

- 3) A trigger is provided from the pulse generator to the DFS monitoring system in order to capture the traffic and the occurrence of the radar pulse.
- 4) EUT will associate with the master at channel. The file `iperf.exe` specified by the FCC is streamed from the PC 2 through the master and the client device to the PC 1 and played in full motion video using Media Player Classic Ver. 6.4.8.6 in order to properly load the network for the entire period of the test.
- 5) When radar burst with a level equal to the DFS Detection Threshold +1dB is generated on the operating channel of the U-NII device. At time T0 the radar waveform generator sends a burst of pulse of the radar waveform at Detection Threshold +1dB.
- 6) Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). One 15 seconds plot is reported for the Short Pulse Radar Type 0. The plot for the Short Pulse Radar Types start at the end of the radar burst. The Channel Move Time will be calculated based on the zoom in 600ms plot of the Short Pulse Radar Type.
- 7) Measurement of the aggregate duration of the Channel Closed Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by: $Dwell (0.3ms) = S (12000ms) / B (4000)$; where Dwell is the dwell time per spectrum analyzer sampling bin, S is sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by: $C (ms) = N \times Dwell (0.3ms)$; where C is the Closing Time, N is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.
- 8) Measurement the EUT for more than 30 minutes following the channel move time to verify that no transmission or beacons occur on this channel.

6.13.4 Test data

N/A

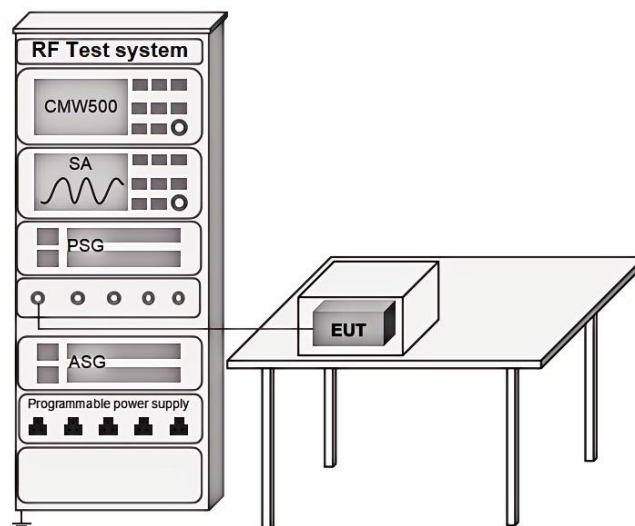
6.14 DFS: Non-occupancy period

Test Standard	47 CFR Part 15, Subpart E 15.407(h)(2)
Test Method	KDB 905462 D02 Section 7.8.3
Test Mode (Pre-Scan)	TX
Test Mode (Final Test)	TX

6.14.1 Limit

Minimum 30 minutes

6.14.2 Test setup



6.14.3 Procedure

- 1) The radar pulse generator is setup to provide a pulse at frequency that the master and client are operating. A type 0 radar pulse with a 1us pulse width and a 1428us PRI is used for the testing.
- 2) The vector signal generator is adjusted to provide the radar burst (18 pulses) at the level of approximately -61dBm at the antenna port of the master device.
- 3) A trigger is provided from the pulse generator to the DFS monitoring system in order to capture the traffic and the occurrence of the radar pulse.
- 4) EUT will associate with the master at channel. The file `i°iperf.exe±` specified by the FCC is streamed from the PC 2 through the master and the client device to the PC 1 and played in full motion video using Media Player Classic Ver. 6.4.8.6 in order to properly load the network for the entire period of the test.

- 5) When radar burst with a level equal to the DFS Detection Threshold +1dB is generated on the operating channel of the U-NII device. At time T0 the radar waveform generator sends a burst of pulse of the radar waveform at Detection Threshold +1dB.
- 6) Observe the transmissions of the EUT at the end of the radar Burst on the Operating Channel. Measure and record the transmissions from the UUT during the observation time (Channel Move Time). One 15 seconds plot is reported for the Short Pulse Radar Type 0. The plot for the Short Pulse Radar Types start at the end of the radar burst. The Channel Move Time will be calculated based on the zoom in 600ms plot of the Short Pulse Radar Type.
- 7) Measurement of the aggregate duration of the Channel Closed Transmission Time method. With the spectrum analyzer set to zero span tuned to the center frequency of the EUT operating channel at the radar simulated frequency, peak detection, and max hold, the dwell time per bin is given by: $Dwell (0.3ms) = S (12000ms) / B (4000)$; where Dwell is the dwell time per spectrum analyzer sampling bin, S is sweep time and B is the number of spectrum analyzer sampling bins. An upper bound of the aggregate duration of the intermittent control signals of Channel Closing Transmission Time is calculated by: $C (ms) = N \times Dwell (0.3ms)$; where C is the Closing Time, N is the number of spectrum analyzer sampling bins (intermittent control signals) showing a U-NII transmission and Dwell is the dwell time per bin.
- 8) Measurement the EUT for more than 30 minutes following the channel move time to verify that no transmission or beacons occur on this channel.

6.14.4 Test data

N/A

7 Appendix A

7.1 Frequency Stability

Voltage vs. Frequency Stability

Test frequency		Test conditions		Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Max. Deviation (ppm)	Limit (ppm)	Verdict
Band	Frequency	Temp(°C)	Voltage(DC V)						
Band 1	(20MHz)Lowest channel=5180MHz	20	10.8	Ant1	5180.0435	43500	8.40	25	Pass
			12	Ant1	5180.042	42000	8.11	25	Pass
			13.2	Ant1	5180.019	19000	3.67	25	Pass
Band 1	(40MHz)Lowest channel=5190MHz	20	10.8	Ant1	5190.021	21000	4.05	25	Pass
			12	Ant1	5190.0005	500	0.10	25	Pass
			13.2	Ant1	5190.003	3000	0.58	25	Pass
Band 4	(20MHz)Lowest channel=5475MHz	20	10.8	Ant1	5475.0275	27500	5.02	25	Pass
			12	Ant1	5475.0205	20500	3.74	25	Pass
			13.2	Ant1	5475.0245	24500	4.47	25	Pass
Band 4	(40MHz)Lowest channel=5755MHz	20	10.8	Ant1	5755.035	35000	6.08	25	Pass
			12	Ant1	5755.007	7000	1.22	25	Pass
			13.2	Ant1	5755.027	27000	4.69	25	Pass

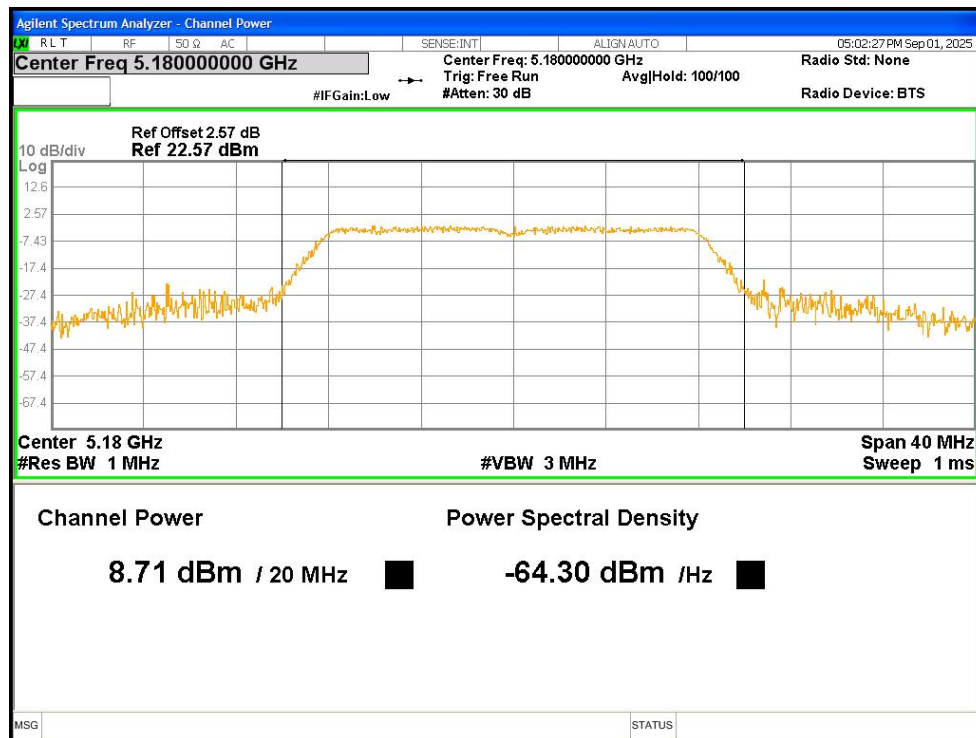
Temperature vs. Frequency Stability

Test frequency		Test conditions		Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Max. Deviation (ppm)	Limit (ppm)	Verdict
Band	Frequency	Voltage(DC V)	Temp(°C)						
Band 1	(20MHz)Lowest channel=5180MHz	12	-20	Ant1	5180.026	26000	5.02	25	Pass
			-10	Ant1	5180.0095	9500	1.83	25	Pass
			0	Ant1	5180.0495	49500	9.56	25	Pass
			10	Ant1	5180.0085	8500	1.64	25	Pass
			20	Ant1	5180.0395	39500	7.63	25	Pass
			30	Ant1	5180.034	34000	6.56	25	Pass
			40	Ant1	5180.0365	36500	7.05	25	Pass
			50	Ant1	5180.0165	16500	3.19	25	Pass
Band 1	(40MHz)Lowest channel=5190MHz	12	-20	Ant1	5190.039	39000	7.51	25	Pass
			-10	Ant1	5190.0395	39500	7.61	25	Pass
			0	Ant1	5190.035	35000	6.74	25	Pass
			10	Ant1	5190.0345	34500	6.65	25	Pass
			20	Ant1	5190.015	15000	2.89	25	Pass
			30	Ant1	5190.0035	3500	0.67	25	Pass
			40	Ant1	5190.0055	5500	1.06	25	Pass
			50	Ant1	5190.015	15000	2.89	25	Pass
Band 4	(20MHz)Lowest channel=5475MHz	12	-20	Ant1	5475.014	14000	2.56	25	Pass
			-10	Ant1	5475.041	41000	7.49	25	Pass
			0	Ant1	5475.019	19000	3.47	25	Pass
			10	Ant1	5475.0315	31500	5.75	25	Pass
			20	Ant1	5475.038	38000	6.94	25	Pass
			30	Ant1	5475.029	29000	5.30	25	Pass
			40	Ant1	5475.0265	26500	4.84	25	Pass
			50	Ant1	5475.0465	46500	8.49	25	Pass
Band 4	(40MHz)Lowest channel=5755MHz	12	-20	Ant1	5755.0165	16500	2.87	25	Pass
			-10	Ant1	5755.0025	2500	0.43	25	Pass
			0	Ant1	5755.0335	33500	5.82	25	Pass
			10	Ant1	5755.009	9000	1.56	25	Pass
			20	Ant1	5755.0155	15500	2.69	25	Pass
			30	Ant1	5755.0365	36500	6.34	25	Pass
			40	Ant1	5755.0445	44500	7.73	25	Pass
			50	Ant1	5755.0265	26500	4.60	25	Pass

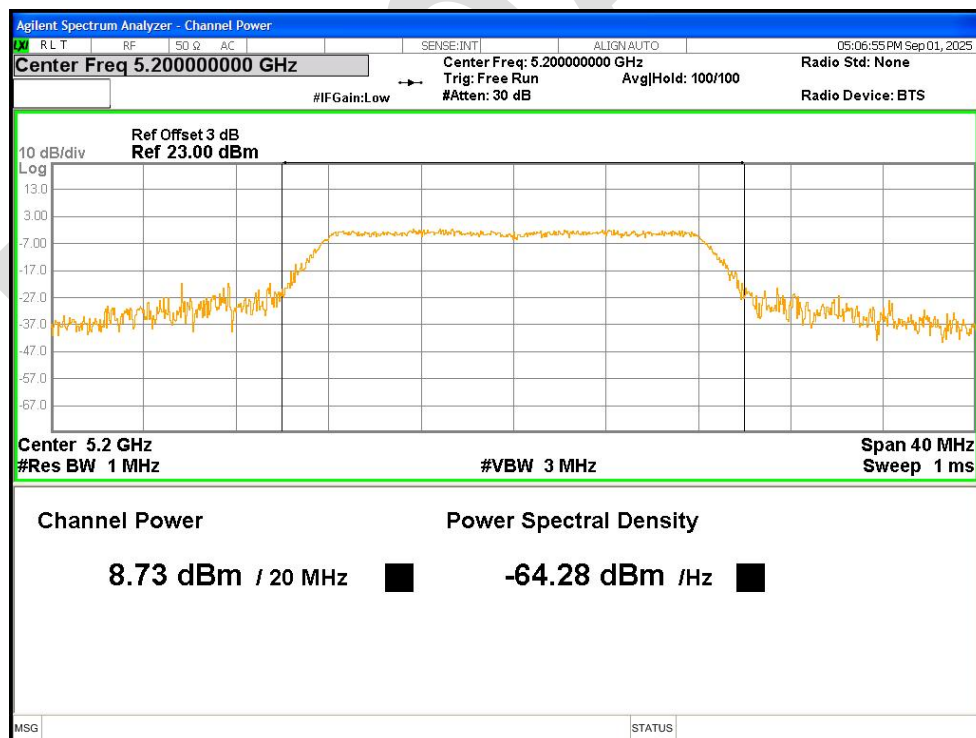
7.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	8.714	23	Pass
NVNT	a	5200	Ant1	8.726	23	Pass
NVNT	a	5240	Ant1	8.008	23	Pass
NVNT	a	5745	Ant1	7.636	29	Pass
NVNT	a	5785	Ant1	6.702	29	Pass
NVNT	a	5825	Ant1	7.586	29	Pass
NVNT	n20	5180	Ant1	6.352	23	Pass
NVNT	n20	5200	Ant1	6.297	23	Pass
NVNT	n20	5240	Ant1	6.047	23	Pass
NVNT	n20	5745	Ant1	5.687	29	Pass
NVNT	n20	5785	Ant1	5.481	29	Pass
NVNT	n20	5825	Ant1	5.17	29	Pass
NVNT	n40	5190	Ant1	4.069	23	Pass
NVNT	n40	5230	Ant1	3.673	23	Pass
NVNT	n40	5755	Ant1	4.905	29	Pass
NVNT	n40	5795	Ant1	4.032	29	Pass
NVNT	ac20	5180	Ant1	4.303	23	Pass
NVNT	ac20	5200	Ant1	4.392	23	Pass
NVNT	ac20	5240	Ant1	3.584	23	Pass
NVNT	ac20	5745	Ant1	5.353	29	Pass
NVNT	ac20	5785	Ant1	4.252	29	Pass
NVNT	ac20	5825	Ant1	4.009	29	Pass
NVNT	ac40	5190	Ant1	4.11	23	Pass
NVNT	ac40	5230	Ant1	3.627	23	Pass
NVNT	ac40	5755	Ant1	5.574	29	Pass
NVNT	ac40	5795	Ant1	4.499	29	Pass

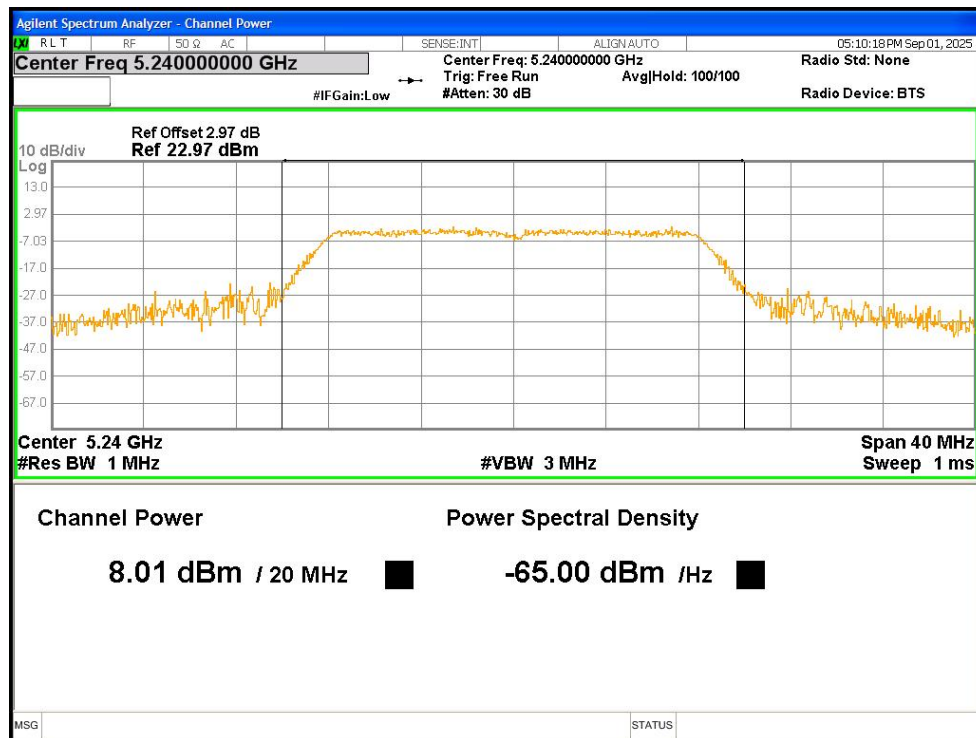
Power NVNT a 5180MHz Ant1



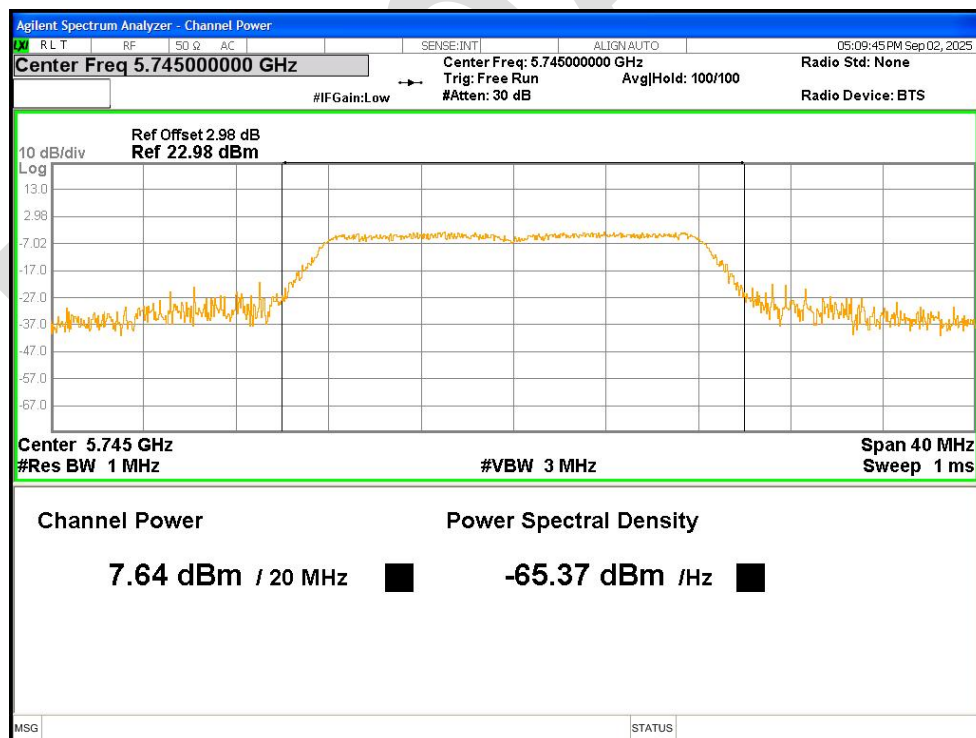
Power NVNT a 5200MHz Ant1



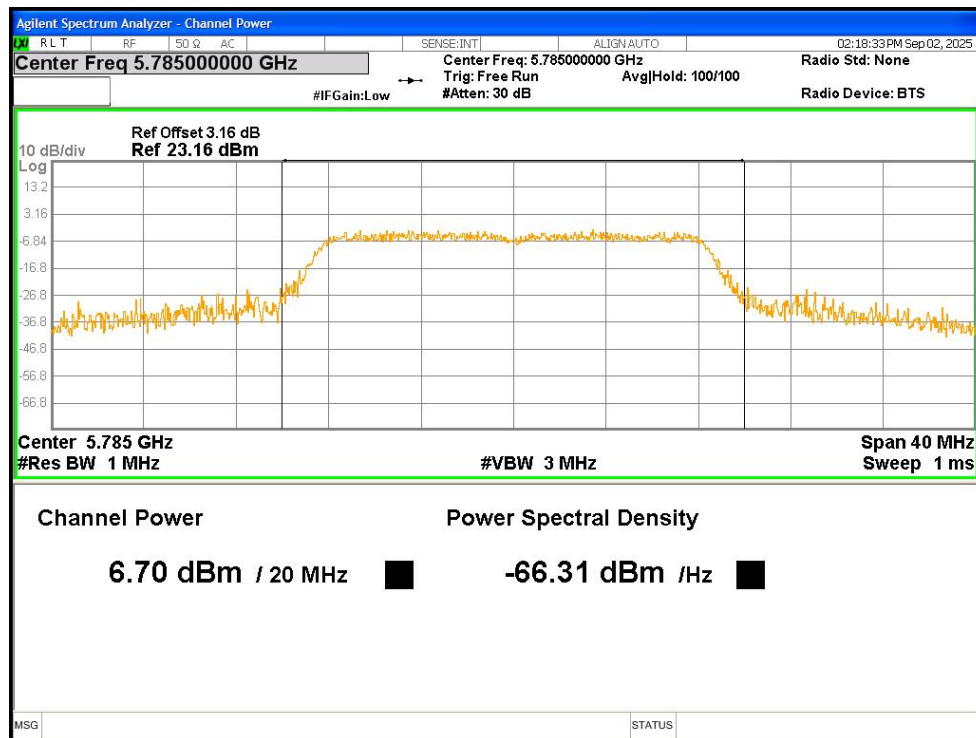
Power NVNT a 5240MHz Ant1



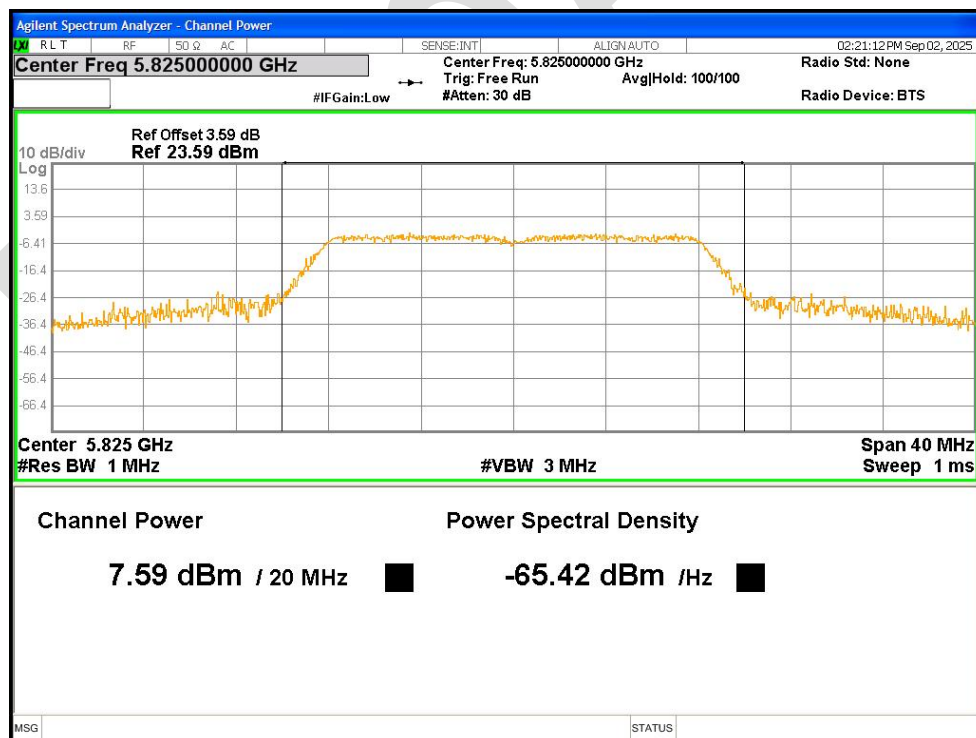
Power NVNT a 5745MHz Ant1



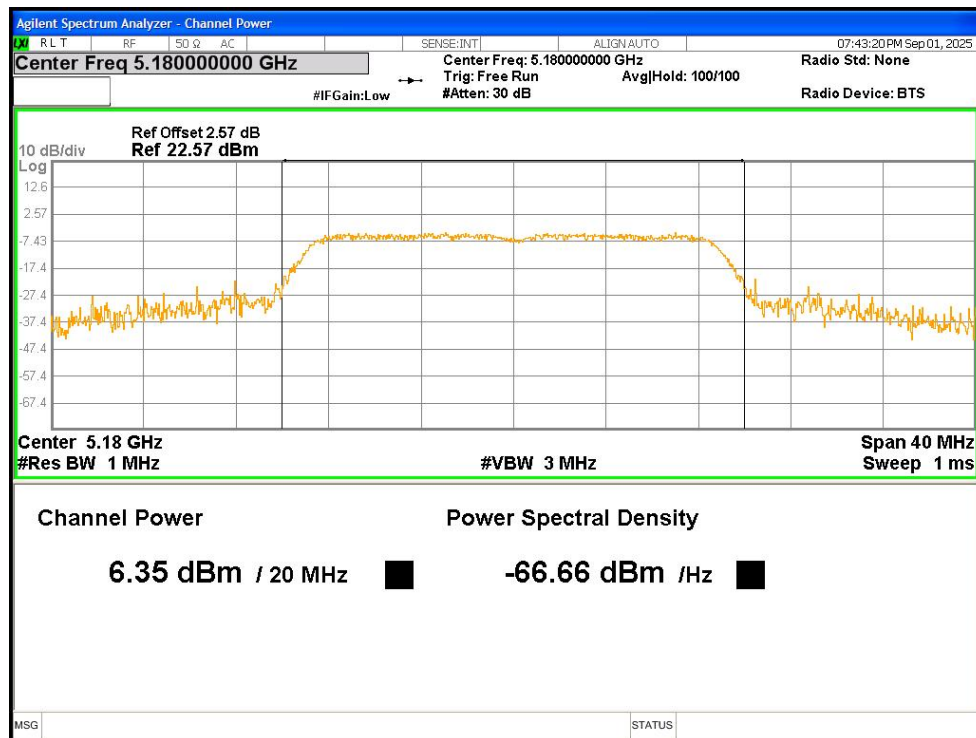
Power NVNT a 5785MHz Ant1



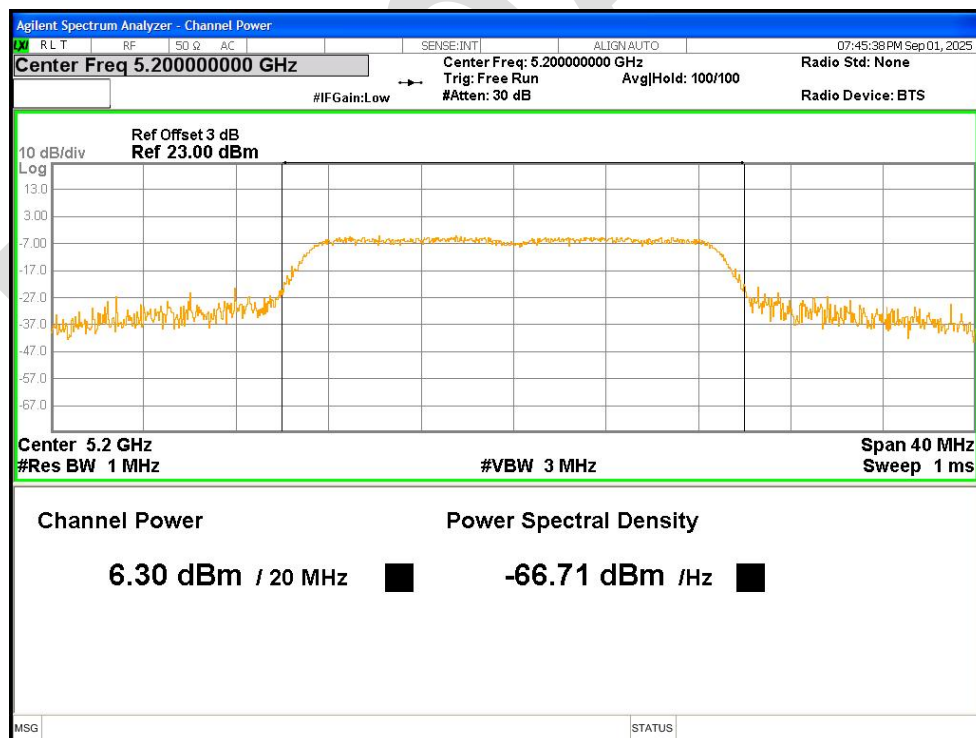
Power NVNT a 5825MHz Ant1



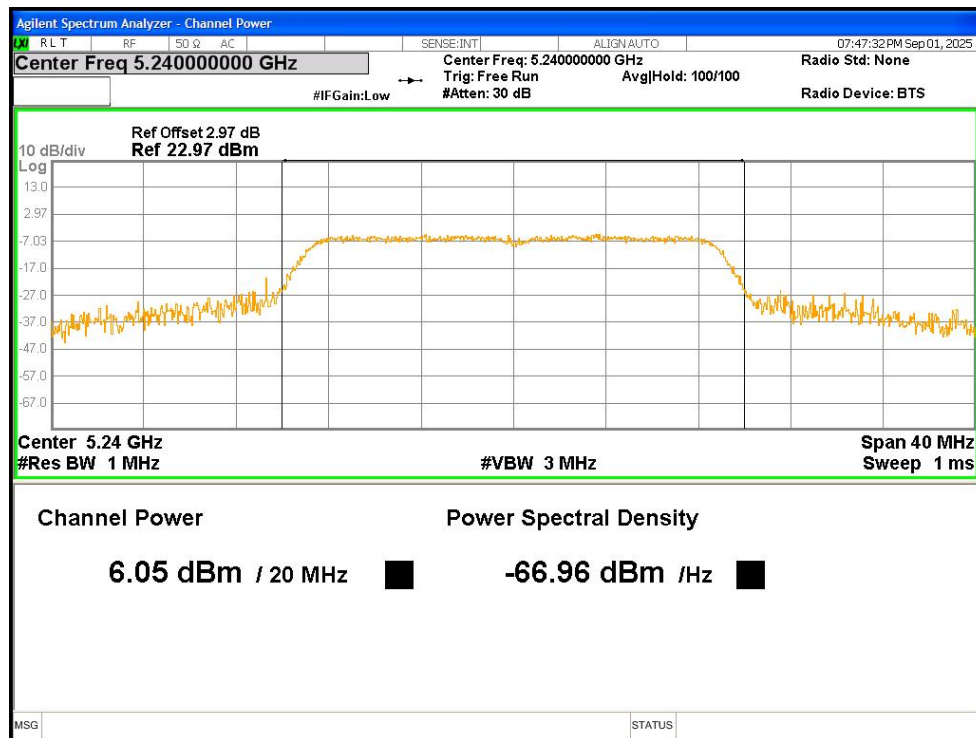
Power NVNT n20 5180MHz Ant1



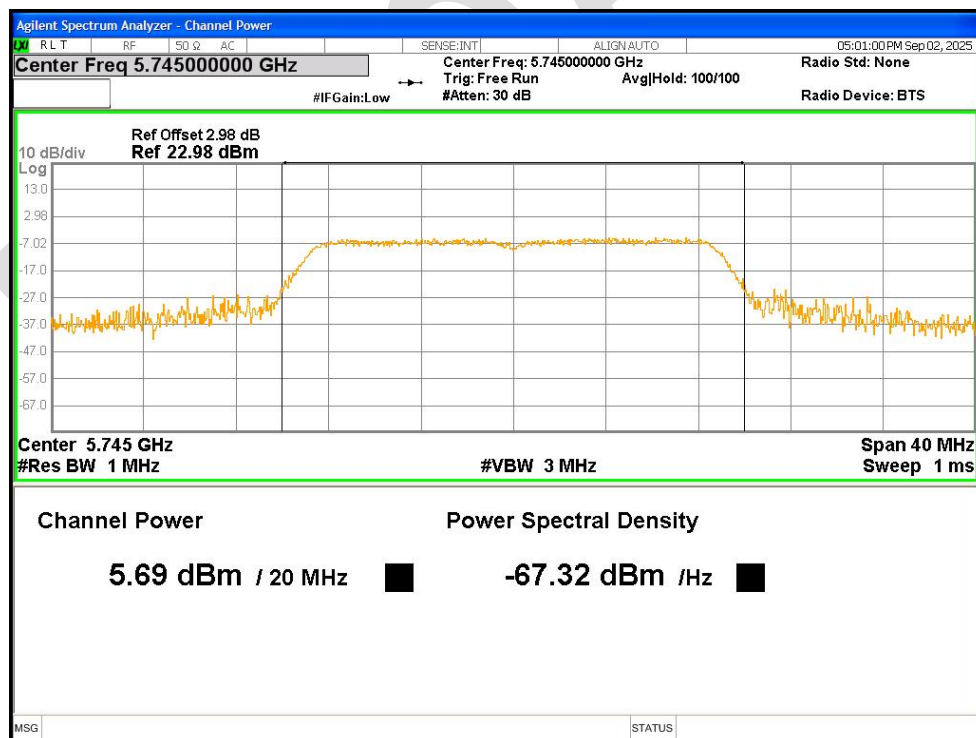
Power NVNT n20 5200MHz Ant1



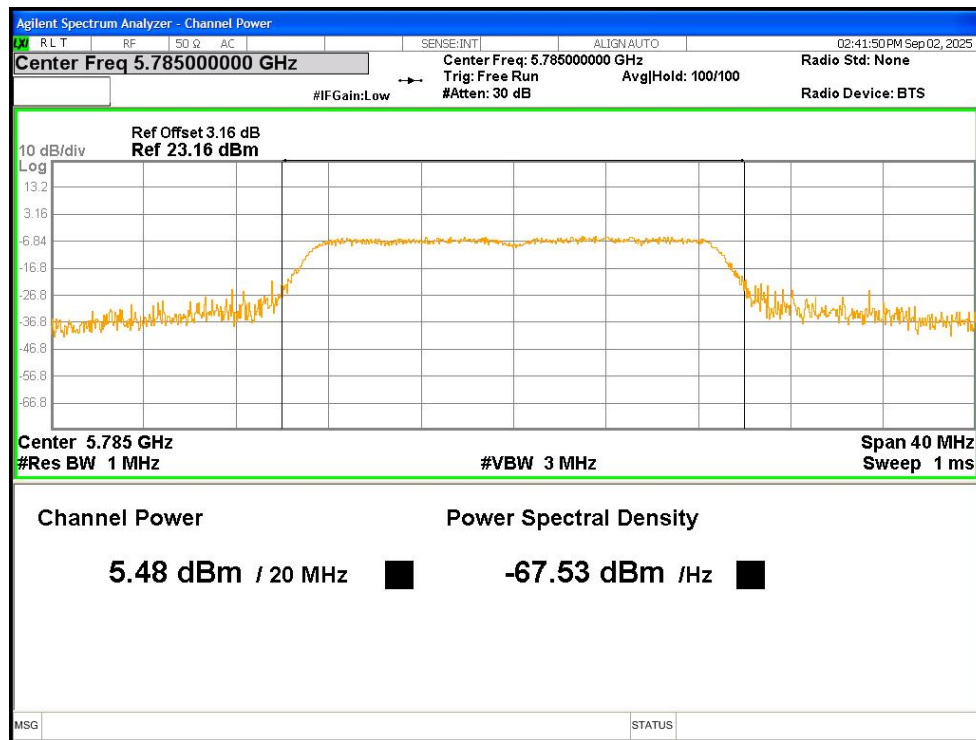
Power NVNT n20 5240MHz Ant1



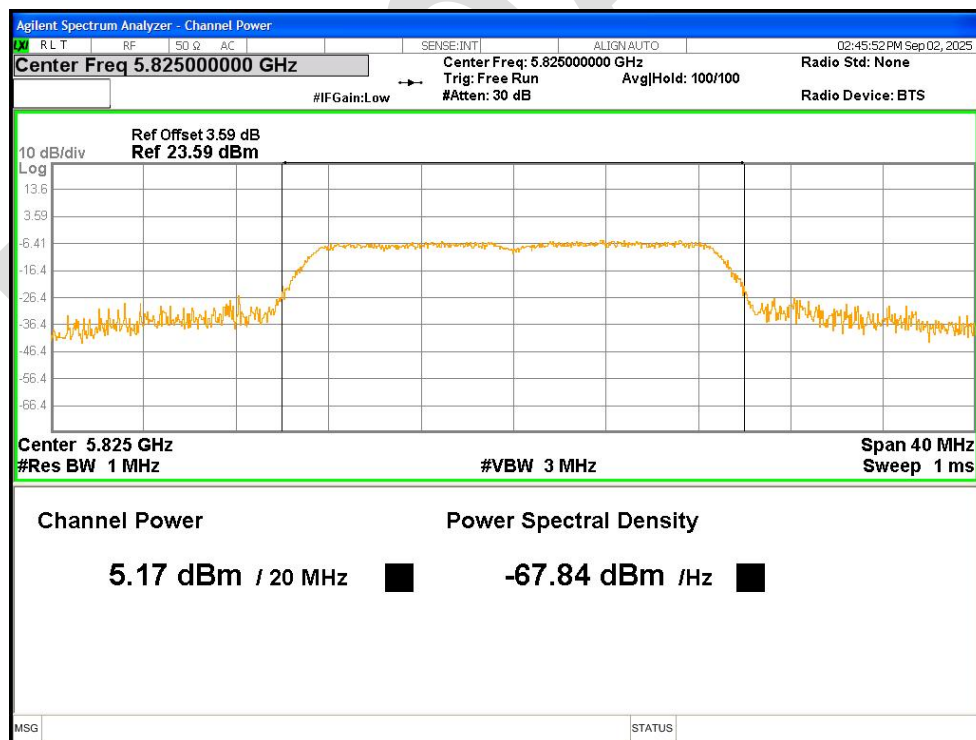
Power NVNT n20 5745MHz Ant1



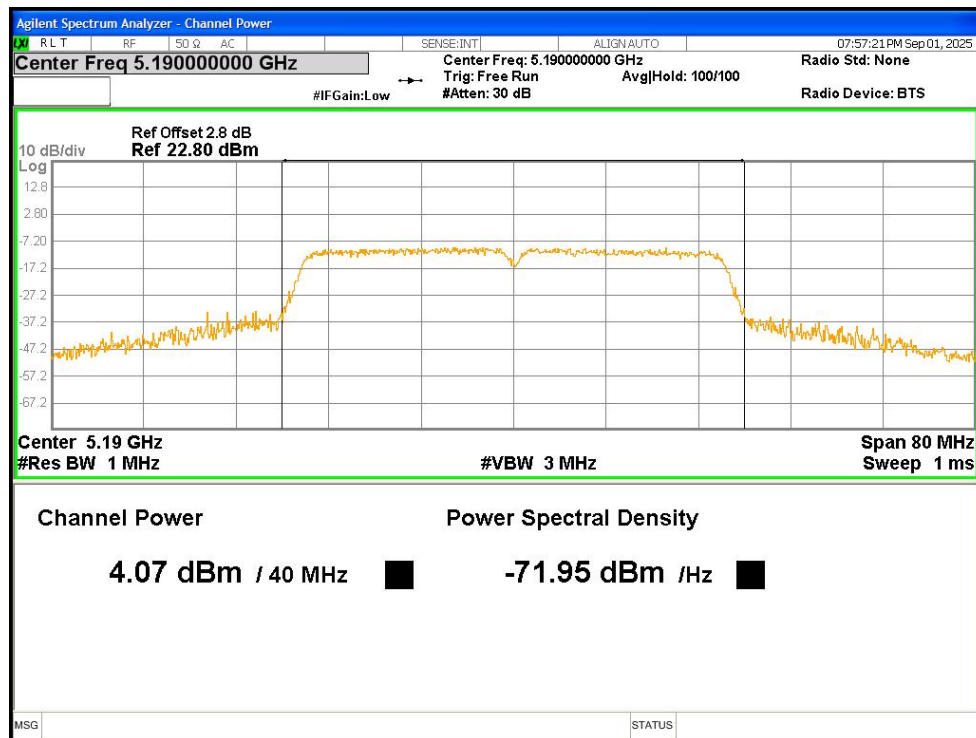
Power NVNT n20 5785MHz Ant1



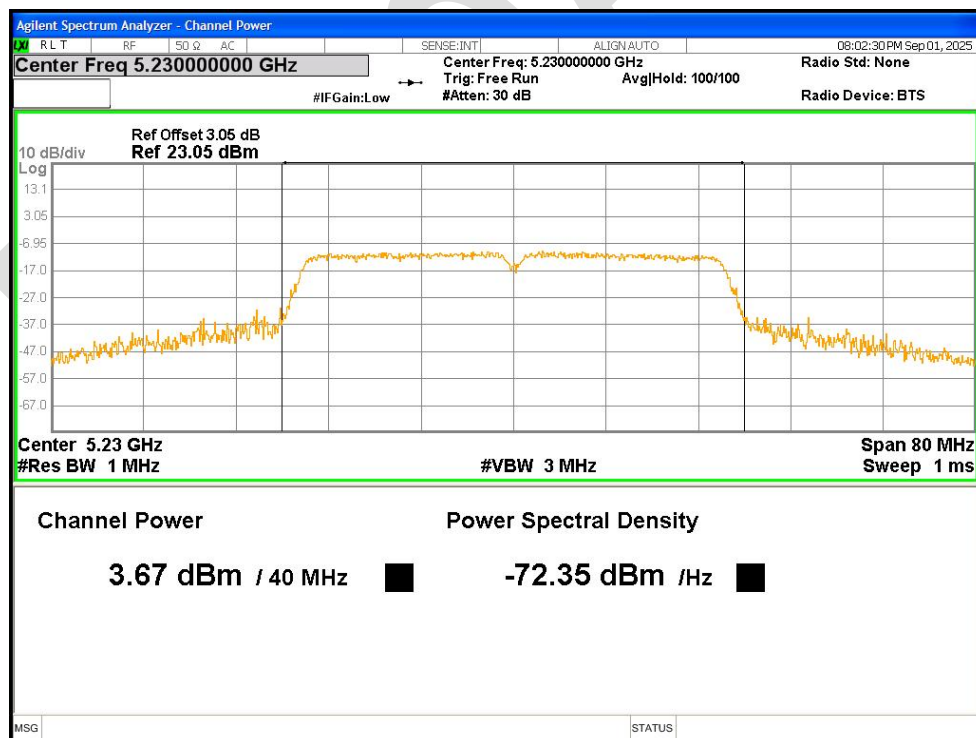
Power NVNT n20 5825MHz Ant1



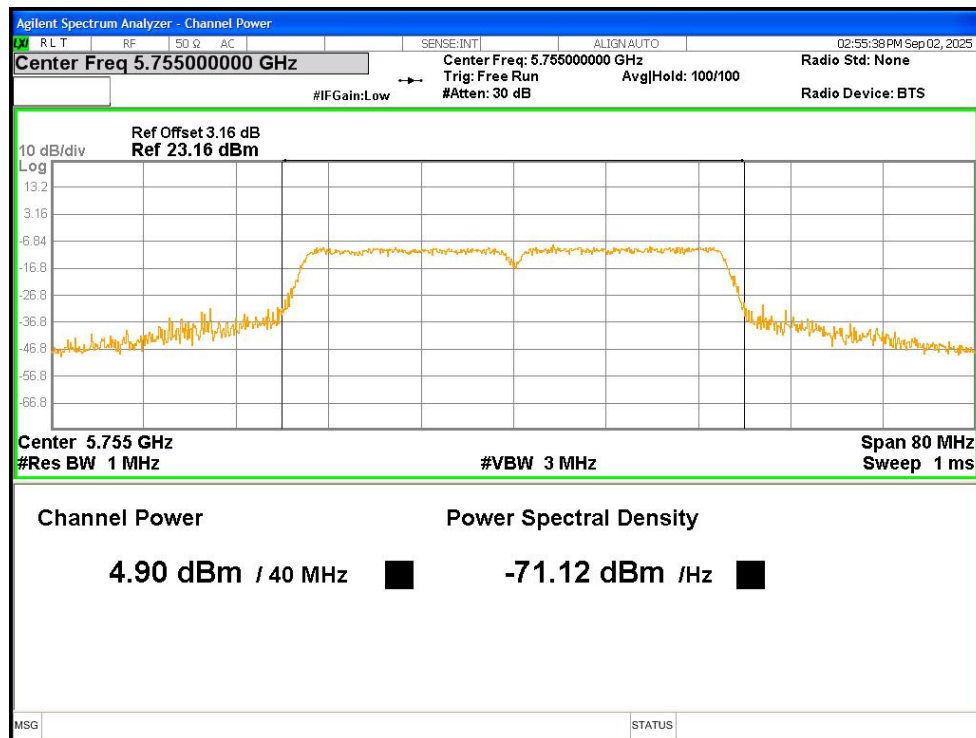
Power NVNT n40 5190MHz Ant1



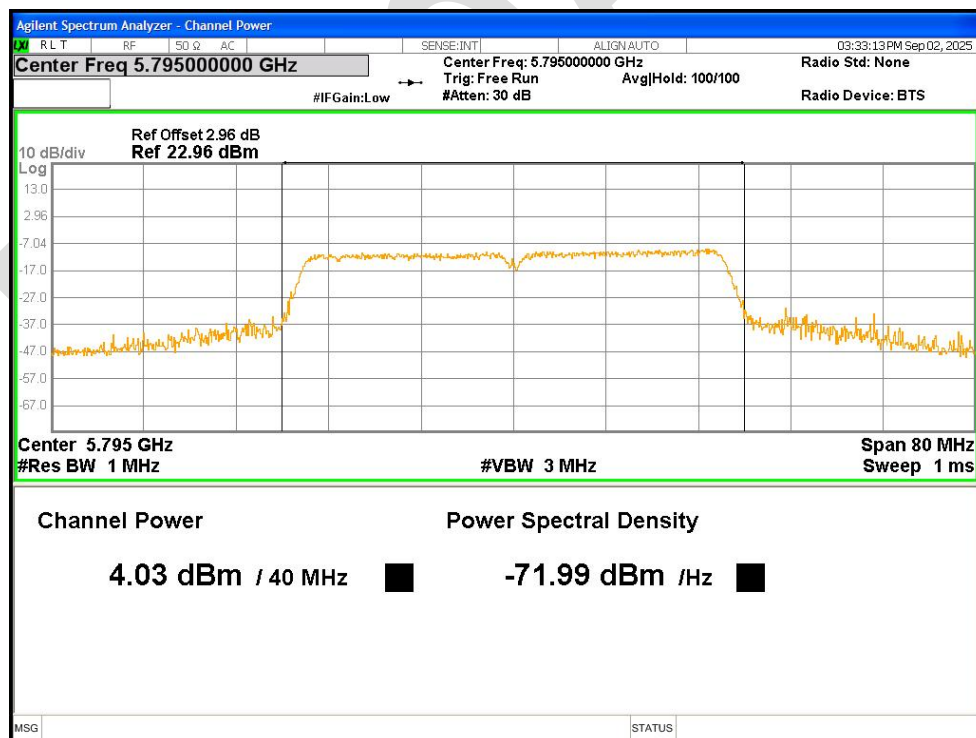
Power NVNT n40 5230MHz Ant1



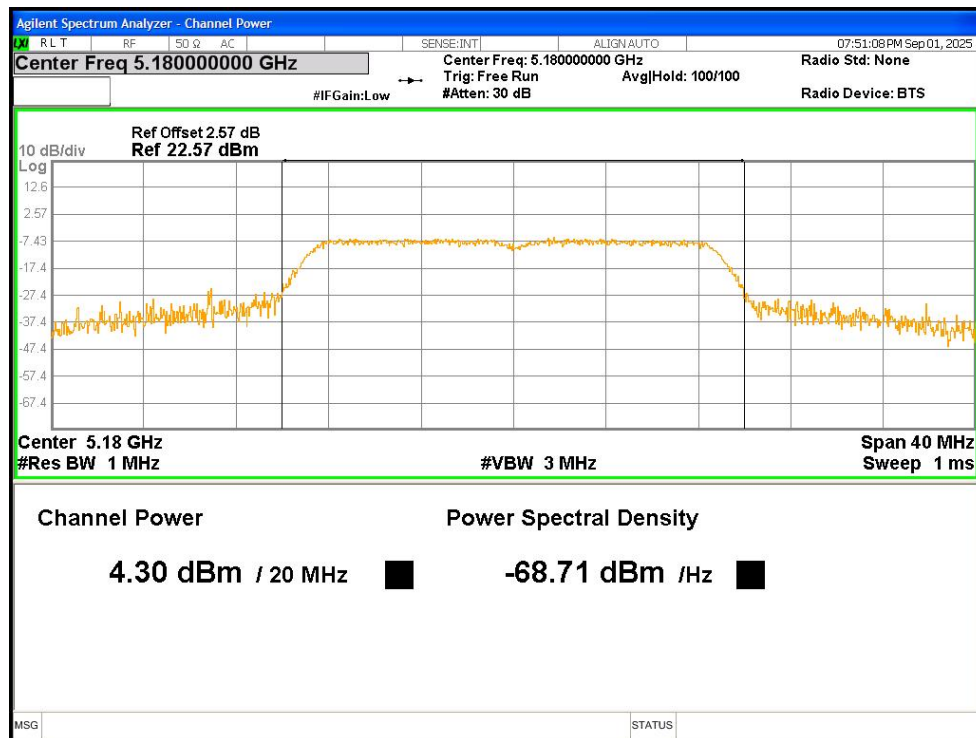
Power NVNT n40 5755MHz Ant1



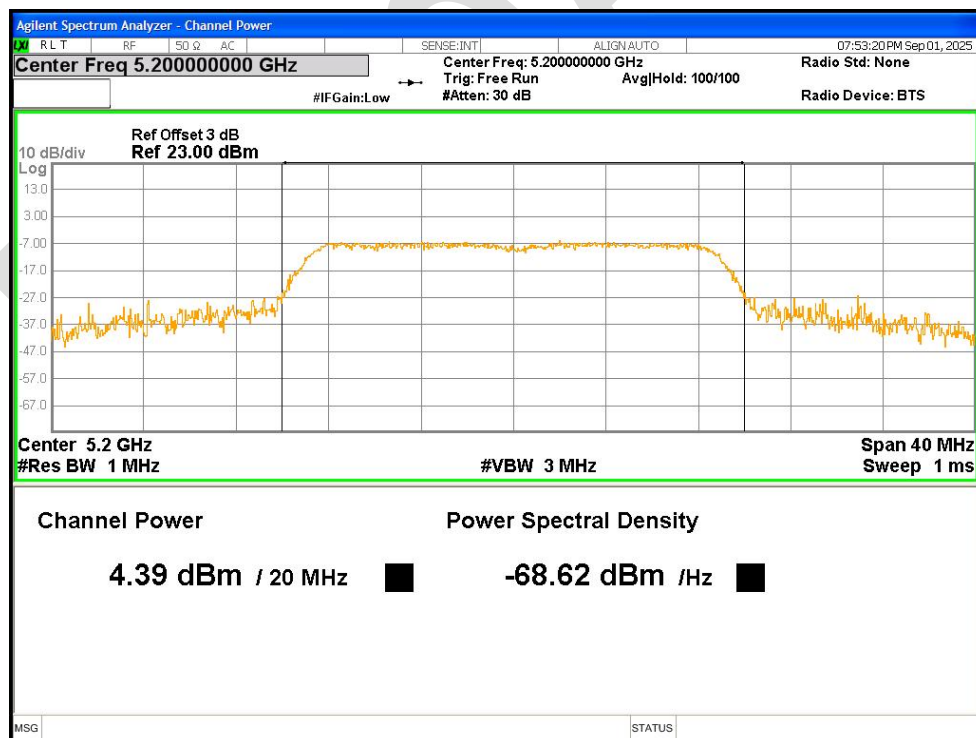
Power NVNT n40 5795MHz Ant1



Power NVNT ac20 5180MHz Ant1



Power NVNT ac20 5200MHz Ant1



Power NVNT ac20 5240MHz Ant1