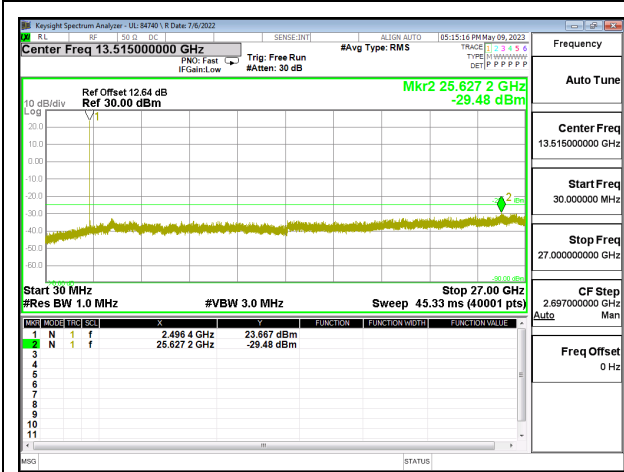
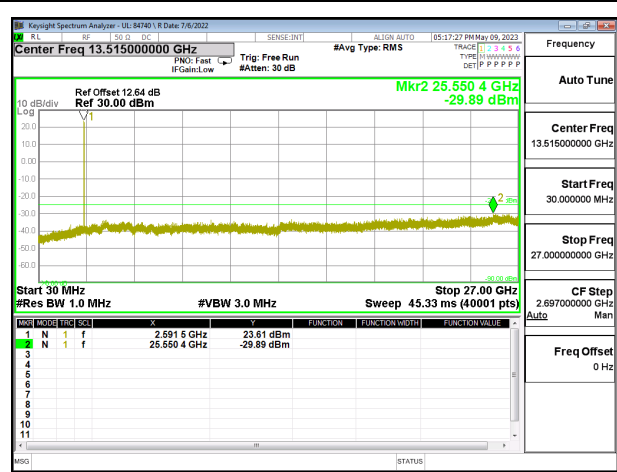


9.2.10. LTE41

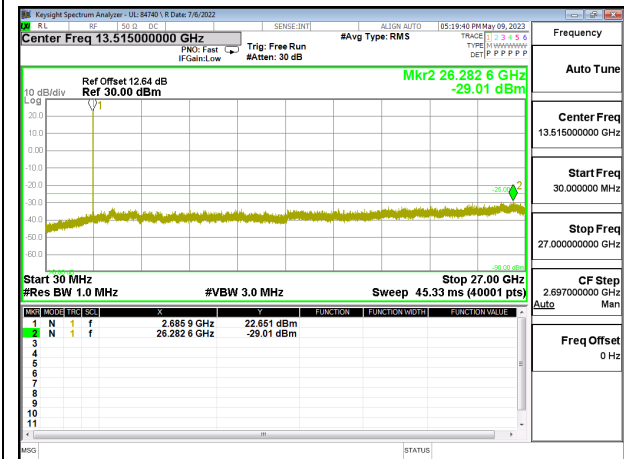
Test Engineer ID: 27465/44389 Test Date: 2023-05-09 EUT Serial Number: QV77008AG9



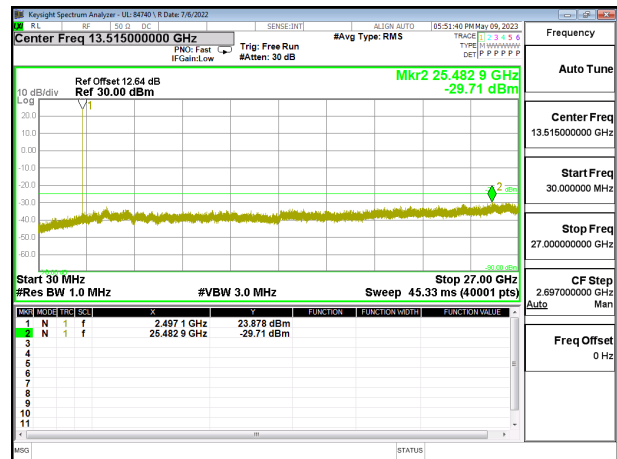
LTE41 5MHz 16QAM LOW Ch RB1-0



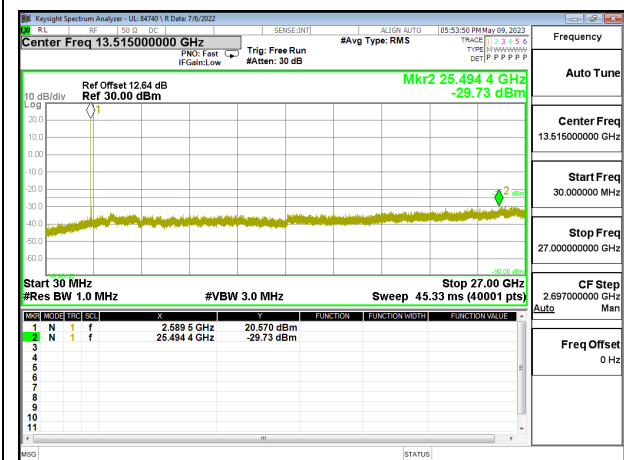
LTE41 5MHz 16QAM MID Ch RB1-0



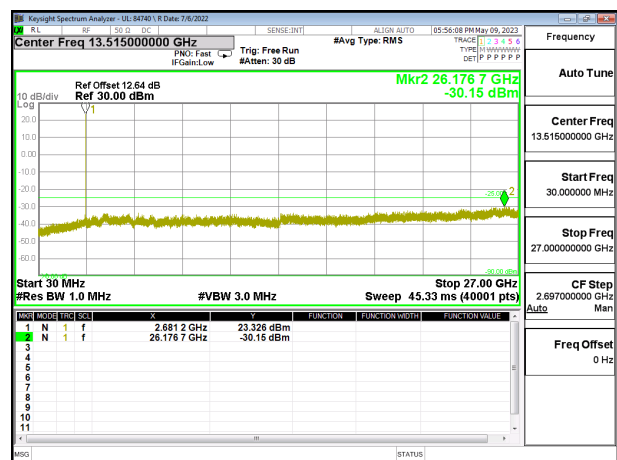
LTE41 5MHz 16QAM HIGH Ch RB1-0



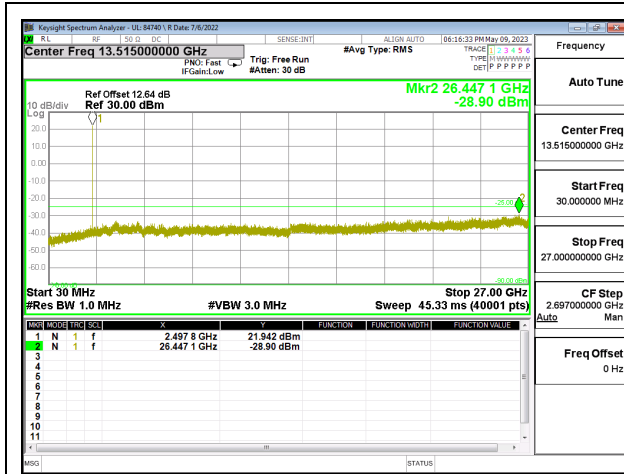
LTE41 10MHz 16QAM LOW Ch RB1-0



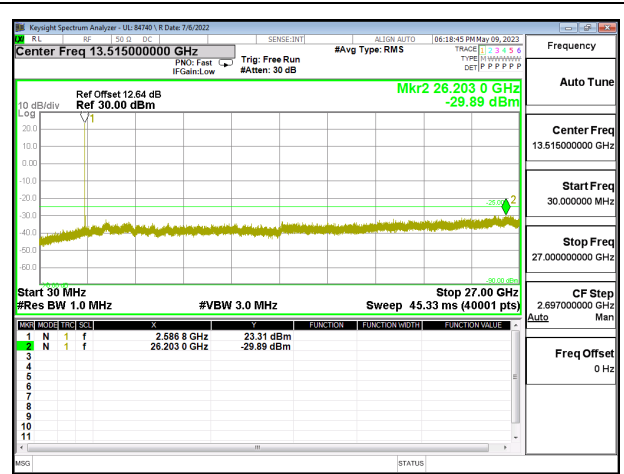
LTE41 10MHz 16QAM MID Ch RB1-0



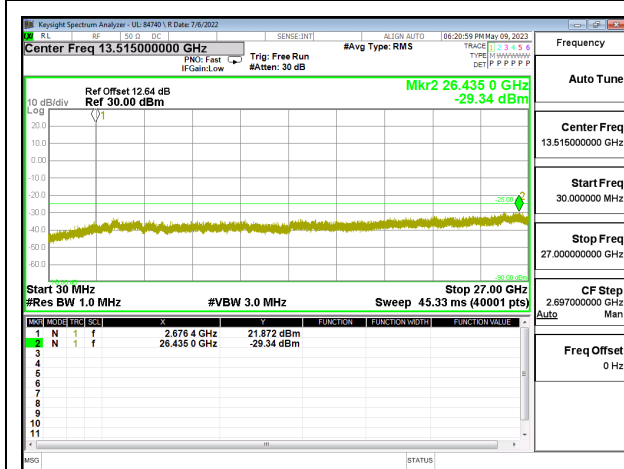
LTE41 10MHz 16QAM HIGH Ch RB1-0



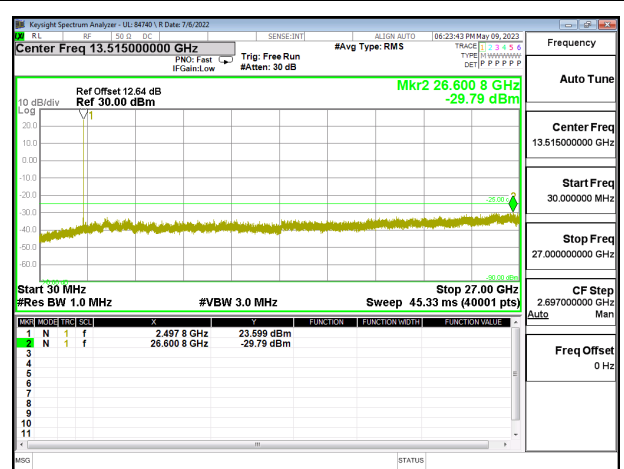
LTE41 15MHz 16QAM LOW Ch RB1-0



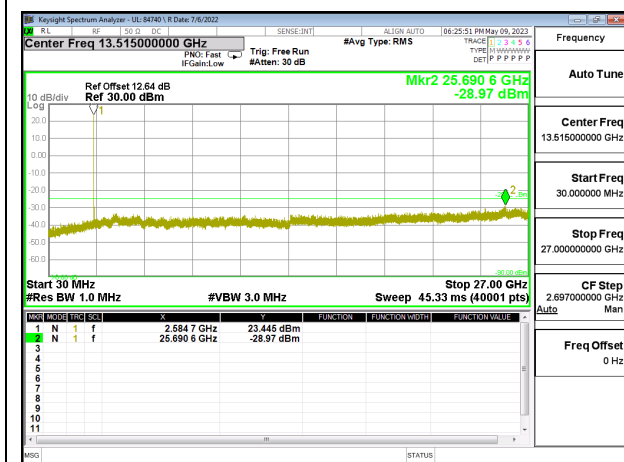
LTE41 15MHz 16QAM MID Ch RB1-0



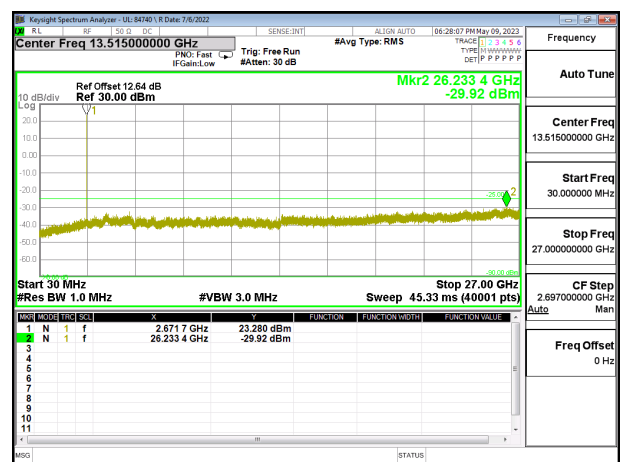
LTE41 15MHz 16QAM HIGH Ch RB1-0



LTE41 20MHz 16QAM LOW Ch RB1-0



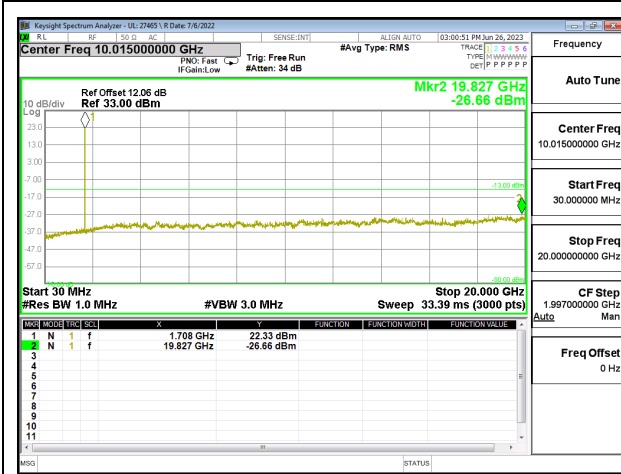
LTE41 20MHz 16QAM MID Ch RB1-0



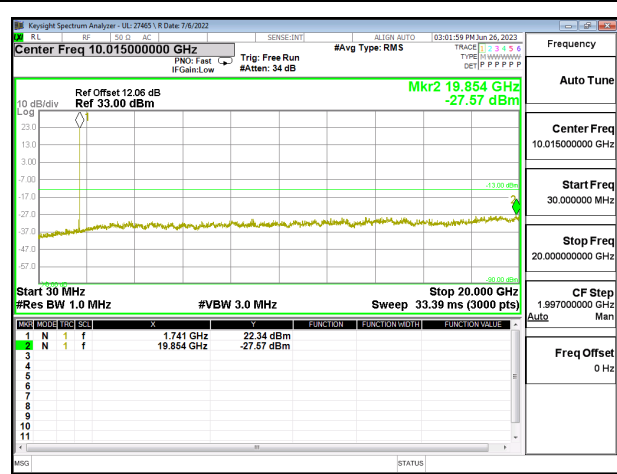
LTE41 20MHz 16QAM HIGH Ch RB1-0

9.2.11. LTE66

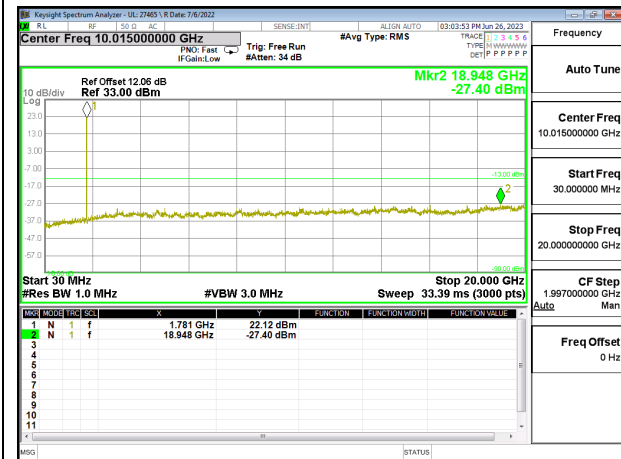
Test Engineer ID: 84740/44389 Test Date: 2023-05-08 EUT Serial Number: QV77007YG9



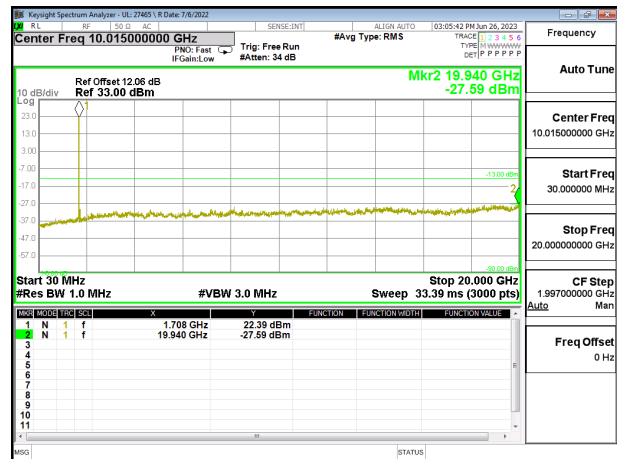
LTE66 1.4MHz 16QAM LOW Ch RB1-0



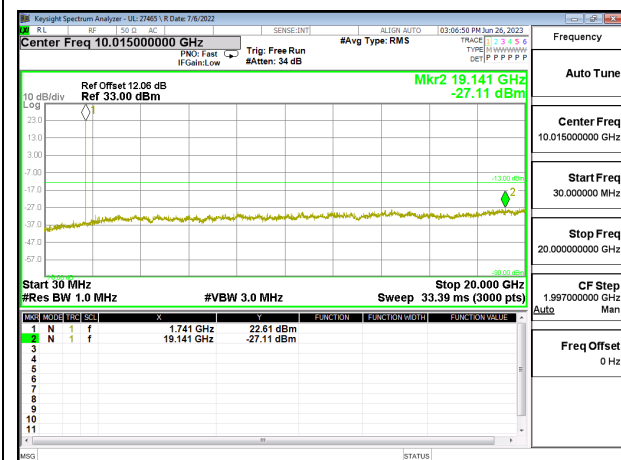
LTE66 1.4MHz 16QAM MID Ch RB1-0



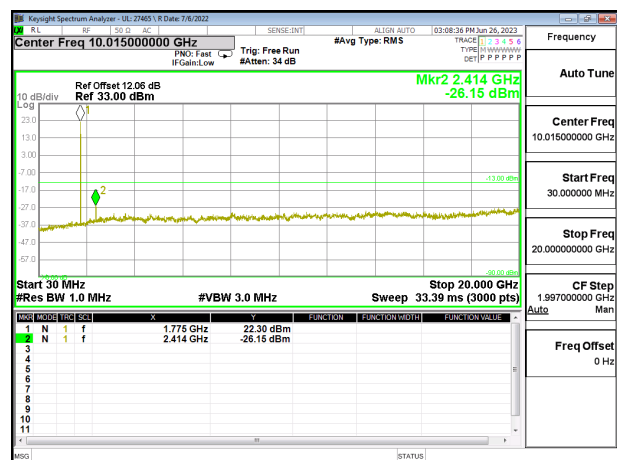
LTE66 1.4MHz 16QAM HIGH Ch RB1-0



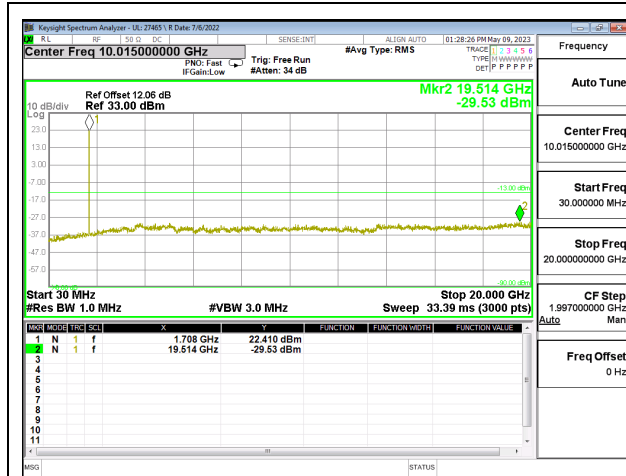
LTE66 3MHz 16QAM LOW Ch RB1-0



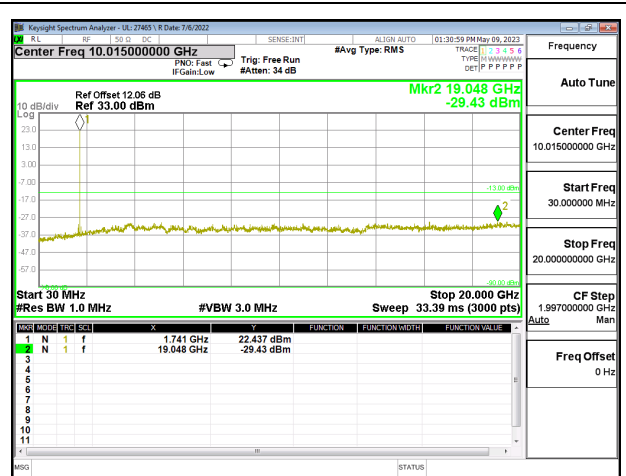
LTE66 3MHz 16QAM MID Ch RB1-0



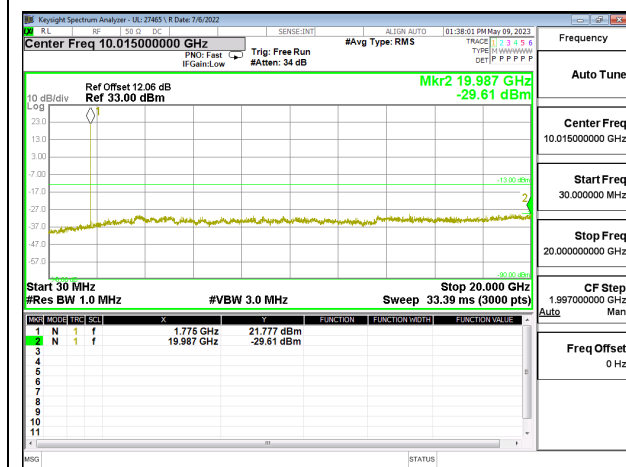
LTE66 3MHz 16QAM HIGH Ch RB1-0



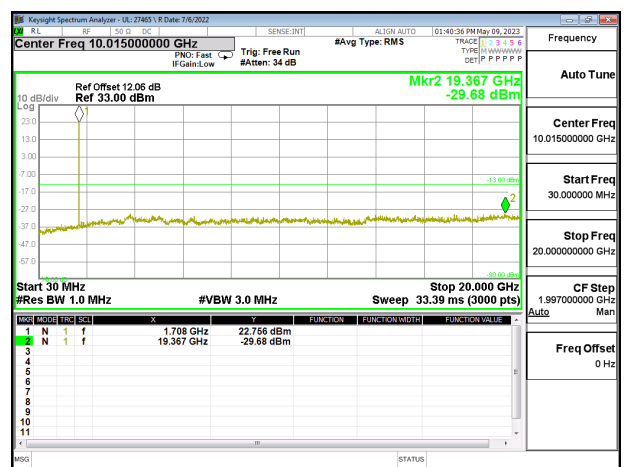
LTE66 5MHz 16QAM LOW Ch RB1-0



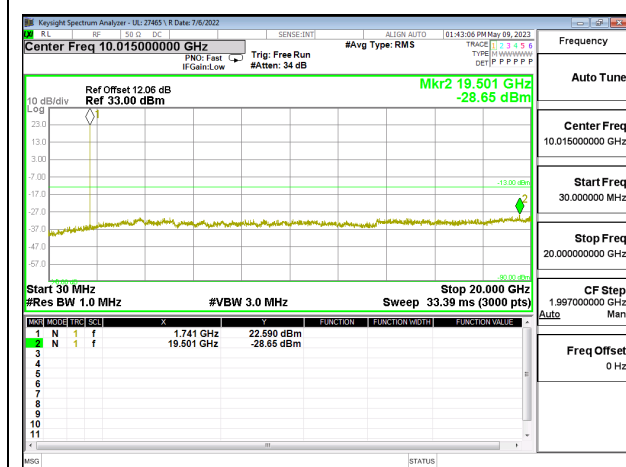
LTE66 5MHz 16QAM MID Ch RB1-0



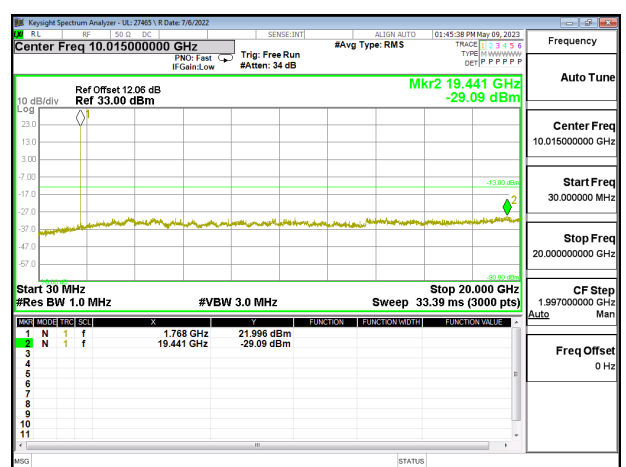
LTE66 5MHz 16QAM HIGH Ch RB1-0



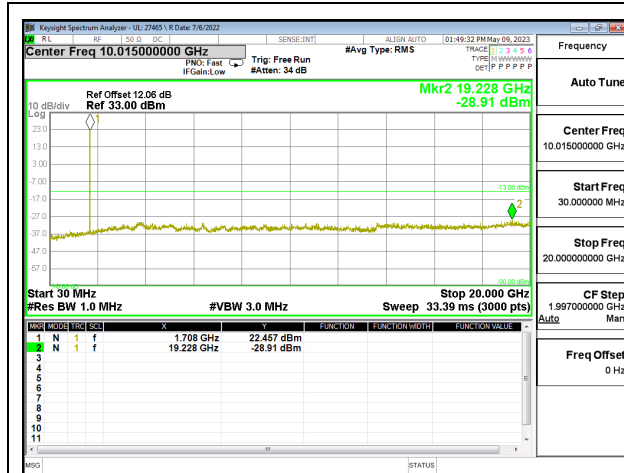
LTE66 10MHz 16QAM LOW Ch RB1-0



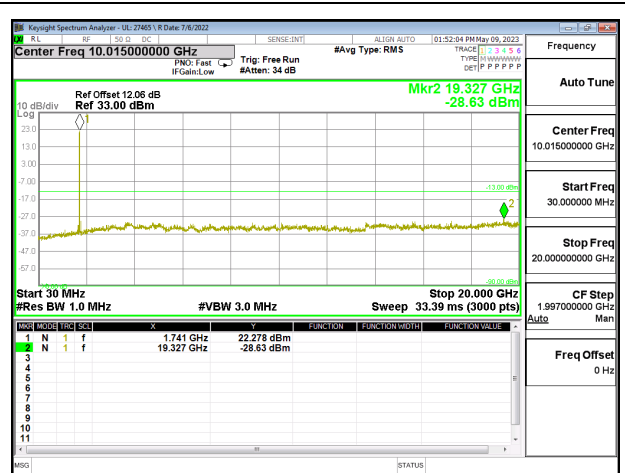
LTE66 10MHz 16QAM MID Ch RB1-0



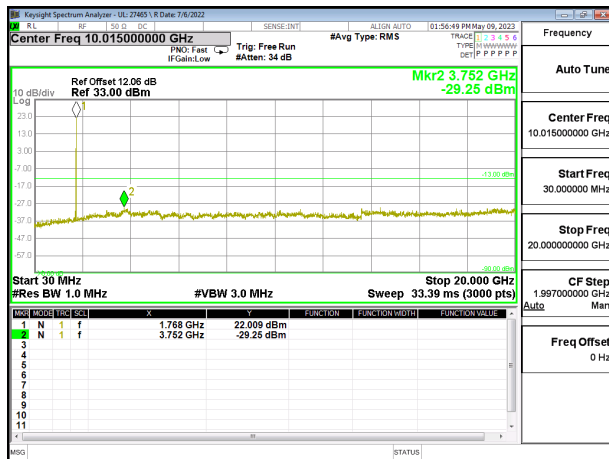
LTE66 10MHz 16QAM HIGH Ch RB1-0



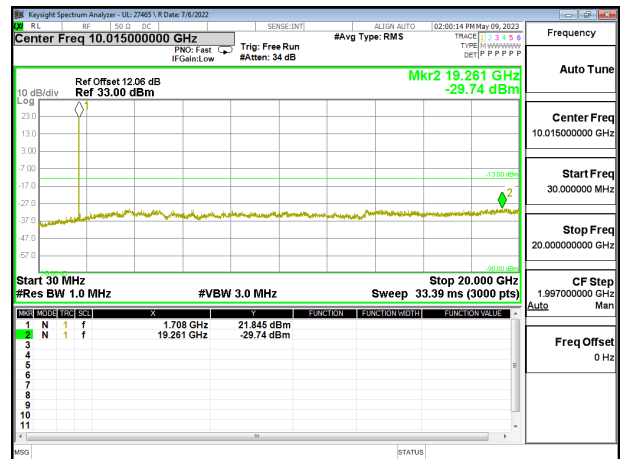
LTE66 15MHz 16QAM LOW Ch RB1-0



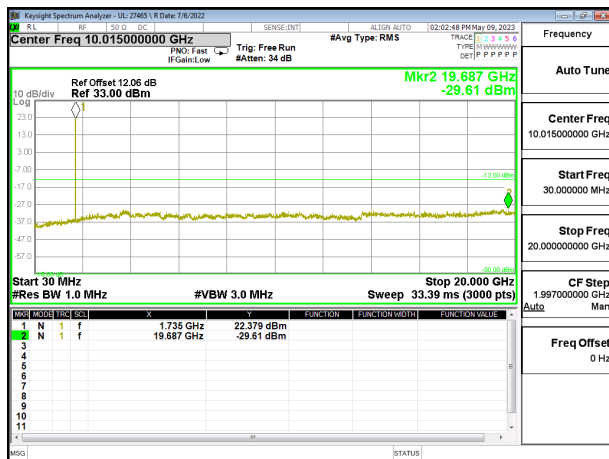
LTE66 15MHz 16QAM MID Ch RB1-0



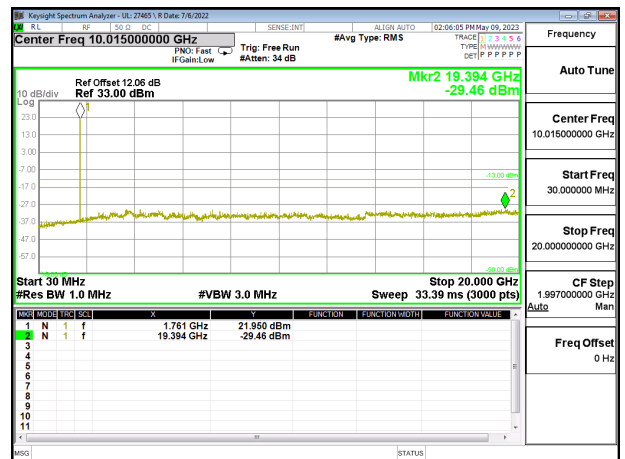
LTE66 15MHz 16QAM HIGH Ch RB1-0



LTE66 20MHz 16QAM LOW Ch RB1-0



LTE66 20MHz 16QAM MID Ch RB1-0



LTE66 20MHz 16QAM HIGH Ch RB1-0

### **9.3. PEAK TO AVERAGE RATIO**

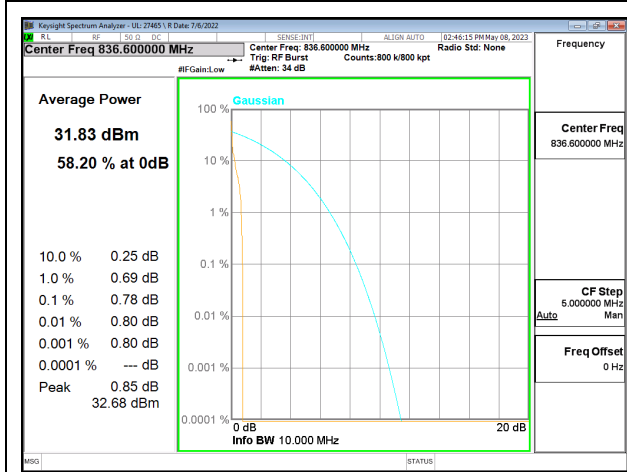
#### **LIMIT**

In addition, the peak to average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the highest PAPR during periods of continuous transmission.

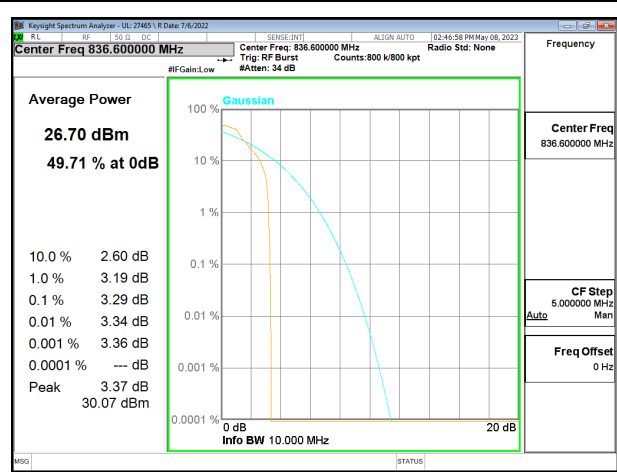
#### **RESULTS**

### 9.3.1. GSM

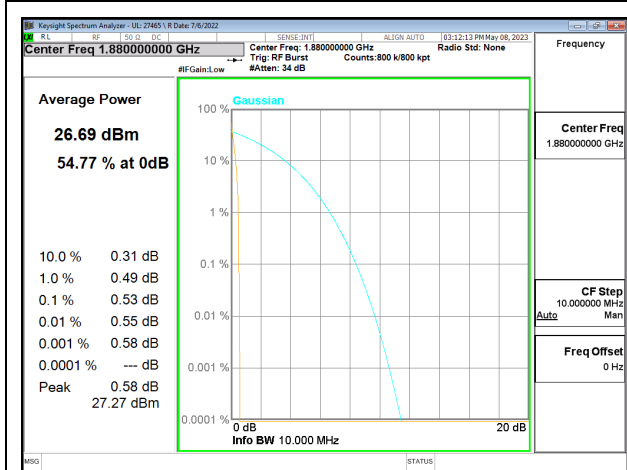
Test Engineer ID:	27465/44389	Test Date:	2023-05-08	EUT Serial Number:	QV77002SG9
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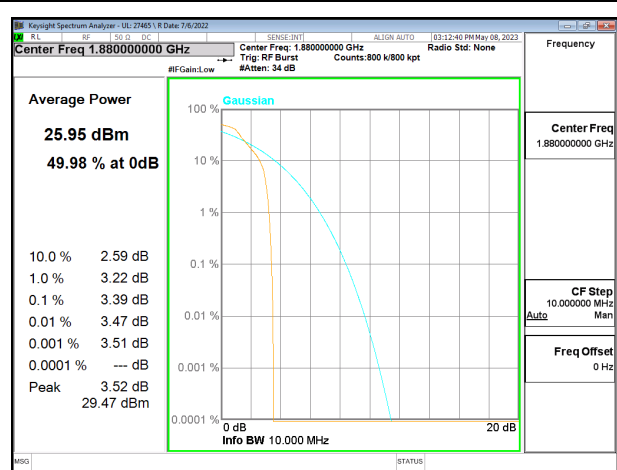
GSM850 GPRS MID Channel



GSM850 EGPRS MID Channel



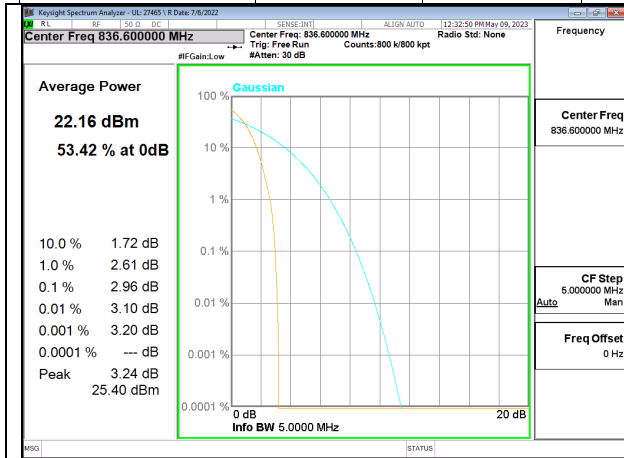
GSM1900 GPRS MID Channel



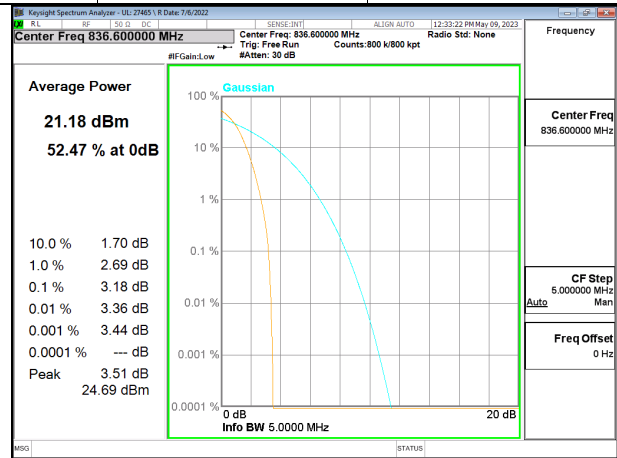
GSM1900 EGPRS MID Channel

9.3.2. WCDMA

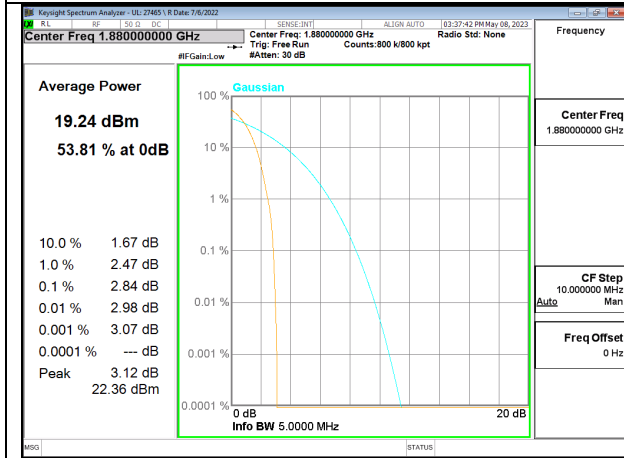
<b>Test Engineer ID:</b> 27465/44389	<b>Test Date:</b> 2023-05-08 2023-05-09	<b>EUT Serial Number:</b> QV77002SG9
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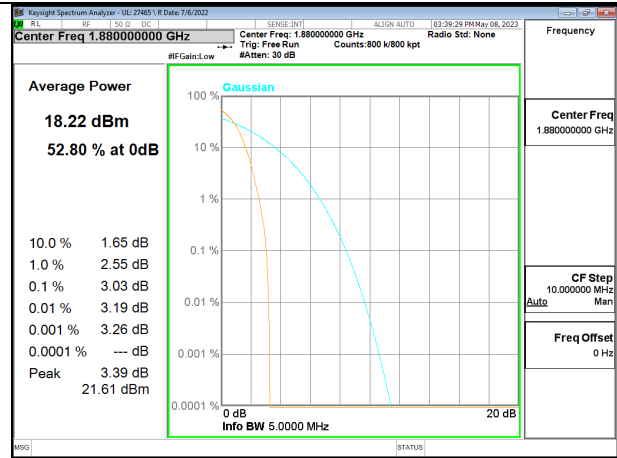
BAND 5 Rel 99 MID Channel



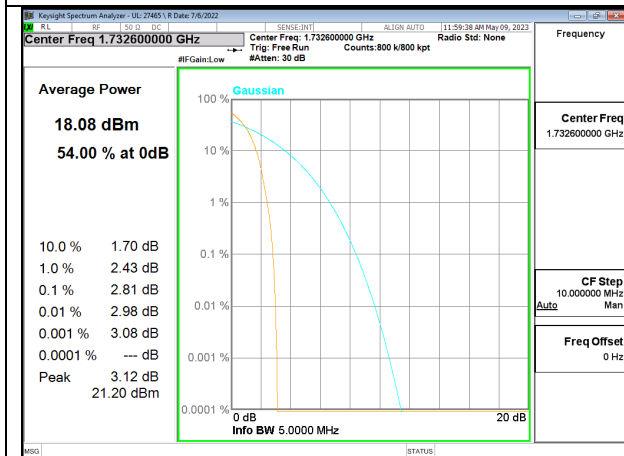
BAND 5 HSDPA MID Channel



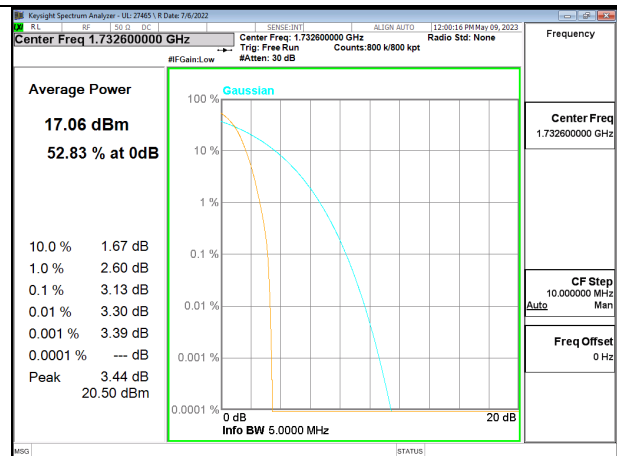
BAND 2 Rel 99 MID Channel



BAND 2 HSDPA MID Channel



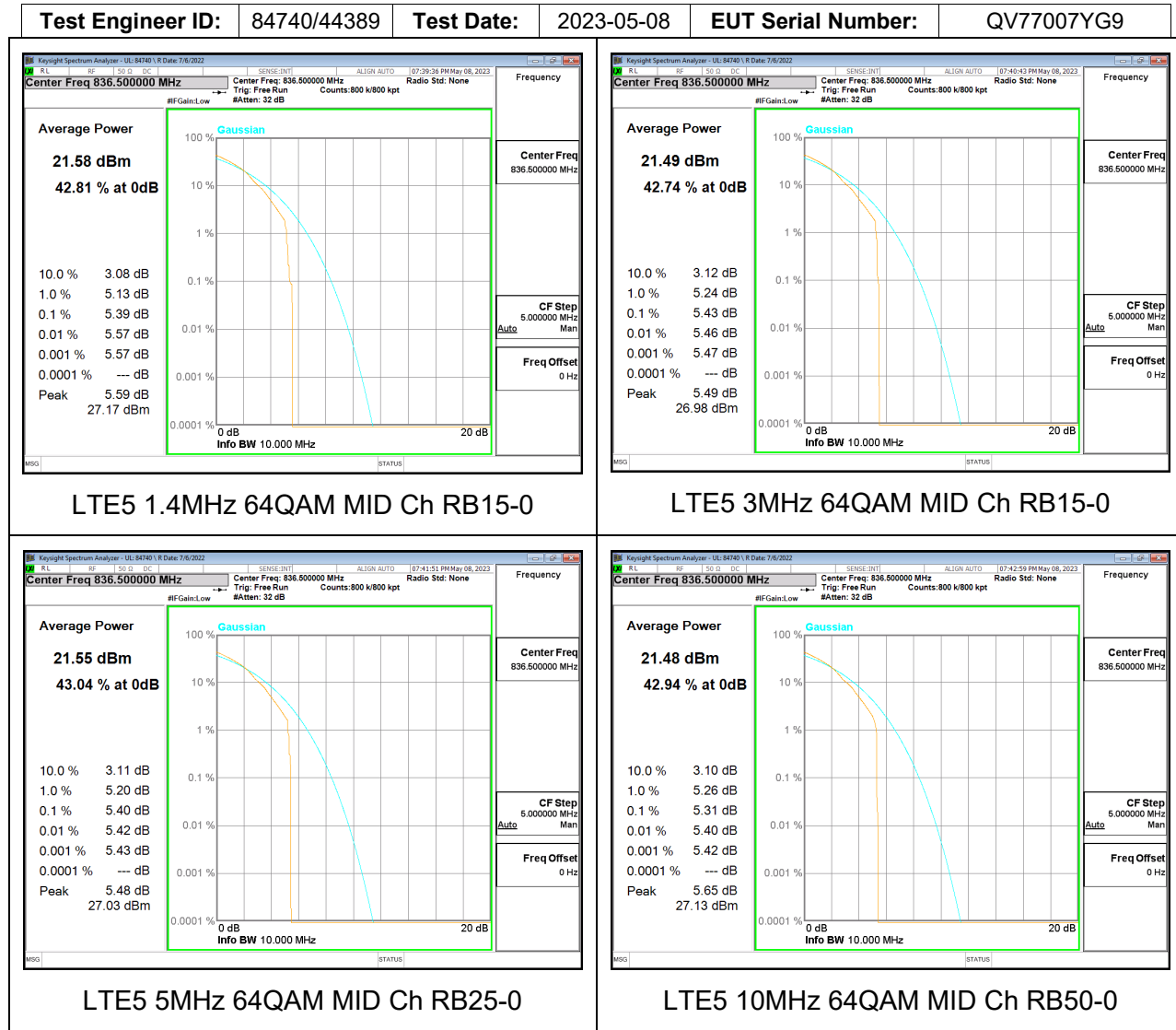
BAND 4 Rel 99 MID Channel



BAND 4 HSDPA MID Channel



9.3.3. LTE5



9.3.4. LTE66

<b>Test Engineer ID:</b> 85502/44389	<b>Test Date:</b> 2023-05-08	<b>EUT Serial Number:</b> QV77008AG9
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Band	Bandwidth (MHz)	Frequency (MHz)	RB Allocation	RB OffSet	Modulation	Conducted Power (dBm)		Peak-to-Average Power Ratio (dB)
						Peak	Average	
LTE Band 66	1.4MHz	1745.0	6	0	16QAM	23.67	18.24	5.43
	3MHz		15	0	16QAM	23.98	18.14	5.84
	5MHz		25	0	16QAM	24.25	18.05	6.20
	10MHz		50	0	16QAM	24.25	18.1	6.15
	15MHz		75	0	16QAM	24.29	17.97	6.32
	20MHz		100	0	16QAM	24.29	18	6.29
Duty Cycle Correction Factor (dB) =			0.00					
Peak-to-Average Power Ratio= Peak Reading - Average Reading - Duty Cycle Correction Factor								

## 9.4. BAND EDGE AND EMISSION MASK

### TEST PROCEDURE

The transmitter output was connected to a CMW500 Test Set and configured to operate at maximum power. The band edge emissions were measured at the required operating frequencies in each band on the Spectrum Analyzer.

For each band edge measurement:

- (iii) Set the spectrum analyzer span to include the block edge frequency.
- (iv) Set a marker to point the corresponding band edge frequency in each test case.
- (v) Set display line at -13 dBm
- (vi) Set resolution bandwidth to at least 1% of emission bandwidth.

### TEST PROCEDURE (FCC LTE BAND 41)

(m)(6) Measurement procedure. Compliance with these rules is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed; for mobile digital stations, in the 1 megahertz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least two percent may be employed, except when the 1 megahertz band is 2495-2496 MHz, in which case a resolution bandwidth of at least one percent may be employed. A narrower resolution bandwidth is permitted in all cases to improve measurement accuracy provided the measured power is integrated over the full required measurement bandwidth (i.e. 1 megahertz or 1 percent of emission bandwidth, as specified; or 1 megahertz or 2 percent for mobile digital stations, except in the band 2495-2496 MHz). The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power. With respect to television operations, measurements must be made of the separate visual and aural operating powers at sufficiently frequent intervals to ensure compliance with the rules.

### RESULTS

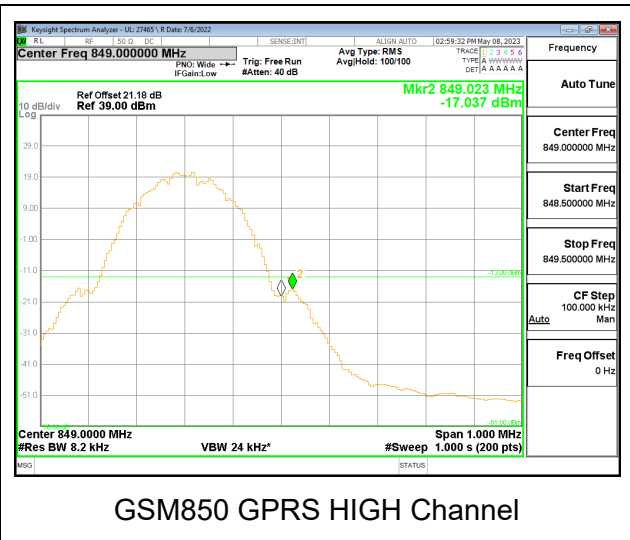
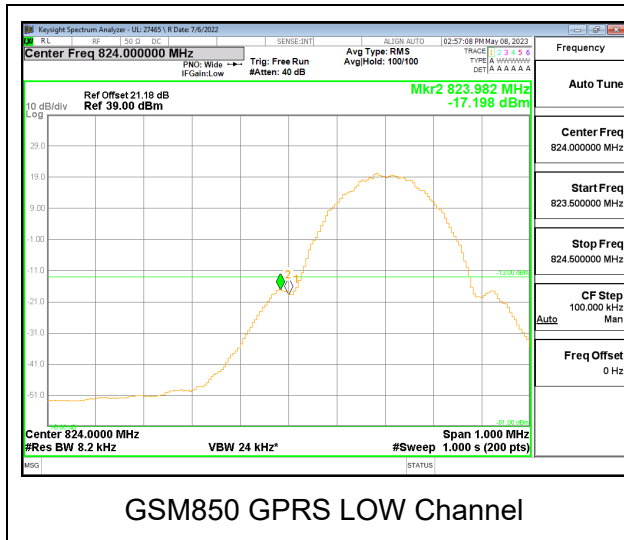
### 9.4.1. GSM850

#### LIMITS

FCC: §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.

<b>Test Engineer ID:</b>	27465/44389	<b>Test Date:</b>	2023-05-08	<b>EUT Serial Number:</b>	QV77002SG9
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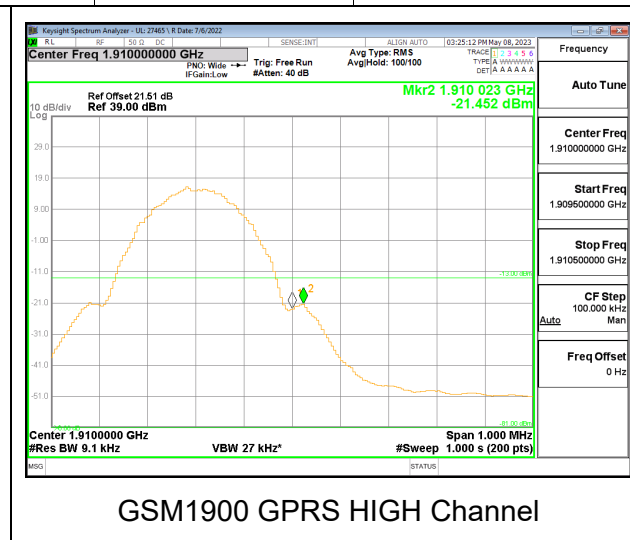
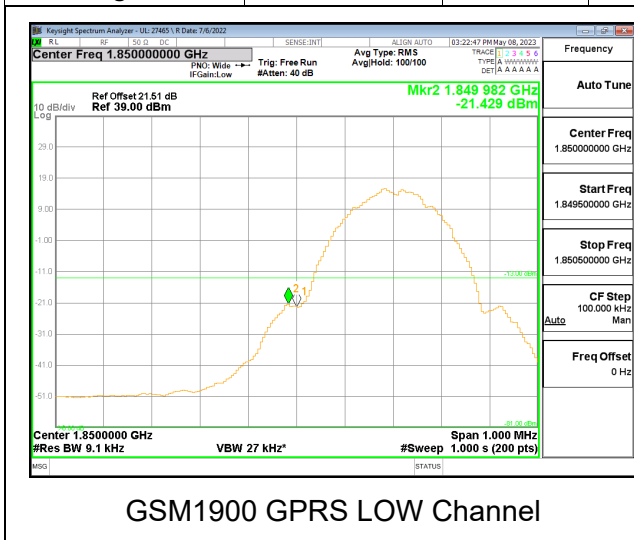
### 9.4.2. GSM1900

#### LIMITS

FCC: §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.

<b>Test Engineer ID:</b>	27465/44389	<b>Test Date:</b>	2023-05-08	<b>EUT Serial Number:</b>	QV77002SG9
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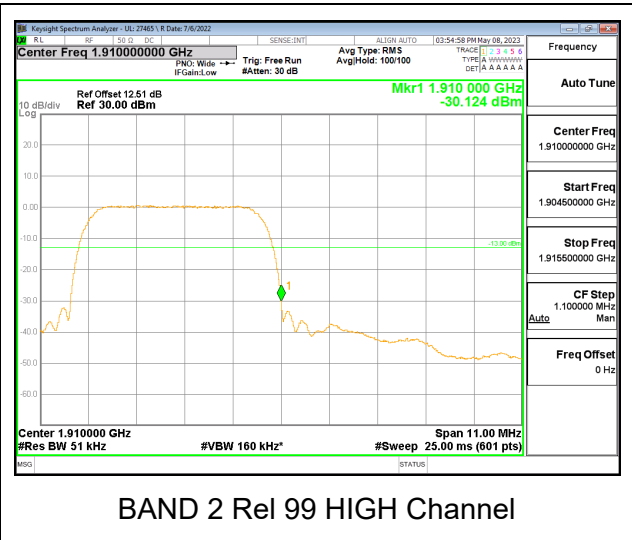
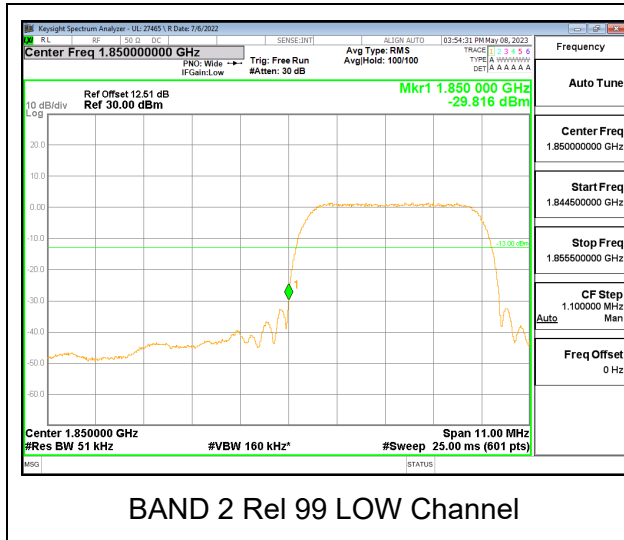
### 9.4.3. WCDMA BAND 2

#### LIMITS

FCC: §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.

<b>Test Engineer ID:</b>	27465/44389	<b>Test Date:</b>	2023-05-08	<b>EUT Serial Number:</b>	QV77002SG9
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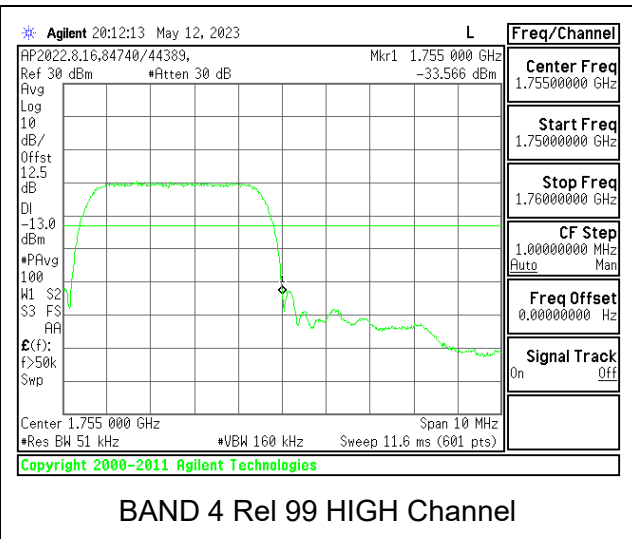
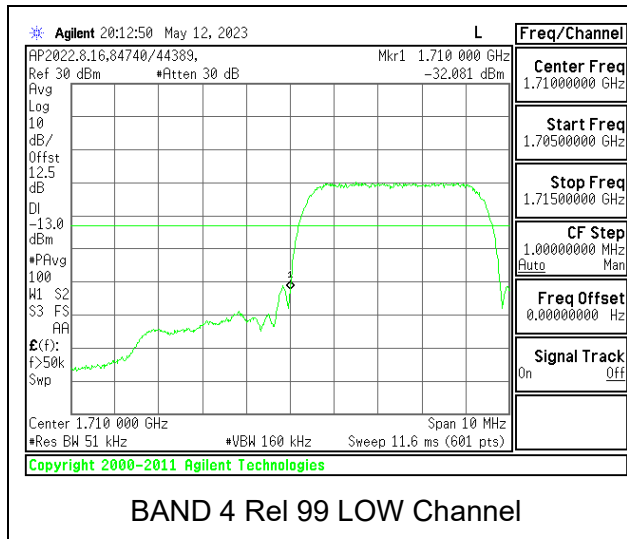
### 9.4.4. WCDMA BAND 4

#### LIMITS

FCC: §27.53(h)

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.

<b>Test Engineer ID:</b>	27465/44389	<b>Test Date:</b>	2023-05-08	<b>EUT Serial Number:</b>	QV77002SG9
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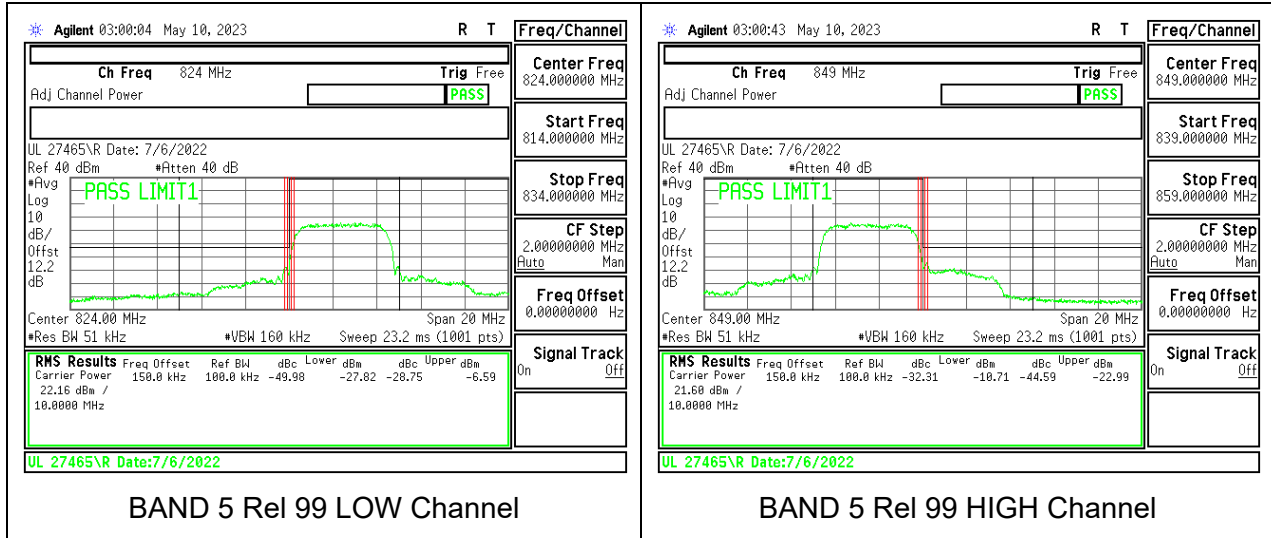
### 9.4.5. WCDMA BAND 5

#### LIMITS

FCC: §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.

<b>Test Engineer ID:</b>	27465/44389	<b>Test Date:</b>	2023-05-10	<b>EUT Serial Number:</b>	QV77002SG9
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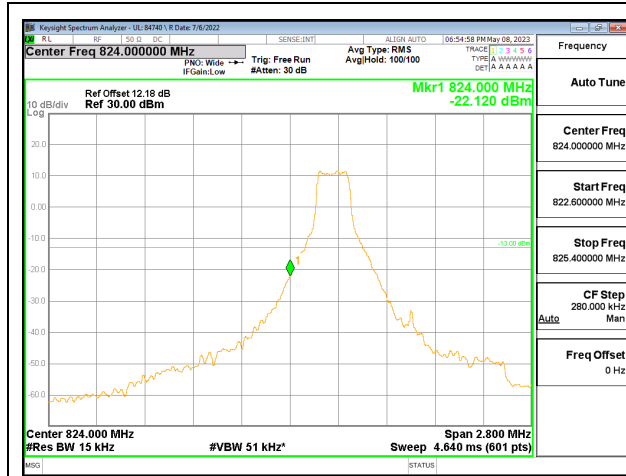


**9.4.6. LTE5****LIMITS**

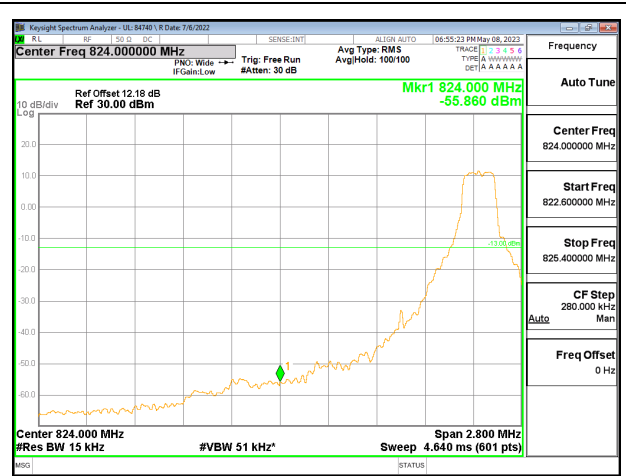
FCC: §22.917

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.

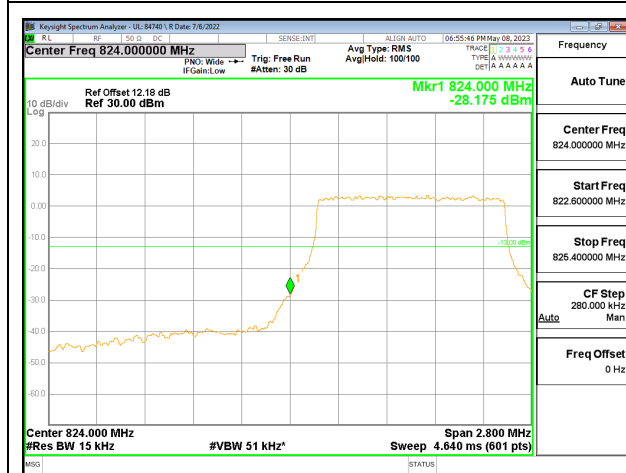
<b>Test Engineer ID:</b>	27465/44389	<b>Test Date:</b>	2023-05-10	<b>EUT Serial Number:</b>	QV77002SG9
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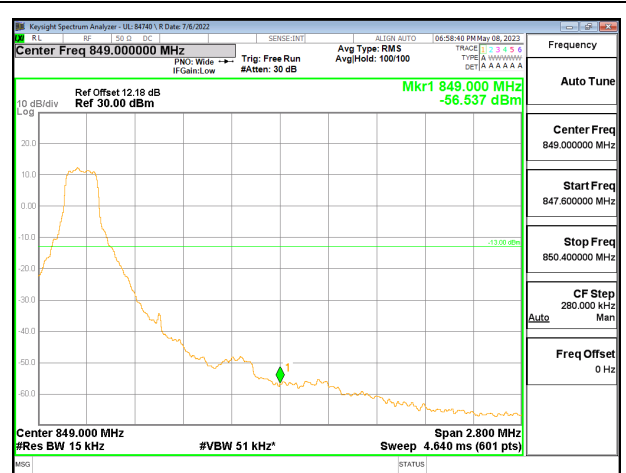
LTE5 1.4MHz 64QAM LOW Ch RB1-0



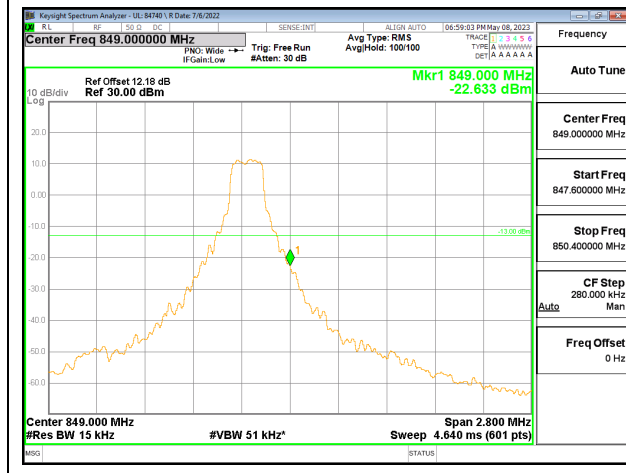
LTE5 64QAM QPSK LOW Ch RB1-5



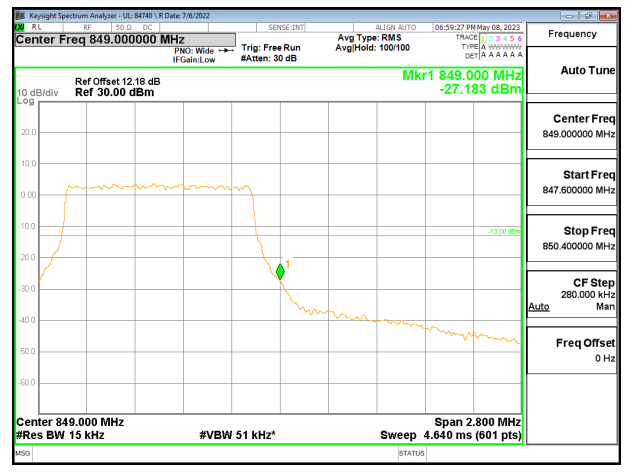
LTE5 1.4MHz 64QAM LOW Ch RB6-0



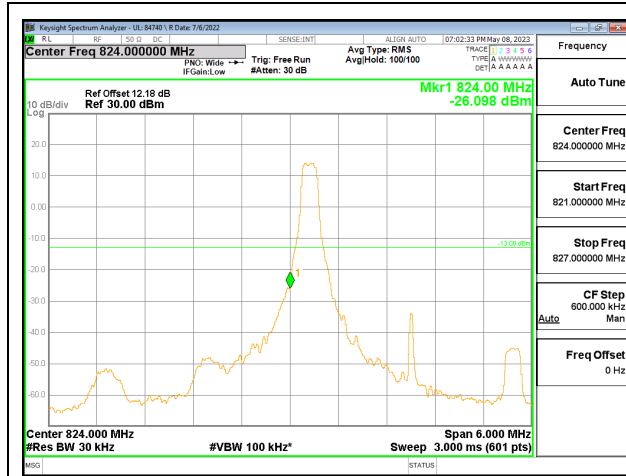
LTE5 64QAM QPSK HIGH Ch RB1-0



LTE5 1.4MHz 64QAM HIGH Ch RB1-5



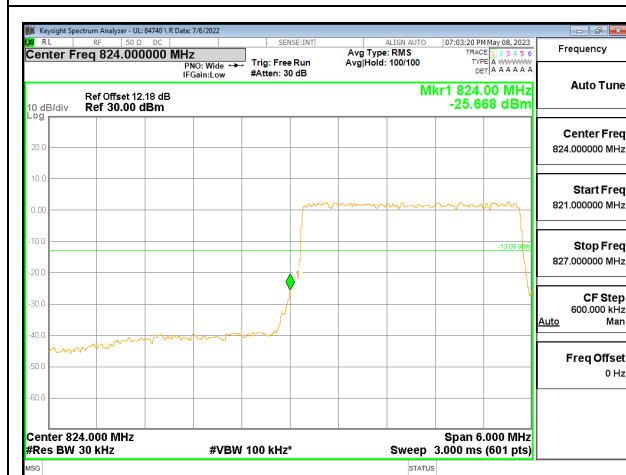
LTE5 64QAM QPSK HIGH Ch RB6-0



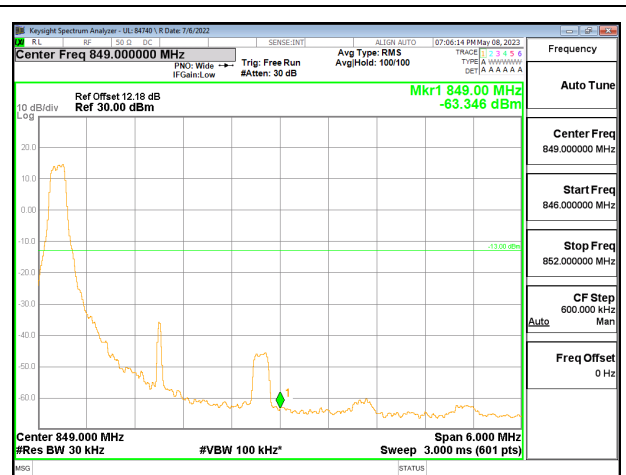
LTE5 3MHz 64QAM LOW Ch RB1-0



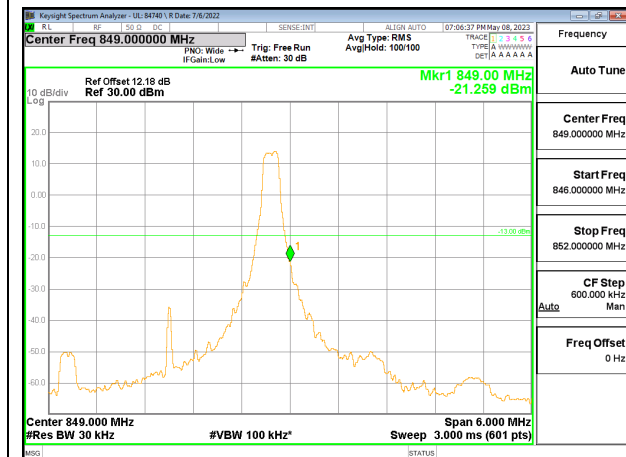
LTE5 3MHz 64QAM LOW Ch RB1-14



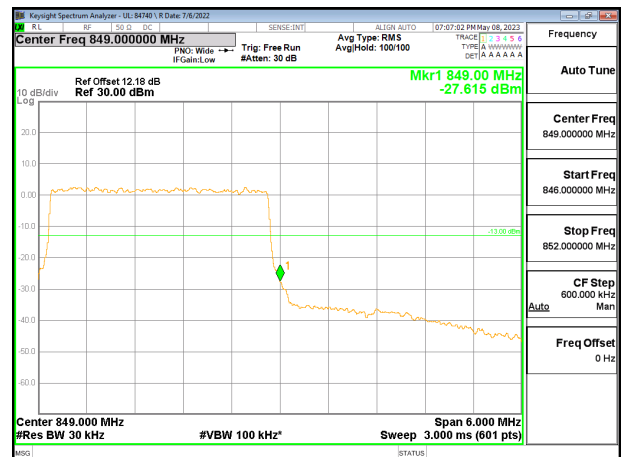
LTE5 3MHz 64QAM LOW Ch RB15-0



LTE5 3MHz 64QAM HIGH Ch RB1-0

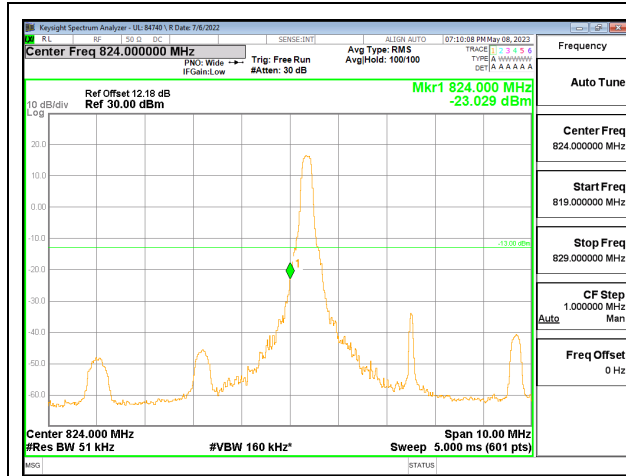


LTE5 3MHz 64QAM HIGH Ch RB1-14

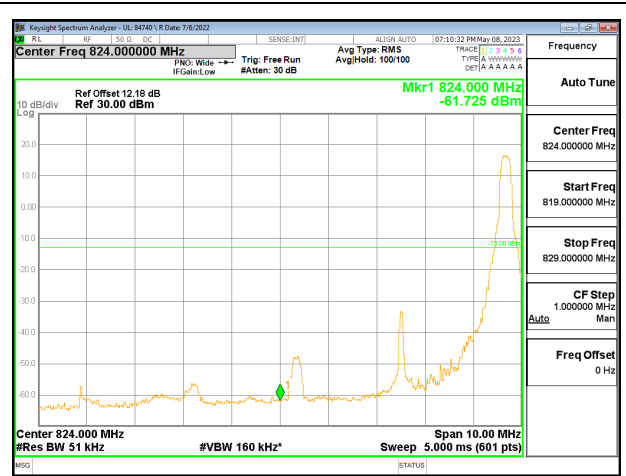


LTE5 3MHz 64QAM HIGH Ch RB15-0

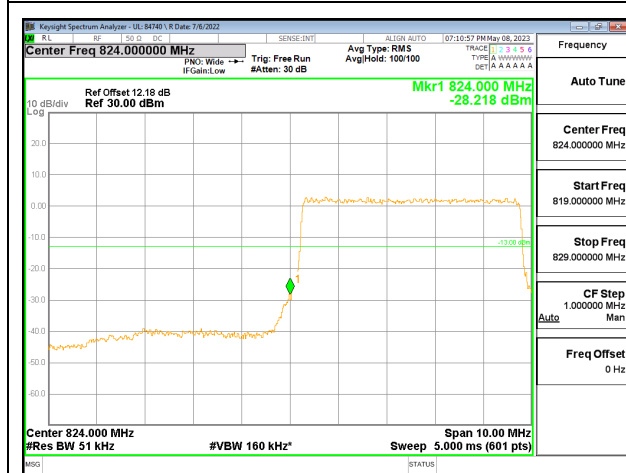




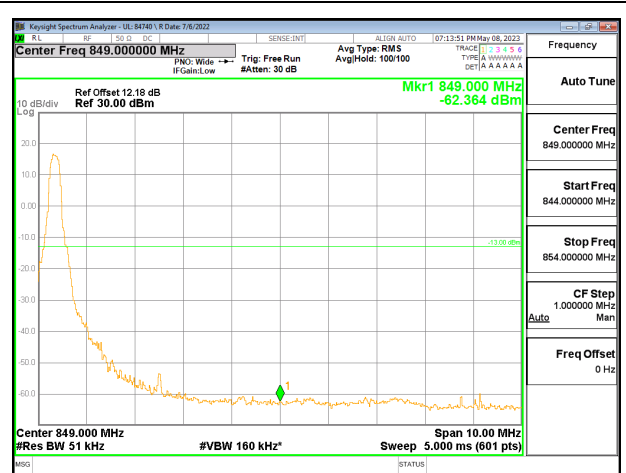
LTE5 5MHz 64QAM LOW Ch RB1-0



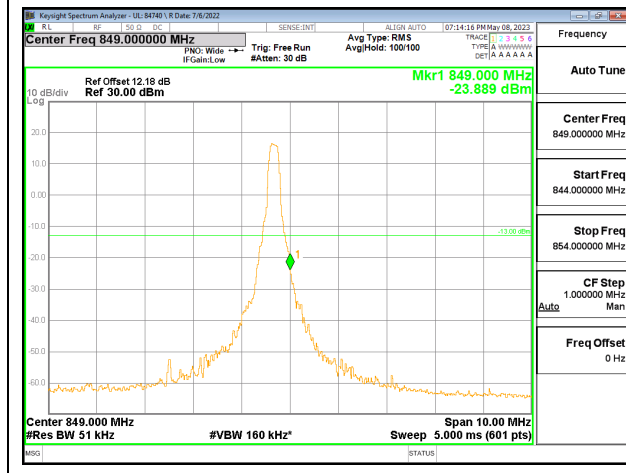
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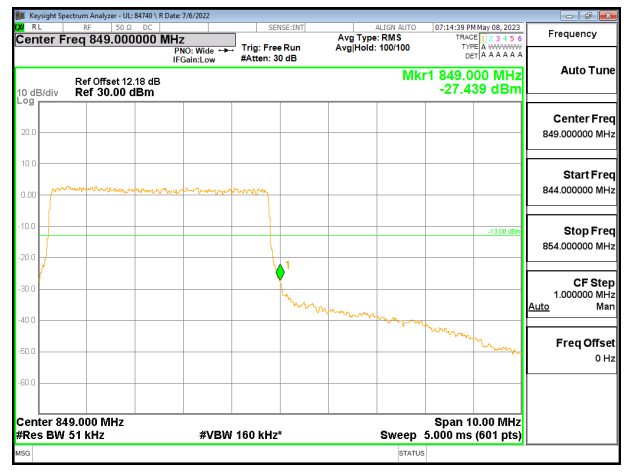
LTE5 5MHz 64QAM LOW Ch RB25-0



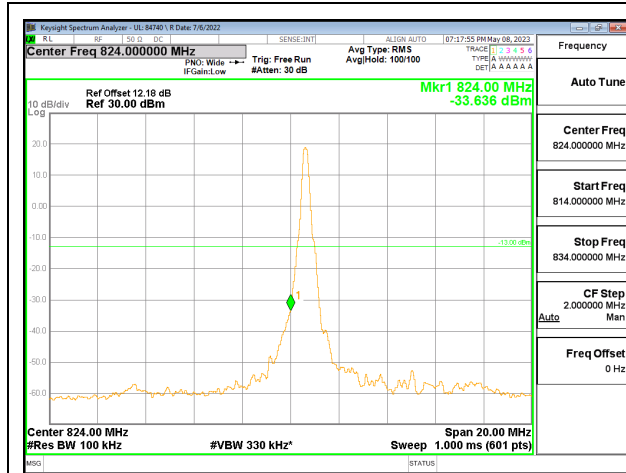
LTE5 5MHz 64QAM HIGH Ch RB1-0



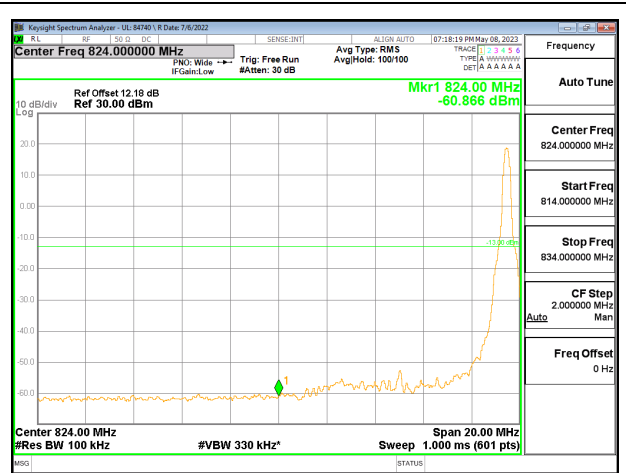
LTE5 5MHz 64QAM HIGH Ch RB1-24



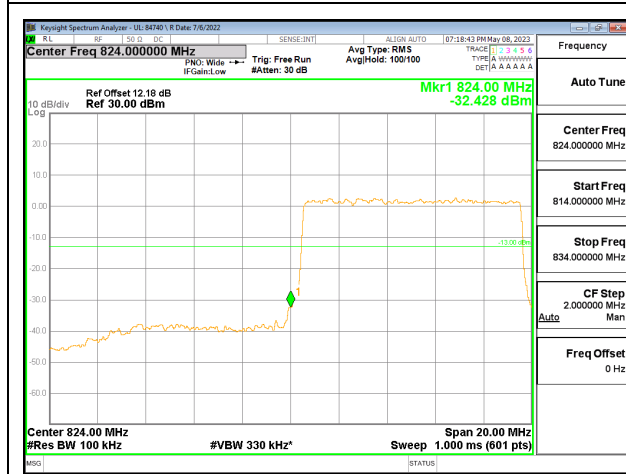
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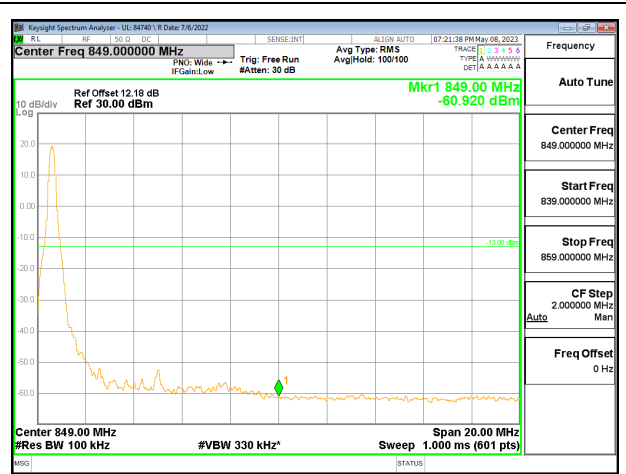
LTE5 10MHz 64QAM LOW Ch RB1-0



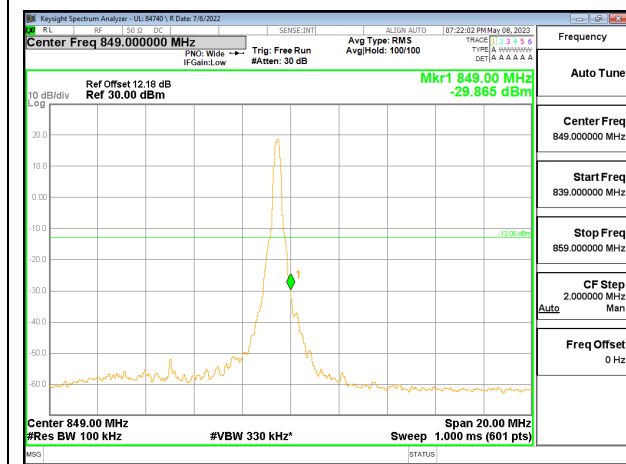
LTE5 10MHz 64QAM LOW Ch RB1-49



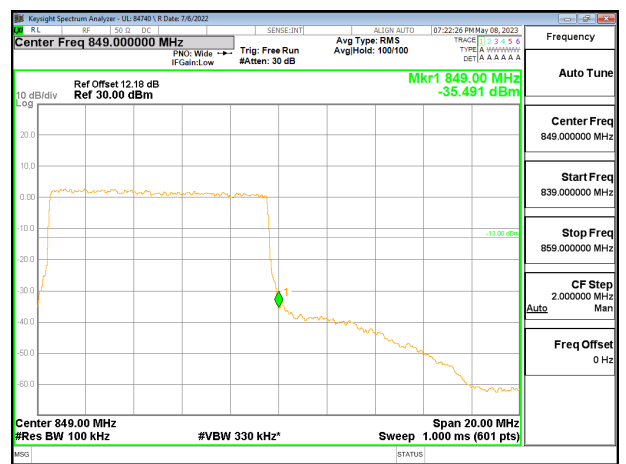
LTE5 10MHz 64QAM LOW Ch RB50-0



LTE5 10MHz 64QAM HIGH Ch RB1-0



LTE5 10MHz 64QAM HIGH Ch RB1-49



LTE5 10MHz 64QAM HIGH Ch RB50-0

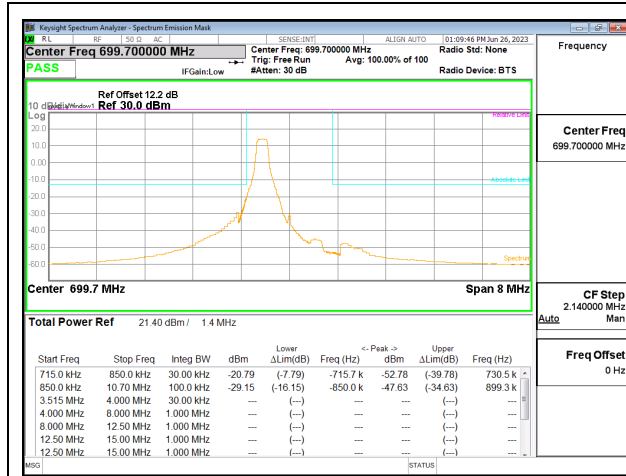
### 9.4.7. LTE12

#### LIMITS

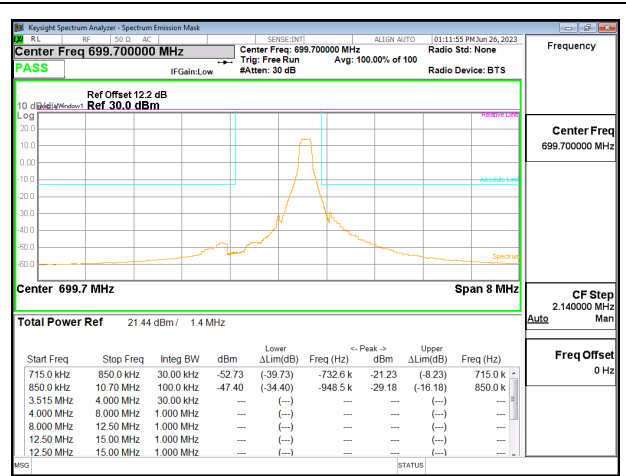
FCC: §27.53

(g) For operations in the 600 MHz band and 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.

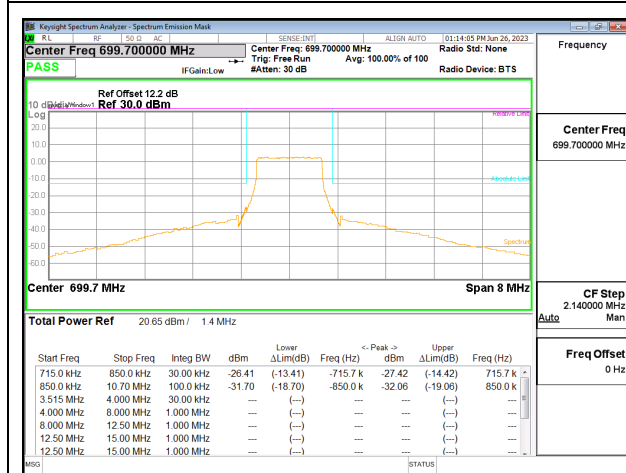
<b>Test Engineer ID:</b>	27465/44389	<b>Test Date:</b>	2023-06-26	<b>EUT Serial Number:</b>	QV77007YG9
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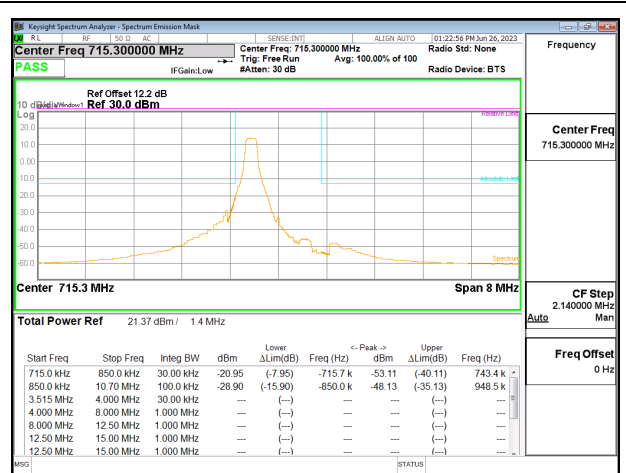
LTE12 1.4MHz 64QAM LOW Ch RB1-0



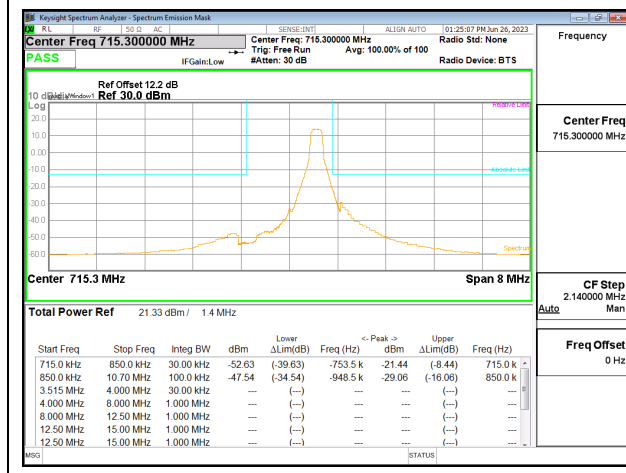
LTE12 1.4MHz 64QAM LOW Ch RB1-5



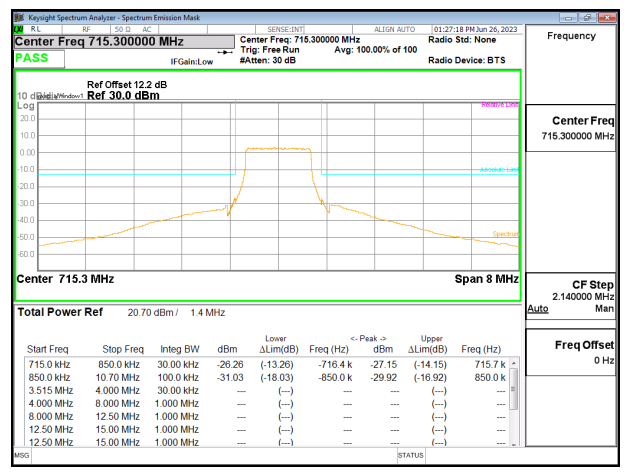
LTE12 1.4MHz 64QAM LOW Ch RB6-0



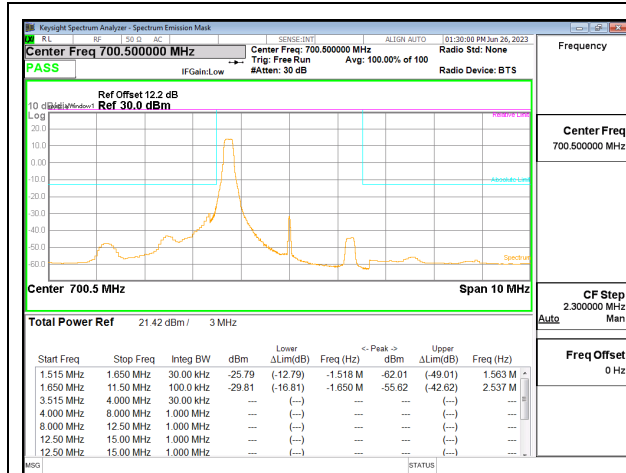
LTE12 1.4MHz 64QAM HIGH Ch RB1-0



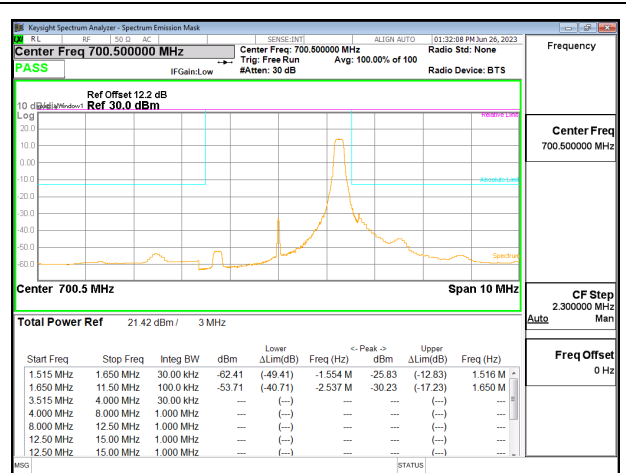
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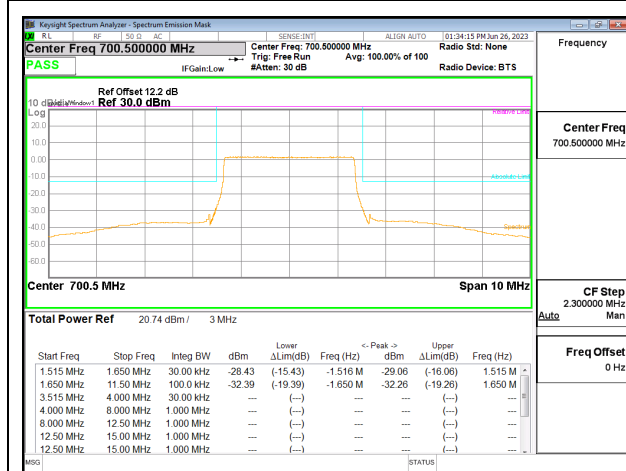
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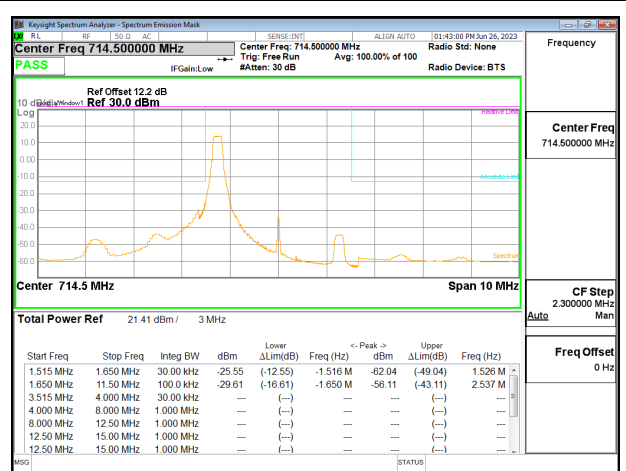
LTE12 3MHz 64QAM LOW Ch RB1-0



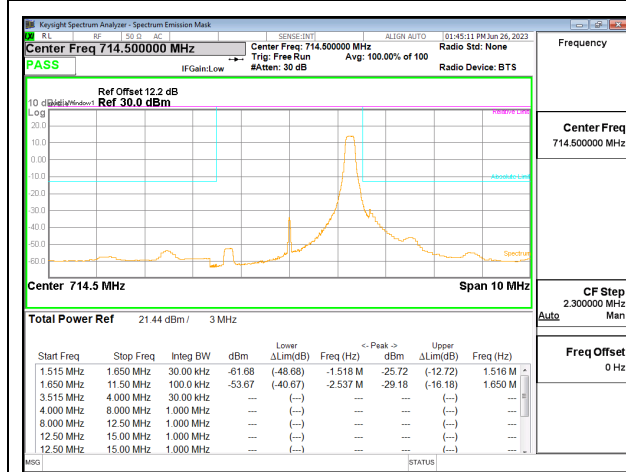
LTE12 3MHz 64QAM LOW Ch RB1-14



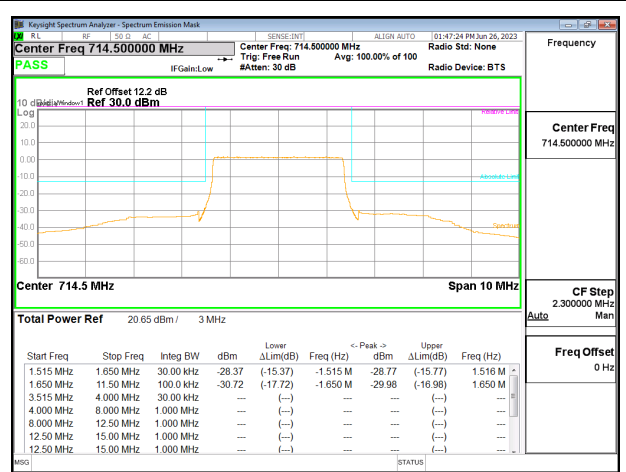
LTE12 3MHz 64QAM LOW Ch RB15-0



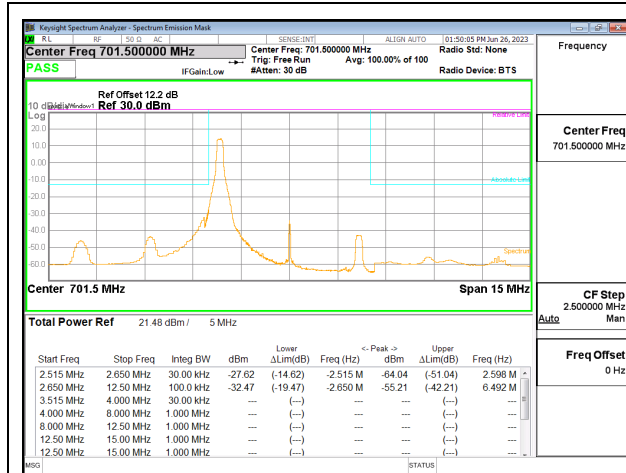
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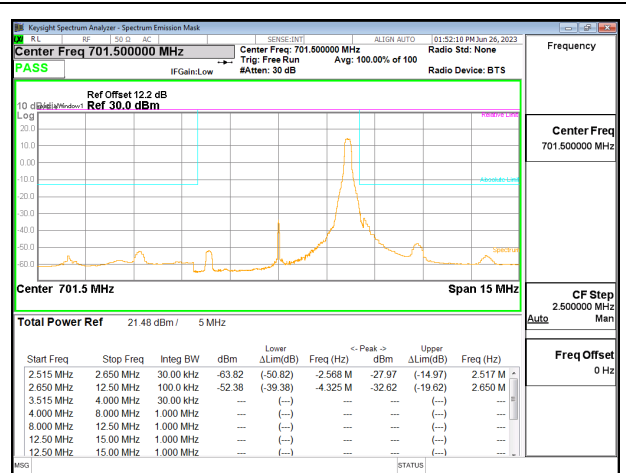
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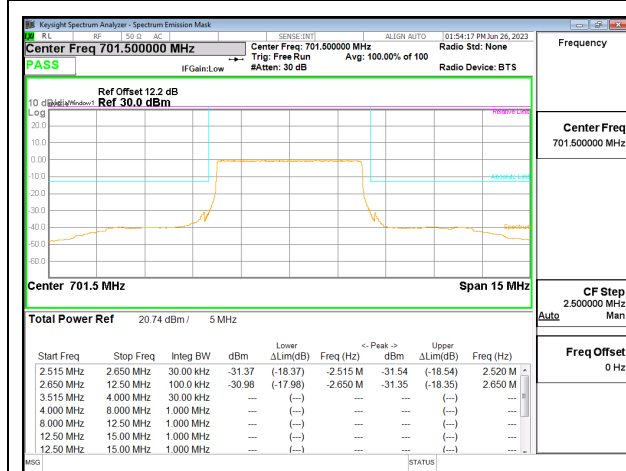
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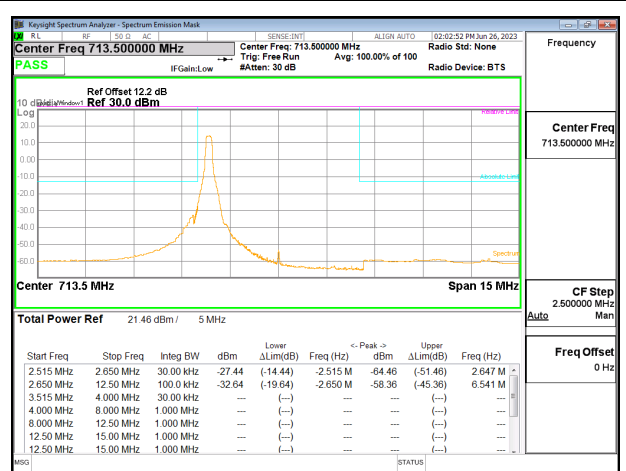
LTE12 5MHz 64QAM LOW Ch RB1-0



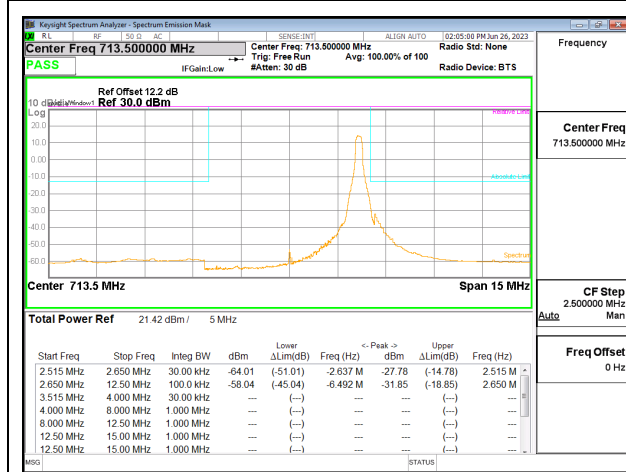
LTE12 5MHz 64QAM LOW Ch RB1-24



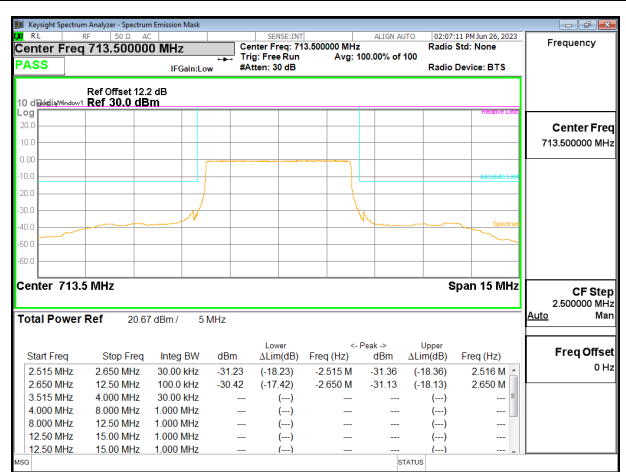
LTE12 5MHz 64QAM LOW Ch RB25-0



LTE12 5MHz 64QAM HIGH Ch RB1-0



LTE12 5MHz 64QAM HIGH Ch RB1-24



LTE12 5MHz 64QAM HIGH Ch RB25-0