Appendix F: Test Data for E-UTRA Band 13

Product Name: Stackable multifunction charging station
Trade Mark: /
Test Model: SD-C9

Environmental Conditions

Temperature:	22.3° C
Relative Humidity:	53.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Carl Fu
Supervised by:	Li Huan

F.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	23.84	22.20	PASS
		1	12	23.53	22.34	PASS
		1	24	23.63	22.28	PASS
		12	0	22.77	21.76	PASS
		12	6	22.85	21.71	PASS
		12	13	22.60	21.43	PASS
		25	0	22.64	21.78	PASS
	MCH	1	0	23.64	22.64	PASS
		1	12	23.81	22.45	PASS
		1	24	23.40	22.43	PASS
		12	0	22.52	21.42	PASS
		12	6	22.51	21.43	PASS
		12	13	22.57	21.56	PASS
		25	0	22.42	21.44	PASS
	HCH	1	0	23.50	22.47	PASS
		1	12	23.37	22.47	PASS
		1	24	23.05	21.92	PASS
		12	0	22.53	21.43	PASS
		12	6	22.52	21.53	PASS
		12	13	22.16	21.10	PASS
		25	0	22.36	21.33	PASS

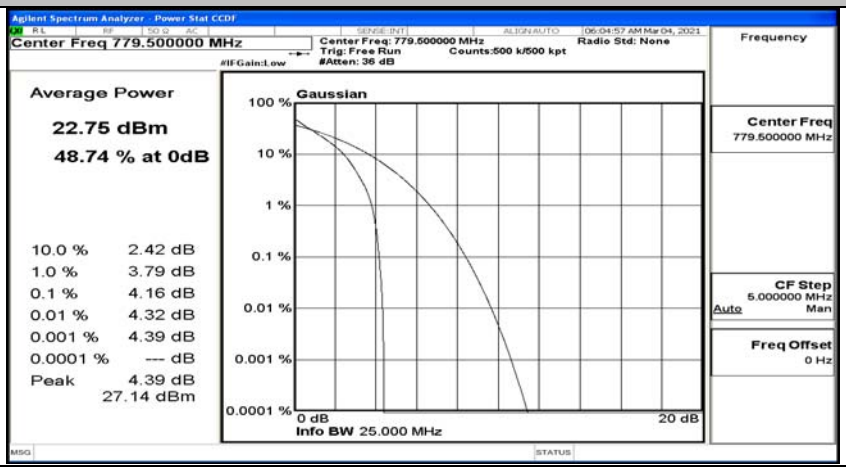
Conducted Output Power Test Result (Channel Bandwidth: 10 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict
		Size	Offset			
QPSK / 16QAM	MCH	1	0	23.68	22.82	PASS
		1	24	23.73	22.85	PASS
		1	49	22.96	22.20	PASS
		25	0	22.63	21.58	PASS
		25	12	22.83	21.59	PASS
		25	25	22.28	21.53	PASS
		50	0	22.66	21.67	PASS

F.2 Peak-to-Average Ratio

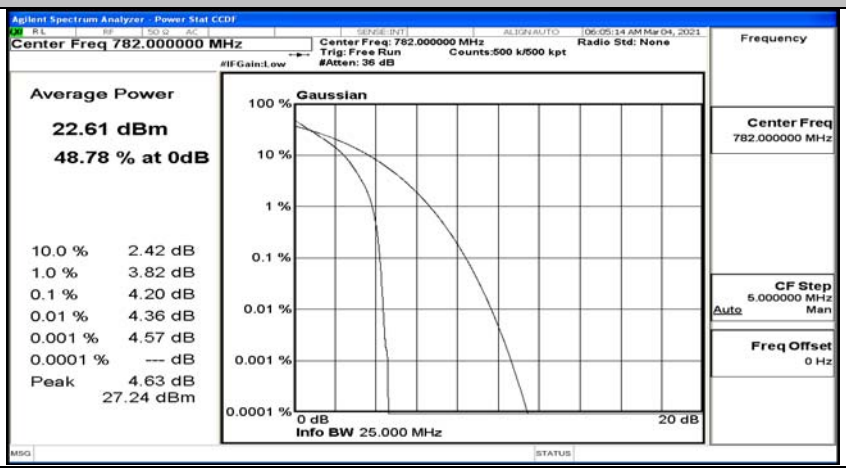
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	4.16	<13	PASS
	MCH	4.2	<13	PASS
	HCH	4.08	<13	PASS
16QAM	LCH	5.07	<13	PASS
	MCH	5.1	<13	PASS
	HCH	4.89	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	MCH	4.19	<13	PASS
16QAM	MCH	5.13	<13	PASS

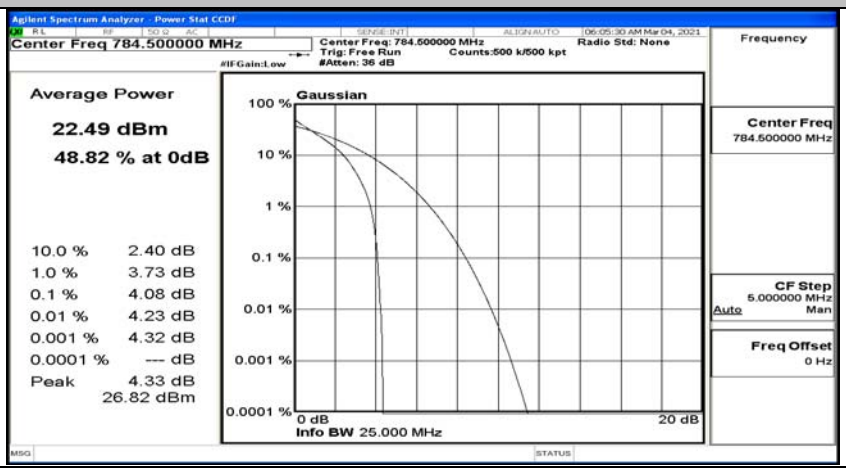
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



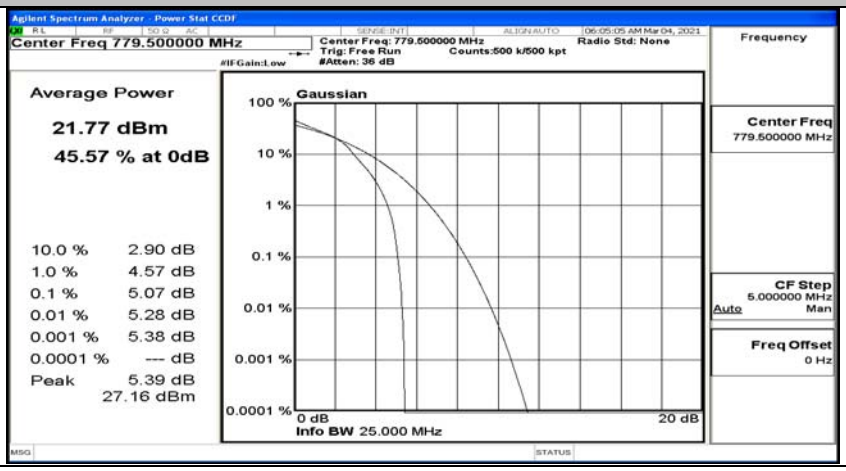
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



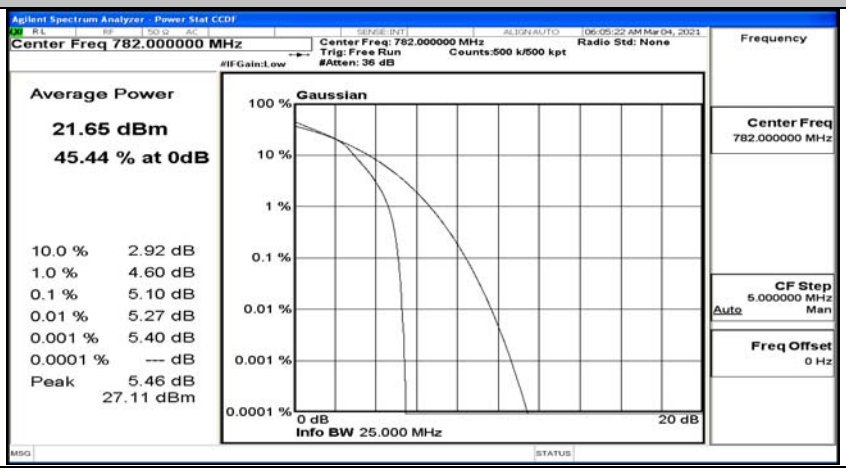
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



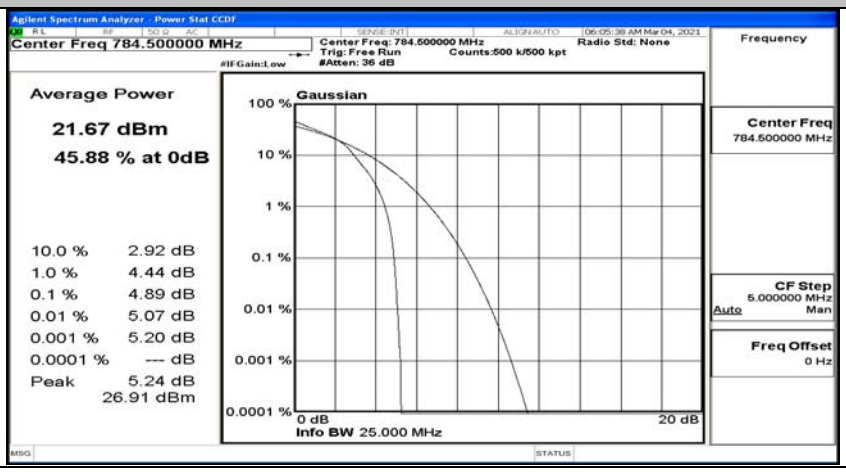
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



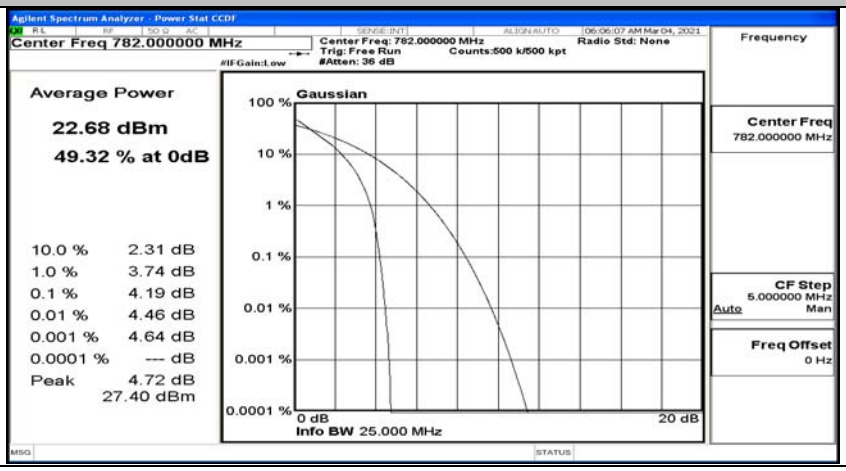
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



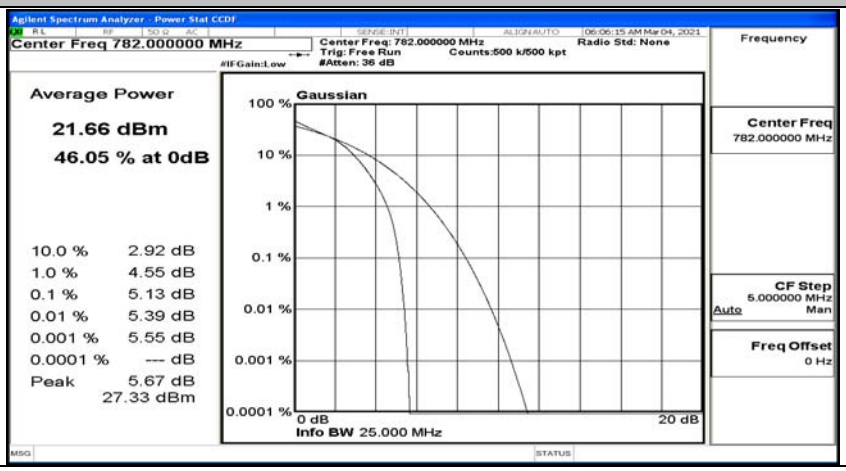
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



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



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

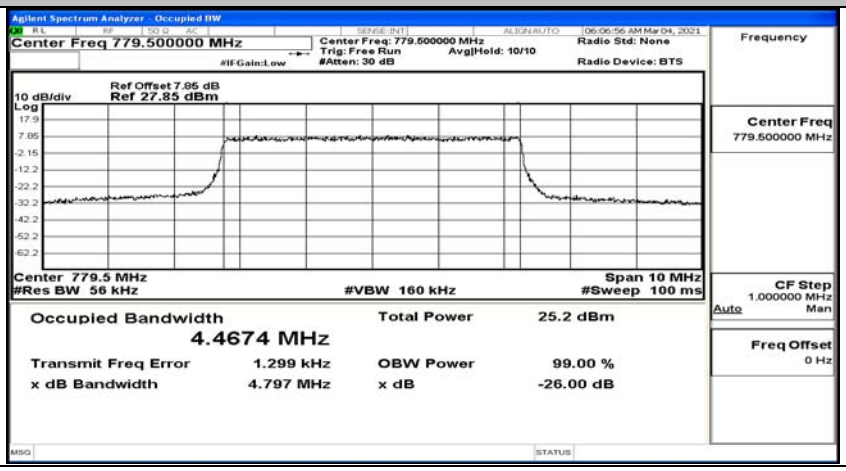


F.3 26dB Bandwidth and Occupied Bandwidth

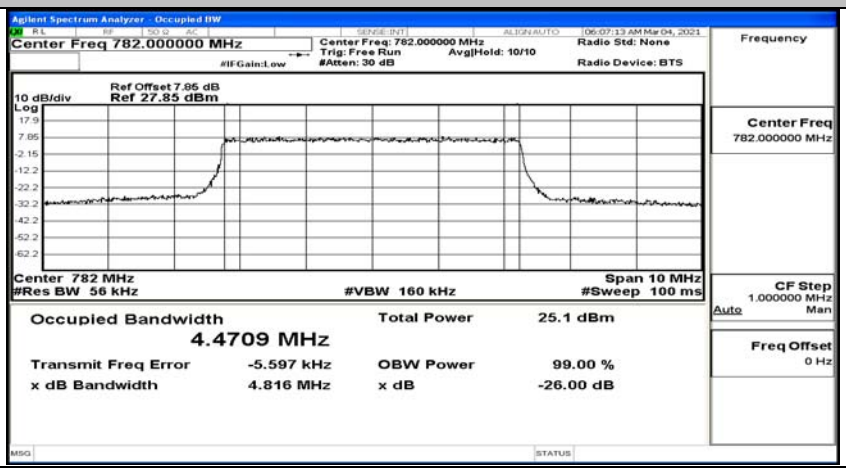
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4674	4.797	PASS
	MCH	4.4709	4.816	PASS
	HCH	4.4636	4.815	PASS
16QAM	LCH	4.4691	4.826	PASS
	MCH	4.4821	4.773	PASS
	HCH	4.4710	4.847	PASS

EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	MCH	8.9314	9.488	PASS
16QAM	MCH	8.9104	9.442	PASS

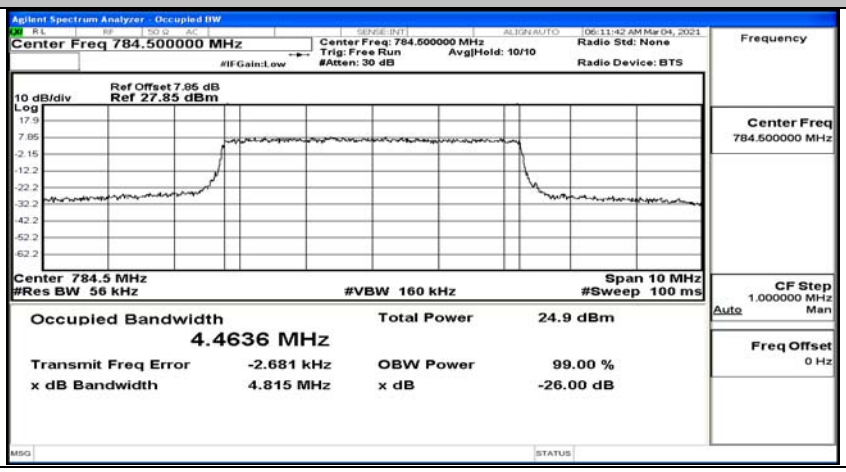
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



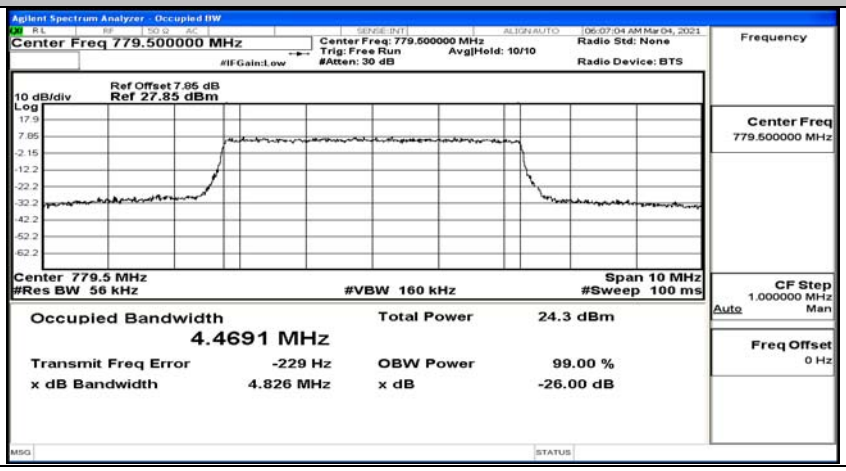
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



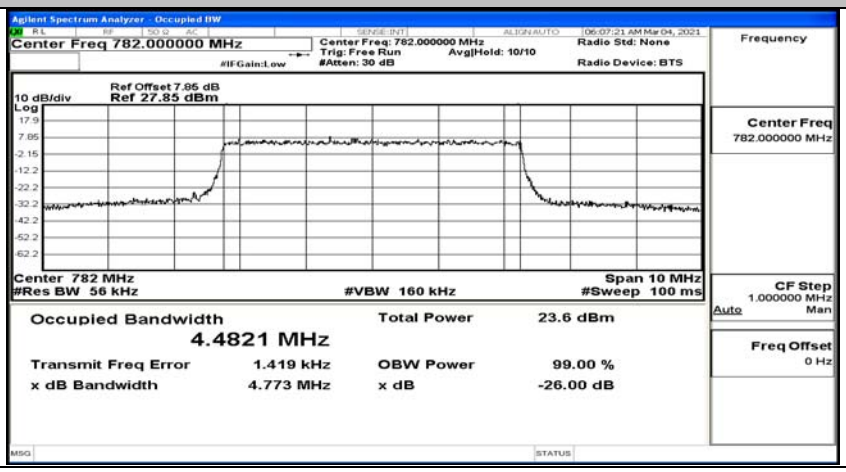
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



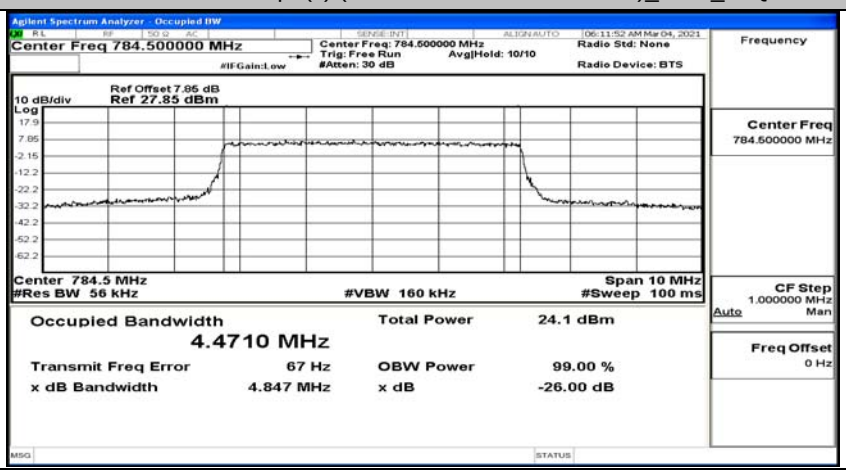
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



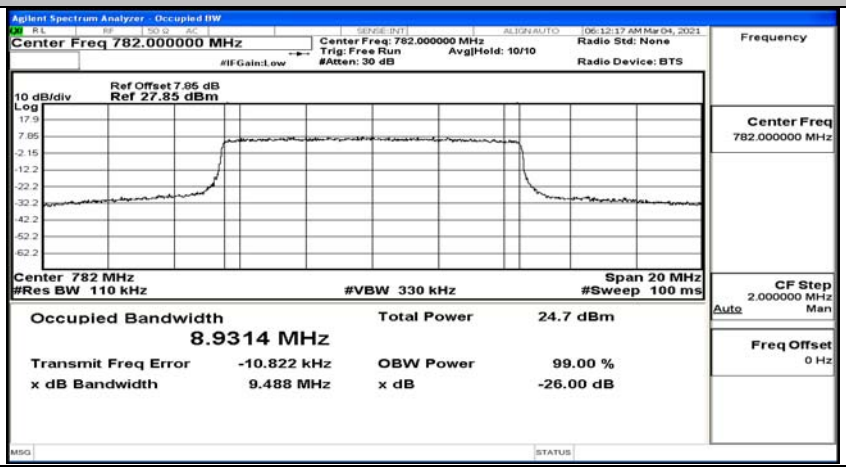
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



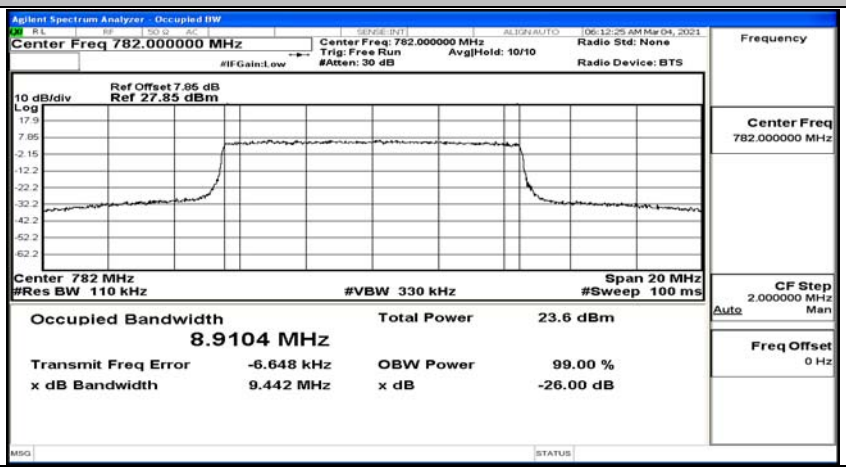
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



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

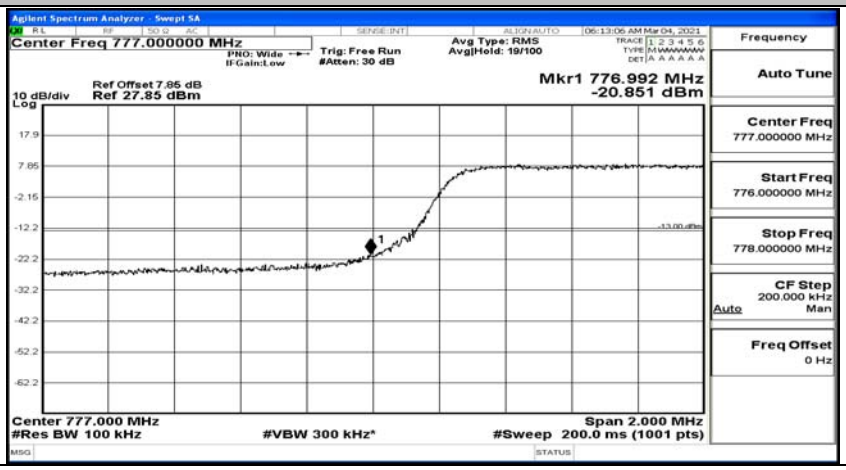


EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_16QAM

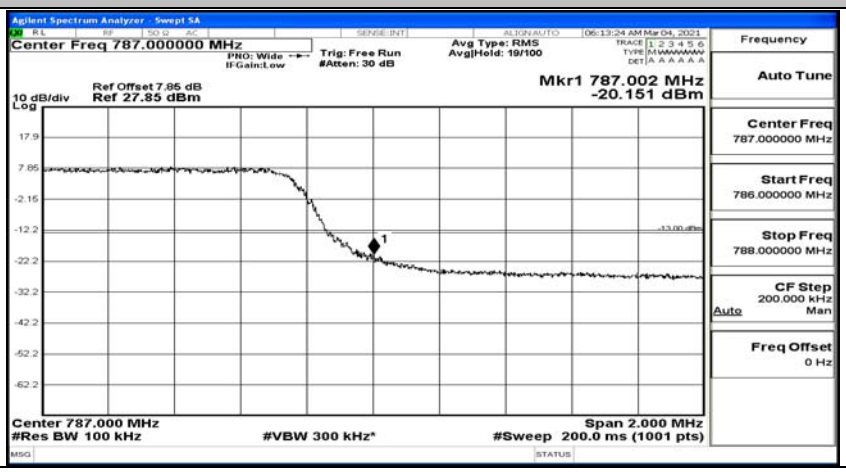


F.4 Band Edge

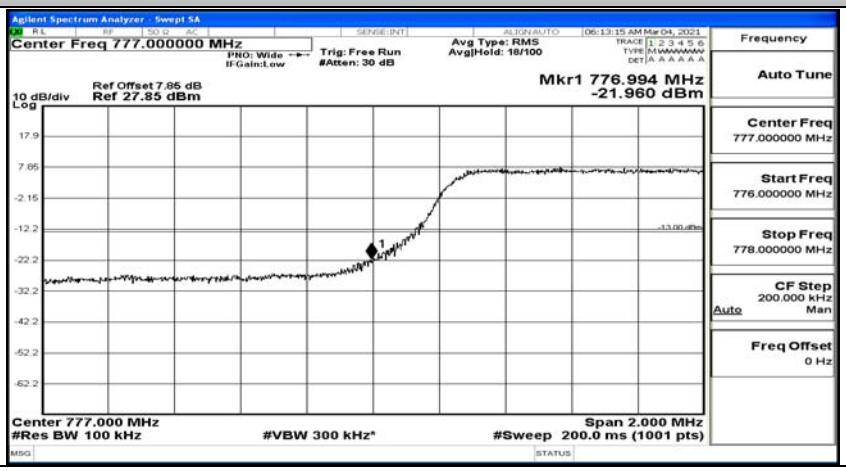
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



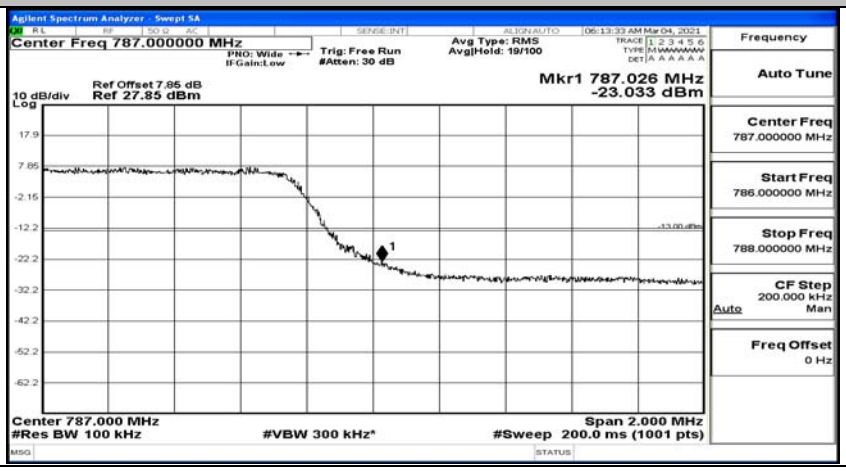
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



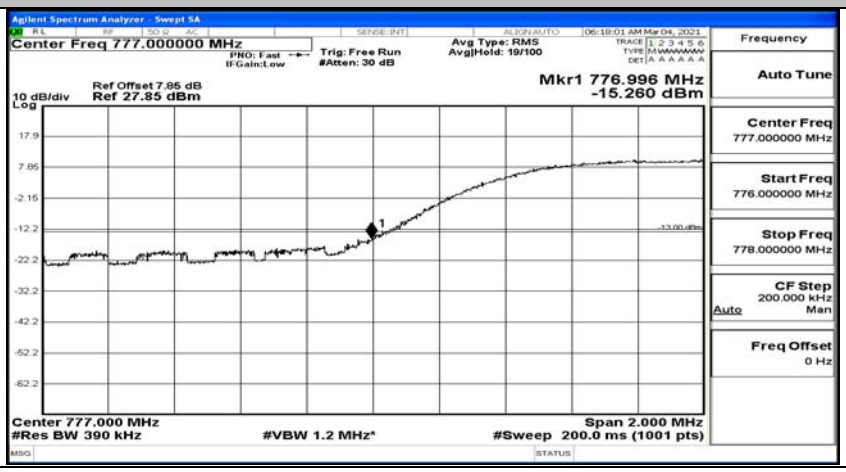
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



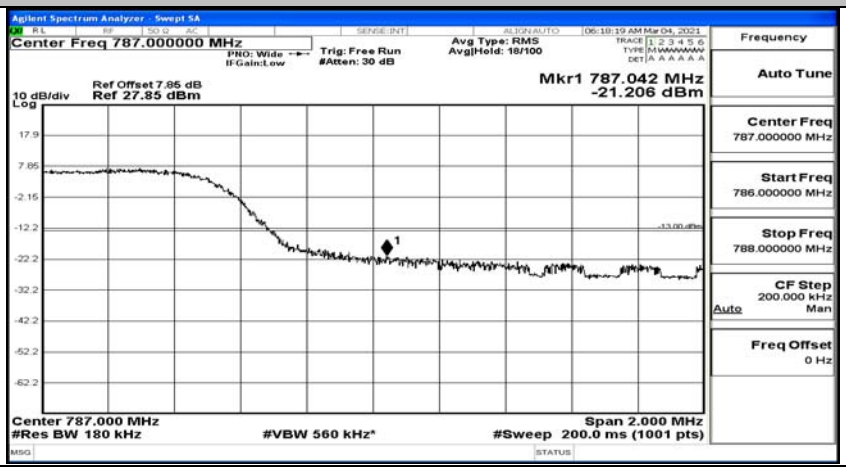
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



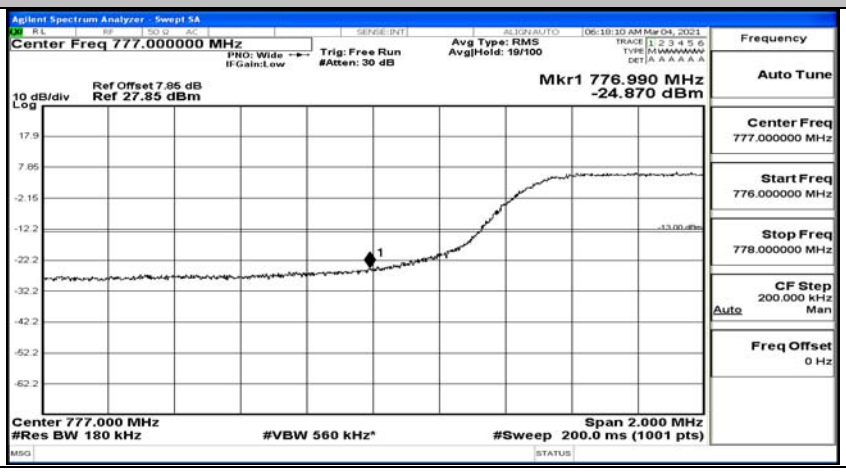
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



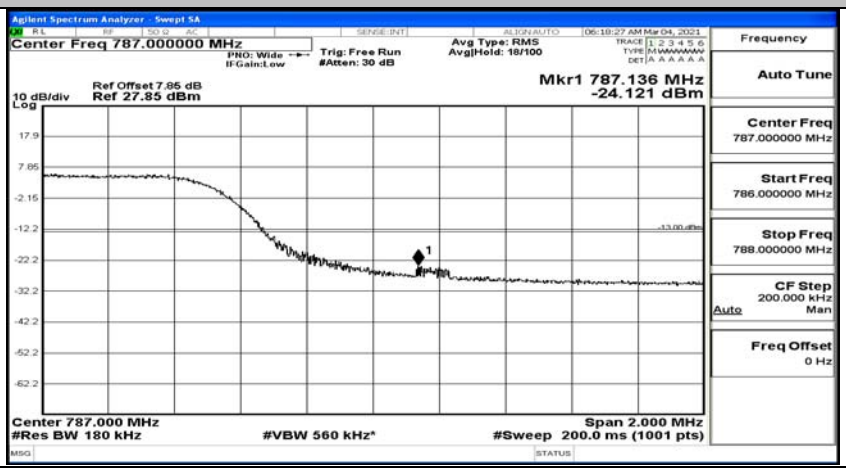
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



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



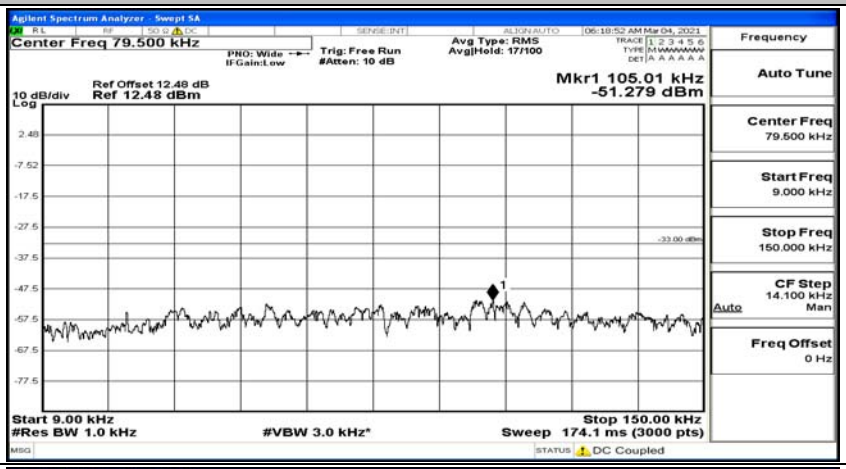
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM

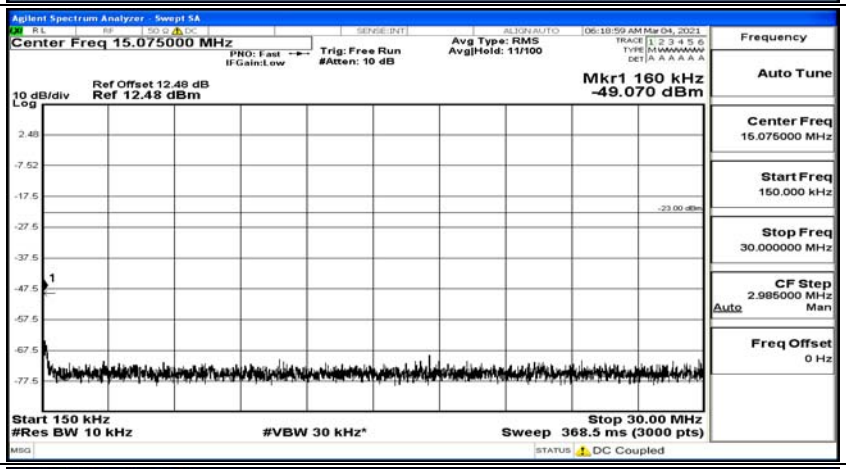


F.5 Conducted Spurious Emission

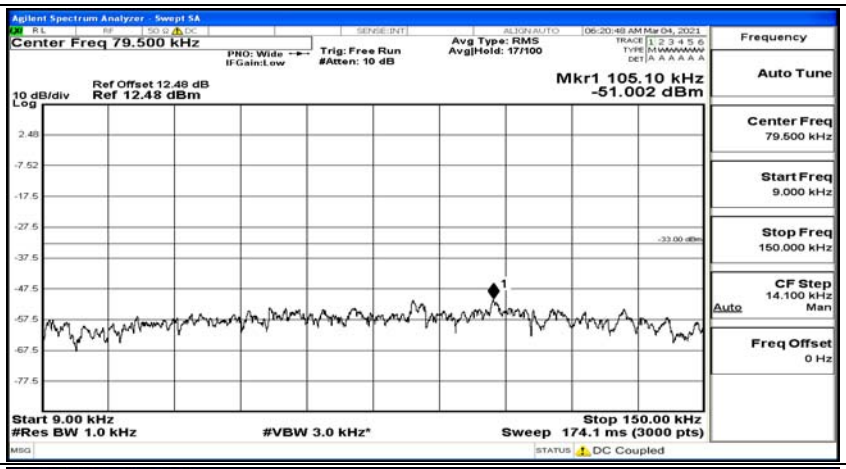
Channel Bandwidth: 5 MHz

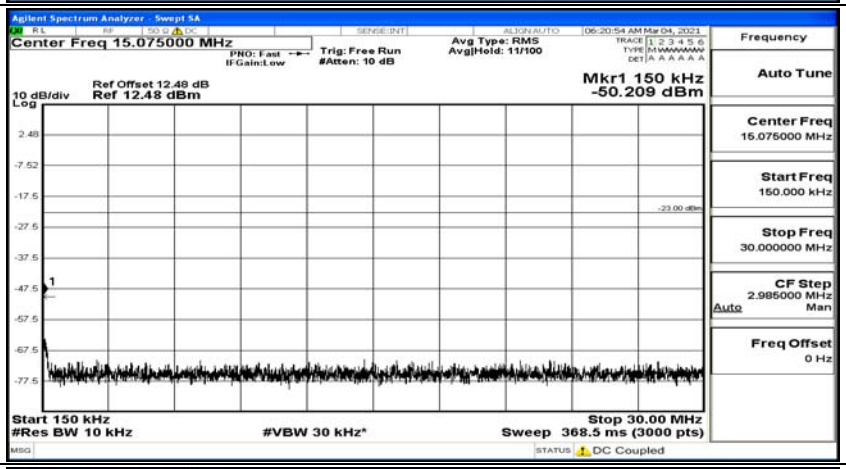
(Channel Bandwidth: 5 MHz)_LCH_QPSK



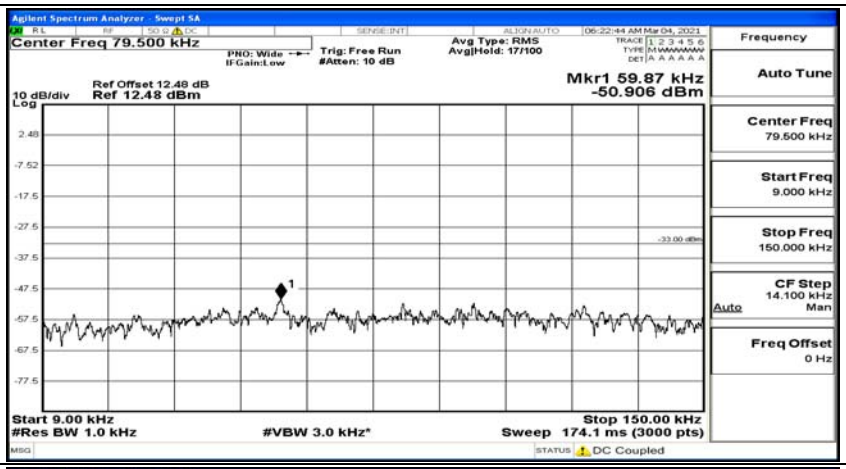


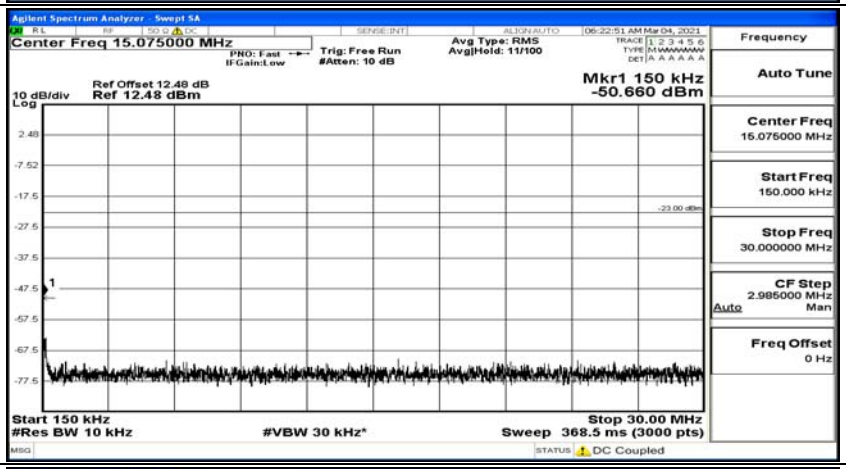
(Channel Bandwidth: 5 MHz)_MCH_QPSK



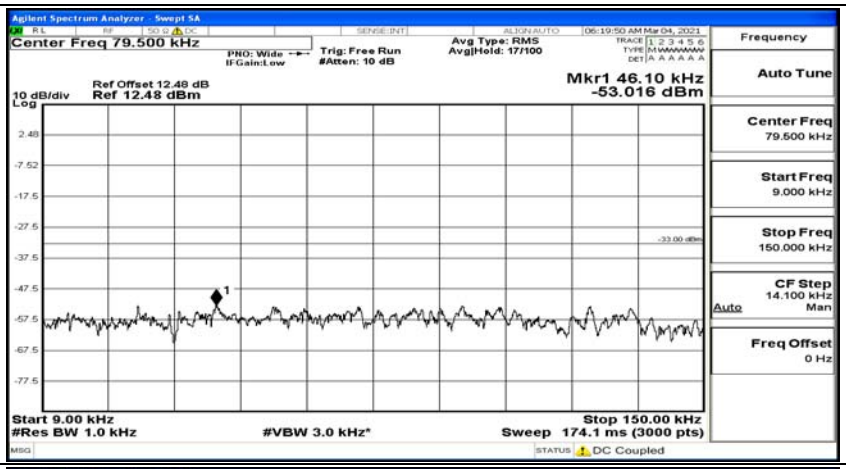


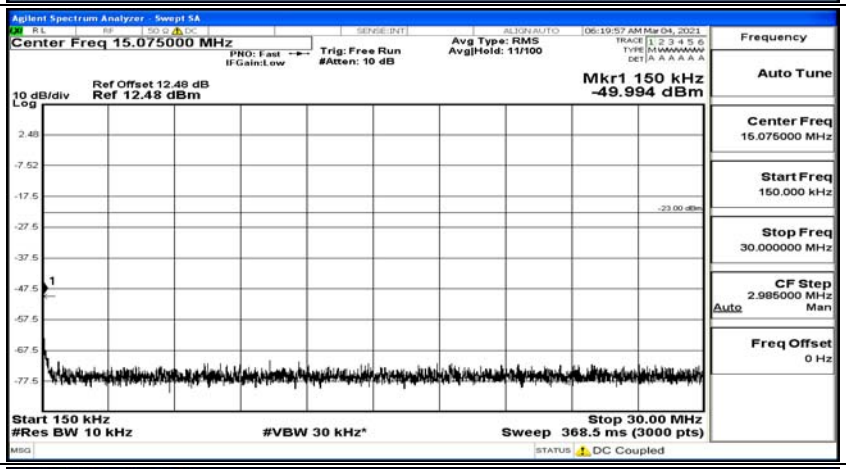
(Channel Bandwidth: 5 MHz)_HCH_QPSK



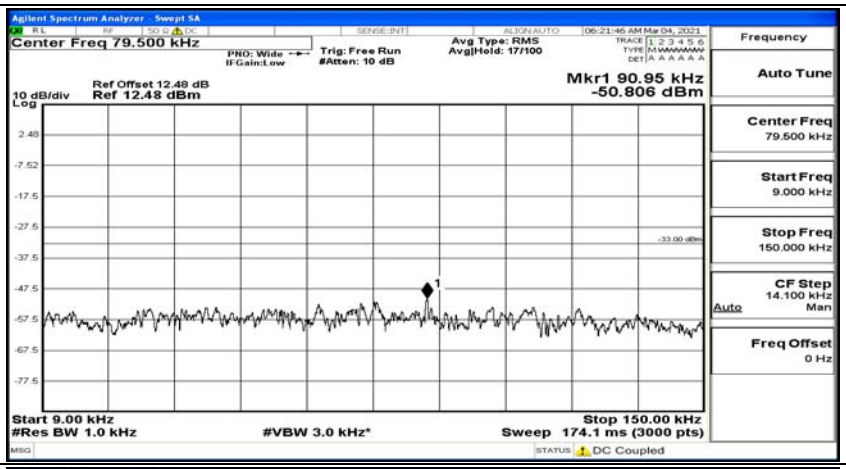


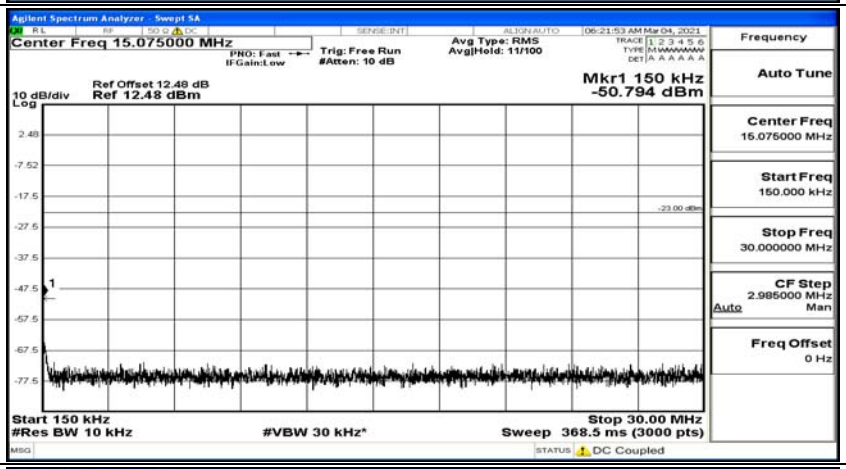
(Channel Bandwidth: 5 MHz)_LCH_16QAM



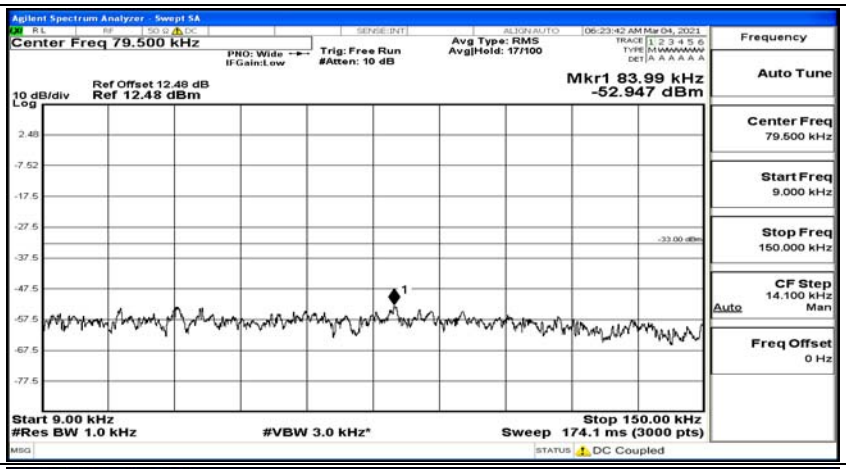


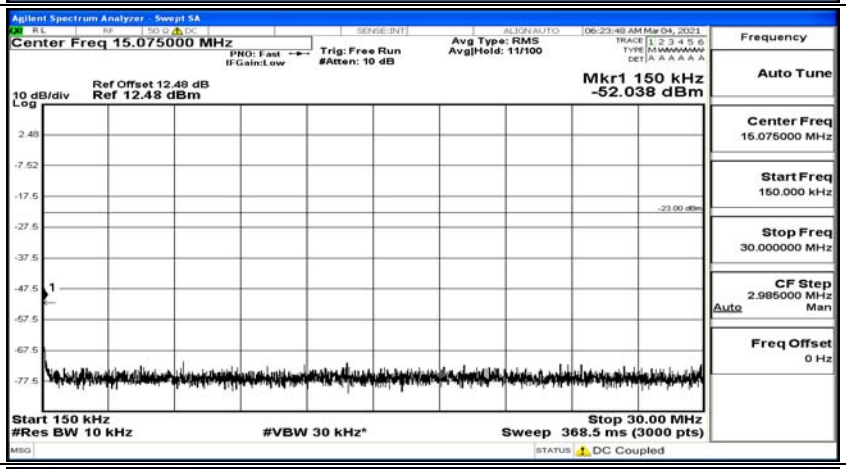
(Channel Bandwidth: 5 MHz)_MCH_16QAM





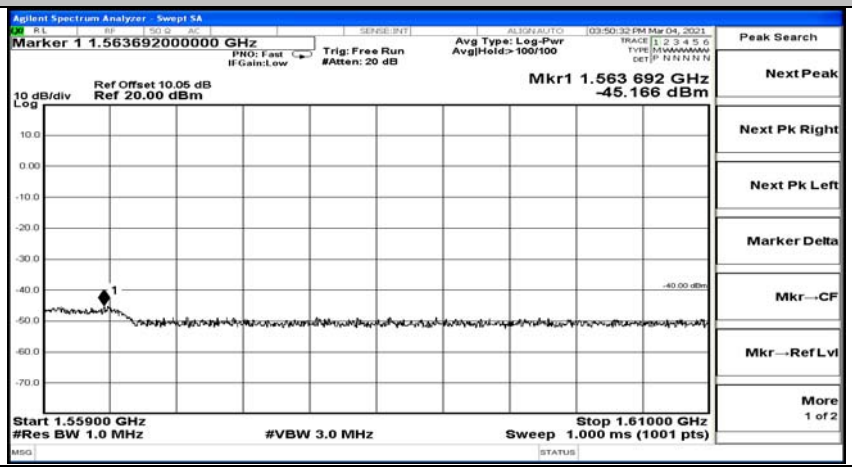
(Channel Bandwidth: 5 MHz)_HCH_16QAM


Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
06:23:42 AM Mar 04, 2021
Mkr1 83.99 kHz
-52.947 dBm
Ref Offset 12.48 dB
10 dB/div
Ref 12.48 dBm
Log
2.48
-7.52
-17.5
-27.5
-37.5
-47.5
-57.5
-67.5
-77.5
-33.00 dBm
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz

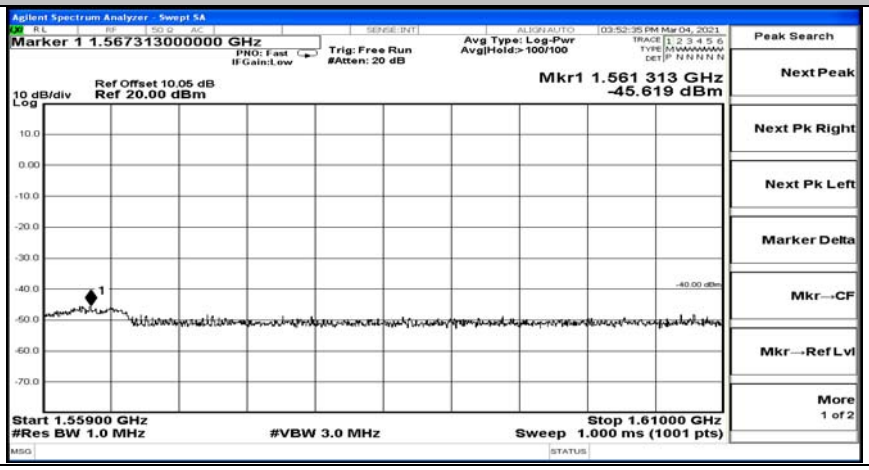

Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 11/100
06:23:48 AM Mar 04, 2021
Mkr1 150 kHz
-52.038 dBm
Ref Offset 12.48 dB
10 dB/div
Ref 12.48 dBm
Log
2.48
-7.52
-17.5
-27.5
-37.5
-47.5
-57.5
-67.5
-77.5
-23.00 dBm
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz


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: 10/100
06:23:54 AM Mar 04, 2021
Mkr2 25.688 GHz
-29.399 dBm
Ref Offset 8.05 dB
10 dB/div
Ref 30.00 dBm
Log
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
-13.00 dBm
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 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

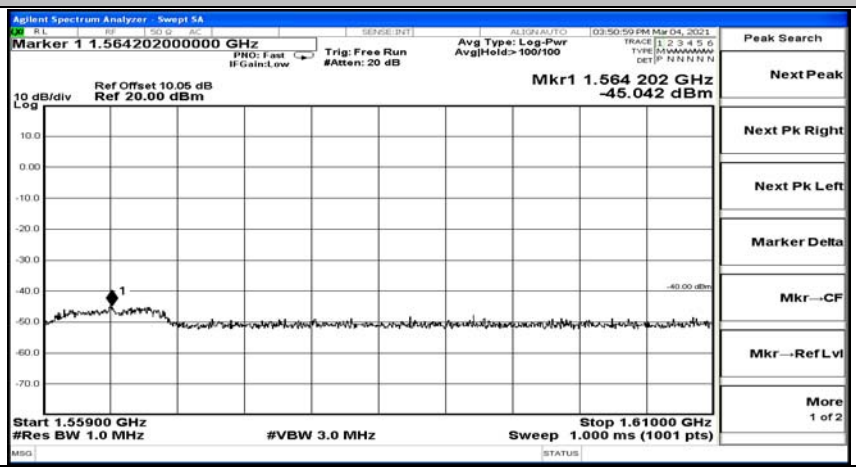
(Channel Bandwidth: 5 MHz)_LCH_QPSK



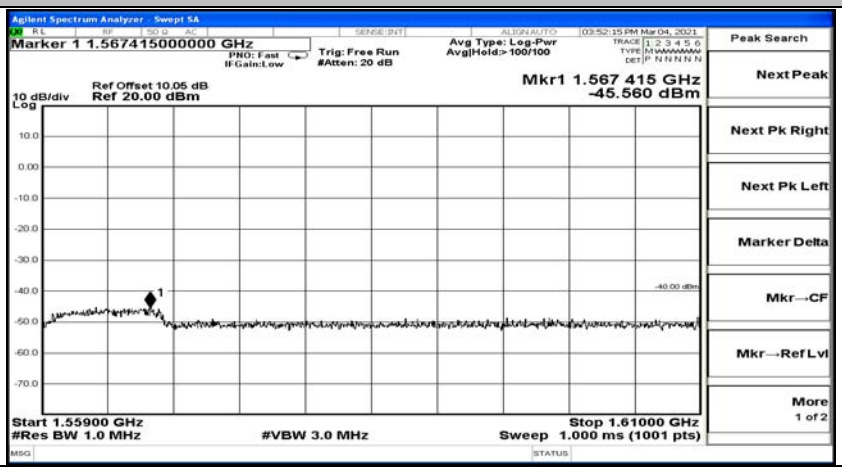
(Channel Bandwidth: 5 MHz)_LCH_16QAM



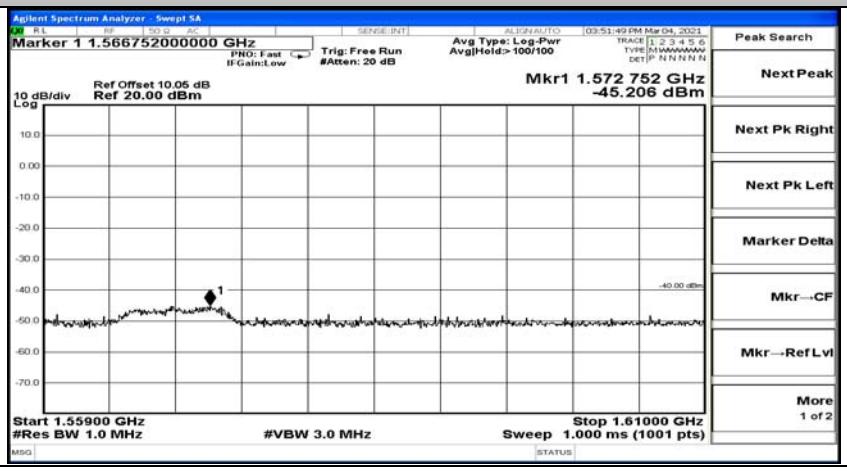
(Channel Bandwidth: 5 MHz)_MCH_QPSK



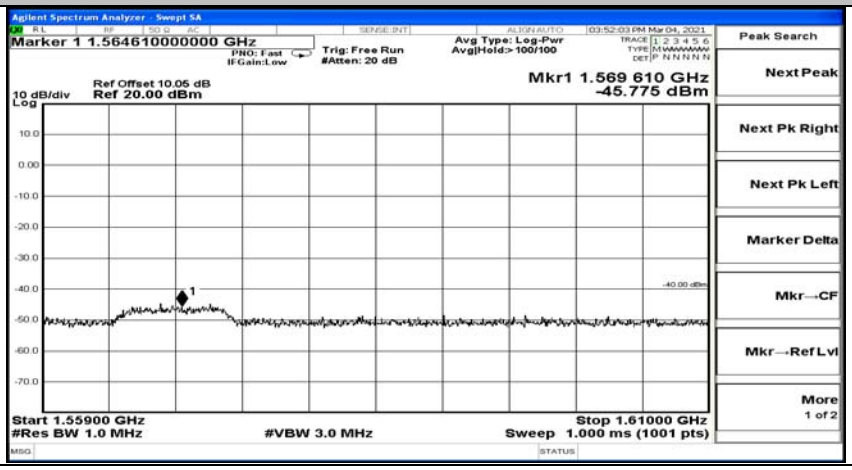
(Channel Bandwidth: 5 MHz)_MCH_16QAM



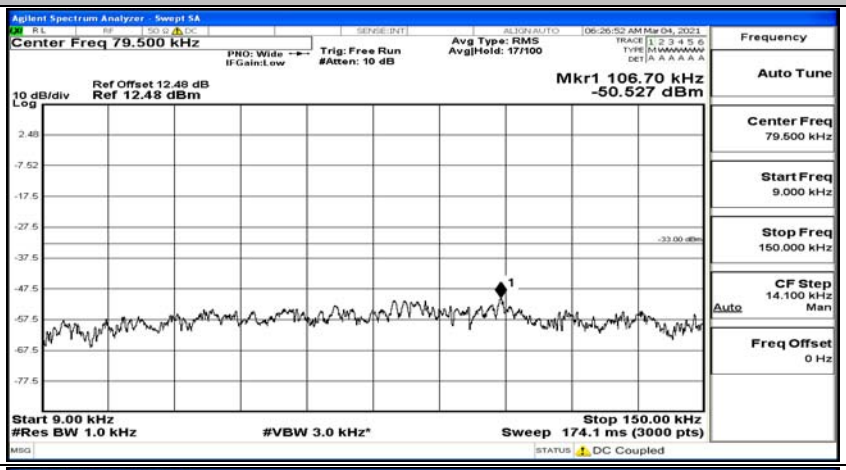
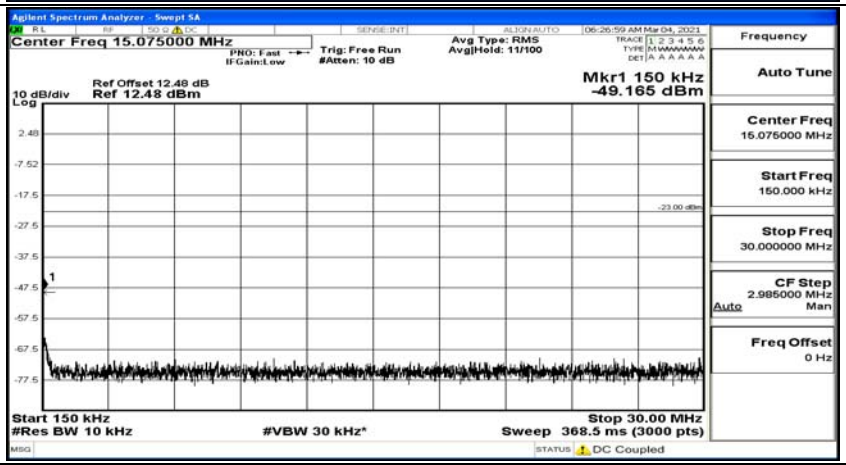
(Channel Bandwidth: 5 MHz)_HCH_QPSK



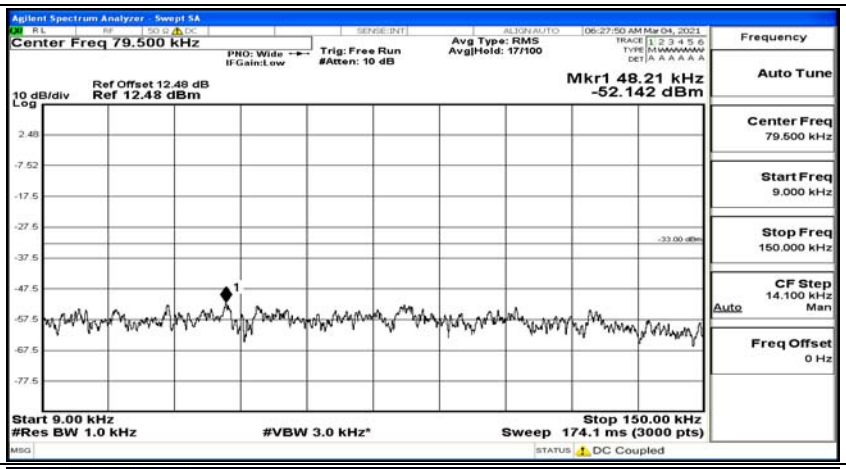
(Channel Bandwidth: 5 MHz)_HCH_16QAM

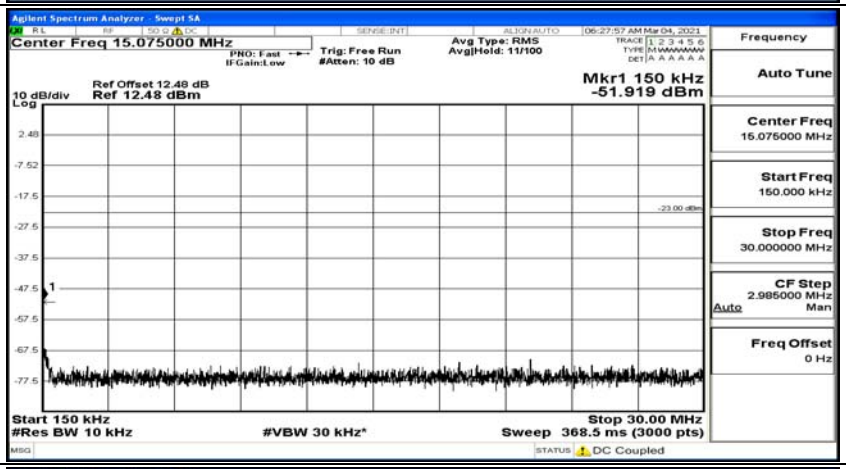


Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz_MCH_QPSK



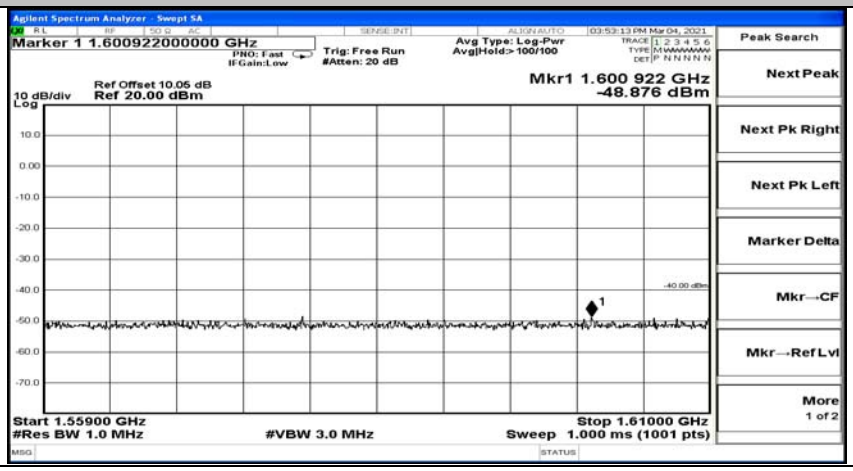

Channel Bandwidth: 10 MHz_MCH_16QAM


Agilent Spectrum Analyzer - Swept SA
Center Freq 79.500 kHz
PNO: Wide
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 17/100
06:27:50 AM Mar 04, 2021
Mkr1 48.21 kHz
-52.142 dBm
Ref Offset 12.48 dB
10 dB/div
Ref 12.48 dBm
Log
Start 9.00 kHz
#Res BW 1.0 kHz
#VBW 3.0 kHz*
Stop 150.00 kHz
Sweep 174.1 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
79.500 kHz
Start Freq
9.000 kHz
Stop Freq
150.000 kHz
CF Step
14.100 kHz
Auto
Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Center Freq 15.075000 MHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
Avg Type: RMS
Avg|Hold: 11/100
06:27:57 AM Mar 04, 2021
Mkr1 150 kHz
-51.919 dBm
Ref Offset 12.48 dB
10 dB/div
Ref 12.48 dBm
Log
Start 150 kHz
#Res BW 10 kHz
#VBW 30 kHz*
Stop 30.00 MHz
Sweep 368.5 ms (3000 pts)
DC Coupled
Frequency
Auto Tune
Center Freq
15.075000 MHz
Start Freq
150.000 kHz
Stop Freq
30.000000 MHz
CF Step
2.985000 MHz
Auto
Man
Freq Offset
0 Hz


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: 10/100
06:28:03 AM Mar 04, 2021
Mkr2 25.697 GHz
-28.881 dBm
Ref Offset 8.05 dB
10 dB/div
Ref 30.00 dBm
Log
Start 30 MHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.00 GHz
Sweep 64.98 ms (3000 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

(Channel Bandwidth: 10 MHz)_MCH_QPSK



(Channel Bandwidth: 10 MHz)_MCH_16QAM