

Appendix C

LTE BAND48

CONDUCTED OUTPUT POWER AND E.I.R.P.

CONDUCTED OUTPUT POWER (dBm)

LTE Band 48 (Ant7)						
BW	MCS Index	RB Size	RB Offset	Low	Mid	High
		Channel		55340	55990	56640
		Frequency (MHz)		3560	3625	3690
20M	QPSK	1	0	22.85	22.91	23.19
		1	50	22.75	22.83	23.11
		1	99	22.70	22.81	23.17
		50	0	22.08	22.08	22.25
		50	25	21.94	21.93	22.19
		50	50	22.05	22.09	22.21
		100	0	21.95	21.99	22.19
	16QAM	1	0	21.76	21.91	22.16
		1	50	21.88	22.04	22.20
		1	99	21.87	21.83	22.19
		50	0	20.94	21.09	21.32
		50	25	21.02	20.98	21.23
		50	50	21.09	20.87	21.27
		100	0	20.93	21.02	21.16
	64QAM	1	0	20.92	20.91	21.44
		1	50	20.83	20.94	21.37
		1	99	20.92	20.93	21.03
		50	0	20.00	20.00	20.50
		50	25	19.91	20.00	20.05
		50	50	19.99	20.01	20.14
		100	0	19.92	20.07	20.49
	256QAM	1	0	18.01	18.22	17.90
		1	50	18.00	18.06	17.84
		1	99	18.08	18.01	17.76
		50	0	18.06	18.10	17.84
		50	25	18.05	18.05	17.80
		50	50	18.09	18.03	17.82
		100	0	17.95	18.02	17.82
BW	MCS Index	Channel		55315	55990	56665
		Frequency (MHz)		3557.5	3625	3692.5

15M	QPSK	1	0	22.81	22.69	23.16
		1	37	22.60	22.64	22.96
		1	74	22.55	22.49	23.06
		36	0	21.97	21.82	22.24
		36	19	21.88	21.70	22.10
		36	39	21.98	21.67	22.14
		75	0	21.86	21.76	22.16
	16QAM	1	0	21.71	21.65	22.14
		1	37	21.85	21.64	22.16
		1	74	21.72	21.58	22.05
		36	0	20.83	20.85	21.17
		36	19	20.88	20.79	21.13
		36	39	20.99	20.76	21.17
		75	0	20.80	20.70	21.03
	64QAM	1	0	20.79	20.69	21.36
		1	37	20.79	20.77	21.23
		1	74	20.85	20.65	21.38
		36	0	19.98	19.80	20.47
		36	19	19.89	19.62	20.43
		36	39	19.96	19.68	20.48
		75	0	19.79	19.75	20.46
	256QAM	1	0	17.87	17.89	17.84
		1	37	17.98	17.78	17.77
		1	74	18.02	17.74	17.65
		36	0	17.97	17.95	17.78
		36	19	17.93	17.78	17.76
		36	39	17.99	17.75	17.81
		75	0	17.88	17.79	17.76
BW	MCS Index	Channel		55290	55990	56690
		Frequency (MHz)		3555	3625	3695
10M	QPSK	1	0	22.78	22.74	23.18
		1	24	22.68	22.55	23.04
		1	49	22.59	22.50	23.10
		25	0	22.03	21.75	22.10
		25	12	21.80	21.72	22.18
		25	25	21.97	21.76	22.12
		50	0	21.83	21.74	22.04
	16QAM	1	0	21.62	21.76	22.15
		1	24	21.78	21.55	22.09
		1	49	21.81	21.46	22.08
		25	0	20.85	20.74	21.23
		25	12	21.00	20.73	21.16
		25	25	21.02	20.76	21.24
		50	0	20.80	20.69	21.07

	64QAM	1	0	20.87	20.80	21.41
		1	24	20.82	20.71	21.33
		1	49	20.78	20.72	21.47
		25	0	19.87	19.68	20.49
		25	12	19.89	19.71	20.48
		25	25	19.90	19.69	20.45
		50	0	19.87	19.61	20.46
	256QAM	1	0	17.97	17.93	17.78
		1	24	17.92	17.83	17.74
		1	49	17.97	17.76	17.62
		25	0	17.95	17.86	17.77
		25	12	17.99	17.89	17.68
		25	25	18.06	17.85	17.74
		50	0	17.88	17.77	17.72
BW	MCS Index	Channel		55265	55990	56715
		Frequency (MHz)		3552.5	3625	3697.5
5M	QPSK	1	0	22.70	22.77	23.15
		1	12	22.67	22.65	23.03
		1	24	22.60	22.53	23.05
		12	0	21.97	21.75	22.21
		12	6	21.85	21.81	22.09
		12	13	21.95	21.69	22.08
		25	0	21.80	21.85	22.08
	16QAM	1	0	21.70	21.71	22.11
		1	12	21.82	21.65	22.08
		1	24	21.72	21.46	22.17
		12	0	20.83	20.74	21.28
		12	6	20.97	20.76	21.20
		12	13	21.06	20.71	21.12
		25	0	20.80	20.67	21.11
	64QAM	1	0	20.85	20.83	21.36
		1	12	20.72	20.63	21.35
		1	24	20.78	20.59	21.48
		12	0	19.86	19.73	20.40
		12	6	19.90	19.76	20.33
		12	13	19.96	19.66	20.44
		25	0	19.90	19.68	20.44
	256QAM	1	0	17.89	17.82	17.77
		1	12	17.94	17.88	17.71
		1	24	18.02	17.80	17.64
		12	0	18.02	17.95	17.79
		12	6	18.01	17.84	17.72
		12	13	18.03	17.81	17.79
		25	0	17.90	17.87	17.71

EIRP

Part 96 LTE Band 48_Ant 7							
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	FCC Limit (dbm)
20M-QPSK	55340	3560	22.85	-0.48	22.37	172.58	23
	55990	3625	22.91	-0.48	22.43	174.98	23
	56640	3690	23.19	-0.48	22.71	186.64	23
20M-16QAM	55340	3560	21.88	-0.48	21.40	138.04	23
	55990	3625	22.04	-0.48	21.56	143.22	23
	56640	3690	22.20	-0.48	21.72	148.59	23
20M-64QAM	55340	3560	20.92	-0.48	20.44	110.66	23
	55990	3625	20.94	-0.48	20.46	111.17	23
	56640	3690	21.44	-0.48	20.96	124.74	23
20M-256QAM	55340	3560	18.09	-0.48	17.61	57.68	23
	55990	3625	18.22	-0.48	17.74	59.43	23
	56640	3690	17.90	-0.48	17.42	55.21	23
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	FCC Limit (dbm)
15M-QPSK	55315	3557.5	22.81	-0.48	22.33	171.00	23
	55990	3625	22.69	-0.48	22.21	166.34	23
	56665	3692.5	23.16	-0.48	22.68	185.35	23
15M-16QAM	55315	3557.5	21.85	-0.48	21.37	137.09	23
	55990	3625	21.65	-0.48	21.17	130.92	23
	56665	3692.5	22.16	-0.48	21.68	147.23	23
15M-64QAM	55315	3557.5	20.85	-0.48	20.37	108.89	23
	55990	3625	20.77	-0.48	20.29	106.91	23
	56665	3692.5	21.38	-0.48	20.90	123.03	23
15M-256QAM	55315	3557.5	18.02	-0.48	17.54	56.75	23
	55990	3625	17.95	-0.48	17.47	55.85	23
	56665	3692.5	17.84	-0.48	17.36	54.45	23
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	FCC Limit (dbm)
10M-QPSK	55290	3555	22.78	-0.48	22.30	169.82	23
	55990	3625	22.74	-0.48	22.26	168.27	23
	56690	3695	23.18	-0.48	22.70	186.21	23
10M-16QAM	55290	3555	21.81	-0.48	21.33	135.83	23
	55990	3625	21.76	-0.48	21.28	134.28	23
	56690	3695	22.15	-0.48	21.67	146.89	23
10M-64QAM	55290	3555	20.87	-0.48	20.39	109.40	23

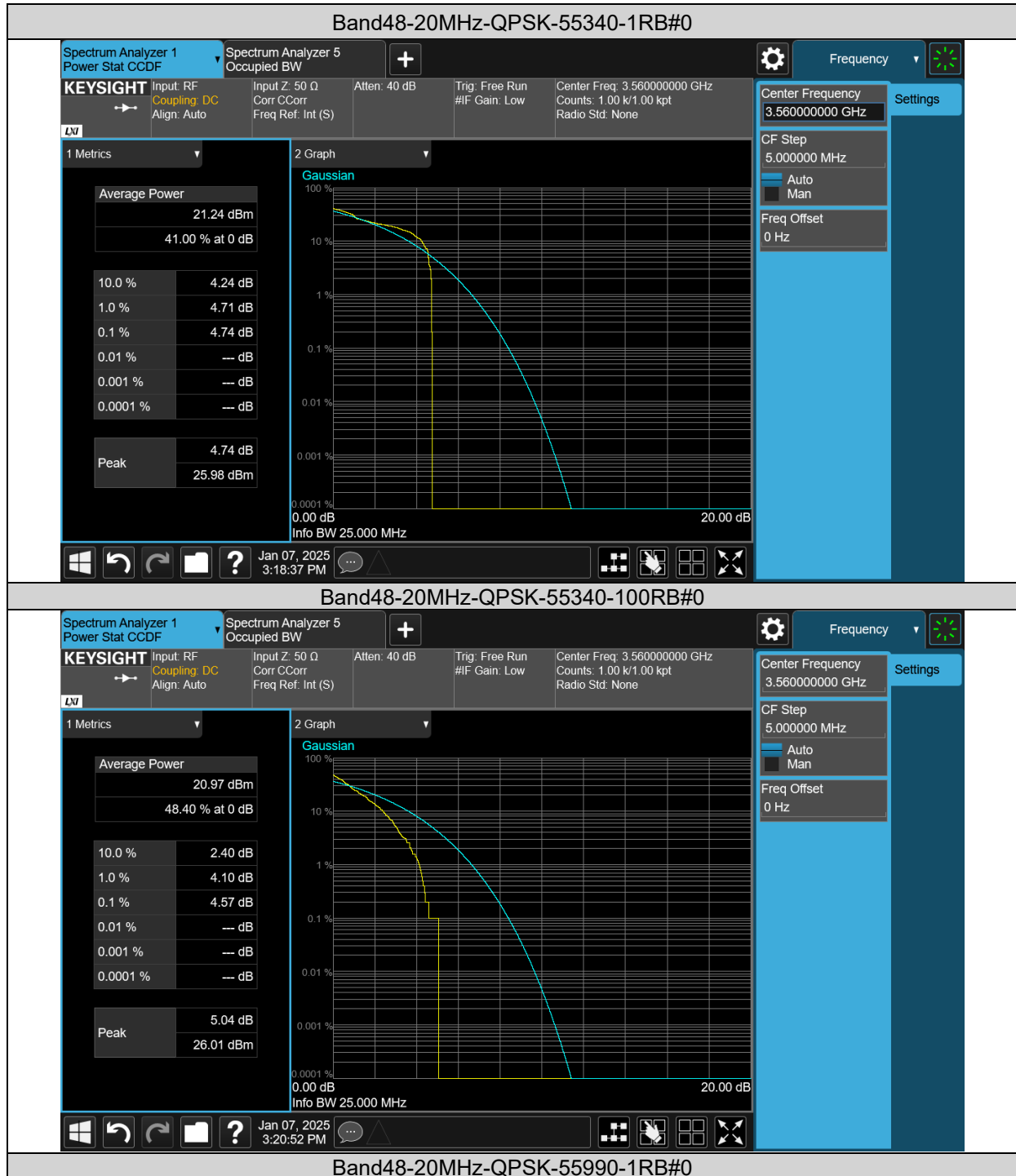
	55990	3625	20.80	-0.48	20.32	107.65	23
	56690	3695	21.47	-0.48	20.99	125.60	23
10M-256QAM	55290	3555	18.06	-0.48	17.58	57.28	23
	55990	3625	17.93	-0.48	17.45	55.59	23
	56690	3695	17.78	-0.48	17.30	53.70	23
BW [MHz] Modulation	Channel	Frequency (MHz)	Conducted Power (dBm)	Gain (dB)	EIRP (dBm)	EIRP (mW)	FCC Limit (dbm)
5M-QPSK	55265	3552.5	22.70	-0.48	22.22	166.72	23
	55990	3625	22.77	-0.48	22.29	169.43	23
	56715	3697.5	23.15	-0.48	22.67	184.93	23
5M-16QAM	55265	3552.5	21.82	-0.48	21.34	136.14	23
	55990	3625	21.71	-0.48	21.23	132.74	23
	56715	3697.5	22.17	-0.48	21.69	147.57	23
5M-64QAM	55265	3552.5	20.85	-0.48	20.37	108.89	23
	55990	3625	20.83	-0.48	20.35	108.39	23
	56715	3697.5	21.48	-0.48	21.00	125.89	23
5M-256QAM	55265	3552.5	18.03	-0.48	17.55	56.89	23
	55990	3625	17.95	-0.48	17.47	55.85	23
	56715	3697.5	17.79	-0.48	17.31	53.83	23

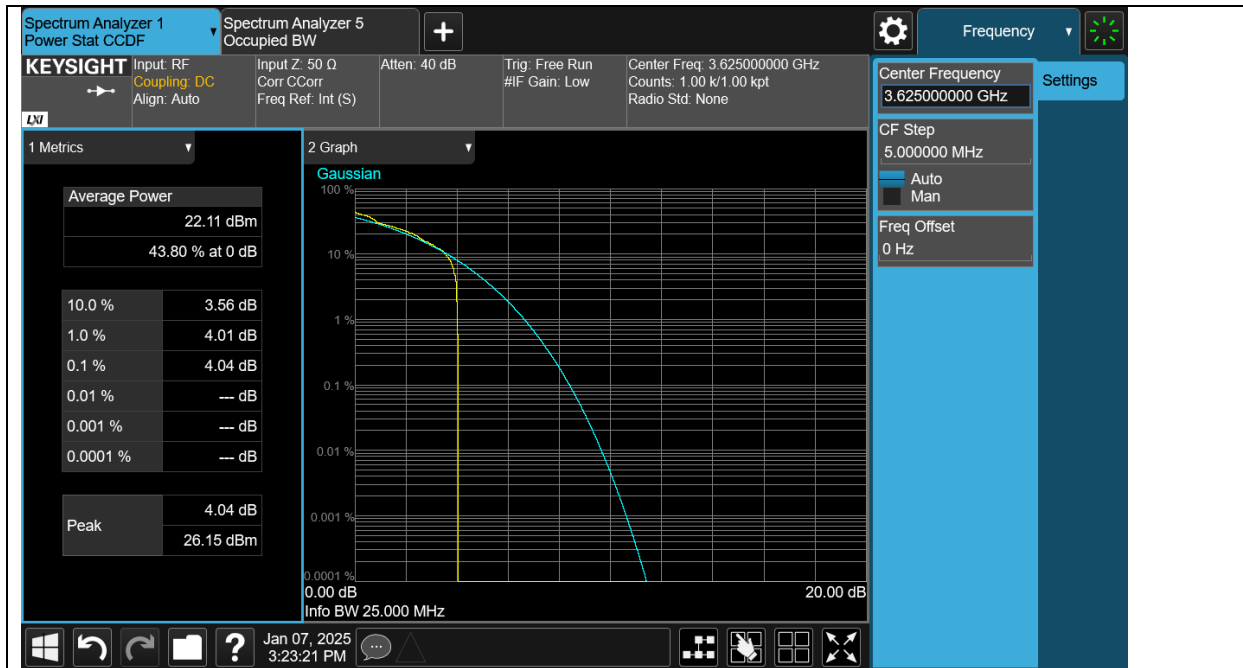
Note: The worst case EIRP shown in this section is found with LTE operating only using 1RB. As such, the EIRP/10MHz and full channel EIRP values will be identical since 1RB is fully contained within all available channel bandwidths (i.e., 5, 10, 15, 20MHz).

PEAK-TO-AVERAGE RATIO(CCDF) TEST RESULT

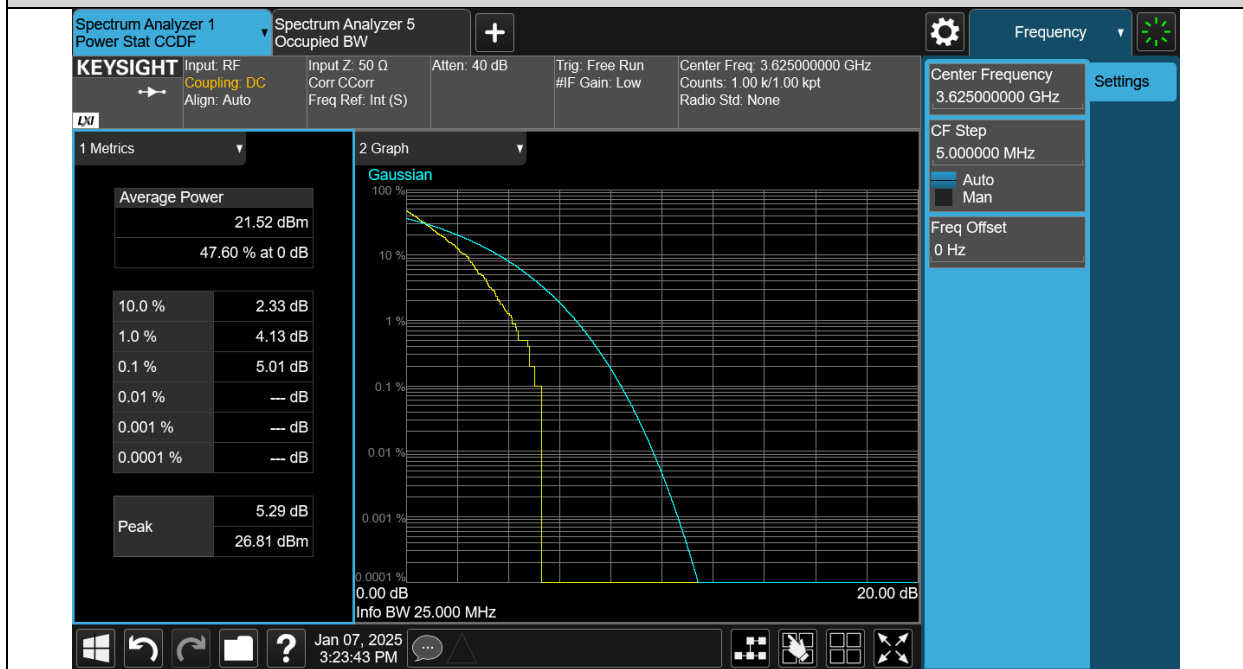
Band	Bandwidth	Modulation	Channel	RB Configuration	Result(dB)	Limit(dB)	Verdict
Band48	20MHz	QPSK	55340	1RB#0	4.74	13	PASS
Band48	20MHz	QPSK	55340	100RB#0	4.57	13	PASS
Band48	20MHz	QPSK	55990	1RB#0	4.04	13	PASS
Band48	20MHz	QPSK	55990	100RB#0	5.01	13	PASS
Band48	20MHz	QPSK	56640	1RB#0	2.90	13	PASS
Band48	20MHz	QPSK	56640	100RB#0	5.08	13	PASS
Band48	20MHz	16QAM	55340	1RB#0	3.15	13	PASS
Band48	20MHz	16QAM	55340	100RB#0	5.85	13	PASS
Band48	20MHz	16QAM	55990	1RB#0	2.94	13	PASS
Band48	20MHz	16QAM	55990	100RB#0	5.83	13	PASS
Band48	20MHz	16QAM	56640	1RB#0	3.53	13	PASS
Band48	20MHz	16QAM	56640	100RB#0	5.67	13	PASS
Band48	20MHz	64QAM	55340	1RB#0	4.35	13	PASS
Band48	20MHz	64QAM	55340	100RB#0	6.07	13	PASS
Band48	20MHz	64QAM	55990	1RB#0	3.81	13	PASS
Band48	20MHz	64QAM	55990	100RB#0	6.54	13	PASS
Band48	20MHz	64QAM	56640	1RB#0	2.97	13	PASS
Band48	20MHz	64QAM	56640	100RB#0	6.57	13	PASS
Band48	20MHz	256QAM	55340	1RB#0	3.51	13	PASS
Band48	20MHz	256QAM	55340	100RB#0	6.77	13	PASS
Band48	20MHz	256QAM	55990	1RB#0	3.61	13	PASS
Band48	20MHz	256QAM	55990	100RB#0	5.79	13	PASS
Band48	20MHz	256QAM	56640	1RB#0	2.66	13	PASS
Band48	20MHz	256QAM	56640	100RB#0	6.09	13	PASS

TEST GRAPHS

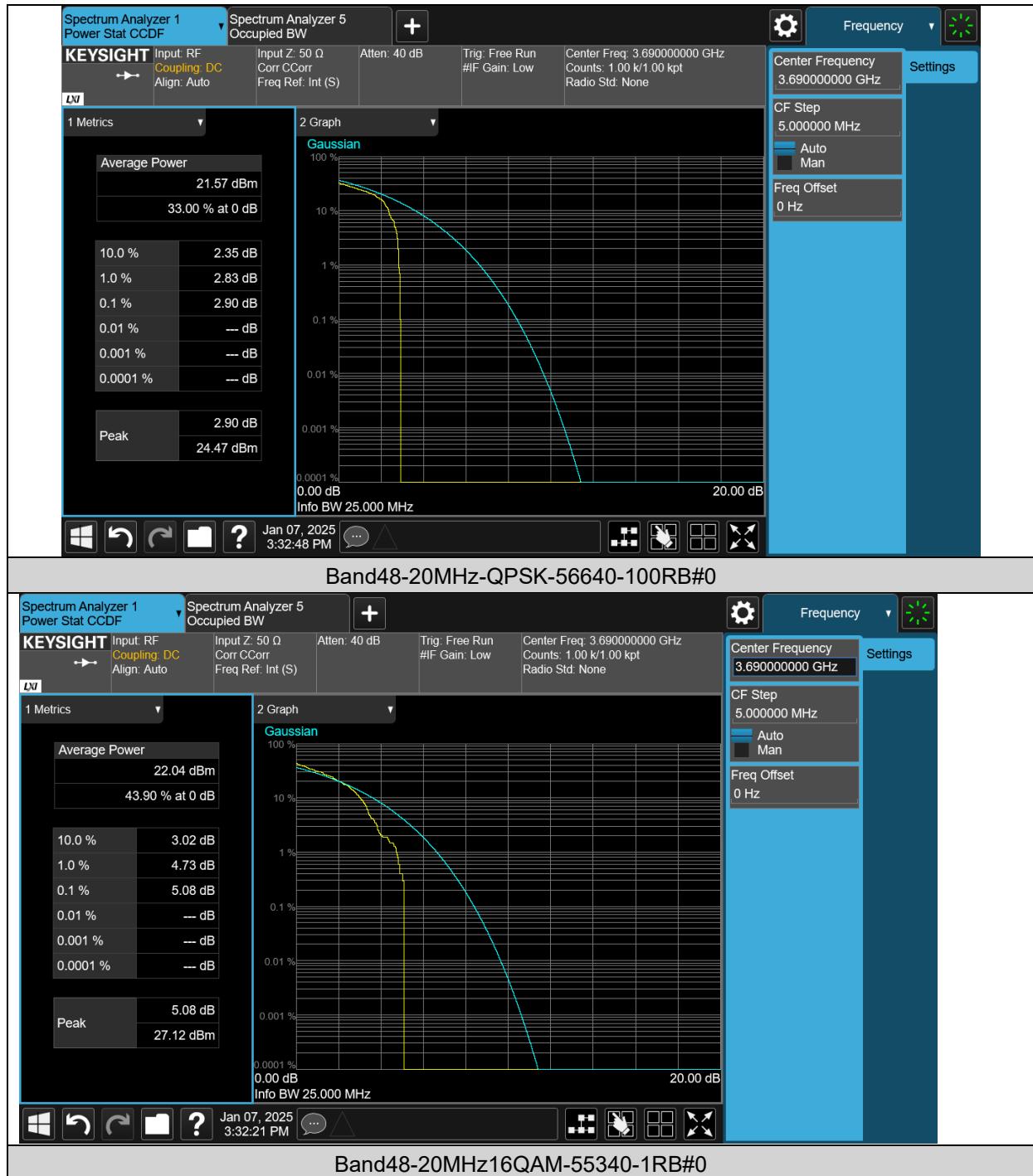


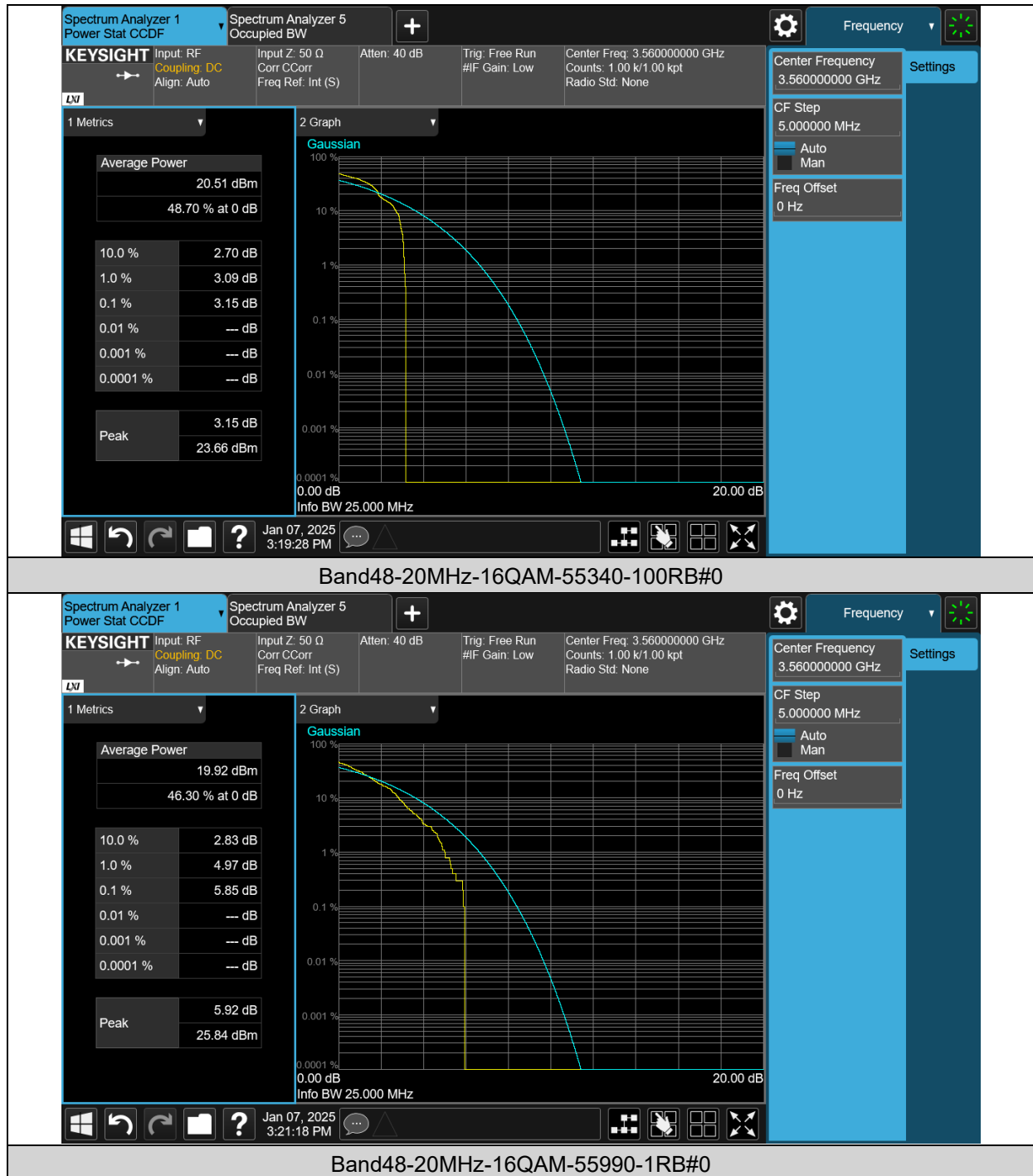


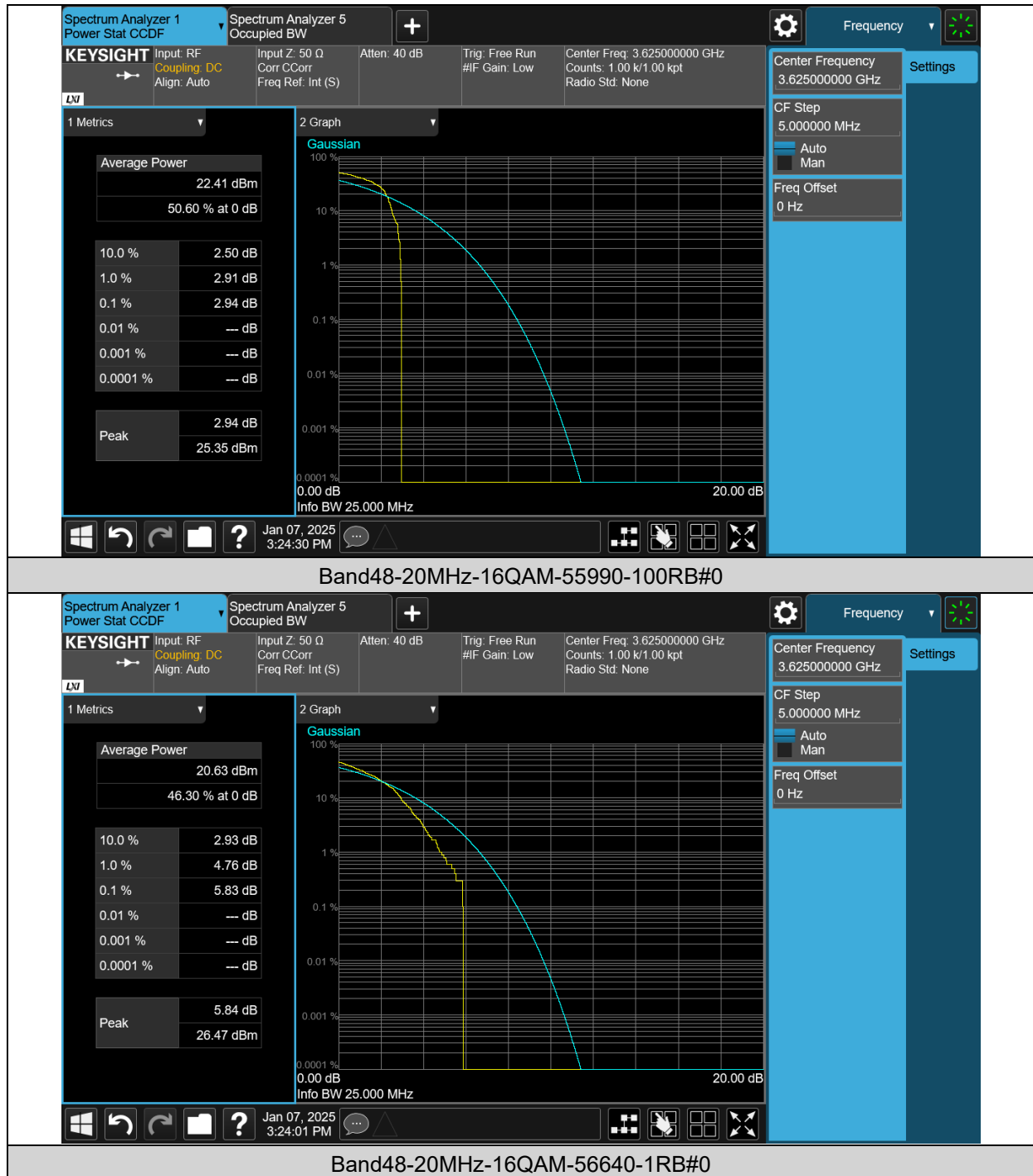
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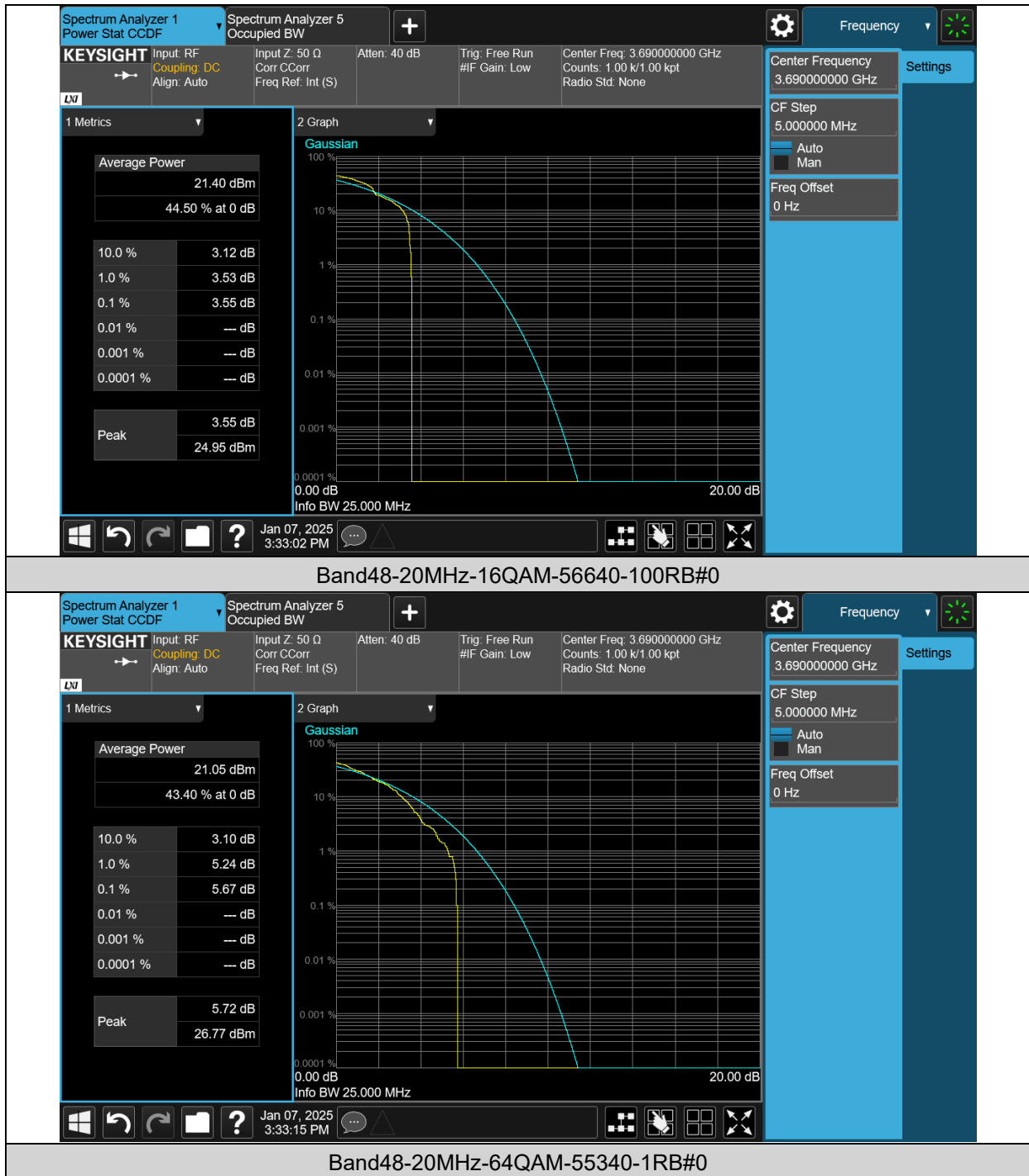


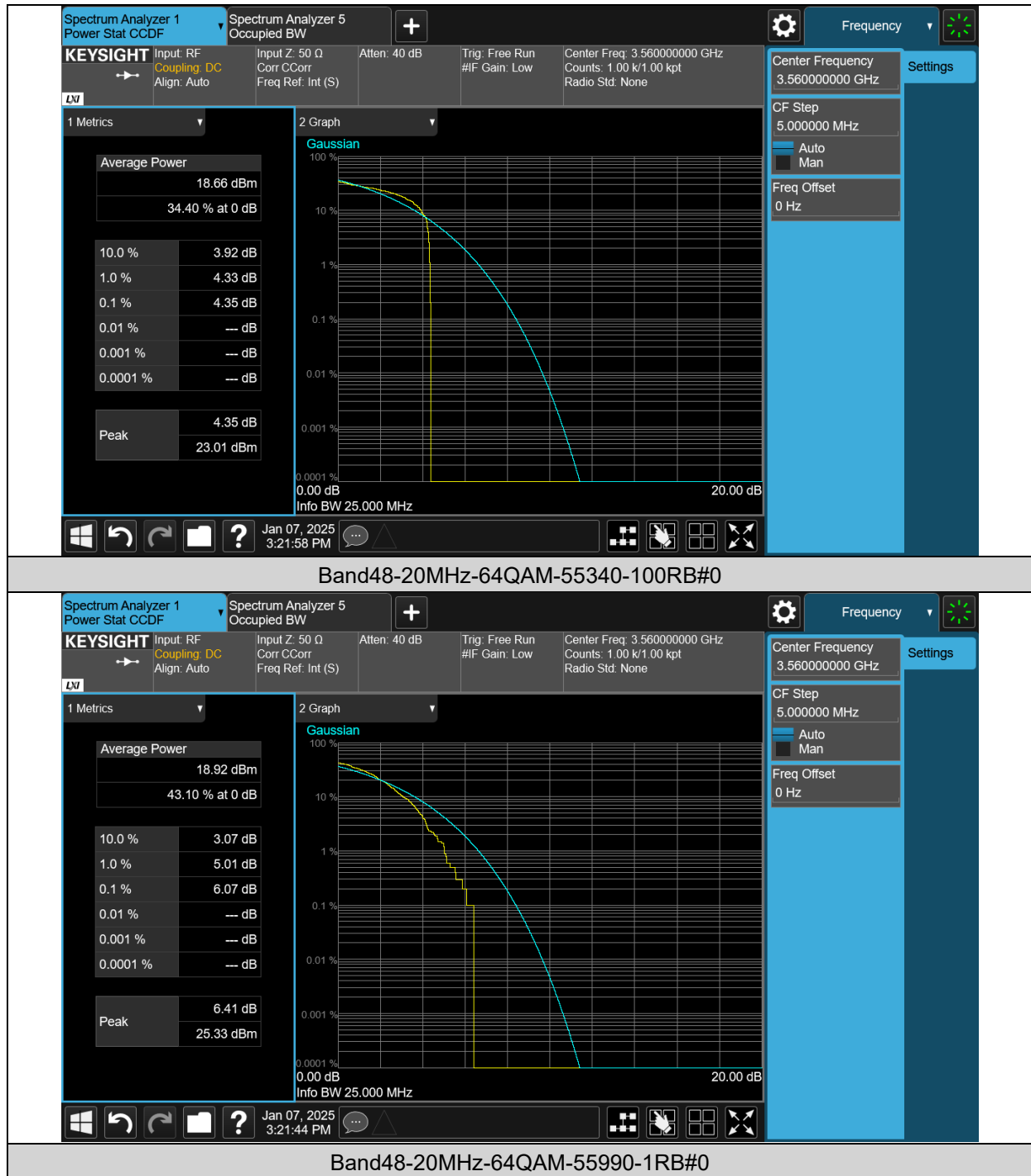
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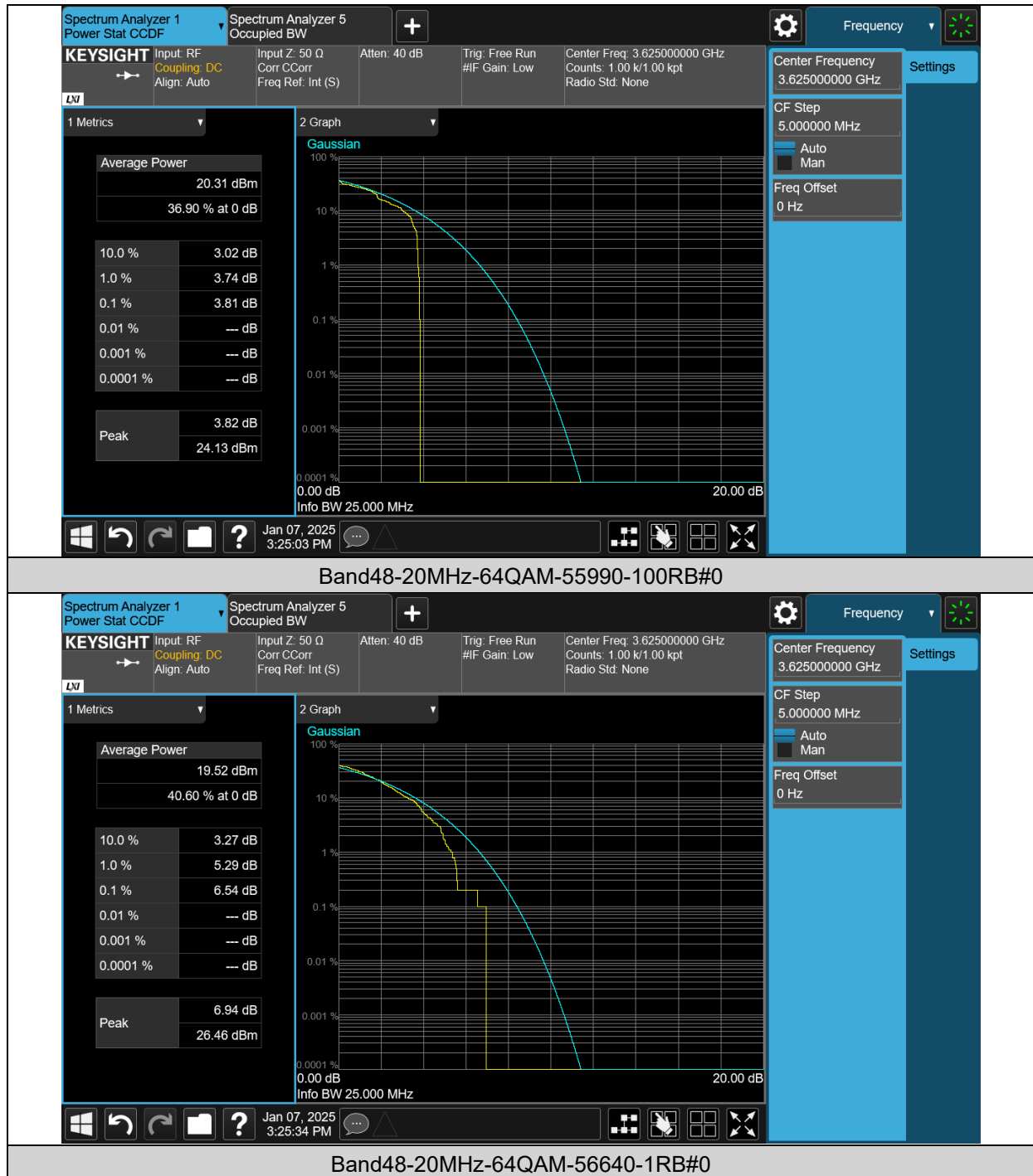


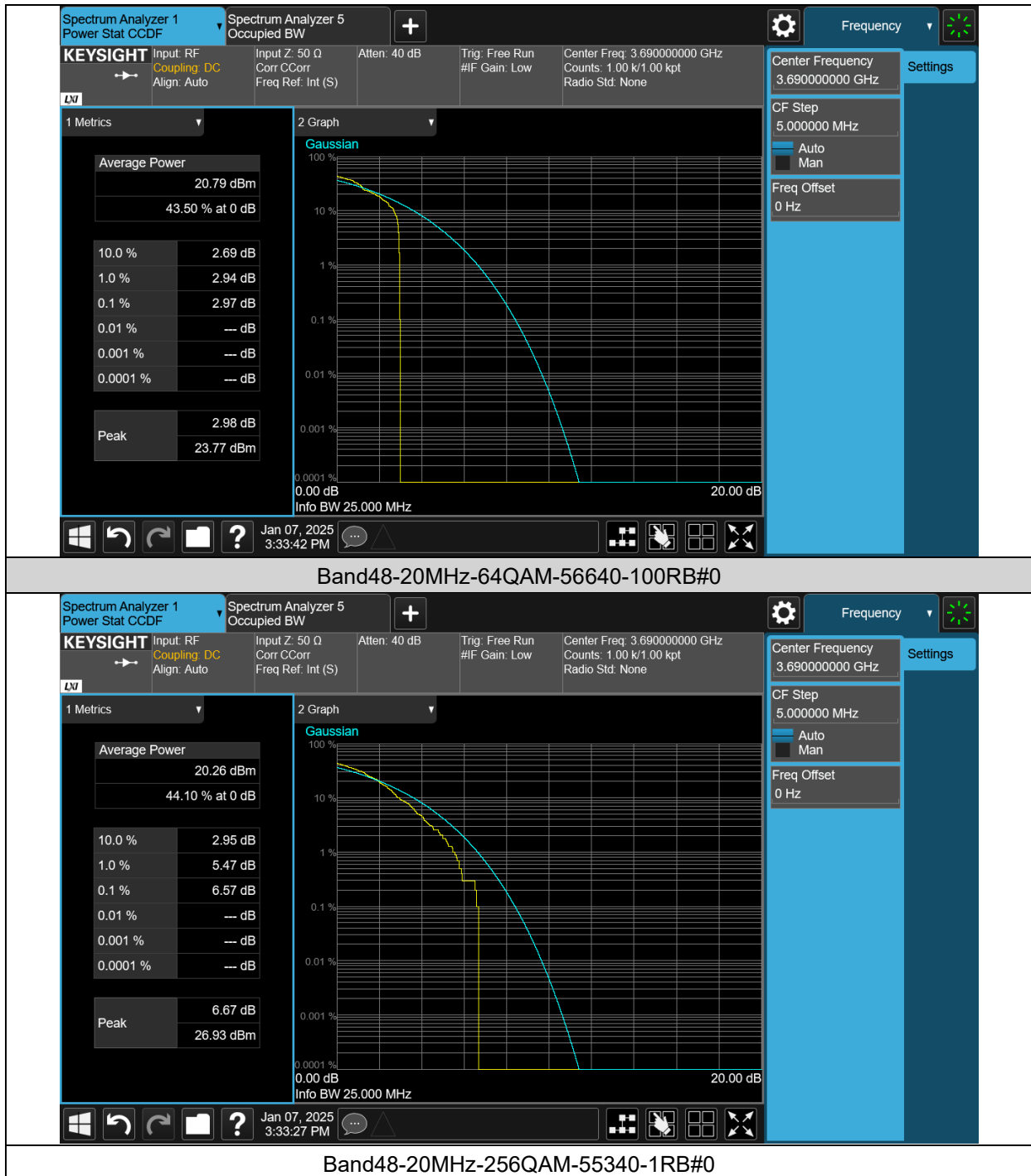


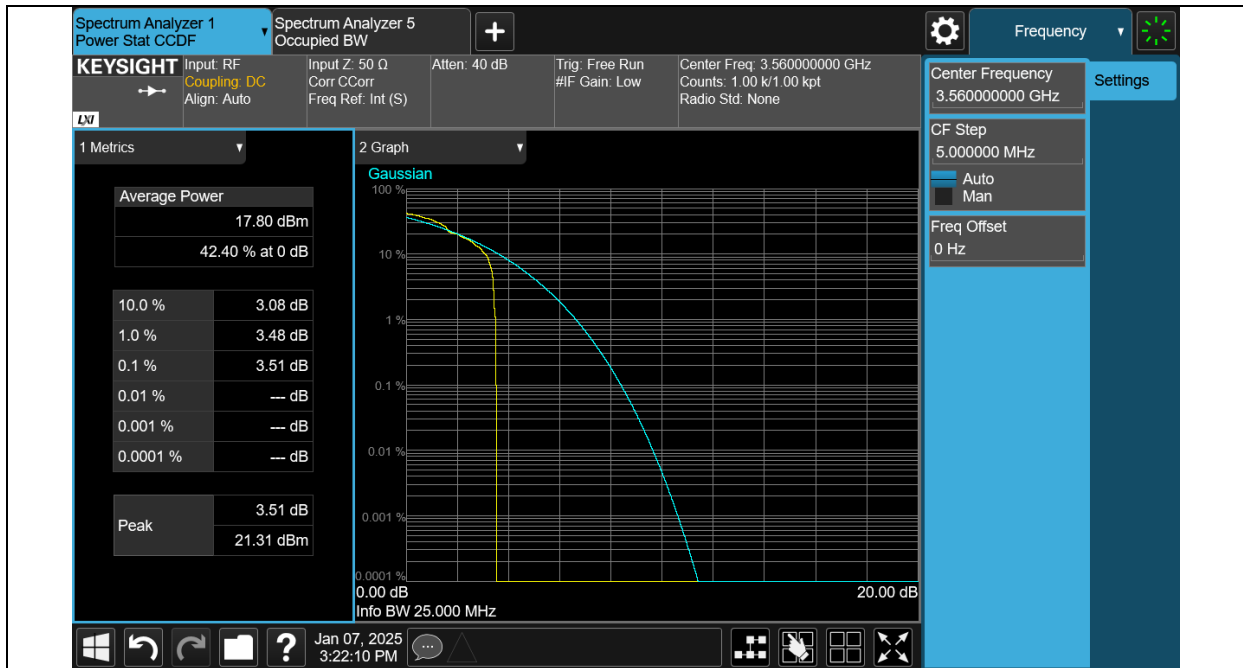




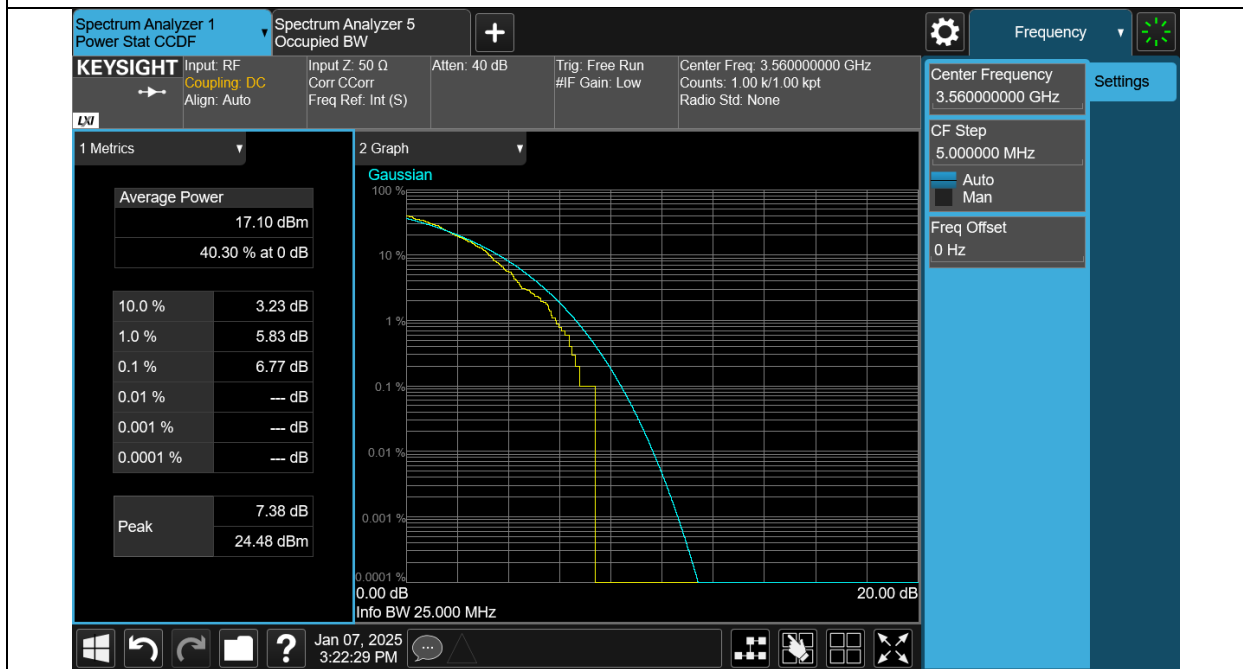




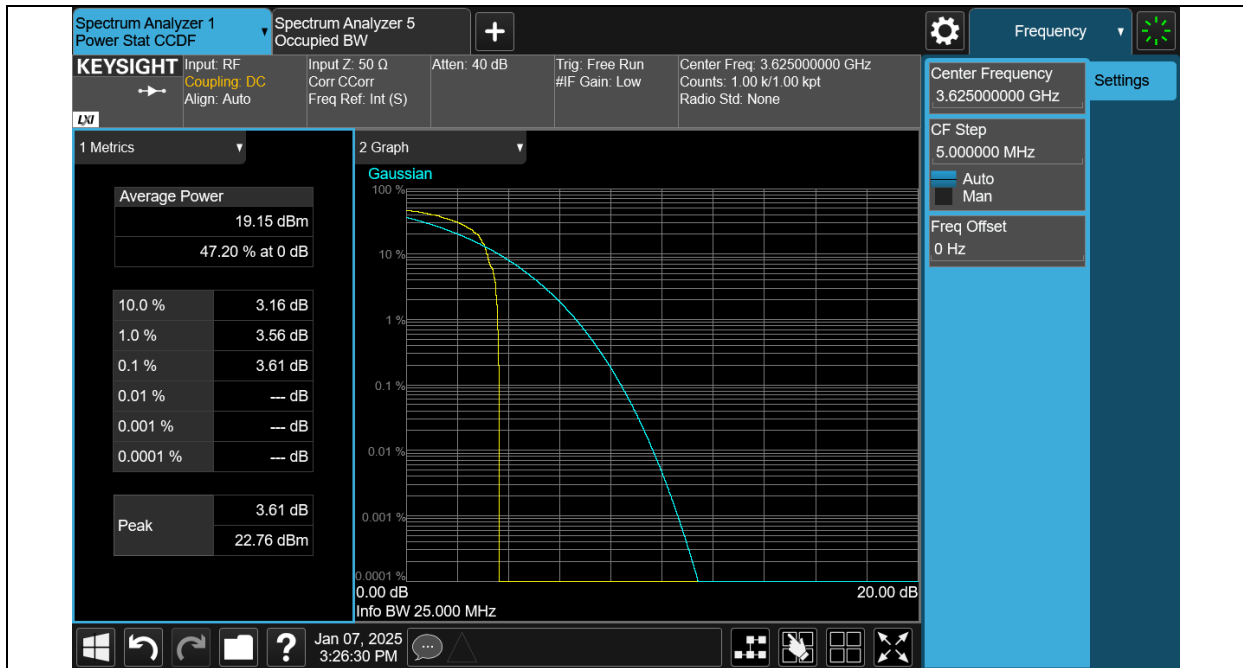




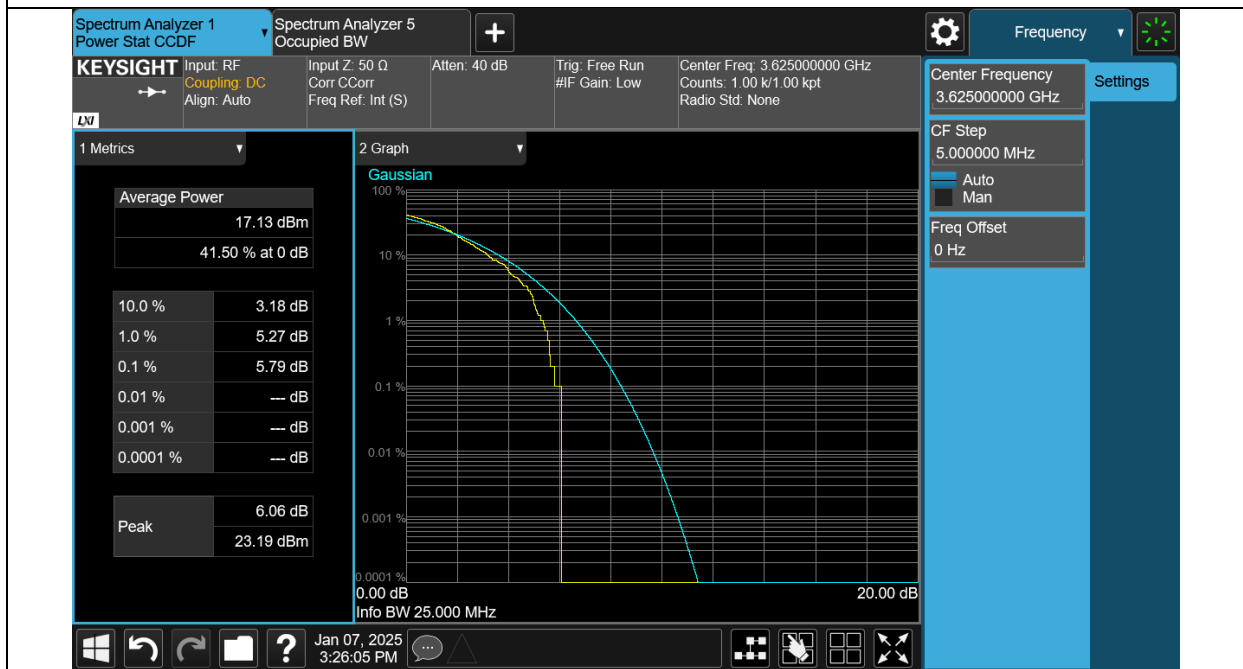
Band48-20MHz-256QAM-55340-100RB#0



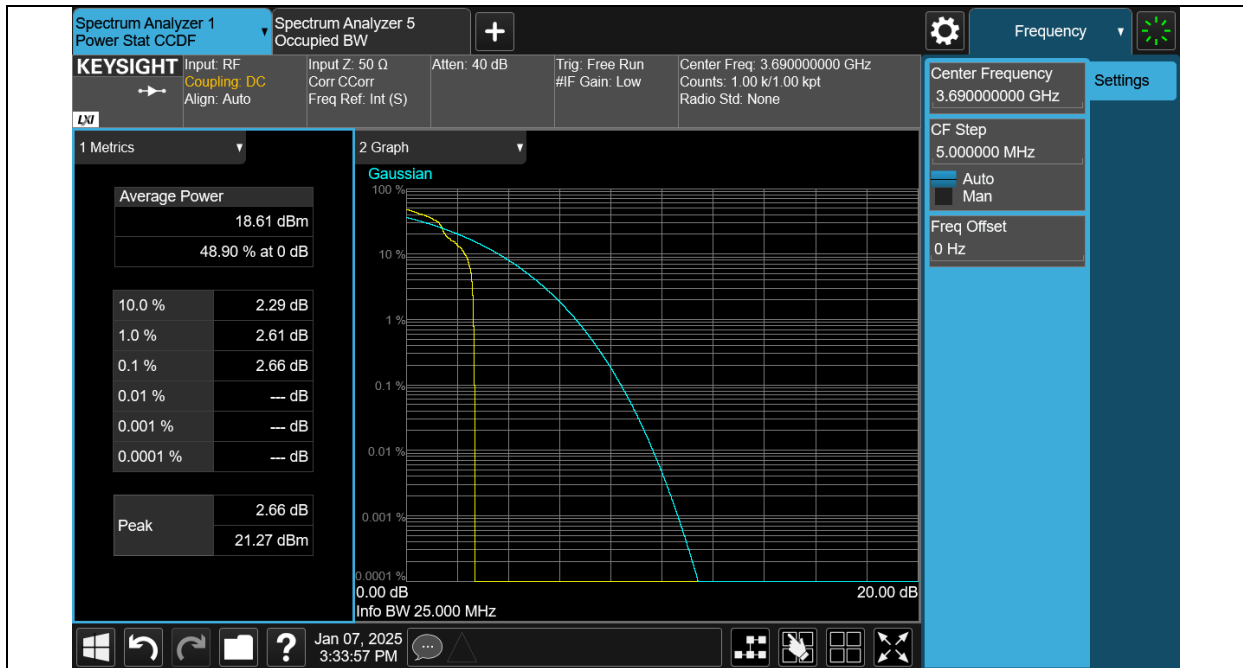
Band48-20MHz-256QAM-55990-1RB#0



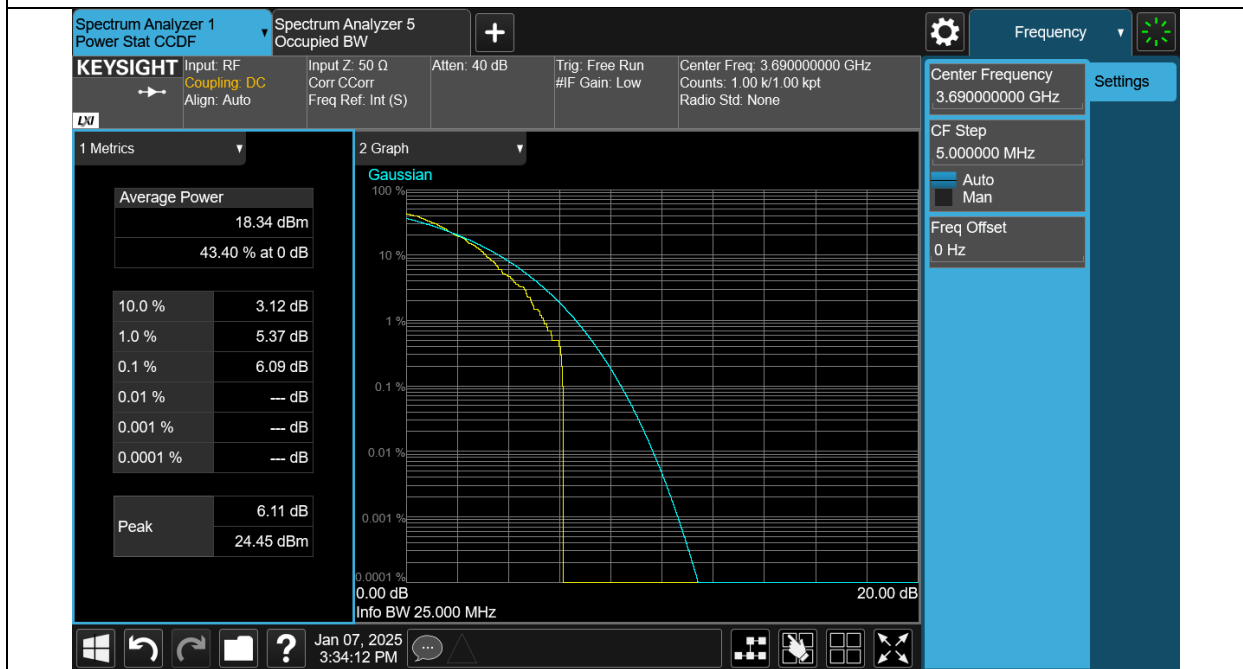
Band48-20MHz-256QAM-55990-100RB#0



Band48-20MHz-256QAM-56640-1RB#0



Band48-20MHz-256QAM-56640-100RB#0



26DB BANDWIDTH AND OCCUPIED BANDWIDTH TEST RESULT

Band	Bandwidth	Modulation	Channel	RB Configuration	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
Band48	5MHz	QPSK	55265	25RB#0	4.495	4.785	PASS
Band48	5MHz	QPSK	55990	25RB#0	4.490	4.796	PASS
Band48	5MHz	QPSK	56715	25RB#0	4.487	4.810	PASS
Band48	5MHz	16QAM	55265	25RB#0	4.827	4.795	PASS
Band48	5MHz	16QAM	55990	25RB#0	4.488	4.818	PASS
Band48	5MHz	16QAM	56715	25RB#0	4.483	4.822	PASS
Band48	5MHz	64QAM	55265	25RB#0	4.477	4.776	PASS
Band48	5MHz	64QAM	55990	25RB#0	4.490	4.792	PASS
Band48	5MHz	64QAM	56715	25RB#0	4.480	4.801	PASS
Band48	5MHz	256QAM	55265	25RB#0	4.483	4.835	PASS
Band48	5MHz	256QAM	55990	25RB#0	4.488	4.803	PASS
Band48	5MHz	256QAM	56715	25RB#0	4.488	4.789	PASS
Band48	10MHz	QPSK	55290	50RB#0	8.917	9.351	PASS
Band48	10MHz	QPSK	55990	50RB#0	8.923	9.351	PASS
Band48	10MHz	QPSK	56690	50RB#0	8.918	9.357	PASS
Band48	10MHz	16QAM	55290	50RB#0	8.928	9.380	PASS
Band48	10MHz	16QAM	55990	50RB#0	8.915	9.298	PASS
Band48	10MHz	16QAM	56690	50RB#0	8.928	9.324	PASS
Band48	10MHz	64QAM	55290	50RB#0	8.921	9.374	PASS
Band48	10MHz	64QAM	55990	50RB#0	8.915	9.337	PASS
Band48	10MHz	64QAM	56690	50RB#0	8.912	9.290	PASS
Band48	10MHz	256QAM	55290	50RB#0	8.929	9.332	PASS
Band48	10MHz	256QAM	55990	50RB#0	8.934	9.314	PASS
Band48	10MHz	256QAM	56690	50RB#0	8.923	9.371	PASS
Band48	15MHz	QPSK	55315	75RB#0	13.373	13.990	PASS
Band48	15MHz	QPSK	55990	75RB#0	13.398	14.010	PASS
Band48	15MHz	QPSK	56665	75RB#0	13.403	14.030	PASS
Band48	15MHz	16QAM	55315	75RB#0	13.400	14.020	PASS
Band48	15MHz	16QAM	55990	75RB#0	13.409	14.030	PASS
Band48	15MHz	16QAM	56665	75RB#0	13.388	14.030	PASS
Band48	15MHz	64QAM	55315	75RB#0	13.375	13.990	PASS
Band48	15MHz	64QAM	55990	75RB#0	13.405	14.010	PASS
Band48	15MHz	64QAM	56665	75RB#0	13.400	13.990	PASS
Band48	15MHz	256QAM	55315	75RB#0	13.371	13.990	PASS
Band48	15MHz	256QAM	55990	75RB#0	13.371	13.990	PASS
Band48	15MHz	256QAM	56665	75RB#0	13.383	14.010	PASS
Band48	20MHz	QPSK	55340	100RB#0	17.854	18.520	PASS
Band48	20MHz	QPSK	55990	100RB#0	17.787	18.510	PASS
Band48	20MHz	QPSK	56640	100RB#0	17.792	18.490	PASS
Band48	20MHz	16QAM	55340	100RB#0	17.808	18.510	PASS
Band48	20MHz	16QAM	55990	100RB#0	17.884	18.510	PASS

Band48	20MHz	16QAM	56640	100RB#0	17.874	18.540	PASS
Band48	20MHz	64QAM	55340	100RB#0	17.849	18.520	PASS
Band48	20MHz	64QAM	55990	100RB#0	17.961	18.510	PASS
Band48	20MHz	64QAM	56640	100RB#0	17.812	18.520	PASS
Band48	20MHz	256QAM	55340	100RB#0	17.863	18.530	PASS
Band48	20MHz	256QAM	55990	100RB#0	17.822	18.520	PASS
Band48	20MHz	256QAM	56640	100RB#0	17.842	18.520	PASS

TEST GRAPHS

