Appendix B: Test Data for E-UTRA Band 4

Product Name: Portable Data Collector

Trade Mark: Newland Test Model: NLS-NFT10

Environmental Conditions

Temperature:	24.4 ° C
Relative Humidity:	52.9%
ATM Pressure:	100.0 kPa
Test Engineer:	WANGCHUANG
Supervised by:	TOM.LIU

A.1 Conducted Output Power

	Conducted Output Power Test Result (Channel Bandwidth: 1.4 MHz)							
Madulation	Channal	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	\/a nali a4		
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict		
		1	0	22.91	22.32	PASS		
		1	3	22.90	22.30	PASS		
		1	5	22.84	22.12	PASS		
	LCH	3	0	22.75	22.02	PASS		
		3	2	22.82	22.02	PASS		
		3	3	22.81	22.01	PASS		
		6	0	21.85	20.83	PASS		
		1	0	23.63	23.03	PASS		
		1	3	23.64	23.00	PASS		
QPSK /		1	5	23.62	23.11	PASS		
16QAM	MCH	3	0	23.63	22.73	PASS		
TOQAIVI		3	2	23.65	22.79	PASS		
		3	3	23.53	22.69	PASS		
		6	0	22.62	21.59	PASS		
		1	0	22.96	22.22	PASS		
		1	3	22.75	22.05	PASS		
		1	5	22.73	21.89	PASS		
	HCH	3	0	22.78	21.87	PASS		
		3	2	22.73	21.91	PASS		
		3	3	22.72	21.82	PASS		
		6	0	21.75	20.78	PASS		

	Conducted Output Power Test Result (Channel Bandwidth: 3 MHz)								
Modulation	Channel	RB Cont	figuration Offset	Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict			
		1	0	22.97	22.25	PASS			
		1	7	22.82	22.33	PASS			
		1	14	22.78	22.32	PASS			
	LCH	8	0	21.88	21.03	PASS			
		8	4	21.92	20.98	PASS			
		8	7	21.89	20.98	PASS			
		15	0	21.93	20.92	PASS			
	MCH	1	0	23.64	22.99	PASS			
		1	7	23.62	22.92	PASS			
QPSK /		1	14	23.56	23.26	PASS			
16QAM		8	0	22.75	21.86	PASS			
TOQAIVI		8	4	22.70	21.78	PASS			
		8	7	22.68	21.78	PASS			
		15	0	22.66	21.68	PASS			
		1	0	22.94	22.25	PASS			
		1	7	22.84	22.29	PASS			
		1	14	22.83	22.16	PASS			
	HCH	8	0	21.98	20.92	PASS			
		8	4	21.96	20.91	PASS			
		8	7	21.82	20.85	PASS			
		15	0	21.88	20.91	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	23.20	22.36	PASS			
		1	12	22.60	22.21	PASS			
		1	24	22.82	22.20	PASS			
	LCH	12	0	22.05	21.07	PASS			
		12	6	21.99	21.19	PASS			
		12	13	22.05	21.16	PASS			
		25	0	22.00	21.09	PASS			
		1	0	23.82	23.23	PASS			
	МСН	1	12	23.77	23.33	PASS			
QPSK /		1	24	23.61	22.94	PASS			
16QAM		12	0	22.71	21.79	PASS			
TOQAM		12	6	22.60	21.73	PASS			
		12	13	22.66	21.83	PASS			
		25	0	22.62	21.60	PASS			
		1	0	23.45	22.26	PASS			
		1	12	22.81	22.01	PASS			
		1	24	22.63	22.01	PASS			
	HCH	12	0	22.10	21.10	PASS			
		12	6	21.98	21.05	PASS			
		12	13	21.88	20.98	PASS			
		25	0	22.01	20.96	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	23.02	22.49	PASS			
		1	24	23.02	22.37	PASS			
		1	49	21.86	21.33	PASS			
	LCH	25	0	22.03	21.04	PASS			
		25	12	22.16	21.16	PASS			
		25	25	22.30	21.32	PASS			
		50	0	22.15	21.21	PASS			
		1	0	23.82	23.05	PASS			
	мсн	1	24	24.34	23.51	PASS			
QPSK /		1	49	23.94	23.14	PASS			
16QAM		25	0	22.70	21.68	PASS			
TOQAIVI		25	12	22.69	21.75	PASS			
		25	25	22.83	21.87	PASS			
		50	0	22.76	21.58	PASS			
		1	0	23.46	22.92	PASS			
		1	24	22.98	22.40	PASS			
		1	49	22.45	21.99	PASS			
	HCH	25	0	22.18	21.24	PASS			
		25	12	22.15	21.14	PASS			
		25	25	21.96	21.15	PASS			
		50	0	22.28	21.25	PASS			

	Conducted Output Power Test Result (Channel Bandwidth: 15 MHz)								
Madulation	Channal	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	\/a nali at			
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict			
		1	0	22.64	22.02	PASS			
		1	37	22.25	22.18	PASS			
		1	74	22.19	22.47	PASS			
	LCH	37	0	21.93	20.98	PASS			
		37	18	21.99	21.06	PASS			
		37	38	22.04	21.03	PASS			
		75	0	22.02	21.09	PASS			
		1	0	23.29	22.79	PASS			
	МСН	1	37	23.62	22.90	PASS			
QPSK /		1	74	23.47	22.73	PASS			
16QAM		37	0	22.34	21.31	PASS			
TOQAIVI		37	18	22.37	21.38	PASS			
		37	38	22.36	21.29	PASS			
		75	0	22.30	21.31	PASS			
		1	0	23.25	22.64	PASS			
		1	37	22.61	21.96	PASS			
		1	74	21.98	21.57	PASS			
	HCH	37	0	22.08	21.12	PASS			
		37	18	21.90	20.87	PASS			
		37	38	21.65	20.68	PASS			
		75	0	21.93	20.95	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	22.52	21.83	PASS		
		1	49	22.63	21.93	PASS		
		1	99	23.27	22.45	PASS		
	LCH	50	0	21.91	20.89	PASS		
		50	25	22.21	21.16	PASS		
		50	50	22.22	21.26	PASS		
		100	0	22.11	21.16	PASS		
	MCH	1	0	23.05	22.48	PASS		
		1	49	23.78	23.05	PASS		
QPSK /		1	99	23.31	22.52	PASS		
16QAM		50	0	22.30	21.32	PASS		
TOQAIVI		50	25	22.47	21.55	PASS		
		50	50	22.41	21.44	PASS		
		100	0	22.34	21.32	PASS		
		1	0	23.14	22.58	PASS		
		1	49	22.97	22.46	PASS		
		1	99	22.04	21.19	PASS		
	HCH	50	0	22.20	21.26	PASS		
		50	25	22.12	21.09	PASS		
		50	50	21.77	20.78	PASS		
		100	0	21.96	20.97	PASS		

A.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	Grianner	[dB]	[dB]	verdict				
	LCH	5.08	<13	PASS				
QPSK	MCH	5.33	<13	PASS				
	HCH	4.73	<13	PASS				
	LCH	6	<13	PASS				
16QAM	MCH	6.3	<13	PASS				
	HCH	5.56	<13	PASS				

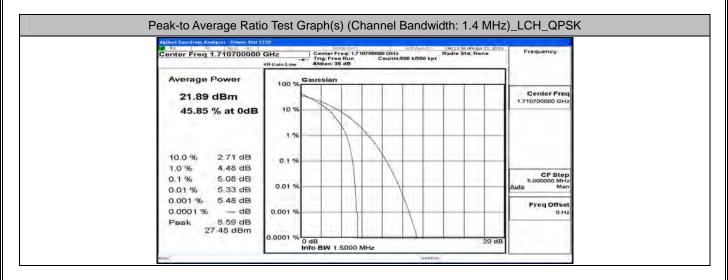
	Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)							
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict				
Modulation	Charmer	[dB]	[dB]	verdict				
	LCH	5.05	<13	PASS				
QPSK	MCH	5.35	<13	PASS				
	HCH	4.82	<13	PASS				
	LCH	6.03	<13	PASS				
16QAM	MCH	6.28	<13	PASS				
	HCH	5.63	<13	PASS				

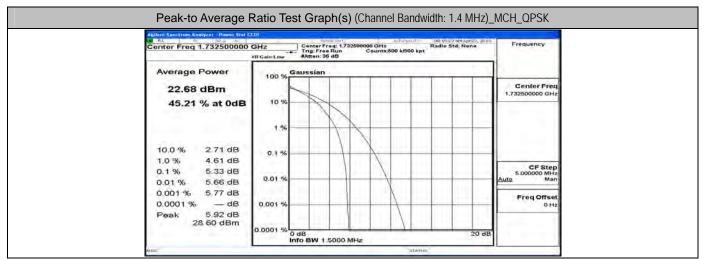
	Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)						
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict			
iviodulation	Charmer	[dB]	[dB]	verdict			
	LCH	4.92	<13	PASS			
QPSK	MCH	5.28	<13	PASS			
	HCH	4.74	<13	PASS			
	LCH	5.77	<13	PASS			
16QAM	MCH	6.19	<13	PASS			
	HCH	5.61	<13	PASS			

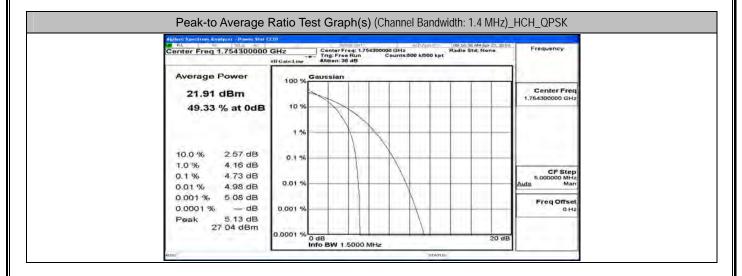
	Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)							
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict				
Modulation	Channel	[dB]	[dB]	verdict				
	LCH	4.8	<13	PASS				
QPSK	MCH	5.2	<13	PASS				
	HCH	4.87	<13	PASS				
16QAM	LCH	5.68	<13	PASS				
	MCH	6.07	<13	PASS				
	HCH	5.7	<13	PASS				

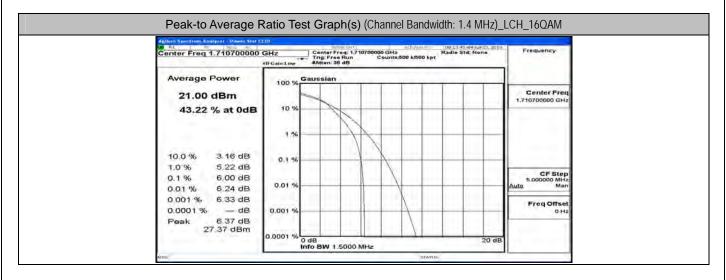
	Peak-to Average Ratio Test Result (Channel Bandwidth: 15 MHz)							
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict				
Modulation	Grianner	[dB]	[dB]	verdict				
	LCH	4.85	<13	PASS				
QPSK	MCH	5.08	<13	PASS				
	HCH	4.93	<13	PASS				
	LCH	6.09	<13	PASS				
16QAM	MCH	6.35	<13	PASS				
	HCH	6.2	<13	PASS				

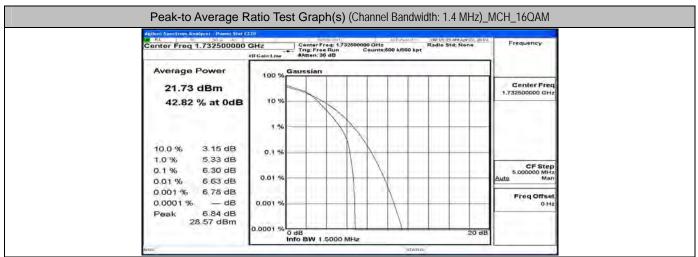
Peak-to Average Ratio Test Result (Channel Bandwidth: 20 MHz)				
M. I.I.C	Channel	Peak-to-Average Ratio	Limit	Verdict
Modulation		[dB]	[dB]	
QPSK	LCH	5.75	<13	PASS
	MCH	5.72	<13	PASS
	HCH	5.68	<13	PASS
16QAM	LCH	6.81	<13	PASS
	MCH	6.93	<13	PASS
	HCH	6.72	<13	PASS

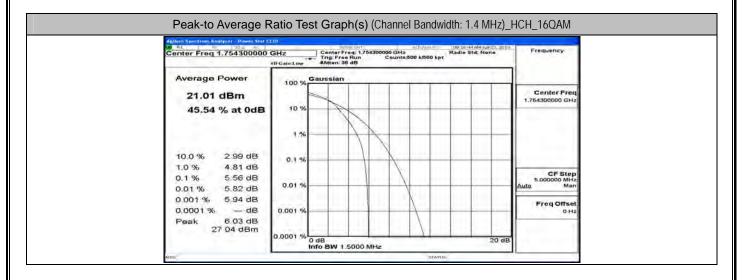


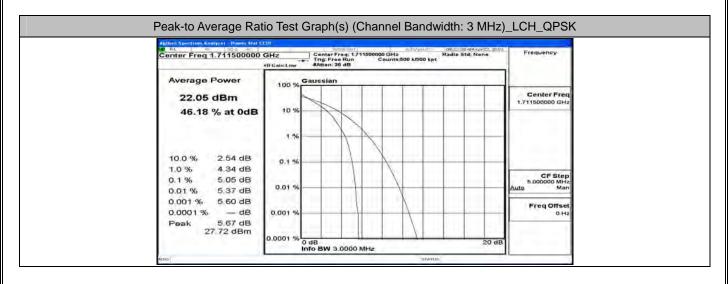


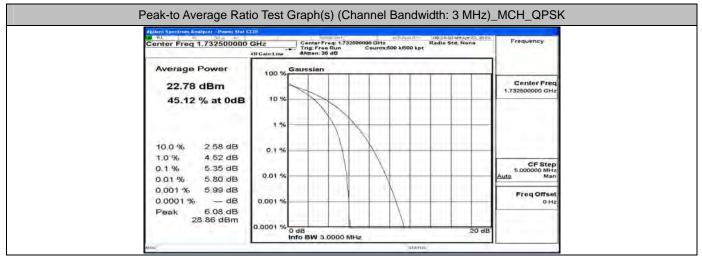


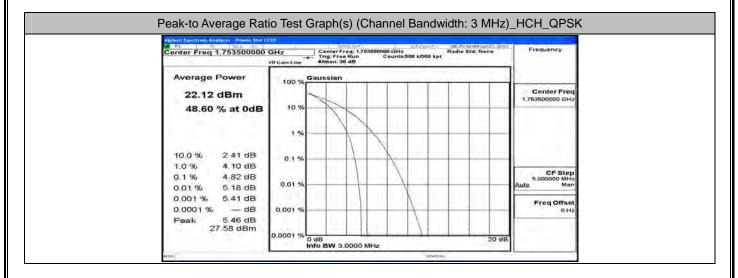


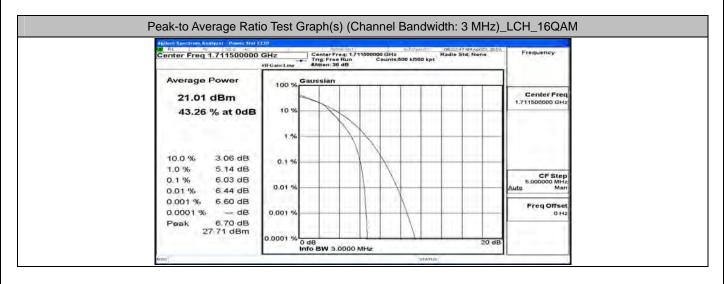


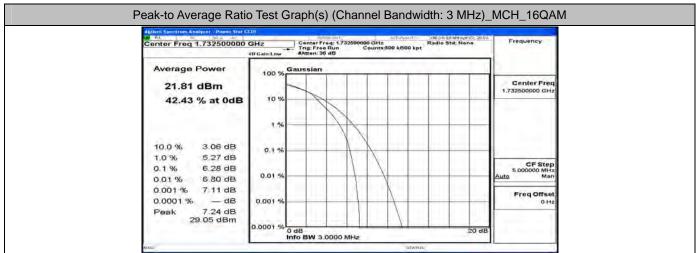


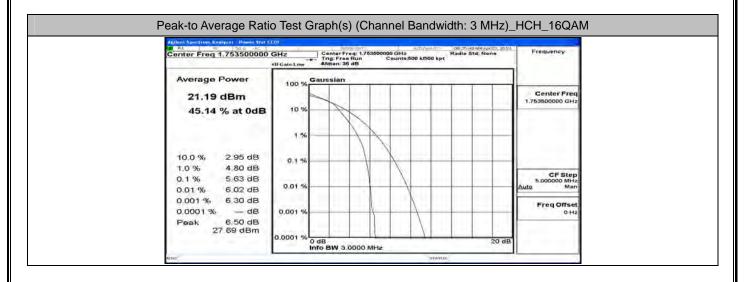


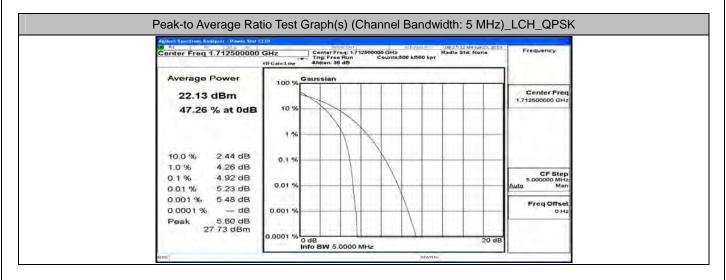


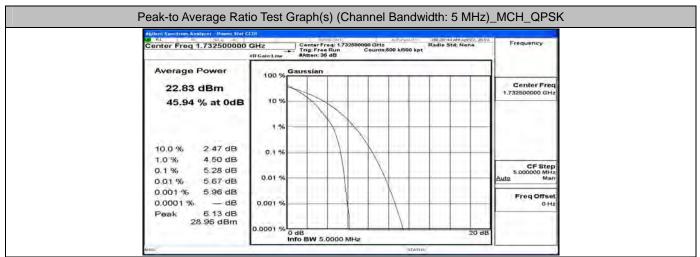


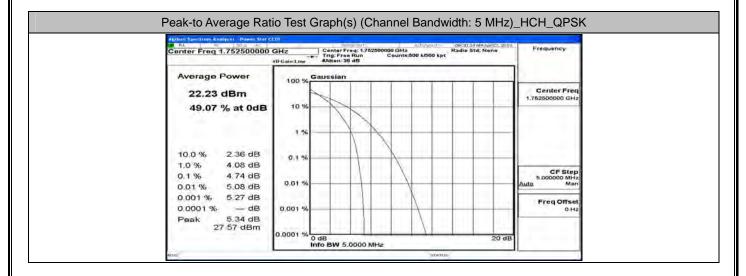


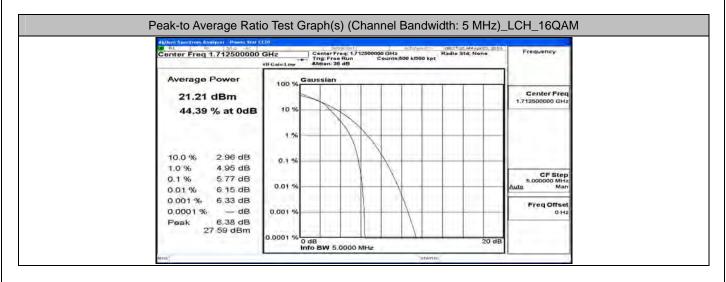


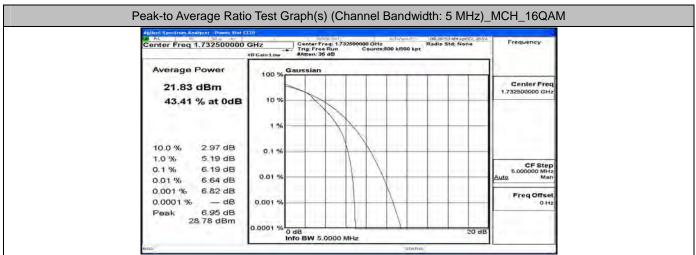


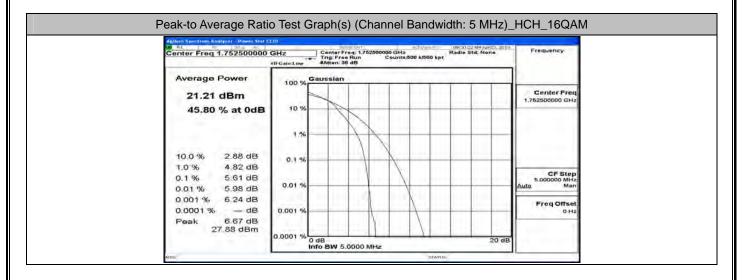


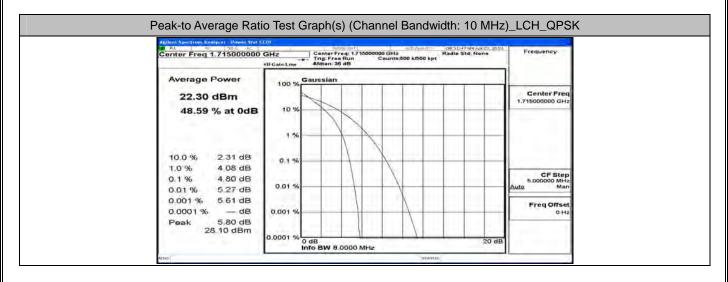


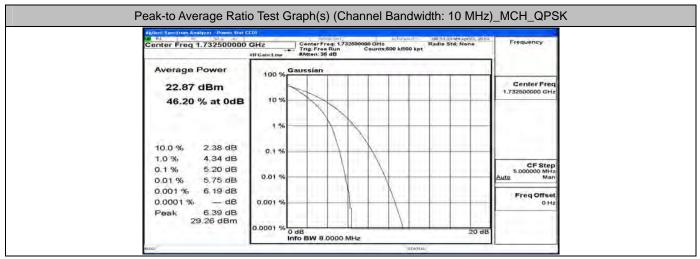


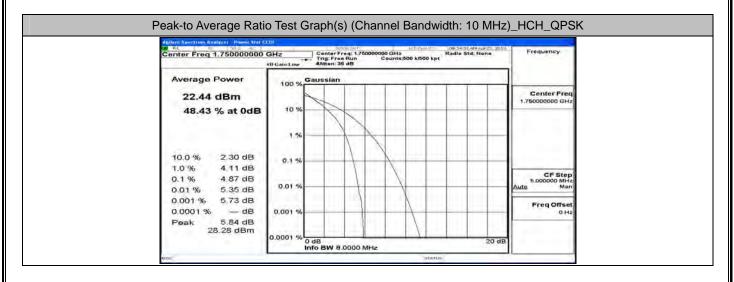


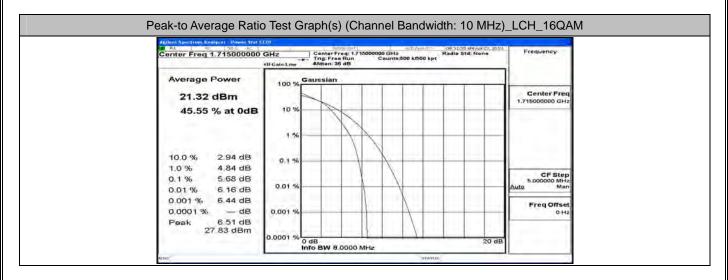


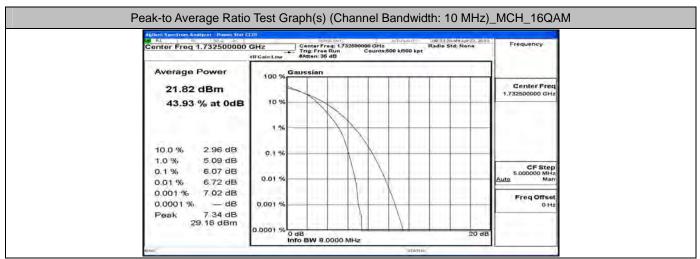


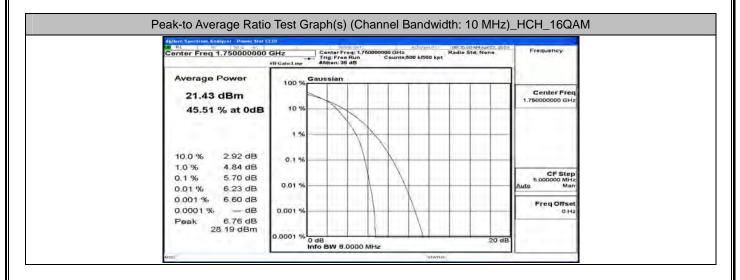


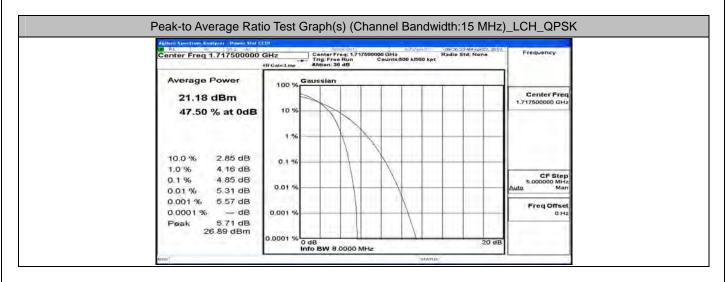


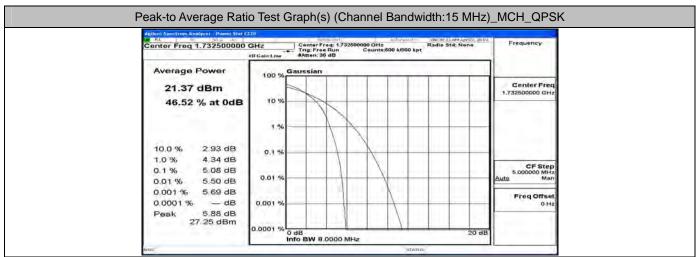


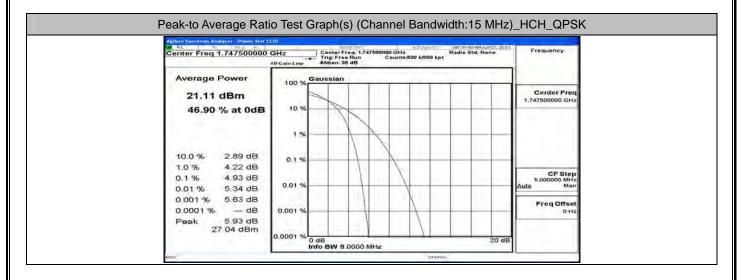


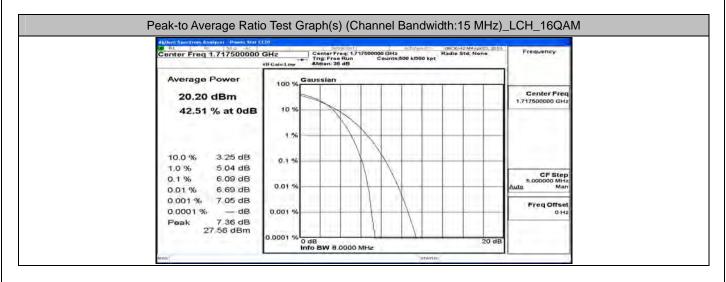


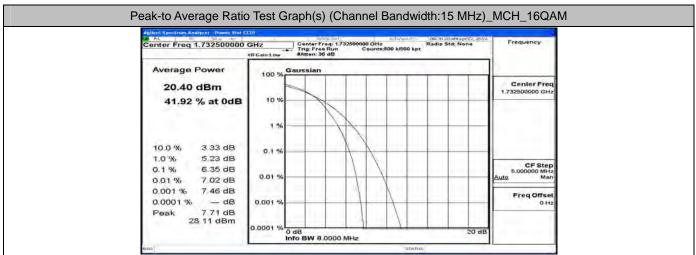


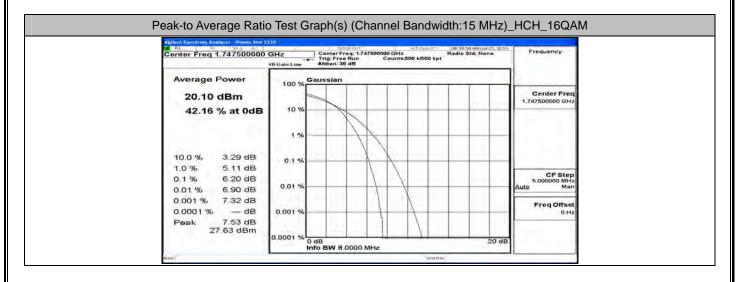


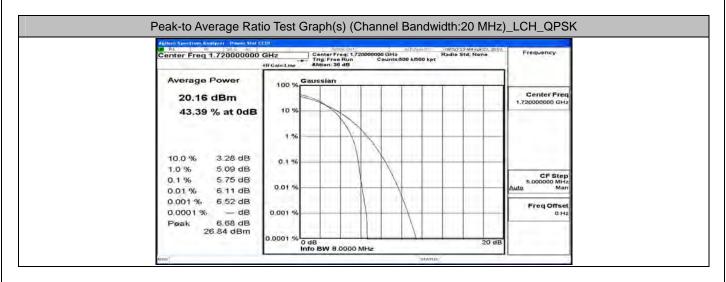


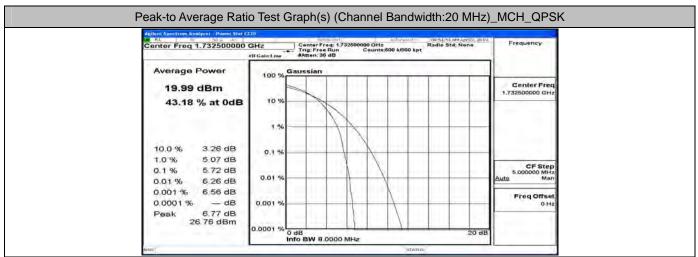


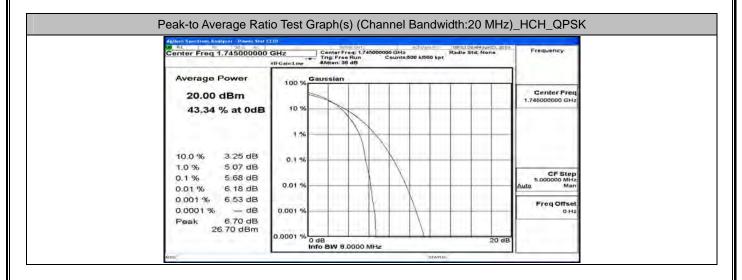


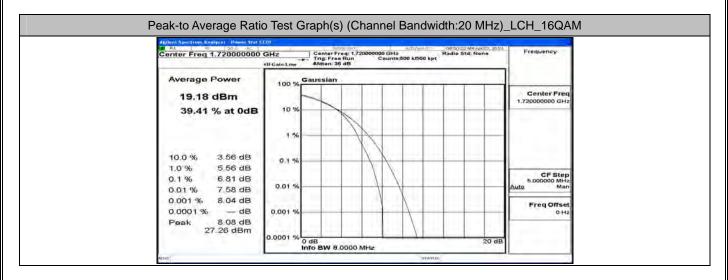


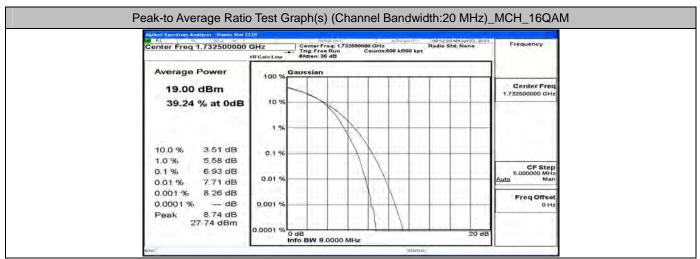


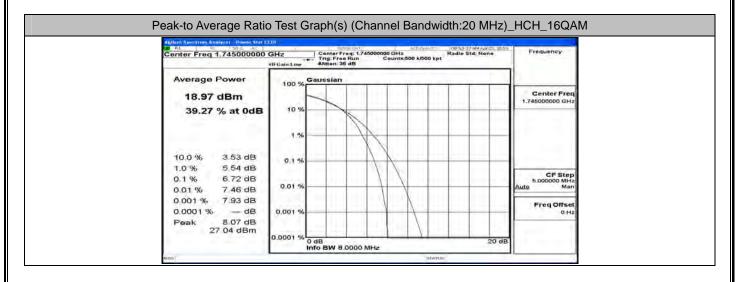












A.3 26dB Bandwidth and Occupied Bandwidth

EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
Modulation		(MHz)	(MHz)	
QPSK	LCH	1.0780	1.310	PASS
	MCH	1.0785	1.270	PASS
	HCH	1.0787	1.259	PASS
16QAM	LCH	1.0828	1.271	PASS
	MCH	1.0835	1.284	PASS
	HCH	1.0797	1.283	PASS

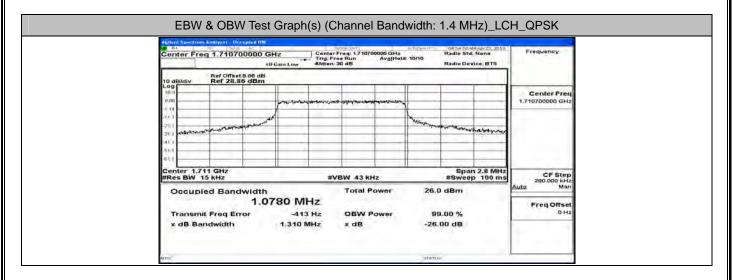
EBW & OBW Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	2.6857	2.891	PASS
	MCH	2.6861	2.903	PASS
	HCH	2.6862	2.921	PASS
16QAM	LCH	2.6851	2.939	PASS
	MCH	2.6837	2.891	PASS
	HCH	2.6877	2.896	PASS

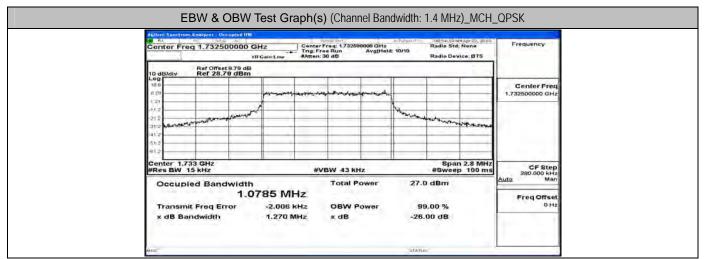
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
Iviodulation		(MHz)	(MHz)	
QPSK	LCH	4.4726	4.779	PASS
	MCH	4.4771	4.802	PASS
	HCH	4.4762	4.827	PASS
16QAM	LCH	4.4757	4.807	PASS
	MCH	4.4741	4.814	PASS
	HCH	4.4740	4.843	PASS

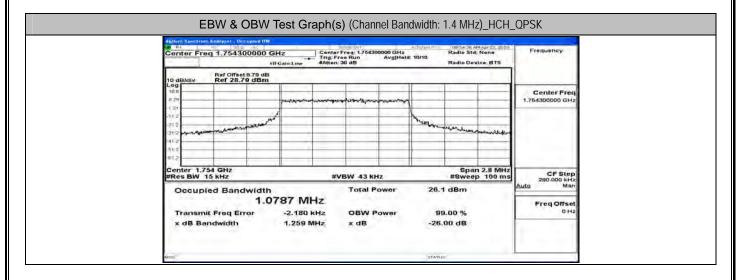
EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
IVIOGUIATION		(MHz)	(MHz)	
QPSK	LCH	8.9246	9.408	PASS
	MCH	8.9409	9.545	PASS
	HCH	8.9167	9.441	PASS
16QAM	LCH	8.9251	9.425	PASS
	MCH	8.9361	9.515	PASS
	HCH	8.9317	9.425	PASS

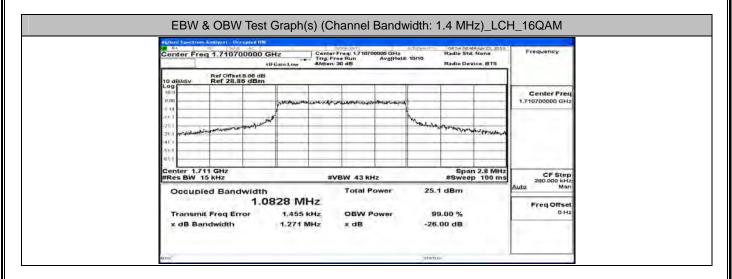
EBW & OBW Test Result (Channel Bandwidth: 15 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
Woddiation		(MHz)	(MHz)	
QPSK	LCH	13.358	13.96	PASS
	MCH	13.407	14.12	PASS
	HCH	13.371	14.04	PASS
16QAM	LCH	13.360	13.99	PASS
	MCH	13.410	14.10	PASS
	HCH	13.379	14.06	PASS

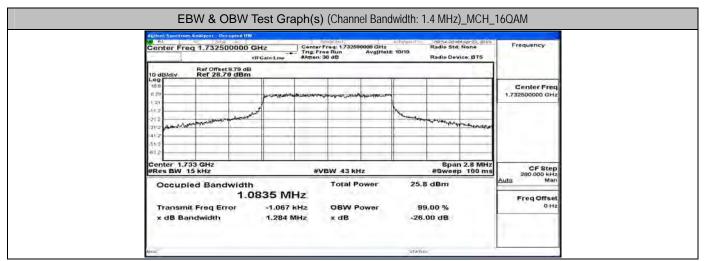
EBW & OBW Test Result (Channel Bandwidth: 20 MHz)				
Marketakan	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
Modulation		(MHz)	(MHz)	
QPSK	LCH	17.810	18.52	PASS
	MCH	17.892	18.67	PASS
	HCH	17.822	18.61	PASS
16QAM	LCH	17.795	18.55	PASS
	MCH	17.871	18.74	PASS
	HCH	17.795	18.54	PASS

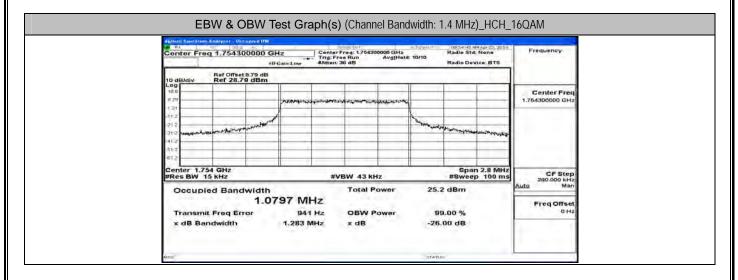


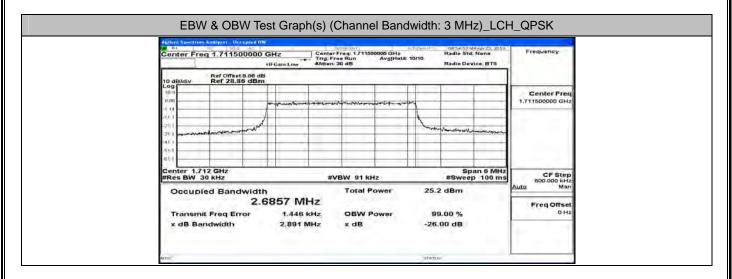


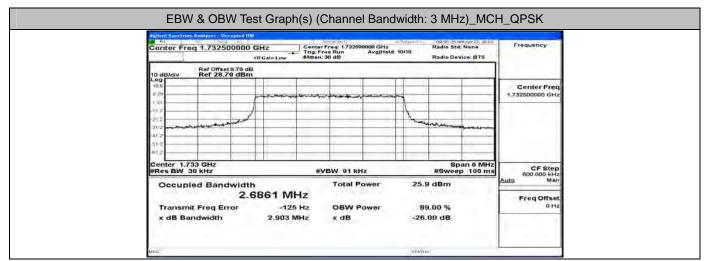


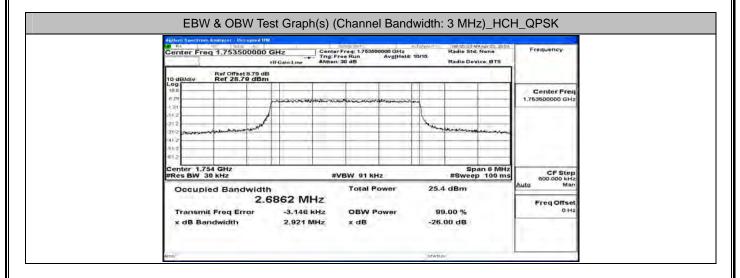


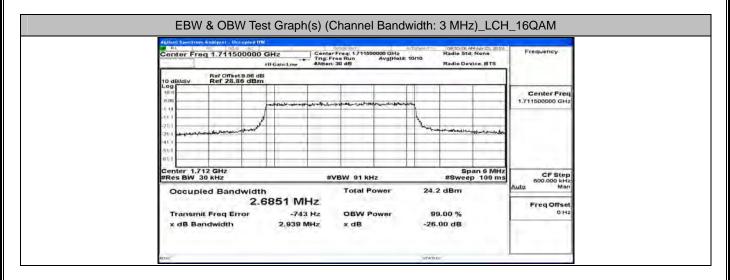


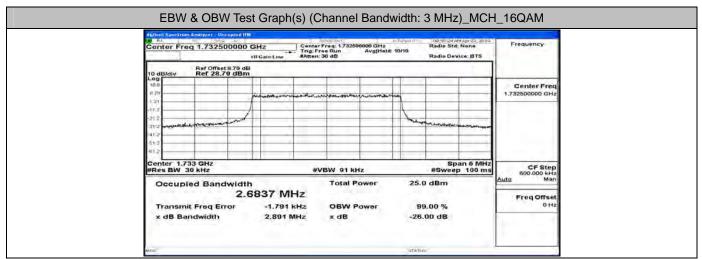


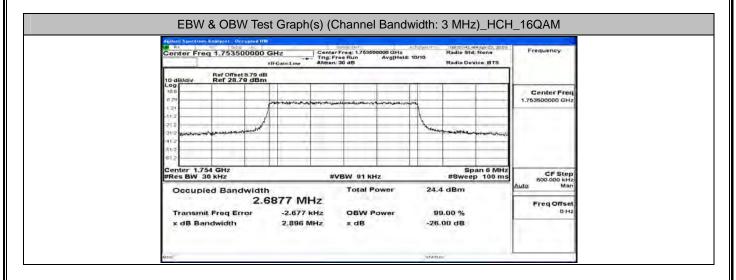


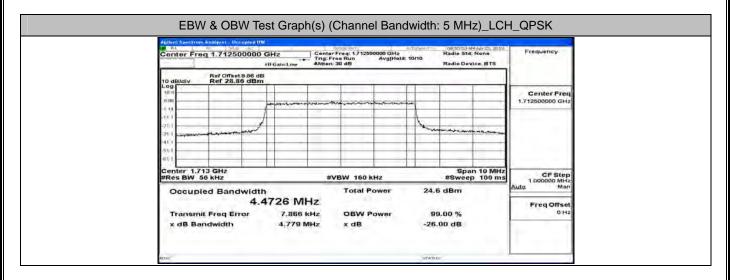


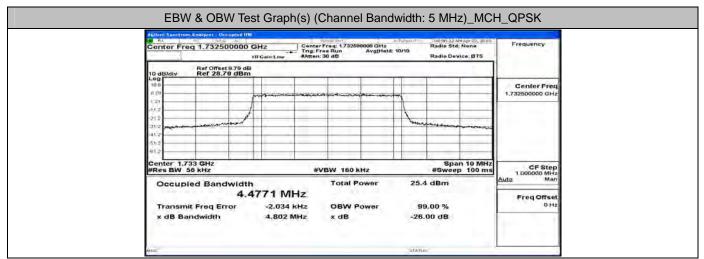


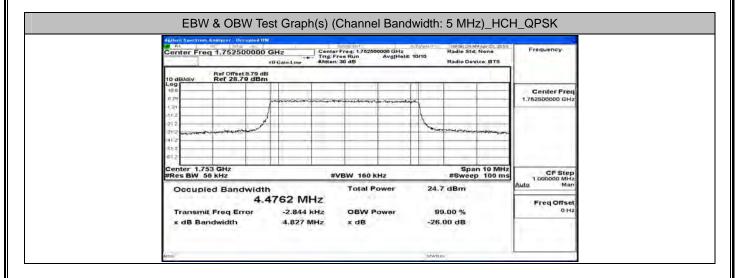


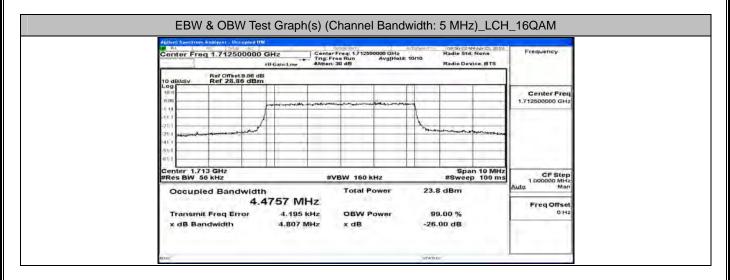


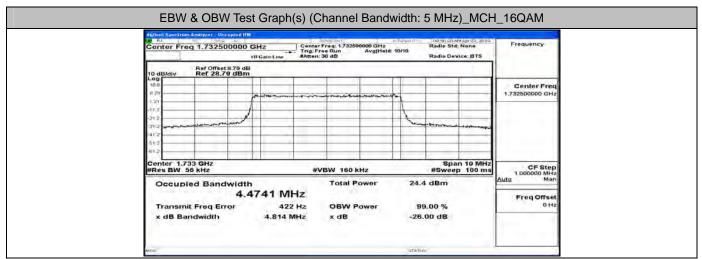


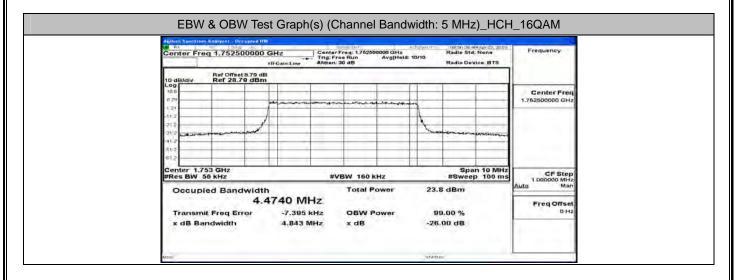


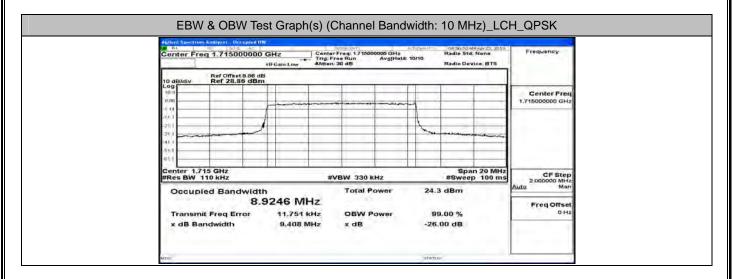


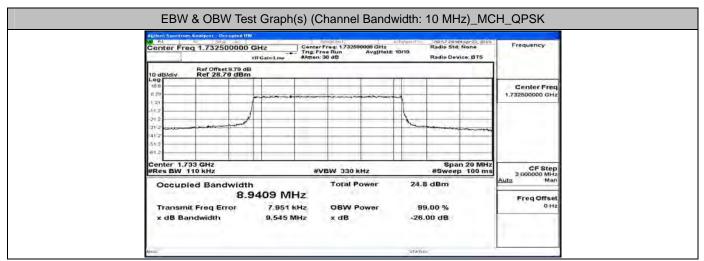


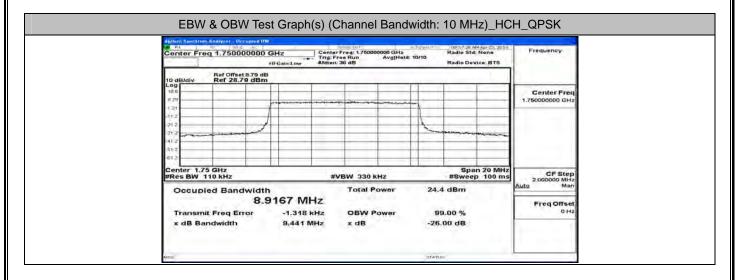


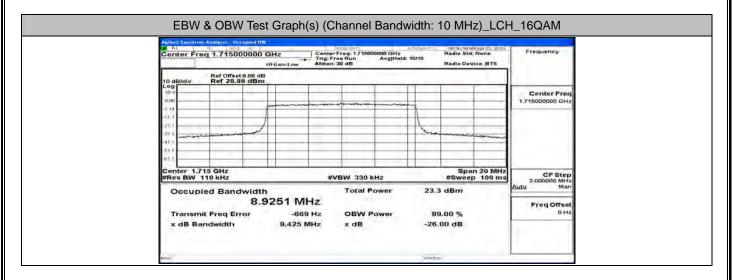


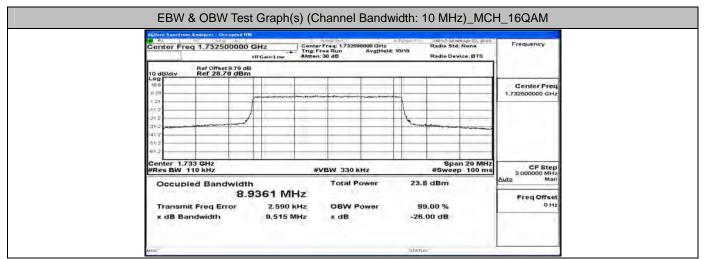


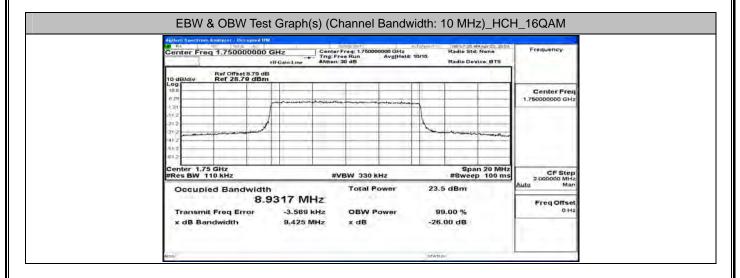


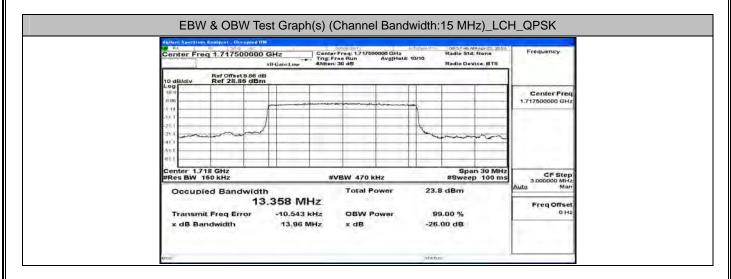


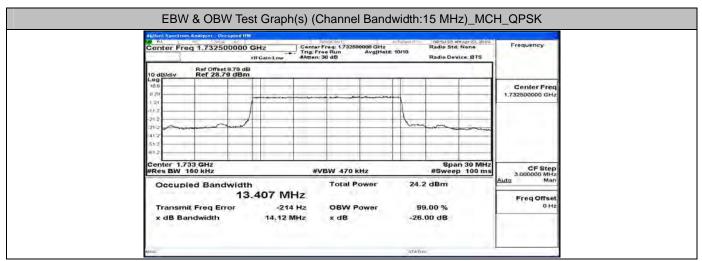


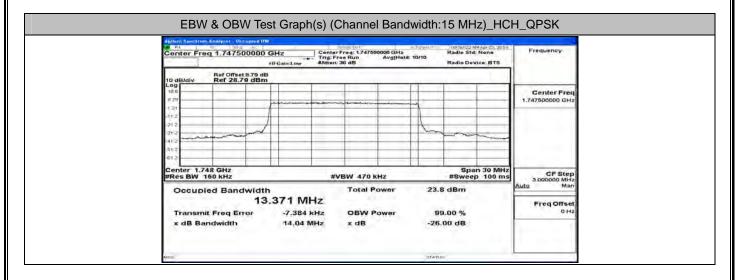


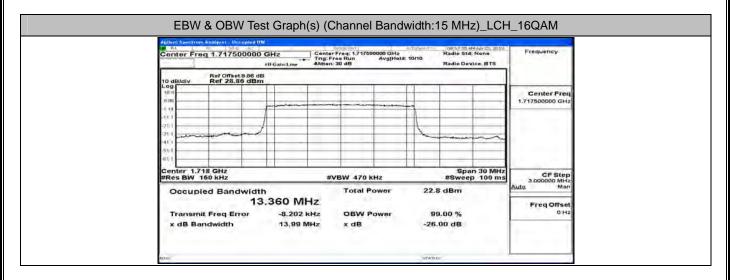


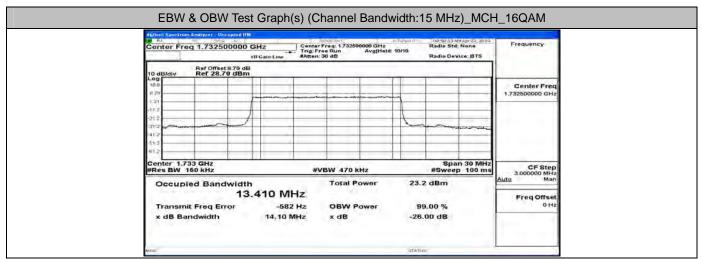


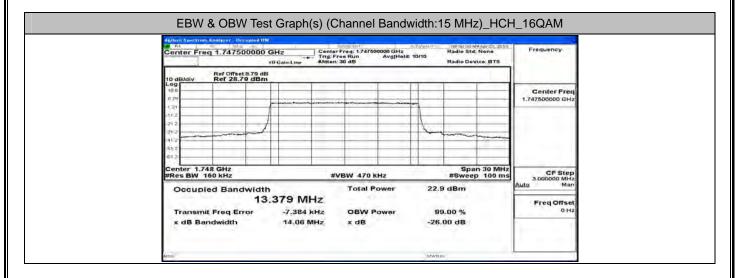


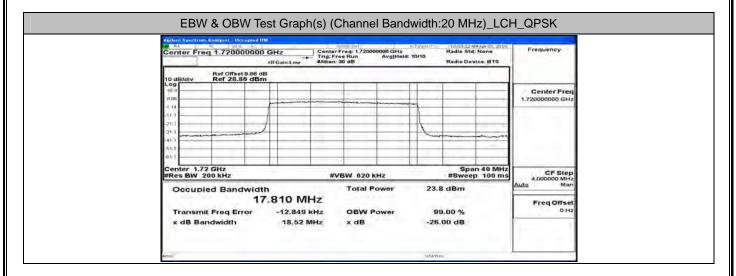


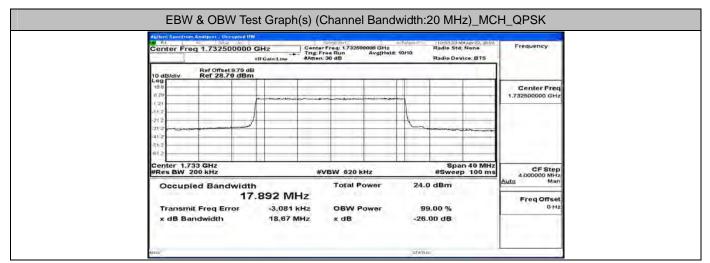


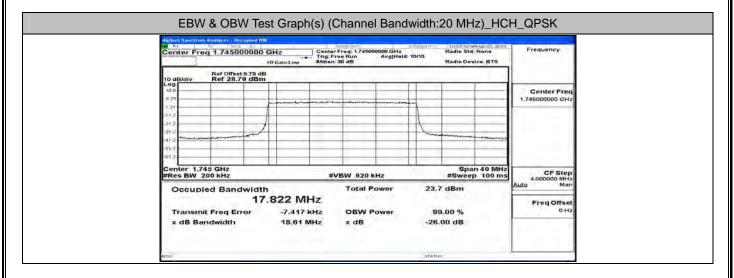


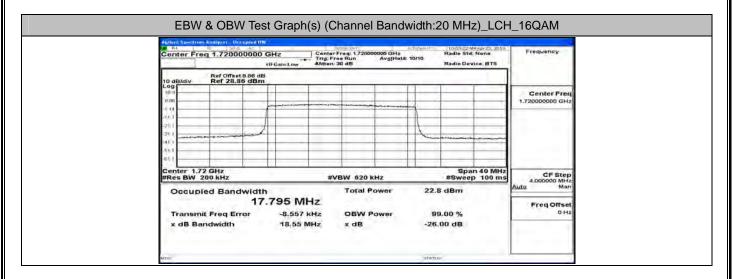


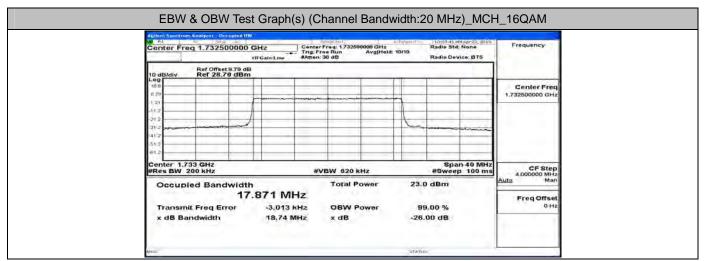


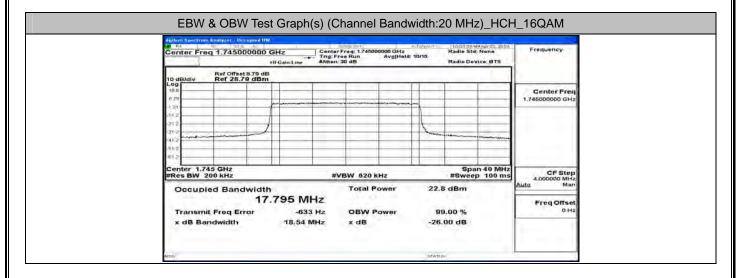




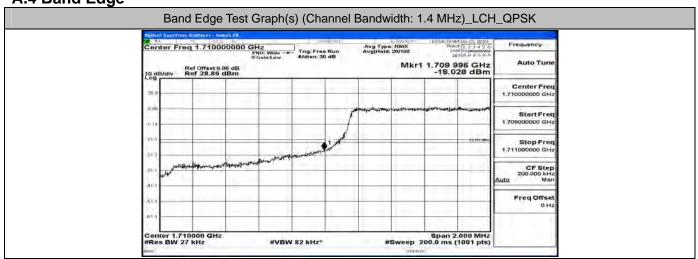


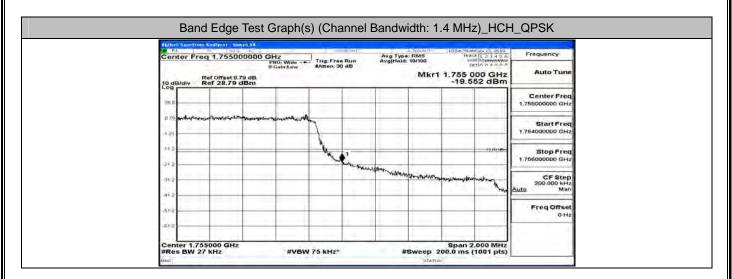


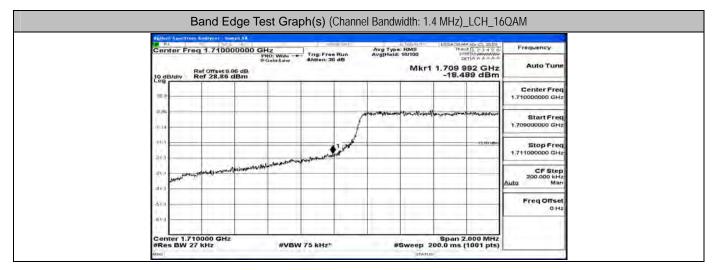


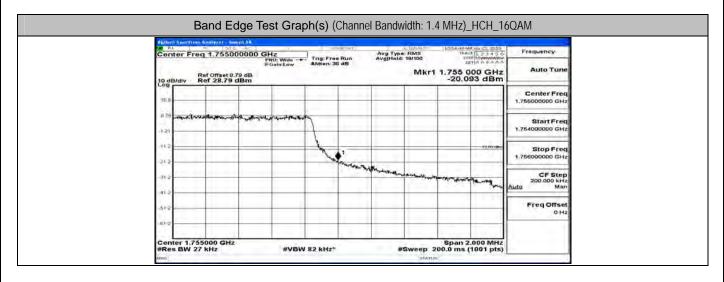


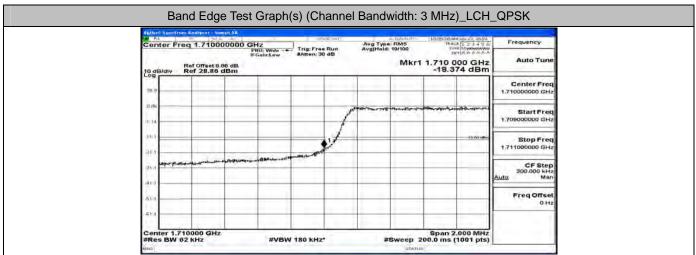
A.4 Band Edge

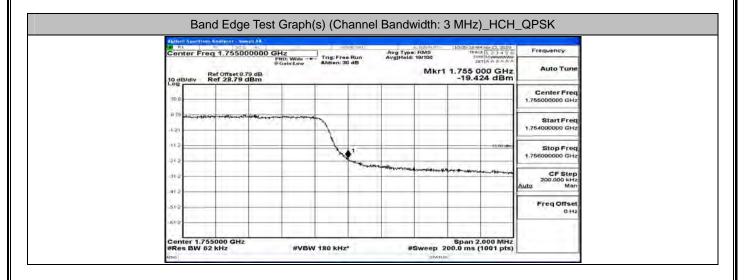


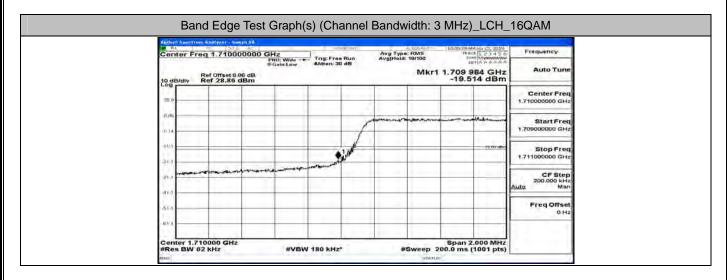


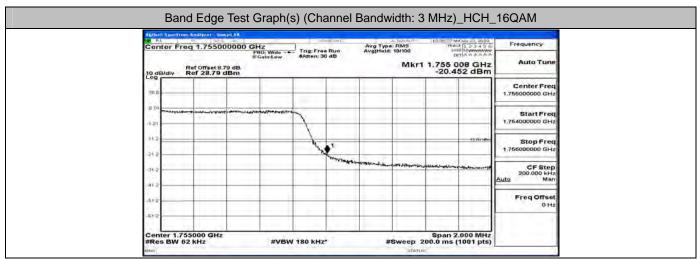


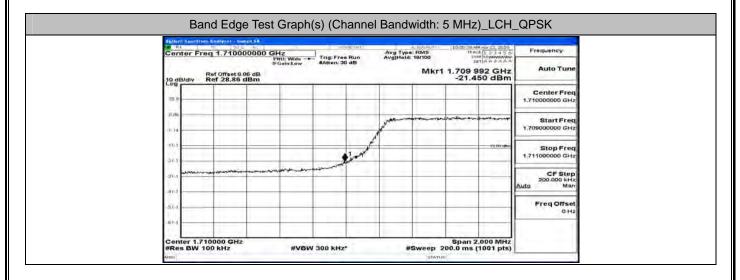


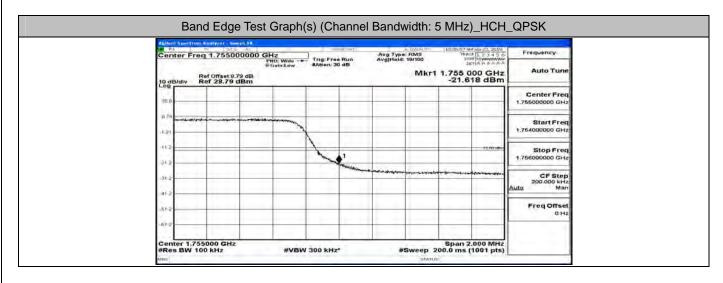


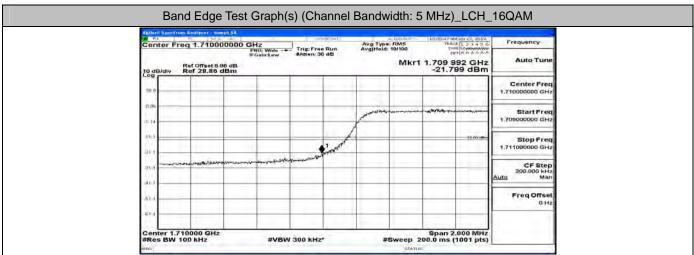


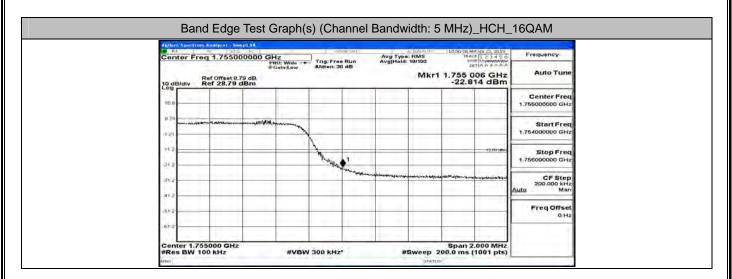








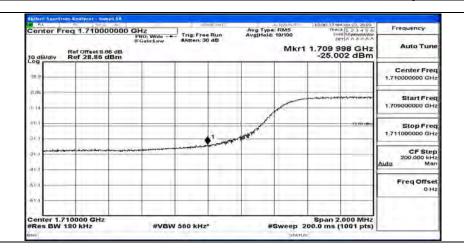


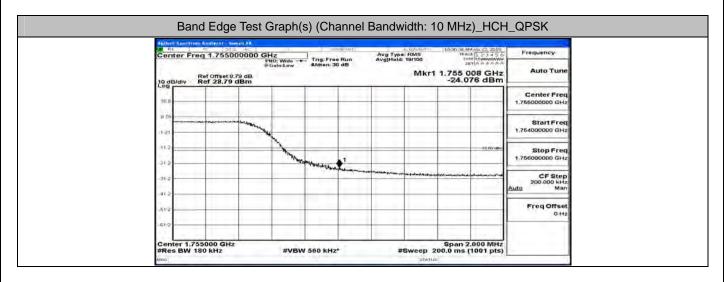


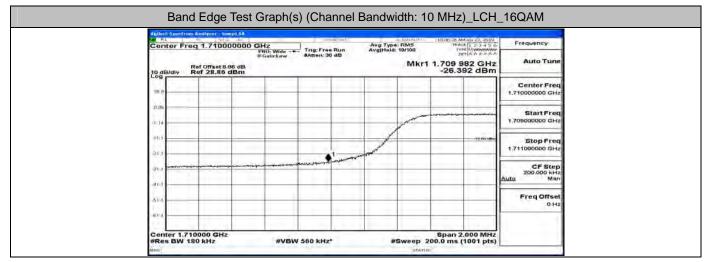
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK

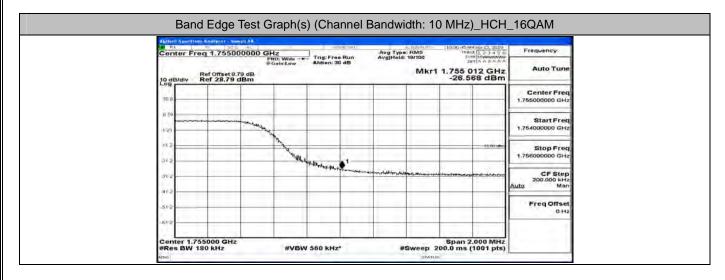
SHENZHEN LCS COMPLIANCE TESTING LABORATORY LTD.

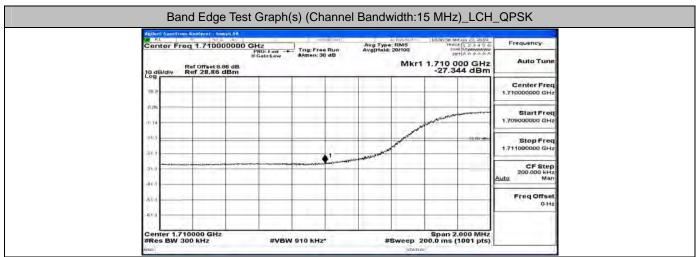
FCC ID: SL9NLS-NFT10 Report No.: LCS190322058AEF

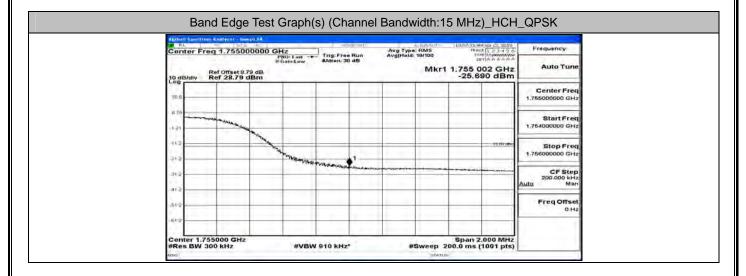


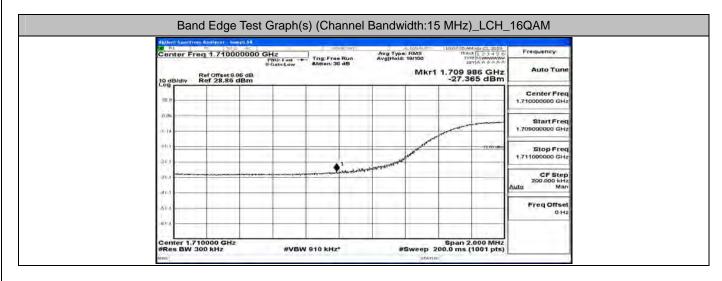


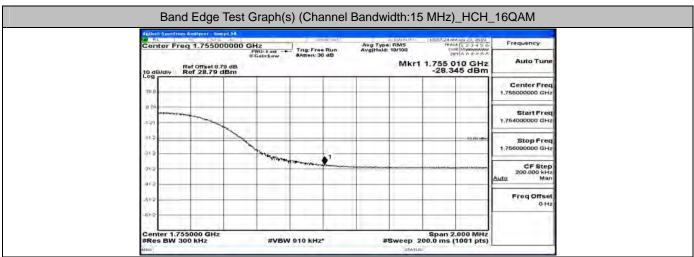


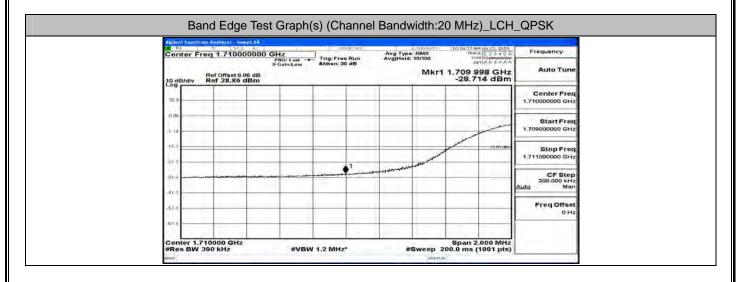


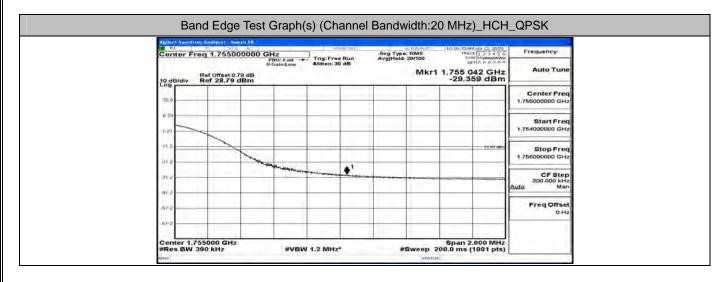


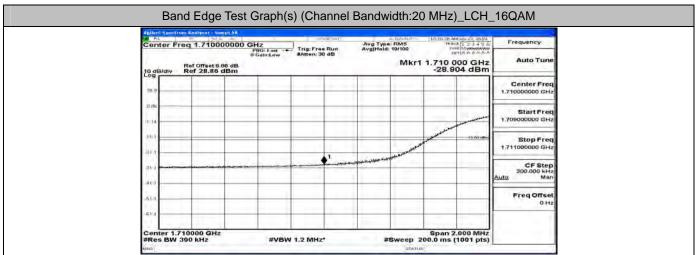


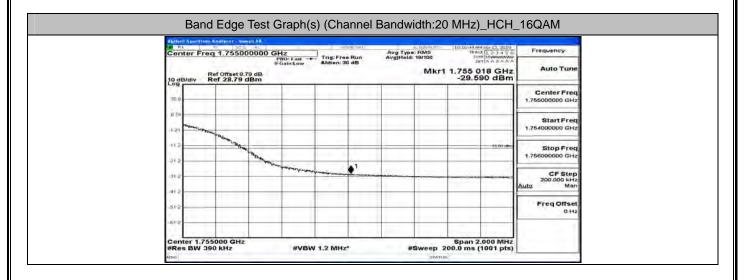












A.5 Conducted Spurious Emission

