

## Appendix for Band 4

### 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	22.93	PASS
		1	3	22.98	PASS
		1	5	22.94	PASS
		3	0	23.05	PASS
		3	2	23.04	PASS
		3	3	23.04	PASS
		6	0	22.07	PASS
	MCH	1	0	22.9	PASS
		1	3	22.95	PASS
		1	5	22.9	PASS
		3	0	22.95	PASS
		3	2	22.9	PASS
		3	3	22.94	PASS
		6	0	21.95	PASS
16QAM	LCH	1	0	22.44	PASS
		1	3	22.49	PASS
		1	5	22.42	PASS
		3	0	22.58	PASS
		3	2	22.52	PASS
		3	3	22.53	PASS
		6	0	21.56	PASS
	MCH	1	0	21.65	PASS
		1	3	21.68	PASS
		1	5	21.65	PASS
		3	0	21.05	PASS
		3	2	21.16	PASS
		3	3	21.17	PASS
		6	0	21.03	PASS

		3	2	21.88	PASS
		3	3	21.92	PASS
		6	0	20.85	PASS
HCH	HCH	1	0	21.68	PASS
		1	3	21.8	PASS
		1	5	21.65	PASS
		3	0	21.63	PASS
		3	2	21.56	PASS
		3	3	21.61	PASS
		6	0	20.66	PASS

### Channel Bandwidth: 3 MHz

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	22.83	PASS
		1	7	22.91	PASS
		1	14	22.84	PASS
		8	0	22.07	PASS
		8	4	22.05	PASS
		8	7	22.06	PASS
		15	0	22.05	PASS
	MCH	1	0	22.87	PASS
		1	7	22.93	PASS
		1	14	22.8	PASS
		8	0	22.01	PASS
		8	4	21.99	PASS
		8	7	21.97	PASS
		15	0	21.9	PASS
16QAM	HCH	1	0	22.46	PASS
		1	7	22.51	PASS
		1	14	22.41	PASS
		8	0	21.61	PASS
		8	4	21.59	PASS
		8	7	21.59	PASS
		15	0	21.58	PASS
	LCH	1	0	21.82	PASS
		1	7	21.24	PASS
		1	14	21.16	PASS
		8	0	20.65	PASS
		8	4	20.47	PASS
		8	7	21.1	PASS
		15	0	21.03	PASS

	MCH	1	0	21.21	PASS
		1	7	21.24	PASS
		1	14	21.12	PASS
		8	0	20.97	PASS
		8	4	20.92	PASS
		8	7	20.92	PASS
		15	0	20.9	PASS
	HCH	1	0	21.72	PASS
		1	7	21.77	PASS
		1	14	21.62	PASS
		8	0	20.58	PASS
		8	4	20.54	PASS
		8	7	20.51	PASS
		15	0	20.58	PASS

### Channel Bandwidth: 5 MHz

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	23.02	PASS
		1	12	23.06	PASS
		1	24	22.96	PASS
		12	0	21.35	PASS
		12	6	22.1	PASS
		12	13	22.08	PASS
		25	0	22.03	PASS
	MCH	1	0	22.95	PASS
		1	12	22.97	PASS
		1	24	22.85	PASS
		12	0	21.98	PASS
		12	6	21.96	PASS
		12	13	21.93	PASS
		25	0	21.91	PASS
	HCH	1	0	22.63	PASS
		1	12	22.65	PASS
		1	24	22.49	PASS
		12	0	21.69	PASS
		12	6	21.65	PASS
		12	13	21.64	PASS
		25	0	21.59	PASS
16QAM	LCH	1	0	21.28	PASS
		1	12	21.34	PASS
		1	24	21.75	PASS

		12	0	20.85	PASS
		12	6	20.65	PASS
		12	13	20.65	PASS
		25	0	20.2	PASS
MCH		1	0	20.68	PASS
		1	12	20.79	PASS
		1	24	22.02	PASS
		12	0	21.07	PASS
		12	6	21.05	PASS
		12	13	21.03	PASS
		25	0	20.91	PASS
HCH		1	0	21.82	PASS
		1	12	21.84	PASS
		1	24	21.68	PASS
		12	0	20.68	PASS
		12	6	20.64	PASS
		12	13	20.61	PASS
		25	0	20.61	PASS

## Channel Bandwidth: 10 MHz

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	22.94	PASS
		1	24	22.93	PASS
		1	49	22.92	PASS
		25	0	22.07	PASS
		25	12	22.09	PASS
		25	25	22.09	PASS
		50	0	22.02	PASS
	MCH	1	0	22.91	PASS
		1	24	22.84	PASS
		1	49	22.75	PASS
		25	0	21.93	PASS
		25	12	21.9	PASS
		25	25	21.87	PASS
		50	0	21.9	PASS
	HCH	1	0	22.62	PASS
		1	24	22.51	PASS
		1	49	22.42	PASS
		25	0	21.65	PASS
		25	12	21.63	PASS
		25	25	21.56	PASS

		50	0	21.63	PASS
16QAM	LCH	1	0	21.27	PASS
		1	24	21.28	PASS
		1	49	21.35	PASS
		25	0	20.89	PASS
		25	12	20.79	PASS
		25	25	21.02	PASS
		50	0	21.03	PASS
	MCH	1	0	21.27	PASS
		1	24	22.01	PASS
		1	49	22.07	PASS
		25	0	20.97	PASS
		25	12	20.91	PASS
		25	25	20.88	PASS
		50	0	20.95	PASS
	HCH	1	0	21.86	PASS
		1	24	21.79	PASS
		1	49	21.67	PASS
		25	0	20.69	PASS
		25	12	20.63	PASS
		25	25	20.56	PASS
		50	0	20.68	PASS

### Channel Bandwidth: 15 MHz

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	22.97	PASS
		1	37	23.02	PASS
		1	74	22.95	PASS
		37	0	21.15	PASS
		37	18	21.17	PASS
		37	38	21.35	PASS
		75	0	21.19	PASS
	MCH	1	0	22.98	PASS
		1	37	22.97	PASS
		1	74	22.83	PASS
		37	0	22.08	PASS
		37	18	22.07	PASS
		37	38	22.03	PASS
		75	0	22.09	PASS
	HCH	1	0	22.75	PASS
		1	37	22.65	PASS

		1	74	22.45	PASS
		37	0	21.86	PASS
		37	18	21.78	PASS
		37	38	21.69	PASS
		75	0	21.79	PASS
16QAM	LCH	1	0	21.26	PASS
		1	37	21.37	PASS
		1	74	21.26	PASS
		37	0	20.58	PASS
		37	18	20.75	PASS
		37	38	20.65	PASS
		75	0	20.16	PASS
	MCH	1	0	21.65	PASS
		1	37	21.61	PASS
		1	74	22	PASS
		37	0	21.04	PASS
		37	18	21.01	PASS
		37	38	20.98	PASS
		75	0	21	PASS
	HCH	1	0	21.92	PASS
		1	37	21.9	PASS
		1	74	21.69	PASS
		37	0	20.8	PASS
		37	18	20.73	PASS
		37	38	20.65	PASS
		75	0	20.77	PASS

### Channel Bandwidth: 20 MHz

Modulation	Channel	RB Configuration		Average Power [dBm]	Verdict
		Size	Offset		
QPSK	LCH	1	0	23.09	PASS
		1	49	23.01	PASS
		1	99	23.09	PASS
		50	0	22.45	PASS
		50	25	22.08	PASS
		50	50	22.08	PASS
		100	0	22.09	PASS
	MCH	1	0	23.04	PASS
		1	49	22.97	PASS
		1	99	22.86	PASS
		50	0	21.99	PASS
		50	25	21.92	PASS

	HCH	50	50	21.87	PASS
		100	0	21.93	PASS
		1	0	22.76	PASS
		1	49	22.51	PASS
		1	99	22.38	PASS
		50	0	21.83	PASS
		50	25	21.72	PASS
		50	50	21.64	PASS
16QAM	LCH	100	0	21.77	PASS
		1	0	21.26	PASS
		1	49	21.24	PASS
		1	99	21.26	PASS
		50	0	21.08	PASS
		50	25	21.07	PASS
		50	50	21.06	PASS
	MCH	100	0	21.07	PASS
		1	0	21.65	PASS
		1	49	21.25	PASS
		1	99	21.35	PASS
		50	0	21.02	PASS
		50	25	20.99	PASS
		50	50	20.92	PASS
	HCH	100	0	20.92	PASS
		1	0	21.96	PASS
		1	49	21.82	PASS
		1	99	21.67	PASS
		50	0	20.84	PASS
		50	25	20.74	PASS
		50	50	20.67	PASS
		100	0	20.74	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	3.64	<13	PASS
		1	3	3.59	<13	PASS
		1	5	3.74	<13	PASS
		3	0	4.16	<13	PASS
		3	2	4.17	<13	PASS
		3	3	4.23	<13	PASS
		6	0	5.11	<13	PASS
	MCH	1	0	3.26	<13	PASS
		1	3	3.19	<13	PASS
		1	5	3.22	<13	PASS
		3	0	3.6	<13	PASS
		3	2	3.58	<13	PASS
		3	3	3.55	<13	PASS
		6	0	4.43	<13	PASS
16QAM	LCH	1	0	3.69	<13	PASS
		1	3	3.54	<13	PASS
		1	5	3.56	<13	PASS
		3	0	4	<13	PASS
		3	2	4.03	<13	PASS
		3	3	3.96	<13	PASS
		6	0	4.97	<13	PASS
	MCH	1	0	4.65	<13	PASS
		1	3	4.6	<13	PASS
		1	5	4.58	<13	PASS
		3	0	5.11	<13	PASS
		3	2	5.09	<13	PASS
		3	3	5.13	<13	PASS
		6	0	5.94	<13	PASS

		3	2	4.41	<13	PASS
		3	3	4.4	<13	PASS
		6	0	5.36	<13	PASS
HCH		1	0	4.64	<13	PASS
		1	3	4.45	<13	PASS
		1	5	4.49	<13	PASS
		3	0	4.97	<13	PASS
		3	2	4.96	<13	PASS
		3	3	5	<13	PASS
		6	0	5.9	<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	3.82	<13	PASS
		1	7	3.8	<13	PASS
		1	14	3.83	<13	PASS
		8	0	5.18	<13	PASS
		8	4	5.15	<13	PASS
		8	7	5.2	<13	PASS
		15	0	5.19	<13	PASS
	MCH	1	0	3.33	<13	PASS
		1	7	3.2	<13	PASS
		1	14	3.19	<13	PASS
		8	0	4.5	<13	PASS
		8	4	4.45	<13	PASS
		8	7	4.46	<13	PASS
		15	0	4.66	<13	PASS
	HCH	1	0	3.76	<13	PASS
		1	7	3.71	<13	PASS
		1	14	3.68	<13	PASS
		8	0	5.1	<13	PASS
		8	4	5.08	<13	PASS
		8	7	4.98	<13	PASS
		15	0	5.1	<13	PASS
16QAM	LCH	1	0	4.67	<13	PASS
		1	7	4.62	<13	PASS
		1	14	4.72	<13	PASS
		8	0	5.87	<13	PASS
		8	4	5.92	<13	PASS

		8	7	5.94	<13	PASS
		15	0	6.16	<13	PASS
MCH		1	0	4.41	<13	PASS
		1	7	4.36	<13	PASS
		1	14	4.38	<13	PASS
		8	0	5.43	<13	PASS
		8	4	5.35	<13	PASS
		8	7	5.42	<13	PASS
		15	0	5.51	<13	PASS
HCH		1	0	4.66	<13	PASS
		1	7	4.5	<13	PASS
		1	14	4.54	<13	PASS
		8	0	5.99	<13	PASS
		8	4	5.98	<13	PASS
		8	7	6.01	<13	PASS
		15	0	6	<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	3.73	<13	PASS
		1	12	3.8	<13	PASS
		1	24	3.91	<13	PASS
		12	0	5.19	<13	PASS
		12	6	5.26	<13	PASS
		12	13	5.25	<13	PASS
		25	0	5.3	<13	PASS
	MCH	1	0	3.3	<13	PASS
		1	12	3.22	<13	PASS
		1	24	3.21	<13	PASS
		12	0	4.56	<13	PASS
		12	6	4.47	<13	PASS
		12	13	4.44	<13	PASS
		25	0	4.82	<13	PASS
	HCH	1	0	3.7	<13	PASS
		1	12	3.61	<13	PASS
		1	24	3.56	<13	PASS
		12	0	5.18	<13	PASS
		12	6	5.16	<13	PASS
		12	13	5.1	<13	PASS

		25	0	5.23	<13	PASS
16QAM	LCH	1	0	4.54	<13	PASS
		1	12	4.75	<13	PASS
		1	24	4.85	<13	PASS
		12	0	5.95	<13	PASS
		12	6	6.09	<13	PASS
		12	13	6.18	<13	PASS
		25	0	6.07	<13	PASS
	MCH	1	0	4.32	<13	PASS
		1	12	4.28	<13	PASS
		1	24	4.29	<13	PASS
		12	0	5.49	<13	PASS
		12	6	5.41	<13	PASS
		12	13	5.46	<13	PASS
		25	0	5.7	<13	PASS
	HCH	1	0	4.49	<13	PASS
		1	12	4.38	<13	PASS
		1	24	4.34	<13	PASS
		12	0	6.02	<13	PASS
		12	6	5.95	<13	PASS
		12	13	5.93	<13	PASS
		25	0	6.07	<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	3.7	<13	PASS
		1	24	3.87	<13	PASS
		1	49	3.93	<13	PASS
		25	0	5.22	<13	PASS
		25	12	5.29	<13	PASS
		25	25	5.32	<13	PASS
		50	0	5.3	<13	PASS
	MCH	1	0	3.42	<13	PASS
		1	24	3.12	<13	PASS
		1	49	3.09	<13	PASS
		25	0	4.73	<13	PASS
		25	12	4.58	<13	PASS
		25	25	4.5	<13	PASS
		50	0	4.72	<13	PASS

		1	0	3.58	<13	PASS
	HCH	1	24	3.79	<13	PASS
		1	49	3.66	<13	PASS
		25	0	5.1	<13	PASS
		25	12	5.15	<13	PASS
		25	25	5.18	<13	PASS
		50	0	5.2	<13	PASS
		1	0	4.52	<13	PASS
	LCH	1	24	4.69	<13	PASS
		1	49	4.82	<13	PASS
		25	0	6.14	<13	PASS
		25	12	6.14	<13	PASS
		25	25	6.24	<13	PASS
		50	0	6.15	<13	PASS
		1	0	4.63	<13	PASS
	MCH	1	24	4.34	<13	PASS
		1	49	4.15	<13	PASS
		25	0	5.6	<13	PASS
		25	12	5.5	<13	PASS
		25	25	5.45	<13	PASS
		50	0	5.58	<13	PASS
		1	0	4.33	<13	PASS
	HCH	1	24	4.56	<13	PASS
		1	49	4.52	<13	PASS
		25	0	6.01	<13	PASS
		25	12	6.13	<13	PASS
		25	25	6.12	<13	PASS
		50	0	6.08	<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	3.62	<13	PASS
		1	37	3.9	<13	PASS
		1	74	3.74	<13	PASS
		37	0	5.22	<13	PASS
		37	18	5.28	<13	PASS
		37	38	5.26	<13	PASS
		75	0	5.59	<13	PASS
	MCH	1	0	3.72	<13	PASS

		1	37	3.15	<13	PASS
		1	74	2.98	<13	PASS
		37	0	4.77	<13	PASS
		37	18	4.48	<13	PASS
		37	38	4.4	<13	PASS
		75	0	4.99	<13	PASS
		1	0	3.29	<13	PASS
		1	37	3.61	<13	PASS
		1	74	3.54	<13	PASS
		37	0	4.8	<13	PASS
		37	18	5.03	<13	PASS
		37	38	5.2	<13	PASS
		75	0	5.35	<13	PASS
16QAM	LCH	1	0	4.51	<13	PASS
		1	37	4.8	<13	PASS
		1	74	4.61	<13	PASS
		37	0	6.09	<13	PASS
		37	18	6.17	<13	PASS
		37	38	6.12	<13	PASS
		75	0	6.31	<13	PASS
	MCH	1	0	4.71	<13	PASS
		1	37	4.22	<13	PASS
		1	74	4.08	<13	PASS
		37	0	5.72	<13	PASS
		37	18	5.5	<13	PASS
		37	38	5.41	<13	PASS
		75	0	5.78	<13	PASS
	HCH	1	0	4.11	<13	PASS
		1	37	4.4	<13	PASS
		1	74	4.46	<13	PASS
		37	0	5.72	<13	PASS
		37	18	5.91	<13	PASS
		37	38	6.04	<13	PASS
		75	0	6.12	<13	PASS

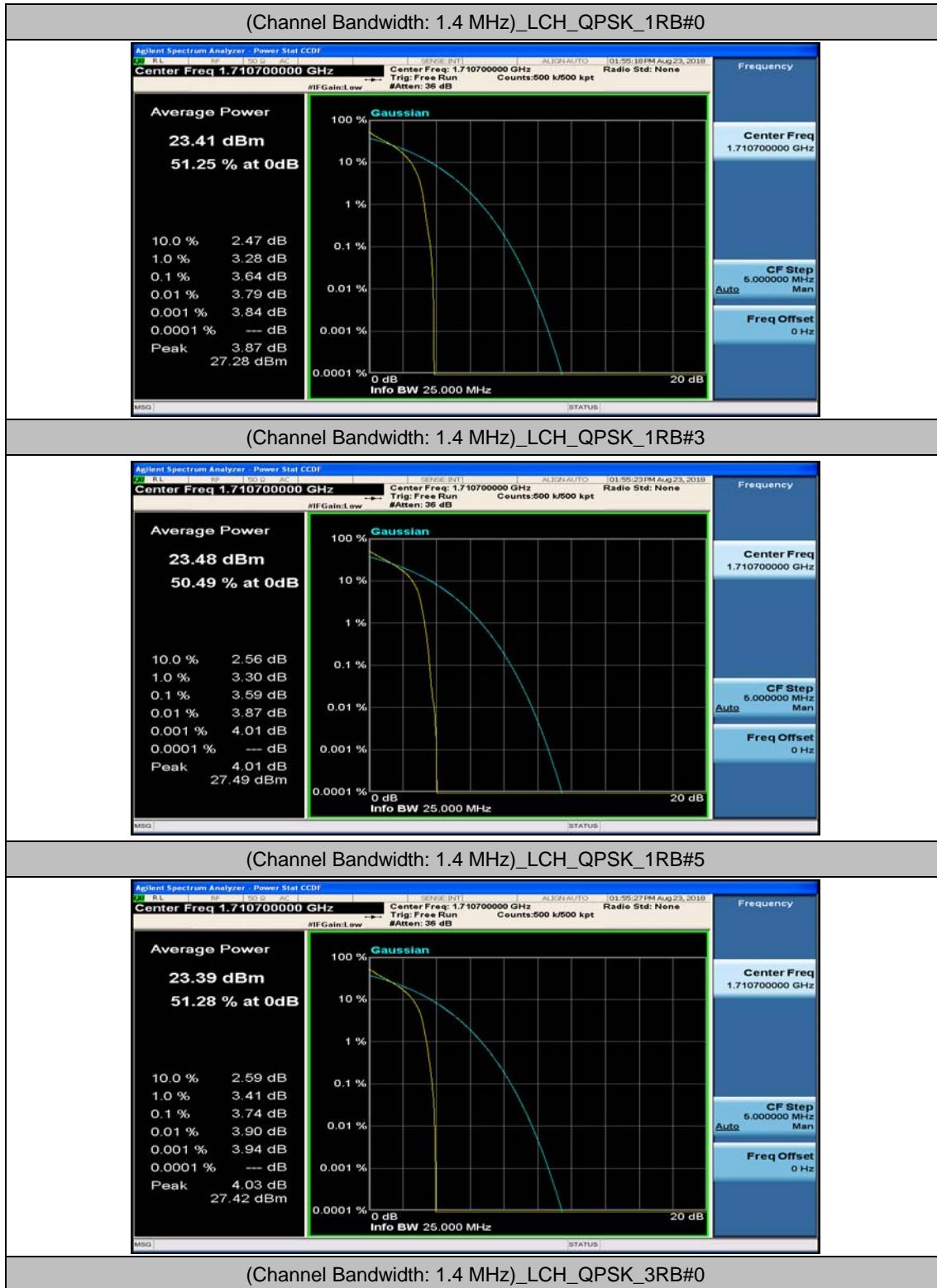
### Channel Bandwidth: 20 MHz

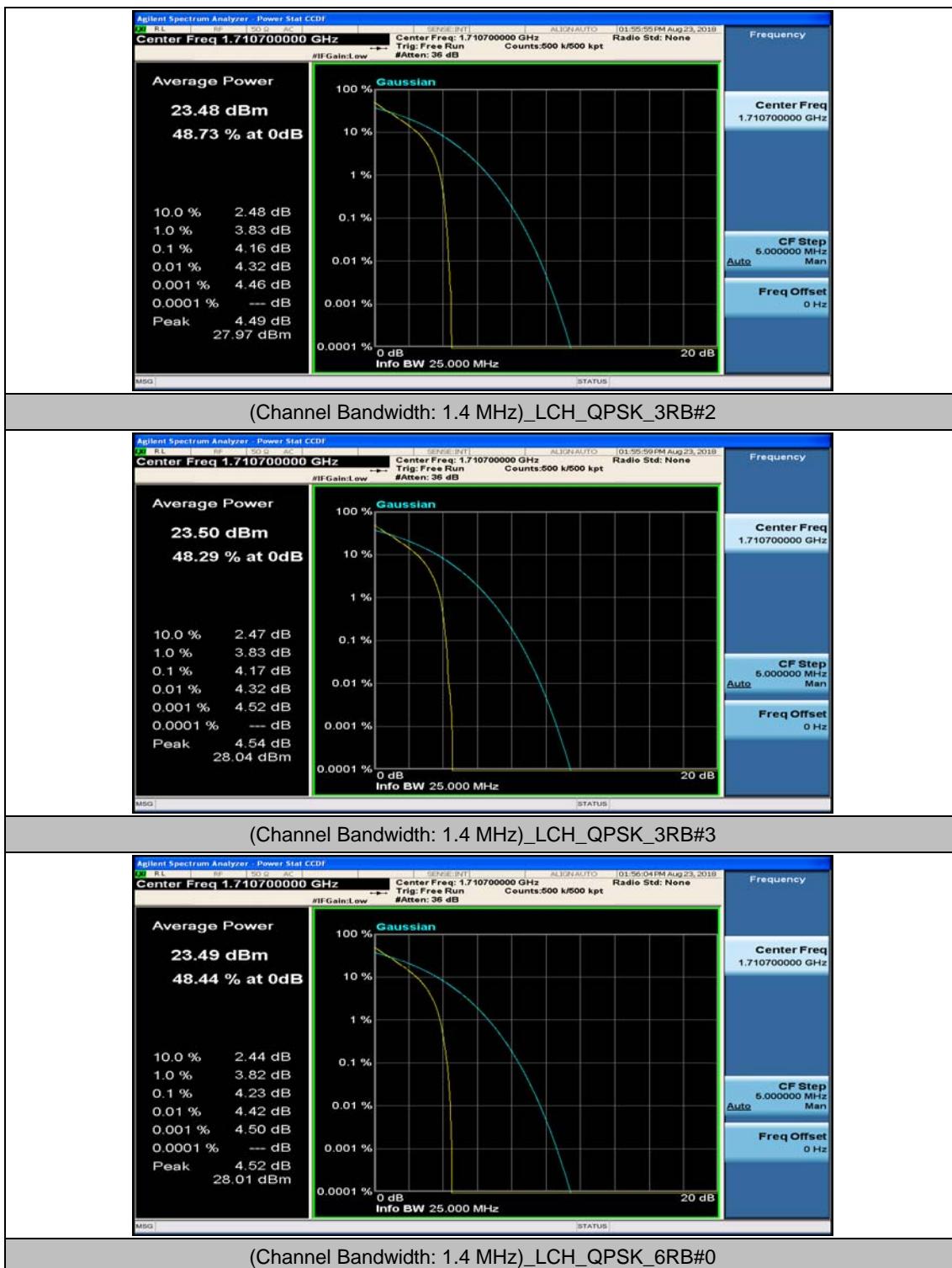
Channel Bandwidth: 20 MHz						
Modulation	Channel	RB Configuration		Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
		Size	Offset			
QPSK	LCH	1	0	3.75	<13	PASS
		1	49	3.88	<13	PASS

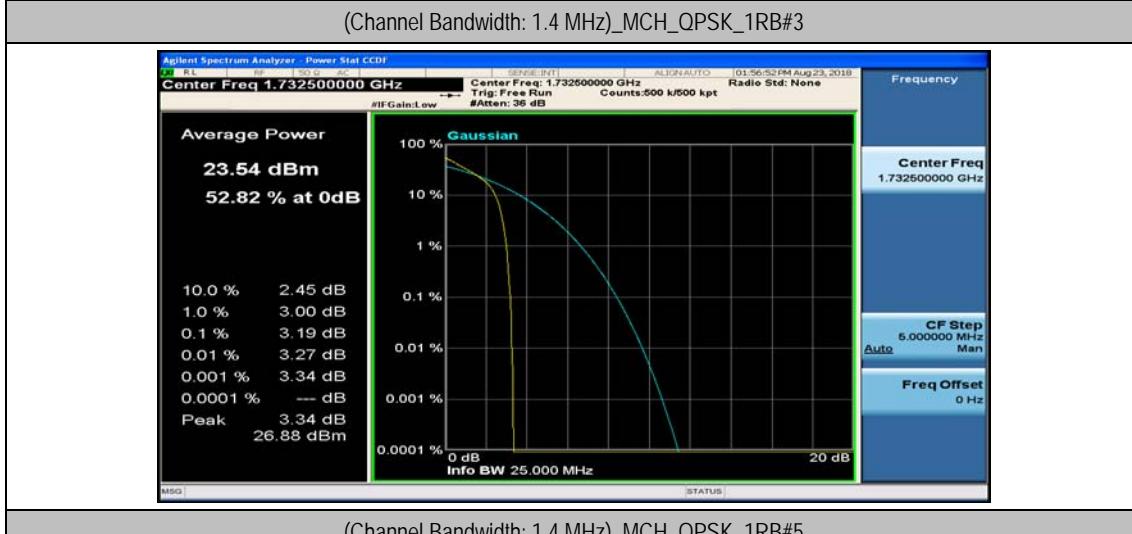
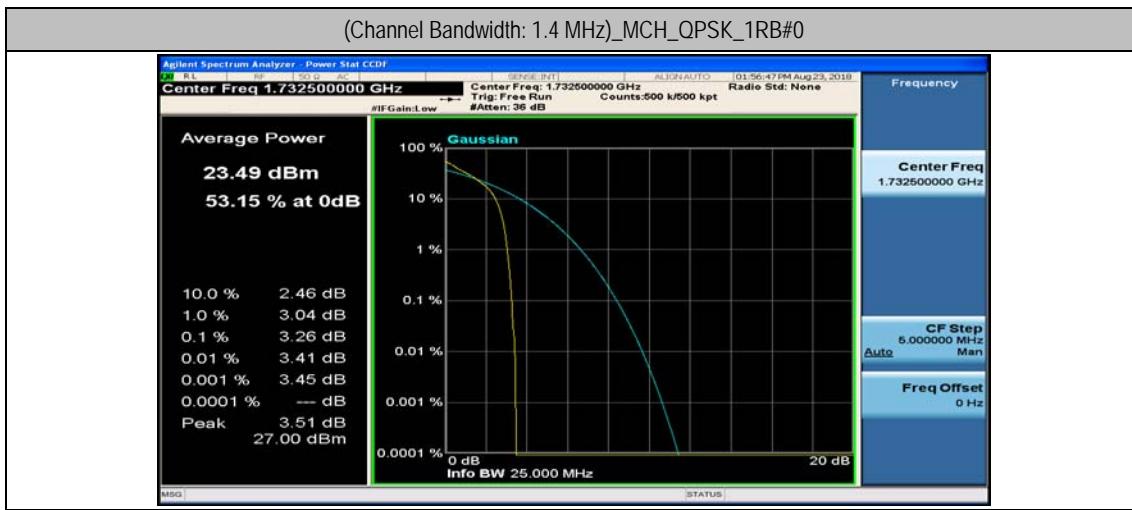
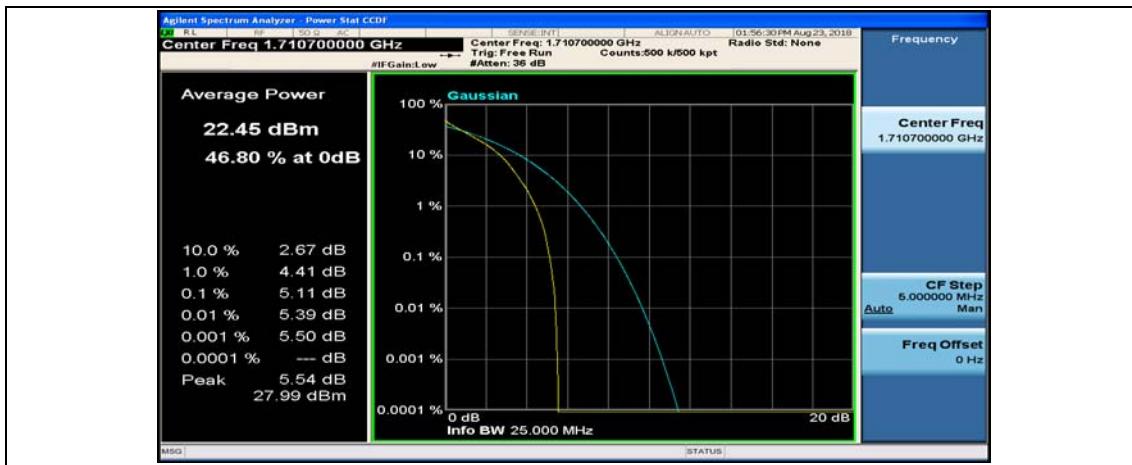
		1	99	3.32	<13	PASS
		50	0	5.32	<13	PASS
		50	25	5.36	<13	PASS
		50	50	5.21	<13	PASS
		100	0	5.47	<13	PASS
	MCH	1	0	3.85	<13	PASS
		1	49	3.26	<13	PASS
		1	99	3.28	<13	PASS
		50	0	4.96	<13	PASS
		50	25	4.68	<13	PASS
		50	50	4.64	<13	PASS
		100	0	5.11	<13	PASS
	HCH	1	0	3.12	<13	PASS
		1	49	3.51	<13	PASS
		1	99	3.58	<13	PASS
		50	0	4.74	<13	PASS
		50	25	5	<13	PASS
		50	50	5.23	<13	PASS
		100	0	5.25	<13	PASS
16QAM	LCH	1	0	4.73	<13	PASS
		1	49	4.69	<13	PASS
		1	99	4.4	<13	PASS
		50	0	6.2	<13	PASS
		50	25	6.18	<13	PASS
		50	50	6.1	<13	PASS
		100	0	6.23	<13	PASS
	MCH	1	0	4.71	<13	PASS
		1	49	4.13	<13	PASS
		1	99	4.15	<13	PASS
		50	0	5.83	<13	PASS
		50	25	5.53	<13	PASS
		50	50	5.51	<13	PASS
		100	0	5.9	<13	PASS
	HCH	1	0	4.02	<13	PASS
		1	49	4.34	<13	PASS
		1	99	4.44	<13	PASS
		50	0	5.6	<13	PASS
		50	25	5.86	<13	PASS
		50	50	6.1	<13	PASS
		100	0	6.06	<13	PASS

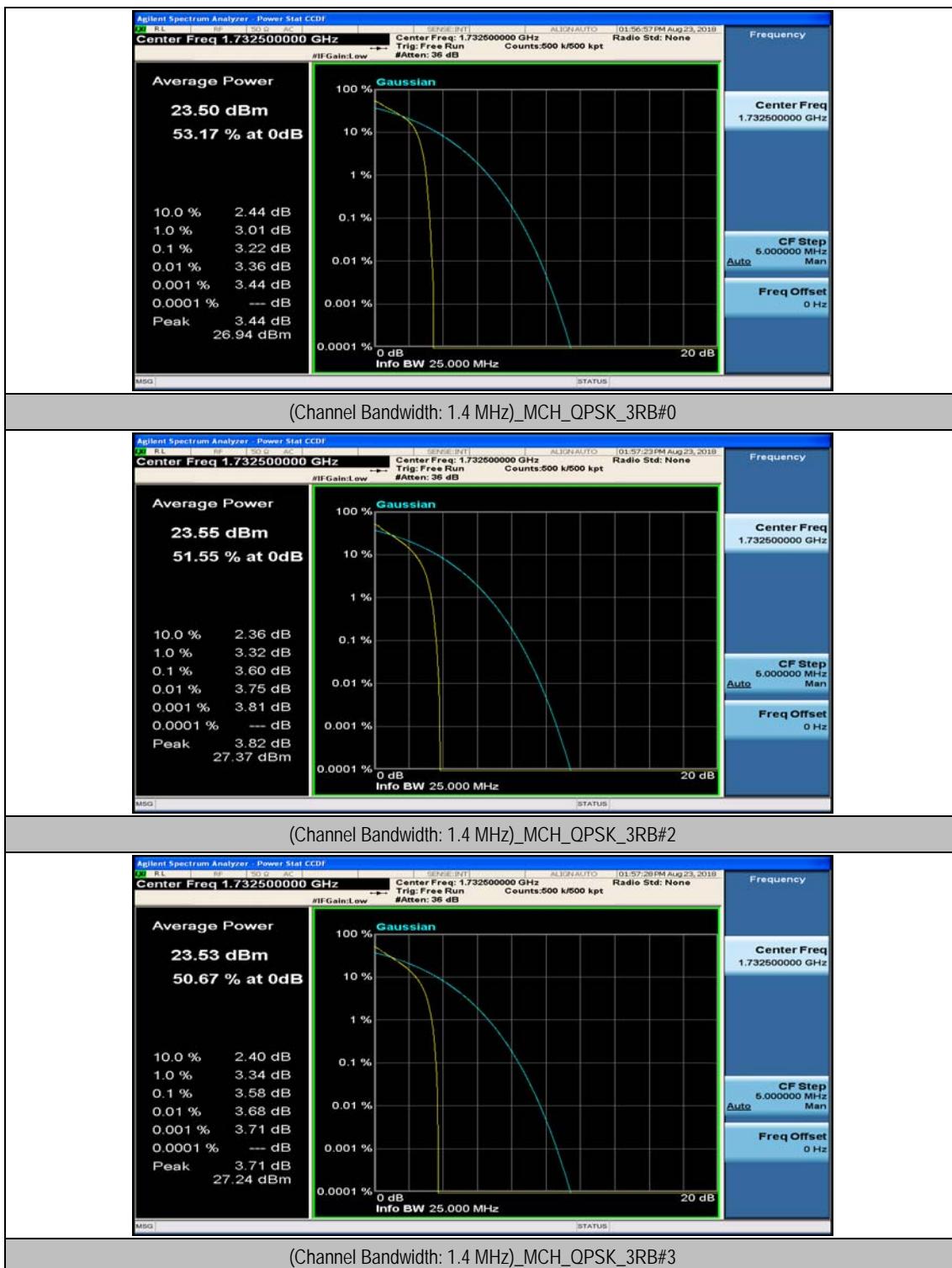
## Test Graphs

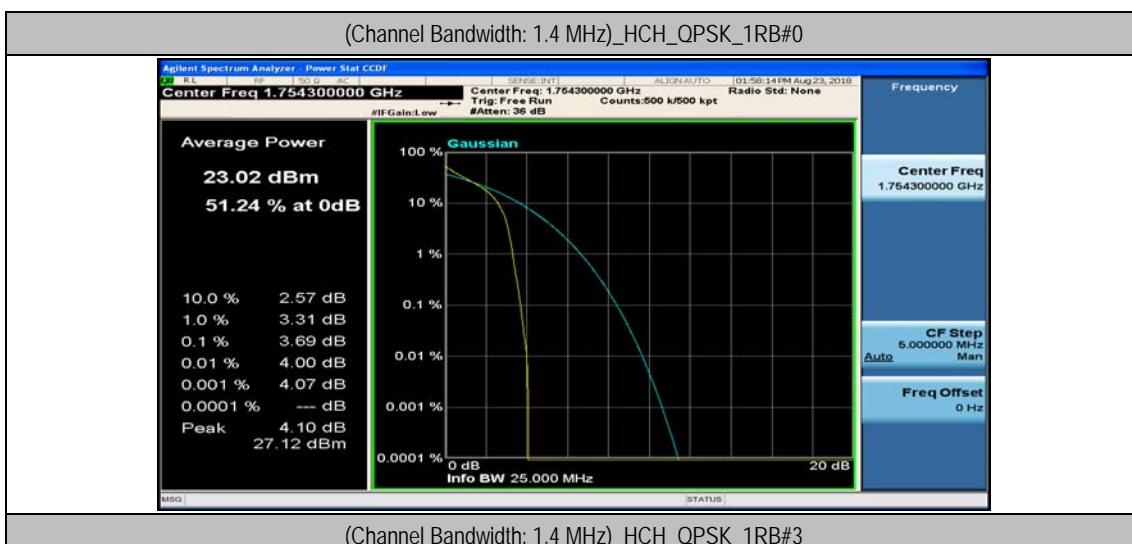
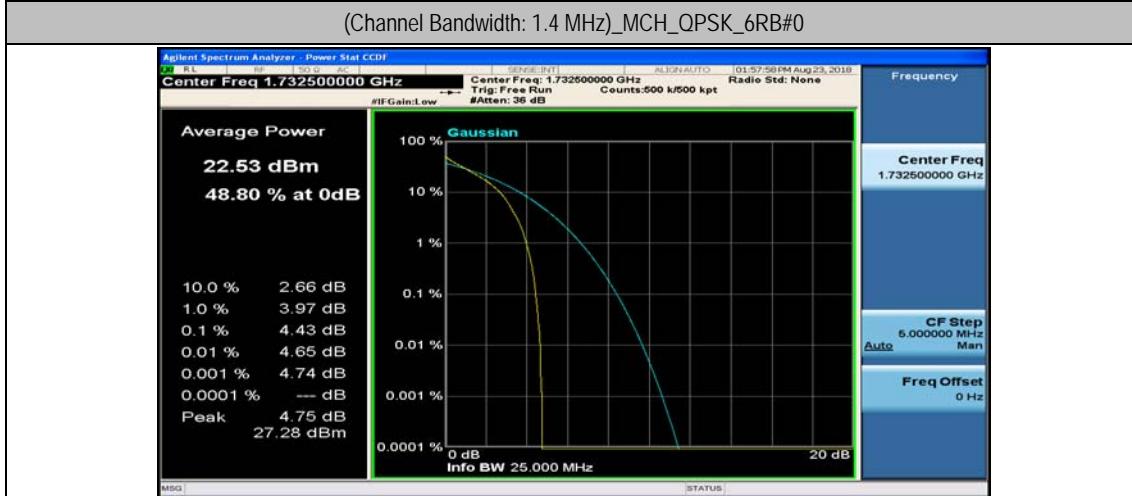
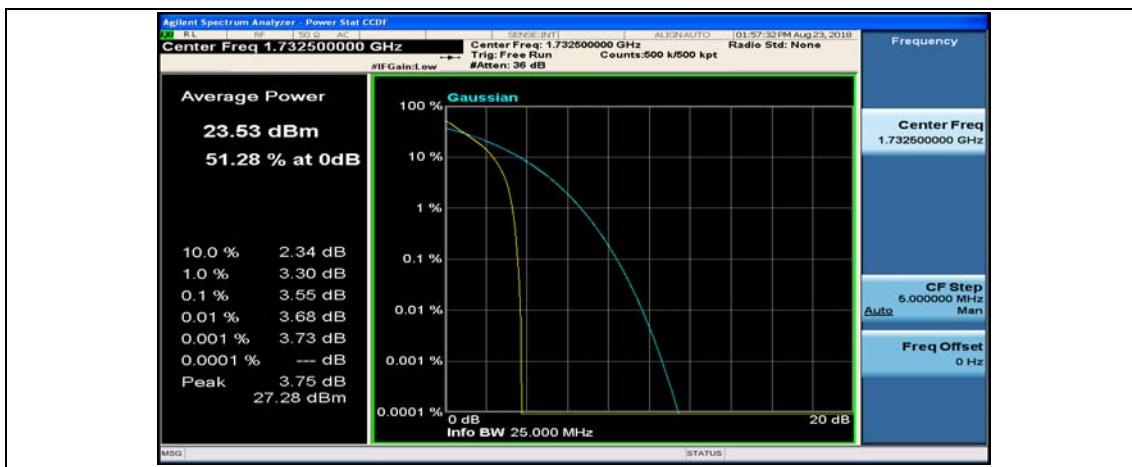
### Channel Bandwidth: 1.4 MHz



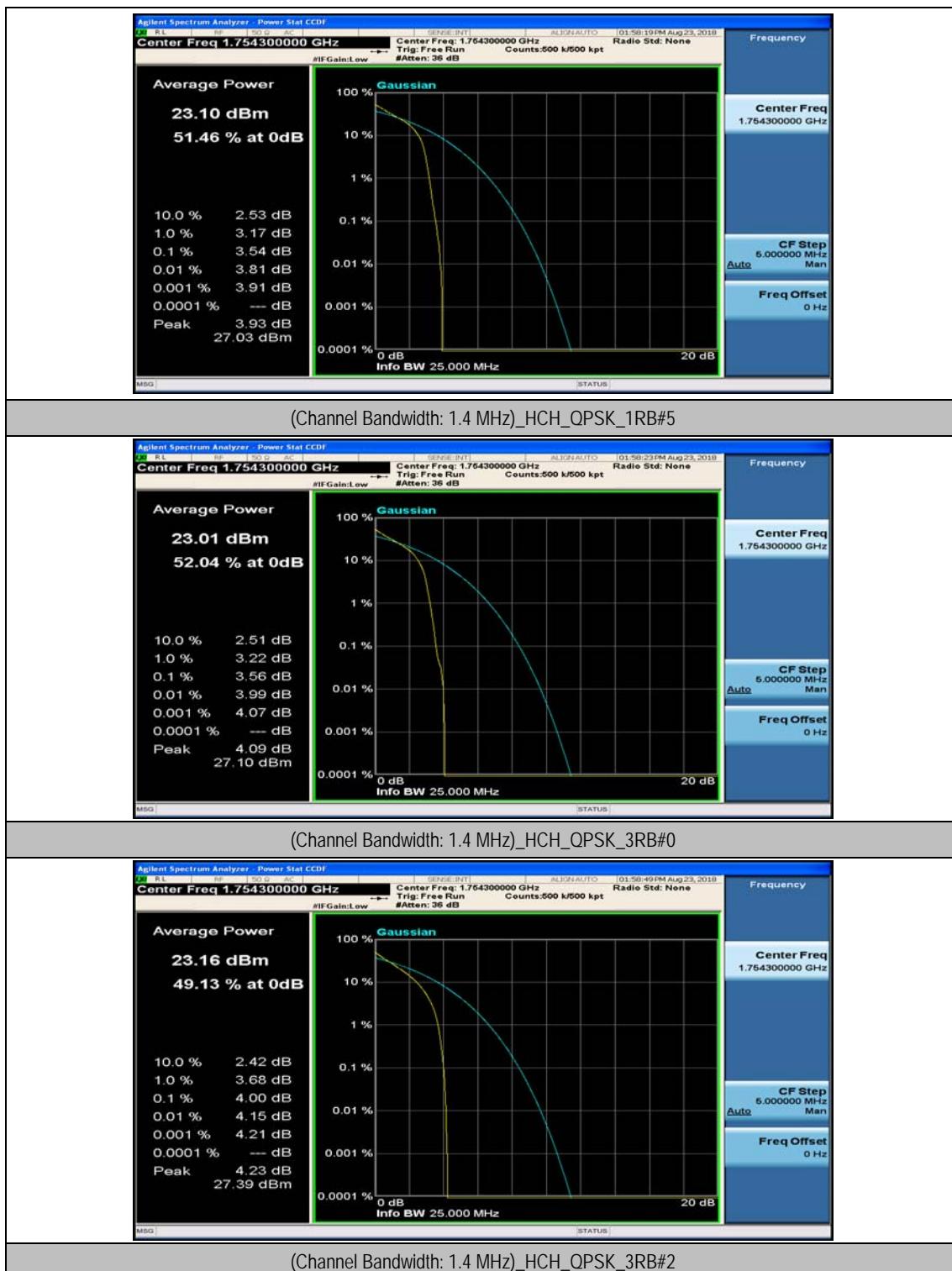


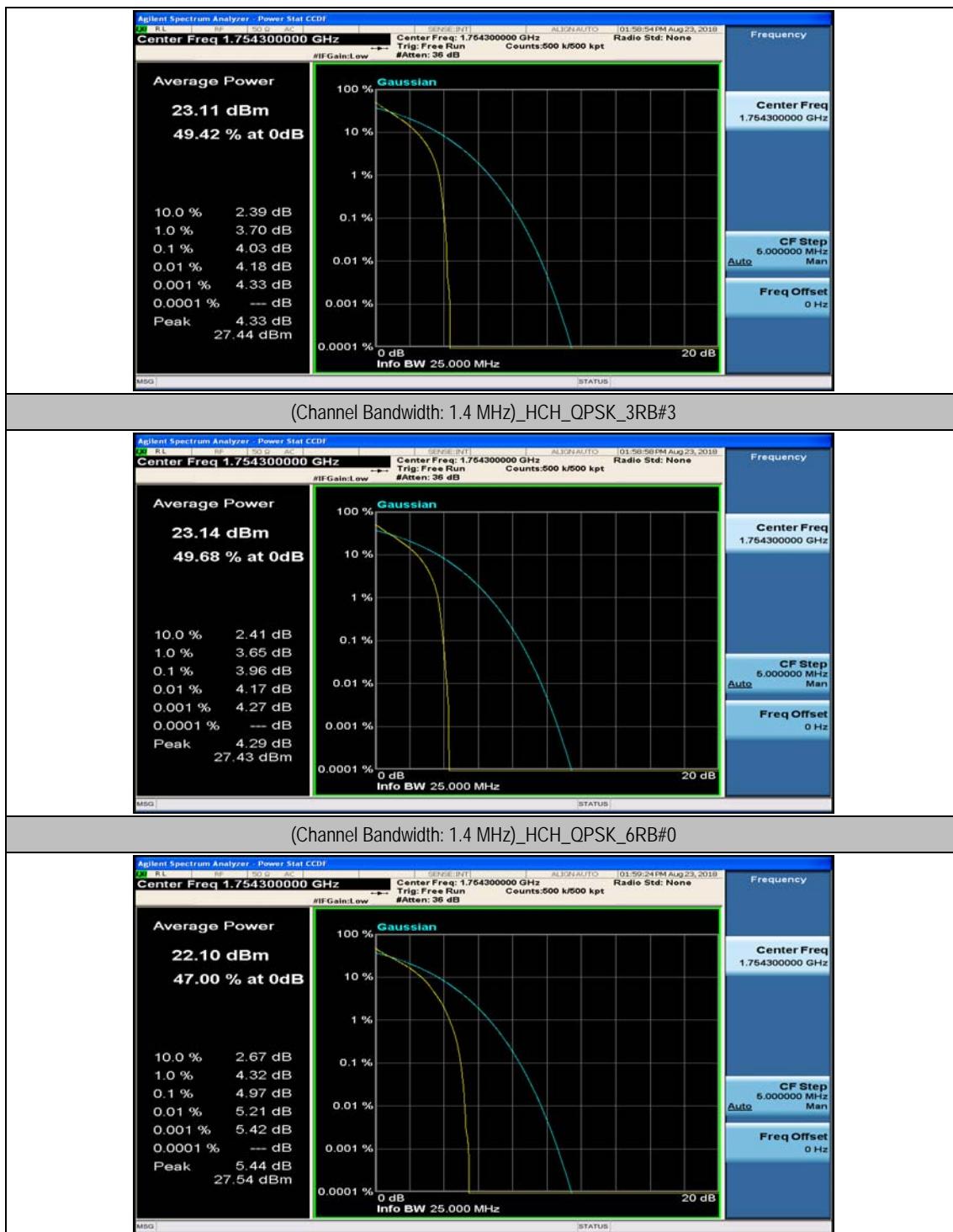


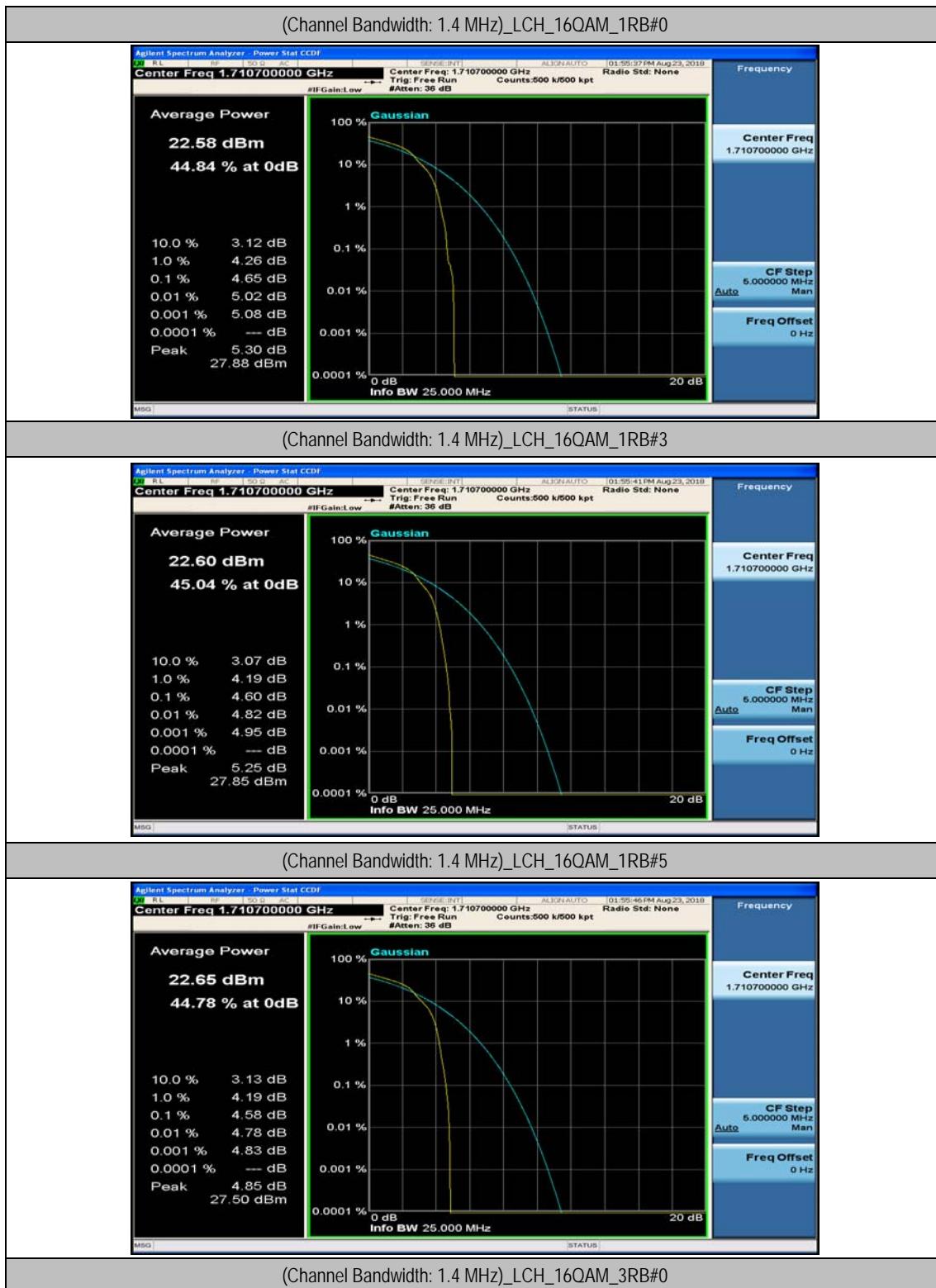


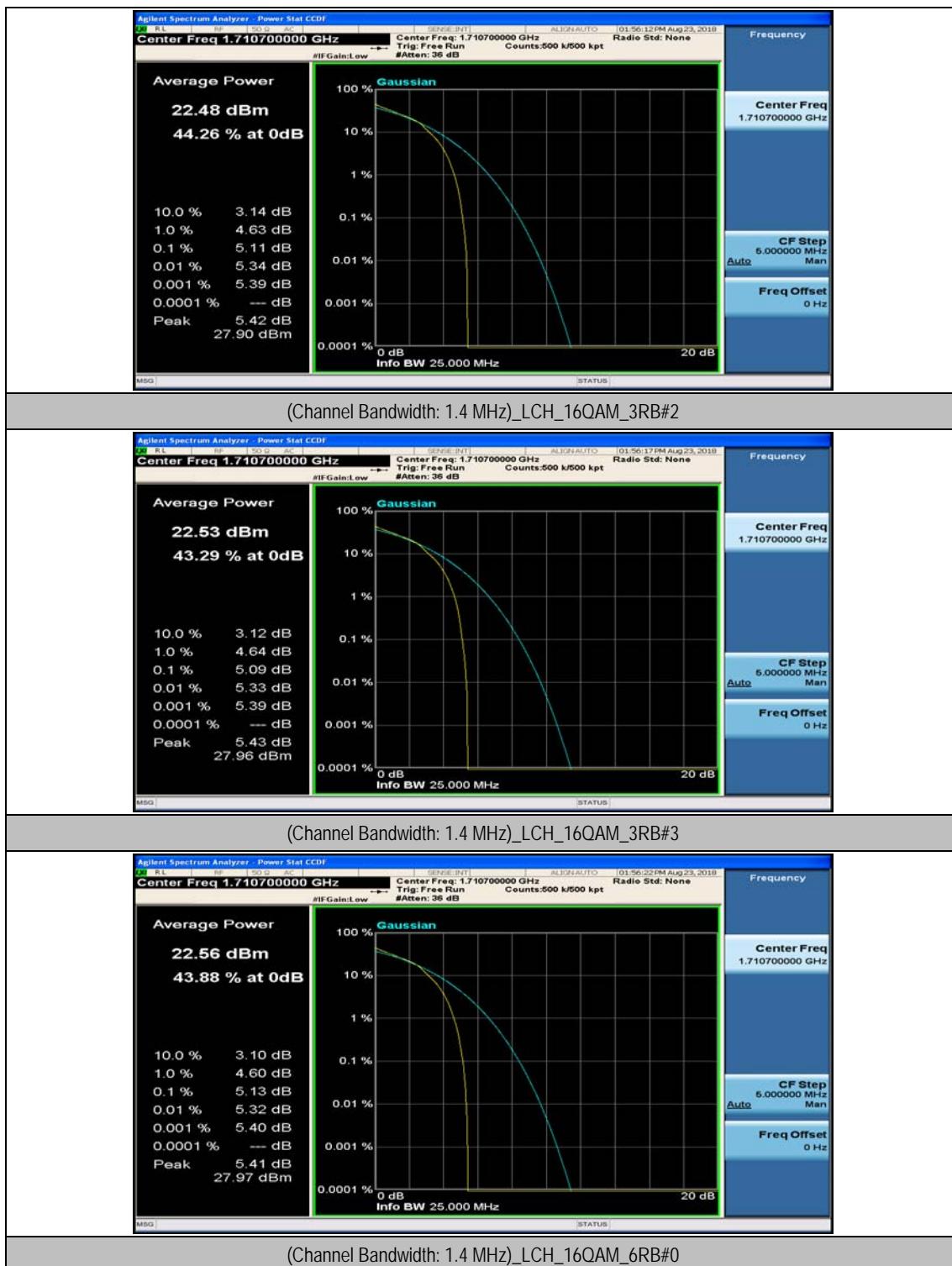


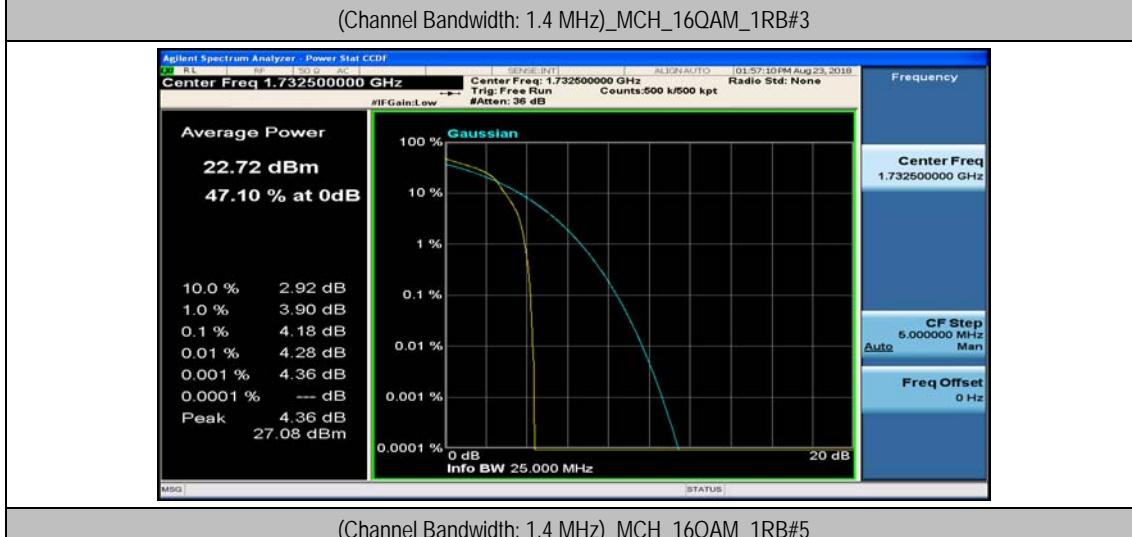
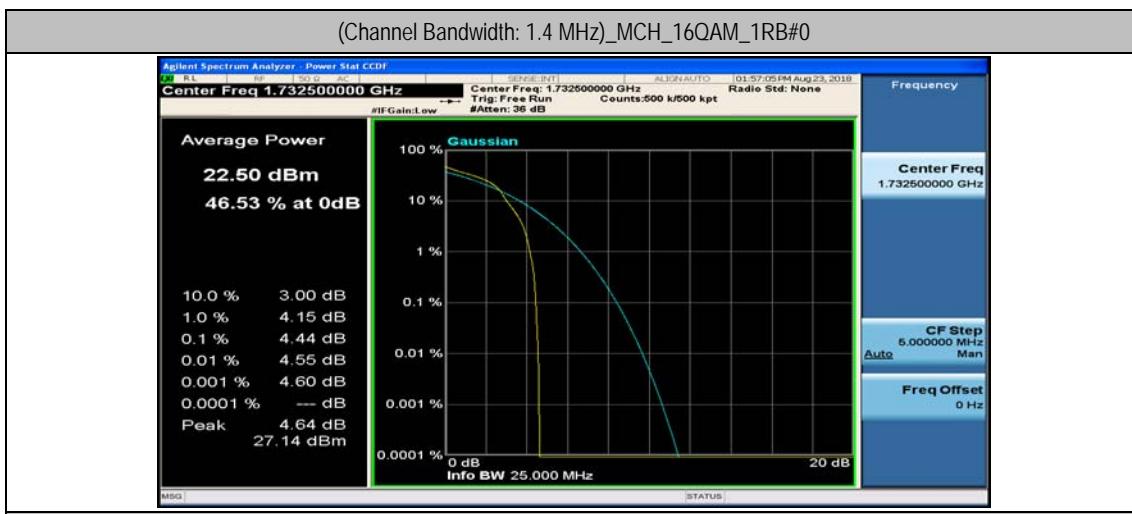
**(Channel Bandwidth: 1.4 MHz)\_HCH\_QPSK\_1RB#3**

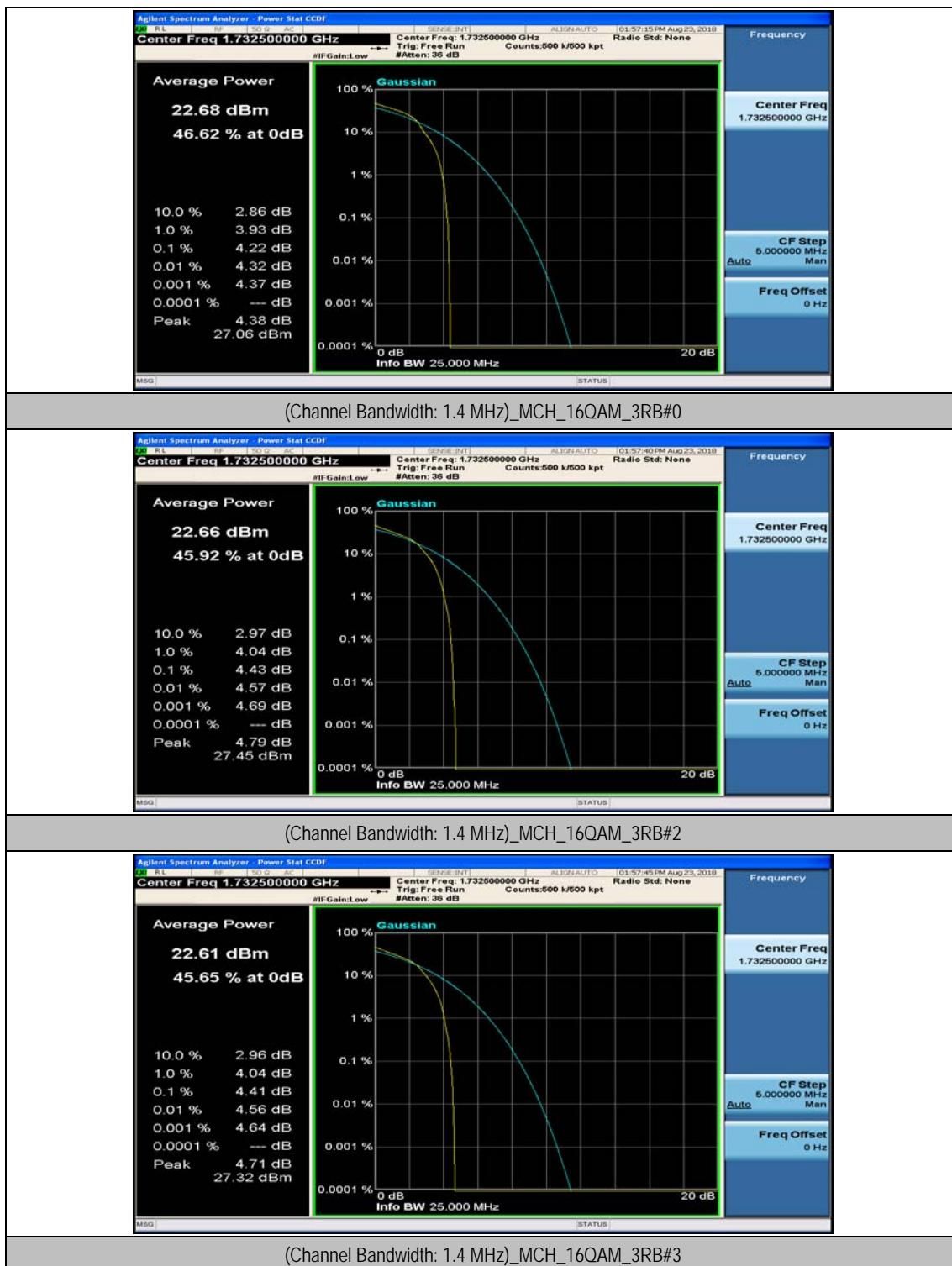


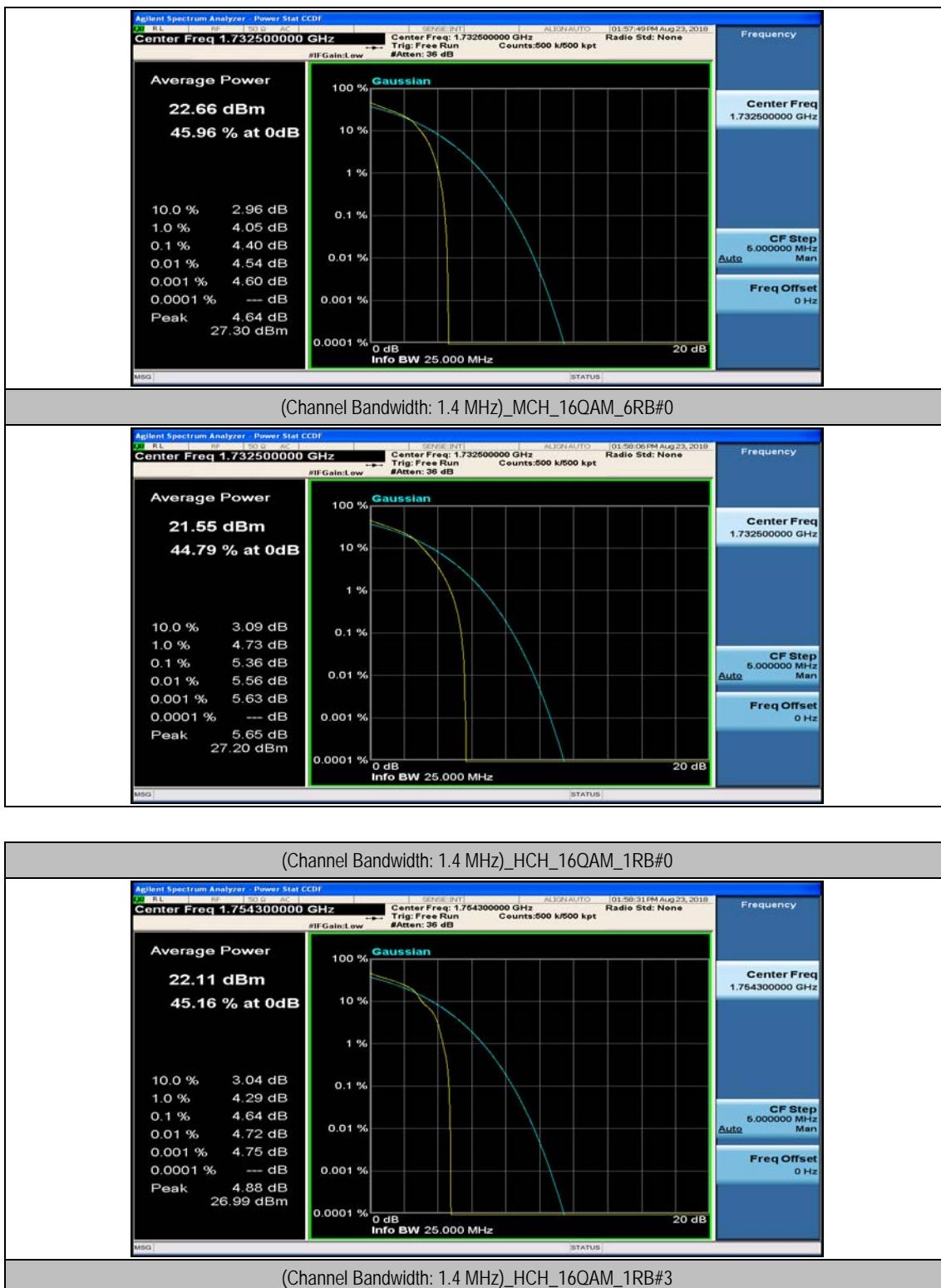


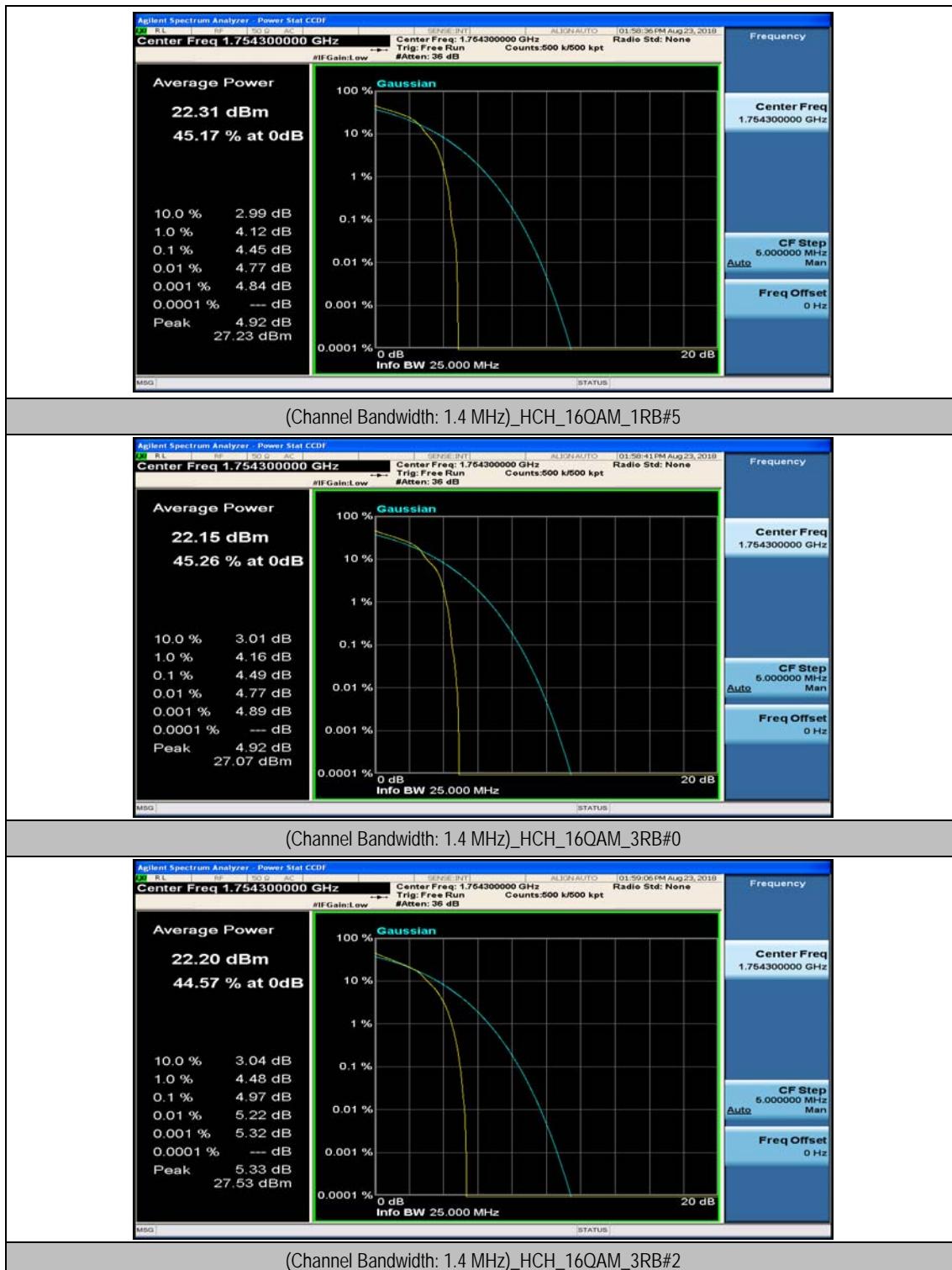


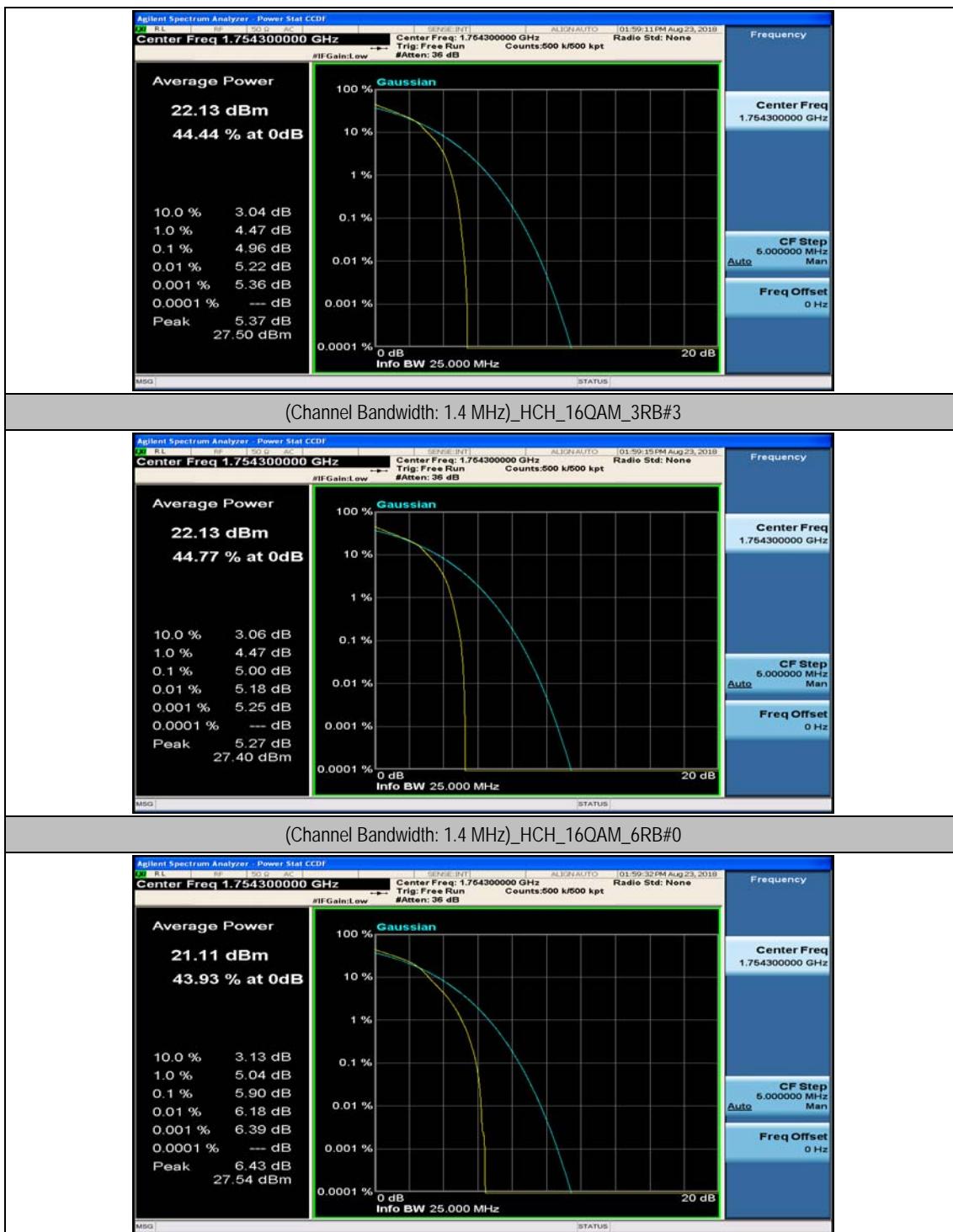




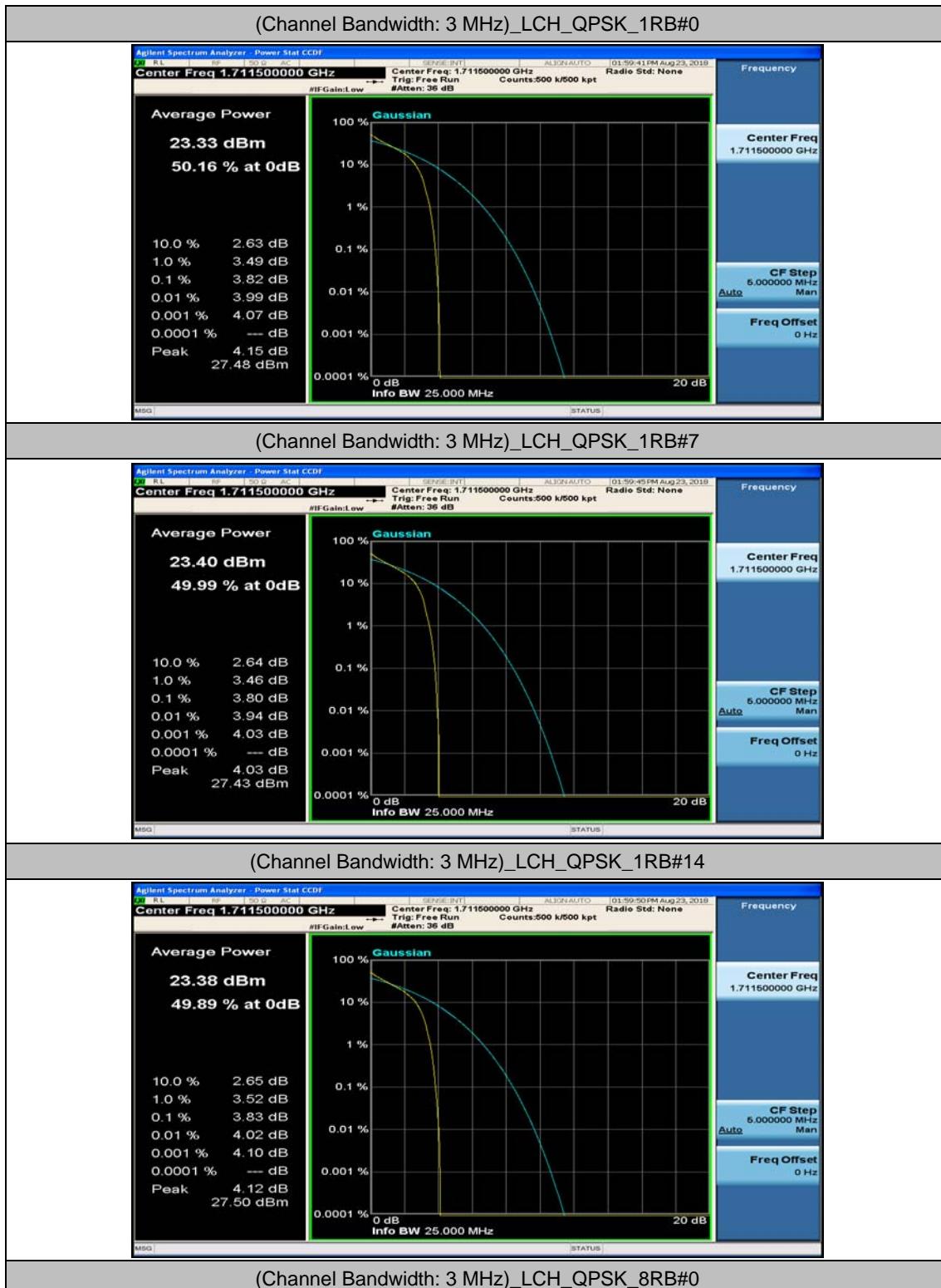


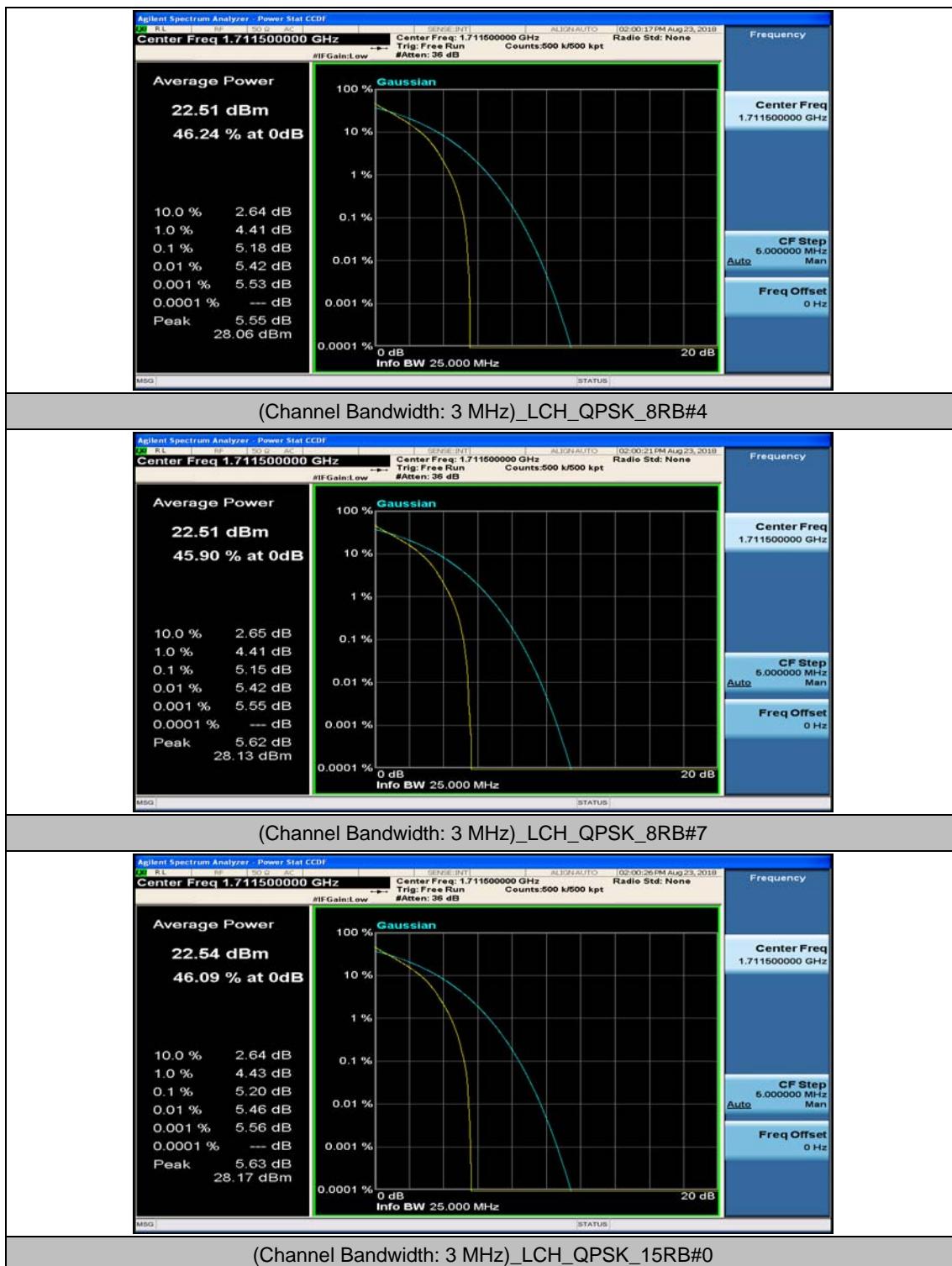


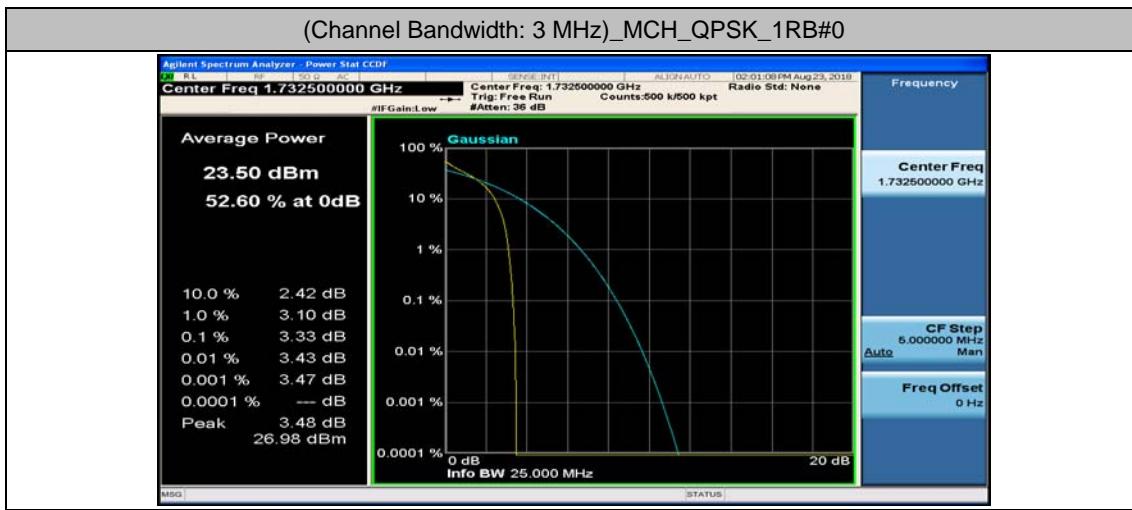
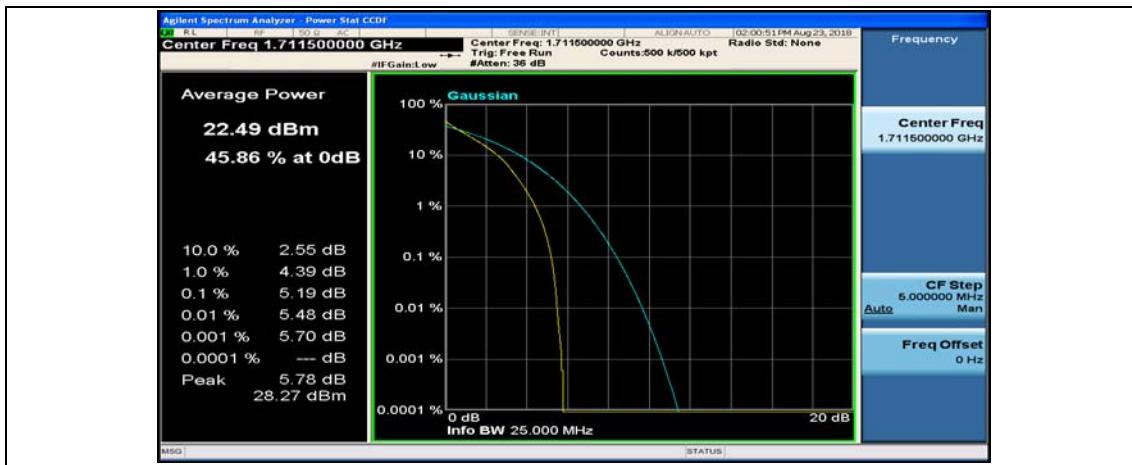




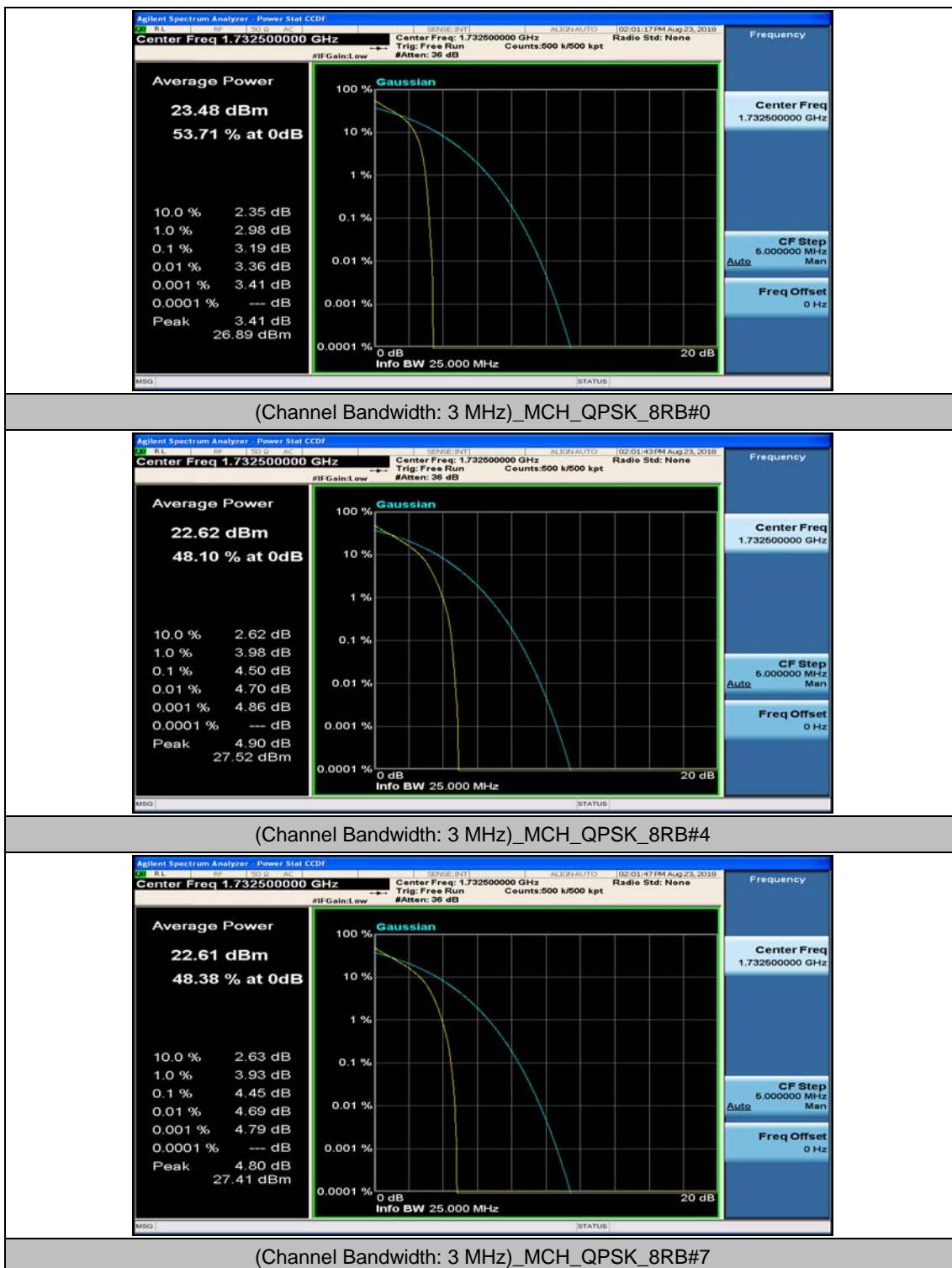
## Channel Bandwidth: 3 MHz

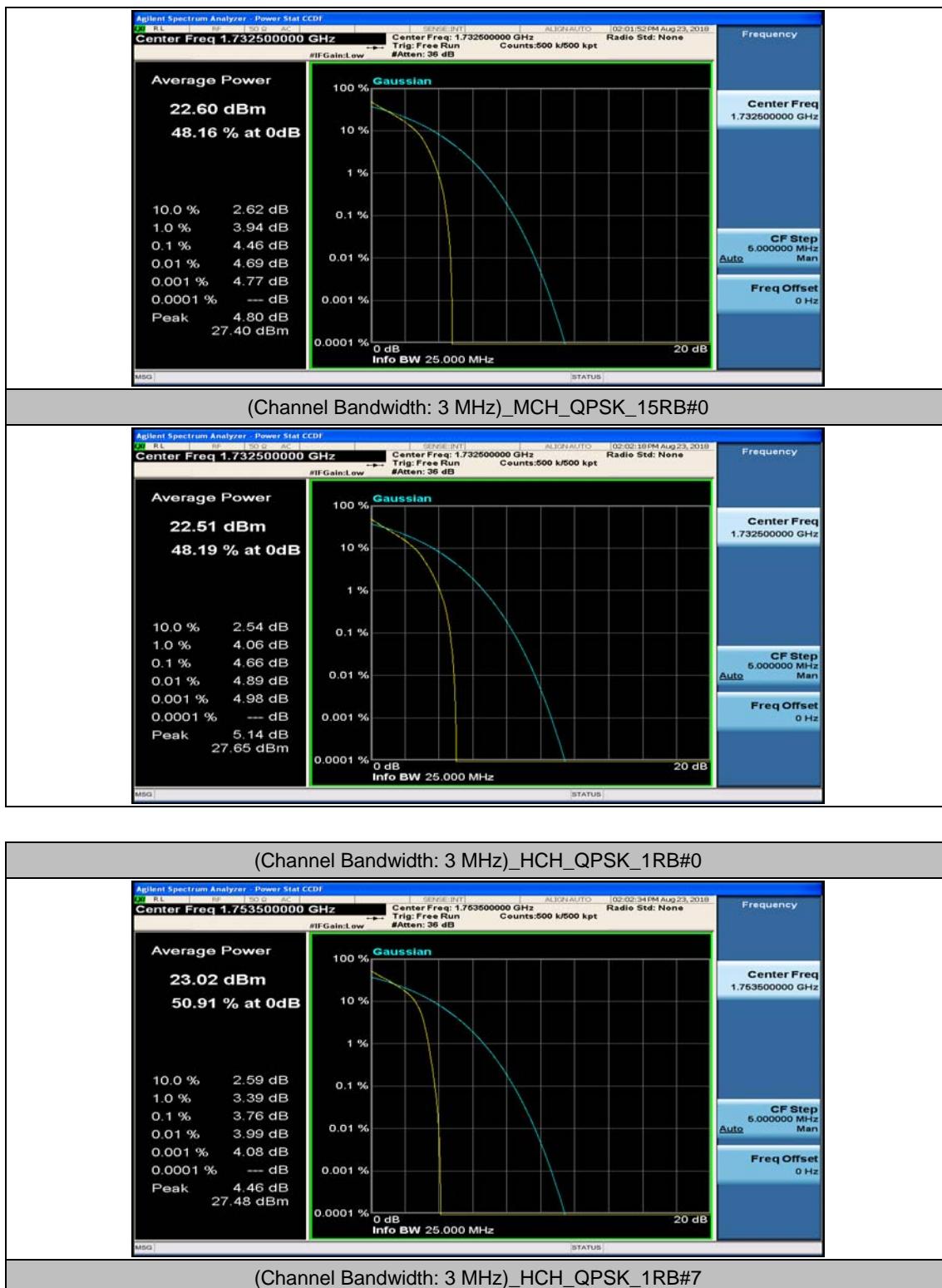


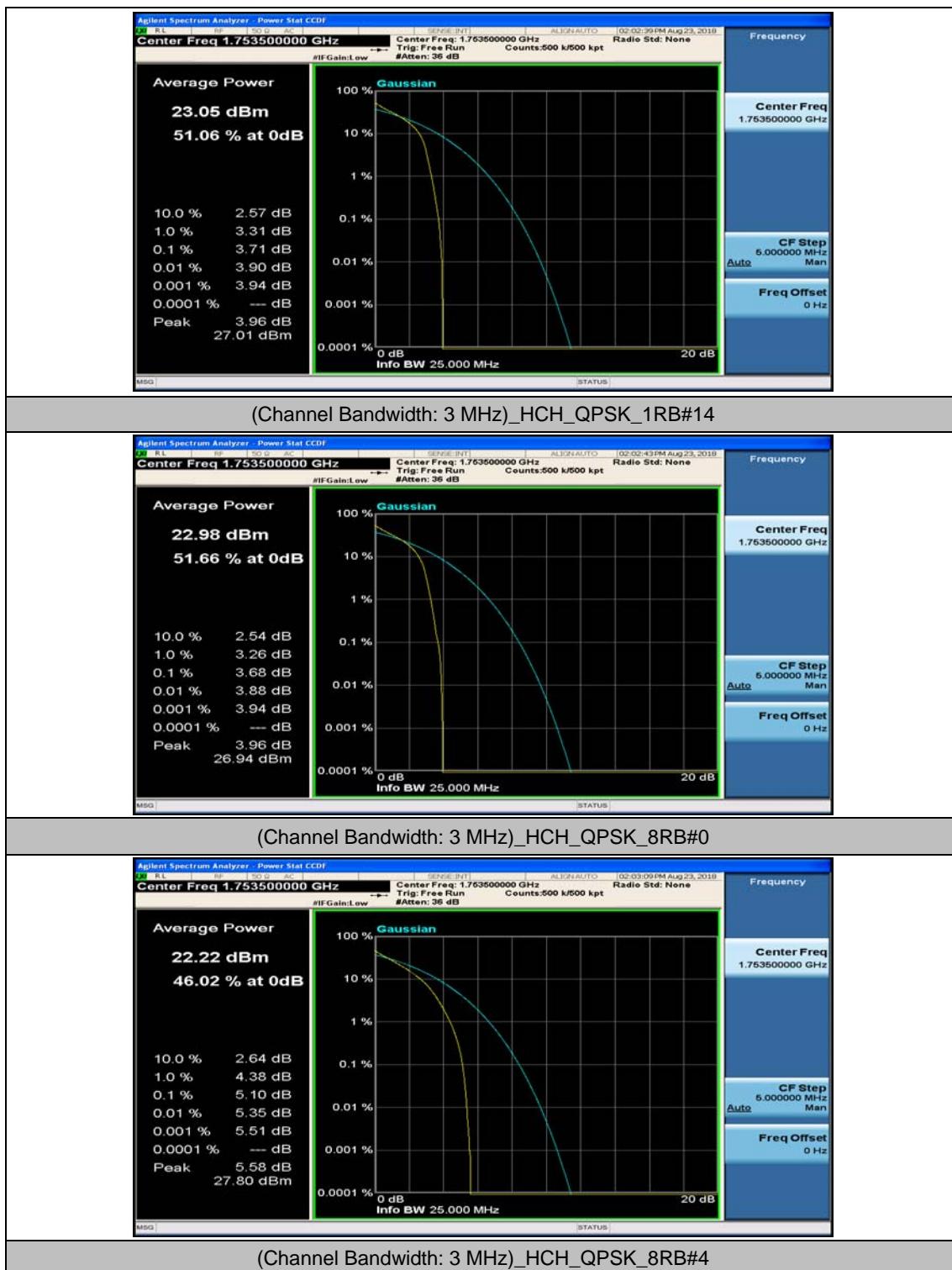


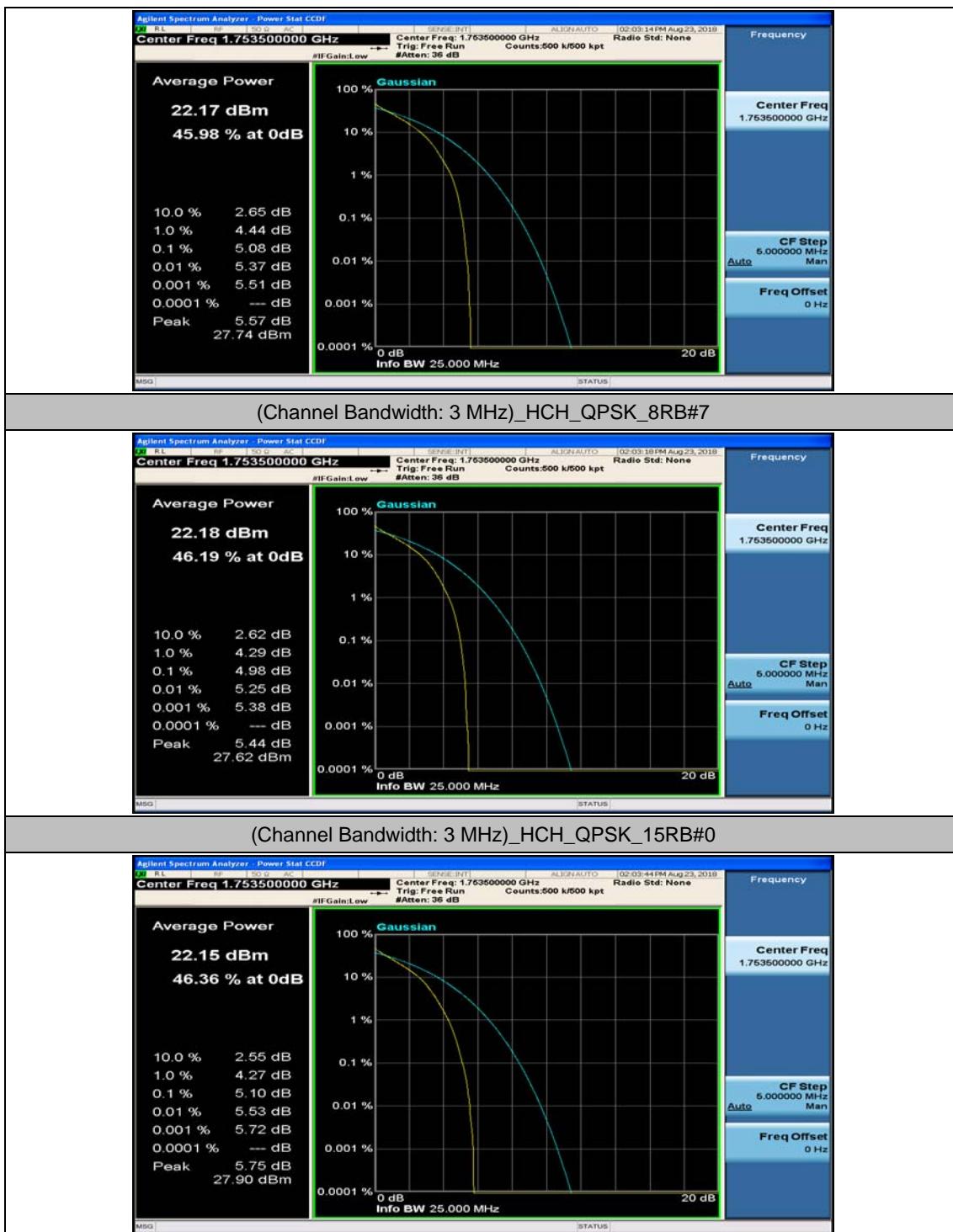


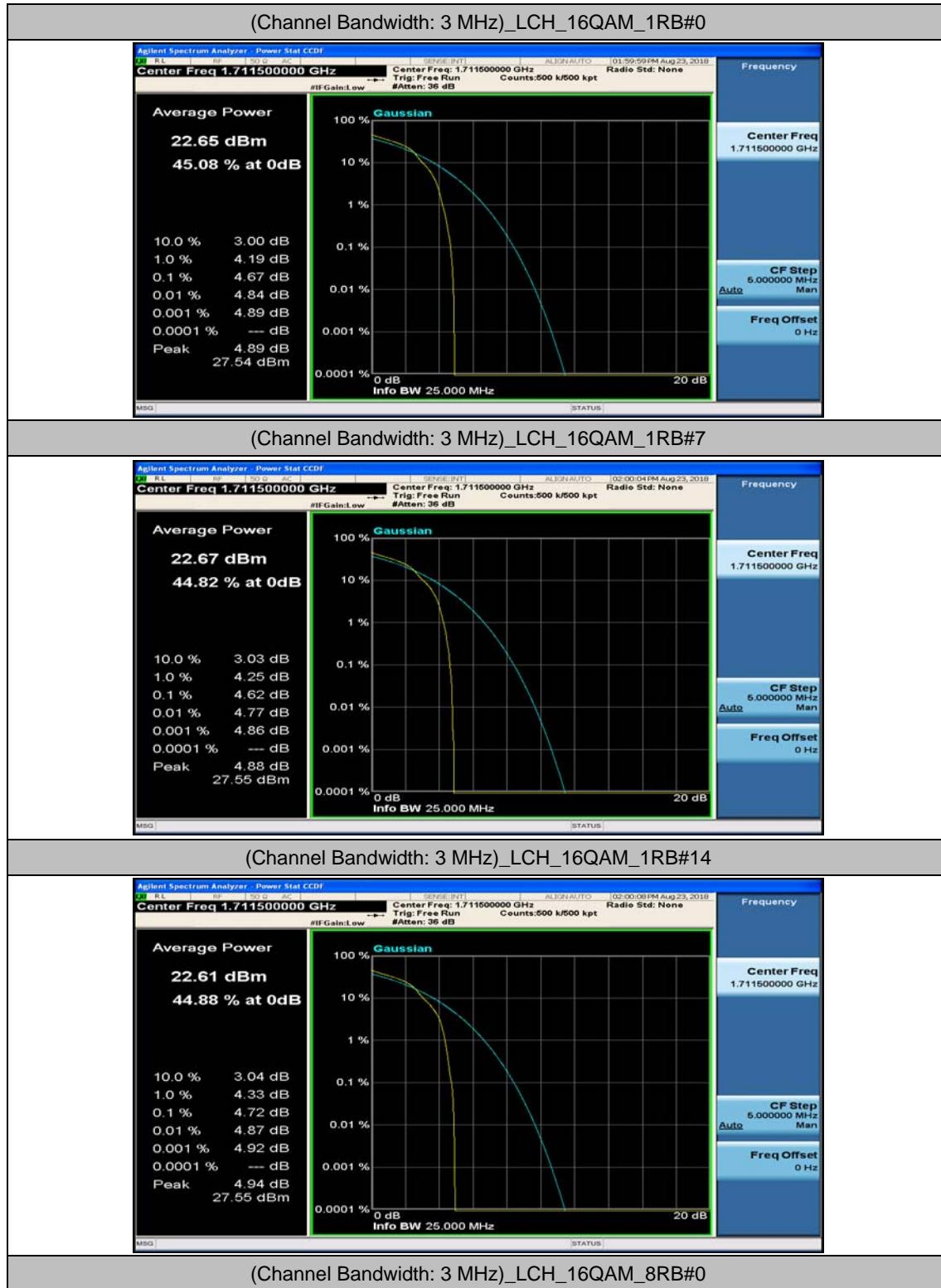
(Channel Bandwidth: 3 MHz)\_MCH\_QPSK\_1RB#14

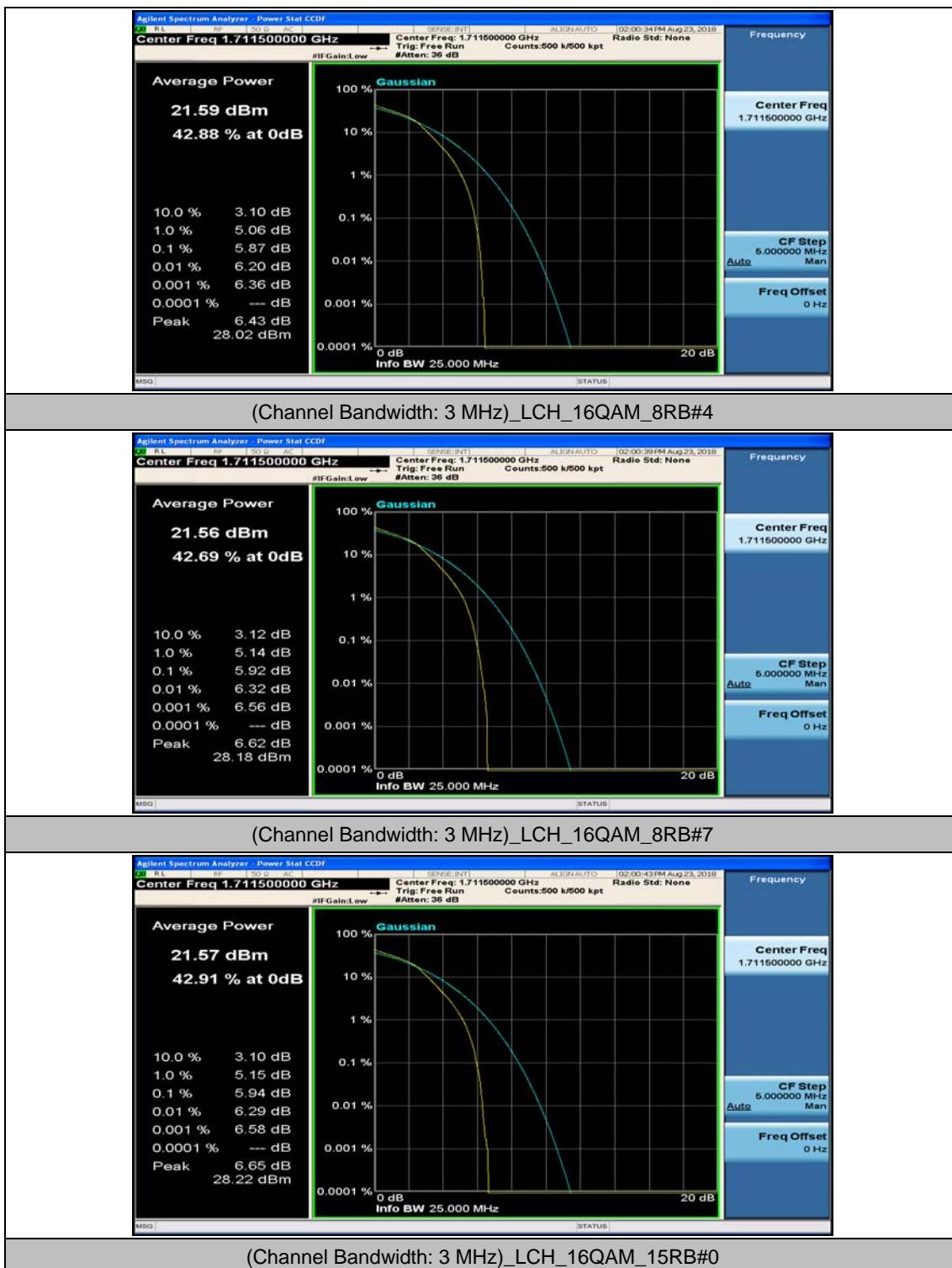


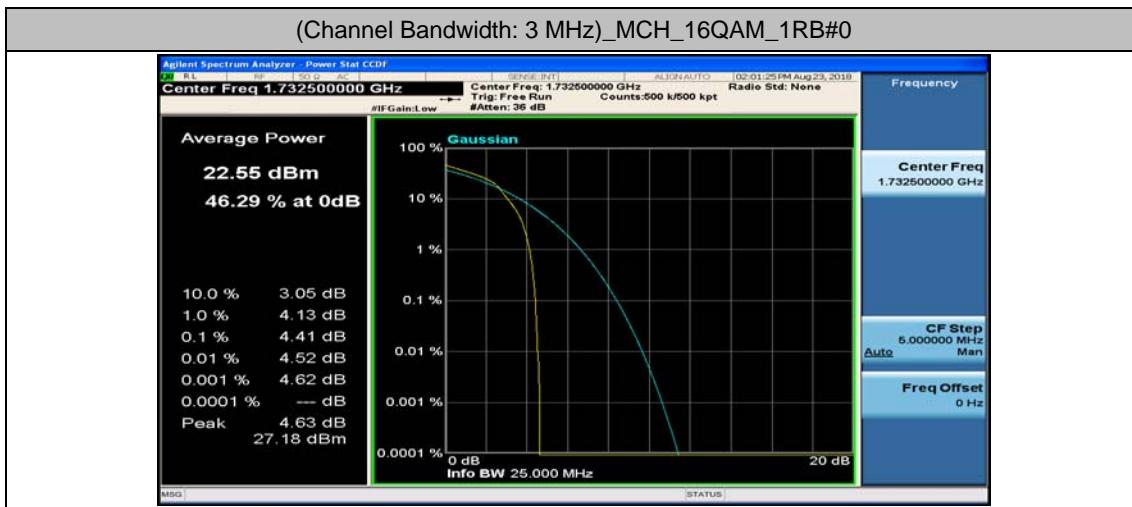
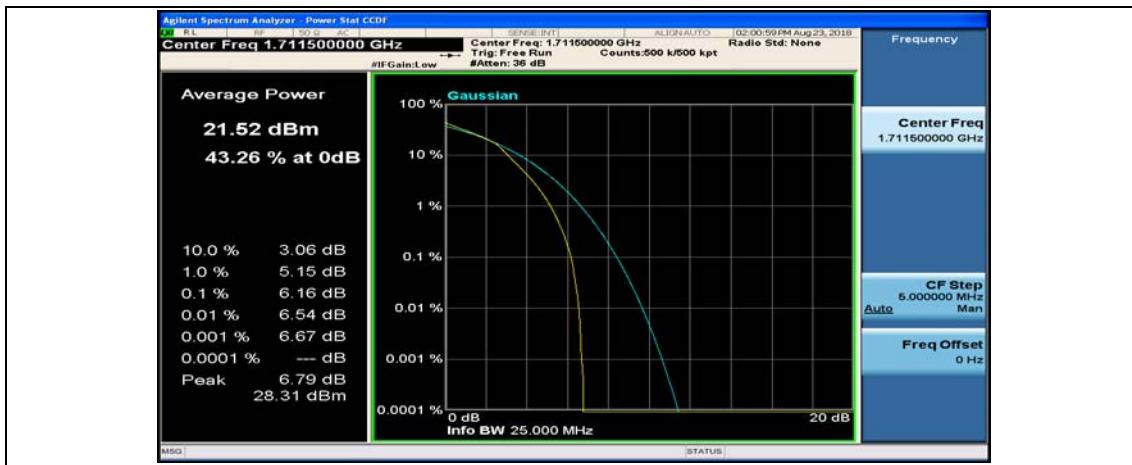




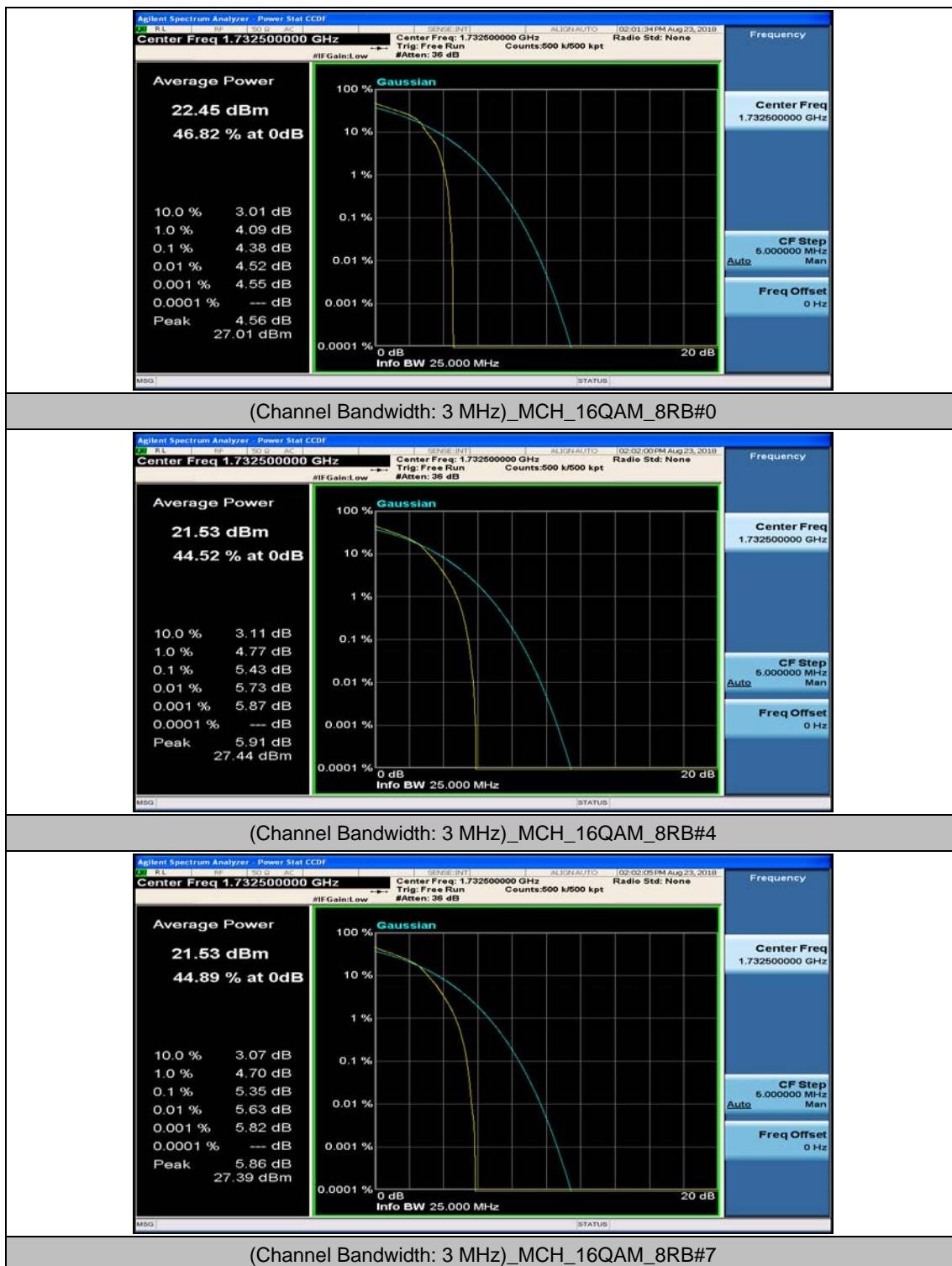


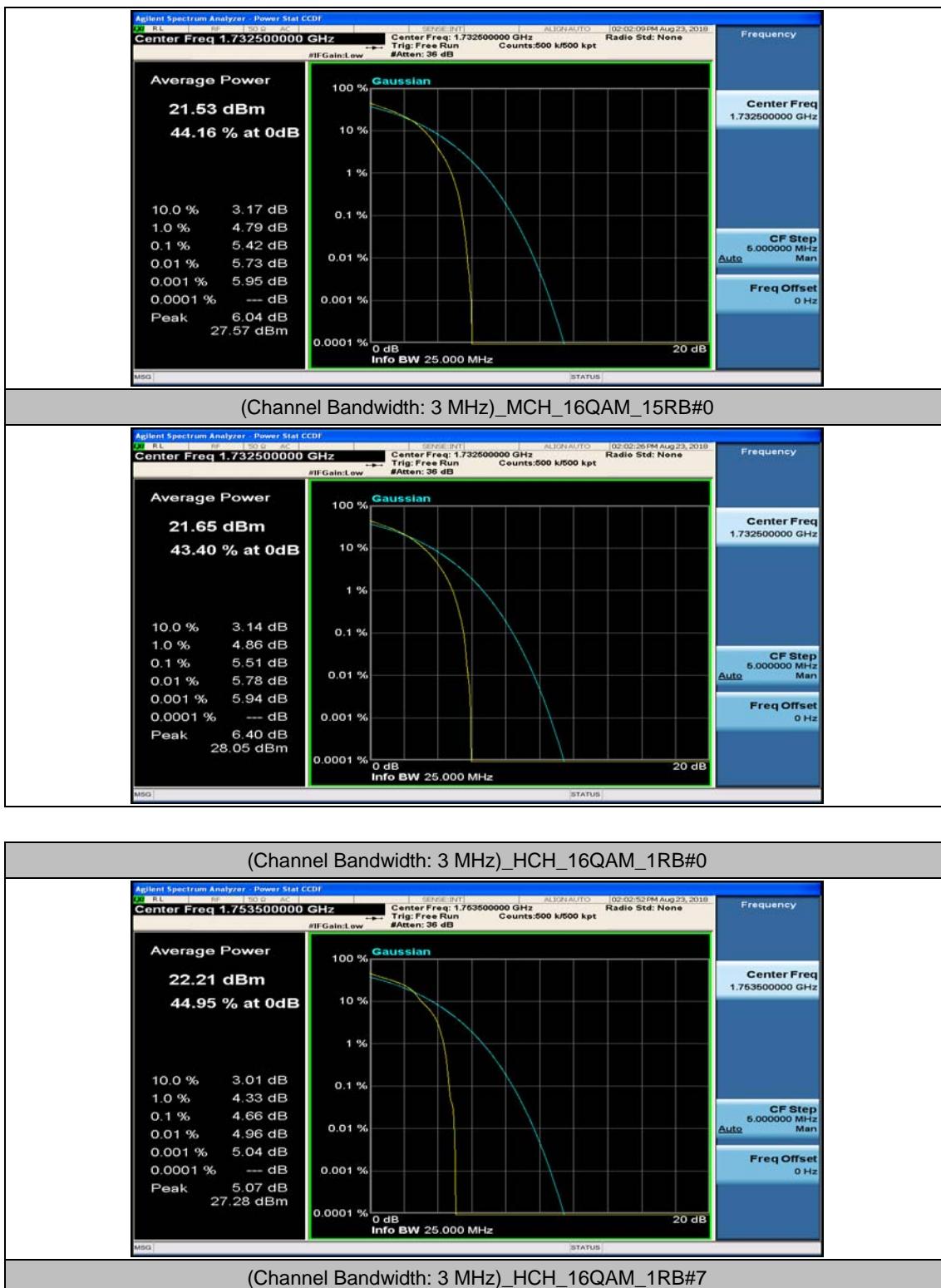


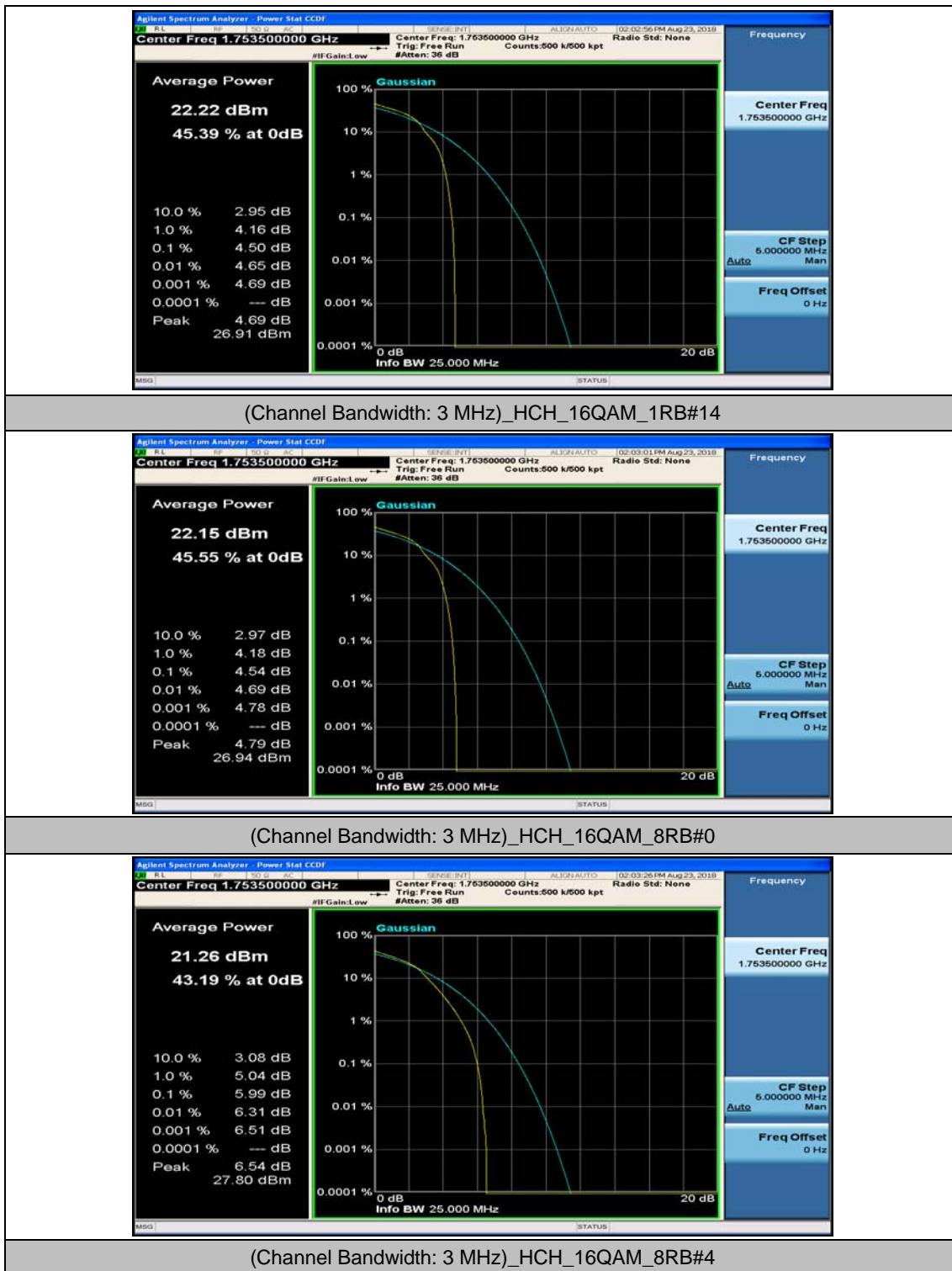


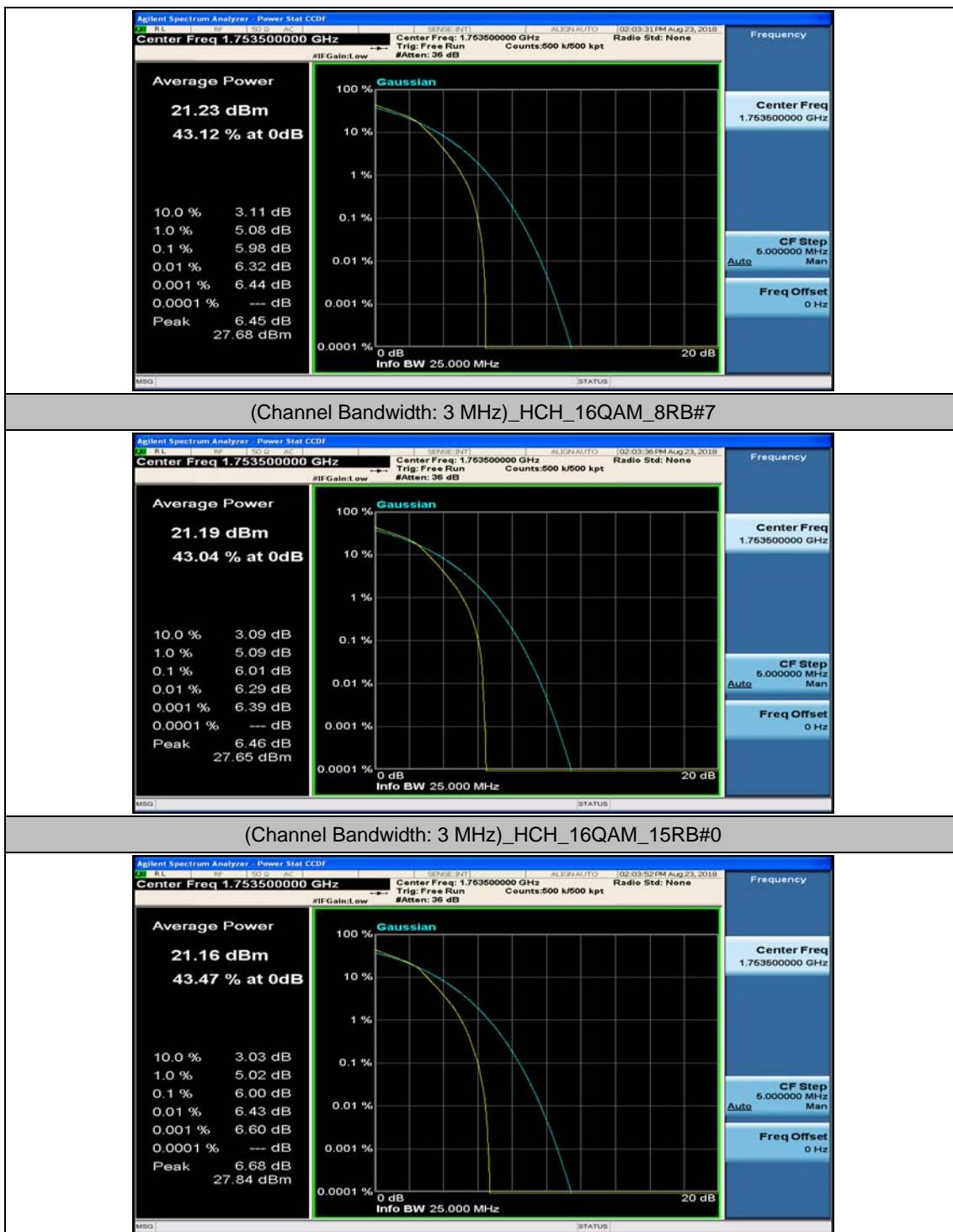


**(Channel Bandwidth: 3 MHz)\_MCH\_16QAM\_1RB#14**

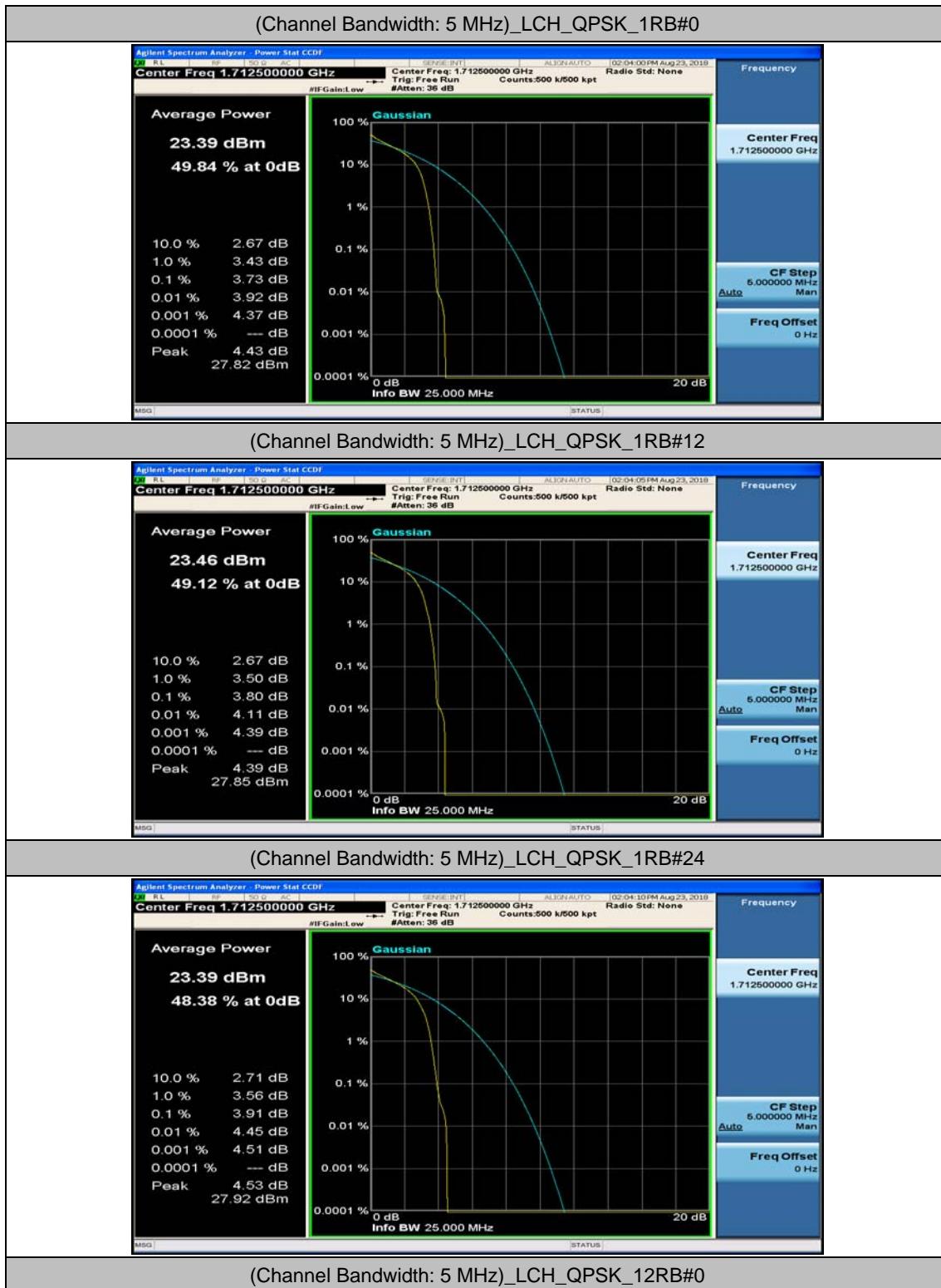


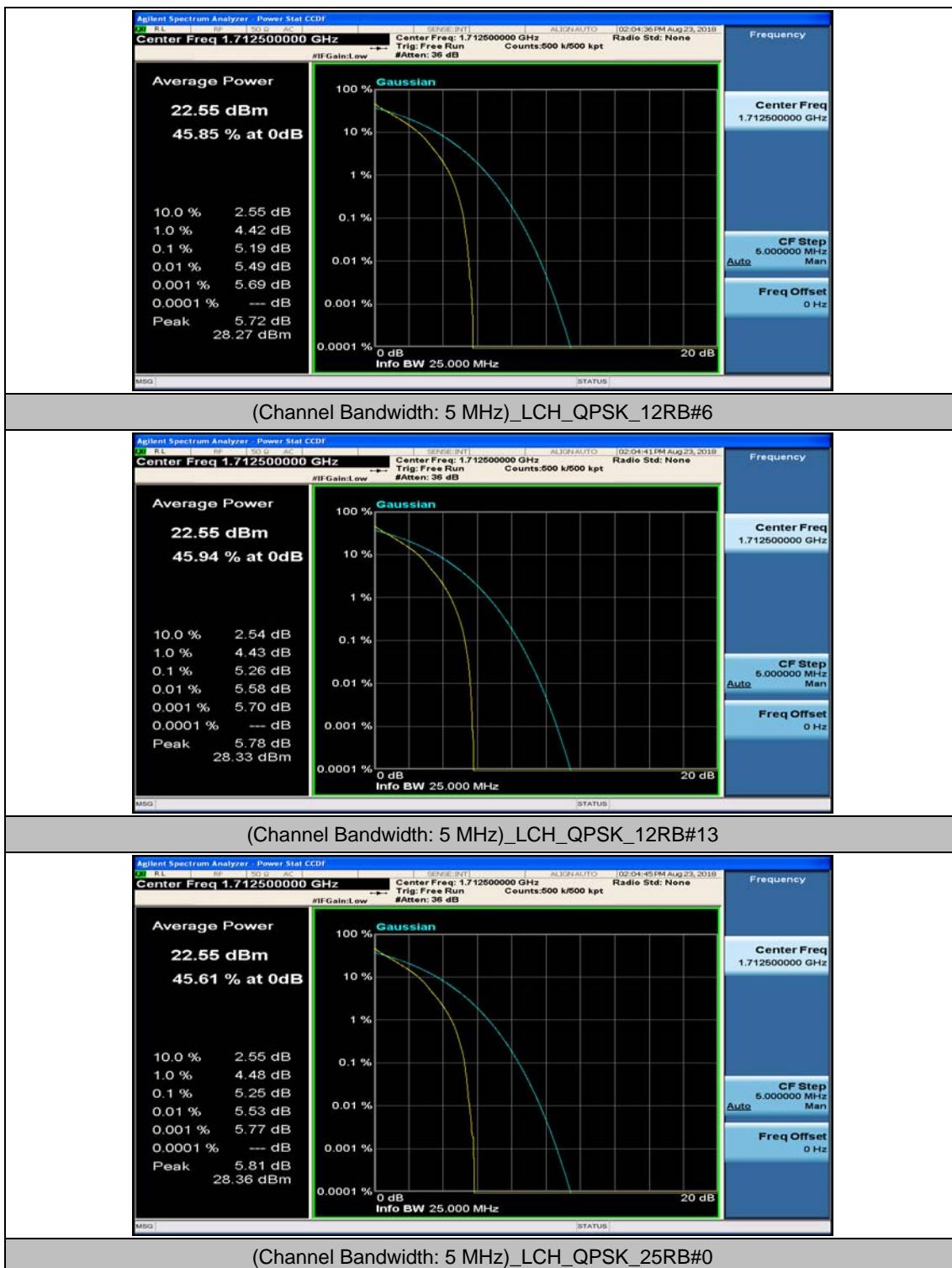


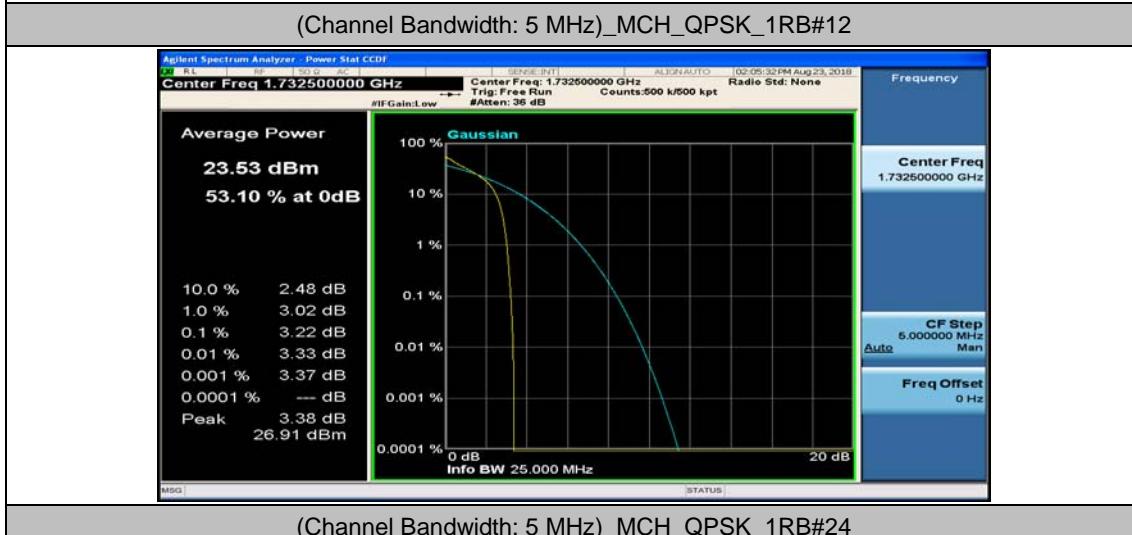
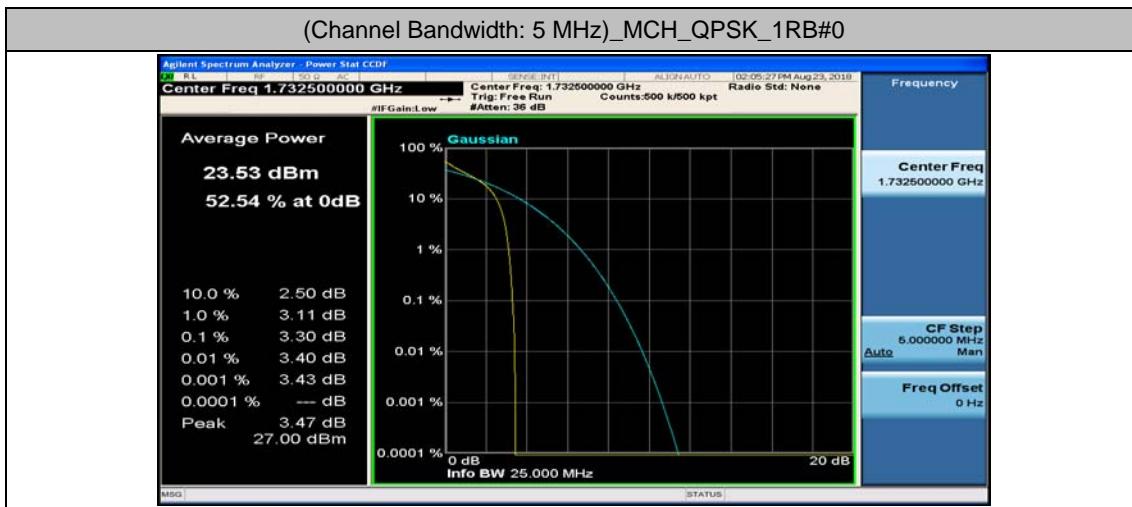
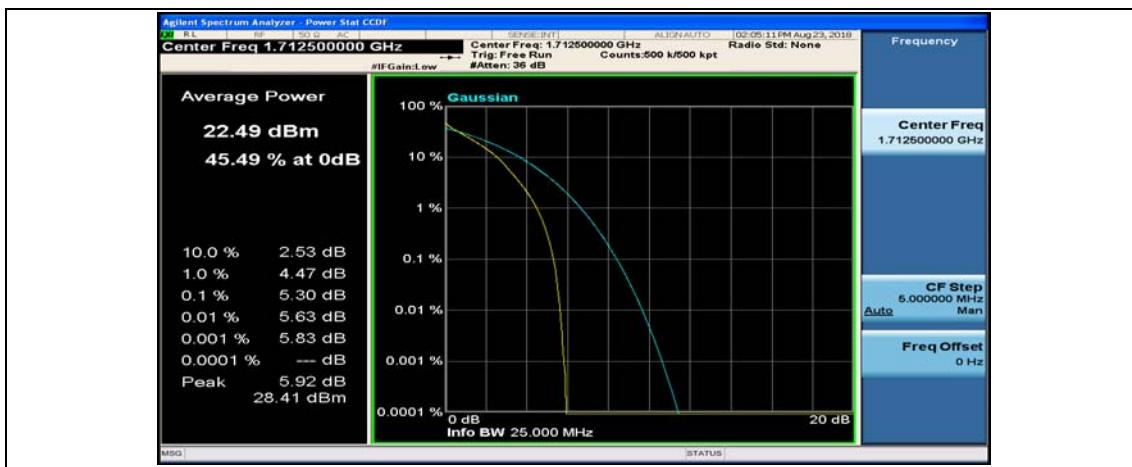




## Channel Bandwidth: 5 MHz







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

