Appendix G: Test Data for E-UTRA Band 7

Product Name: Smart Phone

Trade Mark: XTRATECH

Test Model: Brio X31

Environmental Conditions

Temperature:	23.4 ° C
Relative Humidity:	52.5%
ATM Pressure:	100.0 kPa
Test Engineer:	Diamond.Lu
Supervised by:	Tom.Liu

G.1 Conducted Output Power

Conducted Output Power Test Result (Channel Bandwidth: 5 MHz)						
Modulation	Channel	RB Configuration		Average Power [dBm]	Average Power [dBm]	Verdict
		Size	Offset	QPSK	16QAM	
QPSK / 16QAM	LCH	1	0	20.40	19.66	PASS
		1	12	20.90	19.08	PASS
		1	24	21.75	18.04	PASS
		12	0	20.11	18.21	PASS
		12	6	20.76	17.82	PASS
		12	13	20.16	17.26	PASS
		25	0	20.68	17.73	PASS
	MCH	1	0	21.20	20.09	PASS
		1	12	20.99	19.86	PASS
		1	24	20.07	18.97	PASS
		12	0	20.94	18.98	PASS
		12	6	20.74	18.73	PASS
		12	13	20.32	18.34	PASS
		25	0	20.68	18.66	PASS
	HCH	1	0	20.48	19.57	PASS
		1	12	20.72	19.79	PASS
		1	24	20.19	19.28	PASS
		12	0	20.55	18.56	PASS
		12	6	20.58	18.57	PASS
		12	13	20.39	18.41	PASS
		25	0	20.47	18.54	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	20.29	19.49	PASS
		1	24	20.83	18.04	PASS
		1	49	20.51	16.78	PASS
		25	0	20.66	17.67	PASS
		25	12	20.81	16.81	PASS
		25	25	21.10	16.14	PASS
		50	0	21.95	16.96	PASS
	MCH	1	0	21.33	20.57	PASS
		1	24	20.85	20.02	PASS
		1	49	20.25	18.51	PASS
		25	0	20.20	19.16	PASS
		25	12	20.72	18.75	PASS
		25	25	20.01	18.00	PASS
		50	0	20.62	18.61	PASS
	HCH	1	0	20.76	19.07	PASS
		1	24	20.73	20.01	PASS
		1	49	20.33	19.60	PASS
		25	0	20.33	18.33	PASS
		25	12	20.56	18.56	PASS
		25	25	20.60	18.60	PASS
		50	0	20.42	18.45	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	20.08	19.28	PASS
		1	37	20.12	17.30	PASS
		1	74	20.25	16.51	PASS
		37	0	20.26	17.22	PASS
		37	18	20.21	16.15	PASS
		37	38	20.57	15.58	PASS
		75	0	20.45	16.43	PASS
	MCH	1	0	21.05	20.26	PASS
		1	37	20.90	20.15	PASS
		1	74	21.56	17.77	PASS
		37	0	20.36	19.26	PASS
		37	18	20.84	18.79	PASS
		37	38	20.81	17.72	PASS
		75	0	20.64	18.59	PASS
	HCH	1	0	20.26	17.53	PASS
		1	37	20.38	19.63	PASS
		1	74	20.20	19.41	PASS
		37	0	20.36	17.31	PASS
		37	18	20.22	18.14	PASS
		37	38	20.62	18.54	PASS
		75	0	20.06	18.04	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	20.92	19.02	PASS
		1	49	20.75	16.87	PASS
		1	99	20.05	17.20	PASS
		50	0	20.68	16.69	PASS
		50	25	20.70	15.70	PASS
		50	50	20.79	15.79	PASS
		100	0	20.21	16.25	PASS
	MCH	1	0	20.41	19.52	PASS
		1	49	20.92	19.99	PASS
		1	99	20.85	16.99	PASS
		50	0	20.12	19.05	PASS
		50	25	20.62	18.58	PASS
		50	50	20.27	17.27	PASS
		100	0	20.31	18.28	PASS
	HCH	1	0	20.41	16.73	PASS
		1	49	20.79	19.04	PASS
		1	99	20.17	19.40	PASS
		50	0	20.36	16.39	PASS
		50	25	20.62	17.66	PASS
		50	50	20.24	18.29	PASS
		100	0	20.42	17.46	PASS

G.2 Peak-to-Average Ratio

Peak-to Average Ratio Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.29	<13	PASS
	MCH	5.04	<13	PASS
	HCH	4.86	<13	PASS
16QAM	LCH	6.04	<13	PASS
	MCH	5.79	<13	PASS
	HCH	5.58	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.47	<13	PASS
	MCH	5.22	<13	PASS
	HCH	5.09	<13	PASS
16QAM	LCH	6.15	<13	PASS
	MCH	5.89	<13	PASS
	HCH	5.75	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 15 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.18	<13	PASS
	MCH	4.98	<13	PASS
	HCH	4.94	<13	PASS
16QAM	LCH	6.27	<13	PASS
	MCH	6.1	<13	PASS
	HCH	6.02	<13	PASS

Peak-to Average Ratio Test Result (Channel Bandwidth: 20 MHz)				
Modulation	Channel	Peak-to-Average Ratio [dB]	Limit [dB]	Verdict
QPSK	LCH	5.82	<13	PASS
	MCH	5.76	<13	PASS
	HCH	5.73	<13	PASS
16QAM	LCH	6.73	<13	PASS
	MCH	6.65	<13	PASS
	HCH	6.54	<13	PASS

Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK
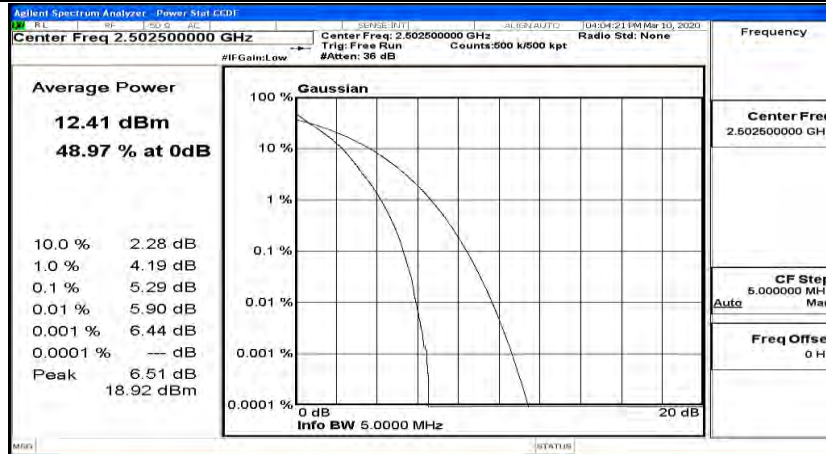
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK
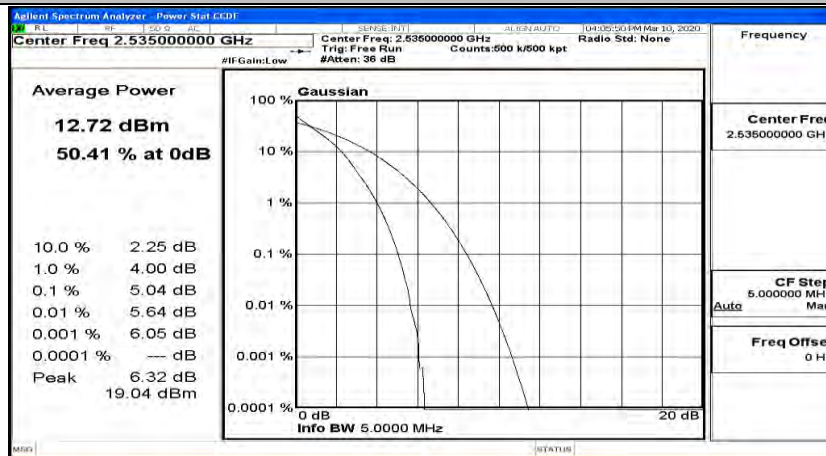
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK
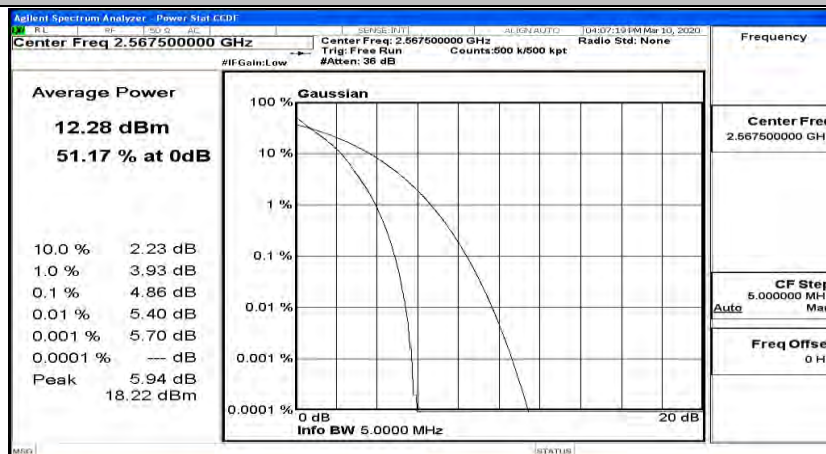
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM
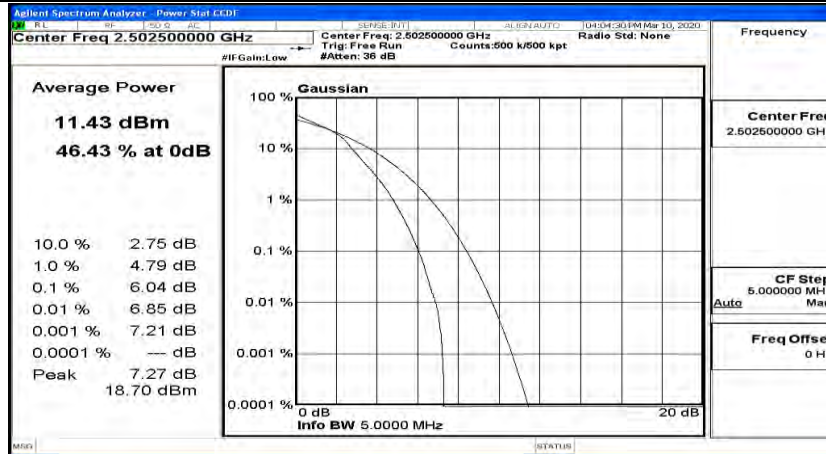
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_16QAM
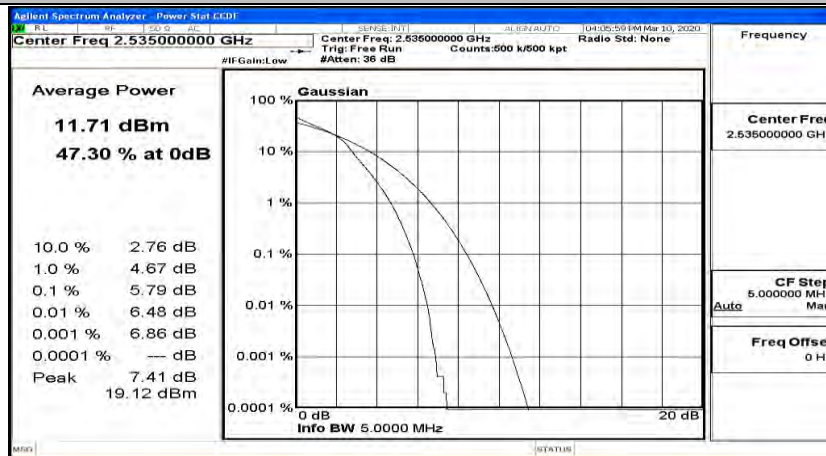
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM
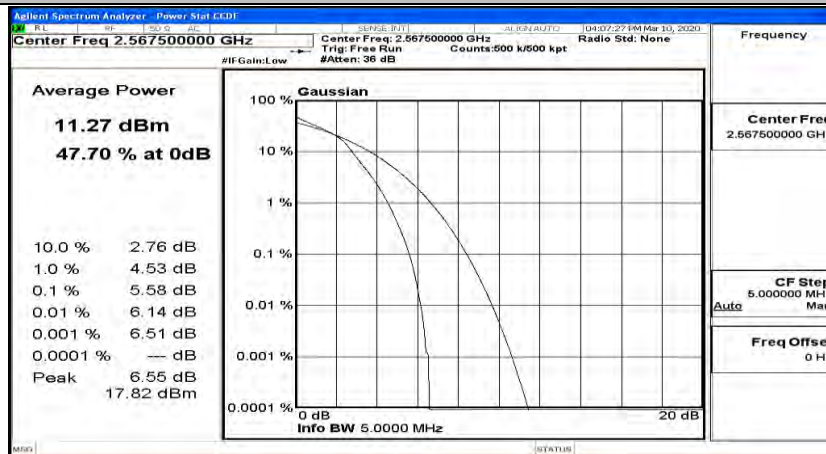
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK
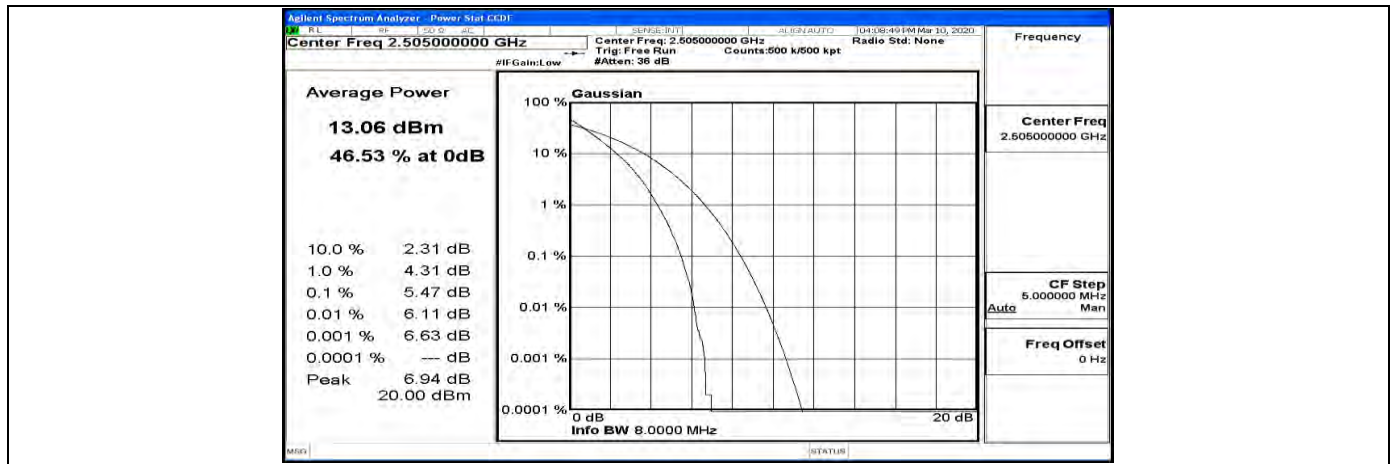
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_QPSK
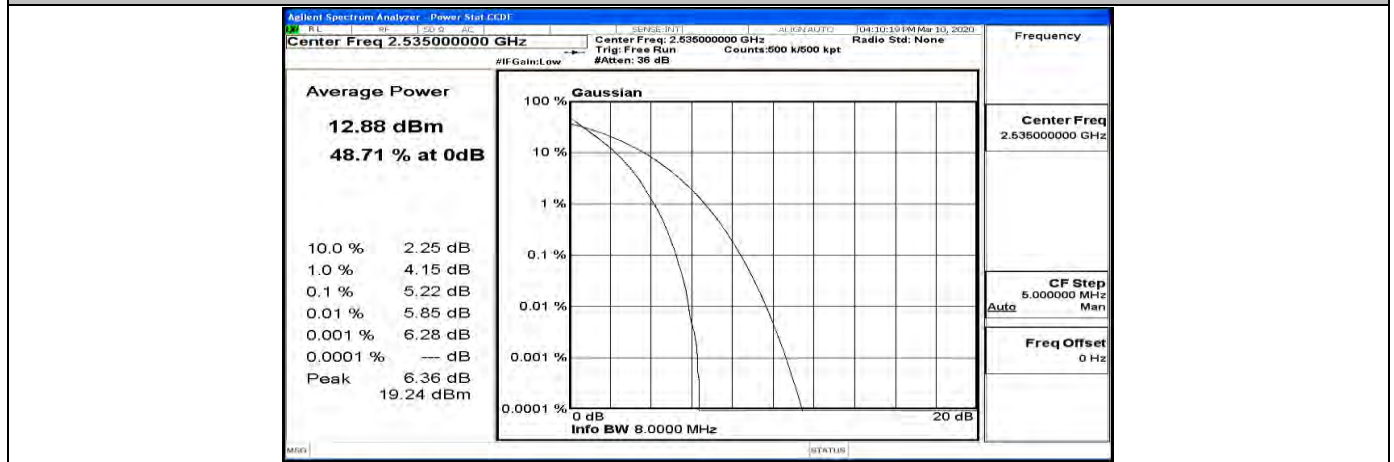
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK
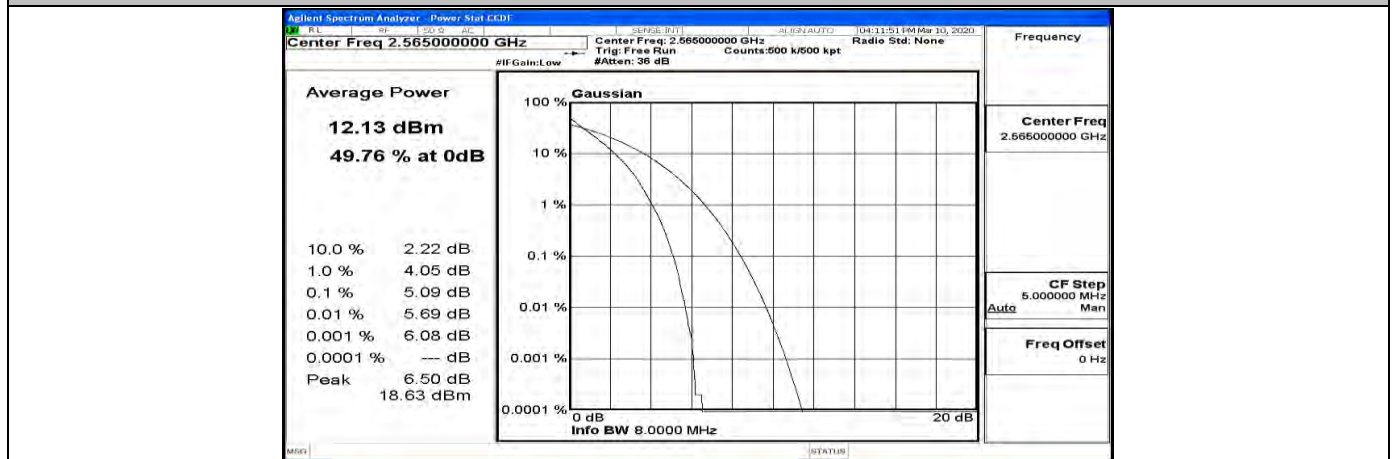
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM
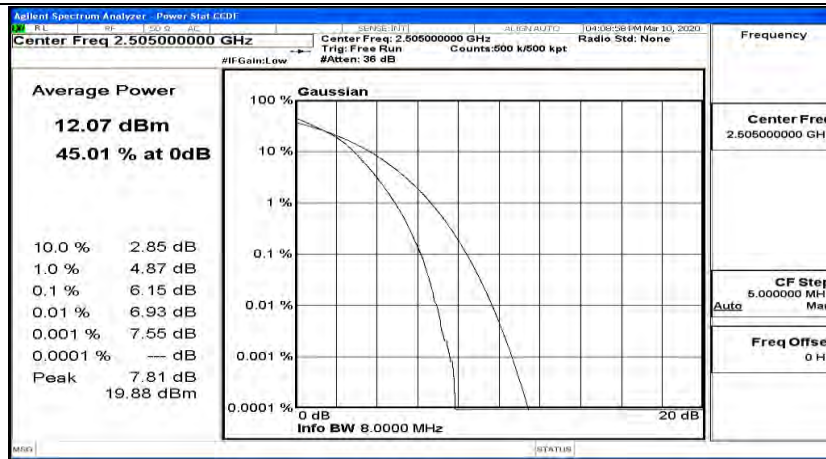
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_MCH_16QAM
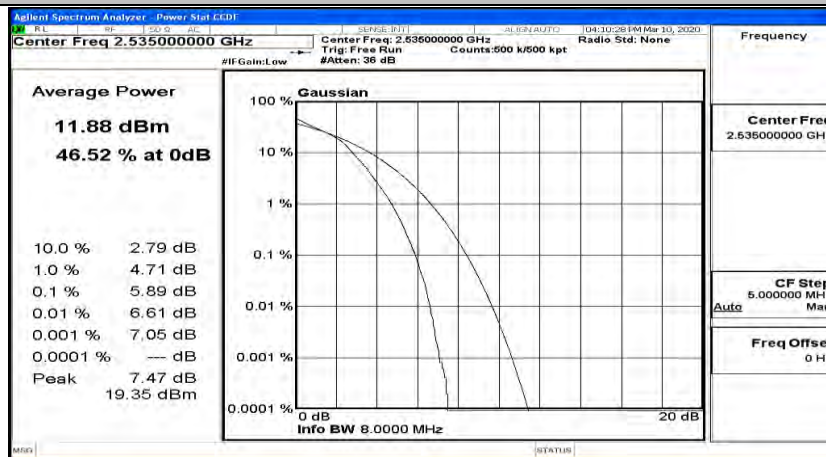
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM
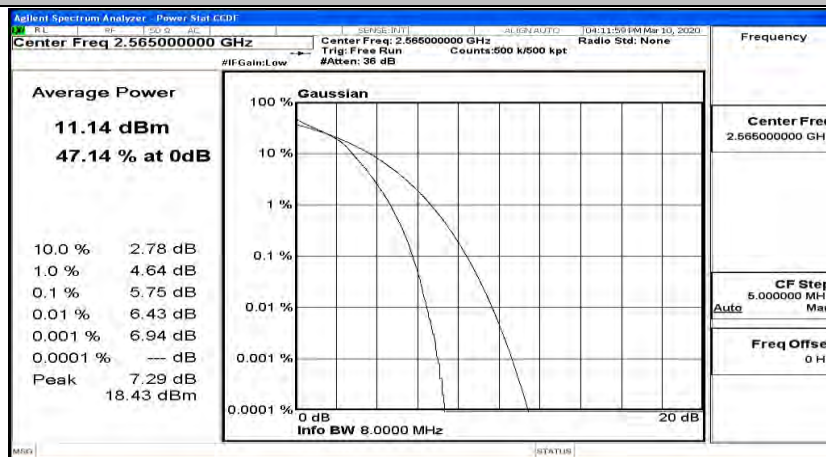
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_QPSK
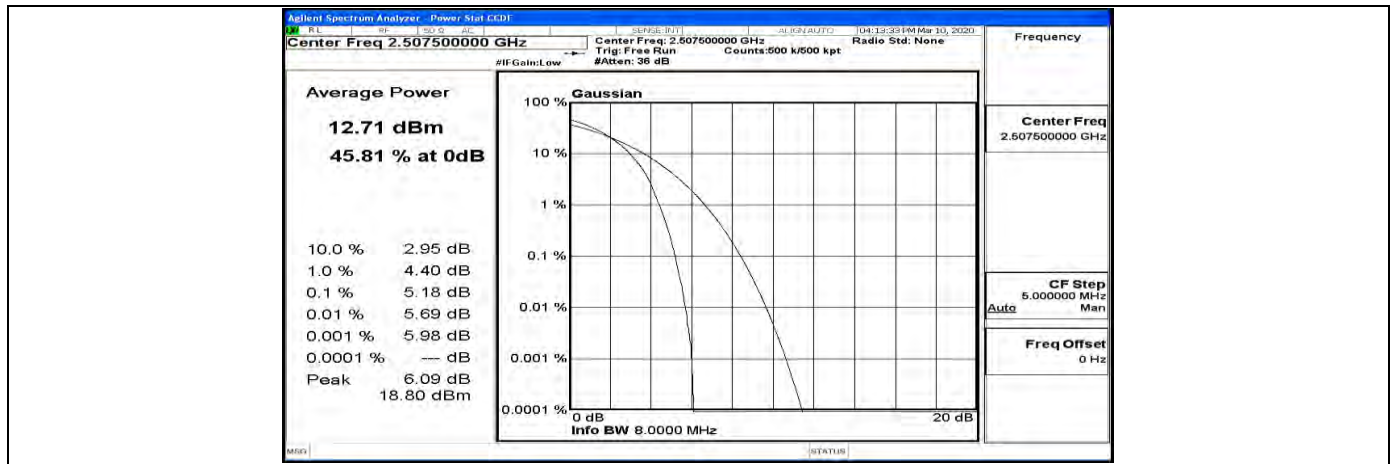
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_QPSK
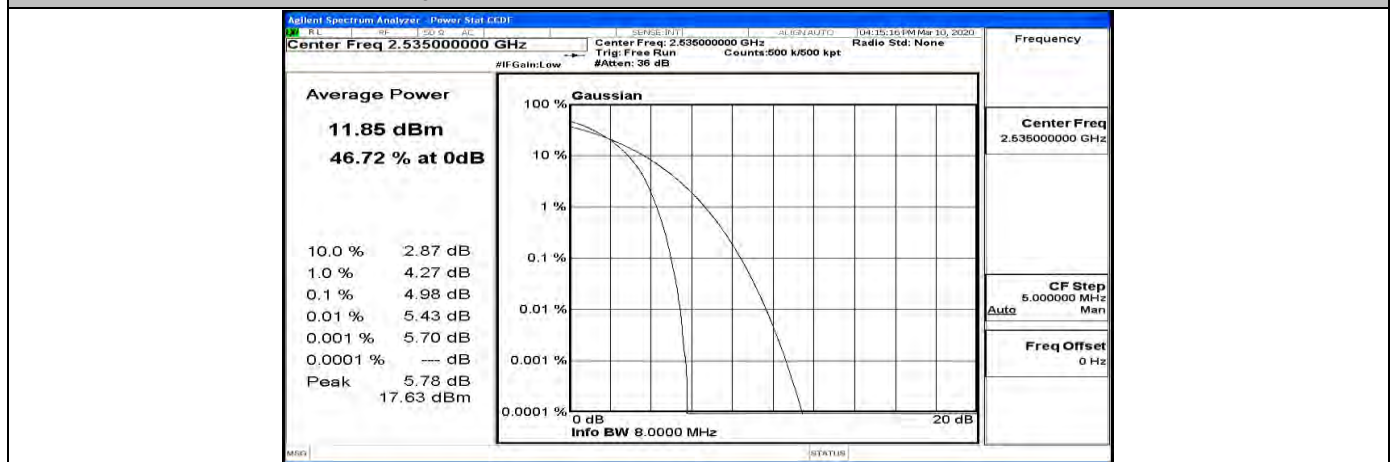
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_QPSK
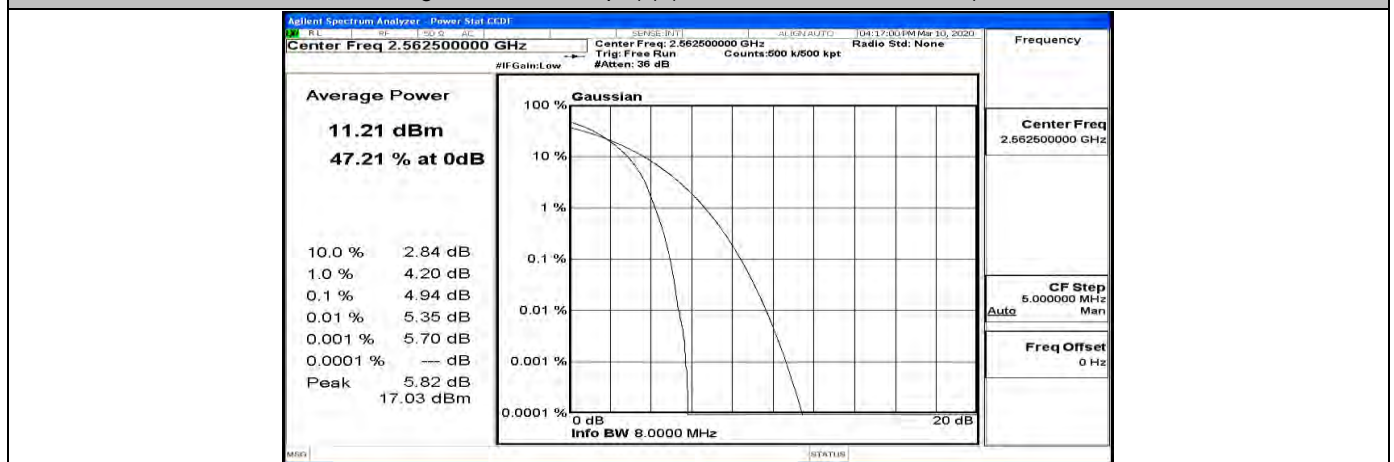
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_16QAM
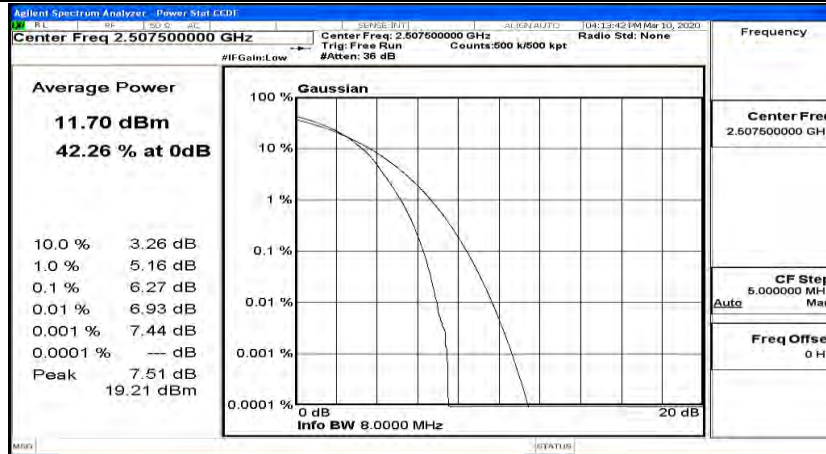
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_16QAM
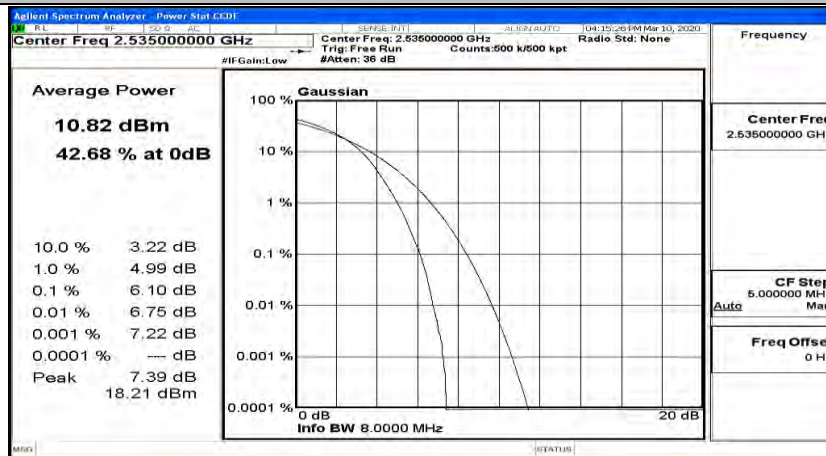
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_16QAM
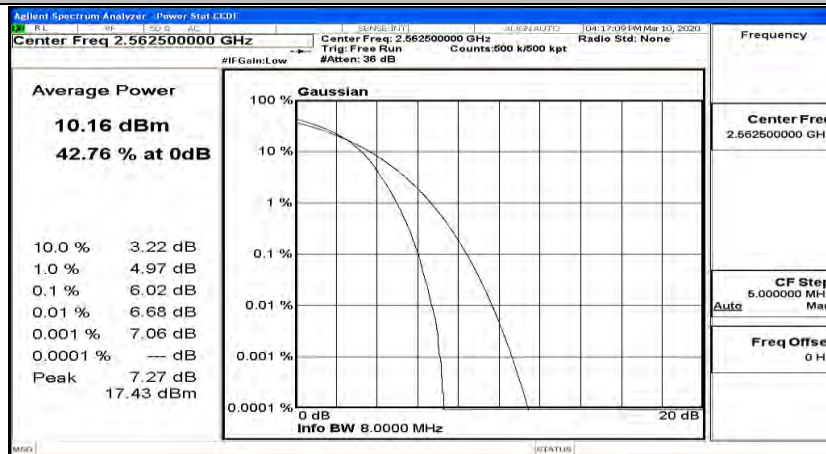
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_QPSK
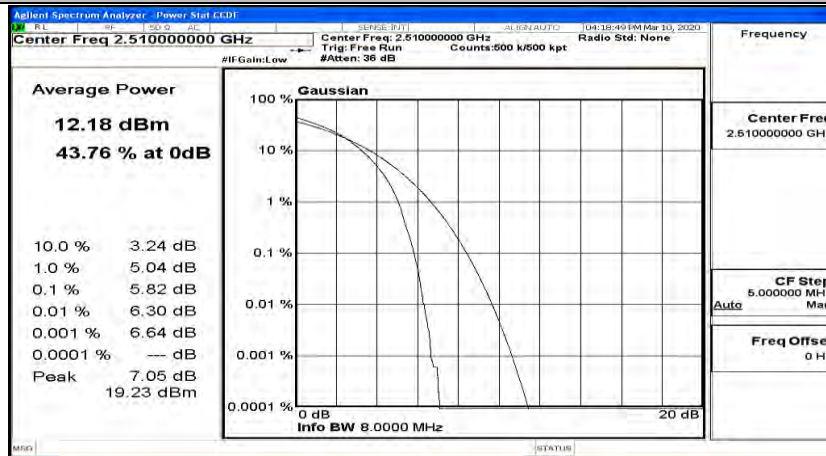
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_QPSK
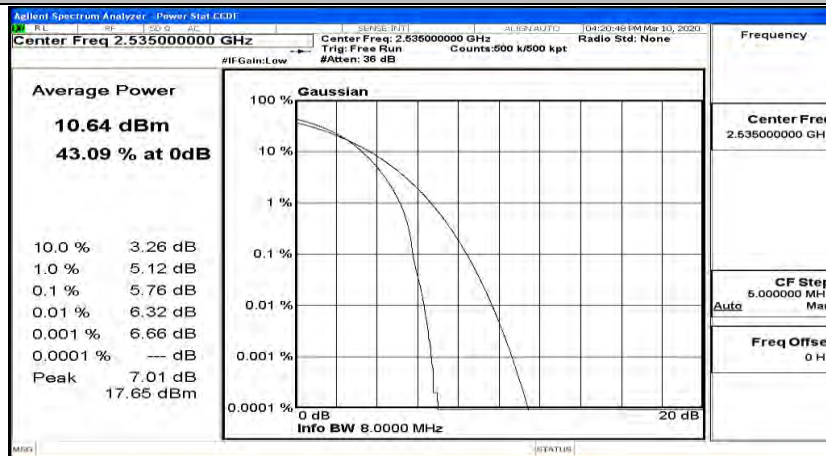
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_QPSK
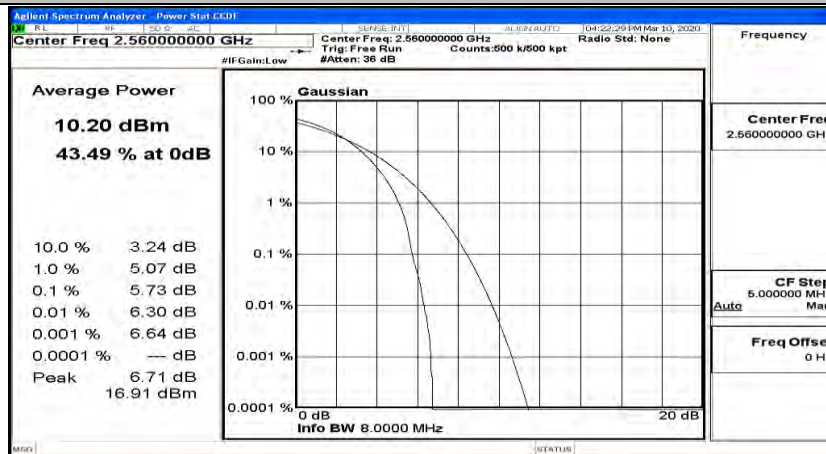
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_16QAM
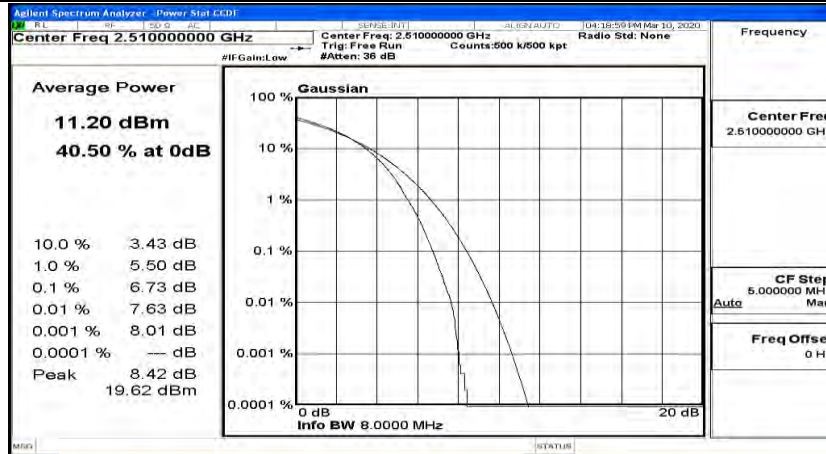
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_16QAM
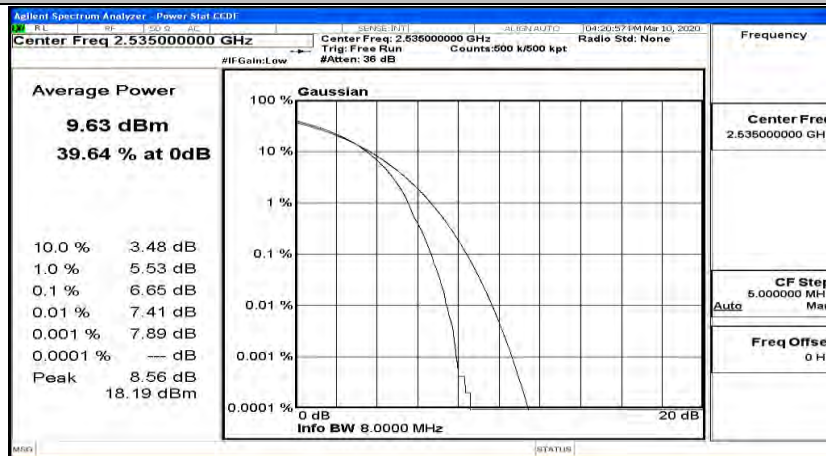
Peak-to Average Ratio Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_16QAM
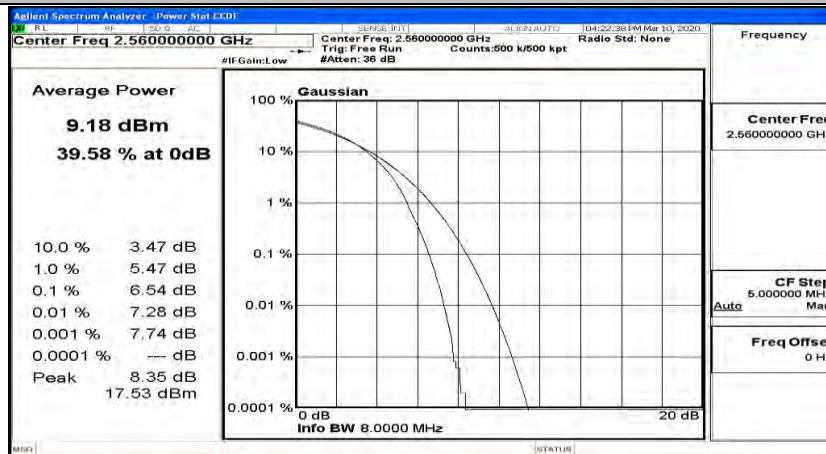
G.3 26dB Bandwidth and Occupied Bandwidth

EBW & OBW Test Result (Channel Bandwidth: 5 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	4.4737	4.757	PASS
	MCH	4.4724	4.728	PASS
	HCH	4.4792	4.752	PASS
16QAM	LCH	4.4801	4.758	PASS
	MCH	4.4784	4.741	PASS
	HCH	4.4804	4.733	PASS

EBW & OBW Test Result (Channel Bandwidth: 10 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	8.9553	9.421	PASS
	MCH	8.9417	9.396	PASS
	HCH	8.9354	9.387	PASS
16QAM	LCH	8.9520	9.383	PASS
	MCH	8.9420	9.482	PASS
	HCH	8.9395	9.435	PASS

EBW & OBW Test Result (Channel Bandwidth: 15 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	13.393	13.94	PASS
	MCH	13.445	13.98	PASS
	HCH	13.416	13.95	PASS
16QAM	LCH	13.416	13.92	PASS
	MCH	13.430	14.00	PASS
	HCH	13.420	13.96	PASS

EBW & OBW Test Result (Channel Bandwidth: 20 MHz)				
Modulation	Channel	Occupied Bandwidth (MHz)	26dB Bandwidth (MHz)	Verdict
QPSK	LCH	17.813	18.52	PASS
	MCH	17.891	18.60	PASS
	HCH	17.868	18.61	PASS
16QAM	LCH	17.804	18.51	PASS
	MCH	17.905	18.59	PASS
	HCH	17.883	18.57	PASS

EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK
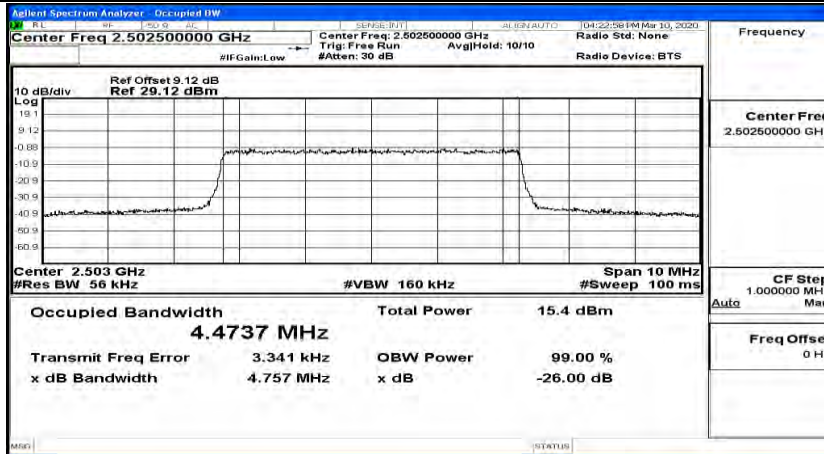
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_MCH_QPSK
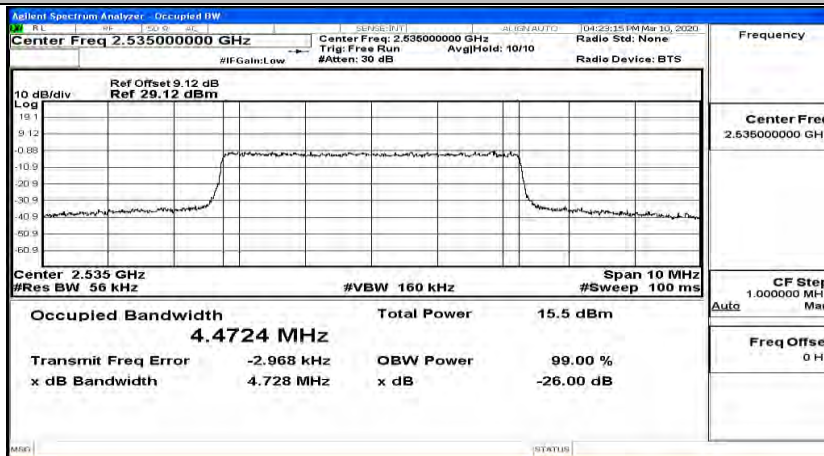
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK
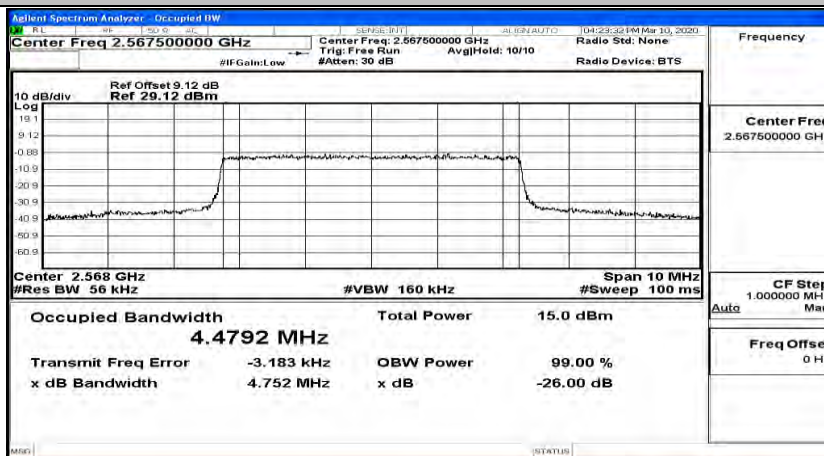
EBW & OBW Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM
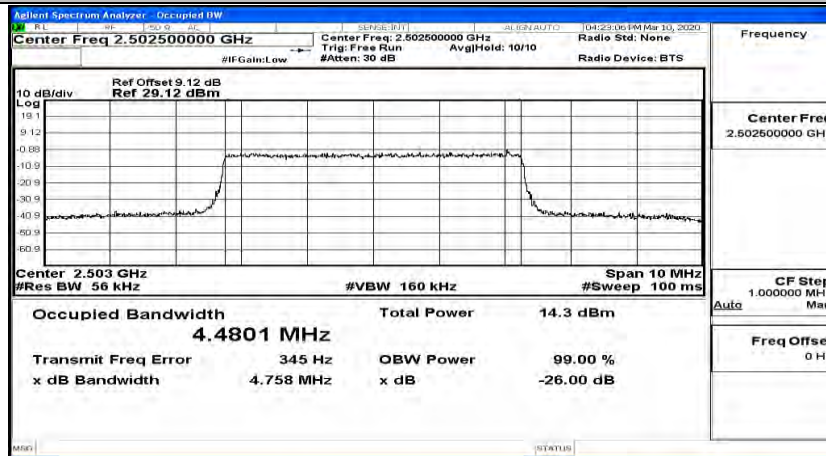
Occupied Bandwidth	Total Power	14.3 dBm
4.4801 MHz		
Transmit Freq Error 345 Hz	OBW Power	99.00 %
x dB Bandwidth 4.758 MHz	x dB	-26.00 dB

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

Occupied Bandwidth	Total Power	14.6 dBm
4.4784 MHz		
Transmit Freq Error -4.101 kHz	OBW Power	99.00 %
x dB Bandwidth 4.741 MHz	x dB	-26.00 dB

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

Occupied Bandwidth	Total Power	14.1 dBm
4.4804 MHz		
Transmit Freq Error 4.277 kHz	OBW Power	99.00 %
x dB Bandwidth 4.733 MHz	x dB	-26.00 dB
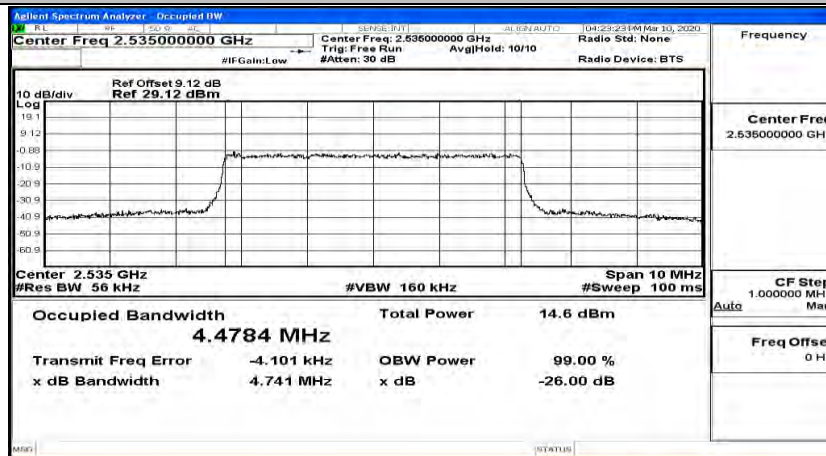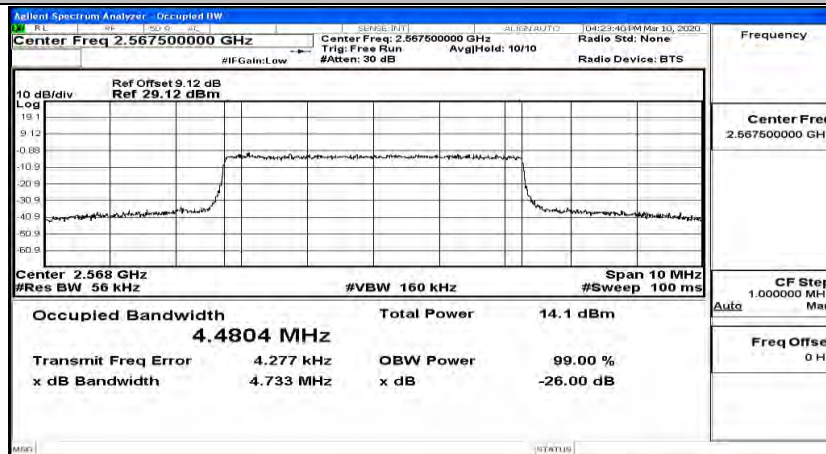
EBW & OBW Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK

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 |
|---|
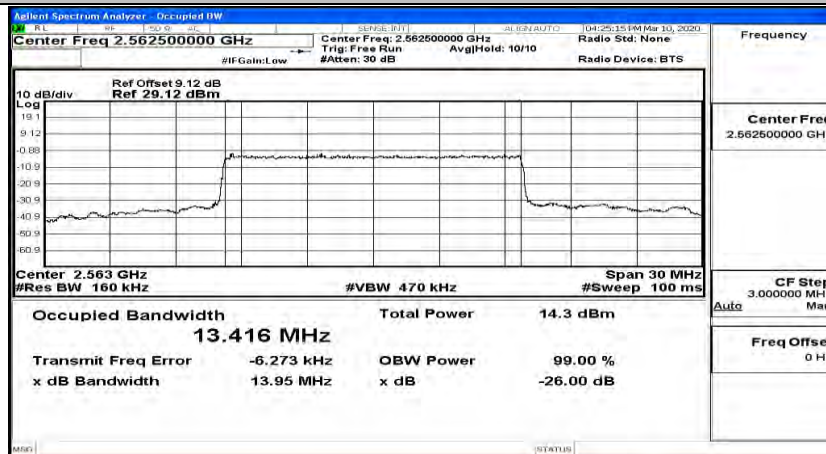
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_16QAM
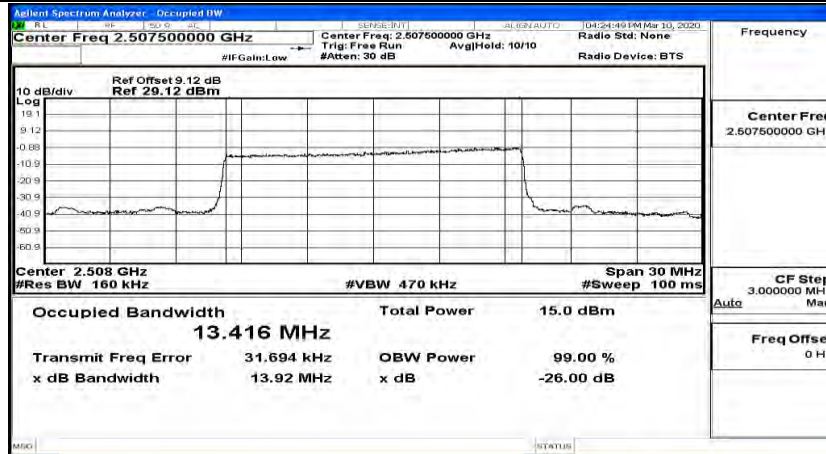
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_MCH_16QAM
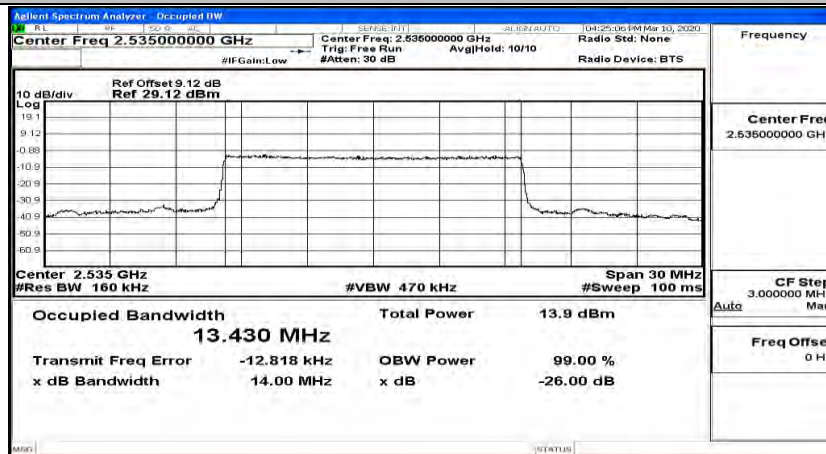
EBW & OBW Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_16QAM
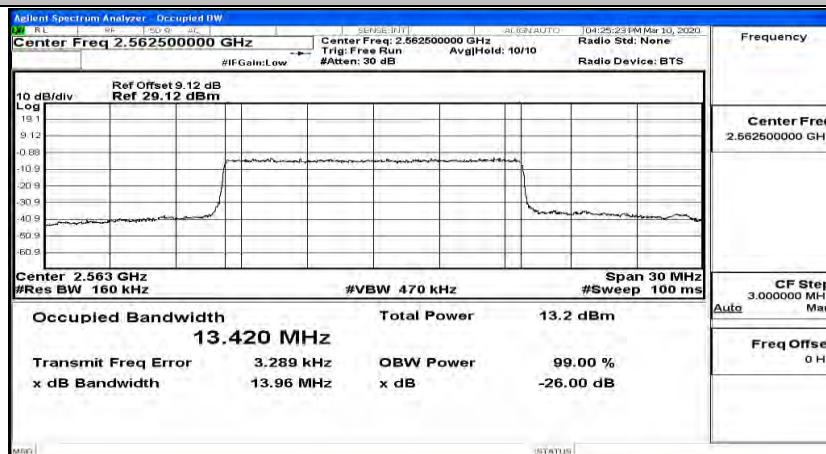
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_QPSK
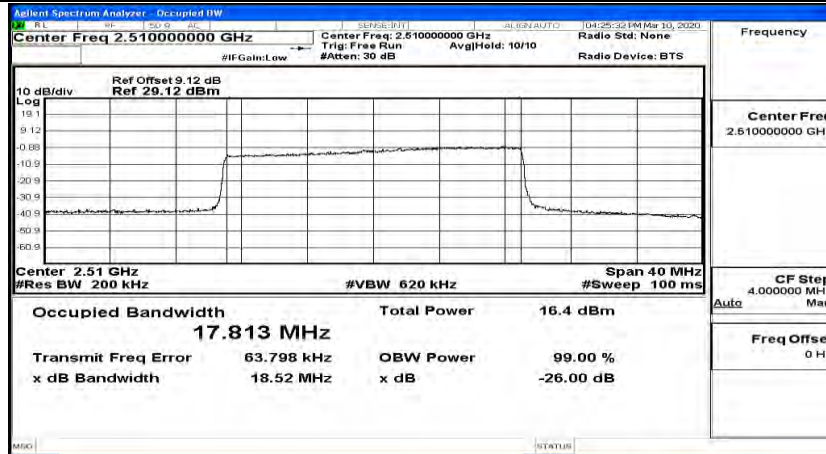
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_QPSK
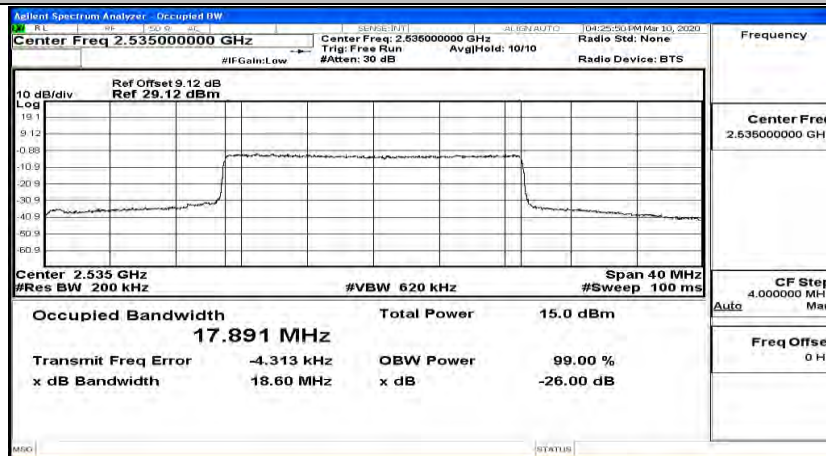
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_QPSK
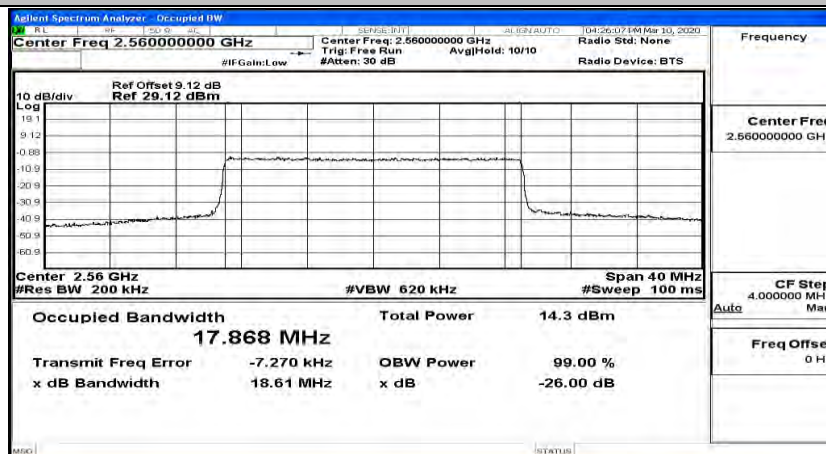
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_16QAM
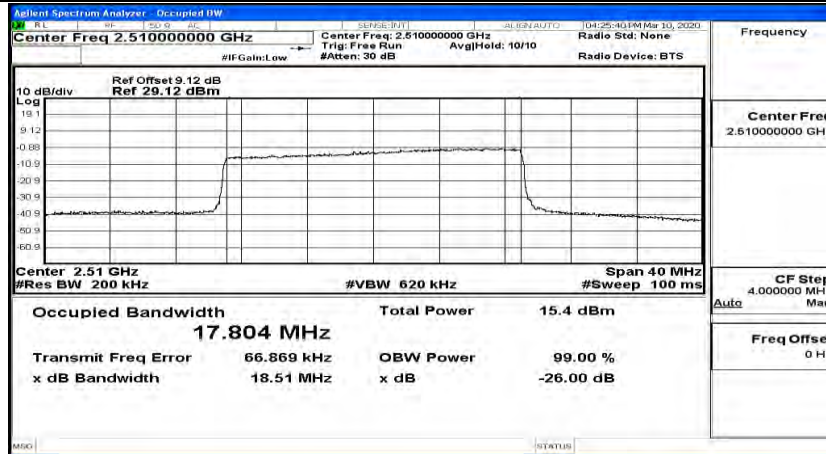
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_MCH_16QAM
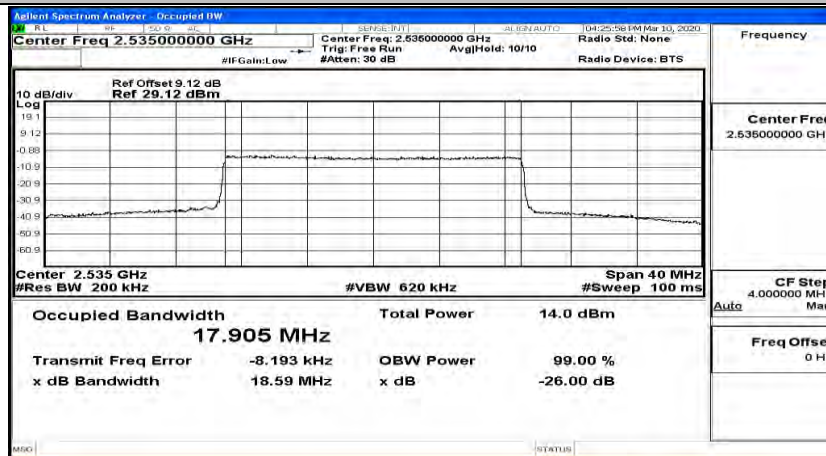
EBW & OBW Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_16QAM
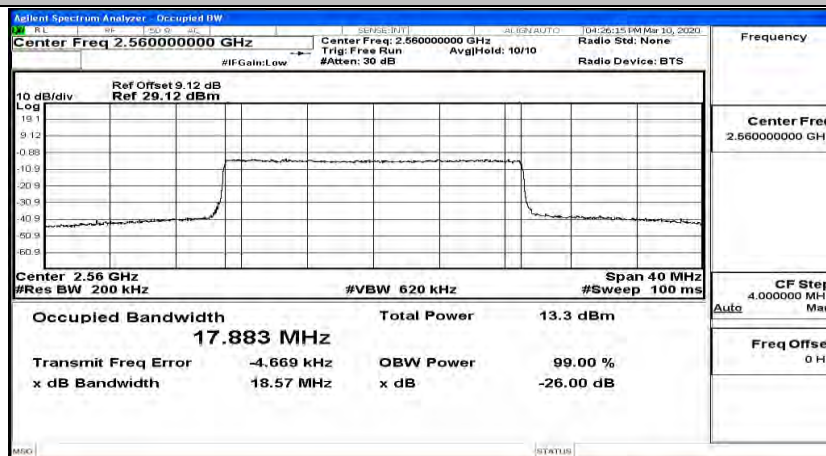
G.4 Band Edge

Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_QPSK
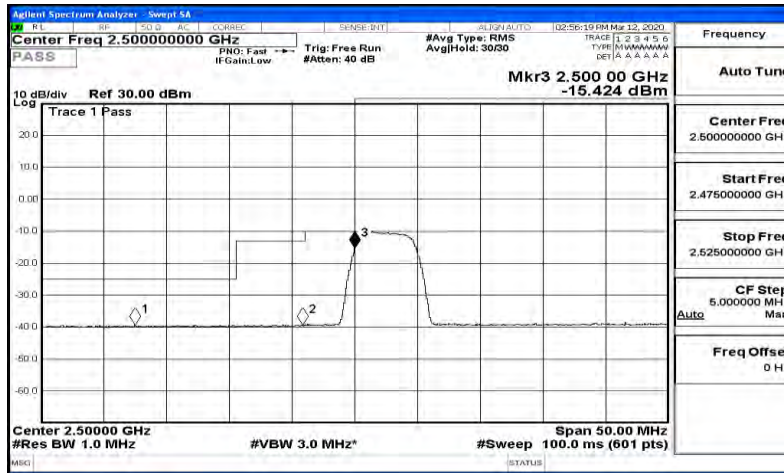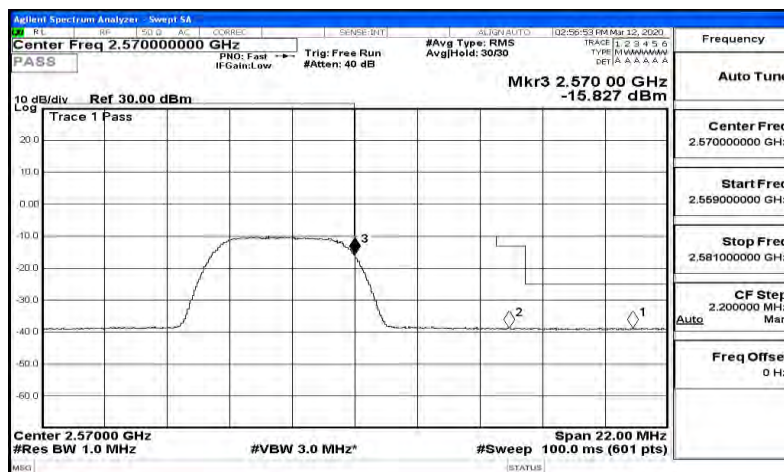
| Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_QPSK |
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| Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_LCH_16QAM |
| --- |
| |
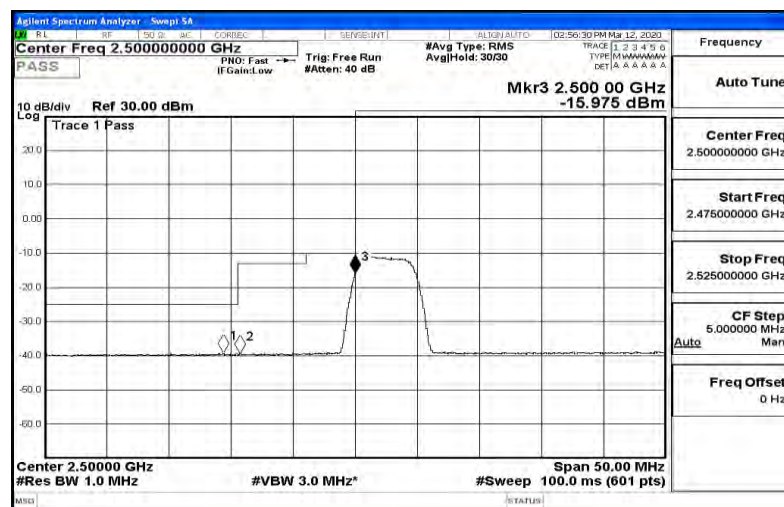
Band Edge Test Graph(s) (Channel Bandwidth: 5 MHz)_HCH_16QAM
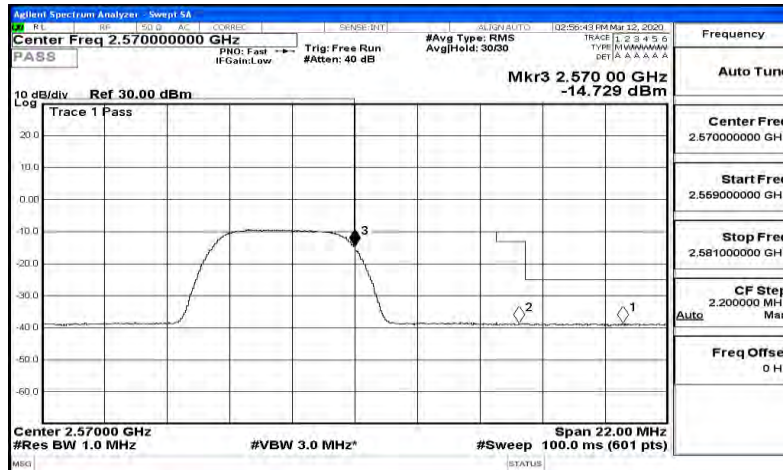
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_QPSK
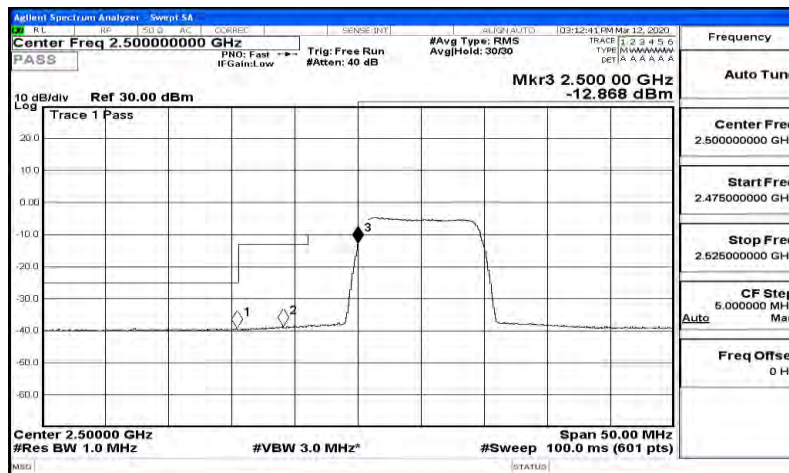
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_QPSK
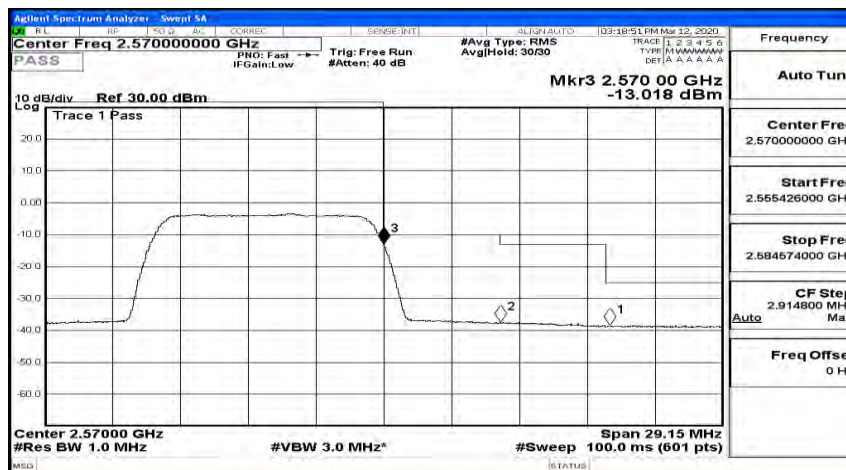
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_LCH_16QAM
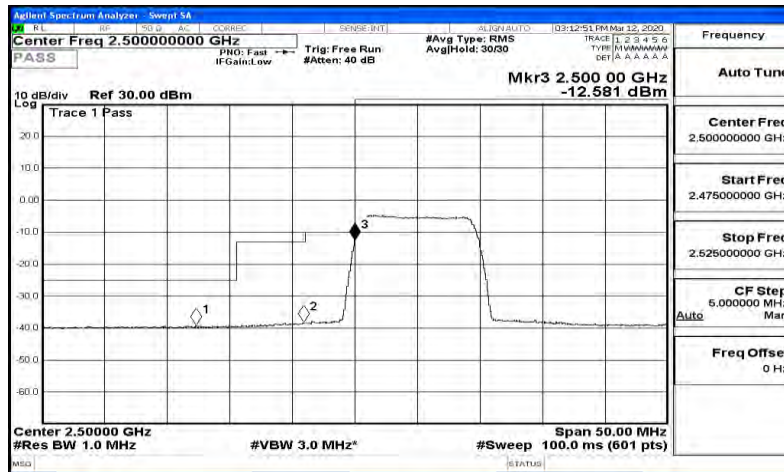
Band Edge Test Graph(s) (Channel Bandwidth: 10 MHz)_HCH_16QAM
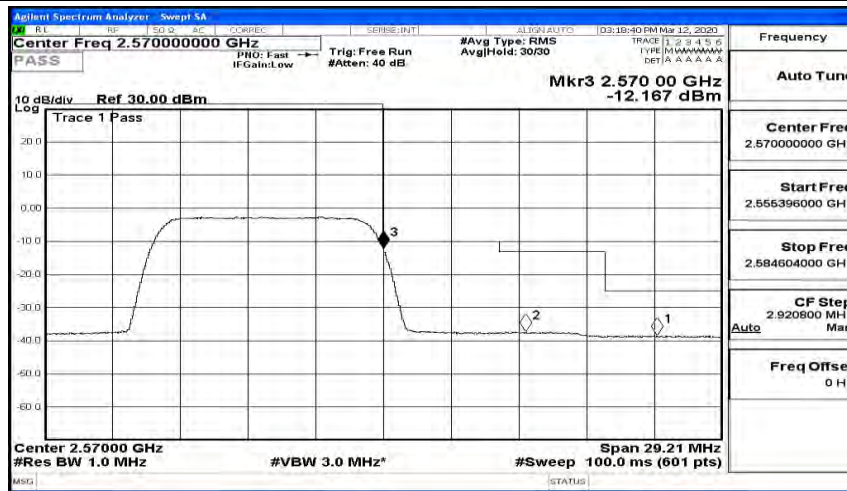
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_QPSK
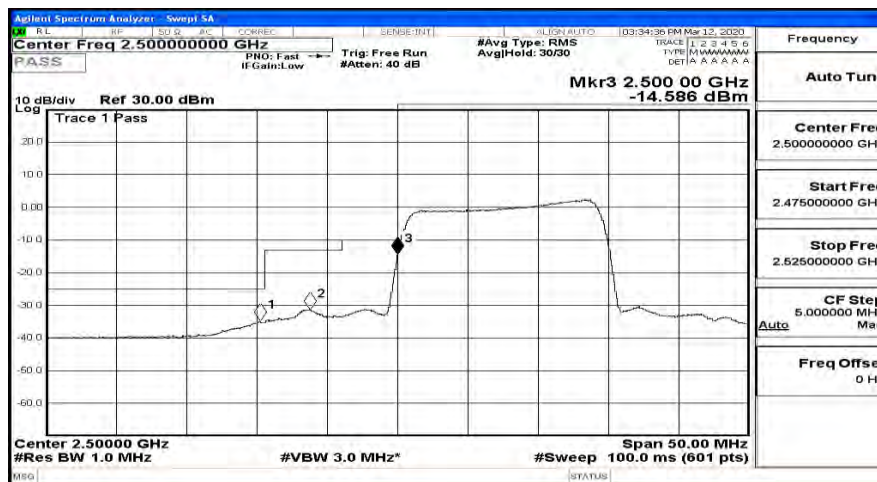
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_QPSK
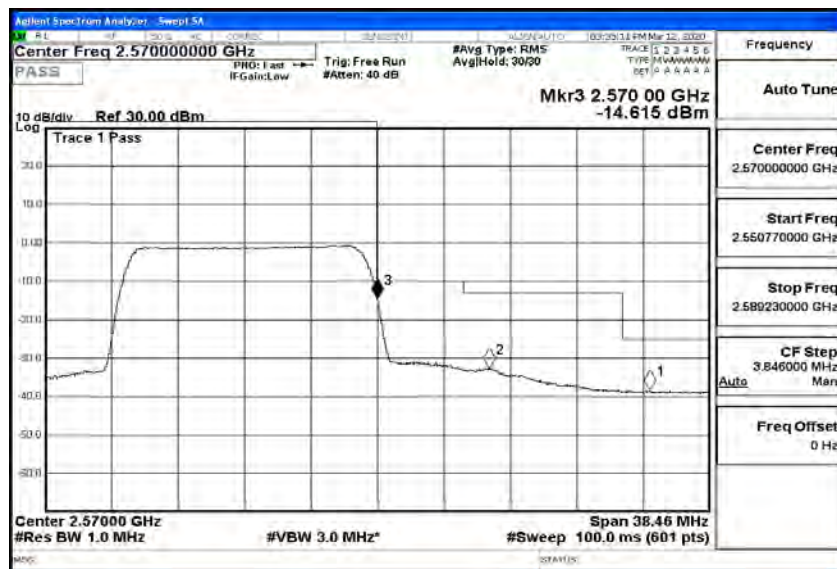
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)_LCH_16QAM
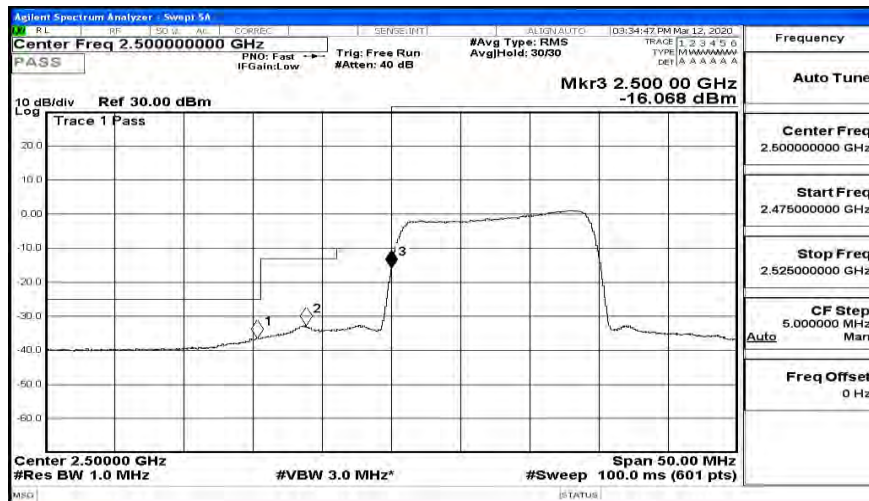
Band Edge Test Graph(s) (Channel Bandwidth:15 MHz)_HCH_16QAM
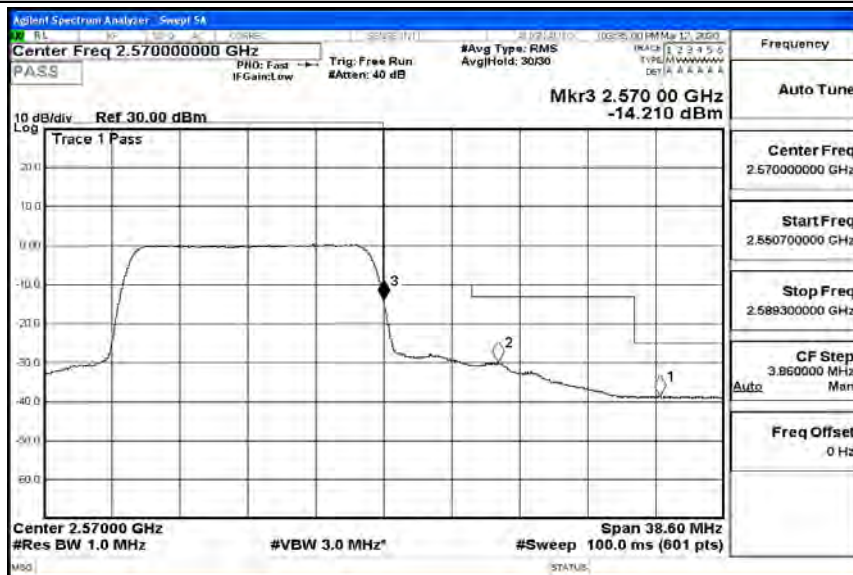
Band Edge Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_QPSK
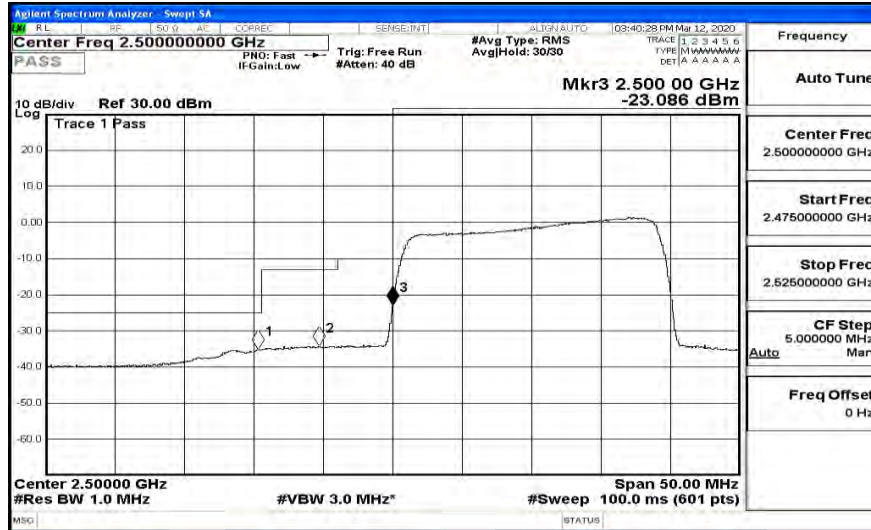
Band Edge Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_QPSK
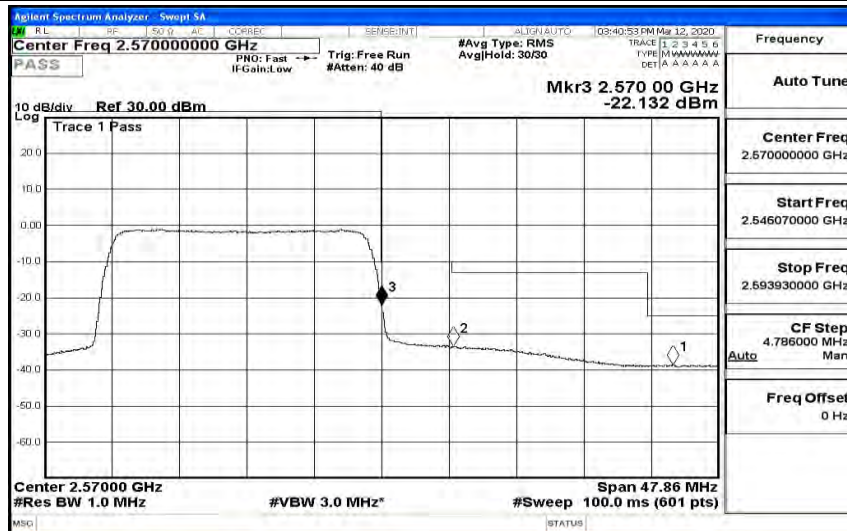
Band Edge Test Graph(s) (Channel Bandwidth:20 MHz)_LCH_16QAM
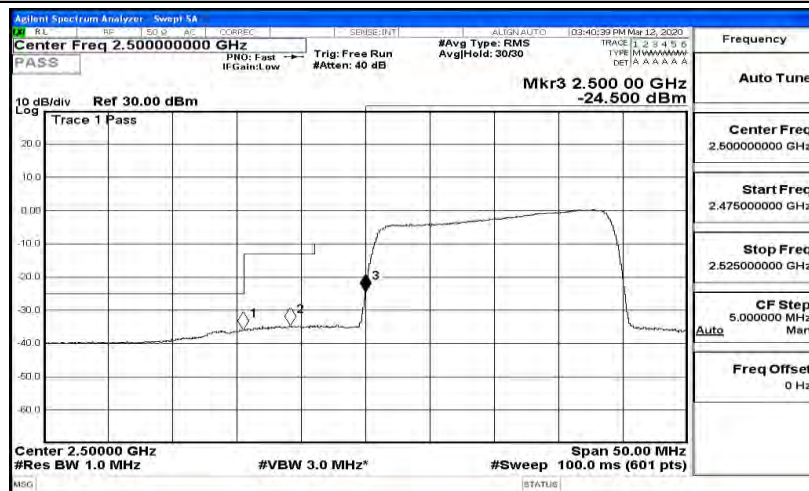
Band Edge Test Graph(s) (Channel Bandwidth:20 MHz)_HCH_16QAM
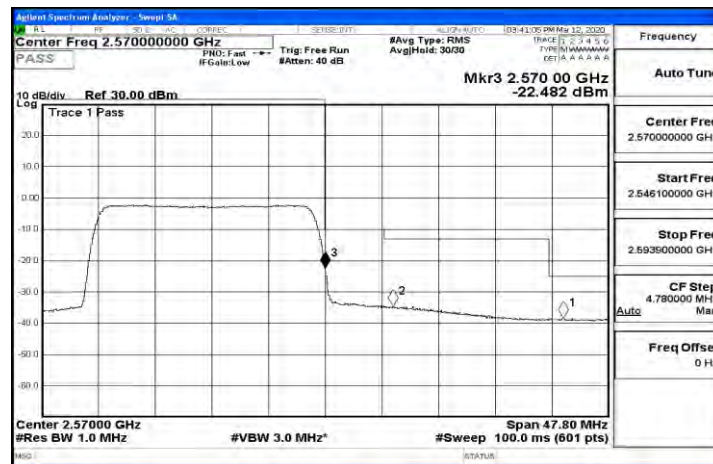
G.5 Conducted Spurious Emission**Channel Bandwidth: 5 MHz**

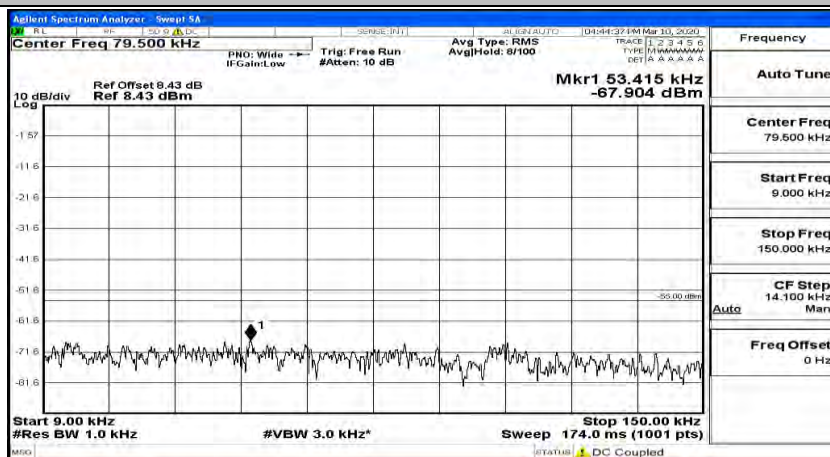| (Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#0 |
|---|
| |
| |
| |
| (Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#12 |
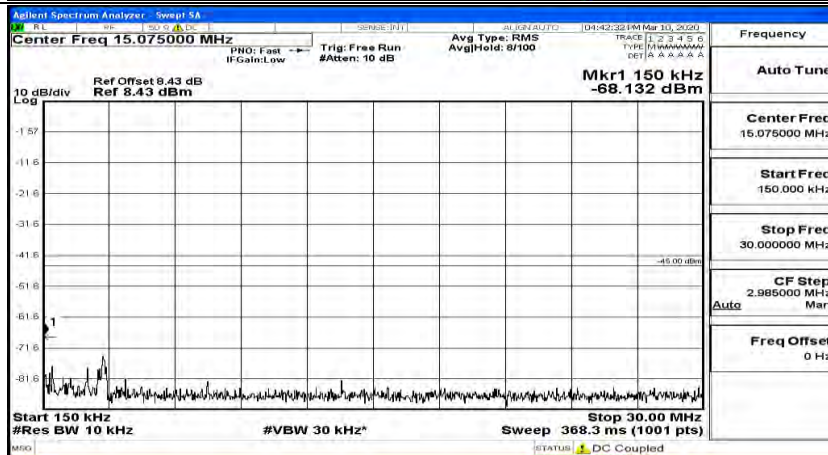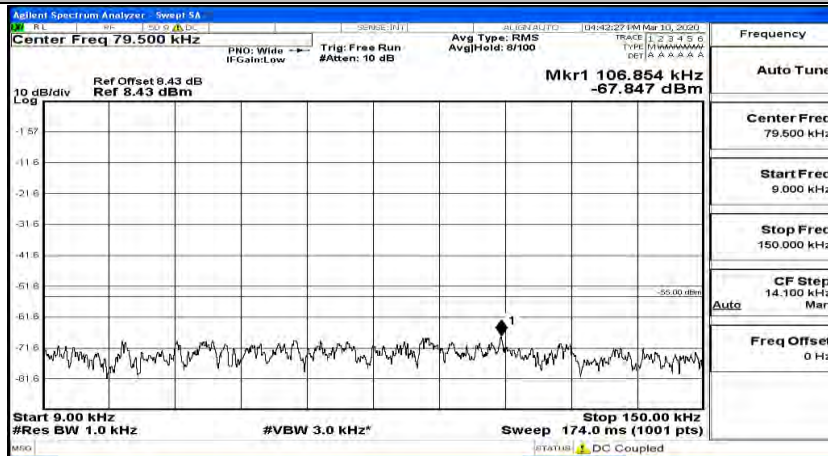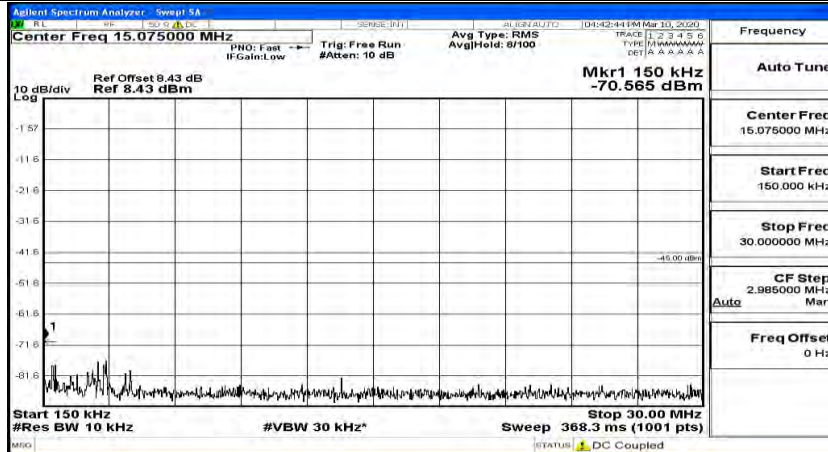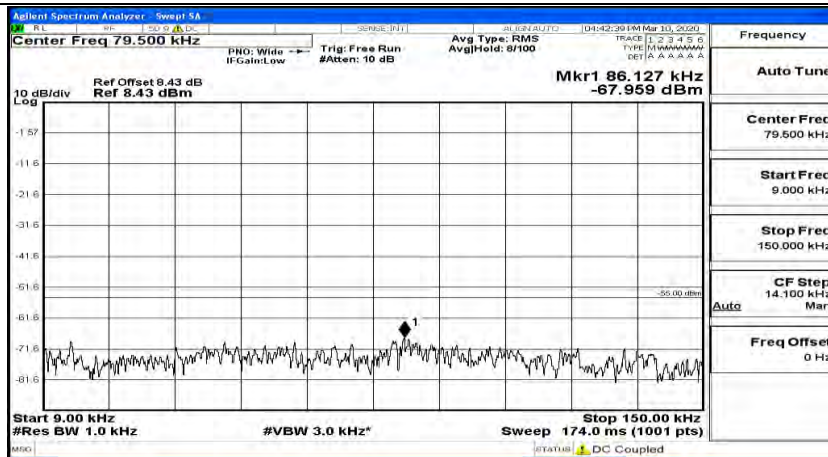
(Channel Bandwidth: 5 MHz)_LCH_QPSK_1RB#24
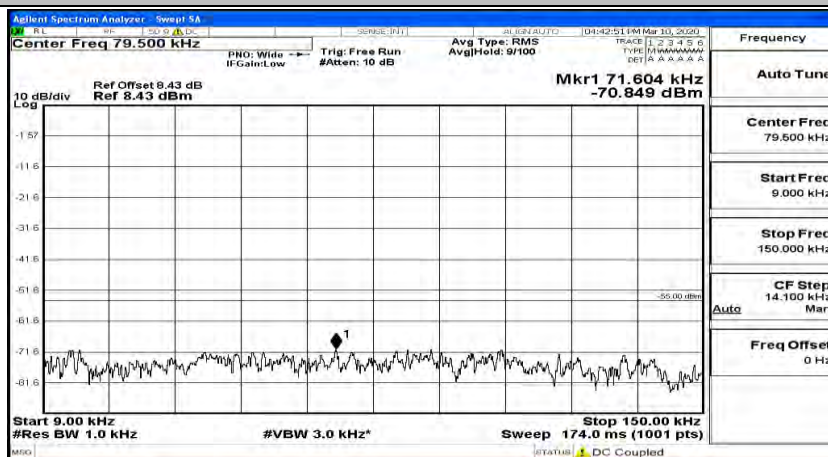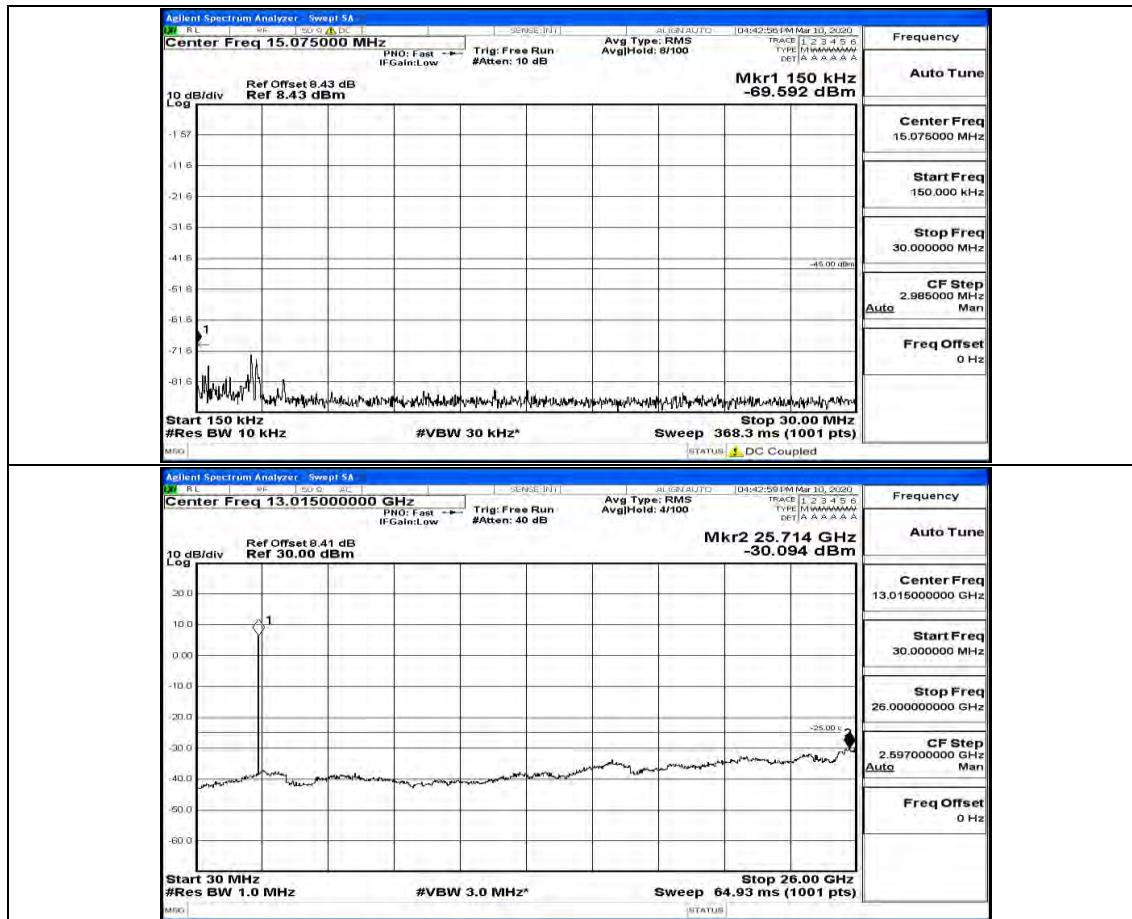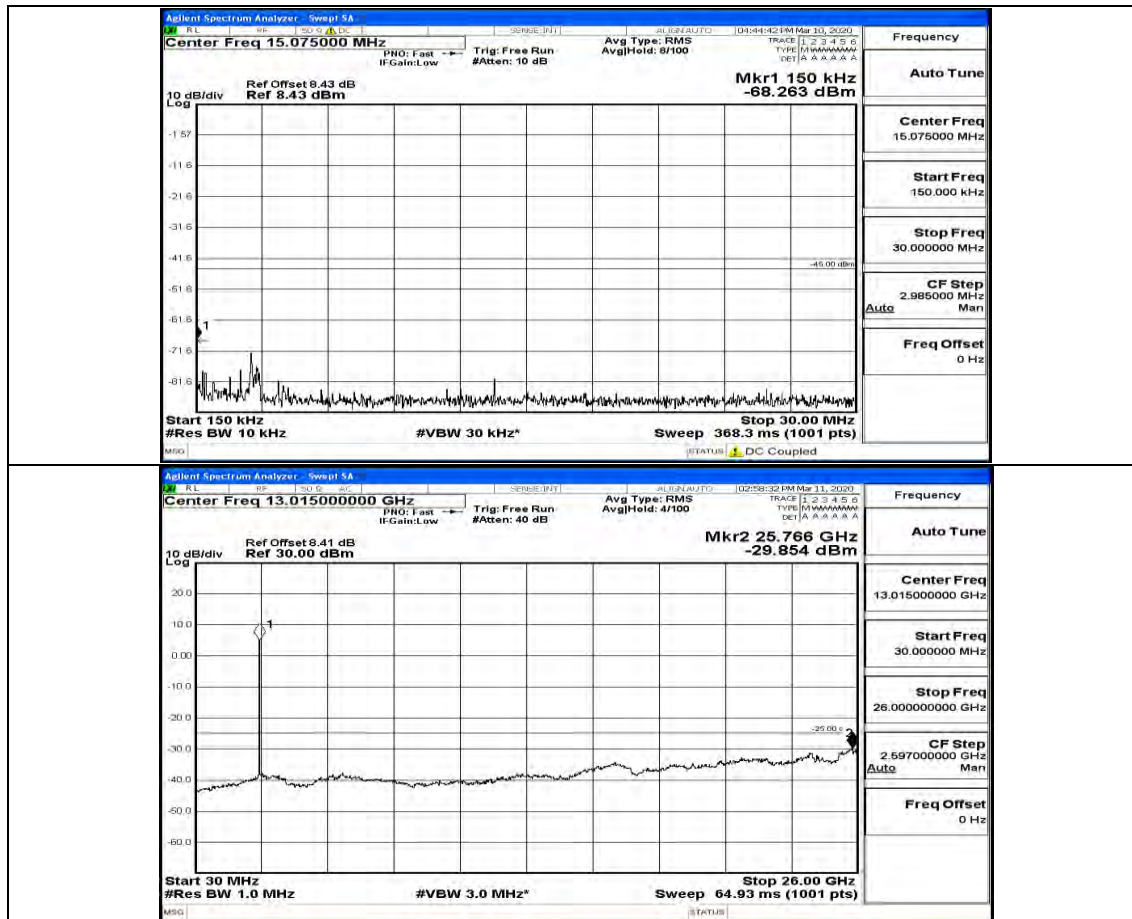
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#0
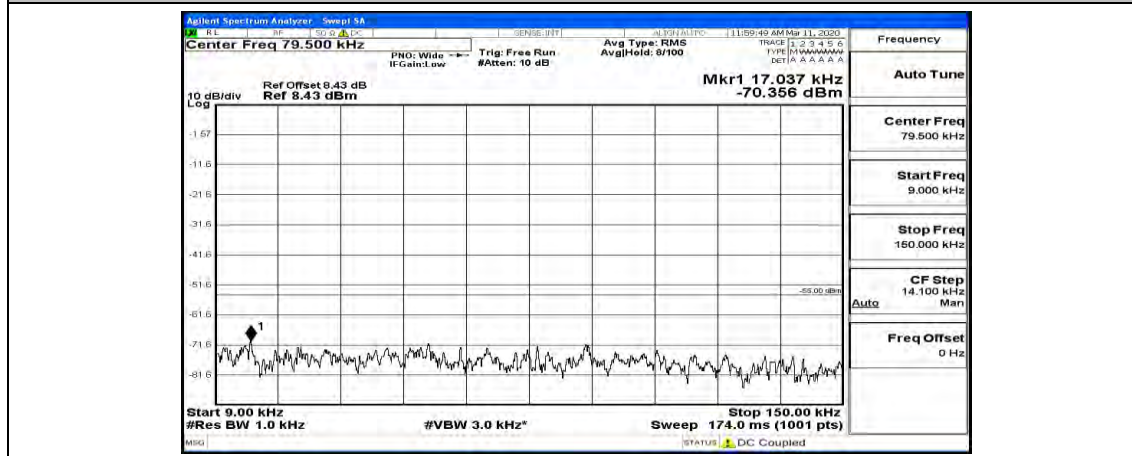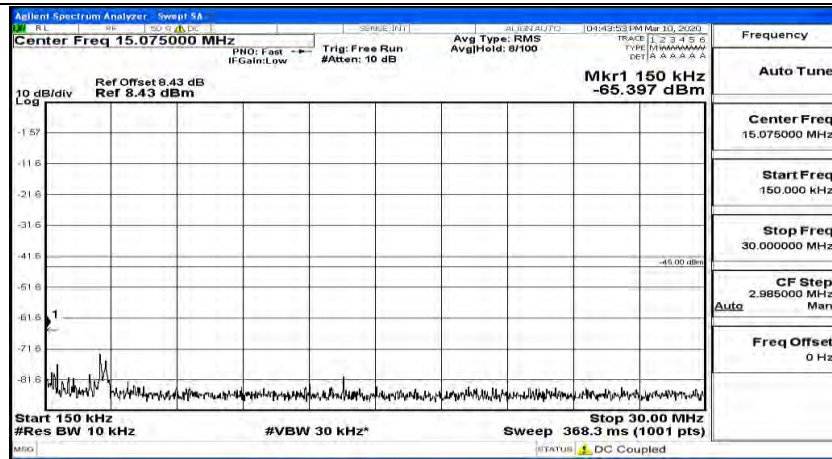
(Channel Bandwidth: 5 MHz)_MCH_QPSK_1RB#12

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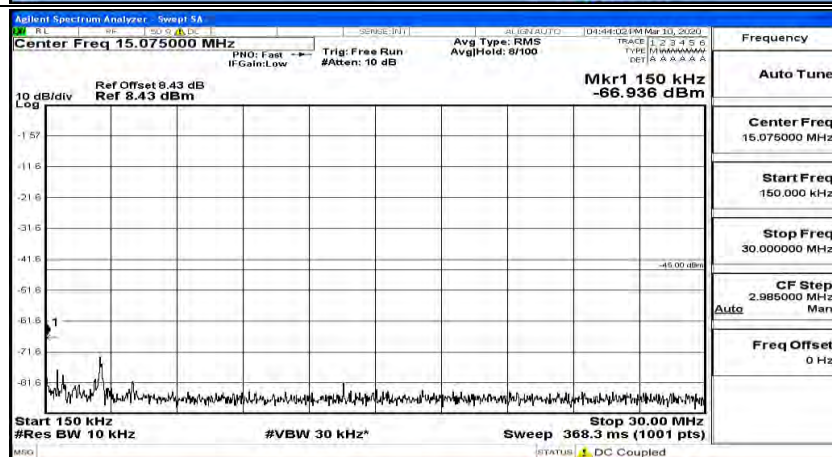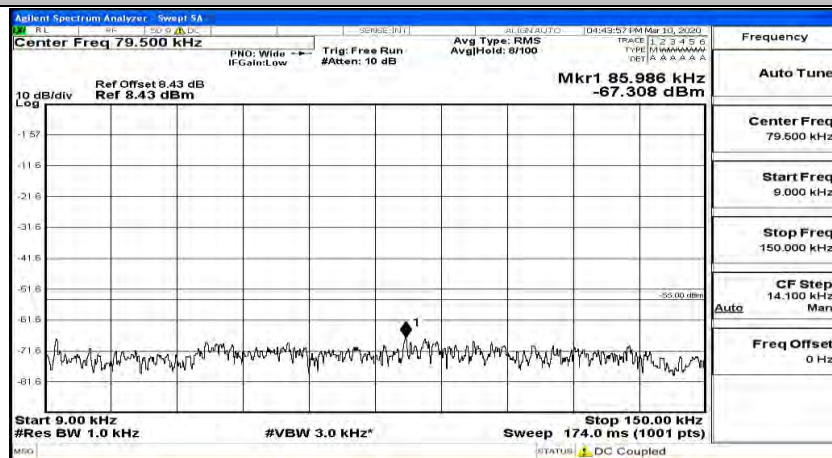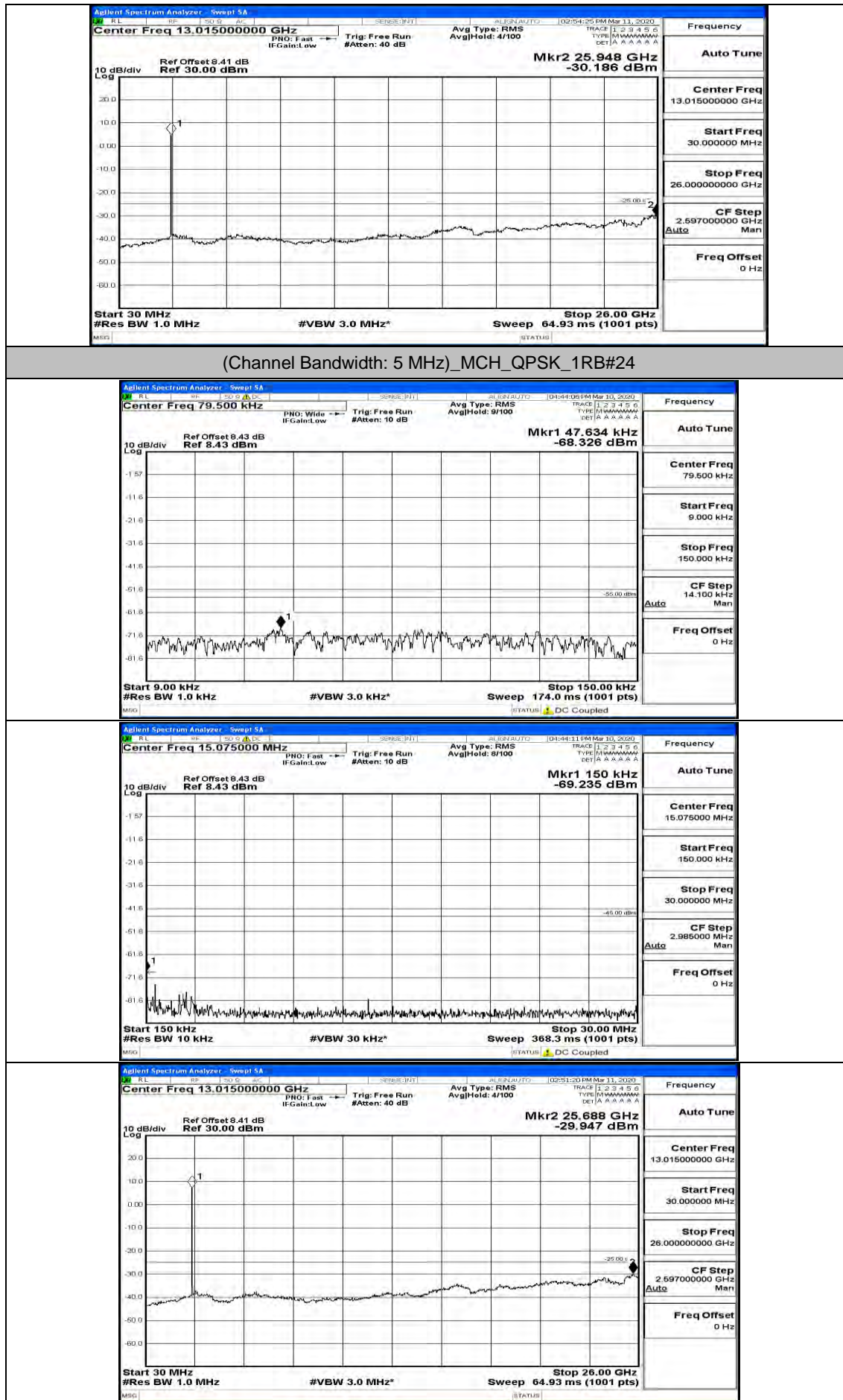
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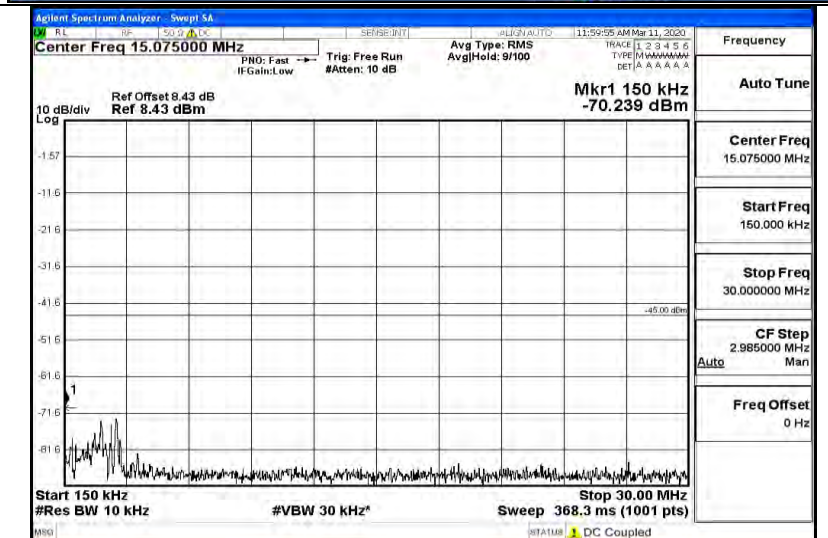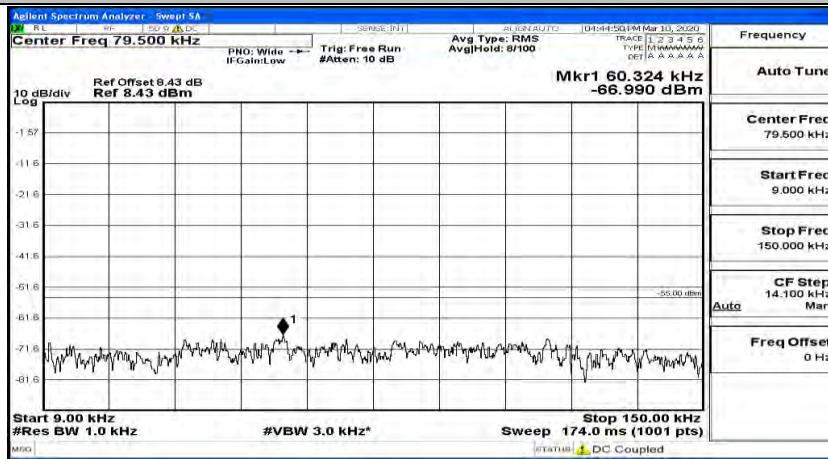
(Channel Bandwidth: 5 MHz)_HCH_QPSK_1RB#12
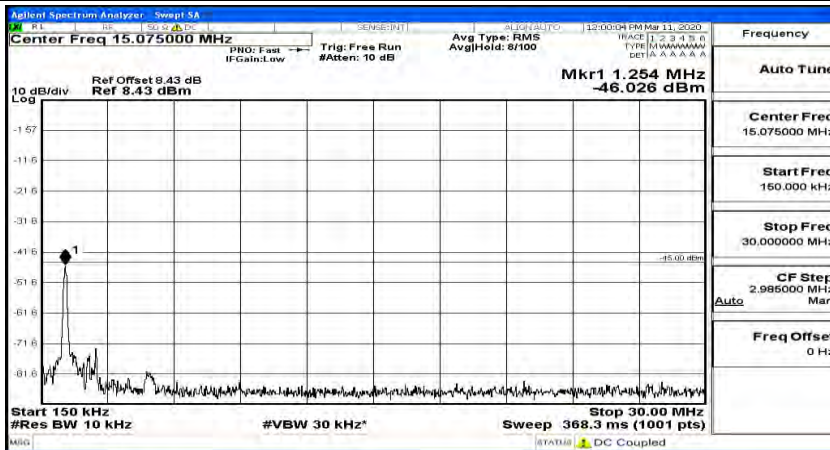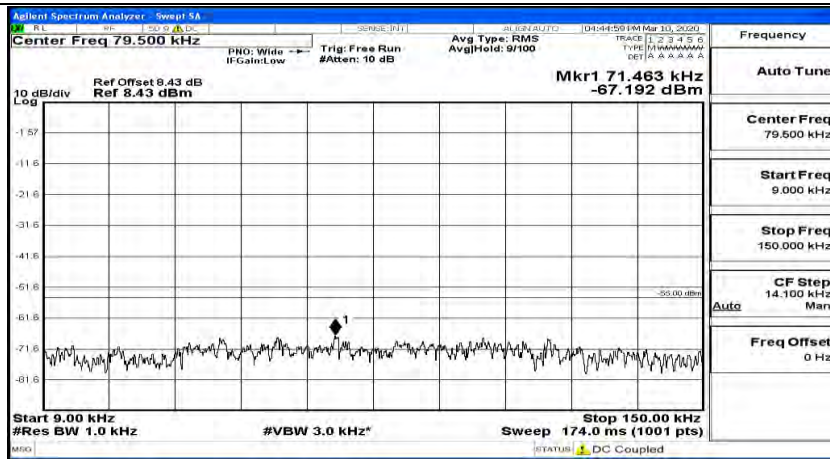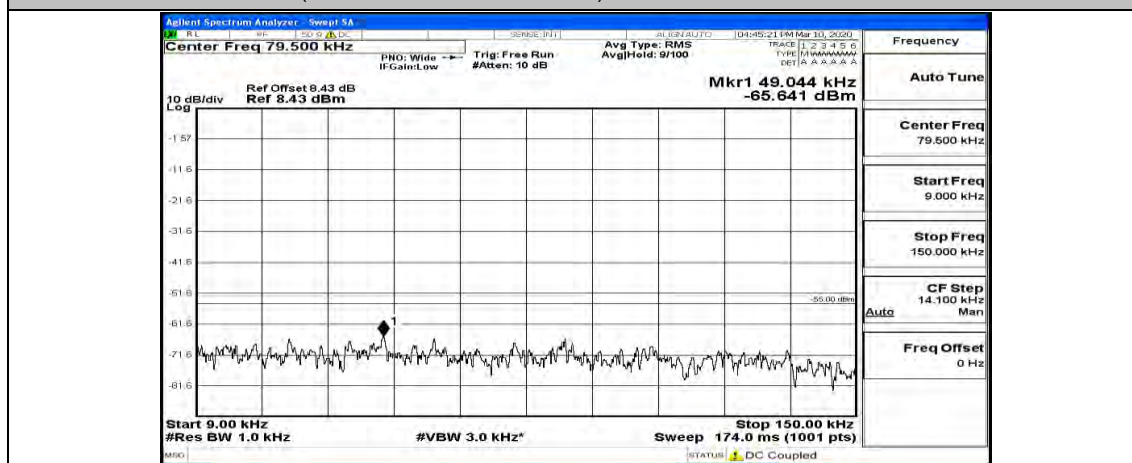
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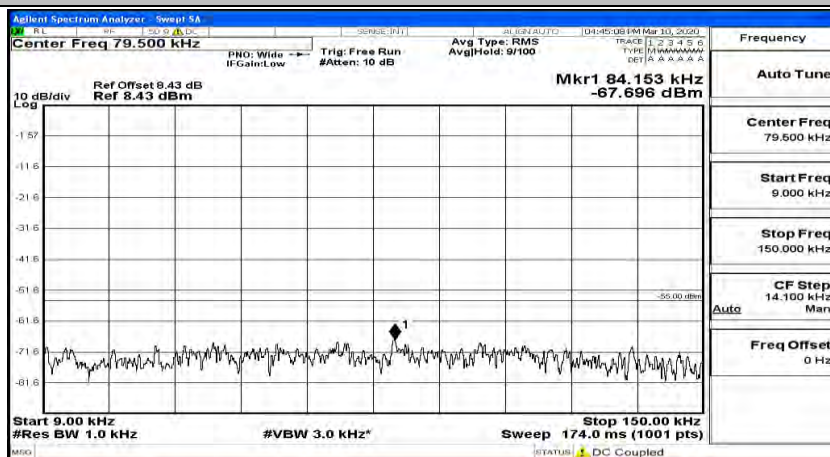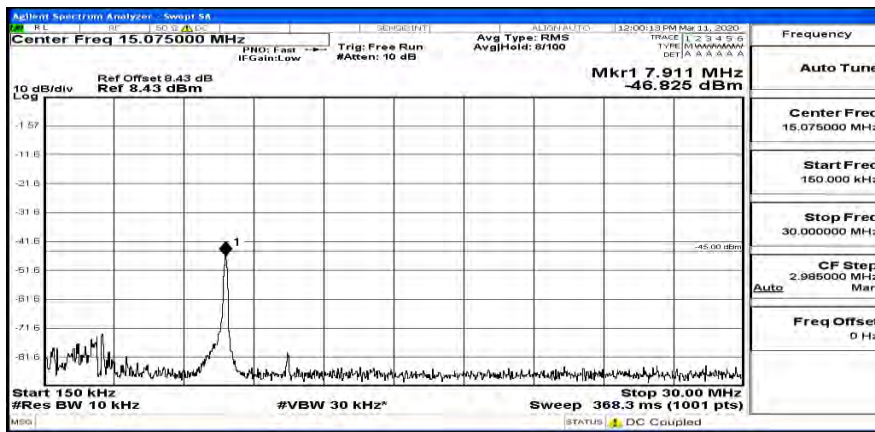
(Channel Bandwidth: 5 MHz)_LCH_16QAM_1RB#0
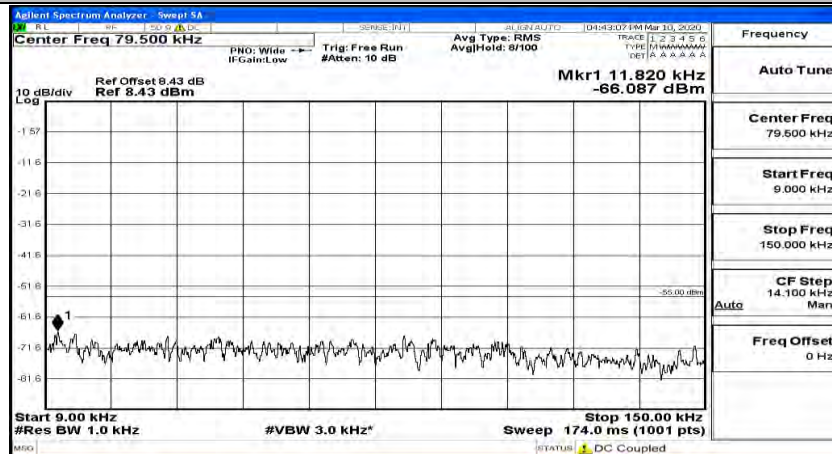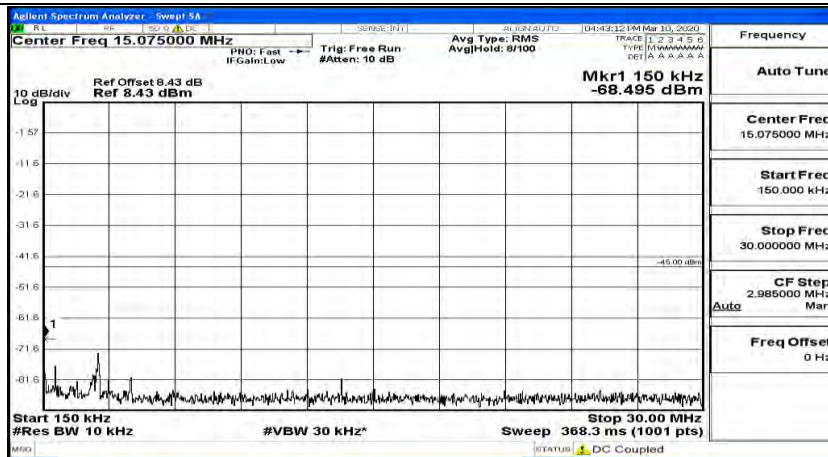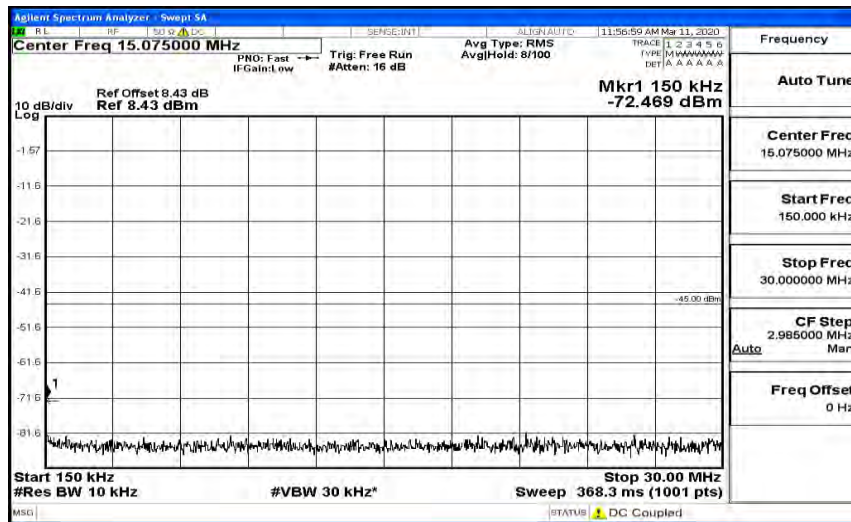
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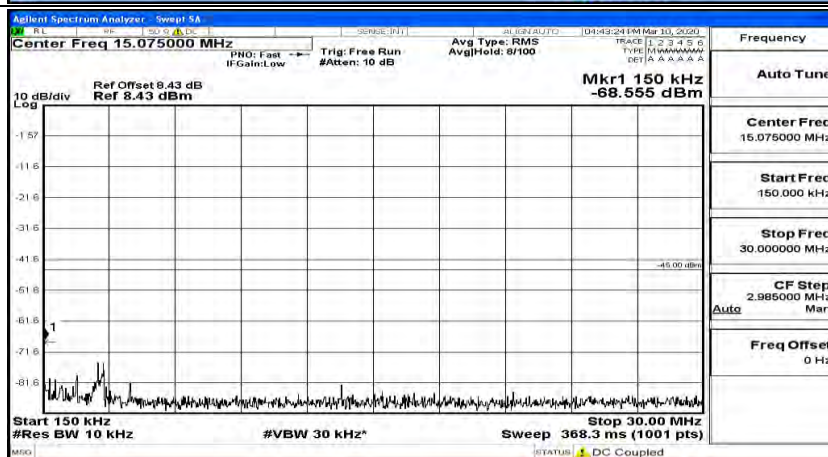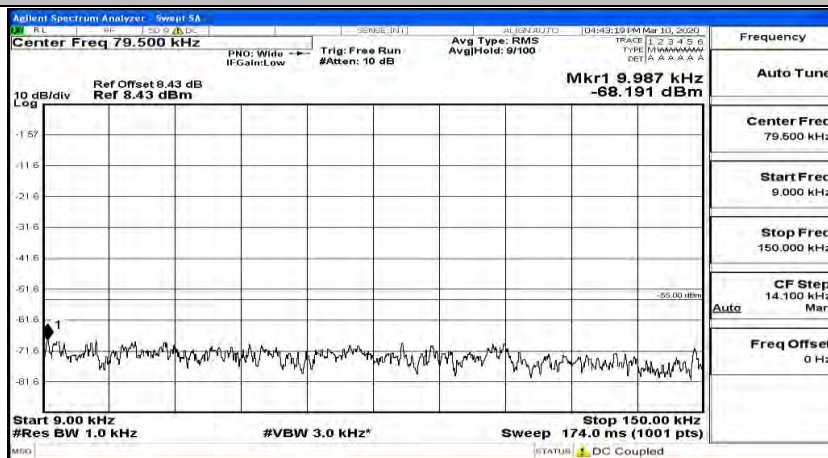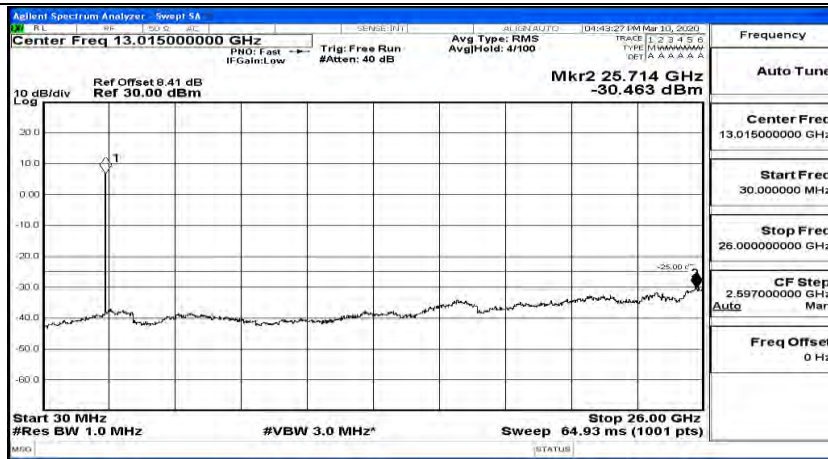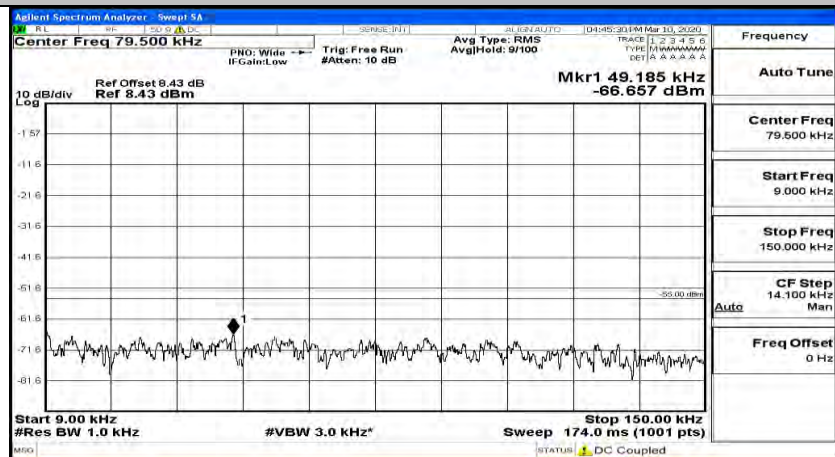
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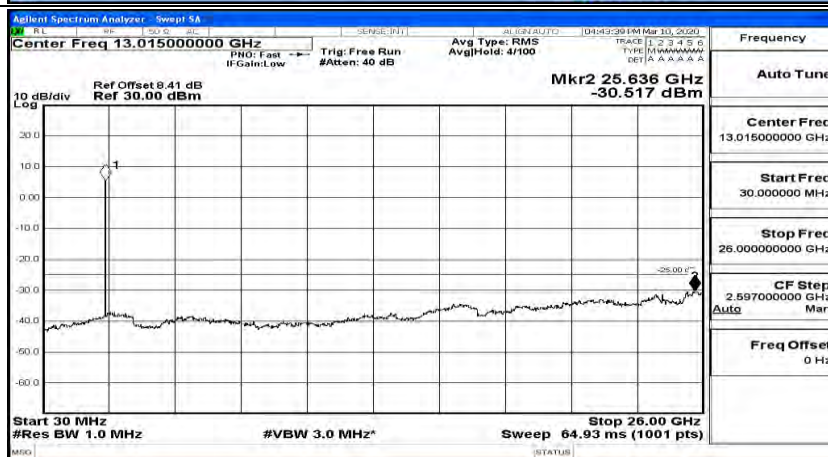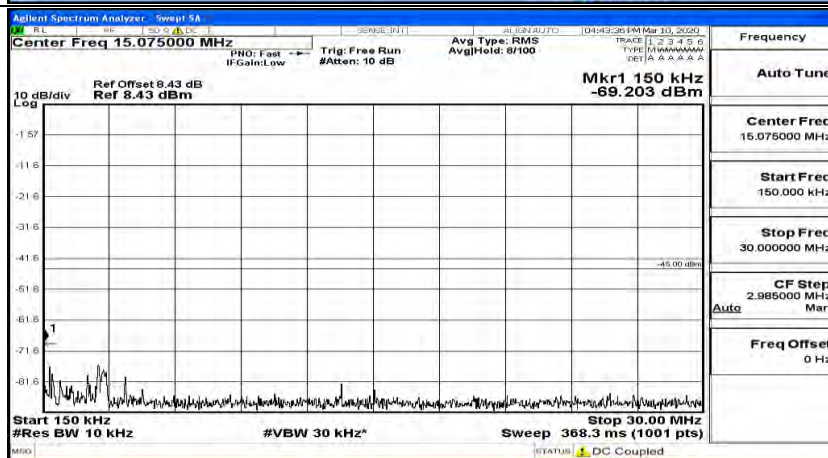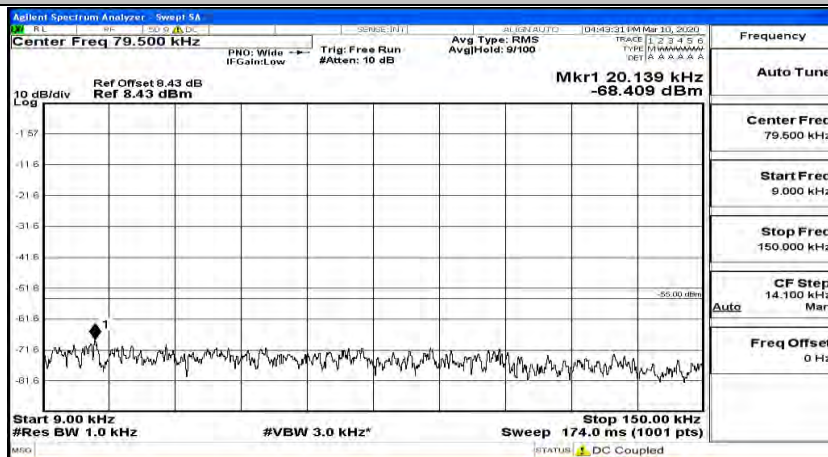
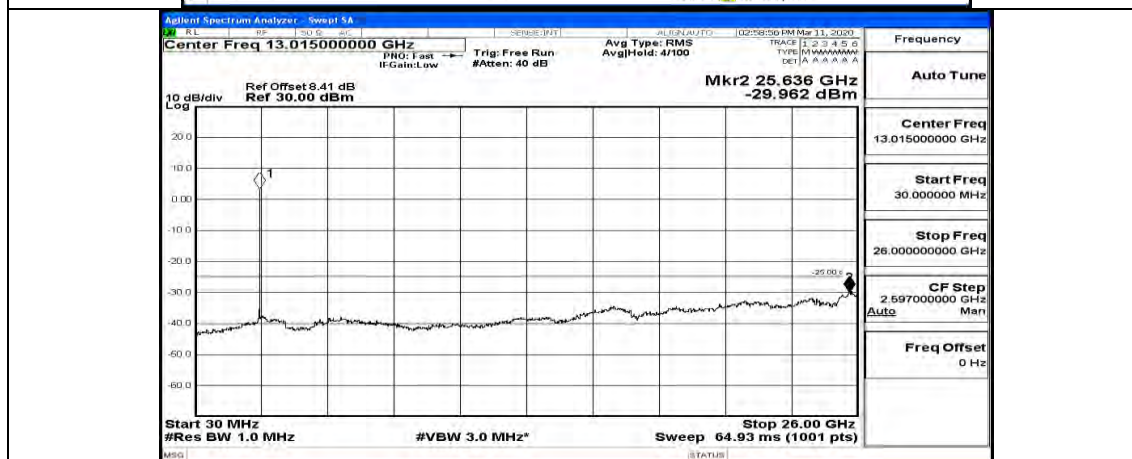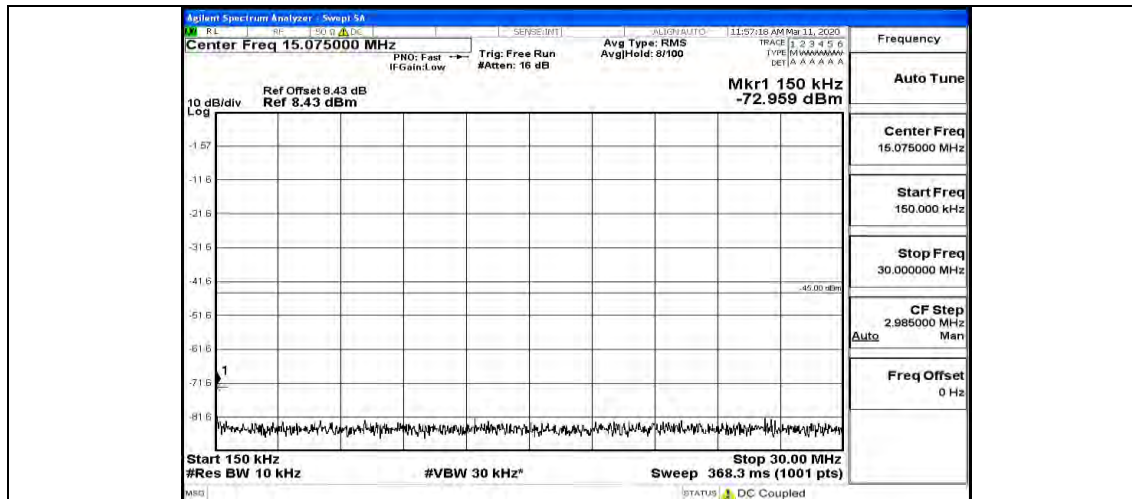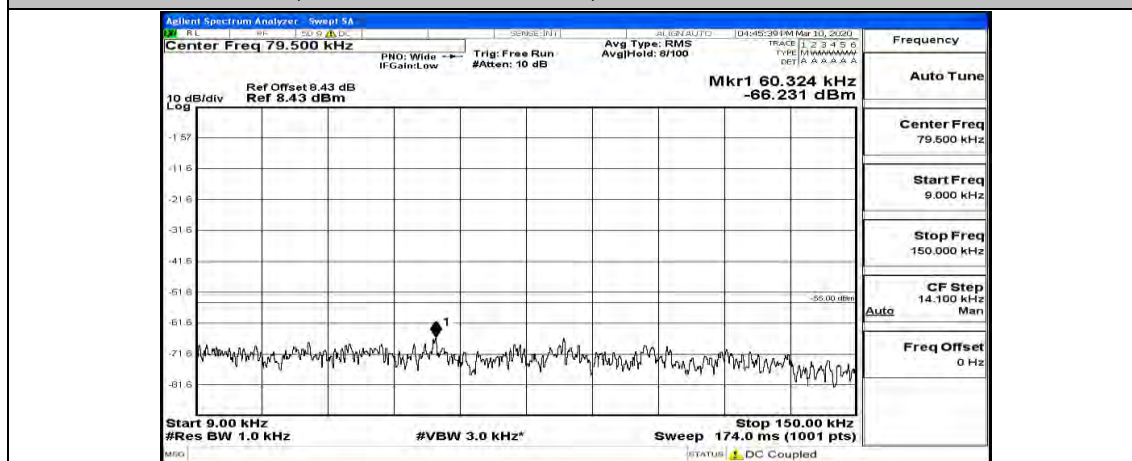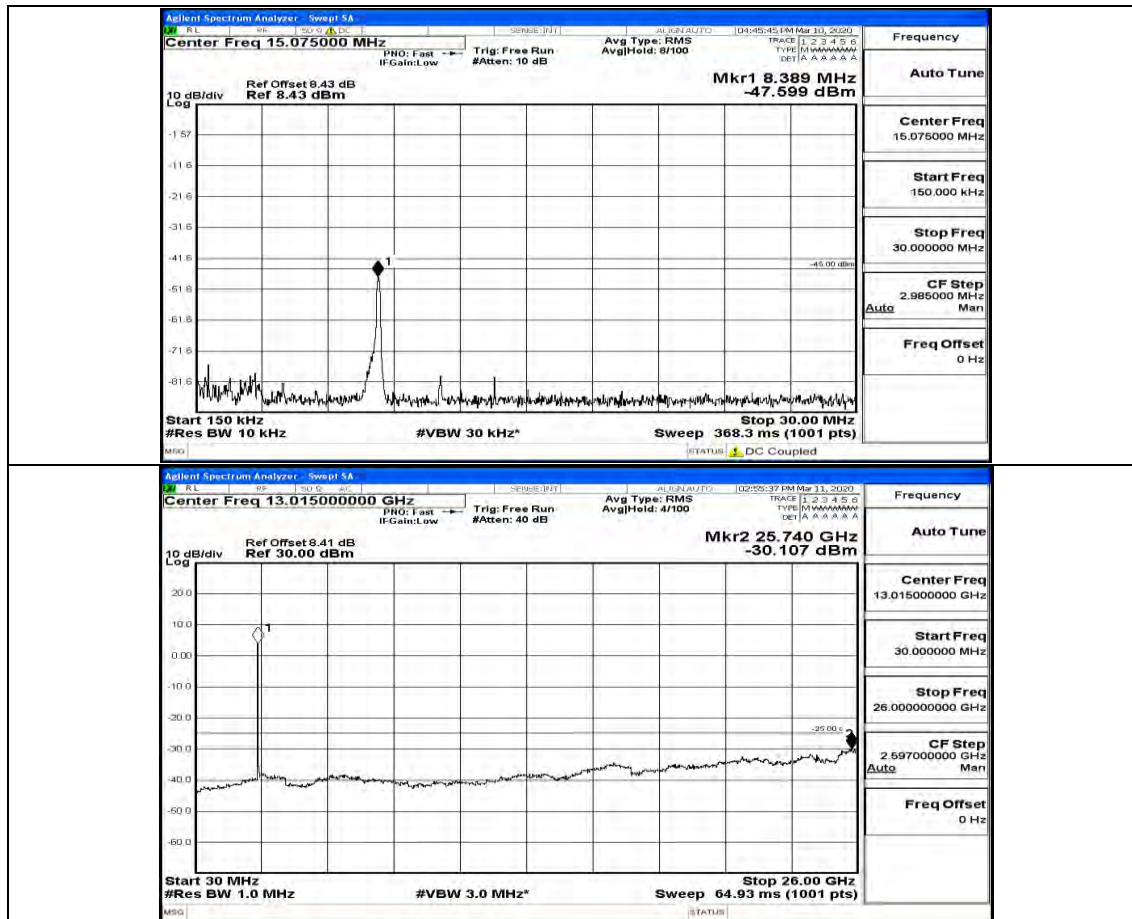**(Channel Bandwidth: 5 MHz)_MCH_16QAM_1RB#0**
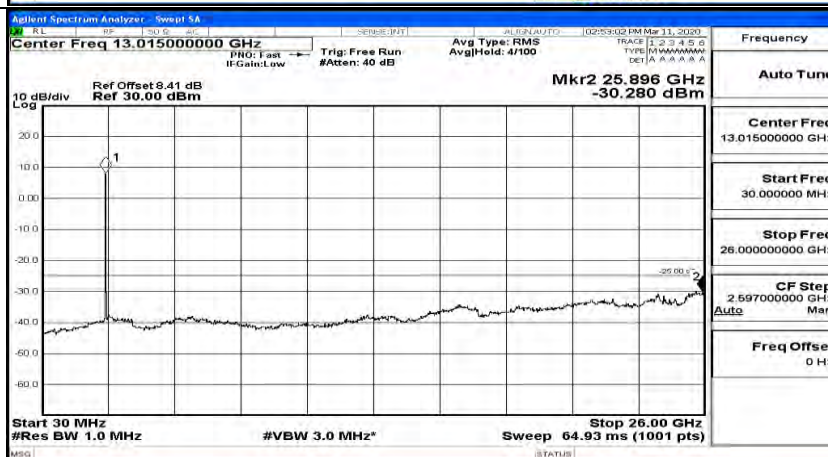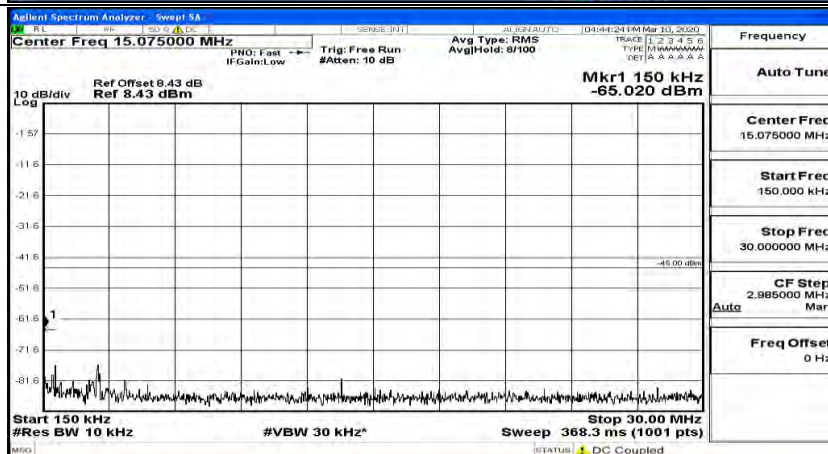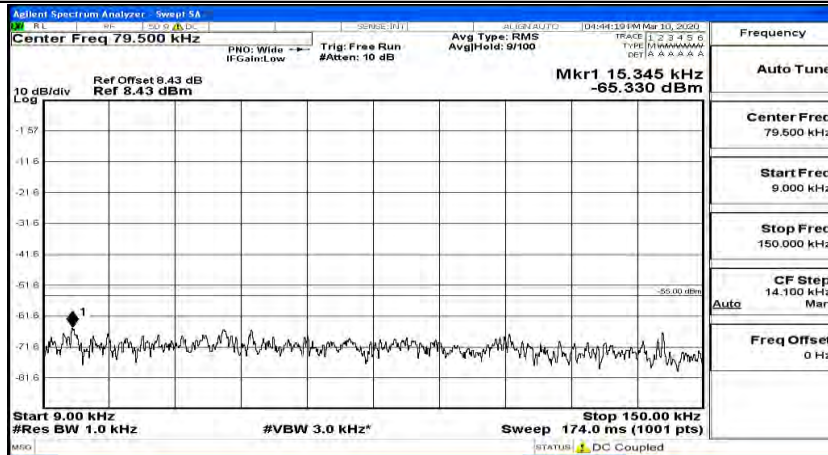
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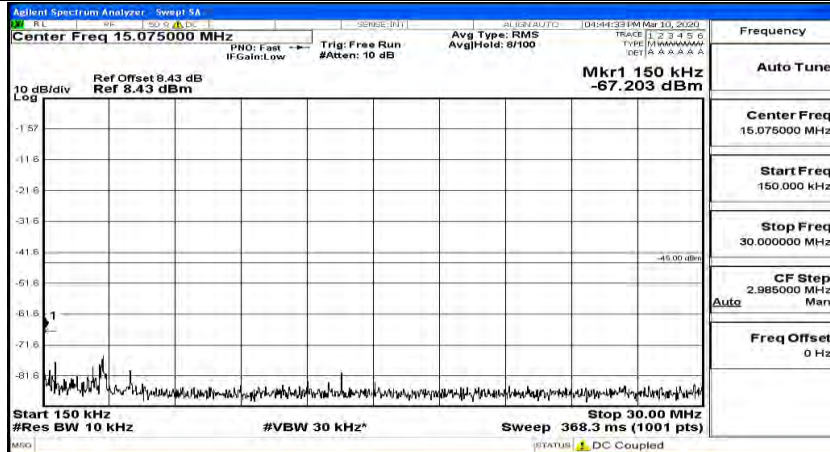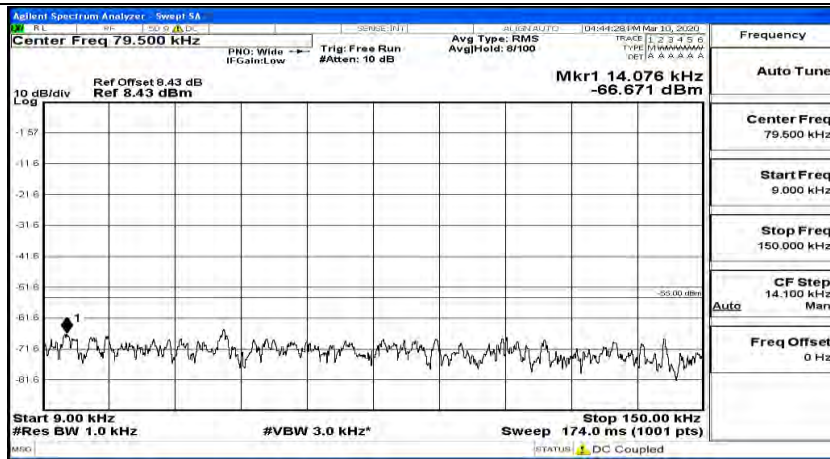
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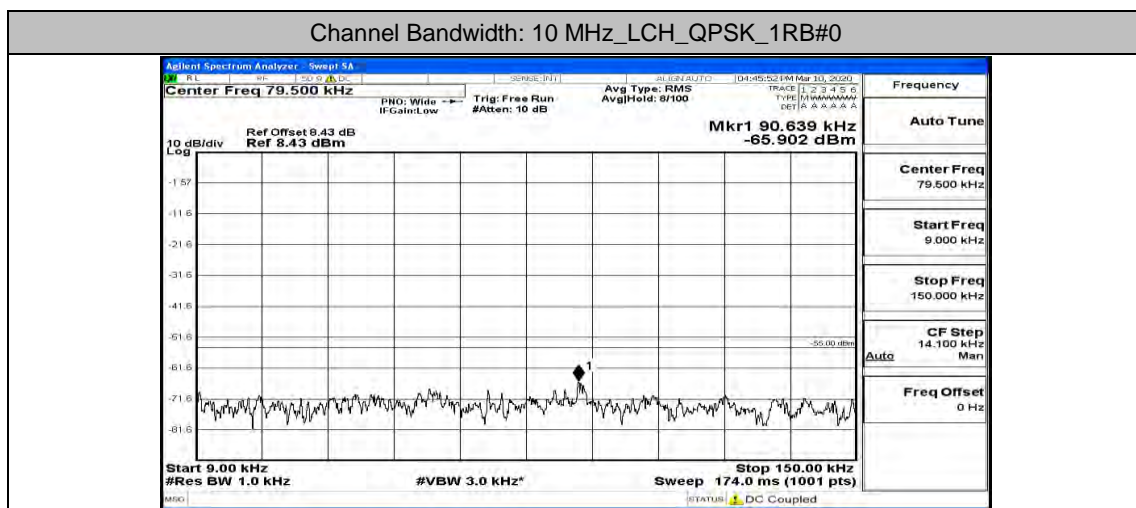
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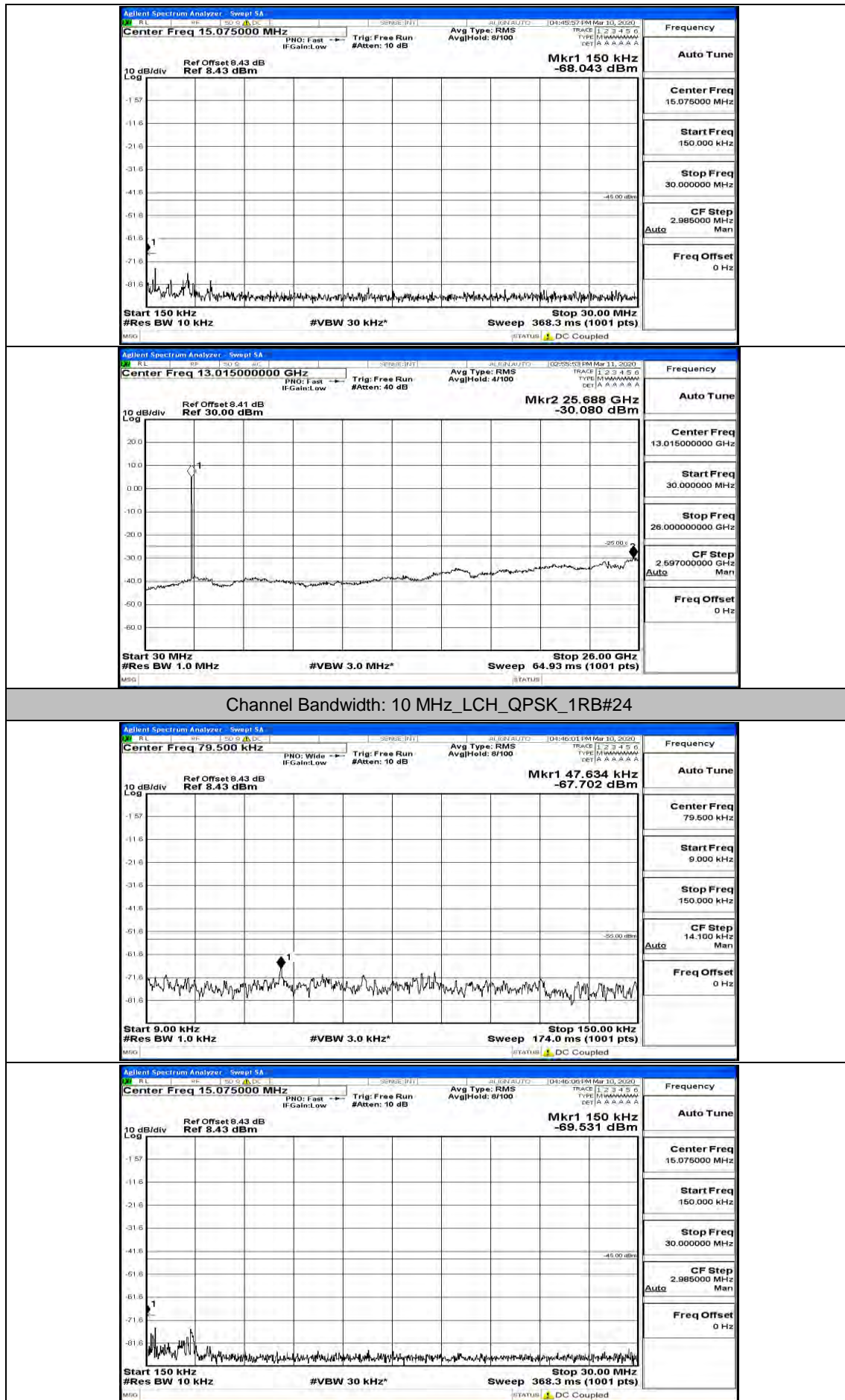
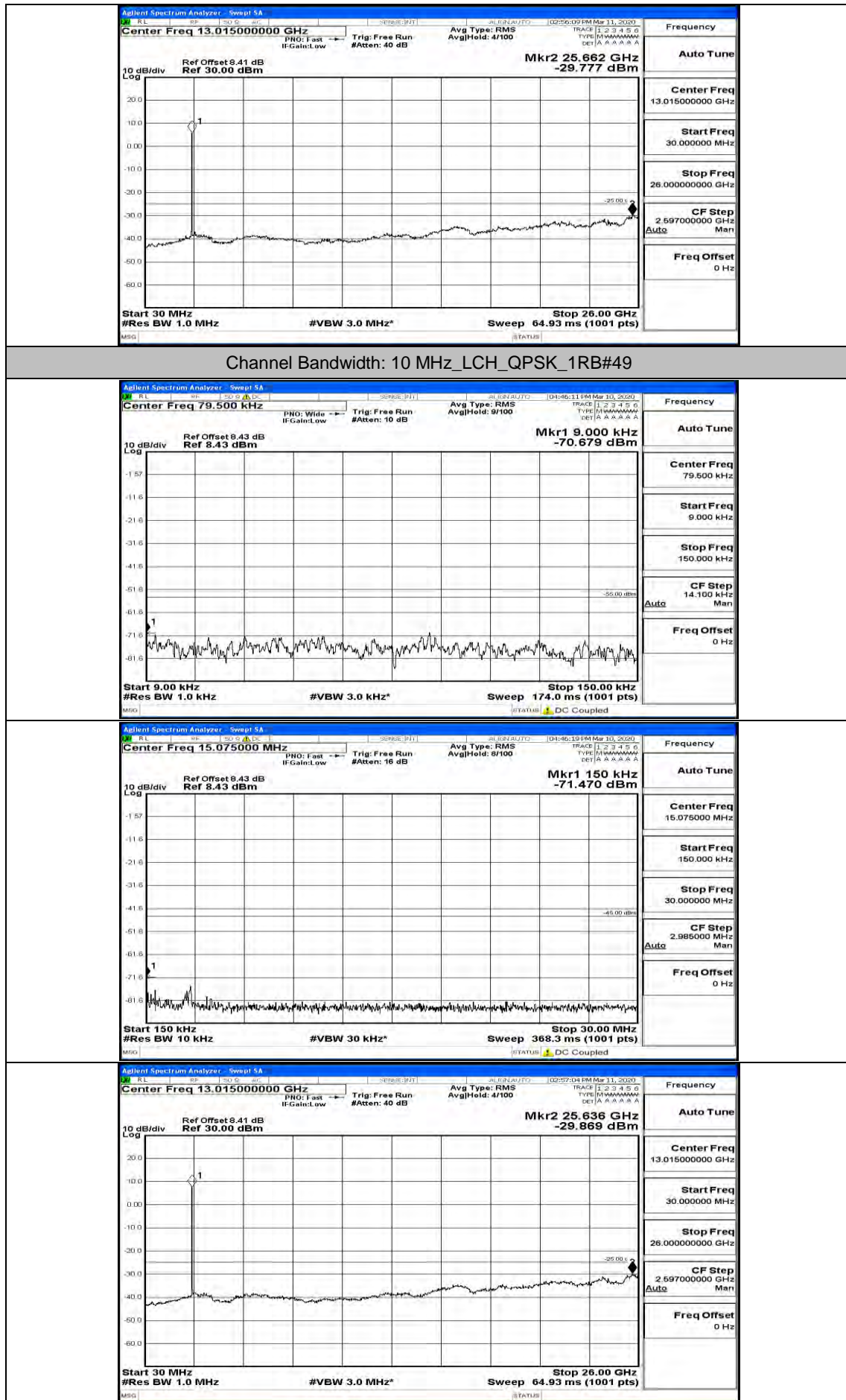(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#12
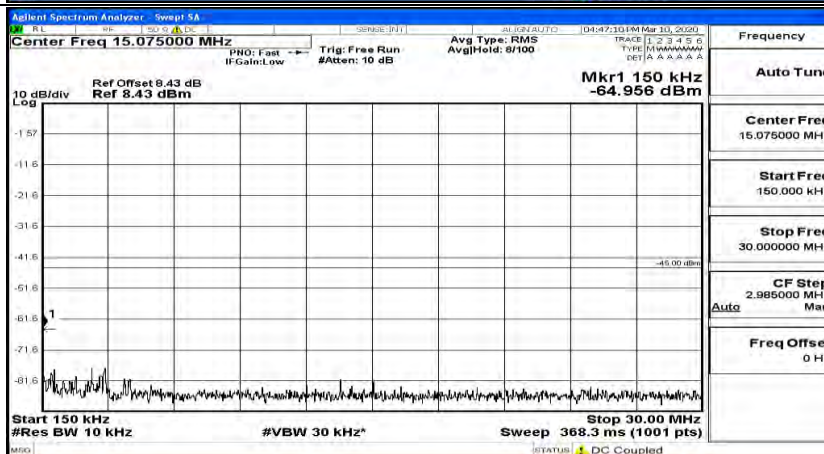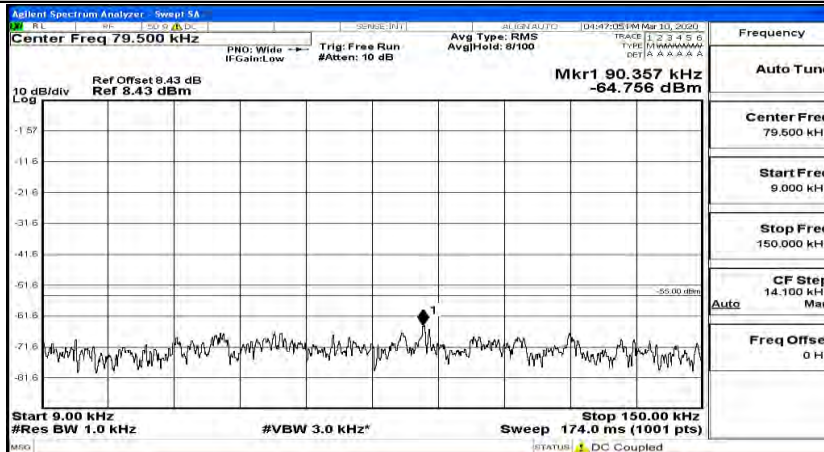
(Channel Bandwidth: 5 MHz)_HCH_16QAM_1RB#24

Channel Bandwidth: 10 MHz

Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#0

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Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#24

Channel Bandwidth: 10 MHz_LCH_QPSK_1RB#49

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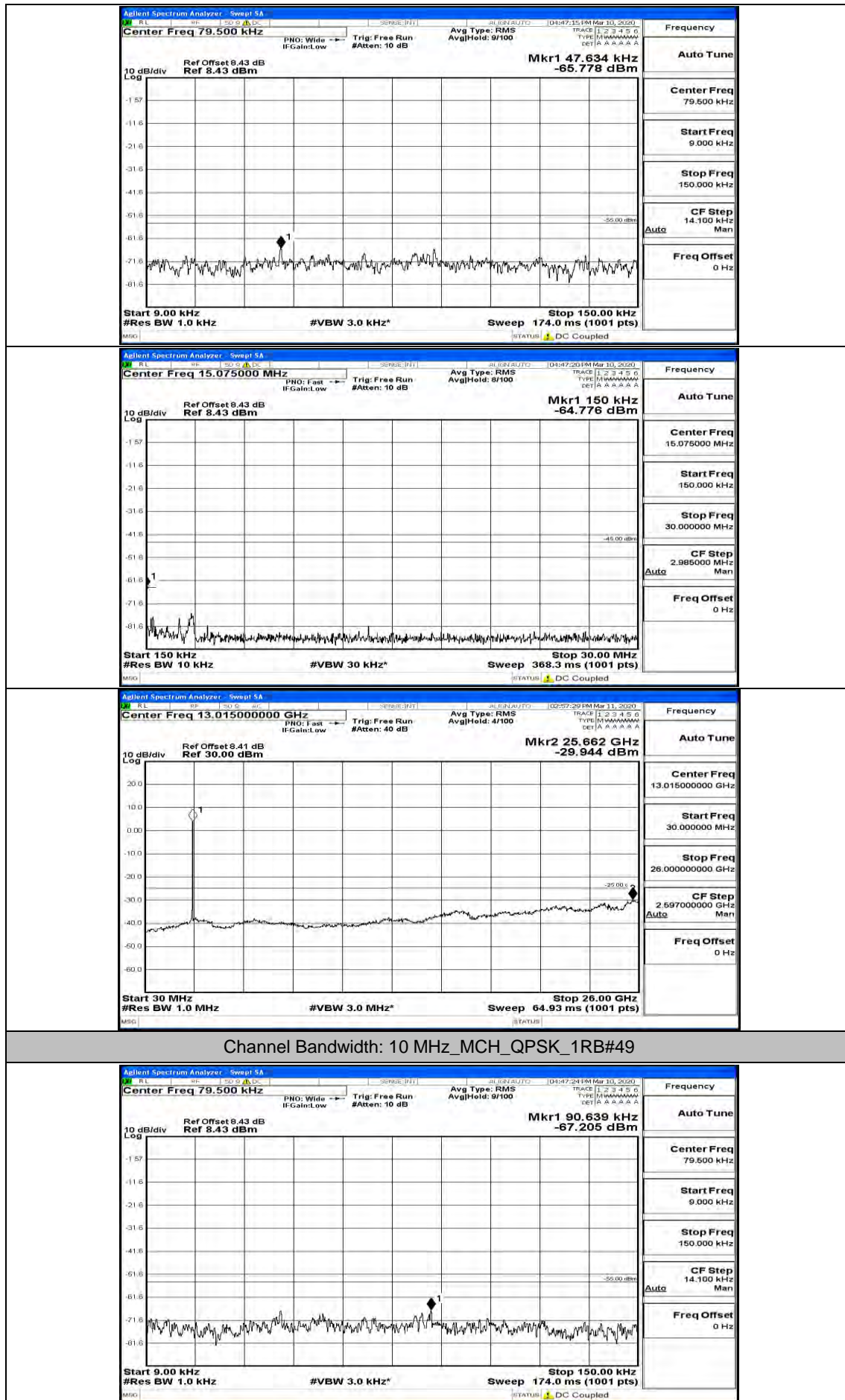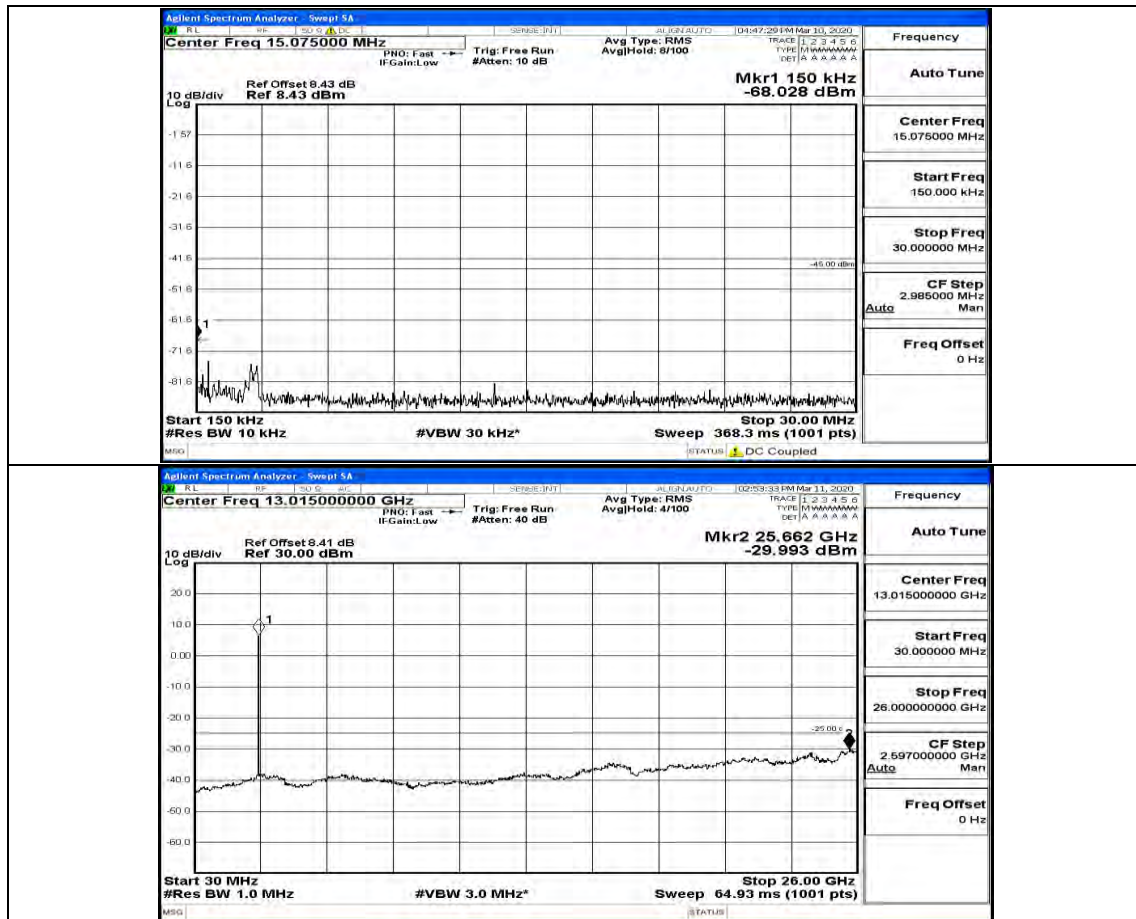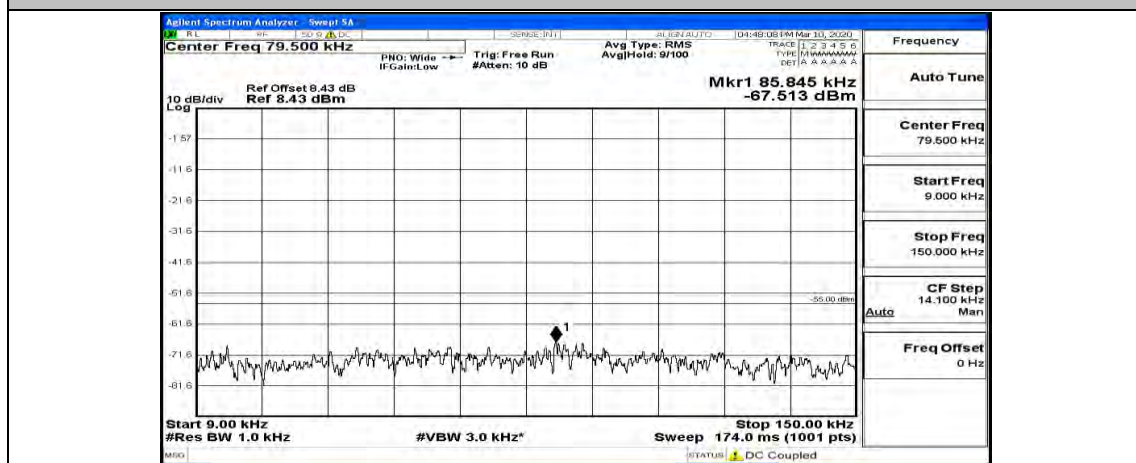
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Channel Bandwidth: 10 MHz_MCH_QPSK_1RB#0
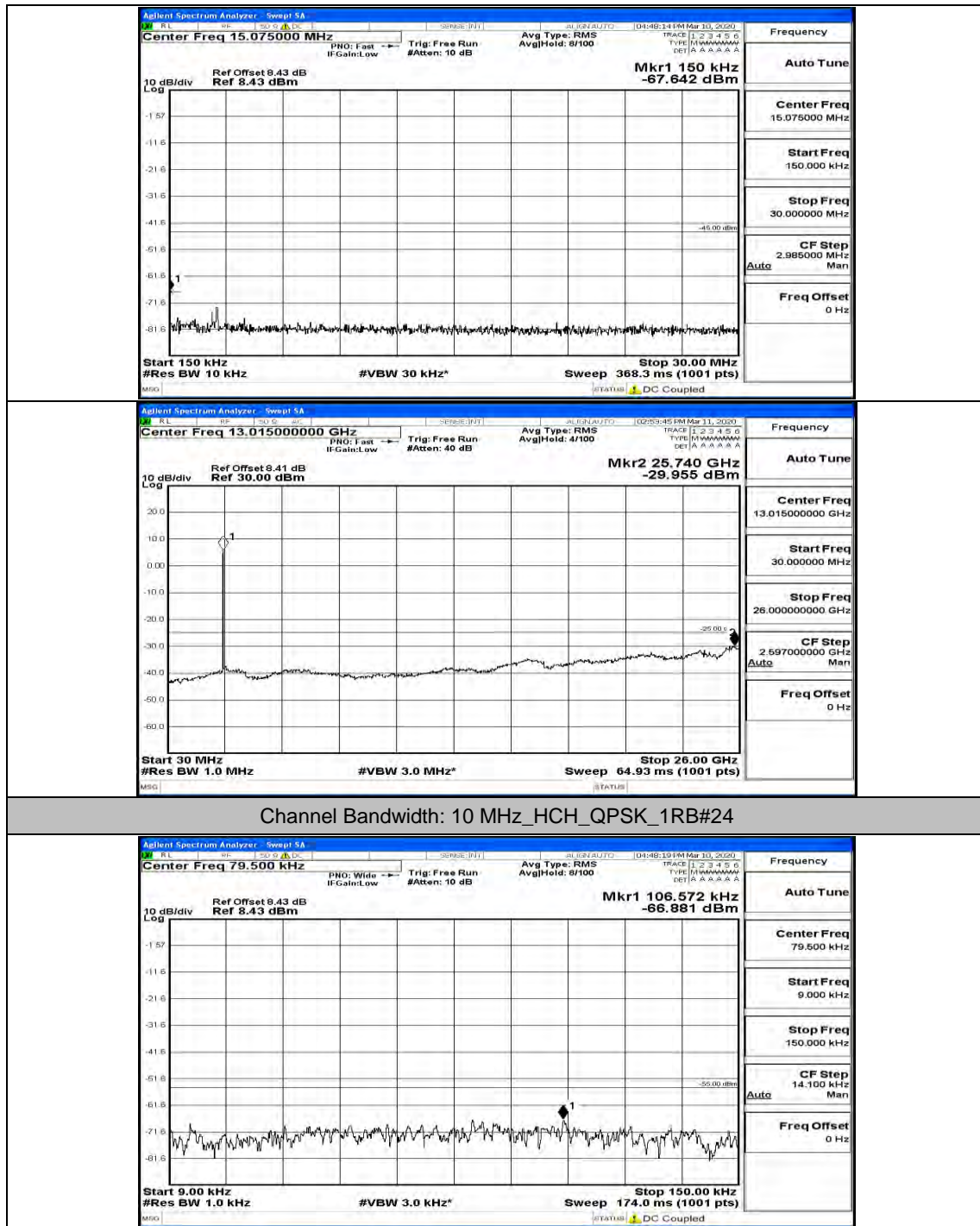

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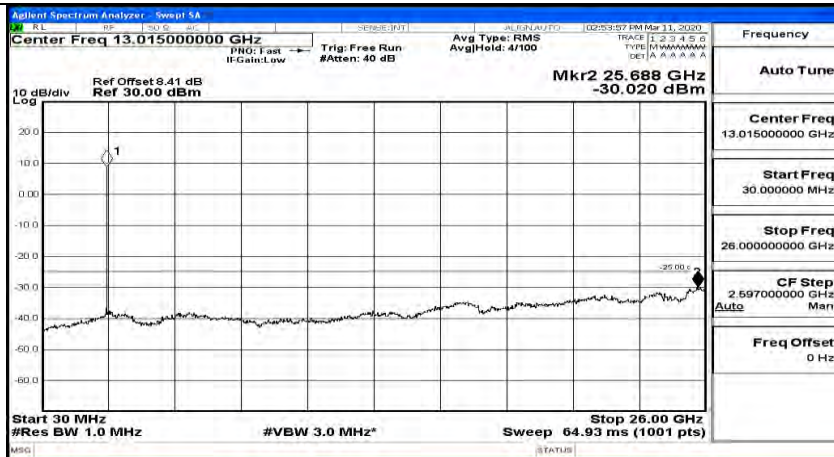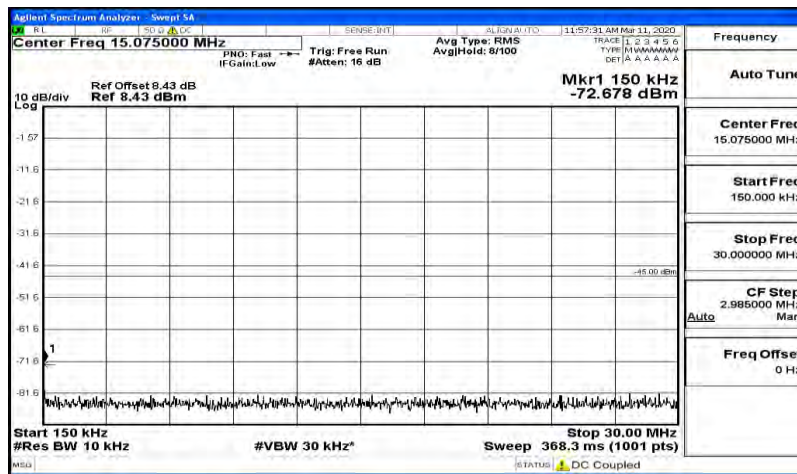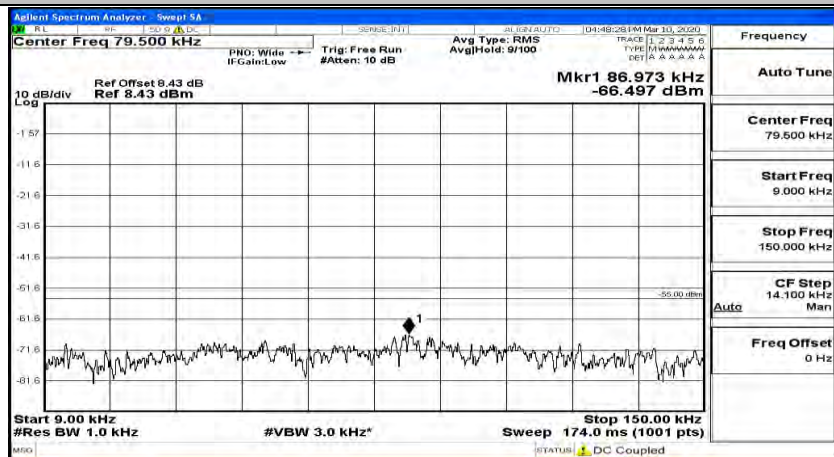
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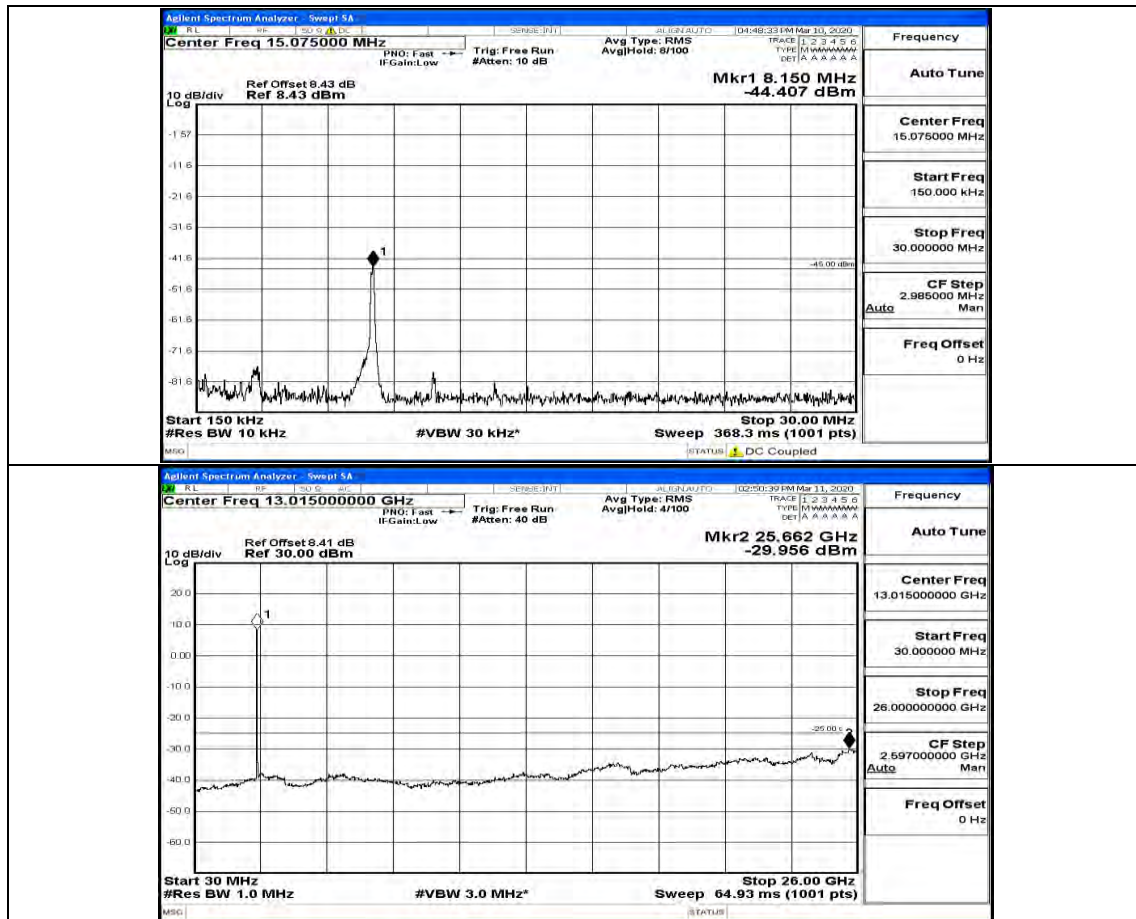
Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#0

Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#24

Channel Bandwidth: 10 MHz_HCH_QPSK_1RB#49

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Channel Bandwidth: 10 MHz_LCH_16QAM_1RB#0