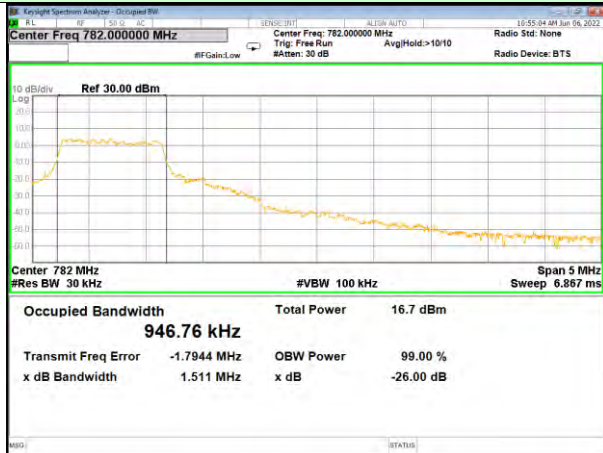| Test Mode: LTE Band 12	Test Mode: LTE Band 12
Channel Bandwidth: 5MHz	Channel Bandwidth: 10MHz

QPSK

QPSK

16-QAM
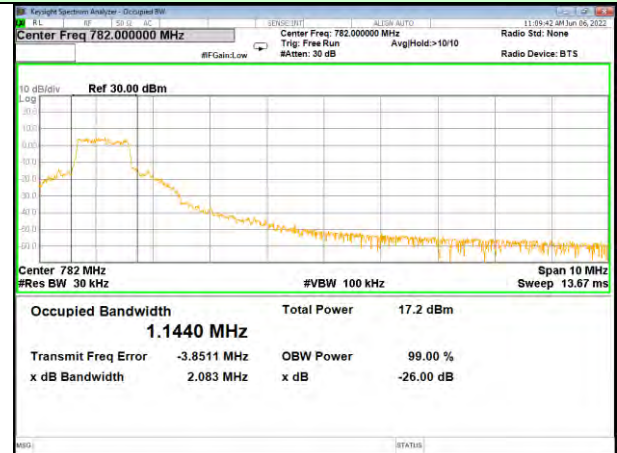
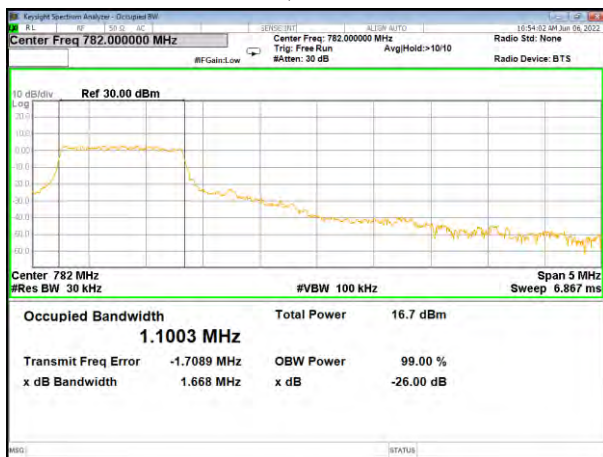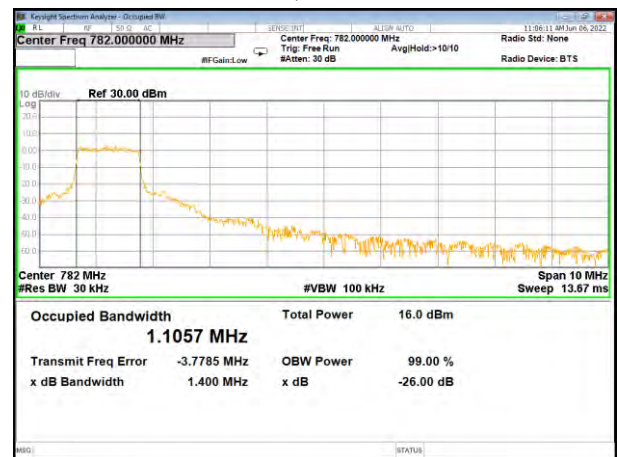

16-QAM

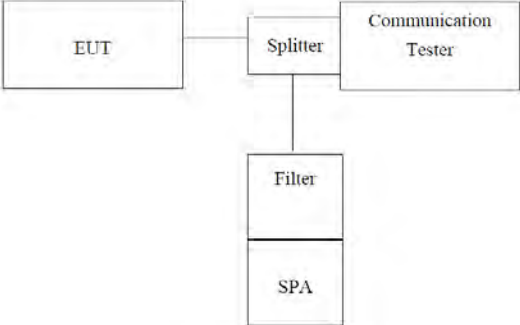| Test Mode: LTE Band 13 Channel Bandwidth: 5MHz	Test Mode: LTE Band 13 Channel Bandwidth: 10MHz

QPSK

QPSK

16-QAM

16-QAM

Note: All bandwidth and modulation are tested, only the worst results are reported.

4.6 MODULATION CHARACTERISTIC

According to FCC § 2.1047(d), Part 22H, Part 24E & Part 27 there is no specific requirement for digital modulation, therefore modulation characteristic is not presented.

4.7 Out of band emission at antenna terminals

|	
Test Requirement:	FCC part22.913(a), FCC part24.238(a) and FCC part27.53(h)
Test Method:	ANSI C63.26:2015
Limit:	-13dBm
Test setup:	Note: Measurement setup for testing on Antenna connector
Test Procedure:	1 The RF output of the transceiver was connected to a spectrum analyzer through appropriate attenuation.
	2 The resolution bandwidth of the spectrum analyzer was set at 1MHz, sufficient scans were taken to show the out of band Emissions if any up to 10th harmonic.
	3 For the out of band: Set the RBW=1MHz, VBW = 3MHz, Start=30MHz, Stop= 10th harmonic.
	4 Band Edge Requirements: In the 1 MHz bands immediately outside and adjacent to the frequency block, a resolution bandwidth of at least 1 percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to measure the out of band Emissions.
Test Instruments:	Refer to section 3 for details
Test mode:	Refer to section 4.1 for details
Test results:	Pass

Test plot as follows:

Conducted Spurious Emission:

Test Mode: LTE Band 2 / 1.4MHz /1RB	Test Mode: LTE Band 2 / 1.4MHz /6RB
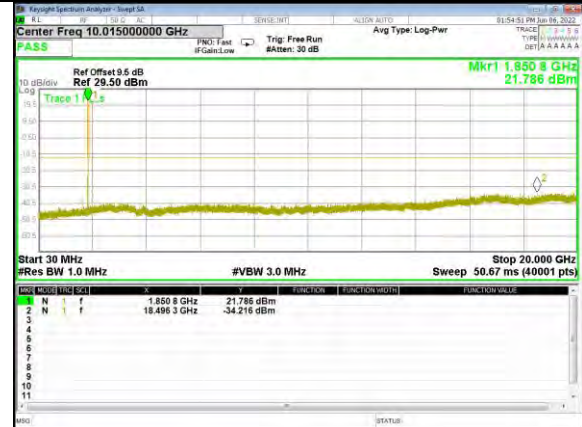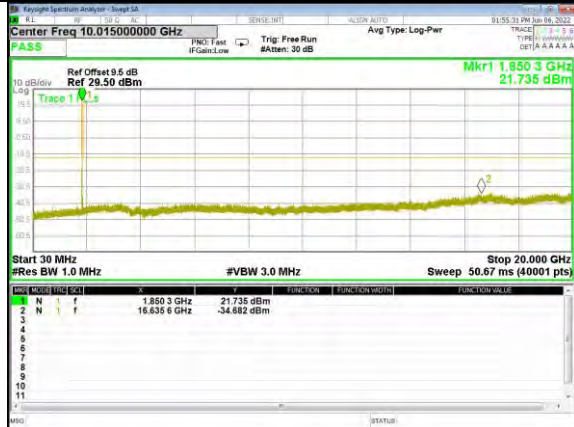
Lowest channel
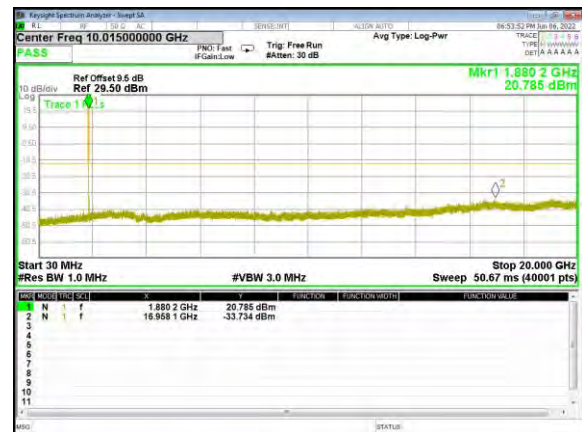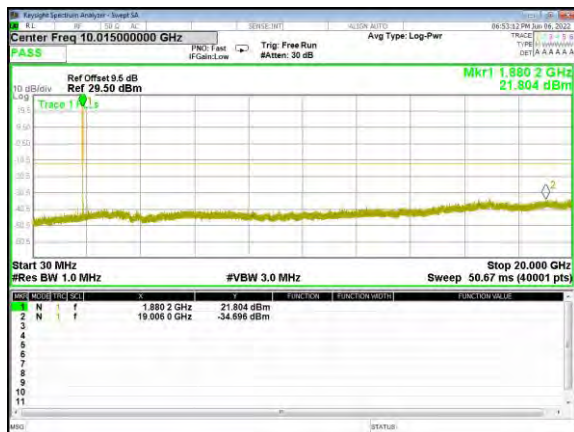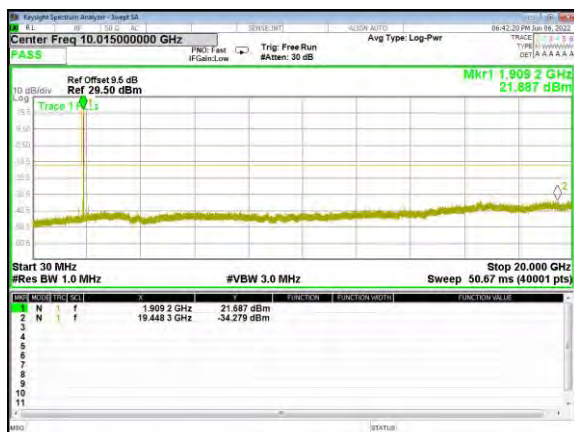
Middle channel

Highest channel

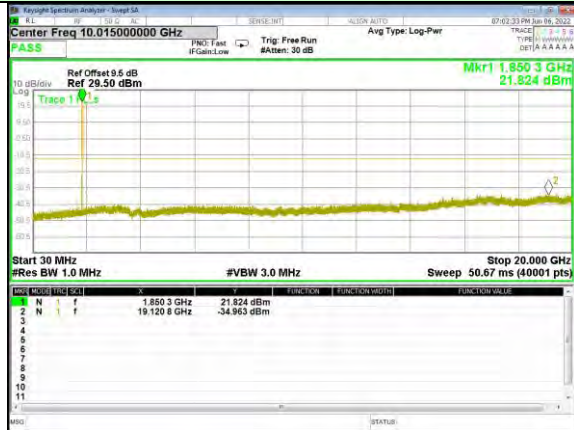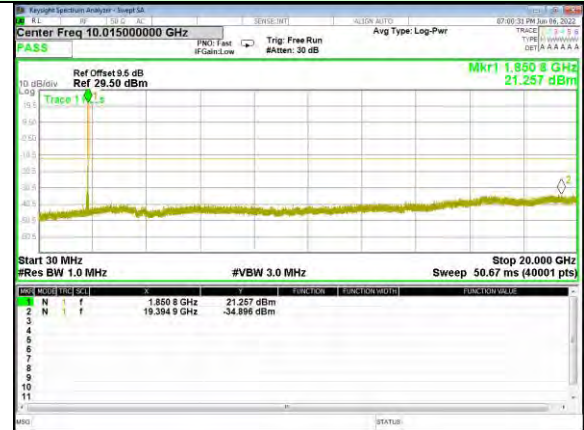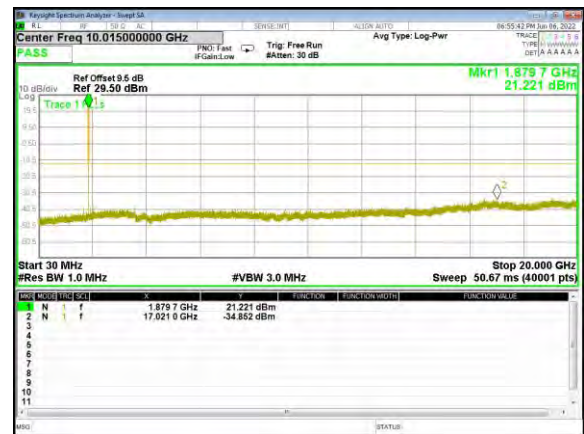| Test Mode: LTE Band 2 / 3MHz /1RB	Test Mode: LTE Band 2 / 3MHz /15RB

Lowest channel
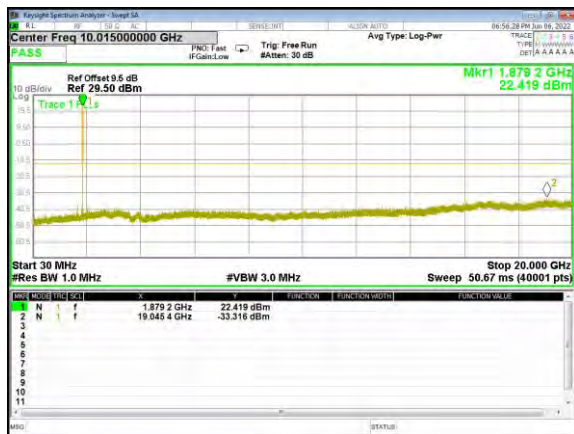
Middle channel
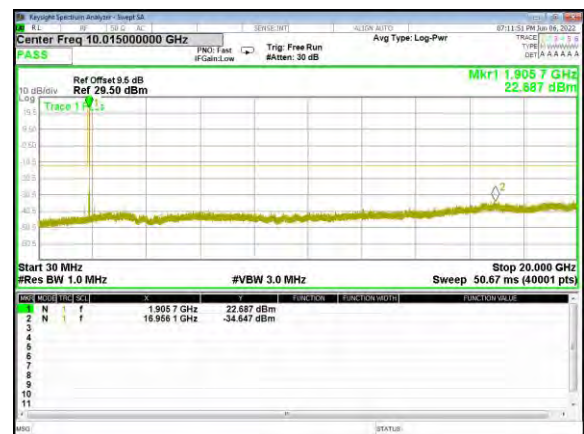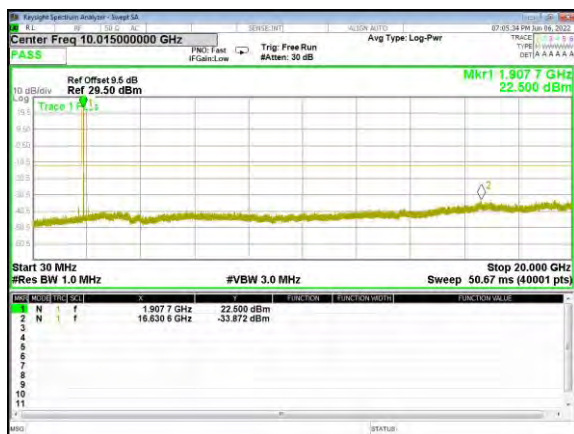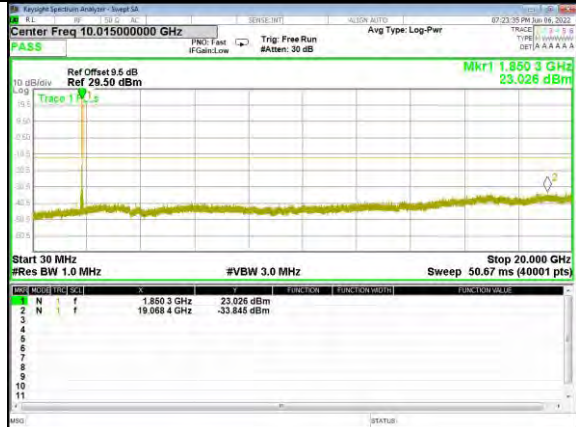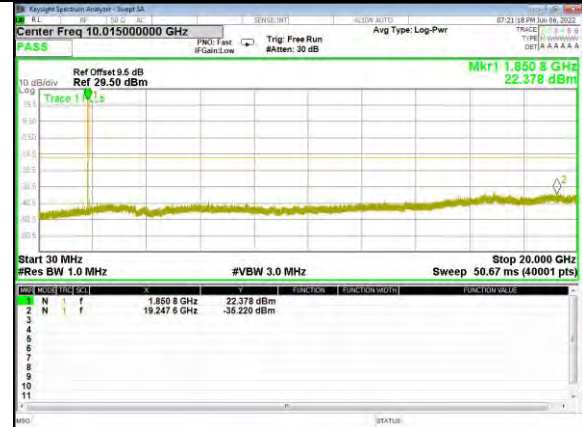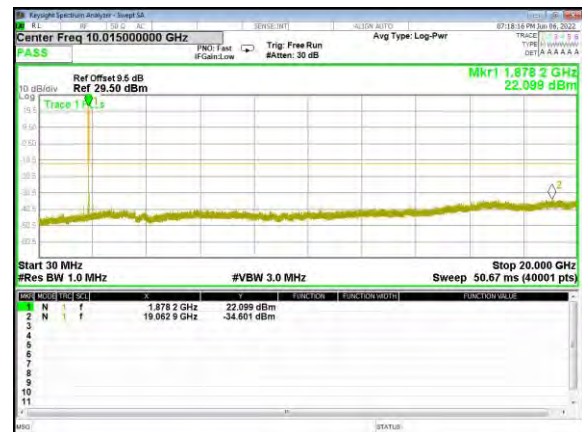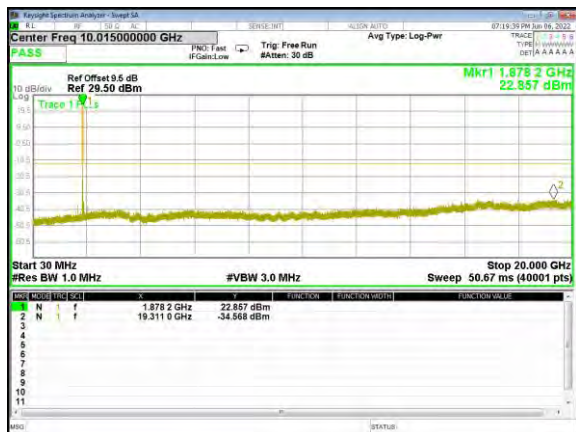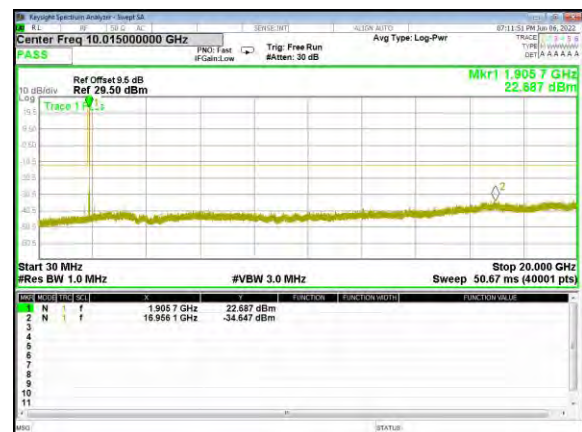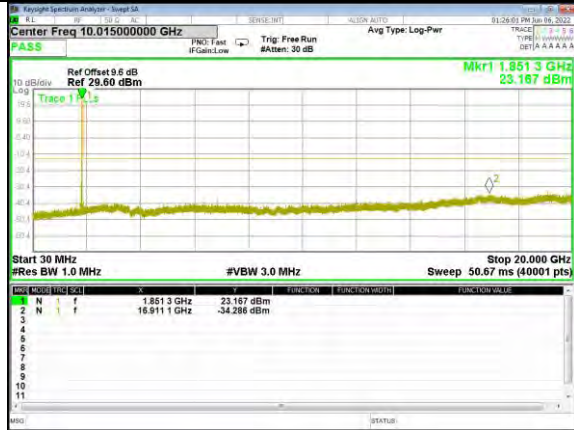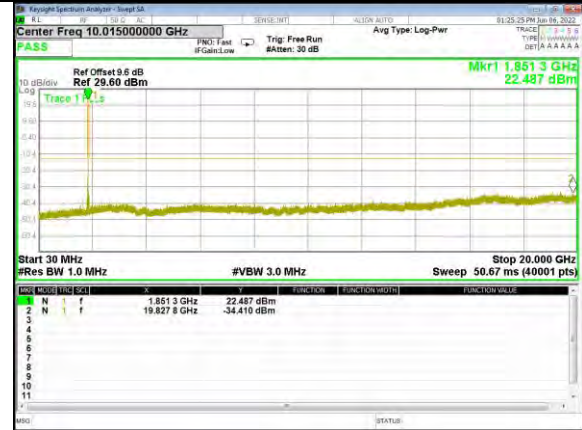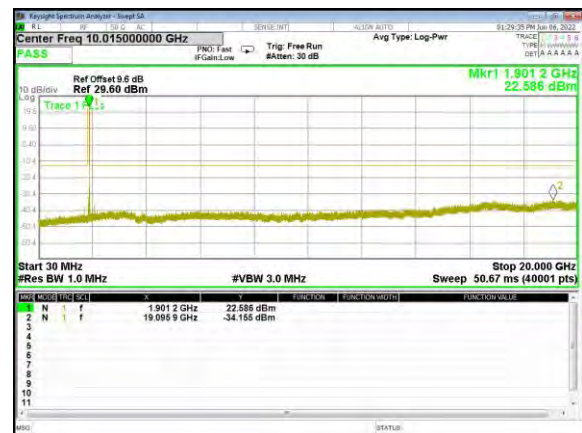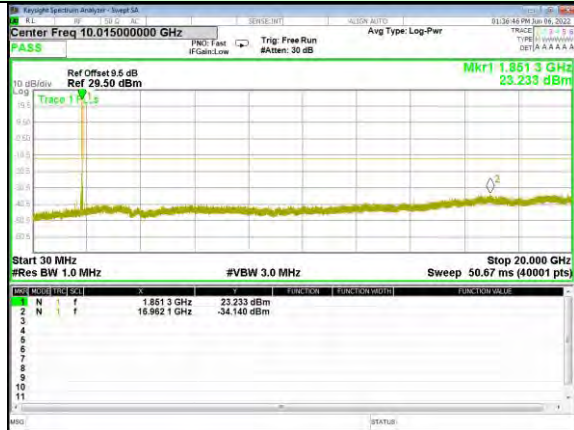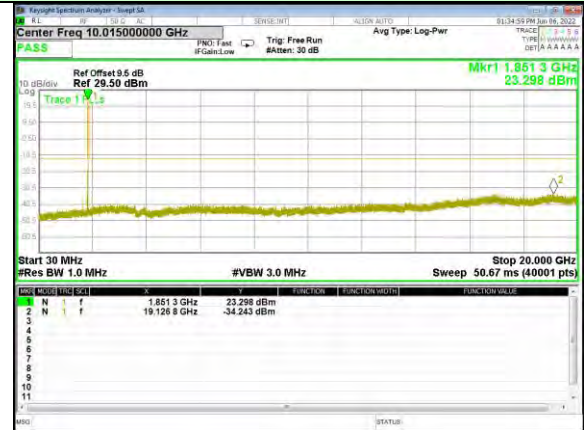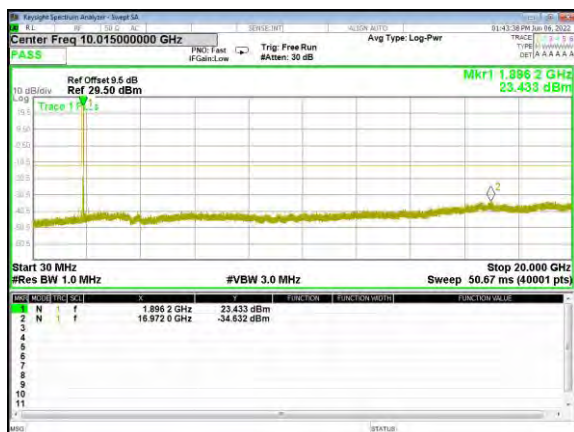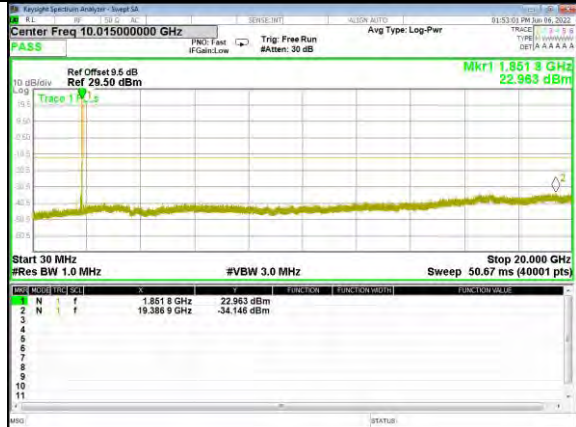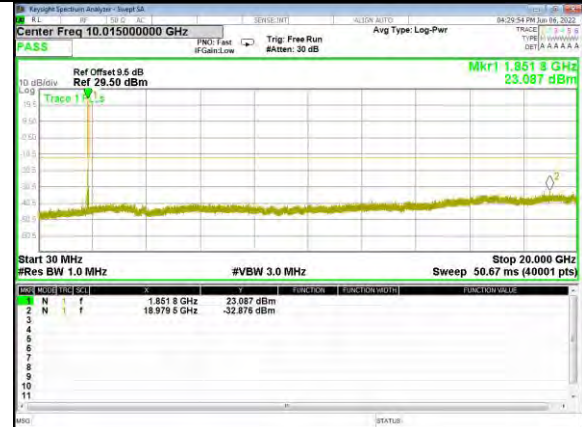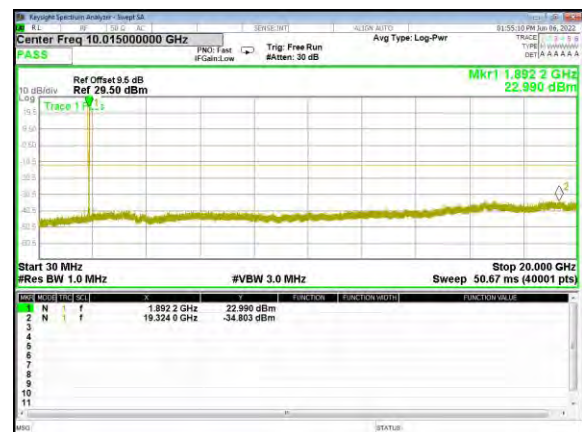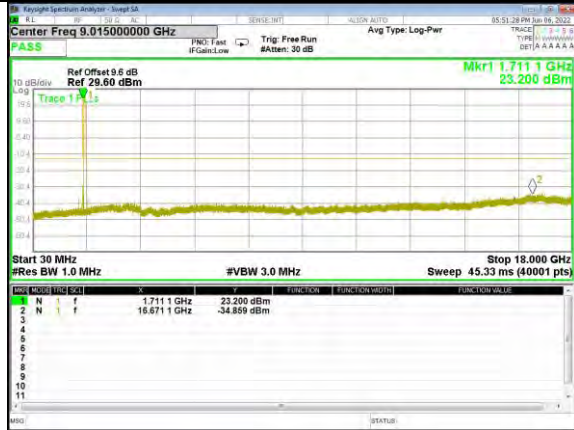

Highest channel

Test Mode: LTE Band 2 / 5MHz /1RB	Test Mode: LTE Band 2 / 5MHz /25RB

Lowest channel

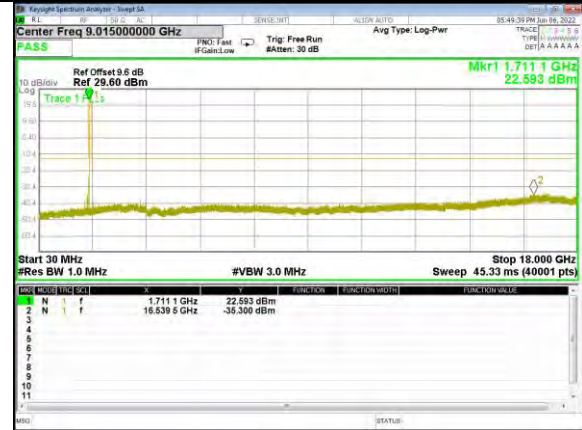|	
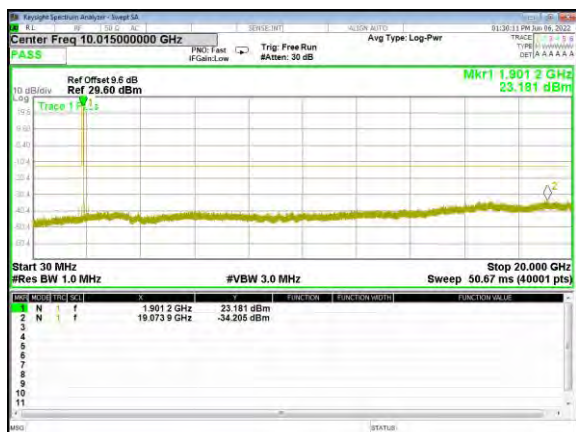
Middle channel

Highest channel

Test Mode: LTE Band 2 / 10MHz /1RB	Test Mode: LTE Band 2 / 10MHz /50RB

Lowest channel
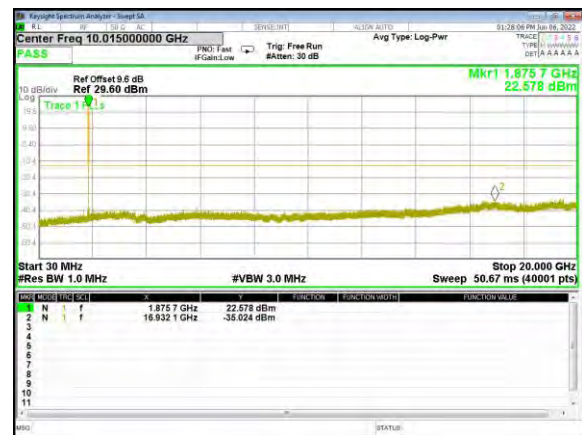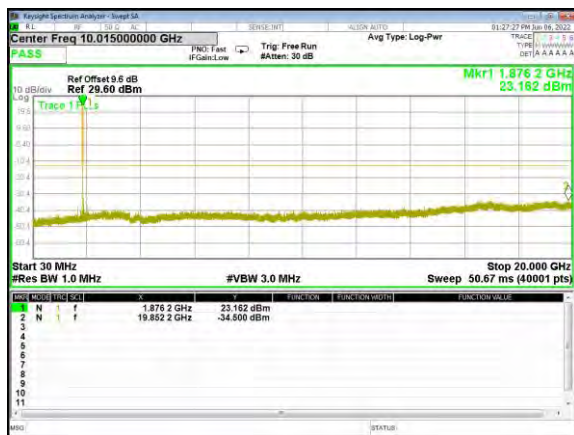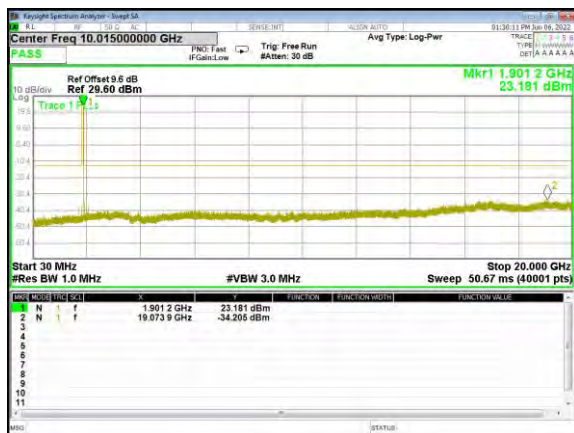
Middle channel

Highest channel

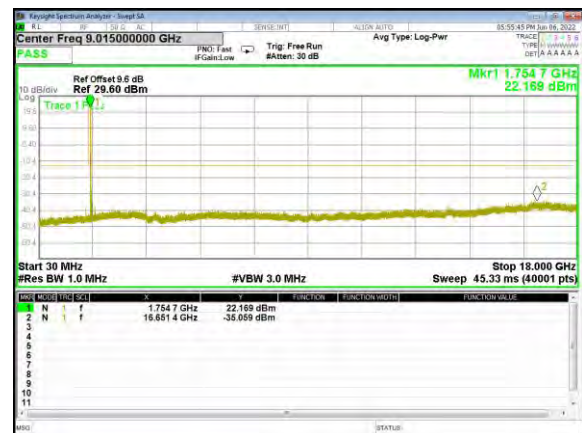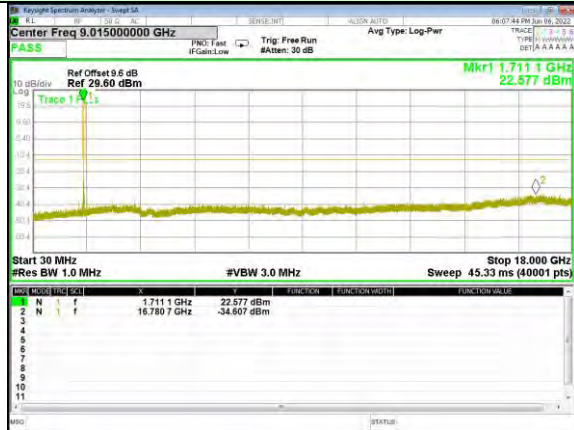| Test Mode: LTE Band 2 / 15MHz /1RB	Test Mode: LTE Band 2 / 15MHz /75RB

Lowest channel
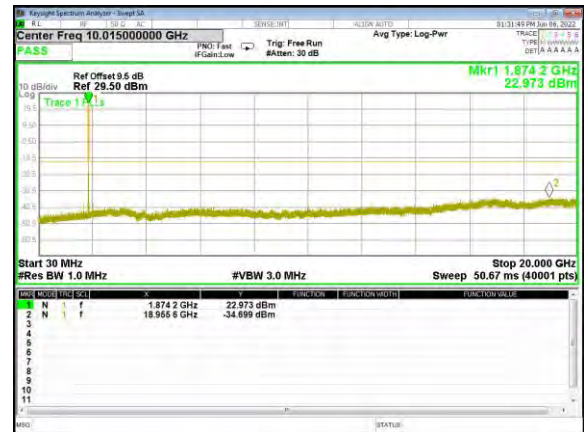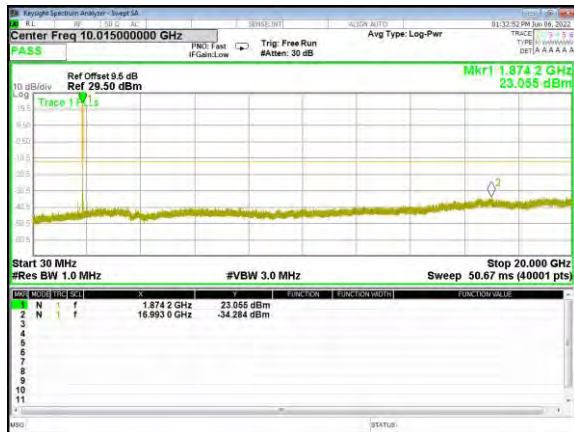
Middle channel

Highest channel

Test Mode: LTE Band 2 / 20MHz /1RB	Test Mode: LTE Band 2 / 20MHz /100RB

Lowest channel
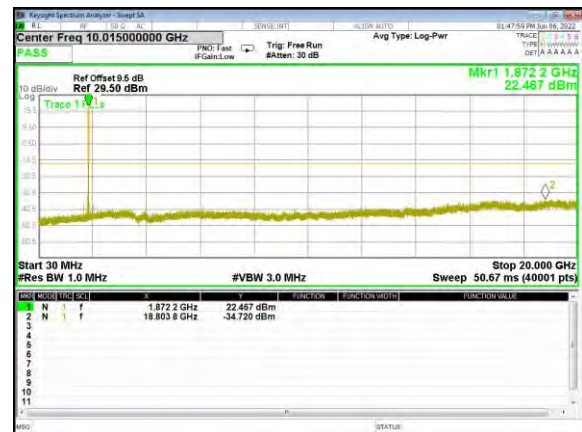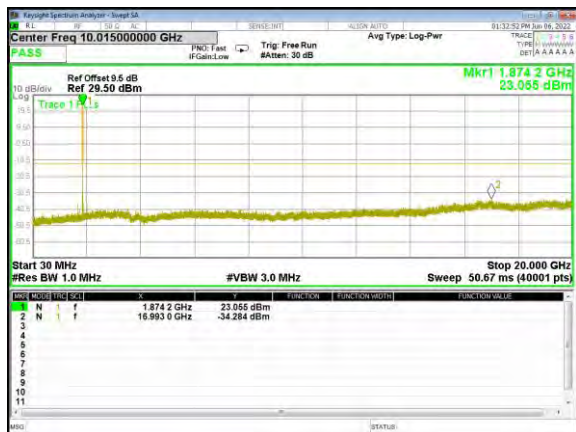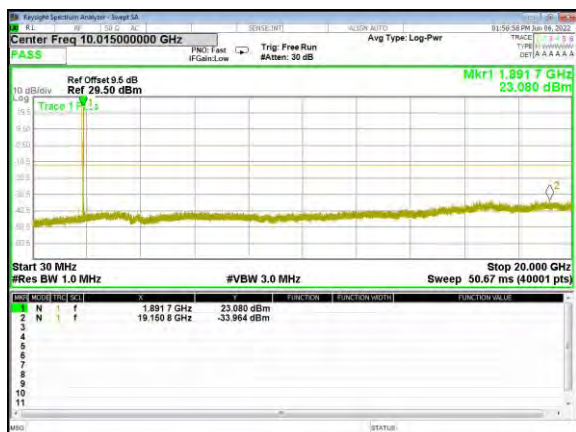
Middle channel

Highest channel

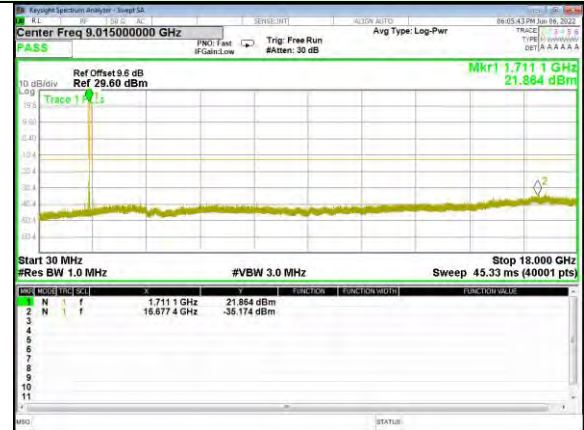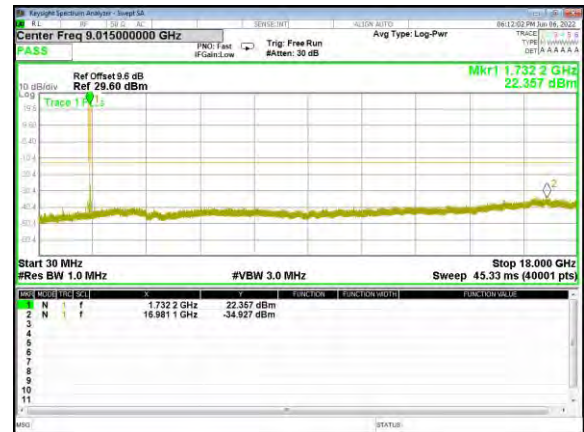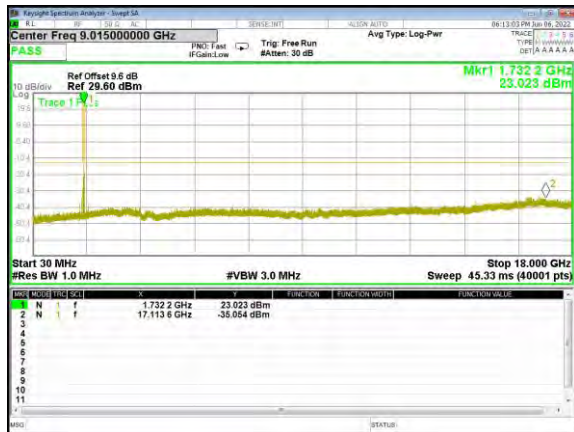| Test Mode: LTE Band 4 / 1.4MHz /1RB	Test Mode: LTE Band 4 / 1.4MHz /6RB

Lowest channel
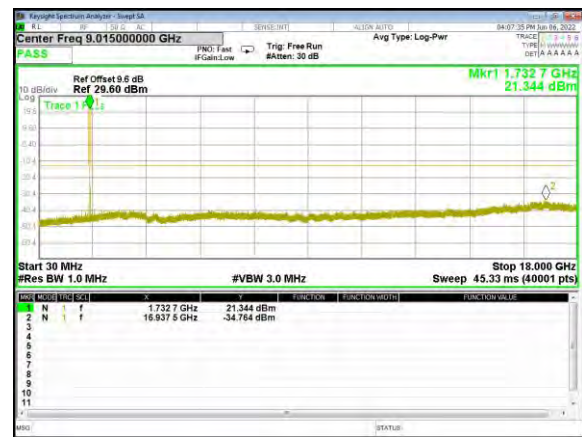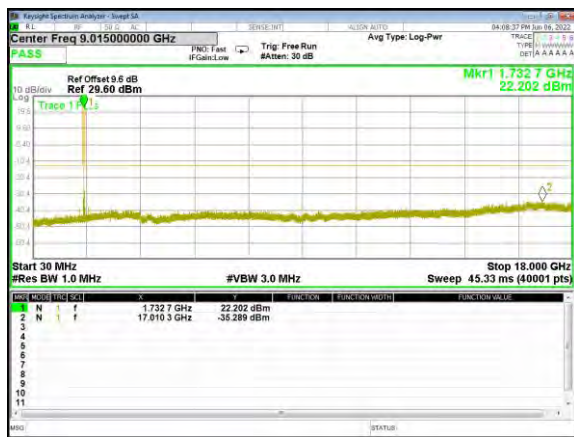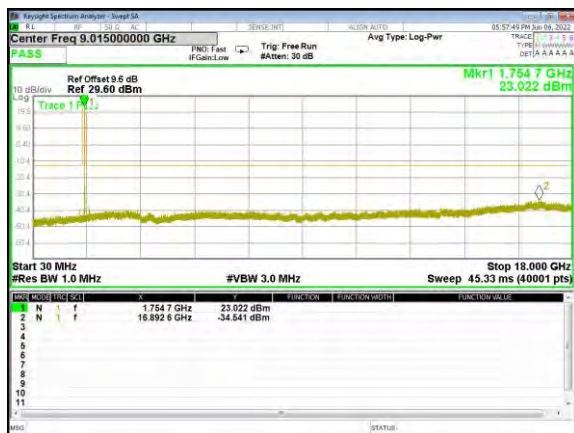
Middle channel

Highest channel
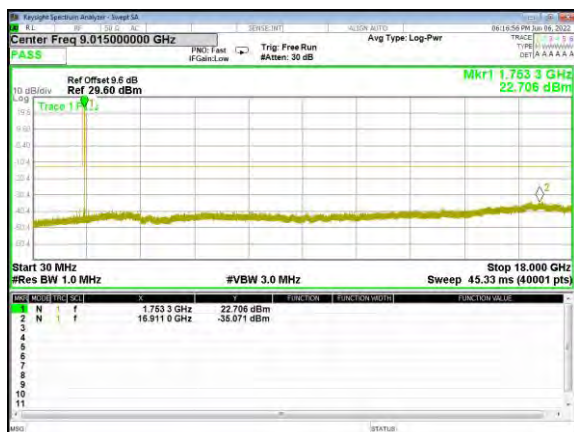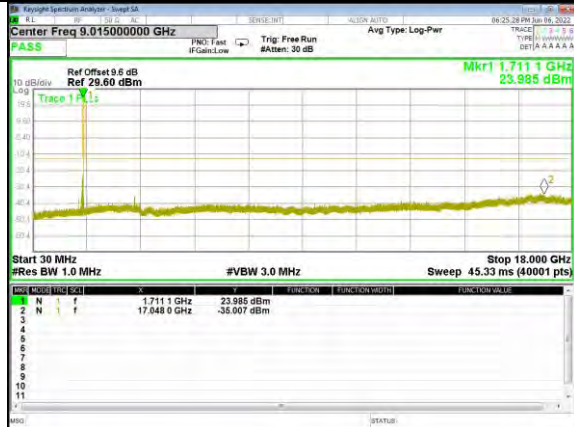
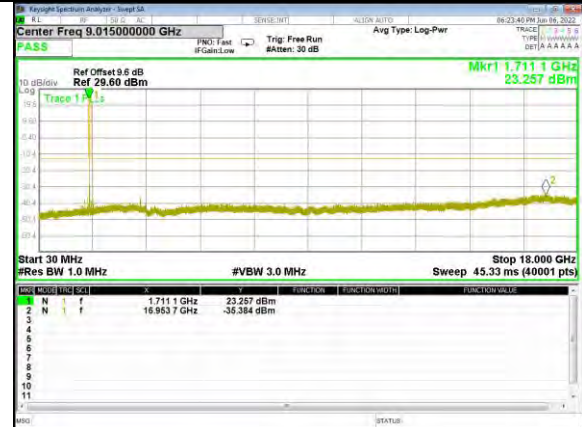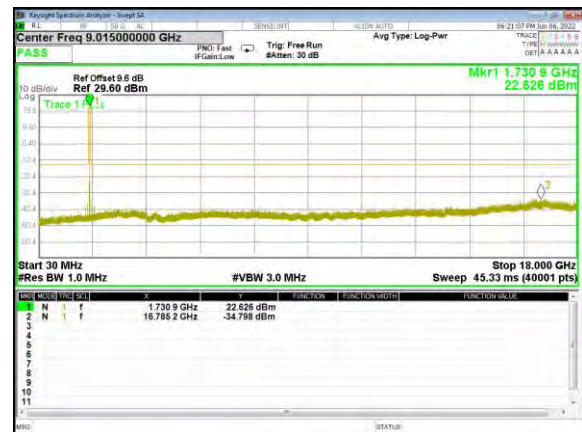| Test Mode: LTE Band 4 / 3MHz /1RB	Test Mode: LTE Band 4 / 3MHz /15RB

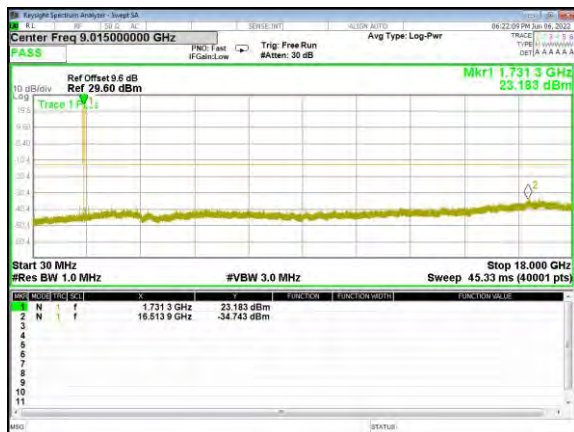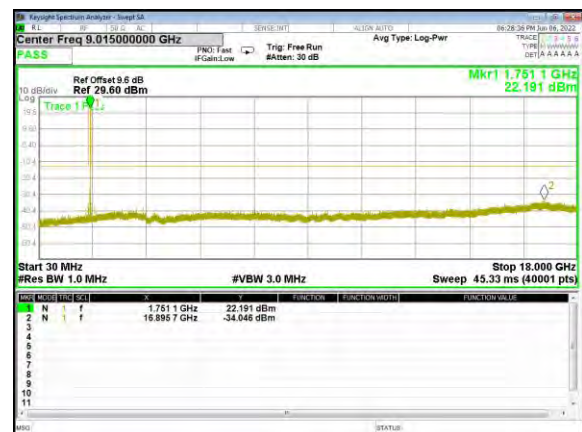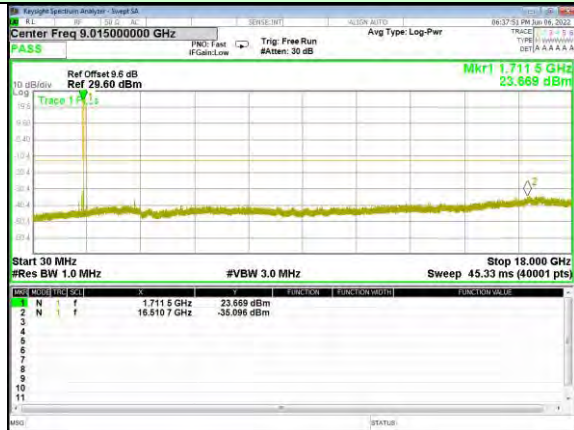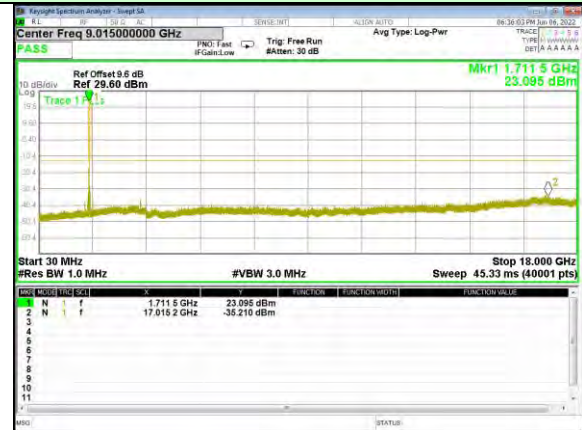
Lowest channel

Middle channel

Highest channel

Test Mode: LTE Band 4 / 5MHz /1RB	Test Mode: LTE Band 4 / 5MHz /25RB

Lowest channel

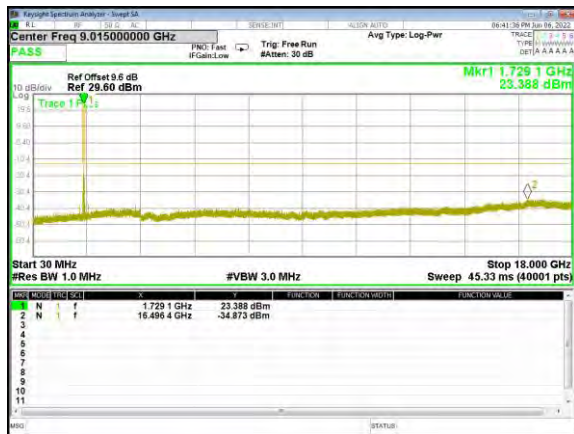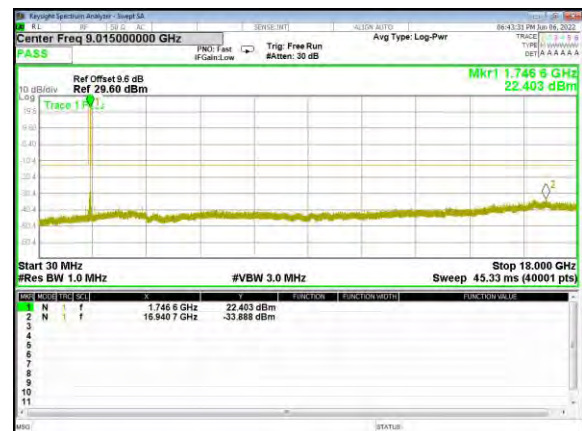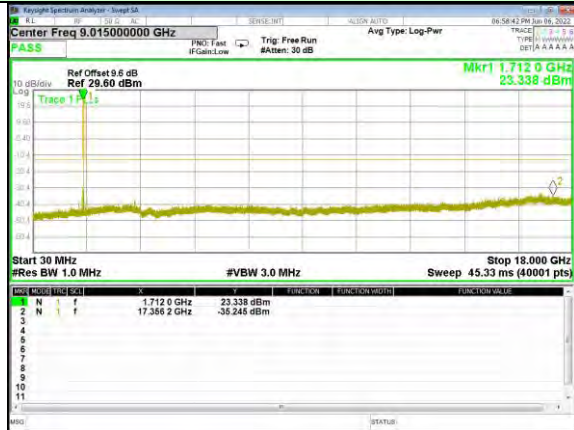|	
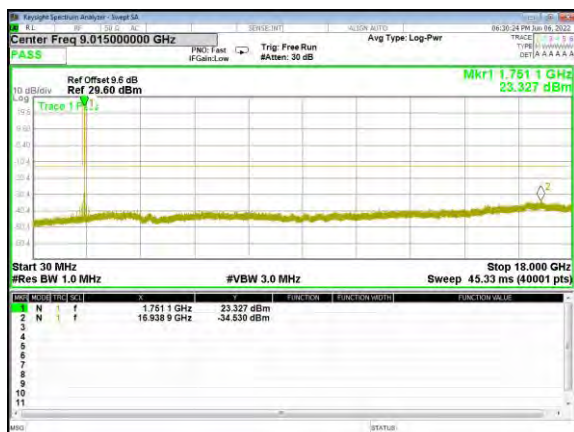
Middle channel

Highest channel

Test Mode: LTE Band 4 / 10MHz /1RB	Test Mode: LTE Band 4 / 10MHz /50RB

Lowest channel

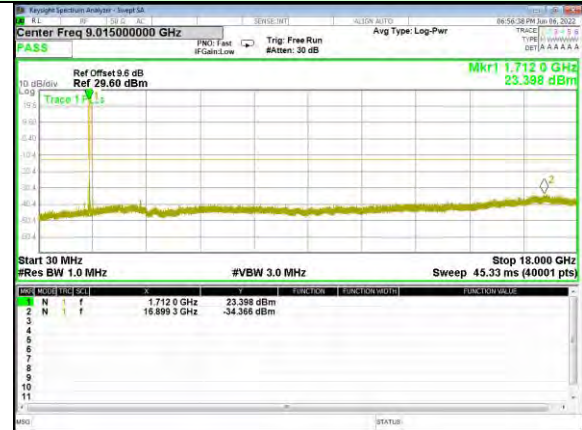|	
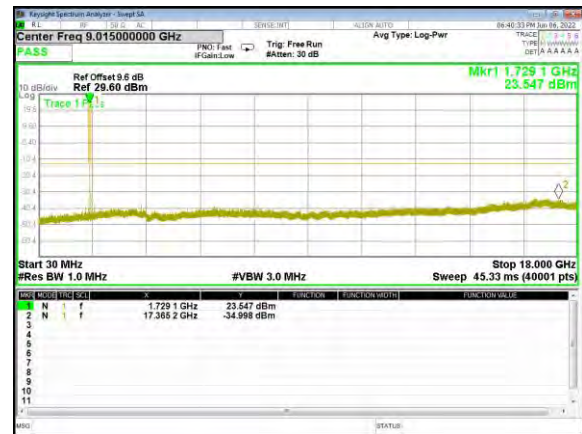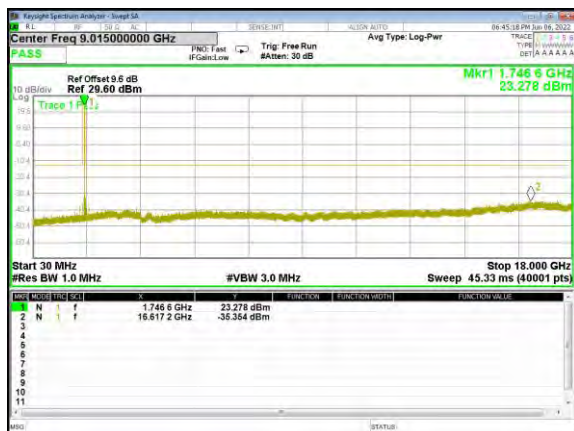
Middle channel

Highest channel

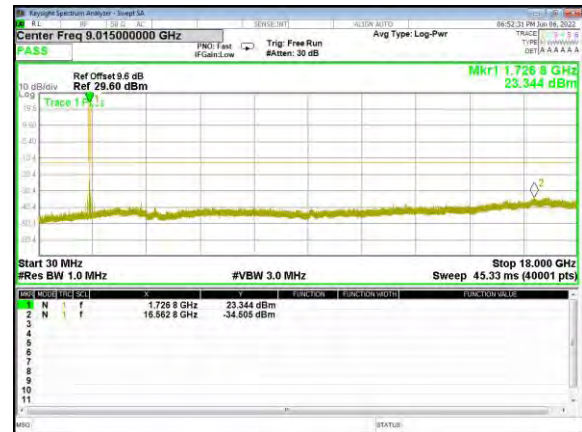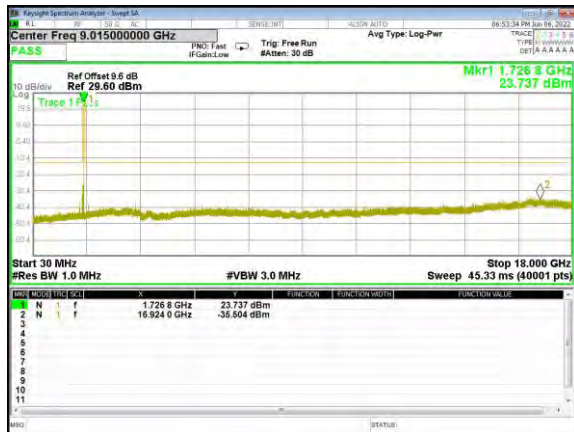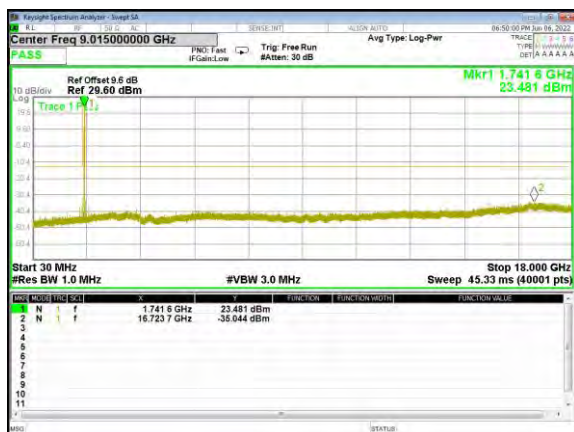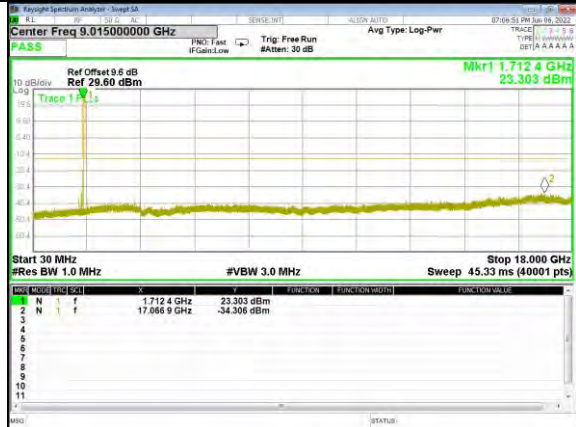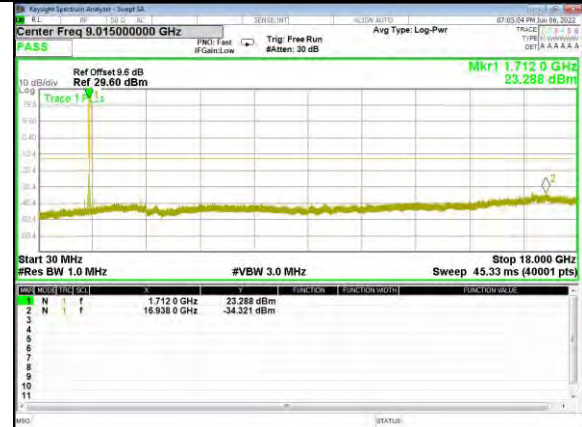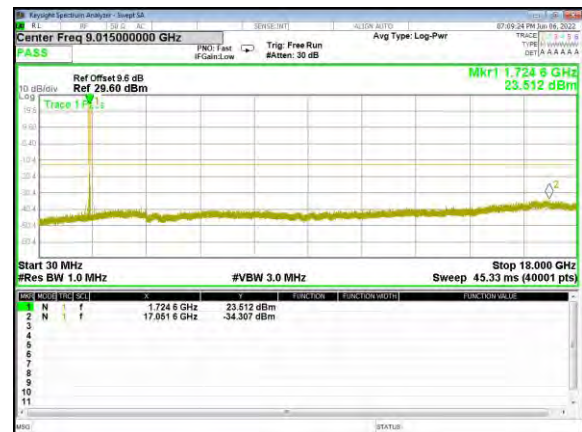| Test Mode: LTE Band 4 / 15MHz /1RB	Test Mode: LTE Band 4 / 15MHz /75RB

Lowest channel

Middle channel

Highest channel

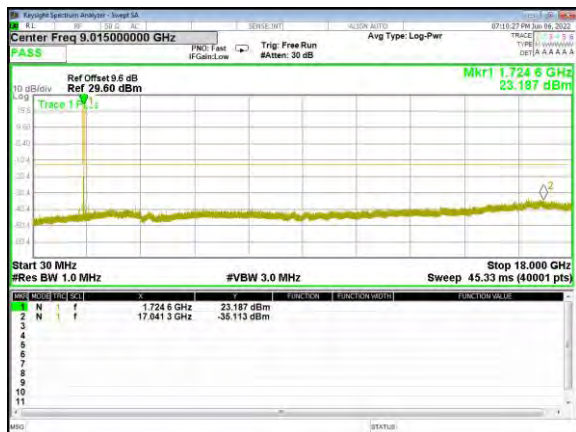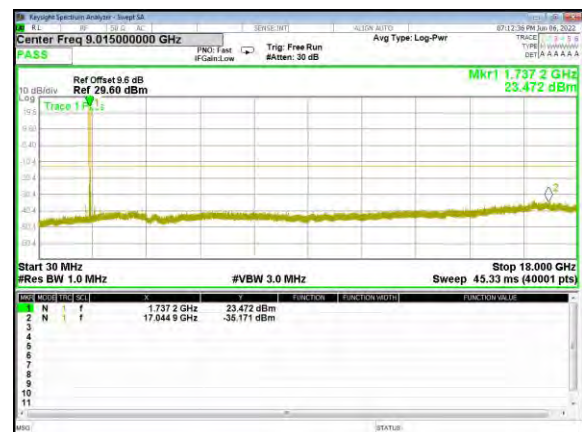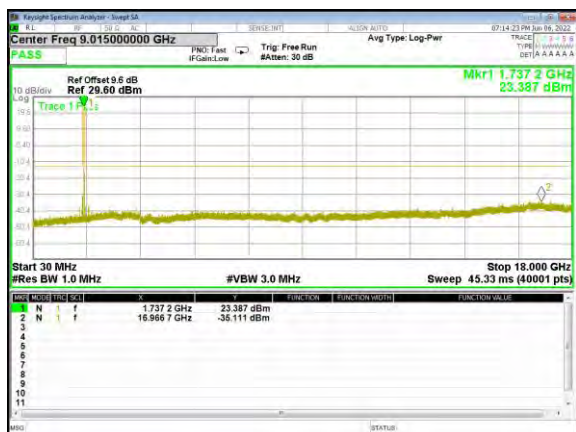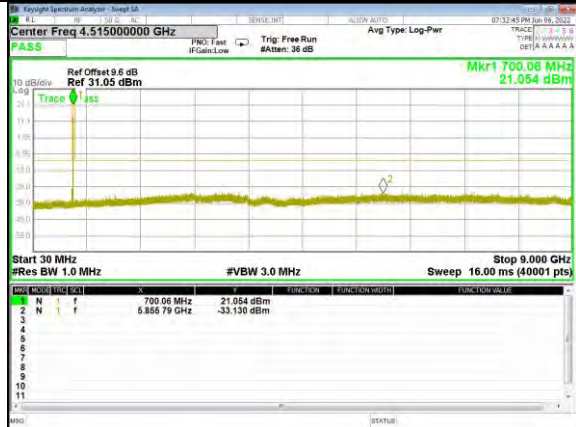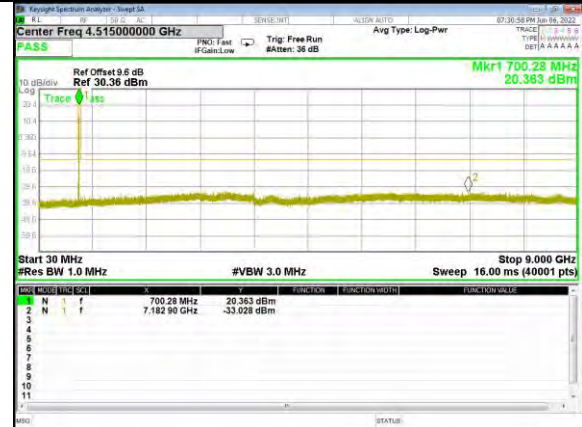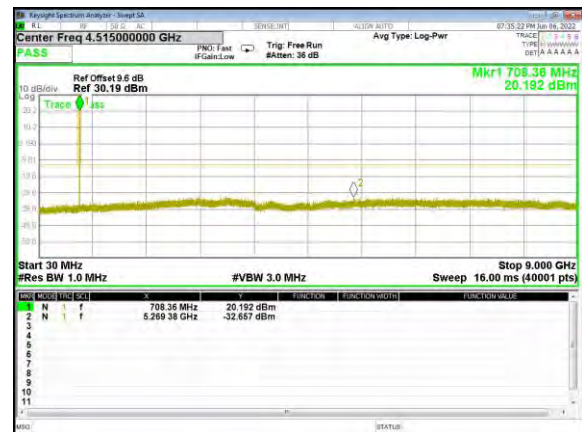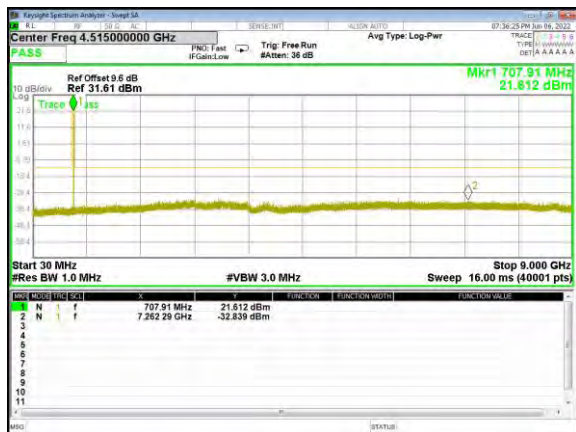| Test Mode: LTE Band 4 / 20MHz /1RB	Test Mode: LTE Band 4 / 20MHz /100RB

Lowest channel

Middle channel

Highest channel

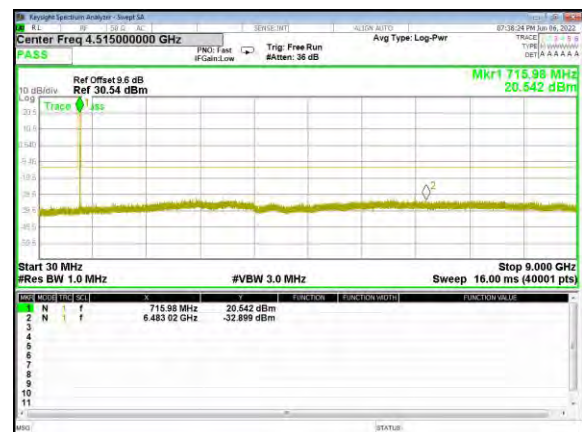| Test Mode: LTE Band 12 / 1.4MHz /1RB	Test Mode: LTE Band 12 / 1.4MHz /100RB

Lowest channel

Middle channel

Highest channel

Test Mode: LTE Band 12 / 3MHz /1RB	Test Mode: LTE Band 12 / 3MHz /100RB

Lowest channel

Middle channel

Highest channel

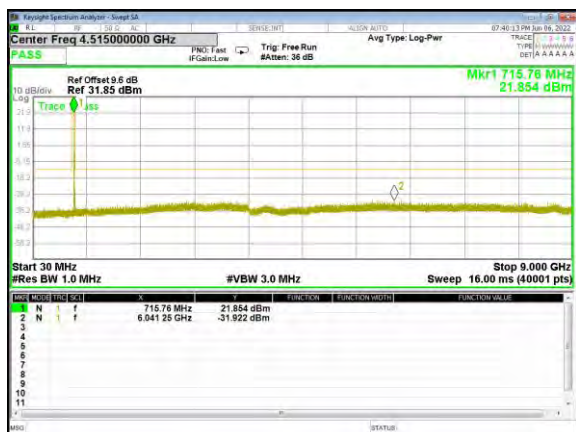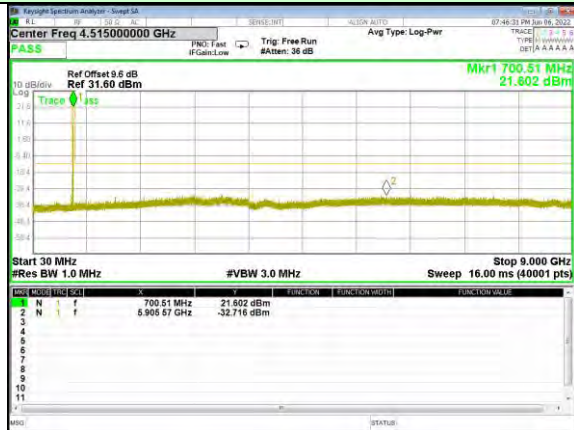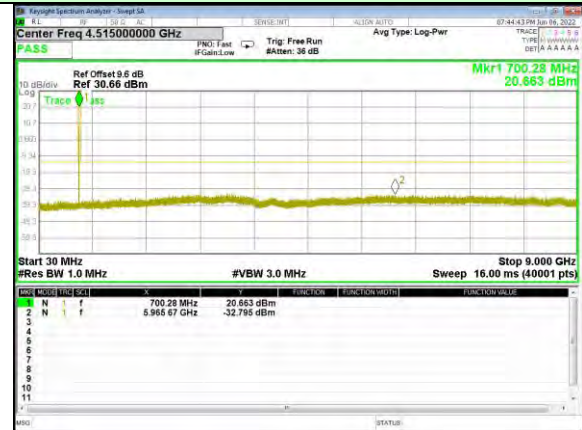| Test Mode: LTE Band 12 / 5MHz /1RB	Test Mode: LTE Band 12 / 5MHz /100RB

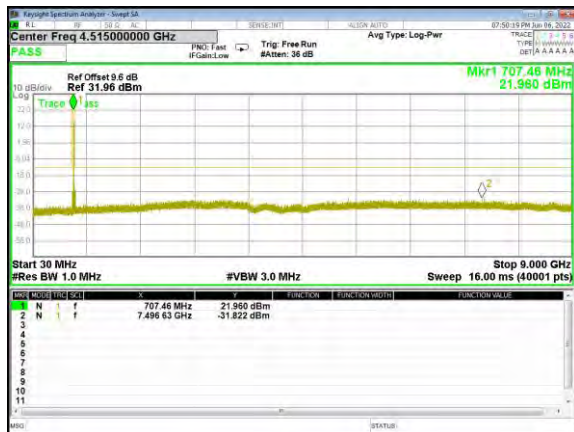Lowest channel

Middle channel
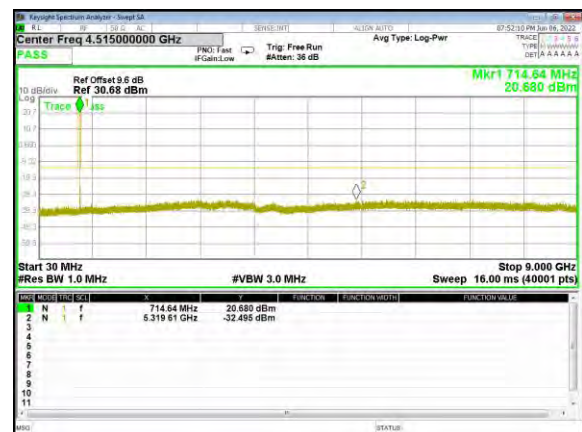

Highest channel

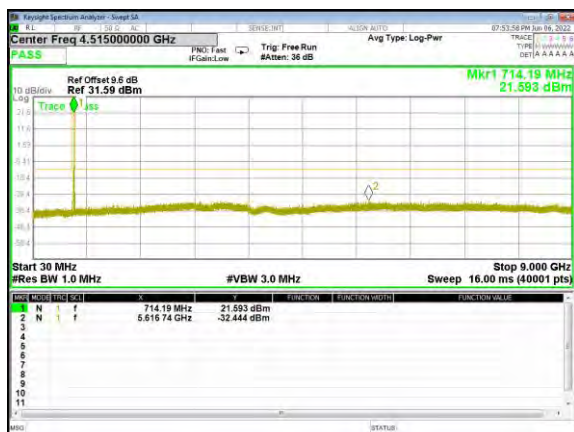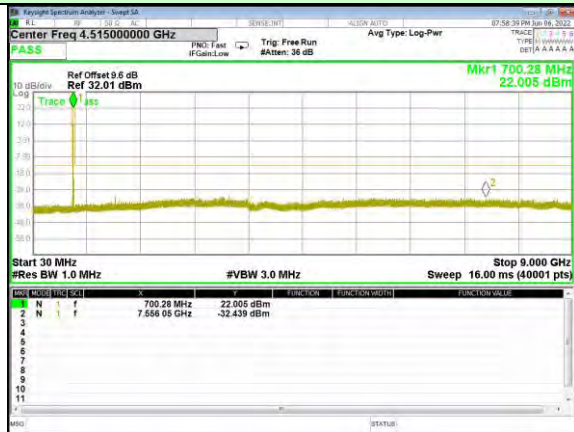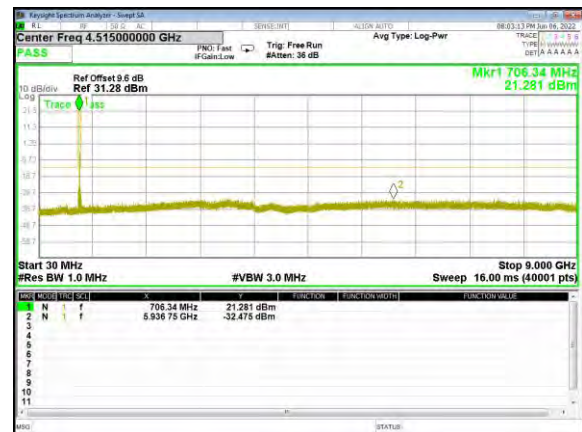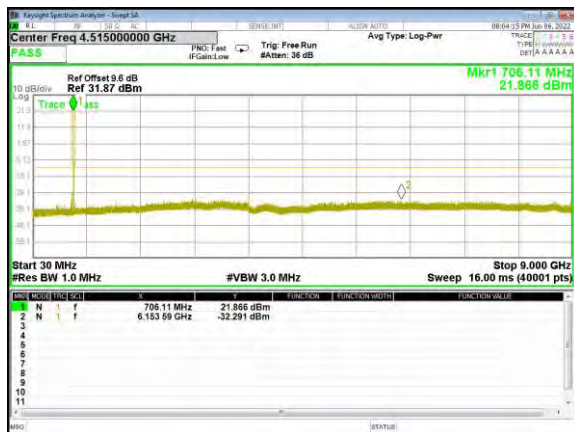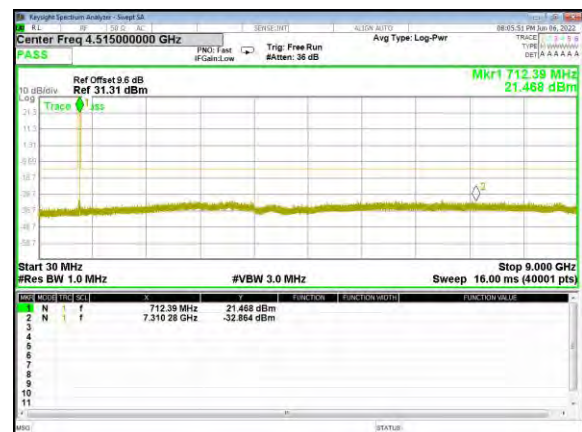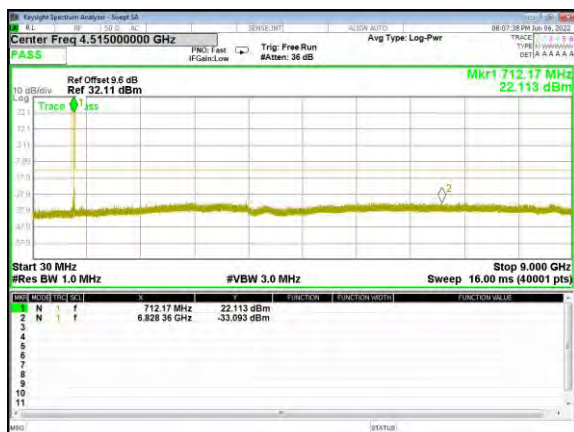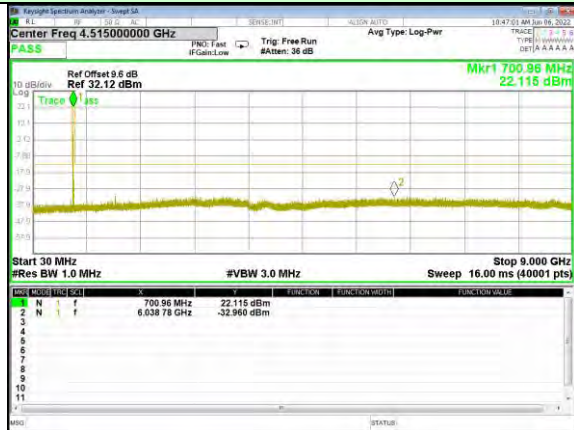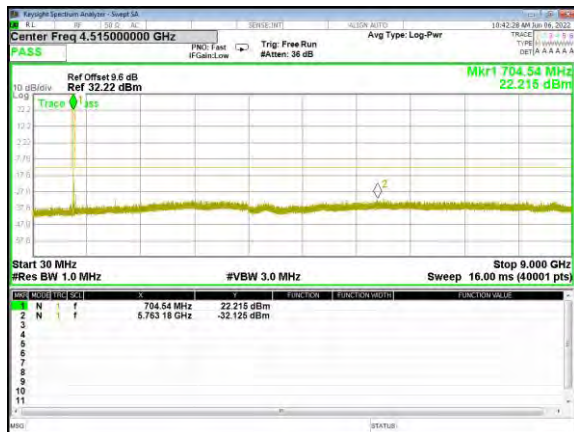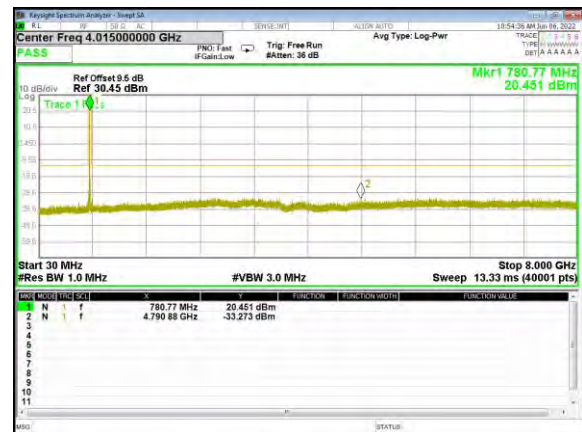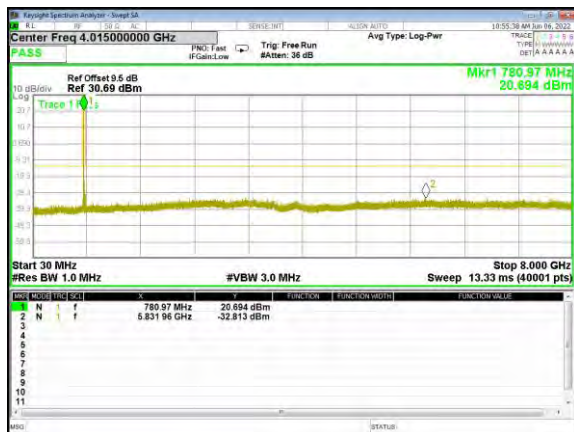| Test Mode: LTE Band 12 / 10MHz /1RB	Test Mode: LTE Band 12 / 10MHz /100RB

Lowest channel

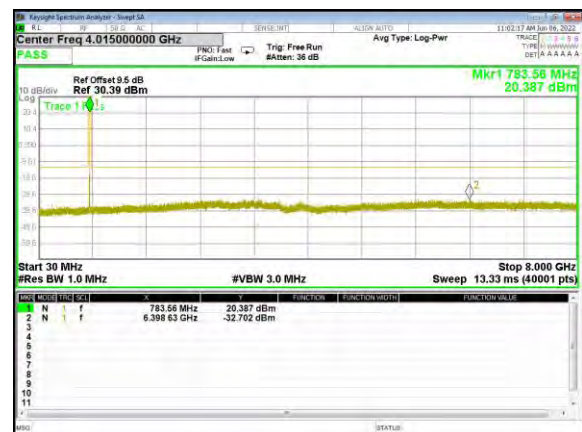Middle channel
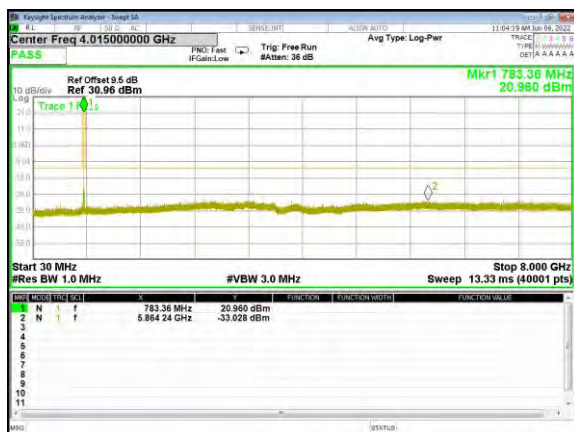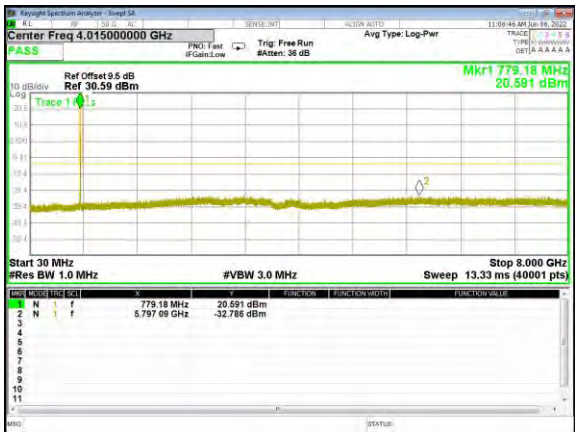

Highest channel

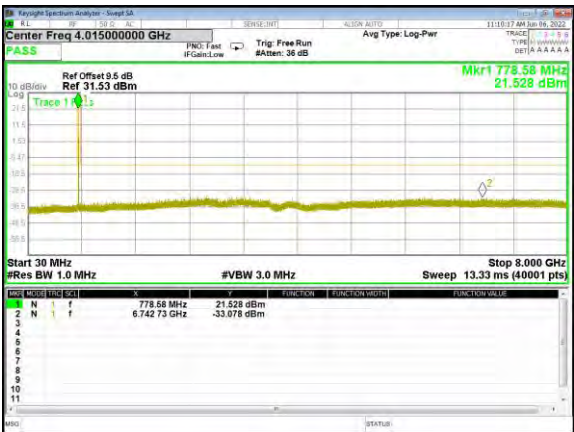| Test Mode: LTE Band 13 / 5MHz /1RB	Test Mode: LTE Band 13 / 5MHz /100RB

Lowest channel

Middle channel

Highest channel

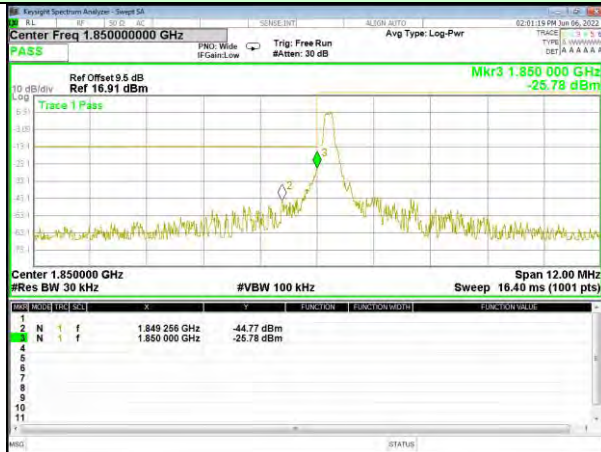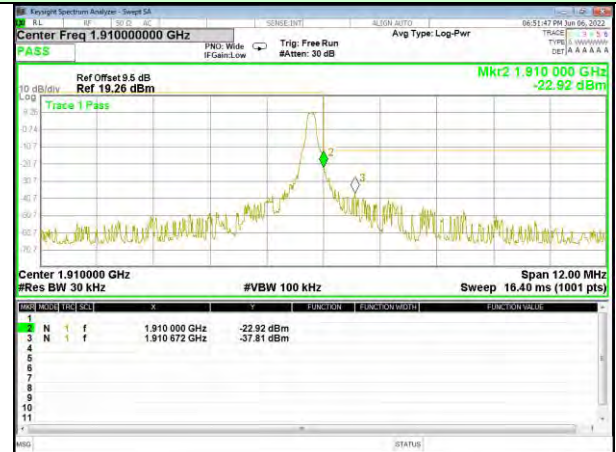| Test Mode: LTE Band 13 / 10MHz /1RB	Test Mode: LTE Band 13 / 10MHz /100RB

Middle channel

Band Edge

Test Mode: LTE Band 2 / 1.4MHz / 1RB / QPSK

Lowest channel   Highest channel

Test Mode: LTE Band 2 / 1.4MHz / 6RB / QPSK

Lowest channel   Highest channel

Test Mode: LTE Band 2 / 3MHz / 1RB / QPSK

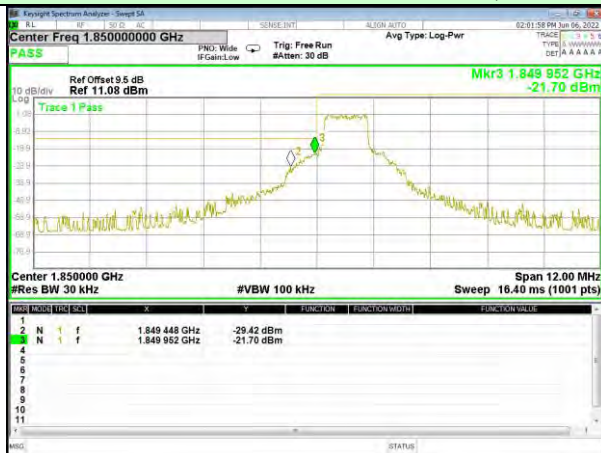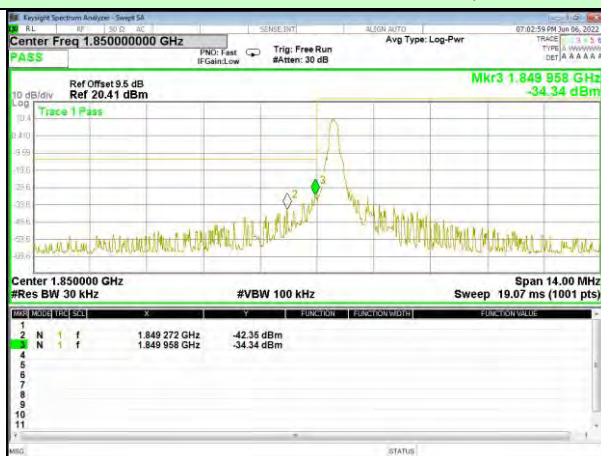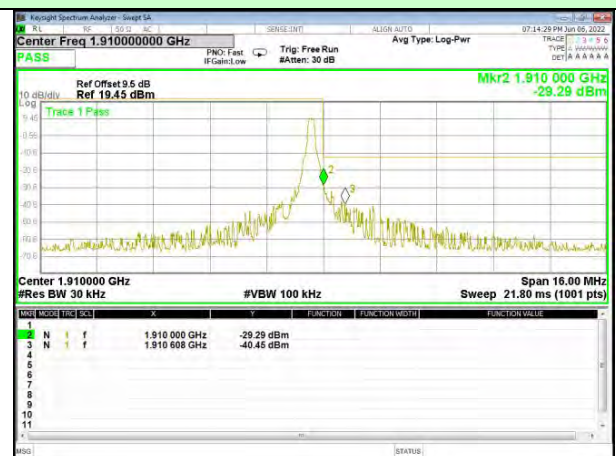
Lowest channel   Highest channel

Test Mode: LTE Band 2 / 3MHz / 15RB / QPSK

Lowest channel

Highest channel

Test Mode: LTE Band 2 / 5MHz / 1RB / QPSK

Lowest channel

Highest channel

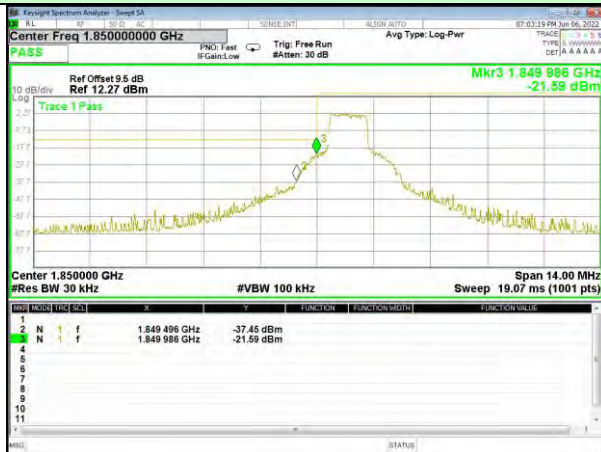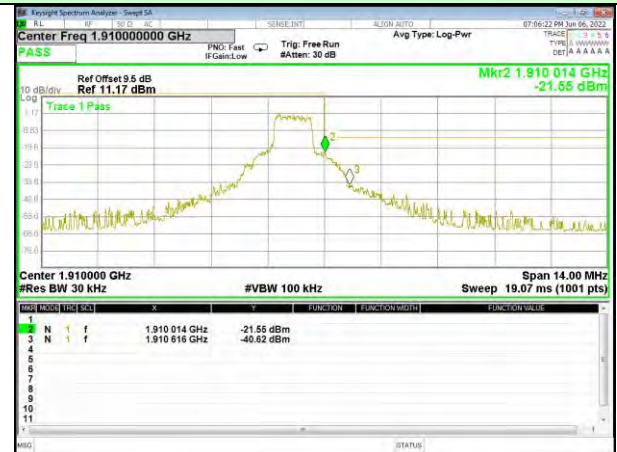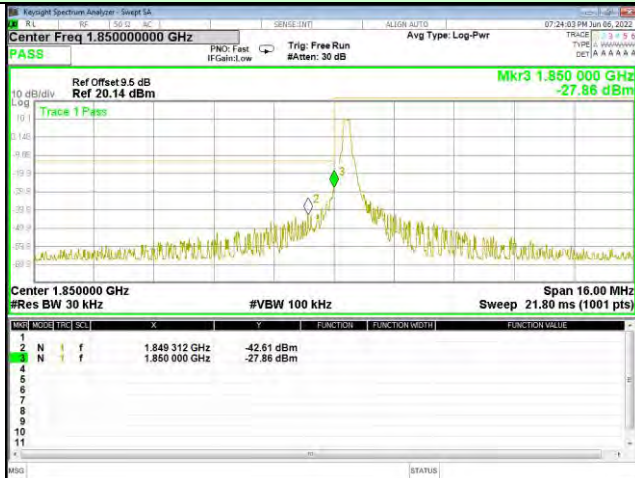Test Mode: LTE Band 2 / 5MHz / 25RB / QPSK

Lowest channel

Highest channel

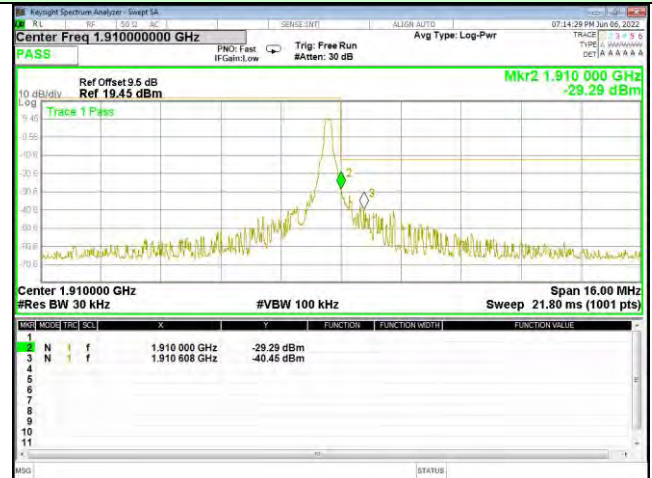Test Mode: LTE Band 2 / 10MHz / 1RB / QPSK

Lowest channel

Highest channel

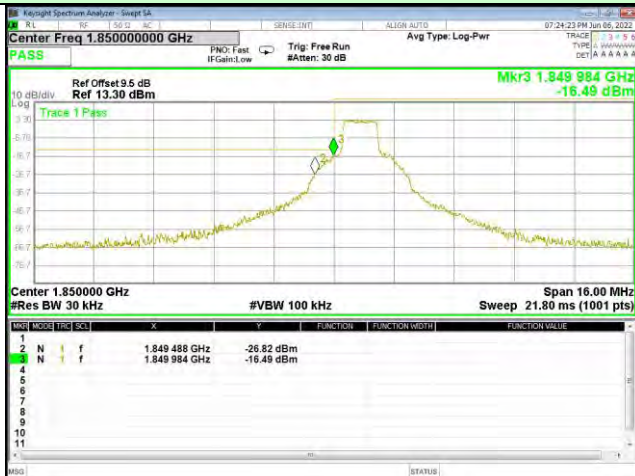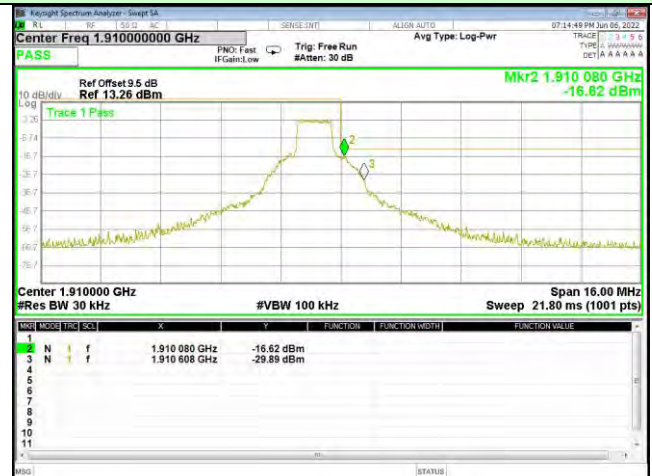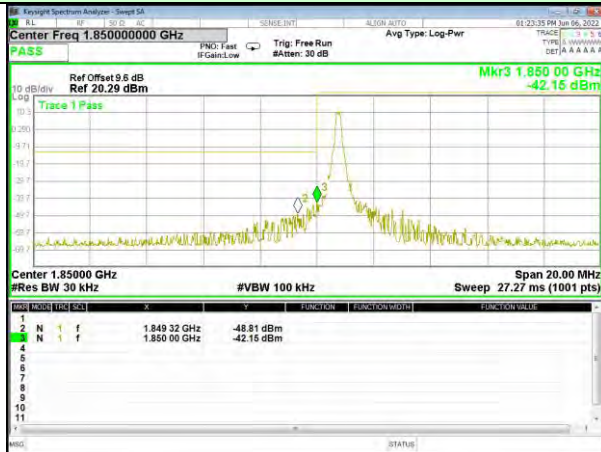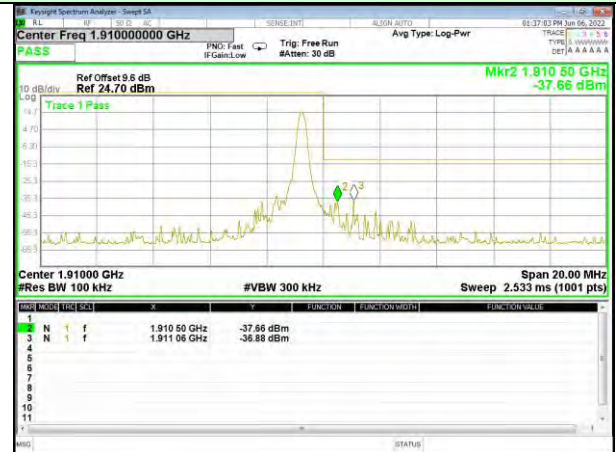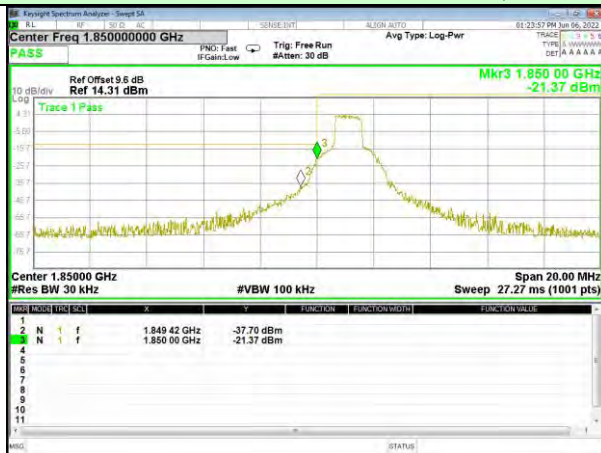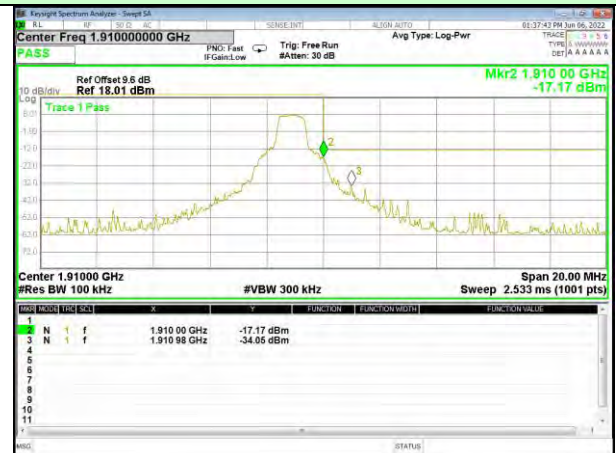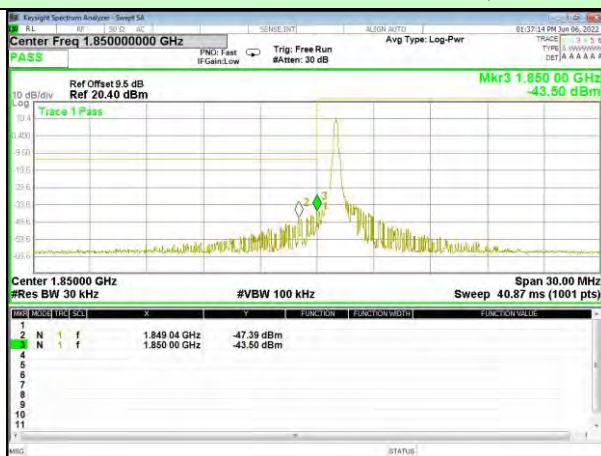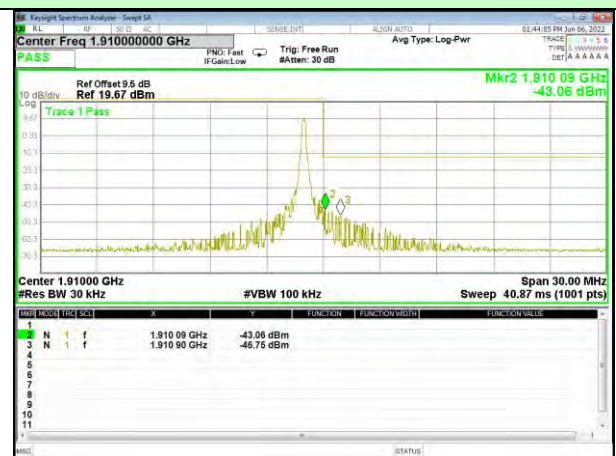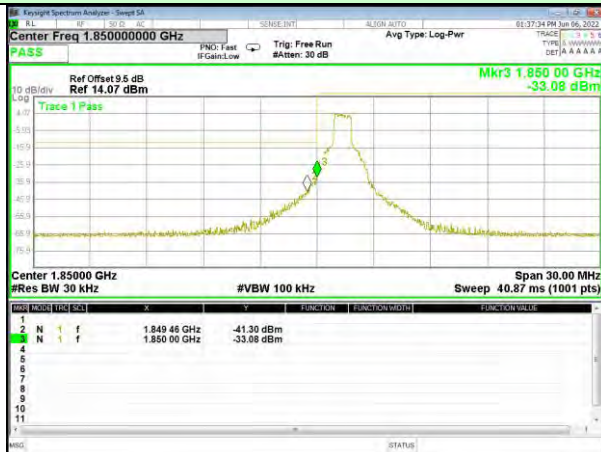Test Mode: LTE Band 2 / 10MHz / 50RB / QPSK

Lowest channel

Highest channel

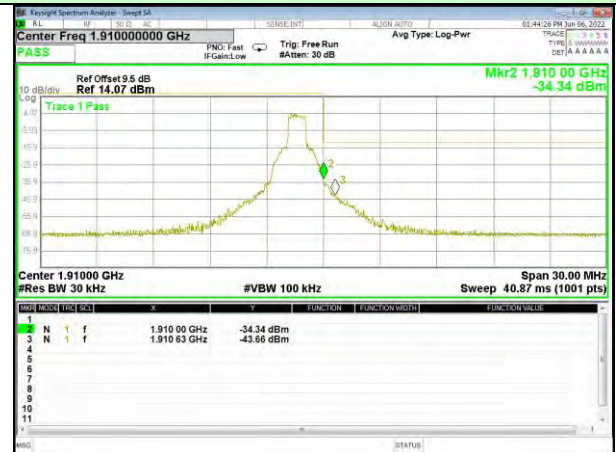Test Mode: LTE Band 2 / 15MHz / 1RB / QPSK

Lowest channel

Highest channel

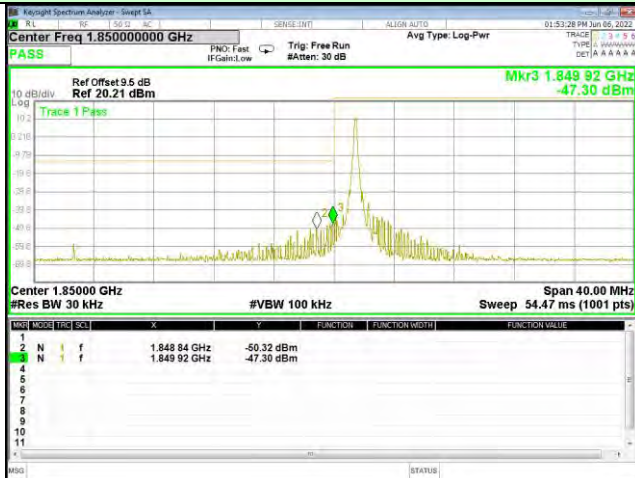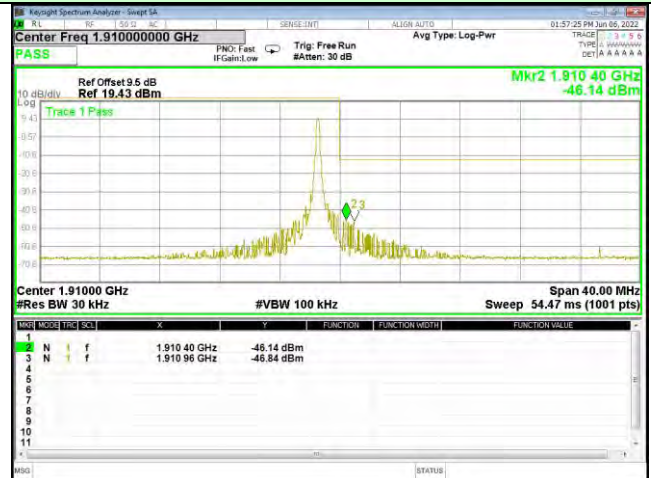**Test Mode: LTE Band 2 / 15MHz / 75RB / QPSK**

Lowest channel

Highest channel

Test Mode: LTE Band 2 / 20MHz / 1RB / QPSK
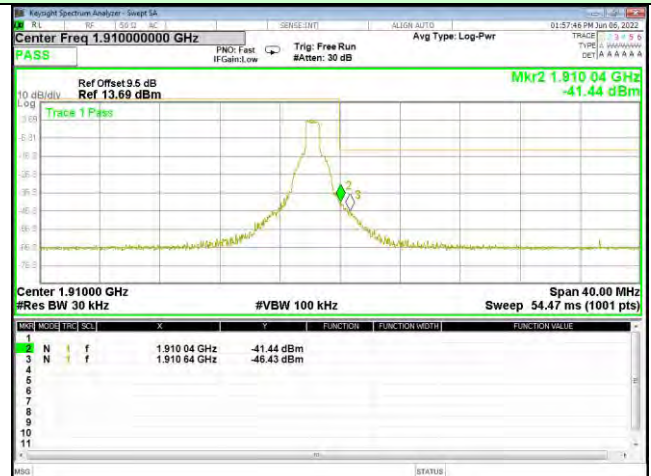

Lowest channel

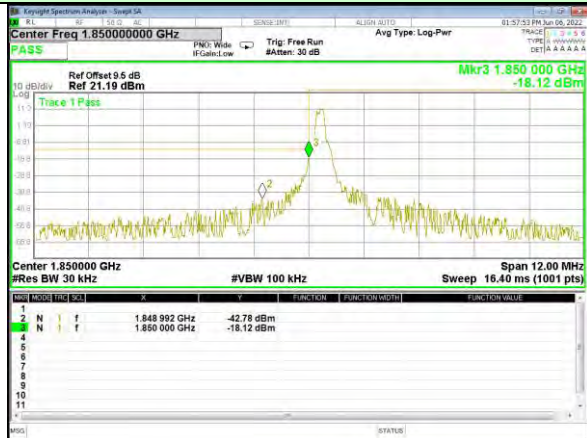Highest channel

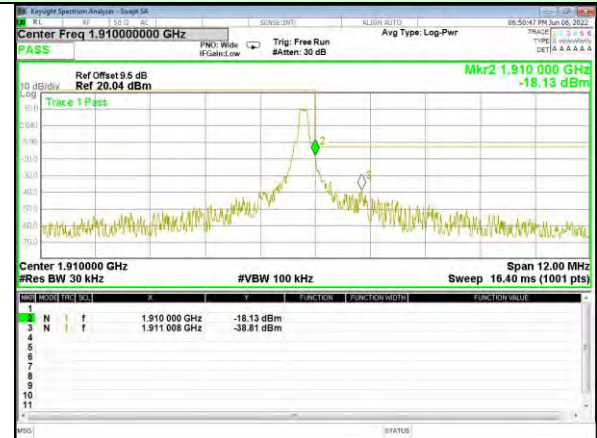**Test Mode: LTE Band 2 / 20MHz / 100RB / QPSK**

Lowest channel

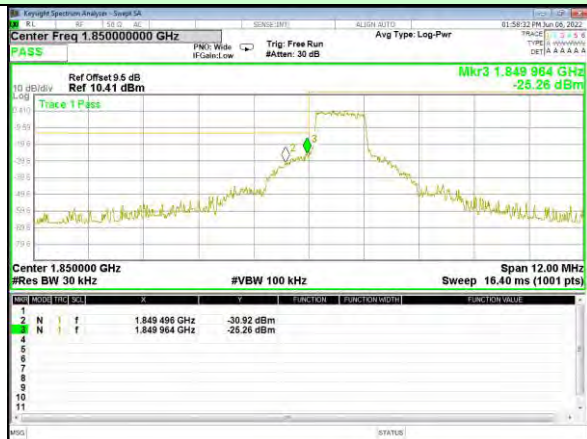Highest channel

Test Mode: LTE Band 2 / 1.4MHz / 1RB / 16-QAM

Lowest channel	Highest channel

Test Mode: LTE Band 2 / 1.4MHz / 6RB / 16-QAM

Lowest channel	Highest channel

Test Mode: LTE Band 2 / 3MHz / 1RB / 16-QAM

Lowest channel	Highest channel

Test Mode: LTE Band 2 / 3MHz / 15RB / 16-QAM	
Lowest channel	Highest channel

Test Mode: LTE Band 2 / 5MHz / 1RB / 16-QAM	
Lowest channel	Highest channel

Test Mode: LTE Band 2 / 5MHz / 25RB / 16-QAM	
Lowest channel	Highest channel

Test Mode: LTE Band 2 / 10MHz / 1RB / 16-QAM

Lowest channel

Highest channel

Test Mode: LTE Band 2 / 10MHz / 50RB / 16-QAM

Lowest channel

Highest channel

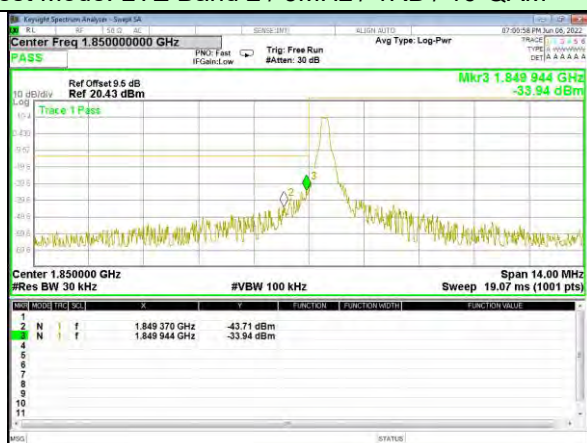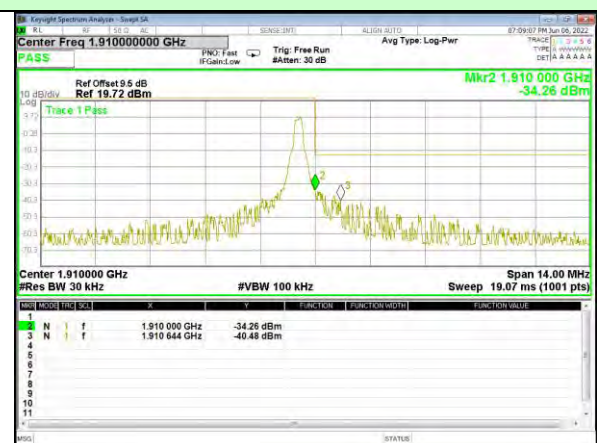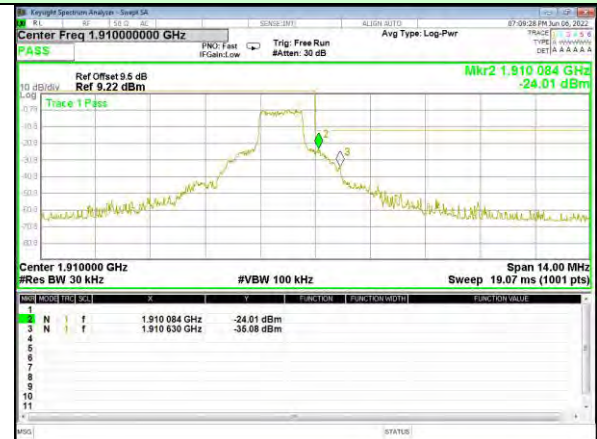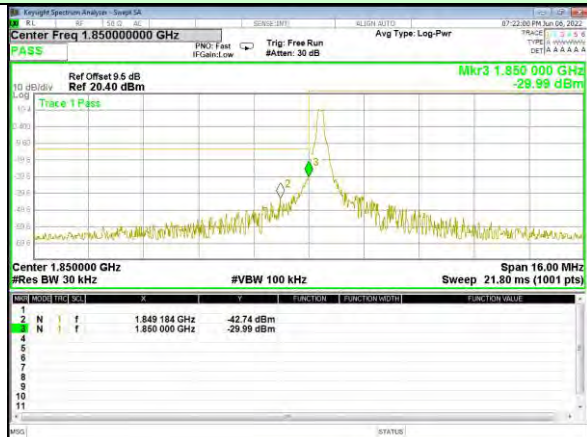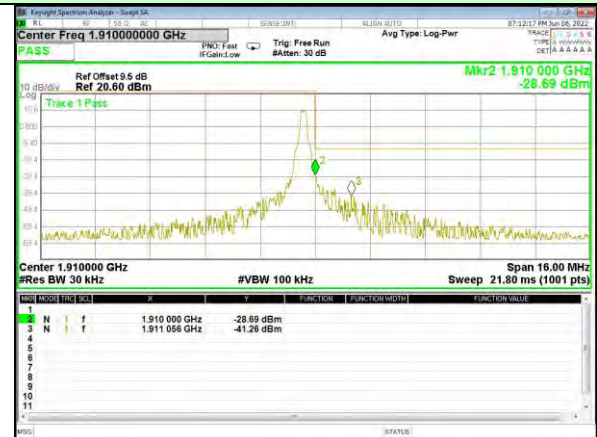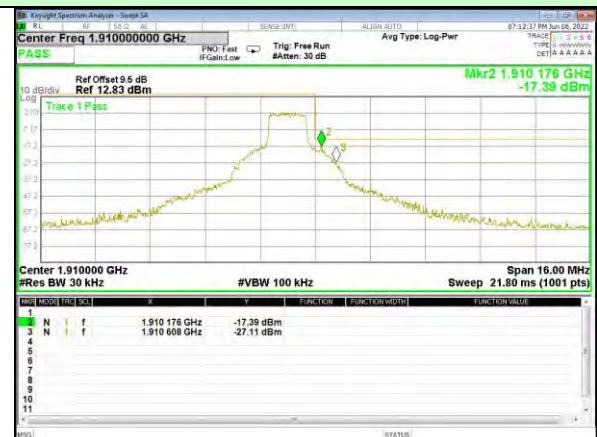| Test Mode: LTE Band 2 / 15MHz / 1RB / 16-QAM |
|---|

Lowest channel

Highest channel

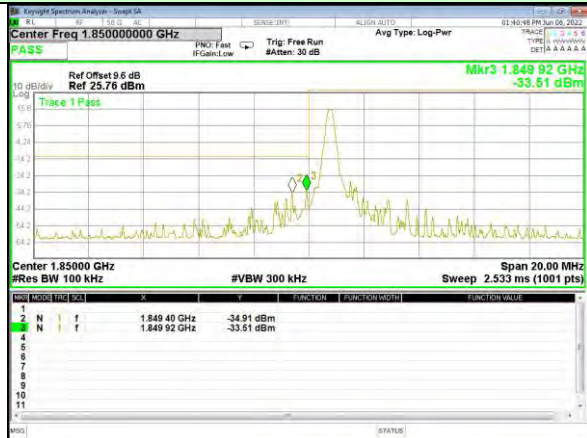Test Mode: LTE Band 2 / 15MHz / 75RB / 16-QAM
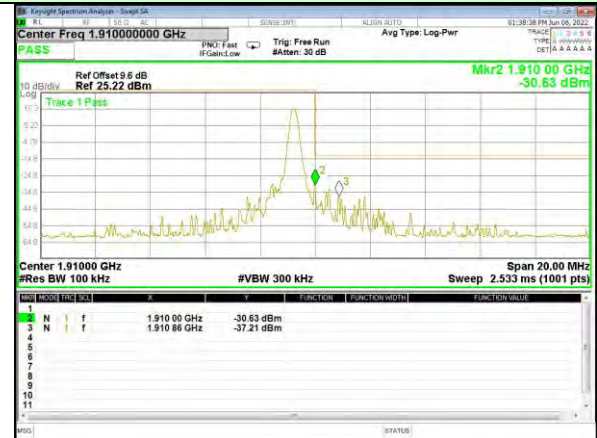

Lowest channel

Highest channel

Test Mode: LTE Band 2 / 20MHz / 1RB / 16-QAM

Lowest channel

Highest channel

Test Mode: LTE Band 2 / 20MHz / 100RB / 16-QAM
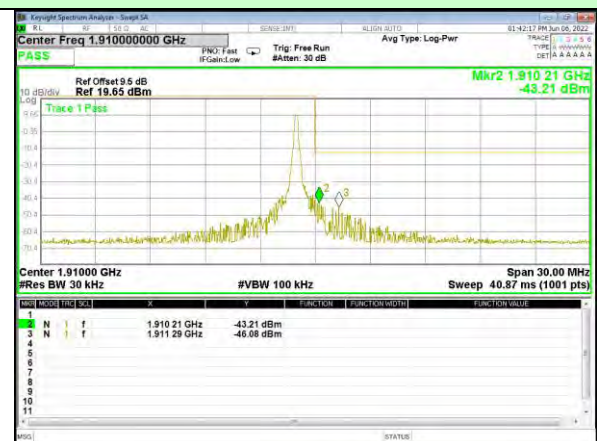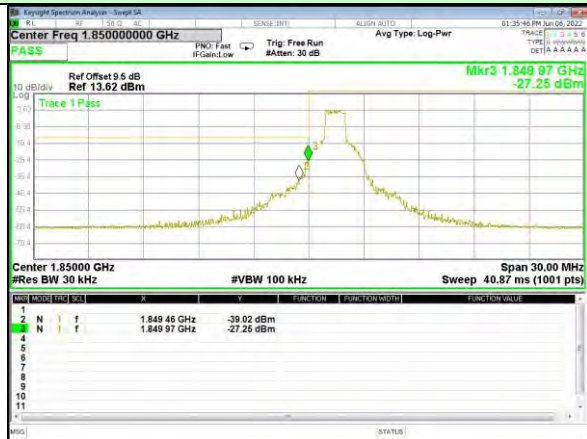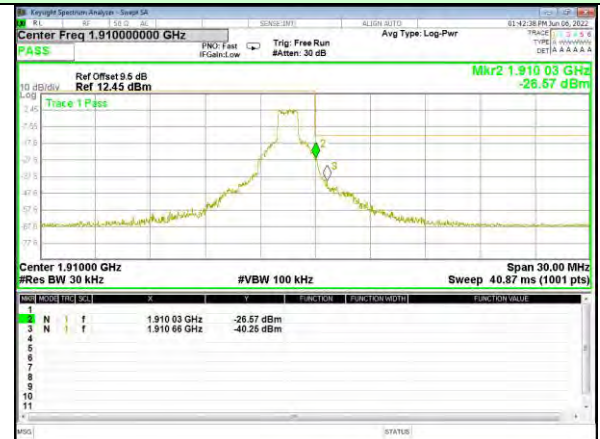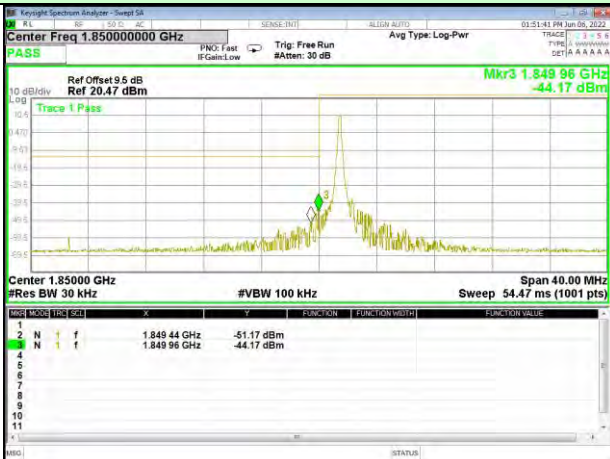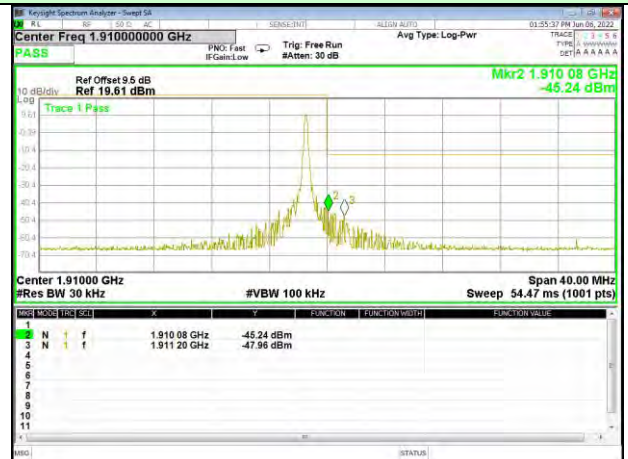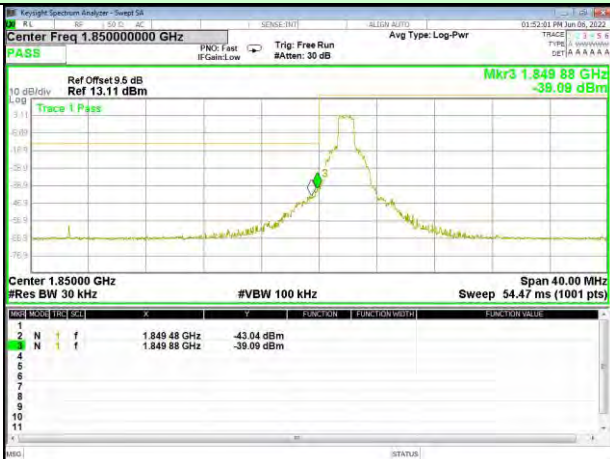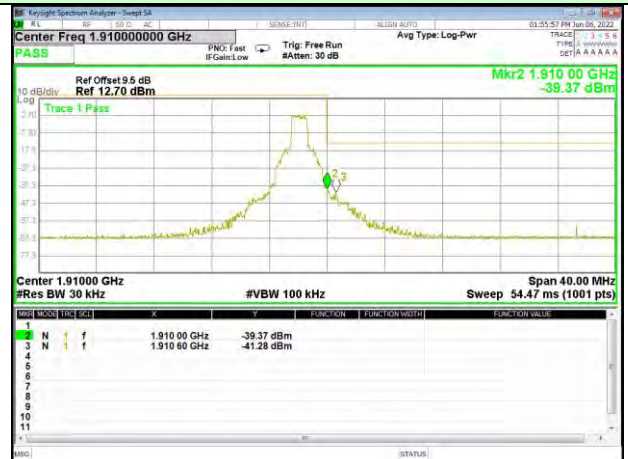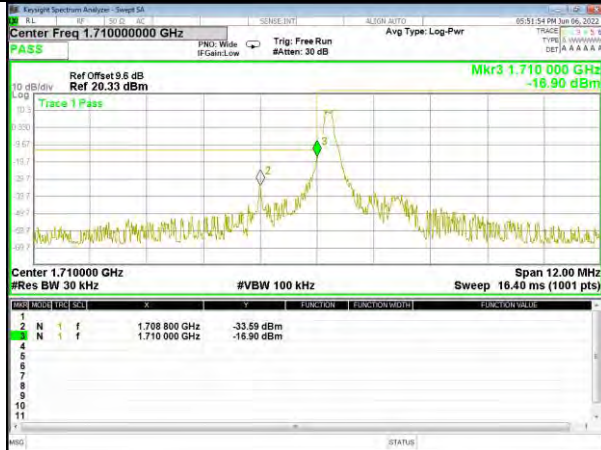

Lowest channel

Highest channel

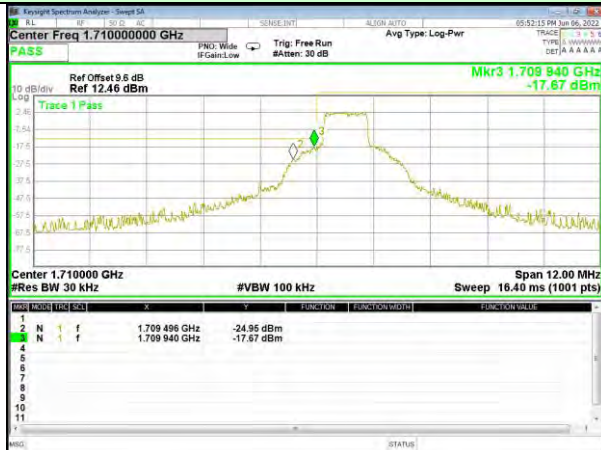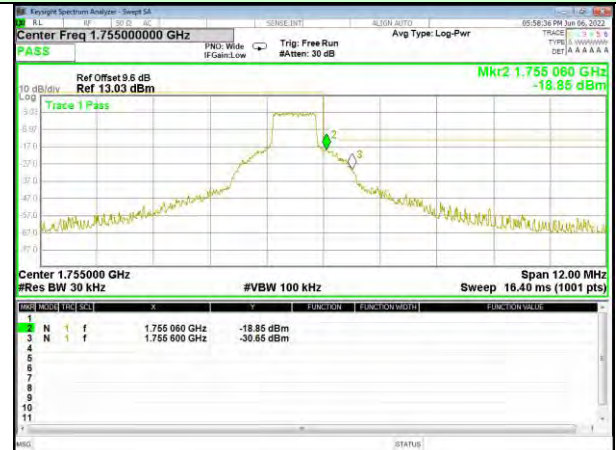Test Mode: LTE Band 4 / 1.4MHz / 1RB / QPSK

Lowest channel

Highest channel
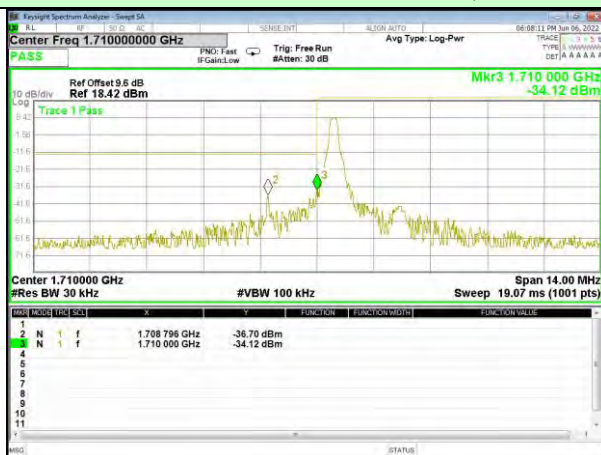
Test Mode: LTE Band 4 / 1.4MHz / 6RB / QPSK
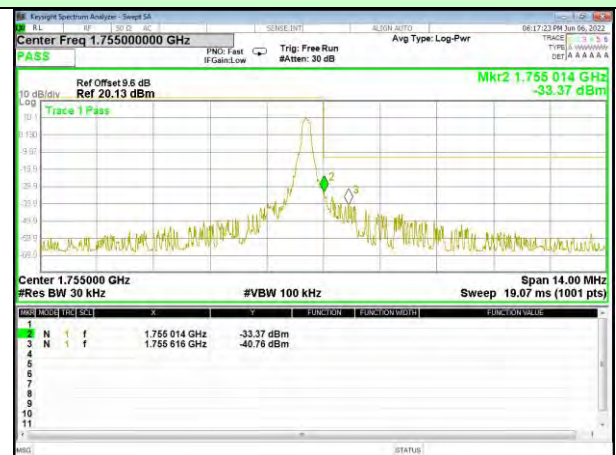

Lowest channel

Highest channel

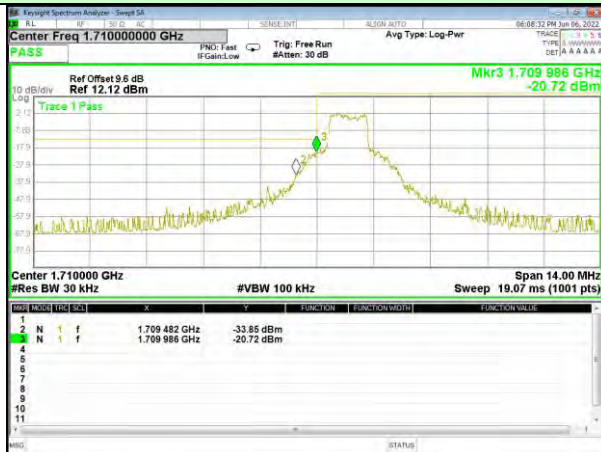Test Mode: LTE Band 4 / 3MHz / 1RB / QPSK
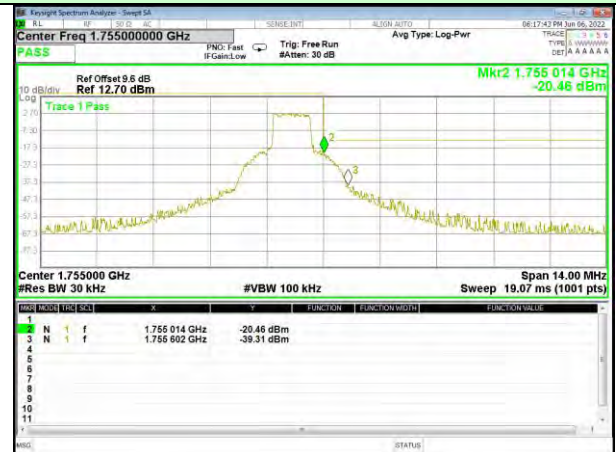

Lowest channel

Highest channel

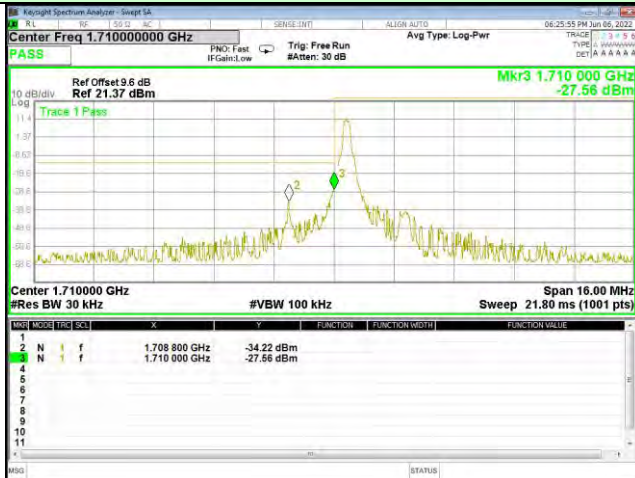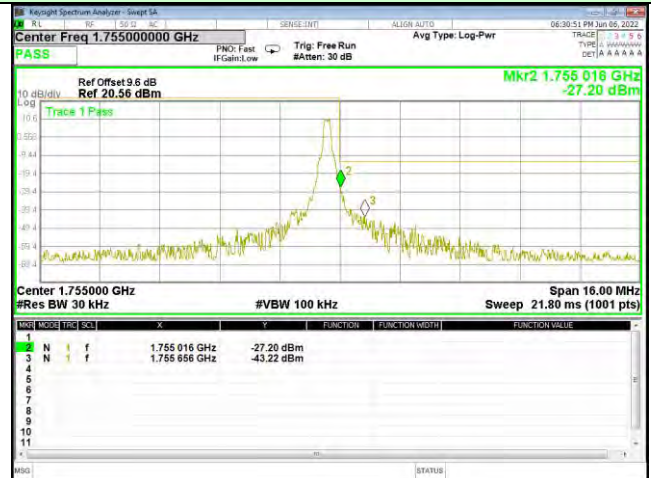Test Mode: LTE Band 4 / 3MHz / 15RB / QPSK

Lowest channel

Highest channel

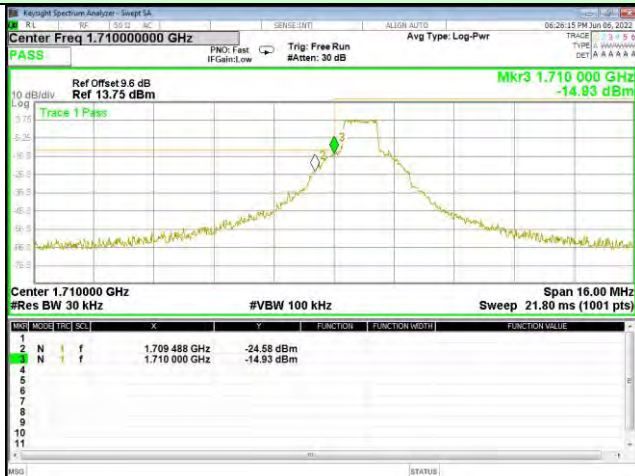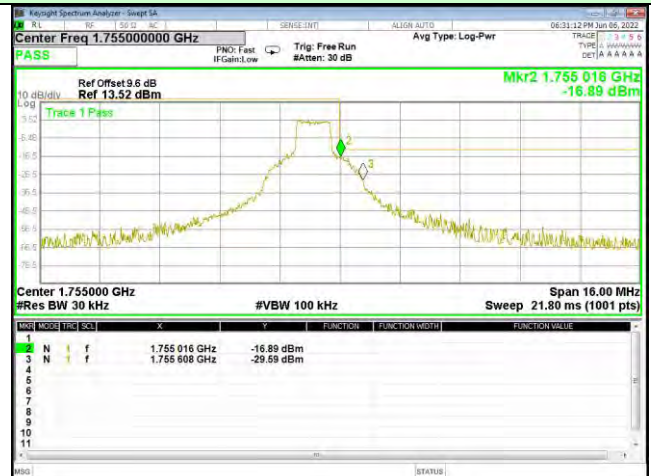Test Mode: LTE Band 4 / 5MHz / 1RB / QPSK

Lowest channel

Highest channel

Test Mode: LTE Band 4 / 5MHz / 25RB / QPSK

Lowest channel

Highest channel

Test Mode: LTE Band 4 / 10MHz / 1RB / QPSK

Lowest channel	Highest channel

Test Mode: LTE Band 4 / 10MHz / 50RB / QPSK

Lowest channel	Highest channel

Test Mode: LTE Band 4 / 15MHz / 1RB / QPSK

Lowest channel	Highest channel

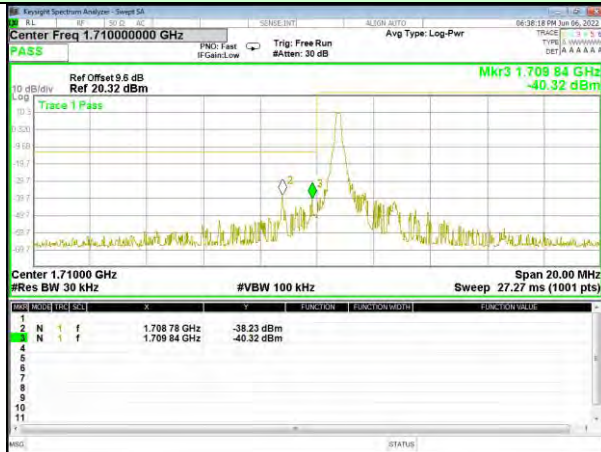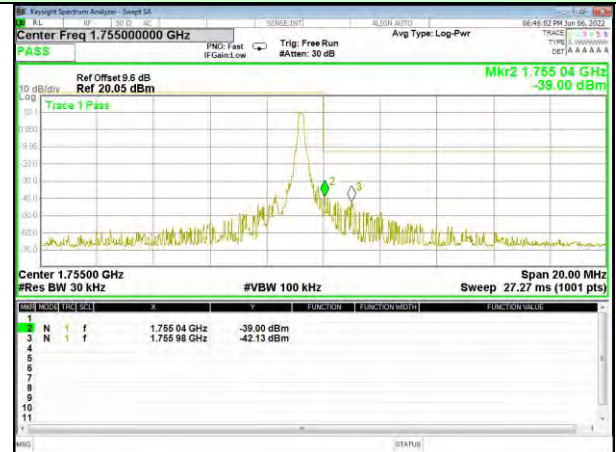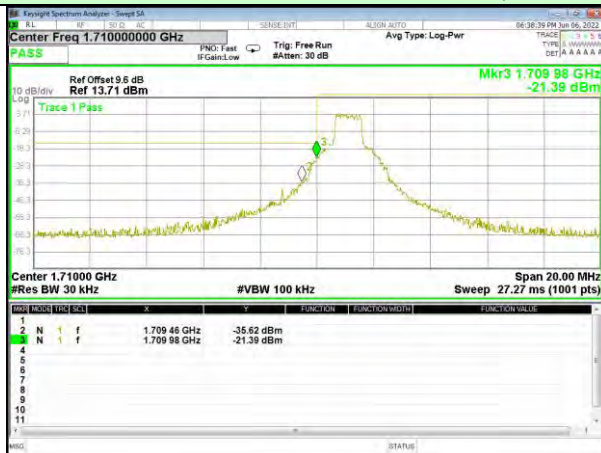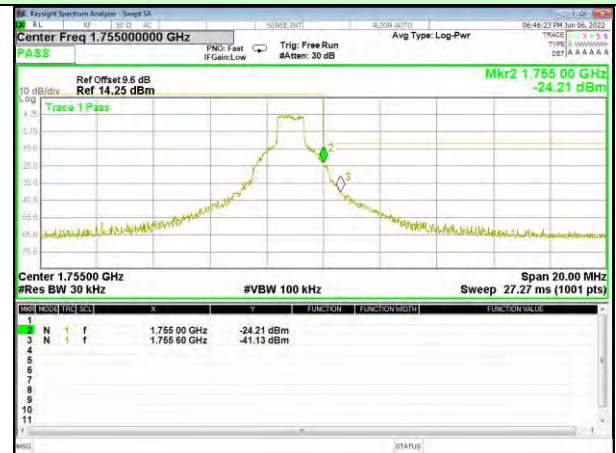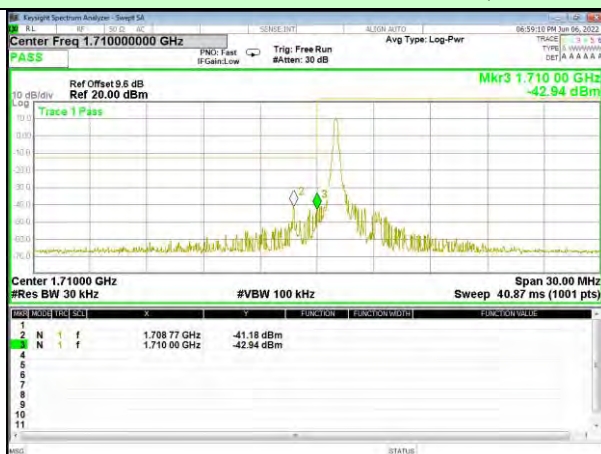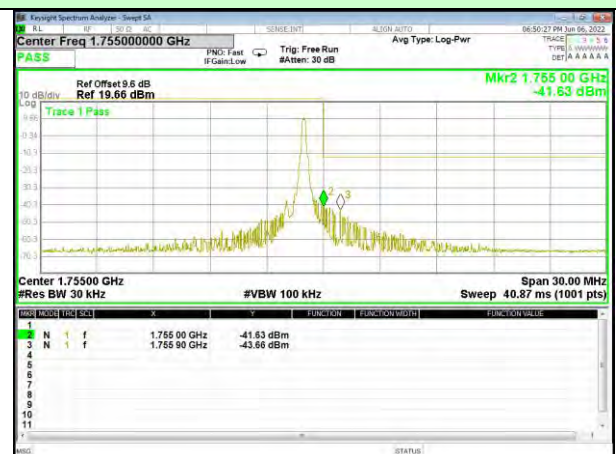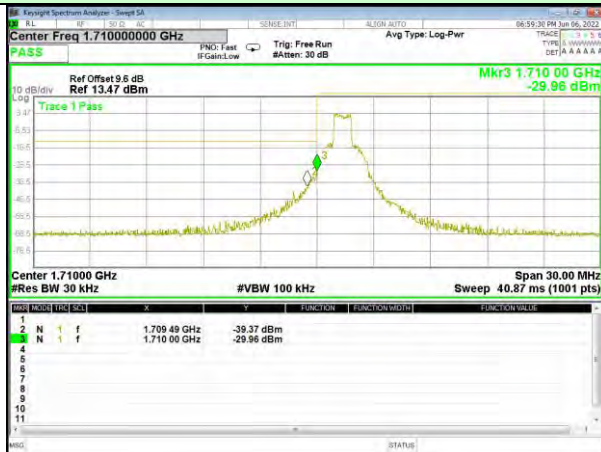## Test Mode: LTE Band 4 / 15MHz / 75RB / QPSK

Lowest channel

Highest channel

Test Mode: LTE Band 4 / 20MHz / 1RB / QPSK
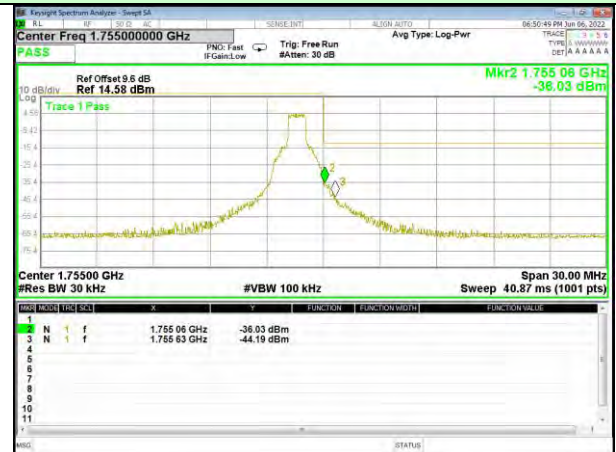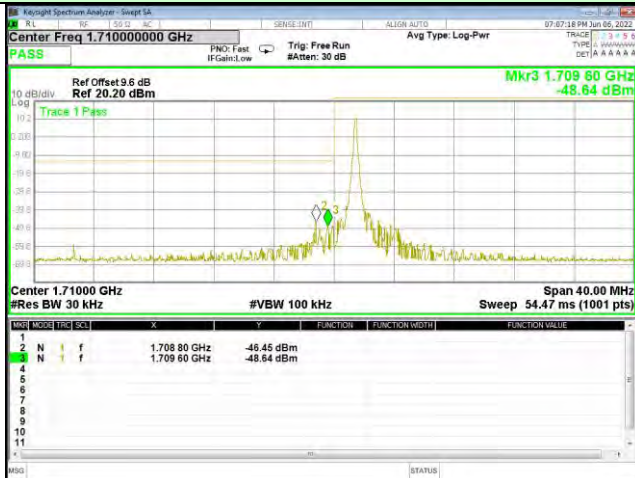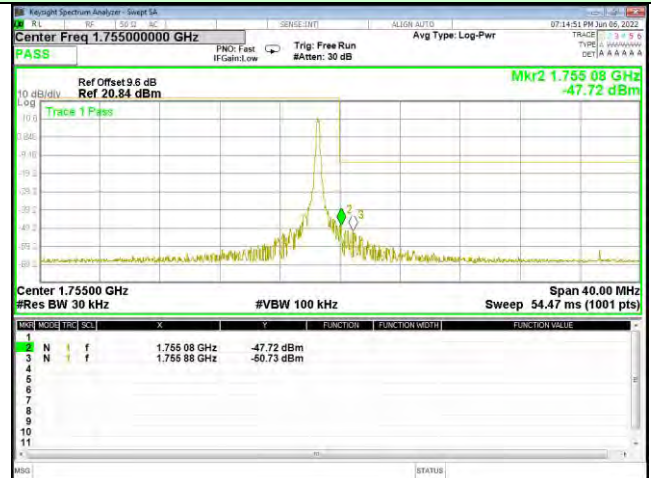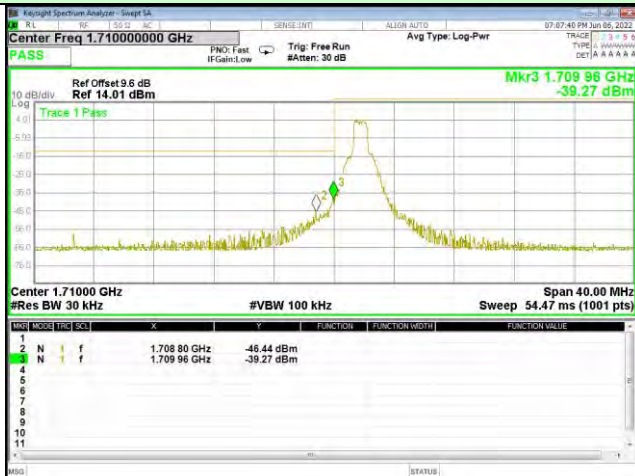

Lowest channel

Highest channel

Test Mode: LTE Band 4 / 20MHz / 100RB / QPSK

Lowest channel

Highest channel

Test Mode: LTE Band 4 / 1.4MHz / 1RB / 16-QAM	
Lowest channel	Highest channel

Test Mode: LTE Band 4 / 1.4MHz / 6RB / 16-QAM	
Lowest channel	Highest channel

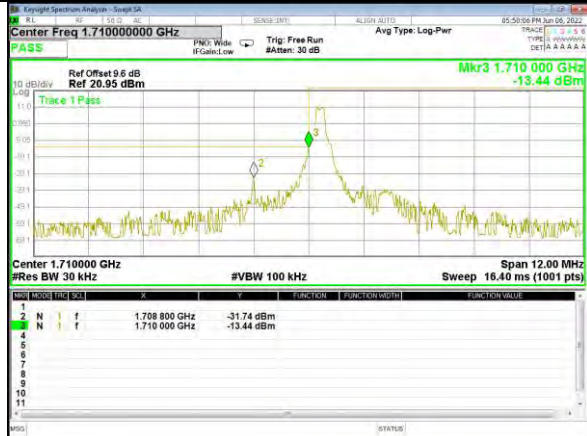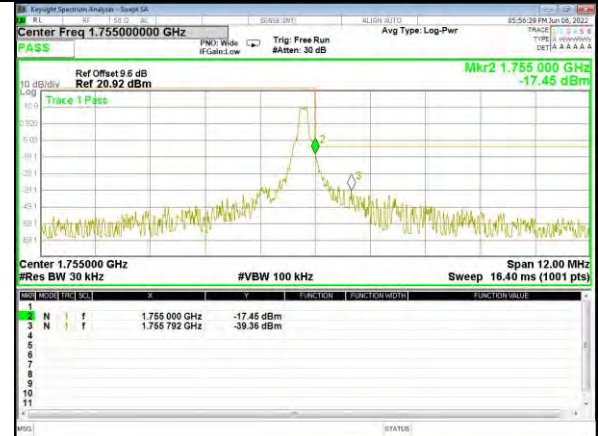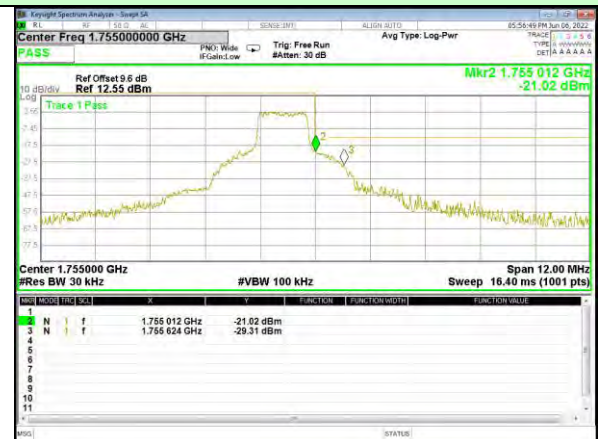| Test Mode: LTE Band 4 / 3MHz / 1RB / 16-QAM	
Lowest channel	Highest channel

Test Mode: LTE Band 4 / 3MHz / 15RB / 16-QAM
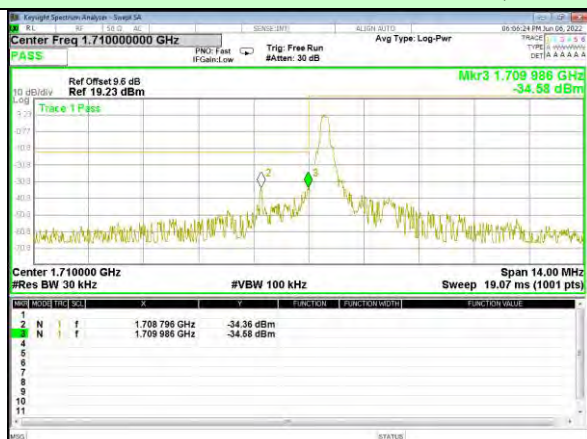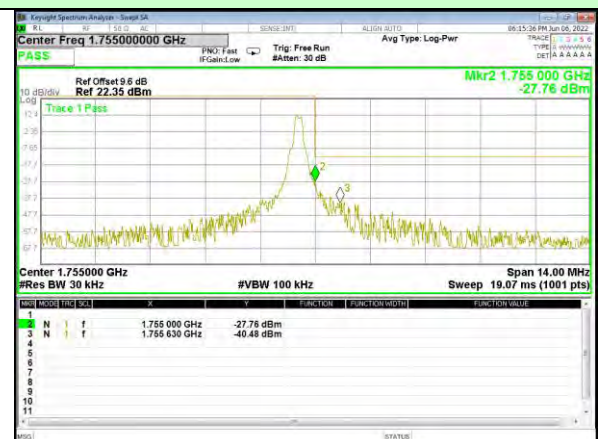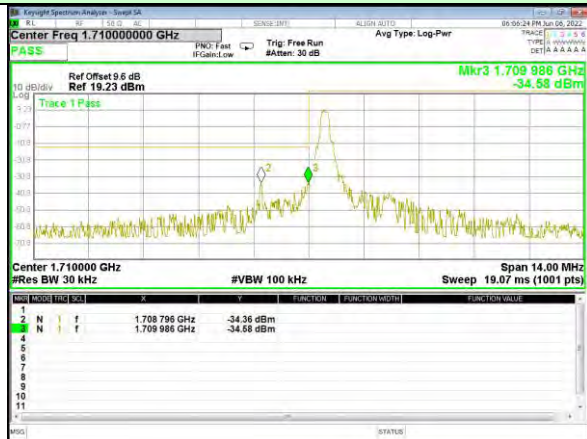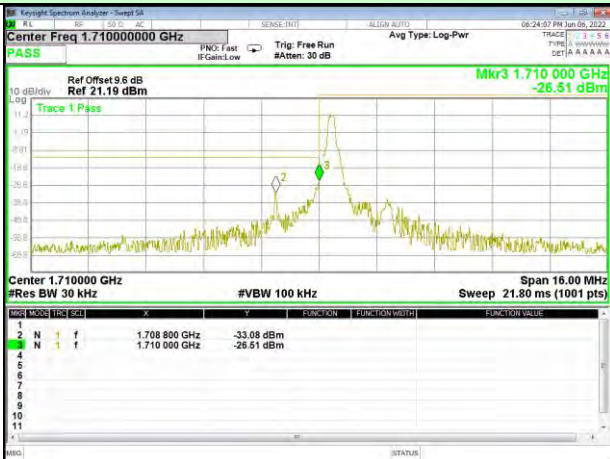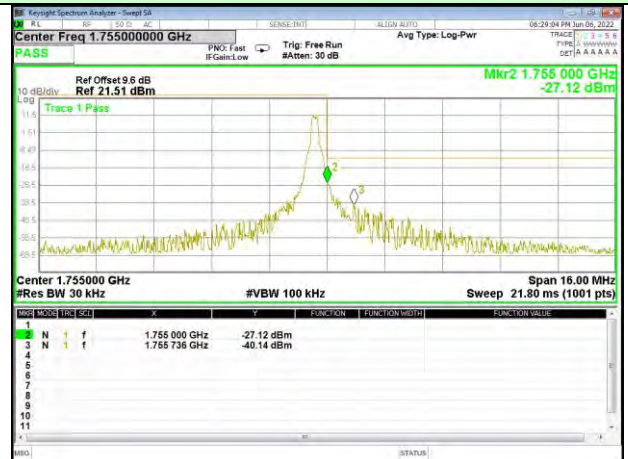

Lowest channel

Highest channel
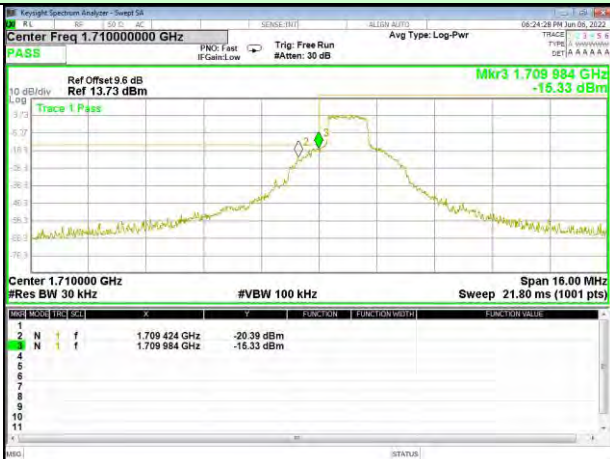
Test Mode: LTE Band 4 / 5MHz / 1RB / 16-QAM
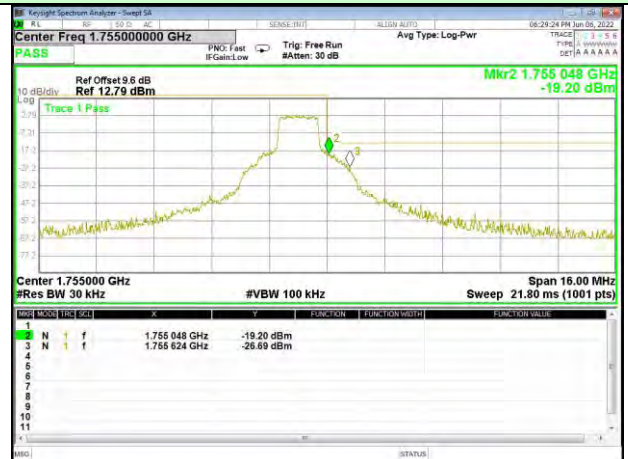

Lowest channel

Highest channel

Test Mode: LTE Band 4 / 5MHz / 25RB / 16-QAM

Lowest channel

Highest channel