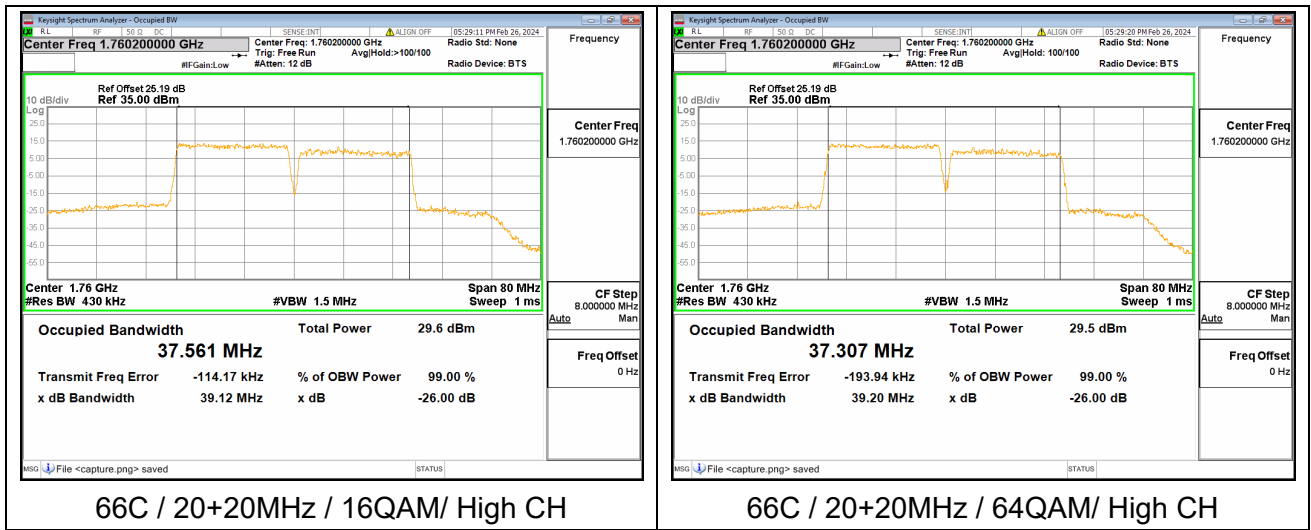




REPORT No.: SZ23040391W09



Shenzhen Morlab Communications Technology Co., Ltd.
FL.1-3, Building A, FeiYang Science Park, No.8 LongChang Road,
Block67, BaoAn District, ShenZhen , GuangDong Province, P. R. China

Tel: 86-755-36698555
Http://www.morlab.cn

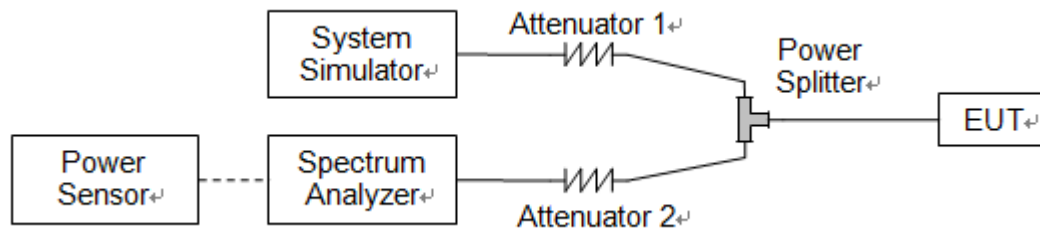
Fax: 86-755-36698525
E-mail: service@morlab.cn

2.3. Peak to Average Ratio

2.3.1. Requirement

According to FCC section 24.232(d), 27.50(d) and 27.50(j)(4), the peak to average ratio (PAR) of the transmission may not exceed 13dB.

2.3.2. Test Description



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

2.3.3. Test Procedure

KDB 971168 D01v03 Section 5.7 and ANSI/TIA-603-E-2016.

2.3.4. Test Result

Record the maximum PAPR level associated with a probability of 0.1%.



LTE Band	BW(MHz)	Channel Level	PCC CH	SCC CH	Modulation	Peak to Average Radio(dB)	Verdict
48C	5+20	Low	55273	55390	QPSK	5.56	PASS
48C	5+20	Low	55273	55390	16QAM	6.24	PASS
48C	5+20	Low	55273	55390	64QAM	6.17	PASS
48C	5+20	Mid	55898	56015	QPSK	5.54	PASS
48C	5+20	Mid	55898	56015	16QAM	6.19	PASS
48C	5+20	Mid	55898	56015	64QAM	6.15	PASS
48C	5+20	High	56523	56640	QPSK	5.56	PASS
48C	5+20	High	56523	56640	16QAM	6.28	PASS
48C	5+20	High	56523	56640	64QAM	6.24	PASS
48C	10+20	Low	55295	55439	QPSK	5.44	PASS
48C	10+20	Low	55295	55439	16QAM	6.11	PASS
48C	10+20	Low	55295	55439	64QAM	6.43	PASS
48C	10+20	Mid	55896	56040	QPSK	5.50	PASS
48C	10+20	Mid	55896	56040	16QAM	6.23	PASS
48C	10+20	Mid	55896	56040	64QAM	6.35	PASS
48C	10+20	High	56496	56640	QPSK	5.55	PASS
48C	10+20	High	56496	56640	16QAM	6.30	PASS
48C	10+20	High	56496	56640	64QAM	6.29	PASS
48C	15+20	Low	55318	55489	QPSK	5.24	PASS
48C	15+20	Low	55318	55489	16QAM	6.23	PASS
48C	15+20	Low	55318	55489	64QAM	6.18	PASS
48C	15+20	Mid	55893	56064	QPSK	5.31	PASS
48C	15+20	Mid	55893	56064	16QAM	6.15	PASS
48C	15+20	Mid	55893	56064	64QAM	6.23	PASS
48C	15+20	High	56469	56640	QPSK	5.25	PASS
48C	15+20	High	56469	56640	16QAM	6.16	PASS
48C	15+20	High	56469	56640	64QAM	6.22	PASS
48C	20+5	Low	55340	55457	QPSK	5.32	PASS
48C	20+5	Low	55340	55457	16QAM	6.25	PASS
48C	20+5	Low	55340	55457	64QAM	6.20	PASS
48C	20+10	Low	55340	55484	QPSK	5.35	PASS
48C	20+10	Low	55340	55484	16QAM	6.26	PASS
48C	20+10	Low	55340	55484	64QAM	6.24	PASS
48C	20+15	Low	55340	55511	QPSK	5.33	PASS
48C	20+15	Low	55340	55511	16QAM	6.31	PASS



REPORT No.: SZ23040391W09

48C	20+15	Low	55340	55511	64QAM	6.22	PASS
48C	20+20	Low	55340	55538	QPSK	5.33	PASS
48C	20+20	Low	55340	55538	16QAM	6.27	PASS
48C	20+20	Low	55340	55538	64QAM	6.22	PASS
48C	20+5	Mid	55965	56082	QPSK	5.34	PASS
48C	20+5	Mid	55965	56082	16QAM	6.26	PASS
48C	20+5	Mid	55965	56082	64QAM	6.23	PASS
48C	20+10	Mid	55941	56085	QPSK	5.29	PASS
48C	20+10	Mid	55941	56085	16QAM	6.29	PASS
48C	20+10	Mid	55941	56085	64QAM	6.21	PASS
48C	20+15	Mid	55916	56087	QPSK	5.37	PASS
48C	20+15	Mid	55916	56087	16QAM	6.22	PASS
48C	20+15	Mid	55916	56087	64QAM	6.19	PASS
48C	20+20	Mid	55891	56089	QPSK	5.30	PASS
48C	20+20	Mid	55891	56089	16QAM	6.28	PASS
48C	20+20	Mid	55891	56089	64QAM	6.21	PASS
48C	20+5	High	56590	56707	QPSK	5.37	PASS
48C	20+5	High	56590	56707	16QAM	6.32	PASS
48C	20+5	High	56590	56707	64QAM	6.29	PASS
48C	20+10	High	56541	56685	QPSK	5.35	PASS
48C	20+10	High	56541	56685	16QAM	6.34	PASS
48C	20+10	High	56541	56685	64QAM	6.27	PASS
48C	20+15	High	56491	56662	QPSK	5.34	PASS
48C	20+15	High	56491	56662	16QAM	6.34	PASS
48C	20+15	High	56491	56662	64QAM	6.28	PASS
48C	20+20	High	56442	56640	QPSK	5.36	PASS
48C	20+20	High	56442	56640	16QAM	6.34	PASS
48C	20+20	High	56442	56640	64QAM	6.28	PASS
66B	5+5	Low	131997	132045	QPSK	5.95	PASS
66B	5+5	Low	131997	132045	16QAM	6.60	PASS
66B	5+5	Low	131997	132045	64QAM	6.82	PASS
66B	5+10	Low	132000	132072	QPSK	6.02	PASS
66B	5+10	Low	132000	132072	16QAM	6.70	PASS
66B	5+10	Low	132000	132072	64QAM	6.84	PASS
66B	5+15	Low	132002	132095	QPSK	6.07	PASS
66B	5+15	Low	132002	132095	16QAM	6.72	PASS
66B	5+15	Low	132002	132095	64QAM	6.83	PASS
66B	5+5	Mid	132398	132446	QPSK	5.99	PASS



REPORT No.: SZ23040391W09

66B	5+5	Mid	132398	132446	16QAM	6.78	PASS
66B	5+5	Mid	132398	132446	64QAM	7.09	PASS
66B	5+10	Mid	132375	132447	QPSK	6.25	PASS
66B	5+10	Mid	132375	132447	16QAM	6.89	PASS
66B	5+10	Mid	132375	132447	64QAM	7.14	PASS
66B	5+15	Mid	132353	132446	QPSK	6.19	PASS
66B	5+15	Mid	132353	132446	16QAM	6.87	PASS
66B	5+15	Mid	132353	132446	64QAM	7.09	PASS
66B	5+5	High	132599	132647	QPSK	5.90	PASS
66B	5+5	High	132599	132647	16QAM	6.69	PASS
66B	5+5	High	132599	132647	64QAM	6.96	PASS
66B	5+10	High	132550	132622	QPSK	5.92	PASS
66B	5+10	High	132550	132622	16QAM	6.66	PASS
66B	5+10	High	132550	132622	64QAM	6.77	PASS
66B	5+15	High	132504	132597	QPSK	5.88	PASS
66B	5+15	High	132504	132597	16QAM	6.59	PASS
66B	5+15	High	132504	132597	64QAM	6.77	PASS
66B	10+5	Low	132022	132094	QPSK	6.17	PASS
66B	10+5	Low	132022	132094	16QAM	6.87	PASS
66B	10+5	Low	132022	132094	64QAM	6.98	PASS
66B	10+10	Low	132022	132121	QPSK	6.17	PASS
66B	10+10	Low	132022	132121	16QAM	6.85	PASS
66B	10+10	Low	132022	132121	64QAM	6.96	PASS
66B	10+5	Mid	132397	132469	QPSK	6.22	PASS
66B	10+5	Mid	132397	132469	16QAM	6.96	PASS
66B	10+5	Mid	132397	132469	64QAM	7.14	PASS
66B	10+10	Mid	132373	132472	QPSK	6.32	PASS
66B	10+10	Mid	132373	132472	16QAM	6.89	PASS
66B	10+10	Mid	132373	132472	64QAM	7.12	PASS
66B	10+5	High	132572	132644	QPSK	6.07	PASS
66B	10+5	High	132572	132644	16QAM	6.80	PASS
66B	10+5	High	132572	132644	64QAM	6.94	PASS
66B	10+10	High	132523	132622	QPSK	6.04	PASS
66B	10+10	High	132523	132622	16QAM	6.69	PASS
66B	10+10	High	132523	132622	64QAM	6.88	PASS
66B	15+5	Low	132047	132140	QPSK	6.11	PASS
66B	15+5	Low	132047	132140	16QAM	6.82	PASS
66B	15+5	Low	132047	132140	64QAM	7.03	PASS



REPORT No.: SZ23040391W09

66B	15+5	Mid	132398	132491	QPSK	6.16	PASS
66B	15+5	Mid	132398	132491	16QAM	6.84	PASS
66B	15+5	Mid	132398	132491	64QAM	7.04	PASS
66B	15+5	High	132549	132642	QPSK	6.08	PASS
66B	15+5	High	132549	132642	16QAM	6.75	PASS
66B	15+5	High	132549	132642	64QAM	6.93	PASS
66C	5+20	Low	132005	132122	QPSK	6.03	PASS
66C	5+20	Low	132005	132122	16QAM	6.68	PASS
66C	5+20	Low	132005	132122	64QAM	6.92	PASS
66C	5+20	Mid	132330	132447	QPSK	6.19	PASS
66C	5+20	Mid	132330	132447	16QAM	6.85	PASS
66C	5+20	Mid	132330	132447	64QAM	6.98	PASS
66C	5+20	High	132455	132572	QPSK	6.22	PASS
66C	5+20	High	132455	132572	16QAM	6.96	PASS
66C	5+20	High	132455	132572	64QAM	7.07	PASS
66C	10+15	Low	132025	132145	QPSK	6.10	PASS
66C	10+15	Low	132025	132145	16QAM	6.76	PASS
66C	10+15	Low	132025	132145	64QAM	6.98	PASS
66C	10+20	Low	132027	132171	QPSK	6.06	PASS
66C	10+20	Low	132027	132171	16QAM	6.78	PASS
66C	10+20	Low	132027	132171	64QAM	6.99	PASS
66C	10+15	Mid	132351	132471	QPSK	6.24	PASS
66C	10+15	Mid	132351	132471	16QAM	6.94	PASS
66C	10+15	Mid	132351	132471	64QAM	7.14	PASS
66C	10+20	Mid	132328	132472	QPSK	6.16	PASS
66C	10+20	Mid	132328	132472	16QAM	6.88	PASS
66C	10+20	Mid	132328	132472	64QAM	7.00	PASS
66C	10+15	High	132477	132597	QPSK	6.22	PASS
66C	10+15	High	132477	132597	16QAM	6.96	PASS
66C	10+15	High	132477	132597	64QAM	7.07	PASS
66C	10+20	High	132428	132572	QPSK	6.23	PASS
66C	10+20	High	132428	132572	16QAM	6.91	PASS
66C	10+20	High	132428	132572	64QAM	7.13	PASS
66C	15+10	Low	132047	132167	QPSK	6.45	PASS
66C	15+10	Low	132047	132167	16QAM	6.84	PASS
66C	15+10	Low	132047	132167	64QAM	7.06	PASS
66C	15+15	Low	132047	132197	QPSK	6.22	PASS
66C	15+15	Low	132047	132197	16QAM	6.81	PASS



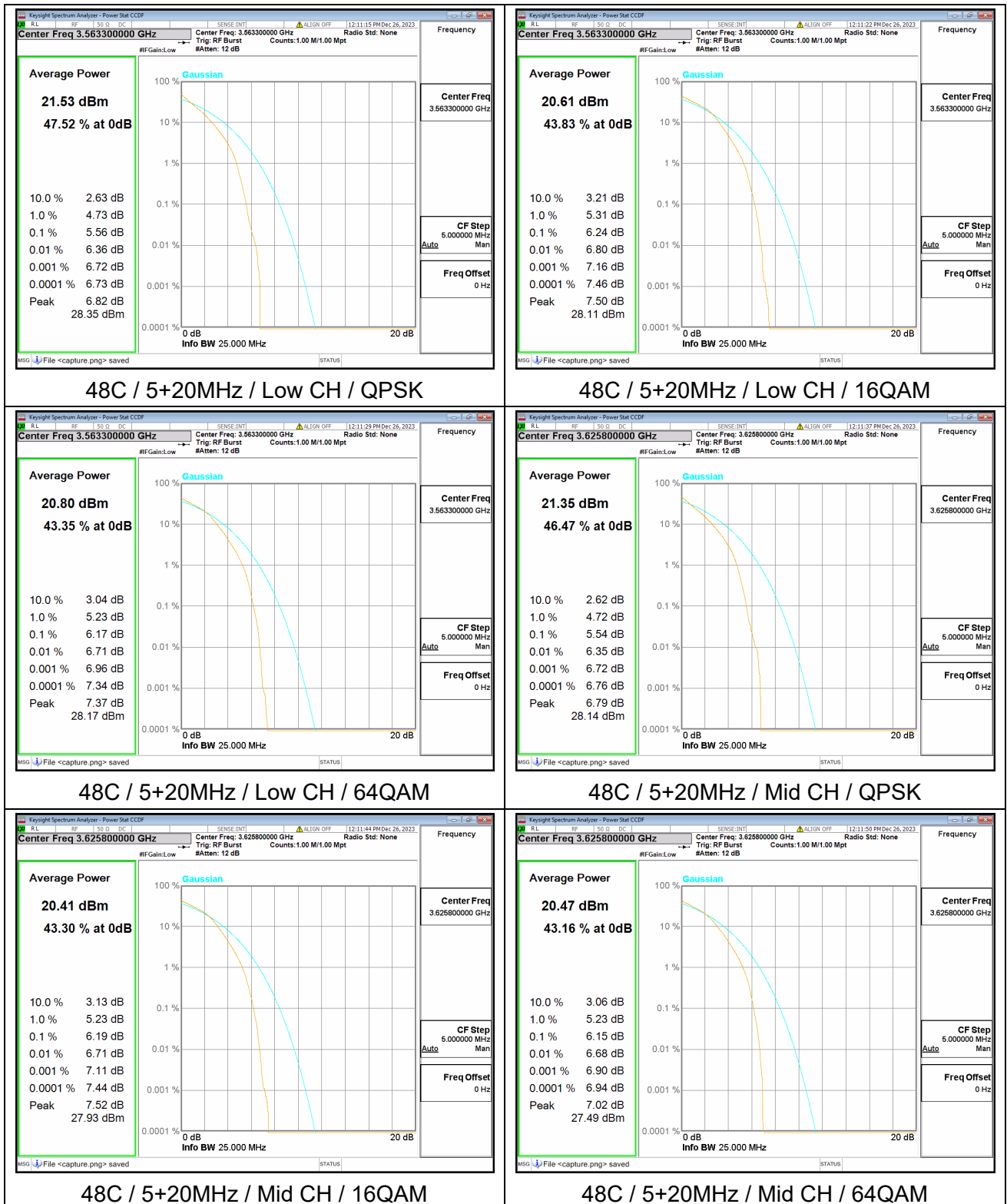
REPORT No.: SZ23040391W09

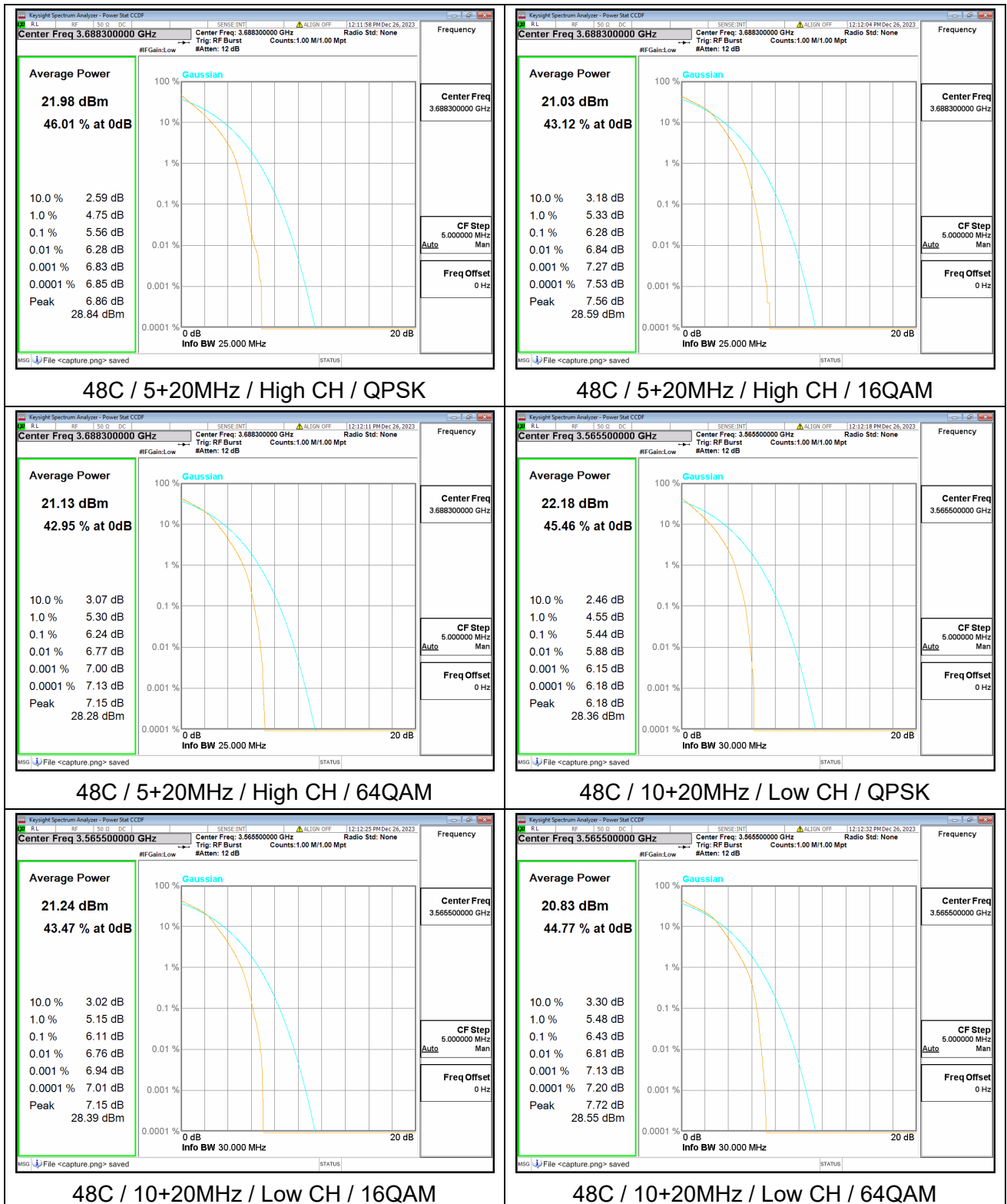
66C	15+15	Low	132047	132197	64QAM	7.10	PASS
66C	15+20	Low	132050	132221	QPSK	6.13	PASS
66C	15+20	Low	132050	132221	16QAM	6.72	PASS
66C	15+20	Low	132050	132221	64QAM	7.13	PASS
66C	15+10	Mid	132373	132493	QPSK	6.24	PASS
66C	15+10	Mid	132373	132493	16QAM	6.98	PASS
66C	15+10	Mid	132373	132493	64QAM	7.12	PASS
66C	15+15	Mid	132347	132497	QPSK	6.32	PASS
66C	15+15	Mid	132347	132497	16QAM	6.93	PASS
66C	15+15	Mid	132347	132497	64QAM	7.05	PASS
66C	15+20	Mid	132325	132496	QPSK	6.13	PASS
66C	15+20	Mid	132325	132496	16QAM	6.83	PASS
66C	15+20	Mid	132325	132496	64QAM	6.95	PASS
66C	15+10	High	132499	132619	QPSK	6.21	PASS
66C	15+10	High	132499	132619	16QAM	6.92	PASS
66C	15+10	High	132499	132619	64QAM	7.07	PASS
66C	15+15	High	132447	132597	QPSK	6.33	PASS
66C	15+15	High	132447	132597	16QAM	6.99	PASS
66C	15+15	High	132447	132597	64QAM	7.19	PASS
66C	15+20	High	132401	132572	QPSK	6.30	PASS
66C	15+20	High	132401	132572	16QAM	6.89	PASS
66C	15+20	High	132401	132572	64QAM	7.15	PASS
66C	20+10	Low	132072	132216	QPSK	7.02	PASS
66C	20+10	Low	132072	132216	16QAM	6.83	PASS
66C	20+10	Low	132072	132216	64QAM	7.05	PASS
66C	20+15	Low	132072	132243	QPSK	6.19	PASS
66C	20+15	Low	132072	132243	16QAM	6.81	PASS
66C	20+15	Low	132072	132243	64QAM	6.98	PASS
66C	20+5	Low	132072	132189	QPSK	6.16	PASS
66C	20+5	Low	132072	132189	16QAM	6.82	PASS
66C	20+5	Low	132072	132189	64QAM	7.03	PASS
66C	20+20	Low	132072	132270	QPSK	6.25	PASS
66C	20+20	Low	132072	132270	16QAM	6.78	PASS
66C	20+20	Low	132072	132270	64QAM	6.98	PASS
66C	20+10	Mid	132373	132517	QPSK	6.22	PASS
66C	20+10	Mid	132373	132517	16QAM	6.89	PASS
66C	20+10	Mid	132373	132517	64QAM	7.08	PASS
66C	20+15	Mid	132348	132519	QPSK	6.17	PASS

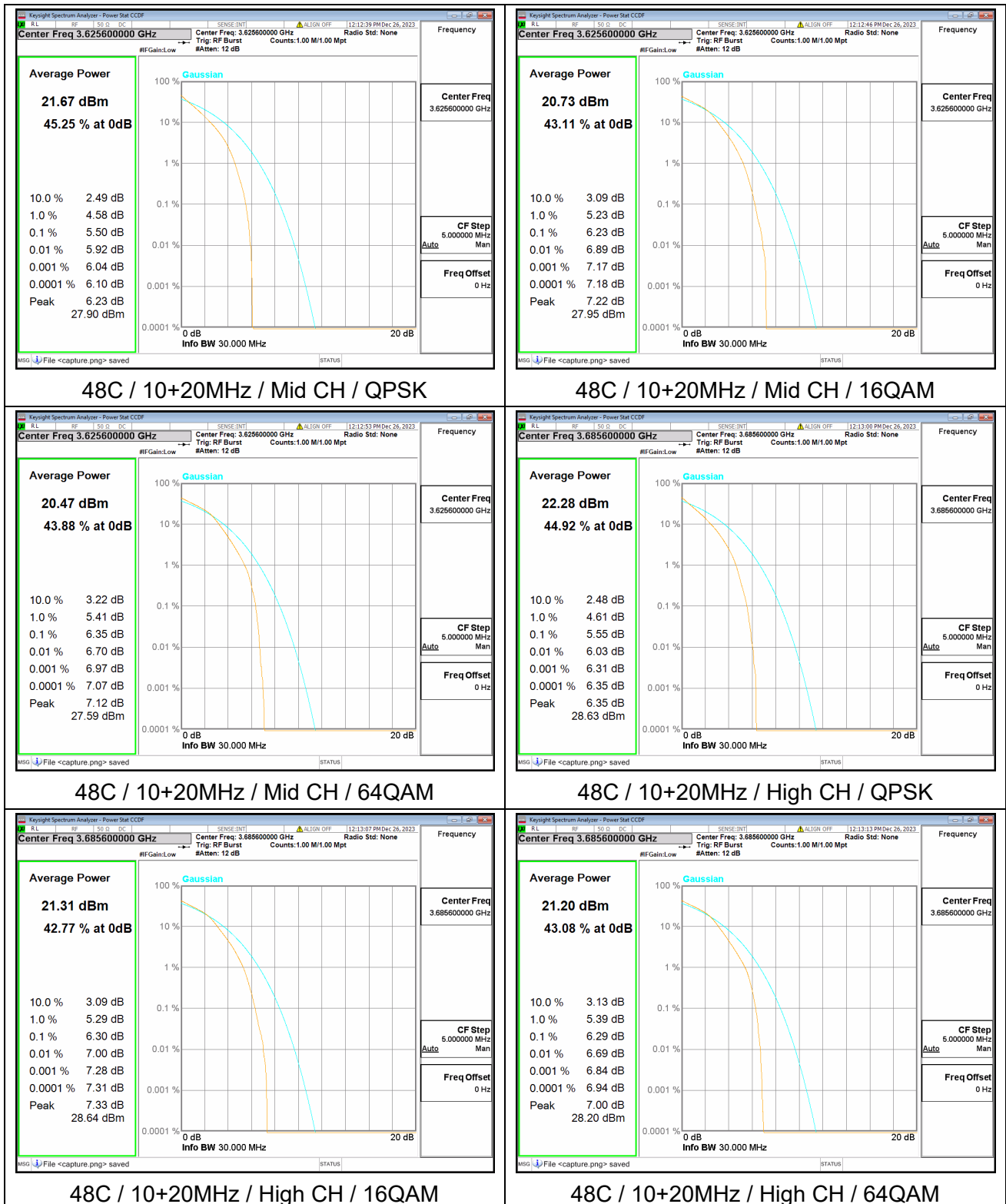


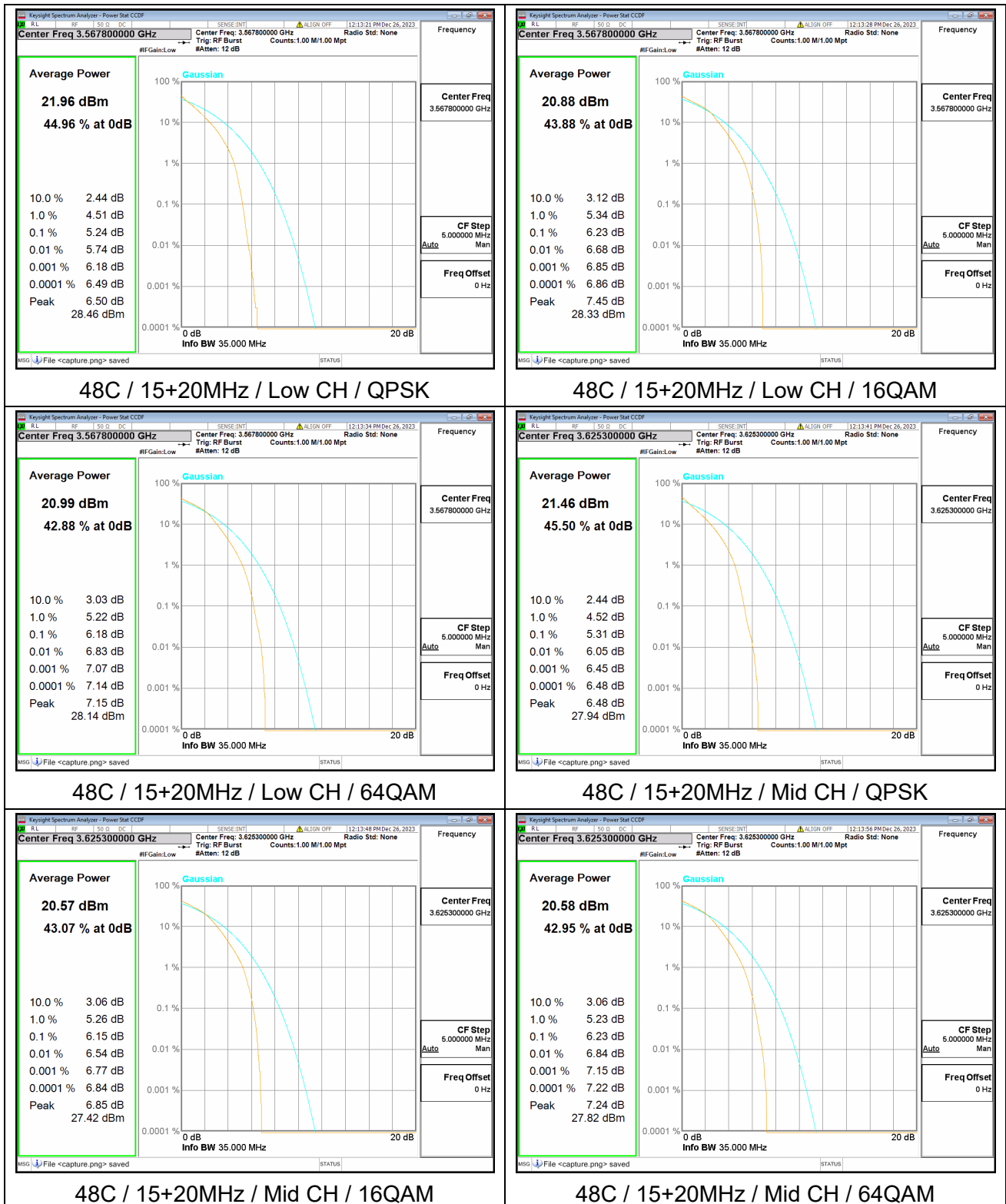
REPORT No.: SZ23040391W09

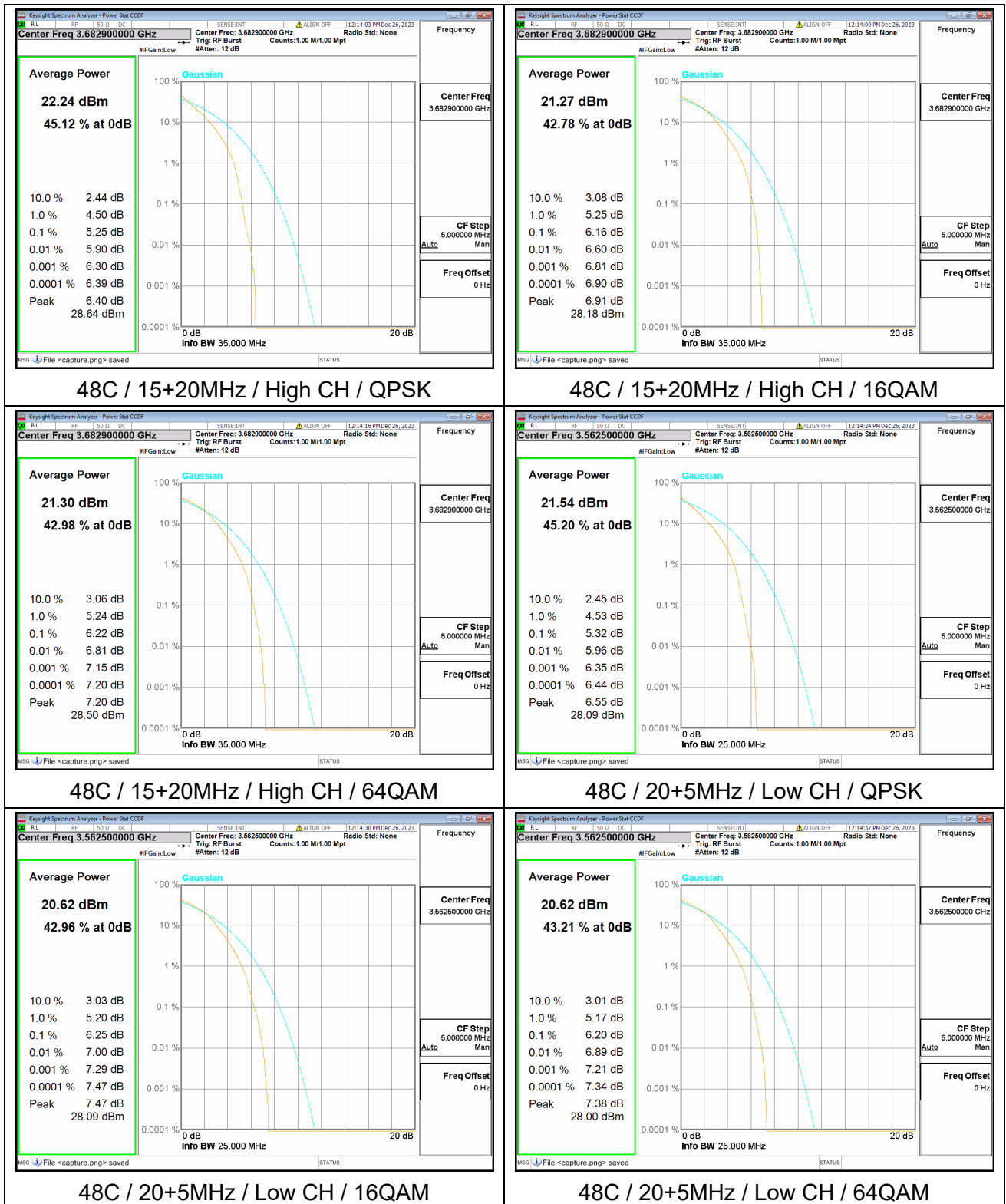
66C	20+15	Mid	132348	132519	16QAM	6.84	PASS
66C	20+15	Mid	132348	132519	64QAM	6.86	PASS
66C	20+5	Mid	132397	132514	QPSK	6.27	PASS
66C	20+5	Mid	132397	132514	16QAM	6.89	PASS
66C	20+5	Mid	132397	132514	64QAM	7.10	PASS
66C	20+20	Mid	132323	132521	QPSK	6.17	PASS
66C	20+20	Mid	132323	132521	16QAM	6.82	PASS
66C	20+20	Mid	132323	132521	64QAM	7.07	PASS
66C	20+10	High	132473	132617	QPSK	6.23	PASS
66C	20+10	High	132473	132617	16QAM	6.94	PASS
66C	20+10	High	132473	132617	64QAM	7.19	PASS
66C	20+15	High	132423	132594	QPSK	6.35	PASS
66C	20+15	High	132423	132594	16QAM	6.99	PASS
66C	20+15	High	132423	132594	64QAM	7.15	PASS
66C	20+5	High	132522	132639	QPSK	6.26	PASS
66C	20+5	High	132522	132639	16QAM	6.92	PASS
66C	20+5	High	132522	132639	64QAM	7.16	PASS
66C	20+20	High	132374	132572	QPSK	6.35	PASS
66C	20+20	High	132374	132572	16QAM	6.97	PASS
66C	20+20	High	132374	132572	64QAM	7.15	PASS

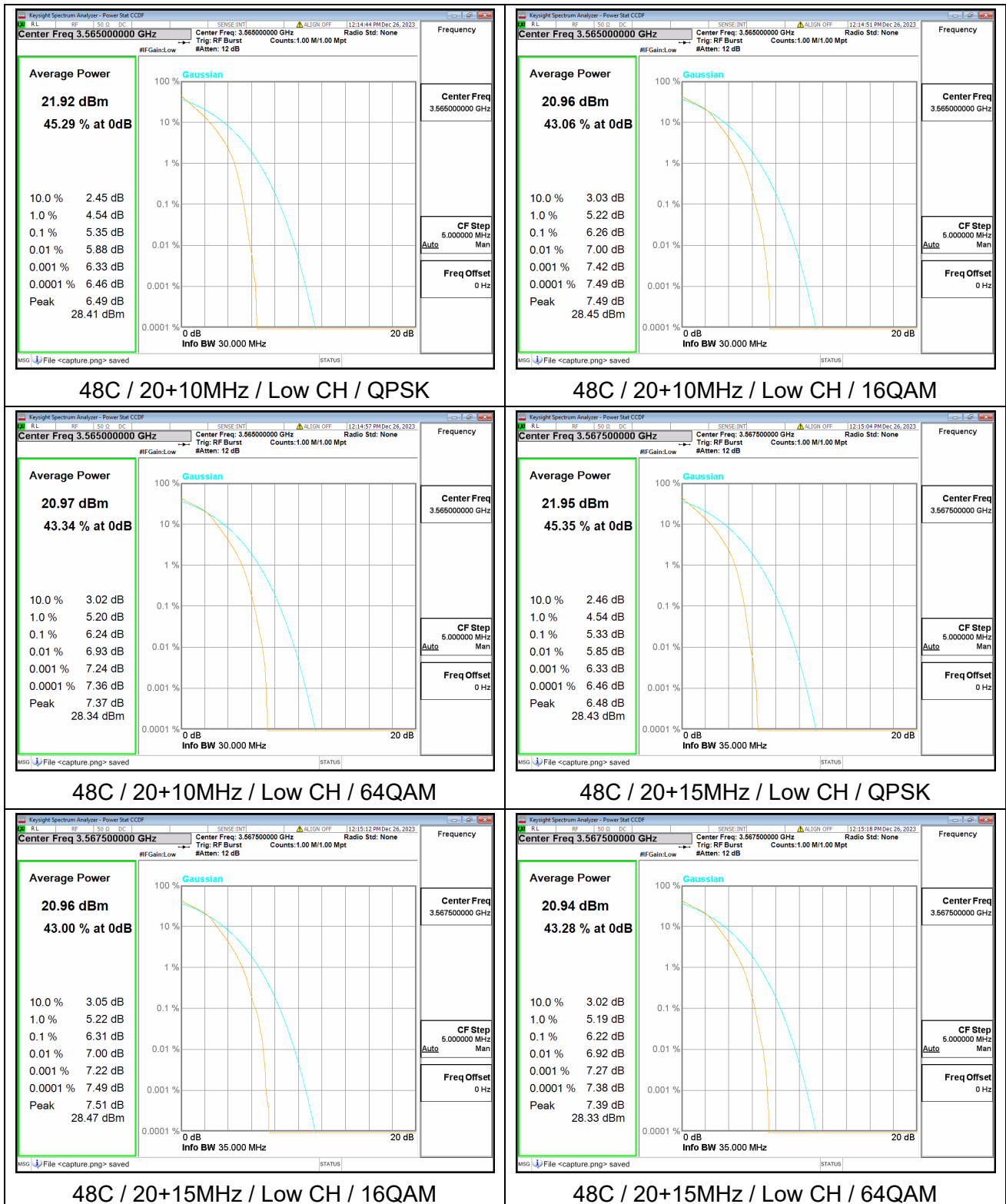


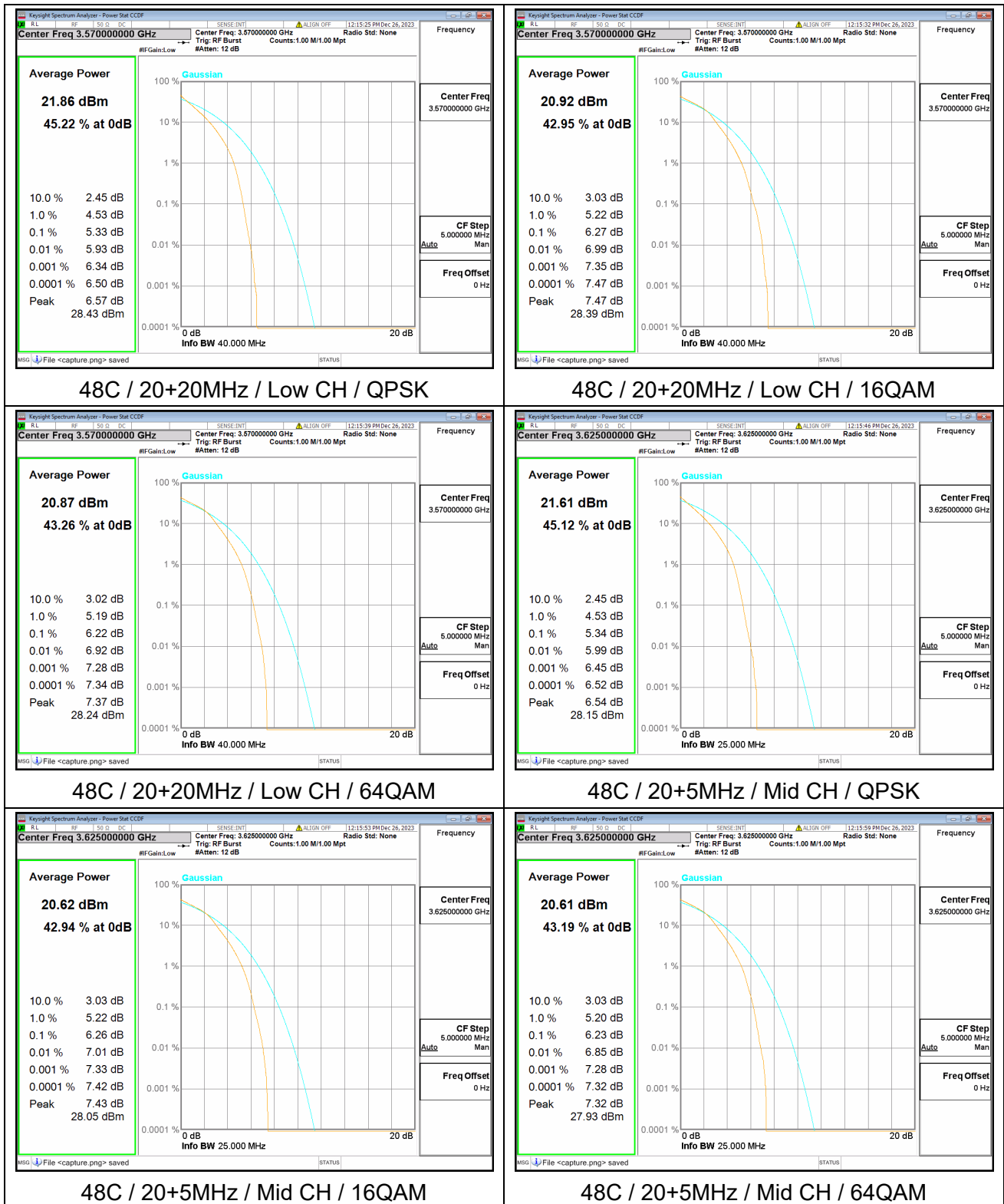


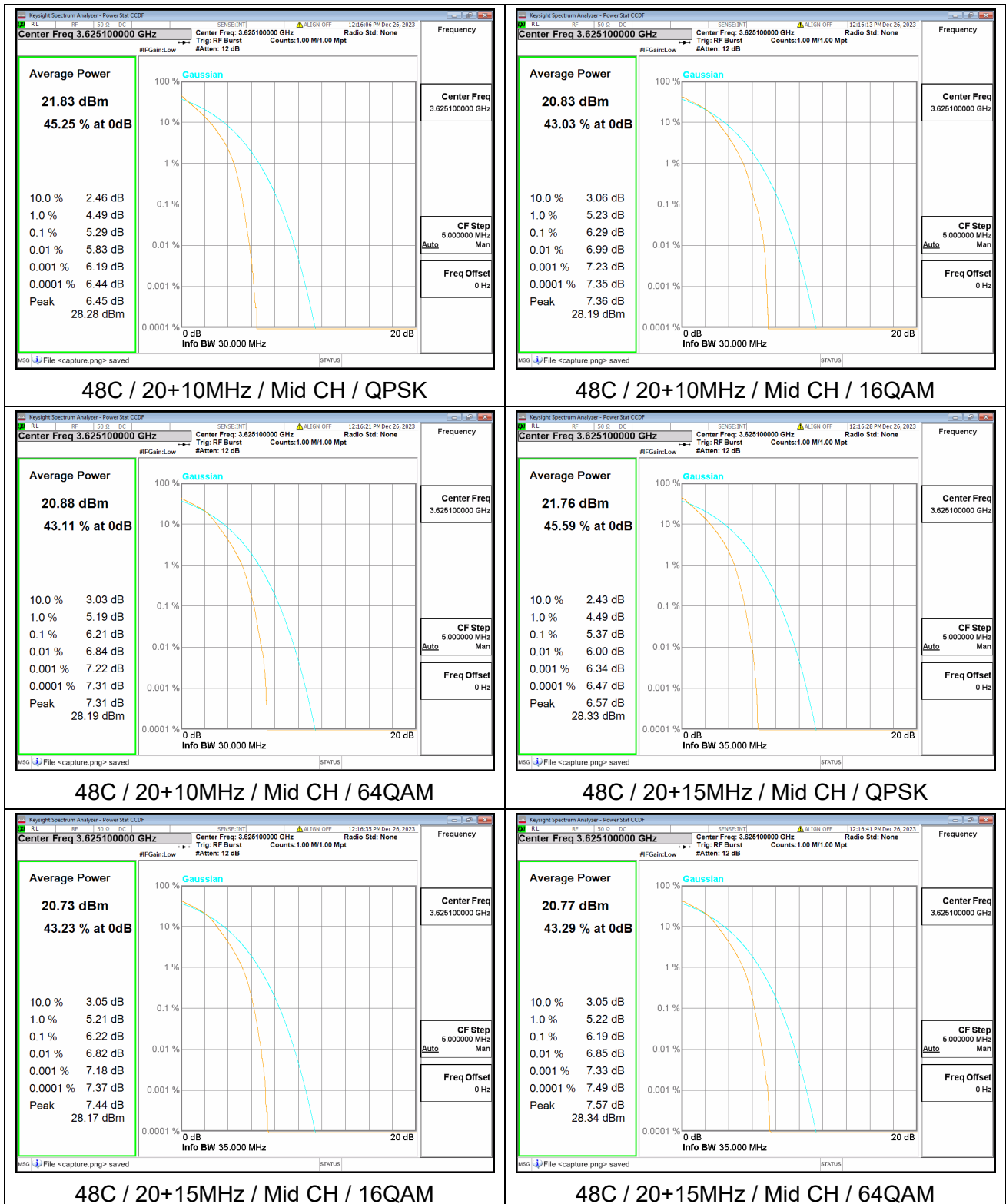


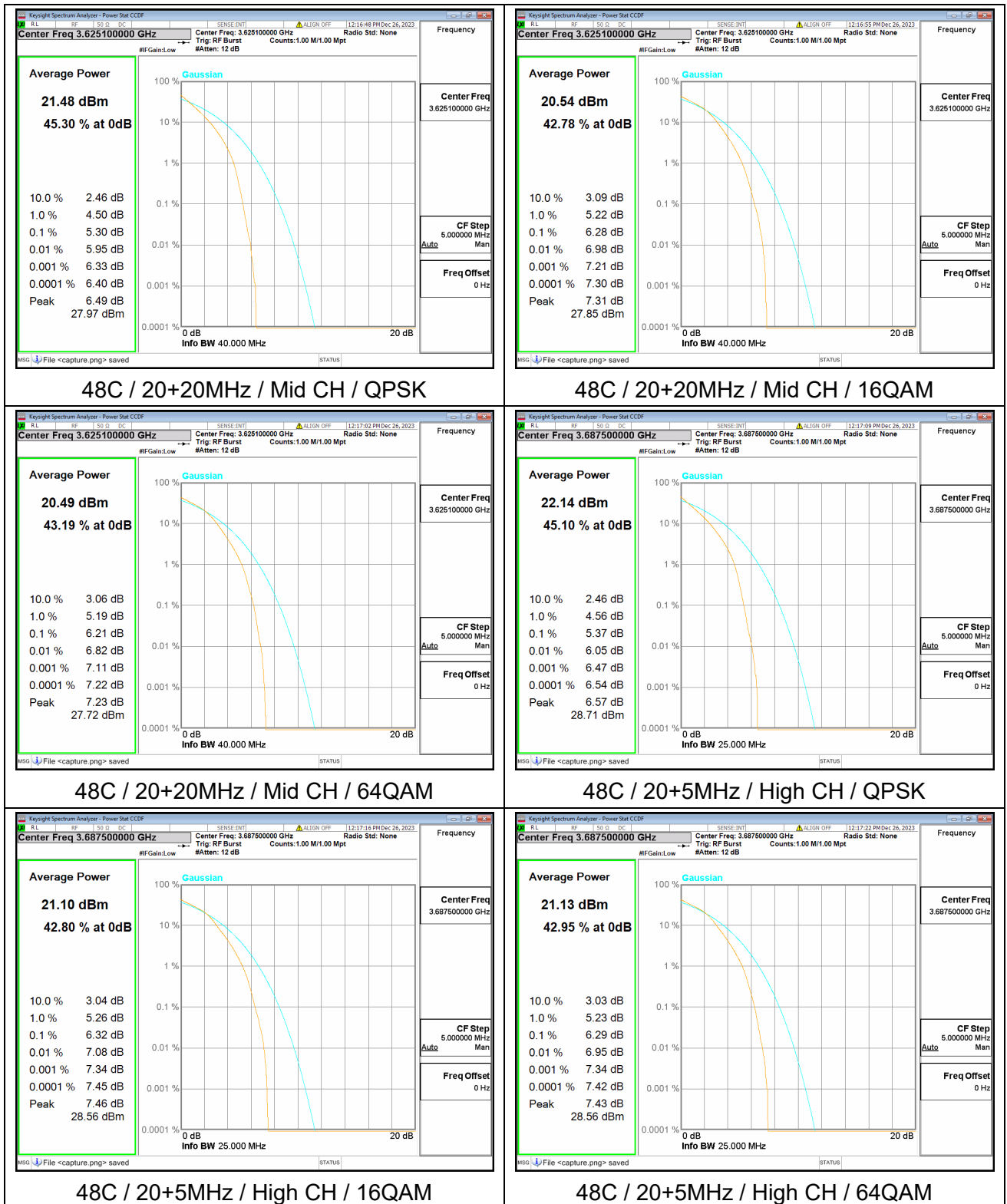


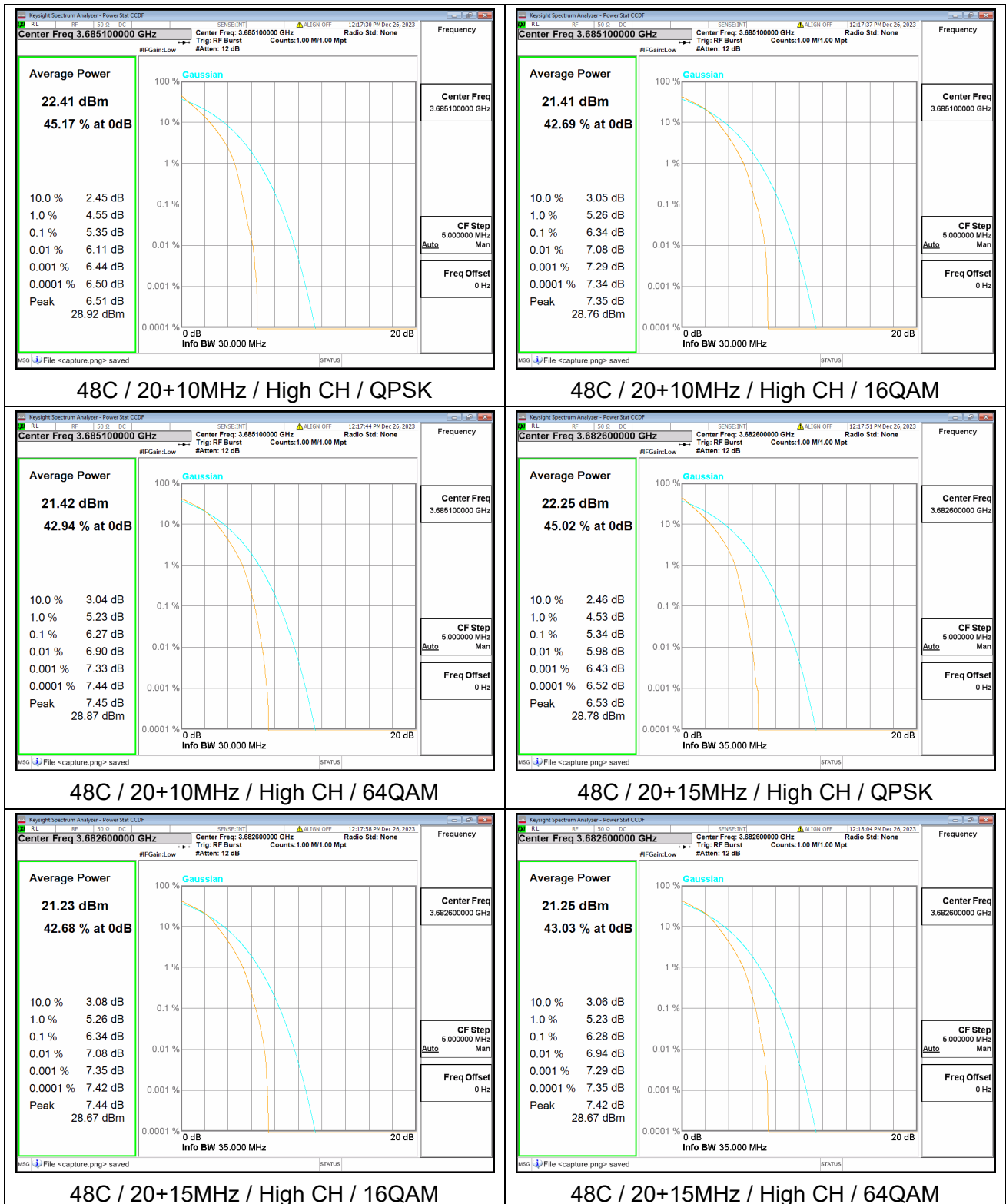


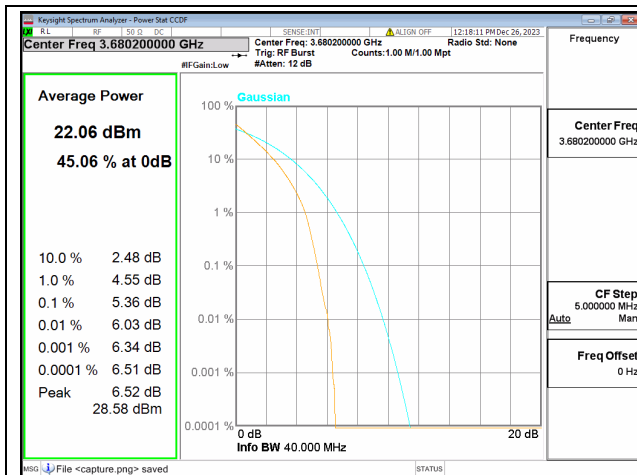




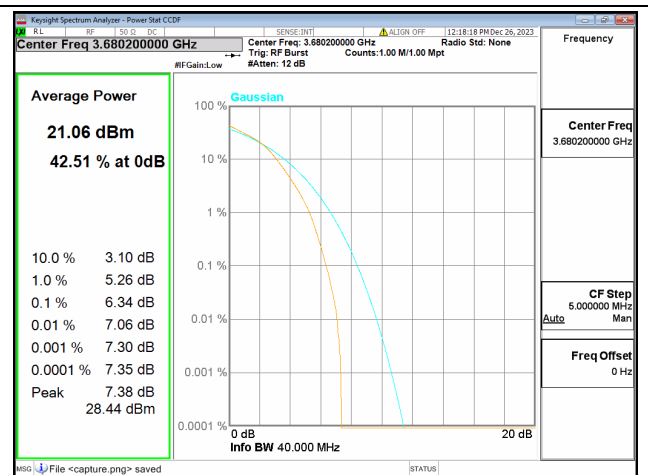




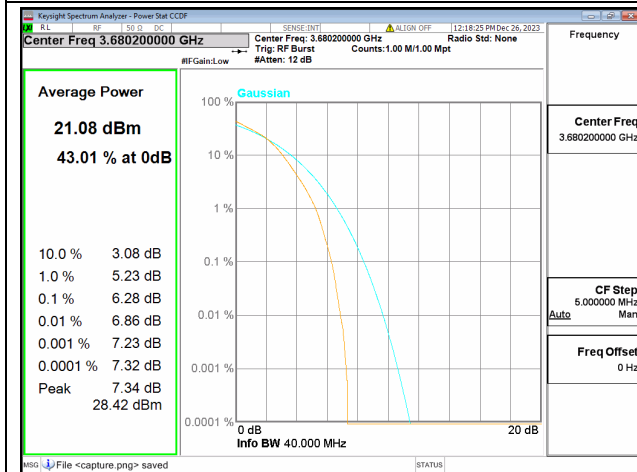




48C / 20+20MHz / High CH / QPSK

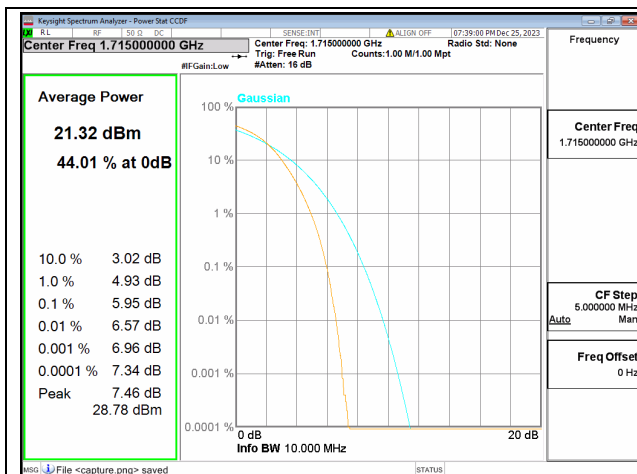


48C / 20+20MHz / High CH / 16QAM

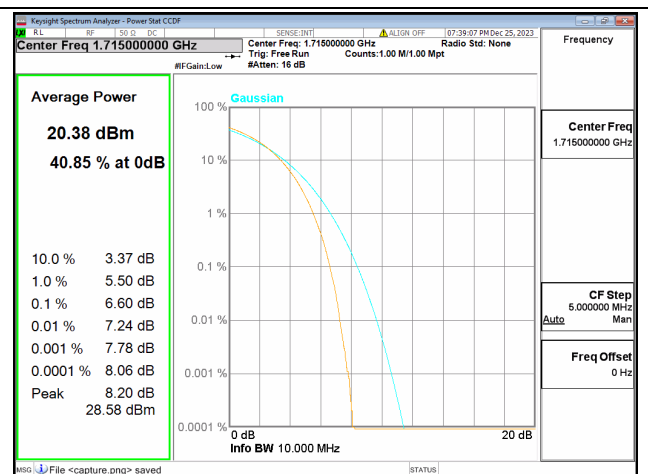


48C / 20+20MHz / High CH / 64QAM

N/A



66B / 5+5MHz / Low CH / QPSK



66B / 5+5MHz / Low CH / 16QAM

