Appendix N: Test Data for E-UTRA Band 38

Product Name: Smart Phone

Trade Mark: DOOGEE

Test Model: S96Pro

Environmental Conditions

Temperature:	22.9° C
Relative Humidity:	53.3%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Li Huan

N.1 Conducted Output Power

Conducted Output Power Test Result (Channel Bandwidth: 5 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict
		Size	Offset			
QPSK / 16QAM	LCH	1	0	21.26	20.50	PASS
		1	12	21.42	20.62	PASS
		1	24	21.27	20.50	PASS
		12	0	22.40	19.45	PASS
		12	6	22.41	19.45	PASS
		12	13	22.34	19.41	PASS
		25	0	22.38	19.44	PASS
	MCH	1	0	21.78	20.70	PASS
		1	12	21.95	20.89	PASS
		1	24	21.69	20.64	PASS
		12	0	22.78	19.82	PASS
		12	6	22.81	19.81	PASS
		12	13	22.79	19.82	PASS
		25	0	22.76	19.84	PASS
	HCH	1	0	22.61	19.59	PASS
		1	12	22.79	19.85	PASS
		1	24	22.67	19.68	PASS
		12	0	22.75	18.74	PASS
		12	6	22.72	18.72	PASS
		12	13	22.75	18.77	PASS
		25	0	22.72	18.79	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	21.33	20.52	PASS
		1	24	21.64	20.84	PASS
		1	49	21.41	20.57	PASS
		25	0	22.43	19.46	PASS
		25	12	22.44	19.48	PASS
		25	25	22.44	19.47	PASS
		50	0	22.46	19.49	PASS
	MCH	1	0	21.89	20.83	PASS
		1	24	22.22	21.15	PASS
		1	49	21.76	20.71	PASS
		25	0	22.88	19.90	PASS
		25	12	22.87	19.91	PASS
		25	25	22.85	19.89	PASS
		50	0	22.83	19.87	PASS
	HCH	1	0	22.91	19.76	PASS
		1	24	21.08	20.00	PASS
		1	49	22.82	19.70	PASS
		25	0	22.88	18.93	PASS
		25	12	22.87	18.91	PASS
		25	25	22.78	18.88	PASS
		50	0	22.86	18.90	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	21.25	20.42	PASS
		1	37	21.41	20.59	PASS
		1	74	21.45	20.58	PASS
		37	0	20.55	20.55	PASS
		37	18	20.55	20.55	PASS
		37	38	20.55	20.58	PASS
		75	0	20.55	19.50	PASS
	MCH	1	0	21.74	20.82	PASS
		1	37	21.96	21.03	PASS
		1	74	21.47	20.59	PASS
		37	0	22.89	20.90	PASS
		37	18	22.91	20.89	PASS
		37	38	22.89	20.89	PASS
		75	0	21.90	19.88	PASS
	HCH	1	0	21.09	19.99	PASS
		1	37	22.85	19.71	PASS
		1	74	22.69	19.59	PASS
		37	0	22.95	19.95	PASS
		37	18	22.94	19.95	PASS
		37	38	22.96	19.95	PASS
		75	0	22.95	18.94	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	21.15	20.15	PASS
		1	49	21.71	20.71	PASS
		1	99	21.51	20.47	PASS
		50	0	22.46	19.52	PASS
		50	25	22.48	19.49	PASS
		50	50	21.56	19.57	PASS
		100	0	22.52	19.57	PASS
	MCH	1	0	21.50	20.63	PASS
		1	49	22.20	21.30	PASS
		1	99	21.11	20.28	PASS
		50	0	22.74	19.77	PASS
		50	25	22.76	19.75	PASS
		50	50	22.66	19.71	PASS
		100	0	22.69	19.68	PASS
	HCH	1	0	21.26	20.22	PASS
		1	49	21.07	20.05	PASS
		1	99	22.42	19.38	PASS
		50	0	22.09	19.21	PASS
		50	25	20.11	19.21	PASS
		50	50	22.65	18.80	PASS
		100	0	22.91	18.95	PASS

N.2 Peak-to-Average Ratio

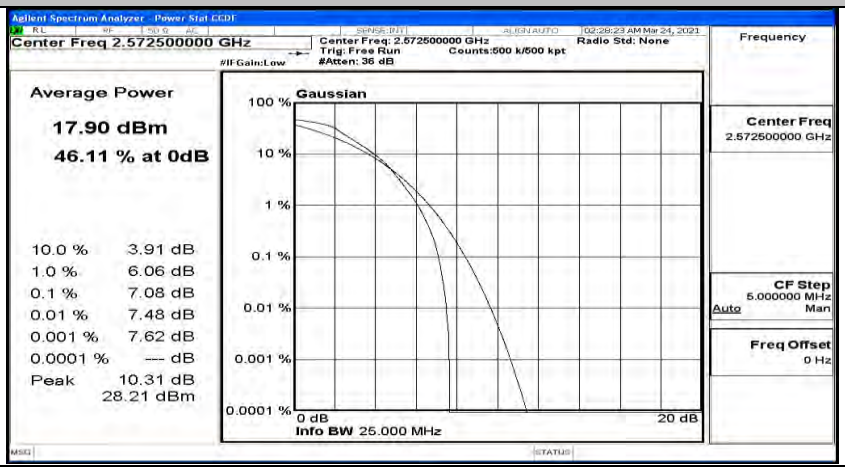
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	7.08	<13	PASS
	MCH	12.54	<13	PASS
	HCH	7.92	<13	PASS
16QAM	LCH	9.4	<13	PASS
	MCH	12.8	<13	PASS
	HCH	7.81	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	10.18	<13	PASS
	MCH	7.17	<13	PASS
	HCH	6.82	<13	PASS
16QAM	LCH	8.72	<13	PASS
	MCH	8.77	<13	PASS
	HCH	8.08	<13	PASS

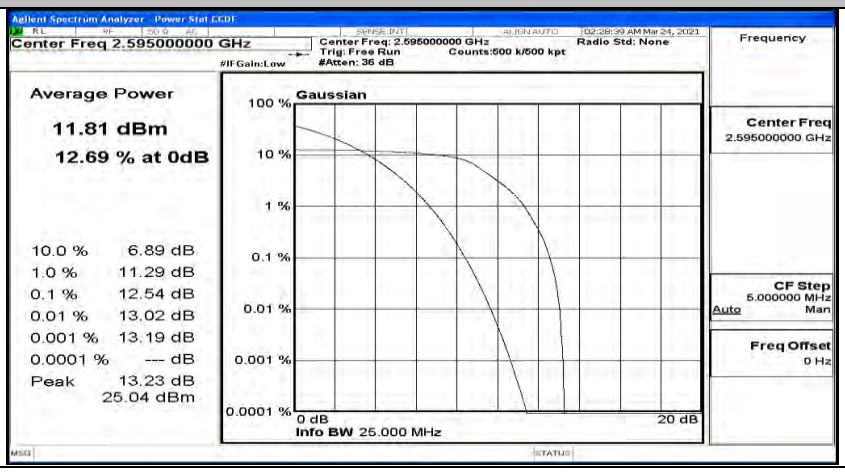
Peak-to Average Ratio Test Result (Channel Bandwidth: 15 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	10.29	<13	PASS
	MCH	8.74	<13	PASS
	HCH	10.37	<13	PASS
16QAM	LCH	12.54	<13	PASS
	MCH	7.97	<13	PASS
	HCH	8.83	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 20 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	11.98	<13	PASS
	MCH	9.06	<13	PASS
	HCH	11.83	<13	PASS
16QAM	LCH	10.64	<13	PASS
	MCH	8.45	<13	PASS
	HCH	8.79	<13	PASS

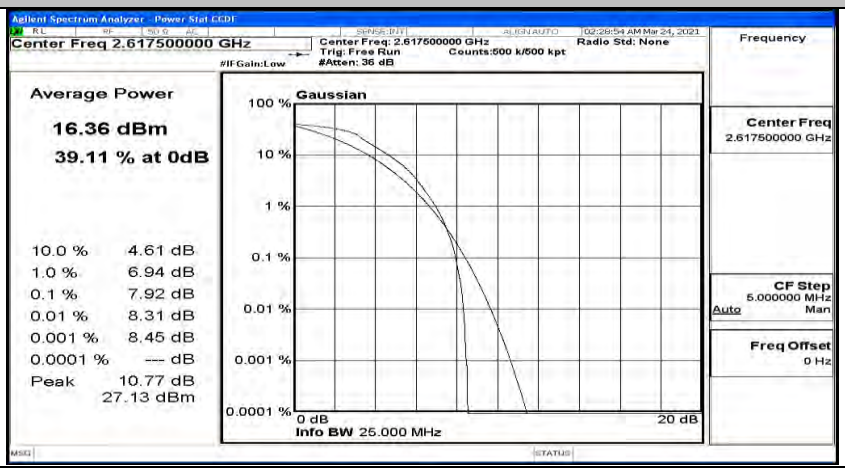
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



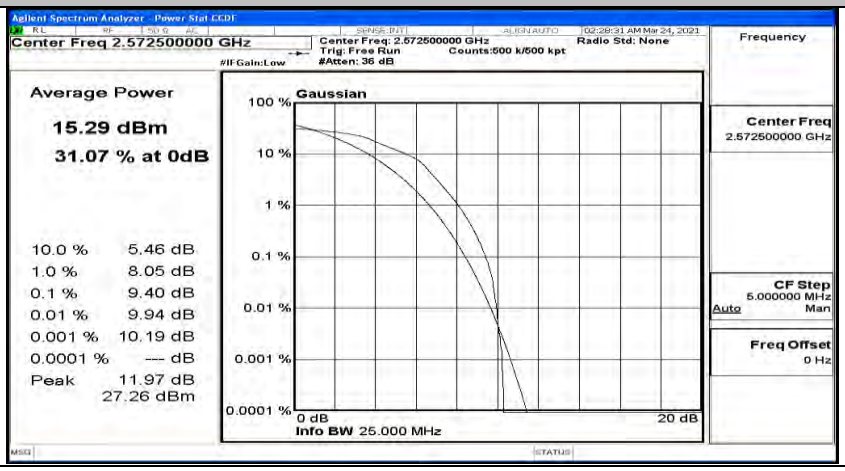
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



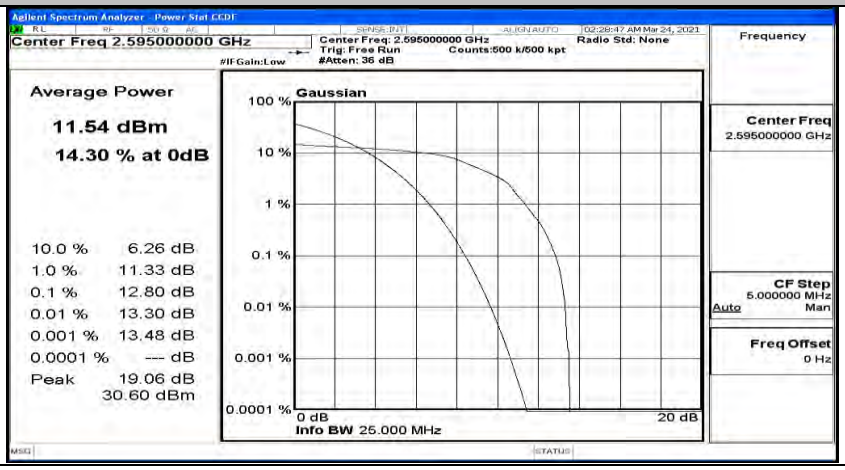
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



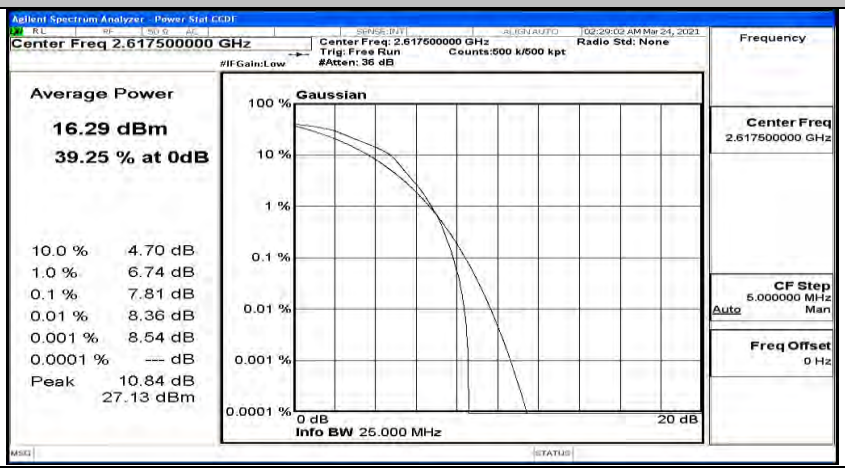
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



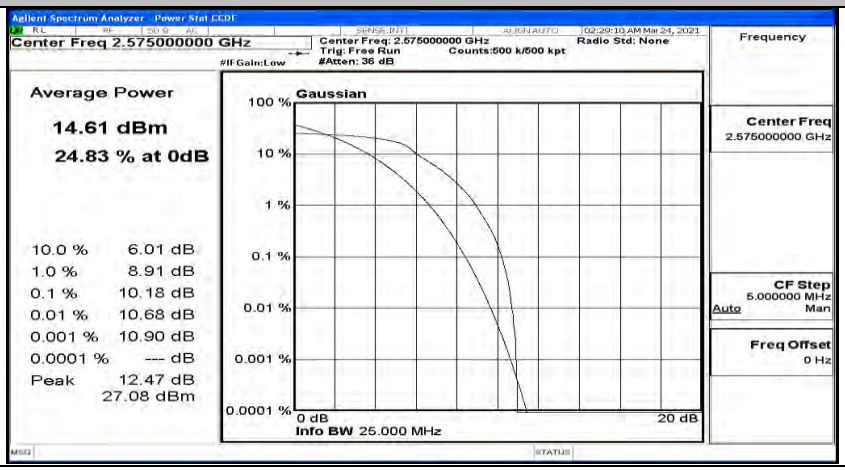
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



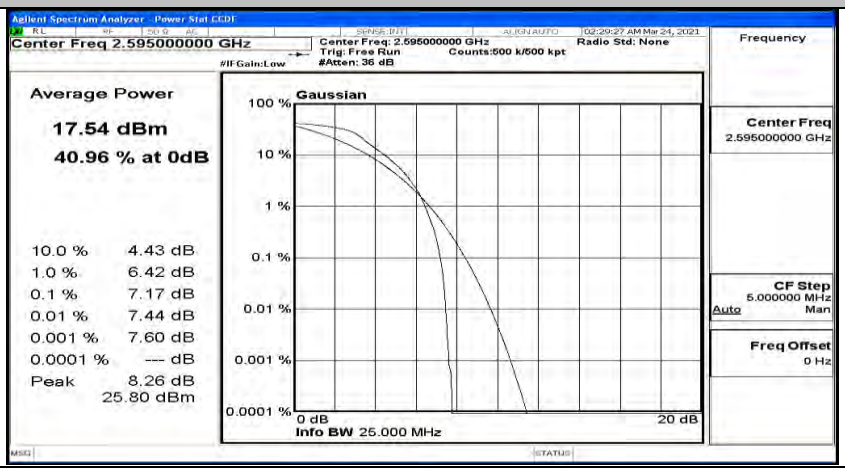
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



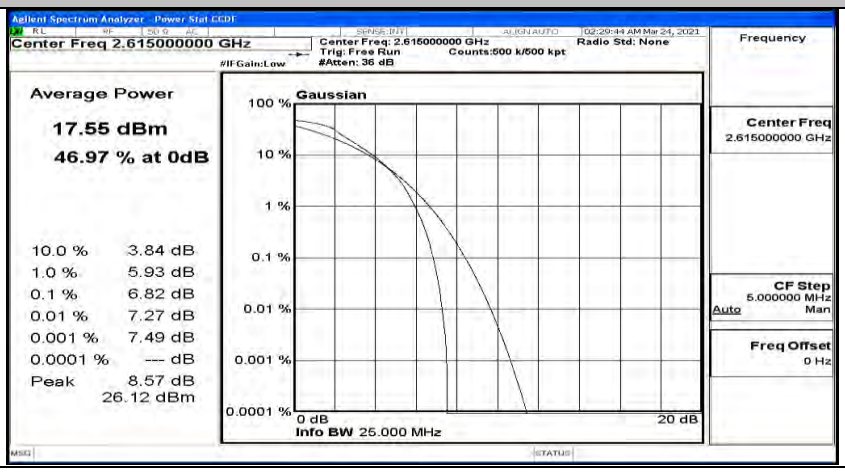
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



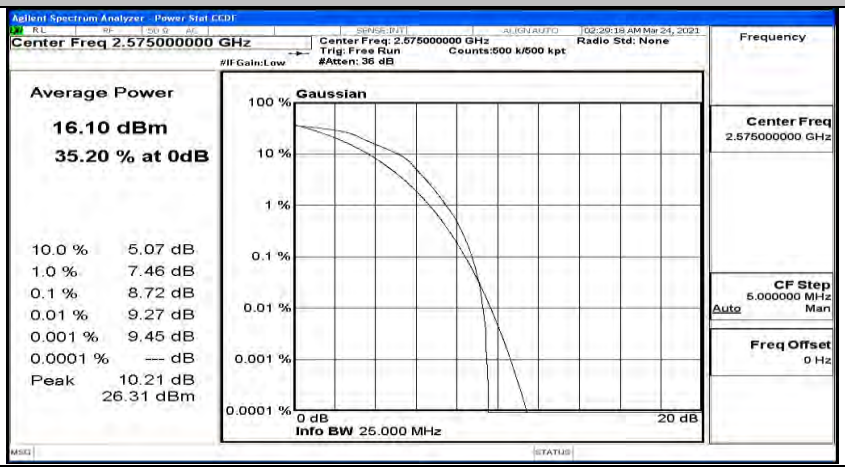
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



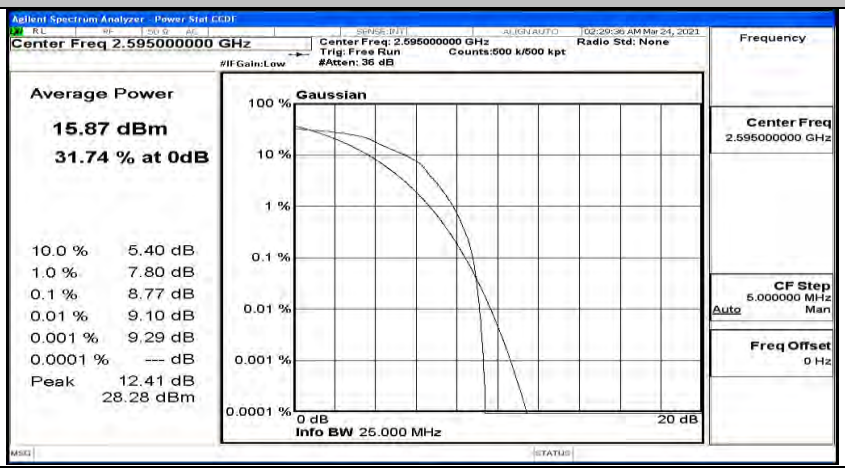
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



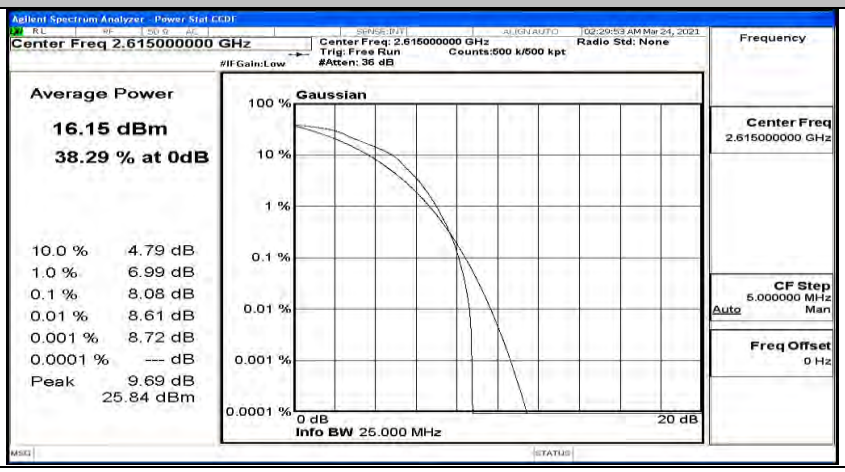
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



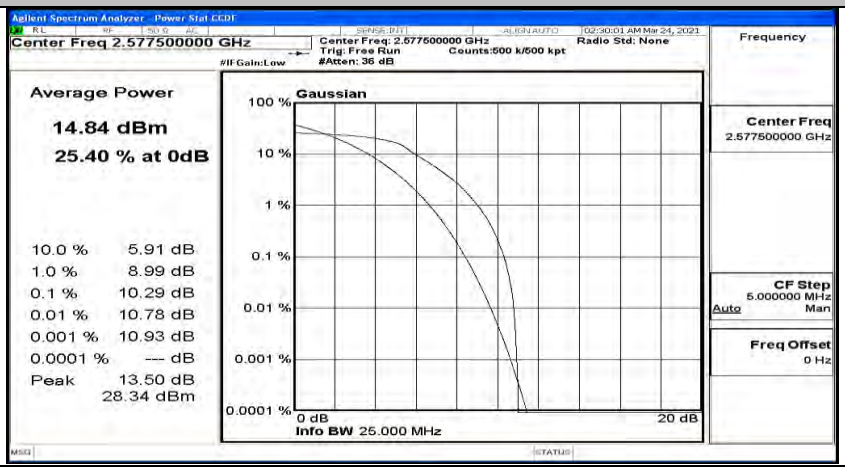
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_16QAM



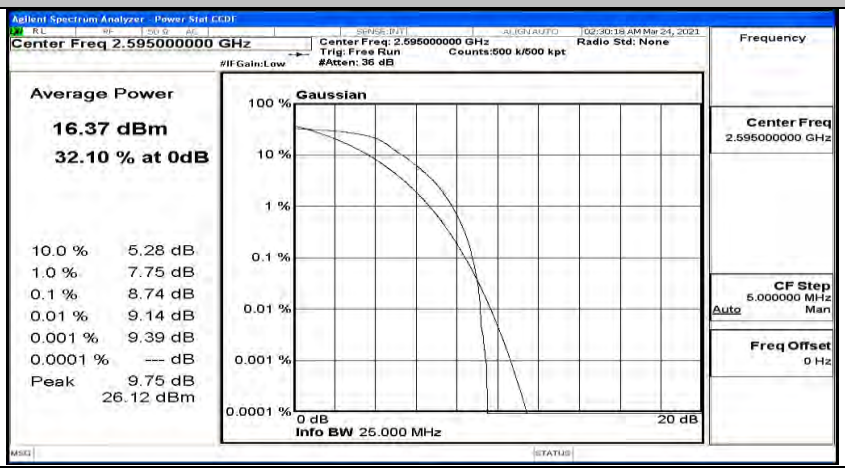
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM



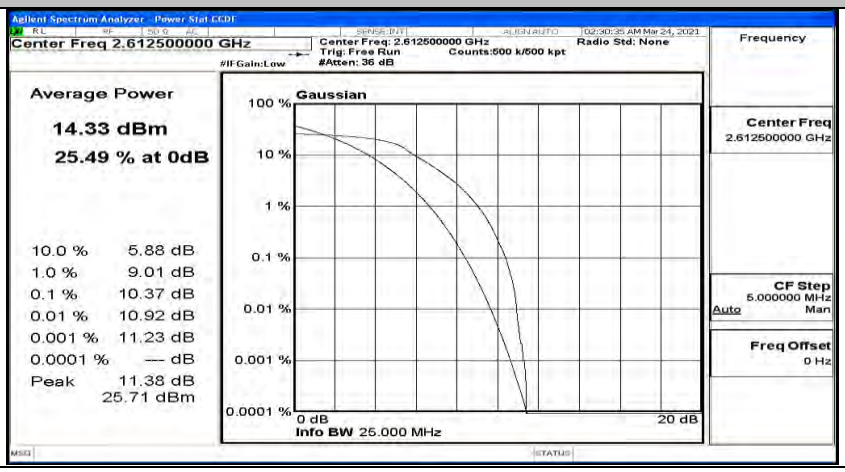
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_QPSK



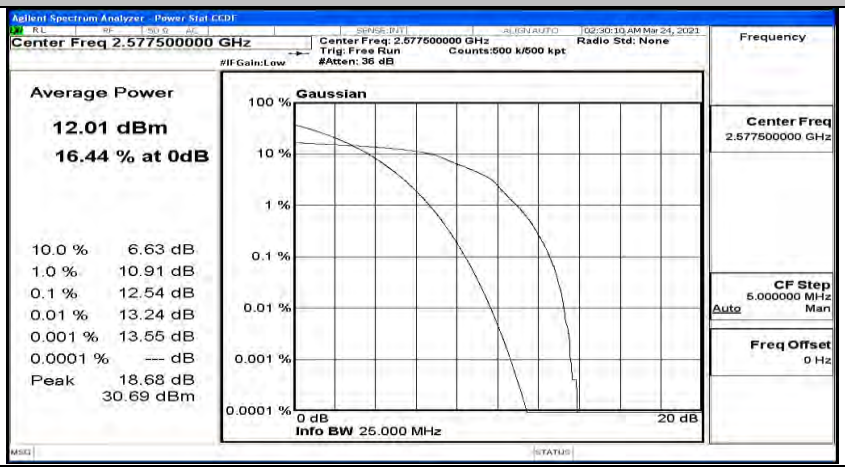
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_QPSK



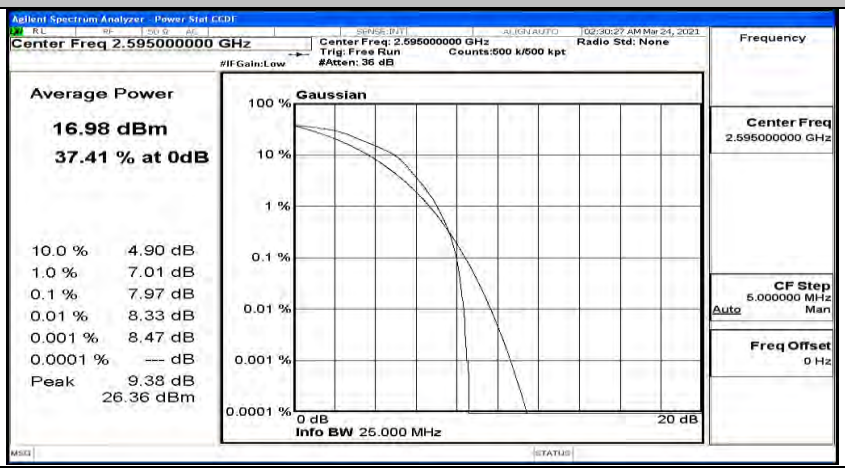
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_QPSK



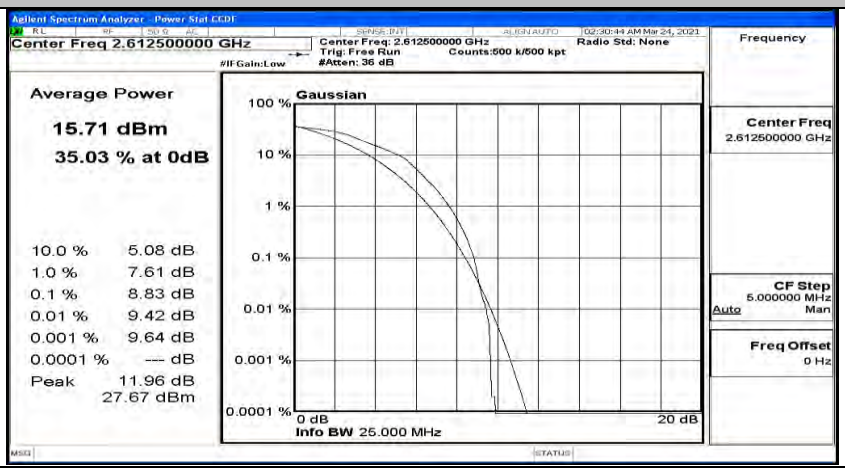
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_16QAM



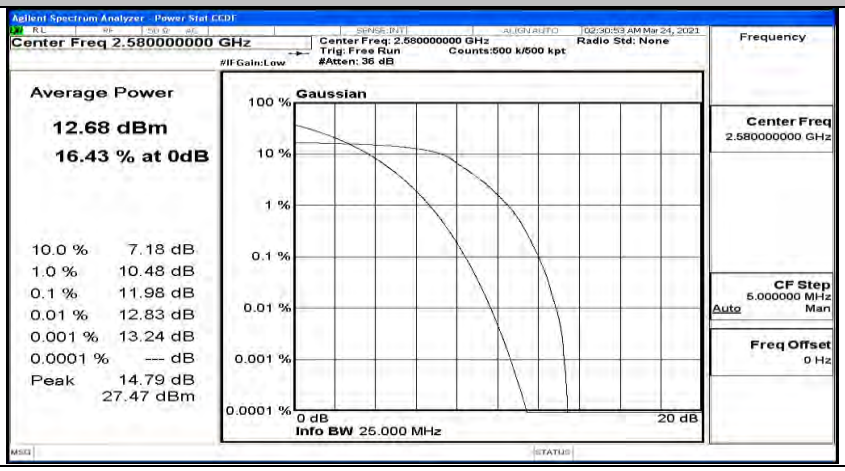
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_16QAM



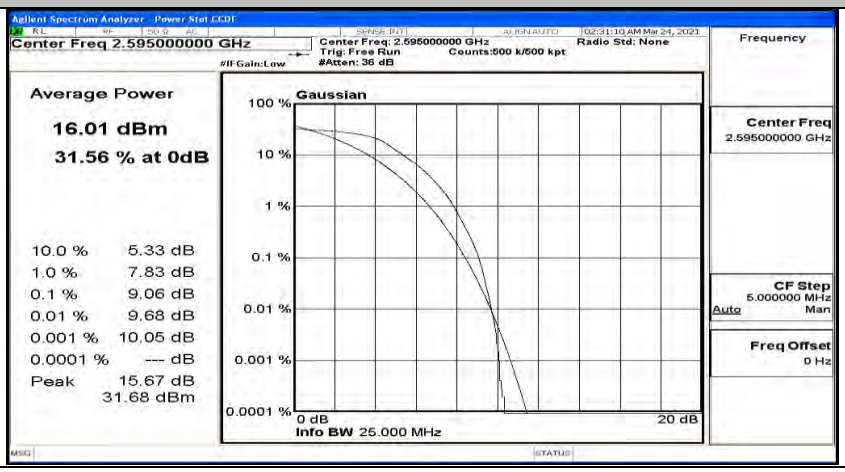
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_16QAM



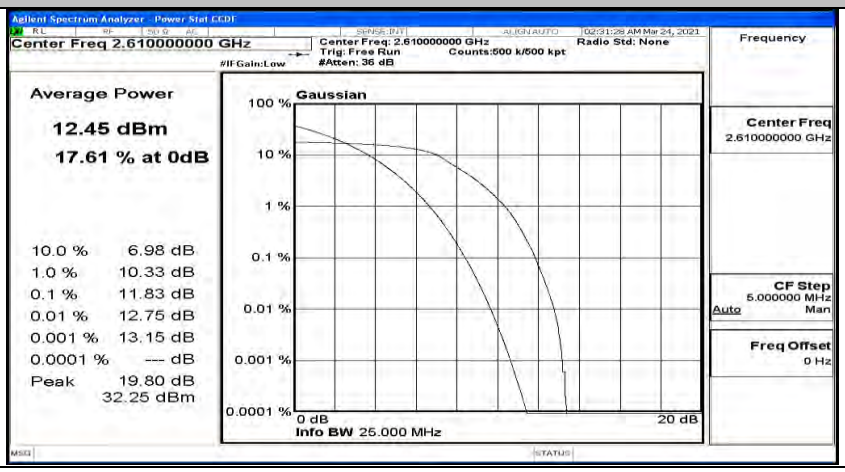
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_QPSK



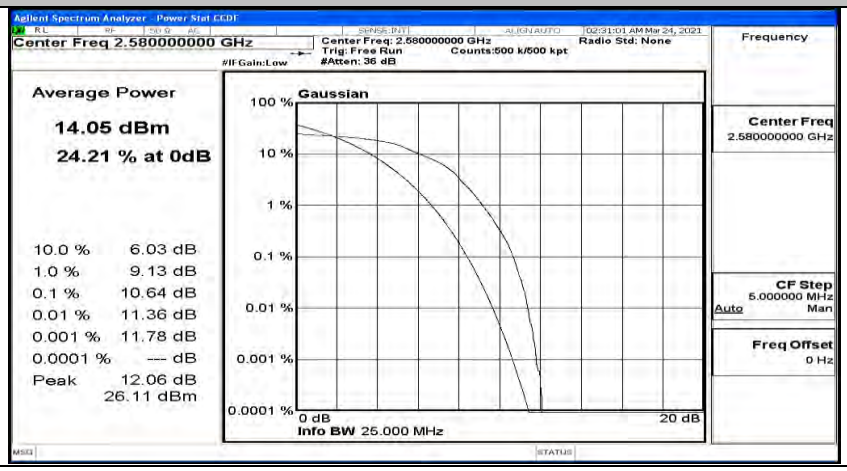
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_QPSK



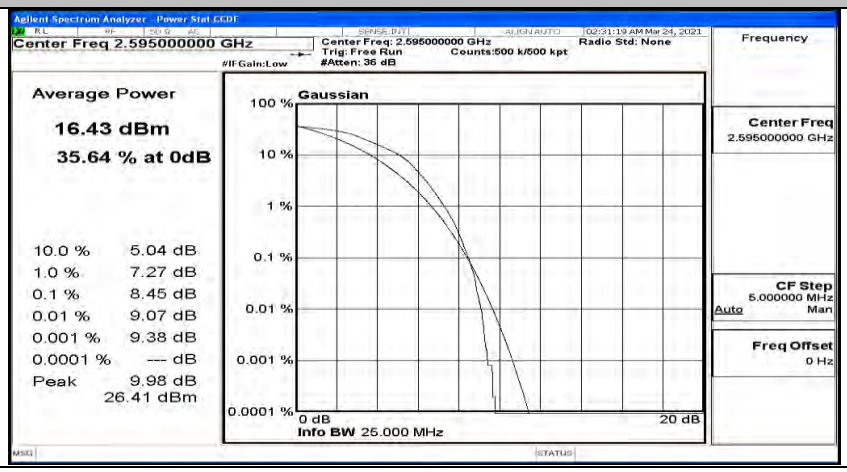
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_QPSK



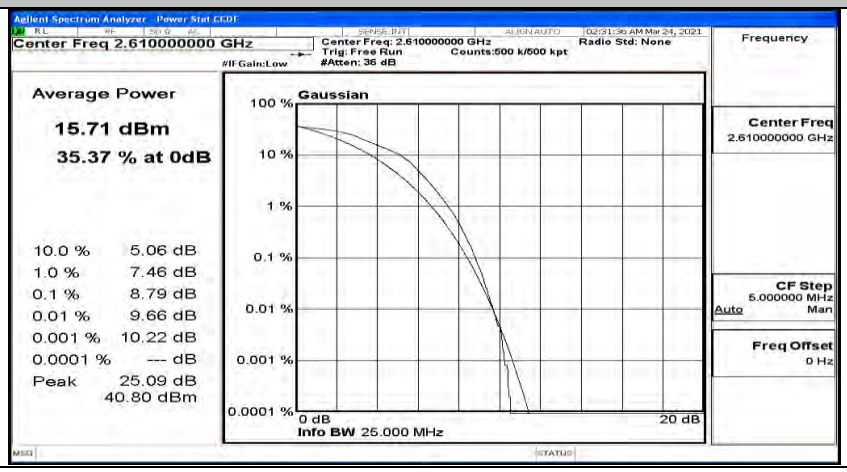
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_16QAM



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



N.3 26dB Bandwidth and Occupied Bandwidth

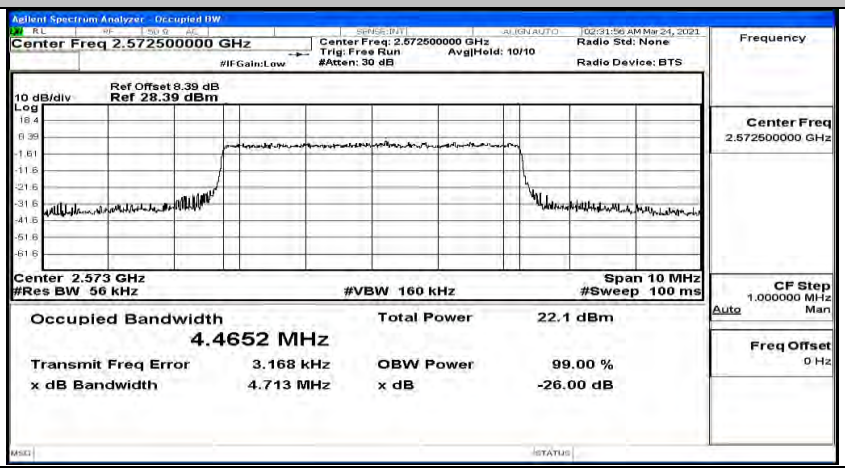
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4652	4.713	PASS
	MCH	4.4669	4.688	PASS
	HCH	4.4753	4.748	PASS
16QAM	LCH	4.4677	4.713	PASS
	MCH	4.4765	4.761	PASS
	HCH	4.4673	4.724	PASS

EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	8.9339	9.314	PASS
	MCH	8.9579	9.404	PASS
	HCH	8.9273	9.379	PASS
16QAM	LCH	8.9380	9.330	PASS
	MCH	8.9340	9.345	PASS
	HCH	8.9426	9.299	PASS

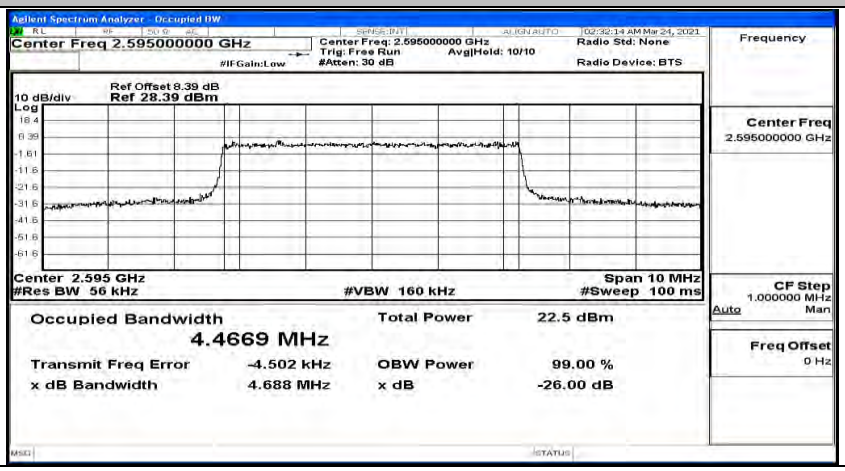
EBW & OBW Test Result (Channel Bandwidth: 15 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	13.394	13.99	PASS
	MCH	13.382	13.94	PASS
	HCH	13.405	13.94	PASS
16QAM	LCH	13.401	14.03	PASS
	MCH	13.383	14.03	PASS
	HCH	13.397	13.97	PASS

EBW & OBW Test Result (Channel Bandwidth: 20 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	17.866	18.59	PASS
	MCH	17.856	18.55	PASS
	HCH	17.868	18.52	PASS
16QAM	LCH	17.847	18.54	PASS
	MCH	17.858	18.55	PASS
	HCH	17.864	18.55	PASS

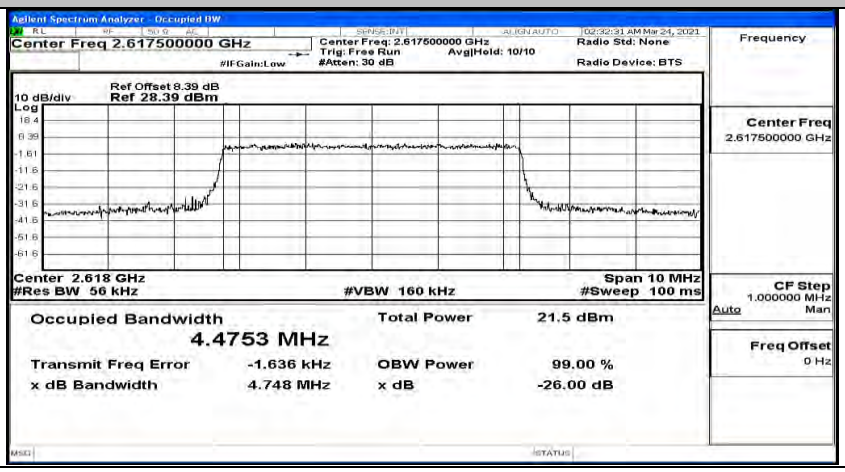
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



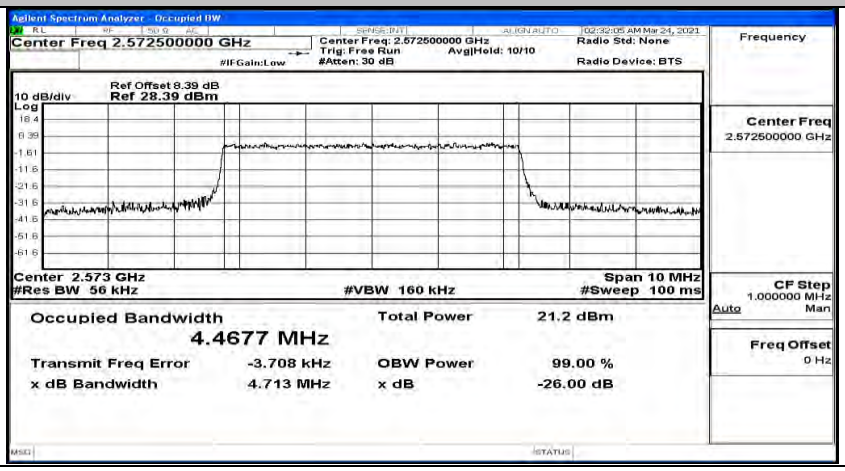
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



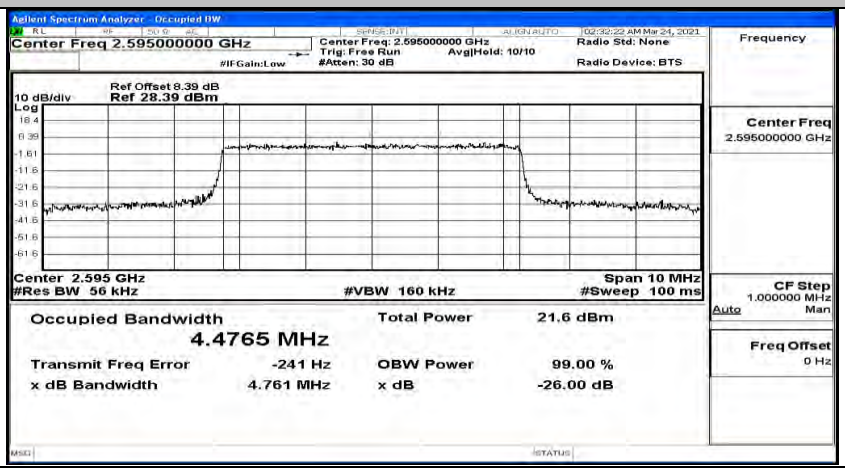
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



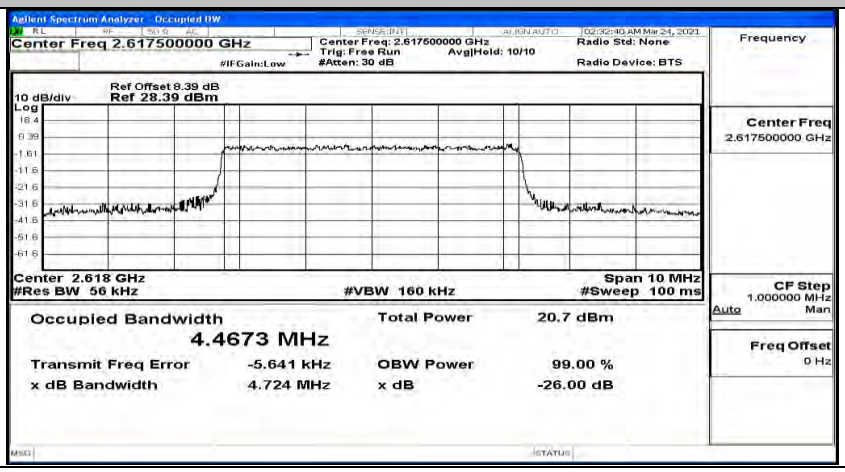
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



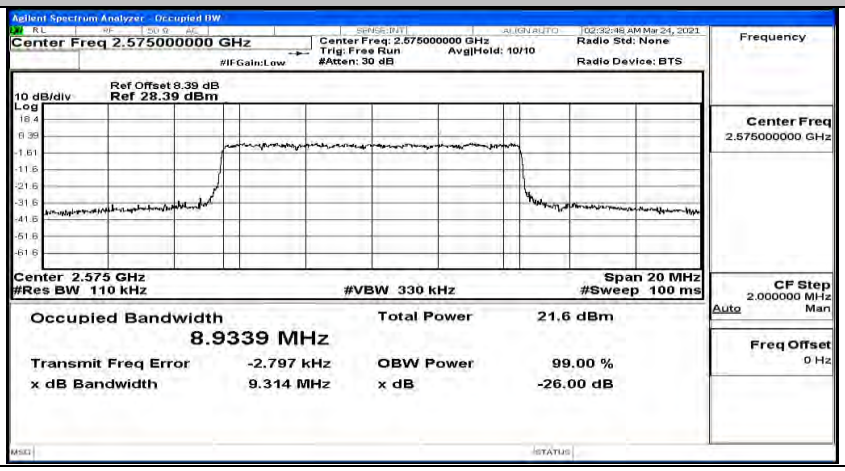
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



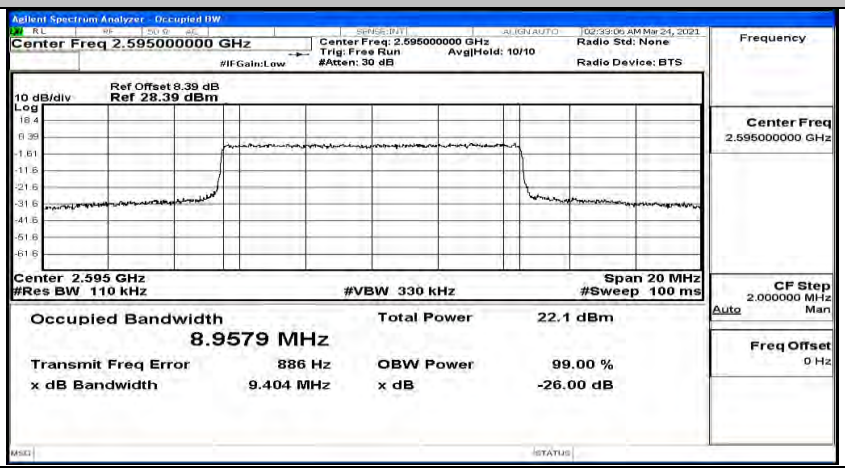
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



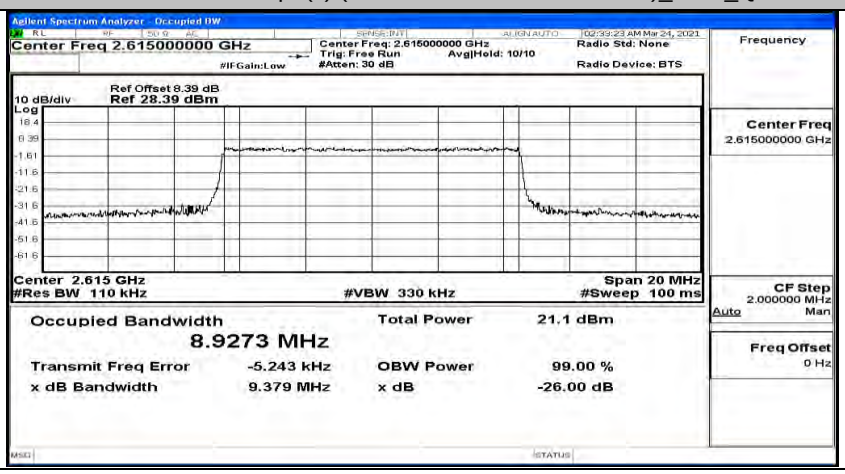
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



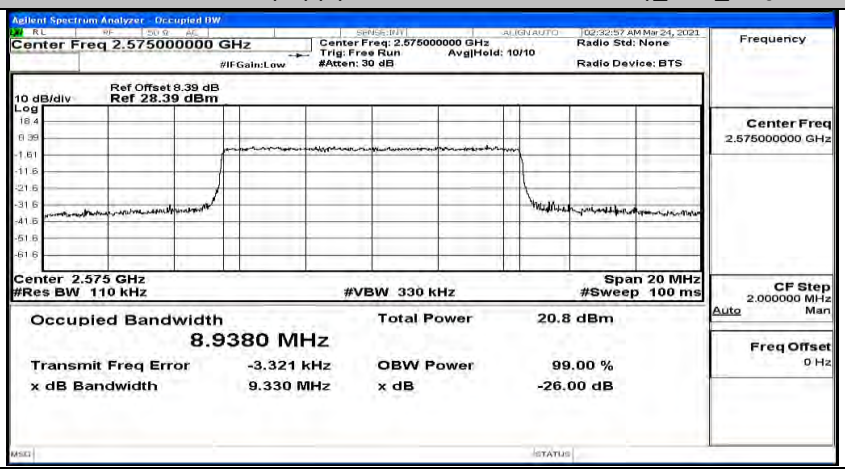
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



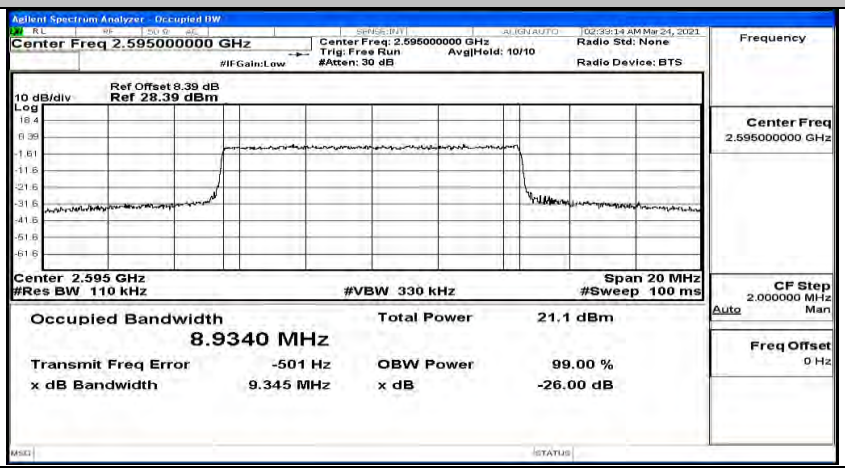
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



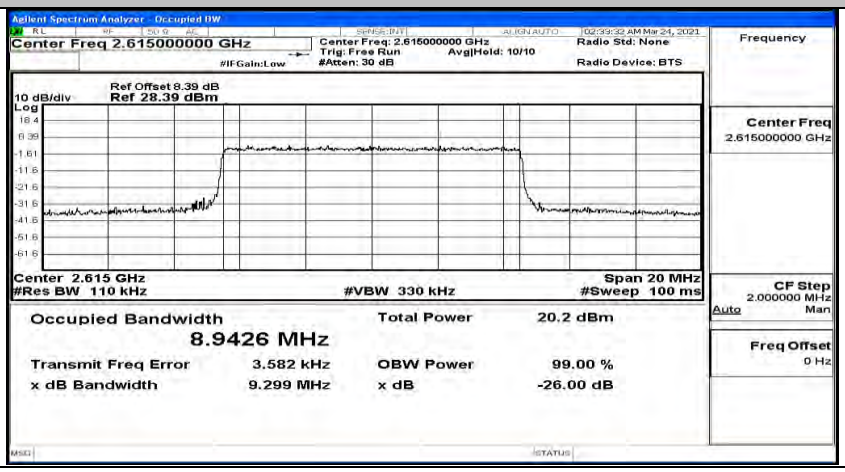
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



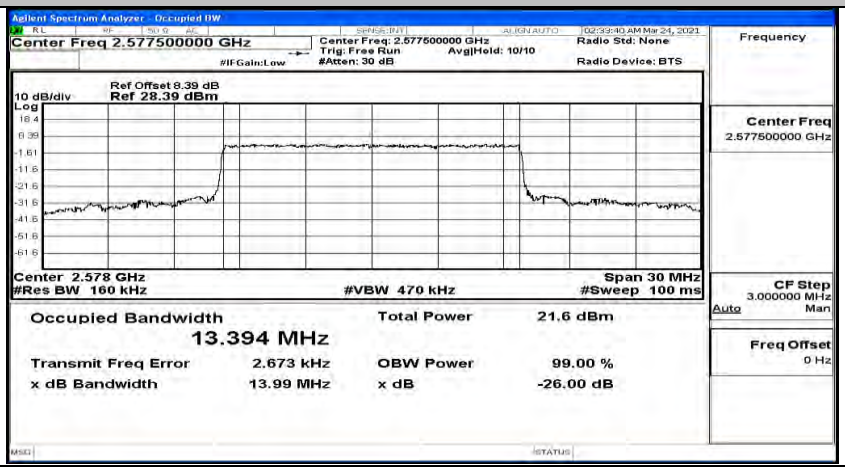
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_16QAM



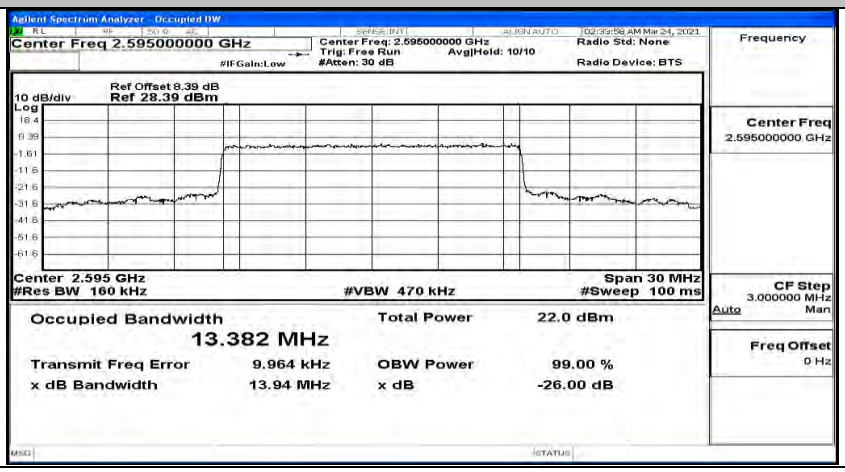
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM



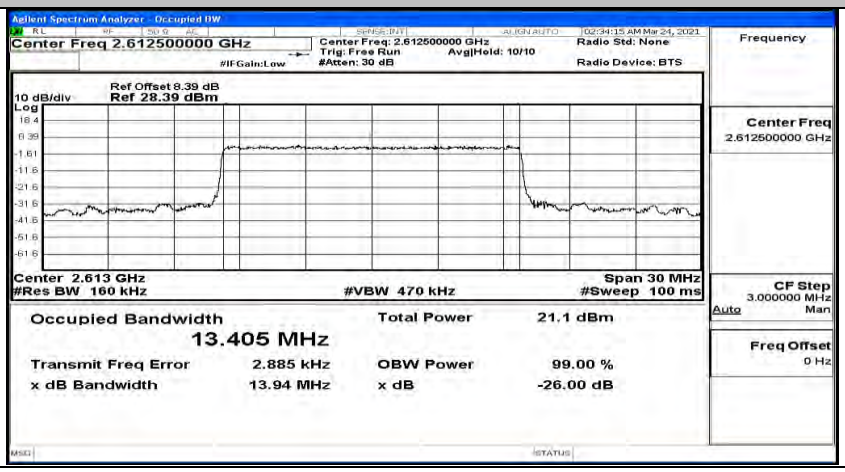
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_QPSK



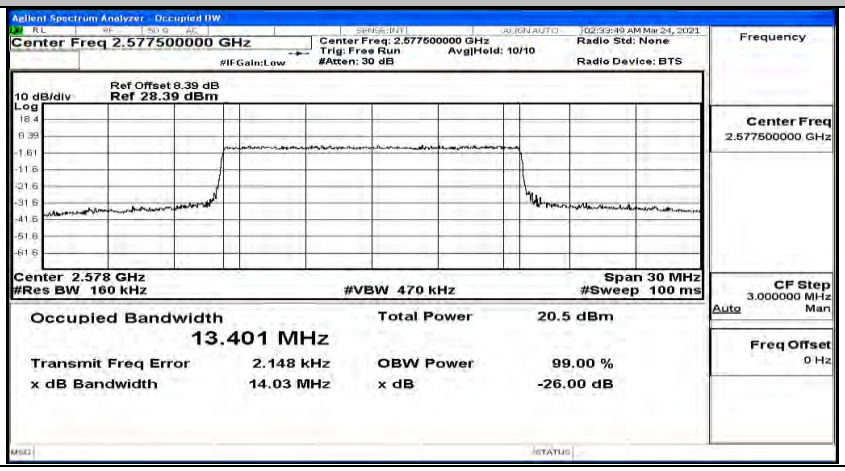
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_QPSK



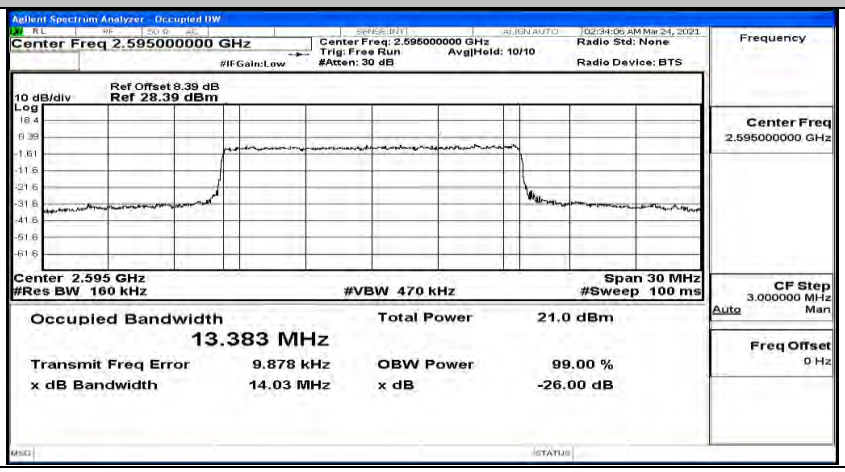
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_QPSK



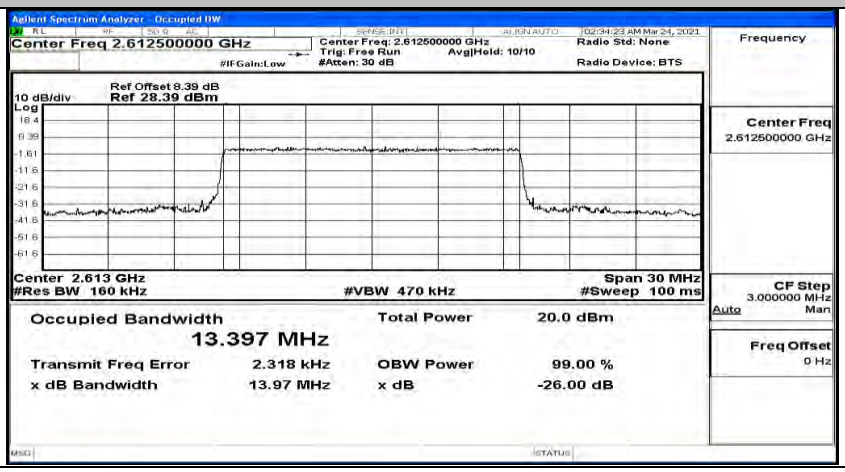
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_16QAM



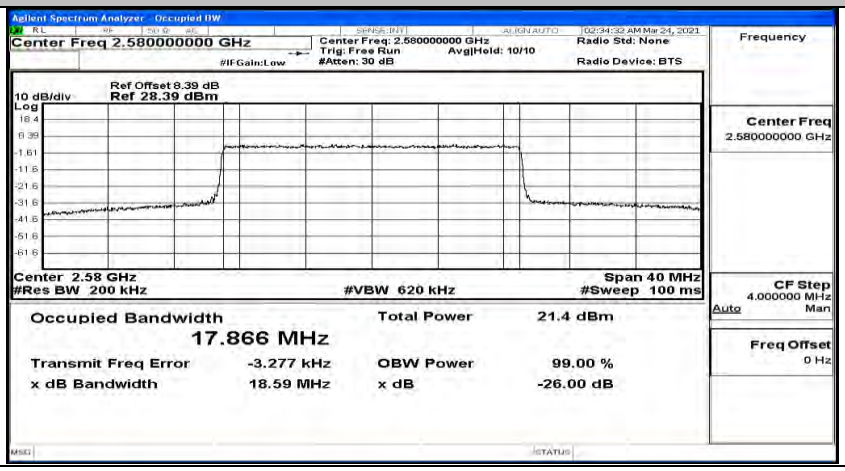
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_16QAM



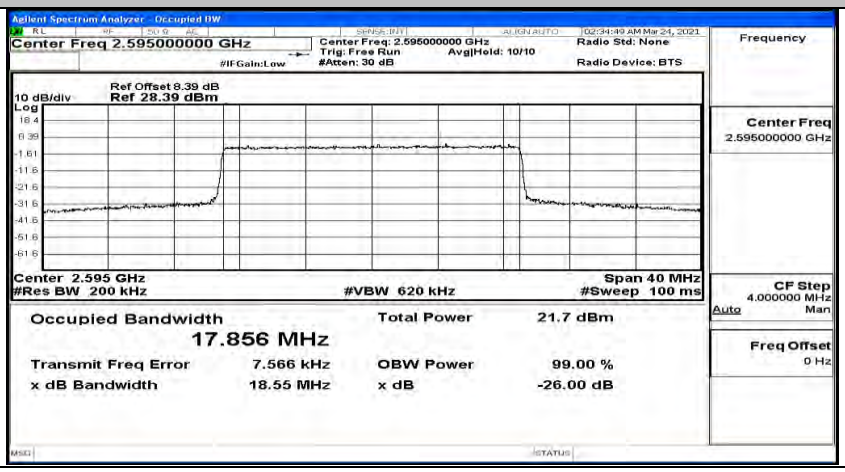
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_16QAM



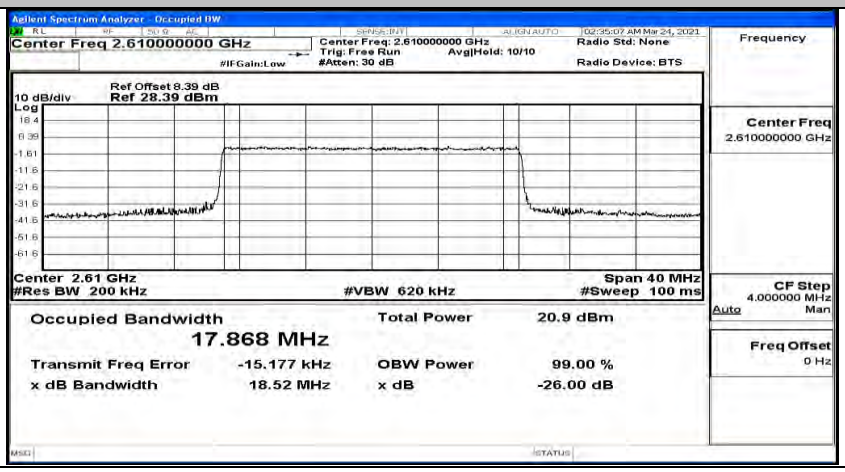
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_QPSK



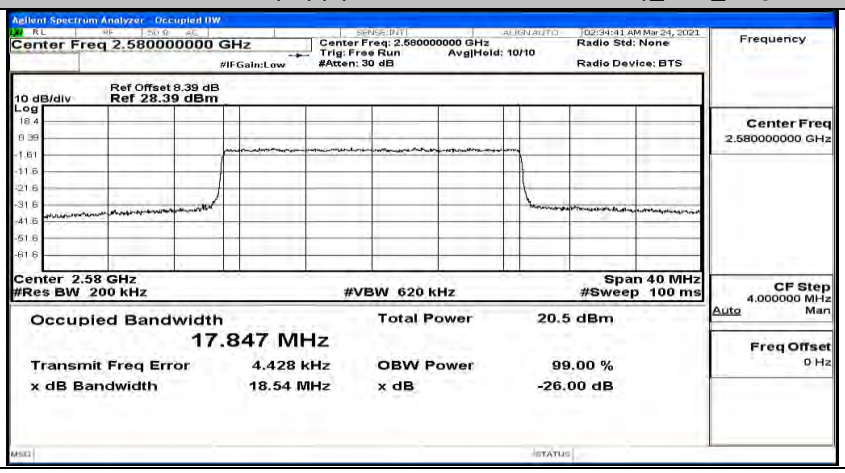
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_QPSK



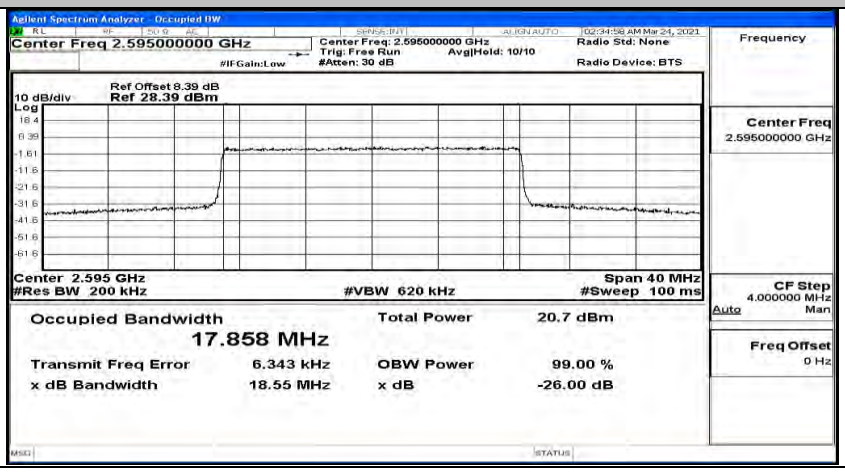
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_QPSK



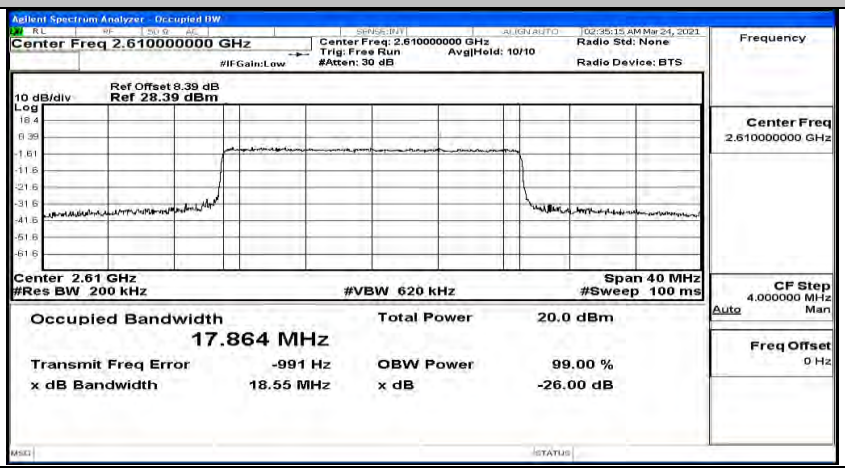
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_16QAM



EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_16QAM

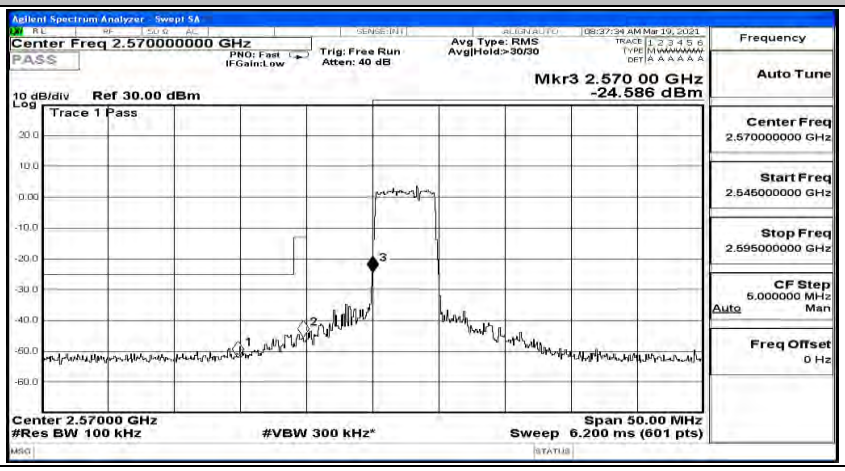


EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_16QAM

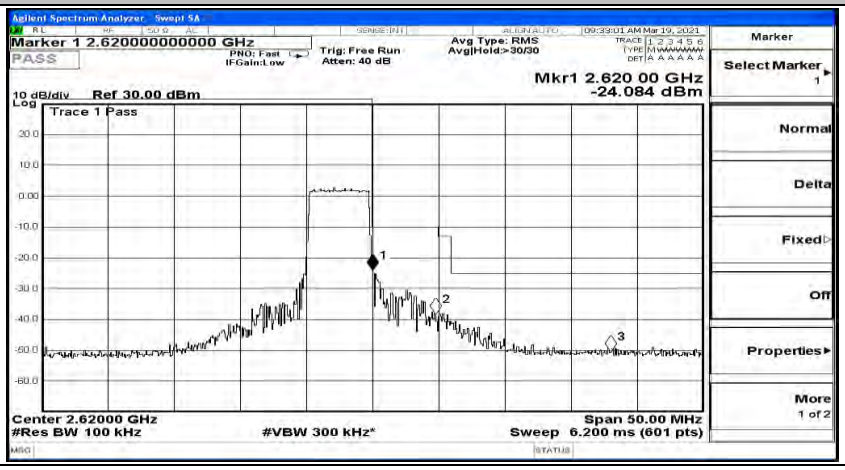


N.4 Band Edge

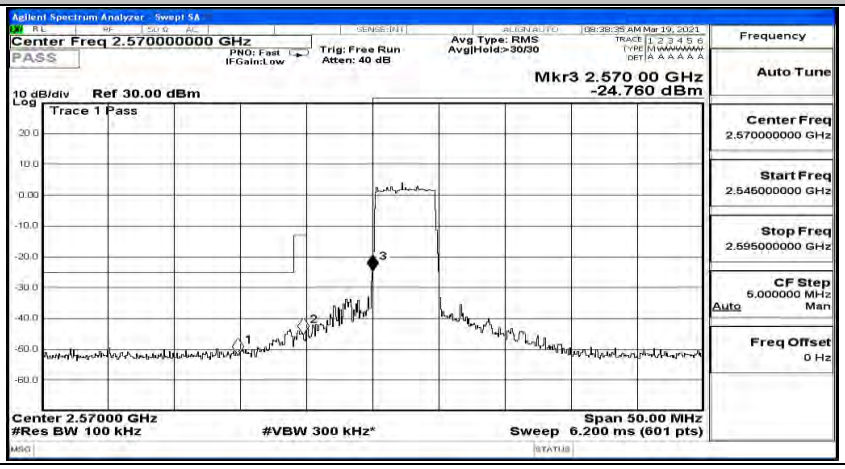
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



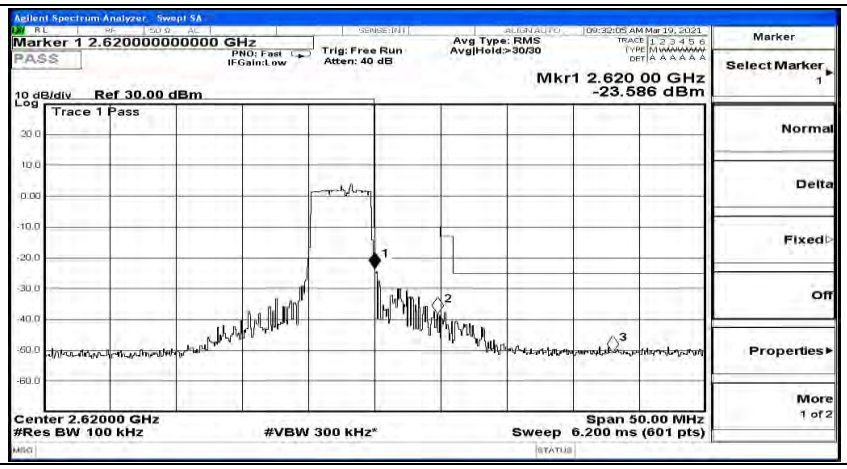
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



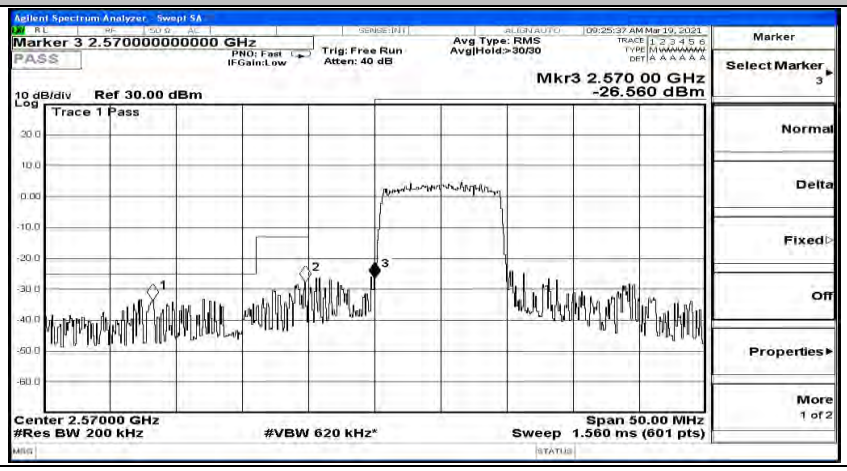
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



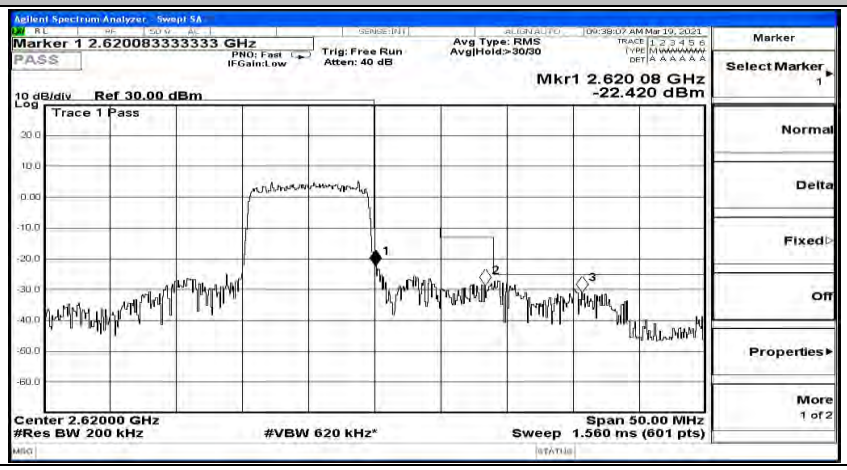
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



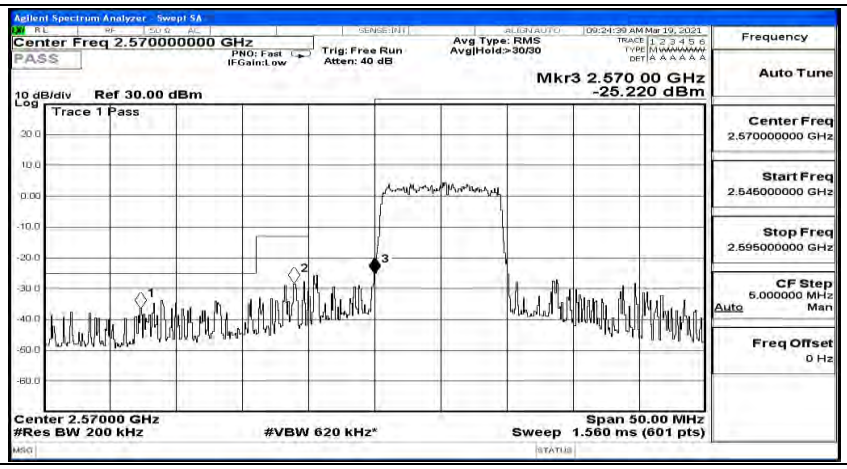
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



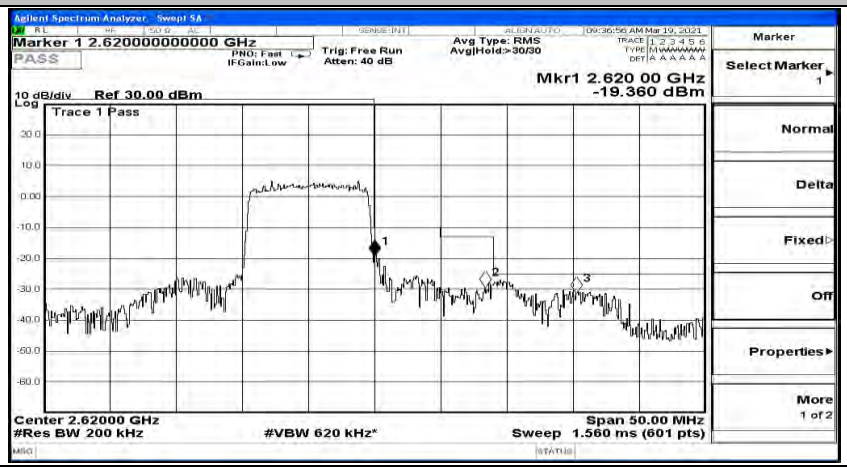
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



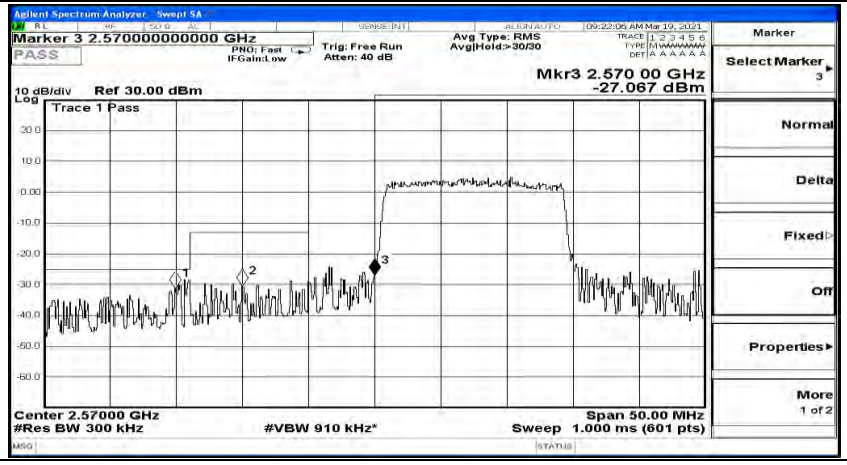
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



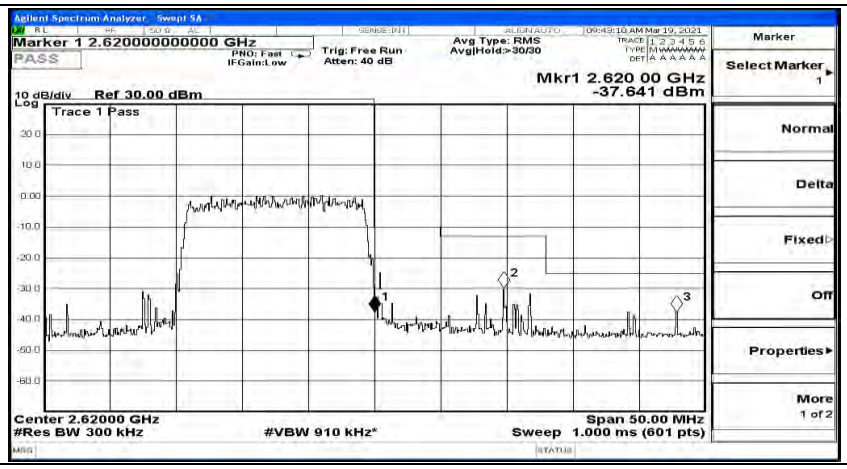
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM



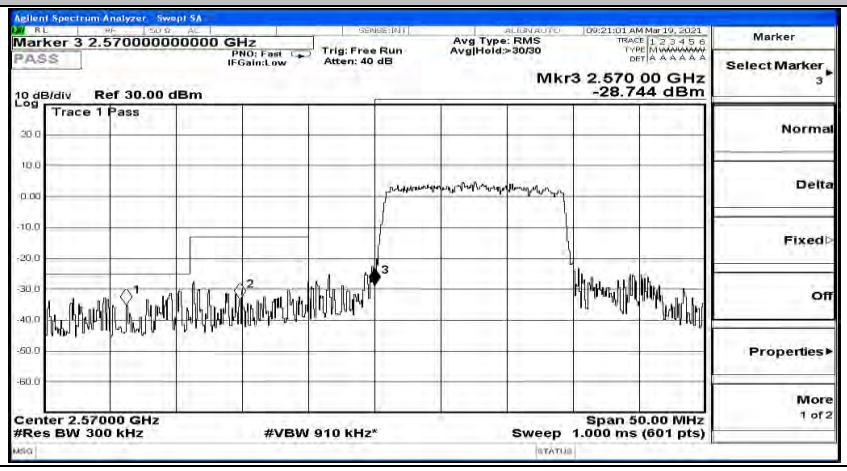
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_QPSK



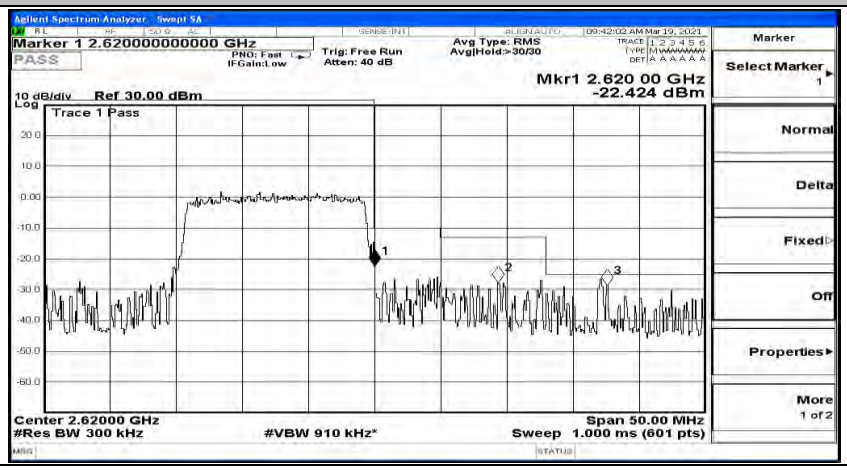
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_QPSK



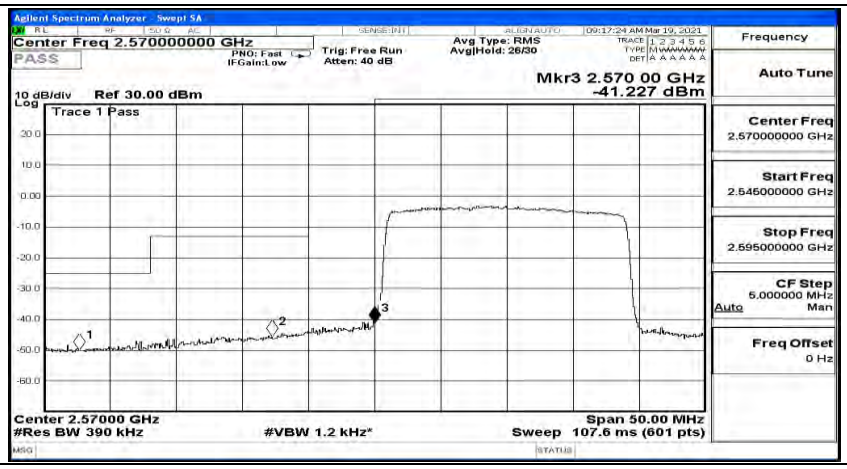
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_16QAM



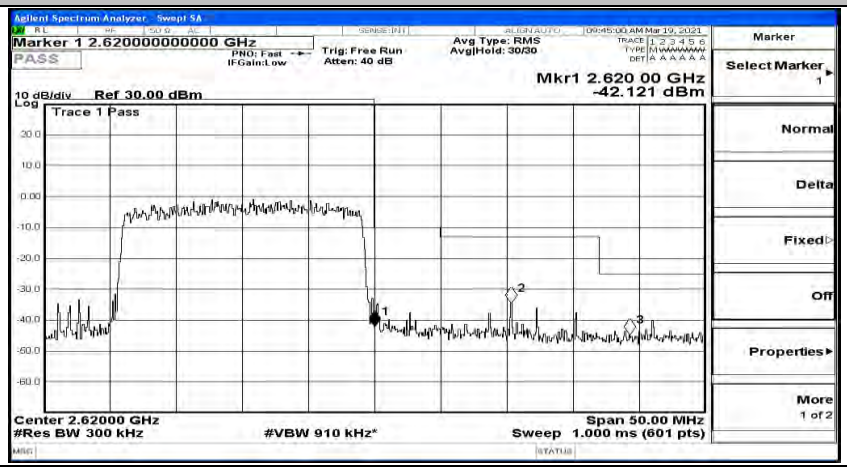
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_16QAM



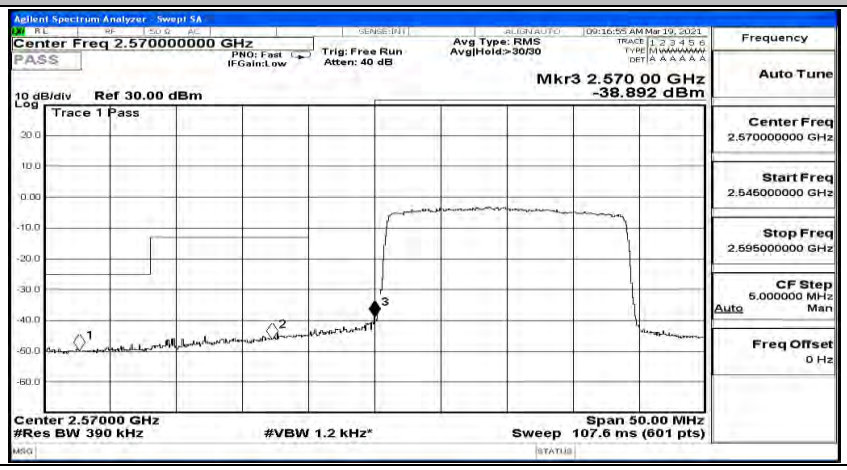
Band Edge Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_QPSK



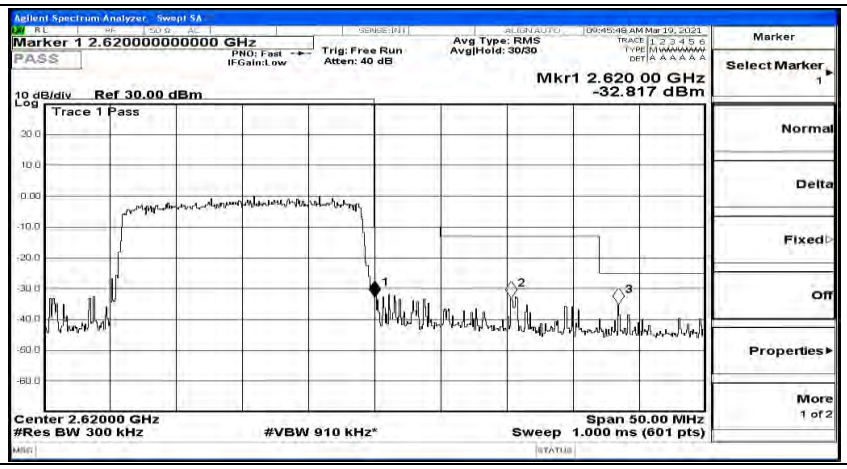
Band Edge Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_QPSK



Band Edge Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_16QAM

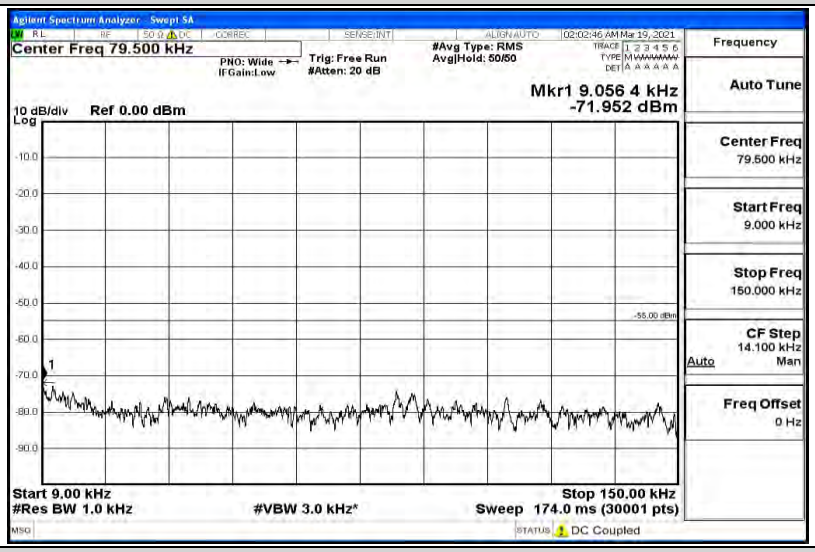


Band Edge Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_16QAM

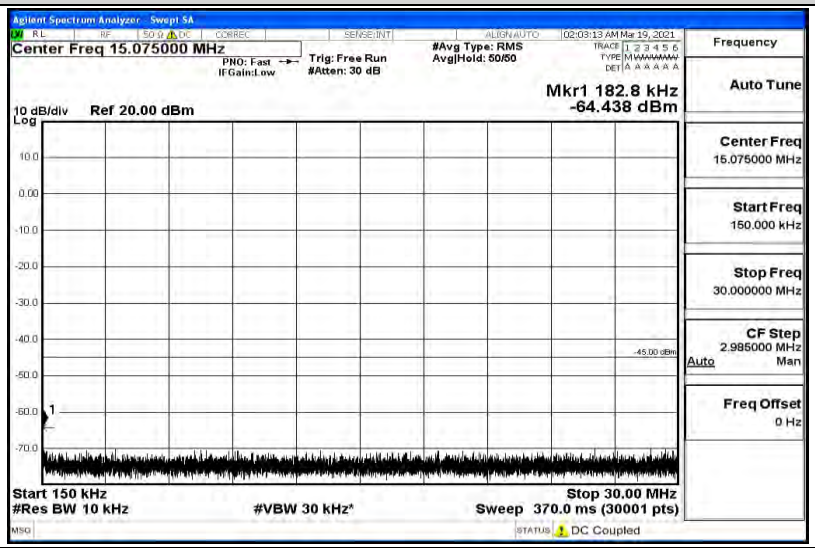

Agilent Spectrum Analyzer - Swept SA
Marker 1 2.620000000000 GHz
PASS
PNO: Fast
IFGain:Low
Trig: Free Run
Atten: 40 dB
Avg Type: RMS
Avg|Hold: 30/30
Mkr1 2.620 00 GHz
-32.817 dBm
10 dB/div
Log
Ref 30.00 dBm
Trace 1 Pass
20.0
10.0
0.00
-10.0
-20.0
-30.0
-40.0
-50.0
-60.0
Center 2.62000 GHz
#Res BW 300 kHz
#VBW 910 kHz*
Span 50.00 MHz
Sweep 1.000 ms (601 pts)
Marker
Select Marker
Normal
Delta
Fixed
Off
Properties
More
1 of 2

N.5 Conducted Spurious Emission

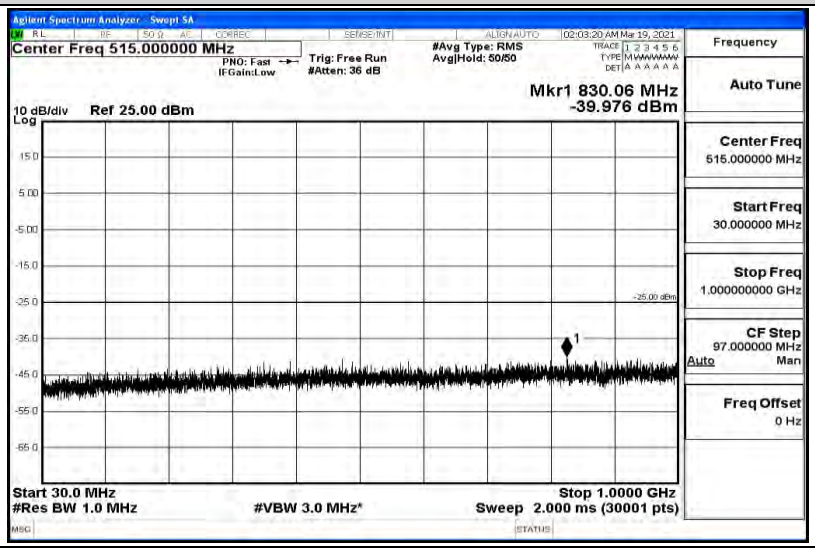
5MHz-QPSK-L-1RB#0-Range1:0.009~0.15MHz



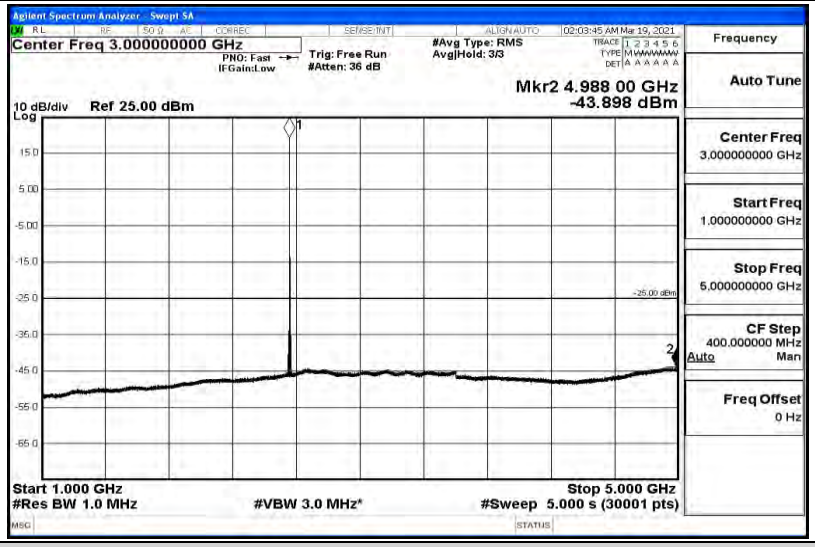
5MHz-QPSK-L-1RB#0-Range2:0.15~30MHz



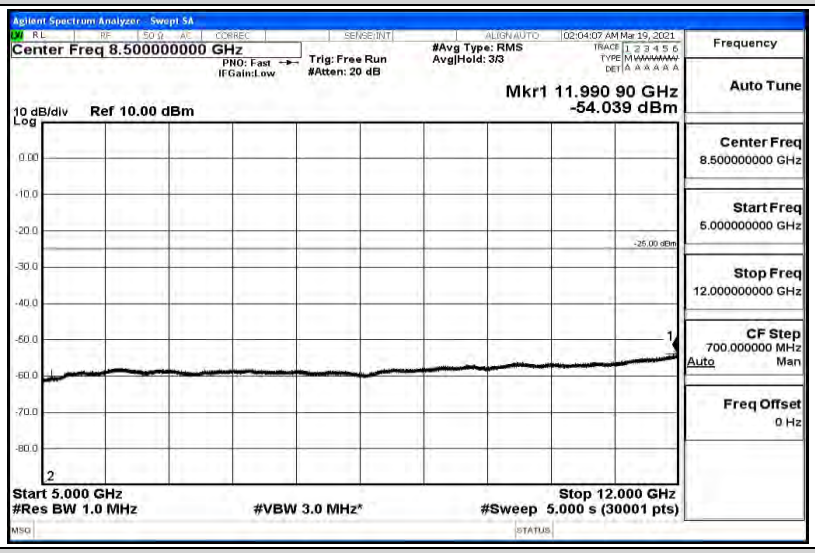
5MHz-QPSK-L-40265-1RB#0-Range3:30~1000MHz



5MHz-QPSK-L-1RB#0-Range4:1000~5000MHz

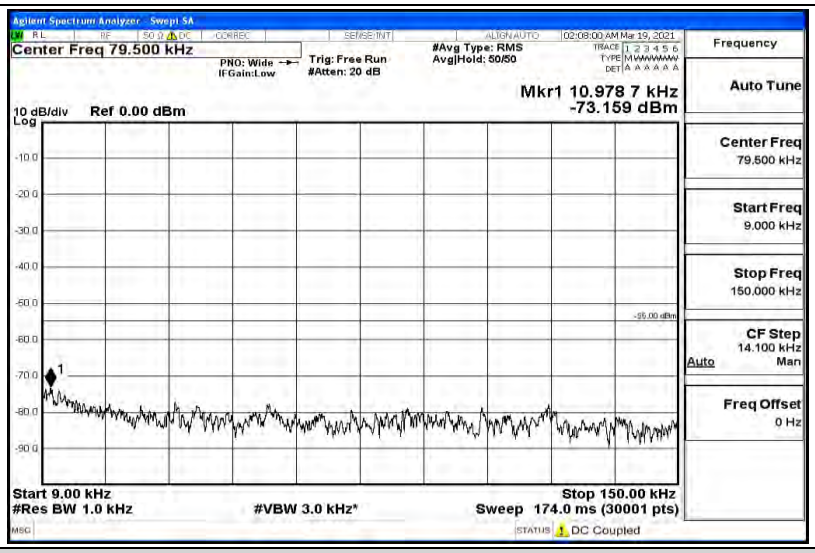


5MHz-QPSK-L-1RB#0-Range5:5000~12000MHz

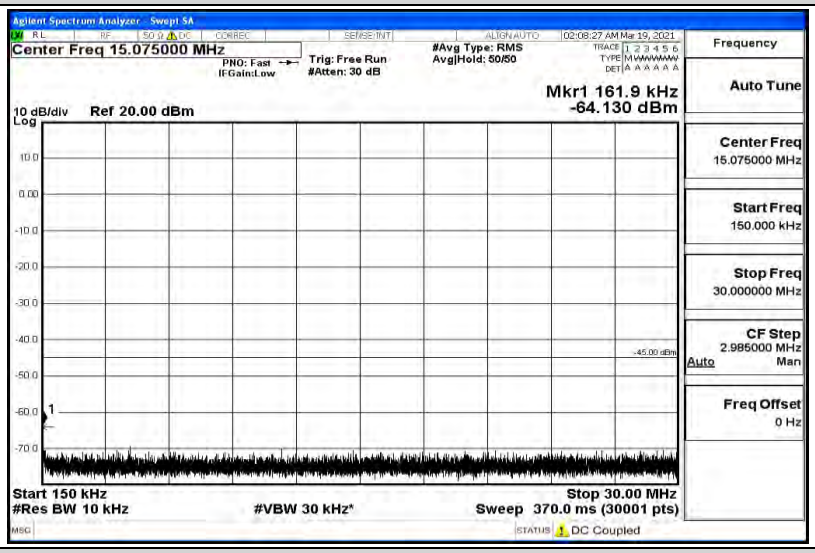


5MHz-QPSK-L-1RB#0-Range6:12000~26500MHz

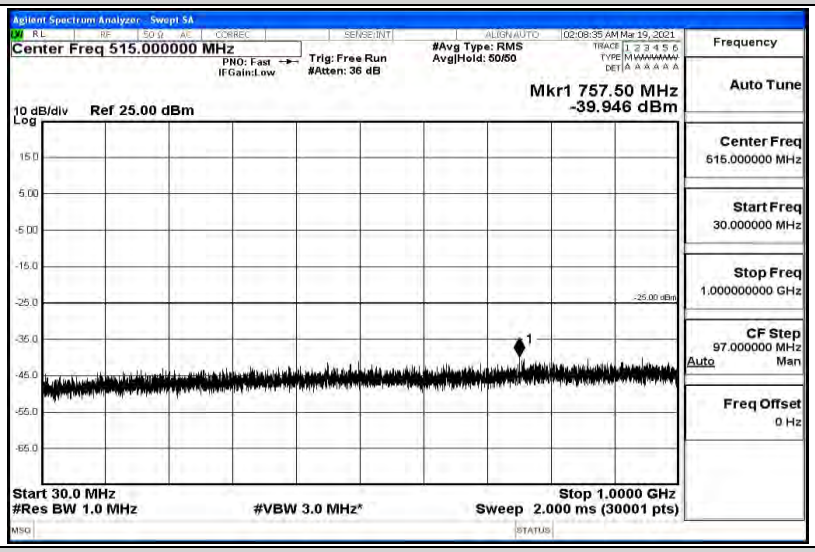
5MHz-QPSK-M-1RB#0-Range1:0.009~0.15MHz



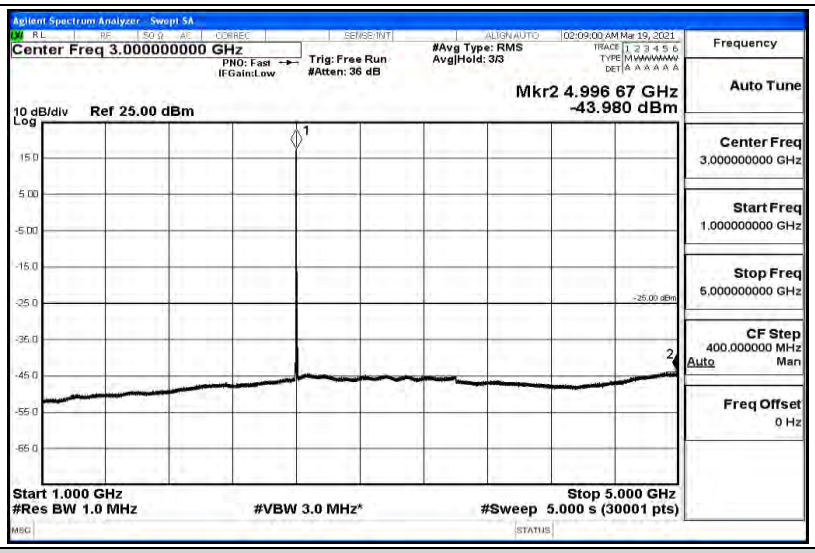
5MHz-QPSK-M -1RB#0-Range2:0.15~30MHz



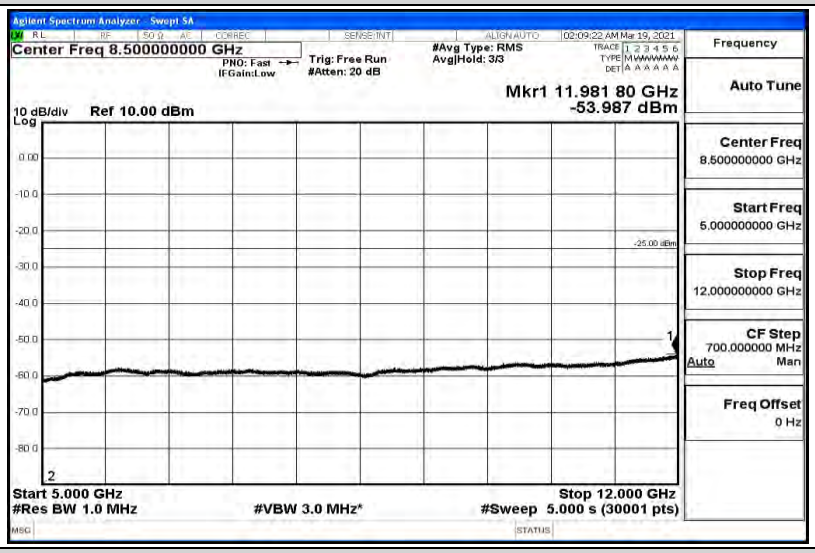
5MHz-QPSK-M -1RB#0-Range3:30~1000MHz



5MHz-QPSK-M -1RB#0-Range4:1000~5000MHz

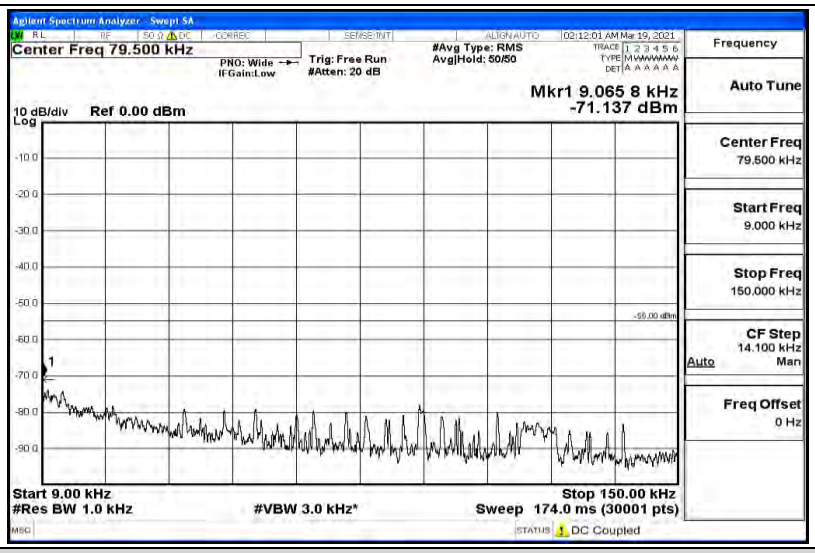


5MHz-QPSK-M -1RB#0-Range5:5000~12000MHz

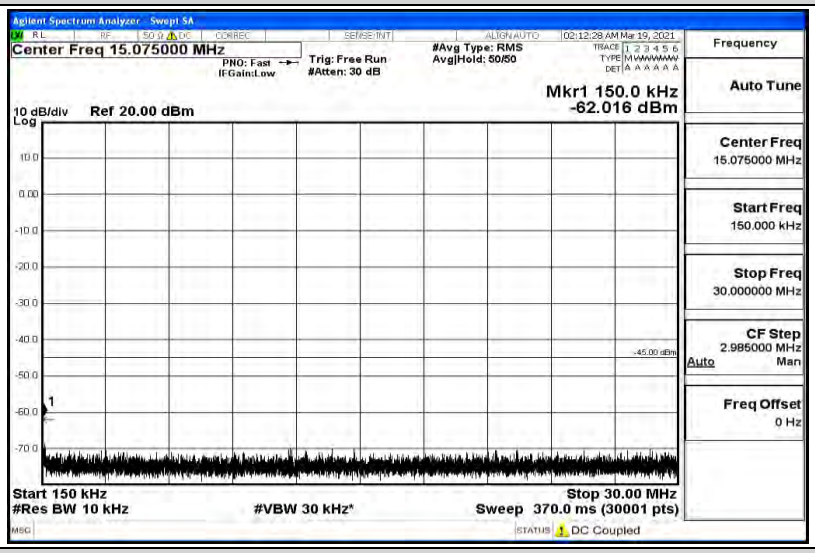


5MHz-QPSK-M -1RB#0-Range6:12000~26500MHz

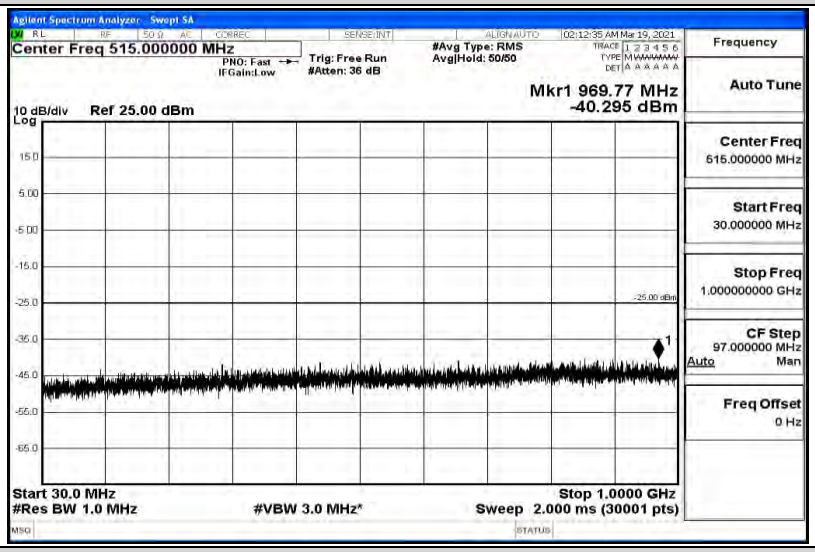
5MHz-QPSK-H-1RB#0-Range1:0.009~0.15MHz



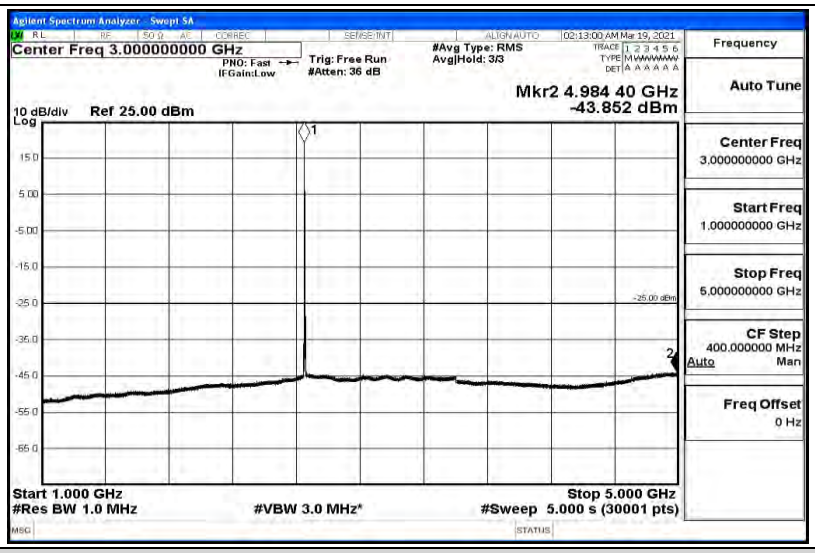
5MHz-QPSK-H-1RB#0-Range2:0.15~30MHz



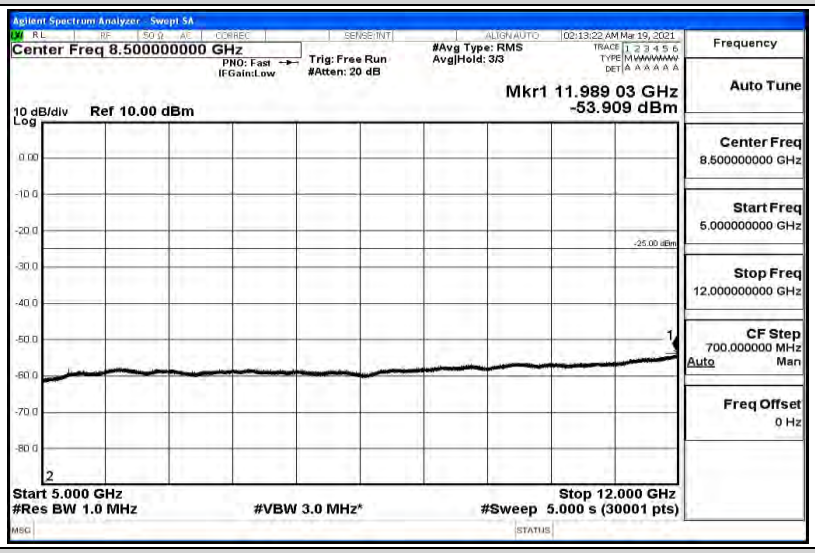
5MHz-QPSK-H-1RB#0-Range3:30~1000MHz



5MHz-QPSK-H-1RB#0-Range4:1000~5000MHz

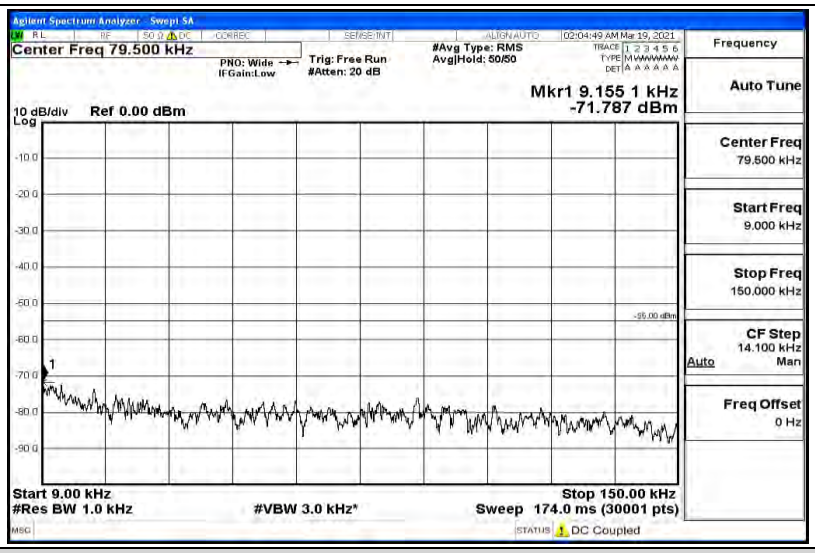


5MHz-QPSK-H-1RB#0-Range5:5000~12000MHz

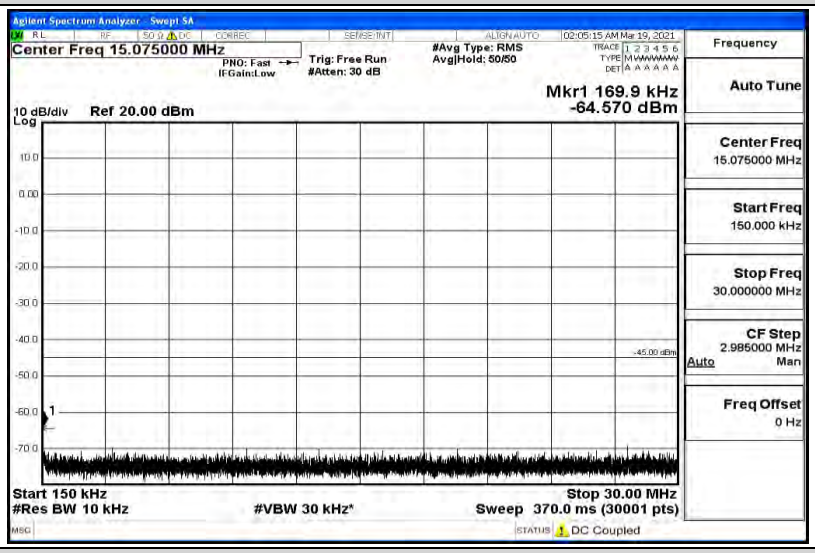


5MHz-QPSK-H-1RB#0-Range6:12000~26500MHz

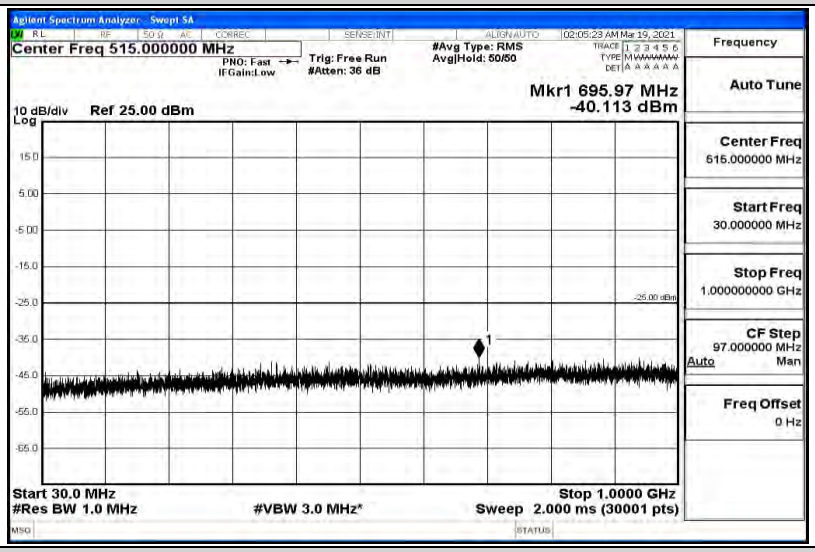
5MHz-16QAM-L-1RB#0-Range1:0.009~0.15MHz



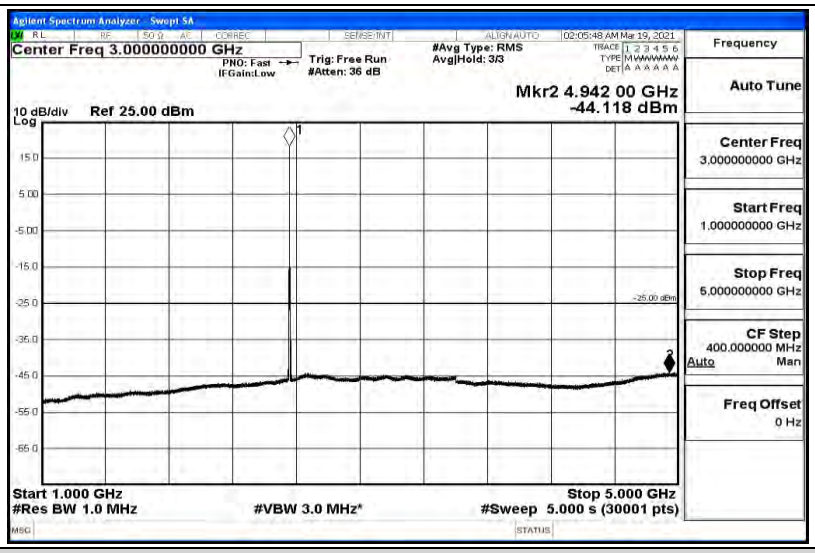
5MHz-16QAM-L -1RB#0-Range2:0.15~30MHz



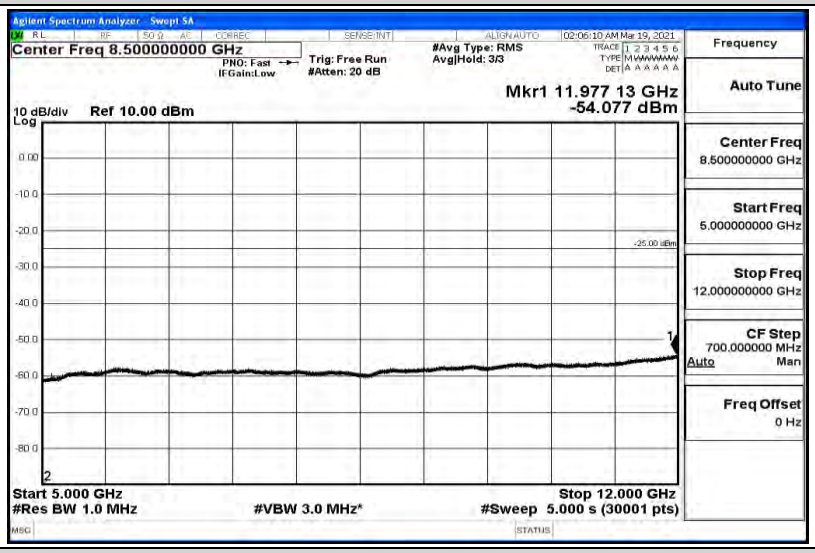
5MHz-16QAM-L -1RB#0-Range3:30~1000MHz



5MHz-16QAM-L -1RB#0-Range4:1000~5000MHz

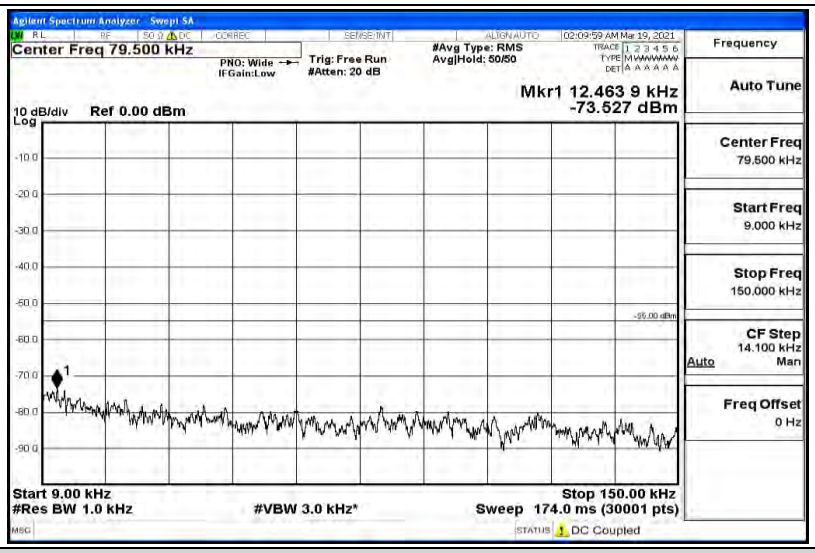


5MHz-16QAM-L-1RB#0-Range5:5000~12000MHz

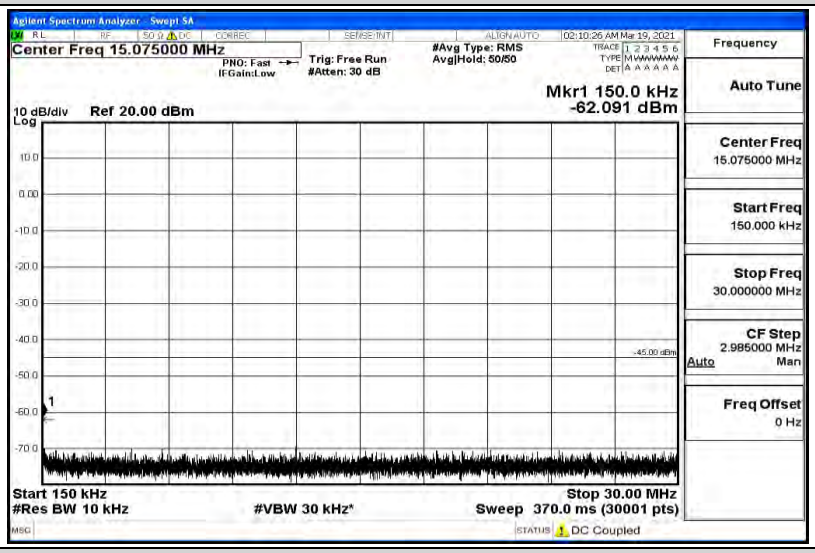


5MHz-16QAM-L-1RB#0-Range6:12000~26500MHz

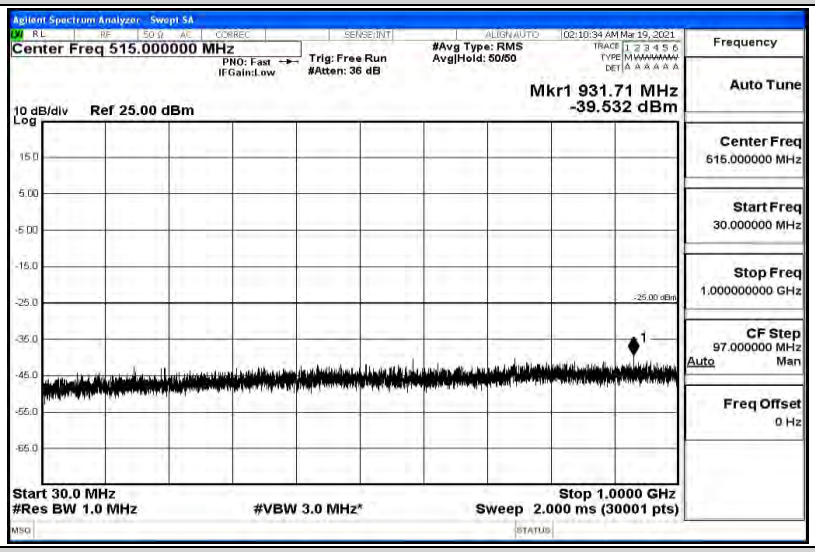
5MHz-16QAM-M-1RB#0-Range1:0.009~0.15MHz



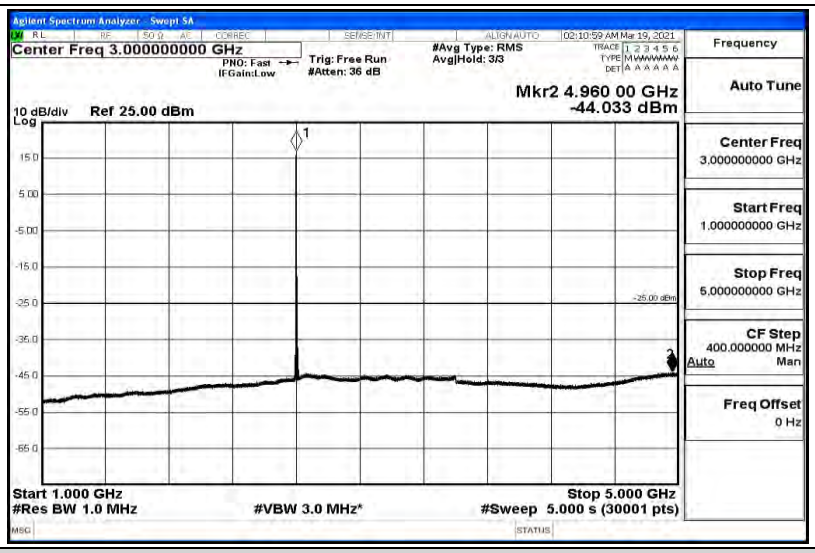
5MHz-16QAM-M -1RB#0-Range2:0.15~30MHz



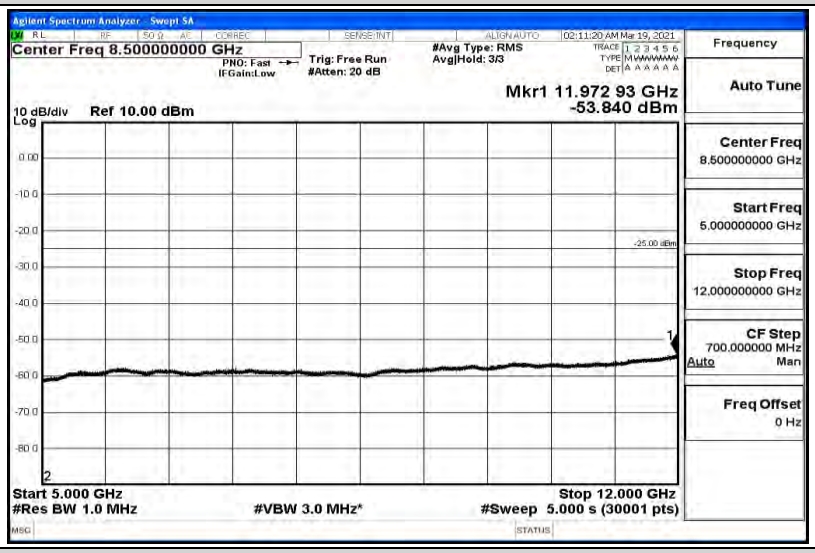
5MHz-16QAM-M -1RB#0-Range3:30~1000MHz



5MHz-16QAM-M -1RB#0-Range4:1000~5000MHz

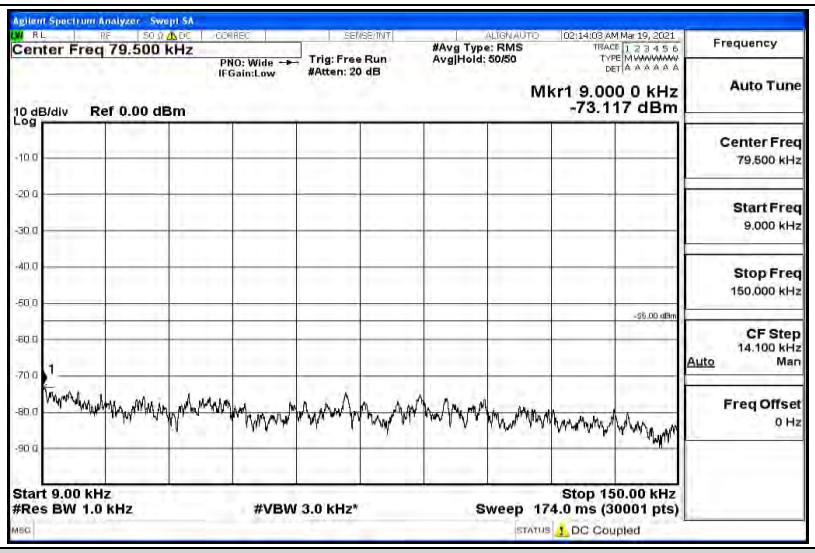


5MHz-16QAM-M -1RB#0-Range5:5000~12000MHz

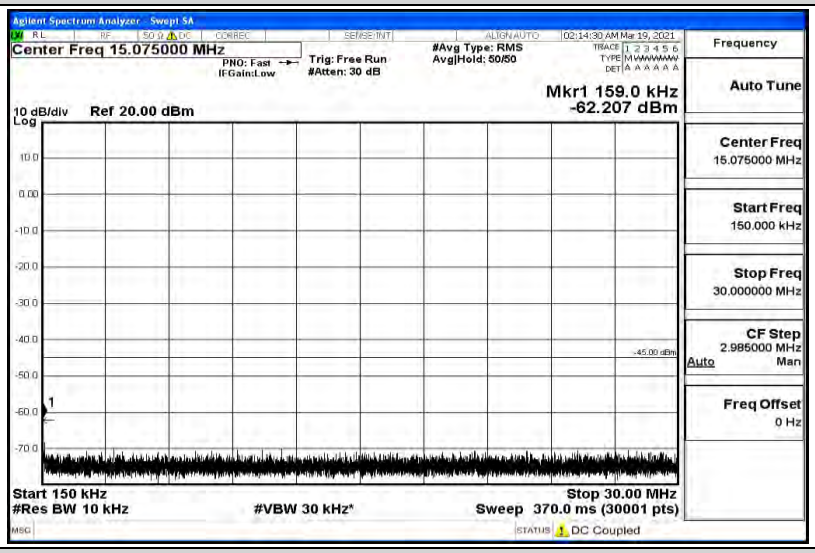


5MHz-16QAM-M -1RB#0-Range6:12000~26500MHz

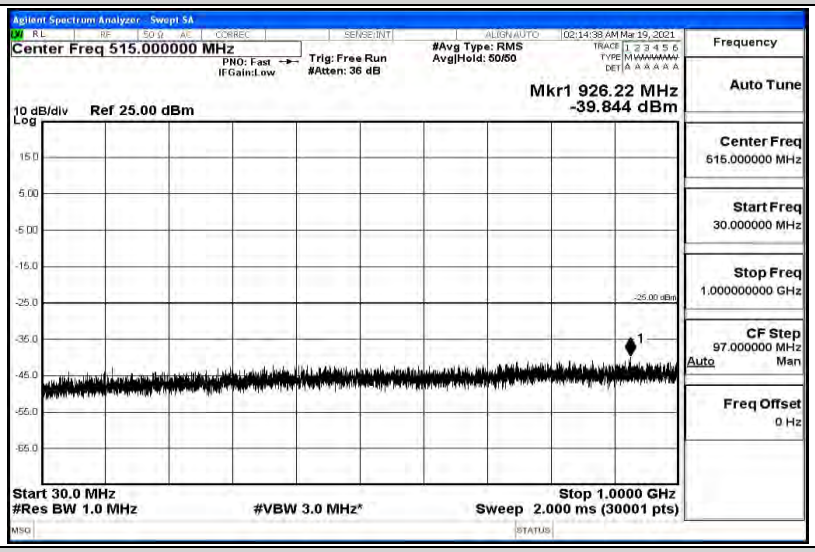
5MHz-16QAM-H-1RB#0-Range1:0.009~0.15MHz



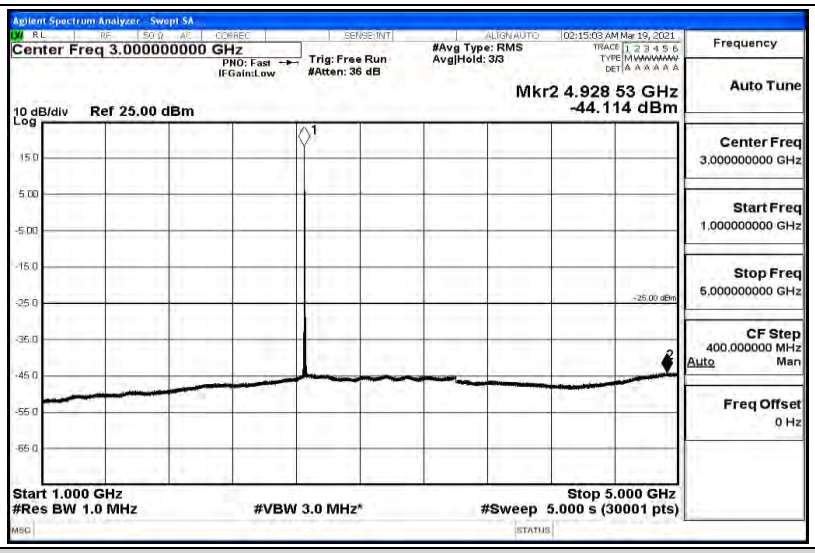
5MHz-16QAM-H-1RB#0-Range2:0.15~30MHz



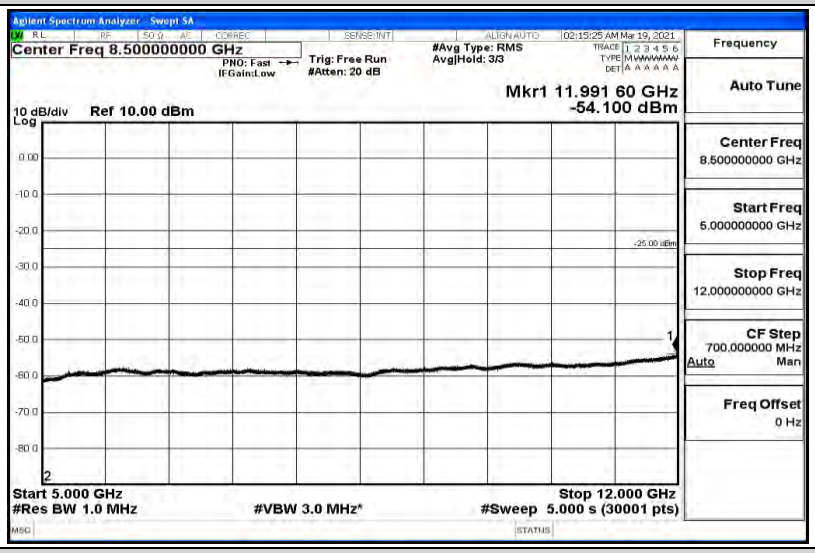
5MHz-16QAM-H -1RB#0-Range3:30~1000MHz



5MHz-16QAM-H -1RB#0-Range4:1000~5000MHz



5MHz-16QAM-H -1RB#0-Range5:5000~12000MHz



5MHz-16QAM-H -1RB#0-Range6:12000~26500MHz

10MHz-QPSK-L-1RB#0-Range1:0.009~0.15MHz