

Appendix for Band 12

Product Name: Rugged Phone
Model No: CM17XA

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	23.47	PASS
		1	3	23.56	PASS
		1	5	23.50	PASS
		3	0	23.50	PASS
		3	2	23.54	PASS
		3	3	23.52	PASS
		6	0	22.38	PASS
	MCH	1	0	23.45	PASS
		1	3	23.58	PASS
		1	5	23.46	PASS
		3	0	23.55	PASS
		3	2	23.57	PASS
		3	3	23.54	PASS
		6	0	22.52	PASS
	HCH	1	0	23.47	PASS
		1	3	23.54	PASS
		1	5	23.45	PASS
		3	0	23.56	PASS
		3	2	23.52	PASS
		3	3	23.52	PASS
		6	0	22.43	PASS
16QAM	LCH	1	0	22.66	PASS
		1	3	22.87	PASS
		1	5	22.74	PASS
		3	0	22.56	PASS
		3	2	22.61	PASS
		3	3	22.61	PASS
		6	0	21.50	PASS
	MCH	1	0	22.64	PASS
		1	3	22.71	PASS
		1	5	22.67	PASS
		3	0	22.63	PASS
		3	2	22.62	PASS
		3	3	22.63	PASS

		6	0	21.46	PASS
	HCH	1	0	22.76	PASS
		1	3	22.87	PASS
		1	5	22.78	PASS
		3	0	22.51	PASS
		3	2	22.48	PASS
		3	3	22.52	PASS
		6	0	21.40	PASS

Channel Bandwidth: 3 MHz

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	23.40	PASS
		1	7	23.59	PASS
		1	14	23.38	PASS
		8	0	22.39	PASS
		8	4	22.46	PASS
		8	7	22.43	PASS
		15	0	22.41	PASS
	MCH	1	0	23.48	PASS
		1	7	23.75	PASS
		1	14	23.49	PASS
		8	0	22.47	PASS
		8	4	22.54	PASS
		8	7	22.48	PASS
		15	0	22.47	PASS
	HCH	1	0	23.49	PASS
		1	7	23.72	PASS
		1	14	23.49	PASS
		8	0	22.51	PASS
		8	4	22.53	PASS
		8	7	22.48	PASS
		15	0	22.49	PASS
16QAM	LCH	1	0	22.71	PASS
		1	7	22.90	PASS
		1	14	22.70	PASS
		8	0	21.50	PASS
		8	4	21.55	PASS
		8	7	21.47	PASS
		15	0	21.41	PASS
	MCH	1	0	22.81	PASS

		1	7	23.03	PASS
		1	14	22.85	PASS
		8	0	21.46	PASS
		8	4	21.49	PASS
		8	7	21.48	PASS
		15	0	21.46	PASS
	HCH	1	0	22.72	PASS
		1	7	22.97	PASS
		1	14	22.69	PASS
		8	0	21.43	PASS
		8	4	21.47	PASS
		8	7	21.43	PASS
		15	0	21.44	PASS

Channel Bandwidth: 5 MHz

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	23.42	PASS
		1	12	23.58	PASS
		1	24	23.40	PASS
		12	0	22.42	PASS
		12	6	22.45	PASS
		12	13	22.43	PASS
		25	0	22.50	PASS
	MCH	1	0	23.42	PASS
		1	12	23.82	PASS
		1	24	23.44	PASS
		12	0	22.48	PASS
		12	6	22.54	PASS
		12	13	22.48	PASS
		25	0	22.50	PASS
	HCH	1	0	23.53	PASS
		1	12	23.77	PASS
		1	24	23.51	PASS
		12	0	22.48	PASS
		12	6	22.52	PASS
		12	13	22.42	PASS
		25	0	22.52	PASS
16QAM	LCH	1	0	22.64	PASS
		1	12	22.94	PASS
		1	24	22.60	PASS

		12	0	21.55	PASS
		12	6	21.56	PASS
		12	13	21.48	PASS
		25	0	21.49	PASS
	MCH	1	0	22.61	PASS
		1	12	23.03	PASS
		1	24	22.69	PASS
		12	0	21.56	PASS
		12	6	21.63	PASS
		12	13	21.54	PASS
		25	0	21.49	PASS
	HCH	1	0	22.64	PASS
		1	12	22.94	PASS
		1	24	22.60	PASS
		12	0	21.49	PASS
		12	6	21.55	PASS
		12	13	21.40	PASS
		25	0	21.50	PASS

Channel Bandwidth: 10 MHz

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	23.43	PASS
		1	24	23.90	PASS
		1	49	23.50	PASS
		25	0	22.49	PASS
		25	12	22.50	PASS
		25	25	22.52	PASS
		50	0	22.48	PASS
	MCH	1	0	23.40	PASS
		1	24	23.64	PASS
		1	49	23.46	PASS
		25	0	22.45	PASS
		25	12	22.52	PASS
		25	25	22.51	PASS
		50	0	22.49	PASS
	HCH	1	0	23.53	PASS
		1	24	23.68	PASS
		1	49	23.51	PASS
		25	0	22.58	PASS
		25	12	22.56	PASS

		25	25	22.45	PASS
		50	0	22.49	PASS
16QAM	LCH	1	0	22.76	PASS
		1	24	22.83	PASS
		1	49	22.75	PASS
		25	0	21.50	PASS
		25	12	21.48	PASS
		25	25	21.52	PASS
		50	0	21.47	PASS
		MCH	1	0	22.77
	1		24	22.99	PASS
	1		49	22.87	PASS
	25		0	21.50	PASS
	25		12	21.51	PASS
	25		25	21.56	PASS
	50		0	21.48	PASS
	HCH	1	0	22.71	PASS
		1	24	22.92	PASS
		1	49	22.74	PASS
		25	0	21.57	PASS
		25	12	21.54	PASS
		25	25	21.46	PASS
		50	0	21.51	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	5.33	<13	PASS
		1	3	5.25	<13	PASS
		1	5	5.28	<13	PASS
		3	0	5.47	<13	PASS
		3	2	5.43	<13	PASS
		3	3	5.51	<13	PASS
		6	0	5.71	<13	PASS
	MCH	1	0	4.27	<13	PASS
		1	3	4.11	<13	PASS
		1	5	4.29	<13	PASS
		3	0	4.34	<13	PASS
		3	2	4.28	<13	PASS
		3	3	4.27	<13	PASS
		6	0	4.95	<13	PASS
	HCH	1	0	4.65	<13	PASS
		1	3	4.5	<13	PASS
		1	5	4.62	<13	PASS
		3	0	4.97	<13	PASS
		3	2	4.92	<13	PASS
		3	3	4.78	<13	PASS
		6	0	5.37	<13	PASS
16QAM	LCH	1	0	6.45	<13	PASS
		1	3	6.21	<13	PASS
		1	5	6.15	<13	PASS
		3	0	6.21	<13	PASS
		3	2	6.29	<13	PASS
		3	3	6.3	<13	PASS
		6	0	6.63	<13	PASS
	MCH	1	0	5.29	<13	PASS
		1	3	5.03	<13	PASS
1		5	5.26	<13	PASS	

		3	0	5.26	<13	PASS
		3	2	5.35	<13	PASS
		3	3	5.26	<13	PASS
		6	0	5.81	<13	PASS
	HCH	1	0	5.82	<13	PASS
		1	3	5.65	<13	PASS
		1	5	5.54	<13	PASS
		3	0	6.05	<13	PASS
		3	2	5.87	<13	PASS
		3	3	5.83	<13	PASS
		6	0	6.27	<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	5.2	<13	PASS
		1	7	5.15	<13	PASS
		1	14	4.93	<13	PASS
		8	0	5.86	<13	PASS
		8	4	5.89	<13	PASS
		8	7	5.88	<13	PASS
		15	0	5.82	<13	PASS
	MCH	1	0	4.09	<13	PASS
		1	7	3.97	<13	PASS
		1	14	3.91	<13	PASS
		8	0	4.94	<13	PASS
		8	4	4.83	<13	PASS
		8	7	4.8	<13	PASS
		15	0	4.95	<13	PASS
	HCH	1	0	4.86	<13	PASS
		1	7	4.95	<13	PASS
		1	14	4.6	<13	PASS
		8	0	5.5	<13	PASS
		8	4	5.44	<13	PASS
		8	7	5.45	<13	PASS
		15	0	5.34	<13	PASS
16QAM	LCH	1	0	6.19	<13	PASS
		1	7	5.94	<13	PASS
		1	14	5.71	<13	PASS
		8	0	6.6	<13	PASS

		8	4	6.62	<13	PASS
		8	7	6.55	<13	PASS
		15	0	6.76	<13	PASS
	MCH	1	0	5.17	<13	PASS
		1	7	5	<13	PASS
		1	14	4.95	<13	PASS
		8	0	5.71	<13	PASS
		8	4	5.67	<13	PASS
		8	7	5.7	<13	PASS
		15	0	5.74	<13	PASS
	HCH	1	0	5.76	<13	PASS
		1	7	5.71	<13	PASS
		1	14	5.61	<13	PASS
		8	0	6.5	<13	PASS
		8	4	6.47	<13	PASS
		8	7	6.57	<13	PASS
		15	0	6.3	<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	5.45	<13	PASS
		1	12	5.03	<13	PASS
		1	24	4.83	<13	PASS
		12	0	5.9	<13	PASS
		12	6	5.79	<13	PASS
		12	13	5.64	<13	PASS
		25	0	5.8	<13	PASS
	MCH	1	0	4.44	<13	PASS
		1	12	4.05	<13	PASS
		1	24	4.42	<13	PASS
		12	0	4.98	<13	PASS
		12	6	4.82	<13	PASS
		12	13	4.85	<13	PASS
		25	0	4.97	<13	PASS
	HCH	1	0	4.6	<13	PASS
		1	12	4.71	<13	PASS
		1	24	4.73	<13	PASS
		12	0	5.44	<13	PASS
		12	6	5.45	<13	PASS

		12	13	5.47	<13	PASS
		25	0	5.46	<13	PASS
16QAM	LCH	1	0	6.08	<13	PASS
		1	12	5.85	<13	PASS
		1	24	5.55	<13	PASS
		12	0	6.81	<13	PASS
		12	6	6.79	<13	PASS
		12	13	6.62	<13	PASS
		25	0	6.5	<13	PASS
		MCH	1	0	5.42	<13
	1		12	5	<13	PASS
	1		24	5.42	<13	PASS
	12		0	5.91	<13	PASS
	12		6	5.72	<13	PASS
	12		13	5.69	<13	PASS
	25		0	5.83	<13	PASS
	HCH	1	0	5.55	<13	PASS
		1	12	5.88	<13	PASS
		1	24	5.69	<13	PASS
		12	0	6.09	<13	PASS
		12	6	6.28	<13	PASS
		12	13	6.32	<13	PASS
		25	0	6.17	<13	PASS

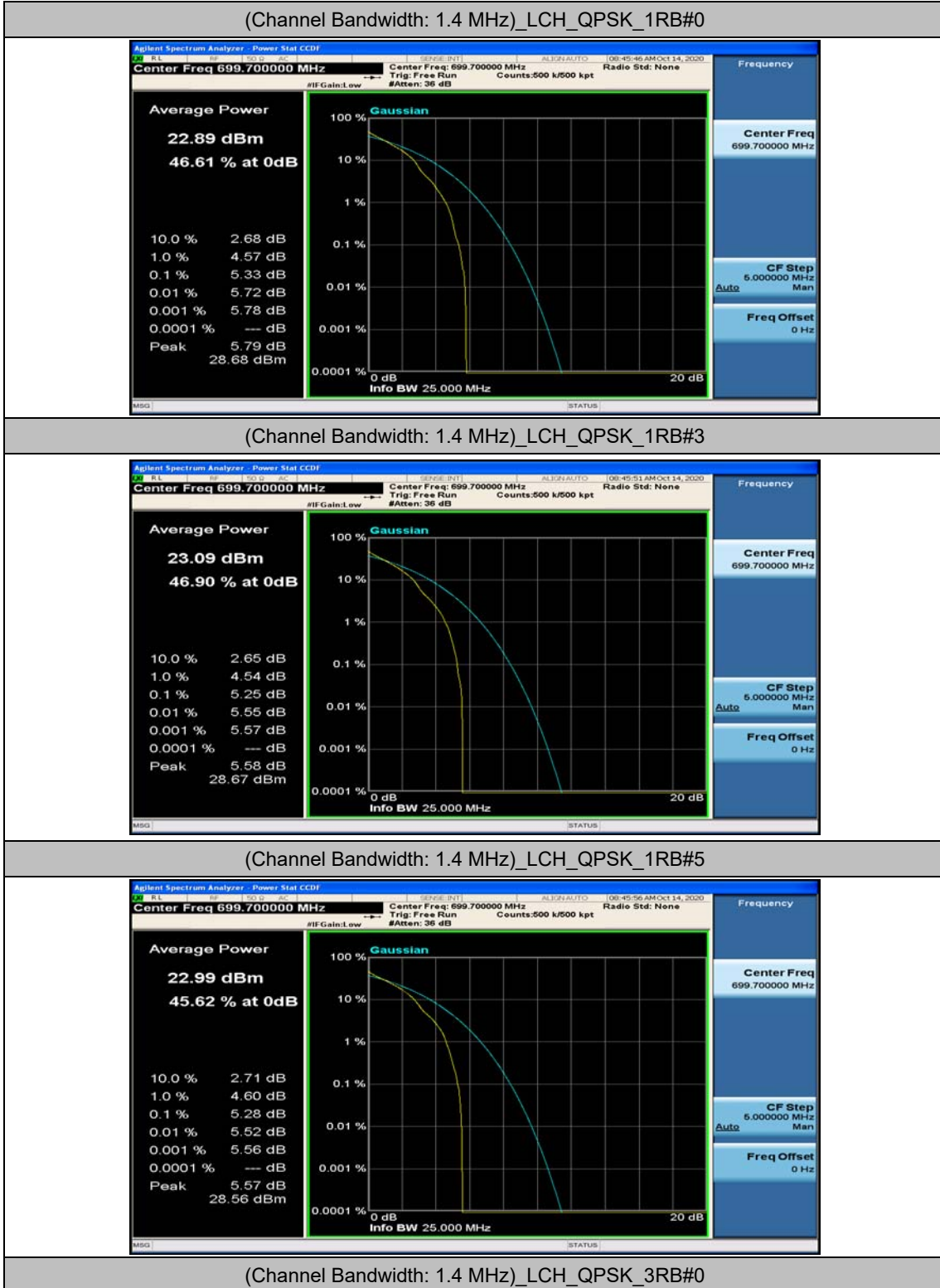
Channel Bandwidth: 10 MHz

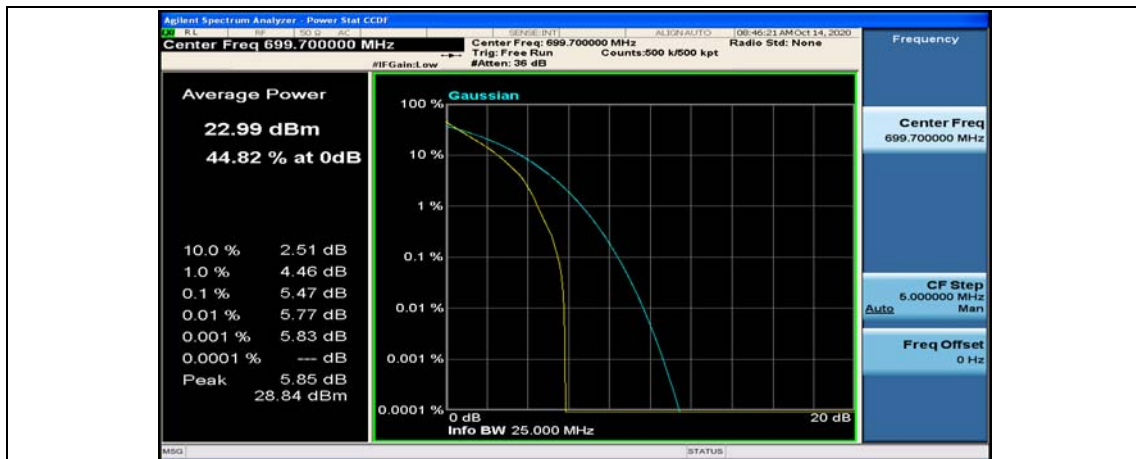
Channel Bandwidth: 10 MHz						
Modulation	Channel	RB Configuration		Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
		Size	Offset			
QPSK	LCH	1	0	5.29	<13	PASS
		1	24	4.47	<13	PASS
		1	49	4.25	<13	PASS
		25	0	5.75	<13	PASS
		25	12	5.39	<13	PASS
		25	25	5.05	<13	PASS
		50	0	5.43	<13	PASS
	MCH	1	0	4.57	<13	PASS
		1	24	3.9	<13	PASS
		1	49	4.58	<13	PASS
		25	0	5.21	<13	PASS
		25	12	4.96	<13	PASS
		25	25	5.06	<13	PASS

	HCH	50	0	5.25	<13	PASS
		1	0	4.08	<13	PASS
		1	24	4.48	<13	PASS
		1	49	4.61	<13	PASS
		25	0	4.94	<13	PASS
		25	12	5.11	<13	PASS
		25	25	5.35	<13	PASS
		50	0	5.24	<13	PASS
16QAM	LCH	1	0	6.15	<13	PASS
		1	24	5.47	<13	PASS
		1	49	5.2	<13	PASS
		25	0	6.74	<13	PASS
		25	12	6.29	<13	PASS
		25	25	5.94	<13	PASS
		50	0	6.24	<13	PASS
		MCH	1	0	5.56	<13
	1		24	4.94	<13	PASS
	1		49	5.43	<13	PASS
	25		0	6.1	<13	PASS
	25		12	5.88	<13	PASS
	25		25	5.91	<13	PASS
	50		0	6.01	<13	PASS
	HCH		1	0	5.1	<13
		1	24	5.32	<13	PASS
		1	49	5.62	<13	PASS
		25	0	5.85	<13	PASS
		25	12	6	<13	PASS
		25	25	6.29	<13	PASS
		50	0	6.08	<13	PASS

Test Graphs

Channel Bandwidth: 1.4 MHz





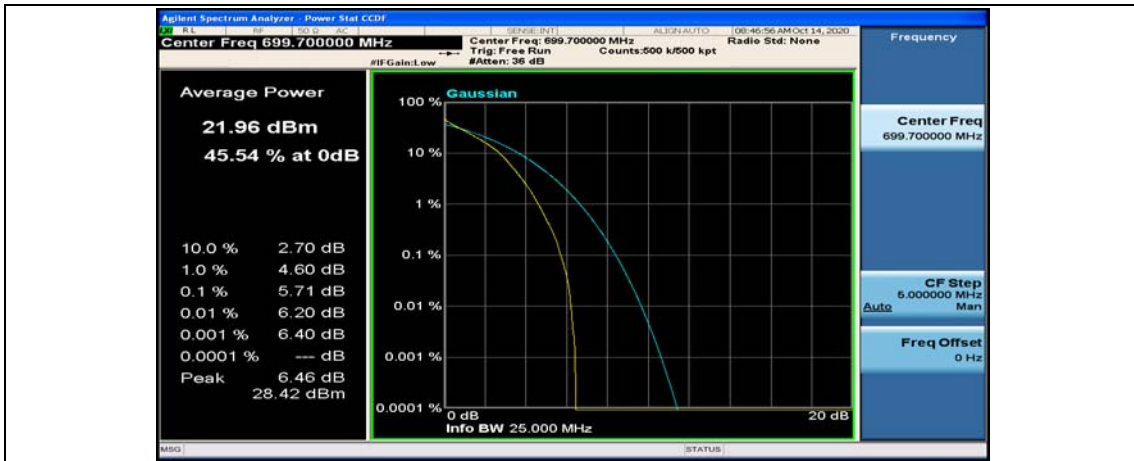
(Channel Bandwidth: 1.4 MHz)_LCH_QPSK_3RB#2



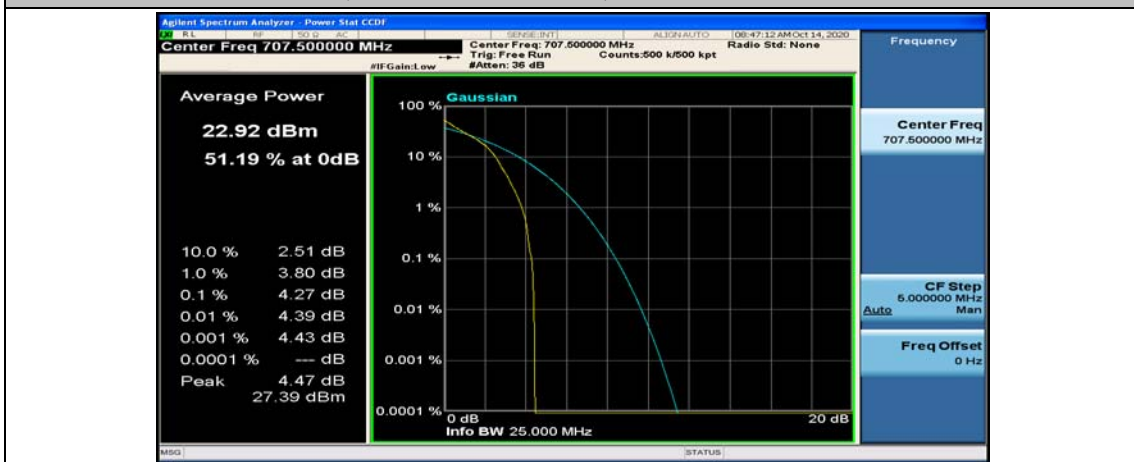
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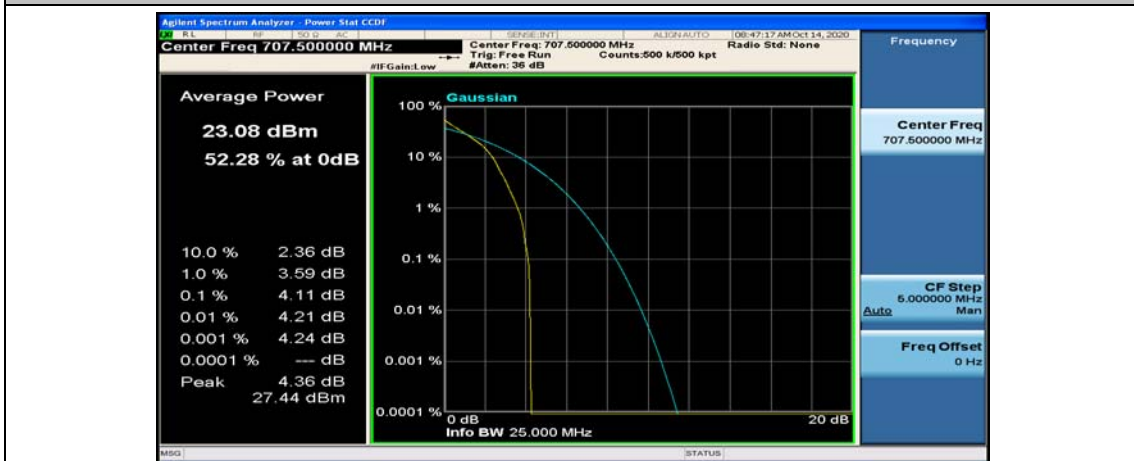
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(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#0



(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_1RB#3



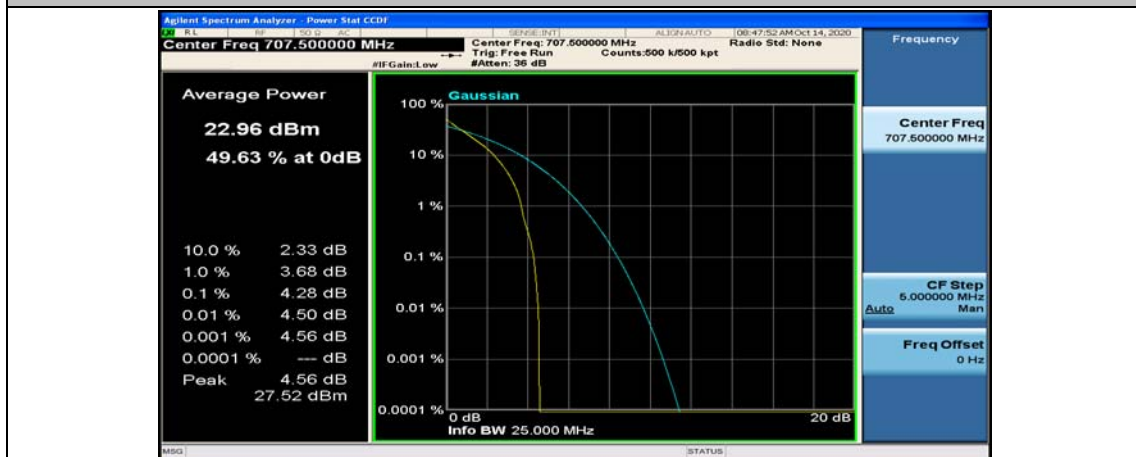
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(Channel Bandwidth: 1.4 MHz)_MCH_QPSK_3RB#0



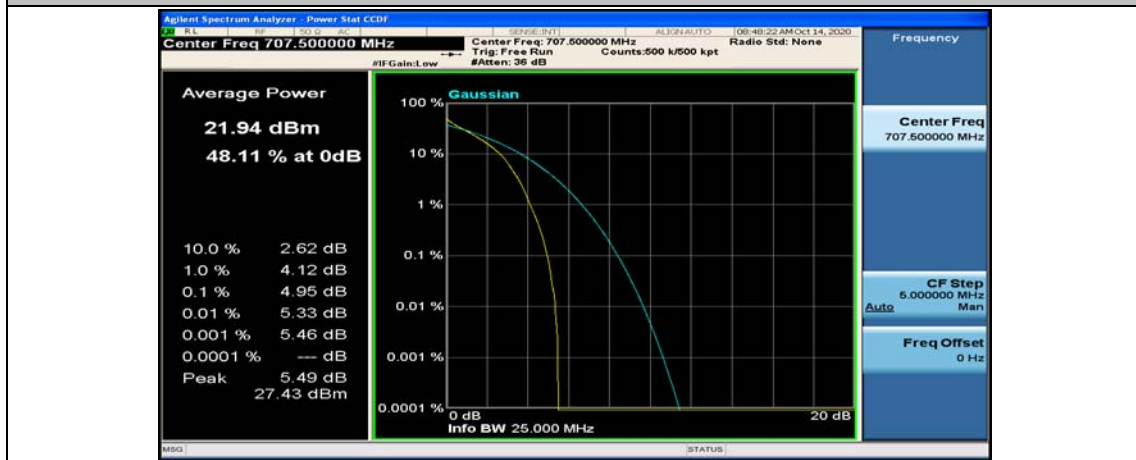
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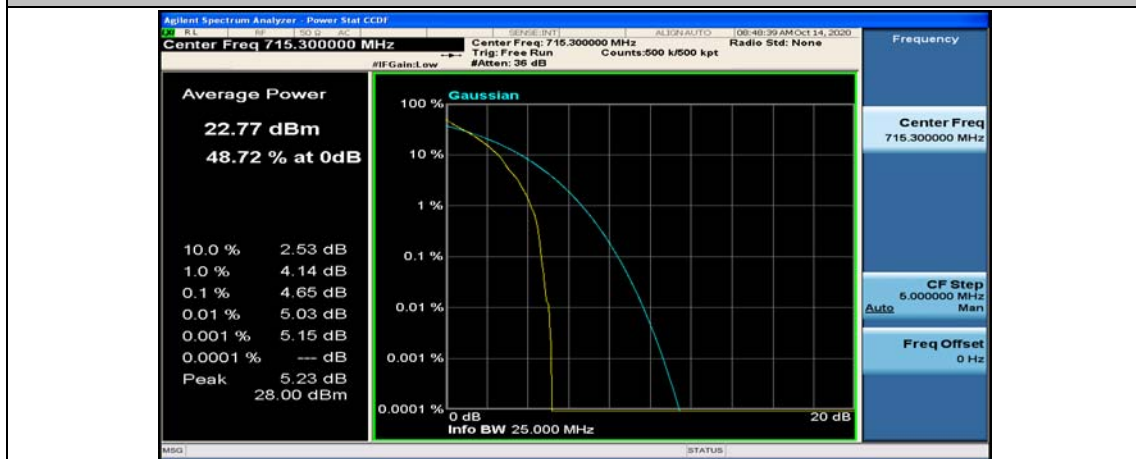
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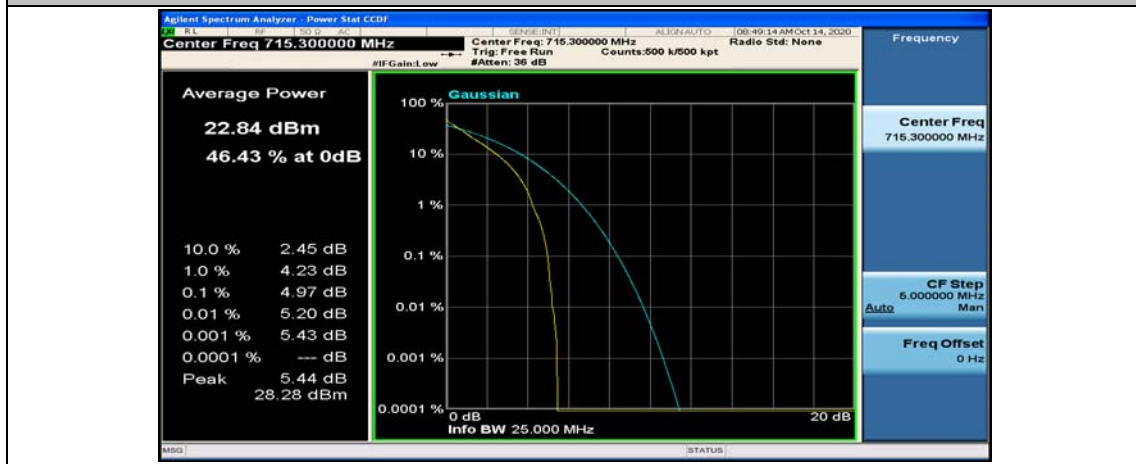
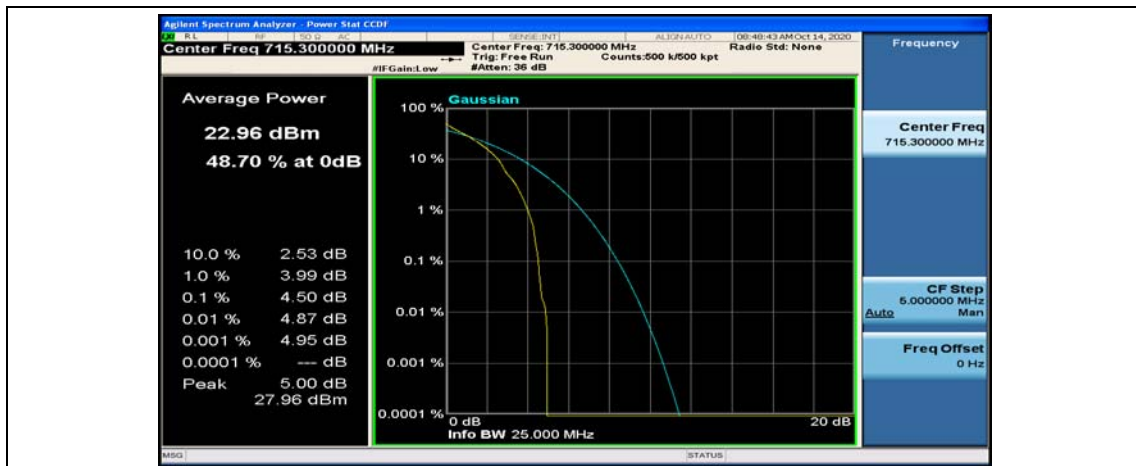
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(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_1RB#3

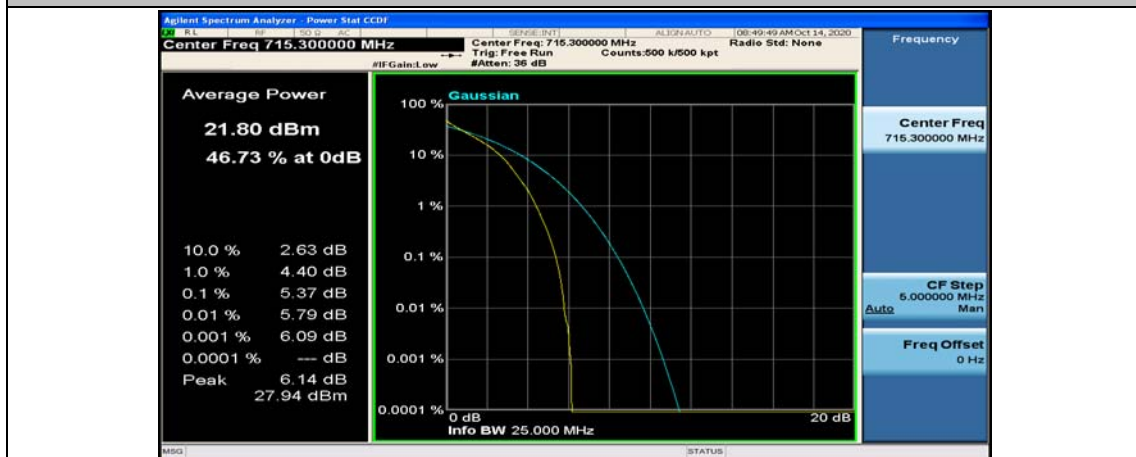




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(Channel Bandwidth: 1.4 MHz)_HCH_QPSK_6RB#0



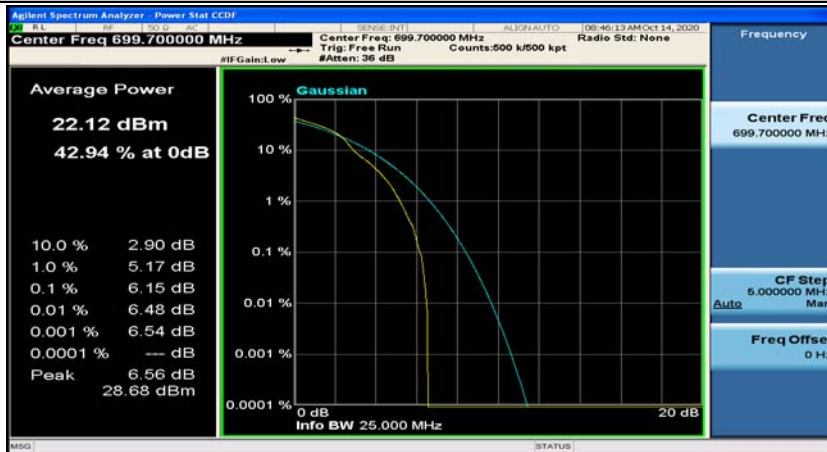
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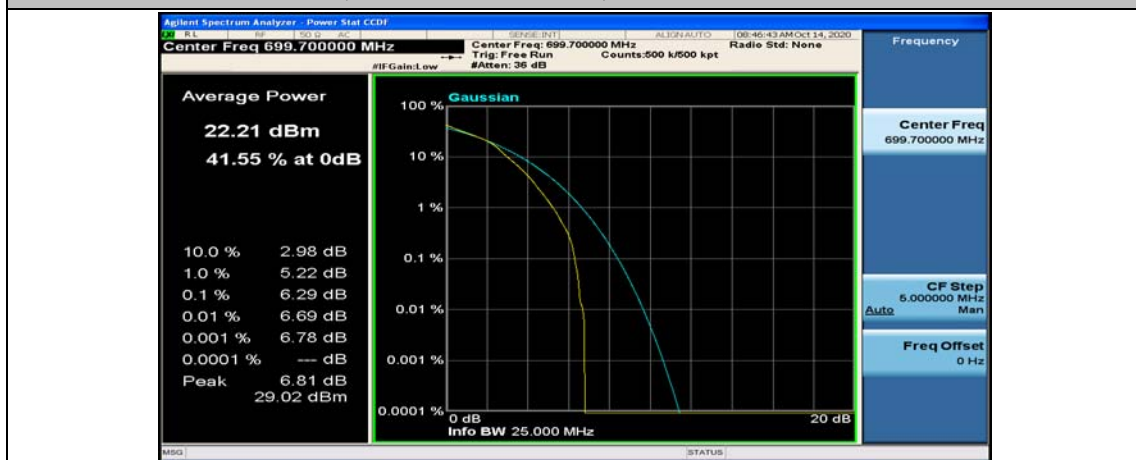
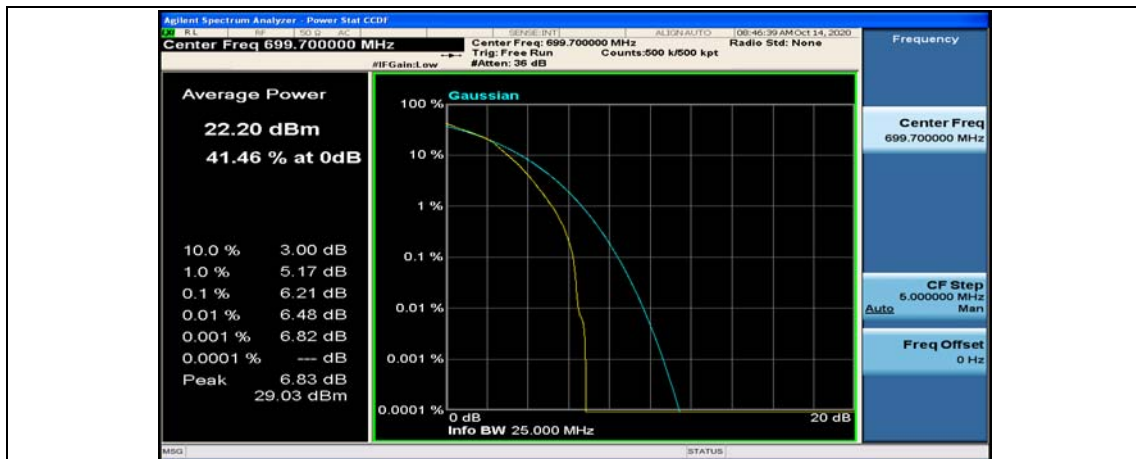
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(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_1RB#5

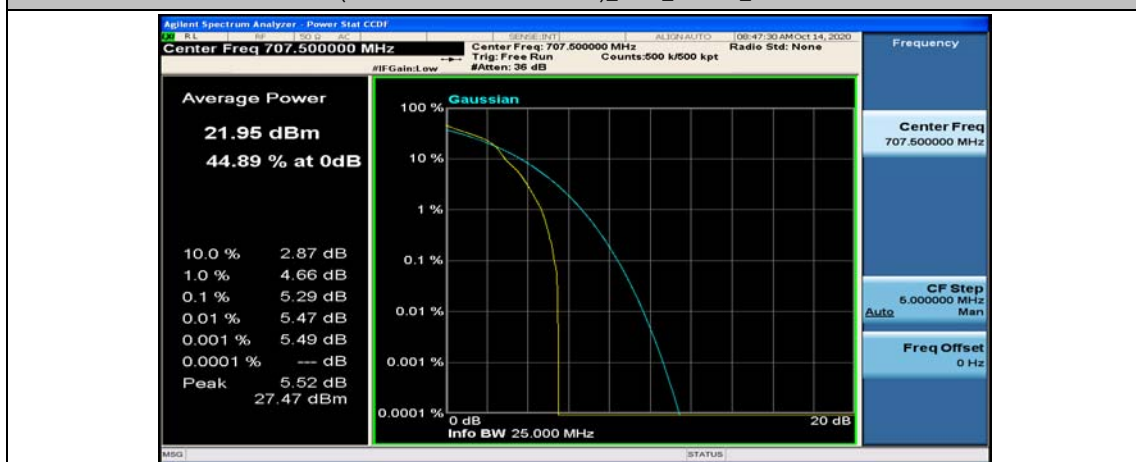


(Channel Bandwidth: 1.4 MHz)_LCH_16QAM_3RB#0





(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

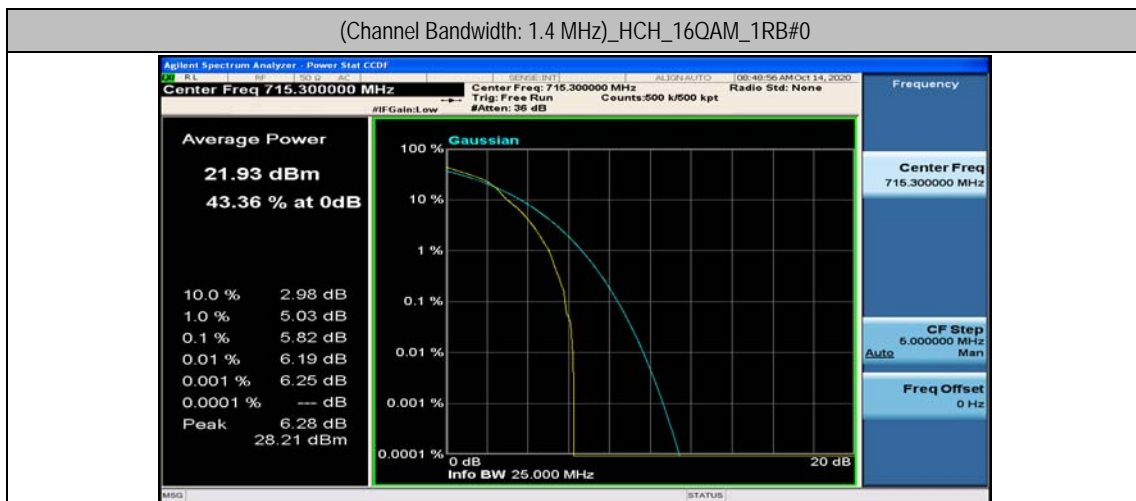




(Channel Bandwidth: 1.4 MHz)_MCH_16QAM_6RB#0



(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#3



(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_1RB#5



(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_3RB#0



(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_3RB#2



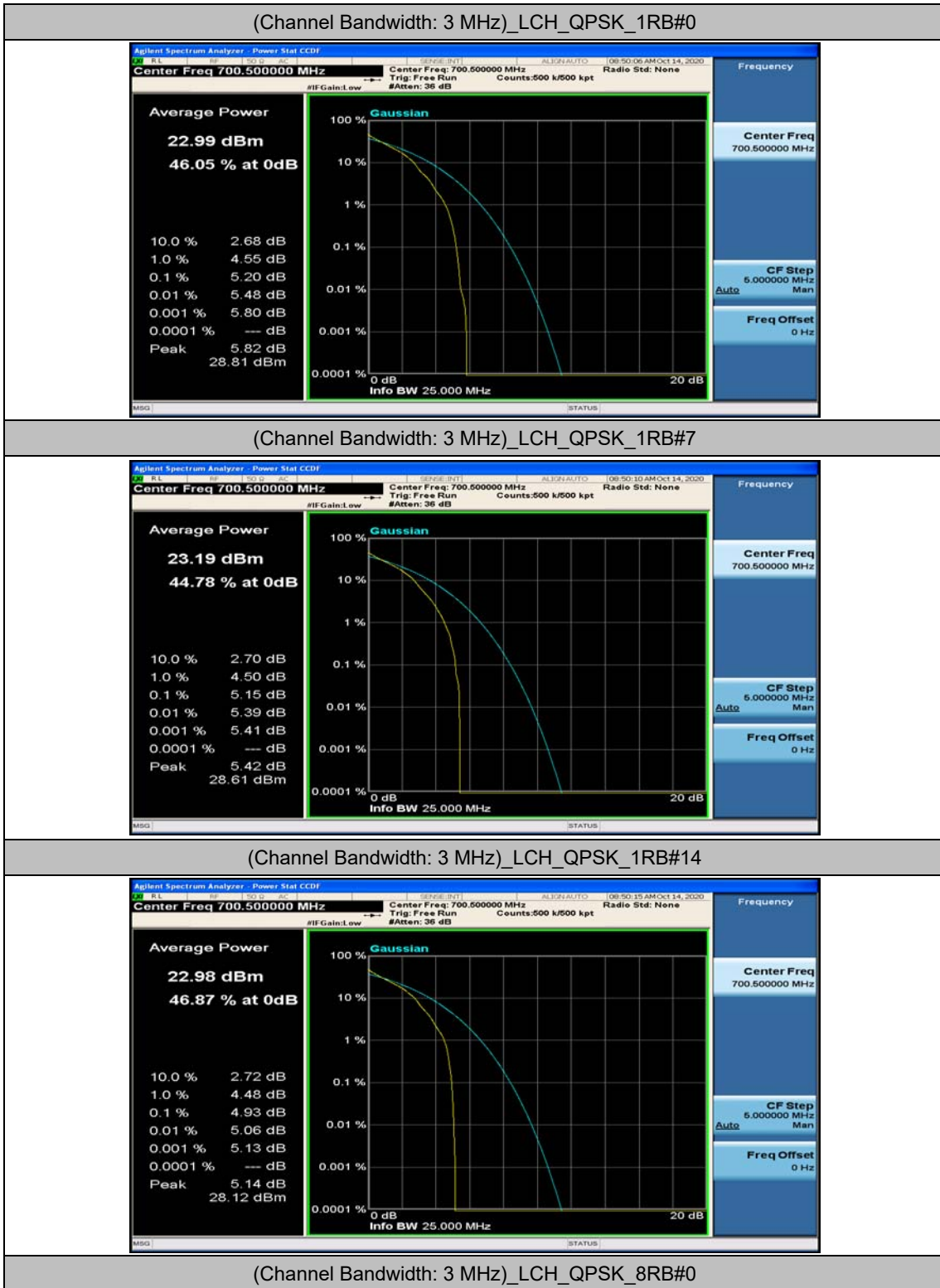
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(Channel Bandwidth: 1.4 MHz)_HCH_16QAM_6RB#0



Channel Bandwidth: 3 MHz





(Channel Bandwidth: 3 MHz)_LCH_QPSK_8RB#4



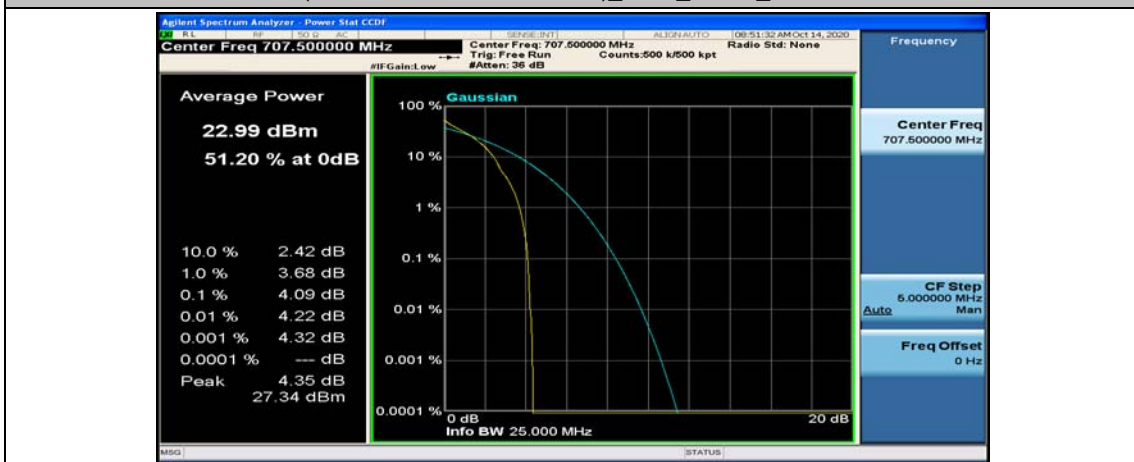
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(Channel Bandwidth: 3 MHz)_LCH_QPSK_15RB#0



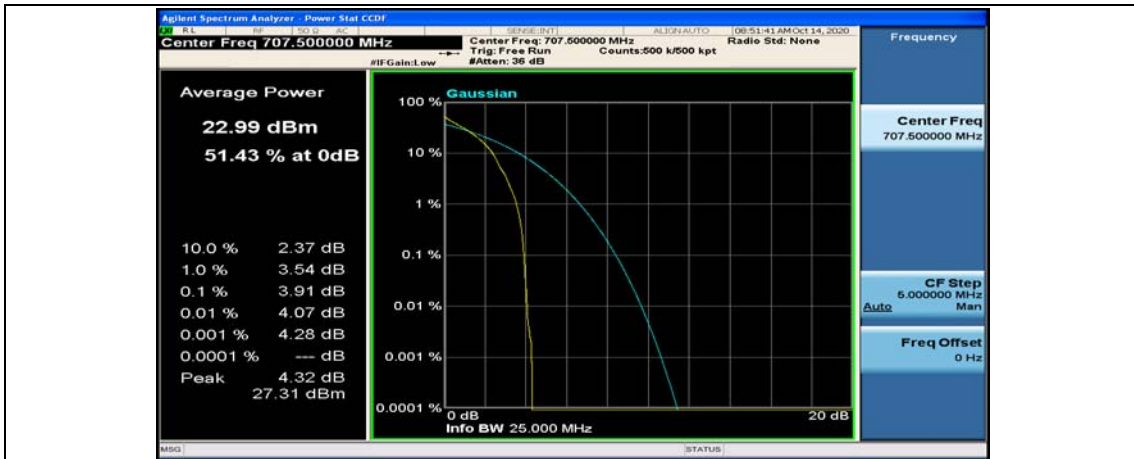
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(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#7



(Channel Bandwidth: 3 MHz)_MCH_QPSK_1RB#14



(Channel Bandwidth: 3 MHz)_MCH_QPSK_8RB#0



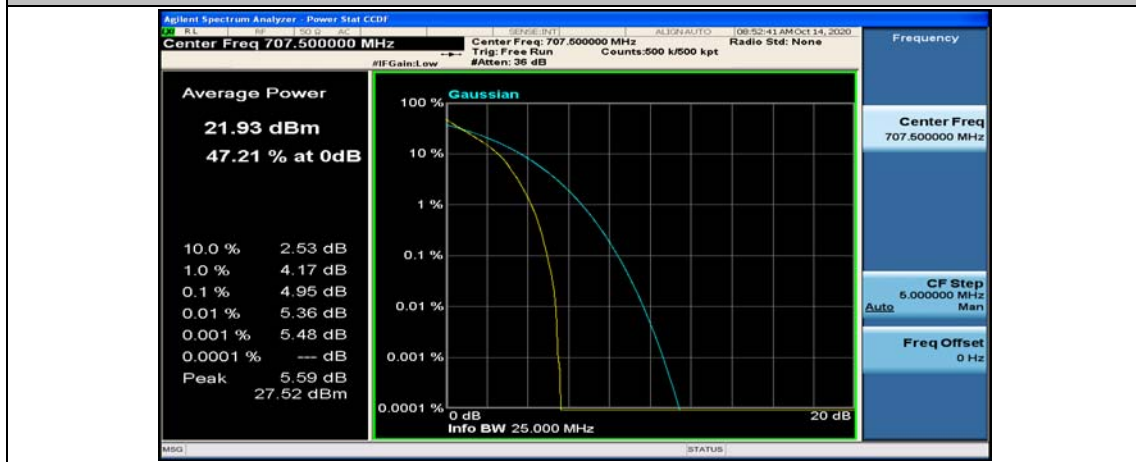
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(Channel Bandwidth: 3 MHz)_MCH_QPSK_8RB#7



(Channel Bandwidth: 3 MHz)_MCH_QPSK_15RB#0



(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#0



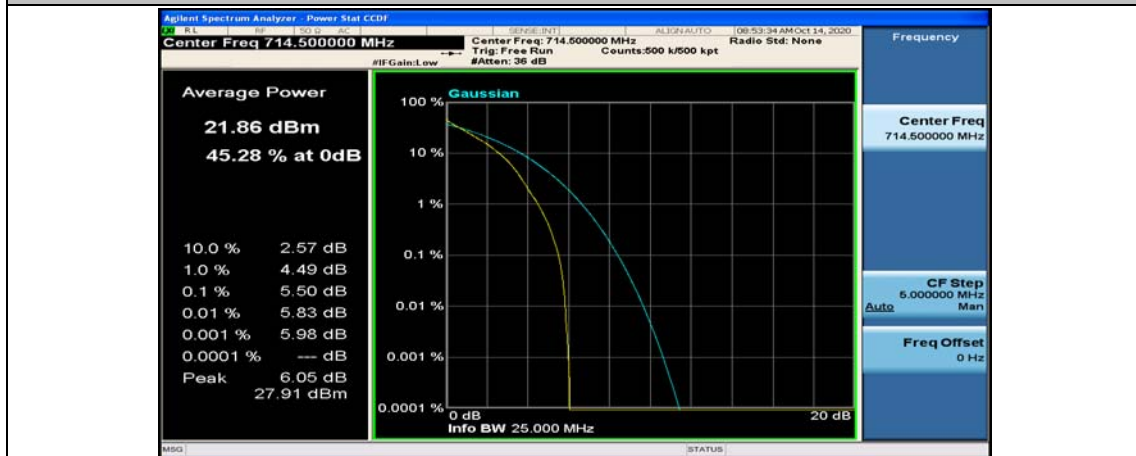
(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#7



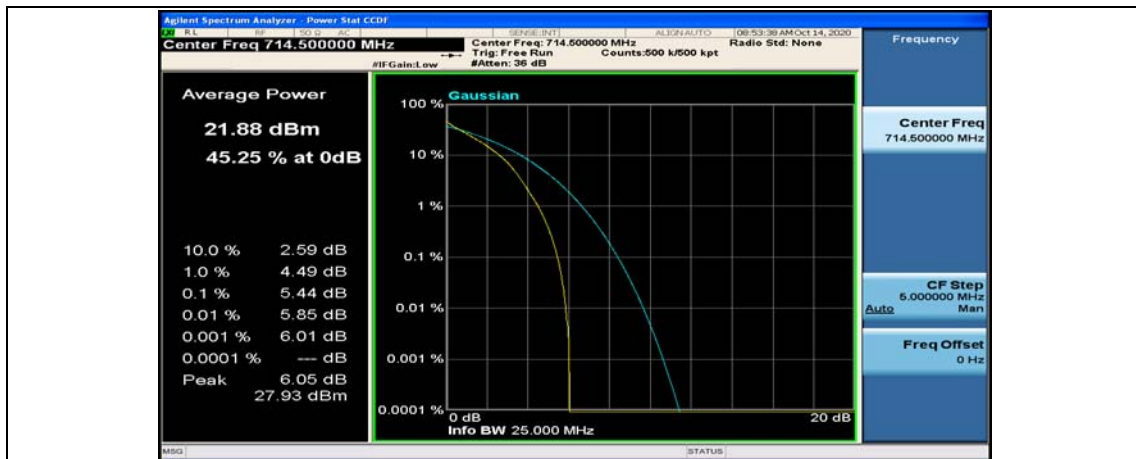
(Channel Bandwidth: 3 MHz)_HCH_QPSK_1RB#14



(Channel Bandwidth: 3 MHz)_HCH_QPSK_8RB#0



(Channel Bandwidth: 3 MHz)_HCH_QPSK_8RB#4



(Channel Bandwidth: 3 MHz)_HCH_QPSK_8RB#7



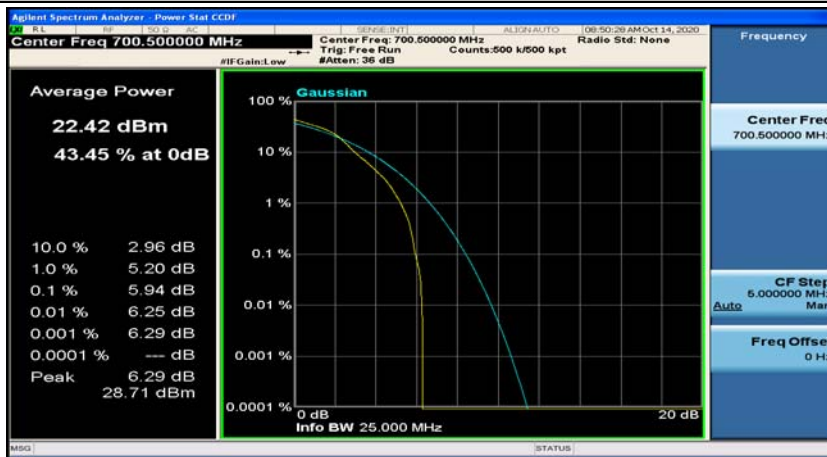
(Channel Bandwidth: 3 MHz)_HCH_QPSK_15RB#0



(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#0



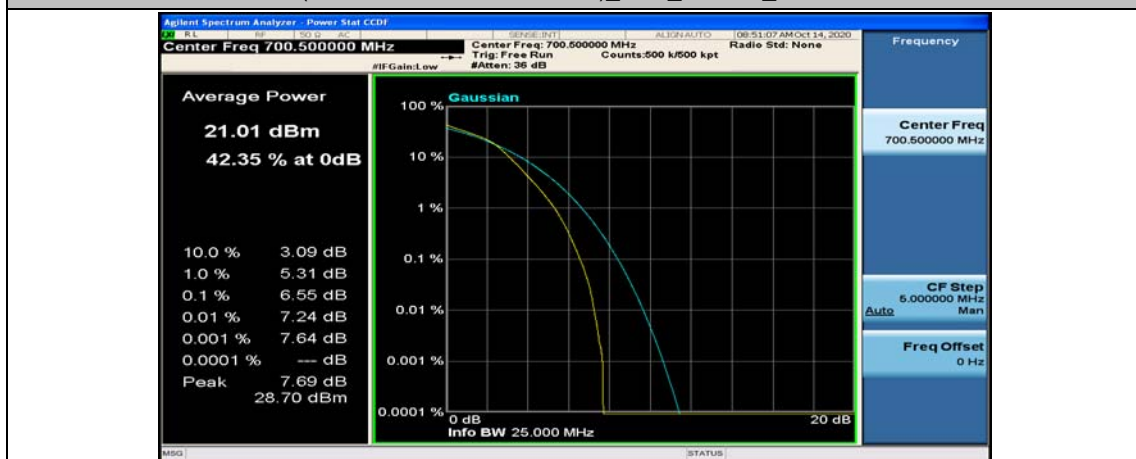
(Channel Bandwidth: 3 MHz)_LCH_16QAM_1RB#7



(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_8RB#0



(Channel Bandwidth: 3 MHz)_MCH_16QAM_8RB#4



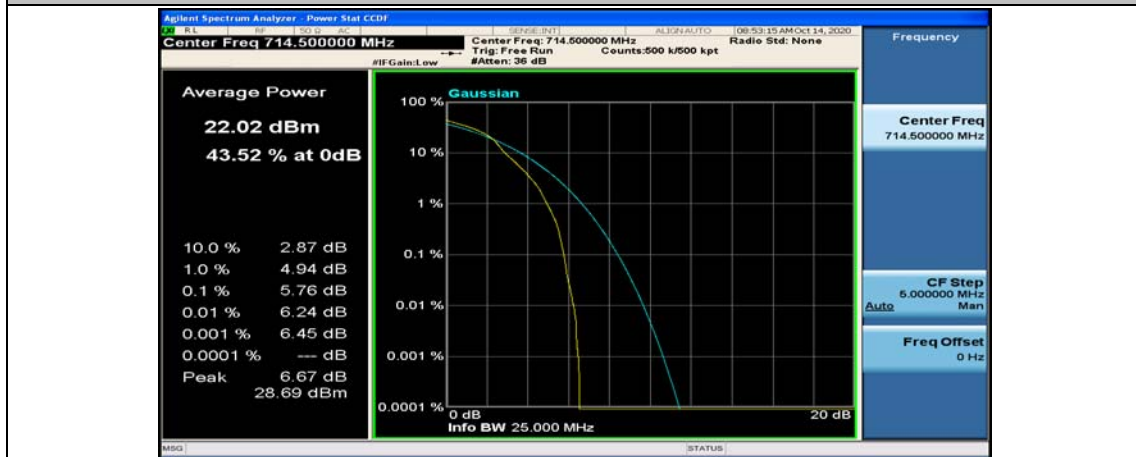
(Channel Bandwidth: 3 MHz)_MCH_16QAM_8RB#7



(Channel Bandwidth: 3 MHz)_MCH_16QAM_15RB#0



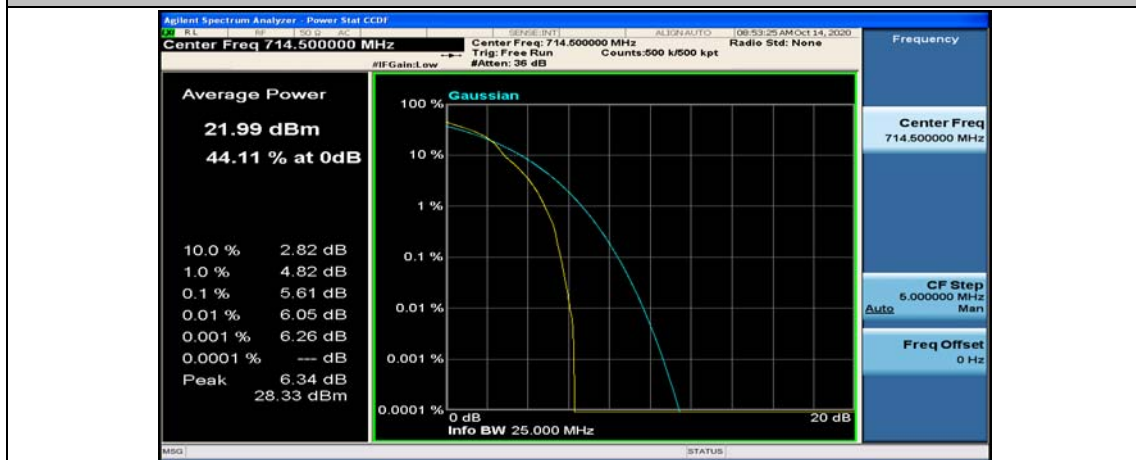
(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#7



(Channel Bandwidth: 3 MHz)_HCH_16QAM_1RB#14



(Channel Bandwidth: 3 MHz)_HCH_16QAM_8RB#0



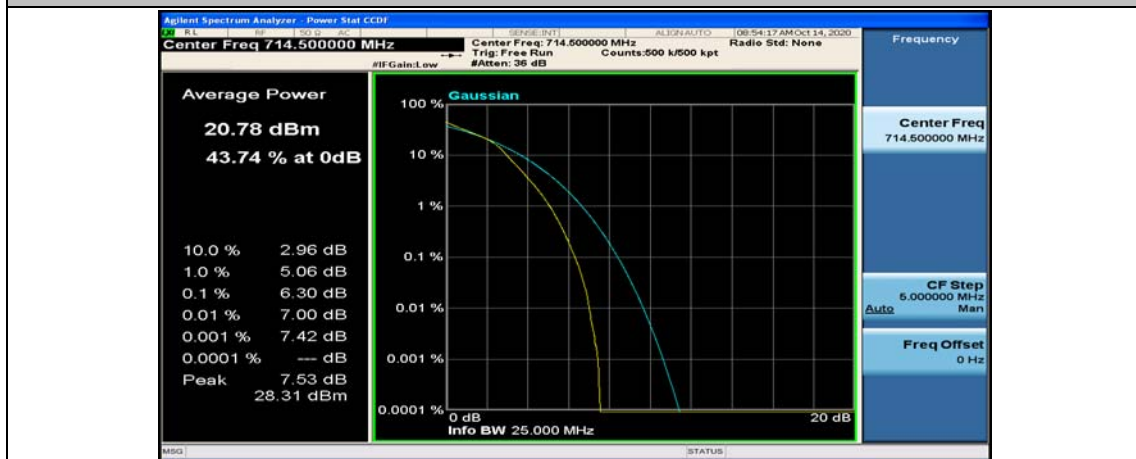
(Channel Bandwidth: 3 MHz)_HCH_16QAM_8RB#4



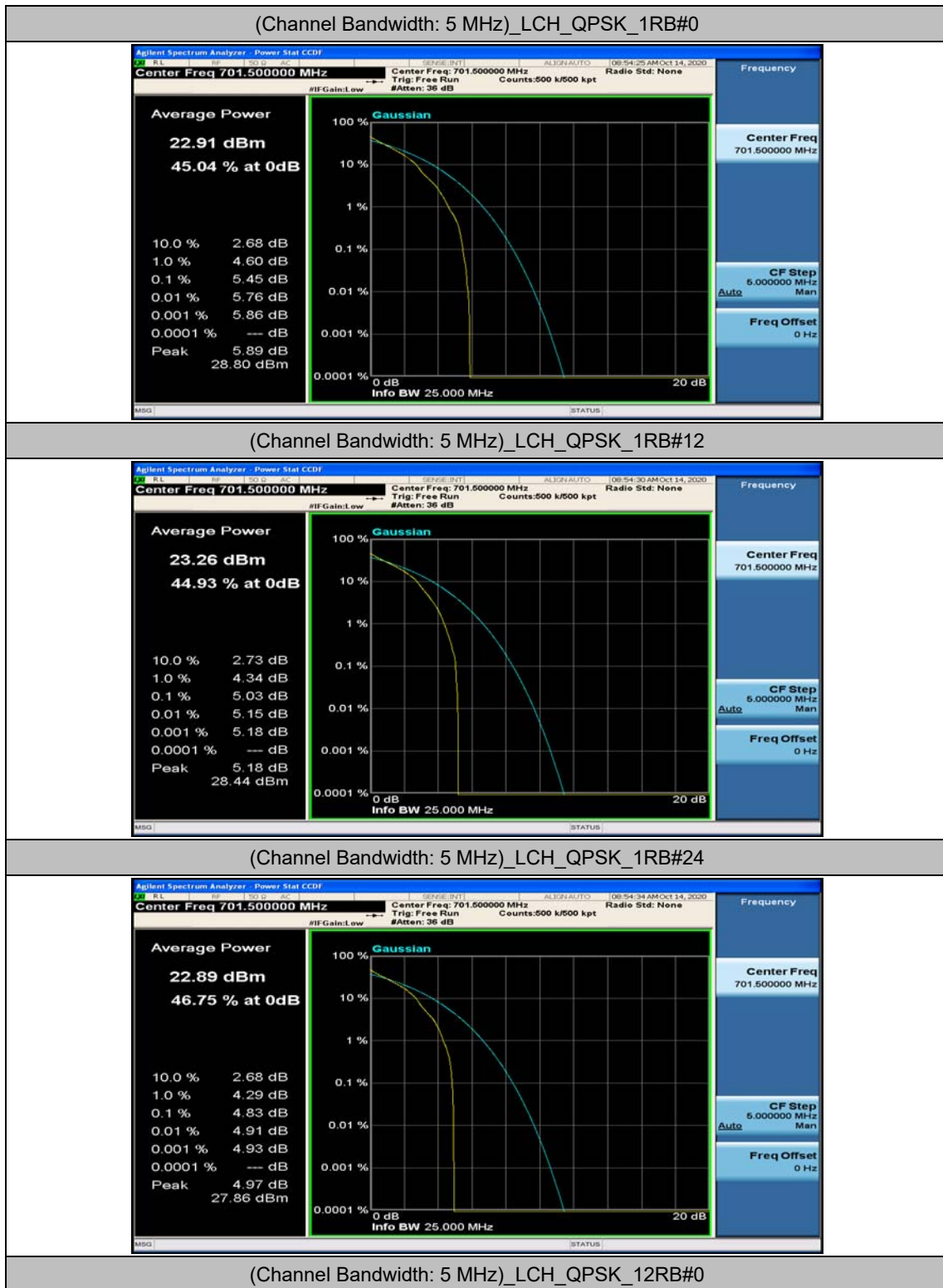
(Channel Bandwidth: 3 MHz)_HCH_16QAM_8RB#7



(Channel Bandwidth: 3 MHz)_HCH_16QAM_15RB#0

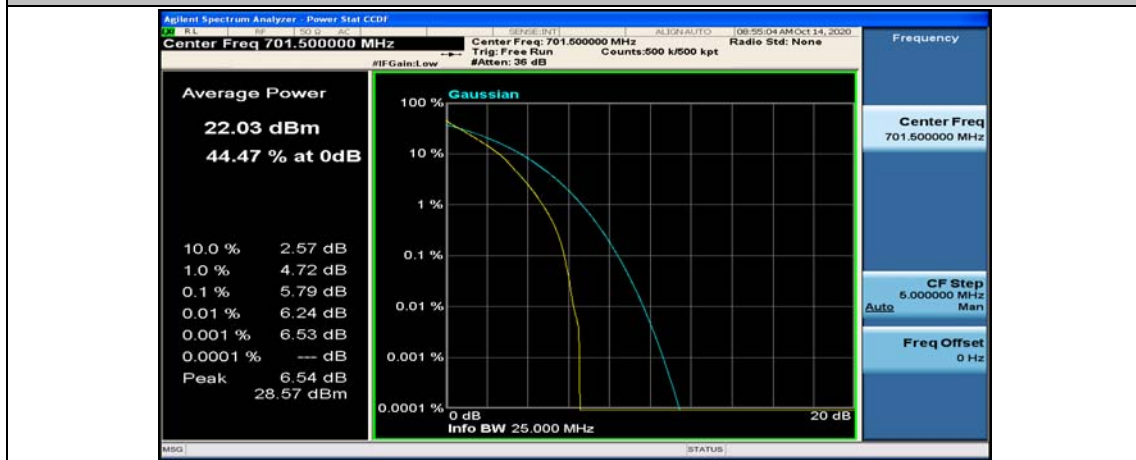


Channel Bandwidth: 5 MHz





(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#6



(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#13



(Channel Bandwidth: 5 MHz)_LCH_QPSK_25RB#0



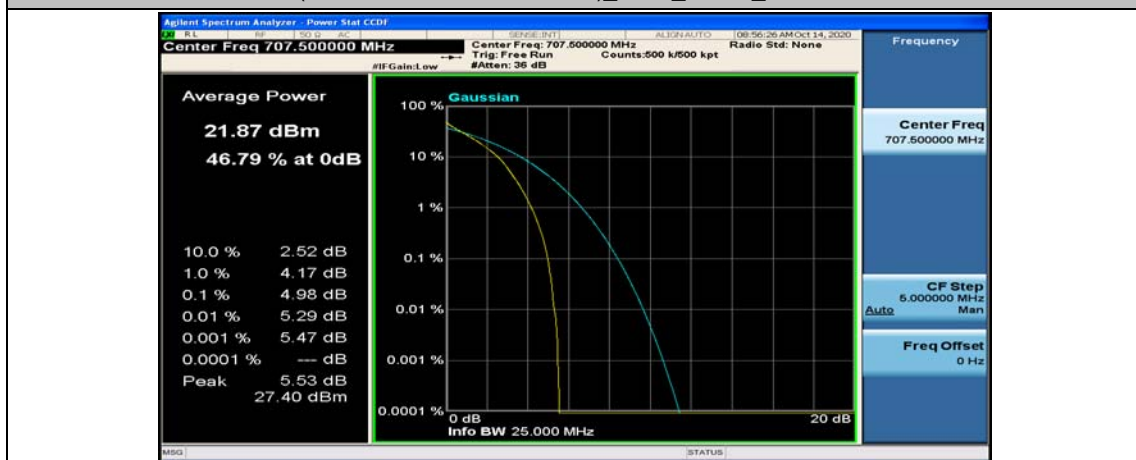
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0



(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)_HCH_QPSK_1RB#24



(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#0



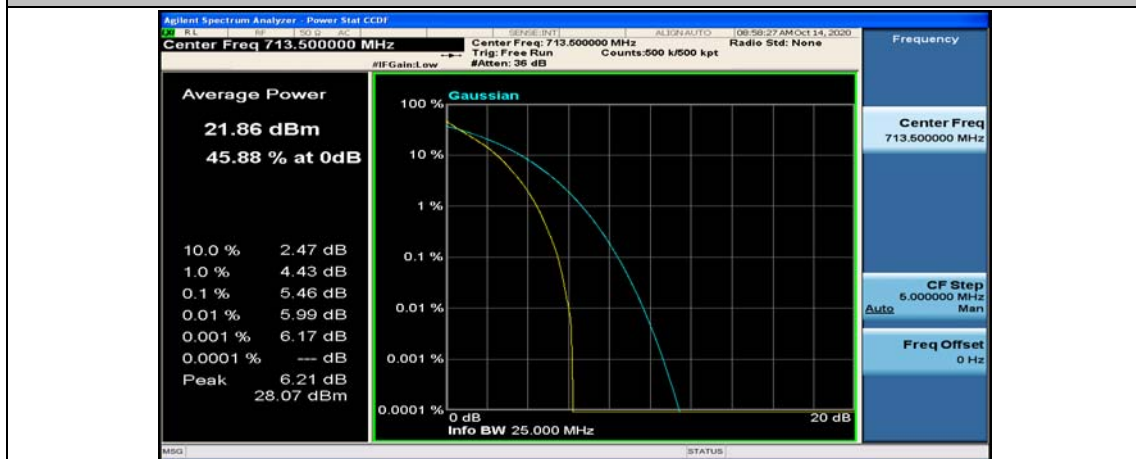
(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#6



(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#13



(Channel Bandwidth: 5 MHz)_HCH_QPSK_25RB#0



(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0



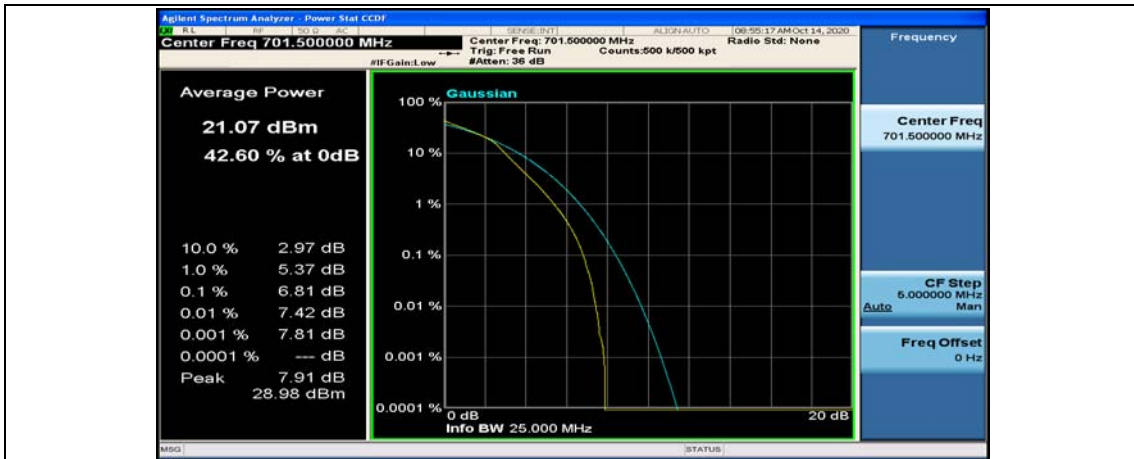
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#12



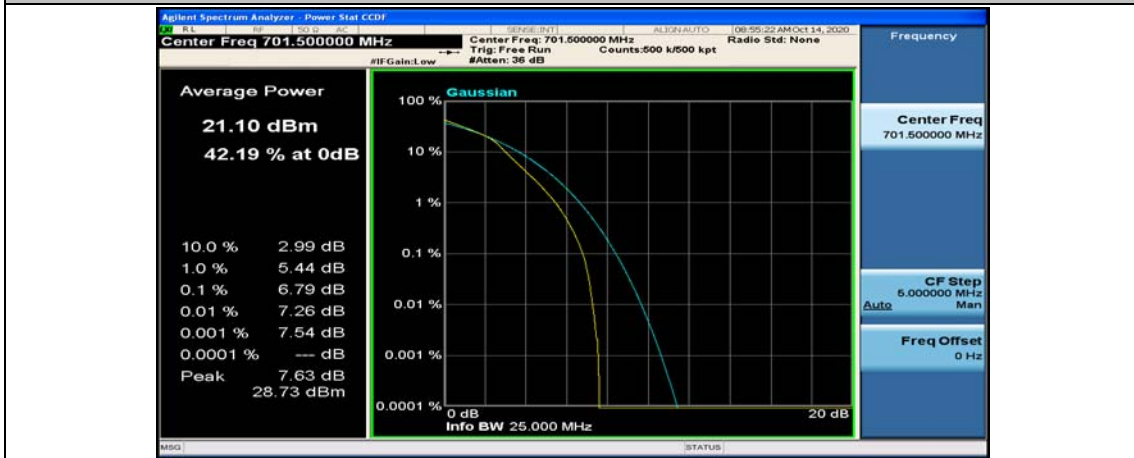
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#24



(Channel Bandwidth: 5 MHz)_LCH_16QAM_12RB#0



(Channel Bandwidth: 5 MHz)_LCH_16QAM_12RB#6



(Channel Bandwidth: 5 MHz)_LCH_16QAM_12RB#13



(Channel Bandwidth: 5 MHz)_LCH_16QAM_25RB#0



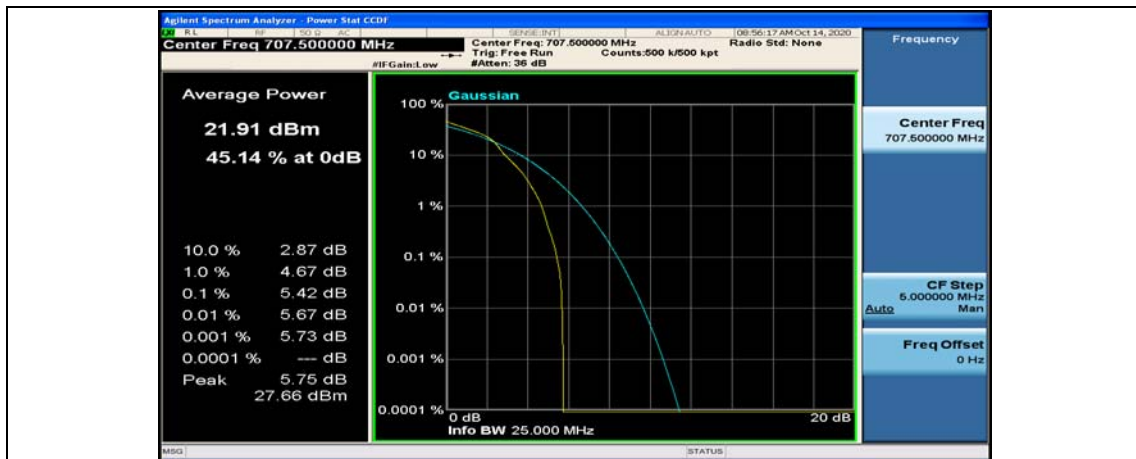
(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12



(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#24



(Channel Bandwidth: 5 MHz)_MCH_16QAM_12RB#0



(Channel Bandwidth: 5 MHz)_MCH_16QAM_12RB#6



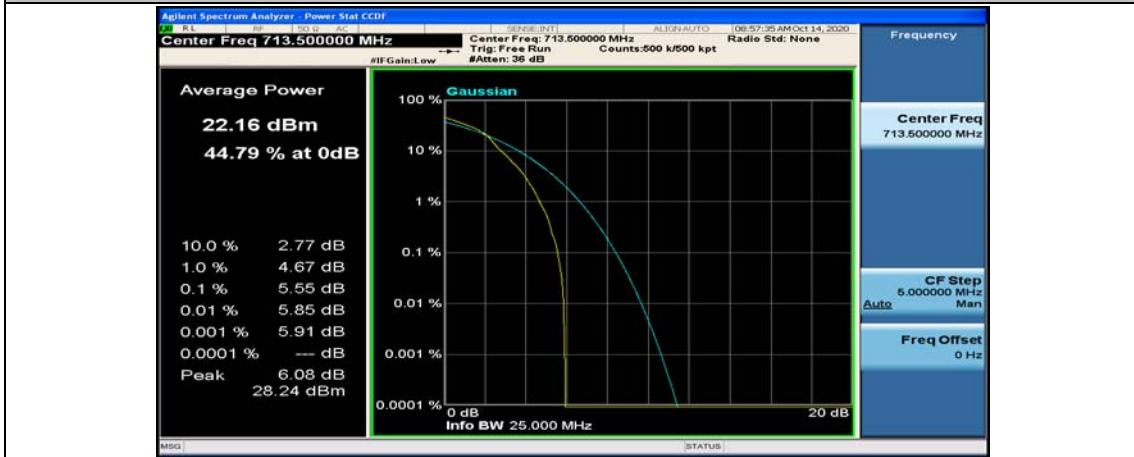
(Channel Bandwidth: 5 MHz)_MCH_16QAM_12RB#13



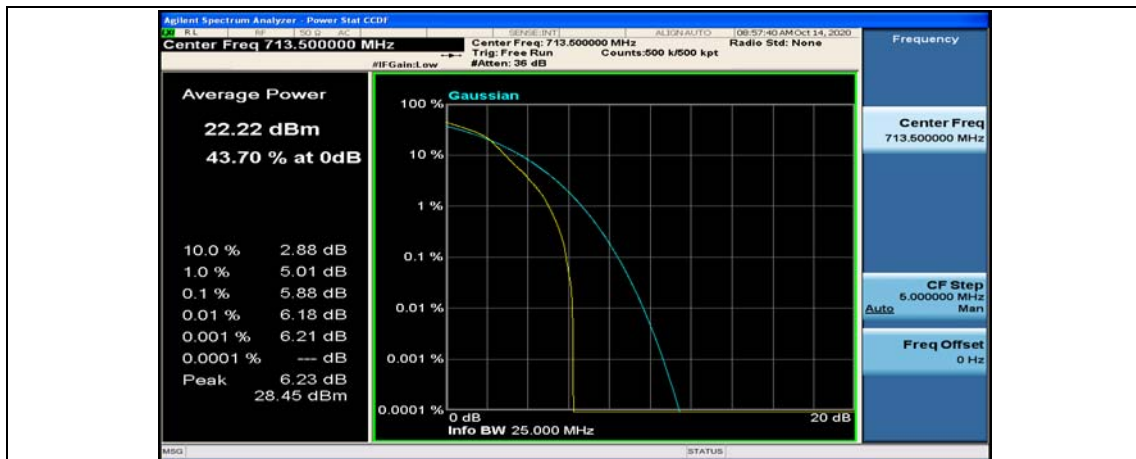
(Channel Bandwidth: 5 MHz)_MCH_16QAM_25RB#0



(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12



(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#24



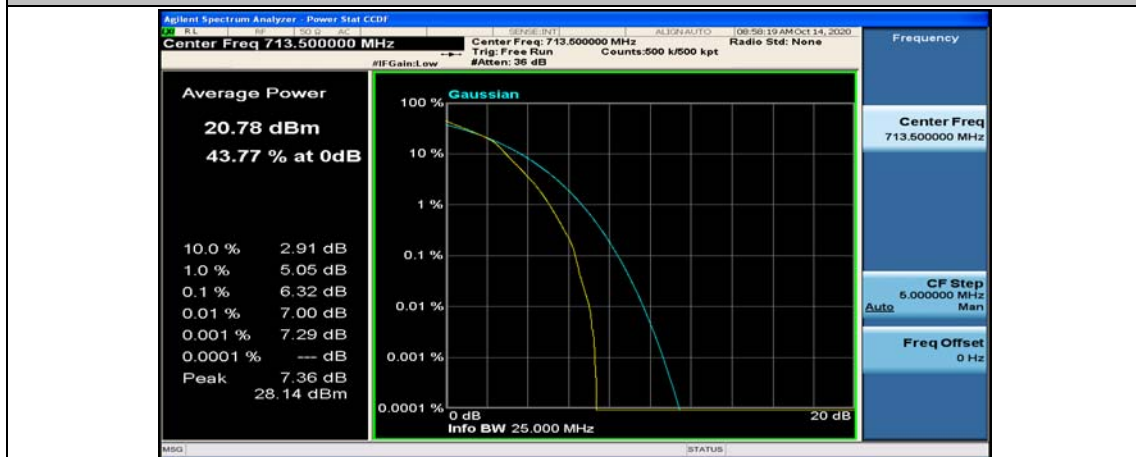
(Channel Bandwidth: 5 MHz)_HCH_16QAM_12RB#0



(Channel Bandwidth: 5 MHz)_HCH_16QAM_12RB#6



(Channel Bandwidth: 5 MHz)_HCH_16QAM_12RB#13



(Channel Bandwidth: 5 MHz)_HCH_16QAM_25RB#0



Channel Bandwidth: 10 MHz

