

Appendix D: Test Data for E-UTRA Band 5

Product Name: GPS 4G TRACKER TUBE
Test Model: GPS 4G TRACKER TUBE (cat1)

Environmental Conditions

Temperature:	24.5°C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	zhao xing hai
Supervised by:	Fengliu Tang

D.1 Conducted Output Power Data

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	25.28	PASS
Band5	1.4MHz	QPSK	20407	1RB#2	25.24	PASS
Band5	1.4MHz	QPSK	20407	1RB#5	25.20	PASS
Band5	1.4MHz	QPSK	20407	3RB#0	25.28	PASS
Band5	1.4MHz	QPSK	20407	3RB#1	25.18	PASS
Band5	1.4MHz	QPSK	20407	3RB#3	25.16	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	24.35	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	24.44	PASS
Band5	1.4MHz	16QAM	20407	1RB#2	24.91	PASS
Band5	1.4MHz	16QAM	20407	1RB#5	24.35	PASS
Band5	1.4MHz	16QAM	20407	3RB#0	24.27	PASS
Band5	1.4MHz	16QAM	20407	3RB#1	24.38	PASS
Band5	1.4MHz	16QAM	20407	3RB#3	24.26	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	23.36	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	25.10	PASS
Band5	1.4MHz	QPSK	20525	1RB#2	25.10	PASS
Band5	1.4MHz	QPSK	20525	1RB#5	25.06	PASS
Band5	1.4MHz	QPSK	20525	3RB#0	25.09	PASS
Band5	1.4MHz	QPSK	20525	3RB#1	25.00	PASS
Band5	1.4MHz	QPSK	20525	3RB#3	25.08	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	24.22	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	24.24	PASS
Band5	1.4MHz	16QAM	20525	1RB#2	24.32	PASS
Band5	1.4MHz	16QAM	20525	1RB#5	24.21	PASS
Band5	1.4MHz	16QAM	20525	3RB#0	24.25	PASS
Band5	1.4MHz	16QAM	20525	3RB#1	24.21	PASS
Band5	1.4MHz	16QAM	20525	3RB#3	24.28	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	23.37	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	24.67	PASS
Band5	1.4MHz	QPSK	20643	1RB#2	24.52	PASS
Band5	1.4MHz	QPSK	20643	1RB#5	24.55	PASS
Band5	1.4MHz	QPSK	20643	3RB#0	24.49	PASS
Band5	1.4MHz	QPSK	20643	3RB#1	26.02	PASS
Band5	1.4MHz	QPSK	20643	3RB#3	25.76	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	24.83	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	23.97	PASS

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Band5	1.4MHz	16QAM	20643	1RB#2	23.87	PASS
Band5	1.4MHz	16QAM	20643	1RB#5	23.84	PASS
Band5	1.4MHz	16QAM	20643	3RB#0	23.63	PASS
Band5	1.4MHz	16QAM	20643	3RB#1	25.04	PASS
Band5	1.4MHz	16QAM	20643	3RB#3	24.76	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	23.86	PASS
Band5	3MHz	QPSK	20415	1RB#0	24.73	PASS
Band5	3MHz	QPSK	20415	1RB#8	24.69	PASS
Band5	3MHz	QPSK	20415	1RB#14	24.58	PASS
Band5	3MHz	QPSK	20415	8RB#0	23.75	PASS
Band5	3MHz	QPSK	20415	8RB#4	23.80	PASS
Band5	3MHz	QPSK	20415	8RB#7	23.79	PASS
Band5	3MHz	QPSK	20415	15RB#0	23.74	PASS
Band5	3MHz	16QAM	20415	1RB#0	23.81	PASS
Band5	3MHz	16QAM	20415	1RB#8	24.28	PASS
Band5	3MHz	16QAM	20415	1RB#14	23.71	PASS
Band5	3MHz	16QAM	20415	8RB#0	22.90	PASS
Band5	3MHz	16QAM	20415	8RB#4	22.87	PASS
Band5	3MHz	16QAM	20415	8RB#7	22.92	PASS
Band5	3MHz	16QAM	20415	15RB#0	22.90	PASS
Band5	3MHz	QPSK	20525	1RB#0	24.90	PASS
Band5	3MHz	QPSK	20525	1RB#8	24.91	PASS
Band5	3MHz	QPSK	20525	1RB#14	24.80	PASS
Band5	3MHz	QPSK	20525	8RB#0	23.93	PASS
Band5	3MHz	QPSK	20525	8RB#4	23.99	PASS
Band5	3MHz	QPSK	20525	8RB#7	23.99	PASS
Band5	3MHz	QPSK	20525	15RB#0	23.95	PASS
Band5	3MHz	16QAM	20525	1RB#0	23.98	PASS
Band5	3MHz	16QAM	20525	1RB#8	24.11	PASS
Band5	3MHz	16QAM	20525	1RB#14	23.89	PASS
Band5	3MHz	16QAM	20525	8RB#0	23.09	PASS
Band5	3MHz	16QAM	20525	8RB#4	23.16	PASS
Band5	3MHz	16QAM	20525	8RB#7	23.13	PASS
Band5	3MHz	16QAM	20525	15RB#0	23.05	PASS
Band5	3MHz	QPSK	20635	1RB#0	25.36	PASS
Band5	3MHz	QPSK	20635	1RB#8	25.30	PASS
Band5	3MHz	QPSK	20635	1RB#14	24.93	PASS
Band5	3MHz	QPSK	20635	8RB#0	24.36	PASS
Band5	3MHz	QPSK	20635	8RB#4	24.33	PASS
Band5	3MHz	QPSK	20635	8RB#7	24.22	PASS
Band5	3MHz	QPSK	20635	15RB#0	24.06	PASS

Band5	3MHz	16QAM	20635	1RB#0	24.61	PASS
Band5	3MHz	16QAM	20635	1RB#8	24.69	PASS
Band5	3MHz	16QAM	20635	1RB#14	24.25	PASS
Band5	3MHz	16QAM	20635	8RB#0	23.48	PASS
Band5	3MHz	16QAM	20635	8RB#4	23.33	PASS
Band5	3MHz	16QAM	20635	8RB#7	23.34	PASS
Band5	3MHz	16QAM	20635	15RB#0	23.27	PASS
Band5	5MHz	QPSK	20425	1RB#0	25.39	PASS
Band5	5MHz	QPSK	20425	1RB#12	25.15	PASS
Band5	5MHz	QPSK	20425	1RB#24	25.02	PASS
Band5	5MHz	QPSK	20425	12RB#0	24.13	PASS
Band5	5MHz	QPSK	20425	12RB#6	24.05	PASS
Band5	5MHz	QPSK	20425	12RB#13	23.98	PASS
Band5	5MHz	QPSK	20425	25RB#0	23.99	PASS
Band5	5MHz	16QAM	20425	1RB#0	24.65	PASS
Band5	5MHz	16QAM	20425	1RB#12	24.09	PASS
Band5	5MHz	16QAM	20425	1RB#24	24.17	PASS
Band5	5MHz	16QAM	20425	12RB#0	23.29	PASS
Band5	5MHz	16QAM	20425	12RB#6	23.10	PASS
Band5	5MHz	16QAM	20425	12RB#13	23.10	PASS
Band5	5MHz	16QAM	20425	25RB#0	23.12	PASS
Band5	5MHz	QPSK	20525	1RB#0	25.33	PASS
Band5	5MHz	QPSK	20525	1RB#12	25.09	PASS
Band5	5MHz	QPSK	20525	1RB#24	25.03	PASS
Band5	5MHz	QPSK	20525	12RB#0	24.14	PASS
Band5	5MHz	QPSK	20525	12RB#6	24.13	PASS
Band5	5MHz	QPSK	20525	12RB#13	24.10	PASS
Band5	5MHz	QPSK	20525	25RB#0	24.10	PASS
Band5	5MHz	16QAM	20525	1RB#0	24.30	PASS
Band5	5MHz	16QAM	20525	1RB#12	23.94	PASS
Band5	5MHz	16QAM	20525	1RB#24	24.08	PASS
Band5	5MHz	16QAM	20525	12RB#0	23.37	PASS
Band5	5MHz	16QAM	20525	12RB#6	23.22	PASS
Band5	5MHz	16QAM	20525	12RB#13	23.34	PASS
Band5	5MHz	16QAM	20525	25RB#0	23.22	PASS
Band5	5MHz	QPSK	20625	1RB#0	25.48	PASS
Band5	5MHz	QPSK	20625	1RB#12	25.16	PASS
Band5	5MHz	QPSK	20625	1RB#24	24.93	PASS
Band5	5MHz	QPSK	20625	12RB#0	24.12	PASS
Band5	5MHz	QPSK	20625	12RB#6	24.08	PASS
Band5	5MHz	QPSK	20625	12RB#13	24.00	PASS

Band5	5MHz	QPSK	20625	25RB#0	24.02	PASS
Band5	5MHz	16QAM	20625	1RB#0	24.72	PASS
Band5	5MHz	16QAM	20625	1RB#12	24.36	PASS
Band5	5MHz	16QAM	20625	1RB#24	24.23	PASS
Band5	5MHz	16QAM	20625	12RB#0	23.39	PASS
Band5	5MHz	16QAM	20625	12RB#6	23.24	PASS
Band5	5MHz	16QAM	20625	12RB#13	23.26	PASS
Band5	5MHz	16QAM	20625	25RB#0	23.19	PASS
Band5	10MHz	QPSK	20450	1RB#0	24.95	PASS
Band5	10MHz	QPSK	20450	1RB#24	24.62	PASS
Band5	10MHz	QPSK	20450	1RB#49	24.70	PASS
Band5	10MHz	QPSK	20450	25RB#0	23.81	PASS
Band5	10MHz	QPSK	20450	25RB#12	23.63	PASS
Band5	10MHz	QPSK	20450	25RB#25	23.57	PASS
Band5	10MHz	QPSK	20450	50RB#0	23.76	PASS
Band5	10MHz	16QAM	20450	1RB#0	23.86	PASS
Band5	10MHz	16QAM	20450	1RB#24	23.94	PASS
Band5	10MHz	16QAM	20450	1RB#49	23.64	PASS
Band5	10MHz	16QAM	20450	25RB#0	22.87	PASS
Band5	10MHz	16QAM	20450	25RB#12	22.74	PASS
Band5	10MHz	16QAM	20450	25RB#25	22.63	PASS
Band5	10MHz	QPSK	20525	1RB#0	24.86	PASS
Band5	10MHz	QPSK	20525	1RB#24	25.02	PASS
Band5	10MHz	QPSK	20525	1RB#49	24.96	PASS
Band5	10MHz	QPSK	20525	25RB#0	24.02	PASS
Band5	10MHz	QPSK	20525	25RB#12	24.10	PASS
Band5	10MHz	QPSK	20525	25RB#25	24.07	PASS
Band5	10MHz	QPSK	20525	50RB#0	24.42	PASS
Band5	10MHz	16QAM	20525	1RB#0	24.11	PASS
Band5	10MHz	16QAM	20525	1RB#24	24.08	PASS
Band5	10MHz	16QAM	20525	1RB#49	24.26	PASS
Band5	10MHz	16QAM	20525	25RB#0	23.23	PASS
Band5	10MHz	16QAM	20525	25RB#12	23.25	PASS
Band5	10MHz	16QAM	20525	25RB#25	23.28	PASS
Band5	10MHz	QPSK	20600	1RB#0	25.28	PASS
Band5	10MHz	QPSK	20600	1RB#24	24.78	PASS
Band5	10MHz	QPSK	20600	1RB#49	24.42	PASS
Band5	10MHz	QPSK	20600	25RB#0	24.05	PASS
Band5	10MHz	QPSK	20600	25RB#12	23.83	PASS
Band5	10MHz	QPSK	20600	25RB#25	23.63	PASS
Band5	10MHz	QPSK	20600	50RB#0	24.51	PASS

Band5	10MHz	16QAM	20600	1RB#0	24.30	PASS
Band5	10MHz	16QAM	20600	1RB#24	23.60	PASS
Band5	10MHz	16QAM	20600	1RB#49	23.48	PASS
Band5	10MHz	16QAM	20600	25RB#0	23.16	PASS
Band5	10MHz	16QAM	20600	25RB#12	22.84	PASS
Band5	10MHz	16QAM	20600	25RB#25	22.74	PASS

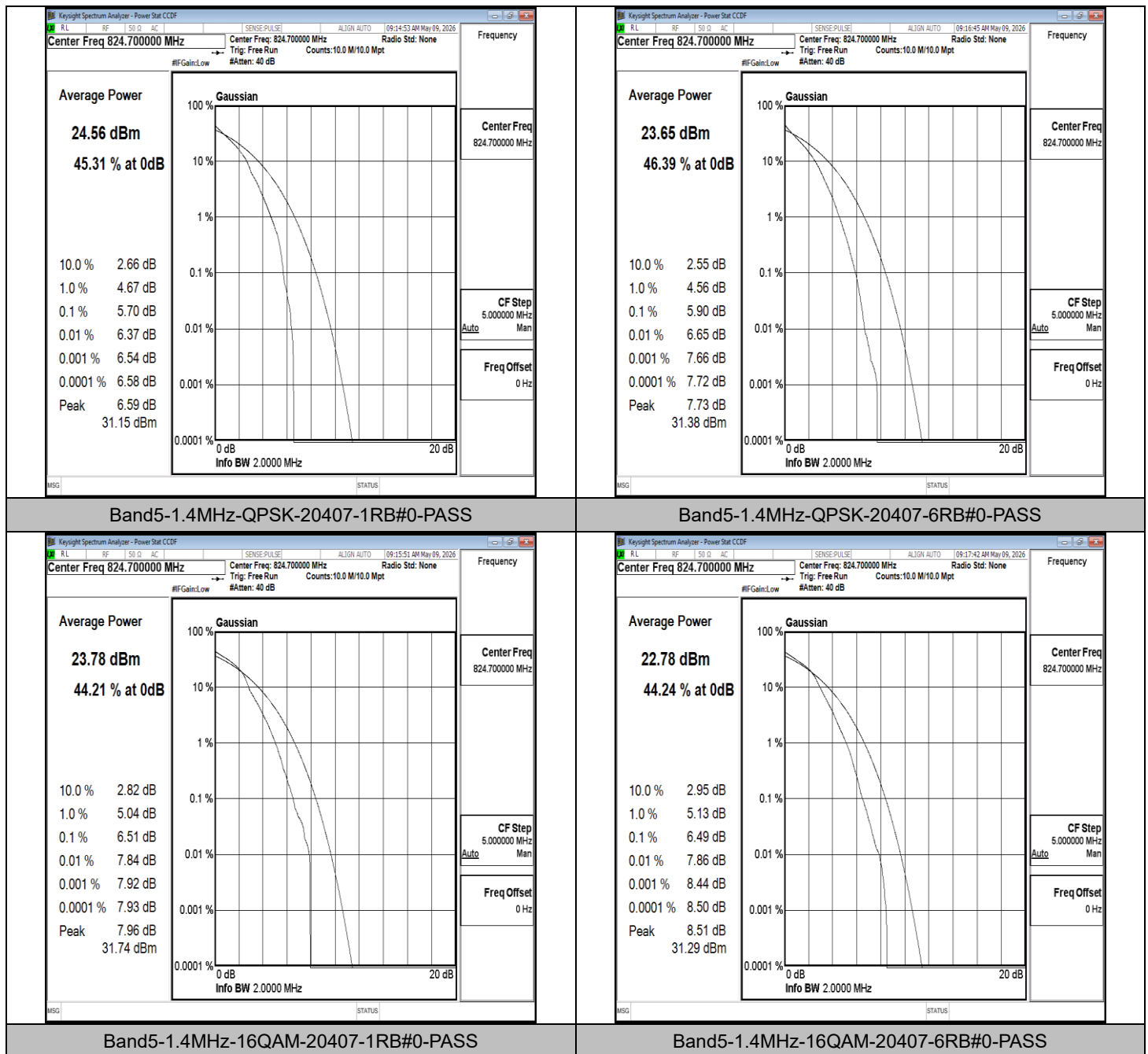
D.2 Peak-to-Average Ratio(CCDF)

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band5	1.4MHz	QPSK	20407	1RB#0	5.70	13	PASS
Band5	1.4MHz	QPSK	20407	6RB#0	5.90	13	PASS
Band5	1.4MHz	16QAM	20407	1RB#0	6.51	13	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	6.49	13	PASS
Band5	1.4MHz	QPSK	20525	1RB#0	5.52	13	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	5.86	13	PASS
Band5	1.4MHz	16QAM	20525	1RB#0	6.38	13	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	6.47	13	PASS
Band5	1.4MHz	QPSK	20643	1RB#0	5.20	13	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	5.77	13	PASS
Band5	1.4MHz	16QAM	20643	1RB#0	6.09	13	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	6.39	13	PASS
Band5	3MHz	QPSK	20415	1RB#0	5.75	13	PASS
Band5	3MHz	QPSK	20415	15RB#0	5.74	13	PASS
Band5	3MHz	16QAM	20415	1RB#0	6.52	13	PASS
Band5	3MHz	16QAM	20415	15RB#0	6.45	13	PASS
Band5	3MHz	QPSK	20525	1RB#0	5.52	13	PASS
Band5	3MHz	QPSK	20525	15RB#0	5.72	13	PASS
Band5	3MHz	16QAM	20525	1RB#0	6.33	13	PASS
Band5	3MHz	16QAM	20525	15RB#0	6.44	13	PASS
Band5	3MHz	QPSK	20635	1RB#0	5.12	13	PASS
Band5	3MHz	QPSK	20635	15RB#0	5.64	13	PASS
Band5	3MHz	16QAM	20635	1RB#0	6.04	13	PASS
Band5	3MHz	16QAM	20635	15RB#0	6.39	13	PASS
Band5	5MHz	QPSK	20425	1RB#0	5.50	13	PASS
Band5	5MHz	QPSK	20425	25RB#0	5.85	13	PASS
Band5	5MHz	16QAM	20425	1RB#0	6.50	13	PASS
Band5	5MHz	16QAM	20425	25RB#0	6.42	13	PASS
Band5	5MHz	QPSK	20525	1RB#0	5.33	13	PASS
Band5	5MHz	QPSK	20525	25RB#0	5.85	13	PASS
Band5	5MHz	16QAM	20525	1RB#0	6.33	13	PASS
Band5	5MHz	16QAM	20525	25RB#0	6.42	13	PASS
Band5	5MHz	QPSK	20625	1RB#0	5.20	13	PASS
Band5	5MHz	QPSK	20625	25RB#0	5.81	13	PASS
Band5	5MHz	16QAM	20625	1RB#0	6.24	13	PASS
Band5	5MHz	16QAM	20625	25RB#0	6.41	13	PASS

Band5	10MHz	QPSK	20450	1RB#0	5.63	13	PASS
Band5	10MHz	QPSK	20450	50RB#0	5.78	13	PASS
Band5	10MHz	16QAM	20450	1RB#0	6.73	13	PASS
Band5	10MHz	QPSK	20525	1RB#0	5.37	13	PASS
Band5	10MHz	QPSK	20525	50RB#0	5.84	13	PASS
Band5	10MHz	16QAM	20525	1RB#0	6.39	13	PASS
Band5	10MHz	QPSK	20600	1RB#0	5.38	13	PASS
Band5	10MHz	QPSK	20600	50RB#0	5.81	13	PASS
Band5	10MHz	16QAM	20600	1RB#0	6.48	13	PASS

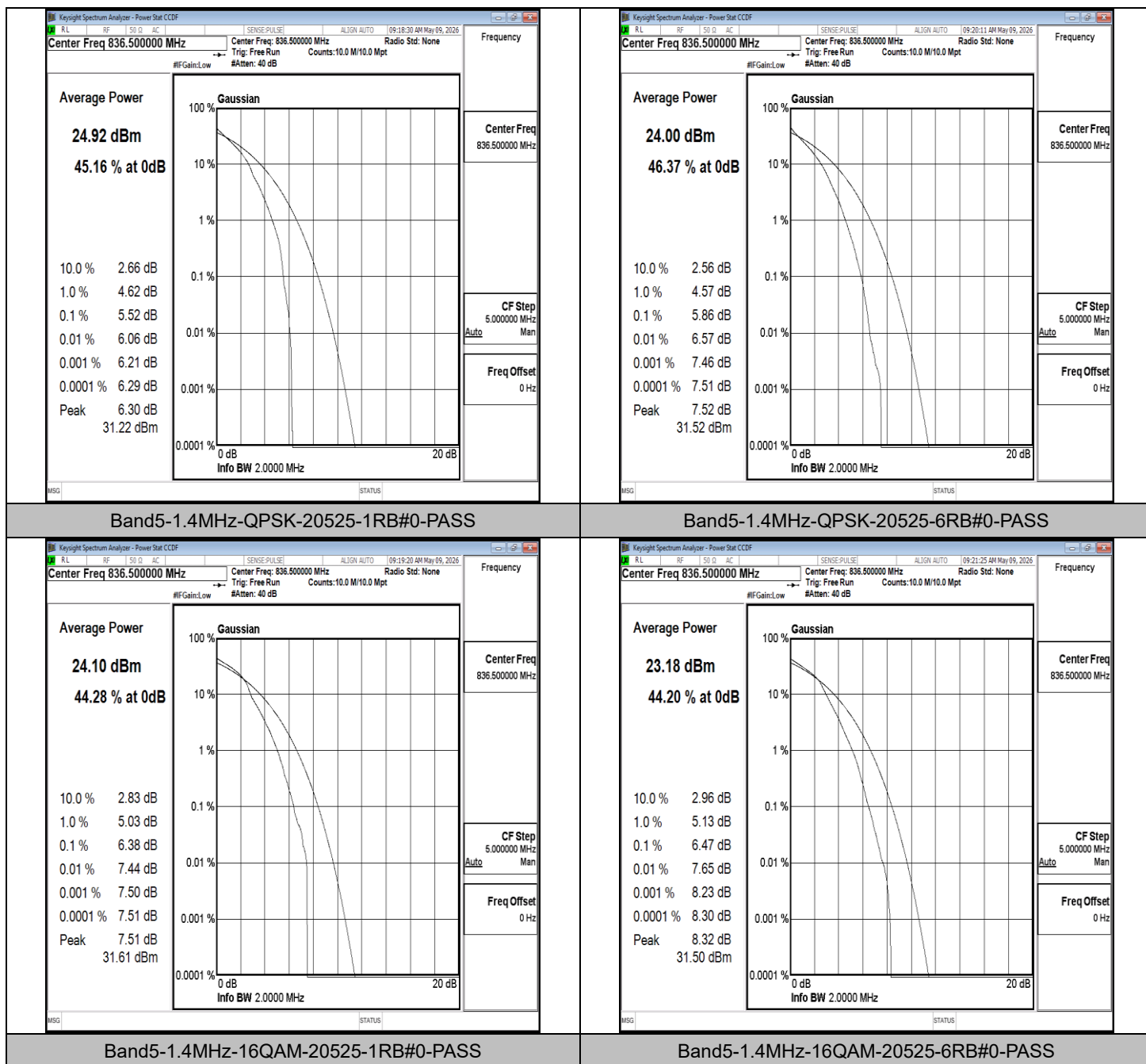
Test Graphs

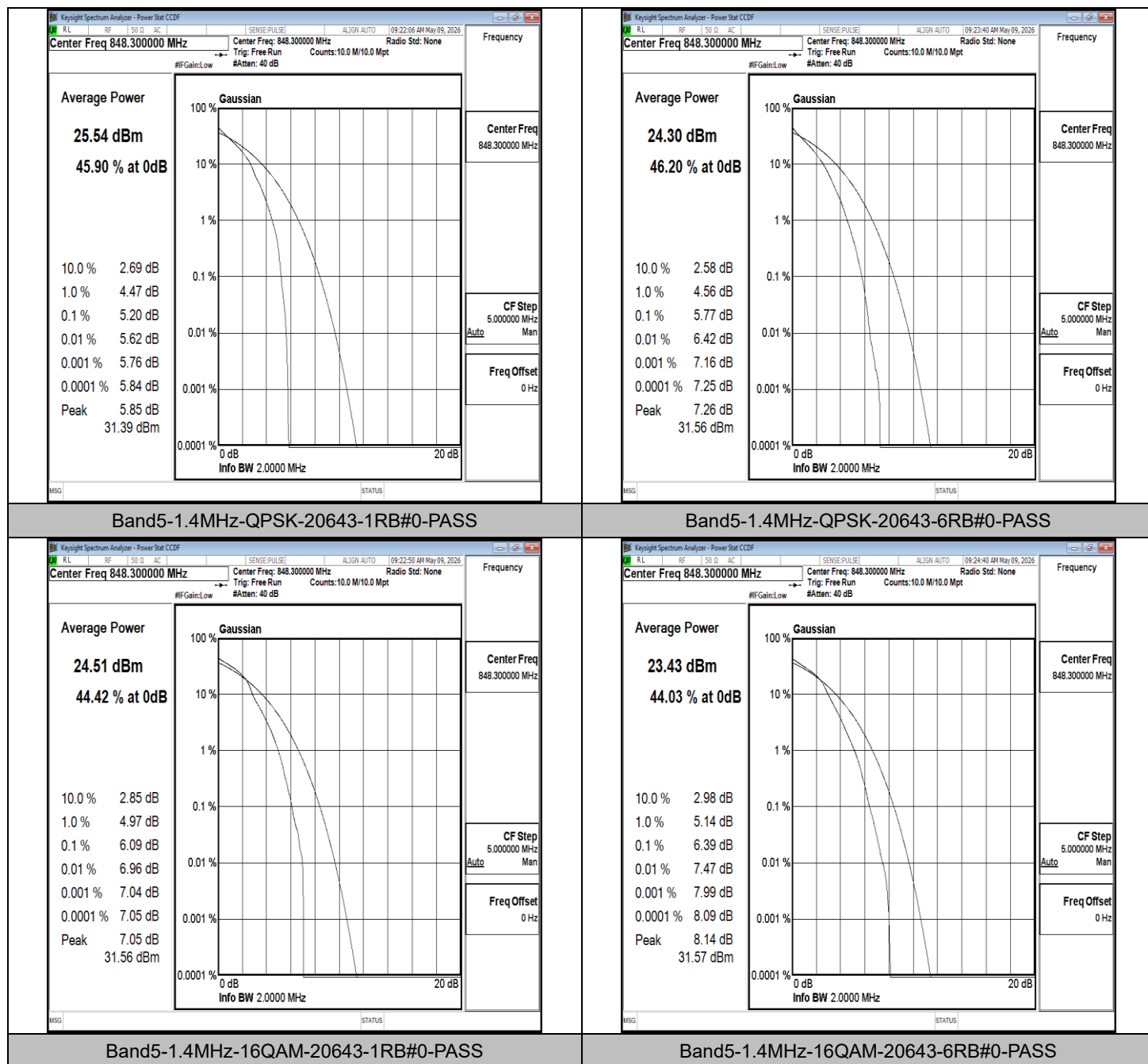


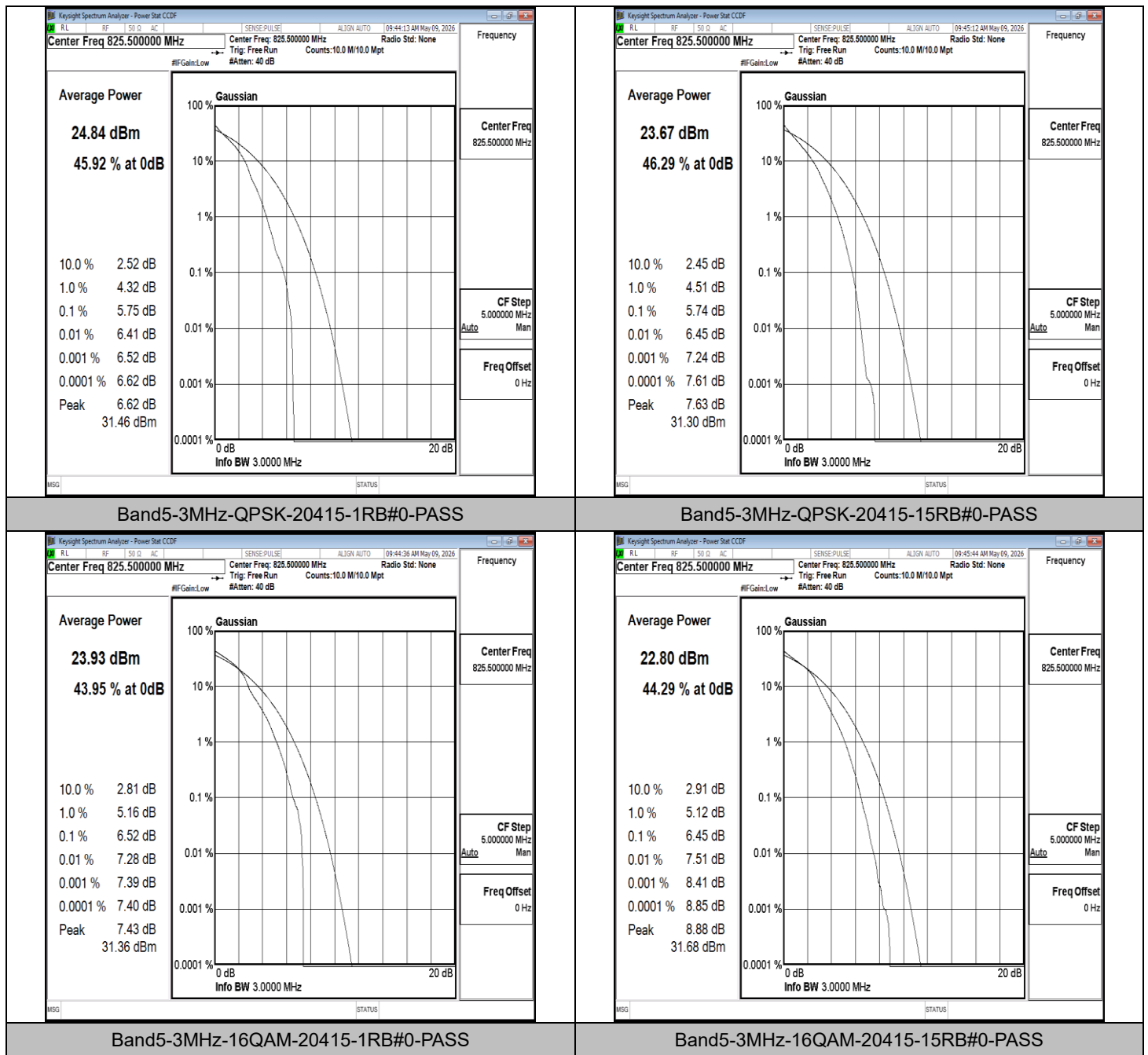
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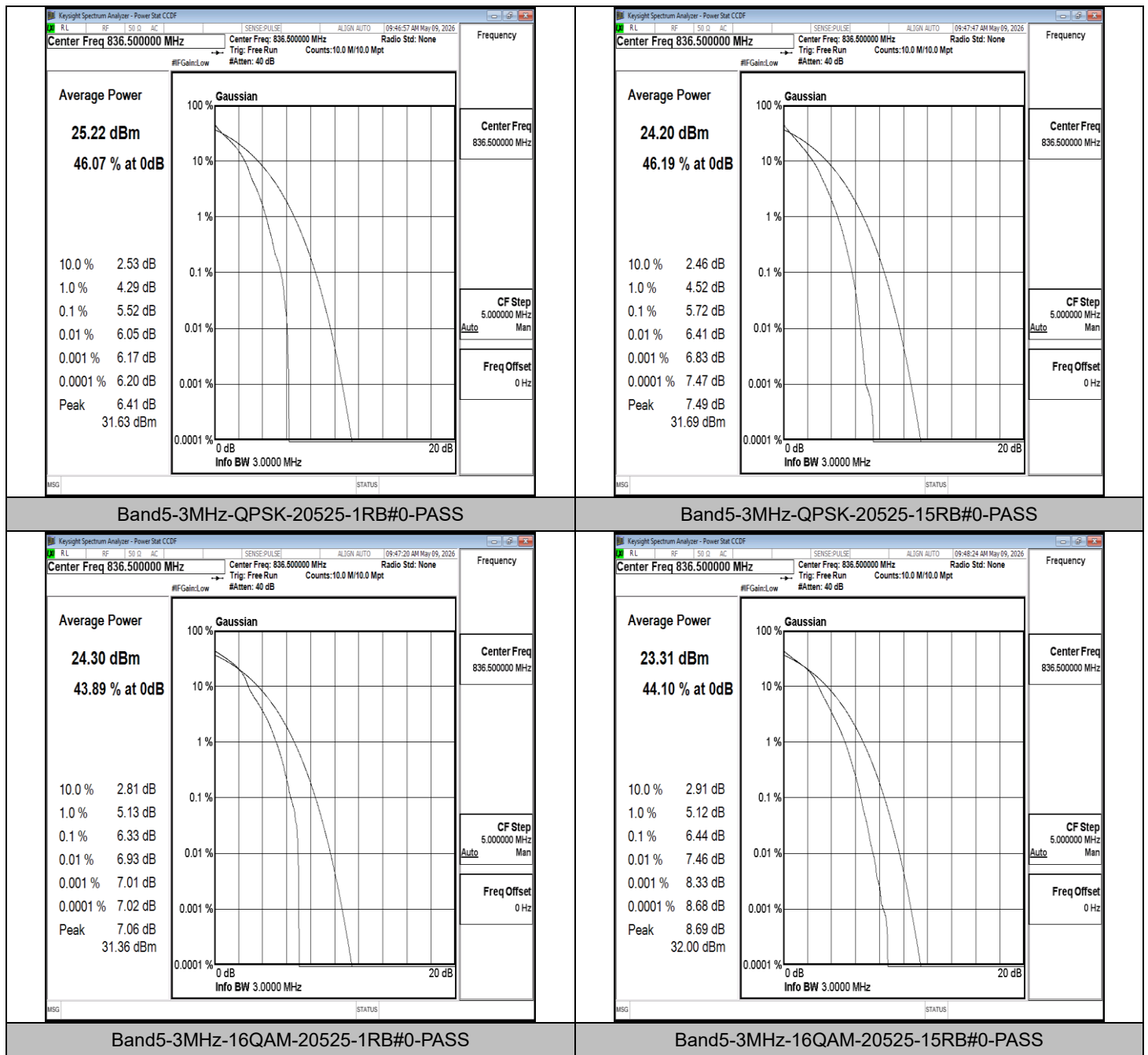
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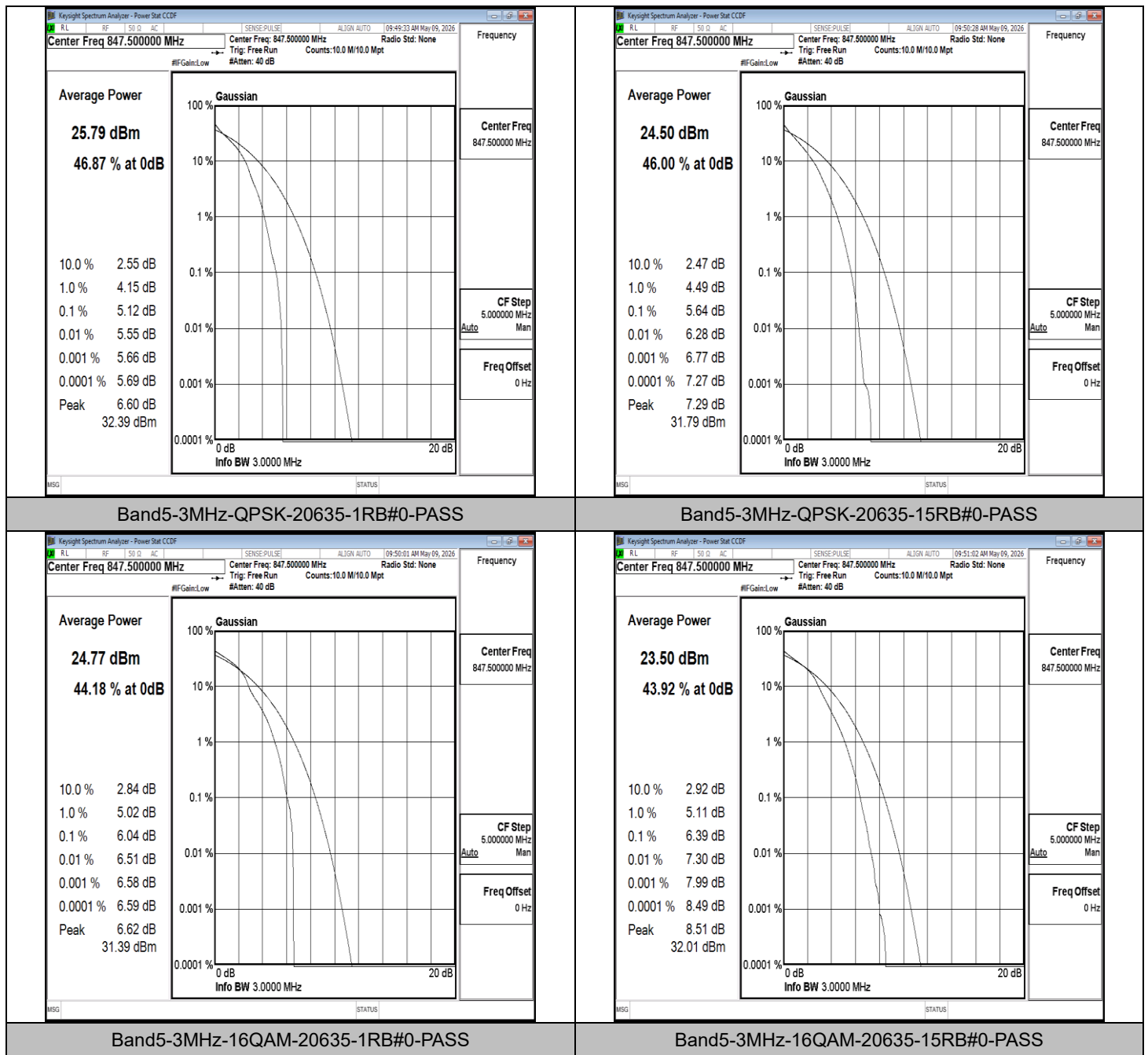
Tel: +(86) 020-39166689 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

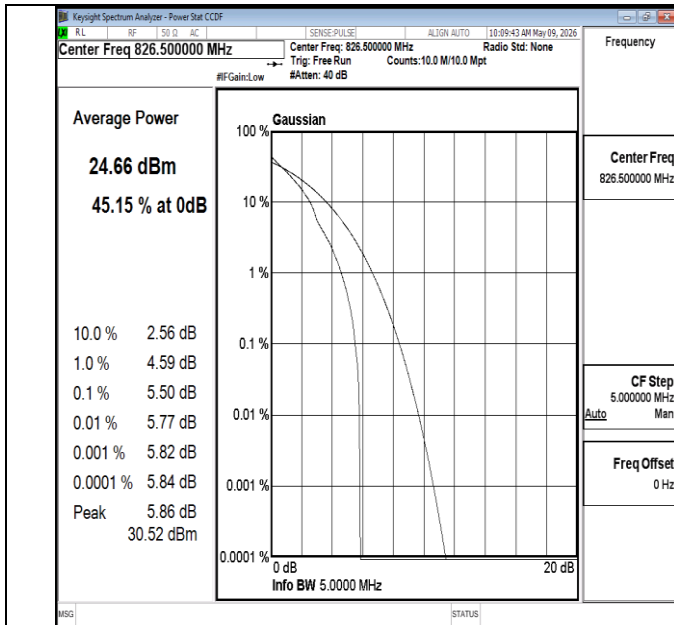




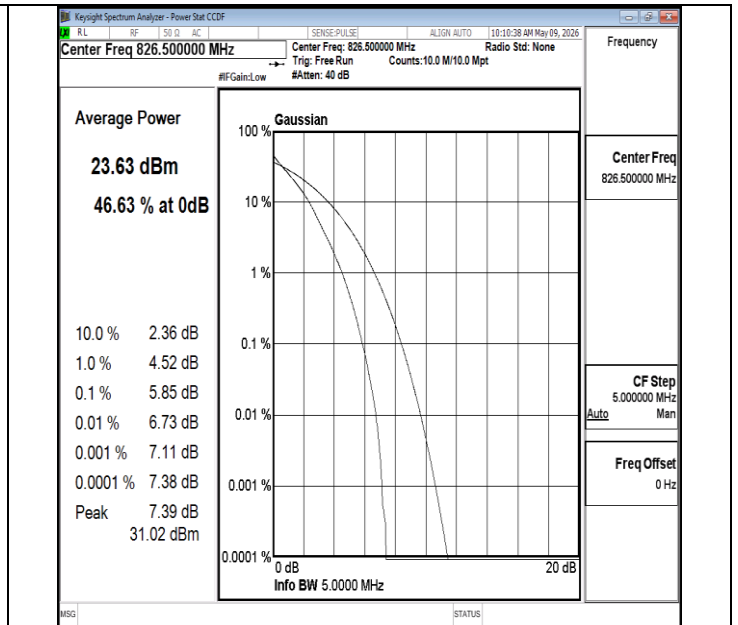




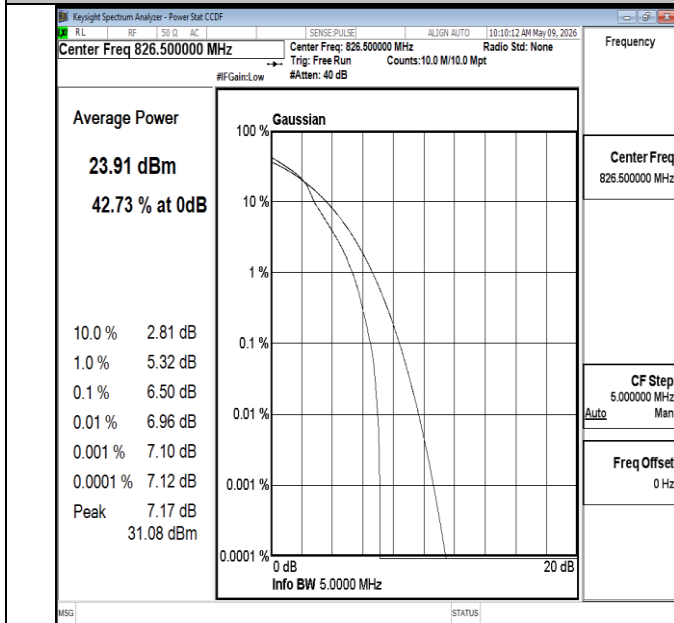




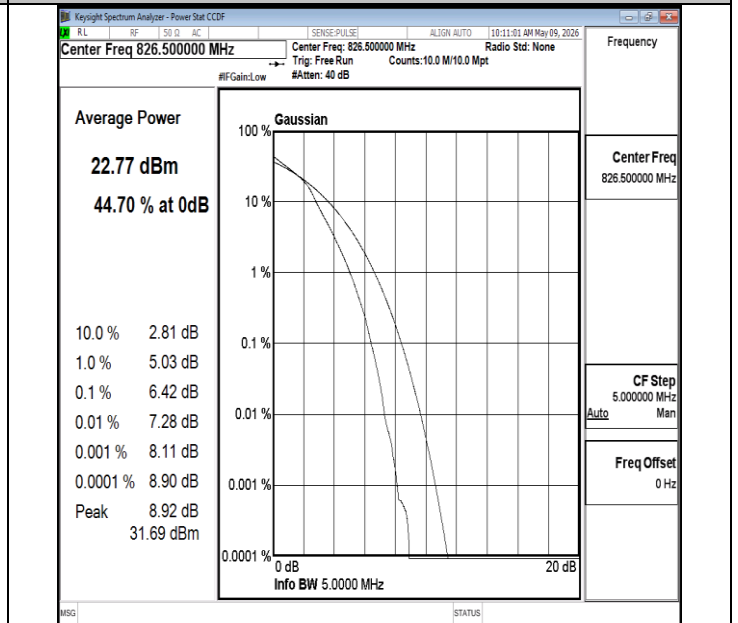
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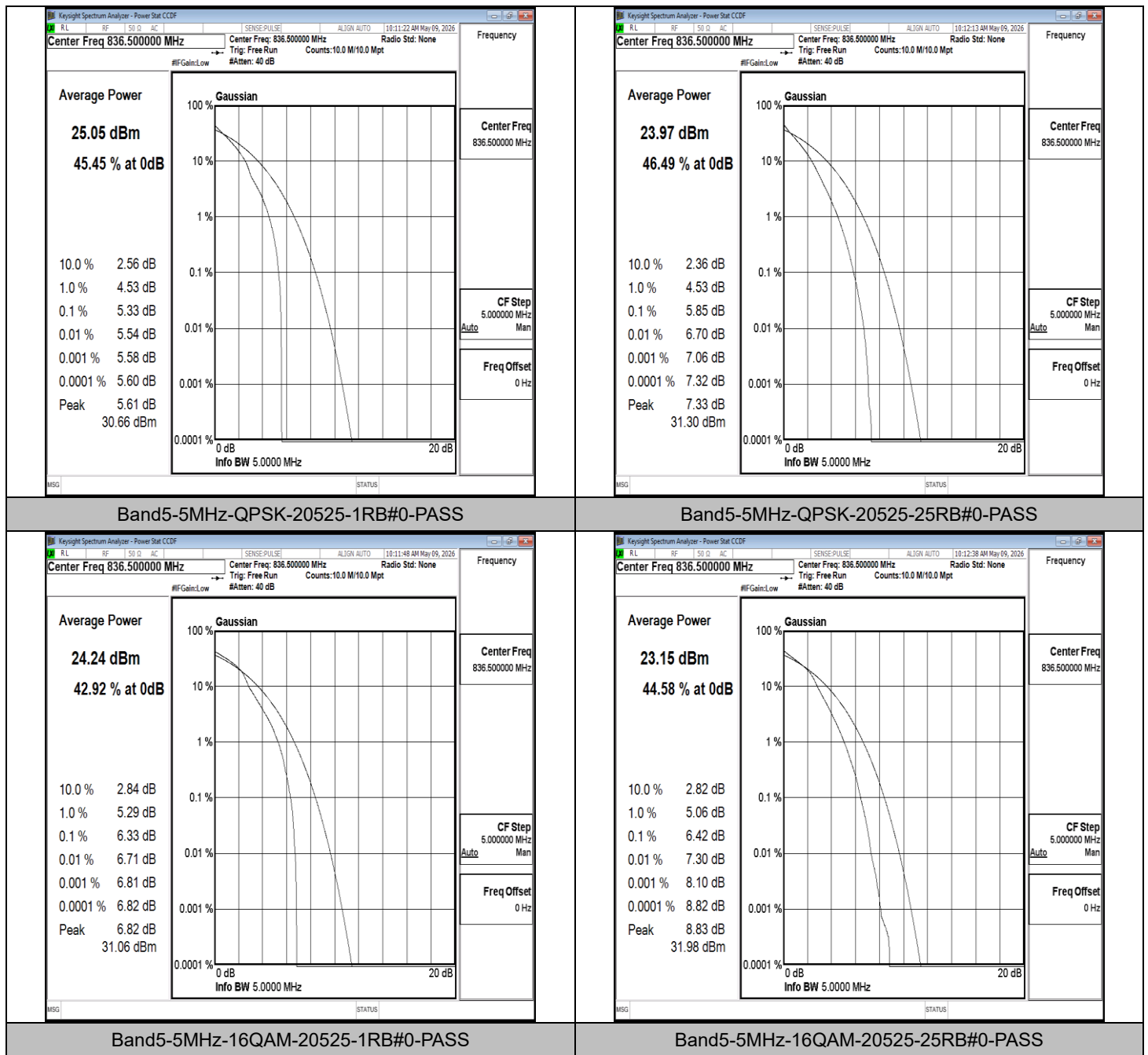
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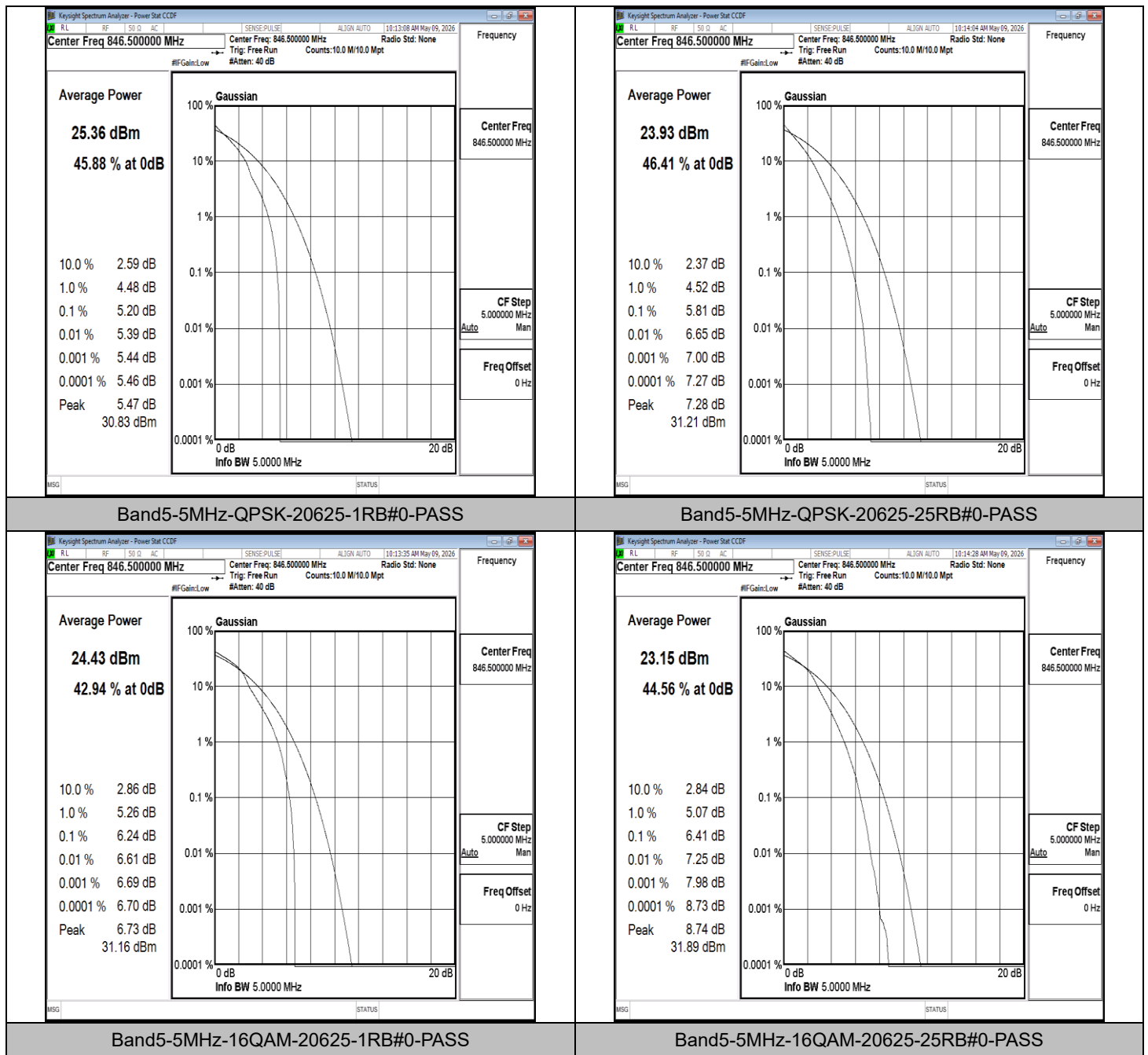


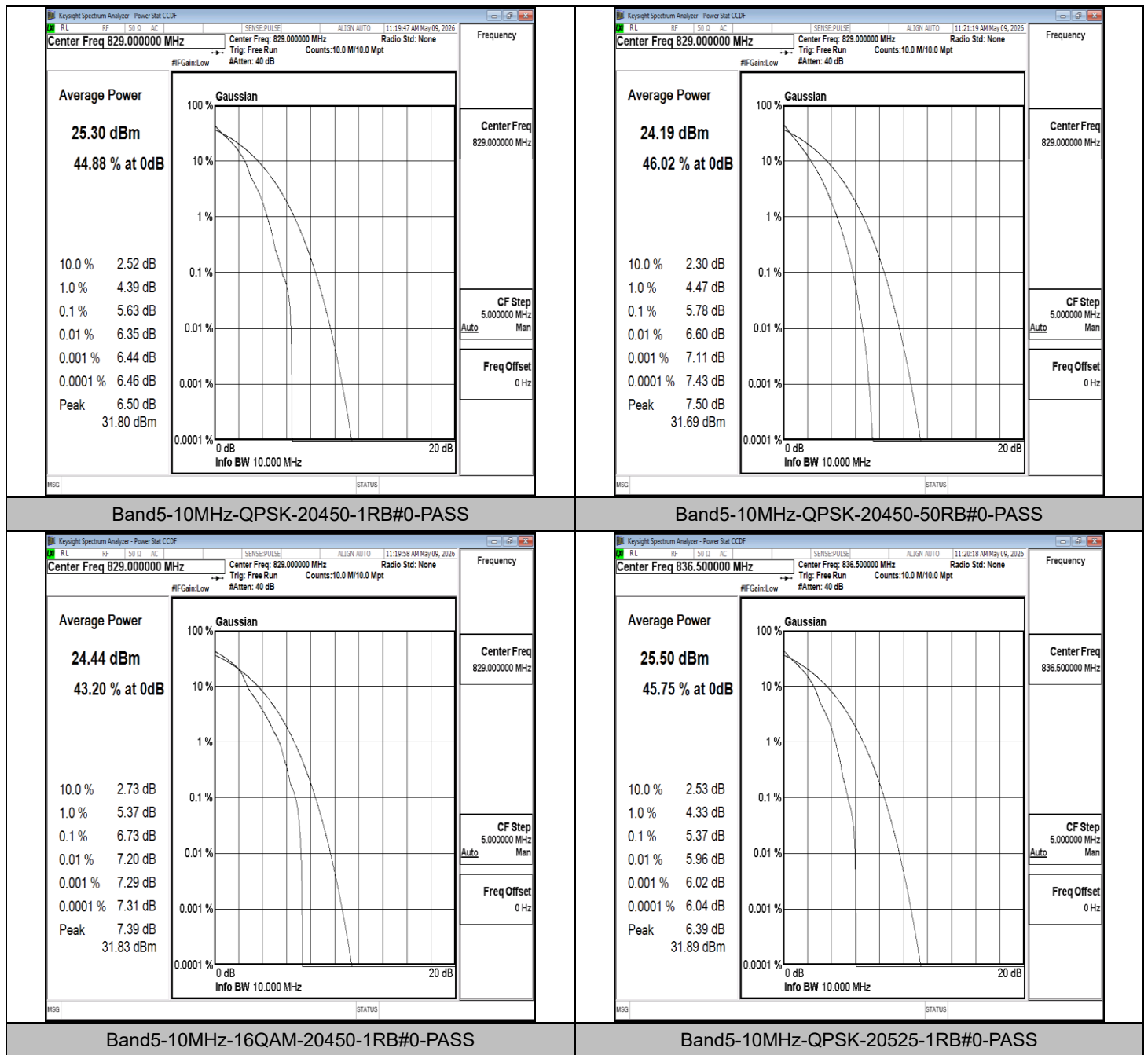
Band5-5MHz-16QAM-20425-1RB#0-PASS

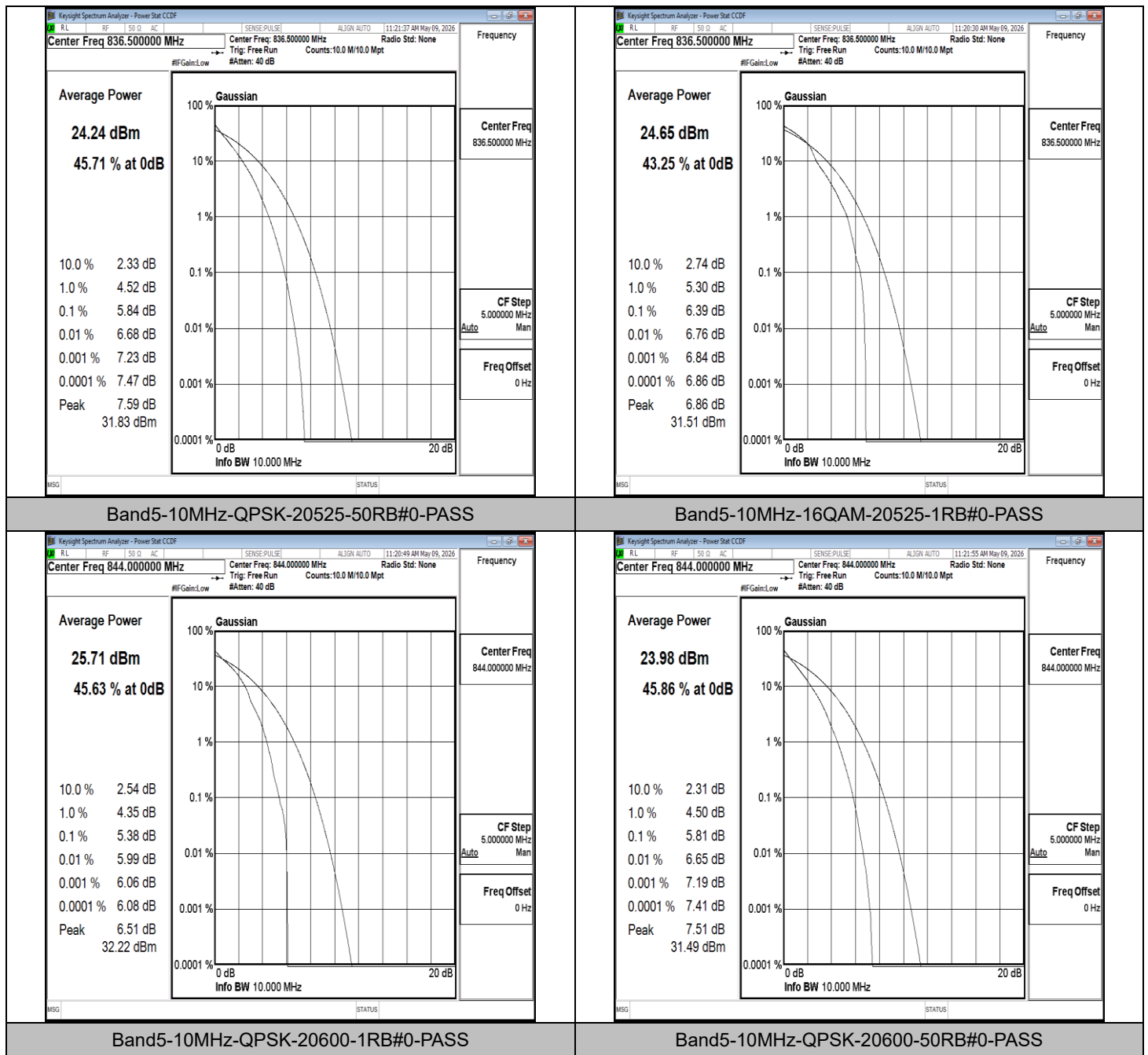


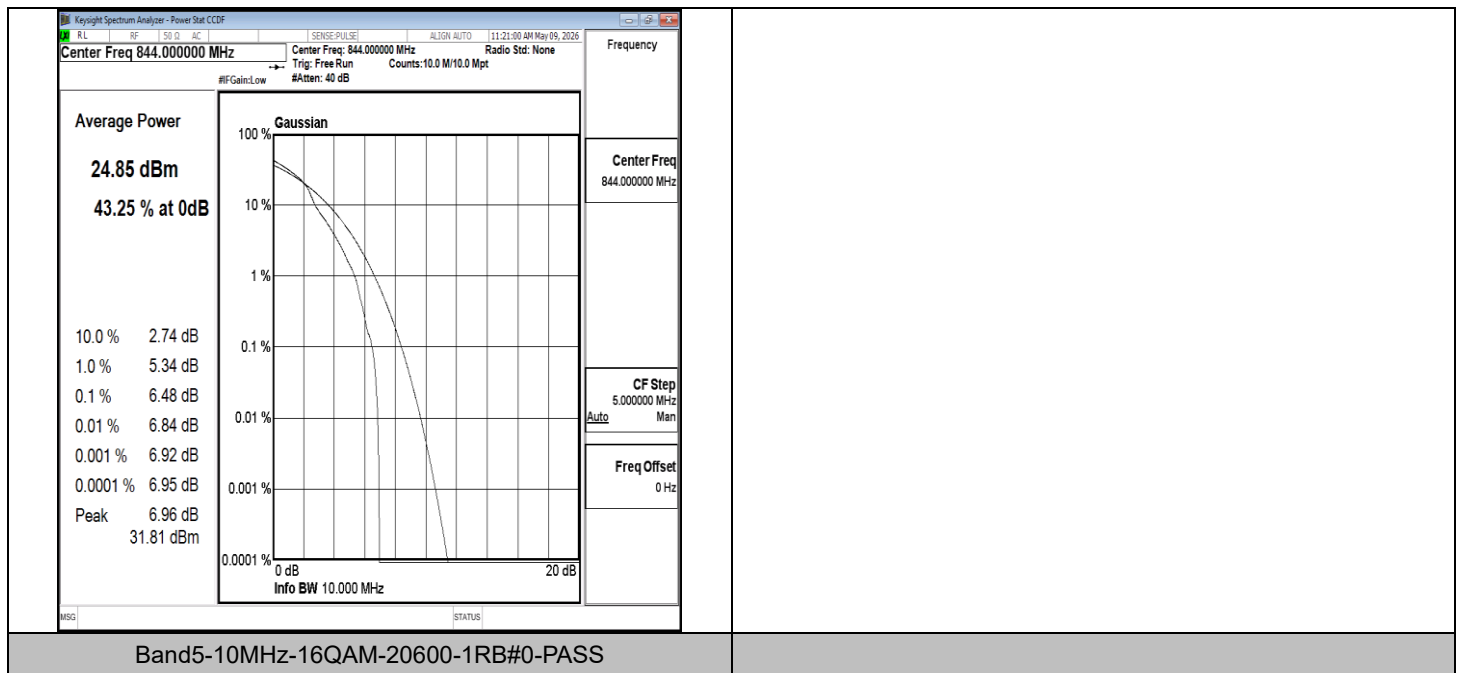
Band5-5MHz-16QAM-20425-25RB#0-PASS









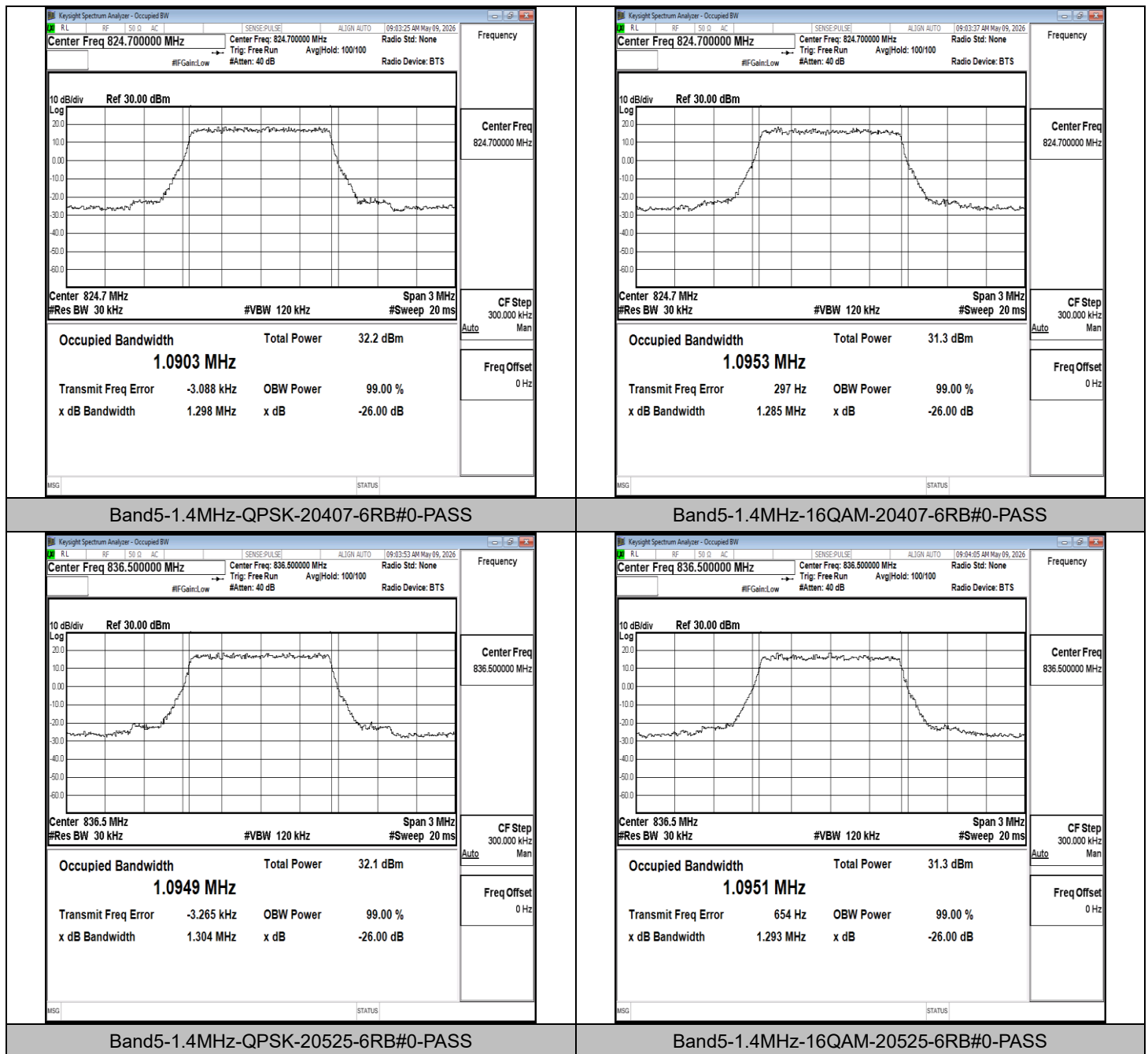


D.3 26dB Bandwidth and Occupied Bandwidth

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	1.0903	1.298	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	1.0953	1.285	PASS
Band5	1.4MHz	QPSK	20525	6RB#0	1.0949	1.304	PASS
Band5	1.4MHz	16QAM	20525	6RB#0	1.0951	1.293	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	1.0934	1.279	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	1.0913	1.280	PASS
Band5	3MHz	QPSK	20415	15RB#0	2.6947	2.973	PASS
Band5	3MHz	16QAM	20415	15RB#0	2.7060	2.983	PASS
Band5	3MHz	QPSK	20525	15RB#0	2.7019	2.949	PASS
Band5	3MHz	16QAM	20525	15RB#0	2.7033	2.988	PASS
Band5	3MHz	QPSK	20635	15RB#0	2.7003	2.972	PASS
Band5	3MHz	16QAM	20635	15RB#0	2.7067	2.971	PASS
Band5	5MHz	QPSK	20425	25RB#0	4.5123	5.033	PASS
Band5	5MHz	16QAM	20425	25RB#0	4.4983	4.976	PASS
Band5	5MHz	QPSK	20525	25RB#0	4.5086	5.024	PASS
Band5	5MHz	16QAM	20525	25RB#0	4.4937	5.003	PASS
Band5	5MHz	QPSK	20625	25RB#0	4.5100	5.016	PASS
Band5	5MHz	16QAM	20625	25RB#0	4.4951	5.006	PASS
Band5	10MHz	QPSK	20450	50RB#0	8.9926	10.22	PASS
Band5	10MHz	16QAM	20450	27RB#0	5.0217	6.101	PASS
Band5	10MHz	QPSK	20525	50RB#0	8.9887	10.29	PASS
Band5	10MHz	16QAM	20525	27RB#0	4.9852	6.186	PASS
Band5	10MHz	QPSK	20600	50RB#0	8.9970	10.19	PASS
Band5	10MHz	16QAM	20600	27RB#0	5.0187	6.143	PASS

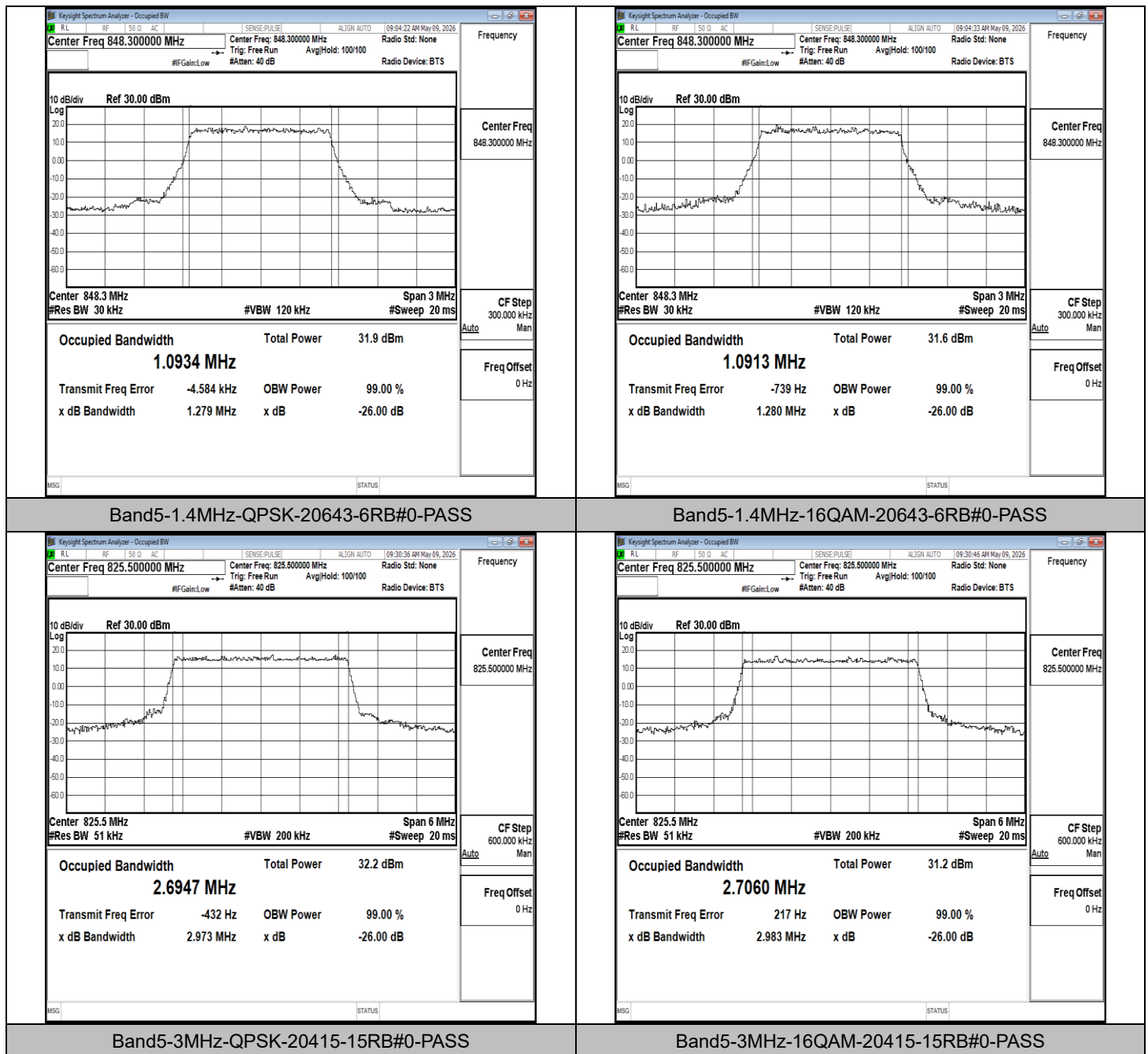
Test Graphs

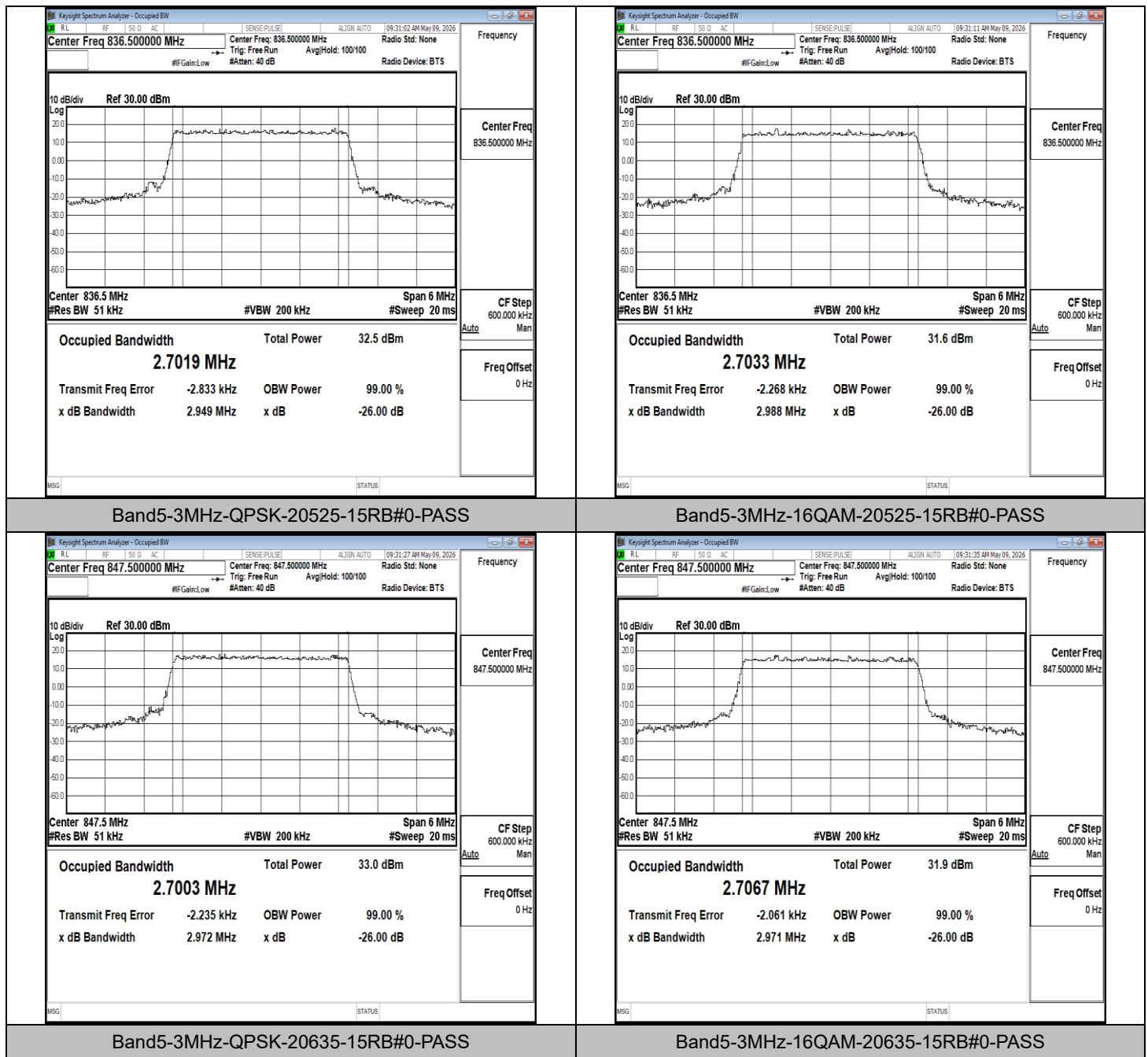


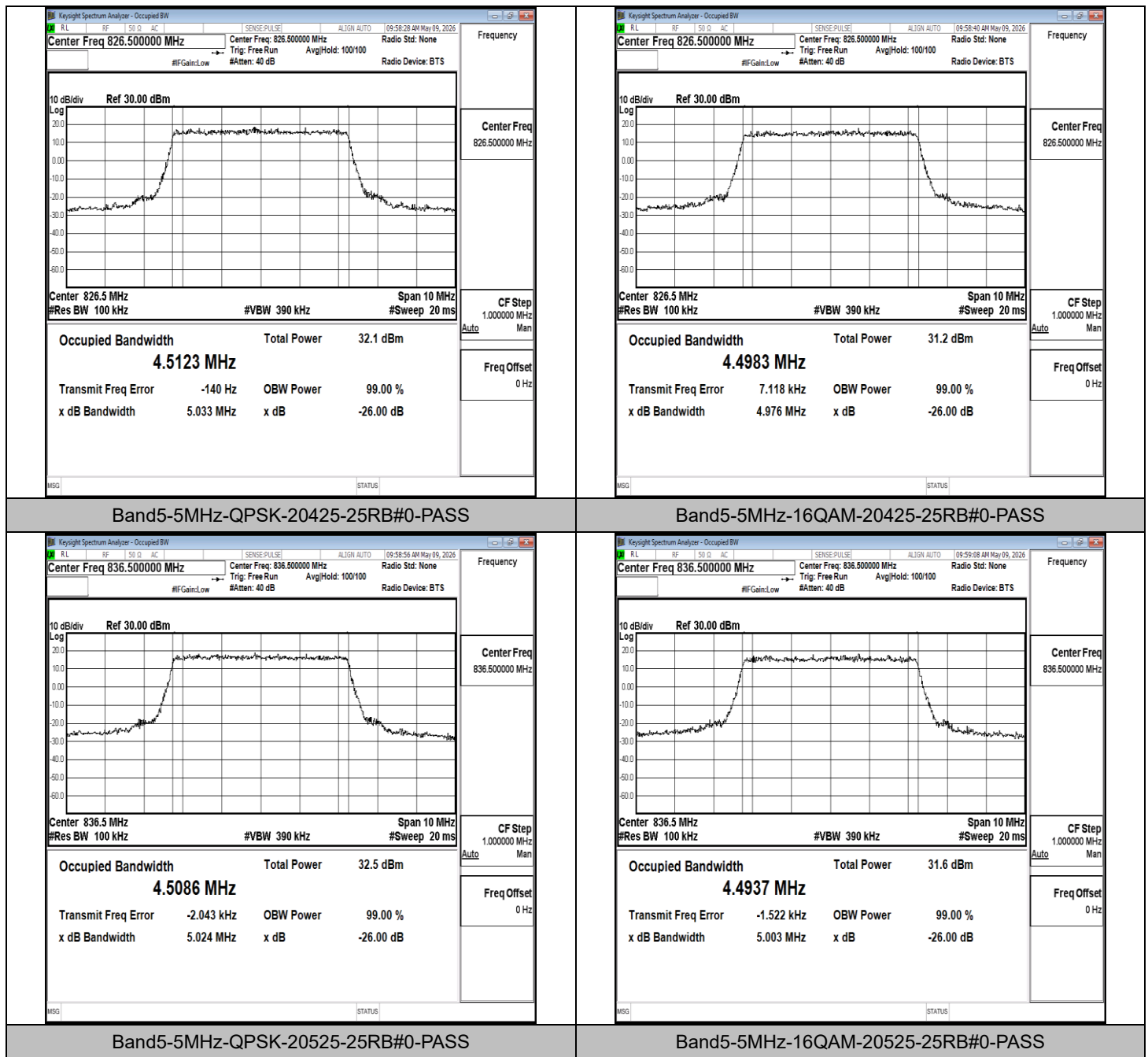
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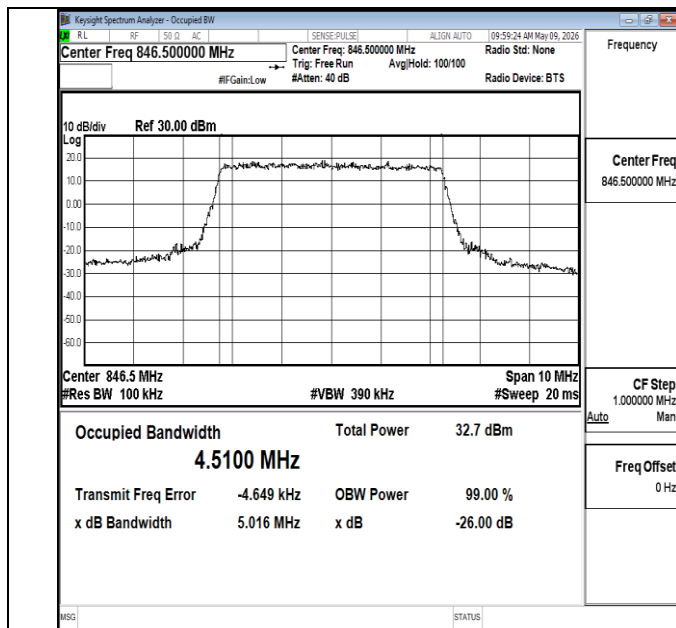
Add: No.44-1, Qianfeng North Road, Shiqi, Panyu District, Guangzhou, Guangdong, China

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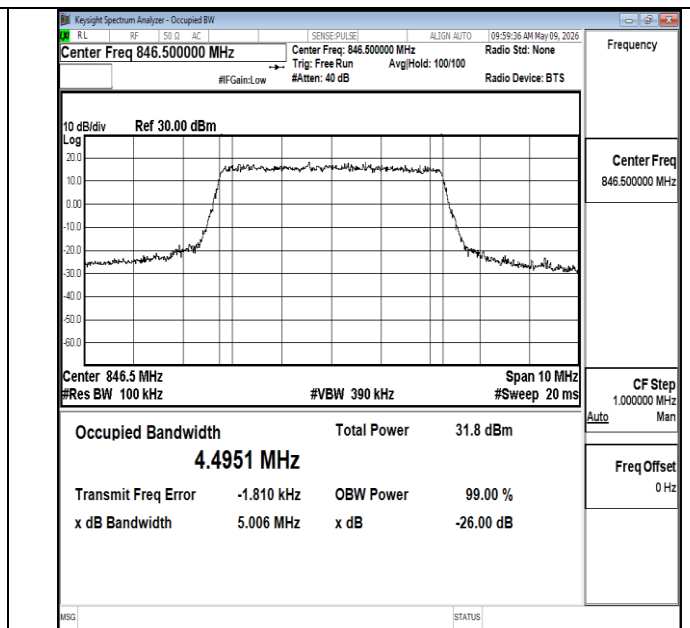




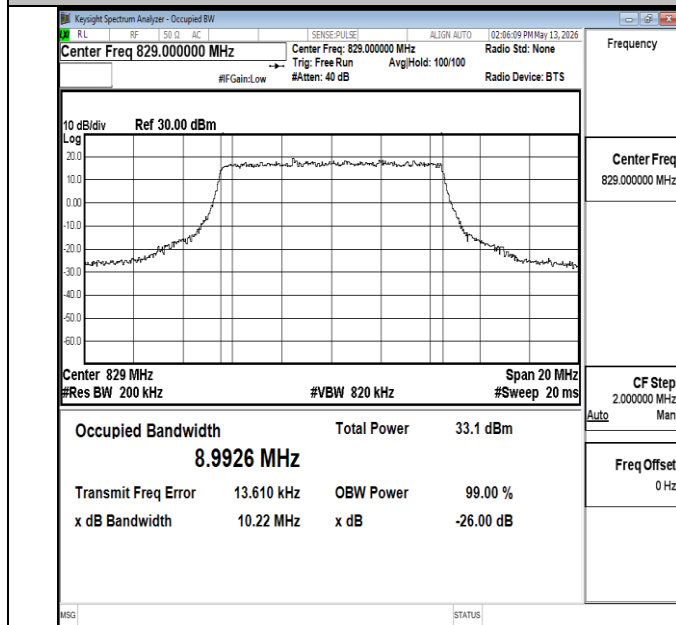




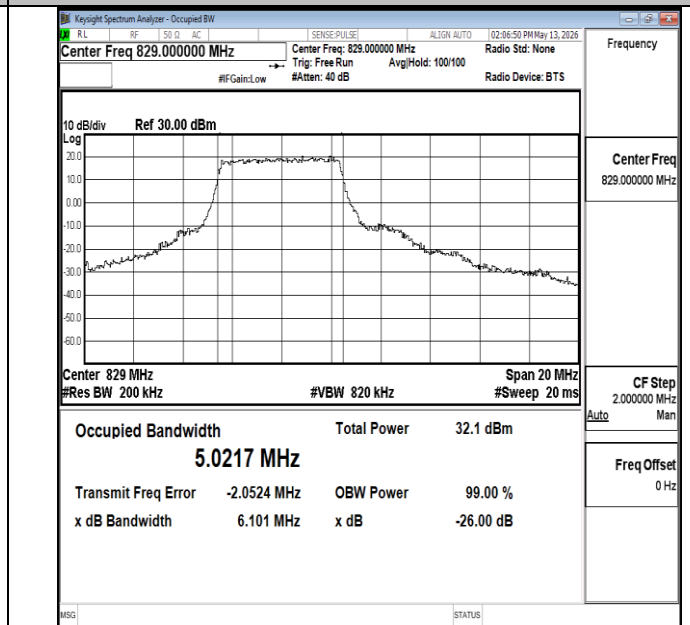
Band5-5MHz-QPSK-20625-25RB#0-PASS



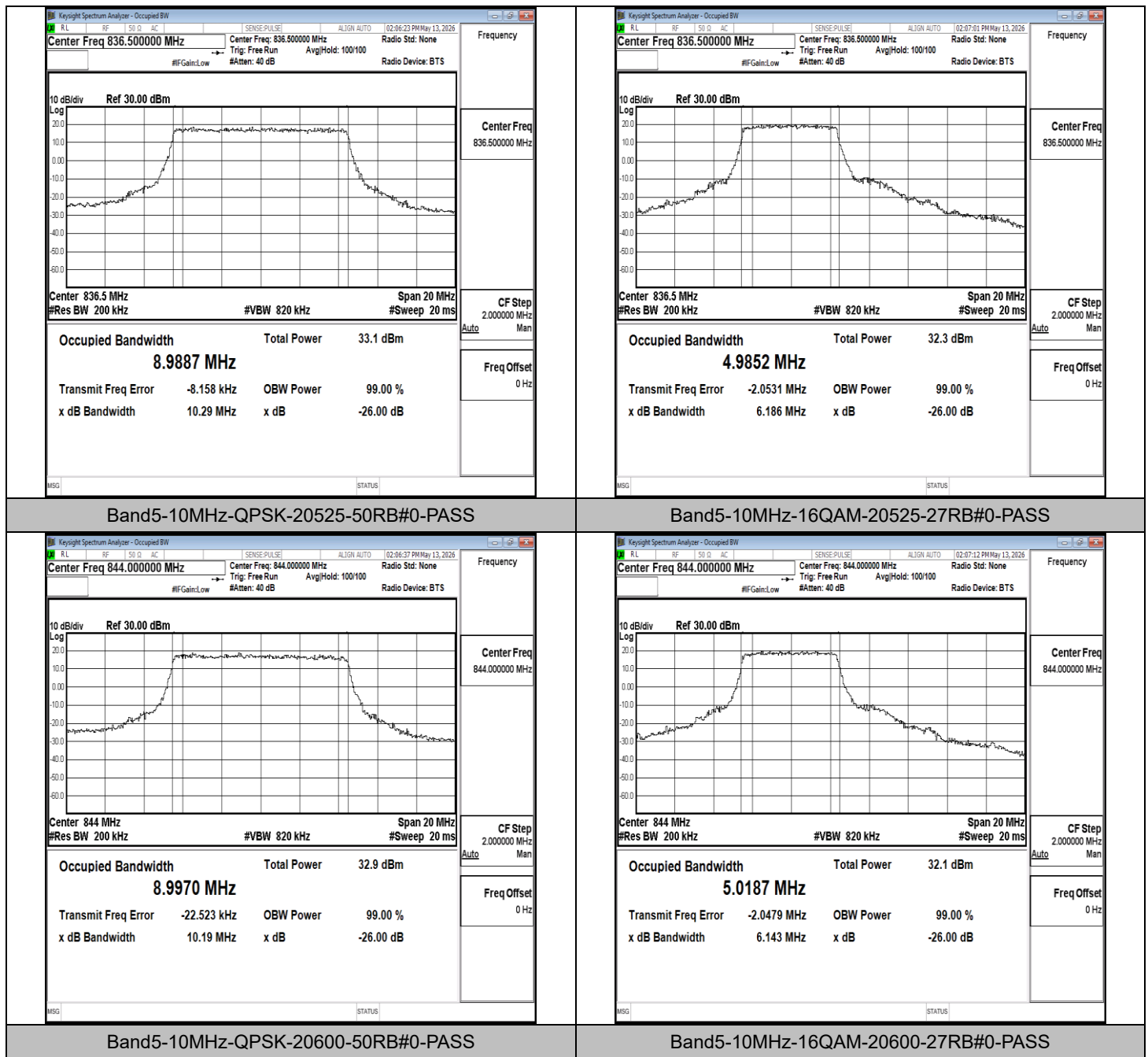
Band5-5MHz-16QAM-20625-25RB#0-PASS



Band5-10MHz-QPSK-20450-50RB#0-PASS



Band5-10MHz-16QAM-20450-27RB#0-PASS

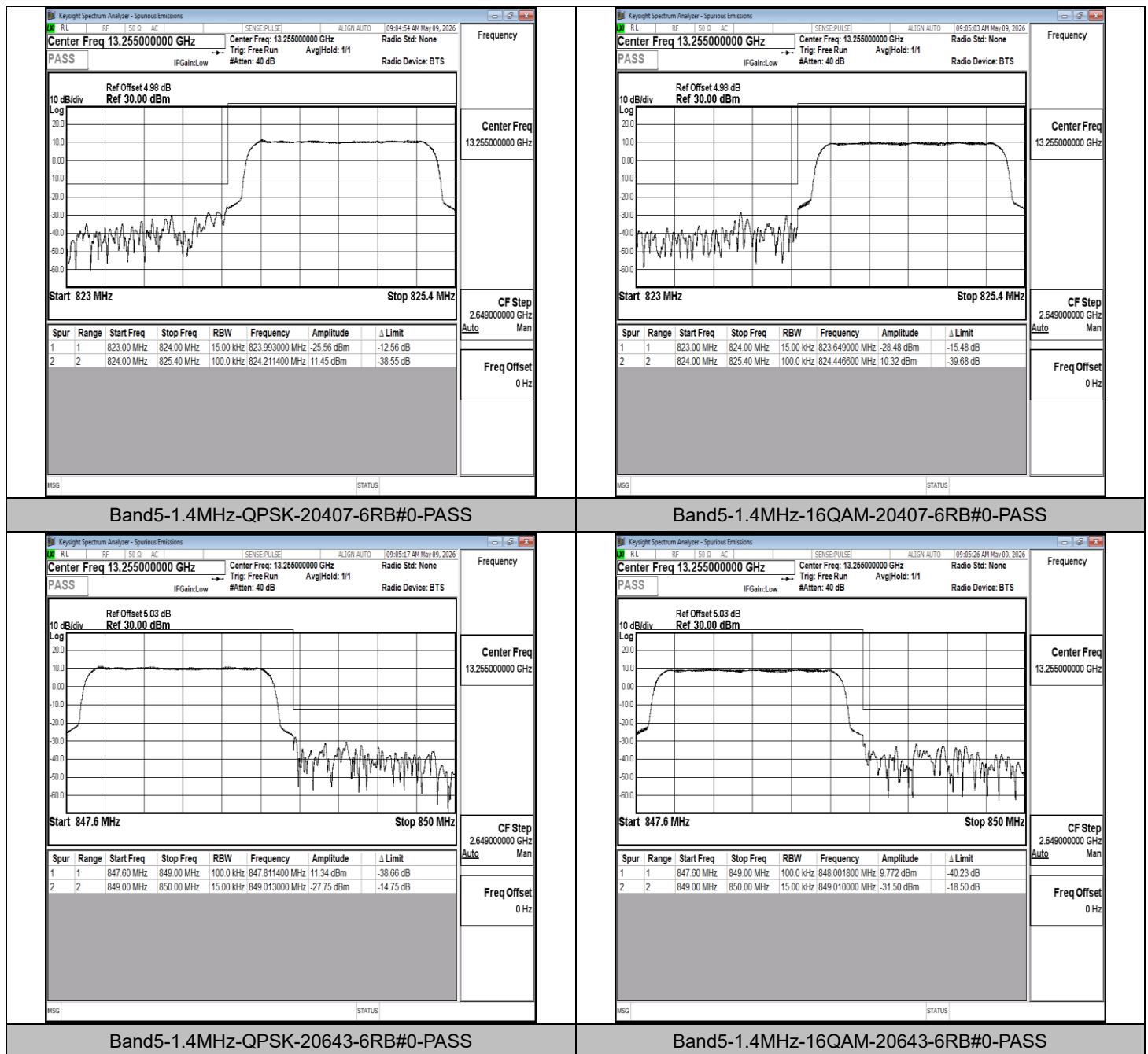


D.4 Band Edge

Test Result

Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dBm)	Margin (dB)	Verdict
Band5	1.4MHz	QPSK	20407	6RB#0	-25.56	12.56	PASS
Band5	1.4MHz	16QAM	20407	6RB#0	-28.48	15.48	PASS
Band5	1.4MHz	QPSK	20643	6RB#0	-27.75	14.75	PASS
Band5	1.4MHz	16QAM	20643	6RB#0	-31.50	18.50	PASS
Band5	3MHz	QPSK	20415	15RB#0	-31.45	18.45	PASS
Band5	3MHz	16QAM	20415	15RB#0	-31.95	18.95	PASS
Band5	3MHz	QPSK	20635	15RB#0	-31.48	18.48	PASS
Band5	3MHz	16QAM	20635	15RB#0	-31.45	18.45	PASS
Band5	5MHz	QPSK	20425	25RB#0	-33.44	20.44	PASS
Band5	5MHz	16QAM	20425	25RB#0	-34.19	21.19	PASS
Band5	5MHz	QPSK	20625	25RB#0	-33.14	20.14	PASS
Band5	5MHz	16QAM	20625	25RB#0	-33.78	20.78	PASS
Band5	10MHz	QPSK	20450	50RB#0	-34.62	21.62	PASS
Band5	10MHz	16QAM	20450	27RB#0	-32.03	19.03	PASS
Band5	10MHz	16QAM	20450	50RB#0	-59.63	46.63	PASS
Band5	10MHz	QPSK	20600	50RB#0	-34.97	21.97	PASS
Band5	10MHz	16QAM	20600	27RB#0	-42.57	29.57	PASS
Band5	10MHz	16QAM	20600	50RB#0	-60.02	47.02	PASS

Test Graphs



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