

Appendix for Band 7

Product Name: TD-LTE Smart Phone
Model No: S12pro

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	21.78	PASS
		1	12	22.16	PASS
		1	24	21.87	PASS
		12	0	21.84	PASS
		12	6	21.93	PASS
		12	13	21.9	PASS
		25	0	20.88	PASS
	MCH	1	0	22.91	PASS
		1	12	23.12	PASS
		1	24	22.83	PASS
		12	0	21.91	PASS
		12	6	21.98	PASS
		12	13	21.9	PASS
		25	0	21.79	PASS
	HCH	1	0	22.36	PASS
		1	12	22.58	PASS
		1	24	22.28	PASS
		12	0	21.84	PASS
		12	6	21.86	PASS
		12	13	21.81	PASS
		25	0	20.79	PASS
16QAM	LCH	1	0	21.01	PASS
		1	12	21.24	PASS
		1	24	21.08	PASS
		12	0	20.86	PASS
		12	6	20.93	PASS
		12	13	20.89	PASS
		25	0	20.85	PASS
	MCH	1	0	22.09	PASS
		1	12	22.35	PASS
		1	24	22.06	PASS
		12	0	20.99	PASS
		12	6	21.02	PASS
		12	13	20.94	PASS

		25	0	20.36	PASS
	HCH	1	0	21.15	PASS
		1	12	21.42	PASS
		1	24	21.03	PASS
		12	0	20.9	PASS
		12	6	20.92	PASS
		12	13	20.82	PASS
		25	0	20.87	PASS

Channel Bandwidth: 10 MHz

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	21.88	PASS
		1	24	22.04	PASS
		1	49	21.88	PASS
		25	0	21.39	PASS
		25	12	21.23	PASS
		25	25	21.23	PASS
		50	0	21.41	PASS
	MCH	1	0	22.33	PASS
		1	24	22.47	PASS
		1	49	22.19	PASS
		25	0	21.45	PASS
		25	12	21.4	PASS
		25	25	21.36	PASS
		50	0	21.41	PASS
	HCH	1	0	22.39	PASS
		1	24	22.46	PASS
		1	49	22.34	PASS
		25	0	20.97	PASS
		25	12	20.9	PASS
		25	25	20.84	PASS
		50	0	20.91	PASS
16QAM	LCH	1	0	21.17	PASS
		1	24	21.32	PASS
		1	49	21.2	PASS
		25	0	20.34	PASS
		25	12	20.34	PASS
		25	25	20.41	PASS
		50	0	20.36	PASS
	MCH	1	0	21.57	PASS

		1	24	21.75	PASS
		1	49	21.62	PASS
		25	0	20.47	PASS
		25	12	20.41	PASS
		25	25	20.41	PASS
		50	0	20.43	PASS
	HCH	1	0	21.35	PASS
		1	24	21.34	PASS
		1	49	21.05	PASS
		25	0	20.48	PASS
		25	12	20.45	PASS
		25	25	20.52	PASS
		50	0	20.56	PASS

Channel Bandwidth: 15 MHz

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	21.98	PASS
		1	37	22.30	PASS
		1	74	22.12	PASS
		37	0	21.33	PASS
		37	18	21.47	PASS
		37	38	21.30	PASS
		75	0	21.41	PASS
	MCH	1	0	22.34	PASS
		1	37	22.60	PASS
		1	74	22.26	PASS
		37	0	21.56	PASS
		37	18	21.53	PASS
		37	38	21.44	PASS
		75	0	21.52	PASS
	HCH	1	0	22.44	PASS
		1	37	22.52	PASS
		1	74	22.09	PASS
		37	0	21.07	PASS
		37	18	21.05	PASS
		37	38	20.96	PASS
		75	0	21.03	PASS
16QAM	LCH	1	0	21.26	PASS
		1	37	21.63	PASS
		1	74	21.31	PASS

		37	0	20.33	PASS
		37	18	20.49	PASS
		37	38	20.46	PASS
		75	0	20.36	PASS
	MCH	1	0	21.67	PASS
		1	37	21.85	PASS
		1	74	21.50	PASS
		37	0	20.50	PASS
		37	18	20.50	PASS
		37	38	20.45	PASS
		75	0	20.49	PASS
	HCH	1	0	21.24	PASS
		1	37	21.37	PASS
		1	74	21.12	PASS
		37	0	20.34	PASS
		37	18	20.33	PASS
		37	38	20.37	PASS
		75	0	20.38	PASS

Channel Bandwidth: 20MHz

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	21.93	PASS
		1	49	22.16	PASS
		1	99	21.9	PASS
		50	0	21.04	PASS
		50	25	21.02	PASS
		50	50	21.03	PASS
		100	0	21.38	PASS
	MCH	1	0	22.32	PASS
		1	49	23.23	PASS
		1	99	22.25	PASS
		50	0	21.41	PASS
		50	25	21.41	PASS
		50	50	21.28	PASS
		100	0	21.33	PASS
	HCH	1	0	22.22	PASS
		1	49	22.51	PASS
		1	99	22.17	PASS
		50	0	20.96	PASS
		50	25	21.1	PASS

		50	50	20.87	PASS
		100	0	20.93	PASS
16QAM	LCH	1	0	21.07	PASS
		1	49	21.33	PASS
		1	99	21.19	PASS
		50	0	20.38	PASS
		50	25	20.31	PASS
		50	50	20.32	PASS
		100	0	20.39	PASS
		MCH	1	0	21.62
	1		49	21.9	PASS
	1		99	21.49	PASS
	50		0	20.46	PASS
	50		25	20.45	PASS
	50		50	20.35	PASS
	100		0	20.35	PASS
	HCH	1	0	21.11	PASS
		1	49	21.39	PASS
		1	99	20.99	PASS
		50	0	20.39	PASS
		50	25	20.34	PASS
		50	50	20.39	PASS
		100	0	20.34	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	4.24	<13	PASS
		1	12	4.03	<13	PASS
		1	24	4.22	<13	PASS
		12	0	4.83	<13	PASS
		12	6	4.79	<13	PASS
		12	13	4.81	<13	PASS
		25	0	4.85	<13	PASS
	MCH	1	0	4.36	<13	PASS
		1	12	4.14	<13	PASS
		1	24	4.31	<13	PASS
		12	0	4.73	<13	PASS
		12	6	4.71	<13	PASS
		12	13	4.71	<13	PASS
		25	0	4.83	<13	PASS
	HCH	1	0	4.69	<13	PASS
		1	12	4.44	<13	PASS
		1	24	4.54	<13	PASS
		12	0	5.17	<13	PASS
		12	6	5.17	<13	PASS
		12	13	5.11	<13	PASS
		25	0	5.19	<13	PASS
16QAM	LCH	1	0	4.97	<13	PASS
		1	12	4.86	<13	PASS
		1	24	5.13	<13	PASS
		12	0	5.71	<13	PASS
		12	6	5.73	<13	PASS
		12	13	5.74	<13	PASS
		25	0	5.66	<13	PASS
	MCH	1	0	5.22	<13	PASS
		1	12	5.02	<13	PASS
		1	24	5.32	<13	PASS
		12	0	5.56	<13	PASS
		12	6	5.57	<13	PASS

		12	13	5.59	<13	PASS
		25	0	5.74	<13	PASS
	HCH	1	0	5.75	<13	PASS
		1	12	5.24	<13	PASS
		1	24	5.58	<13	PASS
		12	0	5.91	<13	PASS
		12	6	5.95	<13	PASS
		12	13	5.91	<13	PASS
		25	0	5.95	<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	4.14	<13	PASS
		1	24	4.04	<13	PASS
		1	49	4.21	<13	PASS
		25	0	4.79	<13	PASS
		25	12	4.84	<13	PASS
		25	25	4.84	<13	PASS
		50	0	4.85	<13	PASS
	MCH	1	0	4.04	<13	PASS
		1	24	3.96	<13	PASS
		1	49	4.23	<13	PASS
		25	0	4.81	<13	PASS
		25	12	4.85	<13	PASS
		25	25	4.8	<13	PASS
		50	0	4.88	<13	PASS
	HCH	1	0	4.77	<13	PASS
		1	24	4.61	<13	PASS
		1	49	4.64	<13	PASS
		25	0	5.12	<13	PASS
		25	12	5.15	<13	PASS
		25	25	5.12	<13	PASS
		50	0	5.18	<13	PASS
16QAM	LCH	1	0	5.05	<13	PASS
		1	24	4.92	<13	PASS
		1	49	5.13	<13	PASS
		25	0	5.61	<13	PASS
		25	12	5.71	<13	PASS
		25	25	5.61	<13	PASS

	MCH	50	0	5.66	<13	PASS
		1	0	5.07	<13	PASS
		1	24	4.85	<13	PASS
		1	49	5.07	<13	PASS
		25	0	5.66	<13	PASS
		25	12	5.71	<13	PASS
		25	25	5.69	<13	PASS
		50	0	5.68	<13	PASS
	HCH	1	0	5.69	<13	PASS
		1	24	5.66	<13	PASS
		1	49	5.34	<13	PASS
		25	0	6.04	<13	PASS
		25	12	6.09	<13	PASS
		25	25	6.05	<13	PASS
		50	0	5.95	<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	4.18	<13	PASS
		1	37	4.12	<13	PASS
		1	74	4.18	<13	PASS
		37	0	4.78	<13	PASS
		37	18	4.79	<13	PASS
		37	38	4.76	<13	PASS
		75	0	5.2	<13	PASS
	MCH	1	0	4.31	<13	PASS
		1	37	4.02	<13	PASS
		1	74	4.38	<13	PASS
		37	0	4.74	<13	PASS
		37	18	4.79	<13	PASS
		37	38	4.79	<13	PASS
		75	0	5.18	<13	PASS
	HCH	1	0	4.55	<13	PASS
		1	37	4.64	<13	PASS
		1	74	4.57	<13	PASS
		37	0	5.14	<13	PASS
		37	18	5.2	<13	PASS
		37	38	5.19	<13	PASS
		75	0	5.56	<13	PASS

16QAM	LCH	1	0	4.89	<13	PASS
		1	37	4.96	<13	PASS
		1	74	5.23	<13	PASS
		37	0	5.68	<13	PASS
		37	18	5.62	<13	PASS
		37	38	5.59	<13	PASS
		75	0	5.83	<13	PASS
	MCH	1	0	5.26	<13	PASS
		1	37	5.07	<13	PASS
		1	74	5.21	<13	PASS
		37	0	5.68	<13	PASS
		37	18	5.68	<13	PASS
		37	38	5.72	<13	PASS
		75	0	5.82	<13	PASS
	HCH	1	0	5.7	<13	PASS
		1	37	5.38	<13	PASS
		1	74	5.64	<13	PASS
		37	0	5.95	<13	PASS
		37	18	5.99	<13	PASS
		37	38	5.95	<13	PASS
		75	0	6.1	<13	PASS

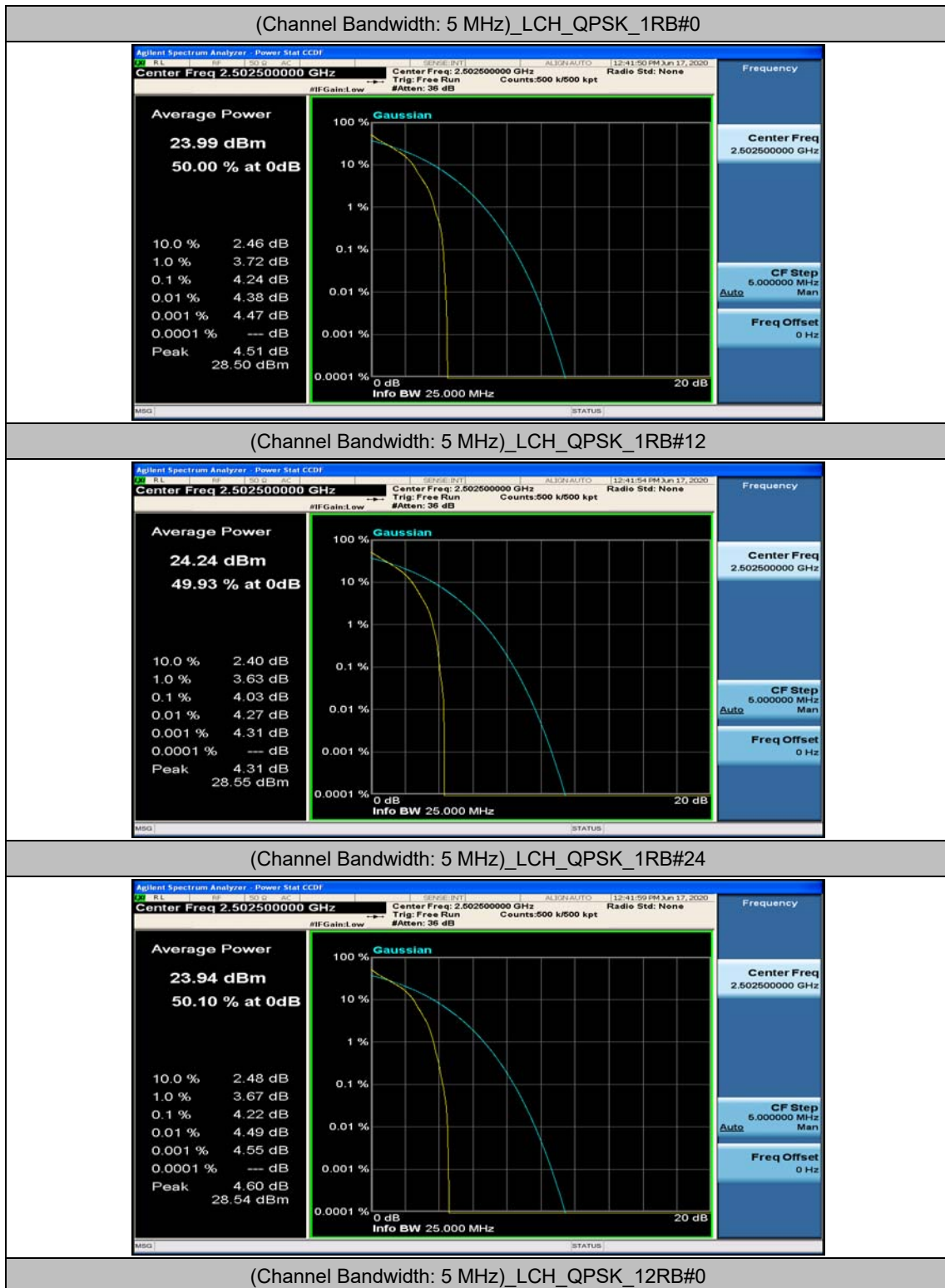
Channel Bandwidth: 20 MHz

Channel Bandwidth: 20 MHz						
Modulation	Channel	RB Configuration		Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
		Size	Offset			
QPSK	LCH	1	0	4.06	<13	PASS
		1	49	4.03	<13	PASS
		1	99	4.08	<13	PASS
		50	0	4.91	<13	PASS
		50	25	4.79	<13	PASS
		50	50	4.96	<13	PASS
		100	0	5.16	<13	PASS
	MCH	1	0	4.32	<13	PASS
		1	49	4.24	<13	PASS
		1	99	4.35	<13	PASS
		50	0	4.9	<13	PASS
		50	25	4.88	<13	PASS
		50	50	4.93	<13	PASS
		100	0	5.2	<13	PASS
	HCH	1	0	4.69	<13	PASS

		1	49	4.67	<13	PASS
		1	99	4.64	<13	PASS
		50	0	5.14	<13	PASS
		50	25	5.22	<13	PASS
		50	50	5.26	<13	PASS
		100	0	5.34	<13	PASS
16QAM	LCH	1	0	5.01	<13	PASS
		1	49	4.75	<13	PASS
		1	99	5.1	<13	PASS
		50	0	5.76	<13	PASS
		50	25	5.65	<13	PASS
		50	50	5.74	<13	PASS
		100	0	5.89	<13	PASS
	MCH	1	0	5.14	<13	PASS
		1	49	4.9	<13	PASS
		1	99	4.98	<13	PASS
		50	0	5.7	<13	PASS
		50	25	5.68	<13	PASS
		50	50	5.71	<13	PASS
		100	0	5.86	<13	PASS
	HCH	1	0	5.53	<13	PASS
		1	49	5.52	<13	PASS
		1	99	5.91	<13	PASS
		50	0	5.99	<13	PASS
		50	25	6.01	<13	PASS
		50	50	6.05	<13	PASS
		100	0	6.11	<13	PASS

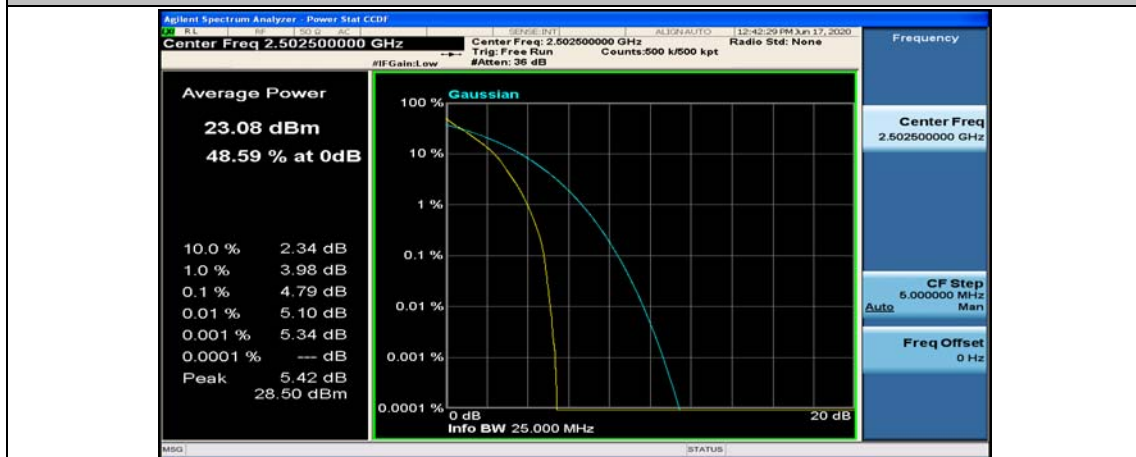
Test Graphs

Channel Bandwidth: 5 MHz





(Channel Bandwidth: 5 MHz)_LCH_QPSK_12RB#6



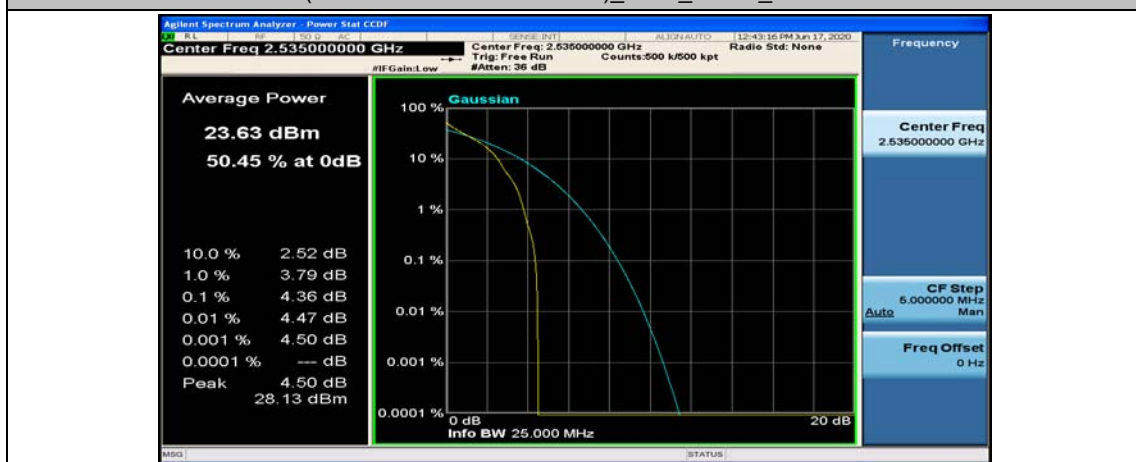
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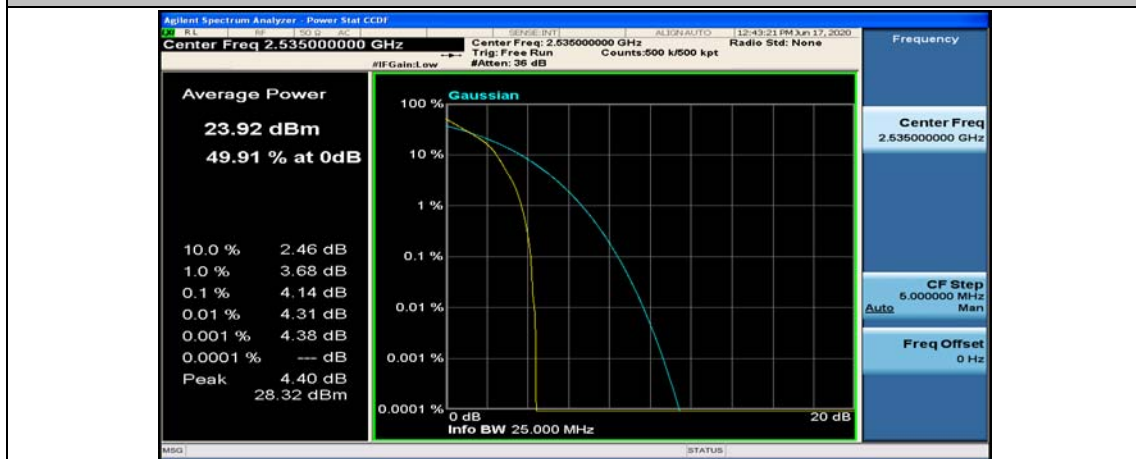
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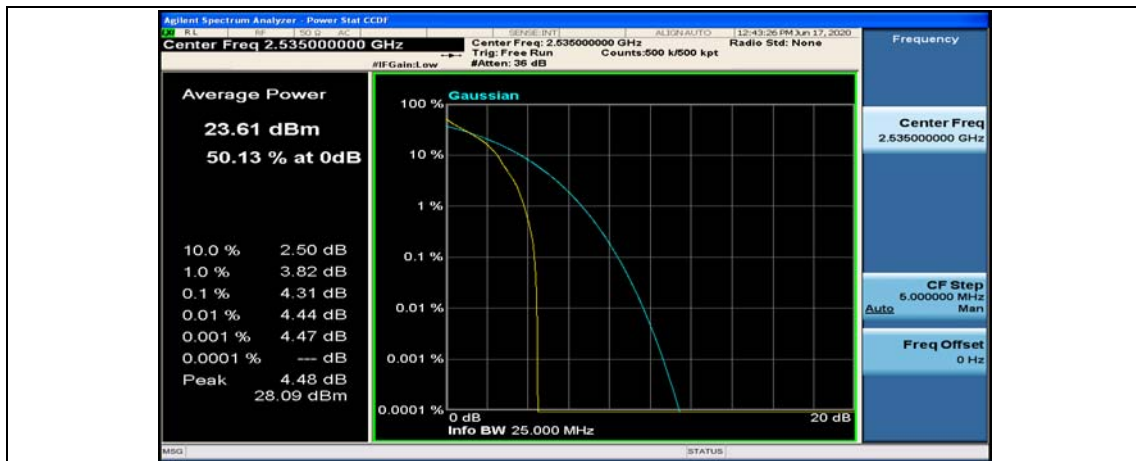
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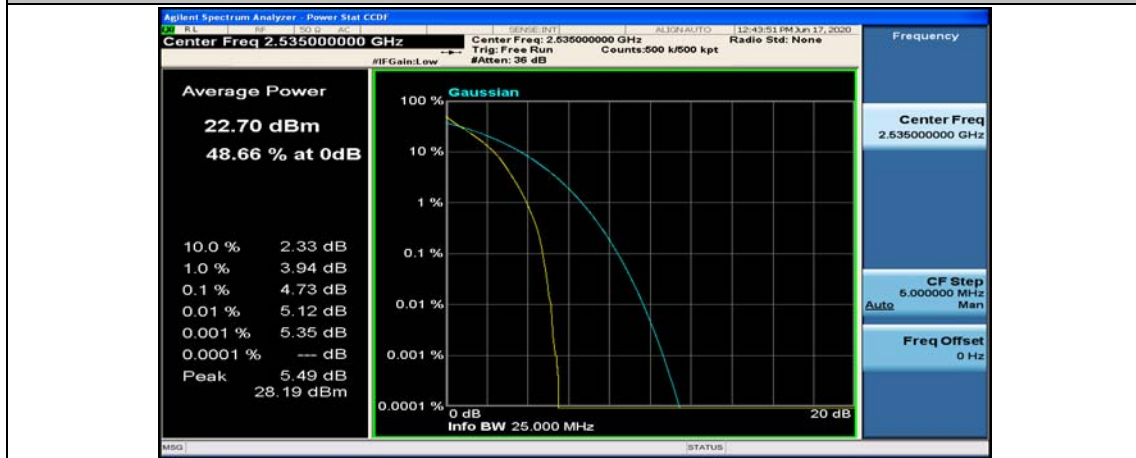
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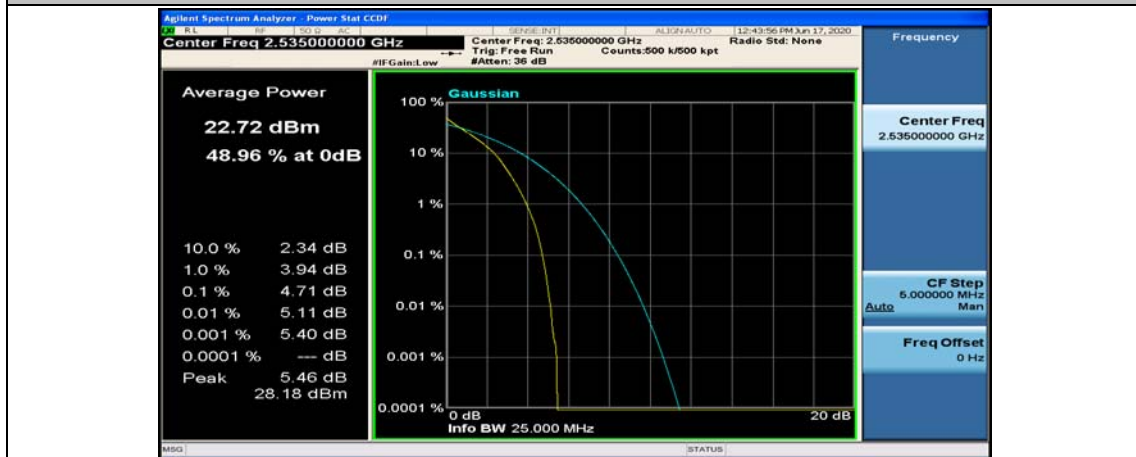
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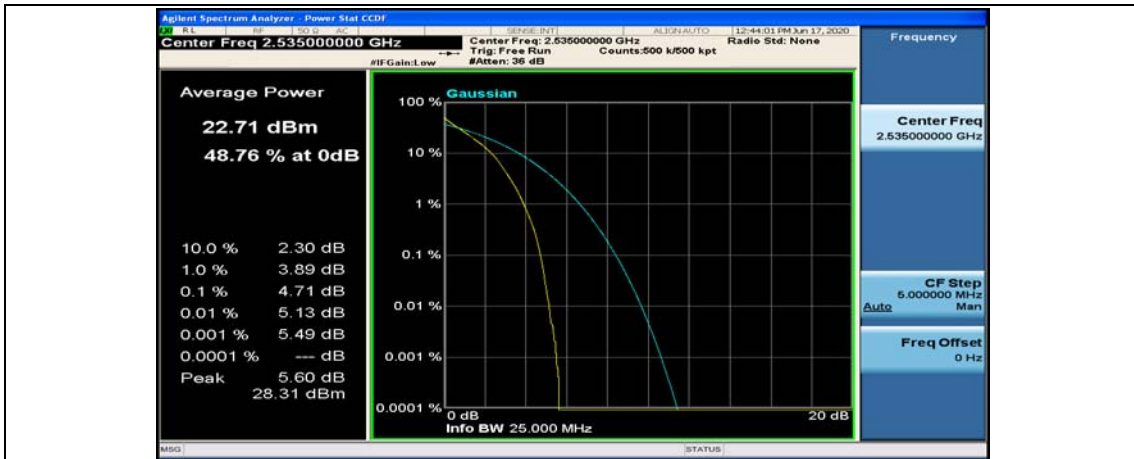
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(Channel Bandwidth: 5 MHz)_MCH_QPSK_12RB#6



(Channel Bandwidth: 5 MHz)_MCH_QPSK_12RB#13



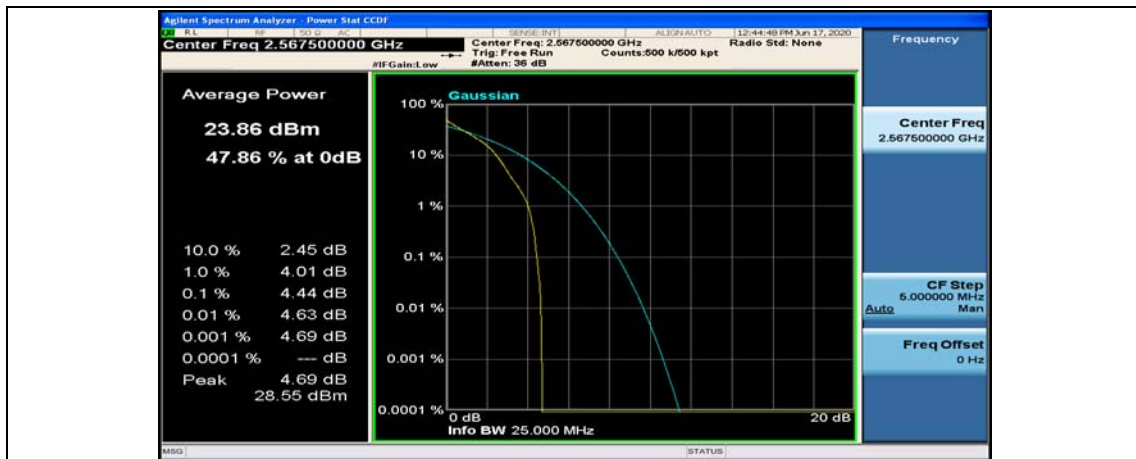
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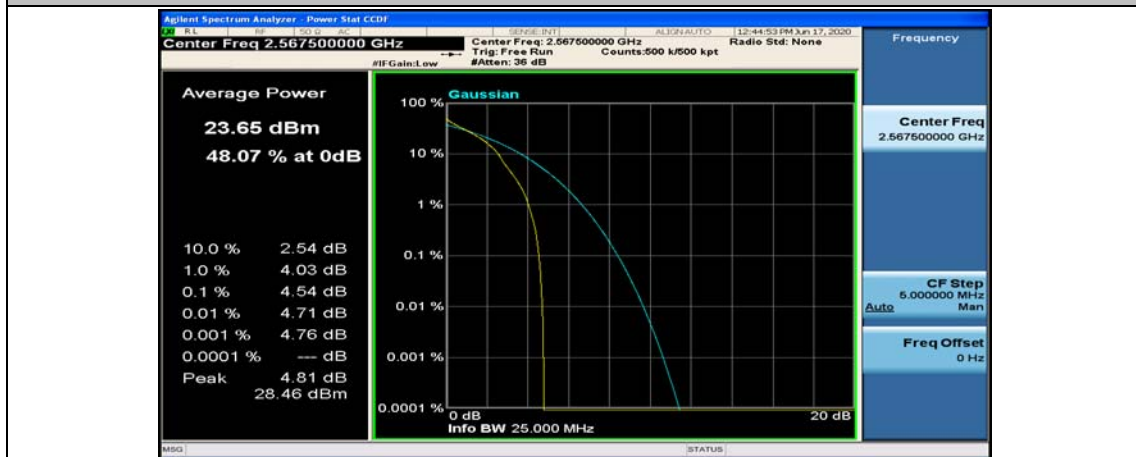
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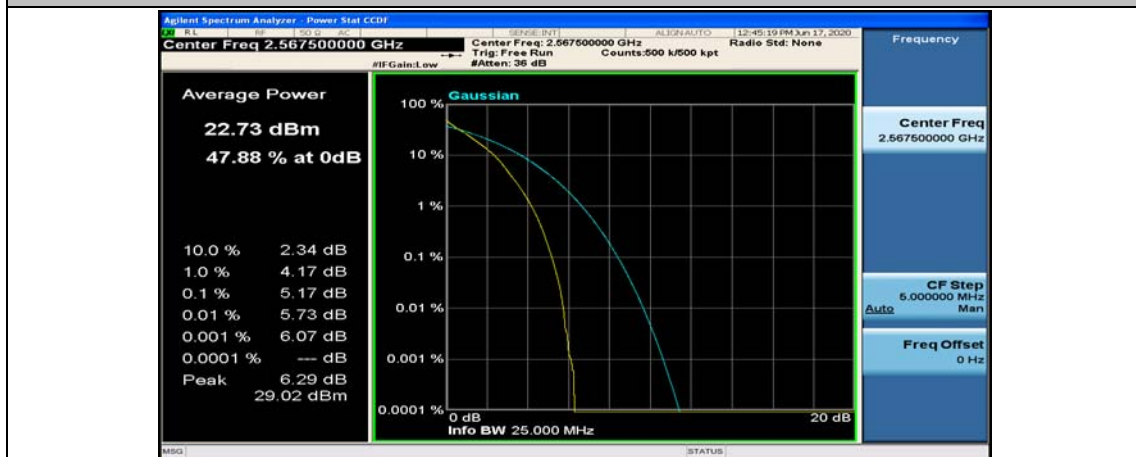
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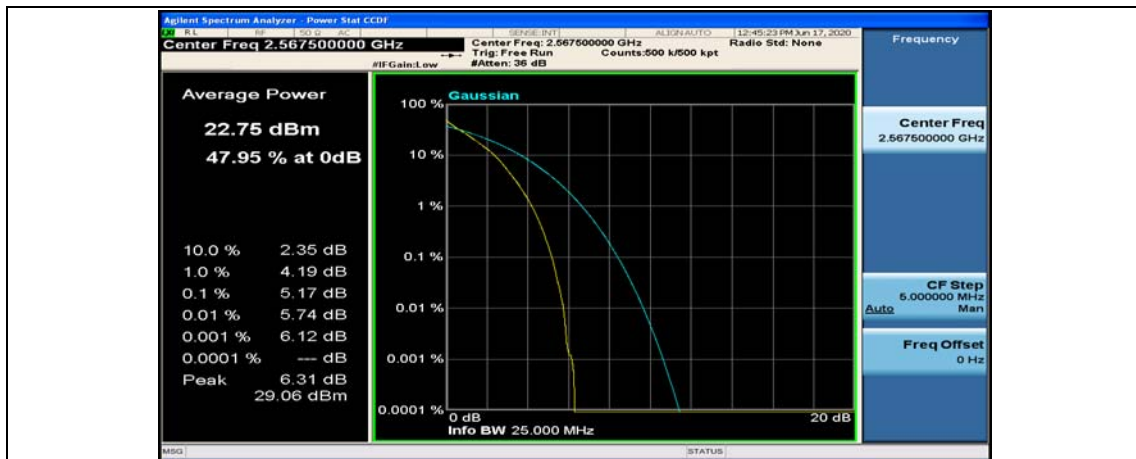
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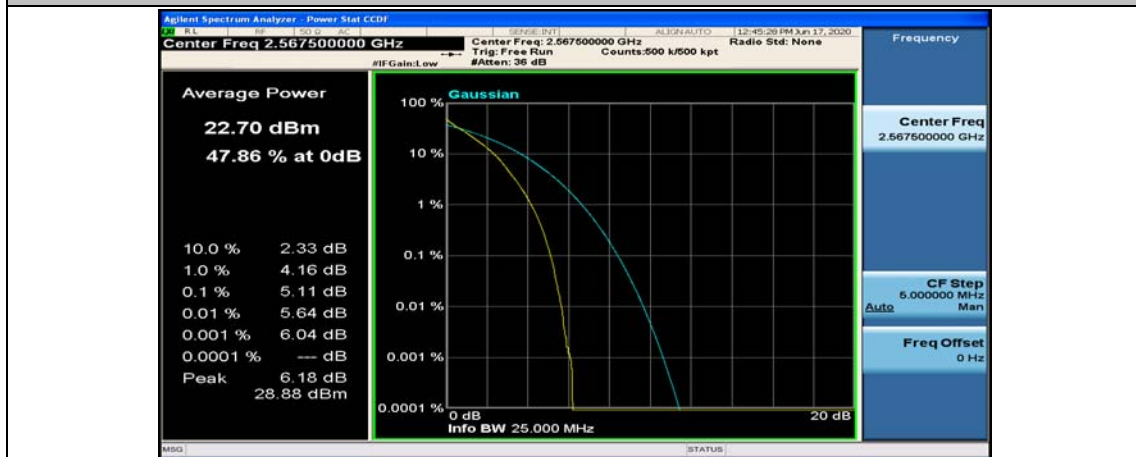
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(Channel Bandwidth: 5 MHz)_HCH_QPSK_12RB#6



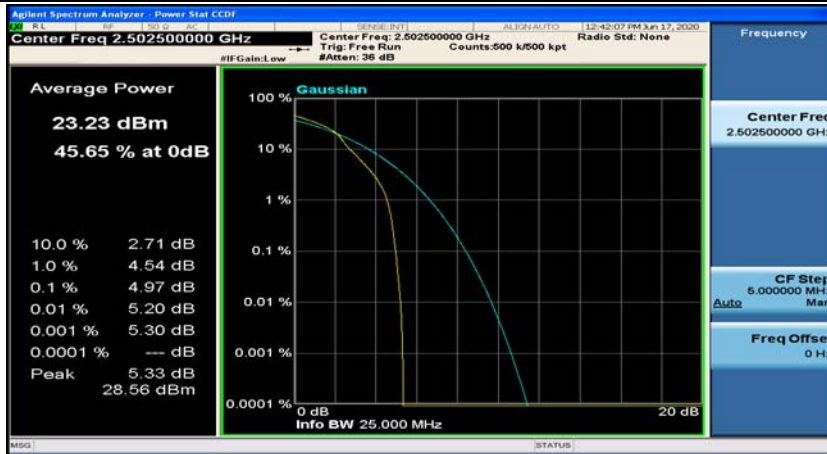
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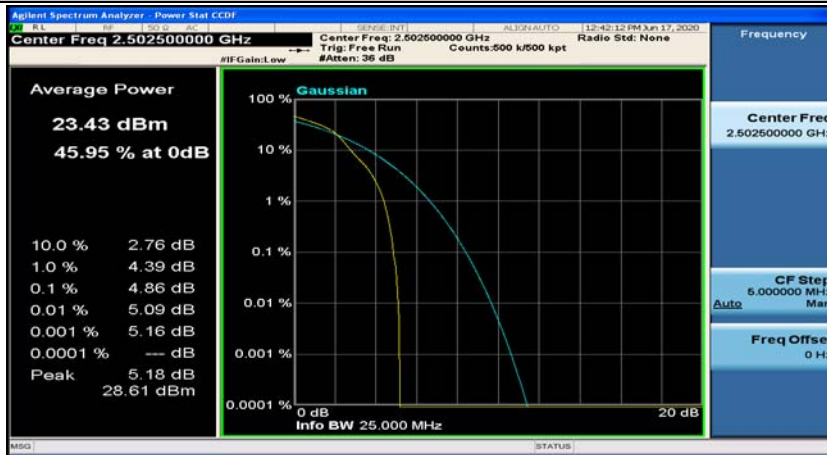
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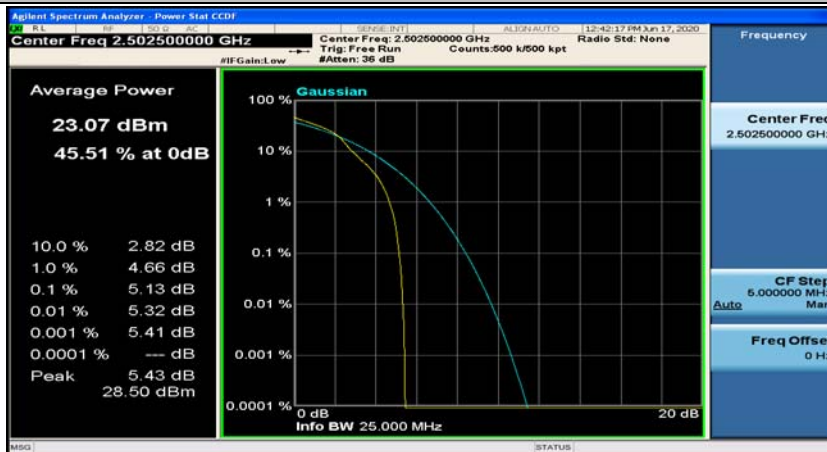
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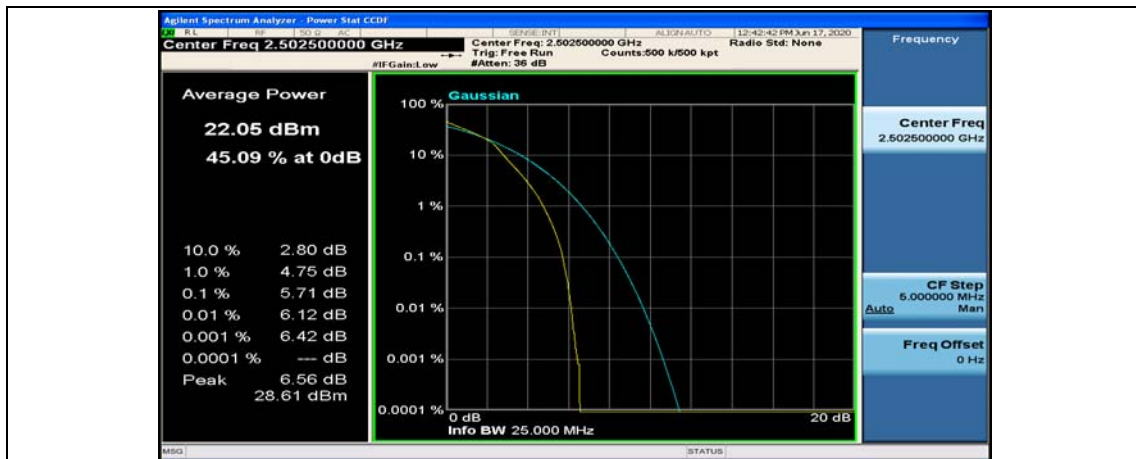
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(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#24



(Channel Bandwidth: 5 MHz)_LCH_16QAM_12RB#0





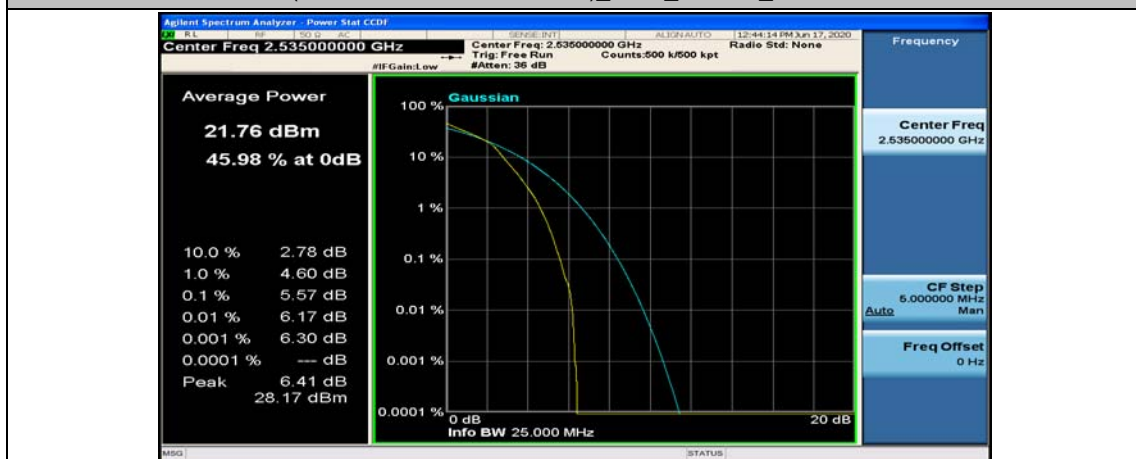
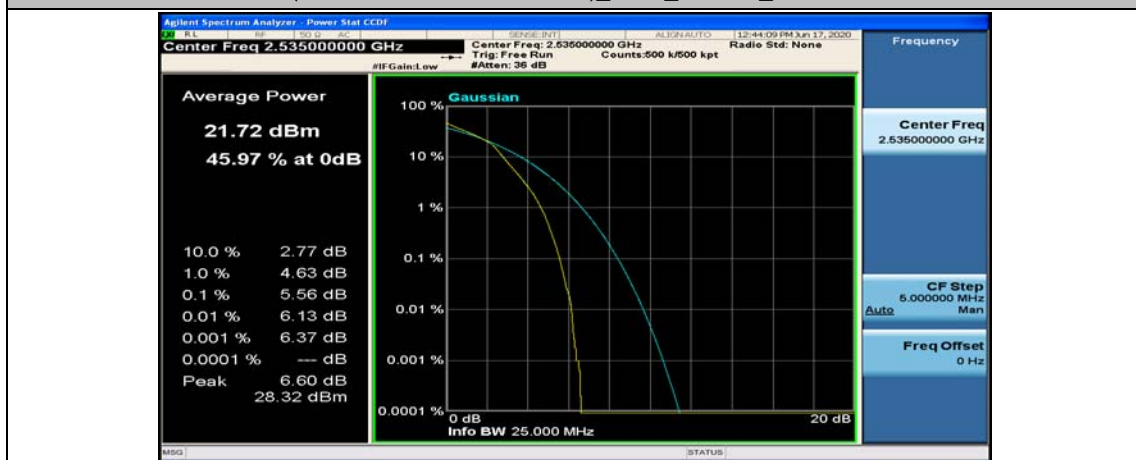
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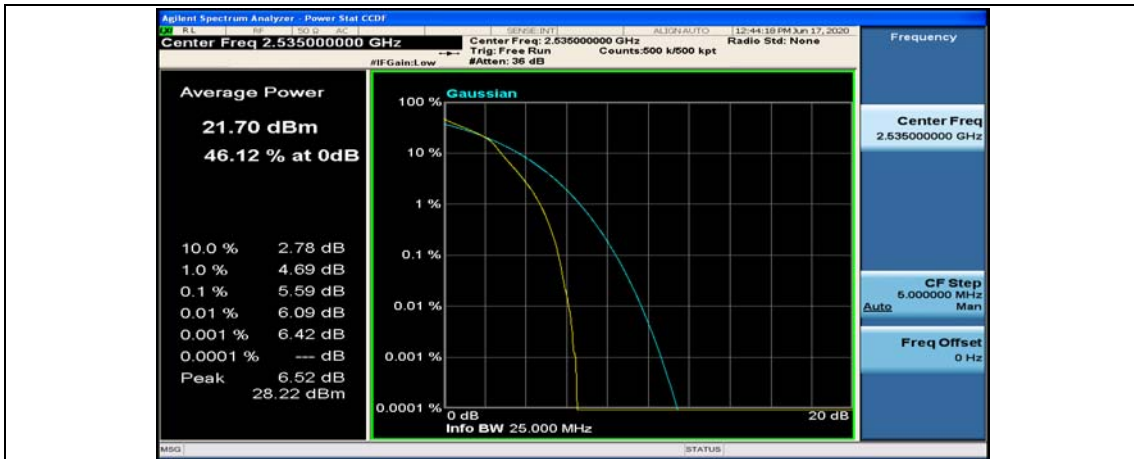


(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#12



(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#24

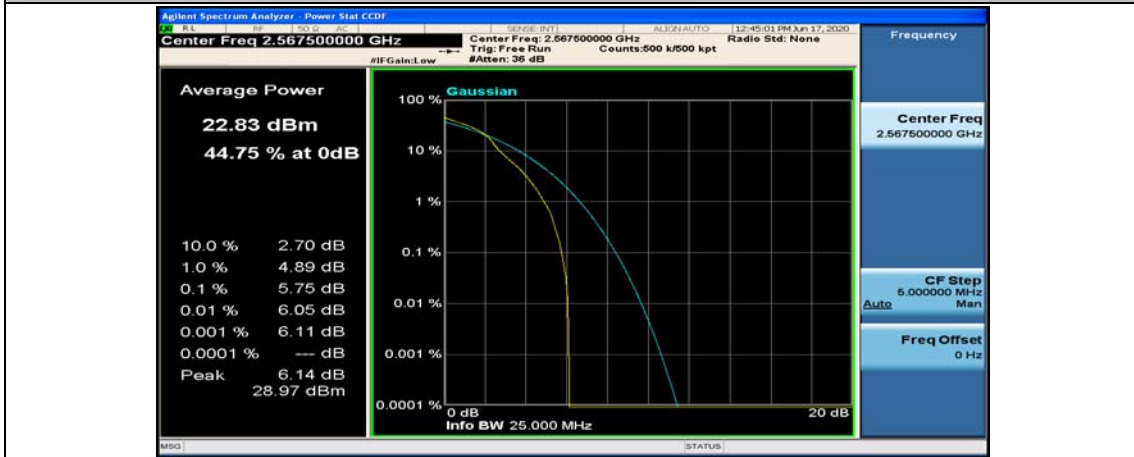




(Channel Bandwidth: 5 MHz)_MCH_16QAM_25RB#0



(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#0



(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12



(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#24



(Channel Bandwidth: 5 MHz)_HCH_16QAM_12RB#0



(Channel Bandwidth: 5 MHz)_HCH_16QAM_12RB#6



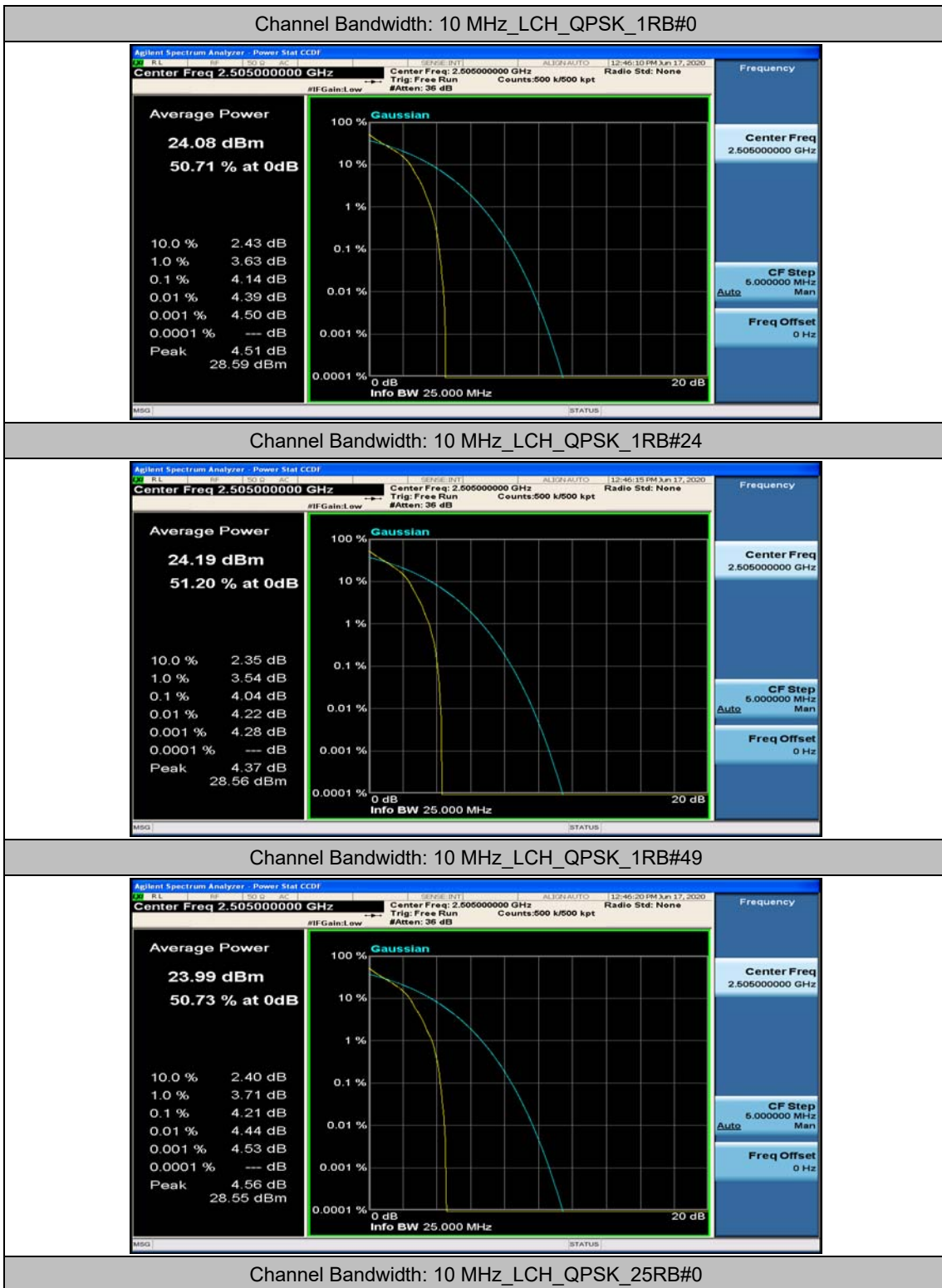
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(Channel Bandwidth: 5 MHz)_HCH_16QAM_25RB#0



Channel Bandwidth: 10 MHz







Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#0

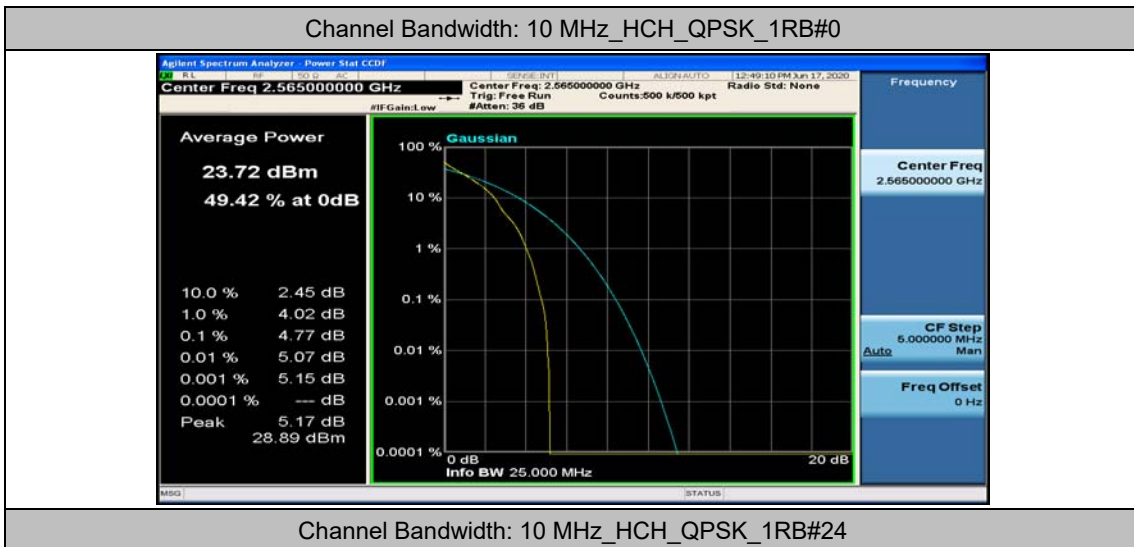


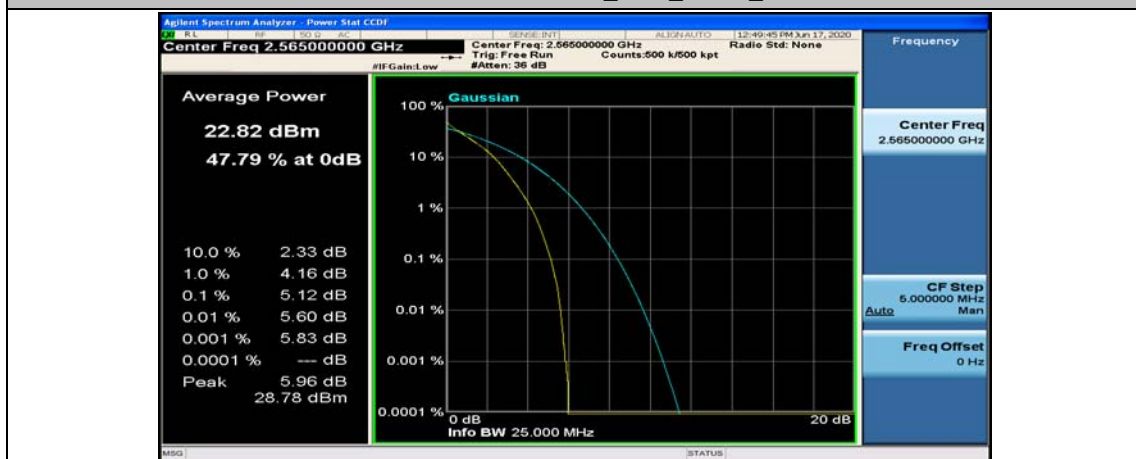
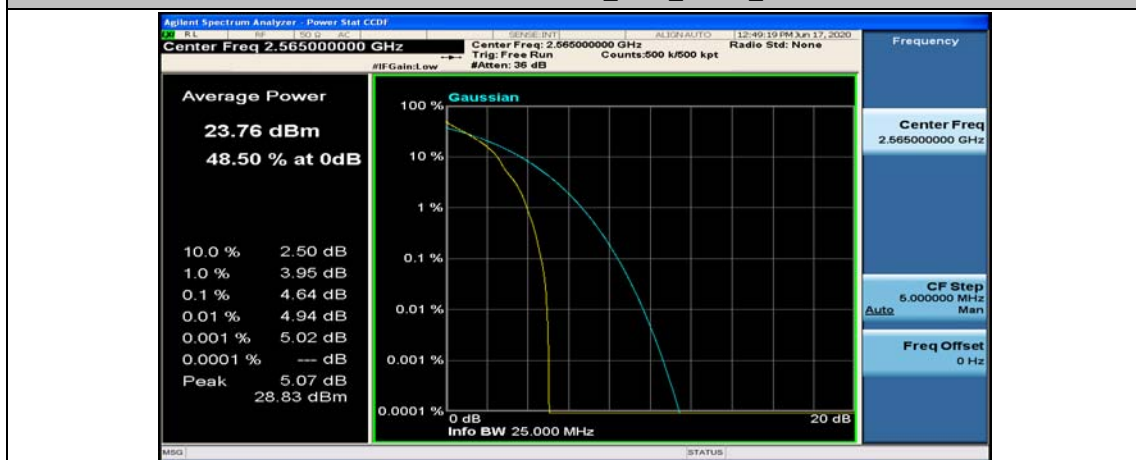
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#24

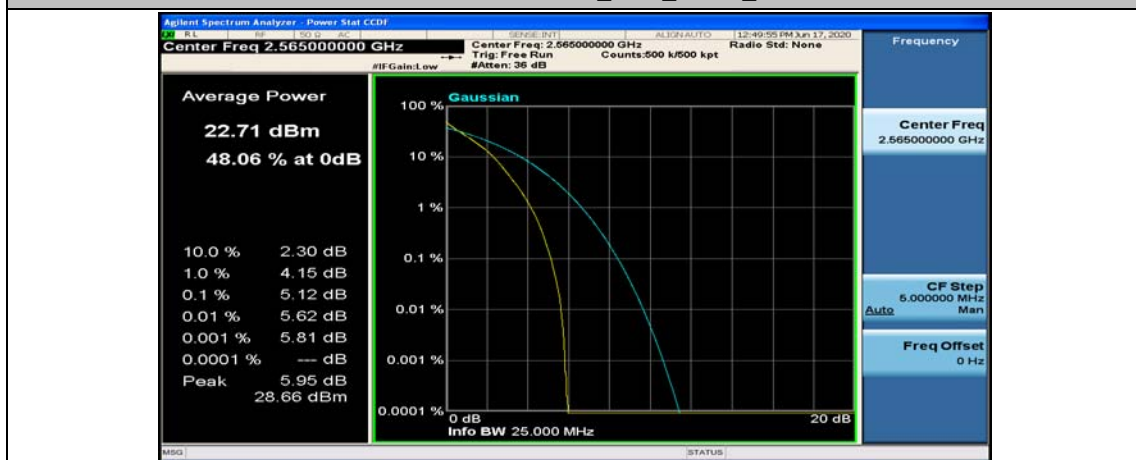


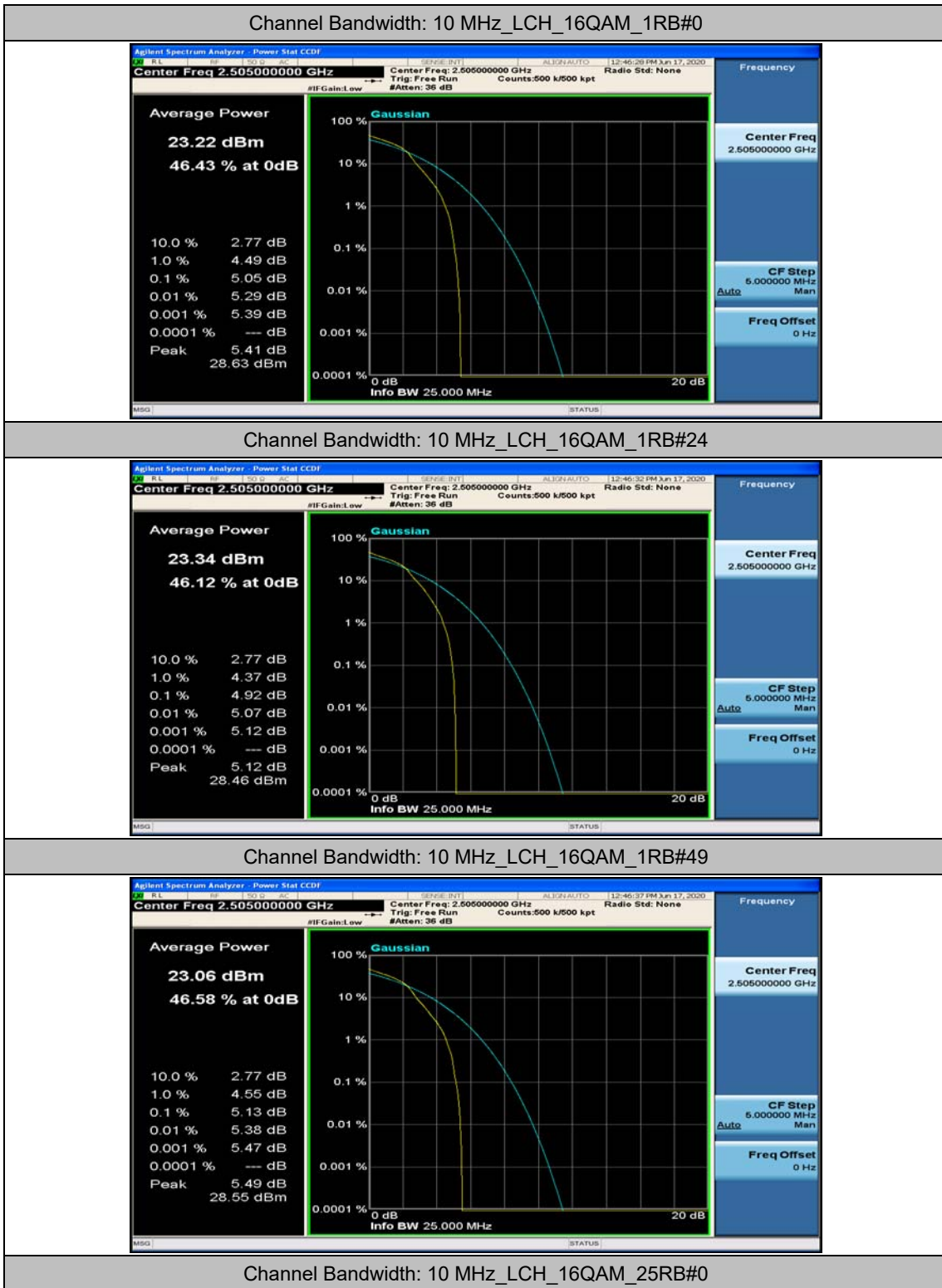
Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#49



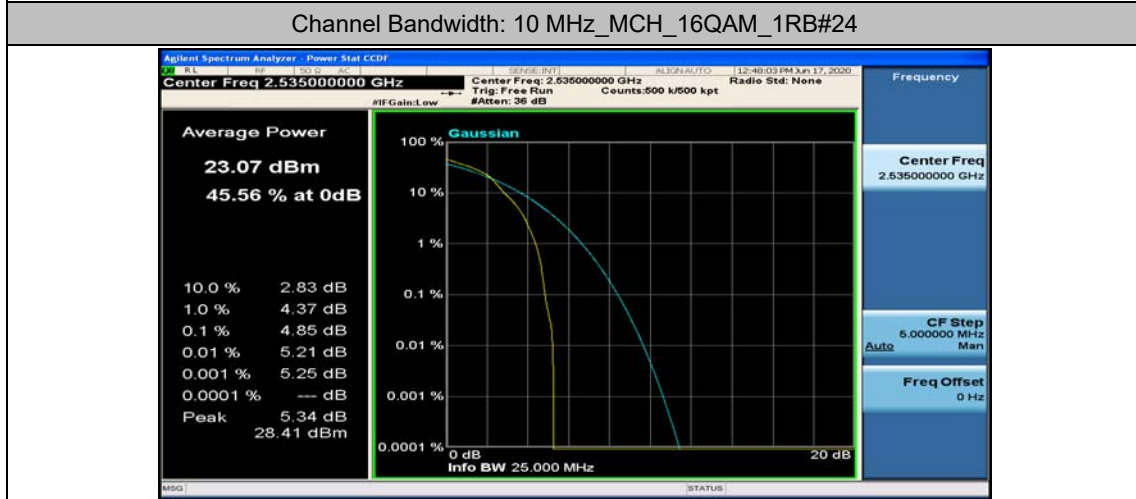
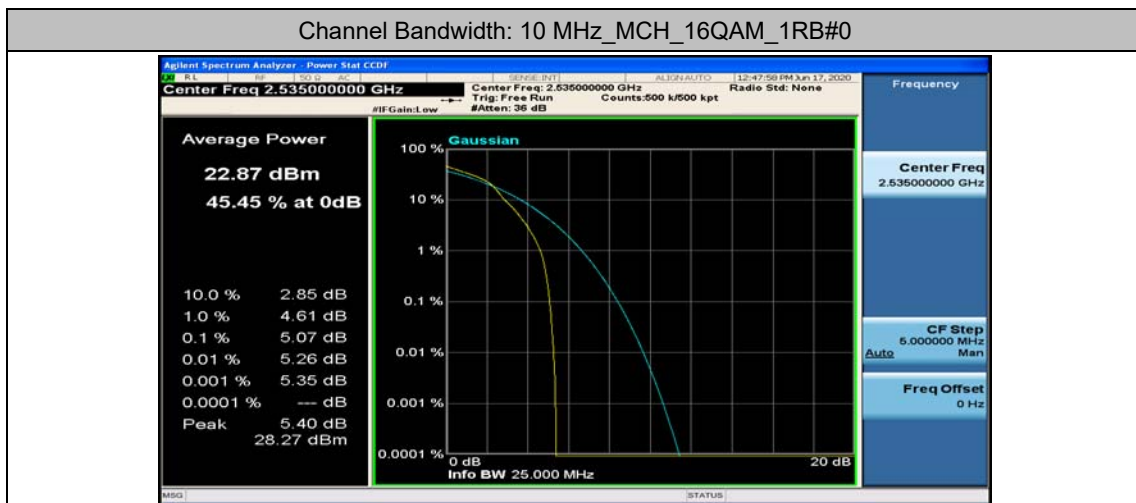




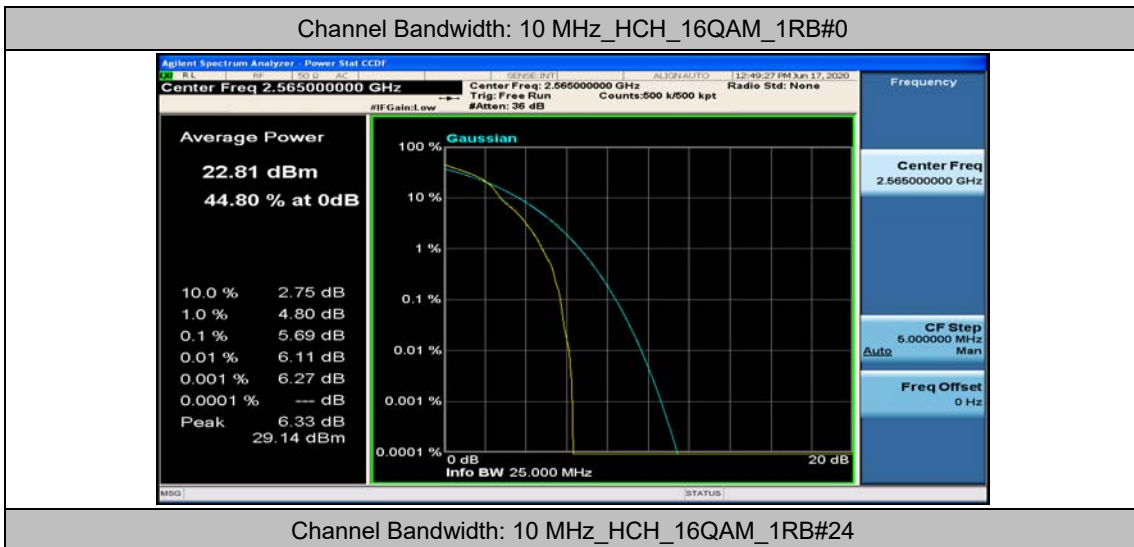




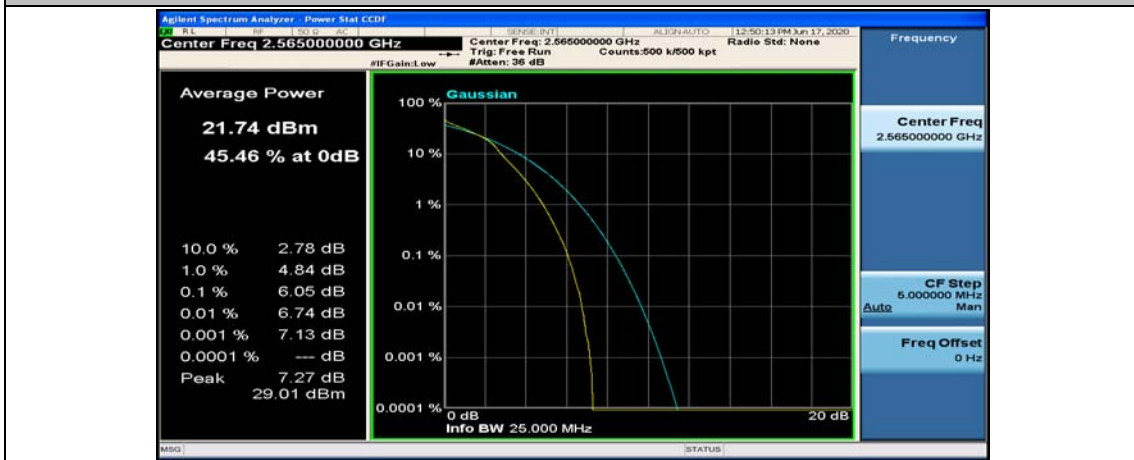
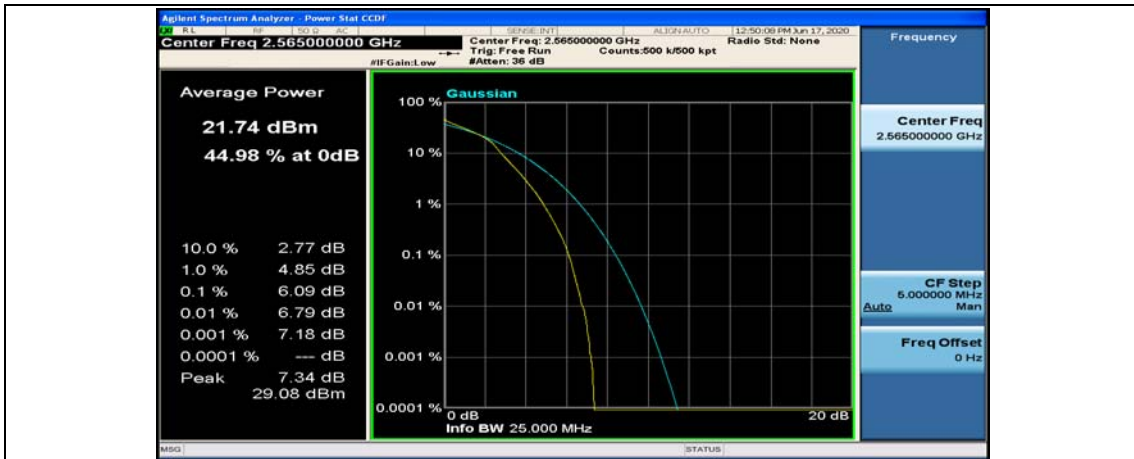




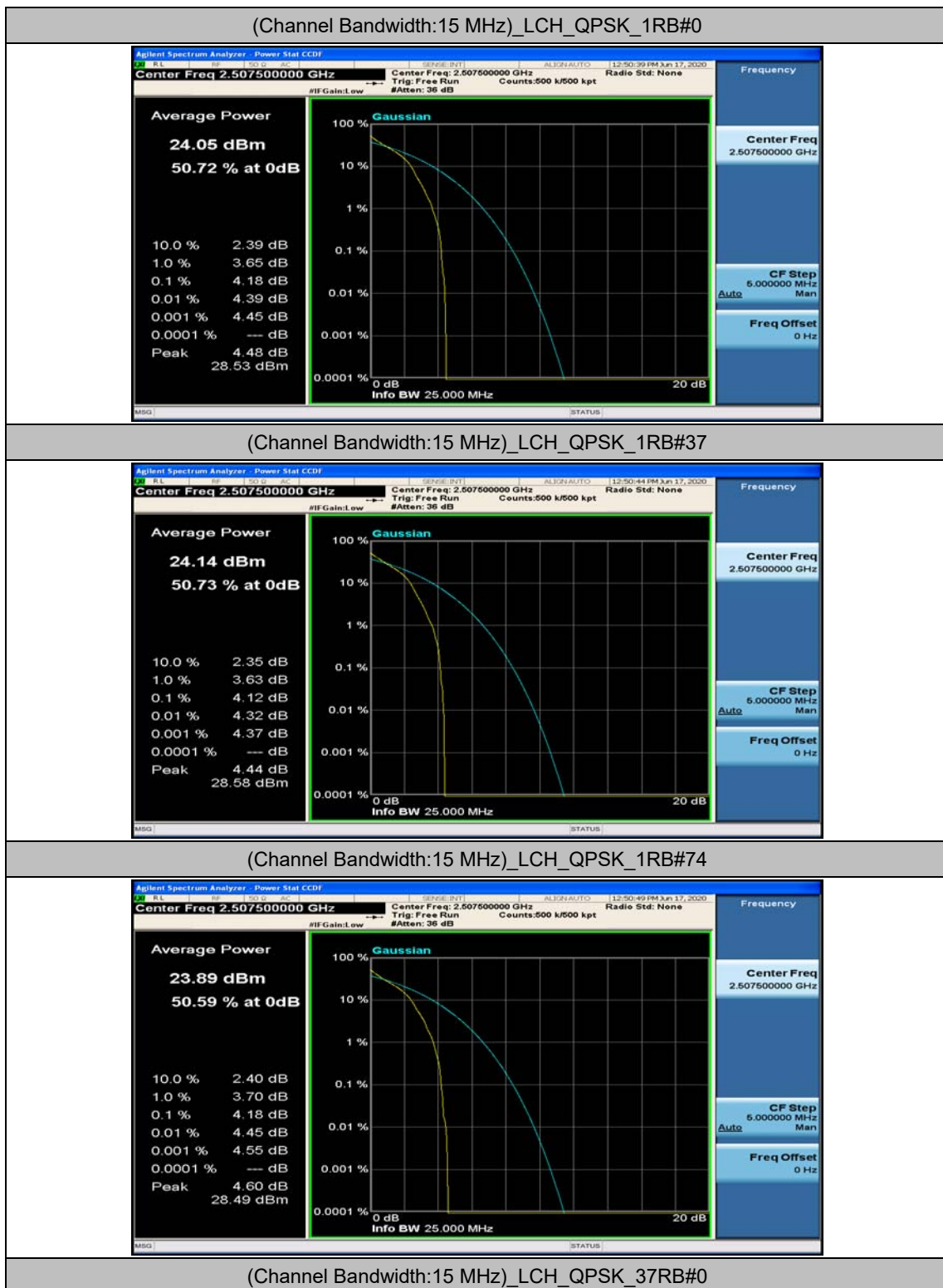








Channel Bandwidth: 15 MHz



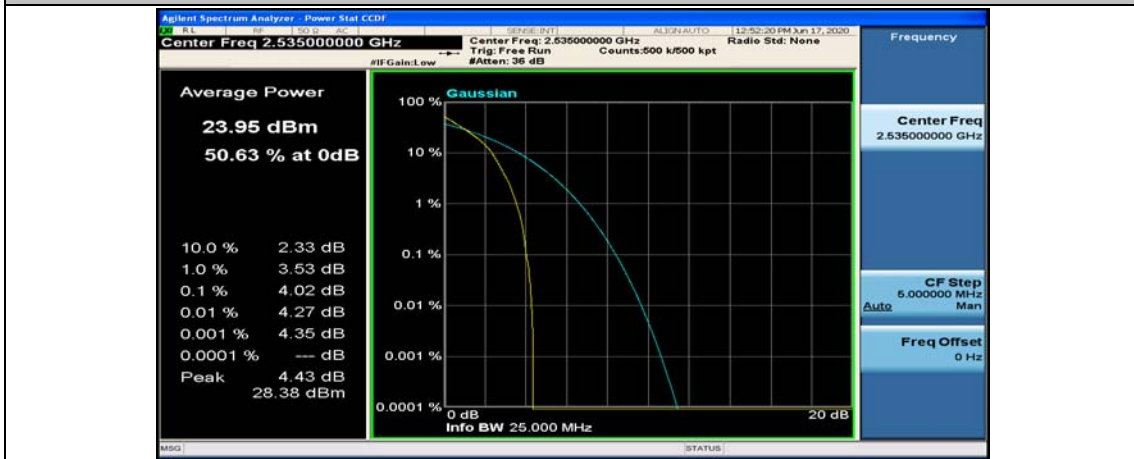




(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#0

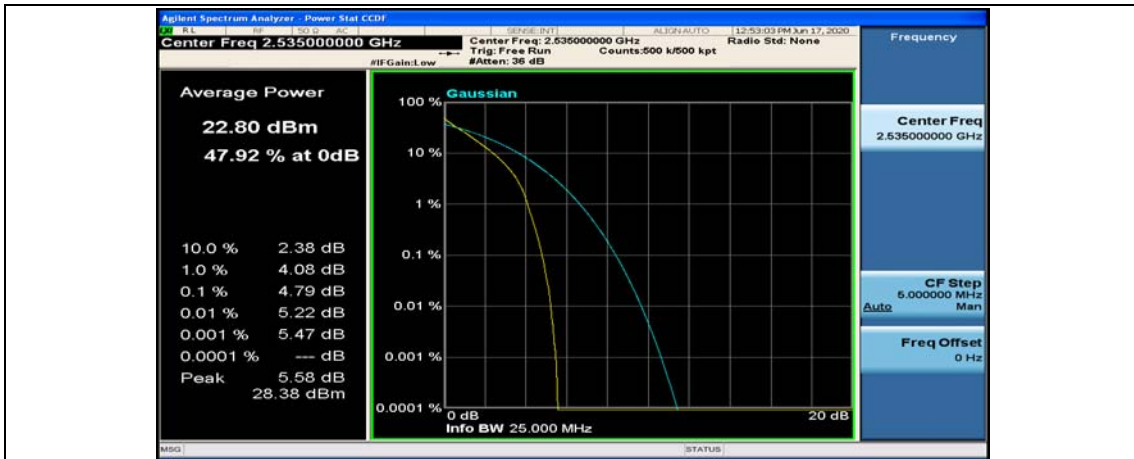


(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#37

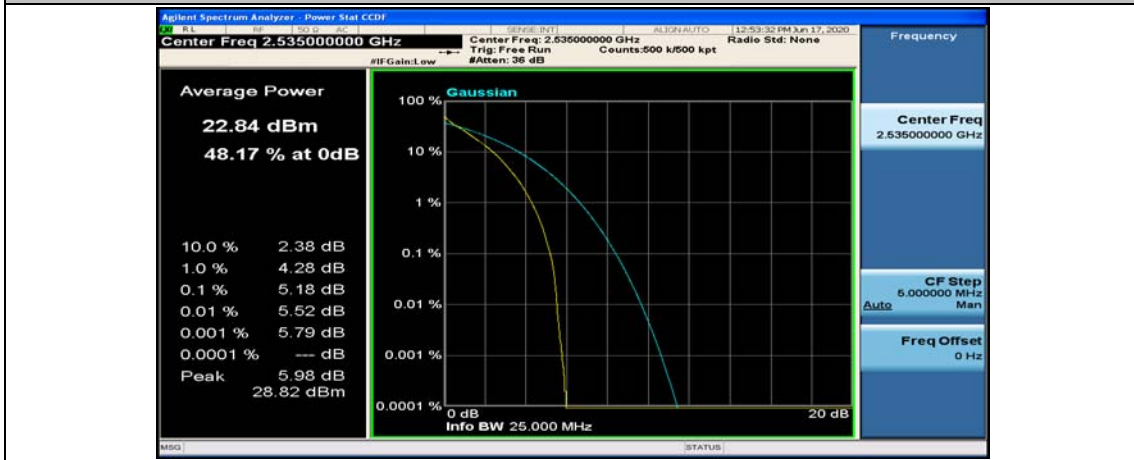


(Channel Bandwidth:15 MHz)_MCH_QPSK_1RB#74

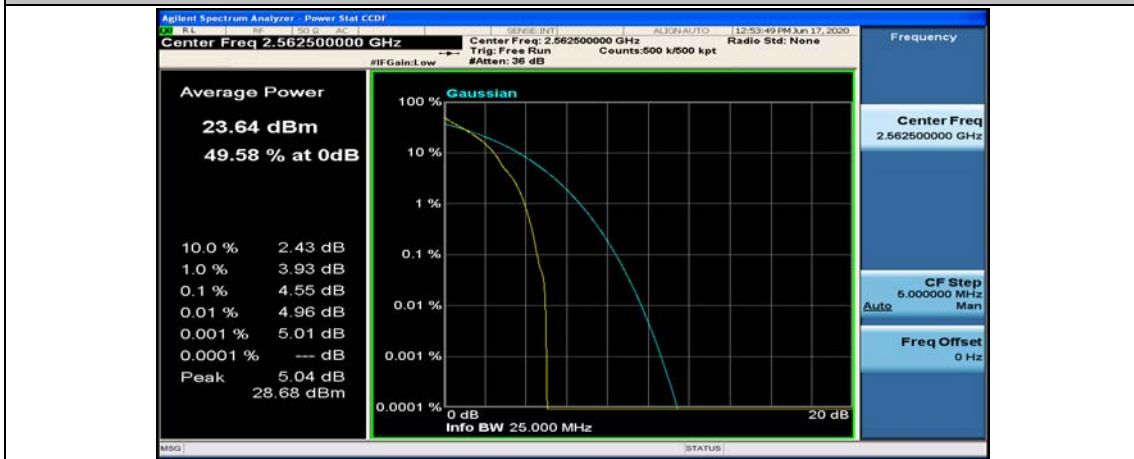




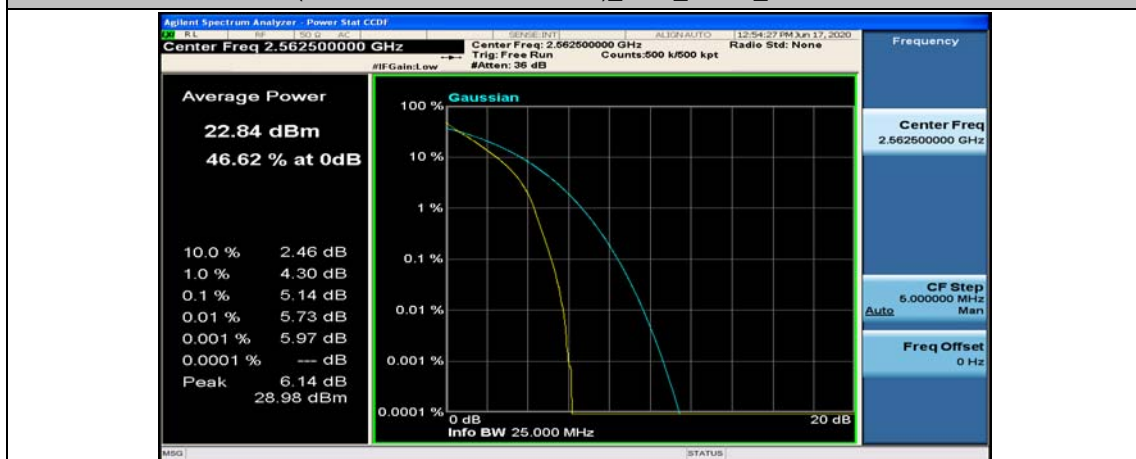
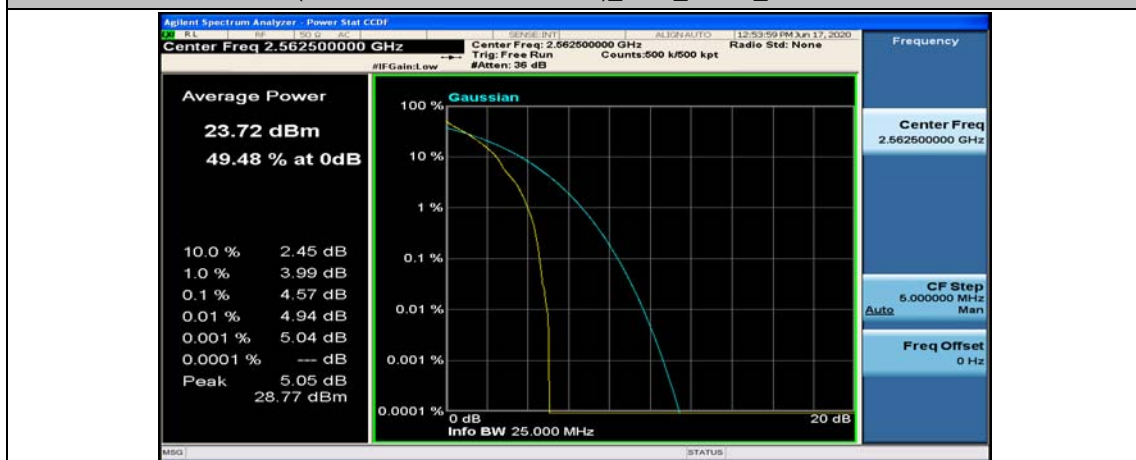
(Channel Bandwidth:15 MHz)_MCH_QPSK_75RB#0

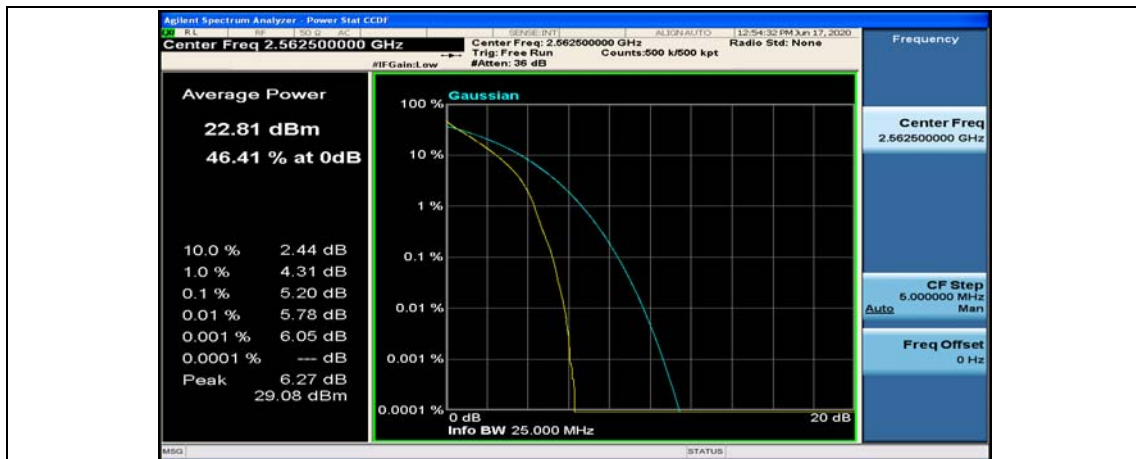


(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#0



(Channel Bandwidth:15 MHz)_HCH_QPSK_1RB#37



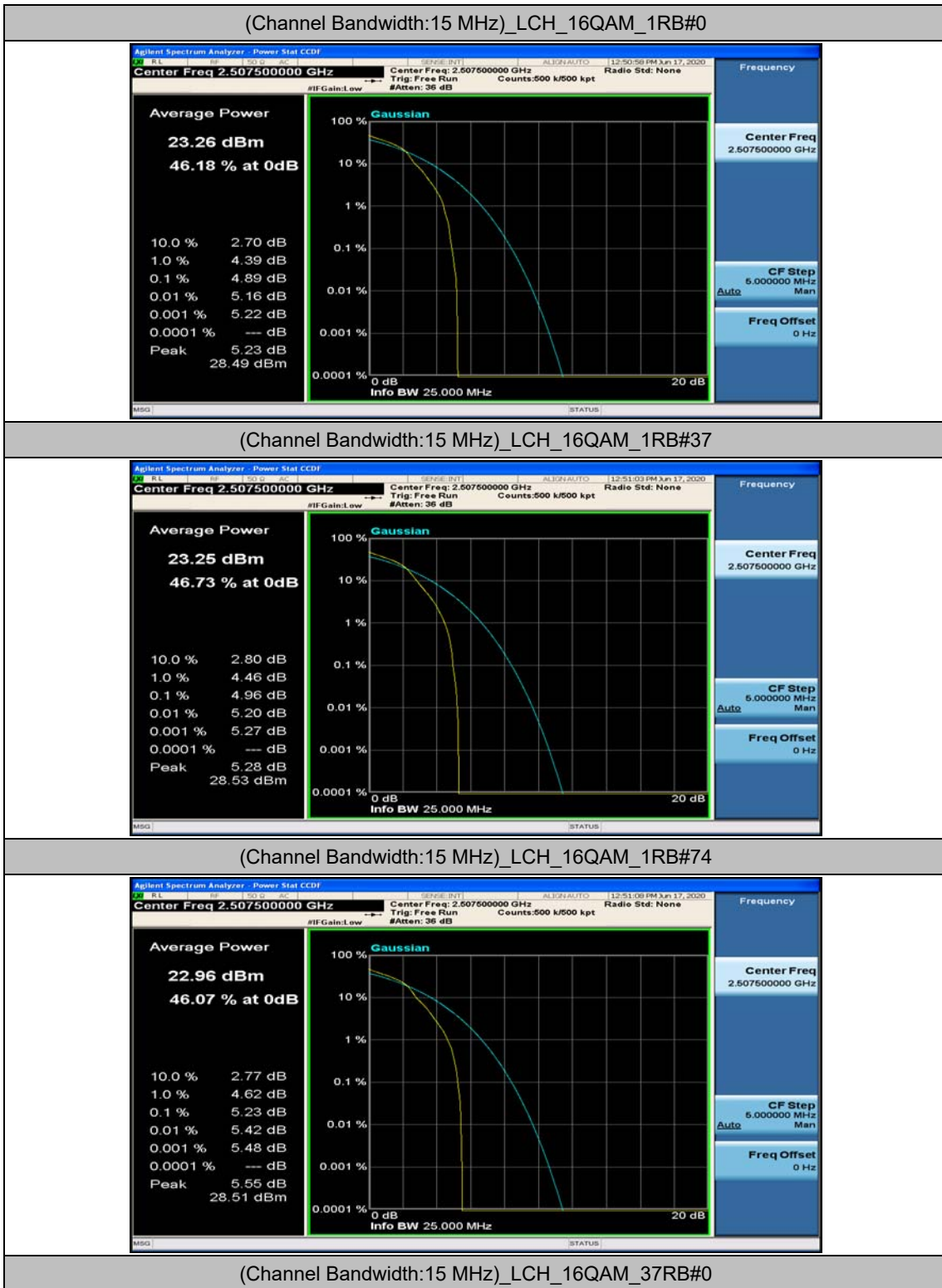


(Channel Bandwidth:15 MHz)_HCH_QPSK_37RB#38



(Channel Bandwidth:15 MHz)_HCH_QPSK_75RB#0







(Channel Bandwidth:15 MHz)_LCH_16QAM_37RB#18



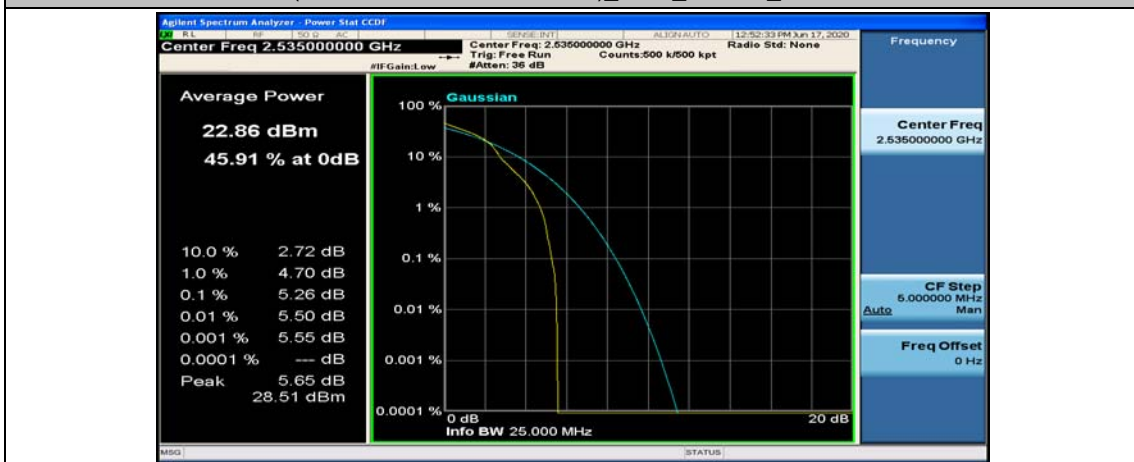
(Channel Bandwidth:15 MHz)_LCH_16QAM_37RB#38



(Channel Bandwidth:15 MHz)_LCH_16QAM_75RB#0



(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#0

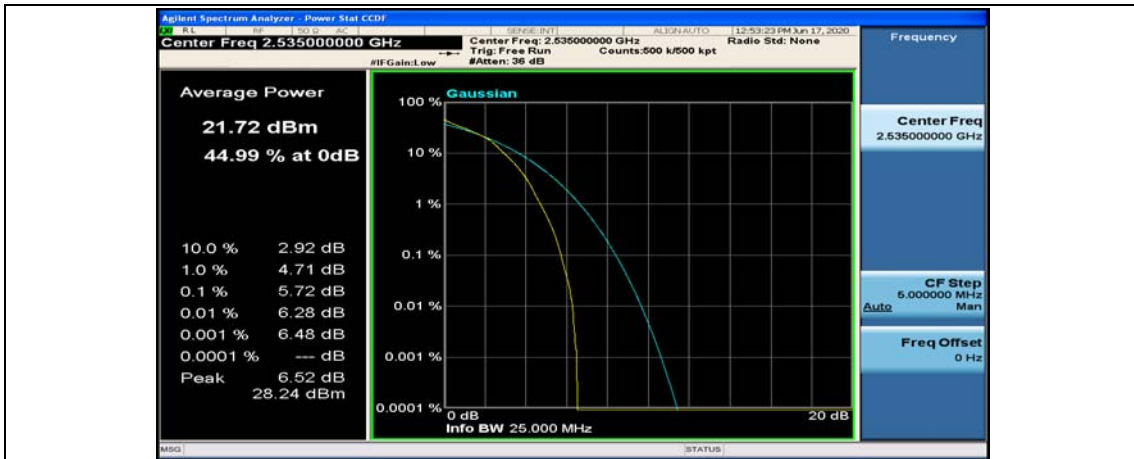


(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#37



(Channel Bandwidth:15 MHz)_MCH_16QAM_1RB#74

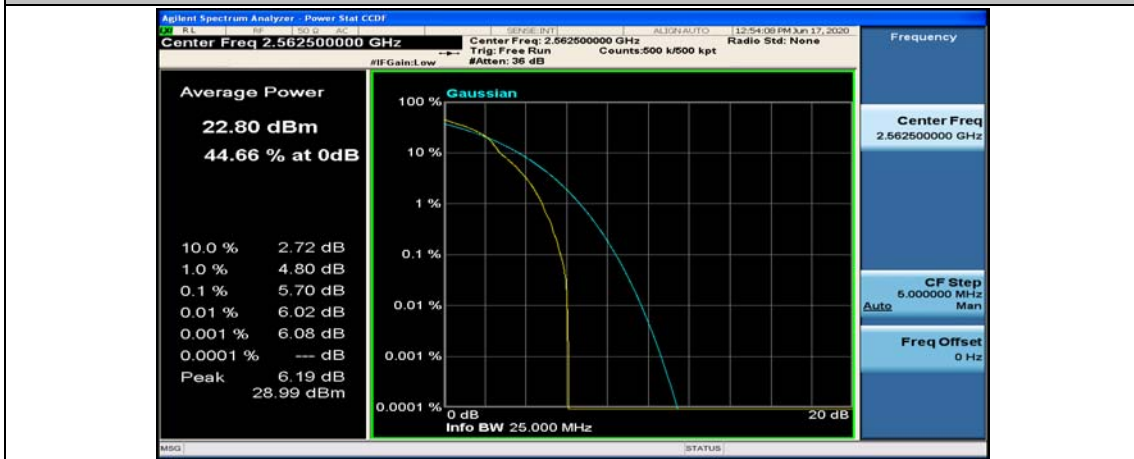




(Channel Bandwidth:15 MHz)_MCH_16QAM_75RB#0



(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#0



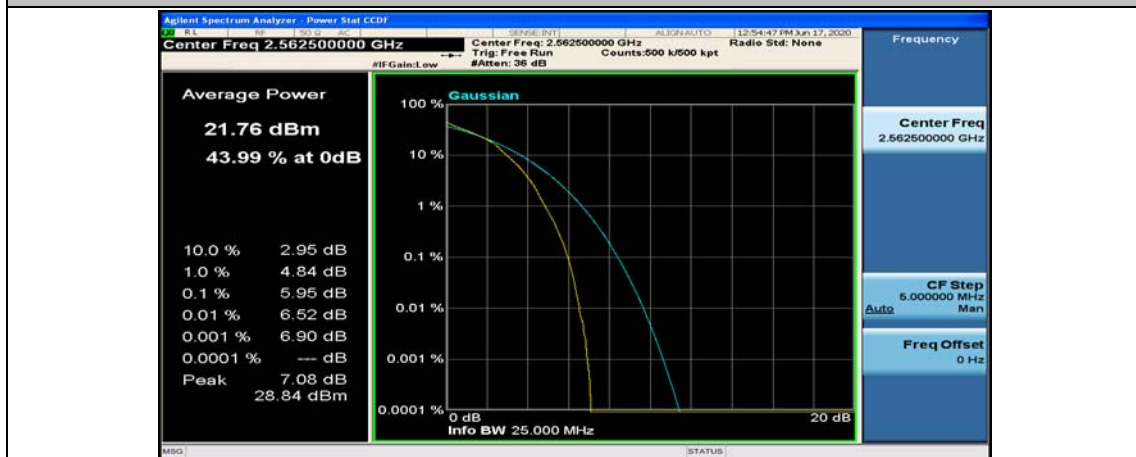
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#37



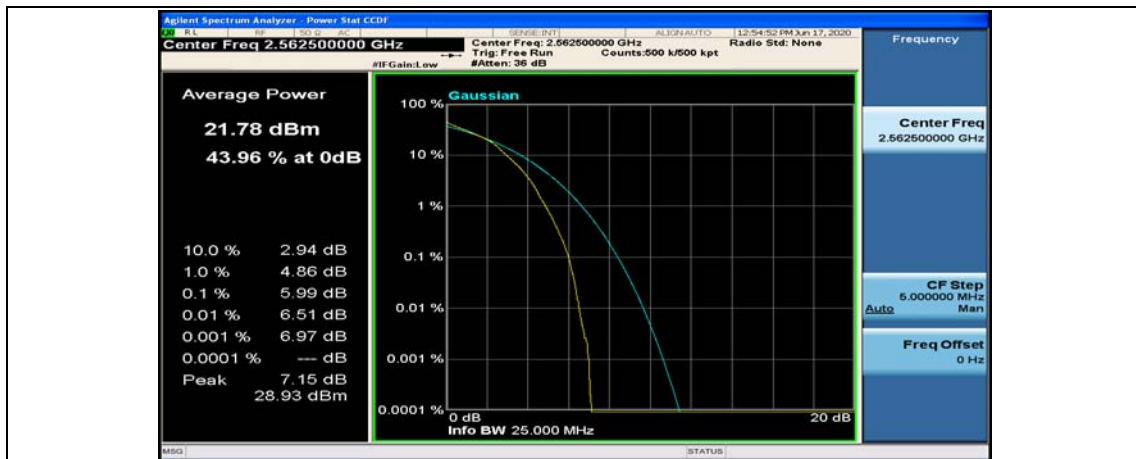
(Channel Bandwidth:15 MHz)_HCH_16QAM_1RB#74



(Channel Bandwidth:15 MHz)_HCH_16QAM_37RB#0



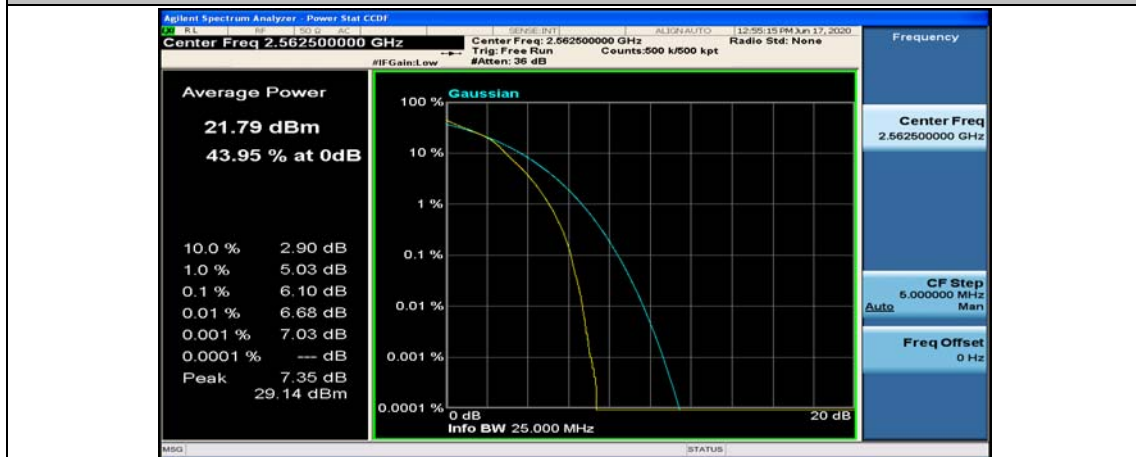
(Channel Bandwidth:15 MHz)_HCH_16QAM_37RB#18



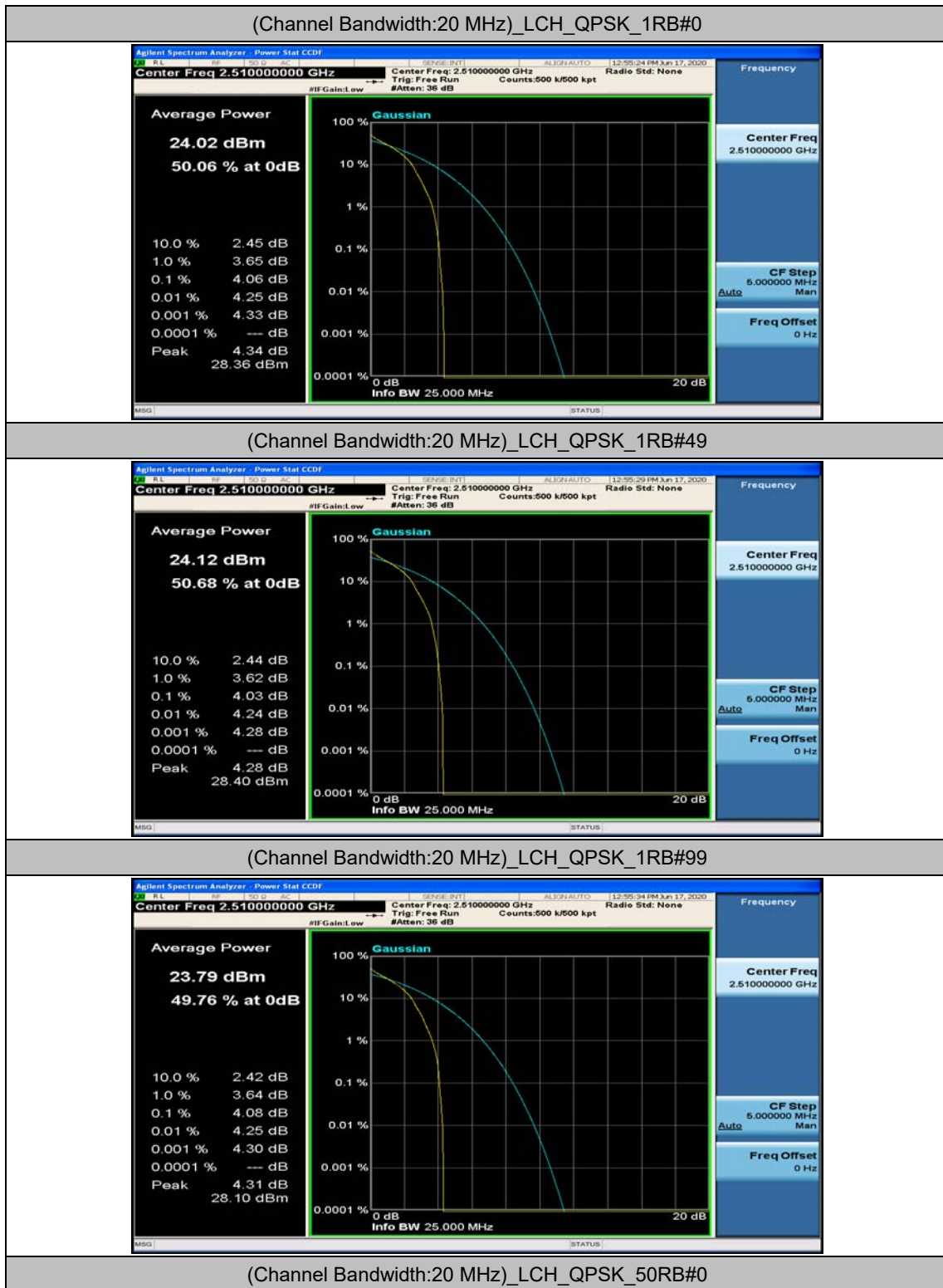
(Channel Bandwidth:15 MHz)_HCH_16QAM_37RB#38

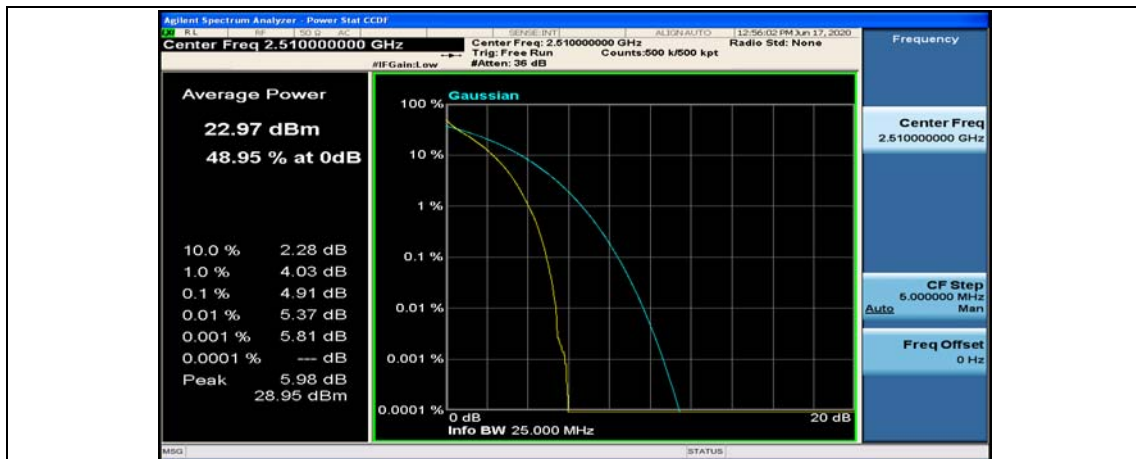


(Channel Bandwidth:15 MHz)_HCH_16QAM_75RB#0



Channel Bandwidth: 20 MHz

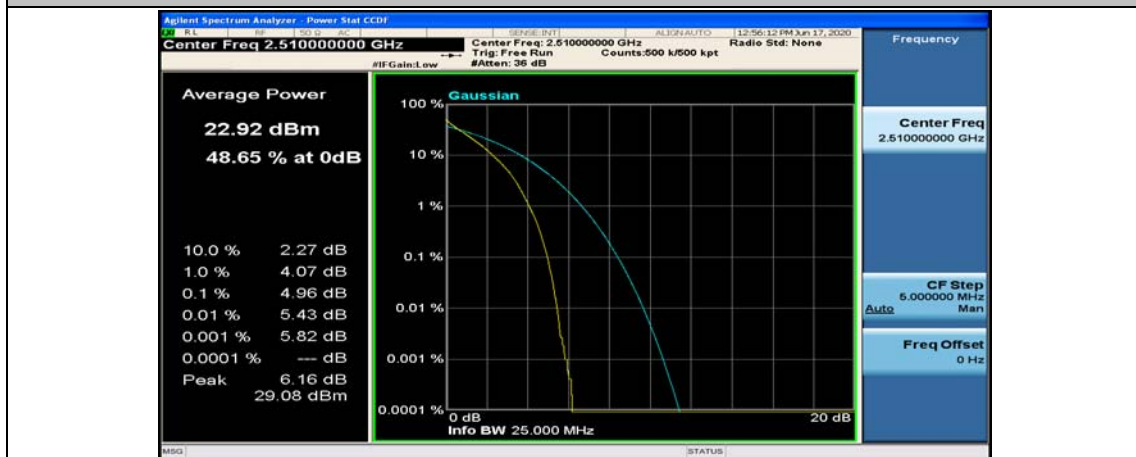




(Channel Bandwidth:20 MHz)_LCH_QPSK_50RB#25



(Channel Bandwidth:20 MHz)_LCH_QPSK_50RB#50



(Channel Bandwidth:20 MHz)_LCH_QPSK_100RB#0