Appendix B: Test Data for E-UTRA Band 4

Product Name: LTE GSM/WCDMA Smartphone

Trade Mark: DOOGEE Test Model: S90

Environmental Conditions

Temperature:	23.9	
Relative Humidity:	52.8	
ATM Pressure:	100.0 kPa	
Test Engineer:	Mina.Xu	
Supervised by:	Jayden Zhuo	

B.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	Channel	Size	Offset	QPSK	16QAM	verdict			
		1	0	23.26	22.57	PASS			
		1	3	23.45	22.76	PASS			
		1	5	23.19	22.53	PASS			
	LCH	3	0	23.37	22.55	PASS			
		3	2	23.38	22.52	PASS			
		3	3	23.36	22.54	PASS			
		6	0	22.31	21.28	PASS			
		1	0	23.81	23.04	PASS			
	мсн	1	3	23.85	23.37	PASS			
ODCK /		1	5	23.68	22.97	PASS			
QPSK / 16QAM		3	0	23.77	22.79	PASS			
TOQAM		3	2	23.77	22.76	PASS			
		3	3	23.79	22.60	PASS			
		6	0	22.70	21.51	PASS			
		1	0	22.97	22.26	PASS			
		1	3	23.17	22.48	PASS			
		1	5	22.93	22.24	PASS			
	HCH	3	0	23.02	22.11	PASS			
		3	2	23.09	22.12	PASS			
		3	3	23.07	22.12	PASS			
İ		6	0	21.93	21.04	PASS			

Conducted Output Power Test Result (Channel Bandwidth: 3 MHz)								
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict		
		Size	Offset	QPSK	16QAM			
		1	0	22.93	22.25	PASS		
		1	7	23.20	22.27	PASS		
		1	14	22.79	22.10	PASS		
	LCH	8	0	21.91	20.96	PASS		
		8	4	21.85	20.96	PASS		
		8	7	21.78	20.86	PASS		
		15	0	21.84	20.79	PASS		
	MCH	1	0	23.65	22.91	PASS		
		1	7	23.91	23.25	PASS		
ODOK /		1	14	23.66	22.90	PASS		
QPSK /		8	0	22.50	21.53	PASS		
16QAM		8	4	22.52	21.60	PASS		
		8	7	22.51	21.55	PASS		
		15	0	22.45	21.51	PASS		
		1	0	22.83	22.30	PASS		
		1	7	23.12	22.54	PASS		
		1	14	23.07	22.56	PASS		
	HCH	8	0	21.87	20.83	PASS		
		8	4	21.87	20.84	PASS		
		8	7	21.82	20.80	PASS		
		15	0	21.75	20.78	PASS		

	Conducted Output Power Test Result (Channel Bandwidth: 5 MHz)								
Modulation	Channel	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	Vardiet			
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict			
		1	0	22.85	22.29	PASS			
		1	12	22.95	22.39	PASS			
		1	24	22.56	22.06	PASS			
	LCH	12	0	21.86	21.02	PASS			
		12	6	21.84	21.00	PASS			
		12	13	21.64	20.82	PASS			
		25	0	21.75	20.84	PASS			
		1	0	23.60	23.02	PASS			
	МСН	1	12	23.96	23.41	PASS			
QPSK /		1	24	23.67	23.12	PASS			
16QAM		12	0	22.66	21.87	PASS			
TOQAW		12	6	22.80	21.97	PASS			
		12	13	22.74	21.93	PASS			
		25	0	22.73	21.69	PASS			
		1	0	22.71	22.06	PASS			
		1	12	23.20	22.47	PASS			
		1	24	23.08	22.18	PASS			
	HCH	12	0	22.15	21.18	PASS			
		12	6	22.21	21.24	PASS			
		12	13	22.09	21.07	PASS			
		25	0	22.13	20.97	PASS			

	Conducted Output Power Test Result (Channel Bandwidth: 10 MHz)							
Modulation	Channel	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	Verdict		
Modulation	Channel	Size	Offset	QPSK	16QAM	verdict		
		1	0	22.88	22.53	PASS		
		1	24	23.18	22.56	PASS		
		1	49	23.04	22.38	PASS		
	LCH	25	0	22.22	21.02	PASS		
		25	12	21.92	21.02	PASS		
		25	25	21.95	20.92	PASS		
		50	0	22.12	20.81	PASS		
	MCH	1	0	23.18	22.43	PASS		
		1	24	23.71	22.96	PASS		
QPSK /		1	49	23.38	22.74	PASS		
16QAM		25	0	22.74	21.74	PASS		
TOQAIVI		25	12	22.80	21.85	PASS		
		25	25	22.70	21.84	PASS		
		50	0	22.77	21.78	PASS		
		1	0	23.24	22.65	PASS		
		1	24	23.30	22.70	PASS		
		1	49	23.16	22.60	PASS		
	HCH	25	0	22.28	21.35	PASS		
		25	12	22.20	21.20	PASS		
		25	25	22.14	21.11	PASS		
		50	0	22.19	21.24	PASS		

	Conducted Output Power Test Result (Channel Bandwidth: 15 MHz)								
Modulation	Channel	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	Verdict			
Wodulation	Channel	Size	Offset	QPSK	16QAM	verdict			
		1	0	23.07	22.07	PASS			
		1	37	23.14	22.33	PASS			
		1	74	23.26	22.10	PASS			
	LCH	37	0	21.67	20.66	PASS			
		37	18	21.53	20.54	PASS			
		37	38	21.68	20.73	PASS			
		75	0	21.68	20.68	PASS			
	мсн	1	0	22.78	22.10	PASS			
		1	37	23.49	22.73	PASS			
QPSK /		1	74	23.08	22.31	PASS			
16QAM		37	0	22.15	21.38	PASS			
TOQAM		37	18	22.47	21.48	PASS			
		37	38	22.39	21.68	PASS			
		75	0	22.61	21.63	PASS			
		1	0	23.38	22.45	PASS			
		1	37	23.37	22.59	PASS			
		1	74	22.88	22.42	PASS			
	HCH	37	0	22.32	21.35	PASS			
		37	18	22.26	21.23	PASS			
		37	38	21.99	21.09	PASS			
		75	0	22.19	20.90	PASS			

	Conducted Output Power Test Result (Channel Bandwidth: 20 MHz)								
Modulation	Channel	RB Conf	figuration	Average Power [dBm]	Average Power [dBm]	Verdict			
Modulation	Channel	Size	Offset	QPSK	16QAM	verdict			
		1	0	23.15	21.91	PASS			
		1	49	23.19	22.11	PASS			
		1	99	23.56	22.38	PASS			
	LCH	50	0	21.62	20.59	PASS			
		50	25	21.70	20.67	PASS			
		50	50	22.10	21.09	PASS			
		100	0	21.87	20.86	PASS			
		1	0	22.62	21.88	PASS			
	МСН	1	49	23.58	22.77	PASS			
QPSK /		1	99	22.98	22.16	PASS			
16QAM		50	0	21.97	20.94	PASS			
TOQAIVI		50	25	22.30	21.27	PASS			
		50	50	22.29	21.34	PASS			
		100	0	22.26	21.15	PASS			
		1	0	23.20	22.59	PASS			
		1	49	23.14	22.46	PASS			
		1	99	22.65	22.07	PASS			
	HCH	50	0	22.12	21.49	PASS			
		50	25	22.09	21.38	PASS			
		50	50	21.80	21.09	PASS			
		100	0	22.24	21.29	PASS			

B.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	Charmer	[dB]	[dB]	verdict		
	LCH	5.82	<13	PASS		
QPSK	MCH	5.6	<13	PASS		
	HCH	5.7	<13	PASS		
	LCH	6.74	<13	PASS		
16QAM	MCH	6.62	<13	PASS		
	HCH	6.67	<13	PASS		

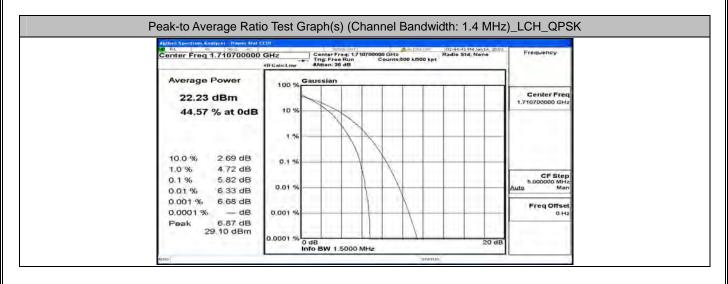
	Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)							
Modulation	Channel	Peak-to-Average Ratio	Limit	Vordiet				
Modulation	Charmer	[dB]	[dB]	Verdict				
	LCH	5.84	<13	PASS				
QPSK	MCH	5.67	<13	PASS				
	HCH	5.8	<13	PASS				
	LCH	6.82	<13	PASS				
16QAM	MCH	6.67	<13	PASS				
	HCH	6.58	<13	PASS				

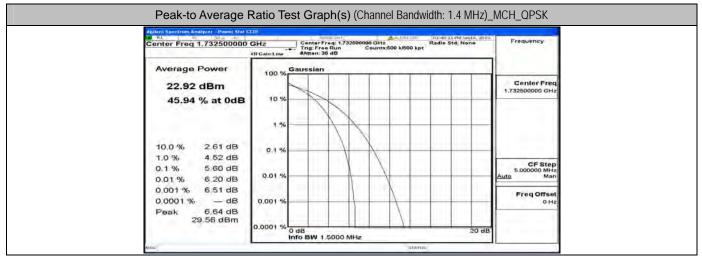
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)						
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict		
iviodulation	Charmer	[dB]	[dB]	verdict		
	LCH	6	<13	PASS		
QPSK	MCH	5.74	<13	PASS		
	HCH	5.77	<13	PASS		
	LCH	6.75	<13	PASS		
16QAM	MCH	6.56	<13	PASS		
	HCH	6.58	<13	PASS		

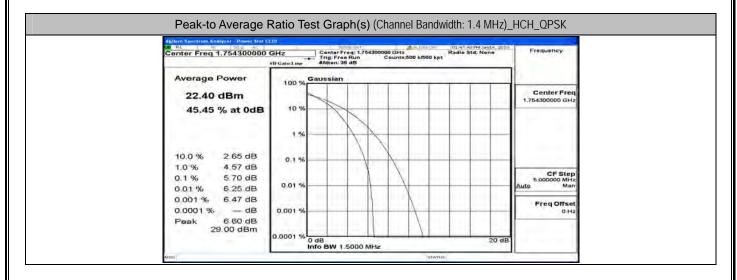
	Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)							
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict				
Modulation	Charine	[dB]	[dB]	verdict				
	LCH	5.95	<13	PASS				
QPSK	MCH	5.71	<13	PASS				
	HCH	5.74	<13	PASS				
	LCH	6.69	<13	PASS				
16QAM	MCH	6.4	<13	PASS				
	HCH	6.47	<13	PASS				

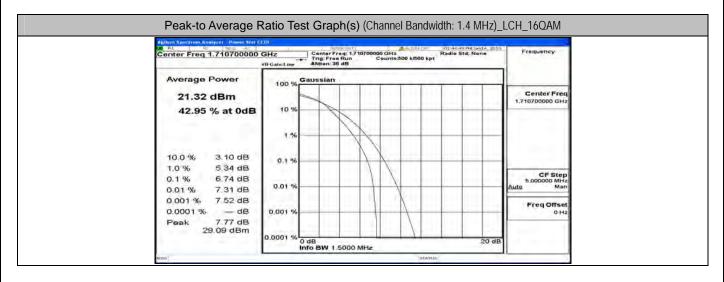
	Peak-to Average Ratio Test Result (Channel Bandwidth: 15 MHz)							
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict				
Modulation	Grianner	[dB]	[dB]	verdict				
	LCH	5.19	<13	PASS				
QPSK	MCH	4.99	<13	PASS				
	HCH	4.91	<13	PASS				
	LCH	6.53	<13	PASS				
16QAM	MCH	6.34	<13	PASS				
	HCH	6.29	<13	PASS				

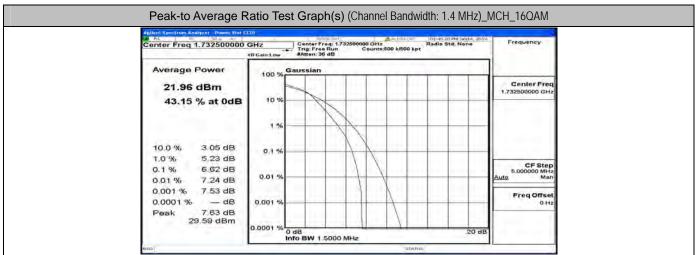
Peak-to Average Ratio Test Result (Channel Bandwidth: 20 MHz)				
Marakata Gara	Channel	Peak-to-Average Ratio	Limit	Verdict
Modulation		[dB]	[dB]	
QPSK	LCH	5.85	<13	PASS
	MCH	5.69	<13	PASS
	HCH	5.68	<13	PASS
16QAM	LCH	6.85	<13	PASS
	MCH	6.8	<13	PASS
	HCH	6.81	<13	PASS

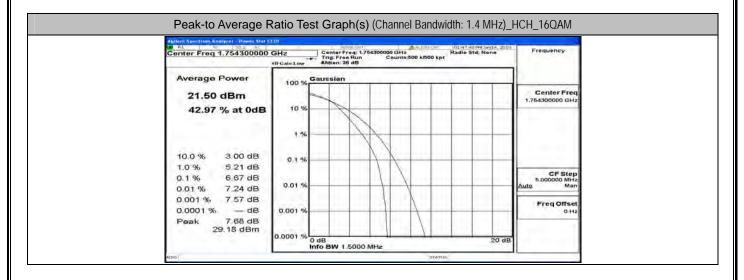


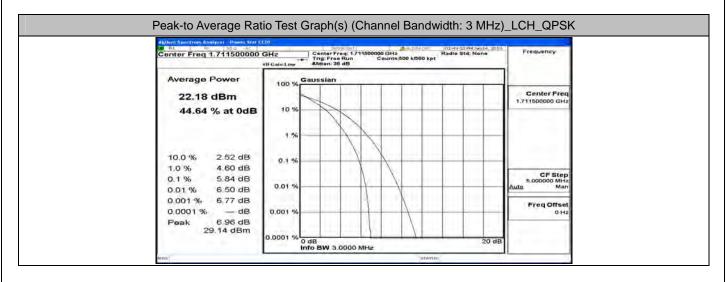


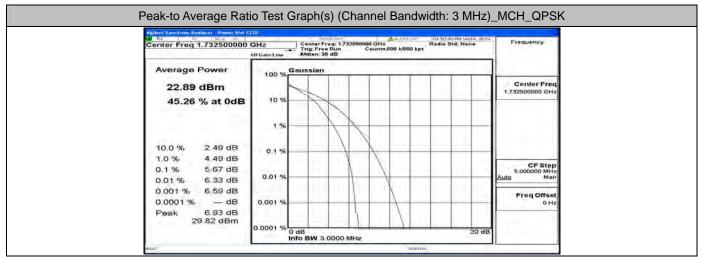


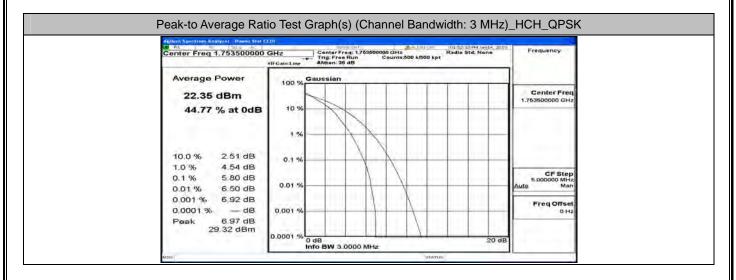


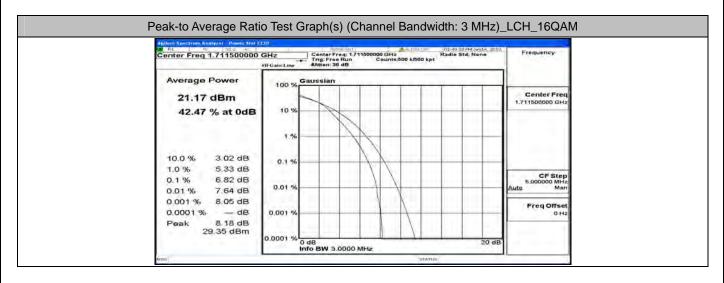


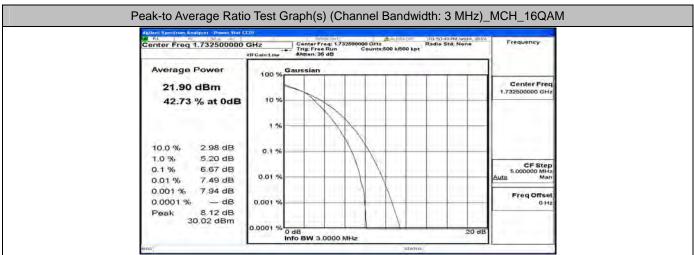


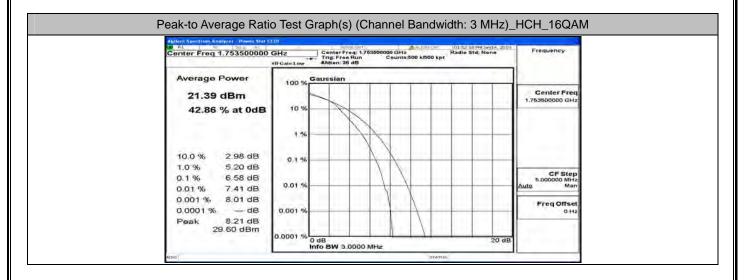


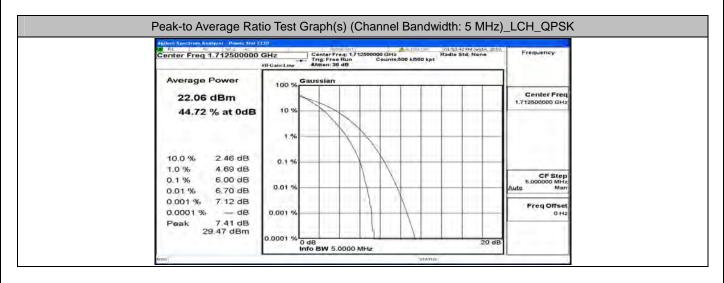


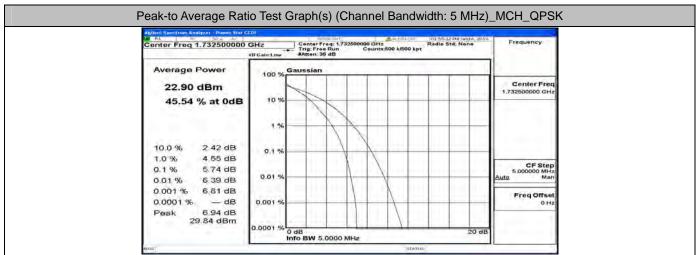


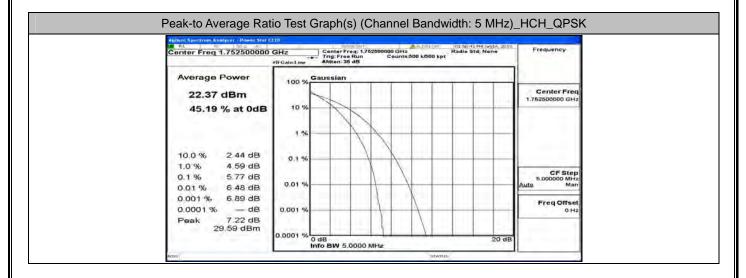


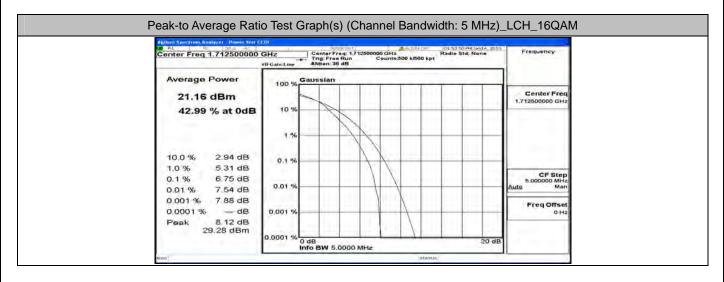


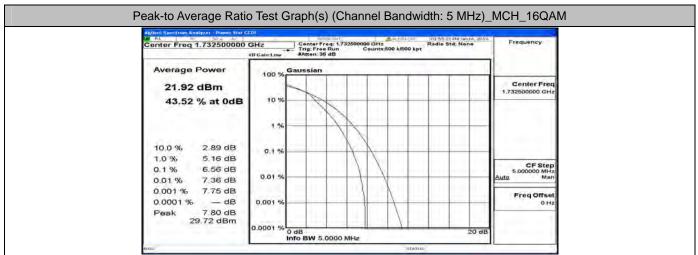


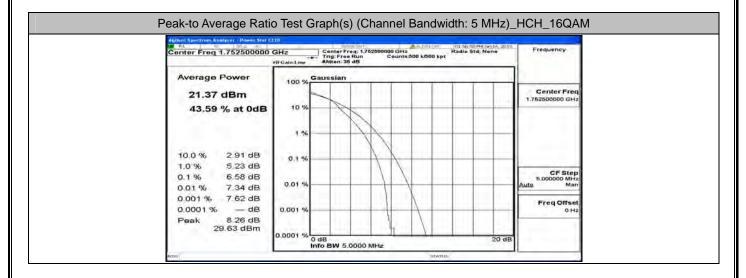


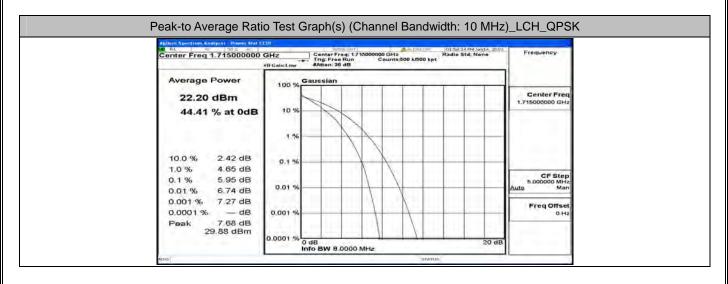


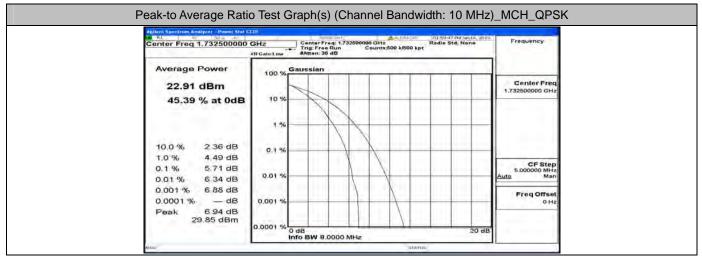


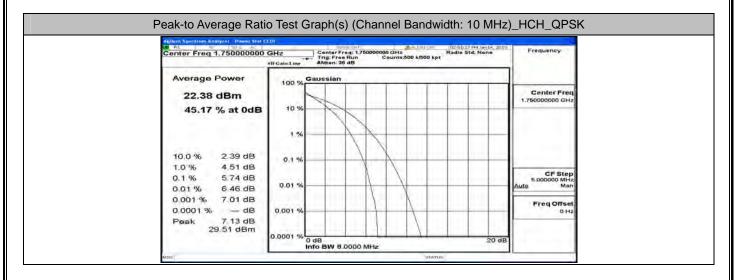


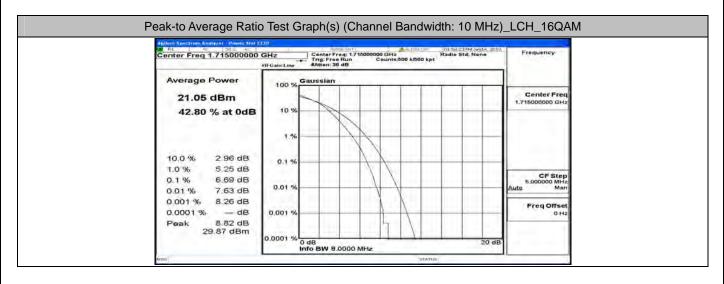


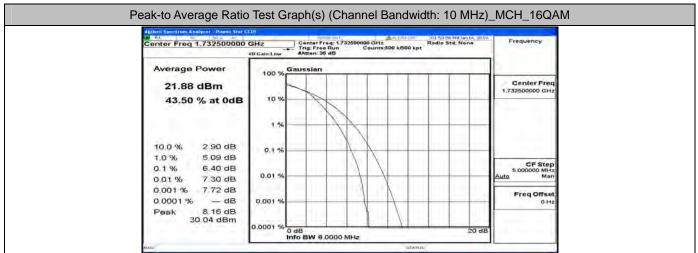


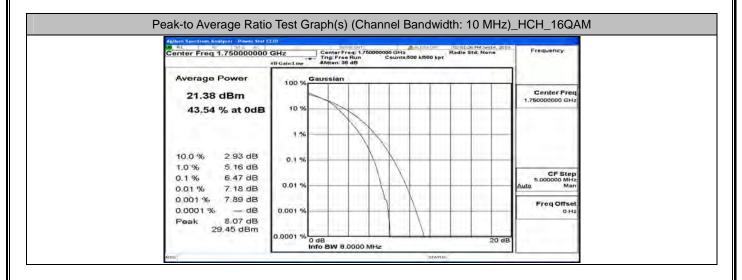


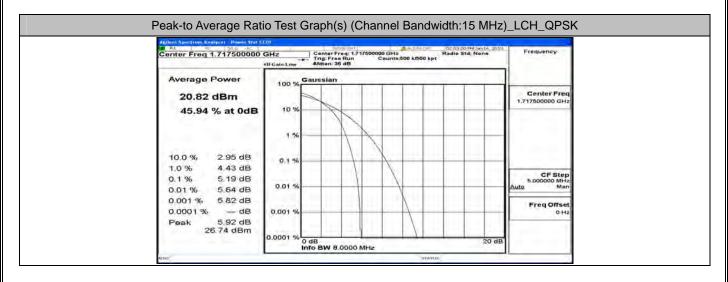


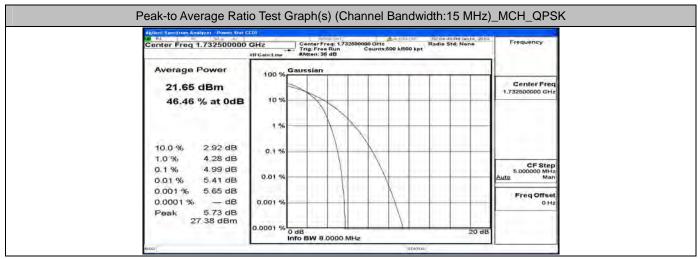


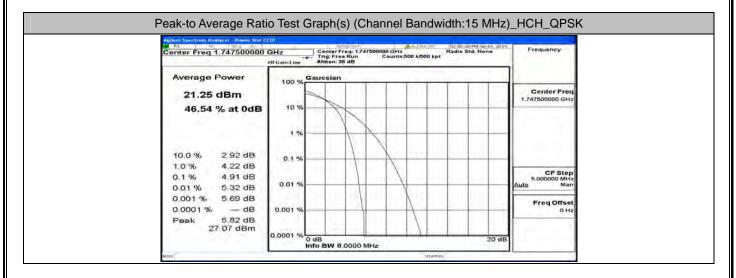


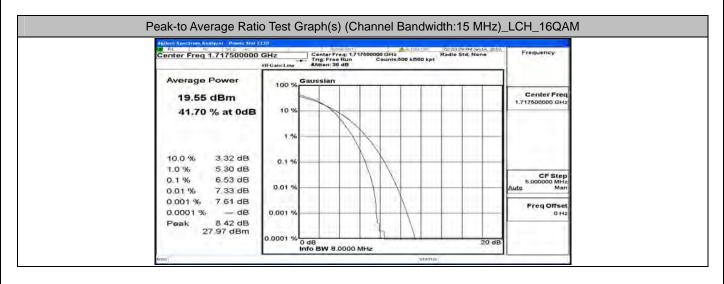


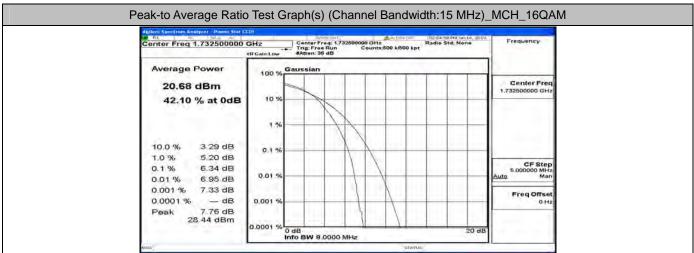


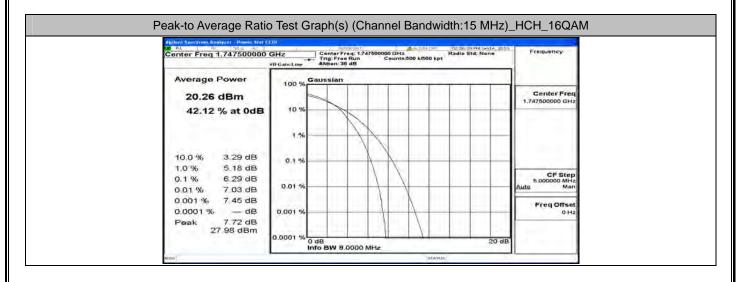


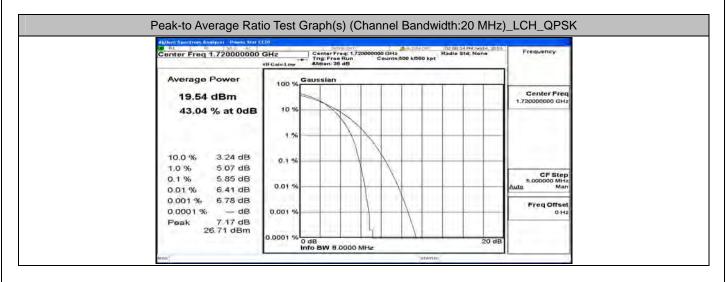


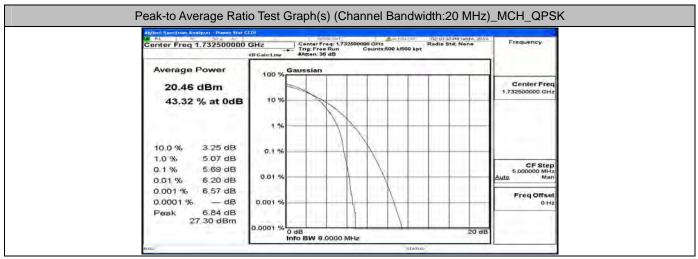


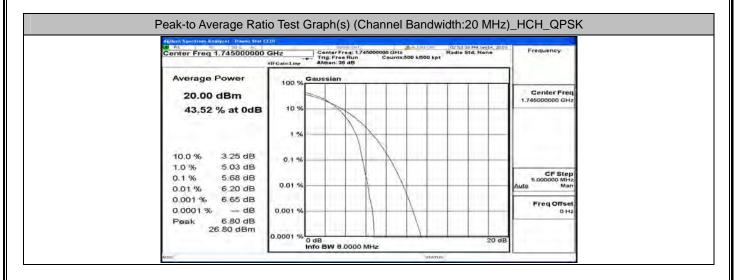


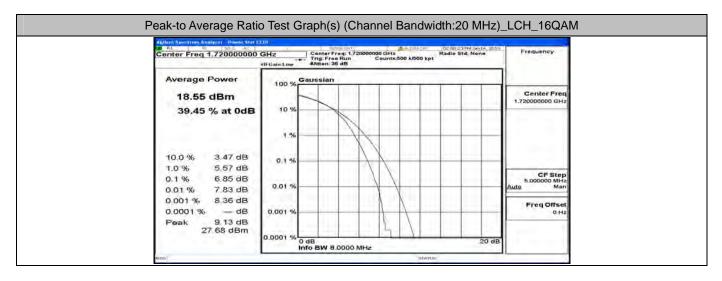


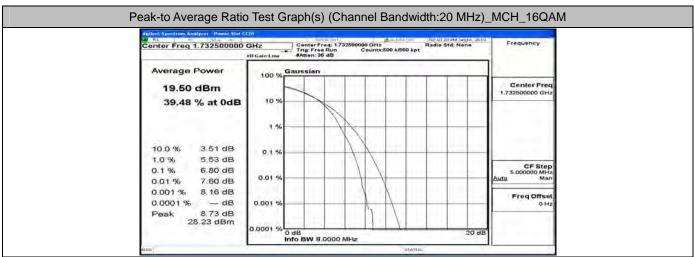


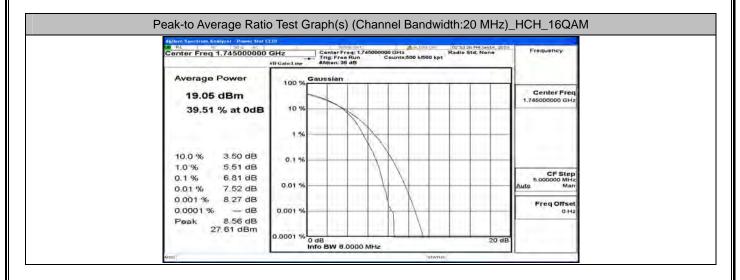












B.3 26dB Bandwidth and Occupied Bandwidth

EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
		(MHz)	(MHz)	verdict
QPSK	LCH	1.0789	1.225	PASS
	MCH	1.0746	1.215	PASS
	HCH	1.0769	1.237	PASS
16QAM	LCH	1.0788	1.229	PASS
	MCH	1.0771	1.237	PASS
	HCH	1.0774	1.239	PASS

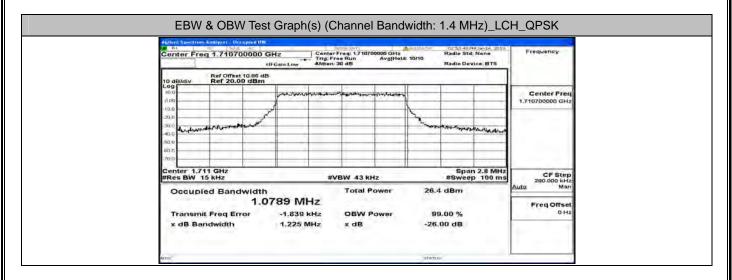
EBW & OBW Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	2.6794	2.833	PASS
	MCH	2.6765	2.816	PASS
	HCH	2.6783	2.852	PASS
16QAM	LCH	2.6801	2.845	PASS
	MCH	2.6794	2.813	PASS
	HCH	2.6868	2.835	PASS

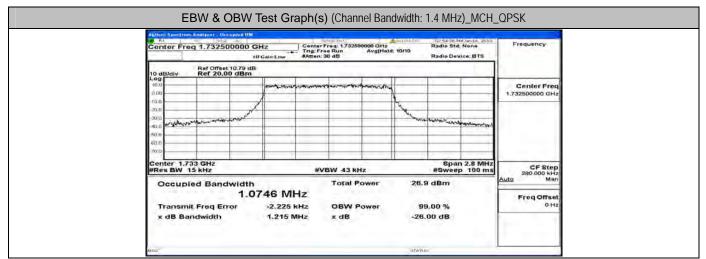
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
		(MHz)	(MHz)	
QPSK	LCH	4.4820	4.811	PASS
	MCH	4.4759	4.848	PASS
	HCH	4.4778	4.888	PASS
16QAM	LCH	4.4792	4.875	PASS
	MCH	4.4775	4.905	PASS
	HCH	4.4822	4.879	PASS

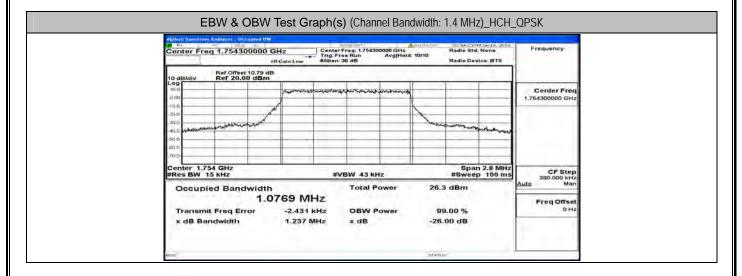
EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
Modulation		(MHz)	(MHz)	
QPSK	LCH	8.9552	9.539	PASS
	MCH	8.9437	9.582	PASS
	HCH	8.9279	9.492	PASS
16QAM	LCH	8.9481	9.556	PASS
	MCH	8.9425	9.609	PASS
	HCH	8.9440	9.495	PASS

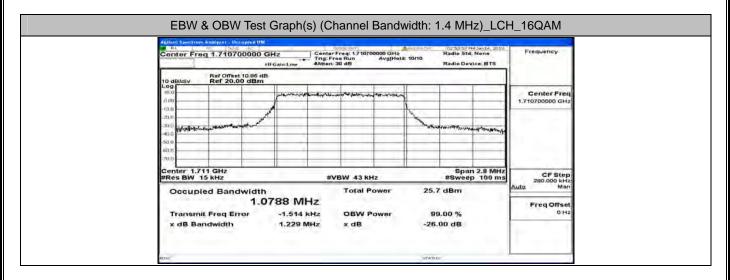
EBW & OBW Test Result (Channel Bandwidth: 15 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
Modulation		(MHz)	(MHz)	
QPSK	LCH	13.449	14.21	PASS
	MCH	13.387	14.17	PASS
	HCH	13.373	14.07	PASS
16QAM	LCH	13.443	14.25	PASS
	MCH	13.395	14.09	PASS
	HCH	13.386	14.08	PASS

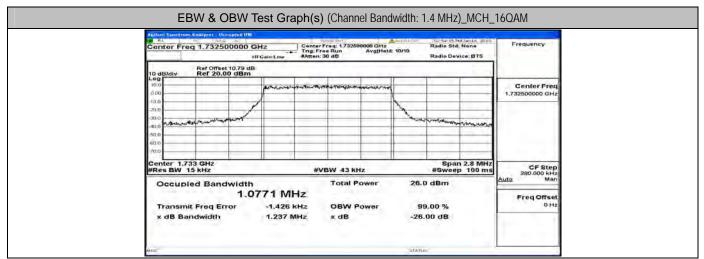
EBW & OBW Test Result (Channel Bandwidth: 20 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
iviodulation		(MHz)	(MHz)	
QPSK	LCH	17.908	18.62	PASS
	MCH	17.823	18.64	PASS
	HCH	17.856	18.62	PASS
16QAM	LCH	17.907	18.72	PASS
	MCH	17.846	18.62	PASS
	HCH	17.832	18.71	PASS

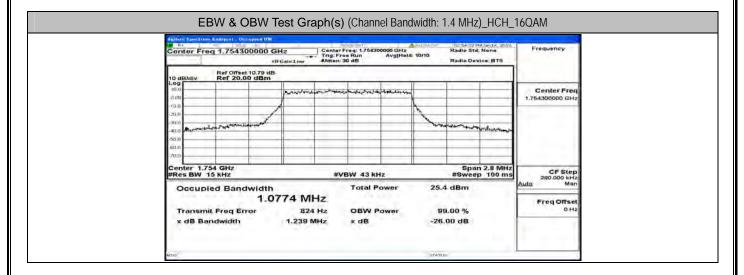


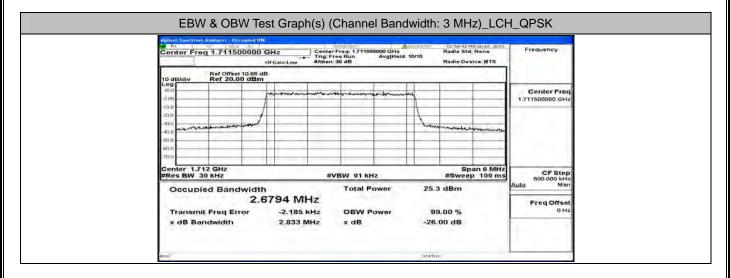


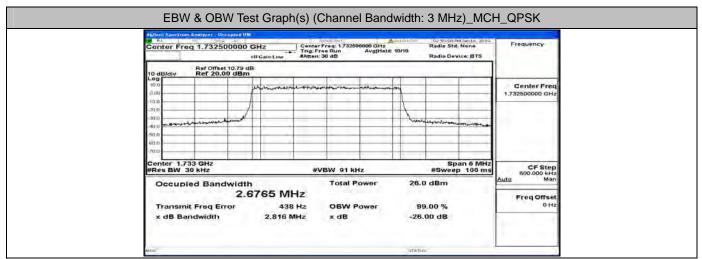


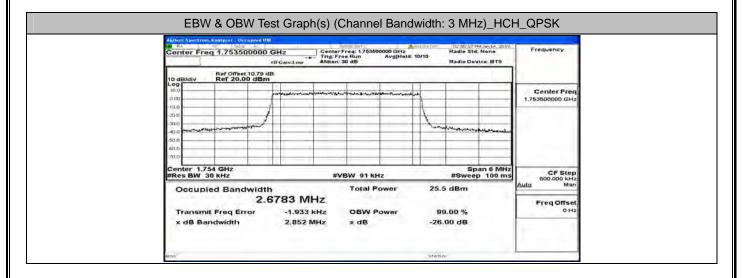


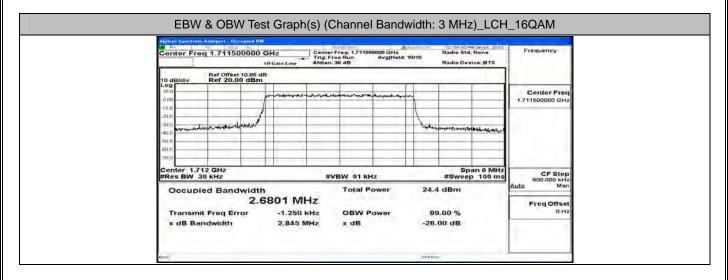


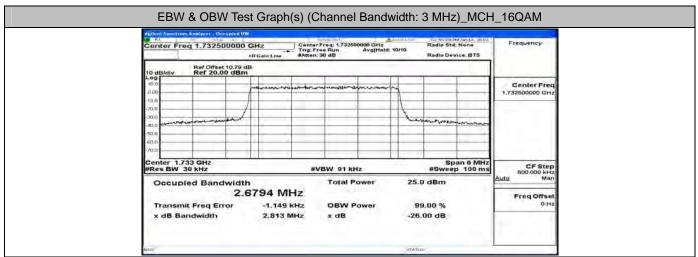


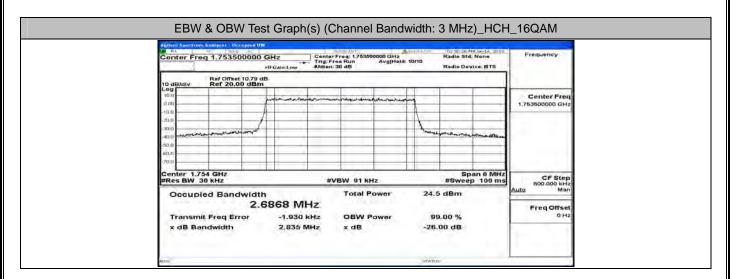


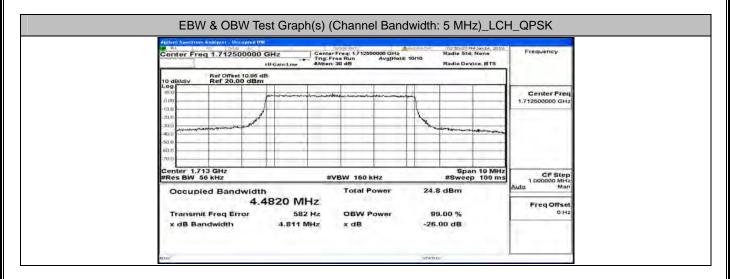


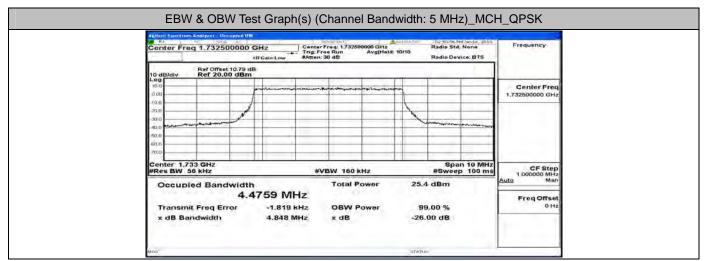


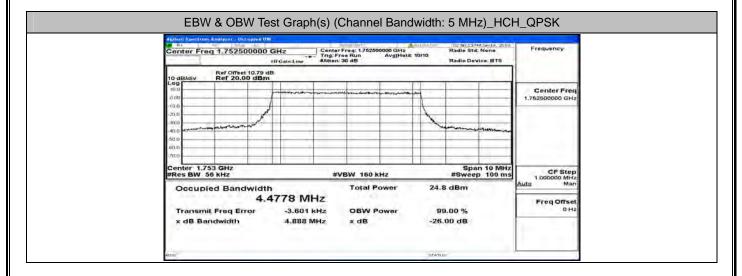


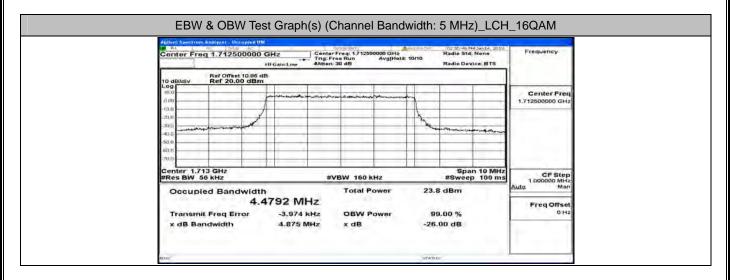


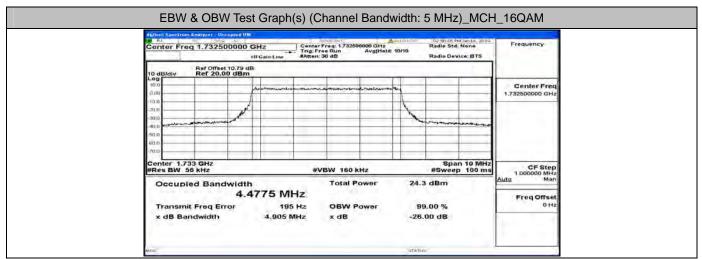


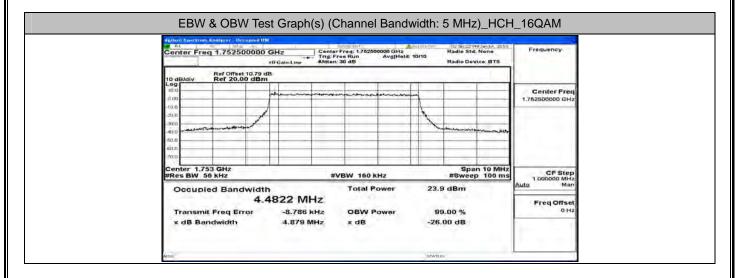


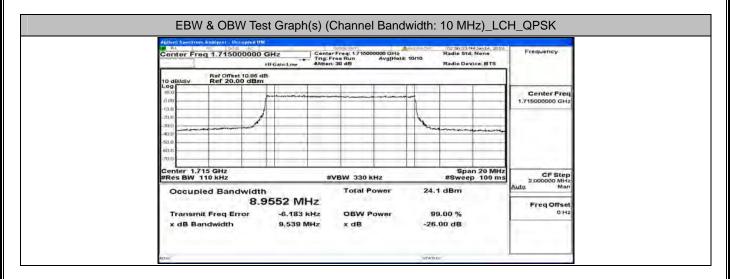


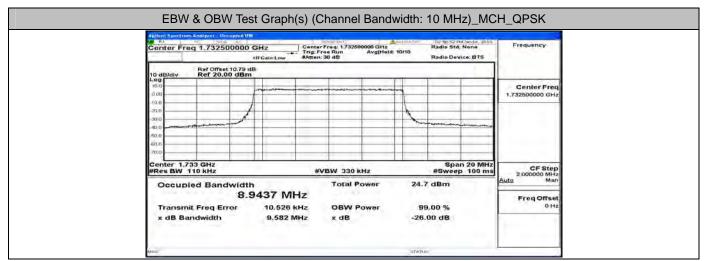


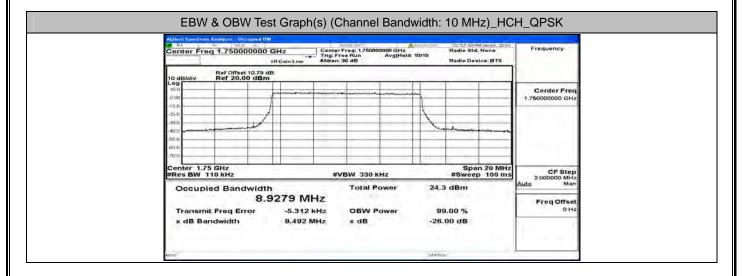


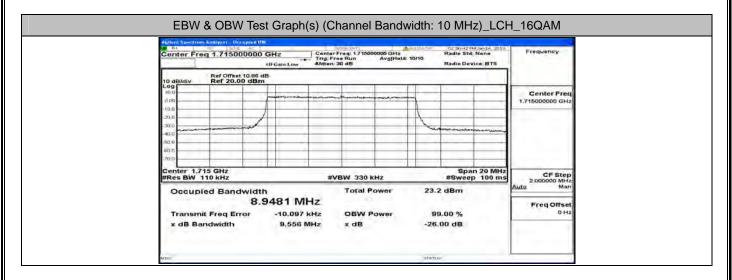


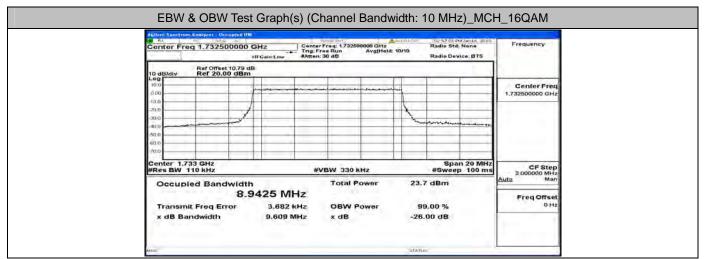


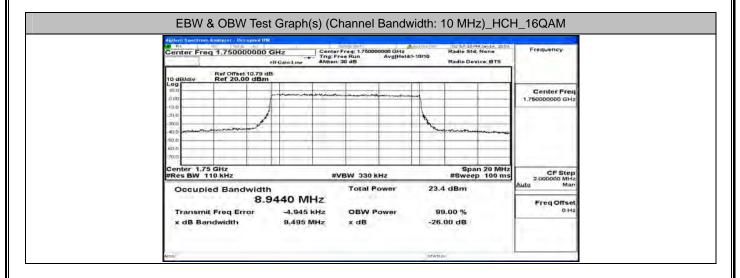


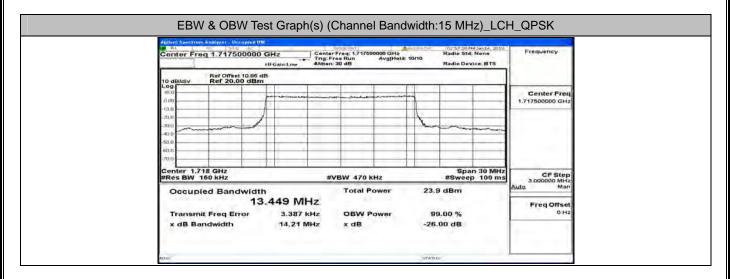


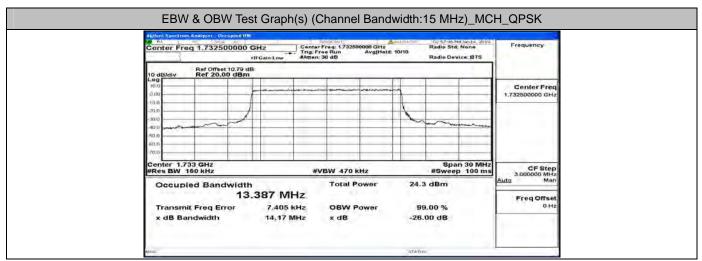


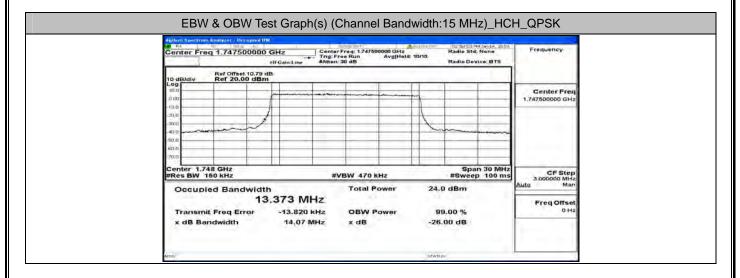


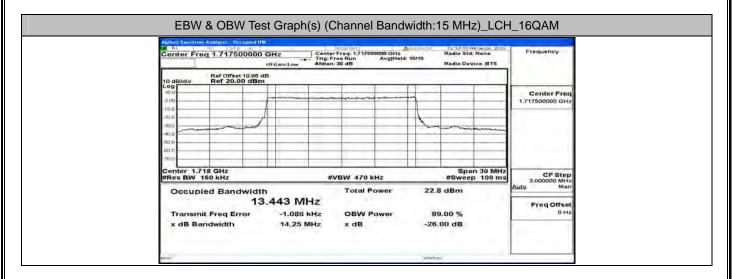


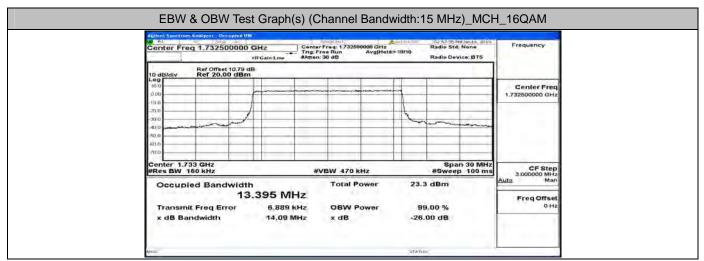


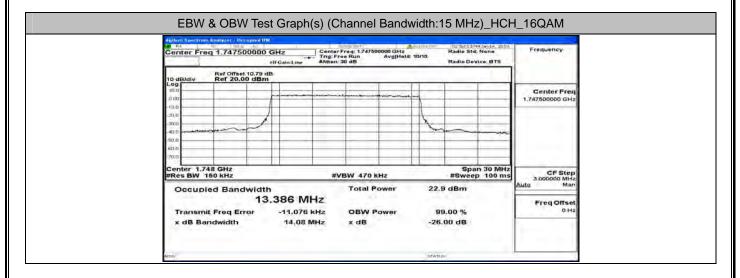


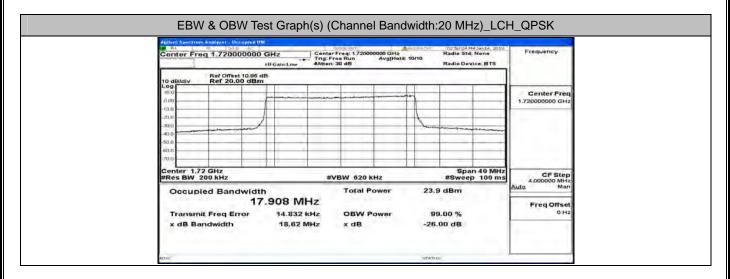


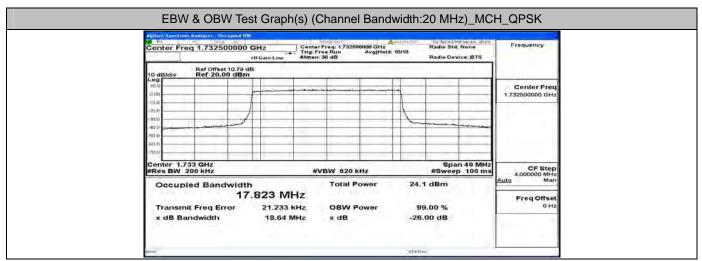


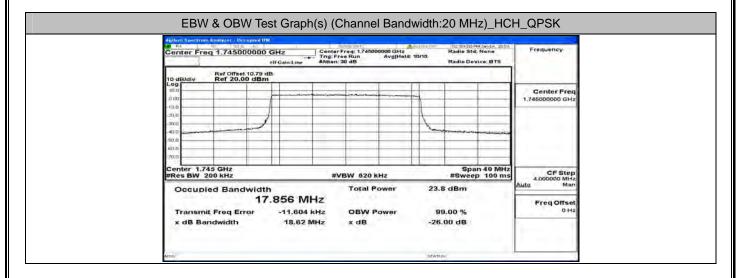


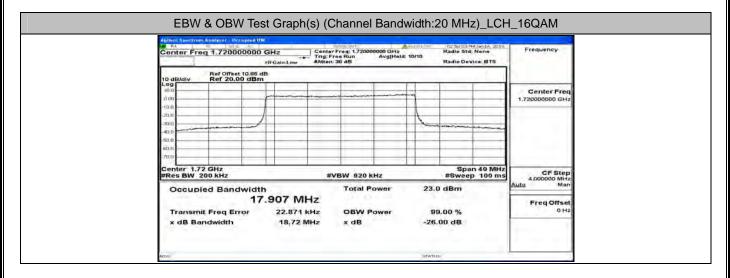


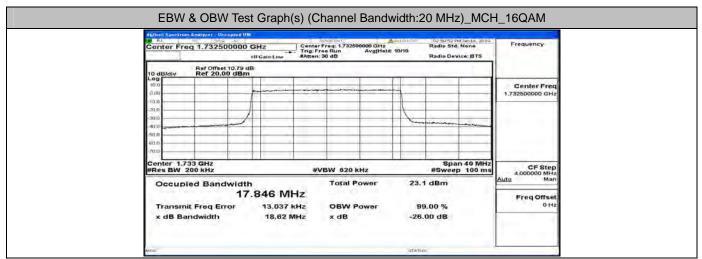


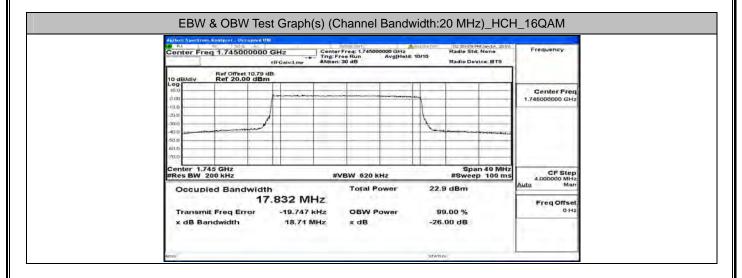




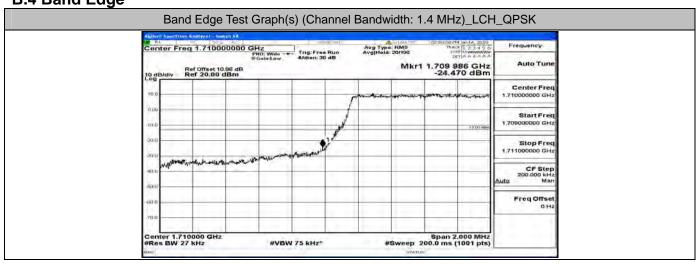


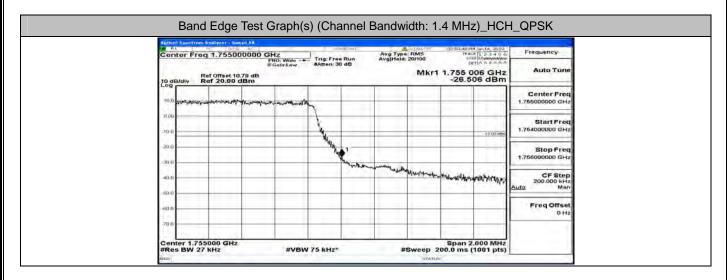


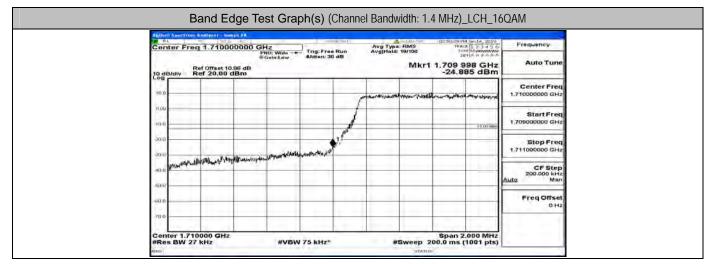


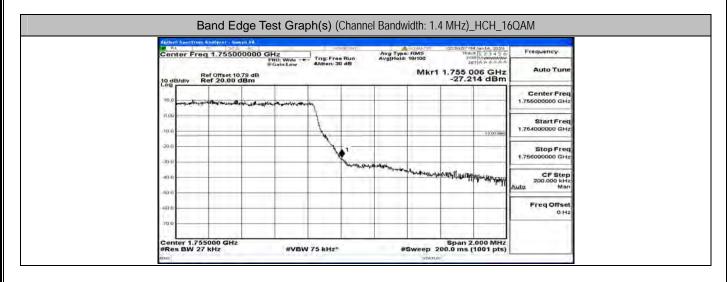


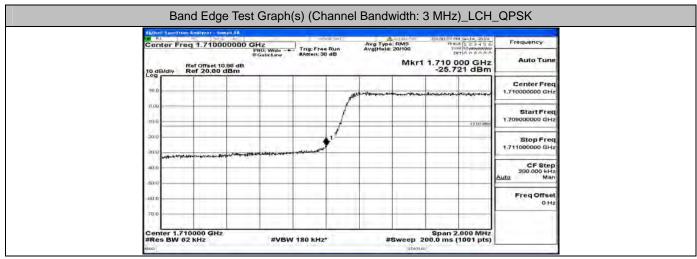
B.4 Band Edge

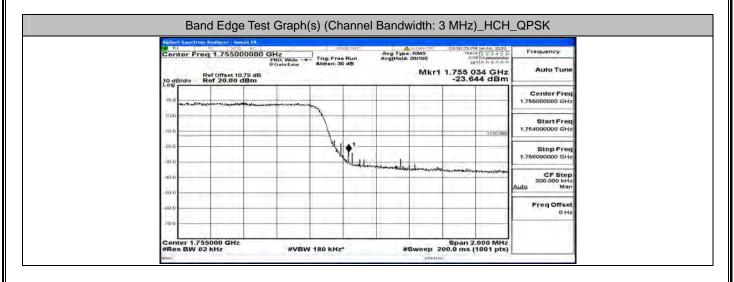


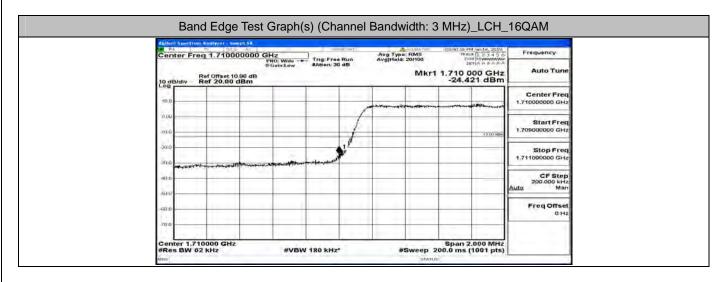


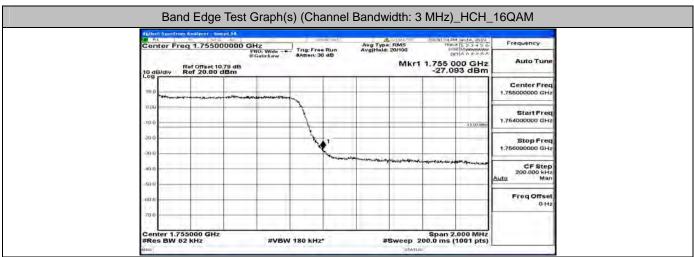


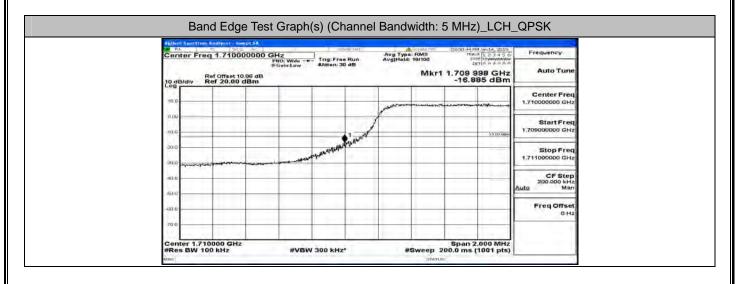


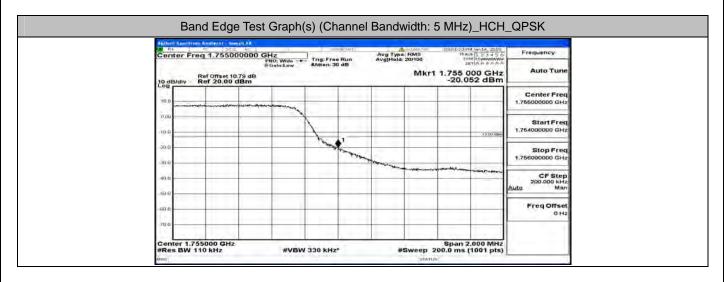


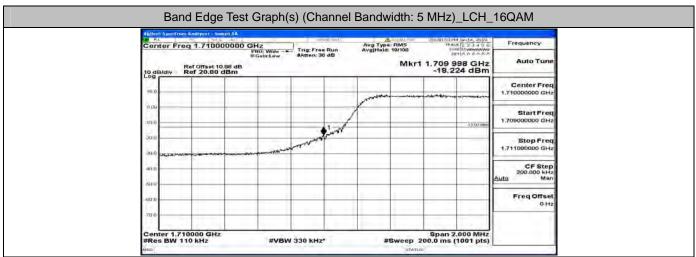


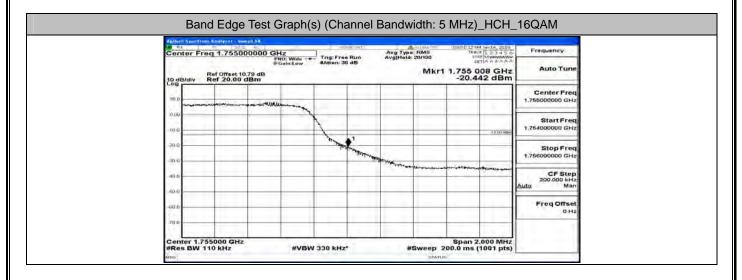


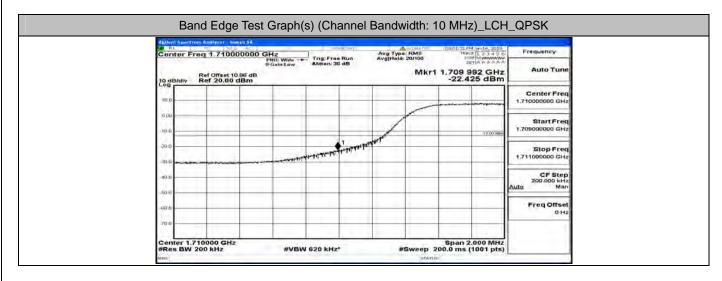


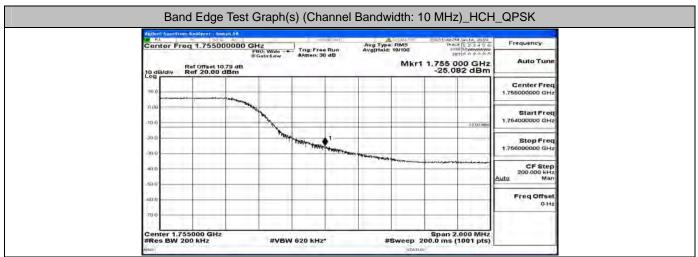


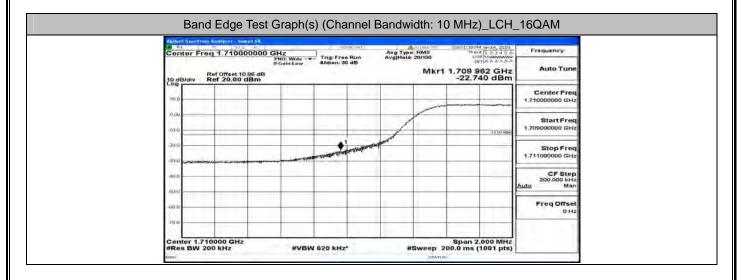


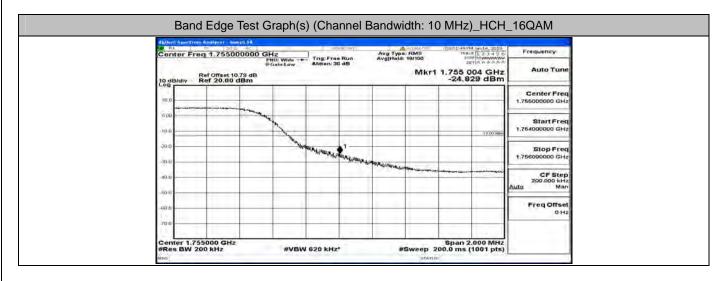


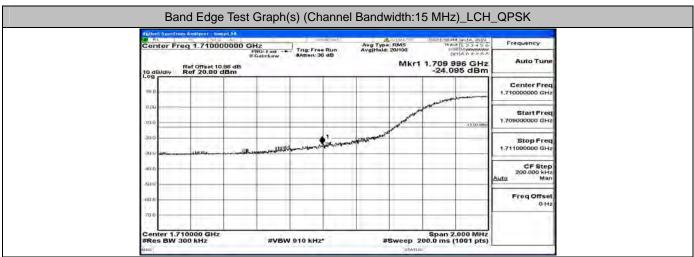


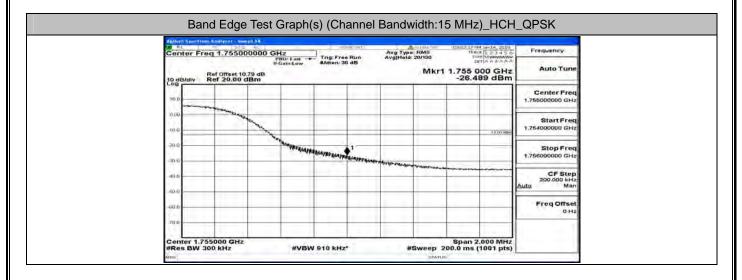


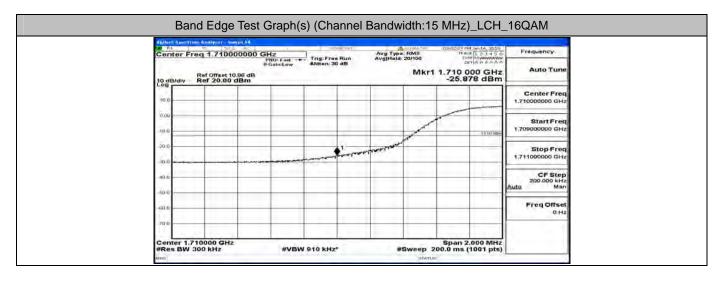


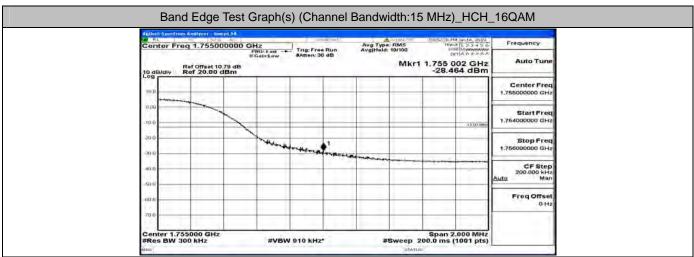


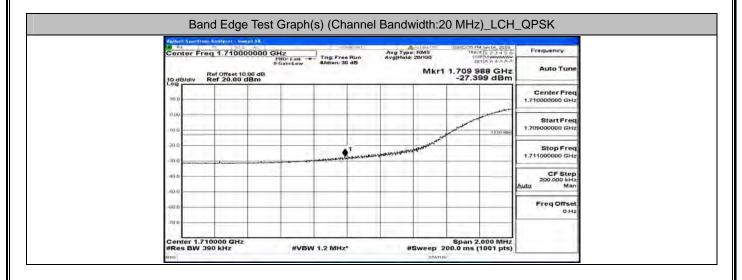


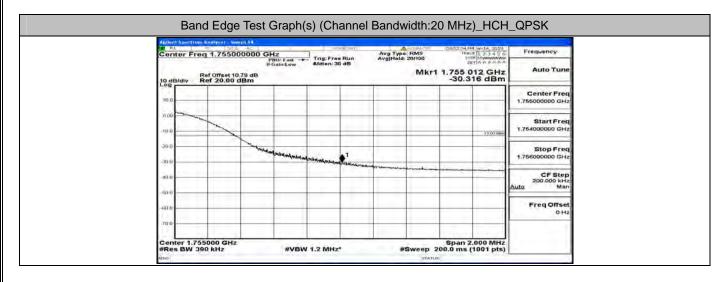


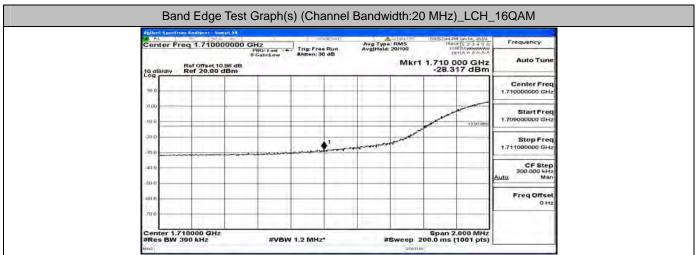


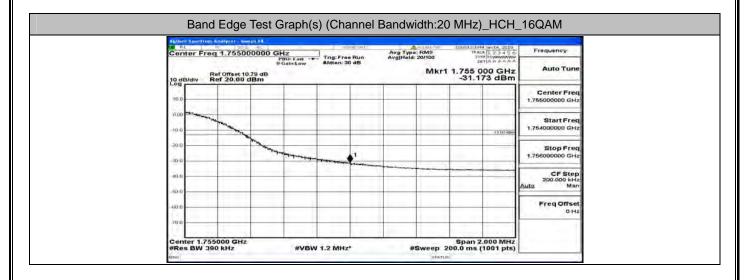












B.5 Conducted Spurious Emission

