

## **Appendix for Band 38**

Product Name: Mobile Phone  
Model No: KE5k

## 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	22.85	PASS
		1	12	23.06	PASS
		1	24	22.81	PASS
		12	0	21.91	PASS
		12	6	21.91	PASS
		12	13	21.85	PASS
		25	0	21.88	PASS
	MCH	1	0	22.78	PASS
		1	12	22.99	PASS
		1	24	22.75	PASS
		12	0	21.74	PASS
		12	6	21.78	PASS
		12	13	21.79	PASS
		25	0	21.77	PASS
	HCH	1	0	22.81	PASS
		1	12	23.07	PASS
		1	24	22.81	PASS
		12	0	21.87	PASS
		12	6	21.84	PASS
		12	13	21.82	PASS
		25	0	21.81	PASS
16QAM	LCH	1	0	22.01	PASS
		1	12	22.23	PASS
		1	24	22.01	PASS
		12	0	20.94	PASS
		12	6	20.95	PASS
		12	13	20.89	PASS
		25	0	20.90	PASS
	MCH	1	0	22.11	PASS
		1	12	22.30	PASS
		1	24	22.07	PASS
		12	0	20.86	PASS
		12	6	20.88	PASS
		12	13	20.85	PASS

		25	0	20.80	PASS
	HCH	1	0	22.03	PASS
		1	12	22.25	PASS
		1	24	22.04	PASS
		12	0	20.78	PASS
		12	6	20.79	PASS
		12	13	20.77	PASS
		25	0	20.83	PASS

**Channel Bandwidth: 10 MHz**

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	22.86	PASS
		1	24	22.88	PASS
		1	49	22.77	PASS
		25	0	21.91	PASS
		25	12	21.91	PASS
		25	25	21.86	PASS
		50	0	21.89	PASS
	MCH	1	0	22.88	PASS
		1	24	22.94	PASS
		1	49	22.79	PASS
		25	0	21.86	PASS
		25	12	21.88	PASS
		25	25	21.86	PASS
		50	0	21.85	PASS
	HCH	1	0	22.85	PASS
		1	24	22.95	PASS
		1	49	22.84	PASS
		25	0	21.91	PASS
		25	12	21.91	PASS
		25	25	21.86	PASS
		50	0	21.90	PASS
16QAM	LCH	1	0	22.13	PASS
		1	24	22.14	PASS
		1	49	22.01	PASS
		25	0	20.94	PASS
		25	12	20.90	PASS
		25	25	20.90	PASS
		50	0	20.89	PASS
	MCH	1	0	22.19	PASS

		1	24	22.20	PASS
		1	49	22.13	PASS
		25	0	20.90	PASS
		25	12	20.91	PASS
		25	25	20.88	PASS
		50	0	20.94	PASS
	HCH	1	0	22.20	PASS
		1	24	22.28	PASS
		1	49	22.21	PASS
		25	0	20.89	PASS
		25	12	20.91	PASS
		25	25	20.86	PASS
		50	0	20.89	PASS

**Channel Bandwidth: 15 MHz**

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	22.86	PASS
		1	37	23.04	PASS
		1	74	22.74	PASS
		37	0	21.93	PASS
		37	18	21.89	PASS
		37	38	21.86	PASS
		75	0	21.91	PASS
	MCH	1	0	22.83	PASS
		1	37	23.00	PASS
		1	74	22.72	PASS
		37	0	21.86	PASS
		37	18	21.86	PASS
		37	38	21.86	PASS
		75	0	21.86	PASS
	HCH	1	0	22.79	PASS
		1	37	23.03	PASS
		1	74	22.75	PASS
		37	0	21.92	PASS
		37	18	21.90	PASS
		37	38	21.89	PASS
		75	0	21.89	PASS
16QAM	LCH	1	0	22.05	PASS
		1	37	22.29	PASS
		1	74	21.95	PASS

		37	0	20.88	PASS
		37	18	20.86	PASS
		37	38	20.82	PASS
		75	0	20.91	PASS
	MCH	1	0	22.08	PASS
		1	37	22.26	PASS
		1	74	21.98	PASS
		37	0	20.87	PASS
		37	18	20.84	PASS
		37	38	20.82	PASS
		75	0	20.86	PASS
	HCH	1	0	22.14	PASS
		1	37	22.39	PASS
		1	74	22.13	PASS
		37	0	20.84	PASS
		37	18	20.83	PASS
		37	38	20.81	PASS
		75	0	20.87	PASS

**Channel Bandwidth: 20 MHz**

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	22.93	PASS
		1	49	23.08	PASS
		1	99	22.65	PASS
		50	0	21.98	PASS
		50	25	21.93	PASS
		50	50	21.88	PASS
		100	0	21.93	PASS
	MCH	1	0	22.80	PASS
		1	49	22.99	PASS
		1	99	22.67	PASS
		50	0	21.84	PASS
		50	25	21.87	PASS
		50	50	21.79	PASS
		100	0	21.82	PASS
	HCH	1	0	22.63	PASS
		1	49	22.89	PASS
		1	99	22.63	PASS
		50	0	21.87	PASS
		50	25	21.85	PASS

		50	50	21.77	PASS
		100	0	21.82	PASS
16QAM	LCH	1	0	22.10	PASS
		1	49	22.22	PASS
		1	99	21.93	PASS
		50	0	20.99	PASS
		50	25	20.92	PASS
		50	50	20.89	PASS
		100	0	20.93	PASS
		MCH	1	0	22.11
	1		49	22.29	PASS
	1		99	22.00	PASS
	50		0	20.90	PASS
	50		25	20.93	PASS
	50		50	20.89	PASS
	100		0	20.87	PASS
	HCH	1	0	21.81	PASS
		1	49	22.05	PASS
		1	99	21.80	PASS
		50	0	20.87	PASS
		50	25	20.86	PASS
		50	50	20.77	PASS
		100	0	20.85	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	8.73	<13	PASS
		1	12	5.59	<13	PASS
		1	24	8.38	<13	PASS
		12	0	9.01	<13	PASS
		12	6	11.81	<13	PASS
		12	13	7.89	<13	PASS
		25	0	8.21	<13	PASS
	MCH	1	0	7.94	<13	PASS
		1	12	6.96	<13	PASS
		1	24	12.56	<13	PASS
		12	0	11.85	<13	PASS
		12	6	11.52	<13	PASS
		12	13	7.68	<13	PASS
		25	0	9.62	<13	PASS
	HCH	1	0	10.8	<13	PASS
		1	12	10.02	<13	PASS
		1	24	9.69	<13	PASS
		12	0	9.08	<13	PASS
		12	6	10.24	<13	PASS
		12	13	9.31	<13	PASS
		25	0	7.18	<13	PASS
16QAM	LCH	1	0	8.07	<13	PASS
		1	12	8.24	<13	PASS
		1	24	7.81	<13	PASS
		12	0	10.42	<13	PASS
		12	6	9.38	<13	PASS
		12	13	10.08	<13	PASS
		25	0	9.51	<13	PASS
	MCH	1	0	8.94	<13	PASS
		1	12	7.96	<13	PASS
		1	24	12.14	<13	PASS
		12	0	8.36	<13	PASS

		12	6	8.95	<13	PASS
		12	13	7.97	<13	PASS
		25	0	9.89	<13	PASS
	HCH	1	0	7.83	<13	PASS
		1	12	10.1	<13	PASS
		1	24	9.27	<13	PASS
		12	0	9.7	<13	PASS
		12	6	8.29	<13	PASS
		12	13	7.31	<13	PASS
		25	0	9.99	<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	7.78	<13	PASS
		1	24	9.43	<13	PASS
		1	49	8.75	<13	PASS
		25	0	7.56	<13	PASS
		25	12	8.38	<13	PASS
		25	25	9.9	<13	PASS
		50	0	9.03	<13	PASS
	MCH	1	0	8.21	<13	PASS
		1	24	9.86	<13	PASS
		1	49	7.63	<13	PASS
		25	0	8.44	<13	PASS
		25	12	8.43	<13	PASS
		25	25	9.29	<13	PASS
		50	0	8.61	<13	PASS
	HCH	1	0	9.82	<13	PASS
		1	24	8.69	<13	PASS
		1	49	10.99	<13	PASS
		25	0	9.19	<13	PASS
		25	12	9.25	<13	PASS
		25	25	9.4	<13	PASS
		50	0	11.77	<13	PASS
16QAM	LCH	1	0	11.65	<13	PASS
		1	24	11.89	<13	PASS
		1	49	8.33	<13	PASS
		25	0	10.58	<13	PASS
		25	12	10.34	<13	PASS



		25	25	9.36	<13	PASS
		50	0	9.27	<13	PASS
	MCH	1	0	12.06	<13	PASS
		1	24	7.39	<13	PASS
		1	49	9.65	<13	PASS
		25	0	12.21	<13	PASS
		25	12	9.64	<13	PASS
		25	25	9.06	<13	PASS
		50	0	10.45	<13	PASS
		HCH	1	0	8.55	<13
	1		24	8.63	<13	PASS
	1		49	11.04	<13	PASS
	25		0	8.73	<13	PASS
	25		12	9.35	<13	PASS
	25		25	7.71	<13	PASS
	50		0	10.27	<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	9.34	<13	PASS
		1	37	6	<13	PASS
		1	74	7.82	<13	PASS
		37	0	8.13	<13	PASS
		37	18	8.37	<13	PASS
		37	38	12.41	<13	PASS
		75	0	7.56	<13	PASS
	MCH	1	0	7.11	<13	PASS
		1	37	8.4	<13	PASS
		1	74	6.35	<13	PASS
		37	0	12.44	<13	PASS
		37	18	9.43	<13	PASS
		37	38	10.76	<13	PASS
		75	0	12.21	<13	PASS
	HCH	1	0	7.52	<13	PASS
		1	37	8.46	<13	PASS
		1	74	10.47	<13	PASS
		37	0	8.33	<13	PASS
		37	18	7.87	<13	PASS
		37	38	8.12	<13	PASS

		75	0	9.7	<13	PASS
16QAM	LCH	1	0	10.23	<13	PASS
		1	37	7.75	<13	PASS
		1	74	11.22	<13	PASS
		37	0	10.51	<13	PASS
		37	18	11.91	<13	PASS
		37	38	10.02	<13	PASS
		75	0	9.16	<13	PASS
	MCH	1	0	7.24	<13	PASS
		1	37	8.31	<13	PASS
		1	74	8.87	<13	PASS
		37	0	10.19	<13	PASS
		37	18	11.85	<13	PASS
		37	38	7.85	<13	PASS
		75	0	9.4	<13	PASS
	HCH	1	0	9.45	<13	PASS
		1	37	9.2	<13	PASS
		1	74	6.18	<13	PASS
		37	0	8.49	<13	PASS
		37	18	8.39	<13	PASS
		37	38	8.14	<13	PASS
		75	0	10.44	<13	PASS

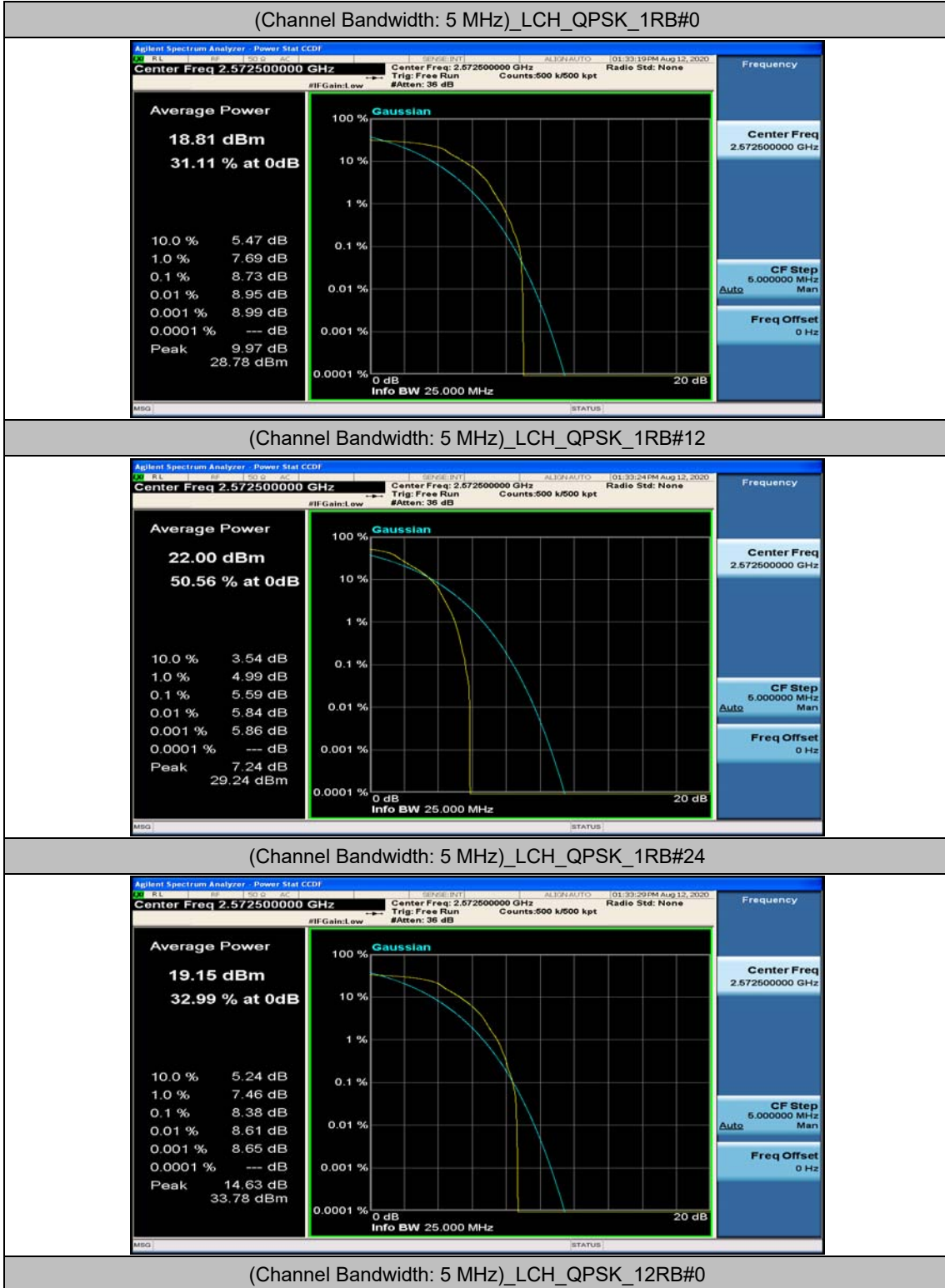
**Channel Bandwidth: 20 MHz**

Channel Bandwidth: 20 MHz						
Modulation	Channel	RB Configuration		Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
		Size	Offset			
QPSK	LCH	1	0	11.41	<13	PASS
		1	49	7.97	<13	PASS
		1	99	9.83	<13	PASS
		50	0	12.05	<13	PASS
		50	25	8.06	<13	PASS
		50	50	12.52	<13	PASS
		100	0	11.55	<13	PASS
	MCH	1	0	7.25	<13	PASS
		1	49	5.48	<13	PASS
		1	99	10.88	<13	PASS
		50	0	9.12	<13	PASS
		50	25	9.99	<13	PASS
		50	50	9.13	<13	PASS
		100	0	10.5	<13	PASS

	HCH	1	0	7.4	<13	PASS
		1	49	8.44	<13	PASS
		1	99	6.13	<13	PASS
		50	0	7.73	<13	PASS
		50	25	8.88	<13	PASS
		50	50	8.98	<13	PASS
		100	0	8	<13	PASS
16QAM	LCH	1	0	7.3	<13	PASS
		1	49	9.5	<13	PASS
		1	99	8.45	<13	PASS
		50	0	10.49	<13	PASS
		50	25	10.61	<13	PASS
		50	50	8.97	<13	PASS
		100	0	8.09	<13	PASS
	MCH	1	0	7	<13	PASS
		1	49	9.49	<13	PASS
		1	99	9.42	<13	PASS
		50	0	8.7	<13	PASS
		50	25	8.31	<13	PASS
		50	50	9.44	<13	PASS
		100	0	9.57	<13	PASS
	HCH	1	0	10.22	<13	PASS
		1	49	8.08	<13	PASS
		1	99	7.58	<13	PASS
		50	0	10.8	<13	PASS
		50	25	8.06	<13	PASS
		50	50	9.36	<13	PASS
		100	0	11.59	<13	PASS

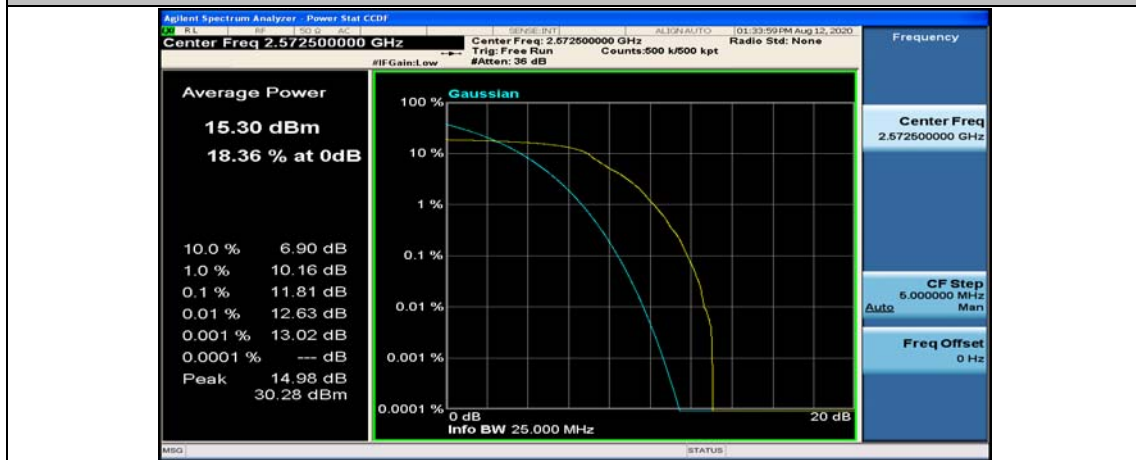
## Test Graphs

### Channel Bandwidth: 5 MHz





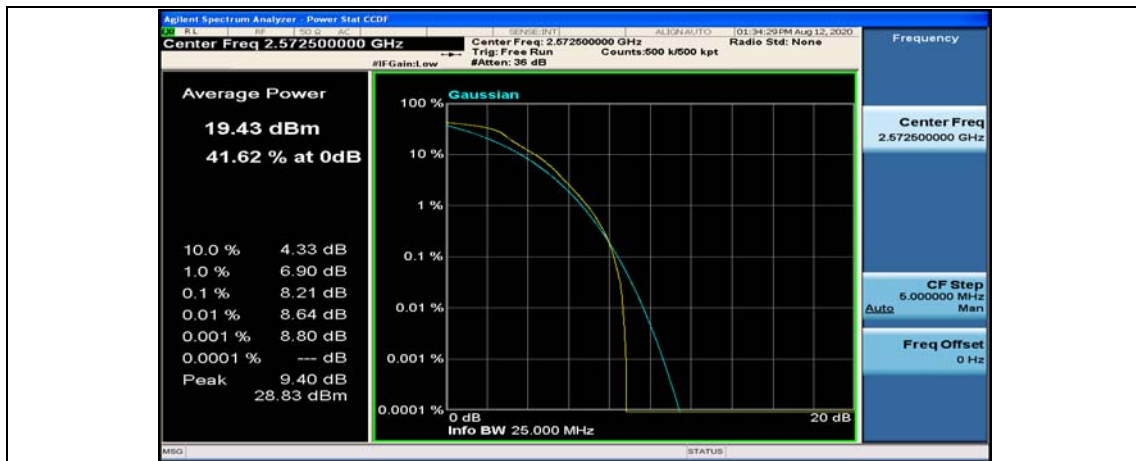
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(Channel Bandwidth: 5 MHz)\_LCH\_QPSK\_12RB#13



(Channel Bandwidth: 5 MHz)\_LCH\_QPSK\_25RB#0



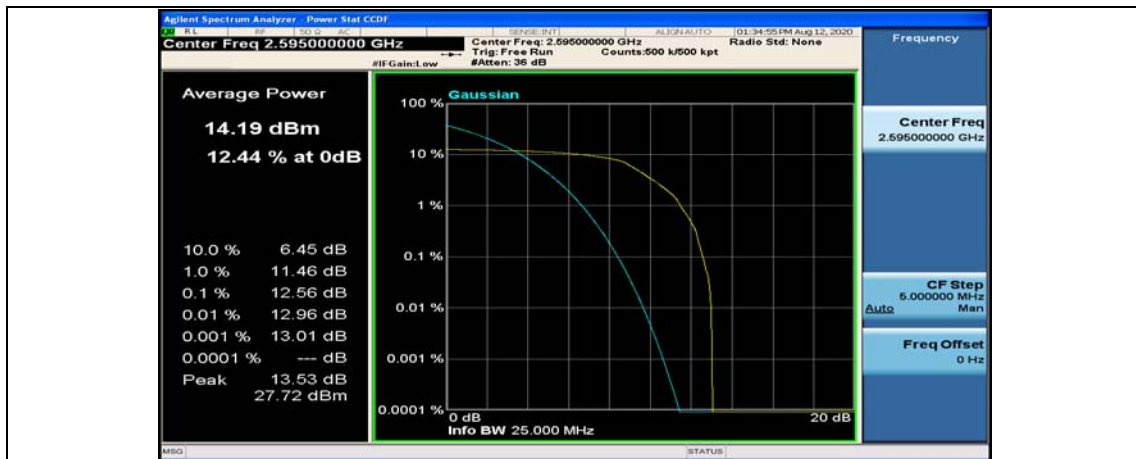
(Channel Bandwidth: 5 MHz)\_MCH\_QPSK\_1RB#0



(Channel Bandwidth: 5 MHz)\_MCH\_QPSK\_1RB#12



(Channel Bandwidth: 5 MHz)\_MCH\_QPSK\_1RB#24



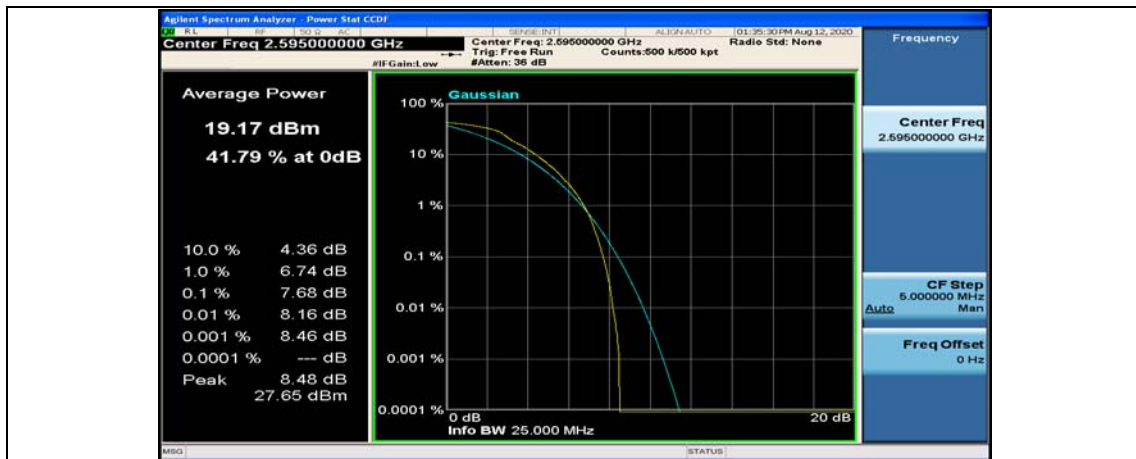
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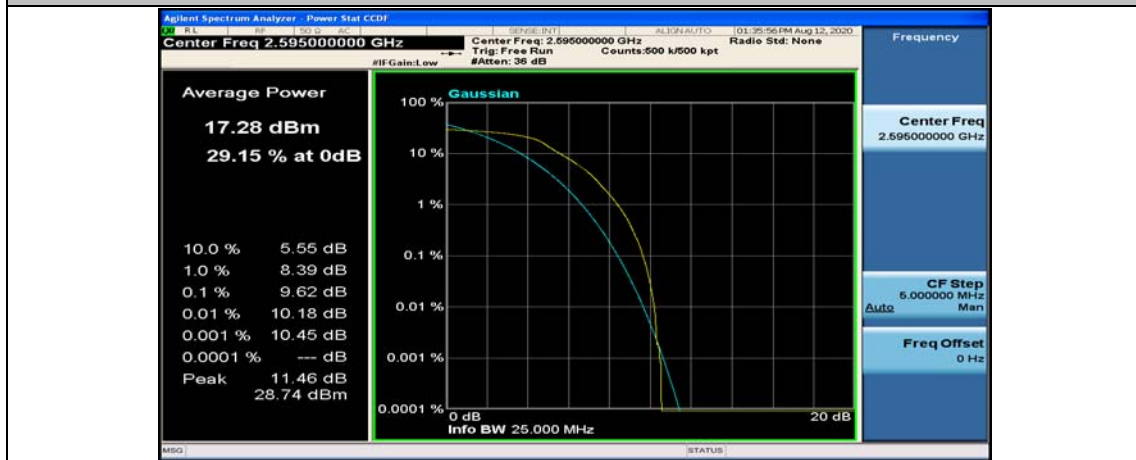
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(Channel Bandwidth: 5 MHz)\_MCH\_QPSK\_12RB#13



(Channel Bandwidth: 5 MHz)\_MCH\_QPSK\_25RB#0



(Channel Bandwidth: 5 MHz)\_HCH\_QPSK\_1RB#0



(Channel Bandwidth: 5 MHz)\_HCH\_QPSK\_1RB#12





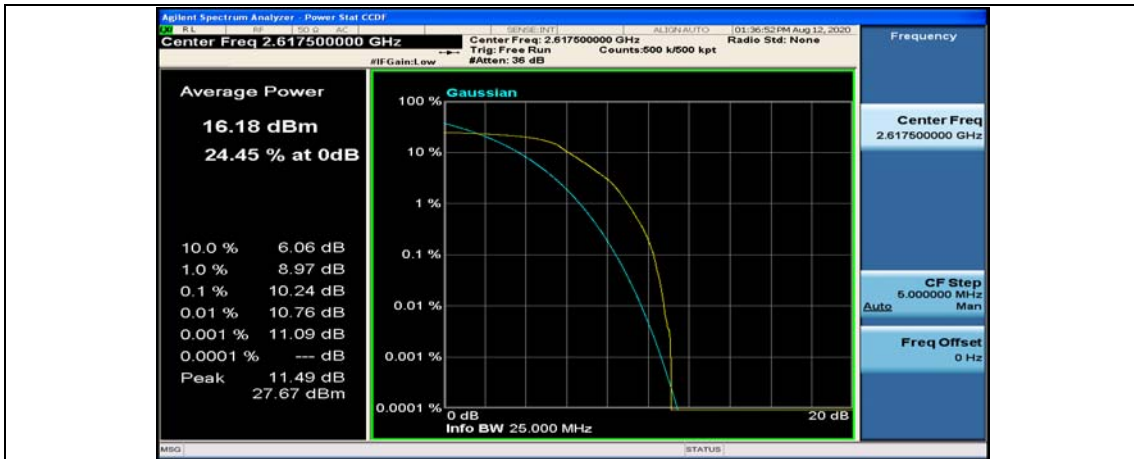
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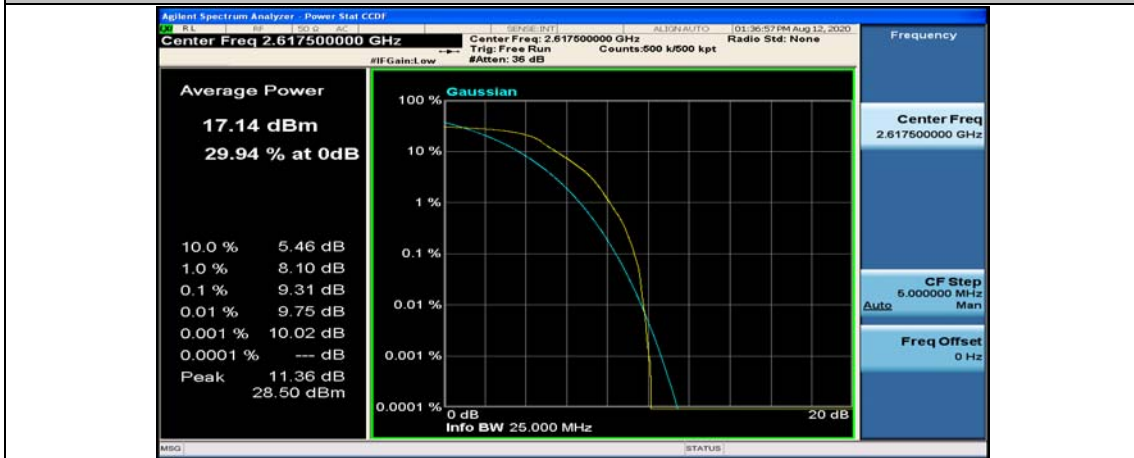
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(Channel Bandwidth: 5 MHz)\_HCH\_QPSK\_12RB#6



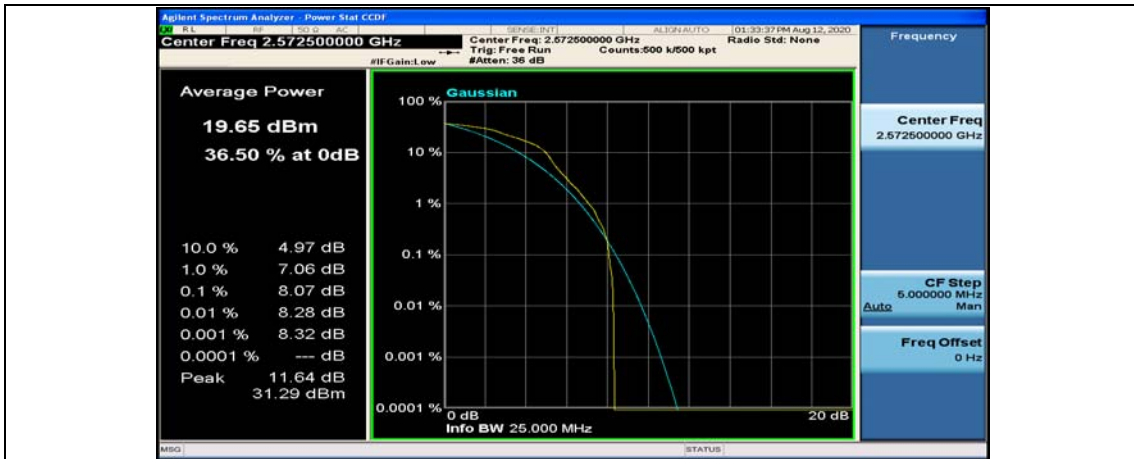
(Channel Bandwidth: 5 MHz)\_HCH\_QPSK\_12RB#13



(Channel Bandwidth: 5 MHz)\_HCH\_QPSK\_25RB#0

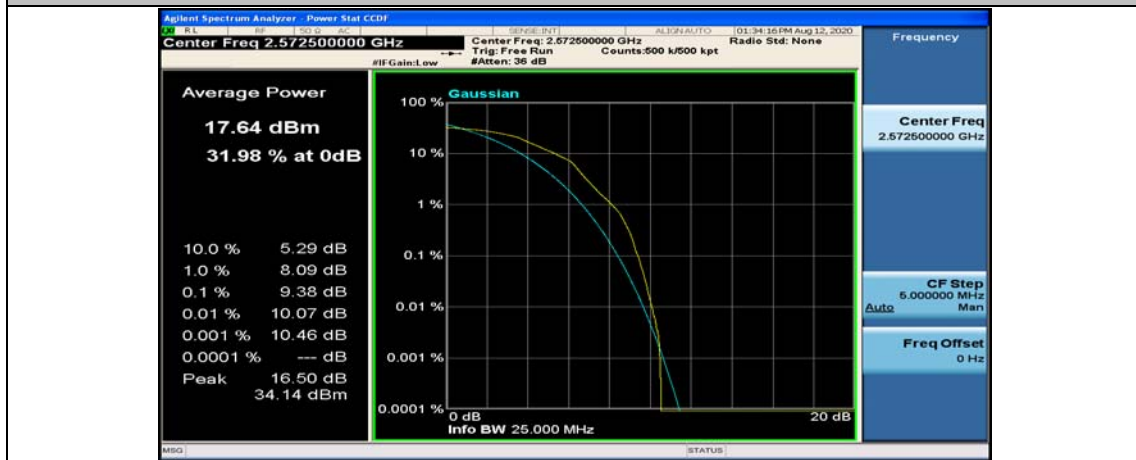


(Channel Bandwidth: 5 MHz)\_LCH\_16QAM\_1RB#0





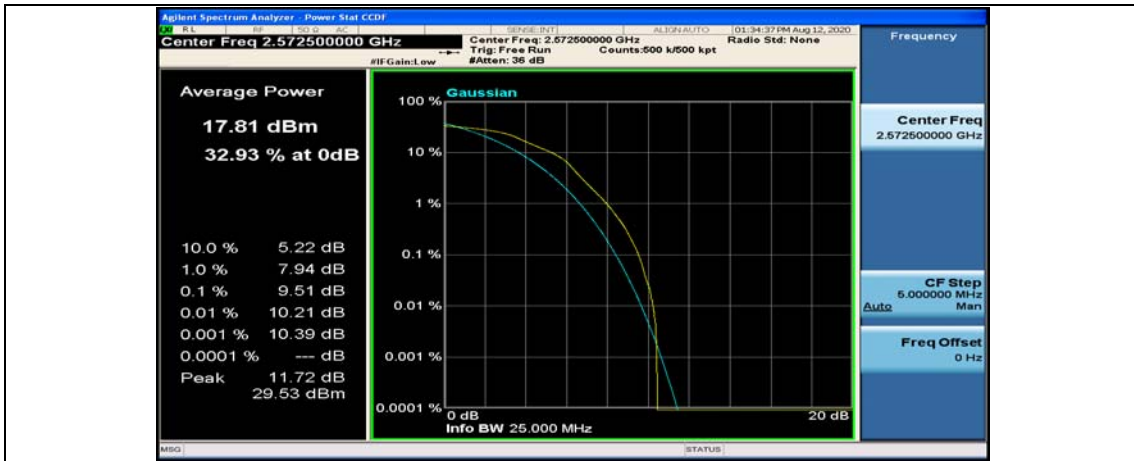
(Channel Bandwidth: 5 MHz)\_LCH\_16QAM\_12RB#6



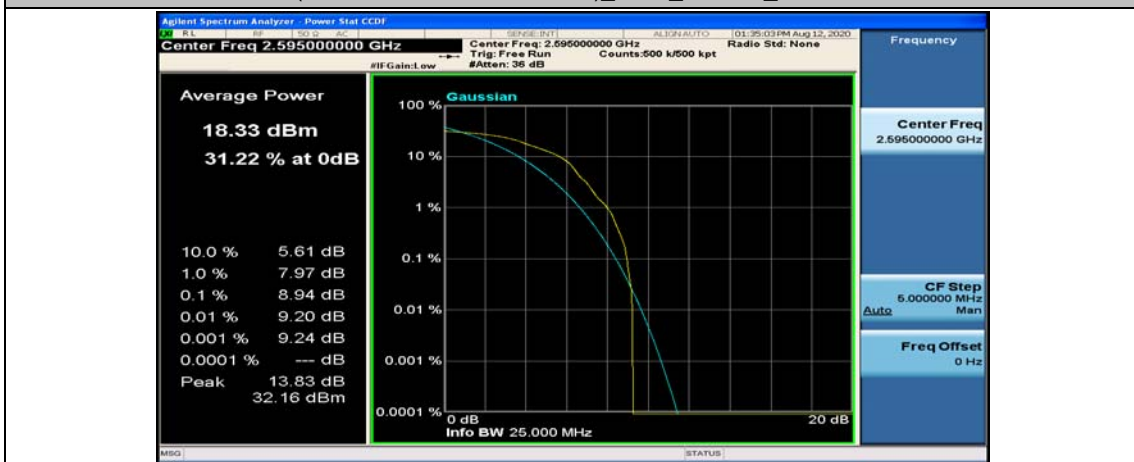
(Channel Bandwidth: 5 MHz)\_LCH\_16QAM\_12RB#13



(Channel Bandwidth: 5 MHz)\_LCH\_16QAM\_25RB#0



(Channel Bandwidth: 5 MHz)\_MCH\_16QAM\_1RB#0



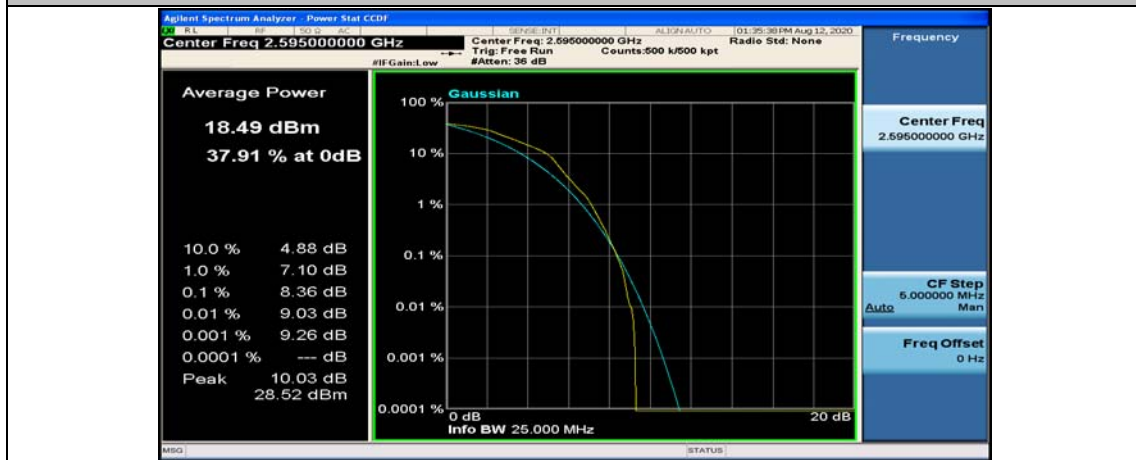
(Channel Bandwidth: 5 MHz)\_MCH\_16QAM\_1RB#12



(Channel Bandwidth: 5 MHz)\_MCH\_16QAM\_1RB#24



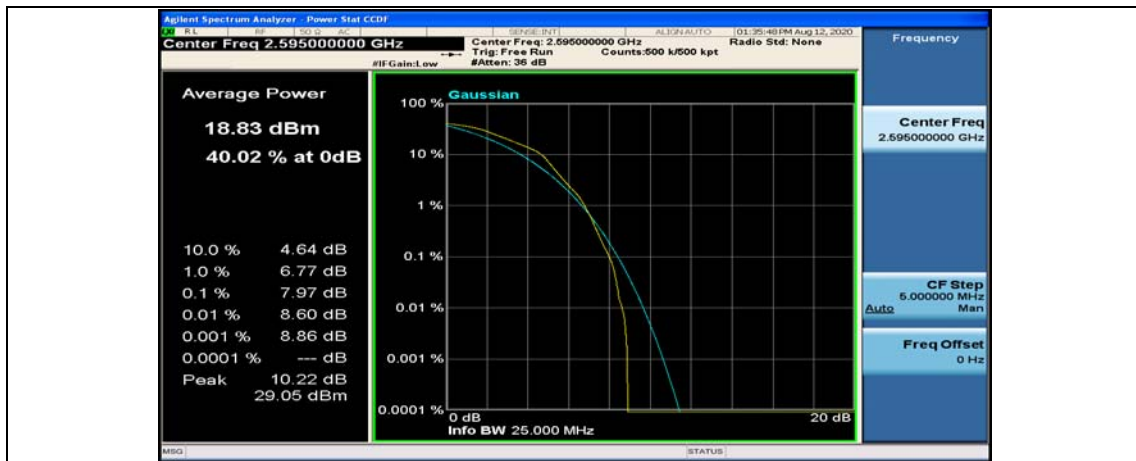
(Channel Bandwidth: 5 MHz)\_MCH\_16QAM\_12RB#0



(Channel Bandwidth: 5 MHz)\_MCH\_16QAM\_12RB#6



(Channel Bandwidth: 5 MHz)\_MCH\_16QAM\_12RB#13



(Channel Bandwidth: 5 MHz)\_MCH\_16QAM\_25RB#0



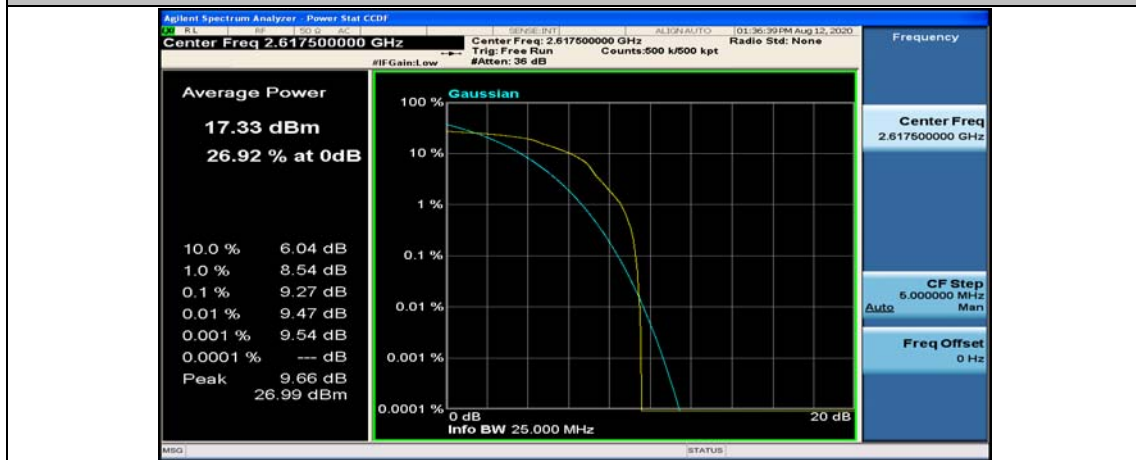
(Channel Bandwidth: 5 MHz)\_HCH\_16QAM\_1RB#0



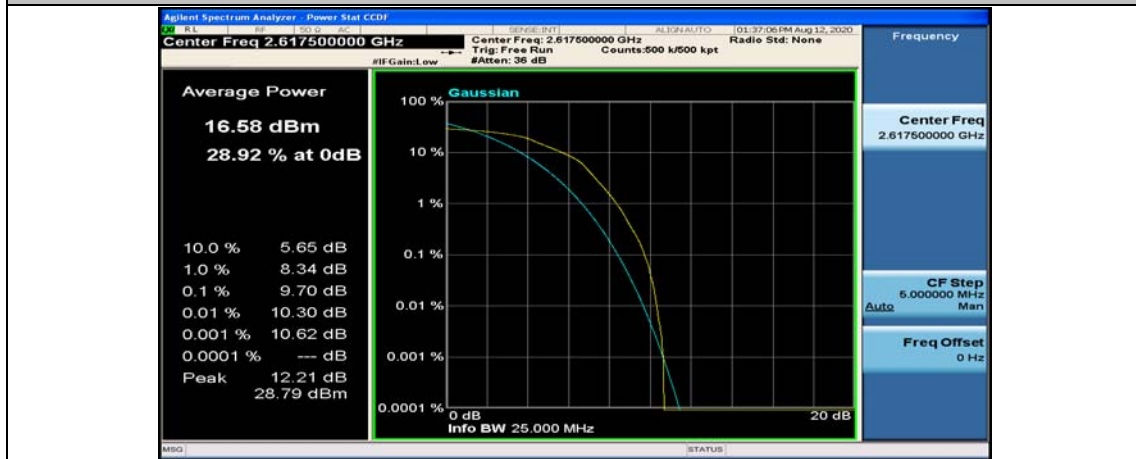
(Channel Bandwidth: 5 MHz)\_HCH\_16QAM\_1RB#12



(Channel Bandwidth: 5 MHz)\_HCH\_16QAM\_1RB#24



(Channel Bandwidth: 5 MHz)\_HCH\_16QAM\_12RB#0



(Channel Bandwidth: 5 MHz)\_HCH\_16QAM\_12RB#6





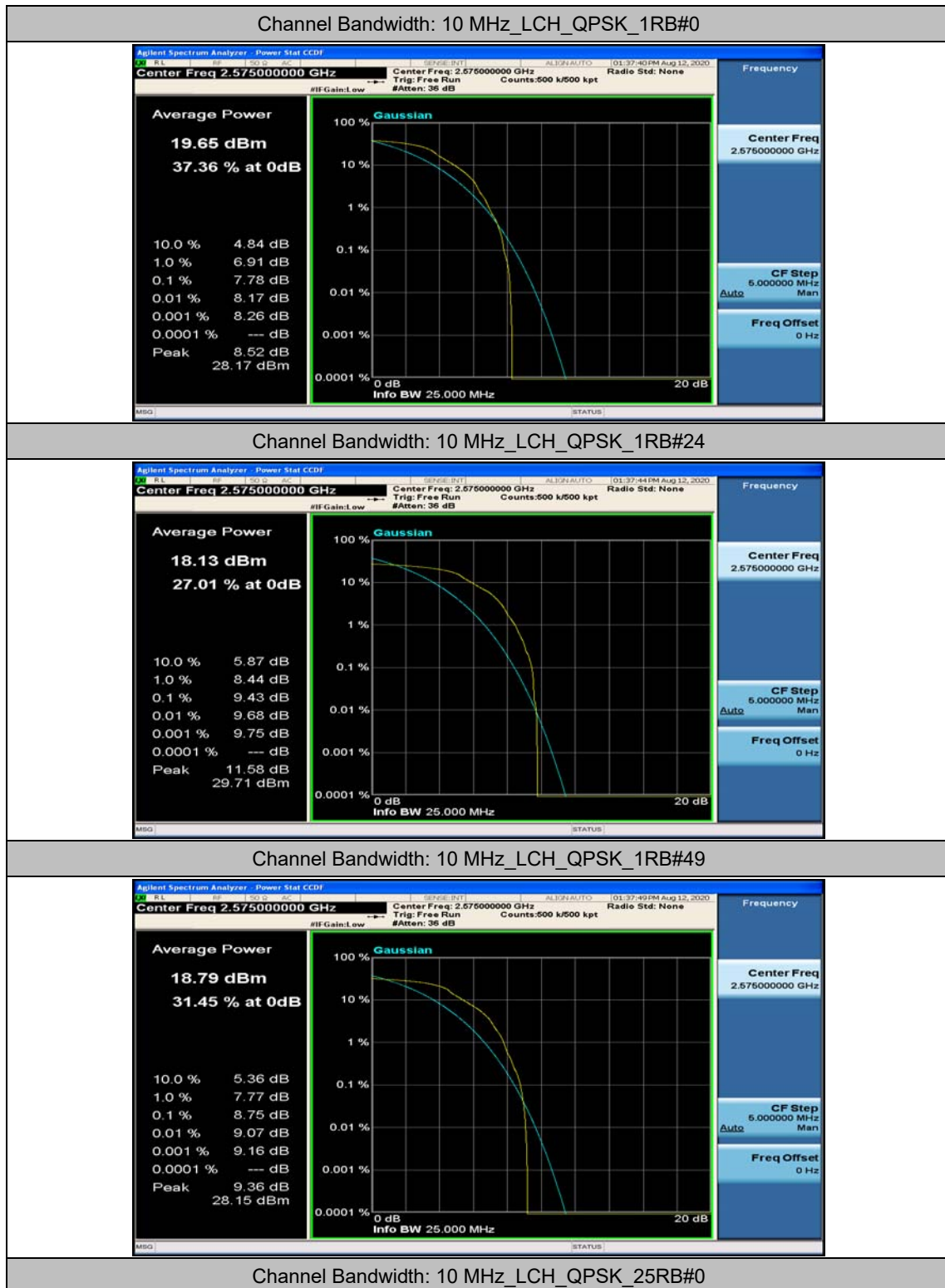
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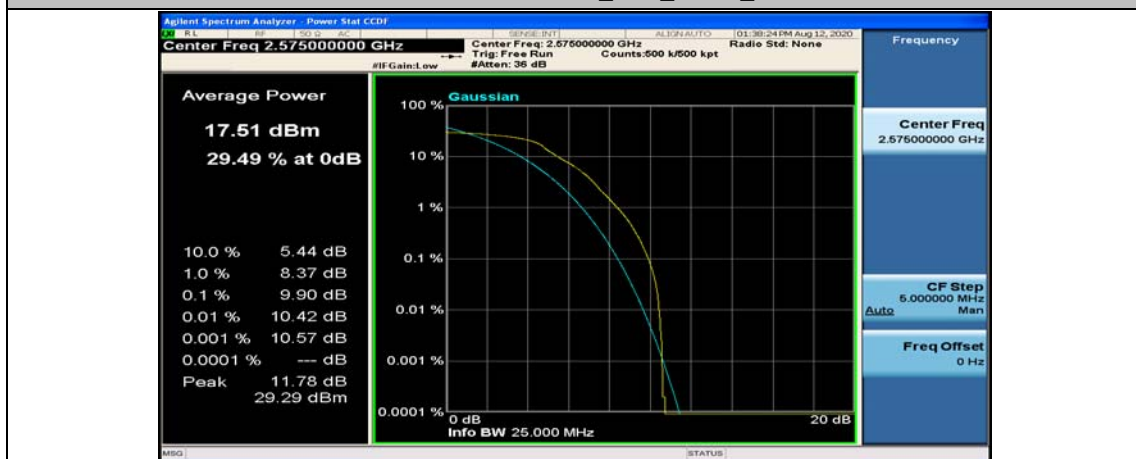
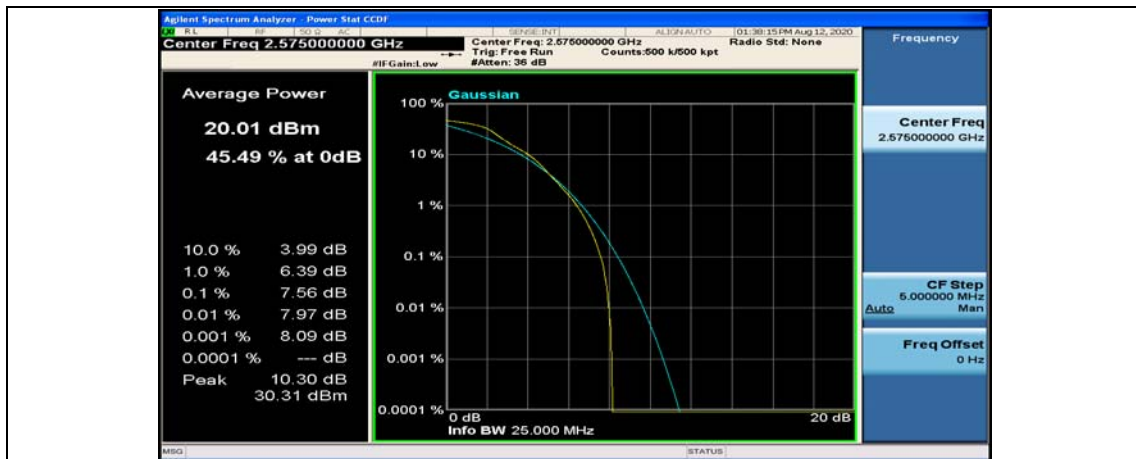


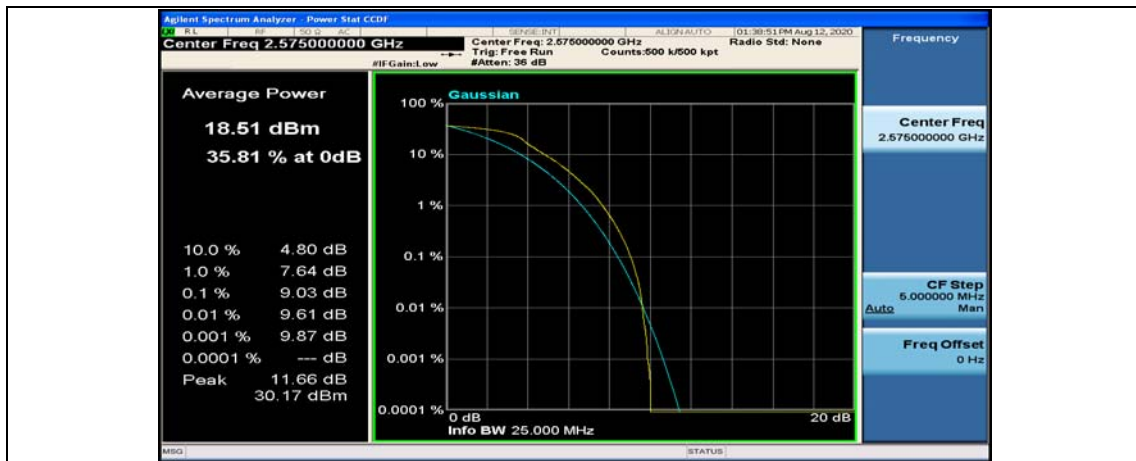
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### Channel Bandwidth: 10 MHz



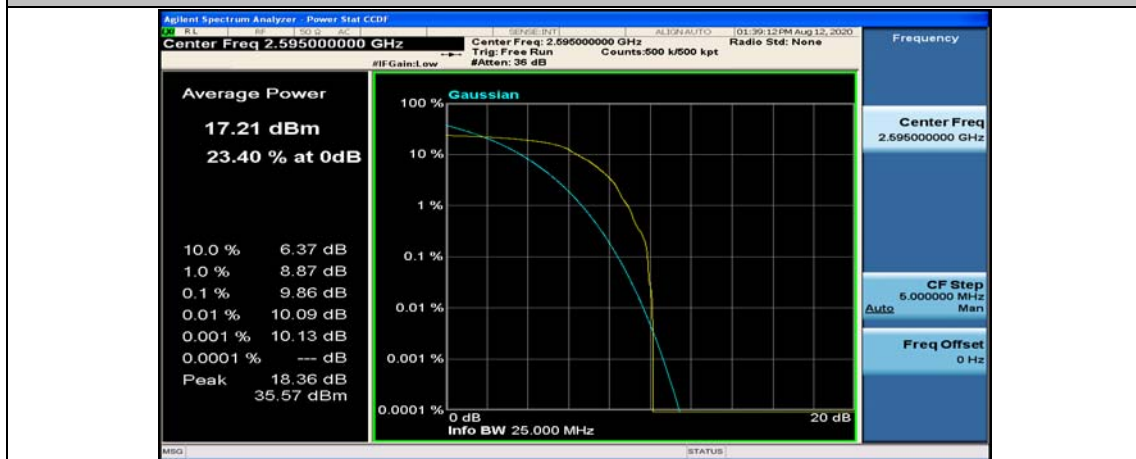




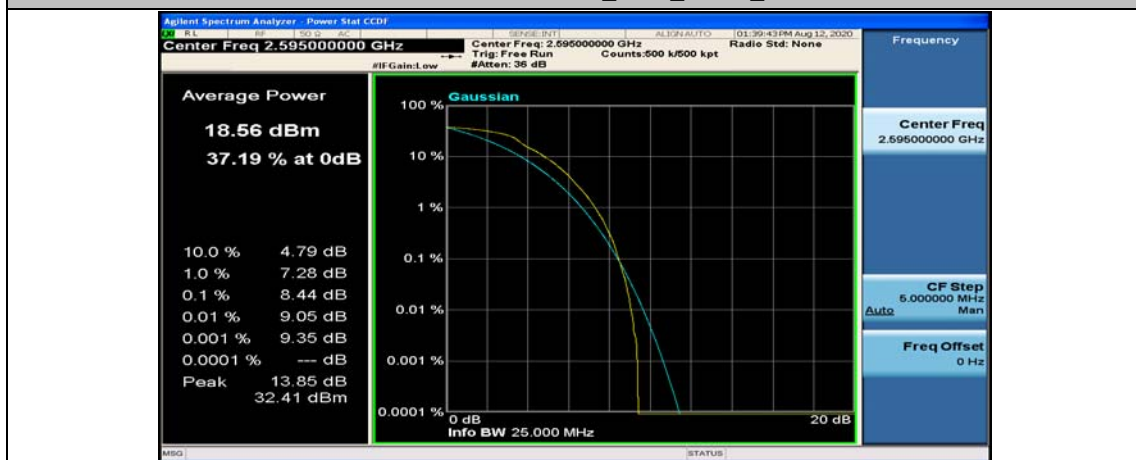
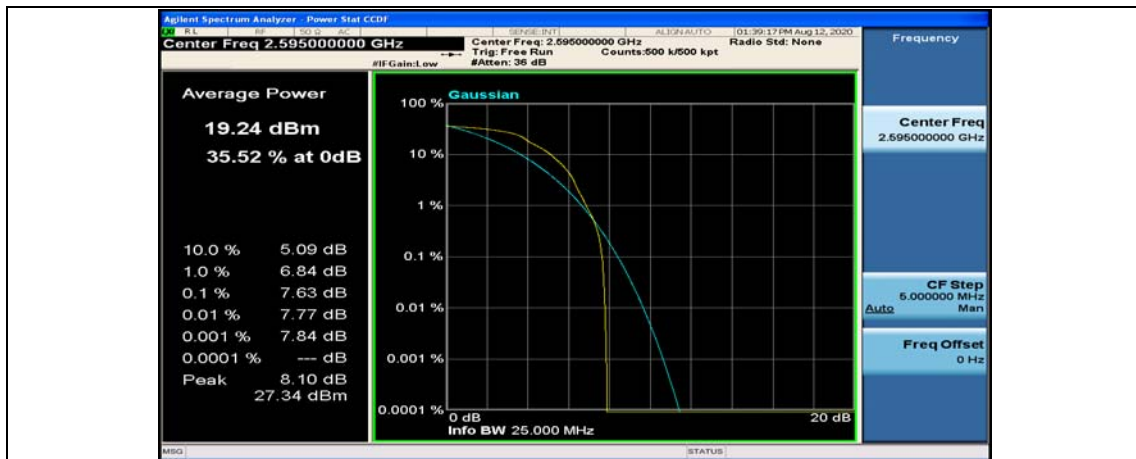
Channel Bandwidth: 10 MHz\_MCH\_QPSK\_1RB#0

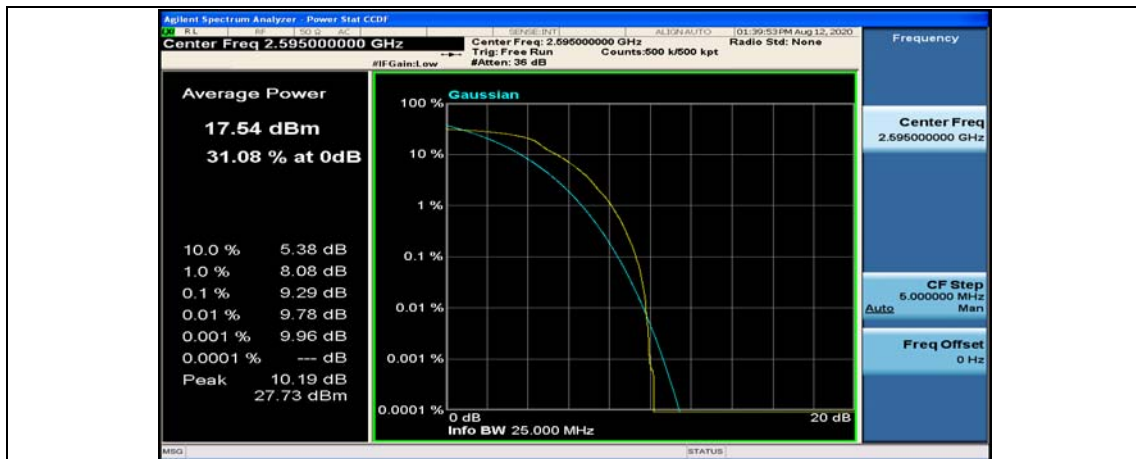


Channel Bandwidth: 10 MHz\_MCH\_QPSK\_1RB#24



Channel Bandwidth: 10 MHz\_MCH\_QPSK\_1RB#49





Channel Bandwidth: 10 MHz\_MCH\_QPSK\_50RB#0

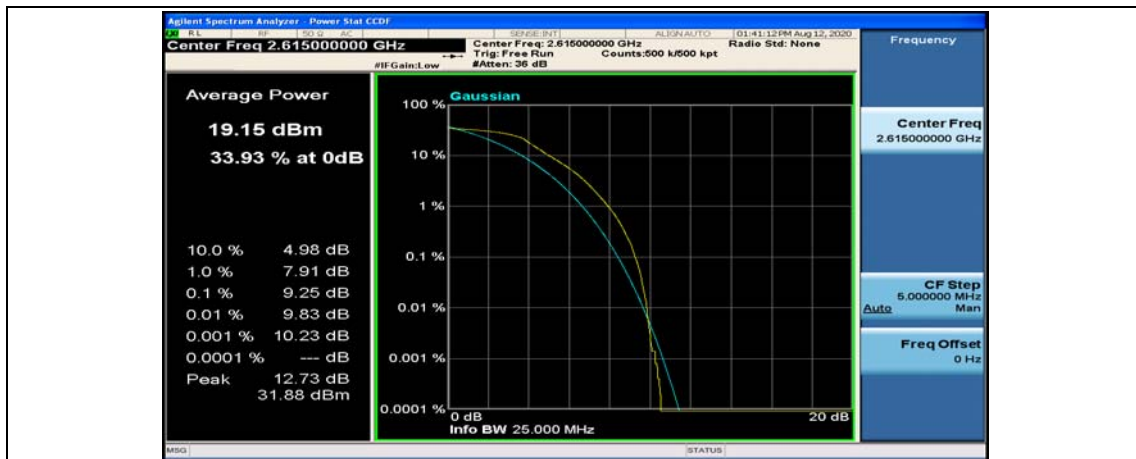


Channel Bandwidth: 10 MHz\_HCH\_QPSK\_1RB#0

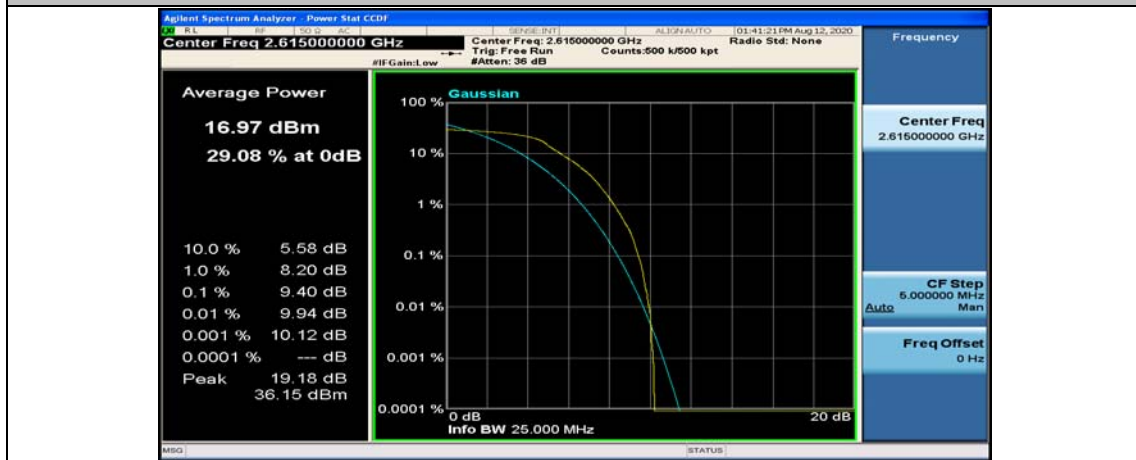


Channel Bandwidth: 10 MHz\_HCH\_QPSK\_1RB#24





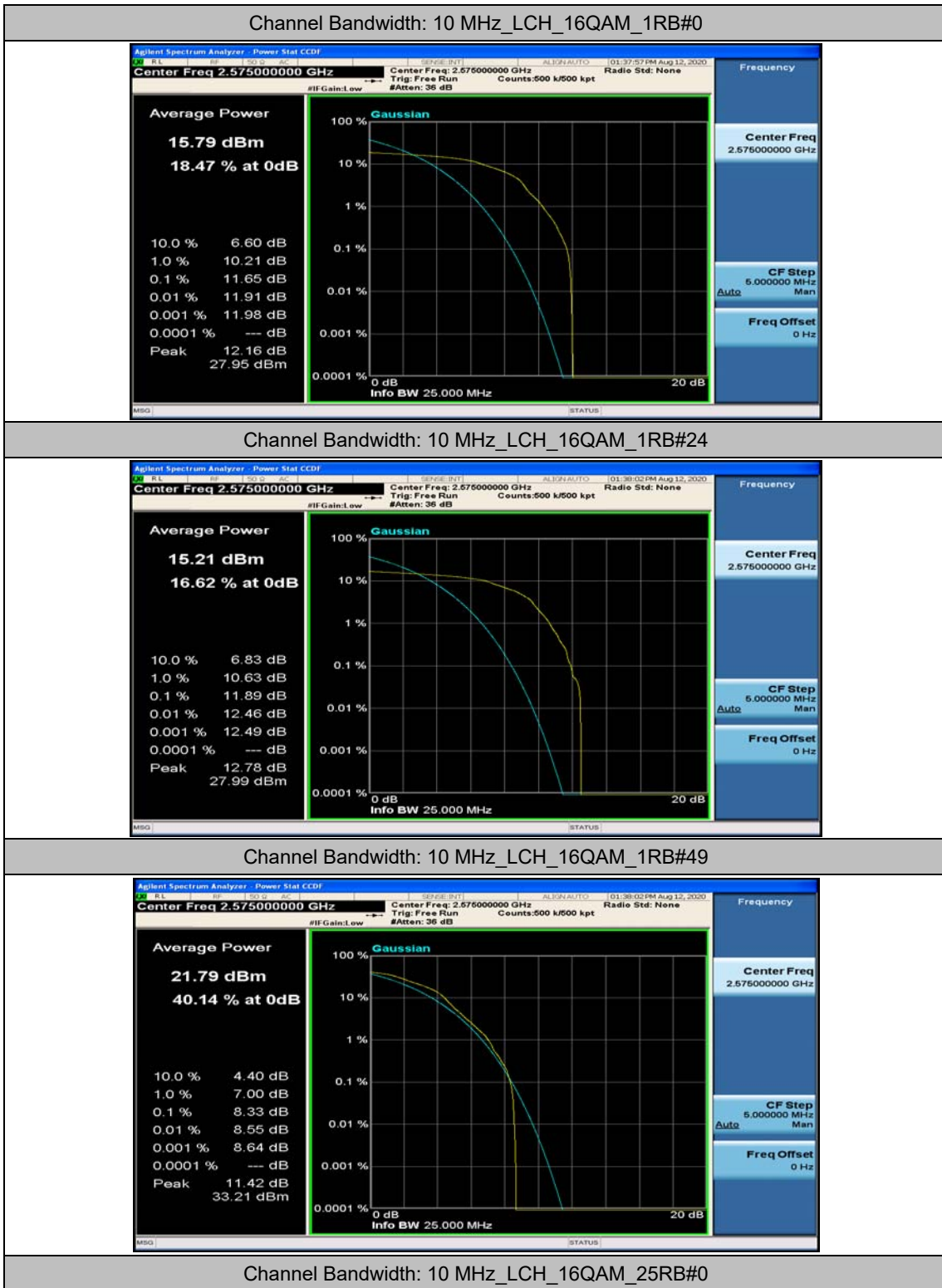
Channel Bandwidth: 10 MHz\_HCH\_QPSK\_25RB#25



Channel Bandwidth: 10 MHz\_HCH\_QPSK\_50RB#0







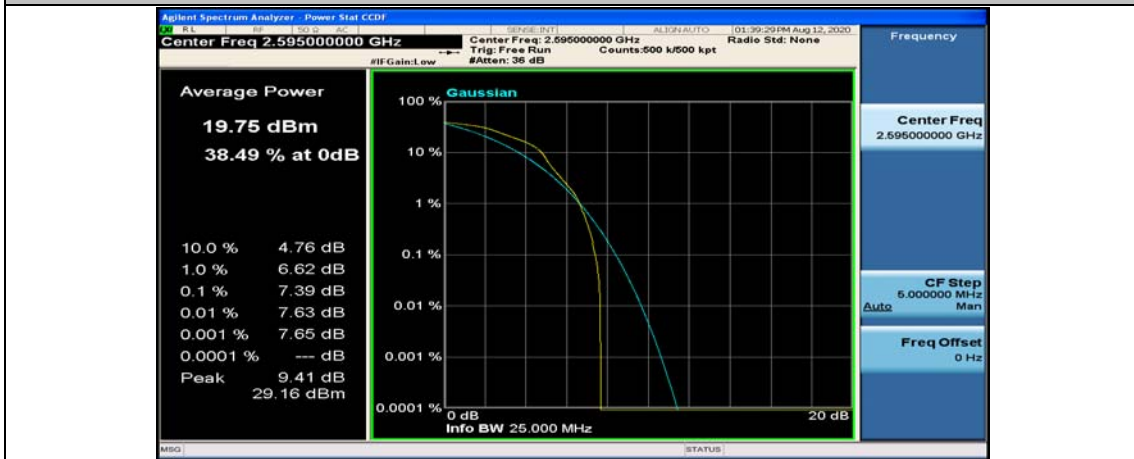




Channel Bandwidth: 10 MHz\_MCH\_16QAM\_1RB#0

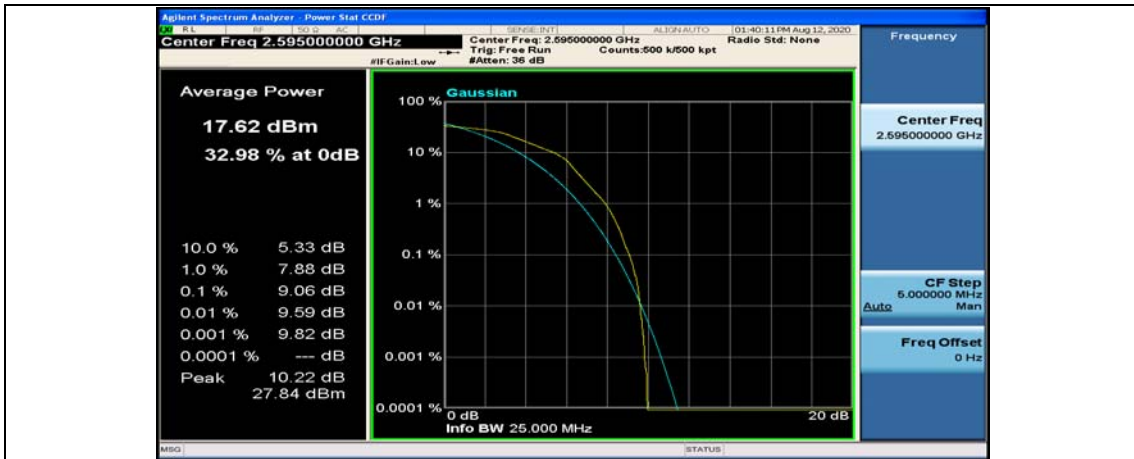


Channel Bandwidth: 10 MHz\_MCH\_16QAM\_1RB#24



Channel Bandwidth: 10 MHz\_MCH\_16QAM\_1RB#49

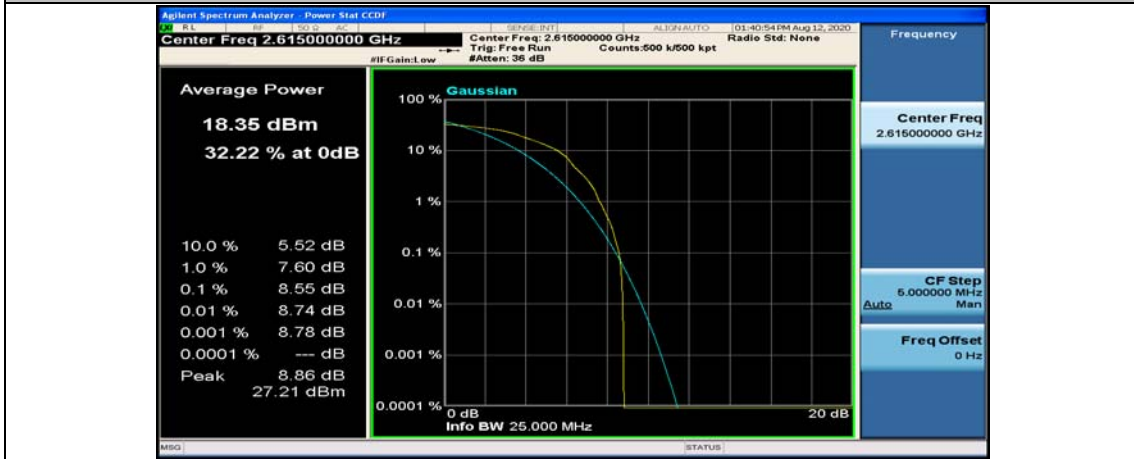




Channel Bandwidth: 10 MHz\_MCH\_16QAM\_50RB#0



Channel Bandwidth: 10 MHz\_HCH\_16QAM\_1RB#0

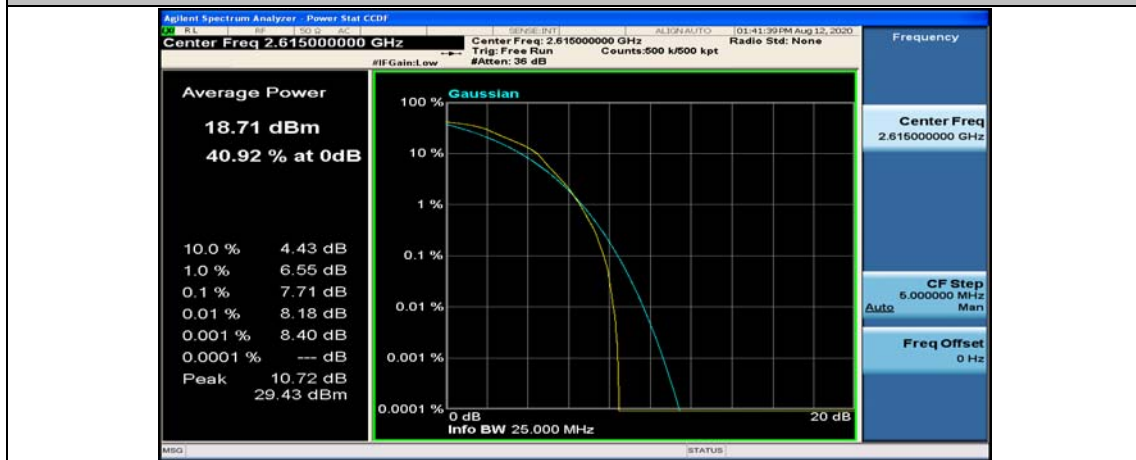


Channel Bandwidth: 10 MHz\_HCH\_16QAM\_1RB#24

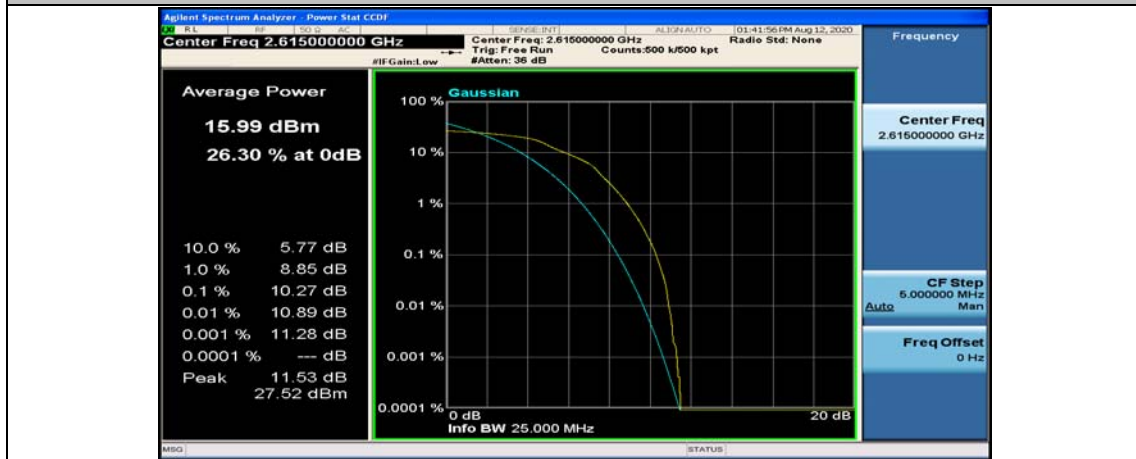




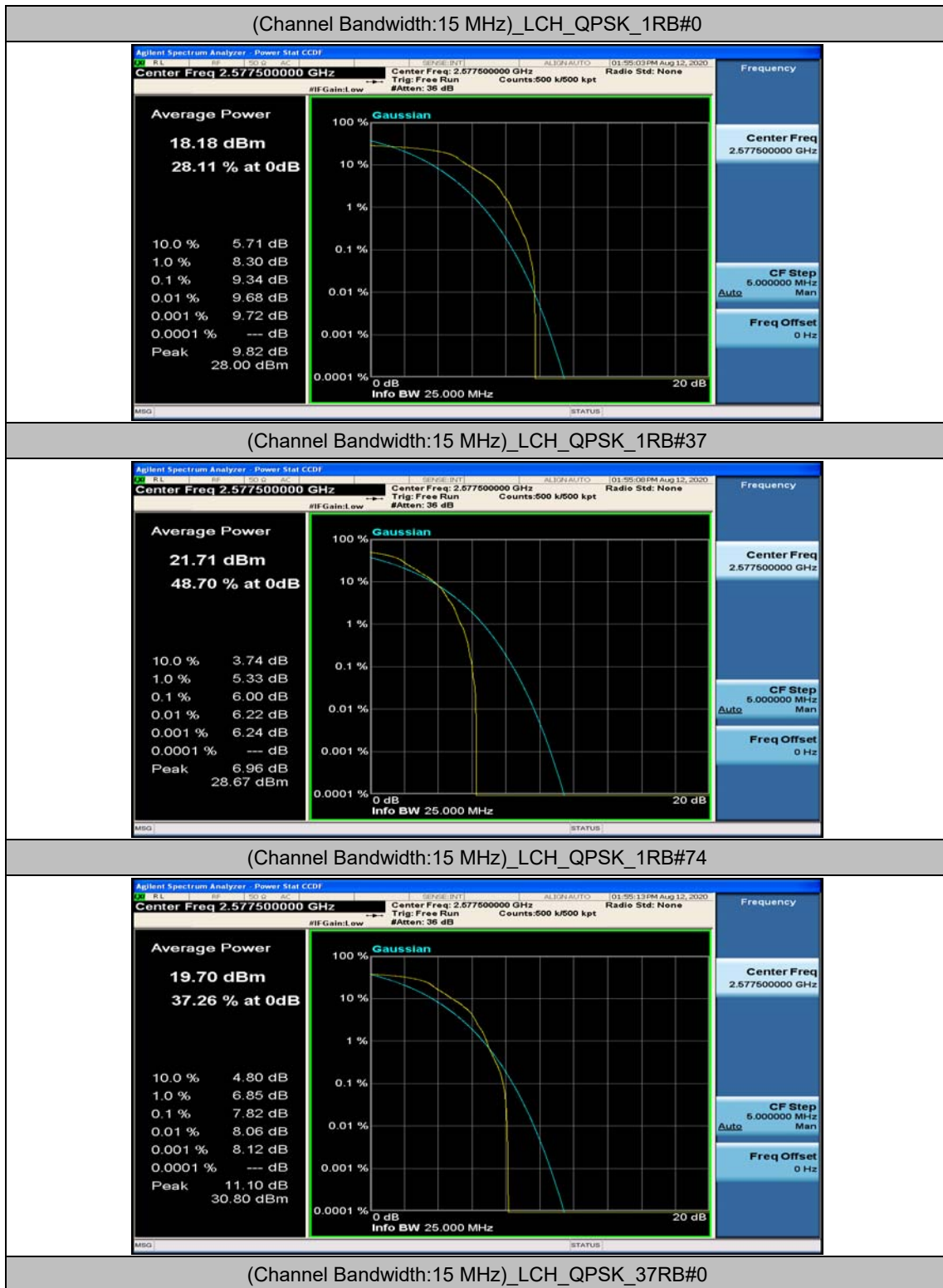
Channel Bandwidth: 10 MHz\_HCH\_16QAM\_25RB#25



Channel Bandwidth: 10 MHz\_HCH\_16QAM\_50RB#0



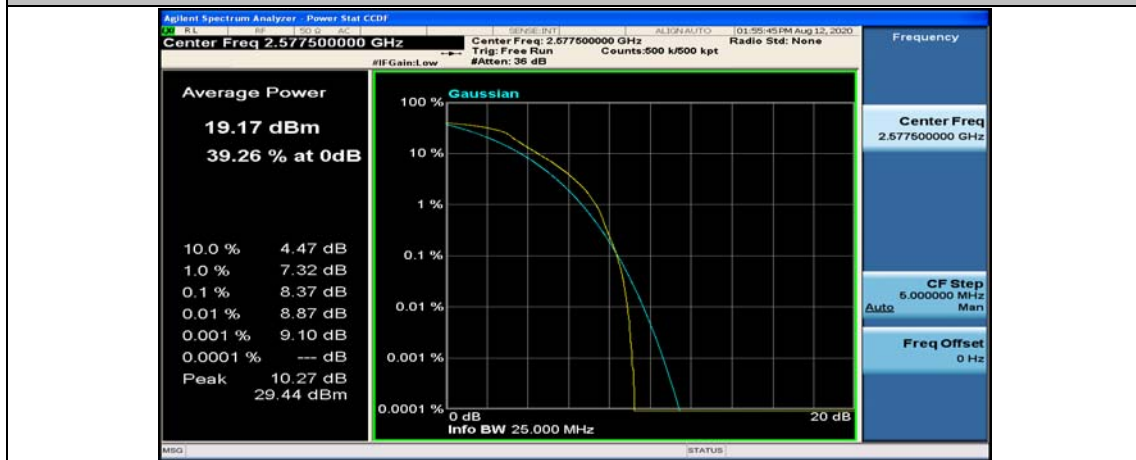
### Channel Bandwidth: 15 MHz







(Channel Bandwidth:15 MHz)\_LCH\_QPSK\_37RB#18



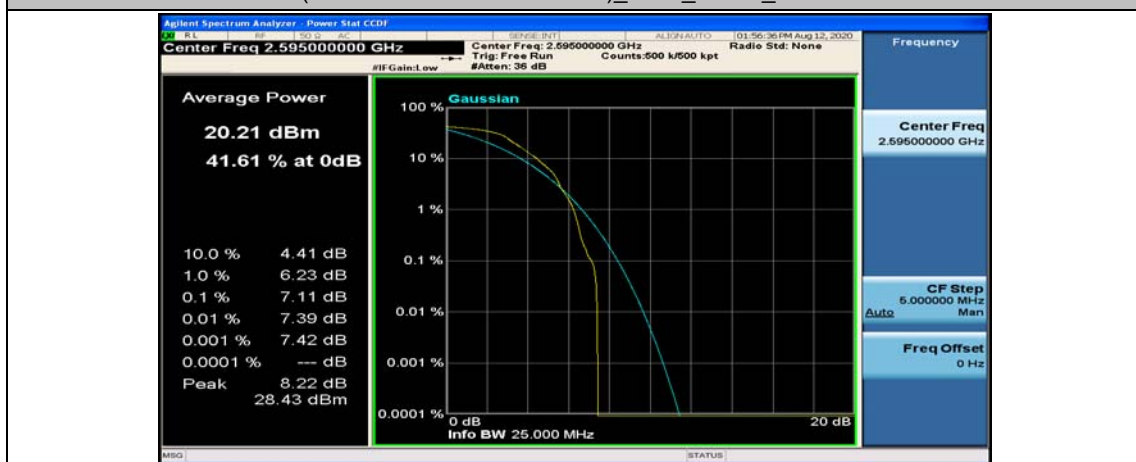
(Channel Bandwidth:15 MHz)\_LCH\_QPSK\_37RB#38



(Channel Bandwidth:15 MHz)\_LCH\_QPSK\_75RB#0



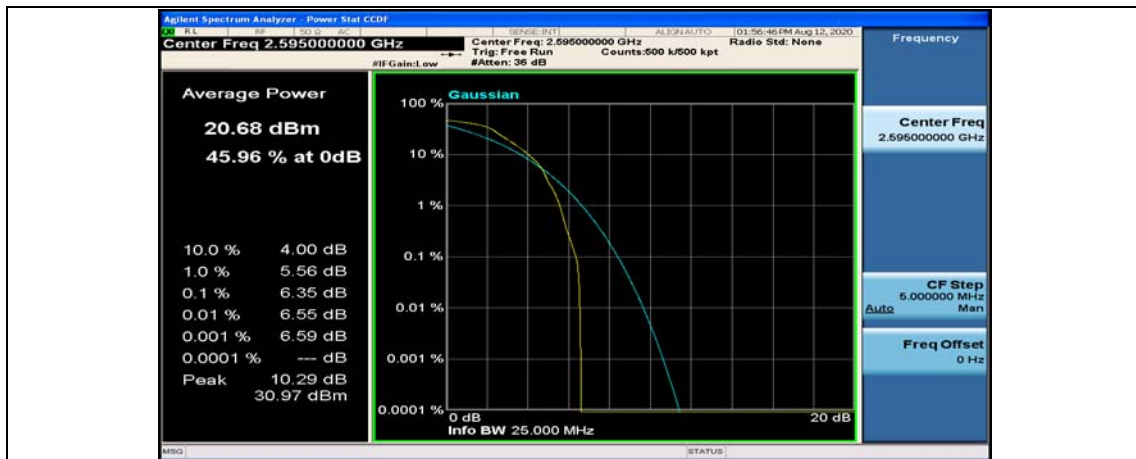
(Channel Bandwidth:15 MHz)\_MCH\_QPSK\_1RB#0



(Channel Bandwidth:15 MHz)\_MCH\_QPSK\_1RB#37



(Channel Bandwidth:15 MHz)\_MCH\_QPSK\_1RB#74



(Channel Bandwidth:15 MHz)\_MCH\_QPSK\_37RB#0



(Channel Bandwidth:15 MHz)\_MCH\_QPSK\_37RB#18



(Channel Bandwidth:15 MHz)\_MCH\_QPSK\_37RB#38



(Channel Bandwidth:15 MHz)\_MCH\_QPSK\_75RB#0



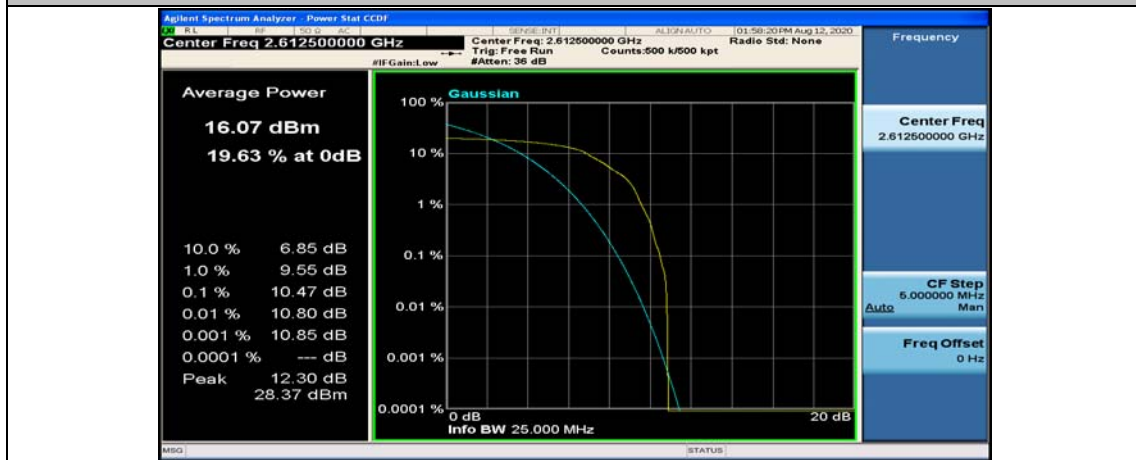
(Channel Bandwidth:15 MHz)\_HCH\_QPSK\_1RB#0



(Channel Bandwidth:15 MHz)\_HCH\_QPSK\_1RB#37



(Channel Bandwidth:15 MHz)\_HCH\_QPSK\_1RB#74



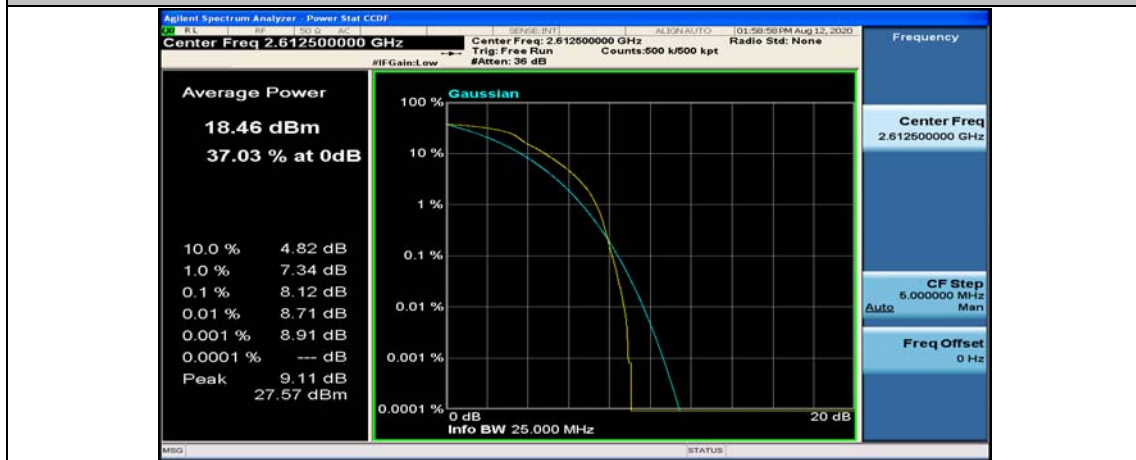
(Channel Bandwidth:15 MHz)\_HCH\_QPSK\_37RB#0



(Channel Bandwidth:15 MHz)\_HCH\_QPSK\_37RB#18



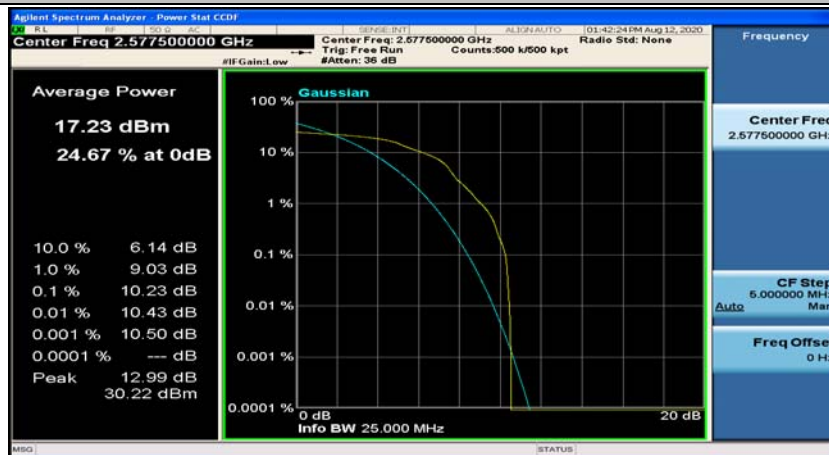
(Channel Bandwidth:15 MHz)\_HCH\_QPSK\_37RB#38



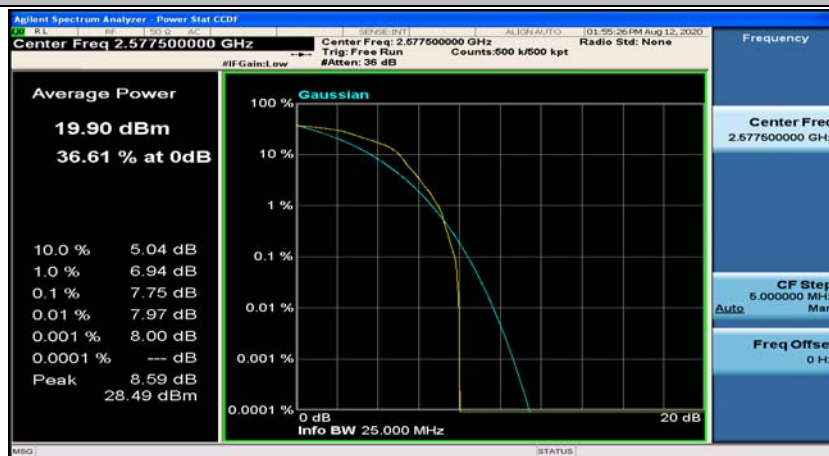
(Channel Bandwidth:15 MHz)\_HCH\_QPSK\_75RB#0



(Channel Bandwidth:15 MHz)\_LCH\_16QAM\_1RB#0



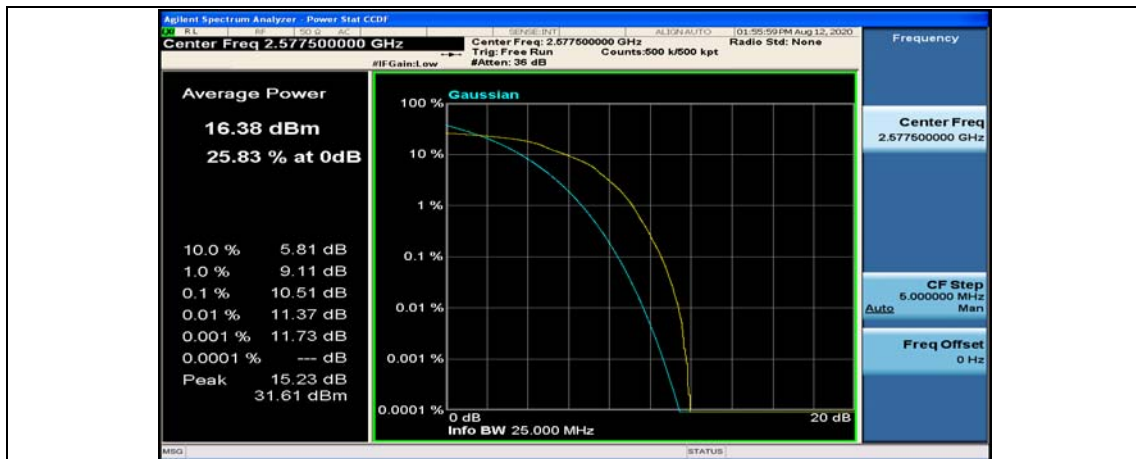
(Channel Bandwidth:15 MHz)\_LCH\_16QAM\_1RB#37



(Channel Bandwidth:15 MHz)\_LCH\_16QAM\_1RB#74



(Channel Bandwidth:15 MHz)\_LCH\_16QAM\_37RB#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



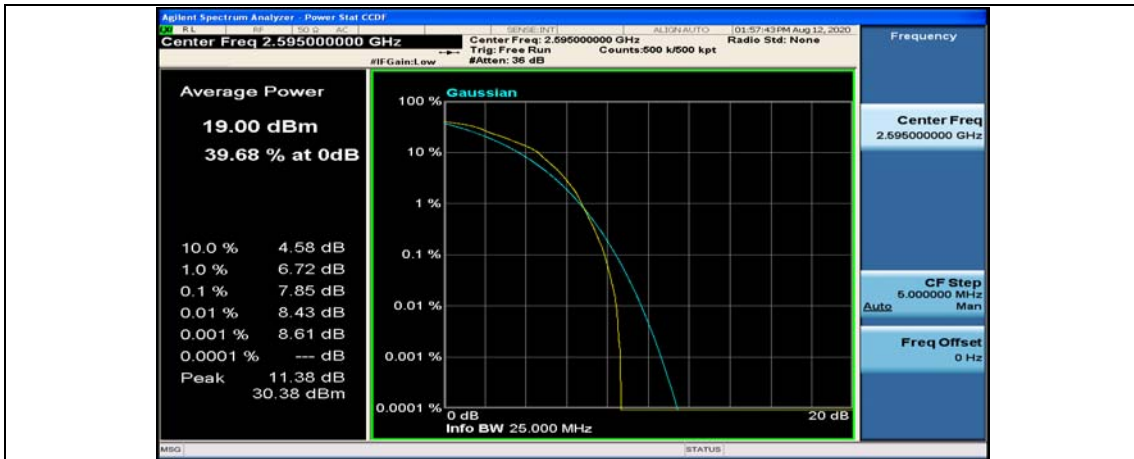
(Channel Bandwidth:15 MHz)\_MCH\_16QAM\_37RB#0



(Channel Bandwidth:15 MHz)\_MCH\_16QAM\_37RB#18



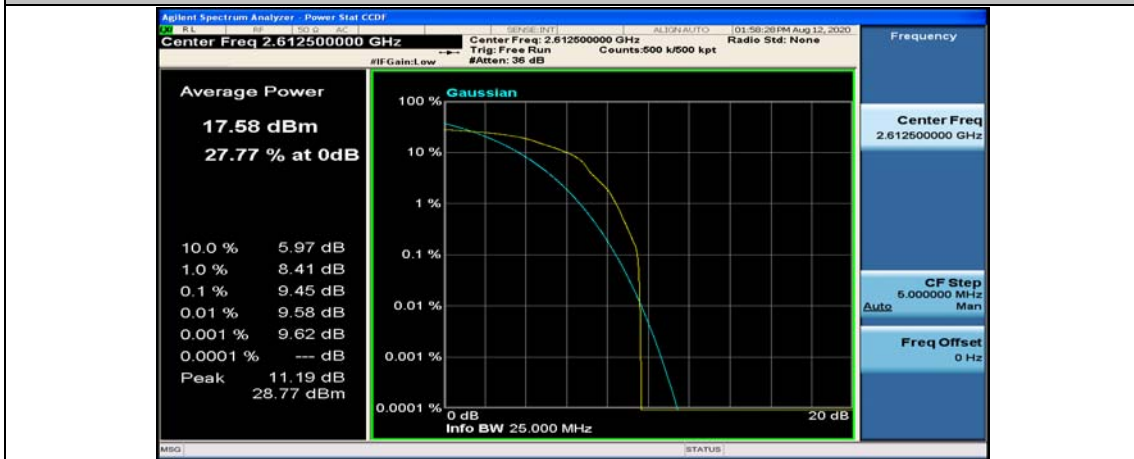
(Channel Bandwidth:15 MHz)\_MCH\_16QAM\_37RB#38



(Channel Bandwidth:15 MHz)\_MCH\_16QAM\_75RB#0



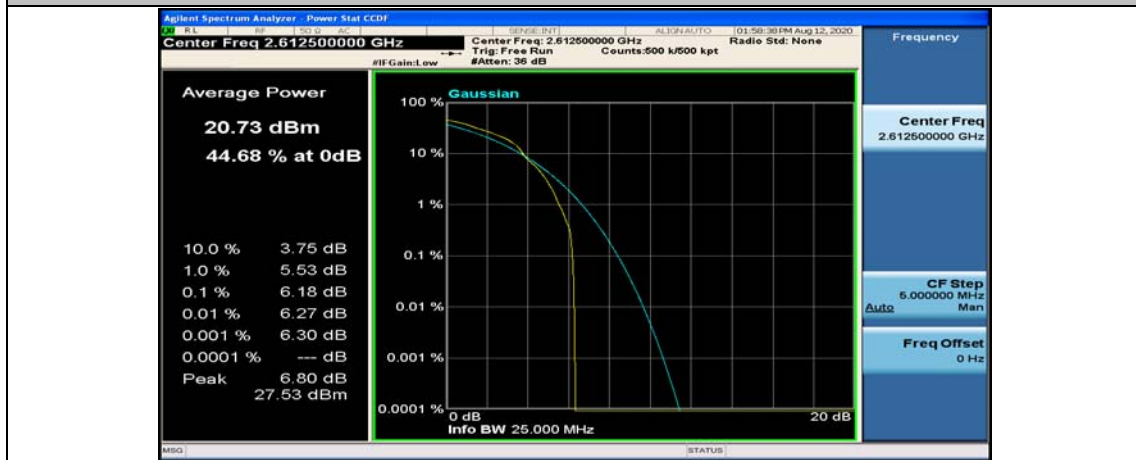
(Channel Bandwidth:15 MHz)\_HCH\_16QAM\_1RB#0



(Channel Bandwidth:15 MHz)\_HCH\_16QAM\_1RB#37



(Channel Bandwidth:15 MHz)\_HCH\_16QAM\_1RB#74



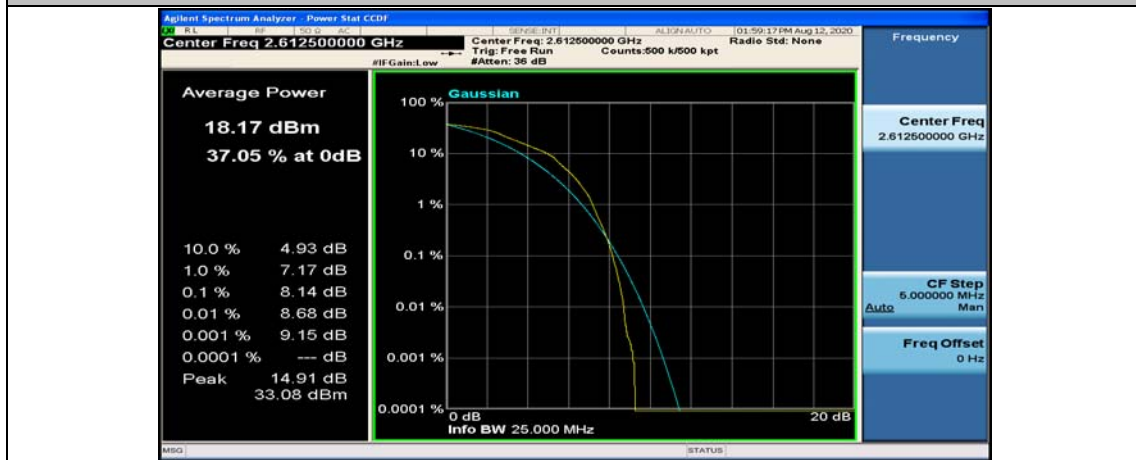
(Channel Bandwidth:15 MHz)\_HCH\_16QAM\_37RB#0



(Channel Bandwidth:15 MHz)\_HCH\_16QAM\_37RB#18



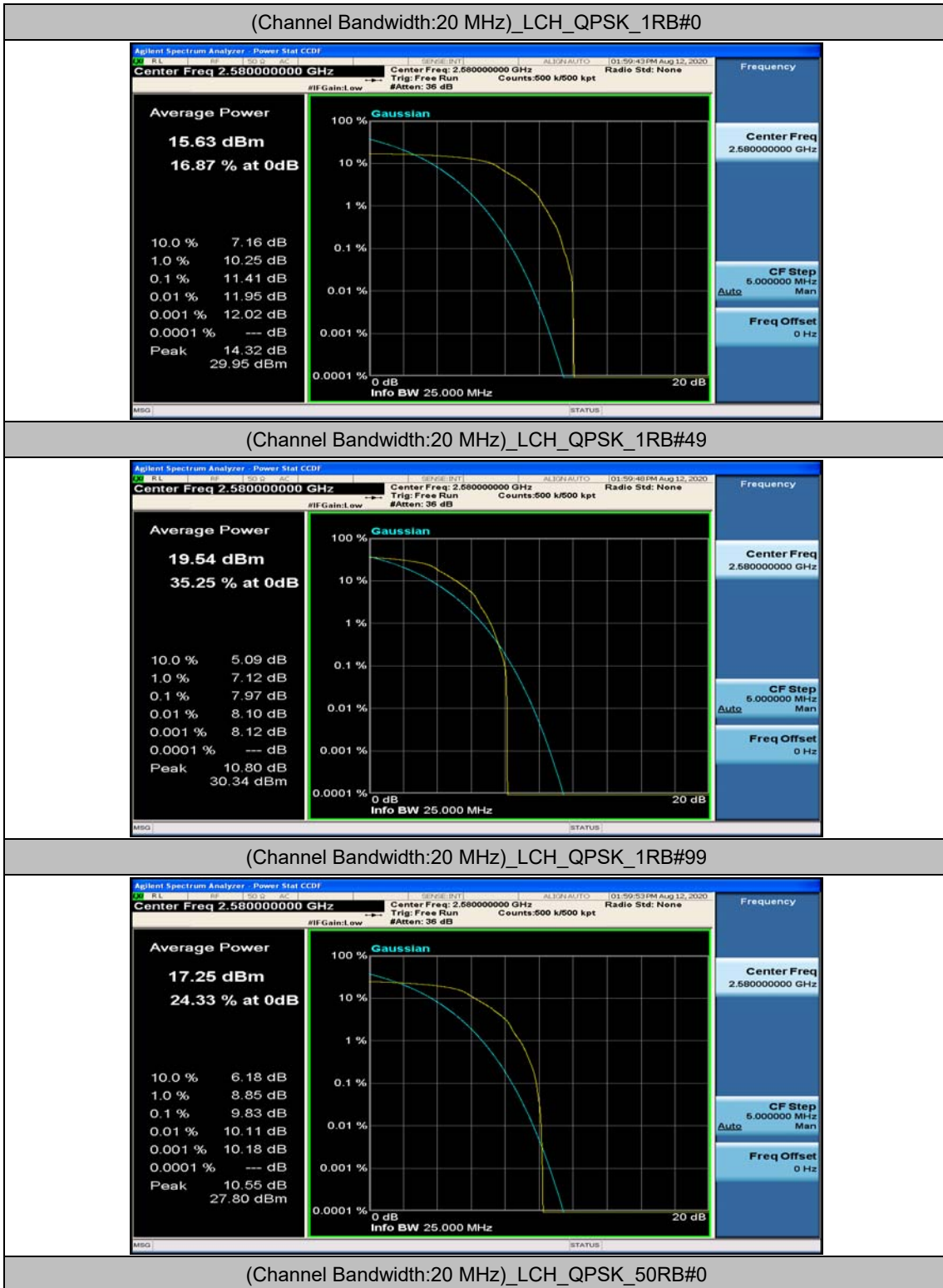
(Channel Bandwidth:15 MHz)\_HCH\_16QAM\_37RB#38



(Channel Bandwidth:15 MHz)\_HCH\_16QAM\_75RB#0

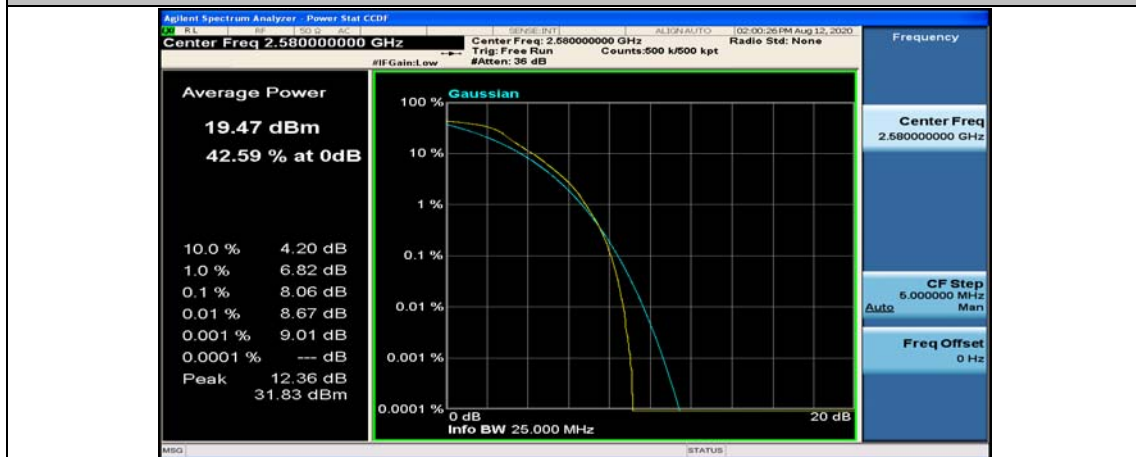


**Channel Bandwidth: 20 MHz**

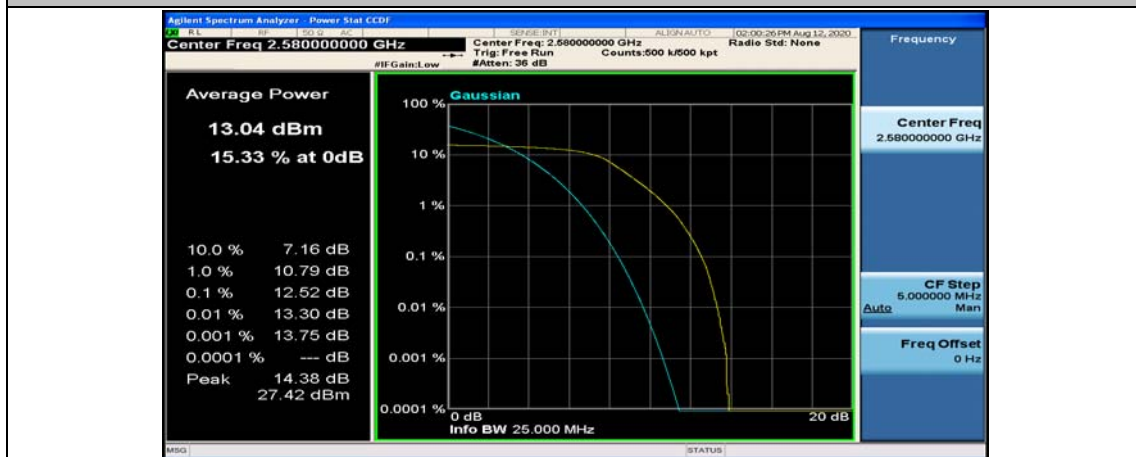




(Channel Bandwidth:20 MHz)\_LCH\_QPSK\_50RB#25



(Channel Bandwidth:20 MHz)\_LCH\_QPSK\_50RB#50



(Channel Bandwidth:20 MHz)\_LCH\_QPSK\_100RB#0