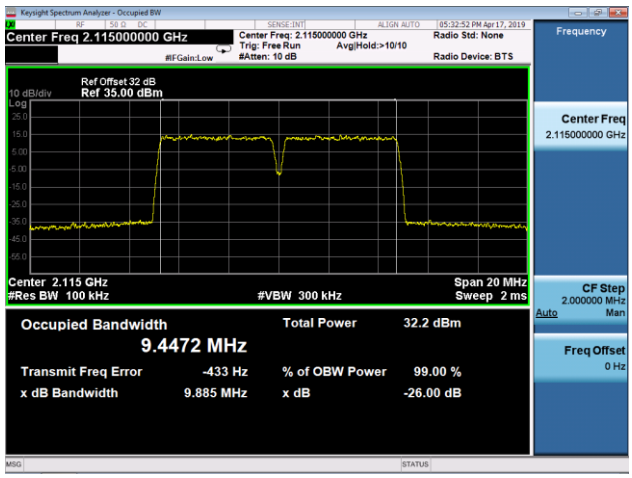
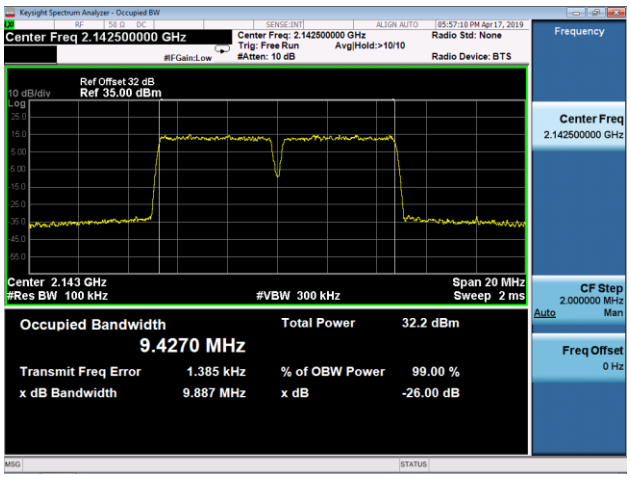
5 + 5MHz Channel Bandwidth

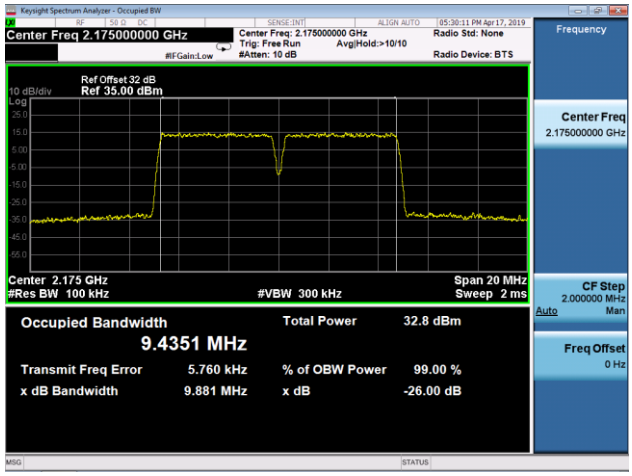
2112.5MHz + 2117.5MHz



2140.0MHz + 2145.0MHz

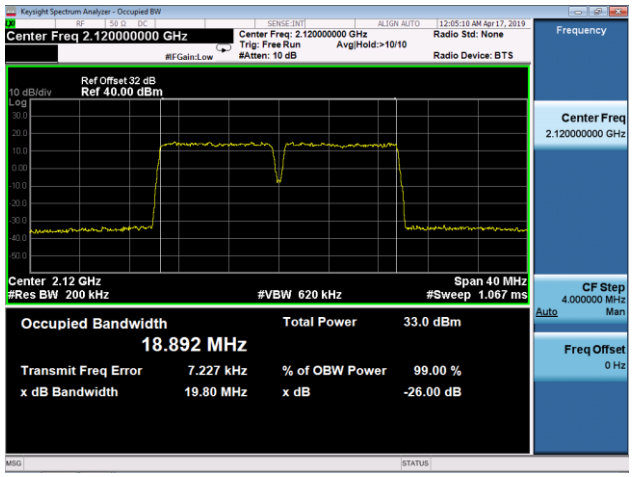


2172.5MHz + 2177.5MHz

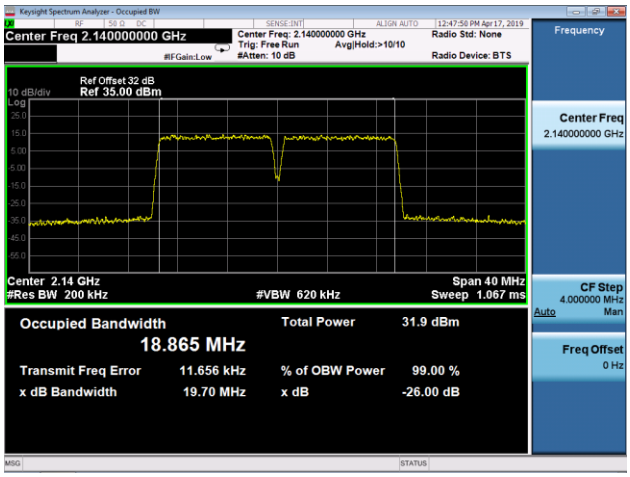


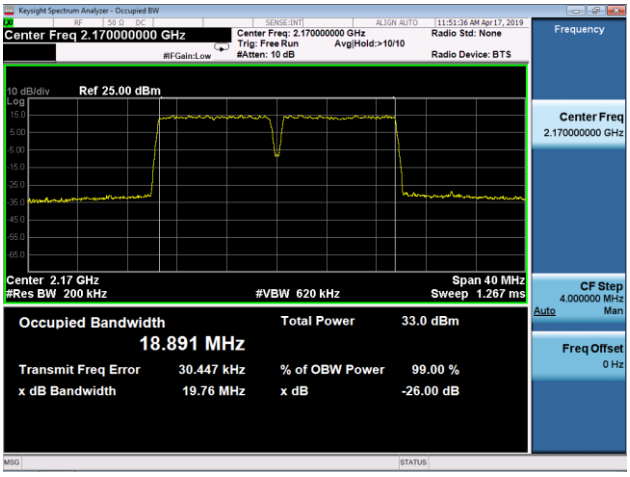
10 + 10MHz Channel Bandwidth

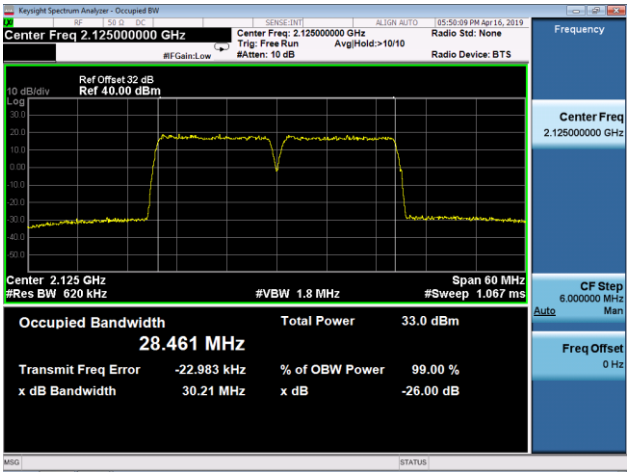
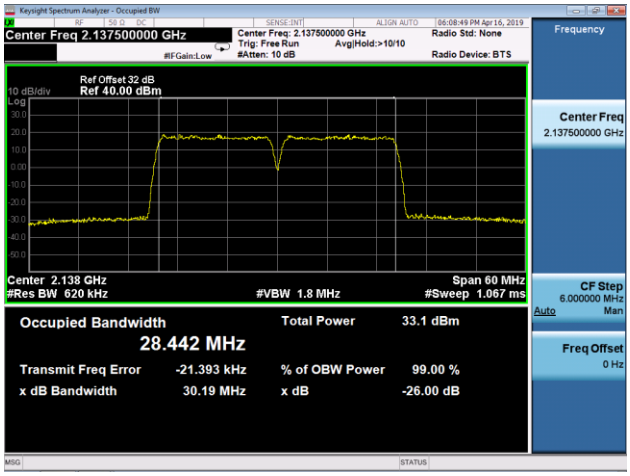
2115.0MHz + 2125.0MHz

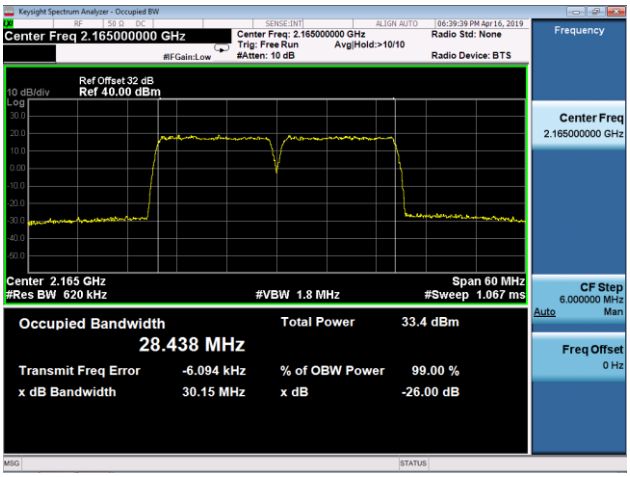


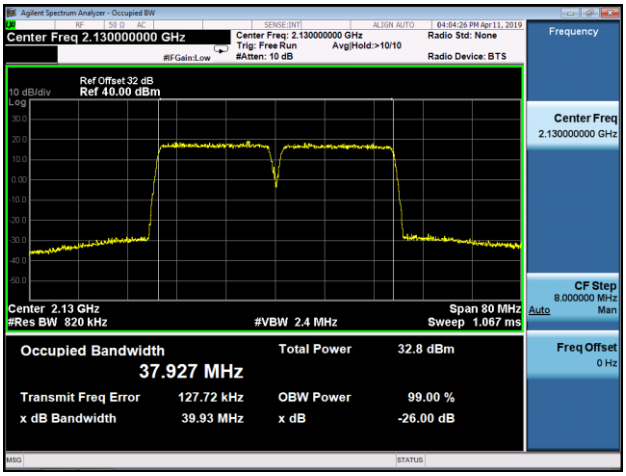
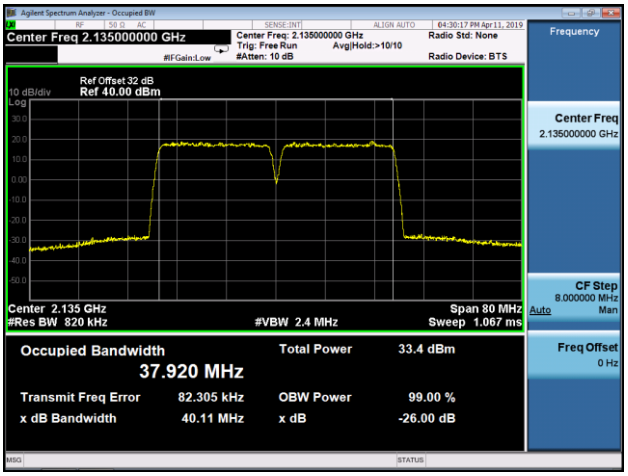
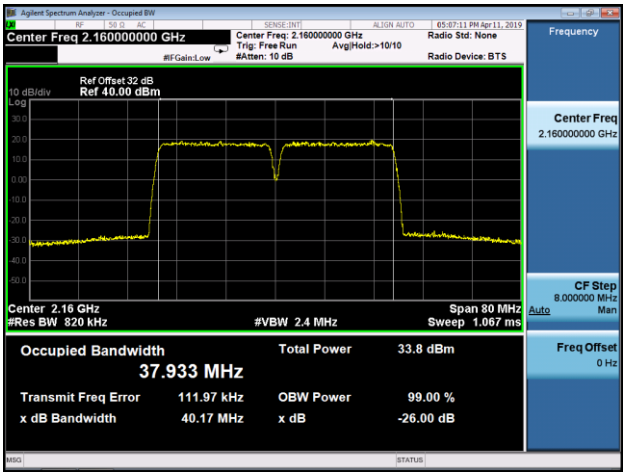
2135.0MHz + 2145.0MHz



2165.0MHz + 2175.0MHz	
	

15 + 15MHz Channel Bandwidth	
2117.5MHz + 2132.5MHz	2130.0MHz + 2145.0MHz
	

2157.5MHz + 2172.5MHz	
	

20 + 20MHz Channel Bandwidth	
2120.0MHz + 2140.0MHz	2125.0MHz + 2145.0MHz
	
2150.0MHz + 2170.0MHz	
	

6.5. Band Edge Measurement

6.5.1.Test Limit

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log(P) dB. The emission limit equal to -13dBm

This device can be impelement MIMO function, so the limit of spurious emissions needs to be reduced by 10*log($Numbers_{Ant}$) according to FCC KDB 662911 D01 guidance.

The limit is adjusted to -13 dBm - 10*log (2) = -16.01dBm

6.5.2.Test Procedure Used

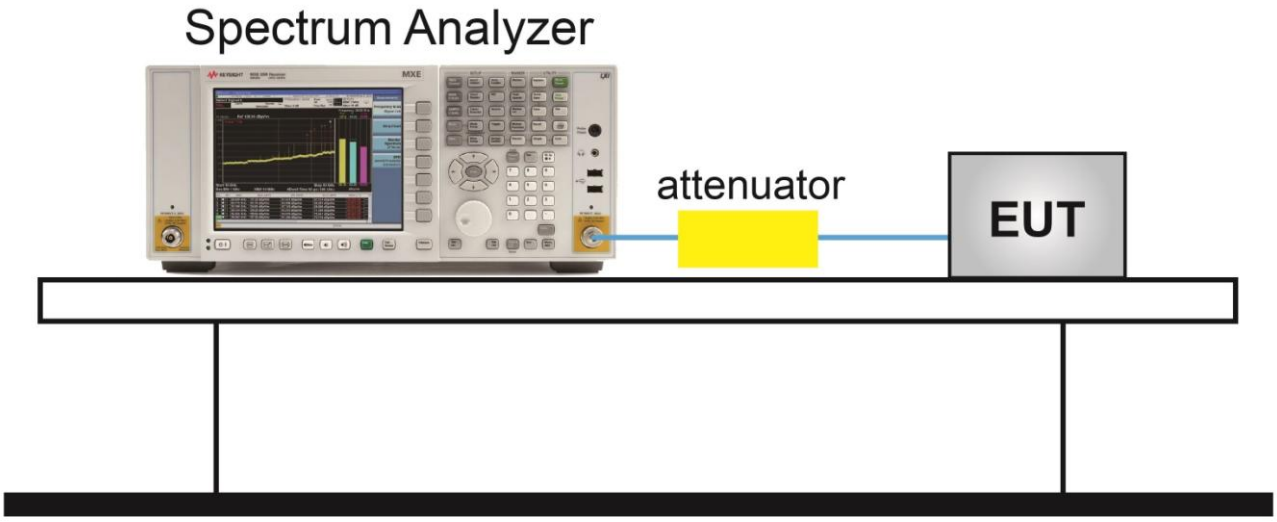
KDB 971168 D01v03r01 - Section 6.1

ANSI C63.26-2015 - Section 5.7.1

6.5.3.Test Setting

1. Set the analyzer frequency to low or high channel.
1. RBW = The nominal RBW shall be in the range of 1% to 5% of the anticipated OBW;
2. VBW ≥ 3*RBW
3. Sweep time = auto
4. Detector = power averaging (rms)
5. Set sweep trigger to “free run.”
6. Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. To accurately determine the average power over the on and off time of the transmitter, it can be necessary to increase the number of traces to be averaged above 100, or if using a manually configured sweep time, increase the sweep time.

6.5.4.Test Setup



6.5.5.Test Setup

Product	AirScale Indoor Radio ASiR-pRRH	Test Engineer	Peter Xu
Test Site	SR2	Test Date	2019/01/30 ~ 2019/04/22
Test Item	Band Edge - LTE Band 2 (Single Carrier)		

Channel	Frequency (MHz)	Channel Bandwidth (MHz)	Max Band Edge (dBm)		Limit (dBm)	Result
			Ant 0	Ant 1		
QPSK						
625	1932.5	5	-31.26	-31.94	≤ -16.01	Pass
1175	1987.5	5	-33.25	-32.81	≤ -16.01	Pass
650	1935.0	10	-34.82	-35.70	≤ -16.01	Pass
1150	1985.0	10	-35.26	-34.85	≤ -16.01	Pass
675	1937.5	15	-34.74	-36.04	≤ -16.01	Pass
1125	1982.5	15	-37.30	-36.68	≤ -16.01	Pass
700	1940.0	20	-33.23	-33.64	≤ -16.01	Pass
1100	1980.0	20	-34.77	-34.44	≤ -16.01	Pass
16QAM						
625	1932.5	5	-31.57	-32.41	≤ -16.01	Pass
1175	1987.5	5	-32.11	-32.23	≤ -16.01	Pass
650	1935.0	10	-34.85	-35.96	≤ -16.01	Pass
1150	1985.0	10	-35.42	-35.22	≤ -16.01	Pass
675	1937.5	15	-35.56	-36.18	≤ -16.01	Pass
1125	1982.5	15	-36.89	-36.48	≤ -16.01	Pass
700	1940.0	20	-33.97	-33.41	≤ -16.01	Pass
1100	1980.0	20	-34.86	-34.55	≤ -16.01	Pass
64QAM						
625	1932.5	5	-31.76	-32.63	≤ -16.01	Pass
1175	1987.5	5	-32.56	-31.54	≤ -16.01	Pass
650	1935.0	10	-34.85	-35.80	≤ -16.01	Pass
1150	1985.0	10	-35.37	-34.97	≤ -16.01	Pass
675	1937.5	15	-35.34	-35.45	≤ -16.01	Pass
1125	1982.5	15	-36.64	-36.58	≤ -16.01	Pass
700	1940.0	20	-33.51	-33.41	≤ -16.01	Pass
1100	1980.0	20	-35.27	-34.55	≤ -16.01	Pass

Channel	Frequency (MHz)	Channel Bandwidth (MHz)	Max Band Edge (dBm)		Limit (dBm)	Result
			Ant 0	Ant 1		
256QAM						
625	1932.5	5	-31.65	-32.54	≤ -16.01	Pass
1175	1987.5	5	-32.31	-31.87	≤ -16.01	Pass
650	1935.0	10	-34.98	-35.81	≤ -16.01	Pass
1150	1985.0	10	-35.29	-35.15	≤ -16.01	Pass
675	1937.5	15	-35.50	-35.52	≤ -16.01	Pass
1125	1982.5	15	-36.77	-36.49	≤ -16.01	Pass
700	1940.0	20	-33.02	-34.20	≤ -16.01	Pass
1100	1980.0	20	-35.32	-34.18	≤ -16.01	Pass

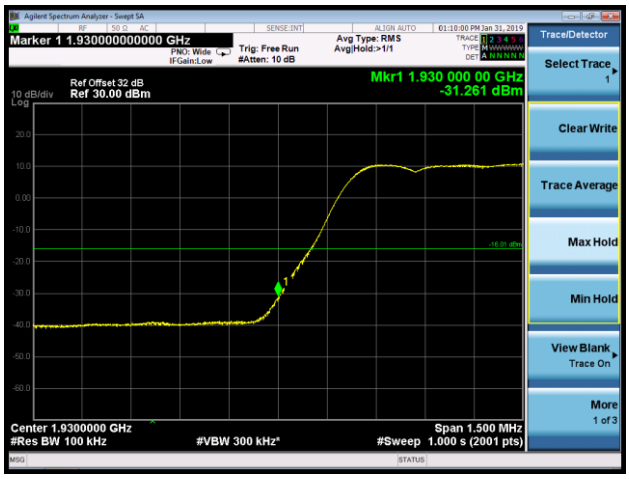
Product	AirScale Indoor Radio ASiR-pRRH	Test Engineer	Peter Xu
Test Site	SR2	Test Date	2019/01/30 ~ 2019/04/22
Test Item	Band Edge - LTE Band 2 (Multi Carrier)		

Channel	Frequency (MHz)	Channel Bandwidth (MHz)	Max Band Edge (dBm)		Limit (dBm)	Result
			Ant 0	Ant 1		
QPSK						
625 + 675	1932.5 + 1937.5	5 + 5	-36.45	-35.49	≤ -16.01	Pass
1125 + 1175	1982.5 + 1987.5	5 + 5	-34.71	-35.94	≤ -16.01	Pass
650 + 750	1935.0 + 1945.0	10 + 10	-38.97	-39.05	≤ -16.01	Pass
1050 + 1150	1975.0 + 1985.0	10 + 10	-39.24	-39.50	≤ -16.01	Pass
675 + 825	1937.5 + 1952.5	15 + 15	-39.05	-39.53	≤ -16.01	Pass
975 + 1125	1967.5 + 1982.5	15 + 15	-40.37	-40.48	≤ -16.01	Pass
700 + 900	1940.0 + 1960.0	20 + 20	-39.84	-38.89	≤ -16.01	Pass
900 + 1100	1960.0 + 1980.0	20 + 20	-41.75	-41.68	≤ -16.01	Pass
16QAM						
625 + 675	1932.5 + 1937.5	5 + 5	-36.44	-35.39	≤ -16.01	Pass
1125 + 1175	1982.5 + 1987.5	5 + 5	-36.35	-37.42	≤ -16.01	Pass
650 + 750	1935.0 + 1945.0	10 + 10	-37.60	-38.36	≤ -16.01	Pass
1050 + 1150	1975.0 + 1985.0	10 + 10	-39.05	-39.43	≤ -16.01	Pass
675 + 825	1937.5 + 1952.5	15 + 15	-38.45	-39.58	≤ -16.01	Pass
975 + 1125	1967.5 + 1982.5	15 + 15	-40.51	-40.10	≤ -16.01	Pass
700 + 900	1940.0 + 1960.0	20 + 20	-39.51	-38.47	≤ -16.01	Pass
900 + 1100	1960.0 + 1980.0	20 + 20	-40.71	-40.78	≤ -16.01	Pass
64QAM						
625 + 675	1932.5 + 1937.5	5 + 5	-37.32	-36.25	≤ -16.01	Pass
1125 + 1175	1982.5 + 1987.5	5 + 5	-36.44	-36.21	≤ -16.01	Pass
650 + 750	1935.0 + 1945.0	10 + 10	-38.16	-39.74	≤ -16.01	Pass
1050 + 1150	1975.0 + 1985.0	10 + 10	-39.87	-39.72	≤ -16.01	Pass
675 + 825	1937.5 + 1952.5	15 + 15	-39.17	-39.67	≤ -16.01	Pass
975 + 1125	1967.5 + 1982.5	15 + 15	-40.06	-39.84	≤ -16.01	Pass
700 + 900	1940.0 + 1960.0	20 + 20	-39.50	-38.92	≤ -16.01	Pass
900 + 1100	1960.0 + 1980.0	20 + 20	-41.11	-41.44	≤ -16.01	Pass

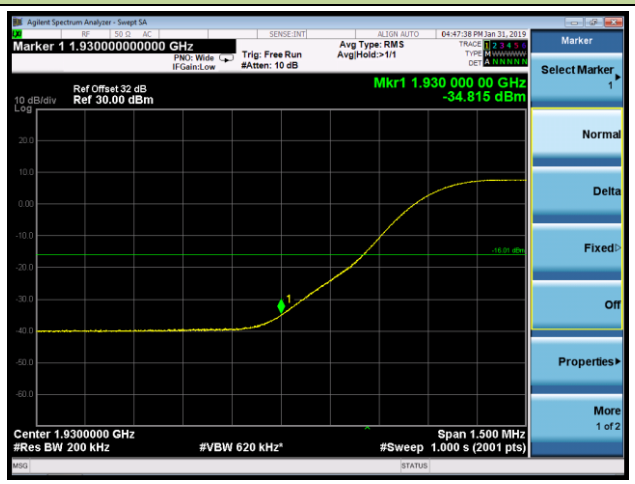
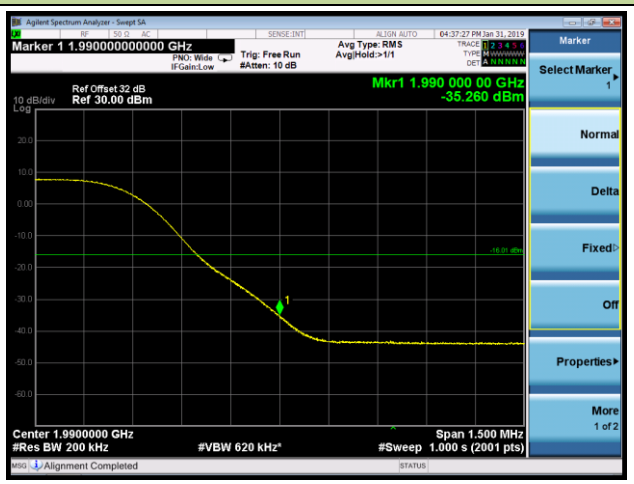
Channel	Frequency (MHz)	Channel Bandwidth (MHz)	Max Band Edge (dBm)		Limit (dBm)	Result
			Ant 0	Ant 1		
256QAM						
625 + 675	1932.5 + 1937.5	5 + 5	-37.63	-36.21	≤ -16.01	Pass
1125 + 1175	1982.5 + 1987.5	5 + 5	-36.04	-36.47	≤ -16.01	Pass
650 + 750	1935.0 + 1945.0	10 + 10	-39.27	-39.59	≤ -16.01	Pass
1050 + 1150	1975.0 + 1985.0	10 + 10	-39.87	-40.25	≤ -16.01	Pass
675 + 825	1937.5 + 1952.5	15 + 15	-39.21	-39.49	≤ -16.01	Pass
975 + 1125	1967.5 + 1982.5	15 + 15	-40.16	-39.61	≤ -16.01	Pass
700 + 900	1940.0 + 1960.0	20 + 20	-39.74	-38.94	≤ -16.01	Pass
900 + 1100	1960.0 + 1980.0	20 + 20	-40.49	-41.31	≤ -16.01	Pass

Band Edge - Ant 0 (QPSK)

5MHz Channel Bandwidth

1932.5MHz	1987.5MHz
	

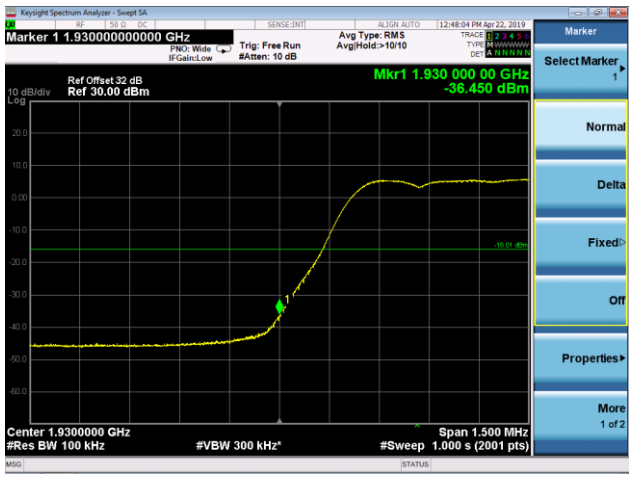
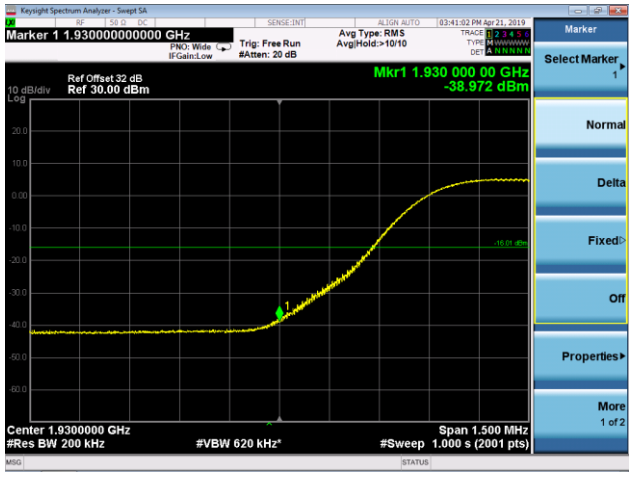
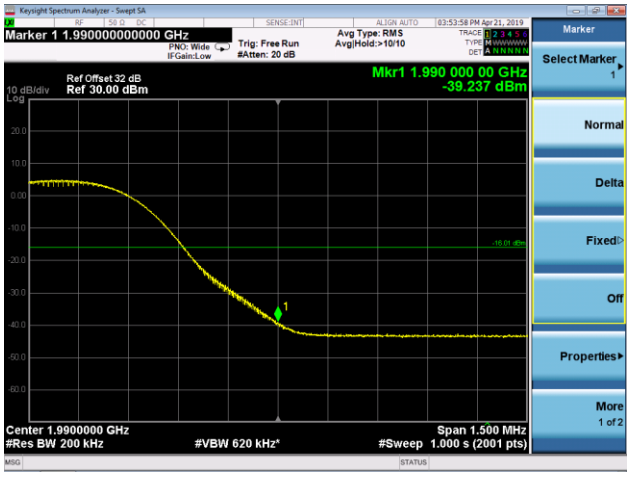
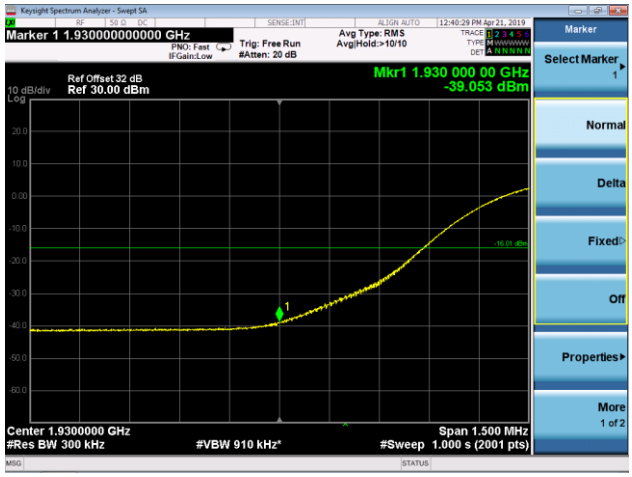
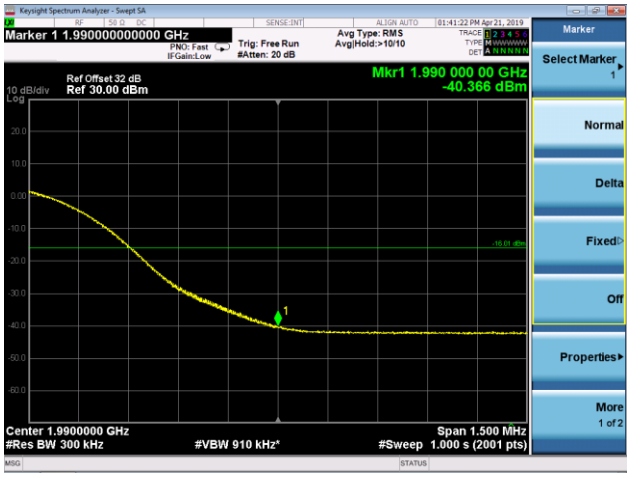
10MHz Channel Bandwidth

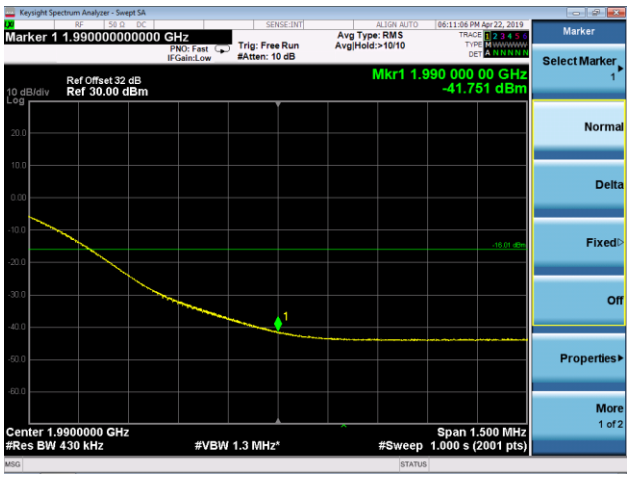
1935.0MHz	1985.0MHz
	

15MHz Channel Bandwidth

1937.5MHz	1982.5MHz

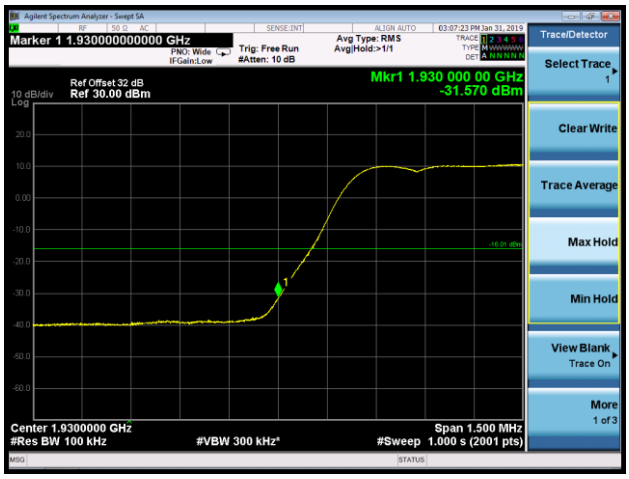
20MHz Channel Bandwidth	
1940.0MHz	1980.0MHz

5 + 5MHz Channel Bandwidth	
1932.5MHz + 1937.5MHz	1982.5MHz + 1987.5MHz
	
10 + 10MHz Channel Bandwidth	
1935.0MHz + 1945.0MHz	1975.0MHz + 1985.0MHz
	
15 + 15MHz Band Edge	
1937.5MHz + 1952.5MHz	1967.5MHz + 1982.5MHz
	

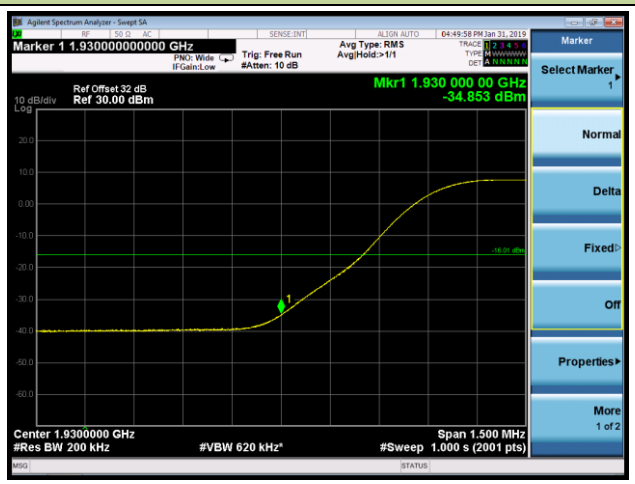
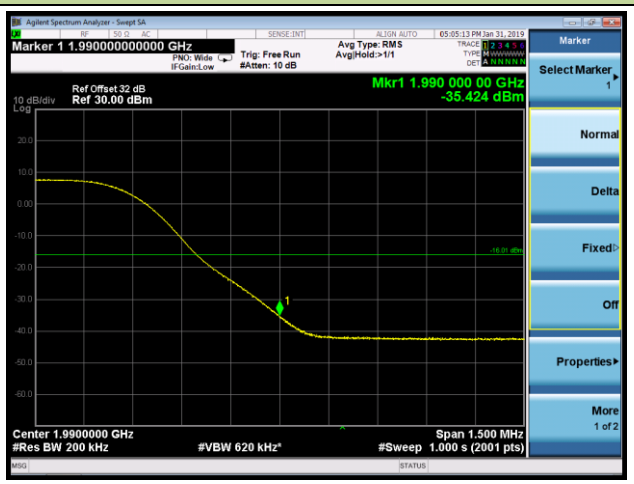
20 + 20MHz Band Edge	
1940.0MHz + 1960.0MHz	1960.0MHz + 1980.0MHz
	

Band Edge - Ant 0 (16QAM)

5MHz Channel Bandwidth

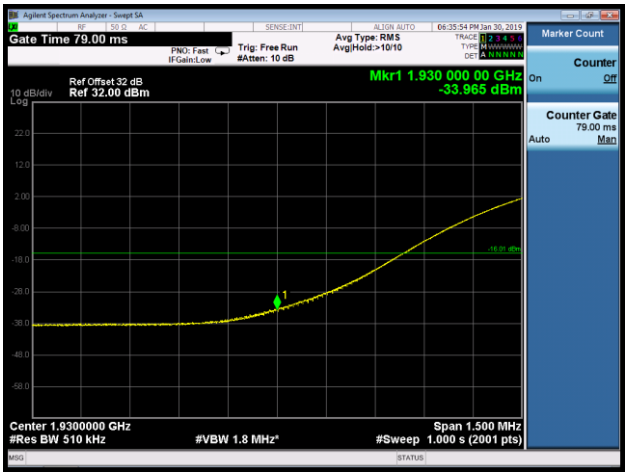
1932.5MHz	1987.5MHz
	

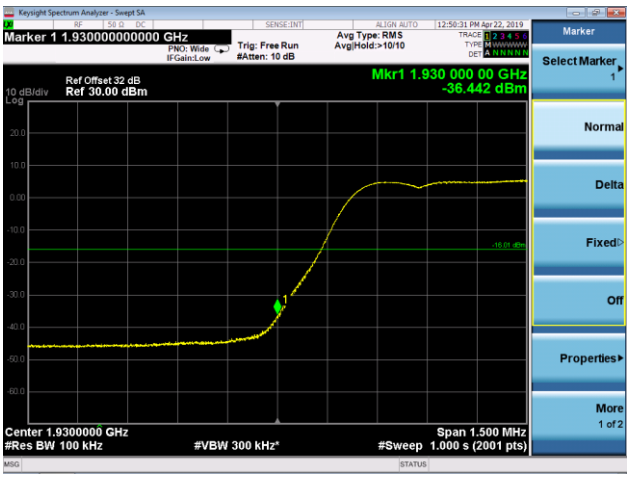
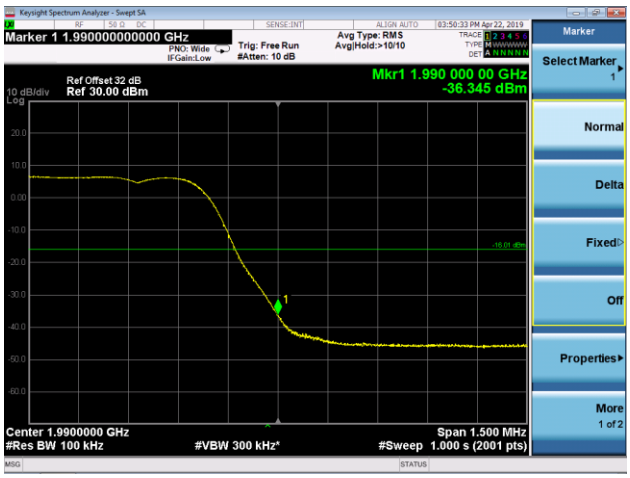
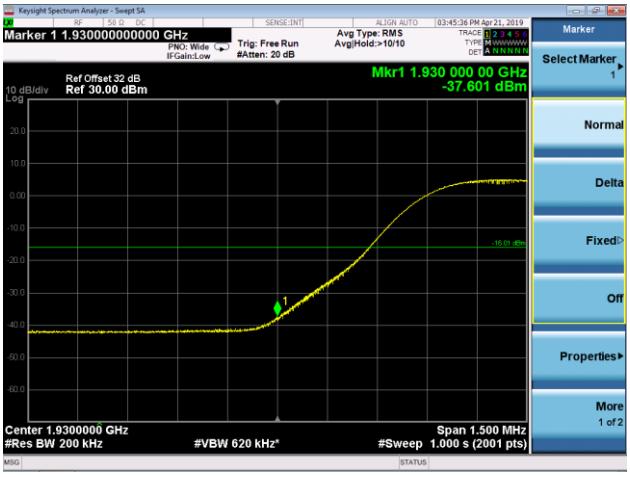
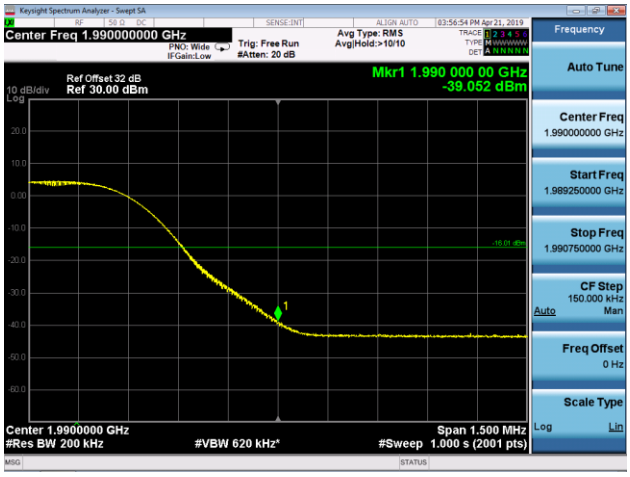
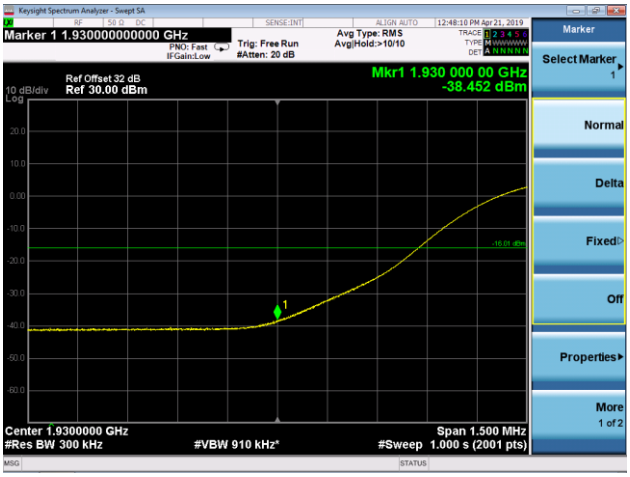
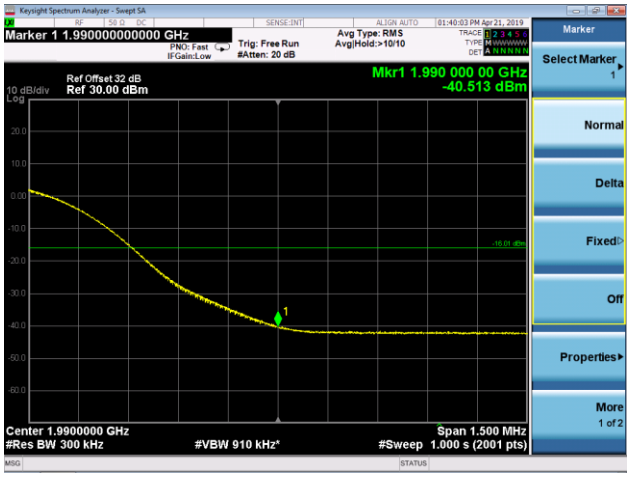
10MHz Channel Bandwidth

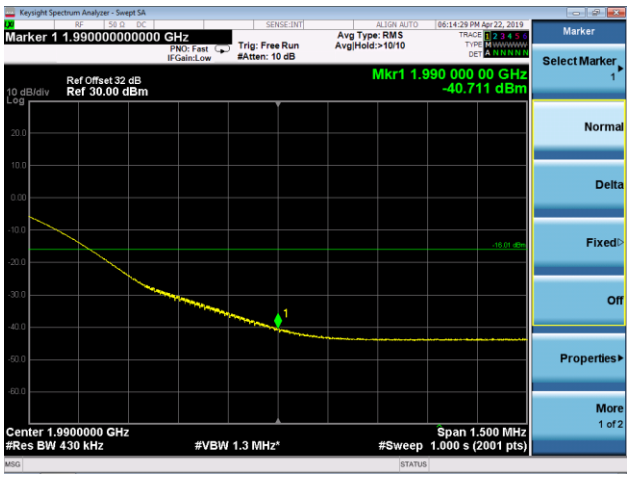
1935.0MHz	1985.0MHz
	

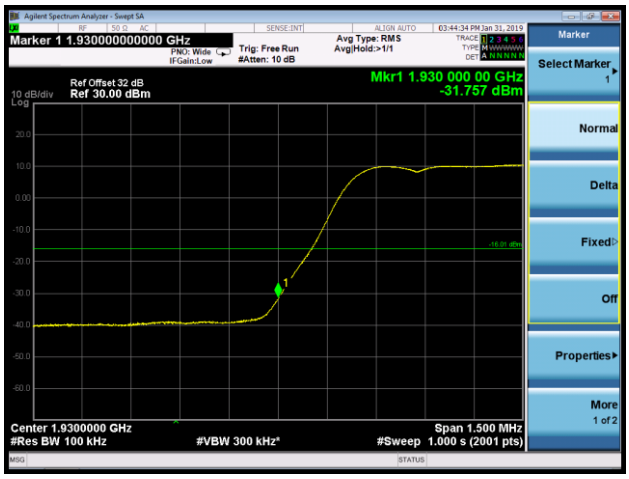
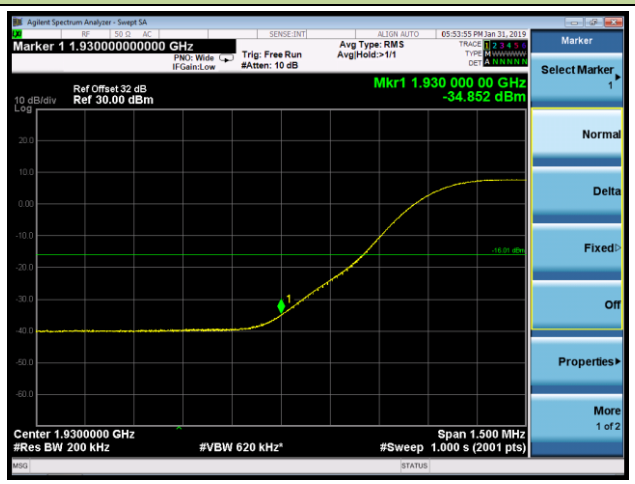
15MHz Channel Bandwidth

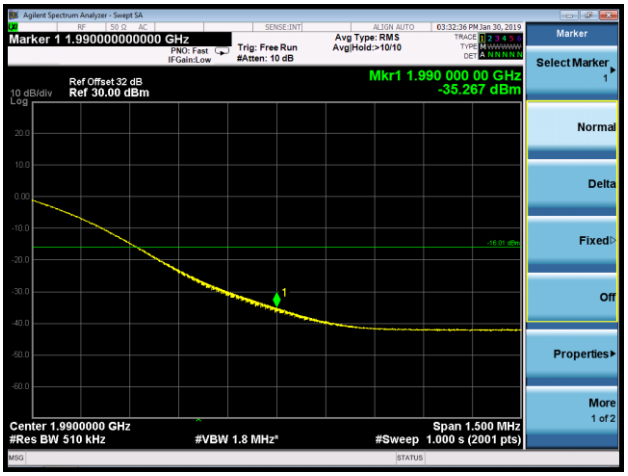
1937.5MHz	1982.5MHz

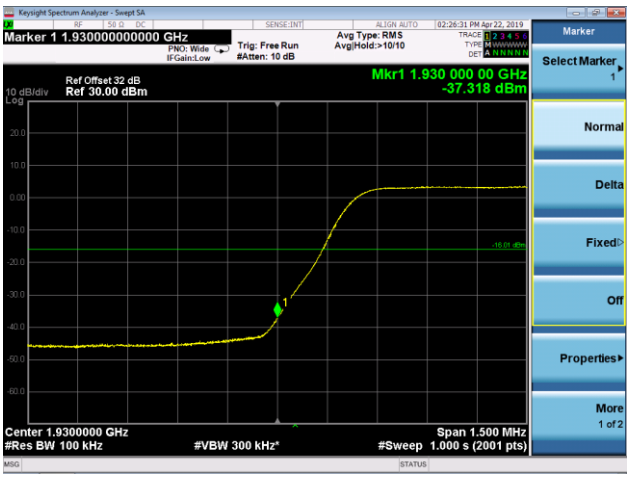
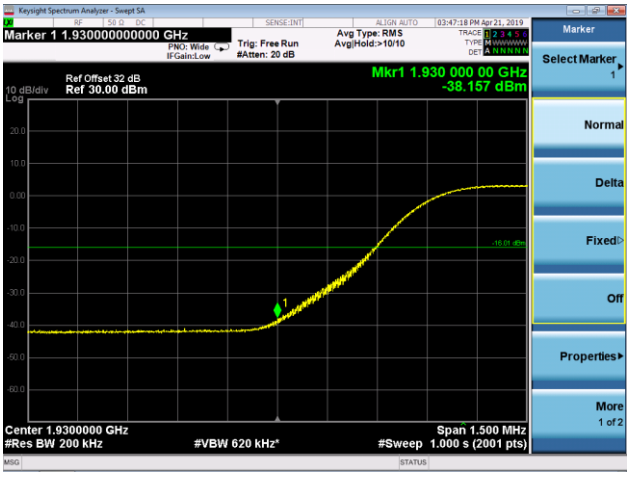
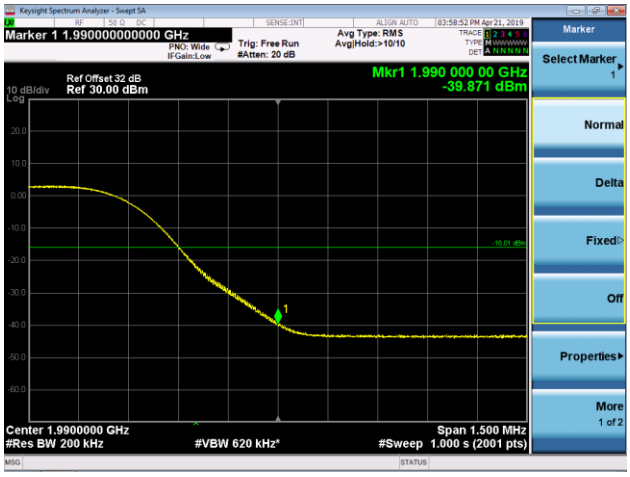
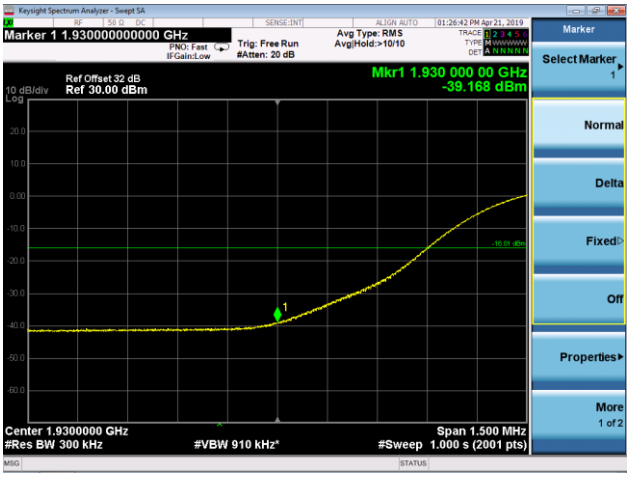
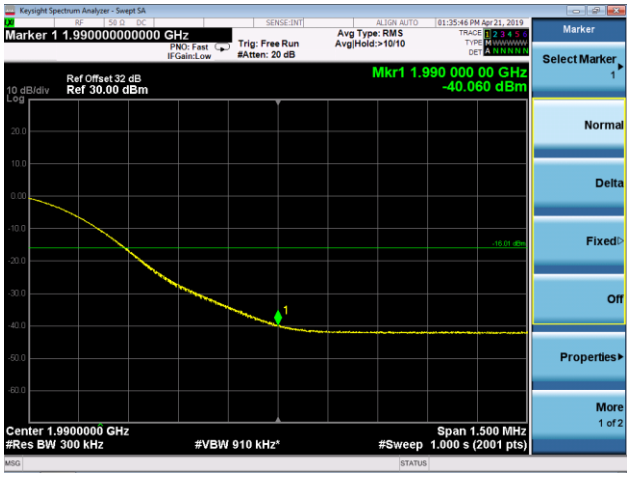
20MHz Channel Bandwidth	
1940.0MHz	1980.0MHz
	

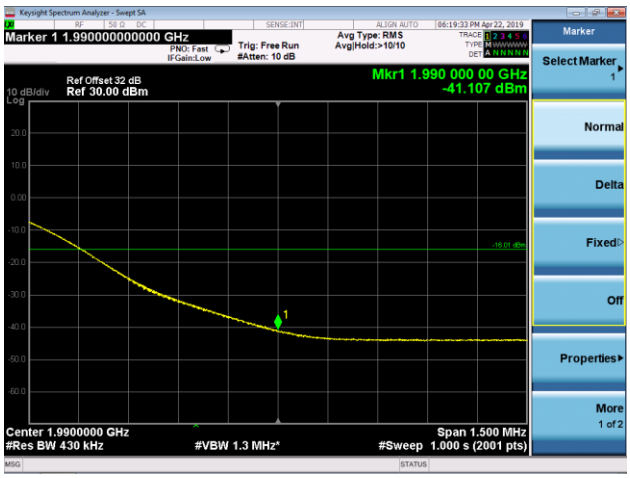
5 + 5MHz Channel Bandwidth	
1932.5MHz + 1937.5MHz	1982.5MHz + 1987.5MHz
	
10 + 10MHz Channel Bandwidth	
1935.0MHz + 1945.0MHz	1975.0MHz + 1985.0MHz
	
15 + 15MHz Band Edge	
1937.5MHz + 1952.5MHz	1967.5MHz + 1982.5MHz
	

20 + 20MHz Band Edge	
1940.0MHz + 1960.0MHz	1960.0MHz + 1980.0MHz
	

Band Edge - Ant 0 (64QAM)	
5MHz Channel Bandwidth	
1932.5MHz	1987.5MHz
	
10MHz Channel Bandwidth	
1935.0MHz	1985.0MHz
	
15MHz Channel Bandwidth	
1937.5MHz	1982.5MHz

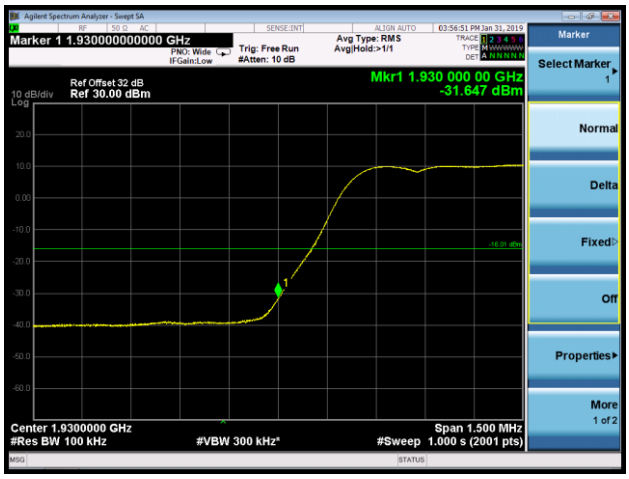
20MHz Channel Bandwidth	
1940.0MHz	1980.0MHz
	

5 + 5MHz Channel Bandwidth	
1932.5MHz + 1937.5MHz	1982.5MHz + 1987.5MHz
	
10 + 10MHz Channel Bandwidth	
1935.0MHz + 1945.0MHz	1975.0MHz + 1985.0MHz
	
15 + 15MHz Band Edge	
1937.5MHz + 1952.5MHz	1967.5MHz + 1982.5MHz
	

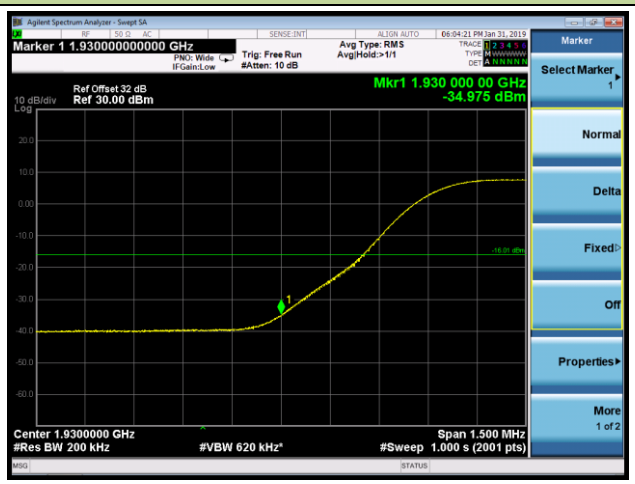
20 + 20MHz Band Edge	
1940.0MHz + 1960.0MHz	1960.0MHz + 1980.0MHz
	

Band Edge - Ant 0 (256QAM)

5MHz Channel Bandwidth

1932.5MHz	1987.5MHz
	

10MHz Channel Bandwidth

1935.0MHz	1985.0MHz
	

15MHz Channel Bandwidth

1937.5MHz	1982.5MHz

20MHz Channel Bandwidth	
1940.0MHz	1980.0MHz