

Appendix I: Test Data for E-UTRA Band 7

Product Name: KIDS WATCH

Test Model: BUBBLE

Environmental Conditions

Temperature:	23.7 °C
Relative Humidity:	53.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Wang Chuang

I.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	22.91	22.21	PASS
		1	12	23.30	22.49	PASS
		1	24	23.02	22.30	PASS
		12	0	22.03	21.16	PASS
		12	6	22.18	21.34	PASS
		12	13	22.07	21.25	PASS
		25	0	22.94	22.25	PASS
	MCH	1	0	22.57	21.43	PASS
		1	12	22.99	21.92	PASS
		1	24	22.68	21.58	PASS
		12	0	22.59	21.66	PASS
		12	6	22.74	21.79	PASS
		12	13	22.68	21.83	PASS
		25	0	22.56	21.43	PASS
	HCH	1	0	22.68	21.73	PASS
		1	12	22.27	21.27	PASS
		1	24	22.15	21.15	PASS
		12	0	22.99	21.91	PASS
		12	6	22.58	21.66	PASS
		12	13	22.66	21.68	PASS
		25	0	22.67	21.76	PASS

Conducted Output Power Test Result (Channel Bandwidth: 10 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict
		Size	O11set			
QPSK / 16QAM	LCH	1	0	22.91	22.08	PASS
		1	24	23.19	22.47	PASS
		1	49	22.89	22.10	PASS
		25	0	22.15	21.16	PASS
		25	12	22.16	21.21	PASS
		25	25	22.13	21.11	PASS
		50	0	22.96	22.13	PASS
	MCH	1	0	22.40	21.68	PASS
		1	24	22.87	22.05	PASS
		1	49	22.78	22.00	PASS
		25	0	22.66	21.68	PASS
		25	12	22.82	21.80	PASS
		25	25	22.82	21.78	PASS
		50	0	22.42	21.61	PASS
	HCH	1	0	22.53	21.90	PASS
		1	24	22.96	22.30	PASS
		1	49	22.15	21.51	PASS
		25	0	22.79	21.82	PASS
		25	12	22.96	21.91	PASS
		25	25	22.12	21.14	PASS
		50	0	22.50	21.88	PASS

Conducted Output Power Test Result (Channel Bandwidth: 15 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict
		Size	O11set			
QPSK / 16QAM	LCH	1	0	22.87	22.08	PASS
		1	37	23.18	22.36	PASS
		1	74	22.43	21.69	PASS
		37	0	22.29	21.08	PASS
		37	18	22.16	21.10	PASS
		37	38	22.98	21.90	PASS
		75	0	22.84	22.10	PASS
	MCH	1	0	22.22	21.55	PASS
		1	37	22.88	22.03	PASS
		1	74	22.75	21.82	PASS
		37	0	22.61	21.53	PASS
		37	18	22.79	21.81	PASS
		37	38	22.86	21.87	PASS
		75	0	22.26	21.54	PASS
	HCH	1	0	22.47	21.73	PASS
		1	37	22.84	22.05	PASS
		1	74	22.12	21.27	PASS
		37	0	22.60	21.62	PASS
		37	18	22.80	21.82	PASS
		37	38	22.73	21.71	PASS
		75	0	22.85	22.13	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	22.80	21.90	PASS
		1	49	23.15	22.32	PASS
		1	99	22.10	21.15	PASS
		50	0	22.35	21.37	PASS
		50	25	22.40	21.41	PASS
		50	50	22.70	21.73	PASS
		100	0	22.83	21.90	PASS
	MCH	1	0	22.20	21.36	PASS
		1	49	22.98	22.06	PASS
		1	99	22.51	21.64	PASS
		50	0	22.55	21.53	PASS
		50	25	22.83	21.78	PASS
		50	50	22.87	21.87	PASS
		100	0	22.14	21.30	PASS
	HCH	1	0	22.75	22.07	PASS
		1	49	22.78	22.08	PASS
		1	99	22.98	22.22	PASS
		50	0	22.82	21.86	PASS
		50	25	22.78	21.79	PASS
		50	50	22.97	22.02	PASS
		100	0	22.74	22.06	PASS

I.2 Peak-to-Average Ratio

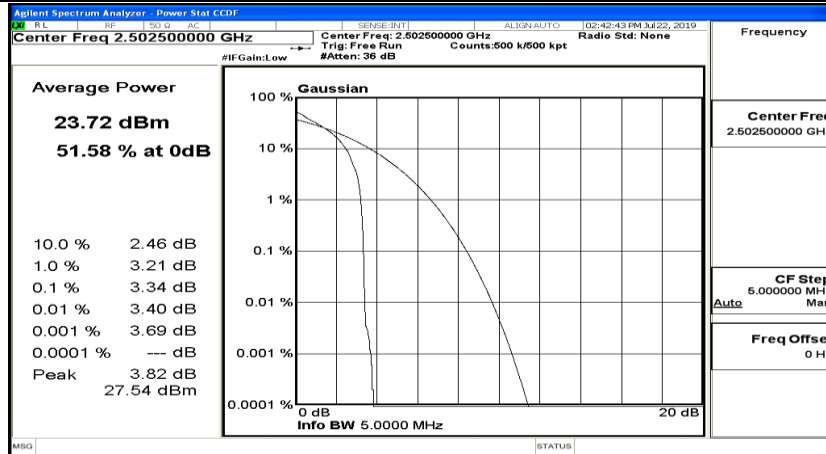
Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	3.34	<13	PASS
	MCH	3.85	<13	PASS
	HCH	4.17	<13	PASS
16QAM	LCH	4.31	<13	PASS
	MCH	4.61	<13	PASS
	HCH	5.03	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	3.37	<13	PASS
	MCH	3.98	<13	PASS
	HCH	4.26	<13	PASS
16QAM	LCH	4.3	<13	PASS
	MCH	4.89	<13	PASS
	HCH	5.19	<13	PASS

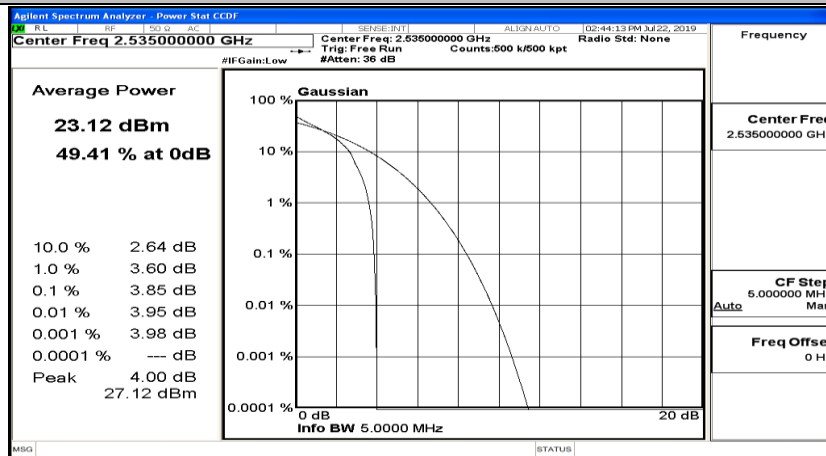
Peak-to Average Ratio Test Result (Channel Bandwidth: 15 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	3.52	<13	PASS
	MCH	3.36	<13	PASS
	HCH	3.93	<13	PASS
16QAM	LCH	4.38	<13	PASS
	MCH	4.28	<13	PASS
	HCH	4.84	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 20 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	3.58	<13	PASS
	MCH	3.41	<13	PASS
	HCH	3.93	<13	PASS
16QAM	LCH	4.29	<13	PASS
	MCH	4.11	<13	PASS
	HCH	4.70	<13	PASS

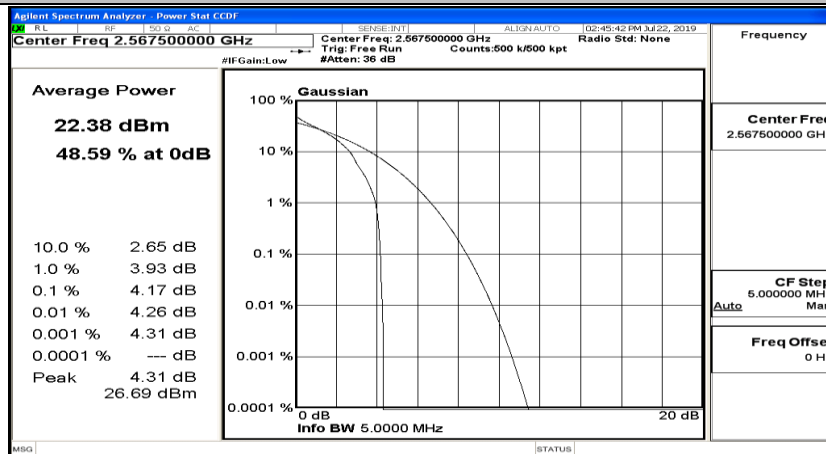
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



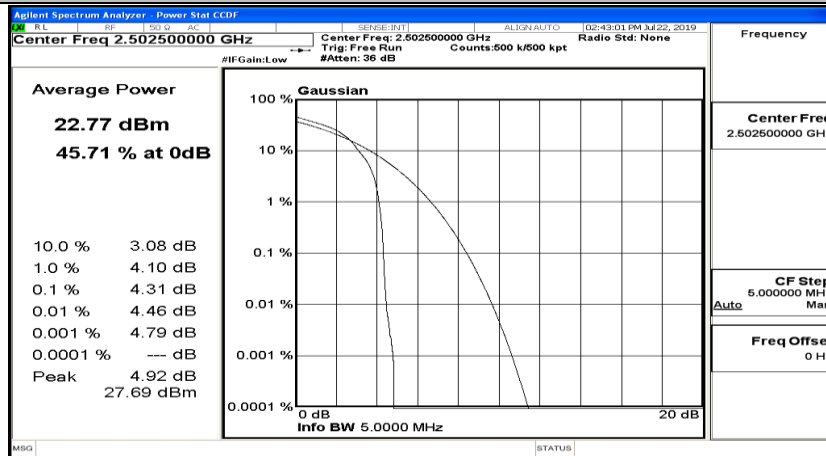
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



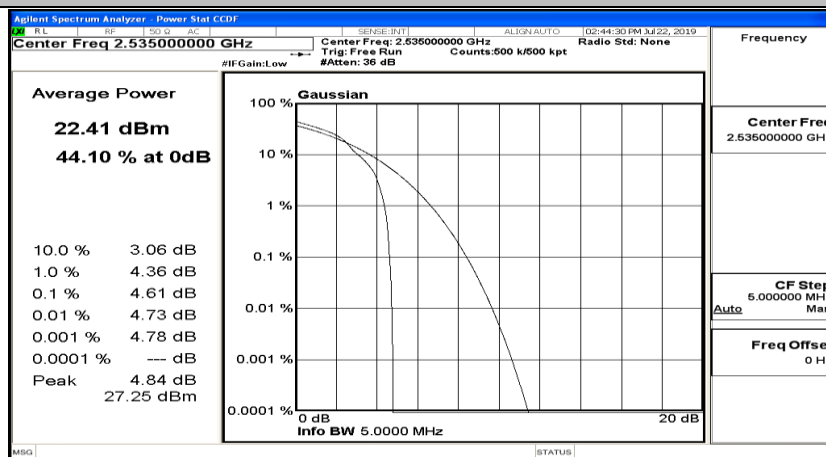
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



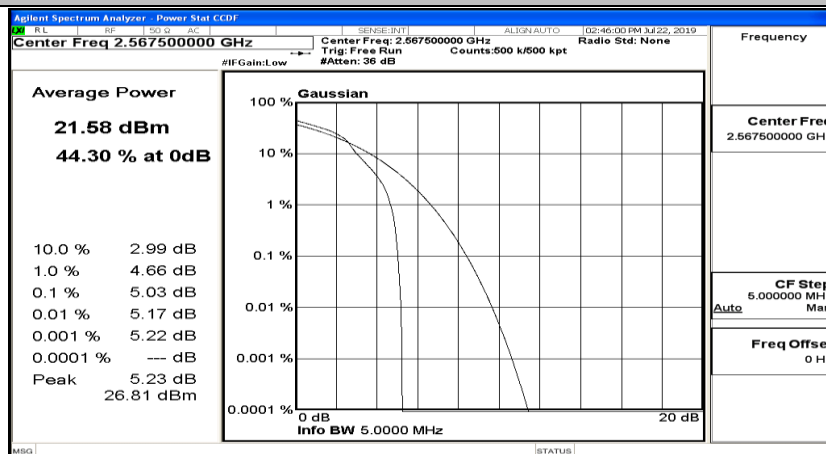
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



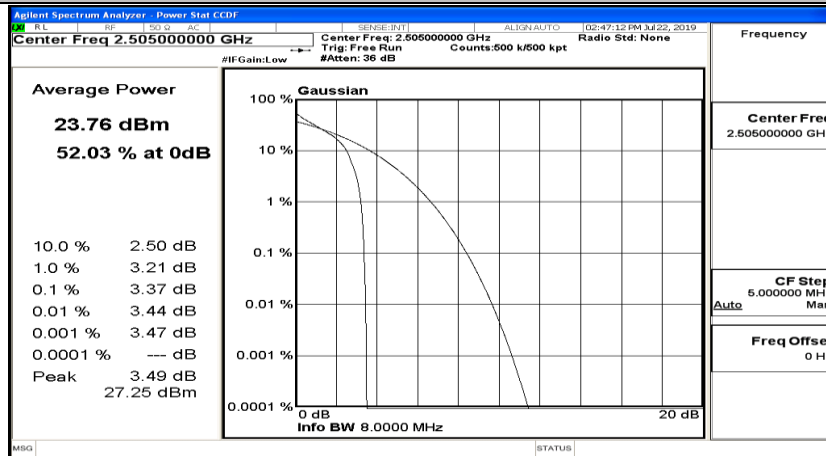
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



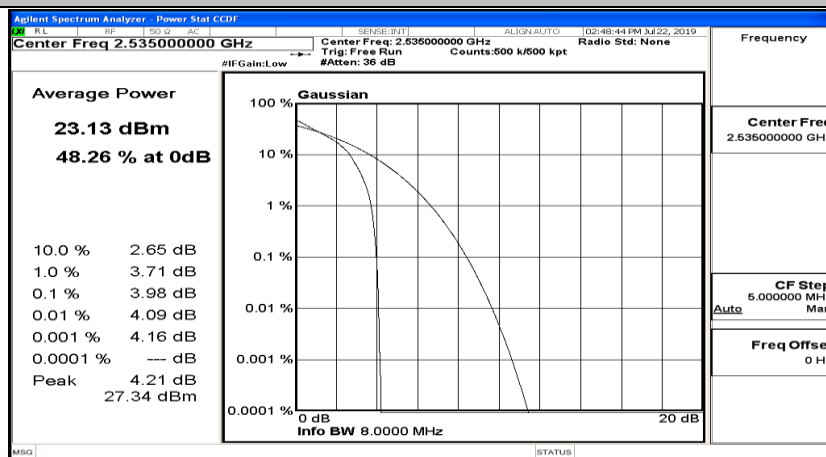
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



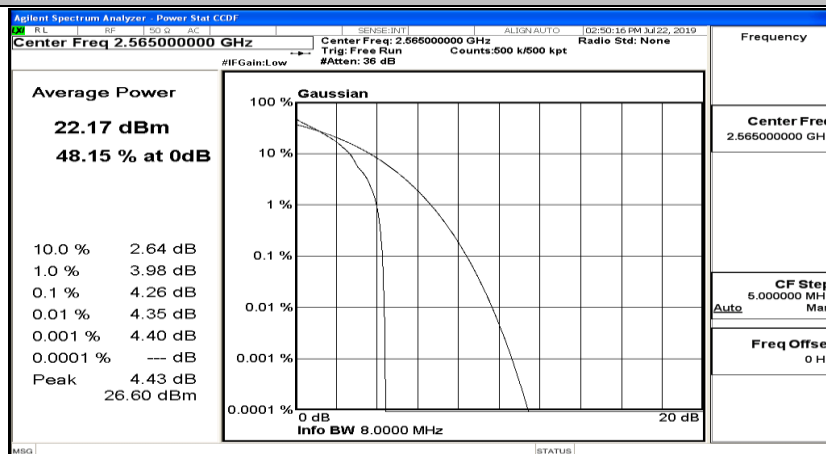
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



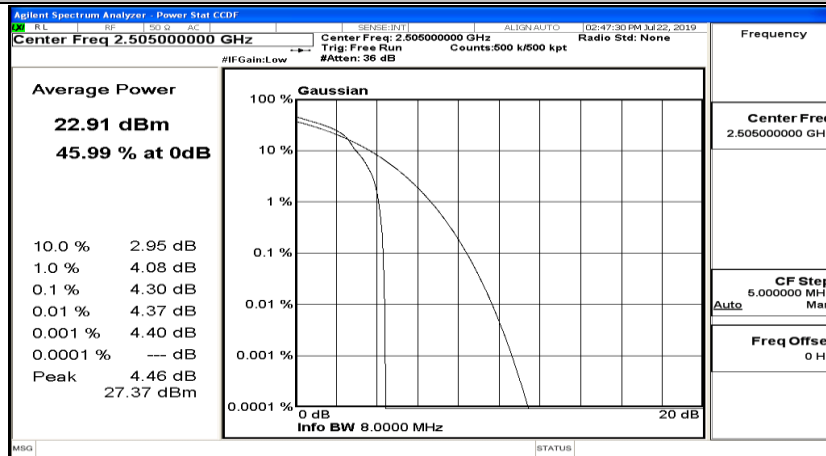
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



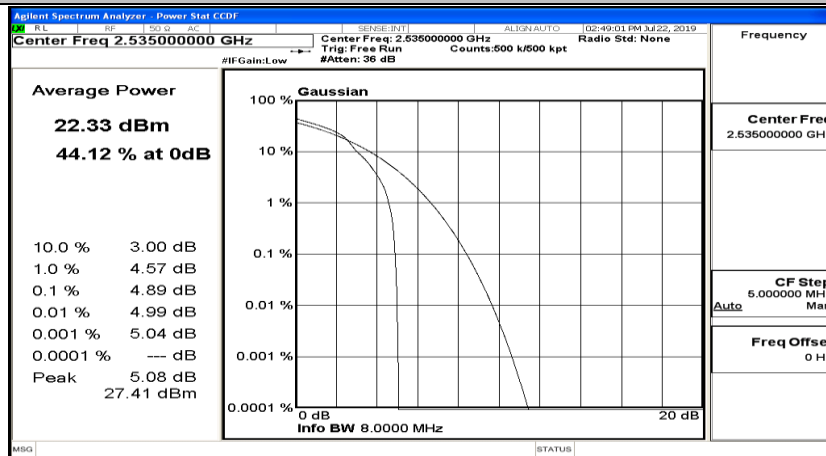
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



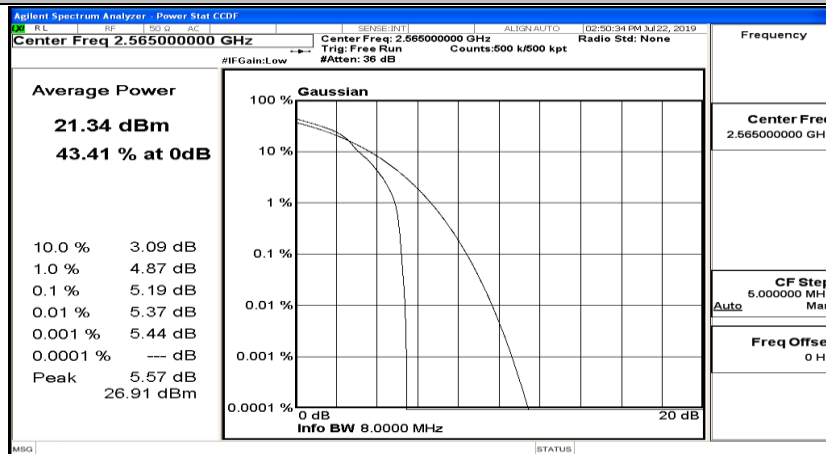
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



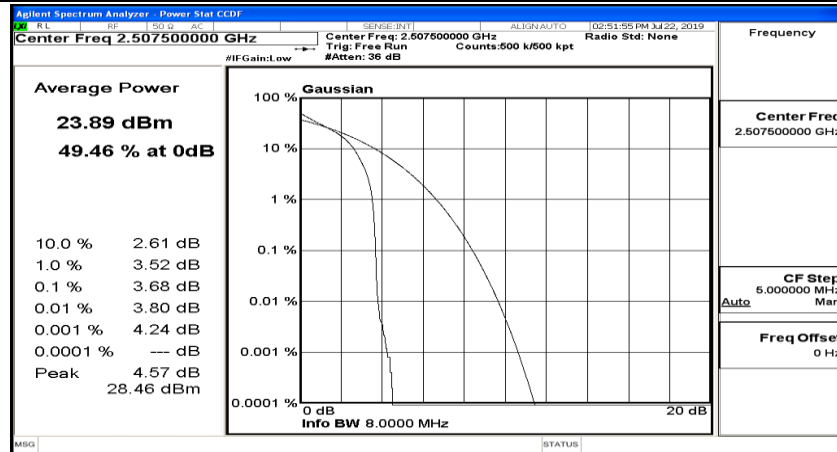
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_16QAM



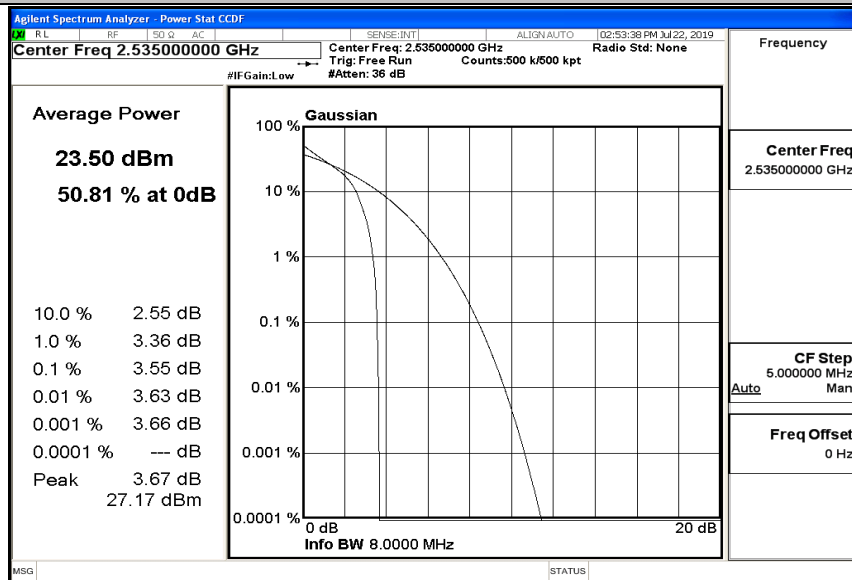
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM



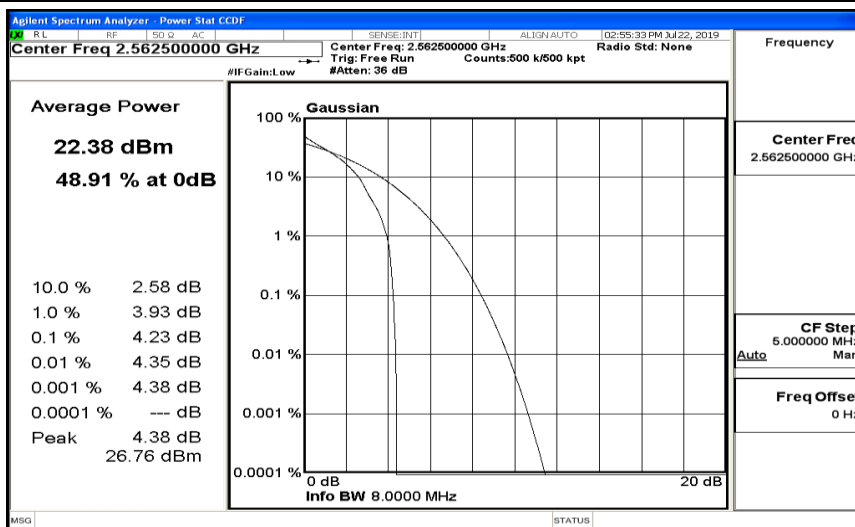
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_QPSK



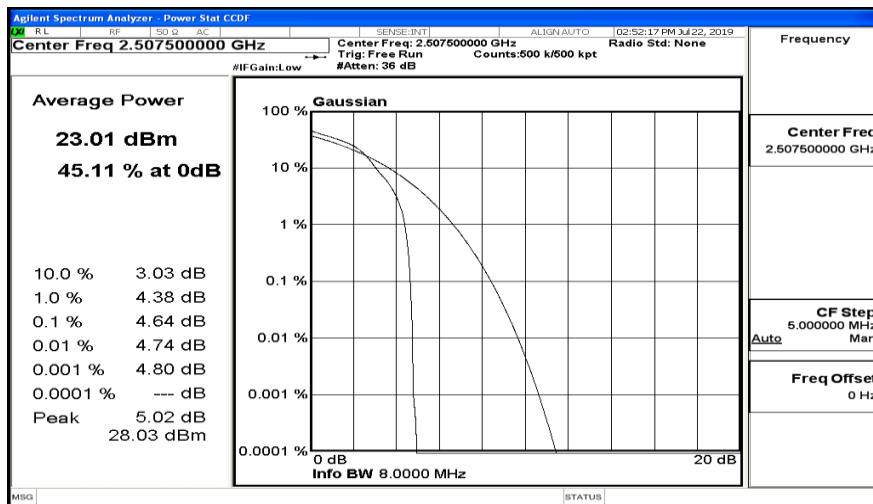
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_QPSK



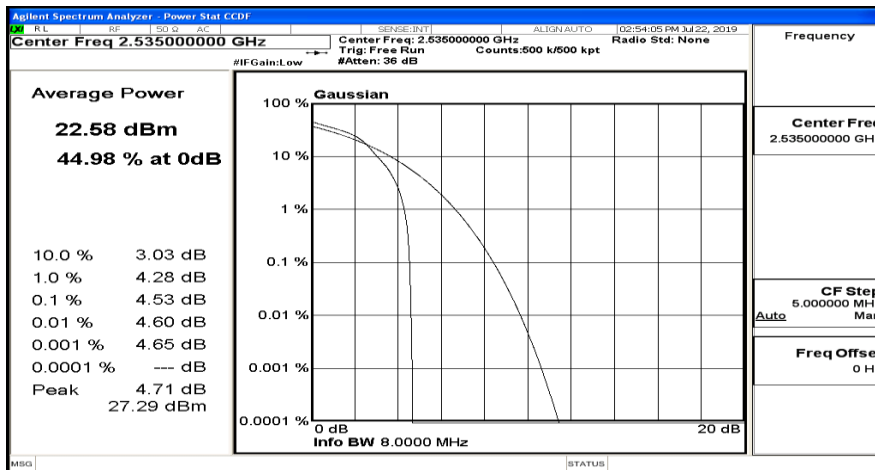
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_QPSK



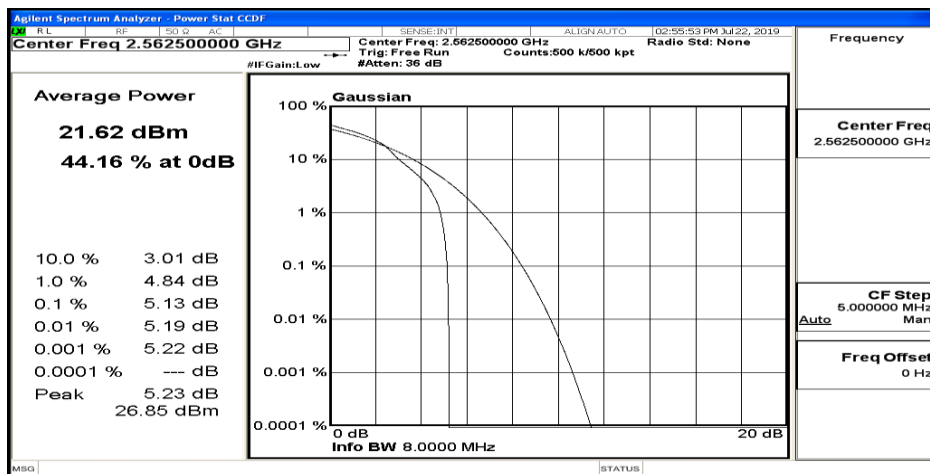
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_16QAM



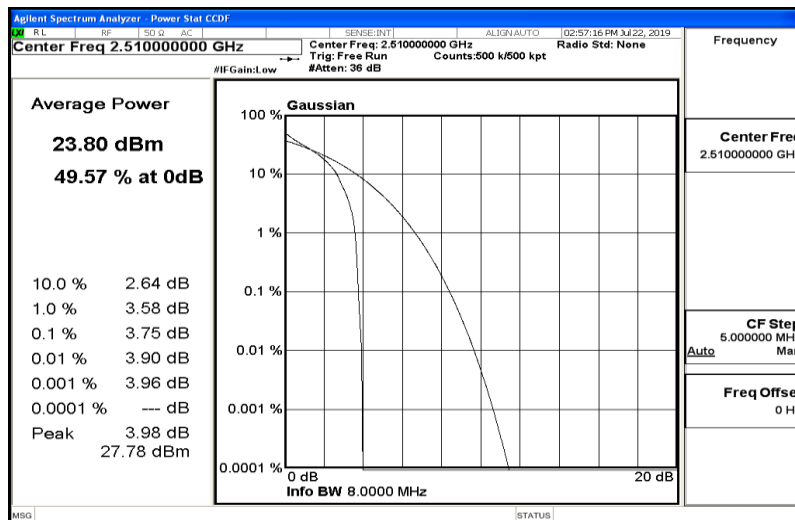
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_16QAM



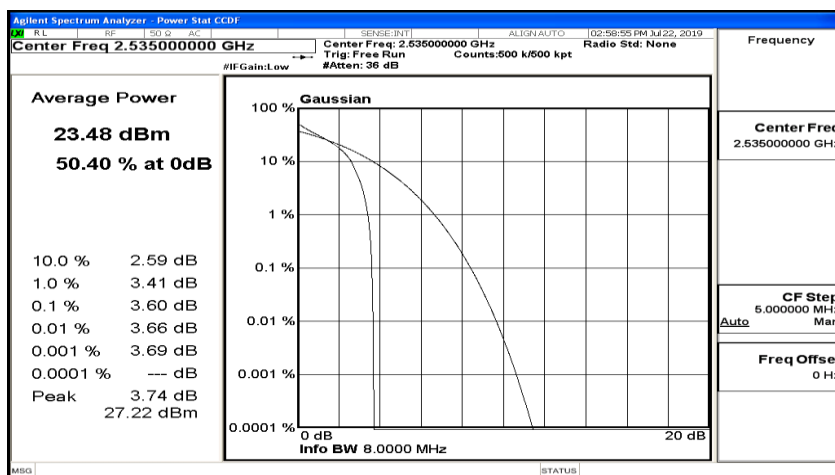
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_16QAM



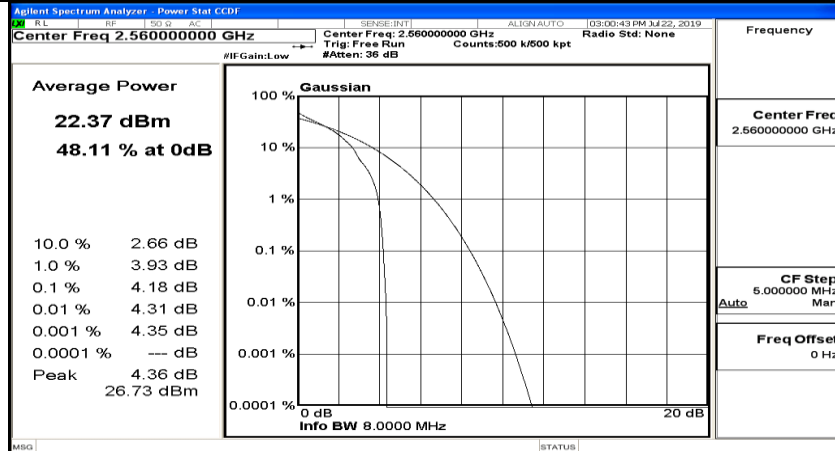
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_QPSK



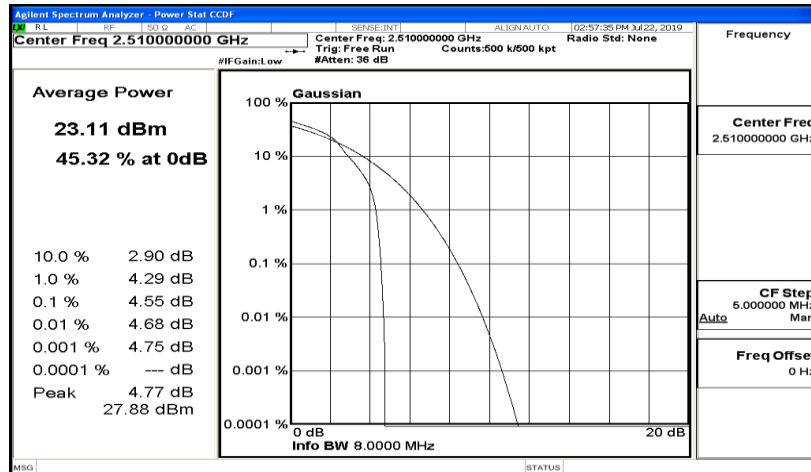
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_QPSK



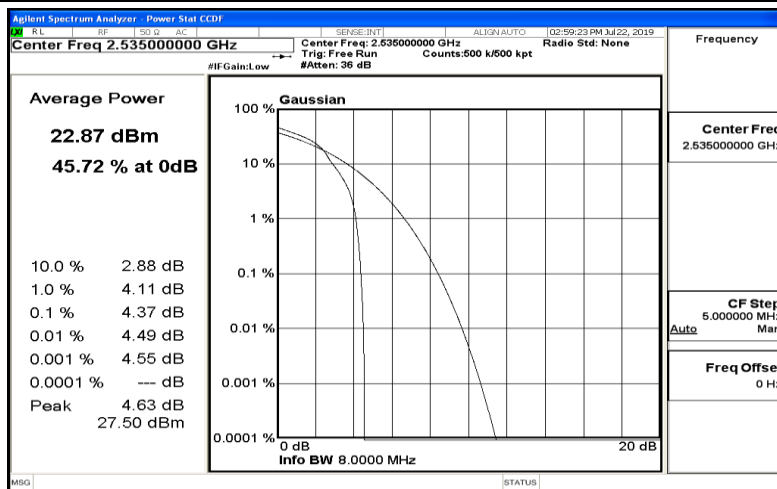
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_QPSK



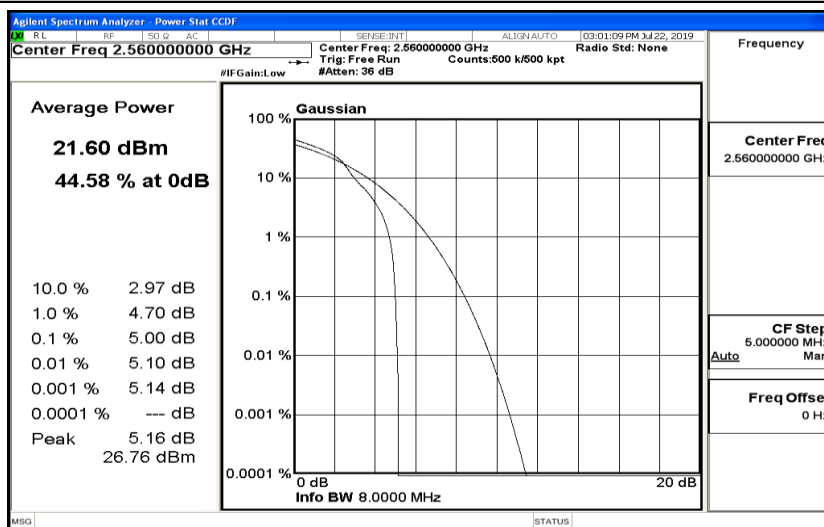
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_16QAM



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



I.3 26dB Bandwidth and Occupied Bandwidth

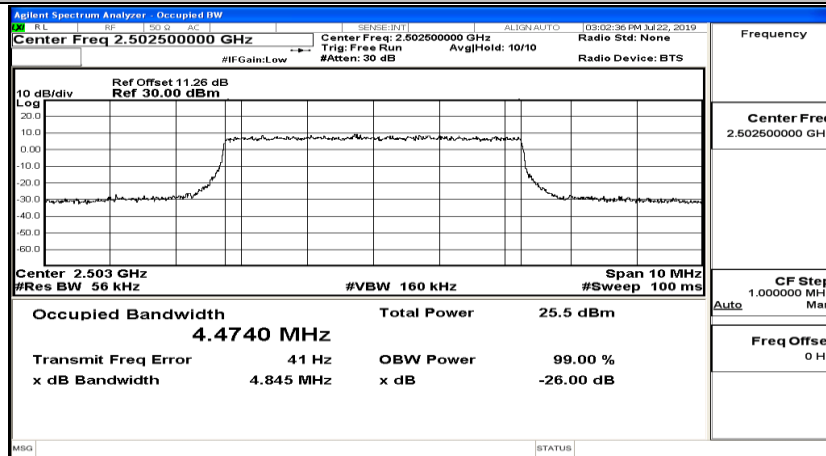
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4740	4.845	PASS
	MCH	4.4715	4.915	PASS
	HCH	4.4863	4.923	PASS
16QAM	LCH	4.4719	4.855	PASS
	MCH	4.4820	4.831	PASS
	HCH	4.4746	4.914	PASS

EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	8.9389	9.543	PASS
	MCH	8.9459	9.506	PASS
	HCH	8.9388	9.571	PASS
16QAM	LCH	8.9342	9.465	PASS
	MCH	8.9403	9.622	PASS
	HCH	8.9484	9.513	PASS

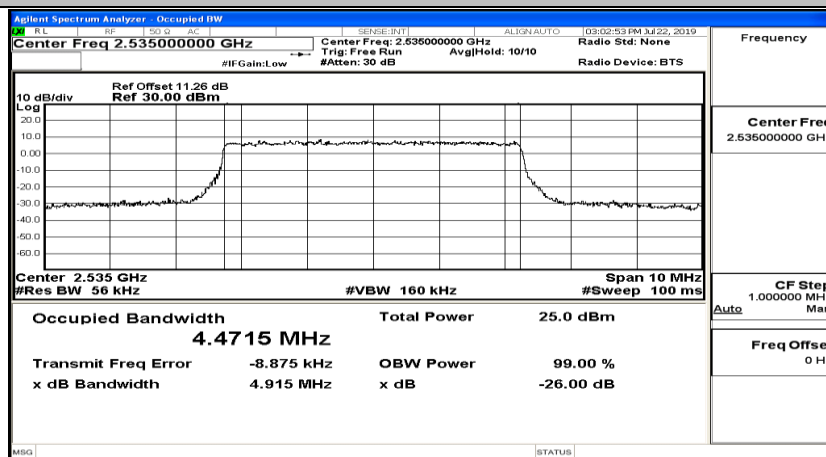
EBW & OBW Test Result (Channel Bandwidth: 15 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	13.402	14.14	PASS
	MCH	13.396	14.26	PASS
	HCH	13.417	14.26	PASS
16QAM	LCH	13.407	14.13	PASS
	MCH	13.401	14.15	PASS
	HCH	13.417	14.18	PASS

EBW & OBW Test Result (Channel Bandwidth: 20 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	17.860	18.69	PASS
	MCH	17.856	18.62	PASS
	HCH	17.885	18.70	PASS
16QAM	LCH	17.877	18.74	PASS
	MCH	17.864	18.64	PASS
	HCH	17.861	18.61	PASS

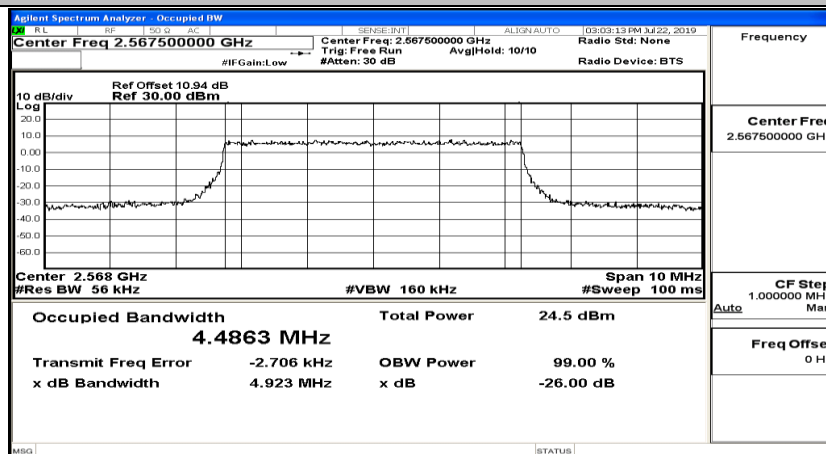
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



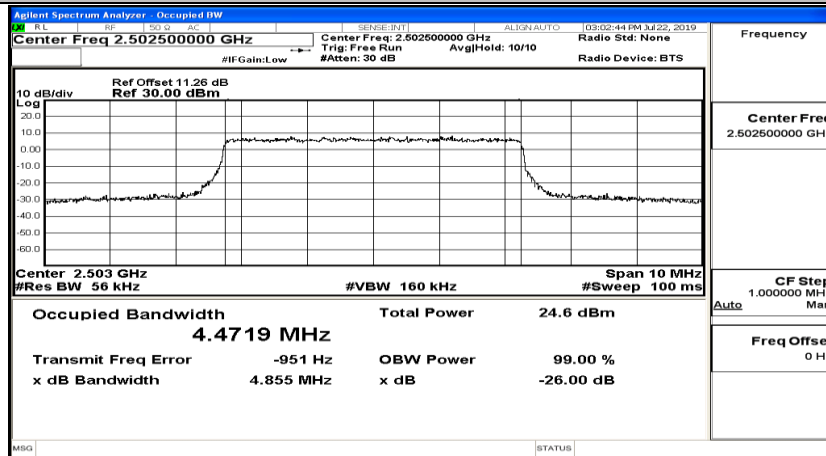
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



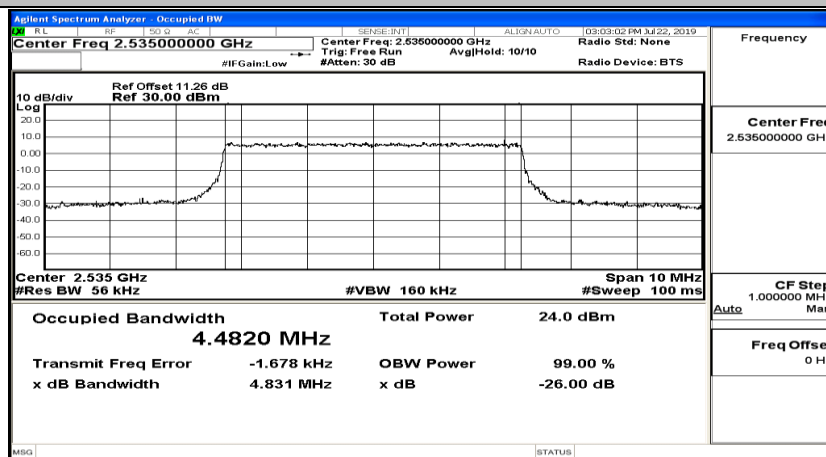
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



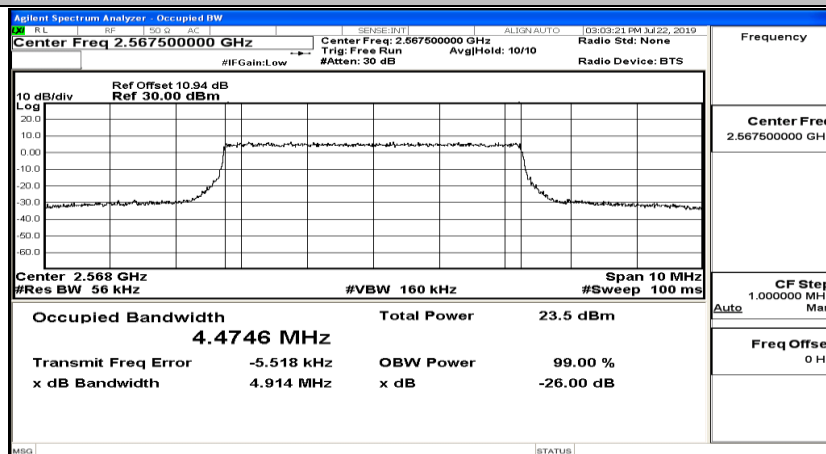
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



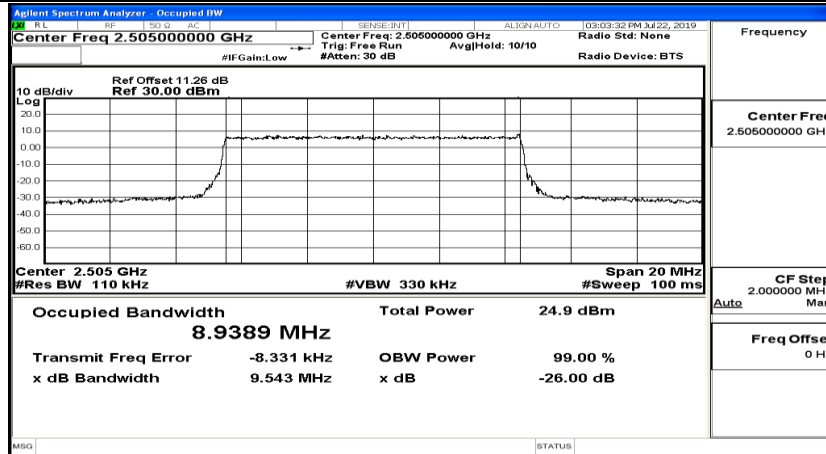
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



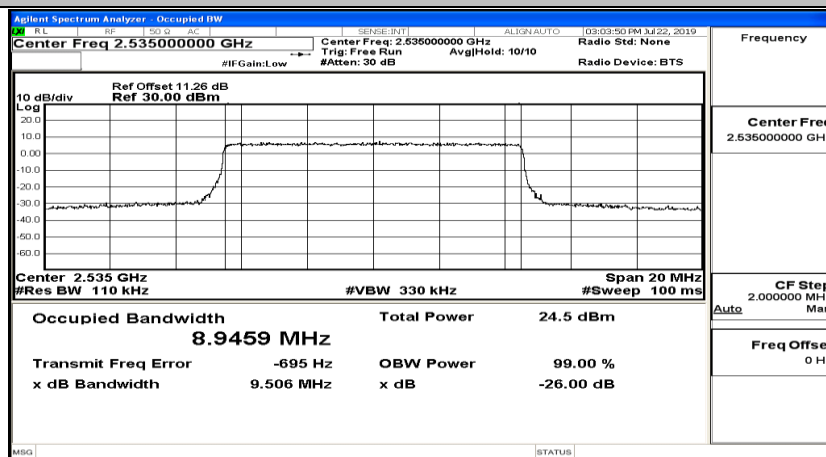
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



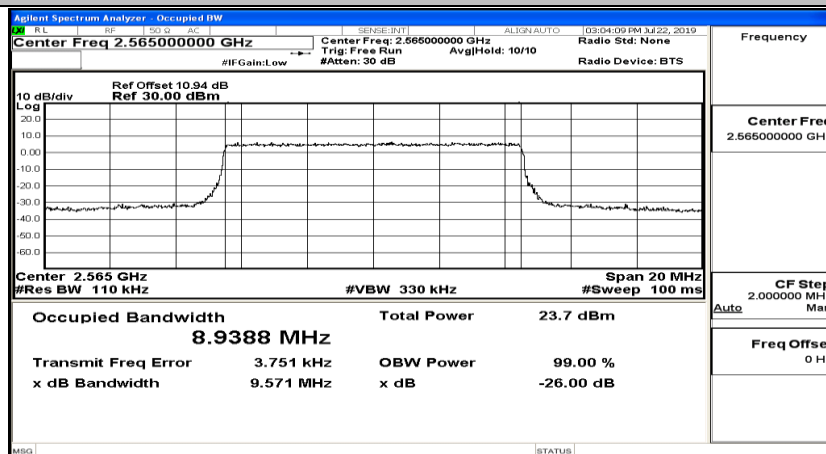
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



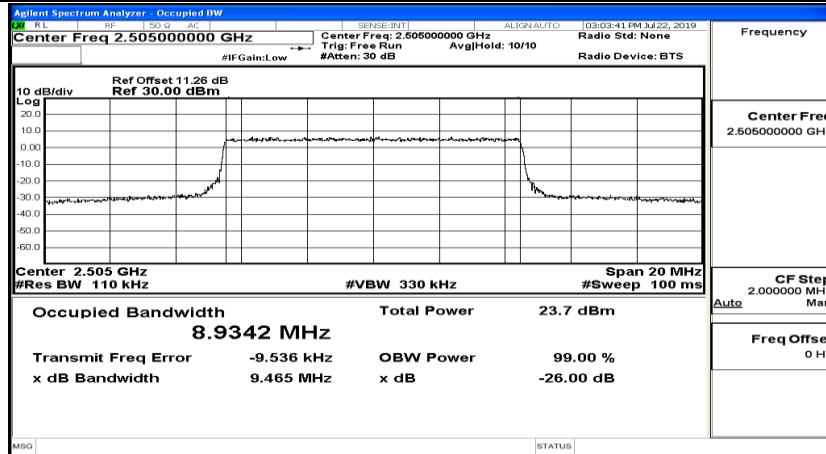
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



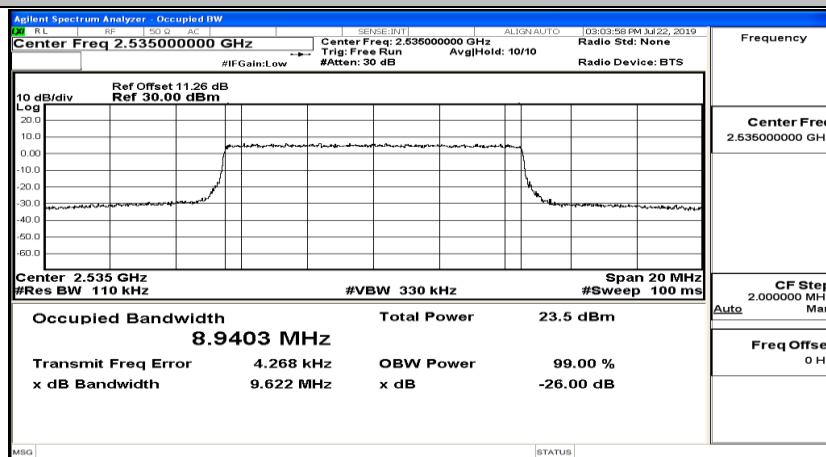
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



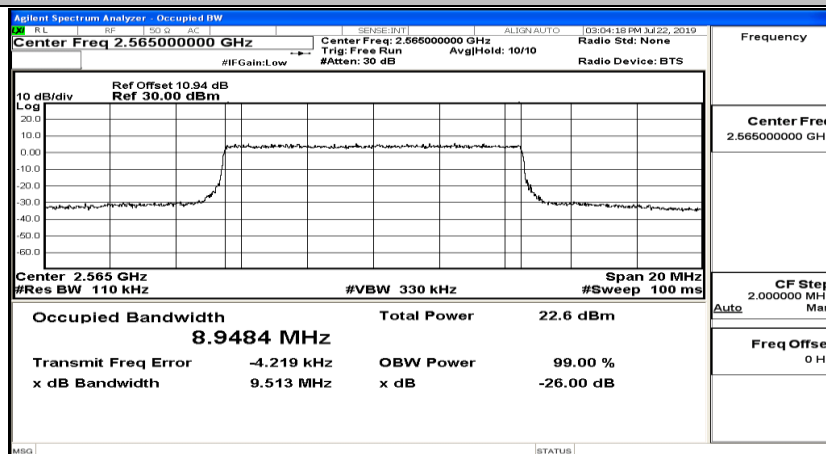
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



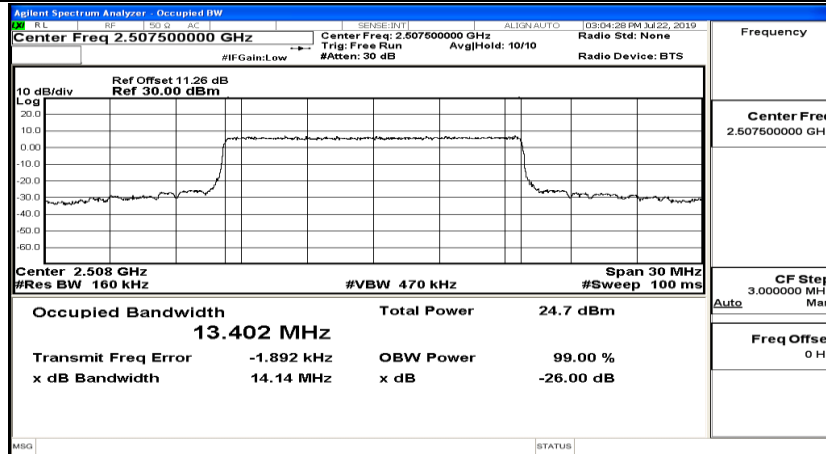
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_16QAM



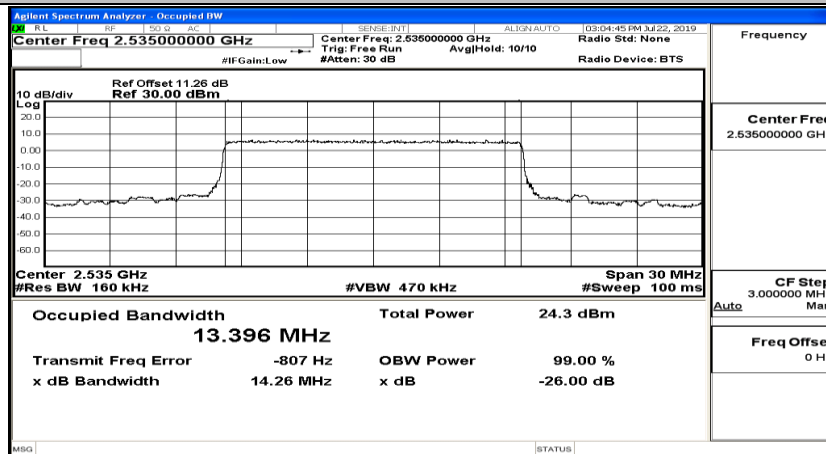
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM



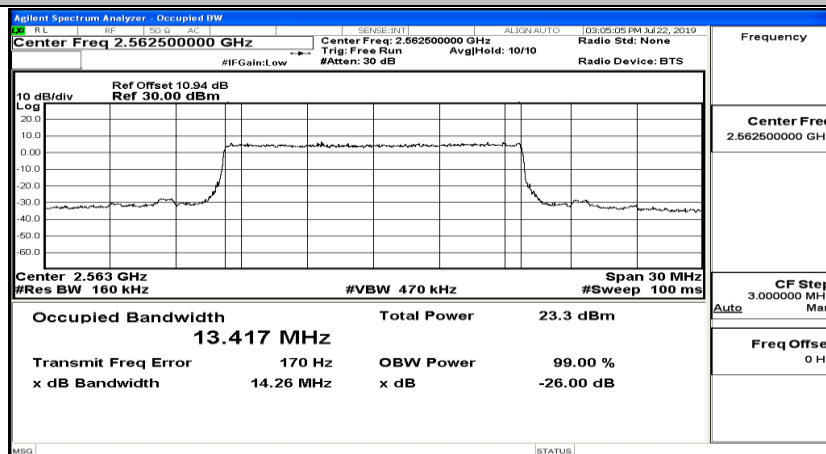
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_QPSK



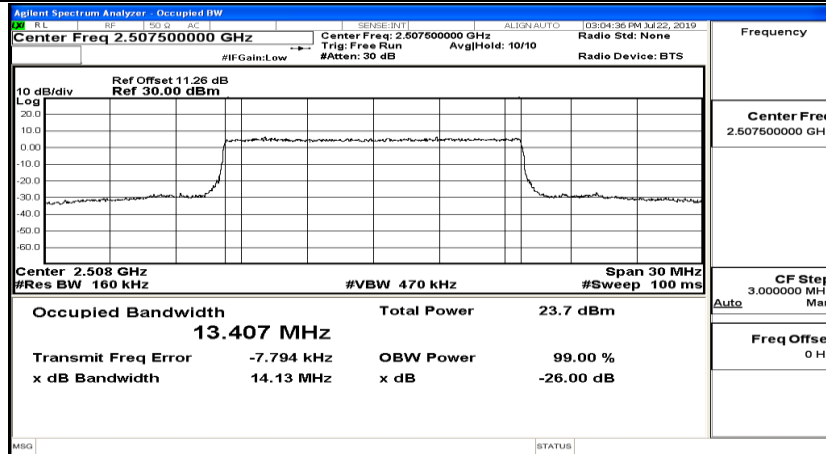
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_QPSK



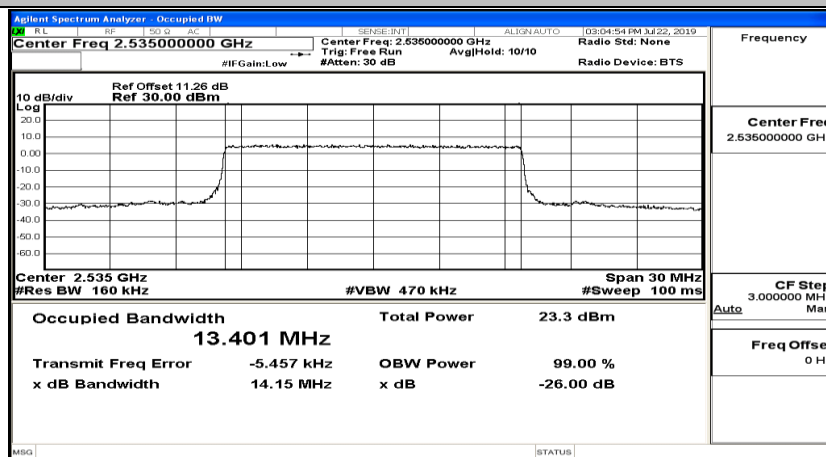
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_QPSK



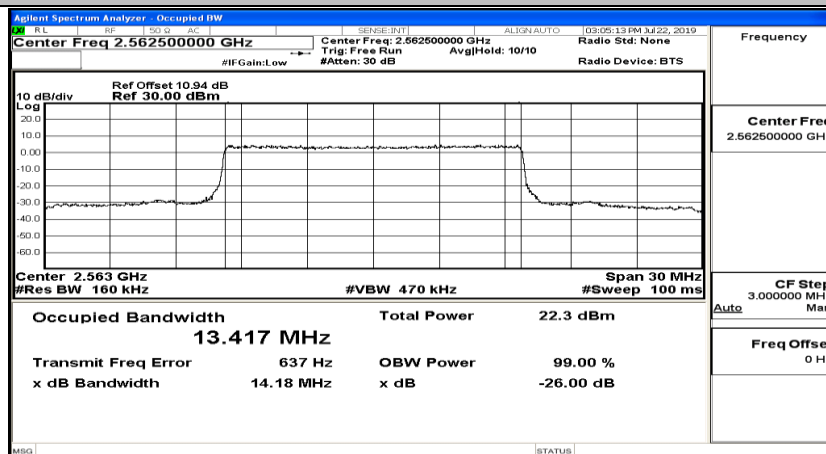
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_16QAM



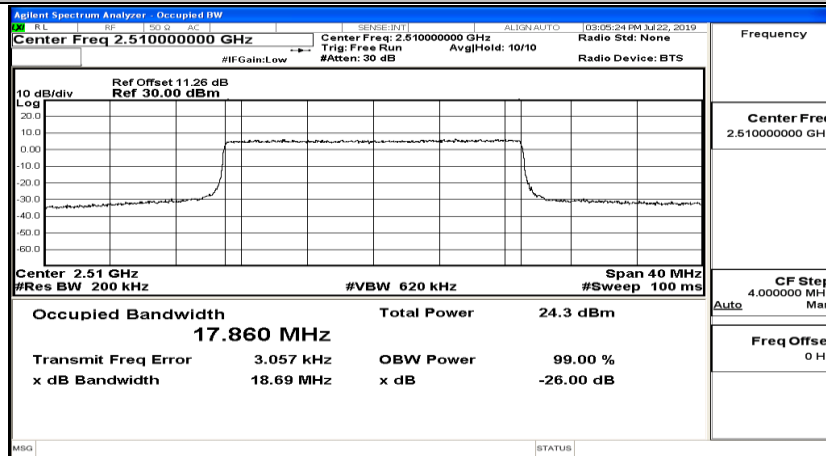
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_16QAM



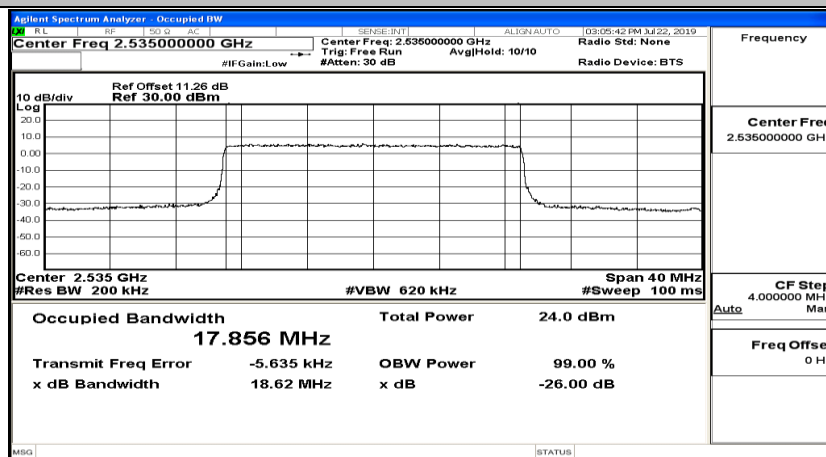
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_16QAM



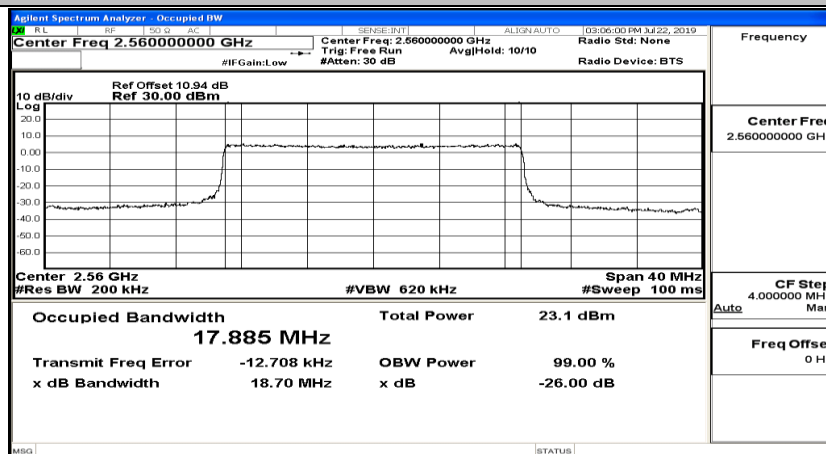
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_QPSK



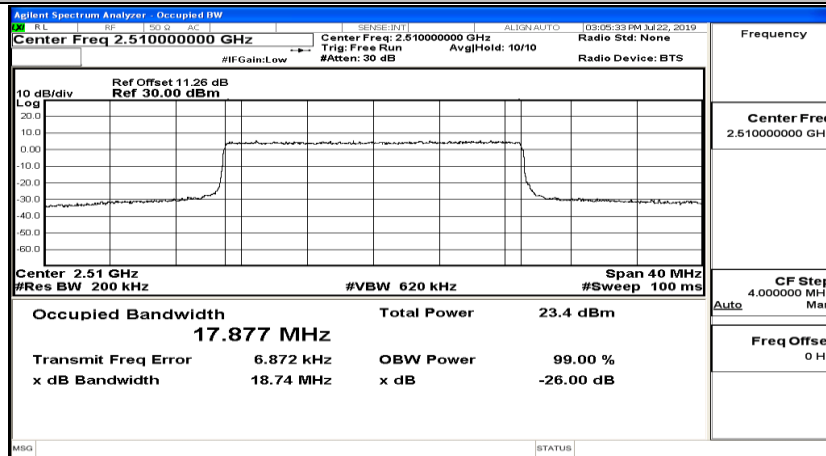
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_QPSK



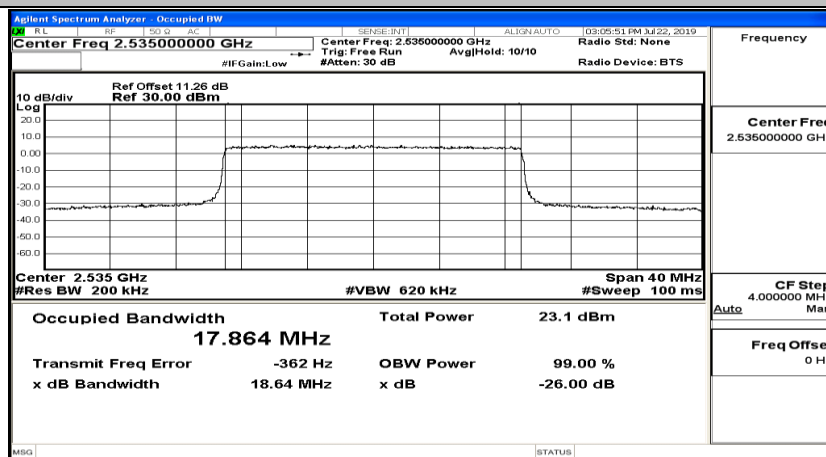
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_QPSK



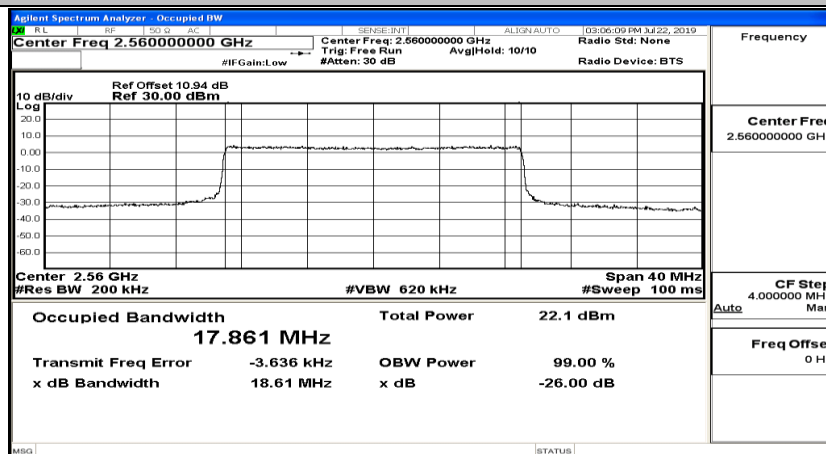
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_16QAM



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

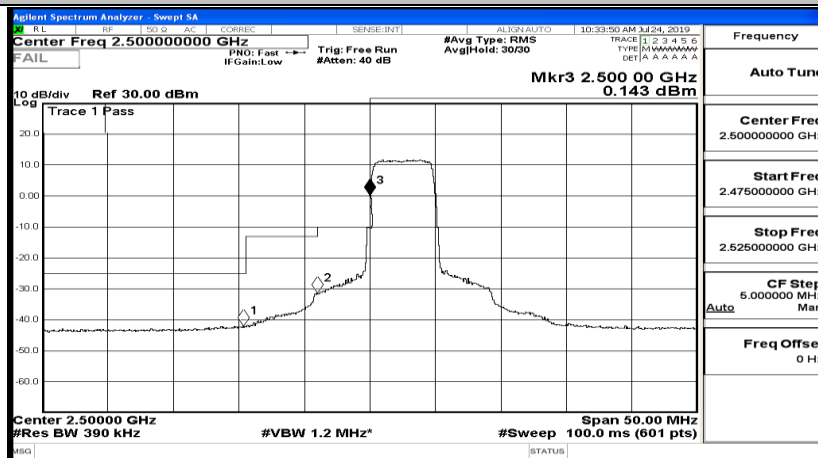


EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_16QAM

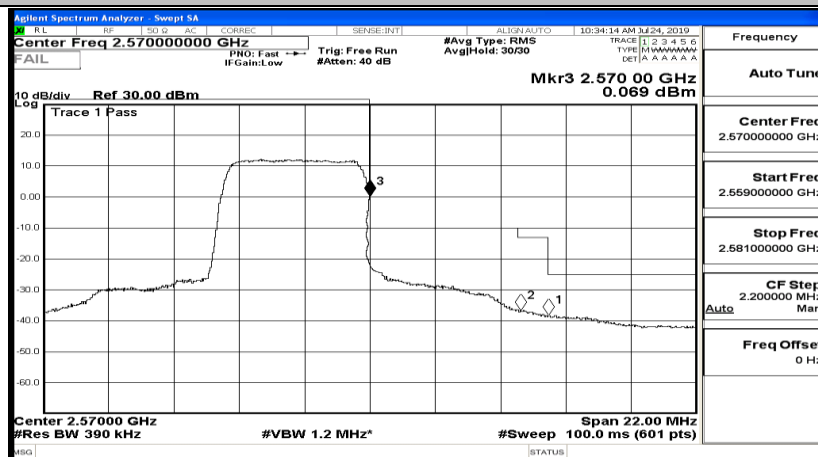


I.4 Band Edge

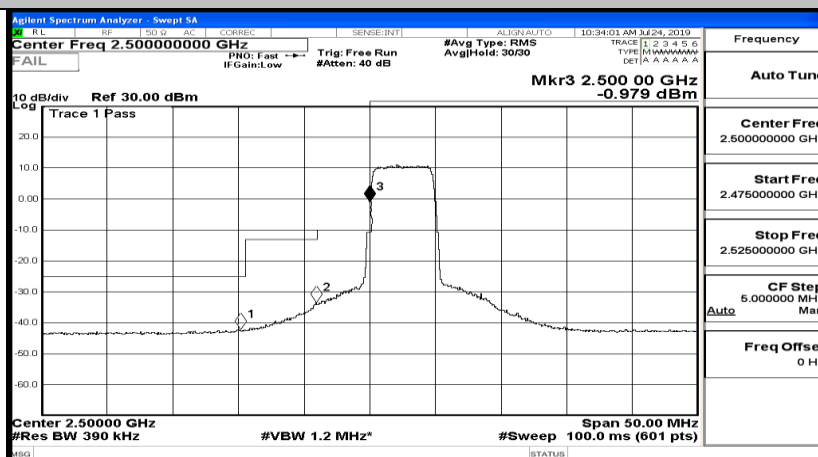
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



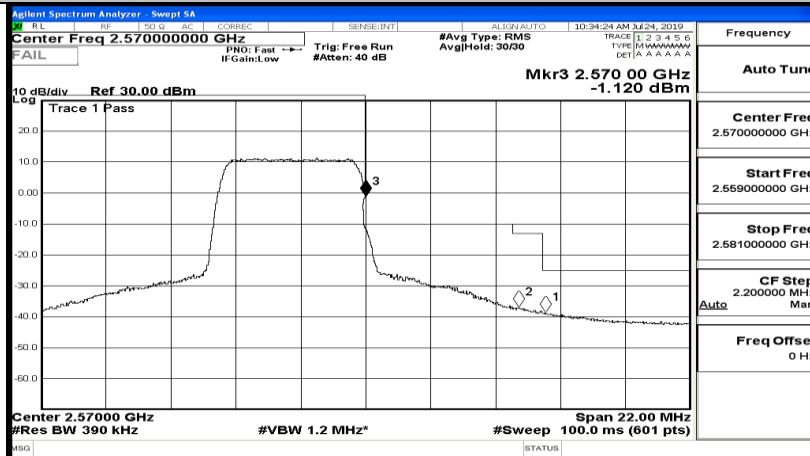
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



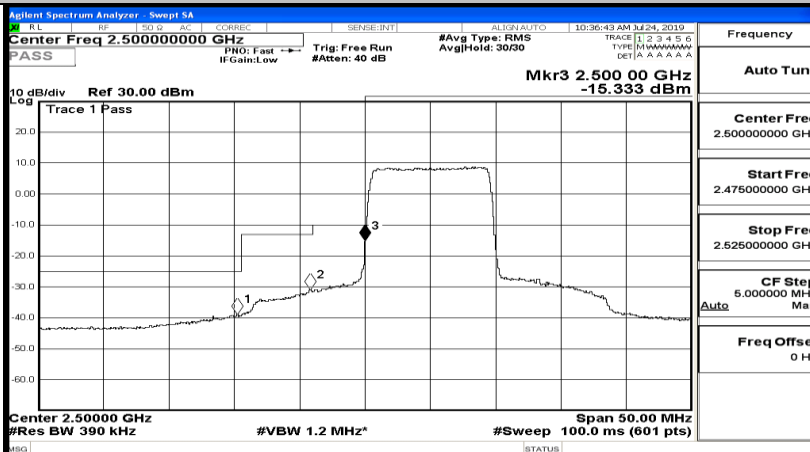
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



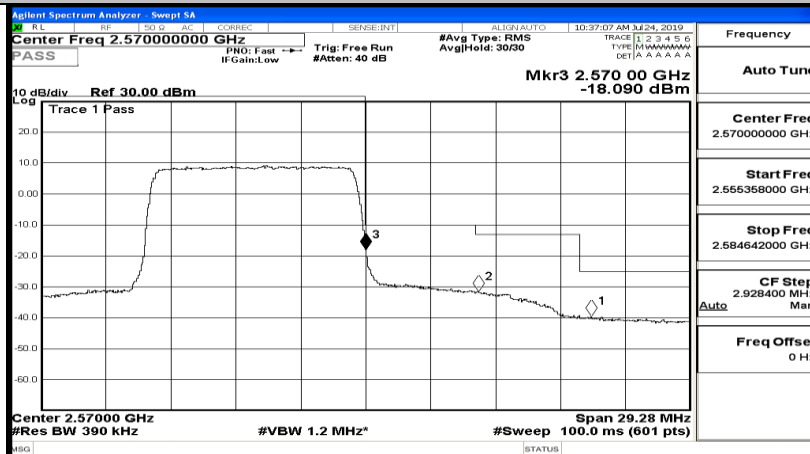
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



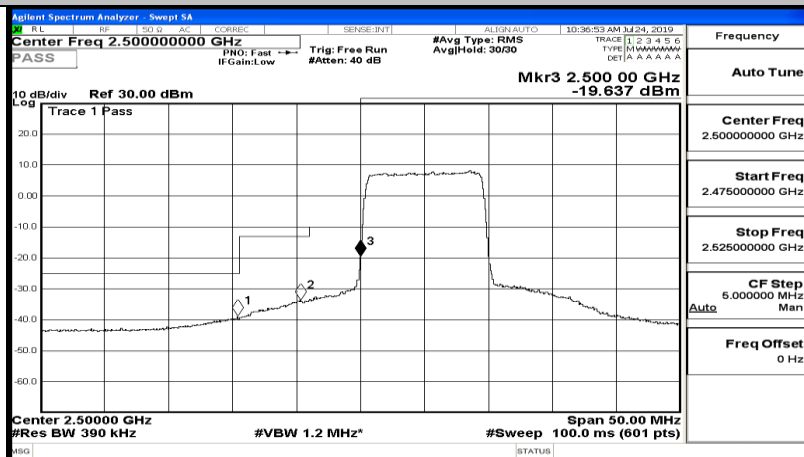
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



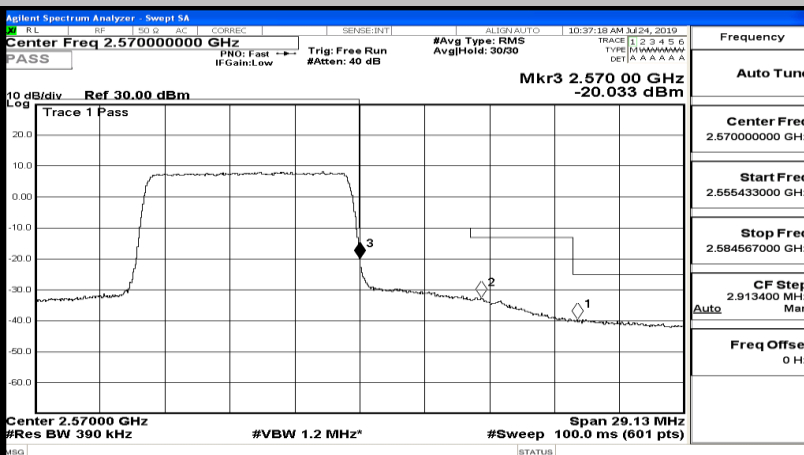
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



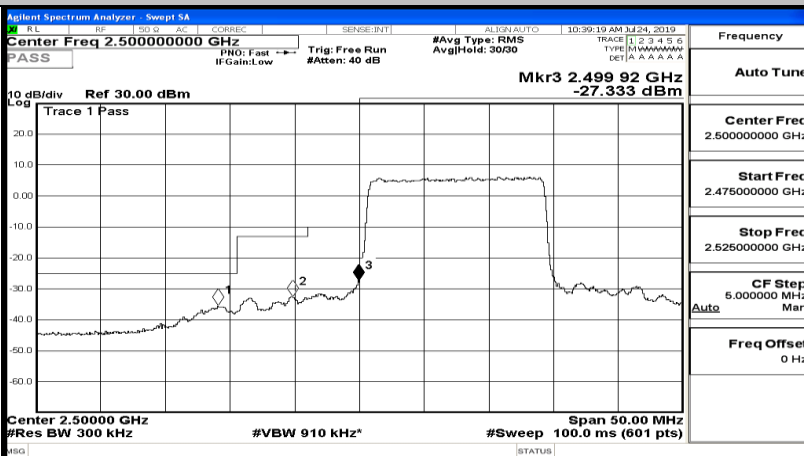
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



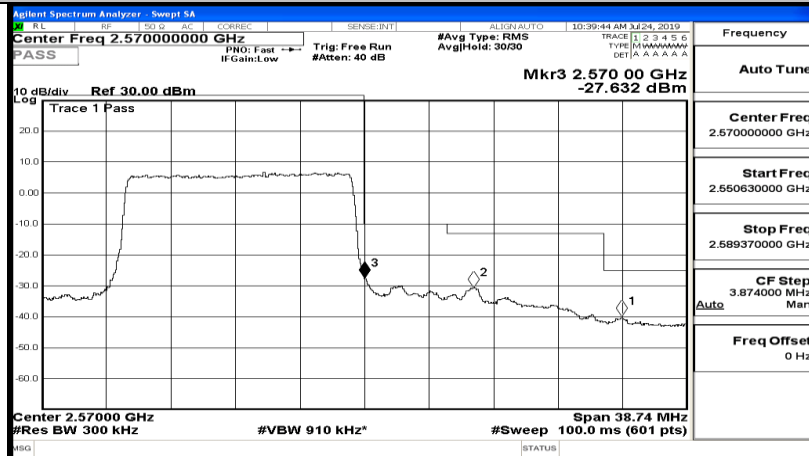
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM



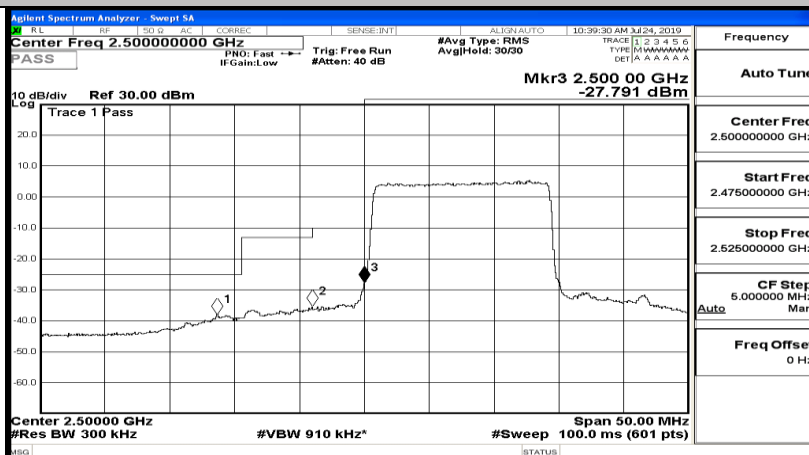
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_QPSK



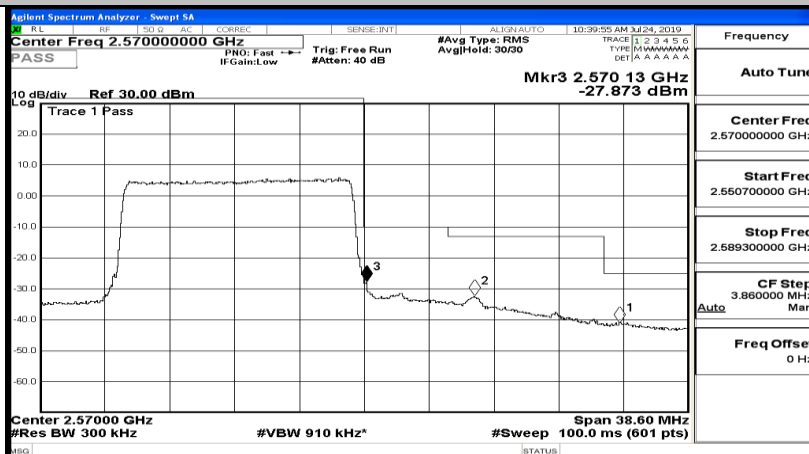
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_QPSK



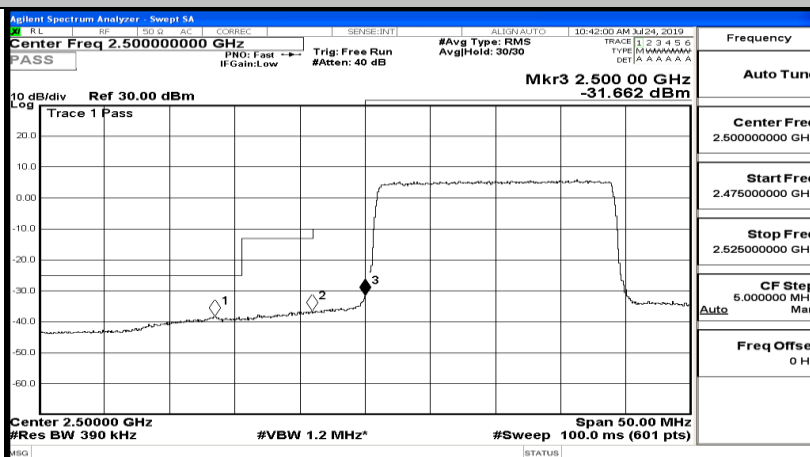
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_16QAM



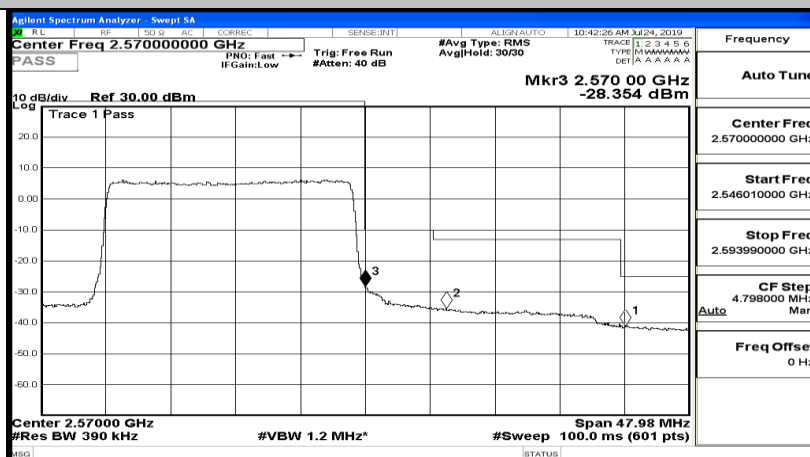
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_16QAM



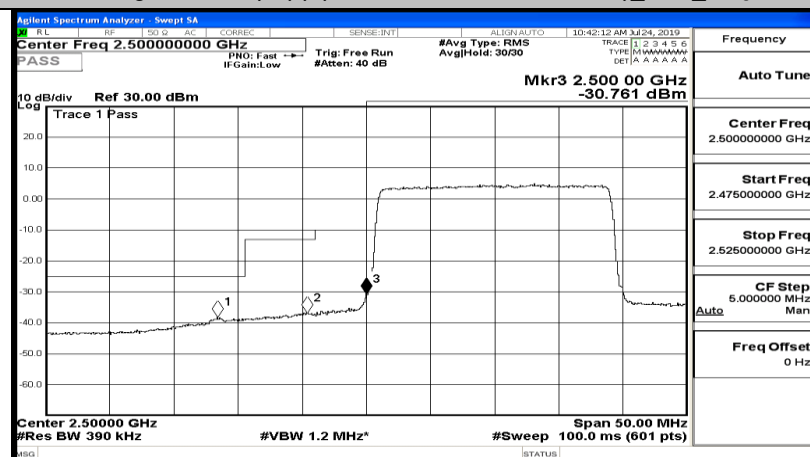
Band Edge Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_QPSK



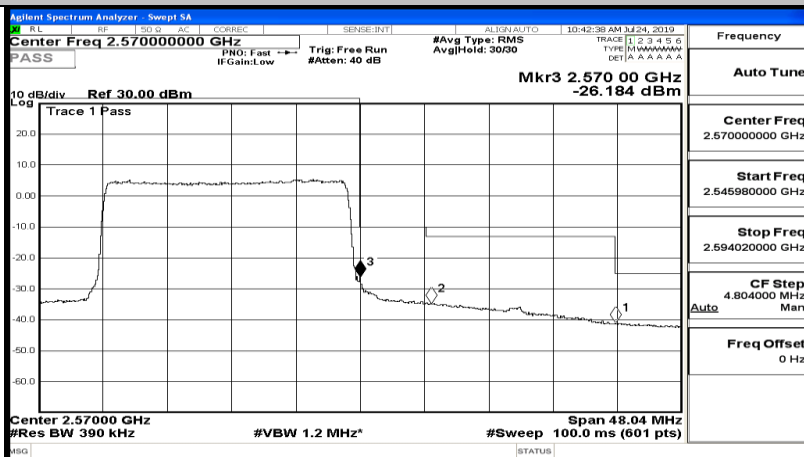
Band Edge Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_QPSK



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



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



I.5 Conducted Spurious Emission

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



Agilent Spectrum Analyzer Sweep SA

RL Freq: 150.0 kHz CC SENSE: INT ALIGN: AUTO 11:57:37 AM N.J.24. 2019

Center Freq 79.500 kHz Avg Type: RMS AvgHold: 9/100
PRN: Wide IF Gain: Low Trig: Free Run #Atten: 10 dB

Mkr1 86.268 kHz -70.555 dBm

10 dB/div Ref Offset 10.58 dB Ref 10.58 dBm

Start 9.00 kHz Stop 150.00 kHz
#Res BW 1.0 kHz #VBW 3.0 kHz* Sweep 174.0 ms (1001 pts)

Frequency Auto Tun

Center Freq 79.500 kHz

Start Freq 9.000 kHz

Stop Freq 150.000 kHz

CF Step 14.100 kHz

Auto Max

Freq Offset 0 Hz

STATUS: DC Coupled

