

Mode 16: Transmit by 802.11ac(80MHz) with Beam-forming by ant0+1

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Directional Gain (dBi)	Limit (dBm/MHz)	Result
		Ant0	Ant1					
CH42	5210	-3.054	-3.345	0.27	0.08	8.5	14.5	Pass
CH58	5290	-2.729	-3.156	0.27	0.34	8.5	8.5	Pass
CH106	5530	-4.941	-4.717	0.27	-1.55	8.5	8.5	Pass
CH138	5690	-3.260	-3.758	0.27	-0.22	8.5	8.5	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)		Duty factor	Total Measurement PSD (dBm/500kHz)	Directional Gain (dBi)	Limit (dBm/500KHz)	Result
		Ant0	Ant1					
CH155	5775	-2.522	-2.449	0.27	0.53	8.5	24.5	Pass

Mode 16: Transmit by 802.11ac(80MHz) with Beam-forming by ant0+1+2+3

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)				Duty factor	Total Measurement PSD (dBm/MHz)	Directional Gain (dBi)	Limit (dBm/MHz)	Result
		Ant0	Ant1	Ant2	Ant3					
CH42	5210	-6.258	-6.060	-6.119	-6.258	0.27	0.12	11.5	11.5	Pass
CH58	5290	-8.517	-9.112	-8.024	-8.393	0.27	-1.83	11.5	5.5	Pass
CH106	5530	-7.800	-8.086	-7.775	-6.919	0.27	-0.96	11.5	5.5	Pass
CH138	5690	-8.234	-8.475	-7.697	-6.876	0.27	-1.12	11.5	5.5	Pass
Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/500KHz)				Duty factor	Total Measurement PSD (dBm/500kHz)	Directional Gain (dBi)	Limit (dBm/500KHz)	Result
		Ant0	Ant1	Ant2	Ant3					
CH155	5775	-5.550	-5.683	-5.445	-5.347	0.27	0.79	11.5	24.5	Pass

Mode 20: Transmit by 802.11ax(160MHz) with Beam-forming by ant0+1

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Total Measurement PSD (dBm/MHz)	Directional Gain (dBi)	Limit (dBm/MHz)	Result
		Ant0	Ant1					
CH50	5250	-6.243	-6.239	0.49	-2.74	8.5	14.5	Pass
CH144	5570	-8.459	-8.686	0.49	-5.07	8.5	14.5	Pass

Mode 20: Transmit by 802.11ax(160MHz) with Beam-forming by ant0+1+2+3

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)				Duty factor	Total Measurement PSD (dBm/500kHz)	Directional Gain (dBi)	Limit (dBm/MHz)	Result
		Ant0	Ant1	Ant2	Ant3					
CH50	5250	-10.850	-11.666	-11.368	-11.283	0.49	-4.77	11.5	11.5	Pass
CH144	5570	-11.243	-11.475	-10.527	-10.993	0.49	-4.53	11.5	11.5	Pass

For IC

CDD:

Mode 1: Transmit by 802.11a by ant 1+2

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2					
CH36	5180	-2.385	-3.615	0.24	8.5	8.79	10	Pass
CH44	5220	-2.832	-3.459	0.24	8.5	8.62	10	Pass
CH48	5240	-2.789	-3.675	0.24	8.5	8.54	10	Pass

Mode 1: Transmit by 802.11a by ant 1+2+3+4

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)				Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2	Ant3	Ant4					
CH36	5180	-8.903	-9.372	-9.107	-9.446	0.24	11.5	8.56	10	Pass
CH44	5220	-9.578	-9.582	-7.894	-9.137	0.24	11.5	8.77	10	Pass
CH48	5240	-9.468	-9.416	-8.141	-9.123	0.24	11.5	8.76	10	Pass

Mode 2: Transmit by 802.11n(20MHz) by ant 1+2

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2					
CH36	5180	-2.733	-2.742	0.26	8.5	9.03	10	Pass
CH44	5220	-2.551	-3.448	0.26	8.5	8.79	10	Pass
CH48	5240	-2.727	-3.896	0.26	8.5	8.50	10	Pass

Mode 2: Transmit by 802.11n(20MHz) by ant 1+2+3+4

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)				Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2	Ant3	Ant4					
CH36	5180	-9.407	-9.082	-8.899	-8.875	0.26	11.5	8.72	10	Pass
CH44	5220	-9.625	-10.045	-9.258	-7.894	0.26	11.5	8.65	10	Pass
CH48	5240	-9.745	-9.548	-7.895	-9.367	0.26	11.5	8.71	10	Pass

Mode 3: Transmit by 802.11n(40MHz) by ant 1+2

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2					
CH38	5190	-2.771	-3.124	0.43	8.5	9.00	10	Pass
CH46	5230	-2.367	-3.482	0.43	8.5	9.05	10	Pass

Mode 3: Transmit by 802.11n(40MHz) by ant 1+2+3+4

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)				Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2	Ant3	Ant4					
CH38	5190	-9.441	-9.091	-9.261	-9.390	0.43	11.5	8.66	10	Pass
CH46	5230	-10.413	-9.858	-9.043	-9.560	0.43	11.5	8.26	10	Pass

Mode 4: Transmit by 802.11ac(20MHz) by ant 1+2

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2					
CH36	5180	-1.913	-3.038	0.1	8.5	9.17	10	Pass
CH44	5220	-1.964	-2.565	0.1	8.5	9.36	10	Pass
CH48	5240	-1.937	-3.360	0.1	8.5	9.02	10	Pass

Mode 4: Transmit by 802.11ac(20MHz) by ant 1+2+3+4

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)				Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2	Ant3	Ant4					
CH36	5180	-9.103	-9.568	-9.560	-8.391	0.1	11.5	8.49	10	Pass
CH44	5220	-9.679	-9.478	-8.739	-8.171	0.1	11.5	8.65	10	Pass
CH48	5240	-9.754	-9.805	-7.988	-8.618	0.1	11.5	8.65	10	Pass

Mode 5: Transmit by 802.11ac(40MHz) by ant 1+2

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2					
CH38	5190	-2.098	-2.712	0.32	8.5	9.44	10	Pass
CH46	5230	-2.248	-3.164	0.32	8.5	9.15	10	Pass

Mode 5: Transmit by 802.11ac(40MHz) by ant 1+2+3+4

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)				Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2	Ant3	Ant4					
CH38	5190	-12.912	-13.023	-13.291	-12.802	0.32	11.5	4.84	10	Pass
CH46	5230	-13.644	-13.278	-11.779	-12.200	0.32	11.5	5.18	10	Pass

Mode 6: Transmit by 802.11ac(80MHz) by ant 1+2

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2					
CH42	5210	-3.432	-4.098	0.64	8.5	8.40	10	Pass

Mode 6: Transmit by 802.11ac(80MHz) by ant 1+2+3+4

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)				Duty factor	Total Measurement PSD (dBm/MHz)	Directional Gain (dBi)	Limit (dBm/MHz)	Result
		Ant1	Ant2	Ant3	Ant4					
CH42	5210	-16.245	-17.328	-16.145	-16.470	0.64	11.5	1.64	10	Pass

Beamforming:
Mode 11: Transmit by 802.11a with by ant 1+2

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2					
CH36	5180	-2.326	-3.532	0.25	8.5	8.87	10	Pass
CH44	5220	-2.724	-3.192	0.25	8.5	8.81	10	Pass
CH48	5240	-2.555	-3.523	0.25	8.5	8.75	10	Pass

Mode 11: Transmit by 802.11a with by ant 1+2+3+4

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)				Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2	Ant3	Ant4					
CH36	5180	-8.928	-8.928	-9.561	-9.390	0.25	11.5	8.58	10	Pass
CH44	5220	-9.470	-9.106	-9.503	-9.187	0.25	11.5	8.46	10	Pass
CH48	5240	-9.311	-9.223	-9.185	-8.850	0.25	11.5	8.63	10	Pass

Mode 12: Transmit by 802.11n(20MHz) with by ant 1+2

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2					
CH36	5180	-2.767	-2.704	0.23	8.5	9.01	10	Pass
CH44	5220	-2.605	-2.868	0.23	8.5	9.01	10	Pass
CH48	5240	-2.768	-3.905	0.23	8.5	8.44	10	Pass

Mode 12: Transmit by 802.11n(20MHz) with by ant 1+2+3+4

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)				Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2	Ant3	Ant4					
CH36	5180	-9.523	-9.445	-9.105	-8.236	0.23	11.5	8.70	10	Pass
CH44	5220	-9.541	-9.636	-8.605	-8.050	0.23	11.5	8.84	10	Pass
CH48	5240	-9.897	-9.391	-8.048	-8.685	0.23	11.5	8.80	10	Pass

Mode 13: Transmit by 802.11n(40MHz) with by ant 1+2

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2					
CH38	5190	-2.439	-2.590	0.46	8.5	9.46	10	Pass
CH46	5230	-2.758	-4.000	0.46	8.5	8.64	10	Pass

Mode 13: Transmit by 802.11n(40MHz) with by ant 1+2+3+4

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)				Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2	Ant3	Ant4					
CH38	5190	-13.697	-14.851	-14.215	-14.235	0.46	11.5	3.75	10	Pass
CH46	5230	-14.521	-14.612	-13.884	-13.452	0.46	11.5	3.89	10	Pass

Mode 14: Transmit by 802.11ac(20MHz) with by ant 1+2

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2					
CH36	5180	-2.079	-3.122	0.11	8.5	9.05	10	Pass
CH44	5220	-2.082	-2.957	0.11	8.5	9.12	10	Pass
CH48	5240	-1.755	-3.066	0.11	8.5	9.26	10	Pass

Mode 14: Transmit by 802.11ac(20MHz) with by ant 1+2+3+4

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)				Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2	Ant3	Ant4					
CH36	5180	-9.146	-9.236	-9.153	-8.058	0.11	11.5	8.76	10	Pass
CH44	5220	-9.683	-9.446	-8.641	-8.262	0.11	11.5	8.66	10	Pass
CH48	5240	-9.635	-9.633	-7.709	-8.457	0.11	11.5	8.85	10	Pass

Mode 15: Transmit by 802.11ac(40MHz) with by ant 1+2

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2					
CH38	5190	-1.743	-2.986	0.16	8.5	9.35	10	Pass
CH46	5230	-1.925	-3.158	0.16	8.5	9.17	10	Pass

Mode 15: Transmit by 802.11ac(40MHz) with by ant 1+2+3+4

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)				Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2	Ant3	Ant4					
CH38	5190	-12.884	-12.856	-13.093	-12.808	0.16	11.5	4.77	10	Pass
CH46	5230	-13.556	-13.320	-11.889	-12.130	0.16	11.5	5.02	10	Pass

Mode 16: Transmit by 802.11ac(80MHz) with by ant 1+2

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)		Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2					
CH42	5210	-3.269	-4.374	0.27	8.5	7.99	10	Pass

Mode 16: Transmit by 802.11ac(80MHz) with by ant 1+2+3+4

Channel No.	Frequency (MHz)	Measurement Power Spectral Density (dBm/MHz)				Duty factor	Directional Gain (dBi)	EIRP Power Spectral Density (dBm/MHz)	Limit (dBm/MHz)	Result
		Ant1	Ant2	Ant3	Ant4					
CH42	5210	-16.163	-17.305	-16.108	-16.438	0.27	11.5	1.31	10	Pass

Note: 1: Measurement Power of 802.11ac/ax(80/160MHz)=Reading value+duty cycle factor

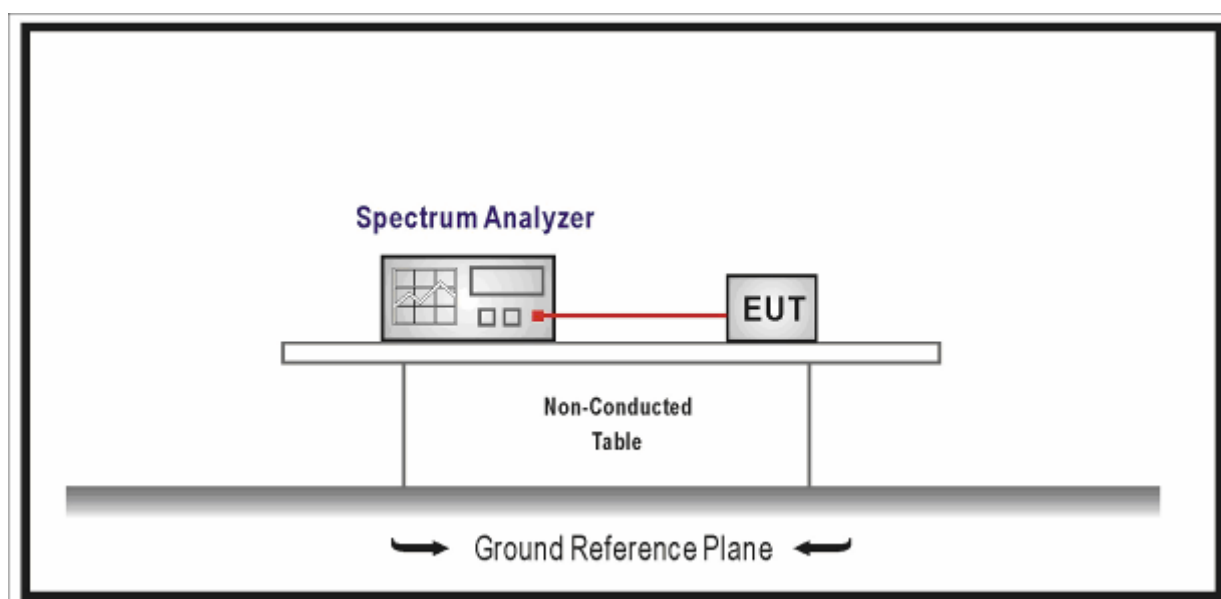
2: The lowest 26dB bandwidth was used for calculate the power limit according to the format $(11+10 \cdot \log B)$. The level is 24.1dBm which is higher than 24dBm, so 24dbm was used for power limit.

9. Band Edge

9.1. Test Equipment

Band Edge / TR-8					
Instrument	Manufacturer	Type No.	Serial No.	Cal. Date	Cal. Due Date
Spectrum Analyzer	Agilent	N9010A	MY48030494	2018.02.04	2019.02.03
EXA Spectrum Analyzer	Keysight	N9010A	MY55370495	2019.04.09	2019.04.08
MXA Signal Analyzer	Keysight	N9020A	MY56060147	2019.04.09	2019.04.08
Temperature/Humidity Meter	zhichen	ZC1-2	TR8-TH	2018.04.10	2019.04.09
Note: All equipment are calibrated with traceable calibrations. Each calibration is traceable to the national or international standards.					

9.2. Test Setup



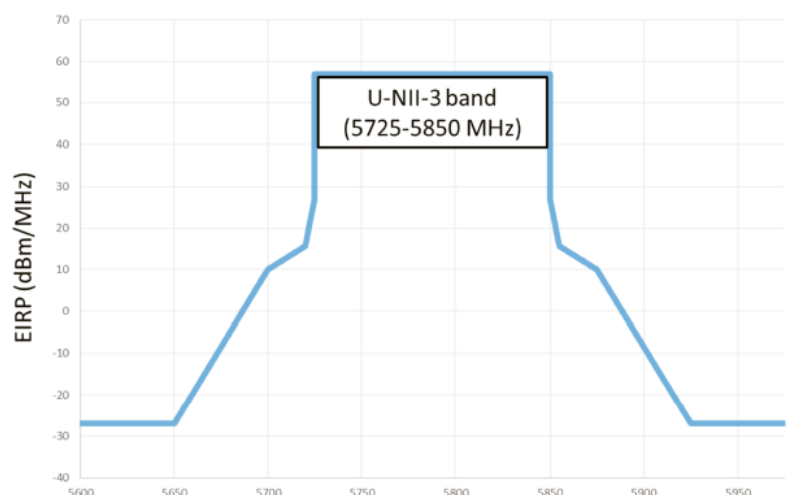
9.3. Limit

FCC Part 15 Subpart C Paragraph 15.209 (Restricted Band Emissions Limit)		
Frequency (MHz)	Distance (m)	Level (dB μ V/m)
0.009-0.490	300	2400/F(kHz)
0.490-1.705	30	24000/F(kHz)
1.705-30.0	30	30
30-88	3	100**
88-216	3	150**
216-960	3	200**
Above 960	3	500

Note 1: At frequencies below 30 MHz, measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field. Pending the development of an appropriate measurement procedure for measurements performed below 30 MHz, when performing measurements at a closer distance than specified, the results shall be extrapolated to the specified distance by either making measurements at a minimum of two distances on at least one radial to determine the proper extrapolation factor or by using the square of an inverse linear distance extrapolation factor (40 dB/decade).

Note 2: At frequencies at or above 30 MHz, measurements may be performed at a distance other than what is specified provided: measurements are not made in the near field except where it can be shown that near field measurements are appropriate due to the characteristics of the device; and it can be demonstrated that the signal levels needed to be measured at the distance employed can be detected by the measurement equipment. Measurements shall not be performed at a distance greater than 30 meters unless it can be further demonstrated that measurements at a distance of 30 meters or less are impractical. When performing measurements at a distance other than that specified, the results shall be extrapolated to the specified distance using an extrapolation factor of 20 dB/decade (inverse linear-distance for field strength measurements; inverse-linear-distance-squared for power density measurements).

FCC Part 15 Subpart C Paragraph 15.205 (Restricted Band)			
Frequency (MHz)	Frequency (MHz)	Frequency (MHz)	Frequency (MHz)
0.090 – 0.110	16.42 – 16.423	399.9 – 410	4.5 – 5.15
0.495 – 0.505	16.69475 – 16.69525	608 – 614	5.35 – 5.46
2.1735 – 2.1905	16.80425 – 16.80475	960 – 1240	7.25 – 7.75
4.125 – 4.128	25.5 – 25.67	1300 – 1427	8.025 – 8.5
4.17725 – 4.17775	37.5 – 38.25	1435 – 1626.5	9.0 – 9.2
4.20725 – 4.20775	73 – 74.6	1645.5 – 1646.5	9.3 – 9.5
6.215 – 6.218	74.8 – 75.2	1660 – 1710	10.6 – 12.7
6.26775 – 6.26825	108 – 121.94	1718.8 – 1722.2	13.25 – 13.4
6.31175 – 6.31225	123 – 138	2200 – 2300	14.47 – 14.5
8.291 – 8.294	149.9 – 150.05	2310 – 2390	15.35 – 16.2
8.362 – 8.366	156.52475 – 156.52525	2483.5 – 2500	17.7 – 21.4
8.37625 – 8.38675	156.7 – 156.9	2690 – 2900	22.01 – 23.12
8.81425 – 8.81475	162.0125 – 167.17	3260 – 3267	23.6 – 24.0
12.29 – 12.293	167.72 – 173.2	3332 – 3339	31.2 – 31.8
12.51975 – 12.52025	240 – 285	3345.8 – 3358	36.43 – 36.5
12.57675 – 12.57725	322 – 335.4	3600 – 4400	
13.36 – 13.41			

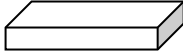
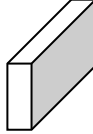
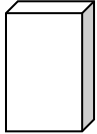



FCC Part 15 Subpart C Paragraph 15.407(5)(b) (Unrestricted Band Emissions Limit)		
Operating Frequency Band (MHz)	EIRP Limit (dBm/MHz)	Equivalent Field Strength at 3m (dB μ V/m)
5150 - 5250	-27	68.3
5250 - 5350	-27	68.3
5470 - 5725	-27	68.3
Operating Frequency Band (MHz)	EIRP Limit (dBm/MHz)	
5725 - 5850	 <p>U-NII-3 band (5725-5850 MHz)</p>	

9.4. Test Procedure

Test Method						
	References Rule			Chapter	Description	
<input type="checkbox"/>	ANSI C63.10			12.7.3	Emissions in non-restricted frequency bands	
<input checked="" type="checkbox"/>	ANSI C63.10			12.7.2	Emissions in restricted frequency bands	
	<input type="checkbox"/>	ANSI C63.10		12.7.5	Radiated emission measurements	
	<input type="checkbox"/>	ANSI C63.10		12.7.6	Procedure for peak unwanted emissions measurements above 1000 MHz	
	<input type="checkbox"/>	ANSI C63.10		12.7.7	Procedures for average unwanted emissions measurements above 1000 MHz	
		<input type="checkbox"/>	ANSI C63.10	12.7.7.2	Method AD (average detection)—primary method	
		<input type="checkbox"/>	ANSI C63.10	12.7.7.3	Method VB-A (Alternative)	
	<input type="checkbox"/>	ANSI C63.10		6.4	Radiated emissions from unlicensed wireless devices below 30 MHz	
	<input type="checkbox"/>	ANSI C63.10		6.5	Radiated emissions from unlicensed wireless devices in the frequency range of 30 MHz to 1000 MHz	
	<input type="checkbox"/>	ANSI C63.10		6.6	Radiated emissions from unlicensed wireless devices above 1 GHz	
	<input checked="" type="checkbox"/>	ANSI C63.10		11.12.2	Antenna-port conducted measurements	
		<input type="checkbox"/>	ANSI C63.10	11.12.2.3	Quasi-peak measurement procedure	
		<input checked="" type="checkbox"/>	ANSI C63.10	11.12.2.4	Peak power measurement procedure	
		<input checked="" type="checkbox"/>	ANSI C63.10	11.12.2.5	Average power measurement procedures	
			<input type="checkbox"/>	ANSI C63.10	11.12.2.5.1	Trace averaging with continuous EUT transmission at full power
			<input type="checkbox"/>	ANSI C63.10	11.12.2.5.2	Trace averaging across ON and OFF times of the EUT transmissions followed by duty cycle correction
			<input checked="" type="checkbox"/>	ANSI C63.10	11.12.2.5.3	Reduced VBW averaging across ON and OFF times of the EUT transmissions with max hold
<input type="checkbox"/>	FCC KDB 789033 D02v01r04			G.2	Unwanted Emissions that fall Outside of the Restricted Bands	
<input type="checkbox"/>	FCC KDB 789033			G.1	Unwanted Emissions in the Restricted Bands	

	D02v01r04			
	<input type="checkbox"/>	FCC KDB 789033 D02v01r04	G.4	Procedure for Unwanted Emissions Measurements below 1000 MHz
	<input type="checkbox"/>	FCC KDB 789033 D02v01r04	G.5	Procedure for Unwanted Maximum Emissions Measurements above 1000 MHz
	<input type="checkbox"/>	FCC KDB 789033 D02v01r04	G.6	Procedures for Average Unwanted Emissions Measurements above 1000 MHz
	<input type="checkbox"/>	FCC KDB 789033 D02v01r04	G.6.c	Method AD (Average detection)—primary method
	<input type="checkbox"/>	FCC KDB 789033 D02v01r04	G.6.d	Method VB (Averaging using reduced video bandwidth): Alternative method.

9.5. EUT test Axis definition

Item	Band Edge			
Device Category	<input checked="" type="checkbox"/>	Indoor use		
	<input type="checkbox"/>	Outdoor use		
	<input type="checkbox"/>	Fix position use		
	<input type="checkbox"/>	Client use		
Test mode	Mode 1-20			
Test method	<input type="checkbox"/>	Radiated		
		X Axis	Y Axis	Z Axis
				
		Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>	Worst Axis <input type="checkbox"/>
	<input checked="" type="checkbox"/>	Conducted		
	<input checked="" type="checkbox"/>	Chain 1		
				
	<input type="checkbox"/>	Chain 1	Chain 2	
				
	<input type="checkbox"/>	Chain 1	Chain 2	Chain 3
				

9.6. Test Result

AV-Ant 0+1 with CDD:

Band I AV Limit=54 dBuV/m-95.2-10lg2 (2tx) -7.97 (Directional Gain) -0.7 (cable loss) =-53dbm
5180MHz by 802.11a:



5320MHz by 802.11a:



5500MHz by 802.11a:

5180MHz by 802.11n(20MHz):**5320MHz by 802.11n(20MHz):**

5500MHz by 802.11n(20MHz):

5190MHz by 802.11n(40MHz):**5310MHz by 802.11n(40MHz):**

Keysight Spectrum Analyzer - Swept SA

RF 50.0 DC SENSE:INT ALIGN AUTO 11:46:42 PM Apr 21, 2018

Start Freq 5.350000000 GHz Avg Type: Log-Pwr Avg/Hold: 36/100

PNO: Fast IF Gain: Low Trig: Free Run Atten: 10 dB

TRACE 1 2 3 4 5 6 TYPE M W W W W W W W DET P N N N N N N

Mkr1 5.460 00 GHz -53.891 dBm

10 dB/div Log Ref 0.00 dBm

Start 5.35000 GHz #Res BW 1.0 MHz #VBW 1.1 kHz Stop 5.53000 GHz Sweep 127.6 ms (1001 pts)

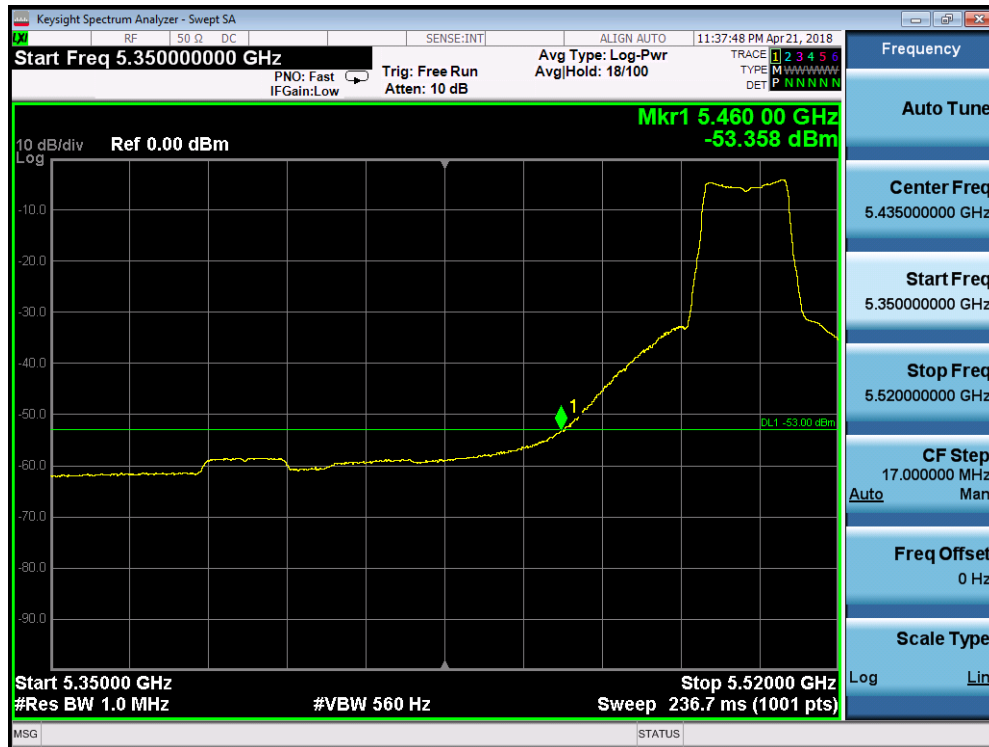
Frequency Auto Tune Center Freq 5.440000000 GHz Start Freq 5.350000000 GHz Stop Freq 5.530000000 GHz CF Step 18.000000 MHz Auto Man Freq Offset 0 Hz Scale Type Log Lin

5180MHz by 802.11ac(20MHz):



5320MHz by 802.11ac(20MHz):



5500MHz by 802.11ac(20MHz):

Keysight Spectrum Analyzer - Swept SA

RF 50.0 DC SENSE:INT ALIGN AUTO 09:57:21 PM Apr 21, 2018

Start Freq 4.500000000 GHz PNO: Fast IFGain:Low Trig: Free Run Atten: 10 dB Avg Type: Log-Pwr Avg/Hold: 15/100

TRACE 1 2 3 4 5 6 TYPE M M M M M M M M DET P N N N N N N

10 dB/div Log Ref 0.00 dBm

Mkr1 5.150 00 GHz -53.928 dBm

Start 4.5000 GHz Stop 5.2200 GHz
#Res 1.0 MHz #VBW 1.1 kHz Sweep 510.4 ms (1001 pts)

MSG STATUS

Keysight Spectrum Analyzer - Swept SA

RF 50 Ω DC SENSE:INT ALIGN AUTO 11:18:19 PM Apr 21, 2018

Start Freq 5.290000000 GHz Avg Type: Log-Pwr
 PNO: Fast IFGain:Low Trig: Free Run Atten: 10 dB Avg/Hold: 32/100

TRACE 1 2 3 4 5 6
 TYPE M W W W W W W W
 DET P N N N N N N

Mkr1 5.350 00 GHz
-53.699 dBm

10 dB/div Log Ref 0.00 dBm

Start 5.29000 GHz Stop 5.46000 GHz
 #Res 1.0 MHz #VBW 1.1 kHz Sweep 120.5 ms (1001 pts)

The spectrum analyzer display shows a signal at 5.350 GHz with a power level of -53.699 dBm. The signal is marked with a green arrow and the number 1. The frequency range is from 5.29000 GHz to 5.46000 GHz, and the resolution bandwidth is 1.1 kHz. The sweep time is 120.5 ms. The display also shows the center frequency, start frequency, stop frequency, and other parameters.

5510MHz by 802.11ac(40MHz):

5210MHz by 802.11ac(80MHz):



5290MHz by 802.11ac(80MHz):



5530MHz by 802.11ac(80MHz):

5180MHz by 802.11ax(20MHz):

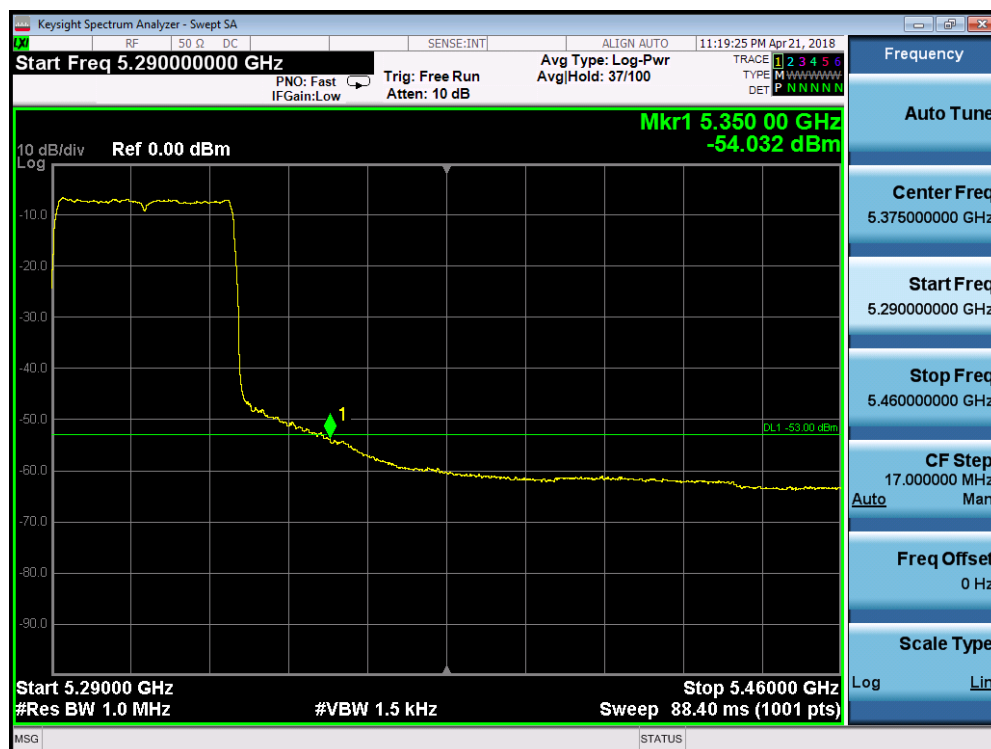


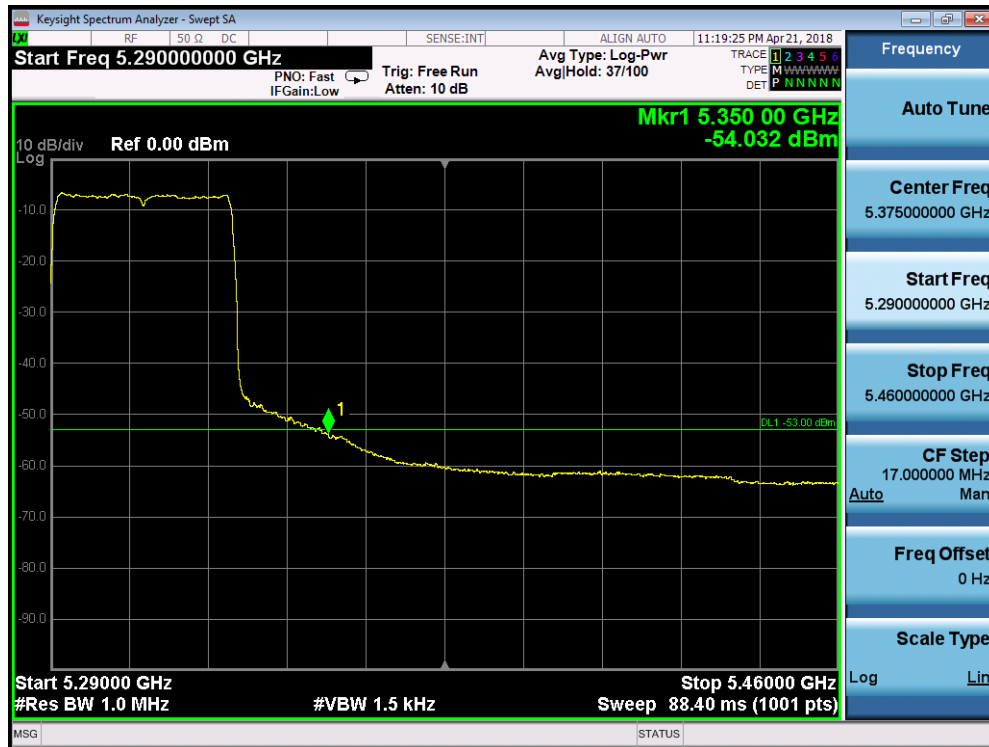
5320MHz by 802.11ax(20MHz):



5500MHz by 802.11ax(20MHz):



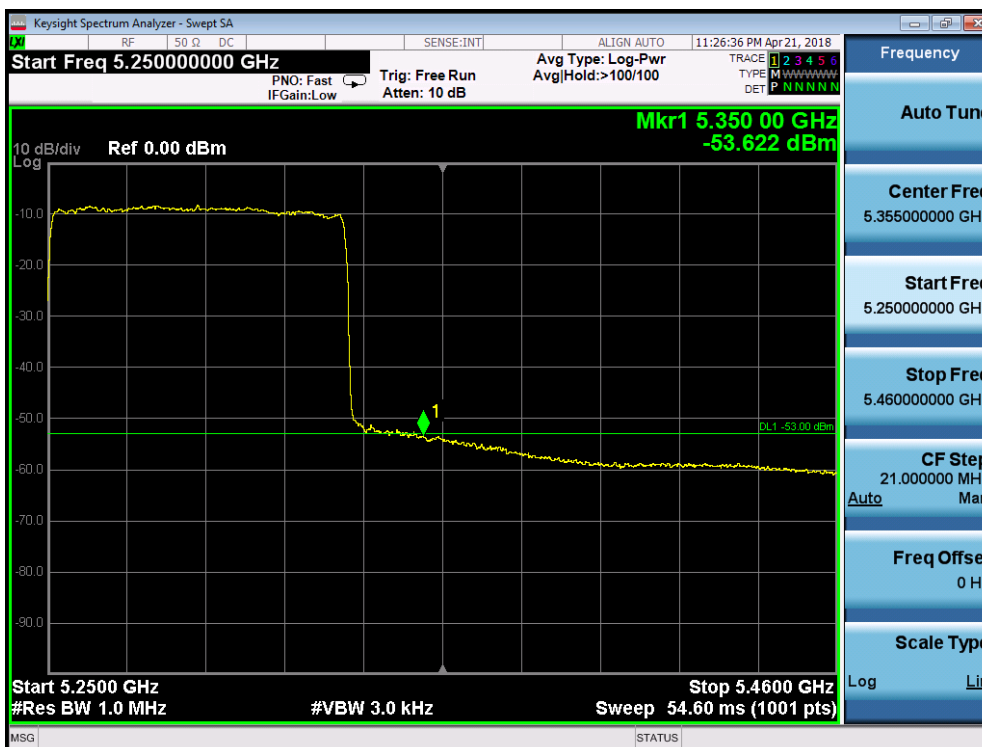
5190MHz by 802.11ax(40MHz):**5310MHz by 802.11ax(40MHz):**

5510MHz by 802.11ax(40MHz):

5210MHz by 802.11ax(80MHz):



5290MHz by 802.11ax(80MHz):

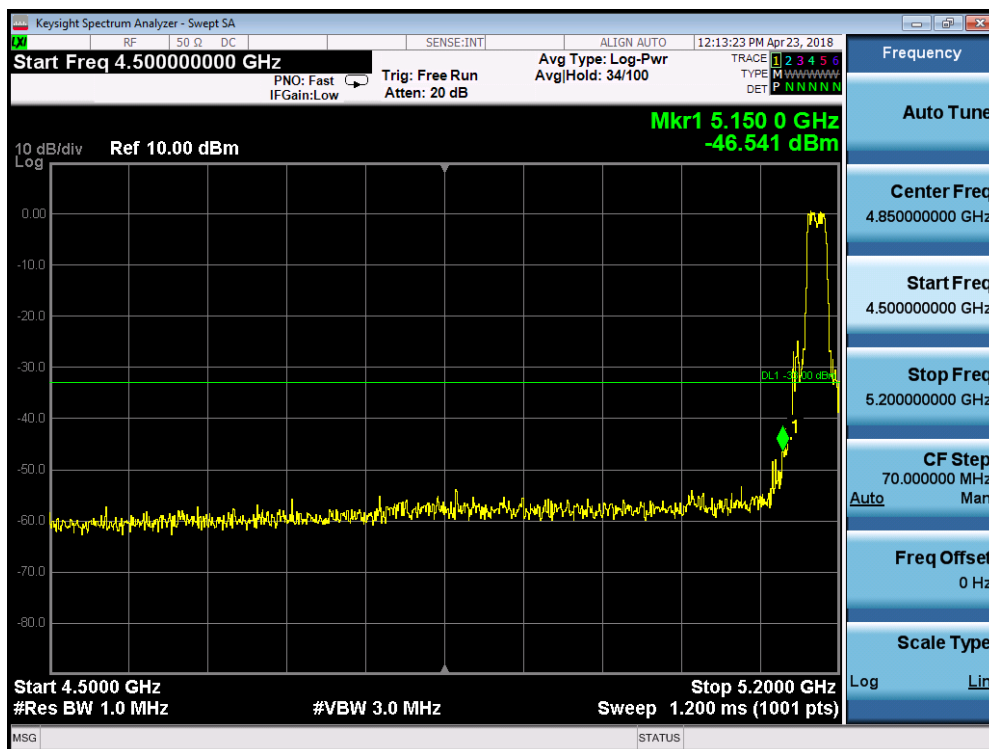


5530MHz by 802.11ax(80MHz):

5250MHz by 802.11ax(160MHz):**5570MHz by 802.11ax(160MHz):**

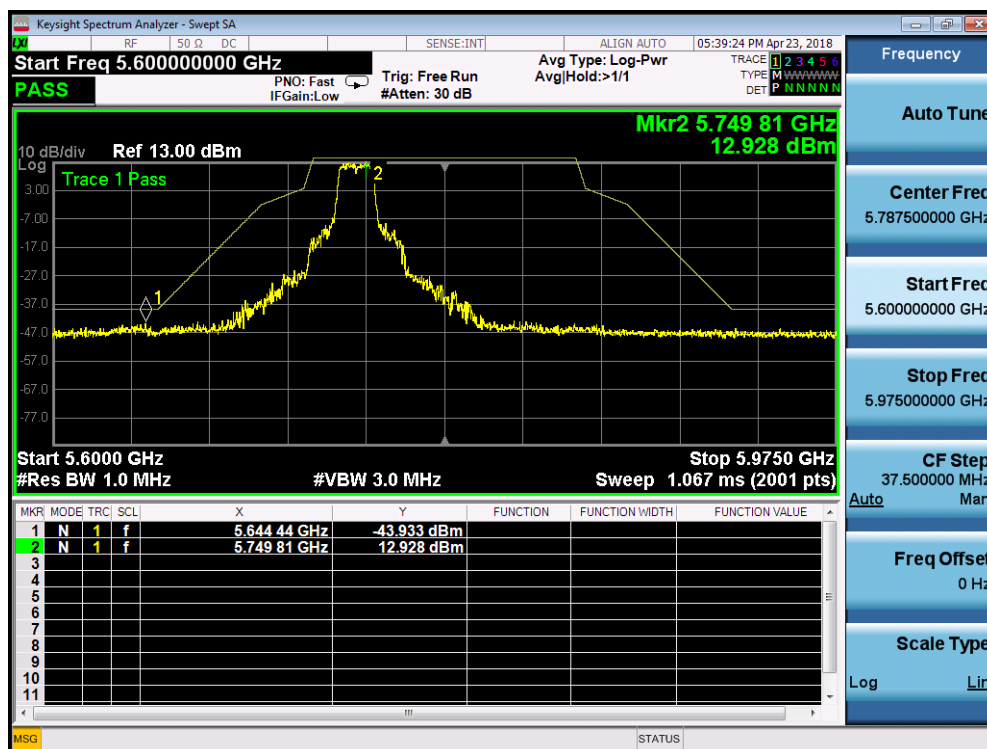
PK-Ant 0+1 with CDD:

Band I PK Limit=74 dBuV/m-95.2-10lg2 (2tx) -7.97 (Directional Gain) -0.7 (cable loss) =-33dbm
5180MHz by 802.11a:

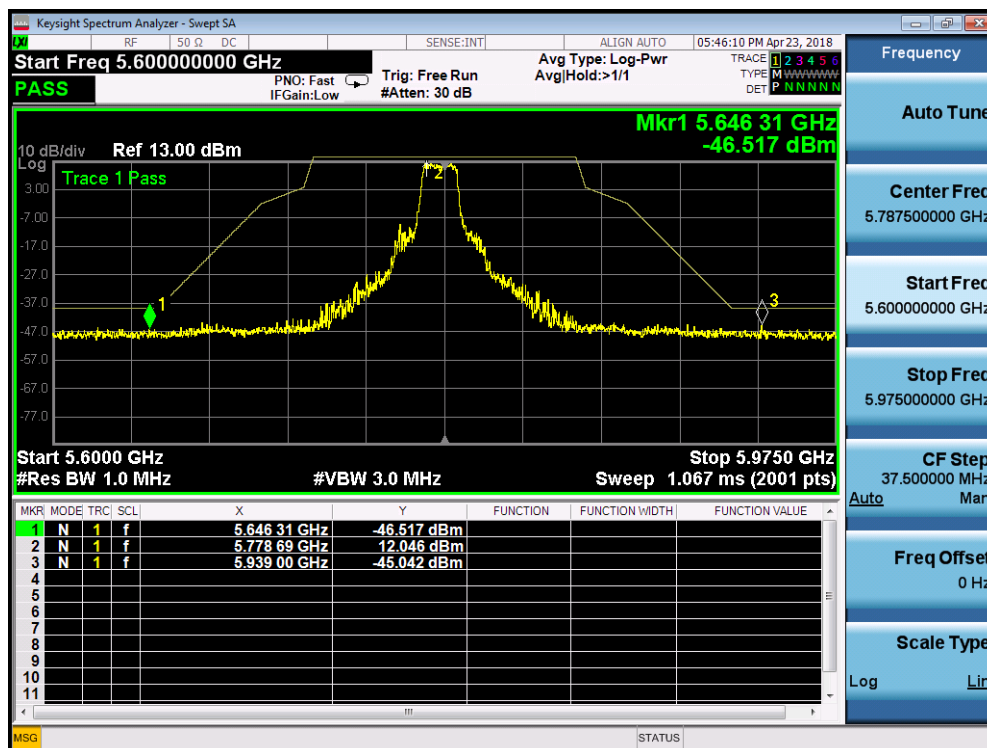


5320MHz by 802.11a:

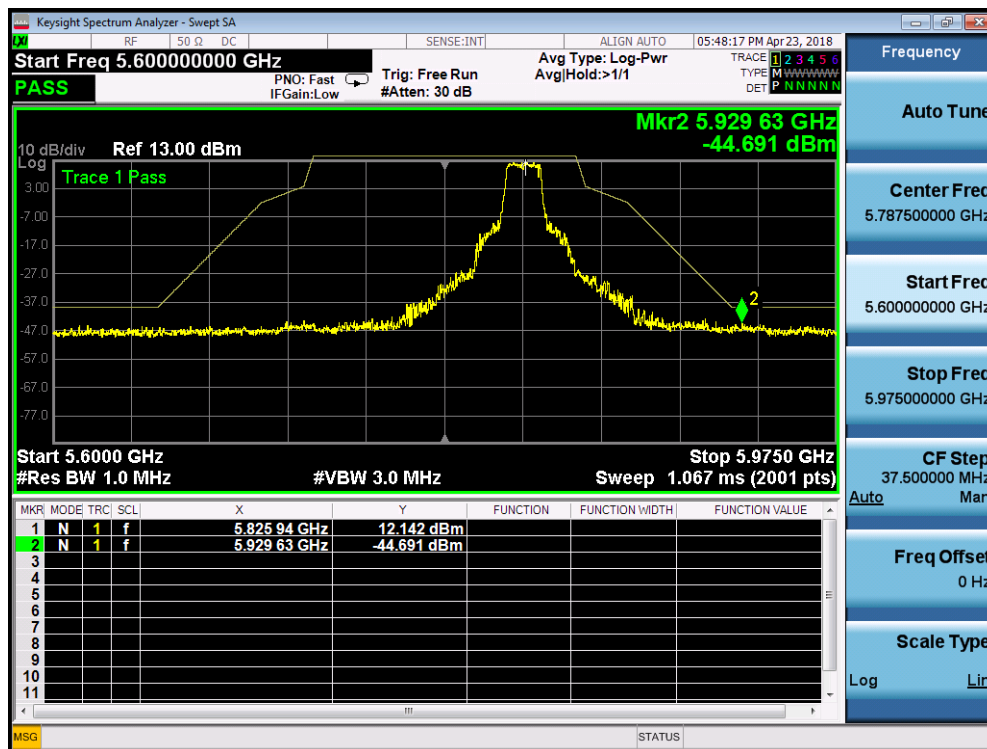


5500MHz by 802.11a:**5745MHz by 802.11a:**

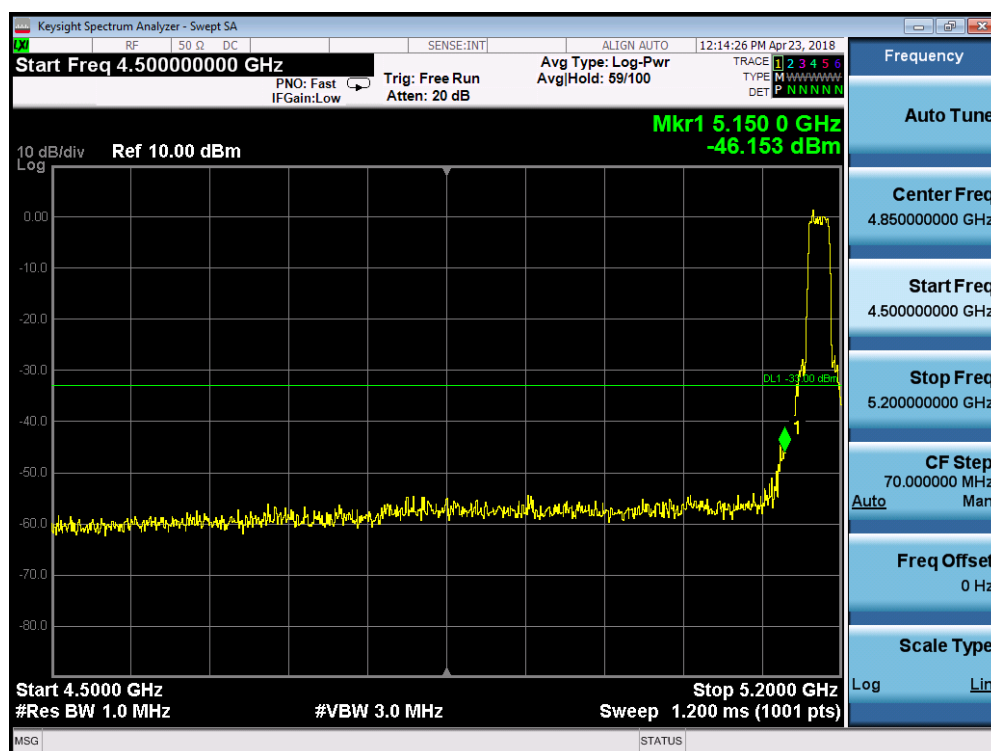
5785MHz by 802.11a:



5825MHz by 802.11a:

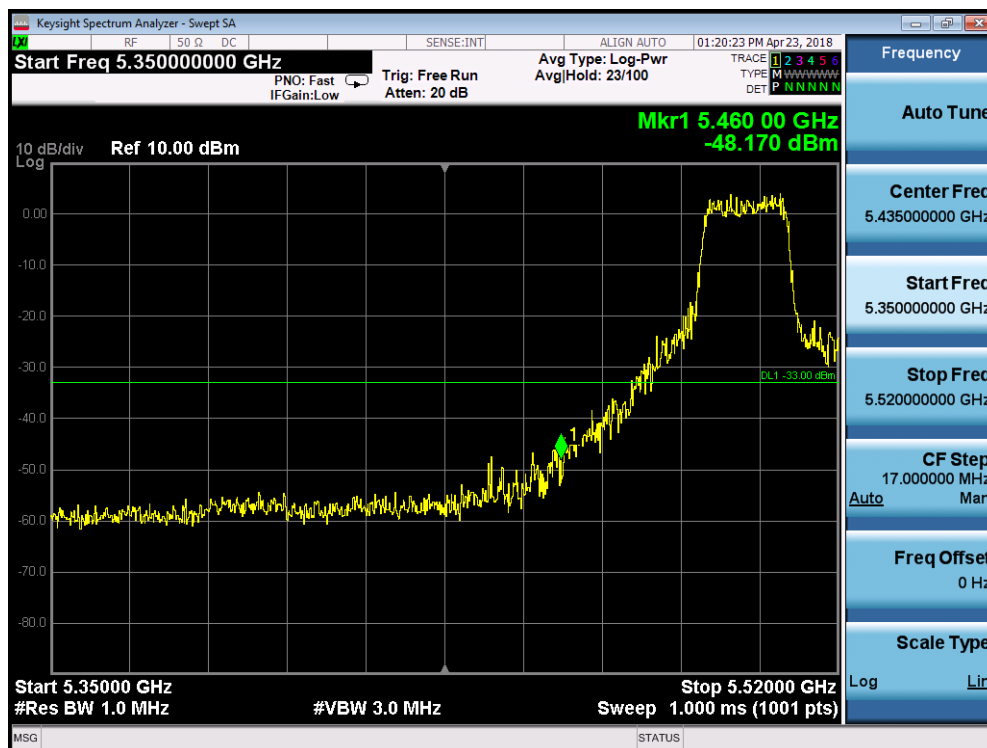
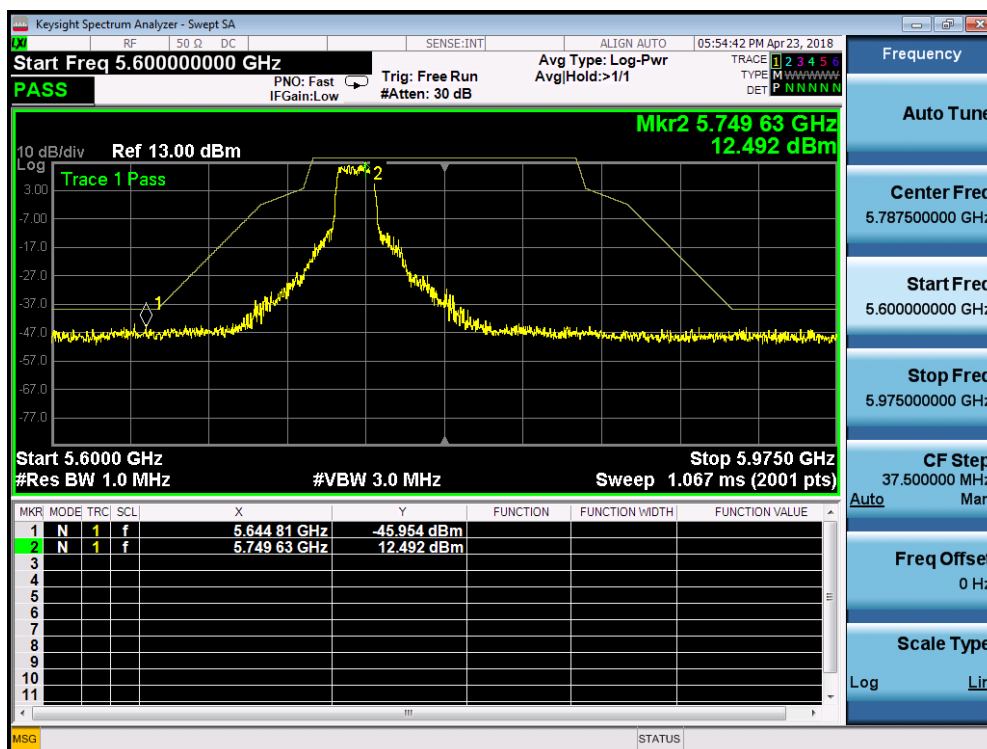


5180MHz by 802.11n(20MHz):

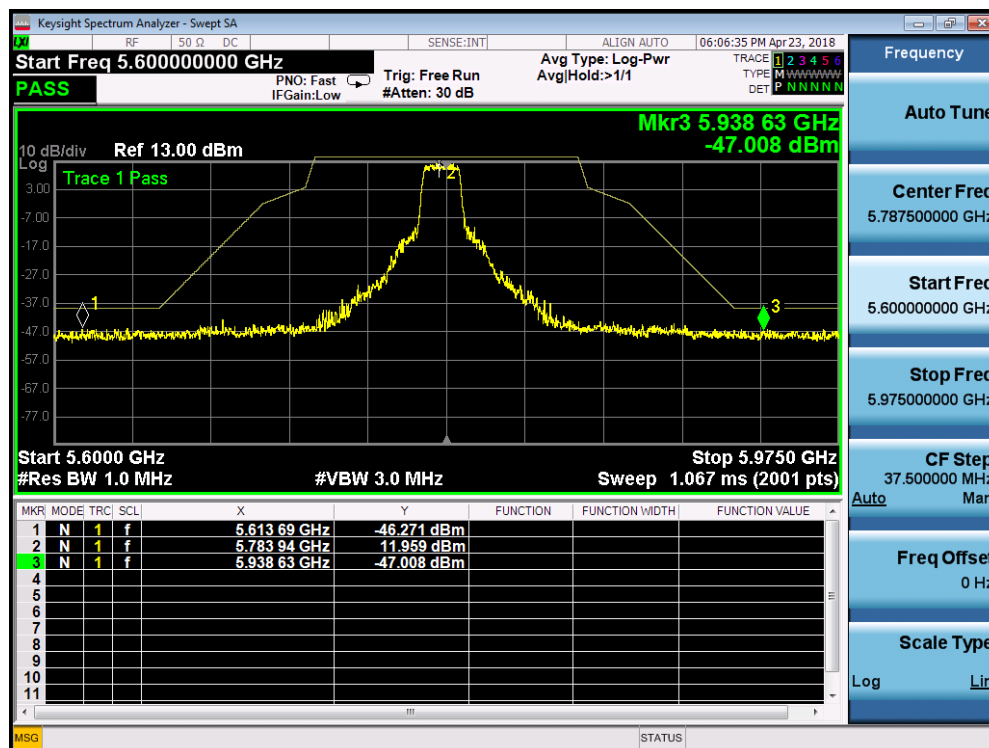


5320MHz by 802.11n(20MHz):

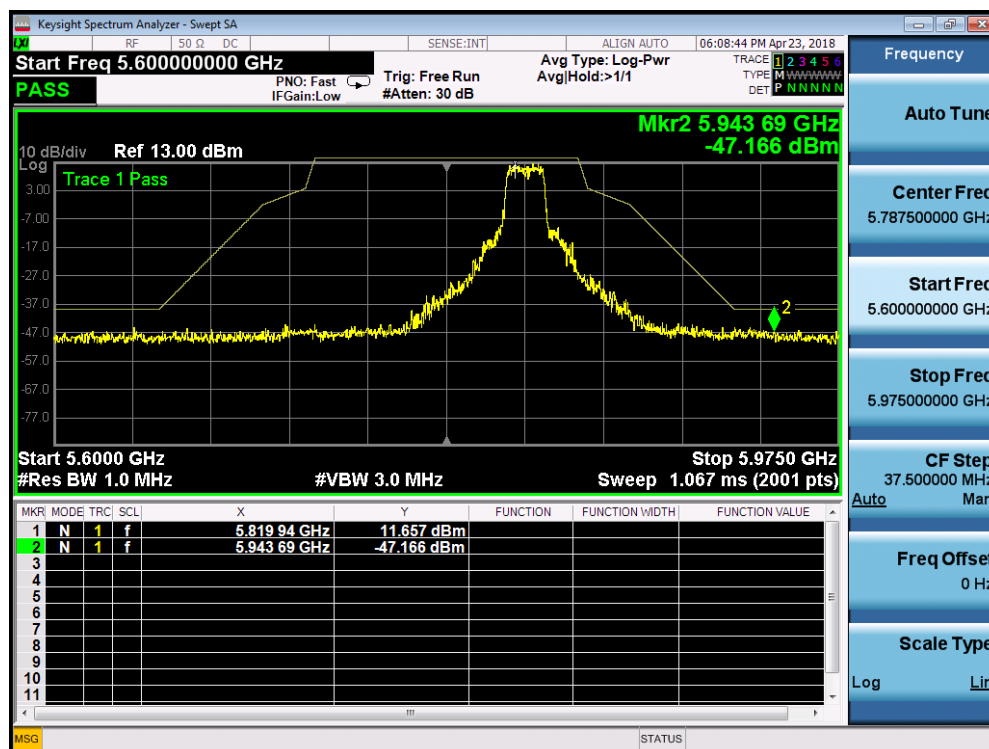


5500MHz by 802.11n(20MHz):**5745MHz by 802.11n(20MHz):**

5785MHz by 802.11n(20MHz):



5825MHz by 802.11n(20MHz):



Keysight Spectrum Analyzer - Swept SA

RF 50 Ω DC SENSE:INT ALIGN:AUTO 12:20:05 PM Apr 23, 2018

Start Freq 4.50000000 GHz Avg Type: Log-Pwr PNO: Fast Trig: Free Run IFGain:Low Atten: 20 dB

Avg/Hold: 64/100 TYPE M DET N

Mkr1 5.150 00 GHz -44.306 dBm

10 dB/div Ref 10.00 dBm Log

Center Freq 4.86000000 GHz

Start Freq 4.50000000 GHz

Stop Freq 5.22000000 GHz

CF Step 72.000000 MHz Auto Man

Freq Offset 0 Hz

Scale Type Log Lin

Start 4.5000 GHz Stop 5.2200 GHz #Res BW 1.0 MHz Sweep 1.200 ms (1001 pts) #VBW 3.0 MHz

Keysight Spectrum Analyzer - Swept SA

RF 50 Ω DC SENSE:INT ALIGN: AUTO 12:50:45 PM Apr 23, 2018

Start Freq 5.29000000 GHz PNO: Fast IFGain:Low Trig: Free Run Avg Type: Log-Pwr Avg/Hold: >100/100 TYPE: M DET: P

10 dB/div Ref 10.00 dBm

Mkr1 5.350 00 GHz -48.673 dBm

0.00 -10.0 -20.0 -30.0 -40.0 -50.0 -60.0 -70.0 -80.0

Log

Start 5.29000 GHz #Res BW 1.0 MHz #VBW 3.0 MHz Stop 5.46000 GHz Sweep 1.000 ms (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq 5.37500000 GHz

Start Freq 5.29000000 GHz

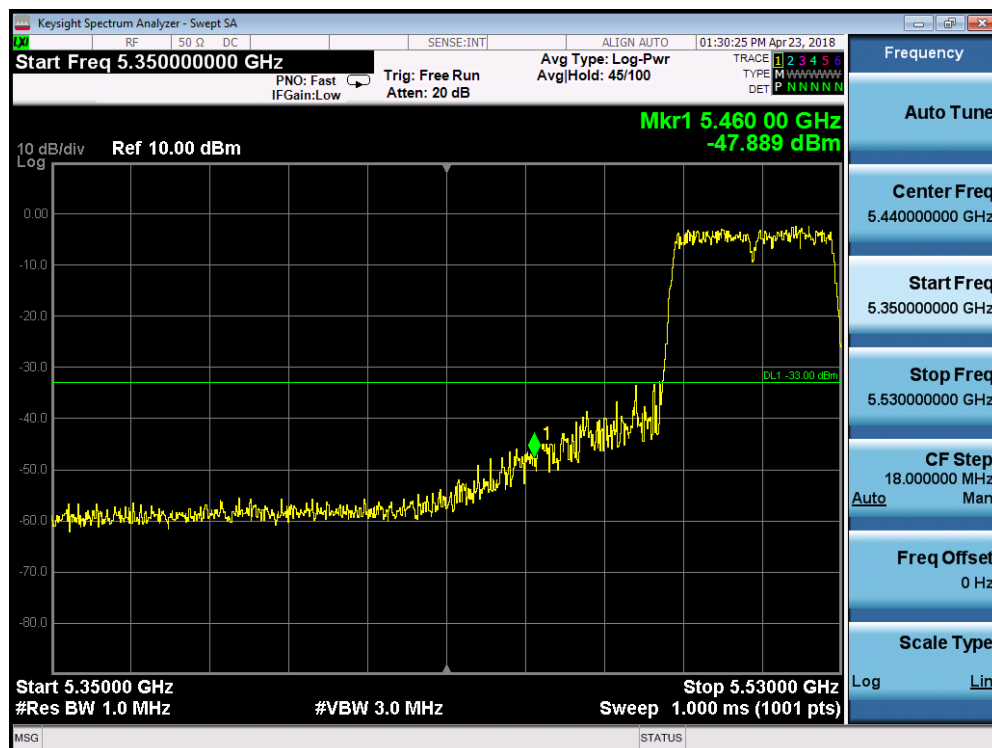
Stop Freq 5.46000000 GHz

CF Step 17.000000 MHz

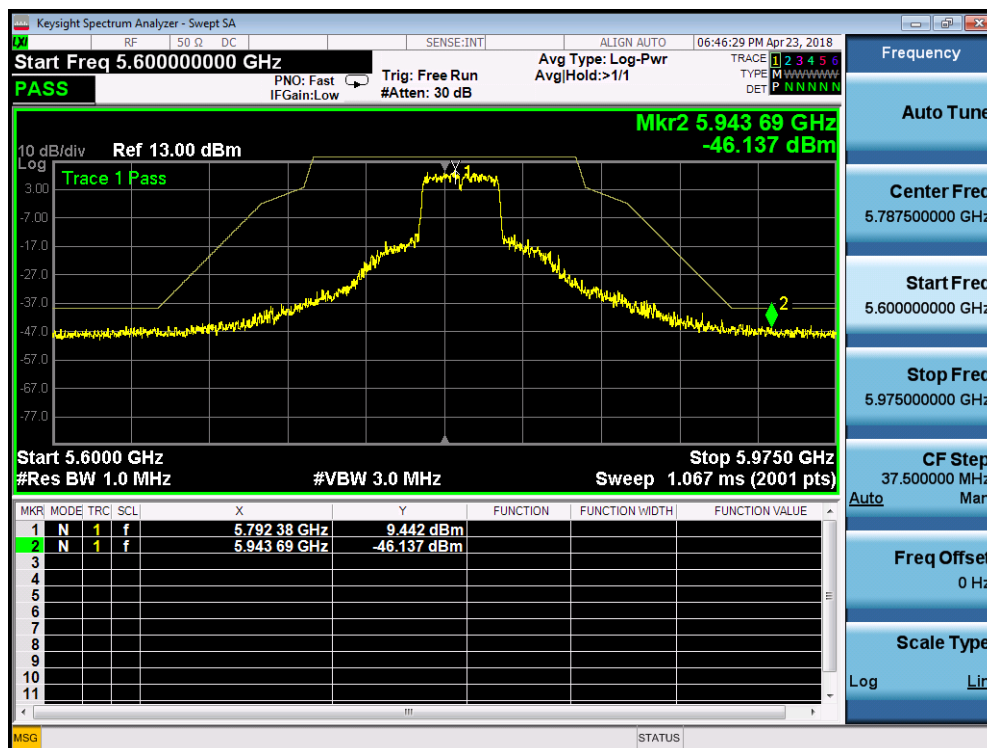
Auto Man

Freq Offset 0 Hz

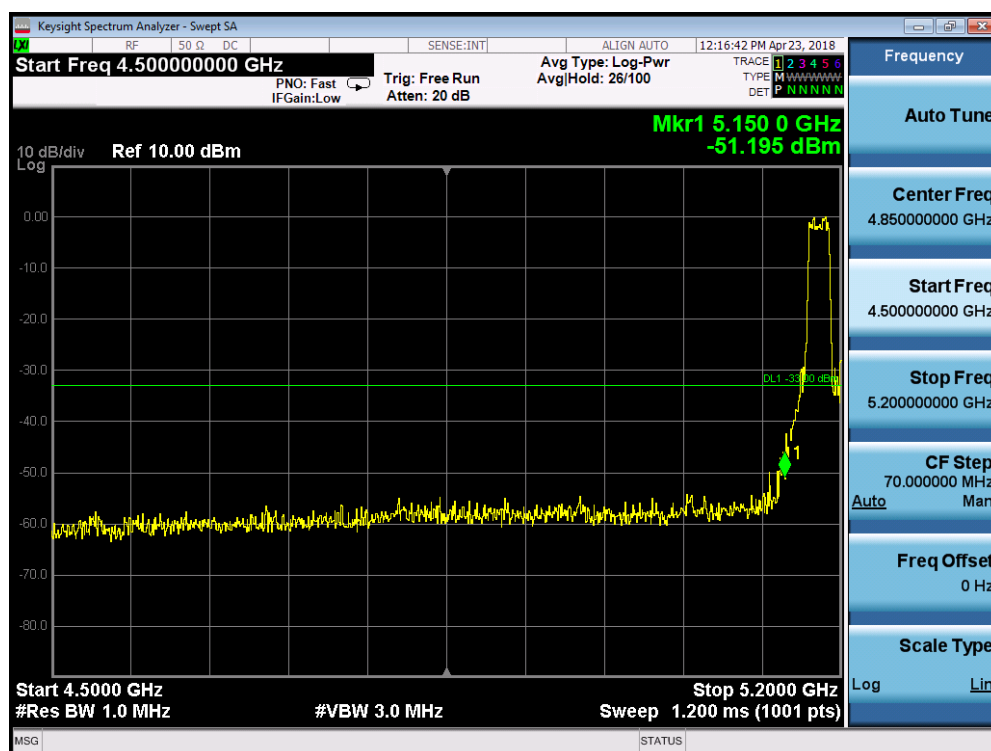
Scale Type Log Lin

5510MHz by 802.11n(40MHz):**5755MHz by 802.11n(40MHz):**

5795MHz by 802.11n(40MHz):



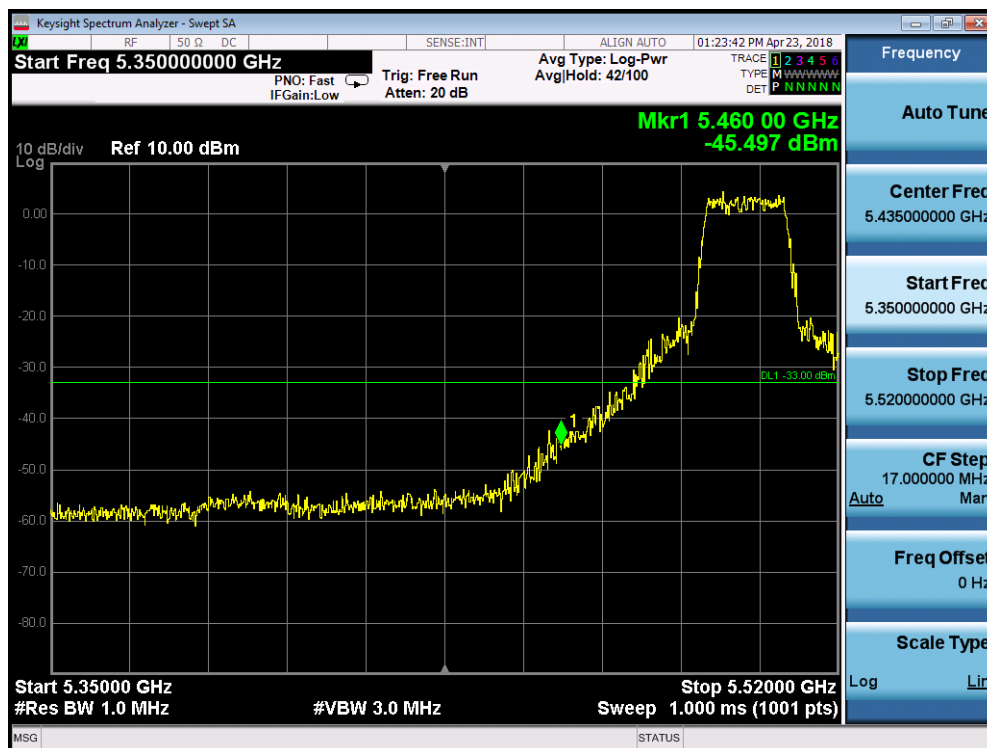
5180MHz by 802.11ac(20MHz):



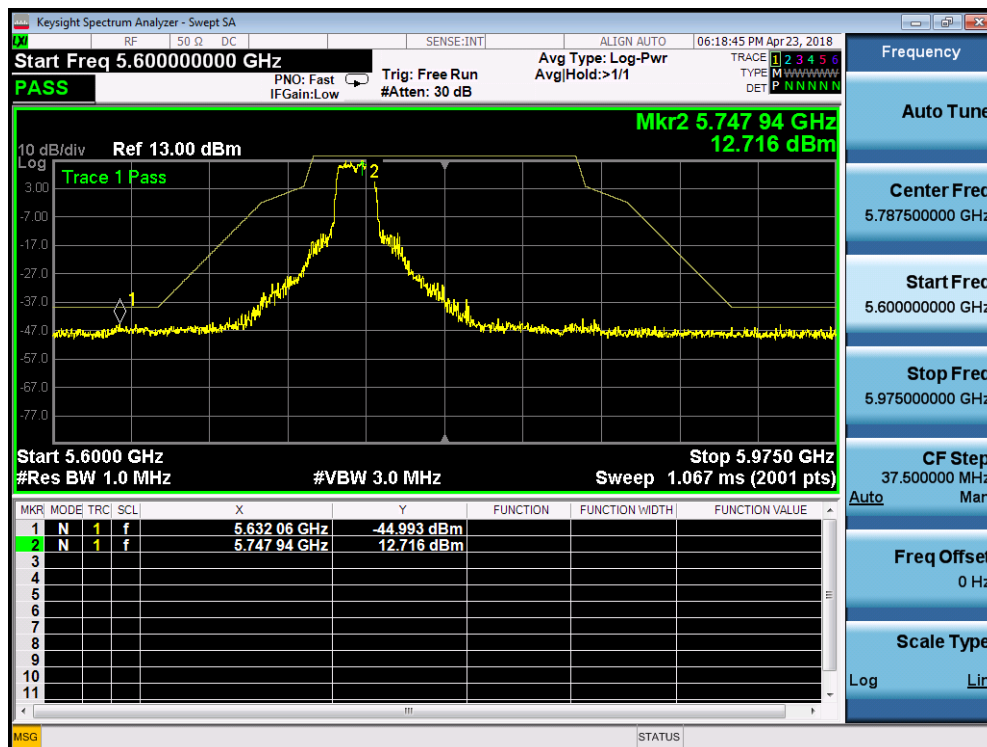
5320MHz by 802.11ac(20MHz):



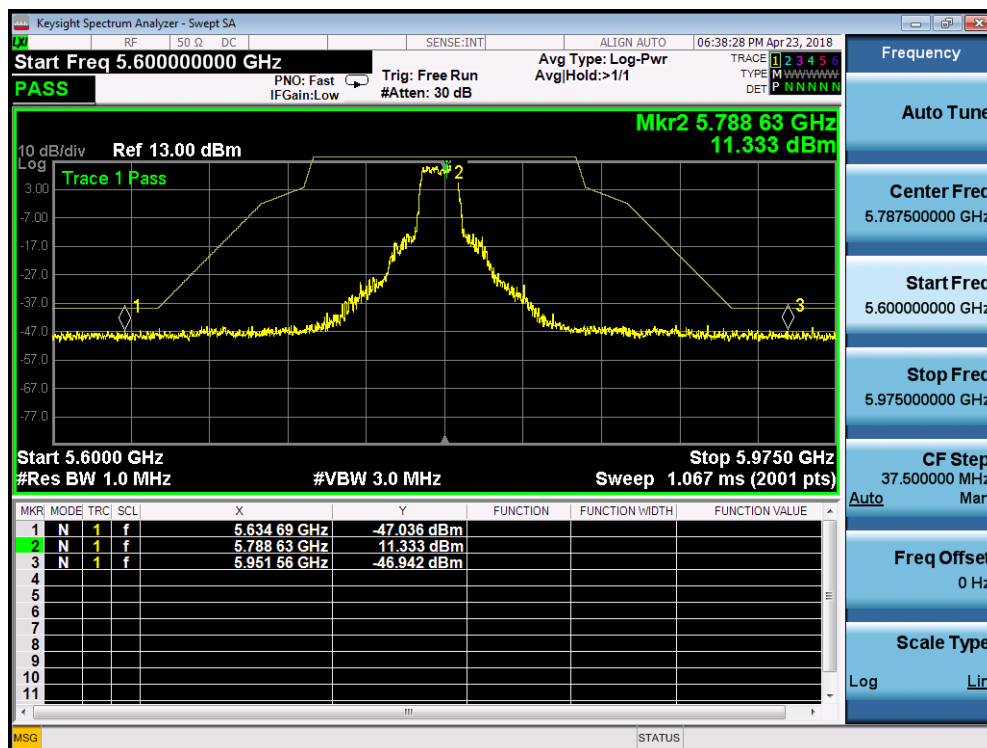
5500MHz by 802.11ac(20MHz):



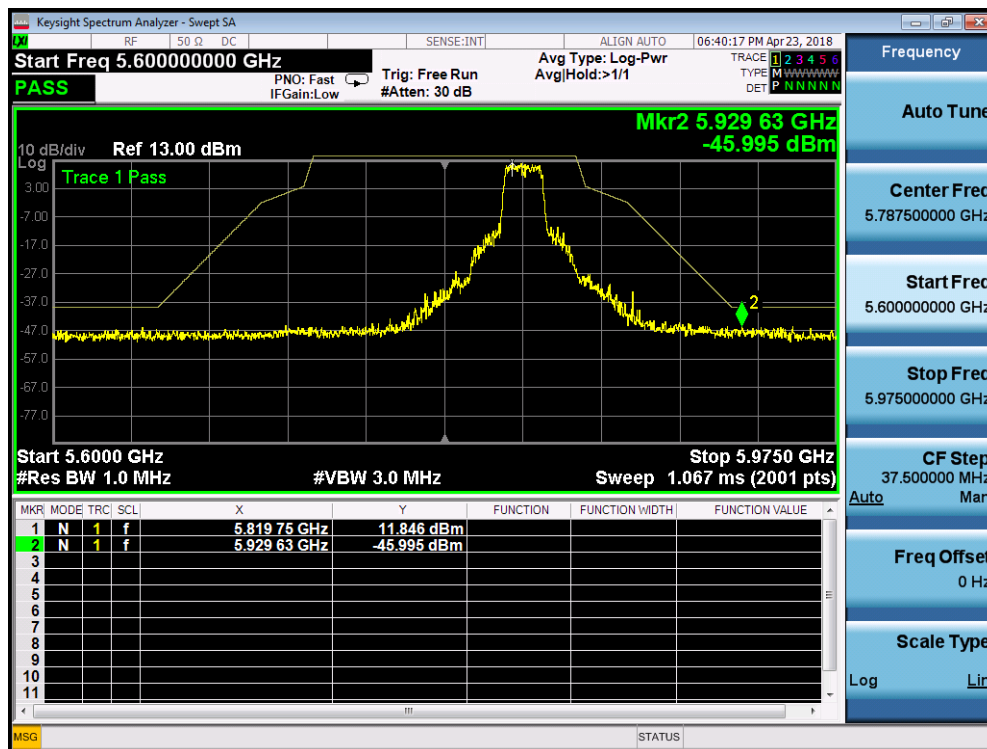
5745MHz by 802.11ac(20MHz):

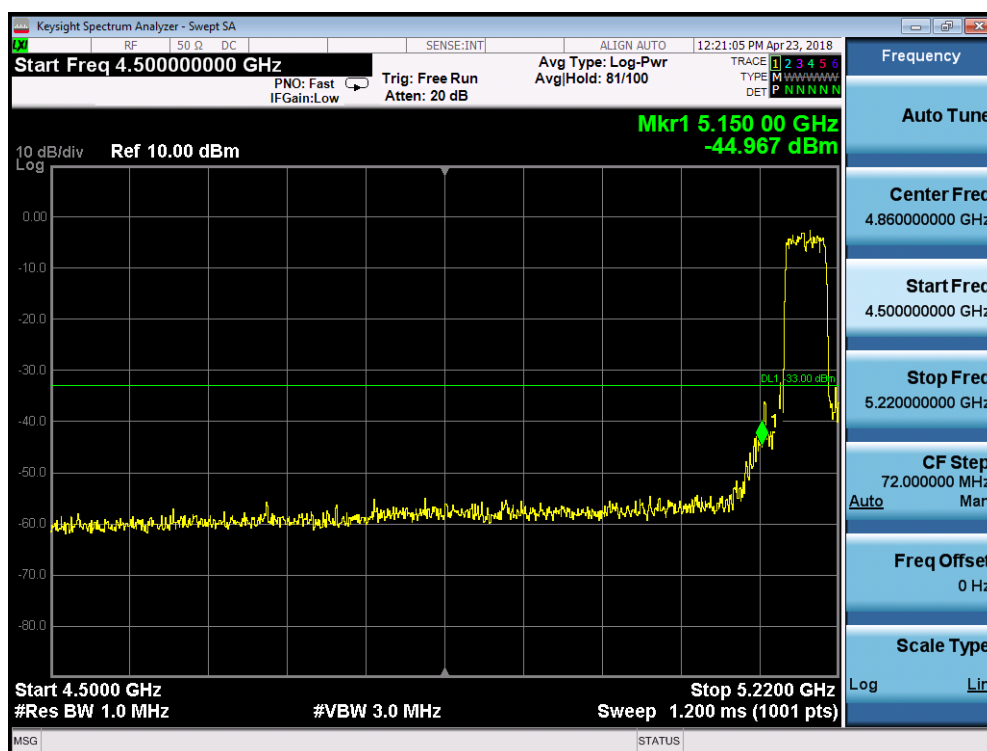
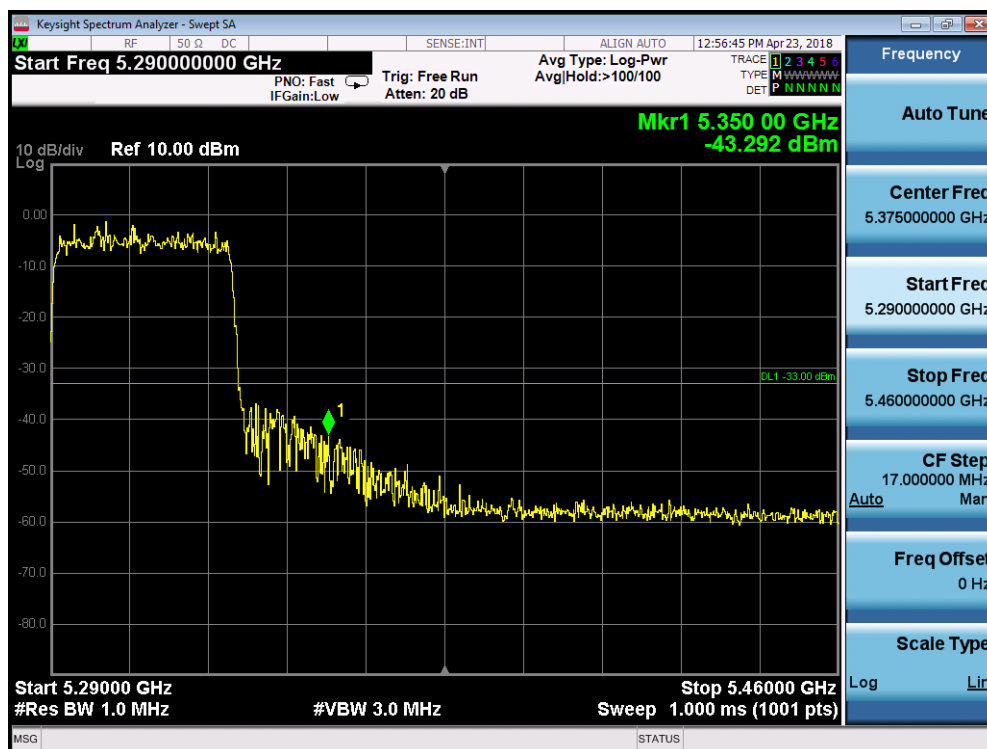


5785MHz by 802.11ac(20MHz):

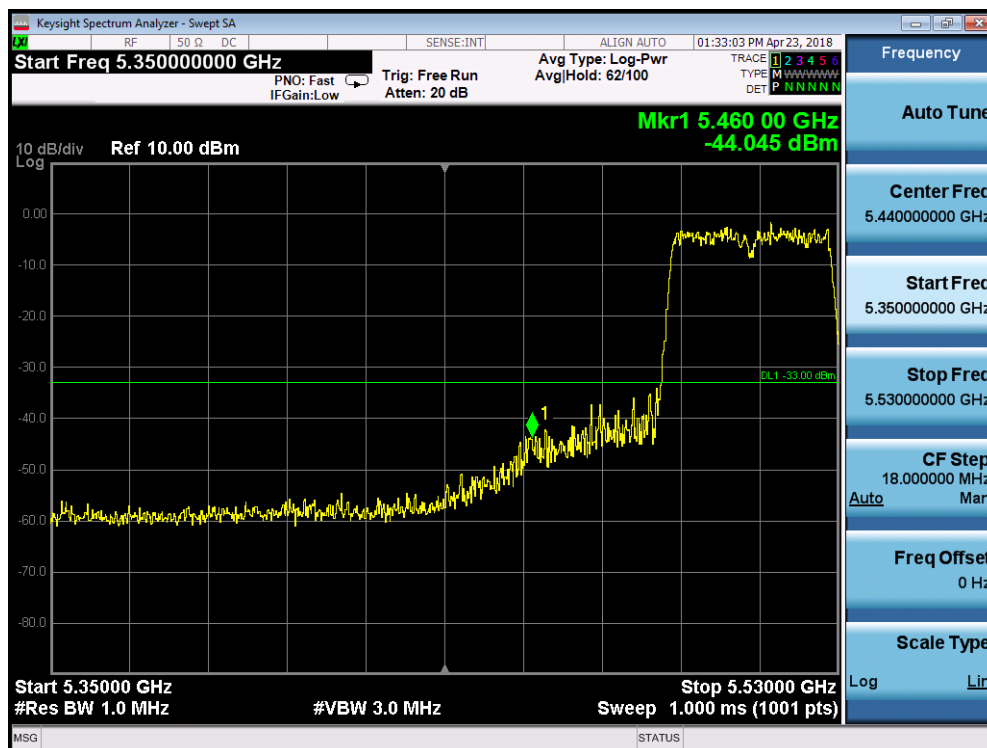


5825MHz by 802.11ac(20MHz):



5190MHz by 802.11ac(40MHz):**5310MHz by 802.11ac(40MHz):**

5510MHz by 802.11ac(40MHz):



5755MHz by 802.11ac(40MHz):



5795MHz by 802.11ac(40MHz):

