Appendix E: Test Data for E-UTRA Band 4

Product Name: MEITRACK GPS P88L Trade Mark: MEITRACK®Test Model: P88L-A

Environmental Conditions

Temperature:	22.8° C
Relative Humidity:	53.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Li Huan

E.1 Conducted Output Power

		•		er Test Result (Channel Band	width: 1.4 MHz)	
Modulation	Channel	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	Verdict
Wodulation	Channel	Size	Offset	QPSK	16QAM	verdict
		1	0	22.37	21.49	PASS
		1	3	22.32	21.57	PASS
		1	5	22.22	21.40	PASS
	LCH	3	0	22.22	21.25	PASS
		3	2	22.19	21.22	PASS
		3	3	22.15	21.18	PASS
		6	0	22.09	21.09	PASS
	мсн	1	0	22.85	22.01	PASS
		1	3	22.99	21.96	PASS
QPSK /		1	5	22.74	21.97	PASS
16QAM		3	0	22.87	21.68	PASS
TOQAM		3	2	22.87	21.59	PASS
		3	3	22.79	21.48	PASS
		6	0	21.77	20.92	PASS
		1	0	22.80	21.78	PASS
		1	3	22.92	22.03	PASS
		1	5	22.86	22.14	PASS
	HCH	3	0	22.63	21.40	PASS
		3	2	22.63	21.40	PASS
		3	3	22.70	21.39	PASS
		6	0	21.59	20.59	PASS

	Conducted Output Power Test Result (Channel Bandwidth: 3 MHz)							
Marakaladian	Observat	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	\		
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict		
		1	0	22.32	21.49	PASS		
		1	7	22.26	21.47	PASS		
		1	14	22.13	21.30	PASS		
	LCH	8	0	22.10	21.24	PASS		
		8	4	22.08	21.23	PASS		
		8	7	22.01	20.97	PASS		
		15	0	21.99	21.13	PASS		
	MCH	1	0	22.85	21.60	PASS		
		1	7	22.84	21.51	PASS		
QPSK /		1	14	22.64	21.32	PASS		
16QAM		8	0	21.80	20.98	PASS		
TOQAIVI		8	4	21.80	20.98	PASS		
		8	7	21.76	20.93	PASS		
		15	0	21.82	20.87	PASS		
		1	0	22.47	21.23	PASS		
		1	7	22.87	21.59	PASS		
		1	14	23.01	21.75	PASS		
	HCH	8	0	21.53	20.50	PASS		
		8	4	21.53	20.41	PASS		
		8	7	21.68	20.48	PASS		
		15	0	21.49	20.45	PASS		

	Conducted Output Power Test Result (Channel Bandwidth: 10 MHz)							
Marshaladian	Ohamad	RB Cor	figuration	Average Power [dBm]	Average Power [dBm]) /li - t		
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict		
		1	0	21.36	20.60	PASS		
		1	24	22.35	21.61	PASS		
		1	49	22.39	21.60	PASS		
	LCH	25	0	21.78	20.86	PASS		
		25	12	21.77	20.86	PASS		
		25	25	22.39	21.49	PASS		
		50	0	22.05	21.15	PASS		
		1	0	22.26	21.17	PASS		
		1	24	23.30	22.26	PASS		
QPSK /		1	49	22.46	22.32	PASS		
16QAM	MCH	25	0	21.70	20.93	PASS		
TOQAW		25	12	21.80	20.84	PASS		
		25	25	21.64	20.87	PASS		
		50	0	21.67	20.98	PASS		
		1	0	22.24	21.36	PASS		
		1	24	22.66	21.85	PASS		
		1	49	22.27	21.49	PASS		
	HCH	25	0	21.65	20.61	PASS		
		25	12	21.65	20.65	PASS		
		25	25	21.76	20.77	PASS		
		50	0	21.61	20.57	PASS		

	Conducted Output Power Test Result (Channel Bandwidth: 15 MHz)						
Modulation	Channel	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	Verdict	
Modulation	Channel	Size	Offset	QPSK	16QAM	verdict	
		1	0	21.12	20.38	PASS	
		1	37	22.78	22.01	PASS	
		1	74	22.39	21.60	PASS	
	LCH	37	0	22.34	22.30	PASS	
		37	18	22.33	22.29	PASS	
		37	38	22.32	22.28	PASS	
		75	0	22.26	21.24	PASS	
	МСН	1	0	22.03	21.36	PASS	
		1	37	22.95	21.85	PASS	
QPSK /		1	74	22.50	21.28	PASS	
16QAM		37	0	21.77	21.64	PASS	
TOQAW		37	18	21.69	21.73	PASS	
		37	38	21.67	21.72	PASS	
		75	0	21.70	20.89	PASS	
		1	0	22.61	22.37	PASS	
		1	37	22.63	21.89	PASS	
		1	74	22.10	21.35	PASS	
	HCH	37	0	21.69	21.66	PASS	
		37	18	21.68	21.66	PASS	
		37	38	21.67	21.65	PASS	
		75	0	21.64	20.74	PASS	

	Conducted Output Power Test Result (Channel Bandwidth: 20 MHz)							
NA - de de die e	01	RB Conf	figuration	Average Power [dBm]	Average Power [dBm]	\/!: - t		
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict		
		1	0	20.95	20.02	PASS		
		1	49	23.39	22.48	PASS		
		1	99	21.63	20.78	PASS		
	LCH	50	0	21.97	21.06	PASS		
		50	25	21.95	21.05	PASS		
		50	50	22.66	21.71	PASS		
		100	0	22.32	21.43	PASS		
	MCH	1	0	22.24	21.51	PASS		
		1	49	23.04	22.32	PASS		
QPSK /		1	99	22.63	21.94	PASS		
16QAM		50	0	22.04	21.01	PASS		
TOQAIVI		50	25	22.03	21.09	PASS		
		50	50	21.65	20.72	PASS		
		100	0	21.85	20.89	PASS		
		1	0	22.59	21.53	PASS		
		1	49	22.88	21.57	PASS		
		1	99	21.72	20.92	PASS		
	HCH	50	0	21.64	20.68	PASS		
		50	25	21.56	20.69	PASS		
		50	50	21.57	20.56	PASS		
		100	0	21.62	20.54	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	5.63	<13	PASS		
QPSK	MCH	5.23	<13	PASS		
	HCH	5.18	<13	PASS		
	LCH	6.05	<13	PASS		
16QAM	MCH	6.06	<13	PASS		
	HCH	5.95	<13	PASS		

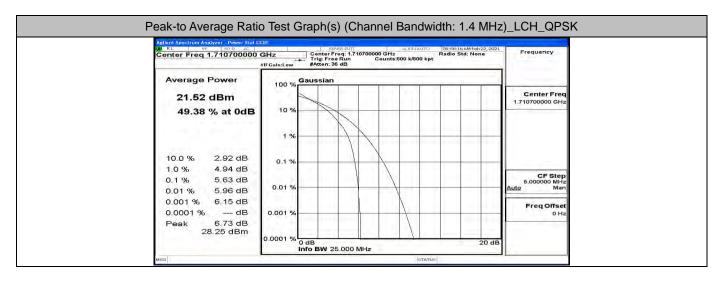
Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)						
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict		
Modulation	Channel	[dB]	[dB]	verdict		
	LCH	5.38	<13	PASS		
QPSK	MCH	5.31	<13	PASS		
	HCH	5.29	<13	PASS		
16QAM	LCH	6.16	<13	PASS		
	MCH	6.14	<13	PASS		
	HCH	6.08	<13	PASS		

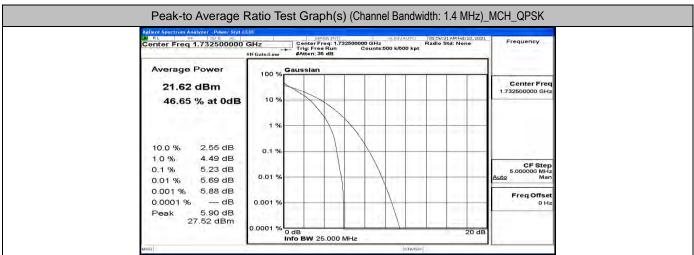
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)						
Modulation	Channel	Peak-to-Average Ratio	Limit	Vordict		
iviodulation	Griannei	[dB]	[dB]	Verdict		
	LCH	5.37	<13	PASS		
QPSK	MCH	5.27	<13	PASS		
	HCH	5.33	<13	PASS		
16QAM	LCH	6.13	<13	PASS		
	MCH	6.05	<13	PASS		
	HCH	6.05	<13	PASS		

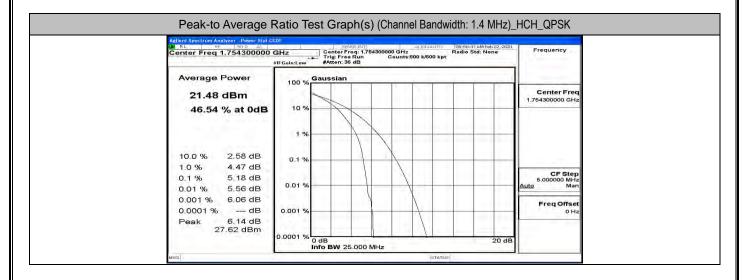
Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)						
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict		
iviodulation	Griannei	[dB]	[dB]	verdict		
	LCH	5.35	<13	PASS		
QPSK	MCH	5.26	<13	PASS		
	HCH	5.25	<13	PASS		
	LCH	6.1	<13	PASS		
16QAM	MCH	6.05	<13	PASS		
	HCH	6.04	<13	PASS		

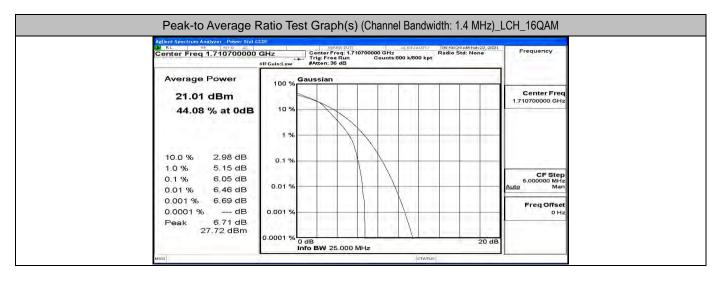
	Peak-to Average Ratio Test Result (Channel Bandwidth: 15 MHz)						
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict			
Wodulation	Chame	[dB]	[dB]	verdict			
	LCH	5.38	<13	PASS			
QPSK	MCH	5.41	<13	PASS			
	HCH	5.45	<13	PASS			
	LCH	6.1	<13	PASS			
16QAM	MCH	6.06	<13	PASS			
	HCH	6.11	<13	PASS			

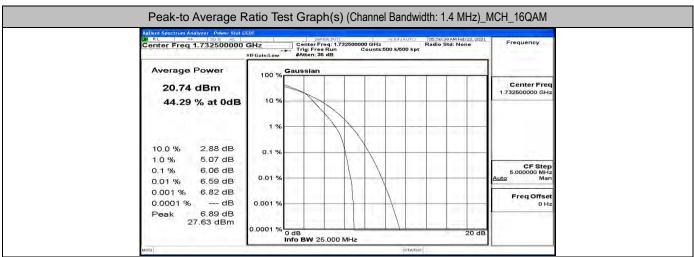
	Peak-to Average Ratio Test Result (Channel Bandwidth: 20 MHz)						
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict			
iviodulation	Channel	[dB]	[dB]	verdict			
	LCH	5.08	<13	PASS			
QPSK	MCH	5.18	<13	PASS			
	HCH	5.17	<13	PASS			
	LCH	5.94	<13	PASS			
16QAM	MCH	5.94	<13	PASS			
	HCH	5.94	<13	PASS			

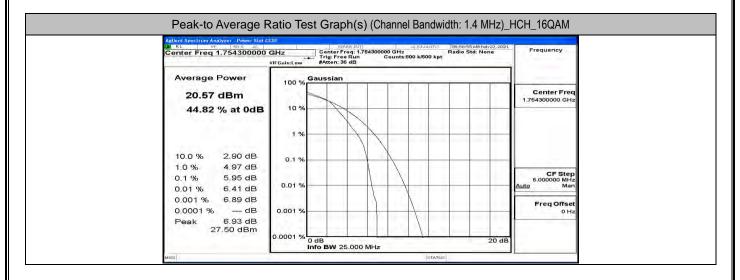


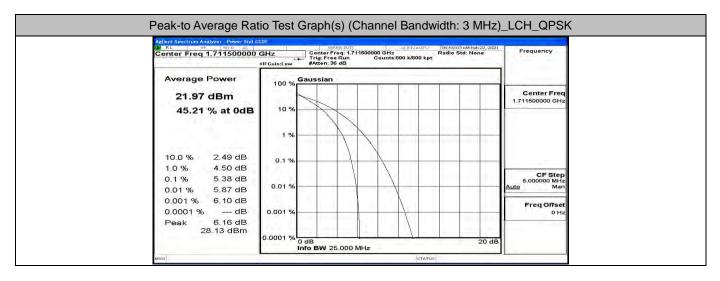


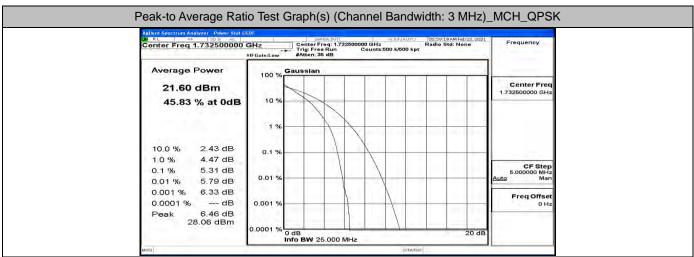


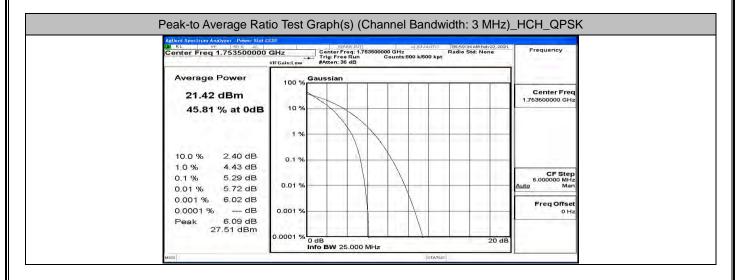


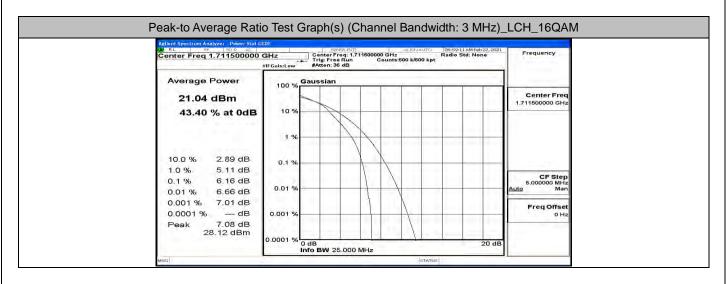


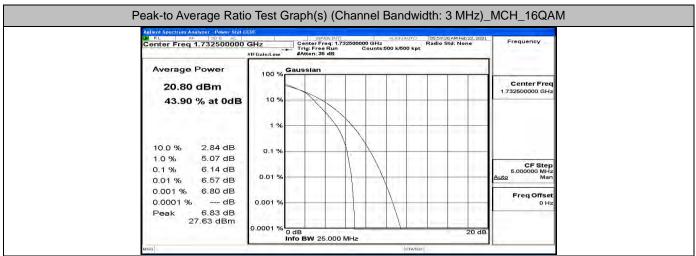


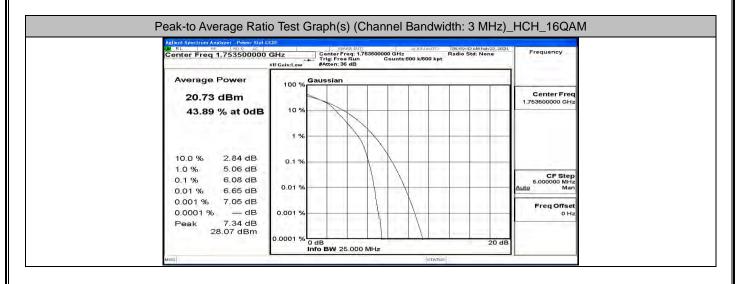


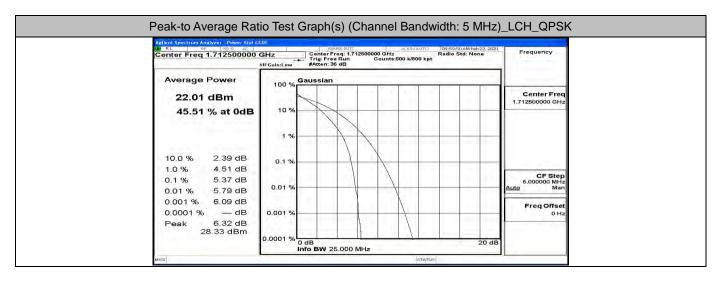


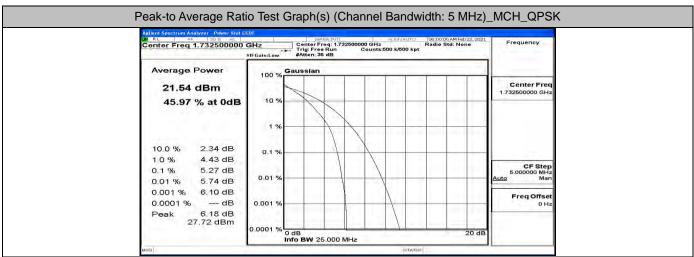


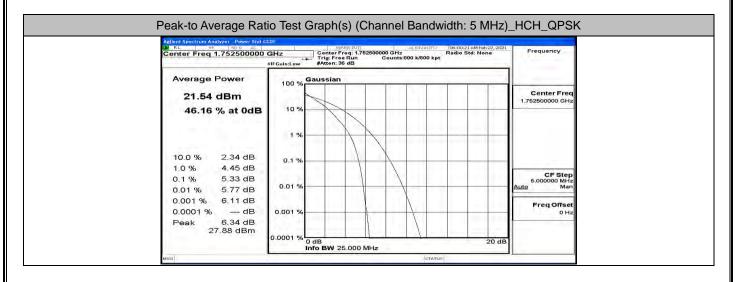


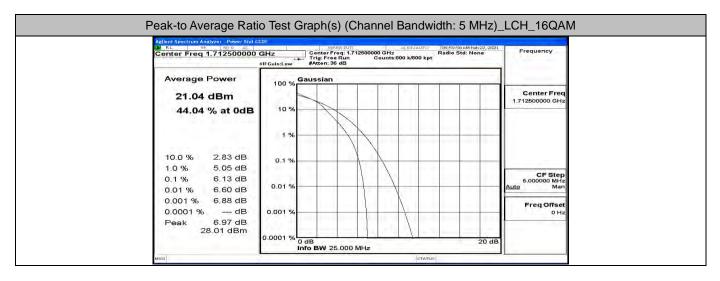


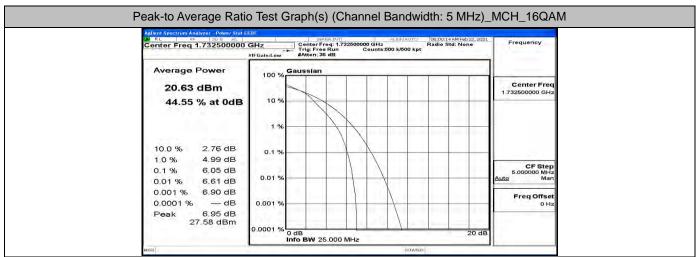


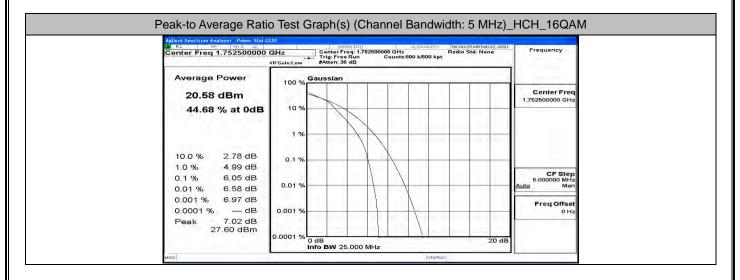


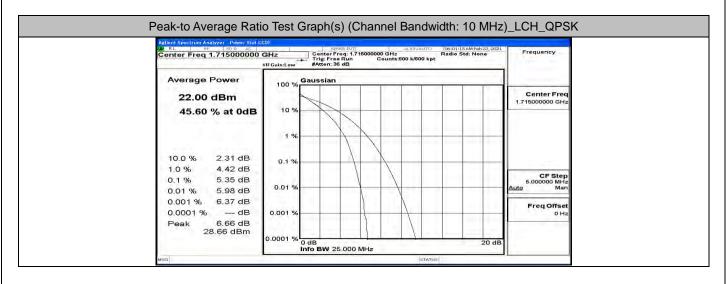


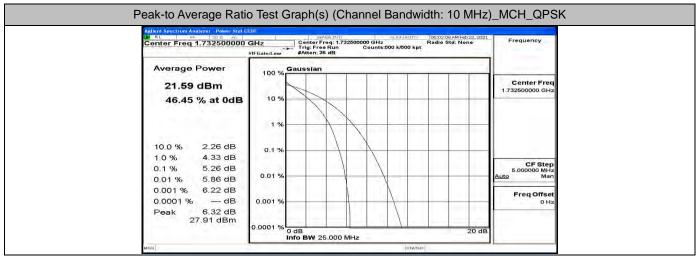


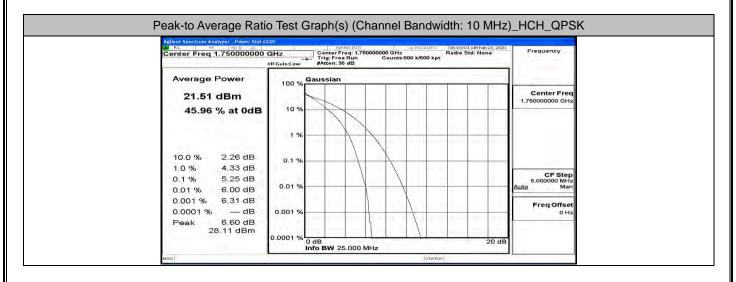


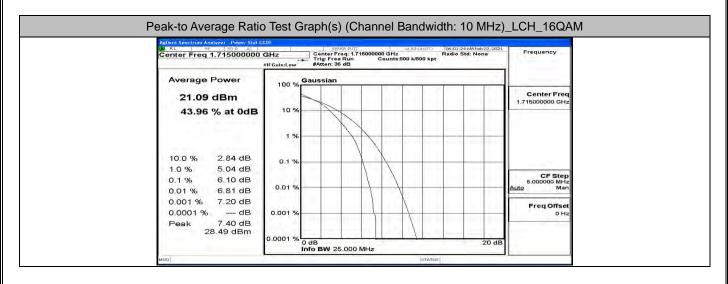


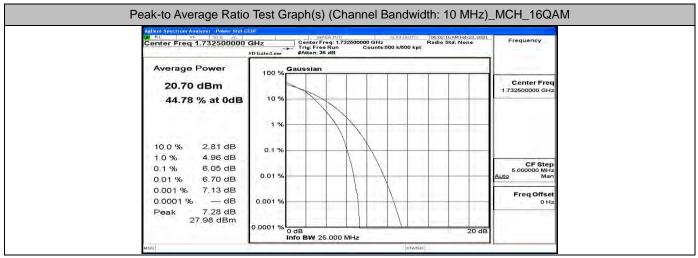


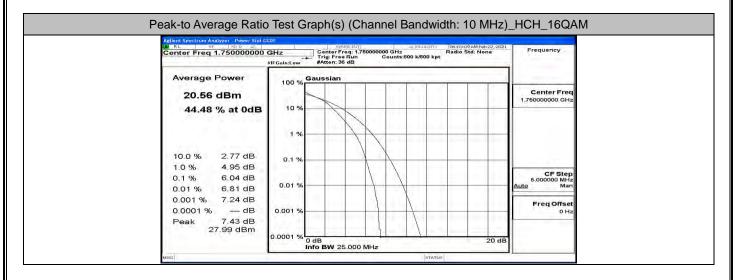


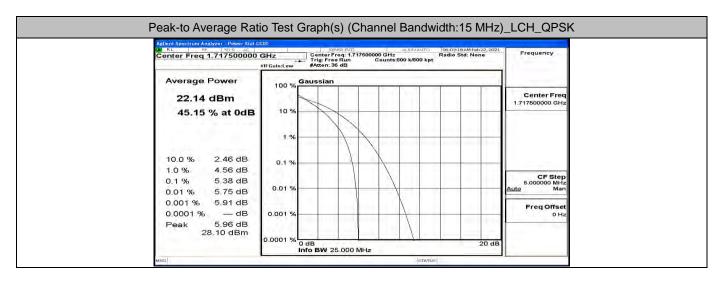


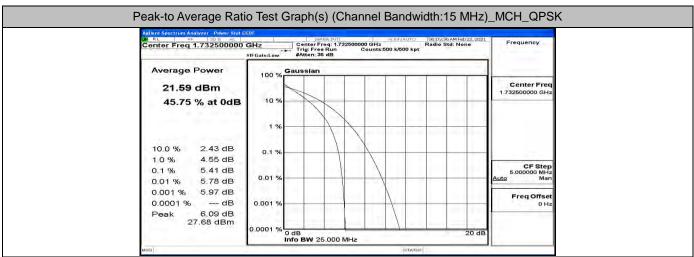


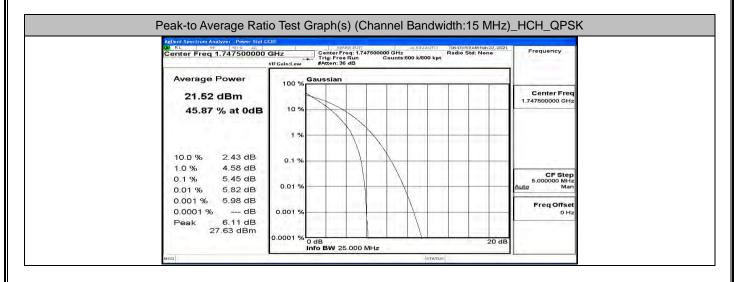


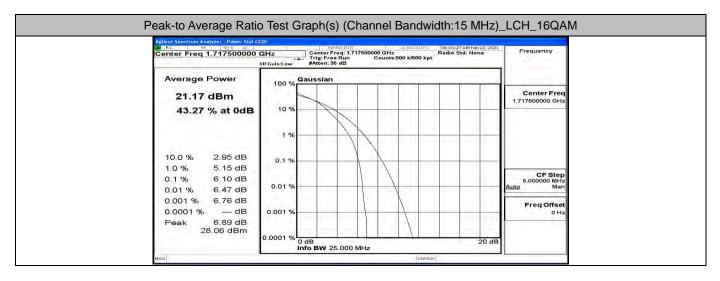


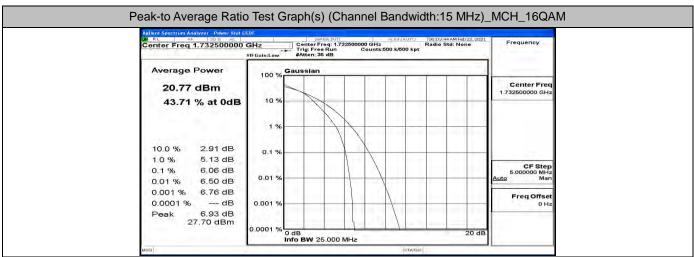


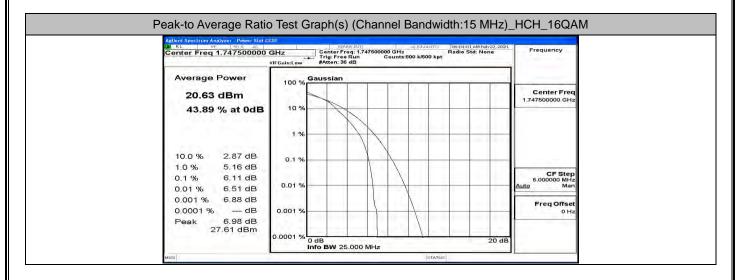


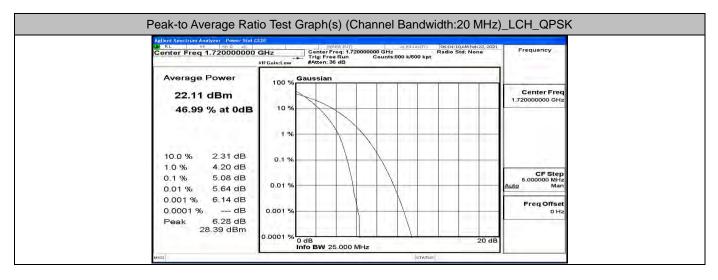


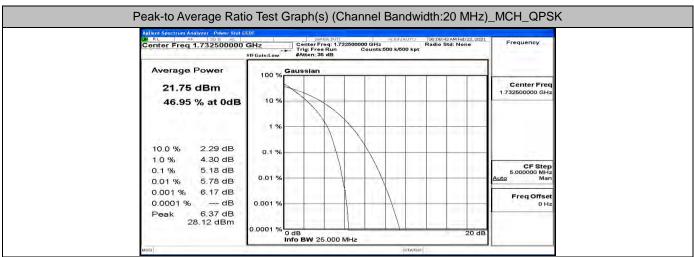


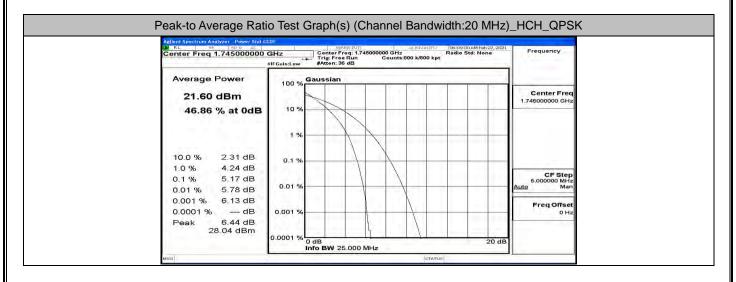


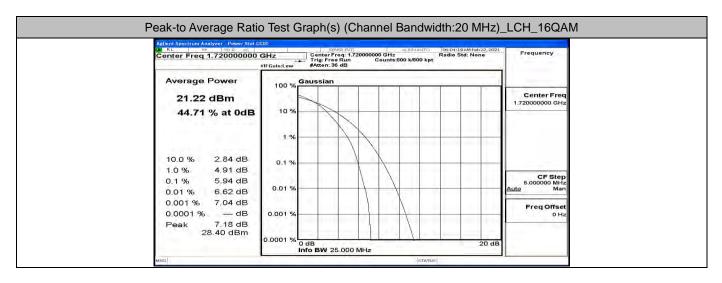


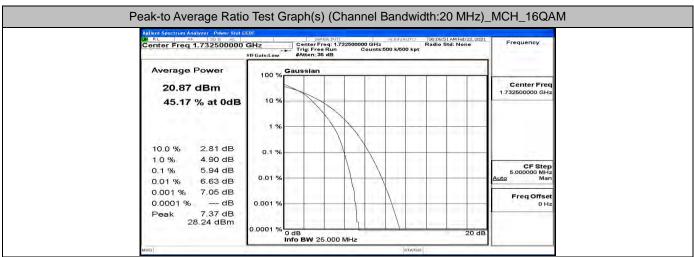


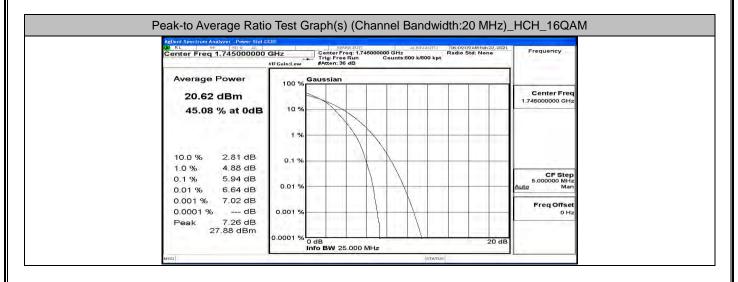












E.3 26dB Bandwidth and Occupied Bandwidth

EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)					
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict	
		(MHz)	(MHz)		
QPSK	LCH	1.0779	1.222	PASS	
	MCH	1.0754	1.244	PASS	
	HCH	1.0747	1.225	PASS	
16QAM	LCH	1.0776	1.225	PASS	
	MCH	1.0769	1.230	PASS	
	HCH	1.0787	1.253	PASS	

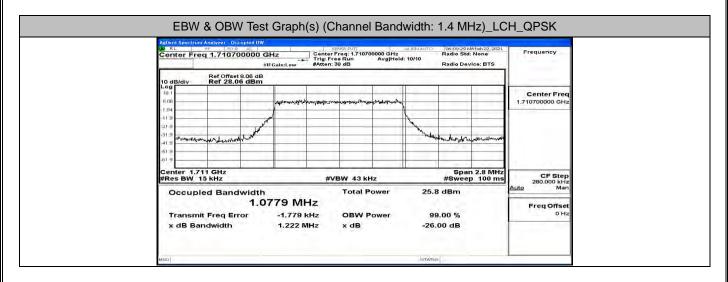
EBW & OBW Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
		(MHz)	(MHz)	
QPSK	LCH	2.6762	2.885	PASS
	MCH	2.6883	2.895	PASS
	HCH	2.6920	2.871	PASS
16QAM	LCH	2.6805	2.900	PASS
	MCH	2.6843	2.886	PASS
	HCH	2.6835	2.858	PASS

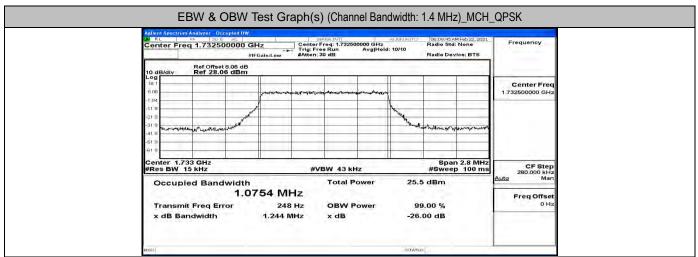
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
		(MHz)	(MHz)	
QPSK	LCH	4.4681	4.825	PASS
	MCH	4.4729	4.815	PASS
	HCH	4.4873	4.786	PASS
16QAM	LCH	4.4820	4.828	PASS
	MCH	4.4713	4.846	PASS
	HCH	4.4724	4.789	PASS

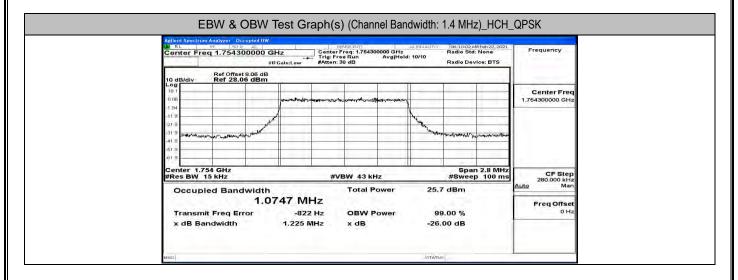
EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
		(MHz)	(MHz)	
QPSK	LCH	8.9205	9.304	PASS
	MCH	8.9379	9.505	PASS
	HCH	8.9262	9.380	PASS
16QAM	LCH	8.9286	9.452	PASS
	MCH	8.9410	9.449	PASS
	HCH	8.9346	9.409	PASS

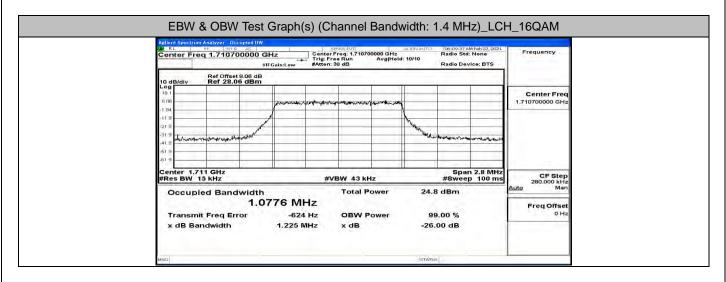
EBW & OBW Test Result (Channel Bandwidth: 15 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
		(MHz)	(MHz)	
QPSK	LCH	13.388	14.05	PASS
	MCH	13.391	14.03	PASS
	HCH	13.390	14.03	PASS
16QAM	LCH	13.369	13.96	PASS
	MCH	13.383	14.05	PASS
	HCH	13.383	14.04	PASS

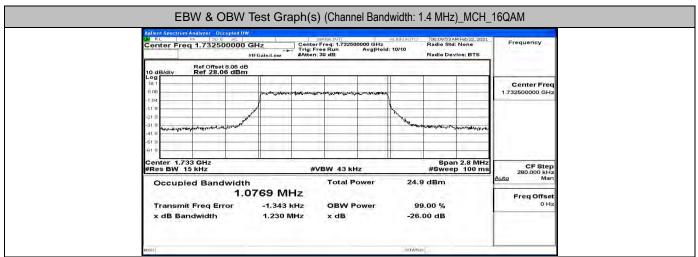
EBW & OBW Test Result (Channel Bandwidth: 20 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
		(MHz)	(MHz)	
QPSK	LCH	17.794	18.55	PASS
	MCH	17.830	18.63	PASS
	HCH	17.821	18.58	PASS
16QAM	LCH	17.783	18.54	PASS
	MCH	17.838	18.67	PASS
	HCH	17.825	18.56	PASS

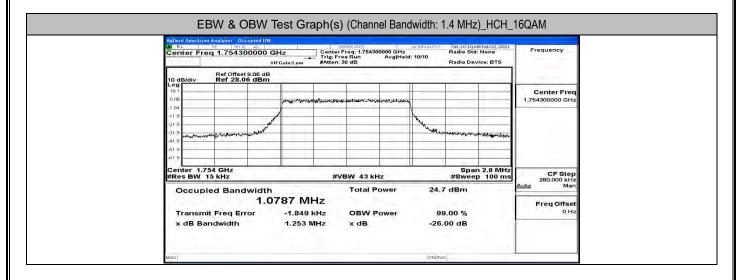


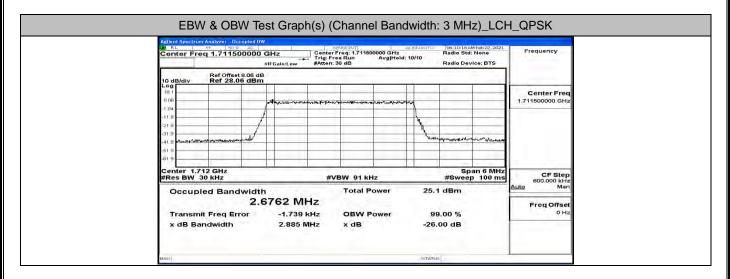


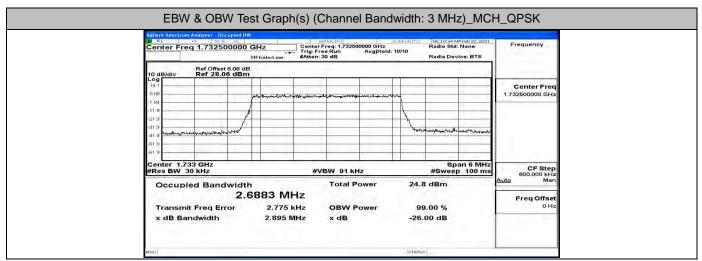


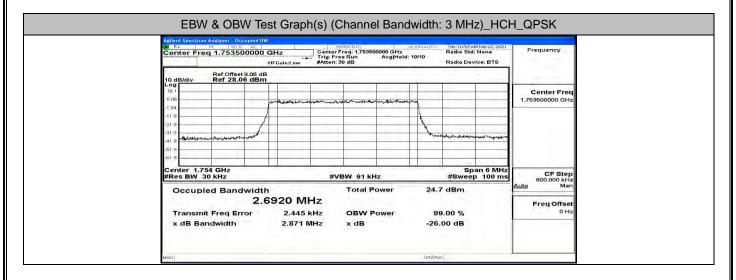


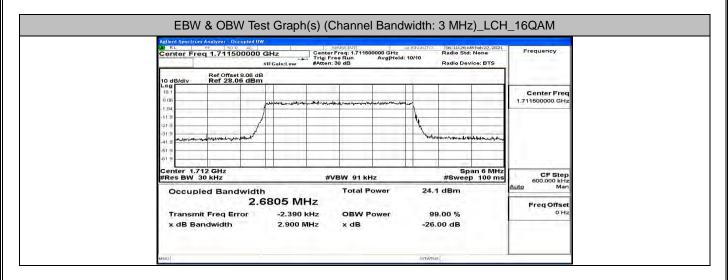


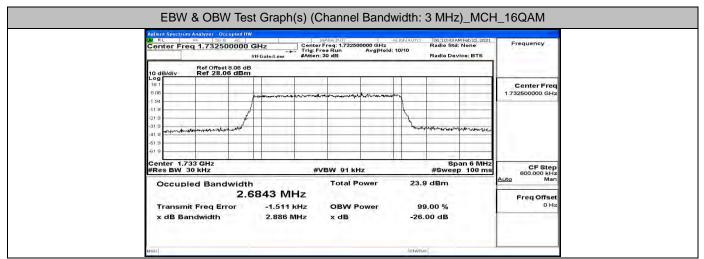


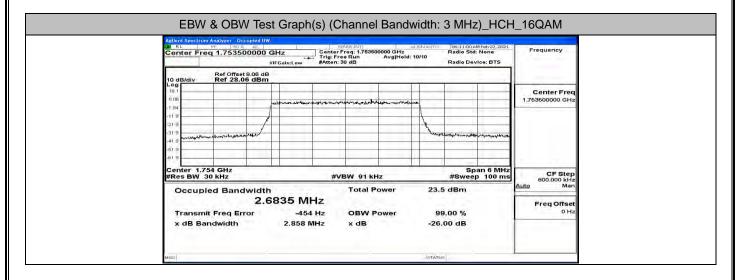


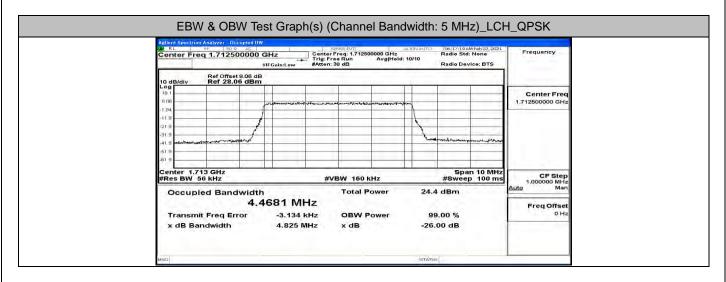


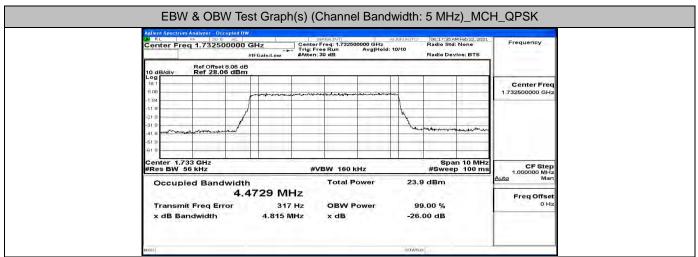


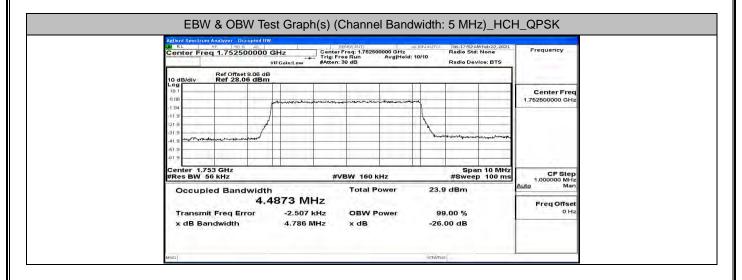


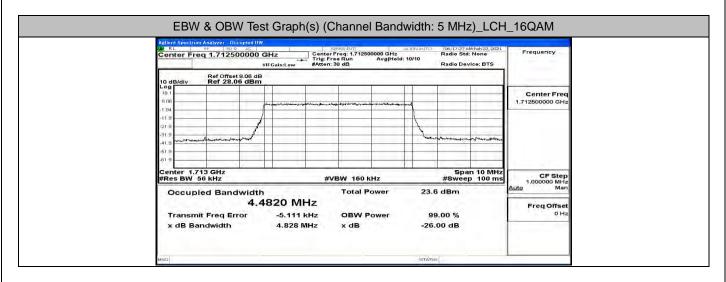


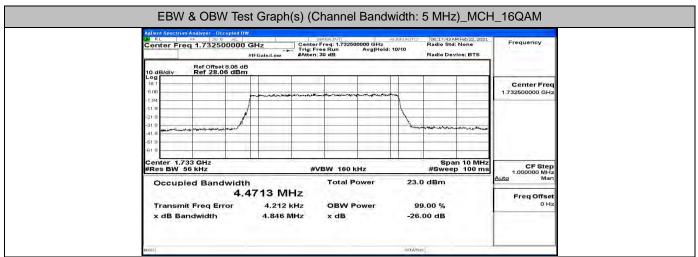


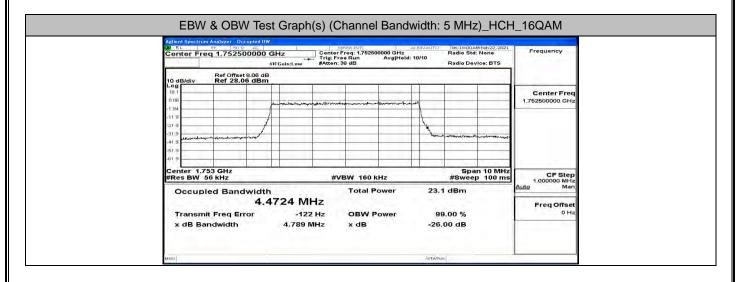


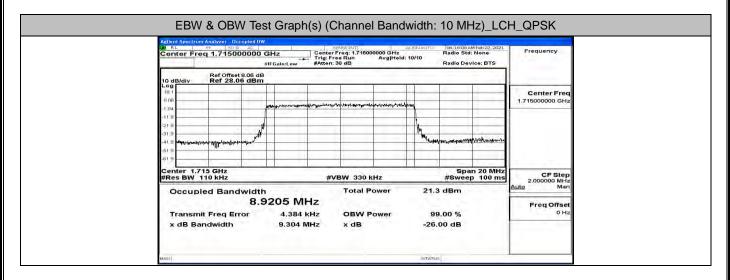


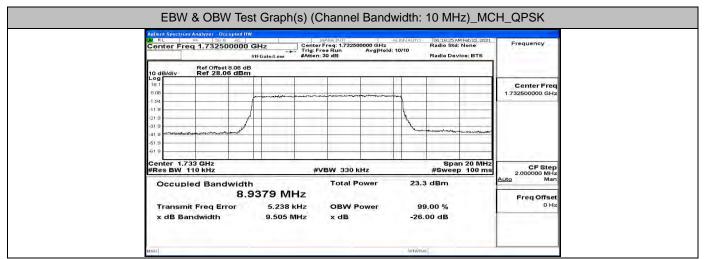


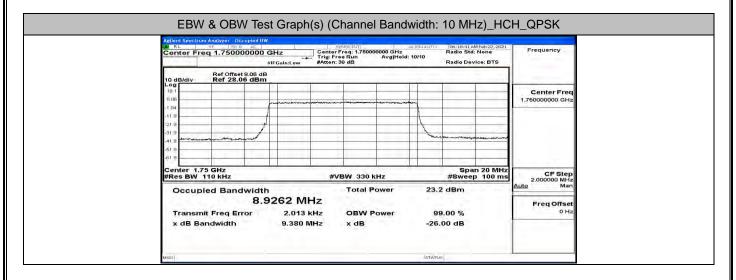


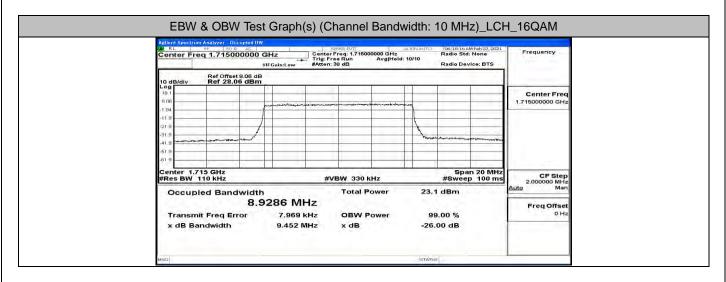


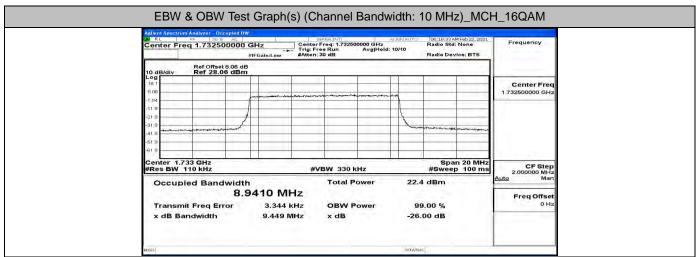


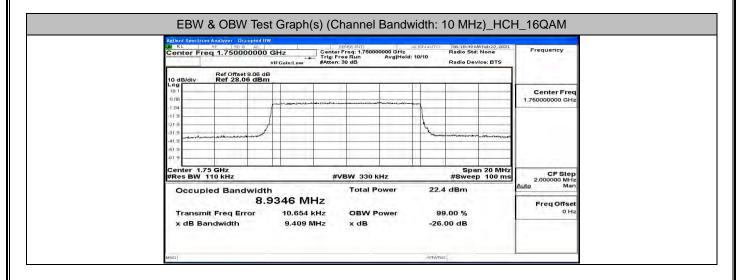


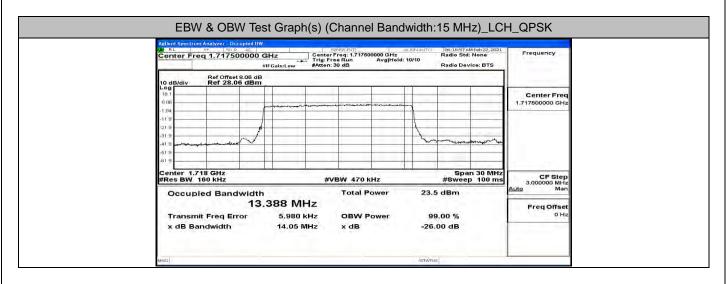


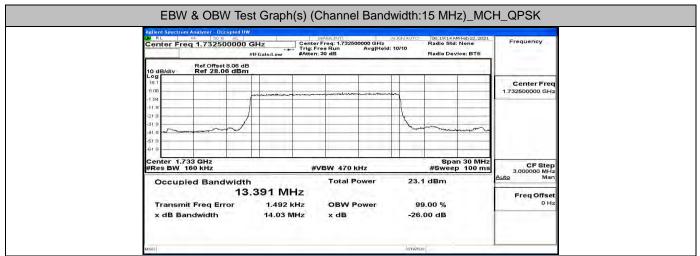


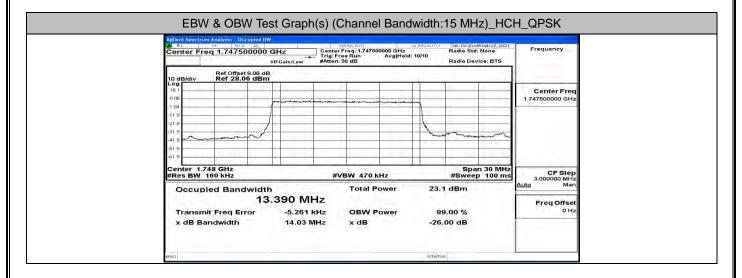


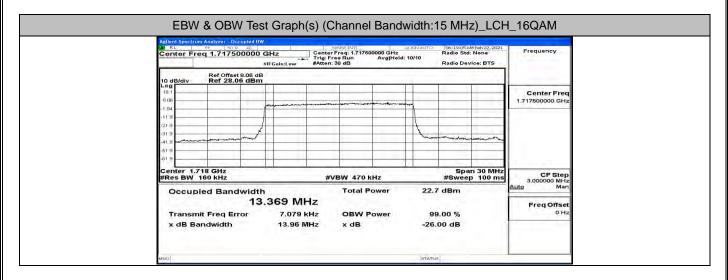


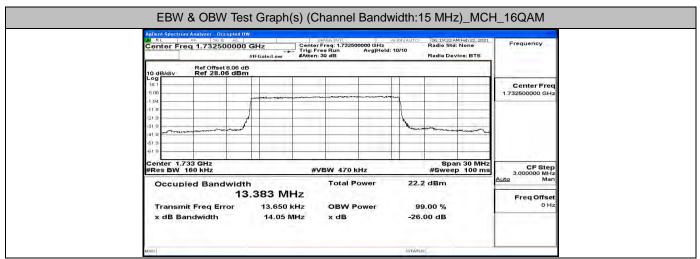


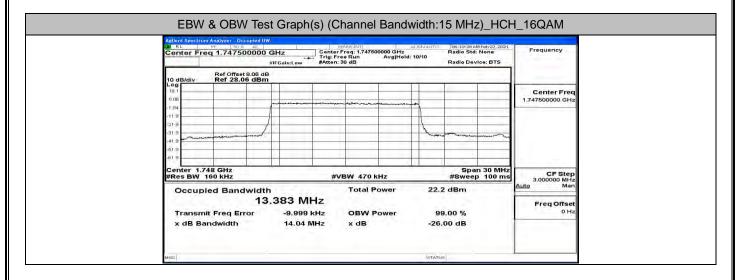


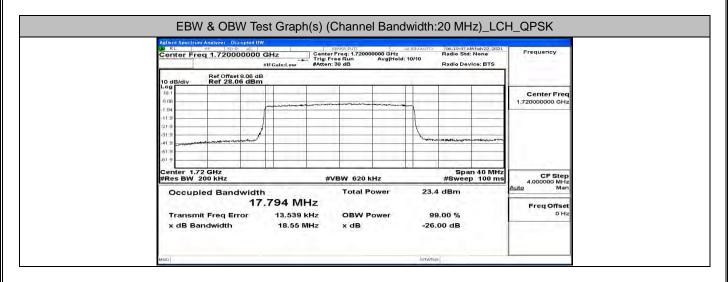


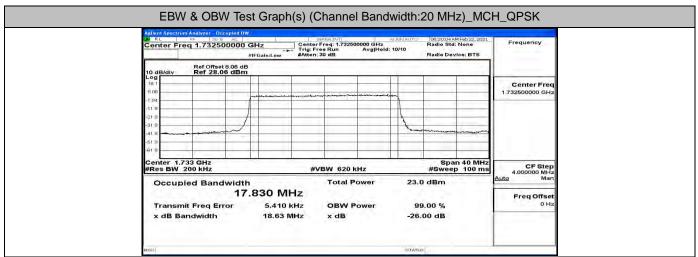


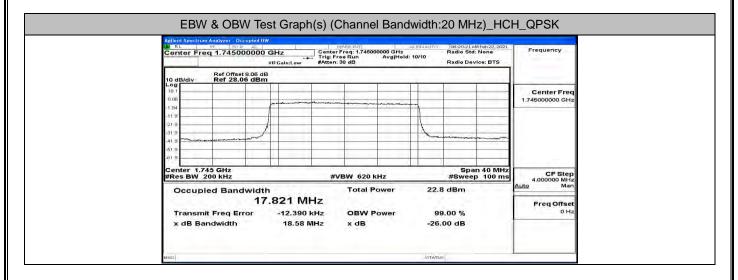


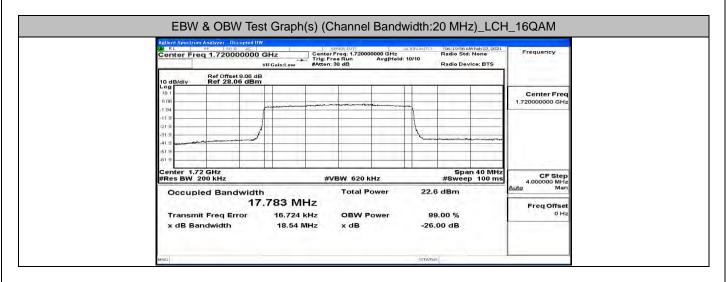


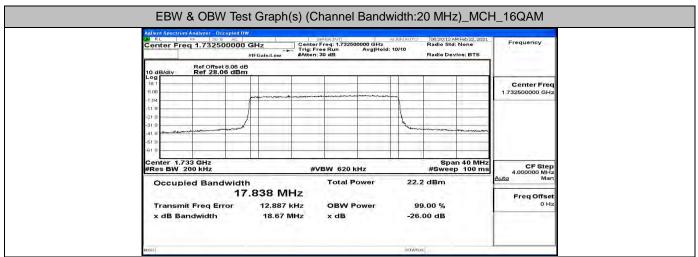


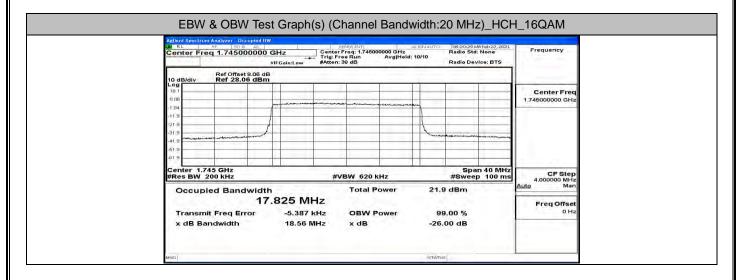




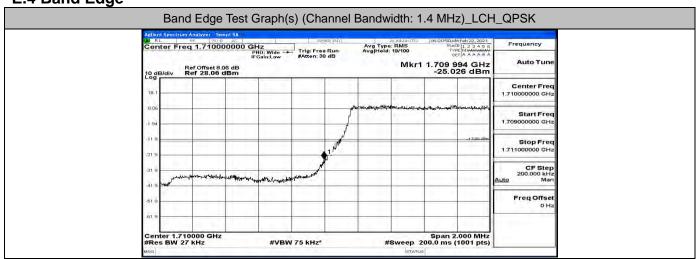


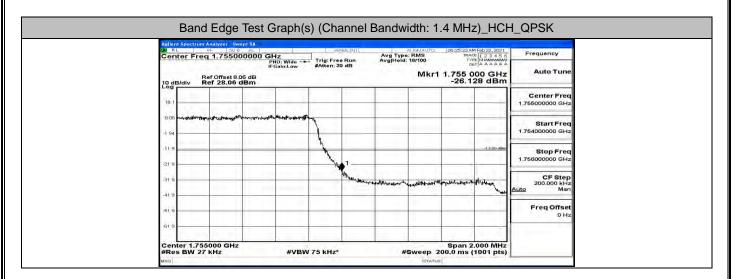


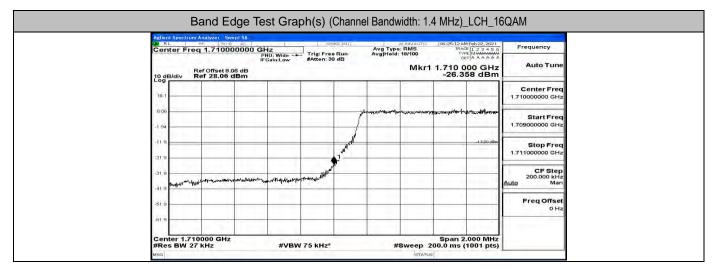


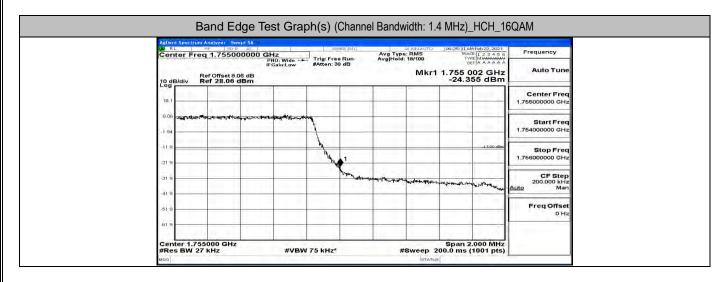


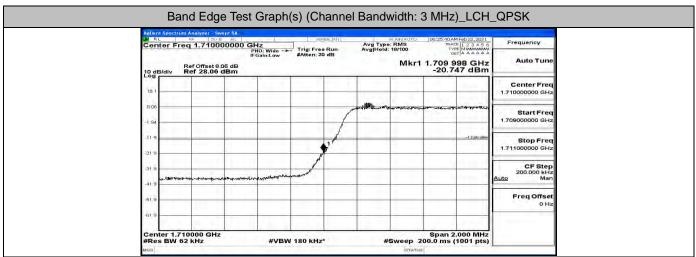
E.4 Band Edge

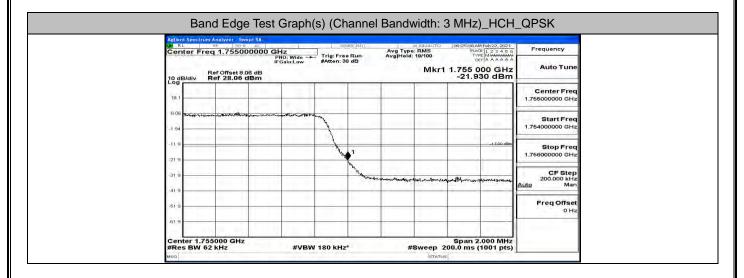


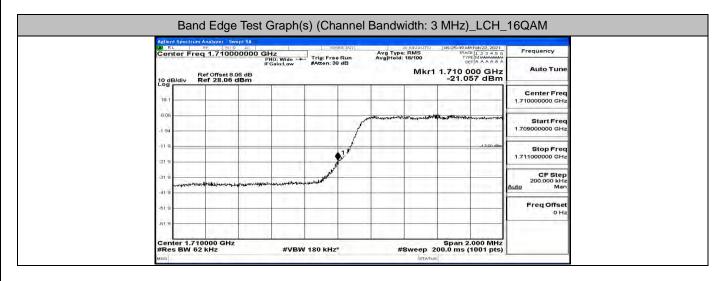


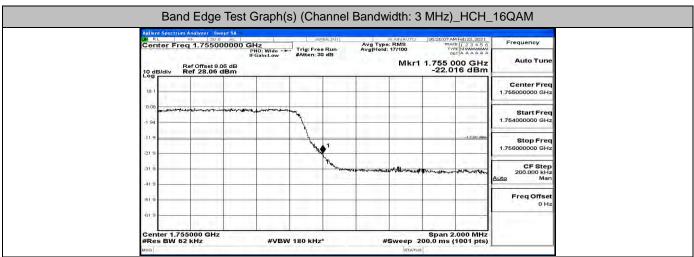


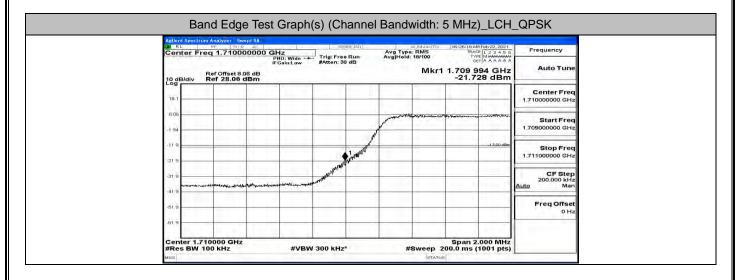


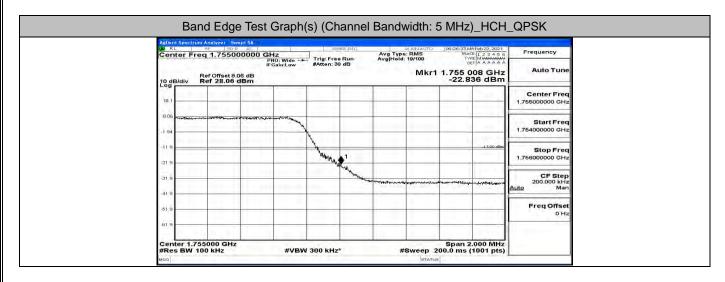


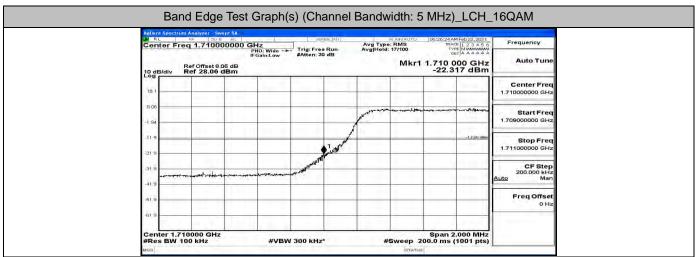


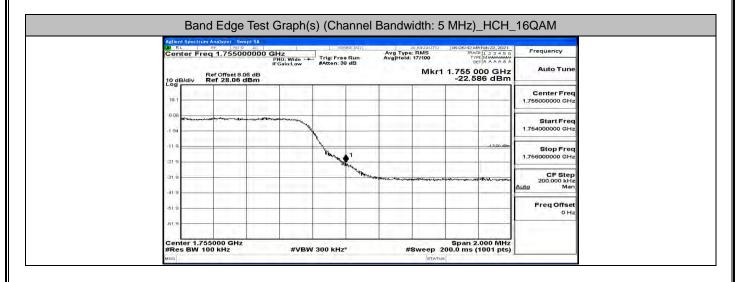


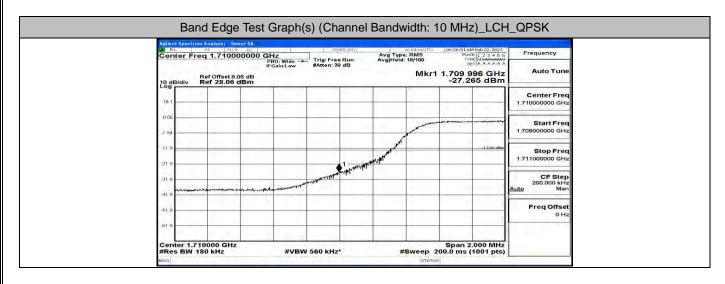


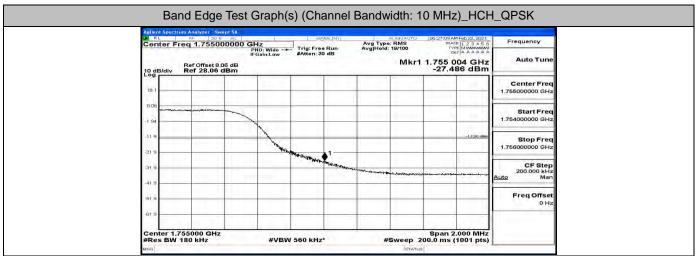


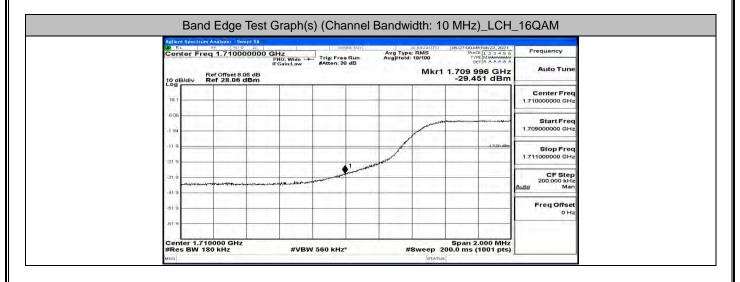


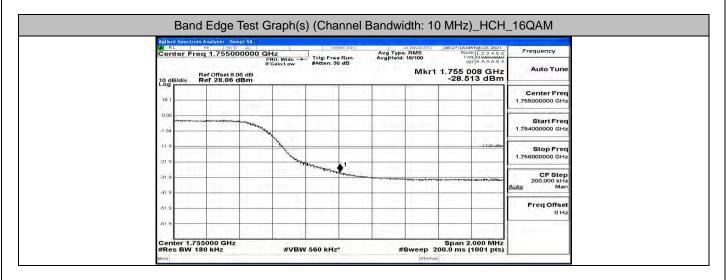


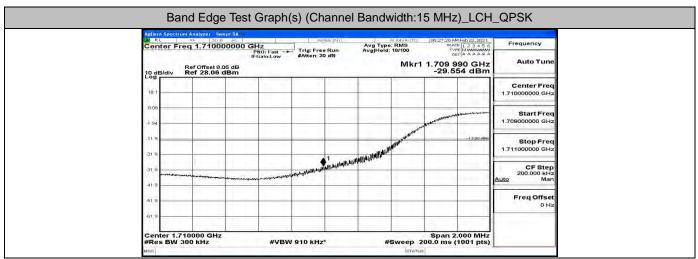


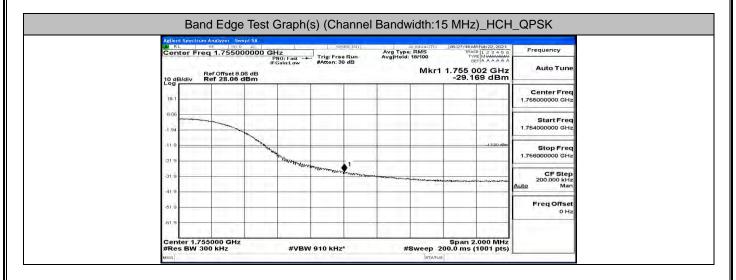


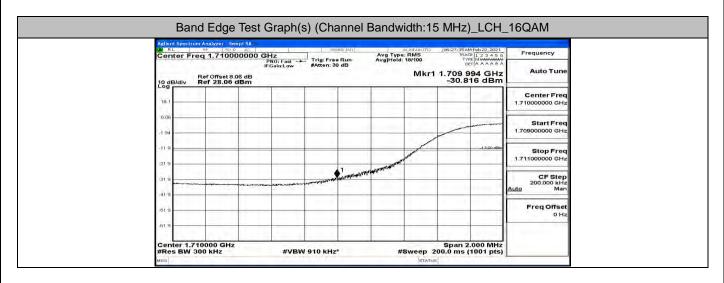


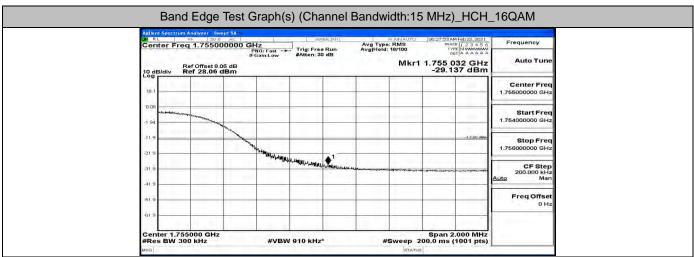


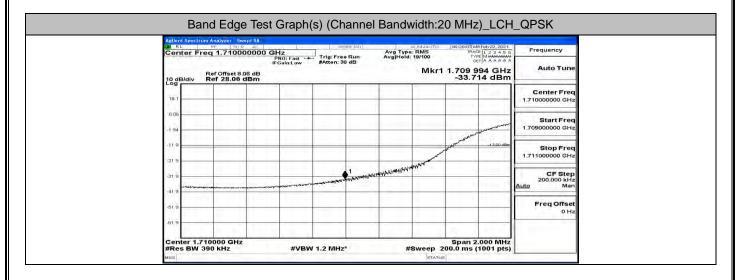


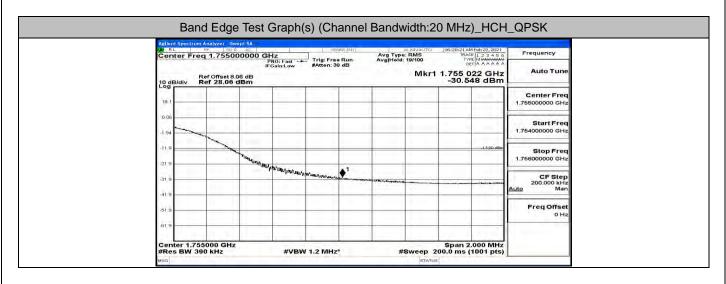


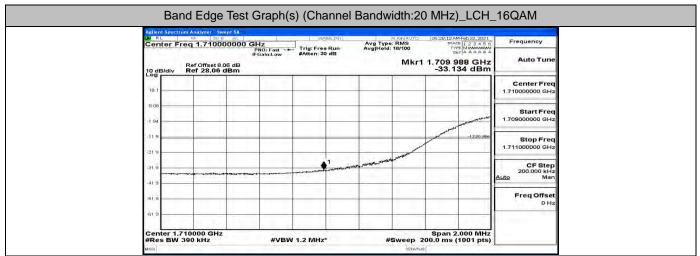


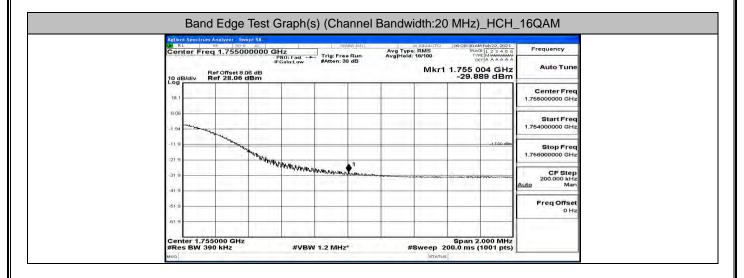






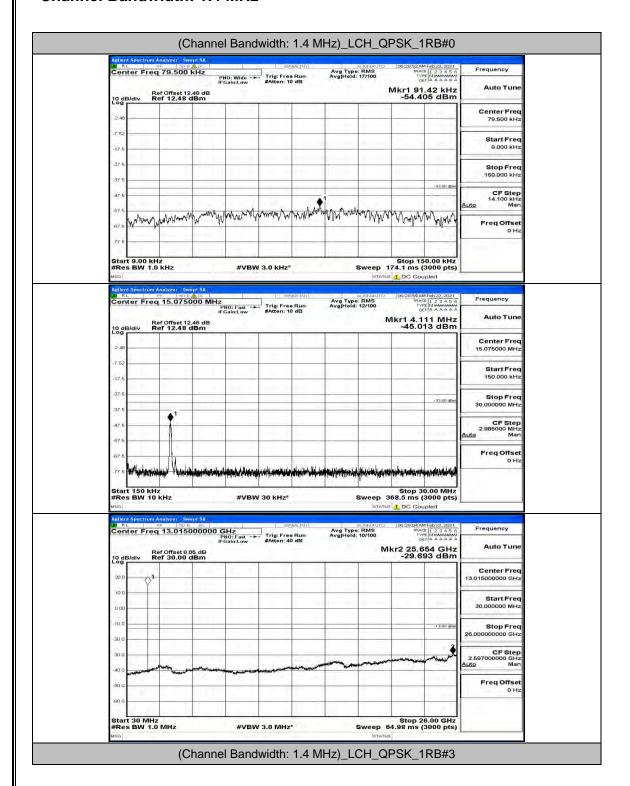


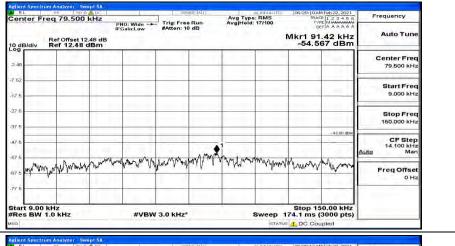


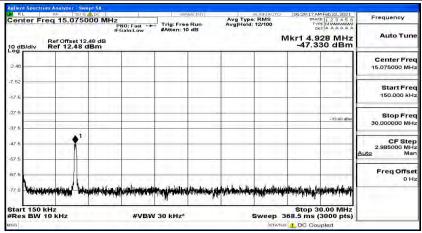


E.5 Conducted Spurious Emission

Channel Bandwidth: 1.4 MHz

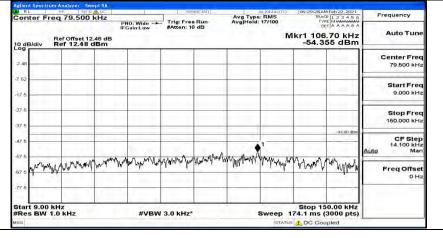


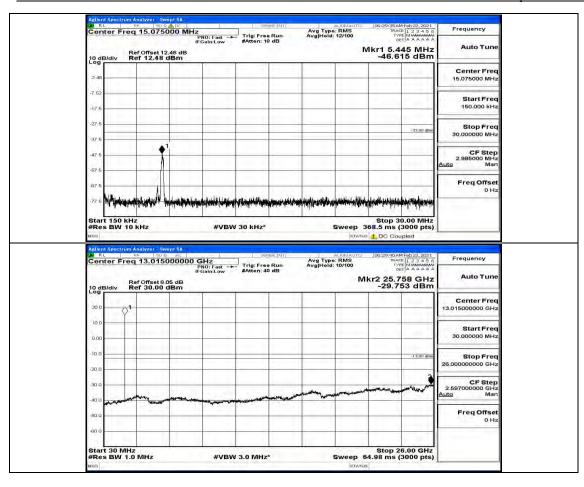


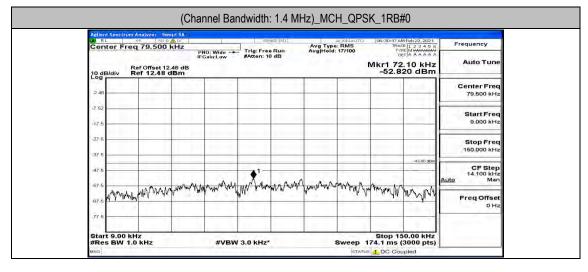








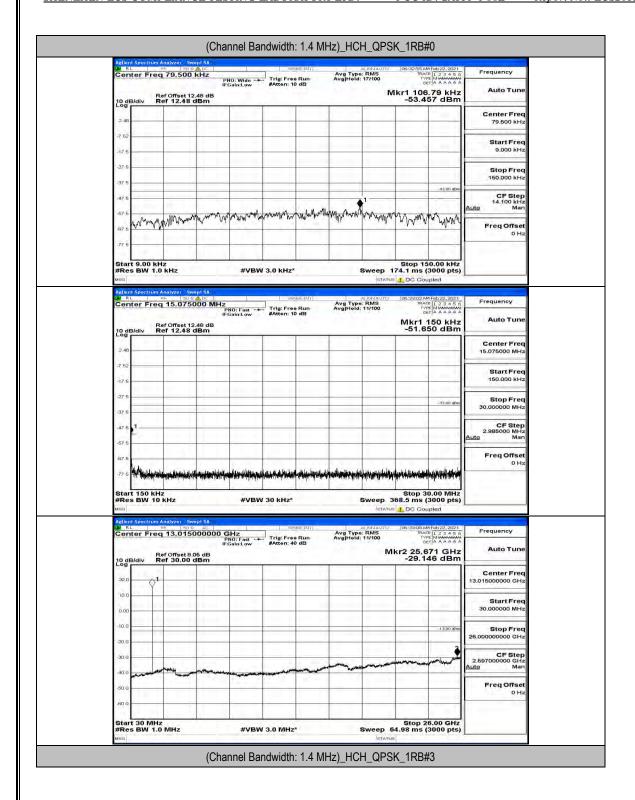


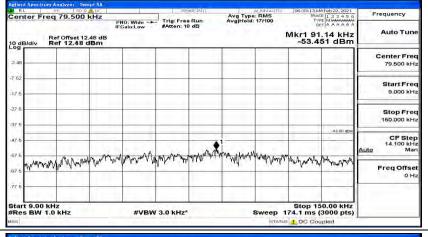


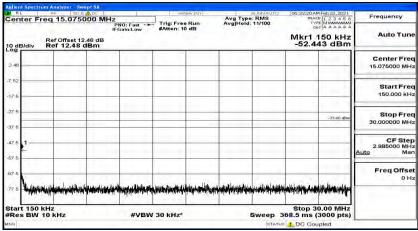
FCC ID: 2AT3F-P88L

Report No.: LCS201224064AEF

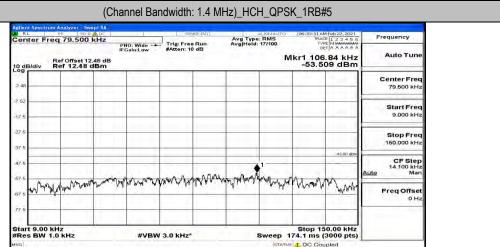
SHENZHEN LCS COMPLIANCE TESTING LABORATORY LTD.

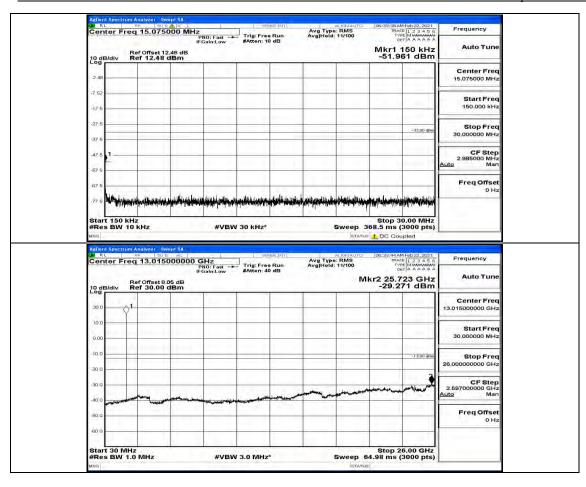


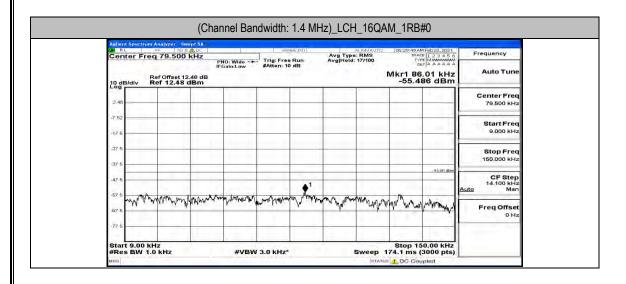


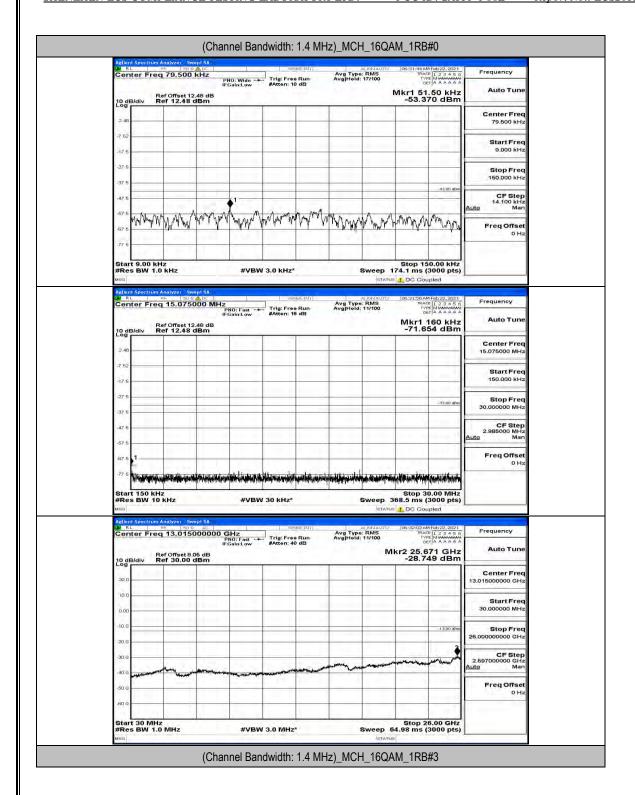


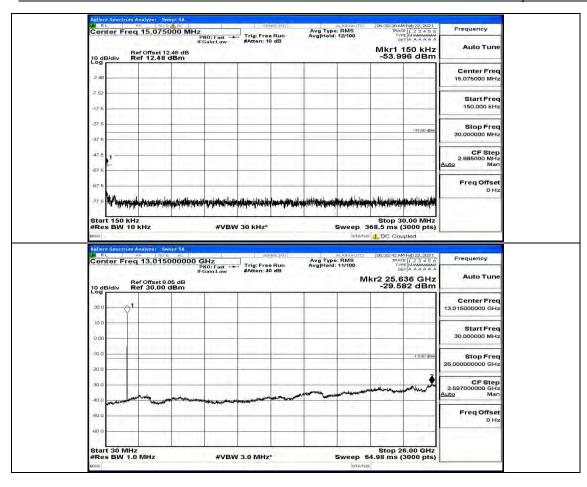


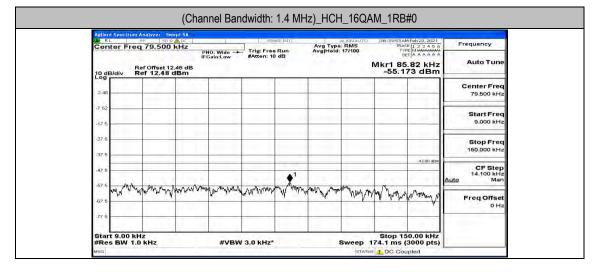








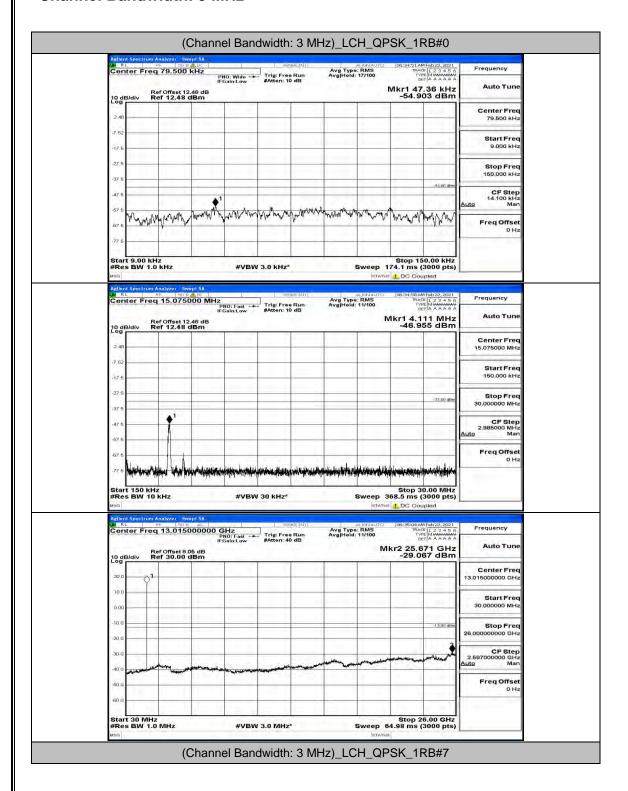


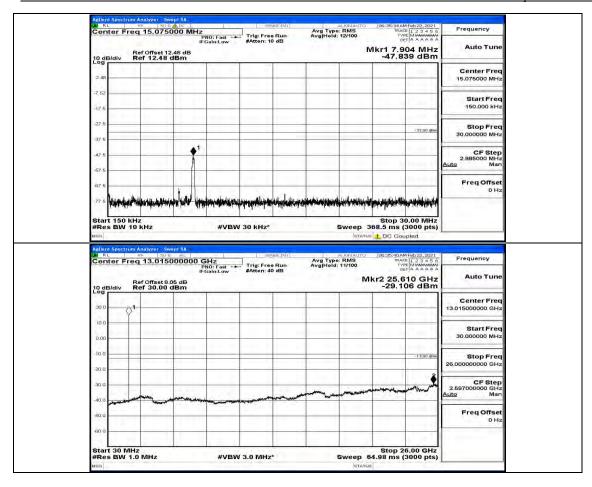


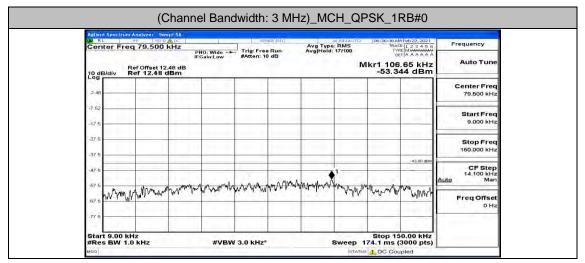
SHENZHEN LCS COMPLIANCE TESTING LABORATORY LTD. FCC ID: 2AT3F-P88L

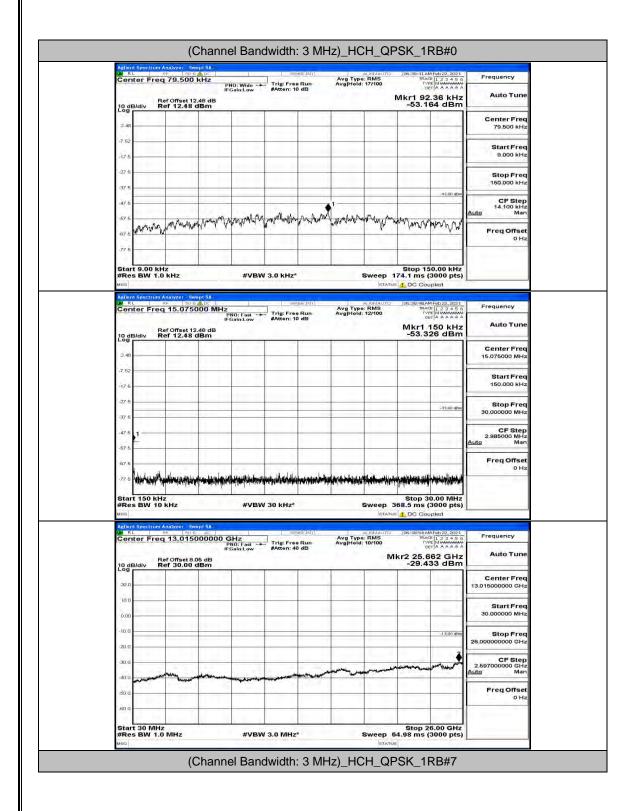
Report No.: LCS201224064AEF

Channel Bandwidth: 3 MHz





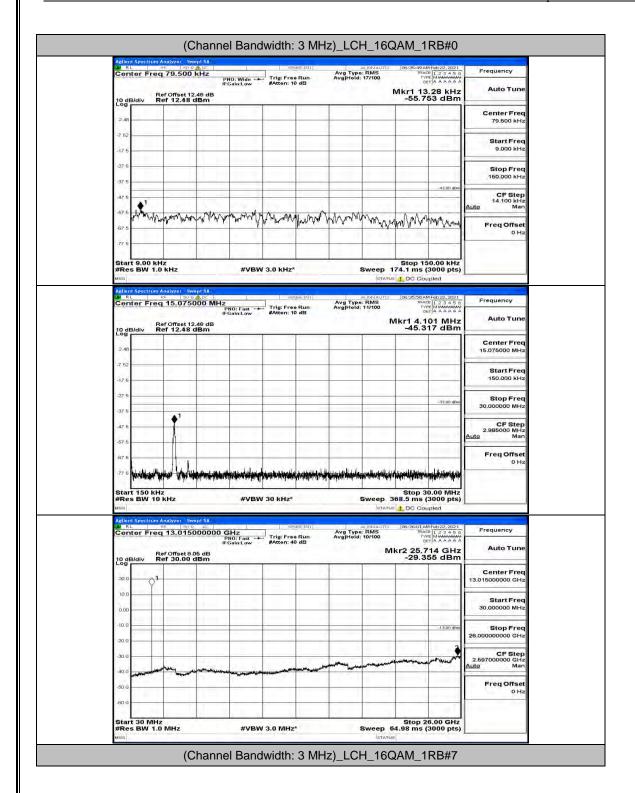




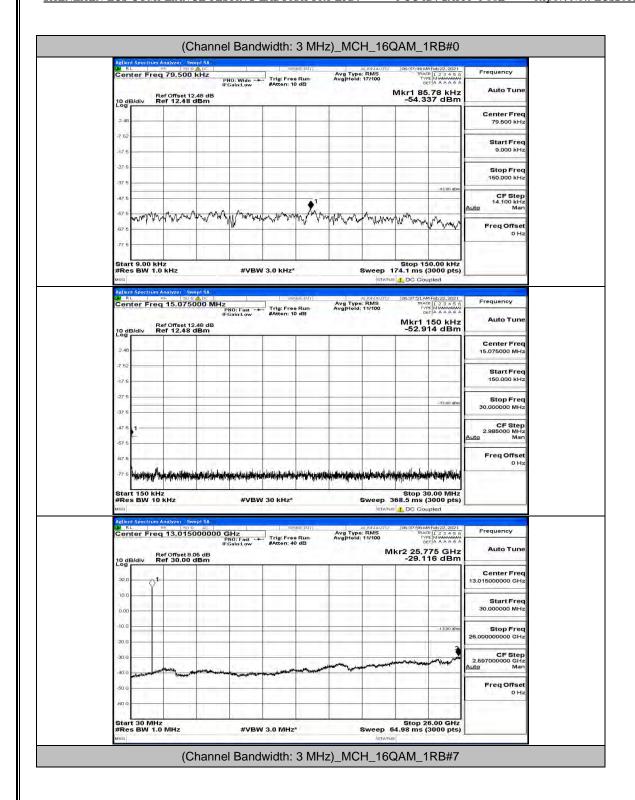
#VBW 3.0 MHz*

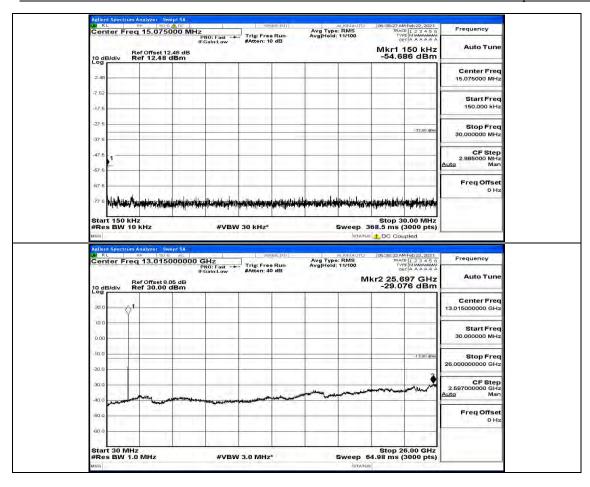
Start 30 MHz #Res BW 1.0 MHz Freq Offset 0 Hz

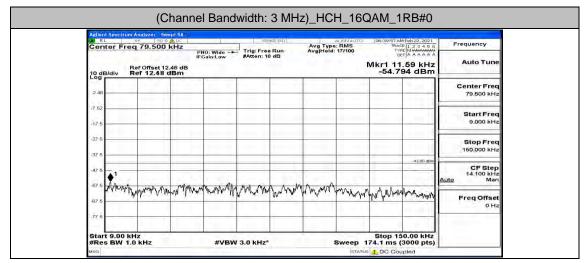
Stop 26.00 GHz Sweep 64.98 ms (3000 pts)











Channel Bandwidth: 5 MHz

