

Appendix A5

5G WiFi(DFS) Test Data

Appendix A5 DFS Test Data

Dynamic Frequency Selection

Calibration of Radar Waveform

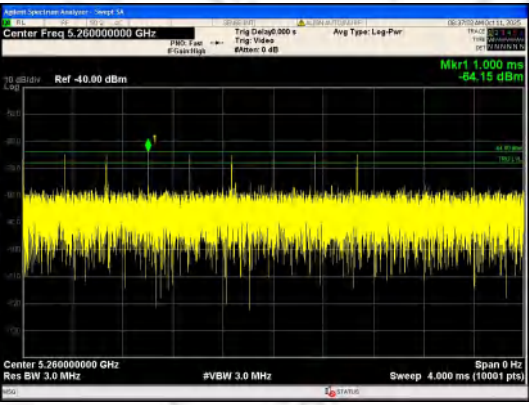
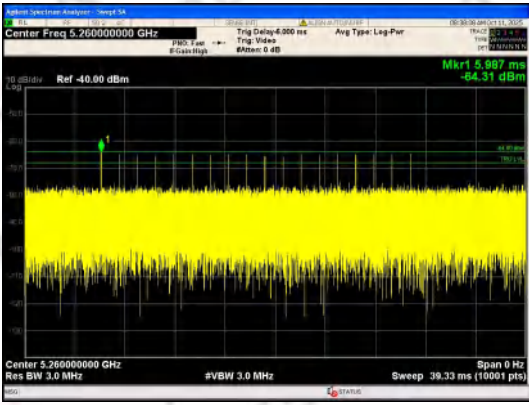
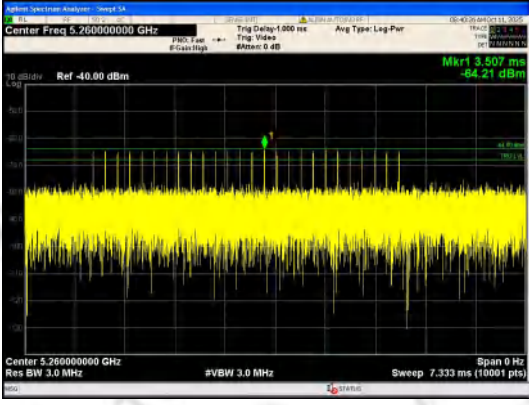
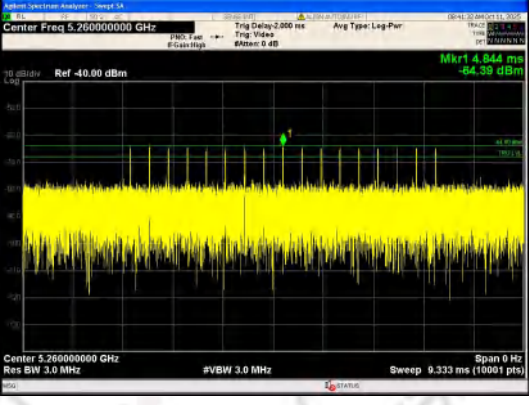
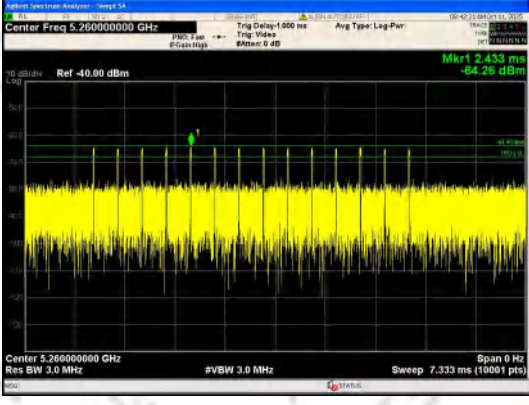
Test Result

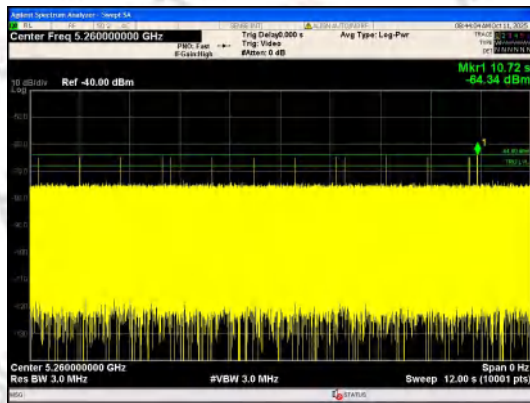
Channel/Frequency	Bandwidth	Radar Type	Level (dBm)	Limit (dBm)	Result
52/5260MHz	20	FCC radar test signal Type 6	-64.15	-64	PASS
		FCC radar test signal Type 0	-64.31	-64	PASS
		FCC radar test signal Type 1	-64.52	-64	PASS
		FCC radar test signal Type 2	-64.21	-64	PASS
		FCC radar test signal Type 3	-64.39	-64	PASS
		FCC radar test signal Type 4	-64.26	-64	PASS
		FCC radar test signal Type 5	-64.34	-64	PASS
64/5320MHz		FCC radar test signal Type 6	-64.1	-64	PASS
		FCC radar test signal Type 0	-64.75	-64	PASS
		FCC radar test signal Type 1	-64.59	-64	PASS
		FCC radar test signal Type 2	-64.46	-64	PASS
		FCC radar test signal Type 3	-64.39	-64	PASS
		FCC radar test signal Type 4	-64.13	-64	PASS
		FCC radar test signal Type 5	-64.28	-64	PASS
100/5500MHz		FCC radar test signal Type 6	-64.24	-64	PASS
		FCC radar test signal Type 0	-64.83	-64	PASS
		FCC radar test signal Type 1	-64.38	-64	PASS
		FCC radar test signal Type 2	-64.09	-64	PASS
		FCC radar test signal Type 3	-64.08	-64	PASS
		FCC radar test signal Type 4	-64.13	-64	PASS
		FCC radar test signal Type 5	-67.56	-64	PASS
140/5700MHz		FCC radar test signal Type 6	-64.11	-64	PASS
		FCC radar test signal Type 0	-64.12	-64	PASS
		FCC radar test signal Type 1	-64.21	-64	PASS
		FCC radar test signal Type 2	-64.06	-64	PASS
		FCC radar test signal Type 3	-64.24	-64	PASS
		FCC radar test signal Type 4	-64.16	-64	PASS
		FCC radar test signal Type 5	-63.98	-64	PASS
54/5270MHz	40	FCC radar test signal Type 6	-64.27	-64	PASS
		FCC radar test signal Type 0	-64.1	-64	PASS
		FCC radar test signal Type 1	-64.11	-64	PASS
		FCC radar test signal Type 2	-64.3	-64	PASS
		FCC radar test signal Type 3	-64.35	-64	PASS
		FCC radar test signal Type 4	-64.09	-64	PASS
		FCC radar test signal Type 5	-63.69	-64	PASS

62/5310MHz		FCC radar test signal Type 6	-64.05	-64	PASS
		FCC radar test signal Type 0	-64.44	-64	PASS
		FCC radar test signal Type 1	-64.24	-64	PASS
		FCC radar test signal Type 2	-64.39	-64	PASS
		FCC radar test signal Type 3	-64.15	-64	PASS
		FCC radar test signal Type 4	-64.38	-64	PASS
		FCC radar test signal Type 5	-64.06	-64	PASS
102/5510MHz		FCC radar test signal Type 6	-64.95	-64	PASS
		FCC radar test signal Type 0	-64.02	-64	PASS
		FCC radar test signal Type 1	-64.06	-64	PASS
		FCC radar test signal Type 2	-64.04	-64	PASS
		FCC radar test signal Type 3	-64.07	-64	PASS
		FCC radar test signal Type 4	-64.11	-64	PASS
		FCC radar test signal Type 5	-67.71	-64	PASS
134/5670MHz		FCC radar test signal Type 6	-64.92	-64	PASS
		FCC radar test signal Type 0	-64.47	-64	PASS
		FCC radar test signal Type 1	-64.06	-64	PASS
		FCC radar test signal Type 2	-64.39	-64	PASS
		FCC radar test signal Type 3	-64.7	-64	PASS
		FCC radar test signal Type 4	-64.17	-64	PASS
		FCC radar test signal Type 5	-64.28	-64	PASS
58/5290MHz		FCC radar test signal Type 6	-64.15	-64	PASS
		FCC radar test signal Type 0	-64.74	-64	PASS
		FCC radar test signal Type 1	-64.67	-64	PASS
		FCC radar test signal Type 2	-64.36	-64	PASS
		FCC radar test signal Type 3	-64.02	-64	PASS
		FCC radar test signal Type 4	-64.07	-64	PASS
		FCC radar test signal Type 5	-63.9	-64	PASS
106/5530MHz	80	FCC radar test signal Type 6	-64.47	-64	PASS
		FCC radar test signal Type 0	-64.61	-64	PASS
		FCC radar test signal Type 1	-64.19	-64	PASS
		FCC radar test signal Type 2	-64.24	-64	PASS
		FCC radar test signal Type 3	-64.06	-64	PASS
		FCC radar test signal Type 4	-64.42	-64	PASS
		FCC radar test signal Type 5	-63.98	-64	PASS
122/5610MHz		FCC radar test signal Type 6	-64.03	-64	PASS
		FCC radar test signal Type 0	-64.29	-64	PASS
		FCC radar test signal Type 1	-64.31	-64	PASS
		FCC radar test signal Type 2	-64.19	-64	PASS
		FCC radar test signal Type 3	-64.37	-64	PASS
		FCC radar test signal Type 4	-64.12	-64	PASS
		FCC radar test signal Type 5	-64.09	-64	PASS
138/5690MHz		FCC radar test signal Type 6	-64.34	-64	PASS
		FCC radar test signal Type 0	-64.19	-64	PASS
		FCC radar test signal Type 1	-64.44	-64	PASS

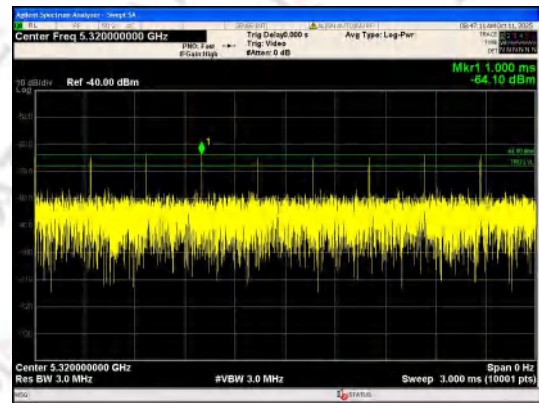
	FCC radar test signal Type 2	-64.35	-64	PASS
	FCC radar test signal Type 3	-64.04	-64	PASS
	FCC radar test signal Type 4	-64.28	-64	PASS
	FCC radar test signal Type 5	-64.19	-64	PASS

Radar Test Signal

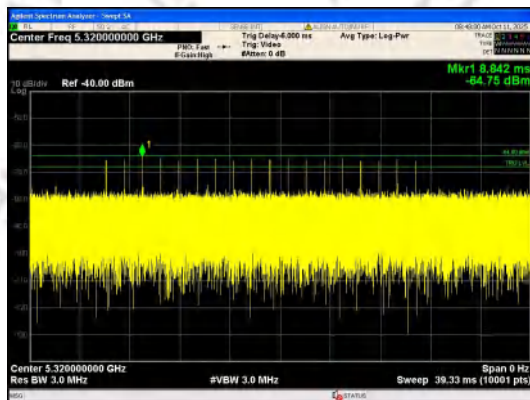
 Center Freq 5.260000000 GHz Res BW 3.0 MHz Span 0 Hz Sweep 4.000 ms (10001 pts)	 Center Freq 5.260000000 GHz Res BW 3.0 MHz Span 0 Hz Sweep 39.33 ms (10001 pts)
FCC radar test signal Type 6 5260MHz/20MHz	FCC radar test signal Type 0 5260MHz/20MHz
 Center Freq 5.260000000 GHz Res BW 3.0 MHz Span 0 Hz Sweep 80.00 ms (10001 pts)	 Center Freq 5.260000000 GHz Res BW 3.0 MHz Span 0 Hz Sweep 7.333 ms (10001 pts)
FCC radar test signal Type 1 5260MHz/20MHz	FCC radar test signal Type 2 5260MHz/20MHz
 Center Freq 5.260000000 GHz Res BW 3.0 MHz Span 0 Hz Sweep 9.333 ms (10001 pts)	 Center Freq 5.260000000 GHz Res BW 3.0 MHz Span 0 Hz Sweep 7.333 ms (10001 pts)
FCC radar test signal Type 3 5260MHz/20MHz	FCC radar test signal Type 4 5260MHz/20MHz



FCC radar test signal Type 5
5260MHz/20MHz



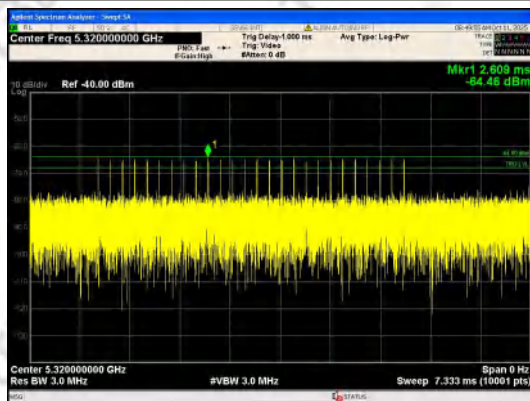
FCC radar test signal Type 6
5320MHz/20MHz



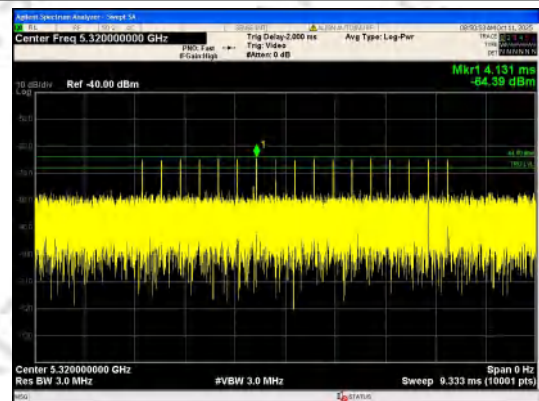
FCC radar test signal Type 0
5320MHz/20MHz



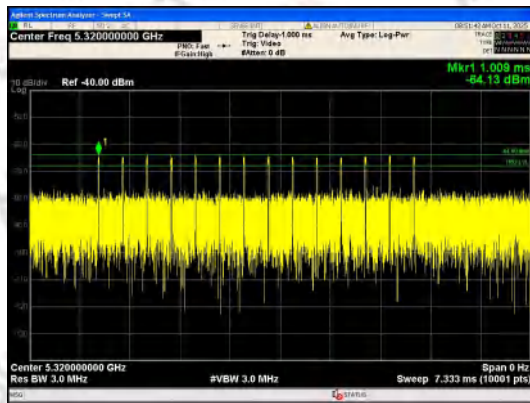
FCC radar test signal Type 1
5320MHz/20MHz



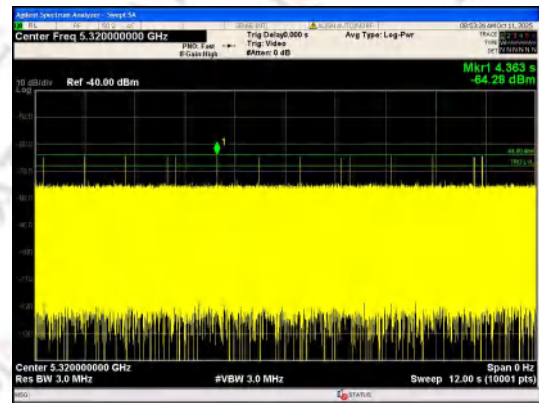
FCC radar test signal Type 2
5320MHz/20MHz



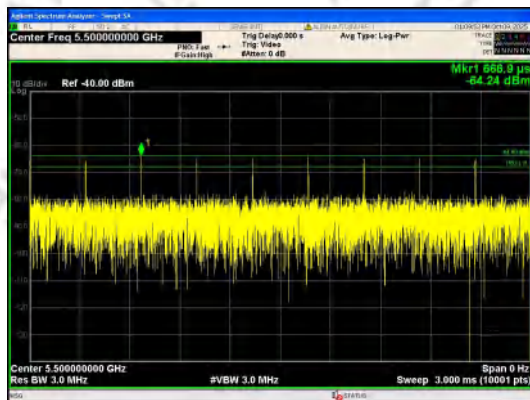
FCC radar test signal Type 3
5320MHz/20MHz



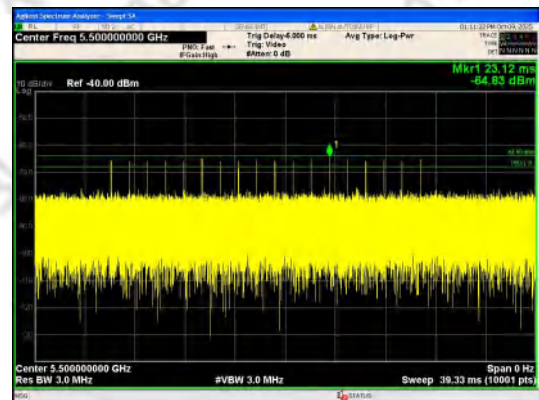
FCC radar test signal Type 4
5320MHz/20MHz



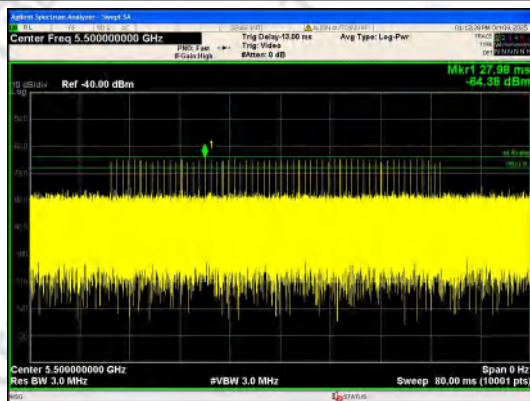
FCC radar test signal Type 5
5320MHz/20MHz



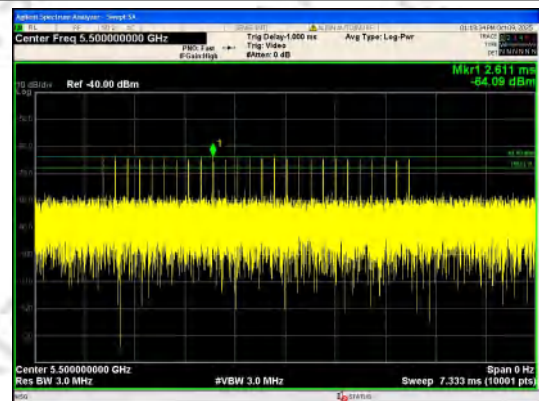
FCC radar test signal Type 6
5500MHz/20MHz



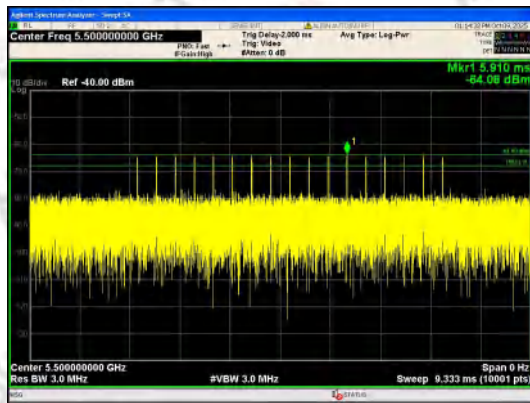
FCC radar test signal Type 0
5500MHz/20MHz



FCC radar test signal Type 1
5500MHz/20MHz



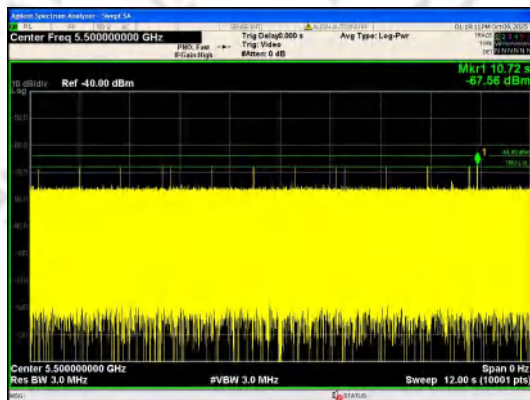
FCC radar test signal Type 2
5500MHz/20MHz



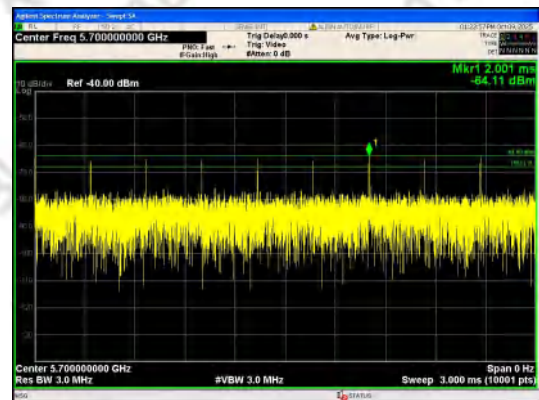
FCC radar test signal Type 3
5500MHz/20MHz



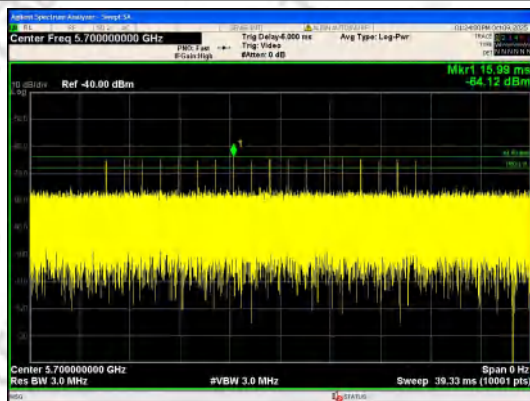
FCC radar test signal Type 4
5500MHz/20MHz



FCC radar test signal Type 5
5500MHz/20MHz



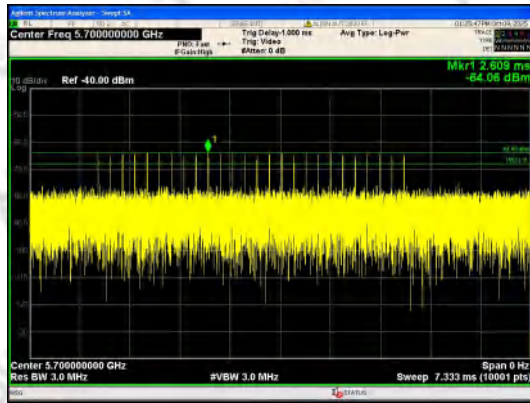
FCC radar test signal Type 6
5700MHz/20MHz



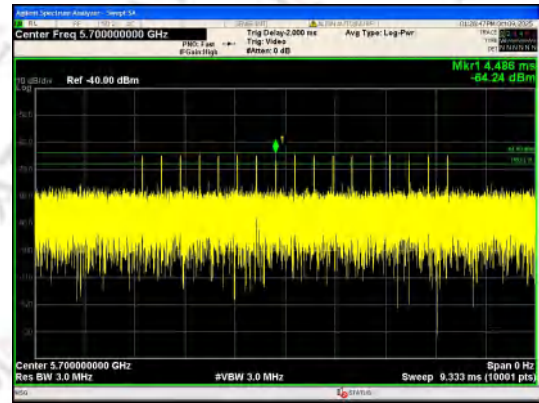
FCC radar test signal Type 0
5700MHz/20MHz



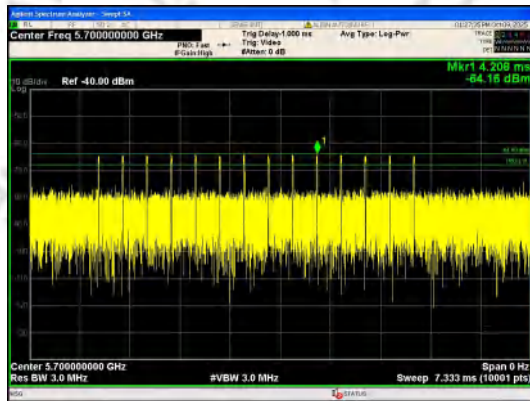
FCC radar test signal Type 1
5700MHz/20MHz



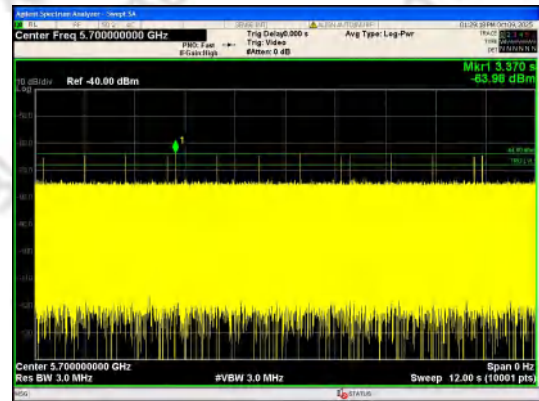
FCC radar test signal Type 2
5700MHz/20MHz



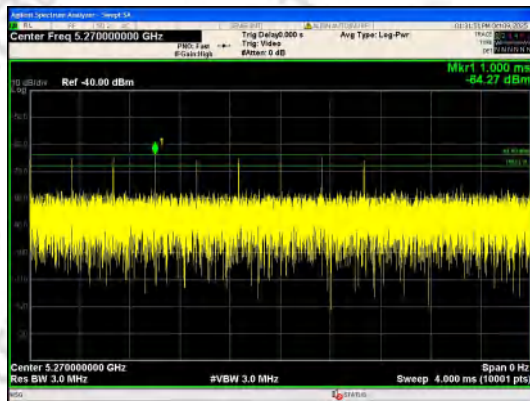
FCC radar test signal Type 3
5700MHz/20MHz



FCC radar test signal Type 4
5700MHz/20MHz



FCC radar test signal Type 5
5700MHz/20MHz



FCC radar test signal Type 6
5270MHz/40MHz



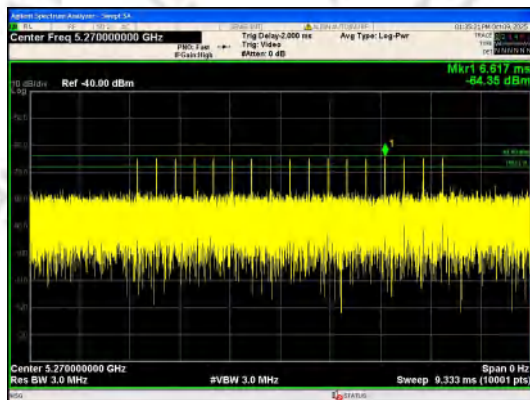
FCC radar test signal Type 0
5270MHz/40MHz



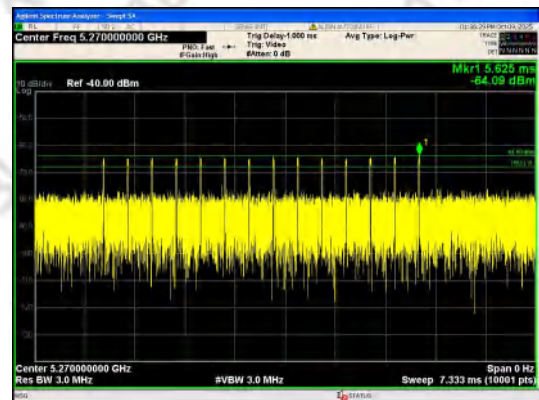
FCC radar test signal Type 1
5270MHz/40MHz



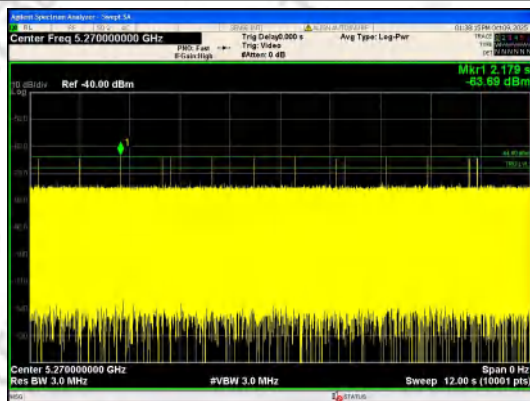
FCC radar test signal Type 2
5270MHz/40MHz



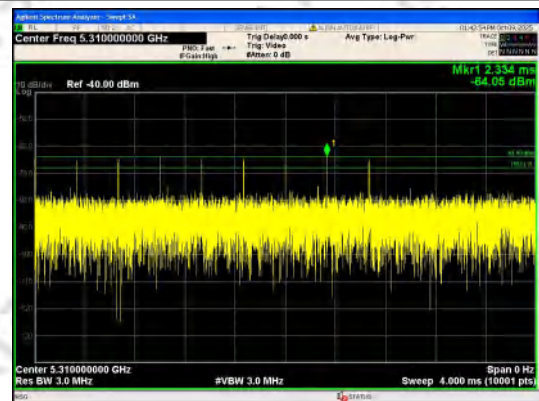
FCC radar test signal Type 3
5270MHz/40MHz



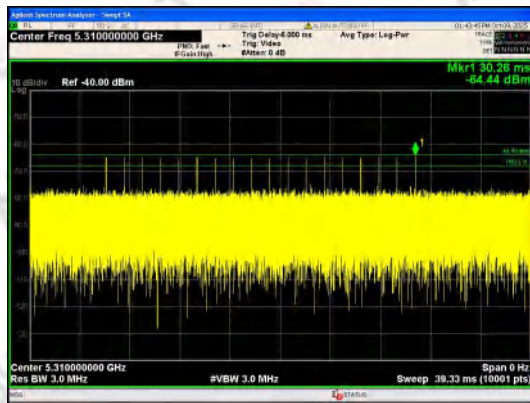
FCC radar test signal Type 4
5270MHz/40MHz



FCC radar test signal Type 5
5270MHz/40MHz



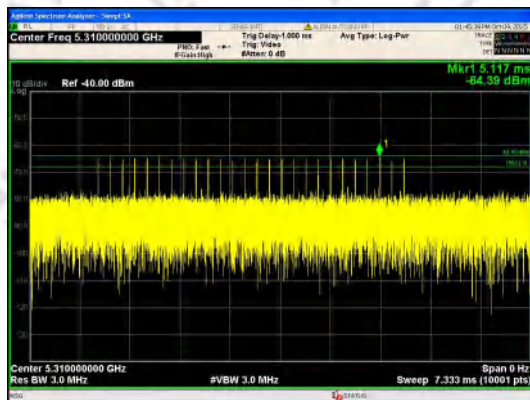
FCC radar test signal Type 6
5310MHz/40MHz



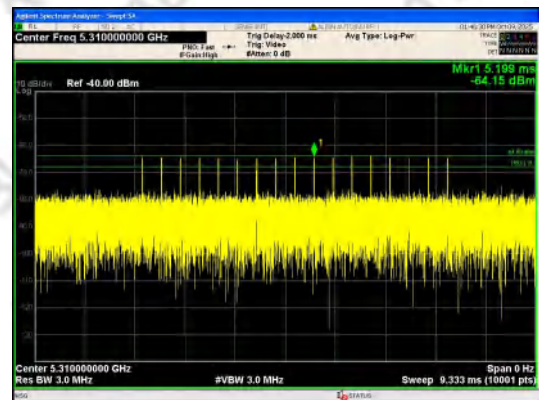
FCC radar test signal Type 0
5310MHz/40MHz



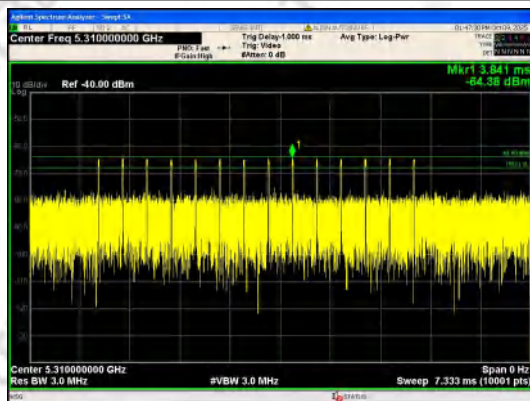
FCC radar test signal Type 1
5310MHz/40MHz



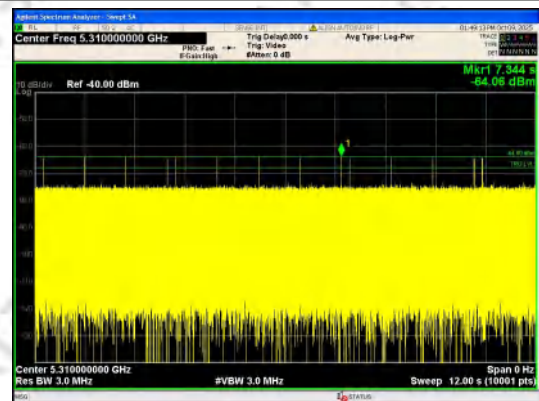
FCC radar test signal Type 2
5310MHz/40MHz



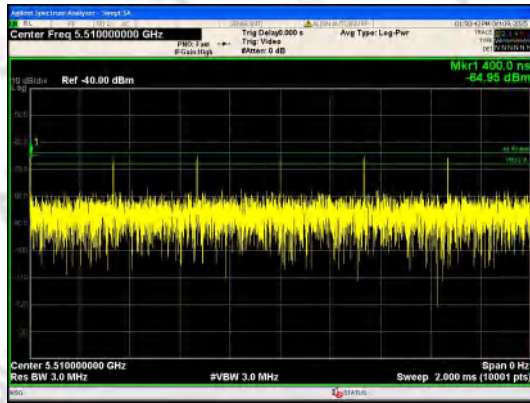
FCC radar test signal Type 3
5310MHz/40MHz



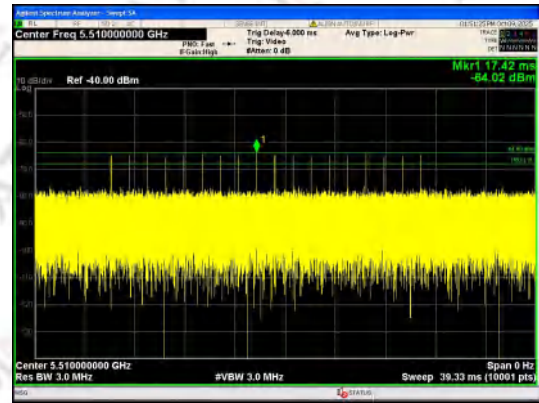
FCC radar test signal Type 4
5310MHz/40MHz



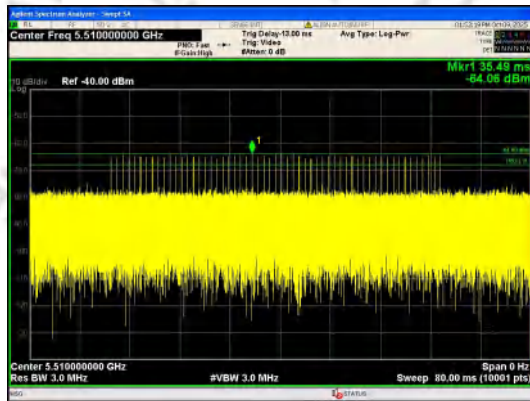
FCC radar test signal Type 5
5310MHz/40MHz



FCC radar test signal Type 6
5510MHz/40MHz



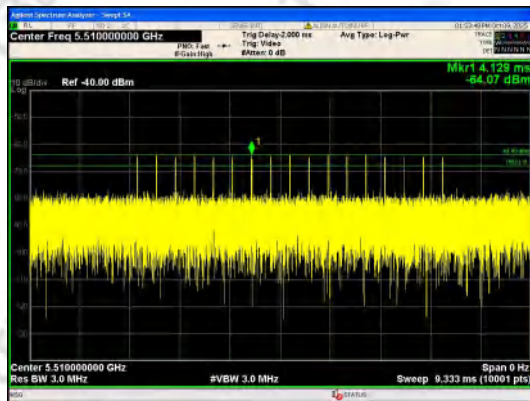
FCC radar test signal Type 0
5510MHz/40MHz



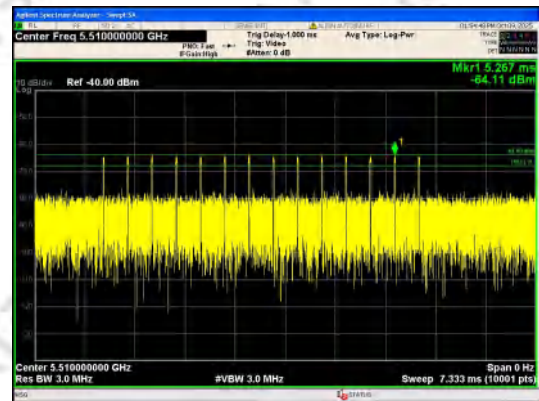
FCC radar test signal Type 1
5510MHz/40MHz



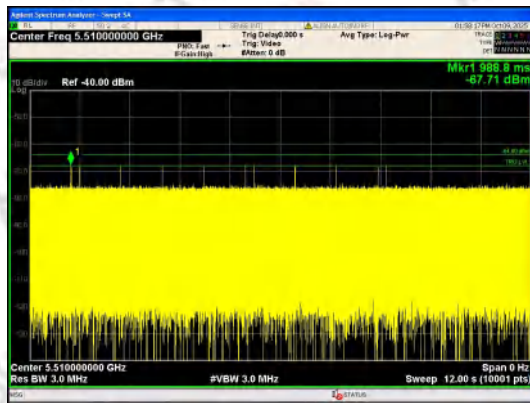
FCC radar test signal Type 2
5510MHz/40MHz



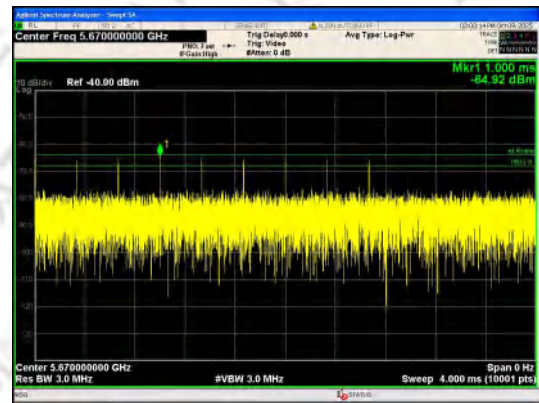
FCC radar test signal Type 3
5510MHz/40MHz



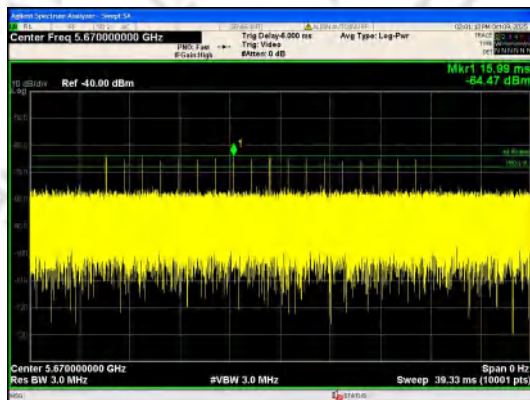
FCC radar test signal Type 4
5510MHz/40MHz



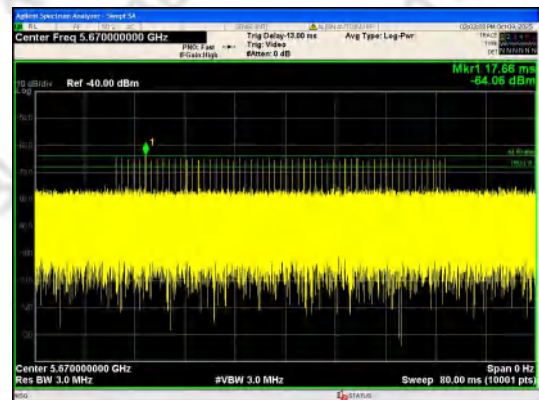
FCC radar test signal Type 5
5510MHz/40MHz



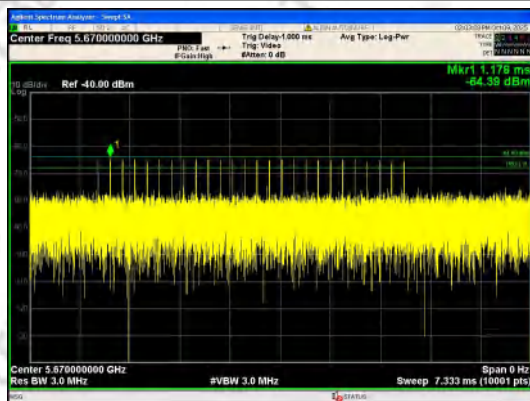
FCC radar test signal Type 6
5670MHz/40MHz



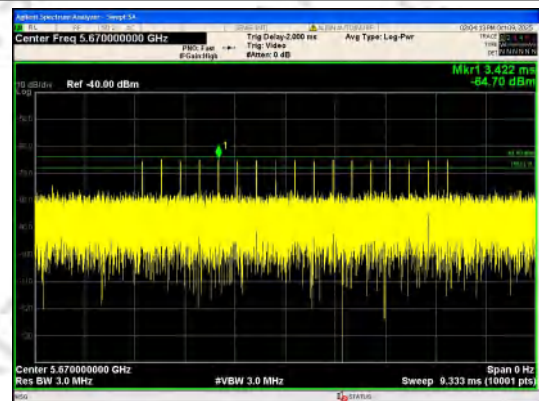
FCC radar test signal Type 0
5670MHz/40MHz



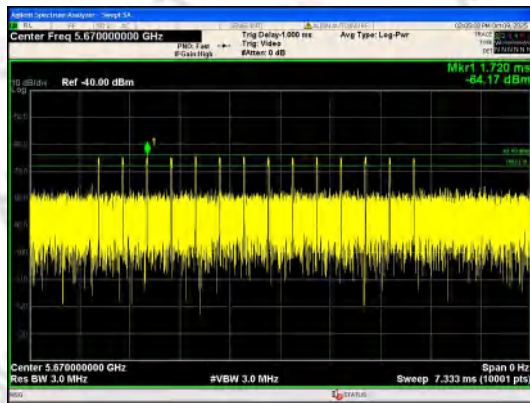
FCC radar test signal Type 1
5670MHz/40MHz



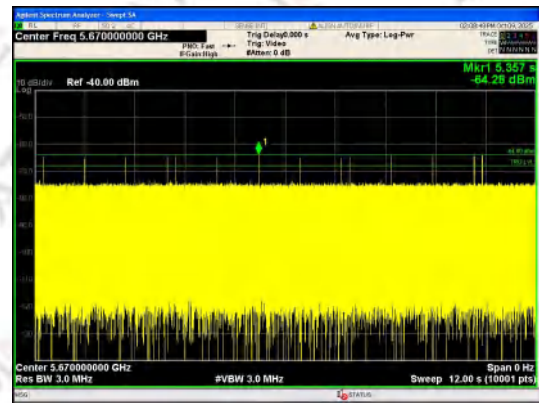
FCC radar test signal Type 2
5670MHz/40MHz



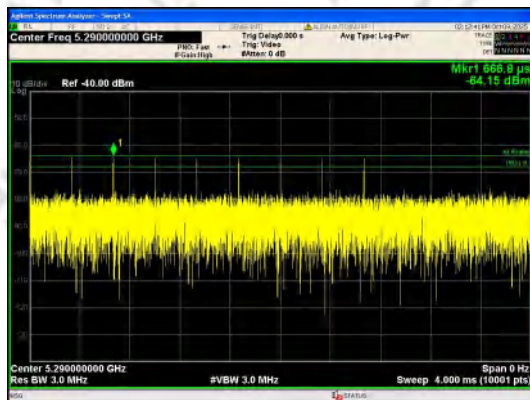
FCC radar test signal Type 3
5670MHz/40MHz



FCC radar test signal Type 4
5670MHz/40MHz



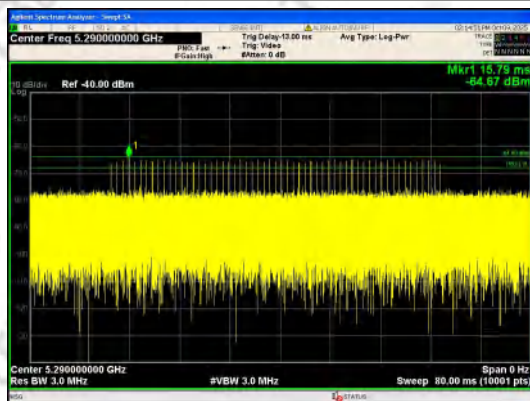
FCC radar test signal Type 5
5670MHz/40MHz



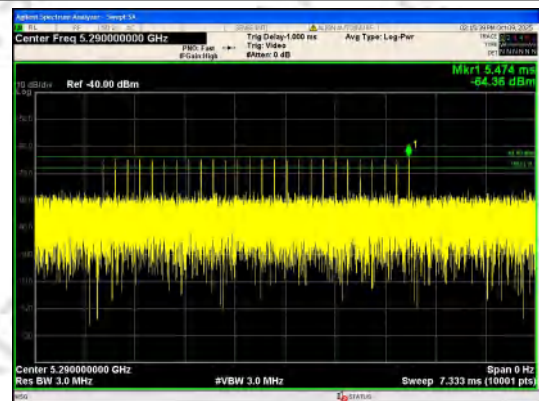
FCC radar test signal Type 6
5290MHz/80MHz



FCC radar test signal Type 0
5290MHz/80MHz



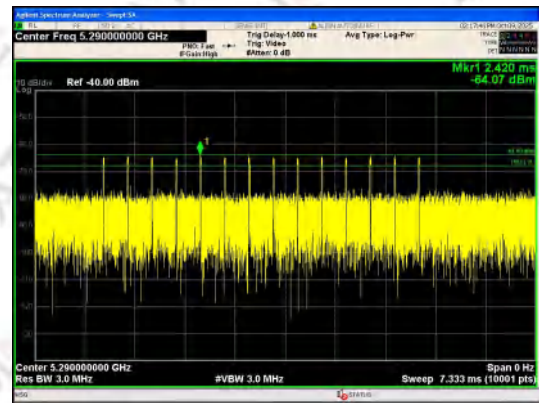
FCC radar test signal Type 1
5290MHz/80MHz



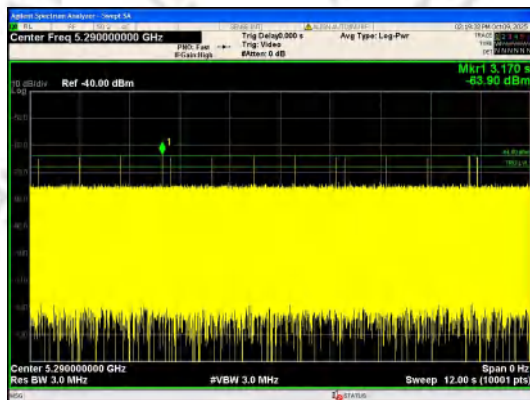
FCC radar test signal Type 2
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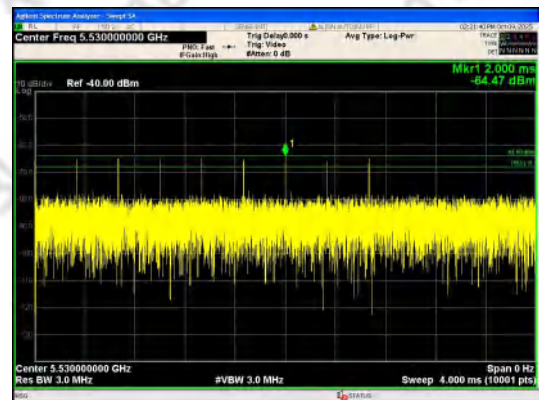
FCC radar test signal Type 3
5290MHz/80MHz



FCC radar test signal Type 4
5290MHz/80MHz



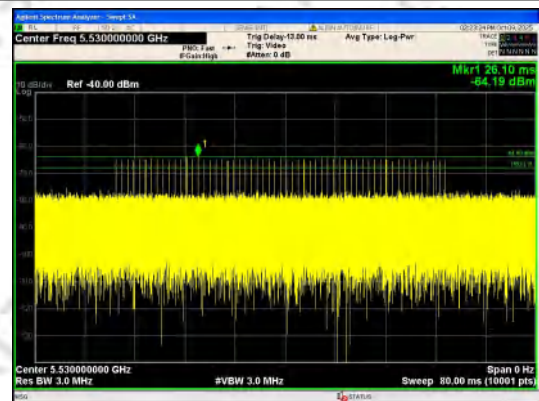
FCC radar test signal Type 5
5290MHz/80MHz



FCC radar test signal Type 6
5530MHz/80MHz



FCC radar test signal Type 0
5530MHz/80MHz



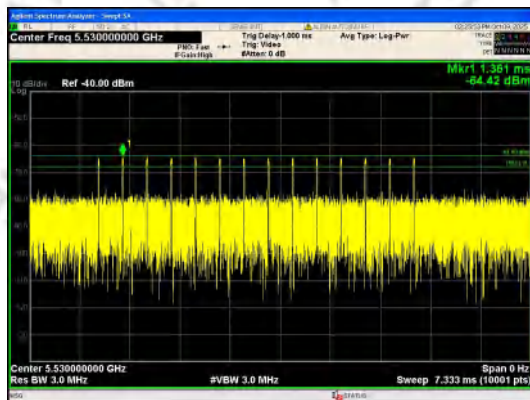
FCC radar test signal Type 1
5530MHz/80MHz



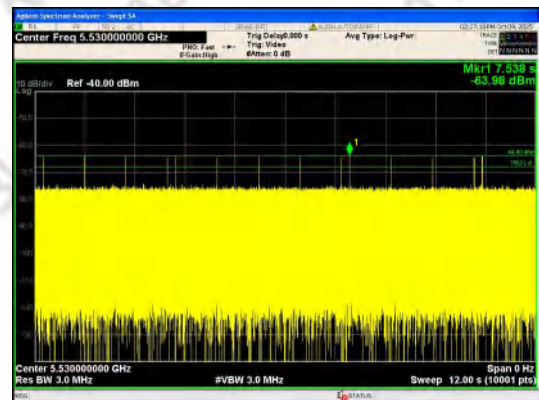
FCC radar test signal Type 2
5530MHz/80MHz



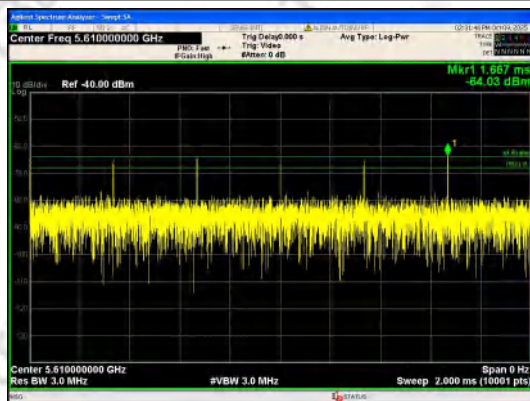
FCC radar test signal Type 3
5530MHz/80MHz



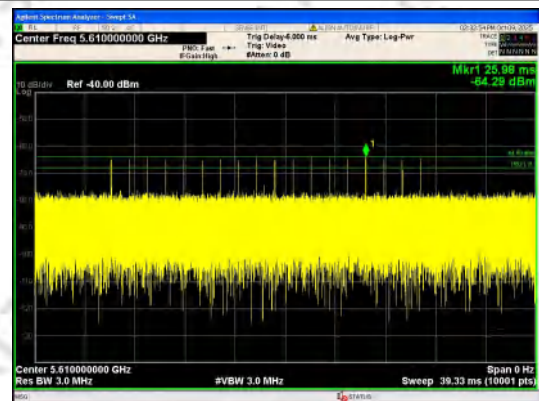
FCC radar test signal Type 4
5530MHz/80MHz



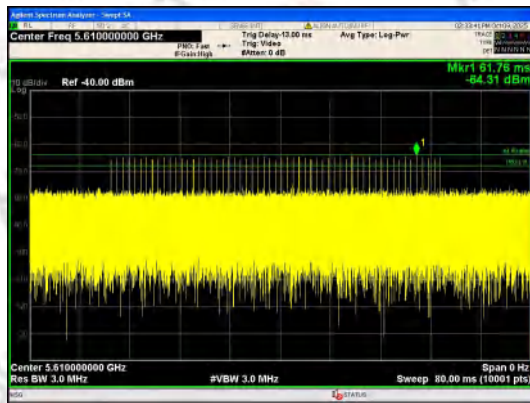
FCC radar test signal Type 5
5530MHz/80MHz



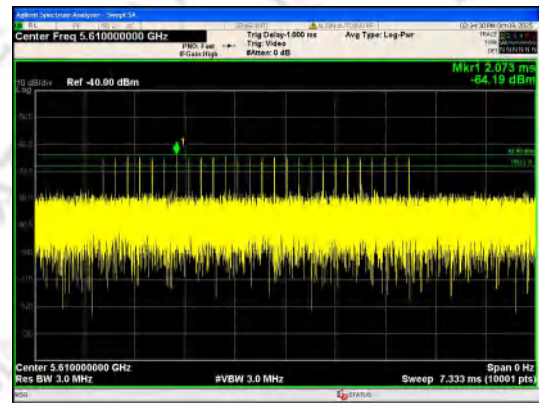
FCC radar test signal Type 6
5610MHz/80MHz



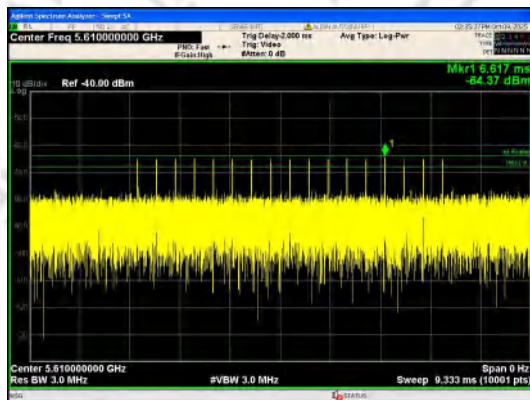
FCC radar test signal Type 0
5610MHz/80MHz



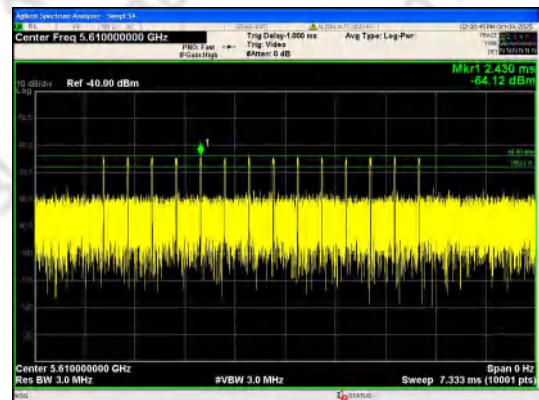
FCC radar test signal Type 1
5610MHz/80MHz



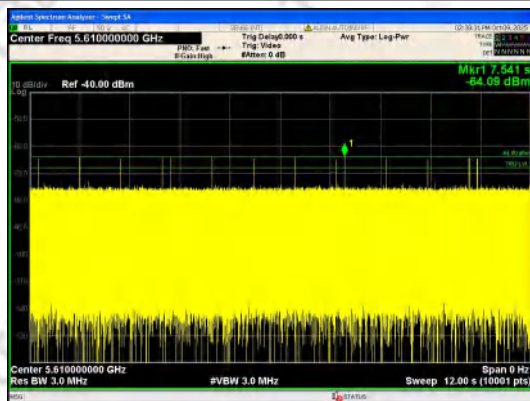
FCC radar test signal Type 2
5610MHz/80MHz



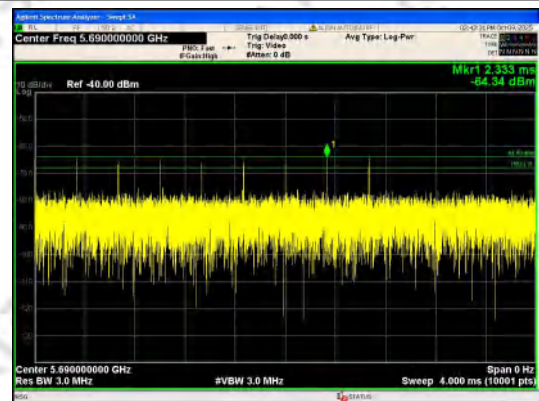
FCC radar test signal Type 3
5610MHz/80MHz



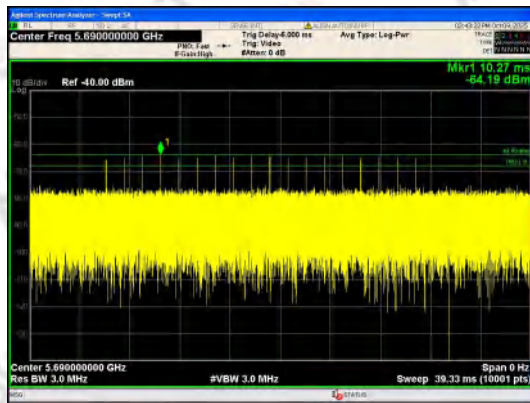
FCC radar test signal Type 4
5610MHz/80MHz



FCC radar test signal Type 5
5610MHz/80MHz



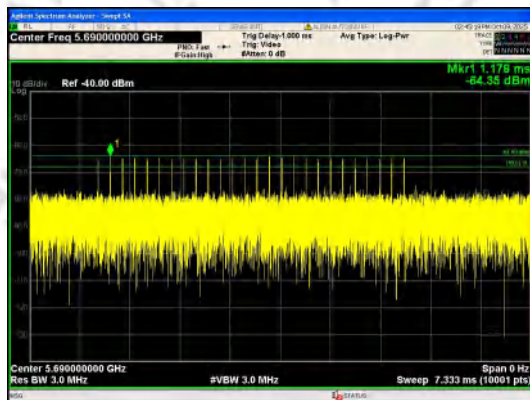
FCC radar test signal Type 6
5690MHz/80MHz



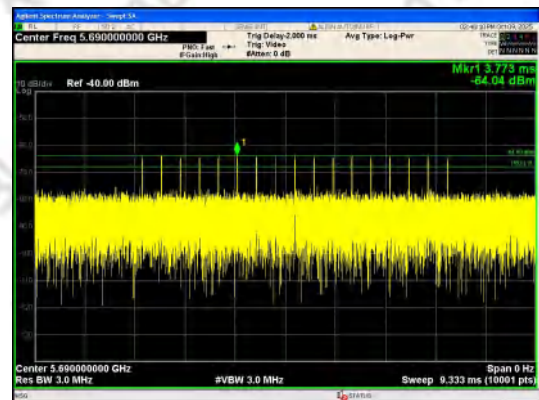
FCC radar test signal Type 0
5690MHz/80MHz



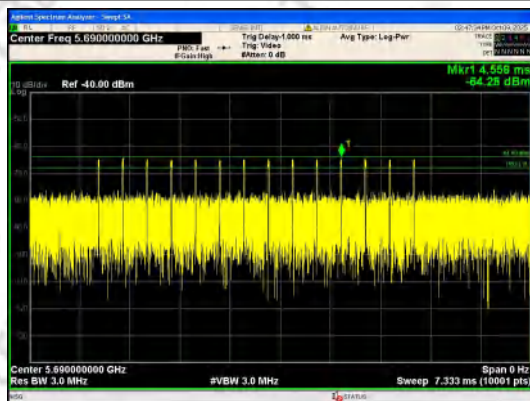
FCC radar test signal Type 1
5690MHz/80MHz



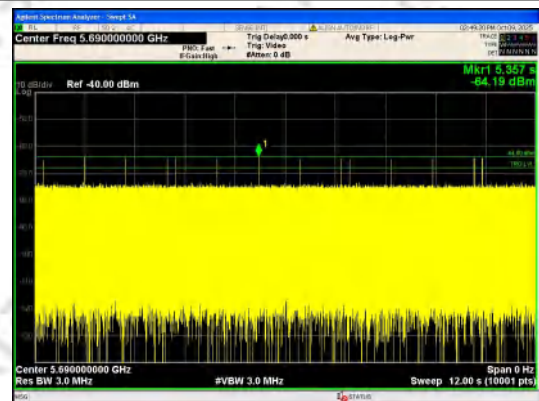
FCC radar test signal Type 2
5690MHz/80MHz



FCC radar test signal Type 3
5690MHz/80MHz



FCC radar test signal Type 4
5690MHz/80MHz



FCC radar test signal Type 5
5690MHz/80MHz

Channel Shutdown

Test Result of Channel Shutdown

IEEE 802.11ac

BW/Frequency	Test Item	Test Result(ms)	Limit(ms)	Result
20MHz/5260MHz	Channel Move Time	0.9	10	PASS
	Channel Closing Transmission Time	7.6	<200+60ms	PASS
20MHz/5320MHz	Channel Move Time	0.86	10	PASS
	Channel Closing Transmission Time	10.0	<200+60ms	PASS
20MHz/5500MHz	Channel Move Time	0.8	10	PASS
	Channel Closing Transmission Time	6.4	<200+60ms	PASS
20MHz/5700MHz	Channel Move Time	0.88	10	PASS
	Channel Closing Transmission Time	4.8	<200+60ms	PASS
40MHz/5270MHz	Channel Move Time	0.99	10	PASS
	Channel Closing Transmission Time	14.4	<200+60ms	PASS
40MHz/5310MHz	Channel Move Time	0.95	10	PASS
	Channel Closing Transmission Time	10.8	<200+60ms	PASS
40MHz/5510MHz	Channel Move Time	0.84	10	PASS
	Channel Closing Transmission Time	7.2	<200+60ms	PASS
40MHz/5670MHz	Channel Move Time	0.88	10	PASS
	Channel Closing Transmission Time	6.8	<200+60ms	PASS
80MHz/5290MHz	Channel Move Time	0.95	10	PASS
	Channel Closing Transmission Time	9.6	<200+60ms	PASS
80MHz/5530MHz	Channel Move Time	0.81	10	PASS
	Channel Closing Transmission Time	6.4	<200+60ms	PASS
80MHz/5610MHz	Channel Move Time	0.99	10	PASS
	Channel Closing Transmission Time	8.4	<200+60ms	PASS
80MHz/5690MHz	Channel Move Time	0.95	10	PASS
	Channel Closing Transmission Time	7.6	<200+60ms	PASS

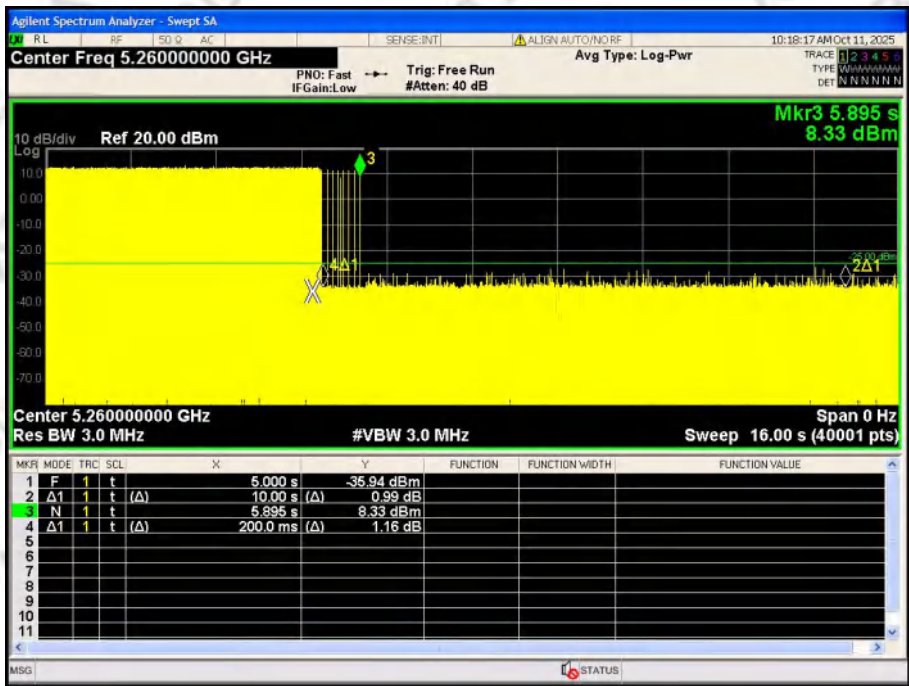
Test Plots of Channel Shutdown

IEEE 802.11ac

Radar Waveform calibration Plot

Data Traffic

20MHz/5260MHz



Note:

- 1) Mark1 Time: 5000ms, Mark2 Time:15000ms, On time Points:19
- 2) Dwell = Sweep Time/Sweep Points = 0.4ms, C = N x Dwell = 19 x 0.4 = 7.6 ms

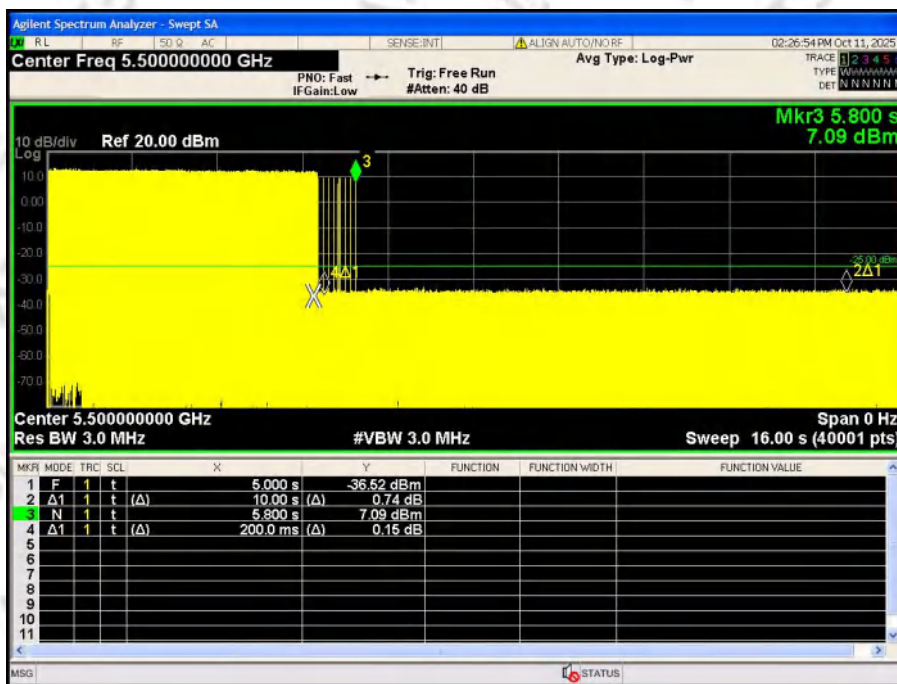
20MHz/5320MHz



Note:

- 1) Mark1 Time: 5000ms, Mark2 Time:15000ms, On time Points:25
- 2) Dwell = Sweep Time/Sweep Points = 0.4ms, C = N x Dwell = 25 x 0.4 = 10.0 ms

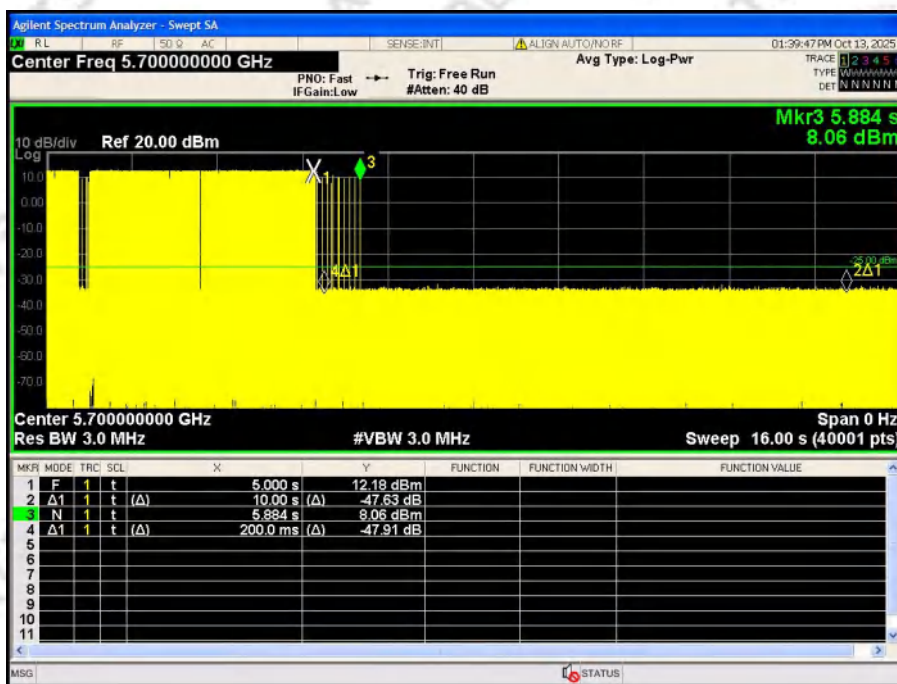
20MHz/5500MHz



Note:

- 1) Mark1 Time: 5000ms, Mark2 Time:15000ms, On time Points:16
- 2) Dwell = Sweep Time/Sweep Points = 0.4ms, C = N x Dwell = 16 x 0.4 = 6.4 ms

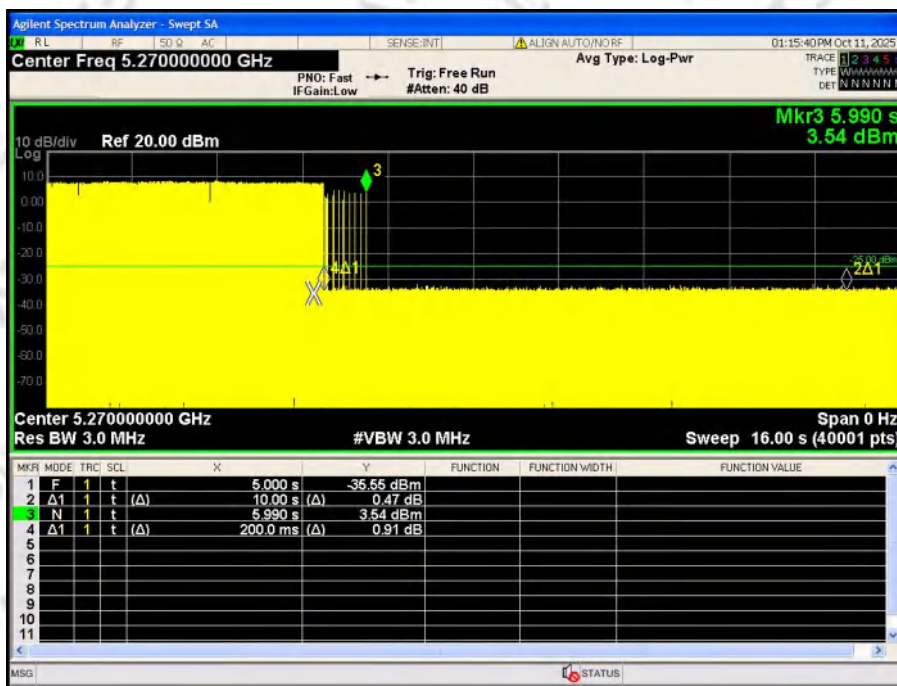
20MHz/5700MHz



Note:

- 1) Mark1 Time: 5000ms, Mark2 Time:15000ms, On time Points:12
- 2) Dwell = Sweep Time/Sweep Points = 0.4ms, C = N x Dwell = 12 x 0.4 = 4.8 ms

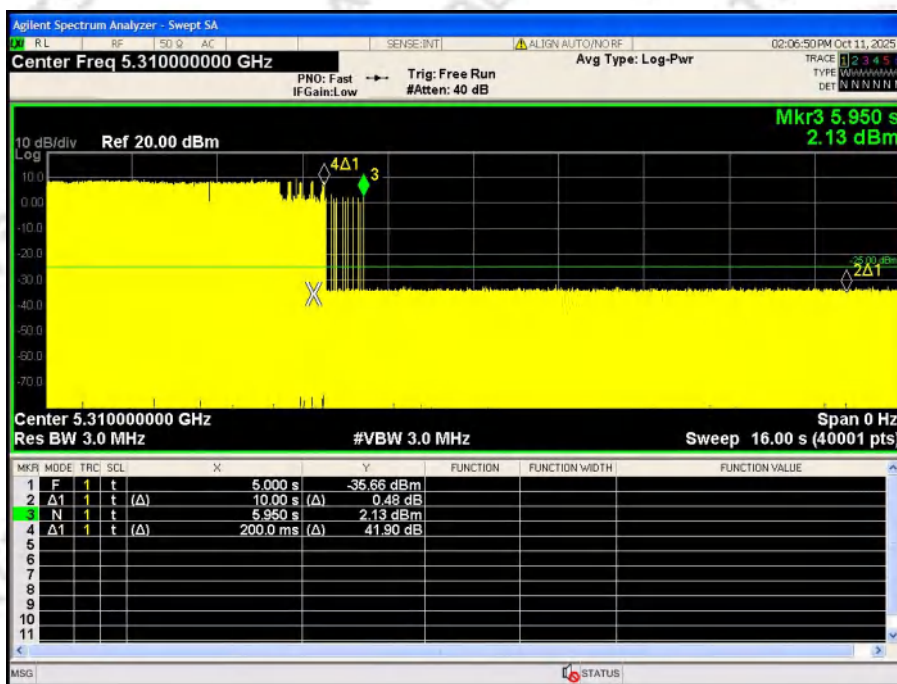
40MHz/5270MHz



Note:

- 1) Mark1 Time: 5000ms, Mark2 Time:15000ms, On time Points:36
- 2) Dwell = Sweep Time/Sweep Points = 0.4ms, C = N x Dwell = 36 x 0.4 = 14.4 ms

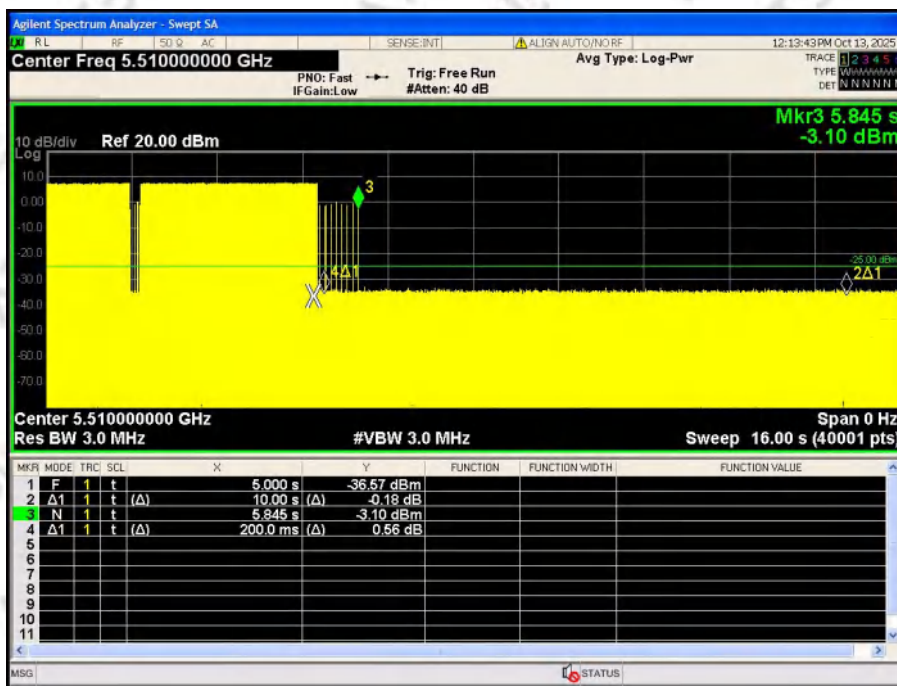
40MHz/5310MHz



Note:

- 1) Mark1 Time: 5000ms, Mark2 Time:15000ms, On time Points:27
- 2) Dwell = Sweep Time/Sweep Points = 0.4ms, C = N x Dwell = 27 x 0.4 = 10.8 ms

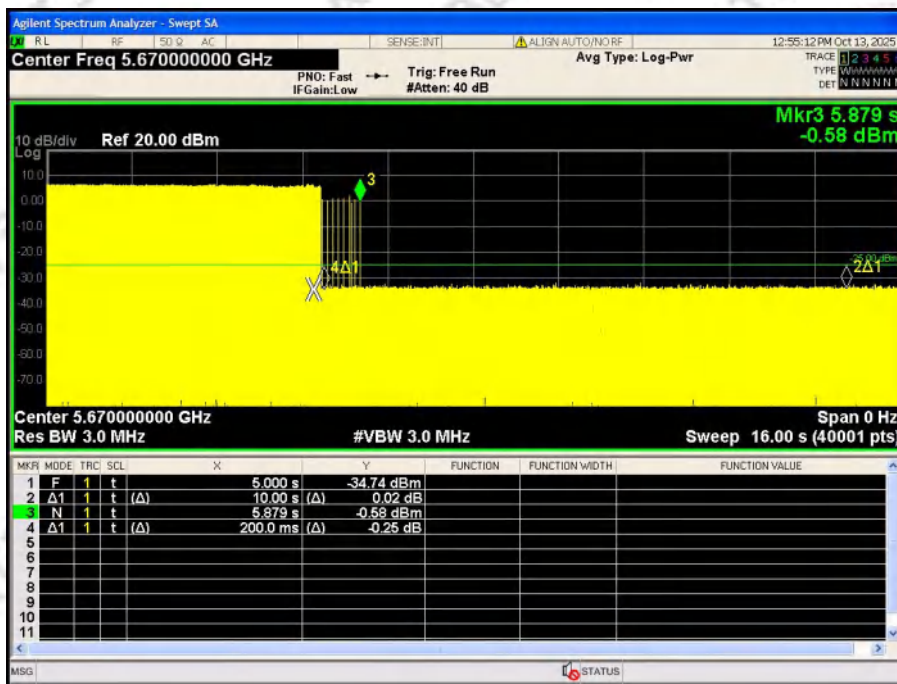
40MHz/5510MHz



Note:

- 1) Mark1 Time: 5000ms, Mark2 Time:15000ms, On time Points:18
- 2) Dwell = Sweep Time/Sweep Points = 0.4ms, C = N x Dwell = 18 x 0.4 = 7.2 ms

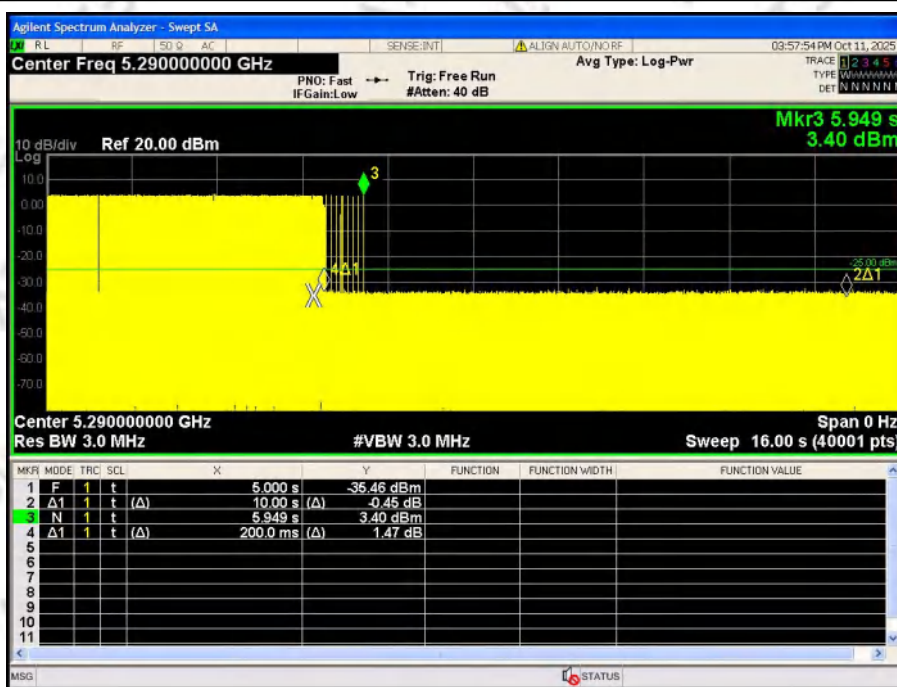
40MHz/5670MHz



Note:

- 1) Mark1 Time: 5000ms, Mark2 Time:15000ms, On time Points:17
- 2) Dwell = Sweep Time/Sweep Points = 0.4ms, C = N x Dwell = 17 x 0.4 = 6.8 ms

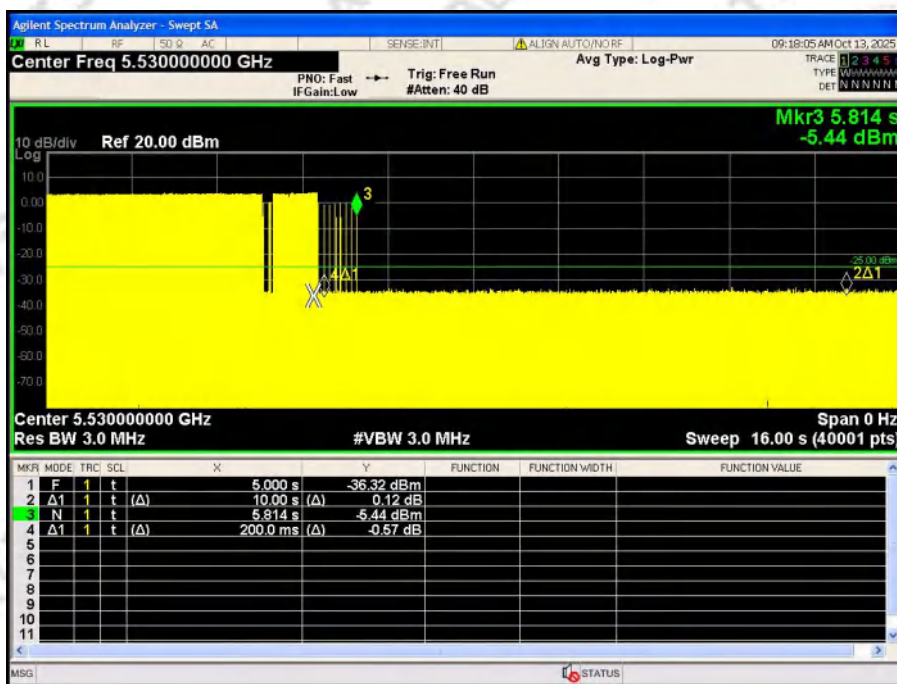
80MHz/5290MHz



Note:

- 1) Mark1 Time: 5000ms, Mark2 Time:15000ms, On time Points:24
- 2) Dwell = Sweep Time/Sweep Points = 0.4ms, C = N x Dwell = 24 x 0.4 = 9.6 ms

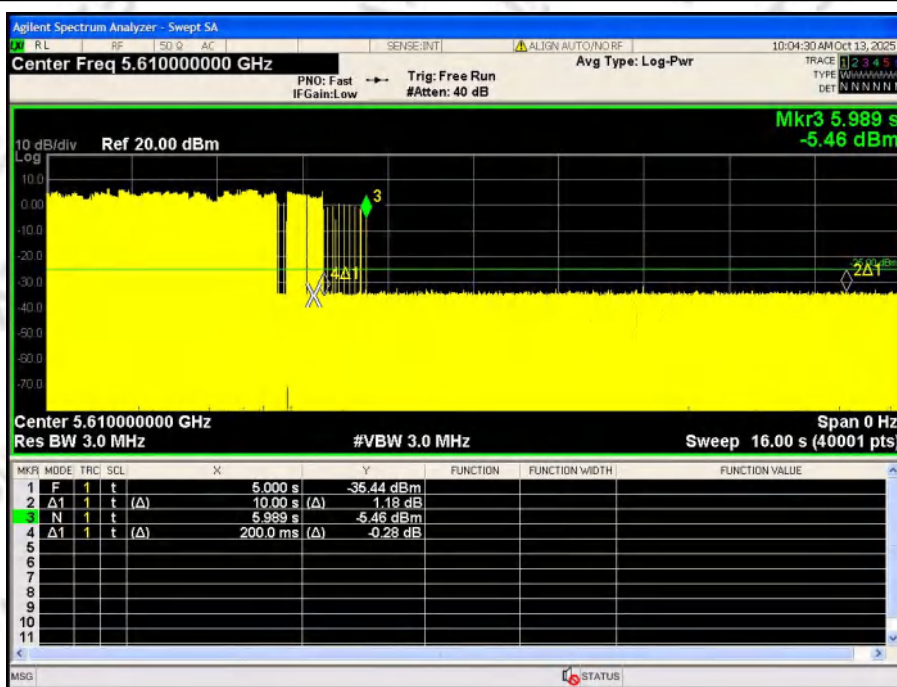
80MHz/5530MHz



Note:

- 1) Mark1 Time: 5000ms, Mark2 Time:15000ms, On time Points:16
- 2) Dwell = Sweep Time/Sweep Points = 0.4ms, C = N x Dwell = 16 x 0.4 = 6.4 ms

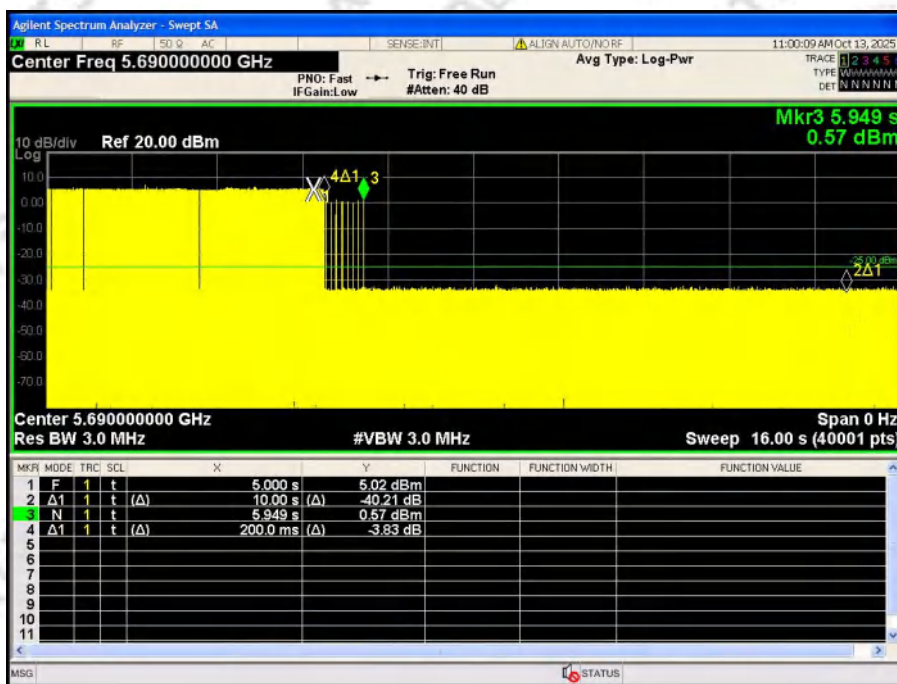
80MHz/5610MHz



Note:

- 1) Mark1 Time: 5000ms, Mark2 Time:15000ms, On time Points:21
- 2) Dwell = Sweep Time/Sweep Points = 0.4ms, C = N x Dwell = 21 x 0.4 = 8.4 ms

80MHz/5690MHz



Note:

- 1) Mark1 Time: 5000ms, Mark2 Time:15000ms, On time Points:19
- 2) Dwell = Sweep Time/Sweep Points = 0.4ms, C = N x Dwell = 19 x 0.4 = 7.6 ms

Non-Occupancy Period

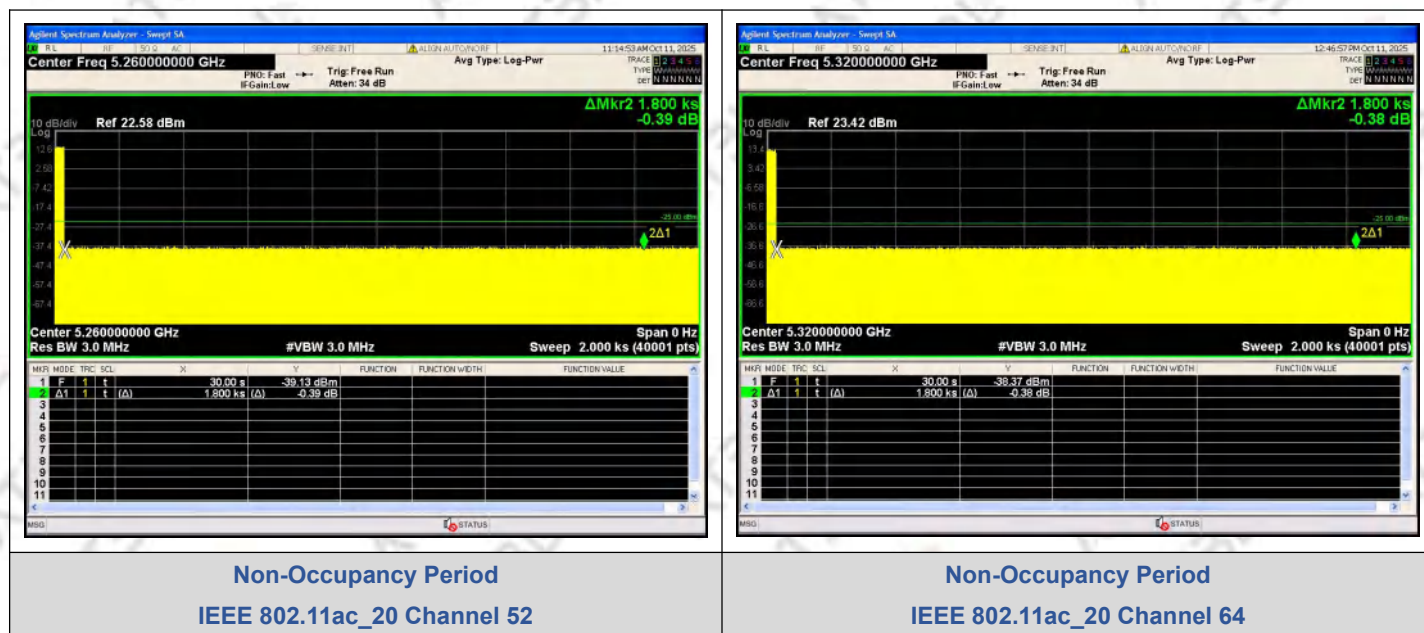
Test Result of Non-Occupancy Period

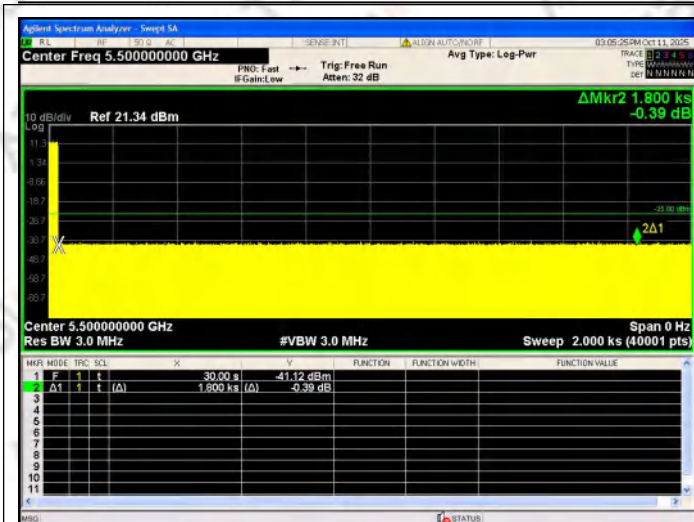
IEEE 802.11ac

BW/Frequency	Test Item	Test Result	Limit	Result
20MHz/5260MHz	Non-Occupancy Period	No transmission	30 minutes	PASS
20MHz/5320MHz	Non-Occupancy Period	No transmission	30 minutes	PASS
20MHz/5500MHz	Non-Occupancy Period	No transmission	30 minutes	PASS
20MHz/5700MHz	Non-Occupancy Period	No transmission	30 minutes	PASS
40MHz/5270MHz	Non-Occupancy Period	No transmission	30 minutes	PASS
40MHz/5310MHz	Non-Occupancy Period	No transmission	30 minutes	PASS
40MHz/5510MHz	Non-Occupancy Period	No transmission	30 minutes	PASS
40MHz/5670MHz	Non-Occupancy Period	No transmission	30 minutes	PASS
80MHz/5290MHz	Non-Occupancy Period	No transmission	30 minutes	PASS
80MHz/5530MHz	Non-Occupancy Period	No transmission	30 minutes	PASS
80MHz/5610MHz	Non-Occupancy Period	No transmission	30 minutes	PASS
80MHz/5690MHz	Non-Occupancy Period	No transmission	30 minutes	PASS

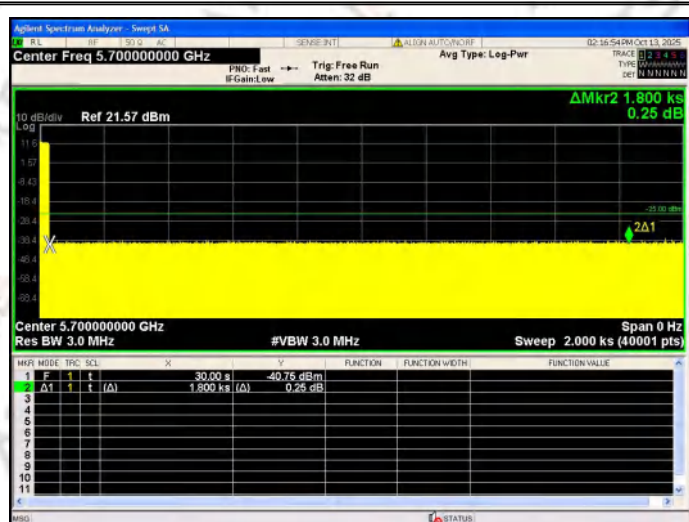
Test Plots of Non-Occupancy Period

IEEE 802.11ac





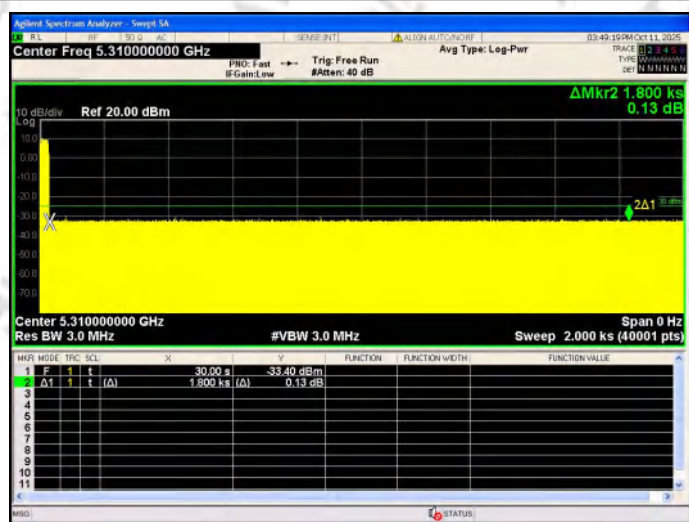
Non-Occupancy Period
IEEE 802.11ac_20 Channel 100



Non-Occupancy Period
IEEE 802.11ac_20 Channel 140



Non-Occupancy Period
IEEE 802.11ac_40 Channel 54



Non-Occupancy Period
IEEE 802.11ac_40 Channel 62



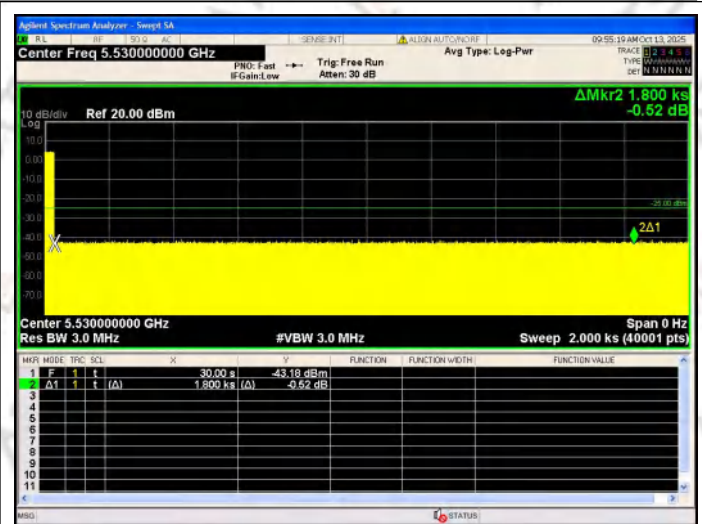
Non-Occupancy Period
IEEE 802.11ac_40 Channel 102



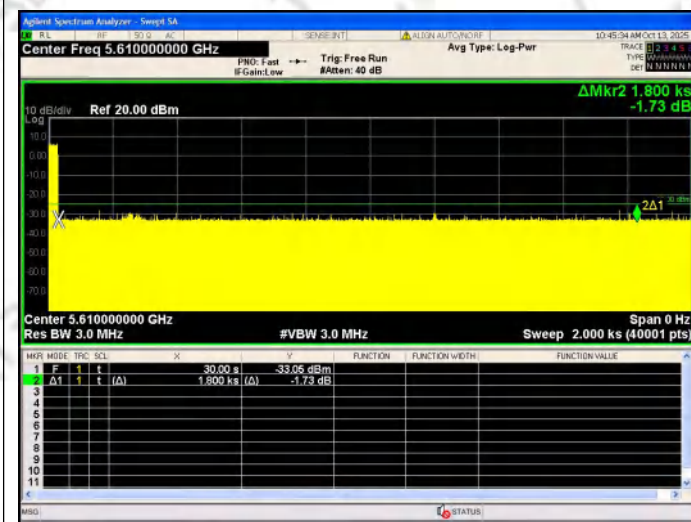
Non-Occupancy Period
IEEE 802.11ac_40 Channel 134



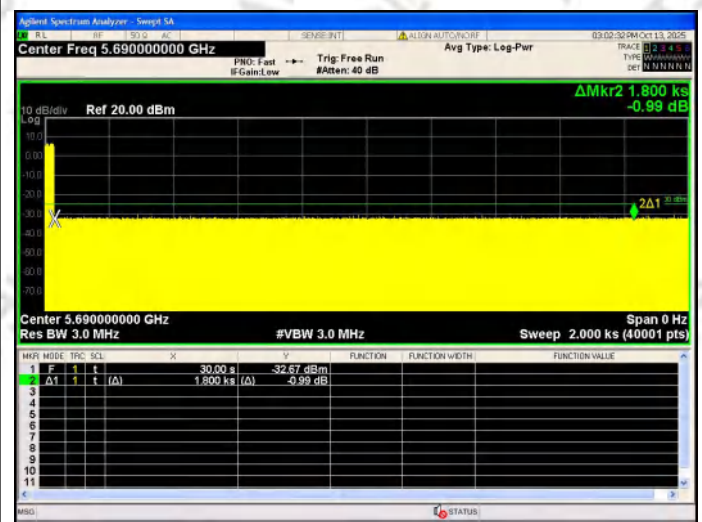
Non-Occupancy Period
IEEE 802.11ac_80 Channel 58



Non-Occupancy Period
IEEE 802.11ac_80 Channel 106



Non-Occupancy Period
IEEE 802.11ac_80 Channel 122



Non-Occupancy Period
IEEE 802.11ac_80 Channel 138

*****END OF THE Appendix A5*****