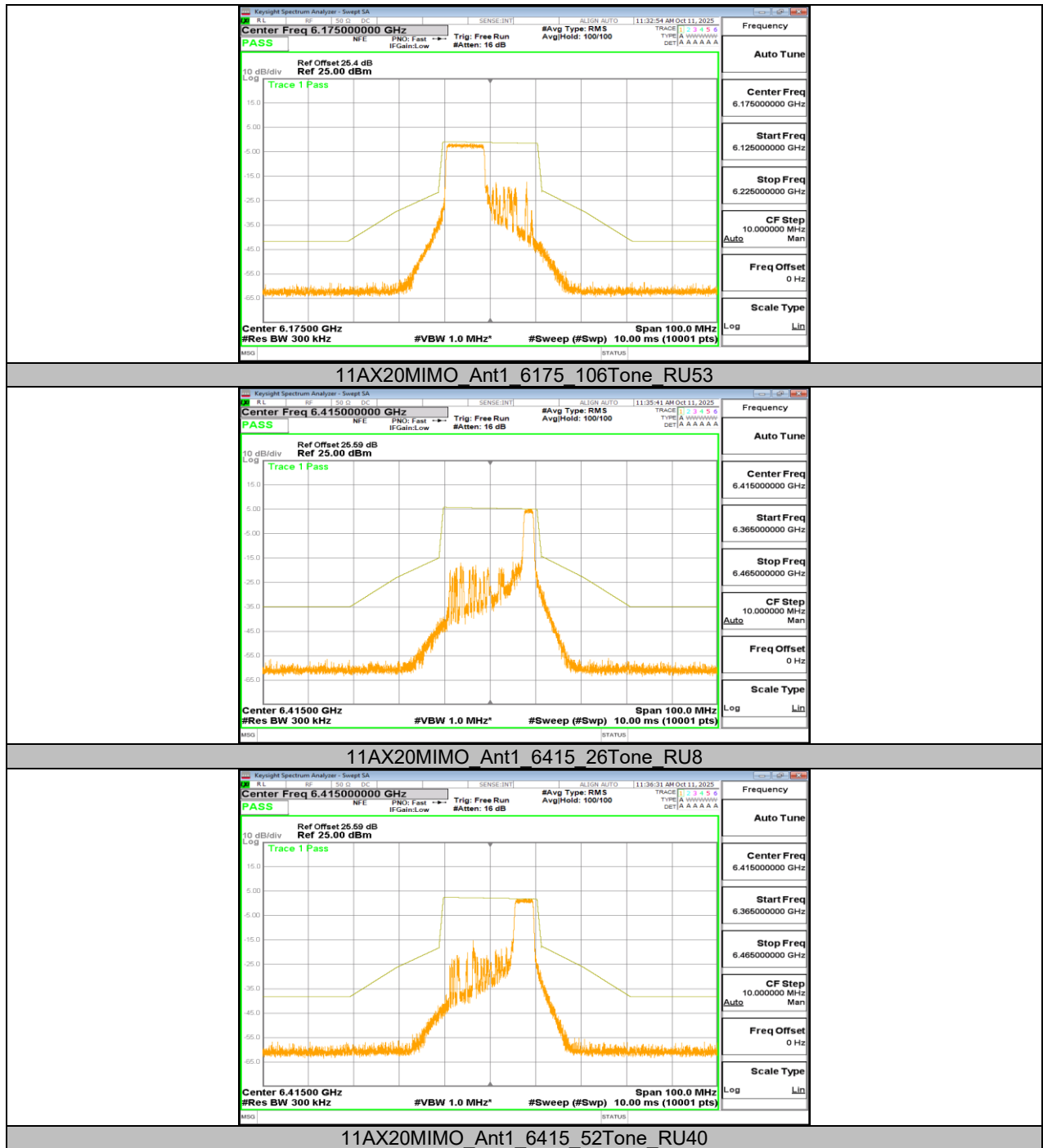
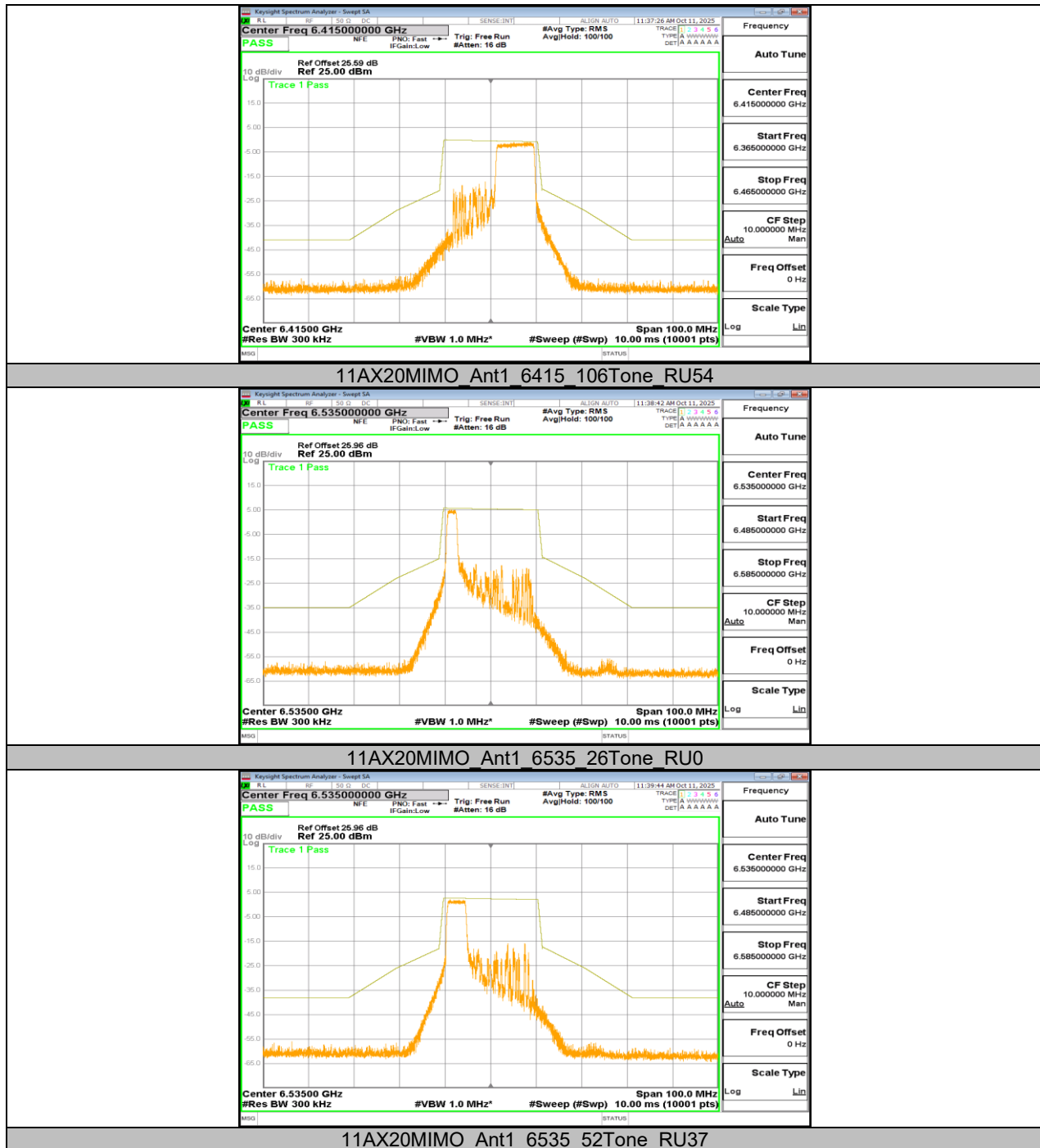
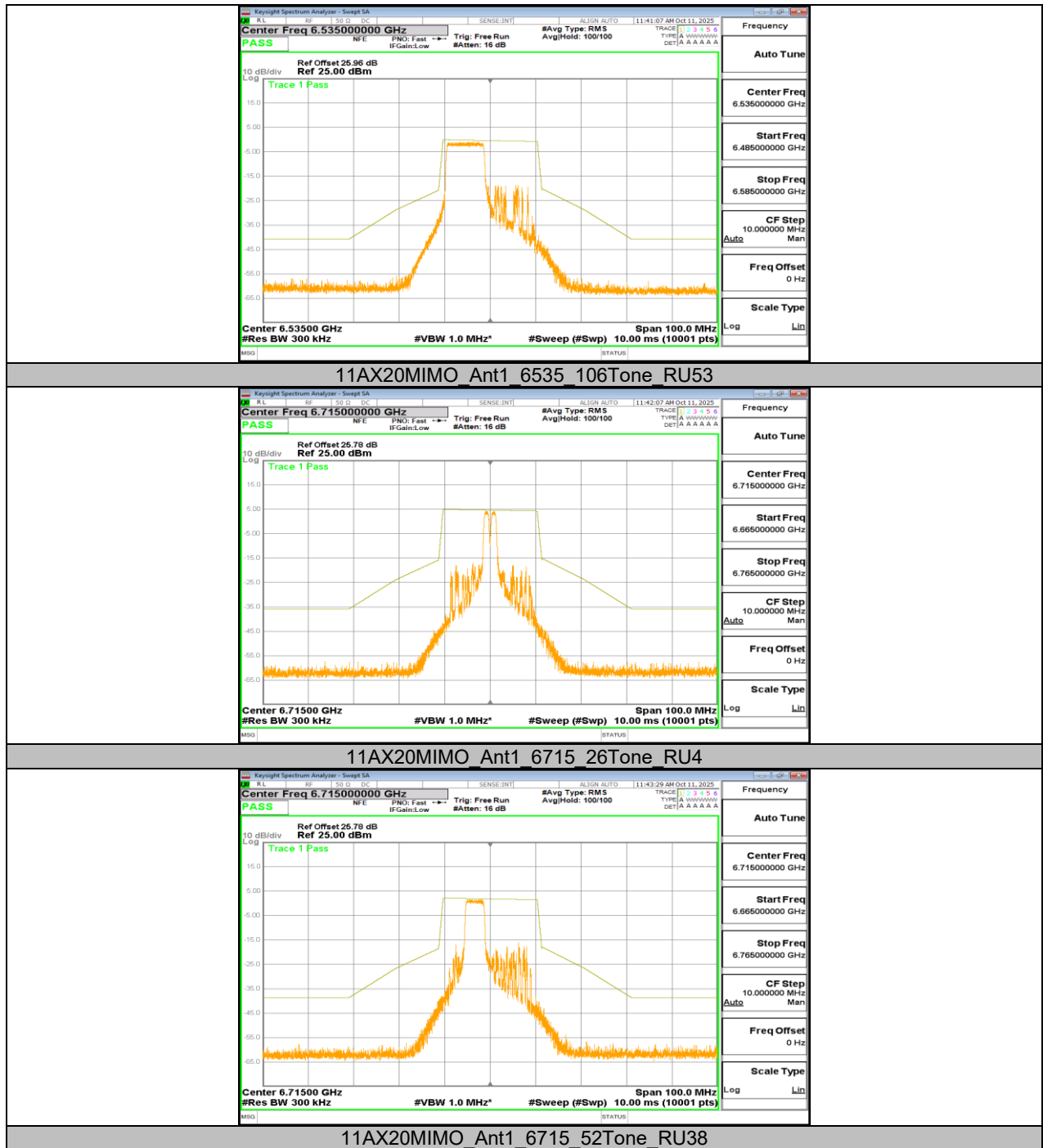
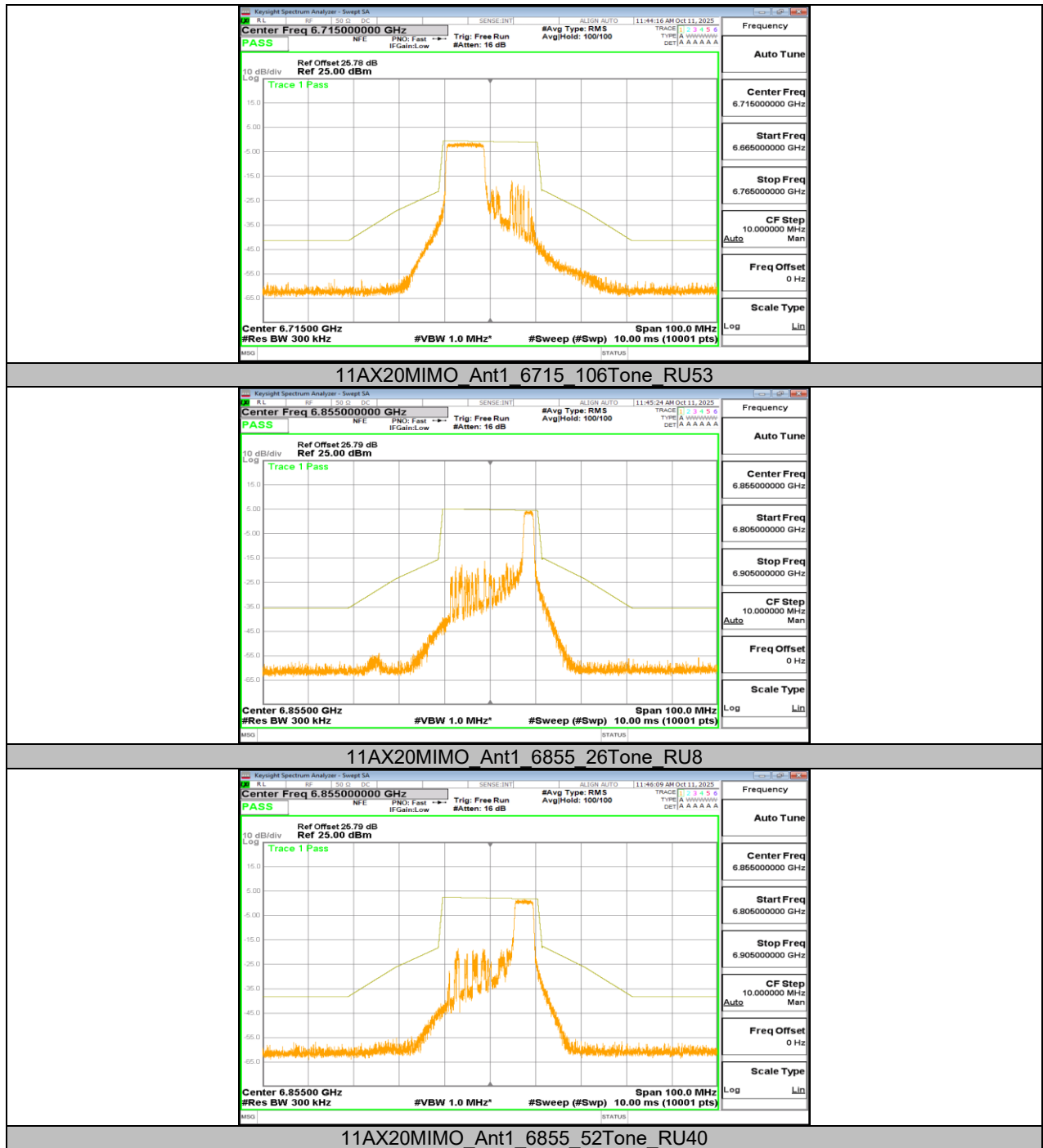
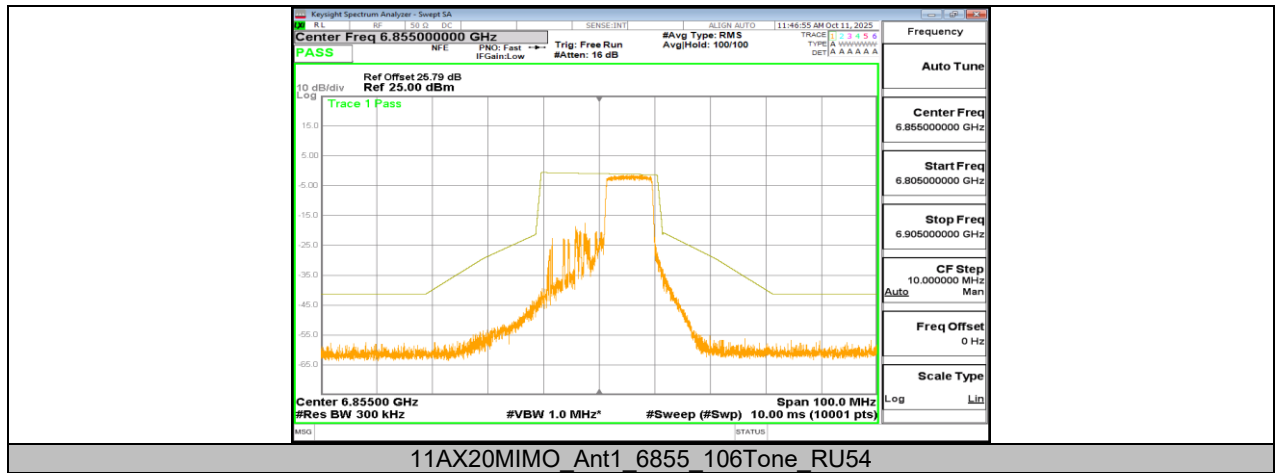












11.7. APPENDIX F: CONTENTION BASED PROTOCOL

11.7.1. Test Result

Mode	Freq	Ant	AWGN Frequency (MHz)	Pmeas (dBm)	Loss (dB)	Pinj (dBm)	Gant Gain (dBi)	Limit (dBm)	Adjusted Limit (dBm)	UT Tx Status (Note1)	Verdict
ax20	6135	Ant0	6135	-71.28	1.80	-73.08	0.40	-62.00	-61.60	ON	---
			6135	-72.21	1.80	-74.01	0.40	-62.00	-61.60	Minimal	---
			6135	-62.37	1.80	-64.17	0.40	-62.00	-61.60	OFF	PASS
	6455	Ant0	6455	-75.22	1.80	-77.02	0.40	-62.00	-61.60	ON	---
			6455	-74.78	1.80	-76.58	0.40	-62.00	-61.60	Minimal	---
			6455	-62.86	1.80	-64.66	0.40	-62.00	-61.60	OFF	PASS
	6715	Ant0	6715	-72.75	1.80	-74.55	0.40	-62.00	-61.60	ON	---
			6715	-70.03	1.80	-71.83	0.40	-62.00	-61.60	Minimal	---
			6715	-62.01	1.80	-63.81	0.40	-62.00	-61.60	OFF	PASS
	6915	Ant0	6915	-71.62	1.80	-73.42	0.40	-62.00	-61.60	ON	---
			6915	-73.47	1.80	-75.27	0.40	-62.00	-61.60	Minimal	---
			6915	-62.34	1.80	-64.14	0.40	-62.00	-61.60	OFF	PASS
ax160	6185	Ant0	6110	-73.07	1.80	-74.87	0.40	-62.00	-61.60	ON	---
			6110	-70.05	1.80	-71.85	0.40	-62.00	-61.60	Minimal	---
			6110	-62.71	1.80	-64.51	0.40	-62.00	-61.60	OFF	PASS
		Ant0	6185	-73.16	1.80	-74.96	0.40	-62.00	-61.60	ON	---
			6185	-73.69	1.80	-75.49	0.40	-62.00	-61.60	Minimal	---
			6185	-62.04	1.80	-63.84	0.40	-62.00	-61.60	OFF	PASS
		Ant0	6260	-73.47	1.80	-75.27	0.40	-62.00	-61.60	ON	---
			6260	-72.32	1.80	-74.12	0.40	-62.00	-61.60	Minimal	---
			6260	-62.63	1.80	-64.43	0.40	-62.00	-61.60	OFF	PASS
	6505	Ant0	6430	-74.69	1.80	-76.49	0.40	-62.00	-61.60	ON	---
			6430	-71.65	1.80	-73.45	0.40	-62.00	-61.60	Minimal	---
			6430	-62.69	1.80	-64.49	0.40	-62.00	-61.60	OFF	PASS
		Ant0	6505	-71.90	1.80	-73.70	0.40	-62.00	-61.60	ON	---
			6505	-70.45	1.80	-72.25	0.40	-62.00	-61.60	Minimal	---
			6505	-62.18	1.80	-63.98	0.40	-62.00	-61.60	OFF	PASS
		Ant0	6580	-75.12	1.80	-76.92	0.40	-62.00	-61.60	ON	---
			6580	-73.12	1.80	-74.92	0.40	-62.00	-61.60	Minimal	---
			6580	-62.15	1.80	-63.95	0.40	-62.00	-61.60	OFF	PASS
	6665	Ant0	6590	-74.04	1.80	-75.84	0.40	-62.00	-61.60	ON	---
			6590	-72.54	1.80	-74.34	0.40	-62.00	-61.60	Minimal	---
			6590	-62.13	1.80	-63.93	0.40	-62.00	-61.60	OFF	PASS
		Ant0	6665	-71.79	1.80	-73.59	0.40	-62.00	-61.60	ON	---
			6665	-73.25	1.80	-75.05	0.40	-62.00	-61.60	Minimal	---
			6665	-62.87	1.80	-64.67	0.40	-62.00	-61.60	OFF	PASS

		Ant0	6740	-75.04	1.80	-76.84	0.40	-62.00	-61.60	ON	---
			6740	-72.41	1.80	-74.21	0.40	-62.00	-61.60	Minimal	---
			6740	-62.23	1.80	-64.03	0.40	-62.00	-61.60	OFF	PASS
	6985	Ant0	6910	-73.97	1.80	-75.77	0.40	-62.00	-61.60	ON	---
			6910	-71.89	1.80	-73.69	0.40	-62.00	-61.60	Minimal	---
			6910	-62.66	1.80	-64.46	0.40	-62.00	-61.60	OFF	PASS
		Ant0	6985	-73.14	1.80	-74.94	0.40	-62.00	-61.60	ON	---
			6985	-72.80	1.80	-74.60	0.40	-62.00	-61.60	Minimal	---
			6985	-62.82	1.80	-64.62	0.40	-62.00	-61.60	OFF	PASS
		Ant0	7060	-73.49	1.80	-75.29	0.40	-62.00	-61.60	ON	---
			7060	-73.61	1.80	-75.41	0.40	-62.00	-61.60	Minimal	---
			7060	-62.37	1.80	-64.17	0.40	-62.00	-61.60	OFF	PASS

Note 1: The AWGN level is reported for the following conditions:

- OFF = AWGN level at which no transmission is detected, consistently for a minimum period of 10 seconds

- Minimal: AWGN level at which the system begins to trigger the transmission switch-off, albeit not being kept off consistently

- ON = AWGN level at which no impact on the transmission is detected, consistently for a minimum period of 10 seconds.

Pmeas is measured AWGN signal level.

Loss is the total path losses of cables / attenuators / couplers between measurement point and EUT injection point. If the measurement is made at the end of the cable that connects to the EUT antenna port then this is 0dBm.

Pinj is the power injected at EUT' s antenna connect port.

Adjusted limit is the FCC limit (-62dBm) corrected for the EUT antenna gain (= -62dBm - grant gain)

Note 2: The EUT does not support channel puncturing.

Note 3: The EUT does not support channel bandwidth reduction.

Note 4: Test is performed by starting at a level much lower than required detection level and then increased based on KDB 987594.

Mode	Frequency (MHz)	Antenna	AWGN Location	AWGN Frequency (MHz)	Test Number	Number Detected	Result (%)	Limit (%)	Verdict
ax20	6135	Ant0	Center	6135	10	10	100	90	Pass
ax20	6455	Ant0	Center	6455	10	10	100	90	Pass
ax20	6715	Ant0	Center	6715	10	10	100	90	Pass
ax20	6915	Ant0	Center	6915	10	10	100	90	Pass
ax160	6185	Ant0	Low	6110	10	10	100	90	Pass
ax160	6185	Ant0	Center	6185	10	10	100	90	Pass
ax160	6185	Ant0	High	6260	10	10	100	90	Pass
ax160	6505	Ant0	Low	6430	10	10	100	90	Pass
ax160	6505	Ant0	Center	6505	10	10	100	90	Pass
ax160	6505	Ant0	High	6580	10	10	100	90	Pass
ax160	6665	Ant0	Low	6590	10	10	100	90	Pass
ax160	6665	Ant0	Center	6665	10	10	100	90	Pass
ax160	6665	Ant0	High	6740	10	10	100	90	Pass
ax160	6985	Ant0	Low	6910	10	10	100	90	Pass
ax160	6985	Ant0	Center	6985	10	10	100	90	Pass
ax160	6985	Ant0	High	7060	10	10	100	90	Pass

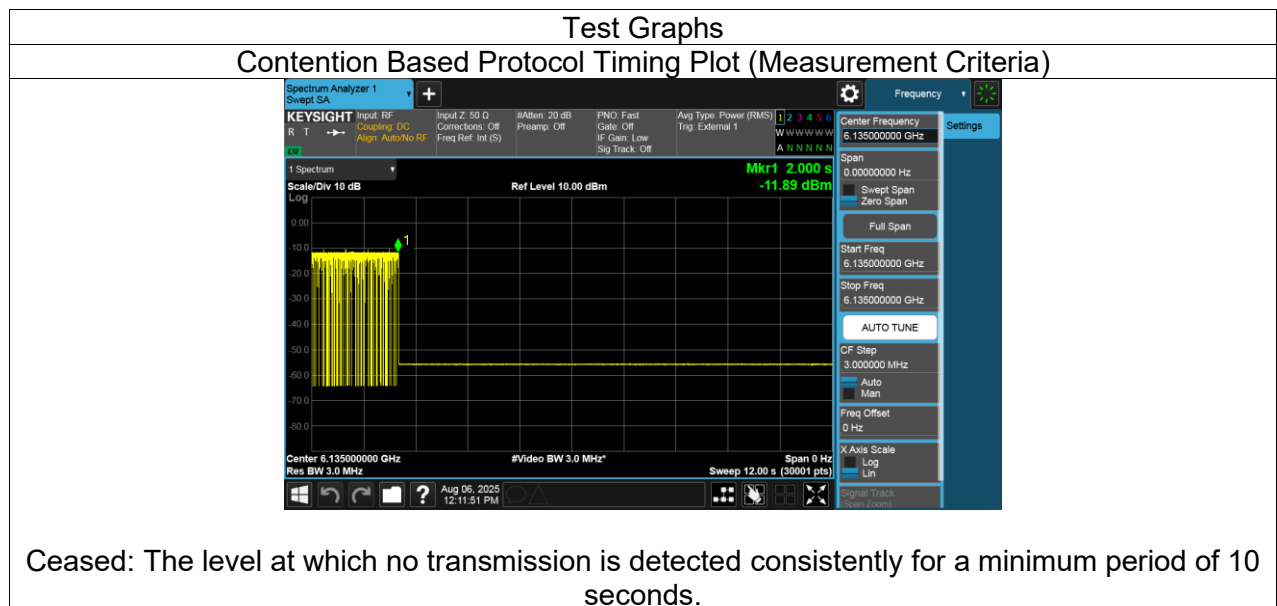
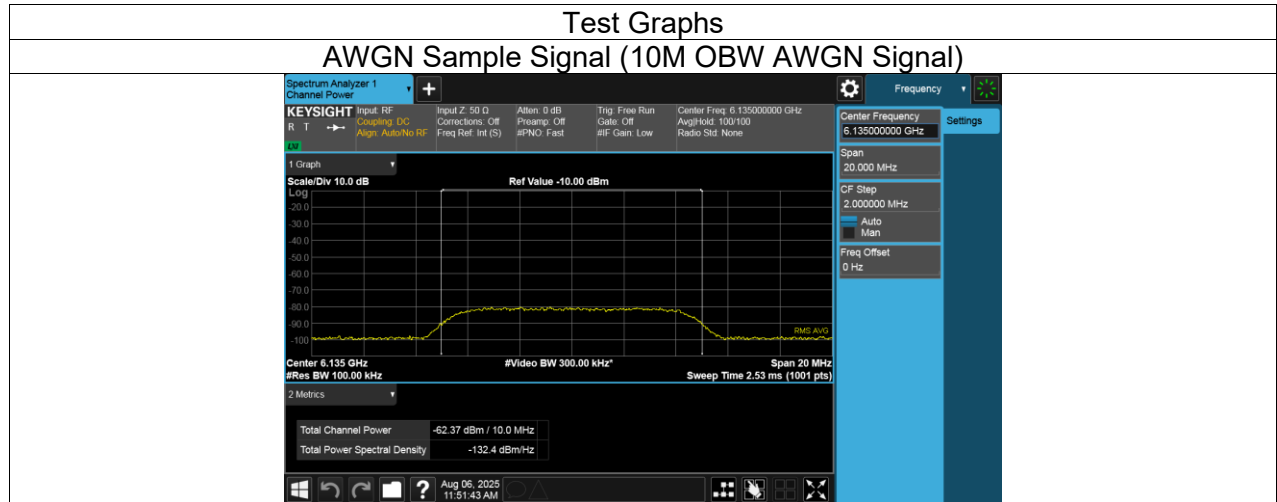
Mode	Frequency (MHz)	Antenna	AWGN Location	AWGN Frequency (MHz)	Test Time	Is Detected	Verdict
ax20	6135	Ant0	Center	6135	1	Yes	Pass
ax20	6135	Ant0	Center	6135	2	Yes	Pass
ax20	6135	Ant0	Center	6135	3	Yes	Pass
ax20	6135	Ant0	Center	6135	4	Yes	Pass
ax20	6135	Ant0	Center	6135	5	Yes	Pass
ax20	6135	Ant0	Center	6135	6	Yes	Pass
ax20	6135	Ant0	Center	6135	7	Yes	Pass
ax20	6135	Ant0	Center	6135	8	Yes	Pass
ax20	6135	Ant0	Center	6135	9	Yes	Pass
ax20	6135	Ant0	Center	6135	10	Yes	Pass
ax20	6455	Ant0	Center	6455	1	Yes	Pass
ax20	6455	Ant0	Center	6455	2	Yes	Pass
ax20	6455	Ant0	Center	6455	3	Yes	Pass
ax20	6455	Ant0	Center	6455	4	Yes	Pass
ax20	6455	Ant0	Center	6455	5	Yes	Pass
ax20	6455	Ant0	Center	6455	6	Yes	Pass
ax20	6455	Ant0	Center	6455	7	Yes	Pass
ax20	6455	Ant0	Center	6455	8	Yes	Pass
ax20	6455	Ant0	Center	6455	9	Yes	Pass
ax20	6455	Ant0	Center	6455	10	Yes	Pass
ax20	6715	Ant0	Center	6715	1	Yes	Pass
ax20	6715	Ant0	Center	6715	2	Yes	Pass
ax20	6715	Ant0	Center	6715	3	Yes	Pass
ax20	6715	Ant0	Center	6715	4	Yes	Pass
ax20	6715	Ant0	Center	6715	5	Yes	Pass
ax20	6715	Ant0	Center	6715	6	Yes	Pass
ax20	6715	Ant0	Center	6715	7	Yes	Pass
ax20	6715	Ant0	Center	6715	8	Yes	Pass
ax20	6715	Ant0	Center	6715	9	Yes	Pass
ax20	6715	Ant0	Center	6715	10	Yes	Pass
ax20	6915	Ant0	Center	6915	1	Yes	Pass

ax20	6915	Ant0	Center	6915	2	Yes	Pass
ax20	6915	Ant0	Center	6915	3	Yes	Pass
ax20	6915	Ant0	Center	6915	4	Yes	Pass
ax20	6915	Ant0	Center	6915	5	Yes	Pass
ax20	6915	Ant0	Center	6915	6	Yes	Pass
ax20	6915	Ant0	Center	6915	7	Yes	Pass
ax20	6915	Ant0	Center	6915	8	Yes	Pass
ax20	6915	Ant0	Center	6915	9	Yes	Pass
ax20	6915	Ant0	Center	6915	10	Yes	Pass
ax160	6185	Ant0	Low	6110	1	Yes	Pass
ax160	6185	Ant0	Low	6110	2	Yes	Pass
ax160	6185	Ant0	Low	6110	3	Yes	Pass
ax160	6185	Ant0	Low	6110	4	Yes	Pass
ax160	6185	Ant0	Low	6110	5	Yes	Pass
ax160	6185	Ant0	Low	6110	6	Yes	Pass
ax160	6185	Ant0	Low	6110	7	Yes	Pass
ax160	6185	Ant0	Low	6110	8	Yes	Pass
ax160	6185	Ant0	Low	6110	9	Yes	Pass
ax160	6185	Ant0	Low	6110	10	Yes	Pass
ax160	6185	Ant0	Center	6185	1	Yes	Pass
ax160	6185	Ant0	Center	6185	2	Yes	Pass
ax160	6185	Ant0	Center	6185	3	Yes	Pass
ax160	6185	Ant0	Center	6185	4	Yes	Pass
ax160	6185	Ant0	Center	6185	5	Yes	Pass
ax160	6185	Ant0	Center	6185	6	Yes	Pass
ax160	6185	Ant0	Center	6185	7	Yes	Pass
ax160	6185	Ant0	Center	6185	8	Yes	Pass
ax160	6185	Ant0	Center	6185	9	Yes	Pass
ax160	6185	Ant0	Center	6185	10	Yes	Pass
ax160	6185	Ant0	High	6260	1	Yes	Pass
ax160	6185	Ant0	High	6260	2	Yes	Pass
ax160	6185	Ant0	High	6260	3	Yes	Pass
ax160	6185	Ant0	High	6260	4	Yes	Pass
ax160	6185	Ant0	High	6260	5	Yes	Pass
ax160	6185	Ant0	High	6260	6	Yes	Pass
ax160	6185	Ant0	High	6260	7	Yes	Pass
ax160	6185	Ant0	High	6260	8	Yes	Pass
ax160	6185	Ant0	High	6260	9	Yes	Pass
ax160	6185	Ant0	High	6260	10	Yes	Pass
ax160	6505	Ant0	Low	6430	1	Yes	Pass
ax160	6505	Ant0	Low	6430	2	Yes	Pass
ax160	6505	Ant0	Low	6430	3	Yes	Pass
ax160	6505	Ant0	Low	6430	4	Yes	Pass
ax160	6505	Ant0	Low	6430	5	Yes	Pass
ax160	6505	Ant0	Low	6430	6	Yes	Pass
ax160	6505	Ant0	Low	6430	7	Yes	Pass
ax160	6505	Ant0	Low	6430	8	Yes	Pass
ax160	6505	Ant0	Low	6430	9	Yes	Pass
ax160	6505	Ant0	Low	6430	10	Yes	Pass
ax160	6505	Ant0	Center	6505	1	Yes	Pass
ax160	6505	Ant0	Center	6505	2	Yes	Pass

ax160	6505	Ant0	Center	6505	3	Yes	Pass
ax160	6505	Ant0	Center	6505	4	Yes	Pass
ax160	6505	Ant0	Center	6505	5	Yes	Pass
ax160	6505	Ant0	Center	6505	6	Yes	Pass
ax160	6505	Ant0	Center	6505	7	Yes	Pass
ax160	6505	Ant0	Center	6505	8	Yes	Pass
ax160	6505	Ant0	Center	6505	9	Yes	Pass
ax160	6505	Ant0	Center	6505	10	Yes	Pass
ax160	6505	Ant0	High	6580	1	Yes	Pass
ax160	6505	Ant0	High	6580	2	Yes	Pass
ax160	6505	Ant0	High	6580	3	Yes	Pass
ax160	6505	Ant0	High	6580	4	Yes	Pass
ax160	6505	Ant0	High	6580	5	Yes	Pass
ax160	6505	Ant0	High	6580	6	Yes	Pass
ax160	6505	Ant0	High	6580	7	Yes	Pass
ax160	6505	Ant0	High	6580	8	Yes	Pass
ax160	6505	Ant0	High	6580	9	Yes	Pass
ax160	6505	Ant0	High	6580	10	Yes	Pass
ax160	6665	Ant0	Low	6590	1	Yes	Pass
ax160	6665	Ant0	Low	6590	2	Yes	Pass
ax160	6665	Ant0	Low	6590	3	Yes	Pass
ax160	6665	Ant0	Low	6590	4	Yes	Pass
ax160	6665	Ant0	Low	6590	5	Yes	Pass
ax160	6665	Ant0	Low	6590	6	Yes	Pass
ax160	6665	Ant0	Low	6590	7	Yes	Pass
ax160	6665	Ant0	Low	6590	8	Yes	Pass
ax160	6665	Ant0	Low	6590	9	Yes	Pass
ax160	6665	Ant0	Low	6590	10	Yes	Pass
ax160	6665	Ant0	Center	6665	1	Yes	Pass
ax160	6665	Ant0	Center	6665	2	Yes	Pass
ax160	6665	Ant0	Center	6665	3	Yes	Pass
ax160	6665	Ant0	Center	6665	4	Yes	Pass
ax160	6665	Ant0	Center	6665	5	Yes	Pass
ax160	6665	Ant0	Center	6665	6	Yes	Pass
ax160	6665	Ant0	Center	6665	7	Yes	Pass
ax160	6665	Ant0	Center	6665	8	Yes	Pass
ax160	6665	Ant0	Center	6665	9	Yes	Pass
ax160	6665	Ant0	Center	6665	10	Yes	Pass
ax160	6665	Ant0	High	6740	1	Yes	Pass
ax160	6665	Ant0	High	6740	2	Yes	Pass
ax160	6665	Ant0	High	6740	3	Yes	Pass
ax160	6665	Ant0	High	6740	4	Yes	Pass
ax160	6665	Ant0	High	6740	5	Yes	Pass
ax160	6665	Ant0	High	6740	6	Yes	Pass
ax160	6665	Ant0	High	6740	7	Yes	Pass
ax160	6665	Ant0	High	6740	8	Yes	Pass
ax160	6665	Ant0	High	6740	9	Yes	Pass
ax160	6665	Ant0	High	6740	10	Yes	Pass
ax160	6985	Ant0	Low	6910	1	Yes	Pass
ax160	6985	Ant0	Low	6910	2	Yes	Pass
ax160	6985	Ant0	Low	6910	3	Yes	Pass

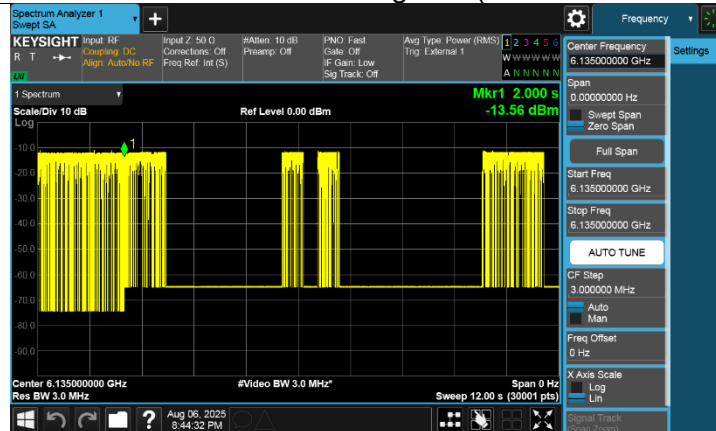
ax160	6985	Ant0	Low	6910	4	Yes	Pass
ax160	6985	Ant0	Low	6910	5	Yes	Pass
ax160	6985	Ant0	Low	6910	6	Yes	Pass
ax160	6985	Ant0	Low	6910	7	Yes	Pass
ax160	6985	Ant0	Low	6910	8	Yes	Pass
ax160	6985	Ant0	Low	6910	9	Yes	Pass
ax160	6985	Ant0	Low	6910	10	Yes	Pass
ax160	6985	Ant0	Center	6985	1	Yes	Pass
ax160	6985	Ant0	Center	6985	2	Yes	Pass
ax160	6985	Ant0	Center	6985	3	Yes	Pass
ax160	6985	Ant0	Center	6985	4	Yes	Pass
ax160	6985	Ant0	Center	6985	5	Yes	Pass
ax160	6985	Ant0	Center	6985	6	Yes	Pass
ax160	6985	Ant0	Center	6985	7	Yes	Pass
ax160	6985	Ant0	Center	6985	8	Yes	Pass
ax160	6985	Ant0	Center	6985	9	Yes	Pass
ax160	6985	Ant0	Center	6985	10	Yes	Pass
ax160	6985	Ant0	High	7060	1	Yes	Pass
ax160	6985	Ant0	High	7060	2	Yes	Pass
ax160	6985	Ant0	High	7060	3	Yes	Pass
ax160	6985	Ant0	High	7060	4	Yes	Pass
ax160	6985	Ant0	High	7060	5	Yes	Pass
ax160	6985	Ant0	High	7060	6	Yes	Pass
ax160	6985	Ant0	High	7060	7	Yes	Pass
ax160	6985	Ant0	High	7060	8	Yes	Pass
ax160	6985	Ant0	High	7060	9	Yes	Pass
ax160	6985	Ant0	High	7060	10	Yes	Pass

11.7.2. Test Graphs



Test Graphs

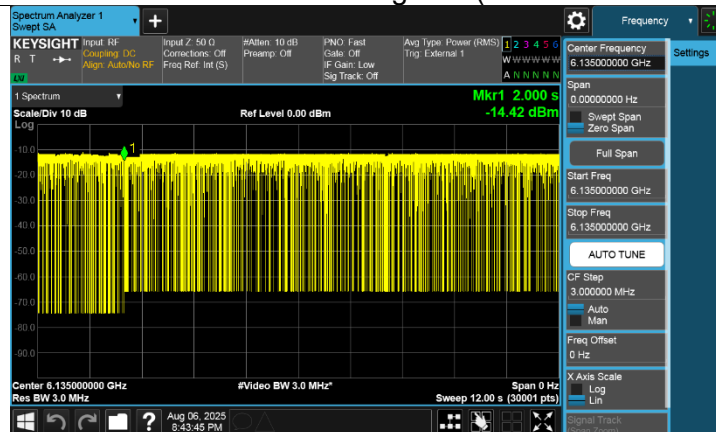
Contention Based Protocol Timing Plot (Measurement Criteria)



Minimal Operation: The AWGN level at which the system begins to trigger the transmission switch-off, albeit not being kept off consistently.

Test Graphs

Contention Based Protocol Timing Plot (Measurement Criteria)



Normal Operation: The level at which there is no apparent detection and the operation of the EUT is still considered optimal

11.8. APPENDIX G: DUAL CLIENT TEST, DEMONSTRATION OF PROPER POWER ADJUSTMENT BASED ON ASSOCIATED AP

11.8.1. Test Result

Frequency (MHz)	Type	Dual Client Power (dBm)			Directional Gain (dBi)	Client EIRP (dBm)	Limit EIRP (dBm)
		ANT0	ANT1	Total			
6395	Indoor AP	12.37	12.08	15.27	0.7	17.97	24
	Standard AP	13.51	13.41	16.47	0.7	17.17	30

Note: Client EIRP = Dual Client Power + Directional Gain
Dual Client Power was tested by power meter.

Test graph of standard AP EIRP:

RF Test Equipment monitors the output of the AFC DUT on channel 89 bandwidth 20

Confirm that the AFC DUT conforms to the conditions in Spectrum Response (21.7 dBm/MHz PSD, 34.7 dBm EIRP) and does not exceed emissions limits in adjacent frequencies

☒ Pass
☐ Fail

11.9. APPENDIX H: PROPER POWER ADJUSTMENT, CLIENT DEVICES CONNECTED TO A STANDARD POWER ACCESS POINT (APC)

11.9.1. Test Result

Point	Client Power (dBm)			Directional Gain (dBi)	Client EIRP (dBm)	AP EIRP (dBm)	AP to client EIRP Delta (dB)
	ANT0	ANT1	Total				
Maximum EIRP	13.68	13.82	16.76	0.7	17.46	34.7	17.24
Midpoint EIRP	13.14	13.46	16.31	0.7	17.01	29.8	12.79
Lowest EIRP	6.43	6.27	9.36	0.7	10.06	22.3	12.24

Note: Client EIRP = Client Power + Directional Gain
Client Power was tested by power meter.

Test graph of standard AP EIRP:

Maximum EIRP

RF Test Equipment monitors the output of the AFC DUT on channel 53 bandwidth 20

Confirm that the AFC DUT transmit power in the band is less than CEILING[LPI limits (5 dBm/MHz PSD) , SP limits (21.9 dBm/MHz PSD, 34.9 dBm EIRP) in Spectrum Reponse] and does not exceed limits in adjacent frequencies

✓ Pass

✗ Fail

Midpoint EIRP

RF Test Equipment monitors the output of the AFC DUT on channel 5 bandwidth 20

Confirm that the AFC DUT conforms to the conditions in Spectrum Response (16.8 dBm/MHz PSD, 29.8 dBm EIRP) and does not exceed emissioins limits in adjacent frequencies

✓ Pass

✗ Fail

Lowest EIRP

RF Test Equipment monitors the output of the AFC DUT on channel 1 bandwidth 20

Confirm that the AFC DUT conforms to the conditions in Spectrum Response (9.3 dBm/MHz PSD, 22.3 dBm EIRP) and does not exceed emissioins limits in adjacent frequencies

✓ Pass

✗ Fail

11.10. APPENDIX I: FREQUENCY STABILITY

11.10.1. Test Result

Frequency Error vs. Voltage									
802.11a:6175MHz									
Temp.	Volt.	0 Minute		2 Minute		5 Minute		10 Minute	
		Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)
TN	VL	6174.9981	-0.31	6174.9988	-0.19	6174.9898	-1.66	6174.9987	-0.21
TN	VN	6174.9892	-1.75	6174.9790	-3.41	6175.0199	3.22	6174.9780	-3.56
TN	VH	6174.9961	-0.63	6175.0212	3.43	6175.0093	1.51	6174.9895	-1.70
Frequency Error vs. Temperature									
802.11a:6175MHz									
Temp.	Volt.	0 Minute		2 Minute		5 Minute		10 Minute	
		Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)	Freq.Error (MHz)	Tolerance (ppm)
50	VN	6174.9769	-3.75	6175.0136	2.21	6174.9968	-0.52	6174.9950	-0.82
40	VN	6174.9771	-3.71	6175.0023	0.38	6174.9865	-2.18	6174.9996	-0.07
30	VN	6174.9811	-3.06	6174.9911	-1.44	6175.0055	0.88	6174.9931	-1.11
20	VN	6174.9917	-1.35	6175.0047	0.76	6174.9795	-3.31	6175.0201	3.25
10	VN	6175.0071	1.15	6174.9983	-0.27	6175.0049	0.80	6174.9828	-2.79
0	VN	6174.9800	-3.24	6174.9862	-2.24	6174.9762	-3.86	6175.0084	1.35
-10	VN	6175.0238	3.86	6175.0079	1.28	6174.9750	-4.04	6174.9888	-1.82

Note:

1. All antennas, test modes and test channels have been tested, only the worst data record in the report.
2. For the detail Test Conditions, please refer to section 7.6 TEST ENVIRONMENT.

END OF REPORT