

Appendix for Band 12

Product Name: 4G Vehicle GPS Tracker
Model No: JM-VL01

Appendix A: Average Power Output Data

Test Result

Channel Bandwidth: 1.4 MHz

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	24.53	PASS
		1	3	24.55	PASS
		1	5	24.57	PASS
		3	0	24.48	PASS
		3	2	24.58	PASS
		3	3	24.51	PASS
		6	0	23.49	PASS
	MCH	1	0	24.71	PASS
		1	3	24.63	PASS
		1	5	24.65	PASS
		3	0	24.59	PASS
		3	2	24.58	PASS
		3	3	24.64	PASS
		6	0	23.40	PASS
	HCH	1	0	24.48	PASS
		1	3	24.31	PASS
		1	5	24.26	PASS
		3	0	24.52	PASS
		3	2	24.32	PASS
		3	3	24.41	PASS
		6	0	23.39	PASS
16QAM	LCH	1	0	24.75	PASS
		1	3	24.72	PASS
		1	5	24.72	PASS
		3	0	23.60	PASS
		3	2	23.61	PASS
		3	3	23.59	PASS
		6	0	22.32	PASS
	MCH	1	0	24.26	PASS
		1	3	24.05	PASS
		1	5	24.01	PASS
		3	0	23.10	PASS
		3	2	23.14	PASS

		3	3	23.18	PASS
		6	0	22.17	PASS
	HCH	1	0	23.64	PASS
		1	3	23.60	PASS
		1	5	23.54	PASS
		3	0	23.15	PASS
		3	2	23.14	PASS
		3	3	23.11	PASS
		6	0	22.42	PASS

Channel Bandwidth: 3 MHz

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	24.60	PASS
		1	7	24.73	PASS
		1	14	24.80	PASS
		8	0	23.46	PASS
		8	4	23.54	PASS
		8	7	23.47	PASS
		15	0	23.50	PASS
	MCH	1	0	24.80	PASS
		1	7	24.72	PASS
		1	14	24.61	PASS
		8	0	23.66	PASS
		8	4	23.46	PASS
		8	7	23.45	PASS
		15	0	23.41	PASS
	HCH	1	0	24.54	PASS
		1	7	24.55	PASS
		1	14	24.30	PASS
		8	0	23.45	PASS
		8	4	23.42	PASS
		8	7	23.40	PASS
		15	0	23.51	PASS
16QAM	LCH	1	0	24.40	PASS
		1	7	24.31	PASS
		1	14	24.30	PASS
		8	0	22.39	PASS
		8	4	22.39	PASS
		8	7	22.40	PASS
		15	0	22.46	PASS

	MCH	1	0	25.13	PASS
		1	7	24.92	PASS
		1	14	24.91	PASS
		8	0	22.34	PASS
		8	4	22.43	PASS
		8	7	22.35	PASS
		15	0	22.28	PASS
	HCH	1	0	24.14	PASS
		1	7	24.12	PASS
		1	14	24.03	PASS
		8	0	22.79	PASS
		8	4	22.71	PASS
		8	7	22.43	PASS
		15	0	22.62	PASS

Channel Bandwidth: 5 MHz

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	24.52	PASS
		1	12	24.87	PASS
		1	24	24.78	PASS
		12	0	23.43	PASS
		12	6	23.52	PASS
		12	13	23.40	PASS
		25	0	23.46	PASS
	MCH	1	0	24.63	PASS
		1	12	24.47	PASS
		1	24	24.50	PASS
		12	0	23.58	PASS
		12	6	23.49	PASS
		12	13	23.38	PASS
		25	0	23.37	PASS
	HCH	1	0	24.69	PASS
		1	12	24.73	PASS
		1	24	24.43	PASS
		12	0	23.71	PASS
		12	6	23.60	PASS
		12	13	23.51	PASS
		25	0	23.49	PASS
16QAM	LCH	1	0	23.33	PASS
		1	12	23.39	PASS

		1	24	23.37	PASS
		12	0	22.45	PASS
		12	6	22.40	PASS
		12	13	22.35	PASS
		25	0	22.59	PASS
	MCH	1	0	24.37	PASS
		1	12	24.06	PASS
		1	24	24.28	PASS
		12	0	22.48	PASS
		12	6	22.46	PASS
		12	13	22.40	PASS
		25	0	22.53	PASS
	HCH	1	0	23.17	PASS
		1	12	23.11	PASS
		1	24	23.05	PASS
		12	0	22.19	PASS
		12	6	22.62	PASS
		12	13	22.55	PASS
		25	0	22.70	PASS

Channel Bandwidth: 10 MHz

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	24.44	PASS
		1	24	24.68	PASS
		1	49	24.63	PASS
		25	0	23.45	PASS
		25	12	23.57	PASS
		25	25	23.69	PASS
		50	0	23.68	PASS
	MCH	1	0	24.87	PASS
		1	24	24.78	PASS
		1	49	24.68	PASS
		25	0	23.61	PASS
		25	12	23.37	PASS
		25	25	23.54	PASS
		50	0	23.49	PASS
	HCH	1	0	25.14	PASS
		1	24	25.01	PASS
		1	49	24.41	PASS
		25	0	23.31	PASS

		25	12	23.53	PASS
		25	25	23.49	PASS
		50	0	23.56	PASS
16QAM	LCH	1	0	24.13	PASS
		1	24	24.27	PASS
		1	49	24.00	PASS
		25	0	22.44	PASS
		25	12	22.48	PASS
		25	25	22.42	PASS
		50	0	22.48	PASS
	MCH	1	0	23.94	PASS
		1	24	23.92	PASS
		1	49	24.06	PASS
		25	0	22.51	PASS
		25	12	22.47	PASS
		25	25	22.66	PASS
		50	0	22.43	PASS
	HCH	1	0	23.80	PASS
		1	24	23.70	PASS
		1	49	23.56	PASS
		25	0	22.36	PASS
		25	12	22.64	PASS
		25	25	22.65	PASS
		50	0	22.68	PASS

Appendix B: Peak-to-Average Ratio

Test Result

Channel Bandwidth: 1.4 MHz

Channel Bandwidth: 1.4 MHz						
Modulation	Channel	RB Configuration		Peak-to-Average Ratio (dB)	Limit (dB)	Verdict
		Size	Offset			
QPSK	LCH	1	0	4.85	<13	PASS
		1	3	4.7	<13	PASS
		1	5	4.89	<13	PASS
		3	0	5.1	<13	PASS
		3	2	5.05	<13	PASS
		3	3	5.13	<13	PASS
		6	0	5.78	<13	PASS
	MCH	1	0	4.83	<13	PASS
		1	3	4.82	<13	PASS
		1	5	4.79	<13	PASS
		3	0	5.11	<13	PASS
		3	2	5.16	<13	PASS
		3	3	5.24	<13	PASS
		6	0	5.69	<13	PASS
	HCH	1	0	4.34	<13	PASS
		1	3	4.24	<13	PASS
		1	5	4.22	<13	PASS
		3	0	4.46	<13	PASS
		3	2	4.49	<13	PASS
		3	3	4.4	<13	PASS
		6	0	5.02	<13	PASS
16QAM	LCH	1	0	5.18	<13	PASS
		1	3	5.13	<13	PASS
		1	5	5.25	<13	PASS
		3	0	6.2	<13	PASS
		3	2	5.97	<13	PASS
		3	3	6.16	<13	PASS
		6	0	6.65	<13	PASS
	MCH	1	0	5.79	<13	PASS
		1	3	5.86	<13	PASS
		1	5	5.91	<13	PASS

		3	0	6.45	<13	PASS
		3	2	6.51	<13	PASS
		3	3	6.47	<13	PASS
		6	0	6.75	<13	PASS
	HCH	1	0	5.32	<13	PASS
		1	3	5.24	<13	PASS
		1	5	5.14	<13	PASS
		3	0	5.65	<13	PASS
		3	2	5.47	<13	PASS
		3	3	5.65	<13	PASS
		6	0	6.02	<13	PASS

Channel Bandwidth: 3 MHz

Channel Bandwidth: 3 MHz						
Modulation	Channel	RB Configuration		Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
		Size	Offset			
QPSK	LCH	1	0	4.92	<13	PASS
		1	7	4.86	<13	PASS
		1	14	4.82	<13	PASS
		8	0	5.66	<13	PASS
		8	4	5.6	<13	PASS
		8	7	5.57	<13	PASS
		15	0	5.65	<13	PASS
	MCH	1	0	4.89	<13	PASS
		1	7	4.81	<13	PASS
		1	14	4.93	<13	PASS
		8	0	5.81	<13	PASS
		8	4	5.86	<13	PASS
		8	7	5.77	<13	PASS
		15	0	5.9	<13	PASS
	HCH	1	0	4.74	<13	PASS
		1	7	4.44	<13	PASS
		1	14	4.21	<13	PASS
		8	0	5.38	<13	PASS
		8	4	5.25	<13	PASS
		8	7	5.15	<13	PASS
		15	0	5.24	<13	PASS
16QAM	LCH	1	0	5.53	<13	PASS
		1	7	5.49	<13	PASS
		1	14	5.58	<13	PASS
		8	0	6.37	<13	PASS

		8	4	6.43	<13	PASS
		8	7	6.53	<13	PASS
		15	0	6.57	<13	PASS
	MCH	1	0	5.16	<13	PASS
		1	7	5.21	<13	PASS
		1	14	5.28	<13	PASS
		8	0	6.54	<13	PASS
		8	4	6.53	<13	PASS
		8	7	6.54	<13	PASS
		15	0	6.52	<13	PASS
	HCH	1	0	5.29	<13	PASS
		1	7	5.18	<13	PASS
		1	14	4.9	<13	PASS
		8	0	6.35	<13	PASS
		8	4	6.16	<13	PASS
		8	7	6.23	<13	PASS
		15	0	6.02	<13	PASS

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	5.28	<13	PASS
		1	12	5.03	<13	PASS
		1	24	5.2	<13	PASS
		12	0	5.7	<13	PASS
		12	6	5.64	<13	PASS
		12	13	5.65	<13	PASS
		25	0	5.63	<13	PASS
	MCH	1	0	5.07	<13	PASS
		1	12	5.15	<13	PASS
		1	24	5.17	<13	PASS
		12	0	5.52	<13	PASS
		12	6	5.68	<13	PASS
		12	13	5.66	<13	PASS
		25	0	5.75	<13	PASS
	HCH	1	0	5.07	<13	PASS
		1	12	4.66	<13	PASS
		1	24	4.21	<13	PASS
		12	0	5.51	<13	PASS
		12	6	5.54	<13	PASS
		12	13	5.13	<13	PASS
		25	0	5.41	<13	PASS
16QAM	LCH	1	0	6.15	<13	PASS
		1	12	6.16	<13	PASS
		1	24	5.99	<13	PASS
		12	0	6.58	<13	PASS
		12	6	6.59	<13	PASS
		12	13	6.63	<13	PASS
		25	0	6.38	<13	PASS
	MCH	1	0	5.64	<13	PASS
		1	12	5.84	<13	PASS
		1	24	5.84	<13	PASS
		12	0	6.48	<13	PASS
		12	6	6.49	<13	PASS
		12	13	6.67	<13	PASS
		25	0	6.55	<13	PASS
	HCH	1	0	6.13	<13	PASS

		1	12	6.06	<13	PASS
		1	24	5.66	<13	PASS
		12	0	6.48	<13	PASS
		12	6	6.24	<13	PASS
		12	13	6	<13	PASS
		25	0	6.18	<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	4.92	<13	PASS
		1	24	4.93	<13	PASS
		1	49	5.18	<13	PASS
		25	0	5.65	<13	PASS
		25	12	5.7	<13	PASS
		25	25	5.67	<13	PASS
		50	0	5.67	<13	PASS
	MCH	1	0	4.7	<13	PASS
		1	24	4.79	<13	PASS
		1	49	4.68	<13	PASS
		25	0	5.69	<13	PASS
		25	12	5.85	<13	PASS
		25	25	5.75	<13	PASS
		50	0	5.83	<13	PASS
	HCH	1	0	4.97	<13	PASS
		1	24	5.04	<13	PASS
		1	49	4.23	<13	PASS
		25	0	5.68	<13	PASS
		25	12	5.67	<13	PASS
		25	25	5.39	<13	PASS
		50	0	5.63	<13	PASS
16QAM	LCH	1	0	5.61	<13	PASS
		1	24	5.83	<13	PASS
		1	49	5.89	<13	PASS
		25	0	6.57	<13	PASS
		25	12	6.54	<13	PASS
		25	25	6.77	<13	PASS
		50	0	6.46	<13	PASS
	MCH	1	0	5.72	<13	PASS
		1	24	5.74	<13	PASS

		1	49	5.17	<13	PASS
		25	0	6.55	<13	PASS
		25	12	6.62	<13	PASS
		25	25	6.57	<13	PASS
		50	0	6.58	<13	PASS
	HCH	1	0	6.04	<13	PASS
		1	24	5.92	<13	PASS
		1	49	5.32	<13	PASS
		25	0	6.63	<13	PASS
		25	12	6.57	<13	PASS
		25	25	6.25	<13	PASS
		50	0	6.43	<13	PASS

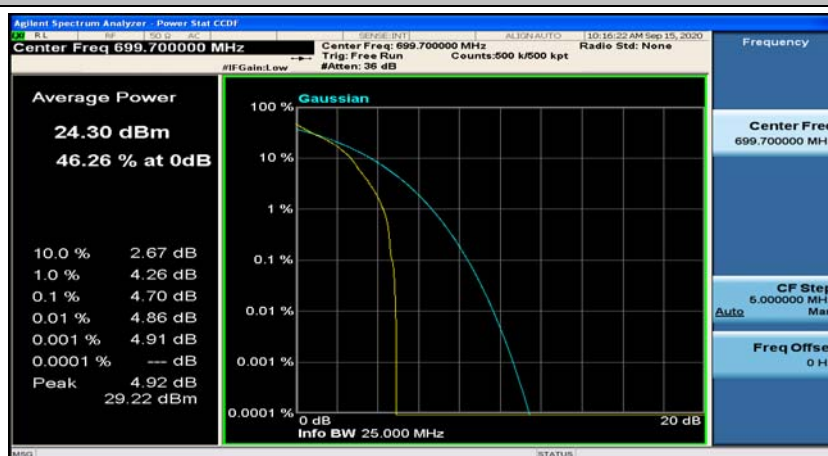
Test Graphs

Channel Bandwidth: 1.4 MHz

(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#0



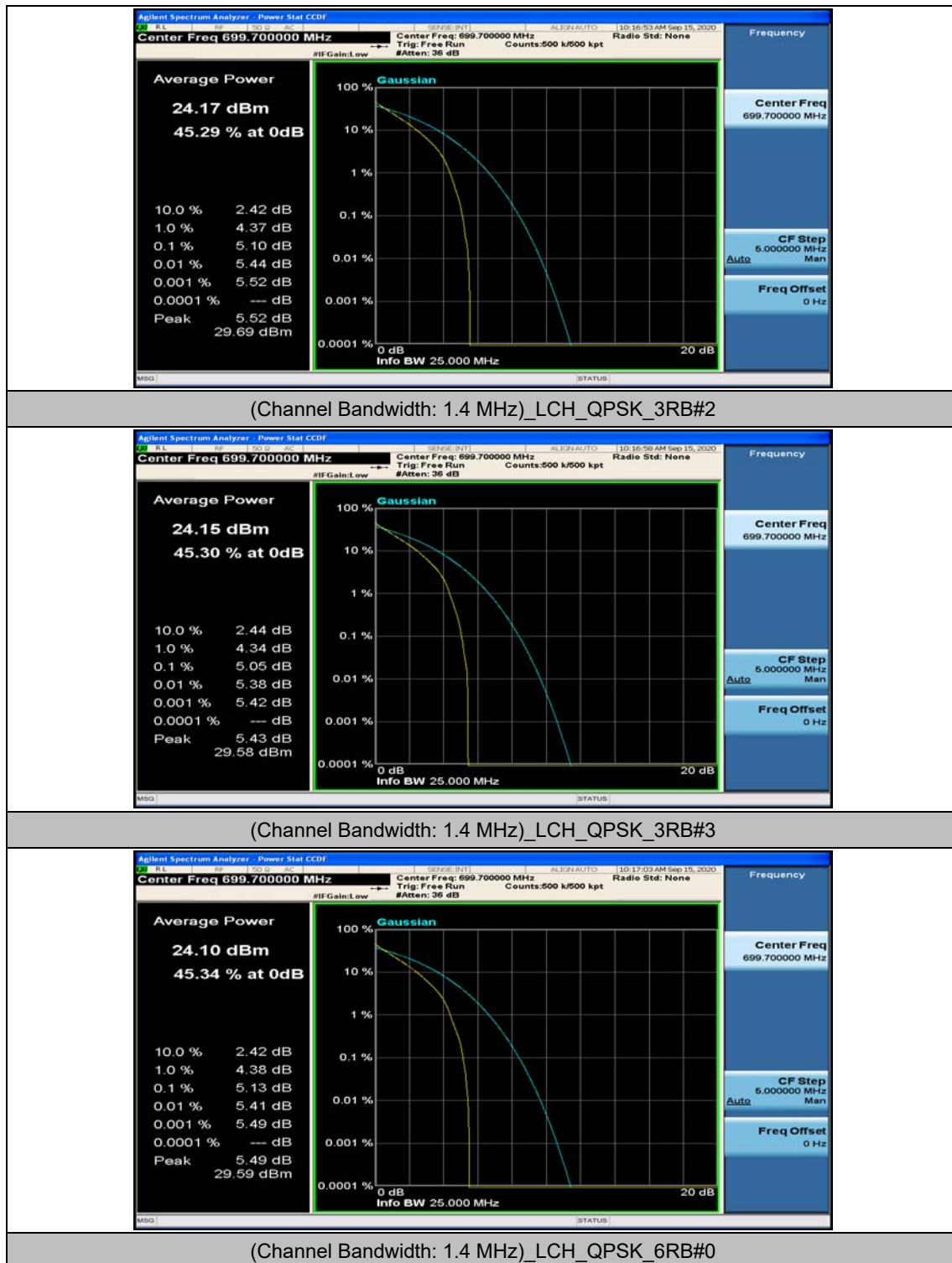
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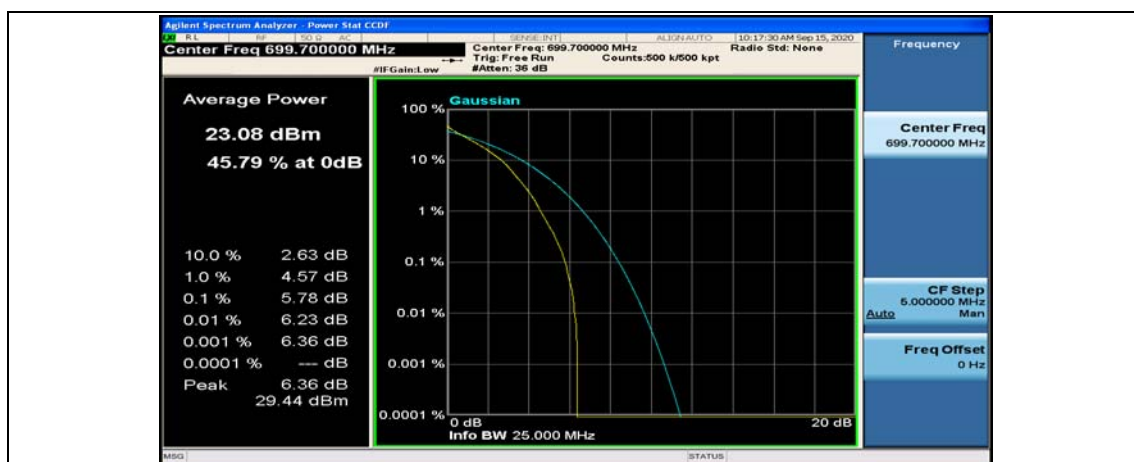


(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_1RB#5



(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_3RB#0





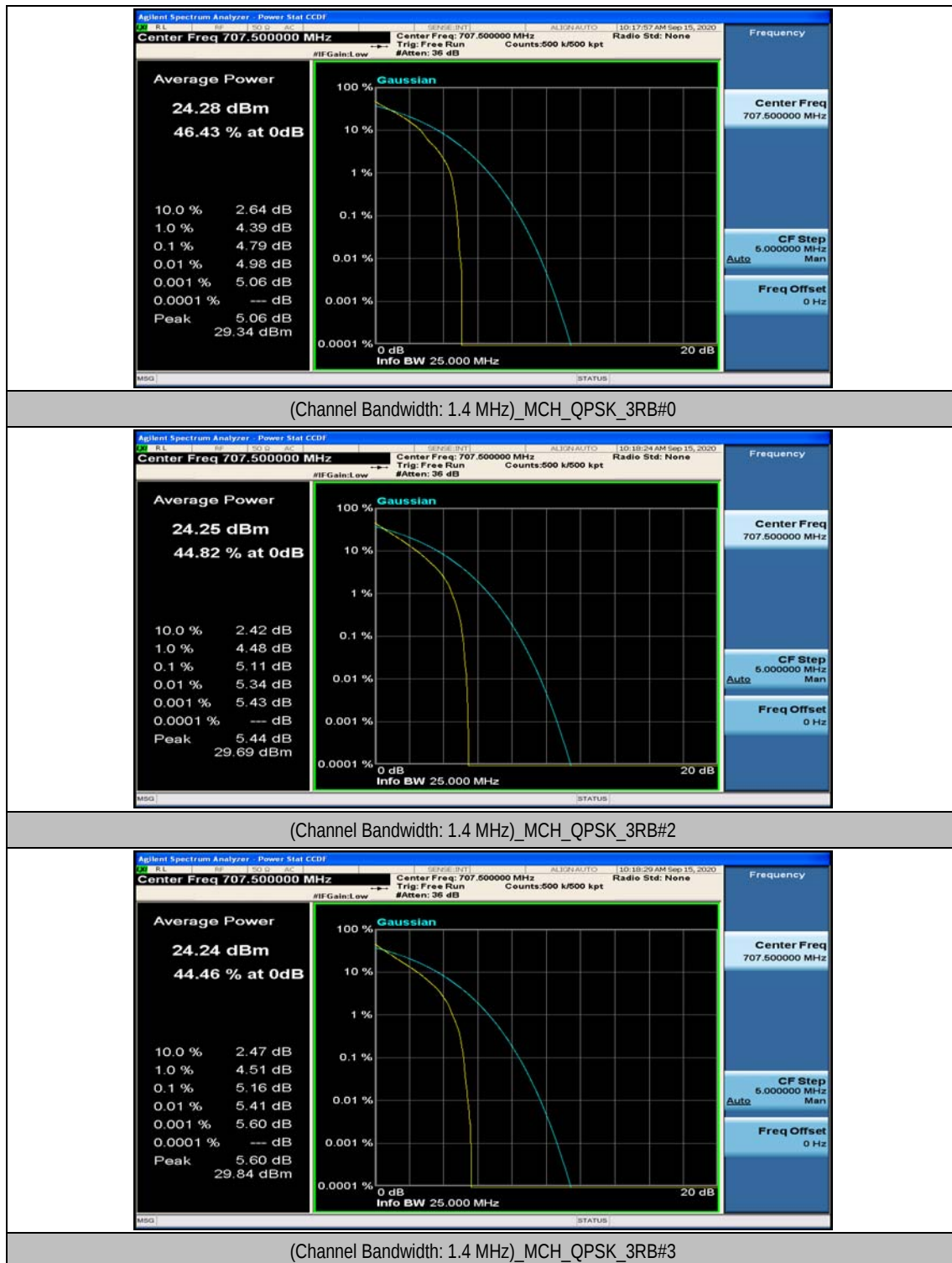
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(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#3

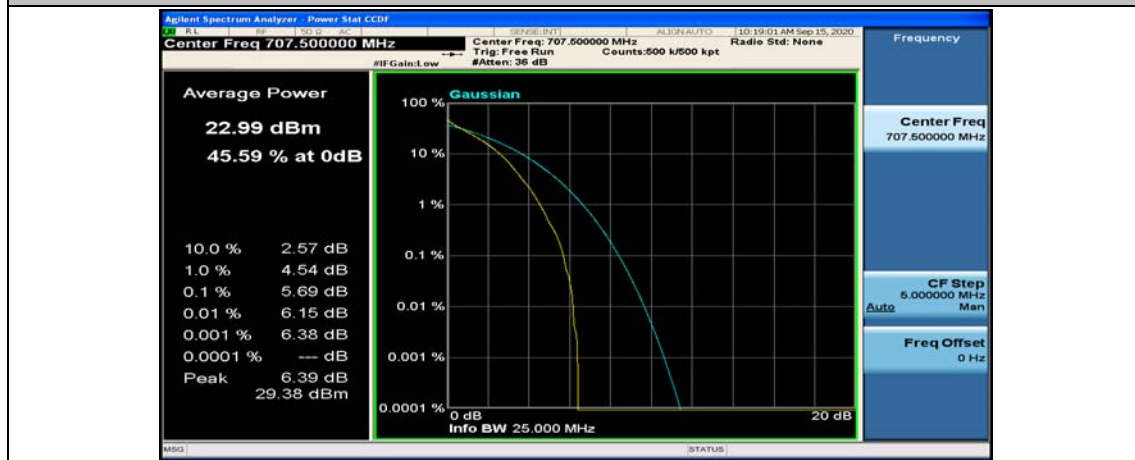


(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#5





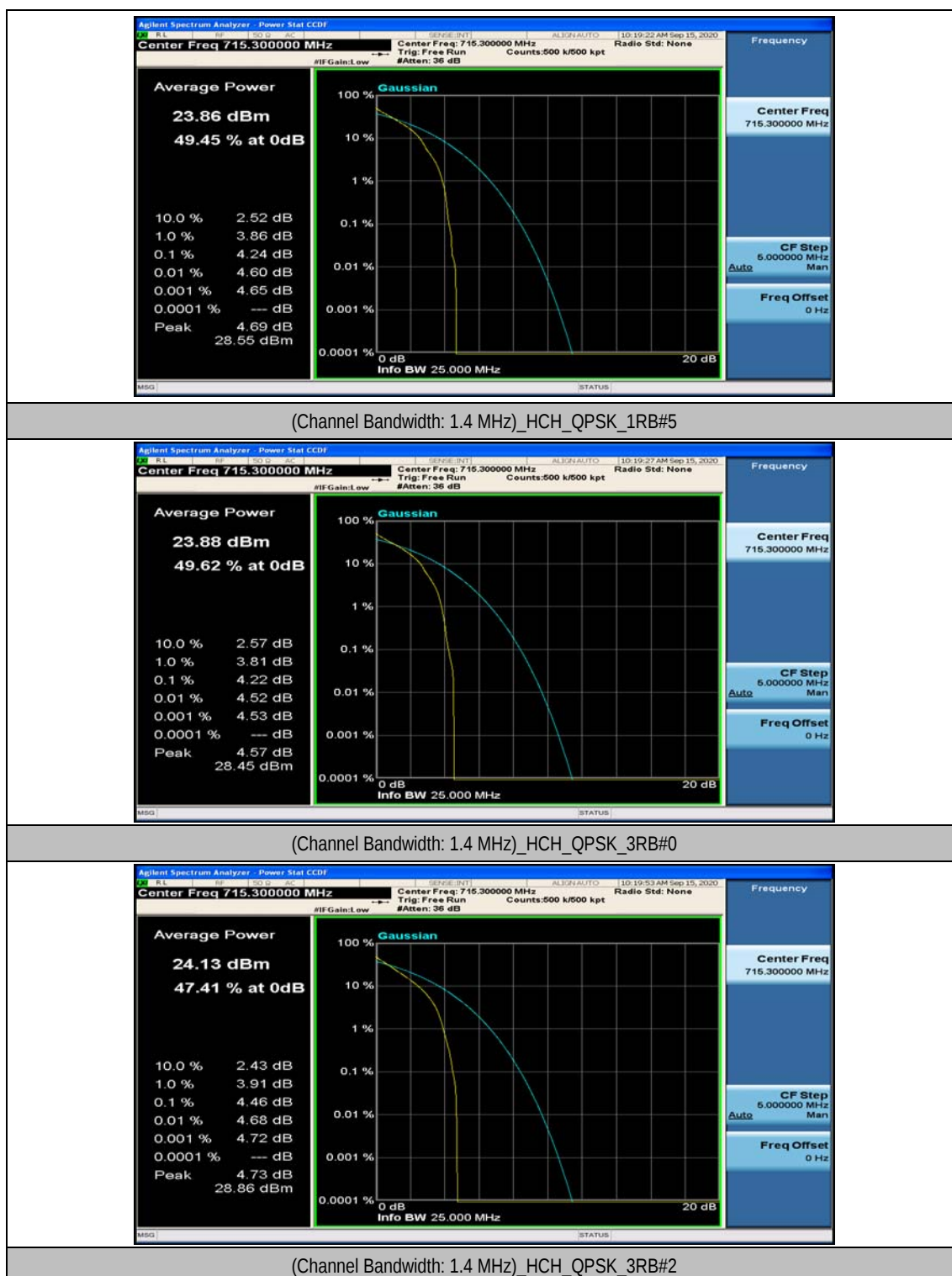
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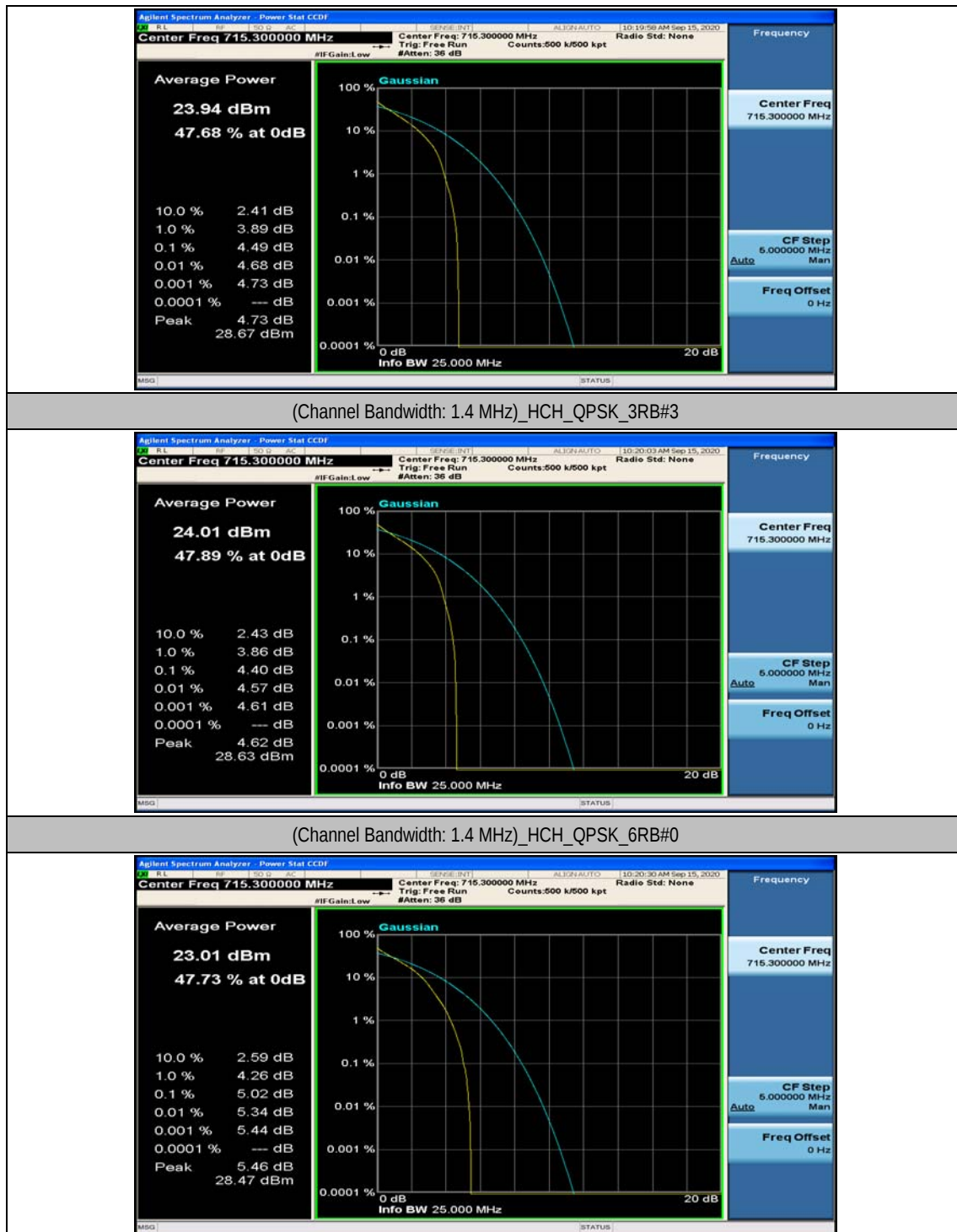


(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#3

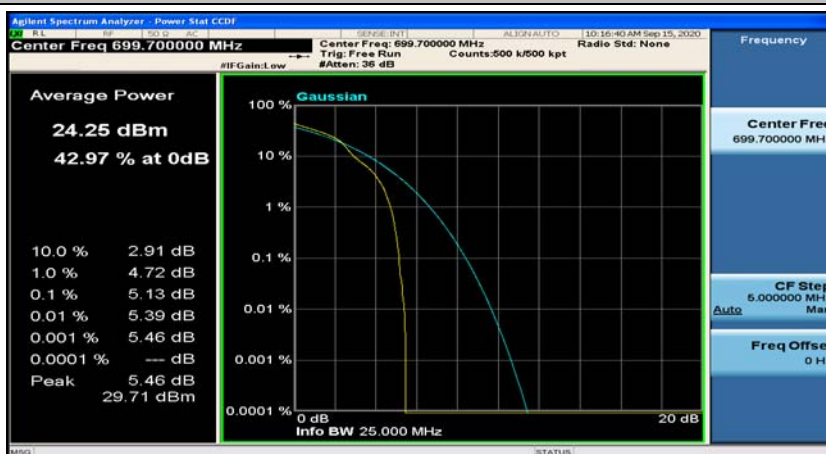




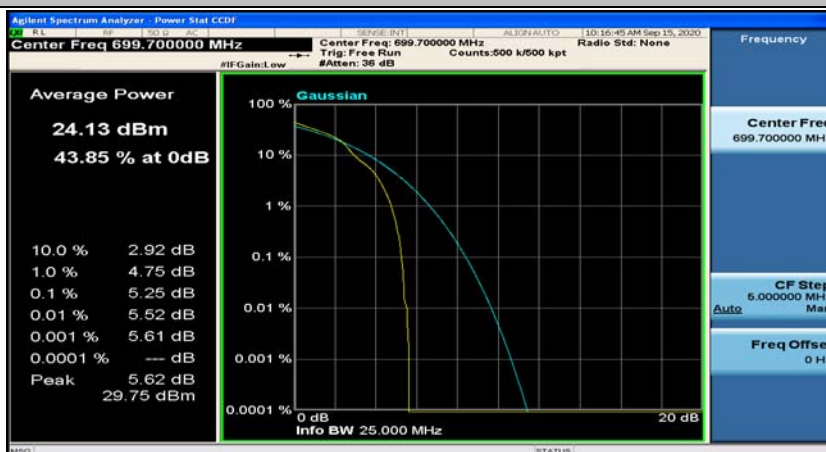
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#0



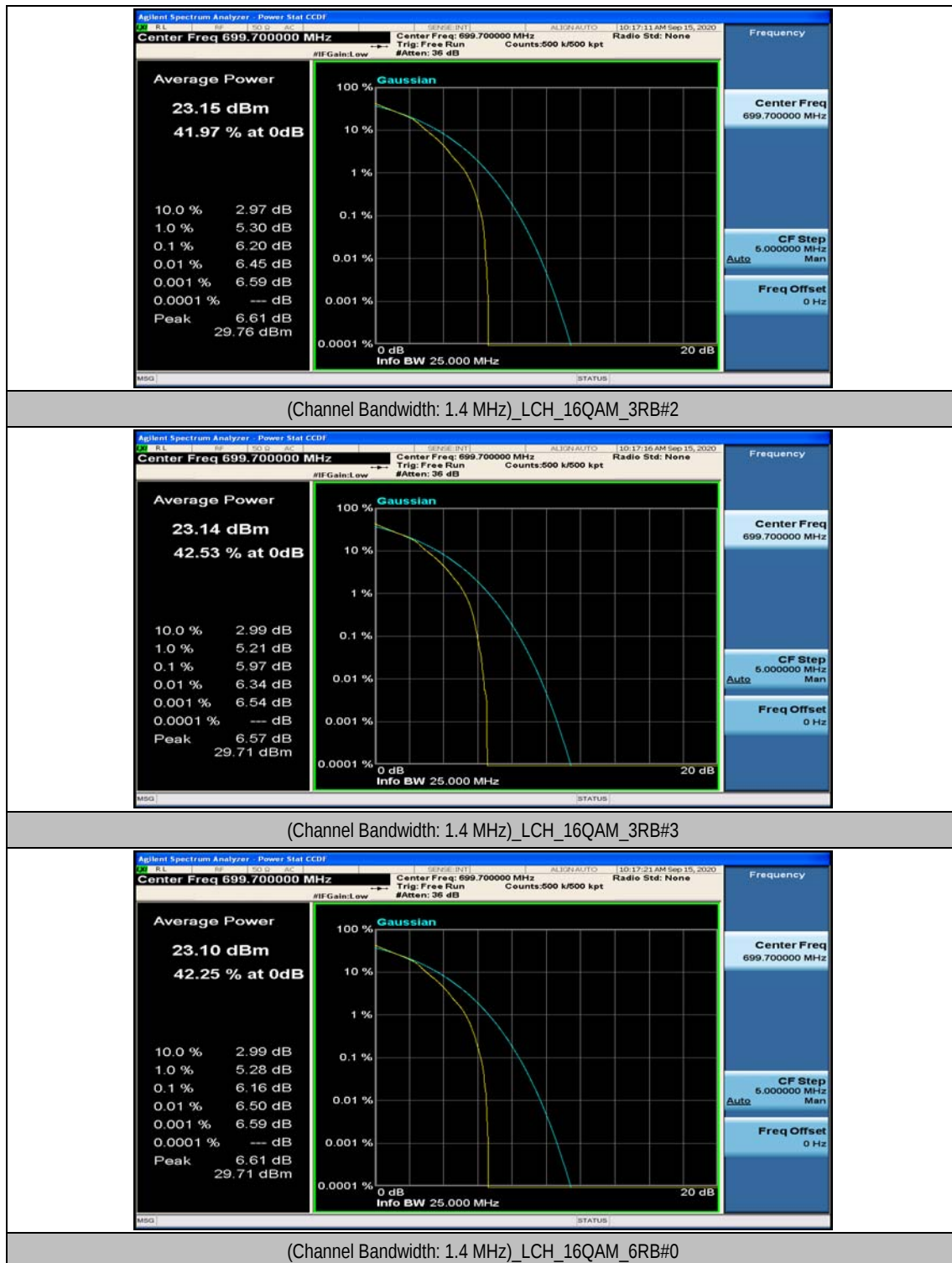
(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#3



(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#5



(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_3RB#0

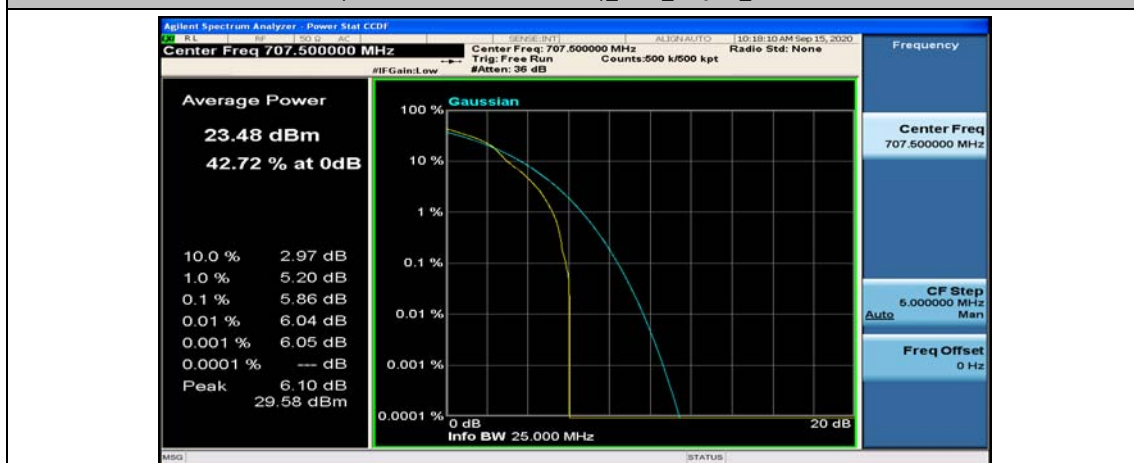




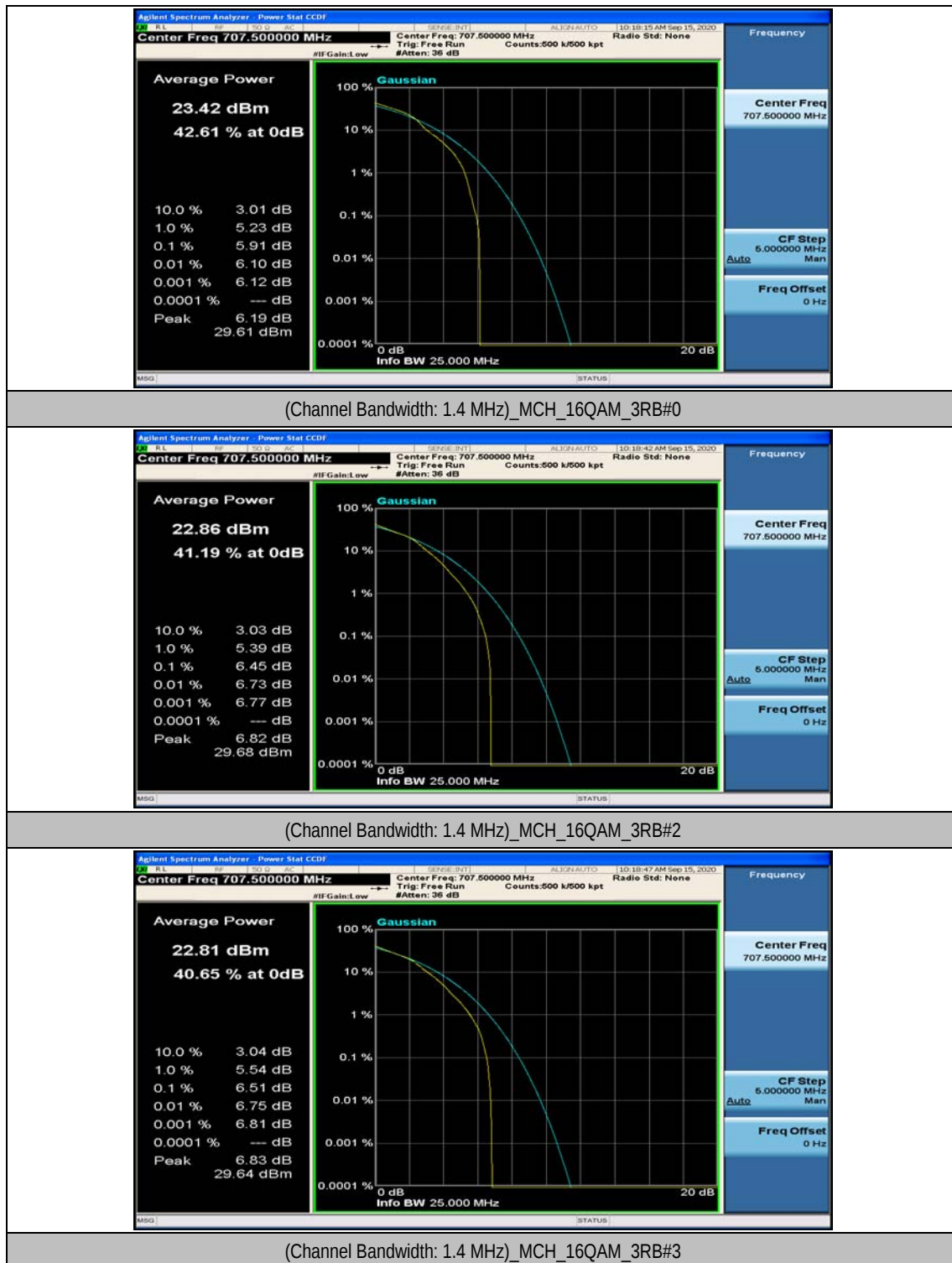
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#0

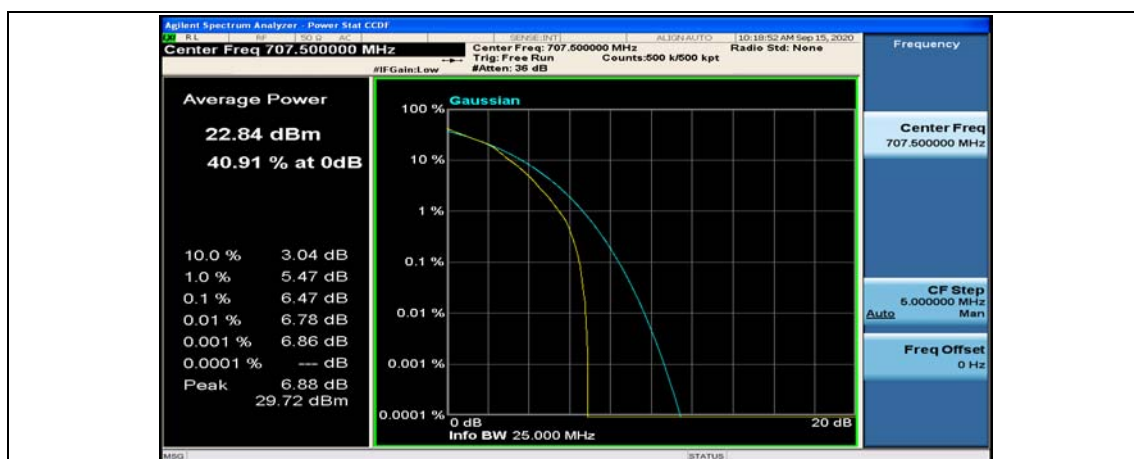


(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#3



(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_1RB#5





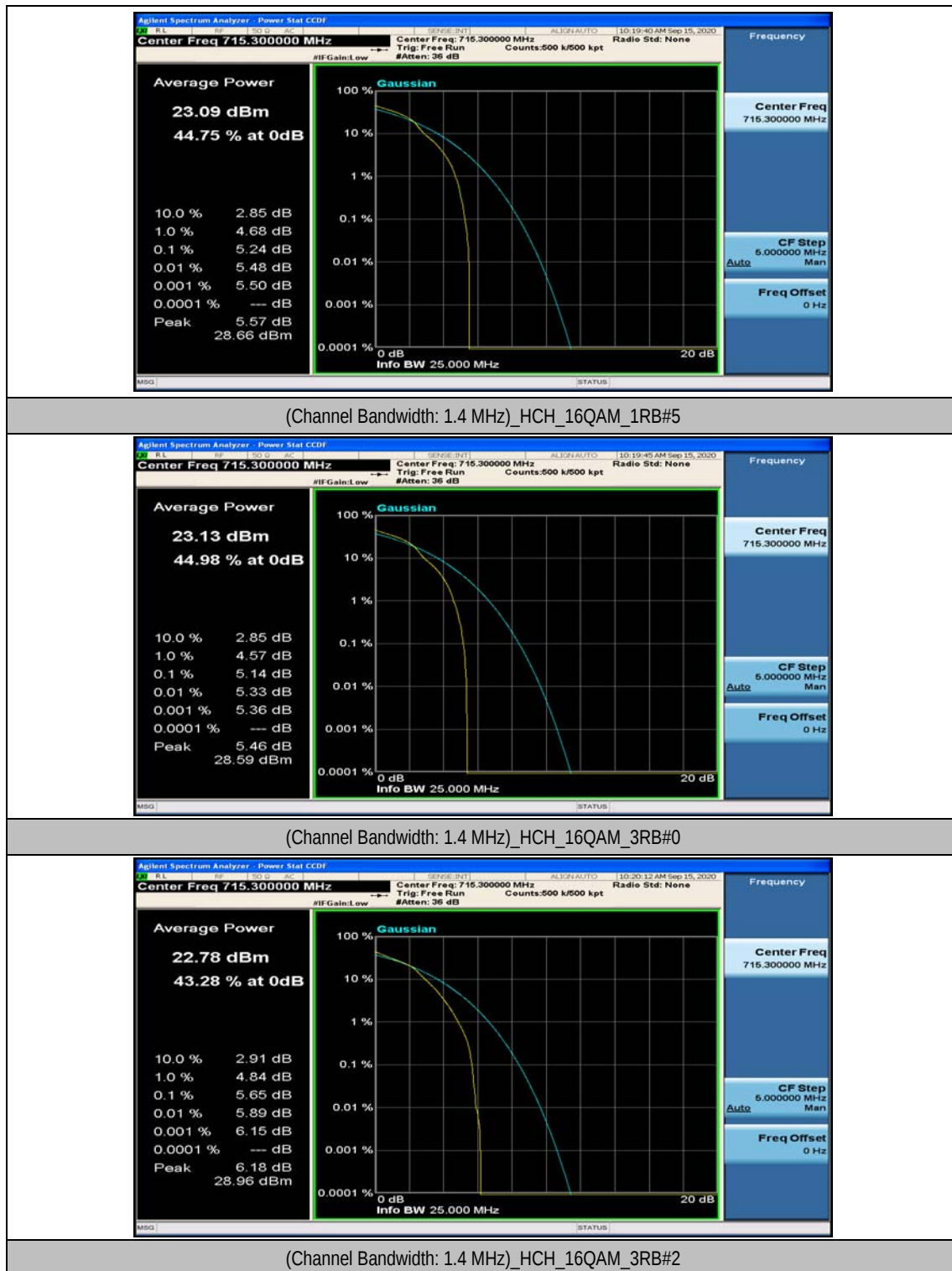
(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_6RB#0

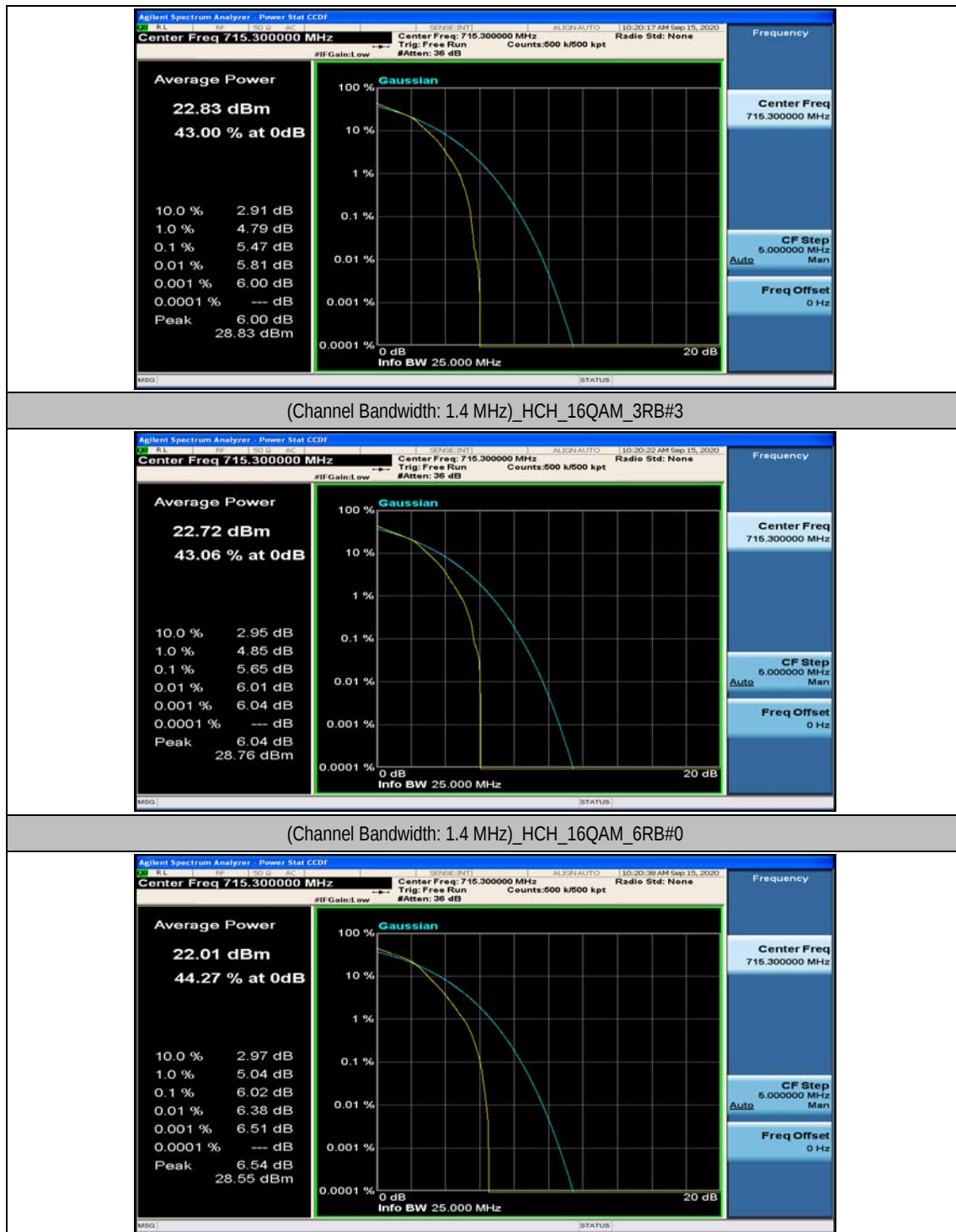


(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#0



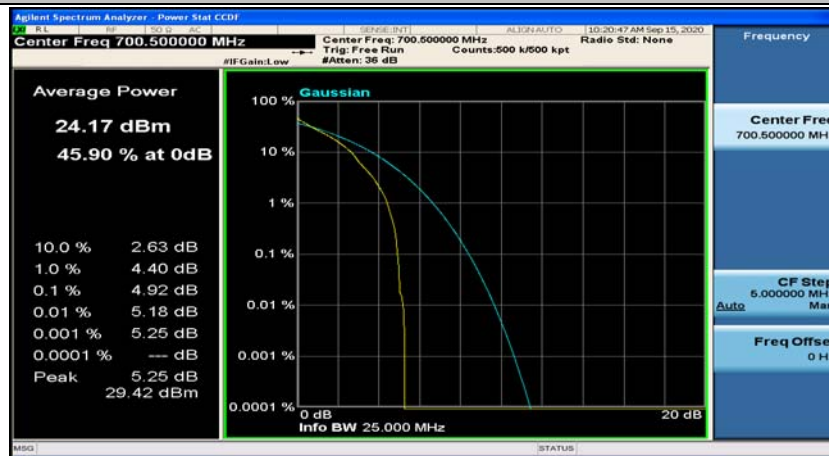
(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#3





Channel Bandwidth: 3 MHz

(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#0



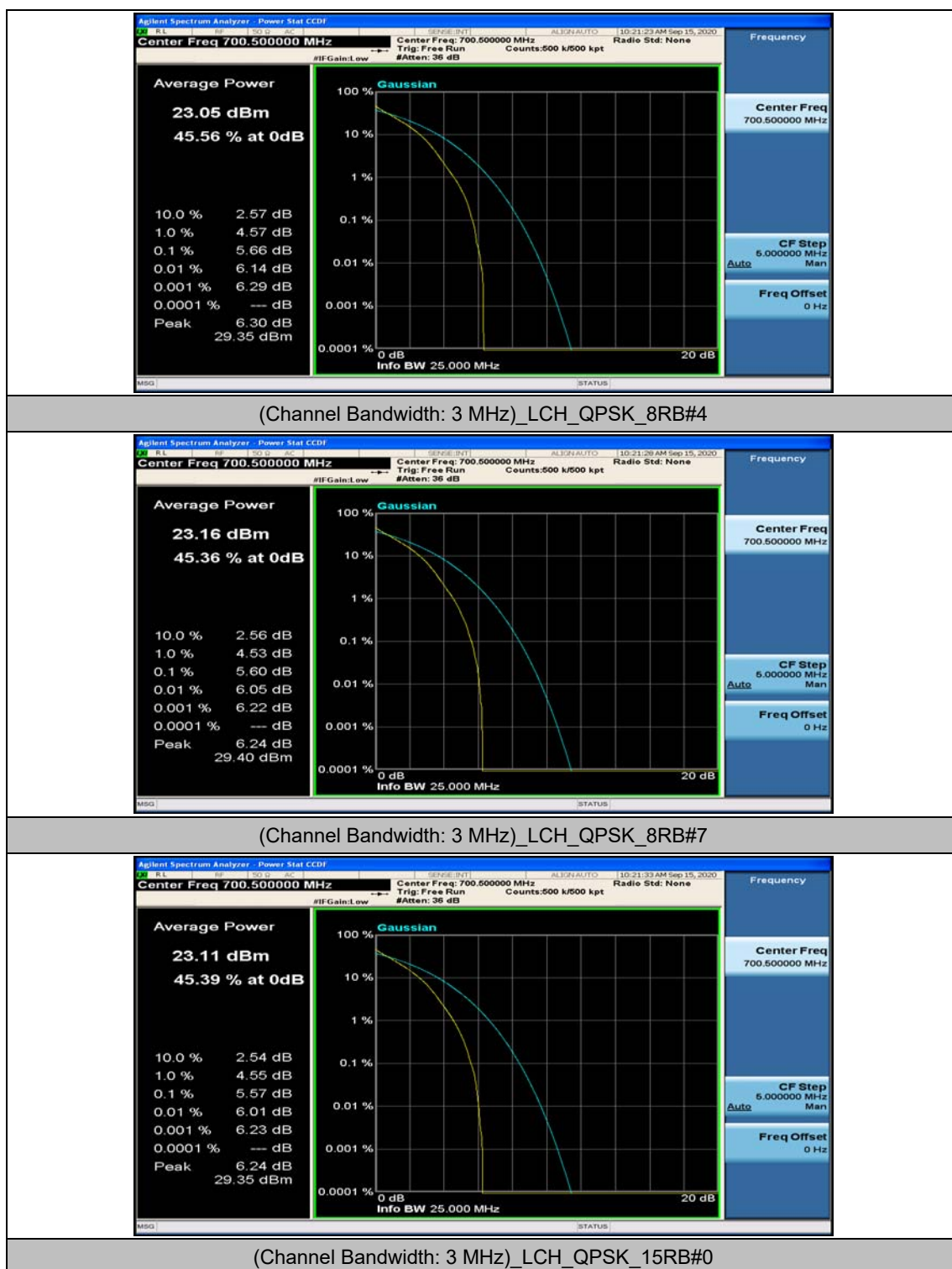
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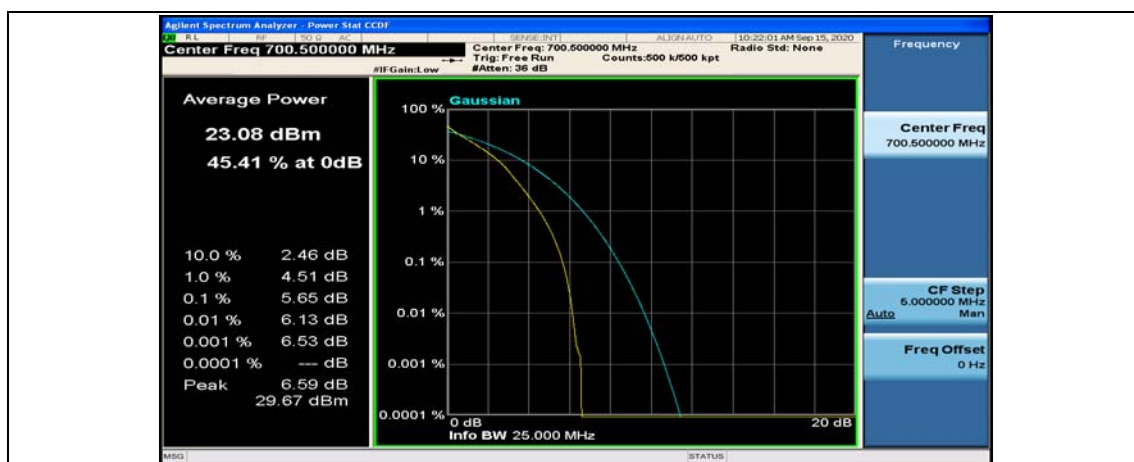


(Channel Bandwidth: 3 MHz)_LCH_QPSK_1RB#14



(Channel Bandwidth: 3 MHz)_LCH_QPSK_8RB#0





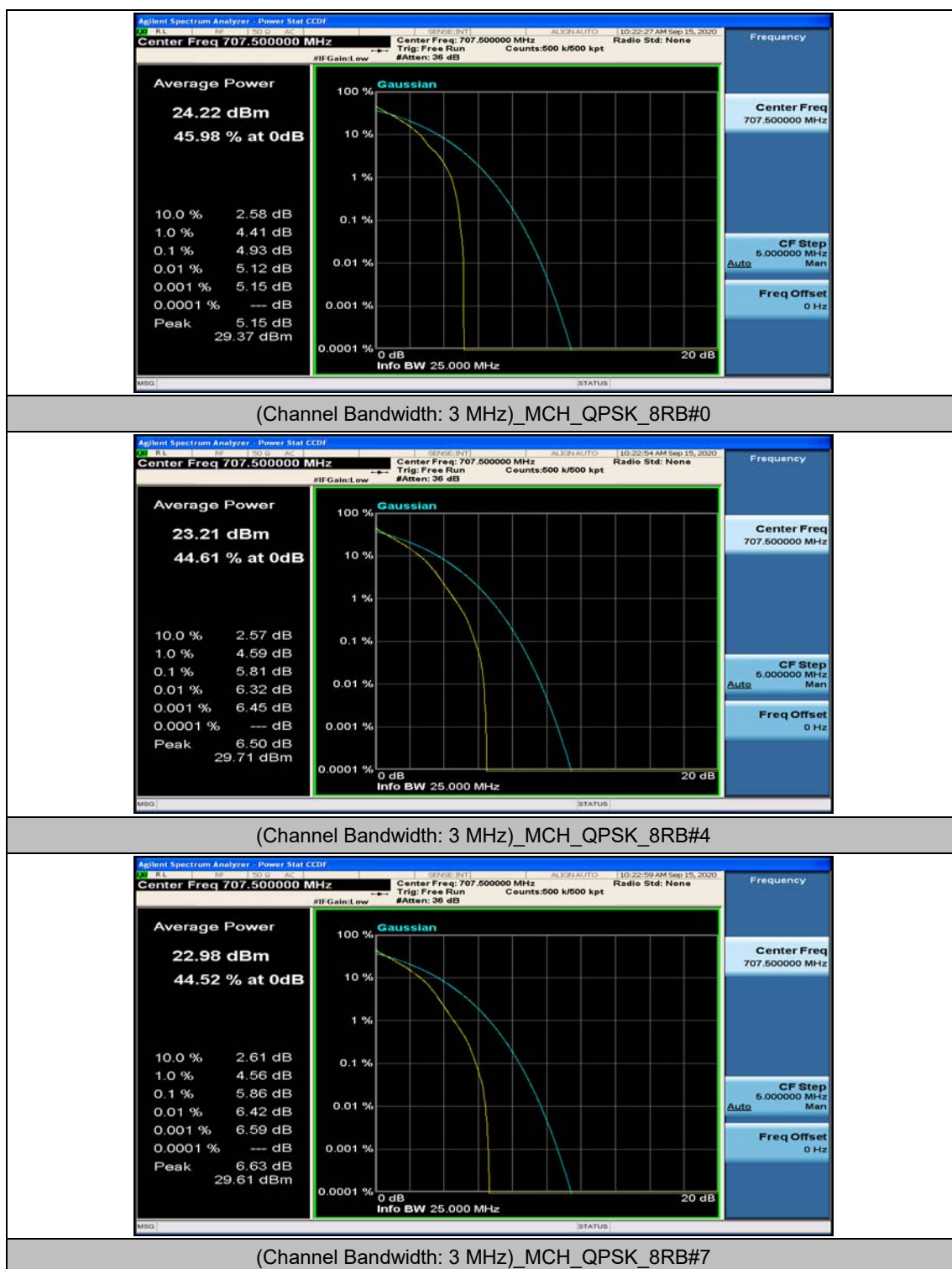
(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#0



(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#7

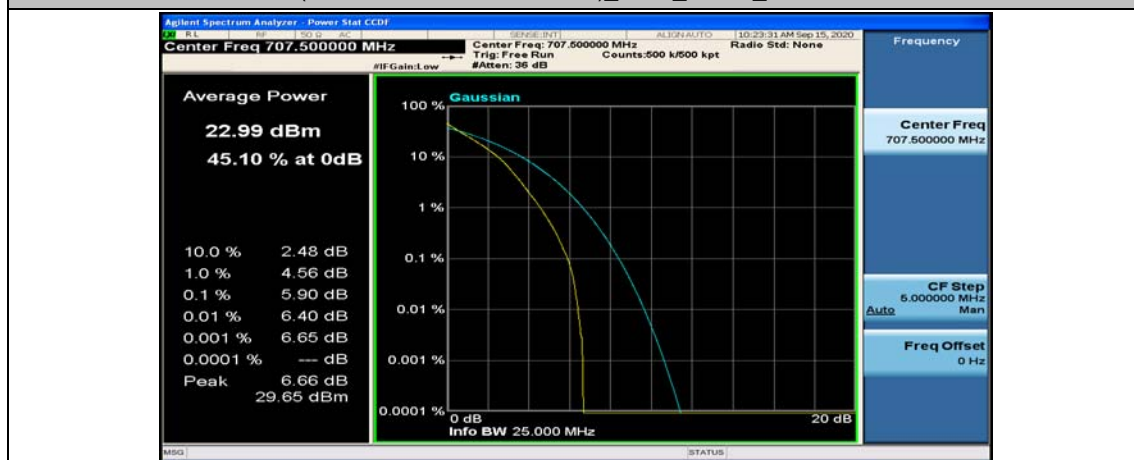


(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#14





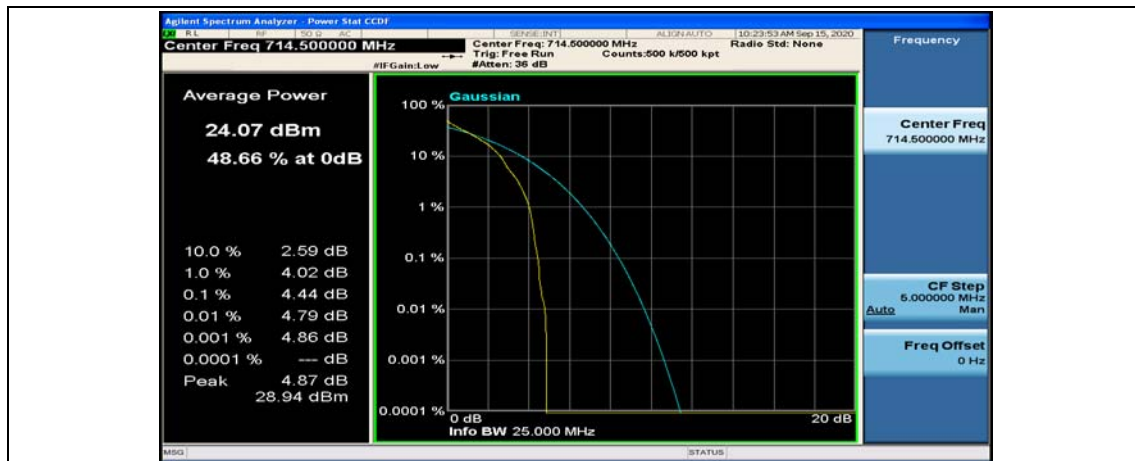
(Channel Bandwidth: 3 MHz)_MCH_QPSK_15RB#0



(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#7



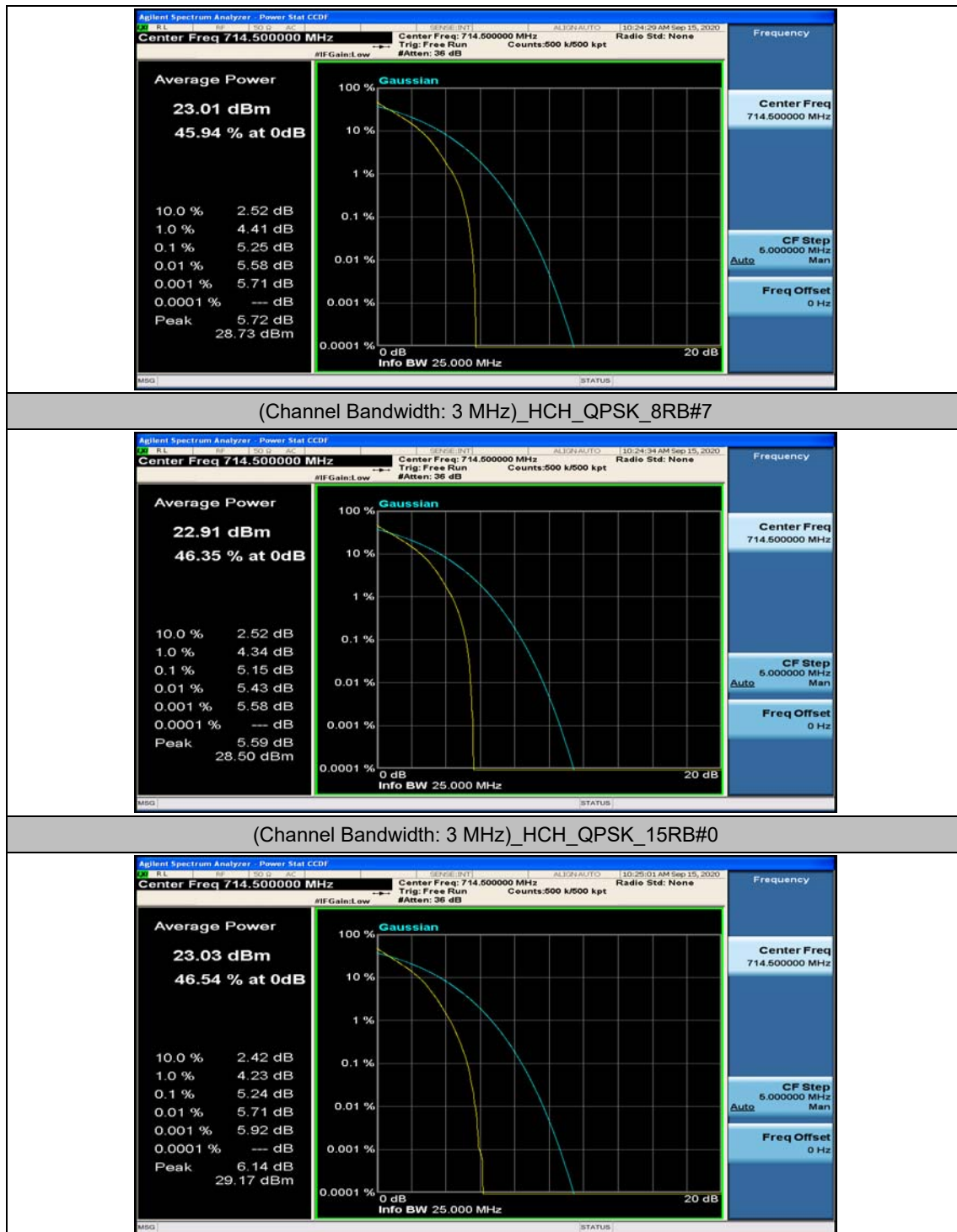
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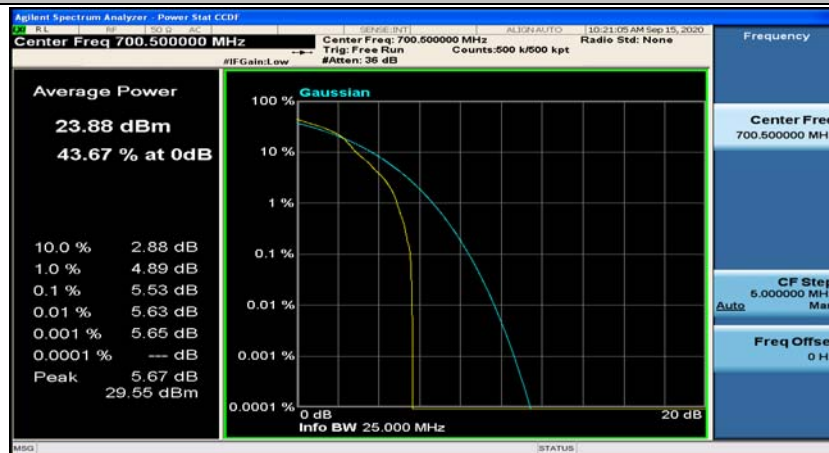
(Channel Bandwidth: 3 MHz)_HCH_QPSK_8RB#0



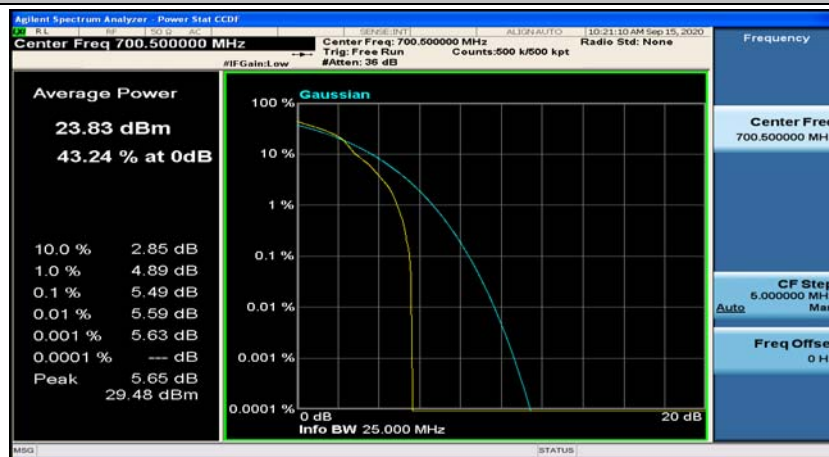
(Channel Bandwidth: 3 MHz)_HCH_QPSK_8RB#4



(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#0



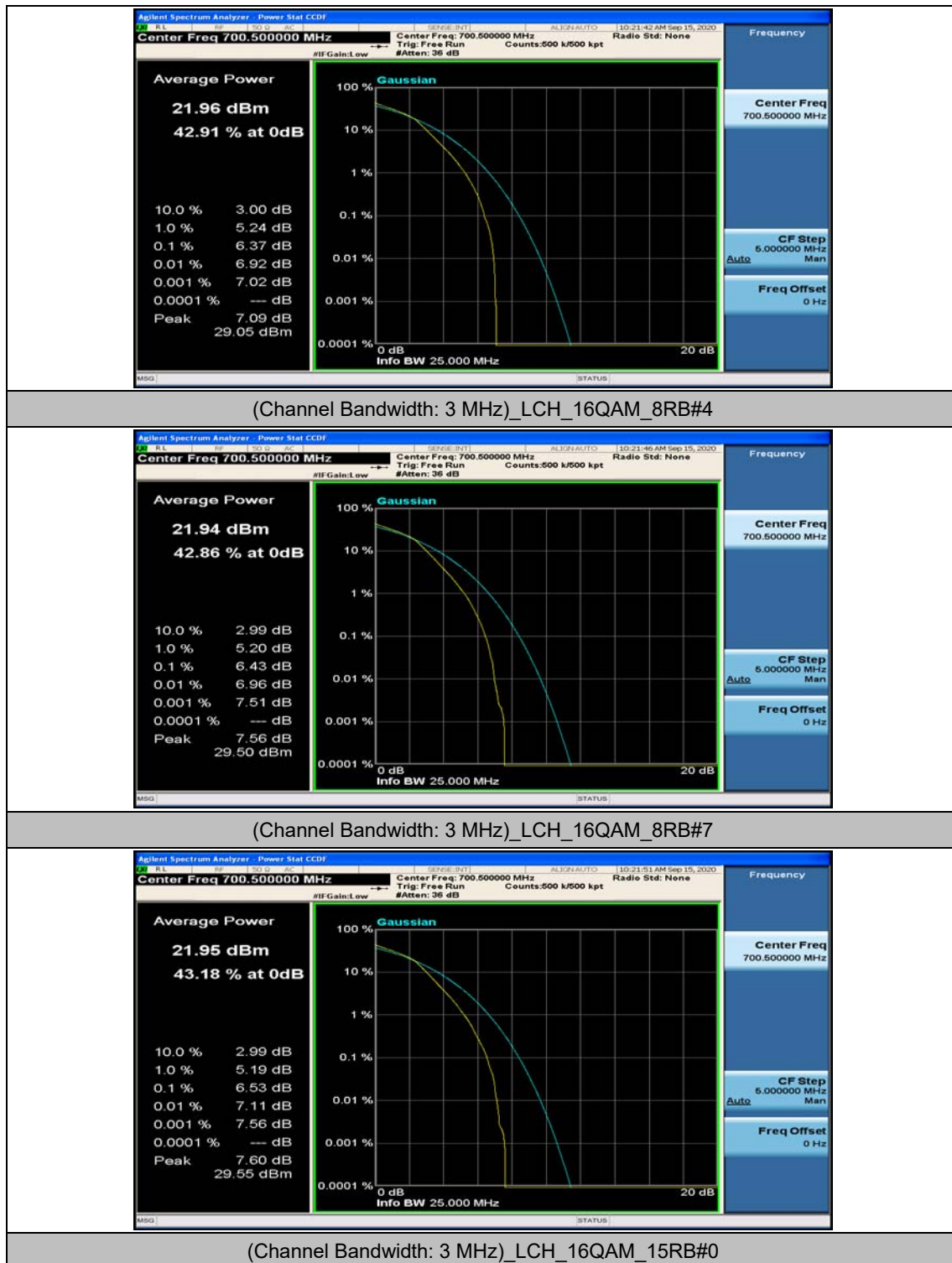
(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#7

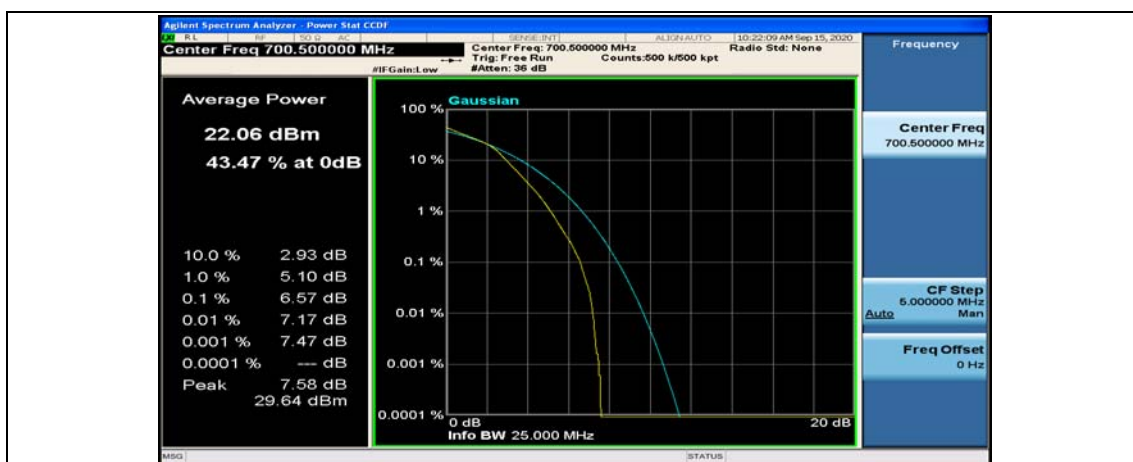


(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#14



(Channel Bandwidth: 3 MHz)_LCH_16QAM_8RB#0





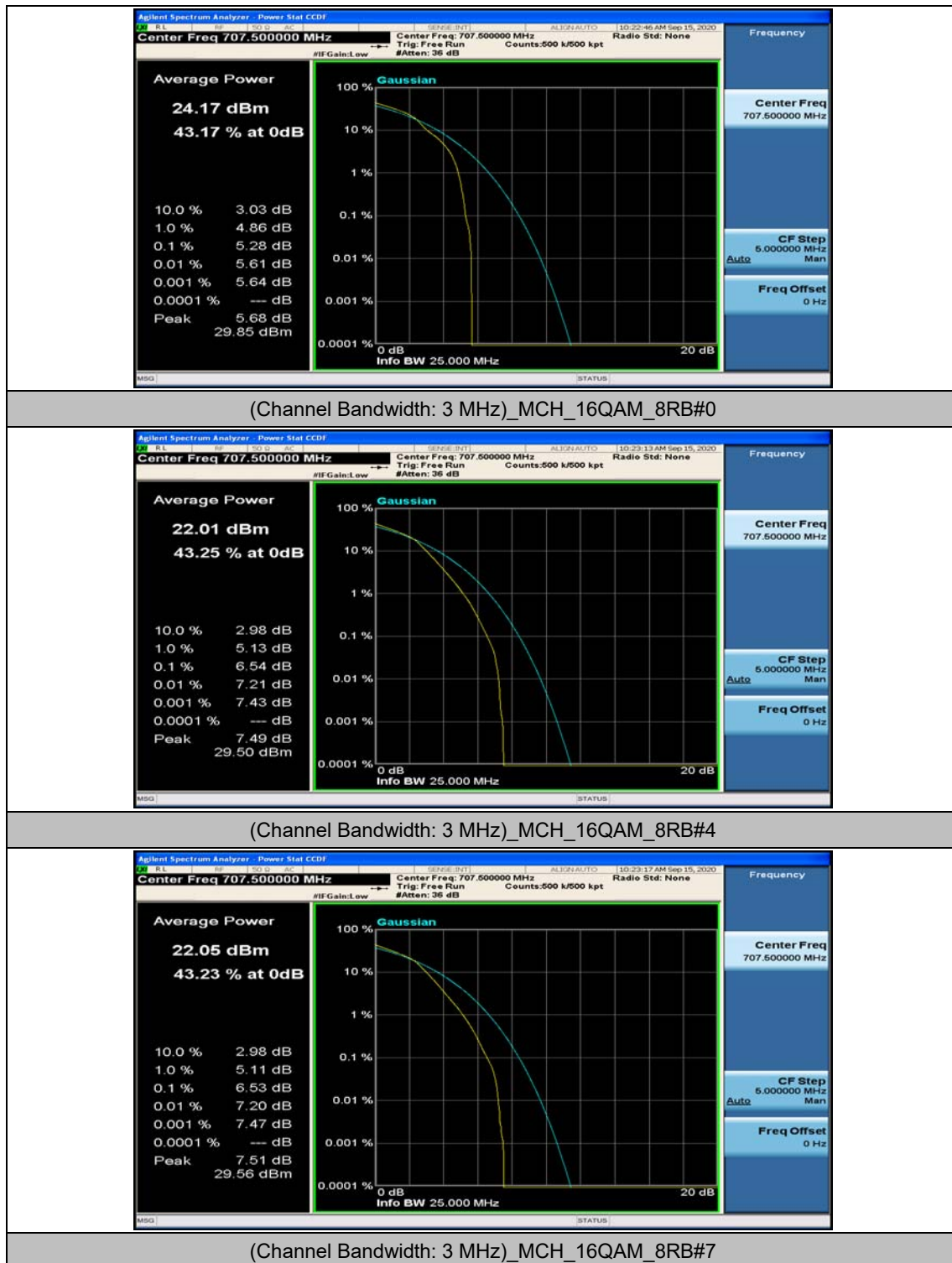
(Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#0

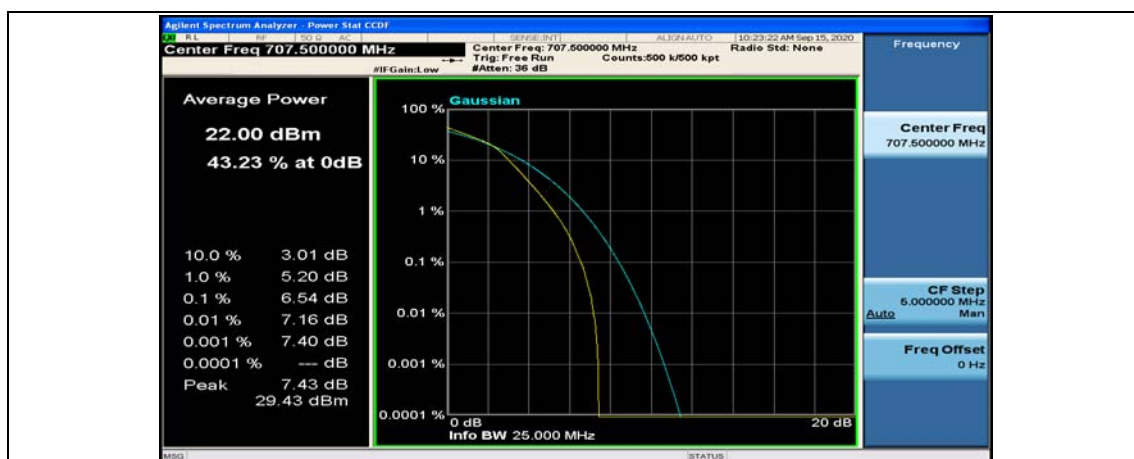


(Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#7



(Channel Bandwidth: 3 MHz)_MCH_16QAM_1RB#14





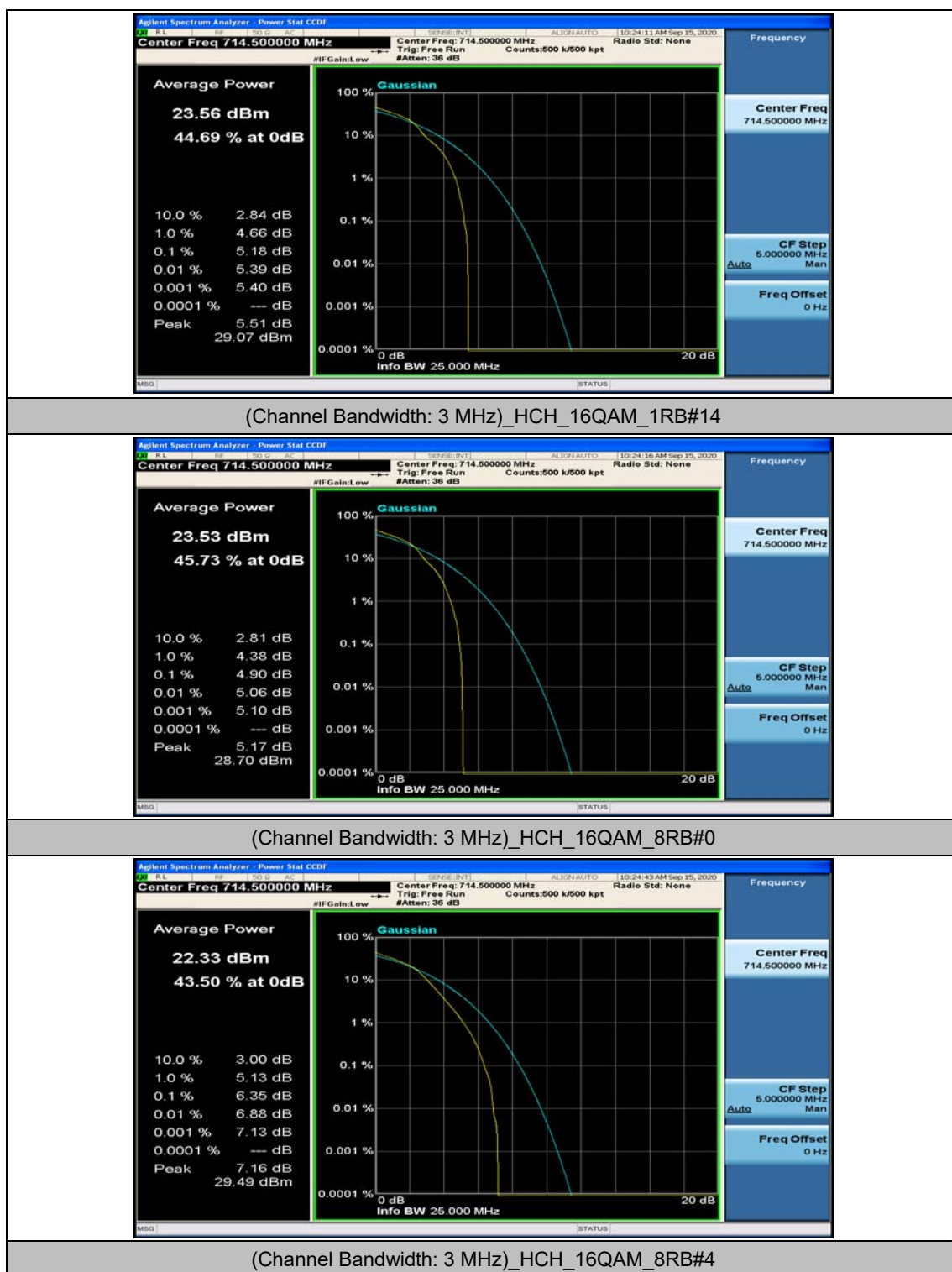
(Channel Bandwidth: 3 MHz)_MCH_16QAM_15RB#0

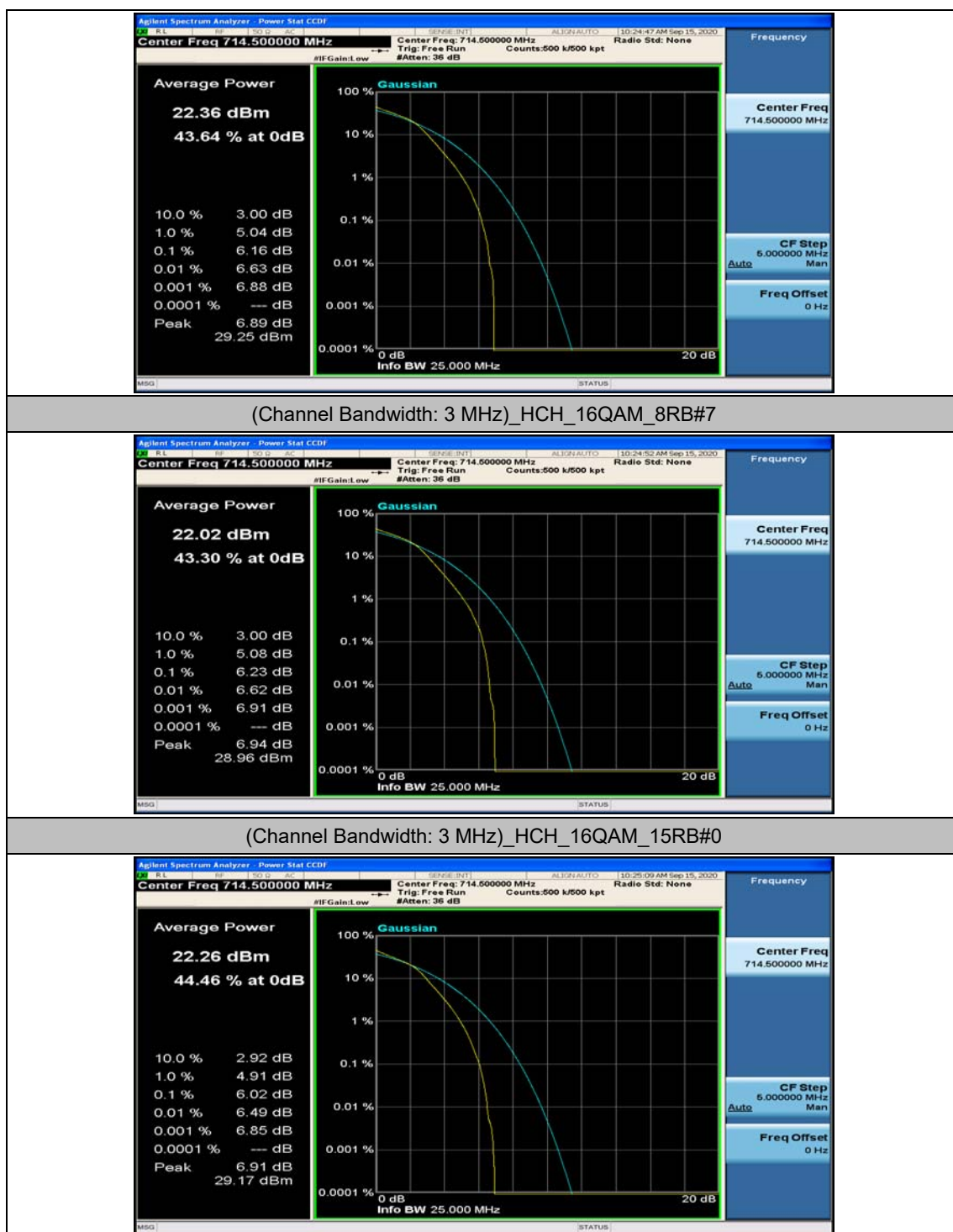


(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#7





Channel Bandwidth: 5 MHz

(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#0



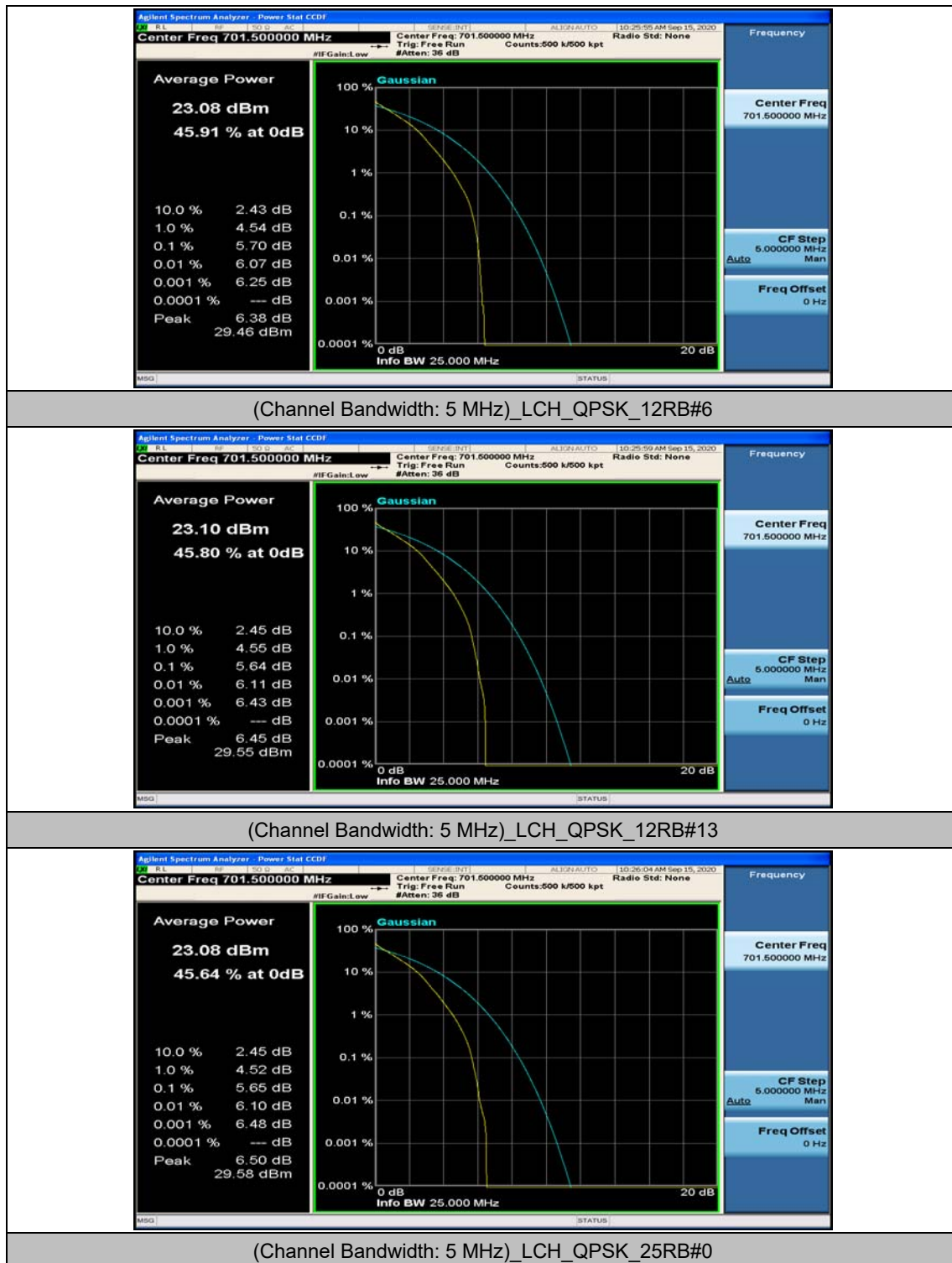
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#12

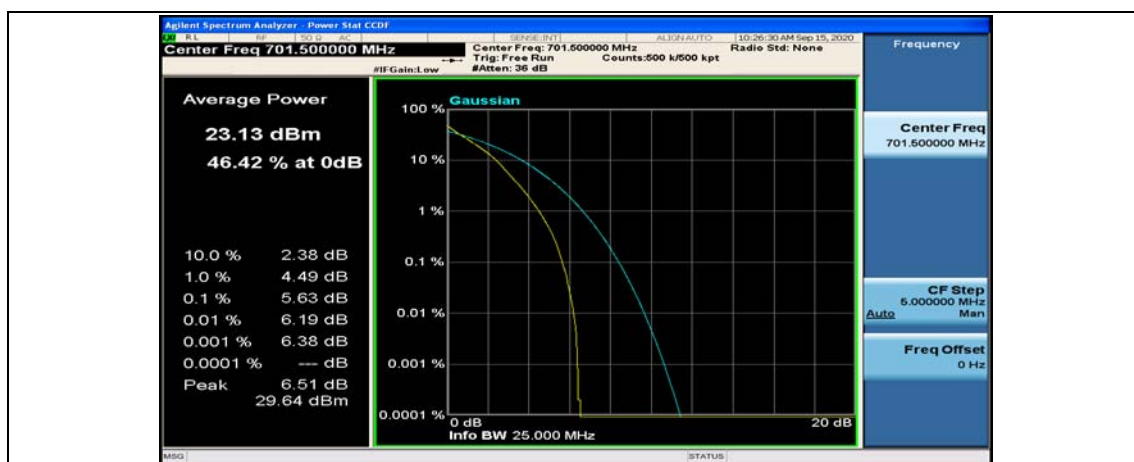


(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#24



(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#0





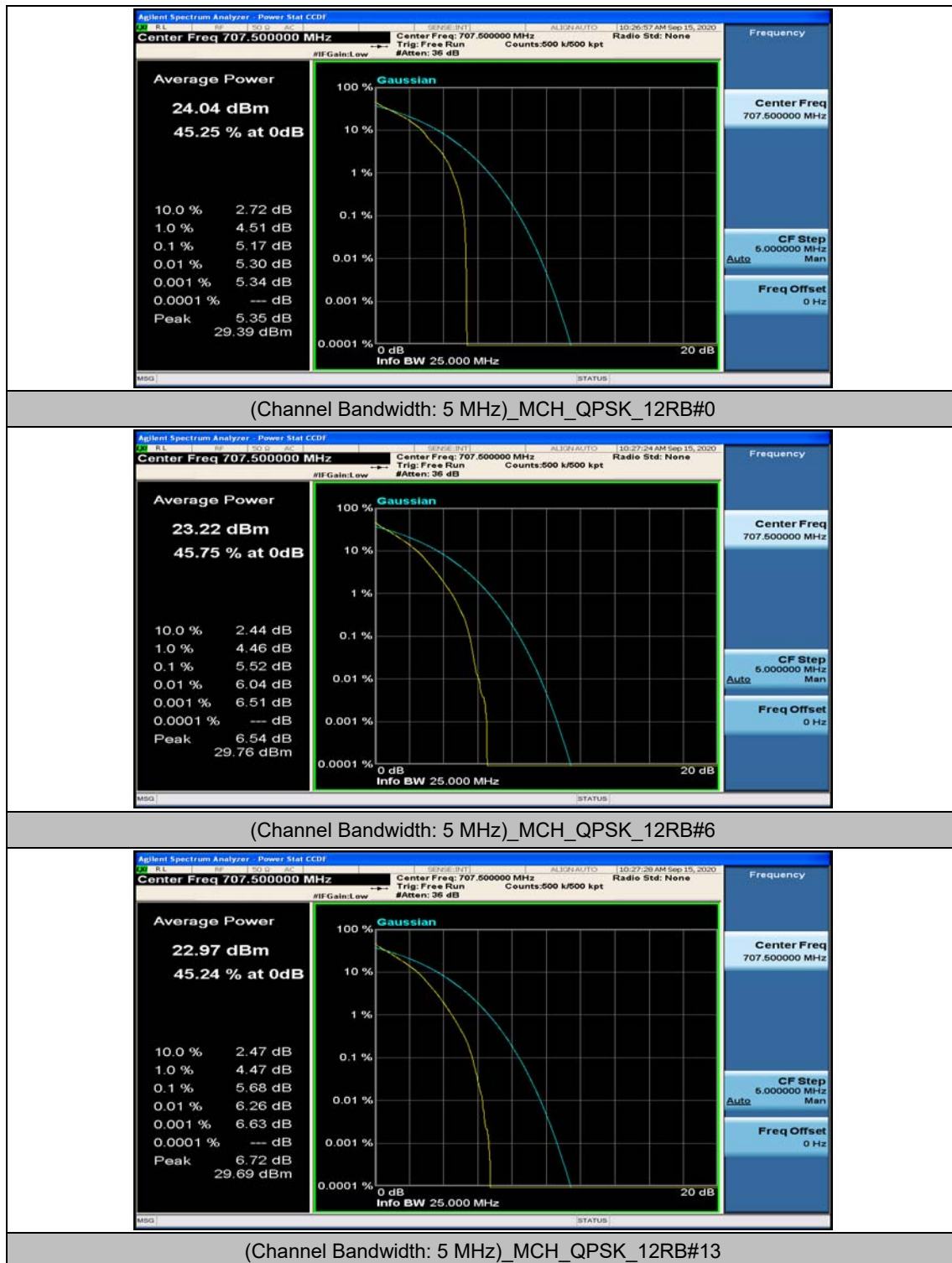
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0

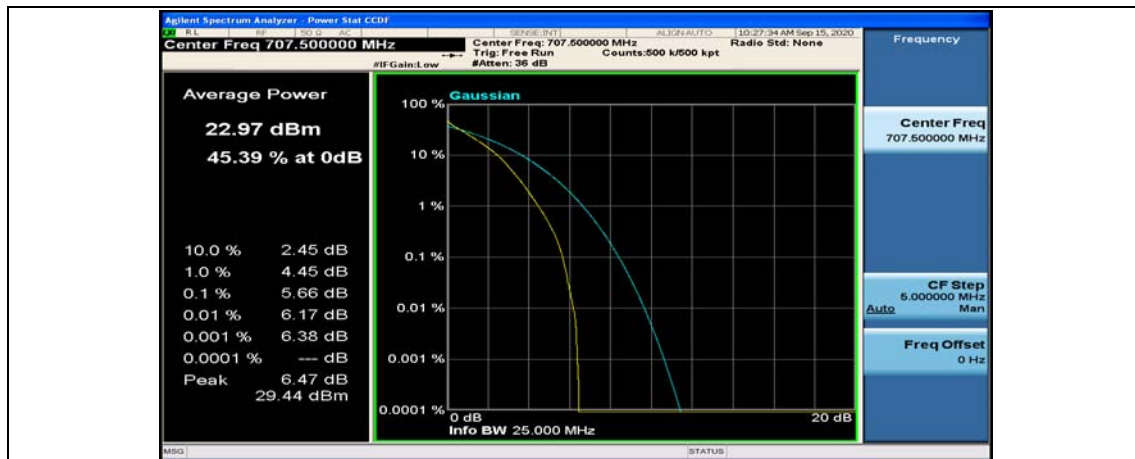


(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#12

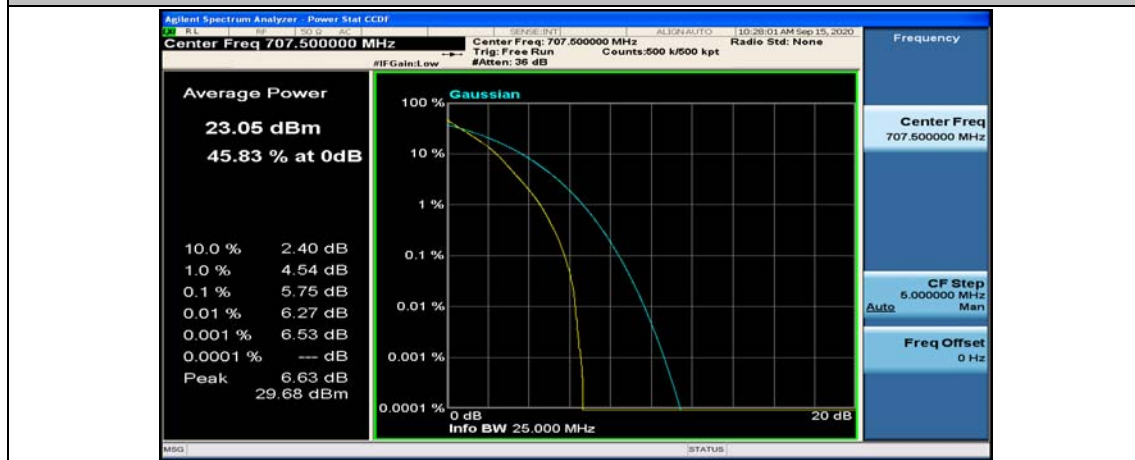


(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#24

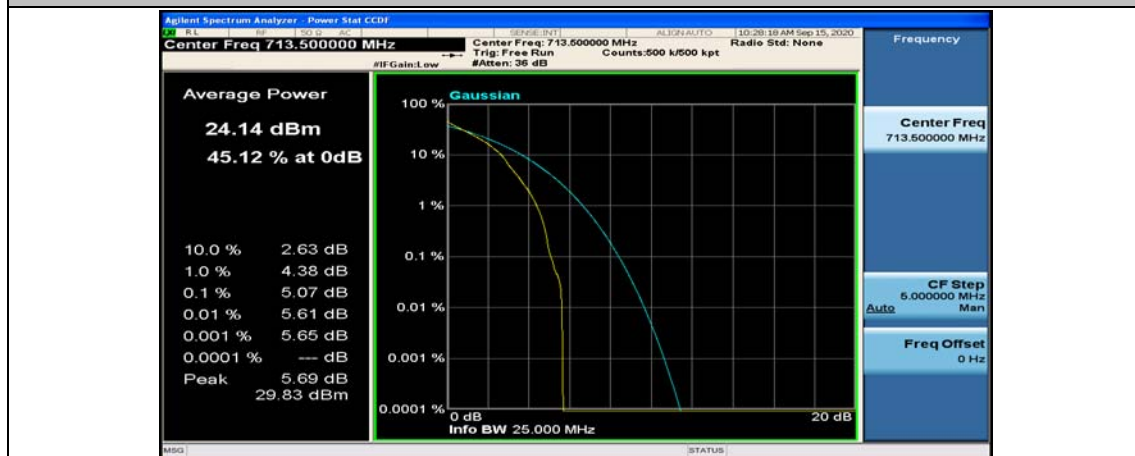




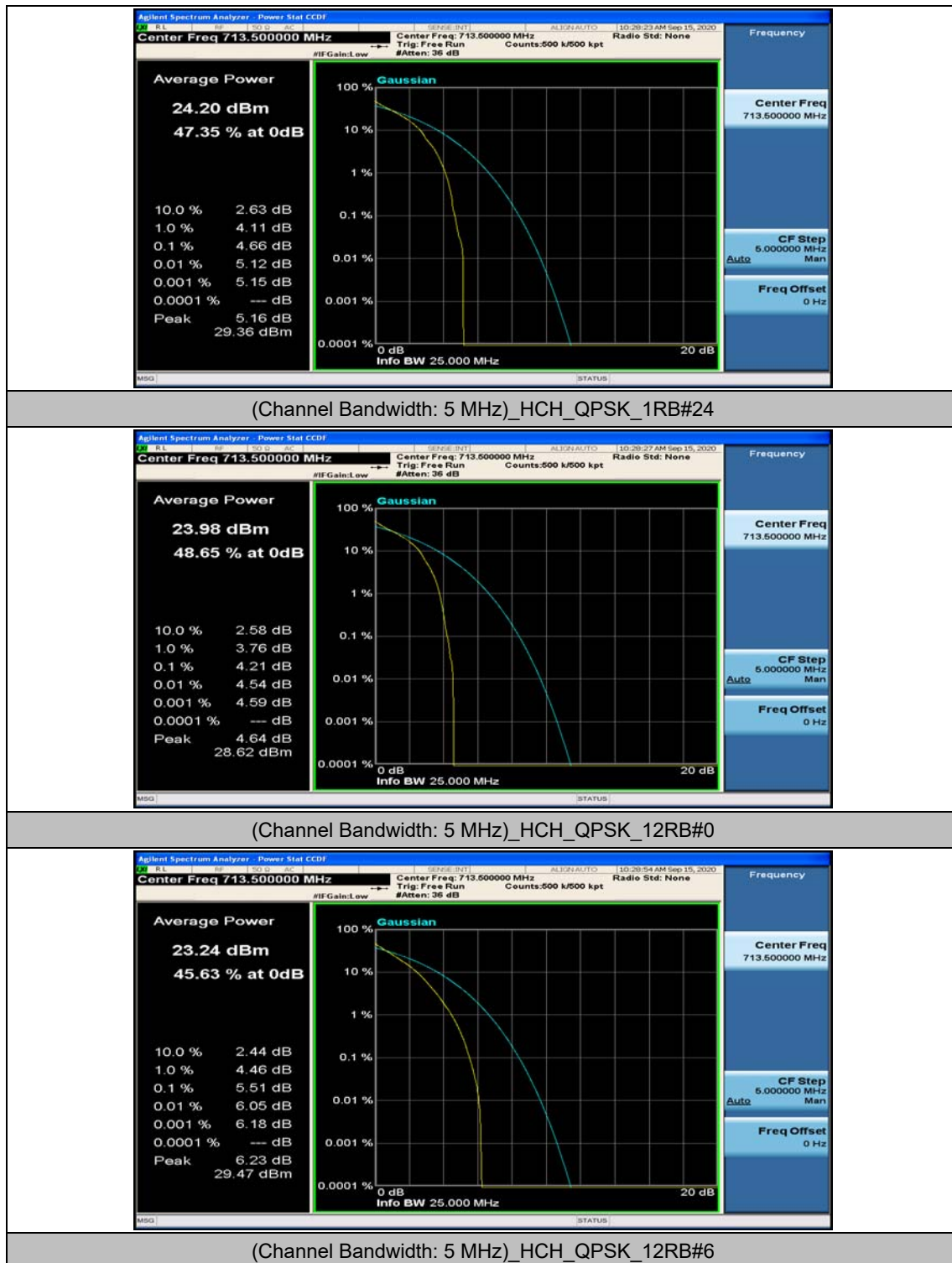
(Channel Bandwidth: 5 MHz)_MCH_QPSK_25RB#0

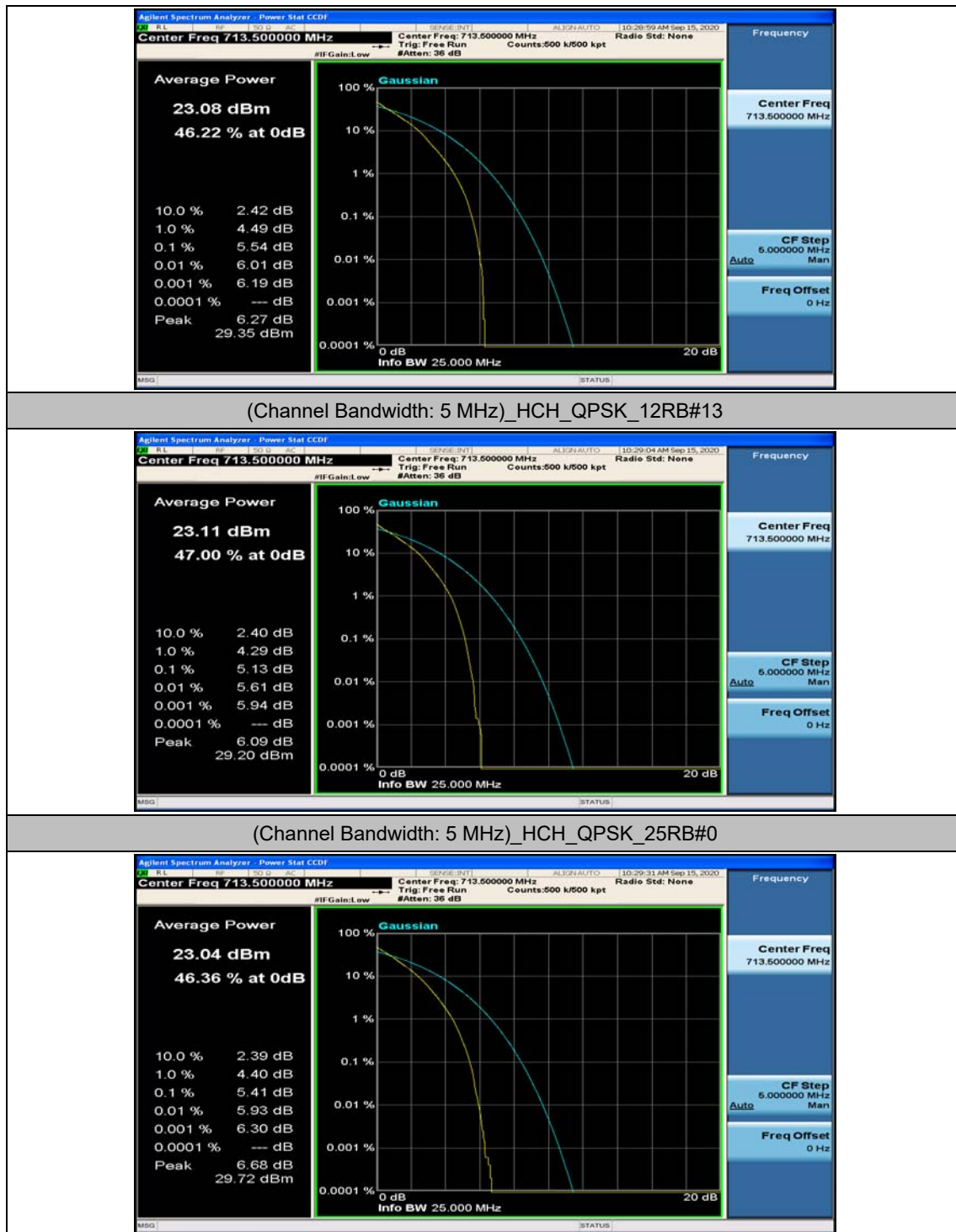


(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#0

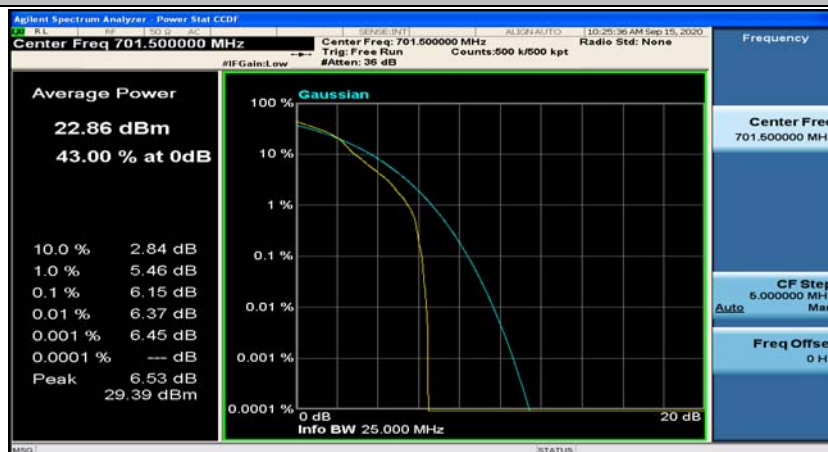


(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12





(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0



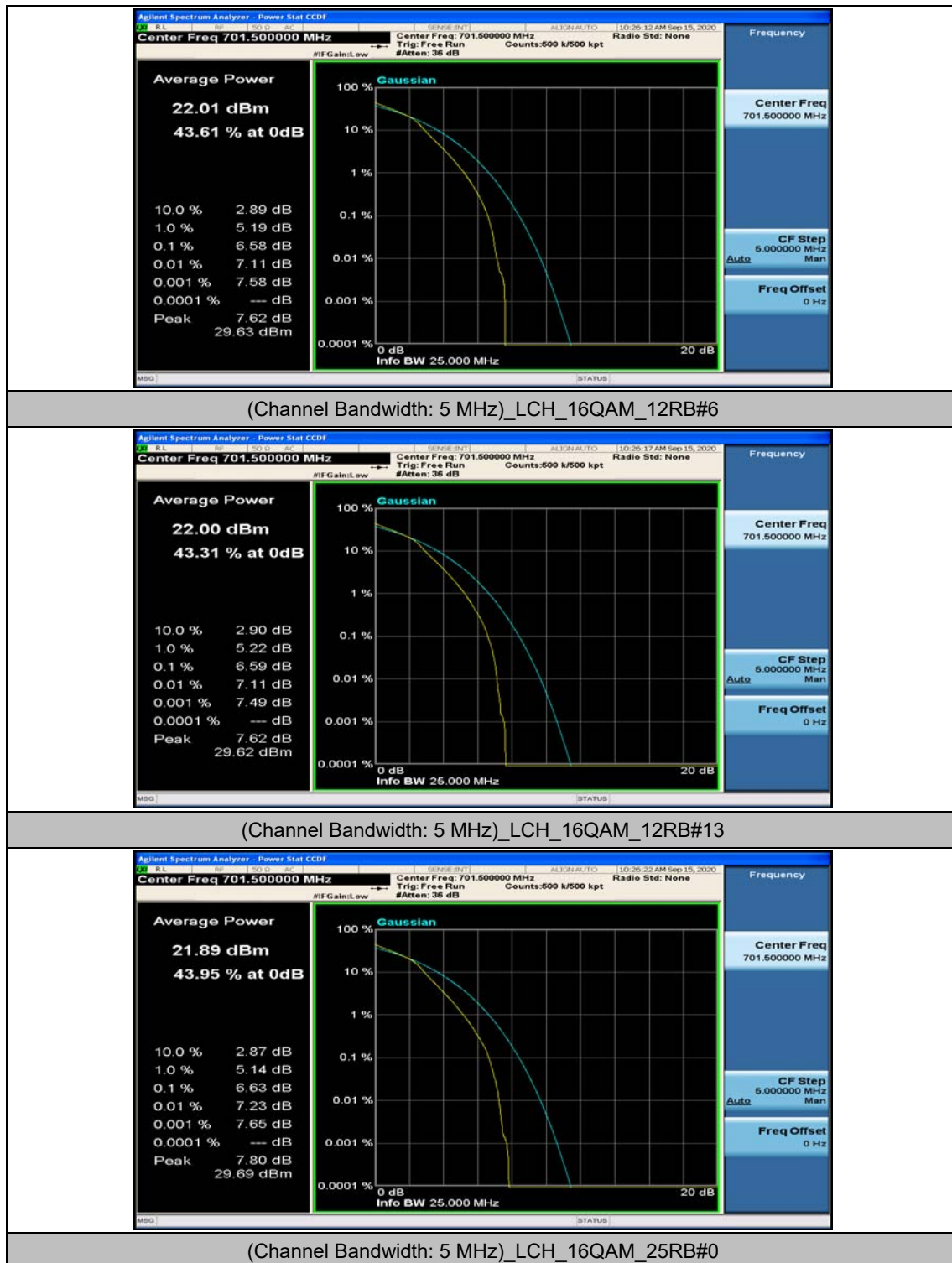
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12



(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#24



(Channel Bandwidth: 5 MHz)_LCH_16QAM_12RB#0





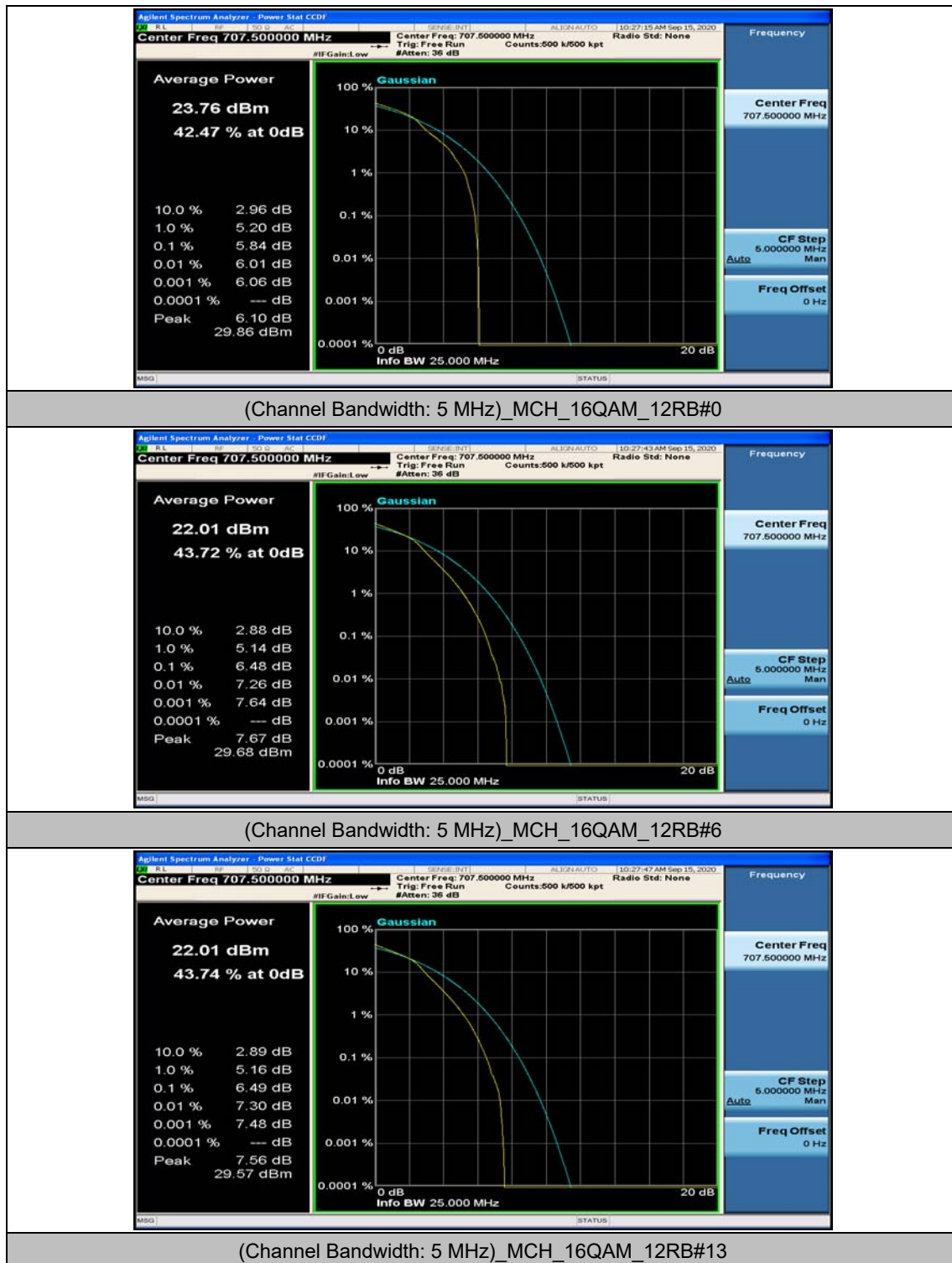
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#0

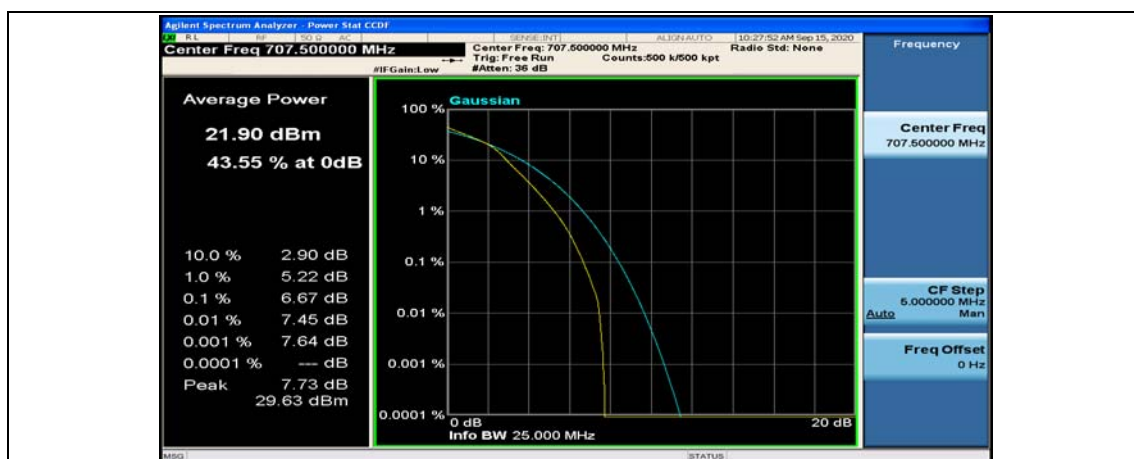


(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12



(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#24





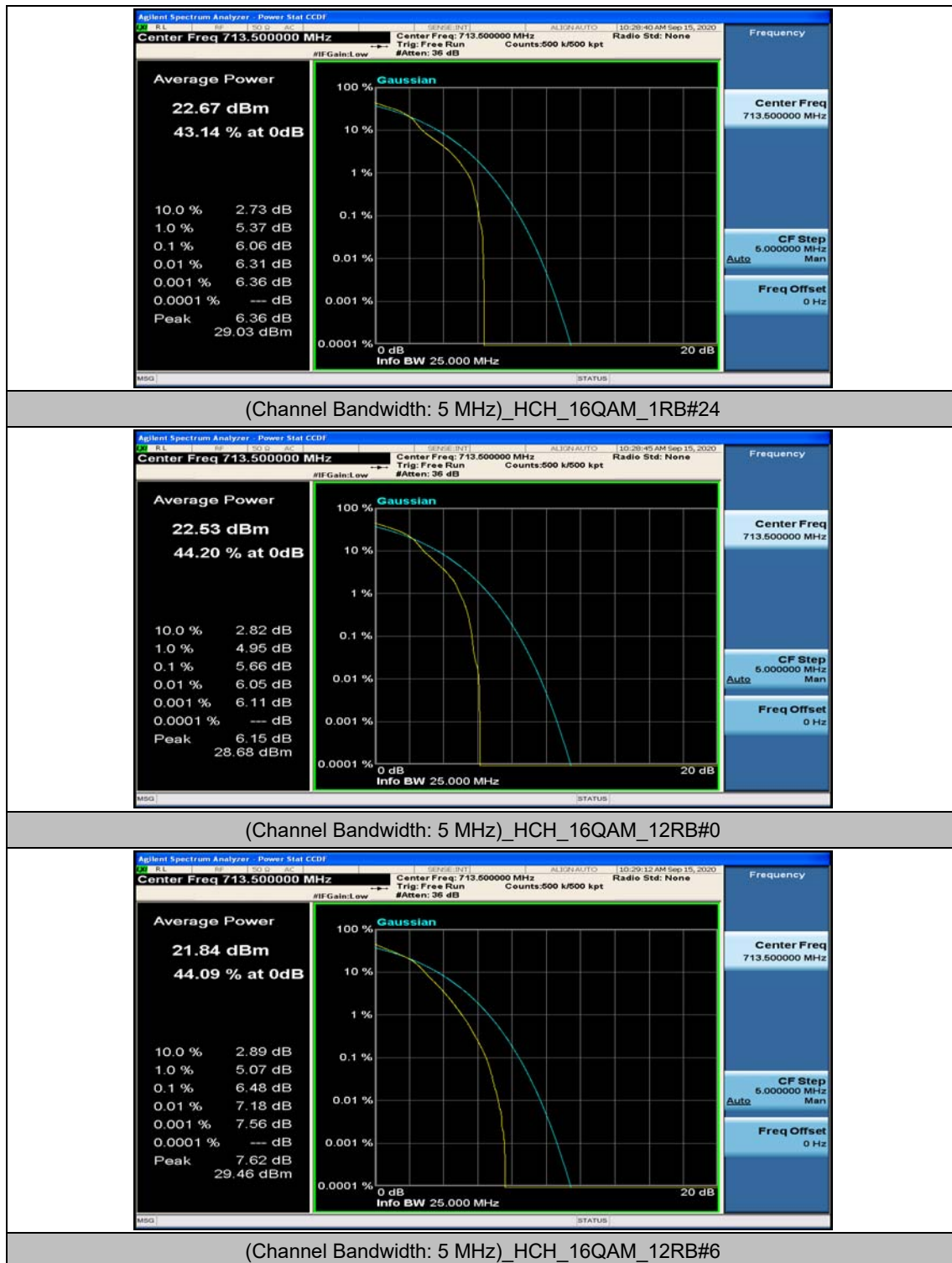
(Channel Bandwidth: 5 MHz)_MCH_16QAM_25RB#0

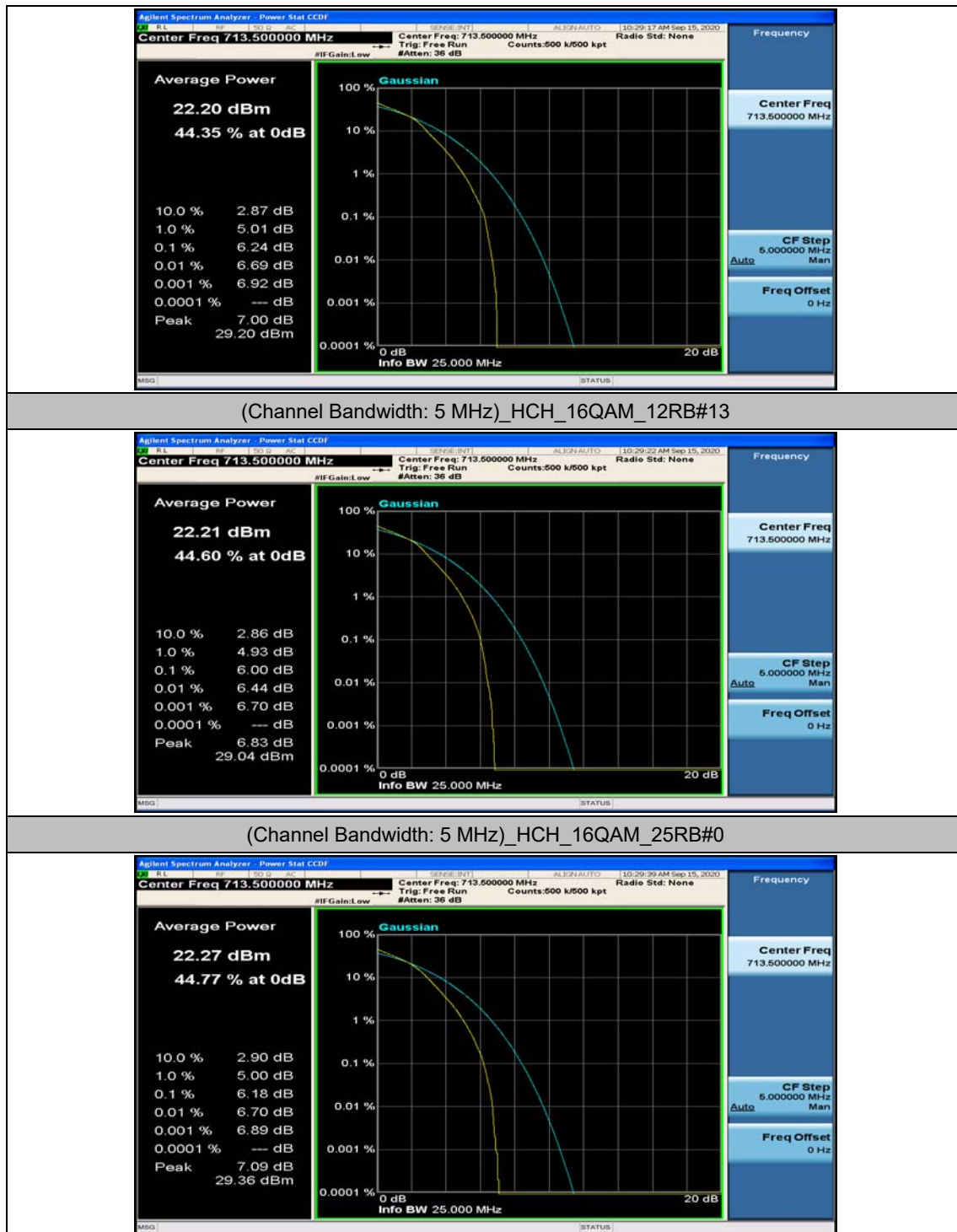


(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12



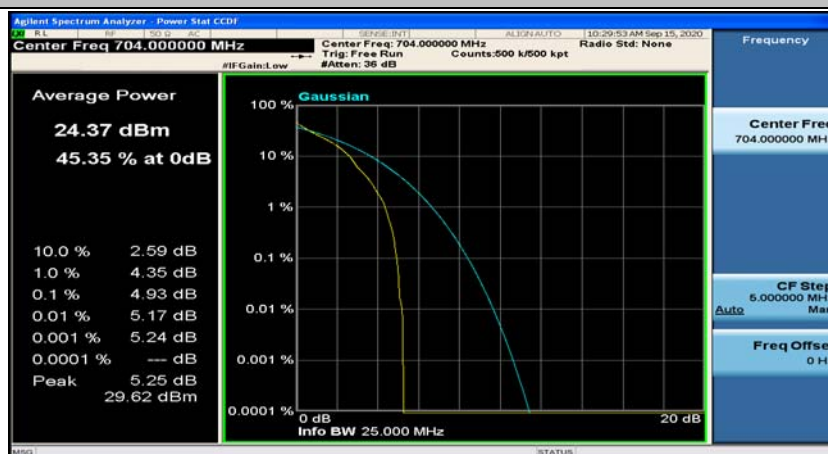


Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#0



Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#24



Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#49



Channel Bandwidth: 10 MHz_LCH_QPSK_25RB#0