# Appendix H: Test Data for E-UTRA Band 4

**Product Name: Smart Phone Trade Mark: HYUNDAI Test Model: Eternity P7** 

#### **Environmental Conditions**

Temperature:	22.5°C
Relative Humidity:	51.8%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Tom.Liu

#### **H.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	23.94	23.06	PASS		
		1	3	24.15	23.34	PASS		
		1	5	24.02	23.17	PASS		
	LCH	3	0	24.02	23.03	PASS		
		3	2	24.11	23.10	PASS		
		3	3	24.05	23.04	PASS		
		6	0	23.17	22.07	PASS		
		1	0	22.14	21.41	PASS		
	МСН	1	3	22.26	21.57	PASS		
QPSK /		1	5	22.13	21.42	PASS		
16QAM		3	0	22.22	21.14	PASS		
TOQAIVI		3	2	22.18	21.17	PASS		
		3	3	22.19	21.12	PASS		
		6	0	21.27	20.18	PASS		
		1	0	24.14	23.19	PASS		
		1	3	24.24	23.32	PASS		
		1	5	24.02	23.09	PASS		
	HCH	3	0	24.09	23.04	PASS		
		3	2	24.14	23.04	PASS		
		3	3	24.06	23.00	PASS		
		6	0	23.33	22.26	PASS		

	Conducted Output Power Test Result (Channel Bandwidth: 3 MHz)								
Modulation	Channal	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	Vardiat			
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict			
		1	0	23.95	23.15	PASS			
		1	7	24.26	23.45	PASS			
		1	14	23.98	23.31	PASS			
	LCH	8	0	23.12	22.12	PASS			
		8	4	23.18	22.23	PASS			
		8	7	23.19	22.15	PASS			
		15	0	23.11	22.00	PASS			
		1	0	22.11	21.12	PASS			
	МСН	1	7	22.21	21.16	PASS			
QPSK /		1	14	21.83	21.23	PASS			
16QAM		8	0	20.72	19.91	PASS			
TOQAW		8	4	21.05	20.02	PASS			
		8	7	21.00	20.03	PASS			
		15	0	20.86	20.01	PASS			
		1	0	23.82	23.04	PASS			
		1	7	23.97	23.10	PASS			
		1	14	23.55	22.74	PASS			
	HCH	8	0	23.28	22.12	PASS			
		8	4	23.02	22.08	PASS			
		8	7	22.78	21.95	PASS			
		15	0	22.86	22.01	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	23.53	22.73	PASS		
		1	12	24.01	23.08	PASS		
		1	24	23.68	22.86	PASS		
	LCH	12	0	22.67	21.71	PASS		
		12	6	22.74	21.75	PASS		
		12	13	22.65	21.65	PASS		
		25	0	22.67	21.67	PASS		
	МСН	1	0	21.58	20.89	PASS		
		1	12	21.88	21.12	PASS		
QPSK /		1	24	21.61	20.94	PASS		
16QAM		12	0	20.60	19.66	PASS		
TOQAIVI		12	6	20.68	19.76	PASS		
		12	13	20.74	19.82	PASS		
		25	0	20.67	19.70	PASS		
		1	0	23.82	22.71	PASS		
		1	12	24.13	22.87	PASS		
		1	24	23.52	22.35	PASS		
	HCH	12	0	22.82	21.80	PASS		
		12	6	22.79	21.75	PASS		
		12	13	22.56	21.52	PASS		
		25	0	22.74	21.68	PASS		

	Conducted Output Power Test Result (Channel Bandwidth: 10 MHz)								
Madulation	Channal	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	Vandiat			
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict			
		1	0	23.53	22.74	PASS			
		1	24	23.80	22.97	PASS			
		1	49	22.64	22.44	PASS			
	LCH	25	0	22.85	21.83	PASS			
		25	12	22.74	21.70	PASS			
		25	25	22.50	21.45	PASS			
		50	0	22.65	21.62	PASS			
		1	0	21.80	21.04	PASS			
	МСН	1	24	21.71	20.95	PASS			
ODCK /		1	49	21.87	21.15	PASS			
QPSK / 16QAM		25	0	20.63	19.60	PASS			
TOQAW		25	12	20.71	19.68	PASS			
		25	25	20.95	19.92	PASS			
		50	0	20.76	19.79	PASS			
		1	0	23.42	22.78	PASS			
		1	24	24.03	23.27	PASS			
		1	49	23.57	22.75	PASS			
	HCH	25	0	22.85	21.89	PASS			
		25	12	22.90	21.87	PASS			
		25	25	22.73	21.69	PASS			
		50	0	22.76	21.78	PASS			

Conducted Output Power Test Result (Channel Bandwidth: 15 MHz)								
Madulation	Channal	RB Conf	figuration	Average Power [dBm]	Average Power [dBm]	\/a ==li =4		
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict		
		1	0	23.42	22.65	PASS		
		1	37	23.24	22.78	PASS		
		1	74	21.84	21.46	PASS		
	LCH	37	0	22.89	21.77	PASS		
		37	18	22.67	21.54	PASS		
		37	38	22.15	21.00	PASS		
		75	0	22.51	21.47	PASS		
		1	0	21.78	21.18	PASS		
	мсн	1	37	22.29	20.96	PASS		
ODCK /		1	74	22.12	21.37	PASS		
QPSK / 16QAM		37	0	20.78	19.68	PASS		
IOQAIVI		37	18	20.80	19.68	PASS		
		37	38	21.04	19.97	PASS		
		75	0	20.94	19.87	PASS		
		1	0	22.46	21.72	PASS		
		1	37	23.88	23.12	PASS		
		1	74	23.50	22.61	PASS		
	HCH	37	0	22.30	21.24	PASS		
		37	18	22.77	21.71	PASS		
		37	38	22.90	21.80	PASS		
		75	0	22.60	21.50	PASS		

	Conducted Output Power Test Result (Channel Bandwidth: 20 MHz)								
Madulation	Channal	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	\/a ==li =4			
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict			
		1	0	23.36	22.51	PASS			
		1	49	22.60	22.49	PASS			
		1	99	21.82	20.64	PASS			
	LCH	50	0	22.70	21.70	PASS			
		50	25	22.19	21.12	PASS			
		50	50	21.47	20.39	PASS			
		100	0	22.16	21.13	PASS			
	МСН	1	0	21.78	21.41	PASS			
		1	49	22.37	20.94	PASS			
QPSK /		1	99	22.45	21.62	PASS			
16QAM		50	0	20.64	19.62	PASS			
TOQAW		50	25	20.76	19.70	PASS			
		50	50	21.14	20.14	PASS			
		100	0	20.93	19.92	PASS			
		1	0	21.58	20.90	PASS			
		1	49	23.55	22.81	PASS			
		1	99	23.39	22.57	PASS			
	HCH	50	0	21.55	20.57	PASS			
		50	25	22.32	21.29	PASS			
		50	50	22.56	21.59	PASS			
		100	0	22.01	21.03	PASS			

### H.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	4.52	<13	PASS			
QPSK	MCH	4.67	<13	PASS			
	HCH	4.01	<13	PASS			
	LCH	5.39	<13	PASS			
16QAM	MCH	5.58	<13	PASS			
	HCH	4.88	<13	PASS			

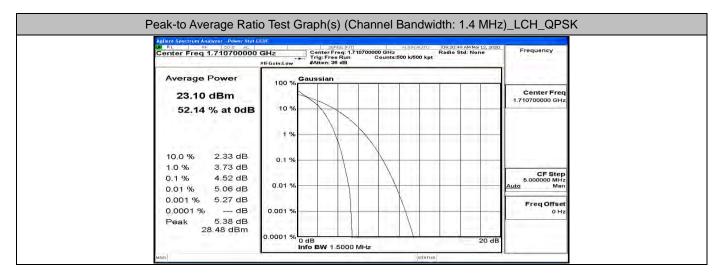
Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)						
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict		
iviodulation	Griannei	[dB]	[dB]	verdict		
	LCH	4.7	<13	PASS		
QPSK	MCH	4.9	<13	PASS		
	HCH	4.49	<13	PASS		
	LCH	5.5	<13	PASS		
16QAM	MCH	5.82	<13	PASS		
	HCH	5.19	<13	PASS		

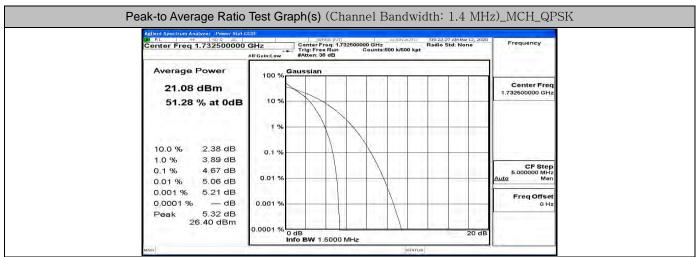
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)							
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict			
Modulation	Griannei	[dB]	[dB]	verdict			
	LCH	4.67	<13	PASS			
QPSK	MCH	4.95	<13	PASS			
	HCH	4.46	<13	PASS			
	LCH	5.42	<13	PASS			
16QAM	MCH	5.73	<13	PASS			
	HCH	5.24	<13	PASS			

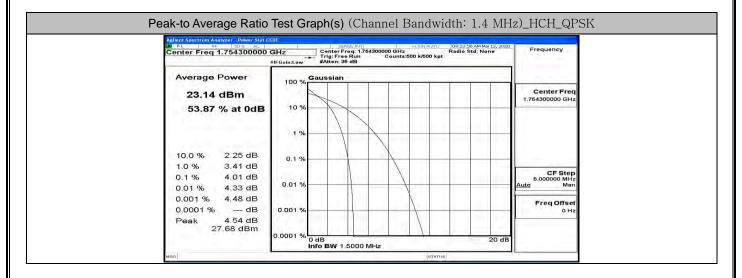
Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)						
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict		
iviodulation	Griannei	[dB]	[dB]	verdict		
	LCH	4.85	<13	PASS		
QPSK	MCH	5.13	<13	PASS		
	HCH	4.88	<13	PASS		
	LCH	5.51	<13	PASS		
16QAM	MCH	5.82	<13	PASS		
	HCH	5.61	<13	PASS		

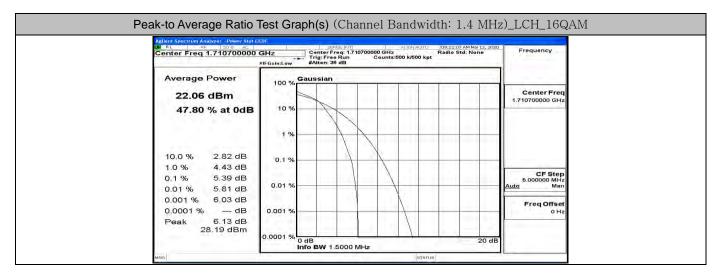
Peak-to Average Ratio Test Result (Channel Bandwidth: 15 MHz)							
Modulation	Channel	Peak-to-Average Ratio	Limit	Vordict			
Modulation	Chame	[dB]	[dB]	Verdict			
	LCH	4.91	<13	PASS			
QPSK	MCH	5.08	<13	PASS			
	HCH	4.91	<13	PASS			
	LCH	5.91	<13	PASS			
16QAM	MCH	6.09	<13	PASS			
	HCH	6.03	<13	PASS			

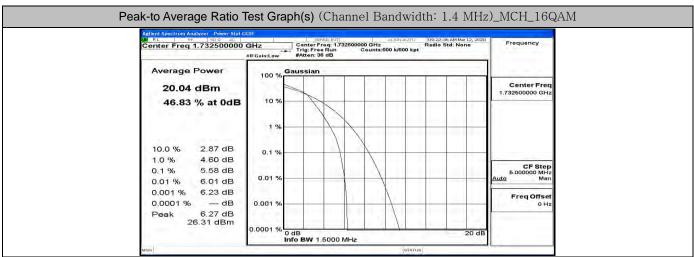
Peak-to Average Ratio Test Result (Channel Bandwidth: 20 MHz)					
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict	
		[dB]	[dB]		
QPSK	LCH	5.87	<13	PASS	
	MCH	5.8	<13	PASS	
	HCH	5.75	<13	PASS	
16QAM	LCH	6.56	<13	PASS	
	MCH	6.66	<13	PASS	
	HCH	6.6	<13	PASS	

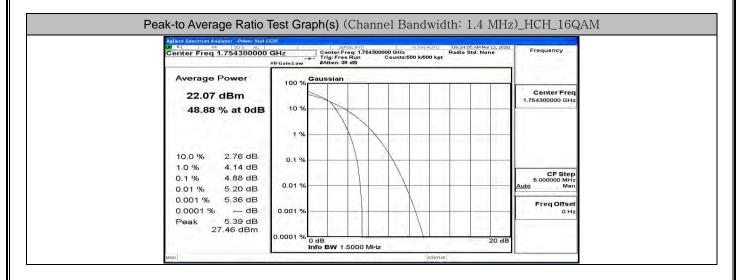


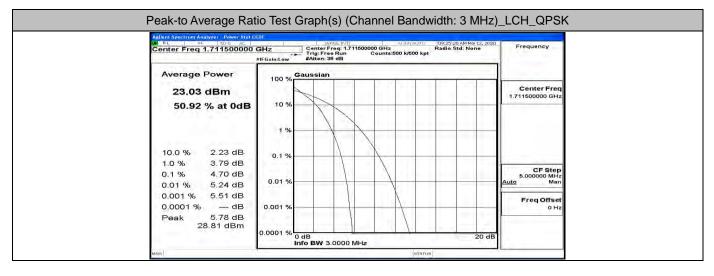


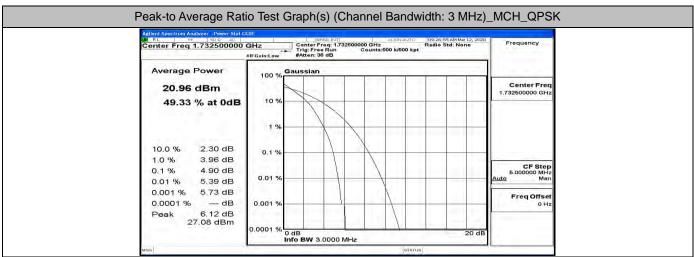


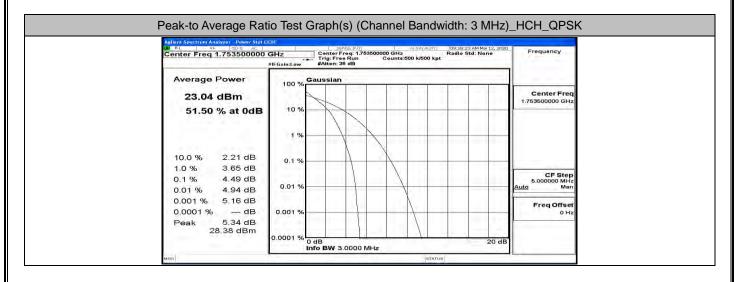


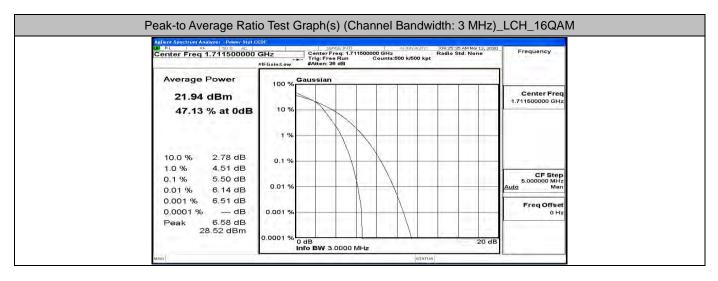


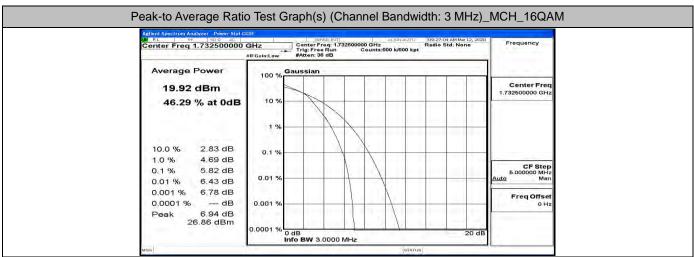


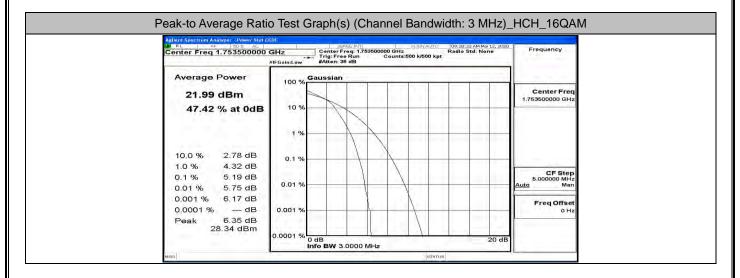


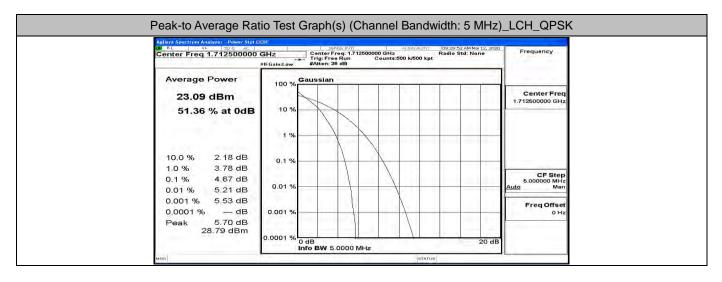


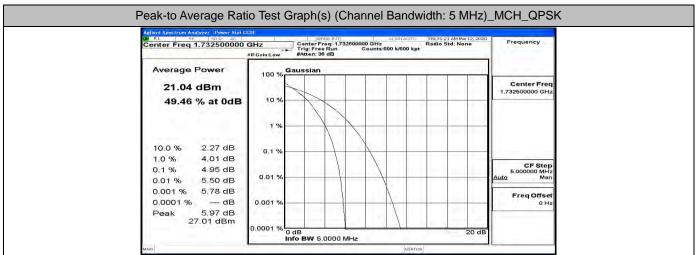


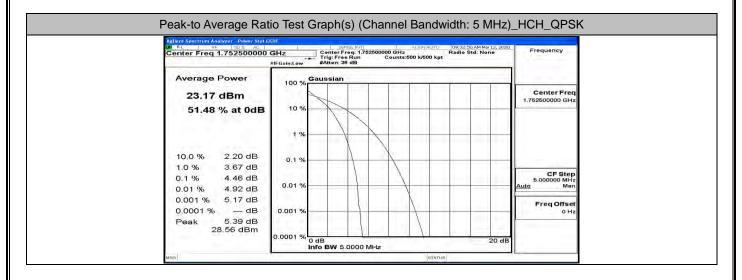


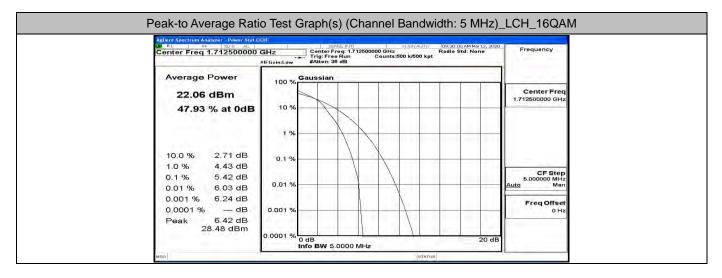


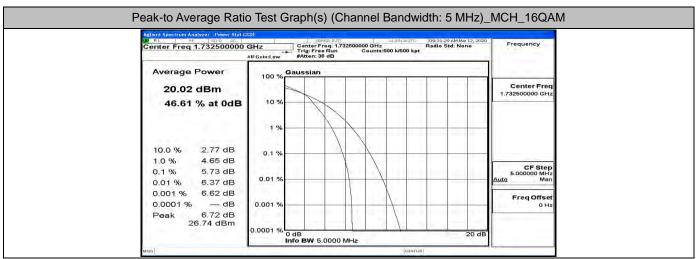


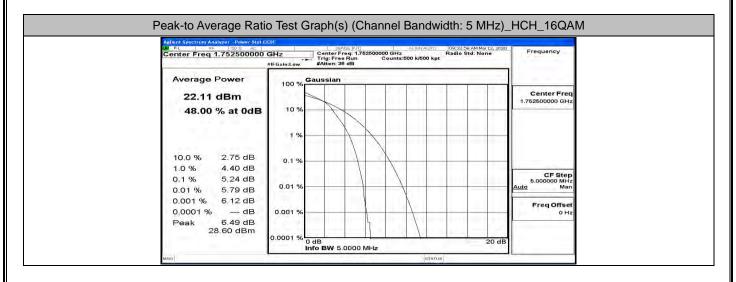


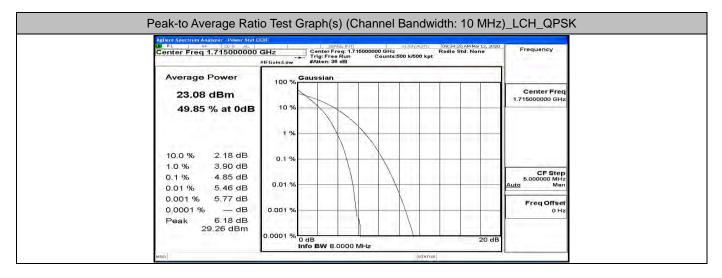


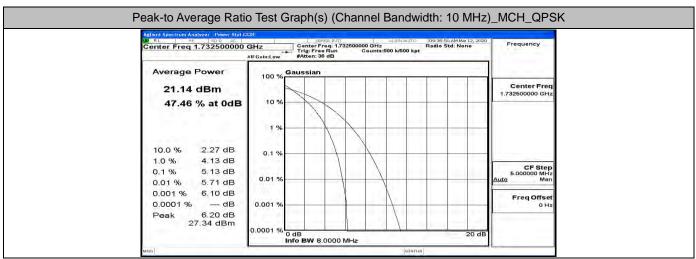


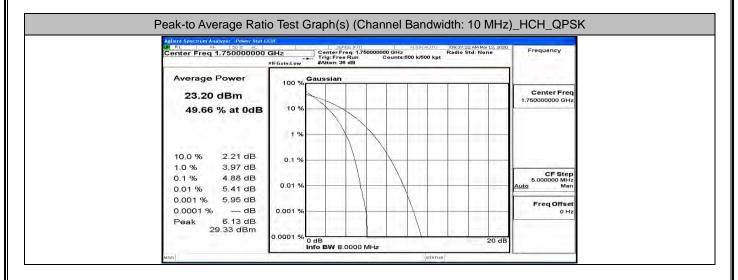


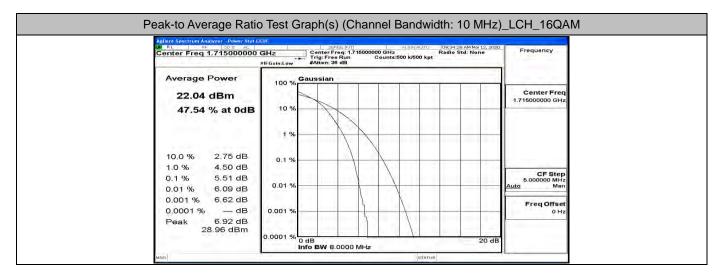


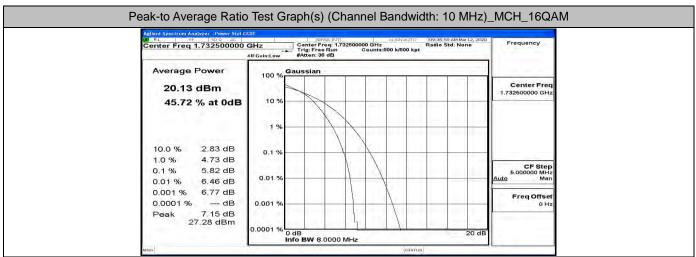


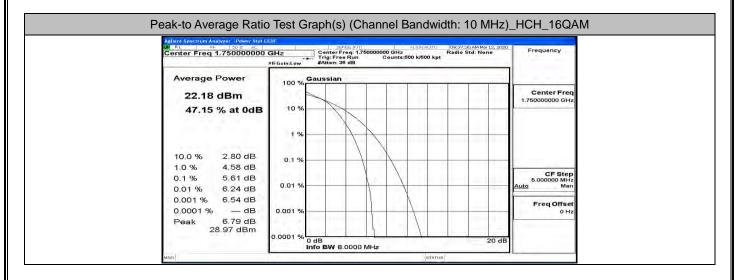


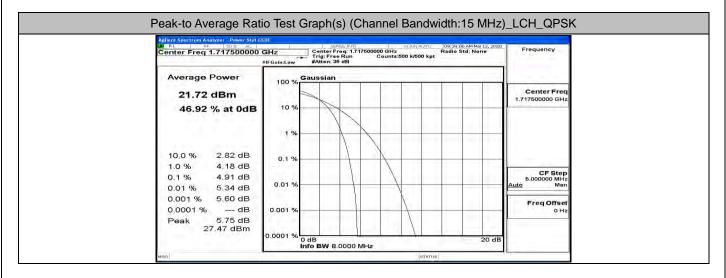


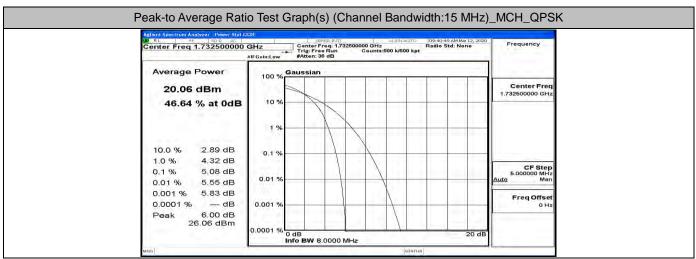


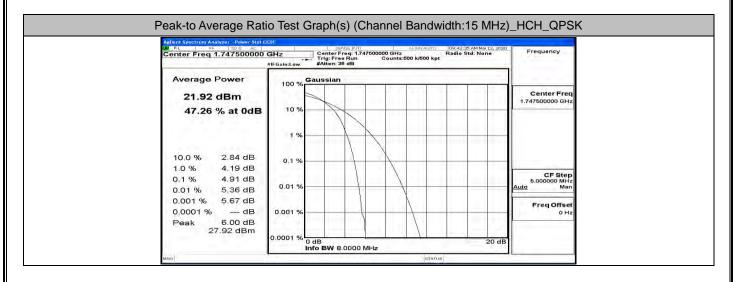


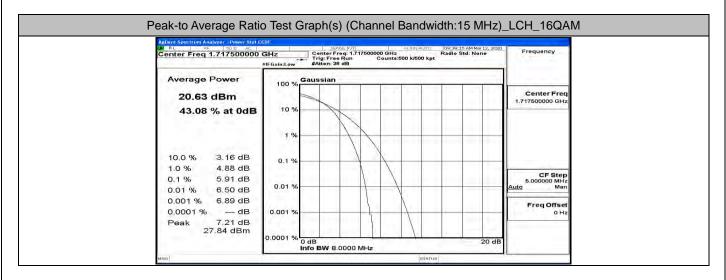


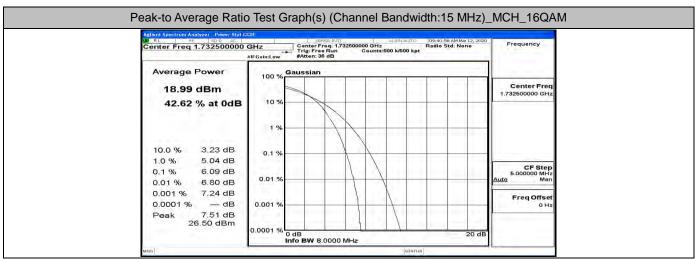


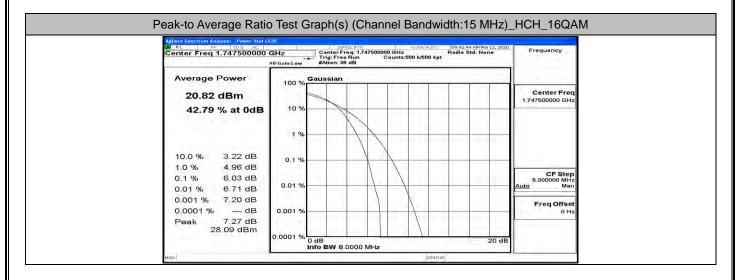


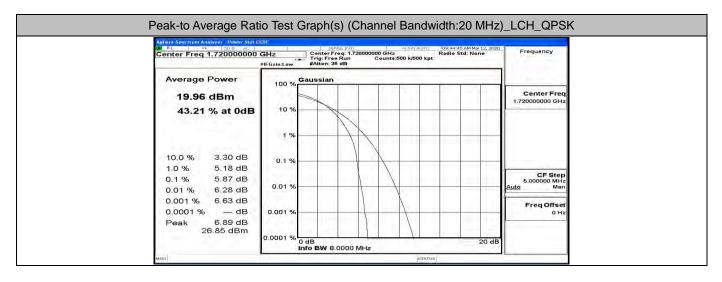


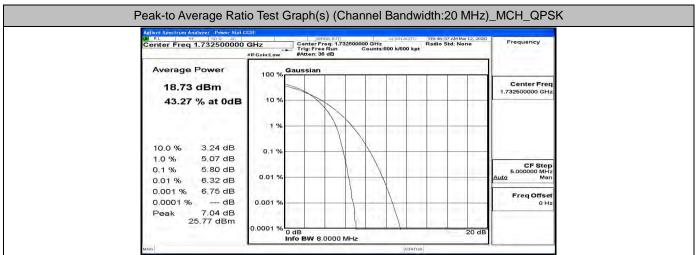


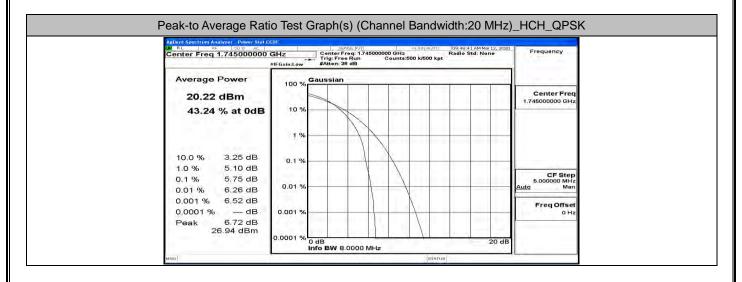


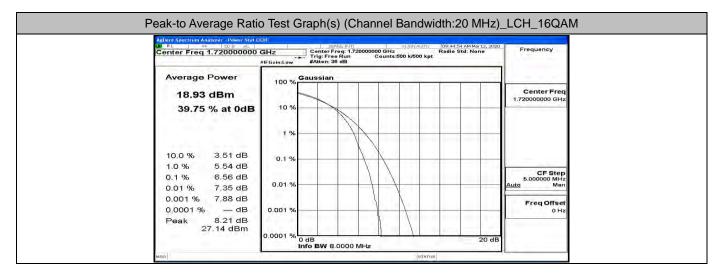


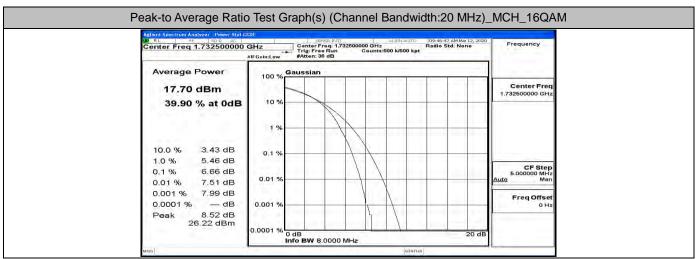


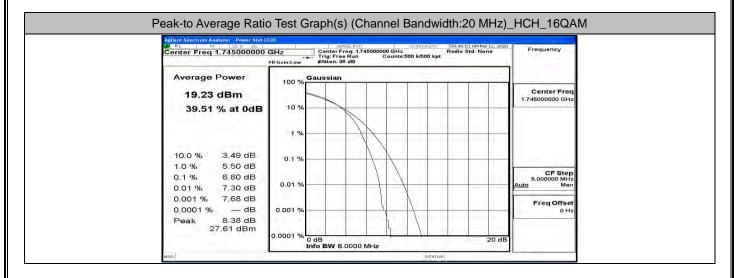












## H.3 26dB Bandwidth and Occupied Bandwidth

EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)					
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict	
		(MHz)	(MHz)		
QPSK	LCH	1.0791	1.255	PASS	
	MCH	1.0752	1.236	PASS	
	HCH	1.0796	1.267	PASS	
16QAM	LCH	1.0807	1.250	PASS	
	MCH	1.0779	1.224	PASS	
	HCH	1.0782	1.228	PASS	

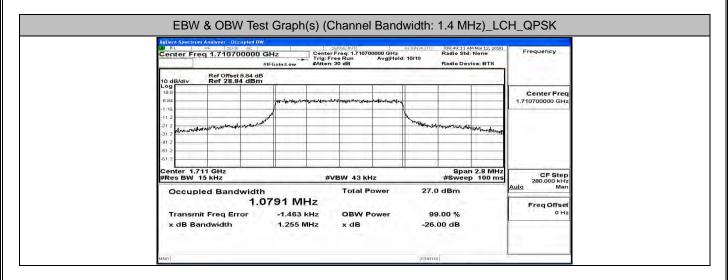
EBW & OBW Test Result (Channel Bandwidth: 3 MHz)					
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict	
		(MHz)	(MHz)		
QPSK	LCH	2.6789	2.845	PASS	
	MCH	2.6792	2.833	PASS	
	HCH	2.6815	2.836	PASS	
16QAM	LCH	2.6792	2.831	PASS	
	MCH	2.6828	2.822	PASS	
	HCH	2.6880	2.850	PASS	

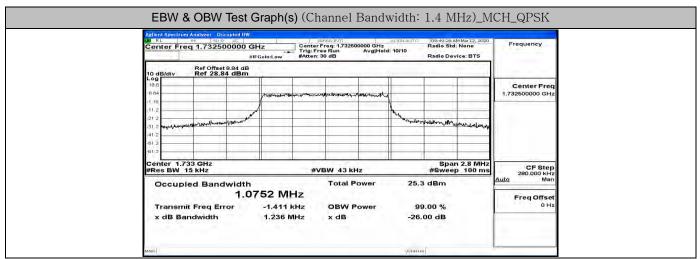
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)					
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict	
		(MHz)	(MHz)		
QPSK	LCH	4.4695	4.763	PASS	
	MCH	4.4776	4.726	PASS	
	HCH	4.4718	4.777	PASS	
16QAM	LCH	4.4789	4.743	PASS	
	MCH	4.4639	4.735	PASS	
	HCH	4.4799	4.763	PASS	

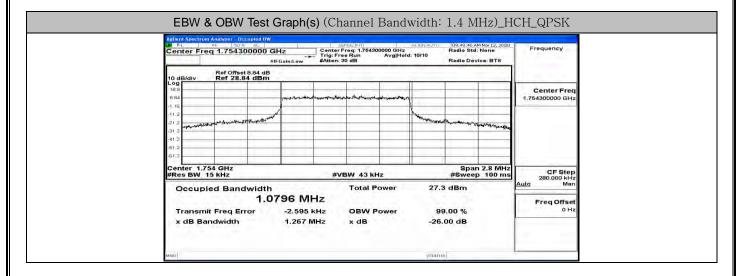
EBW & OBW Test Result (Channel Bandwidth: 10 MHz)					
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict	
Modulation		(MHz)	(MHz)		
QPSK	LCH	8.9511	9.416	PASS	
	MCH	8.9376	9.390	PASS	
	HCH	8.9258	9.391	PASS	
16QAM	LCH	8.9397	9.405	PASS	
	MCH	8.9422	9.442	PASS	
	HCH	8.9332	9.386	PASS	

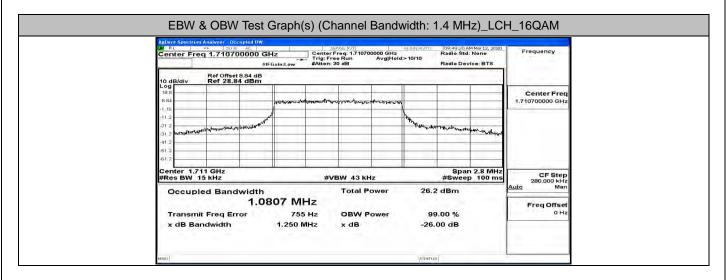
EBW & OBW Test Result (Channel Bandwidth: 15 MHz)					
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict	
		(MHz)	(MHz)		
QPSK	LCH	13.421	14.17	PASS	
	MCH	13.417	13.96	PASS	
	HCH	13.396	13.97	PASS	
16QAM	LCH	13.408	14.00	PASS	
	MCH	13.406	13.98	PASS	
	HCH	13.386	13.98	PASS	

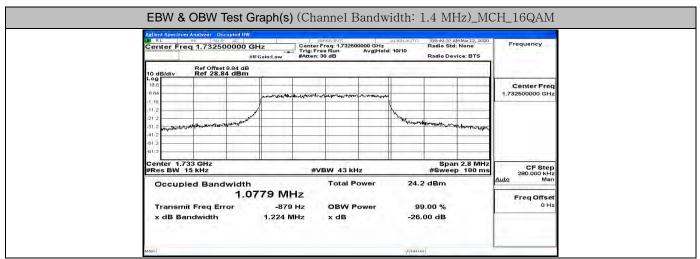
EBW & OBW Test Result (Channel Bandwidth: 20 MHz)					
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict	
		(MHz)	(MHz)		
QPSK	LCH	17.907	18.68	PASS	
	MCH	17.862	18.64	PASS	
	HCH	17.840	18.53	PASS	
16QAM	LCH	17.889	18.60	PASS	
	MCH	17.888	18.56	PASS	
	HCH	17.825	18.58	PASS	

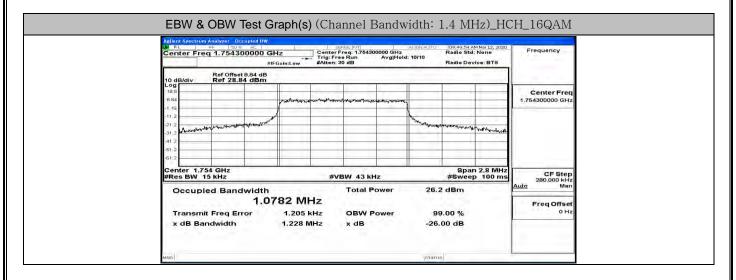


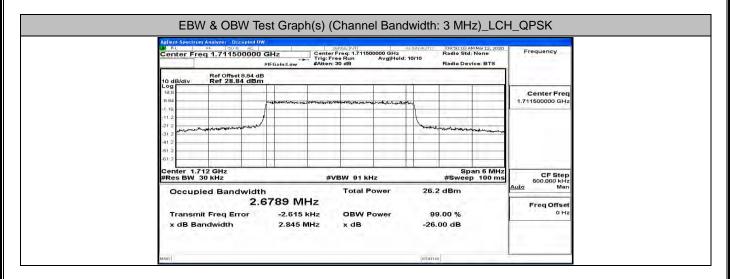


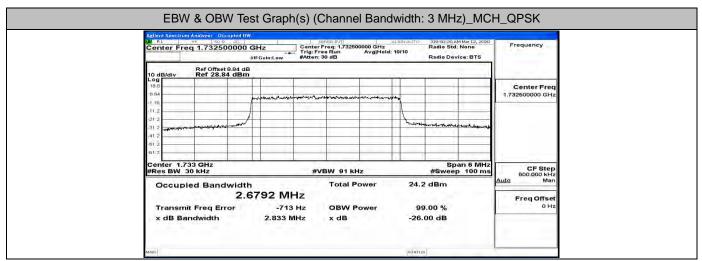


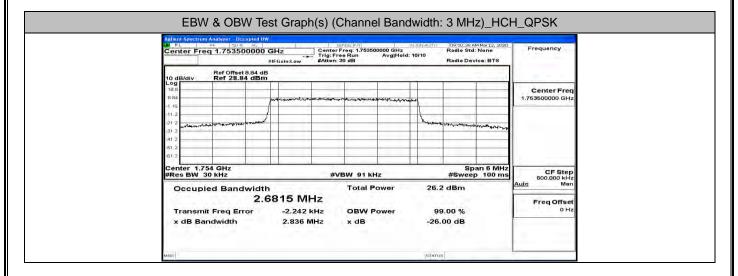


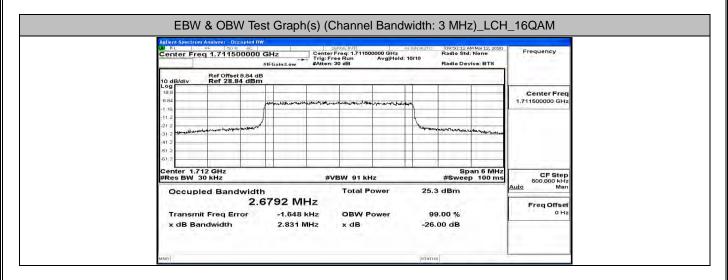


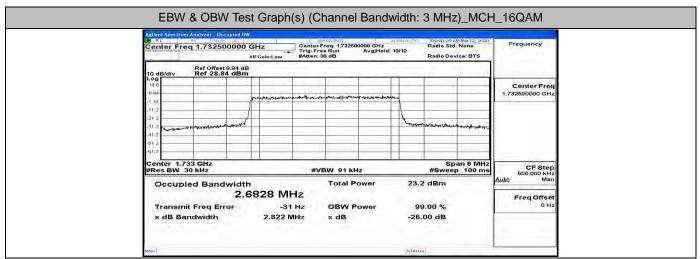


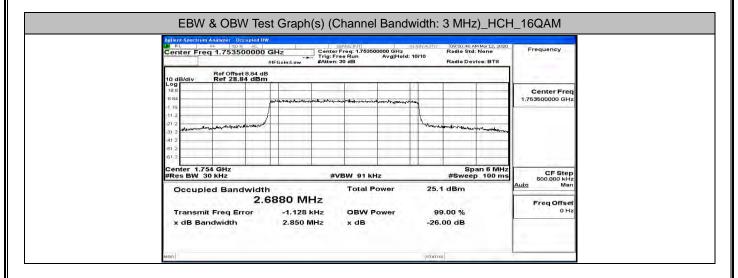


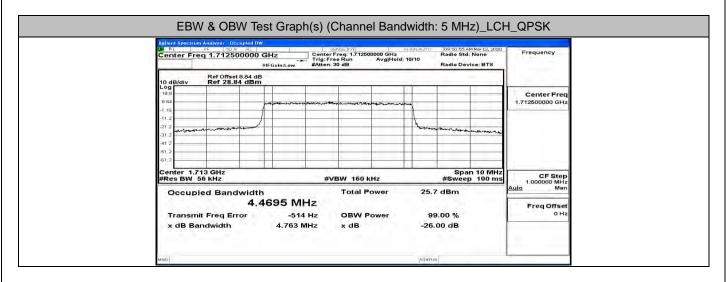


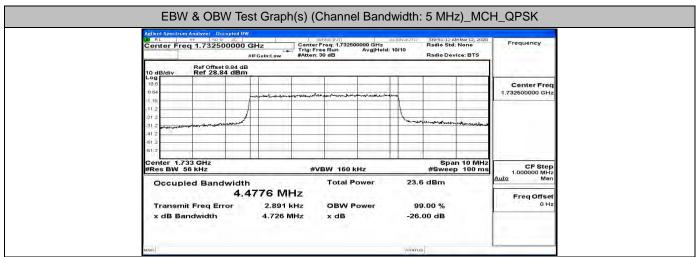


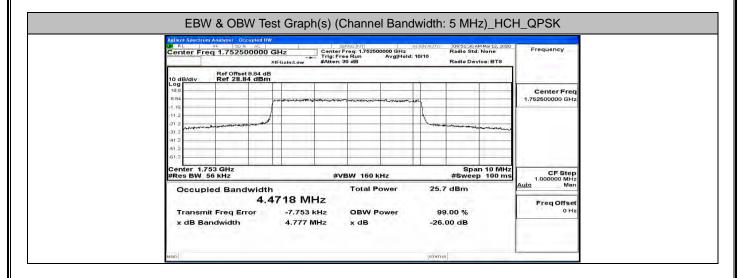


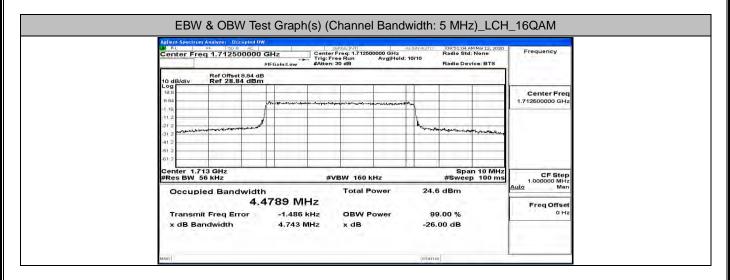


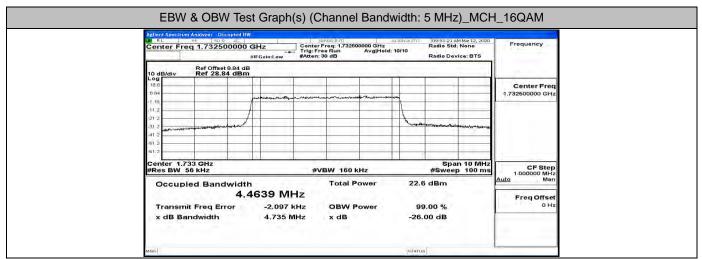


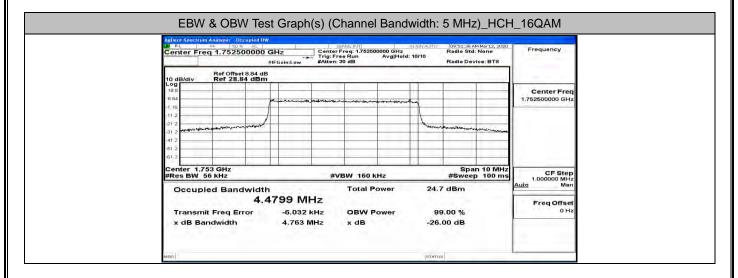


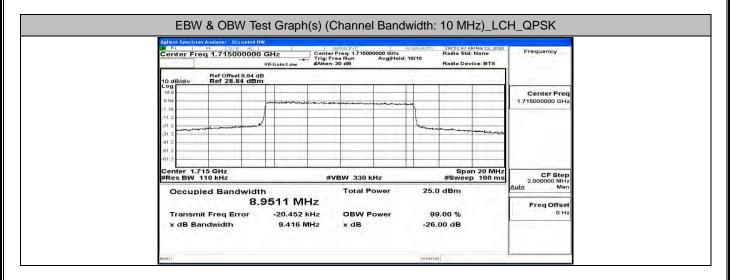


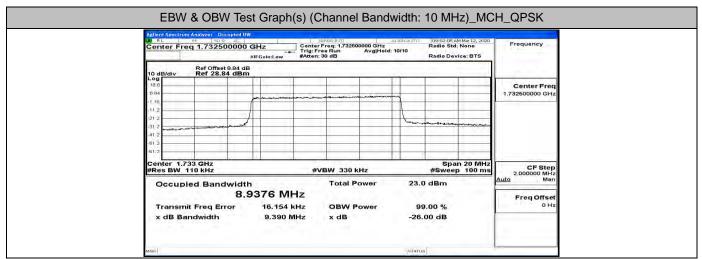


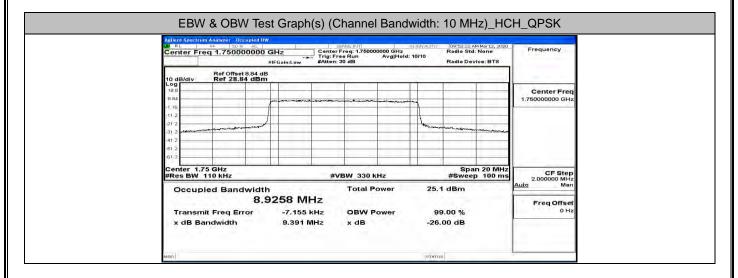


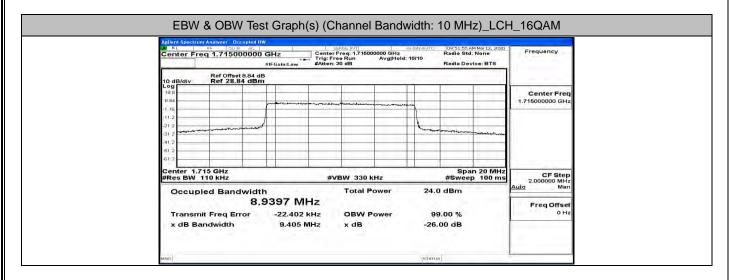


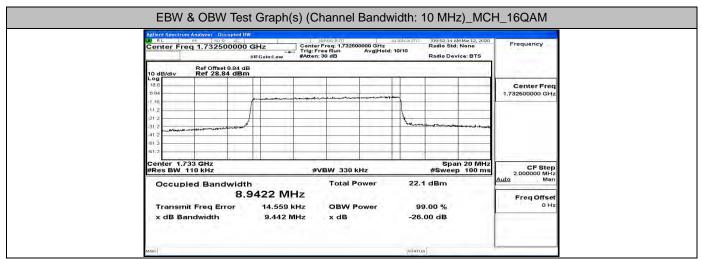


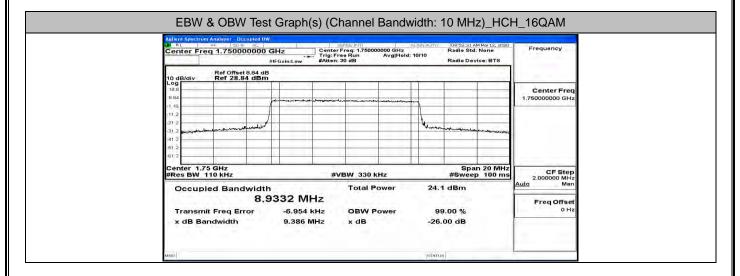


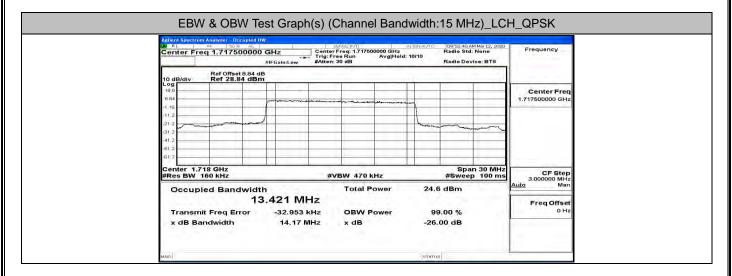


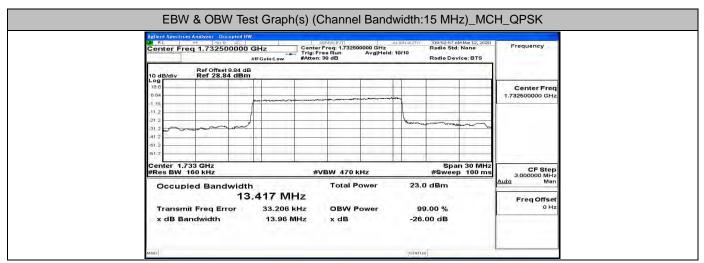


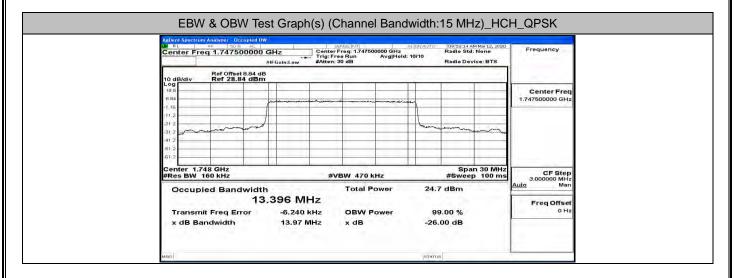


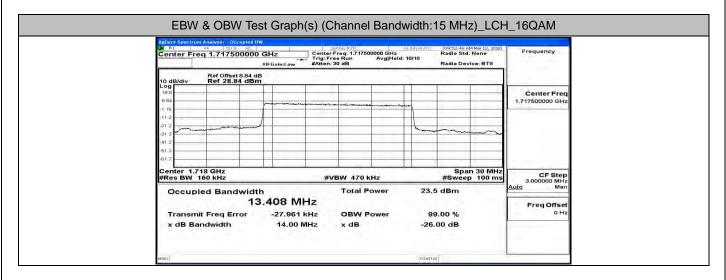


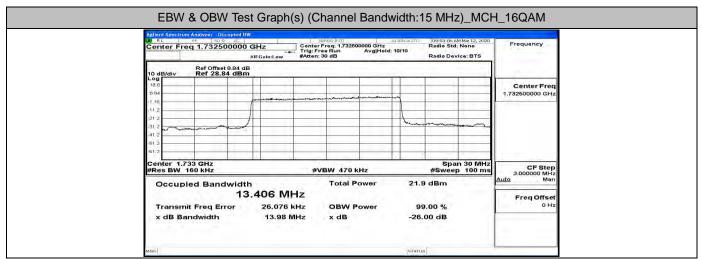


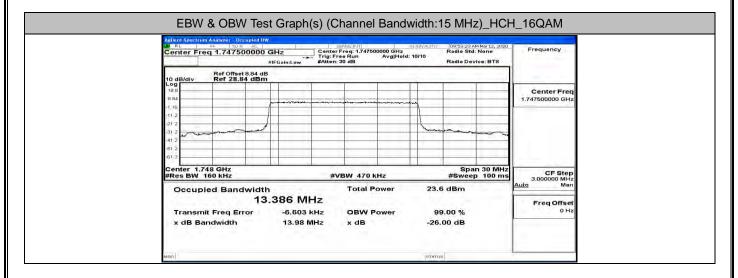


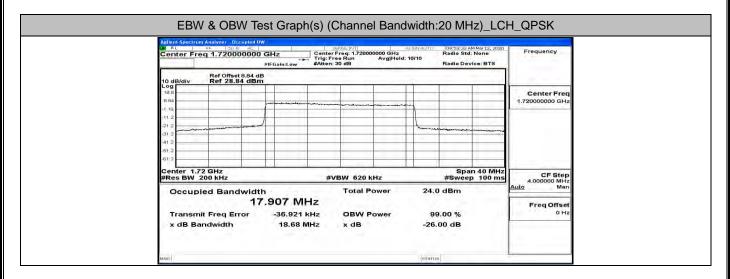


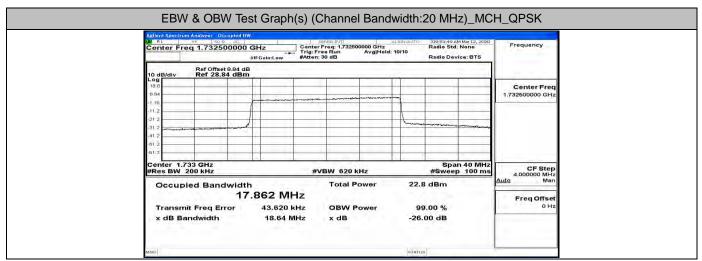


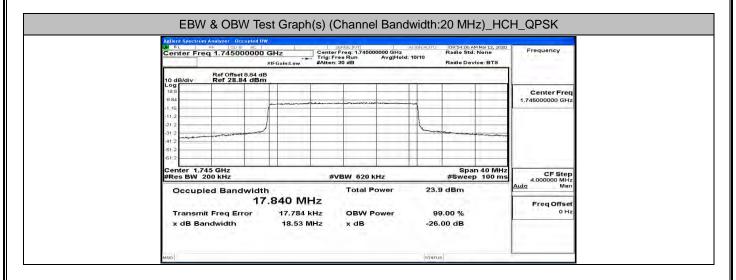


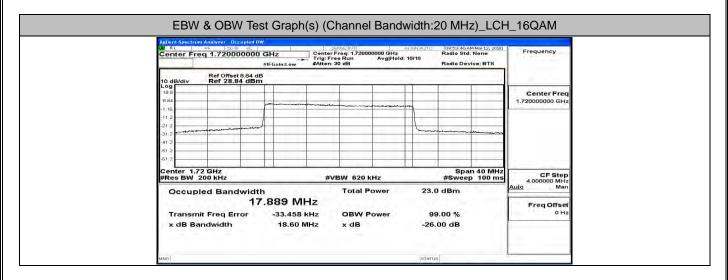


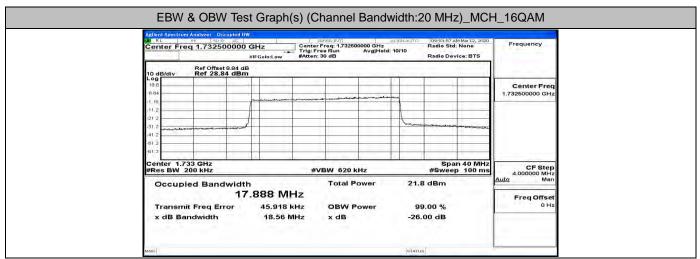


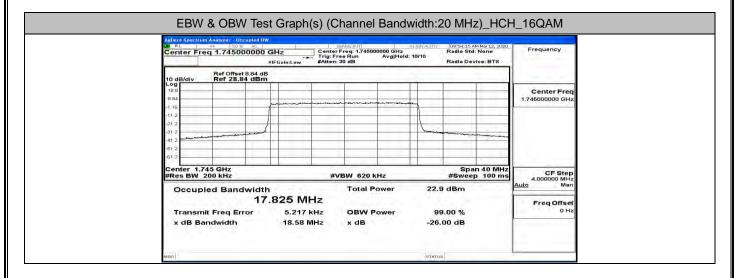




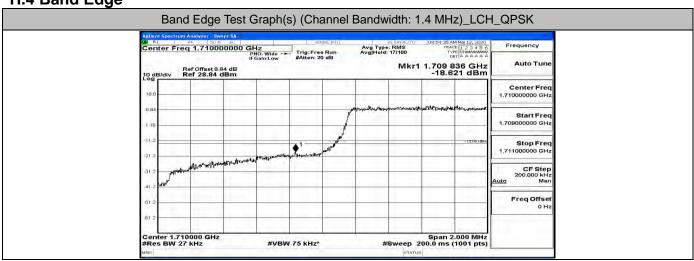


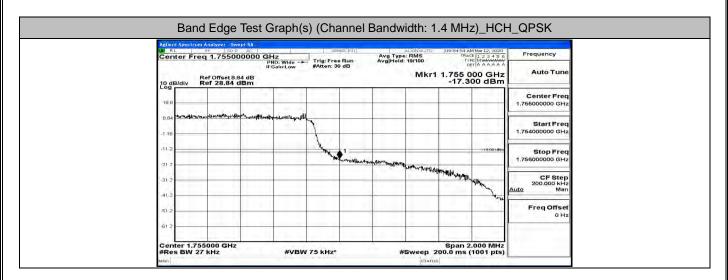


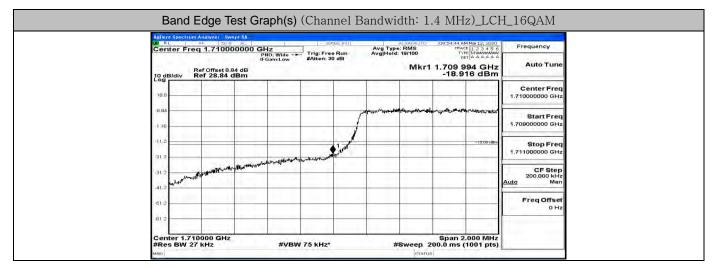


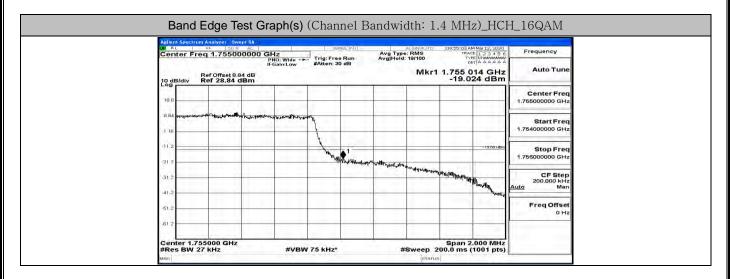


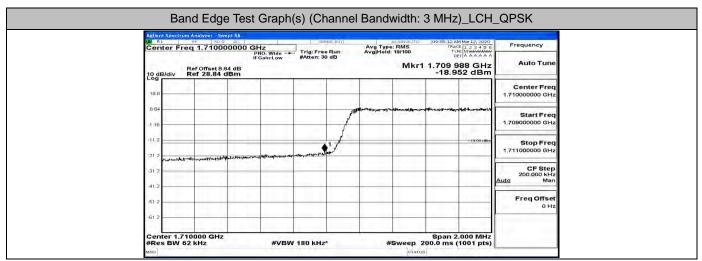
H.4 Band Edge

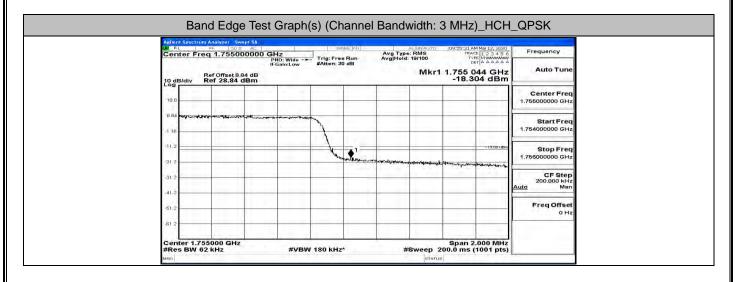


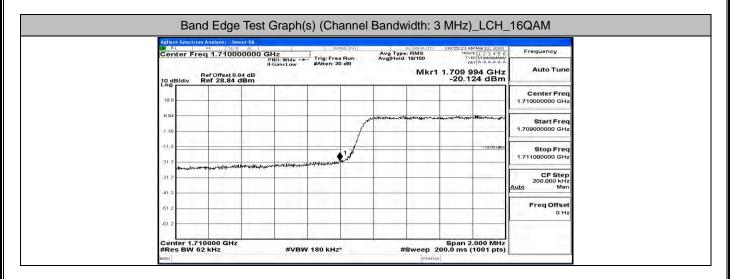


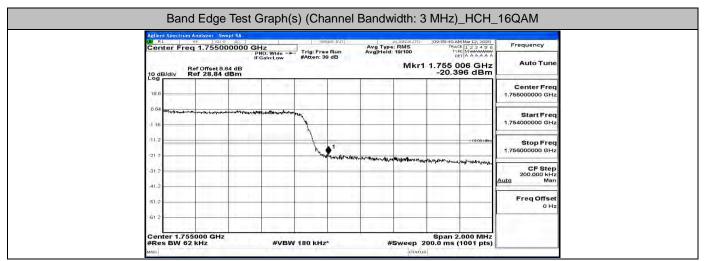


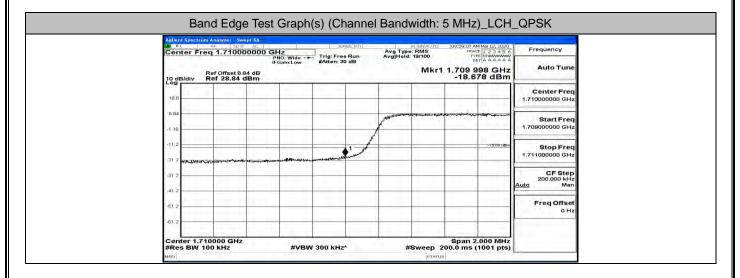


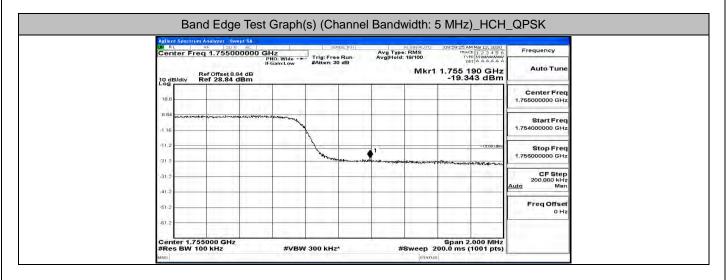


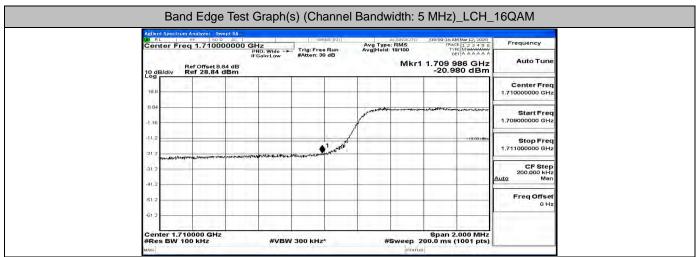


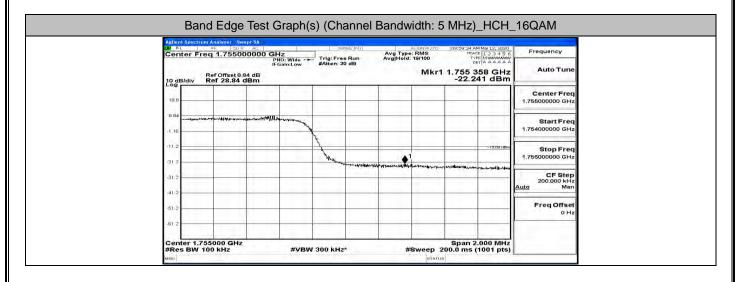


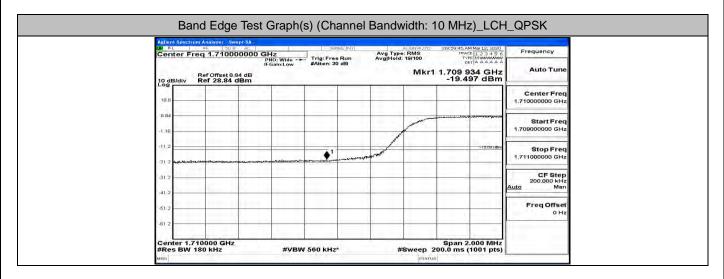


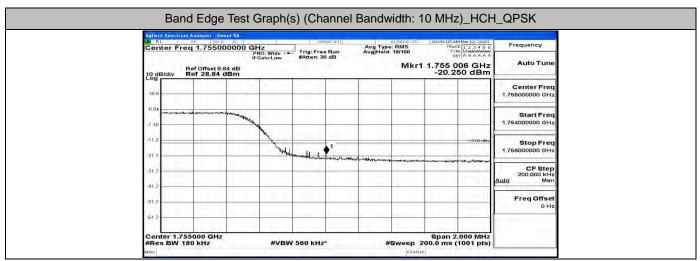


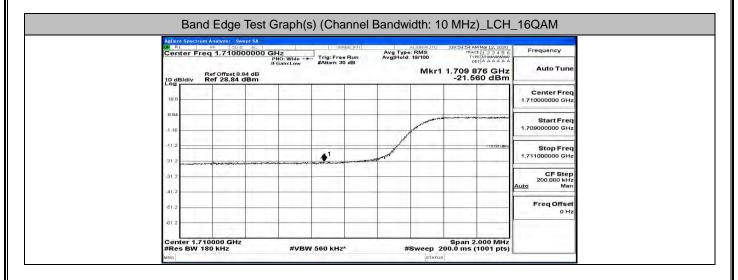


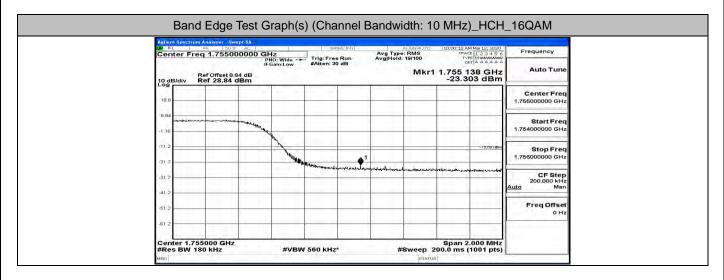


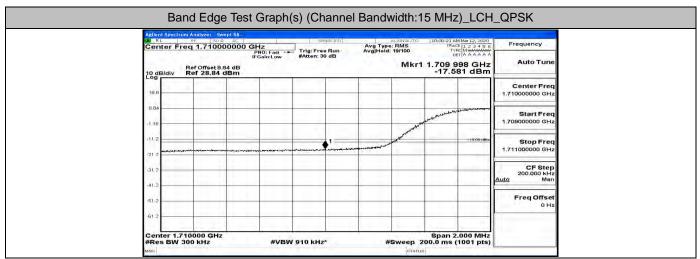


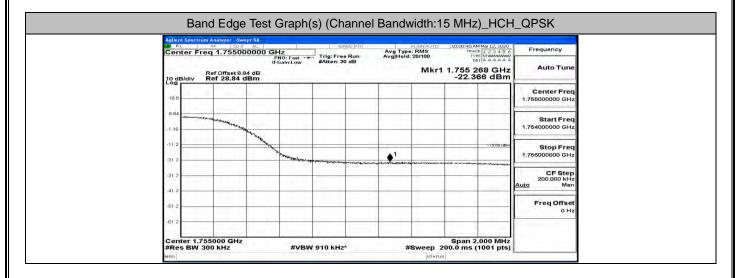


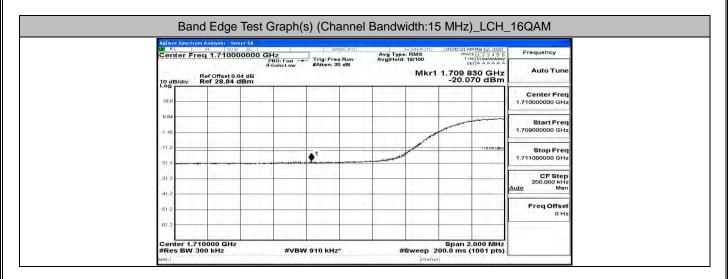


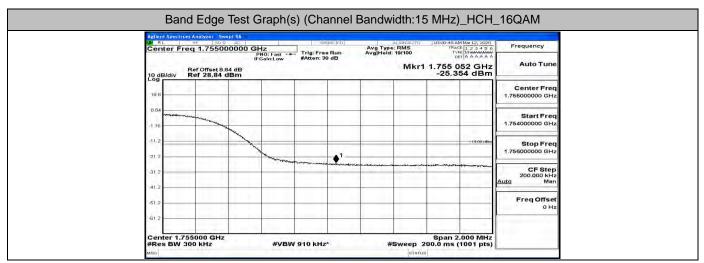


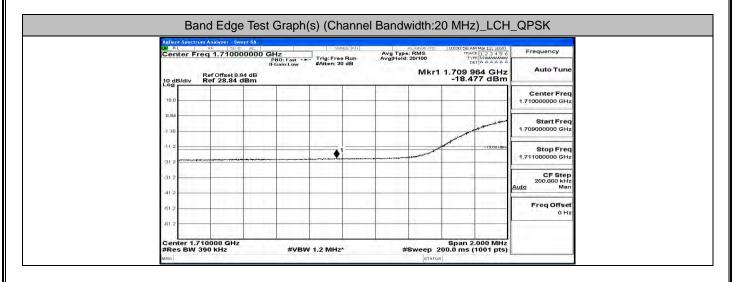


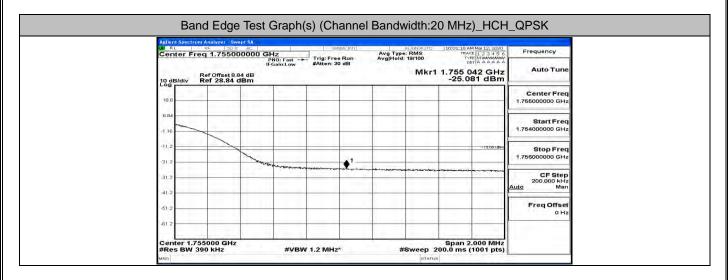


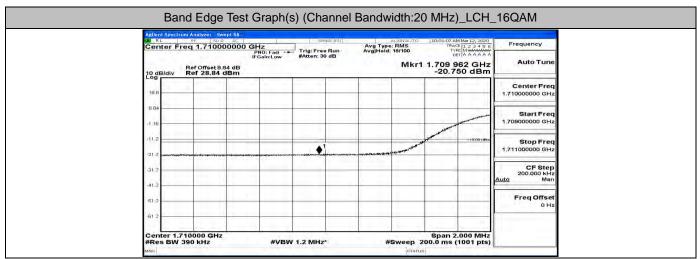


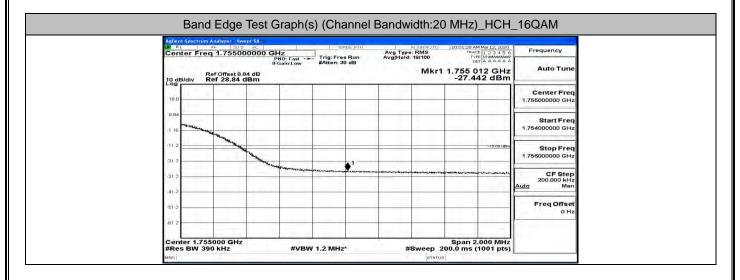






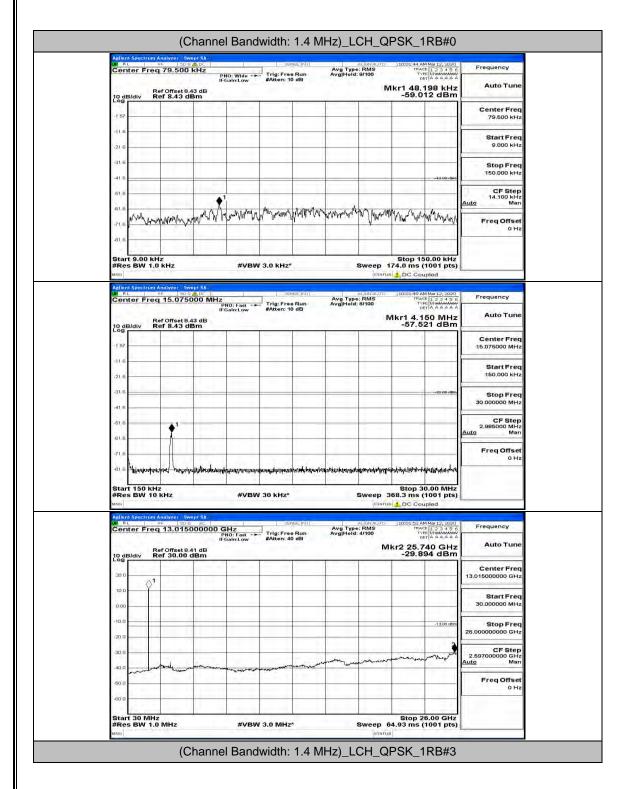


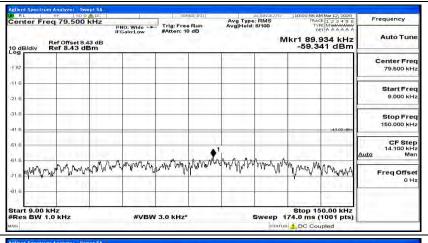


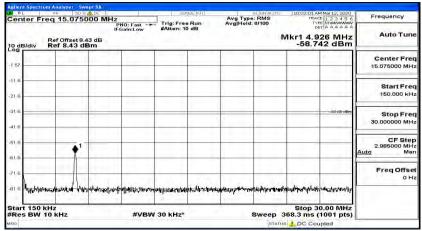


## **H.5 Conducted Spurious Emission**

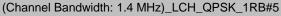
**Channel Bandwidth: 1.4 MHz** 

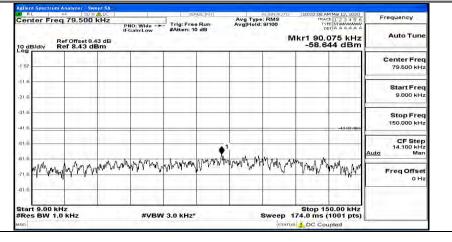


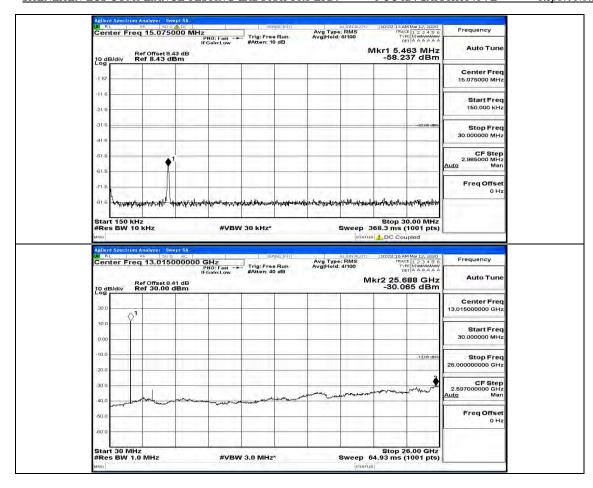


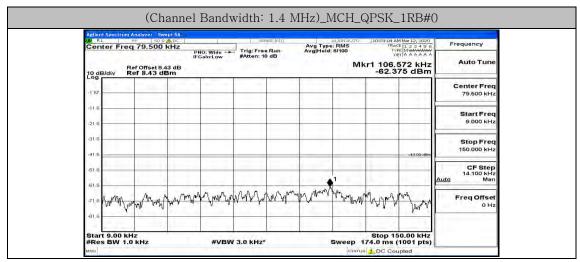


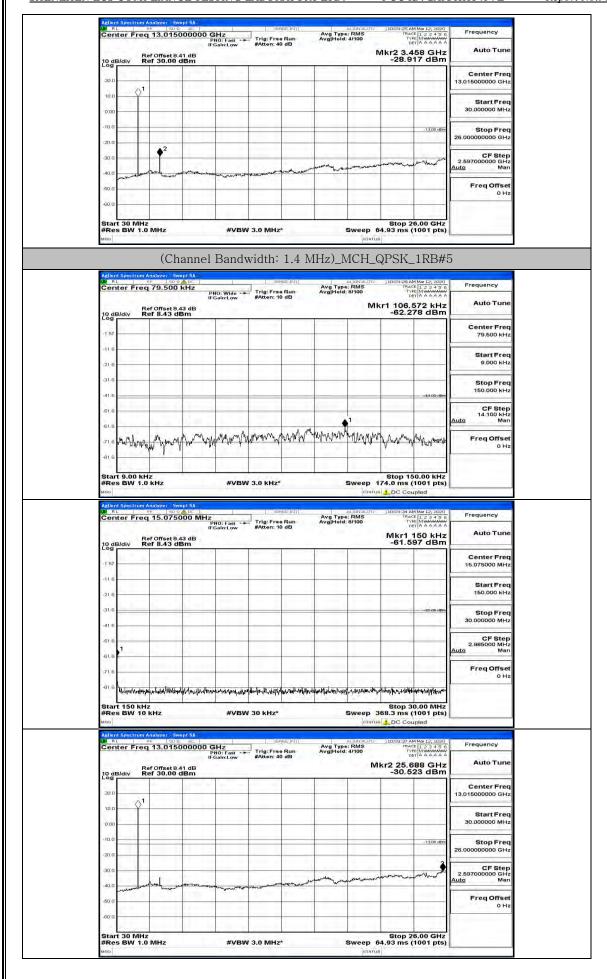


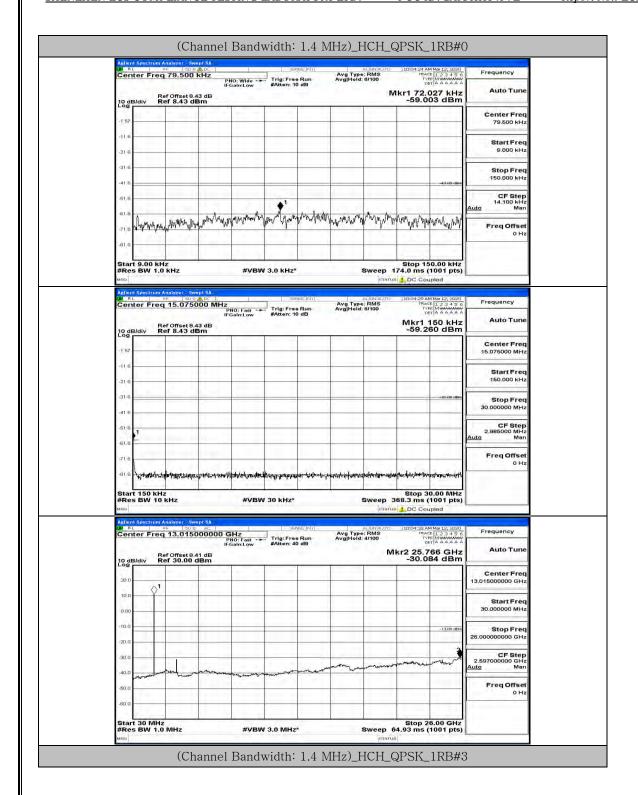


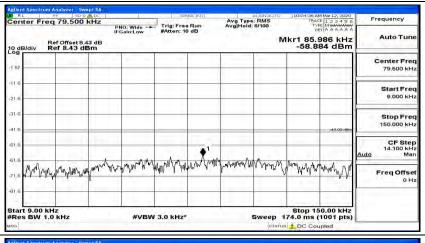


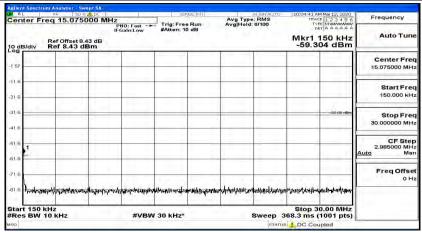




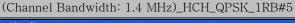


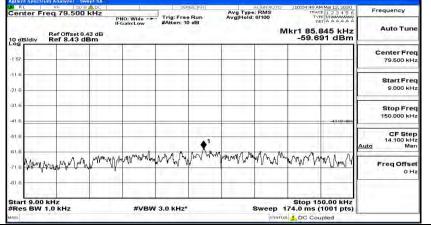


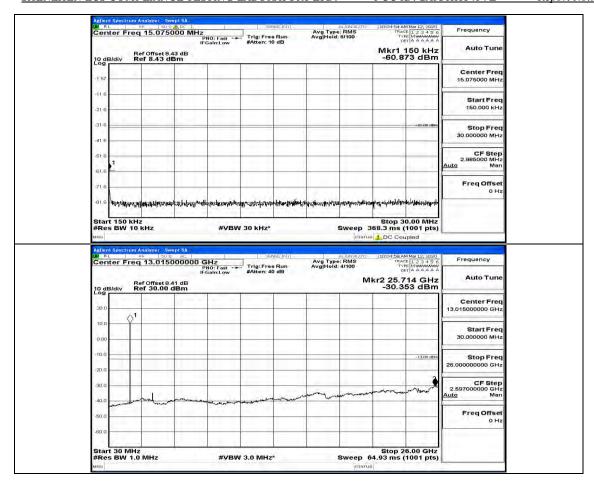


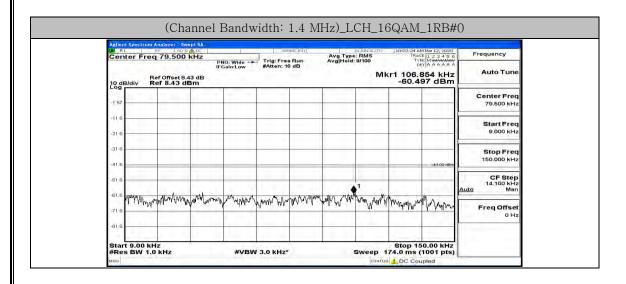


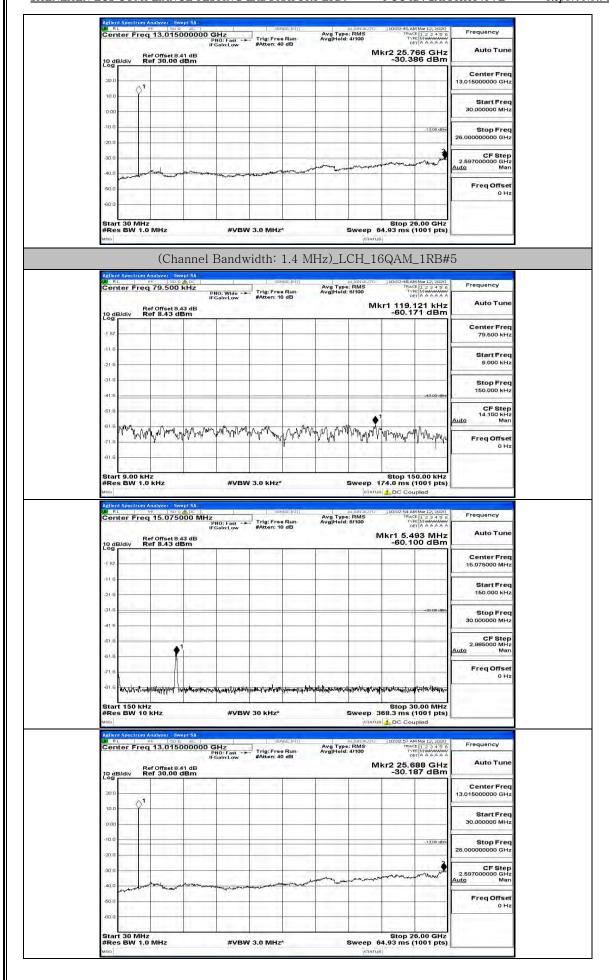


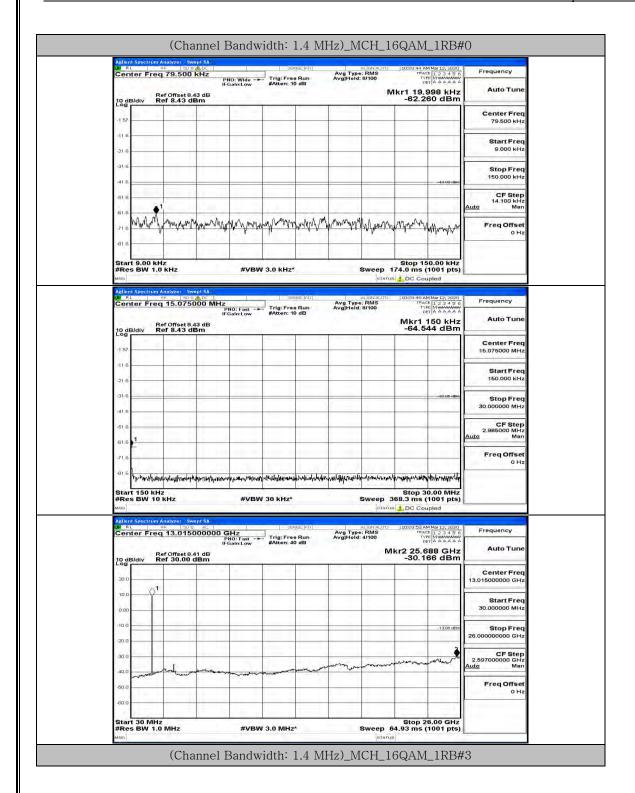




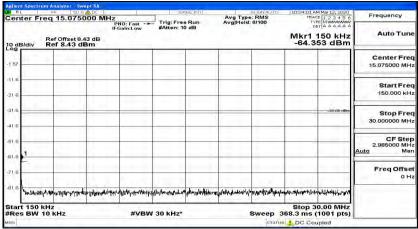


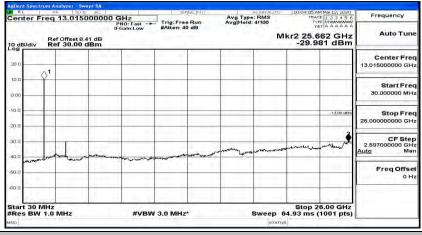


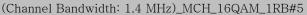


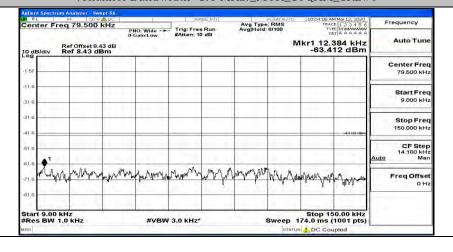


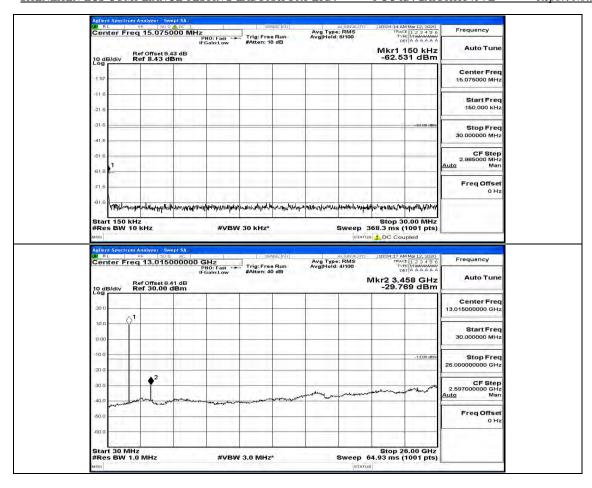


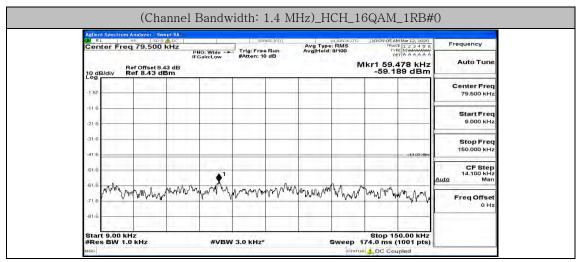


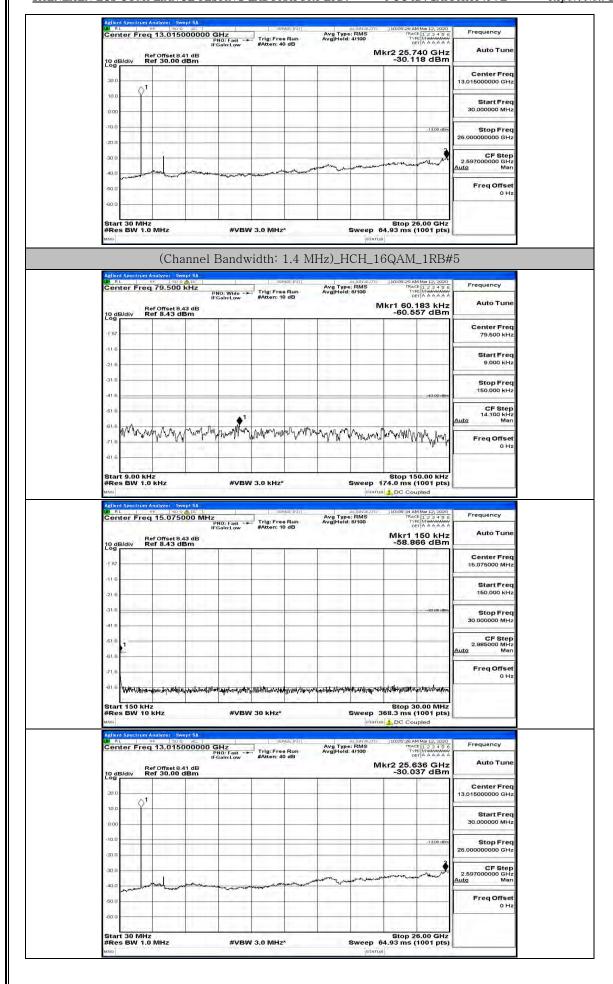




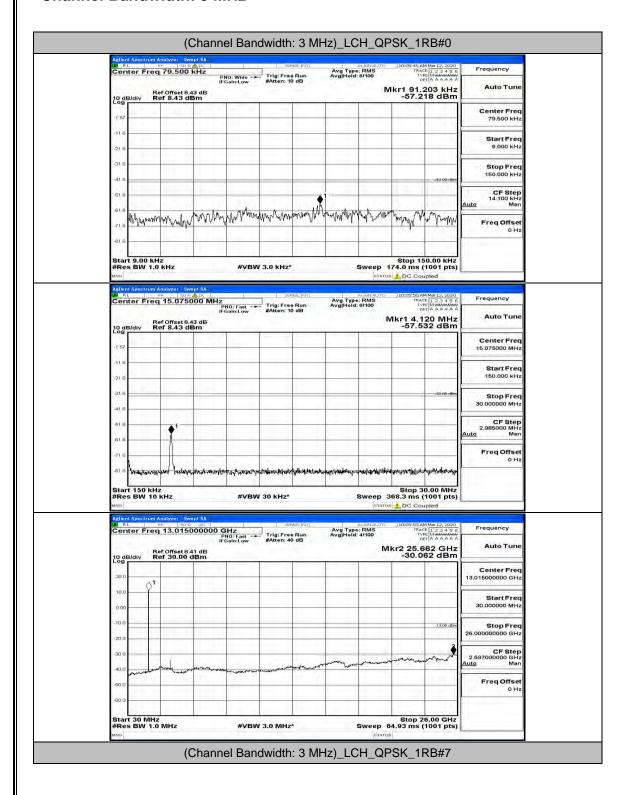


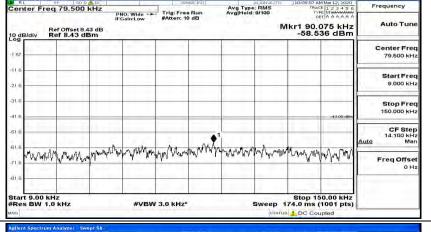


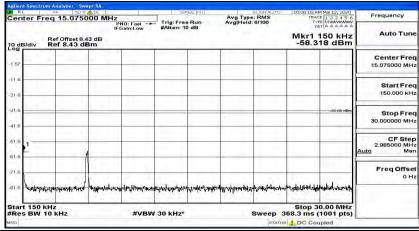




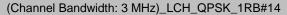
## **Channel Bandwidth: 3 MHz**

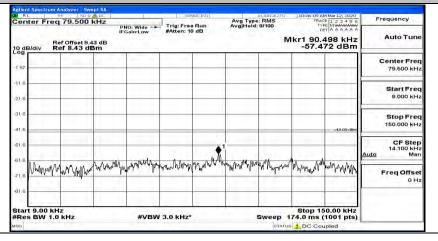


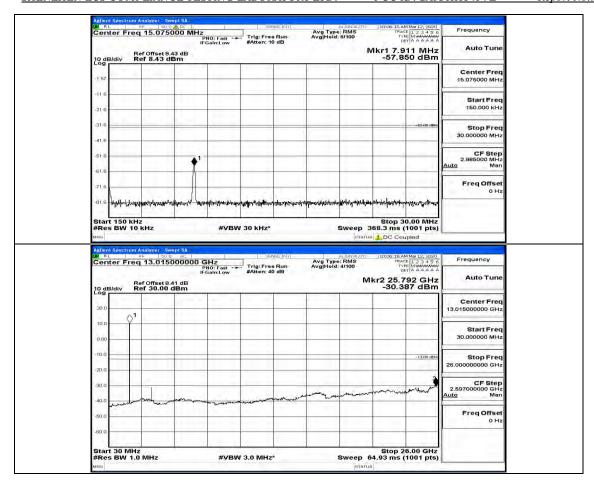


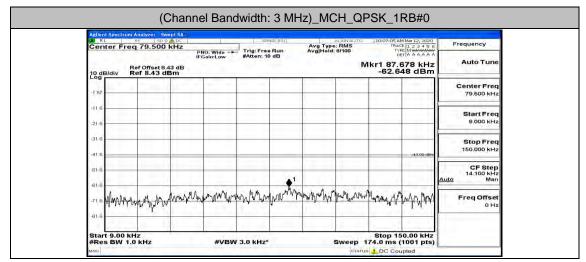








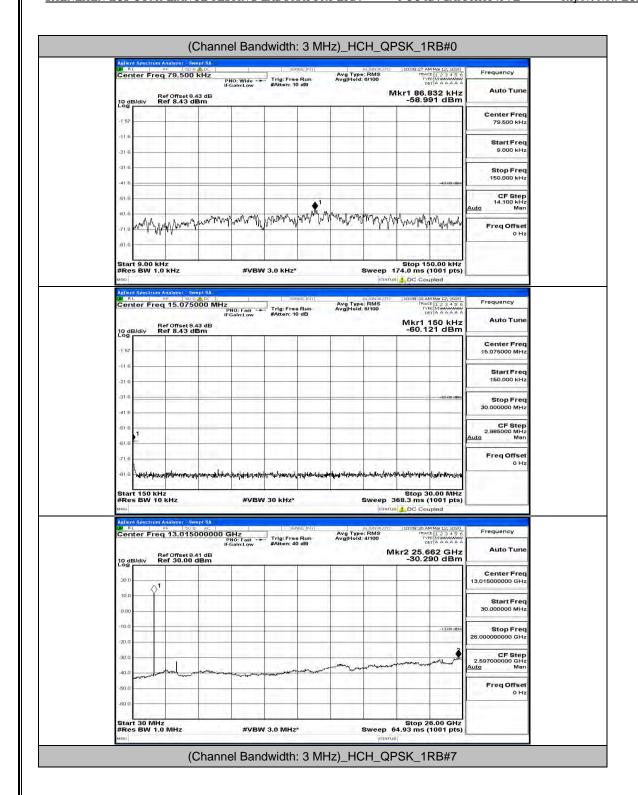


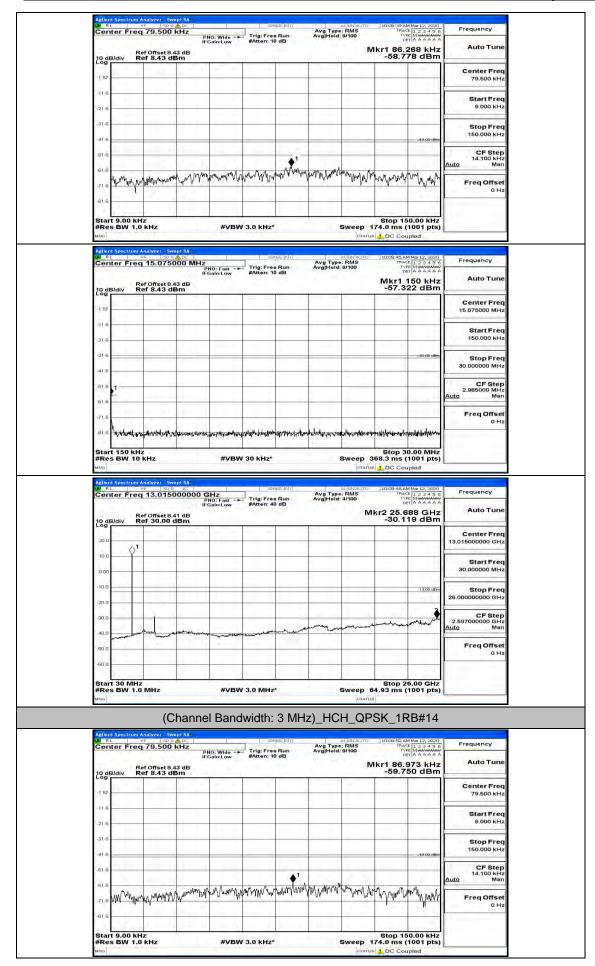


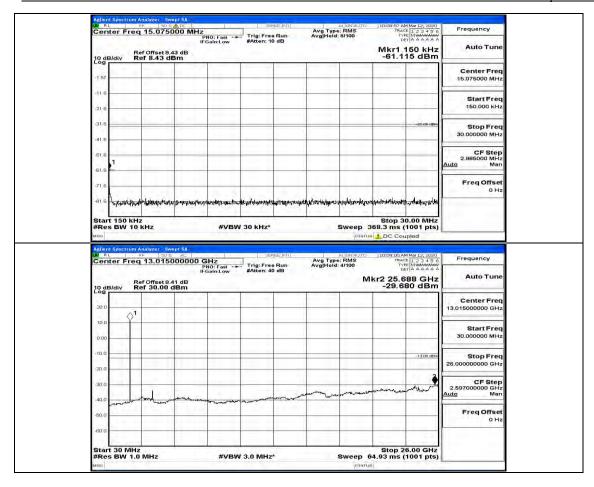
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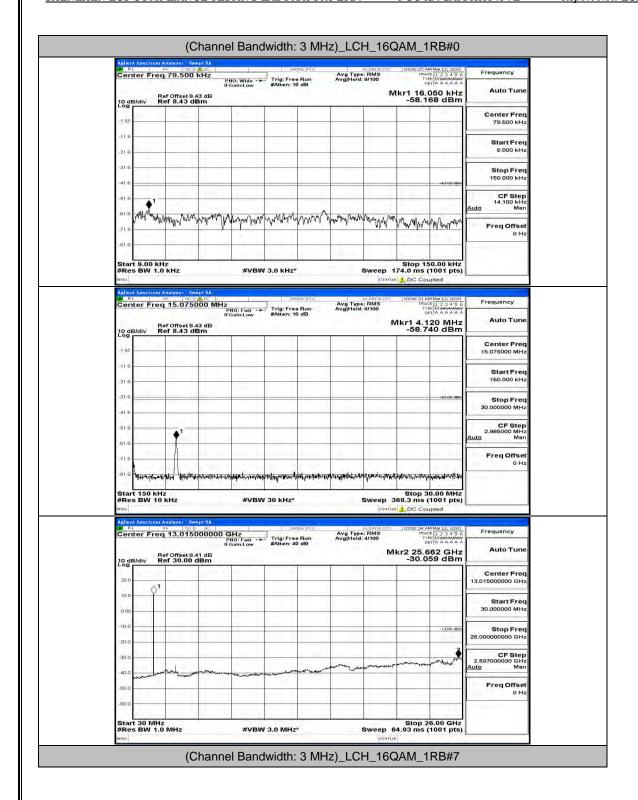
Report No.: LCS191210087AEI

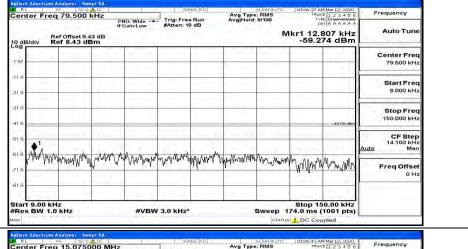
SHENZHEN LCS COMPLIANCE TESTING LABORATORY LTD.

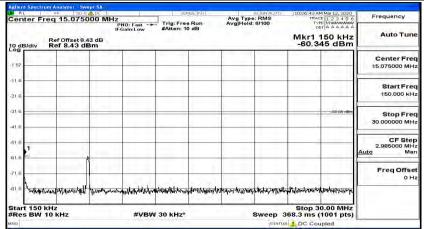


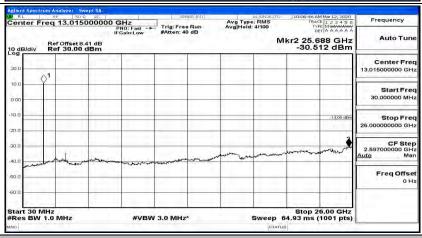


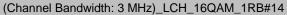


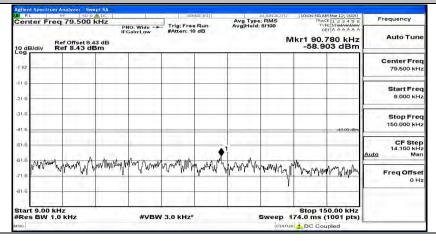


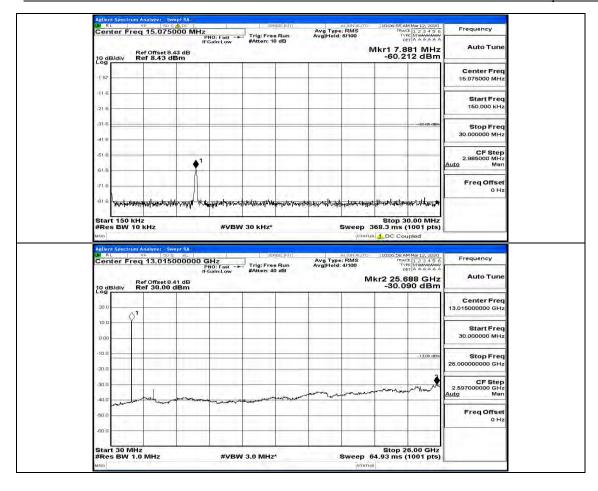


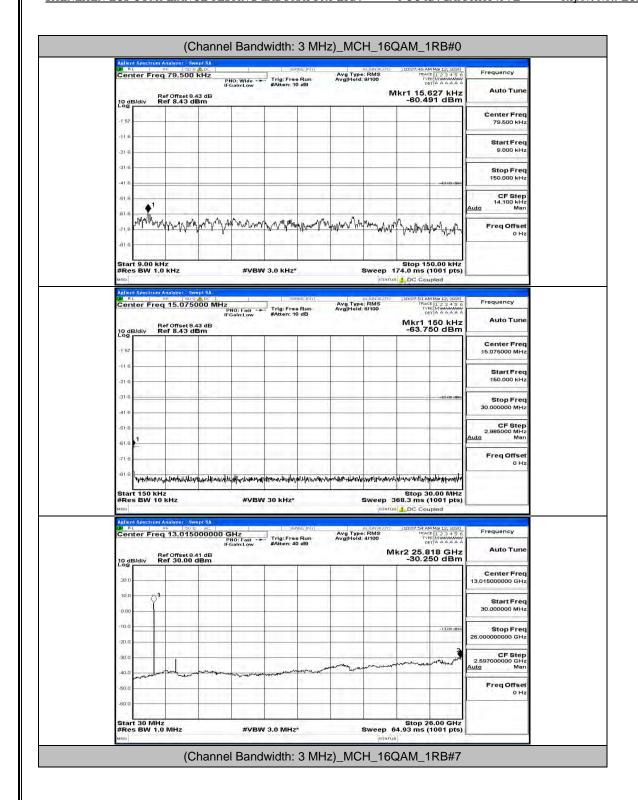




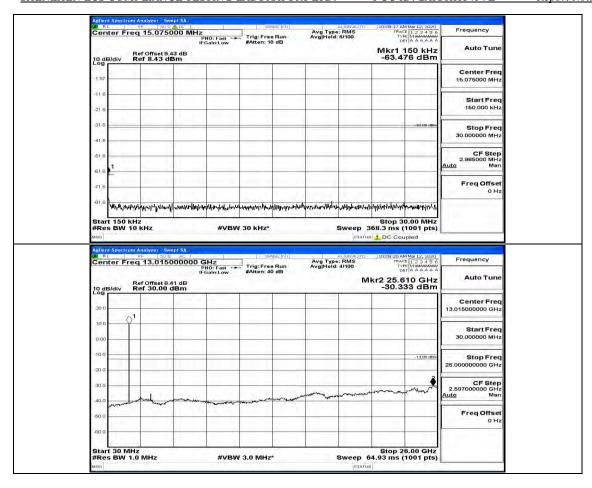


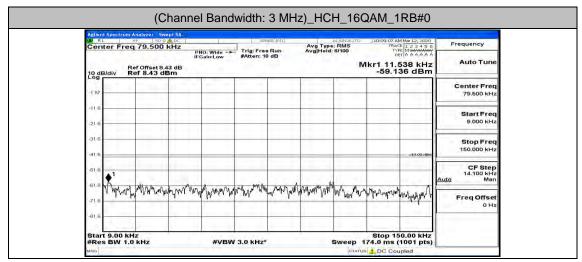












FCC ID: 2AIOHHT4P7L

Report No.: LCS191210087AEI

SHENZHEN LCS COMPLIANCE TESTING LABORATORY LTD.

Stop 26.00 GHz Sweep 64.93 ms (1001 pts)

Start 30 MHz #Res BW 1.0 MHz

#VBW 3.0 MHz