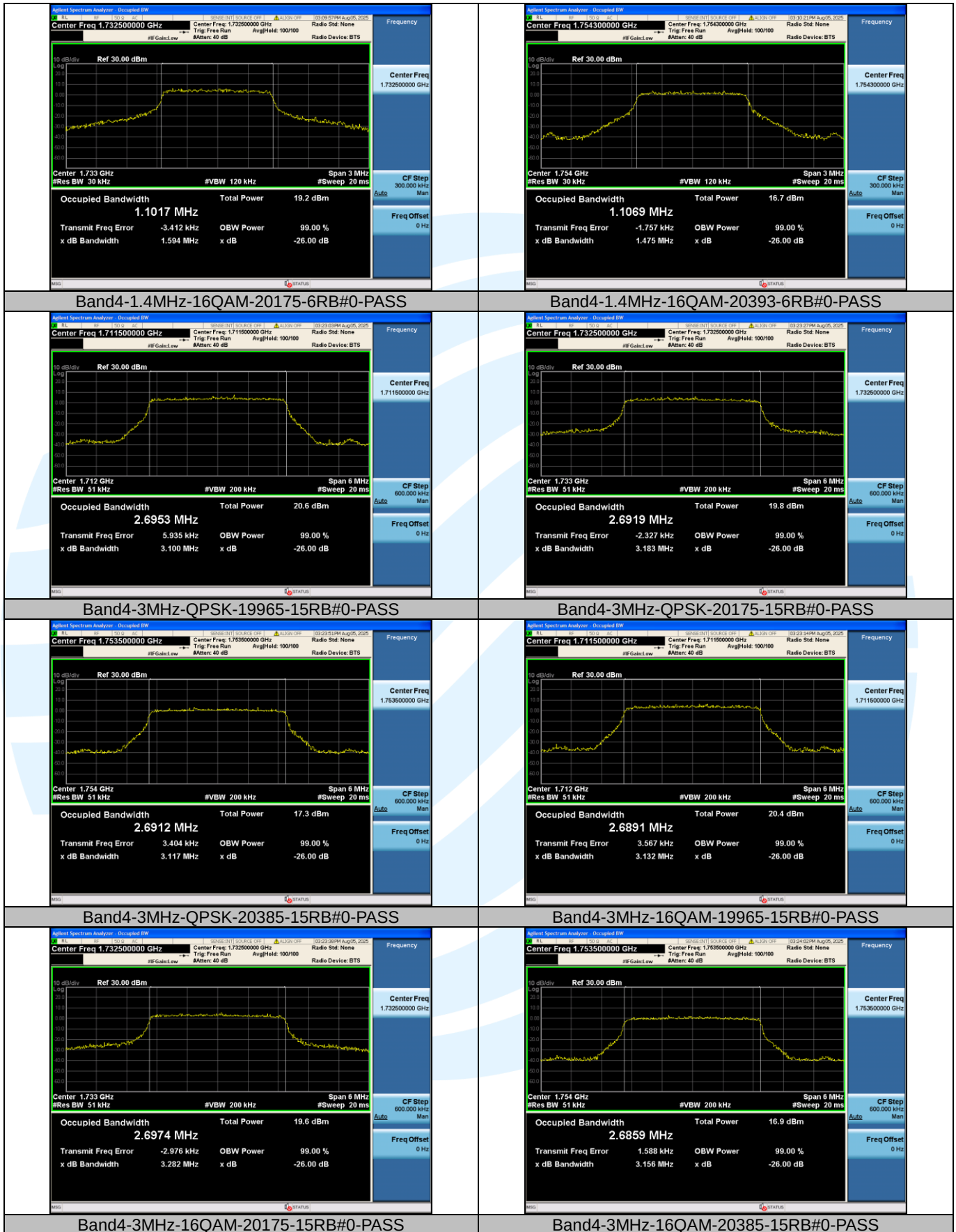
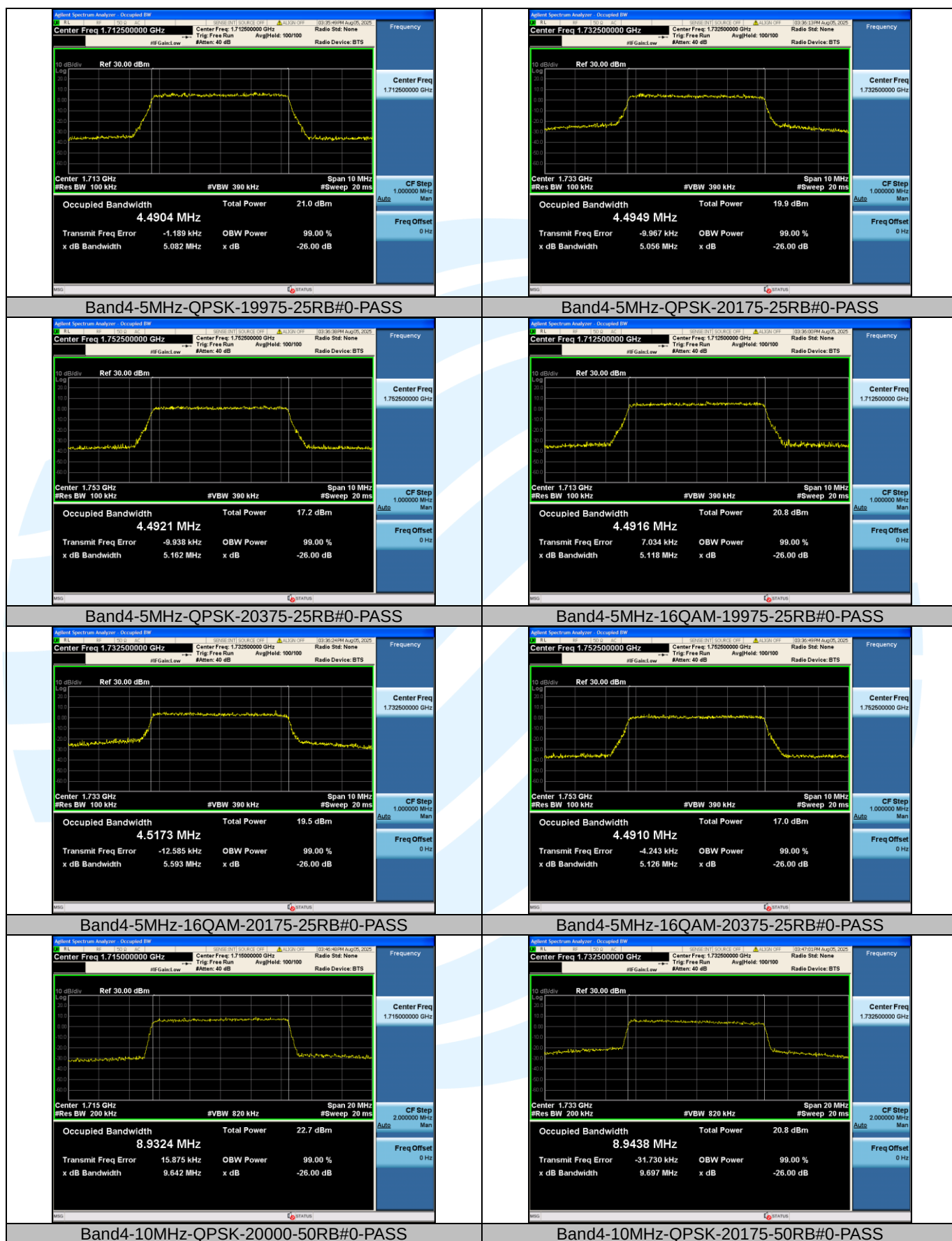
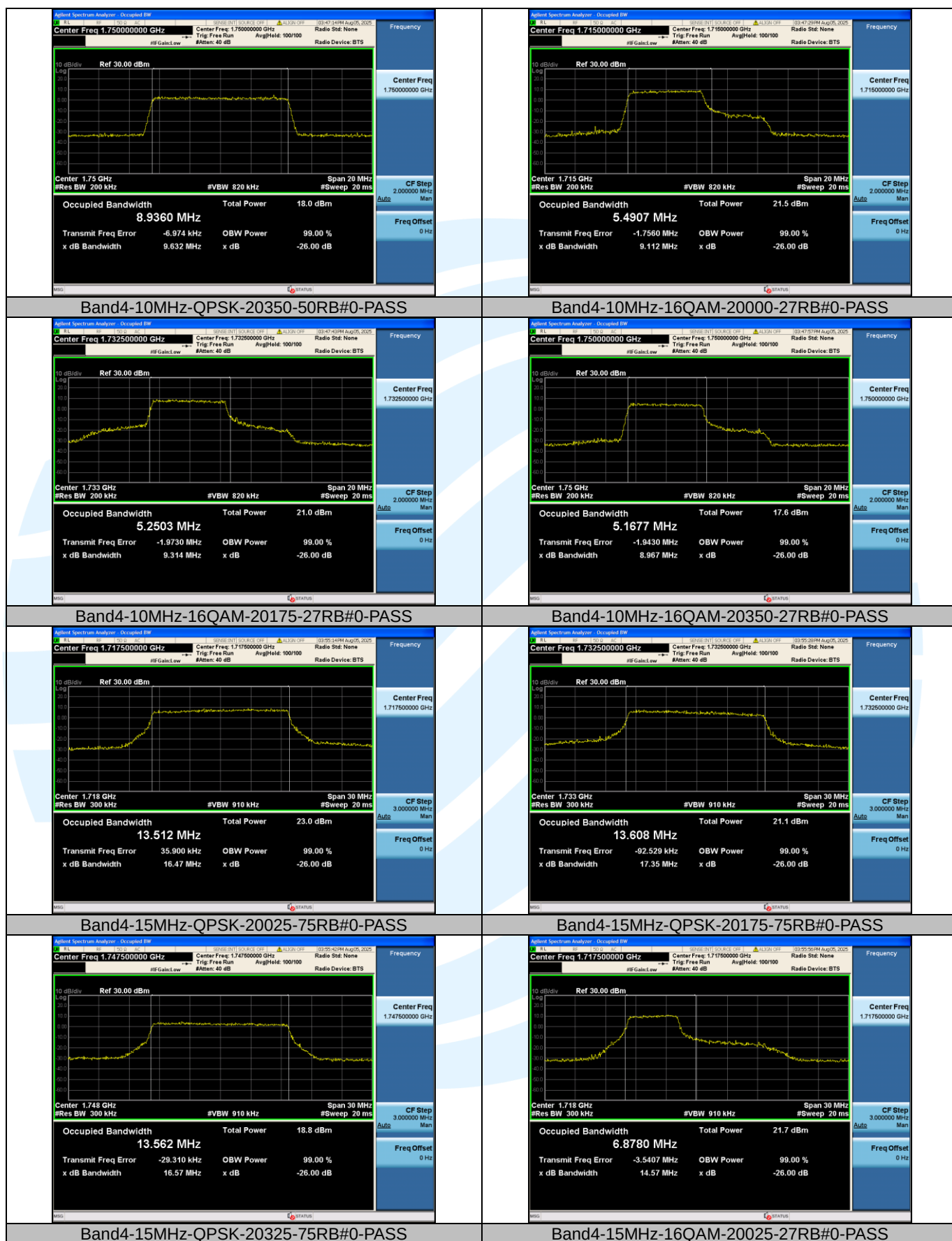
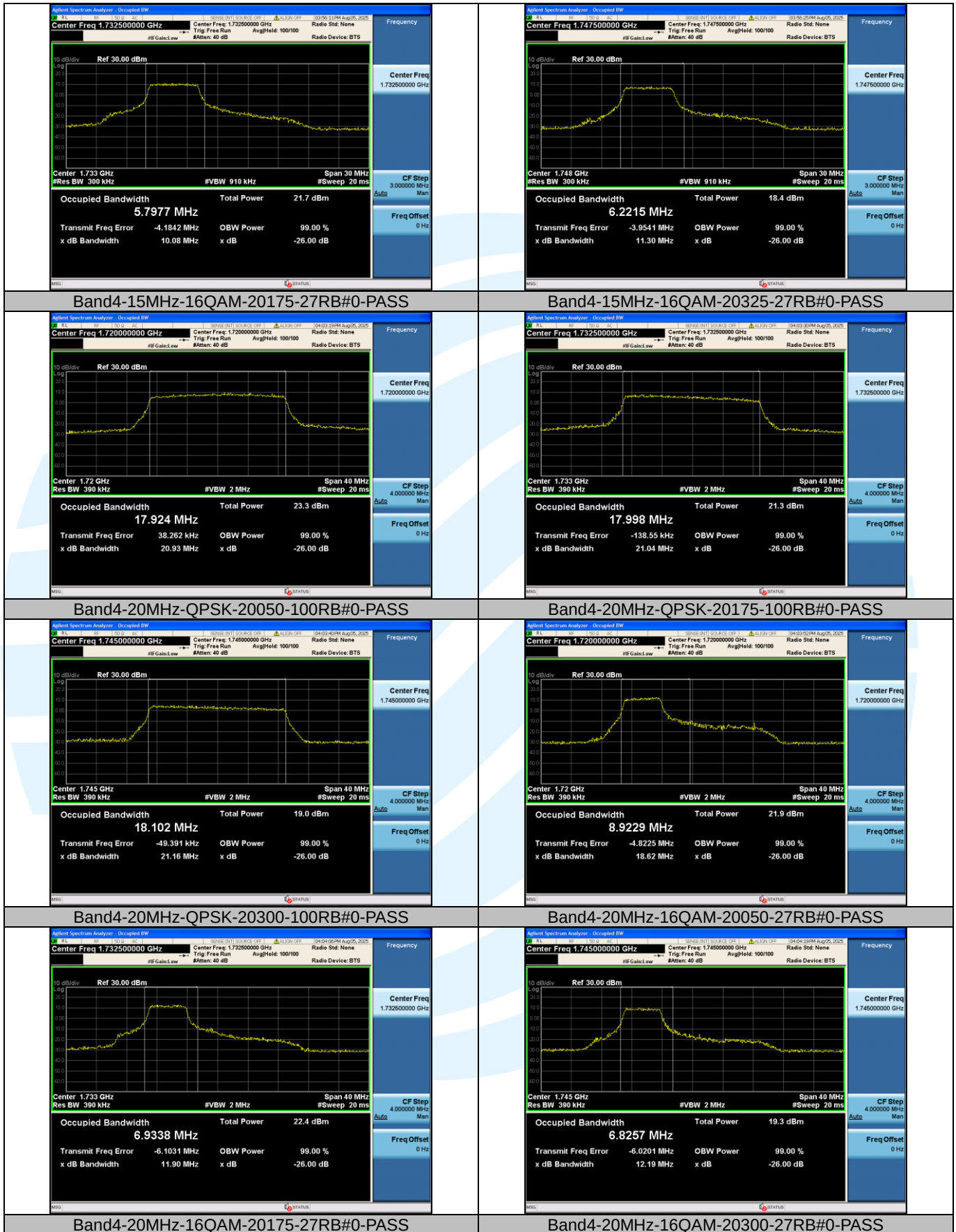
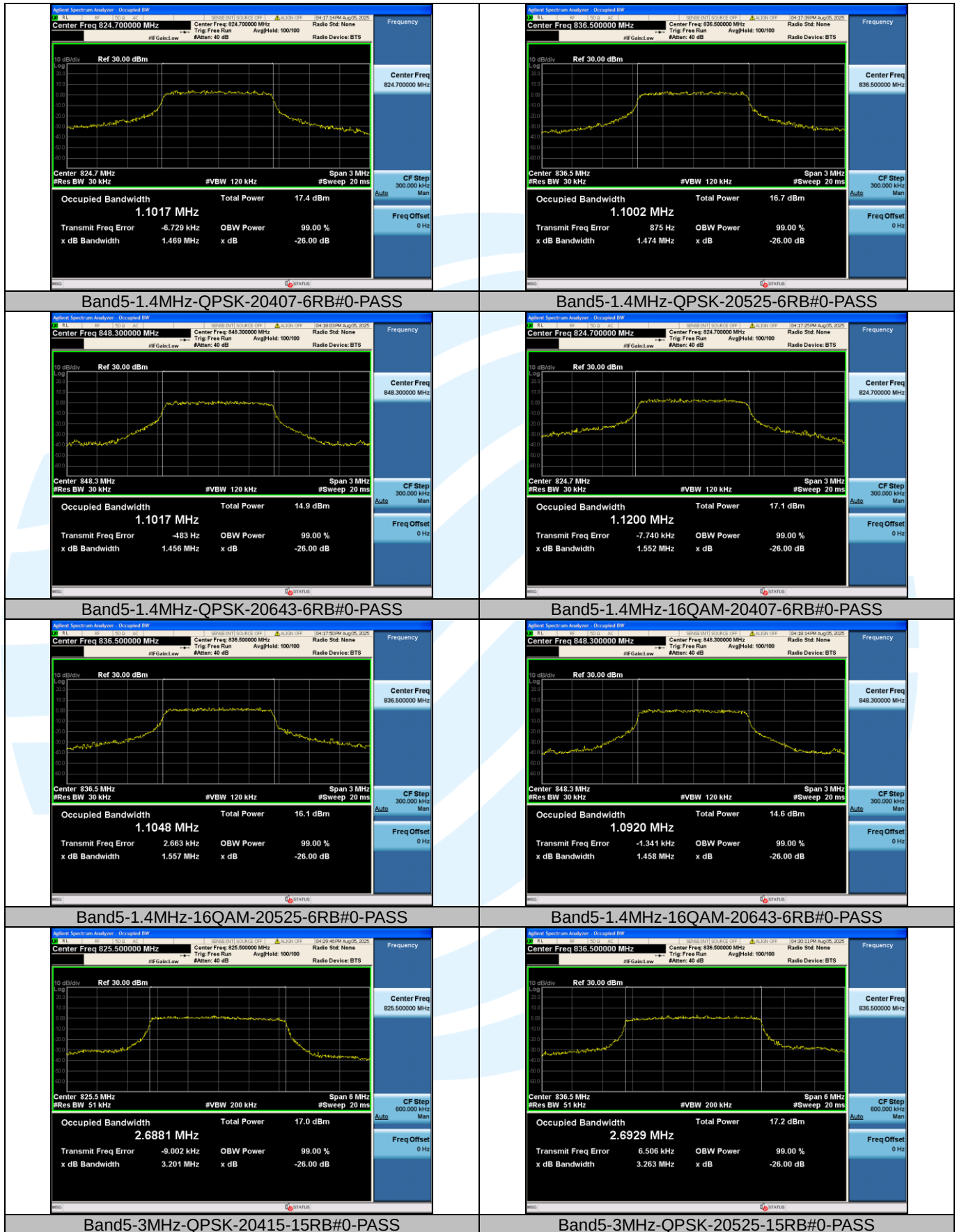


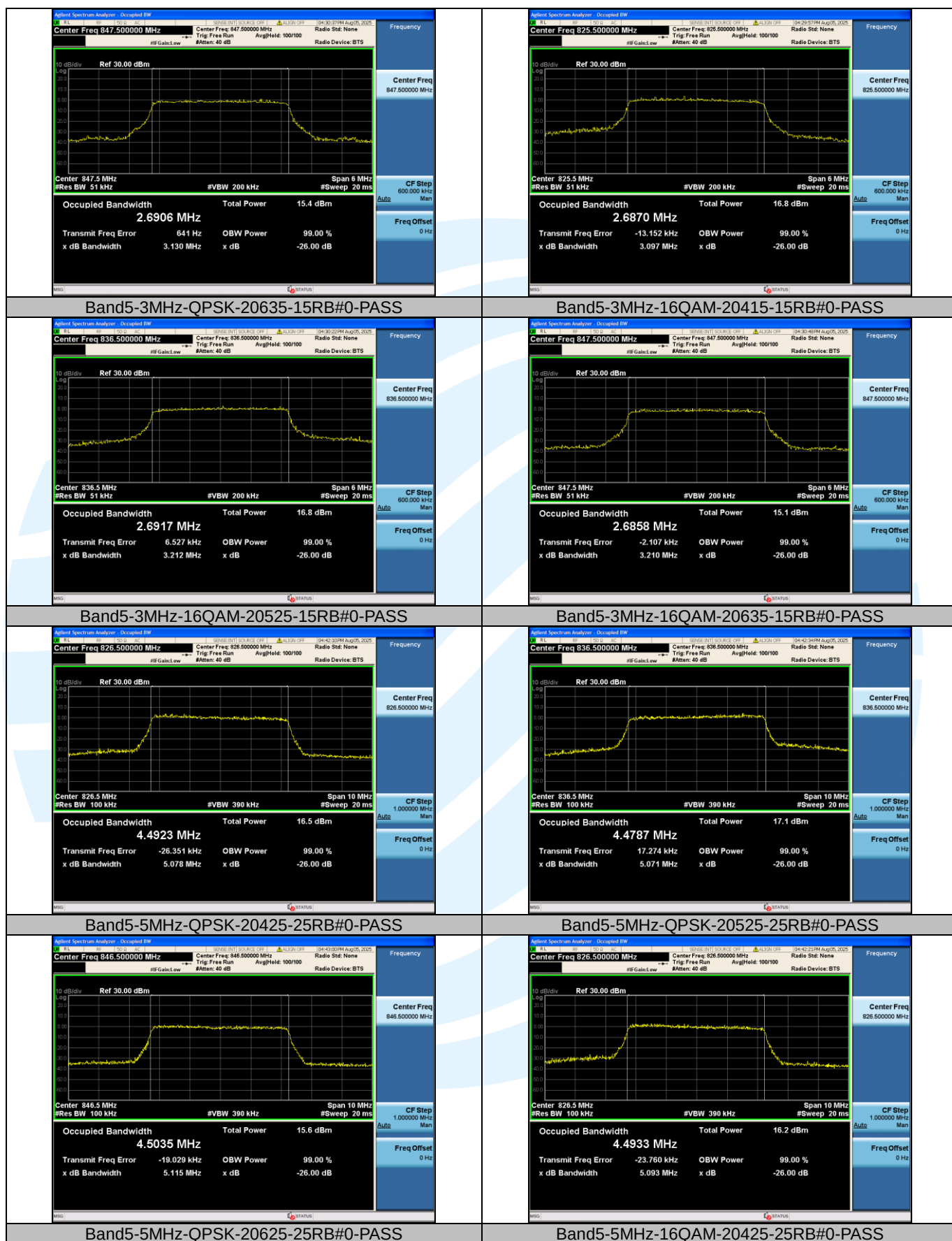


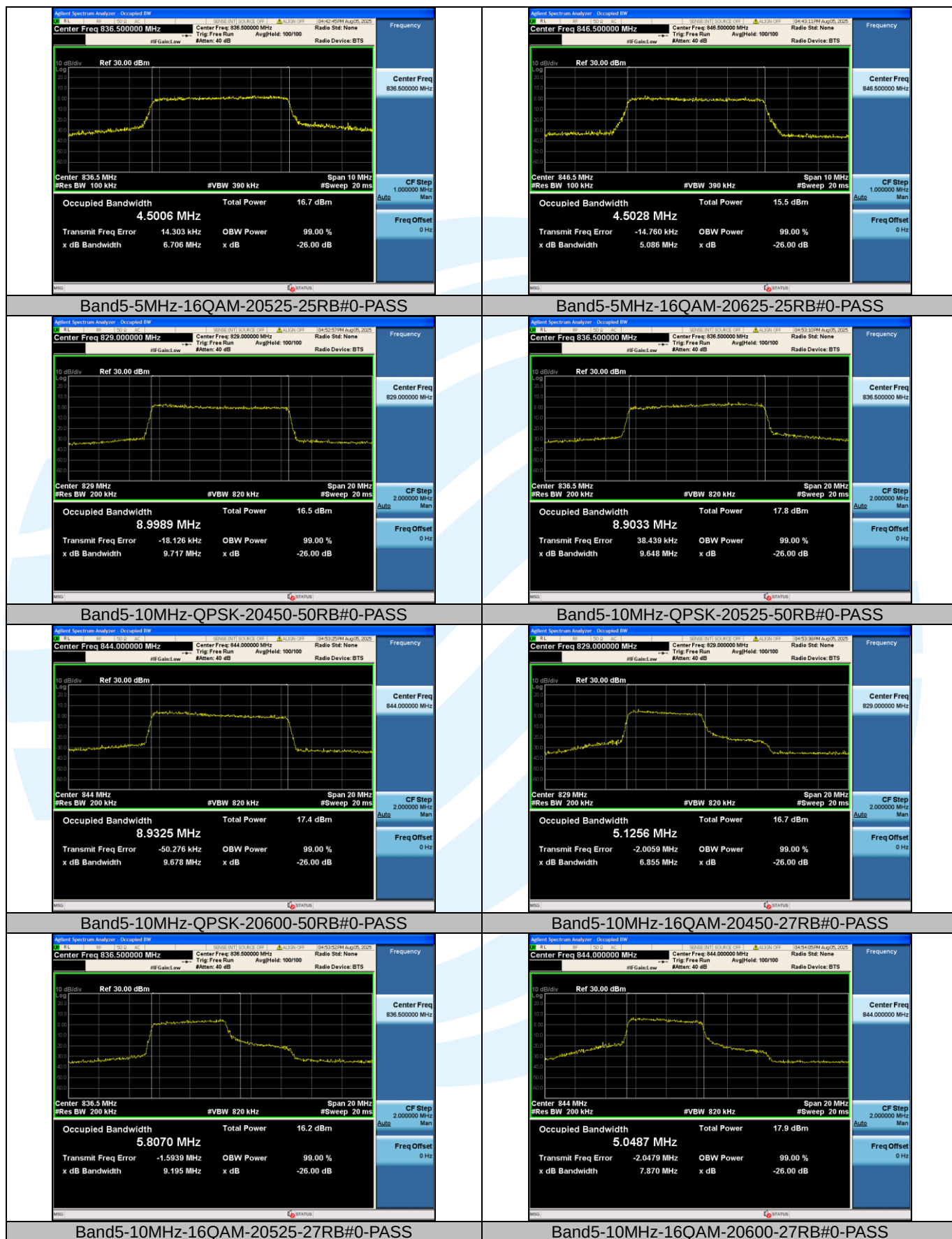












5.6 BAND EDGE AT ANTENNA TERMINALS

Test Requirement: LTE Band 2: FCC 47 CFR Part 24.238(a)
LTE Band 4: FCC 47 CFR Part 27.53(h)(1)
LTE Band 5: FCC 47 CFR Part 22.917(a)
Test Method: ANSI C63.26-2015 & KDB 971168 D01v03r01

Limit:

FCC 47 CFR Part 24.238(a), 27.53(h)(1), 22.917(a):

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log(P)$ dB. The emission limit equal to -13 dBm.

Test Procedure:

The transmitter output was connected to a calibrated coaxial cable and coupler, the other end of which was connected to a spectrum analyzer.

For each band edge measurement:

- 1) Set the spectrum analyzer span to include the block edge frequency.
- 2) Set a marker to point the corresponding band edge frequency in each test case.
- 3) Set display line at -13 dBm
- 4) Set resolution bandwidth to at least 1% of emission bandwidth.
- 5) Set spectrum analyzer with RMS detector.
- 6) Record the max trace plot into the test report

Note: The cable loss and attenuator loss were offset into measure device as an amplitude offset.

Test Setup: Refer to section 4.2.2 for details.

Instruments Used: Refer to section 3 for details

Test Mode: Link mode

Test Results: Pass

Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dBm)	Verdict
Band2	1.4MHz	QPSK	18607	1RB#0	-24.03	PASS
Band2	1.4MHz	QPSK	18607	6RB#0	-31.94	PASS
Band2	1.4MHz	QPSK	19193	1RB#5	-33.23	PASS
Band2	1.4MHz	QPSK	19193	6RB#0	-28.46	PASS
Band2	1.4MHz	16QAM	18607	1RB#0	-28.20	PASS
Band2	1.4MHz	16QAM	18607	6RB#0	-27.07	PASS
Band2	1.4MHz	16QAM	19193	1RB#5	-25.72	PASS
Band2	1.4MHz	16QAM	19193	6RB#0	-25.90	PASS
Band2	3MHz	QPSK	18615	1RB#0	-27.63	PASS
Band2	3MHz	QPSK	18615	15RB#0	-36.69	PASS
Band2	3MHz	QPSK	19185	1RB#14	-29.15	PASS
Band2	3MHz	QPSK	19185	15RB#0	-33.49	PASS
Band2	3MHz	16QAM	18615	1RB#0	-28.40	PASS
Band2	3MHz	16QAM	18615	15RB#0	-36.91	PASS
Band2	3MHz	16QAM	19185	1RB#14	-30.93	PASS
Band2	3MHz	16QAM	19185	15RB#0	-33.69	PASS
Band2	5MHz	QPSK	18625	1RB#0	-34.60	PASS
Band2	5MHz	QPSK	18625	25RB#0	-40.37	PASS
Band2	5MHz	QPSK	19175	1RB#24	-35.81	PASS
Band2	5MHz	QPSK	19175	25RB#0	-35.26	PASS
Band2	5MHz	16QAM	18625	1RB#0	-34.62	PASS
Band2	5MHz	16QAM	18625	25RB#0	-39.41	PASS
Band2	5MHz	16QAM	19175	1RB#24	-36.11	PASS
Band2	5MHz	16QAM	19175	25RB#0	-35.59	PASS
Band2	10MHz	QPSK	18650	1RB#0	-47.59	PASS
Band2	10MHz	QPSK	18650	50RB#0	-47.74	PASS
Band2	10MHz	QPSK	19150	1RB#49	-46.82	PASS
Band2	10MHz	QPSK	19150	50RB#0	-39.93	PASS
Band2	10MHz	16QAM	18650	1RB#0	-47.18	PASS
Band2	10MHz	16QAM	19150	1RB#49	-47.03	PASS
Band2	15MHz	QPSK	18675	1RB#0	-45.55	PASS

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Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dBm)	Verdict
Band2	15MHz	QPSK	18675	75RB#0	-46.05	PASS
Band2	15MHz	QPSK	19125	1RB#74	-46.82	PASS
Band2	15MHz	QPSK	19125	75RB#0	-43.66	PASS
Band2	15MHz	16QAM	18675	1RB#0	-45.56	PASS
Band2	15MHz	16QAM	19125	1RB#74	-46.67	PASS
Band2	20MHz	QPSK	18700	1RB#0	-47.38	PASS
Band2	20MHz	QPSK	18700	100RB#0	-45.56	PASS
Band2	20MHz	QPSK	19100	1RB#99	-48.47	PASS
Band2	20MHz	QPSK	19100	100RB#0	-43.82	PASS
Band2	20MHz	16QAM	18700	1RB#0	-47.24	PASS
Band2	20MHz	16QAM	19100	1RB#99	-48.70	PASS
Band4	1.4MHz	QPSK	19957	1RB#0	-26.49	PASS
Band4	1.4MHz	QPSK	19957	6RB#0	-28.33	PASS
Band4	1.4MHz	QPSK	20393	1RB#5	-27.01	PASS
Band4	1.4MHz	QPSK	20393	6RB#0	-29.63	PASS
Band4	1.4MHz	16QAM	19957	1RB#0	-26.98	PASS
Band4	1.4MHz	16QAM	19957	6RB#0	-31.55	PASS
Band4	1.4MHz	16QAM	20393	1RB#5	-29.71	PASS
Band4	1.4MHz	16QAM	20393	6RB#0	-32.11	PASS
Band4	3MHz	QPSK	19965	1RB#0	-29.33	PASS
Band4	3MHz	QPSK	19965	15RB#0	-37.60	PASS
Band4	3MHz	QPSK	20385	1RB#14	-31.31	PASS
Band4	3MHz	QPSK	20385	15RB#0	-41.80	PASS
Band4	3MHz	16QAM	19965	1RB#0	-28.04	PASS
Band4	3MHz	16QAM	19965	15RB#0	-39.04	PASS
Band4	3MHz	16QAM	20385	1RB#14	-33.12	PASS
Band4	3MHz	16QAM	20385	15RB#0	-42.14	PASS
Band4	5MHz	QPSK	19975	1RB#0	-35.56	PASS
Band4	5MHz	QPSK	19975	25RB#0	-43.74	PASS
Band4	5MHz	QPSK	20375	1RB#24	-38.28	PASS
Band4	5MHz	QPSK	20375	25RB#0	-47.26	PASS
Band4	5MHz	16QAM	19975	1RB#0	-35.20	PASS
Band4	5MHz	16QAM	19975	25RB#0	-44.02	PASS
Band4	5MHz	16QAM	20375	1RB#24	-37.98	PASS
Band4	5MHz	16QAM	20375	25RB#0	-47.06	PASS
Band4	10MHz	QPSK	20000	1RB#0	-47.50	PASS
Band4	10MHz	QPSK	20000	50RB#0	-47.70	PASS
Band4	10MHz	QPSK	20350	1RB#49	-49.94	PASS
Band4	10MHz	QPSK	20350	50RB#0	-51.22	PASS
Band4	10MHz	16QAM	20000	1RB#0	-47.69	PASS
Band4	10MHz	16QAM	20350	1RB#49	-50.36	PASS
Band4	15MHz	QPSK	20025	1RB#0	-44.74	PASS
Band4	15MHz	QPSK	20025	75RB#0	-42.00	PASS
Band4	15MHz	QPSK	20325	1RB#74	-46.44	PASS
Band4	15MHz	QPSK	20325	75RB#0	-47.45	PASS
Band4	15MHz	16QAM	20025	1RB#0	-44.33	PASS
Band4	15MHz	16QAM	20325	1RB#74	-46.73	PASS
Band4	20MHz	QPSK	20050	1RB#0	-46.52	PASS
Band4	20MHz	QPSK	20050	100RB#0	-39.82	PASS
Band4	20MHz	QPSK	20300	1RB#99	-48.28	PASS
Band4	20MHz	QPSK	20300	100RB#0	-47.40	PASS
Band4	20MHz	16QAM	20050	1RB#0	-46.27	PASS
Band4	20MHz	16QAM	20300	1RB#99	-48.31	PASS
Band5	1.4MHz	QPSK	20407	1RB#0	-23.71	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	-30.16	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	-33.81	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	-35.30	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	-29.59	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	-33.11	PASS
Band5	1.4MHz	16QAM	20643	1RB#5	-31.26	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	-41.22	PASS

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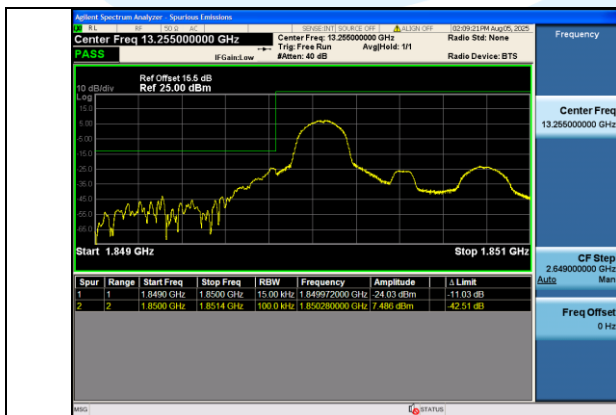
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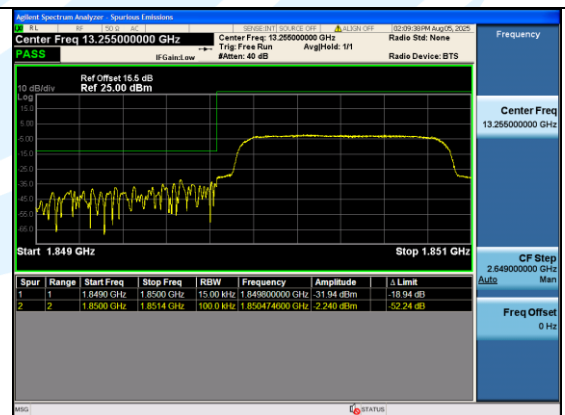
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Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dBm)	Verdict
Band5	3MHz	QPSK	20415	1RB#0	-28.63	PASS
Band5	3MHz	QPSK	20415	15RB#0	-37.64	PASS
Band5	3MHz	QPSK	20635	1RB#14	-34.87	PASS
Band5	3MHz	QPSK	20635	15RB#0	-42.58	PASS
Band5	3MHz	16QAM	20415	1RB#0	-28.83	PASS
Band5	3MHz	16QAM	20415	15RB#0	-37.96	PASS
Band5	3MHz	16QAM	20635	1RB#14	-34.74	PASS
Band5	3MHz	16QAM	20635	15RB#0	-41.89	PASS
Band5	5MHz	QPSK	20425	1RB#0	-36.43	PASS
Band5	5MHz	QPSK	20425	25RB#0	-42.75	PASS
Band5	5MHz	QPSK	20625	1RB#24	-40.97	PASS
Band5	5MHz	QPSK	20625	25RB#0	-46.45	PASS
Band5	5MHz	16QAM	20425	1RB#0	-36.17	PASS
Band5	5MHz	16QAM	20425	25RB#0	-42.21	PASS
Band5	5MHz	16QAM	20625	1RB#24	-40.52	PASS
Band5	5MHz	16QAM	20625	25RB#0	-46.67	PASS
Band5	10MHz	QPSK	20450	1RB#0	-50.43	PASS
Band5	10MHz	QPSK	20450	50RB#0	-46.25	PASS
Band5	10MHz	QPSK	20600	1RB#49	-52.69	PASS
Band5	10MHz	QPSK	20600	50RB#0	-49.45	PASS
Band5	10MHz	16QAM	20450	1RB#0	-49.72	PASS
Band5	10MHz	16QAM	20600	1RB#49	-52.54	PASS

Band	Bandwidth	Modulation	Channel	RB Configuration	Result (dBm)	Verdict
Band2	10MHz	16QAM	18650	27RB#0	-44.10	PASS
Band2	10MHz	16QAM	19150	27RB#23	-44.65	PASS
Band2	15MHz	16QAM	18675	27RB#0	-43.27	PASS
Band2	15MHz	16QAM	19125	27RB#48	-43.33	PASS
Band2	20MHz	16QAM	18700	27RB#0	-42.06	PASS
Band2	20MHz	16QAM	19100	27RB#73	-42.92	PASS
Band4	10MHz	16QAM	20000	27RB#0	-44.77	PASS
Band4	10MHz	16QAM	20350	27RB#23	-44.50	PASS
Band4	15MHz	16QAM	20025	27RB#0	-43.42	PASS
Band4	15MHz	16QAM	20325	27RB#48	-43.21	PASS
Band4	20MHz	16QAM	20050	27RB#0	-42.48	PASS
Band4	20MHz	16QAM	20300	27RB#73	-42.25	PASS
Band5	10MHz	16QAM	20450	27RB#0	-43.80	PASS
Band5	10MHz	16QAM	20600	27RB#23	-43.71	PASS



Band2 1.4MHz QPSK 18607 1RB#0



Band2 1.4MHz QPSK 18607 6RB#0

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