	15.31
		5240	Chain0	15.50
			Chain1	15.28
802.11n20M		5180	Chain0	15.40
			Chain1	15.20
		5220	Chain0	15.85
			Chain1	16.18
		5240	Chain0	15.30
			Chain1	15.20
802.11n40M	5190	Chain0	15.20	
		Chain1	15.30	
	5230	Chain0	15.20	
		Chain1	15.30	
802.11ac20M	5180	Chain0	14.90	
		Chain1	15.00	
	5220	Chain0	15.00	
		Chain1	15.00	
	5240	Chain0	15.00	
		Chain1	15.10	
802.11ac40M	5190	Chain0	15.20	
		Chain1	15.70	
	5230	Chain0	15.20	
		Chain1	15.20	
802.11ac80M	5210	Chain0	15.50	
		Chain1	15.20	

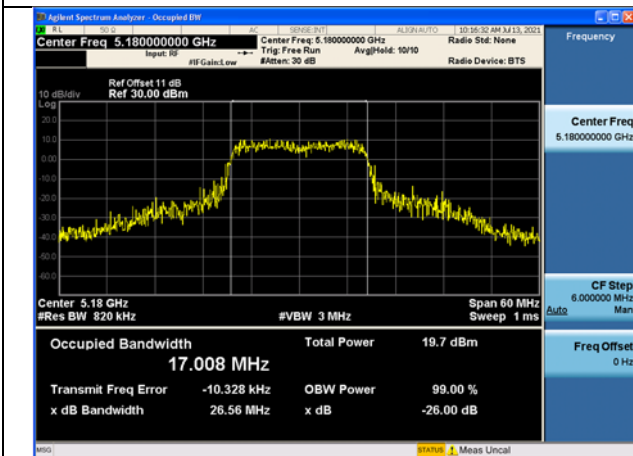
Emission Bandwidth

Offset 11dB = Attenuator 10dB+ Temporary antenna connector loss 0.5dB+ Cable loss 0.5dB

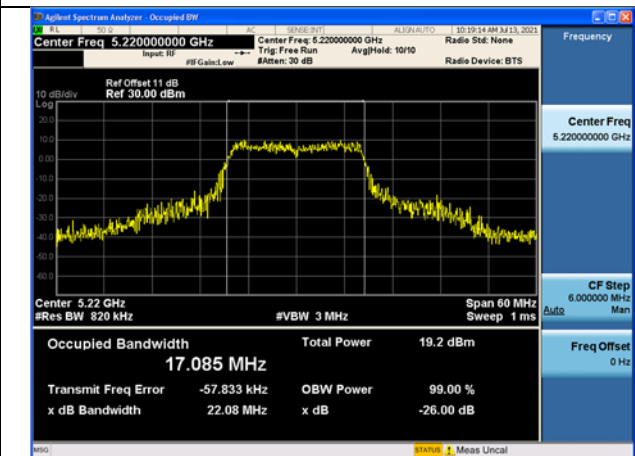
Test Mode:802.11a

Carrier frequency (MHz)	Chain	26dB Bandwidth (MHz)
5180	Chain0	26.56
	Chain1	26.07
5220	Chain0	22.08
	Chain1	24.04
5240	Chain0	30.28
	Chain1	24.26

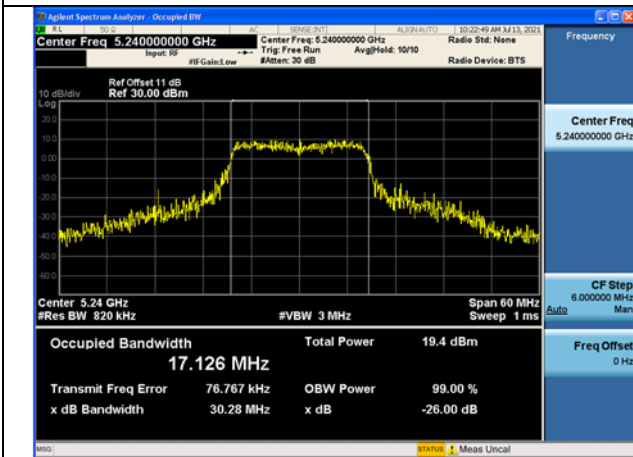
Test Mode:802.11a Chain0



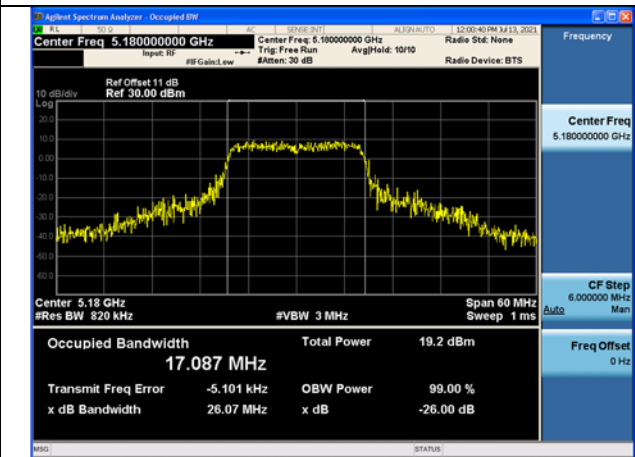
Test Mode:802.11a Chain0



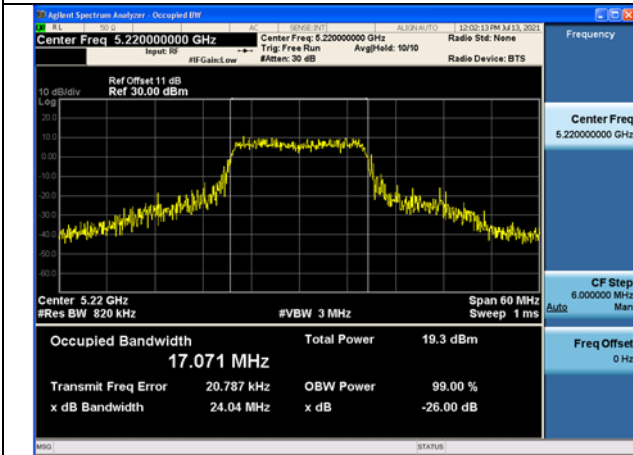
Test Mode:802.11a Chain0



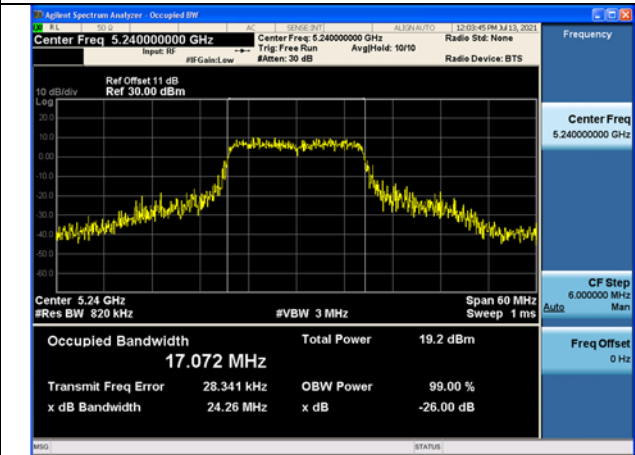
Test Mode:802.11a Chain1



Test Mode:802.11a Chain1



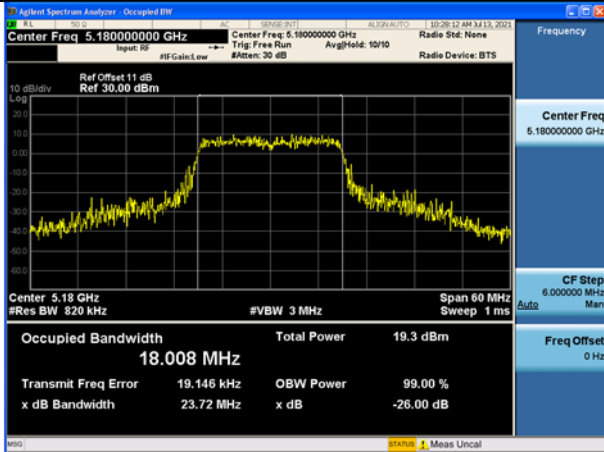
Test Mode:802.11a Chain1



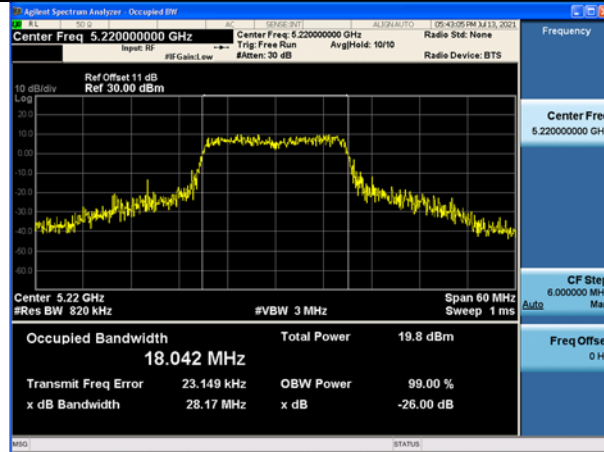
Test Mode:802. 11n HT20

Carrier frequency (MHz)	Chain	26dB Bandwidth (MHz)
5180	Chain0	23.72
	Chain1	28.07
5220	Chain0	28.17
	Chain1	30.61
5240	Chain0	23.96
	Chain1	23.95

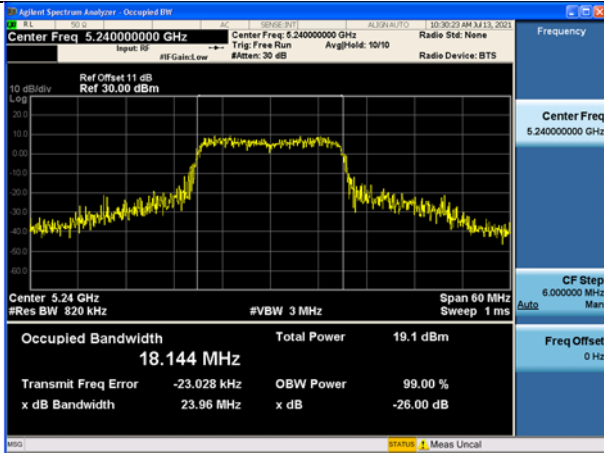
Test Mode:802. 11n HT20 Chain0



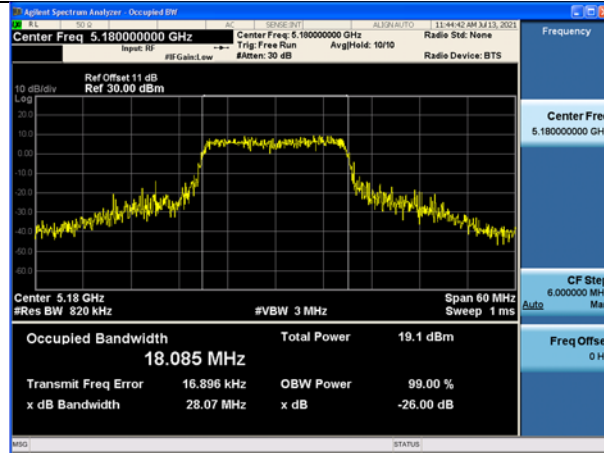
Test Mode:802. 11n HT20 Chain0



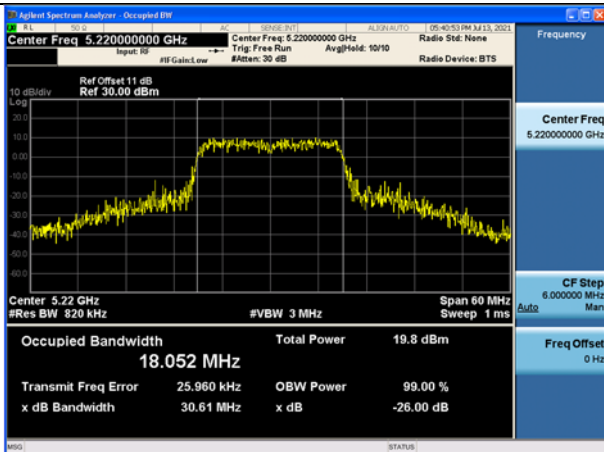
Test Mode:802. 11n HT20 Chain0



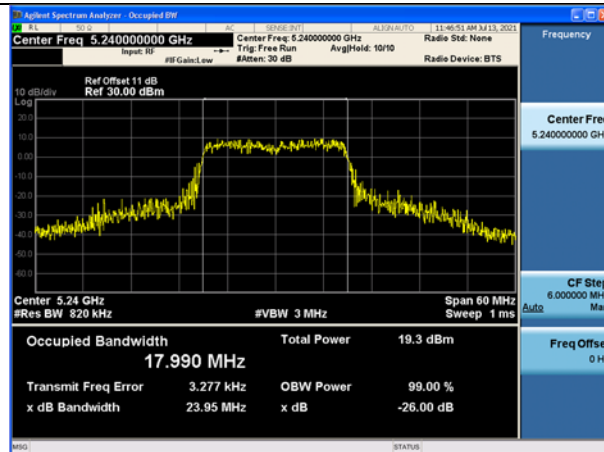
Test Mode:802. 11n HT20 Chain1



Test Mode:802. 11n HT20 Chain1



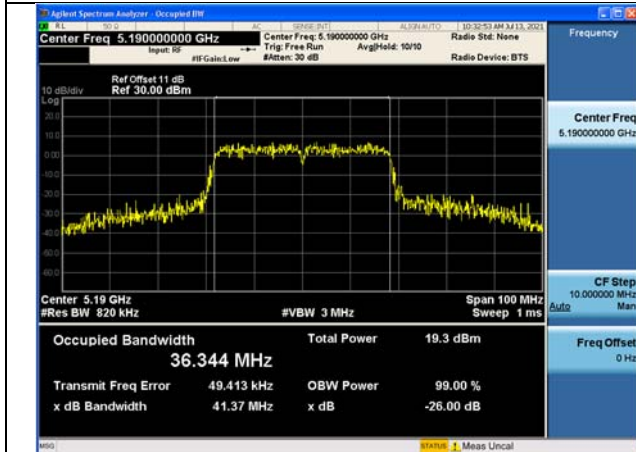
Test Mode:802. 11n HT20 Chain1



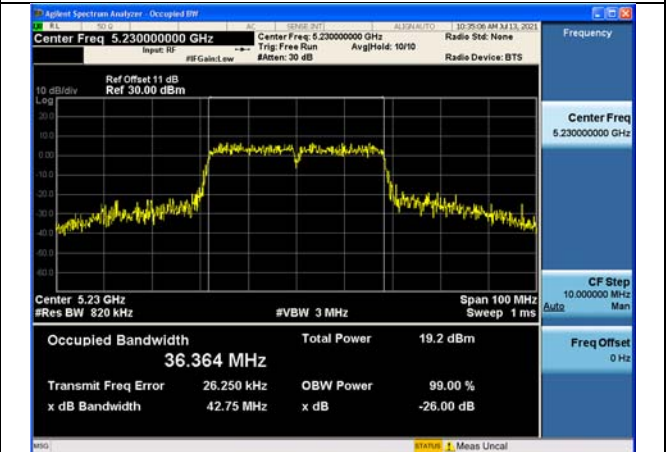
Test Mode:802. 11n HT40

Carrier frequency(MHz)	Chain	26dB Bandwidth (MHz)
5190	Chain0	41.37
	Chain1	40.83
5230	Chain0	42.75
	Chain1	56.05

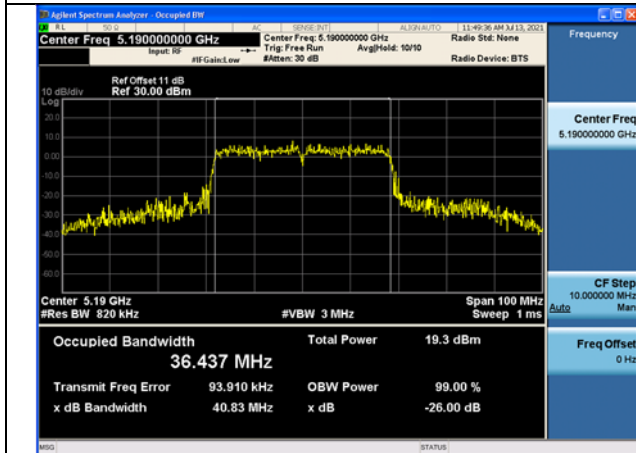
Test Mode:802. 11n HT40 Chain0



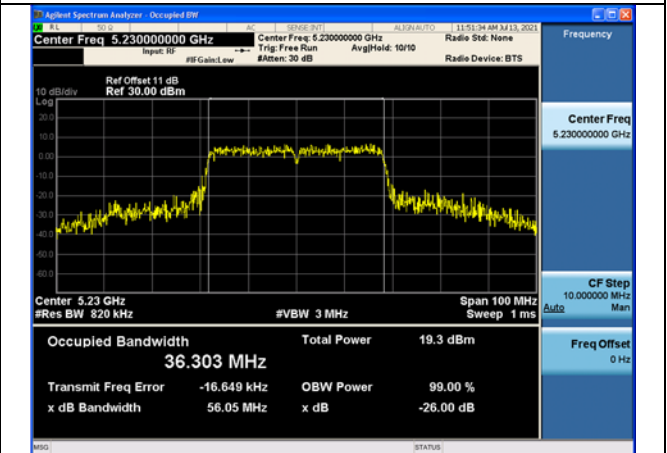
Test Mode:802. 11n HT40 Chain0



Test Mode:802. 11n HT40 Chain1



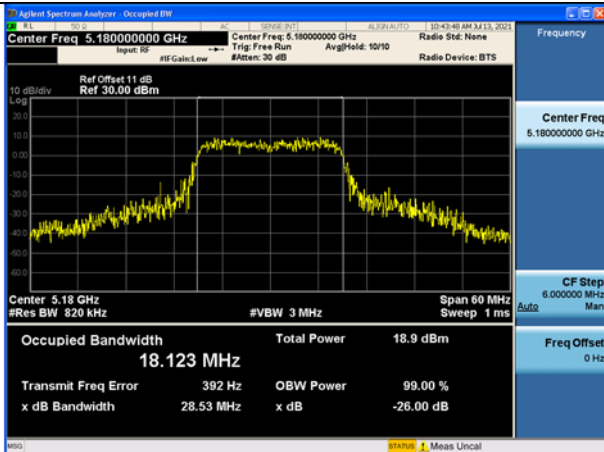
Test Mode:802. 11n HT40 Chain1



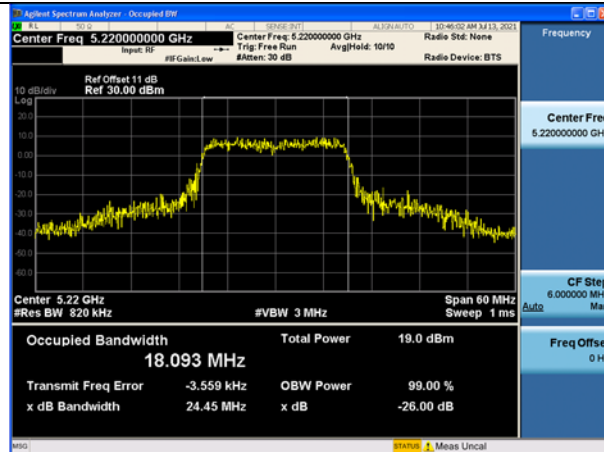
Test Mode:802. 11ac VHT20

Carrier frequency(MHz)	Chain	26dB Bandwidth (MHz)
5180	Chain0	28.53
	Chain1	26.70
5220	Chain0	24.45
	Chain1	22.87
5240	Chain0	28.04
	Chain1	22.60

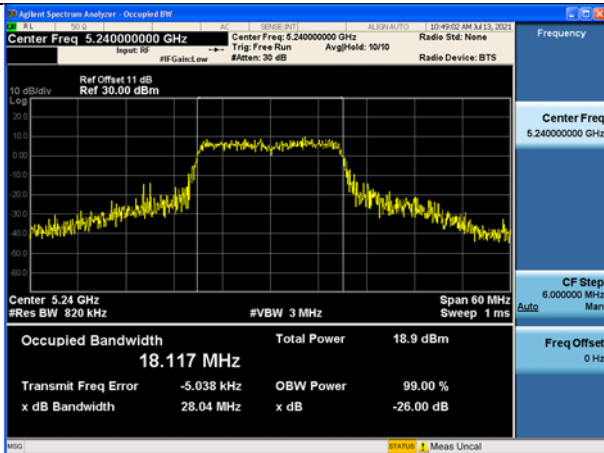
Test Mode:802. 11ac VHT20 Chain0



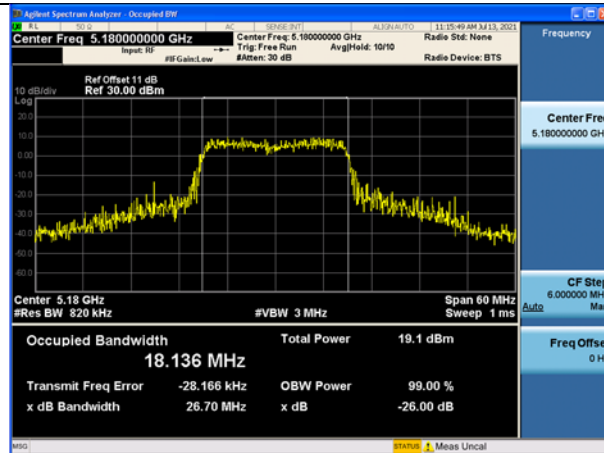
Test Mode:802. 11ac VHT20 Chain0



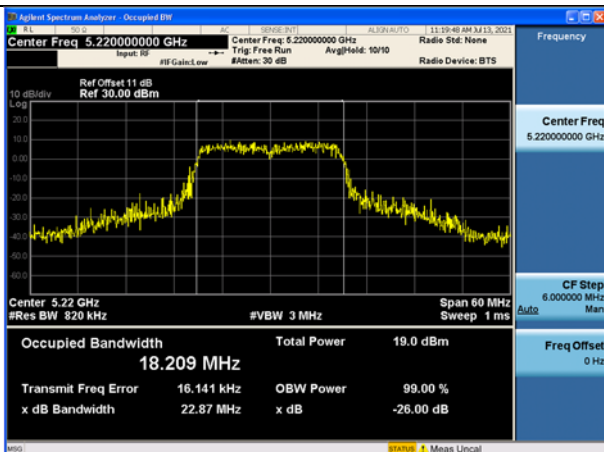
Test Mode:802. 11ac VHT20 Chain0



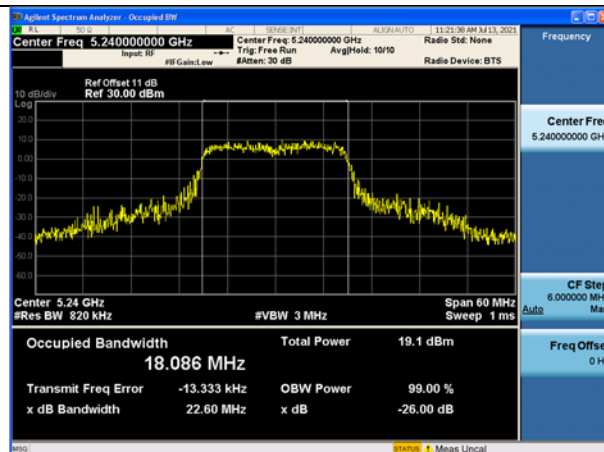
Test Mode:802. 11ac VHT20 Chain1



Test Mode:802. 11ac VHT20 Chain1



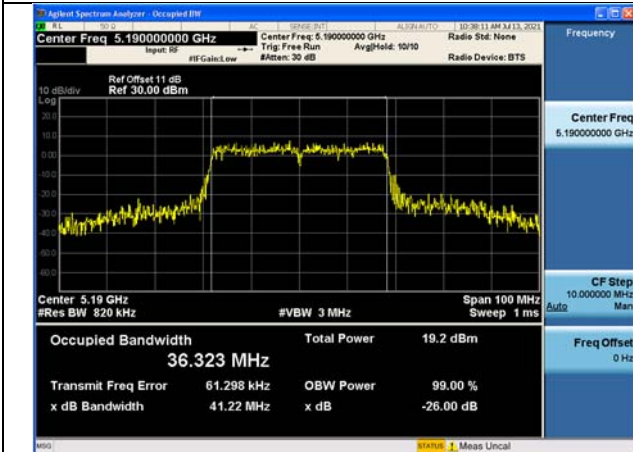
Test Mode:802. 11ac VHT20 Chain1



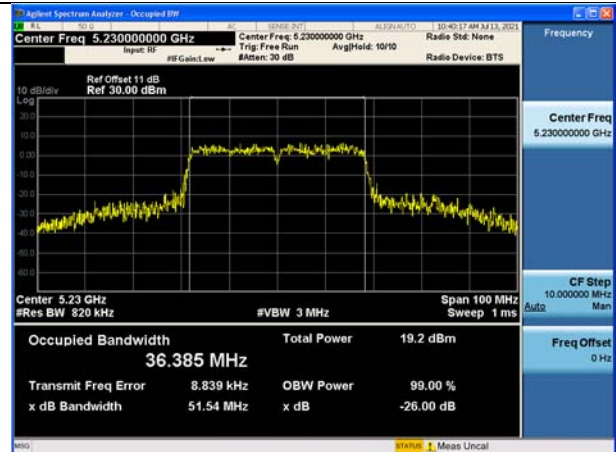
Test Mode:802. 11ac VHT40

Carrier frequency(MHz)	Chain	26dB Bandwidth (MHz)
5190	Chain0	41.22
	Chain1	45.82
5230	Chain0	51.54
	Chain1	46.76

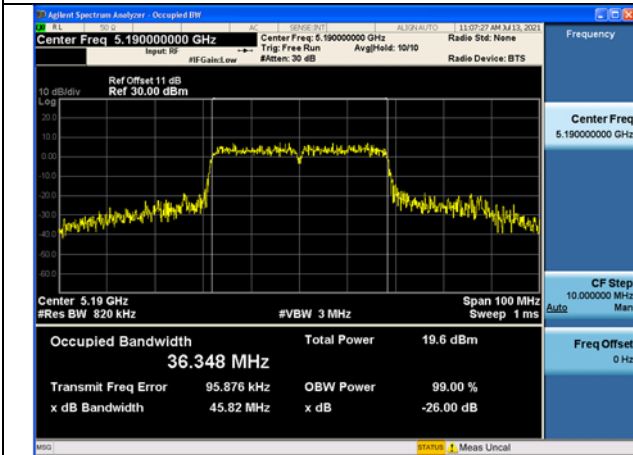
Test Mode:802. 11ac VHT40 Chain0



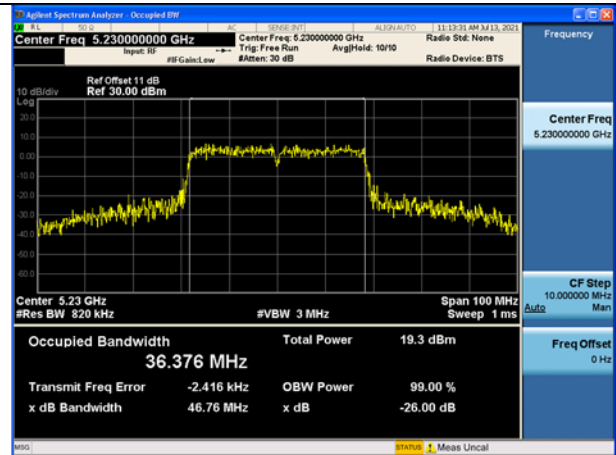
Test Mode:802. 11ac VHT40 Chain0



Test Mode:802. 11ac VHT40 Chain1



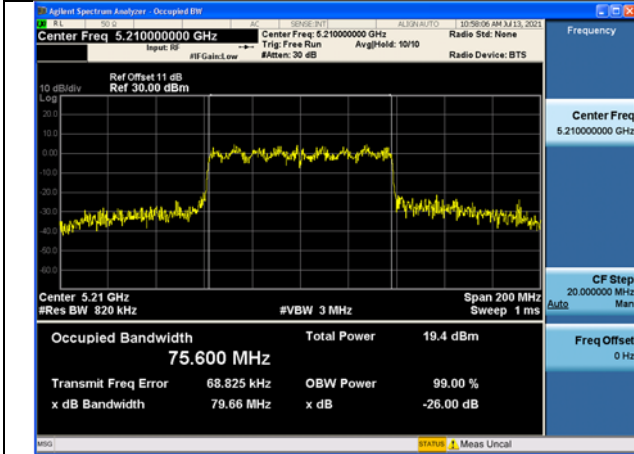
Test Mode:802. 11ac VHT40 Chain1



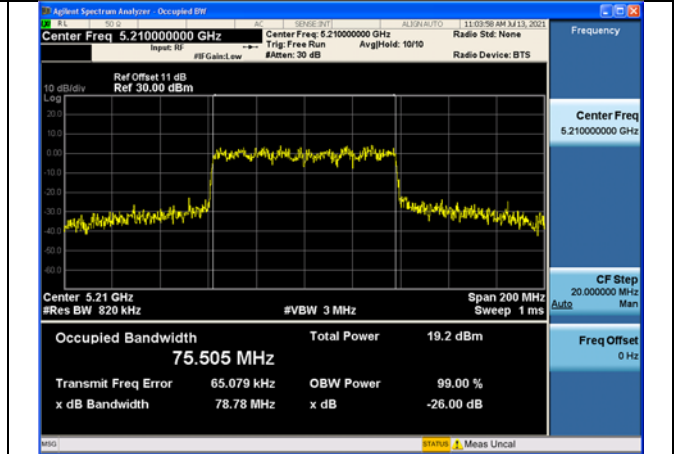
Test Mode:802. 11ac VHT80

Carrier frequency(MHz)	Chain	26dB Bandwidth (MHz)
5210	Chain0	79.66
	Chain1	78.78

Test Mode:802. 11ac VHT80 Chain0



Test Mode:802. 11ac VHT80 Chain1

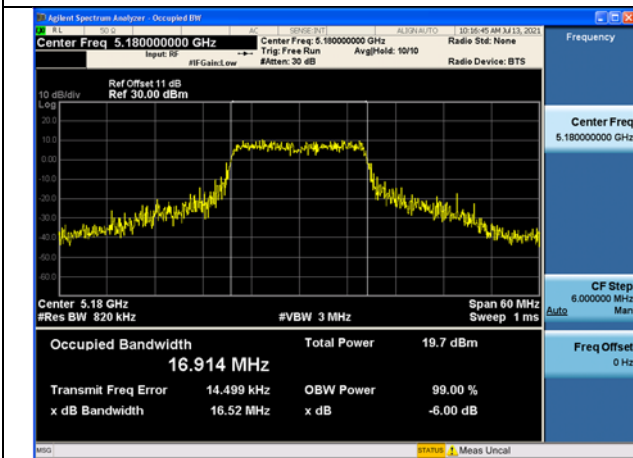


Occupied Bandwidth
Offset 11dB = Attenuator 10dB+ Temporary antenna connector loss 0.5dB+ Cable loss 0.5dB

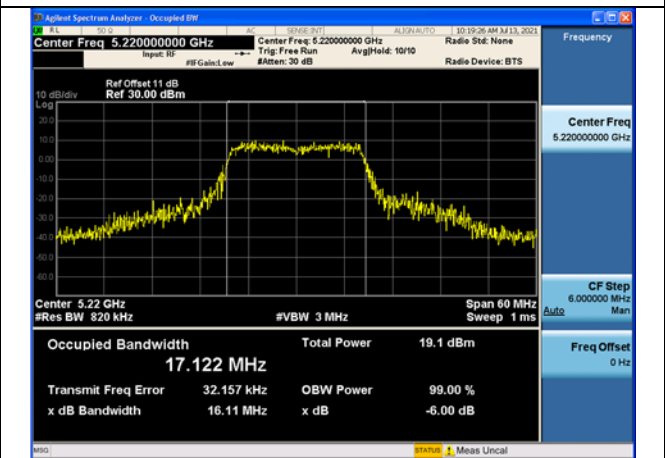
Test Mode:802.11a

Carrier frequency (MHz)	Chain	Occupied Bandwidth (MHz)
5180	Chain0	16.914
	Chain1	16.953
5220	Chain0	17.122
	Chain1	16.921
5240	Chain0	17.388
	Chain1	16.970

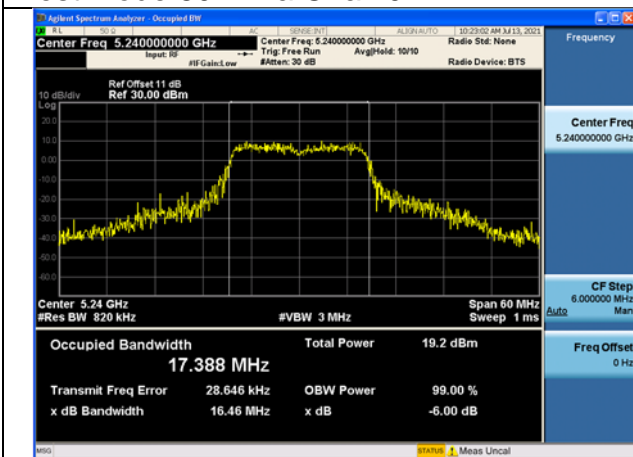
Test Mode:802.11a Chain0



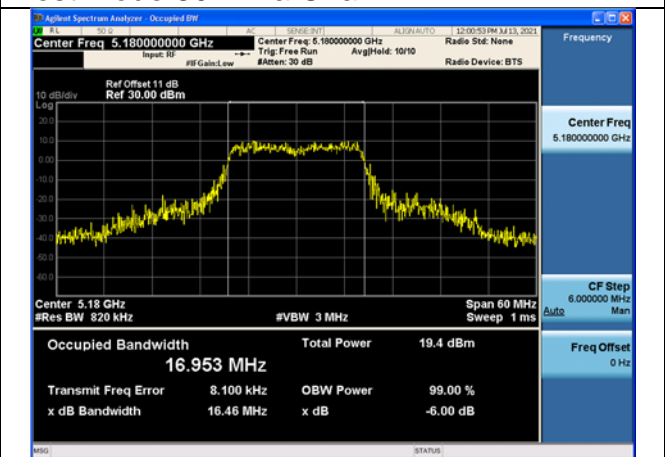
Test Mode:802.11a Chain0



Test Mode:802.11a Chain0

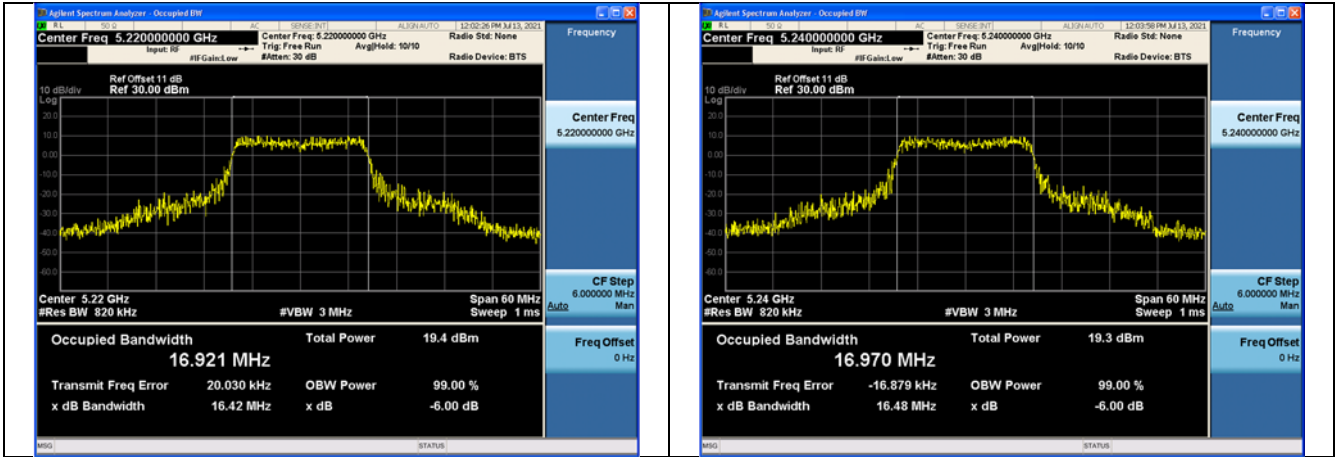


Test Mode:802.11a Chain1



Test Mode:802.11a Chain1

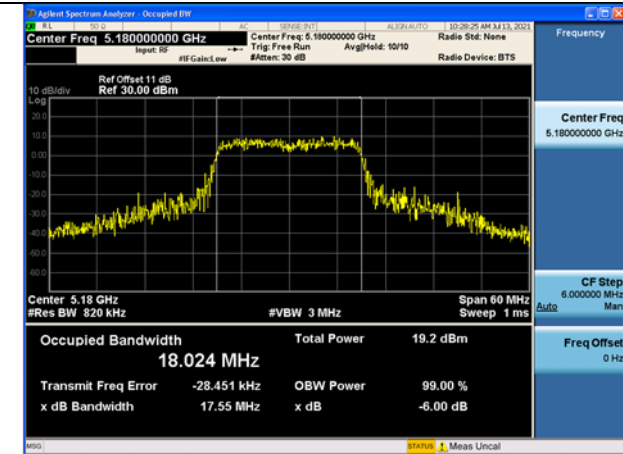
Test Mode:802.11a Chain1



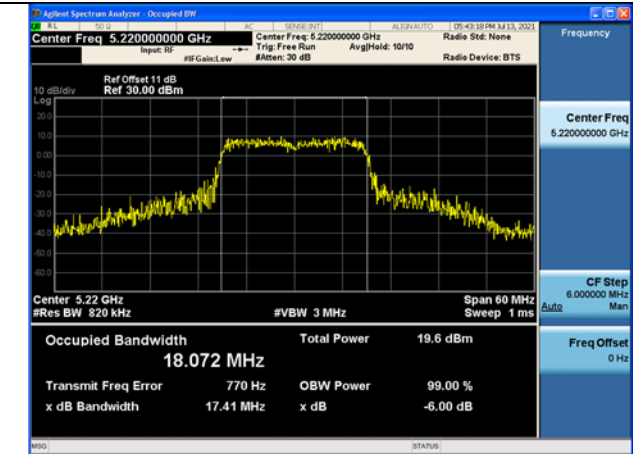
Test Mode:802. 11n HT20

Carrier frequency(MHz)	Chain	Occupied Bandwidth (MHz)
5180	Chain0	18.024
	Chain1	17.895
5220	Chain0	18.072
	Chain1	18.076
5240	Chain0	17.992
	Chain1	18.103

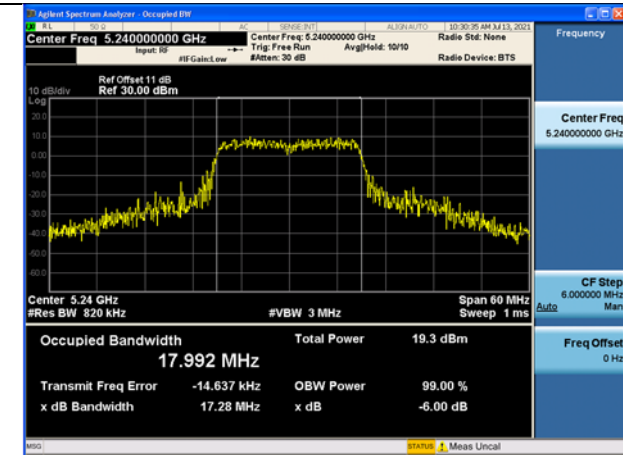
Test Mode:802. 11n HT20 Chain0



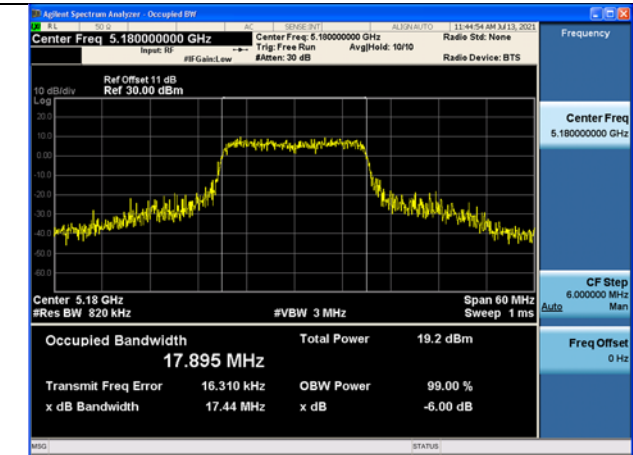
Test Mode:802. 11n HT20 Chain0



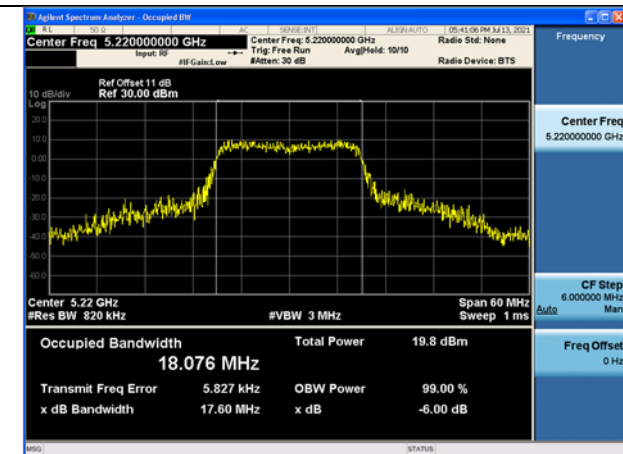
Test Mode:802. 11n HT20 Chain0



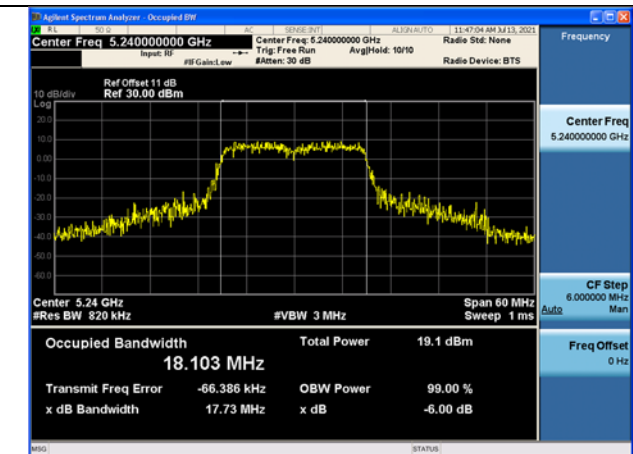
Test Mode:802. 11n HT20 Chain1



Test Mode:802. 11n HT20 Chain1



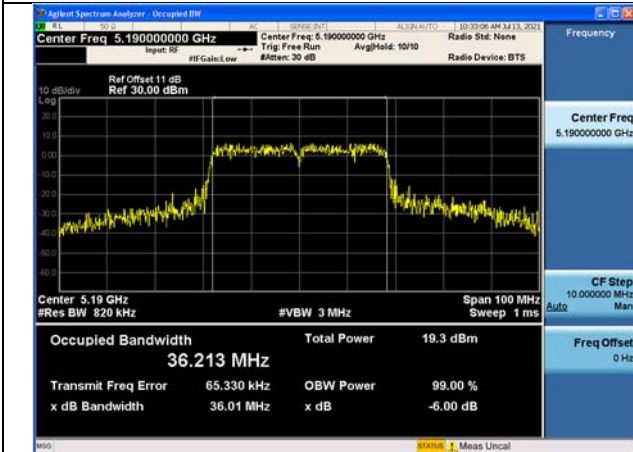
Test Mode:802. 11n HT20 Chain1



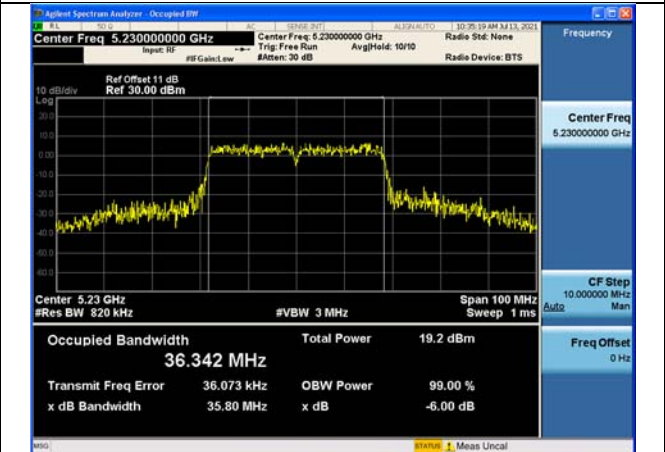
Test Mode:802. 11n HT40

Carrier frequency(MHz)	Chain	Occupied Bandwidth (MHz)
5190	Chain0	36.213
	Chain1	36.337
5230	Chain0	36.342
	Chain1	36.346

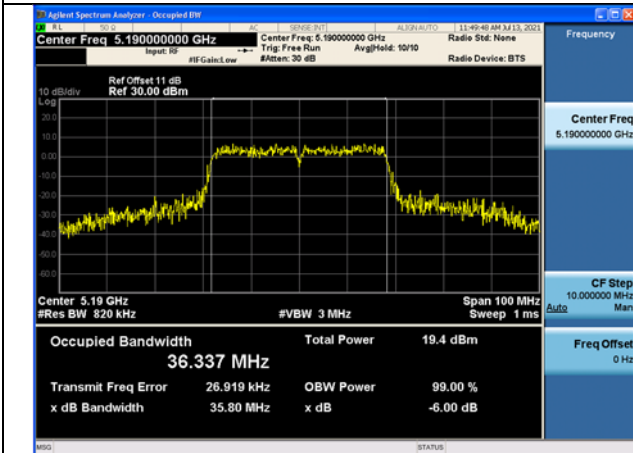
Test Mode:802. 11n HT40 Chain0



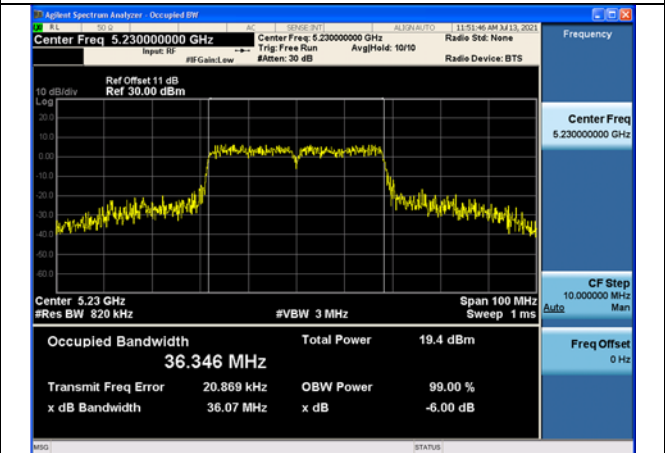
Test Mode:802. 11n HT40 Chain0



Test Mode:802. 11n HT40 Chain1



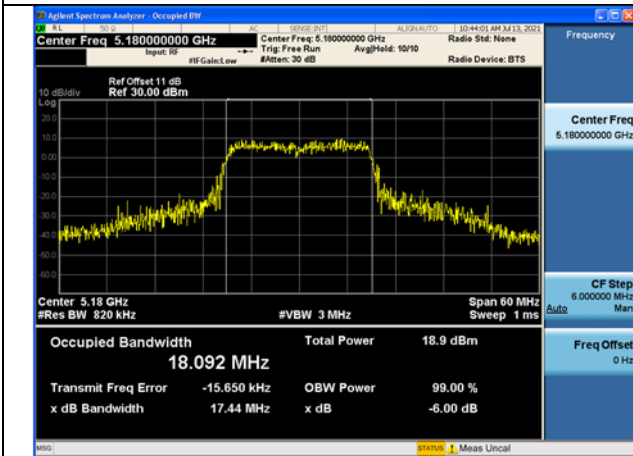
Test Mode:802. 11n HT40 Chain1



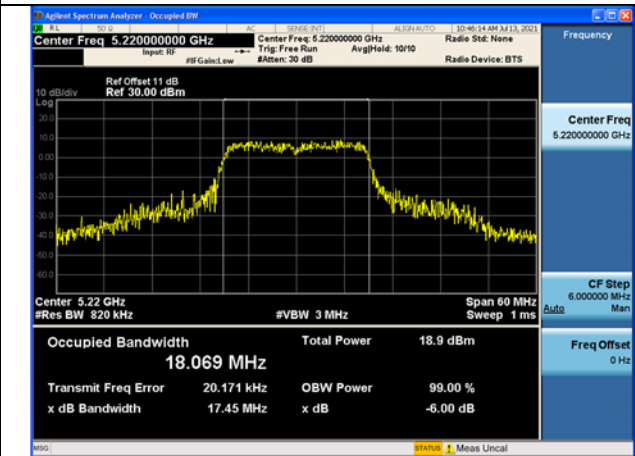
Test Mode:802. 11ac VHT20

Carrier frequency(MHz)	Chain	Occupied Bandwidth (MHz)
5180	Chain0	18.092
	Chain1	17.947
5220	Chain0	18.069
	Chain1	17.953
5240	Chain0	17.943
	Chain1	18.110

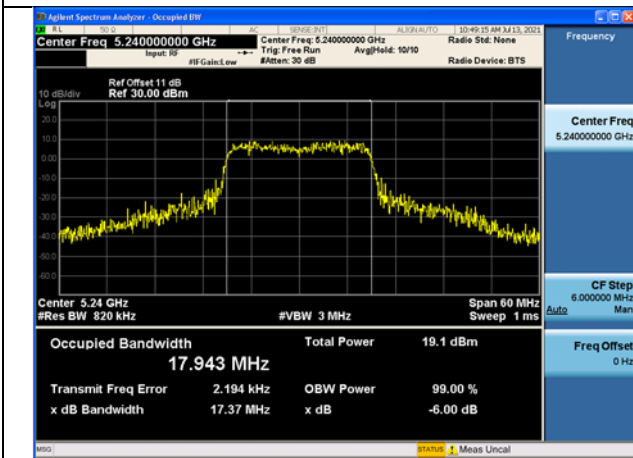
Test Mode:802. 11ac VHT20 Chain0



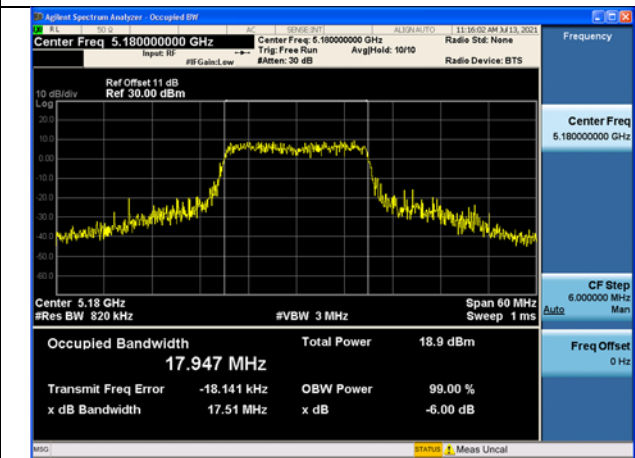
Test Mode:802. 11ac VHT20 Chain0



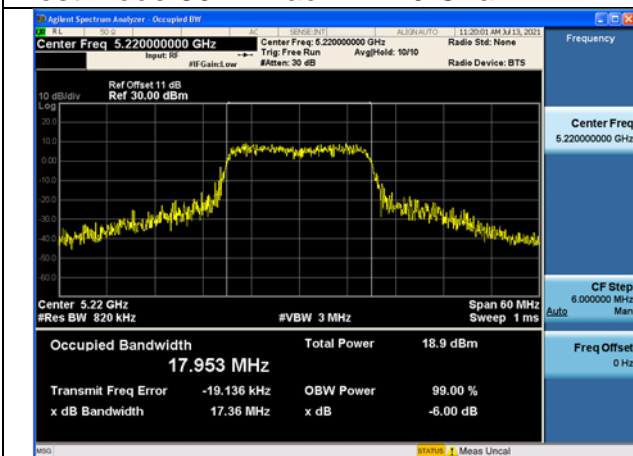
Test Mode:802. 11ac VHT20 Chain0



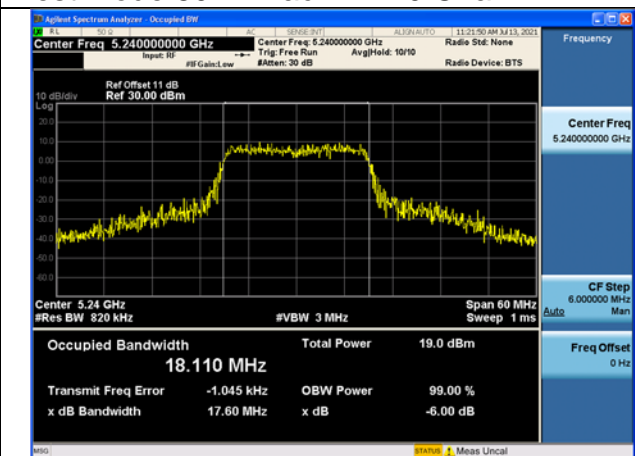
Test Mode:802. 11ac VHT20 Chain1



Test Mode:802. 11ac VHT20 Chain1



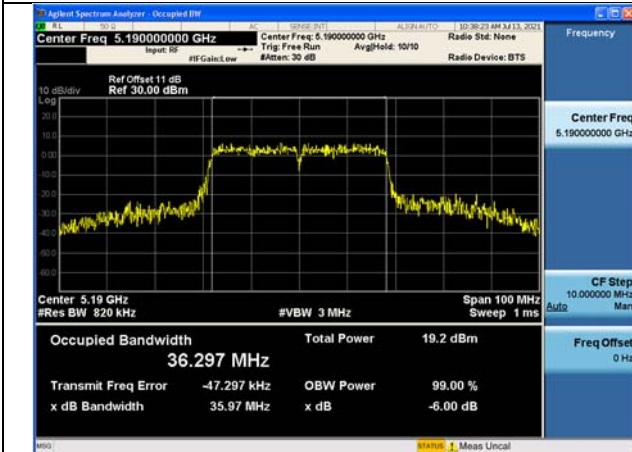
Test Mode:802. 11ac VHT20 Chain1



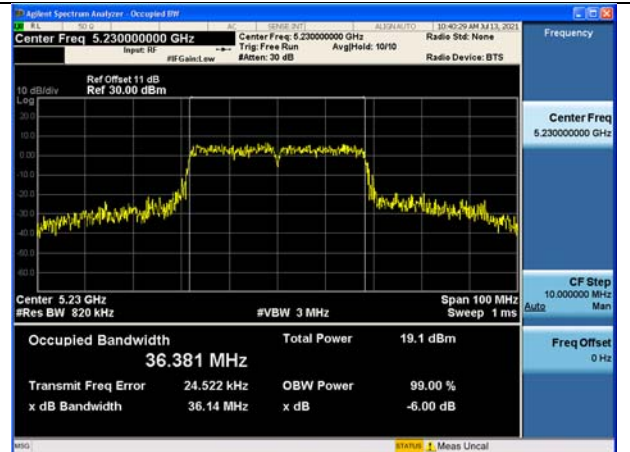
Test Mode:802. 11ac VHT40

Carrier frequency(MHz)	Chain	Occupied Bandwidth (MHz)
5190	Chain0	36.297
	Chain1	36.350
5230	Chain0	36.381
	Chain1	36.267

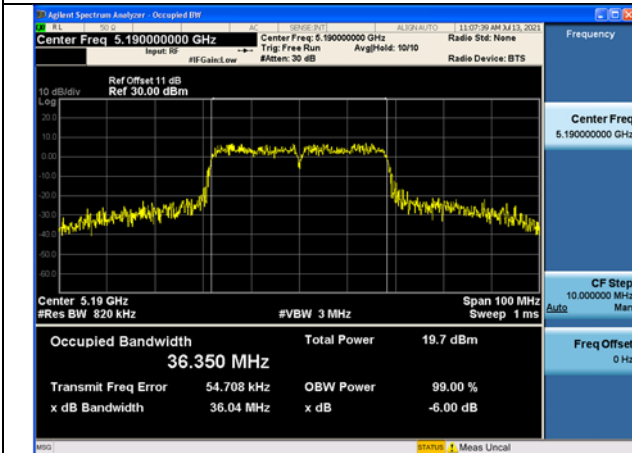
Test Mode:802. 11ac VHT40 Chain0



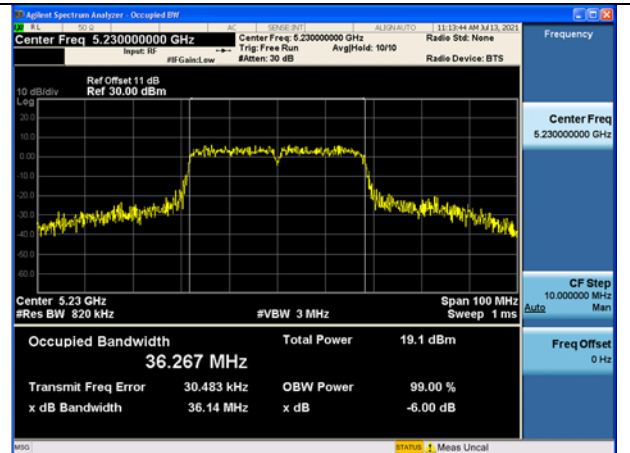
Test Mode:802. 11ac VHT40 Chain0



Test Mode:802. 11ac VHT40 Chain1



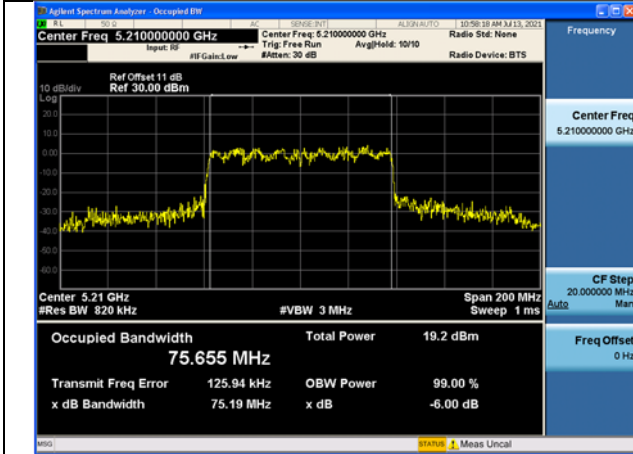
Test Mode:802. 11ac VHT40 Chain1



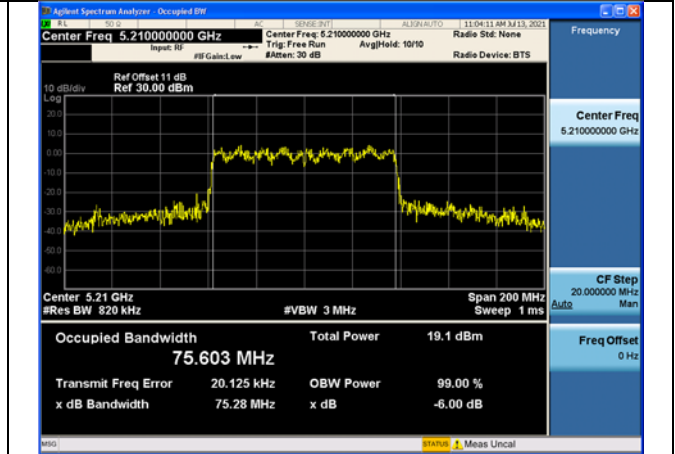
Test Mode:802. 11ac VHT80

Carrier frequency(MHz)	Chain	Occupied Bandwidth (MHz)
5210	Chain0	75.655
	Chain1	75.603

Test Mode:802. 11ac VHT80 Chain0



Test Mode:802. 11ac VHT80 Chain1



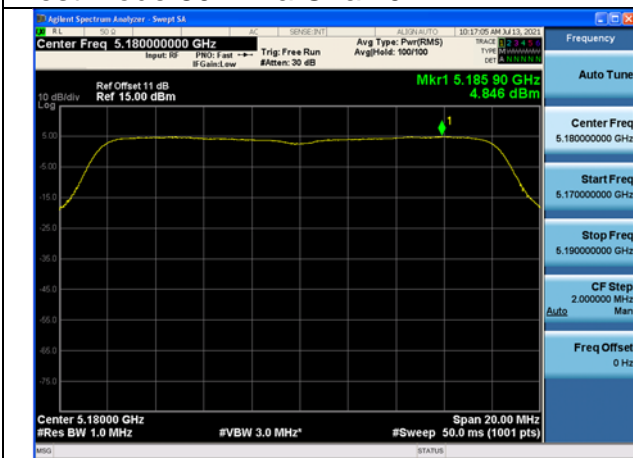
Transmitter Power Spectral Density

Offset 11dB = Attenuator 10dB+ Temporary antenna connector loss 0.5dB+ Cable loss 0.5dB

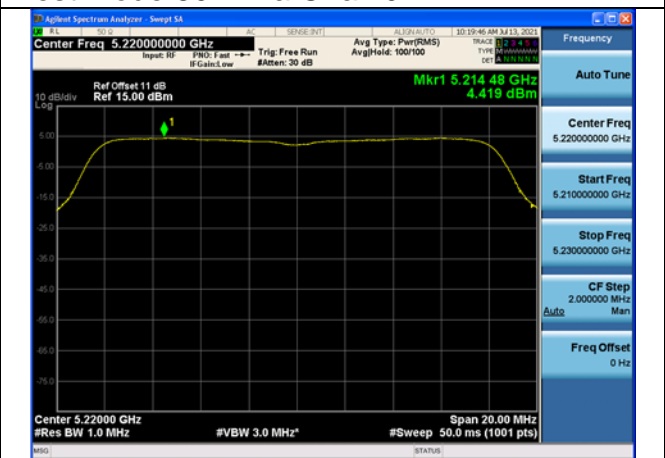
Test Mode:802.11a

Carrier frequency (MHz)	Correction Factor(dB)	Chain	Power Density (dBm/MHz)
5180	0.06	Chain0	4.906
		Chain1	5.046
5220		Chain0	4.479
		Chain1	4.823
5240		Chain0	4.649
		Chain1	4.614

Test Mode:802.11a Chain0



Test Mode:802.11a Chain0



Test Mode:802.11a Chain0

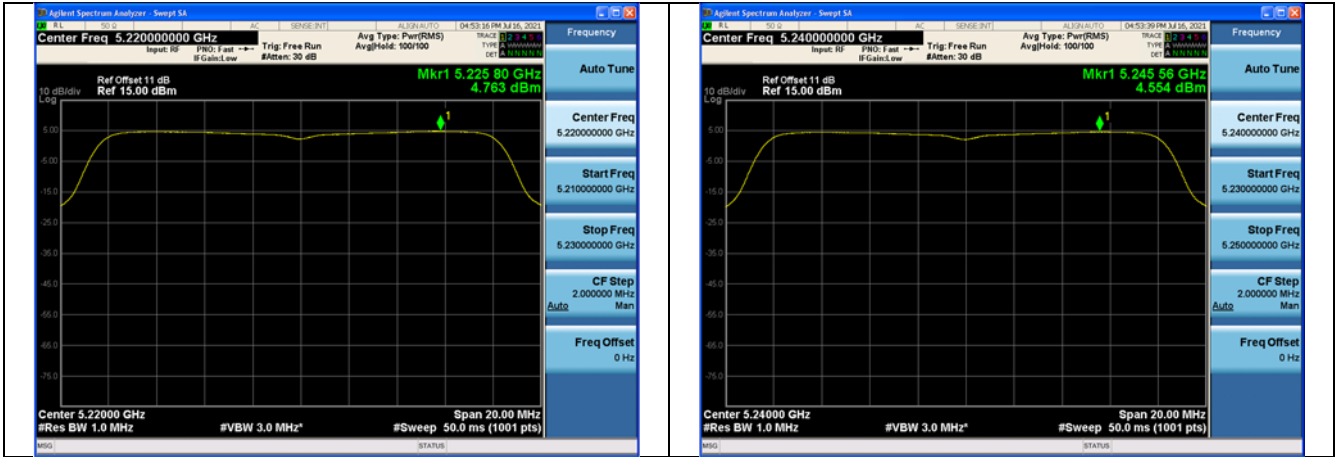


Test Mode:802.11a Chain1



Test Mode:802.11a Chain1

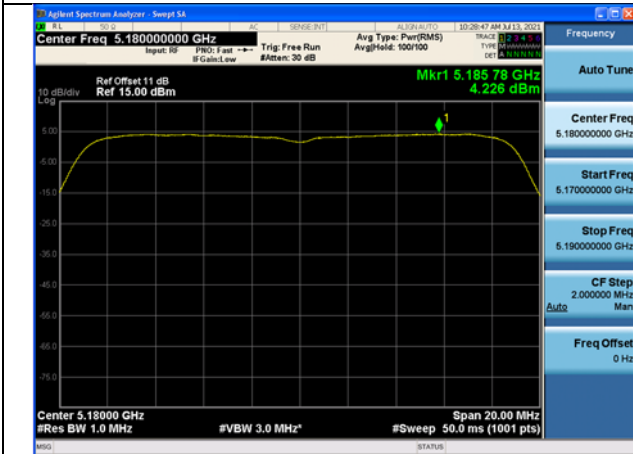
Test Mode:802.11a Chain1



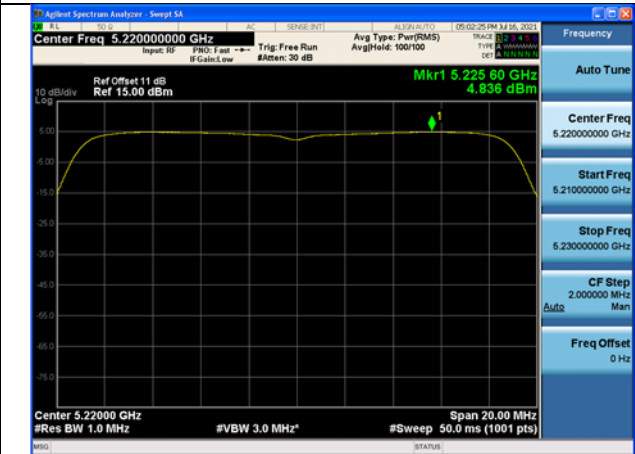
Test Mode:802. 11n HT20

Carrier frequency (MHz)	Correction Factor(dB)	Chain	Power Density (dBm/MHz)
5180	0.06	Chain0	4.286
		Chain1	4.302
5220		Chain0	4.896
		Chain1	4.244
5240		Chain0	4.195
		Chain1	4.157

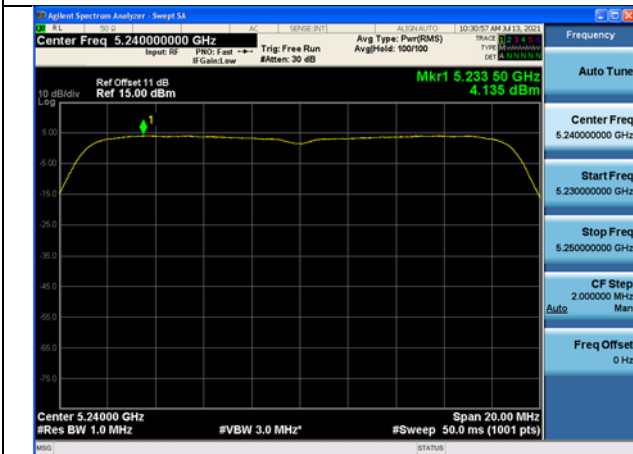
Test Mode:802. 11n HT20 Chain0



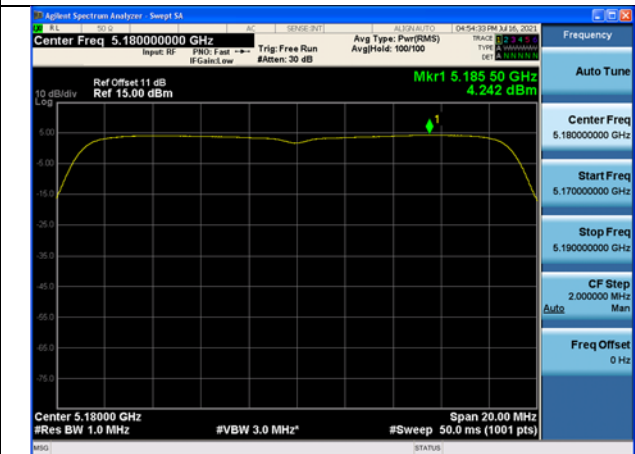
Test Mode:802. 11n HT20 Chain0



Test Mode:802. 11n HT20 Chain0



Test Mode:802. 11n HT20 Chain1



Test Mode:802. 11n HT20 Chain1

Test Mode:802. 11n HT20 Chain1