Appendix G: Test Data for E-UTRA Band 14

Product Name: 4G Router/4G LTE/Wireless Router
Trade Mark: TODAAIR
Test Model: TD954G2

Environmental Conditions

Temperature:	24.3° C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond.Lu
Supervised by:	Tom.Liu

G.1 Conducted Output Power

Conducted Output Power Test Result (Channel Bandwidth: 5 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict
		Size	Offset	QPSK	16QAM	
QPSK / 16QAM	LCH	1	0	23.37	22.62	PASS
		1	12	23.52	22.84	PASS
		1	24	23.15	22.61	PASS
		12	0	22.64	21.96	PASS
		12	6	22.65	21.81	PASS
		12	13	22.53	21.67	PASS
		25	0	22.60	21.79	PASS
	MCH	1	0	23.39	22.89	PASS
		1	12	23.53	22.97	PASS
		1	24	23.29	22.75	PASS
		12	0	22.68	22.45	PASS
		12	6	23.48	22.73	PASS
		12	13	23.93	22.42	PASS
		25	0	23.38	22.87	PASS
	HCH	1	0	23.42	22.63	PASS
		1	12	23.74	22.22	PASS
		1	24	23.36	22.19	PASS
		12	0	23.33	22.18	PASS
		12	6	23.44	22.29	PASS
		12	13	23.03	22.98	PASS
		25	0	23.22	22.14	PASS

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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	MCH	1	0	23.19	22.32	PASS
		1	24	23.05	22.34	PASS
		1	49	23.57	22.38	PASS
		25	0	23.88	22.67	PASS
		25	12	23.47	22.99	PASS
		25	25	23.68	22.00	PASS
		50	0	23.41	22.50	PASS

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G.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	5.1	<13	PASS
	MCH	5.08	<13	PASS
	HCH	4.87	<13	PASS
16QAM	LCH	5.87	<13	PASS
	MCH	5.9	<13	PASS
	HCH	5.72	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	MCH	5.06	<13	PASS
16QAM	MCH	5.84	<13	PASS

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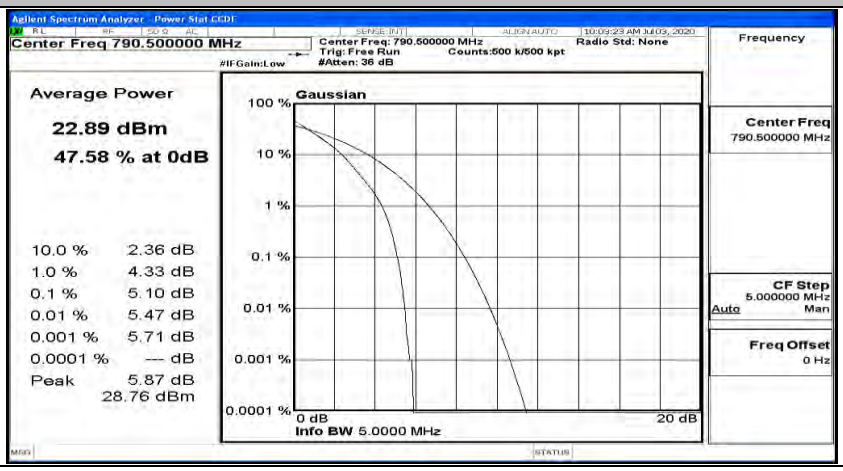
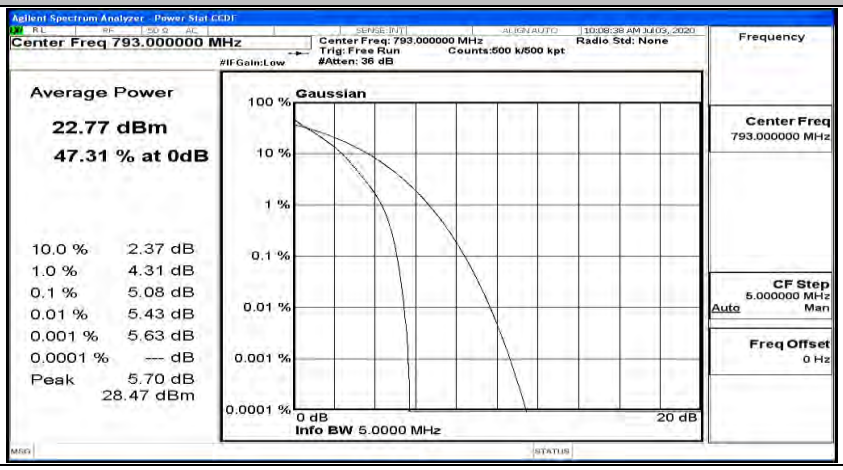
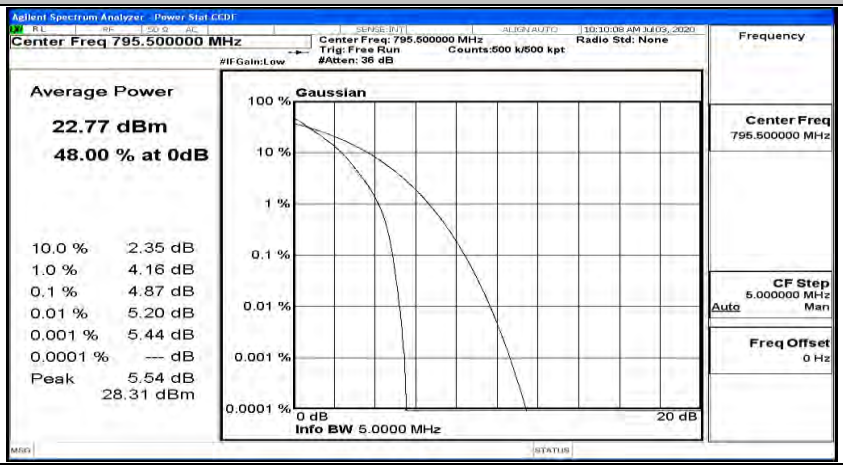
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



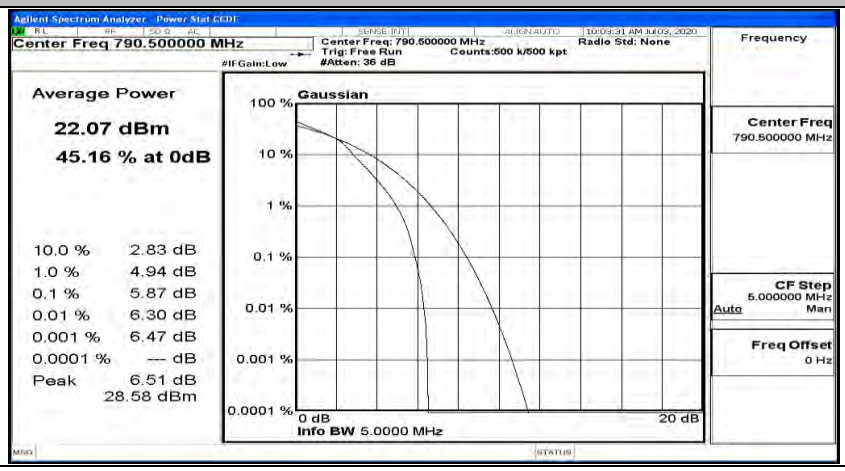
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



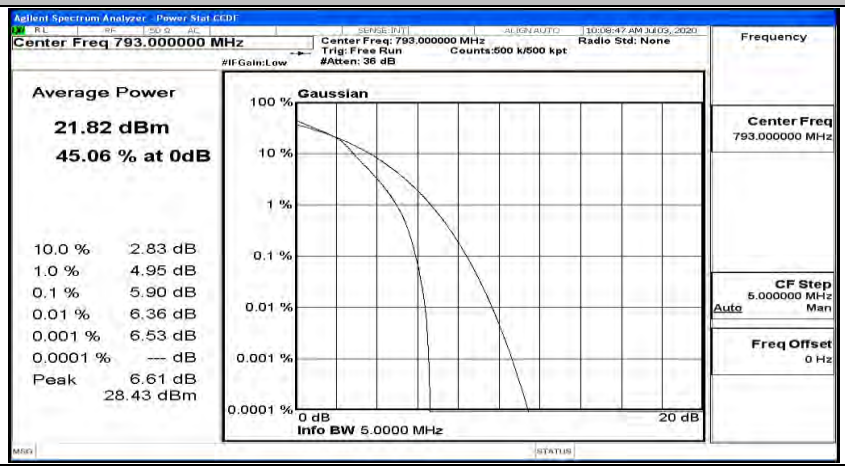
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



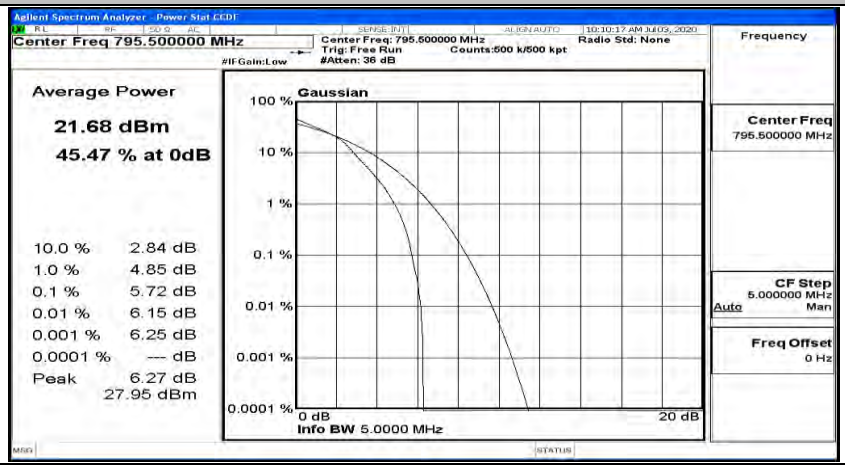
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



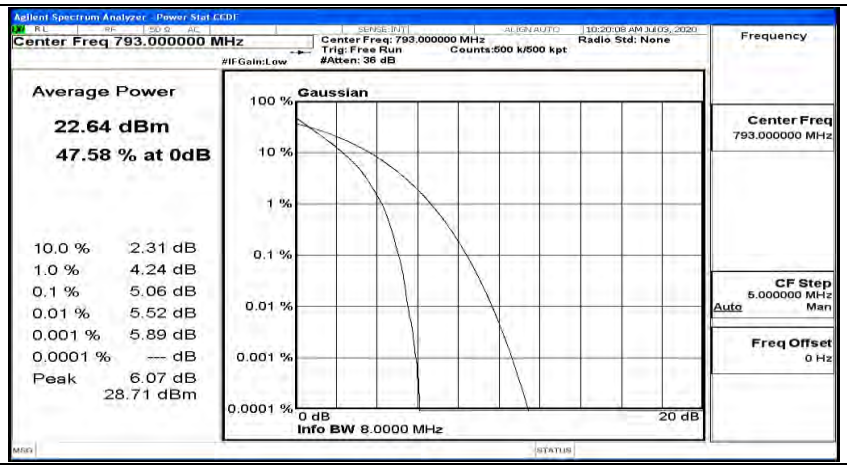
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



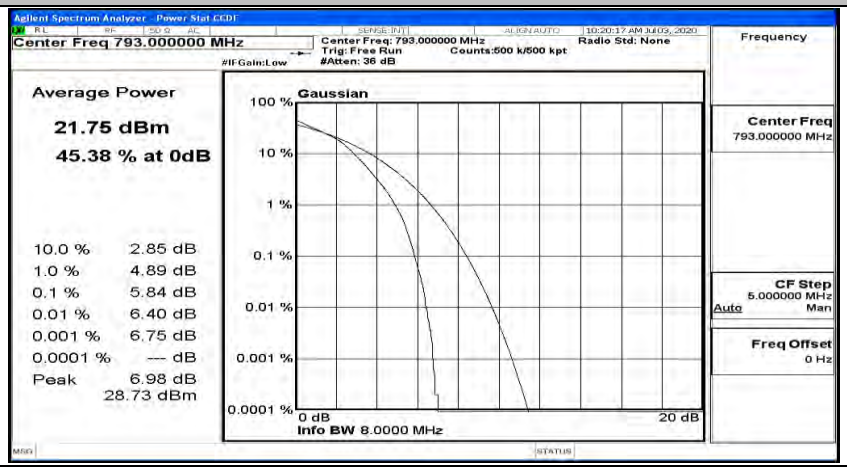
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



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



Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_16QAM



G.3 26dB Bandwidth and Occupied Bandwidth

EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4720	4.794	PASS
	MCH	4.5002	4.849	PASS
	HCH	4.4694	4.764	PASS
16QAM	LCH	4.4699	4.837	PASS
	MCH	4.4736	4.758	PASS
	HCH	4.4598	4.818	PASS

EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	MCH	8.9182	9.448	PASS
16QAM	MCH	8.9117	9.388	PASS

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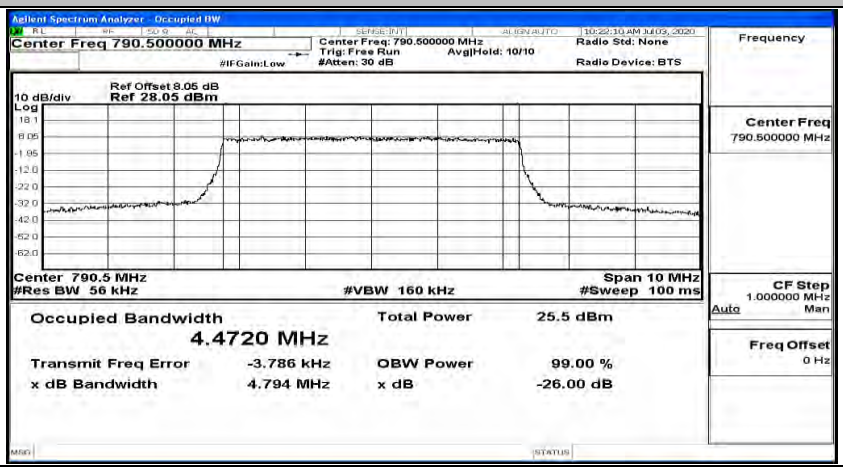
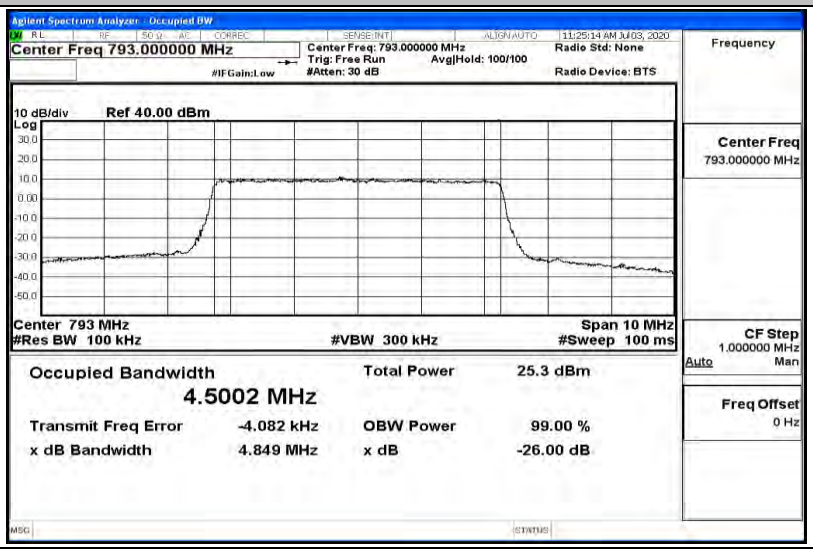
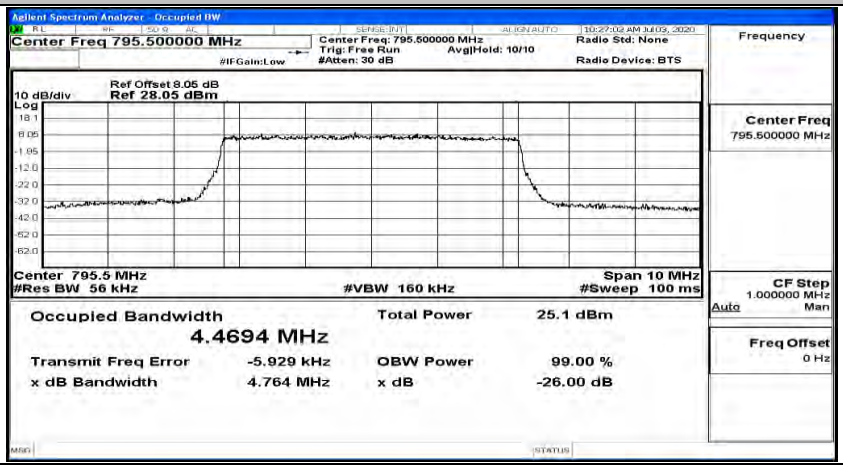
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



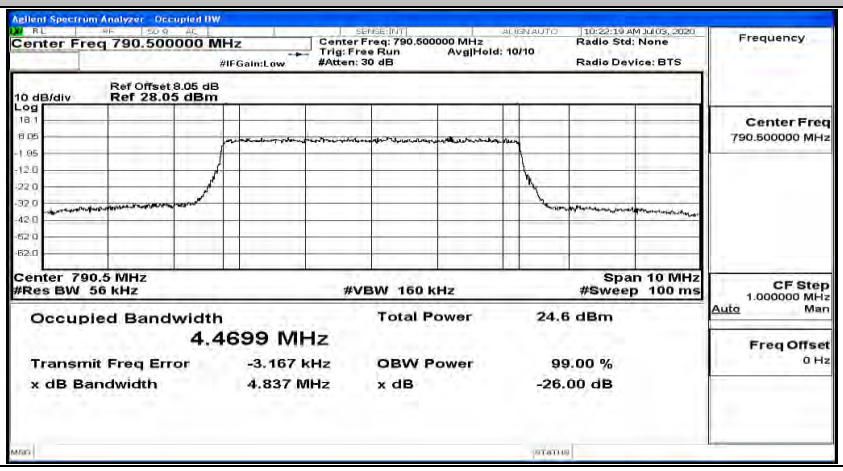
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



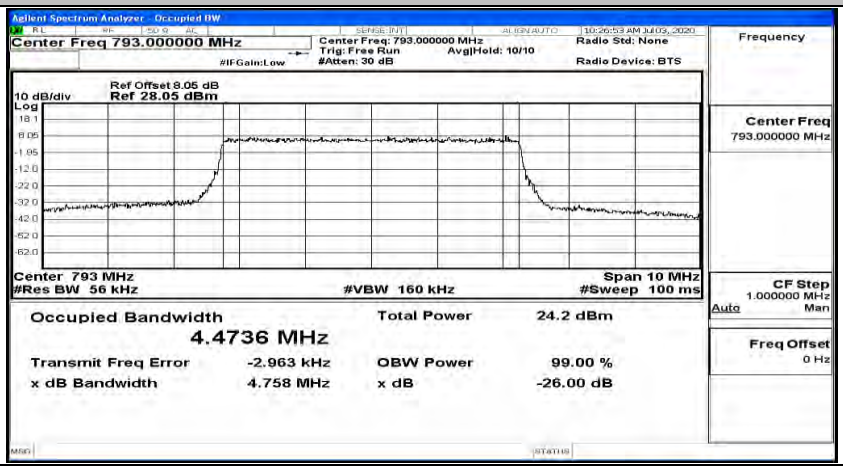
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



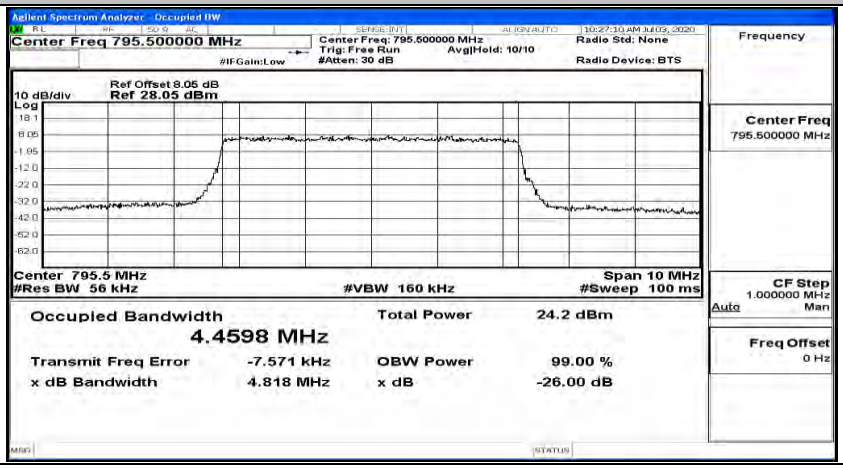
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



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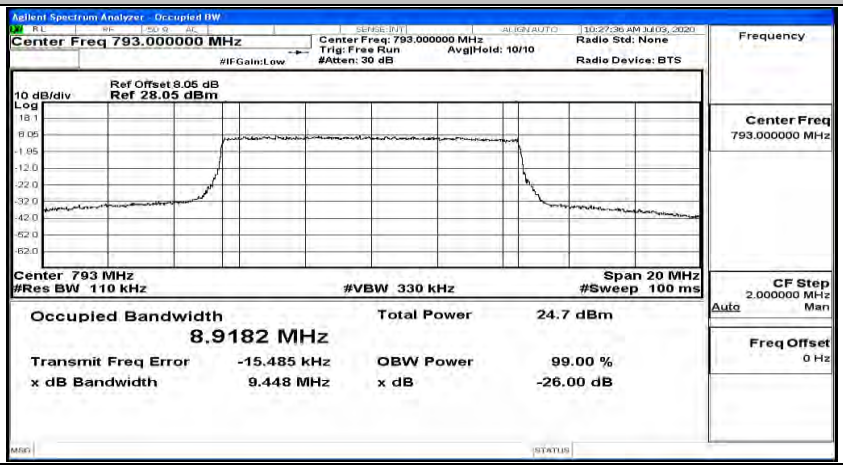
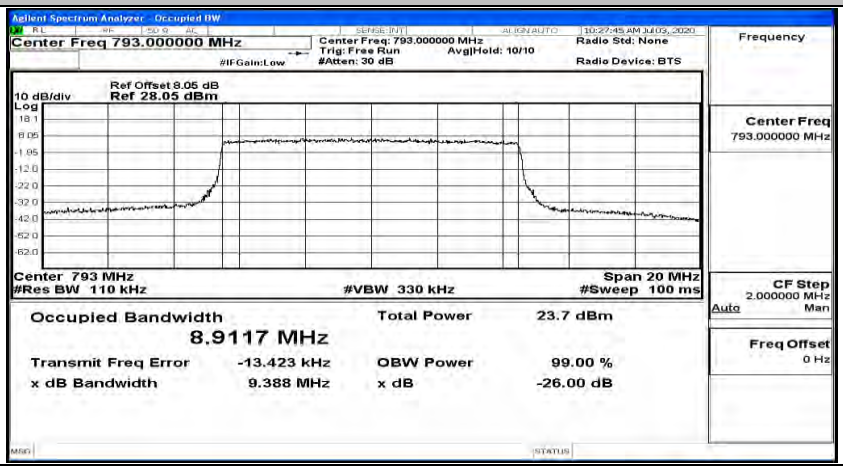
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_16QAM



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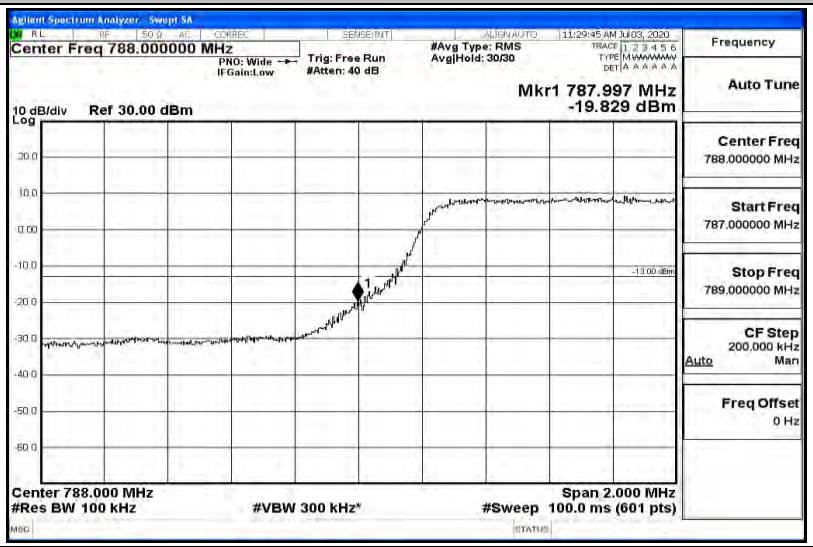
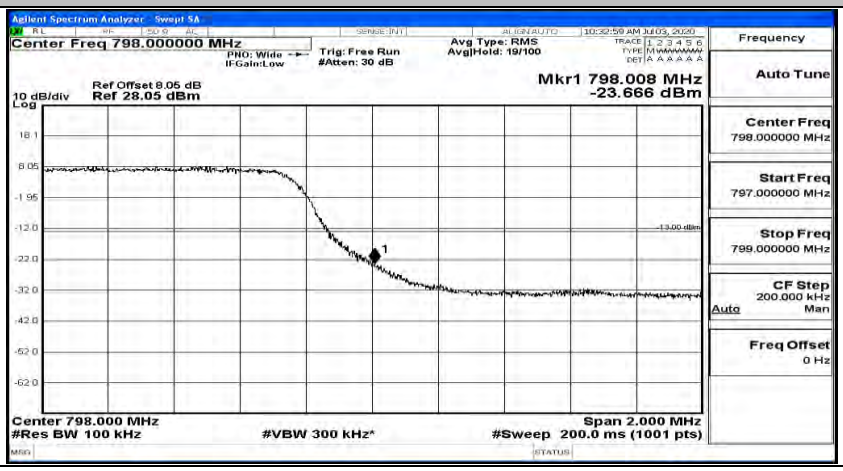
G.4 Band Edge

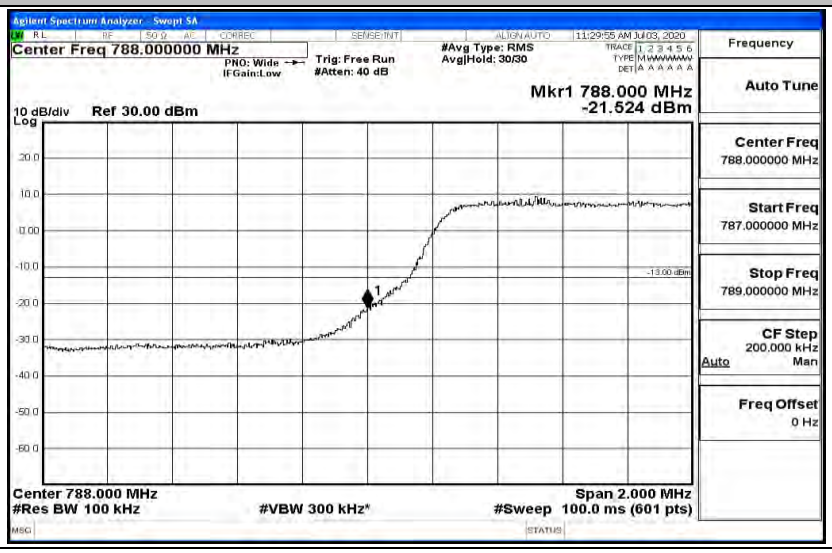
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



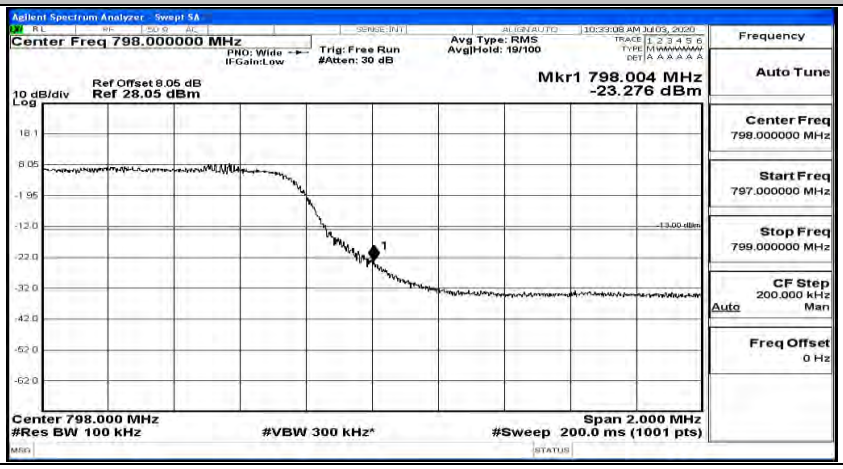
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



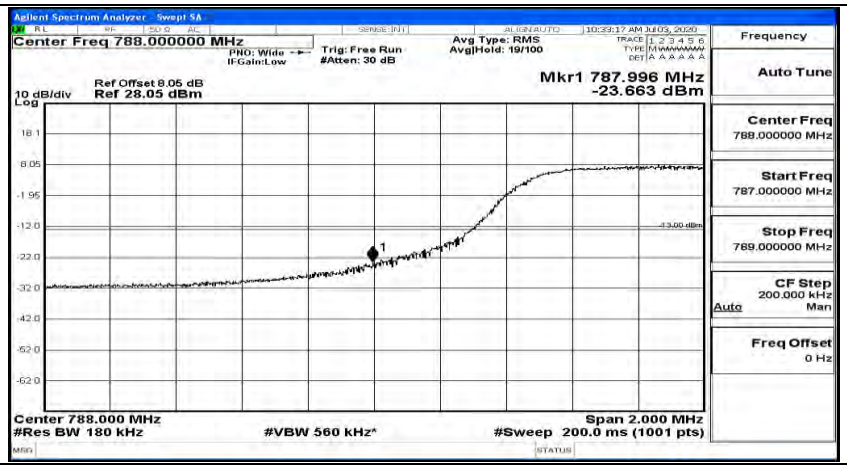
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



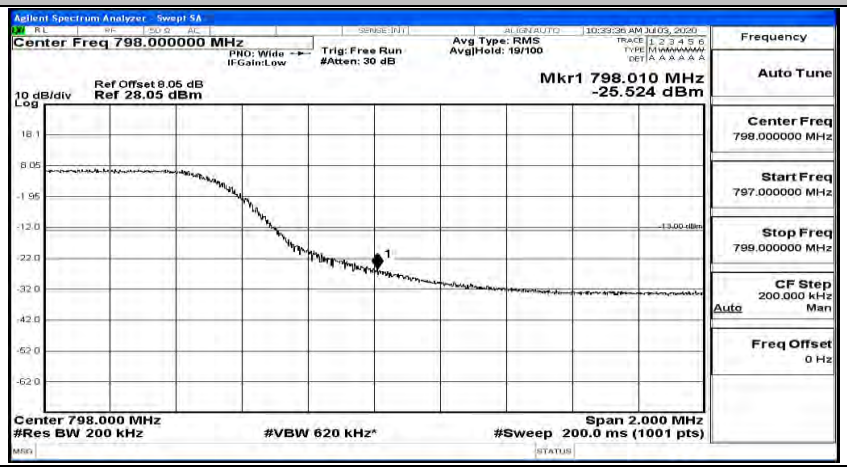
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



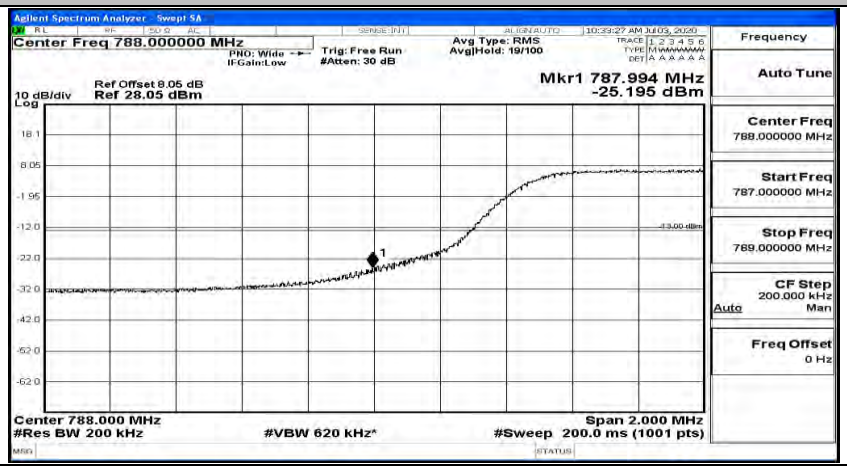
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



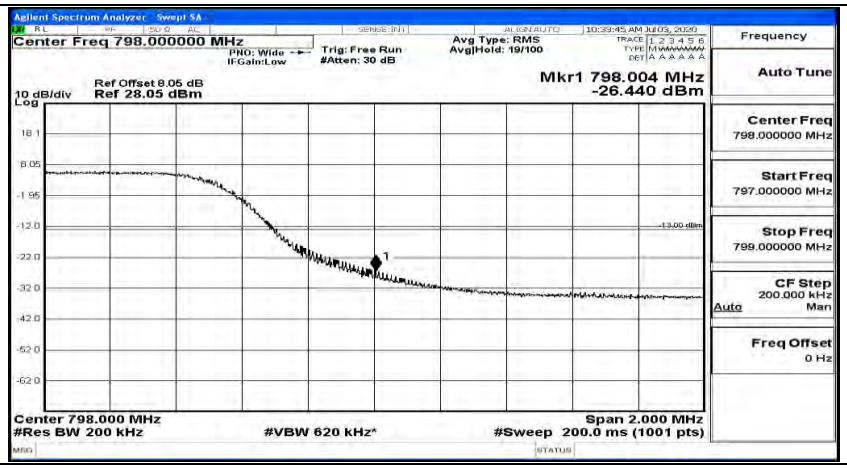
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



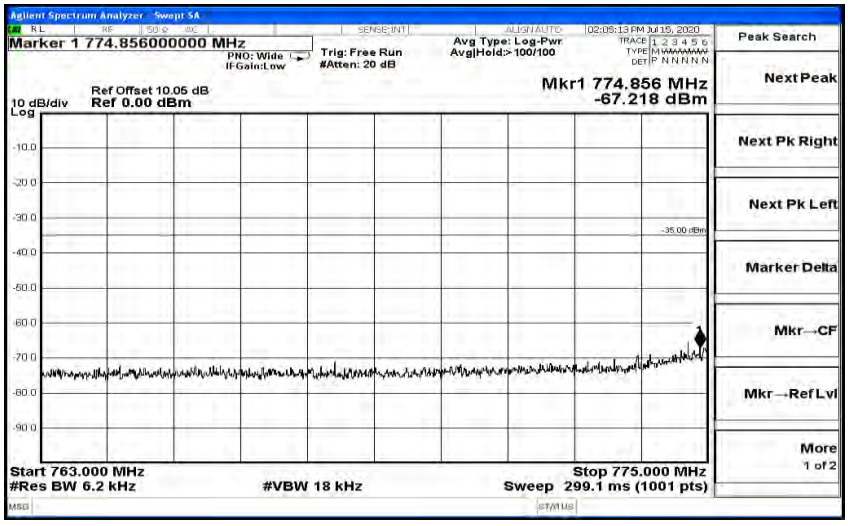
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



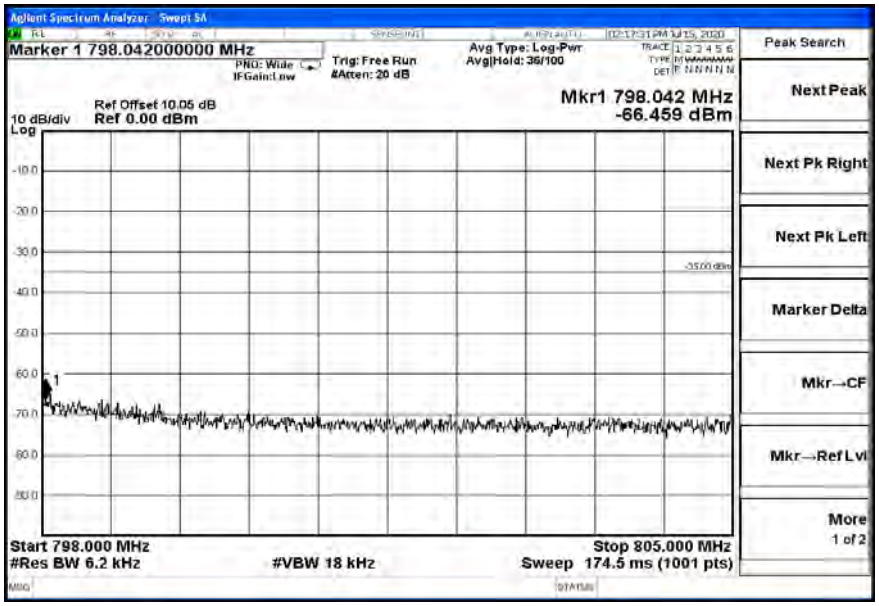
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM



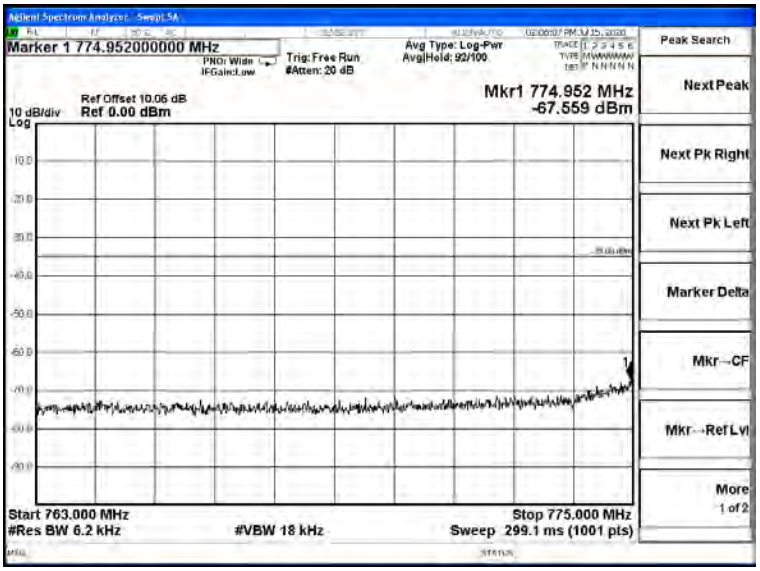
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



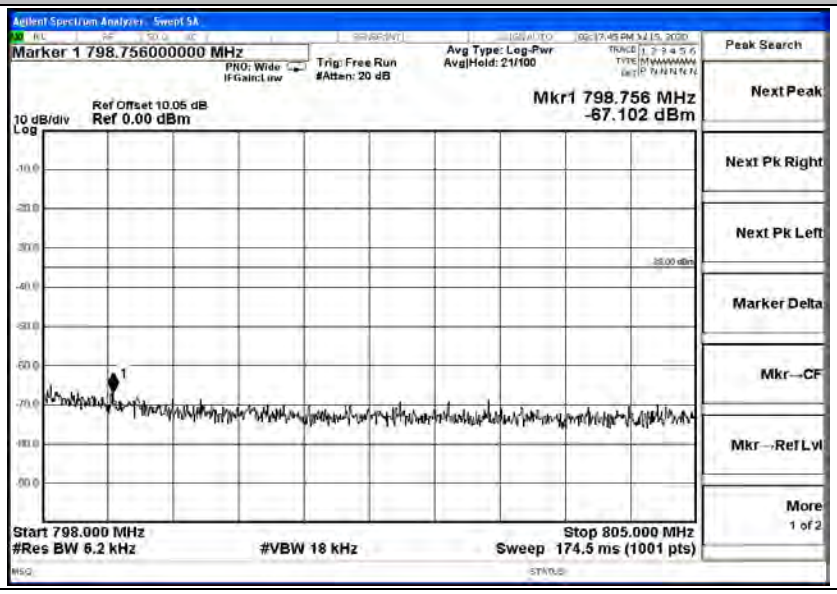
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



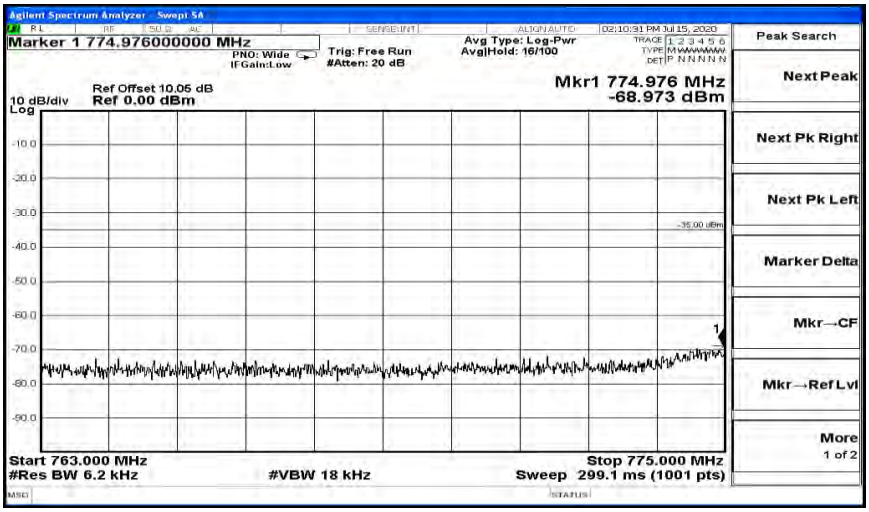
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



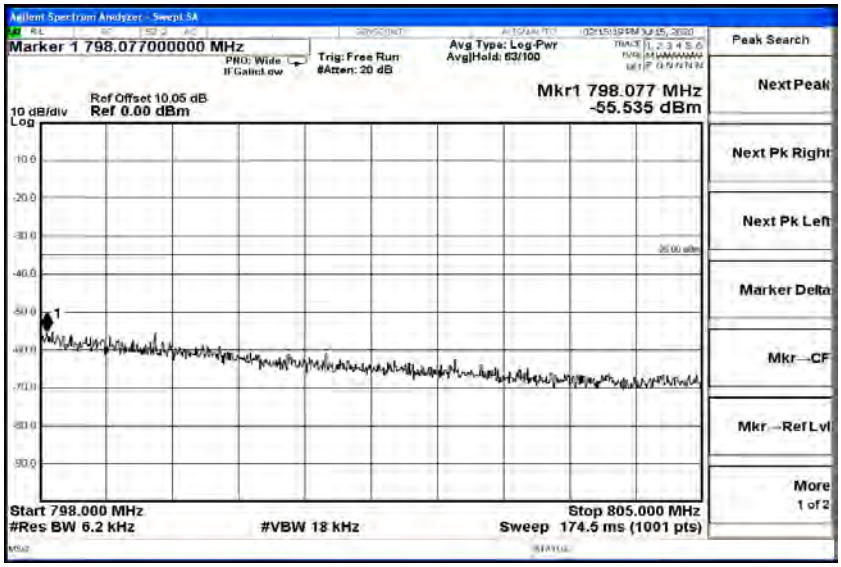
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



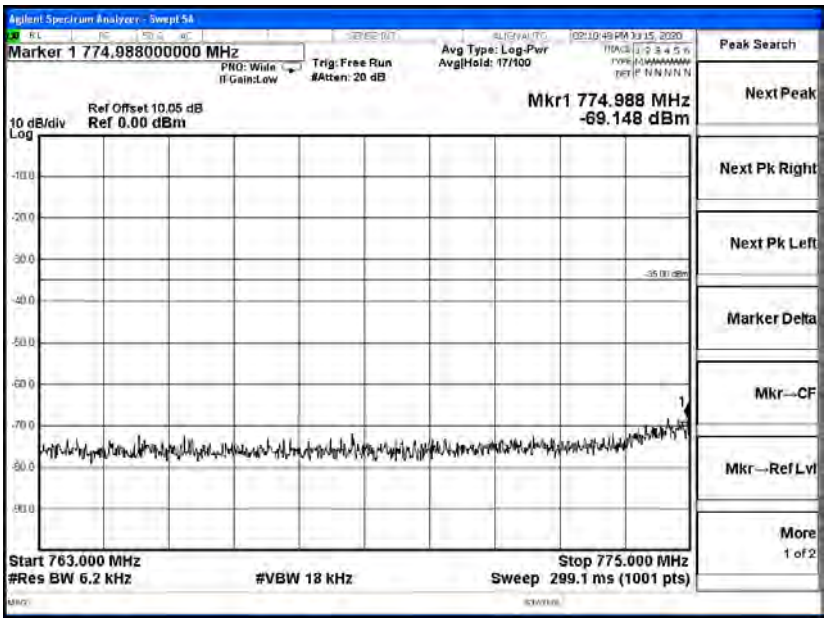
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_L_QPSK


Agilent Spectrum Analyzer - Swept SA
Marker 1 774.976000000 MHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 20 dB
Avg Type: Log-Pwr
Avg|Hold: 16/100
02:10:31 PM Jul 15, 2020
Ref Offset 10.05 dB
10 dB/div
Log
Ref 0.00 dBm
Mkr1 774.976 MHz
-68.973 dBm
-35.00 dBm
Start 763.000 MHz
#Res BW 6.2 kHz
#VBW 18 kHz
Stop 775.000 MHz
Sweep 299.1 ms (1001 pts)
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
More
1 of 2

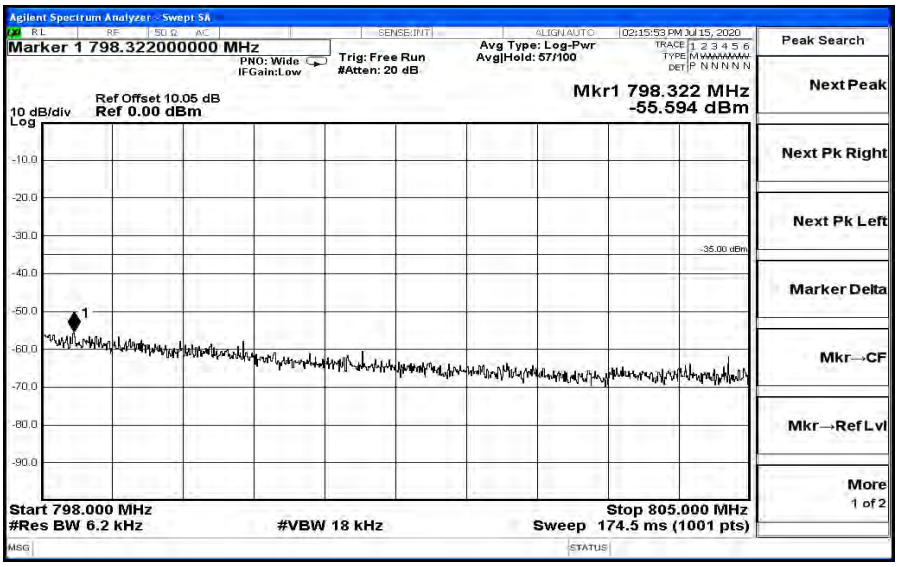
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_H_QPSK



Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_L_16QAM

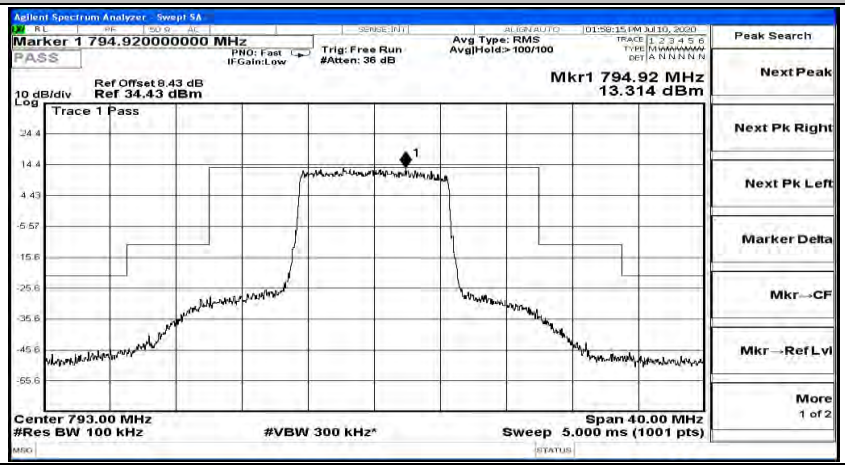


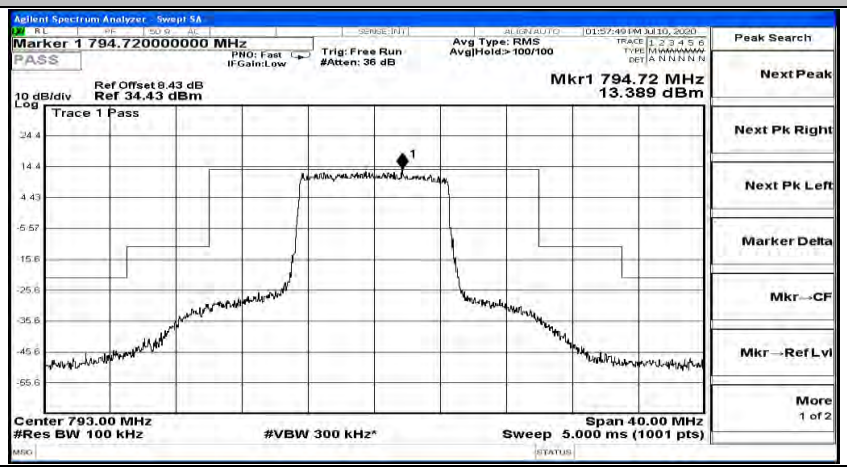
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_H_16QAM



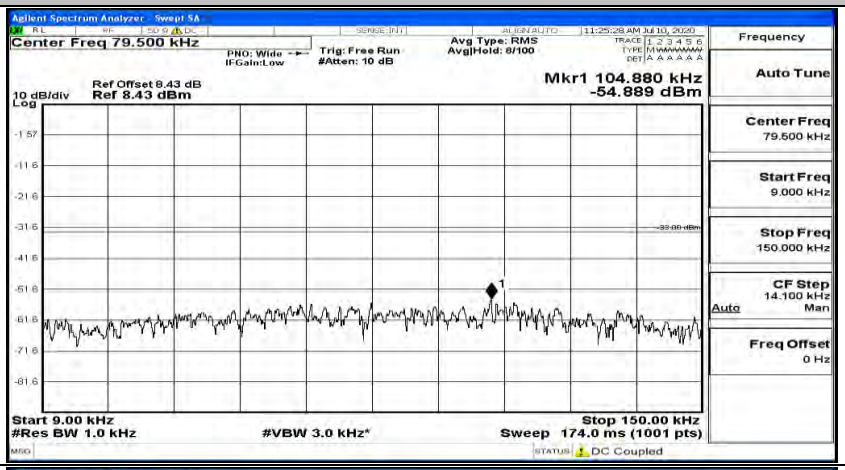
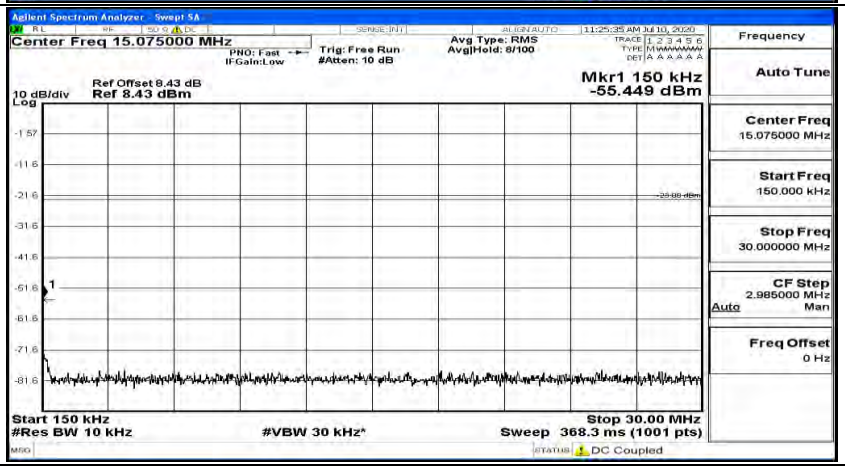
G.5 Emission Mask

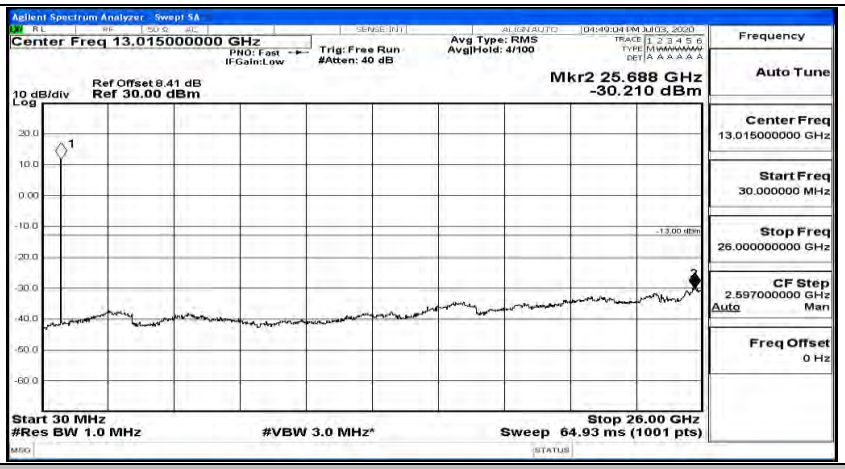
BAND 14_10MHz_QPSK



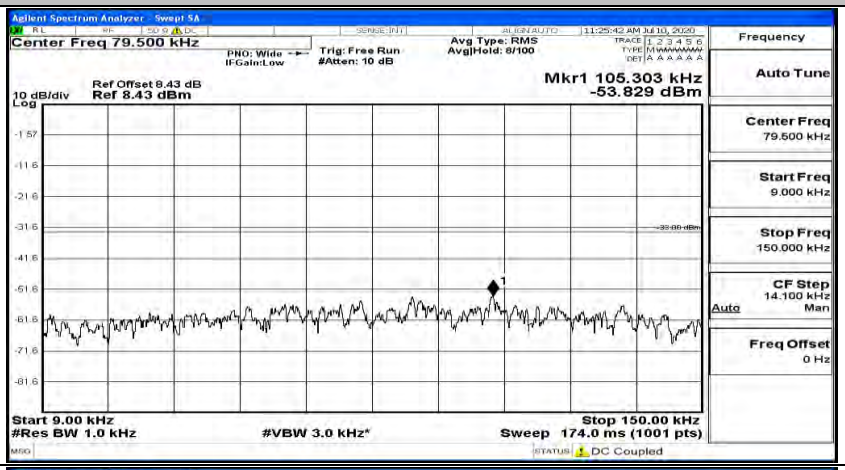
BAND 14_10MHz_16QAM


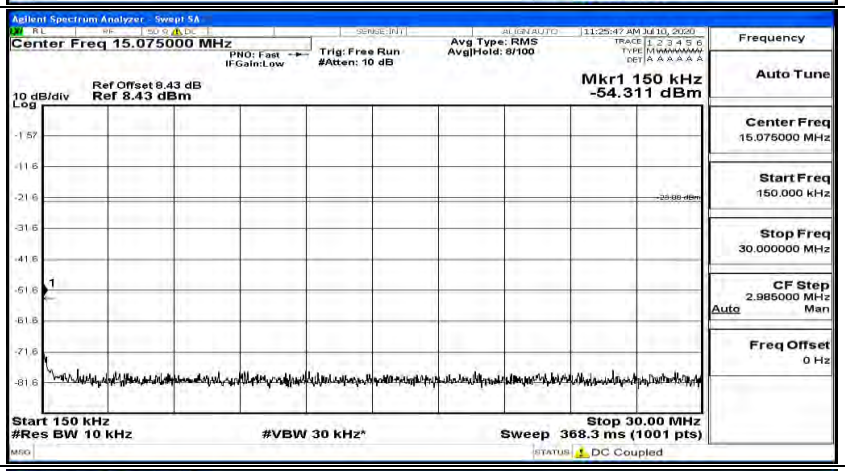
G.5 Conducted Spurious Emission

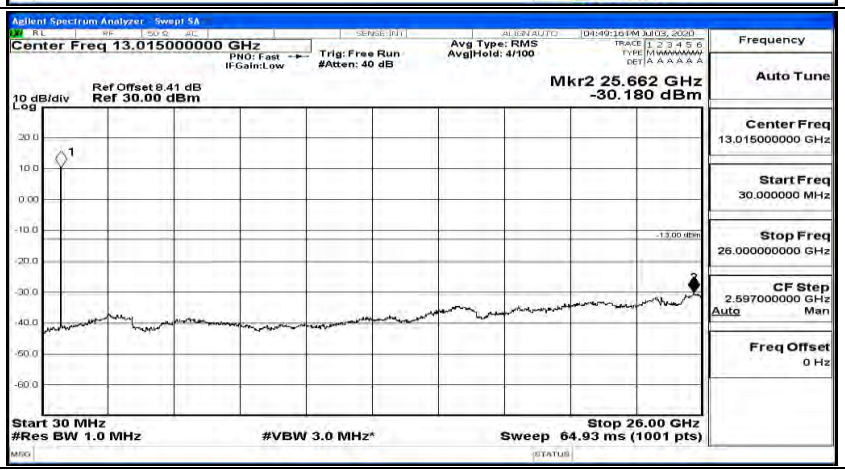
CSE Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK





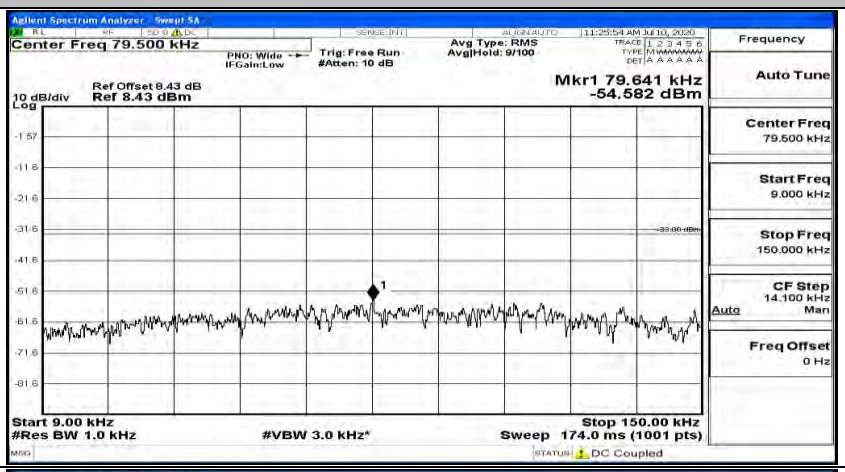
CSE Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK

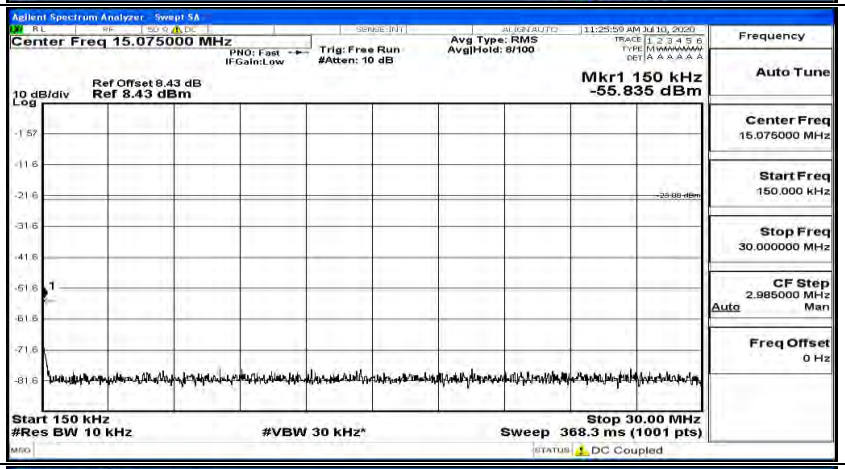




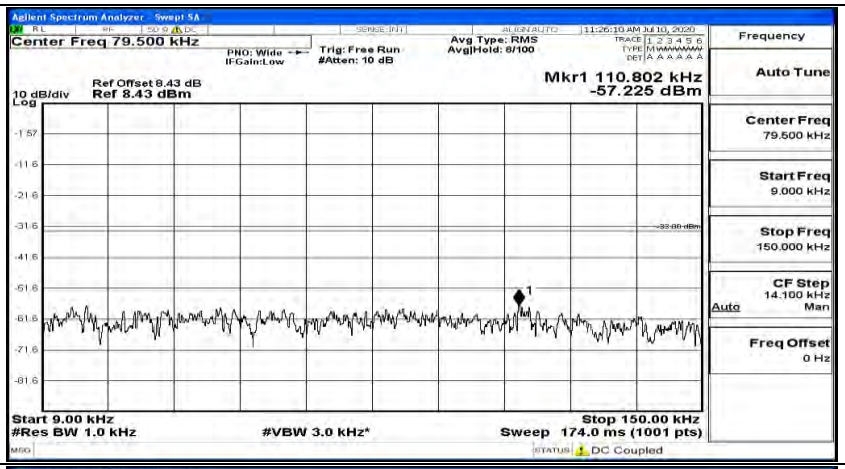


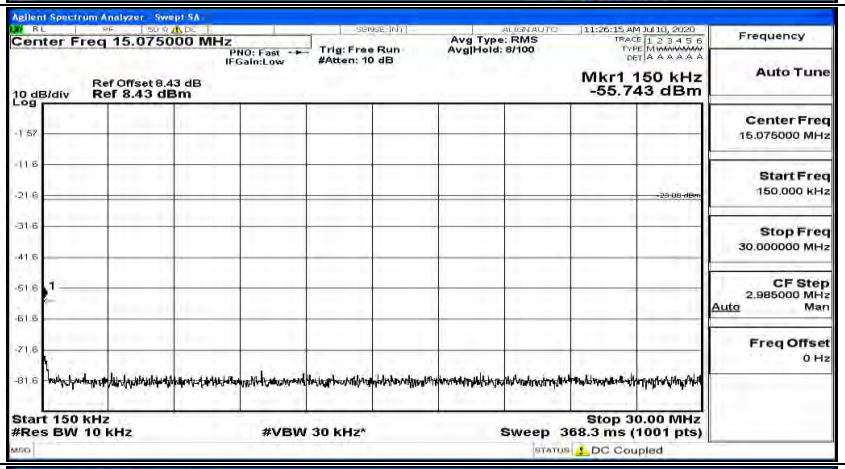
CSE Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



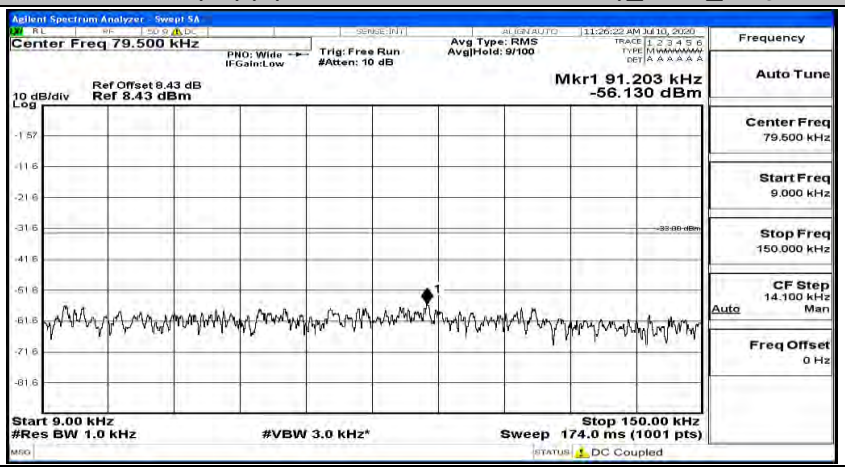


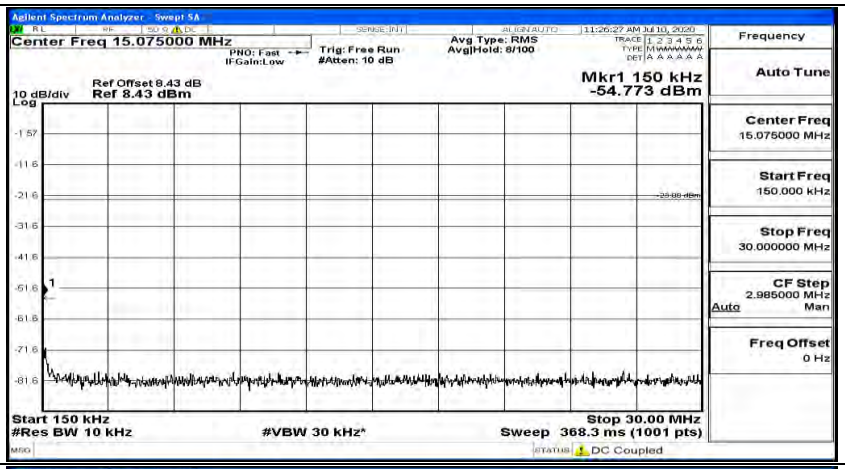
CSE Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



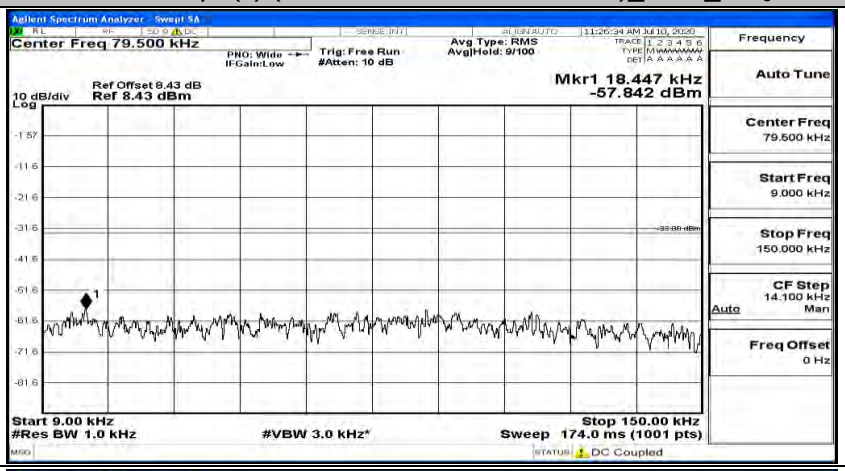


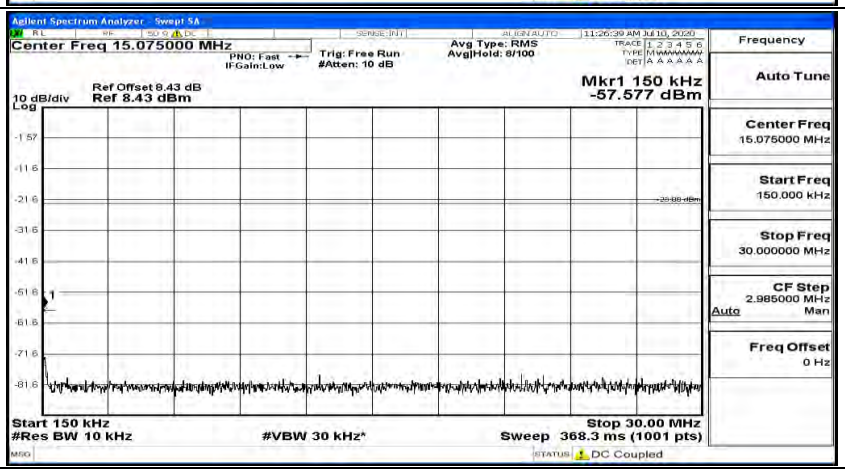
CSE Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM

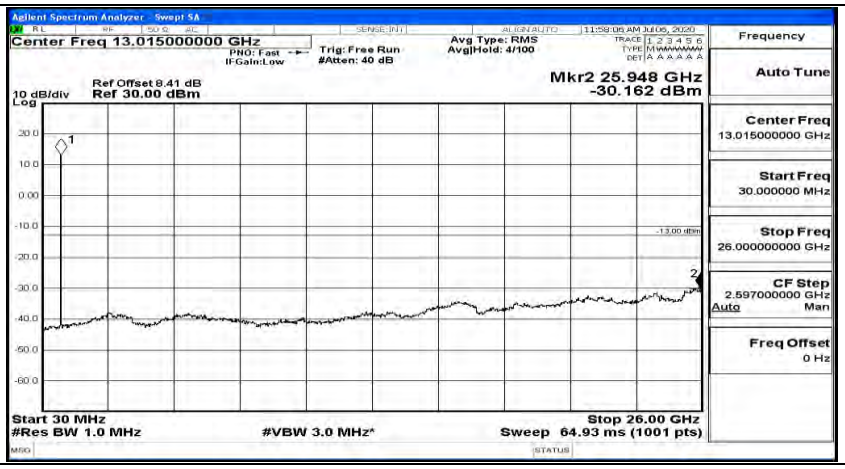




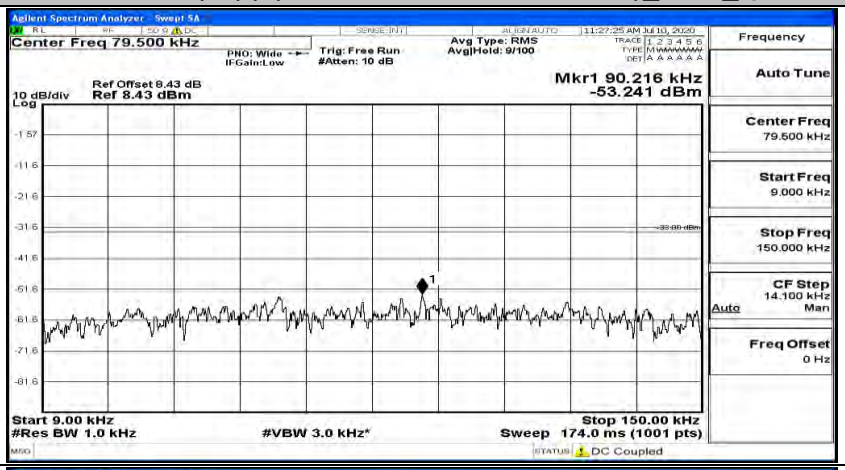
CSE Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM

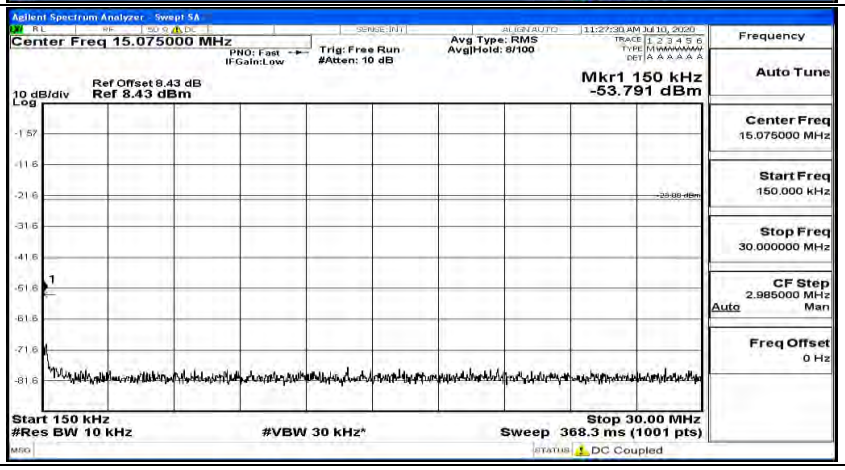


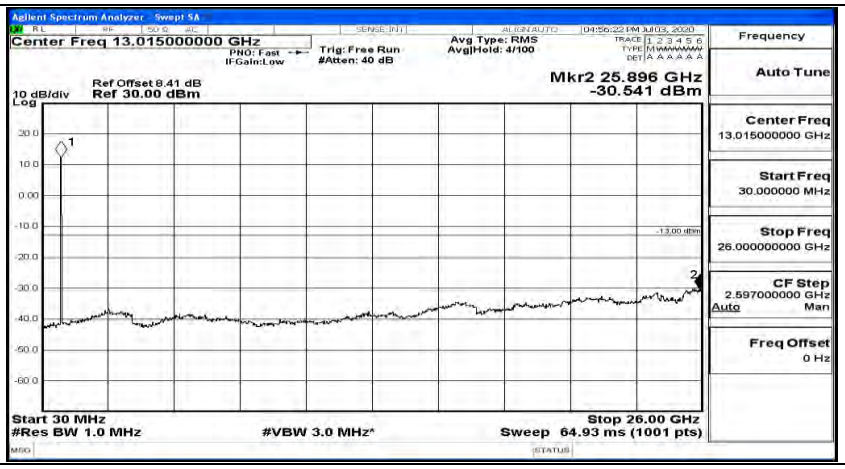




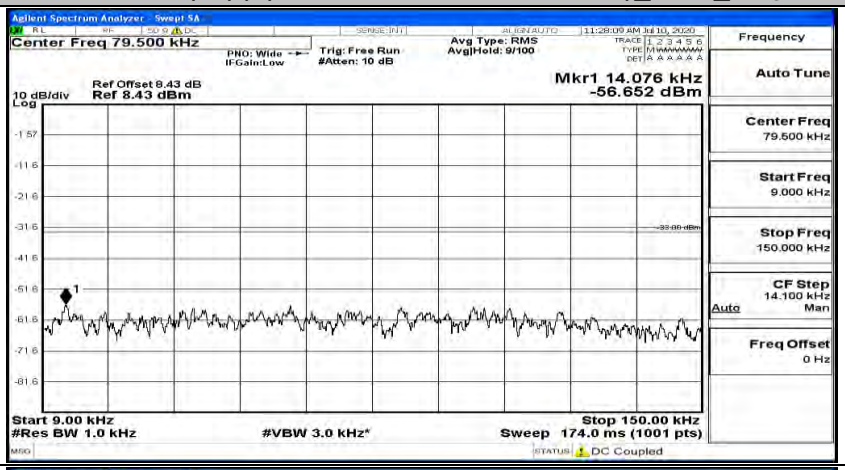
CSE Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK

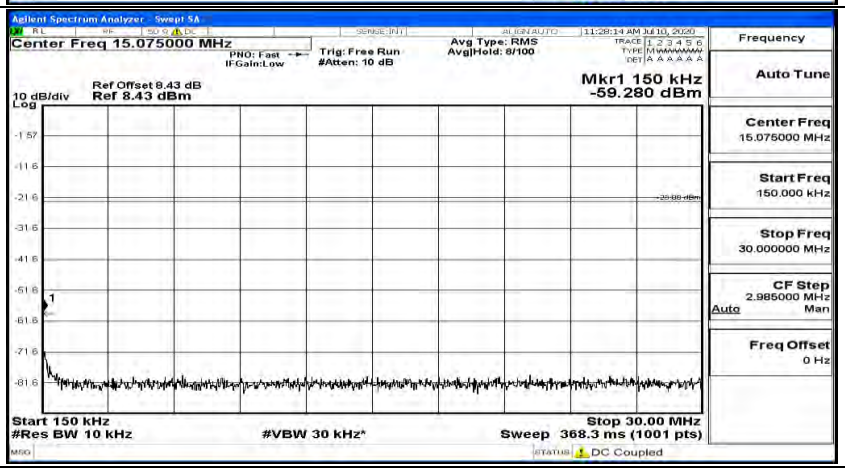






CSE Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_16QAM





Agilent Spectrum Analyzer - Swept SA
Center Freq 13.015000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 40 dB
Avg Type: RMS
Avg|Hold: 4/100
Mkr2 25.662 GHz
-30.288 dBm
Ref Offset 8.41 dB
10 dB/div
Log
Ref 30.00 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 26.00 GHz
Sweep 64.93 ms (1001 pts)
Frequency
Auto Tune
Center Freq
13.015000000 GHz
Start Freq
30.000000 MHz
Stop Freq
26.000000000 GHz
CF Step
2.597000000 GHz
Auto
Man
Freq Offset
0 Hz