Appendix E: Test Data for E-UTRA Band 4

Product Name: 3G/4G Smart Phone

Trade Mark: DOOGEE

Test Model: S59Pro

Environmental Conditions

Temperature:	22.9° C
Relative Humidity:	53.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Li Huan

E.1 Conducted Output Power

	Conducted Output Power Test Result (Channel Bandwidth: 1.4 MHz)							
Modulation	Channel	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	Verdict		
Modulation	Chamilei	Size	Offset	QPSK	16QAM	verdict		
		1	0	21.02	20.19	PASS		
		1	3	21.07	20.36	PASS		
		1	5	20.99	20.20	PASS		
	LCH	3	0	21.12	20.09	PASS		
		3	2	21.15	20.08	PASS		
		3	3	21.07	19.99	PASS		
		6	0	20.08	19.16	PASS		
	MCH	1	0	21.75	20.90	PASS		
		1	3	21.91	21.11	PASS		
QPSK /		1	5	21.75	20.95	PASS		
16QAM		3	0	21.84	20.74	PASS		
IOQAIVI		3	2	21.83	20.76	PASS		
		3	3	21.89	20.80	PASS		
		6	0	20.82	19.75	PASS		
		1	0	21.46	20.33	PASS		
		1	3	21.52	20.47	PASS		
		1	5	21.38	20.27	PASS		
	HCH	3	0	21.49	20.32	PASS		
		3	2	21.47	20.31	PASS		
		3	3	21.51	20.29	PASS		
ı		6	0	20.41	19.48	PASS		

	Conducted Output Power Test Result (Channel Bandwidth: 3 MHz)								
Modulation	Channel	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	Vardiat			
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict			
		1	0	21.04	20.28	PASS			
		1	7	20.99	20.17	PASS			
		1	14	20.97	20.11	PASS			
	LCH	8	0	20.07	19.17	PASS			
		8	4	20.07	19.15	PASS			
		8	7	19.99	19.05	PASS			
		15	0	20.00	19.04	PASS			
		1	0	21.68	20.90	PASS			
	мсн	1	7	21.84	20.96	PASS			
QPSK /		1	14	21.89	21.00	PASS			
16QAM		8	0	20.72	19.81	PASS			
TOQAW		8	4	20.71	19.82	PASS			
		8	7	20.80	19.94	PASS			
		15	0	20.76	19.79	PASS			
		1	0	21.53	20.40	PASS			
		1	7	21.44	20.36	PASS			
		1	14	21.42	20.35	PASS			
	HCH	8	0	20.48	19.50	PASS			
		8	4	20.46	19.55	PASS			
		8	7	20.46	19.51	PASS			
		15	0	20.40	19.42	PASS			

	Conducted Output Power Test Result (Channel Bandwidth: 5 MHz)								
Modulation	Channel	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	Verdict			
Modulation	Channel	Size	Offset	QPSK	16QAM	verdict			
		1	0	20.96	20.13	PASS			
		1	12	21.04	20.10	PASS			
		1	24	20.76	19.85	PASS			
	LCH	12	0	19.98	19.04	PASS			
		12	6	20.01	19.01	PASS			
		12	13	19.98	18.97	PASS			
		25	0	20.00	19.02	PASS			
		1	0	21.62	20.75	PASS			
	МСН	1	12	21.88	21.08	PASS			
QPSK /		1	24	21.87	21.11	PASS			
16QAM		12	0	20.67	19.81	PASS			
IOQAM		12	6	20.68	19.79	PASS			
		12	13	20.92	20.05	PASS			
		25	0	20.84	19.92	PASS			
		1	0	21.53	20.54	PASS			
		1	12	21.63	20.57	PASS			
		1	24	21.44	20.40	PASS			
	HCH	12	0	20.49	19.54	PASS			
		12	6	20.48	19.57	PASS			
		12	13	20.47	19.53	PASS			
<u> </u>		25	0	20.51	19.59	PASS			

	Conducted Output Power Test Result (Channel Bandwidth: 10 MHz)							
Madulation	Channal	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	\/a ==li =t		
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict		
		1	0	20.96	20.20	PASS		
		1	24	20.84	20.13	PASS		
		1	49	20.69	19.94	PASS		
	LCH	25	0	19.98	19.00	PASS		
		25	12	19.98	18.99	PASS		
		25	25	20.02	19.03	PASS		
		50	0	19.94	19.00	PASS		
		1	0	21.35	20.56	PASS		
	мсн	1	24	21.89	21.09	PASS		
QPSK /		1	49	21.94	21.13	PASS		
16QAM		25	0	20.68	19.76	PASS		
TOQAW		25	12	20.66	19.78	PASS		
		25	25	21.12	20.23	PASS		
		50	0	20.90	20.00	PASS		
		1	0	21.63	20.60	PASS		
		1	24	21.67	20.63	PASS		
		1	49	21.46	20.33	PASS		
	HCH	25	0	20.73	19.88	PASS		
		25	12	20.74	19.88	PASS		
		25	25	20.57	19.70	PASS		
		50	0	20.63	19.69	PASS		

	Conducted Output Power Test Result (Channel Bandwidth: 15 MHz)							
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Vardiet		
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict		
		1	0	20.82	20.12	PASS		
		1	37	20.75	19.98	PASS		
		1	74	20.83	20.08	PASS		
	LCH	37	0	19.93	19.92	PASS		
		37	18	19.89	19.92	PASS		
		37	38	19.90	19.92	PASS		
		75	0	19.89	18.84	PASS		
		1	0	21.00	20.28	PASS		
	мсн	1	37	21.81	21.11	PASS		
QPSK /		1	74	21.76	21.03	PASS		
16QAM		37	0	20.86	20.85	PASS		
TOQAW		37	18	20.88	20.87	PASS		
		37	38	20.88	20.88	PASS		
		75	0	20.87	19.92	PASS		
		1	0	21.75	20.69	PASS		
		1	37	21.67	20.60	PASS		
		1	74	21.34	20.24	PASS		
	нсн	37	0	20.81	20.82	PASS		
		37	18	20.80	20.78	PASS		
		37	38	20.80	20.77	PASS		
		75	0	20.83	19.81	PASS		

	Conducted Output Power Test Result (Channel Bandwidth: 20 MHz)							
Modulation	Channal	RB Configuration		Average Power [dBm]	Average Power [dBm]	Vardiet		
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict		
		1	0	20.74	19.85	PASS		
		1	49	20.93	19.99	PASS		
		1	99	21.22	20.25	PASS		
	LCH	50	0	19.60	18.65	PASS		
		50	25	19.62	18.68	PASS		
		50	50	19.95	19.04	PASS		
		100	0	19.76	18.84	PASS		
		1	0	20.70	19.81	PASS		
	MCH	1	49	22.06	21.20	PASS		
QPSK /		1	99	21.60	20.75	PASS		
16QAM		50	0	20.47	19.58	PASS		
TOQAW		50	25	20.47	19.59	PASS		
		50	50	21.16	20.22	PASS		
		100	0	20.86	19.94	PASS		
		1	0	21.54	20.69	PASS		
		1	49	21.76	20.86	PASS		
		1	99	21.05	20.18	PASS		
	HCH	50	0	20.95	20.07	PASS		
		50	25	20.94	20.05	PASS		
		50	50	20.52	19.64	PASS		
		100	0	20.77	19.88	PASS		

E.2 Peak-to-Average Ratio

	Peak-to Average Ratio Test Result (Channel Bandwidth: 1.4 MHz)							
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict				
Modulation	Griannei	[dB]	[dB]	verdict				
	LCH	5.34	<13	PASS				
QPSK	MCH	5.5	<13	PASS				
	HCH	5.34	<13	PASS				
	LCH	6.21	<13	PASS				
16QAM	MCH	6.17	<13	PASS				
	HCH	6.2	<13	PASS				

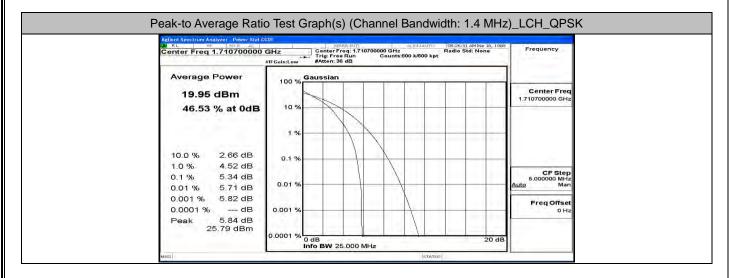
Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)						
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict		
Modulation	Charmer	[dB]	[dB]	verdict		
	LCH	5.45	<13	PASS		
QPSK	MCH	5.45	<13	PASS		
	HCH	5.3	<13	PASS		
16QAM	LCH	6.31	<13	PASS		
	MCH	6.21	<13	PASS		
	HCH	6.15	<13	PASS		

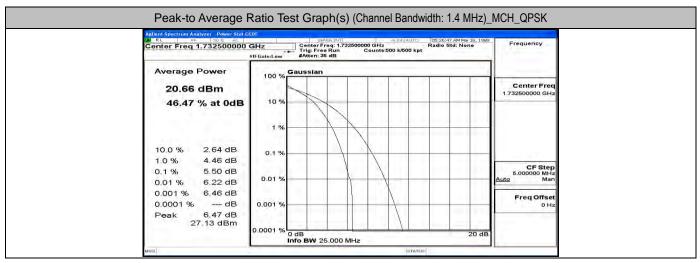
	Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)						
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict			
Modulation	Channel	[dB]	[dB]	verdict			
	LCH	5.56	<13	PASS			
QPSK	MCH	5.47	<13	PASS			
	HCH	5.44	<13	PASS			
	LCH	6.3	<13	PASS			
16QAM	MCH	6.23	<13	PASS			
	HCH	6.19	<13	PASS			

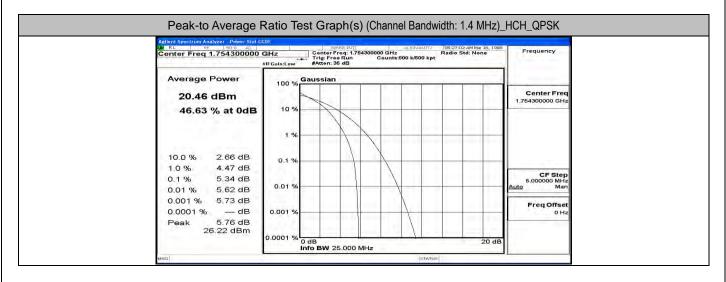
Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)						
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict		
Modulation	Griannei	[dB]	[dB]	verdict		
	LCH	5.59	<13	PASS		
QPSK	MCH	5.4	<13	PASS		
	HCH	5.44	<13	PASS		
	LCH	6.32	<13	PASS		
16QAM	MCH	6.18	<13	PASS		
	HCH	6.23	<13	PASS		

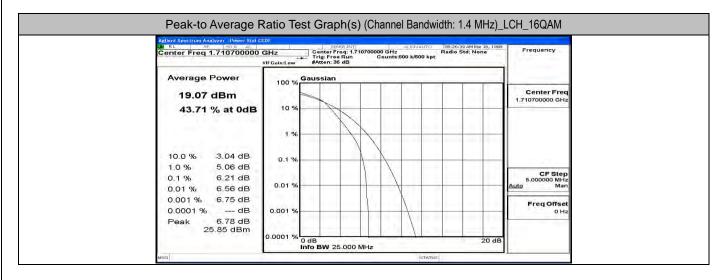
	Peak-to Average Ratio Test Result (Channel Bandwidth: 15 MHz)						
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict			
Modulation	Charmer	[dB]	[dB]	verdict			
	LCH	5.78	<13	PASS			
QPSK	MCH	5.66	<13	PASS			
	HCH	5.63	<13	PASS			
	LCH	6.39	<13	PASS			
16QAM	MCH	6.29	<13	PASS			
	HCH	6.28	<13	PASS			

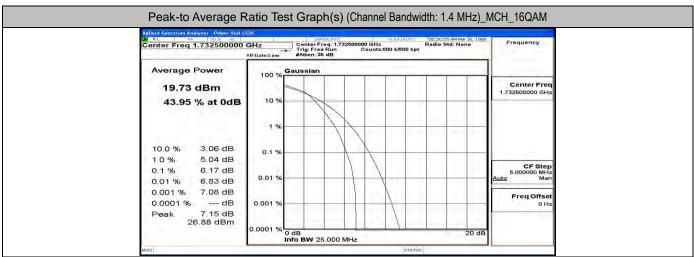
Peak-to Average Ratio Test Result (Channel Bandwidth: 20 MHz)				
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict
iviodulation		[dB]	[dB]	
QPSK	LCH	5.58	<13	PASS
	MCH	5.47	<13	PASS
	HCH	5.41	<13	PASS
16QAM	LCH	6.38	<13	PASS
	MCH	6.24	<13	PASS
	HCH	6.21	<13	PASS

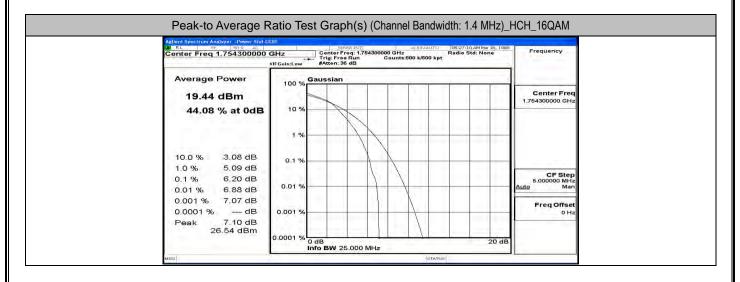


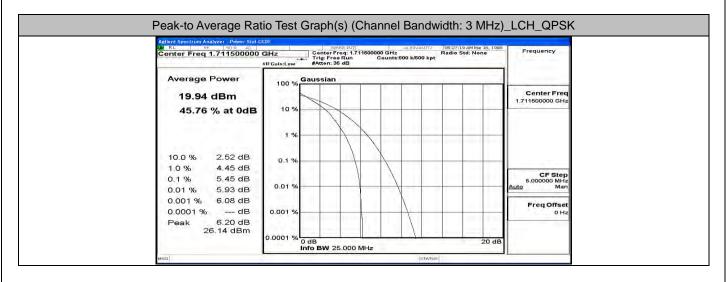


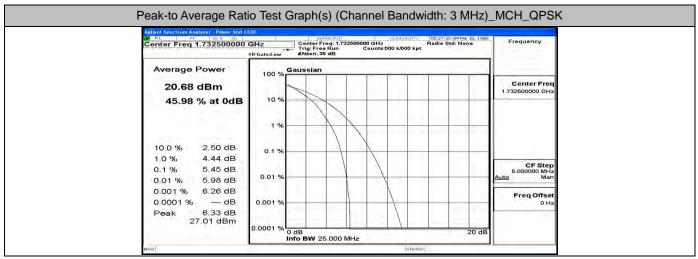


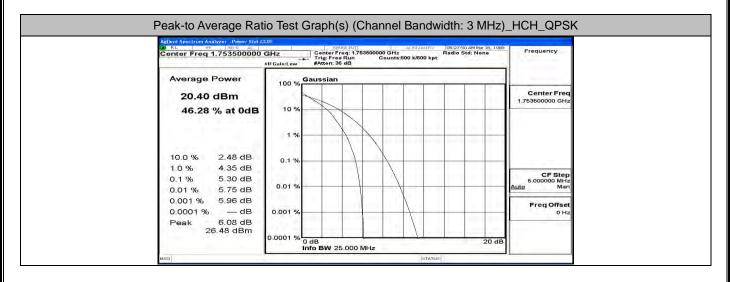


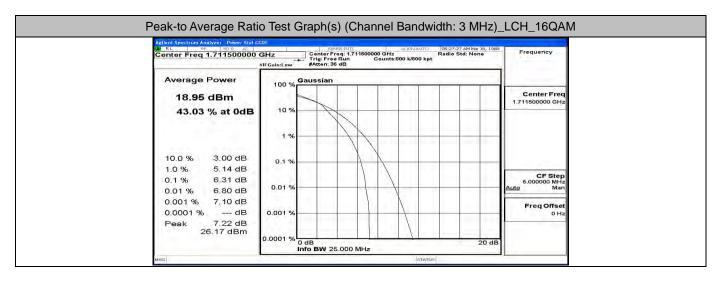


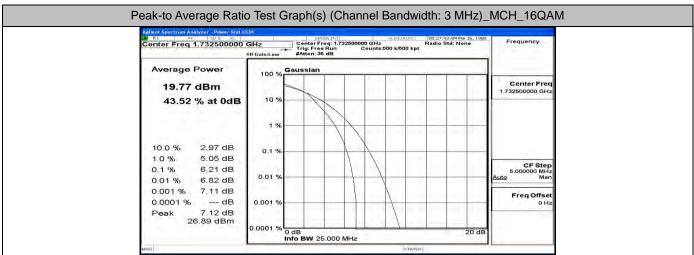


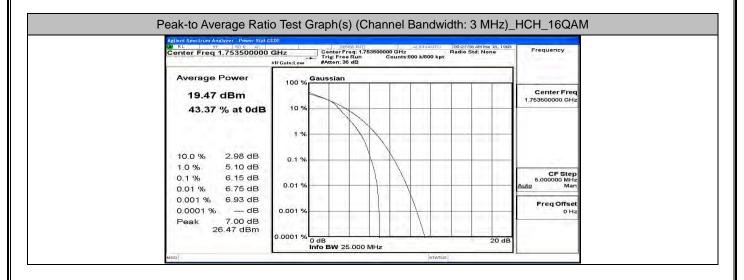


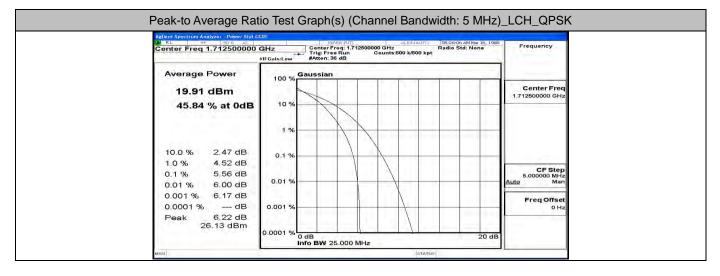


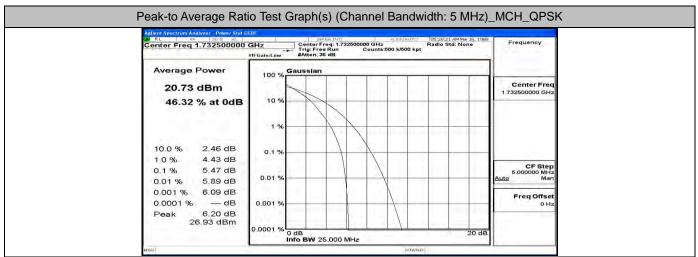


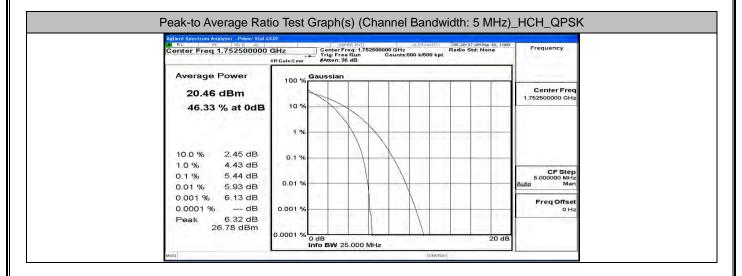


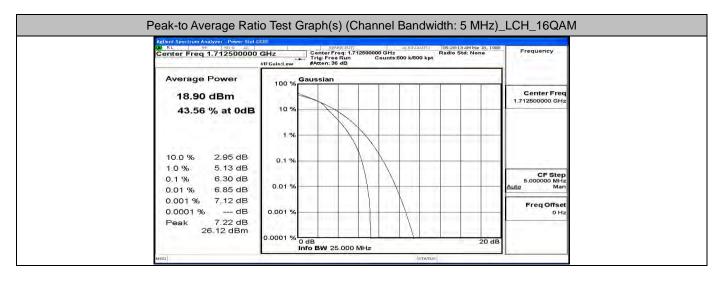


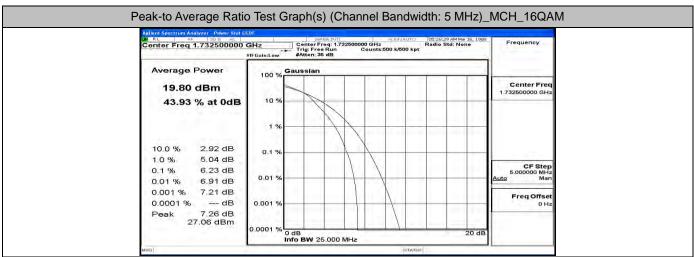


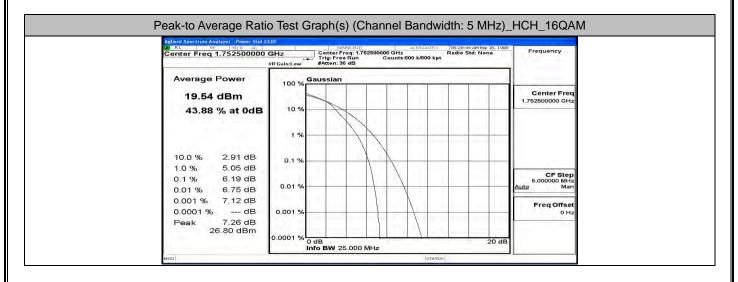


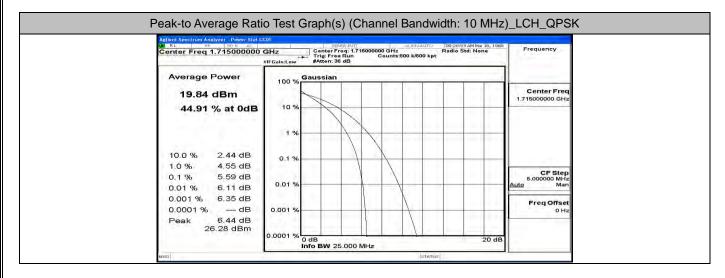


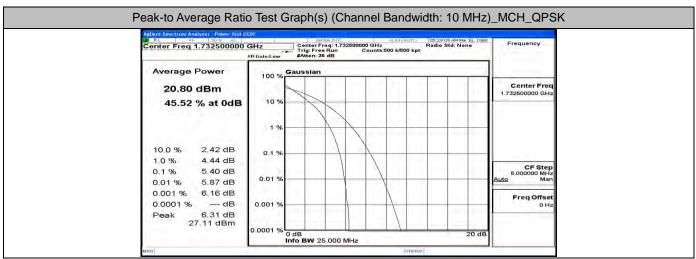


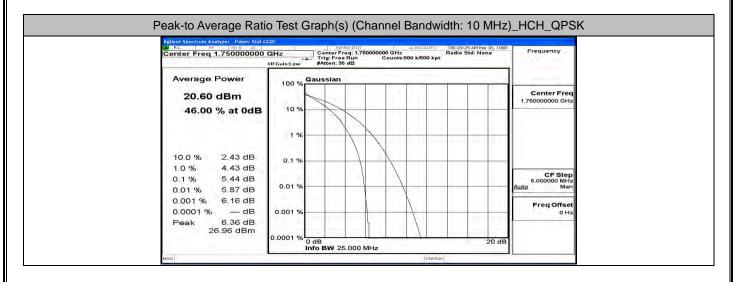


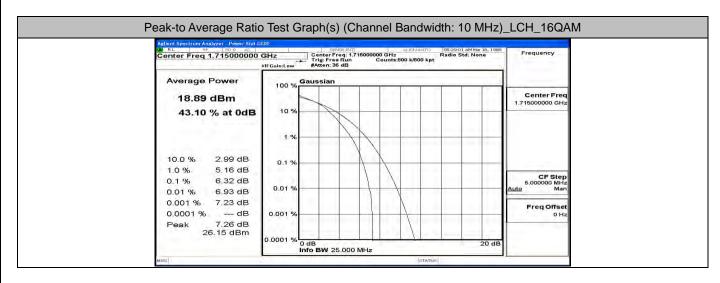


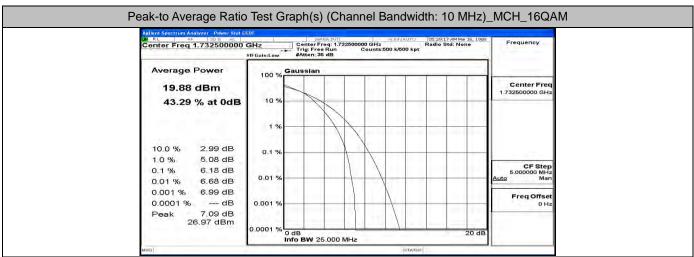


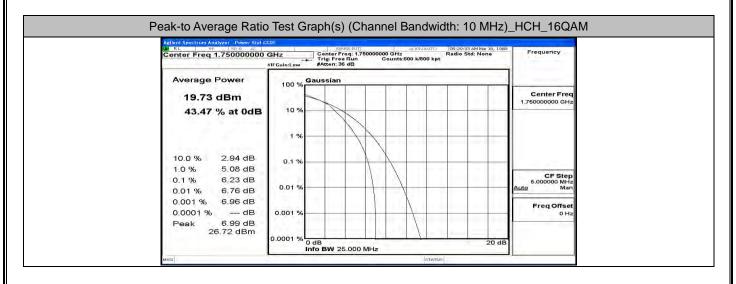


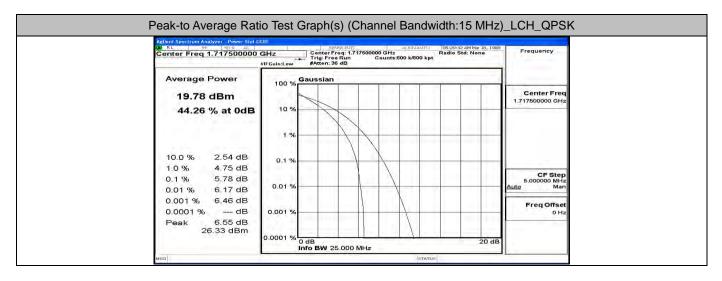


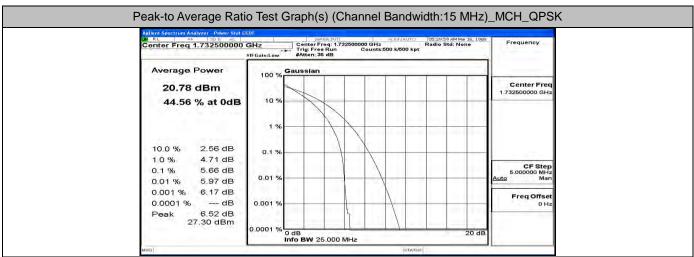


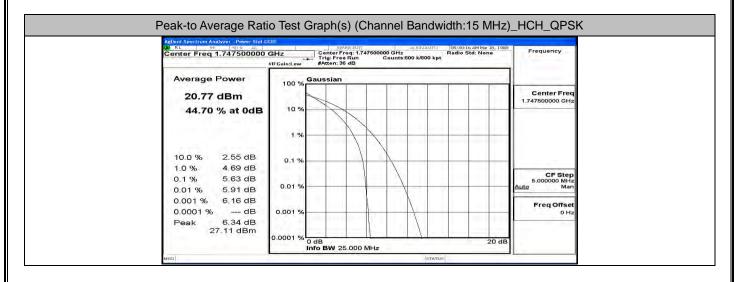


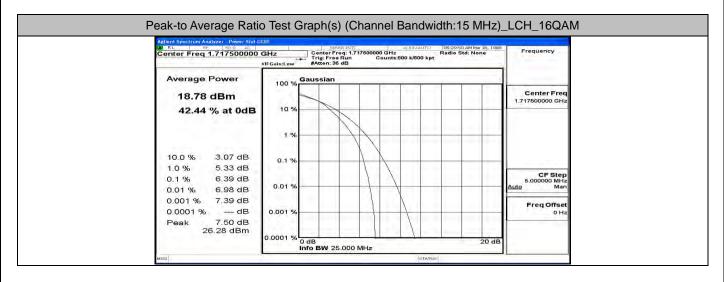


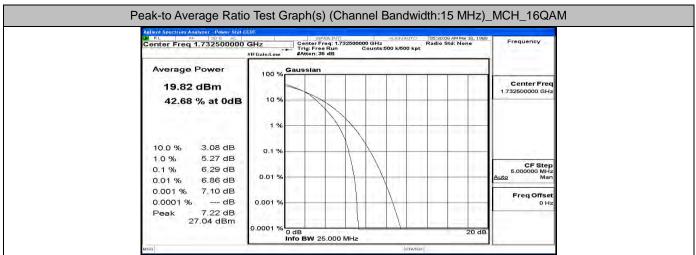


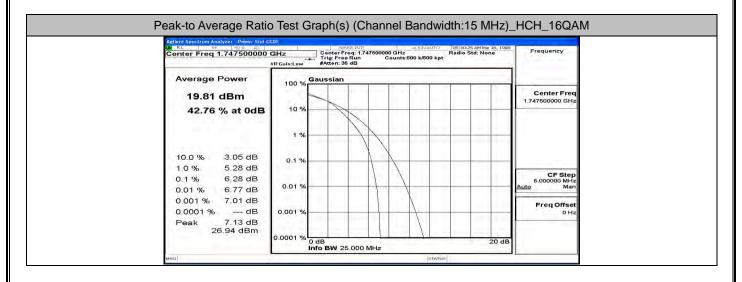


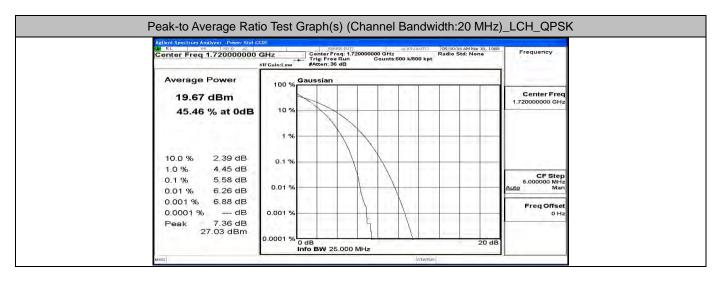


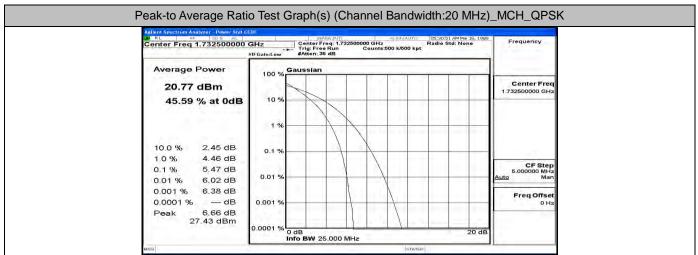


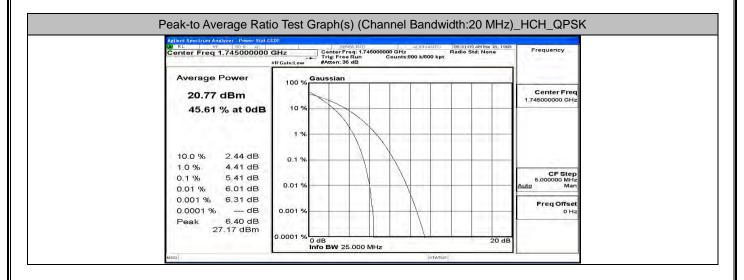


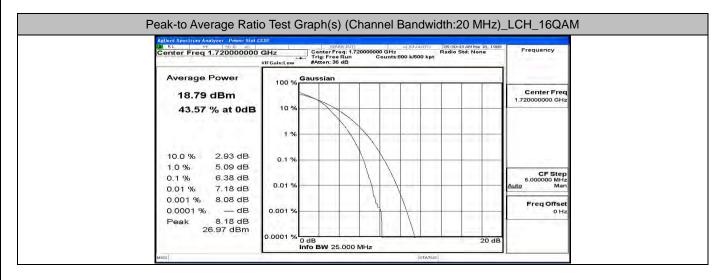


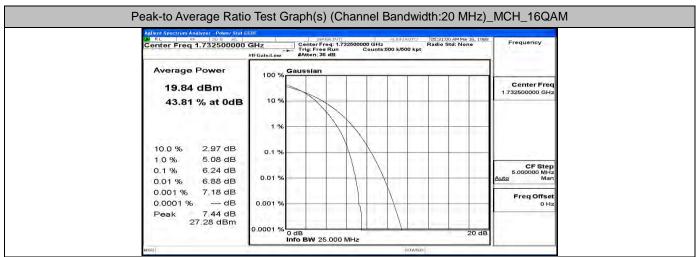


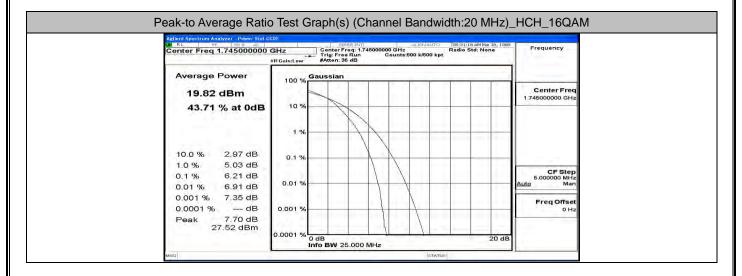












E.3 26dB Bandwidth and Occupied Bandwidth

EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
	LCH	1.0743	1.198	PASS
QPSK	MCH	1.0754	1.229	PASS
	HCH	1.0751	1.234	PASS
16QAM	LCH	1.0806	1.252	PASS
	MCH	1.0776	1.236	PASS
	HCH	1.0745	1.211	PASS

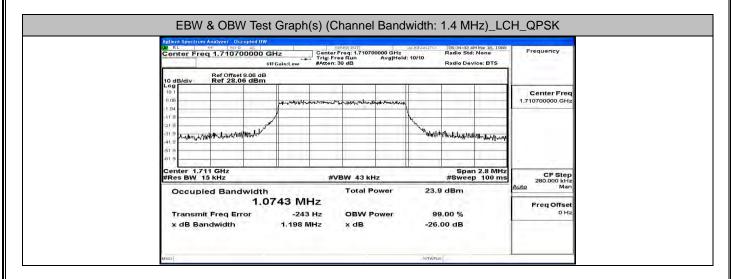
EBW & OBW Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
Modulation	Chame	(MHz)	(MHz)	
QPSK	LCH	2.6822	2.825	PASS
	MCH	2.6819	2.815	PASS
	HCH	2.6792	2.824	PASS
16QAM	LCH	2.6784	2.814	PASS
	MCH	2.6783	2.836	PASS
	HCH	2.6785	2.824	PASS

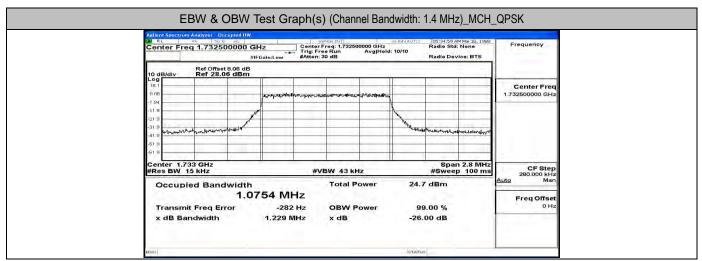
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
Modulation		(MHz)	(MHz)	
QPSK	LCH	4.4676	4.737	PASS
	MCH	4.4734	4.752	PASS
	HCH	4.4818	4.717	PASS
16QAM	LCH	4.4797	4.750	PASS
	MCH	4.4749	4.750	PASS
	HCH	4.4663	4.757	PASS

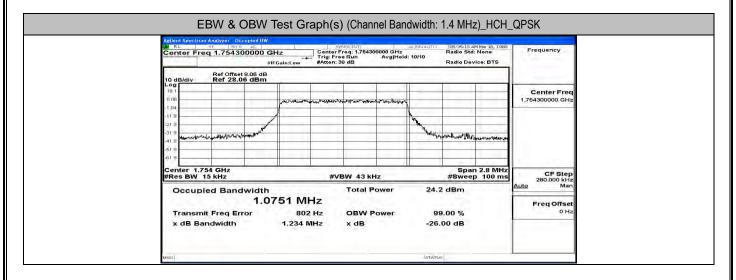
EBW & OBW Test Result (Channel Bandwidth: 10 MHz)					
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict	
Modulation		(MHz)	(MHz)		
QPSK	LCH	8.9485	9.418	PASS	
	MCH	8.9540	9.350	PASS	
	HCH	8.9387	9.354	PASS	
16QAM	LCH	8.9439	9.339	PASS	
	MCH	8.9529	9.338	PASS	
	HCH	8.9464	9.333	PASS	

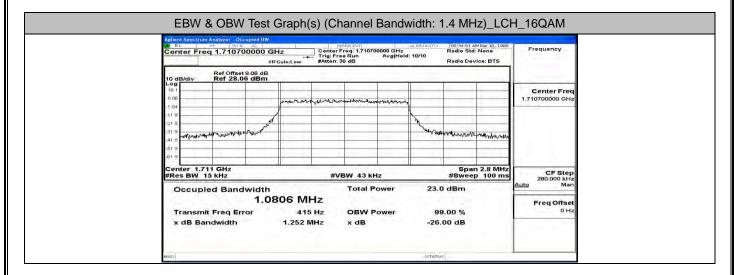
EBW & OBW Test Result (Channel Bandwidth: 15 MHz)					
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict	
Modulation		(MHz)	(MHz)		
QPSK	LCH	13.410	14.02	PASS	
	MCH	13.421	13.95	PASS	
	HCH	13.424	13.95	PASS	
16QAM	LCH	13.406	13.92	PASS	
	MCH	13.414	13.98	PASS	
	HCH	13.415	13.99	PASS	

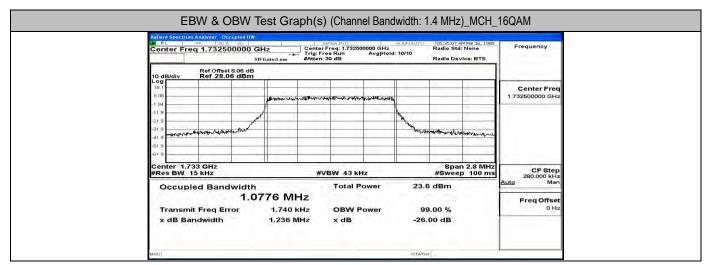
EBW & OBW Test Result (Channel Bandwidth: 20 MHz)				
Manhalatina	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
Modulation		(MHz)	(MHz)	
QPSK	LCH	17.864	18.53	PASS
	MCH	17.861	18.57	PASS
	HCH	17.846	18.55	PASS
16QAM	LCH	17.826	18.56	PASS
	MCH	17.857	18.59	PASS
	HCH	17.868	18.54	PASS

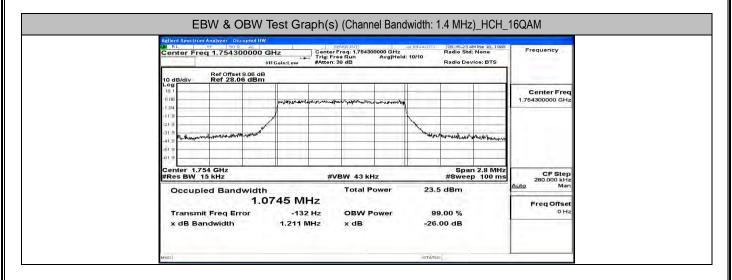


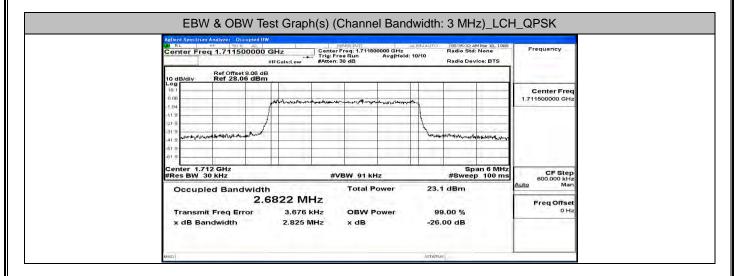


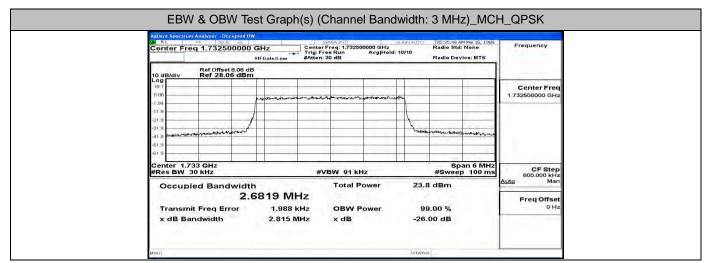


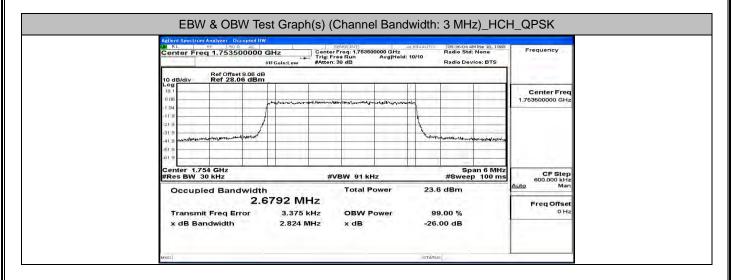


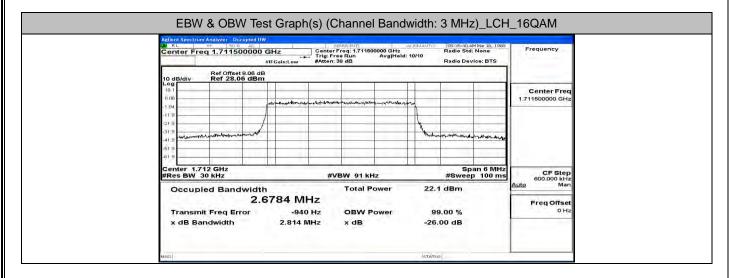


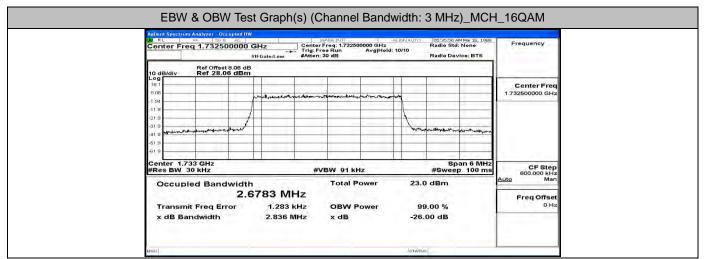


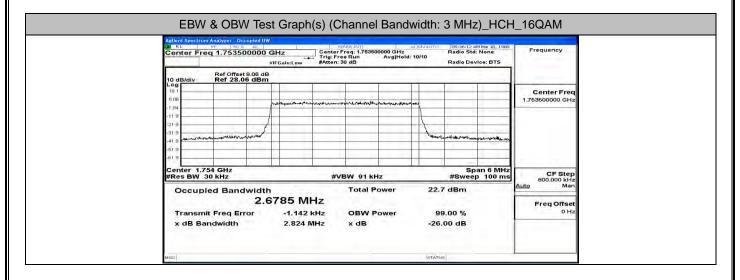


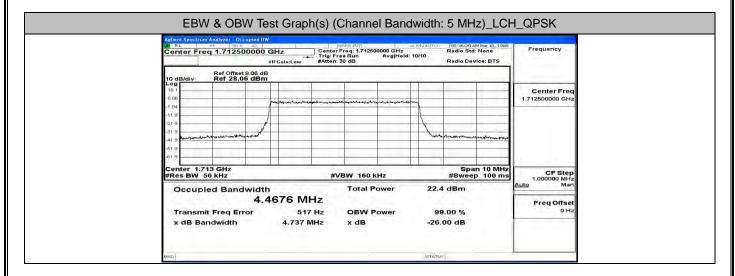


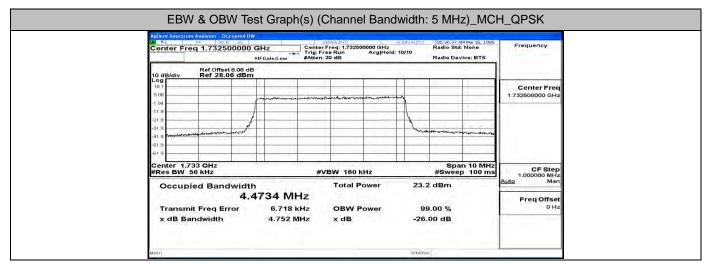


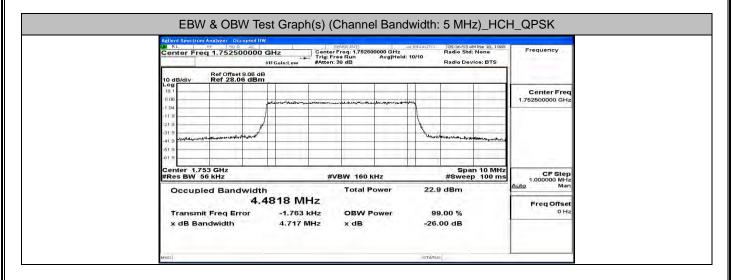


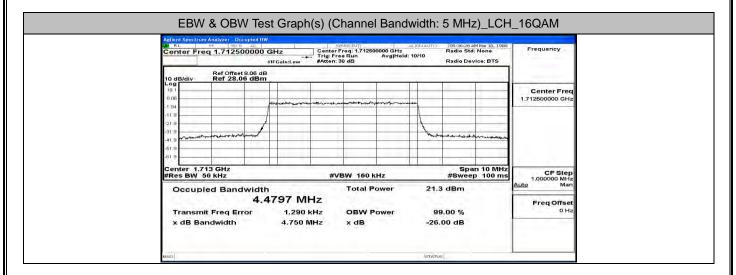


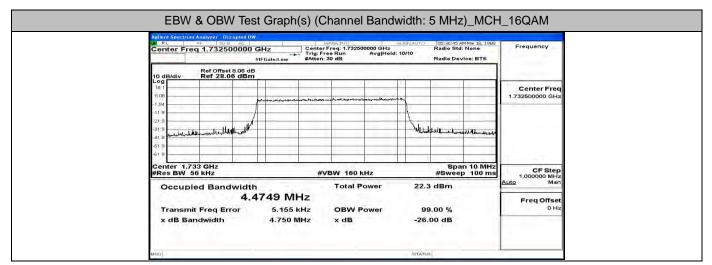


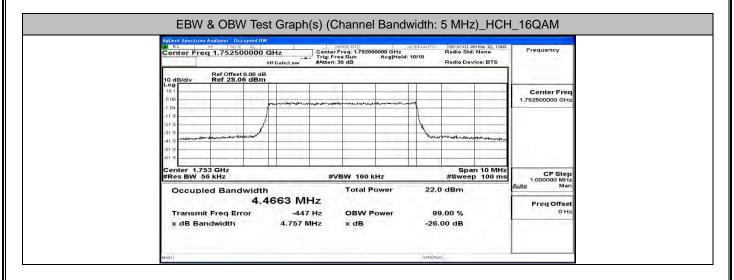


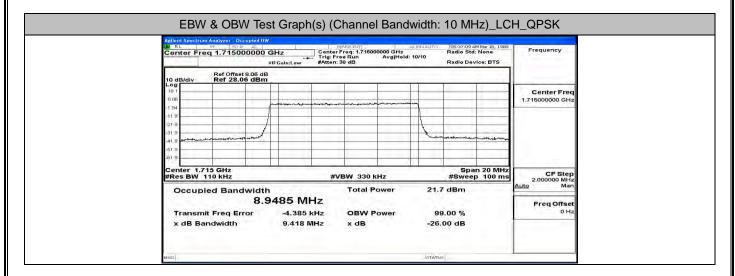


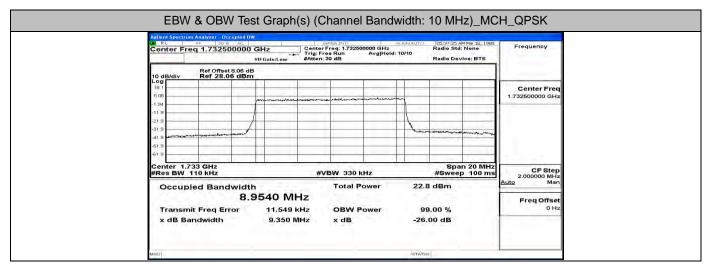


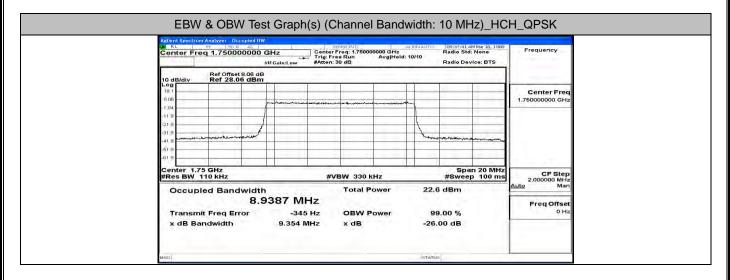


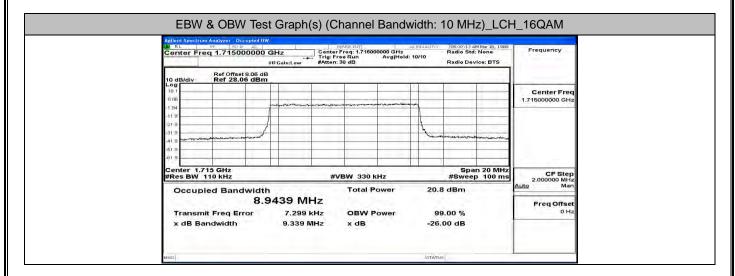


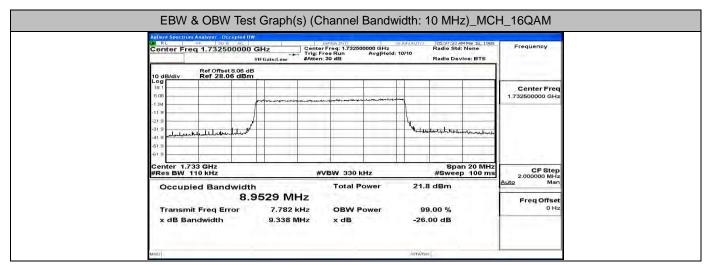


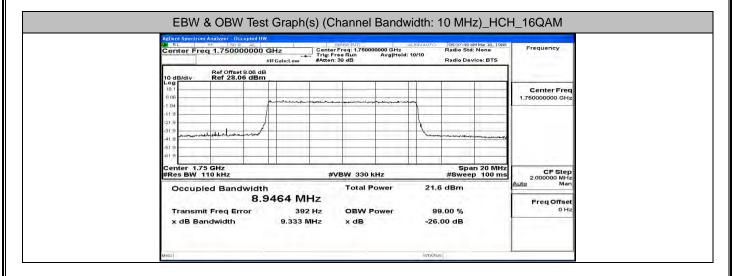


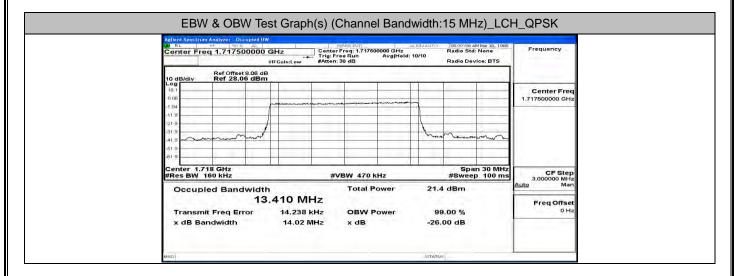


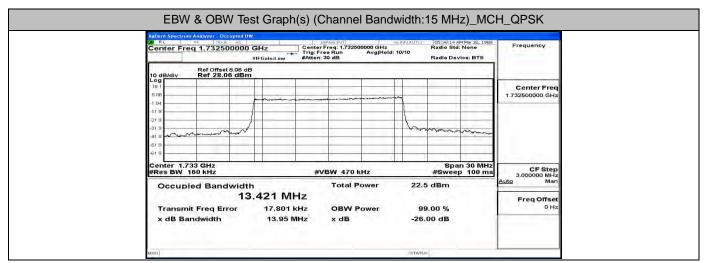


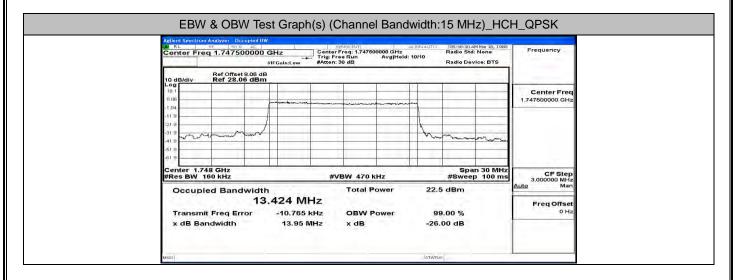


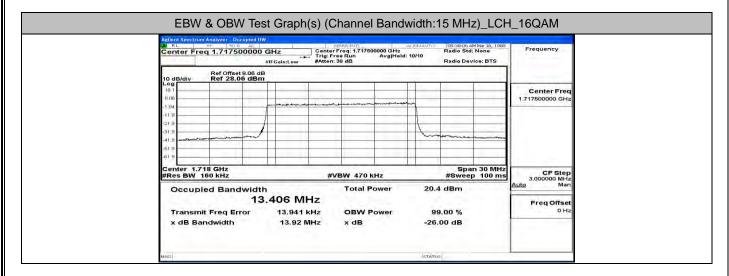


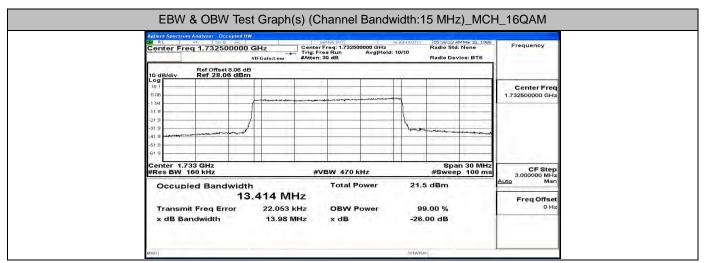


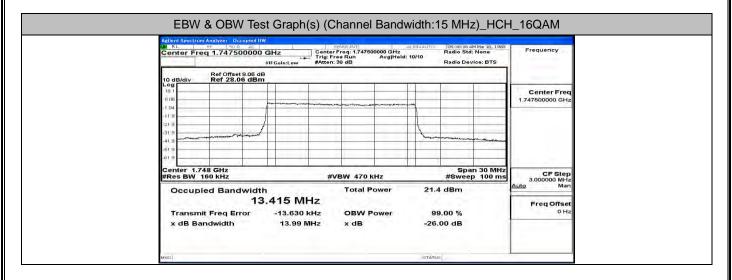


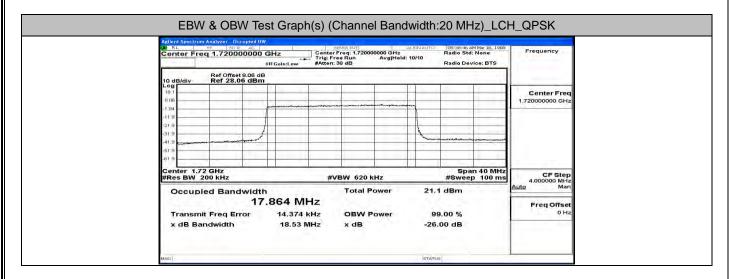


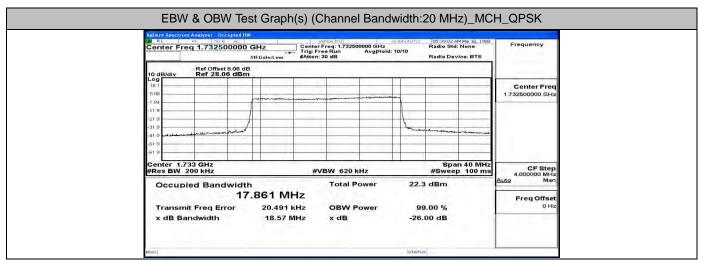


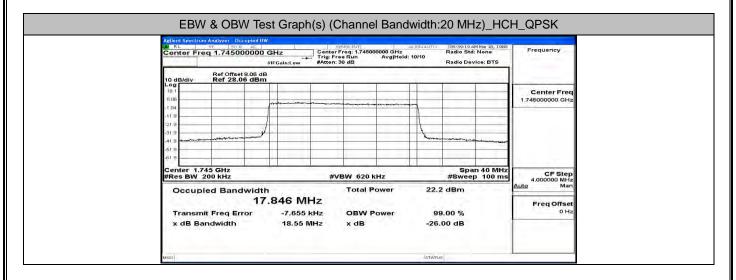


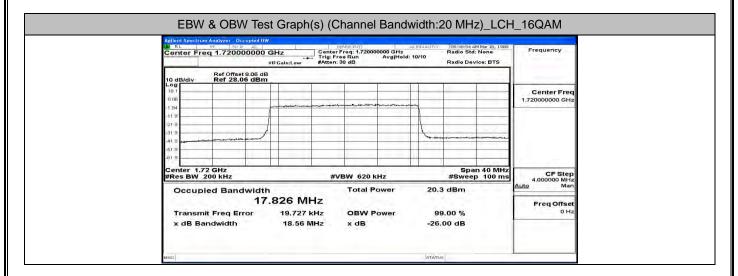


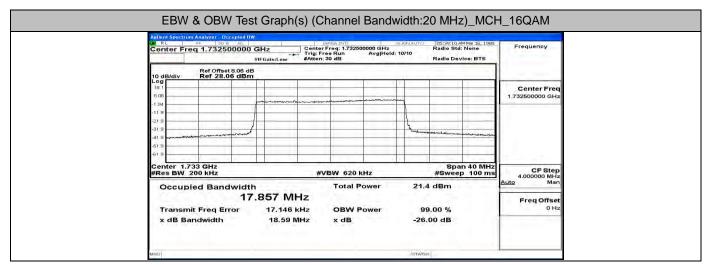


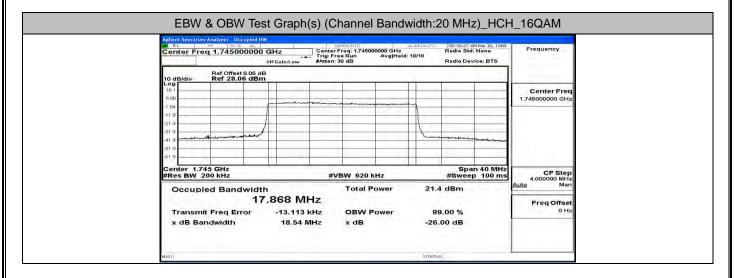




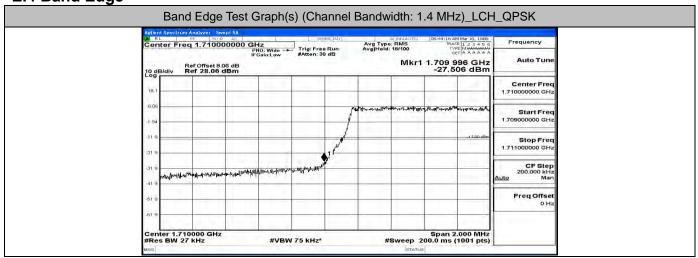


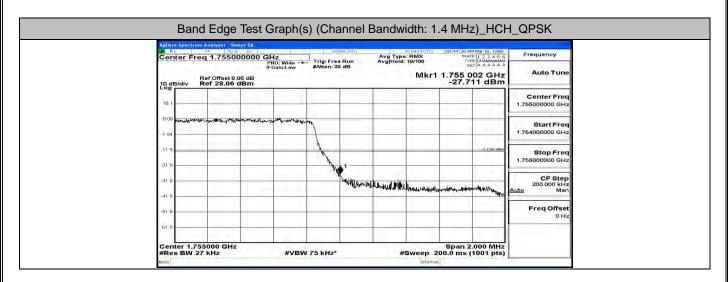


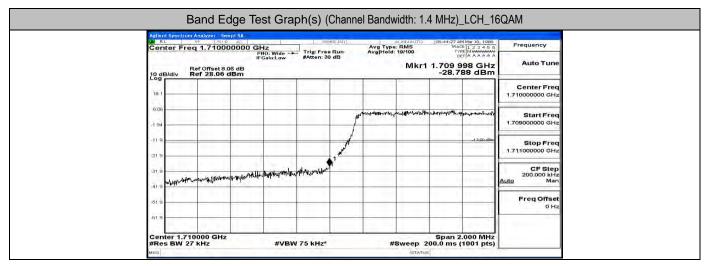


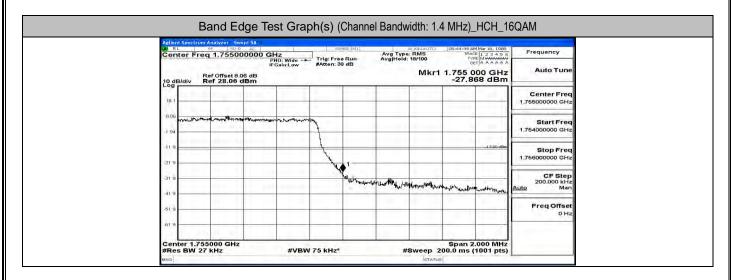


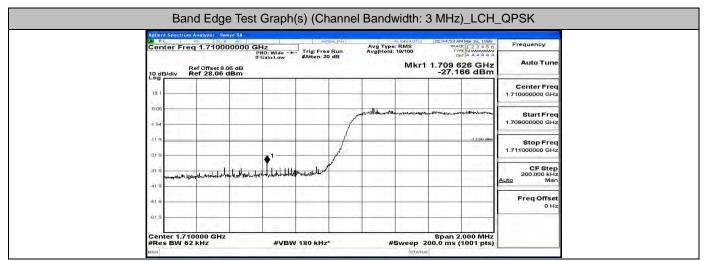
E.4 Band Edge

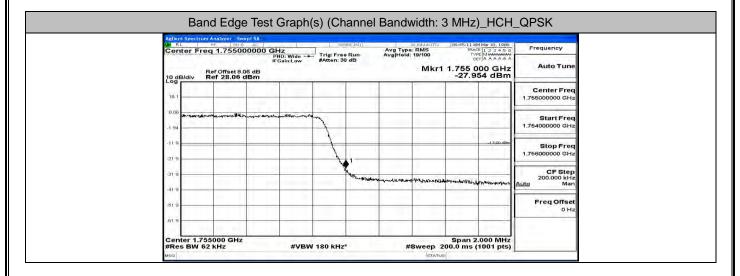


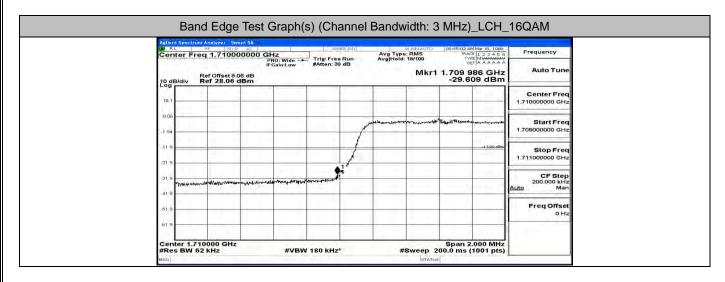


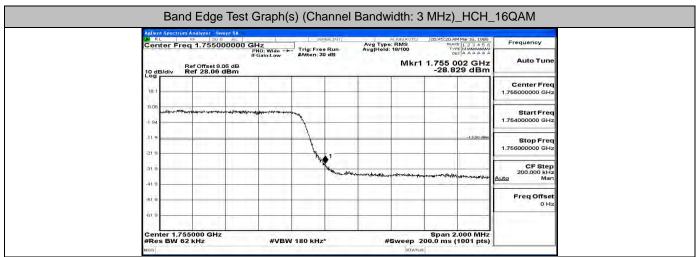


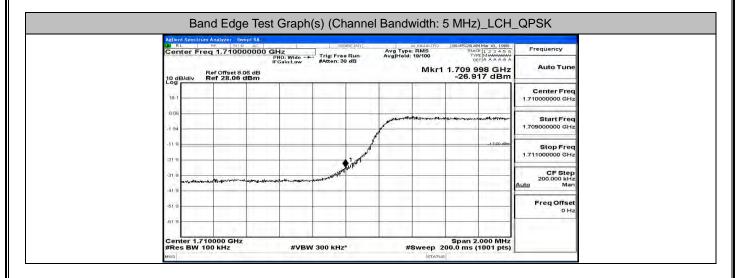


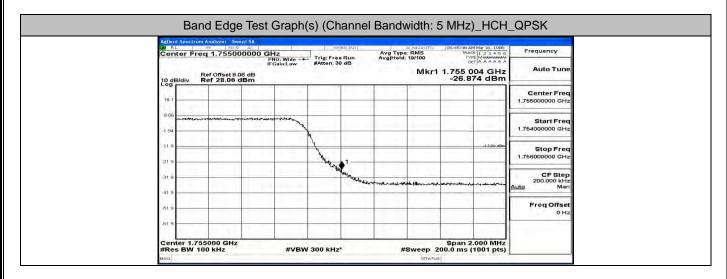


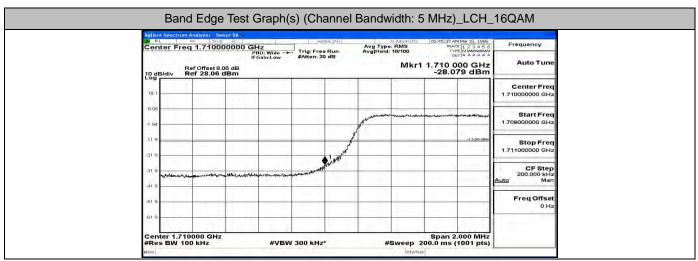


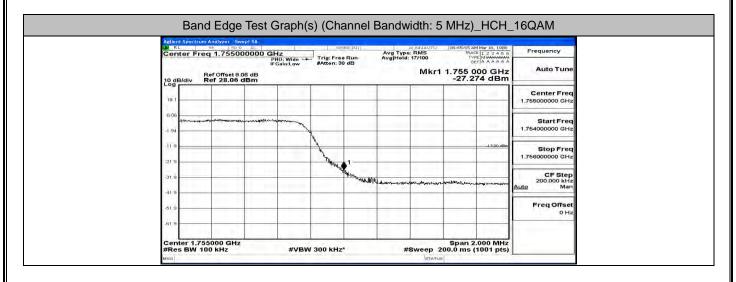


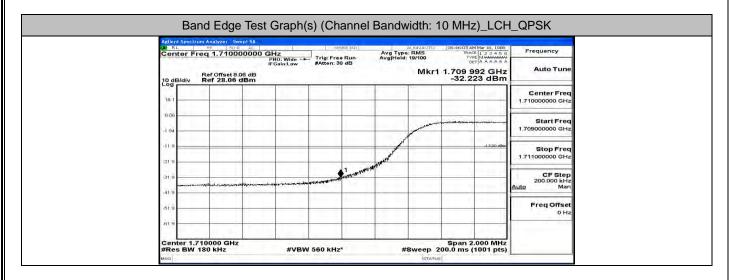


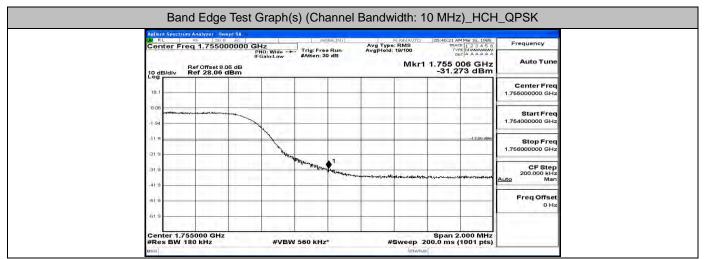


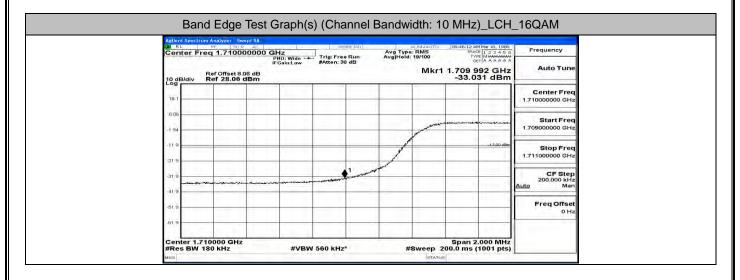


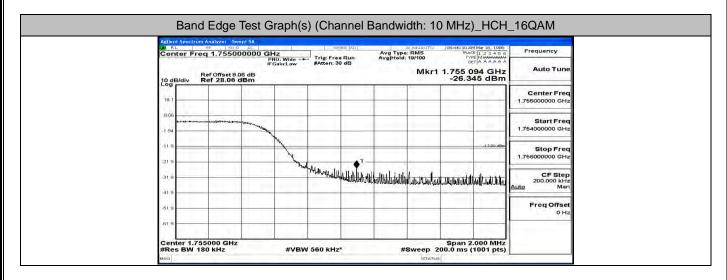


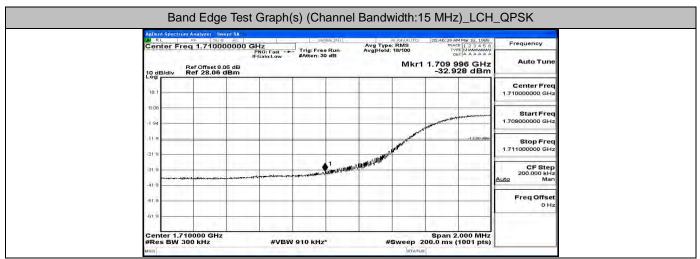


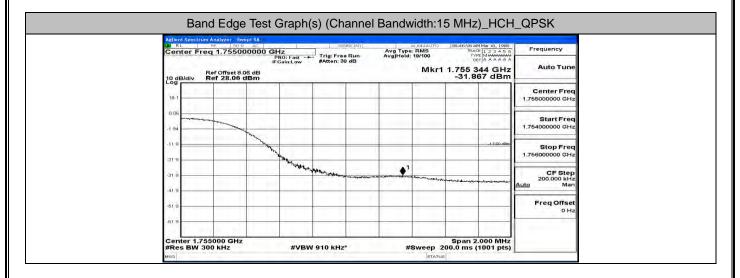


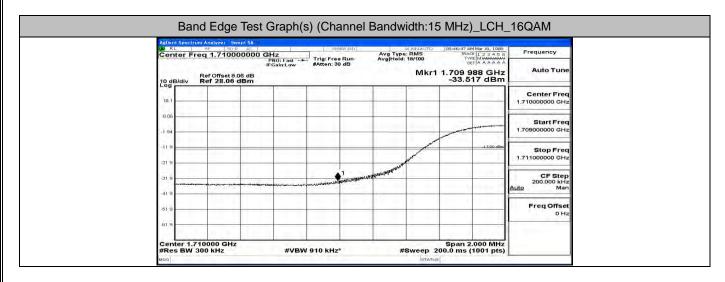


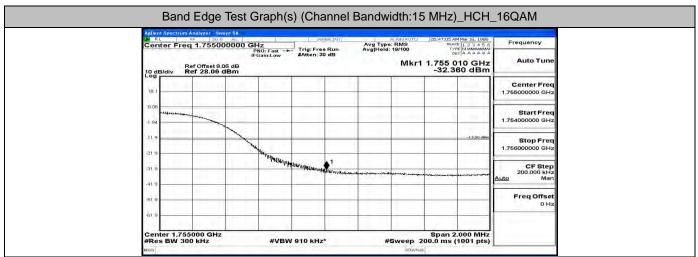


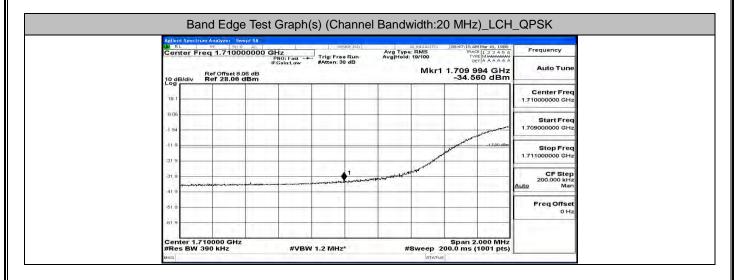


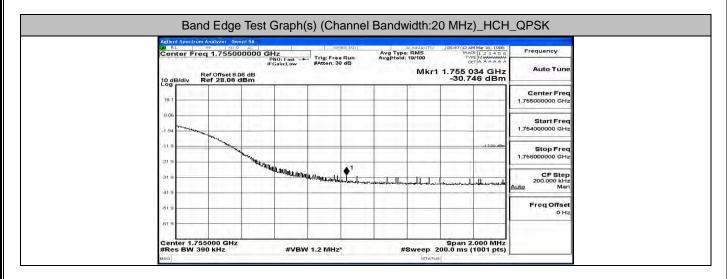


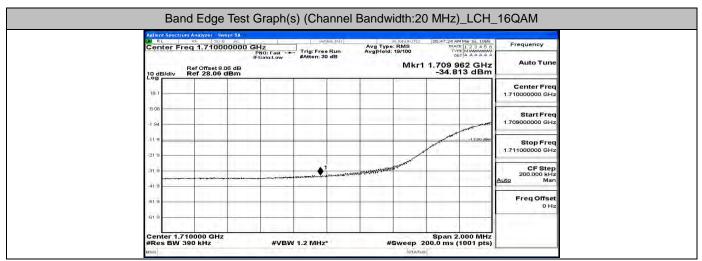


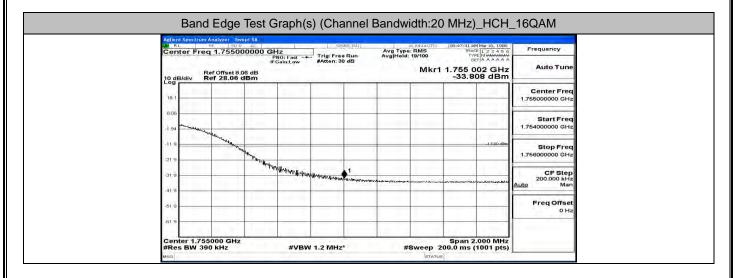






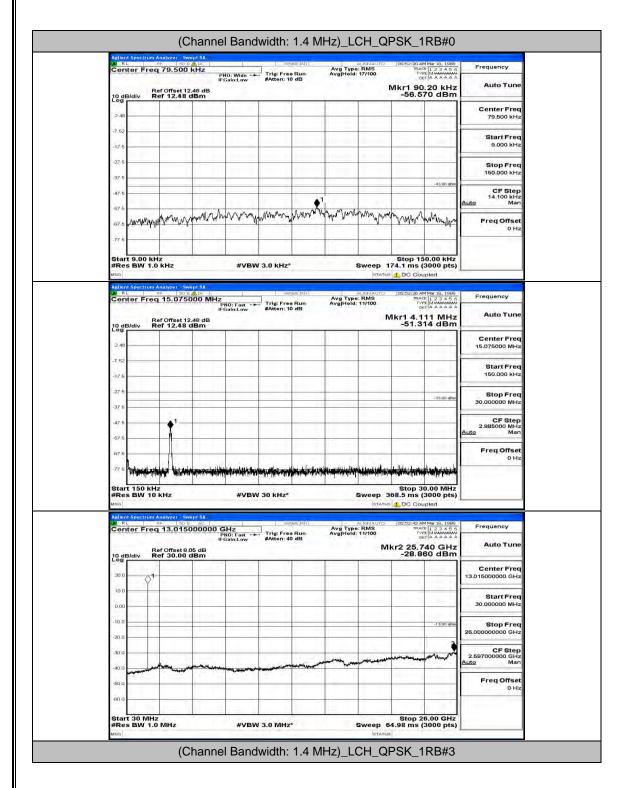






E.5 Conducted Spurious Emission

Channel Bandwidth: 1.4 MHz

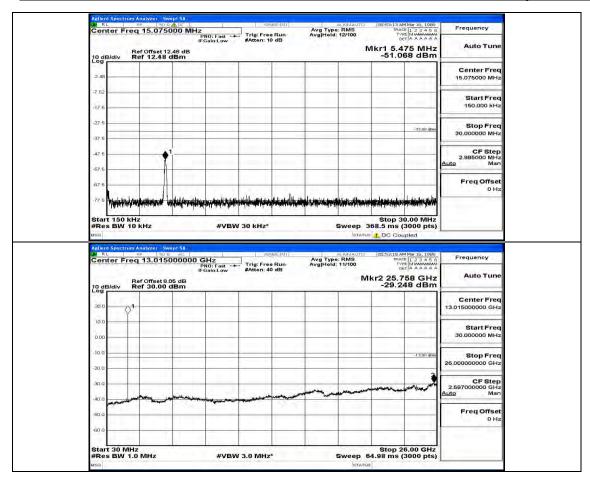


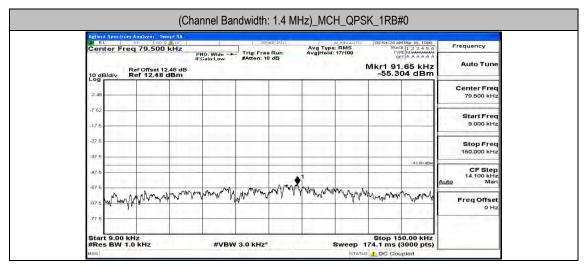
Start 9.00 kHz #Res BW 1.0 kHz

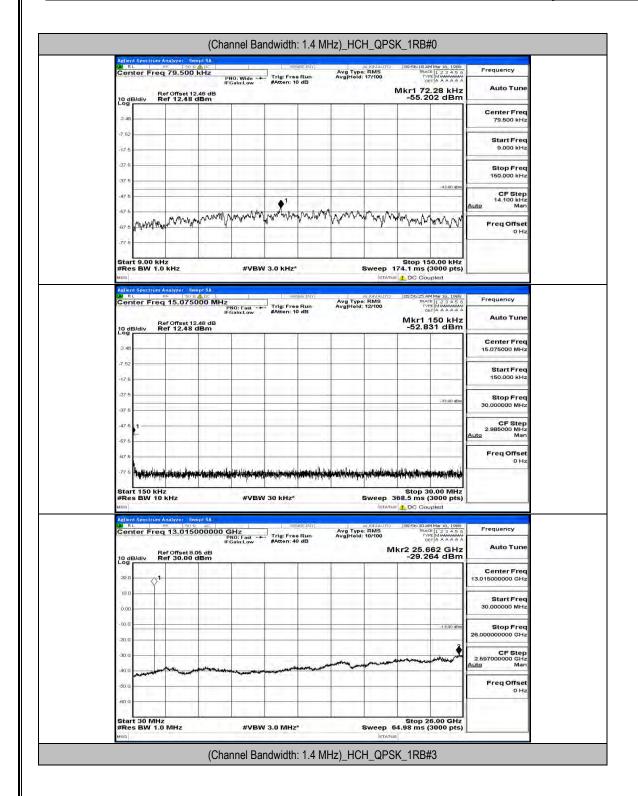
#VBW 3.0 kHz*

MV

Stop 150.00 kHz Sweep 174.1 ms (3000 pts) Freq Offse



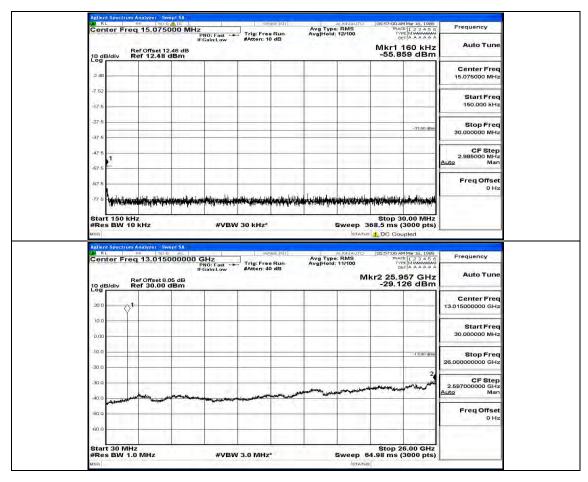


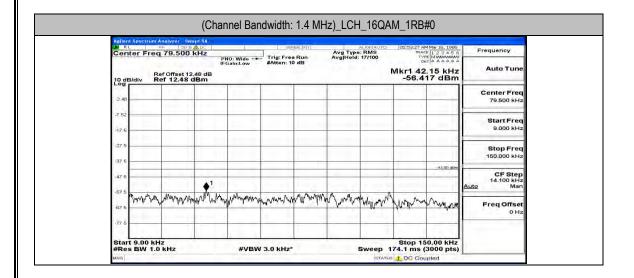


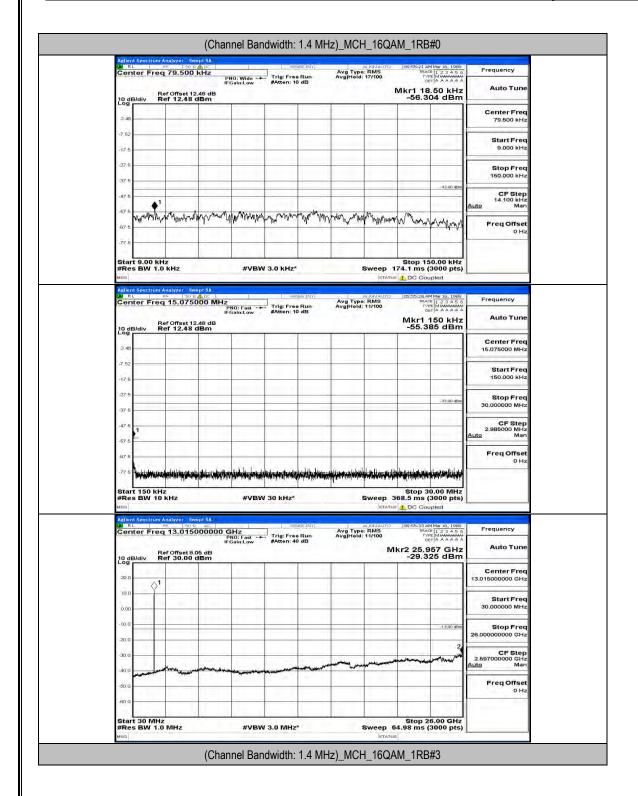
Start 9.00 kHz #Res BW 1.0 kHz

#VBW 3.0 kHz*

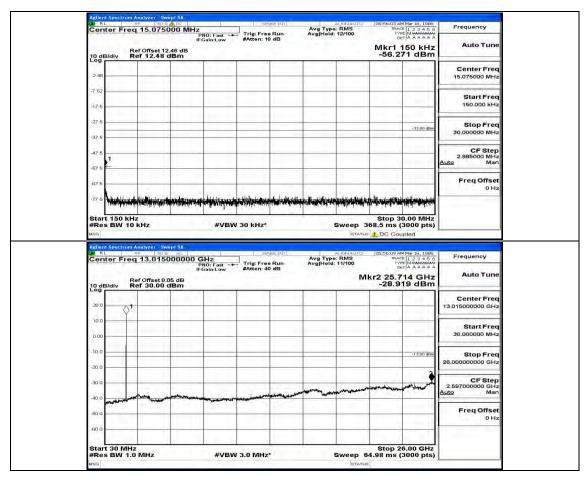
Stop 150.00 kHz Sweep 174.1 ms (3000 pts)

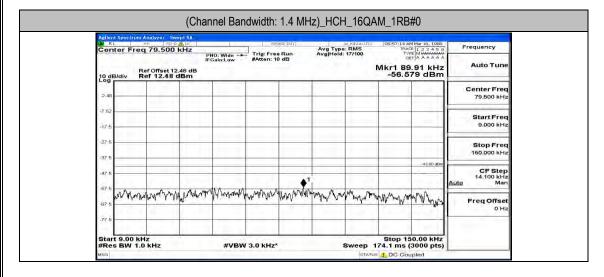




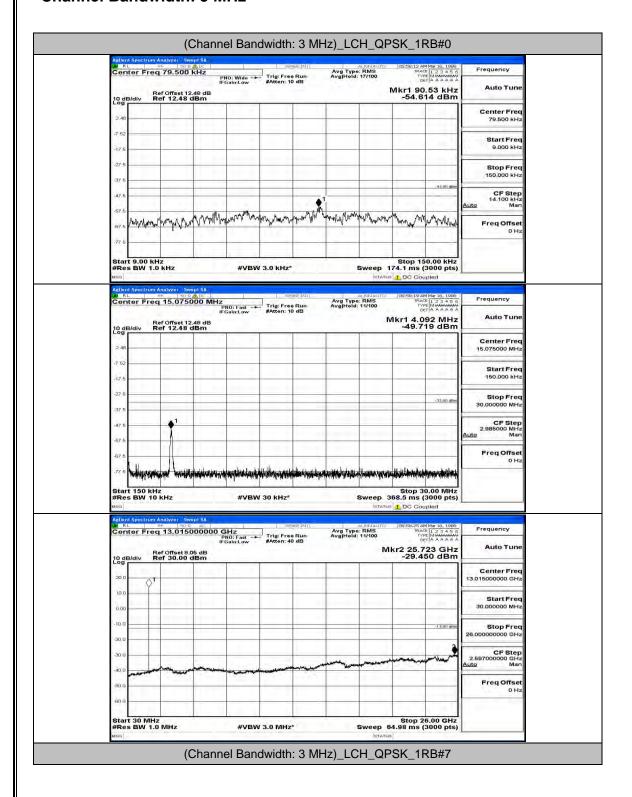


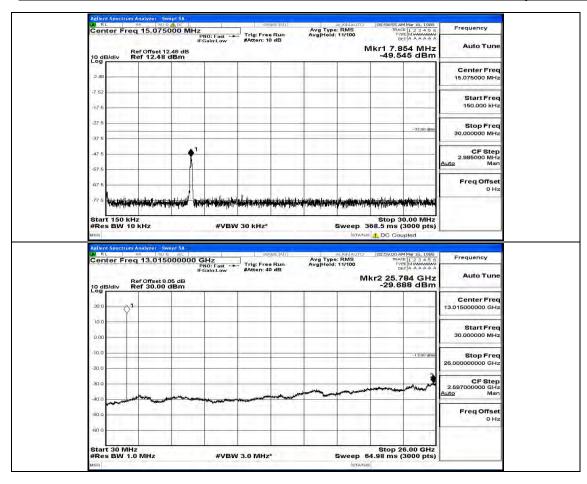
#VBW 3.0 kHz*

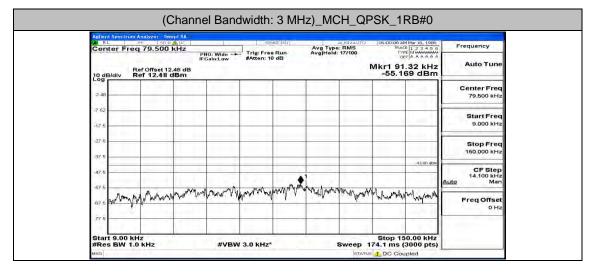


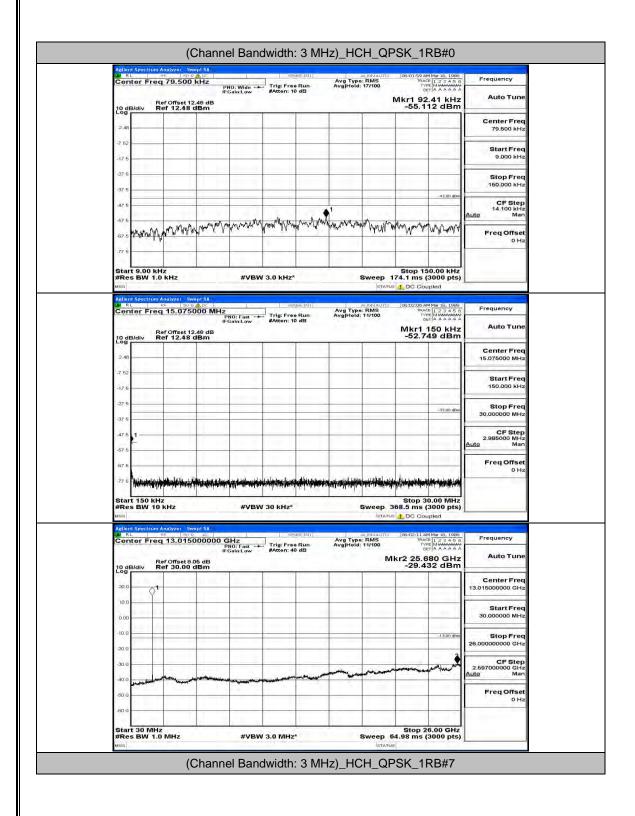


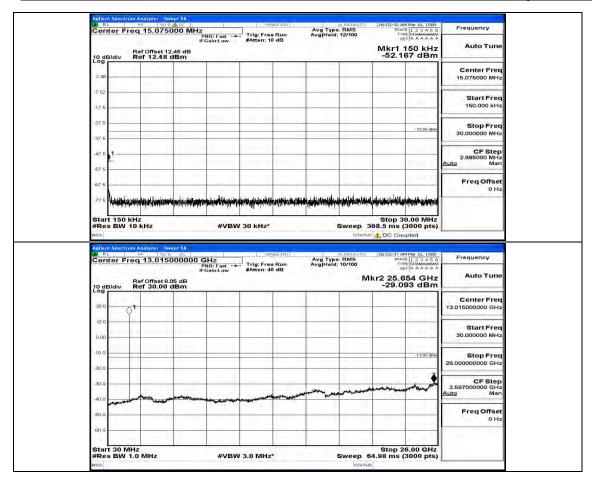
Channel Bandwidth: 3 MHz

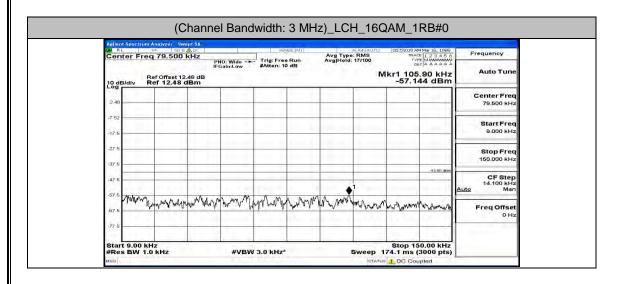


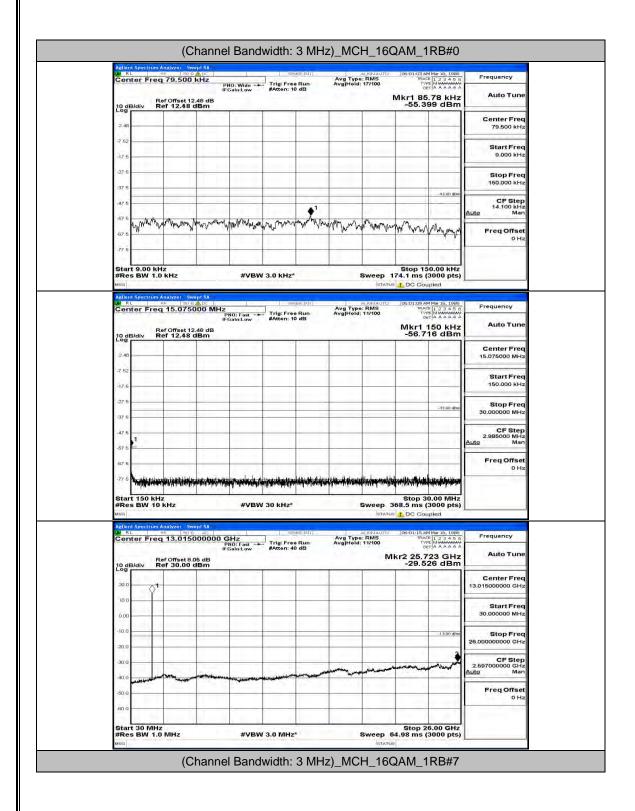


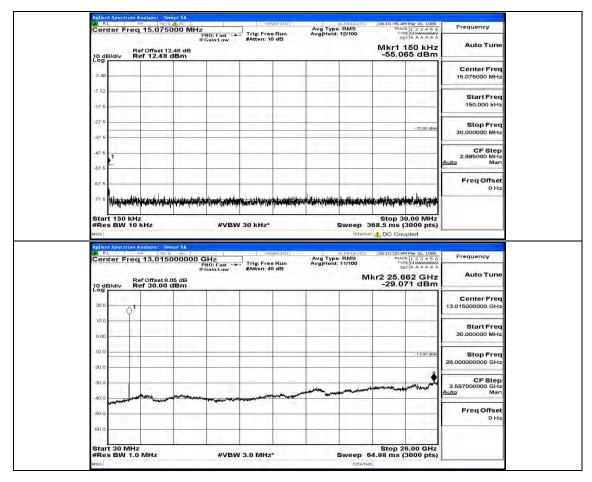


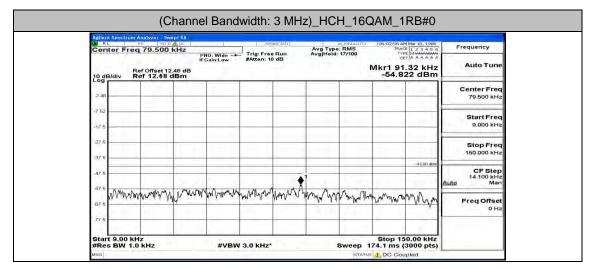












Channel Bandwidth: 5 MHz

