

Maximum Power Spectral Density Measurement

Mode 5	Frequency (MHz)	ANT-0			ANT-1			Limit (dBm/MHz)
		Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	
Mode 5	5180.0	-0.667	0.383	-0.284	-1.001	0.383	-0.618	≤ 12.51
	5200.0	-0.458	0.383	-0.075	-1.064	0.383	-0.681	≤ 12.51
	5240.0	-0.439	0.383	-0.056	-0.988	0.383	-0.605	≤ 12.51

Mode 5	Frequency (MHz)	ANT-2			ANT-3			Limit (dBm/MHz)
		Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	
Mode 5	5180.0	-0.533	0.383	-0.150	-1.932	0.383	-1.549	≤ 12.51
	5200.0	-0.709	0.383	-0.326	-1.805	0.383	-1.422	≤ 12.51
	5240.0	-0.385	0.383	-0.002	-1.476	0.383	-1.093	≤ 12.51

Mode 5	Frequency (MHz)	ANT-0+1+2+3	Limit
		(dBm/MHz)	(dBm/MHz)
	5180.0	5.403	≤ 12.51
	5200.0	5.423	≤ 12.51
	5240.0	5.604	≤ 12.51

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Mode 5	Frequency (MHz)	ANT-0			ANT-1			Limit (dBm/500 kHz)
		Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	
	5745.0	-10.686	0.383	-3.314	-10.675	0.383	-3.303	≤ 24.53
	5785.0	-10.680	0.383	-3.308	-10.188	0.383	-2.816	≤ 24.53
	5825.0	-10.726	0.383	-3.354	-10.844	0.383	-3.472	≤ 24.53

Mode 5	Frequency (MHz)	ANT-2			ANT-3			Limit (dBm/500 kHz)
		Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	
	5745.0	-9.492	0.383	-2.120	-11.154	0.383	-3.782	≤ 24.53
	5785.0	-9.495	0.383	-2.123	-11.699	0.383	-4.327	≤ 24.53
	5825.0	-9.373	0.383	-2.001	-11.971	0.383	-4.599	≤ 24.53

Mode 5	Frequency (MHz)	ANT-0+1+2+3	Limit
		Calculated (dBm/500 kHz)	(dBm/500 kHz)
	5745.0	2.936	≤ 24.53
	5785.0	2.950	≤ 24.53
	5825.0	2.763	≤ 24.53

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10*Log(500 k/100 k)

Mode 6	Frequency (MHz)	ANT-0			ANT-1			Limit (dBm/MHz)
		Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	
	5190.0	-4.384	0.041	-4.343	-4.399	0.041	-4.358	≤ 12.51
	5230.0	-3.645	0.041	-3.604	-3.789	0.041	-3.748	≤ 12.51

Mode 6	Frequency (MHz)	ANT-2			ANT-3			Limit (dBm/MHz)
		Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	
	5190.0	-4.177	0.041	-4.136	-2.340	0.041	-2.299	≤ 12.51
	5230.0	-3.382	0.041	-3.341	-5.227	0.041	-5.186	≤ 12.51

Mode 6	Frequency (MHz)	ANT-0+1+2+3	Limit
		(dBm/MHz)	(dBm/MHz)
	5190.0	2.328	≤ 12.51
	5230.0	2.106	≤ 12.51

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Mode 6	Frequency (MHz)	ANT-0			ANT-1			Limit (dBm/500 kHz)
		Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	
	5755.0	-14.056	0.041	-7.026	-13.989	0.041	-6.959	≤ 24.53
	5795.0	-14.086	0.041	-7.056	-14.016	0.041	-6.986	≤ 24.53

Mode 6	Frequency (MHz)	ANT-2			ANT-3			Limit (dBm/500 kHz)
		Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	
	5755.0	-13.133	0.041	-6.103	-14.432	0.041	-7.402	≤ 24.53
	5795.0	-13.211	0.041	-6.181	-14.859	0.041	-7.829	≤ 24.53

Mode 6	Frequency (MHz)	ANT-0+1+2+3	Limit
		Calculated (dBm/500 kHz)	(dBm/500 kHz)
	5755.0	-0.825	≤ 24.53
	5795.0	-0.953	≤ 24.53

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10*Log(500 k/100 k)

Mode 7	Frequency (MHz)	ANT-0			ANT-1			Limit (dBm/MHz)
		Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	
	5210.0	-13.321	0.167	-13.154	-13.466	0.167	-13.299	≤ 12.51

Mode 7	Frequency (MHz)	ANT-2			ANT-3			Limit (dBm/MHz)
		Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	
	5210.0	-13.258	0.167	-13.091	-11.559	0.167	-11.392	≤ 12.51

Mode 7	Frequency (MHz)	ANT-0+1+2+3	Limit
		(dBm/MHz)	(dBm/MHz)
	5210.0	-6.639	≤ 12.51

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Mode 7	Frequency (MHz)	ANT-0			ANT-1			Limit (dBm/MHz)
		Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	
	5775.0	-16.668	0.167	-9.512	-16.627	0.167	-9.471	≤ 24.53

Mode 7	Frequency (MHz)	ANT-2			ANT-3			Limit (dBm/MHz)
		Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	
	5775.0	-15.458	0.167	-8.302	-17.505	0.167	-10.349	≤ 24.53

Mode 7	Frequency (MHz)	ANT-0+1+2+3		Limit
		(dBm/MHz)		(dBm/MHz)
	5775.0	-3.325		≤ 24.53

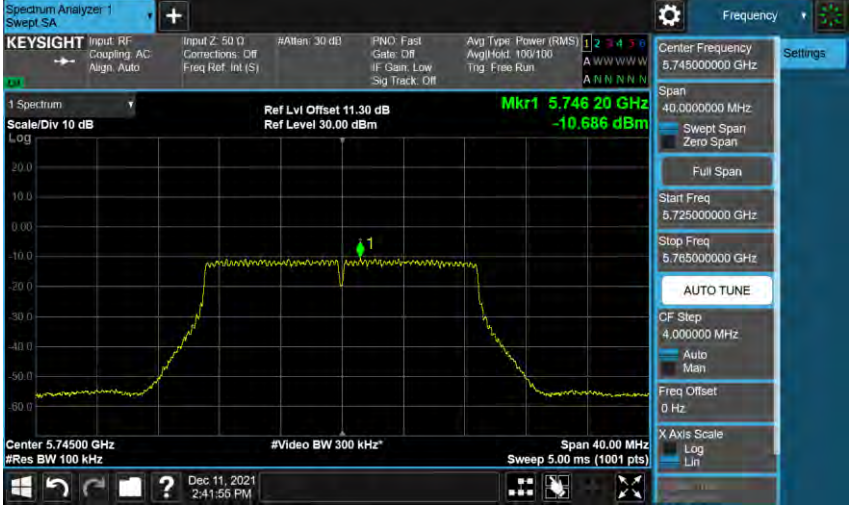
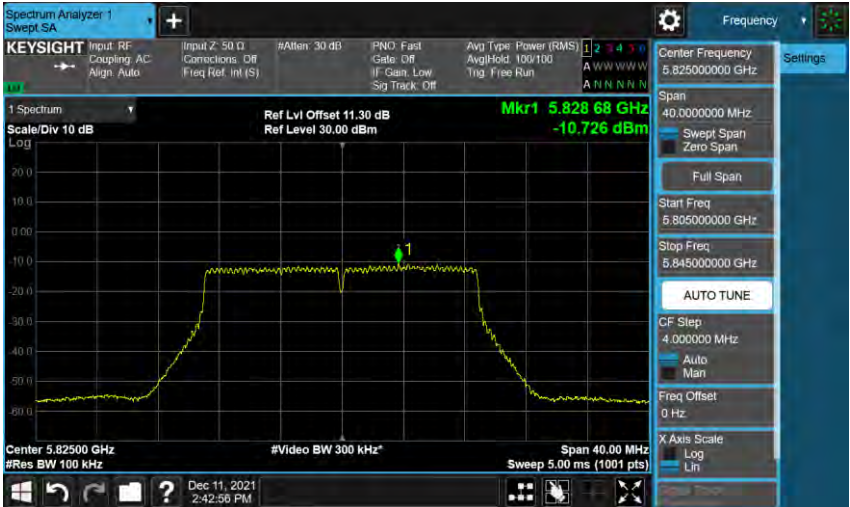
Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Test Graphs

Mode 5: IEEE 802.11ac 20 MHz Continuous TX Mode_ANT-0

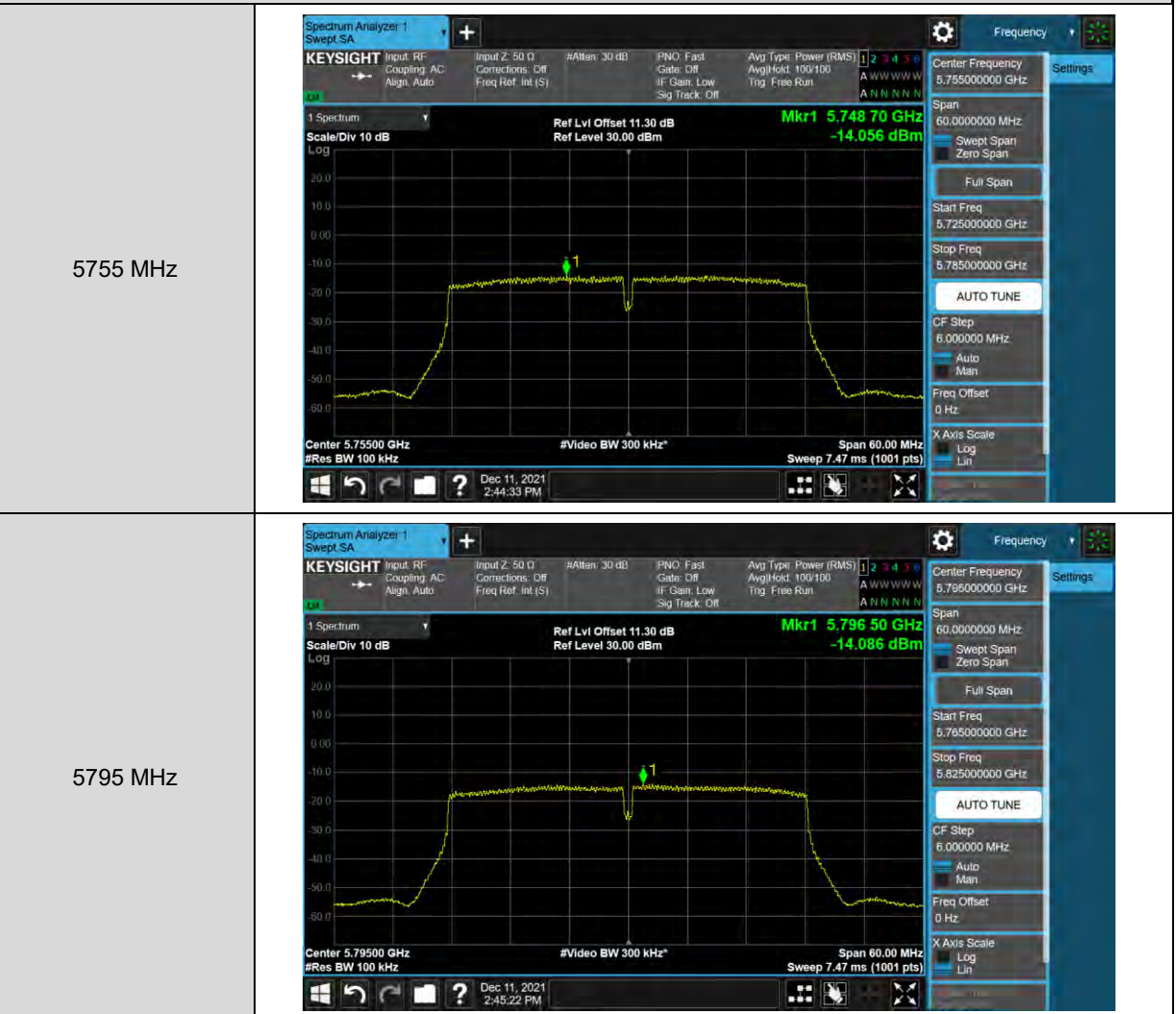


Mode 5: IEEE 802.11ac 20 MHz Continuous TX Mode_ANT-0

5745 MHz	
5785 MHz	
5825 MHz	



Mode 6: IEEE 802.11ac 40 MHz Continuous TX Mode_ANT-0



Mode 7: IEEE 802.11ac 80 MHz Continuous TX Mode _ANT-0

5210 MHz



5775 MHz





Mode 5: IEEE 802.11ac 20 MHz Continuous TX Mode_ANT-1



Mode 6: IEEE 802.11ac 40 MHz Continuous TX Mode_ANT-1

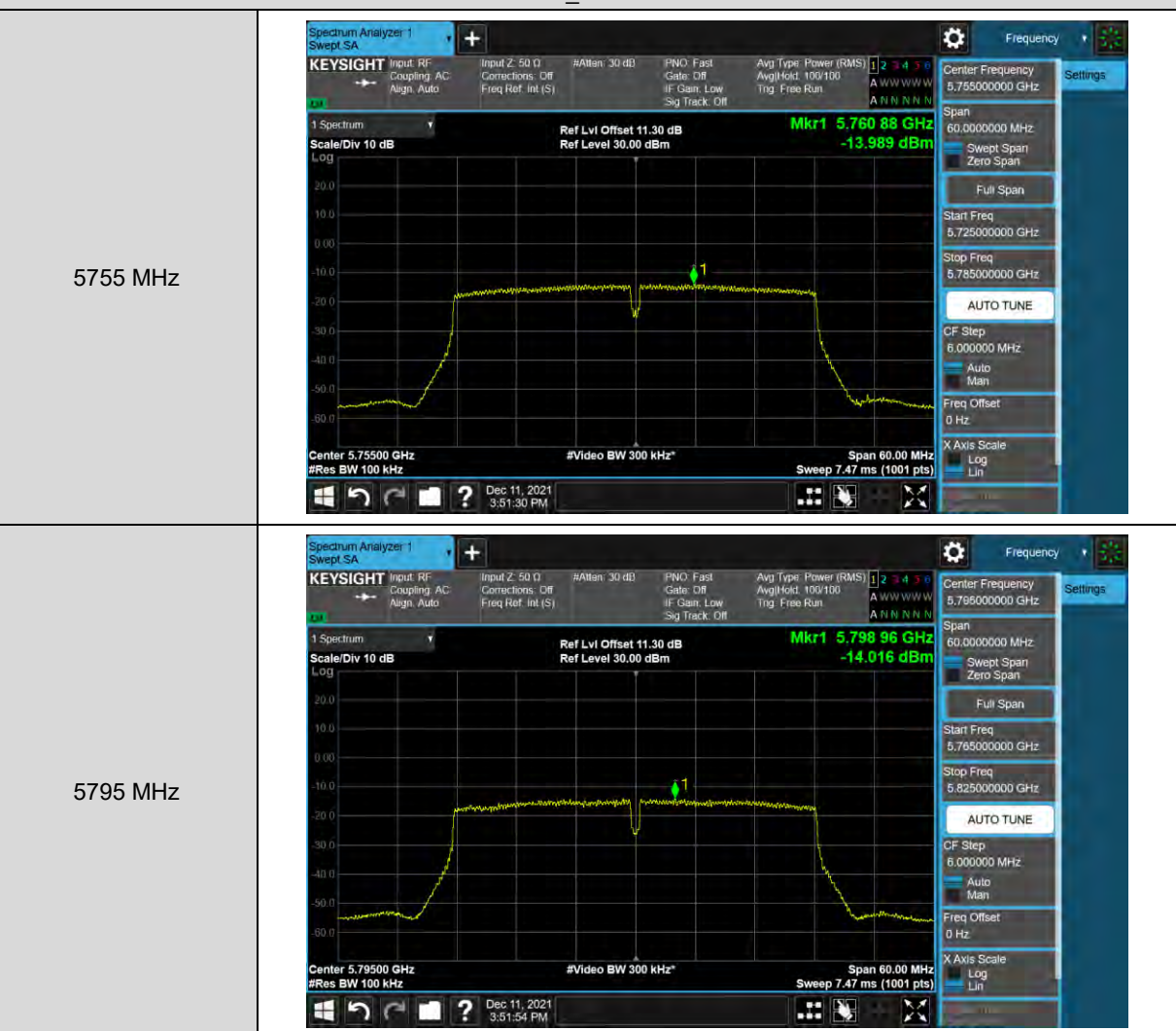
5190 MHz



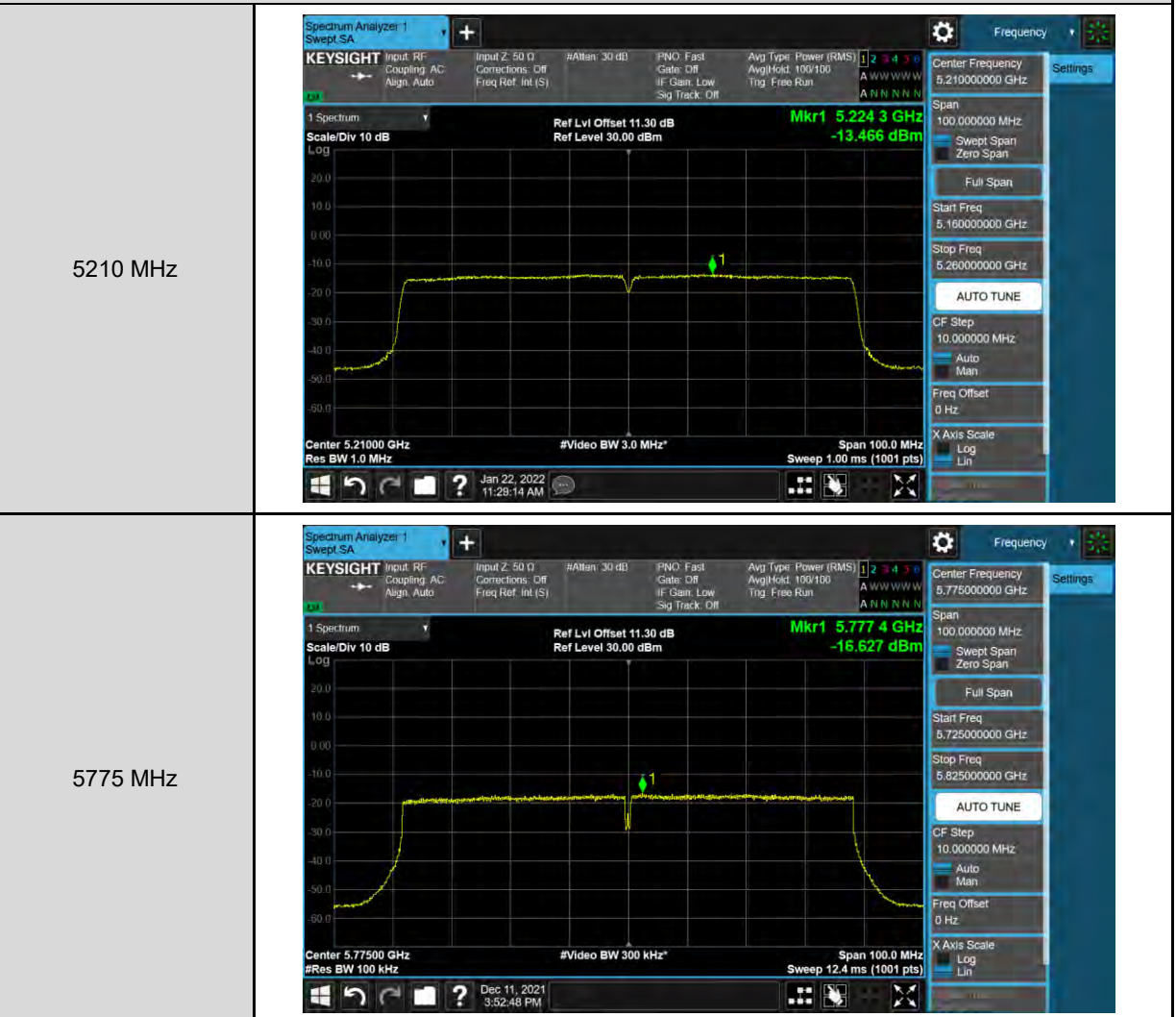
5230 MHz



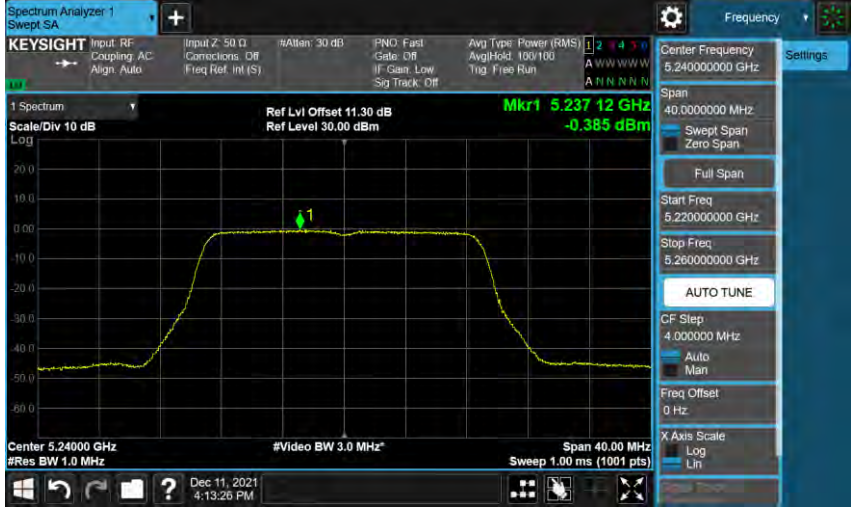
Mode 6: IEEE 802.11ac 40 MHz Continuous TX Mode_ANT-1



Mode 7: IEEE 802.11ac 80 MHz Continuous TX Mode _ANT-1

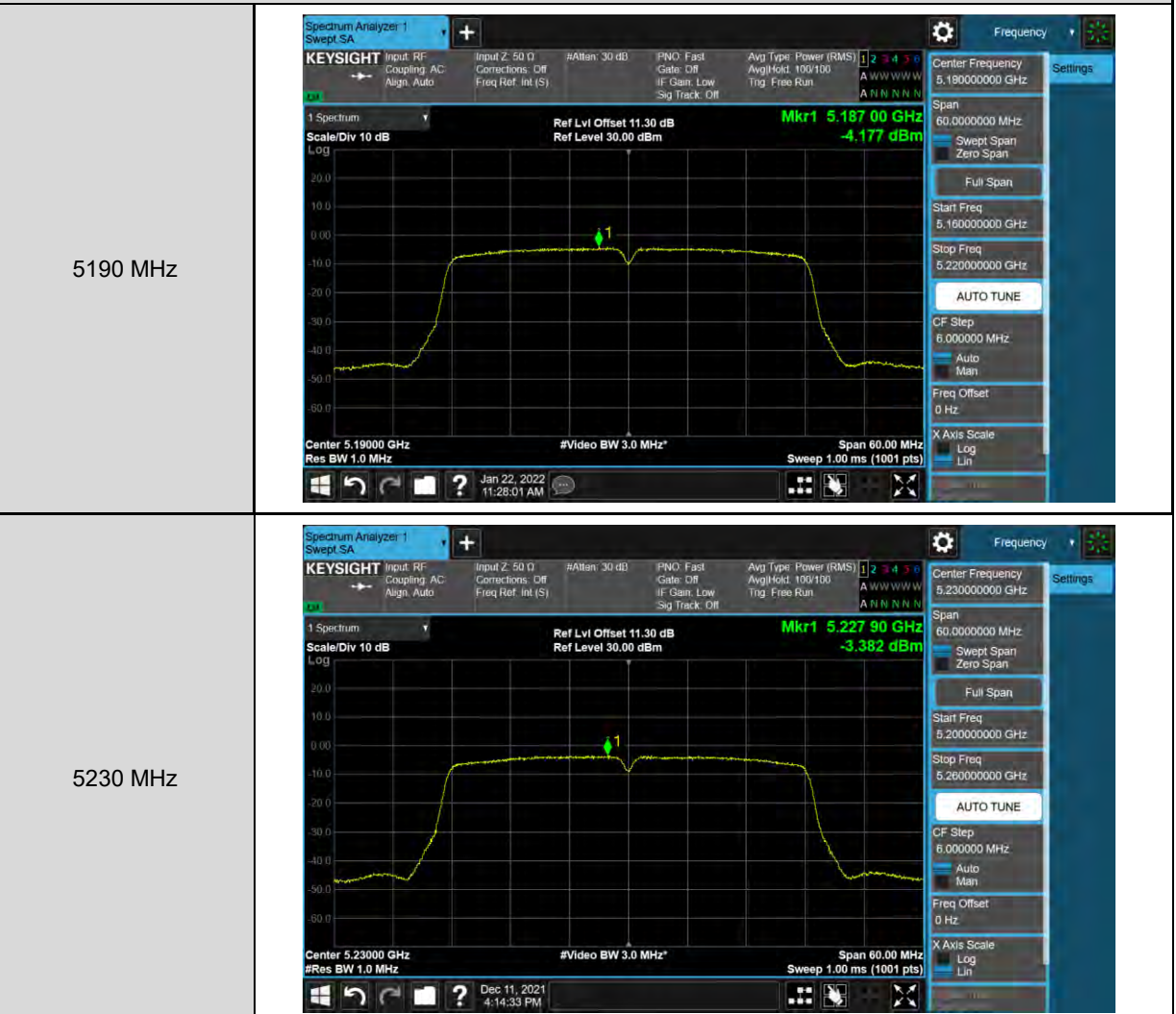


Mode 5: IEEE 802.11ac 20 MHz Continuous TX Mode_ANT-2

5180 MHz	
5200 MHz	
5240 MHz	



Mode 6: IEEE 802.11ac 40 MHz Continuous TX Mode_ANT-2



Mode 6: IEEE 802.11ac 40 MHz Continuous TX Mode_ANT-2

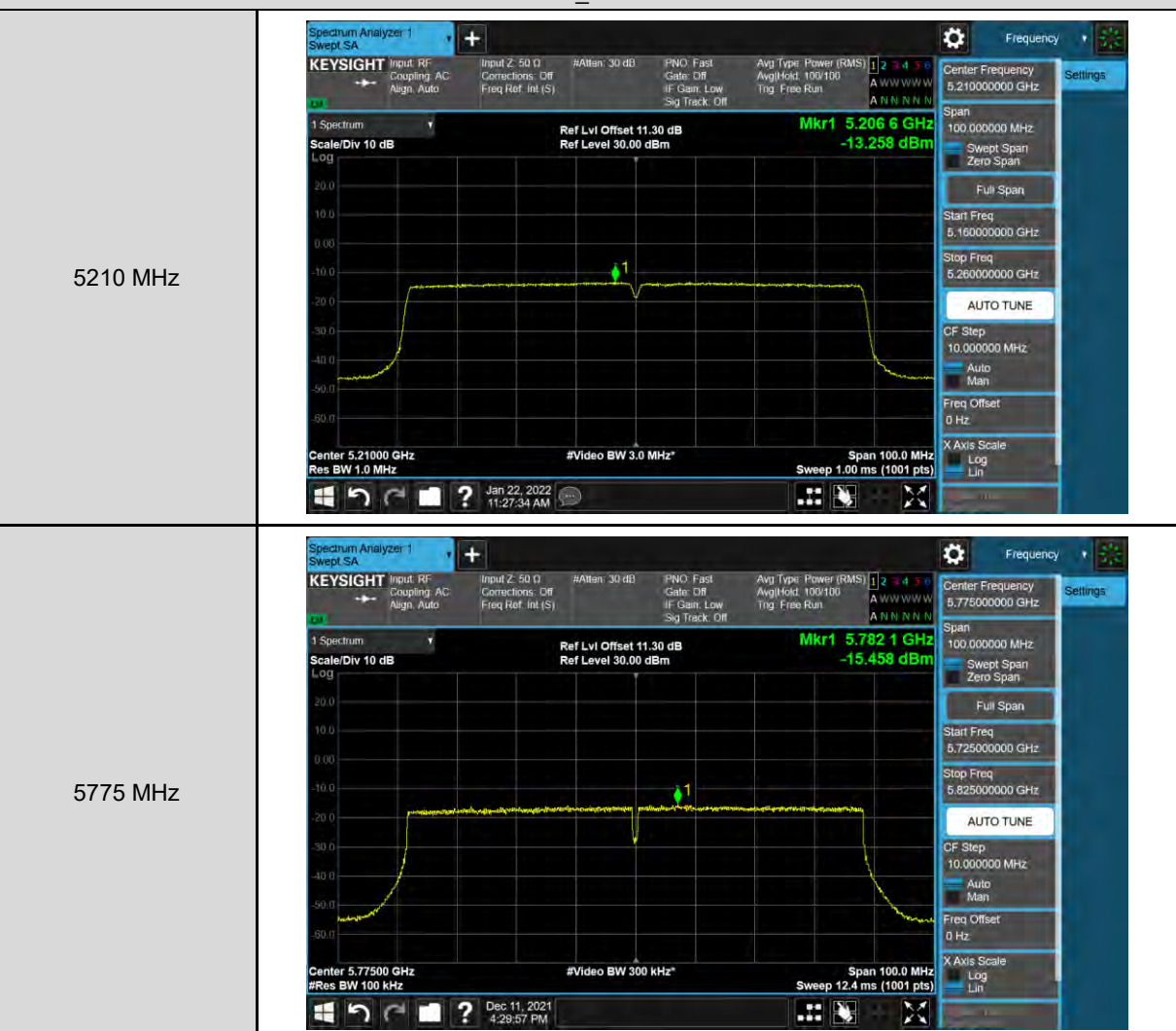
5755 MHz



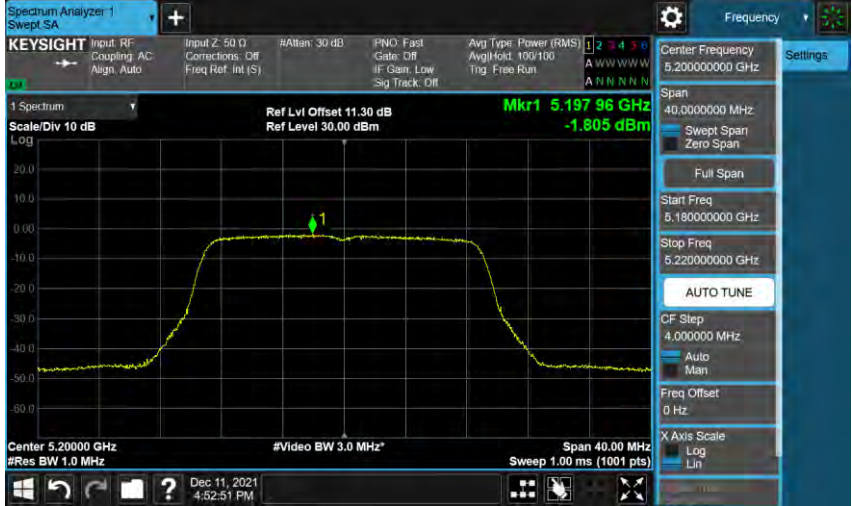
5795 MHz

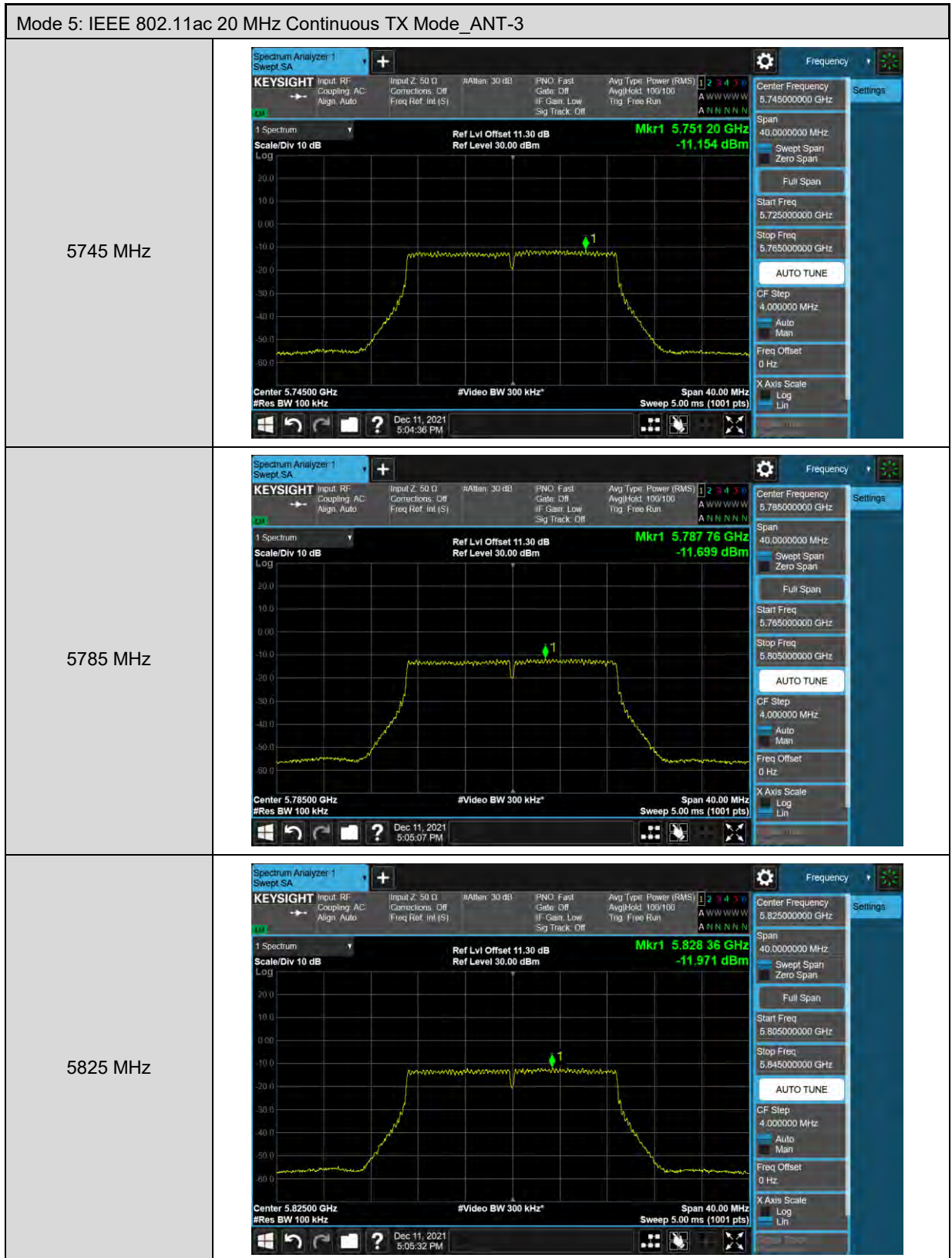


Mode 7: IEEE 802.11ac 80 MHz Continuous TX Mode _ANT-2



Mode 5: IEEE 802.11ac 20 MHz Continuous TX Mode_ANT-3

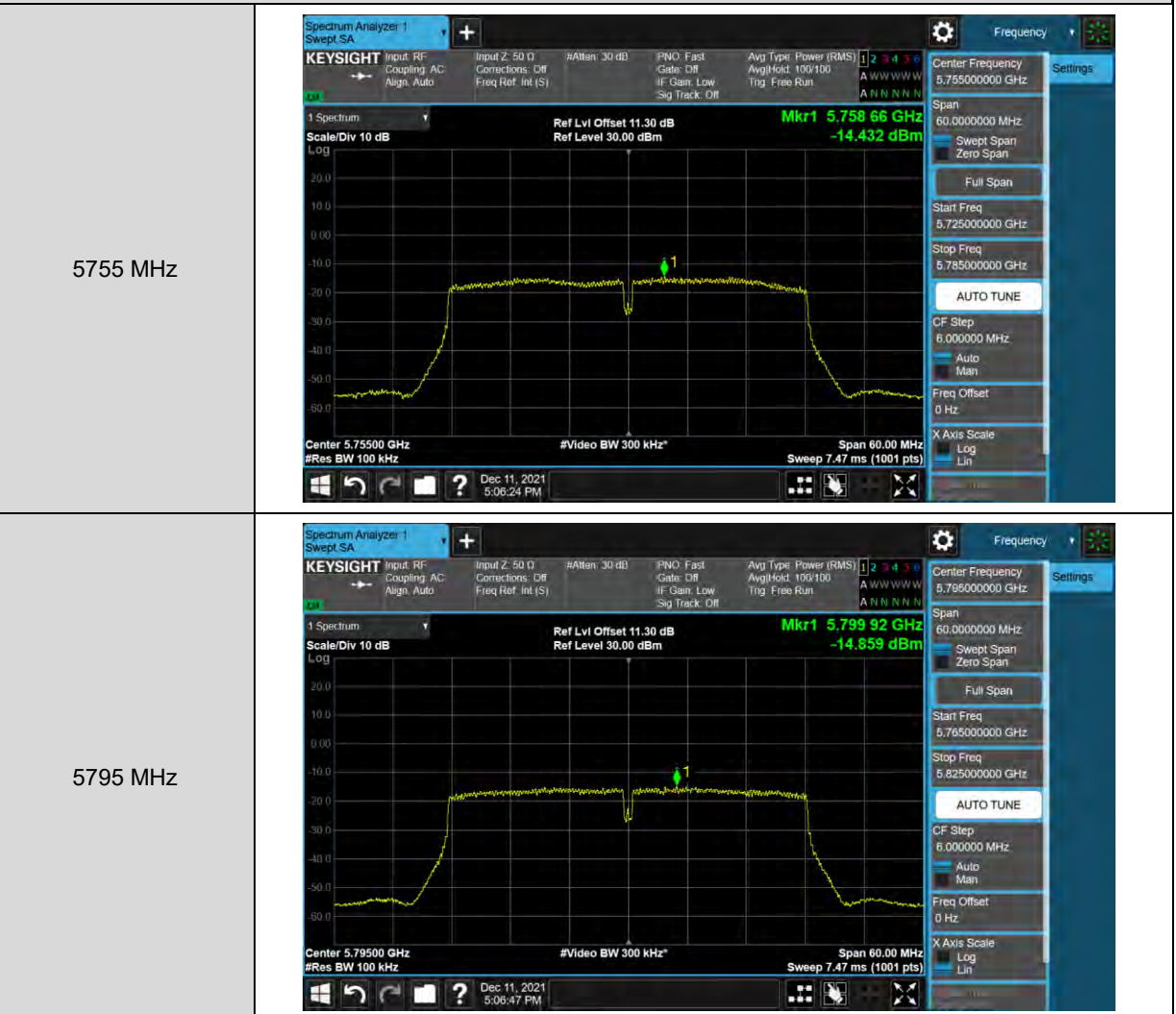
5180 MHz	
5200 MHz	
5240 MHz	



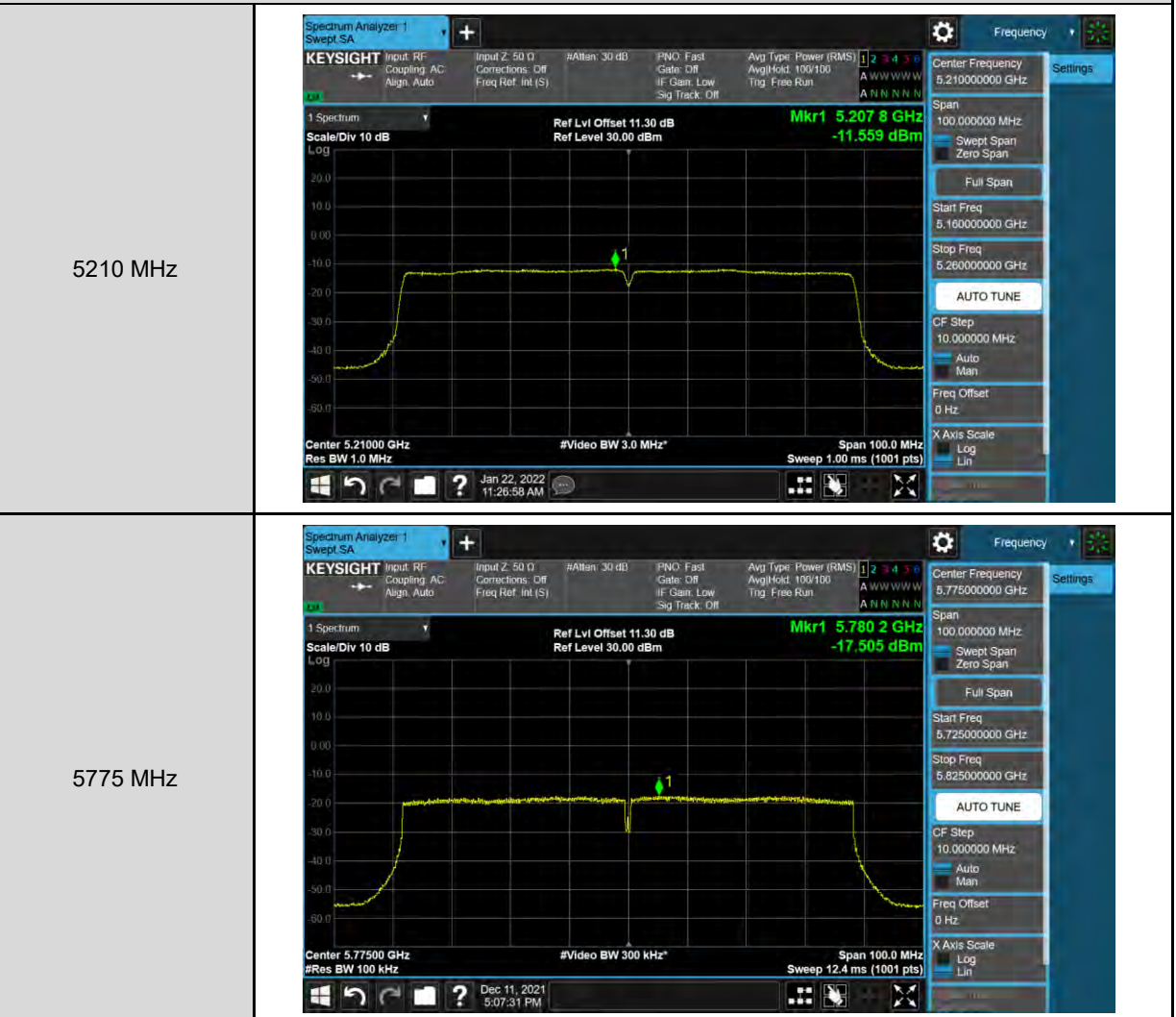
Mode 6: IEEE 802.11ac 40 MHz Continuous TX Mode_ANT-3



Mode 6: IEEE 802.11ac 40 MHz Continuous TX Mode_ANT-3



Mode 7: IEEE 802.11ac 80 MHz Continuous TX Mode _ANT-3



QCA9889

Maximum Conducted Output Power Measurement

Test Mode	Frequency (MHz)	RF Power setting in Test Software	Test Software Version
		ANT-0	
Mode 2	5180	8	QSPR Version 5.0-00188
	5200	8	
	5220	8	
	5240	8	
	5745	8	
	5765	8	
	5785	8	
	5805	8	
	5825	8	
Mode 3	5180	8	
	5200	8	
	5220	8	
	5240	8	
	5745	8	
	5765	8	
	5785	8	
	5805	8	
	5825	8	
Mode 4	5190	8	
	5230	8	
	5755	8	
	5795	8	

Test Mode	Frequency (MHz)	RF Power setting in Test Software	Test Software Version
		ANT-0	
Mode 5	5180	8	QSPR Version 5.0-00188
	5200	8	
	5220	8	
	5240	8	
	5745	8	
	5765	8	
	5785	8	
	5805	8	
	5825	8	
Mode 6	5190	8	
	5230	8	
	5755	8	
	5795	8	
Mode 7	5210	8	
	5775	8	

Maximum Conducted Output Power and Transmit power control Measurement

Test Mode		Mode 2: IEEE 802.11a Continuous TX mode		
Frequency (MHz)	Data Rate	ANT-0		Limit (dBm)
		Max. Output Power		
		(dBm)	(W)	
5180	6 M	8.77	0.008	≤ 30.00
5200		8.47	0.007	≤ 30.00
5220		8.19	0.007	≤ 30.00
5240		8.36	0.007	≤ 30.00
5745		7.93	0.006	≤ 30.00
5765		7.79	0.006	≤ 30.00
5785		7.83	0.006	≤ 30.00
5805		7.81	0.006	≤ 30.00
5825		8.03	0.006	≤ 30.00

Test Mode		Mode 3: IEEE 802.11n 5 GHz 20 MHz Continuous TX mode		
Frequency (MHz)	Data Rate	ANT-0		Limit (dBm)
		Max. Output Power		
		(dBm)	(W)	
5180	6.5 M	8.78	0.008	≤ 30.00
5200		8.38	0.007	≤ 30.00
5220		8.19	0.007	≤ 30.00
5240		8.38	0.007	≤ 30.00
5745		7.85	0.006	≤ 30.00
5765		7.77	0.006	≤ 30.00
5785		7.74	0.006	≤ 30.00
5805		8.28	0.007	≤ 30.00
5825		7.88	0.006	≤ 30.00

Test Mode		Mode 4: IEEE 802.11n 5 GHz 40 MHz Continuous TX mode		
Frequency (MHz)	Data Rate	ANT-0		Limit (dBm)
		Max. Output Power		
		(dBm)	(W)	
5190	13.5M	8.43	0.007	≤ 30.00
5230		7.79	0.006	≤ 30.00
5755		7.61	0.006	≤ 30.00
5795		7.73	0.006	≤ 30.00

Note: The relevant measured result has the offset with cable loss already.

Test Mode		Mode 5: IEEE 802.11ac 20 MHz Continuous TX mode		
Frequency (MHz)	Data Rate	ANT-0		Limit (dBm)
		Max. Output Power		
		(dBm)	(W)	
5180	6.5M	8.80	0.008	≤ 30.00
5200		8.41	0.007	≤ 30.00
5220		8.20	0.007	≤ 30.00
5240		8.45	0.007	≤ 30.00
5745		7.90	0.006	≤ 30.00
5765		7.84	0.006	≤ 30.00
5785		7.85	0.006	≤ 30.00
5805		8.30	0.007	≤ 30.00
5825		8.03	0.006	≤ 30.00

Test Mode		Mode 6: IEEE 802.11ac 40 MHz Continuous TX mode		
Frequency (MHz)	Data Rate	ANT-0		Limit (dBm)
		Max. Output Power		
		(dBm)	(W)	
5190	13.5M	8.50	0.007	≤ 30.00
5230		7.81	0.006	≤ 30.00
5755		7.65	0.006	≤ 30.00
5795		7.74	0.006	≤ 30.00

Test Mode		Mode 7: IEEE 802.11ac 80 MHz Continuous TX mode		
Frequency (MHz)	Data Rate	ANT-0		Limit (dBm)
		Max. Output Power		
		(dBm)	(W)	
5210	117.2 M	8.25	0.007	≤ 30.00
5775		7.72	0.006	≤ 30.00

Note: The relevant measured result has the offset with cable loss already.

Maximum Power Spectral Density Measurement

	Frequency (MHz)	ANT-0			Limit
		Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	(dBm/MHz)
Mode 2	5180.0	-2.978	0.136	-2.842	≤ 17.00
	5200.0	-3.177	0.136	-3.041	≤ 17.00
	5240.0	-3.280	0.136	-3.144	≤ 17.00

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

	Frequency (MHz)	ANT-0			Limit
		Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	(dBm/500 kHz)
Mode 2	5745.0	-12.984	0.136	-5.858	≤ 30.00
	5785.0	-12.696	0.136	-5.570	≤ 30.00
	5825.0	-12.432	0.136	-5.306	≤ 30.00

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10*Log(500 k/100 k)

	Frequency (MHz)	ANT-0			Limit
		Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	(dBm/MHz)
Mode 5	5180.0	-3.233	0.145	-3.088	≤ 17.00
	5200.0	-3.572	0.145	-3.427	≤ 17.00
	5240.0	-3.532	0.145	-3.387	≤ 17.00

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

	Frequency (MHz)	ANT-0			Limit
		Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	(dBm/500 kHz)
Mode 5	5745.0	-13.306	0.145	-6.171	≤ 30.00
	5785.0	-13.320	0.145	-6.185	≤ 30.00
	5825.0	-13.061	0.145	-5.926	≤ 30.00

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10*Log(500 k/100 k)

Mode 6	Frequency (MHz)	ANT-0			Limit
		Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	(dBm/MHz)
	5190.0	-6.090	0.267	-5.823	≤ 17.00
	5230.0	-6.914	0.267	-6.647	≤ 17.00

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Mode 6	Frequency (MHz)	ANT-0			Limit
		Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	(dBm/500 kHz)
	5755.0	-16.263	0.267	-9.006	≤ 30.00
	5795.0	-16.409	0.267	-9.152	≤ 30.00

Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10*Log(500 k/100 k)

Mode 7	Frequency (MHz)	ANT-0			Limit
		Measurement (dBm/MHz)	Duty Factor (dB)	Calculated (dBm/MHz)	(dBm/MHz)
	5210.0	-9.734	0.527	-9.207	≤ 17.00

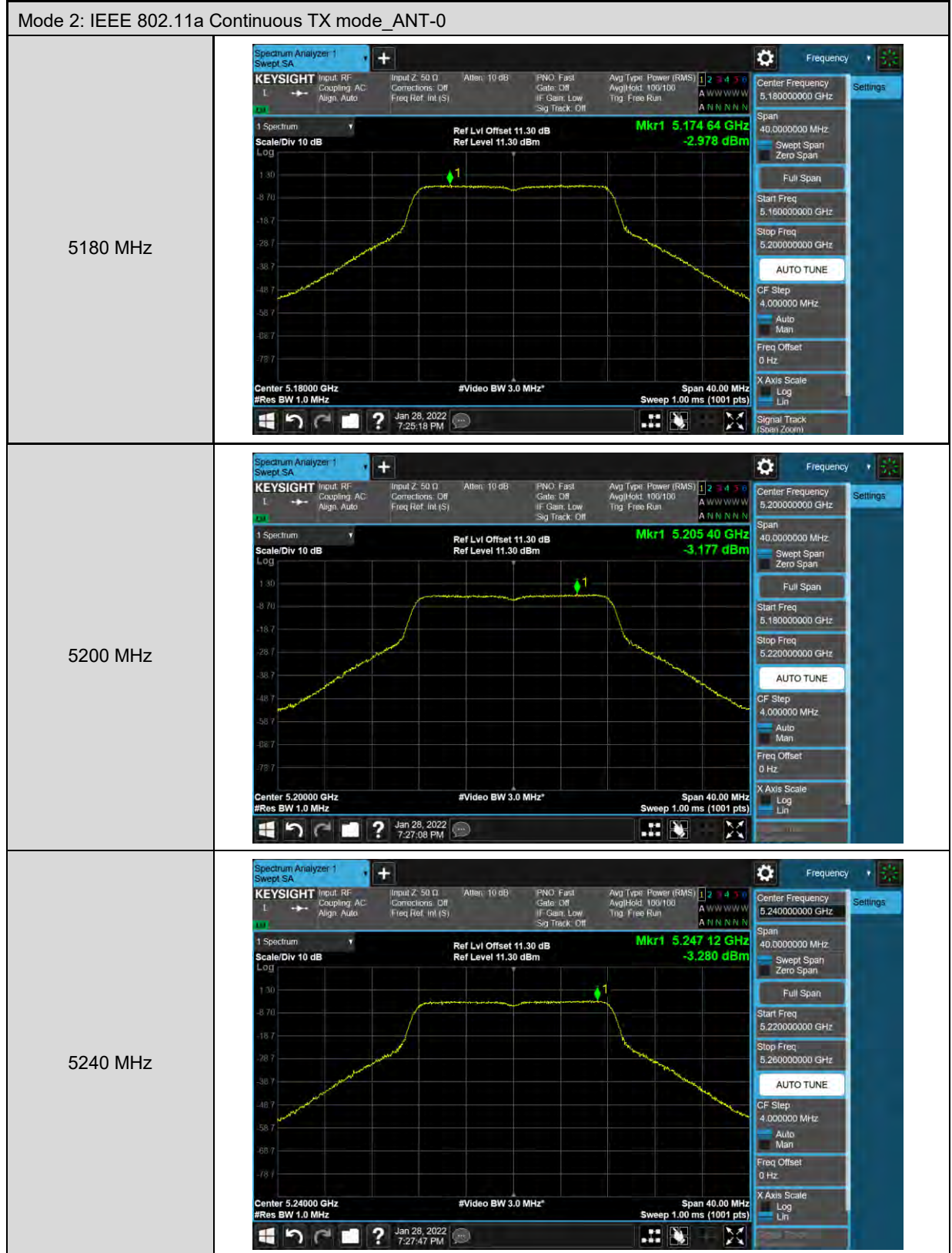
Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Mode 7	Frequency (MHz)	ANT-0			Limit
		Measurement (dBm/100 kHz)	Duty Factor (dB)	Calculated (dBm/500 kHz)	(dBm/500 kHz)
	5775.0	-19.049	0.527	-11.532	≤ 30.00

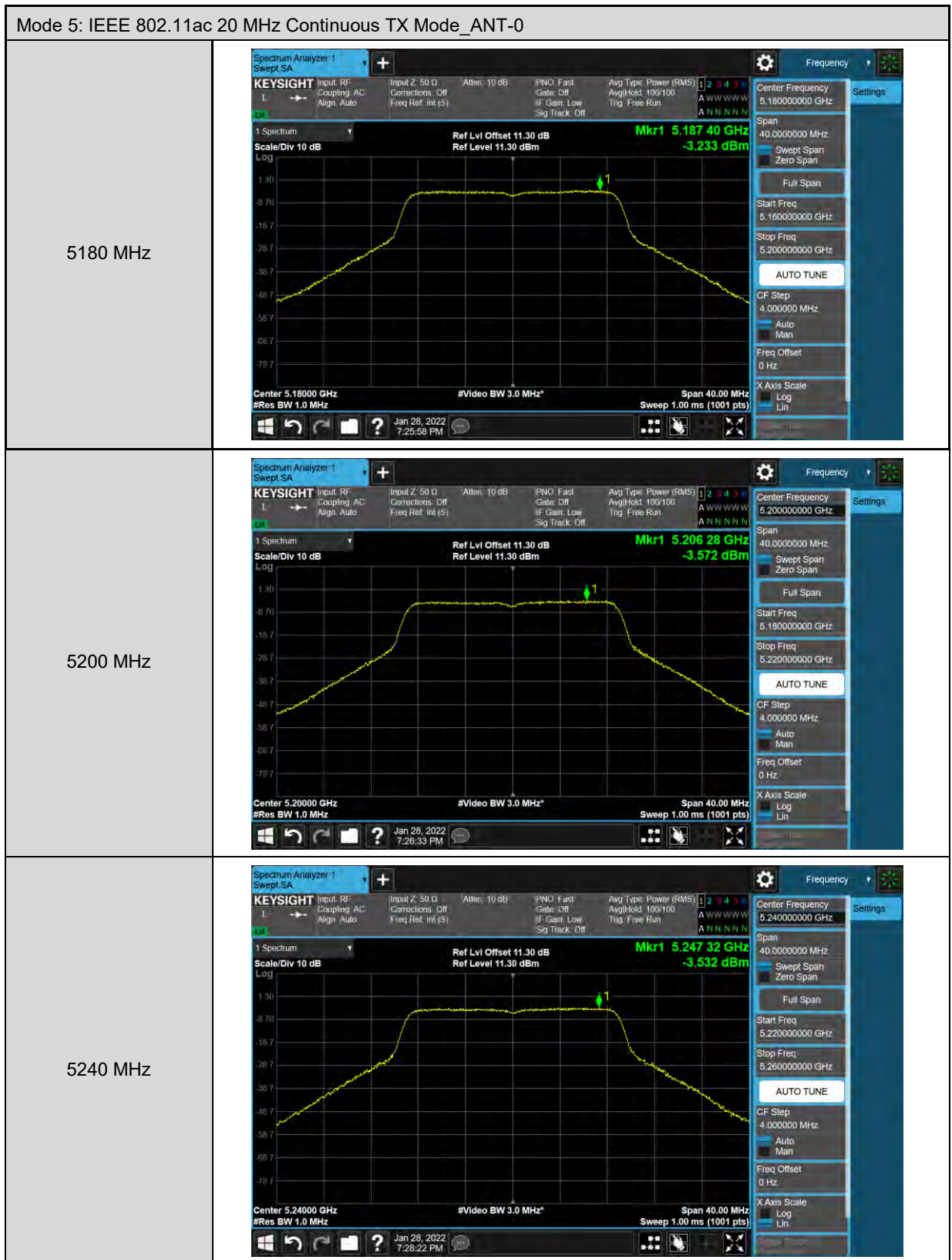
Note: Method SA-2, Power density = measured result + 10 log(1/duty cycle) + Conversion ratio = measured result + duty factor.

Conversion ratio = 10*Log(500 k/100 k)

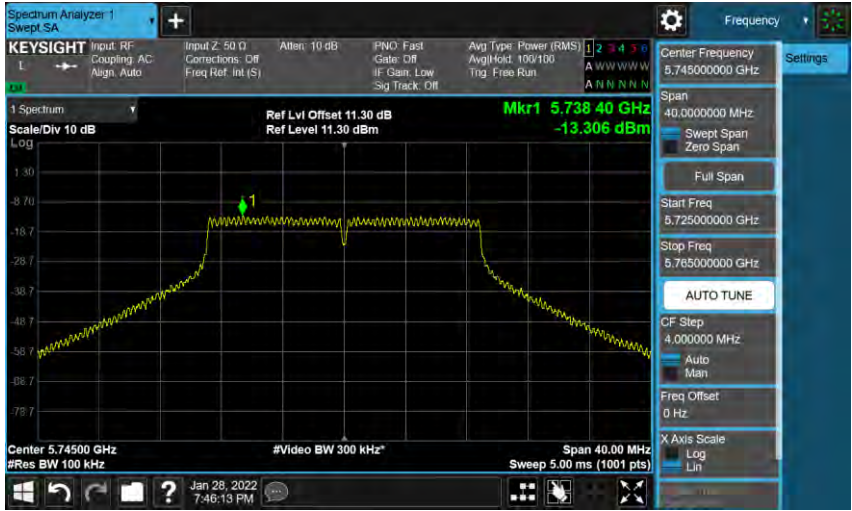
■ Test Graphs







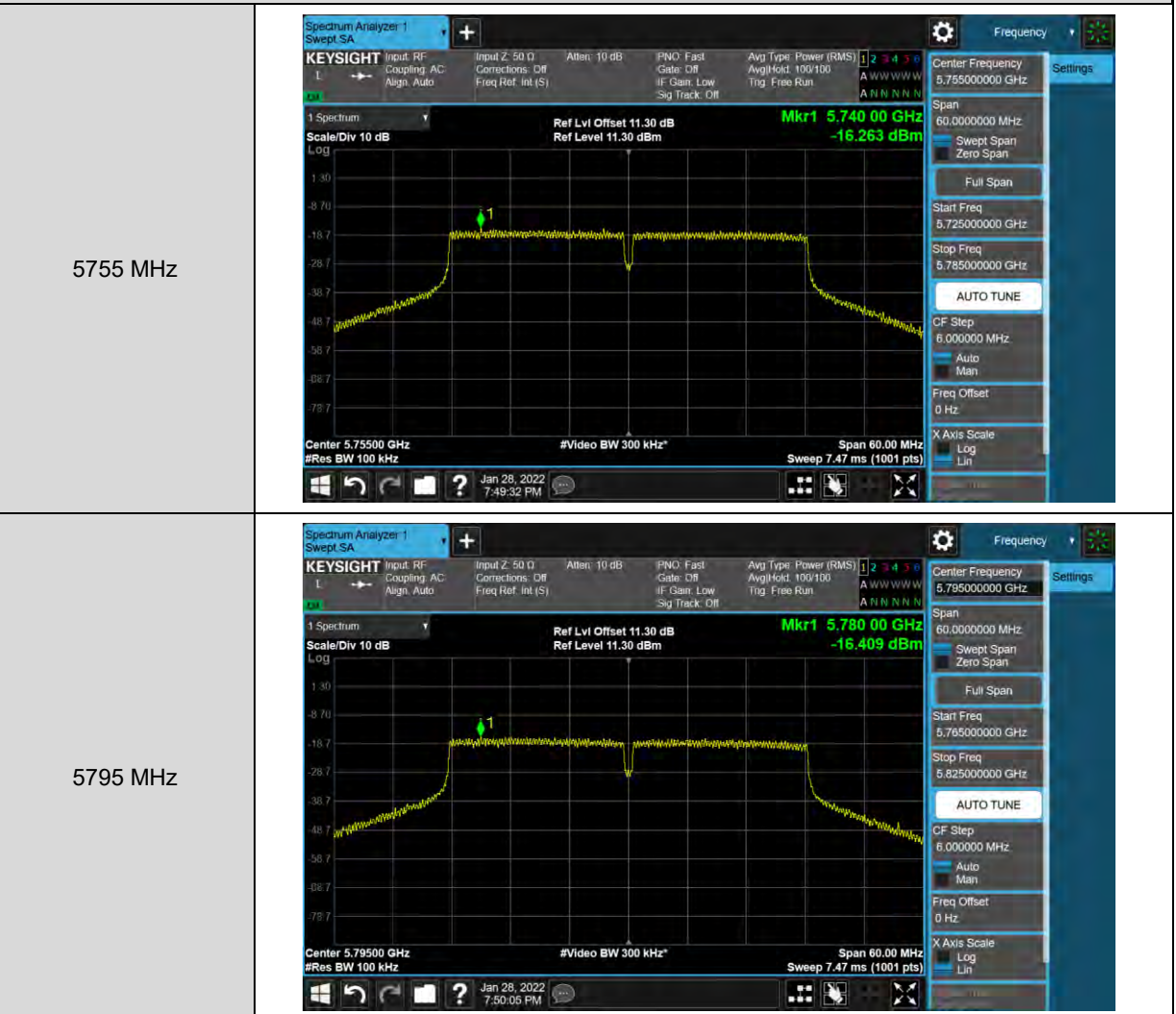
Mode 5: IEEE 802.11ac 20 MHz Continuous TX Mode_ANT-0

5745 MHz	
5785 MHz	
5825 MHz	

Mode 6: IEEE 802.11ac 40 MHz Continuous TX Mode_ANT-0



Mode 6: IEEE 802.11ac 40 MHz Continuous TX Mode_ANT-0





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