

Appendix for Band 41

Product Name: TD-LTE Wireless Data Terminal
Model No: TC50

Appendix A: Average Power Output Data

Test Result

Channel Bandwidth: 5 MHz

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	21.33	PASS
		1	12	21.63	PASS
		1	24	21.31	PASS
		12	0	20.52	PASS
		12	6	20.35	PASS
		12	13	20.39	PASS
		25	0	20.34	PASS
	MCH	1	0	21.60	PASS
		1	12	21.94	PASS
		1	24	21.66	PASS
		12	0	20.63	PASS
		12	6	20.69	PASS
		12	13	20.64	PASS
		25	0	20.68	PASS
	HCH	1	0	22.04	PASS
		1	12	22.39	PASS
		1	24	22.00	PASS
		12	0	21.05	PASS
		12	6	21.05	PASS
		12	13	20.99	PASS
		25	0	21.00	PASS
16QAM	LCH	1	0	20.46	PASS
		1	12	20.73	PASS
		1	24	20.39	PASS
		12	0	20.37	PASS
		12	6	20.40	PASS

		12	13	20.36	PASS
		25	0	20.32	PASS
	MCH	1	0	20.93	PASS
		1	12	21.22	PASS
		1	24	20.94	PASS
		12	0	20.77	PASS
		12	6	20.79	PASS
		12	13	20.78	PASS
		25	0	20.67	PASS
	HCH	1	0	21.13	PASS
		1	12	21.44	PASS
		1	24	21.07	PASS
		12	0	20.49	PASS
		12	6	20.46	PASS
		12	13	20.40	PASS
		25	0	20.42	PASS

Channel Bandwidth: 10 MHz

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	21.50	PASS
		1	24	21.52	PASS
		1	49	21.40	PASS
		25	0	20.46	PASS
		25	12	20.47	PASS
		25	25	20.42	PASS
		50	0	20.40	PASS
	MCH	1	0	21.74	PASS
		1	24	21.79	PASS
		1	49	21.81	PASS
		25	0	20.70	PASS
		25	12	20.71	PASS
		25	25	20.77	PASS
		50	0	20.71	PASS
	HCH	1	0	22.18	PASS
		1	24	22.17	PASS
		1	49	22.06	PASS
		25	0	21.15	PASS
		25	12	21.14	PASS
		25	25	21.03	PASS
		50	0	21.07	PASS

16QAM	LCH	1	0	20.67	PASS
		1	24	20.68	PASS
		1	49	20.55	PASS
		25	0	20.52	PASS
		25	12	20.44	PASS
		25	25	20.39	PASS
		50	0	20.56	PASS
	MCH	1	0	21.00	PASS
		1	24	21.14	PASS
		1	49	21.08	PASS
		25	0	20.75	PASS
		25	12	20.74	PASS
		25	25	20.81	PASS
		50	0	20.78	PASS
	HCH	1	0	21.33	PASS
		1	24	21.33	PASS
		1	49	21.23	PASS
		25	0	20.54	PASS
		25	12	20.51	PASS
		25	25	20.51	PASS
		50	0	20.52	PASS

Channel Bandwidth: 15 MHz

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	21.48	PASS
		1	37	21.71	PASS
		1	74	21.38	PASS
		37	0	20.51	PASS
		37	18	20.51	PASS
		37	38	20.47	PASS
		75	0	20.55	PASS
	MCH	1	0	21.67	PASS
		1	37	22.00	PASS
		1	74	21.72	PASS
		37	0	20.67	PASS
		37	18	20.71	PASS
		37	38	20.75	PASS
		75	0	20.77	PASS
	HCH	1	0	22.18	PASS
		1	37	22.45	PASS

		1	74	21.97	PASS
		37	0	21.29	PASS
		37	18	21.20	PASS
		37	38	21.13	PASS
		75	0	21.24	PASS
16QAM	LCH	1	0	20.64	PASS
		1	37	20.85	PASS
		1	74	20.48	PASS
		37	0	20.48	PASS
		37	18	20.45	PASS
		37	38	20.42	PASS
		75	0	20.45	PASS
	MCH	1	0	20.89	PASS
		1	37	21.22	PASS
		1	74	20.95	PASS
		37	0	20.71	PASS
		37	18	20.75	PASS
		37	38	20.78	PASS
		75	0	20.74	PASS
	HCH	1	0	21.35	PASS
		1	37	21.54	PASS
		1	74	21.14	PASS
		37	0	20.43	PASS
		37	18	20.57	PASS
		37	38	20.68	PASS
		75	0	20.96	PASS

Channel Bandwidth: 20 MHz

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	21.46	PASS
		1	49	21.58	PASS
		1	99	21.33	PASS
		50	0	20.38	PASS
		50	25	20.39	PASS
		50	50	20.27	PASS
		100	0	20.32	PASS
	MCH	1	0	22.45	PASS
		1	49	22.30	PASS
		1	99	22.37	PASS
		50	0	21.62	PASS

		50	25	21.74	PASS
		50	50	21.71	PASS
		100	0	21.68	PASS
	HCH	1	0	21.87	PASS
		1	49	22.04	PASS
		1	99	21.69	PASS
		50	0	20.93	PASS
		50	25	20.84	PASS
		50	50	20.67	PASS
		100	0	20.81	PASS
16QAM	LCH	1	0	20.65	PASS
		1	49	20.72	PASS
		1	99	20.50	PASS
		50	0	20.51	PASS
		50	25	20.62	PASS
		50	50	20.22	PASS
		100	0	20.59	PASS
	MCH	1	0	20.91	PASS
		1	49	21.17	PASS
		1	99	21.03	PASS
		50	0	20.68	PASS
		50	25	20.77	PASS
		50	50	20.76	PASS
		100	0	20.69	PASS
	HCH	1	0	20.98	PASS
		1	49	21.06	PASS
		1	99	20.71	PASS
		50	0	20.93	PASS
		50	25	20.82	PASS
		50	50	20.64	PASS
		100	0	20.77	PASS

Appendix B: Peak-to-Average Ratio

Test Result

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz						
Modulation	Channel	RB Configuration		Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
		Size	Offset			
QPSK	LCH	1	0	6.96	<13	PASS
		1	12	8.78	<13	PASS
		1	24	6.61	<13	PASS
		12	0	7.77	<13	PASS
		12	6	9.22	<13	PASS
		12	13	9.26	<13	PASS
		25	0	11	<13	PASS
	MCH	1	0	9.87	<13	PASS
		1	12	7.37	<13	PASS
		1	24	8.01	<13	PASS
		12	0	8.24	<13	PASS
		12	6	9.77	<13	PASS
		12	13	9.6	<13	PASS
		25	0	8.18	<13	PASS
	HCH	1	0	8.23	<13	PASS
		1	12	8.27	<13	PASS
		1	24	11.15	<13	PASS
		12	0	7.05	<13	PASS
		12	6	9.48	<13	PASS
		12	13	7.47	<13	PASS
		25	0	7.44	<13	PASS
16QAM	LCH	1	0	8.35	<13	PASS
		1	12	10.82	<13	PASS
		1	24	9.84	<13	PASS
		12	0	10.38	<13	PASS
		12	6	9.88	<13	PASS
		12	13	8.77	<13	PASS
		25	0	9.86	<13	PASS
	MCH	1	0	9.59	<13	PASS
		1	12	7.99	<13	PASS
		1	24	10.33	<13	PASS

		12	0	11	<13	PASS
		12	6	9.32	<13	PASS
		12	13	8.15	<13	PASS
		25	0	8.31	<13	PASS
	HCH	1	0	7.15	<13	PASS
		1	12	8.82	<13	PASS
		1	24	7.81	<13	PASS
		12	0	9.21	<13	PASS
		12	6	10.61	<13	PASS
		12	13	8.82	<13	PASS
		25	0	9.4	<13	PASS

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz						
Modulation	Channel	RB Configuration		Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
		Size	Offset			
QPSK	LCH	1	0	6.07	<13	PASS
		1	24	9.87	<13	PASS
		1	49	9.59	<13	PASS
		25	0	8.4	<13	PASS
		25	12	10.01	<13	PASS
		25	25	6.49	<13	PASS
		50	0	10.09	<13	PASS
	MCH	1	0	9.22	<13	PASS
		1	24	8.32	<13	PASS
		1	49	10.32	<13	PASS
		25	0	9.7	<13	PASS
		25	12	9.1	<13	PASS
		25	25	9.07	<13	PASS
		50	0	8.53	<13	PASS
	HCH	1	0	6.61	<13	PASS
		1	24	7.84	<13	PASS
		1	49	9.44	<13	PASS
		25	0	6.93	<13	PASS
		25	12	8.52	<13	PASS
		25	25	11.39	<13	PASS
		50	0	11.24	<13	PASS
16QAM	LCH	1	0	11.24	<13	PASS
		1	24	9.75	<13	PASS
		1	49	9.56	<13	PASS
		25	0	9.18	<13	PASS

		25	12	12.52	<13	PASS
		25	25	7.61	<13	PASS
		50	0	7.53	<13	PASS
	MCH	1	0	11.34	<13	PASS
		1	24	11.47	<13	PASS
		1	49	8.43	<13	PASS
		25	0	11.37	<13	PASS
		25	12	9.06	<13	PASS
		25	25	8.66	<13	PASS
		50	0	8.52	<13	PASS
	HCH	1	0	12.24	<13	PASS
		1	24	7.7	<13	PASS
		1	49	9.58	<13	PASS
		25	0	8.11	<13	PASS
		25	12	7.96	<13	PASS
		25	25	10.94	<13	PASS
		50	0	9.74	<13	PASS

Channel Bandwidth: 15 MHz

Channel Bandwidth: 15 MHz						
Modulation	Channel	RB Configuration		Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
		Size	Offset			
QPSK	LCH	1	0	8.23	<13	PASS
		1	37	7.88	<13	PASS
		1	74	9.66	<13	PASS
		37	0	7.57	<13	PASS
		37	18	10.29	<13	PASS
		37	38	9.46	<13	PASS
		75	0	8.88	<13	PASS
	MCH	1	0	11.71	<13	PASS
		1	37	9.11	<13	PASS
		1	74	8.91	<13	PASS
		37	0	6.79	<13	PASS
		37	18	9.67	<13	PASS
		37	38	9.41	<13	PASS
		75	0	8.07	<13	PASS
	HCH	1	0	6.84	<13	PASS
		1	37	9.92	<13	PASS
		1	74	6.43	<13	PASS
		37	0	8.78	<13	PASS
		37	18	6.85	<13	PASS

		37	38	7.38	<13	PASS
		75	0	9.13	<13	PASS
16QAM	LCH	1	0	7.77	<13	PASS
		1	37	10.69	<13	PASS
		1	74	8.92	<13	PASS
		37	0	12.23	<13	PASS
		37	18	8.37	<13	PASS
		37	38	10.38	<13	PASS
		75	0	8.26	<13	PASS
		75	0	8.26	<13	PASS
	MCH	1	0	10.92	<13	PASS
		1	37	8.57	<13	PASS
		1	74	10.67	<13	PASS
		37	0	10.52	<13	PASS
		37	18	10.78	<13	PASS
		37	38	8.78	<13	PASS
		75	0	9.04	<13	PASS
		75	0	9.04	<13	PASS
	HCH	1	0	10.08	<13	PASS
		1	37	9.25	<13	PASS
		1	74	10.93	<13	PASS
		37	0	8.93	<13	PASS
		37	18	8.28	<13	PASS
		37	38	8.2	<13	PASS
		75	0	9.87	<13	PASS
		75	0	9.87	<13	PASS

Channel Bandwidth: 20 MHz

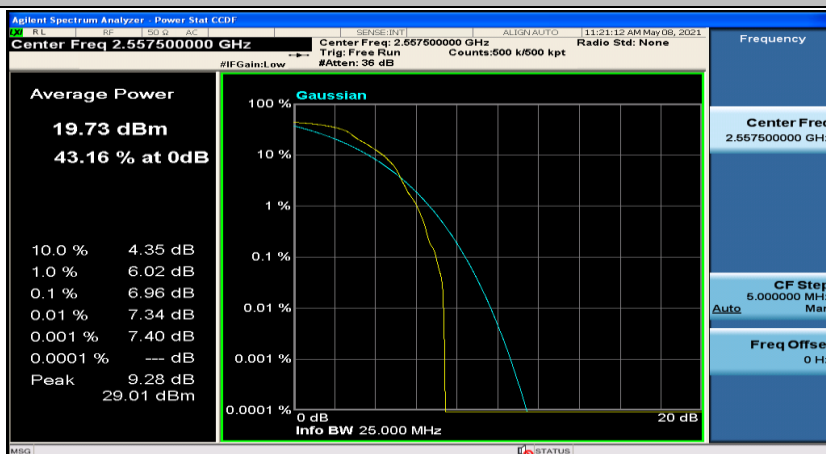
Channel Bandwidth: 20 MHz						
Modulation	Channel	RB Configuration		Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
		Size	Offset			
QPSK	LCH	1	0	8.2	<13	PASS
		1	49	7.21	<13	PASS
		1	99	8.27	<13	PASS
		50	0	8.9	<13	PASS
		50	25	7.56	<13	PASS
		50	50	9.13	<13	PASS
		100	0	7.03	<13	PASS
		100	0	7.03	<13	PASS
	MCH	1	0	7.63	<13	PASS
		1	49	6.82	<13	PASS
		1	99	8.59	<13	PASS
		50	0	7.45	<13	PASS
		50	25	7.82	<13	PASS
		50	50	8.92	<13	PASS

		100	0	8.27	<13	PASS
	HCH	1	0	8.2	<13	PASS
		1	49	8.44	<13	PASS
		1	99	8.44	<13	PASS
		50	0	9.64	<13	PASS
		50	25	9.32	<13	PASS
		50	50	8.27	<13	PASS
		100	0	7.24	<13	PASS
16QAM	LCH	1	0	8.72	<13	PASS
		1	49	8.19	<13	PASS
		1	99	8.24	<13	PASS
		50	0	9	<13	PASS
		50	25	8.47	<13	PASS
		50	50	8.59	<13	PASS
		100	0	8.94	<13	PASS
	MCH	1	0	8.88	<13	PASS
		1	49	10.86	<13	PASS
		1	99	9.43	<13	PASS
		50	0	11.46	<13	PASS
		50	25	9.54	<13	PASS
		50	50	10.24	<13	PASS
		100	0	8.7	<13	PASS
	HCH	1	0	10.04	<13	PASS
		1	49	7.7	<13	PASS
		1	99	11.81	<13	PASS
		50	0	8.47	<13	PASS
		50	25	9.62	<13	PASS
		50	50	8.37	<13	PASS
		100	0	12.25	<13	PASS

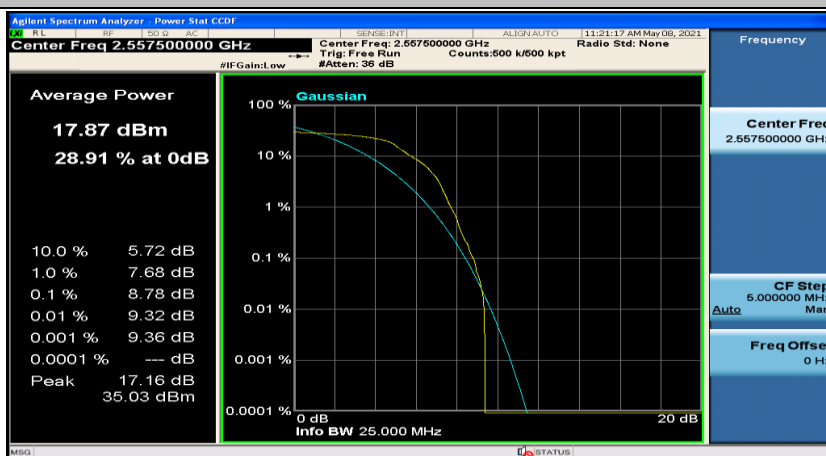
Test Graphs

Channel Bandwidth: 5 MHz

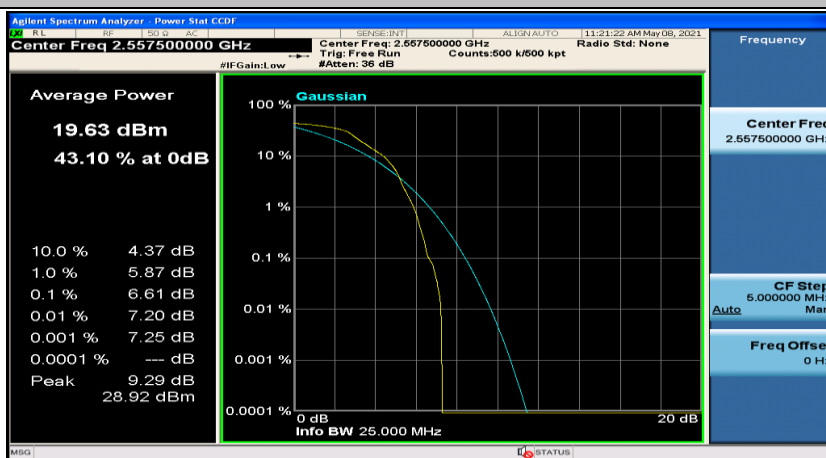
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#0



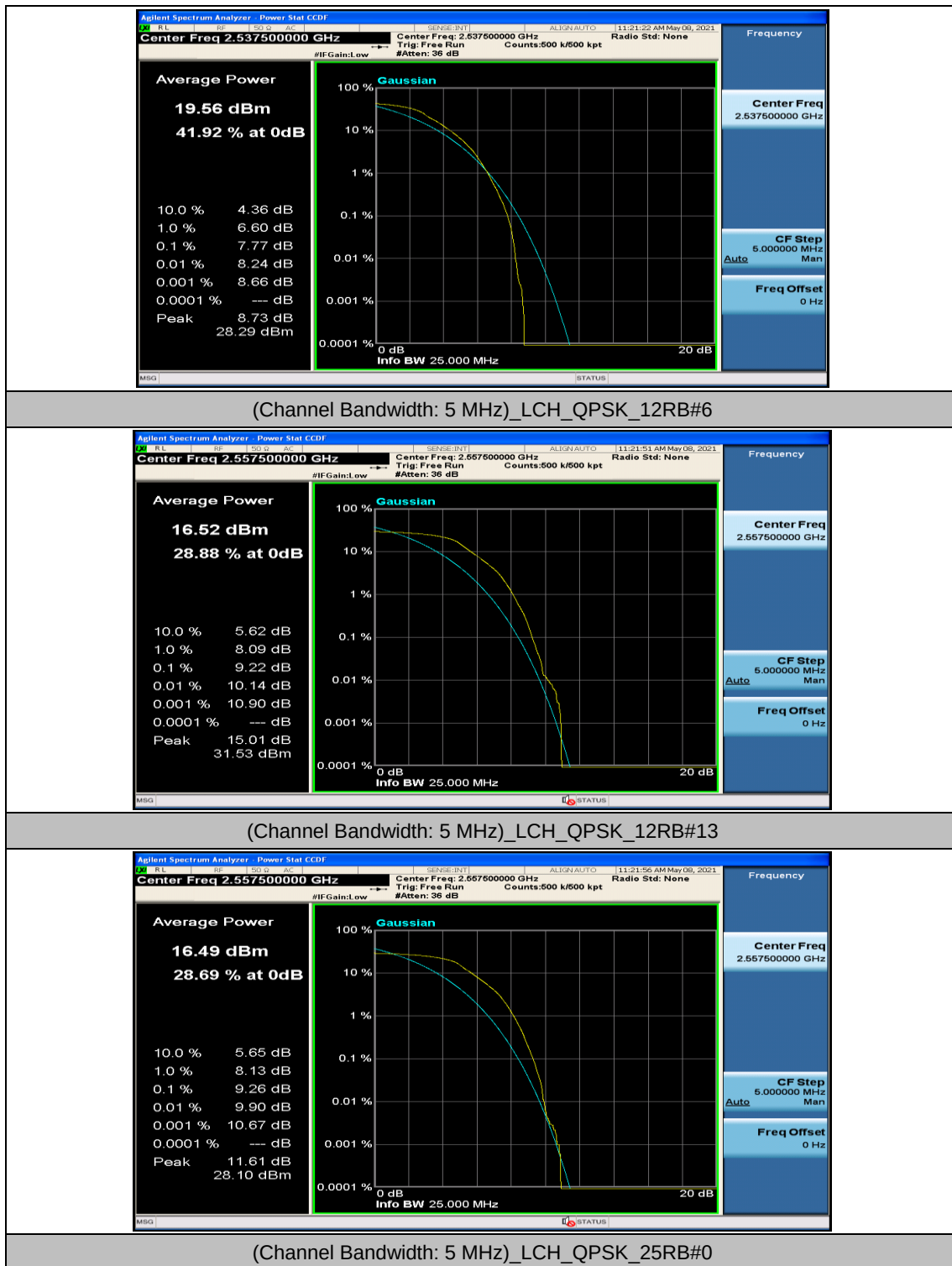
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#12

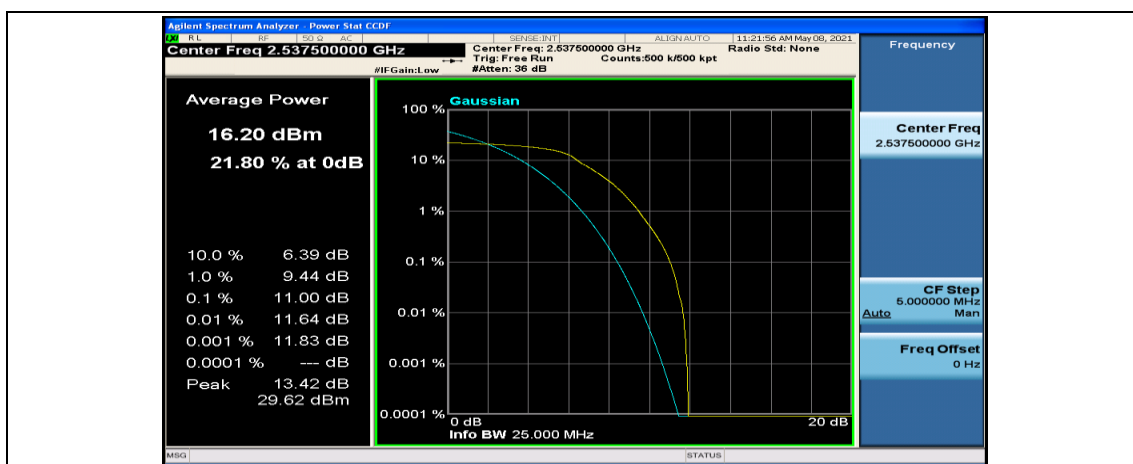


(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#24

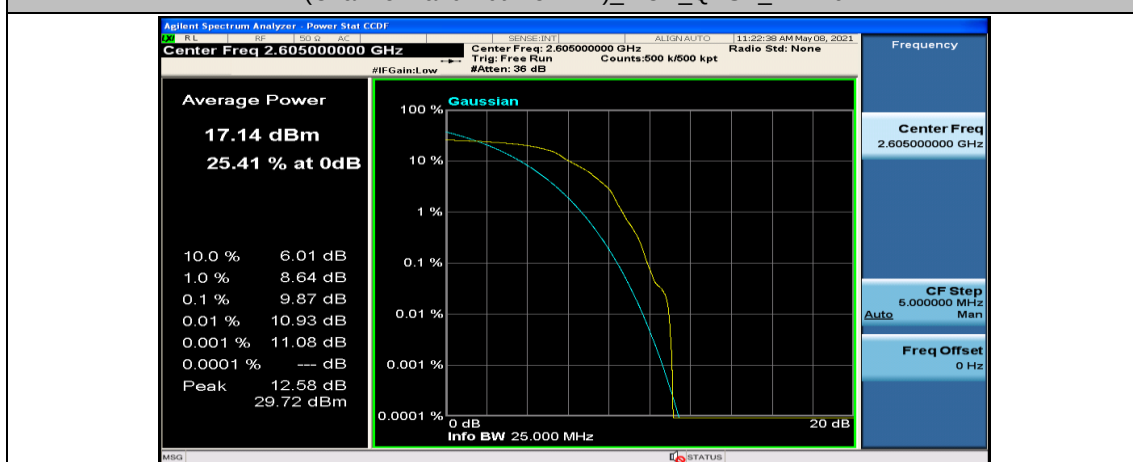


(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#0

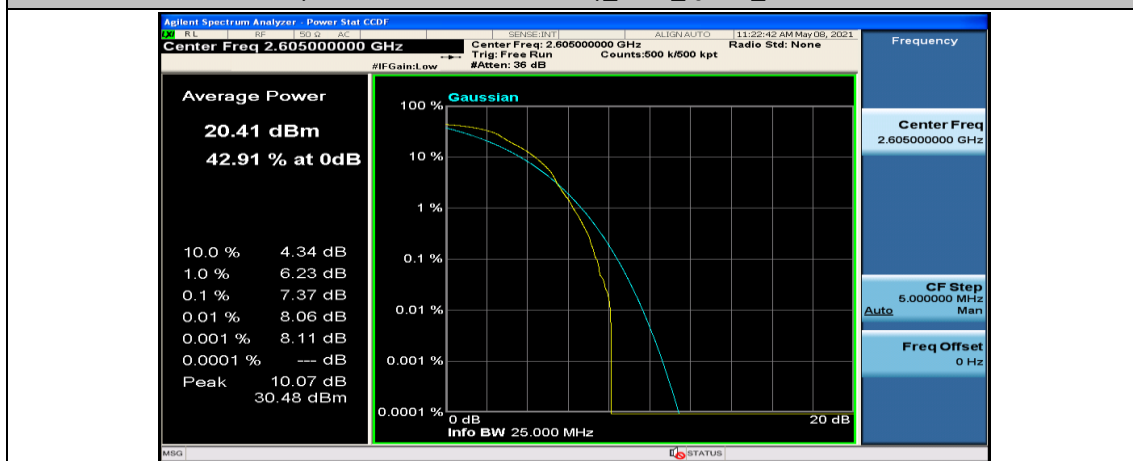




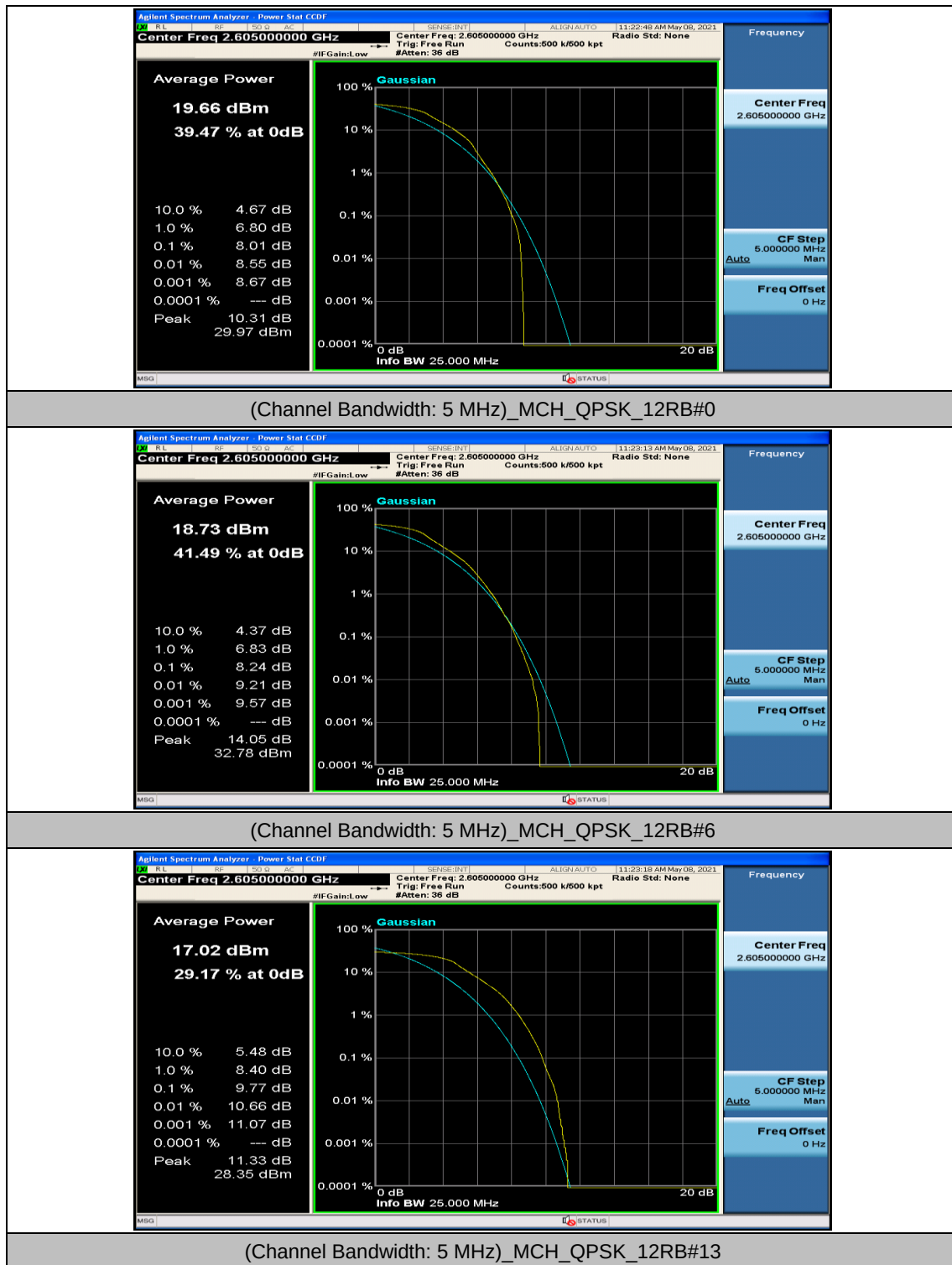
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0

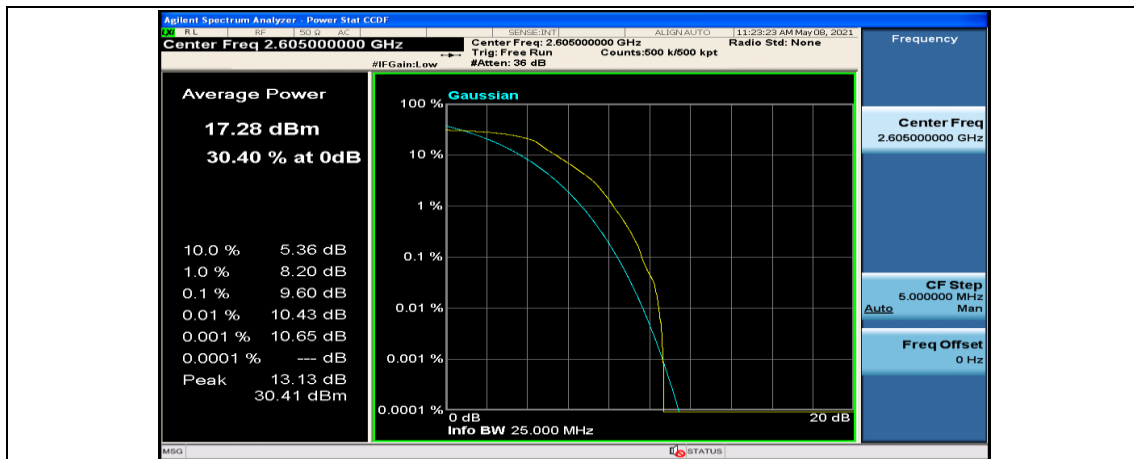


(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#12

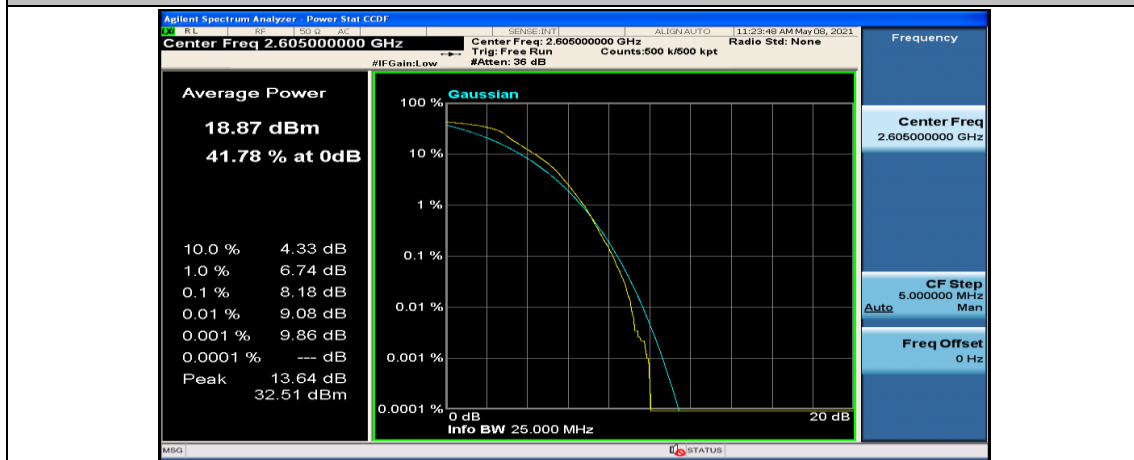


(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#24

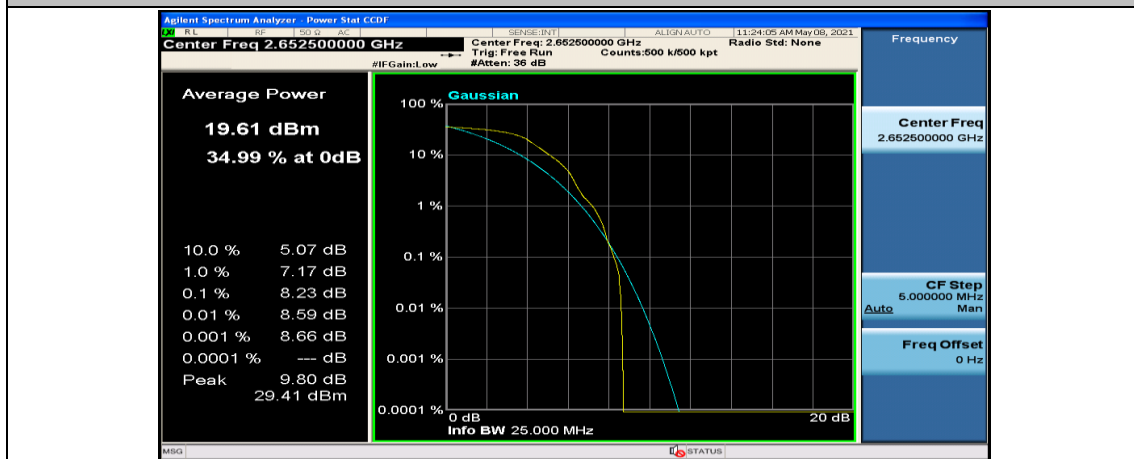




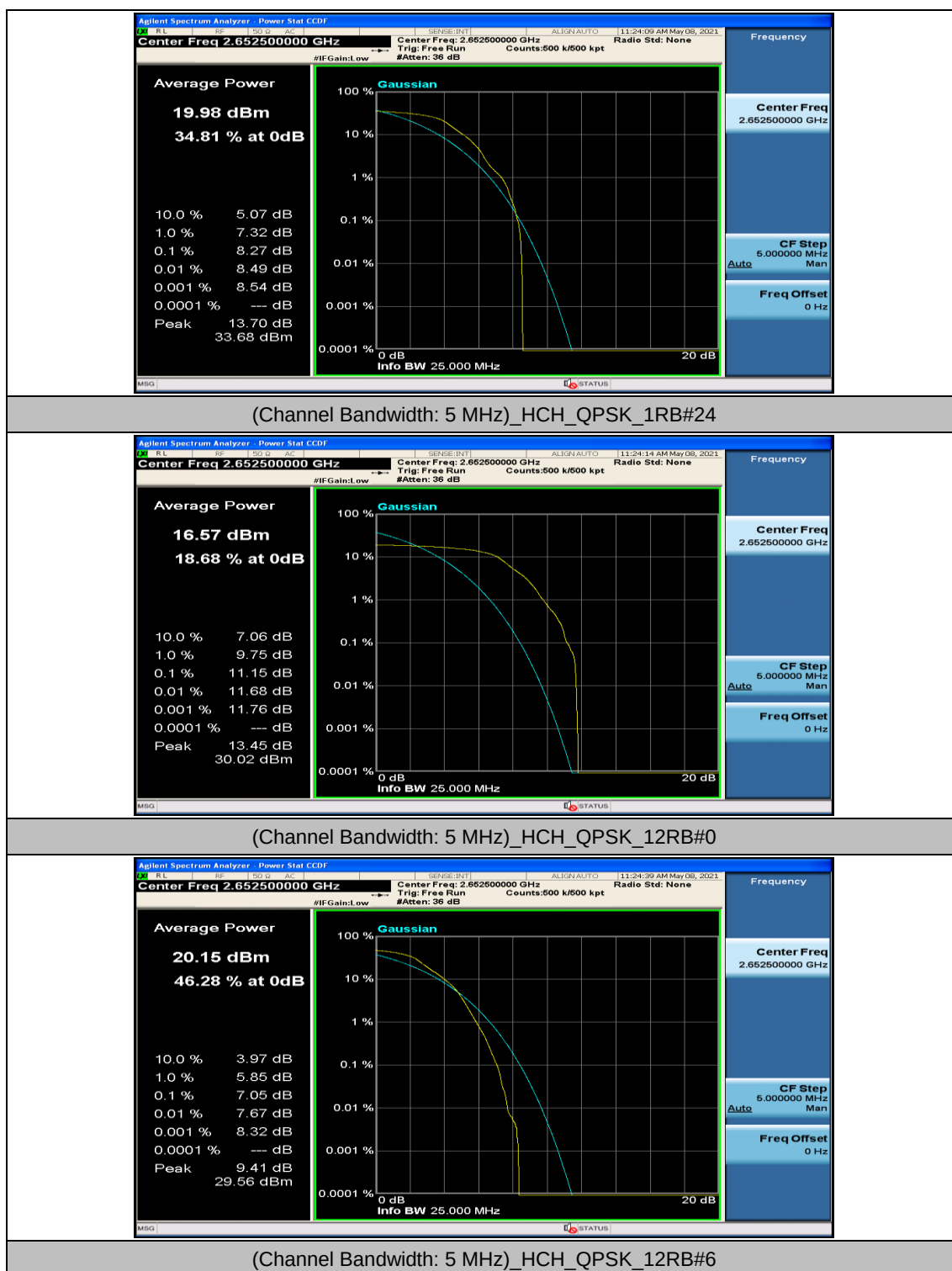
(Channel Bandwidth: 5 MHz)_MCH_QPSK_25RB#0

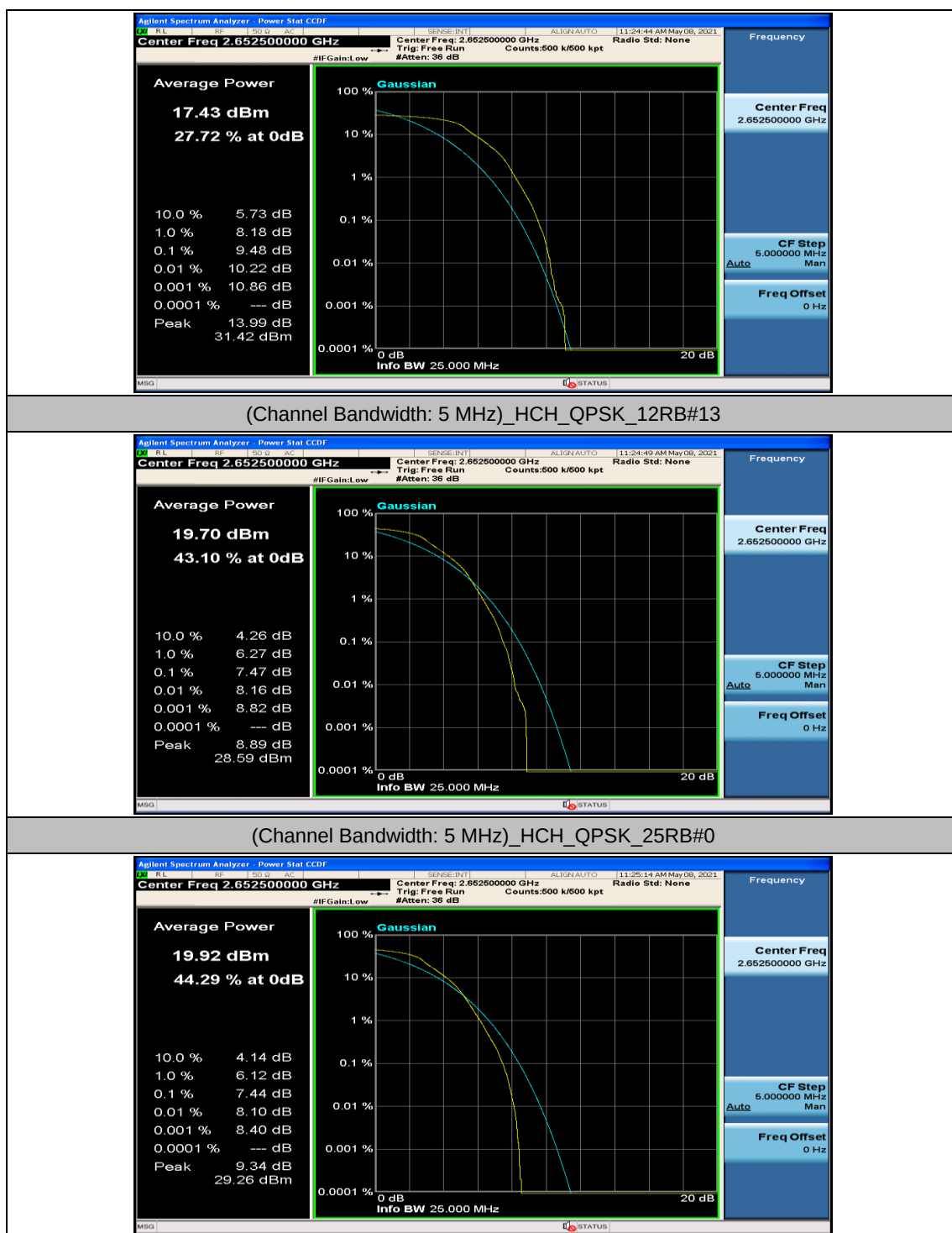


(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0

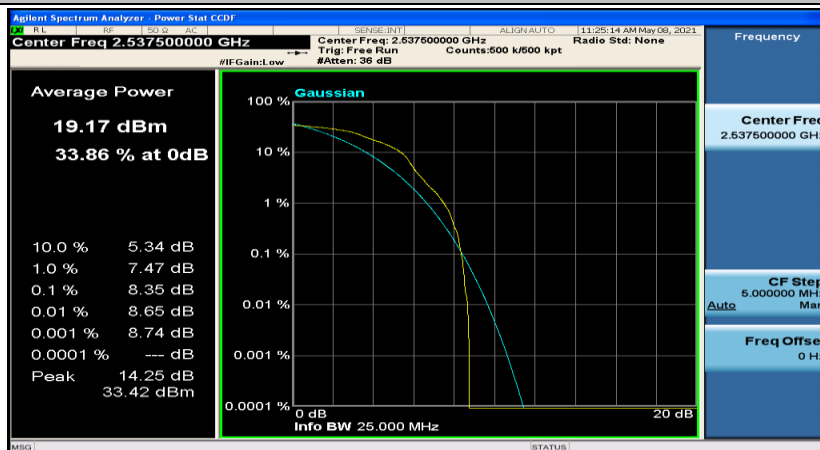


(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12

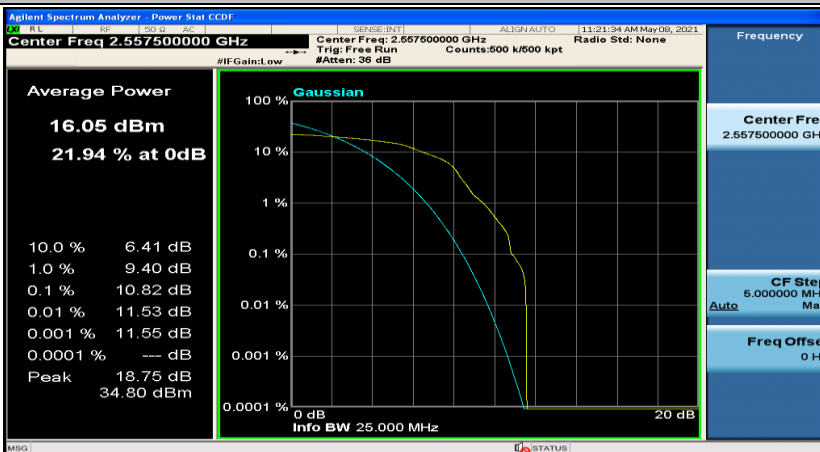




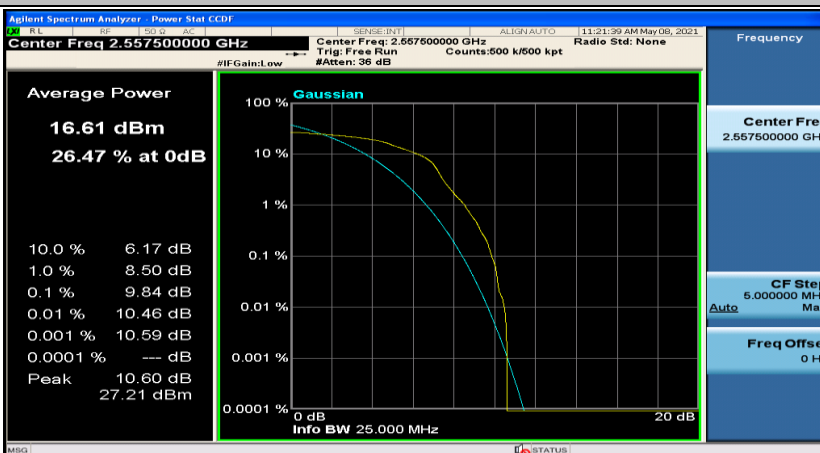
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0



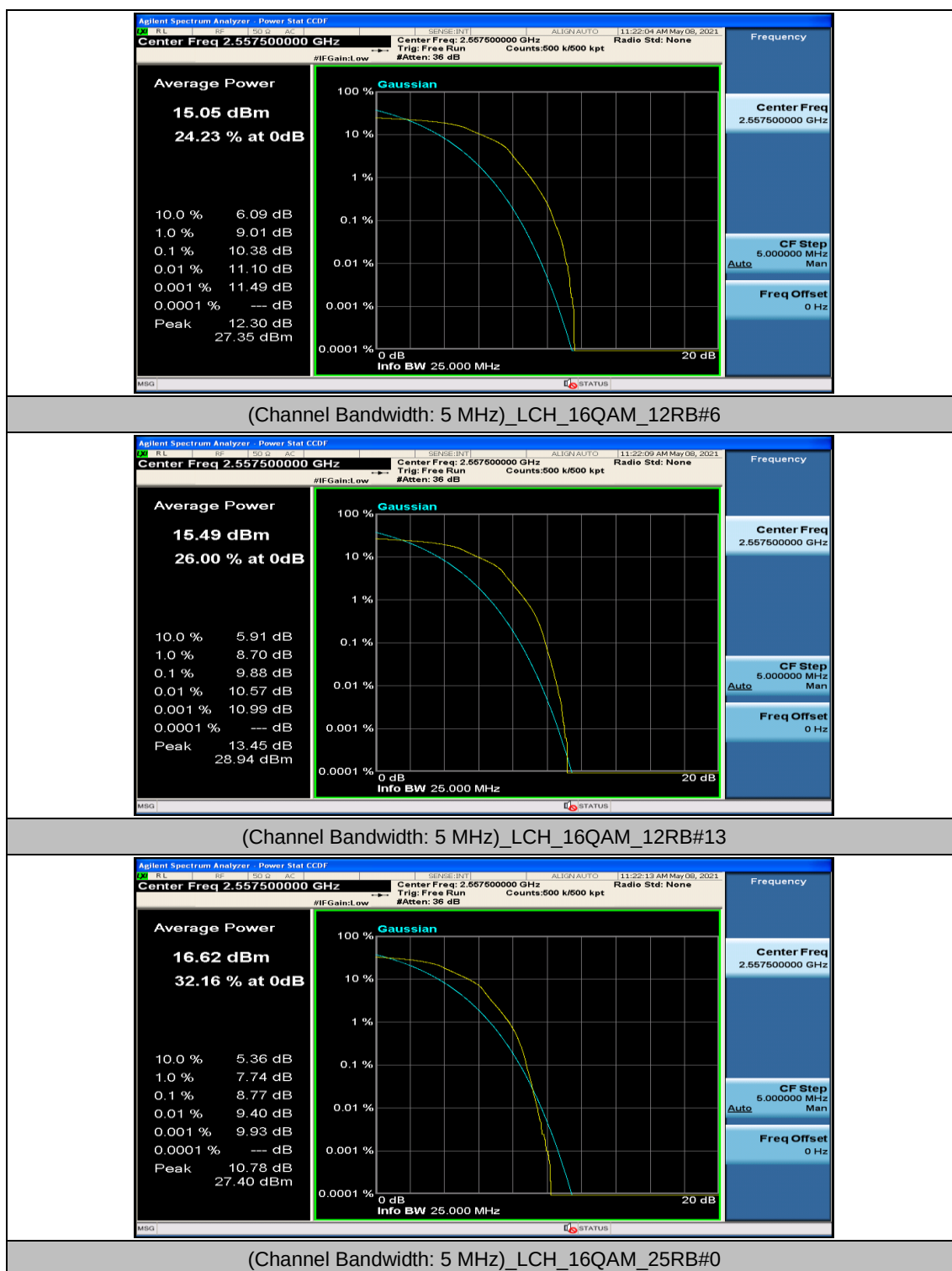
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12

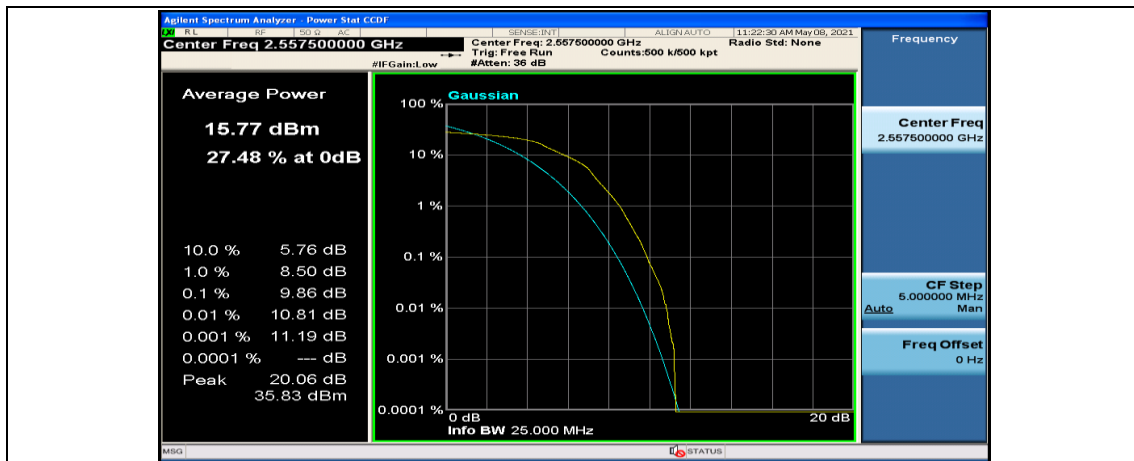


(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#24

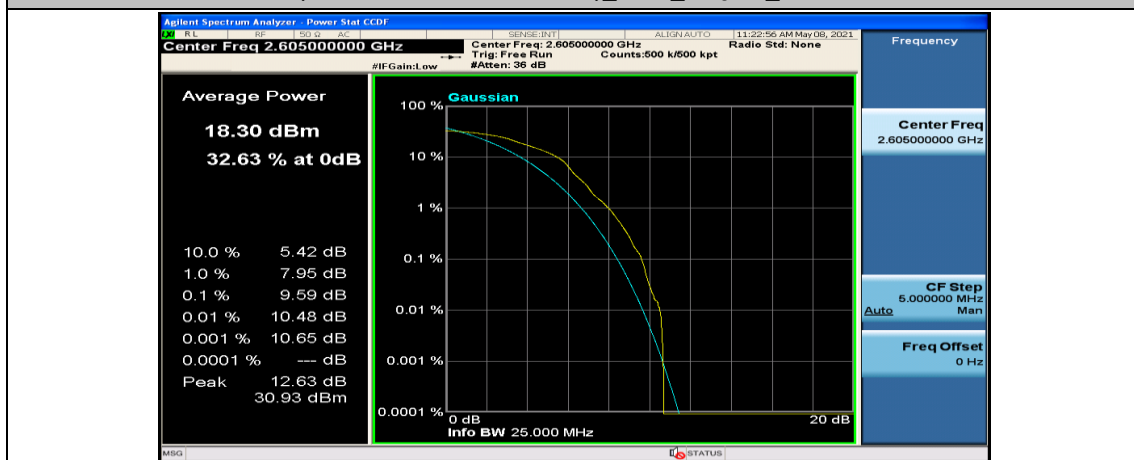


(Channel Bandwidth: 5 MHz)_LCH_16QAM_12RB#0

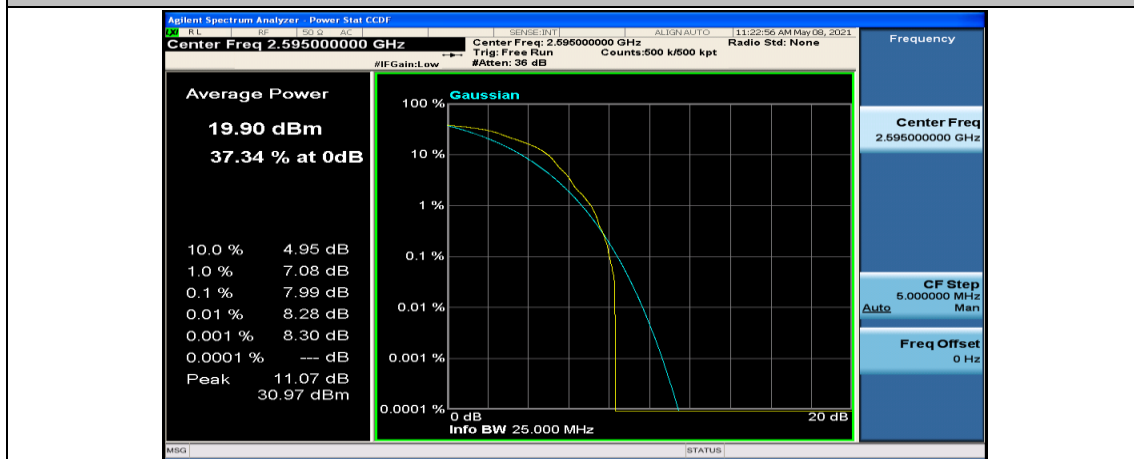




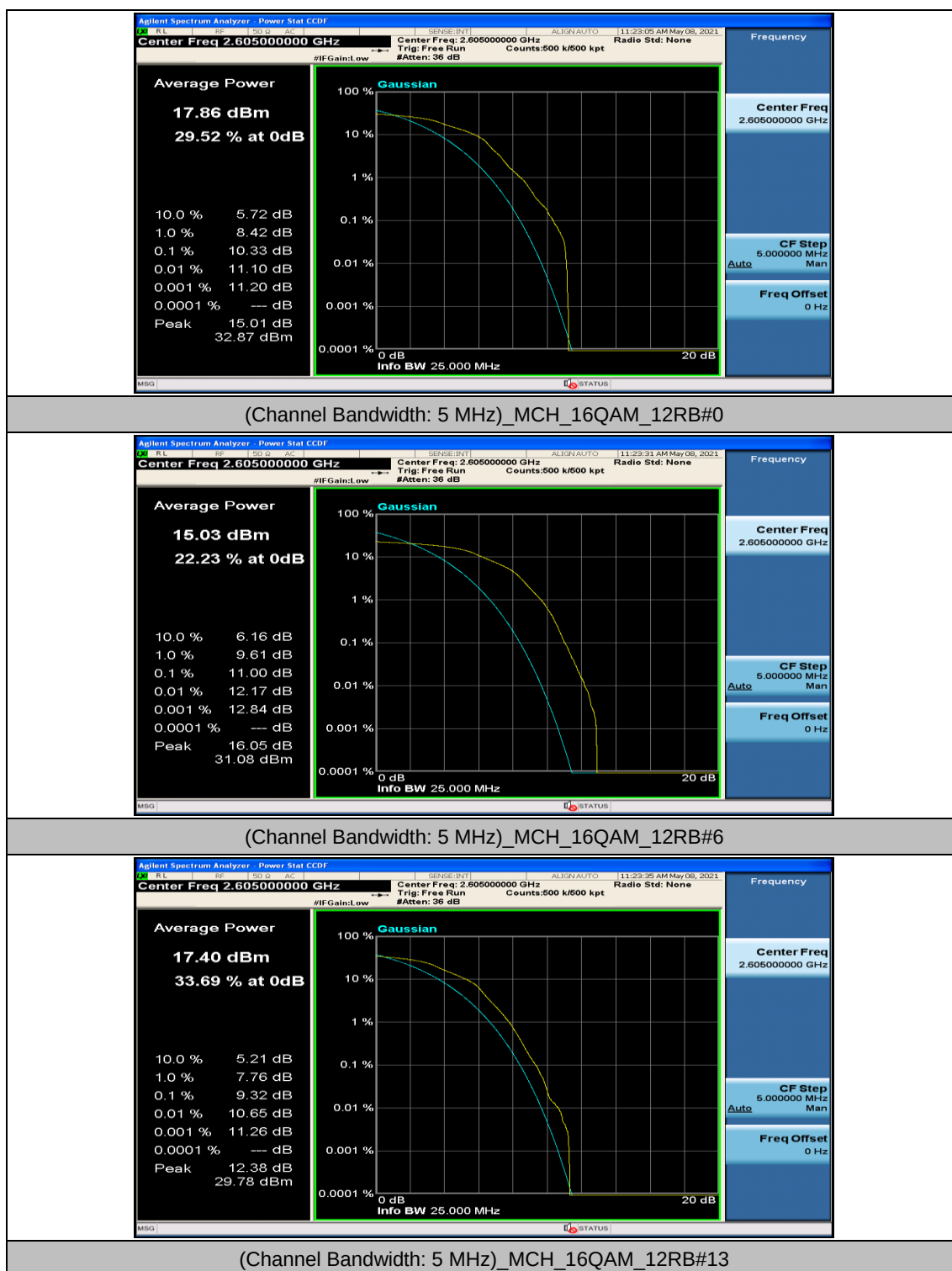
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#0

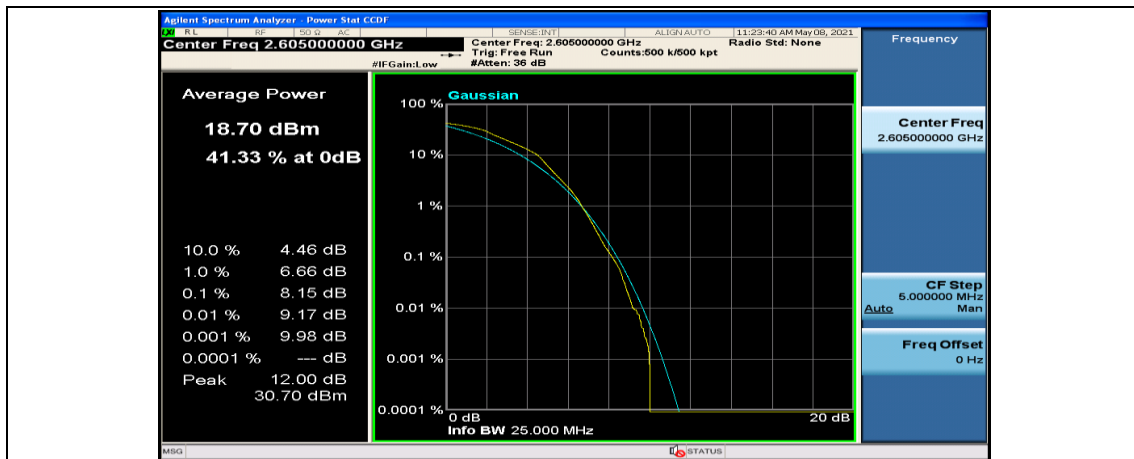


(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12

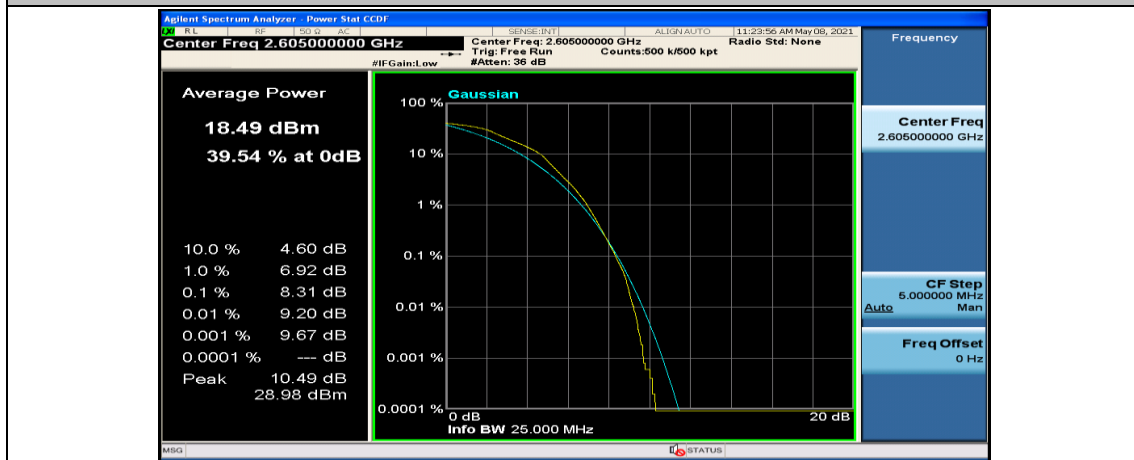


(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#24

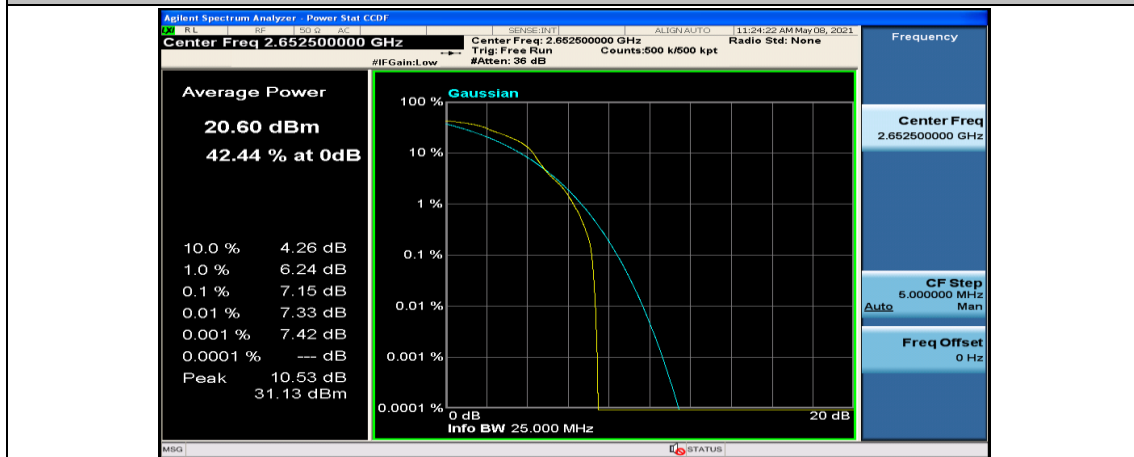




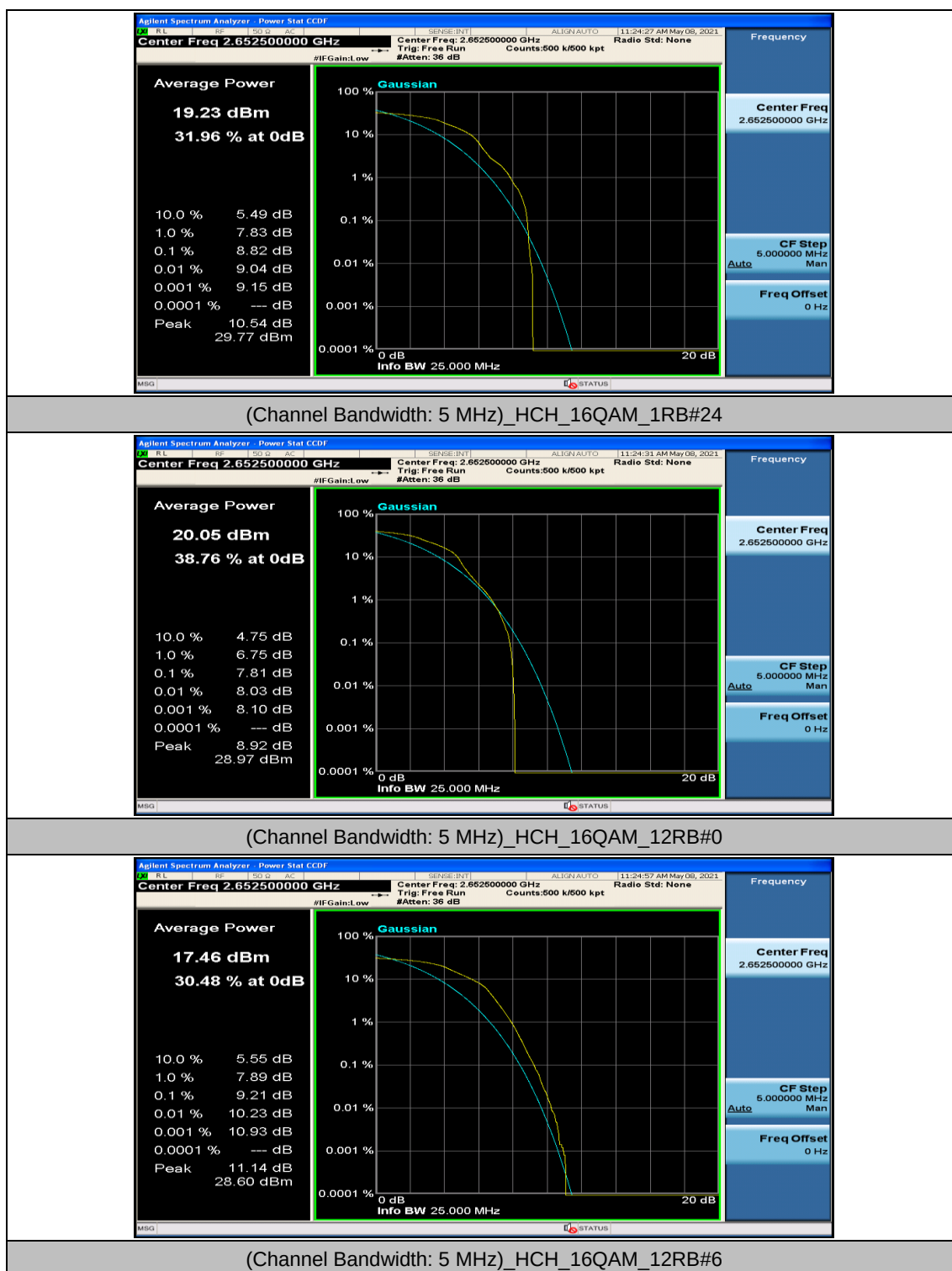
(Channel Bandwidth: 5 MHz)_MCH_16QAM_25RB#0

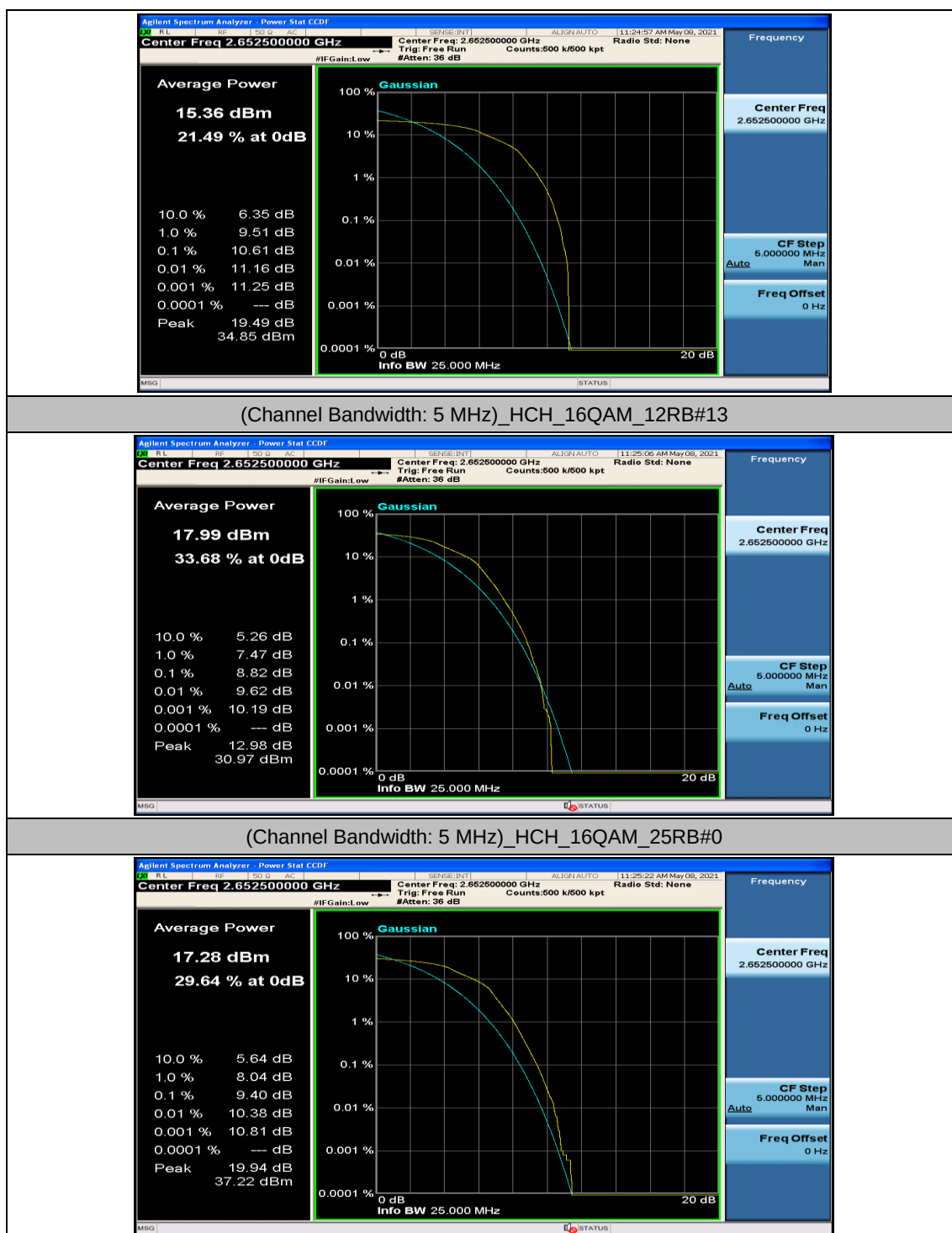


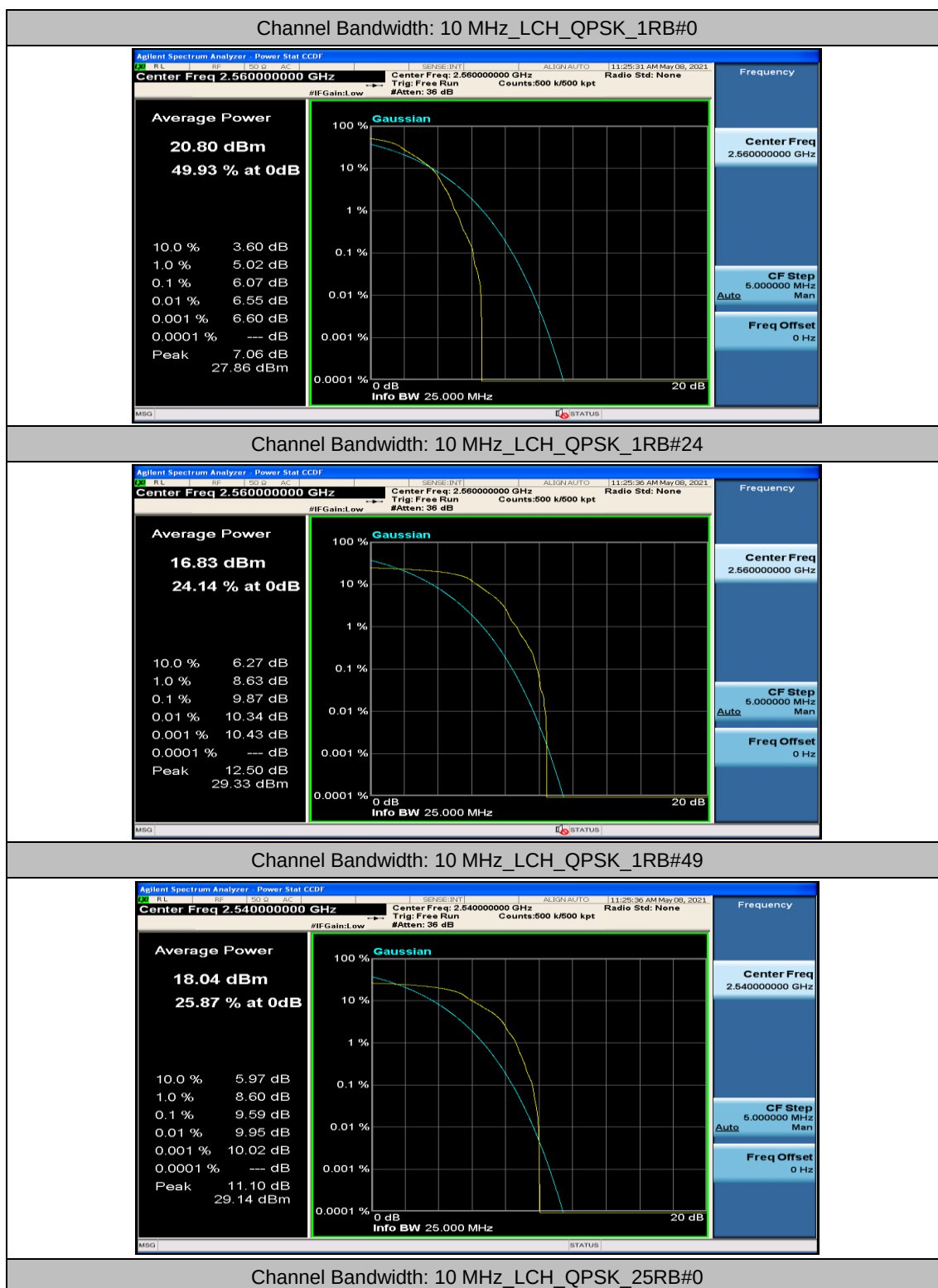
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0

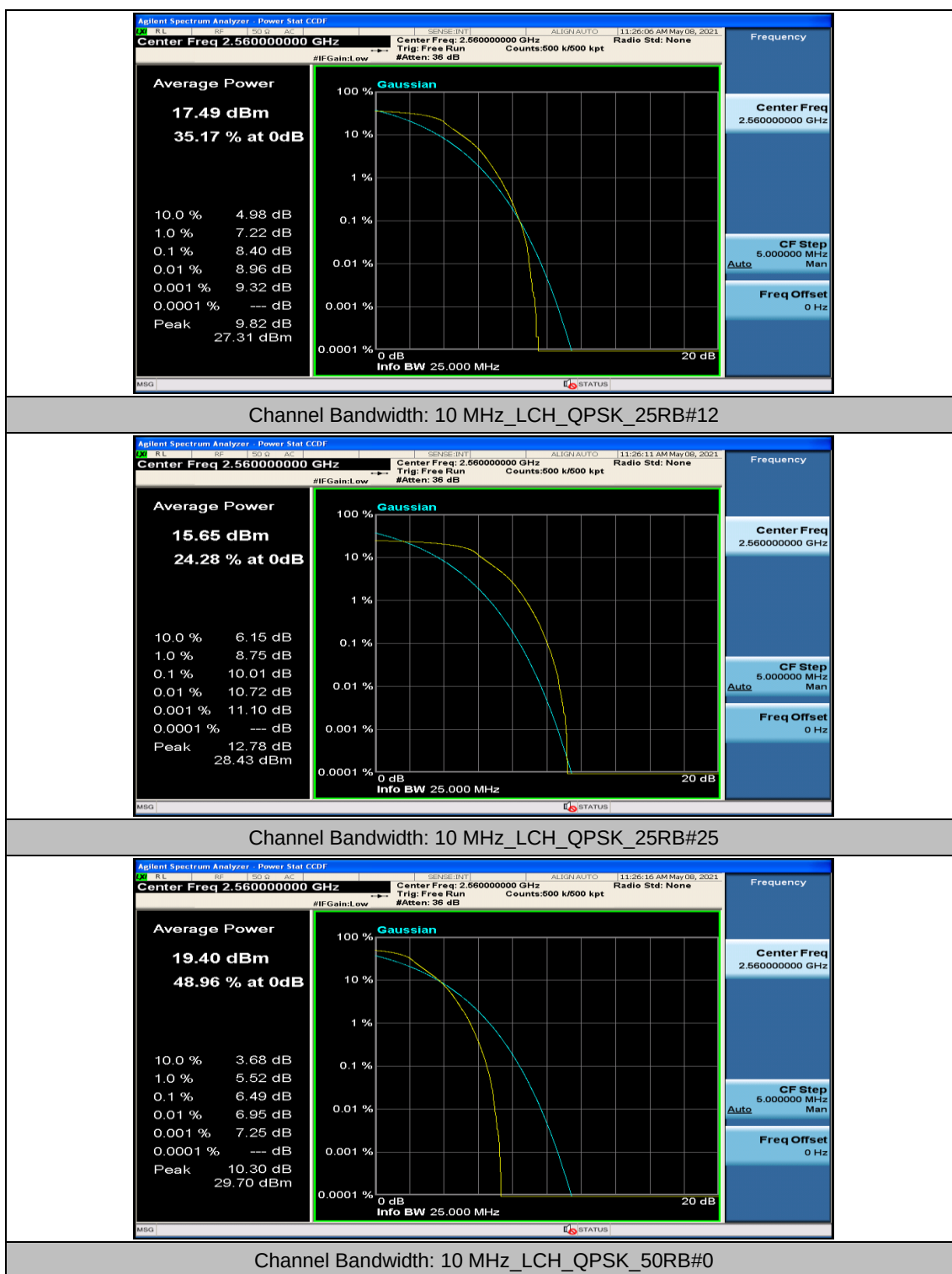


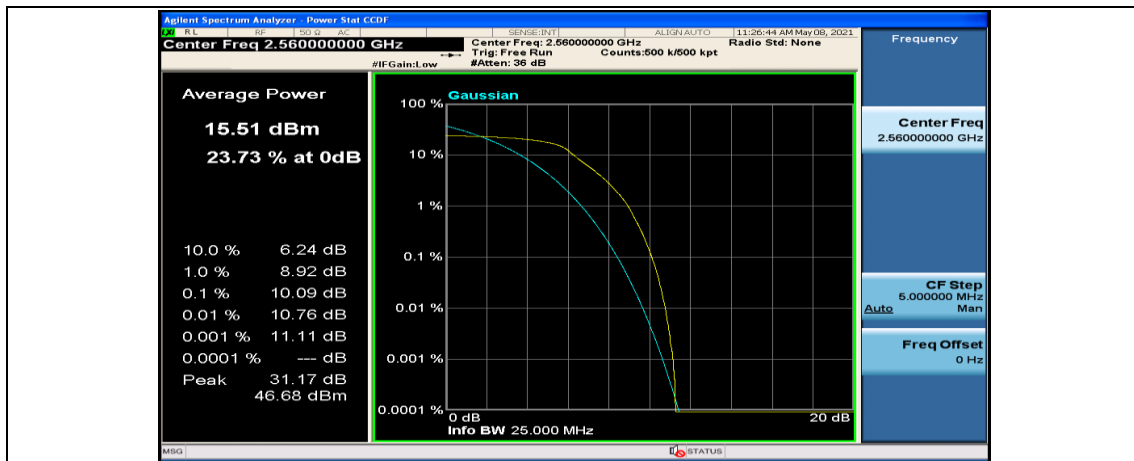
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12



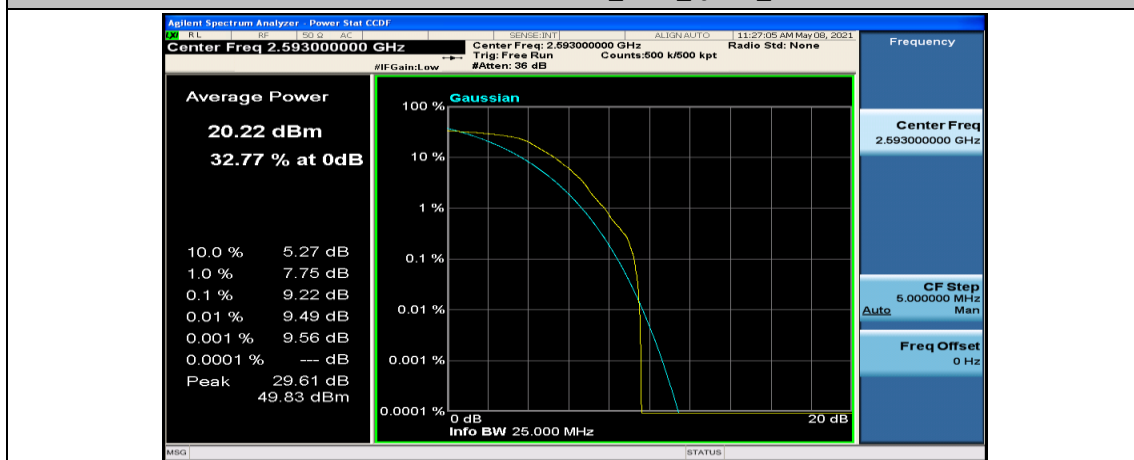


Channel Bandwidth: 10 MHz

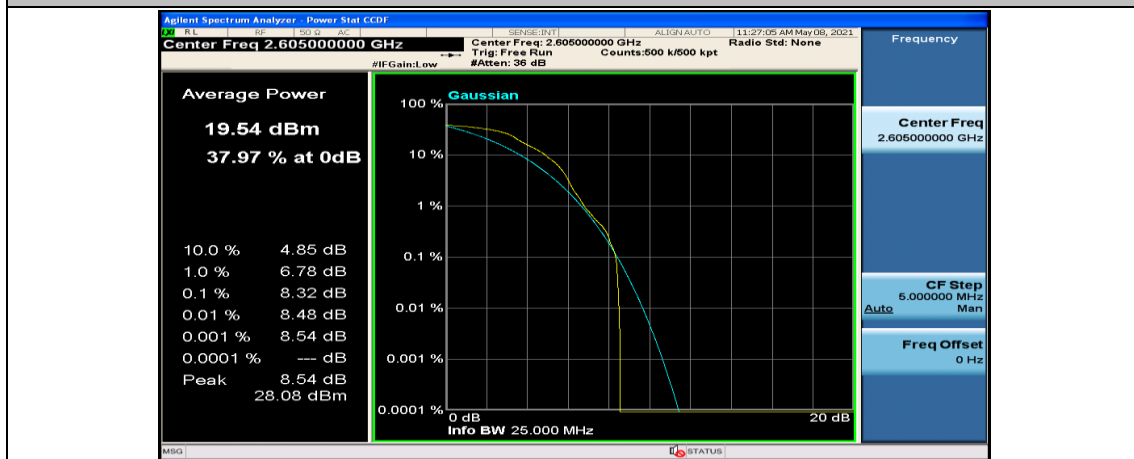




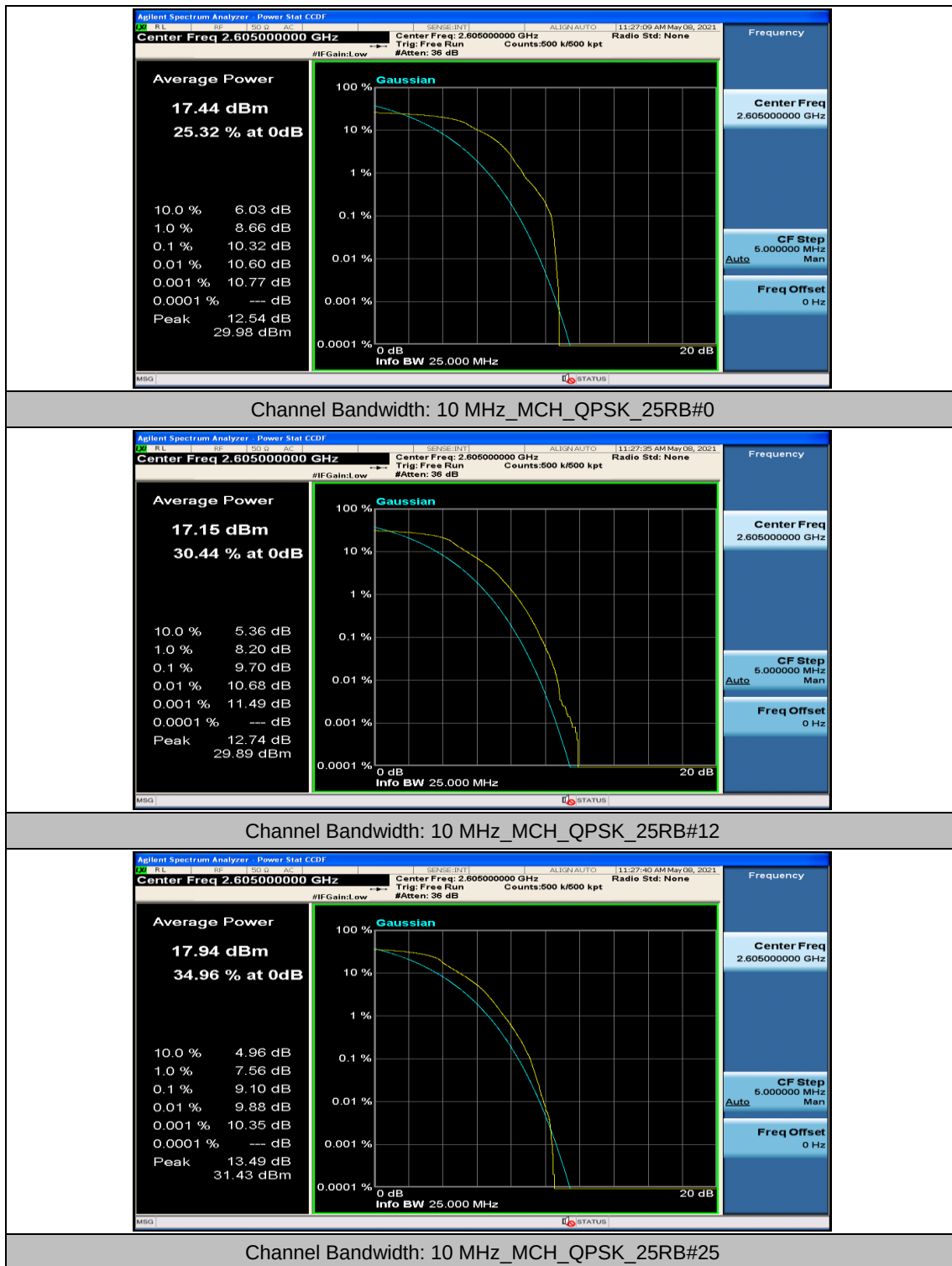
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#0

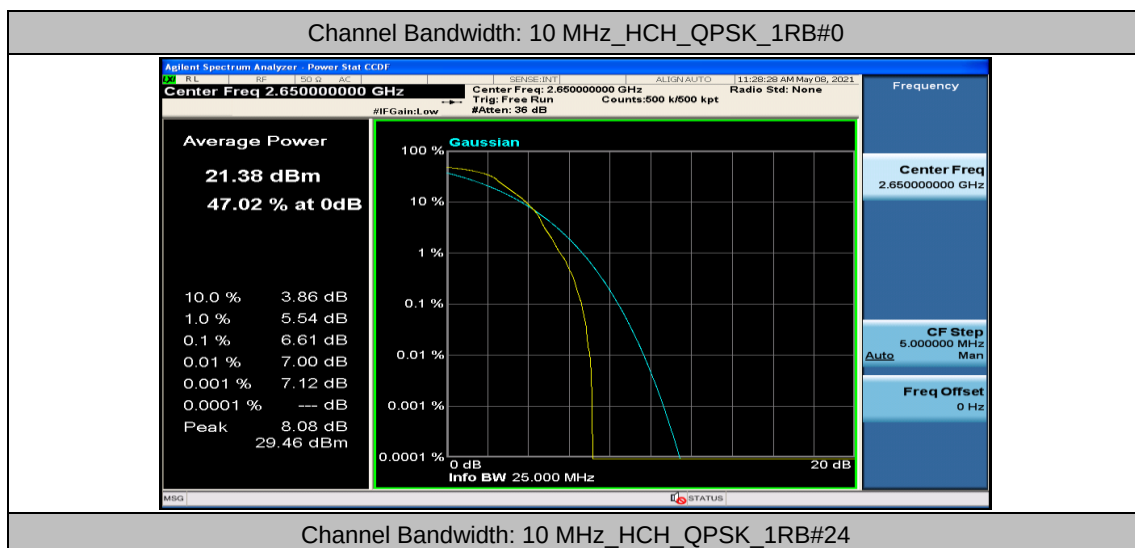
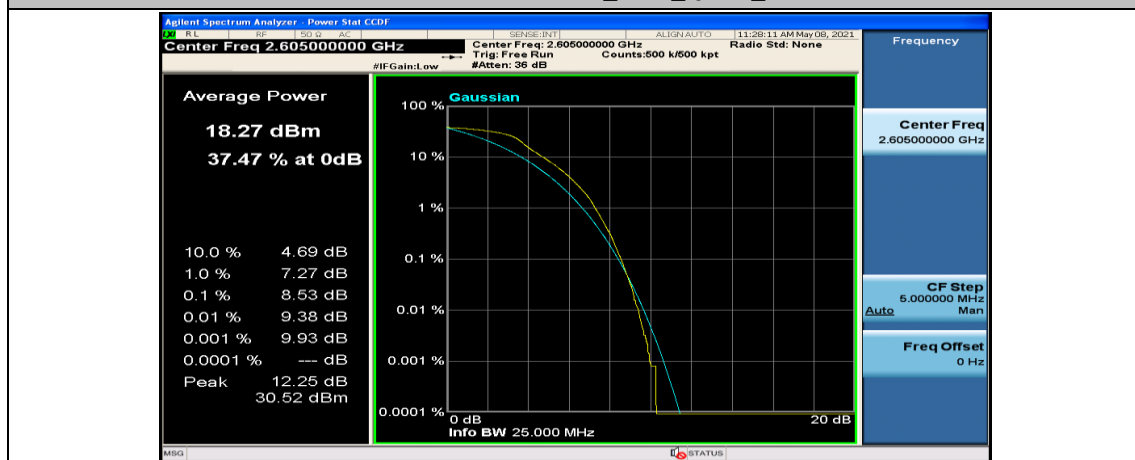
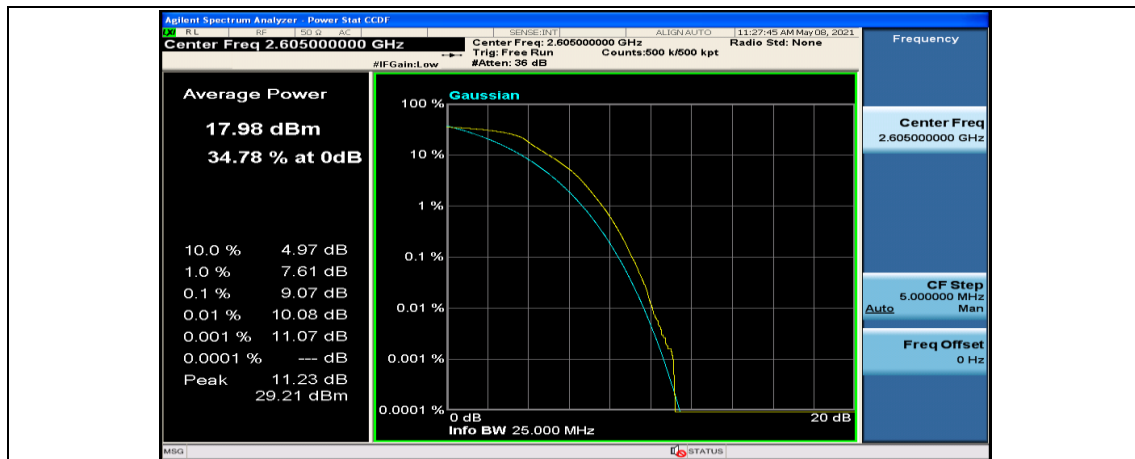


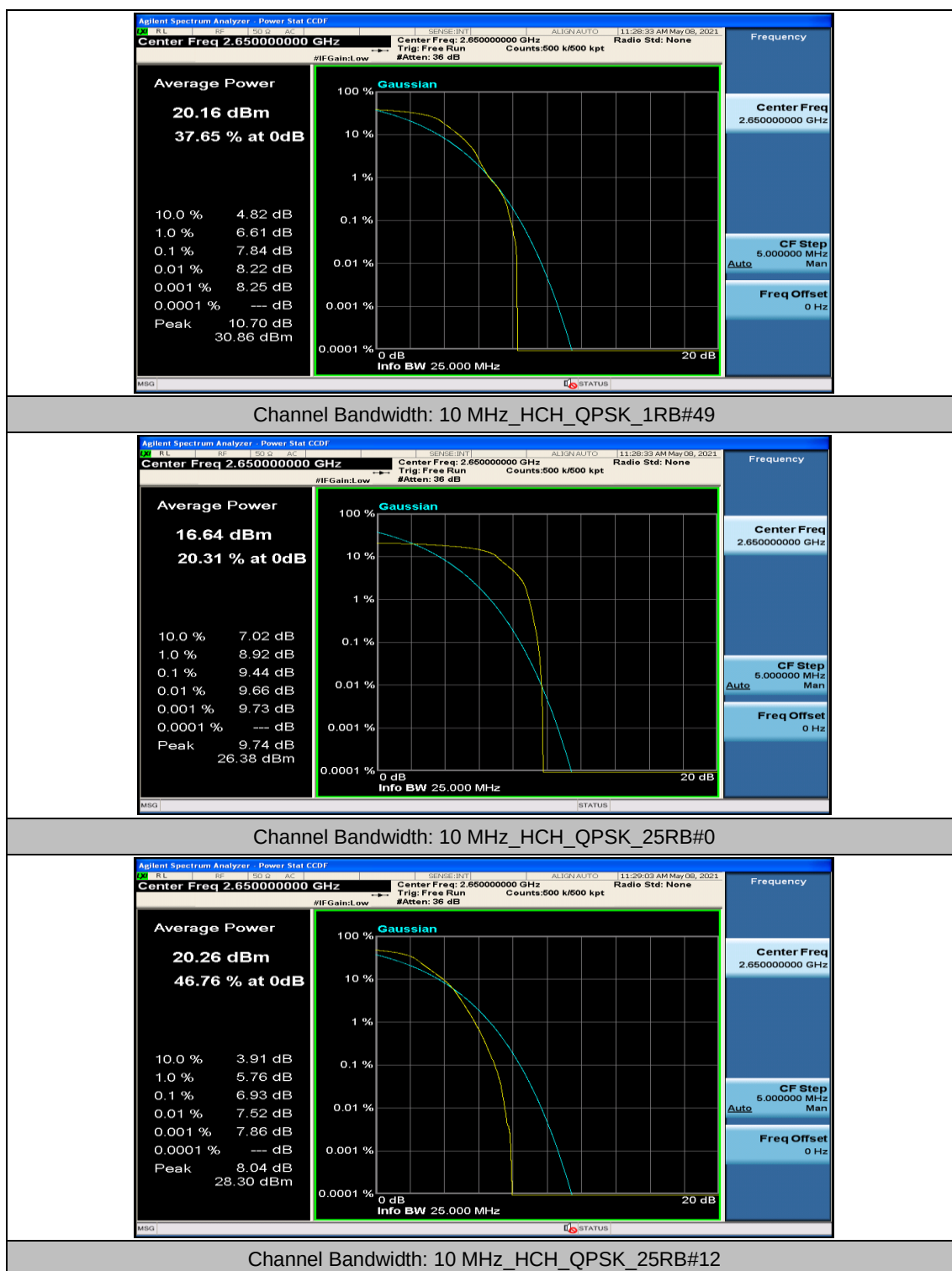
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#24

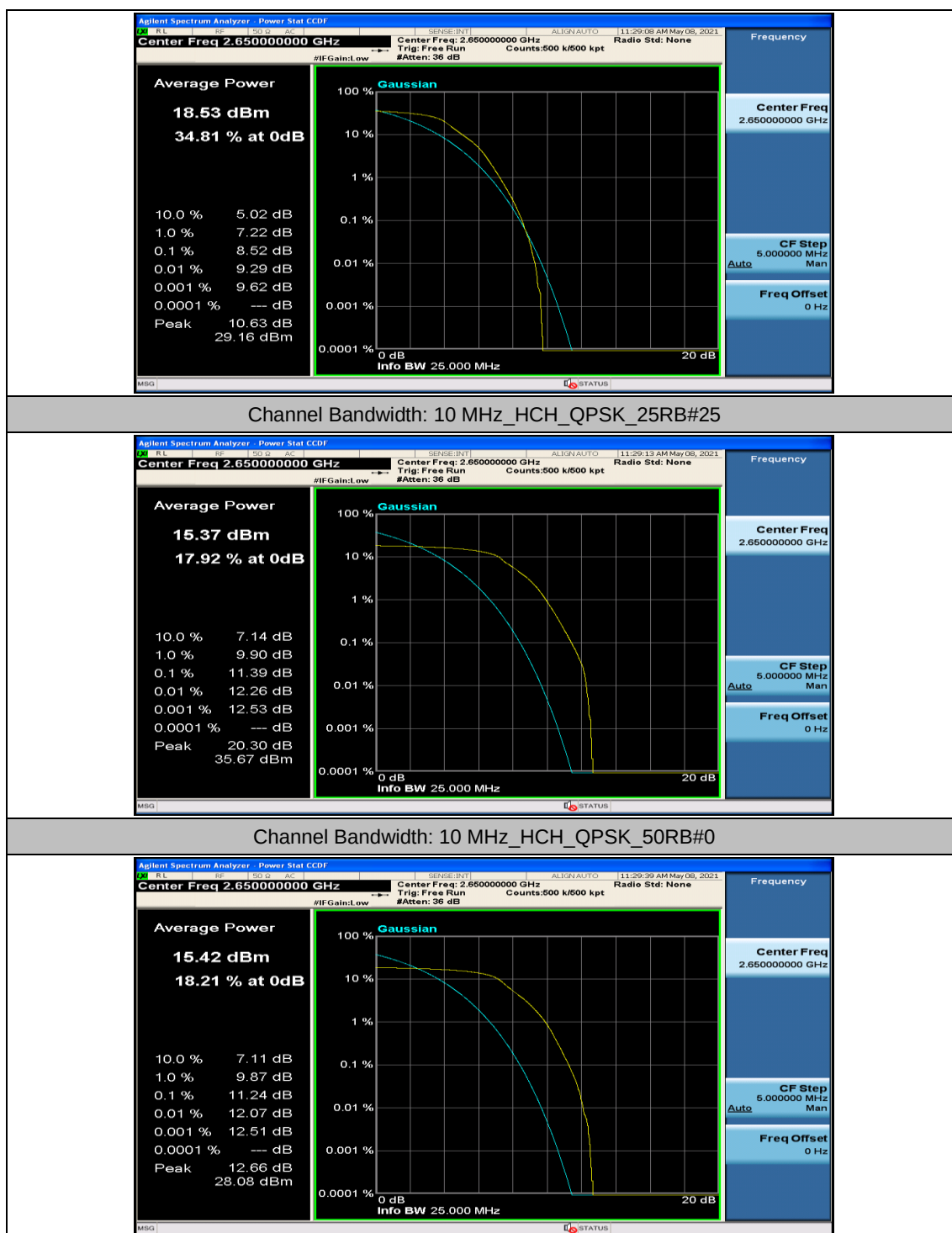


Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#49

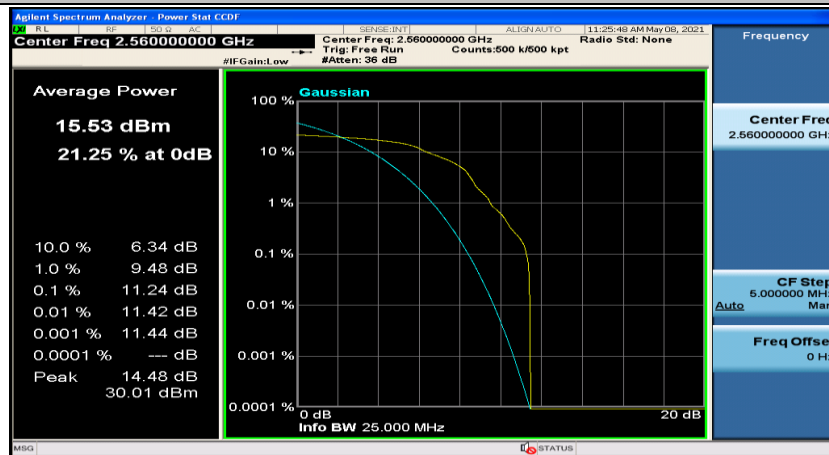




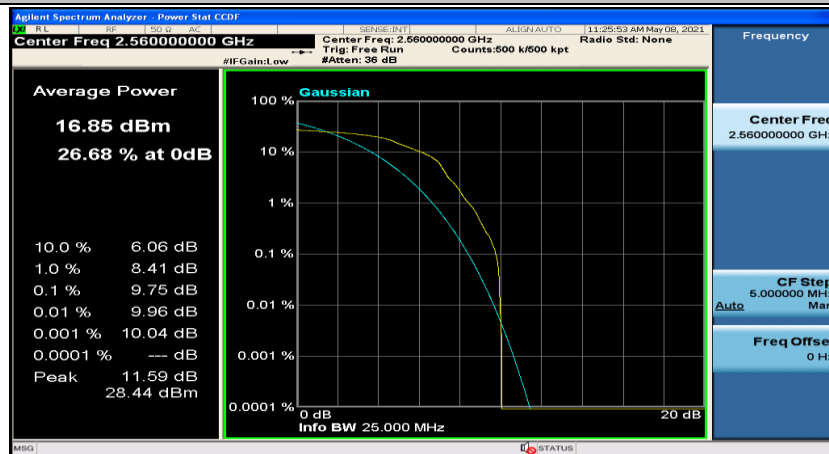




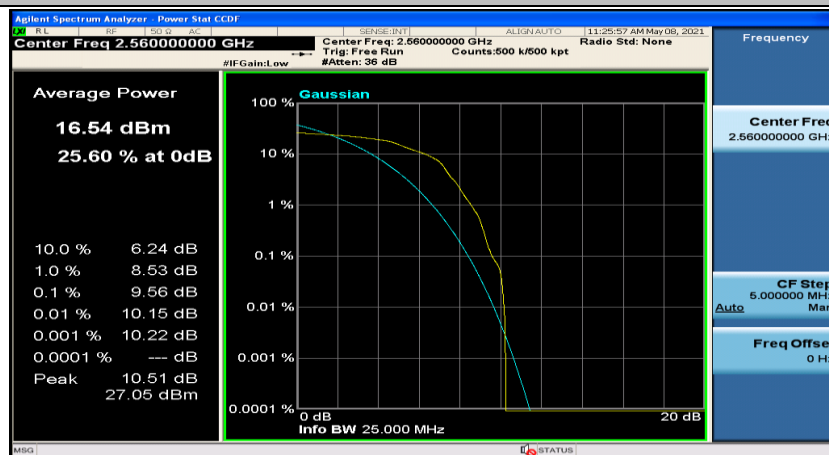
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0



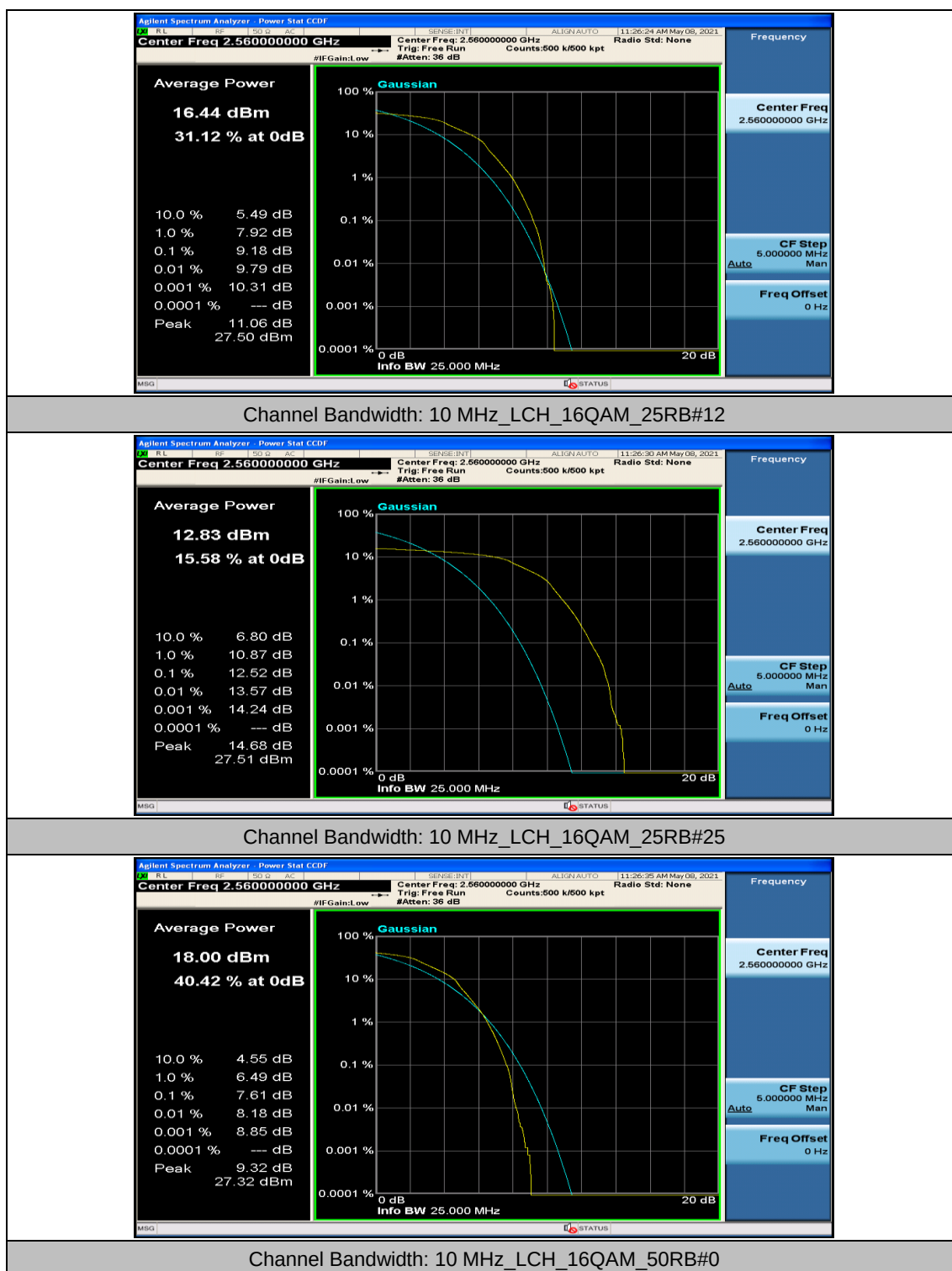
Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#24

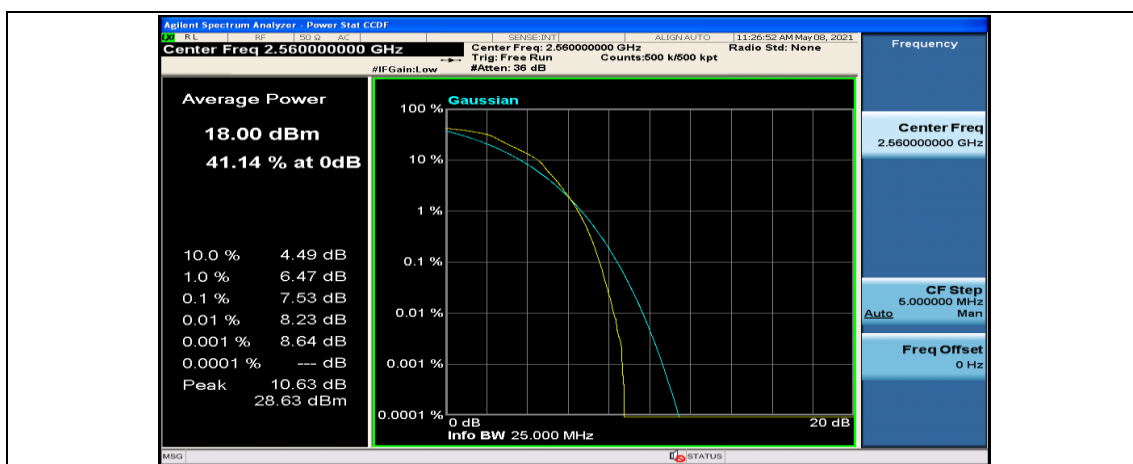


Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#49

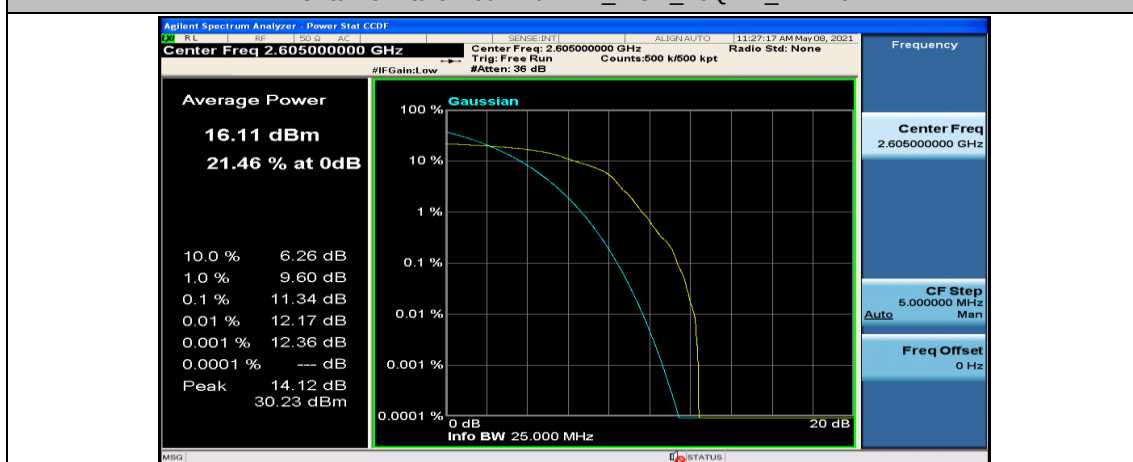


Channel Bandwidth: 10 MHz_LCH_16QAM_25RB#0

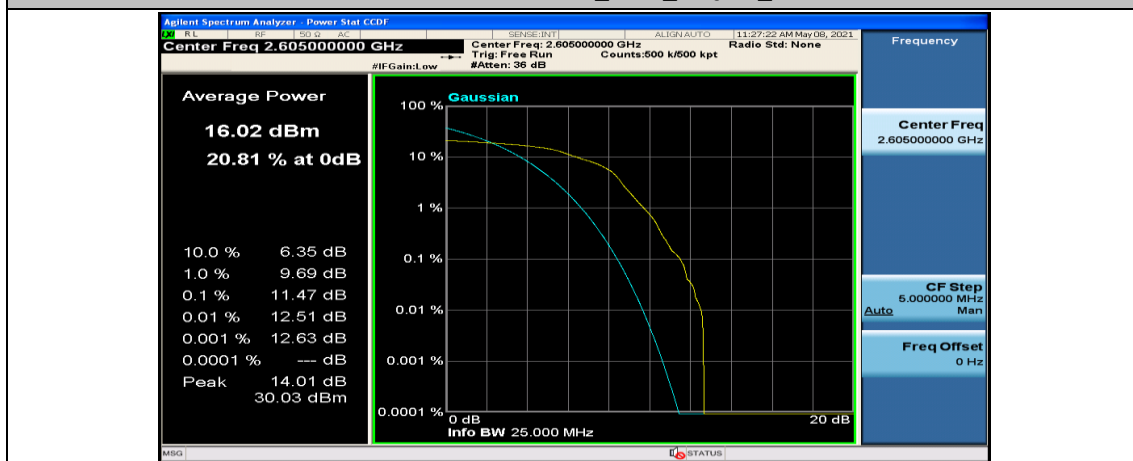




Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#0



Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#24



Channel Bandwidth: 10 MHz_MCH_16QAM_1RB#49

