

Appendix D: Test Data for E-UTRA Band 4

Product Name: Smart phone

Trade Mark: N/A

Test Model: Smooth 5.0

Environmental Conditions

Temperature:	22.3° C
Relative Humidity:	53.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond Lu
Supervised by:	Li Huan

D.1 Conducted Output Power

Conducted Output Power Test Result (Channel Bandwidth: 1.4 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict
		Size	Offset	QPSK	16QAM	
QPSK / 16QAM	LCH	1	0	23.00	22.75	PASS
		1	3	23.02	22.81	PASS
		1	5	23.01	22.73	PASS
		3	0	23.06	21.89	PASS
		3	2	23.12	21.94	PASS
		3	3	23.19	21.97	PASS
		6	0	22.17	20.98	PASS
	MCH	1	0	21.38	20.66	PASS
		1	3	21.46	20.69	PASS
		1	5	21.55	20.72	PASS
		3	0	21.53	20.40	PASS
		3	2	21.45	20.40	PASS
		3	3	21.58	20.49	PASS
		6	0	20.51	19.69	PASS
	HCH	1	0	22.90	22.44	PASS
		1	3	22.72	22.41	PASS
		1	5	22.76	22.40	PASS
		3	0	22.60	21.58	PASS
		3	2	22.56	21.59	PASS
		3	3	22.58	21.34	PASS
		6	0	21.63	20.57	PASS

Conducted Output Power Test Result (Channel Bandwidth: 3 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm] QPSK	Average Power [dBm] 16QAM	Verdict
		Size	Offset			
QPSK / 16QAM	LCH	1	0	23.00	23.02	PASS
		1	7	23.11	23.05	PASS
		1	14	23.04	22.89	PASS
		8	0	22.13	21.14	PASS
		8	4	22.13	21.10	PASS
		8	7	22.15	21.12	PASS
		15	0	22.06	21.15	PASS
	MCH	1	0	21.38	21.30	PASS
		1	7	21.44	21.22	PASS
		1	14	21.60	21.38	PASS
		8	0	20.46	19.55	PASS
		8	4	20.51	19.59	PASS
		8	7	20.56	19.63	PASS
		15	0	20.45	19.59	PASS
	HCH	1	0	22.76	22.60	PASS
		1	7	22.69	22.53	PASS
		1	14	22.55	22.30	PASS
		8	0	21.86	21.04	PASS
		8	4	21.68	20.98	PASS
		8	7	21.63	21.12	PASS
		15	0	21.76	20.95	PASS

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	23.28	22.78	PASS
		1	12	23.18	22.69	PASS
		1	24	23.05	22.64	PASS
		12	0	22.09	21.19	PASS
		12	6	22.06	21.24	PASS
		12	13	21.97	21.14	PASS
		25	0	22.10	21.23	PASS
	MCH	1	0	21.28	20.94	PASS
		1	12	21.36	21.05	PASS
		1	24	21.63	21.33	PASS
		12	0	20.45	19.54	PASS
		12	6	20.44	19.57	PASS
		12	13	20.57	19.67	PASS
		25	0	20.45	19.69	PASS
	HCH	1	0	23.09	21.64	PASS
		1	12	22.92	21.51	PASS
		1	24	22.64	21.23	PASS
		12	0	22.06	21.15	PASS
		12	6	21.87	20.94	PASS
		12	13	21.71	20.71	PASS
		25	0	21.89	21.10	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	23.23	23.10	PASS
		1	24	22.91	22.93	PASS
		1	49	22.36	22.29	PASS
		25	0	22.09	21.00	PASS
		25	12	22.01	20.84	PASS
		25	25	21.61	20.52	PASS
		50	0	21.91	20.93	PASS
	MCH	1	0	21.30	20.85	PASS
		1	24	21.53	21.01	PASS
		1	49	22.07	21.54	PASS
		25	0	20.40	19.58	PASS
		25	12	20.55	19.61	PASS
		25	25	20.70	19.77	PASS
		50	0	20.57	19.65	PASS
	HCH	1	0	23.21	22.19	PASS
		1	24	23.18	22.21	PASS
		1	49	22.79	21.74	PASS
		25	0	22.13	20.95	PASS
		25	12	22.12	20.85	PASS
		25	25	21.89	20.81	PASS
		50	0	22.02	20.96	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	23.12	23.07	PASS
		1	37	22.61	22.62	PASS
		1	74	21.60	21.64	PASS
		37	0	21.85	20.98	PASS
		37	18	21.53	20.52	PASS
		37	38	21.17	19.97	PASS
		75	0	21.63	20.59	PASS
	MCH	1	0	21.27	21.54	PASS
		1	37	21.37	21.52	PASS
		1	74	22.31	22.51	PASS
		37	0	20.34	19.42	PASS
		37	18	20.45	19.56	PASS
		37	38	20.93	19.89	PASS
		75	0	20.62	19.63	PASS
	HCH	1	0	22.76	21.76	PASS
		1	37	23.23	22.24	PASS
		1	74	22.77	21.79	PASS
		37	0	22.04	21.03	PASS
		37	18	22.22	21.16	PASS
		37	38	21.98	21.21	PASS
		75	0	21.94	21.05	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	23.26	22.58	PASS
		1	49	22.33	21.80	PASS
		1	99	21.41	20.81	PASS
		50	0	21.73	20.84	PASS
		50	25	21.24	20.24	PASS
		50	50	20.57	19.69	PASS
		100	0	21.32	20.19	PASS
	MCH	1	0	21.83	20.73	PASS
		1	49	21.72	20.58	PASS
		1	99	22.95	21.83	PASS
		50	0	20.36	19.70	PASS
		50	25	20.58	19.63	PASS
		50	50	21.02	20.08	PASS
		100	0	20.77	19.80	PASS
	HCH	1	0	21.86	21.08	PASS
		1	49	23.09	22.33	PASS
		1	99	22.73	21.73	PASS
		50	0	21.51	20.66	PASS
		50	25	22.12	21.09	PASS
		50	50	22.09	21.13	PASS
		100	0	21.69	20.85	PASS

D.2 Peak-to-Average Ratio**Peak-to Average Ratio Test Result (Channel Bandwidth: 1.4 MHz)**

Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.66	<13	PASS
	MCH	5.02	<13	PASS
	HCH	5.97	<13	PASS
16QAM	LCH	6.58	<13	PASS
	MCH	5.86	<13	PASS
	HCH	6.93	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 3 MHz)

Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.74	<13	PASS
	MCH	5.27	<13	PASS
	HCH	5.81	<13	PASS
16QAM	LCH	6.62	<13	PASS
	MCH	6.04	<13	PASS
	HCH	6.67	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)

Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.7	<13	PASS
	MCH	5.17	<13	PASS
	HCH	5.82	<13	PASS
16QAM	LCH	6.46	<13	PASS
	MCH	5.93	<13	PASS
	HCH	6.54	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)

Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.78	<13	PASS
	MCH	5.34	<13	PASS
	HCH	5.66	<13	PASS
16QAM	LCH	6.48	<13	PASS
	MCH	6.12	<13	PASS
	HCH	6.48	<13	PASS

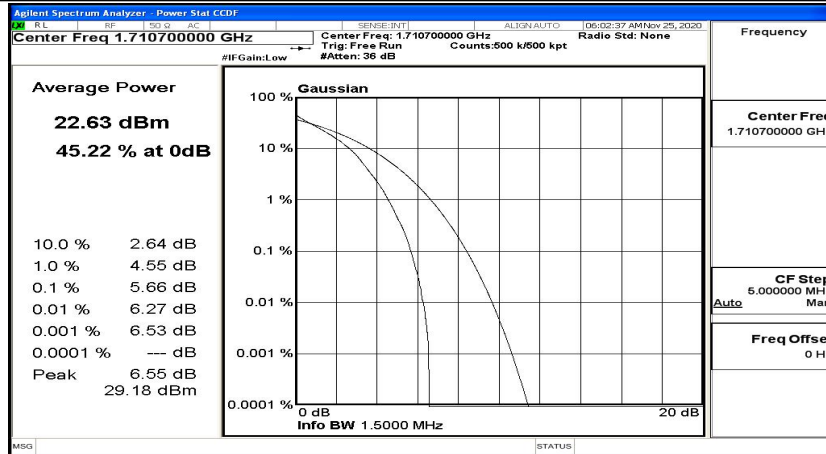
Peak-to Average Ratio Test Result (Channel Bandwidth: 15 MHz)

Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	4.95	<13	PASS
	MCH	4.9	<13	PASS
	HCH	4.86	<13	PASS
16QAM	LCH	6.33	<13	PASS
	MCH	6.19	<13	PASS
	HCH	6.25	<13	PASS

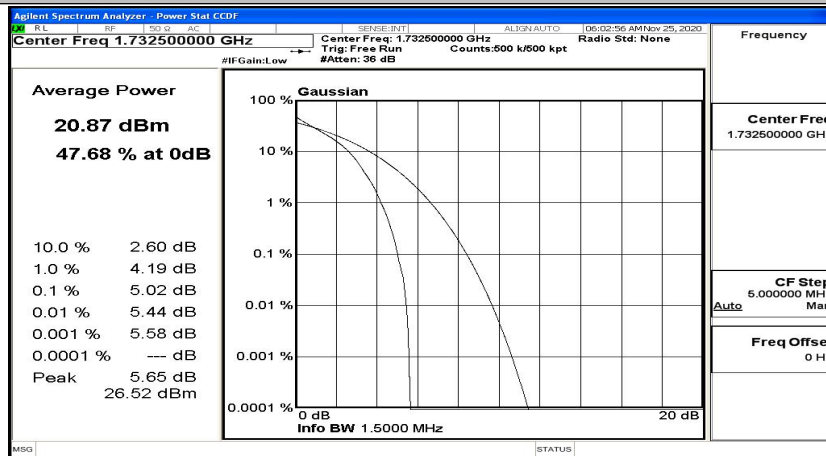
Peak-to Average Ratio Test Result (Channel Bandwidth: 20 MHz)

Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.8	<13	PASS
	MCH	5.68	<13	PASS
	HCH	5.72	<13	PASS
16QAM	LCH	6.8	<13	PASS
	MCH	6.6	<13	PASS
	HCH	6.76	<13	PASS

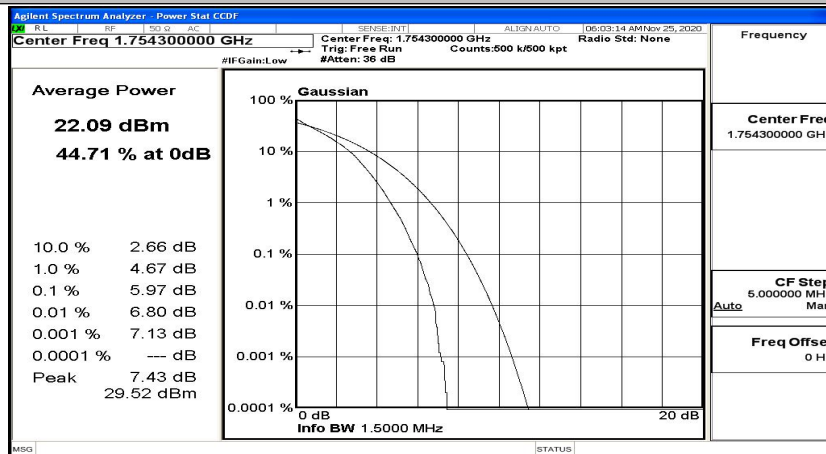
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



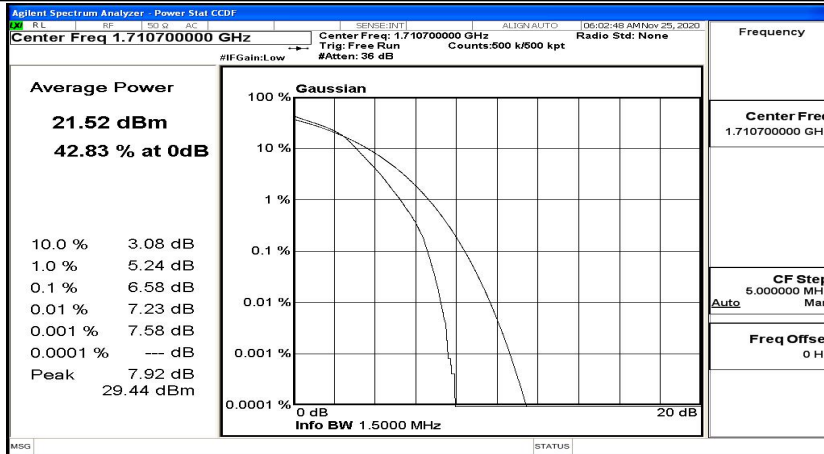
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



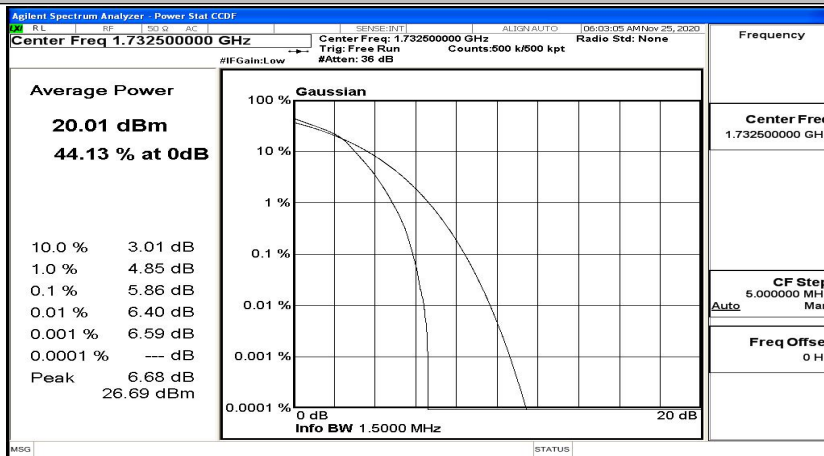
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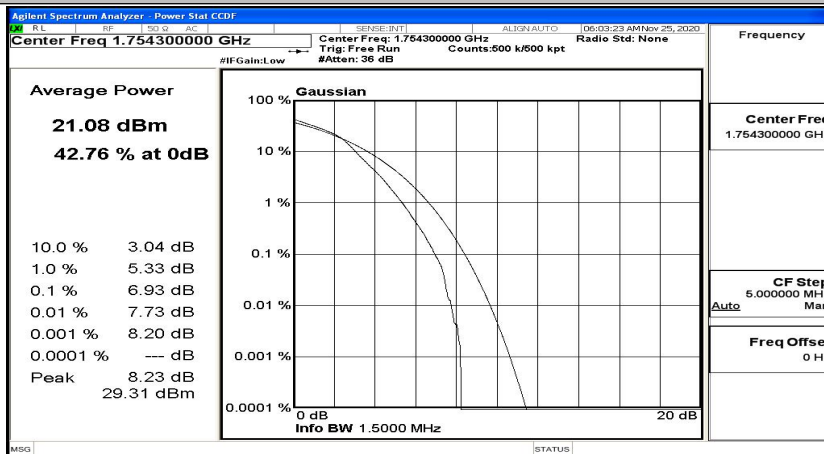
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



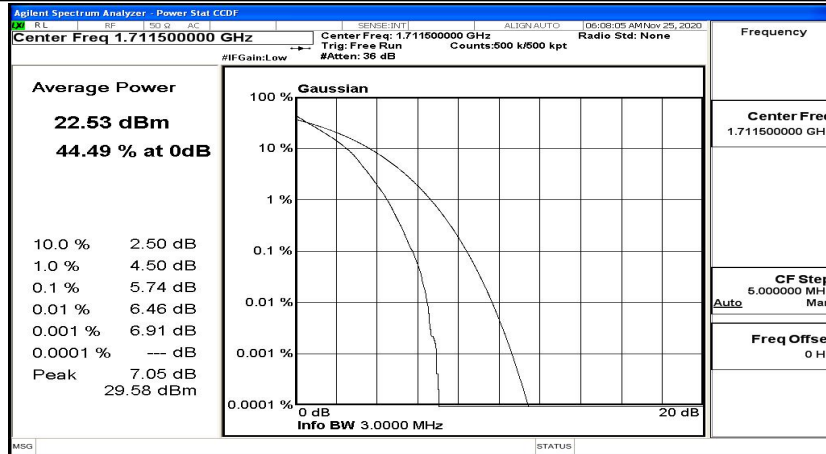
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



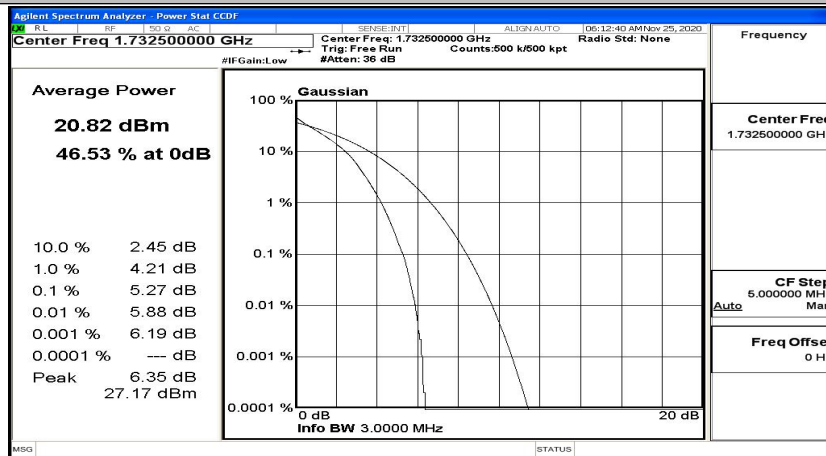
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



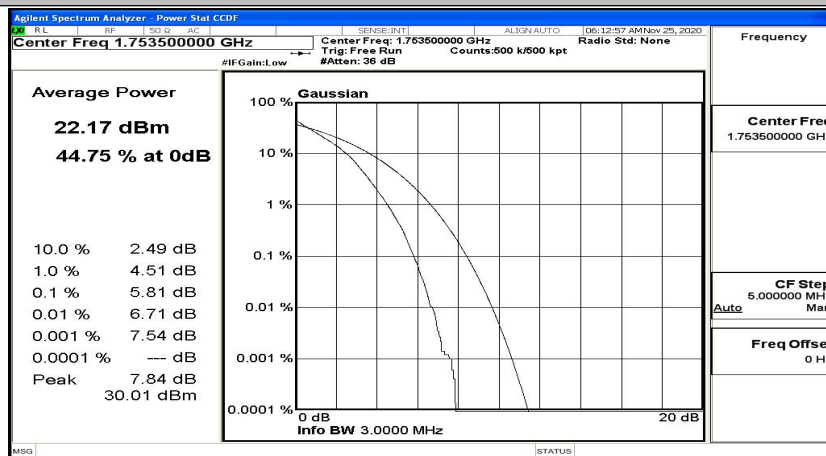
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



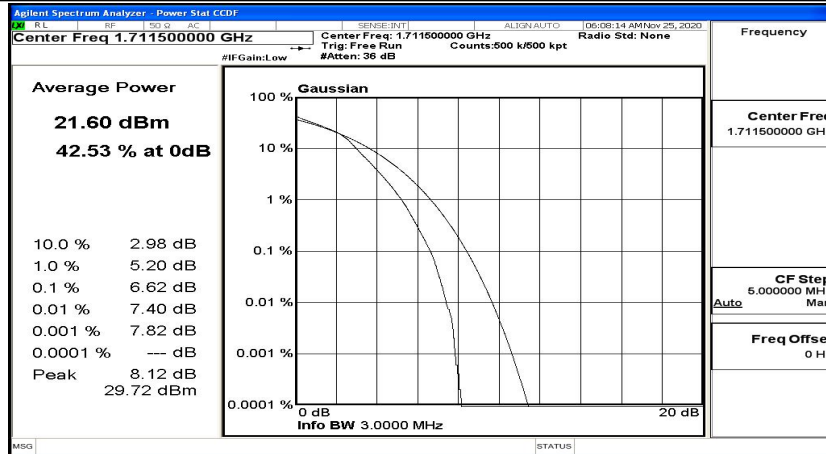
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



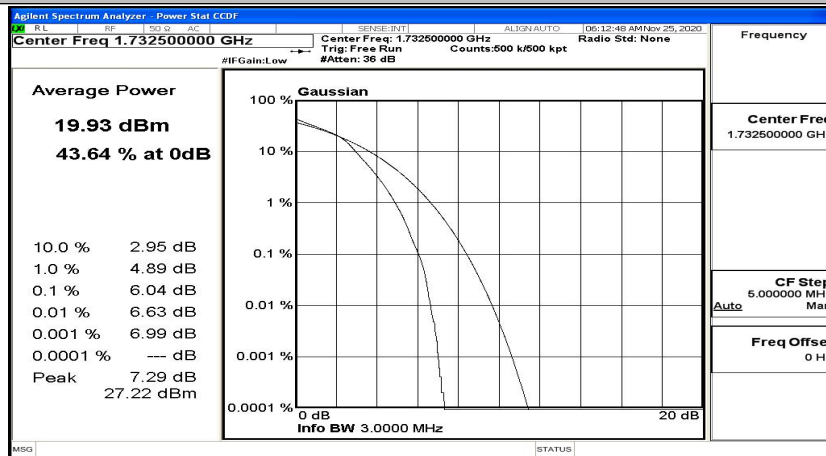
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK



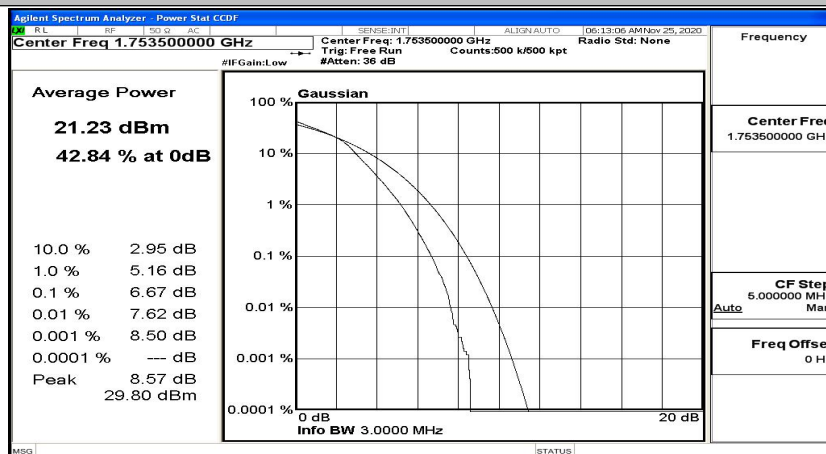
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_16QAM



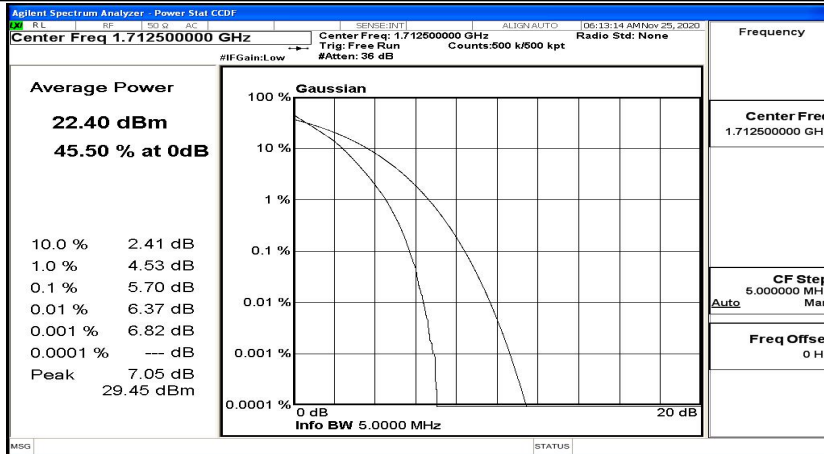
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_16QAM



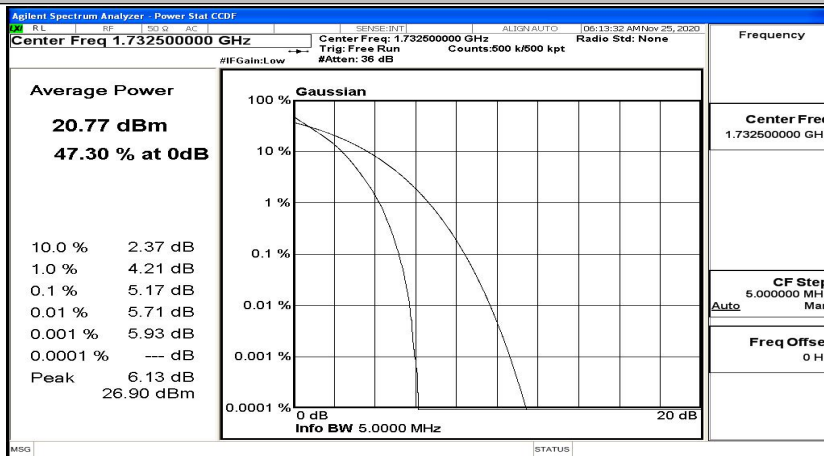
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_16QAM



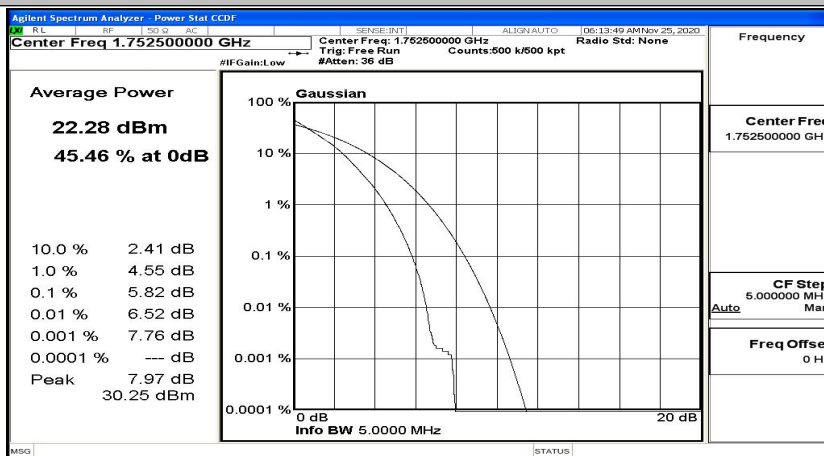
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK



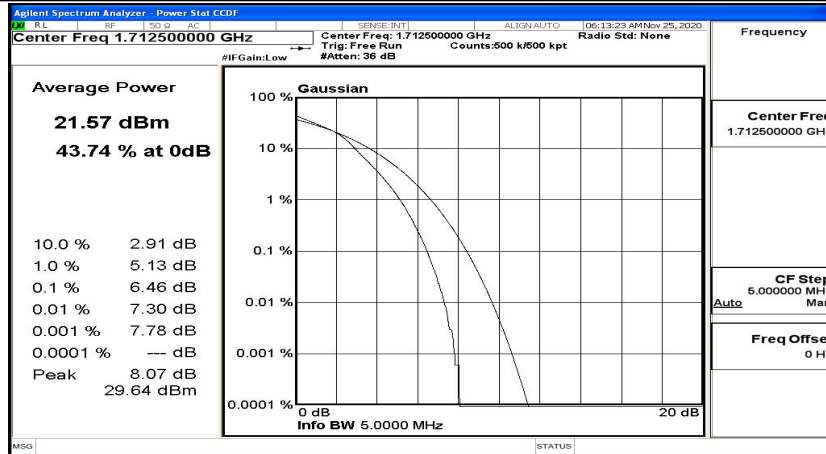
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK



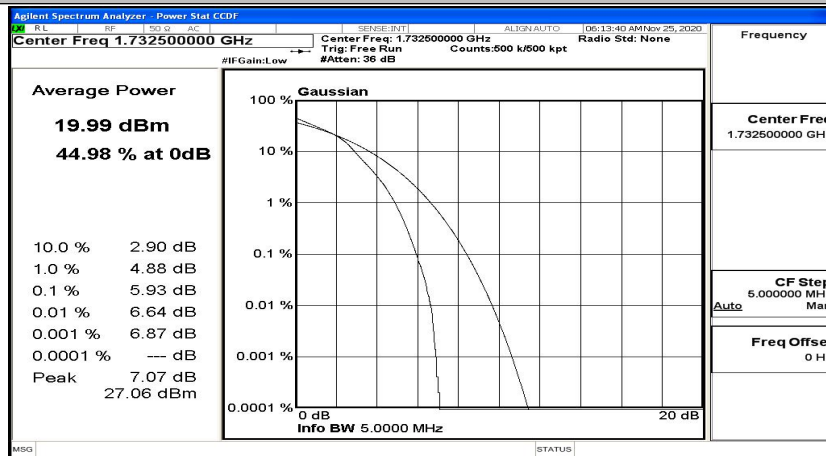
Peak-to-Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK



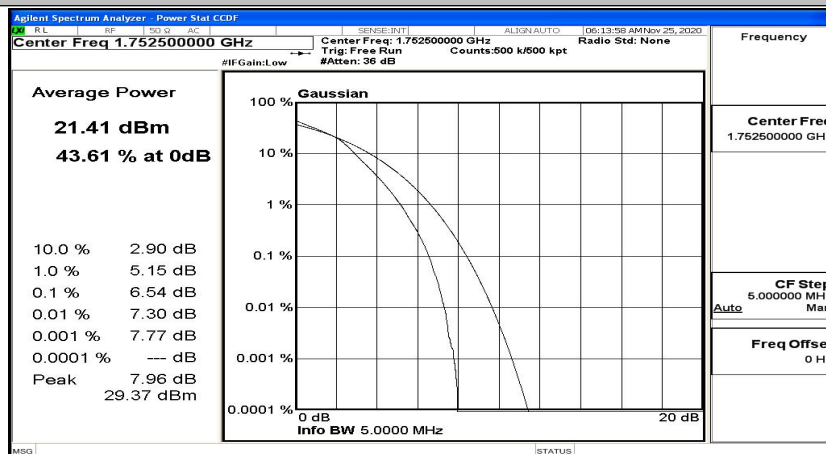
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM



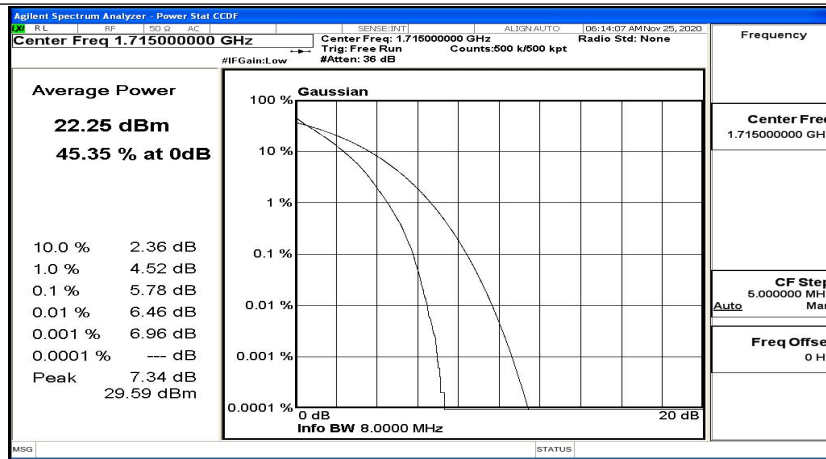
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM



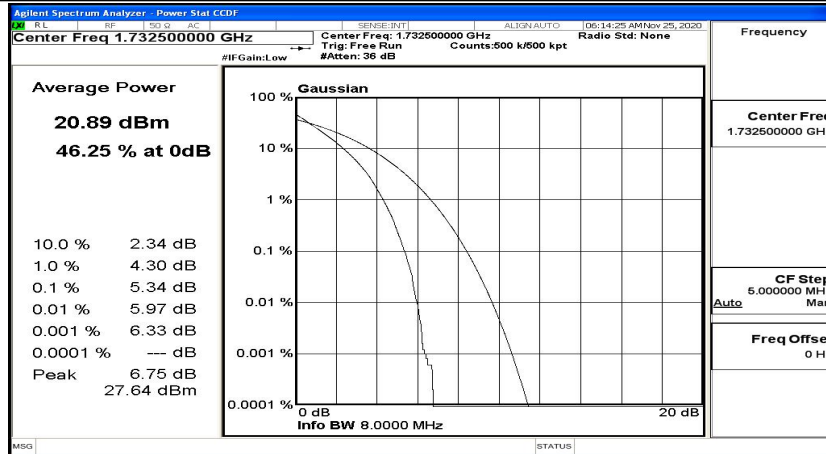
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM



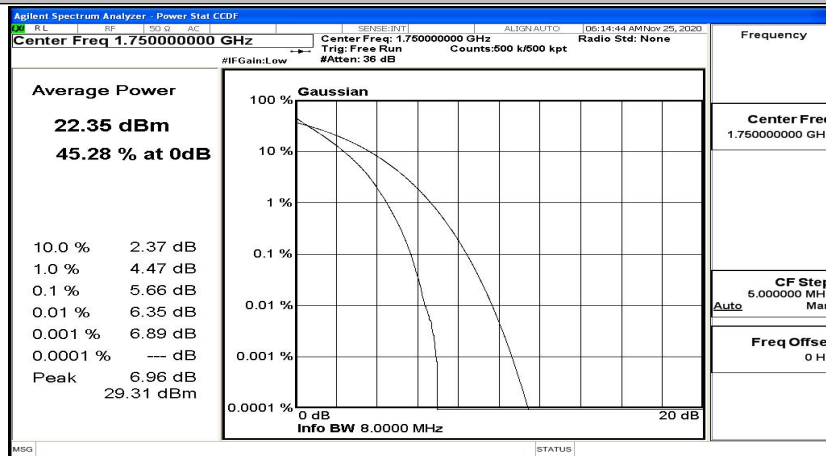
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK



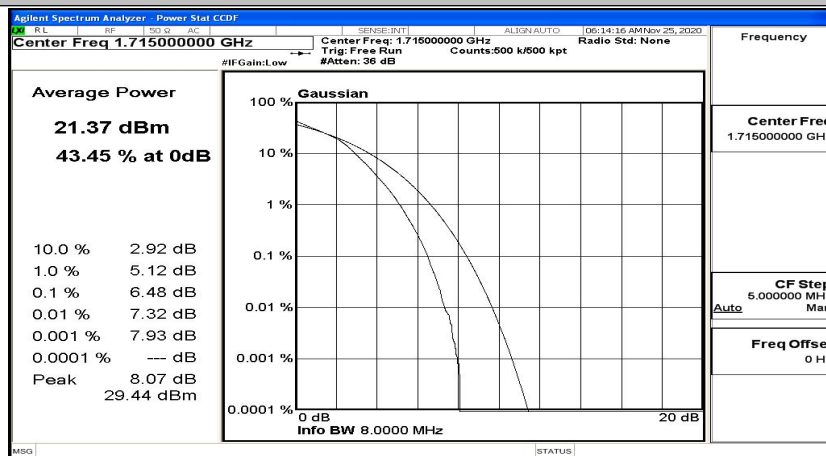
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK



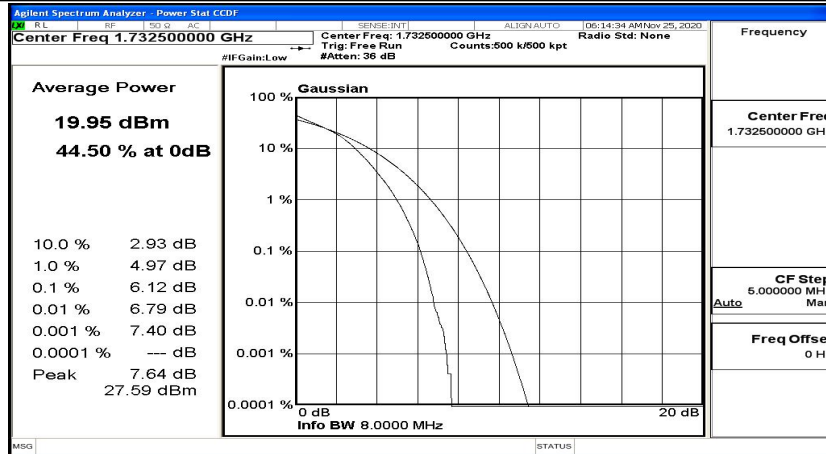
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK



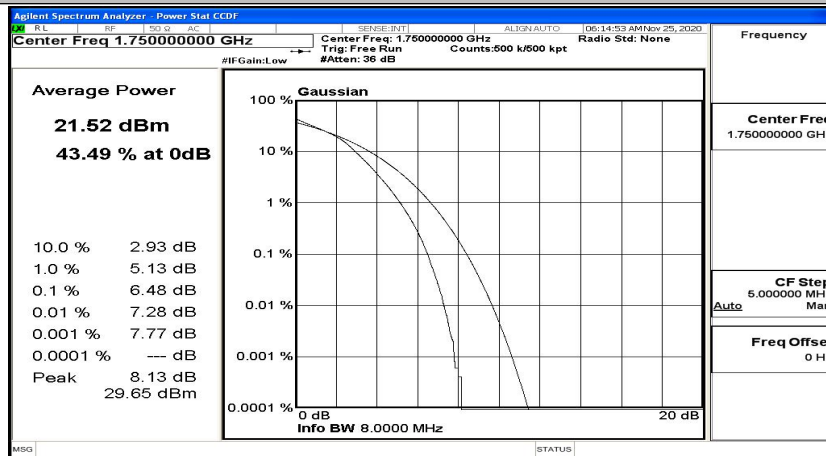
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM



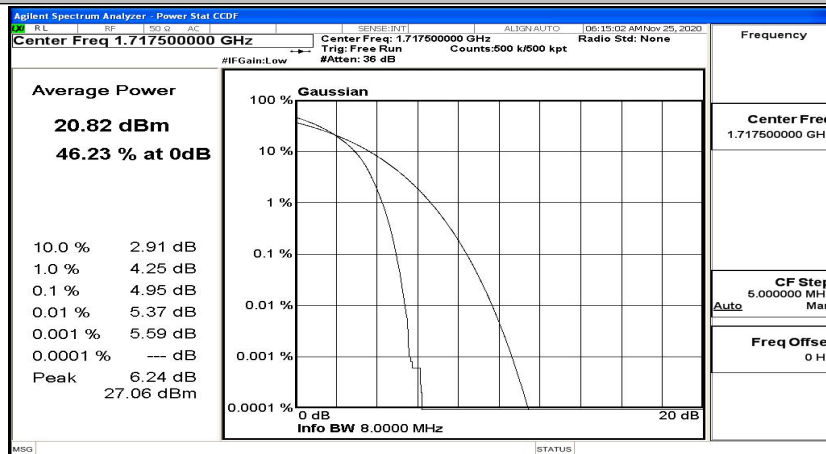
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_16QAM



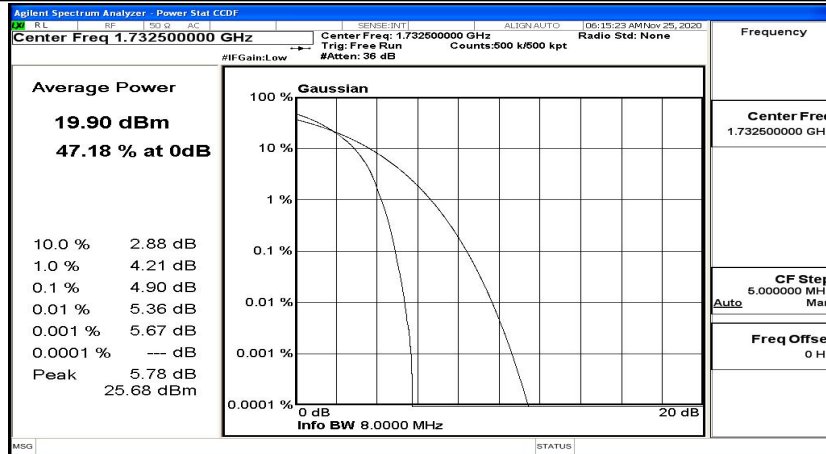
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM



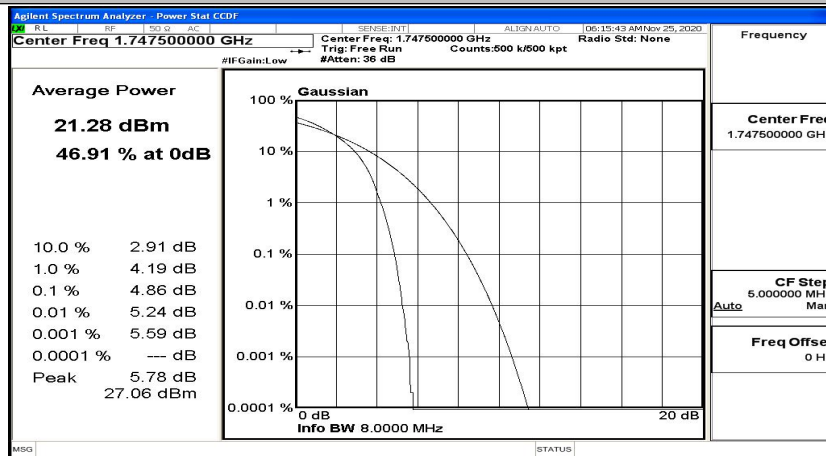
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_QPSK



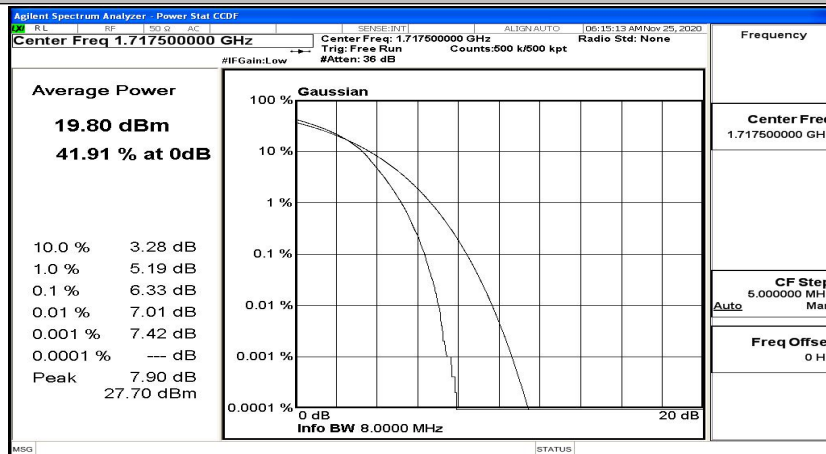
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_QPSK



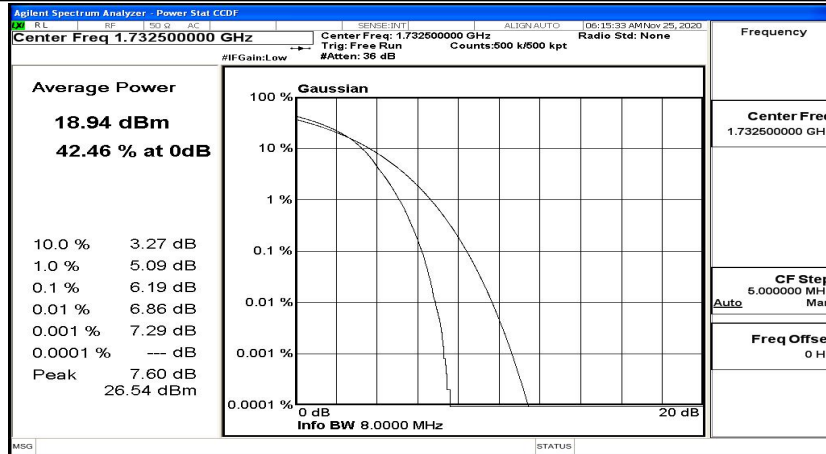
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_QPSK



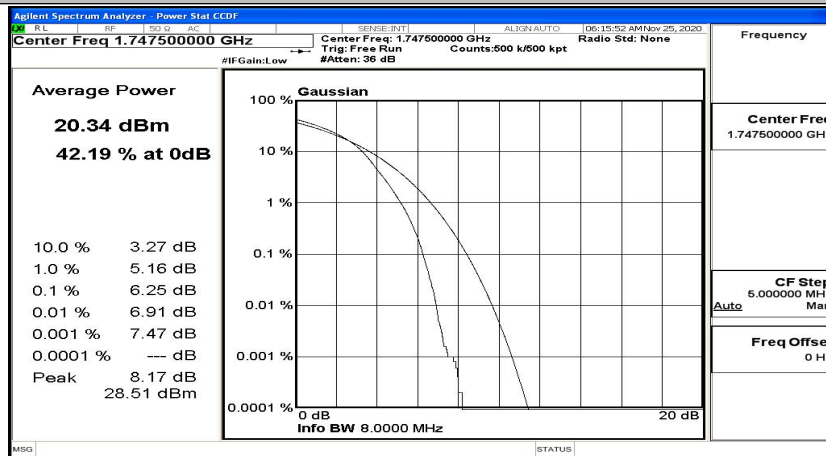
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_16QAM



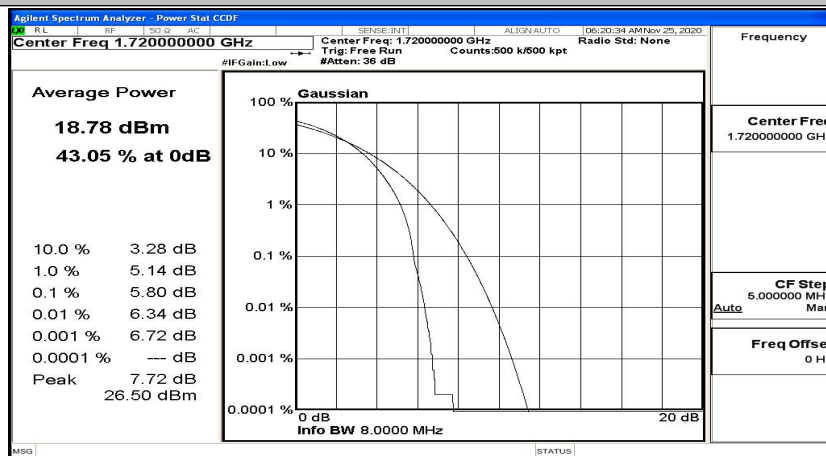
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_16QAM



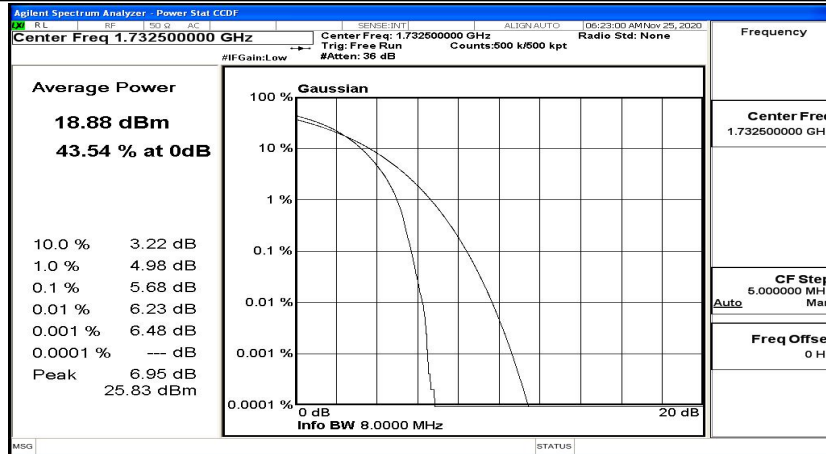
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_16QAM



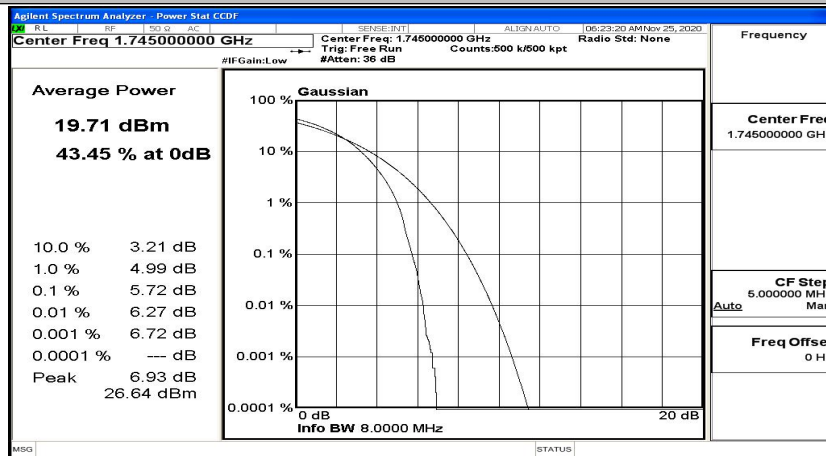
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_QPSK



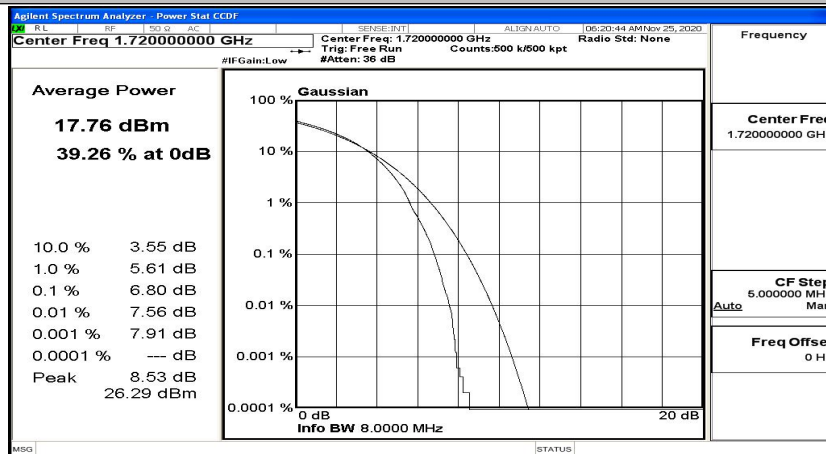
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_QPSK



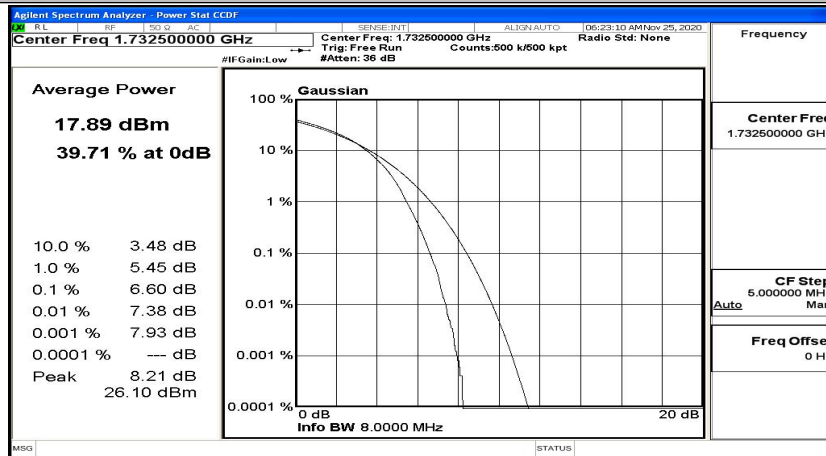
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_QPSK



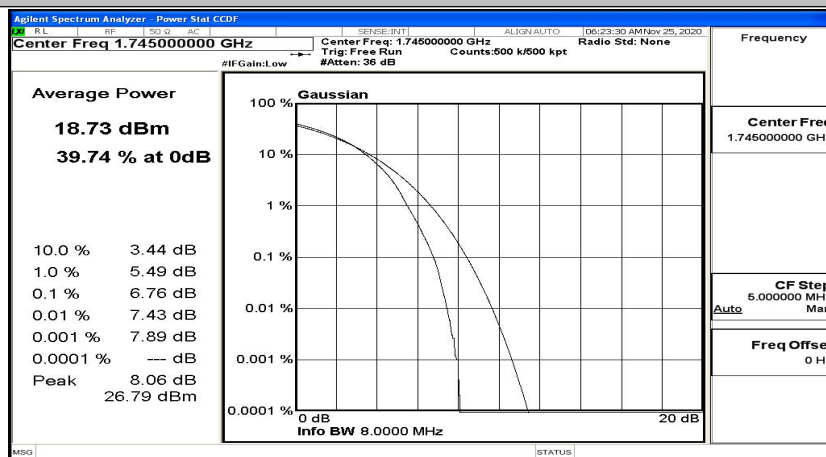
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_16QAM



Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_16QAM



Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_16QAM



D.3 26dB Bandwidth and Occupied Bandwidth

EBW & OBW Test Result (Channel Bandwidth: 1.4 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	1.0731	1.206	PASS
	MCH	1.0796	1.218	PASS
	HCH	1.0798	1.229	PASS
16QAM	LCH	1.0781	1.214	PASS
	MCH	1.0783	1.219	PASS
	HCH	1.0808	1.234	PASS

EBW & OBW Test Result (Channel Bandwidth: 3 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	5.9471	6.000	PASS
	MCH	2.6819	2.937	PASS
	HCH	2.6847	2.953	PASS
16QAM	LCH	2.6849	2.962	PASS
	MCH	2.6780	2.933	PASS
	HCH	2.6857	2.924	PASS

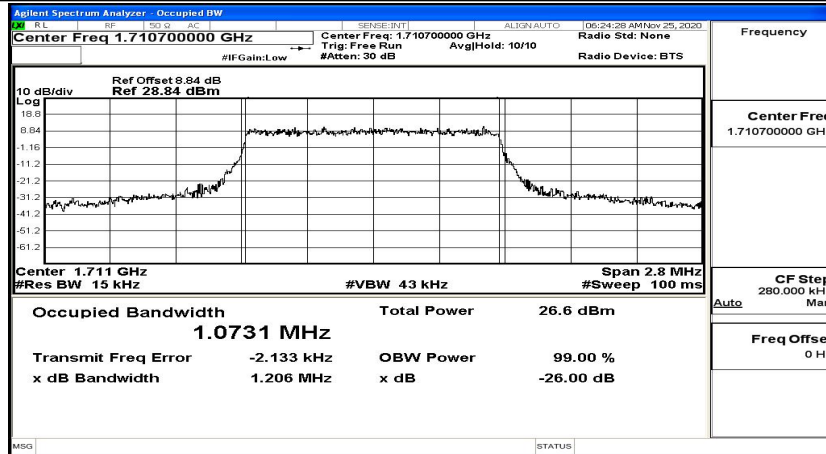
EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4706	4.823	PASS
	MCH	4.4612	4.827	PASS
	HCH	4.4714	4.795	PASS
16QAM	LCH	4.4684	4.819	PASS
	MCH	4.4750	4.784	PASS
	HCH	4.4679	4.833	PASS

EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	8.9306	9.595	PASS
	MCH	8.9351	9.539	PASS
	HCH	8.9333	9.527	PASS
16QAM	LCH	8.9249	9.490	PASS
	MCH	8.9232	9.596	PASS
	HCH	8.9185	9.496	PASS

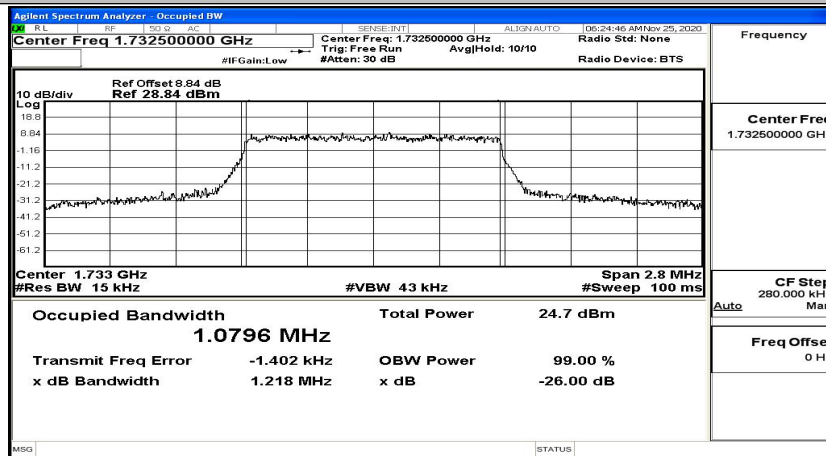
EBW & OBW Test Result (Channel Bandwidth: 15 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	13.396	14.02	PASS
	MCH	13.376	14.15	PASS
	HCH	13.380	14.16	PASS
16QAM	LCH	13.385	14.02	PASS
	MCH	13.379	14.02	PASS
	HCH	13.367	14.12	PASS

EBW & OBW Test Result (Channel Bandwidth: 20 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	17.832	18.62	PASS
	MCH	17.848	18.72	PASS
	HCH	17.866	18.75	PASS
16QAM	LCH	17.903	18.77	PASS
	MCH	17.827	18.76	PASS
	HCH	17.861	18.66	PASS

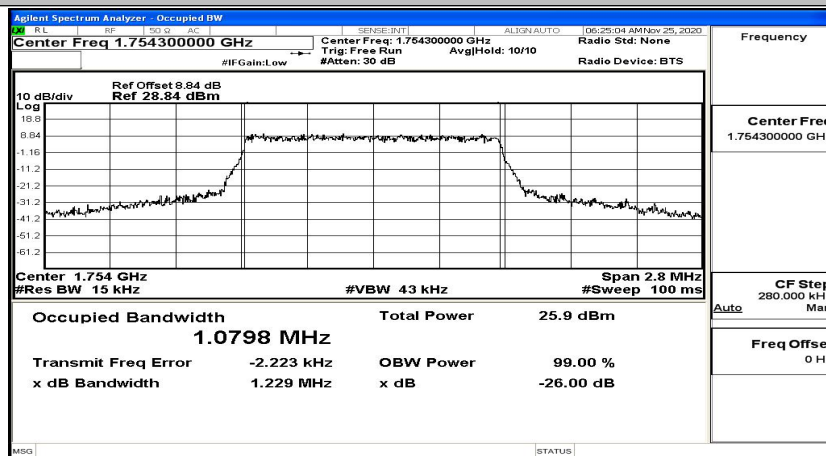
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_QPSK



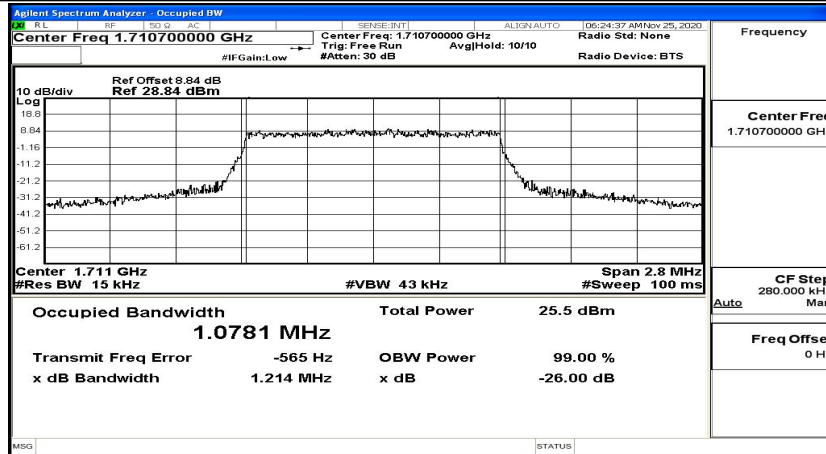
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_QPSK



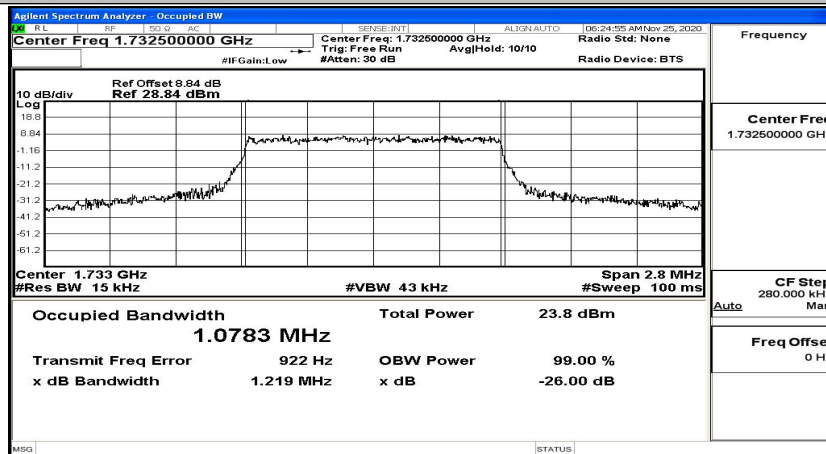
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_QPSK



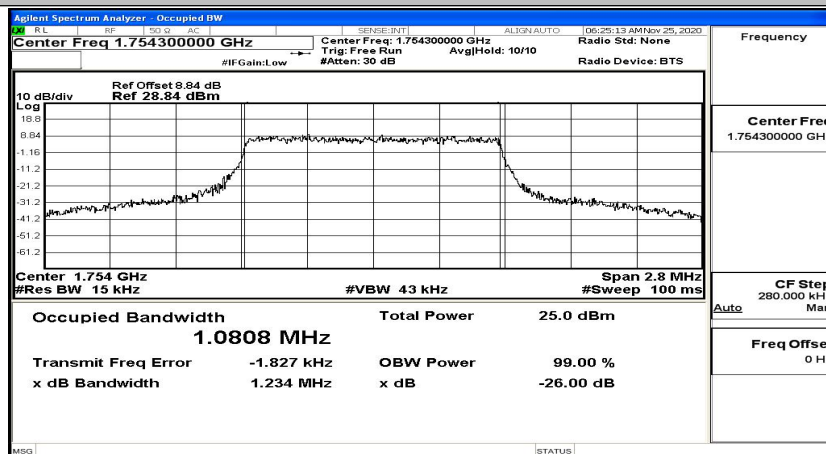
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_LCH_16QAM



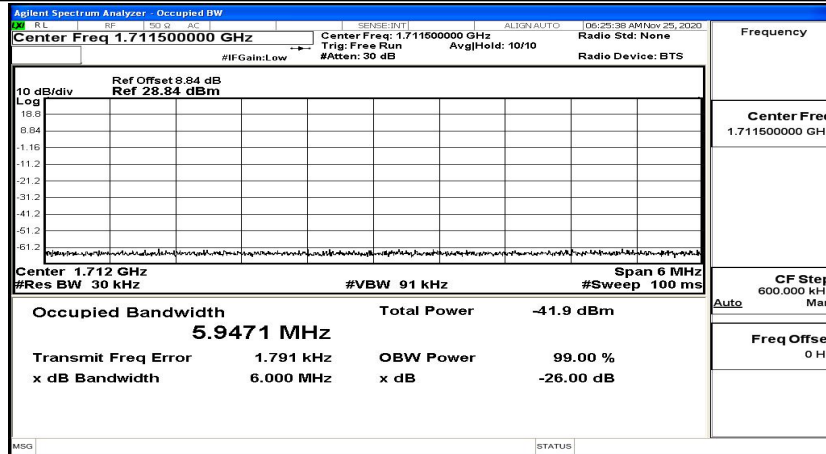
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_MCH_16QAM



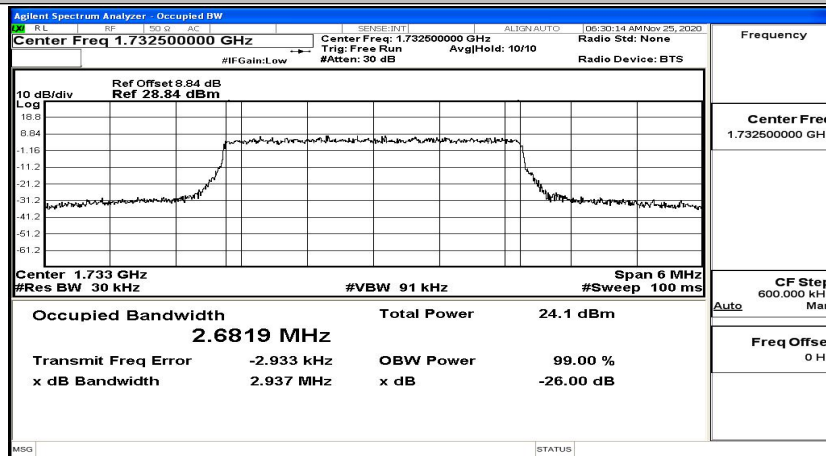
EBW & OBW Test Graph(s) (Channel Bandwidth: 1.4 MHz)_HCH_16QAM



EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_LCH_QPSK



EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_MCH_QPSK



EBW & OBW Test Graph(s) (Channel Bandwidth: 3 MHz)_HCH_QPSK

