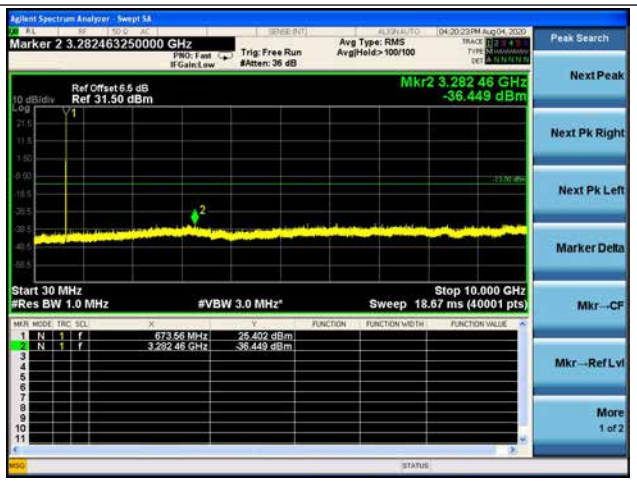
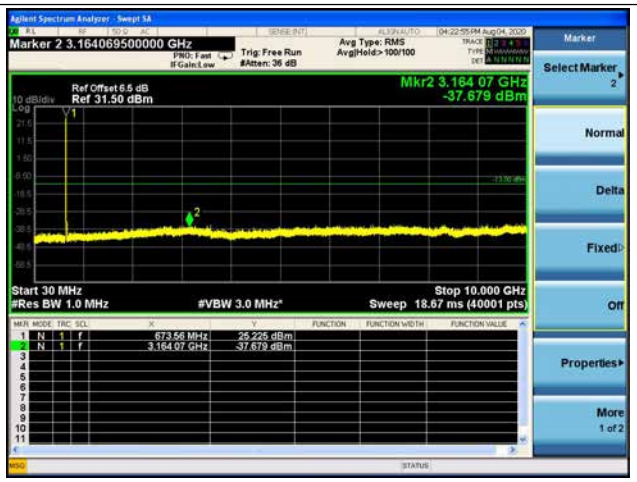
LTE Band 71 _ 5MHz BW _ Low Channel

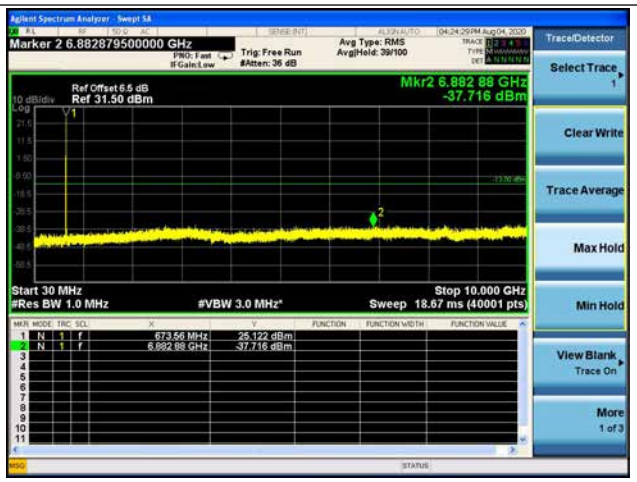
QPSK



16QAM



64QAM



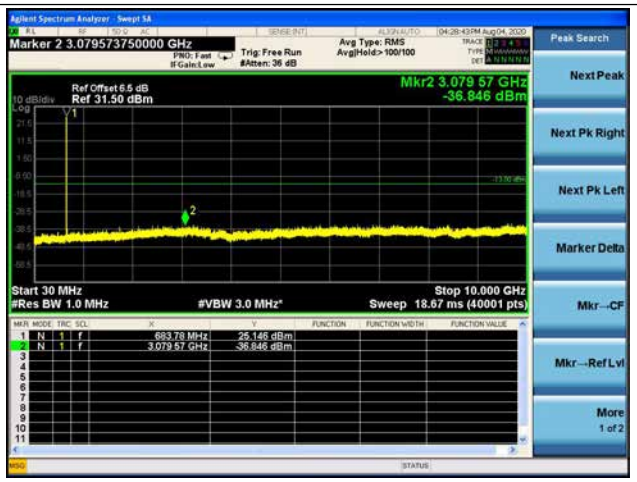
LTE Band 71 _ 20MHz BW _ Middle Channel

QPSK

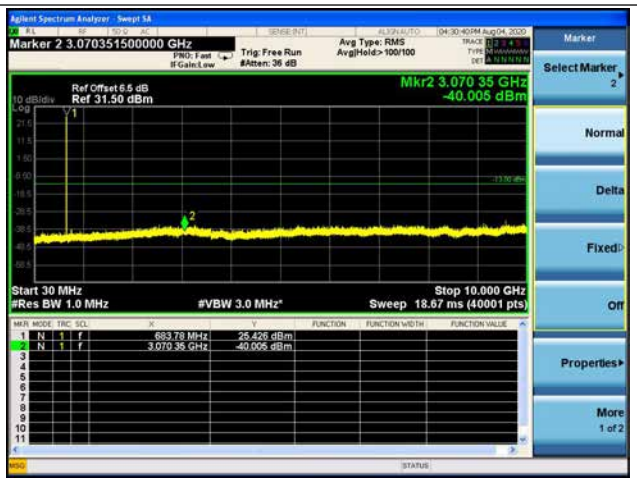
LTE Band 71 _ 5MHz BW _ Low Channel

QPSK

16QAM



64QAM

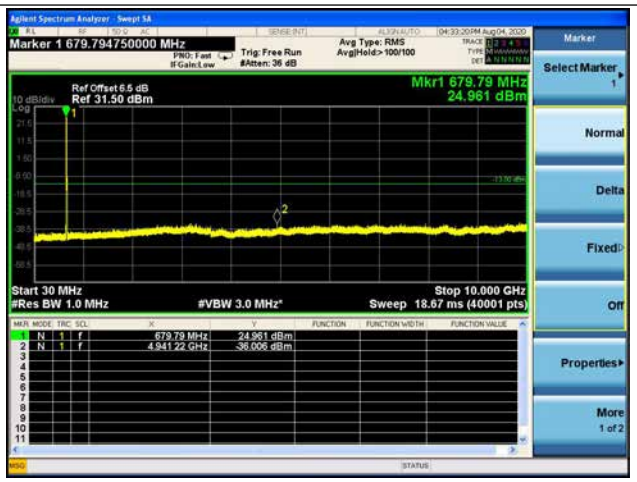


LTE Band 71 _ 20MHz BW _ High Channel

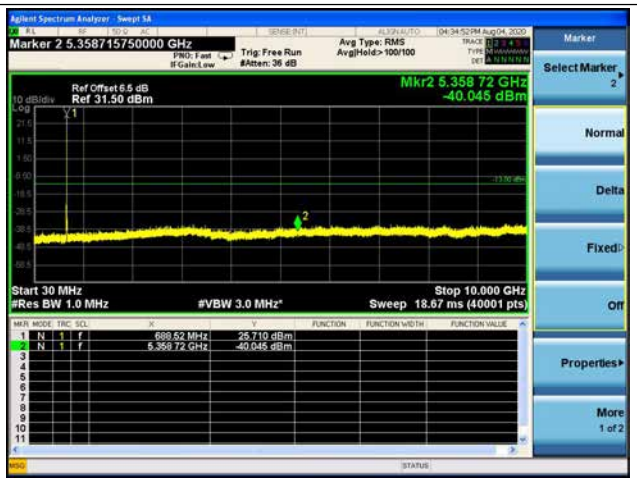
QPSK

LTE Band 71 _ 5MHz BW _ Low Channel

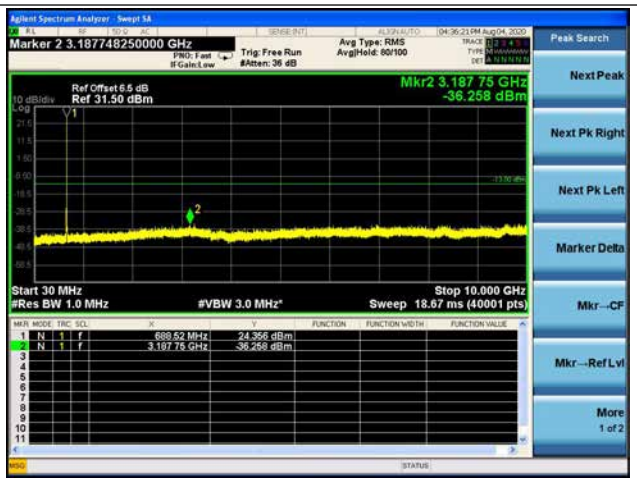
QPSK



16QAM



64QAM



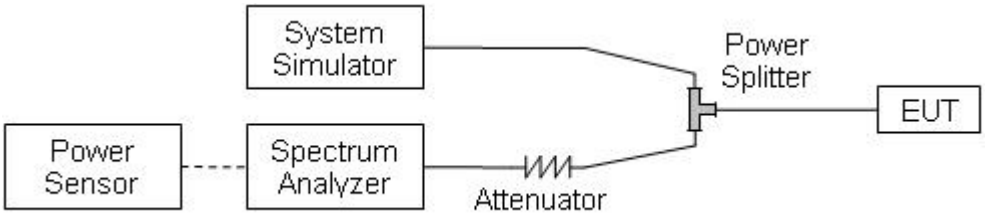
2.6. Band Edge

2.6.1. Requirement

According to FCC section 22.917(a), 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.
According to FCC section 24.238(a), 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.
According to FCC section 27.53(c) (2), for on any frequency outside the the 776–788 MHz band, the power of any emission shall be attenuated the band below the transmitter power (P) by at least 43 + 10 log (P) dB.
For operating in the 770-788MHz, emissions in the band 1559-1610MHz shall be limited to -70dBW/MHz. The limit of emission is equal to -40dBm
According to FCC section 27.53(g), for operations in the 698–746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least 43 + 10 log (P) dB. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.
According to FCC section 27.53(h), For operations in the 1710–1785MHz bands, the power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) by at least 43 + 10 log10(P) dB.
According to FCC section 27.53(m) (4)(6), For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.
According to FCC section 90.961, 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.

(1) For any frequency removed from the EA licensee's frequency block by up to and including 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 116 Log10(f/6.1) decibels or 50 + 10 Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 12.5 kHz.
(2) For any frequency removed from the EA licensee's frequency block greater than 37.5 kHz, the power of any emission shall be attenuated below the transmitter power (P) in watts by at least 43 + 10Log10(P) decibels or 80 decibels, whichever is the lesser attenuation, where f is the frequency removed from the center of the outer channel in the block in kilohertz and where f is greater than 37.5 kHz.

2.6.2. Test Description



The EUT is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power. A call is established between the EUT and the SS.

2.6.3. Test procedure

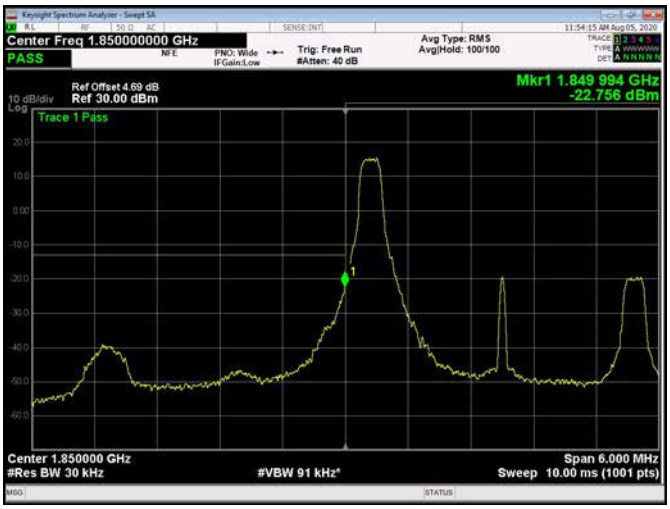
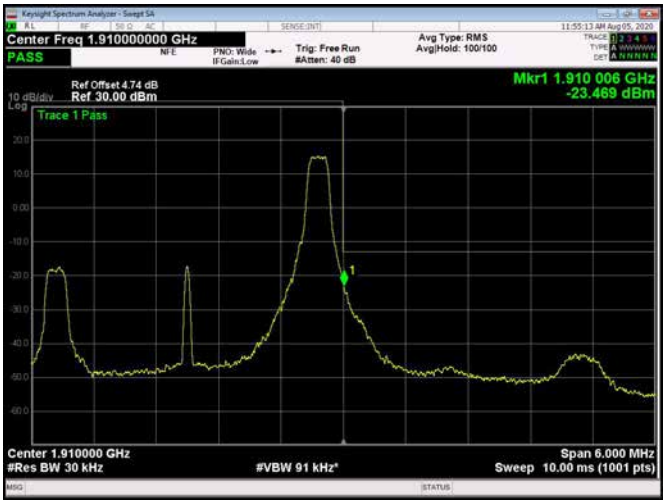
KDB 971168 D01 v03r01 Section 6.0 and ANSI/TIA-603-E-2016.

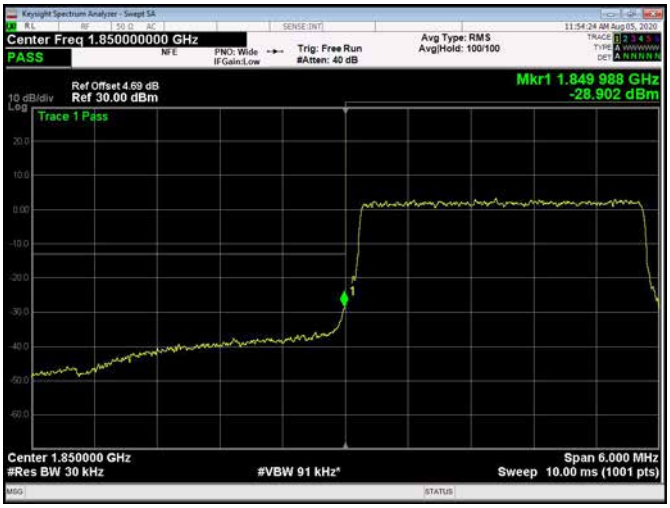
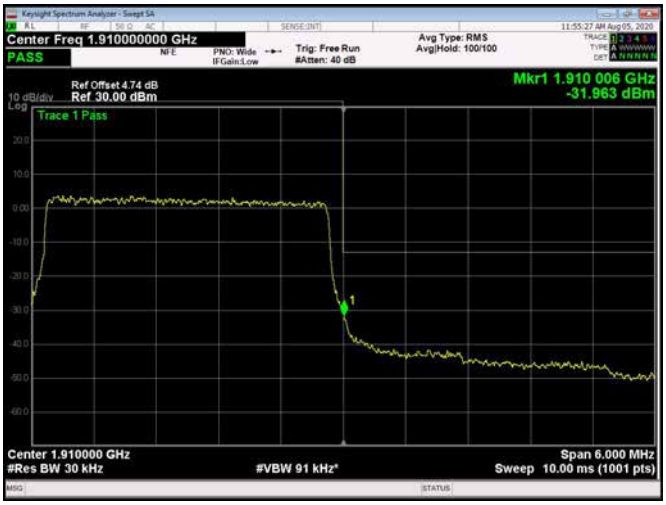
2.6.4. Test Result

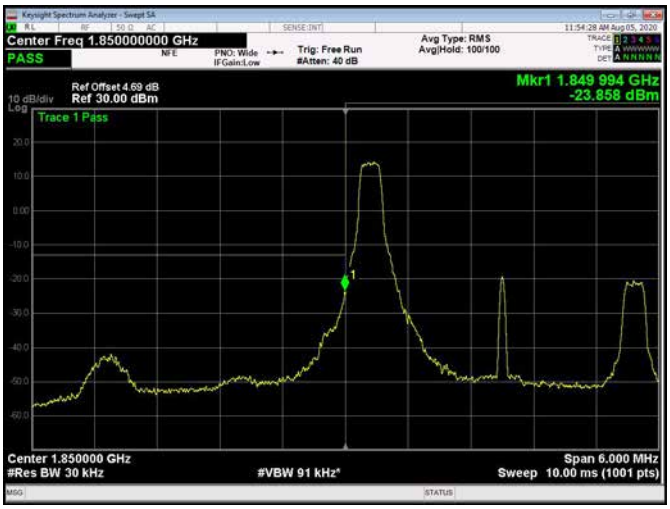
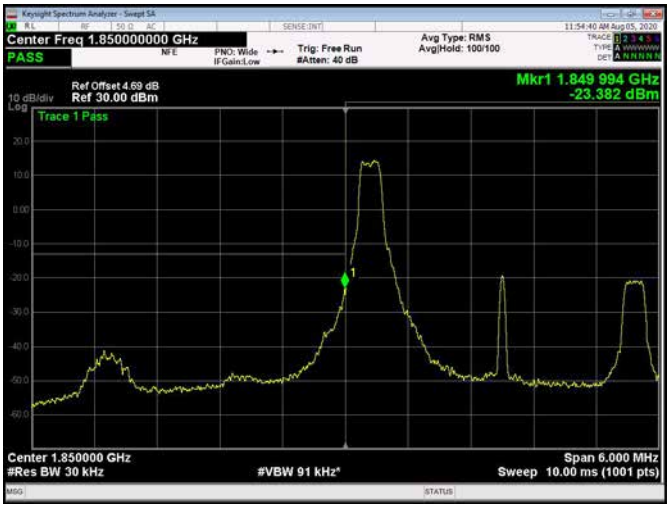
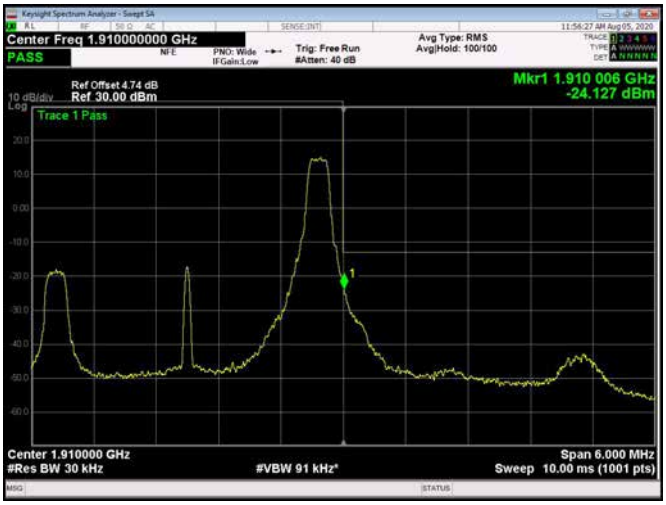
LTE Band 2	
1.4MHz / QPSK / Low Channel / 1RB	**1.4MHz / QPSK / High Channel / 1 RB**
1.4MHz / QPSK / Low Channel / Full RB	**1.4MHz / QPSK / High Channel / Full RB**

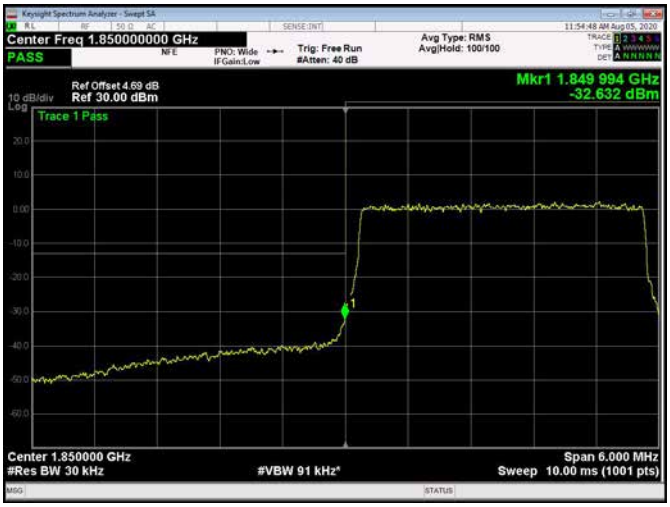
1.4MHz / 16QAM / Low Channel / 1RB	1.4MHz / 16QAM / High Channel / 1 RB
1.4MHz / 16QAM / Low Channel / Full RB	**1.4MHz / 16QAM / High Channel / Full RB**
1.4MHz / 64QAM / Low Channel / 1RB	**1.4MHz / 64QAM / High Channel / 1 RB**

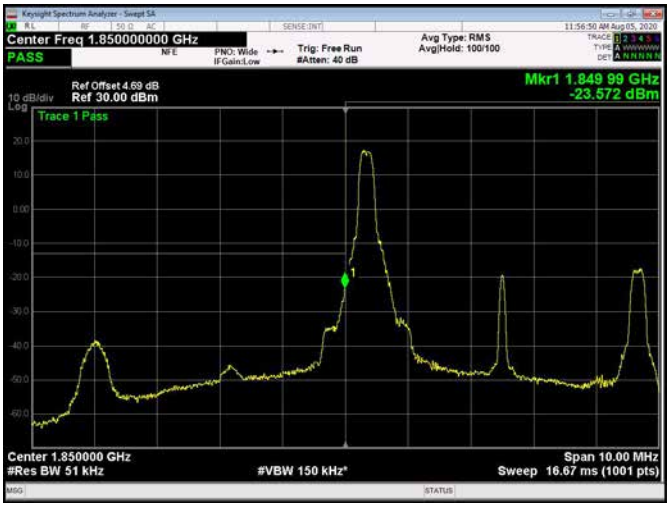
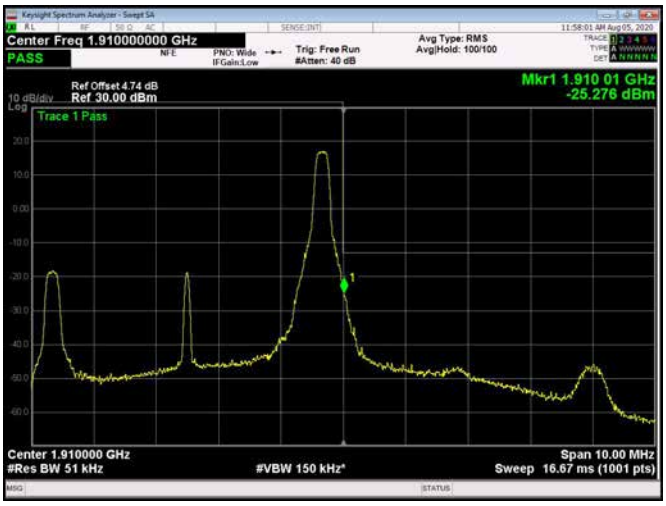
1.4MHz / 64QAM / Low Channel / Full RB	1.4MHz / 64QAM / High Channel / Full RB

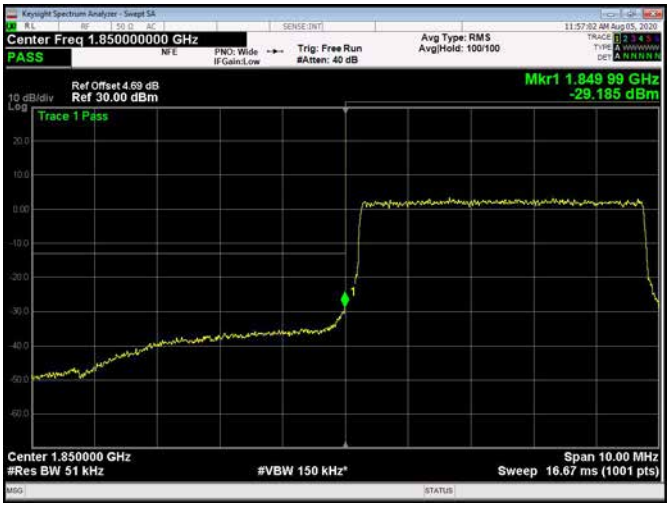
3MHz / QPSK / Low Channel / 1RB	3MHz / QPSK / High Channel / 1 RB
	

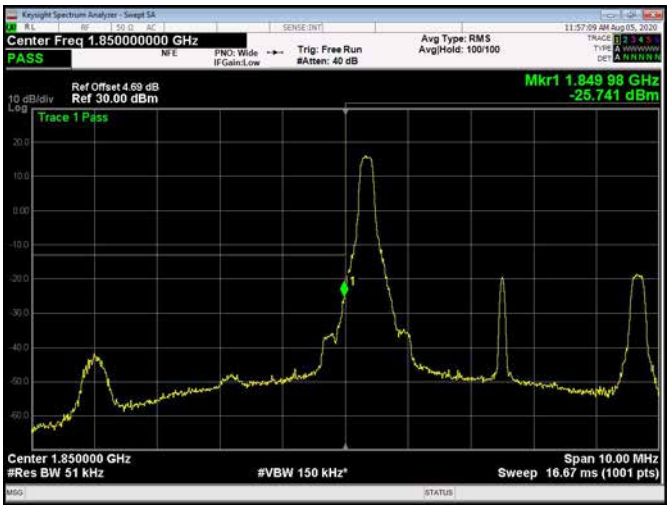
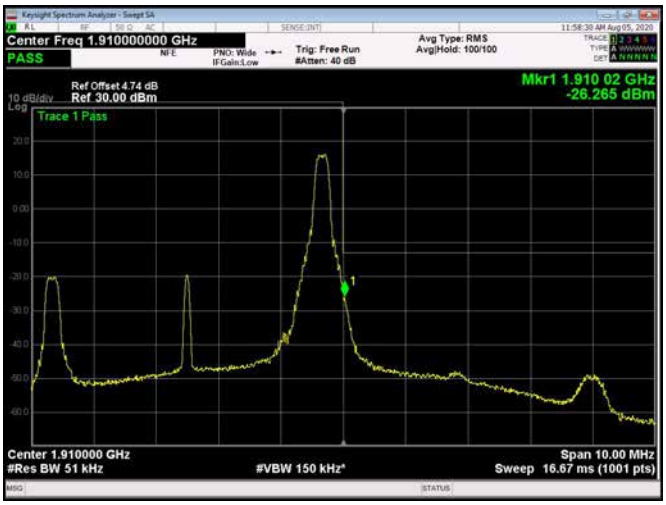
3MHz / QPSK / Low Channel / Full RB	3MHz / QPSK / High Channel / Full RB
	

3MHz / 16QAM / Low Channel / 1RB	3MHz / 16QAM / High Channel / 1 RB
	
3MHz / 16QAM / Low Channel / Full RB	**3MHz / 16QAM / High Channel / Full RB**
3MHz / 64QAM / Low Channel / 1RB	**3MHz / 64QAM / High Channel / 1 RB**
	

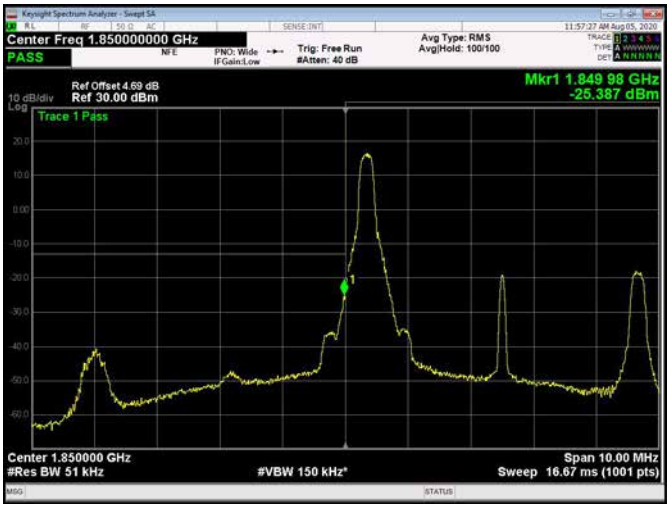
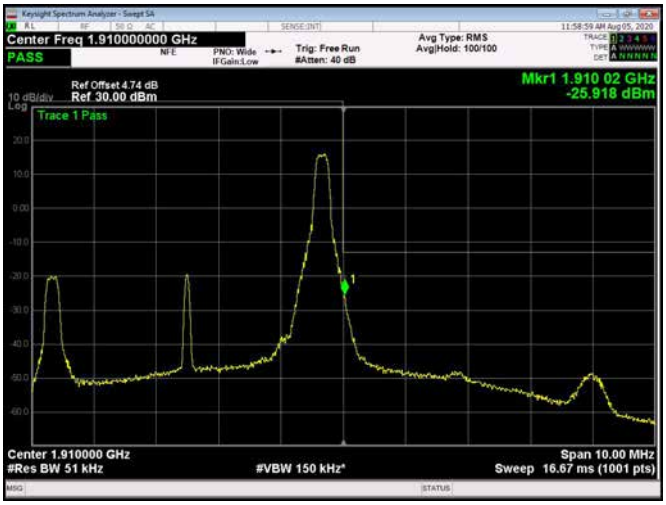
3MHz / 64QAM / Low Channel / Full RB	3MHz / 64QAM / High Channel / Full RB
	

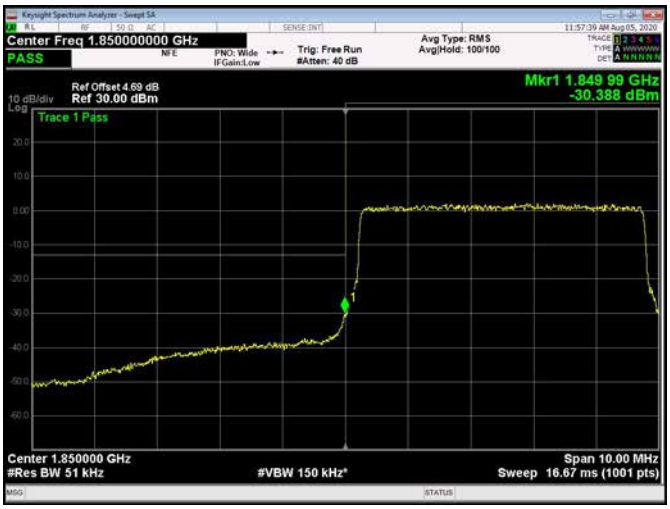
5MHz / QPSK / Low Channel / 1RB	5MHz / QPSK / High Channel / 1 RB
	

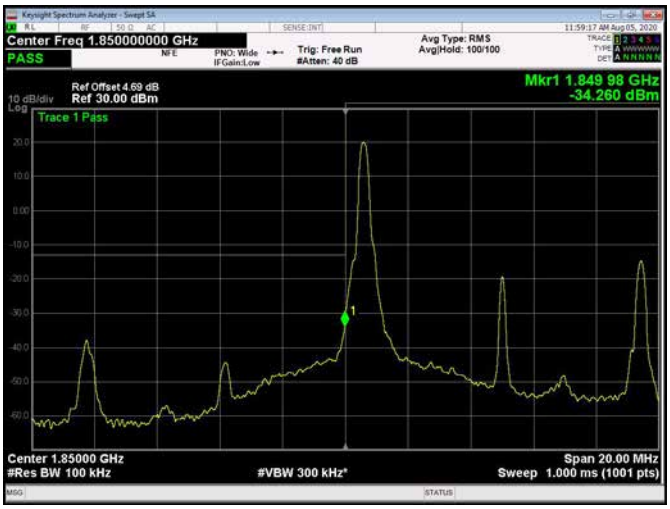
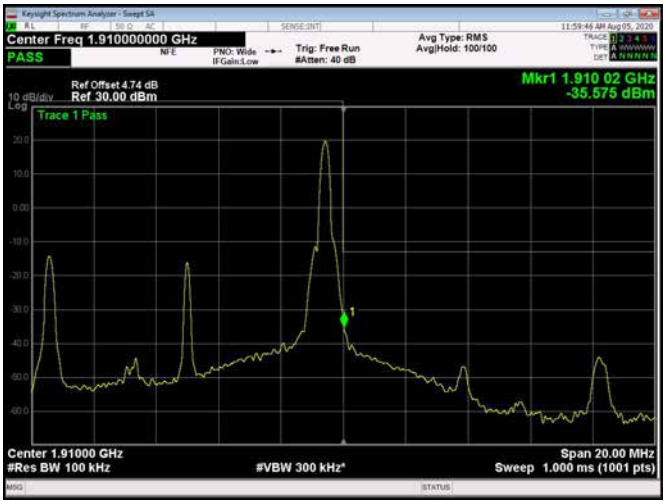
5MHz / QPSK / Low Channel / Full RB	5MHz / QPSK / High Channel / Full RB
	

5MHz / 16QAM / Low Channel / 1RB	5MHz / 16QAM / High Channel / 1 RB
	

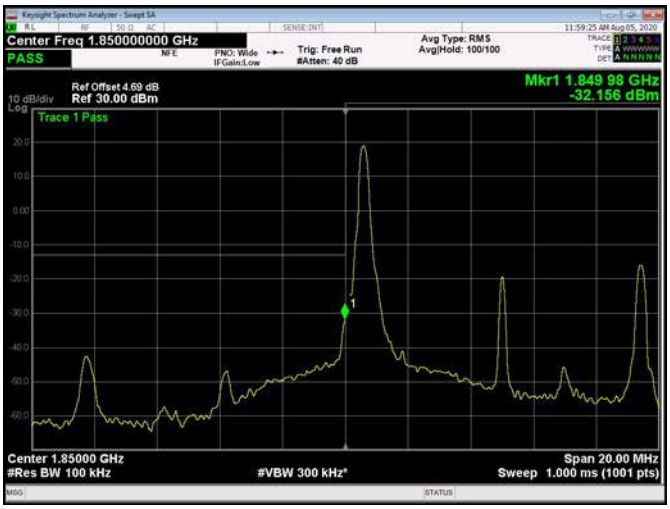
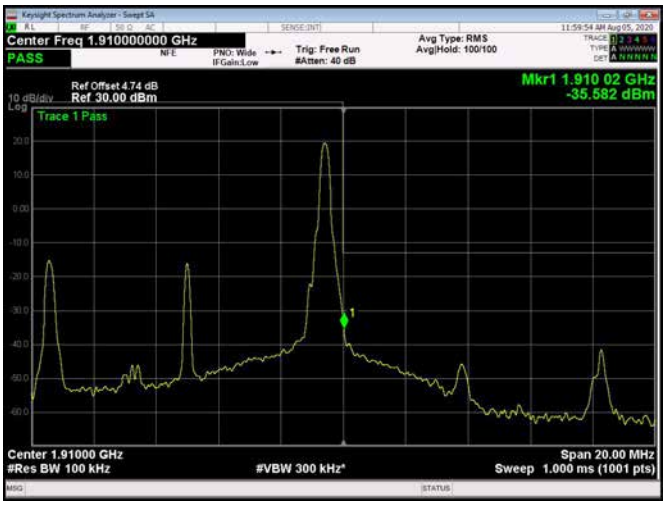
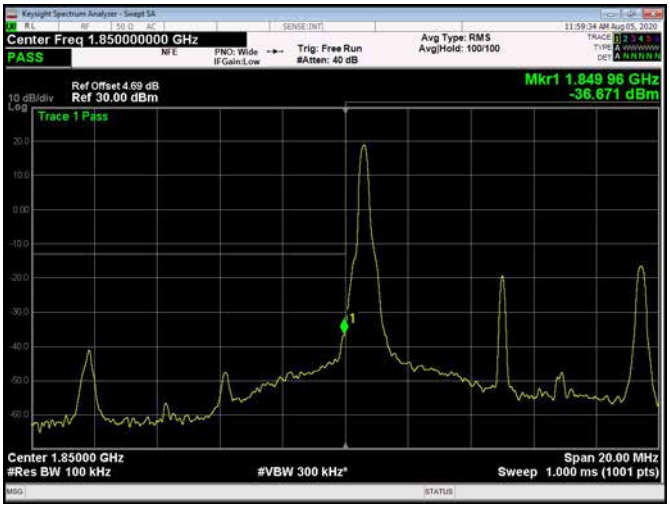
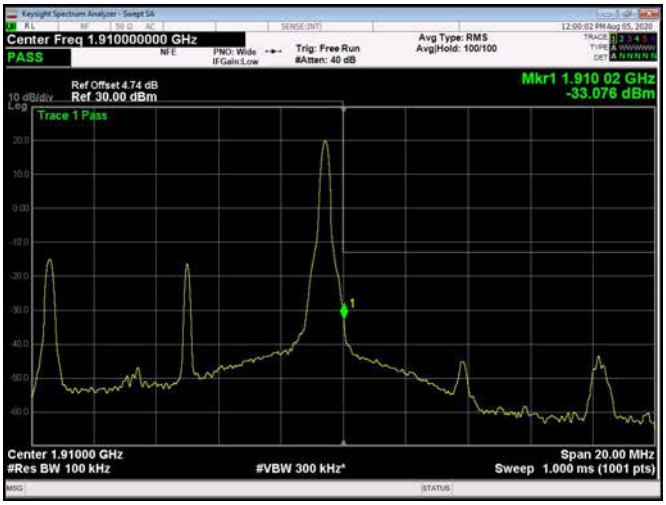
5MHz / 16QAM / Low Channel / Full RB	5MHz / 16QAM / High Channel / Full RB

5MHz / 64QAM / Low Channel / 1RB	5MHz / 64QAM / High Channel / 1 RB
	

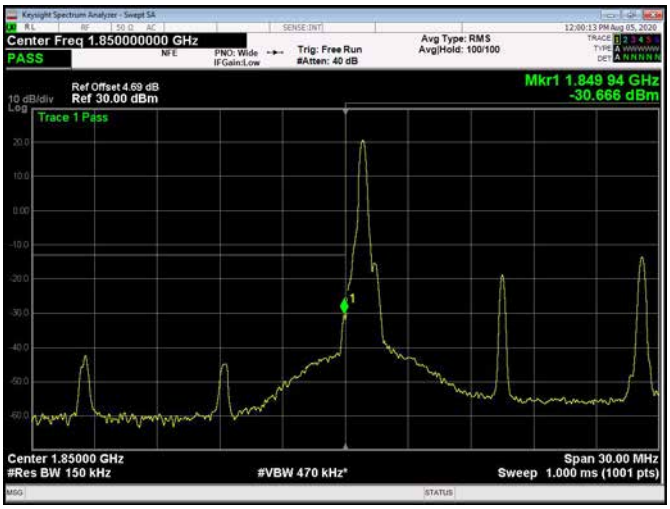
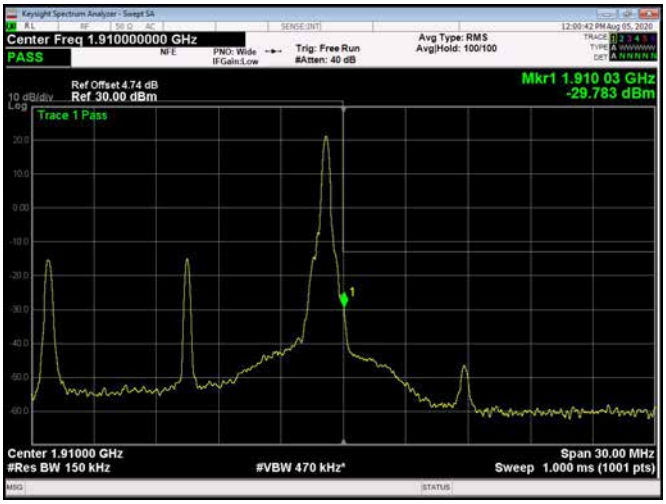
5MHz / 64QAM / Low Channel / Full RB	5MHz / 64QAM / High Channel / Full RB
	

10MHz / QPSK / Low Channel / 1RB	10MHz / QPSK / High Channel / 1 RB
	

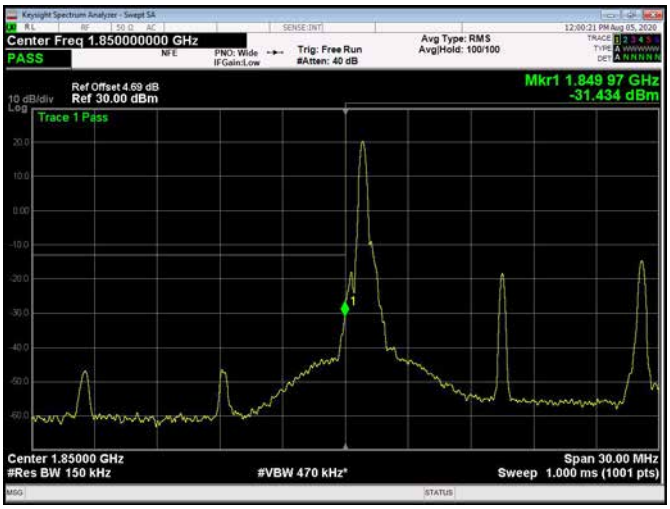
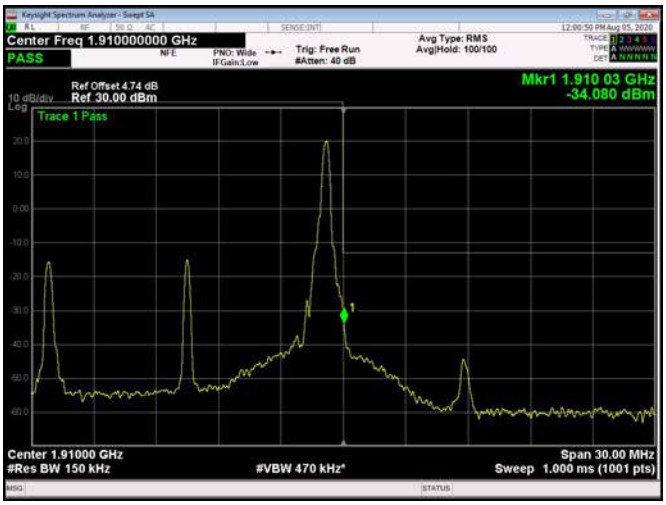
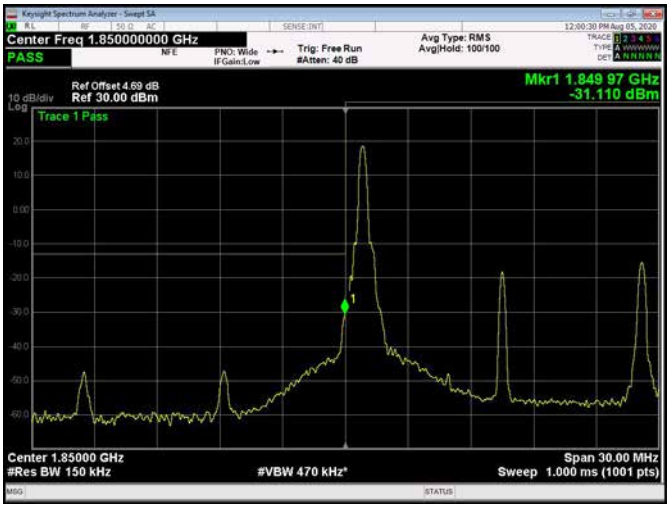
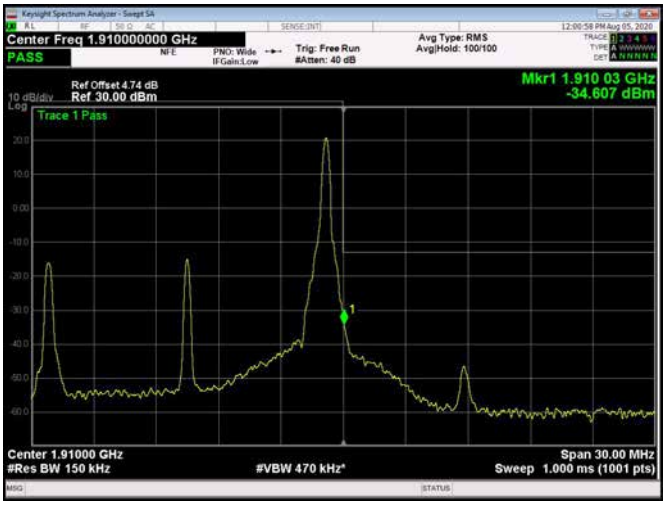
10MHz / QPSK / Low Channel / Full RB	10MHz / QPSK / High Channel / Full RB

10MHz / 16QAM / Low Channel / 1RB	10MHz / 16QAM / High Channel / 1 RB
	
10MHz / 16QAM / Low Channel / Full RB	**10MHz / 16QAM / High Channel / Full RB**
10MHz / 64QAM / Low Channel / 1RB	**10MHz / 64QAM / High Channel / 1 RB**
	

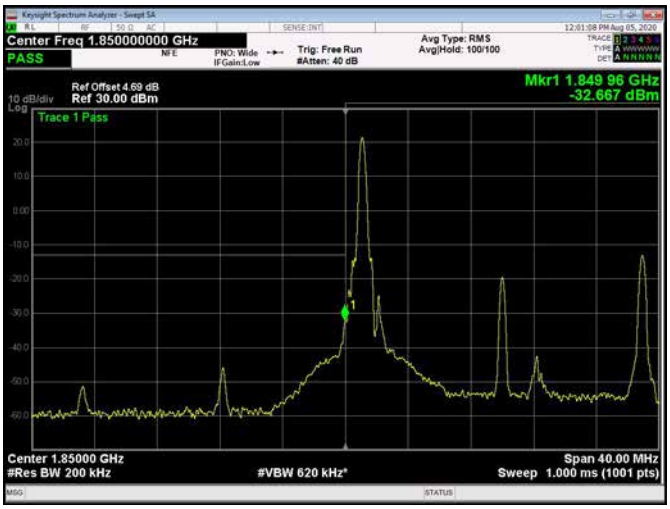
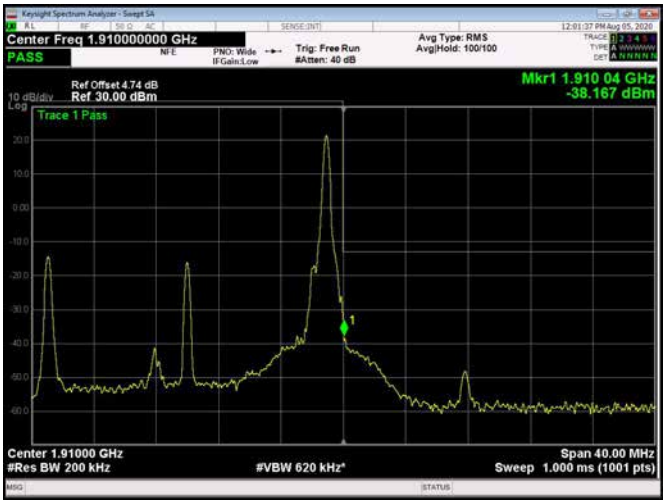
10MHz / 64QAM / Low Channel / Full RB	10MHz / 64QAM / High Channel / Full RB

15MHz / QPSK / Low Channel / 1RB	15MHz / QPSK / High Channel / 1 RB
	

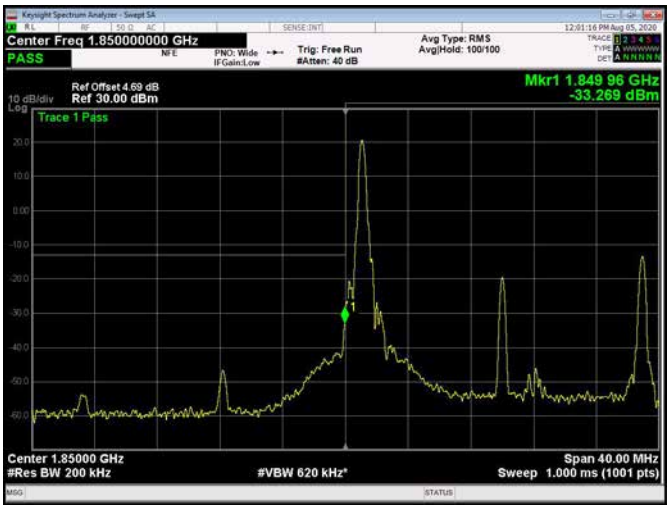
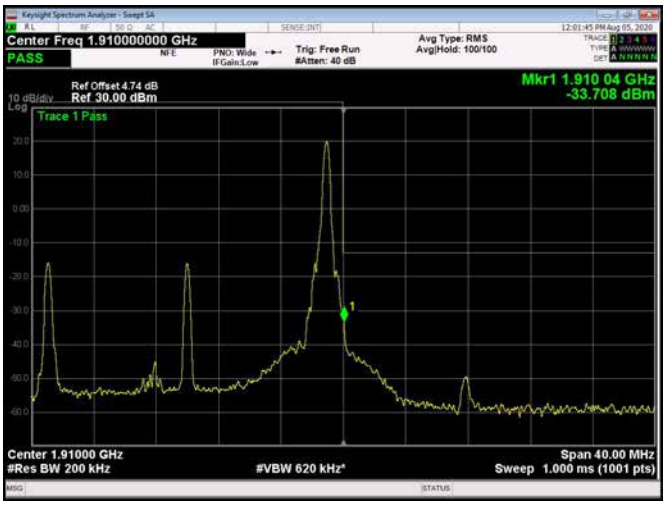
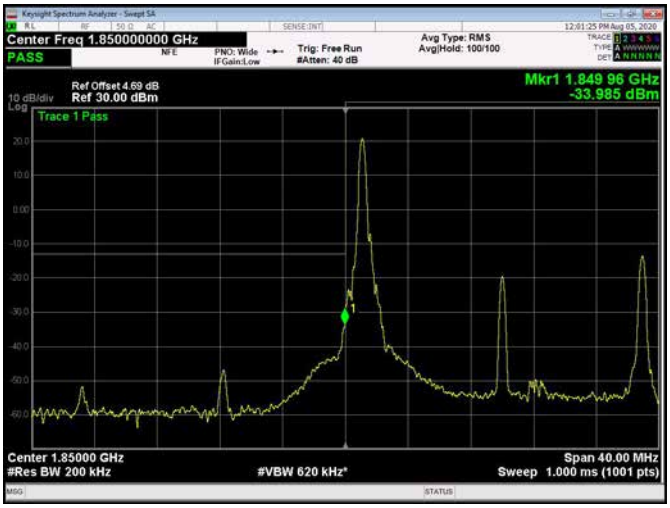
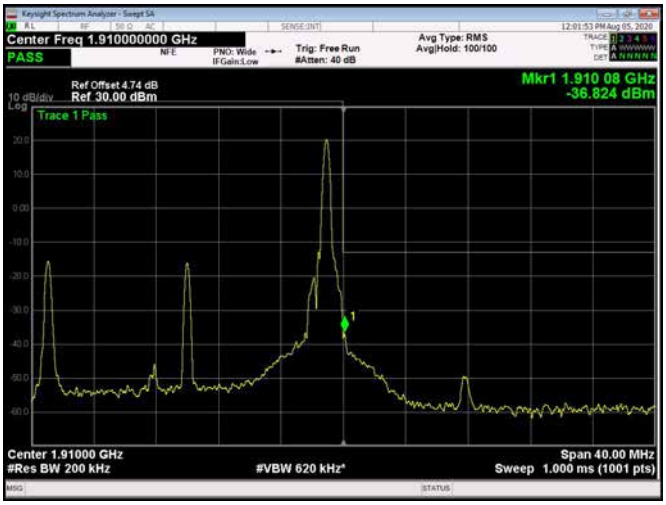
15MHz / QPSK / Low Channel / Full RB	15MHz / QPSK / High Channel / Full RB

15MHz / 16QAM / Low Channel / 1RB	15MHz / 16QAM / High Channel / 1 RB
	
15MHz / 16QAM / Low Channel / Full RB	**15MHz / 16QAM / High Channel / Full RB**
15MHz / 64QAM / Low Channel / 1RB	**15MHz / 64QAM / High Channel / 1 RB**
	

15MHz / 64QAM / Low Channel / Full RB	15MHz / 64QAM / High Channel / Full RB

20MHz / QPSK / Low Channel / 1RB	20MHz / QPSK / High Channel / 1 RB
	

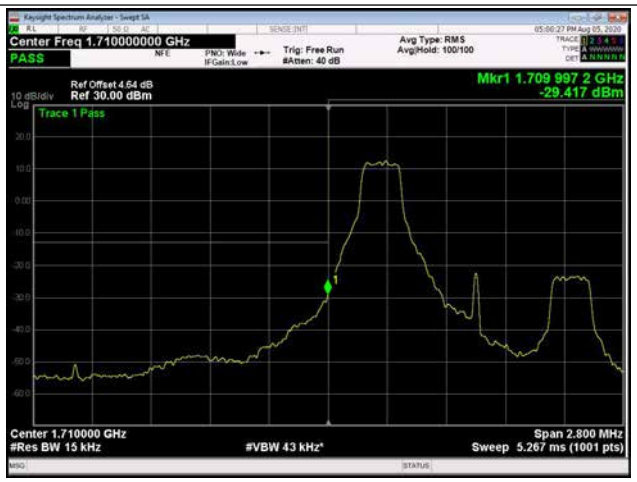
20MHz / QPSK / Low Channel / Full RB	20MHz / QPSK / High Channel / Full RB

20MHz / 16QAM / Low Channel / 1RB	20MHz / 16QAM / High Channel / 1 RB
	
20MHz / 16QAM / Low Channel / Full RB	**20MHz / 16QAM / High Channel / Full RB**
20MHz / 64QAM / Low Channel / 1RB	**20MHz / 64QAM / High Channel / 1 RB**
	

20MHz / 64QAM / Low Channel / Full RB	20MHz / 64QAM / High Channel / Full RB

LTE Band 4

1.4MHz / QPSK / Low Channel / 1RB



1.4MHz / QPSK / High Channel / 1 RB

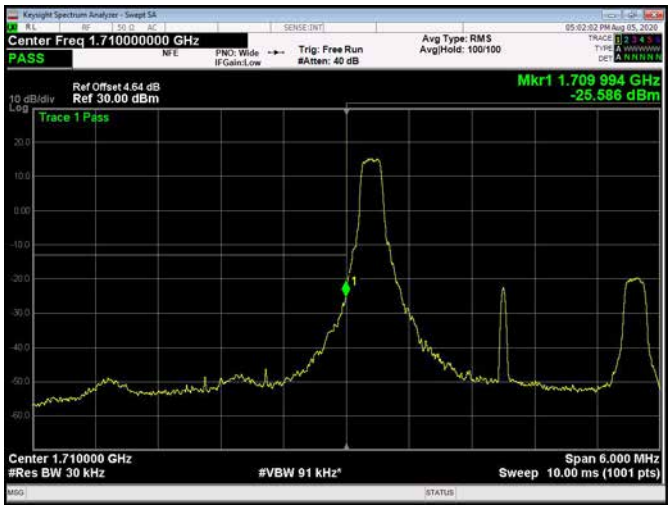
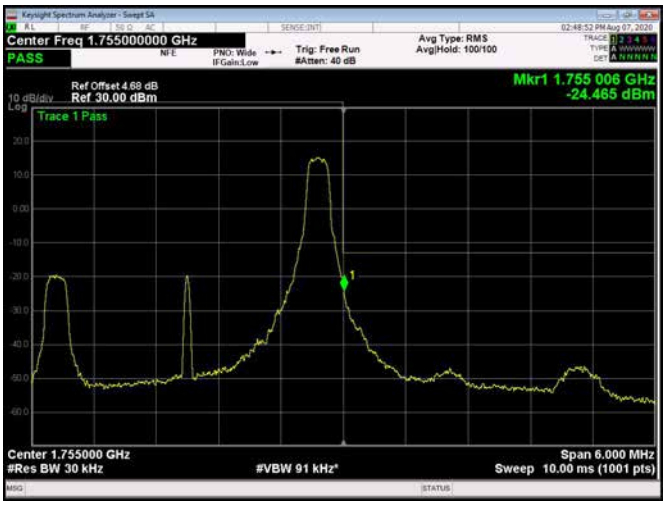
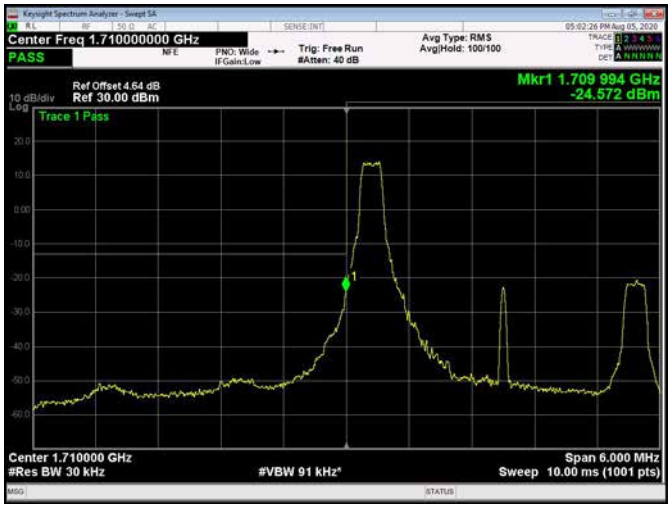
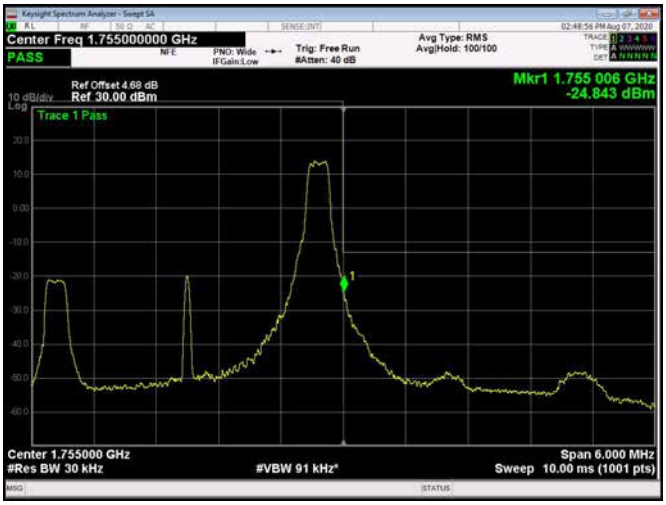
1.4MHz / QPSK / Low Channel / Full RB

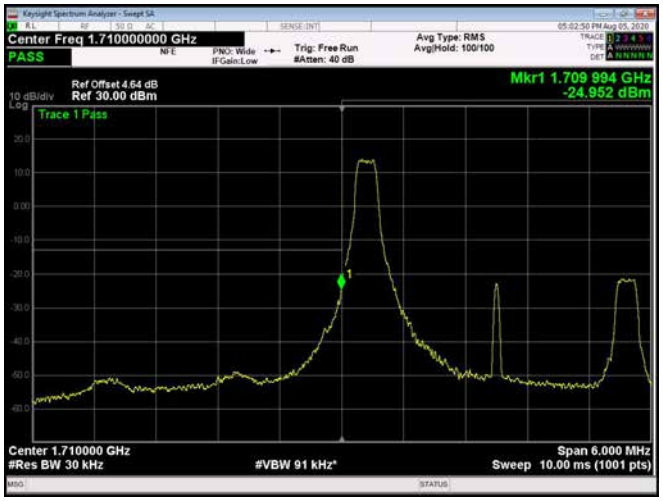
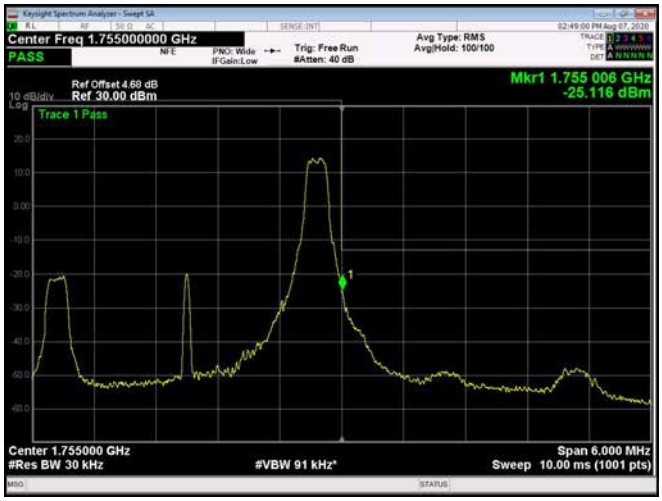
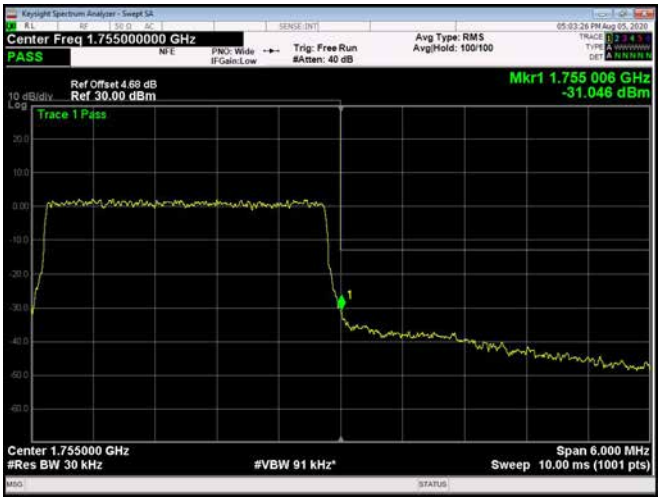
1.4MHz / QPSK / High Channel / Full RB

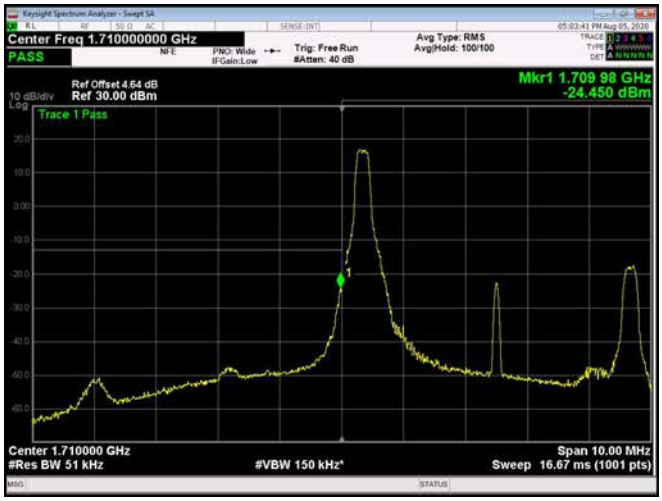
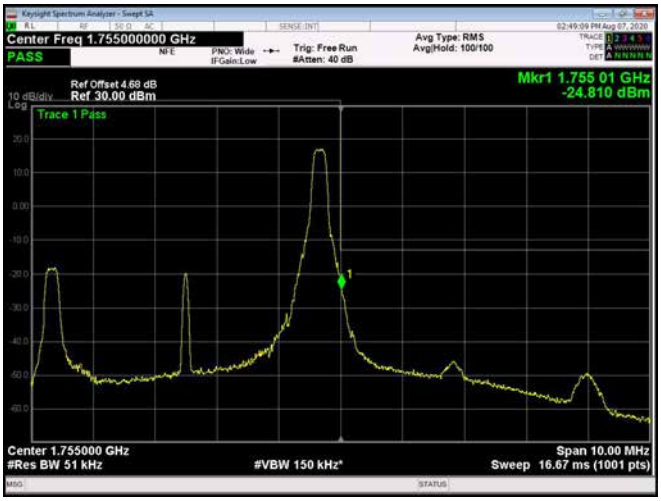
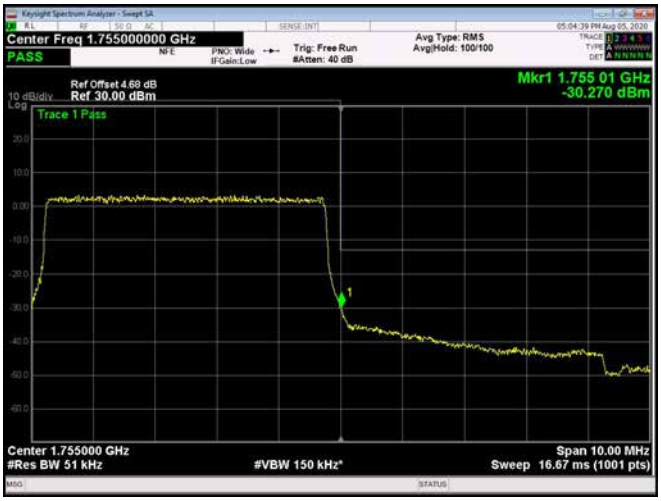
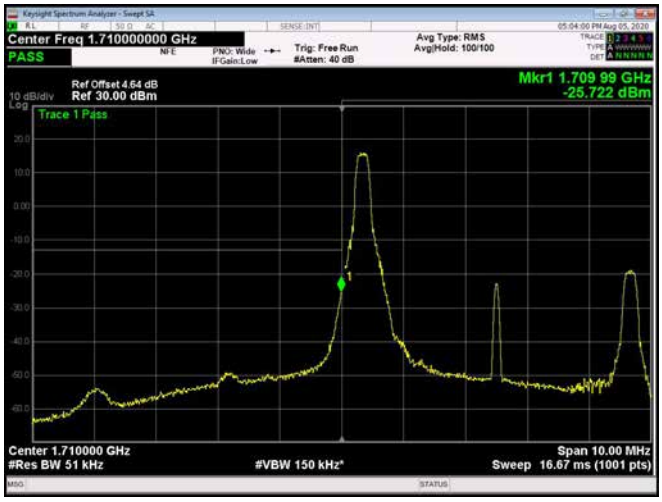
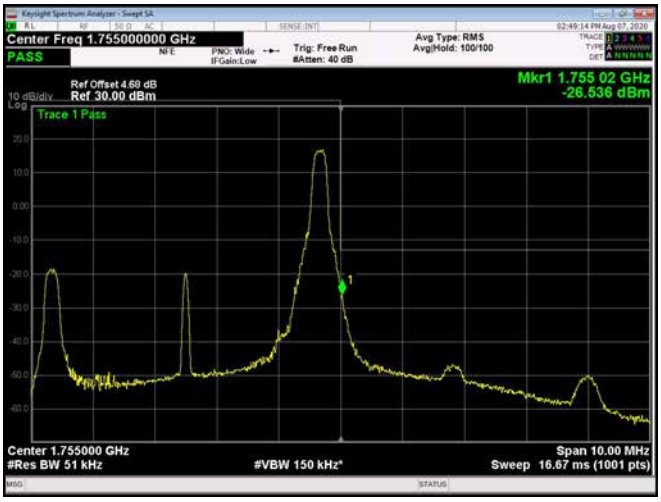
1.4MHz / 16QAM / Low Channel / 1RB

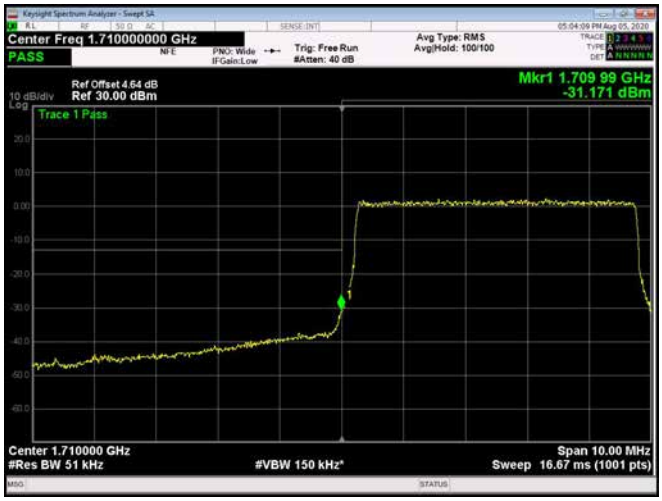
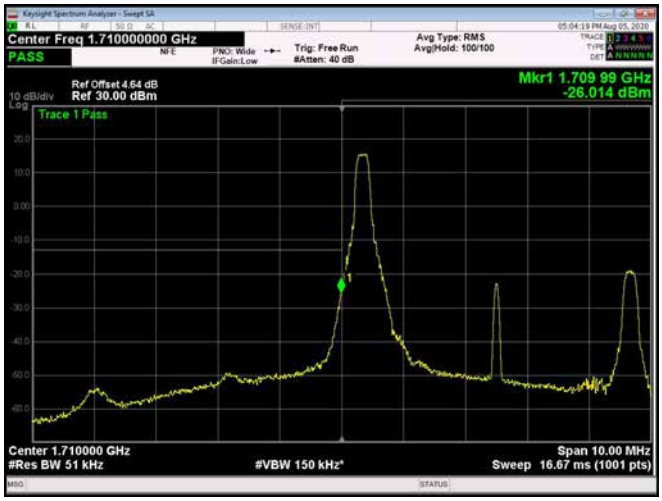
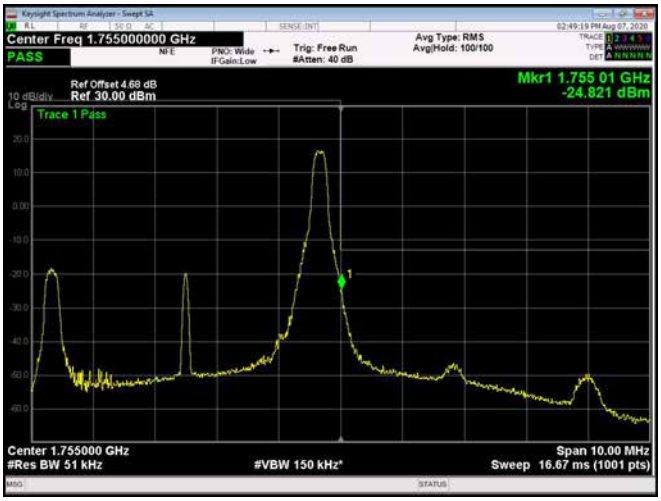
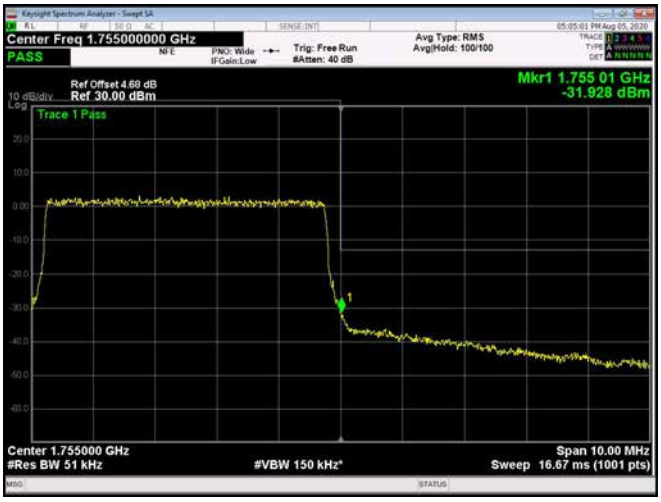
1.4MHz / 16QAM / High Channel / 1 RB

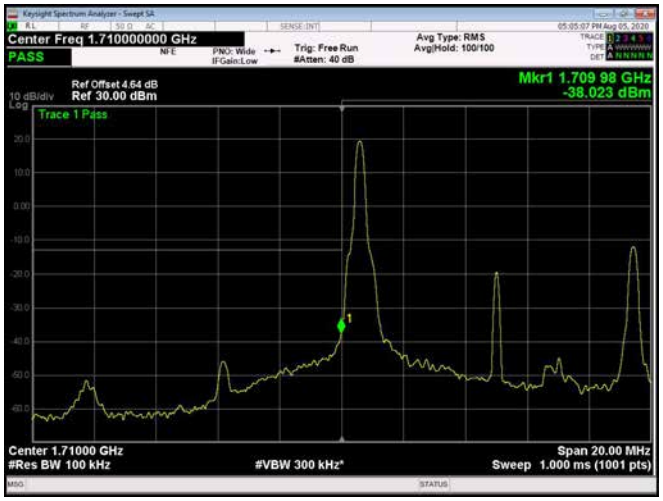
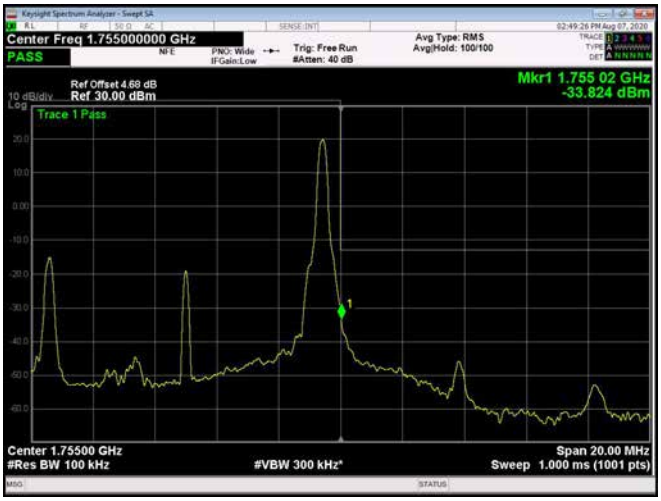
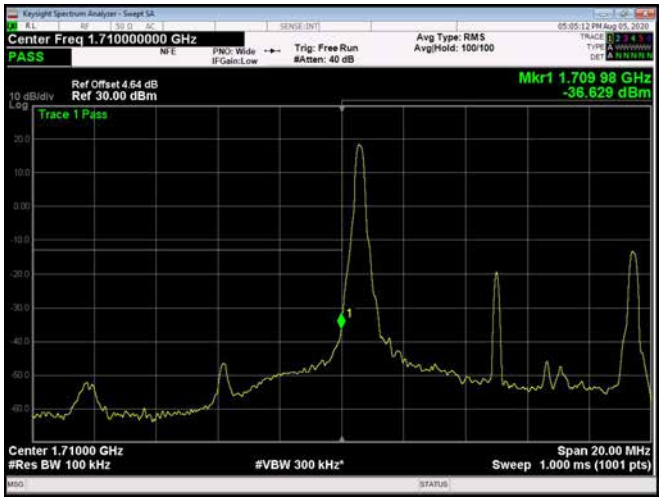
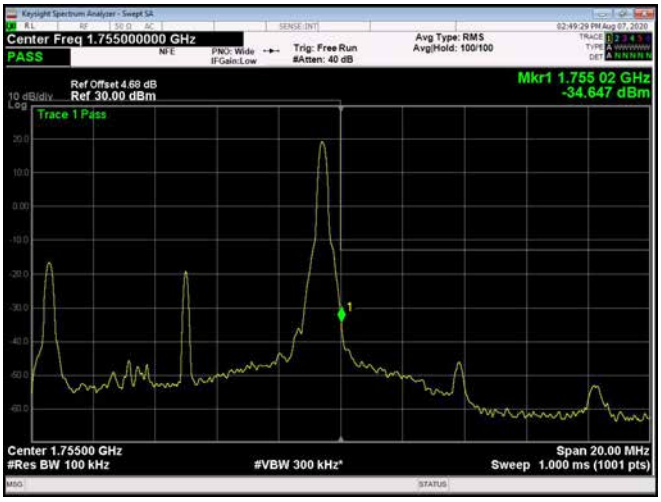
1.4MHz / 16QAM / Low Channel / Full RB	1.4MHz / 16QAM / High Channel / Full RB
1.4MHz / 64QAM / Low Channel / 1RB	**1.4MHz / 64QAM / High Channel / 1 RB**
1.4MHz / 64QAM / Low Channel / Full RB	**1.4MHz / 64QAM / High Channel / Full RB**

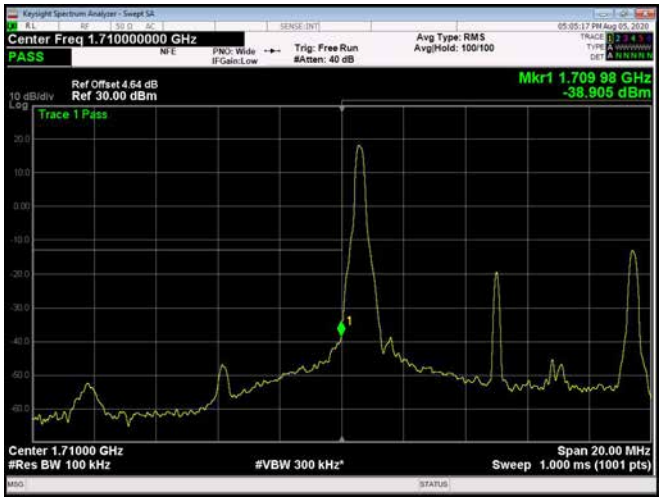
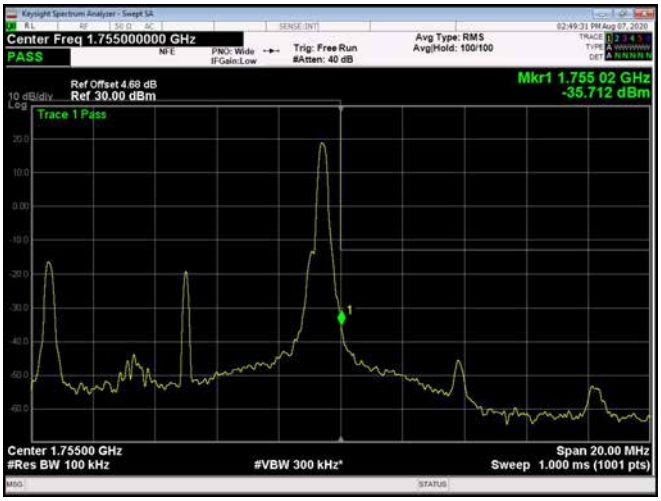
3MHz / QPSK / Low Channel / 1RB	3MHz / QPSK / High Channel / 1 RB
	
3MHz / QPSK / Low Channel / Full RB	**3MHz / QPSK / High Channel / Full RB**
3MHz / 16QAM / Low Channel / 1RB	**3MHz / 16QAM / High Channel / 1 RB**
	

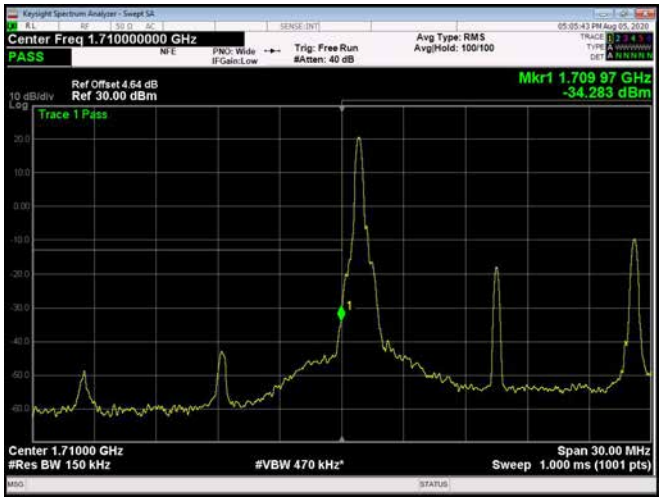
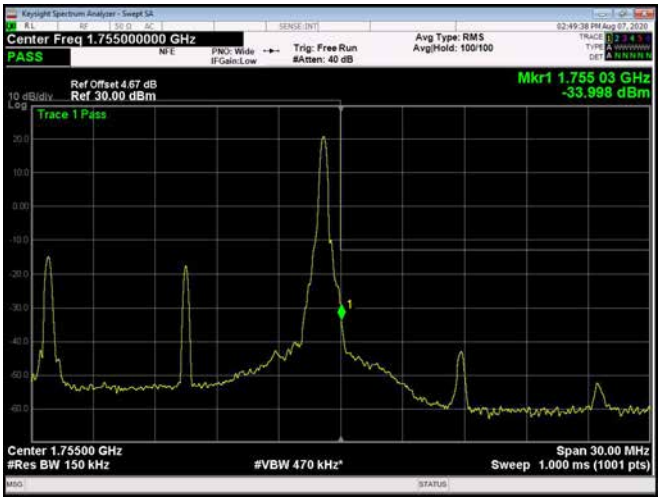
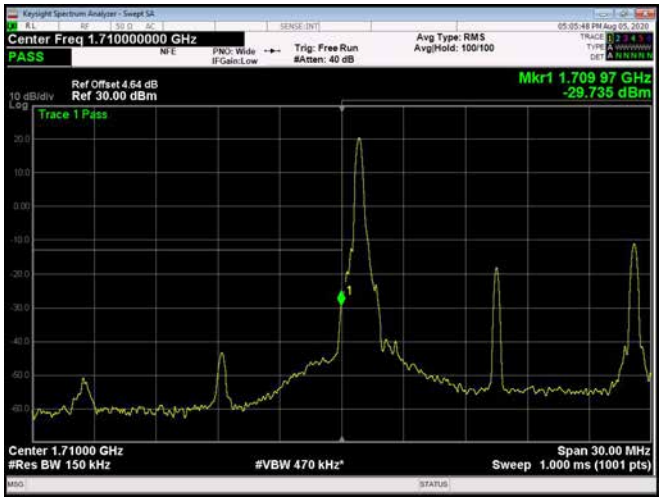
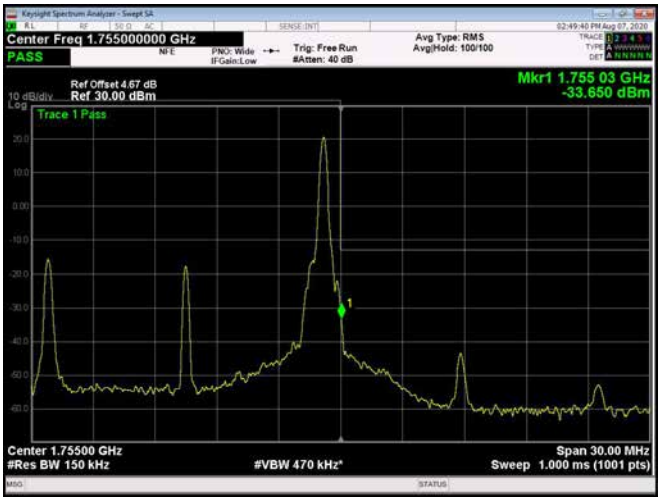
3MHz / 16QAM / Low Channel / Full RB	3MHz / 16QAM / High Channel / Full RB
3MHz / 64QAM / Low Channel / 1RB	**3MHz / 64QAM / High Channel / 1 RB**
	
3MHz / 64QAM / Low Channel / Full RB	**3MHz / 64QAM / High Channel / Full RB**
	

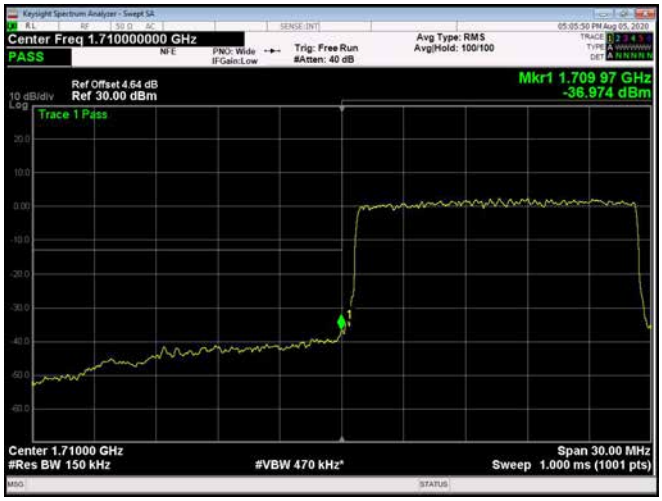
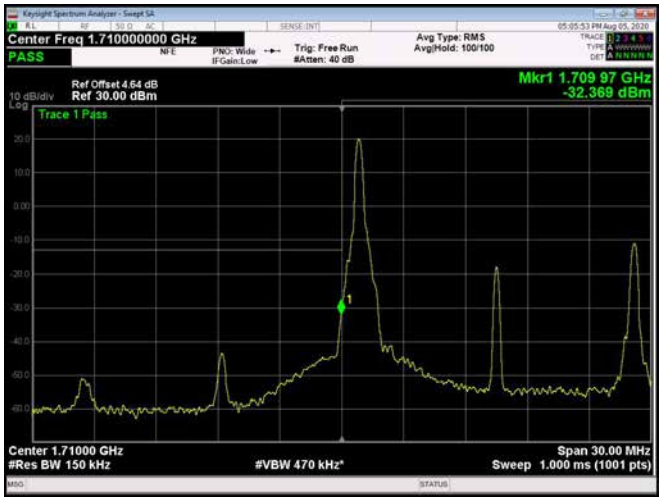
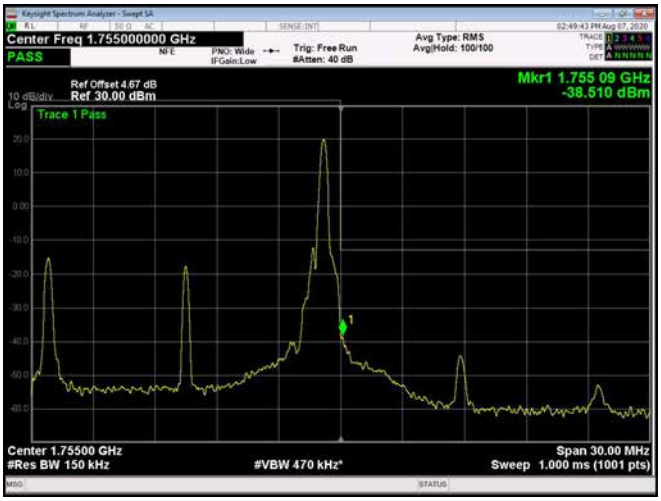
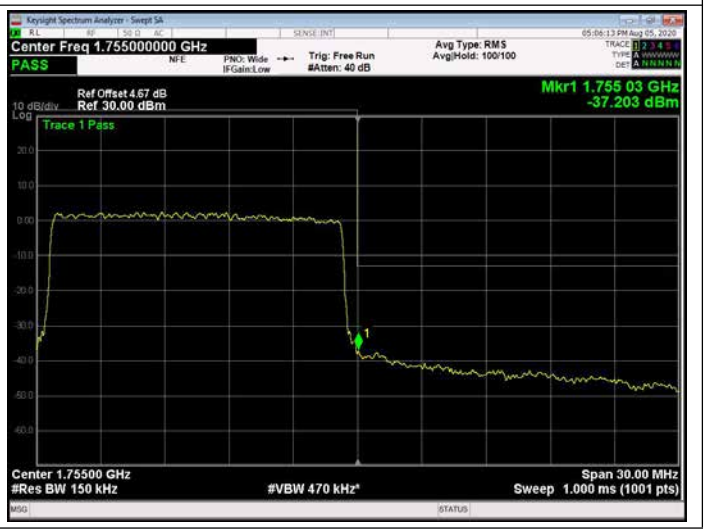
5MHz / QPSK / Low Channel / 1RB	5MHz / QPSK / High Channel / 1 RB
	
5MHz / QPSK / Low Channel / Full RB	**5MHz / QPSK / High Channel / Full RB**
	
5MHz / 16QAM / Low Channel / 1RB	**5MHz / 16QAM / High Channel / 1 RB**
	

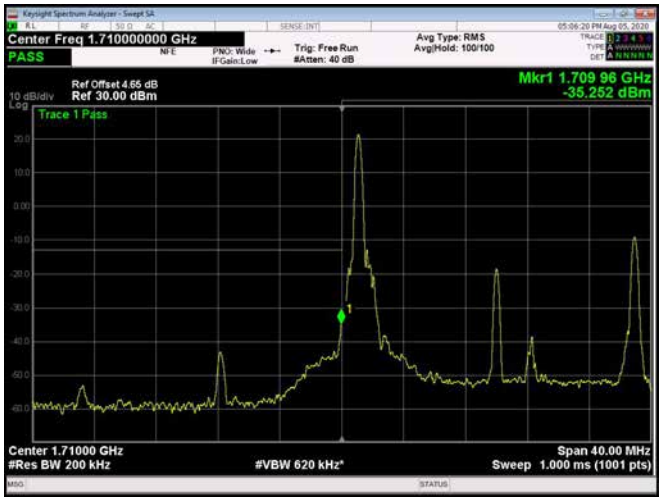
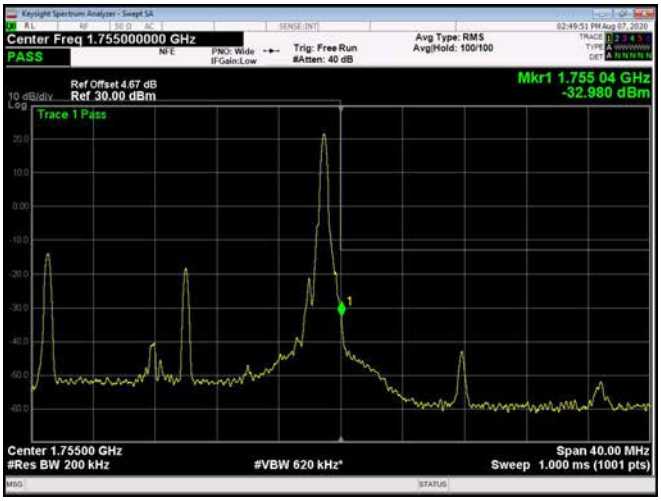
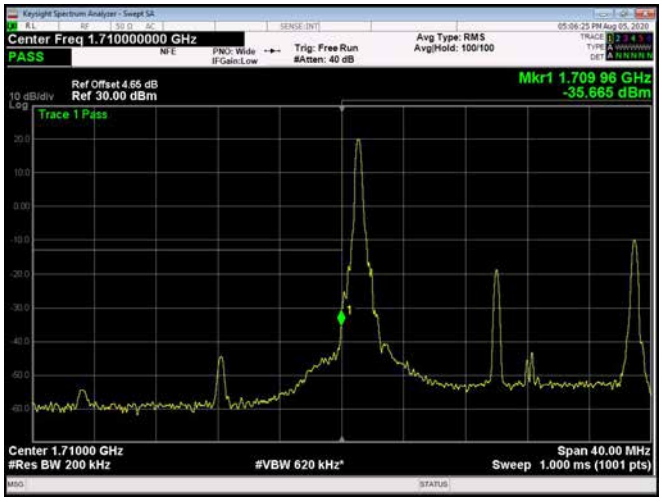
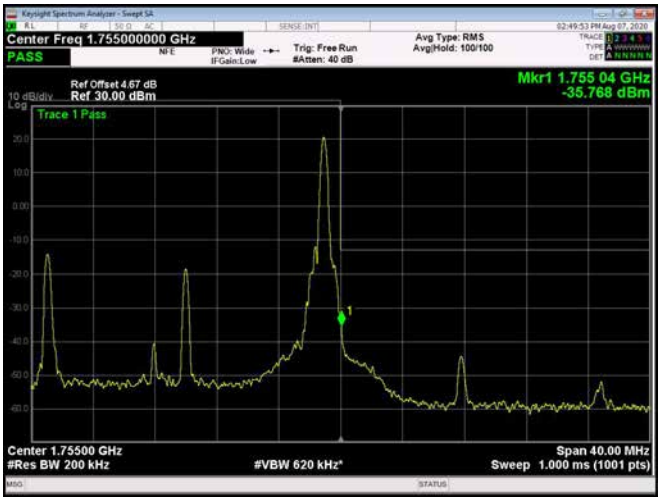
5MHz / 16QAM / Low Channel / Full RB	5MHz / 16QAM / High Channel / Full RB
	
5MHz / 64QAM / Low Channel / 1RB	**5MHz / 64QAM / High Channel / 1 RB**
	
5MHz / 64QAM / Low Channel / Full RB	**5MHz / 64QAM / High Channel / Full RB**
	

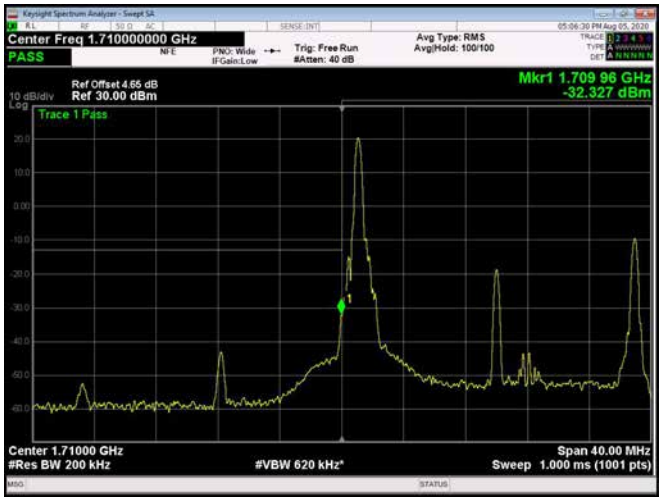
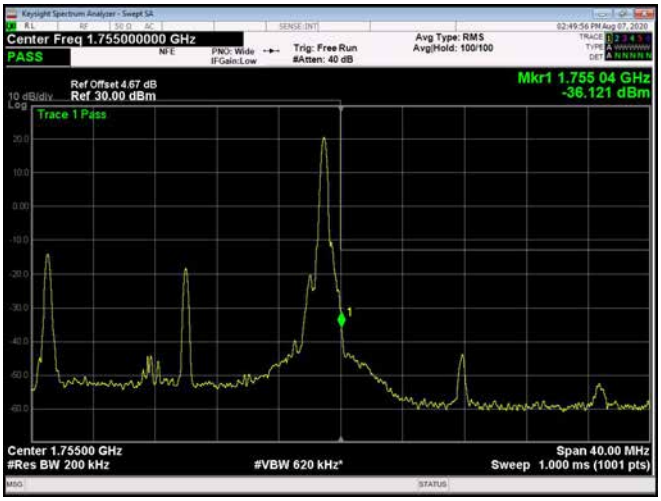
10MHz / QPSK / Low Channel / 1RB	10MHz / QPSK / High Channel / 1 RB
	
10MHz / QPSK / Low Channel / Full RB	**10MHz / QPSK / High Channel / Full RB**
10MHz / 16QAM / Low Channel / 1RB	**10MHz / 16QAM / High Channel / 1 RB**
	

10MHz / 16QAM / Low Channel / Full RB	10MHz / 16QAM / High Channel / Full RB
10MHz / 64QAM / Low Channel / 1RB	**10MHz / 64QAM / High Channel / 1 RB**
	
10MHz / 64QAM / Low Channel / Full RB	**10MHz / 64QAM / High Channel / Full RB**

15MHz / QPSK / Low Channel / 1RB	15MHz / QPSK / High Channel / 1 RB
	
15MHz / QPSK / Low Channel / Full RB	**15MHz / QPSK / High Channel / Full RB**
15MHz / 16QAM / Low Channel / 1RB	**15MHz / 16QAM / High Channel / 1 RB**
	

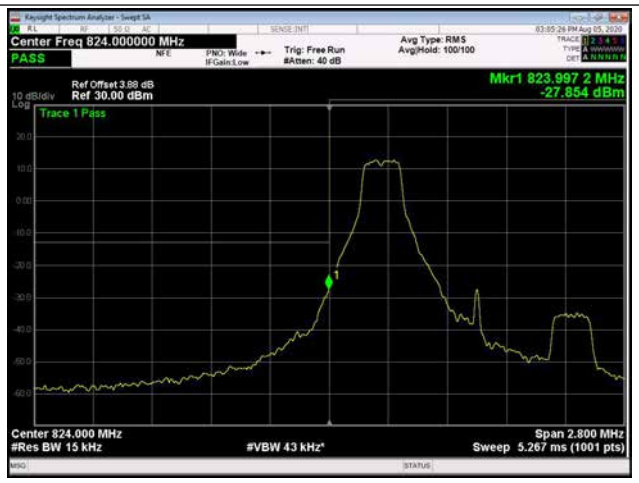
15MHz / 16QAM / Low Channel / Full RB	15MHz / 16QAM / High Channel / Full RB
	
15MHz / 64QAM / Low Channel / 1RB	**15MHz / 64QAM / High Channel / 1 RB**
	
15MHz / 64QAM / Low Channel / Full RB	**15MHz / 64QAM / High Channel / Full RB**
	

20MHz / QPSK / Low Channel / 1RB	20MHz / QPSK / High Channel / 1 RB
	
20MHz / QPSK / Low Channel / Full RB	**20MHz / QPSK / High Channel / Full RB**
20MHz / 16QAM / Low Channel / 1RB	**20MHz / 16QAM / High Channel / 1 RB**
	

20MHz / 16QAM / Low Channel / Full RB	20MHz / 16QAM / High Channel / Full RB
20MHz / 64QAM / Low Channel / 1RB	**20MHz / 64QAM / High Channel / 1 RB**
	
20MHz / 64QAM / Low Channel / Full RB	**20MHz / 64QAM / High Channel / Full RB**

LTE Band 5

1.4MHz / QPSK / Low Channel / 1RB

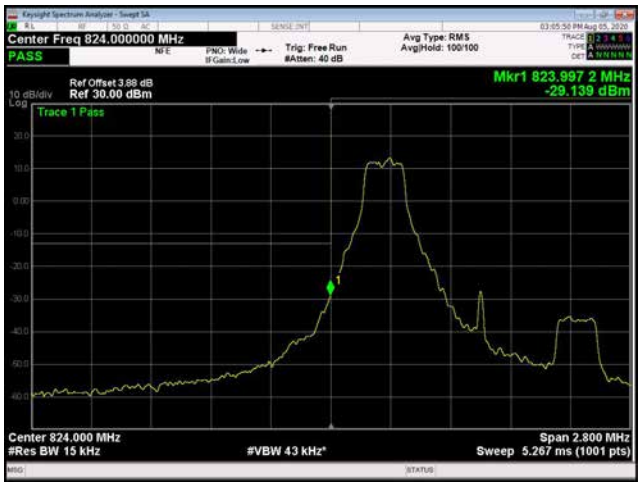


1.4MHz / QPSK / High Channel / 1 RB

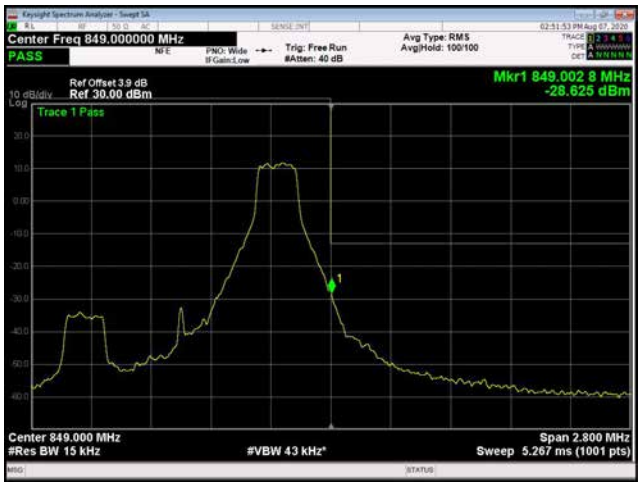
1.4MHz / QPSK / Low Channel / Full RB

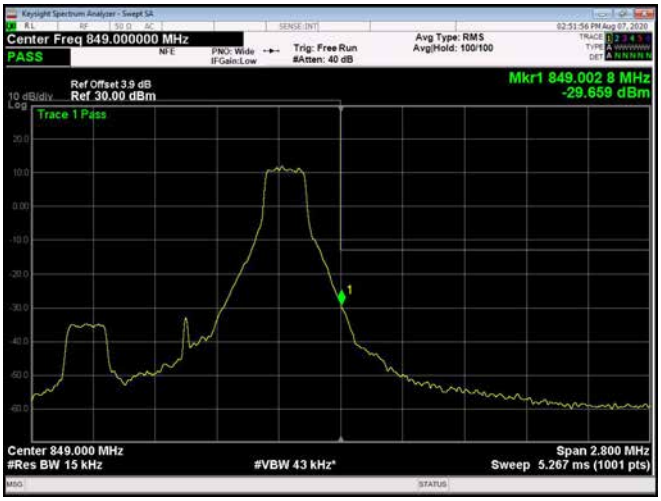
1.4MHz / QPSK / High Channel / Full RB

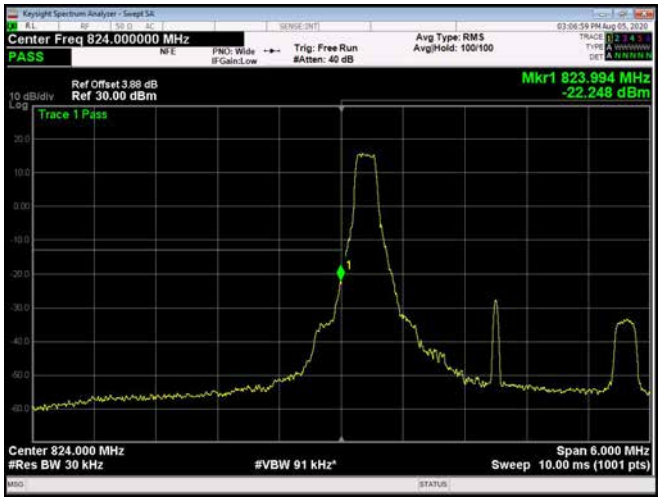
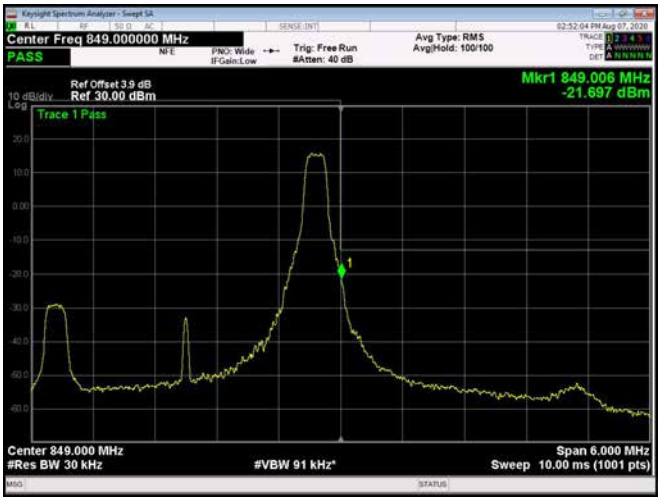
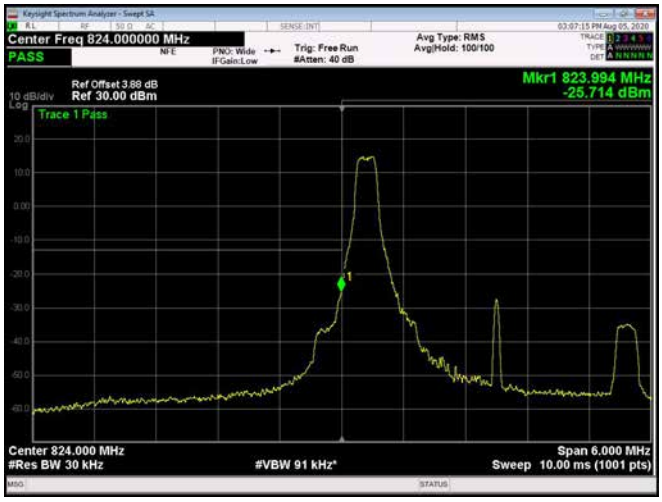
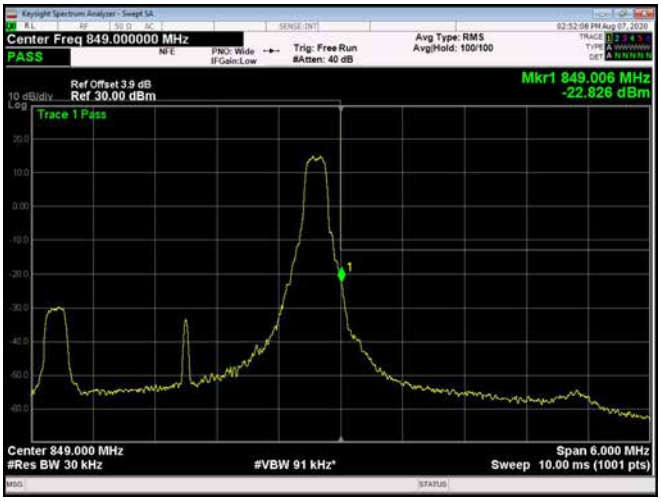
1.4MHz / 16QAM / Low Channel / 1RB



1.4MHz / 16QAM / High Channel / 1 RB



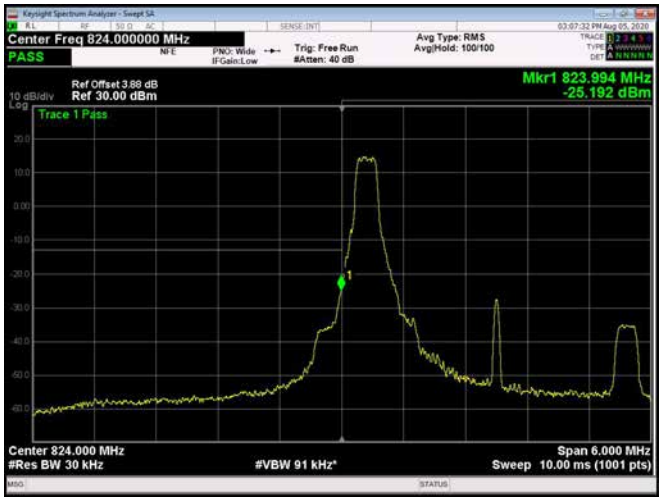
1.4MHz / 16QAM / Low Channel / Full RB	1.4MHz / 16QAM / High Channel / Full RB
1.4MHz / 64QAM / Low Channel / 1RB	**1.4MHz / 64QAM / High Channel / 1 RB**
	
1.4MHz / 64QAM / Low Channel / Full RB	**1.4MHz / 64QAM / High Channel / Full RB**

3MHz / QPSK / Low Channel / 1RB	3MHz / QPSK / High Channel / 1 RB
	
3MHz / QPSK / Low Channel / Full RB	**3MHz / QPSK / High Channel / Full RB**
3MHz / 16QAM / Low Channel / 1RB	**3MHz / 16QAM / High Channel / 1 RB**
	

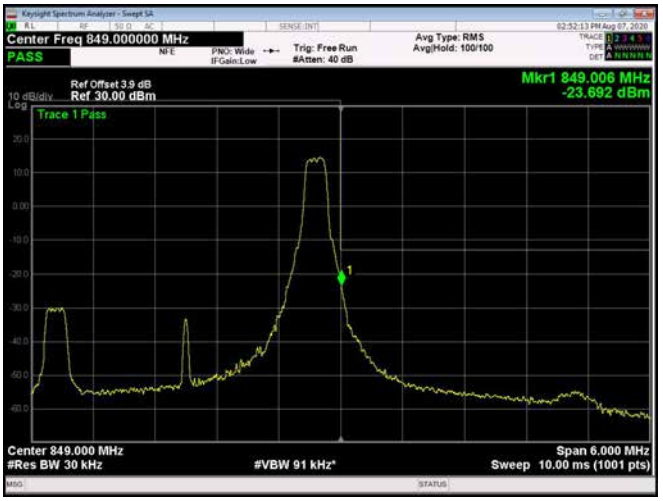
3MHz / 16QAM / Low Channel / Full RB

3MHz / 16QAM / High Channel / Full RB

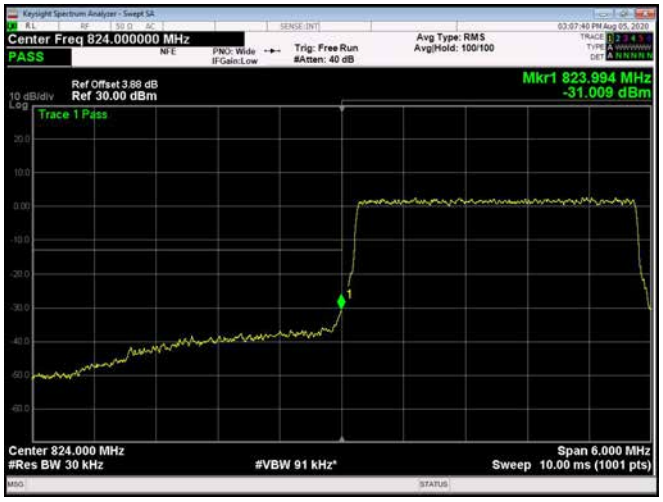
3MHz / 64QAM / Low Channel / 1RB



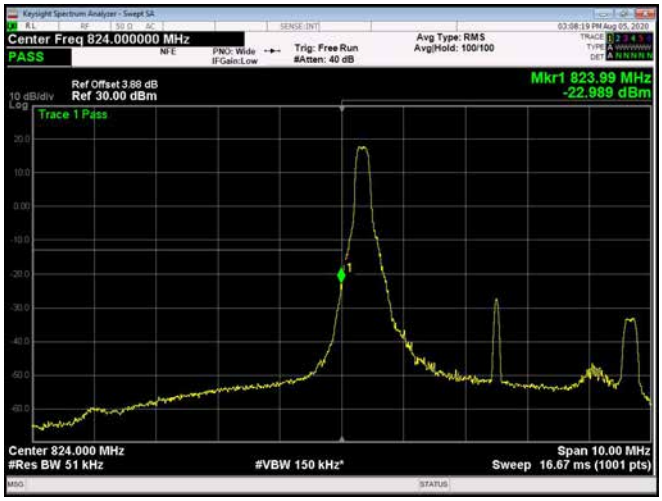
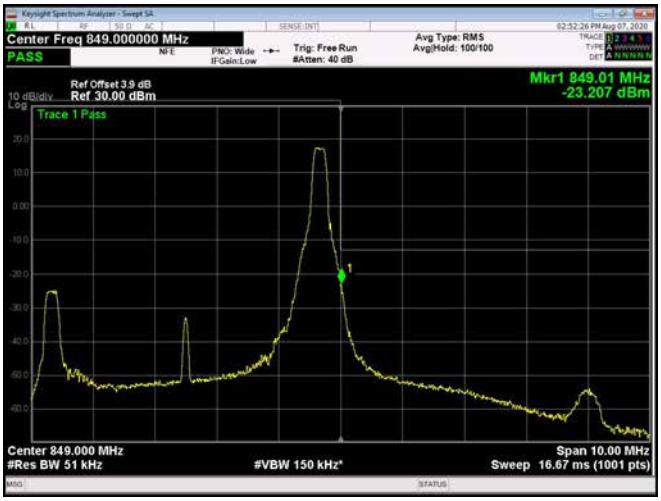
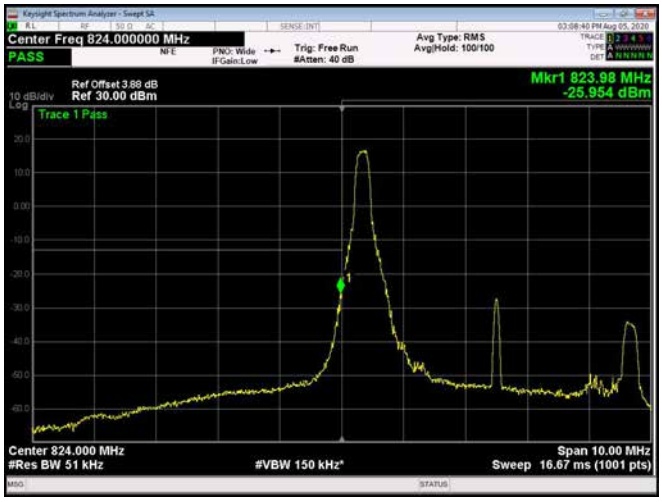
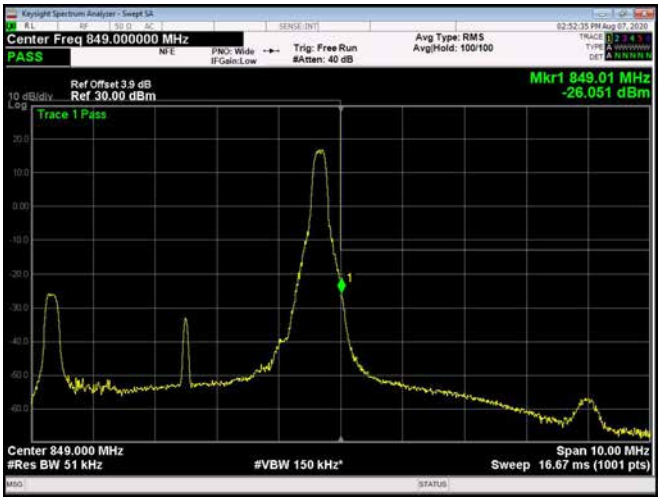
3MHz / 64QAM / High Channel / 1 RB



3MHz / 64QAM / Low Channel / Full RB



3MHz / 64QAM / High Channel / Full RB

5MHz / QPSK / Low Channel / 1RB	5MHz / QPSK / High Channel / 1 RB
	
5MHz / QPSK / Low Channel / Full RB	**5MHz / QPSK / High Channel / Full RB**
5MHz / 16QAM / Low Channel / 1RB	**5MHz / 16QAM / High Channel / 1 RB**