

## Appendix D: Test Data for E-UTRA Band 7

Product Name: LTE GSM/WCDMA Smartphone

Trade Mark: DOOGEE

Test Model: S90

### Environmental Conditions

Temperature:	23.9
Relative Humidity:	52.8
ATM Pressure:	100.0 kPa
Test Engineer:	Mina.Xu
Supervised by:	Jayden Zhuo

### D.1 Conducted Output Power

Conducted Output Power Test Result (Channel Bandwidth: 5 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm]		Verdict
		Size	Offset	QPSK	16QAM	
QPSK / 16QAM	LCH	1	0	22.15	21.13	PASS
		1	12	21.81	21.19	PASS
		1	24	21.02	20.51	PASS
		12	0	20.58	19.86	PASS
		12	6	20.53	19.74	PASS
		12	13	20.31	19.48	PASS
		25	0	20.52	19.57	PASS
	MCH	1	0	22.86	21.97	PASS
		1	12	23.10	22.21	PASS
		1	24	22.65	21.72	PASS
		12	0	21.93	21.04	PASS
		12	6	21.93	21.03	PASS
		12	13	21.80	20.86	PASS
		25	0	21.96	20.96	PASS
	HCH	1	0	22.54	21.83	PASS
		1	12	23.01	22.32	PASS
		1	24	23.03	22.04	PASS
		12	0	21.79	20.86	PASS
		12	6	21.94	21.03	PASS
		12	13	21.93	20.98	PASS
		25	0	21.94	21.04	PASS

Conducted Output Power Test Result (Channel Bandwidth: 10 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict
		Size	Offset	QPSK	16QAM	
QPSK / 16QAM	LCH	1	0	21.76	21.12	PASS
		1	24	21.34	20.66	PASS
		1	49	20.83	20.11	PASS
		25	0	20.52	19.54	PASS
		25	12	20.25	19.26	PASS
		25	25	20.14	19.10	PASS
		50	0	20.34	19.33	PASS
	MCH	1	0	22.93	22.27	PASS
		1	24	23.08	22.43	PASS
		1	49	22.47	21.87	PASS
		25	0	22.10	21.10	PASS
		25	12	21.98	20.99	PASS
		25	25	21.85	20.82	PASS
		50	0	21.93	20.97	PASS
	HCH	1	0	22.13	21.50	PASS
		1	24	22.81	22.31	PASS
		1	49	23.02	22.40	PASS
		25	0	21.64	20.70	PASS
		25	12	21.77	20.78	PASS
		25	25	21.97	20.99	PASS
		50	0	21.82	20.83	PASS

Conducted Output Power Test Result (Channel Bandwidth: 15 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict
		Size	Offset	QPSK	16QAM	
QPSK / 16QAM	LCH	1	0	21.68	21.03	PASS
		1	37	21.08	20.34	PASS
		1	74	20.90	20.16	PASS
		37	0	20.24	19.26	PASS
		37	18	20.04	19.02	PASS
		37	38	20.03	18.97	PASS
		75	0	20.16	19.10	PASS
	MCH	1	0	22.69	22.12	PASS
		1	37	23.15	22.41	PASS
		1	74	22.19	21.59	PASS
		37	0	22.00	21.01	PASS
		37	18	21.95	20.95	PASS
		37	38	21.68	20.73	PASS
		75	0	21.86	20.86	PASS
	HCH	1	0	21.58	20.78	PASS
		1	37	22.61	21.76	PASS
		1	74	22.84	22.22	PASS
		37	0	21.18	20.12	PASS
		37	18	21.47	20.47	PASS
		37	38	21.80	20.77	PASS
		75	0	21.48	20.42	PASS

Conducted Output Power Test Result (Channel Bandwidth: 20 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict
		Size	Offset	QPSK	16QAM	
QPSK / 16QAM	LCH	1	0	21.61	20.86	PASS
		1	49	21.13	20.31	PASS
		1	99	21.48	20.61	PASS
		50	0	20.05	18.93	PASS
		50	25	19.99	18.93	PASS
		50	50	20.12	19.10	PASS
		100	0	20.07	19.03	PASS
	MCH	1	0	22.56	21.78	PASS
		1	49	23.21	22.44	PASS
		1	99	22.08	21.27	PASS
		50	0	21.99	20.97	PASS
		50	25	21.96	20.96	PASS
		50	50	21.62	20.59	PASS
		100	0	21.76	20.99	PASS
	HCH	1	0	21.75	21.05	PASS
		1	49	22.63	21.98	PASS
		1	99	22.96	22.41	PASS
		50	0	21.17	20.16	PASS
		50	25	21.51	20.53	PASS
		50	50	21.77	20.82	PASS
		100	0	21.45	20.38	PASS

**D.2 Peak-to-Average Ratio**

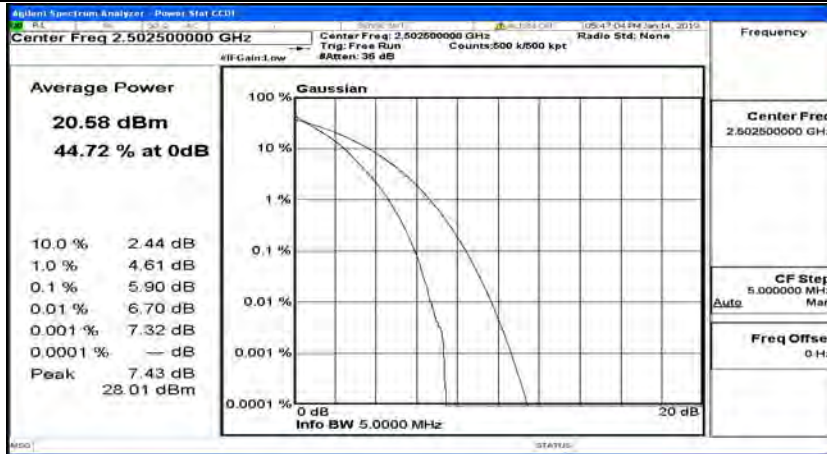
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.9	<13	PASS
	MCH	5.88	<13	PASS
	HCH	5.68	<13	PASS
16QAM	LCH	6.75	<13	PASS
	MCH	6.67	<13	PASS
	HCH	6.52	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.83	<13	PASS
	MCH	5.83	<13	PASS
	HCH	5.68	<13	PASS
16QAM	LCH	6.51	<13	PASS
	MCH	6.58	<13	PASS
	HCH	6.41	<13	PASS

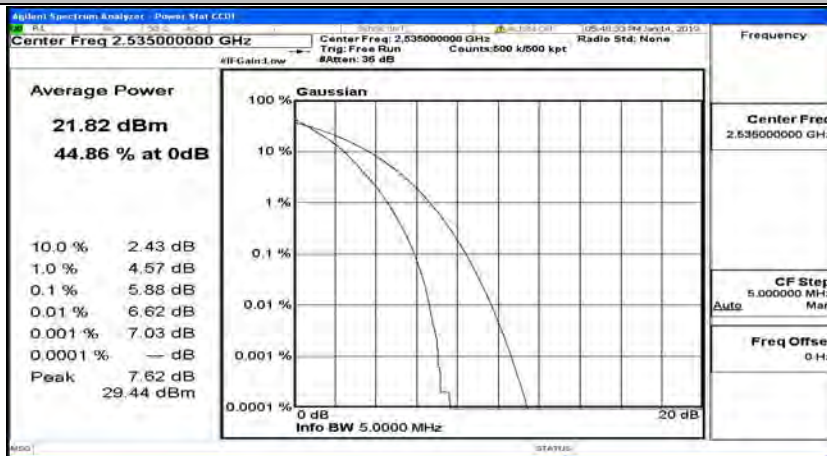
Peak-to Average Ratio Test Result (Channel Bandwidth: 15 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.08	<13	PASS
	MCH	5.01	<13	PASS
	HCH	5.04	<13	PASS
16QAM	LCH	6.32	<13	PASS
	MCH	6.34	<13	PASS
	HCH	6.28	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 20 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.72	<13	PASS
	MCH	5.68	<13	PASS
	HCH	5.78	<13	PASS
16QAM	LCH	6.73	<13	PASS
	MCH	6.78	<13	PASS
	HCH	6.77	<13	PASS

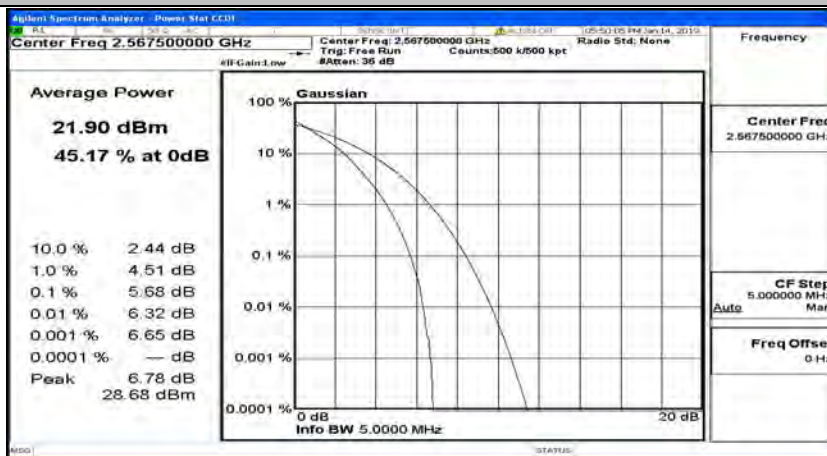
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_QPSK



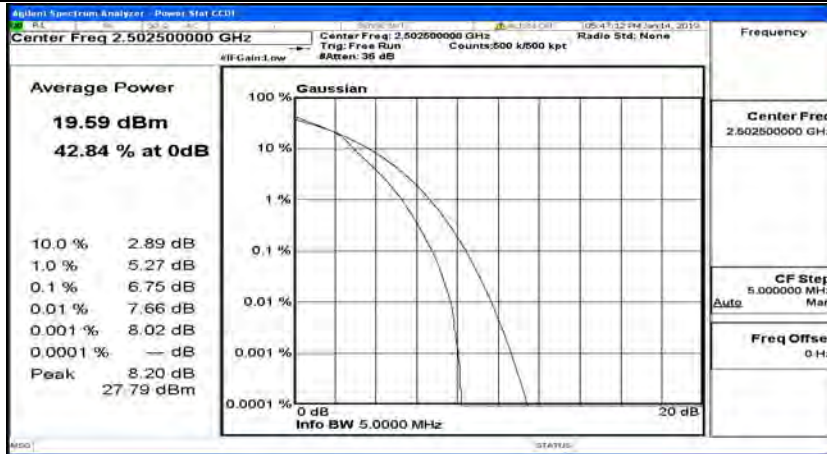
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_MCH\_QPSK



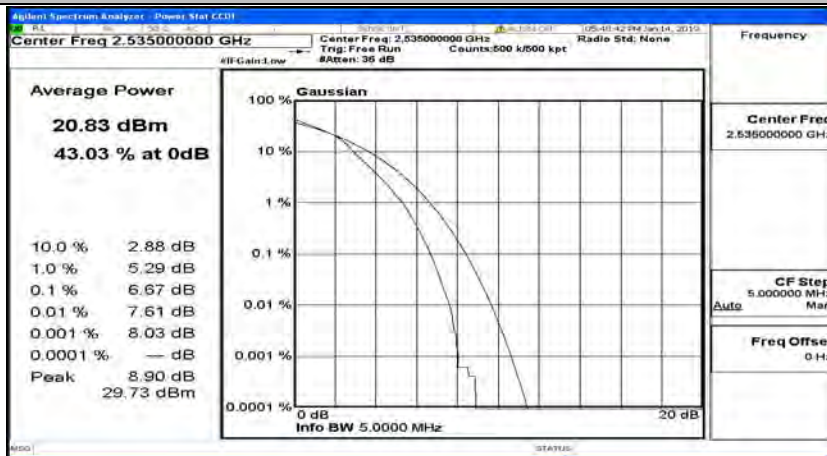
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_QPSK



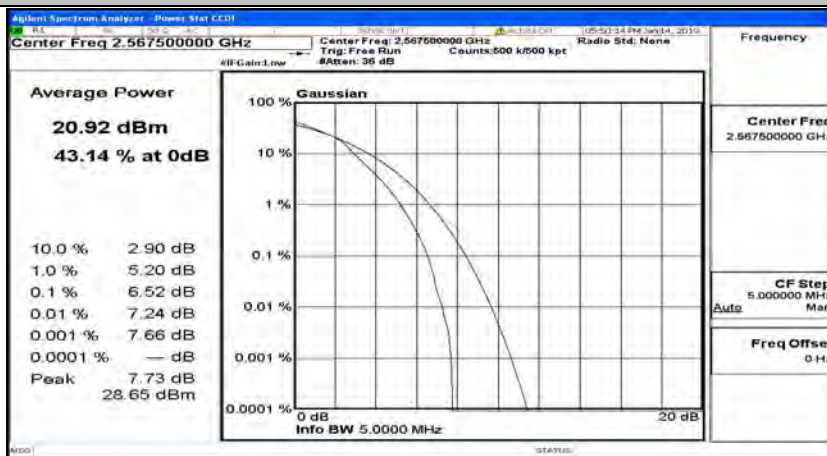
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_16QAM



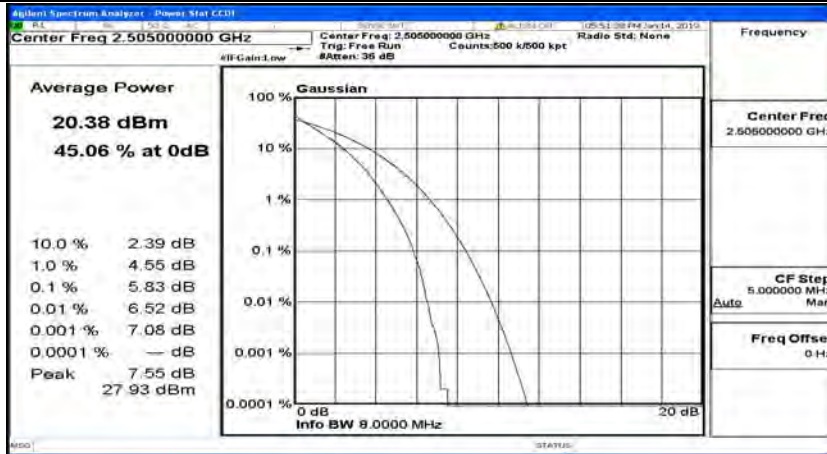
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_MCH\_16QAM



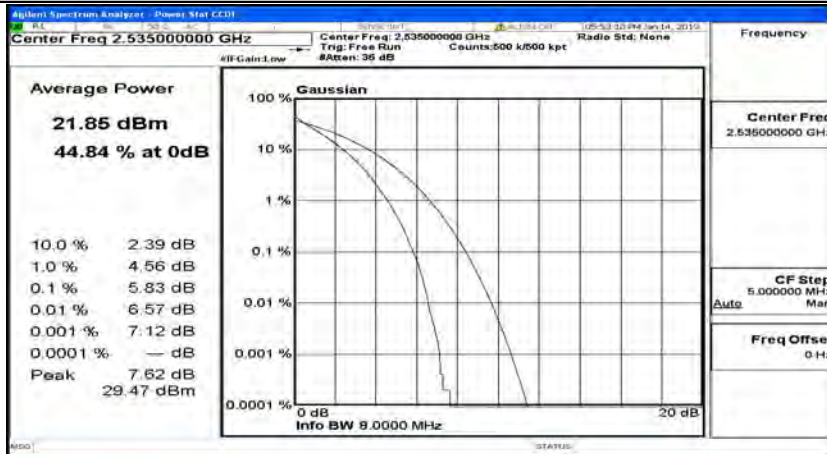
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_16QAM



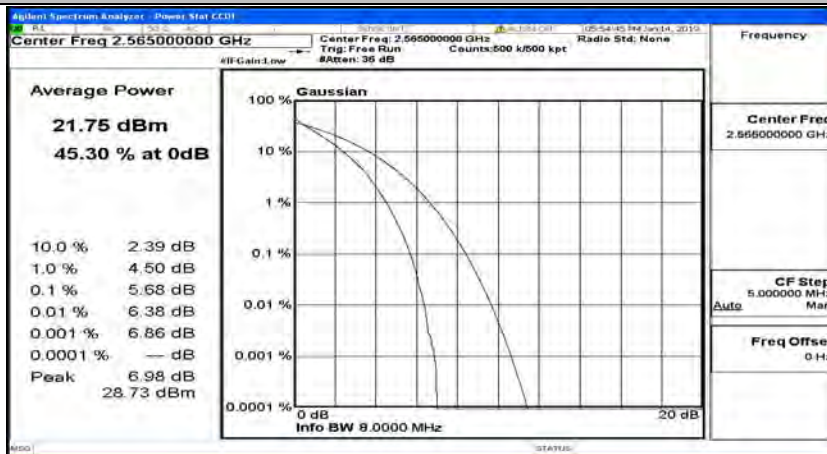
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz) \_LCH\_QPSK



Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz) \_MCH\_QPSK

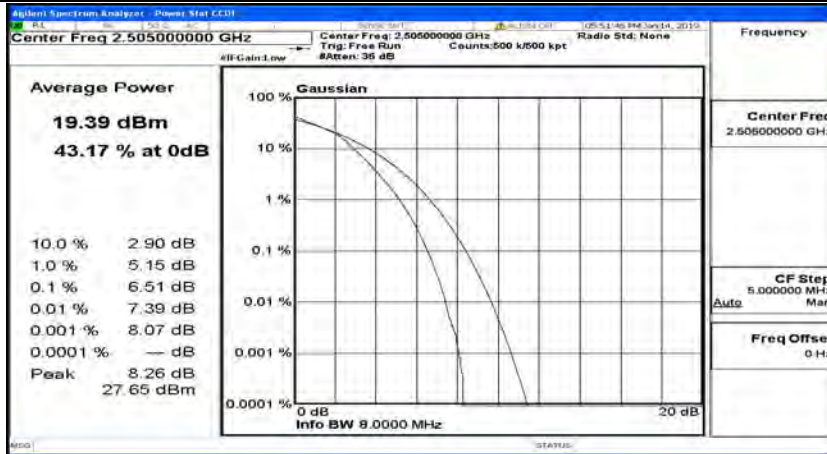


Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz) \_HCH\_QPSK

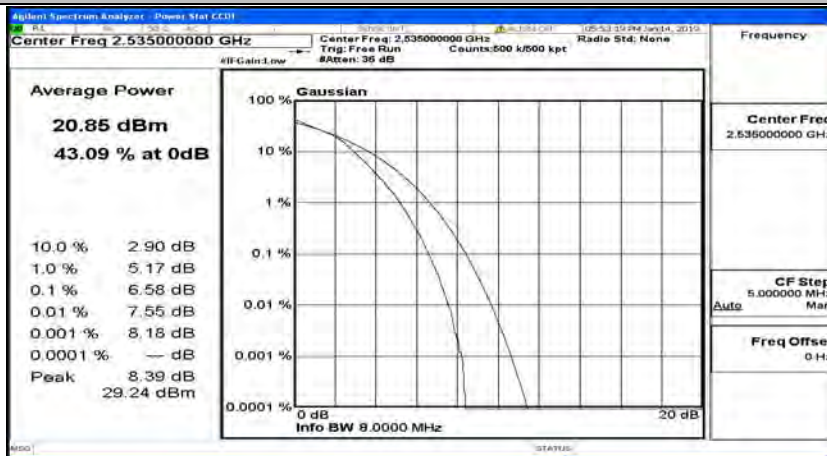




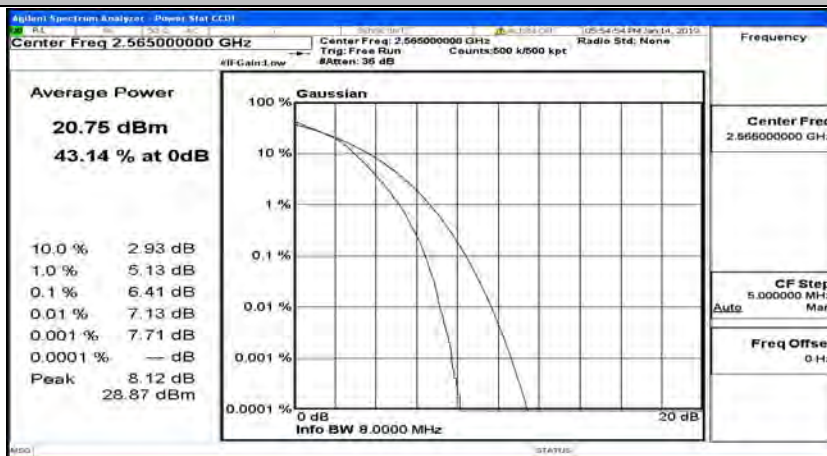
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)\_LCH\_16QAM



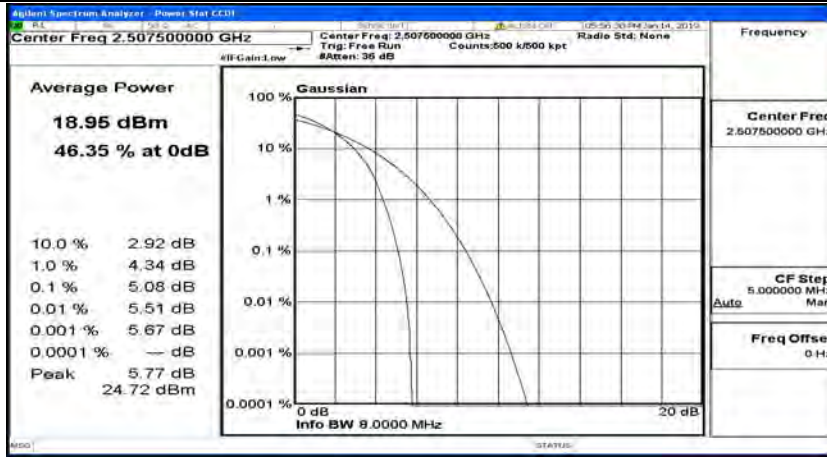
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)\_MCH\_16QAM



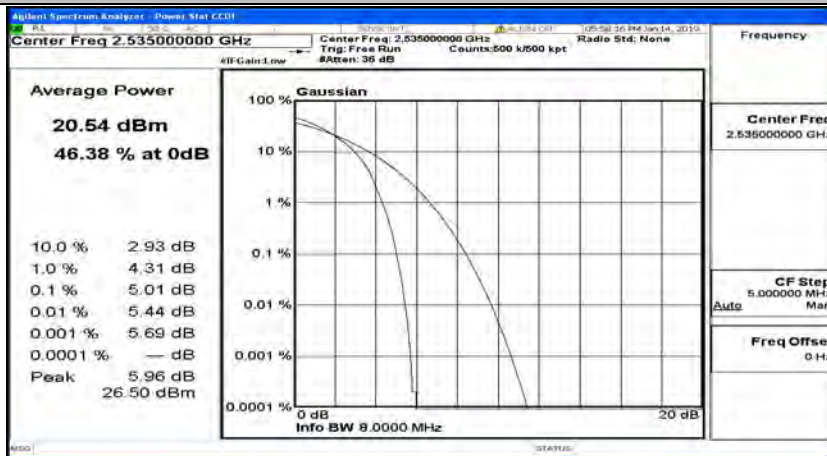
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)\_HCH\_16QAM



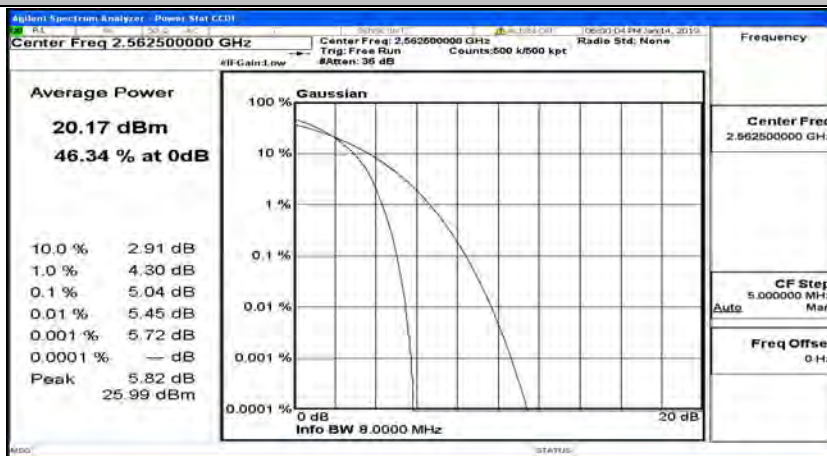
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)\_LCH\_QPSK



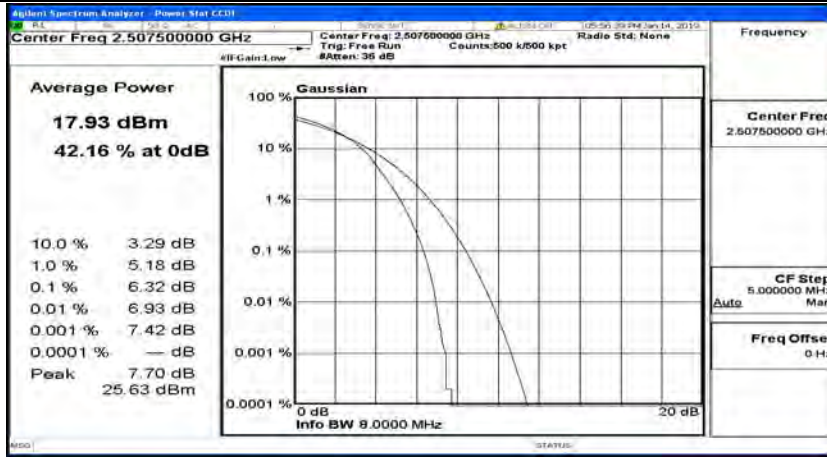
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)\_MCH\_QPSK



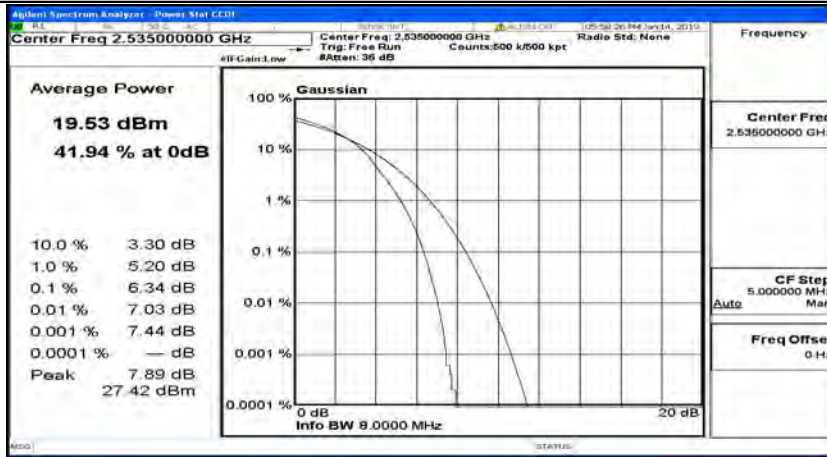
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)\_HCH\_QPSK



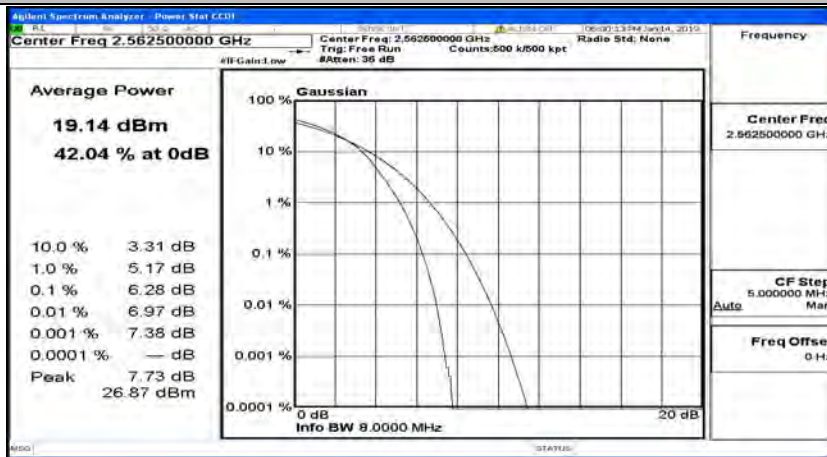
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)\_LCH\_16QAM



Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)\_MCH\_16QAM

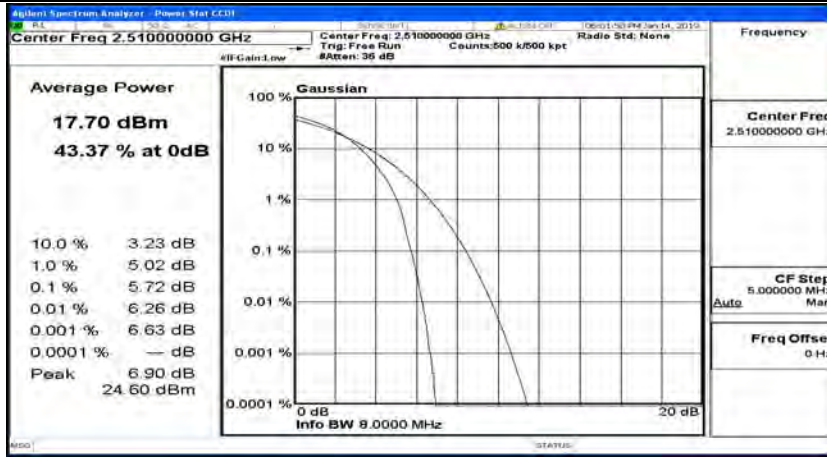


Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)\_HCH\_16QAM

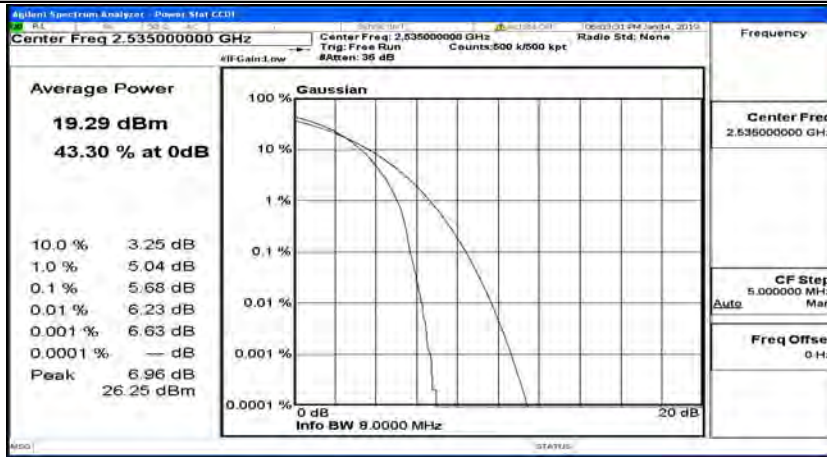




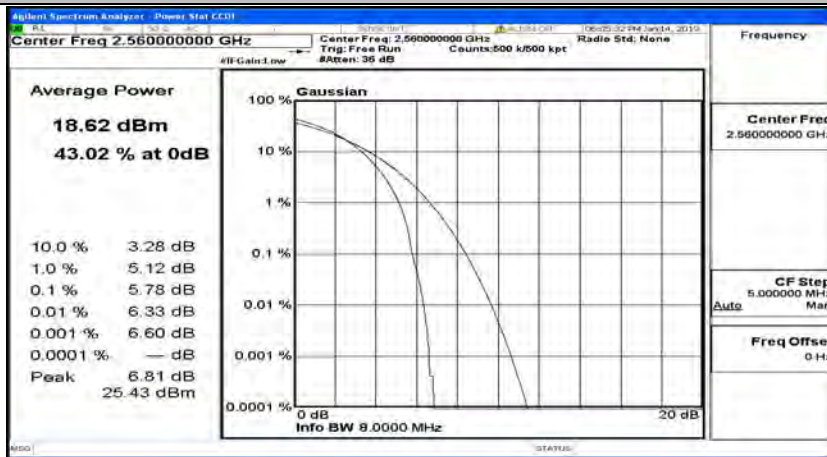
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)\_LCH\_QPSK



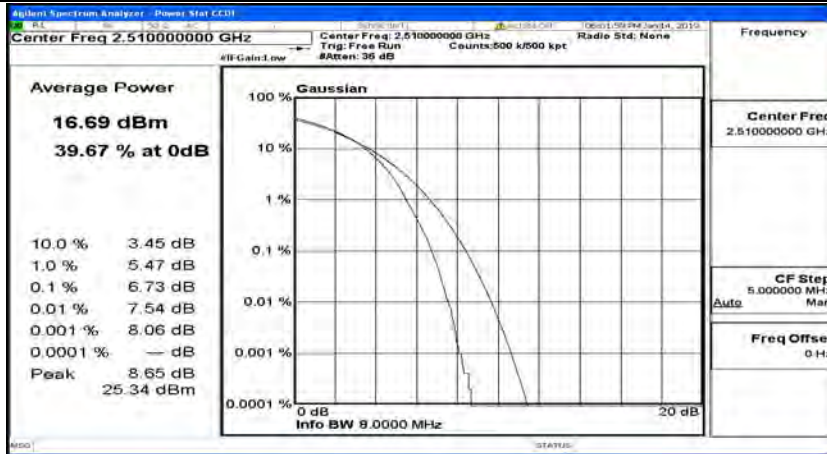
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)\_MCH\_QPSK



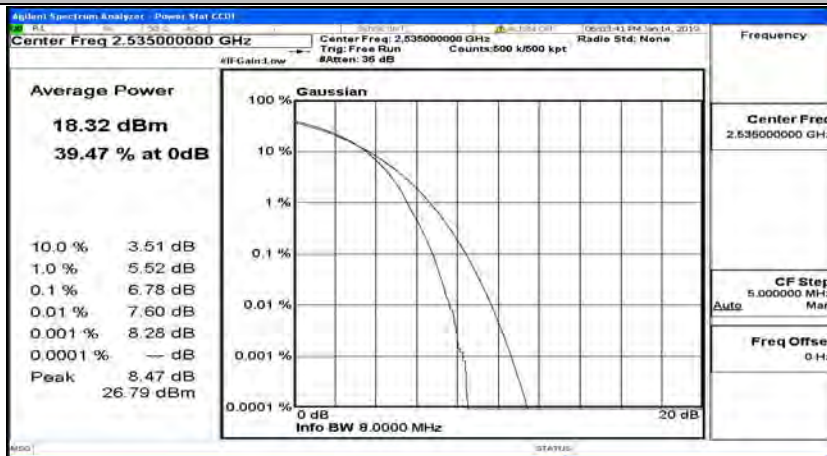
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)\_HCH\_QPSK



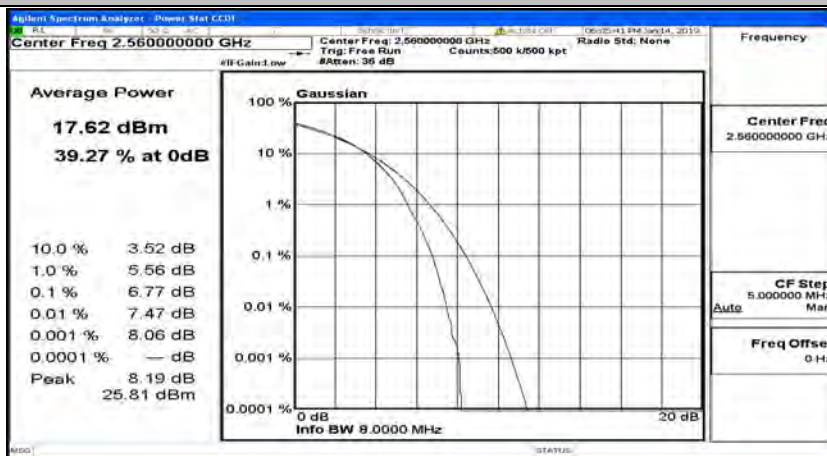
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)\_LCH\_16QAM



Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)\_MCH\_16QAM



Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)\_HCH\_16QAM



**D.3 26dB Bandwidth and Occupied Bandwidth**

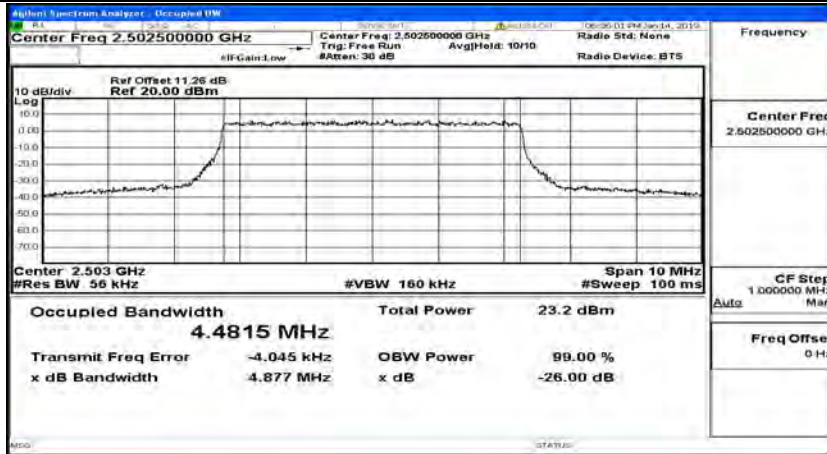
<b>EBW &amp; OBW Test Result (Channel Bandwidth: 5 MHz)</b>				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4815	4.877	PASS
	MCH	4.4744	4.861	PASS
	HCH	4.4886	4.913	PASS
16QAM	LCH	4.4746	4.911	PASS
	MCH	4.4804	4.842	PASS
	HCH	4.4871	4.849	PASS

<b>EBW &amp; OBW Test Result (Channel Bandwidth: 10 MHz)</b>				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	8.9558	9.595	PASS
	MCH	8.9419	9.583	PASS
	HCH	8.9388	9.525	PASS
16QAM	LCH	8.9516	9.474	PASS
	MCH	8.9424	9.573	PASS
	HCH	8.9535	9.449	PASS

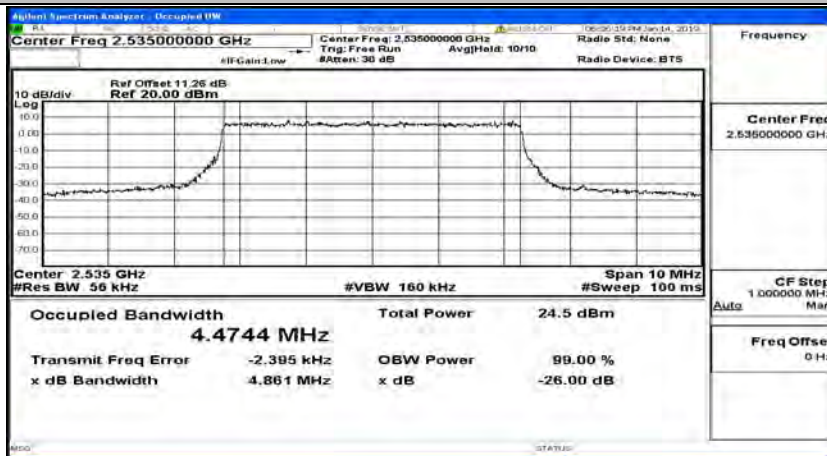
<b>EBW &amp; OBW Test Result (Channel Bandwidth: 15 MHz)</b>				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	13.403	14.10	PASS
	MCH	13.405	14.15	PASS
	HCH	13.425	14.16	PASS
16QAM	LCH	13.424	14.11	PASS
	MCH	13.404	14.10	PASS
	HCH	13.421	14.16	PASS

<b>EBW &amp; OBW Test Result (Channel Bandwidth: 20 MHz)</b>				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	17.848	18.71	PASS
	MCH	17.861	18.67	PASS
	HCH	17.881	18.68	PASS
16QAM	LCH	17.871	18.62	PASS
	MCH	17.858	18.70	PASS
	HCH	17.848	18.61	PASS

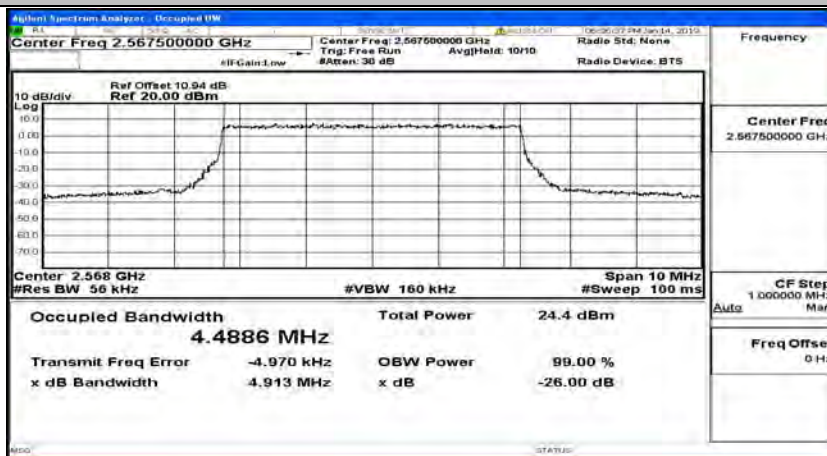
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_QPSK



EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)\_MCH\_QPSK

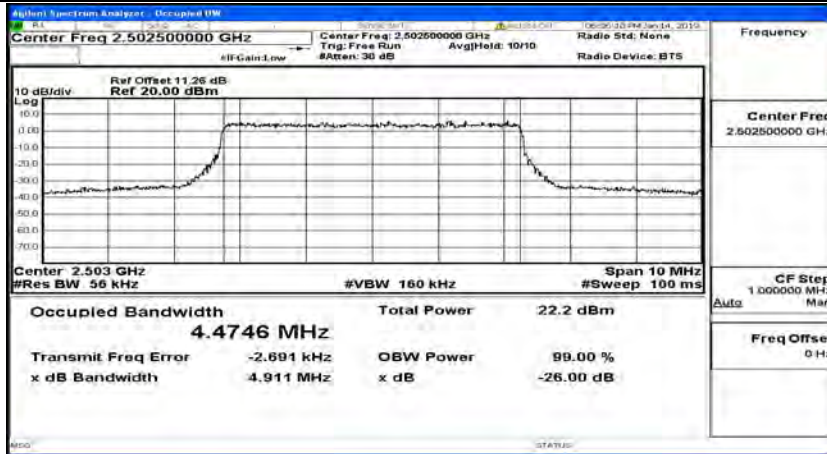


EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_QPSK

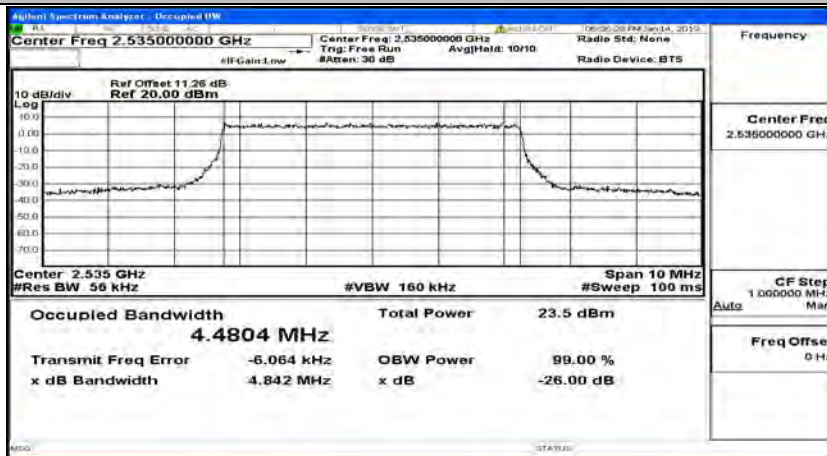




EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_16QAM



EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)\_MCH\_16QAM

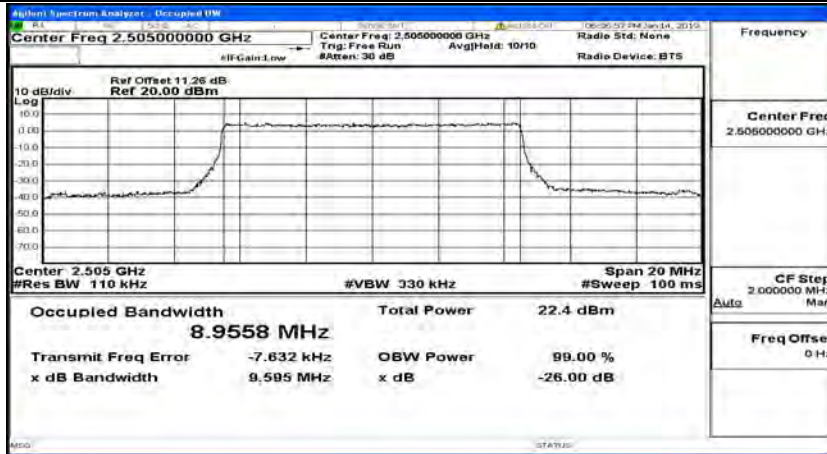


EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_16QAM

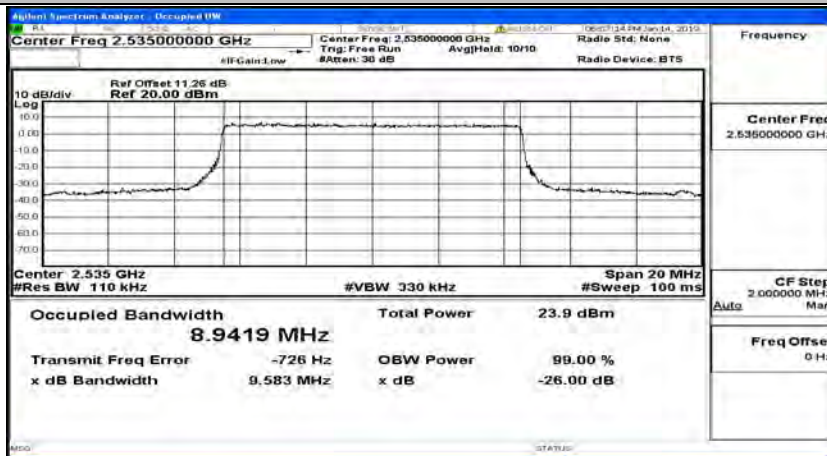




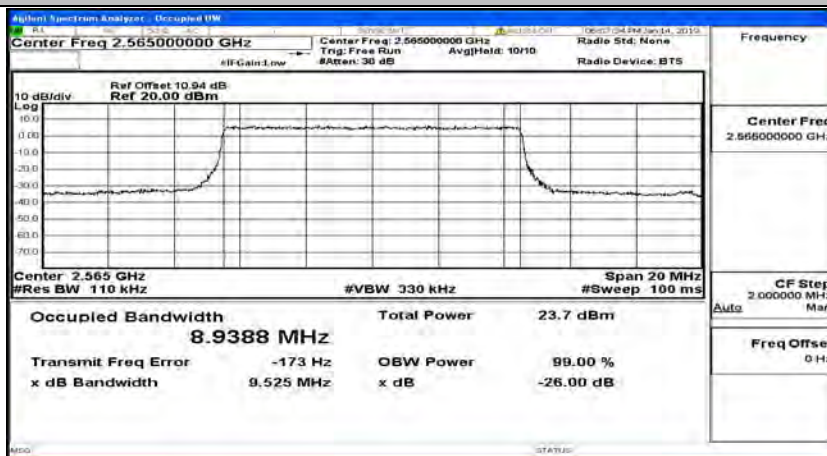
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz) LCH\_QPSK



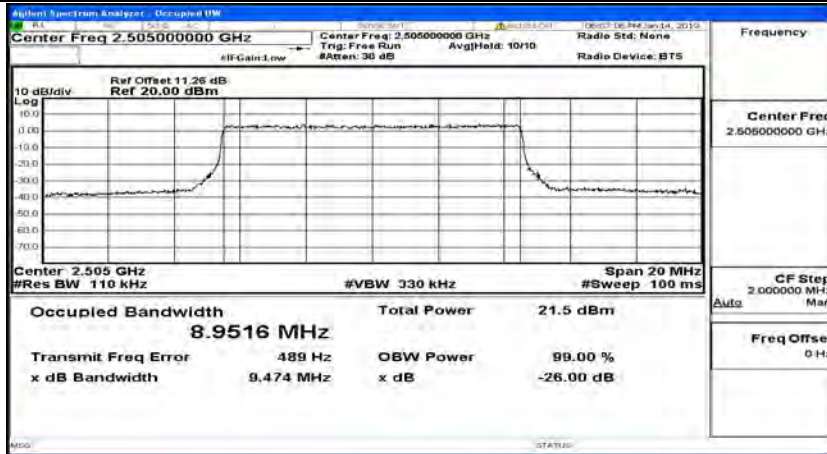
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz) MCH\_QPSK



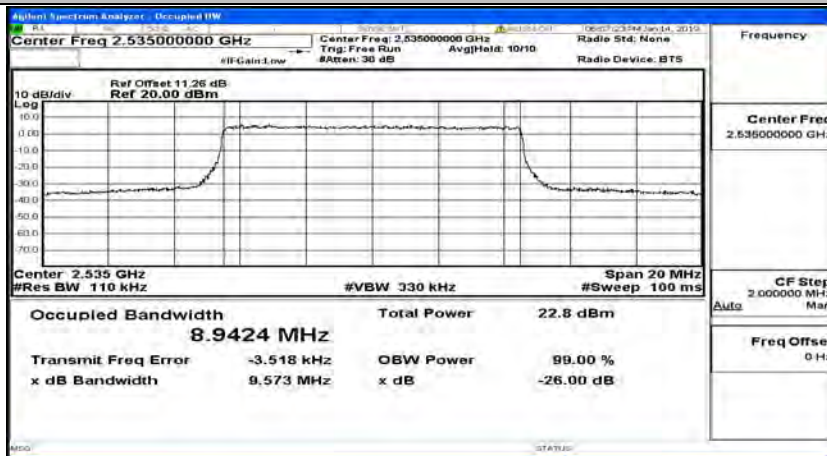
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz) HCH\_QPSK



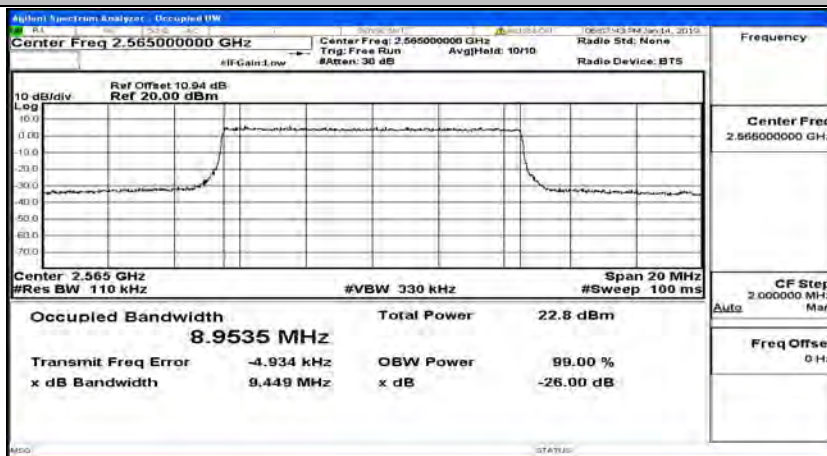
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)\_LCH\_16QAM



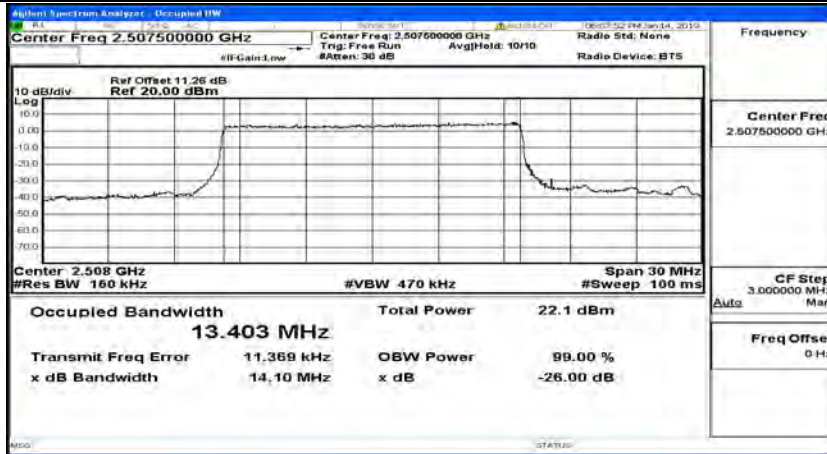
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)\_MCH\_16QAM



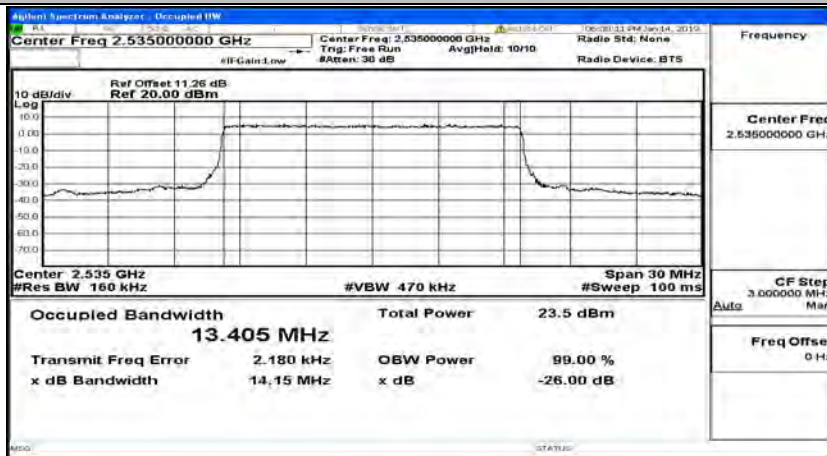
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)\_HCH\_16QAM



EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)\_LCH\_QPSK



EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)\_MCH\_QPSK

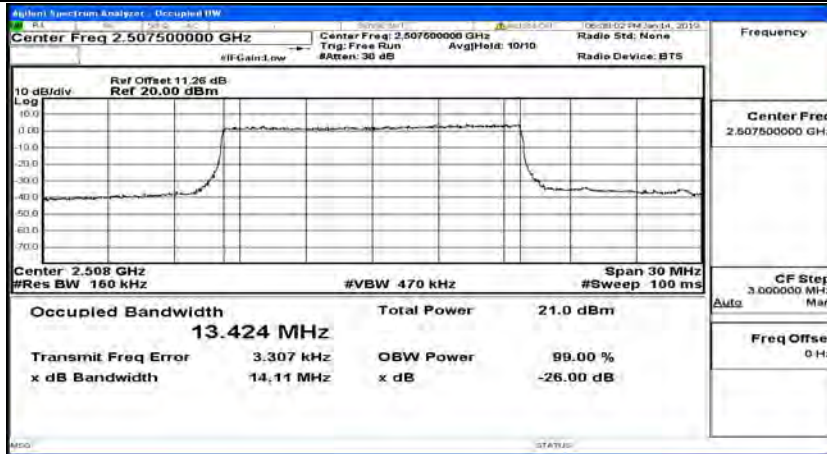


EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)\_HCH\_QPSK

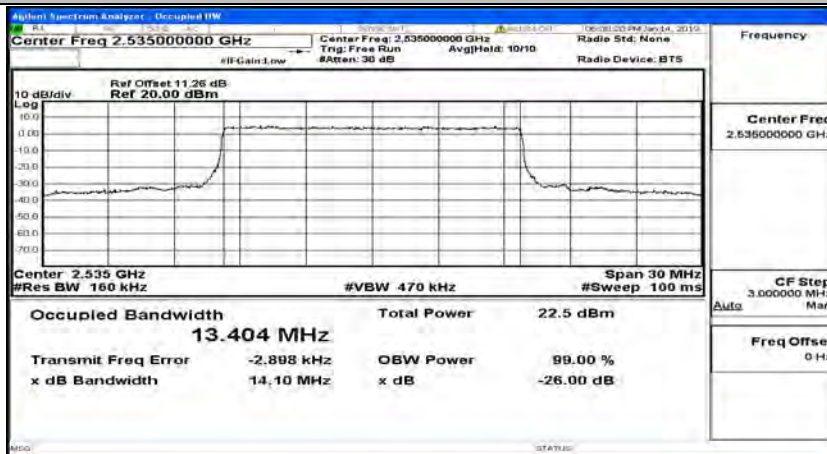




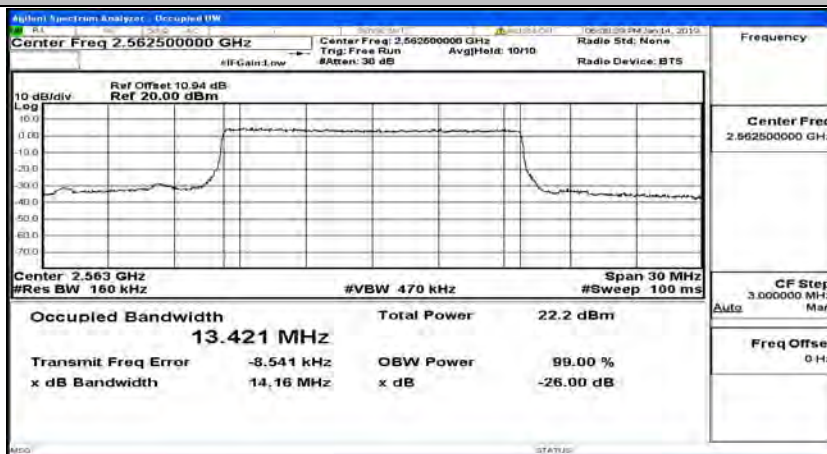
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)\_LCH\_16QAM



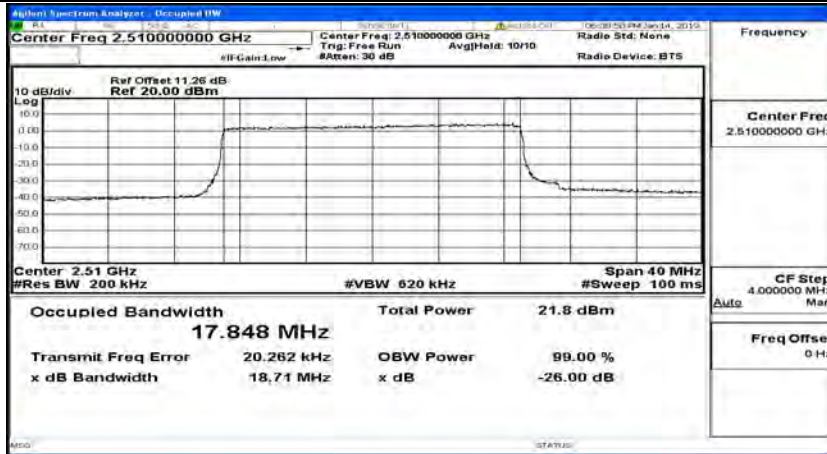
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)\_MCH\_16QAM



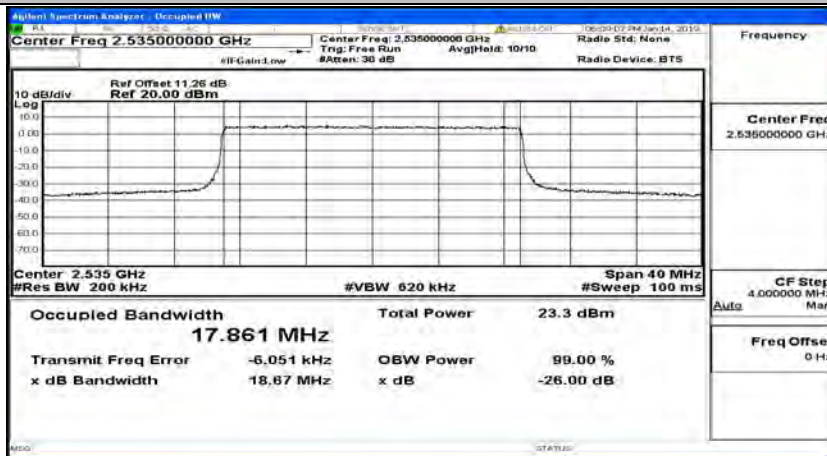
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)\_HCH\_16QAM



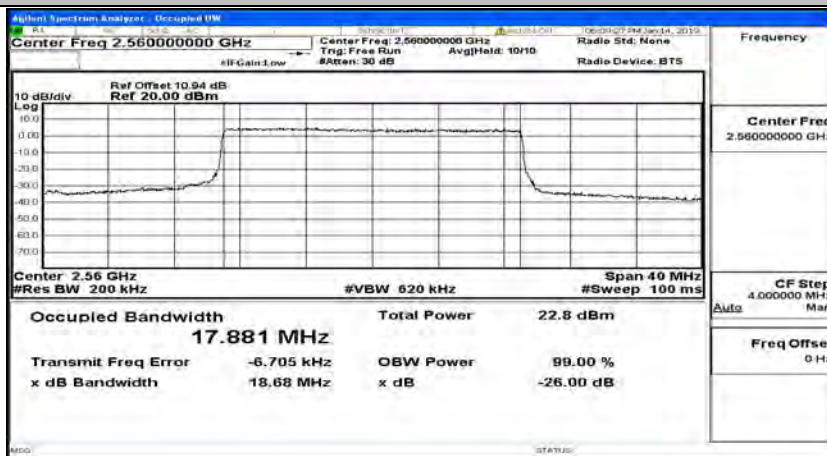
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)\_LCH\_QPSK



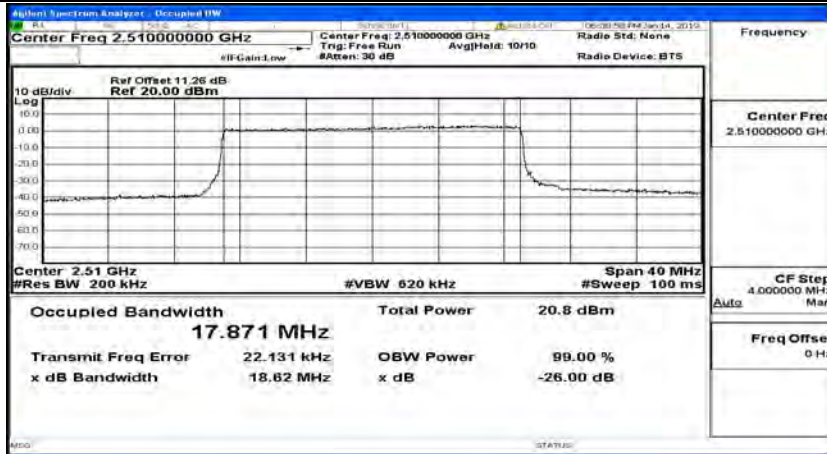
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)\_MCH\_QPSK



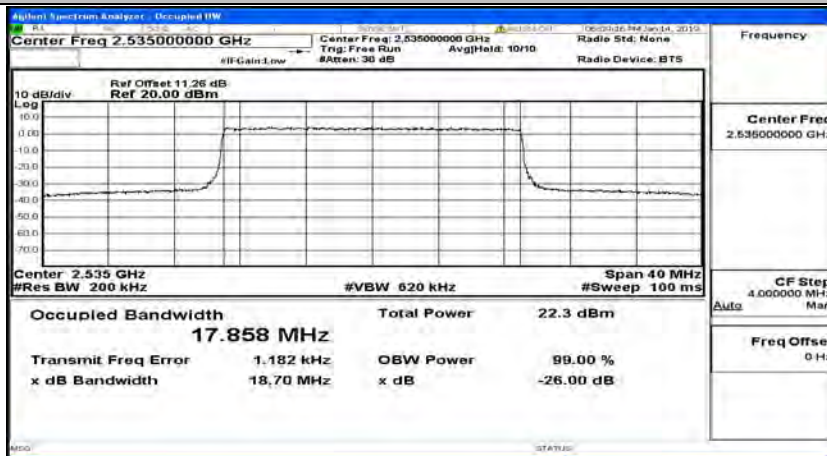
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)\_HCH\_QPSK



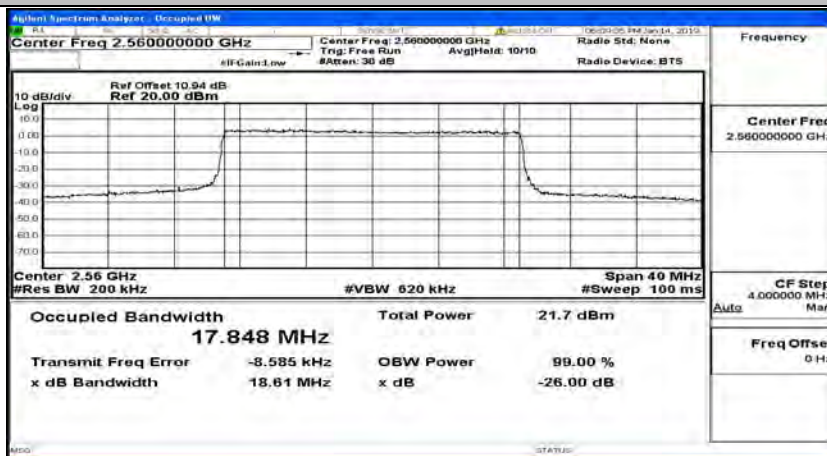
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)\_LCH\_16QAM



EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)\_MCH\_16QAM



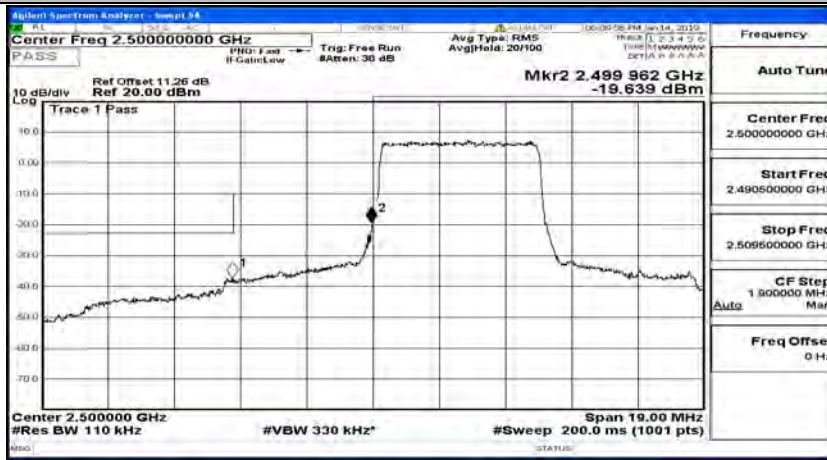
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)\_HCH\_16QAM



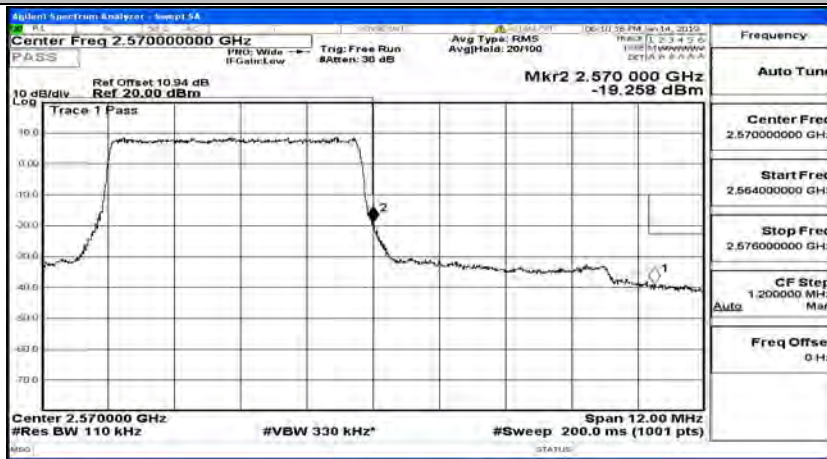


### D.4 Band Edge

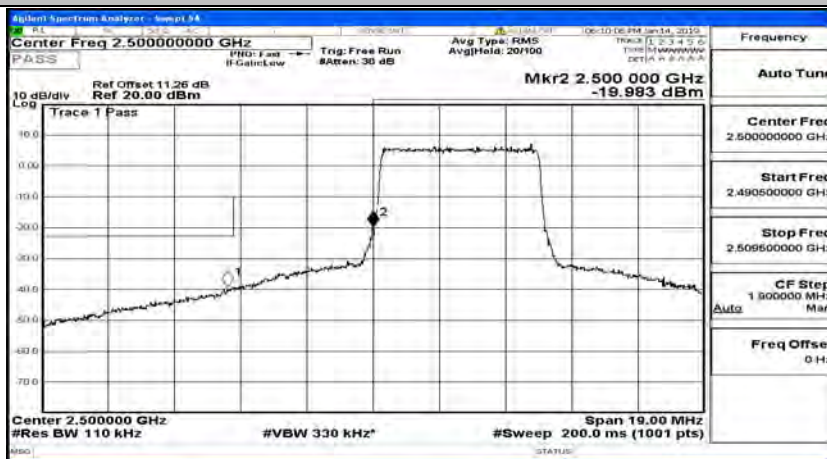
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_QPSK



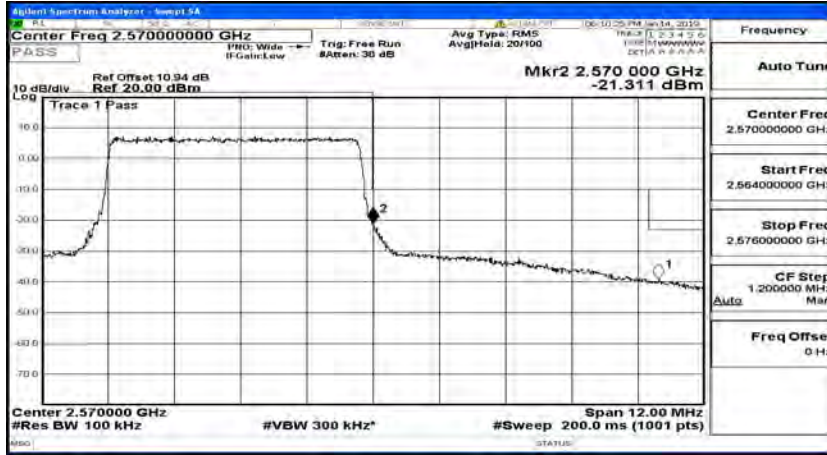
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_QPSK



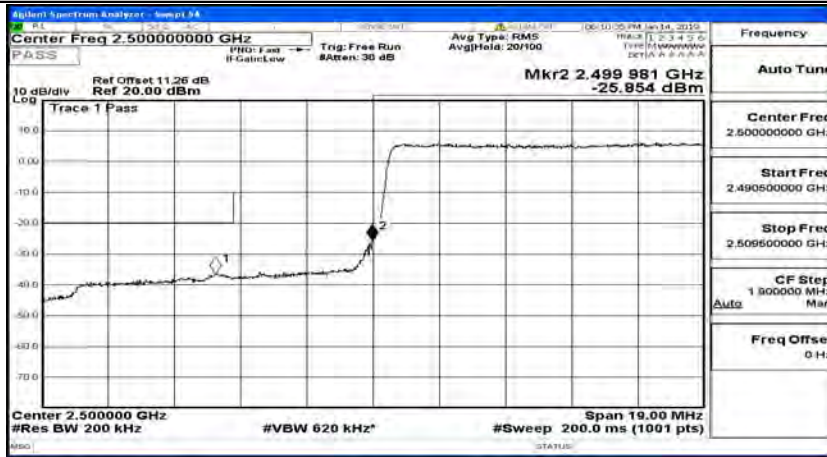
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_16QAM



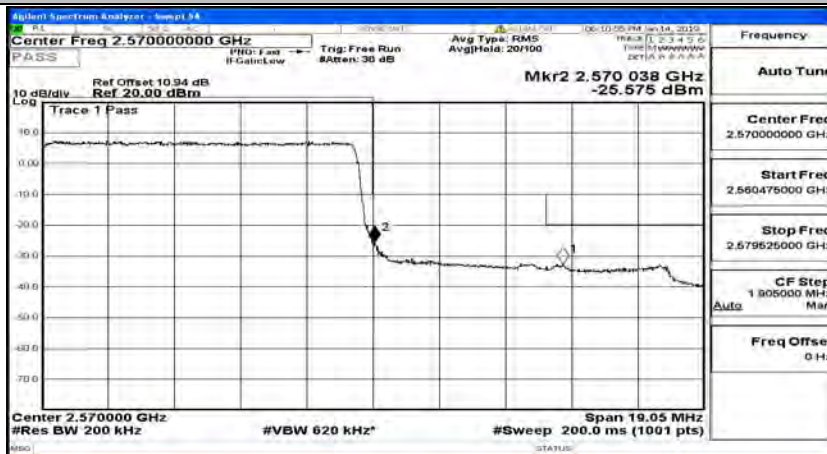
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_16QAM



Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)\_LCH\_QPSK

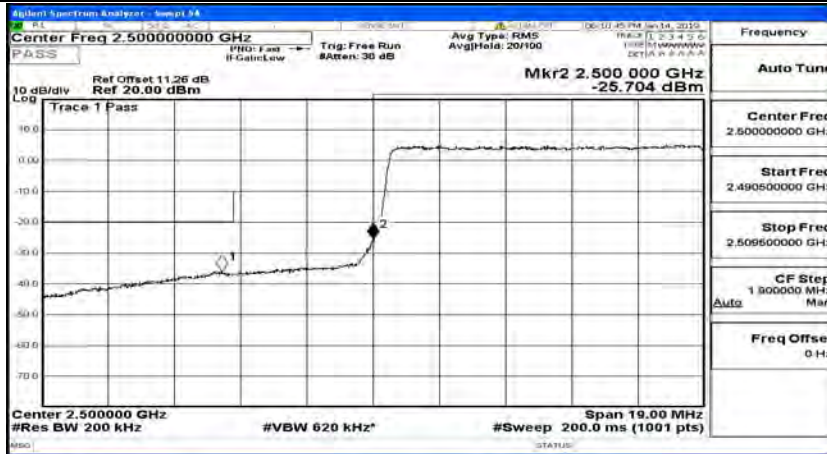


Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)\_HCH\_QPSK

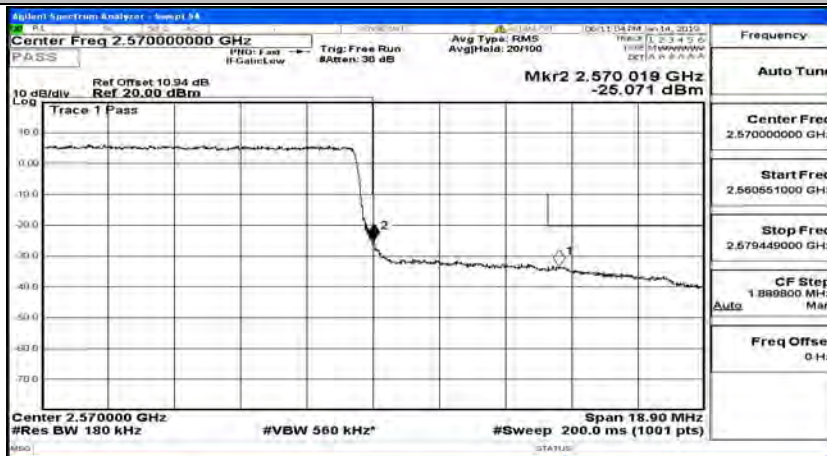




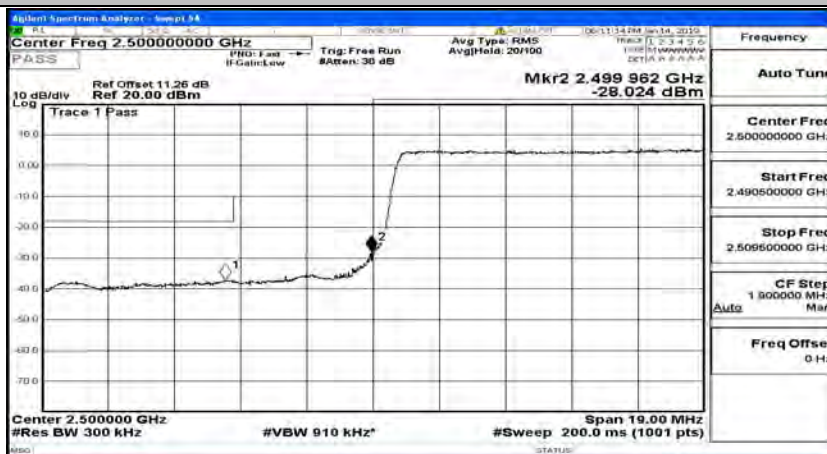
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz) LCH\_16QAM



Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz) HCH\_16QAM



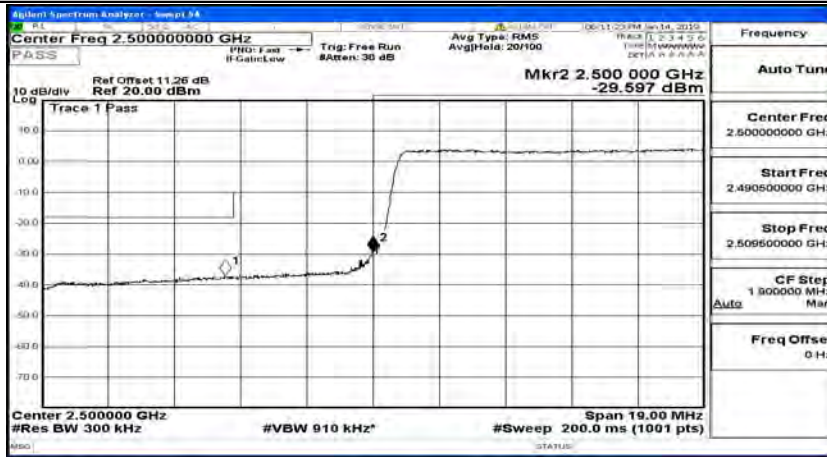
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz) LCH\_QPSK



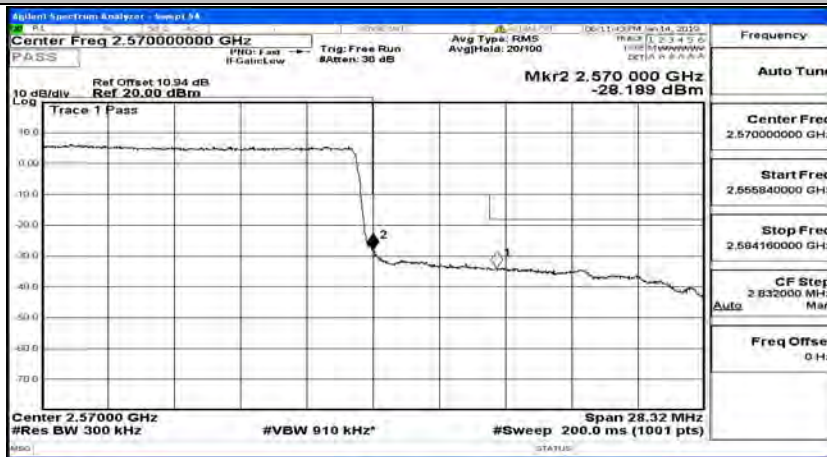
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)\_HCH\_QPSK



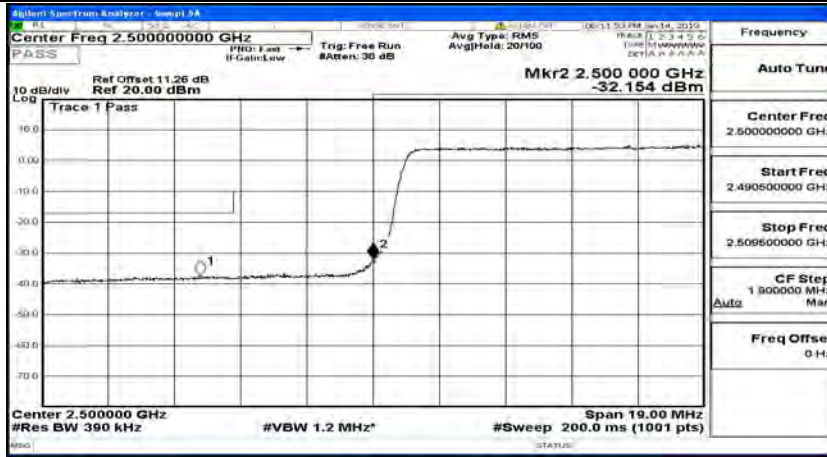
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)\_LCH\_16QAM



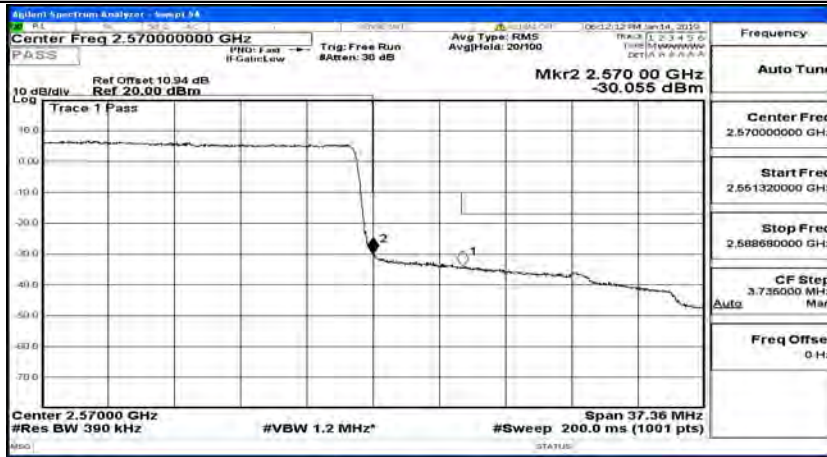
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)\_HCH\_16QAM



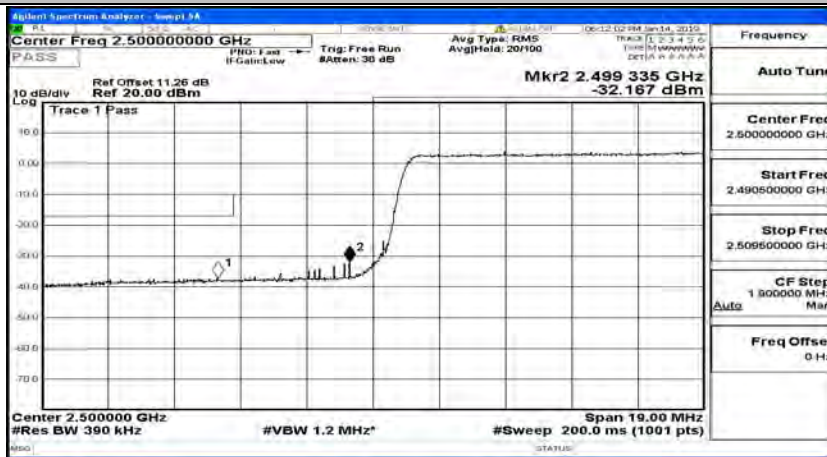
Band Edge Test Graph(s) (Channel Bandwidth:20 MHz) LCH\_QPSK



Band Edge Test Graph(s) (Channel Bandwidth:20 MHz) HCH\_QPSK



Band Edge Test Graph(s) (Channel Bandwidth:20 MHz) LCH\_16QAM



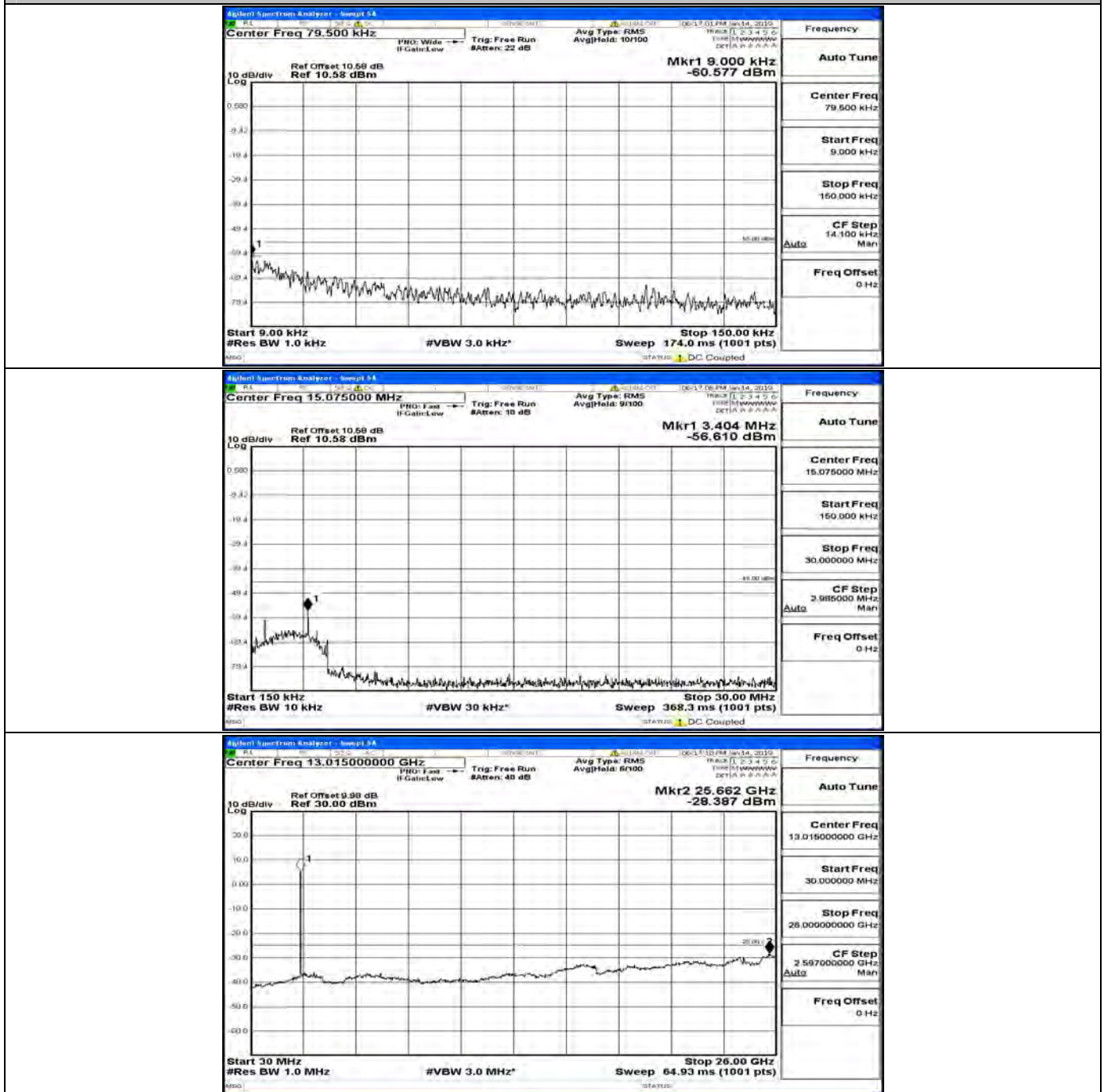
Band Edge Test Graph(s) (Channel Bandwidth:20 MHz)\_HCH\_16QAM



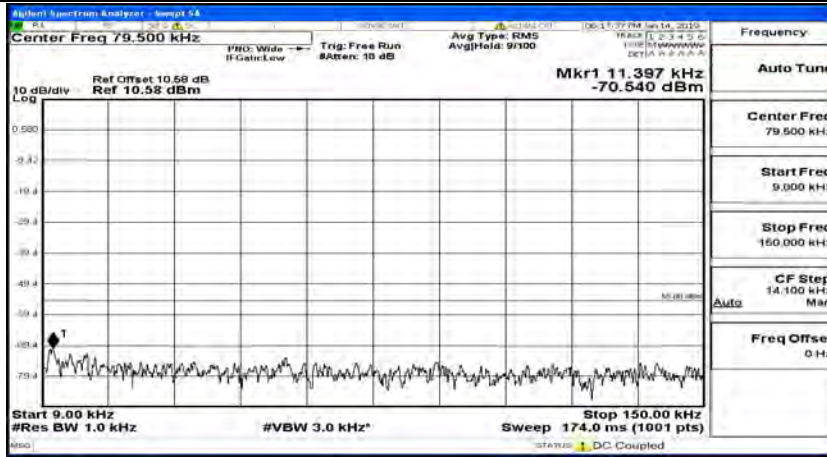


### D.5 Conducted Spurious Emission

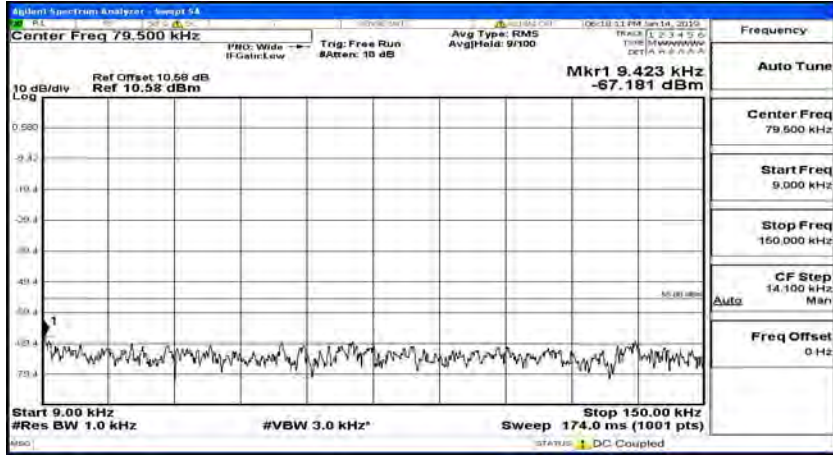
CSE Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_QPSK



CSE Test Graph(s) (Channel Bandwidth: 5 MHz)\_MCH\_QPSK

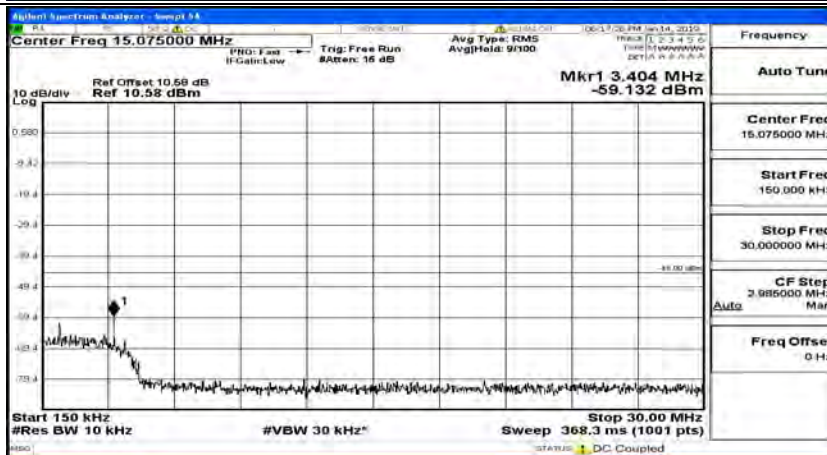
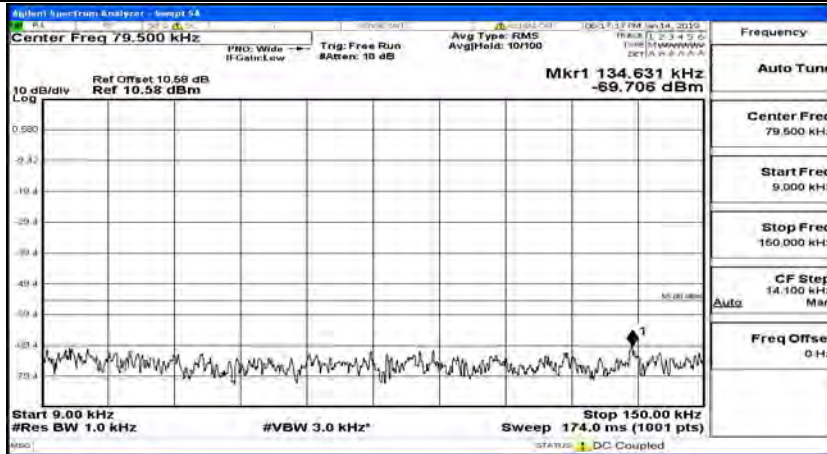


CSE Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_QPSK



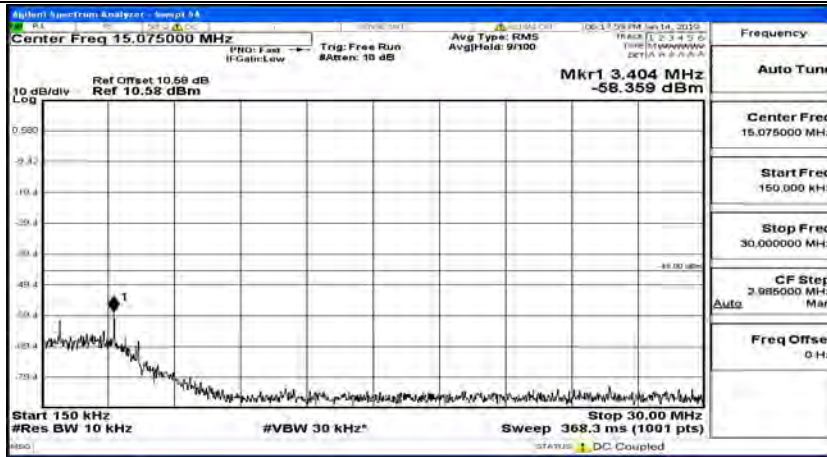
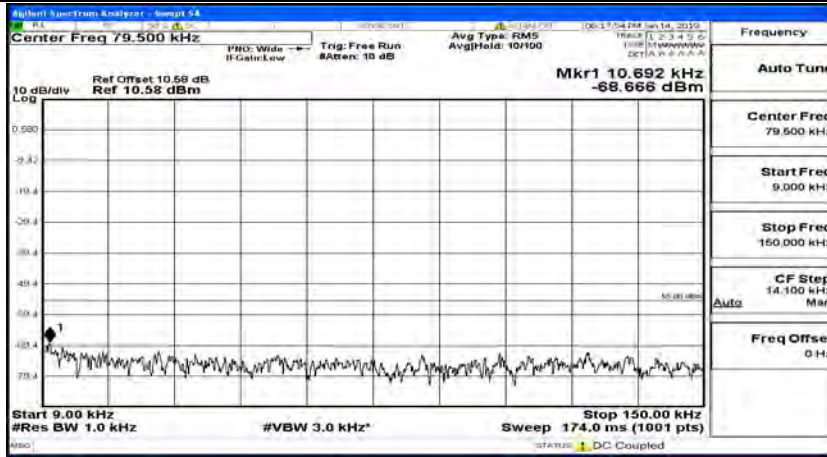


CSE Test Graph(s) (Channel Bandwidth: 5 MHz)\_LCH\_16QAM

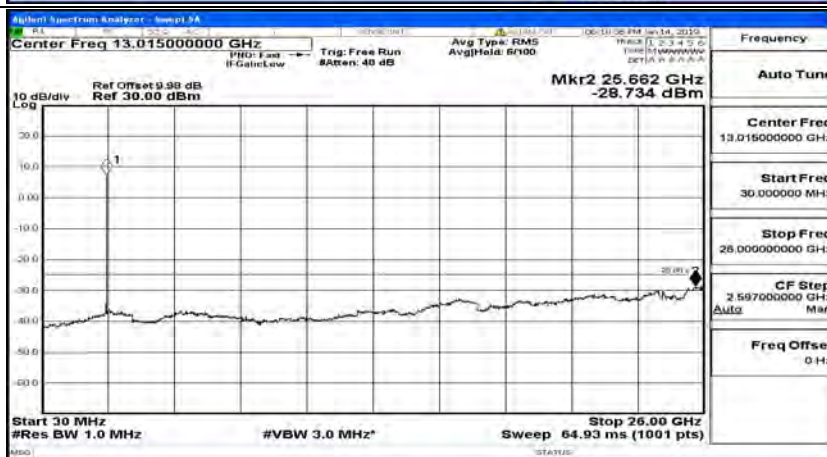
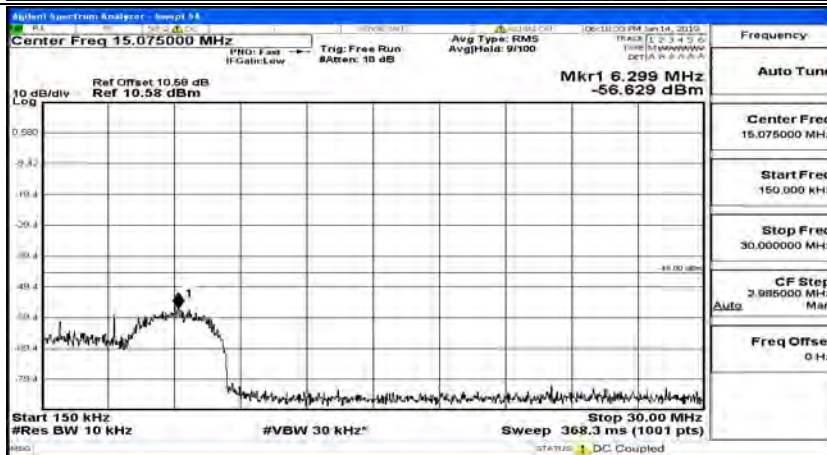
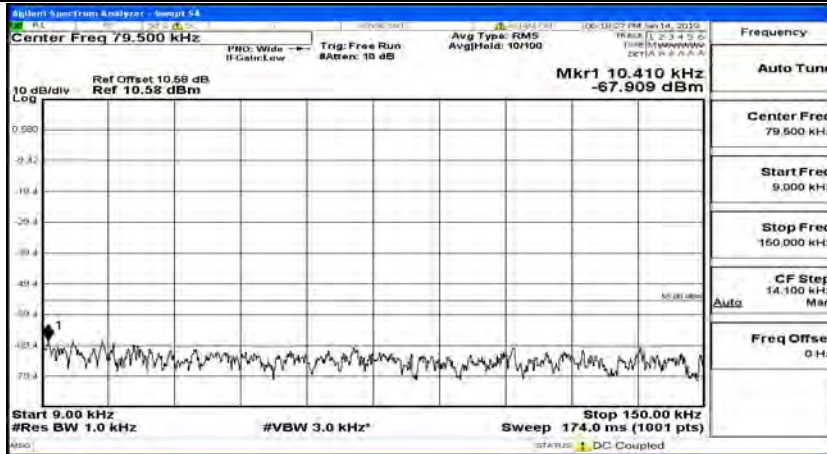




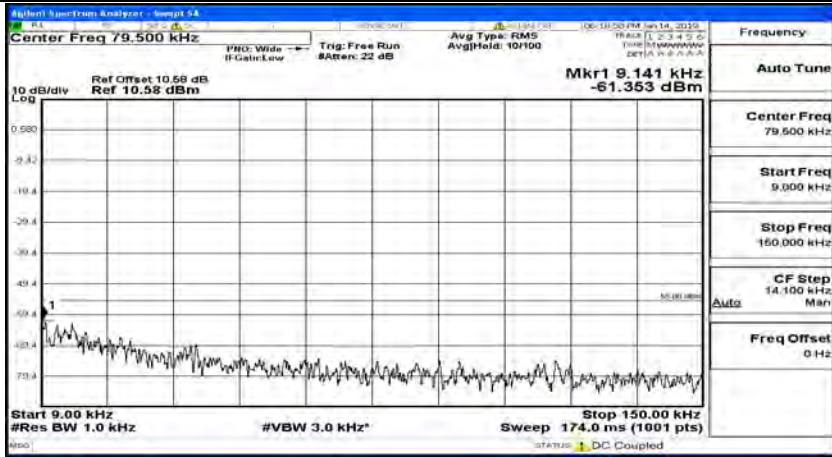
CSE Test Graph(s) (Channel Bandwidth: 5 MHz)\_MCH\_16QAM



CSE Test Graph(s) (Channel Bandwidth: 5 MHz)\_HCH\_16QAM

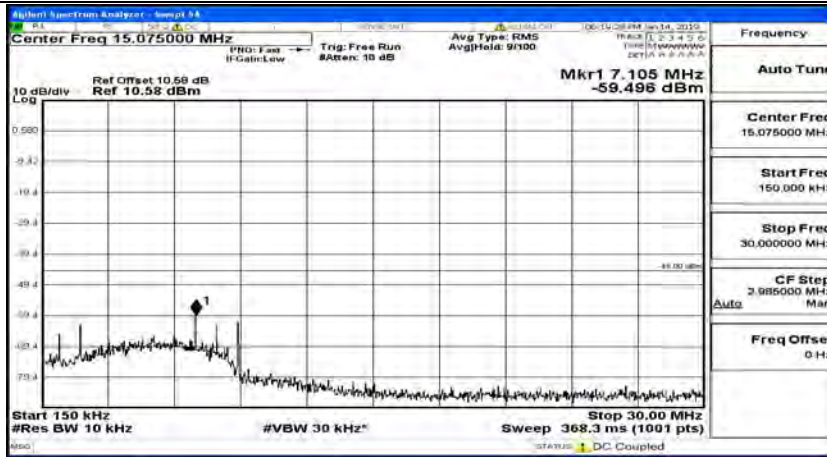
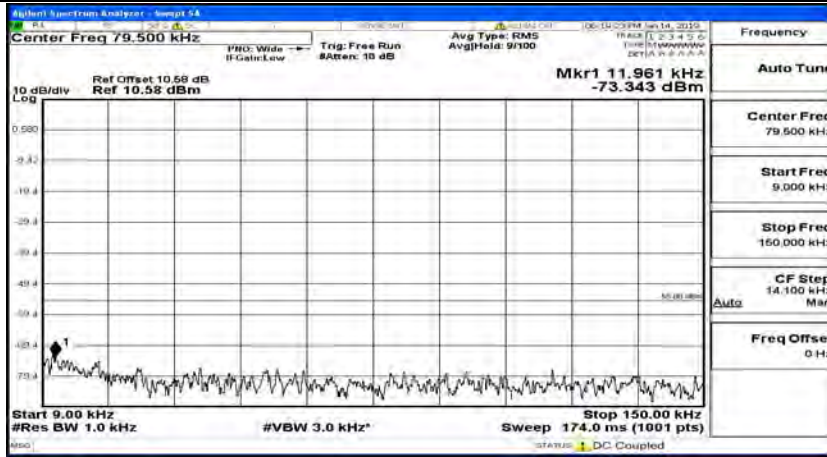


CSE Test Graph(s) (Channel Bandwidth: 10 MHz) LCH\_QPSK

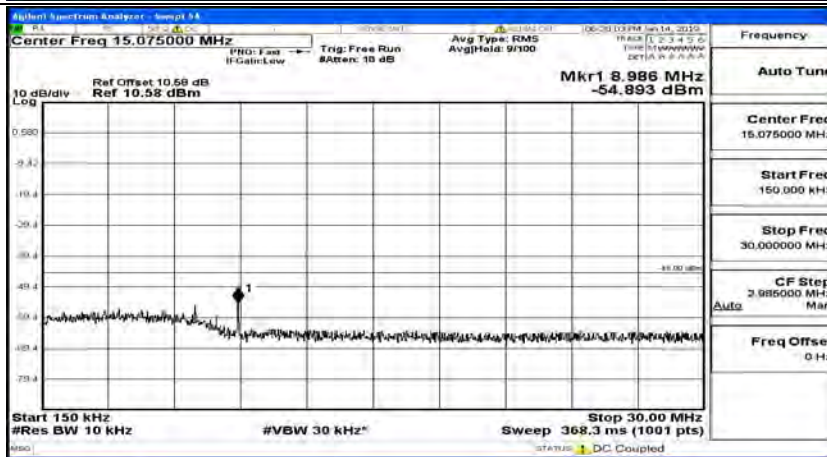
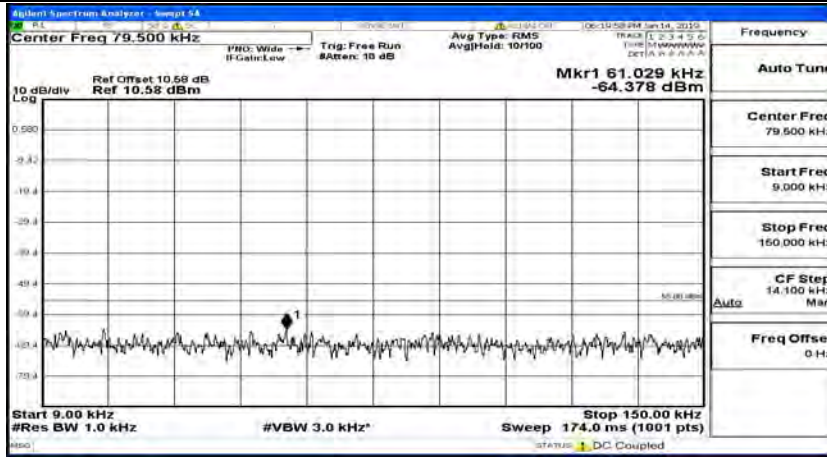




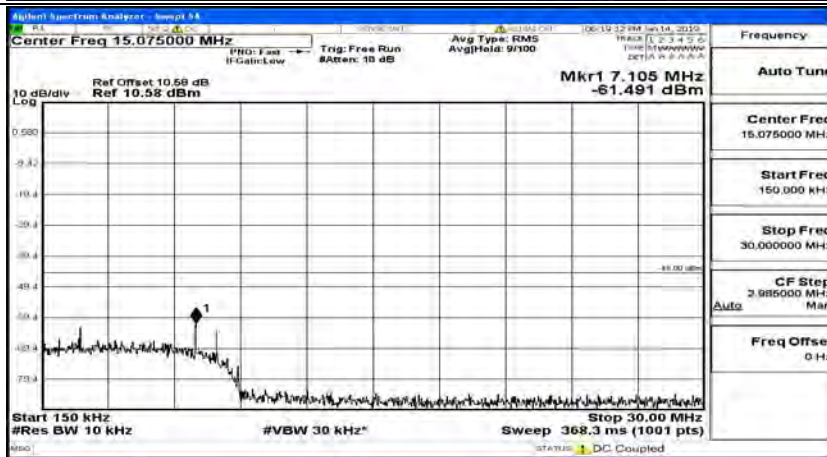
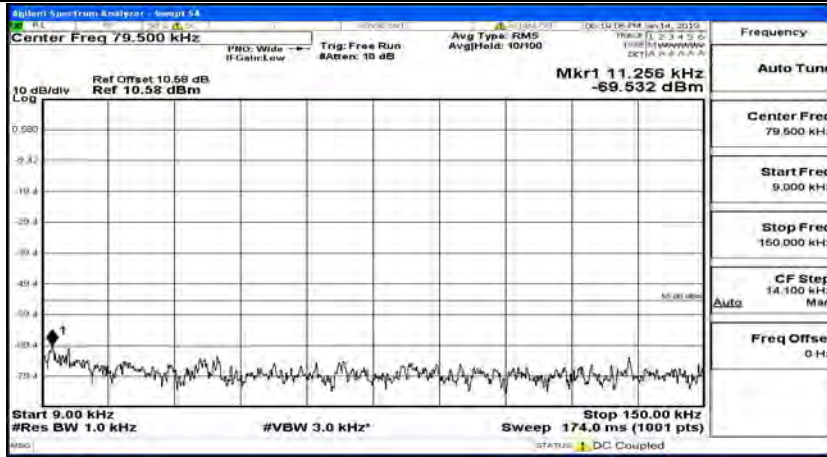
CSE Test Graph(s) (Channel Bandwidth: 10 MHz)\_MCH\_QPSK



CSE Test Graph(s) (Channel Bandwidth: 10 MHz)\_HCH\_QPSK

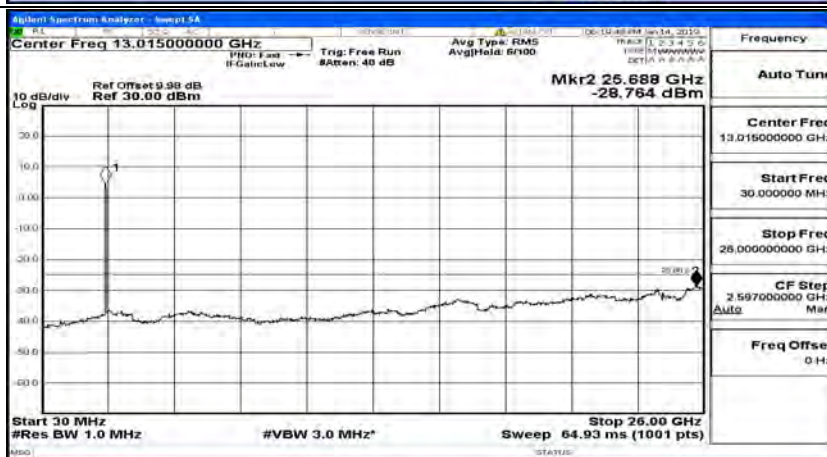
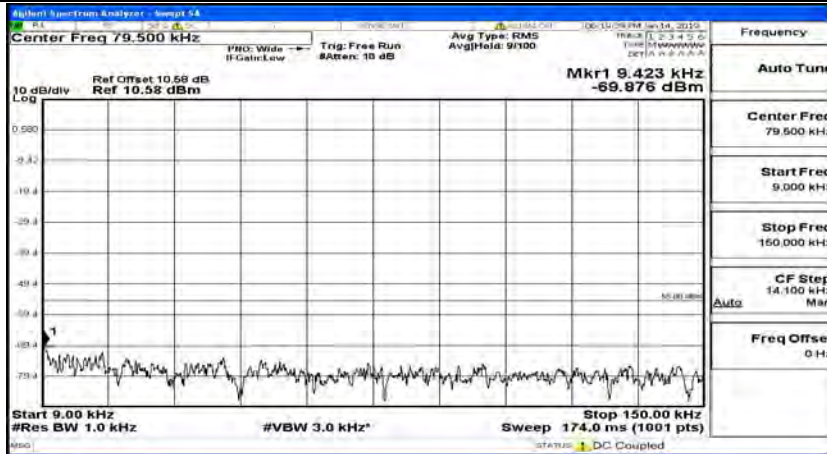


CSE Test Graph(s) (Channel Bandwidth: 10 MHz)\_LCH\_16QAM

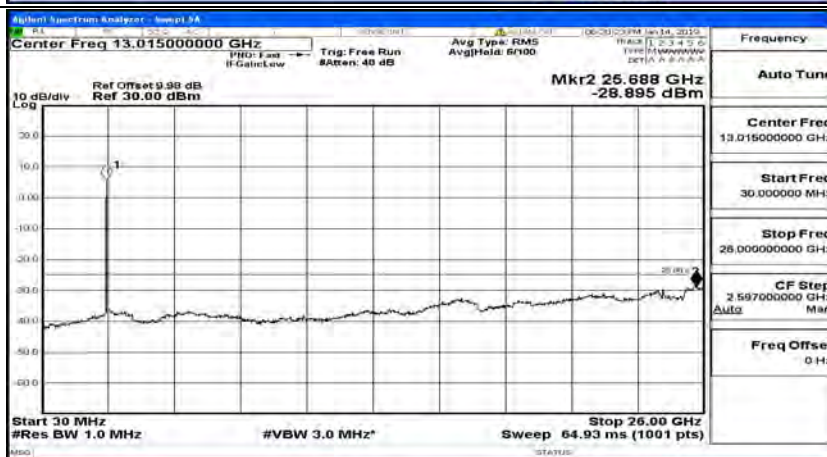
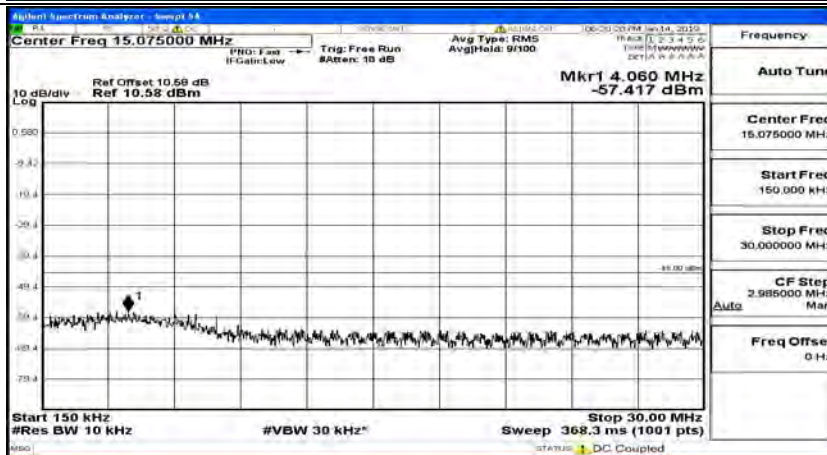
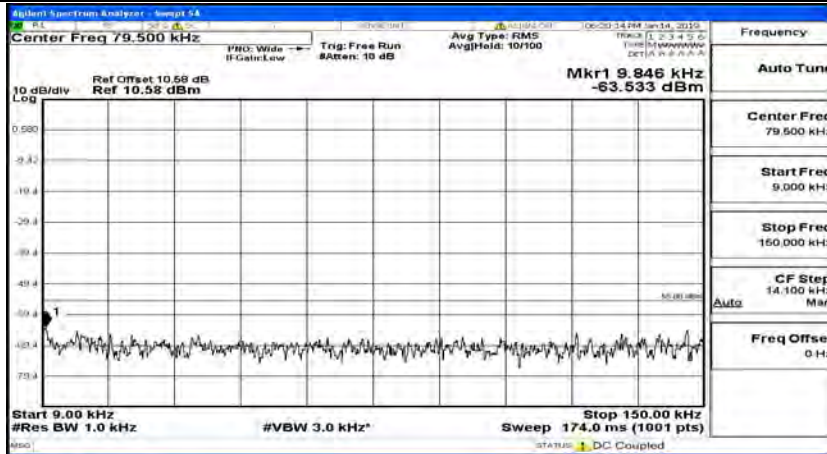




CSE Test Graph(s) (Channel Bandwidth: 10 MHz)\_MCH\_16QAM

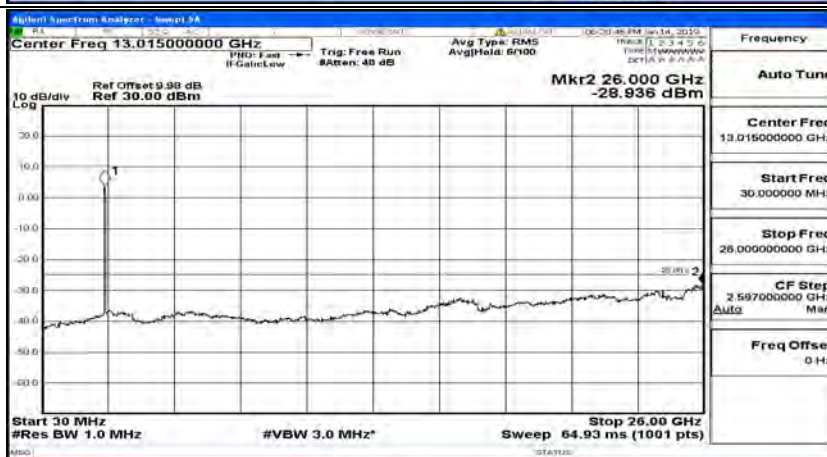
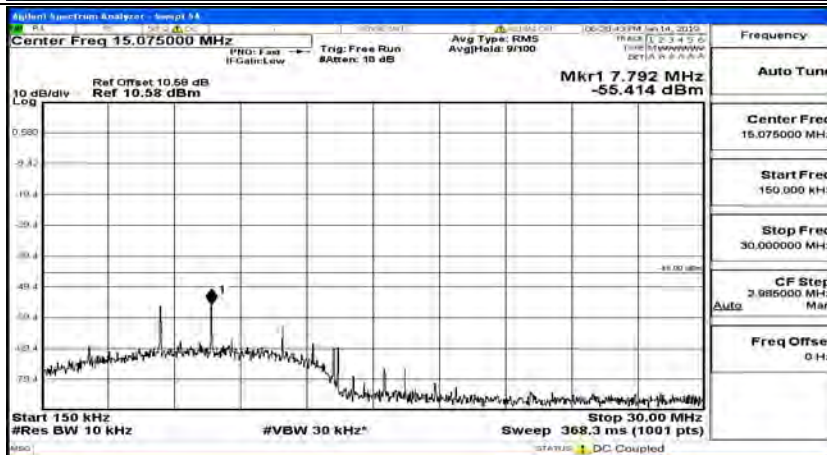
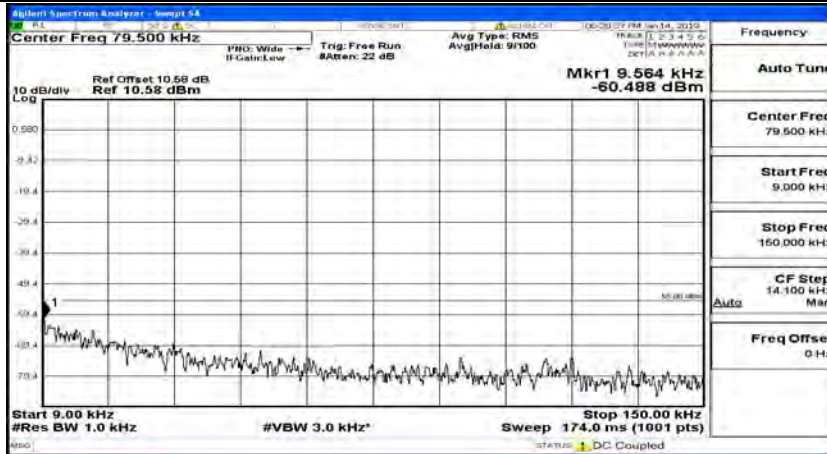


CSE Test Graph(s) (Channel Bandwidth: 10 MHz)\_HCH\_16QAM

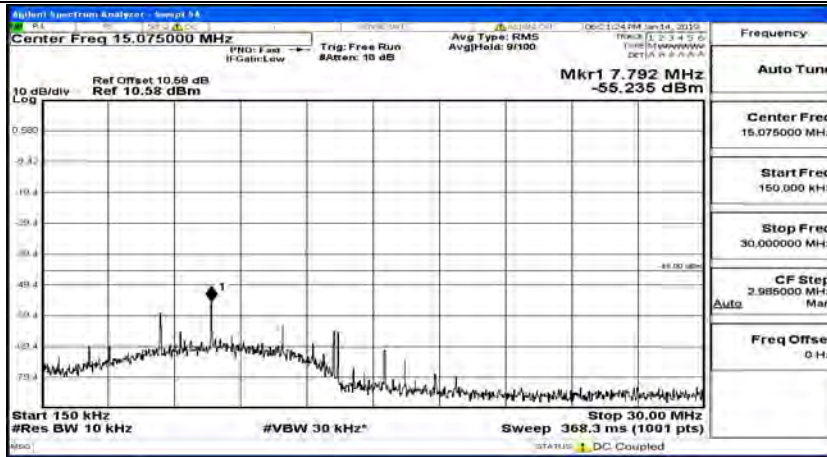
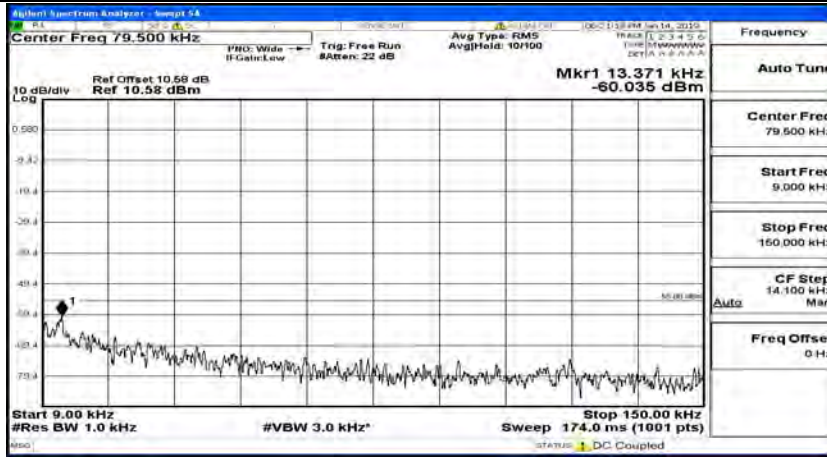




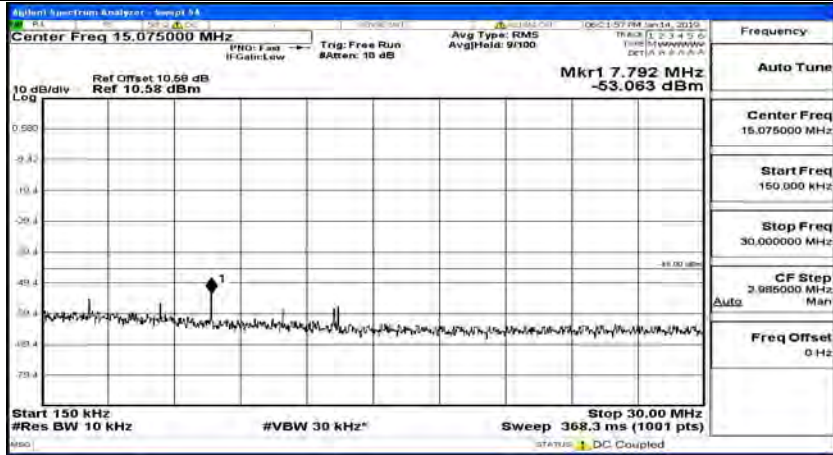
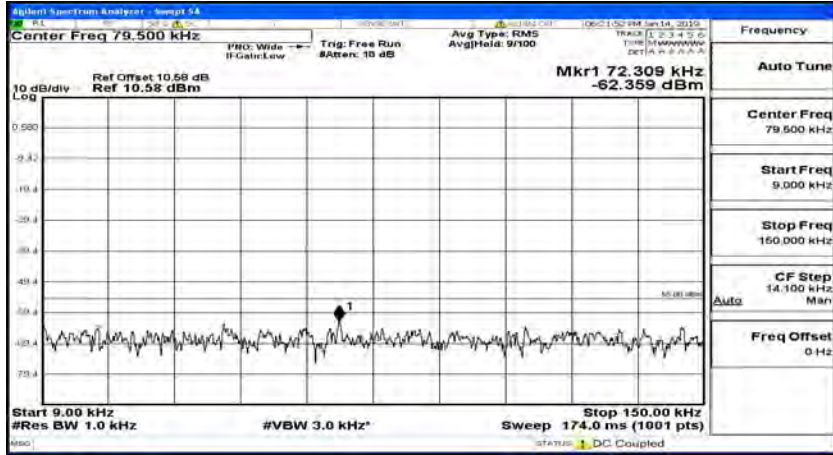
CSE Test Graph(s) (Channel Bandwidth:15 MHz)\_LCH\_QPSK



CSE Test Graph(s) (Channel Bandwidth:15 MHz)\_MCH\_QPSK

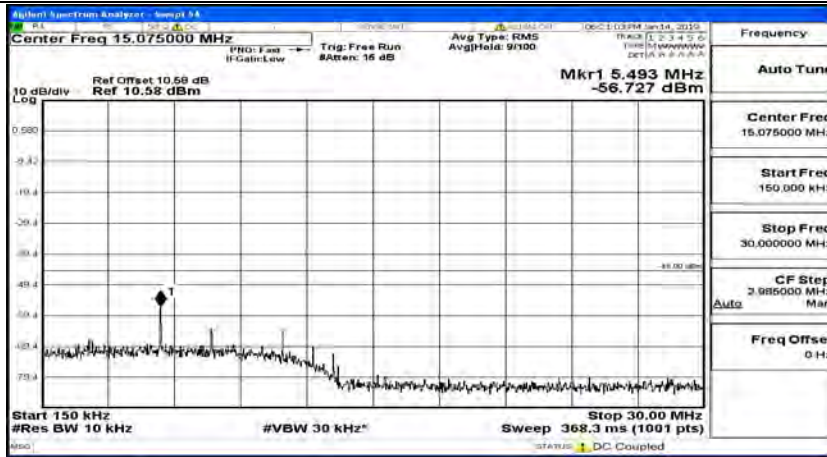
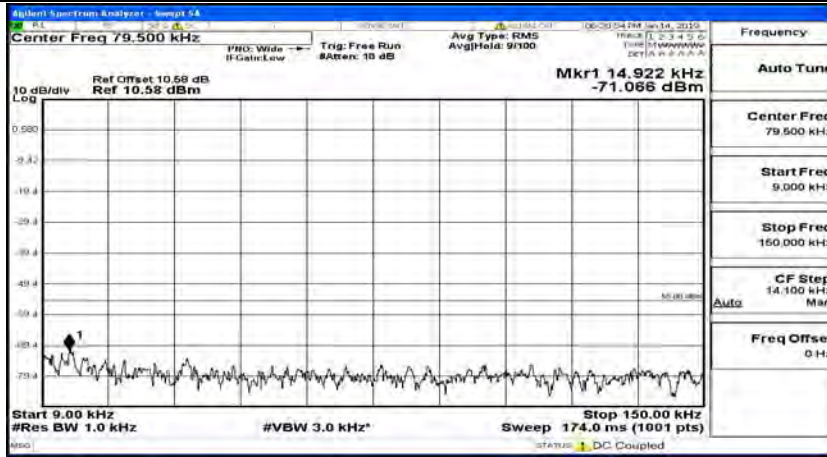


CSE Test Graph(s) (Channel Bandwidth:15 MHz)\_HCH\_QPSK



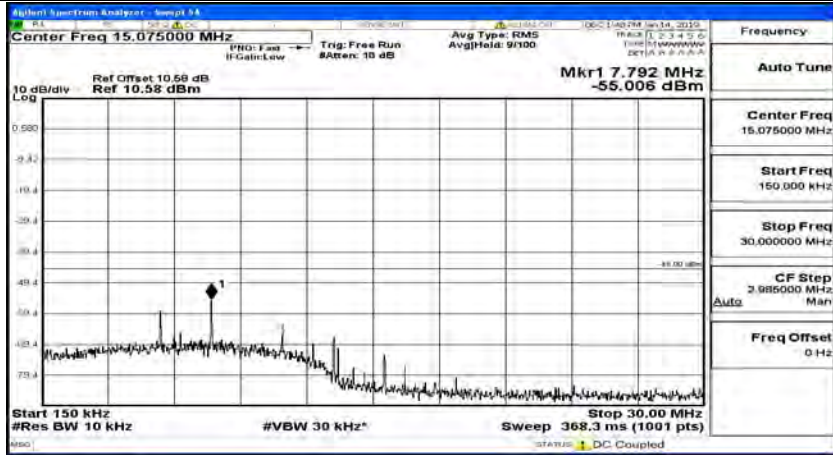
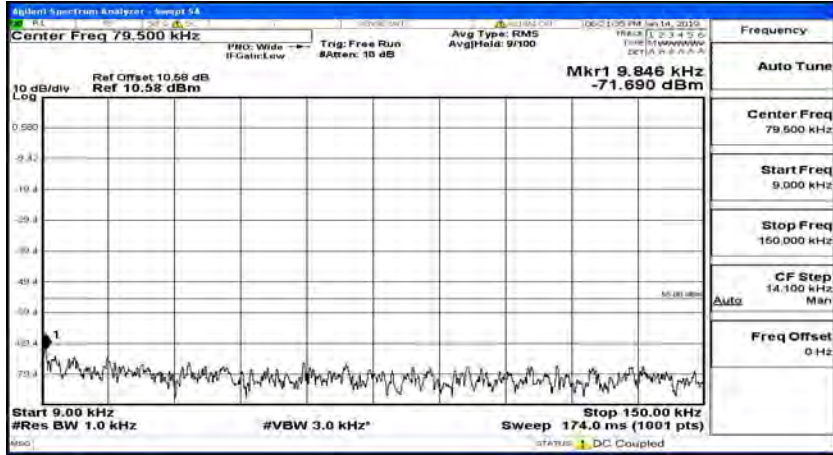


CSE Test Graph(s) (Channel Bandwidth:15 MHz)\_LCH\_16QAM

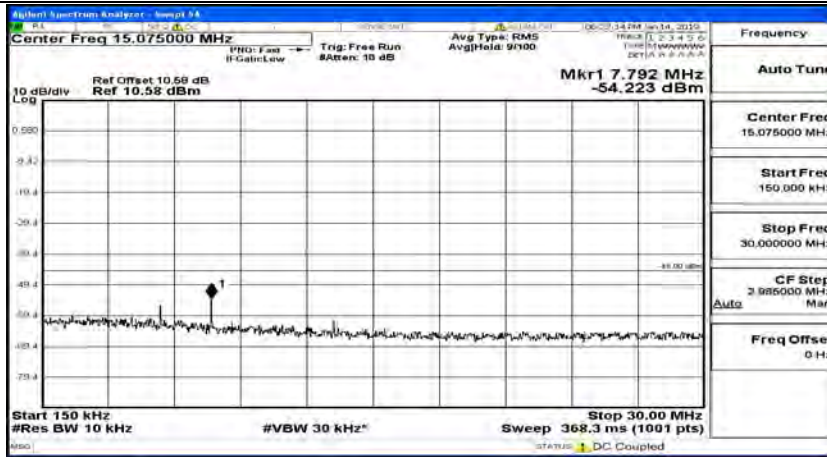
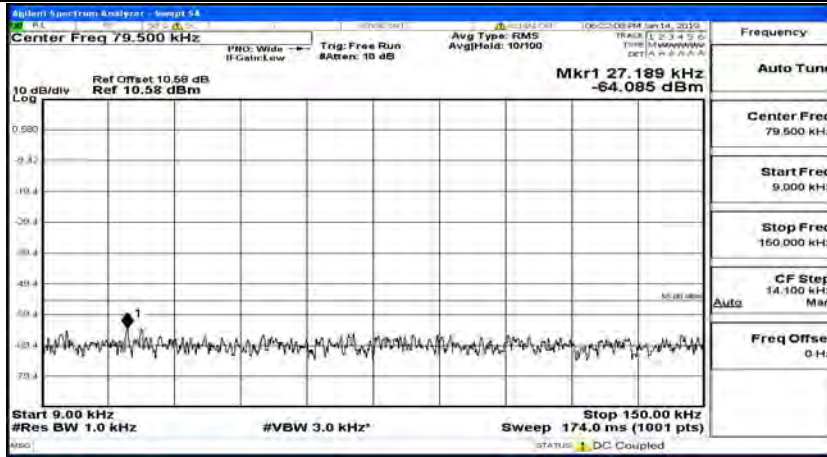




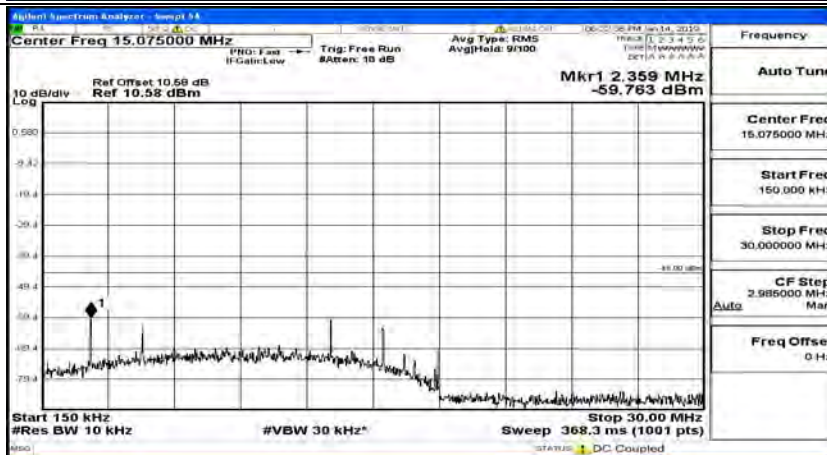
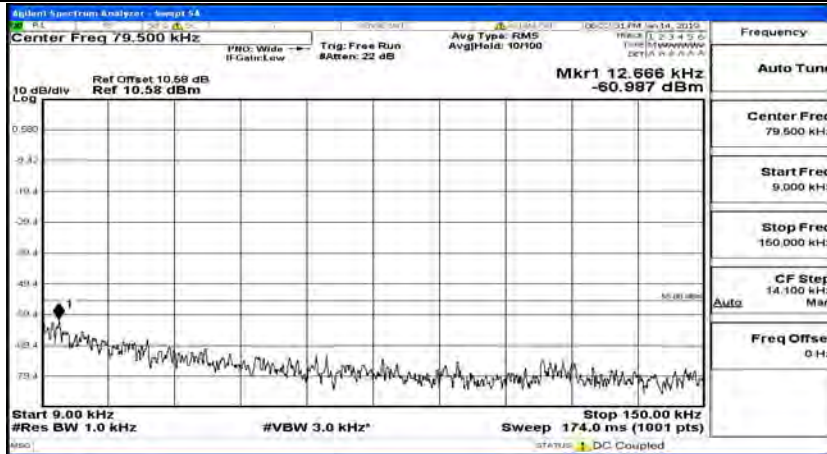
CSE Test Graph(s) (Channel Bandwidth:15 MHz)\_MCH\_16QAM



CSE Test Graph(s) (Channel Bandwidth:15 MHz)\_HCH\_16QAM

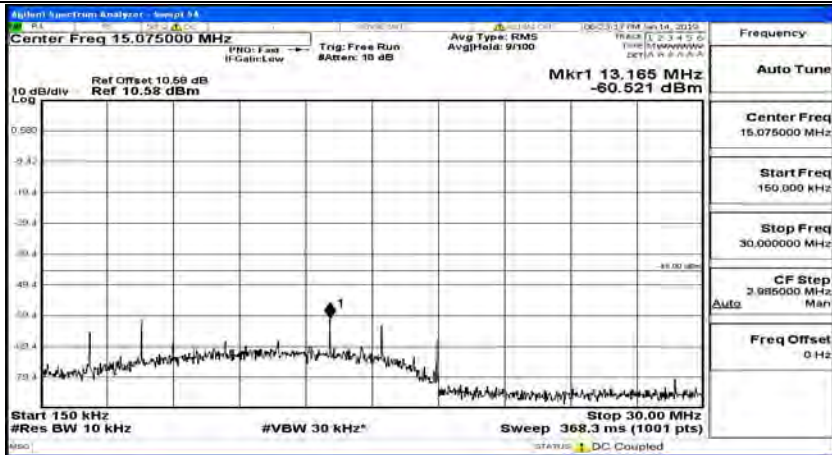
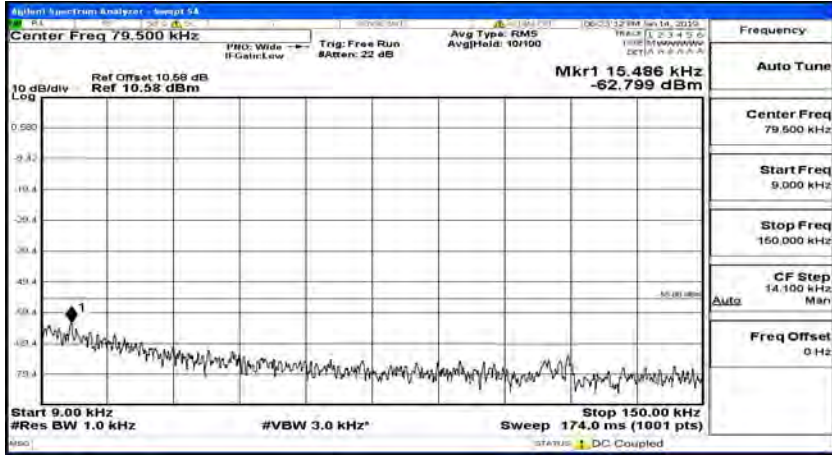


CSE Test Graph(s) (Channel Bandwidth:20 MHz)\_LCH\_QPSK



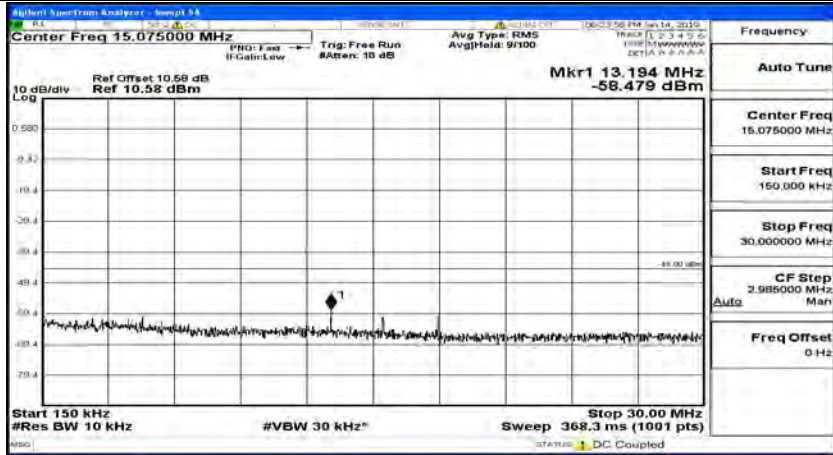
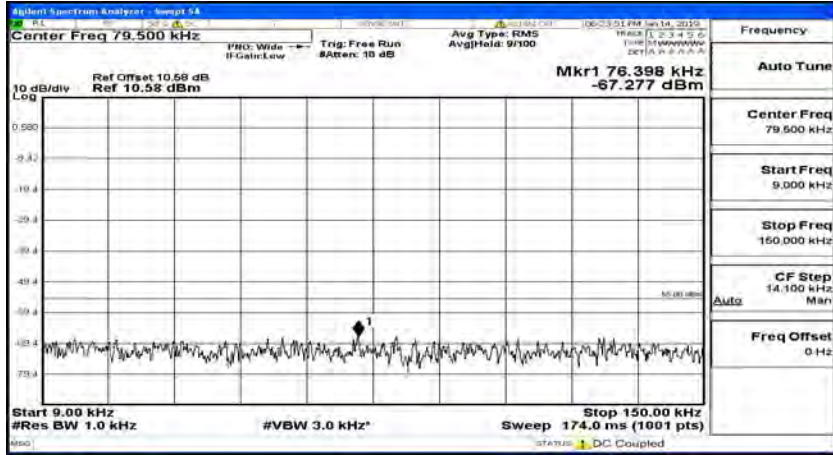


CSE Test Graph(s) (Channel Bandwidth:20 MHz)\_MCH\_QPSK

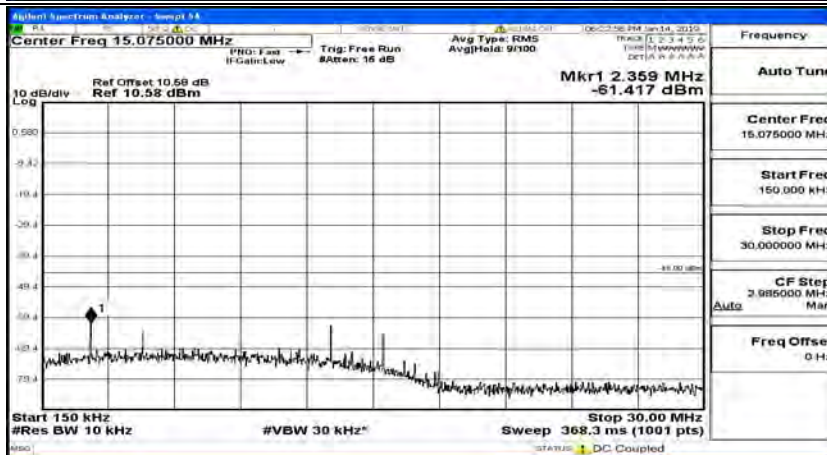
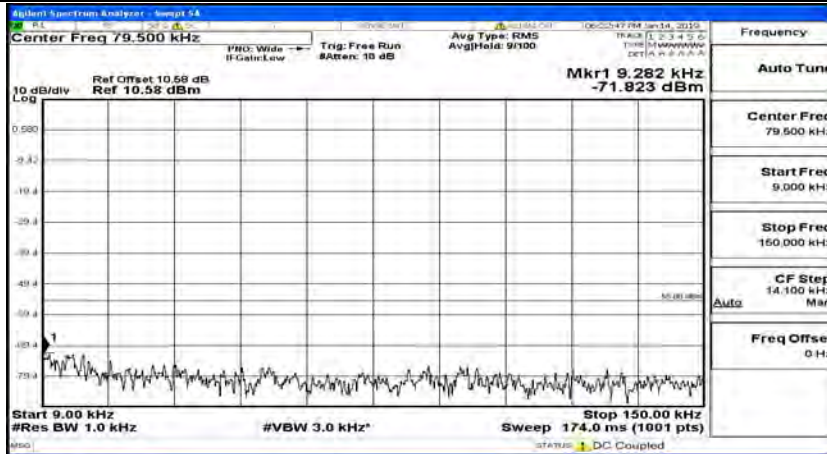




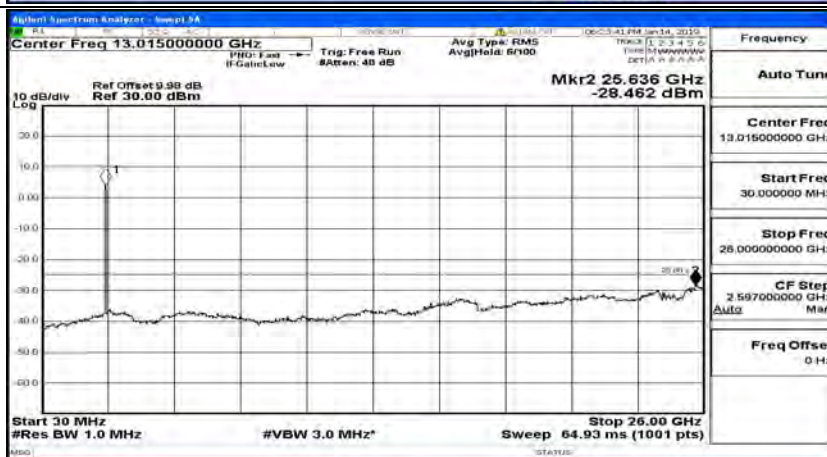
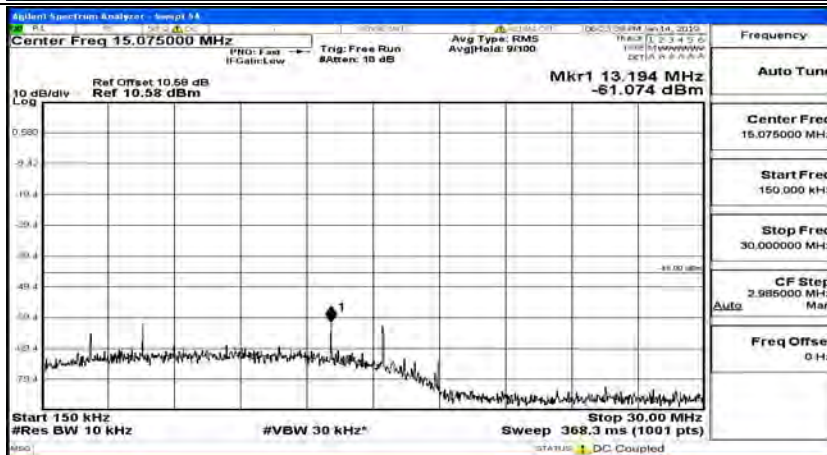
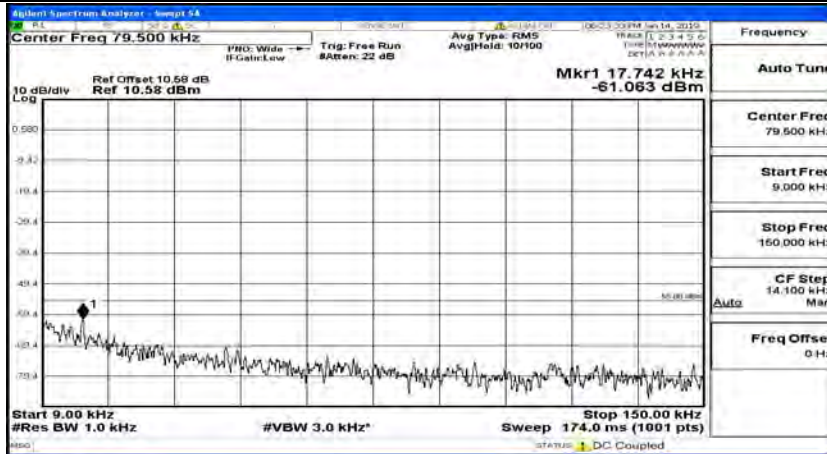
CSE Test Graph(s) (Channel Bandwidth:20 MHz)\_HCH\_QPSK



CSE Test Graph(s) (Channel Bandwidth:20 MHz)\_LCH\_16QAM



CSE Test Graph(s) (Channel Bandwidth:20 MHz)\_MCH\_16QAM





CSE Test Graph(s) (Channel Bandwidth:20 MHz)\_HCH\_16QAM

