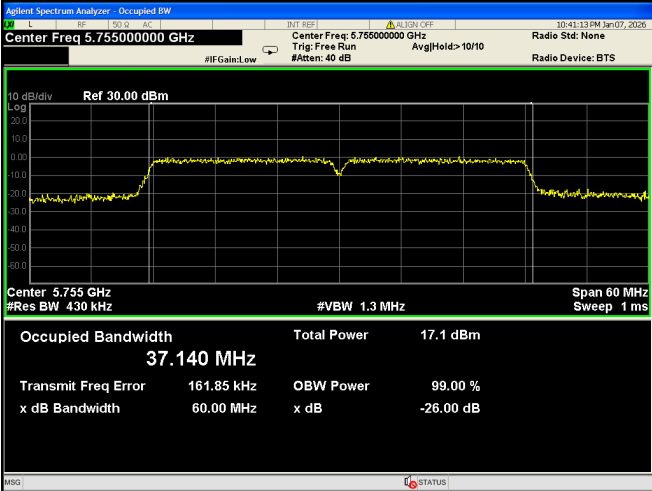
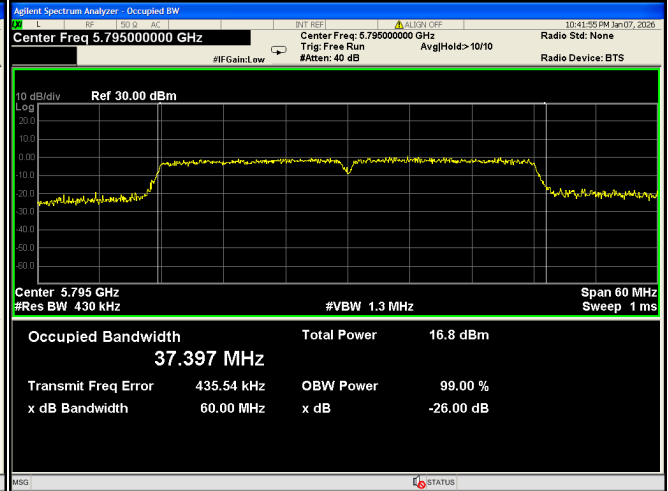


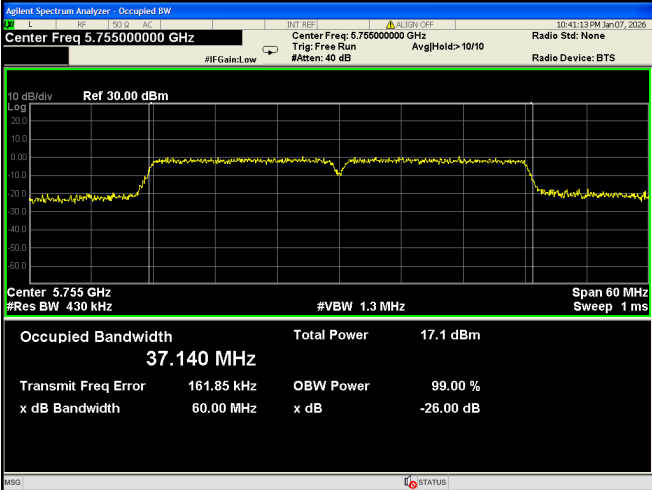
802.11ac VHT40 Low channel



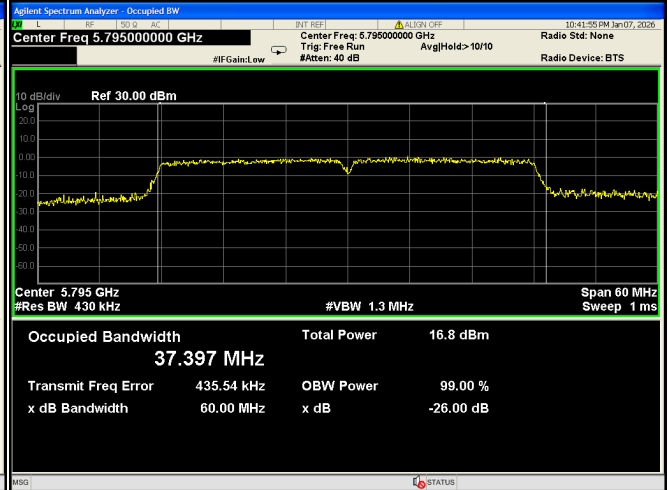
802.11ac VHT40 High channel



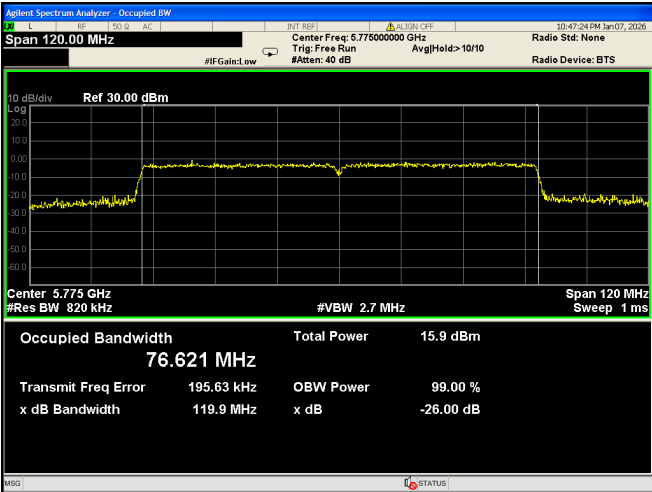
802.11ax HE40 Low channel



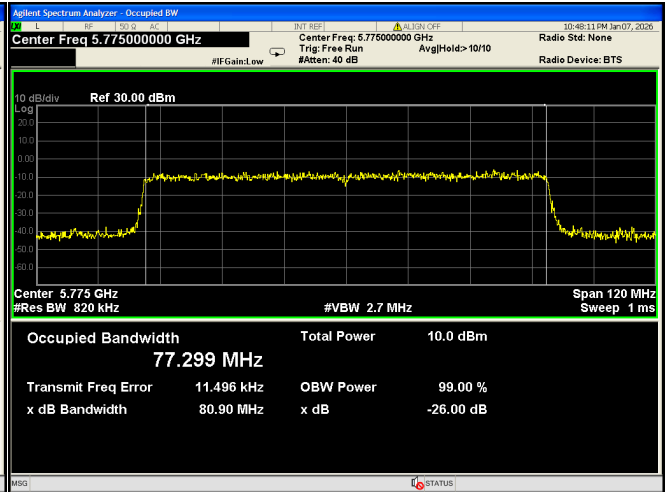
802.11ax HE40 High channel



802.11ac VHT80 Middle channel



802.11ax HE80 Middle channel



13 Conducted Output Power

Test Requirement:	FCC CFR47 Part 15 Section 15.407(a) KDB 662911 D01 Multiple Transmitter Output v02r01, October 31, 2013
Test Method:	KDB 789033 D02 General U-NII Test Procedures New Rules v02r01 Section E ANSI C63.10-2020
Test Limit:	For the band 5.15-5.25 GHz For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W provided the maximum antenna gain does not exceed 6 dBi. For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W. For client devices in the 5.15-5.25 GHz band, the maximum conducted output power over the frequency band of operation shall not exceed 250 mW provided the maximum antenna gain does not exceed 6 dBi. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands For the 5.25-5.35 GHz and 5.47-5.725 GHz bands, the maximum conducted output power over the frequency bands of operation shall not exceed the lesser of 250 mW or 11 dBm + 10 log B, where B is the 26 dB emission bandwidth in megahertz. For the band 5.725-5.850 GHz For the band 5.725-5.850 GHz, the maximum conducted output power over the frequency band of operation shall not exceed 1 W.
Test Result:	PASS

13.1 Test Procedure

- (i) Set span to encompass the entire emission bandwidth (EBW) (or, alternatively, the entire 99% occupied bandwidth) of the signal.
- (ii) Set RBW = 1 MHz.
- (iii) Set VBW $\geq$ 3 MHz.
- (iv) Number of points in sweep $\geq 2 \times \text{span} / \text{RBW}$. (This ensures that bin-to-bin spacing is $\leq \text{RBW}/2$, so that narrowband signals are not lost between frequency bins.)
- (v) Sweep time = auto.
- (vi) Detector = power averaging (rms), if available. Otherwise, use sample detector mode.
- (vii) If transmit duty cycle < 98%, use a video trigger with the trigger level set to enable triggering only on full power pulses. Transmitter must operate at maximum power control level for the entire duration of every sweep. If the EUT transmits continuously (i.e., with no off intervals) or at duty cycle $\geq$ 98%, and if each transmission is entirely at the maximum power control level, then the trigger shall be set to "free run."
- (viii) Trace average at least 100 traces in power averaging (rms) mode.
- (ix) Compute power by integrating the spectrum across the EBW (or, alternatively, the entire

99% occupied bandwidth) of the signal using the instrument's band power measurement function with band limits set equal to the EBW (or occupied bandwidth) band edges. If the instrument does not have a band power function, sum the spectrum levels (in power units) at 1 MHz intervals extending across the EBW (or, alternatively, the entire 99% occupied bandwidth) of the spectrum.

13.2 Test Result

Band	Operation mode	Channel	Conducted Output Power (dBm)			
			Ant. 1	Ant. 2	SUM	Limit
U-NII-1	802.11a	Low	9.34	10.13	12.76	23.98
		Middle	9.97	9.97	12.98	23.98
		High	10.50	9.96	13.25	23.98
	802.11n(HT20)	Low	9.28	10.14	12.74	23.98
		Middle	9.79	9.88	12.85	23.98
		High	10.65	10.00	13.35	23.98
	802.11ac(VHT20)	Low	9.06	10.09	12.62	23.98
		Middle	9.71	9.79	12.76	23.98
		High	10.39	9.99	13.20	23.98
	802.11ax(HE20)	Low	9.16	10.01	12.62	23.98
		Middle	9.86	9.73	12.81	23.98
		High	10.39	9.84	13.13	23.98
	802.11n(HT40)	Low	10.41	11.17	13.82	23.98
		High	11.12	11.01	14.08	23.98
	802.11ac(VHT40)	Low	10.40	11.17	13.81	23.98
		High	11.00	11.02	14.02	23.98
	802.11ax(HE40)	Low	10.30	11.25	13.81	23.98
		High	10.37	11.20	13.82	23.98
	802.11ac(VHT80)	Middle	11.00	10.74	13.88	23.98
	802.11ax(HE80)	Middle	10.85	10.81	13.84	23.98

Band	Operation mode	Channel	Conducted Output Power (dBm)			
			Ant. 1	Ant. 2	SUM	Limit
U-NII-2A	802.11a	Low	10.78	9.54	13.21	23.98
		Middle	11.58	9.82	13.80	23.98
		High	10.42	10.43	13.44	23.98
	802.11n(HT20)	Low	10.59	9.30	13.00	23.98
		Middle	10.82	9.88	13.39	23.98
		High	10.18	10.42	13.31	23.98
	802.11ac(VHT20)	Low	9.95	9.28	12.64	23.98
		Middle	10.78	9.84	13.35	23.98
		High	11.29	10.38	13.87	23.98
	802.11ax(HE20)	Low	10.38	8.78	12.66	23.98
		Middle	10.54	9.22	12.94	23.98
		High	11.13	9.80	13.53	23.98
	802.11n(HT40)	Low	12.18	10.83	14.57	23.98
		High	12.67	11.25	15.03	23.98
	802.11ac(VHT40)	Low	12.19	10.69	14.51	23.98
		High	12.73	11.18	15.03	23.98
	802.11ax(HE40)	Low	12.21	10.70	14.53	23.98
		High	12.74	11.20	15.05	23.98
	802.11ac(VHT80)	Middle	11.43	10.07	13.81	23.98
	802.11ax(HE80)	Middle	11.55	10.15	13.92	23.98

Band	Operation mode	Channel	Conducted Output Power (dBm)			
			Ant. 1	Ant. 2	SUM	Limit
U-NII-2C	802.11a	Low	12.55	11.75	15.18	23.98
		Middle	12.44	11.37	14.95	23.98
		High	11.92	11.46	14.71	23.98
	802.11n(HT20)	Low	12.54	11.65	15.13	23.98
		Middle	12.33	11.26	14.84	23.98
		High	11.93	11.52	14.74	23.98
	802.11ac(VHT20)	Low	12.48	11.56	15.05	23.98
		Middle	12.46	11.35	14.95	23.98
		High	11.89	11.37	14.65	23.98
	802.11ax(HE20)	Low	12.46	11.44	14.99	23.98
		Middle	12.31	11.32	14.85	23.98
		High	11.84	11.46	14.66	23.98
	802.11n(HT40)	Low	12.79	12.76	15.79	23.98
		Middle	12.61	12.64	15.64	23.98
		High	12.51	12.61	15.57	23.98
	802.11ac(VHT40)	Low	12.81	12.75	15.79	23.98
		Middle	12.58	12.68	15.64	23.98
		High	11.70	12.60	15.18	23.98
	802.11ax(HE40)	Low	11.90	12.80	15.38	23.98
		Middle	11.84	12.72	15.31	23.98
		High	11.72	12.64	15.21	23.98
	802.11ac(VHT80)	Low	12.90	12.12	15.54	23.98
		Middle	12.45	12.62	15.55	23.98
	802.11ax(HE80)	Low	12.94	12.61	15.79	23.98
		Middle	12.40	12.16	15.29	23.98

Band	Operation mode	Channel	Conducted Output Power (dBm)			
			Ant. 1	Ant. 2	SUM	Limit
U-NII-3	802.11a	Low	12.07	11.74	14.92	30
		Middle	11.69	11.57	14.64	30
		High	11.74	11.46	14.61	30
	802.11n(HT20)	Low	11.99	11.88	14.95	30
		Middle	11.53	11.51	14.53	30
		High	11.72	11.28	14.52	30
	802.11ac(VHT20)	Low	10.99	11.63	14.33	30
		Middle	10.58	11.45	14.05	30
		High	10.68	11.38	14.05	30
	802.11ax(HE20)	Low	10.92	11.61	14.29	30
		Middle	10.62	11.43	14.05	30
		High	10.76	11.22	14.01	30
	802.11n(HT40)	Low	12.19	12.78	15.51	30
		High	12.07	12.43	15.26	30
	802.11ac(VHT40)	Low	12.19	12.80	15.52	30
		High	12.04	12.42	15.24	30
	802.11ax(HE40)	Low	12.19	12.83	15.53	30
		High	12.08	12.48	15.29	30
	802.11ac(VHT80)	Middle	11.34	11.81	14.59	30
	802.11ax(HE80)	Middle	11.38	11.94	14.68	30

Note:

For power measurements on IEEE 802.11 devices,

Array Gain = 0 dB (i.e., no array gain) for $N_{ANT} \leq 4$;

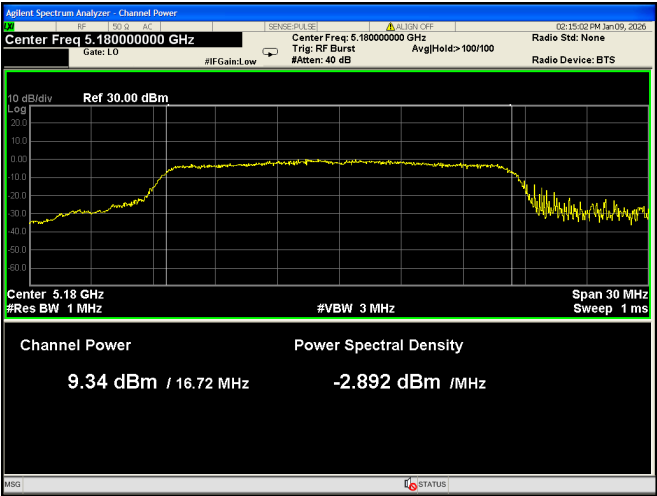
Array Gain = 0 dB (i.e., no array gain) for channel widths ≥ 40 MHz for any N_{ANT} ;

Array Gain = $5 \log(N_{ANT}/N_{SS})$ dB or 3 dB, whichever is less, for 20-MHz channel widths with $N_{ANT} \geq 5$.

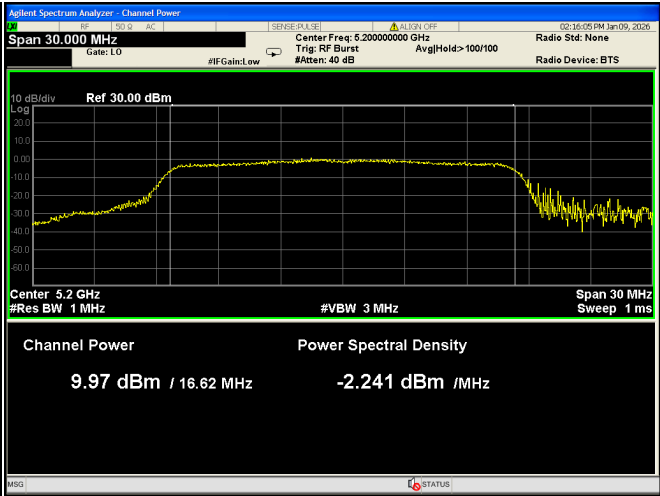
Test plots refer to next page:

Ant. 1
U-NII-1

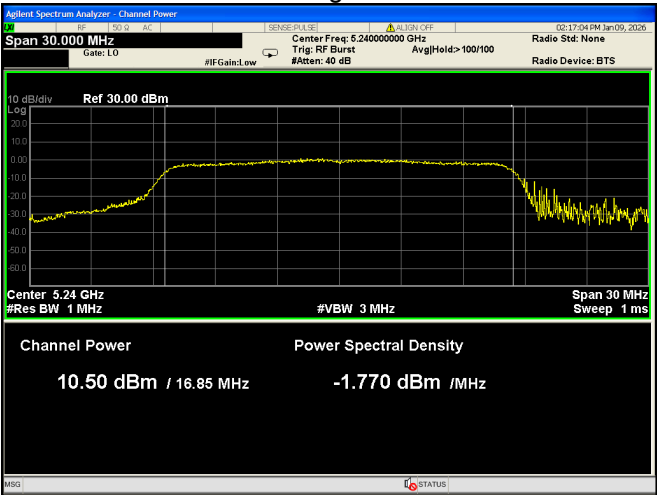
802.11a Low channel



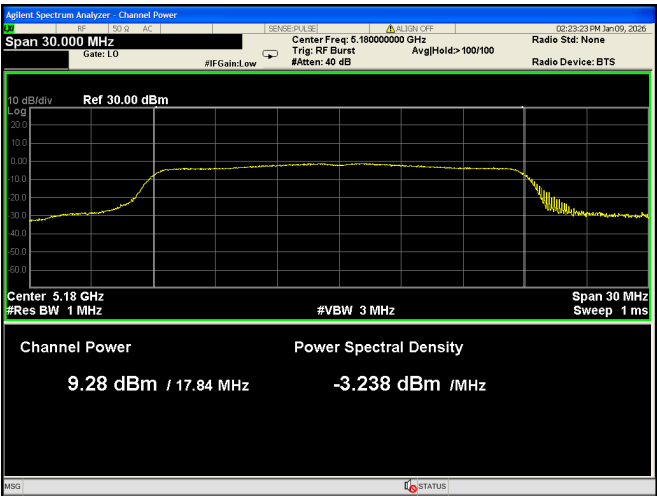
802.11a Middle channel



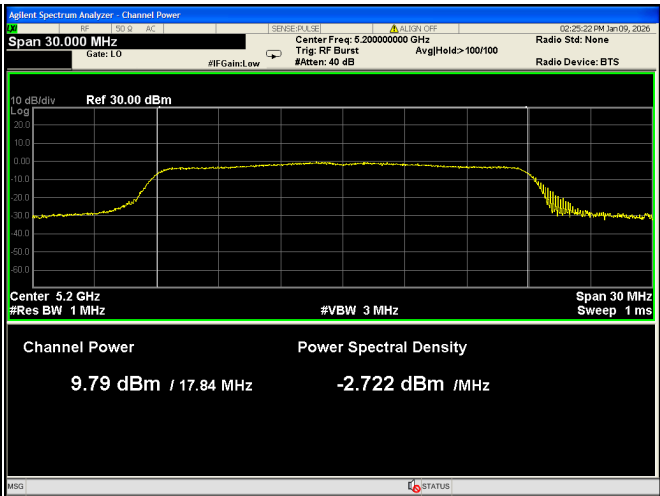
802.11a High channel



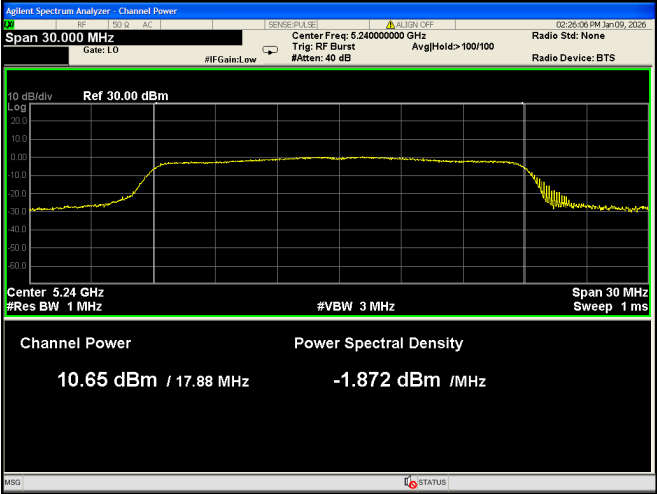
802.11n HT20 Low channel



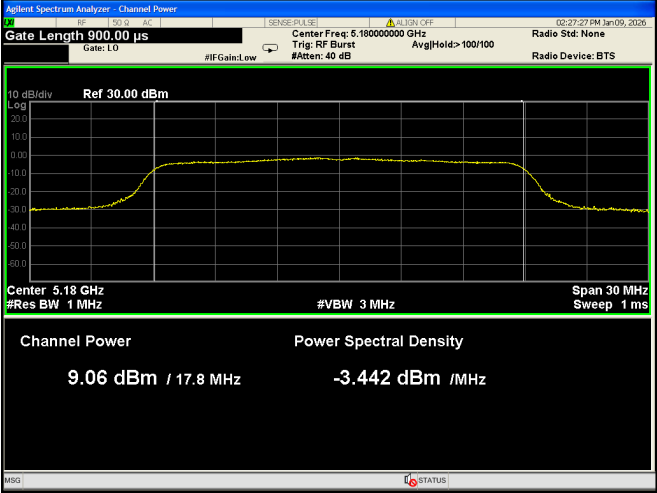
802.11n HT20 Middle channel



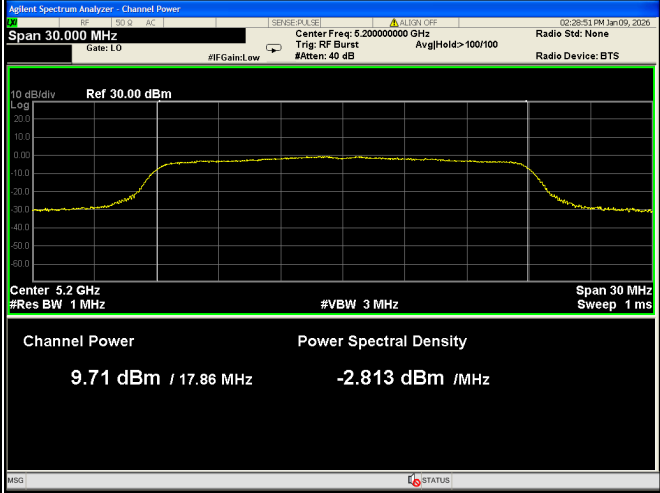
802.11n HT20 High channel



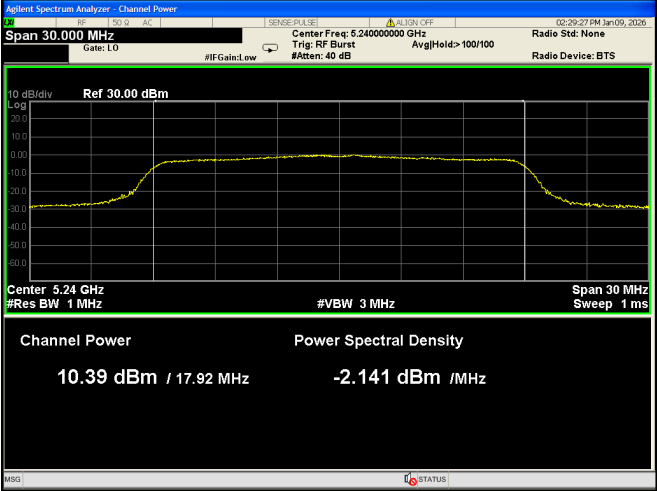
802.11ac VHT20 Low channel



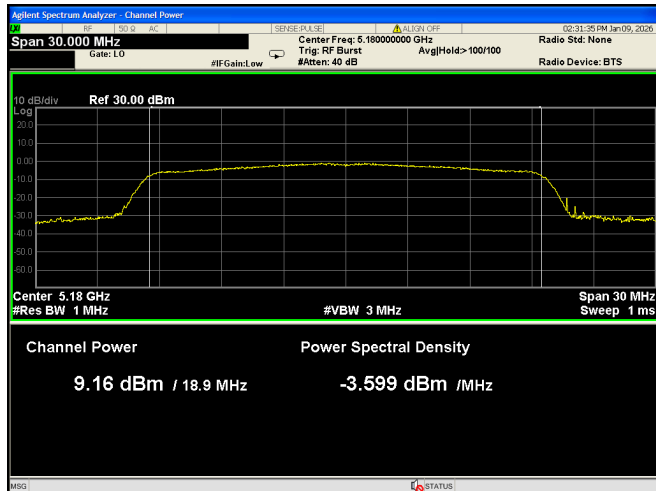
802.11ac VHT20 Middle channel



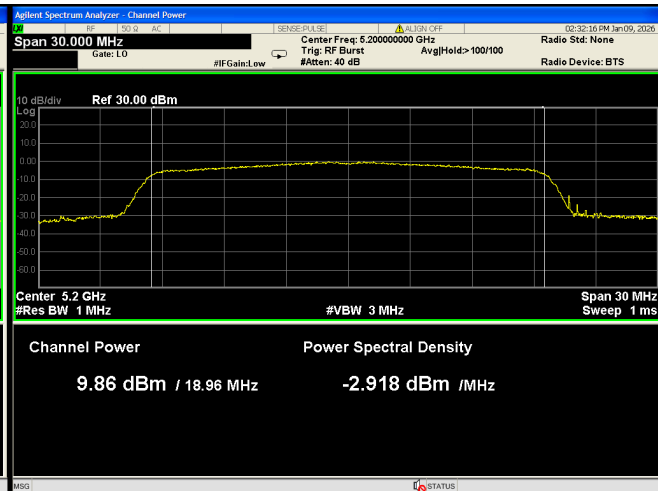
802.11ac VHT20 High channel



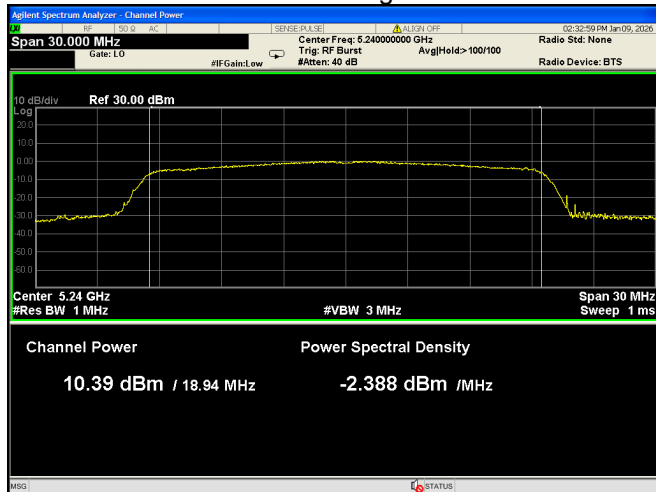
802.11ax HE20 Low channel



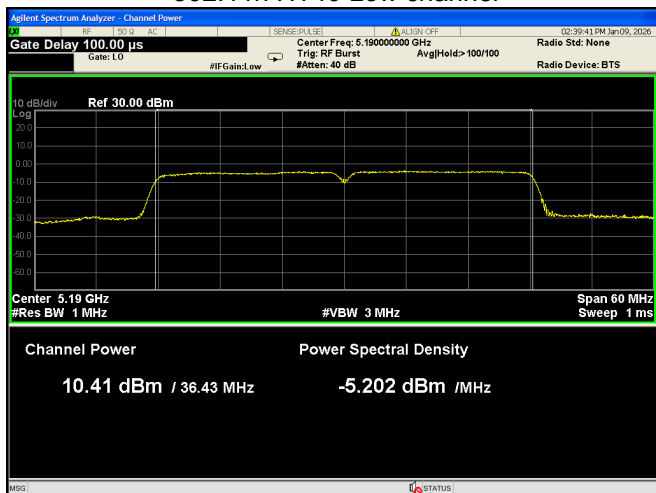
802.11ax HE20 Middle channel



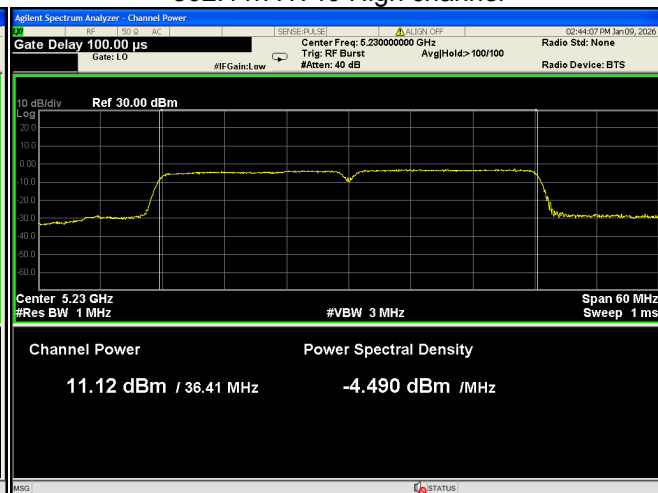
802.11ax HE20 High channel



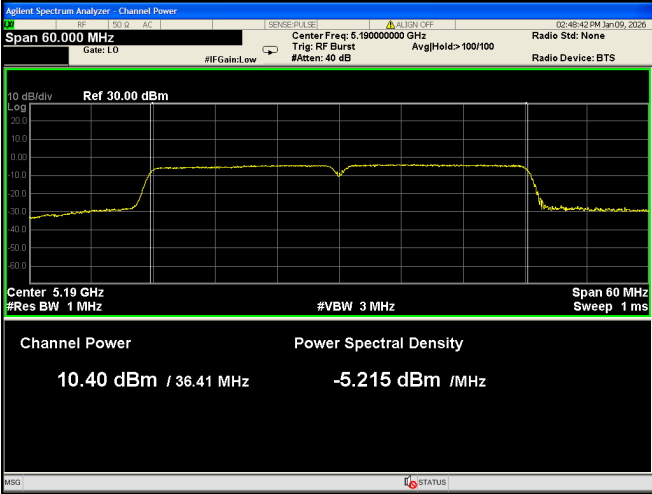
802.11n HT40 Low channel



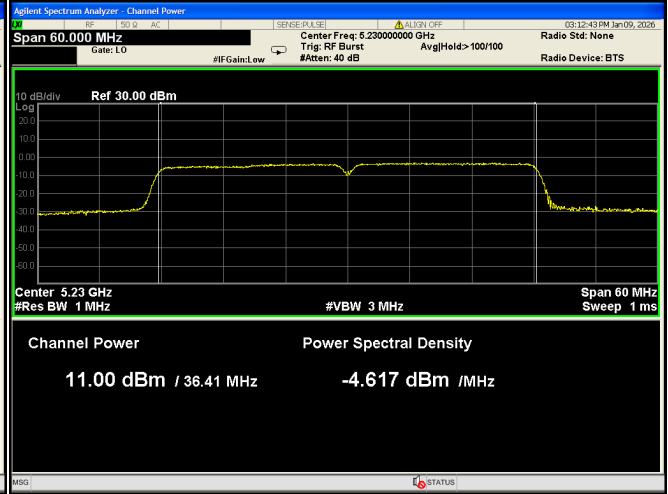
802.11n HT40 High channel



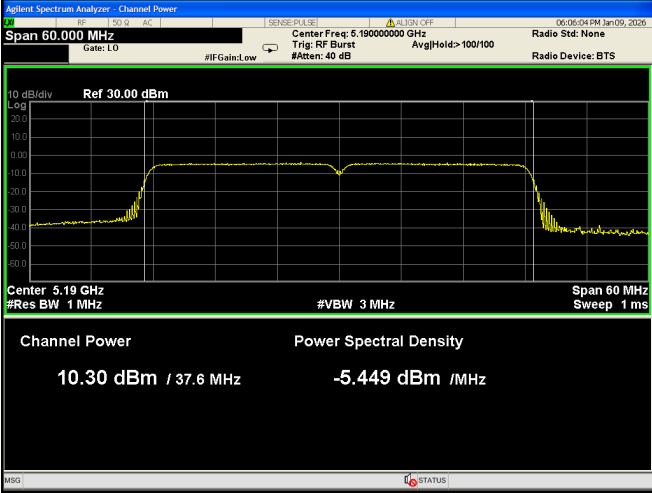
802.11ac VHT40 Low channel



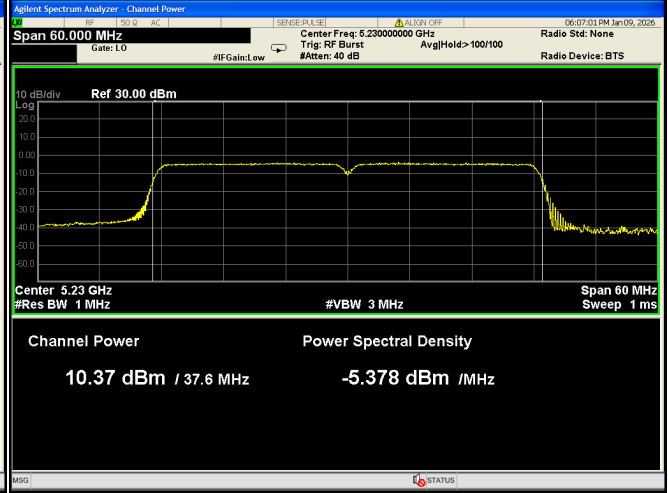
802.11ac VHT40 High channel



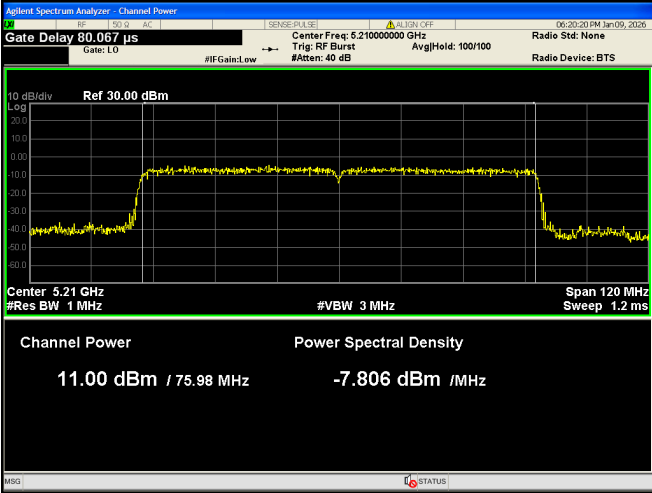
802.11ax HE40 Low channel



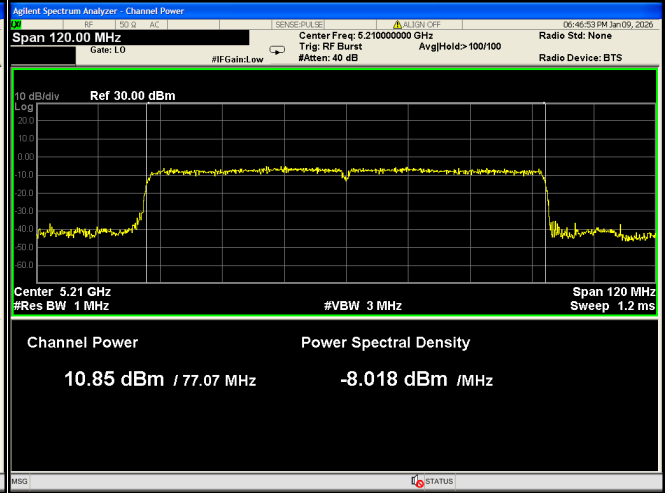
802.11ax HE40 High channel



802.11ac VHT80 Middle channel

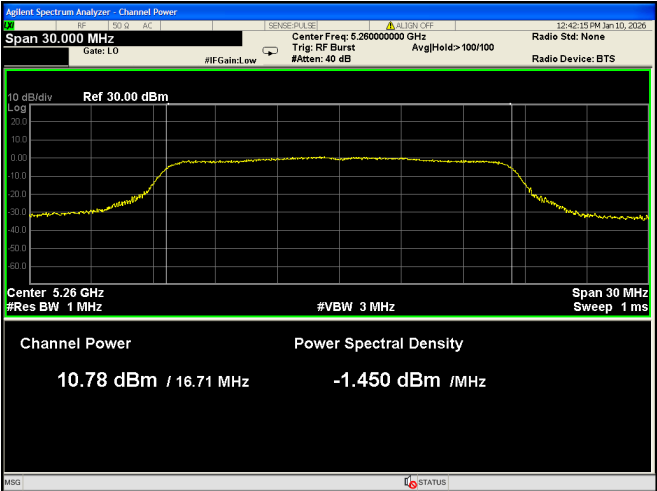


802.11ax HE80 Middle channel

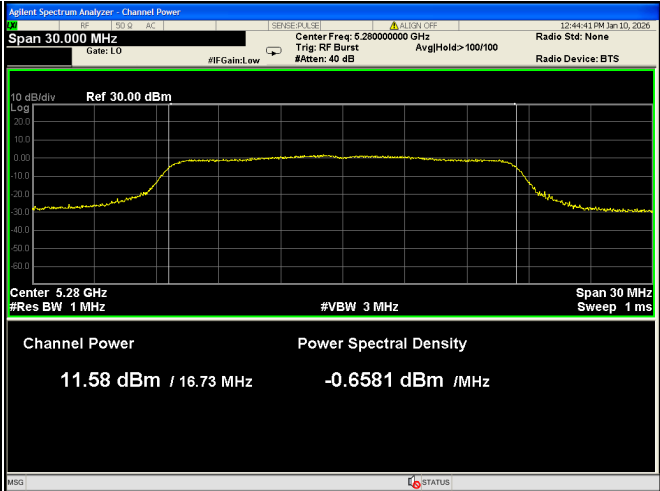


U-NII-2A

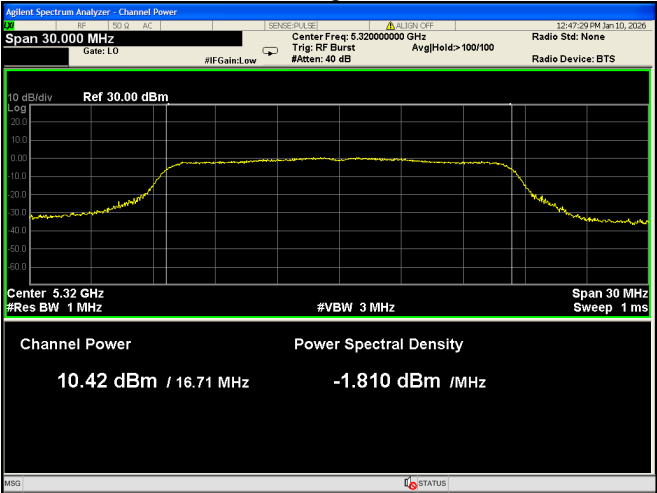
802.11a Low channel



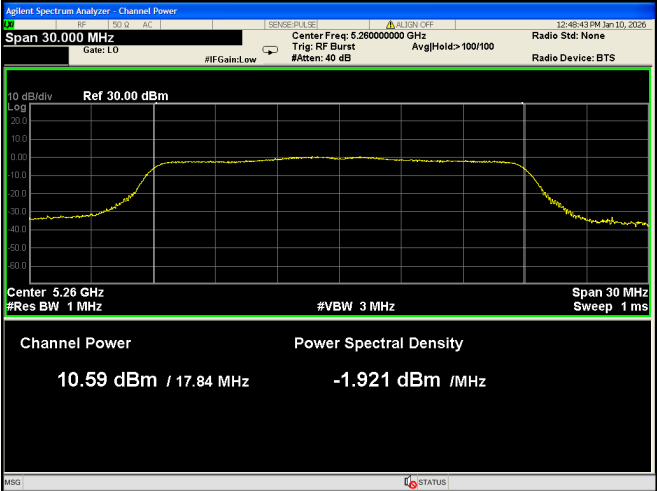
802.11a Middle channel



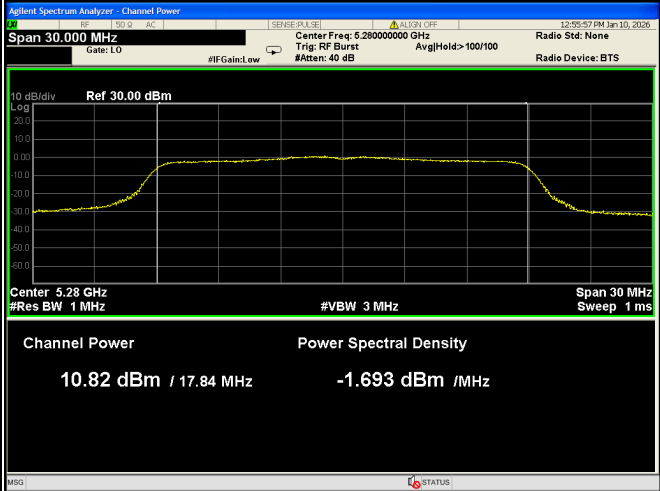
802.11a High channel



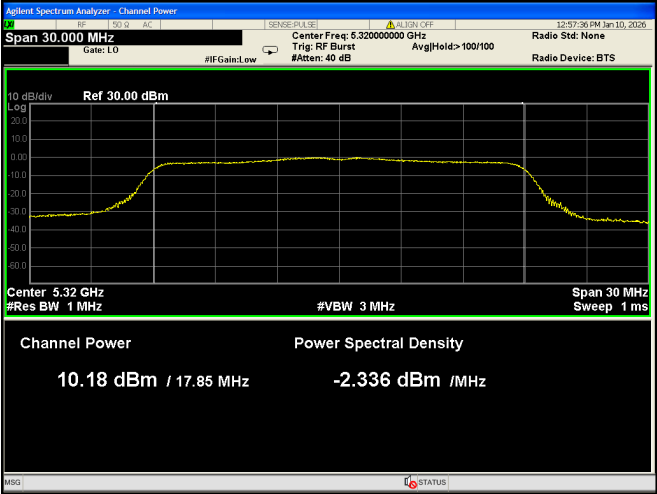
802.11n HT20 Low channel



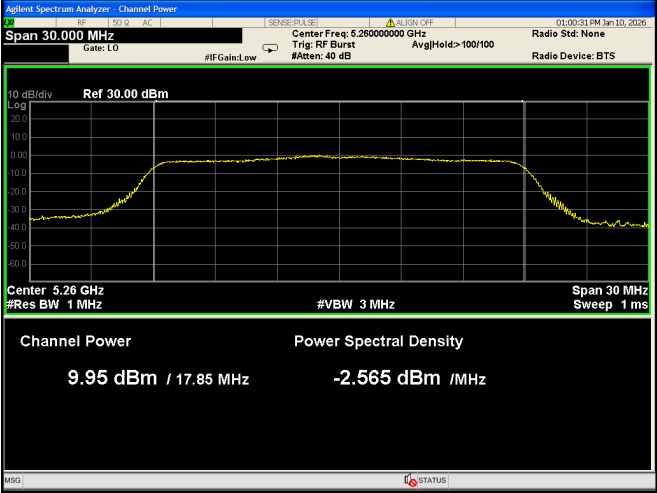
802.11n HT20 Middle channel



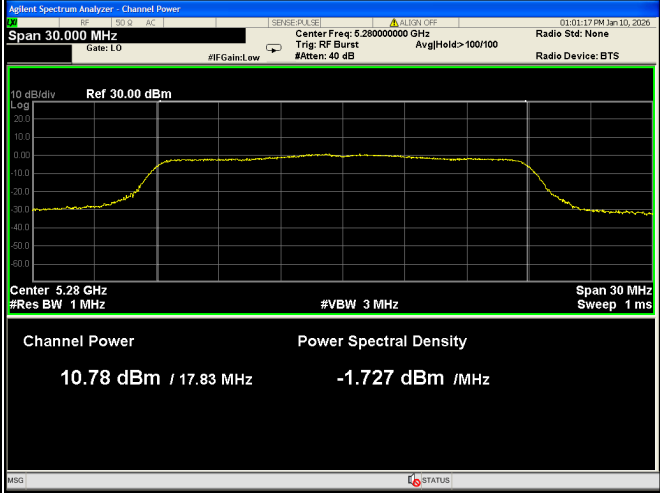
802.11n HT20 High channel



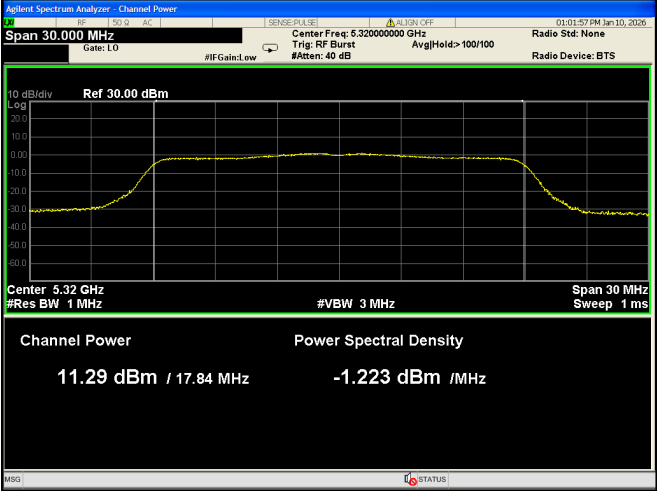
802.11ac VHT20 Low channel



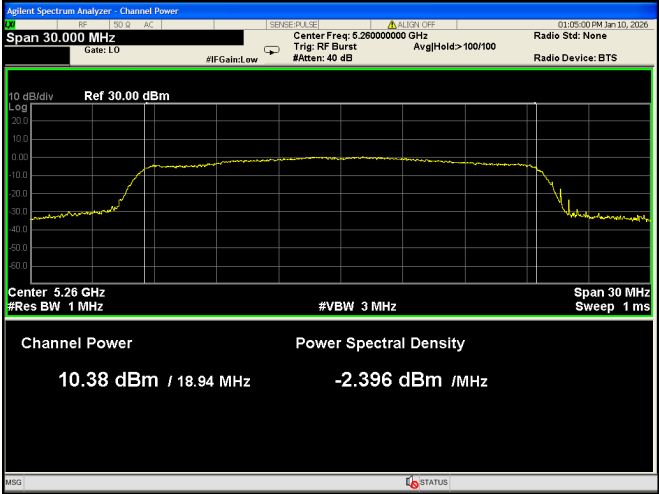
802.11ac VHT20 Middle channel



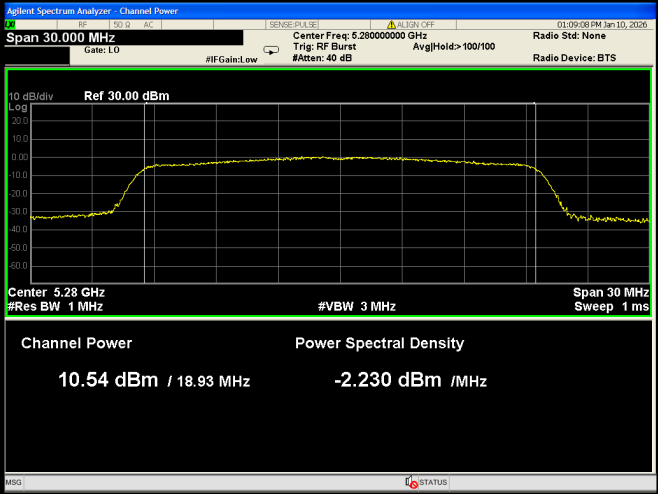
802.11ac VHT20 High channel



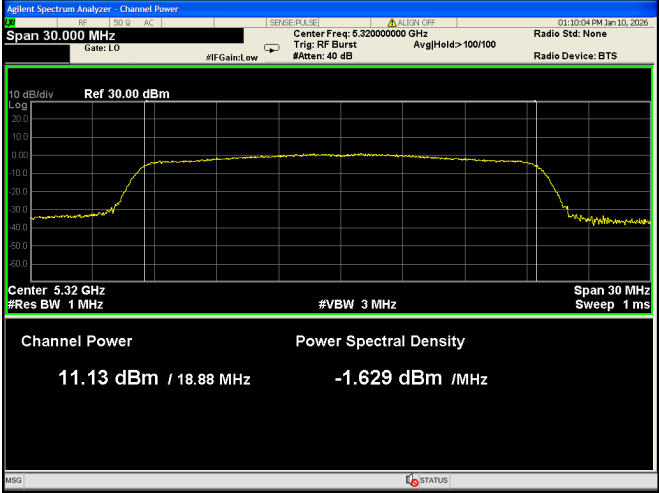
802.11ax HE20 Low channel



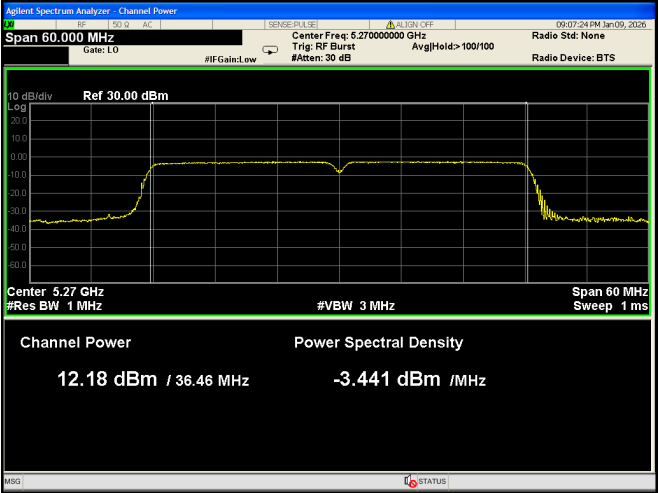
802.11ax HE20 Middle channel



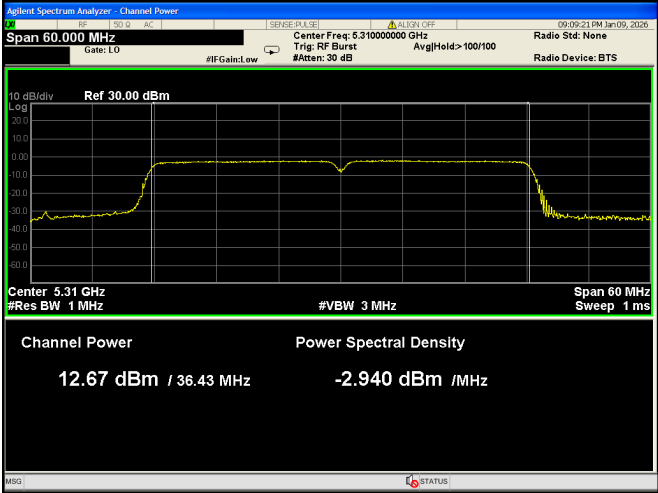
802.11ax HE20 High channel



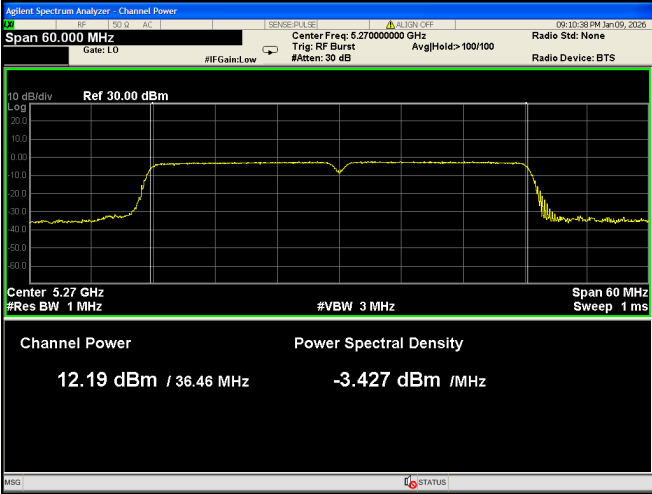
802.11n HT40 Low channel



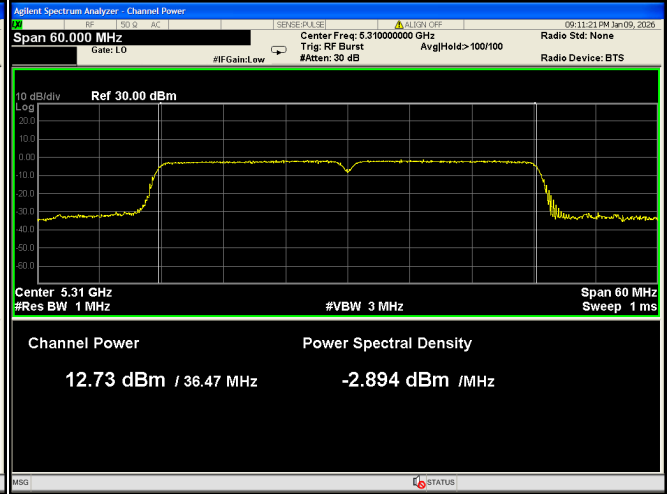
802.11n HT40 High channel



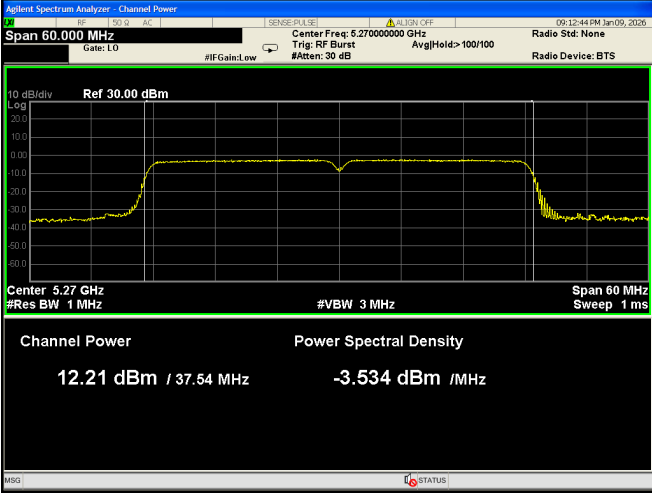
802.11ac VHT40 Low channel



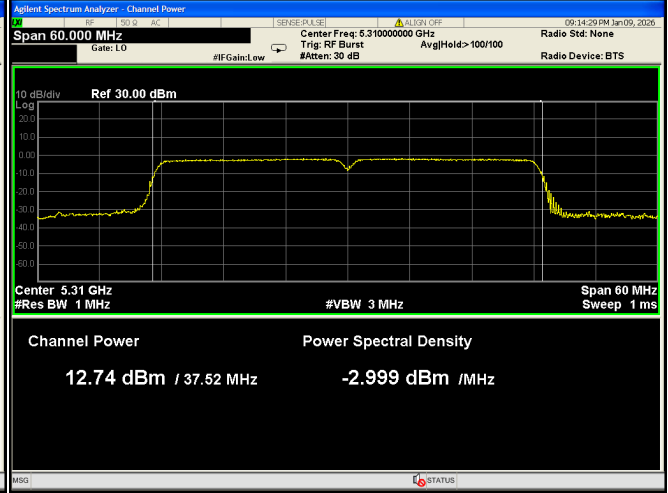
802.11ac VHT40 High channel



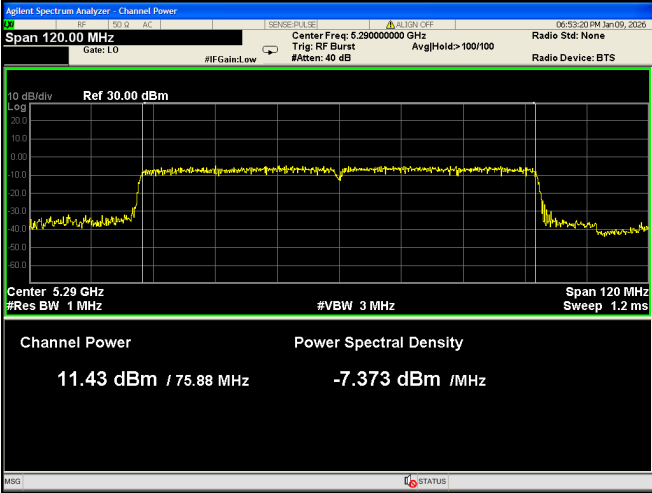
802.11ax HE40 Low channel



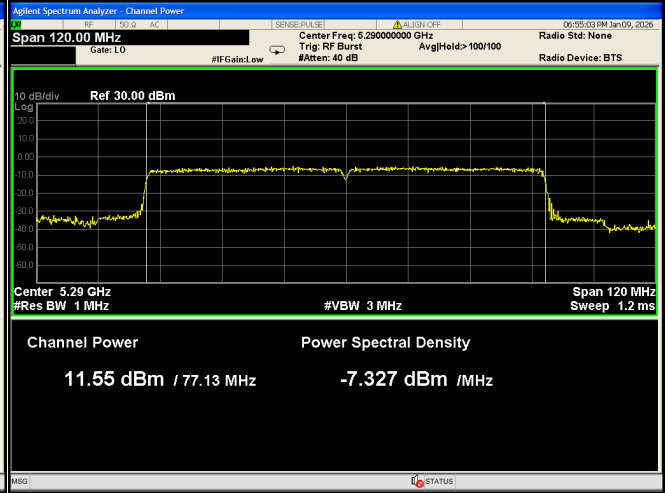
802.11ax HE40 High channel



802.11ac VHT80 Middle channel

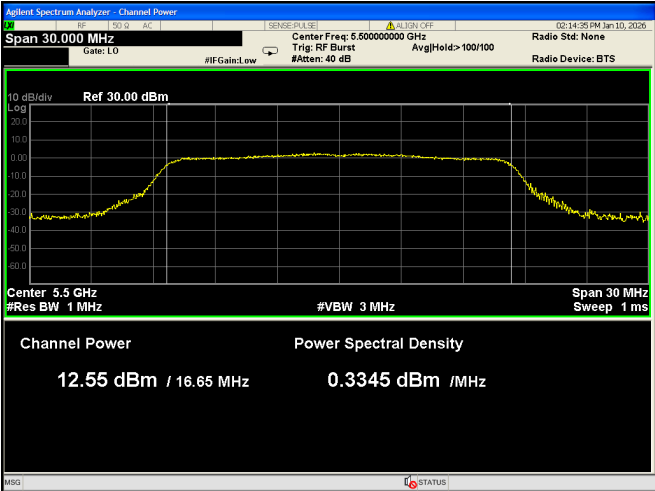


802.11ax HE80 Middle channel

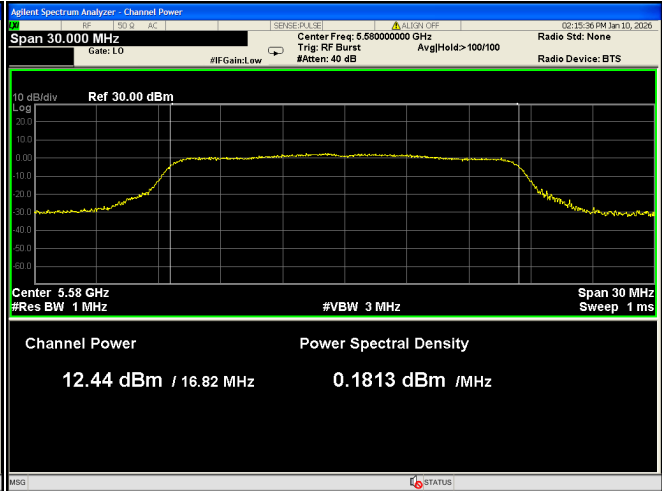


U-NII-2C

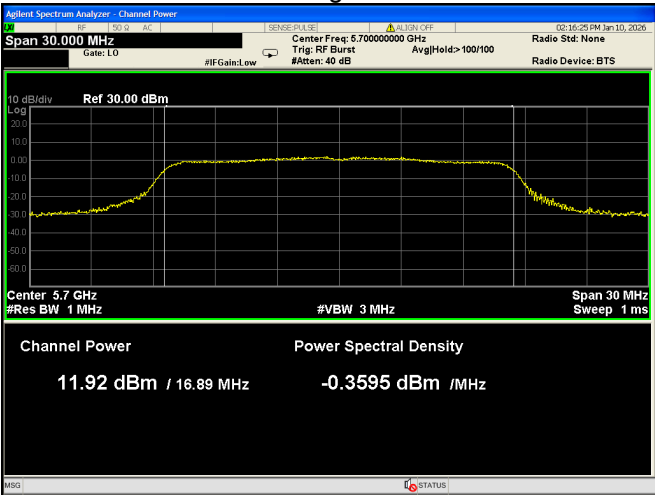
802.11a Low channel



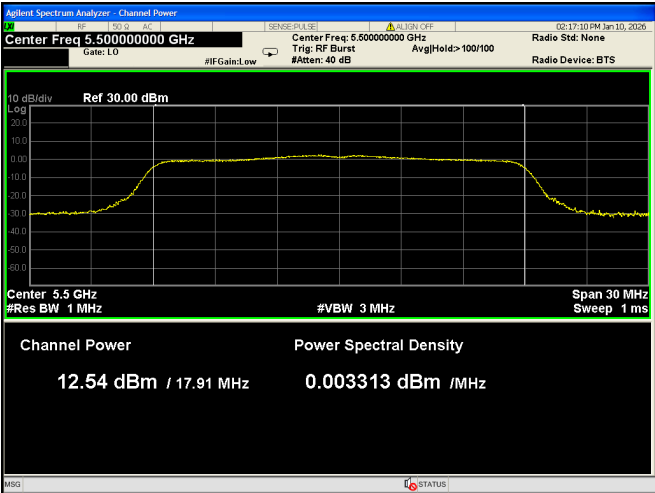
802.11a Middle channel



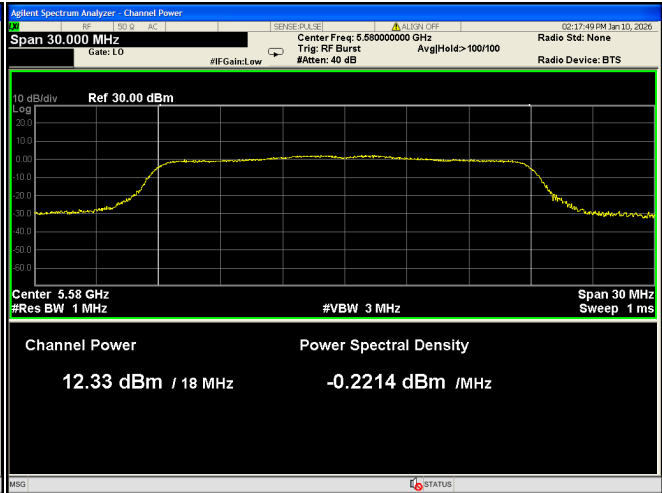
802.11a High channel



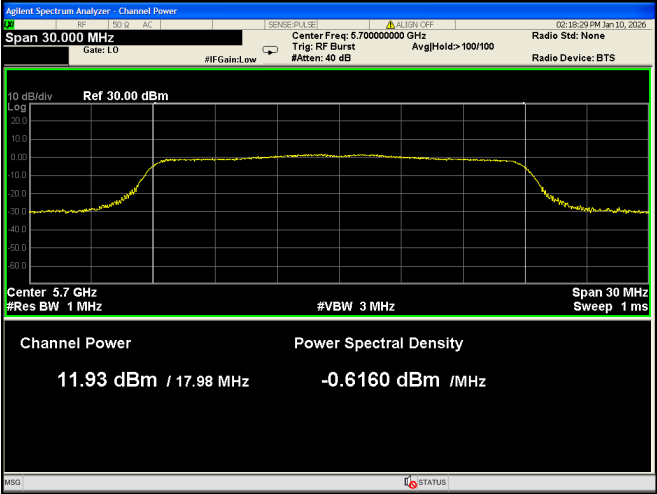
802.11n HT20 Low channel



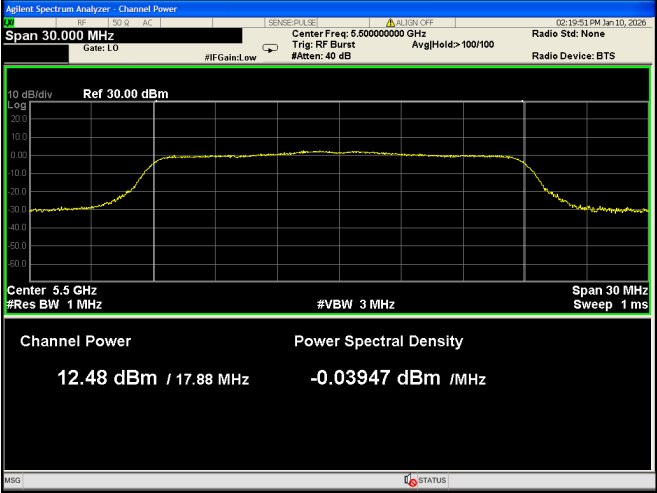
802.11n HT20 Middle channel



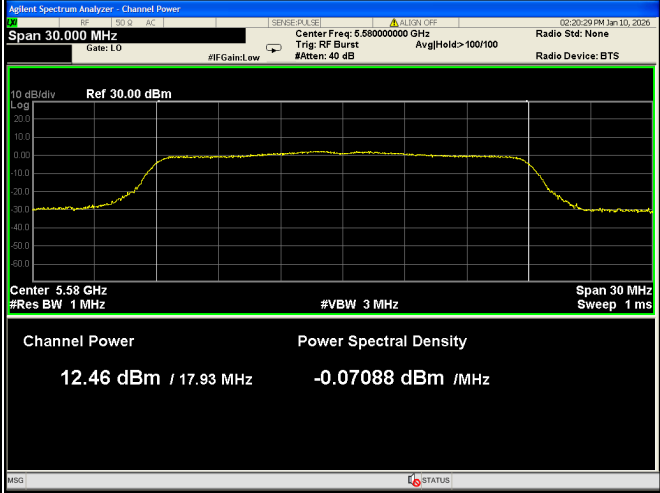
802.11n HT20 High channel



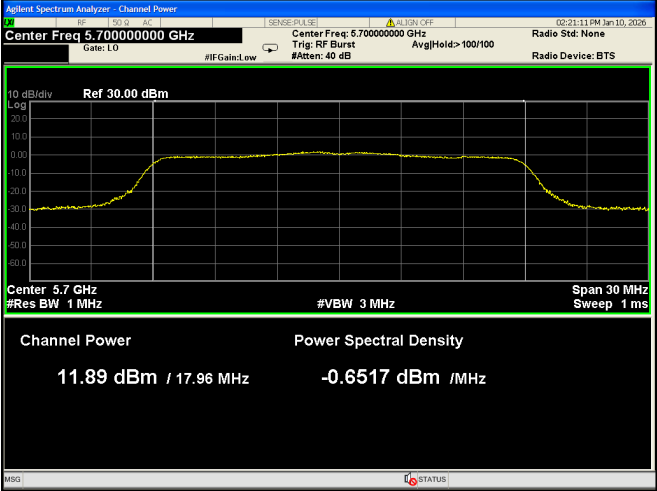
802.11ac VHT20 Low channel



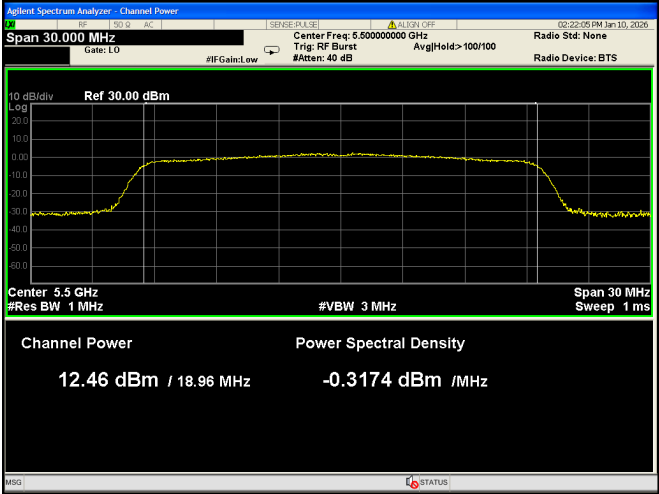
802.11ac VHT20 Middle channel



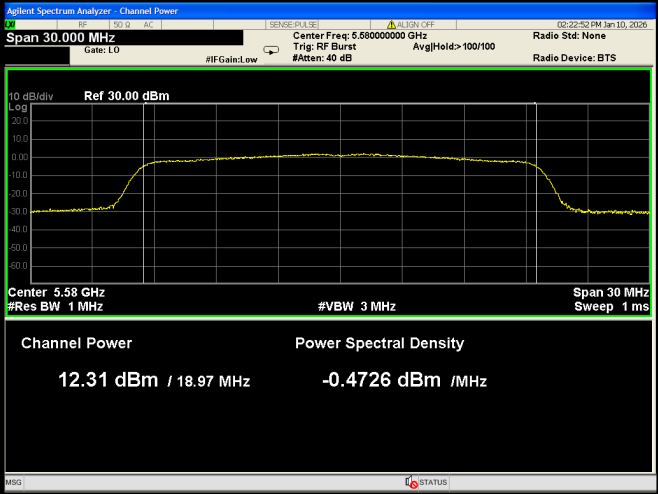
802.11ac VHT20 High channel



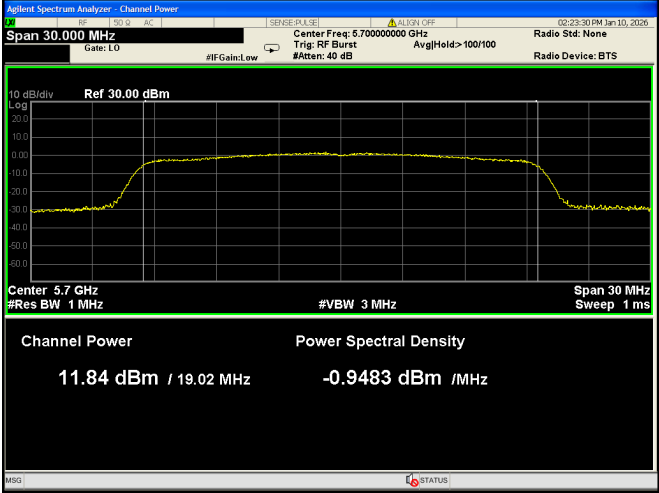
802.11ax HE20 Low channel



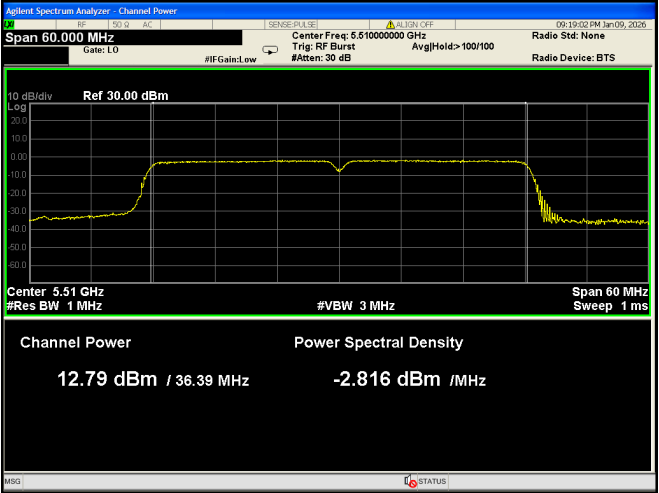
802.11ax HE20 Middle channel



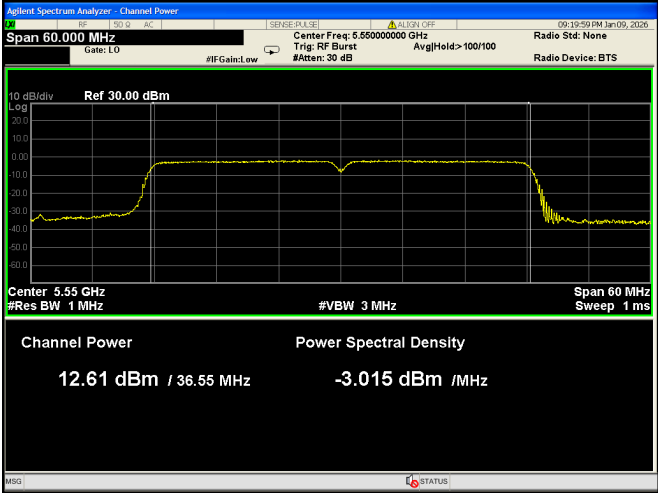
802.11ax HE20 High channel



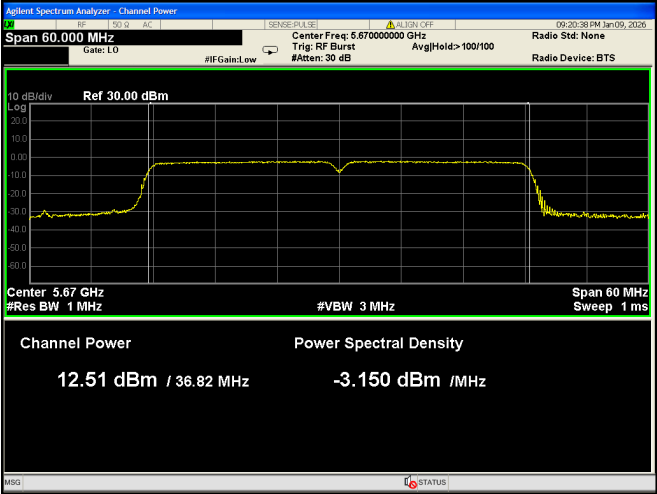
802.11n HT40 Low channel



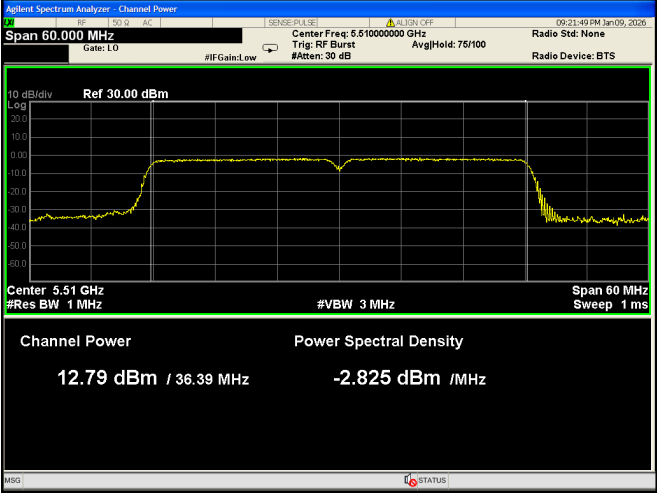
802.11n HT40 Middle channel



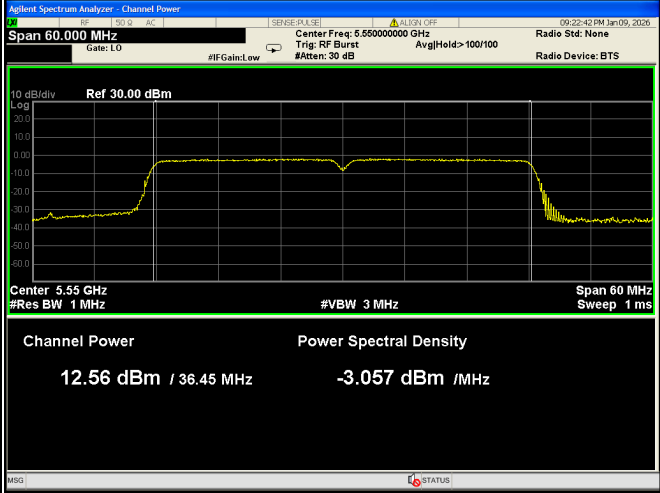
802.11n HT40 High channel



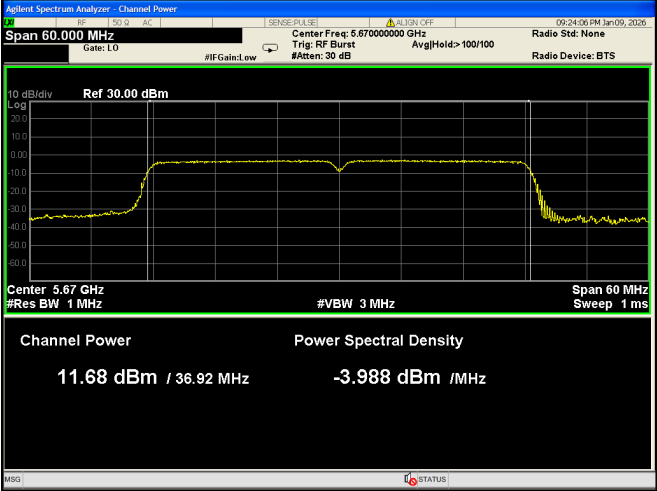
802.11ac VHT40 Low channel



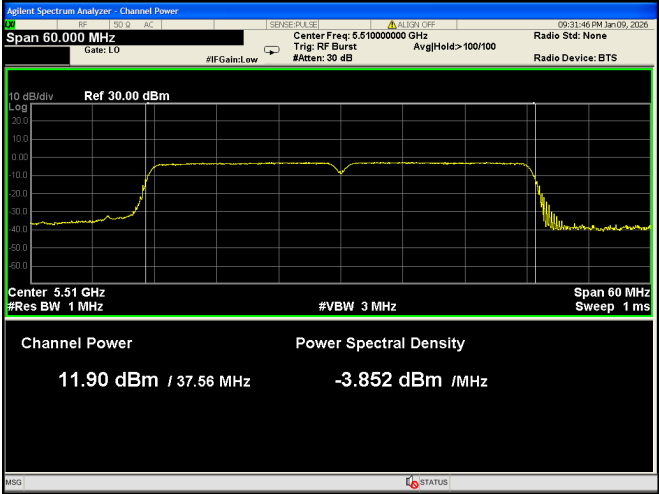
802.11ac VHT40 Middle channel



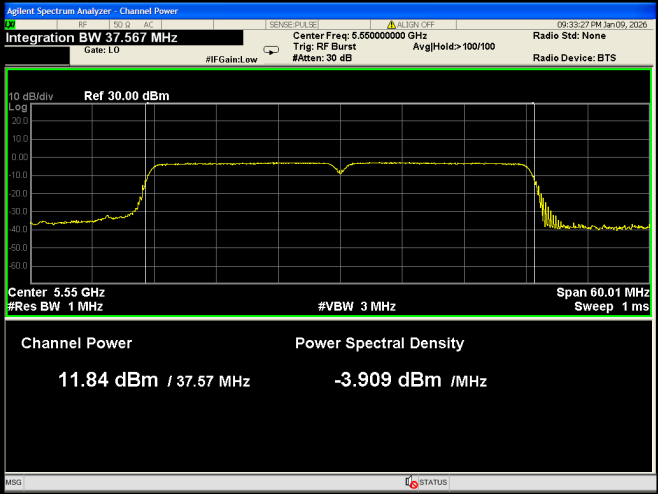
802.11ac VHT40 High channel



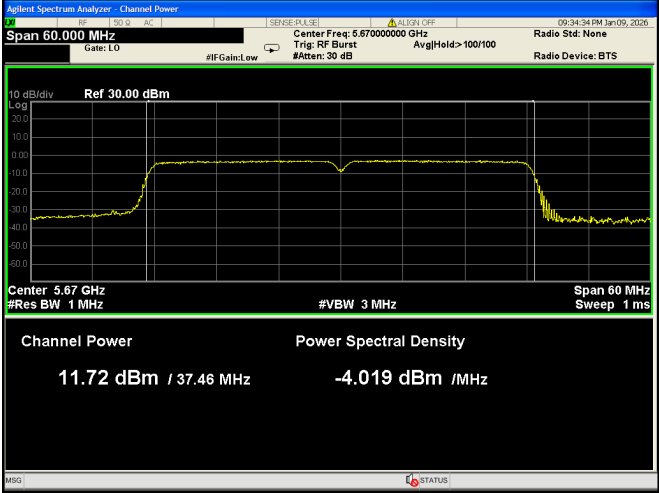
802.11ax HE40 Low channel



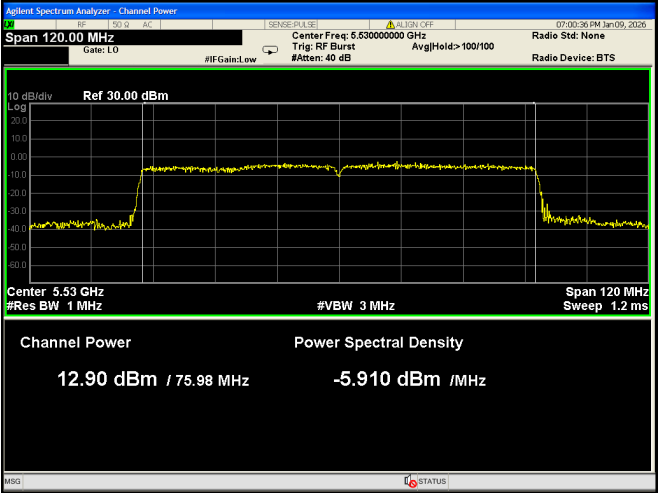
802.11ax HE40 Middle channel



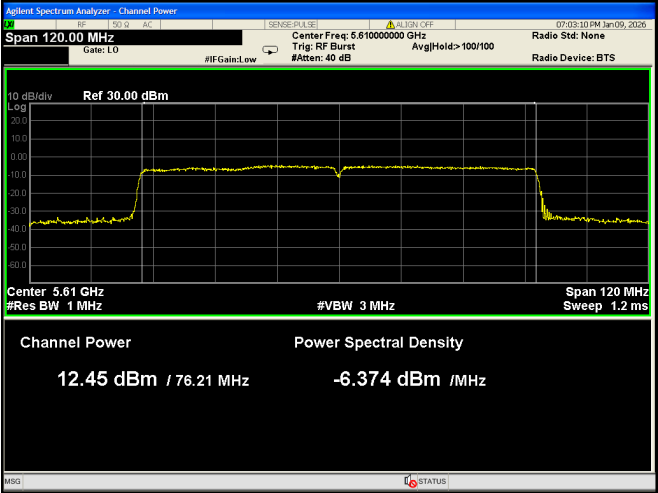
802.11ax HE40 High channel



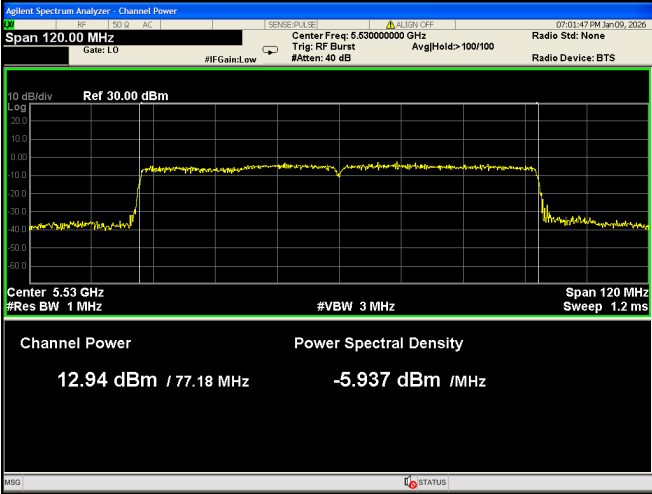
802.11ac VHT80 Low channel



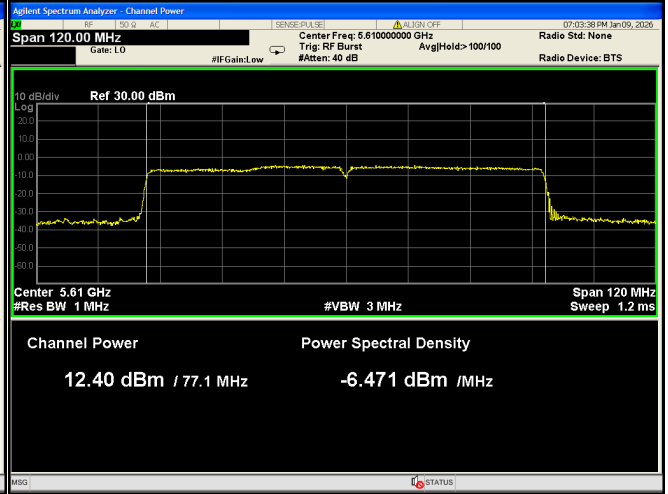
802.11ac VHT80 Middle channel



802.11ax HE80 Low channel

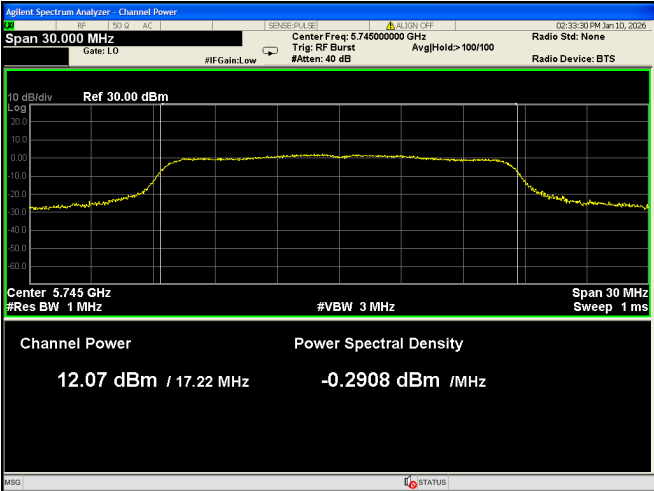


802.11ax HE80 Middle channel

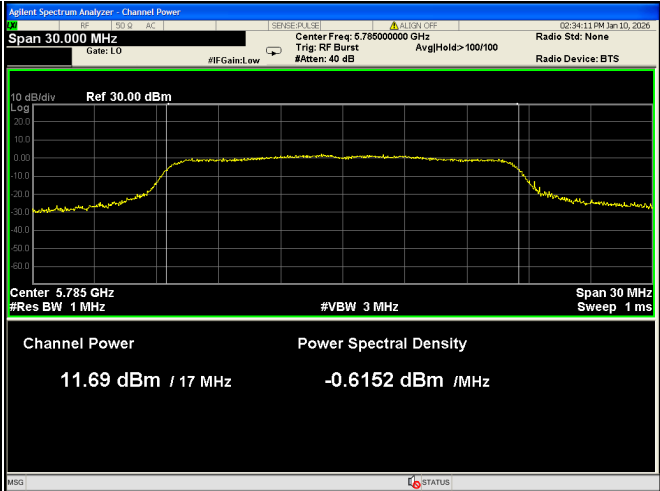


U-NII-3

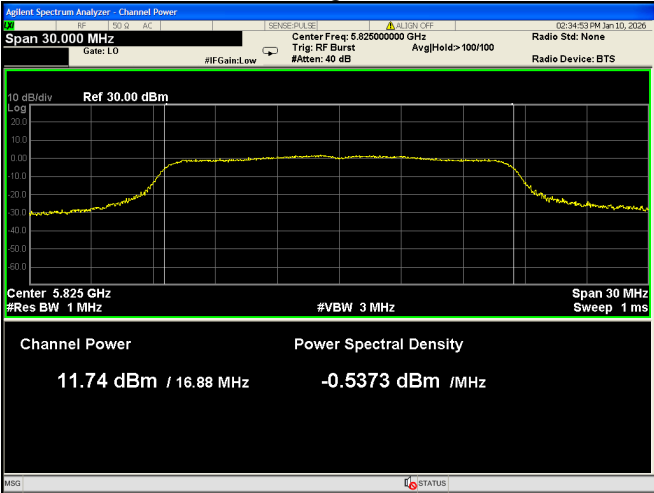
802.11a Low channel



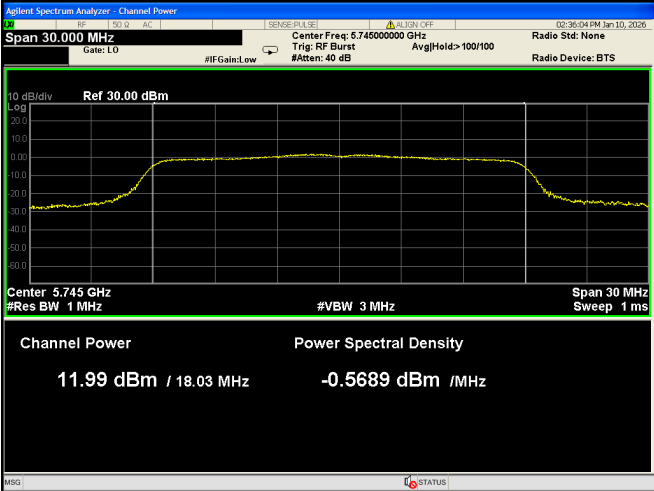
802.11a Middle channel



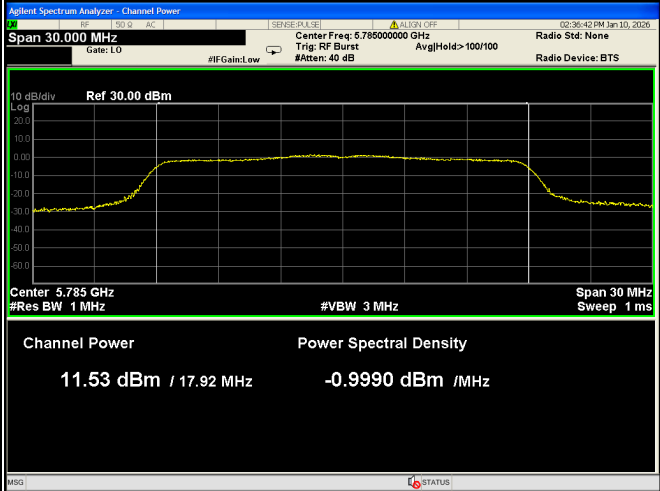
802.11a High channel



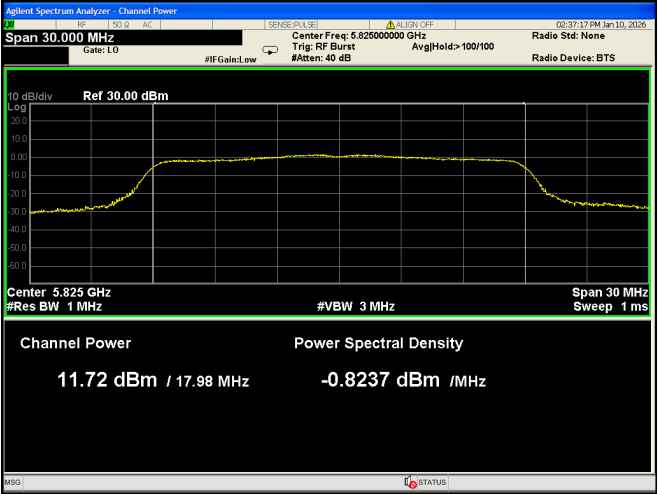
802.11n HT20 Low channel



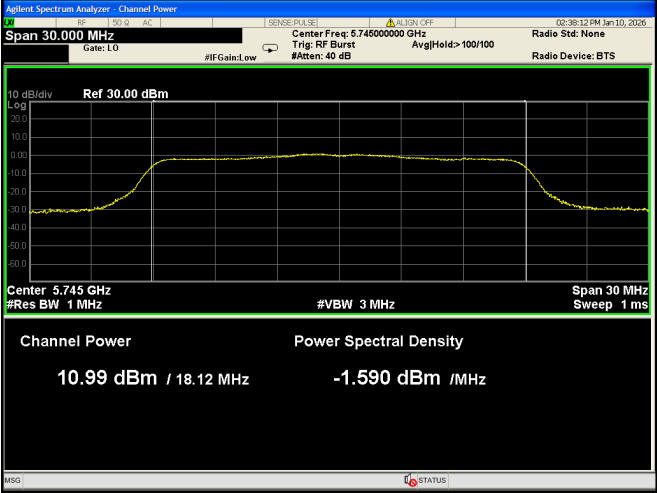
802.11n HT20 Middle channel



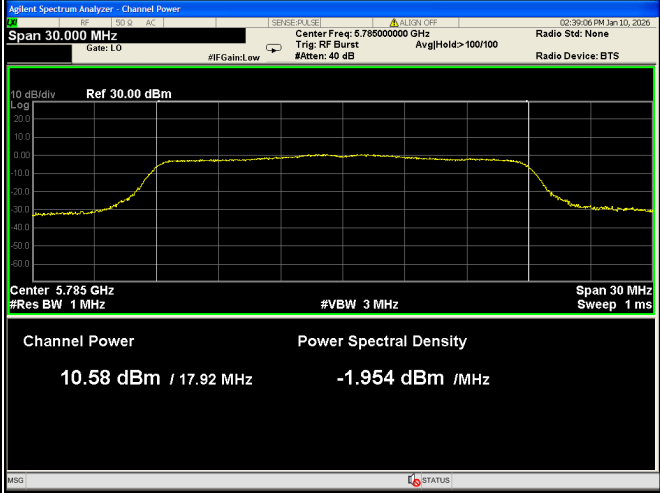
802.11n HT20 High channel



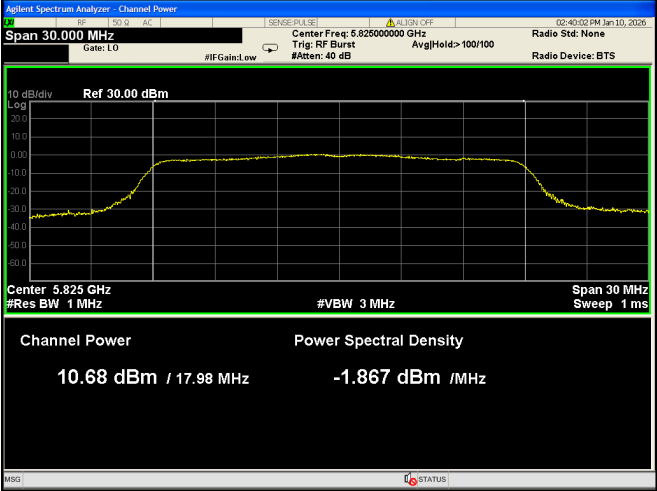
802.11ac VHT20 Low channel



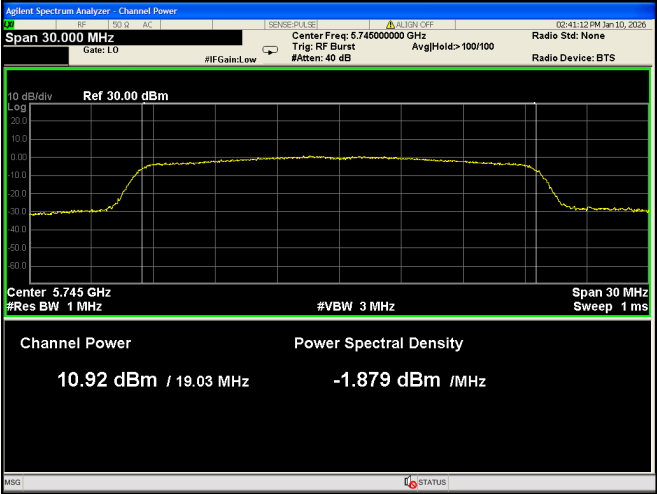
802.11ac VHT20 Middle channel



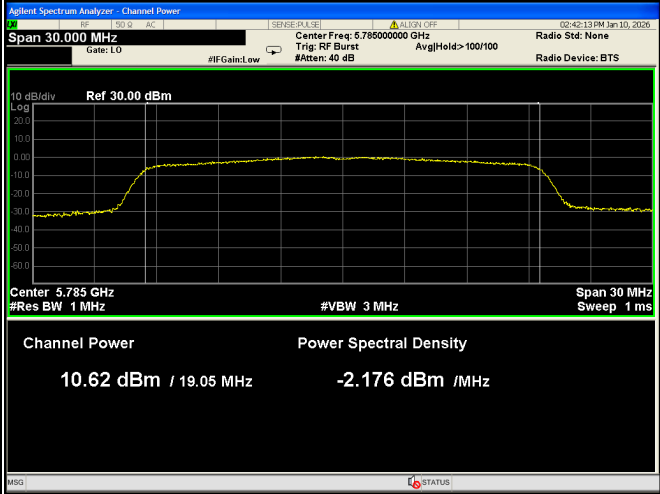
802.11ac VHT20 High channel



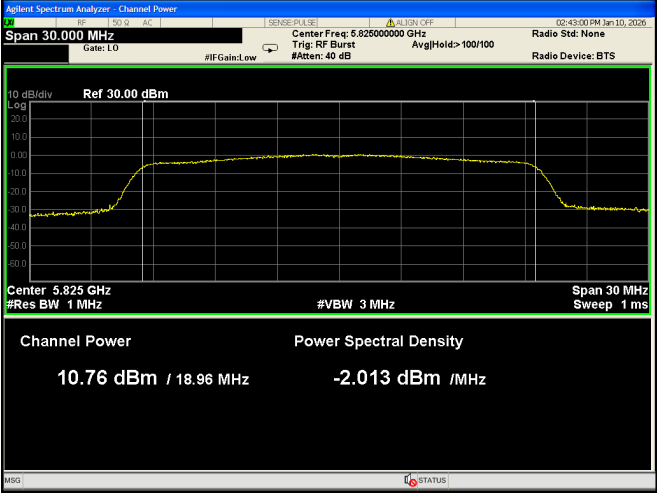
802.11ax HE20 Low channel



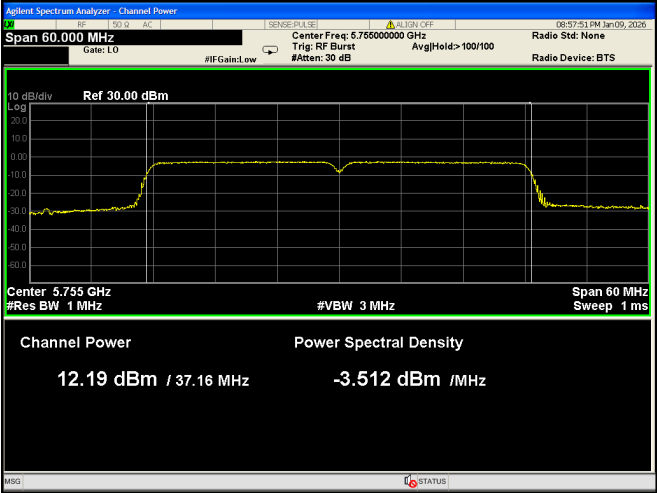
802.11ax HE20 Middle channel



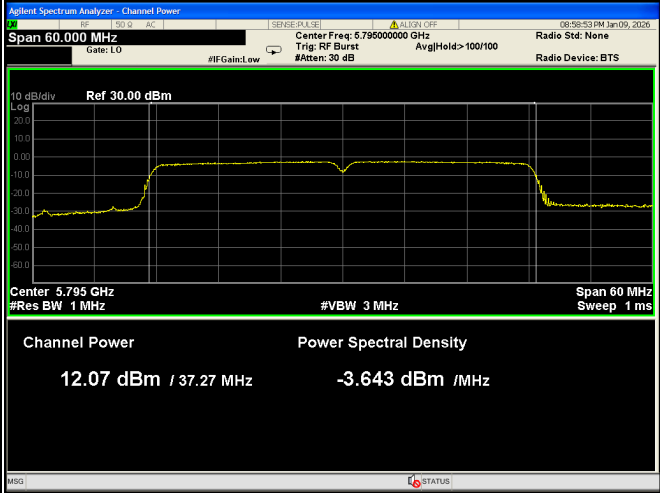
802.11ax HE20 High channel



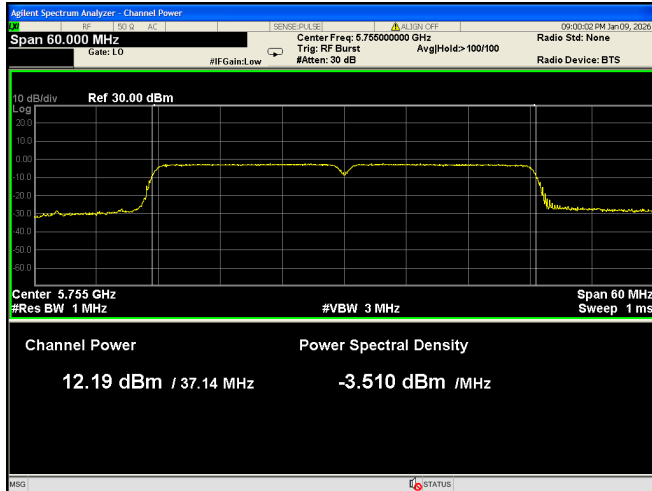
802.11n HT40 Low channel



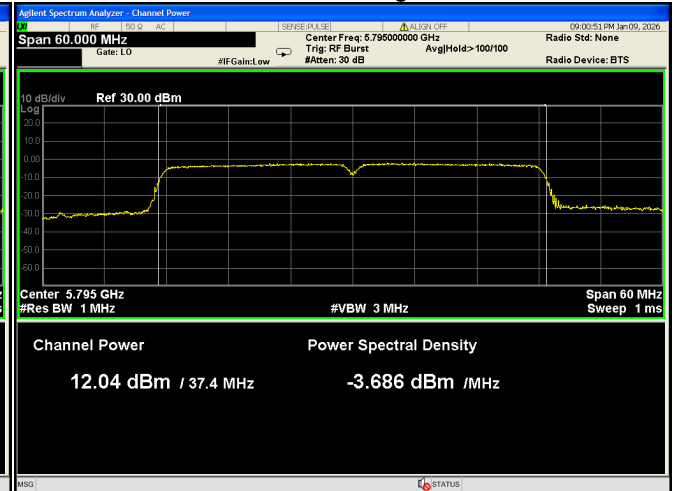
802.11n HT40 High channel



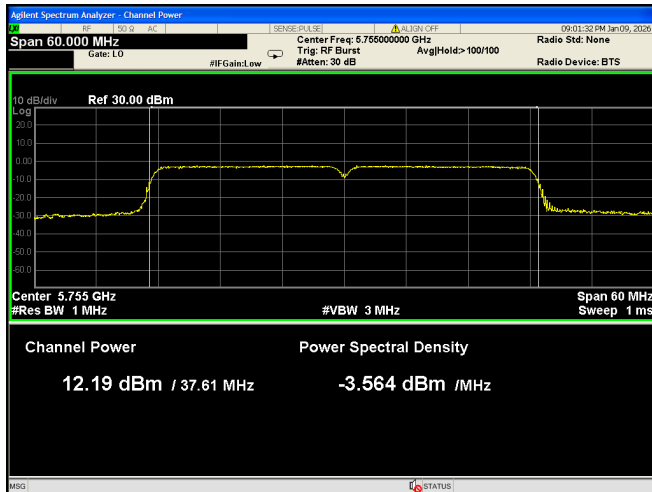
802.11ac VHT40 Low channel



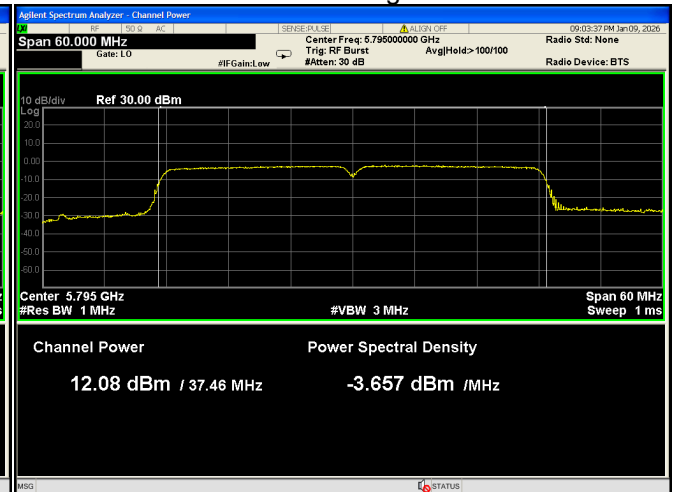
802.11ac VHT40 High channel



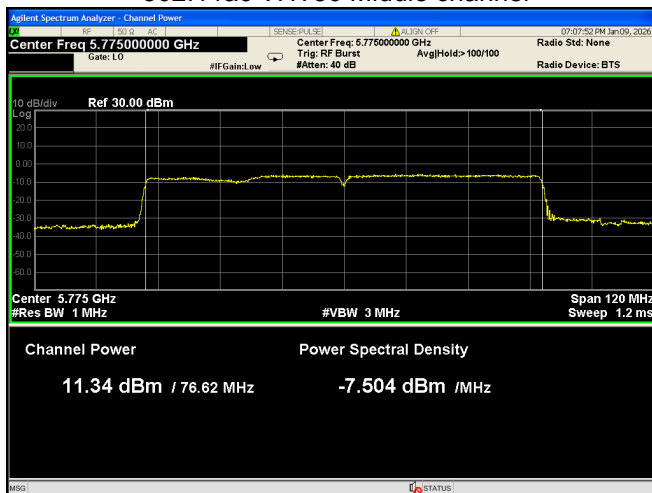
802.11ax HE40 Low channel



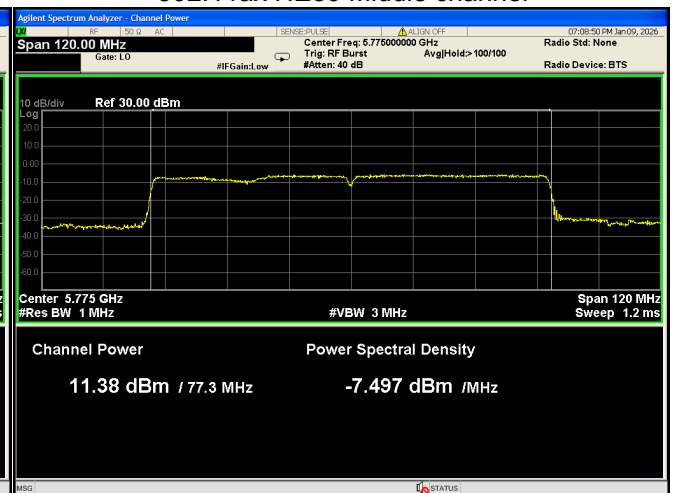
802.11ax HE40 High channel



802.11ac VHT80 Middle channel

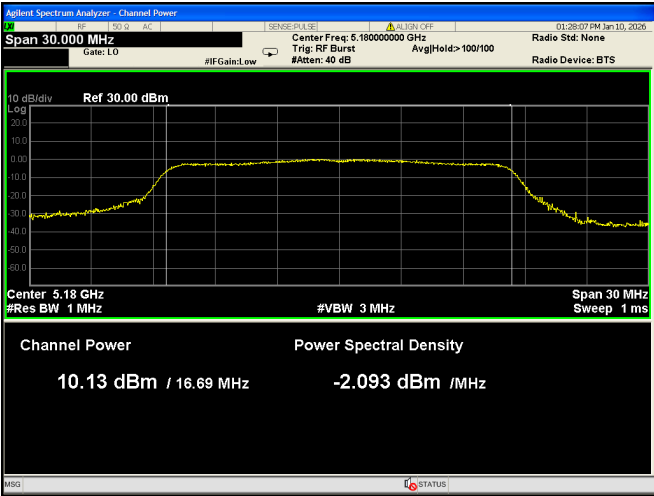


802.11ax HE80 Middle channel

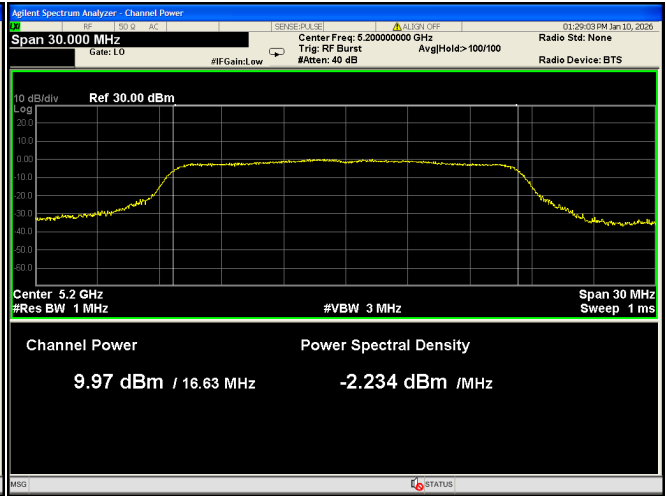


Ant. 2
U-NII-1

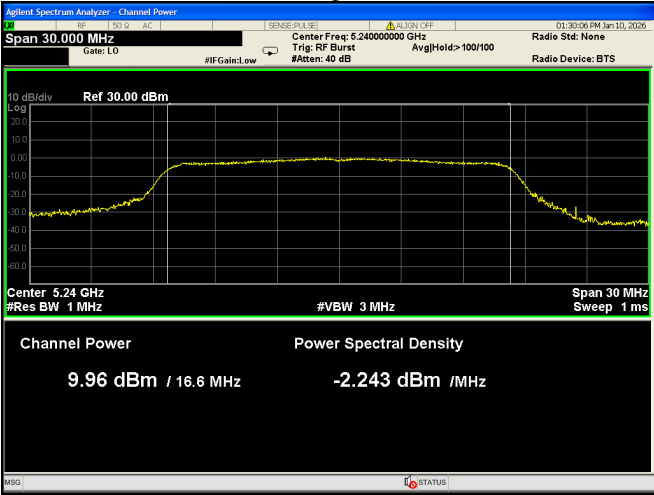
802.11a Low channel



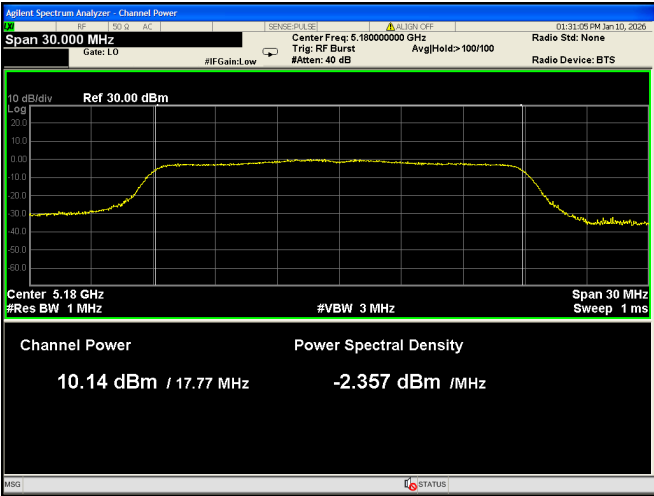
802.11a Middle channel



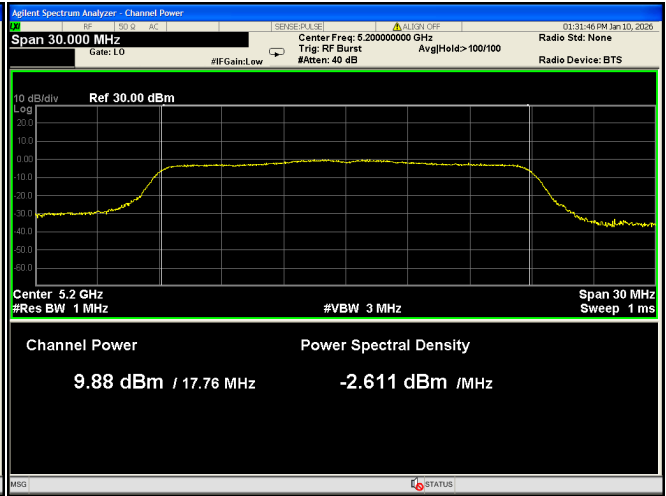
802.11a High channel



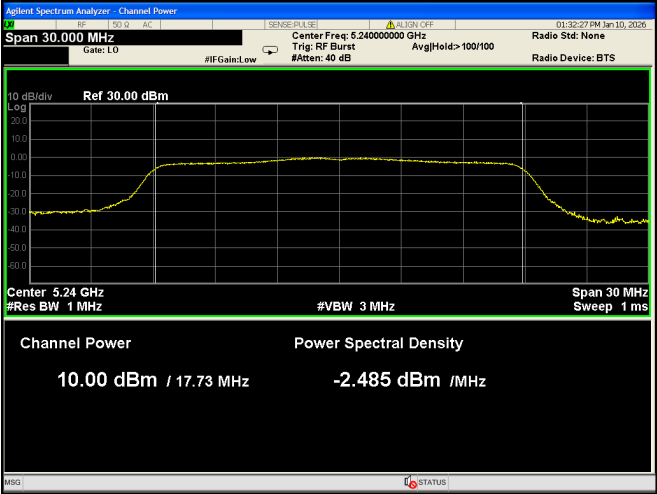
802.11n HT20 Low channel



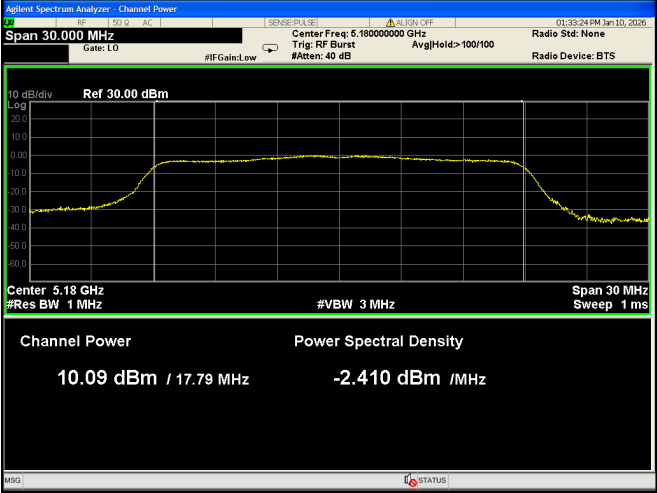
802.11n HT20 Middle channel



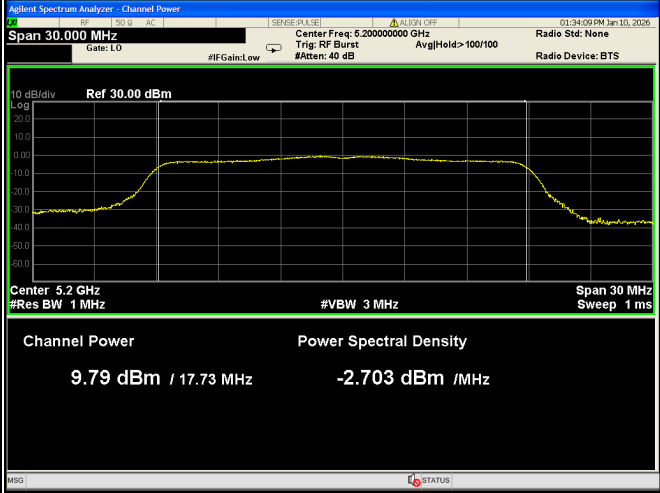
802.11n HT20 High channel



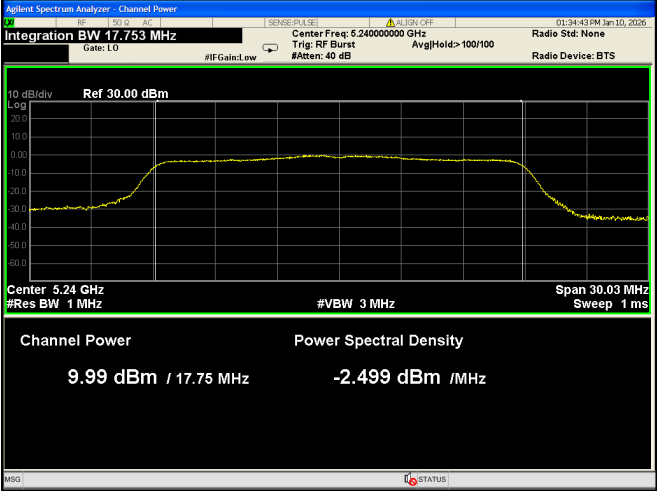
802.11ac VHT20 Low channel



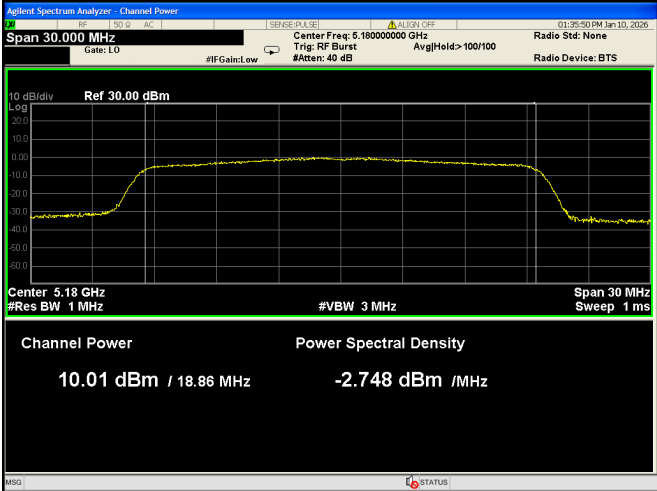
802.11ac VHT20 Middle channel



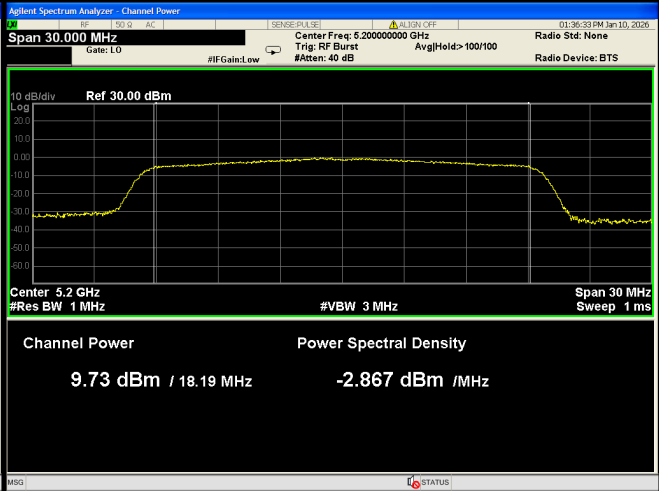
802.11ac VHT20 High channel



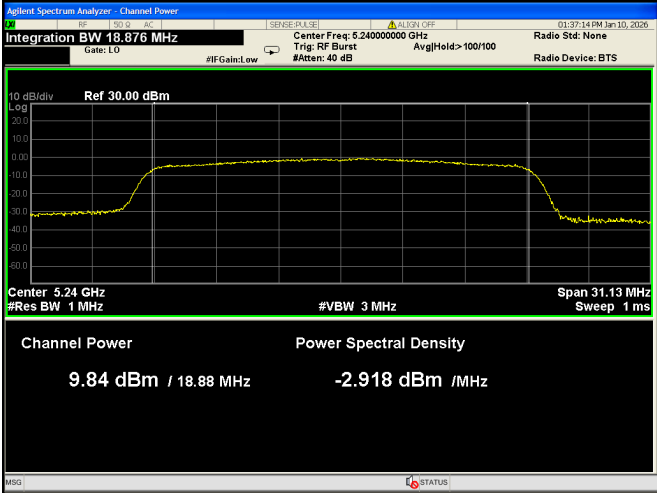
802.11ax HE20 Low channel



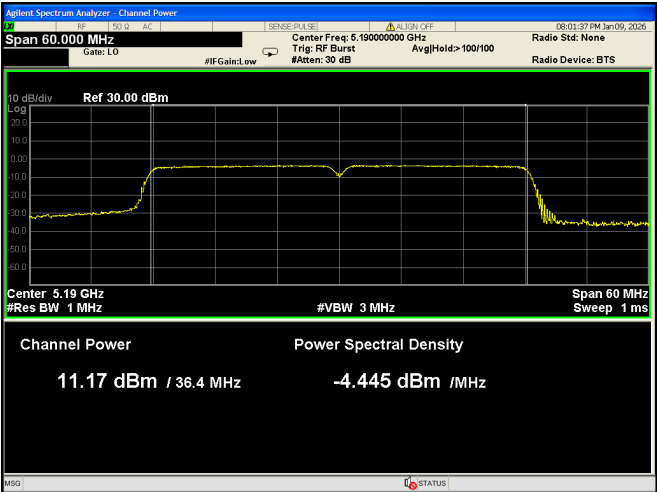
802.11ax HE20 Middle channel



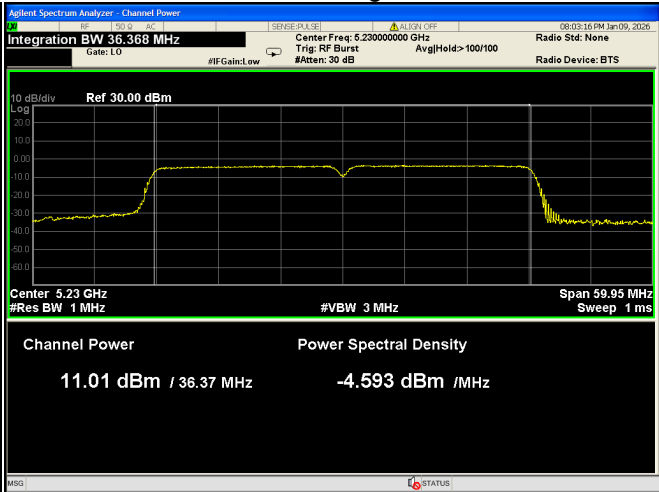
802.11ax HE20 High channel



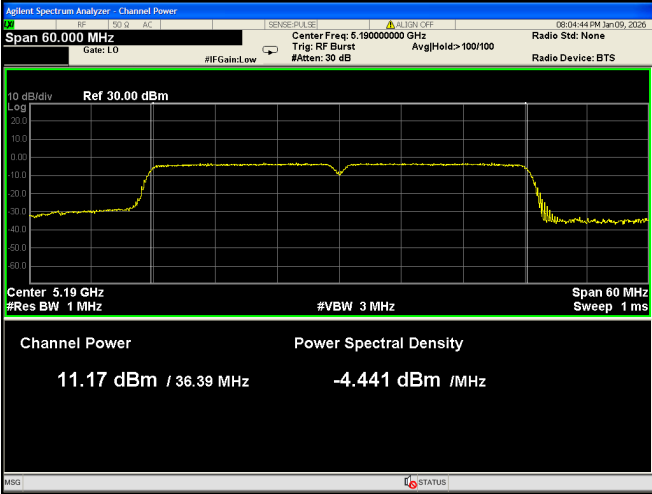
802.11n HT40 Low channel



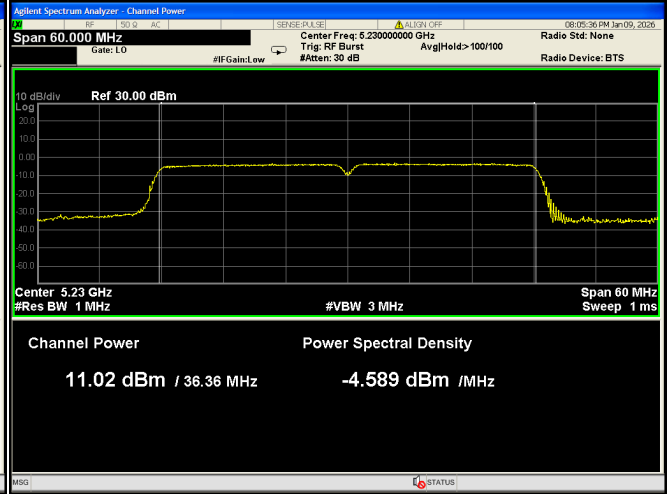
802.11n HT40 High channel



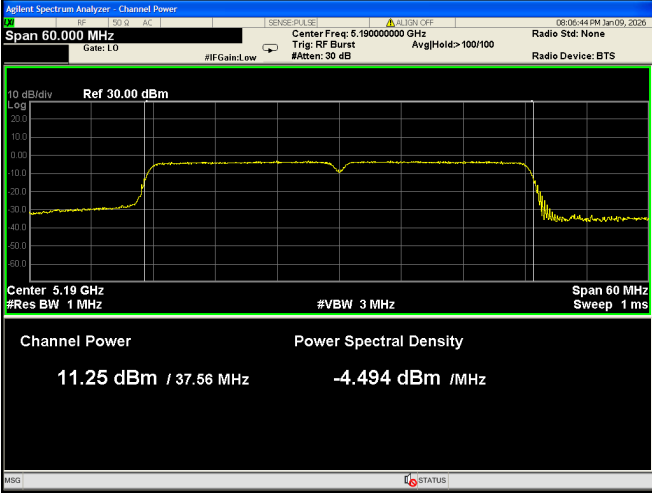
802.11ac VHT40 Low channel



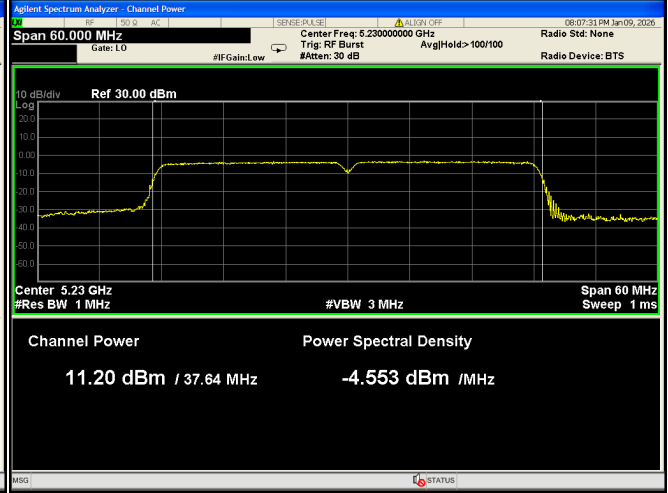
802.11ac VHT40 High channel



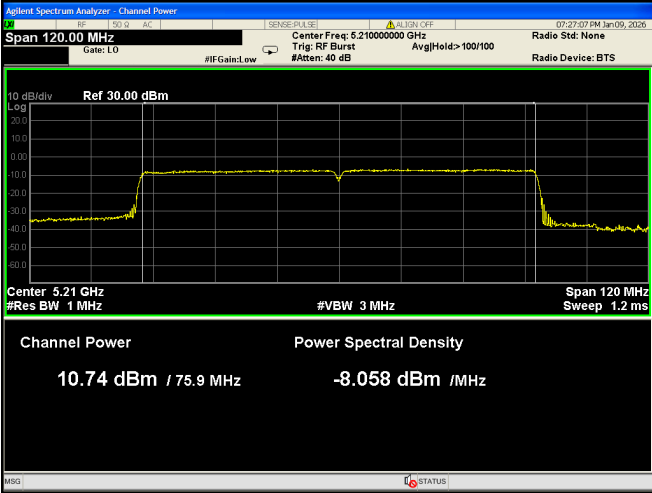
802.11ax HE40 Low channel



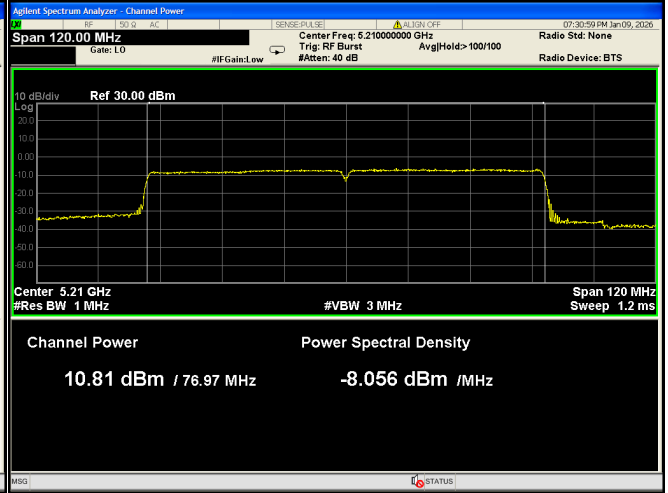
802.11ax HE40 High channel



802.11ac VHT80 Middle channel

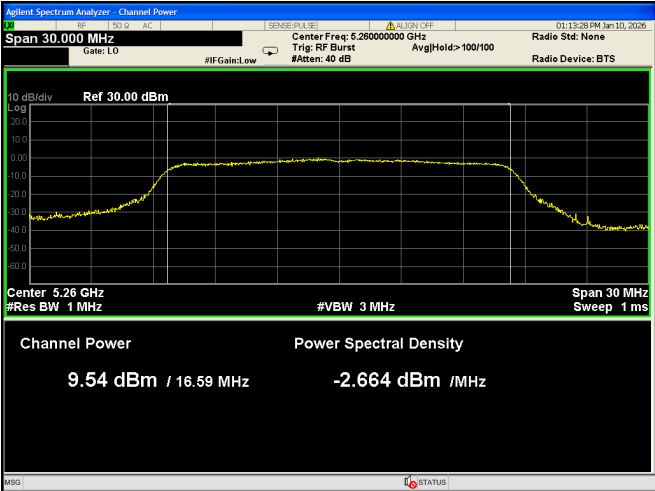


802.11ax HE80 Middle channel

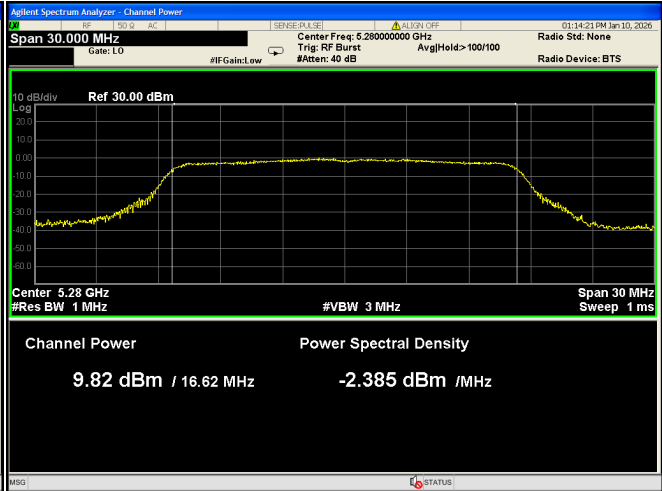


U-NII-2A

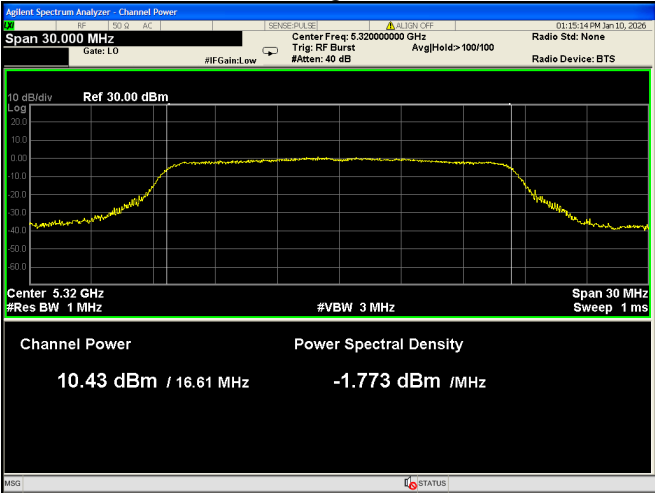
802.11a Low channel



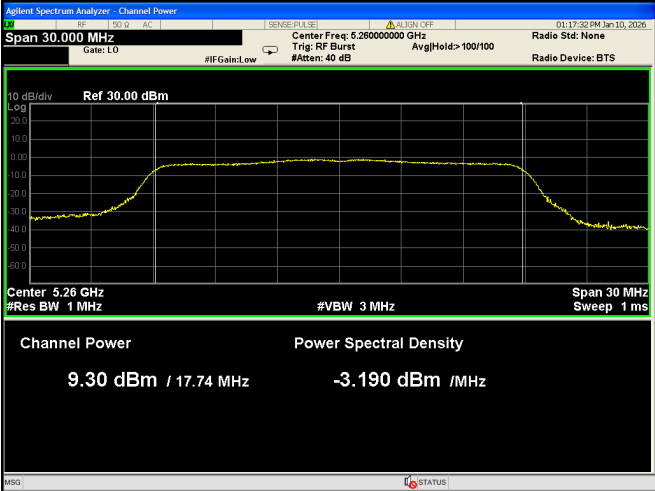
802.11a Middle channel



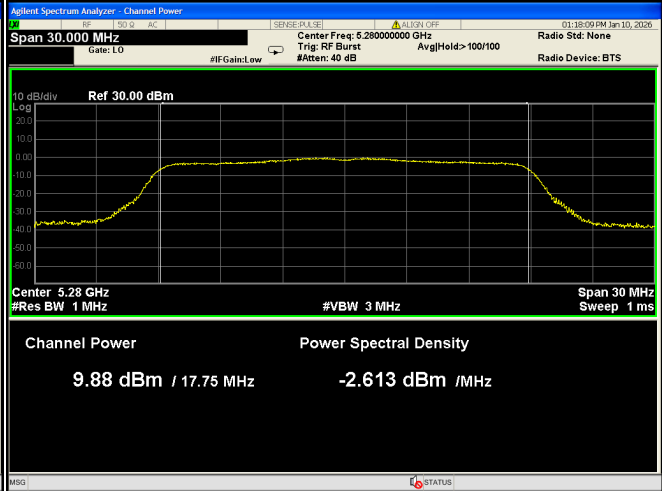
802.11a High channel



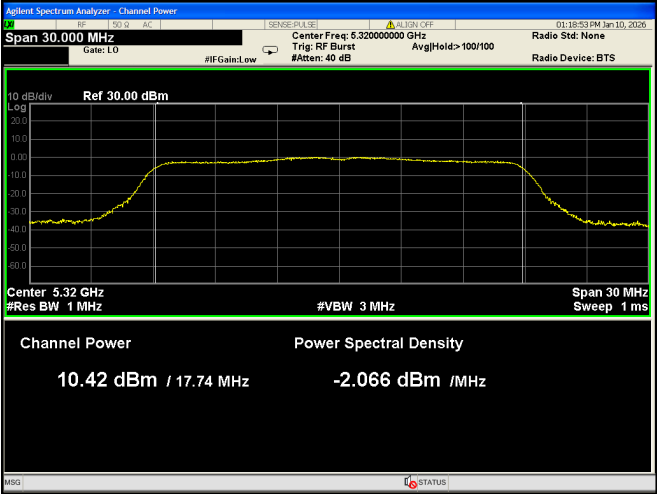
802.11n HT20 Low channel



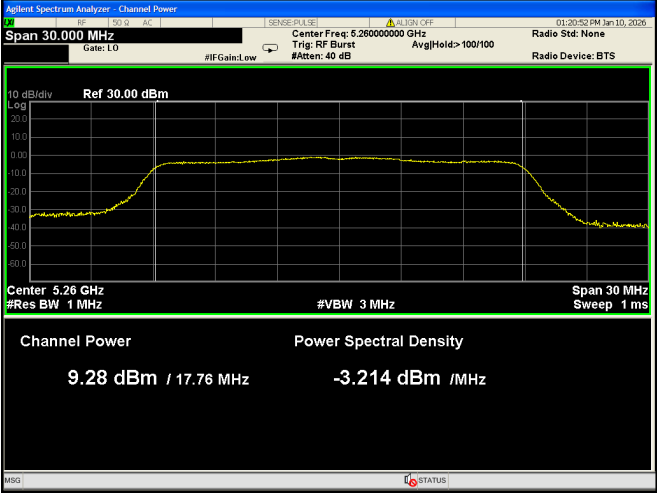
802.11n HT20 Middle channel



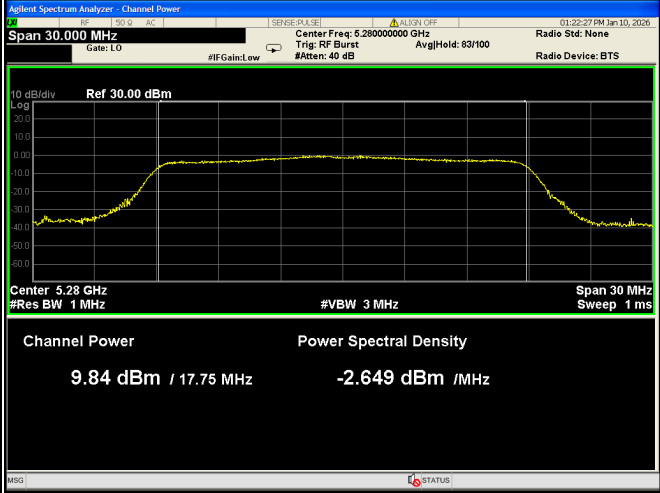
802.11n HT20 High channel



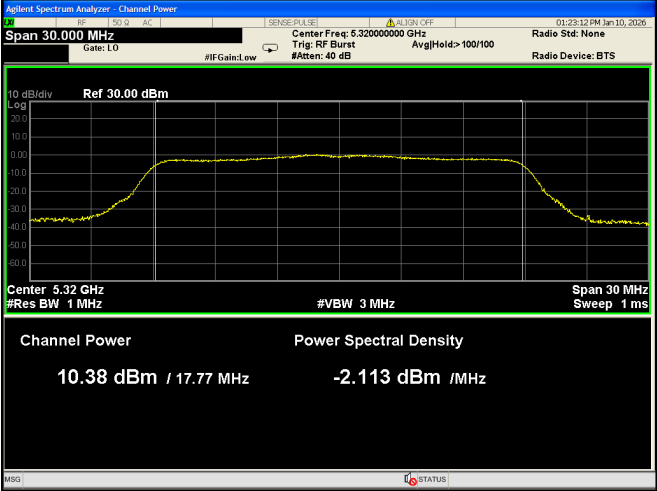
802.11ac VHT20 Low channel



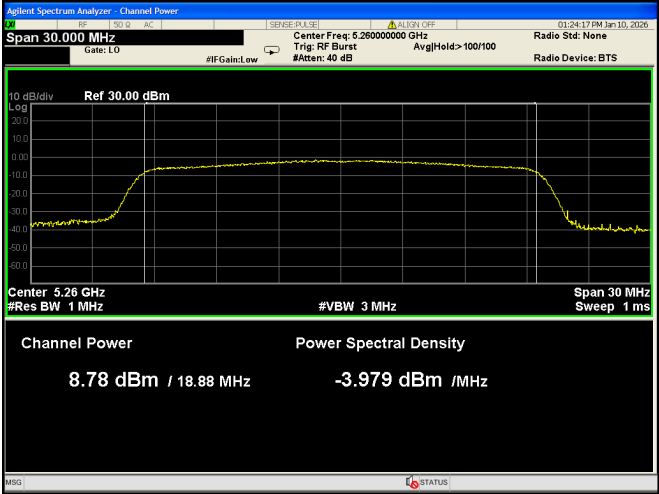
802.11ac VHT20 Middle channel



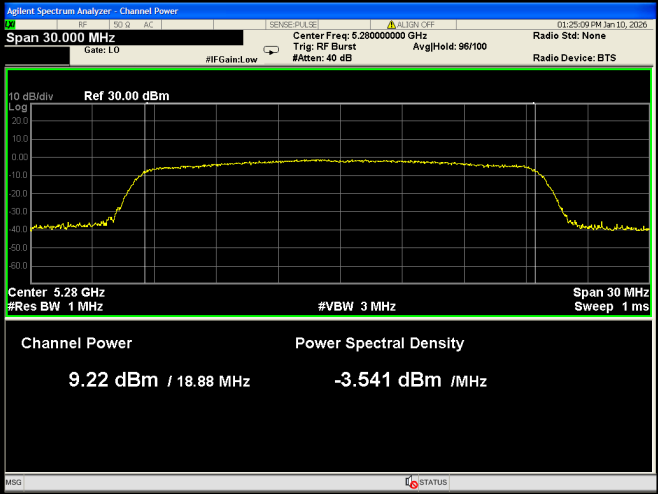
802.11ac VHT20 High channel



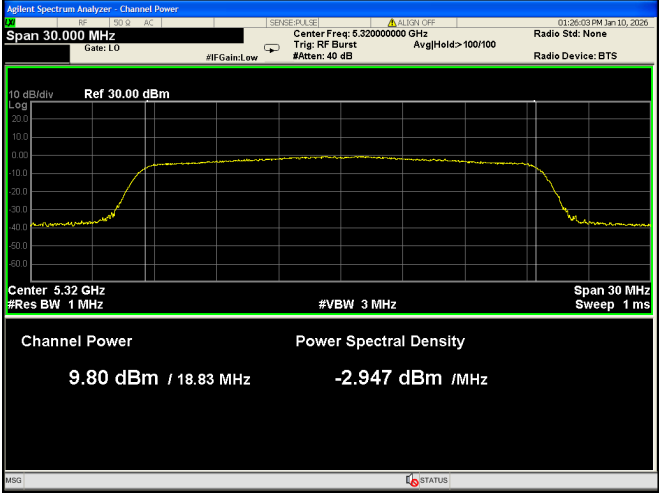
802.11ax HE20 Low channel



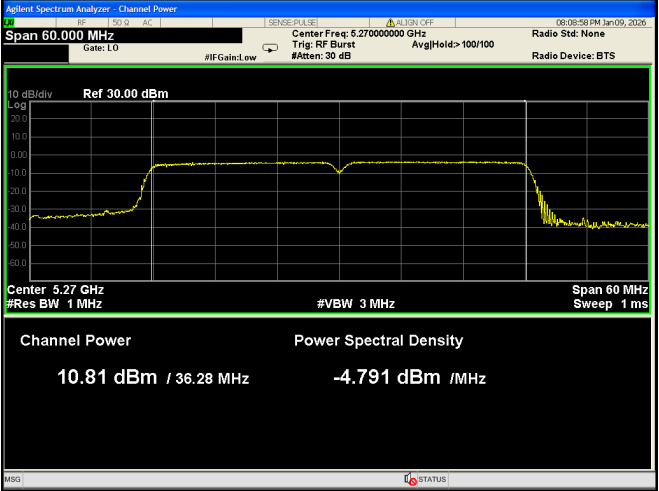
802.11ax HE20 Middle channel



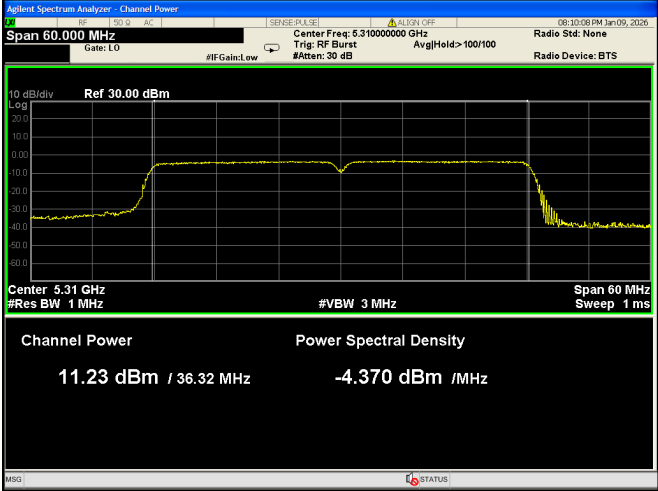
802.11ax HE20 High channel



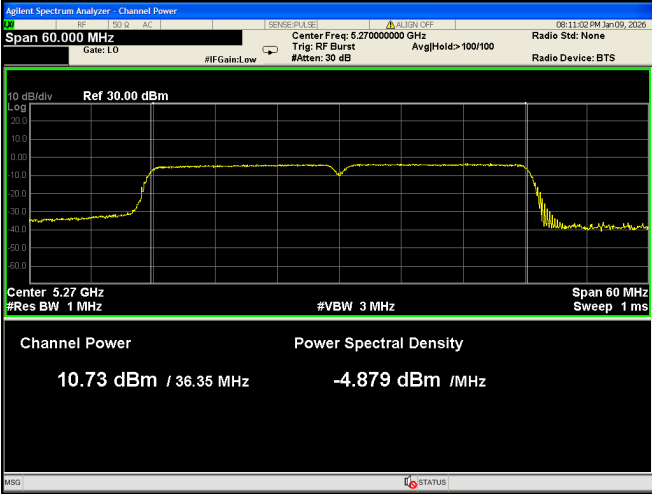
802.11n HT40 Low channel



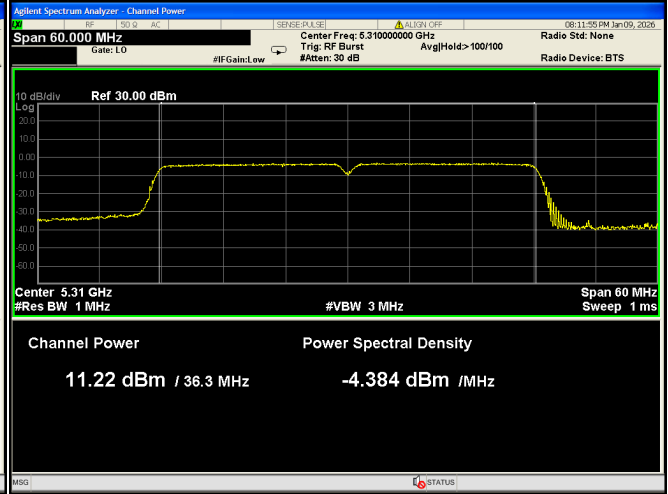
802.11n HT40 High channel



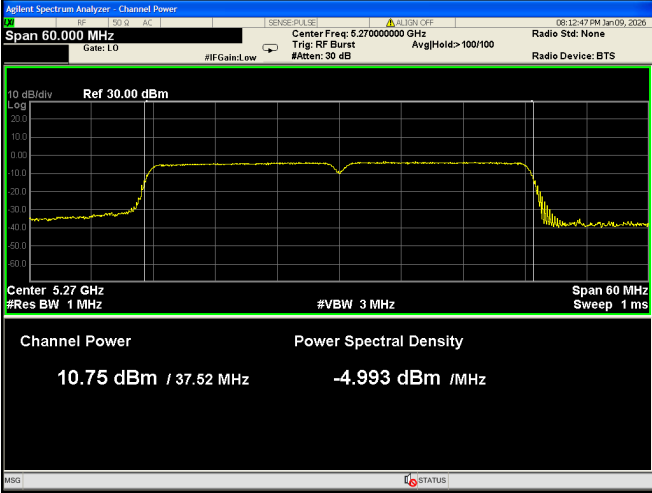
802.11ac VHT40 Low channel



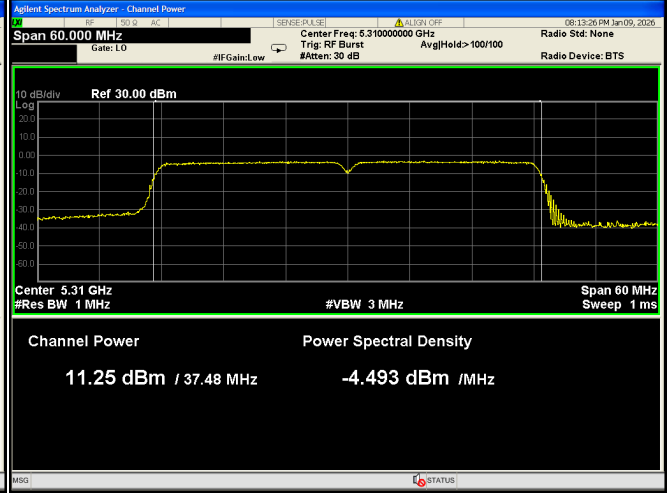
802.11ac VHT40 High channel



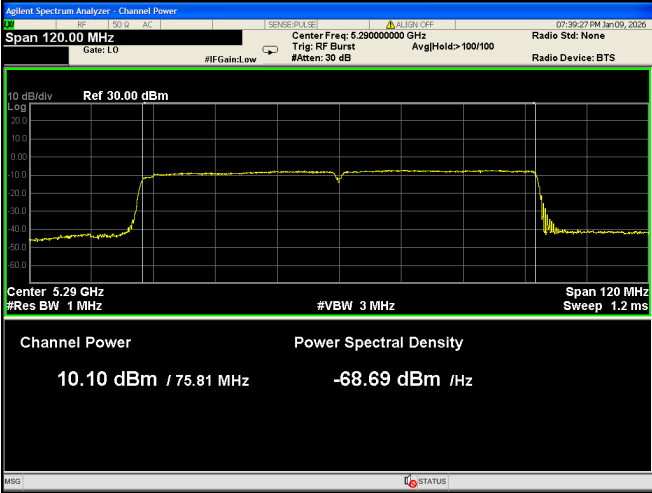
802.11ax HE40 Low channel



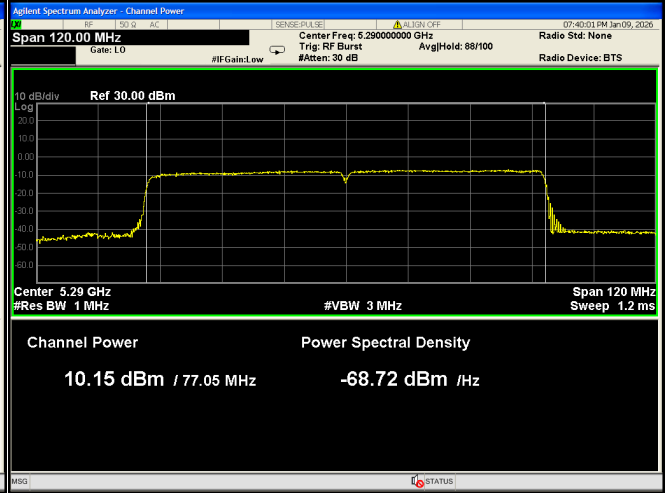
802.11ax HE40 High channel



802.11ac VHT80 Middle channel

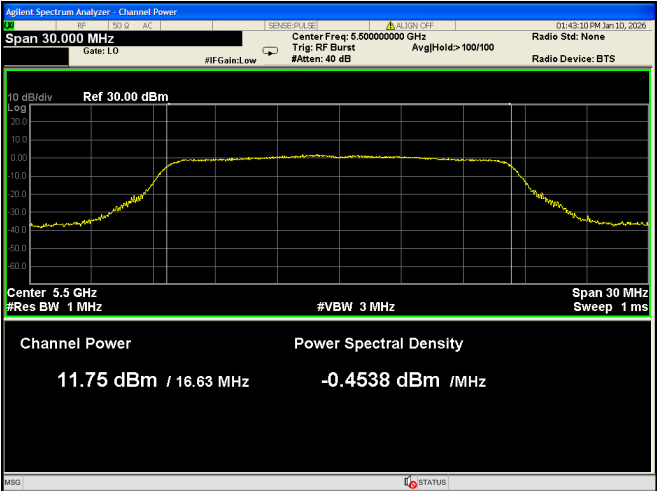


802.11ax HE80 Middle channel

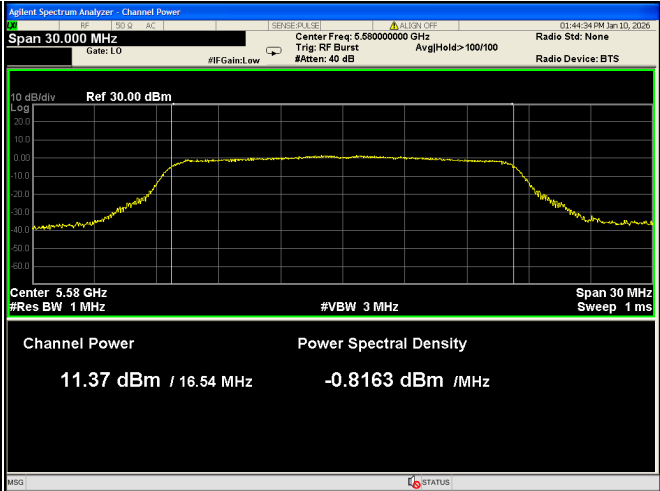


U-NII-2C

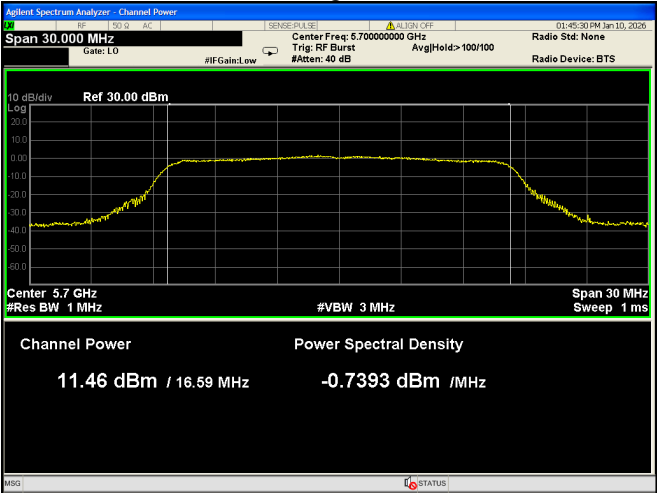
802.11a Low channel



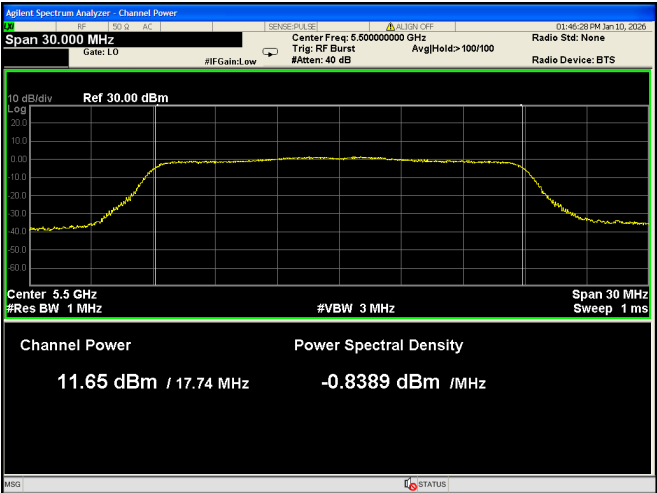
802.11a Middle channel



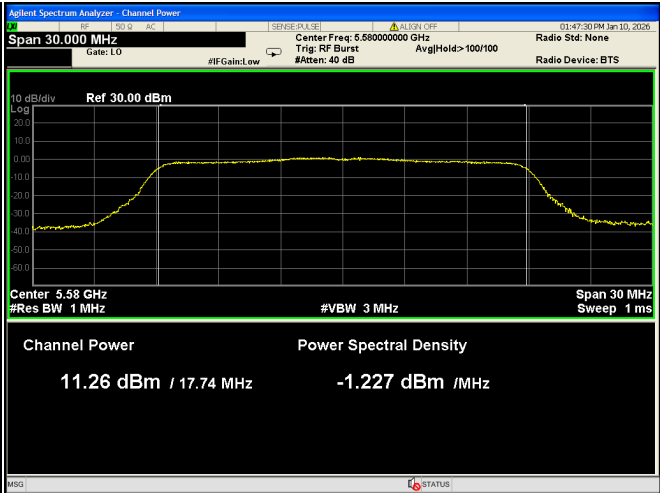
802.11a High channel



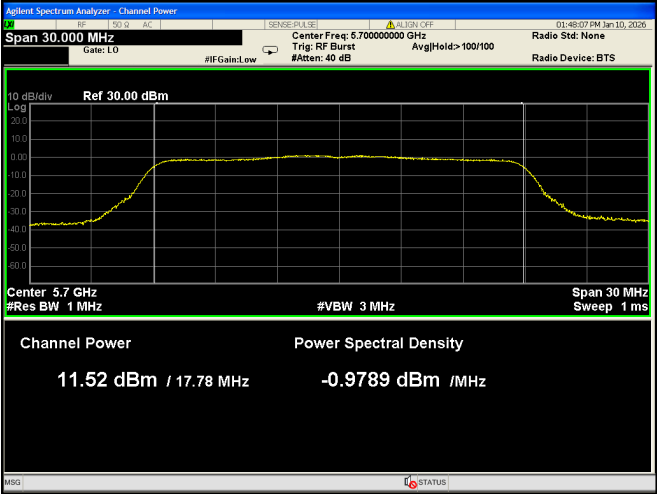
802.11n HT20 Low channel



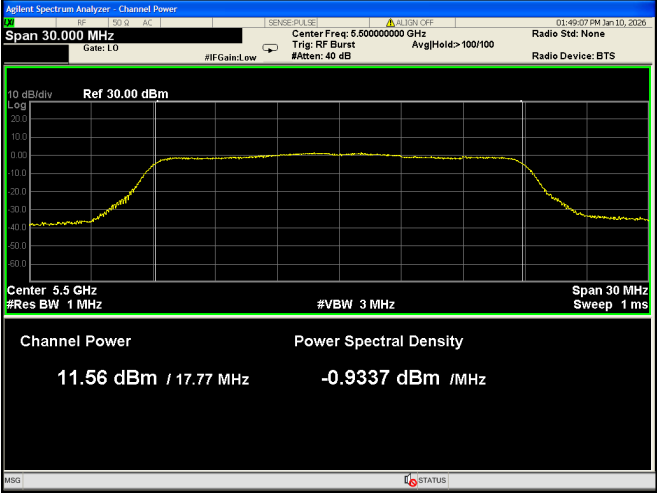
802.11n HT20 Middle channel



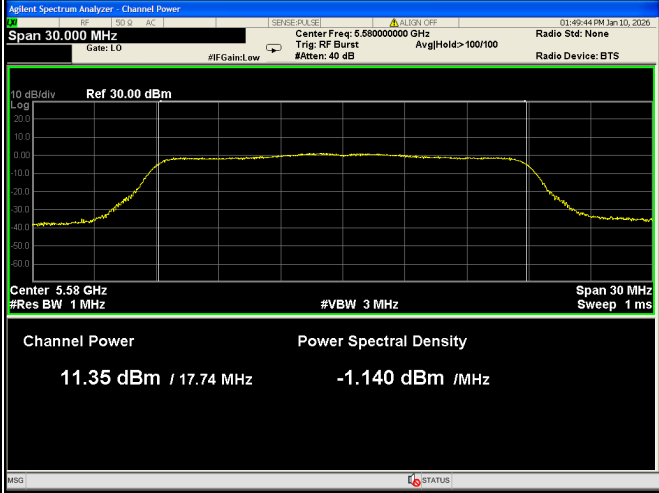
802.11n HT20 High channel



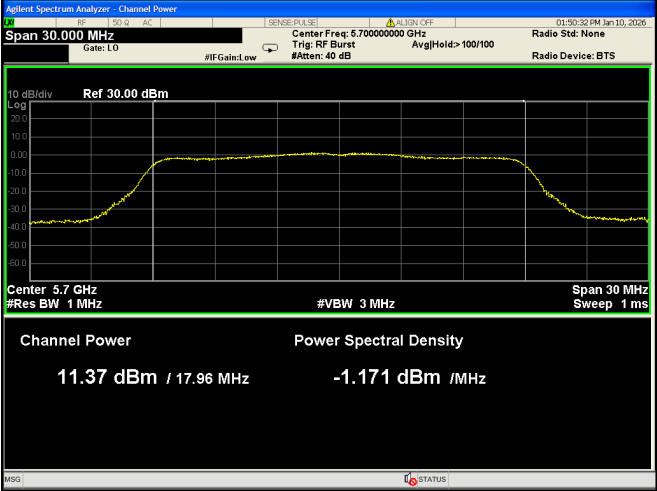
802.11ac VHT20 Low channel



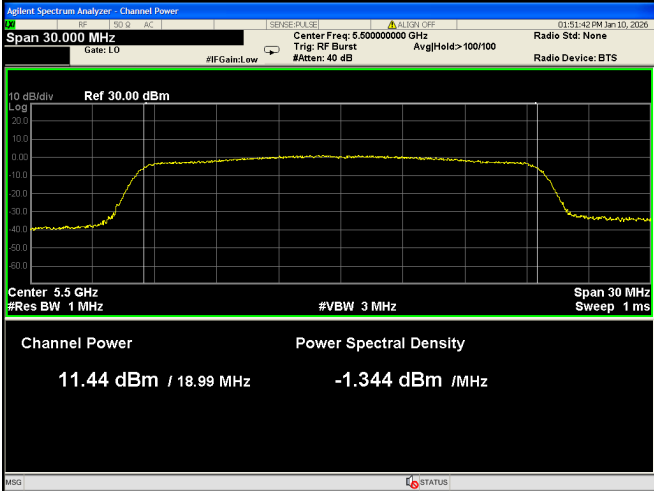
802.11ac VHT20 Middle channel



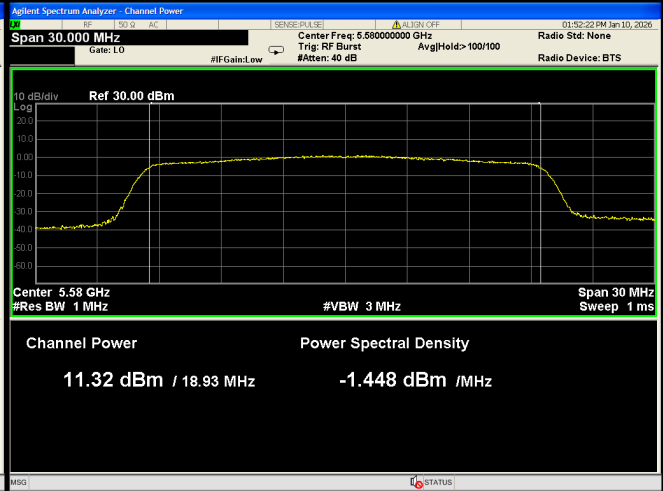
802.11ac VHT20 High channel



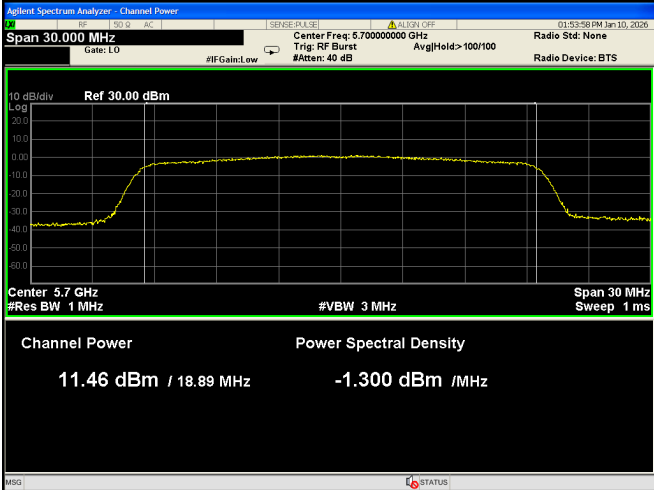
802.11ax HE20 Low channel



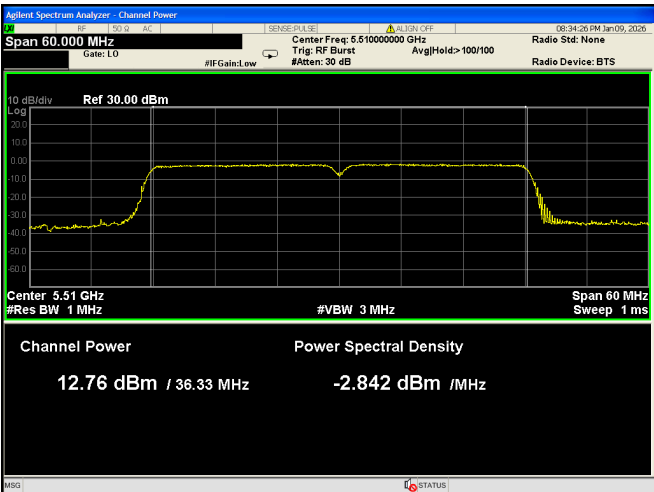
802.11ax HE20 Middle channel



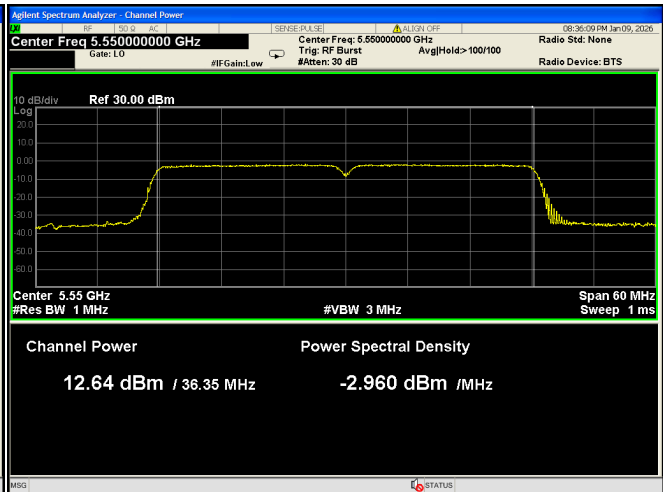
802.11ax HE20 High channel



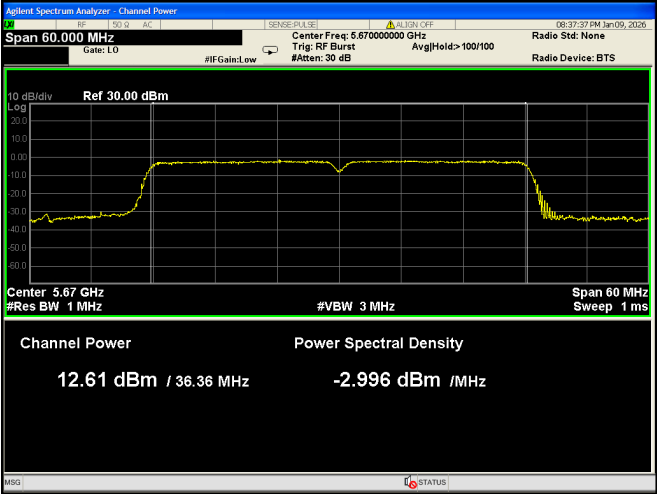
802.11n HT40 Low channel



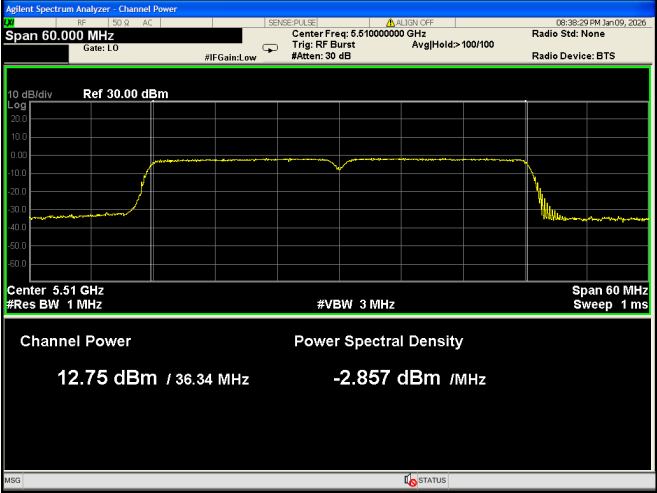
802.11n HT40 Middle channel



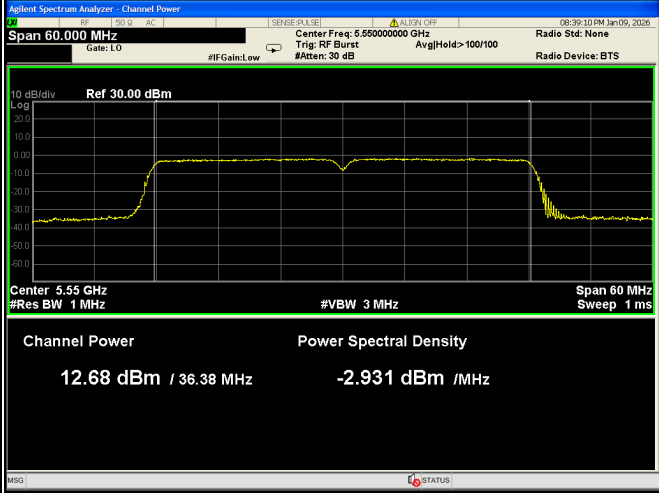
802.11n HT40 High channel



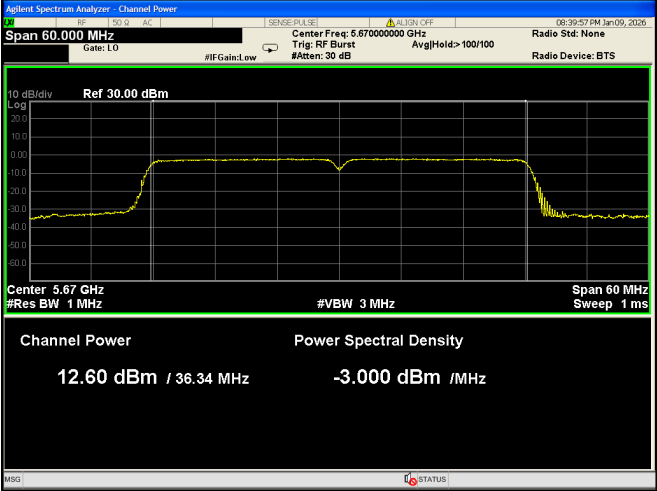
802.11ac VHT40 Low channel



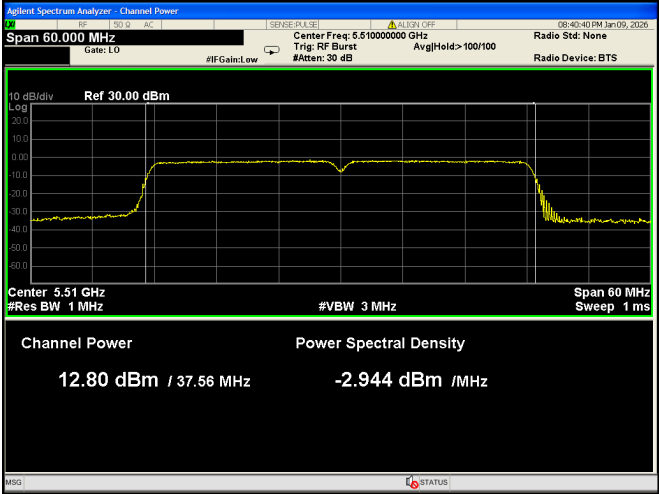
802.11ac VHT40 Middle channel



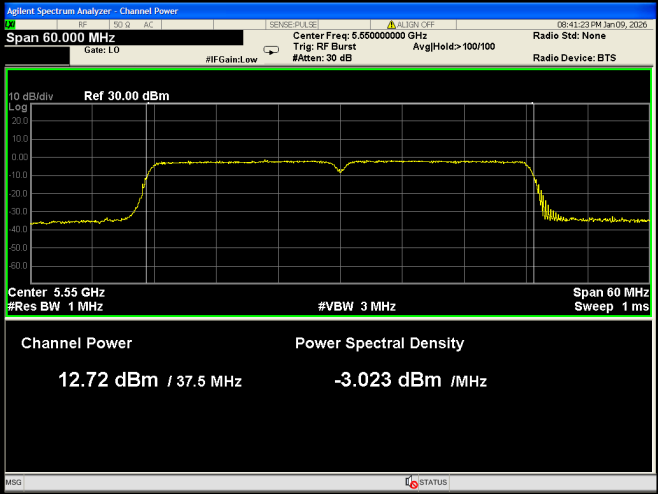
802.11ac VHT40 High channel



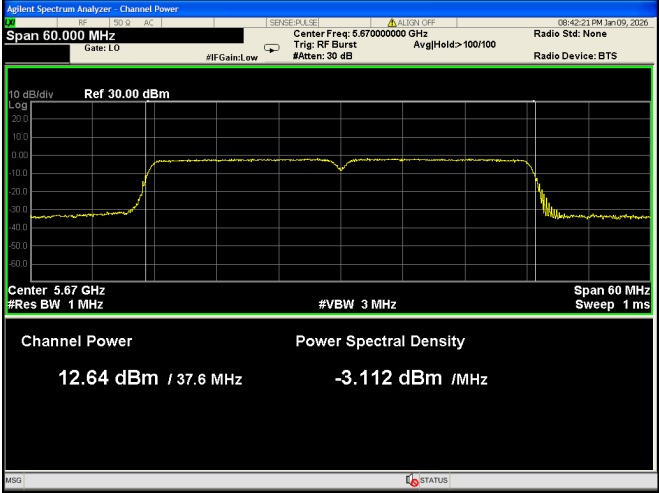
802.11ax HE40 Low channel



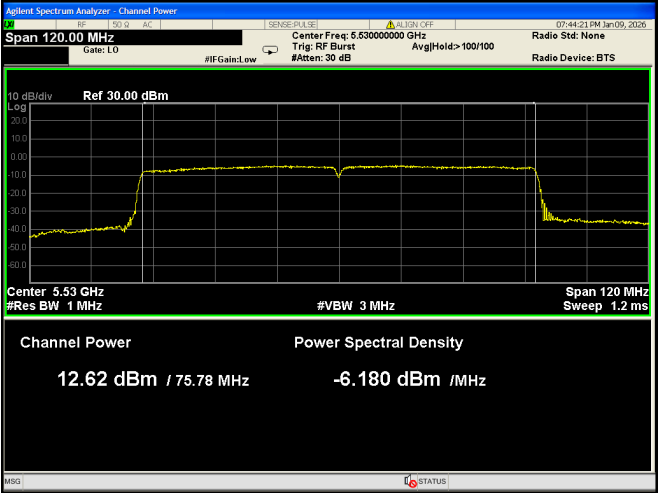
802.11ax HE40 Middle channel



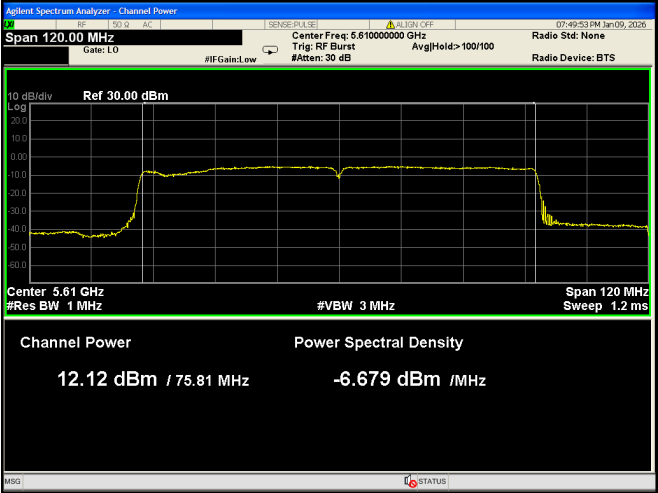
802.11ax HE40 High channel



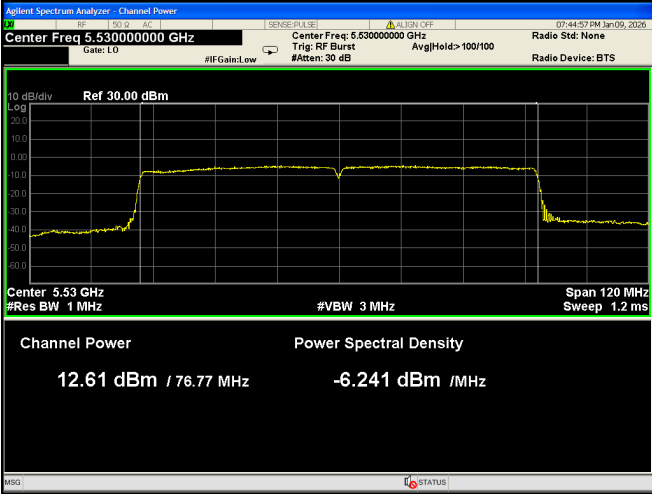
802.11ac VHT80 Low channel



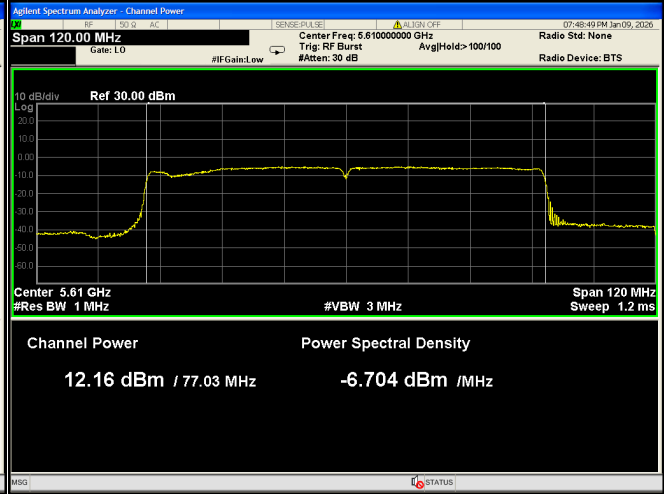
802.11ac VHT80 Middle channel



802.11ax HE80 Low channel

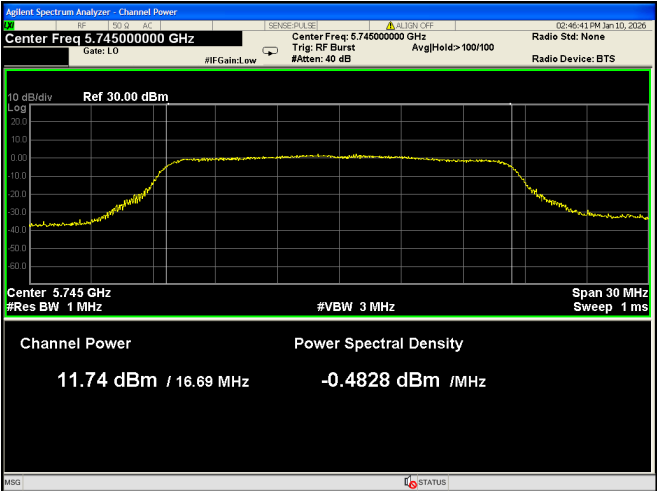


802.11ax HE80 Middle channel

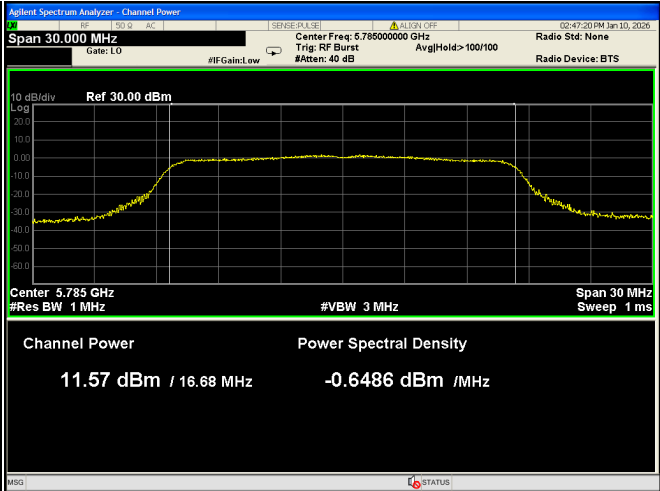


U-NII-3

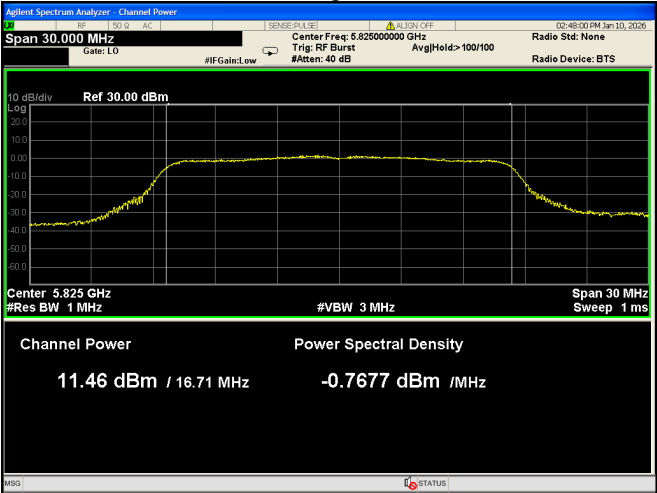
802.11a Low channel



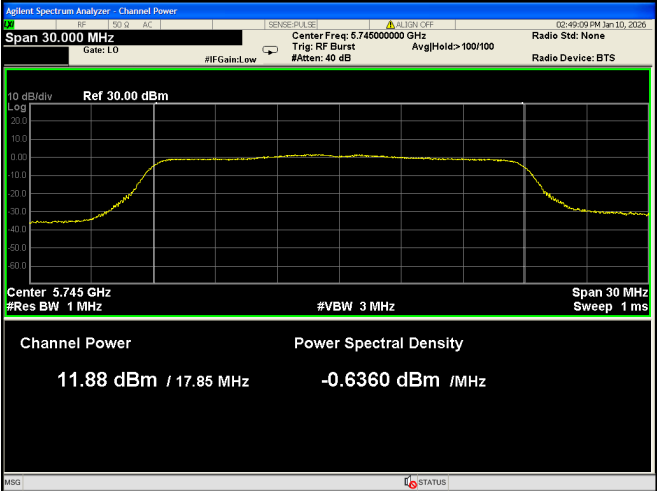
802.11a Middle channel



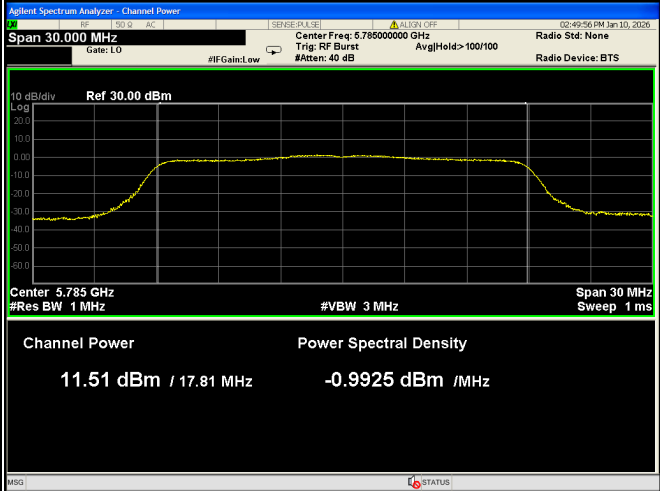
802.11a High channel



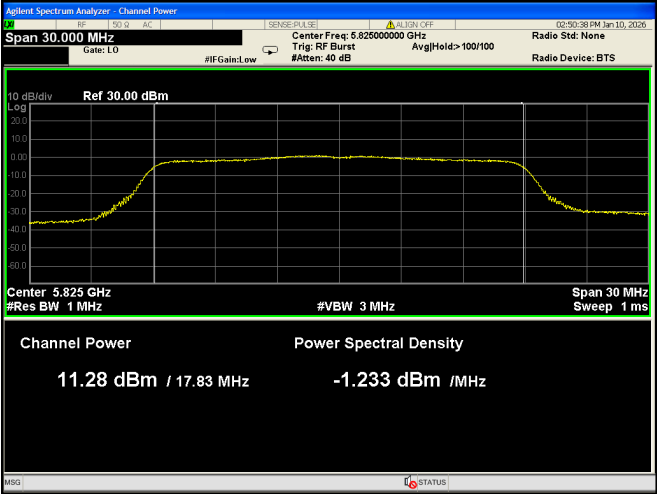
802.11n HT20 Low channel



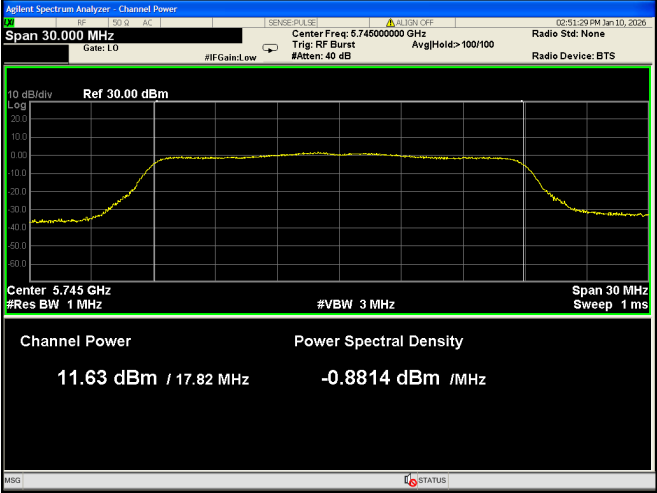
802.11n HT20 Middle channel



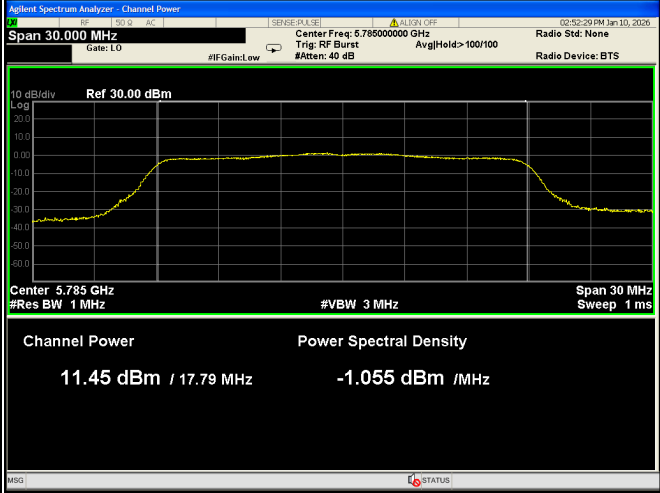
802.11n HT20 High channel



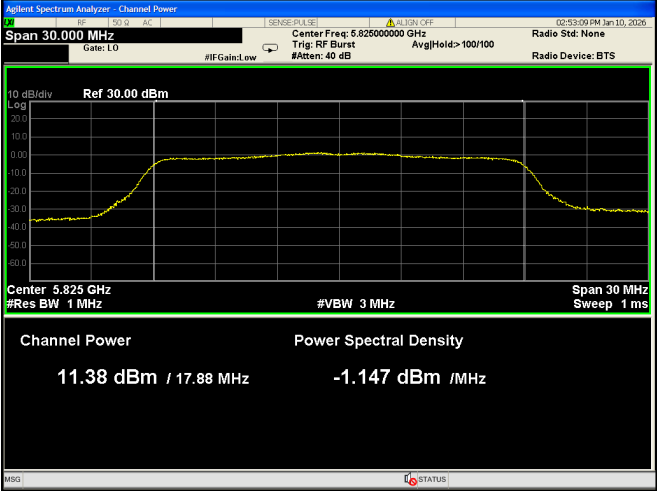
802.11ac VHT20 Low channel



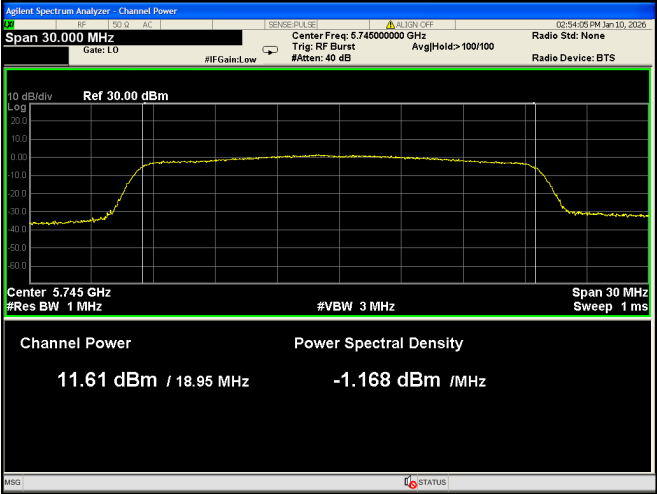
802.11ac VHT20 Middle channel



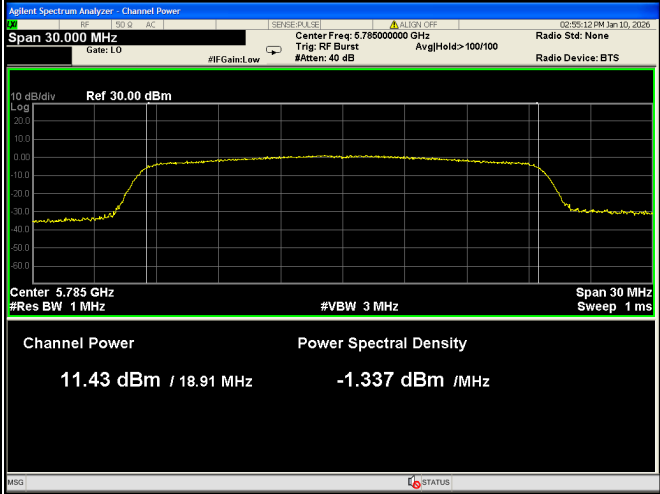
802.11ac VHT20 High channel



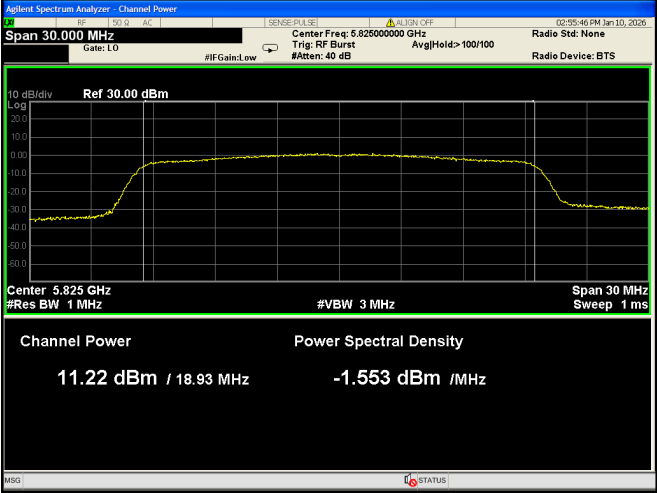
802.11ax HE20 Low channel



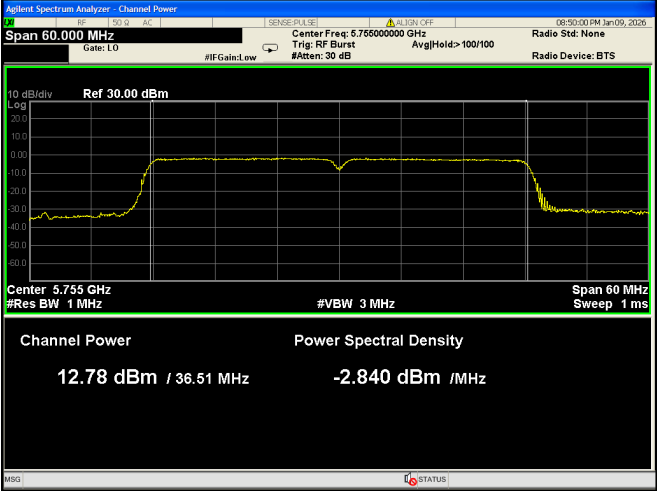
802.11ax HE20 Middle channel



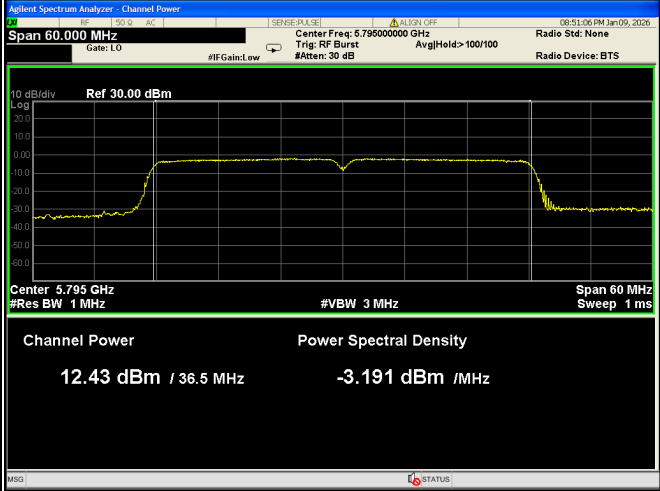
802.11ax HE20 High channel



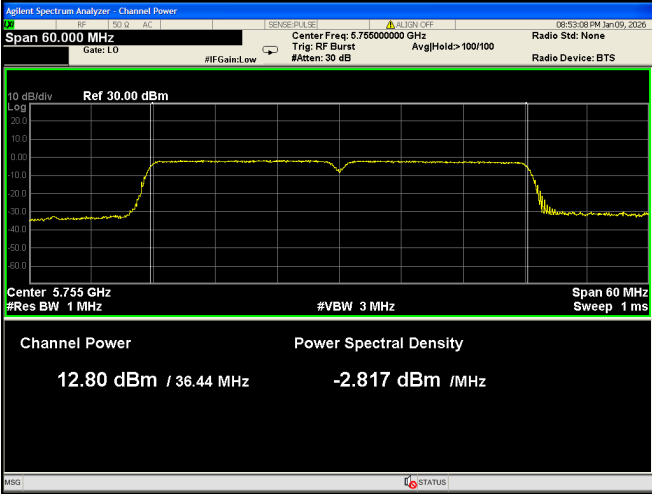
802.11n HT40 Low channel



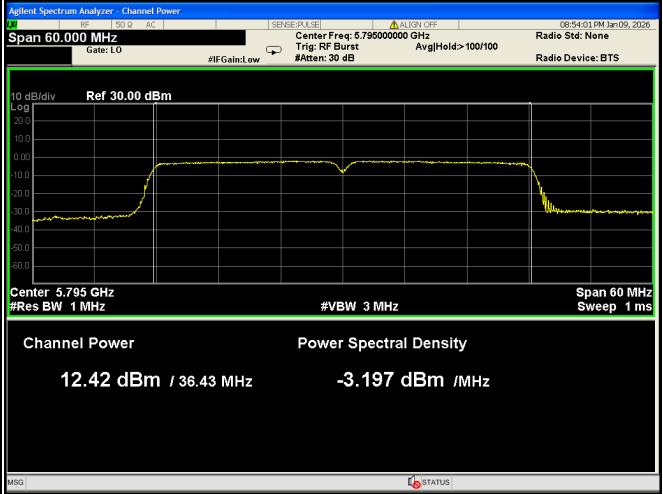
802.11n HT40 High channel



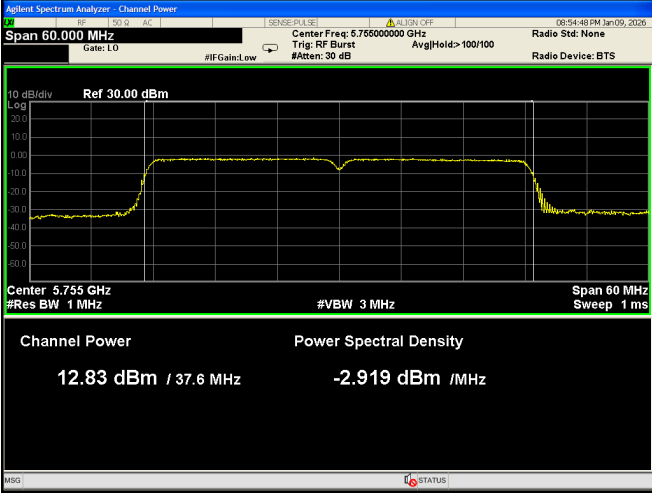
802.11ac VHT40 Low channel



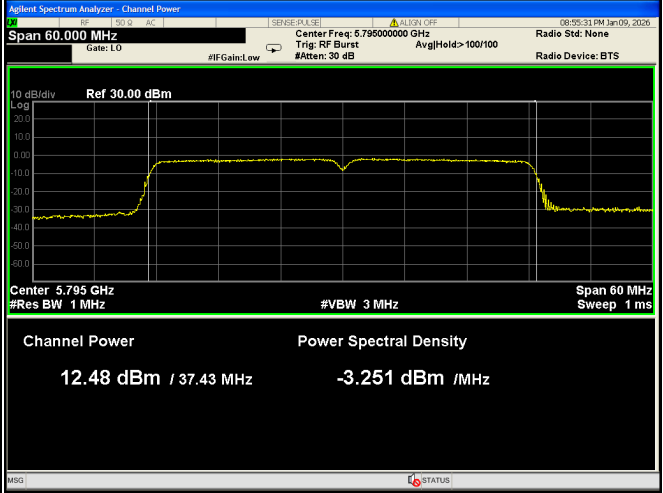
802.11ac VHT40 High channel



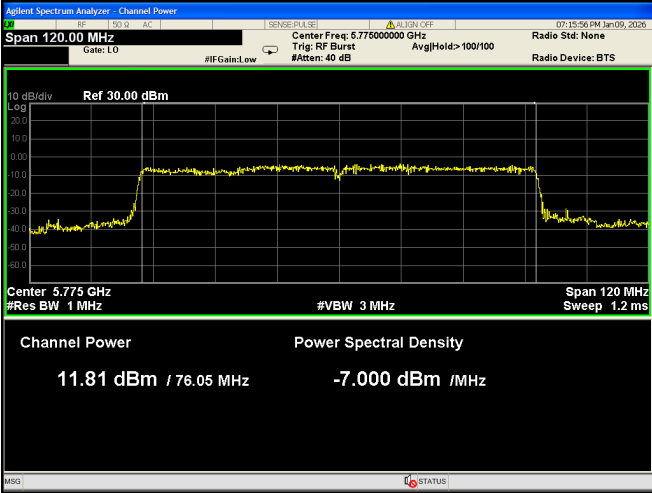
802.11ax HE40 Low channel



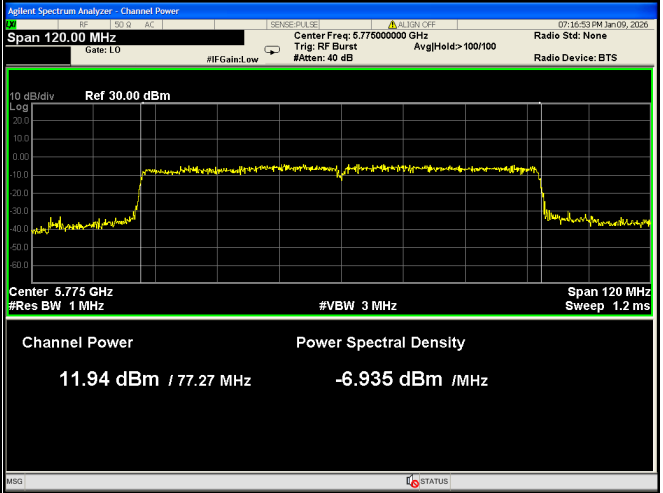
802.11ax HE40 High channel



802.11ac VHT80 Middle channel



802.11ax HE80 Middle channel



14 Power Spectral Density

Test Requirement:	FCC CFR47 Part 15 Section 15.407(a) KDB 662911 D01 Multiple Transmitter Output v02r01, October 31, 2013 ANSI C63.10-2020
Test Method:	KDB 789033 D02 General UNII Test Procedures New Rules v02r01, Section F
Test Limit:	For the band 5.15-5.25 GHz For an outdoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. For an indoor access point operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. For fixed point-to-point access points operating in the band 5.15-5.25 GHz, the maximum power spectral density shall not exceed 17 dBm in any 1 megahertz band. For client devices in the 5.15-5.25 GHz band, the maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. For the 5.25-5.35 GHz and 5.47-5.725 GHz bands The maximum power spectral density shall not exceed 11 dBm in any 1 megahertz band. For the band 5.725-5.850 GHz The maximum power spectral density shall not exceed 30 dBm in any 500-kHz band.
Test Result:	PASS

14.1 Test Procedure

1. Remove the antenna from the EUT and then connect a low RF cable from the antenna port to the spectrum analyzer.
2. Refer to section 4 of this report, according to KDB 789033 and ANSI C63.10, select the appropriate test method: SA-1.
3. Use the peak search function on the instrument to find the peak of the spectrum and record its value.
4. The result is the Maximum PSD over 1 MHz reference bandwidth.
5. For devices operating in the band 5.725–5.85 GHz, the rules specify a measurement bandwidth of 500 kHz. Many spectrum analyzers do not have 500 kHz RBW, thus a narrower RBW may need to be used. The rules permit the use of RBWs less than 1 MHz, or 500 kHz, “provided that the measured power is integrated over the full reference bandwidth” to show the total power over the specified measurement bandwidth (i.e., 1 MHz, or 500 kHz).

14.2 Test Result

Band	Operation mode	Channel	Power Spectral density (dBm/MHz)			
			Ant. 1	Ant. 2	SUM	Limit
U-NII-1	802.11a	Low	-2.579	-3.004	0.22	8.43
		Middle	-2.795	-3.270	-0.02	8.43
		High	-2.532	-3.672	-0.05	8.43
	802.11n(HT20)	Low	-3.148	-3.835	-0.47	8.43
		Middle	-3.265	-4.251	-0.72	8.43
		High	-3.139	-4.180	-0.62	8.43
	802.11ac(VHT20)	Low	-2.985	-4.021	-0.46	8.43
		Middle	-3.179	-4.175	-0.64	8.43
		High	-2.840	-4.093	-0.41	8.43
	802.11ax(HE20)	Low	-3.113	-3.781	-0.42	8.43
		Middle	-3.029	-4.129	-0.53	8.43
		High	-3.203	-4.035	-0.59	8.43
	802.11n(HT40)	Low	-5.113	-5.538	-2.31	8.43
		High	-4.149	-6.087	-2.00	8.43
	802.11ac(VHT40)	Low	-4.186	-5.637	-1.84	8.43
		High	-4.150	-5.494	-1.76	8.43
	802.11ax(HE40)	Low	-4.100	-5.511	-1.74	8.43
		High	-4.392	-5.336	-1.83	8.43
	802.11ac(VHT80)	Middle	-7.384	-6.998	-4.18	8.43
	802.11ax(HE80)	Middle	-7.083	-7.048	-4.06	8.43

Band	Operation mode	Channel	Power Spectral density (dBm/MHz)			
			Ant. 1	Ant. 2	SUM	Limit
U-NII-2A	802.11a	Low	-2.145	-2.737	0.58	8.43
		Middle	-1.737	-2.121	1.09	8.43
		High	-1.969	-1.791	1.13	8.43
	802.11n(HT20)	Low	-2.568	-3.479	0.01	8.43
		Middle	-1.840	-3.015	0.62	8.43
		High	-1.952	-2.069	1.00	8.43
	802.11ac(VHT20)	Low	-2.461	-3.483	0.07	8.43
		Middle	-1.751	-3.028	0.67	8.43
		High	-1.132	-2.168	1.39	8.43
	802.11ax(HE20)	Low	-2.257	-3.220	0.30	8.43
		Middle	-1.828	-3.071	0.61	8.43
		High	-1.390	-2.297	1.19	8.43
	802.11n(HT40)	Low	-4.386	-4.770	-1.56	8.43
		High	-3.238	-3.184	-0.20	8.43
	802.11ac(VHT40)	Low	-4.504	-5.218	-1.84	8.43
		High	-3.514	-3.583	-0.54	8.43
	802.11ax(HE40)	Low	-4.423	-3.155	-0.73	8.43
		High	-3.519	-3.619	-0.56	8.43
	802.11ac(VHT80)	Middle	-7.303	-8.548	-4.87	8.43
	802.11ax(HE80)	Middle	-7.218	-8.368	-4.74	8.43

Band	Operation mode	Channel	Power Spectral density (dBm/MHz)			
			Ant. 1	Ant. 2	SUM	Limit
U-NII- 2C	802.11a	Low	0.915	-0.313	3.35	8.43
		Middle	0.934	-0.263	3.39	8.43
		High	0.422	0.010	3.23	8.43
	802.11n(HT20)	Low	0.356	-0.627	2.90	8.43
		Middle	0.288	-0.763	2.80	8.43
		High	0.276	-0.682	2.83	8.43
	802.11ac(VHT20)	Low	0.570	-0.615	3.03	8.43
		Middle	0.598	-0.765	2.98	8.43
		High	0.146	-0.632	2.78	8.43
	802.11ax(HE20)	Low	0.827	-0.696	3.14	8.43
		Middle	0.450	-0.831	2.87	8.43
		High	-0.085	-0.686	2.64	8.43
	802.11n(HT40)	Low	-2.088	-2.423	0.76	8.43
		Middle	-2.174	-1.329	1.28	8.43
		High	-2.219	-2.523	0.64	8.43
	802.11ac(VHT40)	Low	-2.219	-1.897	0.96	8.43
		Middle	-2.102	-1.697	1.12	8.43
		High	-2.460	-2.343	0.61	8.43
	802.11ax(HE40)	Low	-1.784	-1.754	1.24	8.43
		Middle	-2.039	-1.896	1.04	8.43
		High	-2.510	-2.102	0.71	8.43
	802.11ac(VHT80)	Low	-4.182	-4.957	-1.54	8.43
		Middle	-4.971	-5.438	-2.19	8.43
	802.11ax(HE80)	Low	-4.418	-4.752	-1.57	8.43
		Middle	-4.941	-5.091	-2.01	8.43

Band	Operation mode	Channel	Power Spectral density (dBm/500kHz)			
			Ant. 1	Ant. 2	SUM	Limit
U-NII-3	802.11a	Low	-2.834	-2.045	0.59	27.43
		Middle	-2.960	-2.372	0.35	27.43
		High	-3.199	-2.482	0.18	27.43
	802.11n(HT20)	Low	-3.649	-2.523	-0.04	27.43
		Middle	-3.616	-3.098	-0.34	27.43
		High	-3.701	-3.172	-0.42	27.43
	802.11ac(VHT20)	Low	-3.419	-2.875	-0.13	27.43
		Middle	-3.785	-3.023	-0.38	27.43
		High	-3.548	-3.074	-0.29	27.43
	802.11ax(HE20)	Low	-3.655	-2.931	-0.27	27.43
		Middle	-3.737	-3.022	-0.35	27.43
		High	-3.612	-3.270	-0.43	27.43
	802.11n(HT40)	Low	-6.330	-4.771	-2.47	27.43
		High	-6.213	-5.873	-3.03	27.43
	802.11ac(VHT40)	Low	-5.366	-4.439	-1.87	27.43
		High	-5.362	-4.829	-2.08	27.43
	802.11ax(HE40)	Low	-5.429	-4.622	-2.00	27.43
		High	-5.274	-4.906	-2.08	27.43
	802.11ac(VHT80)	Middle	-6.274	-6.190	-3.22	27.43
	802.11ax(HE80)	Middle	-6.274	-6.185	-3.22	27.43

Note:

If all antennas have the same gain, G_{ANT} , Directional gain = G_{ANT} + Array Gain, where Array Gain is as follows.

- For power spectral density (PSD) measurements on all devices,

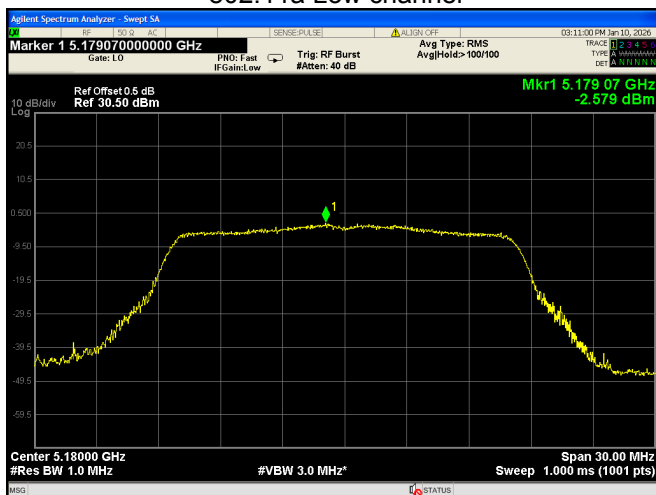
Array Gain = $10 \log(N_{ANT}/N_{SS})$ dB.

Directional gain = $5.56 + 10 * \log(2) = 8.57$ dBi

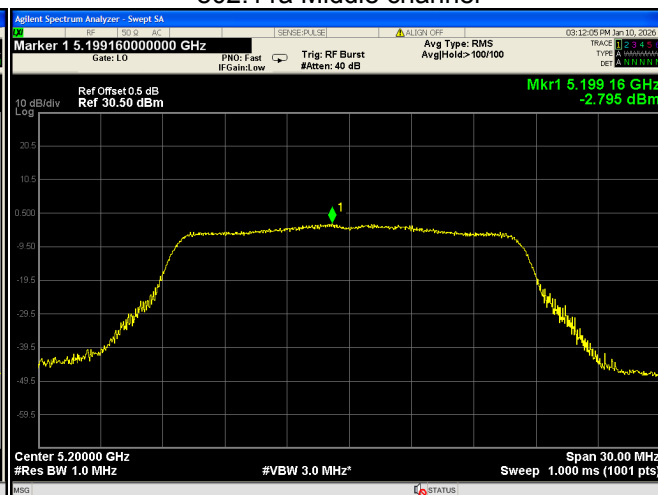
Test plots refer to next page:

**Ant. 1
U-NII-1**

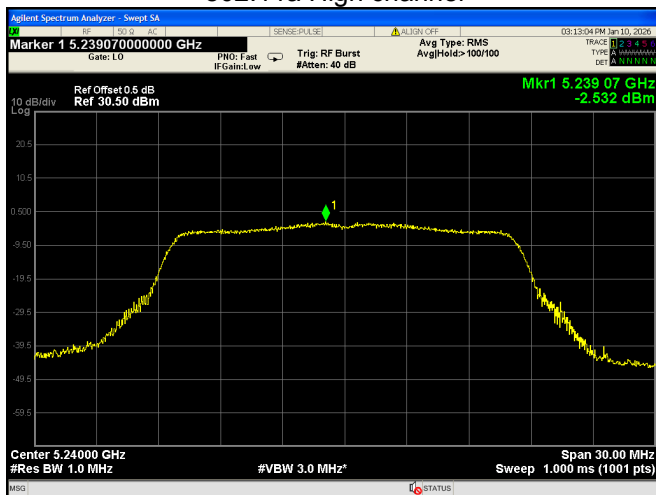
802.11a Low channel



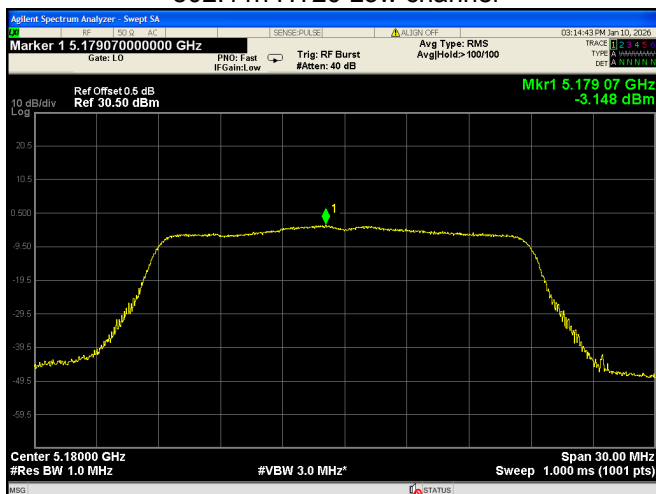
802.11a Middle channel



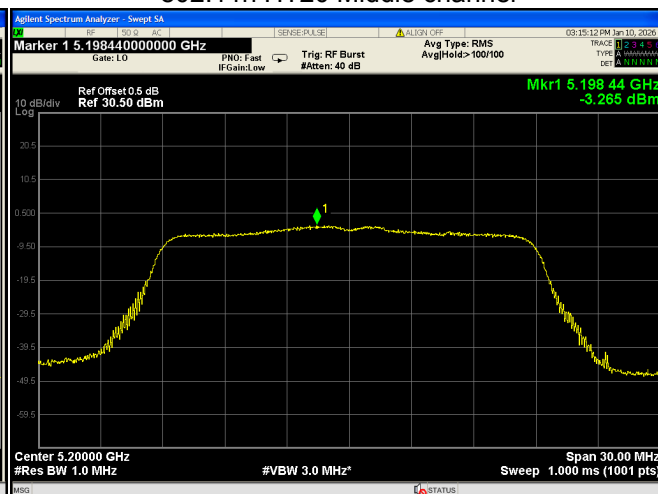
802.11a High channel



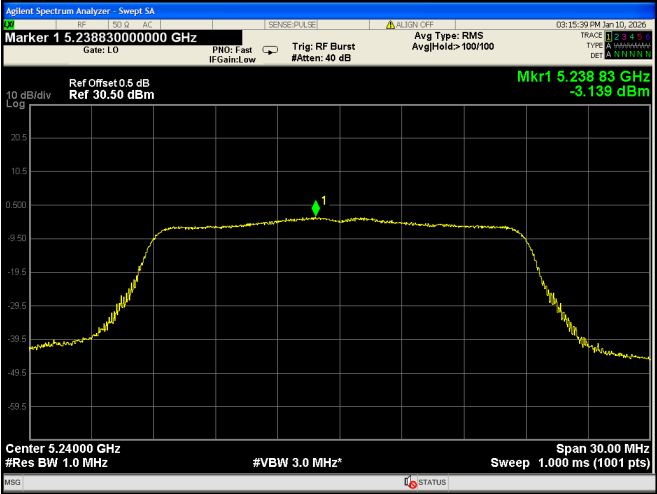
802.11n HT20 Low channel



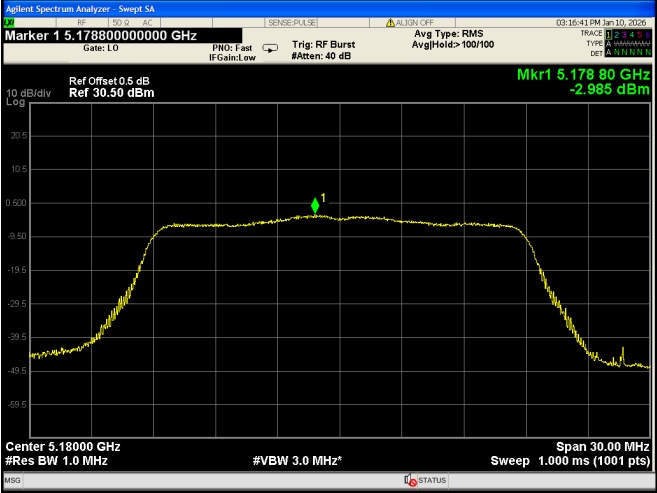
802.11n HT20 Middle channel



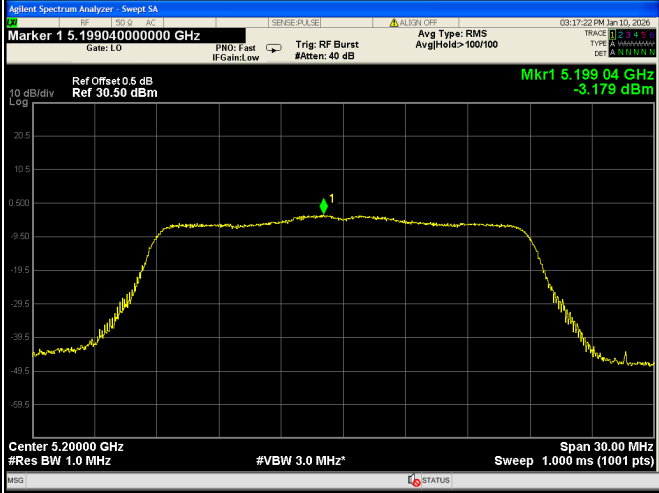
802.11n HT20 High channel



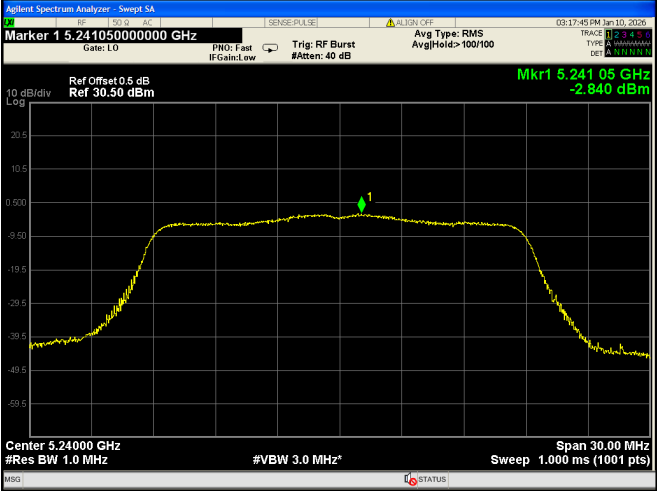
802.11ac VHT20 Low channel



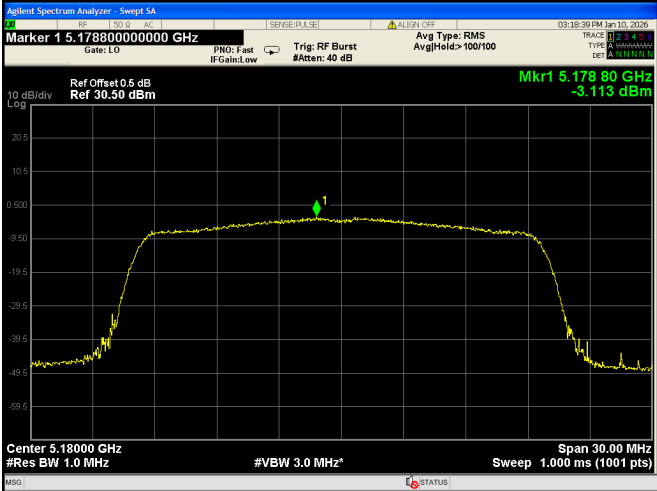
802.11ac VHT20 Middle channel



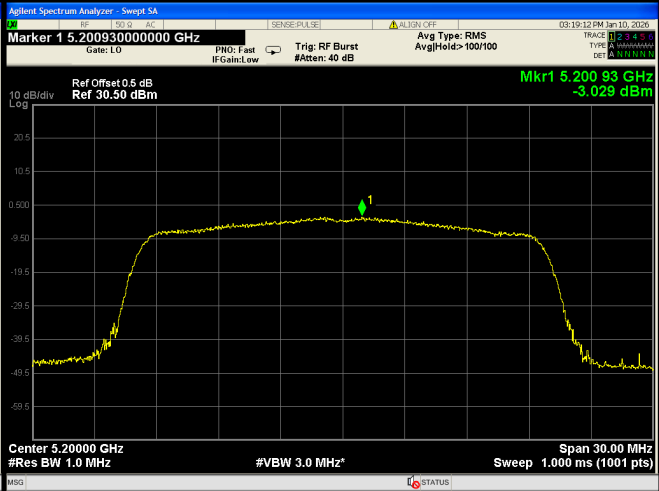
802.11ac VHT20 High channel



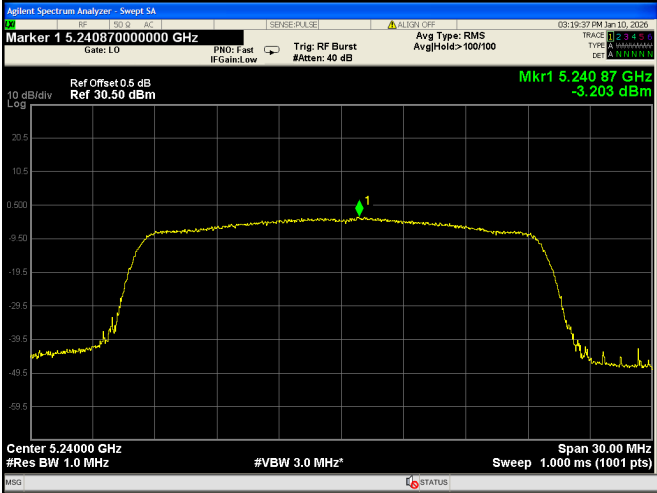
802.11ax HE20 Low channel



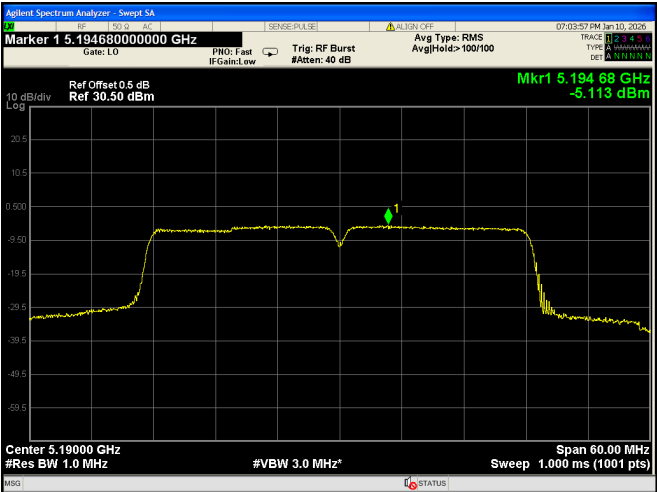
802.11ax HE20 Middle channel



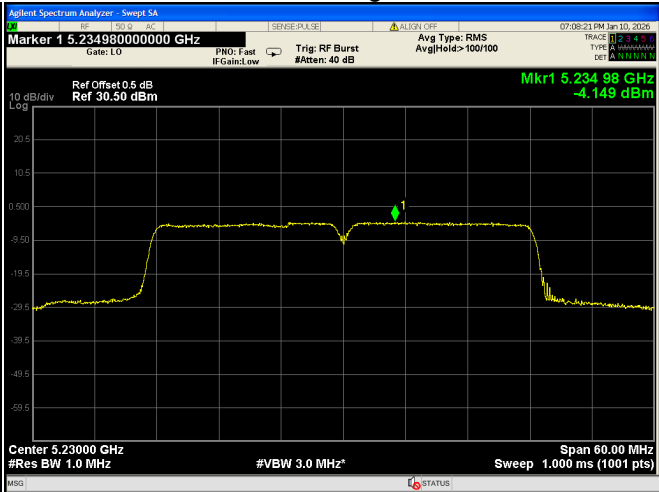
802.11ax HE20 High channel



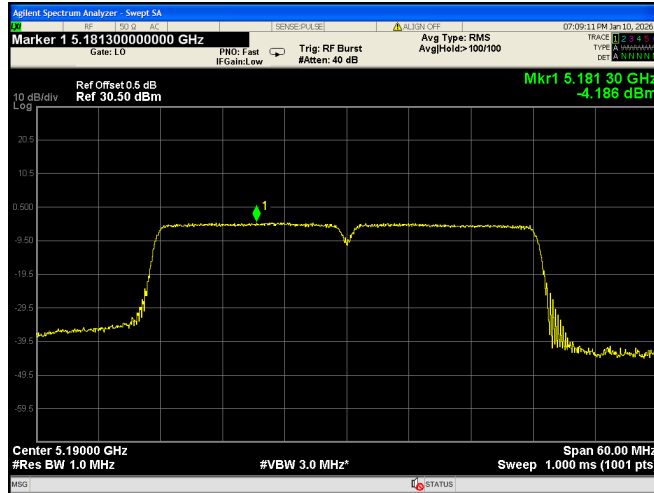
802.11n HT40 Low channel



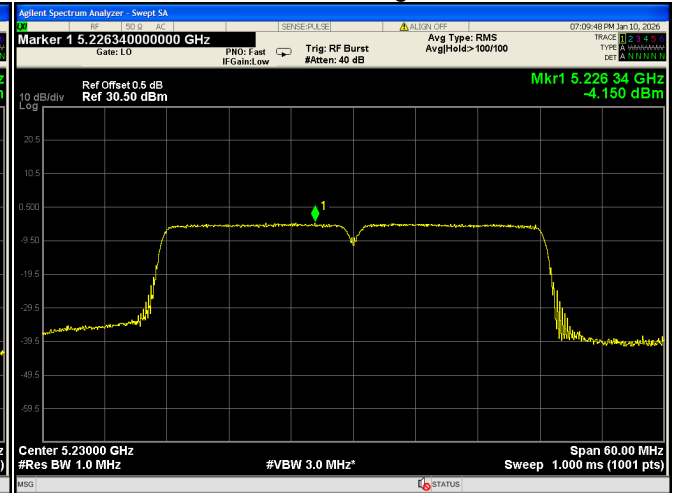
802.11n HT40 High channel



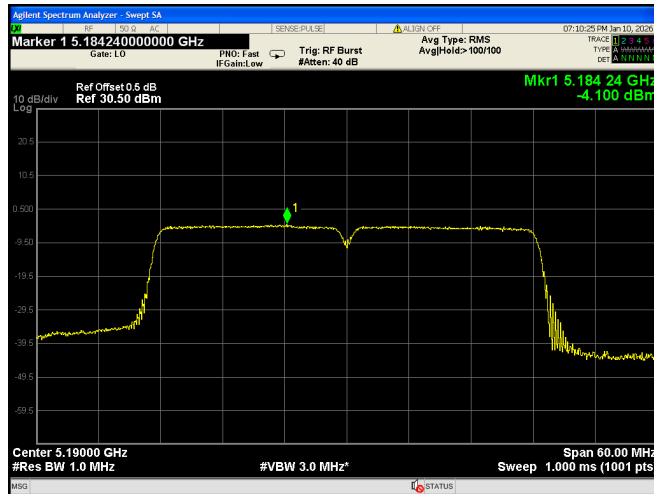
802.11ac VHT40 Low channel



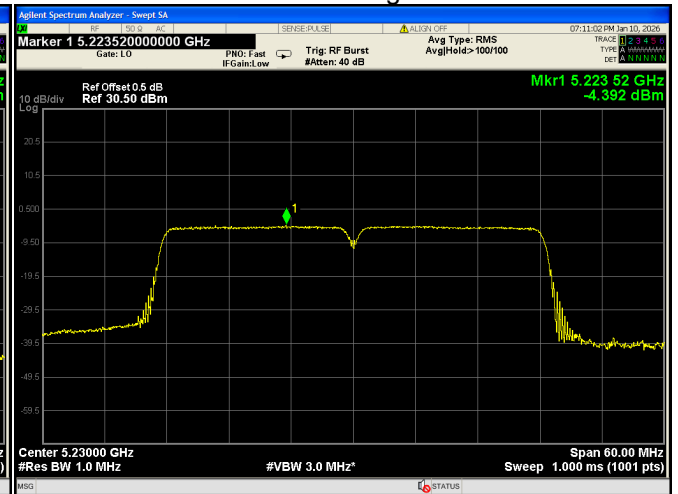
802.11ac VHT40 High channel



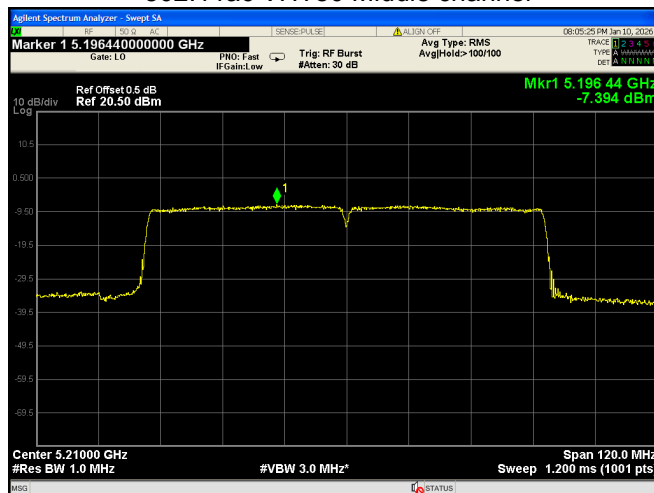
802.11ax HE40 Low channel



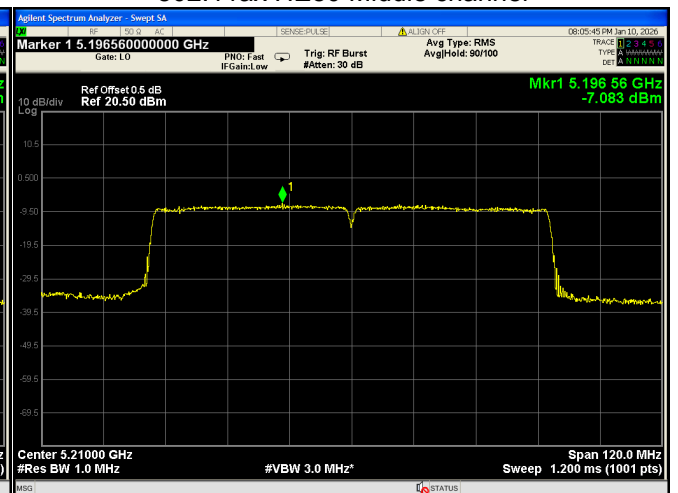
802.11ax HE40 High channel



802.11ac VHT80 Middle channel

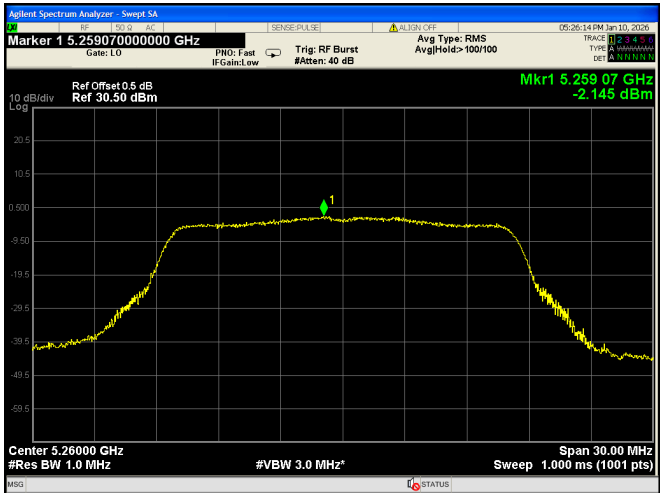


802.11ax HE80 Middle channel

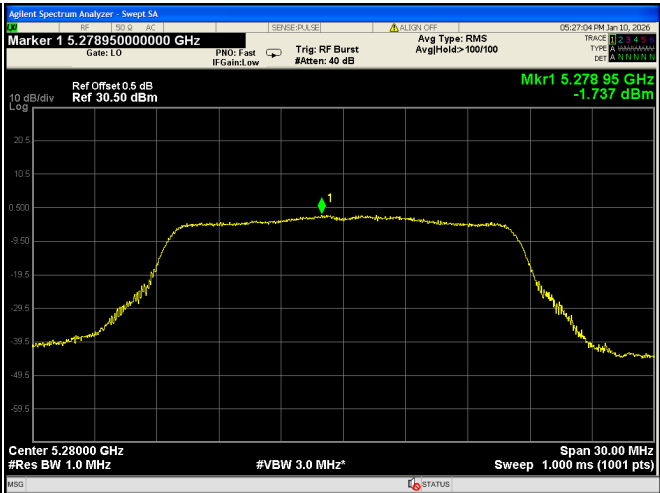


U-NII-2A

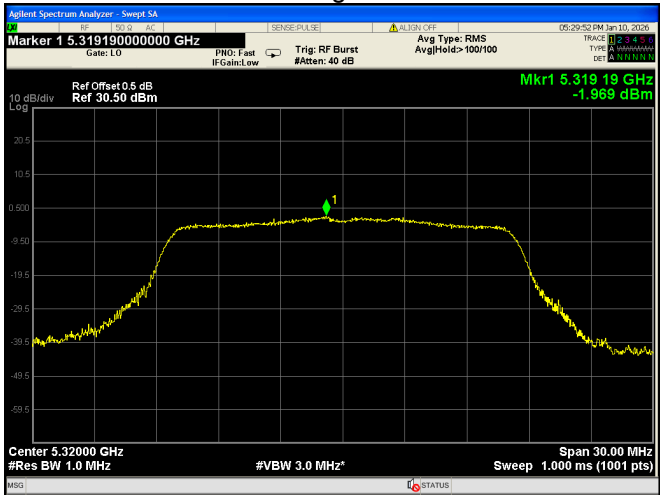
802.11a Low channel



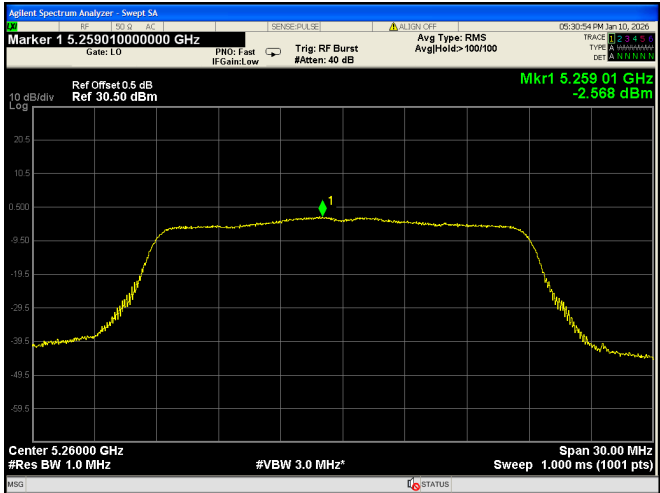
802.11a Middle channel



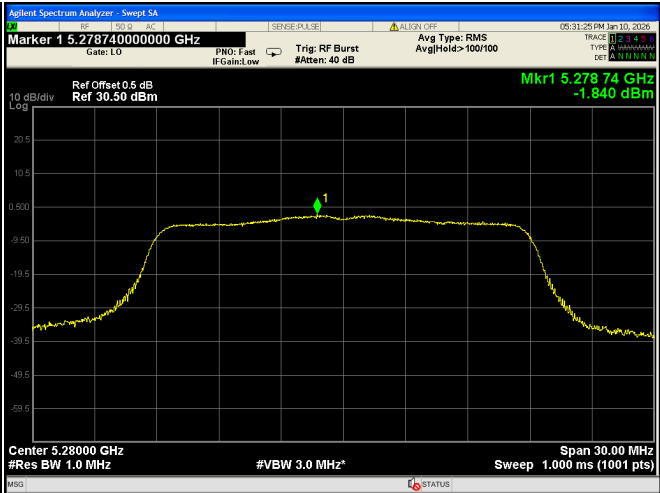
802.11a High channel



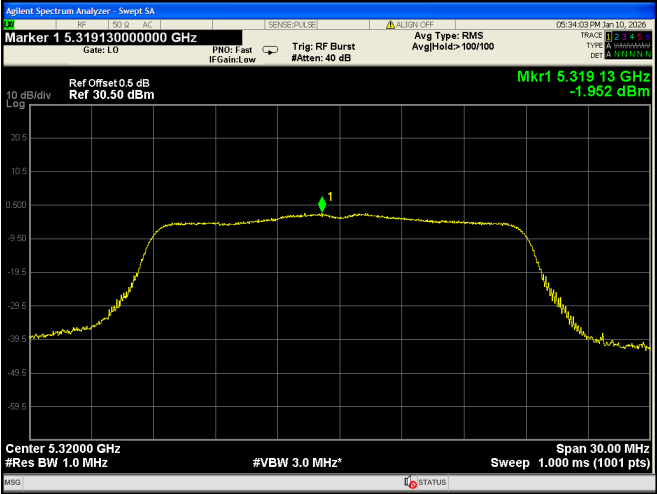
802.11n HT20 Low channel



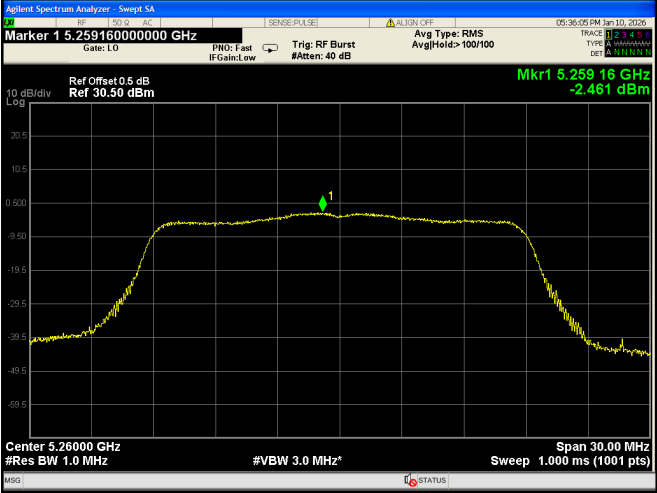
802.11n HT20 Middle channel



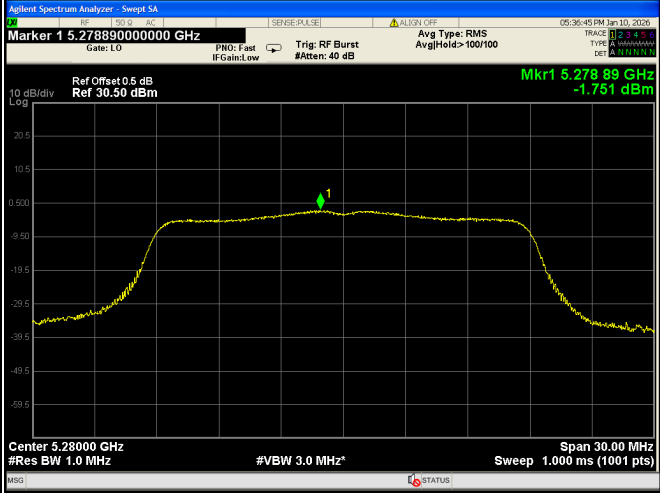
802.11n HT20 High channel



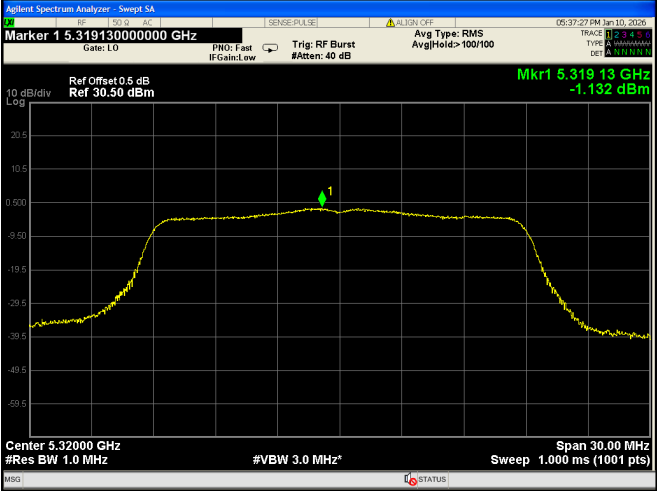
802.11ac VHT20 Low channel



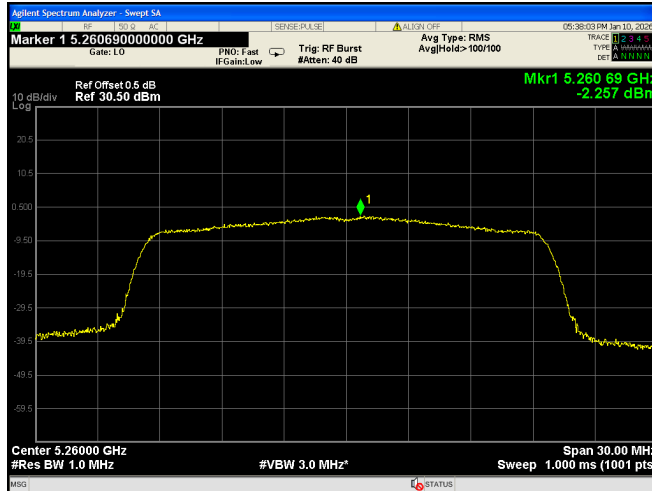
802.11ac VHT20 Middle channel



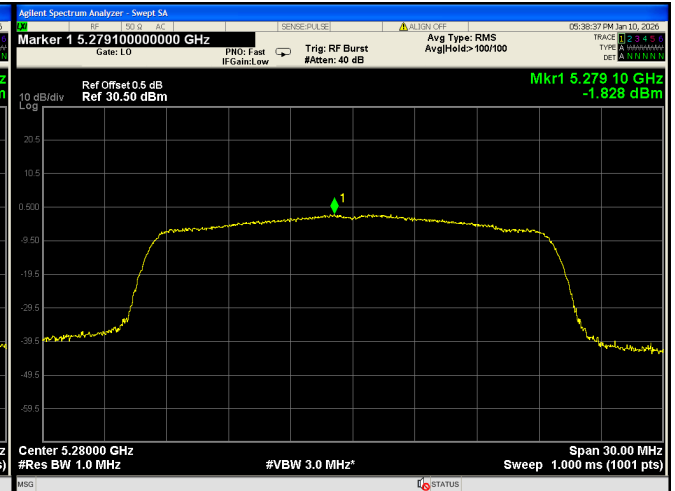
802.11ac VHT20 High channel



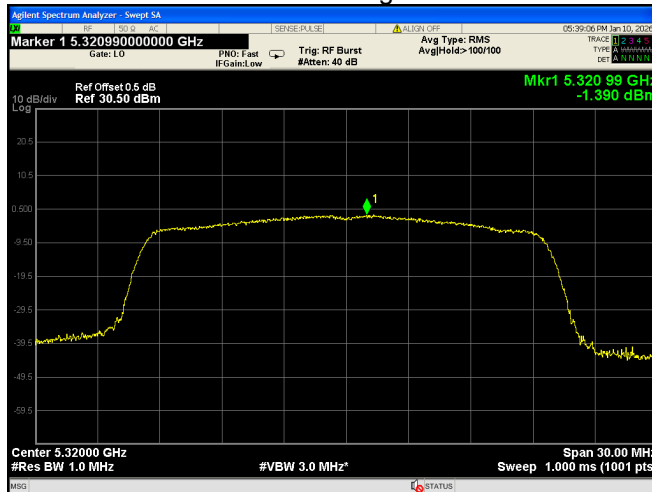
802.11ax HE20 Low channel



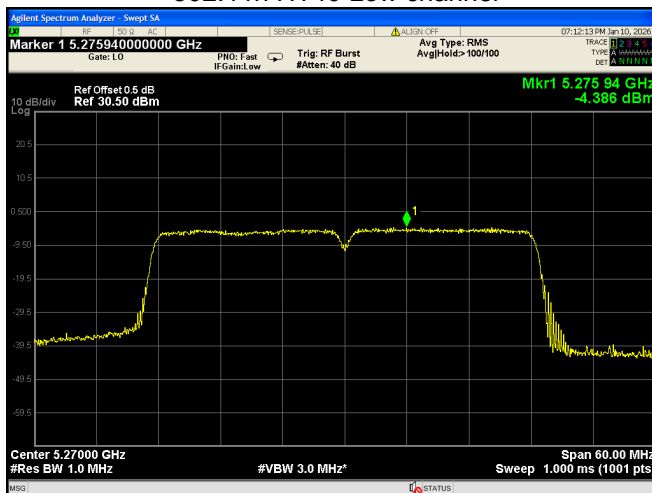
802.11ax HE20 Middle channel



802.11ax HE20 High channel



802.11n HT40 Low channel



802.11n HT40 High channel

