Appendix D: Test Data for E-UTRA Band 4

Product Name: Smart phone Trade Mark: S SMOOTH **Test Model: SMOOTH 5.5**

Environmental Conditions

Temperature:	22.5° C	
Relative Humidity:	53.7%	
ATM Pressure:	100.0 kPa	
Test Engineer:	Diamond Lu	
Supervised by:	Li Huan	

D.1 Conducted Output Power

	Conducted Output Power Test Result (Channel Bandwidth: 1.4 MHz)							
Madulation	Channel	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	Vardiet		
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict		
		1	0	22.20	21.20	PASS		
		1	3	22.24	21.36	PASS		
		1	5	22.08	21.38	PASS		
	LCH	3	0	21.84	21.10	PASS		
		3	2	22.06	21.07	PASS		
		3	3	22.01	21.12	PASS		
		6	0	21.05	19.85	PASS		
		1	0	22.60	21.67	PASS		
		1	3	22.62	21.66	PASS		
ODCK /		1	5	22.64	21.57	PASS		
QPSK / 16QAM	MCH	3	0	22.85	21.67	PASS		
IOQAIVI		3	2	22.82	21.67	PASS		
		3	3	23.03	21.55	PASS		
		6	0	21.57	21.01	PASS		
		1	0	21.90	20.81	PASS		
		1	3	22.06	20.98	PASS		
		1	5	22.02	20.99	PASS		
	HCH	3	0	21.82	20.91	PASS		
		3	2	21.89	21.04	PASS		
		3	3	21.84	21.00	PASS		
		6	0	20.84	19.48	PASS		

	Conducted Output Power Test Result (Channel Bandwidth: 3 MHz)							
Modulation	Channel	RB Con	figuration Offset	Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict		
		1	0	21.66	21.07	PASS		
		1	7	22.08	21.50	PASS		
		1	14	22.13	21.75	PASS		
	LCH	8	0	21.06	19.81	PASS		
		8	4	20.96	19.87	PASS		
		8	7	21.05	20.45	PASS		
		15	0	21.07	20.03	PASS		
		1	0	22.61	22.22	PASS		
		1	7	22.63	22.01	PASS		
QPSK /		1	14	22.64	21.94	PASS		
16QAM	MCH	8	0	21.77	20.50	PASS		
TOQAIVI		8	4	21.79	20.46	PASS		
		8	7	21.57	20.42	PASS		
		15	0	21.64	20.57	PASS		
		1	0	21.85	20.22	PASS		
		1	7	22.17	20.78	PASS		
		1	14	22.19	20.64	PASS		
	HCH	8	0	20.98	19.90	PASS		
		8	4	20.90	19.69	PASS		
		8	7	20.70	19.65	PASS		
		15	0	20.75	19.98	PASS		

Conducted Output Power Test Result (Channel Bandwidth: 5 MHz)								
Madulation	Channal	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	\/andiat		
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict		
		1	0	21.90	21.01	PASS		
		1	12	22.33	21.53	PASS		
		1	24	22.47	21.26	PASS		
	LCH	12	0	21.09	19.79	PASS		
		12	6	21.19	20.00	PASS		
		12	13	21.53	20.55	PASS		
		25	0	21.16	20.36	PASS		
		1	0	22.77	22.01	PASS		
		1	12	22.78	21.45	PASS		
QPSK /		1	24	22.26	21.27	PASS		
16QAM	MCH	12	0	21.60	20.55	PASS		
TOQAIVI		12	6	21.43	20.54	PASS		
		12	13	21.36	20.26	PASS		
		25	0	21.56	20.72	PASS		
		1	0	21.38	19.55	PASS		
		1	12	21.83	20.15	PASS		
		1	24	21.93	20.49	PASS		
	HCH	12	0	20.79	19.35	PASS		
		12	6	20.63	19.54	PASS		
		12	13	21.02	19.67	PASS		
		25	0	20.68	19.91	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	21.95	21.71	PASS			
		1	24	22.49	21.85	PASS			
		1	49	23.16	22.85	PASS			
	LCH	25	0	21.38	20.36	PASS			
		25	12	21.54	20.53	PASS			
		25	25	21.91	20.89	PASS			
		50	0	21.59	20.59	PASS			
		1	0	22.92	22.99	PASS			
		1	24	22.50	22.31	PASS			
QPSK /		1	49	22.18	21.85	PASS			
16QAM	MCH	25	0	22.09	21.14	PASS			
TOQAIVI		25	12	21.85	20.69	PASS			
		25	25	21.45	20.57	PASS			
		50	0	21.75	20.80	PASS			
		1	0	21.48	20.12	PASS			
		1	24	21.55	20.76	PASS			
		1	49	22.32	21.11	PASS			
	HCH	25	0	20.68	19.65	PASS			
		25	12	20.71	20.05	PASS			
		25	25	20.98	20.11	PASS			
		50	0	20.85	19.78	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	21.85	22.09	PASS			
		1	37	23.12	22.58	PASS			
		1	74	23.30	23.07	PASS			
	LCH	37	0	21.51	20.52	PASS			
		37	18	21.74	20.77	PASS			
		37	38	22.13	21.17	PASS			
		75	0	21.84	20.86	PASS			
		1	0	23.19	23.33	PASS			
		1	37	22.75	22.17	PASS			
QPSK /		1	74	22.08	21.69	PASS			
16QAM	MCH	37	0	22.29	21.38	PASS			
TOQAIVI		37	18	21.81	20.89	PASS			
		37	38	21.44	20.54	PASS			
		75	0	21.92	20.97	PASS			
		1	0	22.07	21.43	PASS			
		1	37	22.50	21.79	PASS			
		1	74	22.21	21.42	PASS			
	HCH	37	0	20.72	19.85	PASS			
		37	18	20.57	19.60	PASS			
		37	38	20.95	19.92	PASS			
		75	0	20.80	19.82	PASS			

	Conducted Output Power Test Result (Channel Bandwidth: 20 MHz)								
Madulation	Channal	RB Con	figuration	Average Power [dBm]	Average Power [dBm]	Vardiat			
Modulation	Channel	Size	Offset	QPSK	16QAM	Verdict			
		1	0	22.23	20.34	PASS			
		1	49	22.93	21.67	PASS			
		1	99	23.23	21.75	PASS			
	LCH	50	0	21.74	20.71	PASS			
		50	25	22.18	21.16	PASS			
		50	50	22.45	21.37	PASS			
		100	0	22.09	21.08	PASS			
		1	0	23.67	22.18	PASS			
		1	49	22.87	21.67	PASS			
QPSK /		1	99	22.04	20.87	PASS			
16QAM	MCH	50	0	22.35	21.41	PASS			
IOQAIVI		50	25	21.92	20.93	PASS			
		50	50	21.38	20.42	PASS			
		100	0	21.97	21.00	PASS			
		1	0	22.49	21.09	PASS			
		1	49	21.88	20.74	PASS			
		1	99	21.98	20.88	PASS			
	HCH	50	0	21.24	20.26	PASS			
		50	25	20.81	19.76	PASS			
		50	50	20.81	19.84	PASS			
		100	0	20.98	20.01	PASS			

D.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	5.03	<13	PASS		
QPSK	MCH	4	<13	PASS		
	HCH	4.77	<13	PASS		
16QAM	LCH	5.95	<13	PASS		
	MCH	4.95	<13	PASS		
	HCH	5.62	<13	PASS		

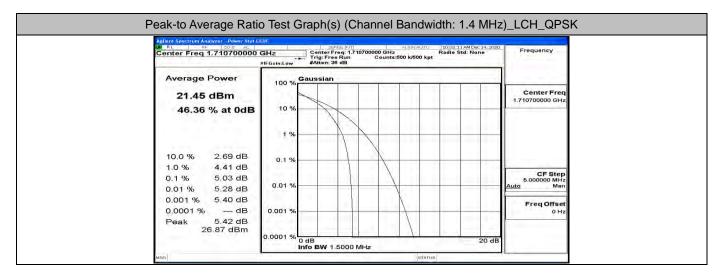
Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)						
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict		
Modulation	Channel	[dB]	[dB]	verdict		
	LCH	5.02	<13	PASS		
QPSK	MCH	4.31	<13	PASS		
	HCH	4.96	<13	PASS		
16QAM	LCH	6	<13	PASS		
	MCH	5.07	<13	PASS		
	HCH	5.87	<13	PASS		

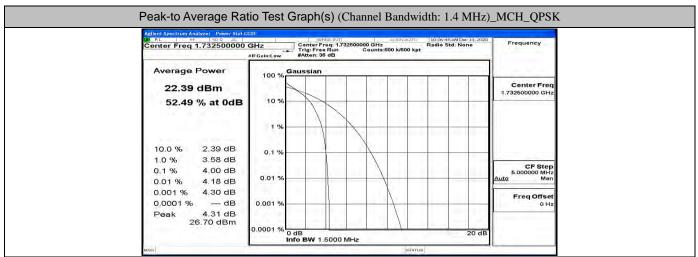
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)						
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict		
Modulation	Griannei	[dB]	[dB]	verdict		
	LCH	4.99	<13	PASS		
QPSK	MCH	4.24	<13	PASS		
	HCH	5.09	<13	PASS		
	LCH	5.7	<13	PASS		
16QAM	MCH	5.01	<13	PASS		
	HCH	5.93	<13	PASS		

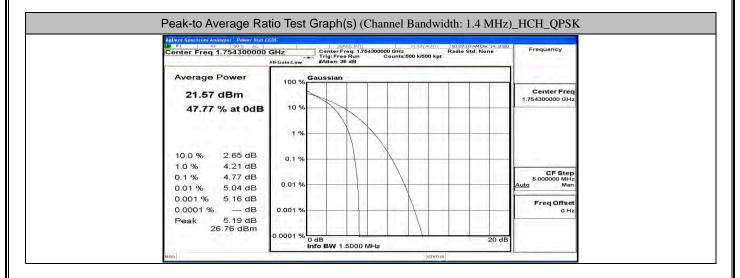
Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)						
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict		
Modulation	Griannei	[dB]	[dB]	verdict		
	LCH	4.73	<13	PASS		
QPSK	MCH	4.47	<13	PASS		
	HCH	5.13	<13	PASS		
	LCH	5.58	<13	PASS		
16QAM	MCH	5.28	<13	PASS		
	HCH	5.91	<13	PASS		

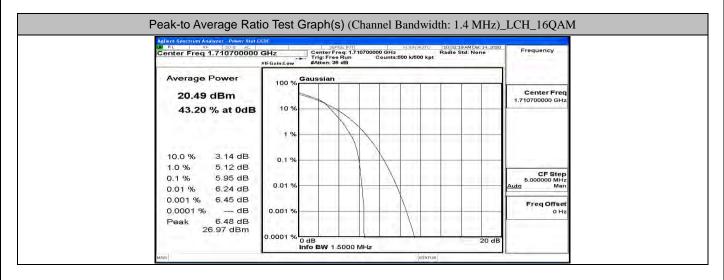
Peak-to Average Ratio Test Result (Channel Bandwidth: 15 MHz)						
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict		
Modulation	Griannei	[dB]	[dB]	verdict		
	LCH	4.93	<13	PASS		
QPSK	MCH	4.79	<13	PASS		
	HCH	5.06	<13	PASS		
	LCH	6.07	<13	PASS		
16QAM	MCH	5.92	<13	PASS		
	HCH	6.4	<13	PASS		

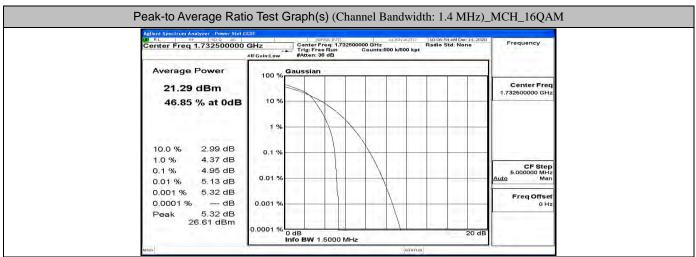
Peak-to Average Ratio Test Result (Channel Bandwidth: 20 MHz)					
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict	
iviodulation		[dB]	[dB]		
QPSK	LCH	5.69	<13	PASS	
	MCH	5.79	<13	PASS	
	HCH	6.03	<13	PASS	
16QAM	LCH	6.68	<13	PASS	
	MCH	6.47	<13	PASS	
	HCH	6.9	<13	PASS	

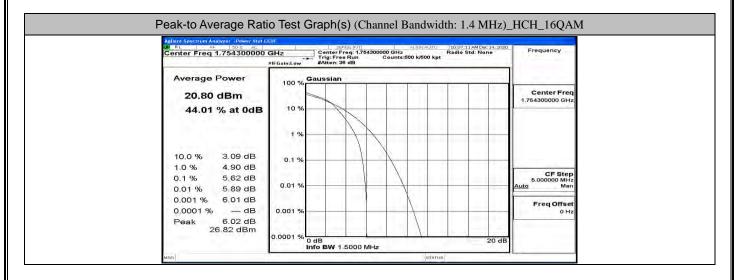


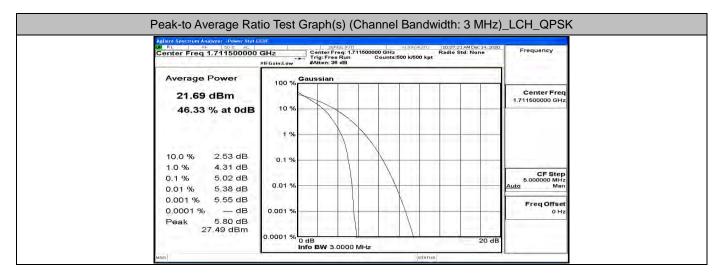


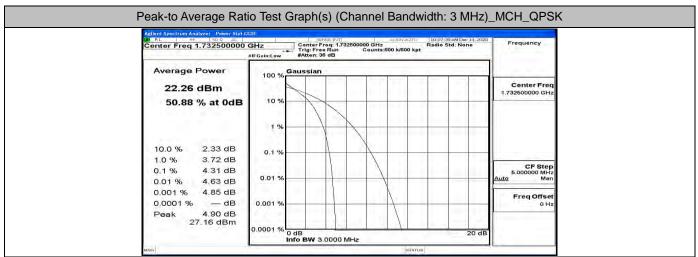


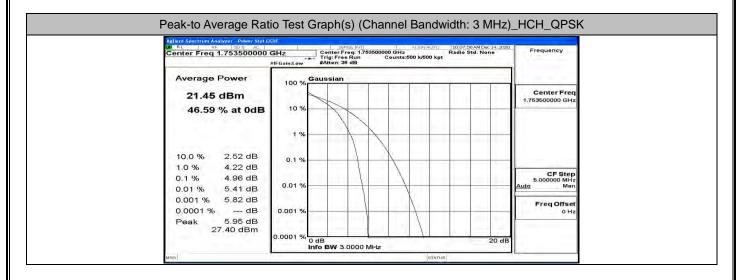


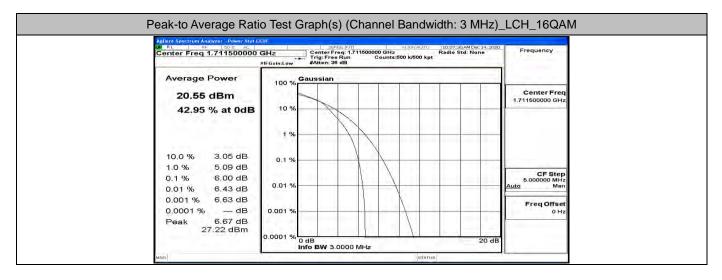


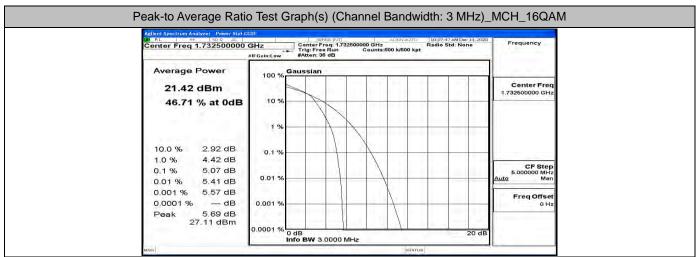


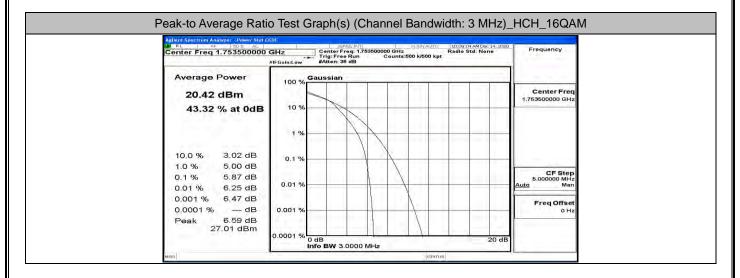


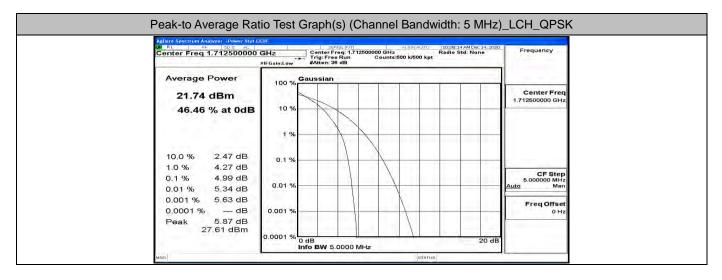


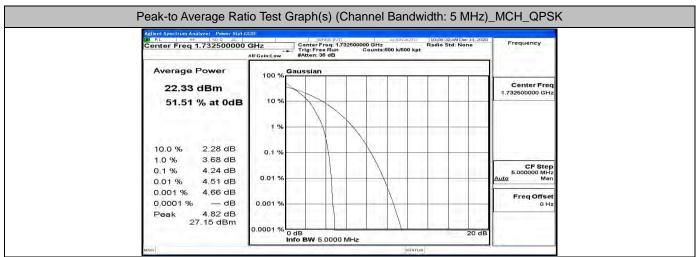


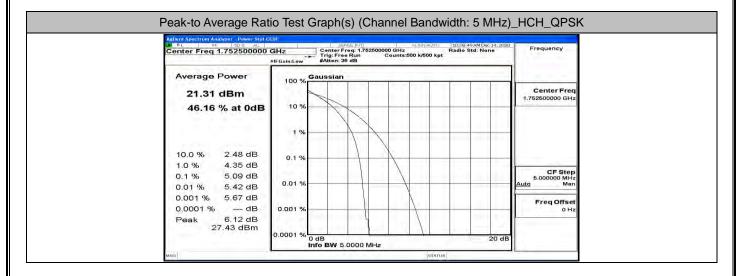


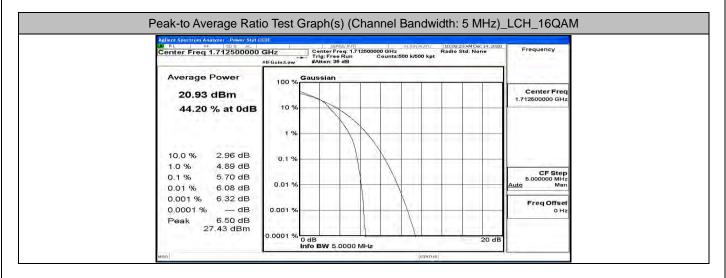


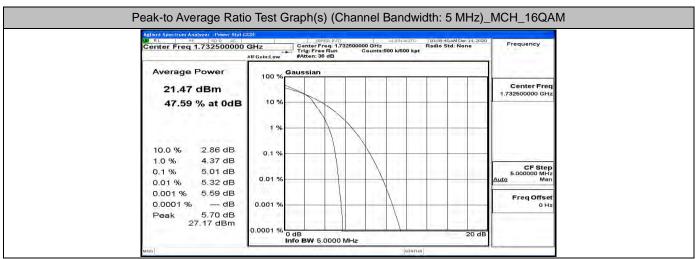


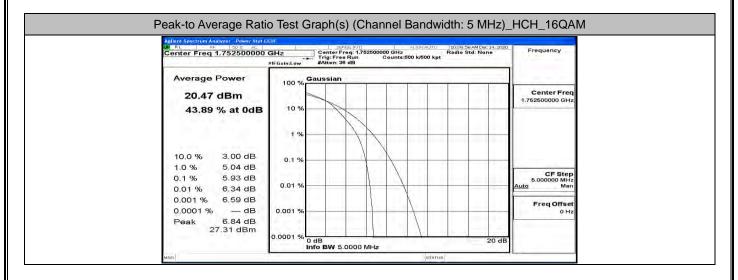


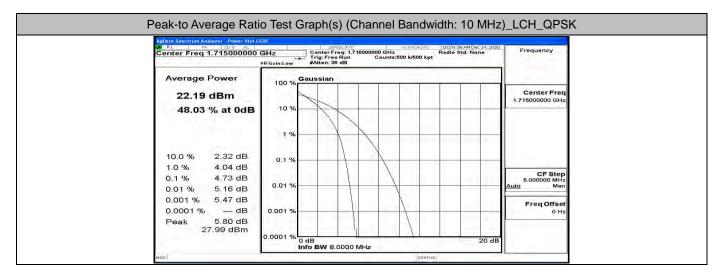


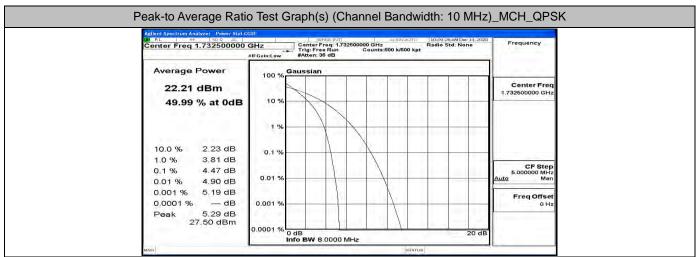


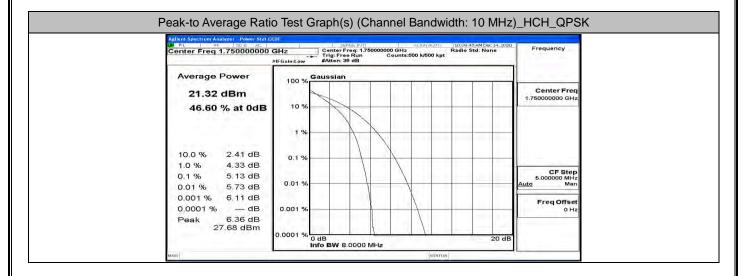


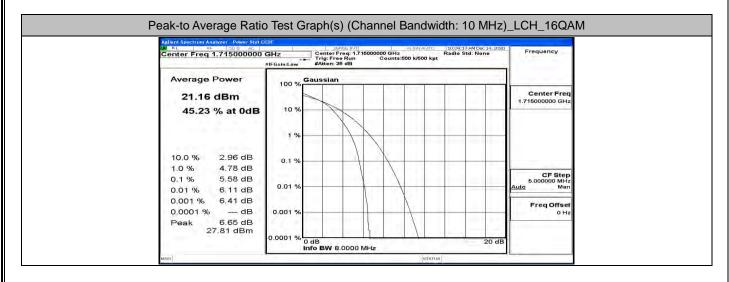


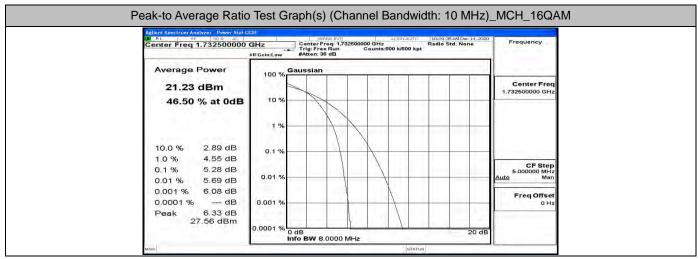


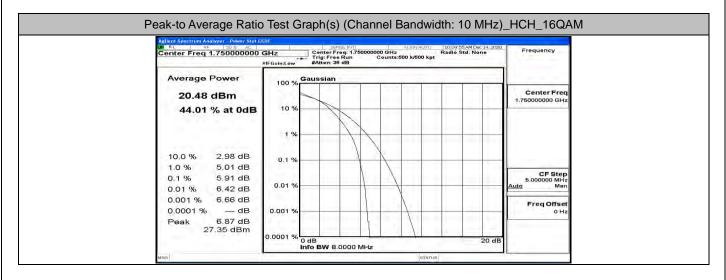


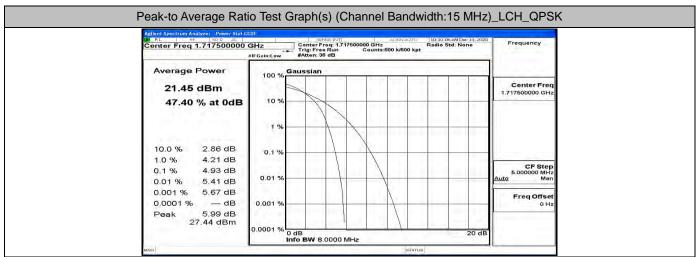


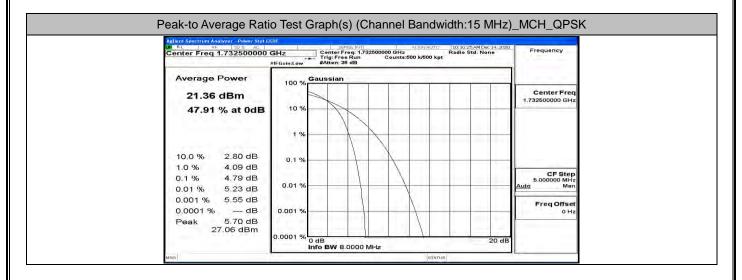


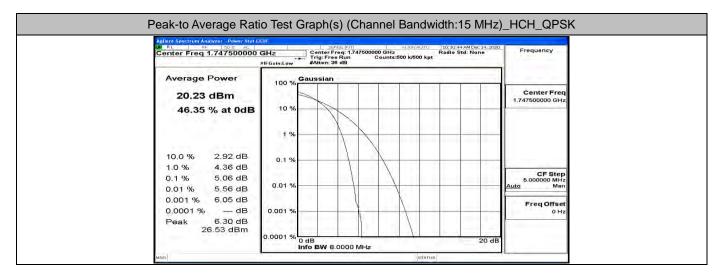


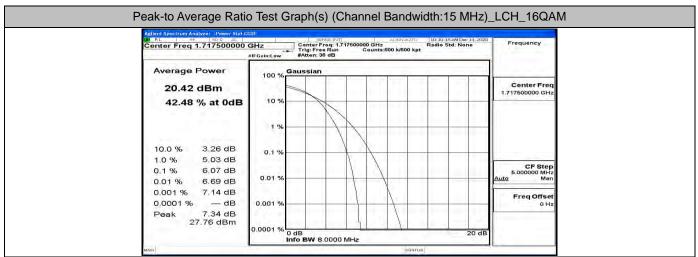


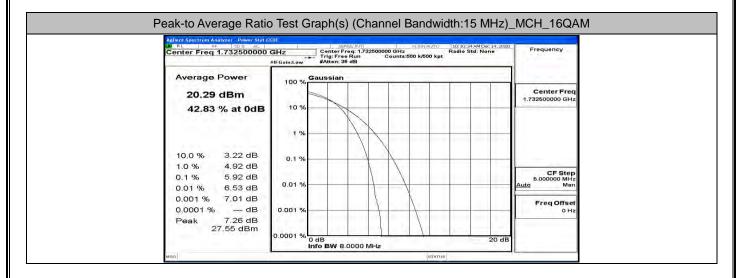


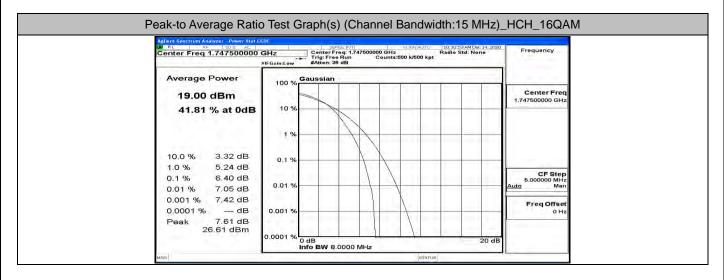


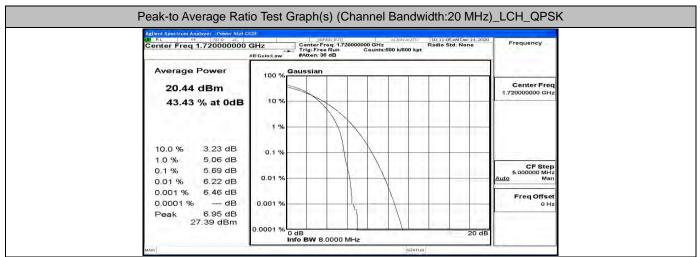


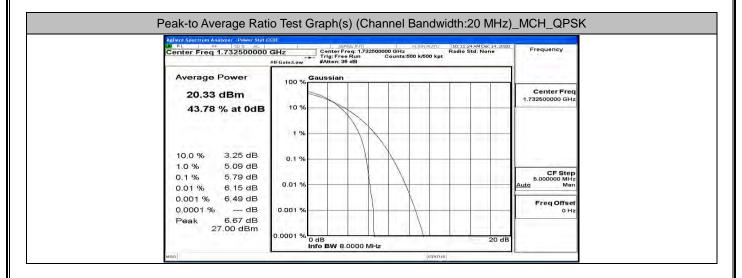


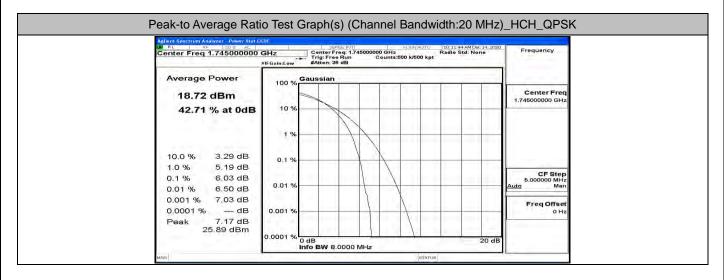


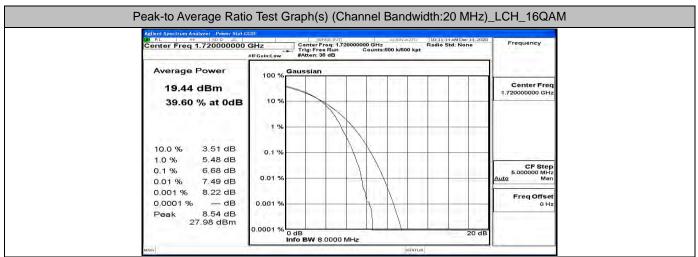


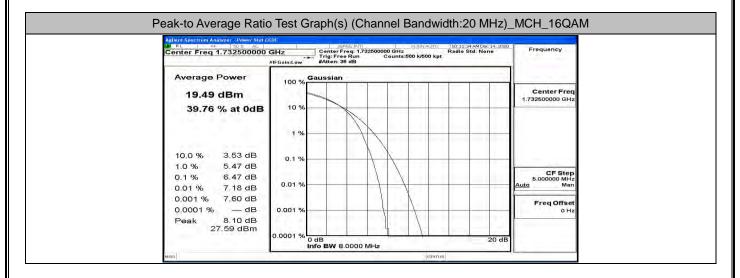


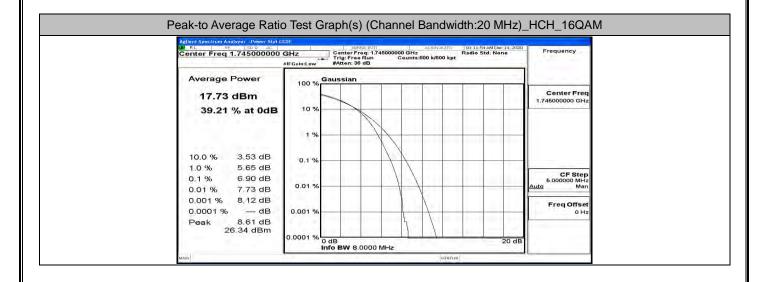












D.3 26dB Bandwidth and Occupied Bandwidth

EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
		(MHz)	(MHz)	
QPSK	LCH	1.0759	1.233	PASS
	MCH	1.0805	1.261	PASS
	HCH	1.0793	1.235	PASS
16QAM	LCH	1.0781	1.227	PASS
	MCH	1.0797	1.252	PASS
	HCH	1.0829	1.250	PASS

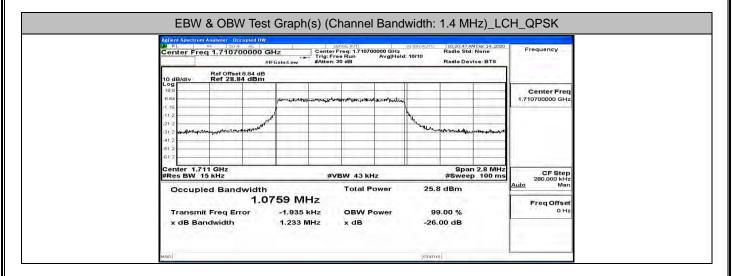
EBW & OBW Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
Modulation		(MHz)	(MHz)	
QPSK	LCH	2.6851	2.876	PASS
	MCH	2.6856	2.910	PASS
	HCH	2.6842	2.906	PASS
16QAM	LCH	2.6824	2.882	PASS
	MCH	2.6889	2.952	PASS
	HCH	2.6813	2.902	PASS

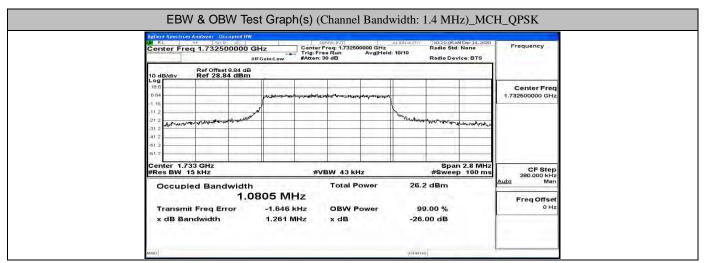
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
Modulation		(MHz)	(MHz)	
QPSK	LCH	4.4805	4.838	PASS
	MCH	4.4801	4.850	PASS
	HCH	4.4788	4.800	PASS
16QAM	LCH	4.4827	4.814	PASS
	MCH	4.4811	4.801	PASS
	HCH	4.4747	4.782	PASS

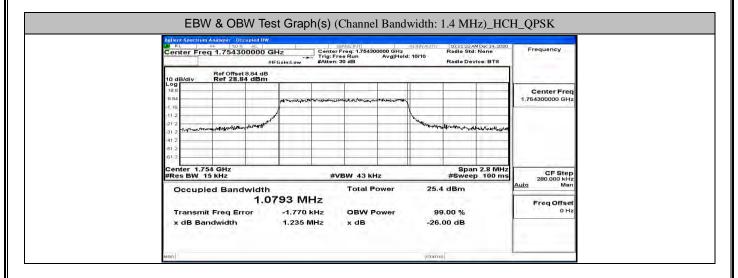
EBW & OBW Test Result (Channel Bandwidth: 10 MHz)					
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict	
Modulation		(MHz)	(MHz)		
QPSK	LCH	8.9182	9.464	PASS	
	MCH	8.9149	9.441	PASS	
	HCH	8.9270	9.495	PASS	
16QAM	LCH	8.9160	9.414	PASS	
	MCH	8.9282	9.392	PASS	
	HCH	8.9218	9.451	PASS	

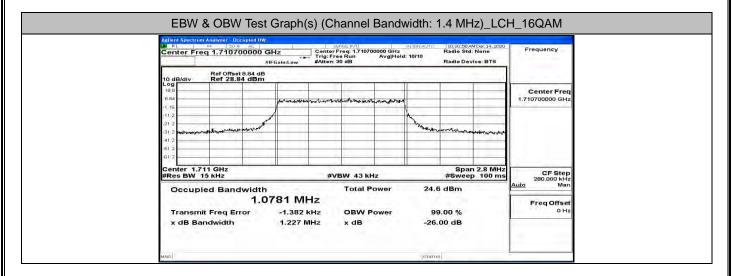
EBW & OBW Test Result (Channel Bandwidth: 15 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
Modulation		(MHz)	(MHz)	
QPSK	LCH	13.367	13.99	PASS
	MCH	13.359	13.98	PASS
	HCH	13.412	14.04	PASS
16QAM	LCH	13.362	14.09	PASS
	MCH	13.359	14.07	PASS
	HCH	13.405	14.07	PASS

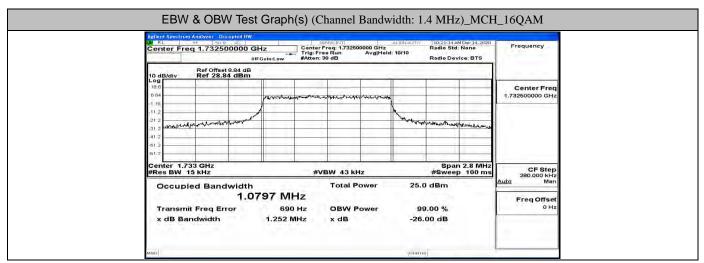
EBW & OBW Test Result (Channel Bandwidth: 20 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
		(MHz)	(MHz)	
QPSK	LCH	17.799	18.53	PASS
	MCH	17.776	18.61	PASS
	HCH	17.888	18.64	PASS
16QAM	LCH	17.797	18.54	PASS
	MCH	17.761	18.53	PASS
	HCH	17.886	18.59	PASS

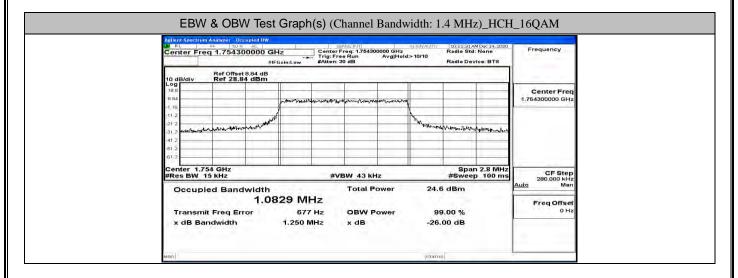


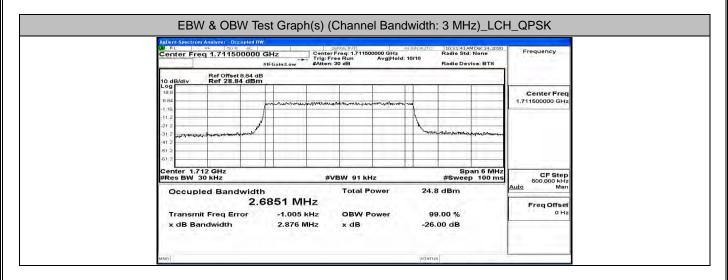


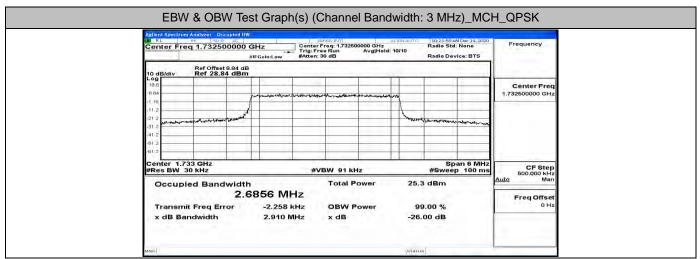


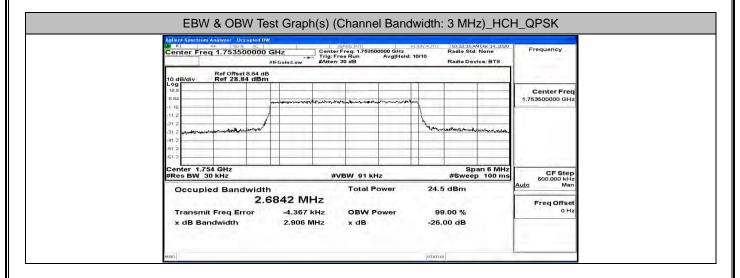


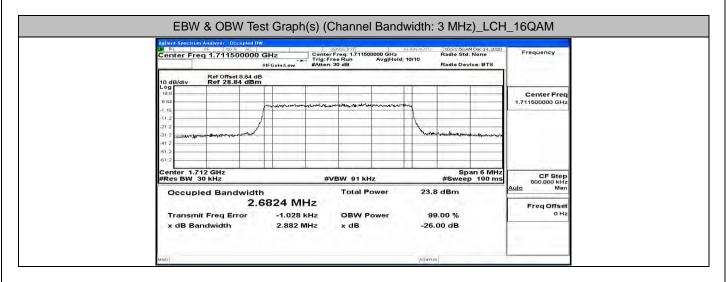


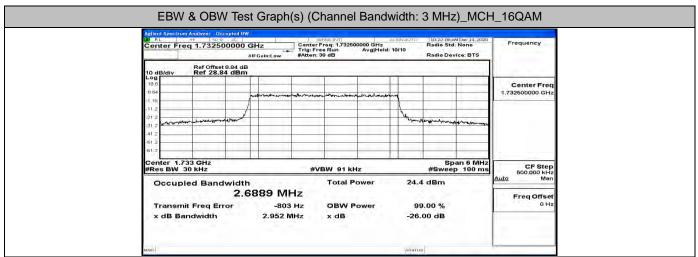


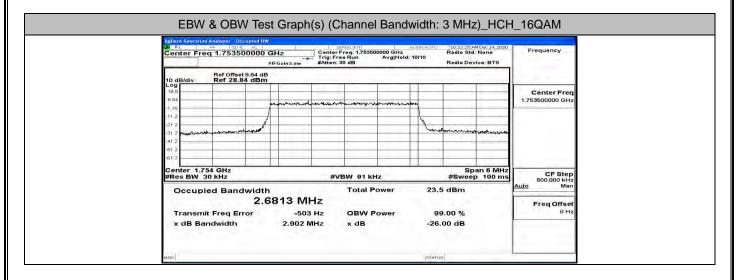


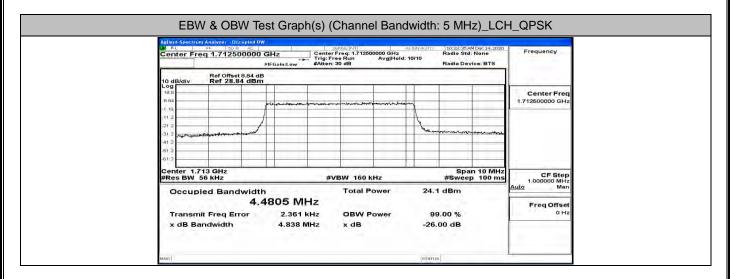


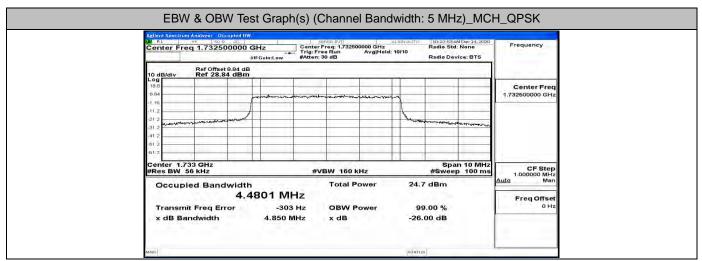


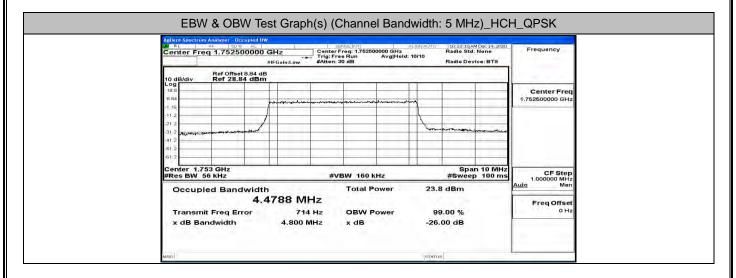


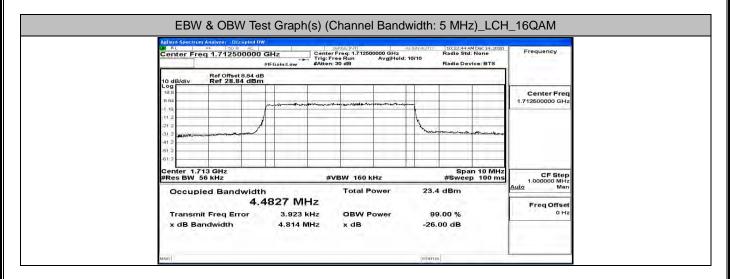


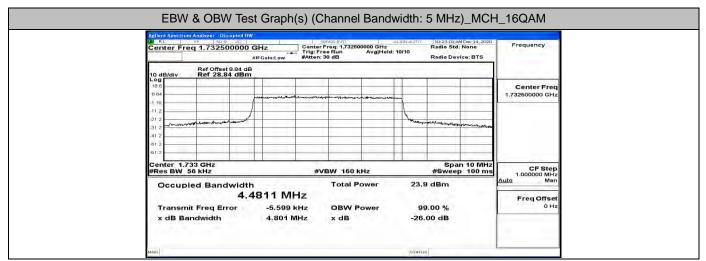


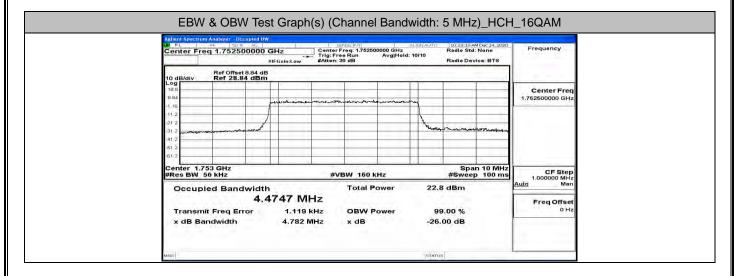


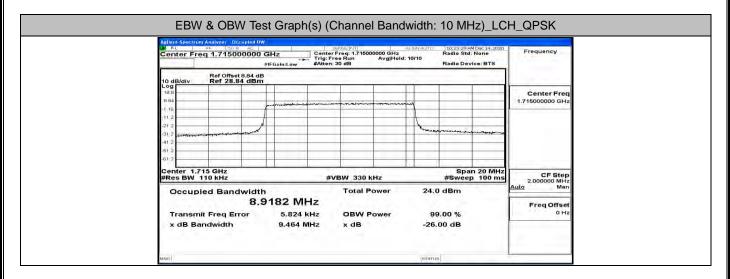


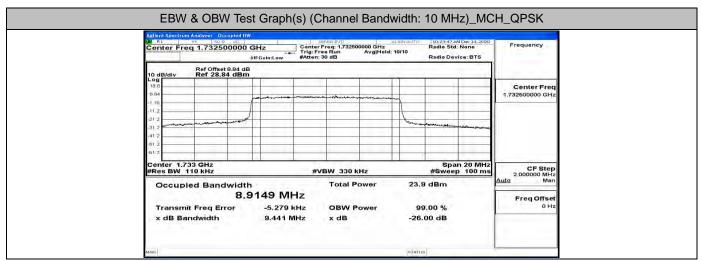


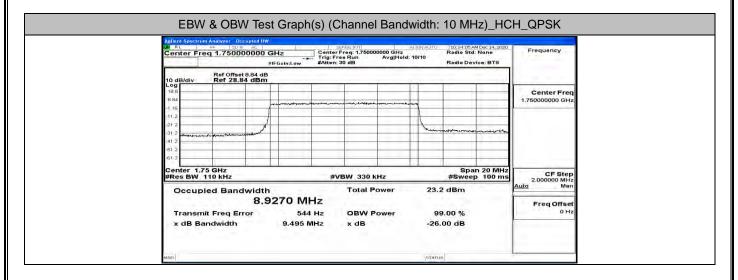


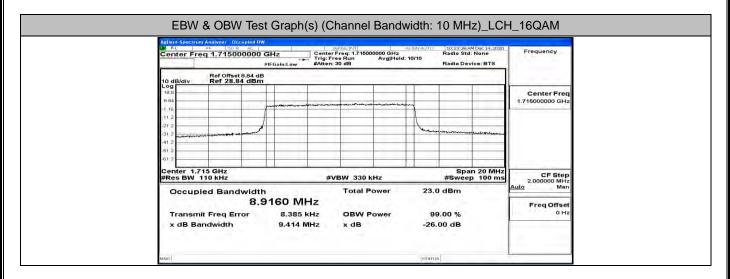


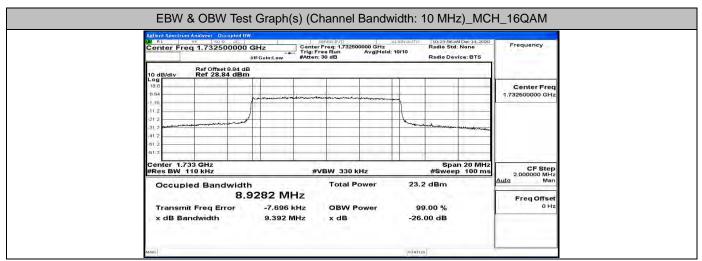


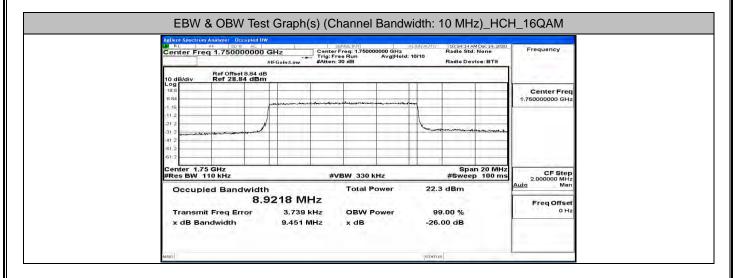


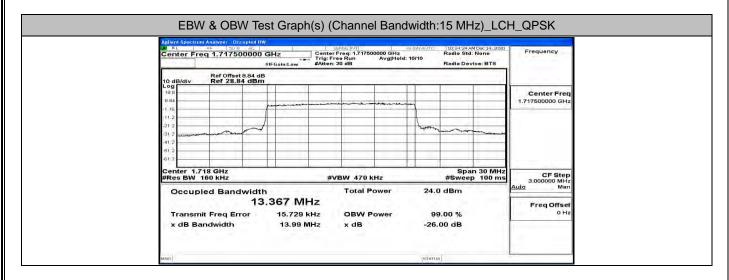


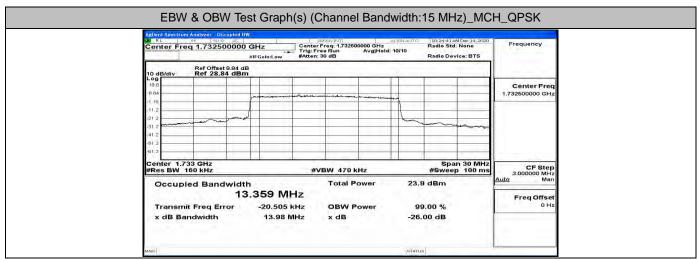


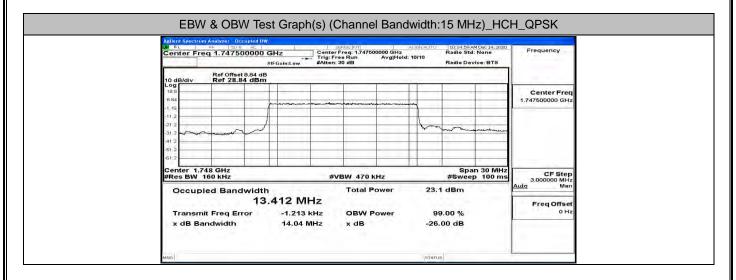


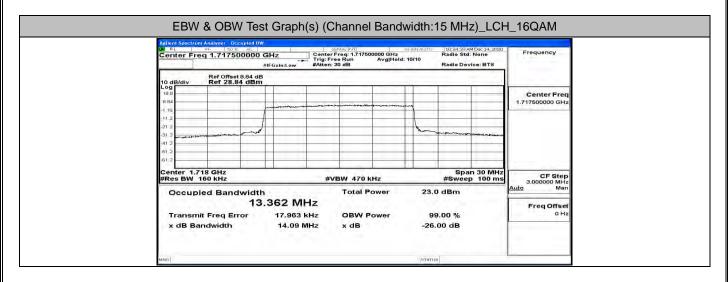


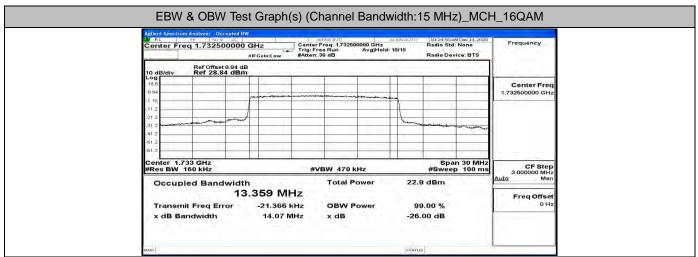


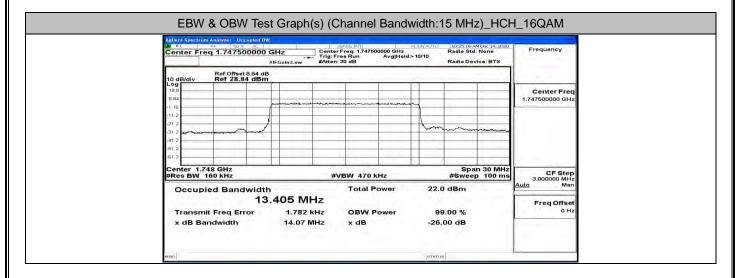


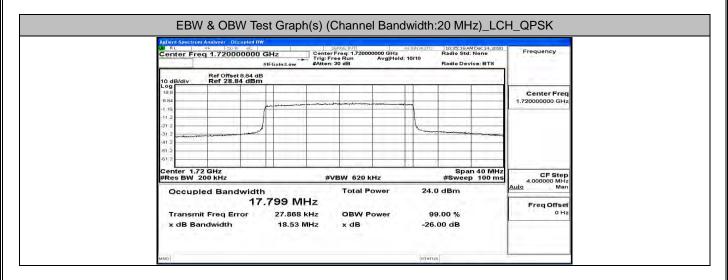


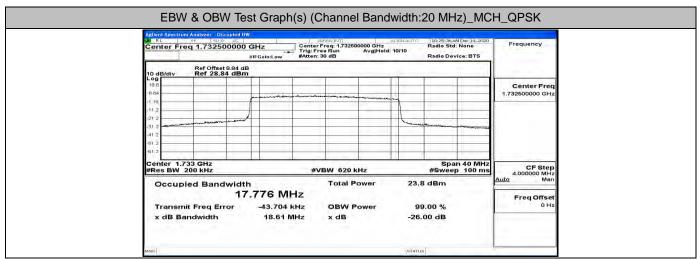


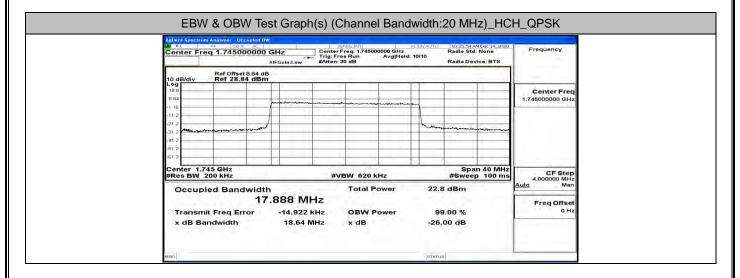


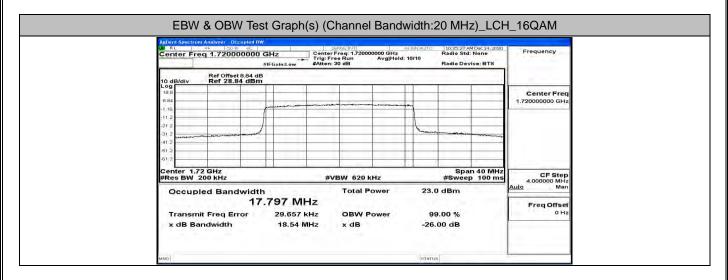


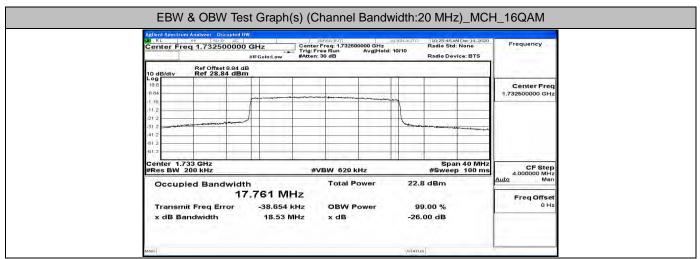


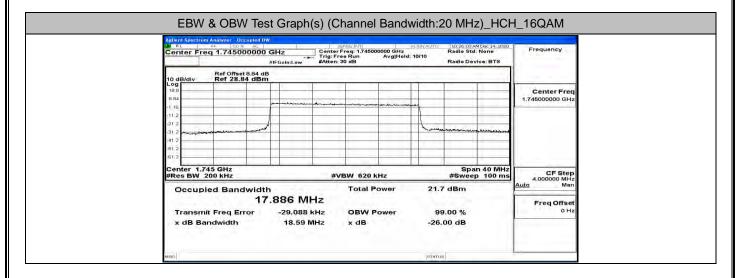




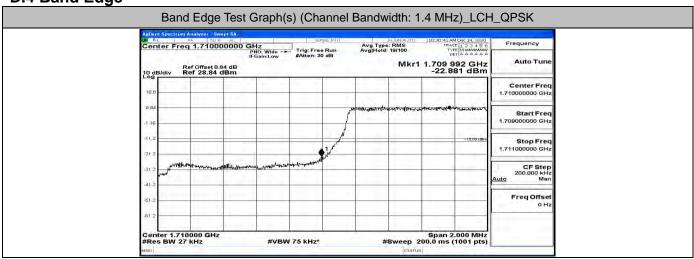


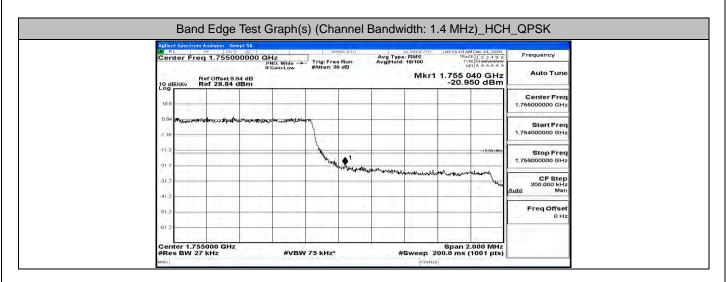


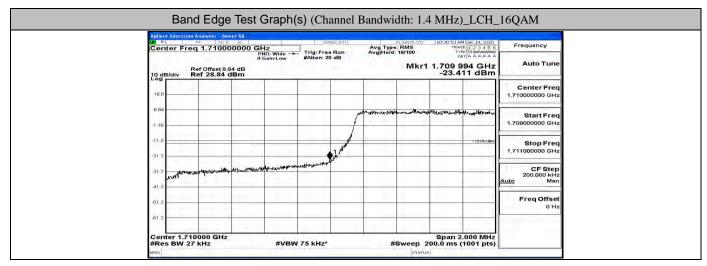


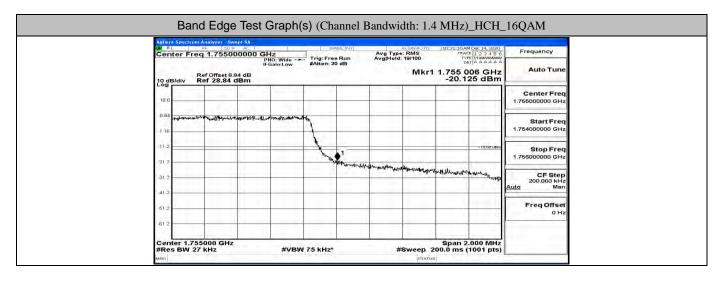


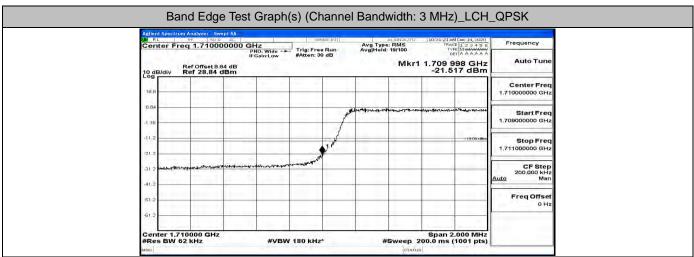
D.4 Band Edge

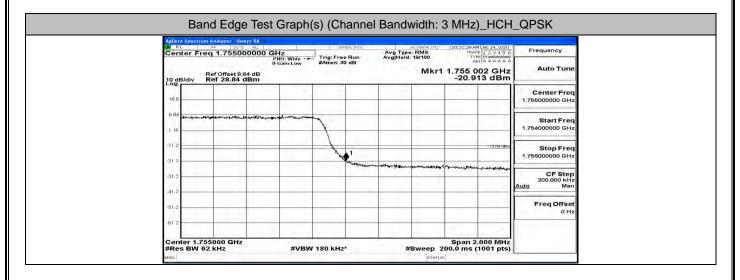


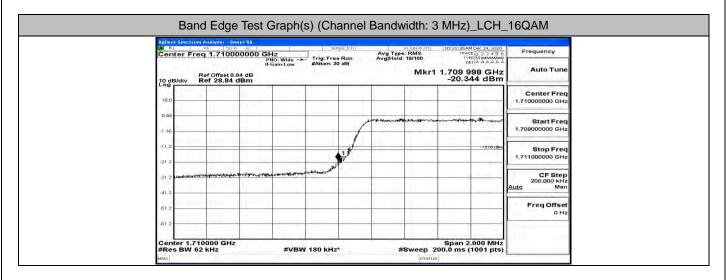


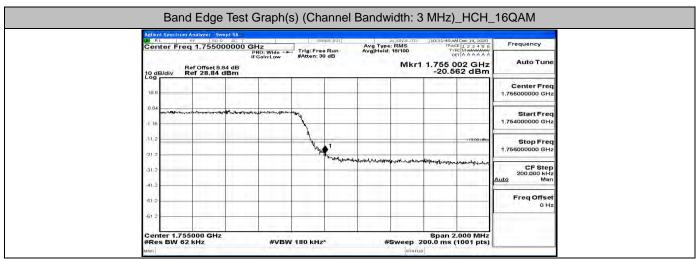


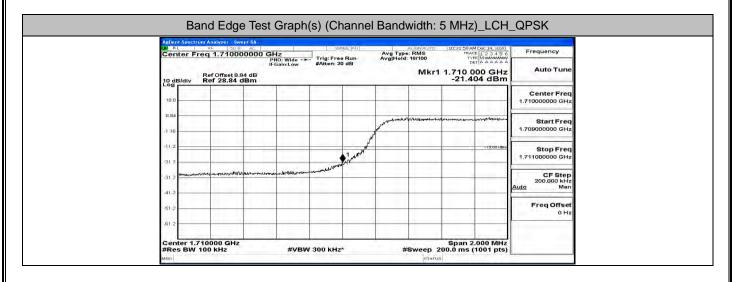


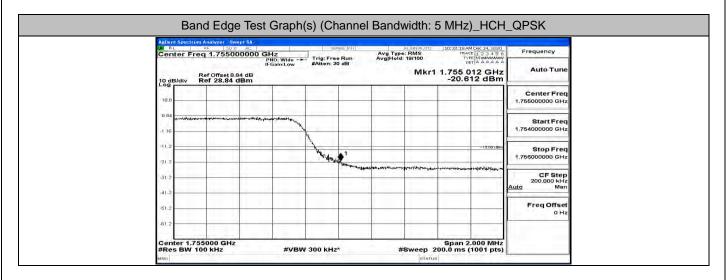


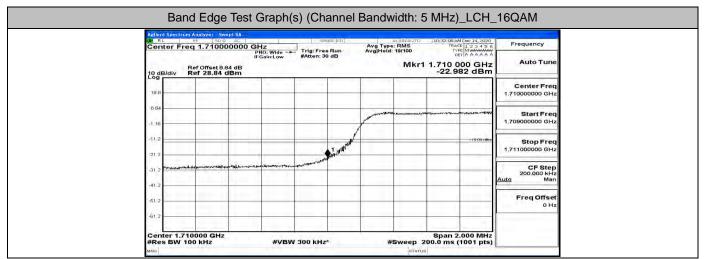


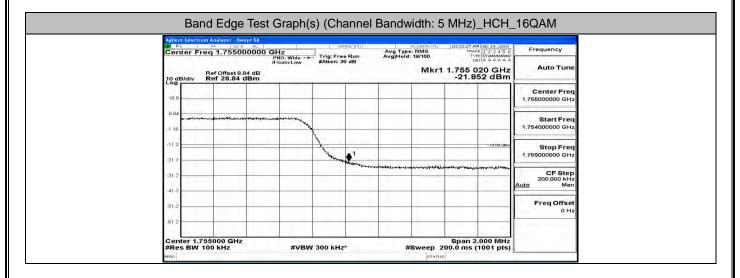


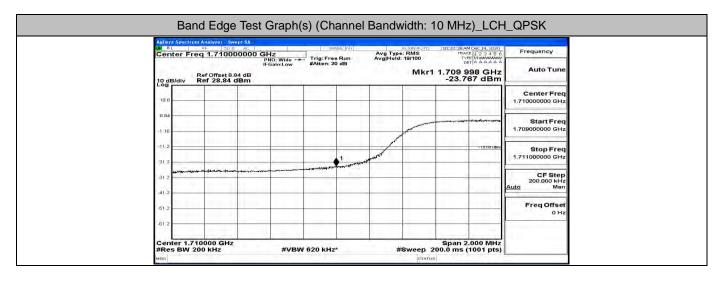


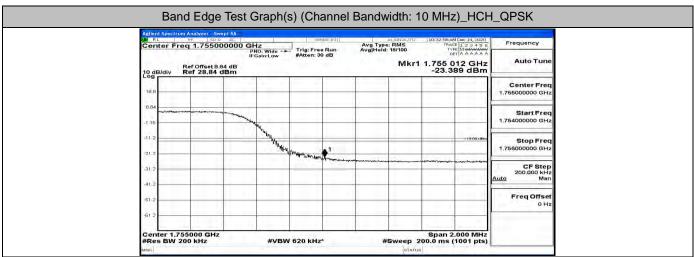


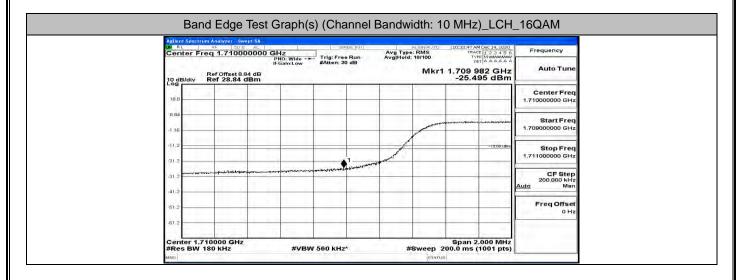


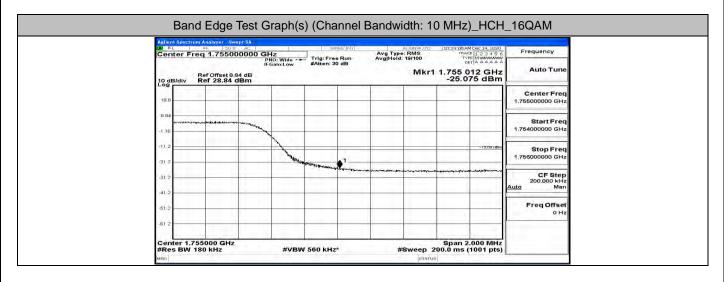


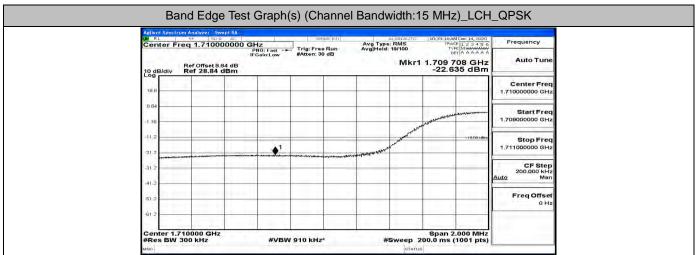


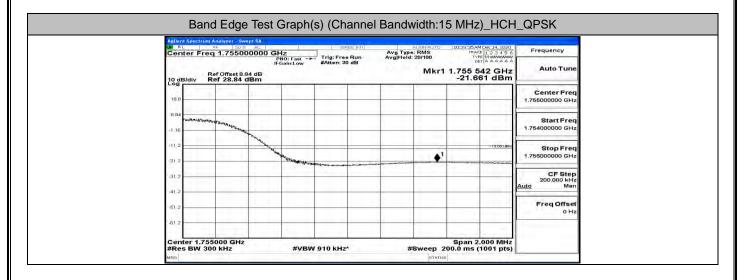


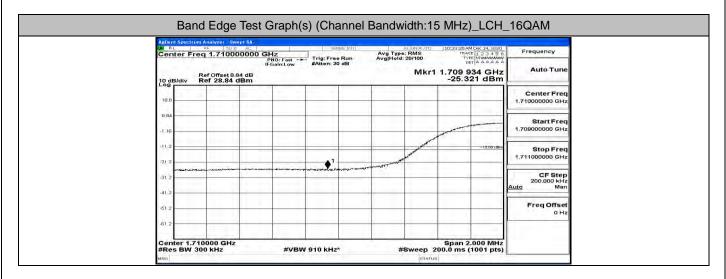


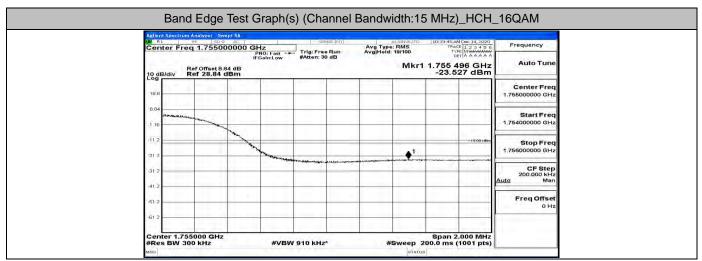


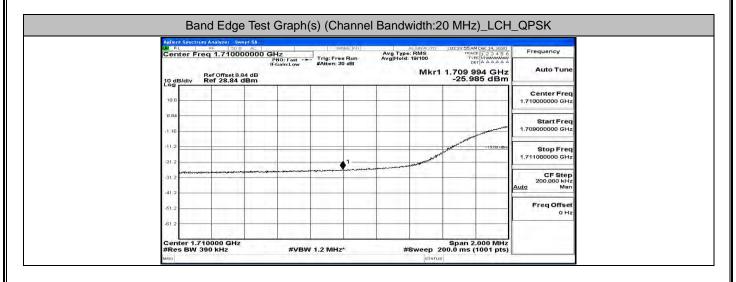


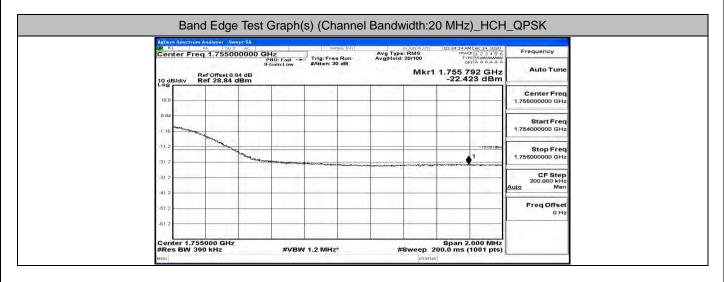


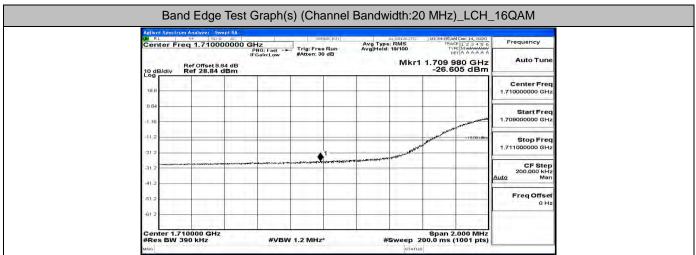


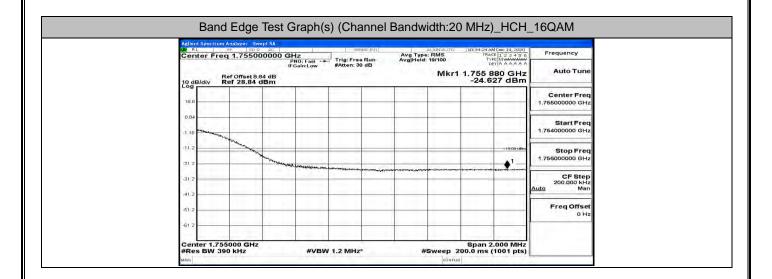








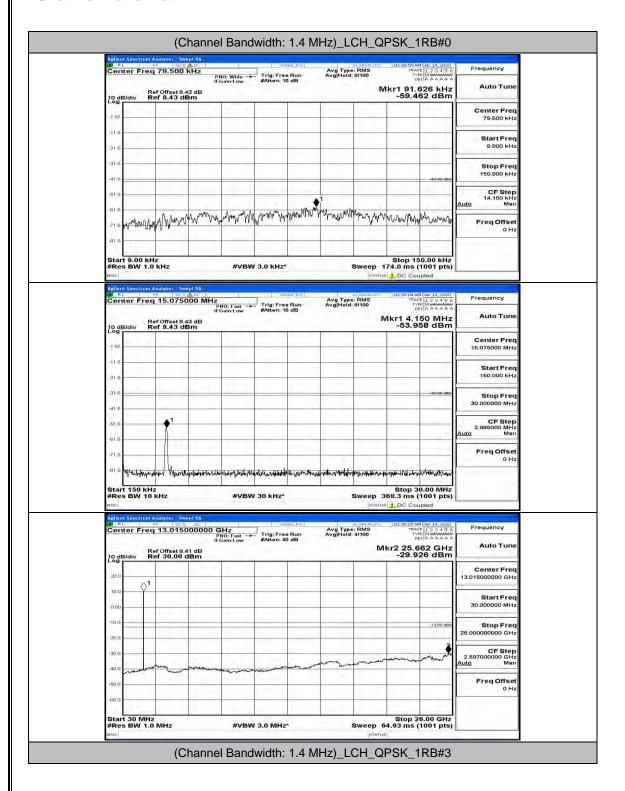


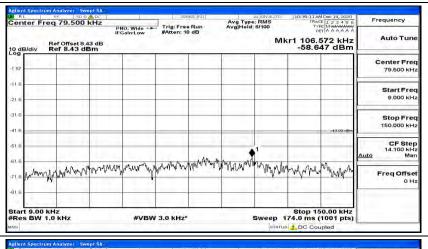


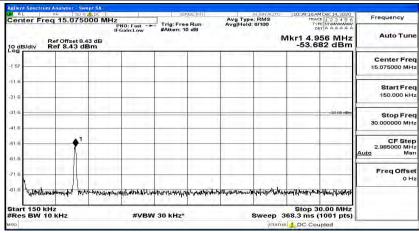
D.5 Conducted Spurious Emission

Test Graphs

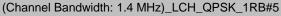
Channel Bandwidth: 1.4 MHz

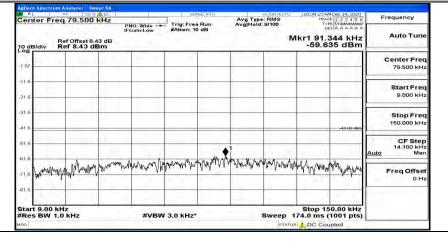


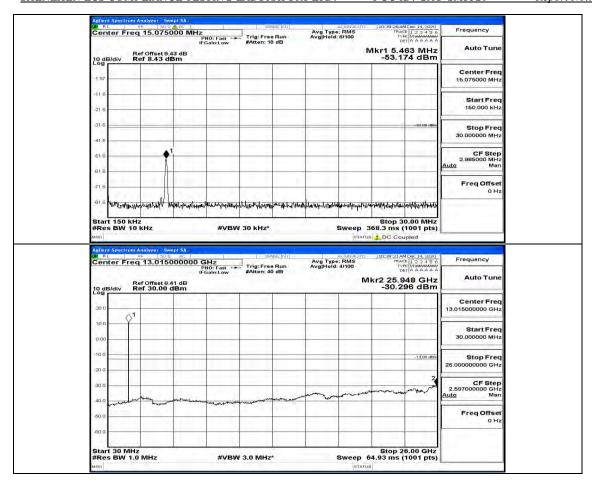


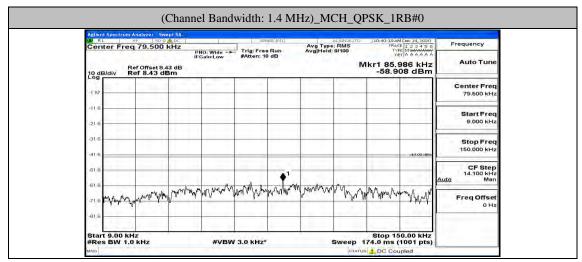


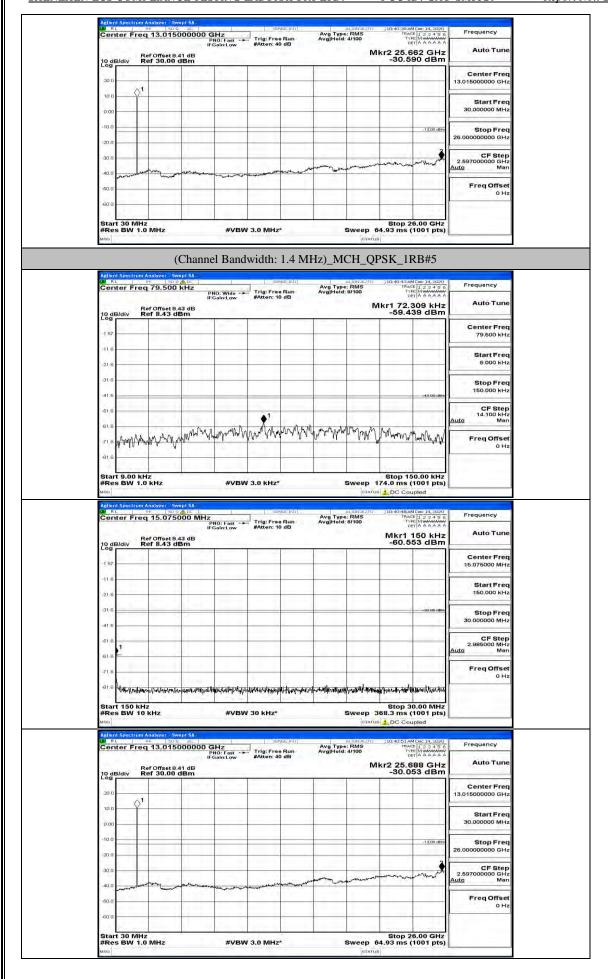


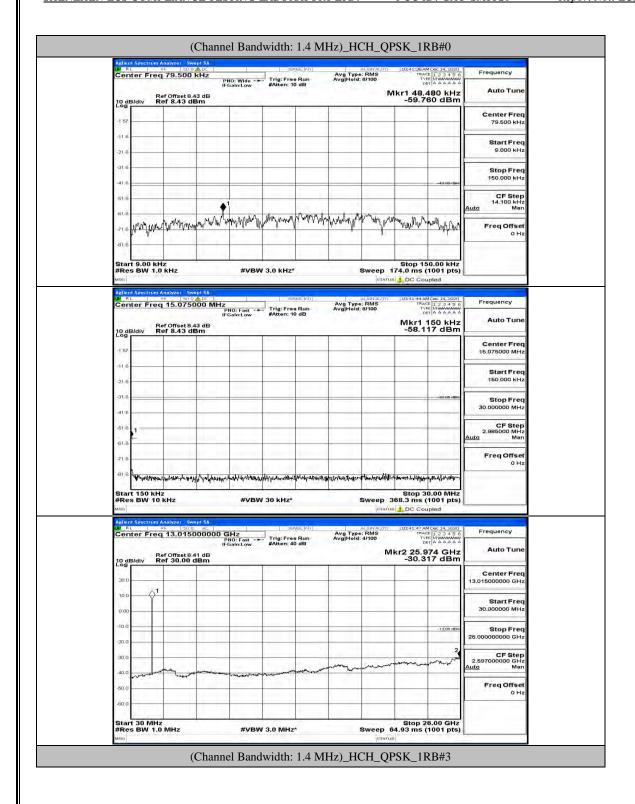


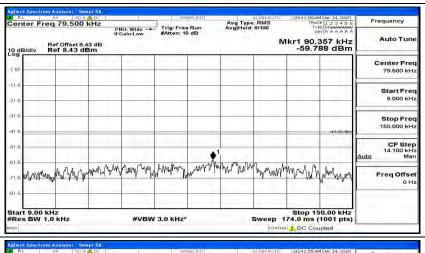


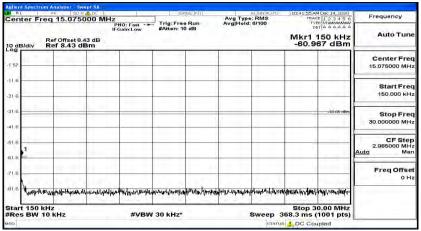


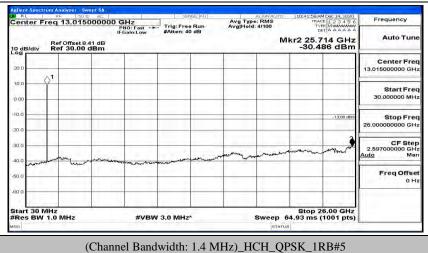






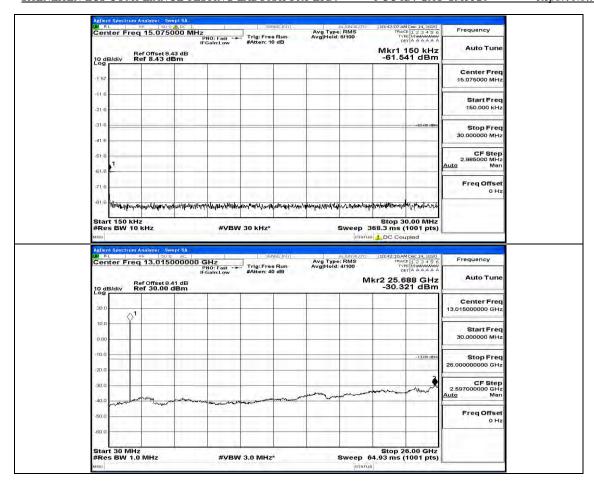


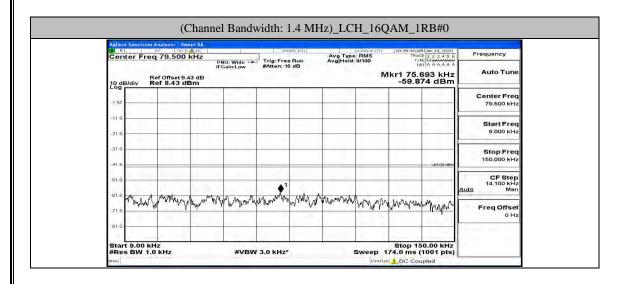




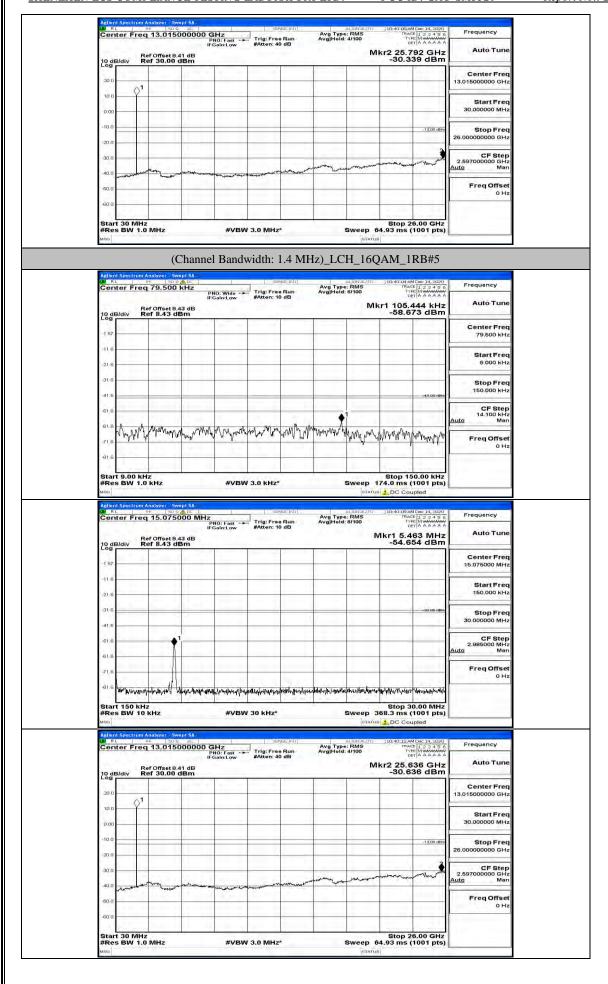


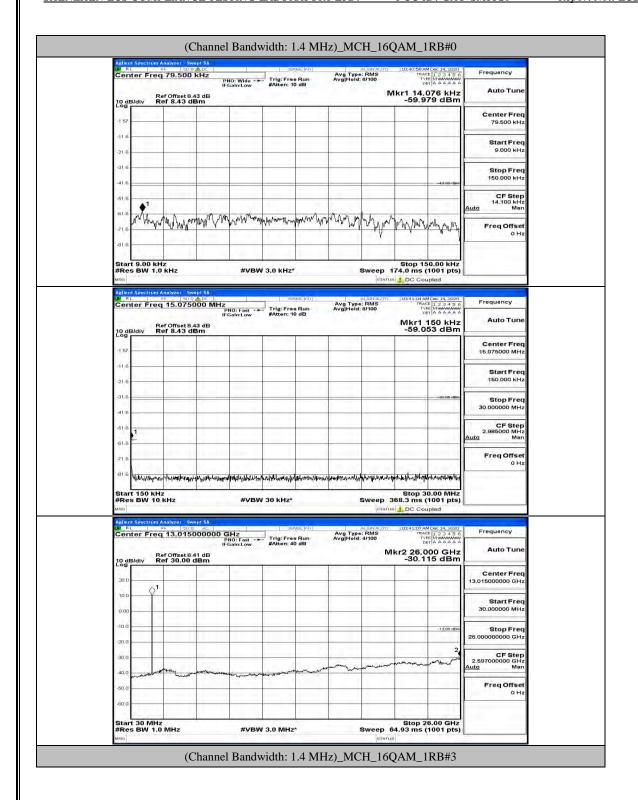


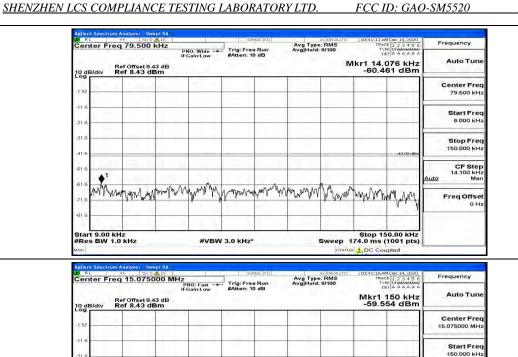


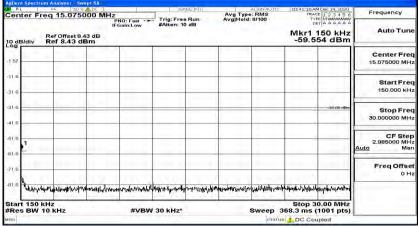




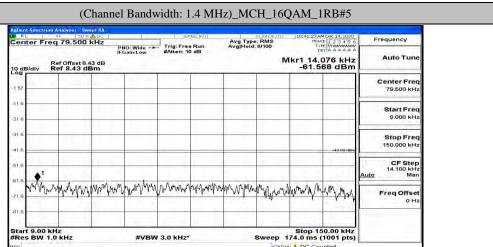


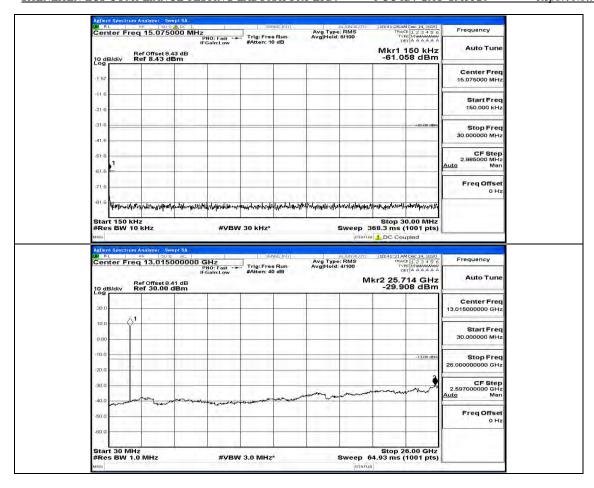


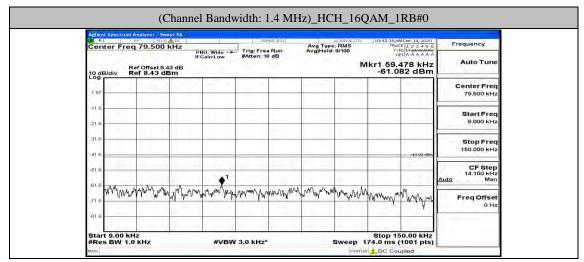


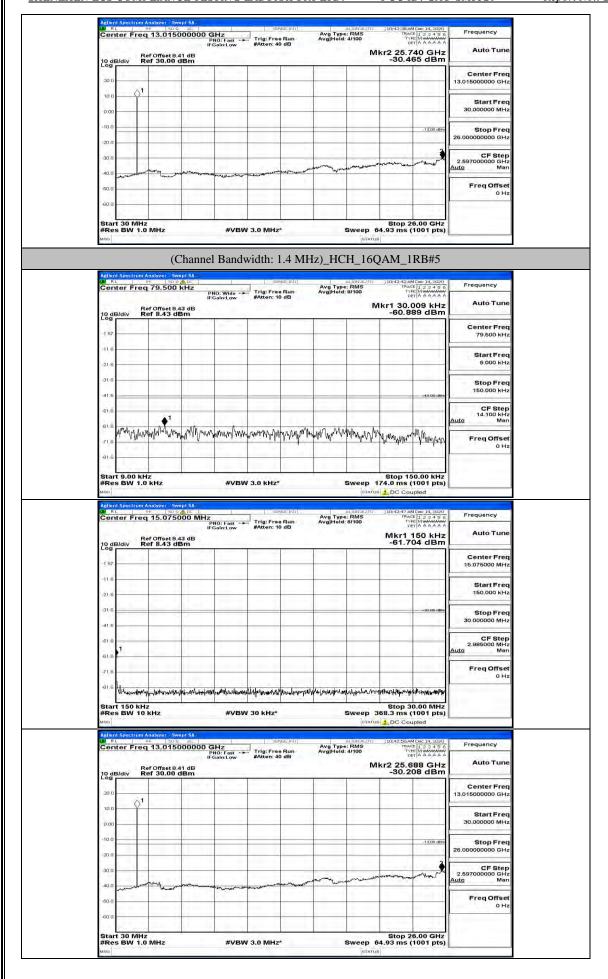




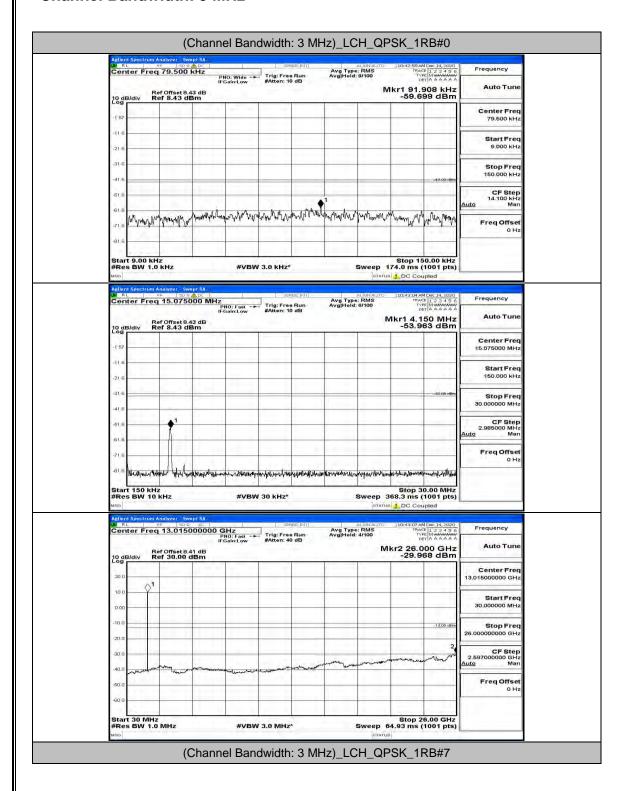


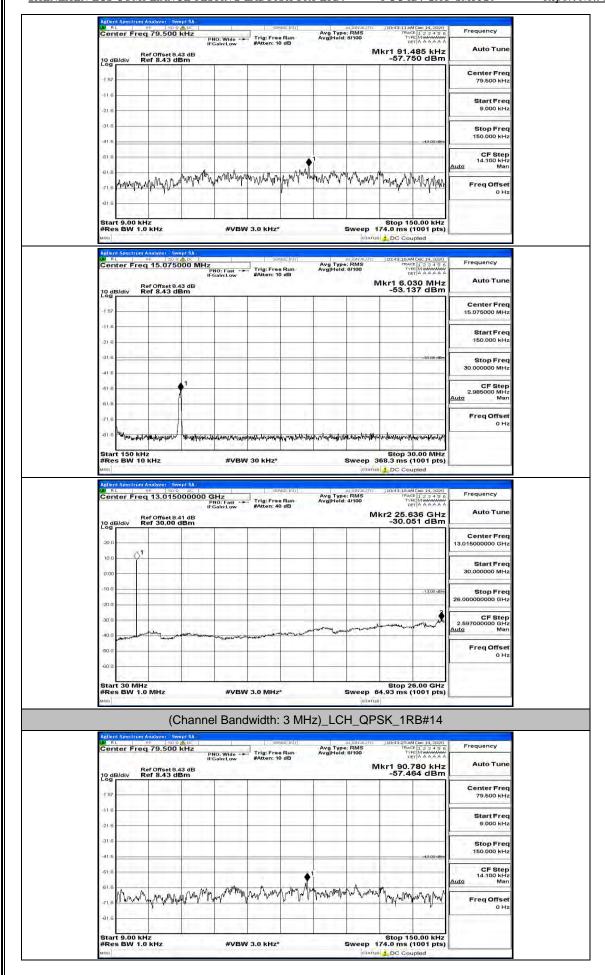


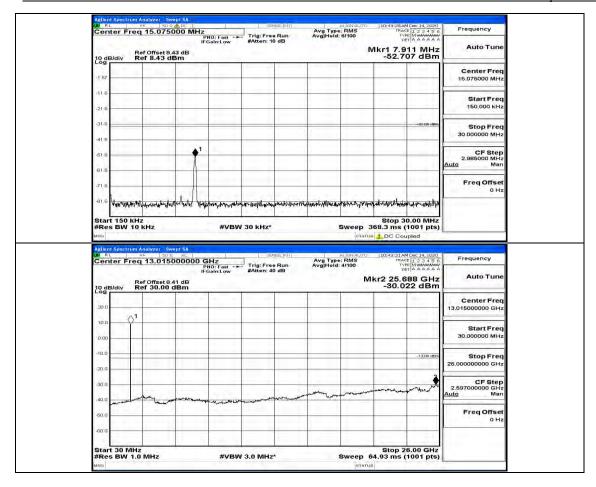


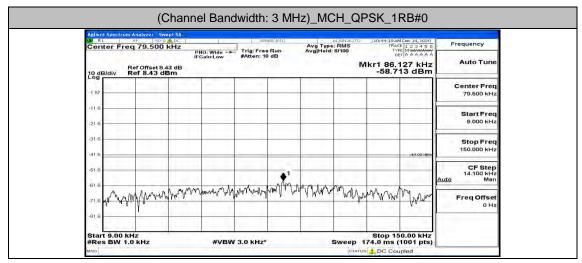


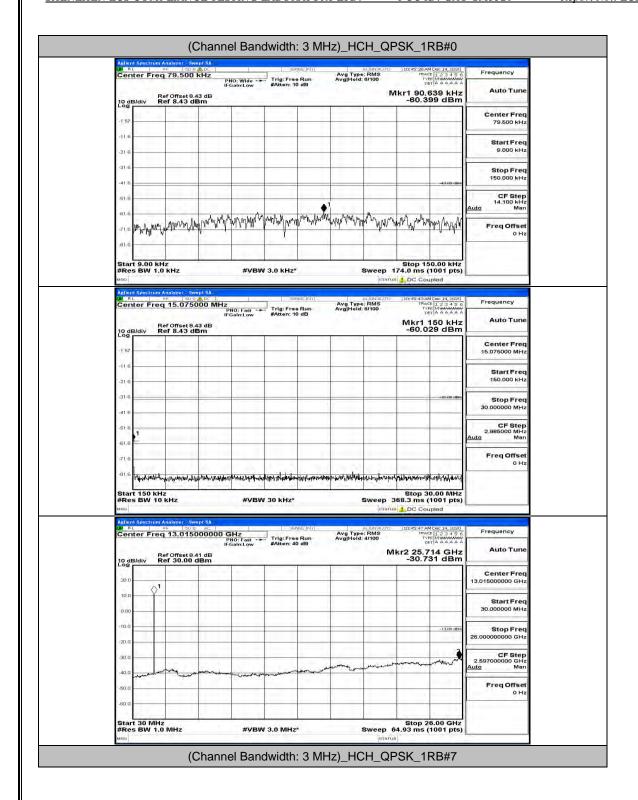
Channel Bandwidth: 3 MHz

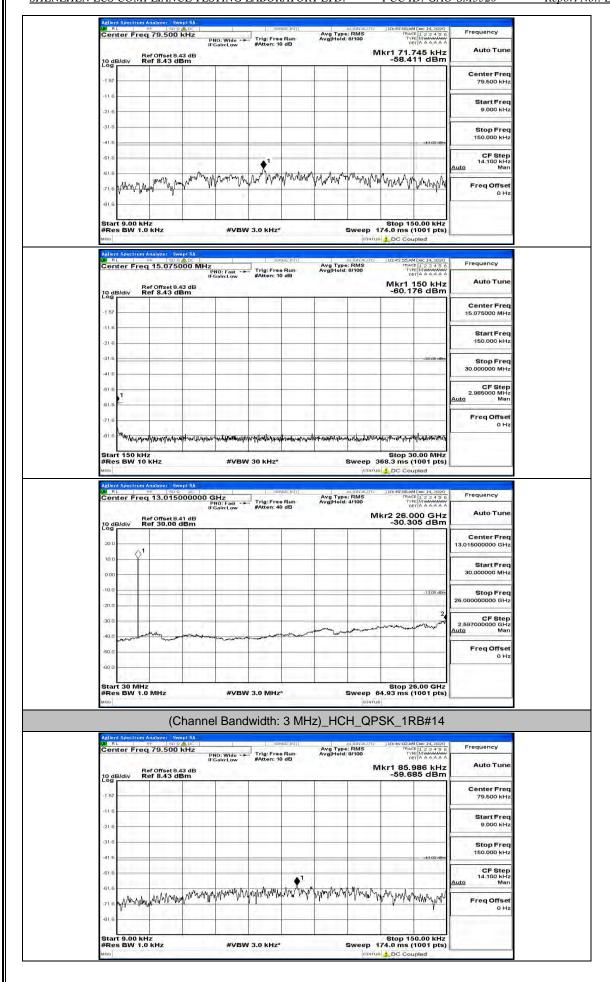


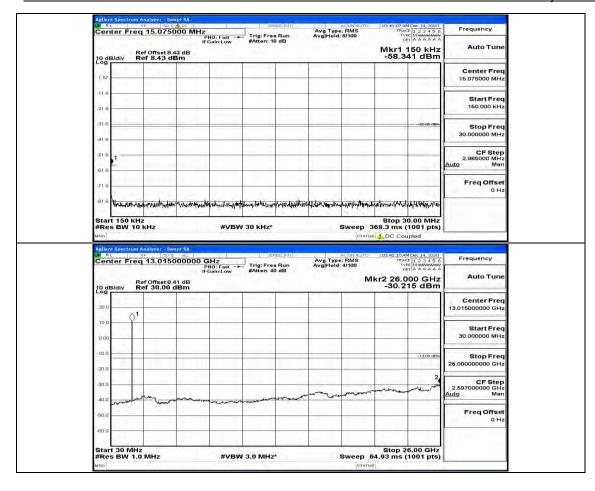


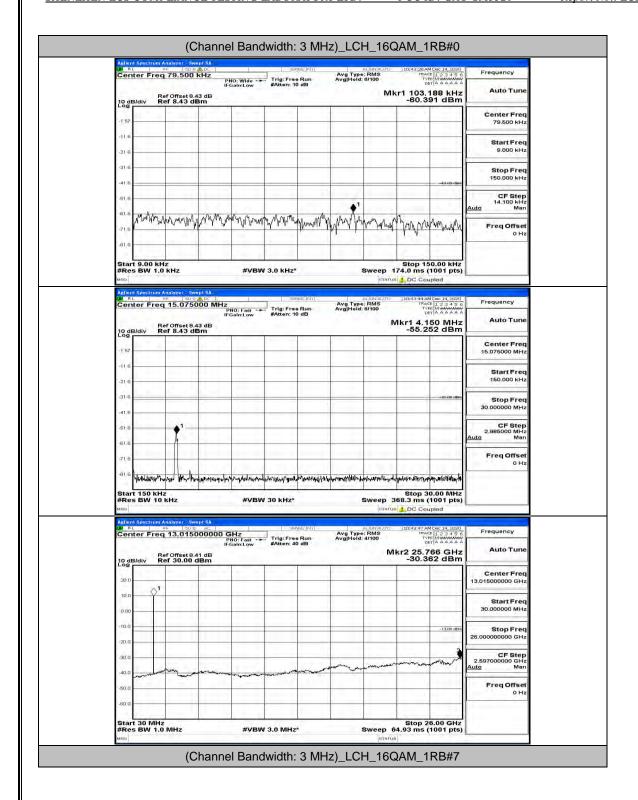


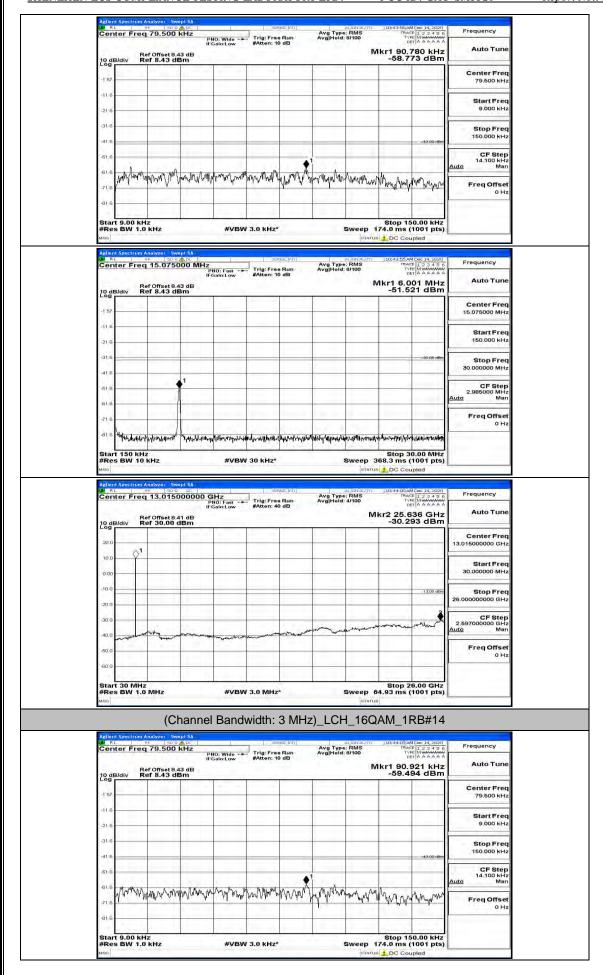


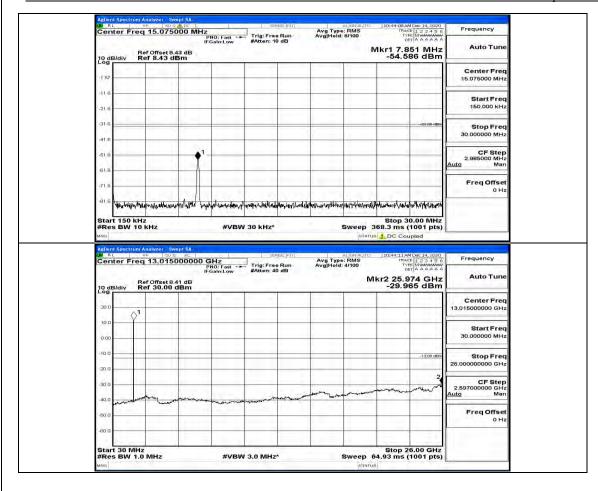


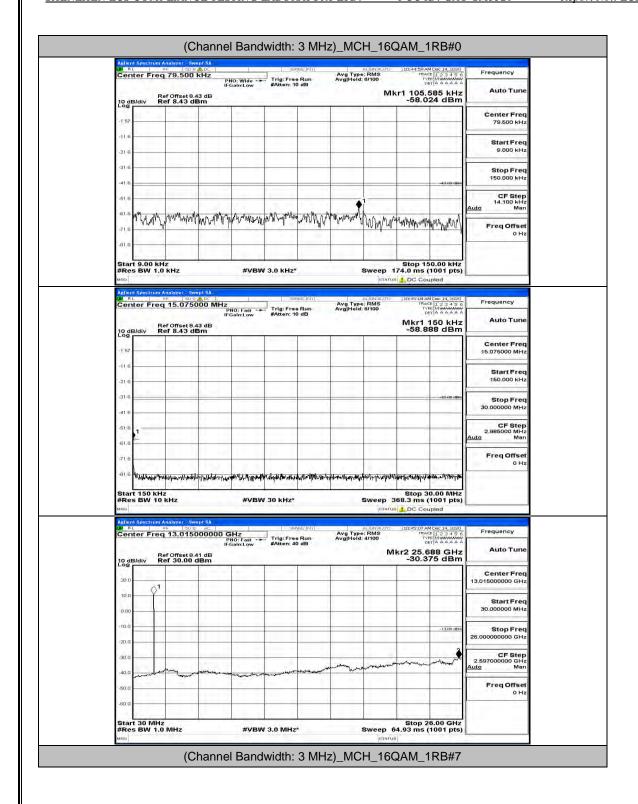


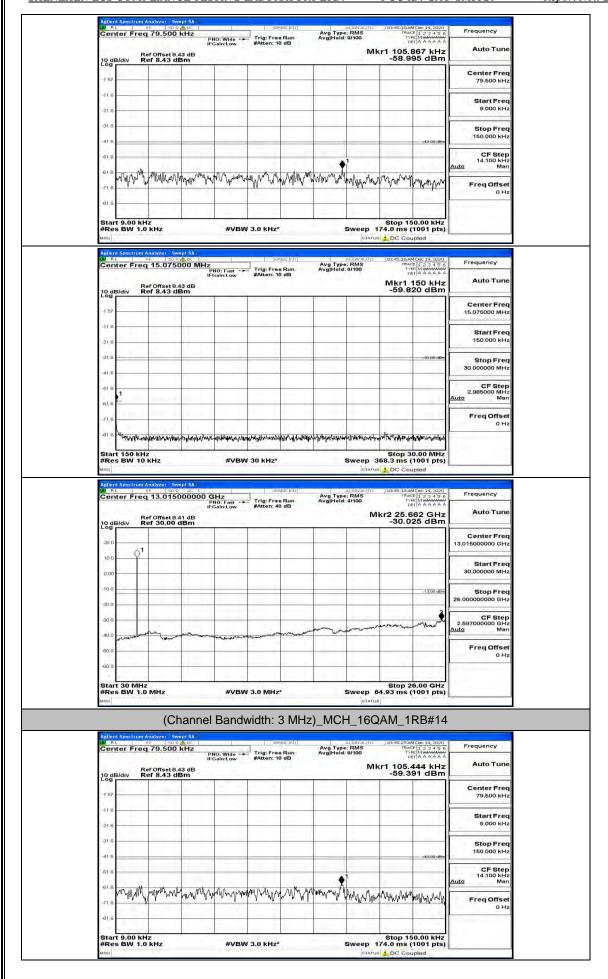


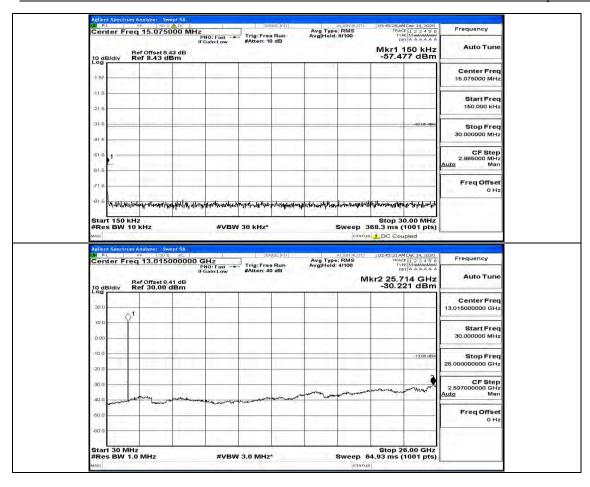


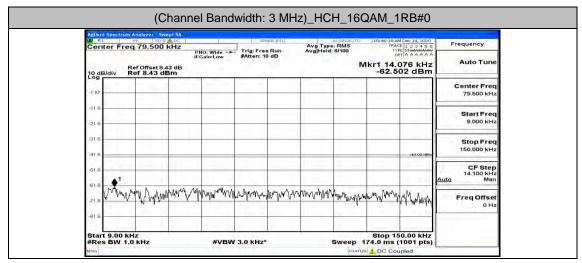












Stop 26.00 GHz Sweep 64.93 ms (1001 pts)

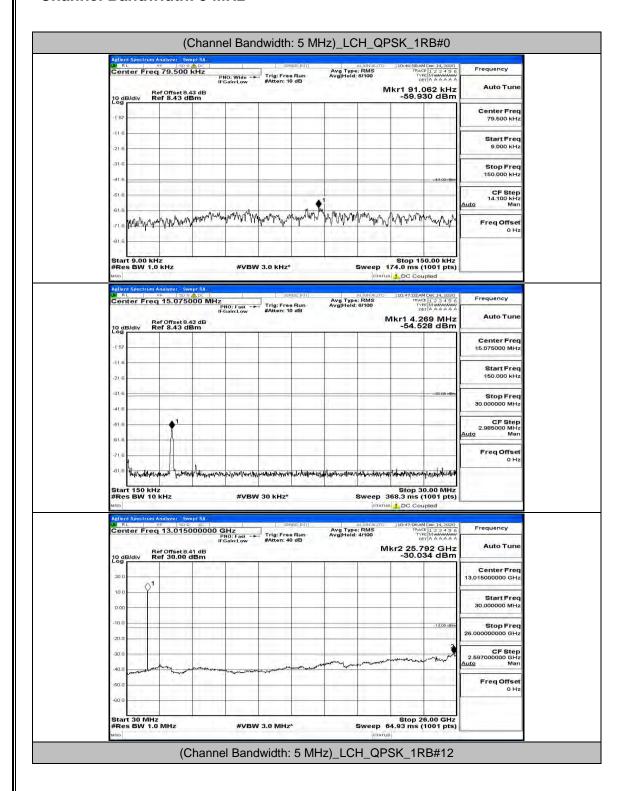
Start 30 MHz #Res BW 1.0 MHz

#VBW 3.0 MHz

Stop Freq 26.000000000 GHz CF Step 2.597000000 GHz

> Freq Offset 0 Hz

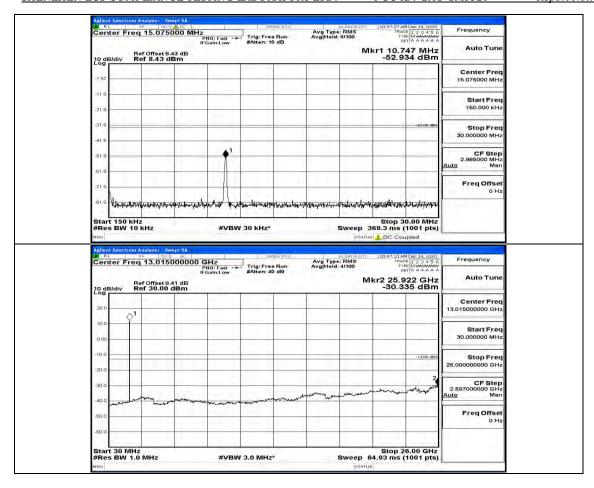
Channel Bandwidth: 5 MHz

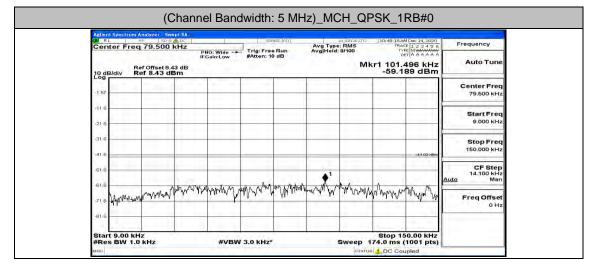


Stop 150.00 kHz Sweep 174.0 ms (1001 pts)

Start 9.00 kHz #Res BW 1.0 kHz

#VBW 3.0 kHz*





FCC ID: GAO-SM5520

Report No.: LCS201123186AEG

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*

Freq Offset

