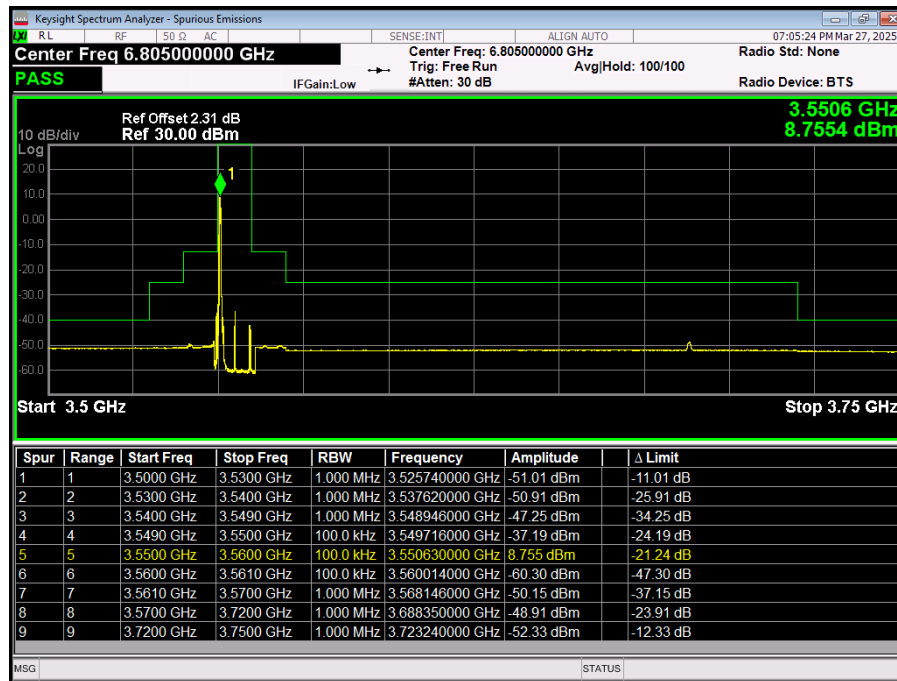
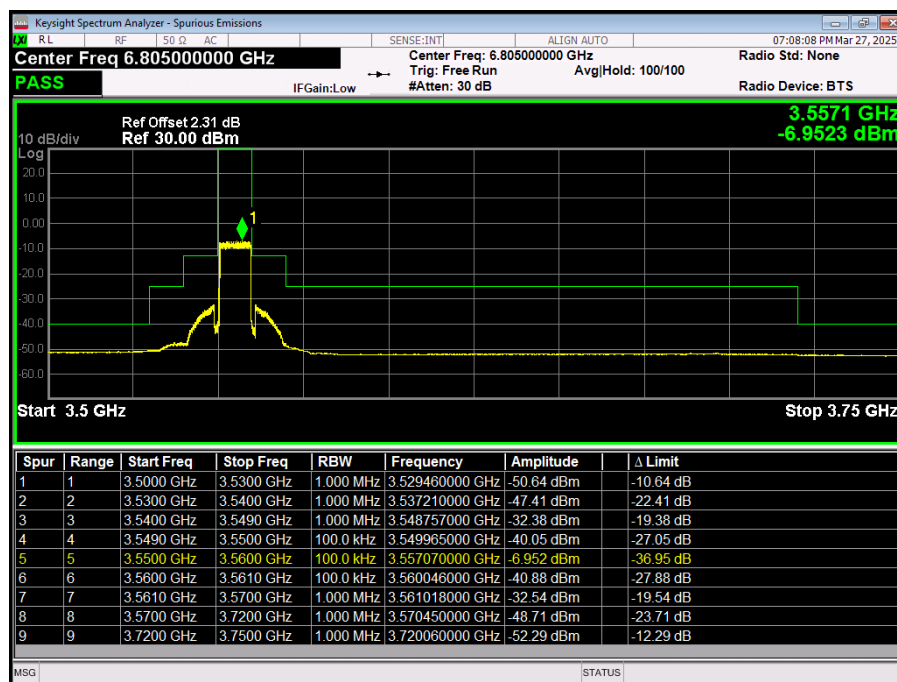
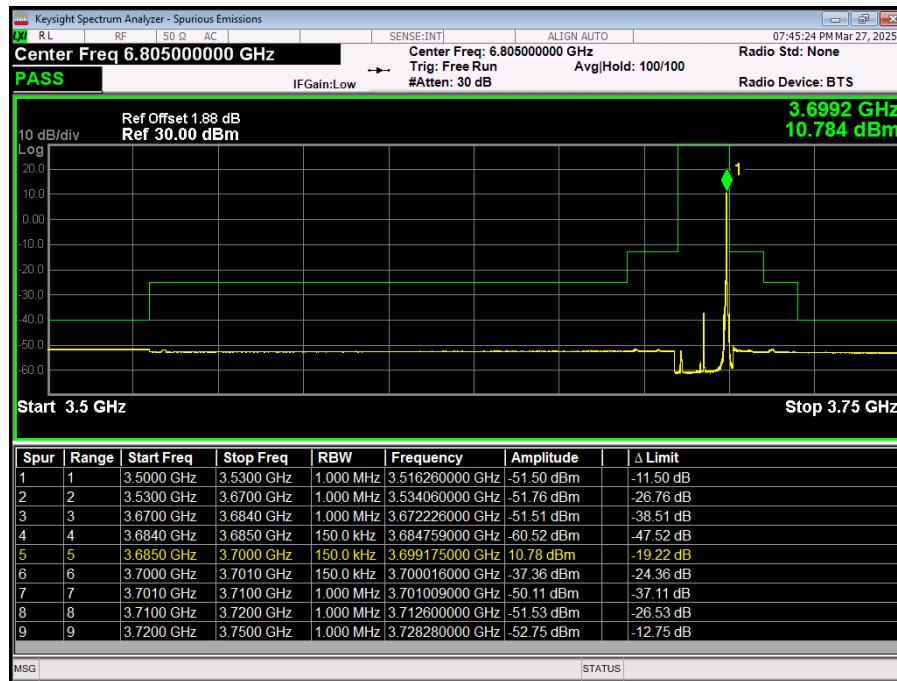




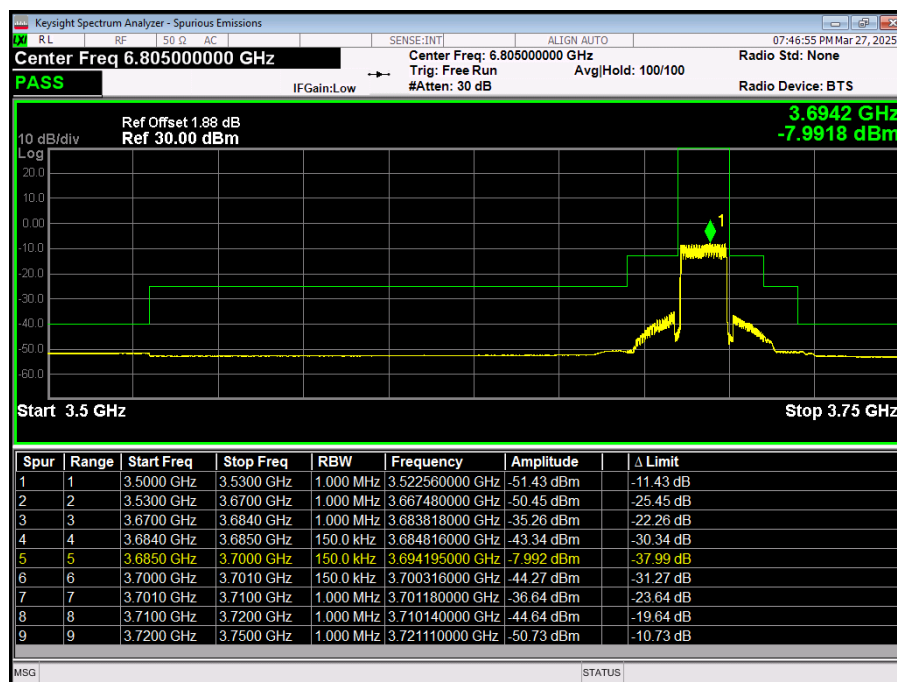
Band48 QPSK BW=10MHz Low Channel=55290 RB Size=1 Position=#0



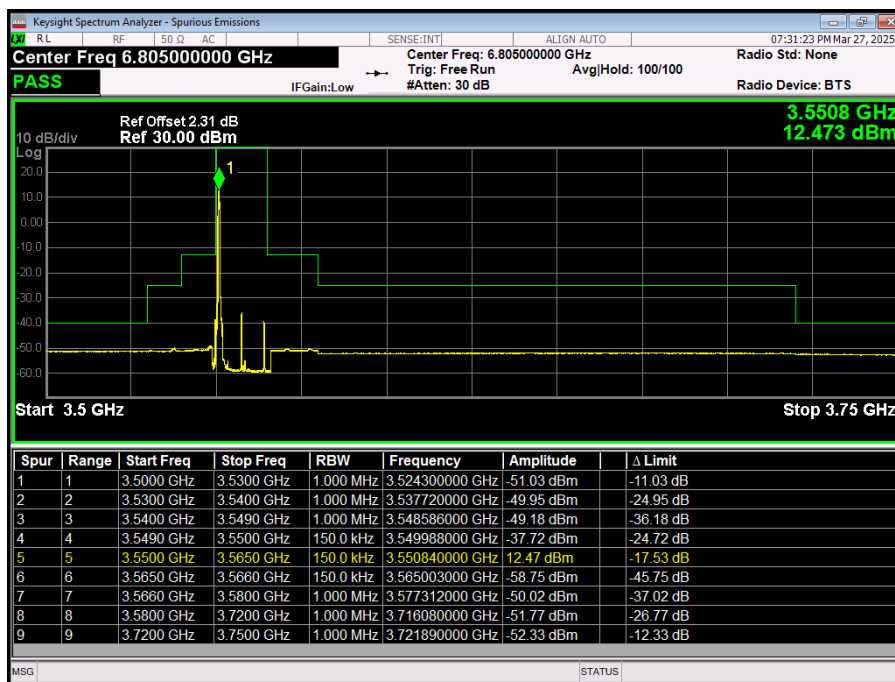
Band48 QPSK BW=10MHz Low Channel=55290 RB Size=50 Position=#0



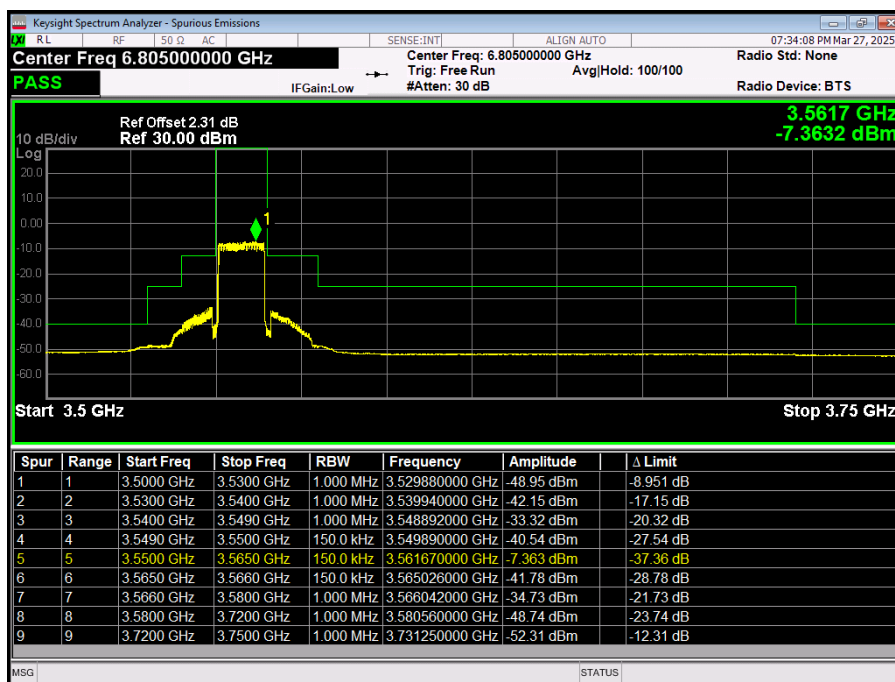
Band48 QPSK BW=15MHz High Channel=56665 RB Size=1 Position=#Max



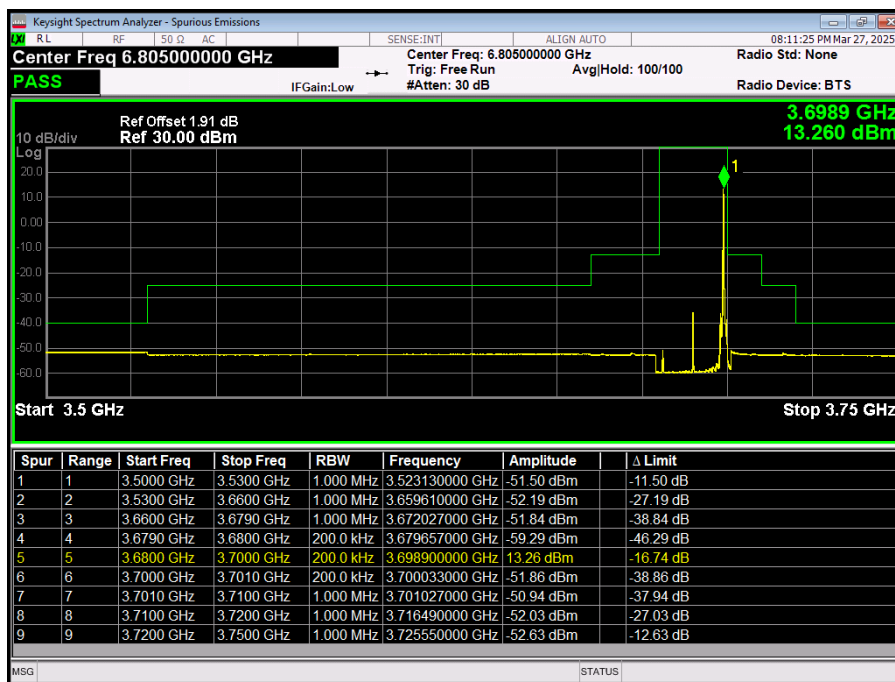
Band48 QPSK BW=15MHz High Channel=56665 RB Size=75 Position=#0



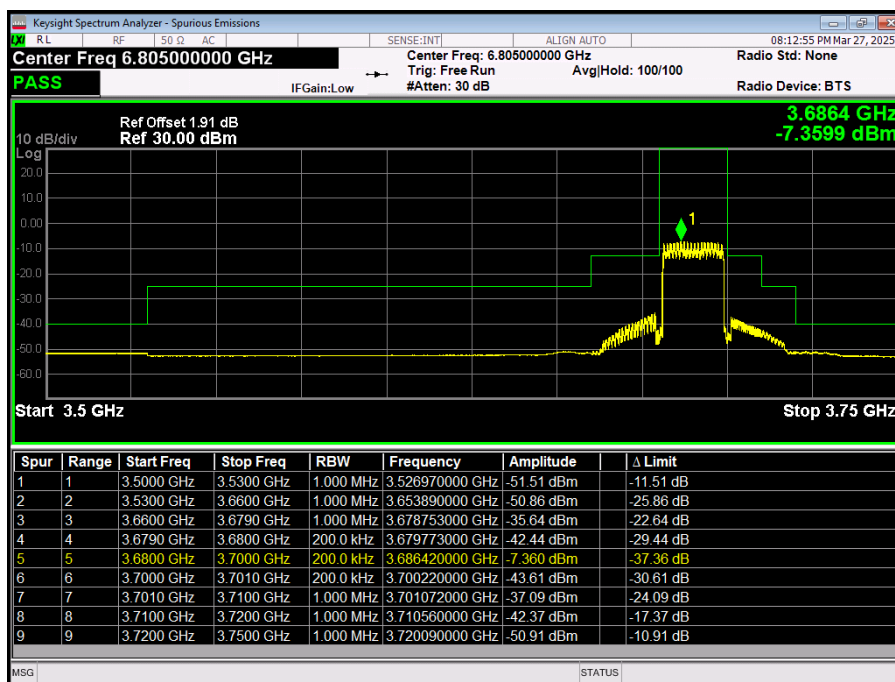
Band48 QPSK BW=15MHz Low Channel=55315 RB Size=1 Position=#0



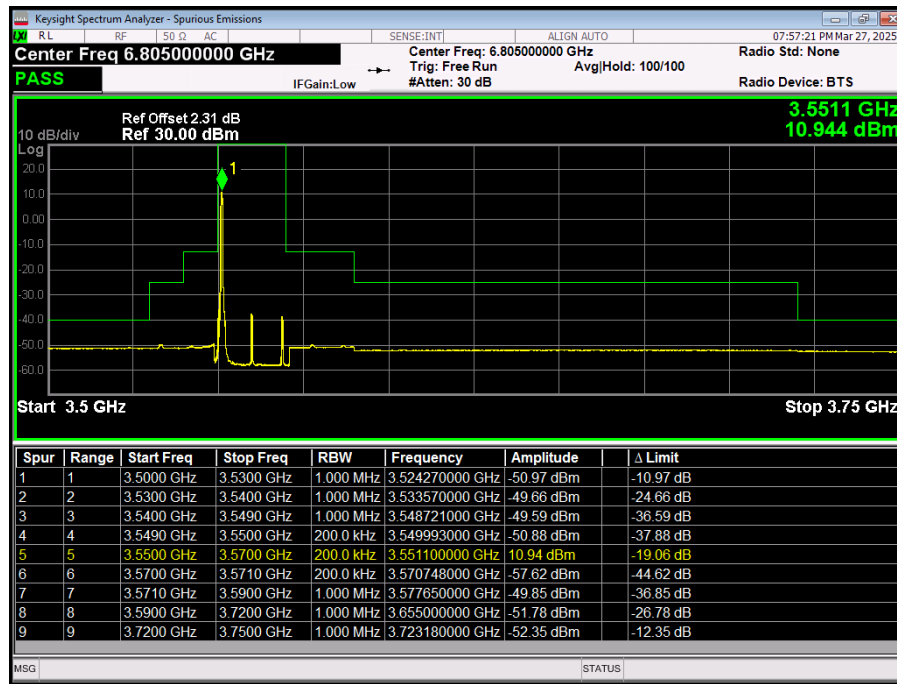
Band48 QPSK BW=15MHz Low Channel=55315 RB Size=75 Position=#0



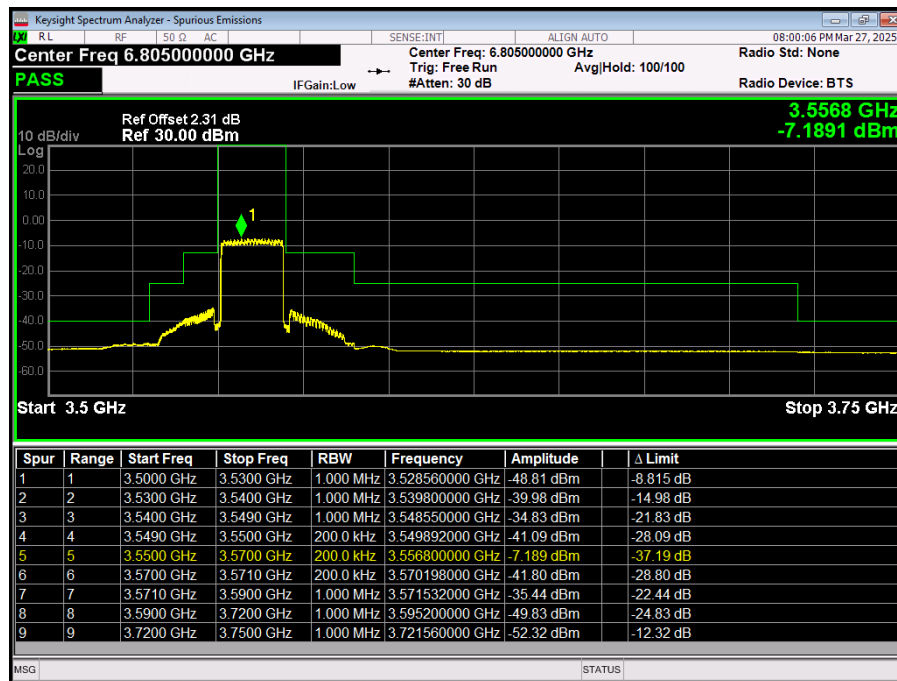
Band48 QPSK BW=20MHz High Channel=56640 RB Size=1 Position=#Max



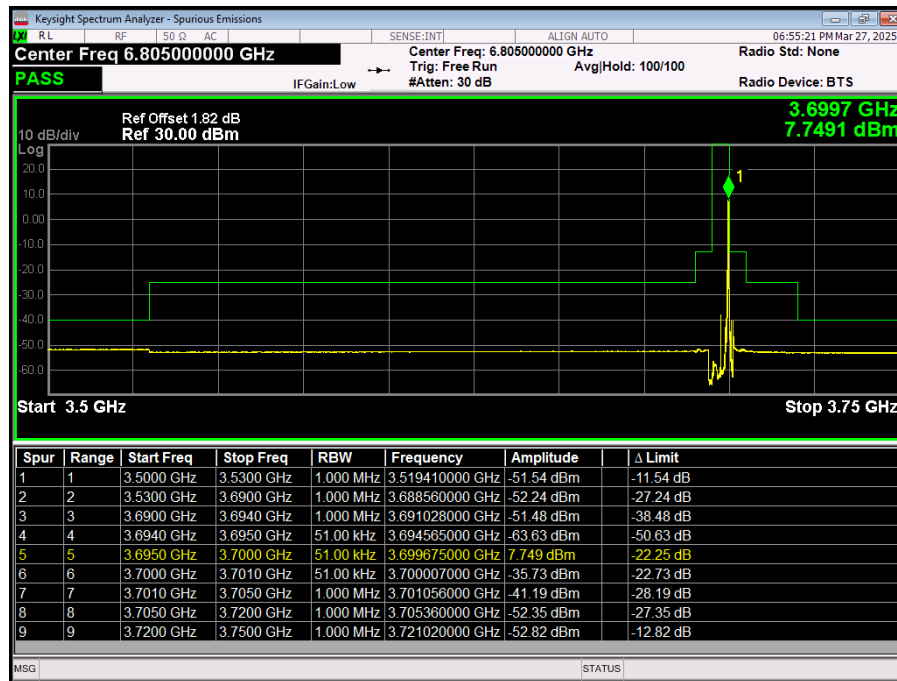
Band48 QPSK BW=20MHz High Channel=56640 RB Size=100 Position=#0



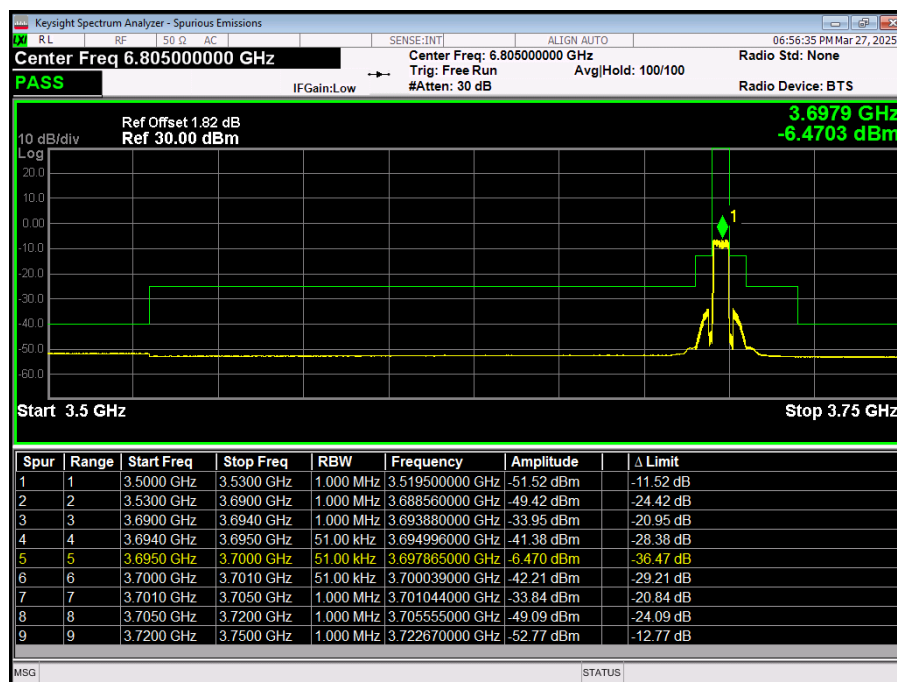
Band48 QPSK BW=20MHz Low Channel=55340 RB Size=1 Position=#0



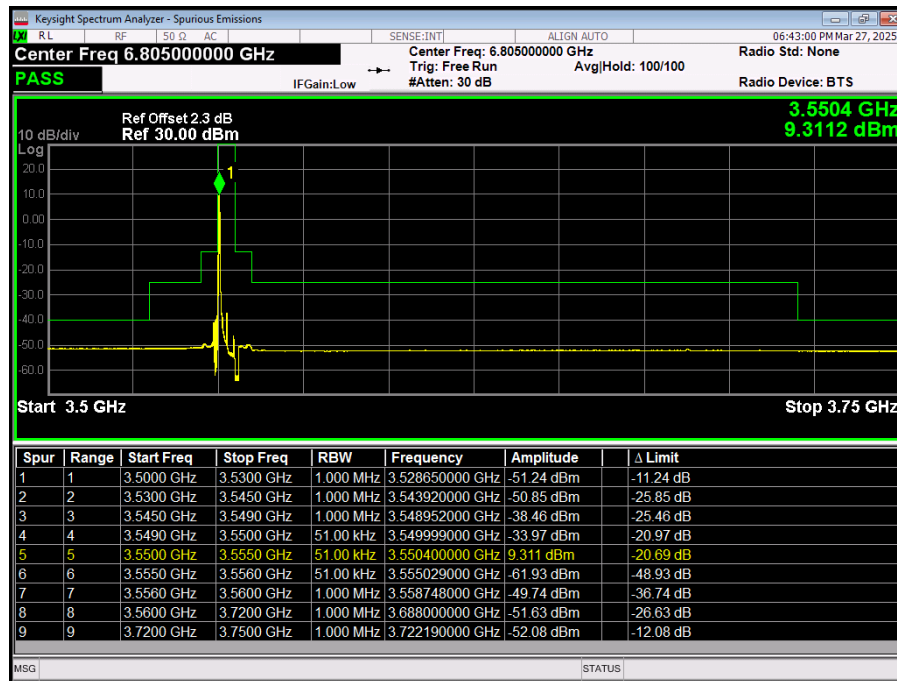
Band48 QPSK BW=20MHz Low Channel=55340 RB Size=100 Position=#0



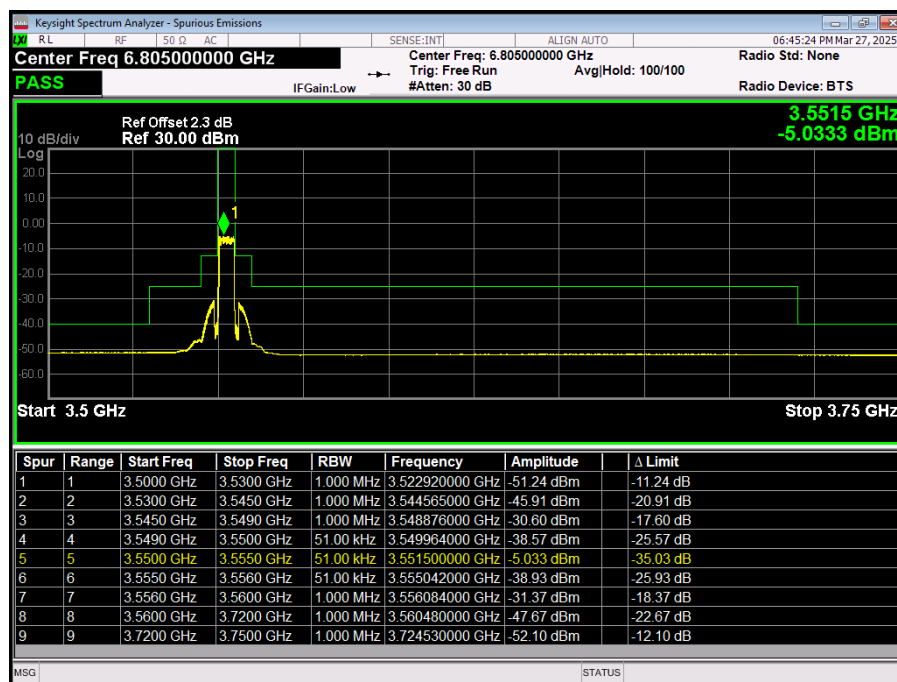
Band48 QPSK BW=5MHz High Channel=56715 RB Size=1 Position=#Max



Band48 QPSK BW=5MHz High Channel=56715 RB Size=25 Position=#0



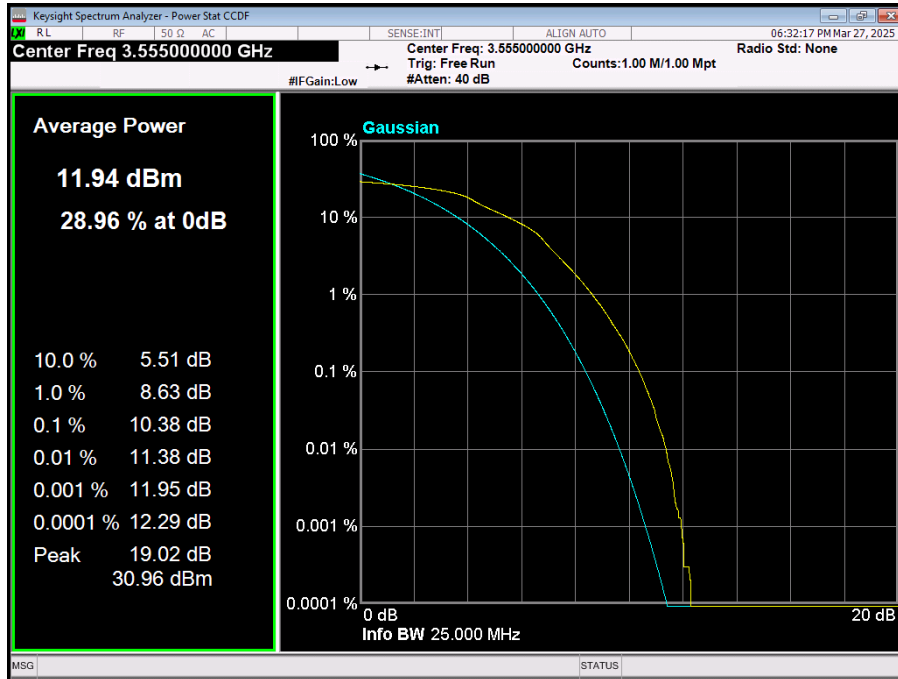
Band48 QPSK BW=5MHz Low Channel=55265 RB Size=1 Position=#0



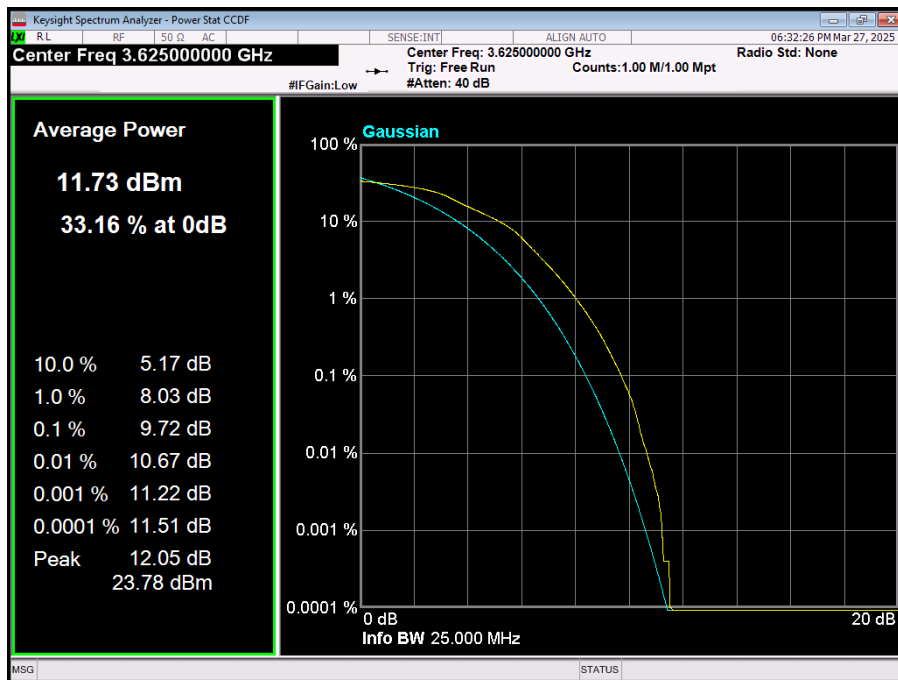
Band48 QPSK BW=5MHz Low Channel=55265 RB Size=25 Position=#0

6.4. Peak-to-Average Power Ratio (PAPR)

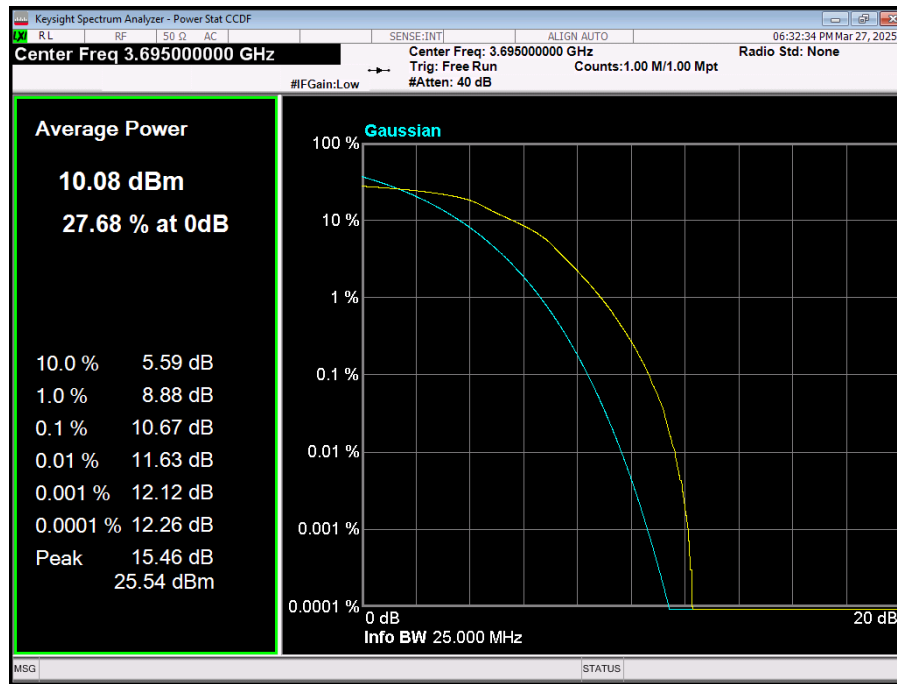
LTE Band 48									
Bandwidth (MHz)	UL Channel	RB Size	RB Position	Modulation	Peak Power(dBm)	Avg Power(dBm)	Result (dB)	High Limit (dB)	Verdict
5	55265	25	#0	QPSK	22.79	12.92	9.87	13	PASS
5	55265	25	#0	16QAM	22.34	12.31	10.03	13	PASS
5	55265	25	#0	64QAM	22.14	10.51	11.63	13	PASS
5	55990	25	#0	QPSK	21.76	11.88	9.88	13	PASS
5	55990	25	#0	16QAM	21.27	11.27	10.00	13	PASS
5	55990	25	#0	64QAM	21.11	9.88	11.23	13	PASS
5	56715	25	#0	QPSK	21.17	11.65	9.52	13	PASS
5	56715	25	#0	16QAM	20.77	10.84	9.93	13	PASS
5	56715	25	#0	64QAM	20.43	8.40	12.03	13	PASS
10	55290	50	#0	QPSK	22.76	13.56	9.20	13	PASS
10	55290	50	#0	16QAM	22.32	11.94	10.38	13	PASS
10	55290	50	#0	64QAM	22.23	11.03	11.20	13	PASS
10	55990	50	#0	QPSK	21.68	11.44	10.24	13	PASS
10	55990	50	#0	16QAM	21.45	11.73	9.72	13	PASS
10	55990	50	#0	64QAM	21.09	9.23	11.86	13	PASS
10	56690	50	#0	QPSK	21.19	11.84	9.35	13	PASS
10	56690	50	#0	16QAM	20.75	10.08	10.67	13	PASS
10	56690	50	#0	64QAM	20.55	9.73	10.82	13	PASS
15	55315	75	#0	QPSK	22.8	13.30	9.50	13	PASS
15	55315	75	#0	16QAM	22.23	11.17	11.06	13	PASS
15	55315	75	#0	64QAM	21.39	10.54	10.85	13	PASS
15	55990	75	#0	QPSK	21.68	11.79	9.89	13	PASS
15	55990	75	#0	16QAM	21.46	11.80	9.66	13	PASS
15	55990	75	#0	64QAM	20.39	9.57	10.82	13	PASS
15	56665	75	#0	QPSK	21.41	12.54	8.87	13	PASS
15	56665	75	#0	16QAM	20.8	9.94	10.86	13	PASS
15	56665	75	#0	64QAM	20	10.20	9.80	13	PASS
20	55340	100	#0	QPSK	22.66	13.95	8.71	13	PASS
20	55340	100	#0	16QAM	22.24	12.01	10.23	13	PASS
20	55340	100	#0	64QAM	21.43	12.05	9.38	13	PASS
20	55990	100	#0	QPSK	21.32	8.49	12.83	13	PASS
20	55990	100	#0	16QAM	21.15	10.28	10.87	13	PASS
20	55990	100	#0	64QAM	20.38	9.76	10.62	13	PASS
20	56640	100	#0	QPSK	20.96	9.64	11.32	13	PASS
20	56640	100	#0	16QAM	21.03	12.19	8.84	13	PASS
20	56640	100	#0	64QAM	20.03	9.99	10.04	13	PASS



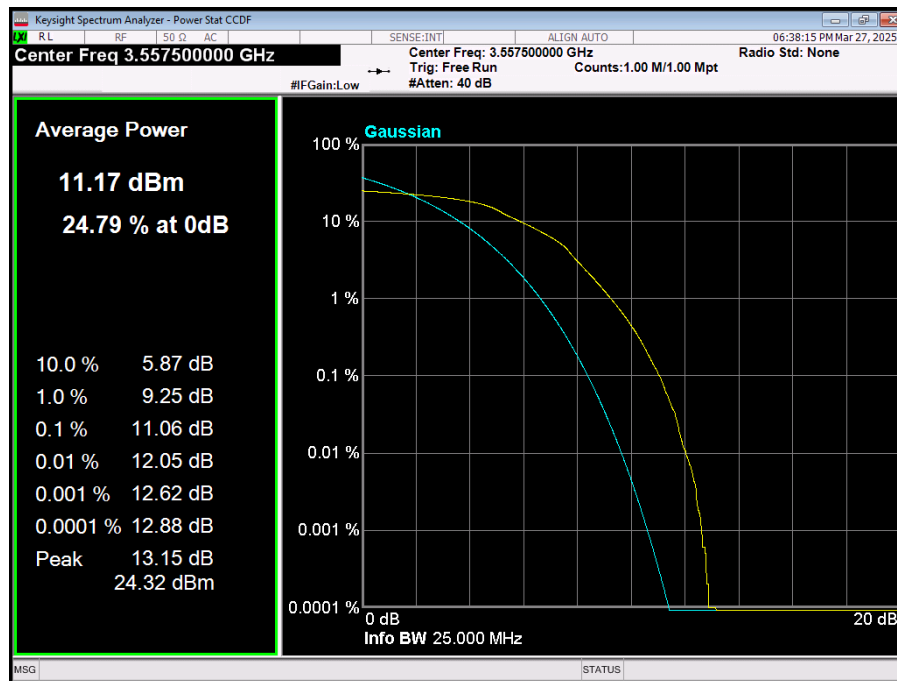
Band48 16QAM BW=10MHz Channel=55290 RB Size=50 Position=#0



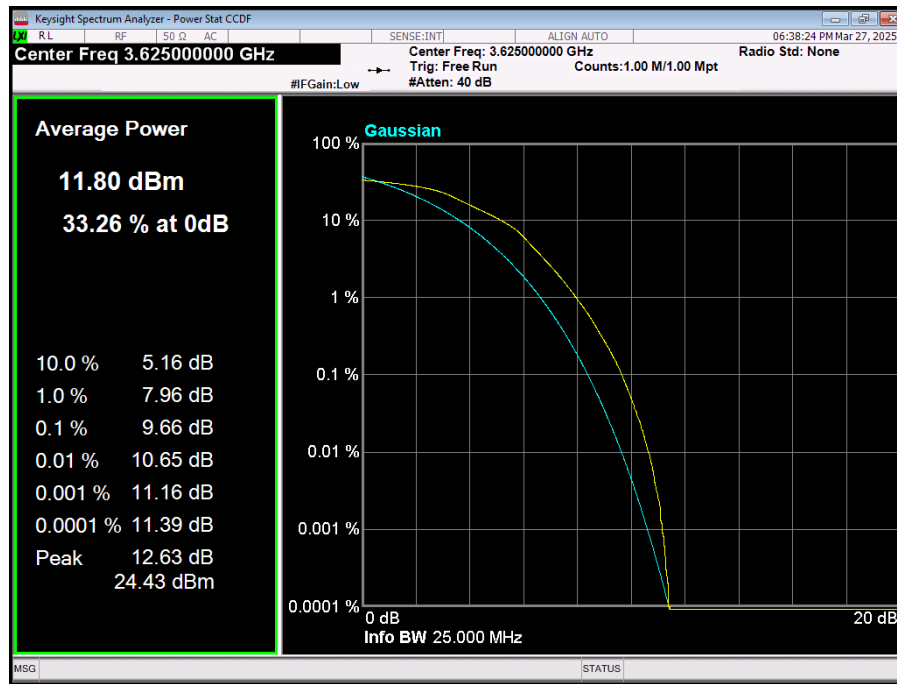
Band48 16QAM BW=10MHz Channel=55990 RB Size=50 Position=#0



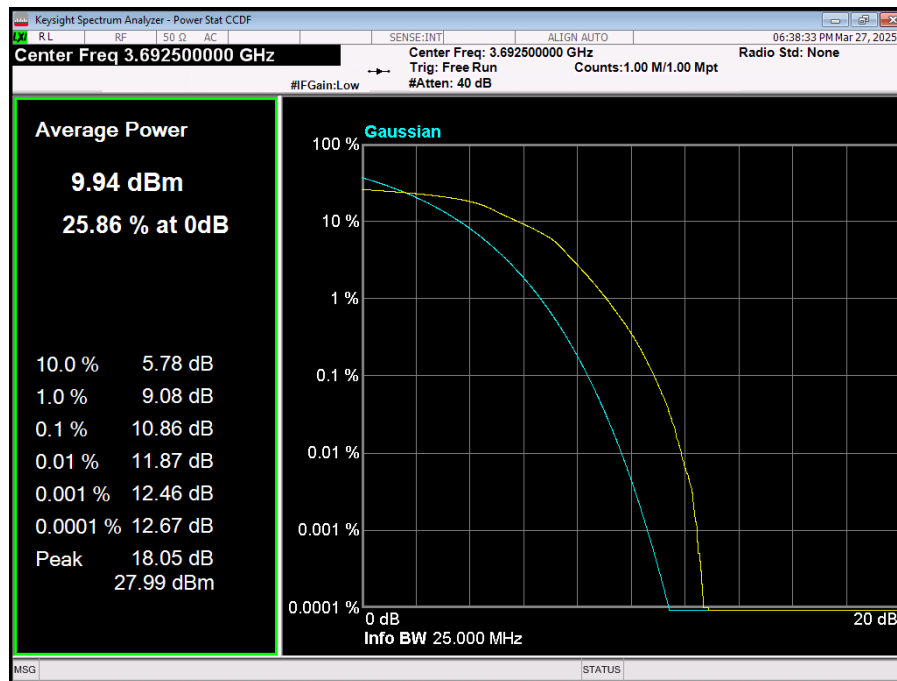
Band48 16QAM BW=10MHz Channel=56690 RB Size=50 Position=#0



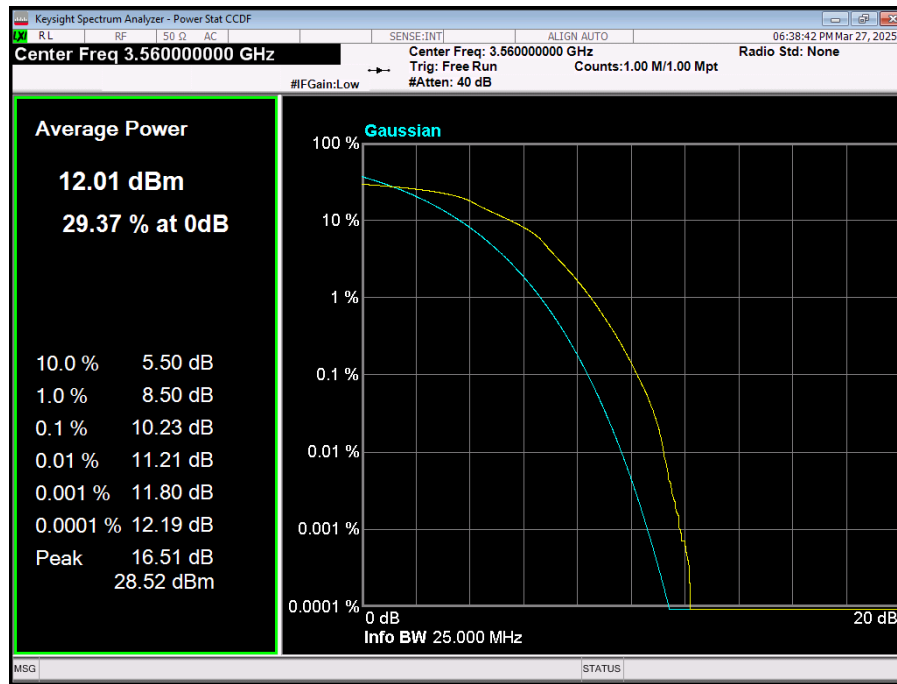
Band48 16QAM BW=15MHz Channel=55315 RB Size=75 Position=#0



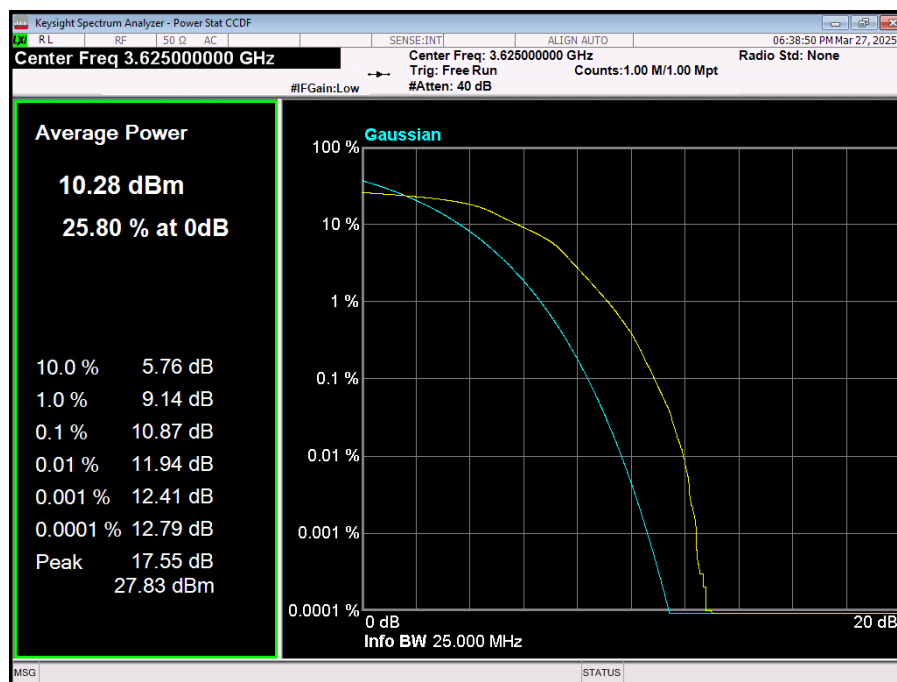
Band48 16QAM BW=15MHz Channel=55990 RB Size=75 Position=#0



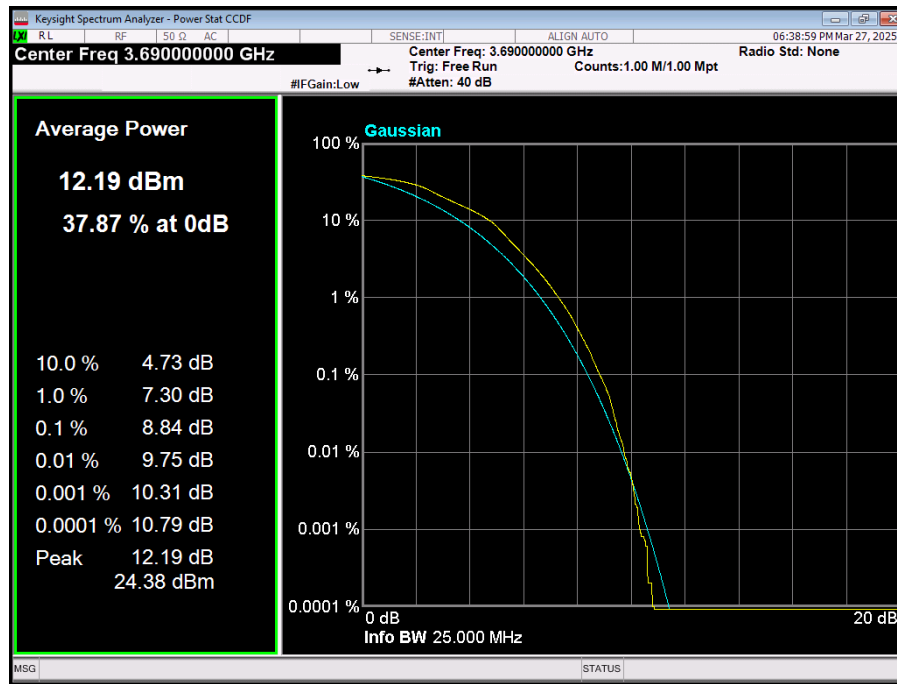
Band48 16QAM BW=15MHz Channel=56665 RB Size=75 Position=#0



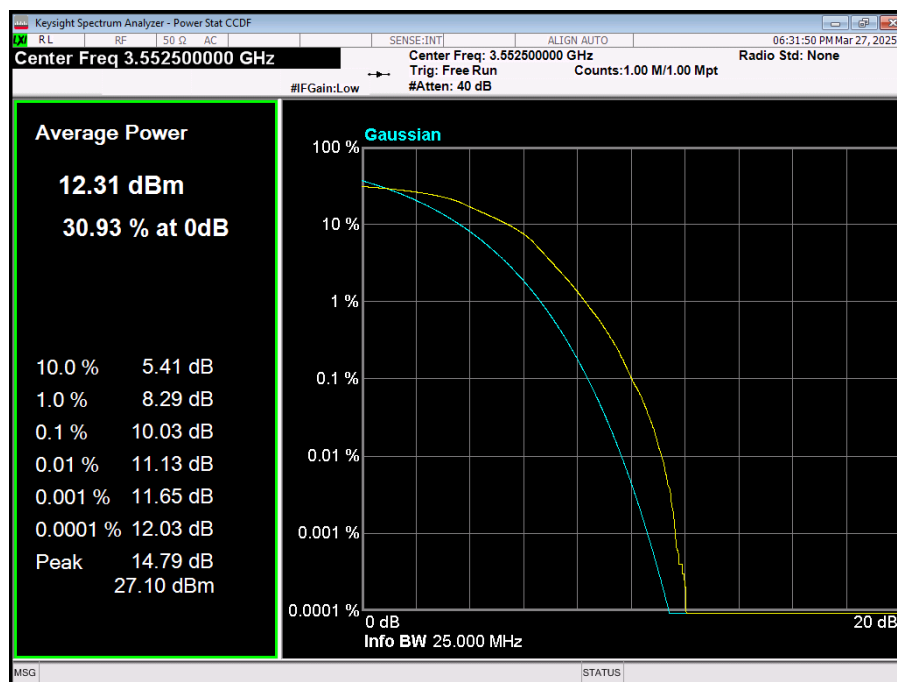
Band48 16QAM BW=20MHz Channel=55340 RB Size=100 Position=#0



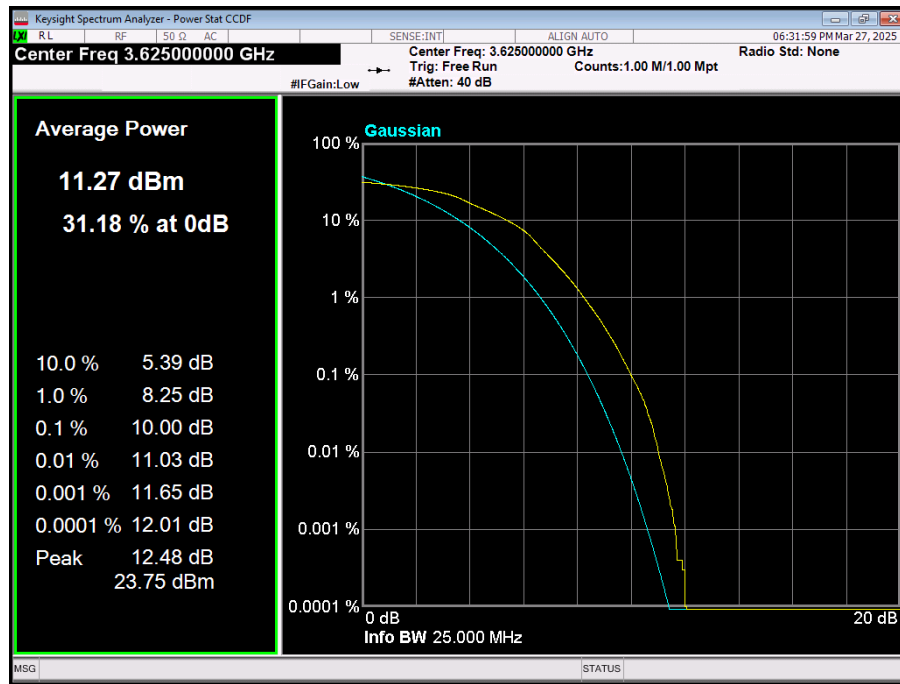
Band48 16QAM BW=20MHz Channel=55990 RB Size=100 Position=#0



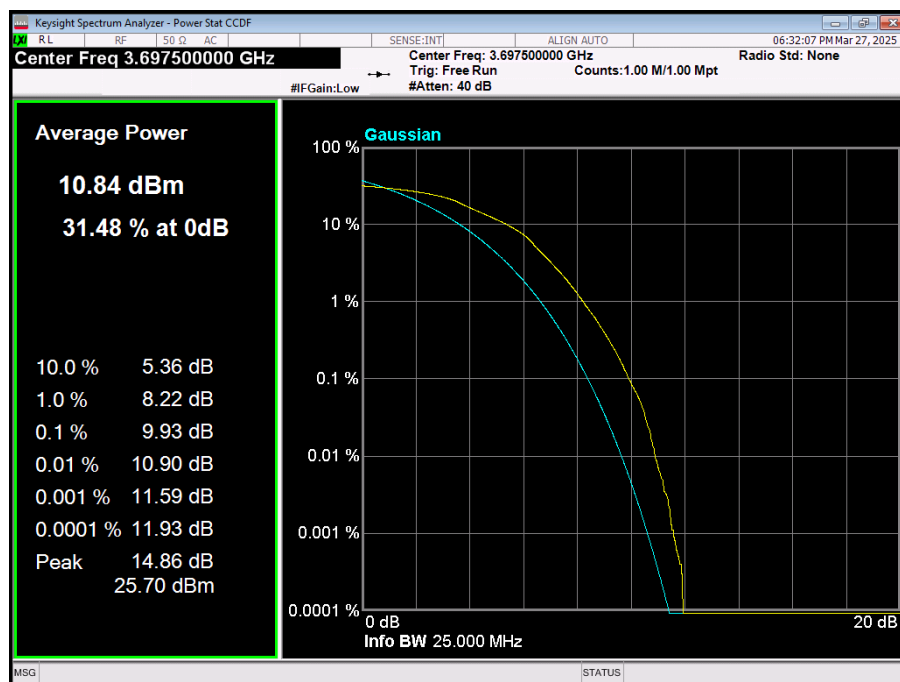
Band48 16QAM BW=20MHz Channel=56640 RB Size=100 Position=#0



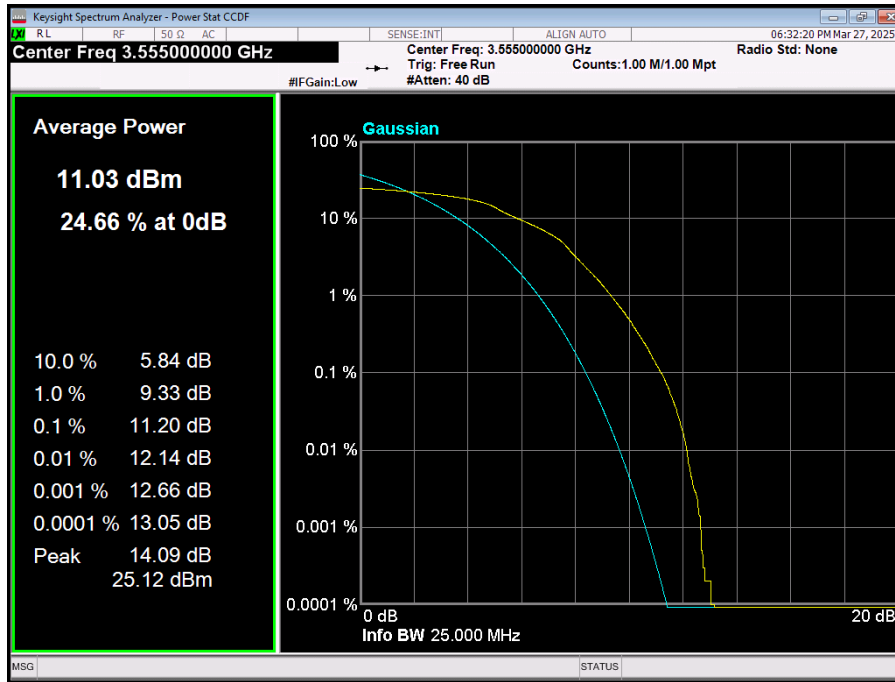
Band48 16QAM BW=5MHz Channel=55265 RB Size=25 Position=#0



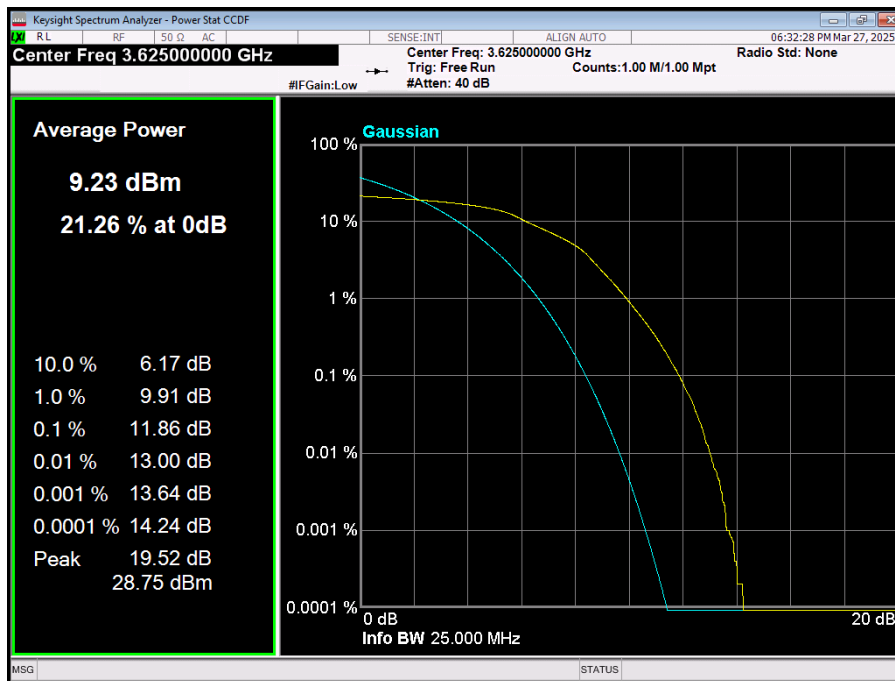
Band48 16QAM BW=5MHz Channel=55990 RB Size=25 Position=#0



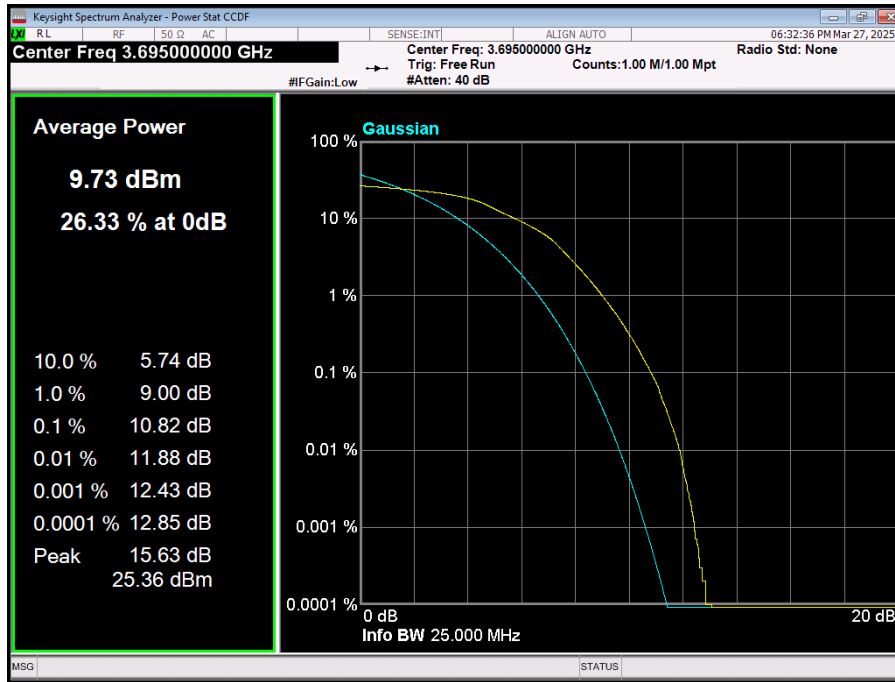
Band48 16QAM BW=5MHz Channel=56715 RB Size=25 Position=#0



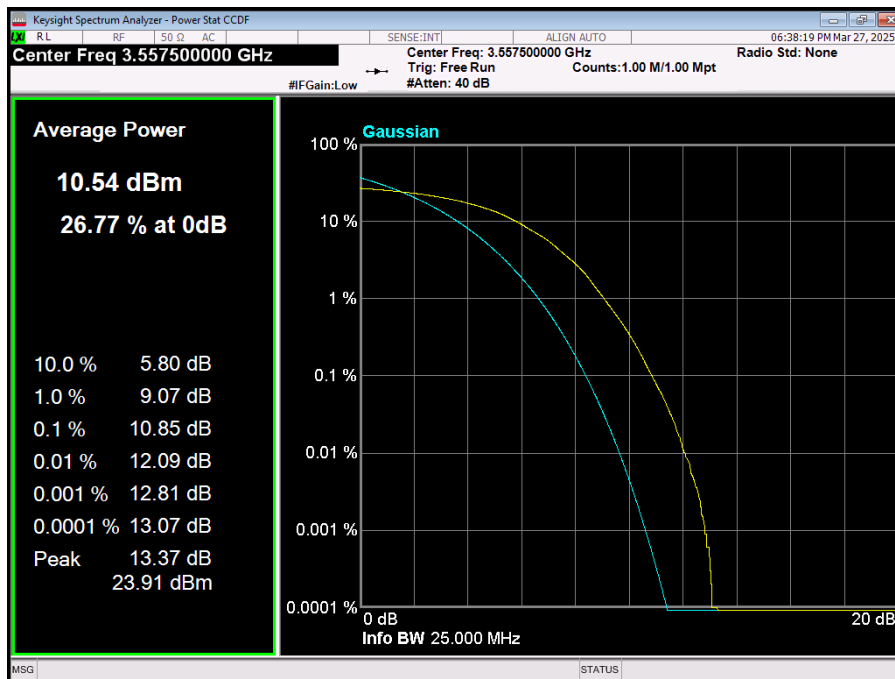
Band48 64QAM BW=10MHz Channel=55290 RB Size=50 Position=#0



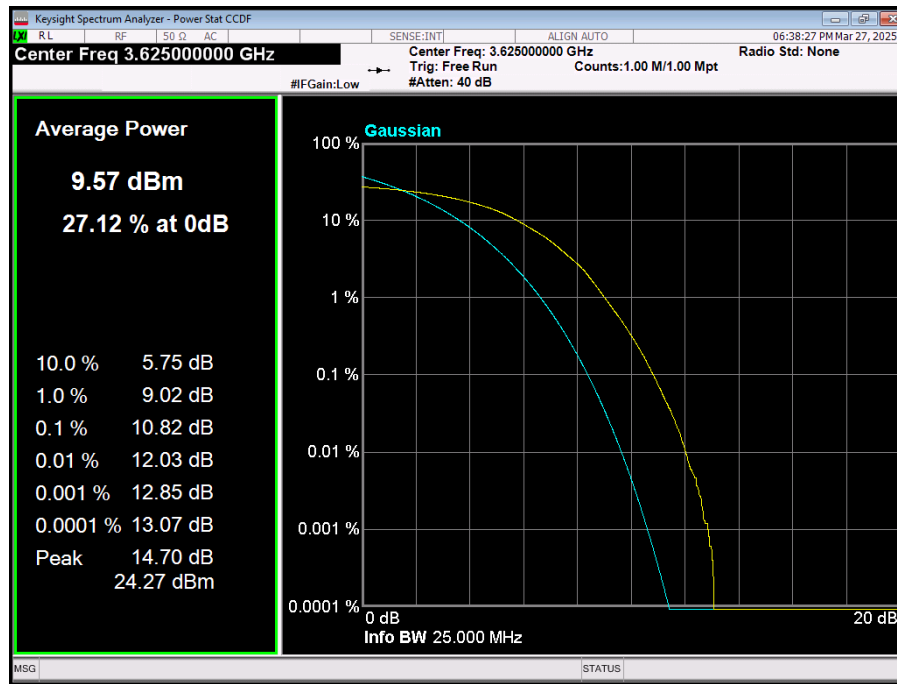
Band48 64QAM BW=10MHz Channel=55990 RB Size=50 Position=#0



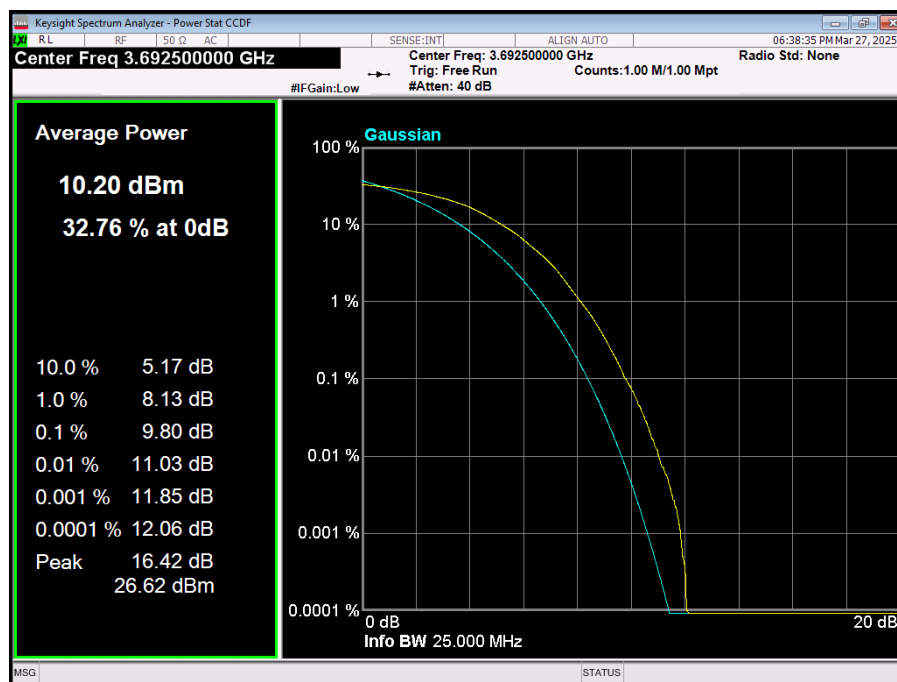
Band48 64QAM BW=10MHz Channel=56690 RB Size=50 Position=#0



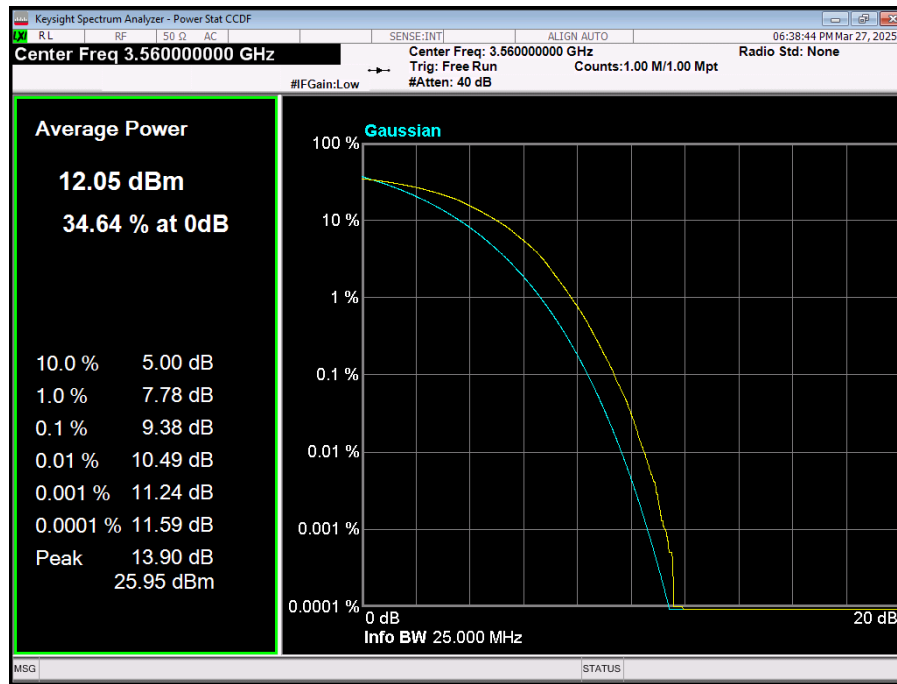
Band48 64QAM BW=15MHz Channel=55315 RB Size=75 Position=#0



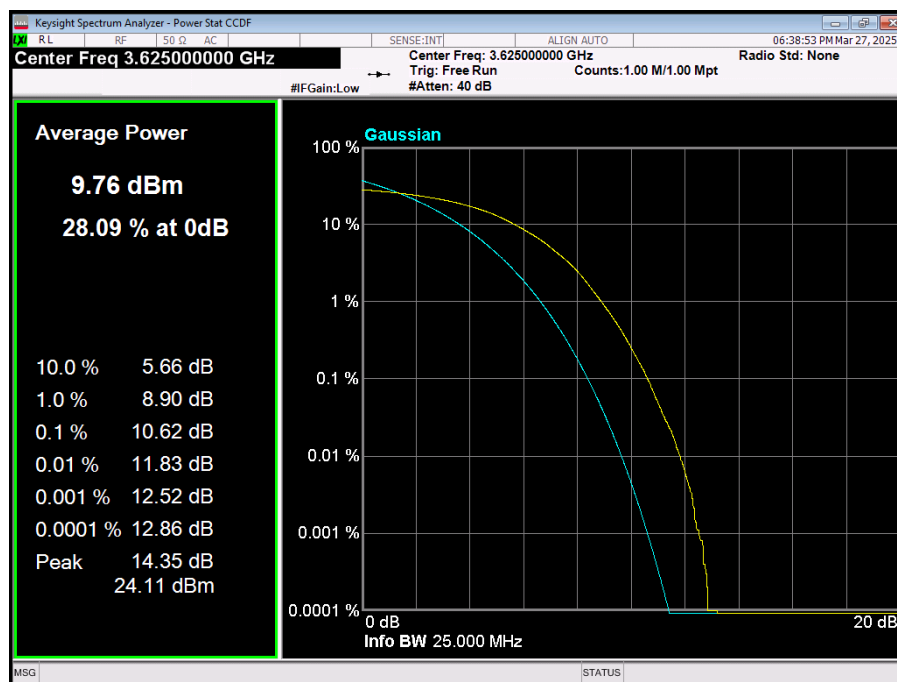
Band48 64QAM BW=15MHz Channel=55990 RB Size=75 Position=#0



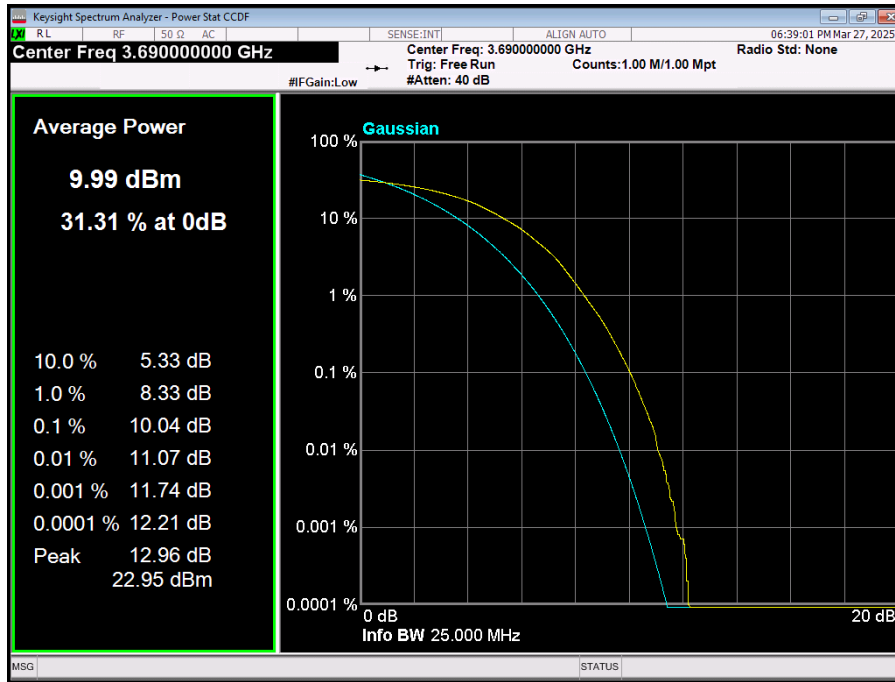
Band48 64QAM BW=15MHz Channel=56665 RB Size=75 Position=#0



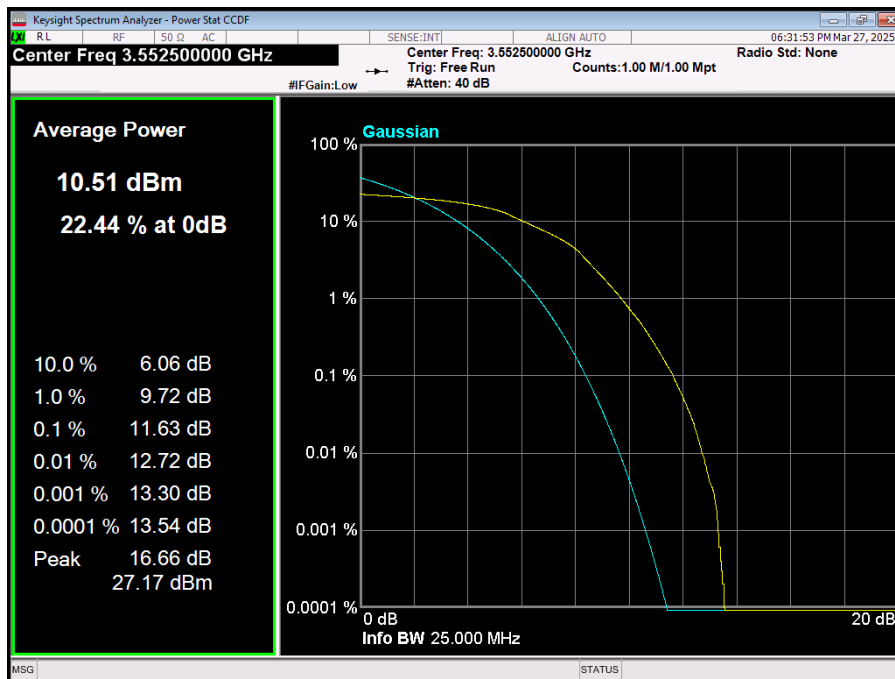
Band48 64QAM BW=20MHz Channel=55340 RB Size=100 Position=#0



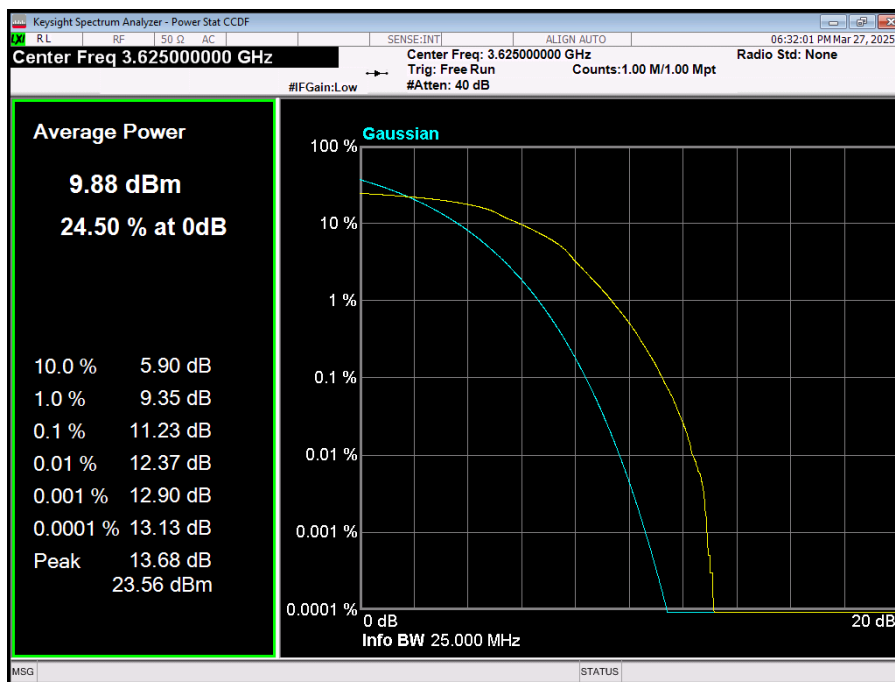
Band48 64QAM BW=20MHz Channel=55990 RB Size=100 Position=#0



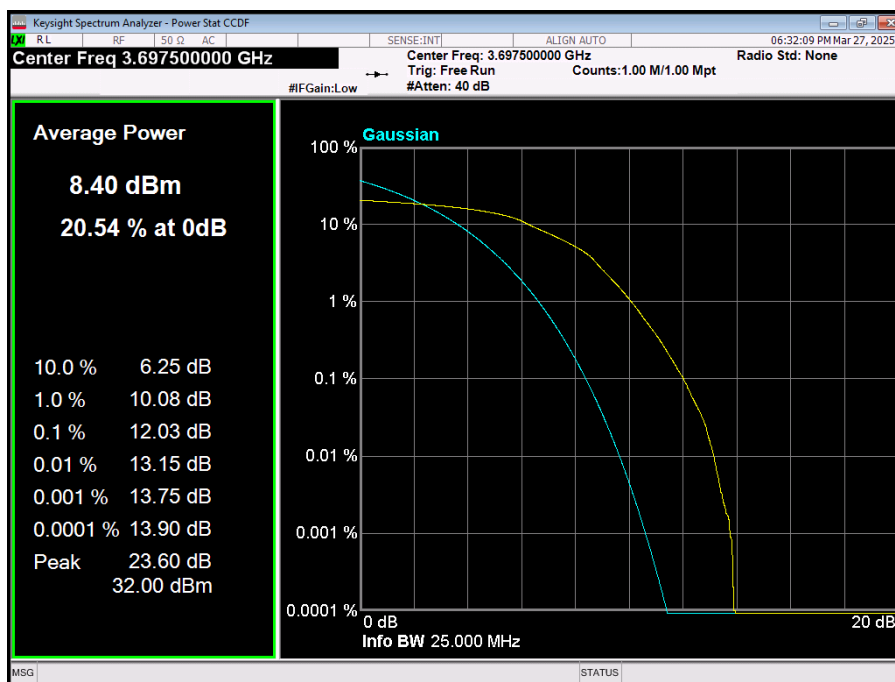
Band48 64QAM BW=20MHz Channel=56640 RB Size=100 Position=#0



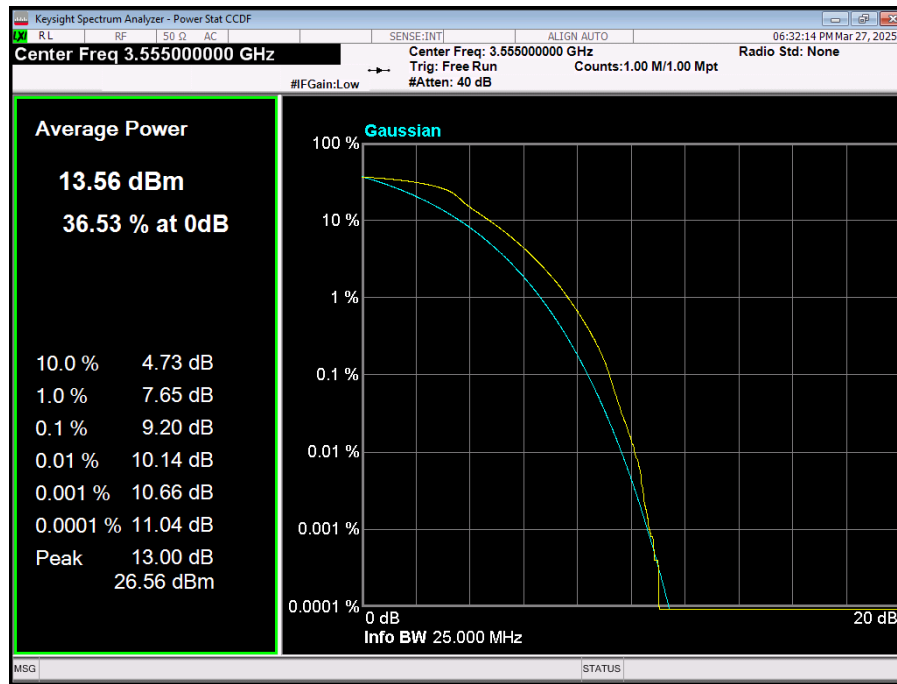
Band48 64QAM BW=5MHz Channel=55265 RB Size=25 Position=#0



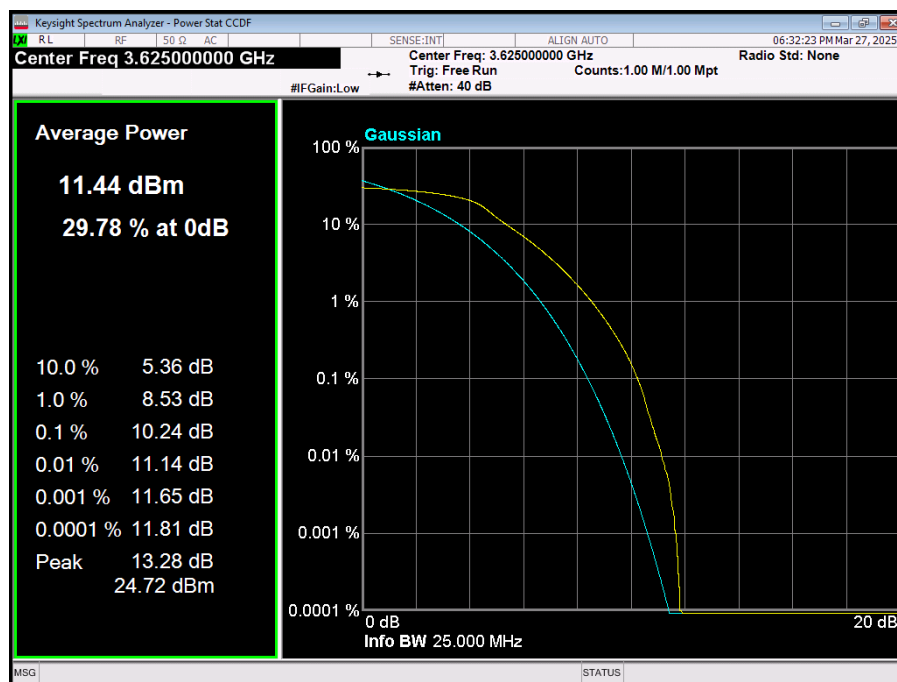
Band48 64QAM BW=5MHz Channel=55990 RB Size=25 Position=#0



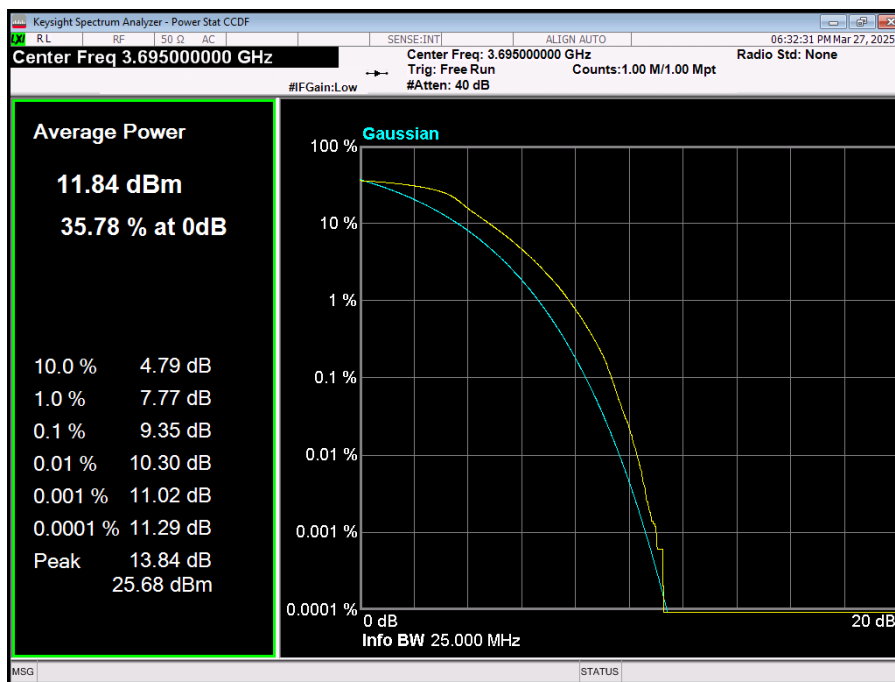
Band48 64QAM BW=5MHz Channel=56715 RB Size=25 Position=#0



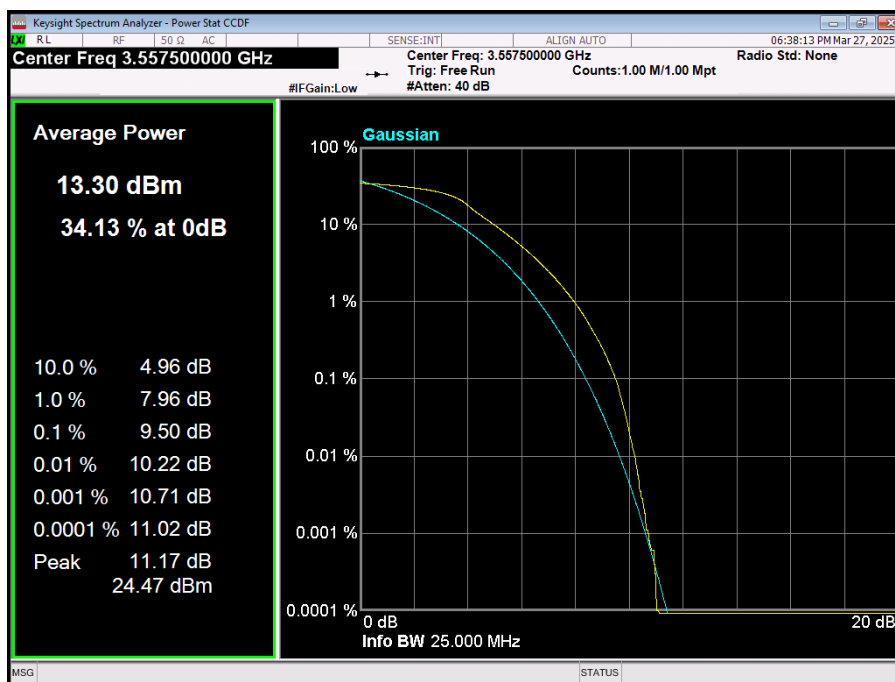
Band48 QPSK BW=10MHz Channel=55290 RB Size=50 Position=#0



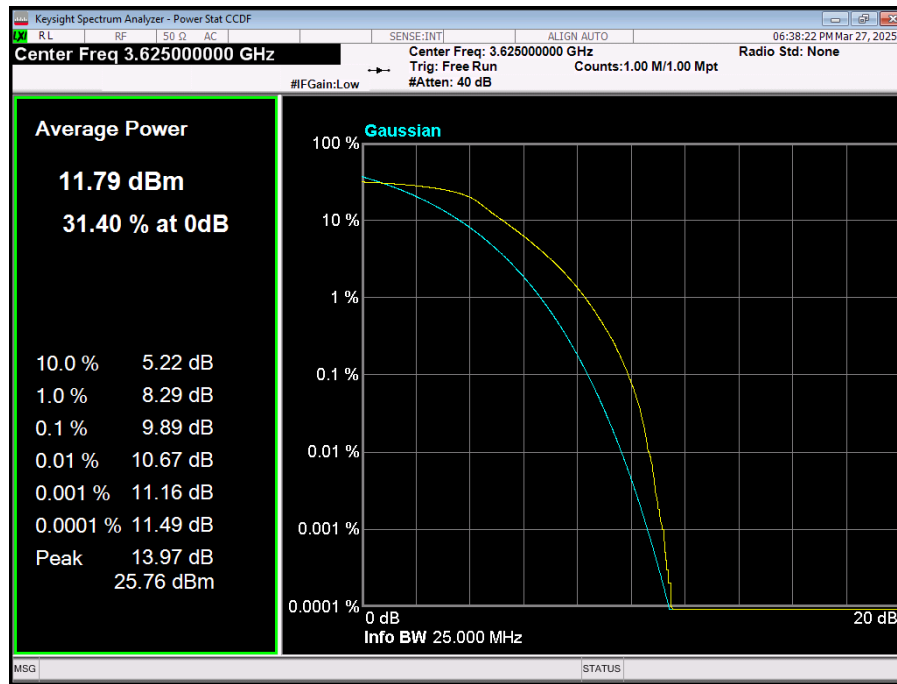
Band48 QPSK BW=10MHz Channel=55990 RB Size=50 Position=#0



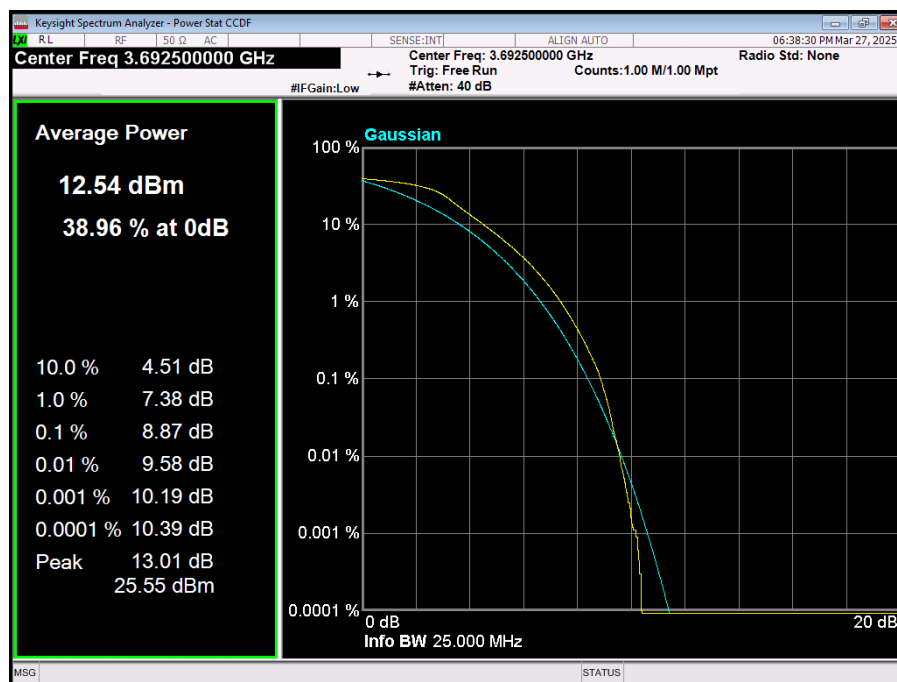
Band48 QPSK BW=10MHz Channel=56690 RB Size=50 Position=#0



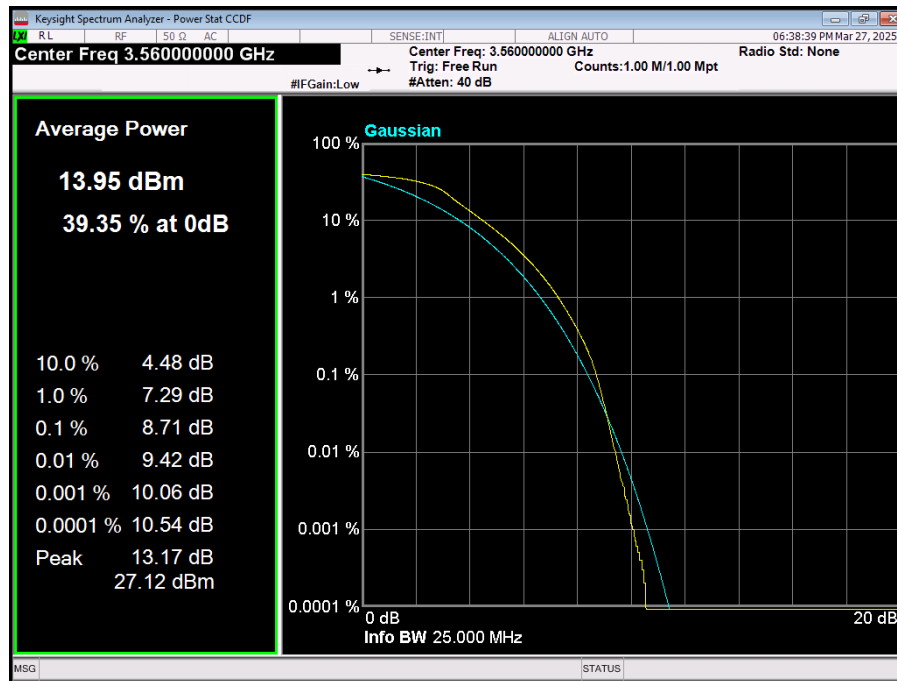
Band48 QPSK BW=15MHz Channel=55315 RB Size=75 Position=#0



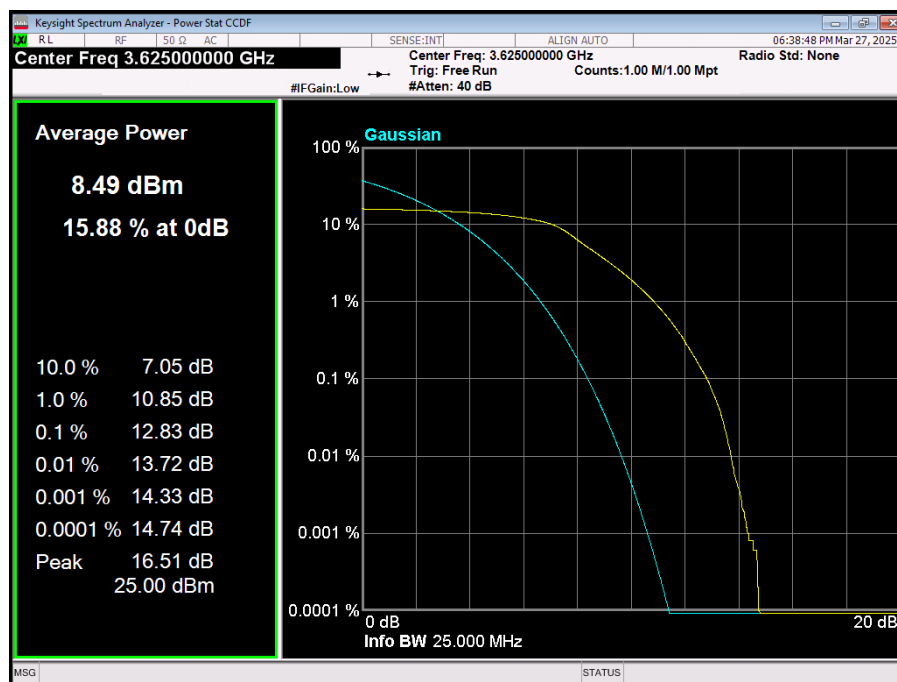
Band48 QPSK BW=15MHz Channel=55990 RB Size=75 Position=#0



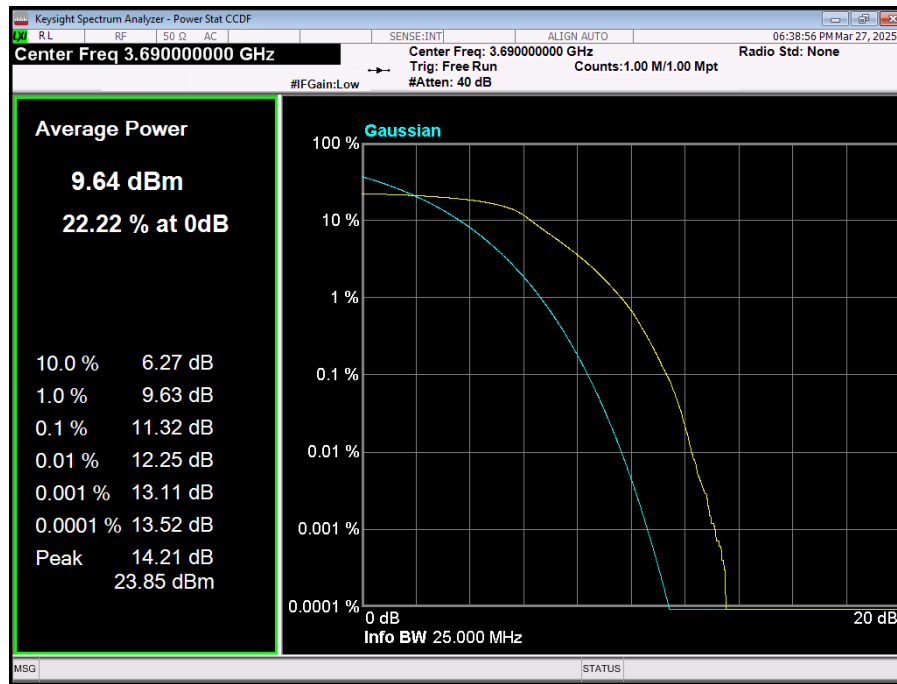
Band48 QPSK BW=15MHz Channel=56665 RB Size=75 Position=#0



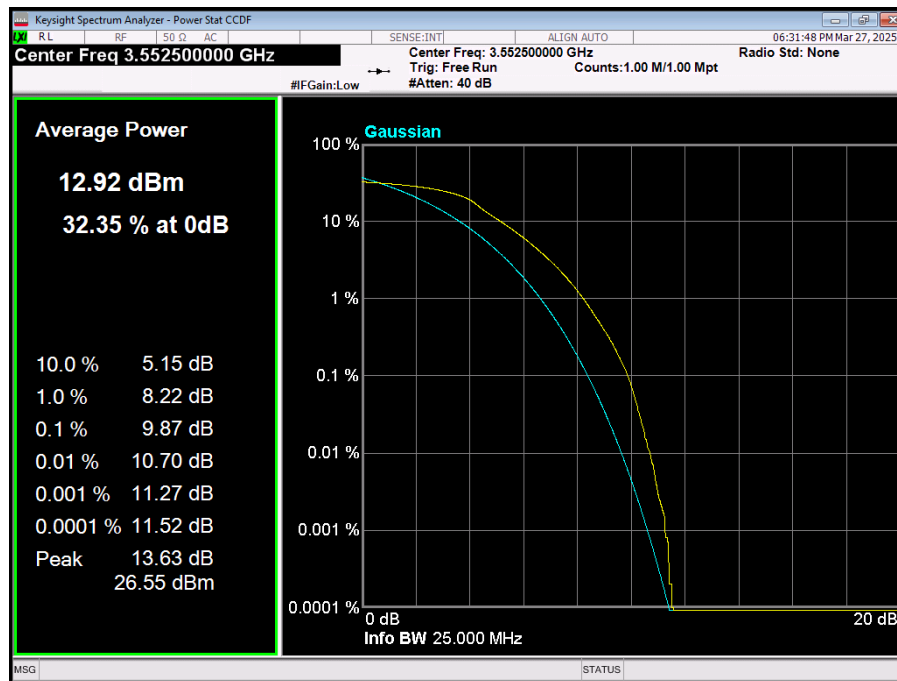
Band48 QPSK BW=20MHz Channel=55340 RB Size=100 Position=#0



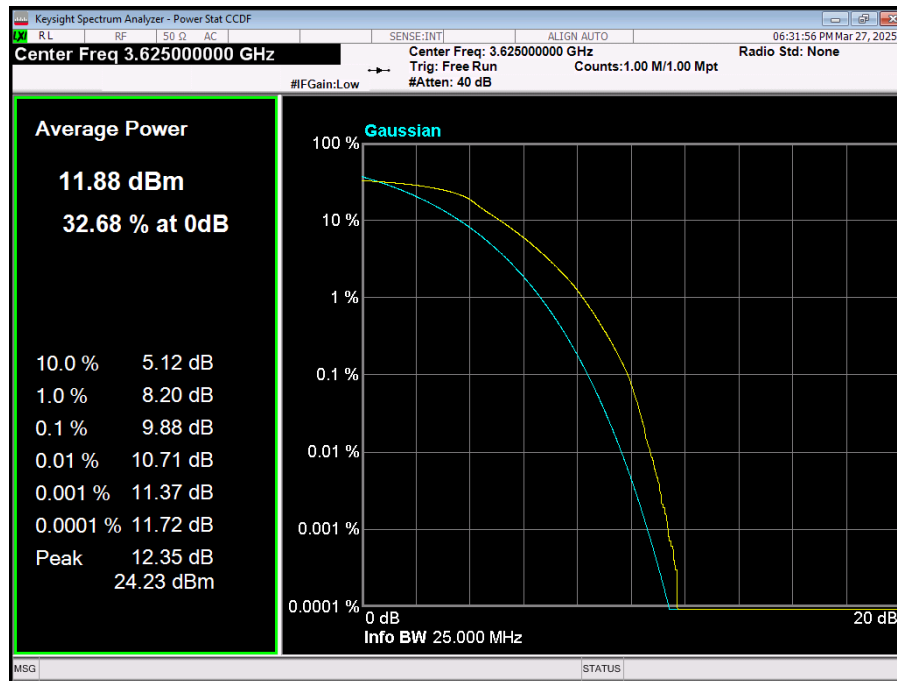
Band48 QPSK BW=20MHz Channel=55990 RB Size=100 Position=#0



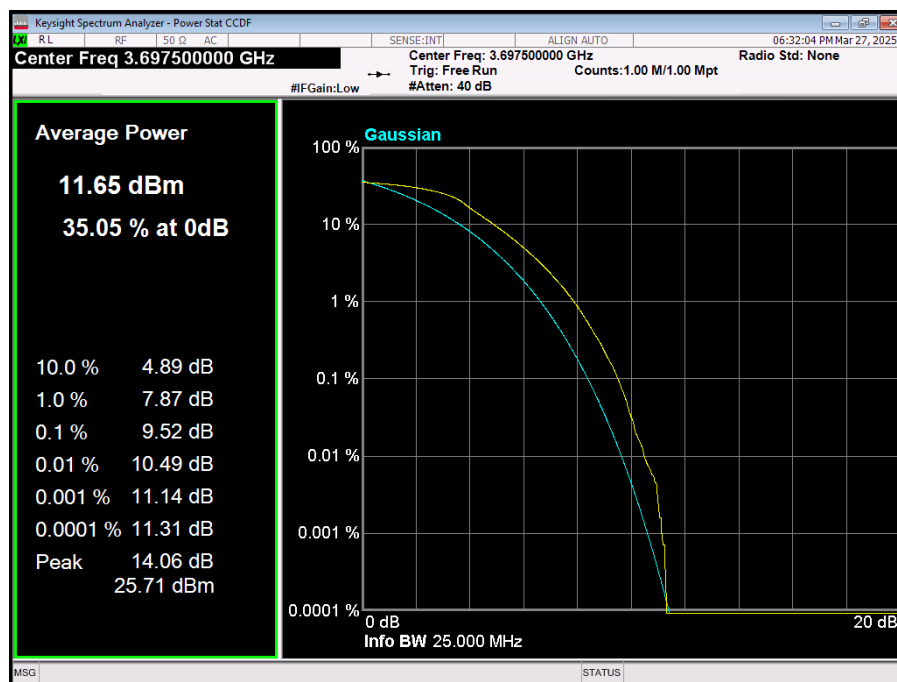
Band48 QPSK BW=20MHz Channel=56640 RB Size=100 Position=#0



Band48 QPSK BW=5MHz Channel=55265 RB Size=25 Position=#0



Band48 QPSK BW=5MHz Channel=55990 RB Size=25 Position=#0



Band48 QPSK BW=5MHz Channel=56715 RB Size=25 Position=#0

6.5. Frequency Stability

LTE B48 Fc(MHz)	Condition		F Low (MHz)	F High (MHz)	Limit (MHz)	Verdict
3552.5	BANDWIDTH	5MHz	3550.237	3554.763	2496-2690	PASS
	Temperature	Voltage				
	Extreme (50℃)		3550.210	3554.790	2496-2690	PASS
	Extreme (40℃)		3550.253	3554.747	2496-2690	PASS
	Extreme (30℃)		3550.227	3554.773	2496-2690	PASS
	Extreme (20℃)		3550.272	3554.728	2496-2690	PASS
	Extreme (10℃)		3550.284	3554.716	2496-2690	PASS
	Extreme (0℃)		3550.251	3554.749	2496-2690	PASS
	Extreme (-10℃)		3550.222	3554.778	2496-2690	PASS
	Extreme (-20℃)		3550.238	3554.762	2496-2690	PASS
	Extreme (-30℃)		3550.242	3554.758	2496-2690	PASS
	20℃	LV	3550.257	3554.743	2496-2690	PASS
		HV				
LTE B48 Fc(MHz)	Condition		F Low (MHz)	F High (MHz)	Limit (MHz)	Verdict
3555	BANDWIDTH	10MHz	3550.501	3559.499	2496-2690	PASS
	Temperature	Voltage				
	Extreme (50℃)		3550.542	3559.458	2496-2690	PASS
	Extreme (40℃)		3550.532	3559.468	2496-2690	PASS
	Extreme (30℃)		3550.502	3559.498	2496-2690	PASS
	Extreme (20℃)		3550.615	3559.385	2496-2690	PASS
	Extreme (10℃)		3550.565	3559.435	2496-2690	PASS
	Extreme (0℃)		3550.586	3559.414	2496-2690	PASS
	Extreme (-10℃)		3550.513	3559.487	2496-2690	PASS
	Extreme (-20℃)		3550.548	3559.452	2496-2690	PASS
	Extreme (-30℃)		3550.560	3559.440	2496-2690	PASS
	20℃	LV	3550.567	3559.433	2496-2690	PASS
		HV				
LTE B48 Fc(MHz)	Condition		F Low (MHz)	F High (MHz)	Limit (MHz)	Verdict
3557.5	BANDWIDTH	15MHz	3550.703	3564.297	2496-2690	PASS
	Temperature	Voltage				
	Extreme (50℃)		3550.739	3564.261	2496-2690	PASS
	Extreme (40℃)		3550.708	3564.292	2496-2690	PASS
	Extreme (30℃)		3550.773	3564.227	2496-2690	PASS
	Extreme (20℃)					

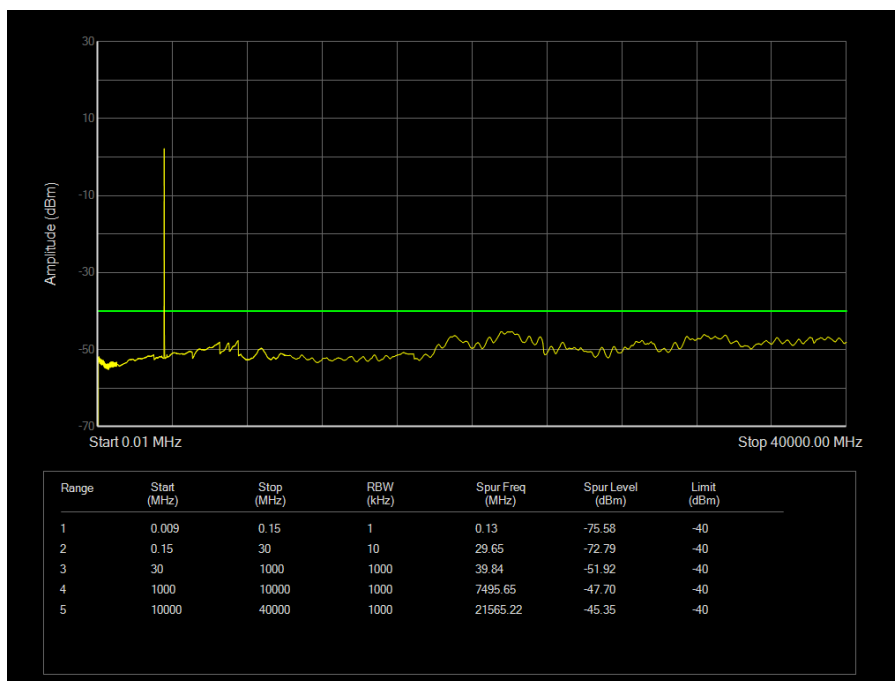
	Extreme (10℃)		3550.794	3564.206	2496-2690	PASS
	Extreme (0℃)		3550.769	3564.231	2496-2690	PASS
	Extreme (-10℃)		3550.723	3564.277	2496-2690	PASS
	Extreme (-20℃)		3550.798	3564.202	2496-2690	PASS
	Extreme (-30℃)	20℃	3550.722	3564.278	2496-2690	PASS
		LV	3550.752	3564.248	2496-2690	PASS
		HV	3550.719	3564.281	2496-2690	PASS
LTE B48 Fc(MHz)	Condition		F Low (MHz)	F High (MHz)	Limit (MHz)	Verdict
3560	BANDWIDTH	20MHz	QPSK			
	Temperature	Voltage				
	Extreme (50℃)		3551.049	3568.951	2496-2690	PASS
	Extreme (40℃)		3551.043	3568.957	2496-2690	PASS
	Extreme (30℃)		3551.036	3568.964	2496-2690	PASS
	Extreme (20℃)		3551.044	3568.956	2496-2690	PASS
	Extreme (10℃)		3551.045	3568.955	2496-2690	PASS
	Extreme (0℃)		3551.022	3568.978	2496-2690	PASS
	Extreme (-10℃)		3551.032	3568.968	2496-2690	PASS
	Extreme (-20℃)		3551.042	3568.958	2496-2690	PASS
	Extreme (-30℃)		3551.025	3568.975	2496-2690	PASS
	20℃	LV	3551.024	3568.976	2496-2690	PASS
		HV	3551.012	3568.988	2496-2690	PASS
LTE B48 Fc(MHz)	Condition		F Low (MHz)	F High (MHz)	Limit (MHz)	Verdict
3697.5	BANDWIDTH	5MHz	QPSK			
	Temperature	Voltage				
	Extreme (50℃)		3695.217	3699.783	2496-2690	PASS
	Extreme (40℃)		3695.237	3699.763	2496-2690	PASS
	Extreme (30℃)		3695.266	3699.734	2496-2690	PASS
	Extreme (20℃)		3695.226	3699.774	2496-2690	PASS
	Extreme (10℃)		3695.263	3699.737	2496-2690	PASS
	Extreme (0℃)		3695.237	3699.763	2496-2690	PASS
	Extreme (-10℃)		3695.233	3699.767	2496-2690	PASS
	Extreme (-20℃)		3695.234	3699.766	2496-2690	PASS
	Extreme (-30℃)		3695.251	3699.749	2496-2690	PASS
	20℃	LV	3695.246	3699.754	2496-2690	PASS
		HV	3695.233	3699.767	2496-2690	PASS
LTE B48 Fc(MHz)	Condition		F Low (MHz)	F High (MHz)	Limit (MHz)	Verdict
3695	BANDWIDTH	10MHz	QPSK			
	Temperature	Voltage				

	Extreme (50℃)		3690.596	3699.404	2496-2690	PASS
	Extreme (40℃)		3690.645	3699.355	2496-2690	PASS
	Extreme (30℃)		3690.636	3699.364	2496-2690	PASS
	Extreme (20℃)		3690.634	3699.366	2496-2690	PASS
	Extreme (10℃)		3690.598	3699.402	2496-2690	PASS
	Extreme (0℃)		3690.636	3699.364	2496-2690	PASS
	Extreme (-10℃)		3690.537	3699.463	2496-2690	PASS
	Extreme (-20℃)		3690.567	3699.433	2496-2690	PASS
	Extreme (-30℃)		3690.595	3699.405	2496-2690	PASS
	20℃	LV	3690.578	3699.422	2496-2690	PASS
		HV	3690.527	3699.473	2496-2690	PASS
LTE B48 Fc(MHz)	Condition		F Low (MHz)	F High (MHz)	Limit (MHz)	Verdict
3692.5	BANDWIDTH	15MHz	QPSK			
	Temperature	Voltage				
	Extreme (50℃)		3685.737	3699.263	2496-2690	PASS
	Extreme (40℃)		3685.705	3699.295	2496-2690	PASS
	Extreme (30℃)		3685.737	3699.263	2496-2690	PASS
	Extreme (20℃)		3685.791	3699.209	2496-2690	PASS
	Extreme (10℃)		3685.786	3699.214	2496-2690	PASS
	Extreme (0℃)		3685.702	3699.298	2496-2690	PASS
	Extreme (-10℃)		3685.701	3699.299	2496-2690	PASS
	Extreme (-20℃)		3685.785	3699.215	2496-2690	PASS
	Extreme (-30℃)		3685.704	3699.296	2496-2690	PASS
	20℃	LV	3685.726	3699.274	2496-2690	PASS
		HV	3685.765	3699.235	2496-2690	PASS
LTE B48 Fc(MHz)	Condition		F Low (MHz)	F High (MHz)	Limit (MHz)	Verdict
3690	BANDWIDTH	20MHz	QPSK			
	Temperature	Voltage				
	Extreme (50℃)		3680.982	3699.018	2496-2690	PASS
	Extreme (40℃)		3680.993	3699.007	2496-2690	PASS
	Extreme (30℃)		3680.936	3699.064	2496-2690	PASS
	Extreme (20℃)		3680.995	3699.005	2496-2690	PASS
	Extreme (10℃)		3680.984	3699.016	2496-2690	PASS
	Extreme (0℃)		3680.956	3699.044	2496-2690	PASS
	Extreme (-10℃)		3680.985	3699.015	2496-2690	PASS
	Extreme (-20℃)		3680.983	3699.017	2496-2690	PASS
	Extreme (-30℃)		3680.992	3699.008	2496-2690	PASS
	20℃	LV	3680.959	3699.041	2496-2690	PASS
		HV	3680.919	3699.081	2496-2690	PASS

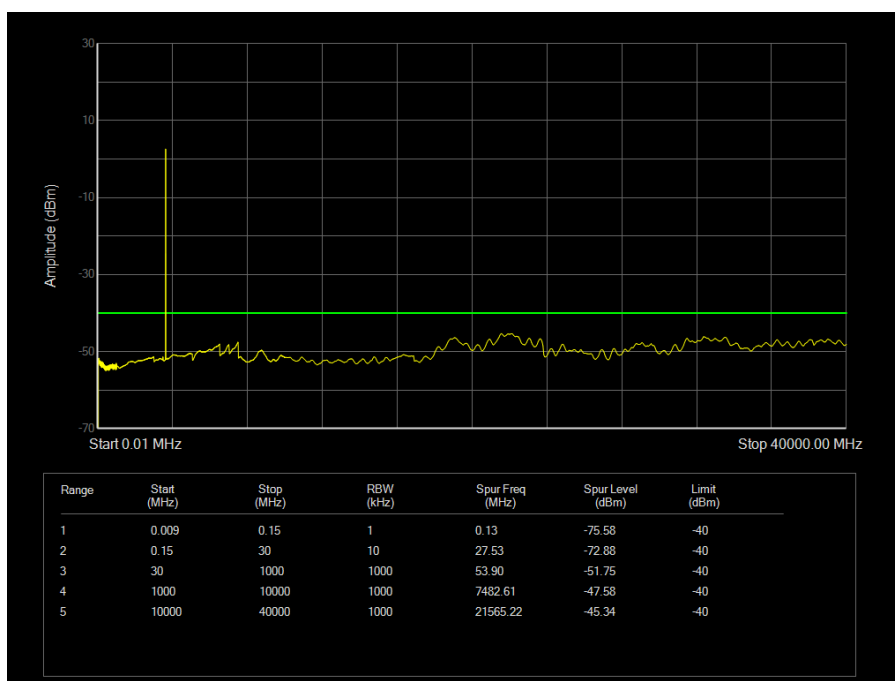
6.6. Spurious Emissions at Antenna Terminals

Sweep the whole frequency band through the range from 9kHz to the 10th harmonic of the carrier, the emissions more than 20 dB below the limit are not reported.

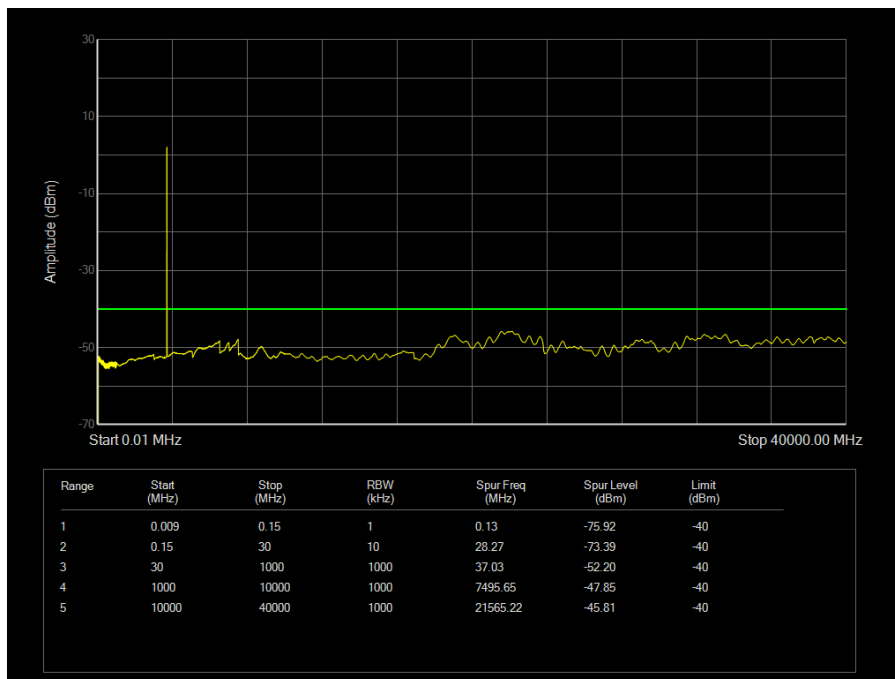
The signal beyond the limit is carrier.



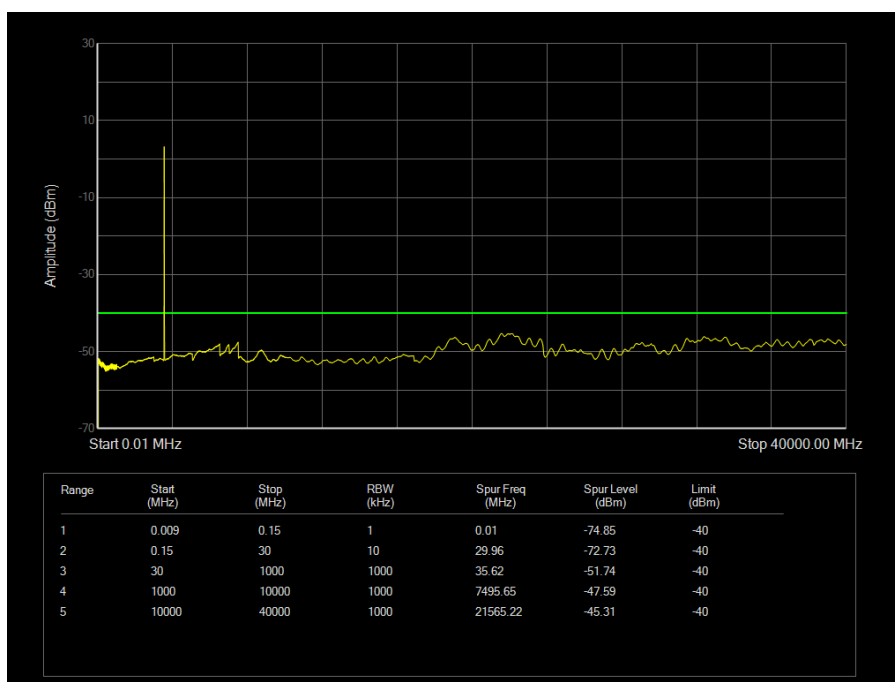
Band48 QPSK BW=10MHz Channel=55290 RB Size=1 Position=#0



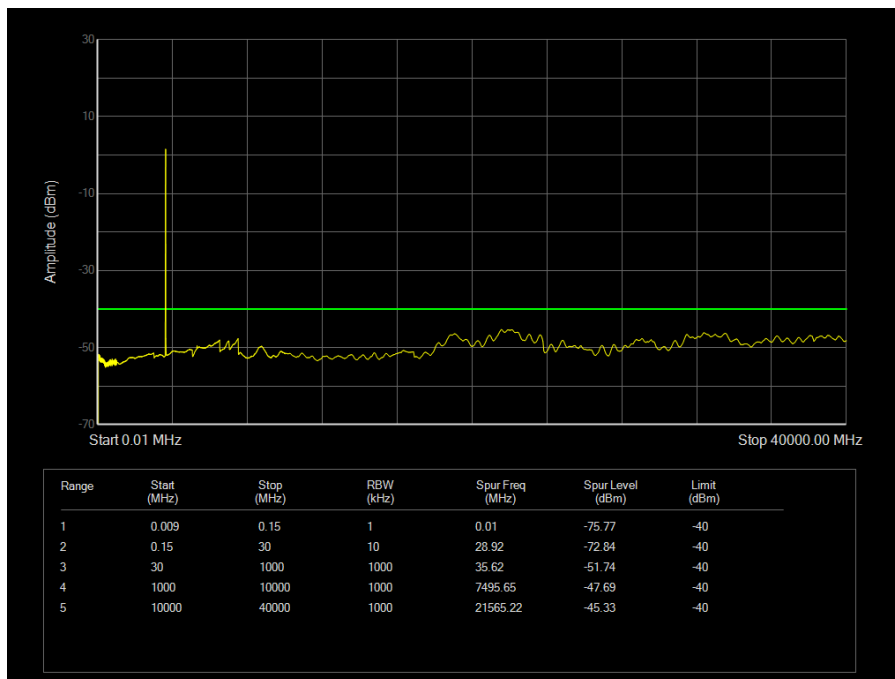
Band48 QPSK BW=10MHz Channel=55990 RB Size=1 Position=#0



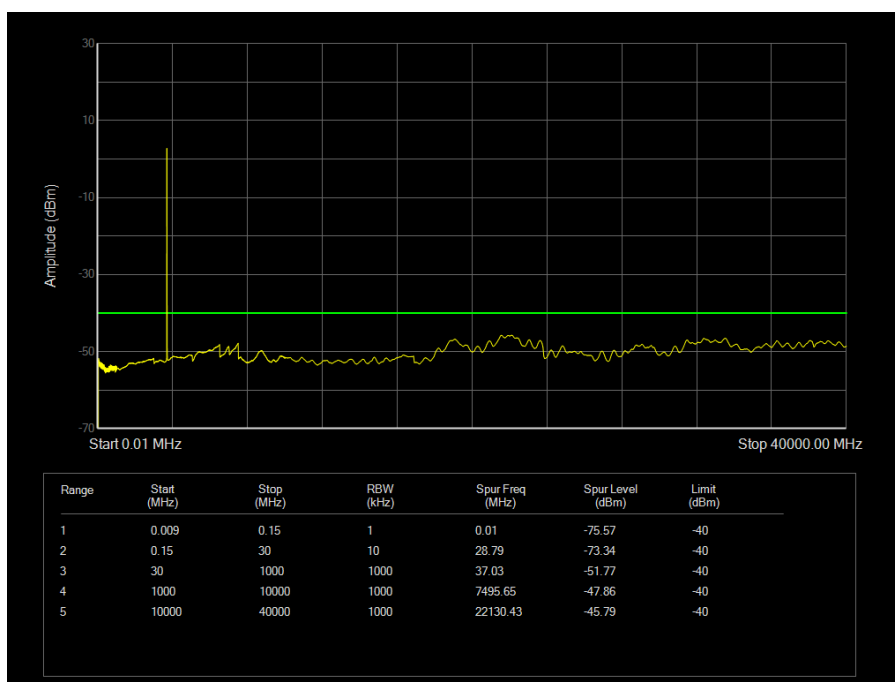
Band48 QPSK BW=10MHz Channel=56690 RB Size=1 Position=#0



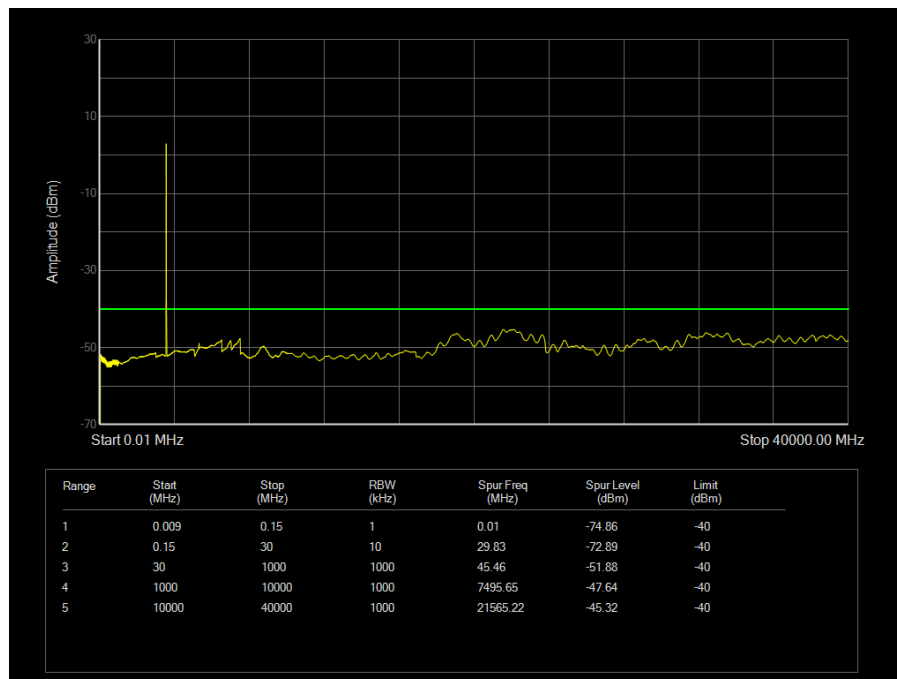
Band48 QPSK BW=15MHz Channel=55315 RB Size=1 Position=#0



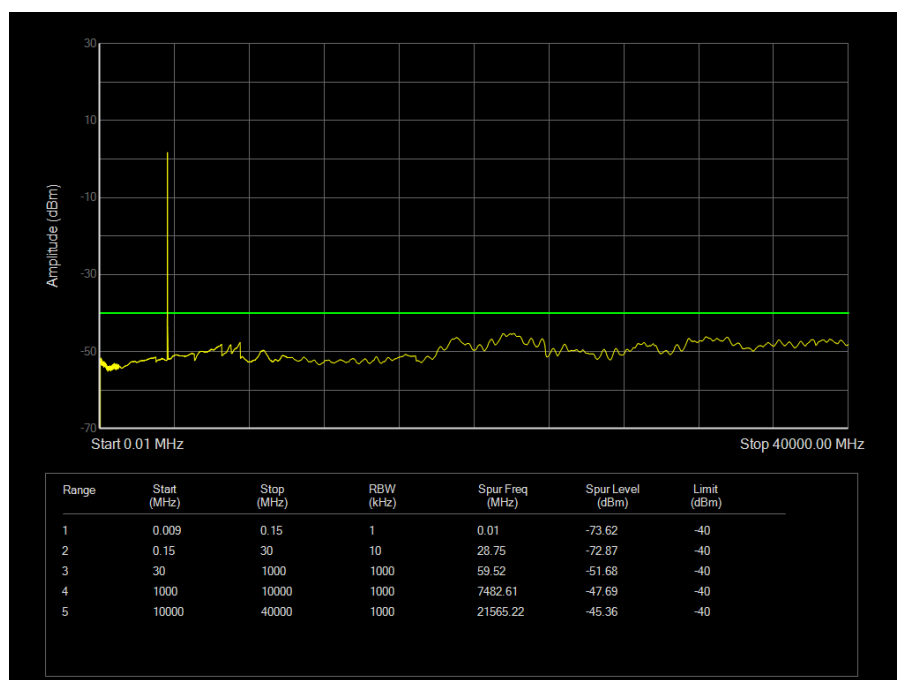
Band48 QPSK BW=15MHz Channel=55990 RB Size=1 Position=#0



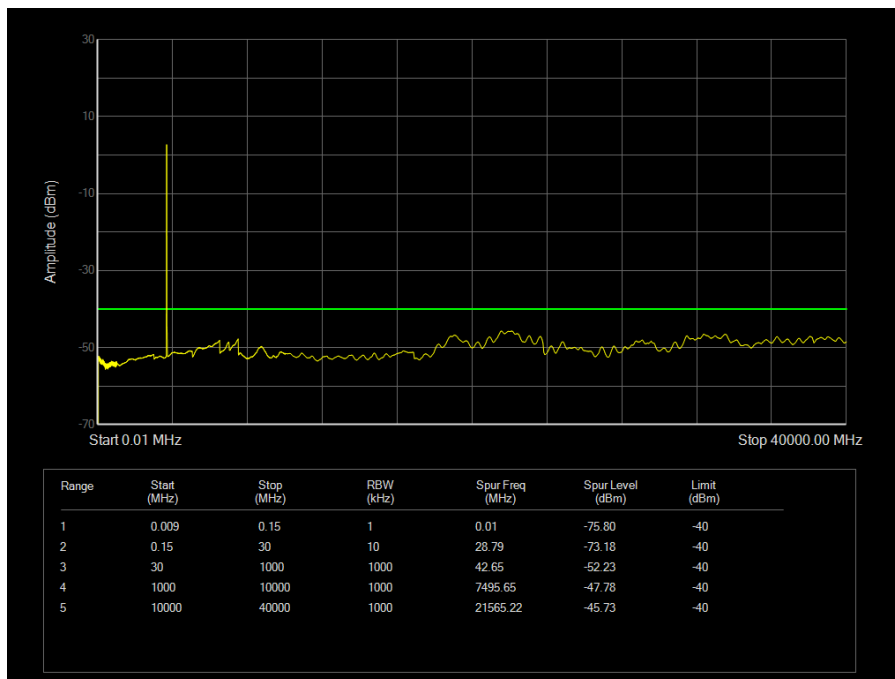
Band48 QPSK BW=15MHz Channel=56665 RB Size=1 Position=#0



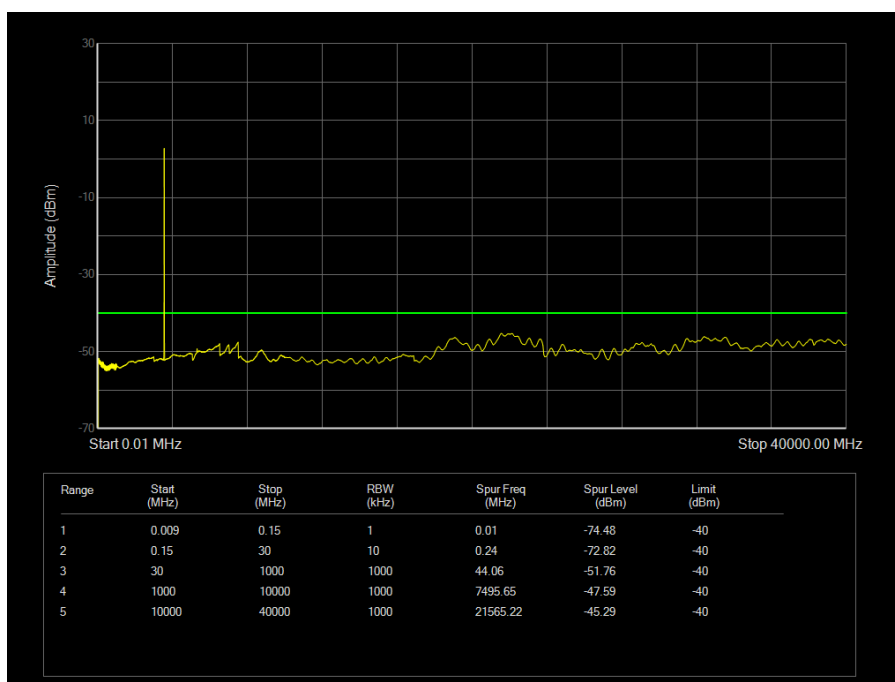
Band48 QPSK BW=20MHz Channel=55340 RB Size=1 Position=#0



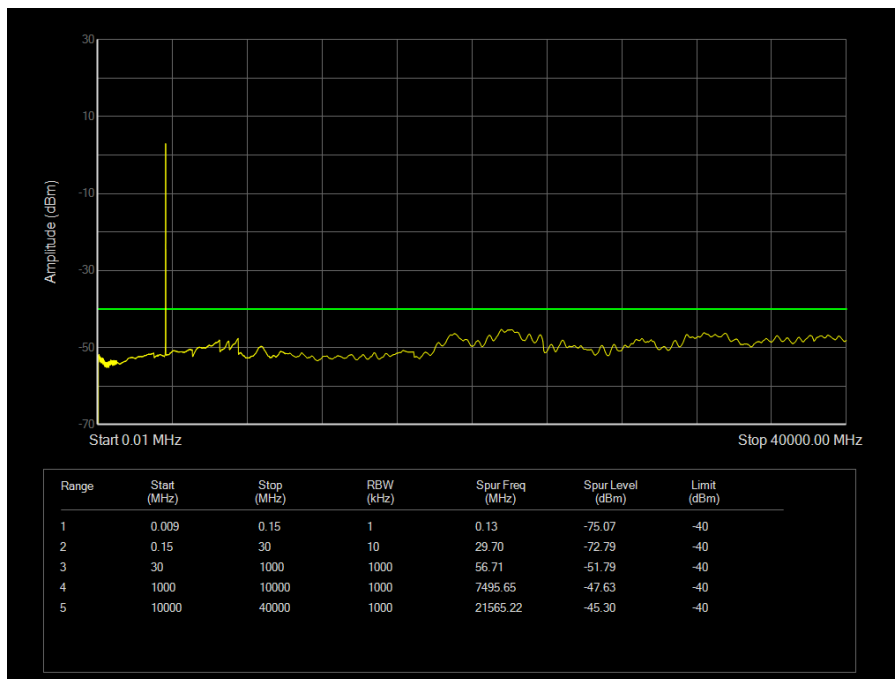
Band48 QPSK BW=20MHz Channel=55990 RB Size=1 Position=#0



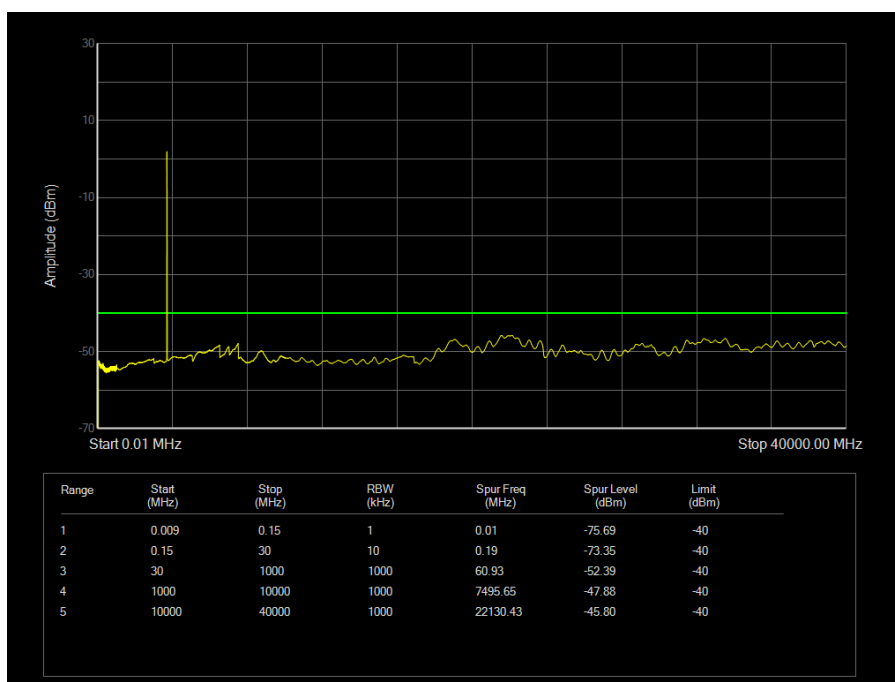
Band48 QPSK BW=20MHz Channel=56640 RB Size=1 Position=#0



Band48 QPSK BW=5MHz Channel=55265 RB Size=1 Position=#0



Band48 QPSK BW=5MHz Channel=55990 RB Size=1 Position=#0



Band48 QPSK BW=5MHz Channel=56715 RB Size=1 Position=#0

6.7. Radiated Spurious Emission

Sweep the whole frequency band through the range from 30MHz to the 10th harmonic of the carrier, the emissions below the noise floor will not be recorded in the report.

LTE Band 48 5MHz CH Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	Result Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	7245.00	-58.64	2.50	11.35	Vertical	-49.79	-13.00	36.79	2
3	10867.50	-52.42	4.20	12.05	Vertical	-44.57	-13.00	31.57	215
4	14490.00	-53.11	5.50	14.23	Vertical	-44.38	-13.00	31.38	174
5	18112.50	--	--	--	--	--	--	--	--
6	21735.00	--	--	--	--	--	--	--	--
7	25357.50	--	--	--	--	--	--	--	--
8	28980.00	--	--	--	--	--	--	--	--
9	32602.50	--	--	--	--	--	--	--	--
10	36225.00	--	--	--	--	--	--	--	--
Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor. 2. The worst emission was found in the antenna is Vertical position.									

LTE Band 48 5MHz CH Middle

Harmonic	Frequency (MHz)	SG (dBm)	Cable Loss (dB)	Gain (dBi)	Antenna Polarization	Result Level (dBm)	Limit (dBm)	Margin (dB)	Azimuth (deg)
2	7230.00	-59.31	2.50	11.35	Vertical	-50.46	-13.00	37.46	36
3	10845.00	-53.19	4.20	12.05	Vertical	-45.34	-13.00	32.34	175
4	14460.00	-53.77	5.50	14.23	Vertical	-45.04	-13.00	32.04	24
5	18075.00	--	--	--	--	--	--	--	--
6	21690.00	--	--	--	--	--	--	--	--
7	25305.00	--	--	--	--	--	--	--	--
8	28920.00	--	--	--	--	--	--	--	--
9	32535.00	--	--	--	--	--	--	--	--
10	36150.00	--	--	--	--	--	--	--	--
Note: 1.The other Spurious RF Radiated emissions level is no more than noise floor. 2. The worst emission was found in the antenna is Vertical position.									

7. Main Test Instruments

Name	Manufacturer	Type	Serial Number	Calibration Date	Expiration Date
Wireless Communication Tester	Anritsu	MT8821C	6201538758	2024-05-08	2025-05-07
Climate Chamber	WEISS	VT 4002	582261194500 10	2024-05-07	2025-05-06
Spectrum Analyzer	Keysight	N9020A	MY50510203	2024-05-07	2025-05-06
DC Power Supply	UNI-T	UTP1310+	C220795889	2024-05-08	2025-05-07
Wideband radio communication tester	R&S	CMW500	113645	2024-12-02	2025-12-01
Spectrum Analyzer	R&S	FSV3044	101053	2024-12-02	2025-12-01
Spectrum Analyzer	R&S	FSV30	100815	2024-12-02	2025-12-01
Loop Antenna	SCHWARZBECK	FMZB1519	1519-047	2023-04-16	2026-04-15
TRILOG Broadband Antenna	SCHWARZBECK	VULB 9163	391	2022-09-29	2025-09-28
Horn Antenna	SCHWARZBECK	BBHA 9120D	01799	2022-09-01	2025-08-31
Horn Antenna	ETS-Lindgren	3160-09	00102643	2024-9-24	2027-09-23
Software	R&S	EMC32	10.35.10	/	/

ANNEX A: The EUT Appearance

The EUT Appearance are submitted separately.

ANNEX B: Test Setup Photos

The Test Setup Photos are submitted separately.

******* END OF REPORT *******