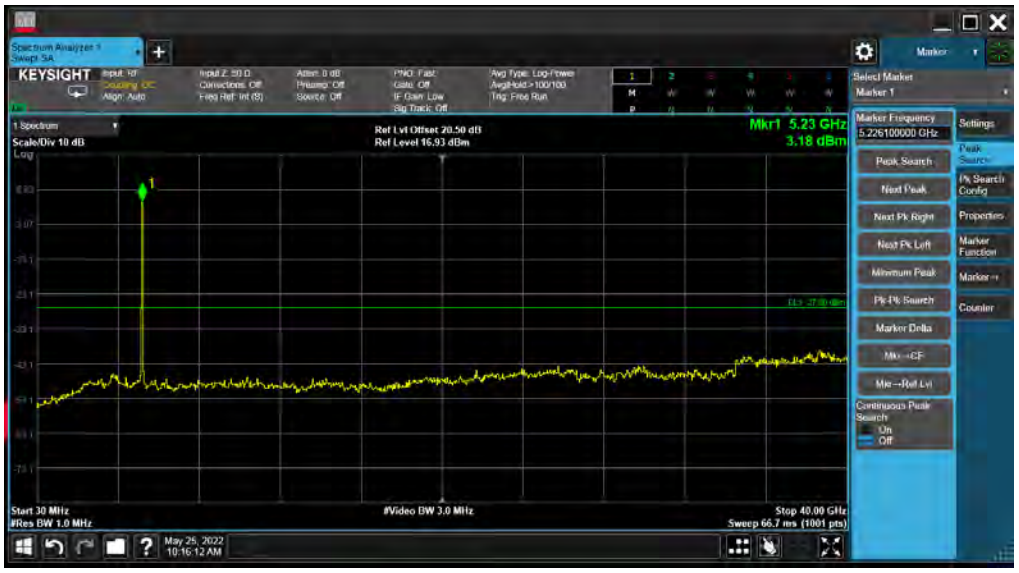
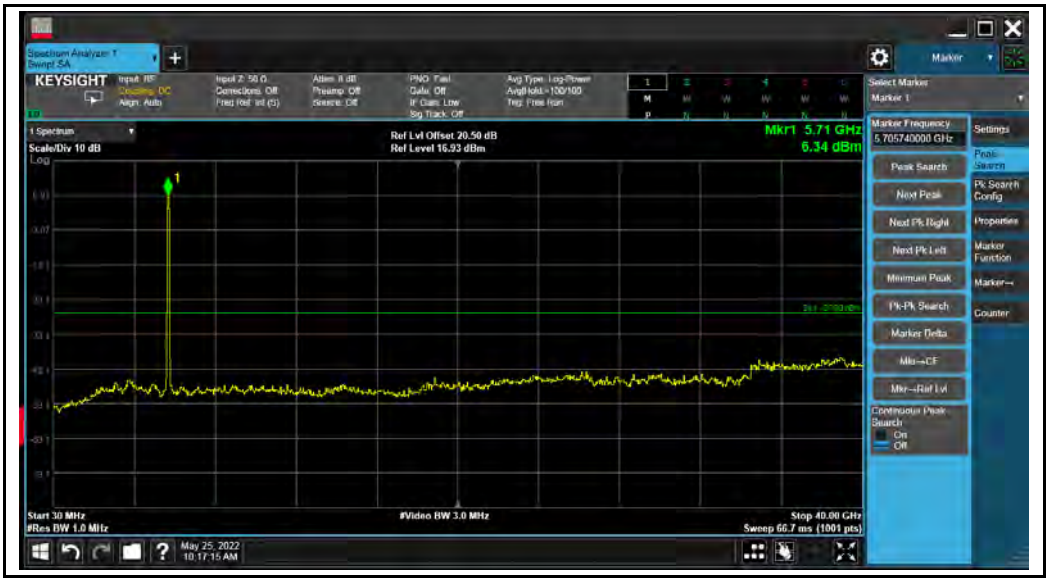


802.11ax40 ch46



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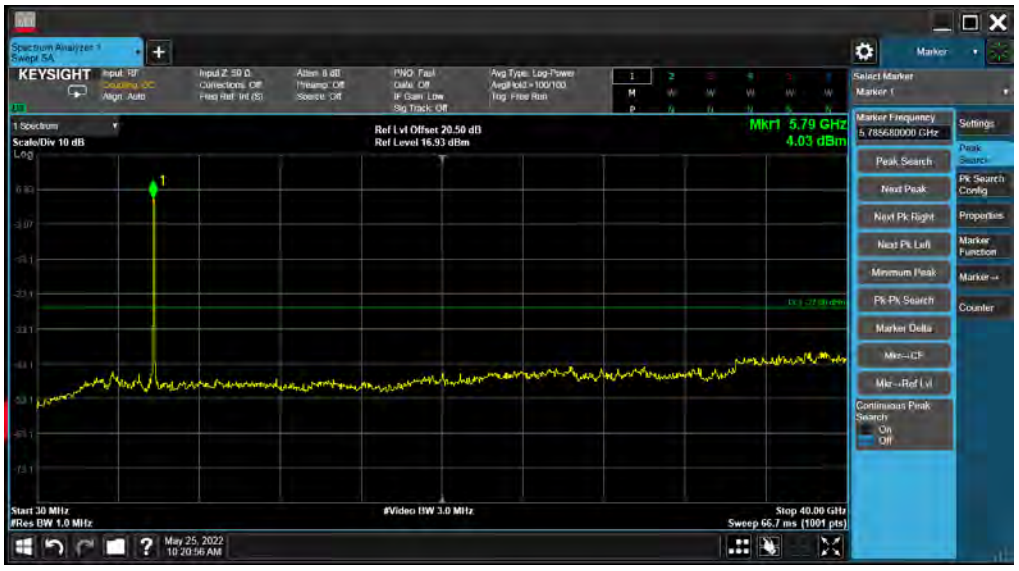
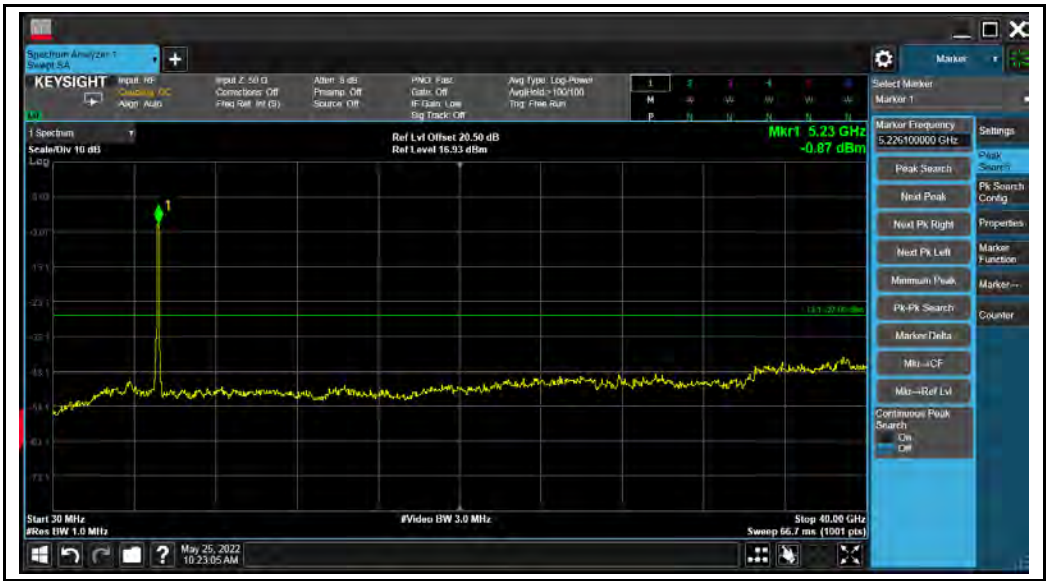
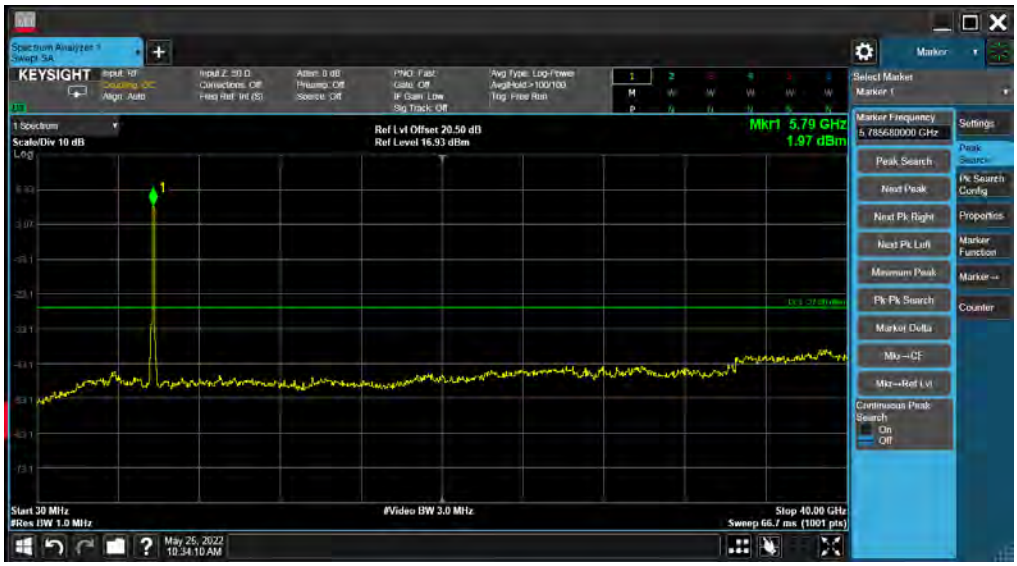


802.11ax40 ch159

11ac 80

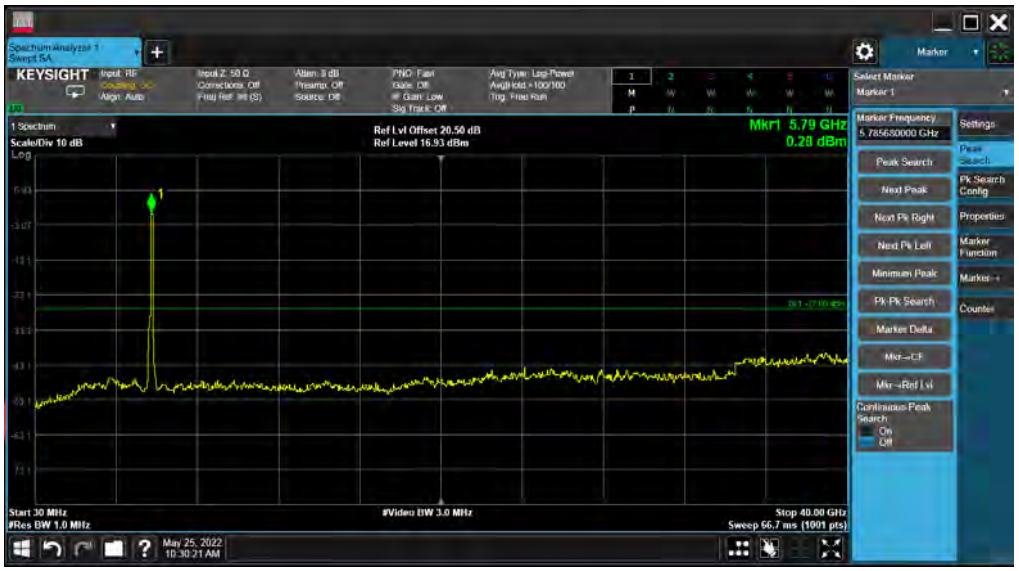


802.11ax80 ch42



802.11ax80 ch155

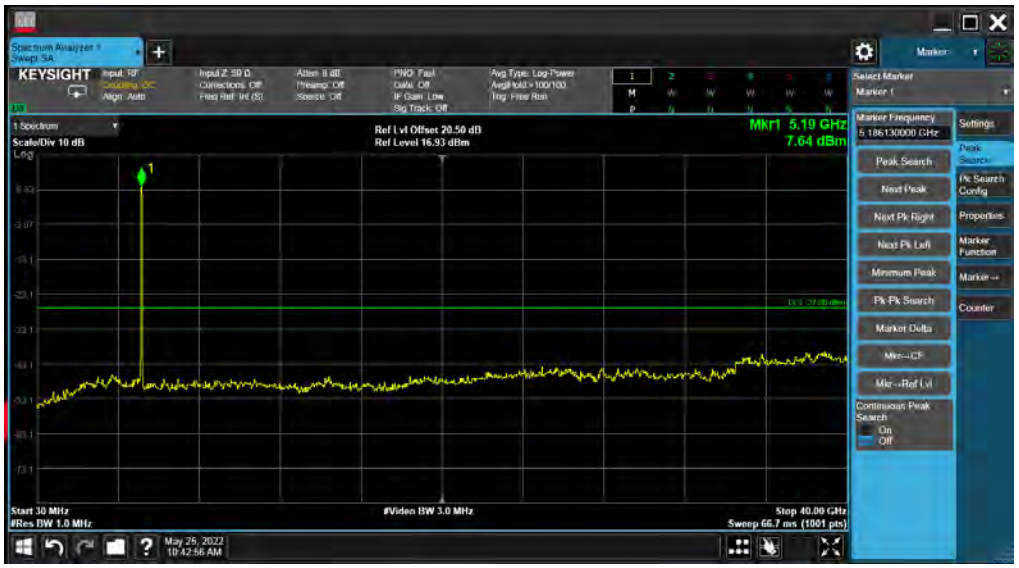
802.11ac80 ch42



802.11ac80 ch155

Path B Conducted Spurious 11a20

802.11a ch36



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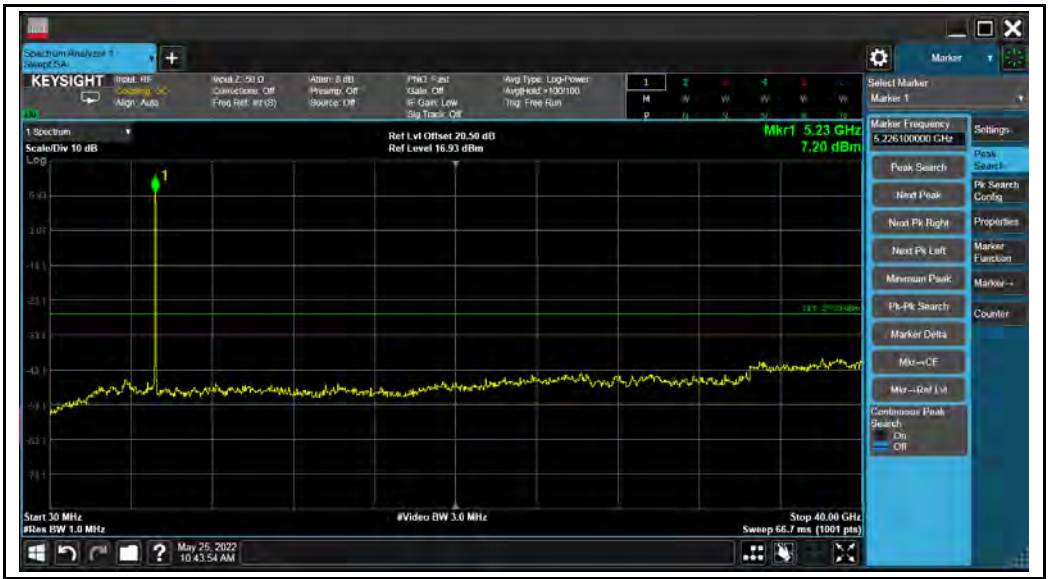
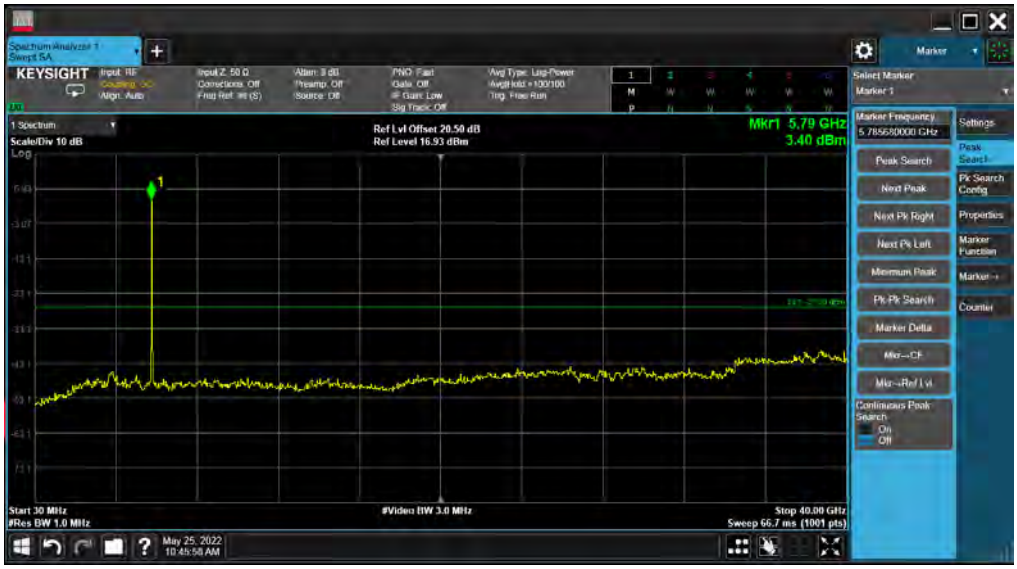


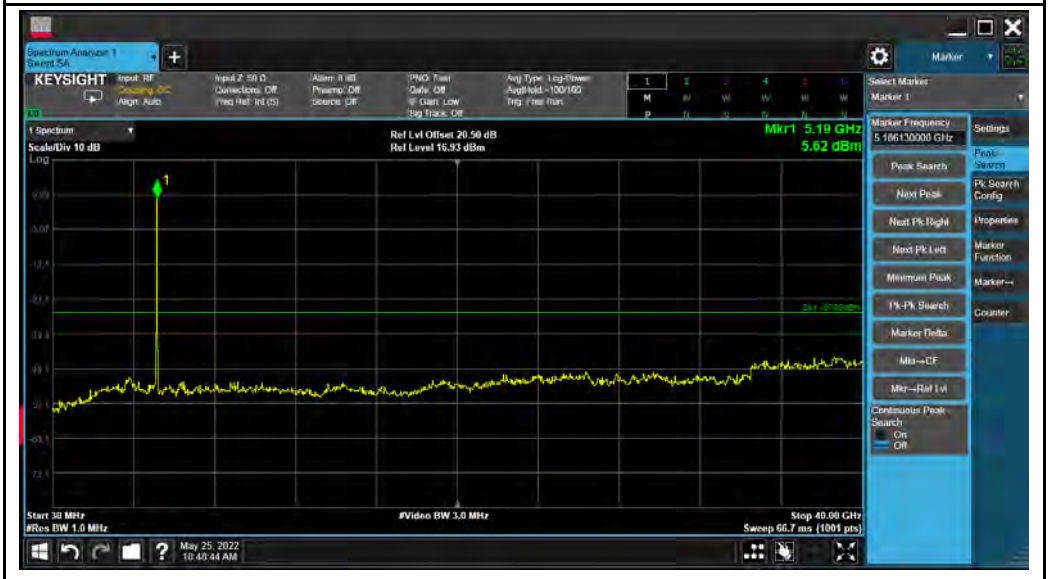
802.11a ch48

802.11a ch149



802.11a ch157

802.11a ch165



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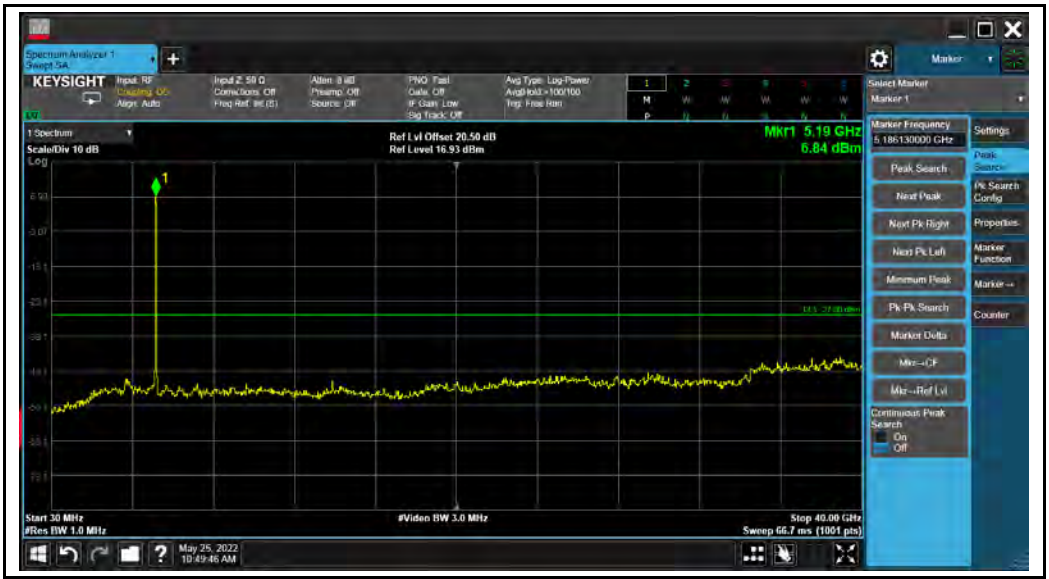

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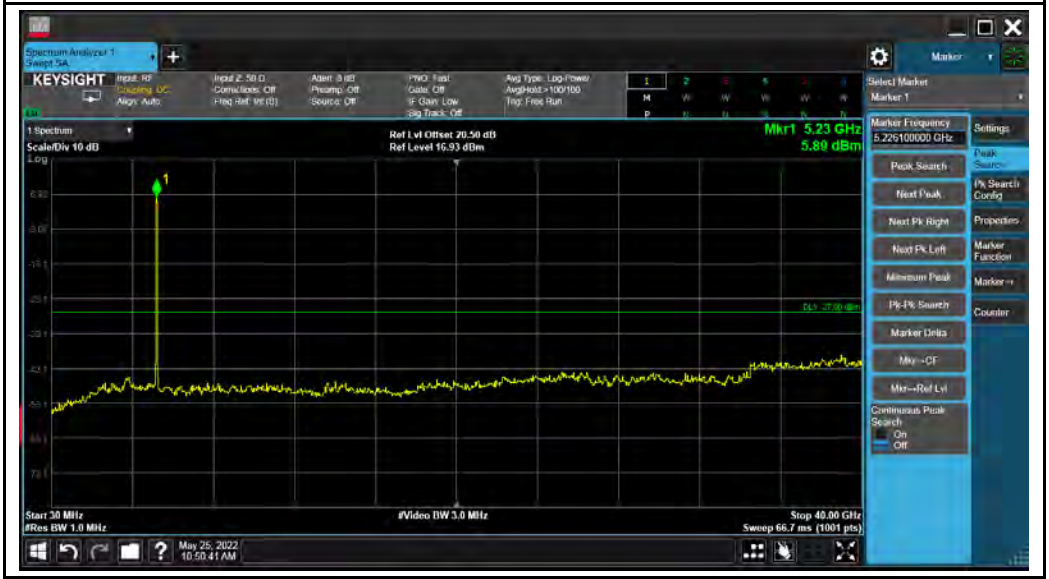

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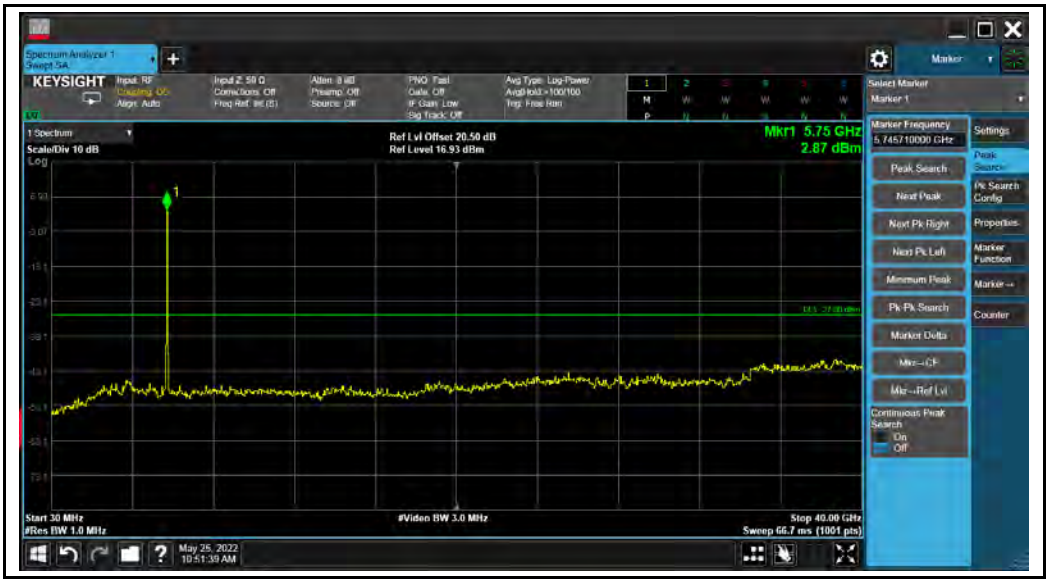

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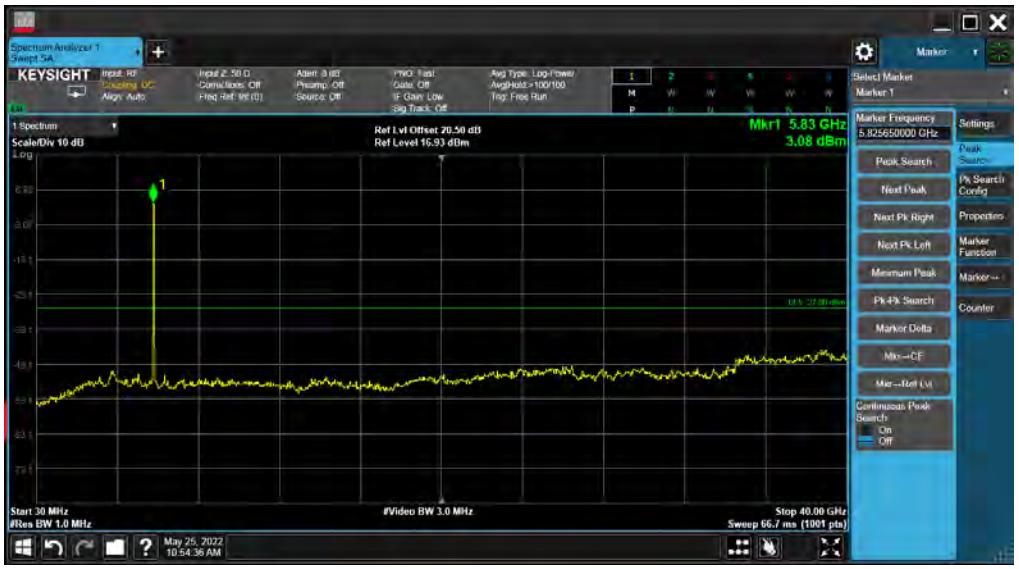
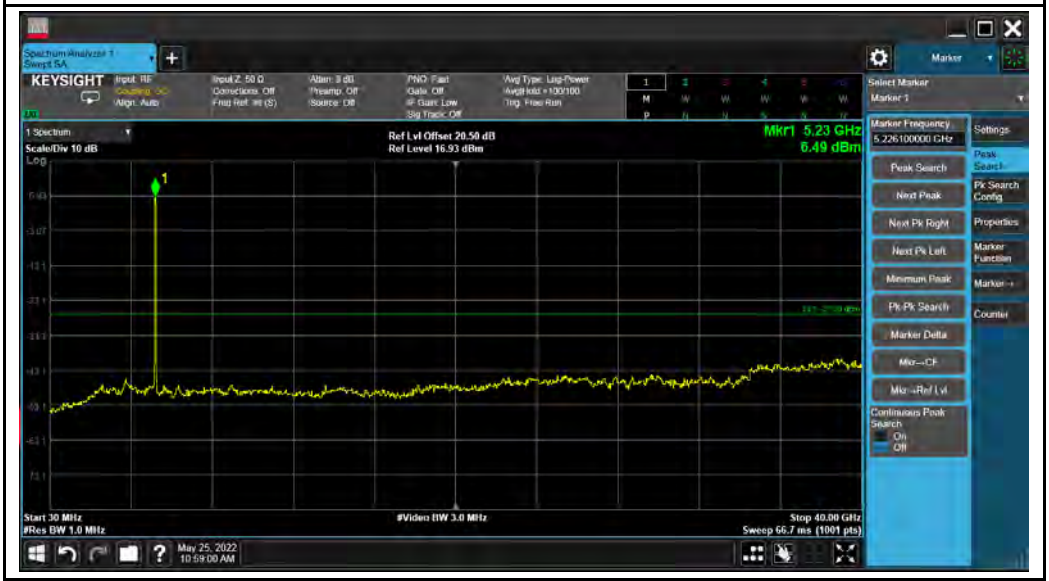
802.11n ch157



802.11n ch165

802.11ac ch36

802.11ac ch40



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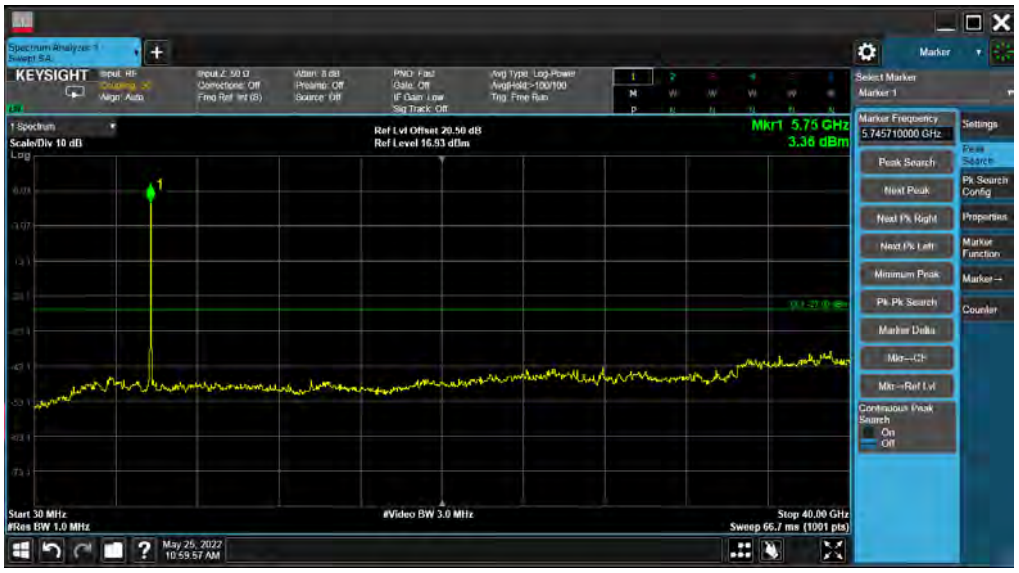

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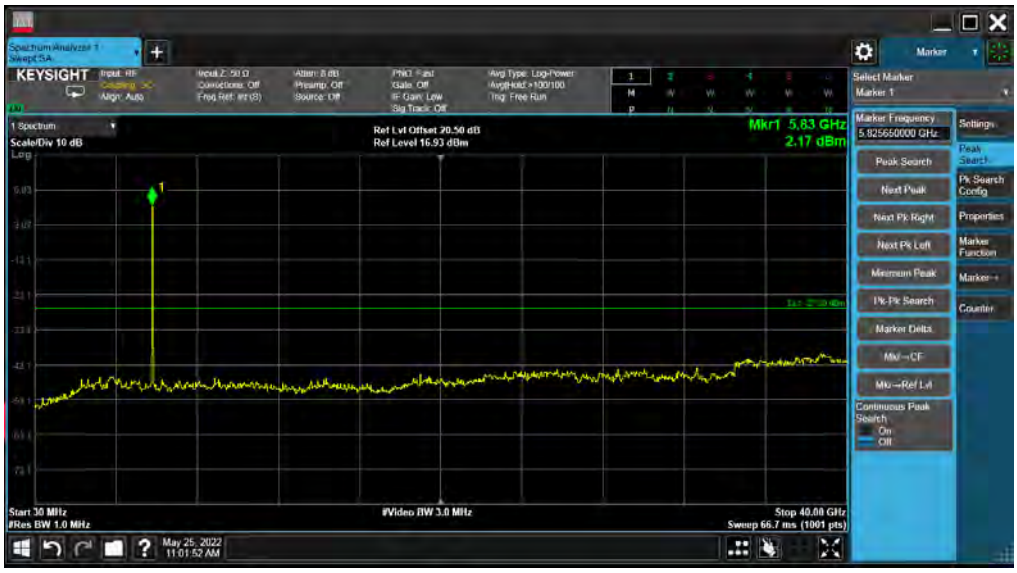

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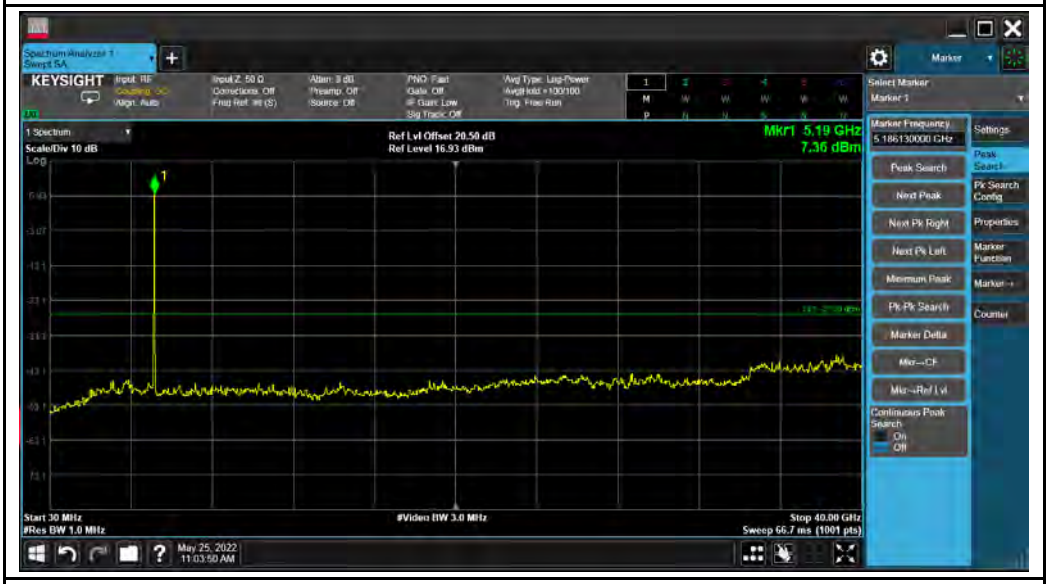

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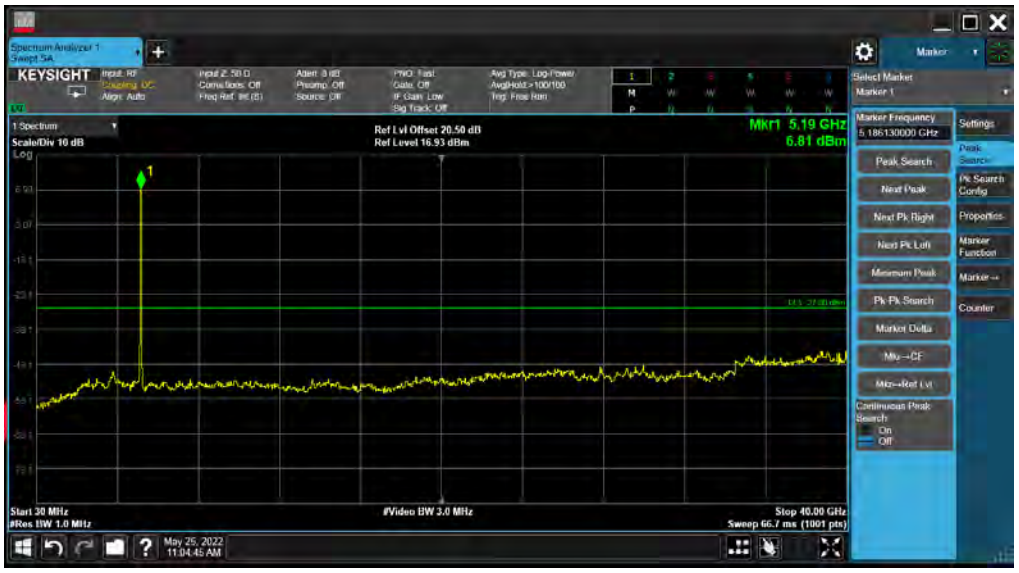

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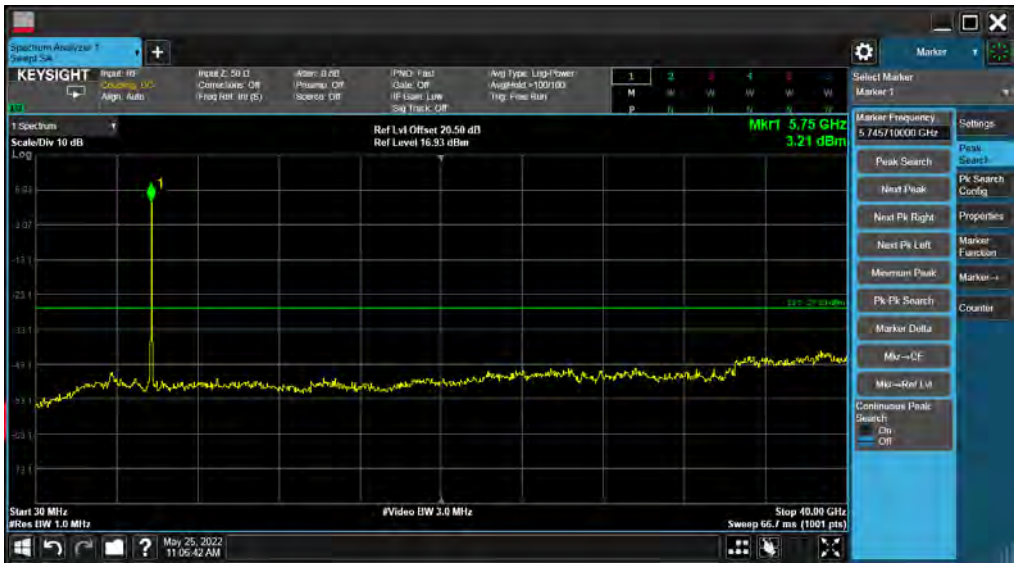
802.11ax ch48



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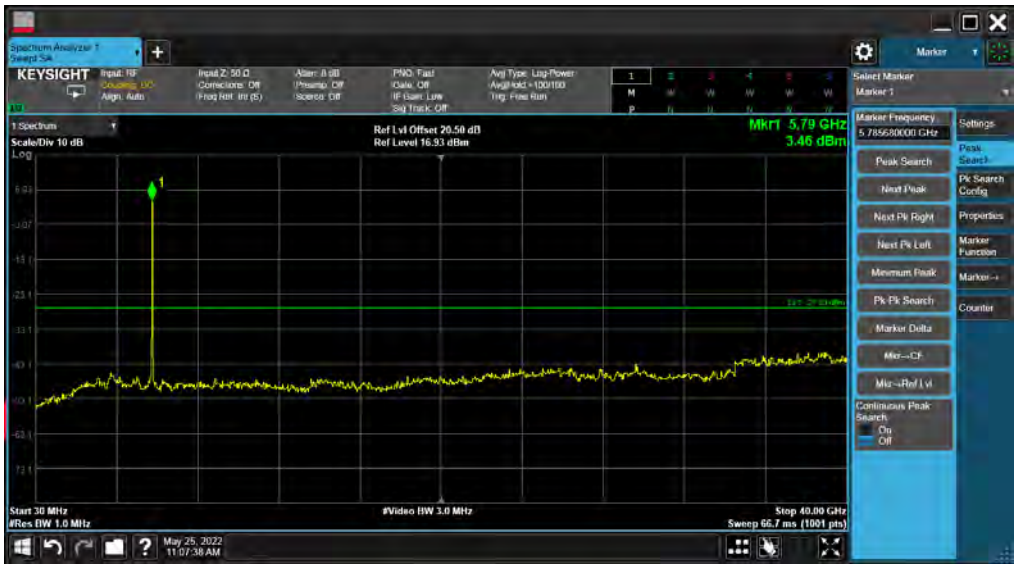

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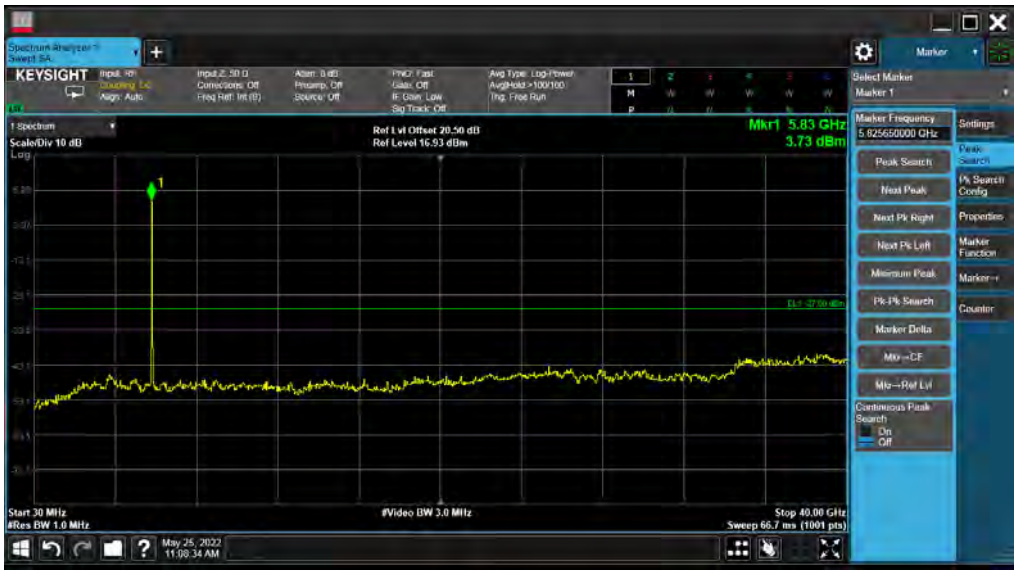
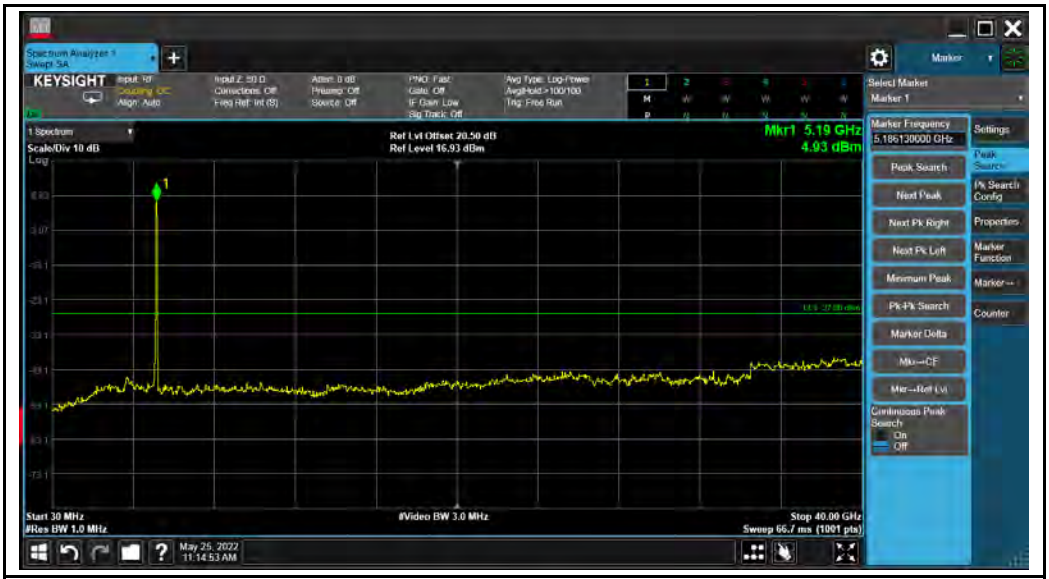
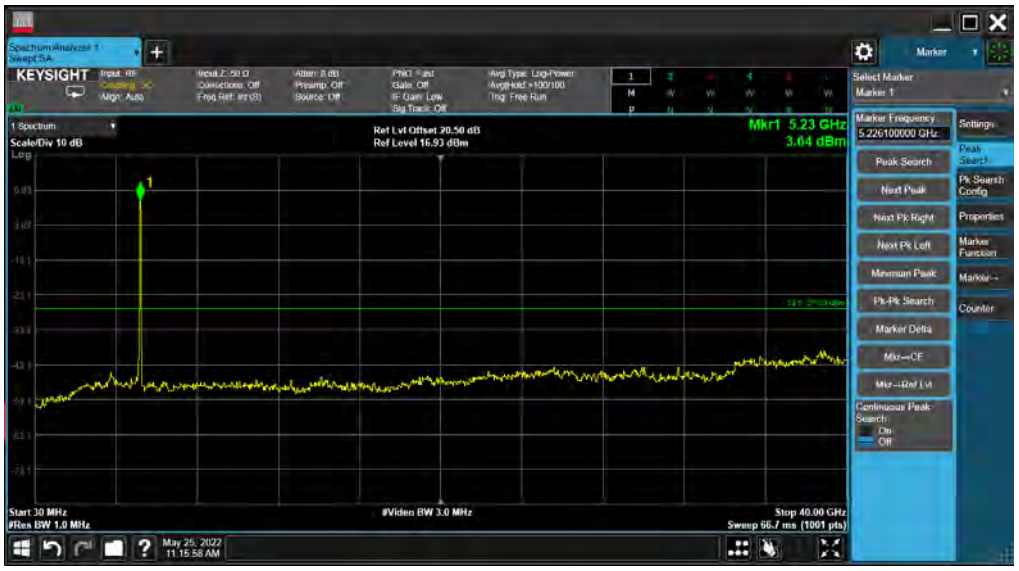


802.11ax ch165

11n 40

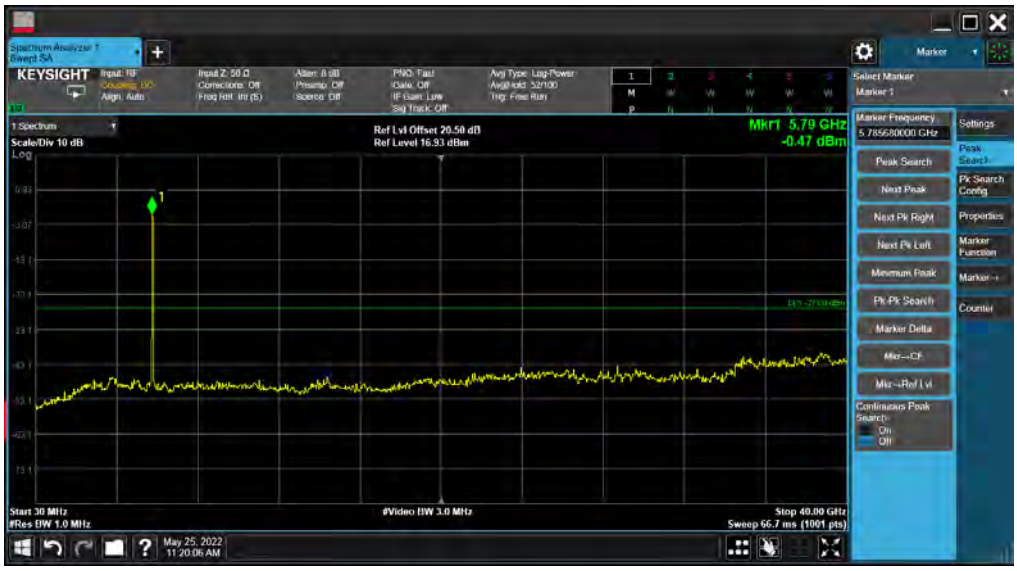


802.11n40 ch38



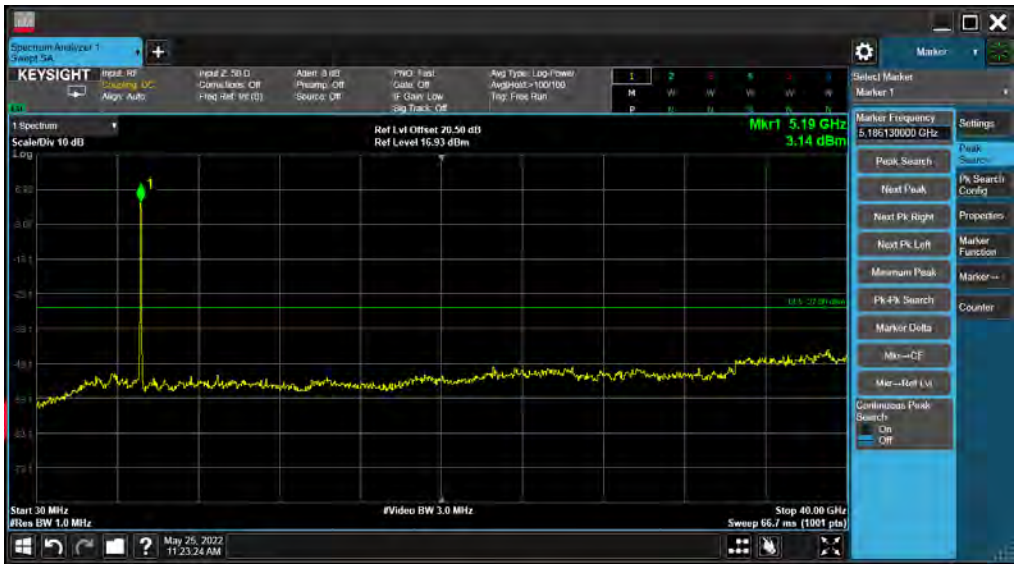
802.11n40 ch46

802.11 n40 ch151



802.11n40 ch159

11ac 40



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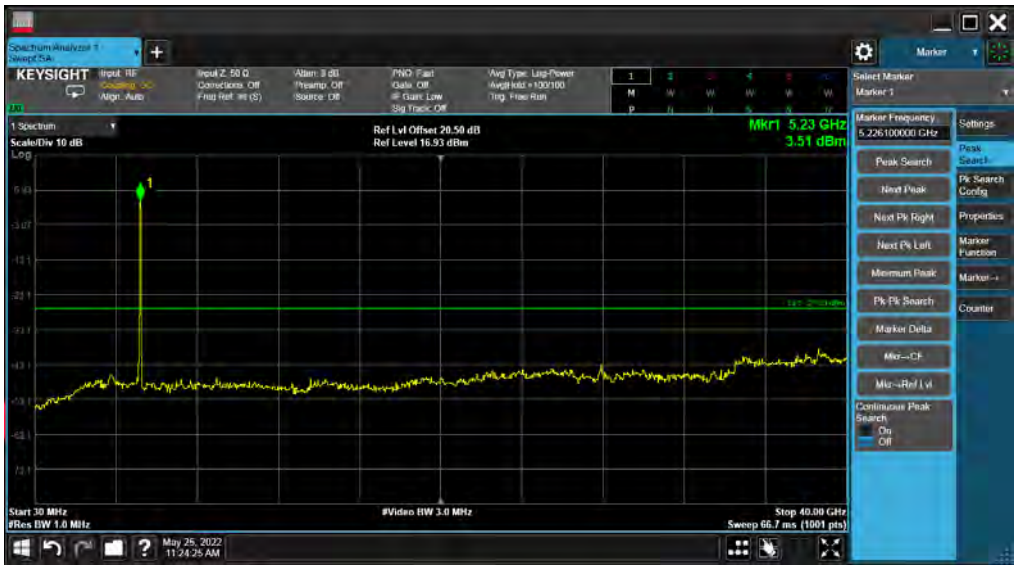
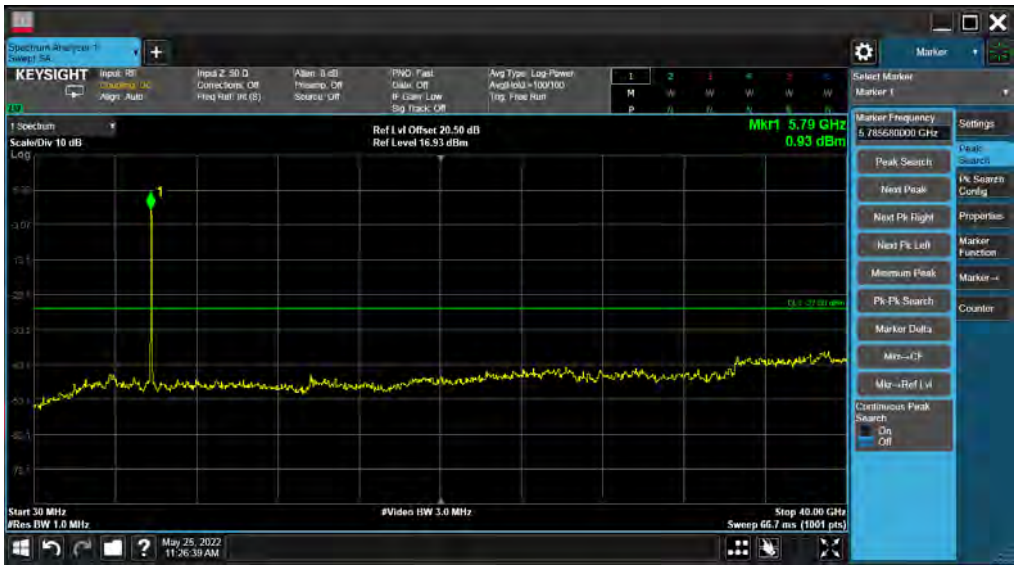


802.11nac40 ch46

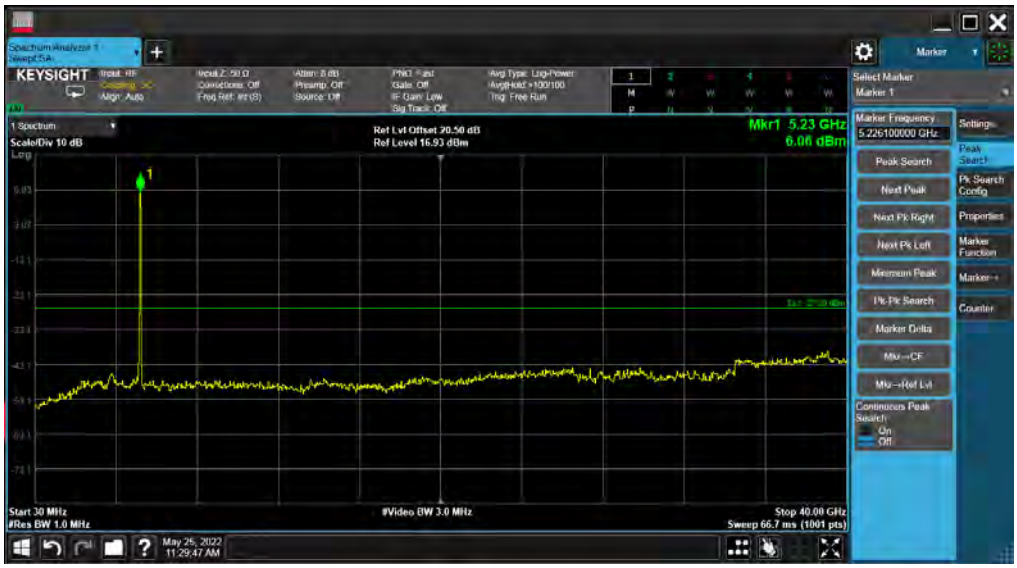
802.11 ac40 ch151



802.11ac ch159

11ax 40

802.11ax40 ch38



802.11ax40 ch46

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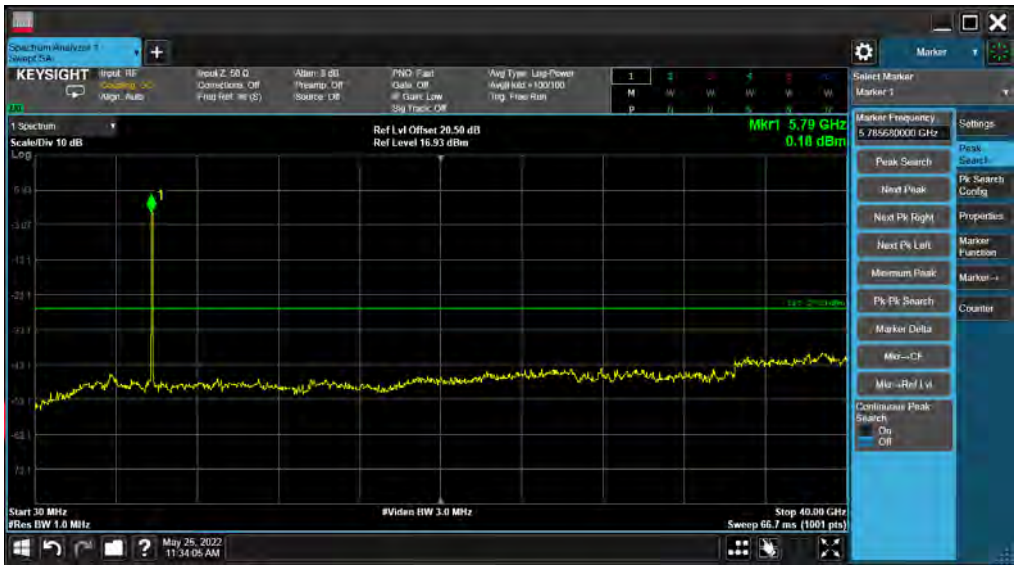
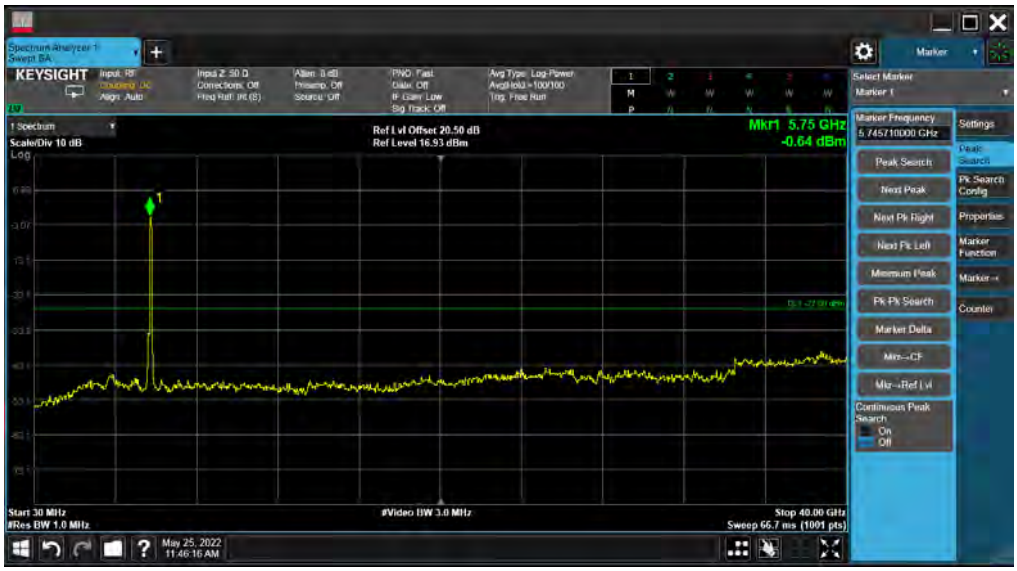


802.11ax40 ch159

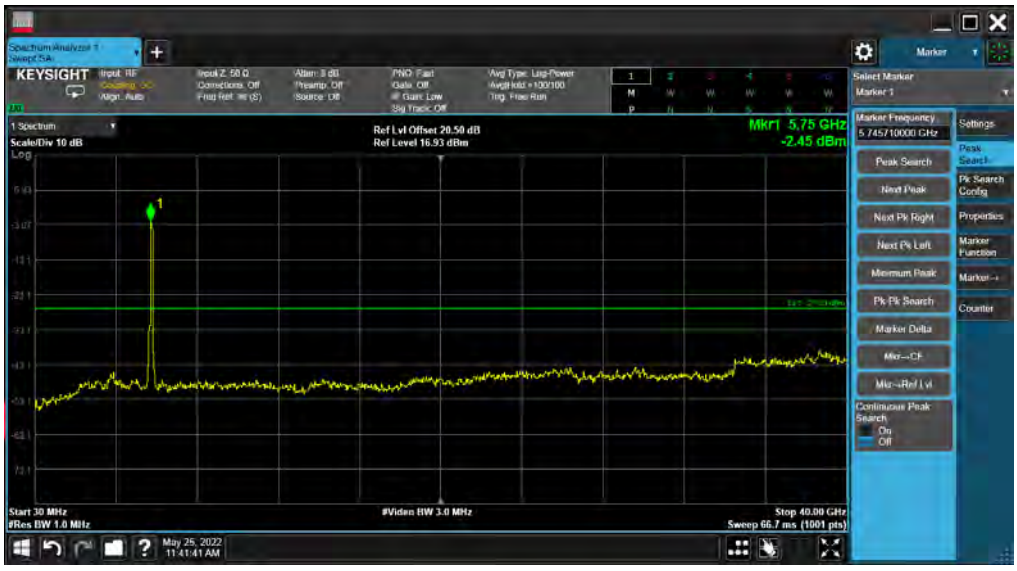
11ac 80

802.11ax80 ch42



802.11ax80 ch155

802.11ac80 ch42



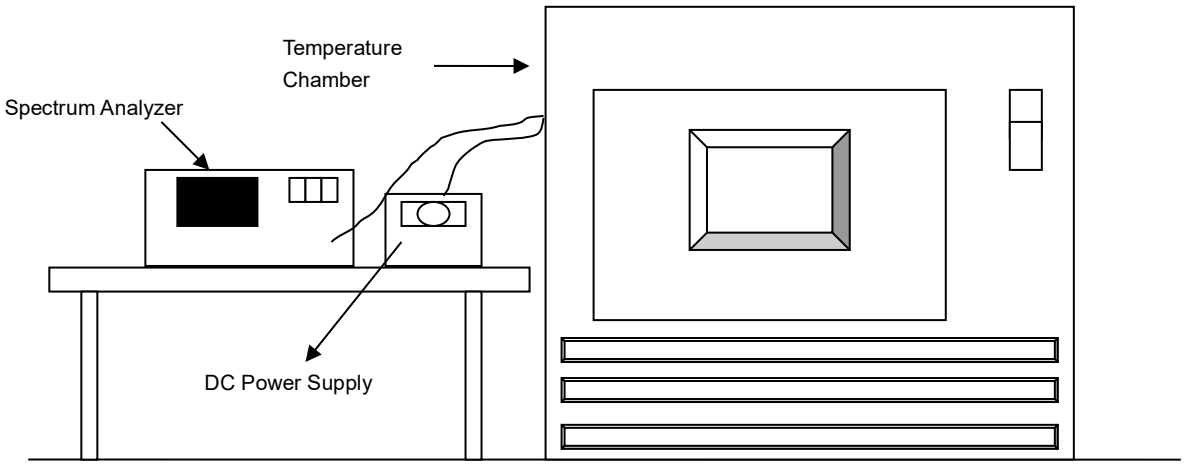
802.11ac80 ch155

4.8 Frequency Stability Measurement

4.8.1 Limits of Frequency Stability Measurement

The frequency of the carrier signal shall be maintained within band of operation.

4.8.2 Test Setup



4.8.3 Test Instruments

Refer to section 4.1.2 to get information of above instrument.

4.8.4 Test Procedure

a. The EUT was placed inside the environmental test chamber and powered by nominal DC voltage.
b. Turn the EUT on and couple its output to a spectrum analyzer.
c. Turn the EUT off and set the chamber to the highest temperature specified.
d. Allow sufficient time (approximately 30 min) for the temperature of the chamber to stabilize, turn the EUT on and measure the operating frequency after 2, 5, and 10 Minutes.
e. Repeat step (d) with the temperature chamber set to the next desired temperature until measurements down to the lowest specified temperature have been completed..
f. The test chamber was allowed to stabilize at +20 degree C for a minimum of 30 Minutes. The supply voltage was then adjusted on the EUT from 85% to 115% and the frequency record.
.

4.8.5 Deviation from Test Standard

No deviation.

4.8.6 EUT Operating Condition

Set the EUT transmit at un-modulation mode to test frequency stability.

4.8.7 Test Results

Frequency Stability Versus Temp. Operating Frequency: 5180 MHz							
TEMP. (℃)	Power Supply (Vdc)	2 Minute		5 Minute		10 Minute	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
50	12	5180.025	0.000482625	5180.026	0.000501931	5180.023	0.000435328
40	12	5180.020	0.000386100	5180.022	0.000415058	5180.017	0.000331081
30	12	5180.030	0.000579151	5180.036	0.000694981	5180.114	0.002192278
20	12	5180.050	0.000965251	5180.052	0.000994208	5180.048	0.000929537
10	12	5180.050	0.000965251	5180.052	0.000994208	5180.046	0.000890927
0	12	5180.100	0.001930502	5180.102	0.001959459	5180.07	0.001354247
-10	12	5180.395	0.007625483	5180.406	0.007837838	5180.401	0.007733591
-20	12	5180.145	0.002799228	5180.146	0.002810811	5180.135	0.002597683
-30	12	5180.025	0.000482625	5180.026	0.000492278	5180.006	0.000116795
-40	12	5180.130	0.002509653	5180.136	0.002625483	5180.136	0.002625483
-50	12	5180.105	0.002027027	5180.107	0.002055985	5180.101	0.00194305

Frequency Stability at 12 VDC +/- 15% Operating Frequency: 5180 MHz							
TEMP. (℃)	Power Supply (Vdc)	12V DC		13.8V DC		10.2V DC	
		Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)	Measured Frequency (MHz)	Frequency Drift (%)
22	12	5179.975	0.000483	5180.075	0.00145	5179.95	0.000965

5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information on the Testing Laboratories

Bureau Veritas is a global leader in testing, inspection and certification (TIC) services. We help businesses improve safety, sustainability and productivity; and our clients include the majority of leading brands in retail, manufacturing and other industries. With a presence in every major country around the world, our quality assurance and compliance solutions are vital in helping our customers enhance product quality and concept-to-consumer journeys. We also assist with increasing speed to market, profitability and brand equity throughout the supply chain. Bureau Veritas is a leading wireless/IoT testing, inspection, audit and certification provider, with a global network of test laboratories to support the IoT industry in areas of connectivity, security, interoperability as well as quality, health & safety, and environmental/chemical requirements.

If you have any comments, please feel free to contact us at the following:

Milpitas EMC/RF/Safety/Telecom Lab
775 Montague Expressway, Milpitas, CA 95035
Tel: +1 408 526 1188

Sunnyvale OTA/Bluetooth Lab
1293 Anvilwood Avenue, Sunnyvale, CA 94089
Tel: +1 669 600 5293

Littleton EMC/RF/Safety/Environmental Lab
1 Distribution Center Cir #1, Littleton, MA 01460
Tel: +1 978 486 8880

Email: sales.eaw@us.bureauveritas.com
Web Site: www.cps.bureauveritas.com

The address and road map of all our labs can be found in our web site also.

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