Appendix B: Test Data for E-UTRA Band 4

Product Name: Battery Operated LTE Cellular GPS Tracker Test Model: CUT-4LH

Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	52.7%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Wang Chuang

B.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]	Verdict	
Modulation	Channel	Size	Offset	QPSK	16QAM	verdict	
		1	0	23.23	22.19	PASS	
		1	3	23.18	22.15	PASS	
		1	5	23.09	22.09	PASS	
	LCH	3	0	23.11	22.14	PASS	
		3	2	23.19	22.14	PASS	
		3	3	23.08	22.09	PASS	
		6	0	22.23	21.13	PASS	
		1	0	23.72	22.64	PASS	
	МСН	1	3	23.95	22.91	PASS	
QPSK /		1	5	23.89	22.85	PASS	
16QAM		3	0	23.78	22.68	PASS	
IOQAM		3	2	23.77	22.79	PASS	
		3	3	23.79	22.74	PASS	
		6	0	22.70	21.77	PASS	
		1	0	23.47	22.36	PASS	
		1	3	23.54	22.53	PASS	
		1	5	23.24	22.15	PASS	
	HCH	3	0	23.14	22.12	PASS	
		3	2	23.21	22.20	PASS	
		3	3	23.18	22.12	PASS	
		6	0	22.14	21.11	PASS	

Conducted Output Power Test Result (Channel Bandwidth: 3 MHz)								
Modulation	Channal	RB Configuration		Average Power [dBm]	Average Power [dBm]	Vardiet		
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict		
		1	0	23.15	22.13	PASS		
		1	7	22.86	21.84	PASS		
		1	14	23.04	21.95	PASS		
	LCH	8	0	22.11	21.14	PASS		
		8	4	22.12	21.14	PASS		
		8	7	22.17	21.09	PASS		
		15	0	22.10	21.09	PASS		
		1	0	23.91	22.81	PASS		
		1	7	23.91	22.93	PASS		
QPSK /	МСН	1	14	23.66	22.62	PASS		
16QAM		8	0	22.91	21.83	PASS		
TOQAW		8	4	22.86	21.75	PASS		
		8	7	22.72	21.74	PASS		
		15	0	22.77	21.75	PASS		
		1	0	23.26	22.22	PASS		
		1	7	23.23	22.21	PASS		
		1	14	23.11	22.13	PASS		
	HCH	8	0	22.20	21.14	PASS		
		8	4	22.21	21.19	PASS		
		8	7	22.12	21.10	PASS		
		15	0	22.20	21.21	PASS		

Conducted Output Power Test Result (Channel Bandwidth: 5 MHz)								
Madulation	Channal	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	\/a.u.di.a.t		
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict		
		1	0	23.30	22.24	PASS		
		1	12	23.03	21.95	PASS		
		1	24	22.98	21.98	PASS		
	LCH	12	0	22.27	21.19	PASS		
		12	6	22.21	21.09	PASS		
		12	13	22.12	21.07	PASS		
		25	0	22.16	21.11	PASS		
		1	0	23.94	22.88	PASS		
	мсн	1	12	23.99	22.92	PASS		
QPSK /		1	24	23.69	22.71	PASS		
16QAM		12	0	22.85	21.87	PASS		
TOQAIVI		12	6	22.83	21.78	PASS		
		12	13	22.83	21.79	PASS		
		25	0	22.80	21.77	PASS		
		1	0	23.31	22.30	PASS		
		1	12	23.13	22.07	PASS		
		1	24	23.21	22.16	PASS		
	HCH	12	0	22.21	21.21	PASS		
		12	6	22.11	21.16	PASS		
		12	13	22.24	21.26	PASS		
		25	0	22.30	21.24	PASS		

Conducted Output Power Test Result (Channel Bandwidth: 10 MHz)								
Madulation	Channal	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	\/andiat		
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict		
		1	0	23.34	22.32	PASS		
		1	24	23.29	22.28	PASS		
		1	49	22.50	21.45	PASS		
	LCH	25	0	22.09	21.11	PASS		
		25	12	22.16	21.06	PASS		
		25	25	22.22	21.18	PASS		
		50	0	22.21	21.24	PASS		
		1	0	23.93	22.98	PASS		
	МСН	1	24	24.55	23.58	PASS		
QPSK /		1	49	23.70	22.62	PASS		
16QAM		25	0	22.84	21.86	PASS		
TOQAIVI		25	12	22.82	21.75	PASS		
		25	25	22.83	21.81	PASS		
		50	0	22.79	21.73	PASS		
		1	0	23.31	22.33	PASS		
		1	24	23.51	22.50	PASS		
		1	49	22.18	21.14	PASS		
	HCH	25	0	22.18	21.05	PASS		
		25	12	22.05	21.04	PASS		
		25	25	22.20	21.11	PASS		
		50	0	22.24	21.21	PASS		

Conducted Output Power Test Result (Channel Bandwidth: 15 MHz)								
Madulation	Channal	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	\/andiat		
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict		
		1	0	23.28	22.41	PASS		
		1	37	23.04	22.25	PASS		
		1	74	23.34	22.54	PASS		
	LCH	37	0	22.20	21.32	PASS		
		37	18	22.14	21.36	PASS		
		37	38	22.27	21.41	PASS		
		75	0	22.26	21.43	PASS		
		1	0	23.67	22.76	PASS		
	мсн	1	37	24.18	23.39	PASS		
QPSK /		1	74	23.59	22.77	PASS		
16QAM		37	0	22.81	21.98	PASS		
TOQAIVI		37	18	22.98	22.14	PASS		
		37	38	22.65	21.84	PASS		
		75	0	22.68	21.85	PASS		
		1	0	23.33	22.57	PASS		
		1	37	22.96	22.12	PASS		
		1	74	22.81	21.95	PASS		
	HCH	37	0	22.23	21.39	PASS		
		37	18	22.19	21.37	PASS		
		37	38	22.12	21.26	PASS		
		75	0	22.14	21.37	PASS		

Conducted Output Power Test Result (Channel Bandwidth: 20 MHz)								
Madulation	Channal	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	\/a ==!:a4		
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict		
		1	0	23.09	22.23	PASS		
		1	49	22.90	22.15	PASS		
		1	99	23.59	22.70	PASS		
	LCH	50	0	22.14	21.41	PASS		
		50	25	22.37	21.47	PASS		
		50	50	22.49	21.56	PASS		
		100	0	22.37	21.55	PASS		
		1	0	23.40	22.49	PASS		
	мсн	1	49	23.07	22.20	PASS		
QPSK /		1	99	23.31	22.47	PASS		
16QAM		50	0	22.71	21.83	PASS		
TOQAM		50	25	22.98	22.18	PASS		
		50	50	22.59	21.80	PASS		
		100	0	22.67	21.85	PASS		
		1	0	23.45	22.57	PASS		
		1	49	22.97	22.10	PASS		
		1	99	22.17	21.35	PASS		
	HCH	50	0	22.30	21.49	PASS		
		50	25	22.22	21.39	PASS		
		50	50	22.11	21.27	PASS		
		100	0	22.20	21.32	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			
iviodulation	Griannei	[dB]	[dB]	verdict			
	LCH	5.35	<13	PASS			
QPSK	MCH	5.4	<13	PASS			
	HCH	4.53	<13	PASS			
	LCH	6.26	<13	PASS			
16QAM	MCH	6.33	<13	PASS			
	HCH	5.34	<13	PASS			

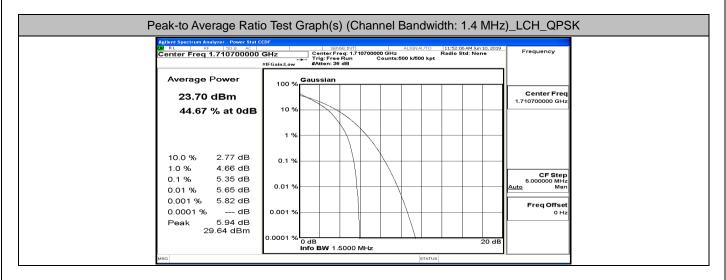
Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)							
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict			
Modulation	Charmer	[dB]	[dB]	verdict			
	LCH	5.29	<13	PASS			
QPSK	MCH	5.42	<13	PASS			
	HCH	4.61	<13	PASS			
	LCH	6.27	<13	PASS			
16QAM	MCH	6.35	<13	PASS			
	HCH	5.39	<13	PASS			

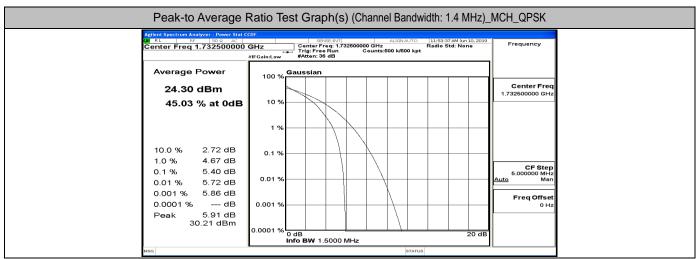
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)							
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict			
Modulation	Griannei	[dB]	[dB]	verdict			
	LCH	5.15	<13	PASS			
QPSK	MCH	5.29	<13	PASS			
	HCH	4.44	<13	PASS			
	LCH	6.07	<13	PASS			
16QAM	MCH	6.2	<13	PASS			
	HCH	5.29	<13	PASS			

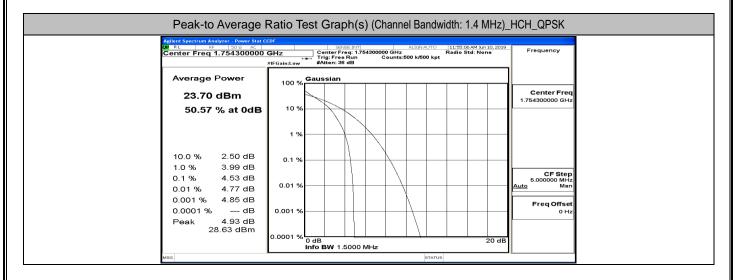
Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)						
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict		
iviodulation	Griannei	[dB]	[dB]	verdict		
	LCH	4.96	<13	PASS		
QPSK	MCH	5.2	<13	PASS		
	HCH	4.7	<13	PASS		
	LCH	5.87	<13	PASS		
16QAM	MCH	6.1	<13	PASS		
	HCH	5.52	<13	PASS		

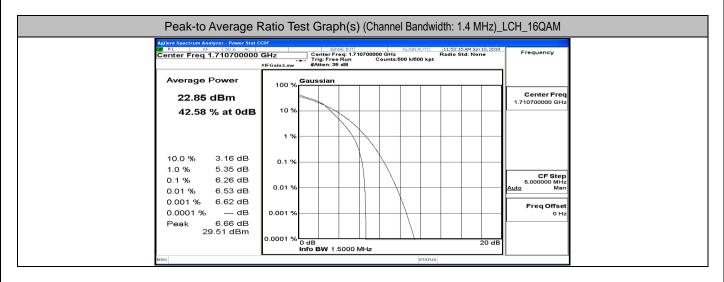
Peak-to Average Ratio Test Result (Channel Bandwidth: 15 MHz)							
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict			
Modulation	Griannei	[dB]	[dB]	verdict			
	LCH	4.86	<13	PASS			
QPSK	MCH	4.99	<13	PASS			
	HCH	4.9	<13	PASS			
	LCH	6.13	<13	PASS			
16QAM	MCH	6.33	<13	PASS			
	HCH	6.18	<13	PASS			

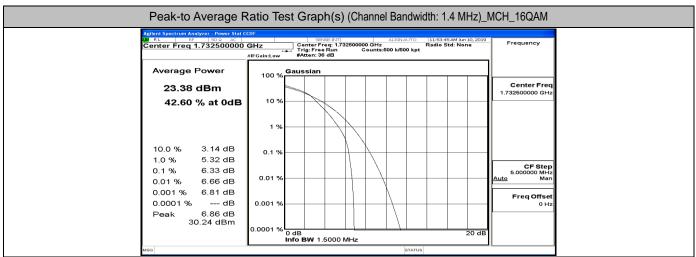
Peak-to Average Ratio Test Result (Channel Bandwidth: 20 MHz)					
Mandada Gara	Channel	Peak-to-Average Ratio	Limit	Verdict	
Modulation		[dB]	[dB]		
QPSK	LCH	5.68	<13	PASS	
	MCH	5.7	<13	PASS	
	HCH	5.74	<13	PASS	
16QAM	LCH	6.68	<13	PASS	
	MCH	6.9	<13	PASS	
	HCH	6.78	<13	PASS	

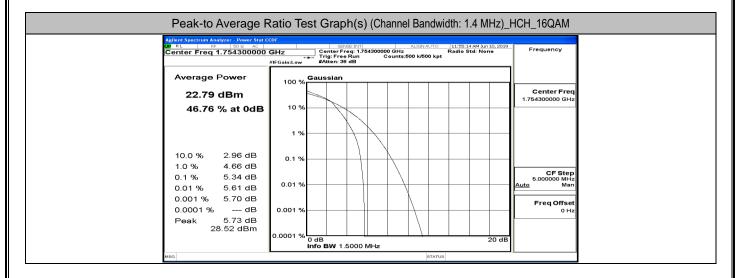


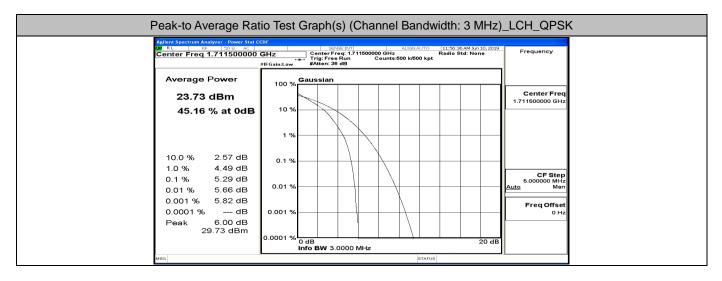


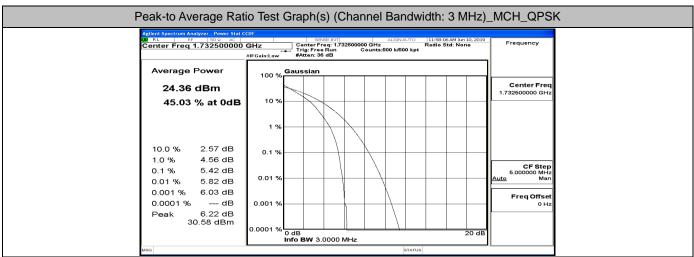


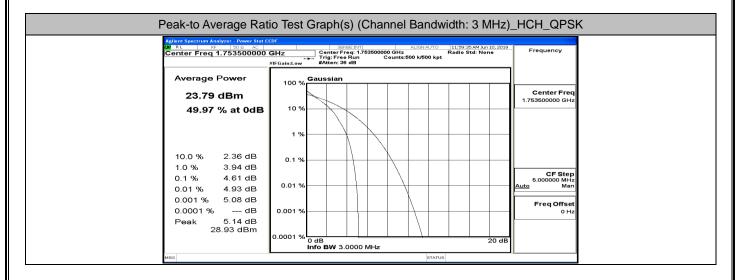


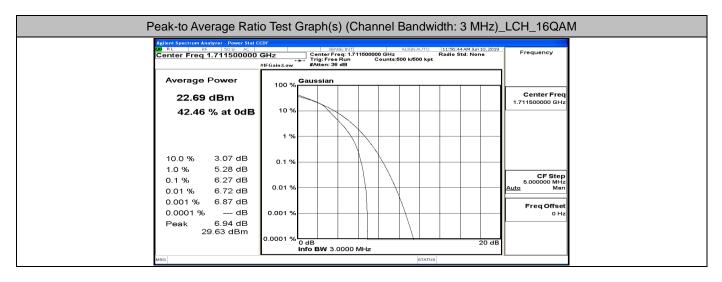


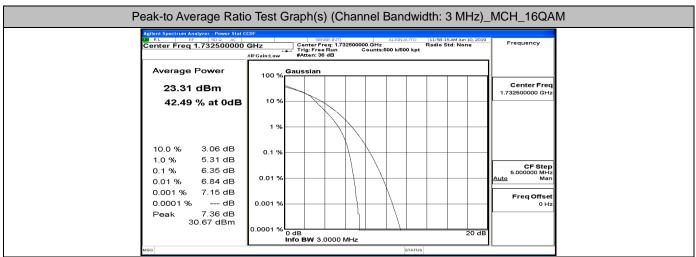


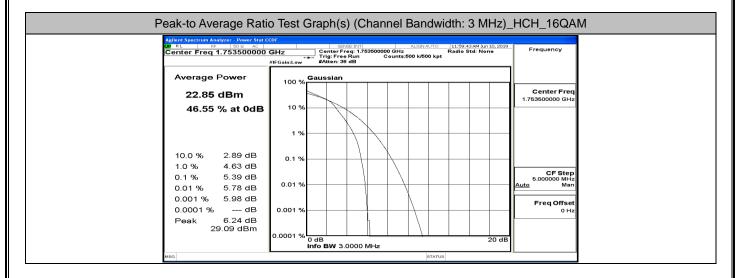


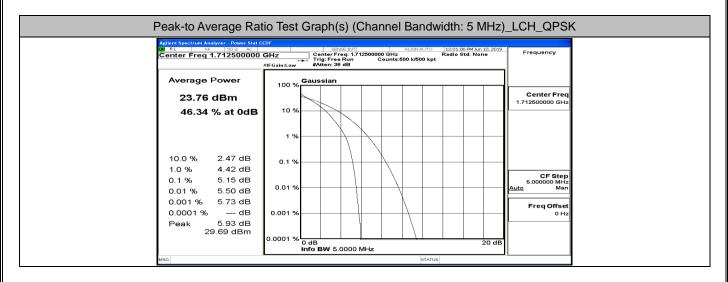


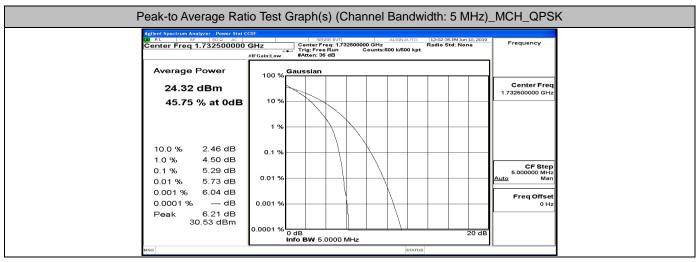


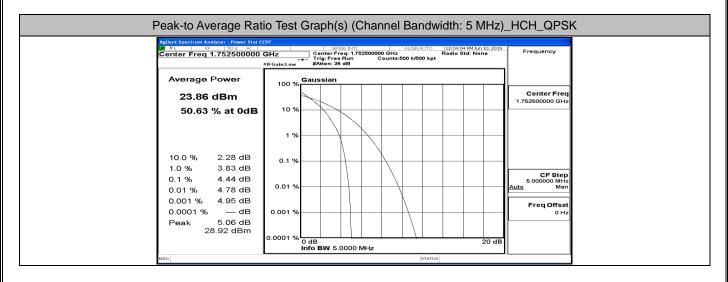


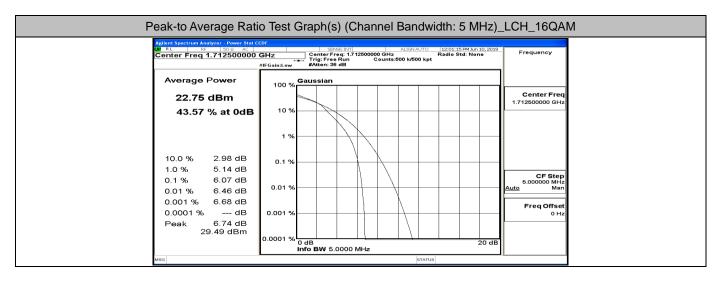


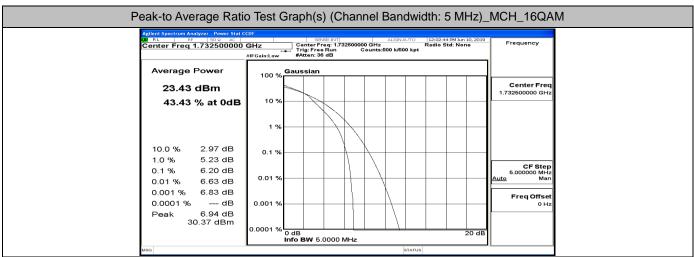


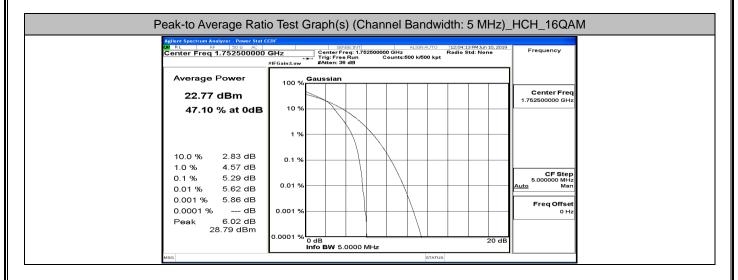


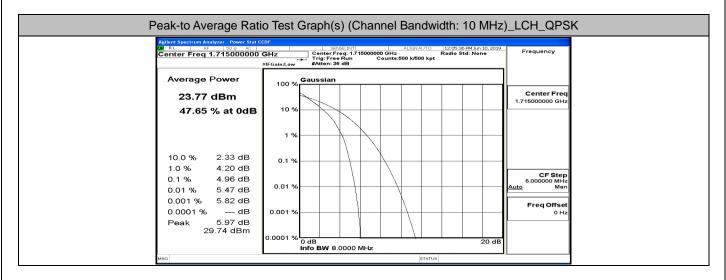


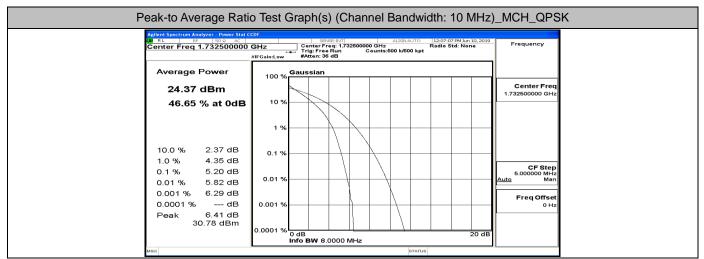


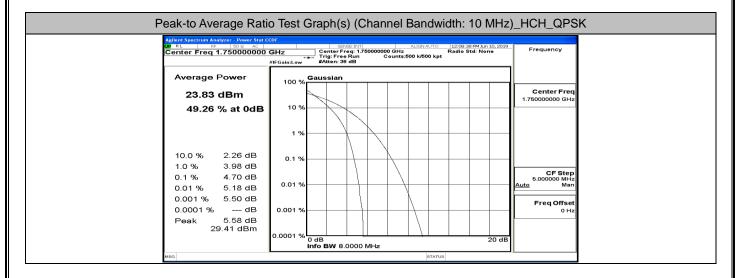


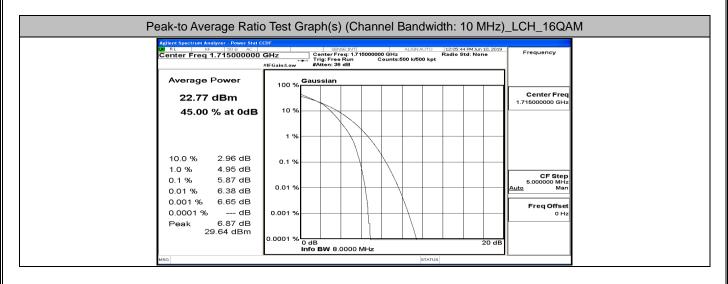


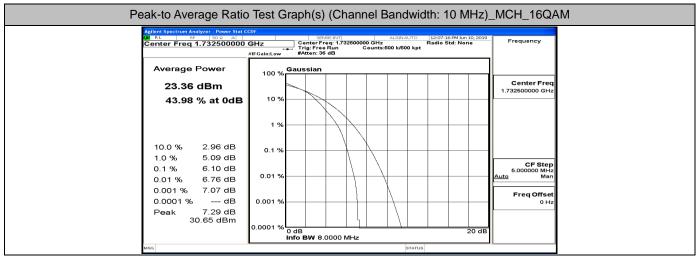


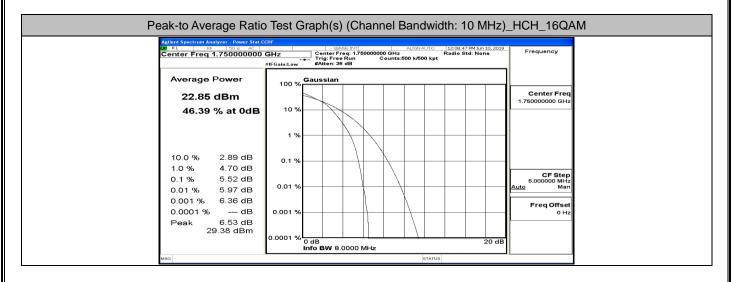


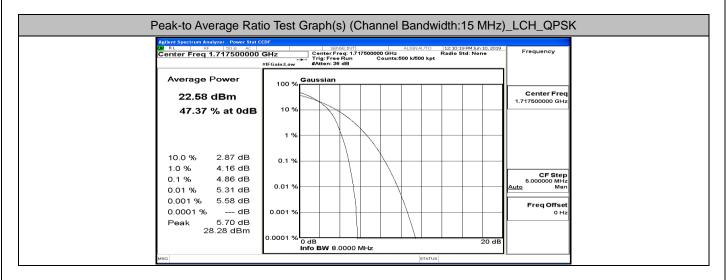


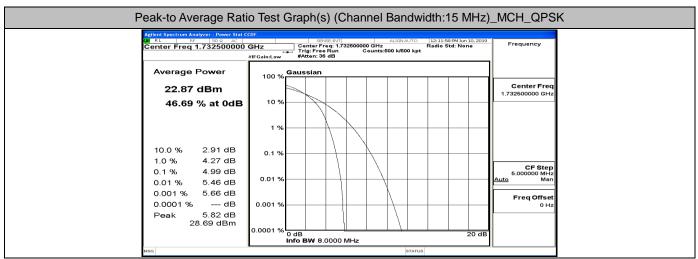


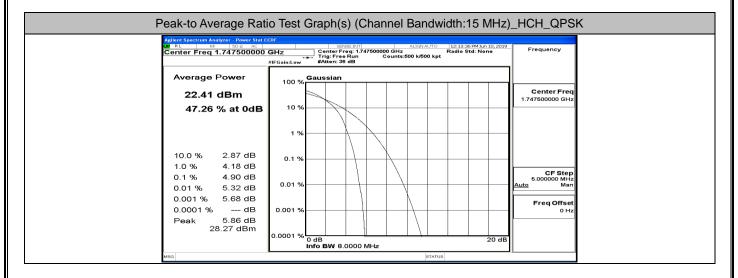


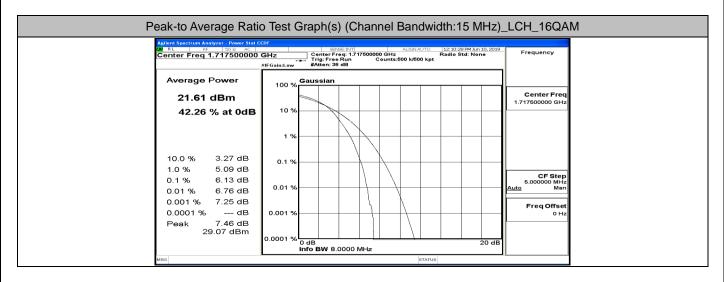


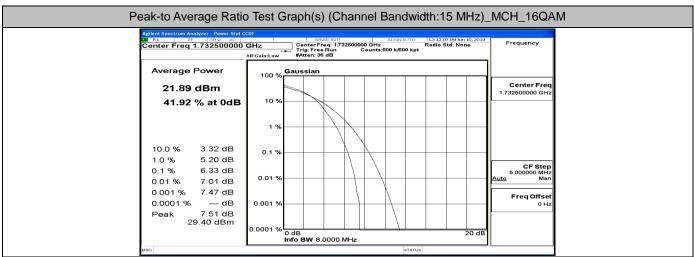


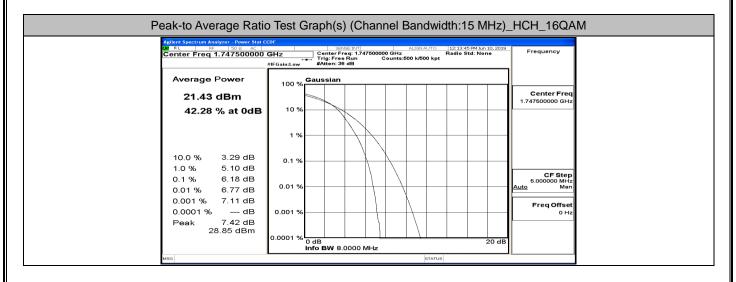


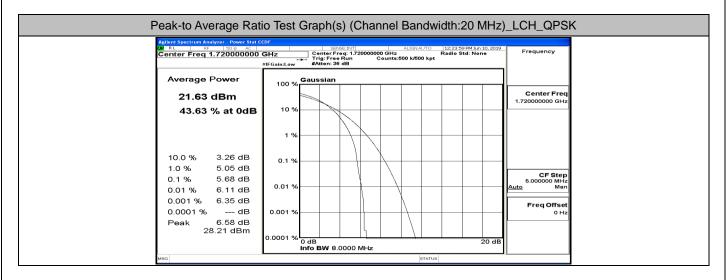


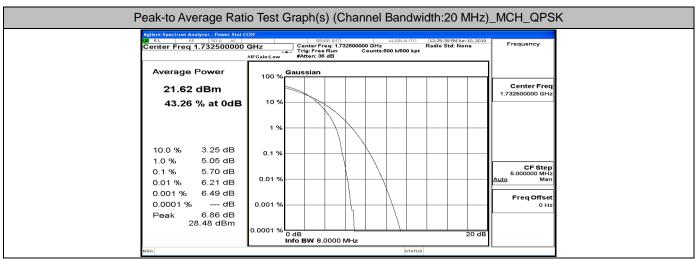


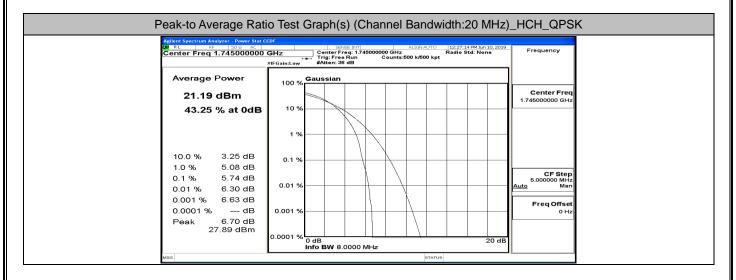


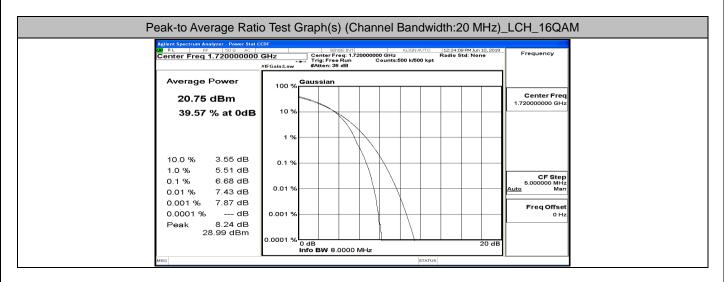


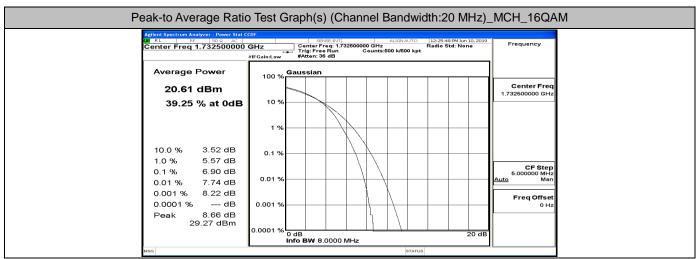


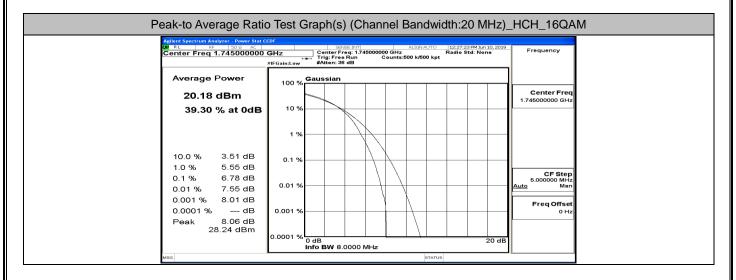












B.3 26dB Bandwidth and Occupied Bandwidth

EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)					
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict	
iviodulation		(MHz)	(MHz)		
QPSK	LCH	1.0778	1.284	PASS	
	MCH	1.0770	1.274	PASS	
	HCH	1.0799	1.265	PASS	
16QAM	LCH	1.0836	1.267	PASS	
	MCH	1.0806	1.275	PASS	
	HCH	1.0802	1.289	PASS	

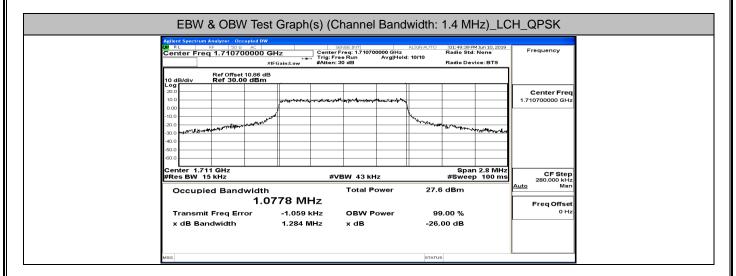
EBW & OBW Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
Modulation		(MHz)	(MHz)	
QPSK	LCH	2.6877	2.904	PASS
	MCH	2.6853	2.892	PASS
	HCH	2.6851	2.928	PASS
16QAM	LCH	2.6856	2.912	PASS
	MCH	2.6847	2.910	PASS
	HCH	2.6868	2.942	PASS

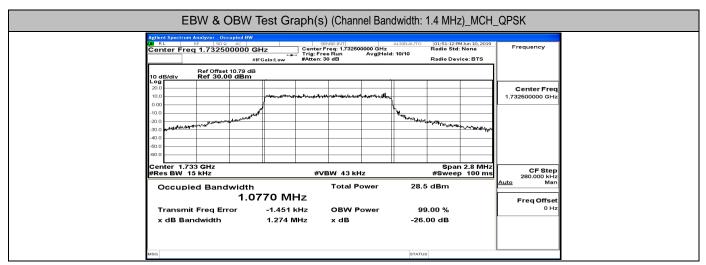
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
Modulation		(MHz)	(MHz)	
QPSK	LCH	4.4727	4.787	PASS
	MCH	4.4834	4.807	PASS
	HCH	4.4716	4.820	PASS
16QAM	LCH	4.4748	4.822	PASS
	MCH	4.4669	4.824	PASS
	HCH	4.4796	4.805	PASS

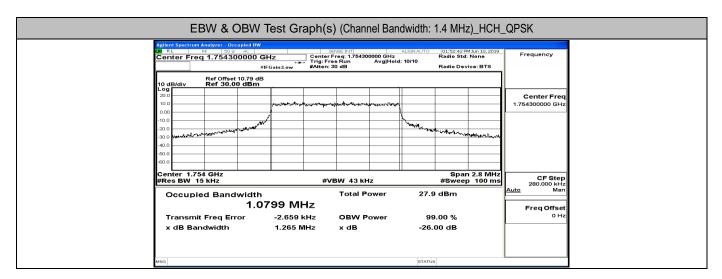
EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Madulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
Modulation		(MHz)	(MHz)	
QPSK	LCH	8.9221	9.470	PASS
	MCH	8.9284	9.472	PASS
	HCH	8.9122	9.453	PASS
16QAM	LCH	8.9280	9.465	PASS
	MCH	8.9228	9.411	PASS
	HCH	8.9218	9.432	PASS

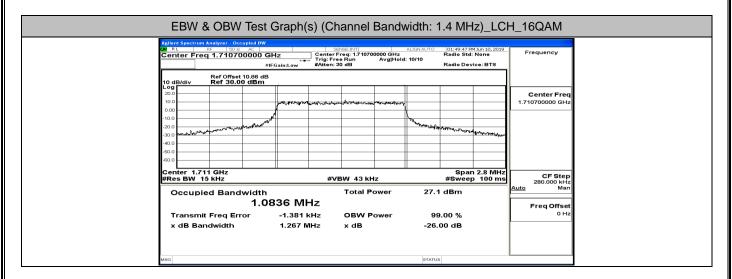
EBW & OBW Test Result (Channel Bandwidth: 15 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
Modulation		(MHz)	(MHz)	
QPSK	LCH	13.380	13.96	PASS
	MCH	13.392	14.05	PASS
	HCH	13.363	13.99	PASS
16QAM	LCH	13.363	13.99	PASS
	MCH	13.401	14.10	PASS
	HCH	13.364	13.99	PASS

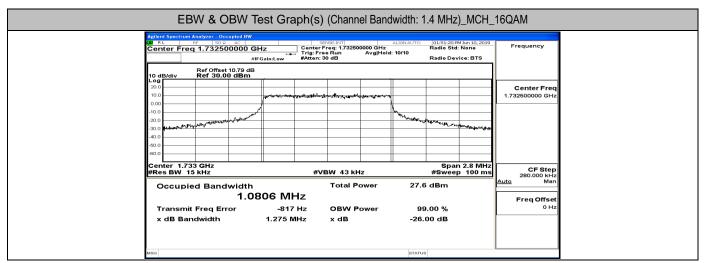
EBW & OBW Test Result (Channel Bandwidth: 20 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
		(MHz)	(MHz)	
QPSK	LCH	17.807	18.55	PASS
	MCH	17.878	18.68	PASS
	HCH	17.849	18.65	PASS
16QAM	LCH	17.816	18.52	PASS
	MCH	17.871	18.74	PASS
	HCH	17.848	18.61	PASS

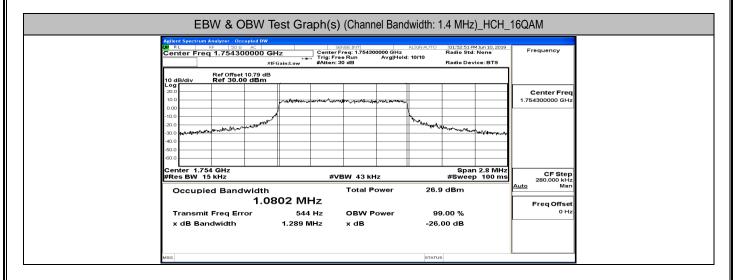


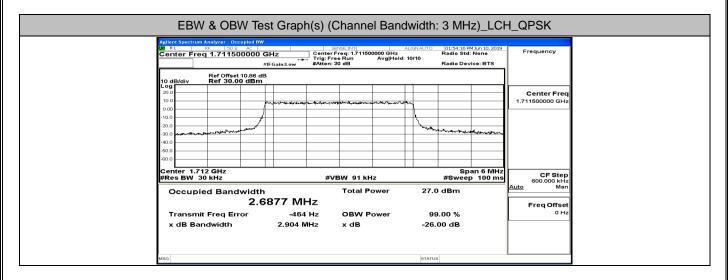


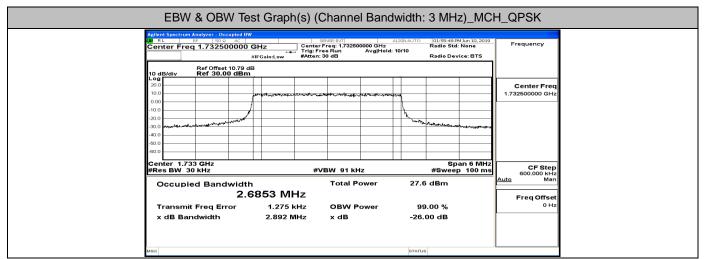


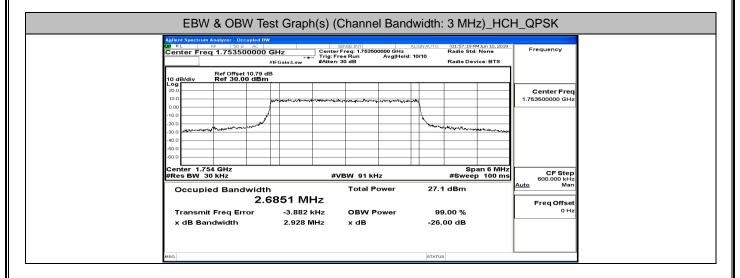


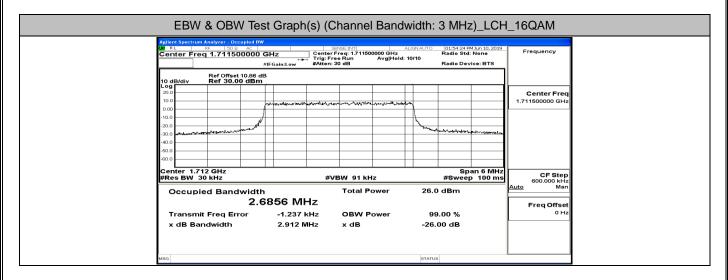


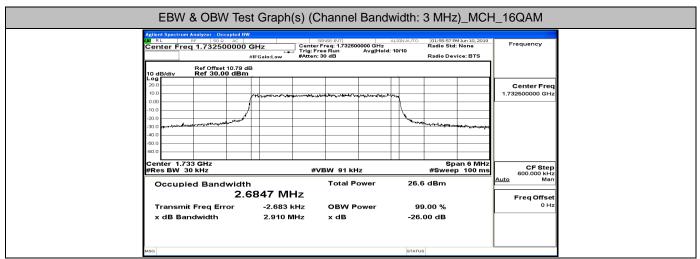


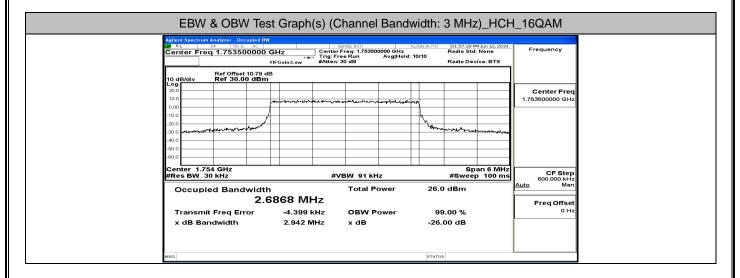


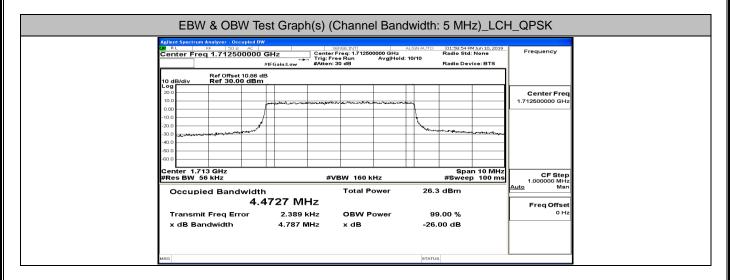


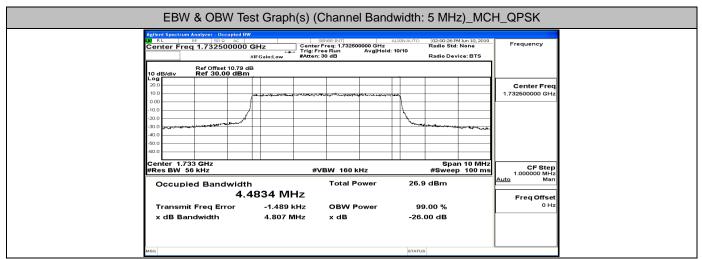


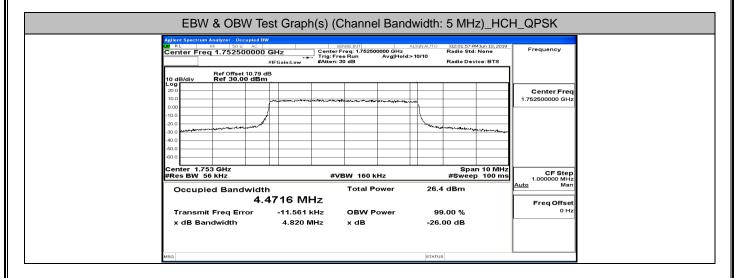


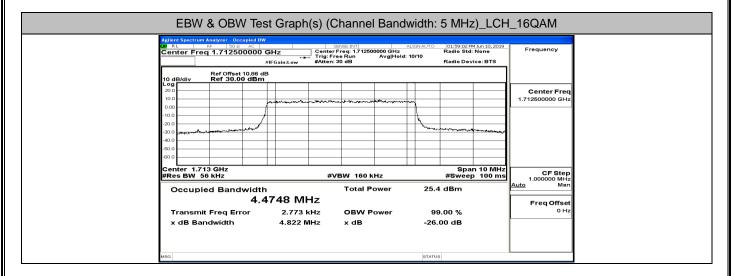


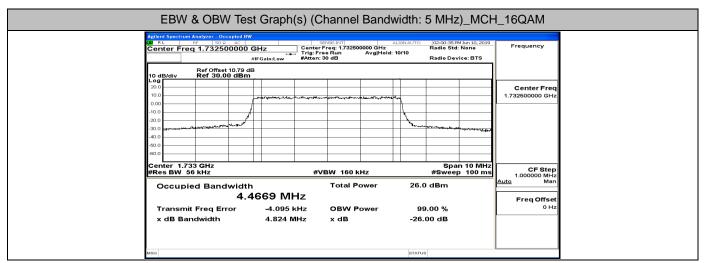


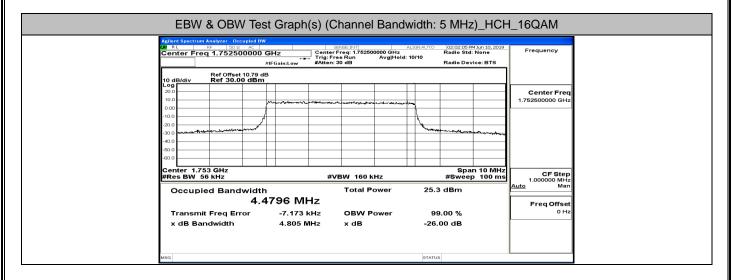


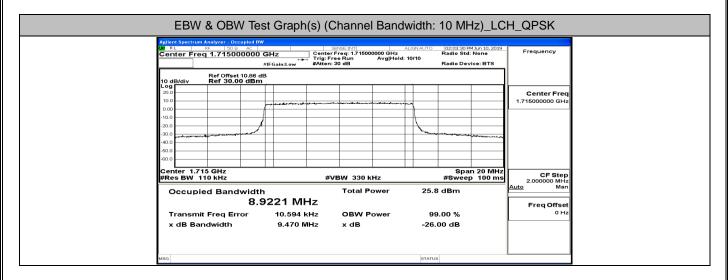


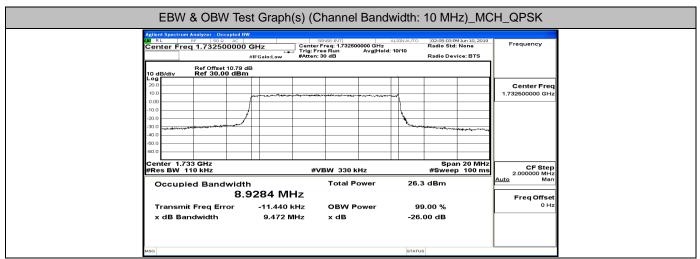


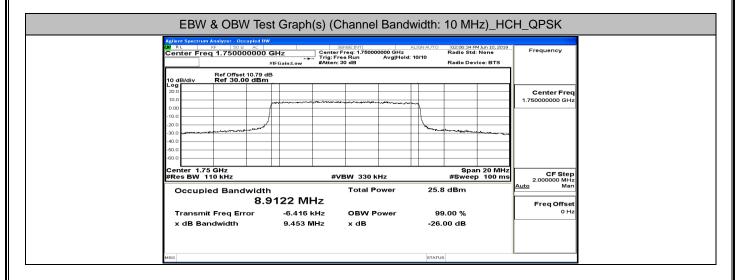


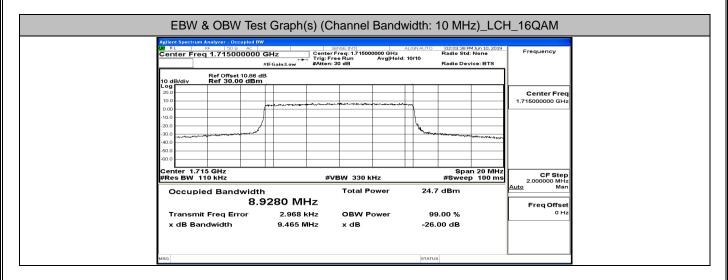


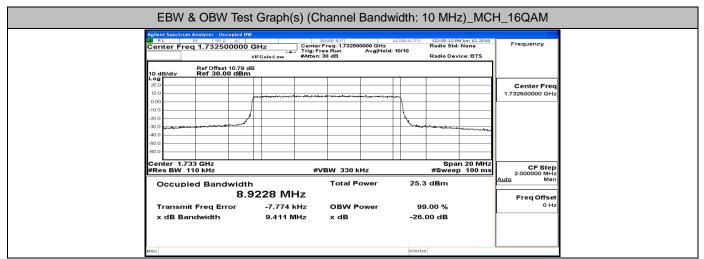


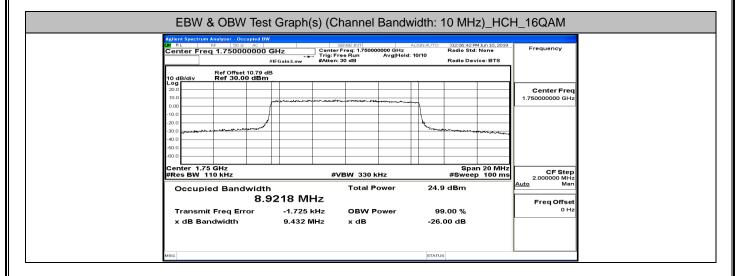


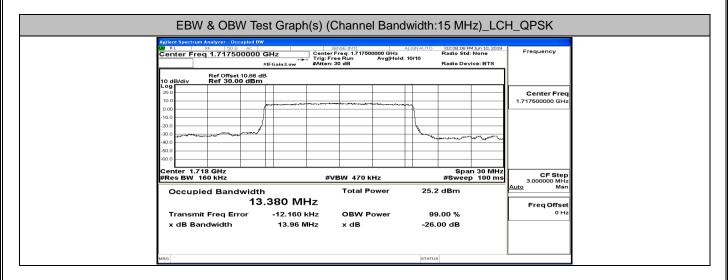


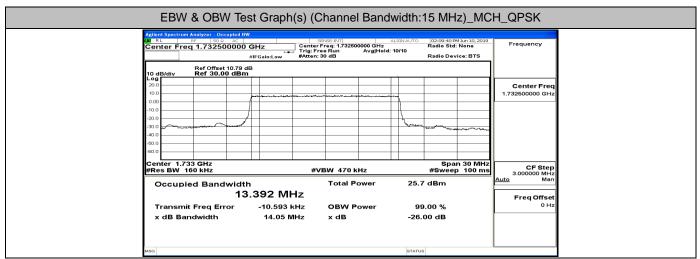


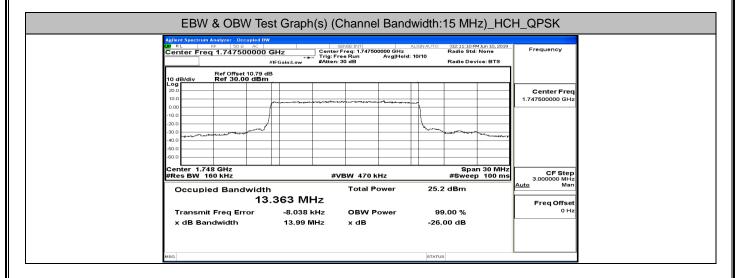


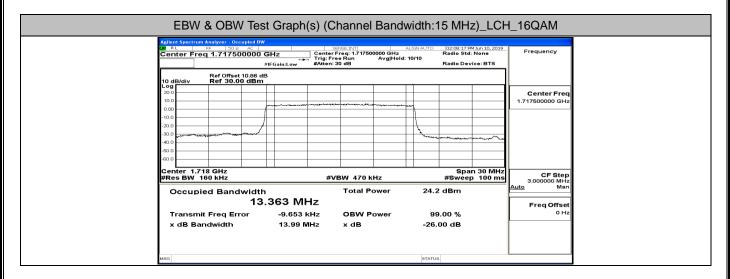


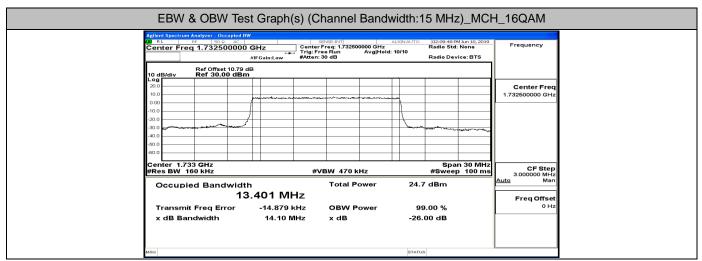


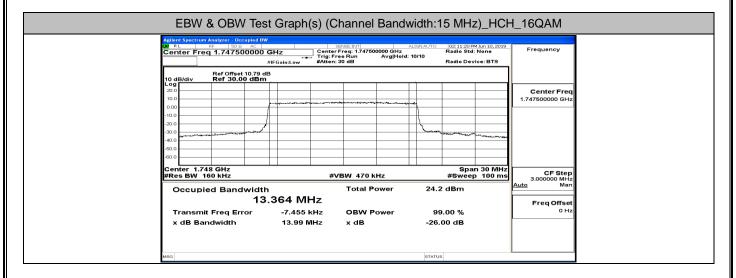


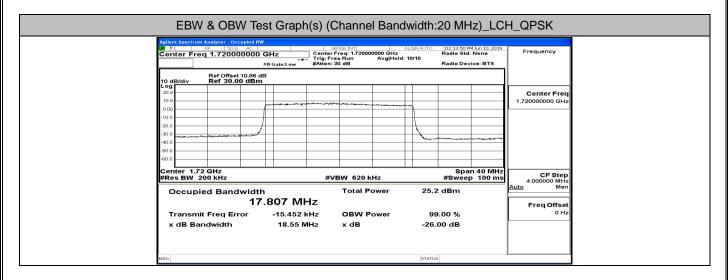


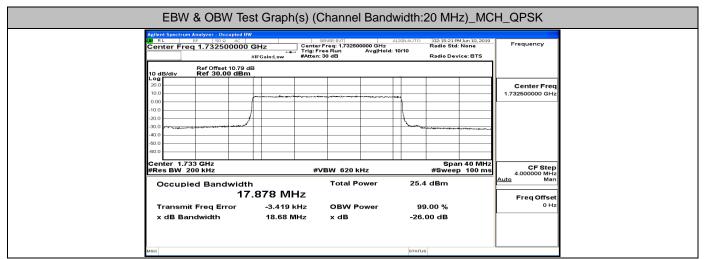


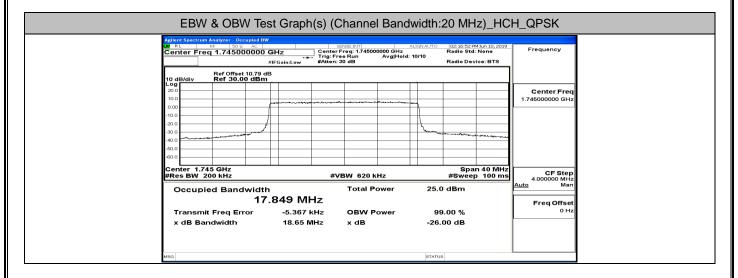


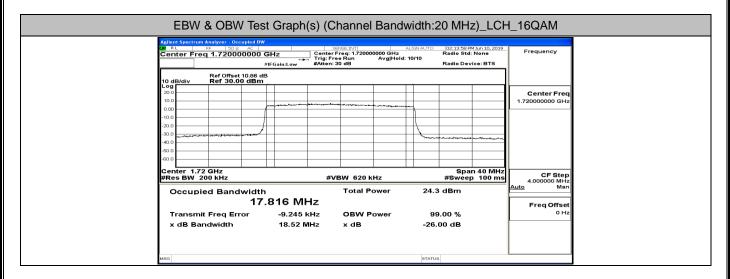


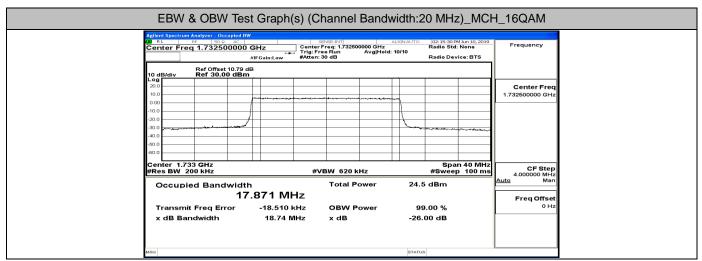


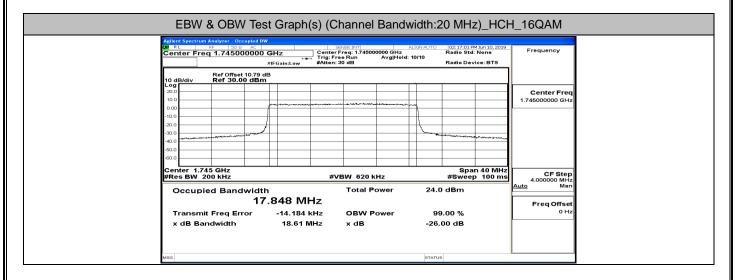












B.4 Band Edge

