Appendix D: Test Data for E-UTRA Band 2

Product Name: 5 inch 4G Smart Phone Trade Mark: LOGIC, iSWAG, UNONU **Test Model: L50T** FCC ID: 055503719

Environmental Conditions

Temperature:	22.6 ° C	
Relative Humidity:	53.6%	
ATM Pressure:	100.0 kPa	
Test Engineer:	Wang.Chuang	
Supervised by:	TOM.LIU	

D.1: Effective (Isotropic) Radiated Power Output Data

Test Result

Channel Bandwidth: 1.4 MHz

			Channel	Bandwidth: 1.4 MHz		
Modulati	Channal	RB Conf	iguration	Average Dower [dDm]	C : u m [dDmn]	Verdict
on	Channel	Size	Offset	Average Power [dBm]	E.i.r.p [dBm]	verdict
		1	0	21.73	22.82	PASS
		1	3	21.84	22.93	PASS
		1	5	21.71	22.80	PASS
	LCH	3	0	21.87	22.96	PASS
		3	2	21.88	22.97	PASS
		3	3	21.83	22.92	PASS
		6	0	20.86	21.95	PASS
QPSK		1	0	21.68	22.77	PASS
		1	3	21.84	22.93	PASS
		1	5	21.77	22.86	PASS
	MCH	3	0	21.78	22.87	PASS
		3	2	21.81	22.90	PASS
		3	3	21.83	22.92	PASS
		6	0	20.78	21.87	PASS
	HCH	1	0	21.08	22.17	PASS

<u>SHENZH</u>	EN LCS COM	PLIANCE TE	STING LABO	PRATORY LTI	D. FCC ID: 055503719	Report No.: LCS	190923018AEG
			1	3	21.28	22.37	PASS
			1	5	21.16	22.25	PASS
			3	0	21.17	22.26	PASS
			3	2	21.26	22.35	PASS
			3	3	21.25	22.34	PASS
			6	0	20.21	21.30	PASS
			1	0	21.01	22.10	PASS
			1	3	21.28	22.37	PASS
			1	5	21.08	22.17	PASS
		LCH	3	0	21.07	22.16	PASS
			3	2	21.08	22.17	PASS
			3	3	21.04	22.13	PASS
			6	0	19.84	20.93	PASS
			1	0	21.10	22.19	PASS
			1	3	21.16	22.25	PASS
			1	5	21.19	22.28	PASS
	16QAM	MCH	3	0	20.84	21.93	PASS
			3	2	20.93	22.02	PASS
			3	3	20.94	22.03	PASS
			6	0	19.70	20.79	PASS
			1	0	20.39	21.48	PASS
			1	3	20.57	21.66	PASS
			1	5	20.44	21.53	PASS
		HCH	3	0	20.28	21.37	PASS
			3	2	20.31	21.40	PASS
			3	3	20.34	21.43	PASS
			6	0	19.32	20.41	PASS

Channel Bandwidth: 3 MHz

	Channel Bandwidth: 3 MHz										
		F	RB								
Modulation	Channel	Config	guration	Average Power [dBm]	E.i.r.p [dBm]	Verdict					
		Size	Offset								
		1	0	21.83	22.92	PASS					
		1	7	22.10	23.19	PASS					
	LCH	1	14	21.83	22.92	PASS					
		8	0	20.86	21.95	PASS					
QPSK		8	4	20.94	22.03	PASS					
QFSN		8	7	20.83	21.92	PASS					
		15	0	20.87	21.96	PASS					
		1	0	21.61	22.7	PASS					
	MCH	1	7	21.99	23.08	PASS					
		1	14	21.80	22.89	PASS					

SHENZHE	N LCS COMPI	LIANCE TES	TING LA	BORATORY	LTD. FCC ID: 0555037	19 Report No.: LO	CS190923018AEG
			8	0	20.73	21.82	PASS
			8	4	20.81	21.9	PASS
			8	7	20.79	21.88	PASS
			15	0	20.75	21.84	PASS
			1	0	20.98	22.07	PASS
			1	7	21.34	22.43	PASS
			1	14	21.13	22.22	PASS
		HCH	8	0	20.12	21.21	PASS
			8	4	20.15	21.24	PASS
			8	7	20.12	21.21	PASS
			15	0	20.07	21.16	PASS
			1	0	21.19	22.28	PASS
			1	7	21.45	22.54	PASS
		LCH	1	14	21.13	22.22	PASS
			8	0	19.96	21.05	PASS
			8	4	19.98	21.07	PASS
			8	7	19.88	20.97	PASS
			15	0	19.86	20.95	PASS
			1	0	20.99	22.08	PASS
			1	7	21.29	22.38	PASS
			1	14	21.09	22.18	PASS
	16QAM	MCH	8	0	19.76	20.85	PASS
			8	4	19.90	20.99	PASS
			8	7	19.83	20.92	PASS
			15	0	19.73	20.82	PASS
			1	0	20.41	21.5	PASS
		1	7	20.72	21.81	PASS	
			1	14	20.58	21.67	PASS
		HCH	8	0	19.07	20.16	PASS
			8	4	19.10	20.19	PASS
			8	7	19.06	20.15	PASS
			15	0	19.04	20.13	PASS

Channel Bandwidth: 5 MHz

Channel Bandwidth: 5 MHz									
Modulation	Channel	RB Conf	iguration	Average Power [dBm]	E.i.r.p [dBm]	Verdict			
Woddiation	Olidino	Size	Offset	Average i ower [ubin]	L.I.I.p [ubiii]	Verdict			
		1	0	21.79	22.88	PASS			
		1	12	22.09	23.18	PASS			
QPSK	LCH	1	24	21.61	22.7	PASS			
QFSK	LCH	12	0	20.87	21.96	PASS			
		12	6	20.92	22.01	PASS			
		12	13	20.79	21.88	PASS			

SHENZHEN LCS COMPLIANCE TESTING LABORATORY LTD. FCC ID: 055503719 Report No.: LCS19092.	018AEG
25 0 20.90 21.99 PAS	S
1 0 21.50 22.59 PAS	S
1 12 22.06 23.15 PAS	S
1 24 21.70 22.79 PAS	S
MCH 12 0 20.70 21.79 PAS	s
12 6 20.74 21.83 PAS	s
12 13 20.77 21.86 PAS	s
25 0 20.77 21.86 PAS	S
1 0 20.85 21.94 PAS	S
1 12 21.30 22.39 PAS	S
1 24 21.01 22.1 PAS	S
HCH 12 0 19.99 21.08 PAS	S
12 6 20.07 21.16 PAS	S
12 13 20.00 21.09 PAS	S
25 0 20.01 21.1 PAS	S
1 0 21.20 22.29 PAS	S
1 12 21.53 22.62 PAS	S
1 24 21.07 22.16 PAS	S
LCH 12 0 20.12 21.21 PAS	S
12 6 20.09 21.18 PAS	S
12 13 19.96 21.05 PAS	S
25 0 19.90 20.99 PAS	S
1 0 20.87 21.96 PAS	S
1 12 21.42 22.51 PAS	S
1 24 21.19 22.28 PAS	S
16QAM MCH 12 0 19.87 20.96 PAS	S
12 6 20.00 21.09 PAS	S
12 13 19.93 21.02 PAS	S
25 0 19.79 20.88 PAS	S
1 0 19.93 21.02 PAS	S
1 12 20.34 21.43 PAS	S
1 24 20.08 21.17 PAS	S
HCH 12 0 19.01 20.1 PAS	S
12 6 19.18 20.27 PAS	S
12 13 19.07 20.16 PAS	S
25 0 19.03 20.12 PAS	S

Channel Bandwidth: 10 MHz

			Channe	l Bandwidth: 10 MHz		
Modulation	Channel		iguration	Average Power [dBm]	E.i.r.p [dBm]	Verdict
Modulation	Onamici	Size	Offset	Average Fower [abin]	E.i.i.p [dBiii]	Verdict
		1	0	21.82	22.91	PASS
		1	24	21.87	22.96	PASS
		1	49	21.31	22.40	PASS
	LCH	25	0	20.89	21.98	PASS
		25	12	20.73	21.82	PASS
		25	25	20.55	21.64	PASS
		50	0	20.74	21.83	PASS
		1	0	21.36	22.45	PASS
		1	24	21.93	23.02	PASS
		1	49	21.85	22.94	PASS
QPSK	MCH	25	0	20.68	21.77	PASS
		25	12	20.80	21.89	PASS
		25	25	20.90	21.99	PASS
		50	0	20.77	21.86	PASS
		1	0	20.84	21.93	PASS
		1	24	21.12	22.21	PASS
		1	49	21.06	22.15	PASS
	HCH	25	0	19.93	21.02	PASS
		25	12	20.00	21.09	PASS
		25	25	19.96	21.05	PASS
		50	0	19.95	21.04	PASS
		1	0	21.13	22.22	PASS
		1	24	21.22	22.31	PASS
		1	49	20.62	21.71	PASS
	LCH	25	0	19.93	21.02	PASS
		25	12	19.77	20.86	PASS
		25	25	19.56	20.65	PASS
		50	0	19.74	20.83	PASS
		1	0	20.63	21.72	PASS
400 414		1	24	21.21	22.30	PASS
16QAM		1	49	21.17	22.26	PASS
	MCH	25	0	19.72	20.81	PASS
		25	12	19.78	20.87	PASS
		25	25	19.87	20.96	PASS
		50	0	19.81	20.90	PASS
		1	0	20.32	21.41	PASS
	11011	1	24	20.49	21.58	PASS
	HCH	1	49	20.50	21.59	PASS
		25	0	18.96	20.05	PASS

<u>SHENZHE</u>	<u>N LCS COMPL</u>	<u>IANCE TEST.</u>	ING LABOH	D. FCC ID: 055503	719 Report No.: 1	LCS190923018A	<i>IEG</i>	
			25	12	18.98	20.07	PASS	
			25	25	18.99	20.08	PASS	
			50	0	18.93	20.02	PASS	

Channel Bandwidth: 15 MHz

			Channe	I Bandwidth: 15 MHz		
Modulation	Charast	RB Cont	figuration	Average Device [dDm.]	Fire [dDar]	\/o==!:=4
Modulation	Channel	Size	Offset	Average Power [dBm]	E.i.r.p [dBm]	Verdict
		1	0	21.86	22.95	PASS
		1	37	21.73	22.82	PASS
		1	74	20.94	22.03	PASS
	LCH	37	0	20.80	21.89	PASS
		37	18	20.56	21.65	PASS
		37	38	20.29	21.38	PASS
		75	0	20.53	21.62	PASS
		1	0	21.09	22.18	PASS
		1	37	21.98	23.07	PASS
		1	74	21.71	22.80	PASS
QPSK	MCH	37	0	20.55	21.64	PASS
		37	18	20.79	21.88	PASS
		37	38	20.93	22.02	PASS
		75	0	20.77	21.86	PASS
	НСН	1	0	21.09	22.18	PASS
		1	37	21.05	22.14	PASS
		1	74	21.02	22.11	PASS
		37	0	19.99	21.08	PASS
		37	18	19.98	21.07	PASS
		37	38	19.99	21.08	PASS
		75	0	19.98	21.07	PASS
		1	0	21.16	22.25	PASS
		1	37	20.97	22.06	PASS
		1	74	20.28	21.37	PASS
	LCH	37	0	19.79	20.88	PASS
		37	18	19.56	20.65	PASS
		37	38	19.28	20.37	PASS
16OAM		75	0	19.56	20.65	PASS
16QAM		1	0	20.37	21.46	PASS
		1	37	21.27	22.36	PASS
		1	74	21.06	22.15	PASS
	MCH	37	0	19.56	20.65	PASS
		37	18	19.80	20.89	PASS
		37	38	19.90	20.99	PASS
		75	0	19.77	20.86	PASS

EN LCS COMP.	<u>LIANCE TEST</u>	<u>ING LABOI</u>	<u>RATORY LTL</u>	D. FCC ID: 0555037	7 <u>19 </u>	<u>CS190923018A</u>
		1	0	20.48	21.57	PASS
		1	37	20.37	21.46	PASS
		1	74	20.35	21.44	PASS
	HCH	37	0	19.05	20.14	PASS
		37	18	19.00	20.09	PASS
		37	38	19.03	20.12	PASS
		75	0	19.03	20.12	PASS

Channel Bandwidth: 20 MHz

	Channel Bandwidth: 20 MHz									
NA LLC		RB Conf	figuration	A B (12.3)	E: (15.1	\				
Modulation	Channel	Size	Offset	Average Power [dBm]	E.i.r.p [dBm]	Verdict				
		1	0	21.80	22.89	PASS				
		1	49	21.58	22.67	PASS				
		1	99	20.88	21.97	PASS				
	LCH	50	0	20.64	21.73	PASS				
		50	25	20.36	21.45	PASS				
		50	50	20.20	21.29	PASS				
		100	0	20.43	21.52	PASS				
		1	0	20.98	22.07	PASS				
		1	49	22.00	23.09	PASS				
		1	99	21.65	22.74	PASS				
QPSK	MCH	50	0	20.48	21.57	PASS				
		50	25	20.74	21.83	PASS				
		50	50	20.94	22.03	PASS				
		100	0	20.67	21.76	PASS				
	НСН	1	0	21.50	22.59	PASS				
		1	49	21.17	22.26	PASS				
		1	99	20.98	22.07	PASS				
		50	0	20.40	21.49	PASS				
		50	25	20.03	21.12	PASS				
		50	50	19.93	21.02	PASS				
		100	0	20.15	21.24	PASS				
		1	0	21.03	22.12	PASS				
		1	49	20.79	21.88	PASS				
		1	99	20.09	21.18	PASS				
	LCH	50	0	19.63	20.72	PASS				
160414		50	25	19.37	20.46	PASS				
16QAM		50	50	19.19	20.28	PASS				
		100	0	19.40	20.49	PASS				
		1	0	20.20	21.29	PASS				
	MCH	1	49	21.17	22.26	PASS				
		1	99	20.82	21.91	PASS				

SHENZHEN LCS COMPLIANCE TESTING LABORATORY LTD.		D. FCC ID: 0555037	719 Report No.: L	CS190923018AEG			
			50	0	19.47	20.56	PASS
			50	25	19.73	20.82	PASS
			50	50	19.91	21.00	PASS
			100	0	19.67	20.76	PASS
			1	0	20.87	21.96	PASS
			1	49	20.54	21.63	PASS
			1	99	20.37	21.46	PASS
		HCH	50	0	19.43	20.52	PASS
			50	25	19.03	20.12	PASS
			50	50	18.94	20.03	PASS
			100	0	19.18	20.27	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	
Modulation	Chame	[dB]	[dB]	verdict	
QPSK	LCH	5.71	<13	PASS	
	MCH	5.5	<13	PASS	
	HCH	5.27	<13	PASS	
16QAM	LCH	6.73	<13	PASS	
	MCH	6.44	<13	PASS	
	HCH	6.18	<13	PASS	

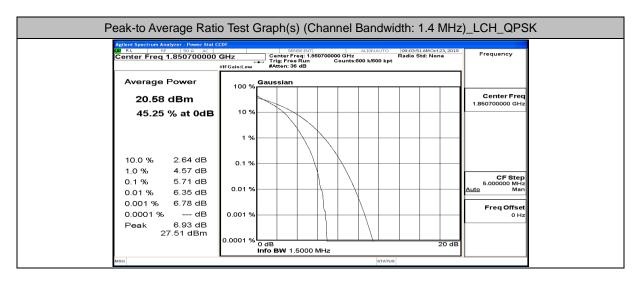
Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)					
Madulatian	Channel	Peak-to-Average Ratio	Limit	Verdict	
Modulation	Channel	[dB]	[dB]	verdict	
QPSK	LCH	5.77	<13	PASS	
	MCH	5.58	<13	PASS	
	HCH	5.48	<13	PASS	
16QAM	LCH	6.61	<13	PASS	
	MCH	6.5	<13	PASS	
	HCH	6.27	<13	PASS	

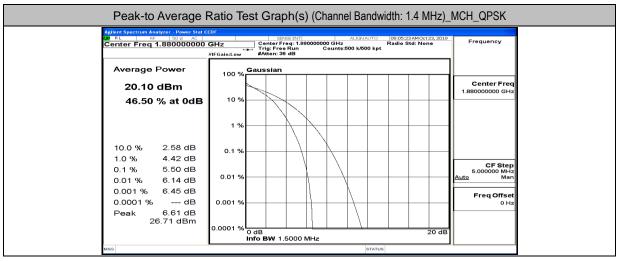
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)					
Maria	Channel	Peak-to-Average Ratio	Limit	Verdict	
Modulation	Chame	[dB]	[dB]		
QPSK	LCH	5.85	<13	PASS	
	MCH	5.65	<13	PASS	
	HCH	5.44	<13	PASS	
16QAM	LCH	6.63	<13	PASS	
	MCH	6.5	<13	PASS	
	HCH	6.22	<13	PASS	

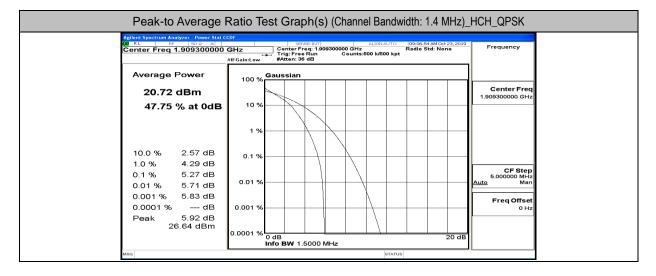
Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)					
Modulation	Channel	Peak-to-Average Ratio Limit	Limit	Verdict	
Modulation	Griannei	[dB]	[dB]		
QPSK	LCH	5.84	<13	PASS	
	MCH	5.65	<13	PASS	
	HCH	5.57	<13	PASS	
16QAM	LCH	6.53	<13	PASS	
	MCH	6.34	<13	PASS	
	HCH	6.26	<13	PASS	

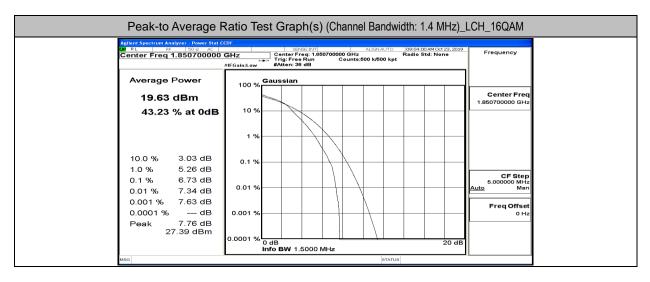
Peak-to Average Ratio Test Result (Channel Bandwidth: 15 MHz)					
Modulation	Channel	Peak-to-Average Ratio	Limit	Verdict	
Modulation	Griannei	[dB]	[dB]	verdict	
	LCH	5.06	<13	PASS	
QPSK	MCH	4.96	<13	PASS	
	HCH	4.97	<13	PASS	
16QAM	LCH	6.38	<13	PASS	
	MCH	6.27	<13	PASS	
	HCH	6.21	<13	PASS	

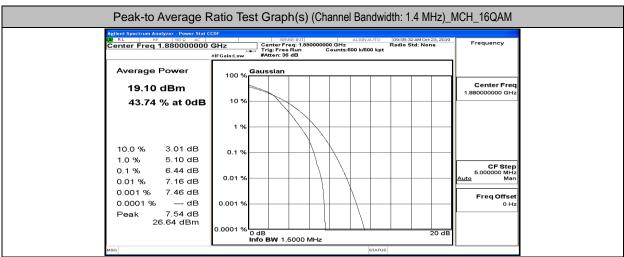
Peak-to Average Ratio Test Result (Channel Bandwidth: 20 MHz)					
Marine	Channel	Peak-to-Average Ratio	Limit	Verdict	
Modulation	Channel	[dB]	[dB]		
QPSK	LCH	5.68	<13	PASS	
	MCH	5.7	<13	PASS	
	HCH	5.69	<13	PASS	
16QAM	LCH	6.81	<13	PASS	
	MCH	6.75	<13	PASS	
	HCH	6.7	<13	PASS	

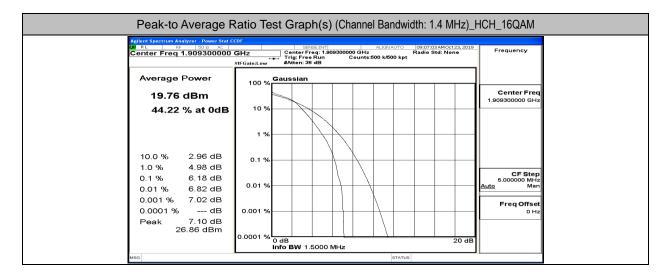


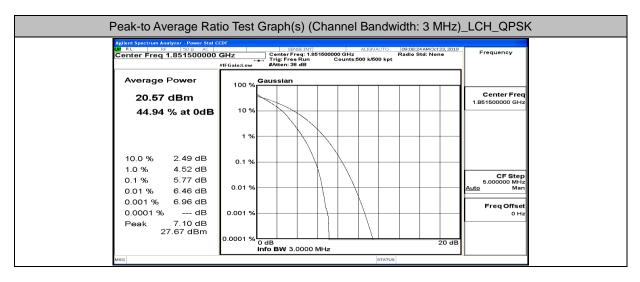


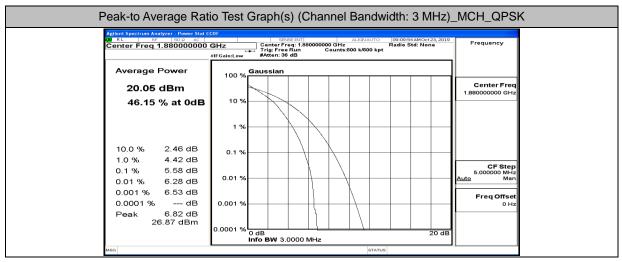


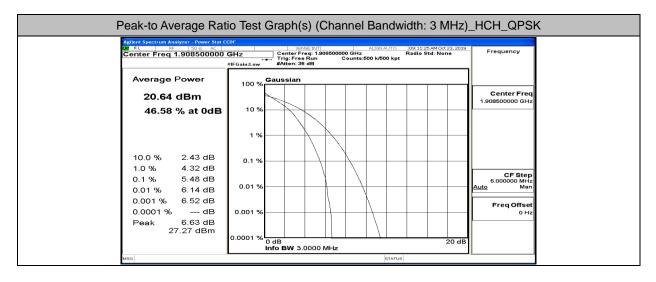


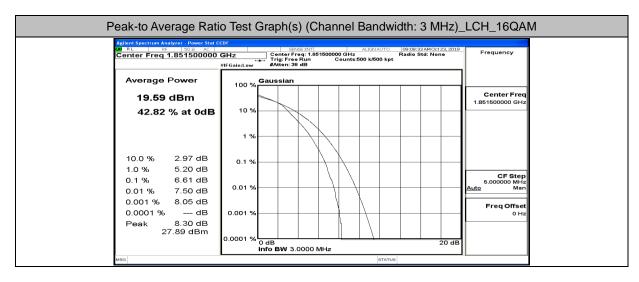


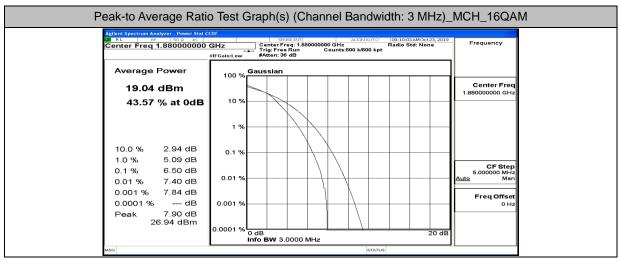


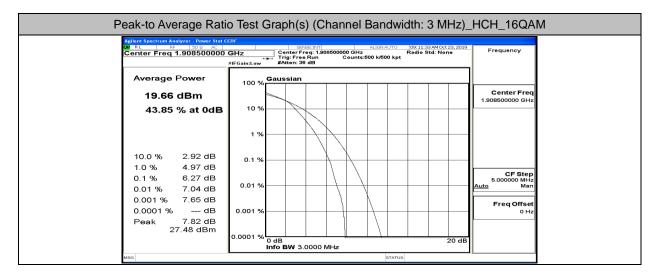


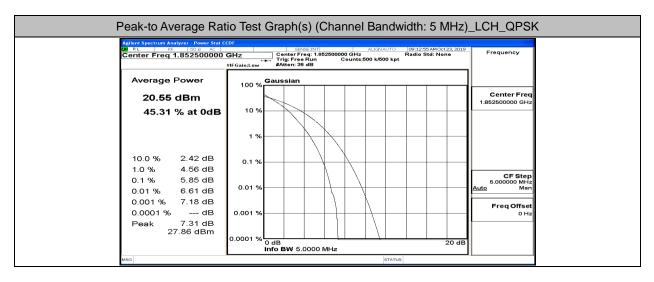


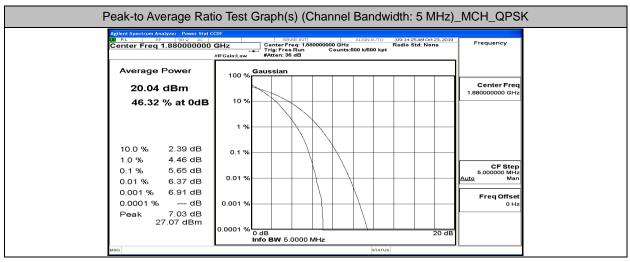


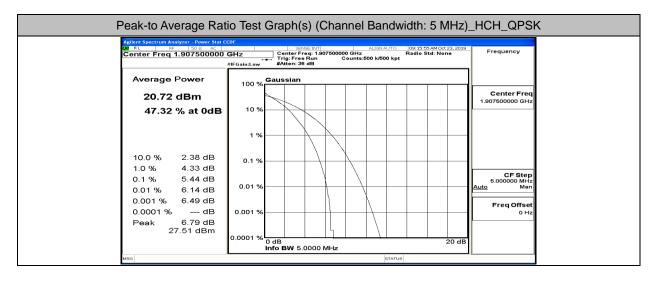


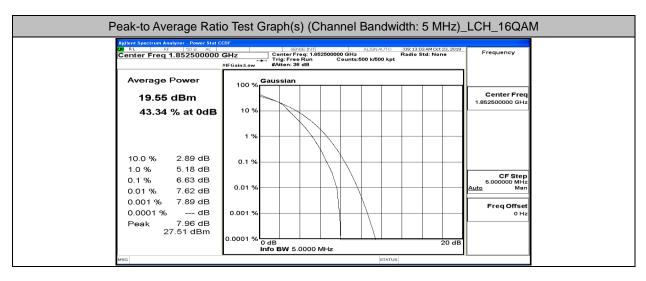


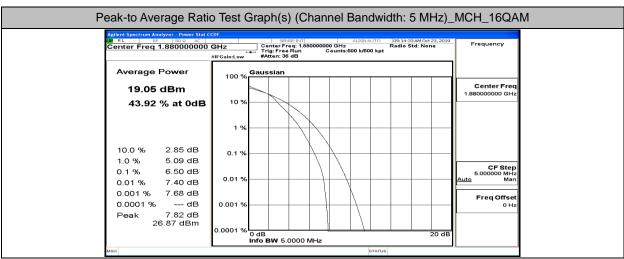


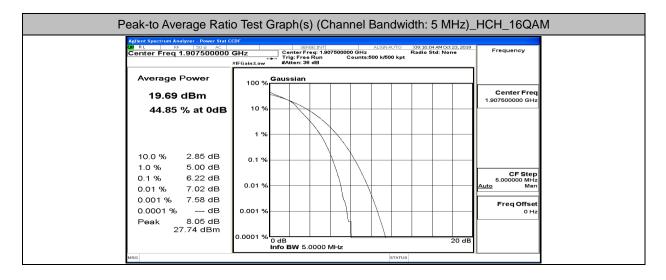


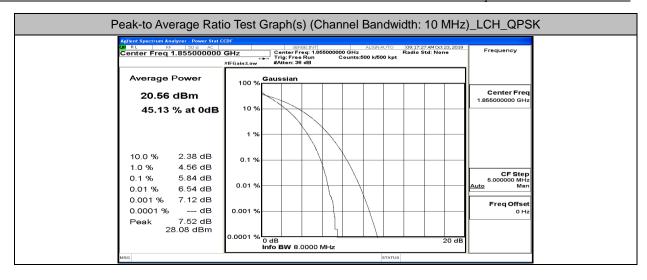


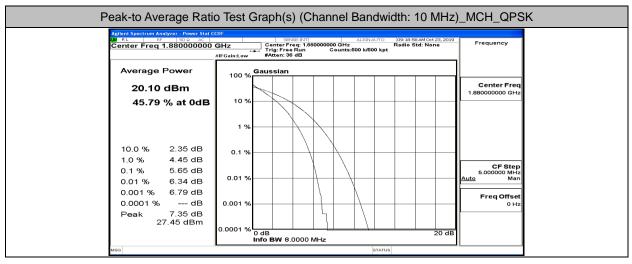


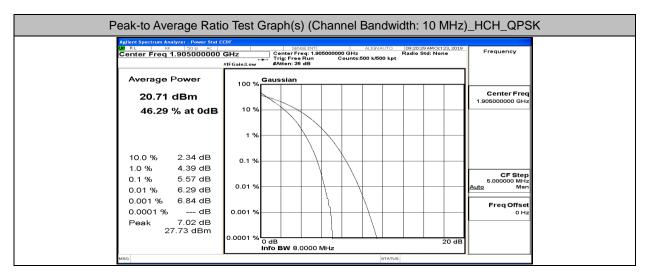




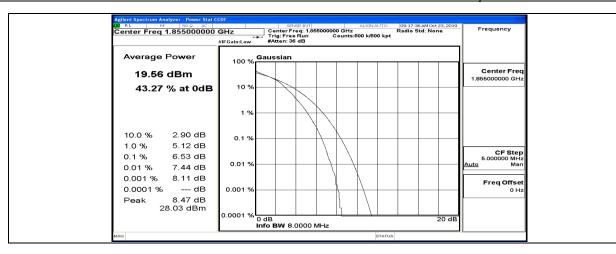


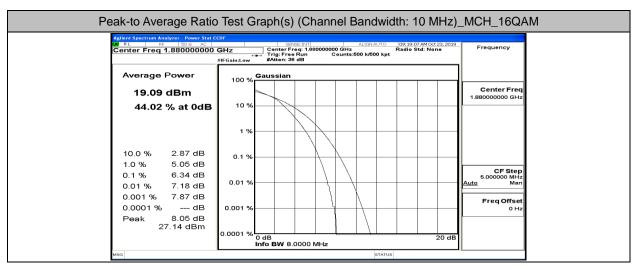


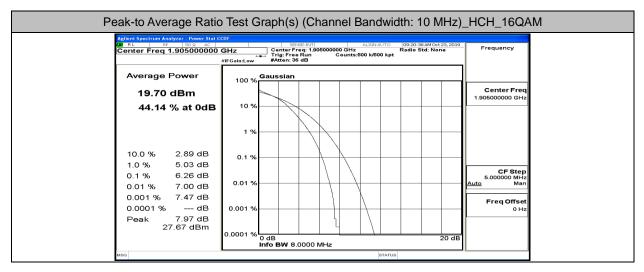




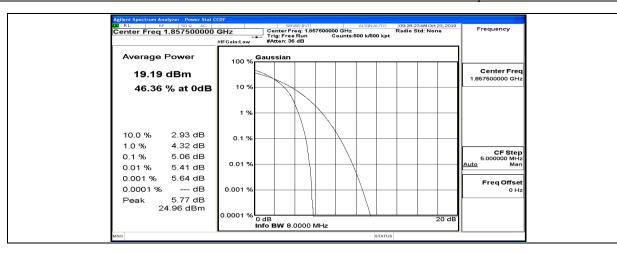
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM

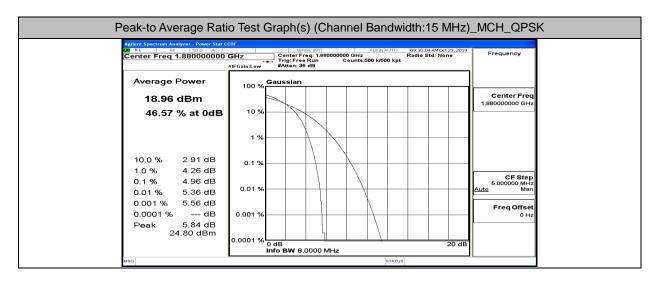


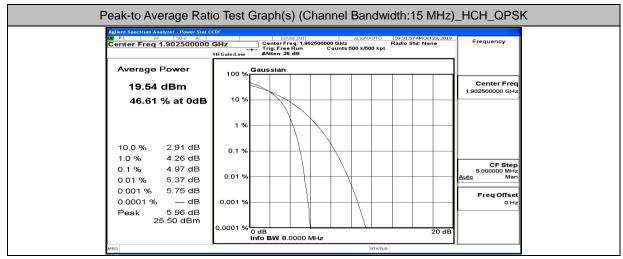


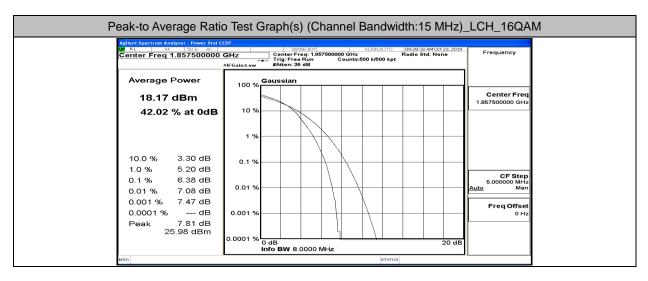


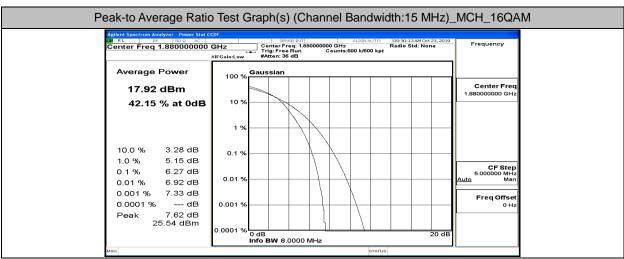
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_QPSK

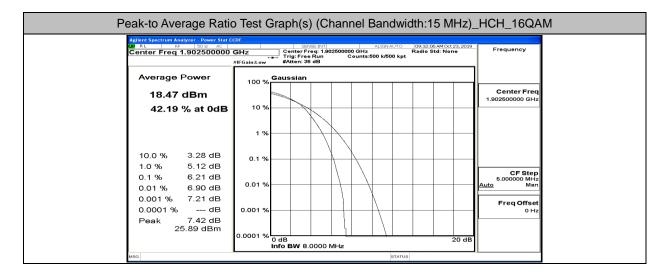


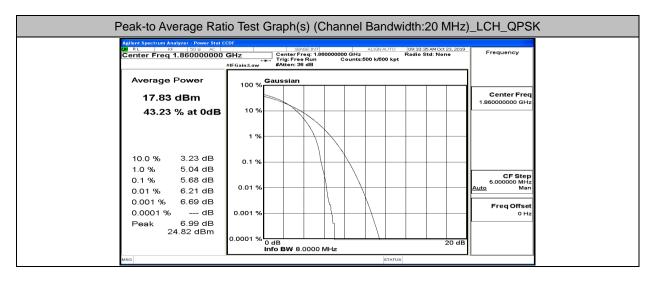


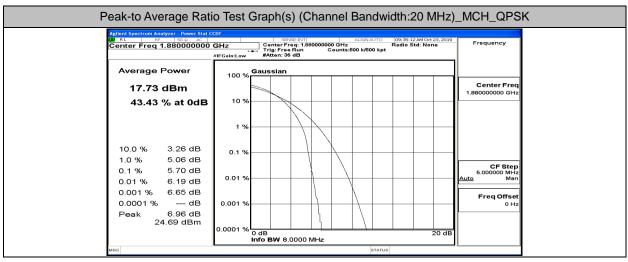


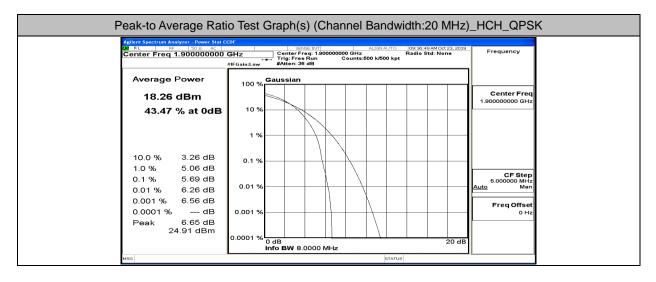


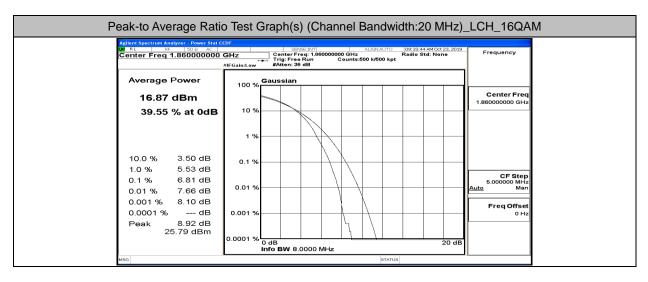


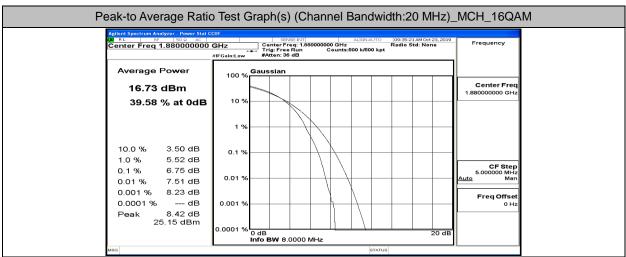


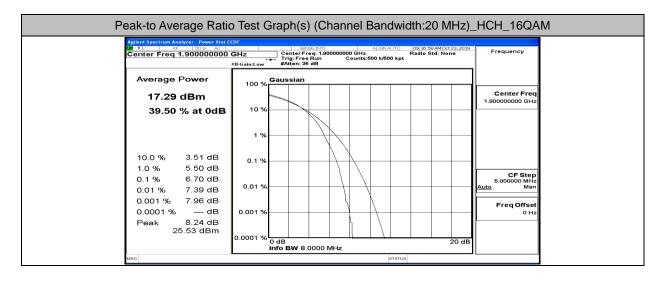












D.3: 26dB Bandwidth and Occupied Bandwidth

EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)					
Modulation	Ohamai	Occupied Bandwidth	26dB Bandwidth	Verdict	
iviodulation	Channel	(MHz)	(MHz)	verdict	
QPSK	LCH	1.0759	1.233	PASS	
	MCH	1.0755	1.215	PASS	
	HCH	1.0778	1.211	PASS	
16QAM	LCH	1.0783	1.236	PASS	
	MCH	1.0781	1.233	PASS	
	HCH	1.0763	1.223	PASS	

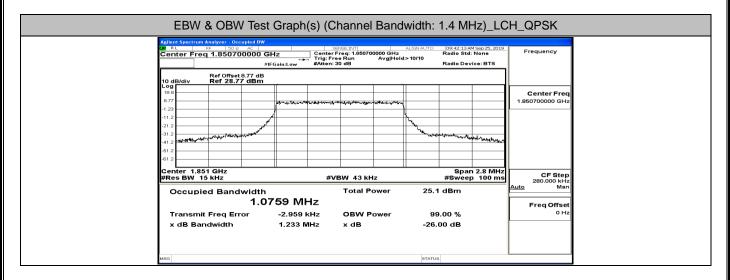
	EBW & OBW Test Result (Channel Bandwidth: 3 MHz)					
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict		
Modulation	Griannei	(MHz)	(MHz)	verdict		
QPSK	LCH	2.6762	2.835	PASS		
	MCH	2.6791	2.820	PASS		
	HCH	2.6804	2.851	PASS		
16QAM	LCH	2.6770	2.824	PASS		
	MCH	2.6796	2.843	PASS		
	HCH	2.6780	2.838	PASS		

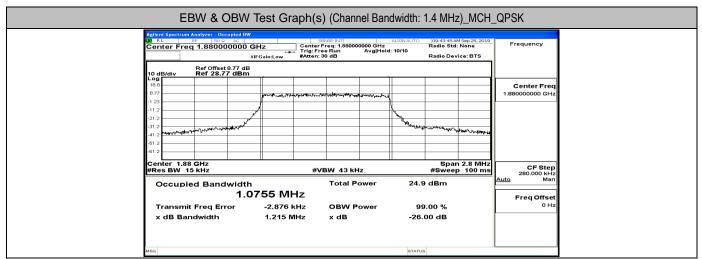
	EBW & OBW Test Result (Channel Bandwidth: 5 MHz)					
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict		
Modulation	Channel	(MHz)	(MHz)			
QPSK	LCH	4.4809	4.866	PASS		
	MCH	4.4706	4.883	PASS		
	HCH	4.4736	4.813	PASS		
16QAM	LCH	4.4740	4.876	PASS		
	MCH	4.4744	4.855	PASS		
	HCH	4.4722	4.866	PASS		

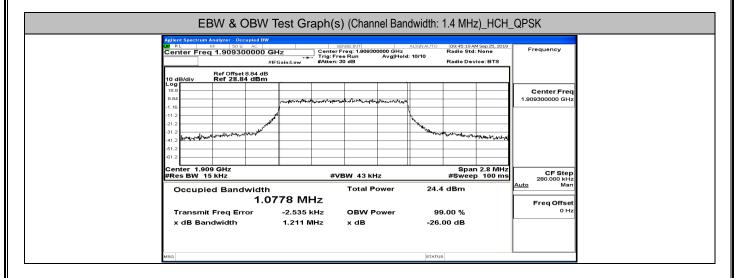
	EBW & OBW Test Result (Channel Bandwidth: 10 MHz)					
Modulation		Occupied Bandwidth	26dB Bandwidth	Verdict		
Modulation	Channel	(MHz)	(MHz)	verdict		
QPSK	LCH	8.9429	9.548	PASS		
	MCH	8.9590	9.533	PASS		
	HCH	8.9288	9.426	PASS		
16QAM	LCH	8.9412	9.532	PASS		
	MCH	8.9428	9.575	PASS		
	HCH	8.9400	9.506	PASS		

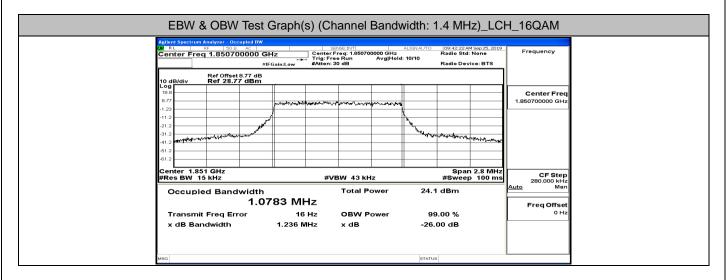
EBW & OBW Test Result (Channel Bandwidth: 15 MHz)					
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict	
Modulation	Griannei	(MHz)	(MHz)	verdict	
QPSK	LCH	13.418	14.16	PASS	
	MCH	13.435	14.04	PASS	
	HCH	13.409	14.13	PASS	
16QAM	LCH	13.419	14.15	PASS	
	MCH	13.418	14.09	PASS	
	HCH	13.412	14.16	PASS	

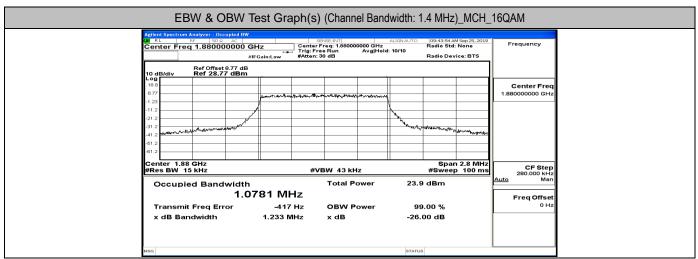
EBW & OBW Test Result (Channel Bandwidth: 20 MHz)				
Modulation	Channel	Occupied Bandwidth	26dB Bandwidth	Verdict
		(MHz)	(MHz)	
QPSK	LCH	17.885	18.75	PASS
	MCH	17.862	18.77	PASS
	HCH	17.872	18.64	PASS
16QAM	LCH	17.886	18.68	PASS
	MCH	17.895	18.68	PASS
	HCH	17.874	18.66	PASS

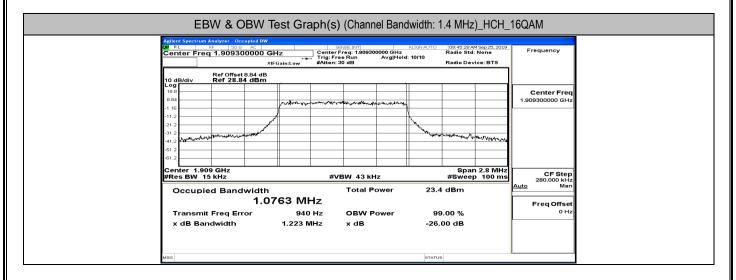


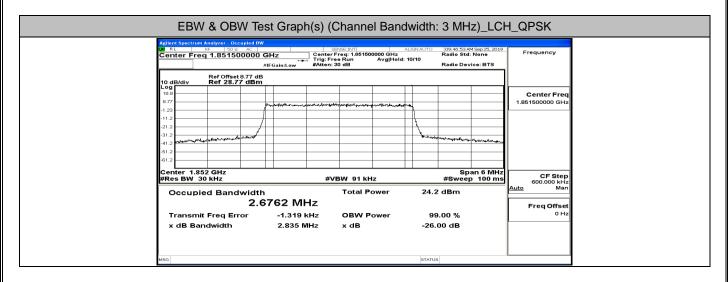


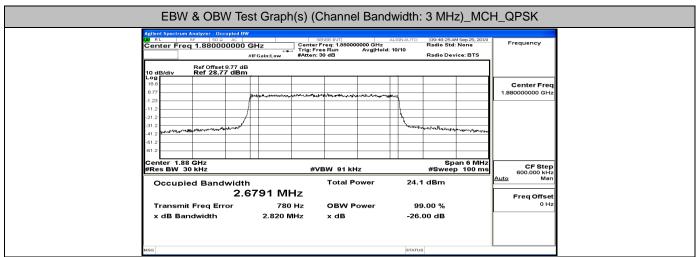


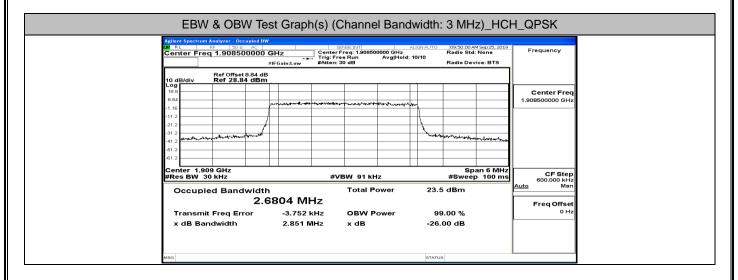


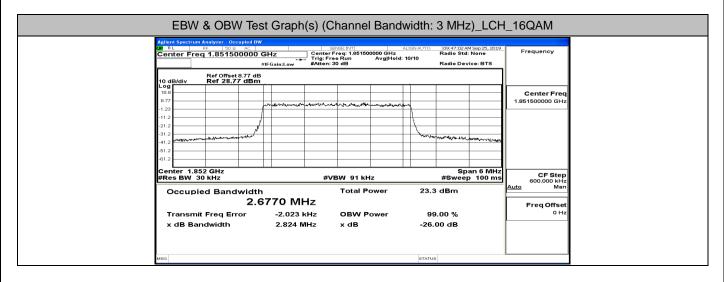


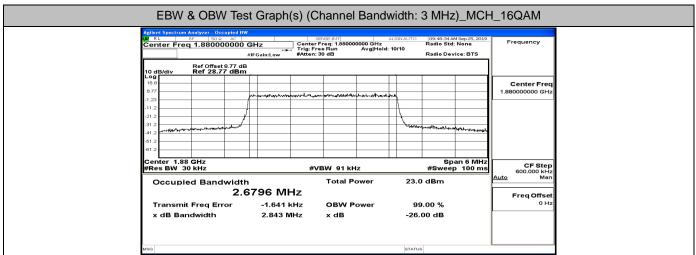


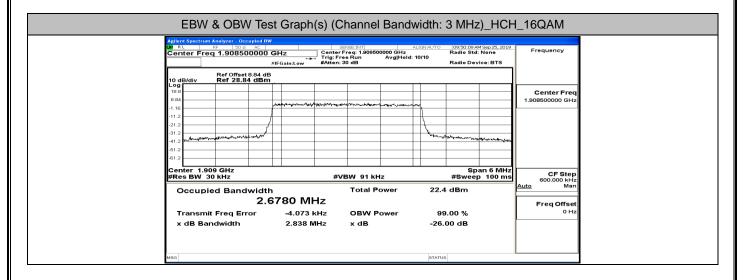


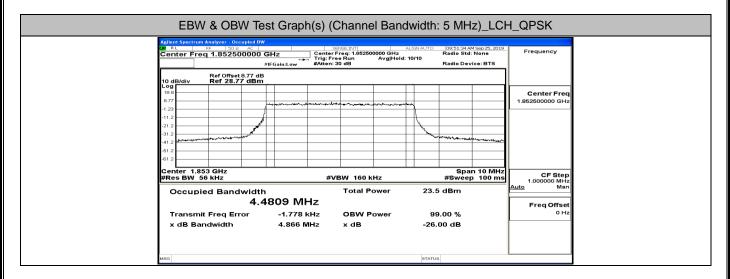


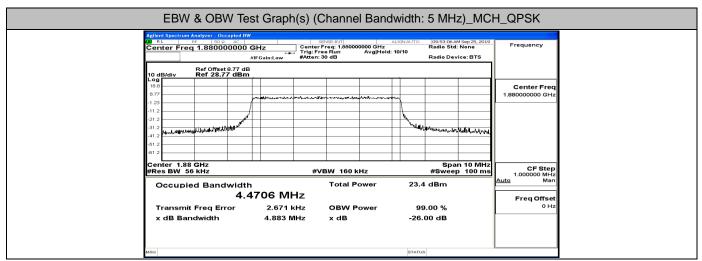


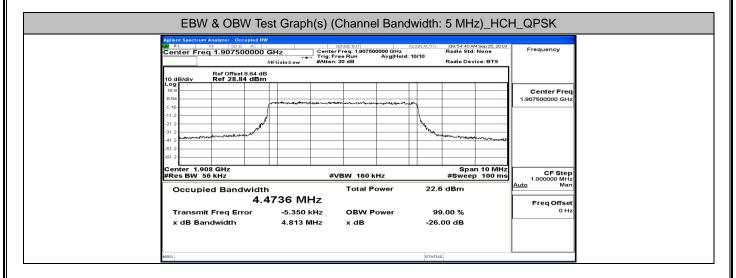


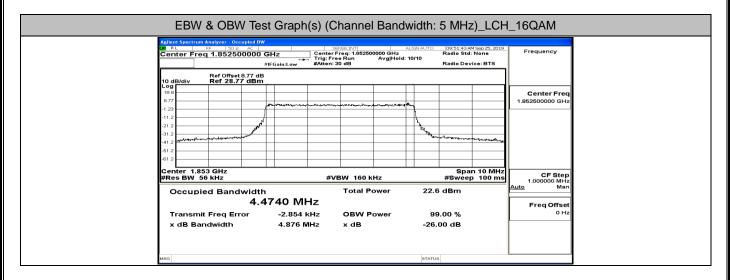


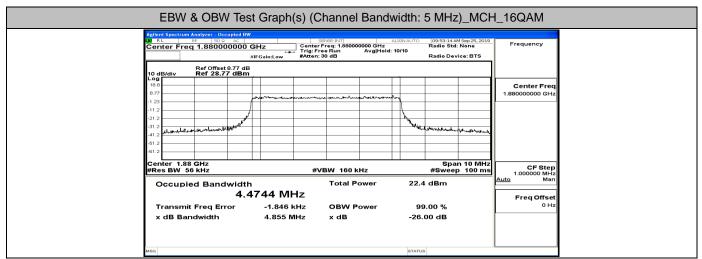


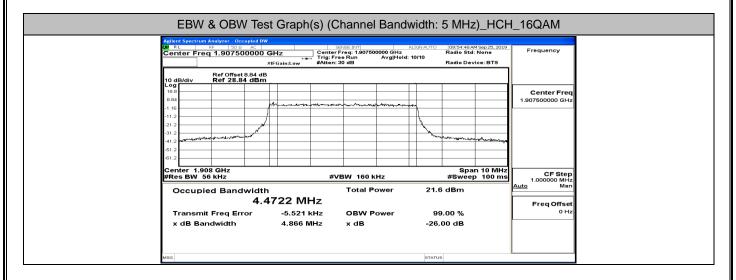


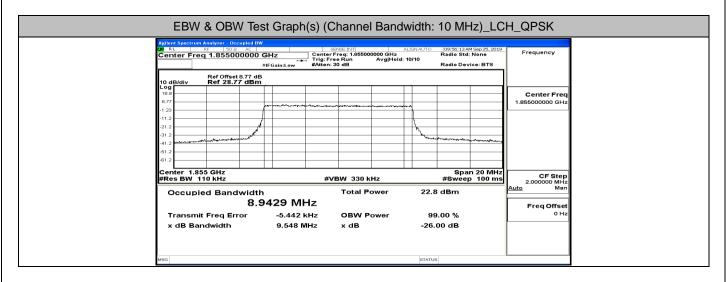


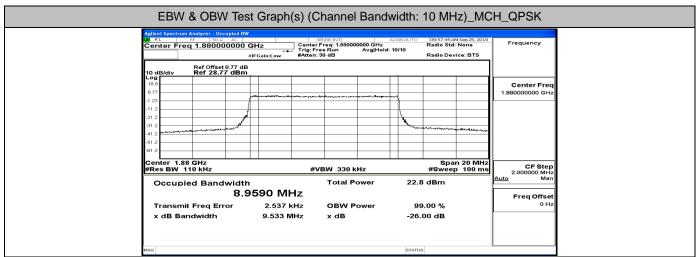


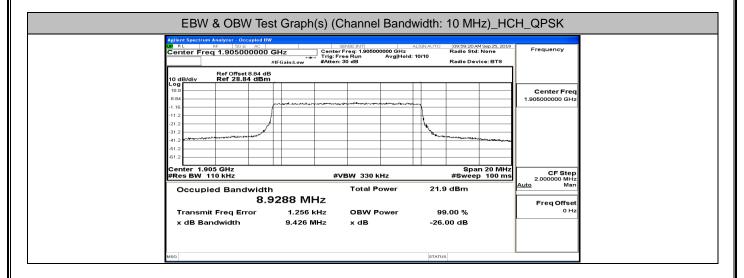


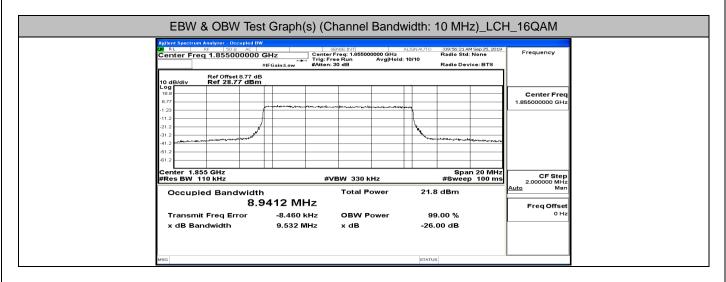


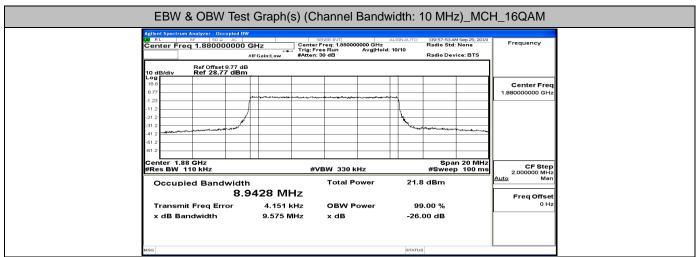


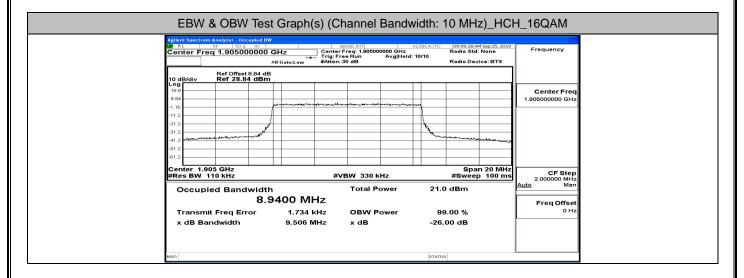


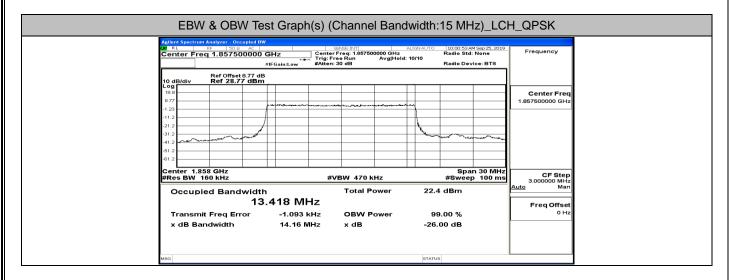


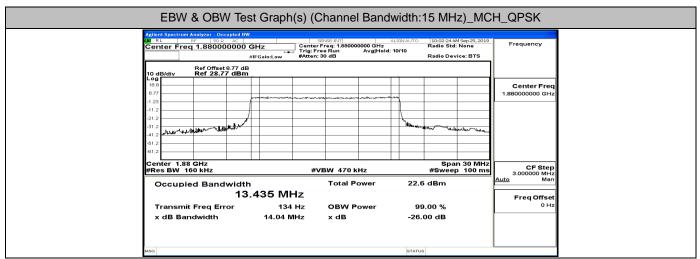


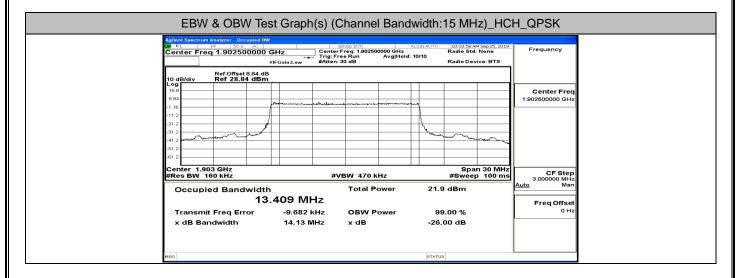


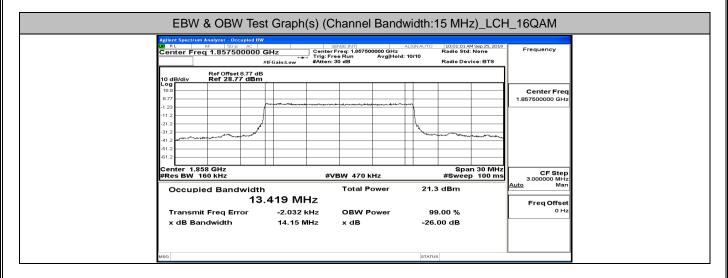


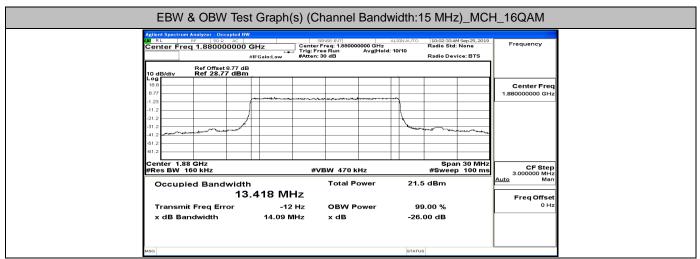


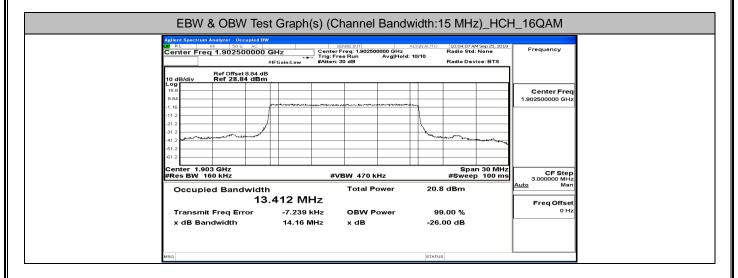


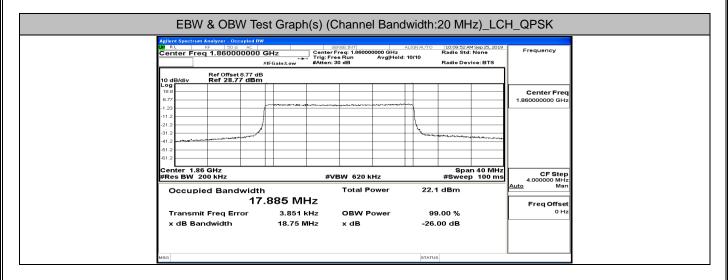


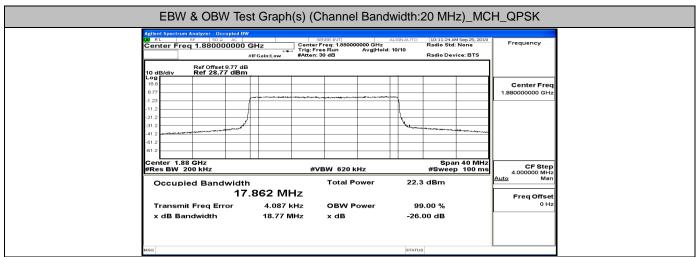


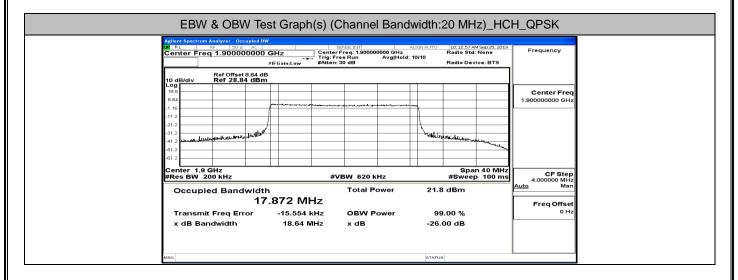


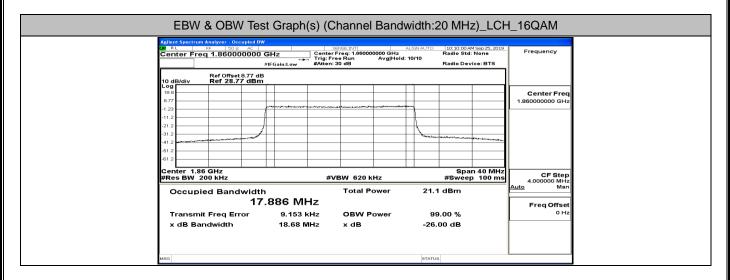


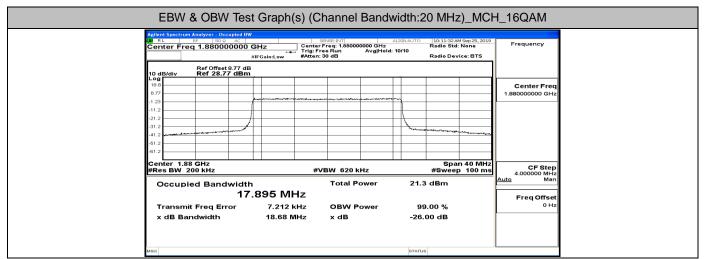


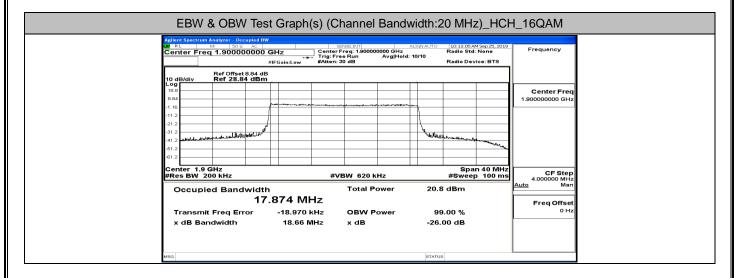




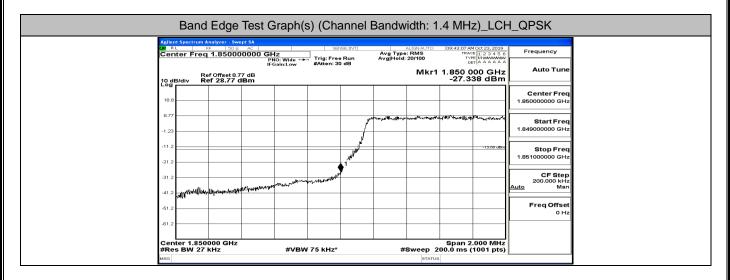


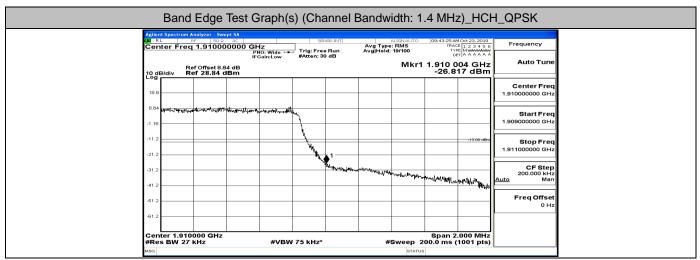


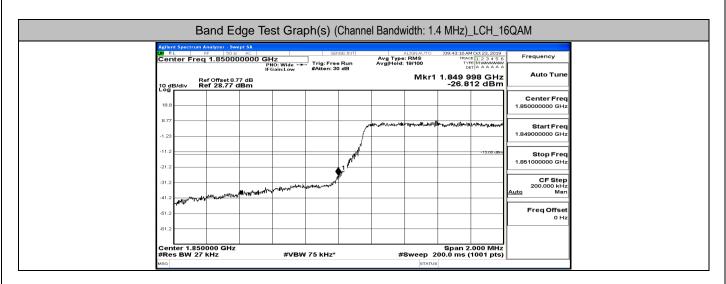


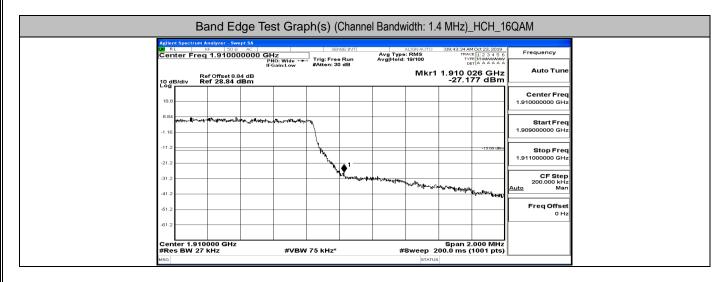


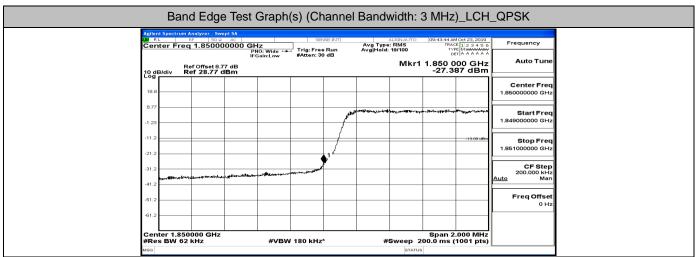
D.4: Band Edge

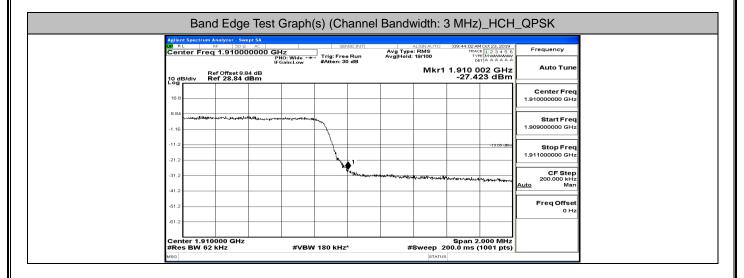


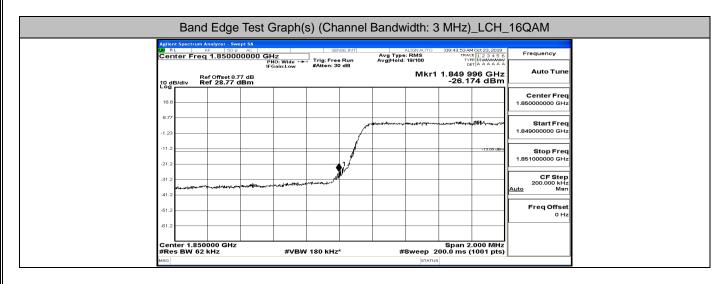


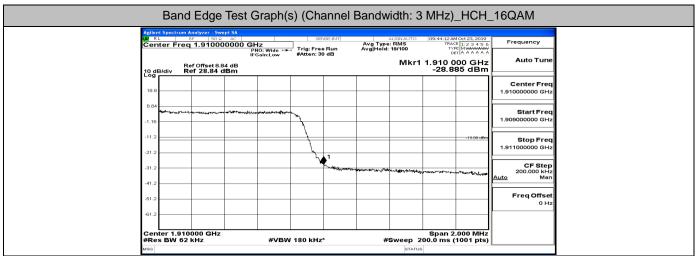


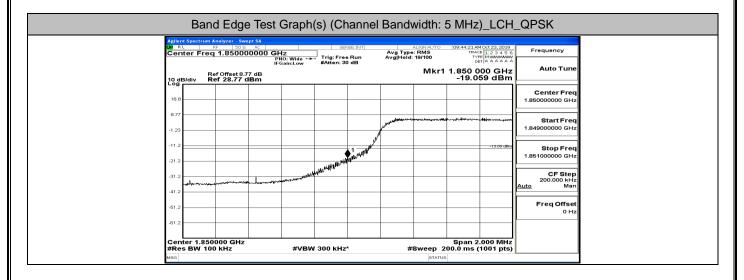


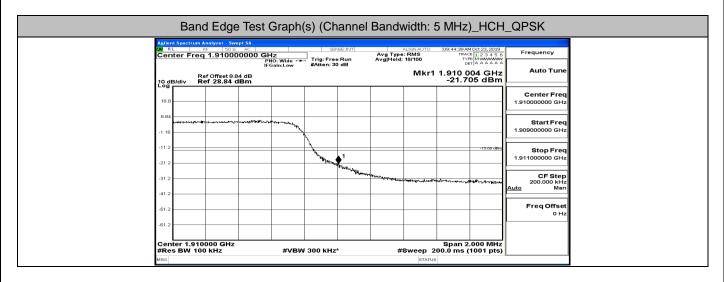


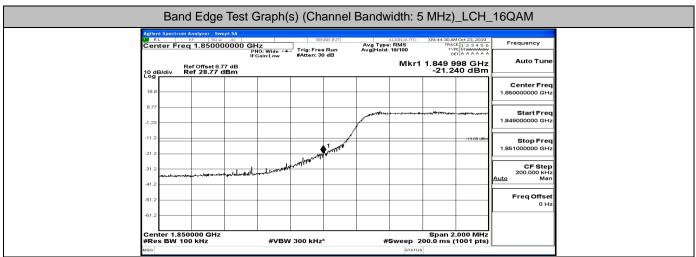


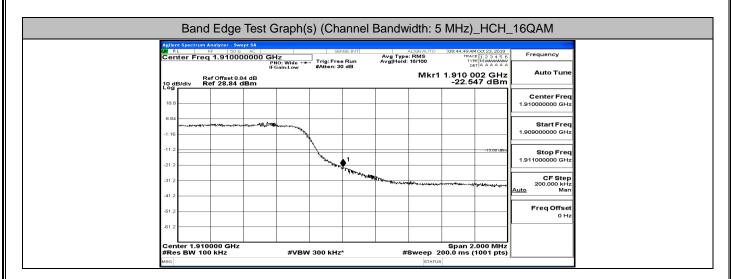




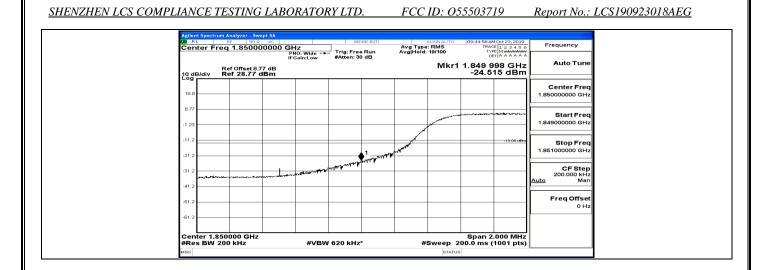


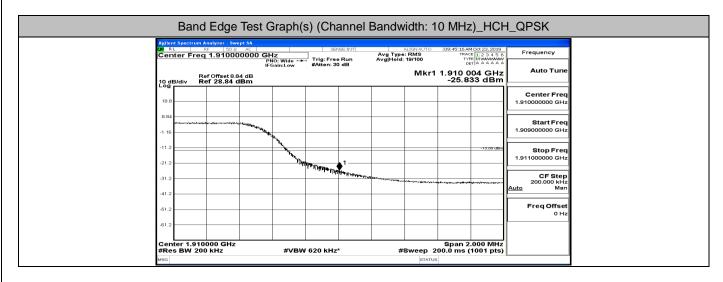


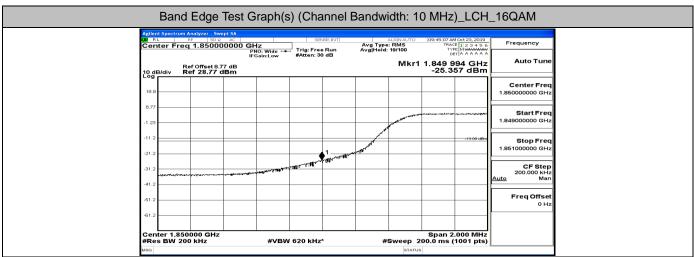


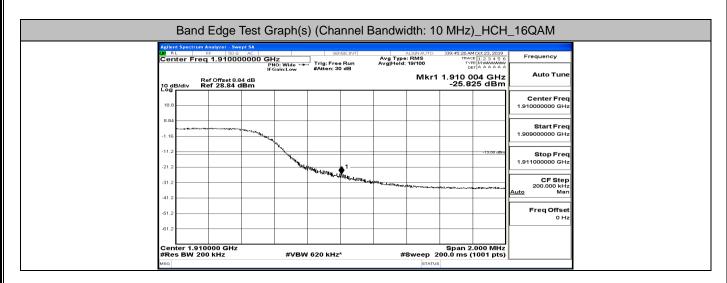


Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK









Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_QPSK

