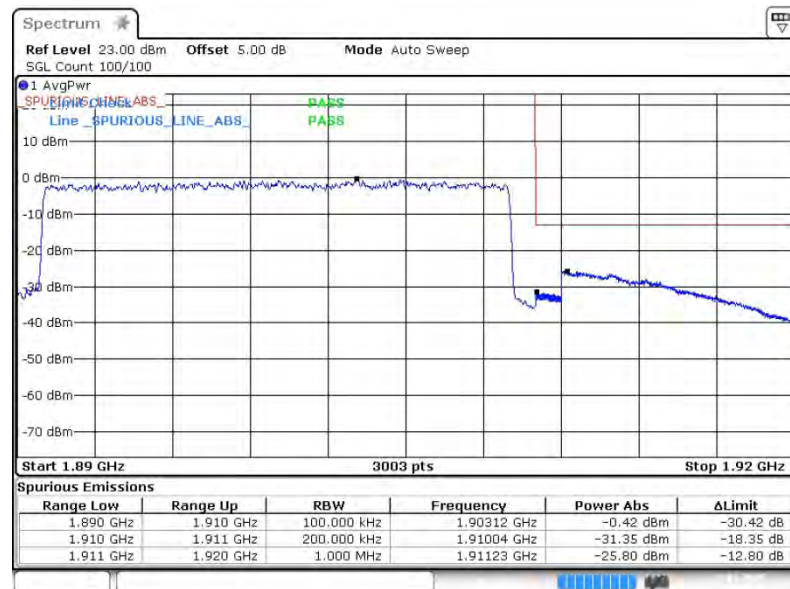




Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 99



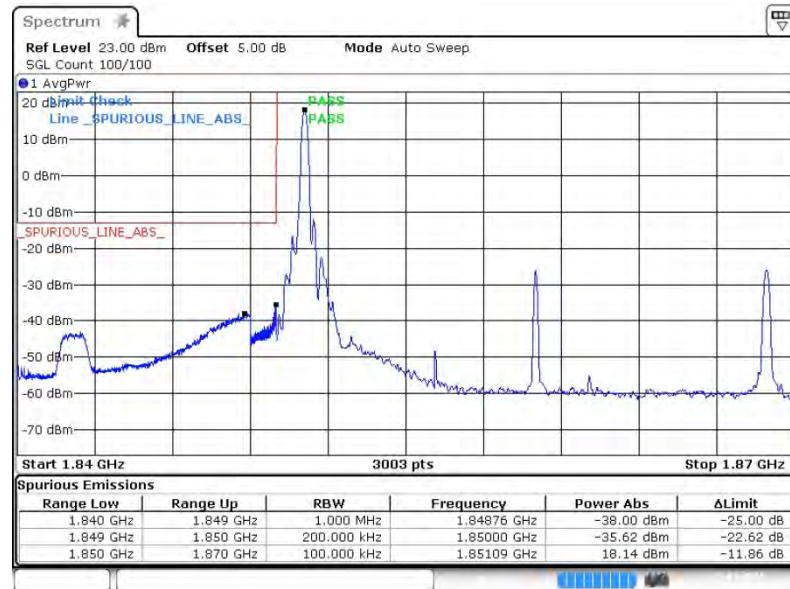
Higher Band Edge Plot for QPSK-RB Size 100, RB Offset 0



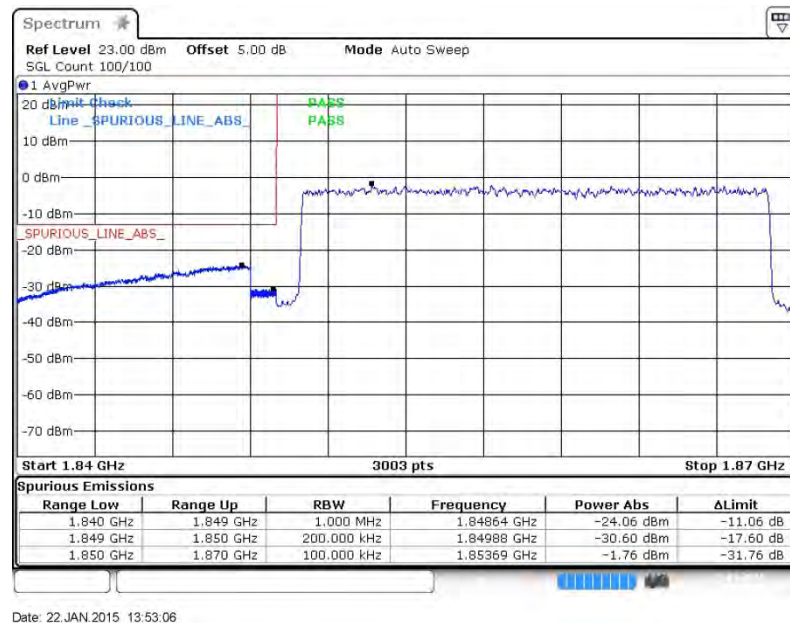


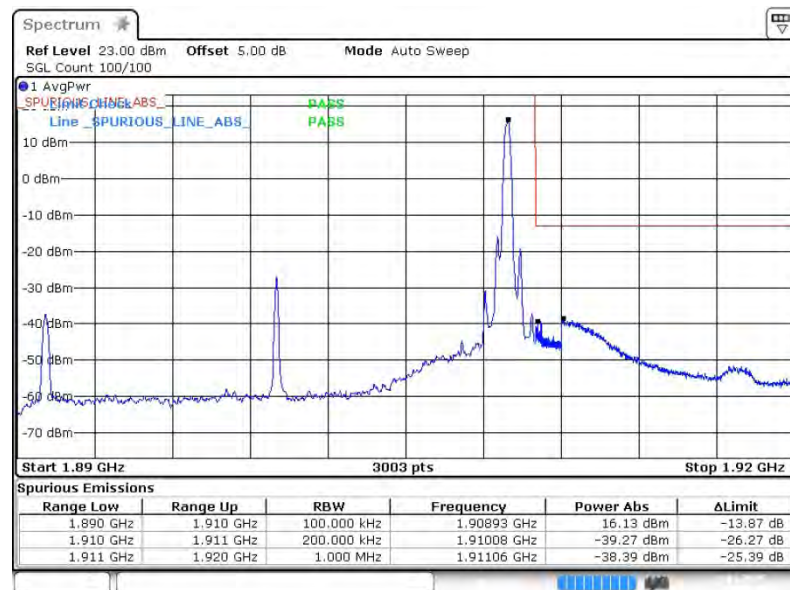
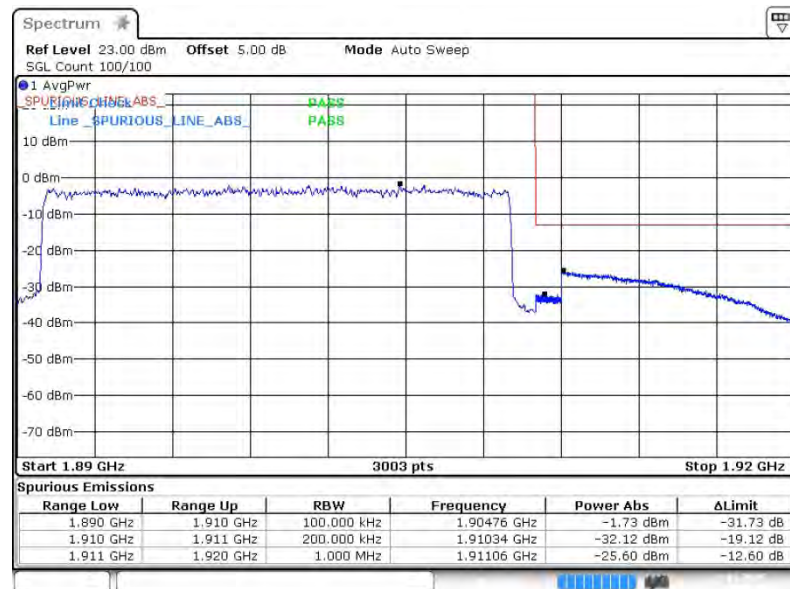
|        |            |              |               |
|--------|------------|--------------|---------------|
| Band : | LTE Band 2 | Band Width : | 20MHz / 16QAM |
|--------|------------|--------------|---------------|

## Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0



## Lower Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



**Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 99****Higher Band Edge Plot for 16QAM-RB Size 100, RB Offset 0**



Band : LTE Band 4

Band Width : 1.4MHz / QPSK

## Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

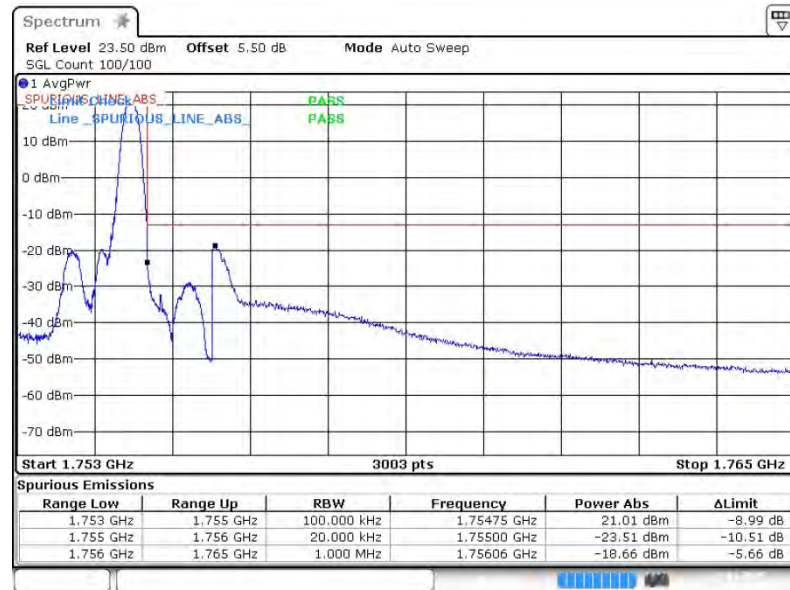


## Lower Band Edge Plot for QPSK-RB Size 6, RB Offset 0

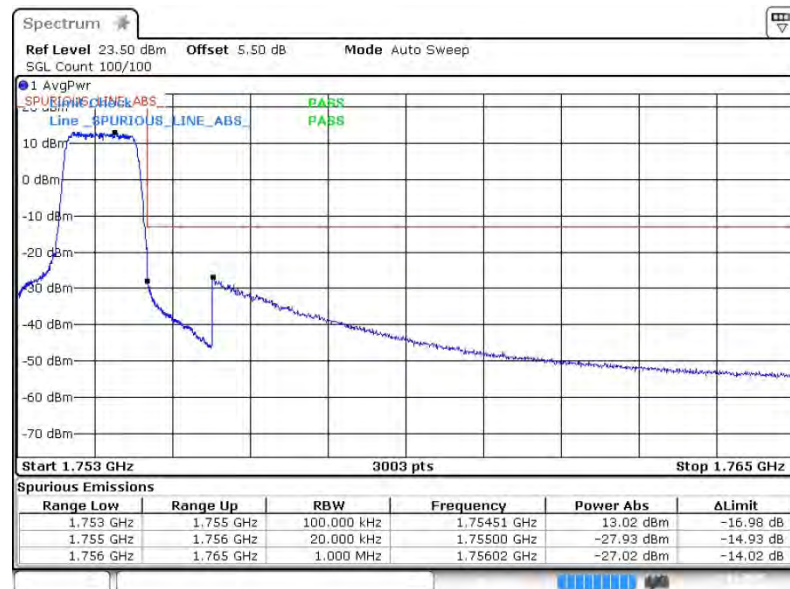




Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 5



Higher Band Edge Plot for QPSK-RB Size 6, RB Offset 0





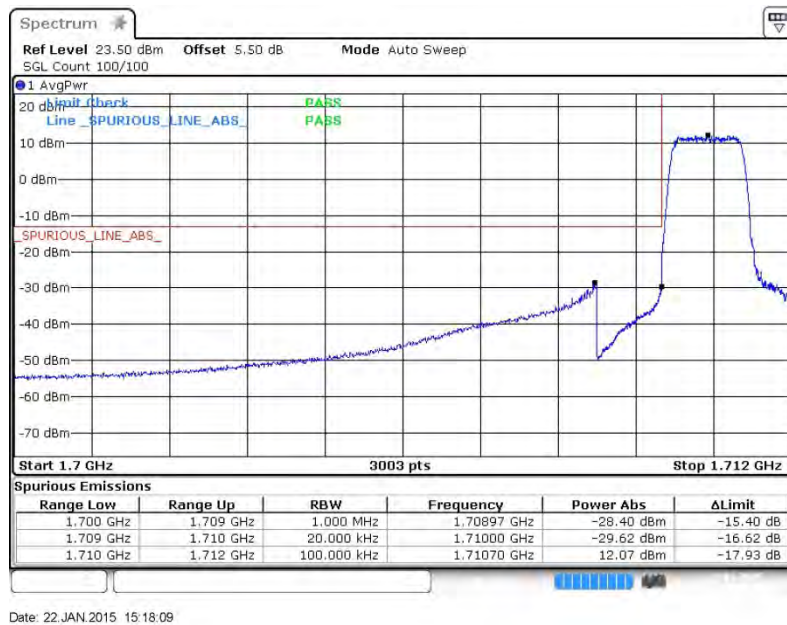
Band : LTE Band 4

Band Width : 1.4MHz / 16QAM

## Lower Band Edge Plot for 16QAM -RB Size 1, RB Offset 0



## Lower Band Edge Plot for 16QAM-RB Size 6, RB Offset 0

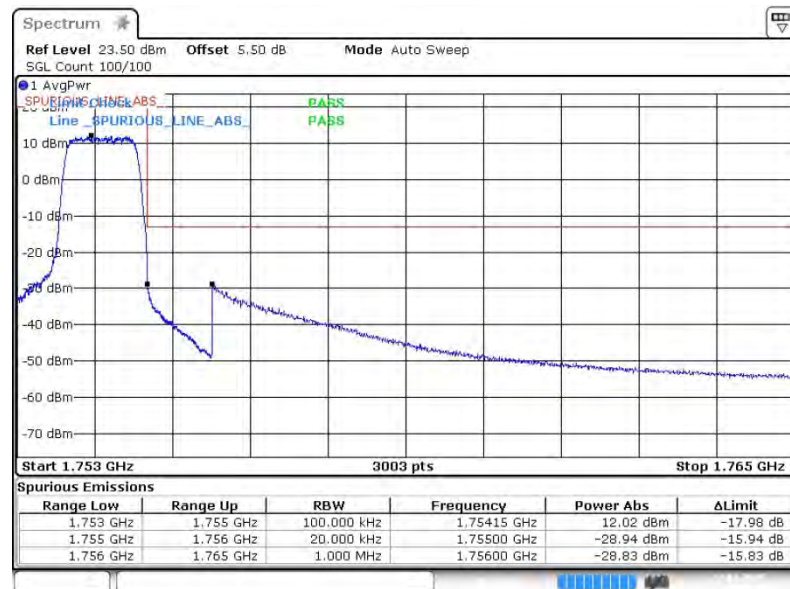




Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 5



Higher Band Edge Plot for 16QAM-RB Size 6, RB Offset 0

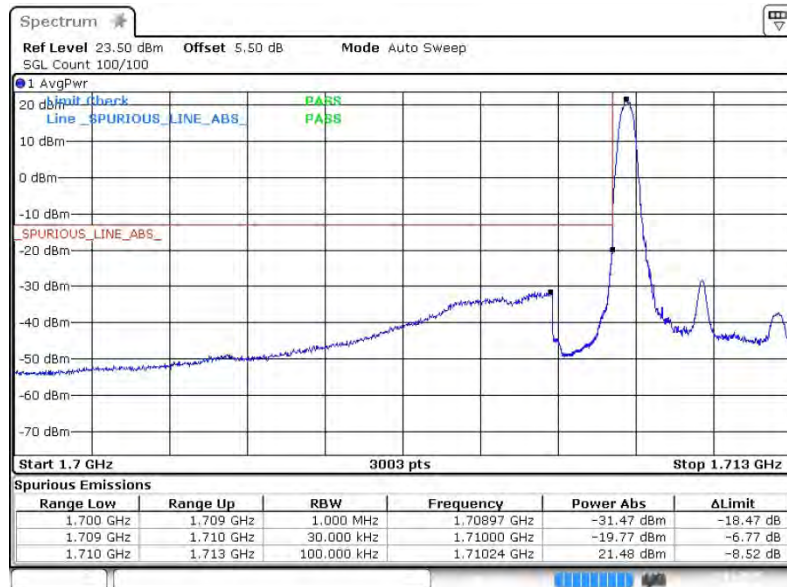




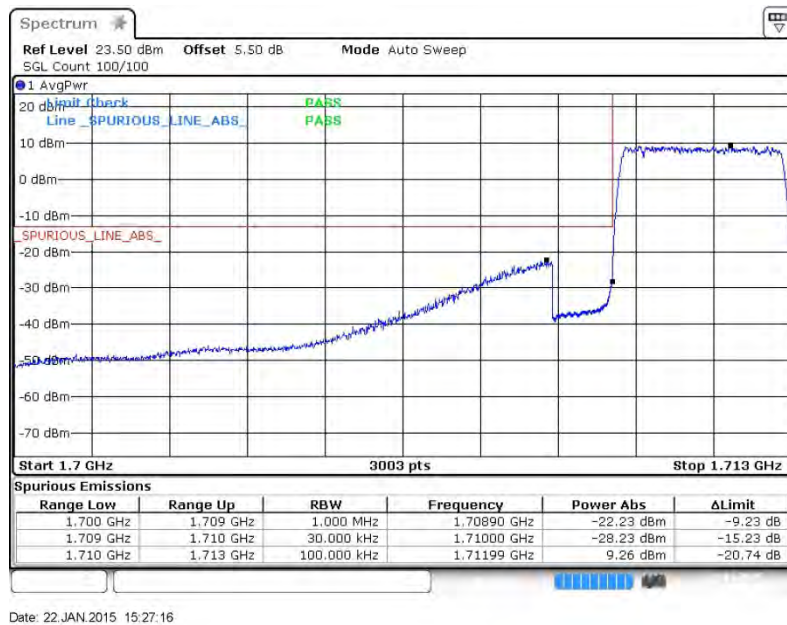
Band : LTE Band 4

Band Width : 3MHz / QPSK

## Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

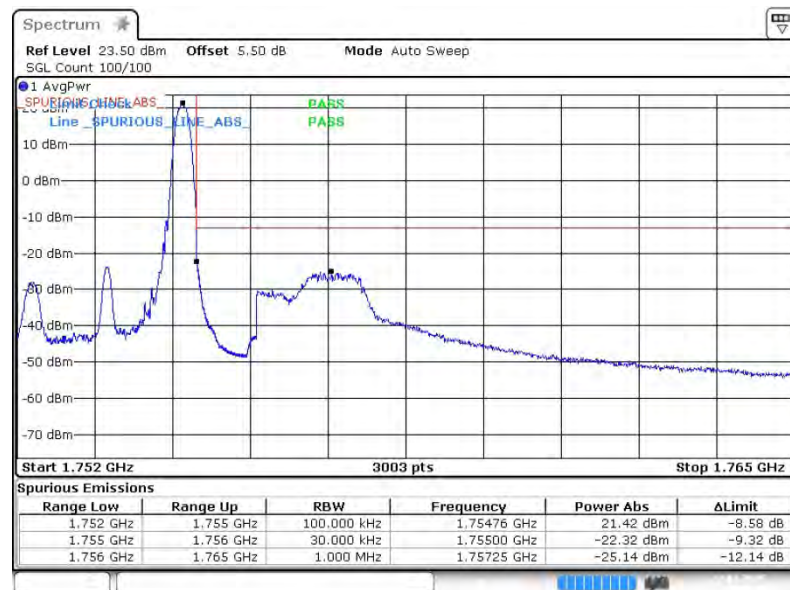


## Lower Band Edge Plot for QPSK-RB Size 15, RB Offset 0

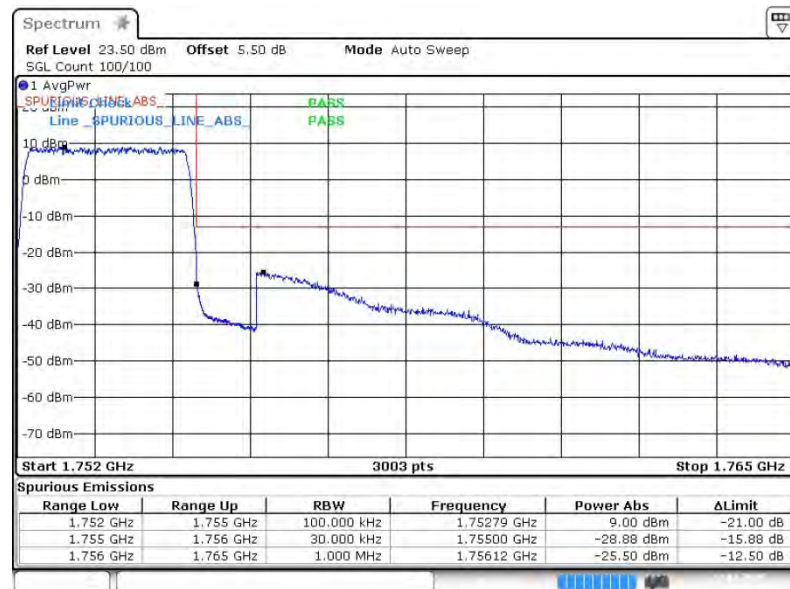




## Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 14



## Higher Band Edge Plot for QPSK-RB Size 15, RB Offset 0





Band : LTE Band 4

Band Width : 3MHz / 16QAM

## Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

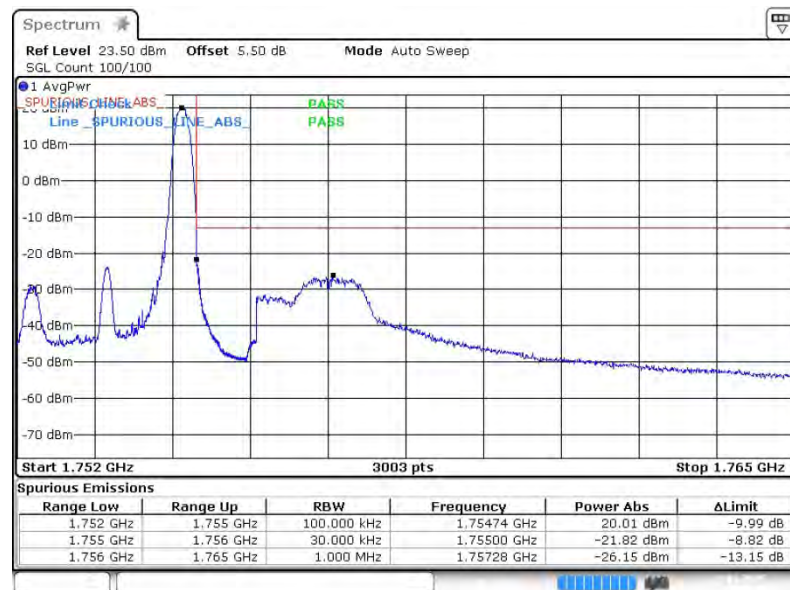


## Lower Band Edge Plot for 16QAM-RB Size 15, RB Offset 0

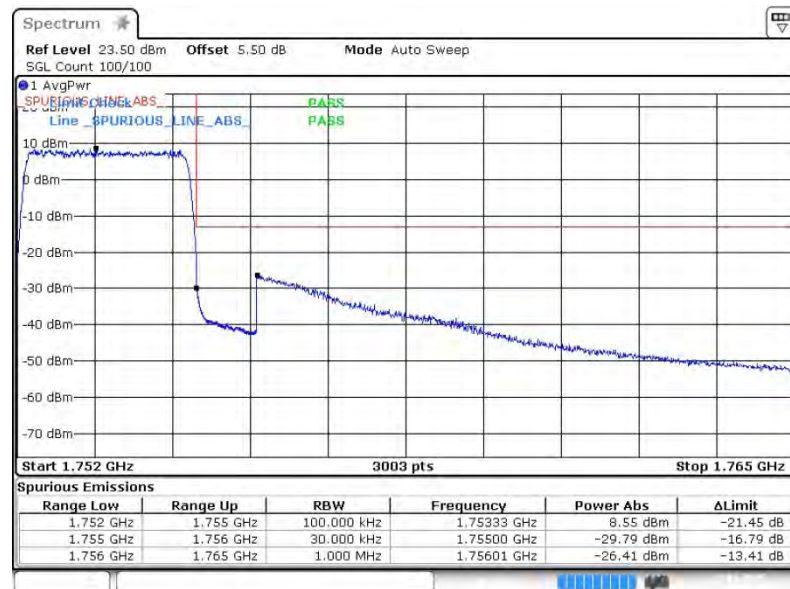




## Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 14



## Higher Band Edge Plot for 16QAM-RB Size 15, RB Offset 0

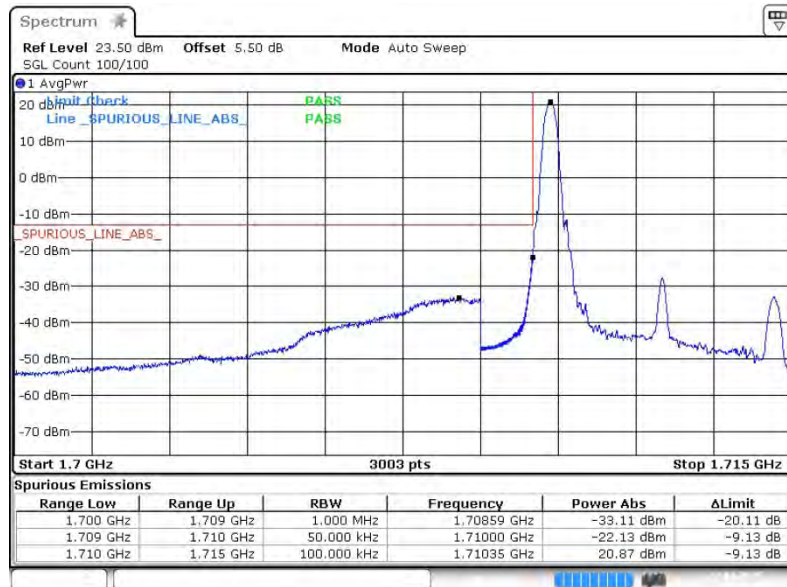




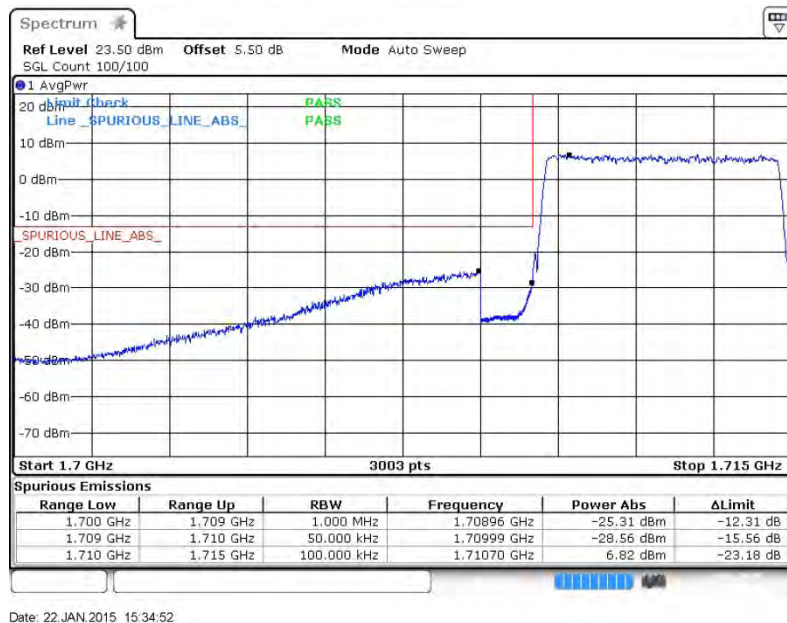
Band : LTE Band 4

Band Width : 5MHz / QPSK

## Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

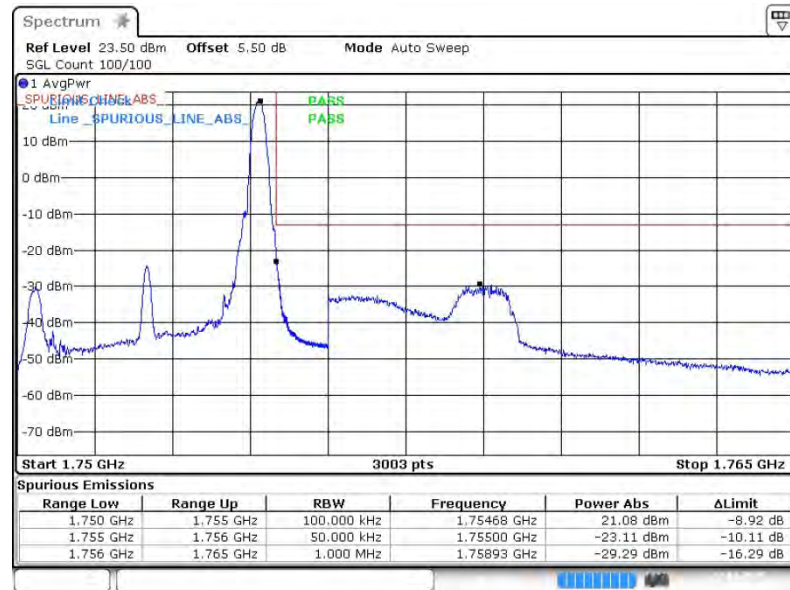


## Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0

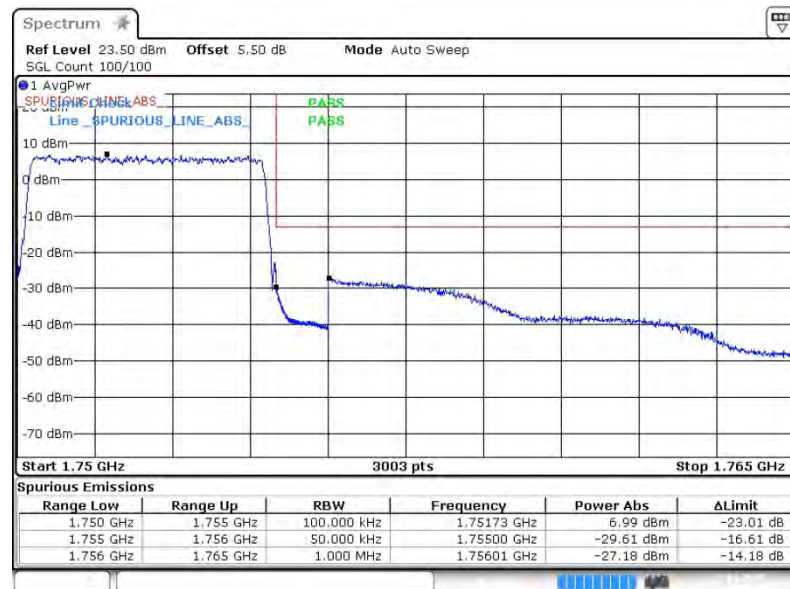




### Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



### Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0

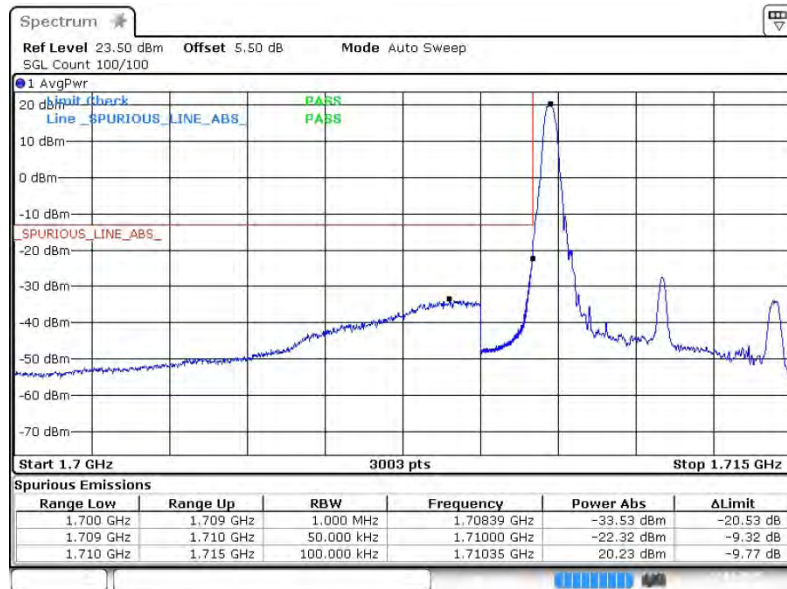




Band : LTE Band 4

Band Width : 5MHz / 16QAM

## Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

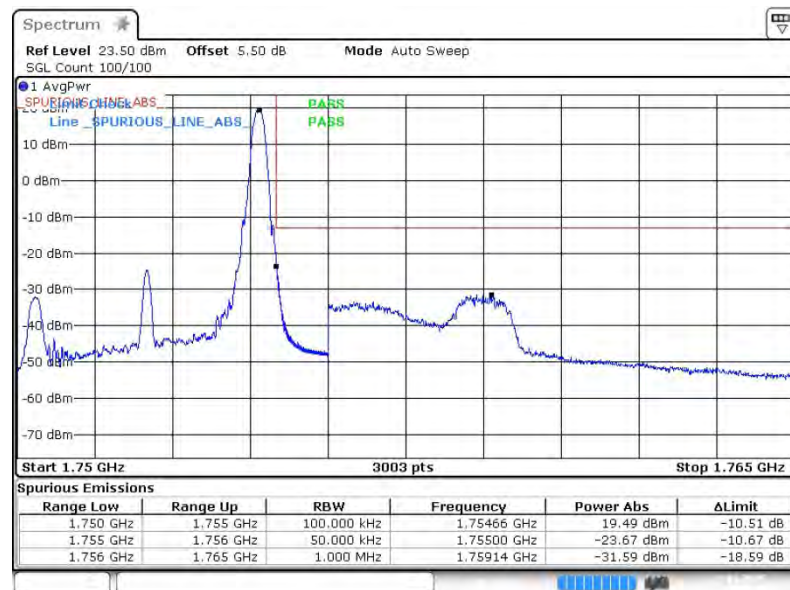


## Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0

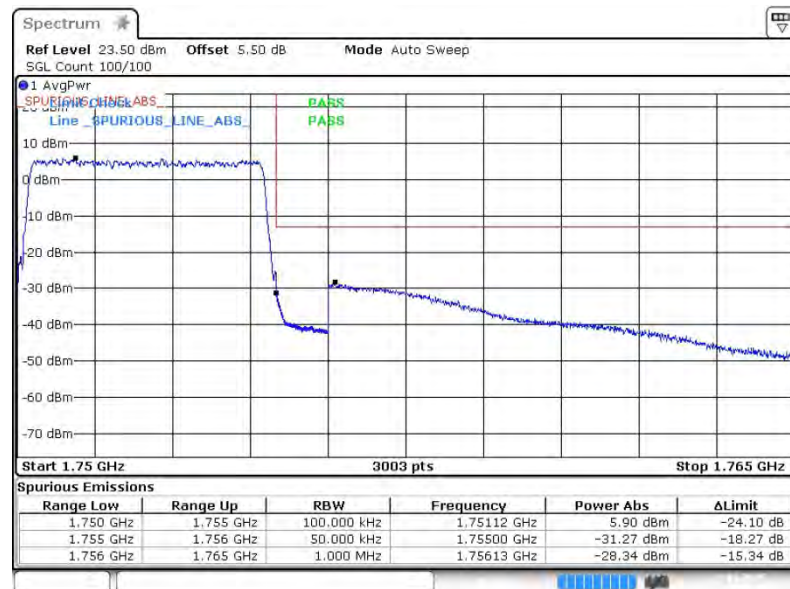




## Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



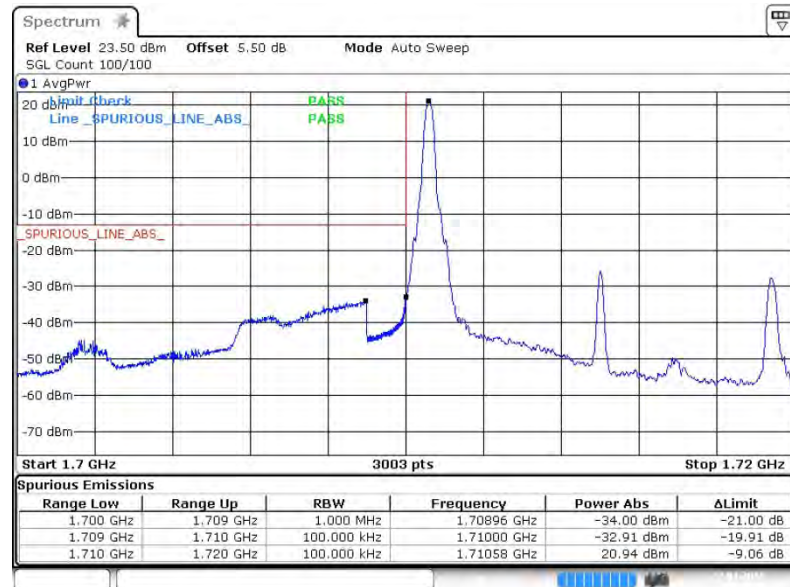
## Higher Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



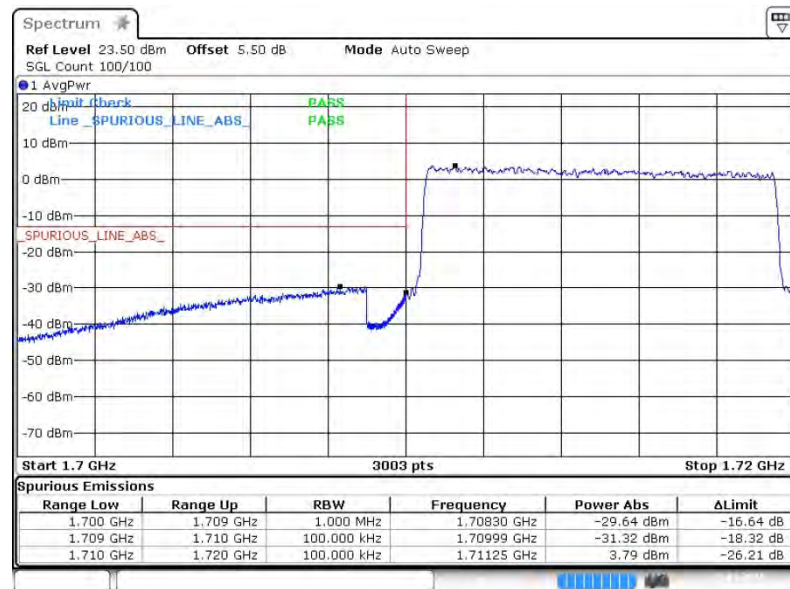


|        |            |              |              |
|--------|------------|--------------|--------------|
| Band : | LTE Band 4 | Band Width : | 10MHz / QPSK |
|--------|------------|--------------|--------------|

## Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

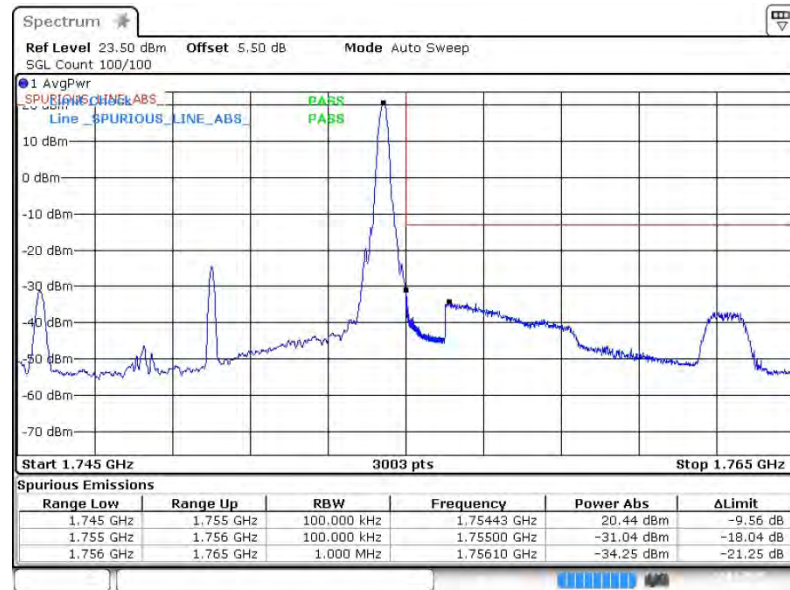


## Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0

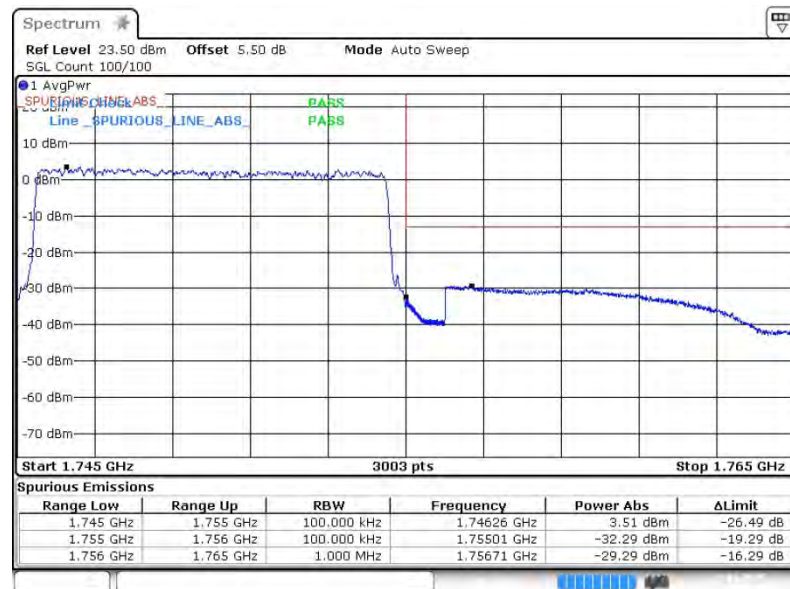




## Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



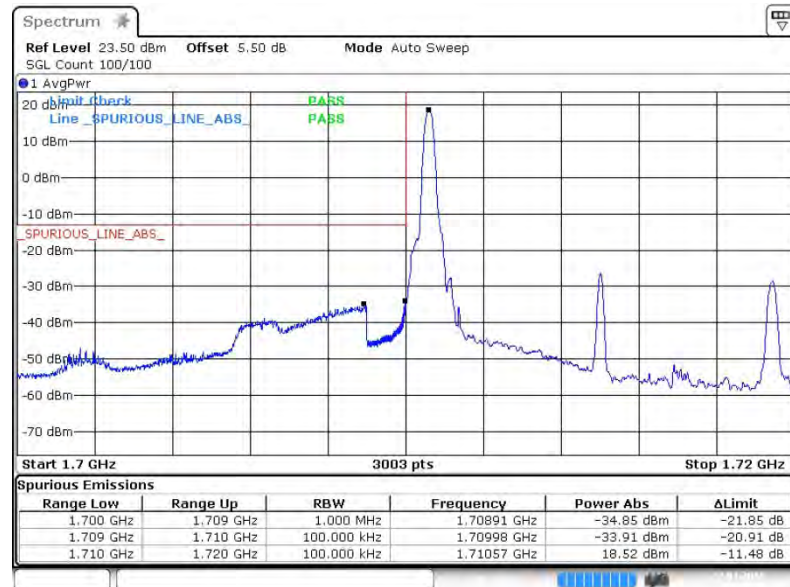
## Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0



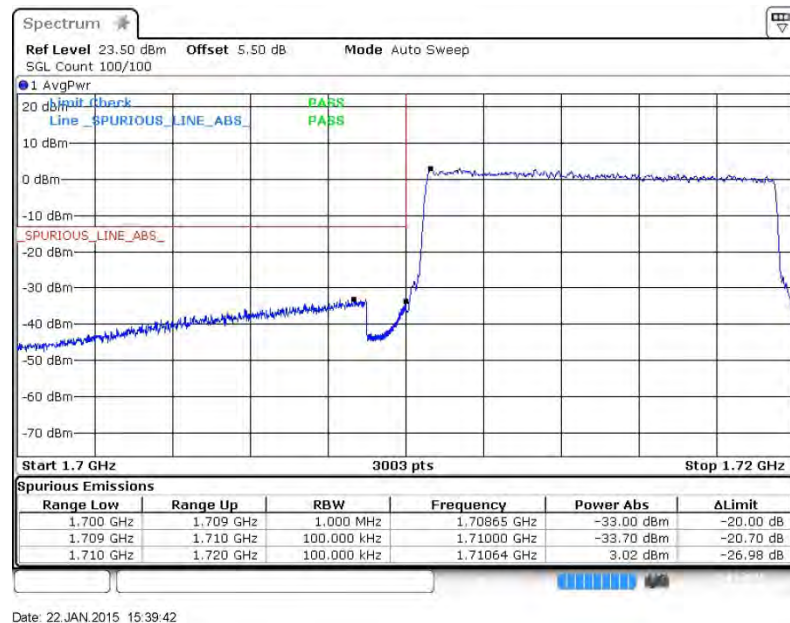


|        |            |              |               |
|--------|------------|--------------|---------------|
| Band : | LTE Band 4 | Band Width : | 10MHz / 16QAM |
|--------|------------|--------------|---------------|

## Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

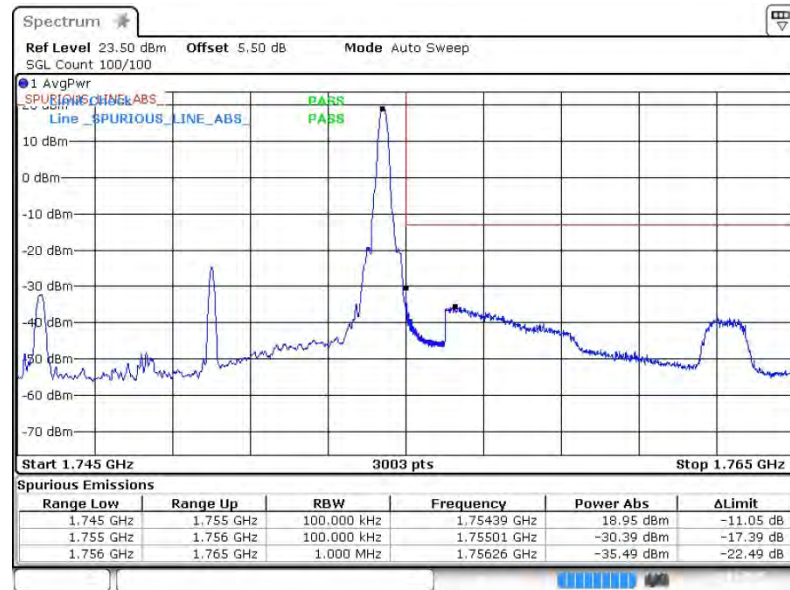


## Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0

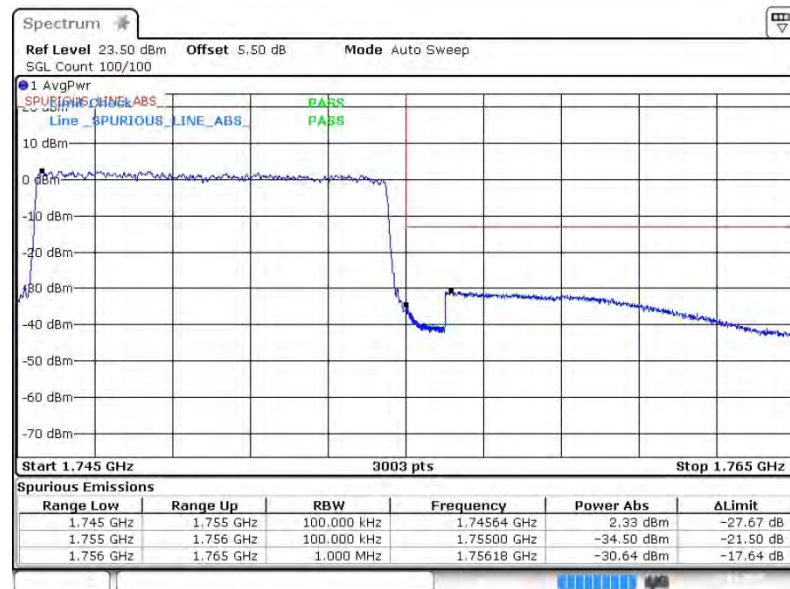




Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



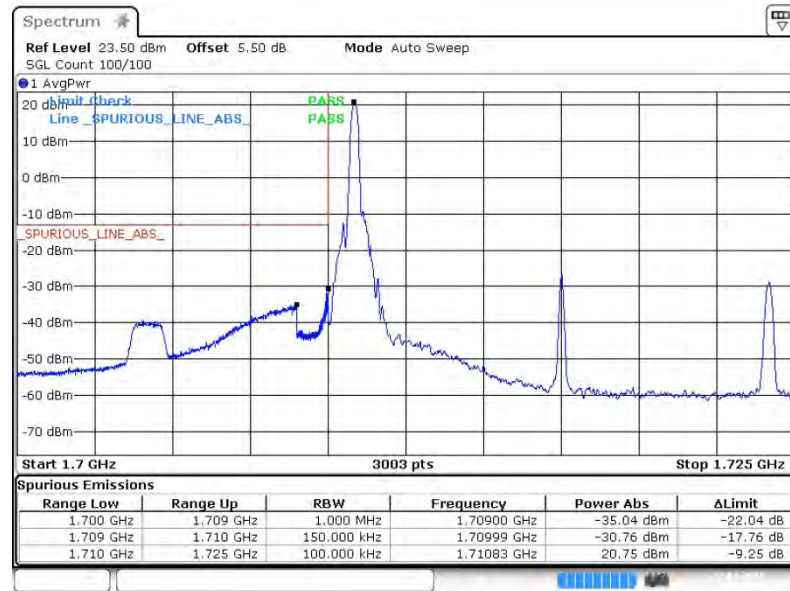
Higher Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



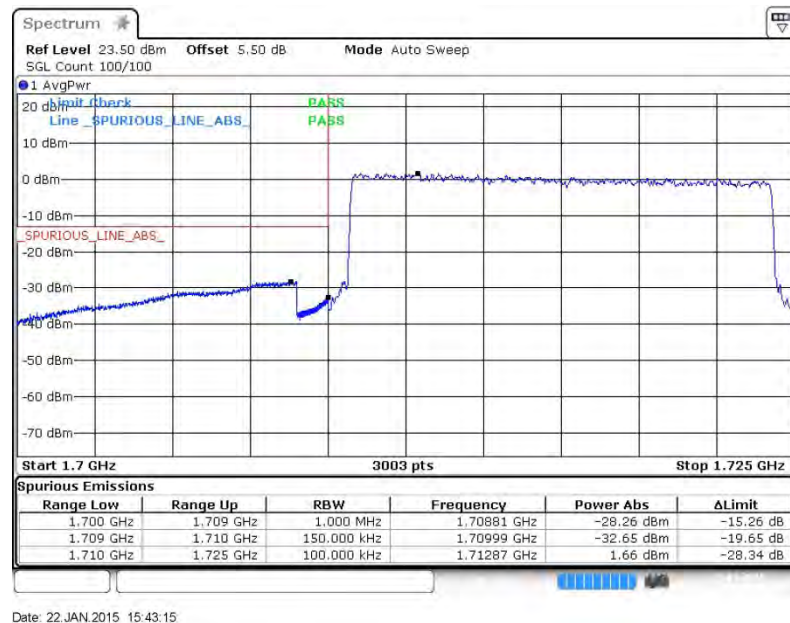


|        |            |              |              |
|--------|------------|--------------|--------------|
| Band : | LTE Band 4 | Band Width : | 15MHz / QPSK |
|--------|------------|--------------|--------------|

## Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

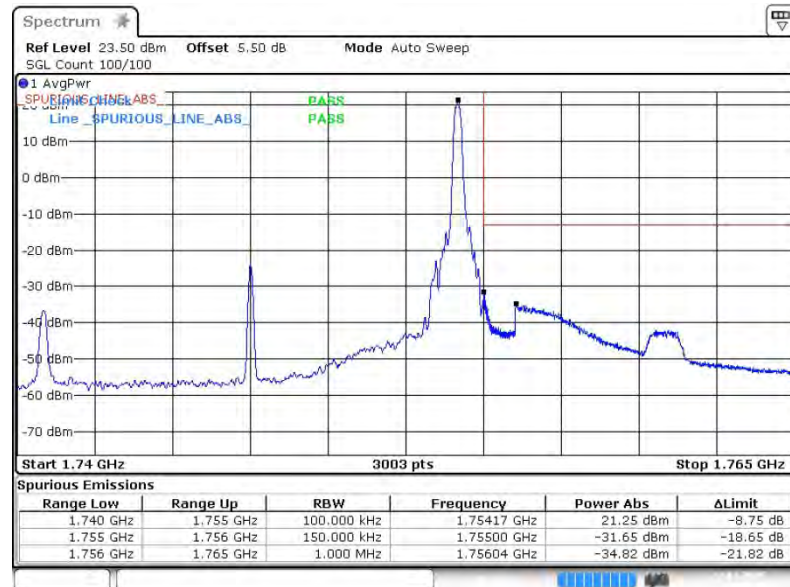


## Lower Band Edge Plot for QPSK-RB Size 75, RB Offset 0



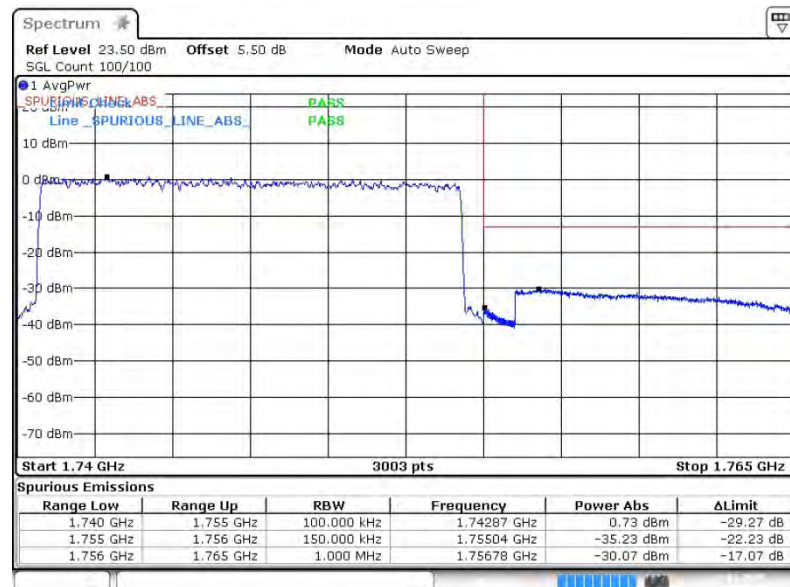


## Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 74



Date: 22.JAN.2015 15:44:35

## Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0



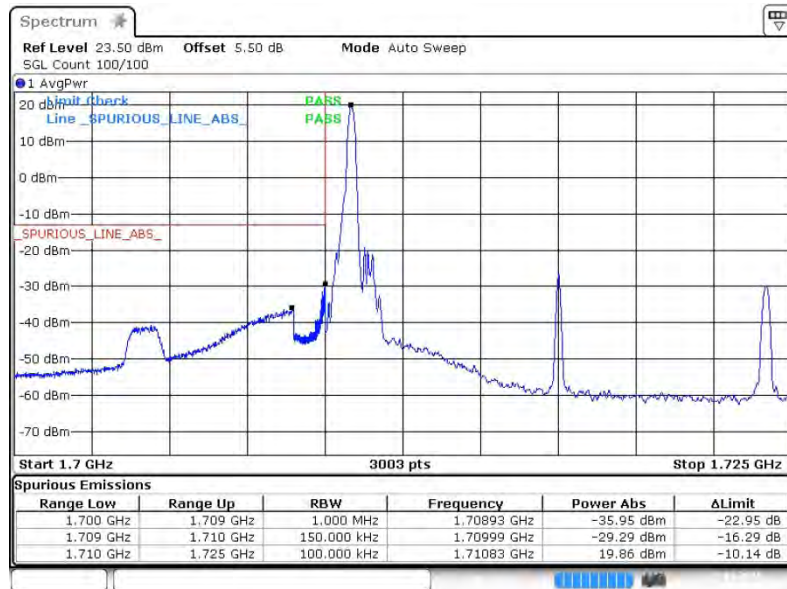
Date: 22.JAN.2015 15:44:15



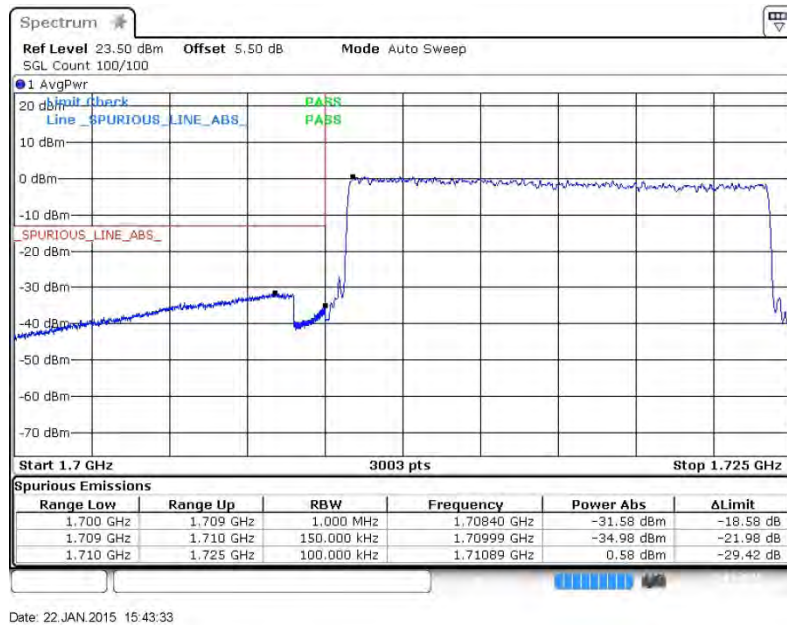
Band : LTE Band 4

Band Width : 15MHz / 16QAM

## Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

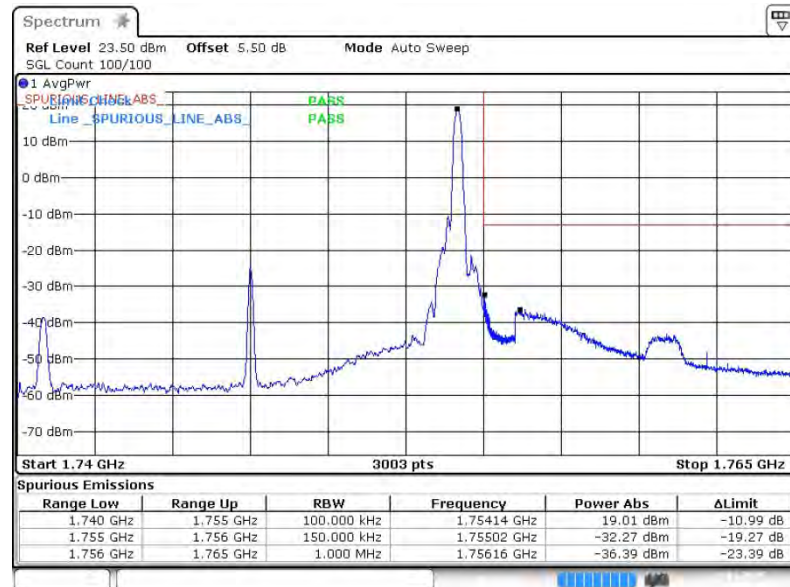


## Lower Band Edge Plot for 16QAM-RB Size 75, RB Offset 0

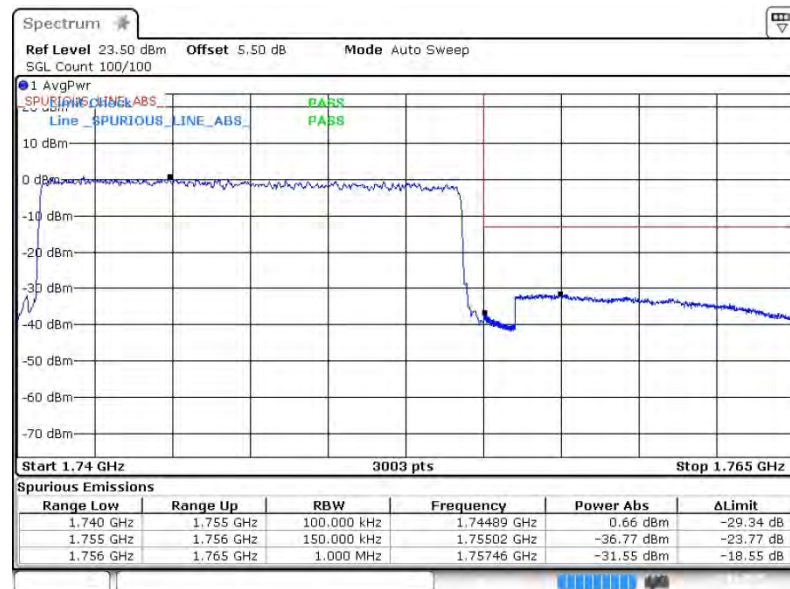




## Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 74



## Higher Band Edge Plot for 16QAM-RB Size 75, RB Offset 0

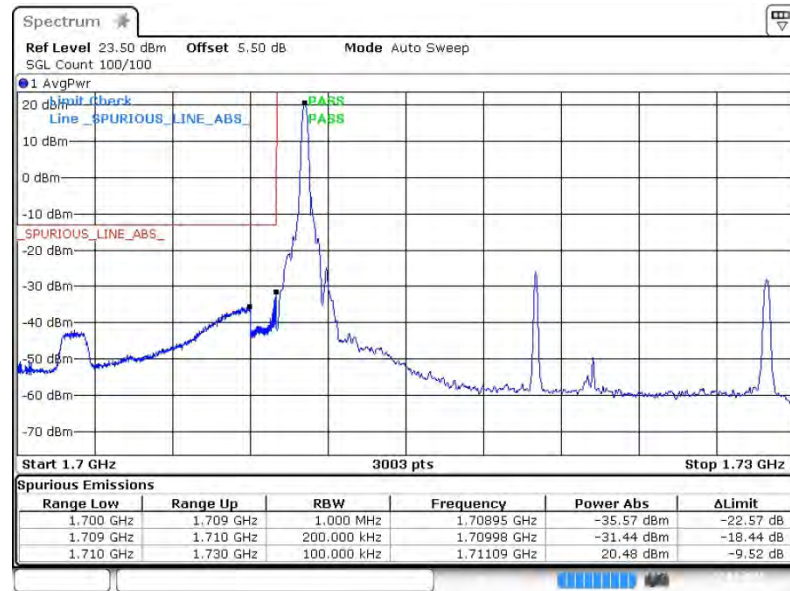




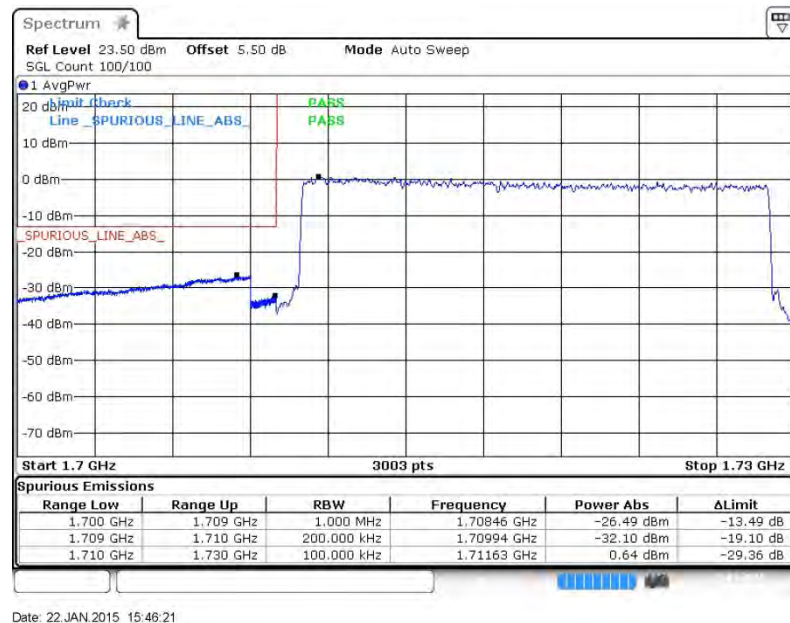
Band : LTE Band 4

Band Width : 20MHz / QPSK

## Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

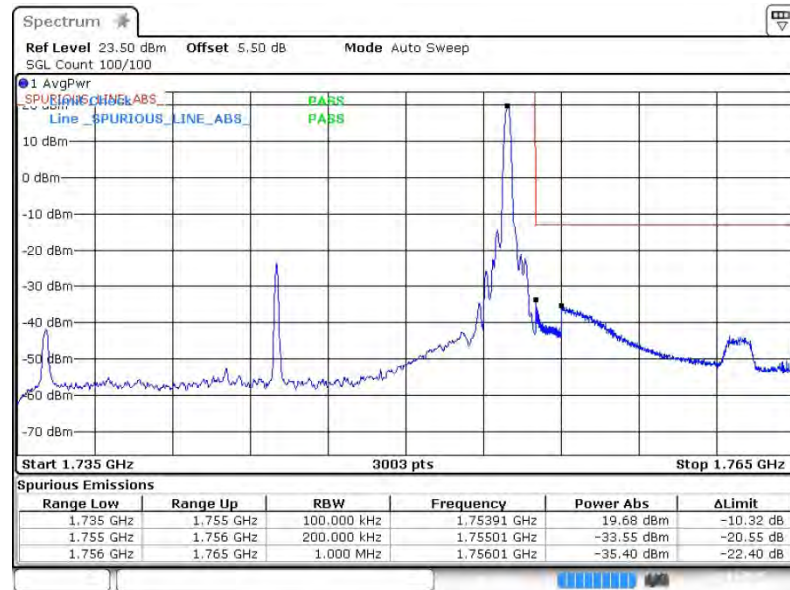


## Lower Band Edge Plot for QPSK-RB Size 100, RB Offset 0



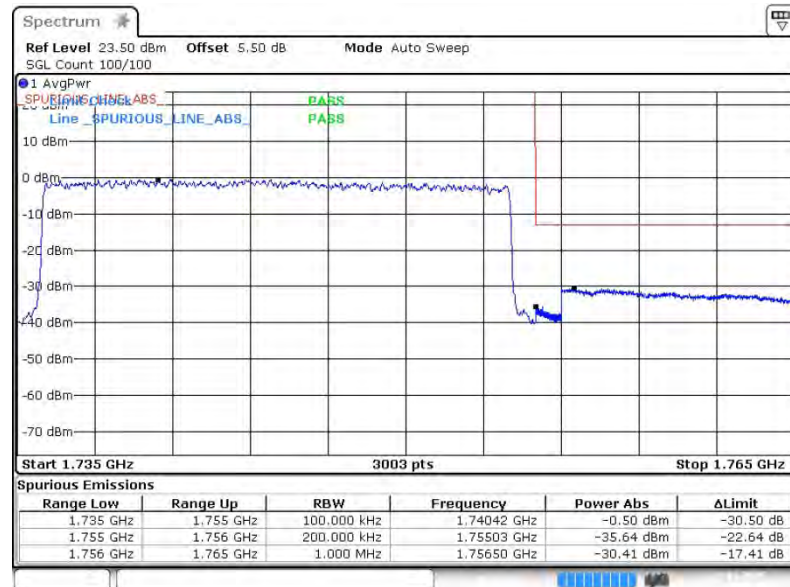


## Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 99



Date: 22.JAN.2015 15:47:52

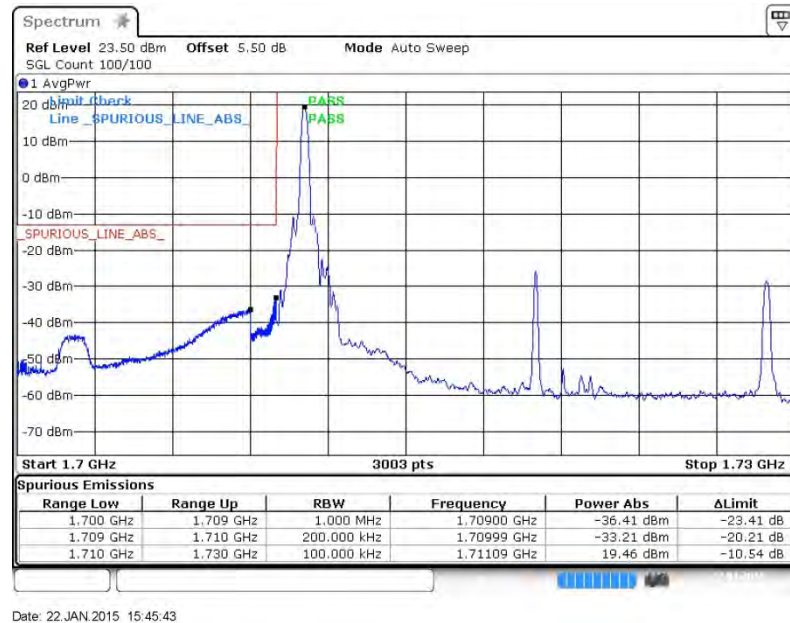
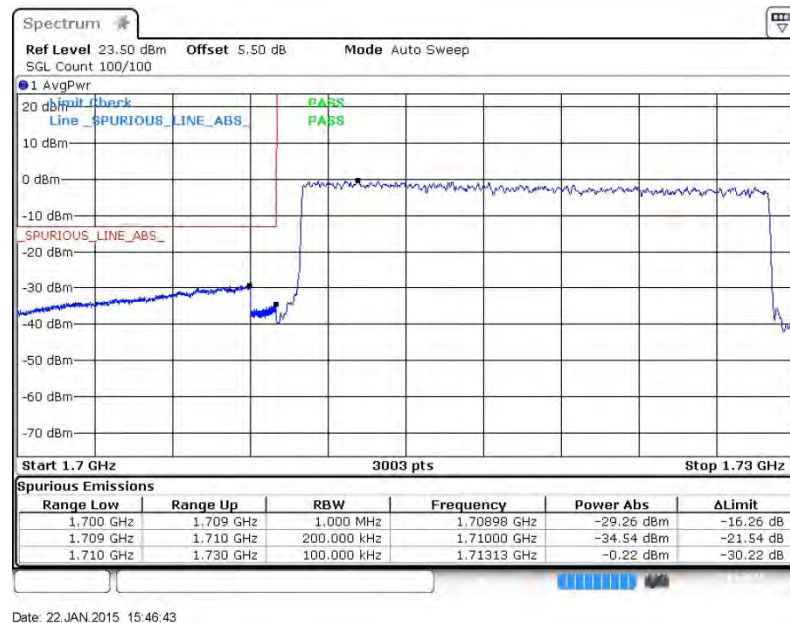
## Higher Band Edge Plot for QPSK-RB Size 100, RB Offset 0



Date: 22.JAN.2015 15:47:28

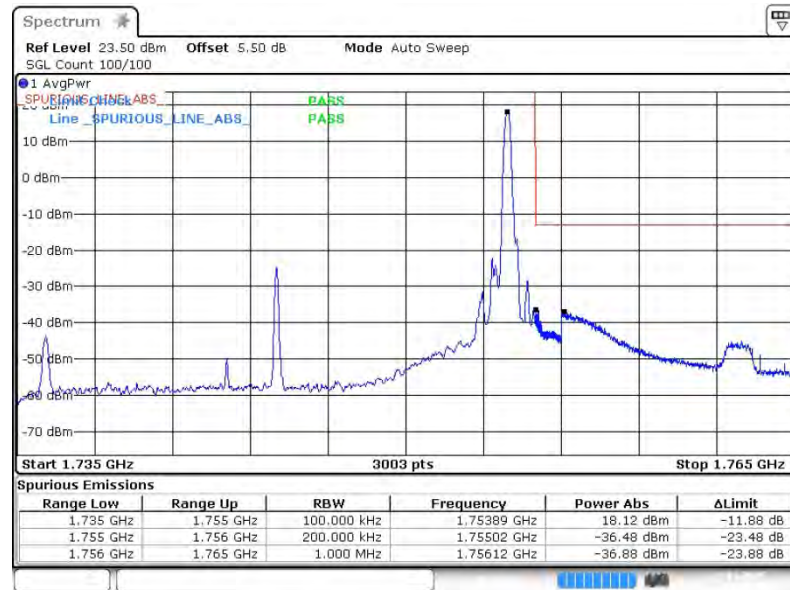


|               |            |                     |               |
|---------------|------------|---------------------|---------------|
| <b>Band :</b> | LTE Band 4 | <b>Band Width :</b> | 20MHz / 16QAM |
|---------------|------------|---------------------|---------------|

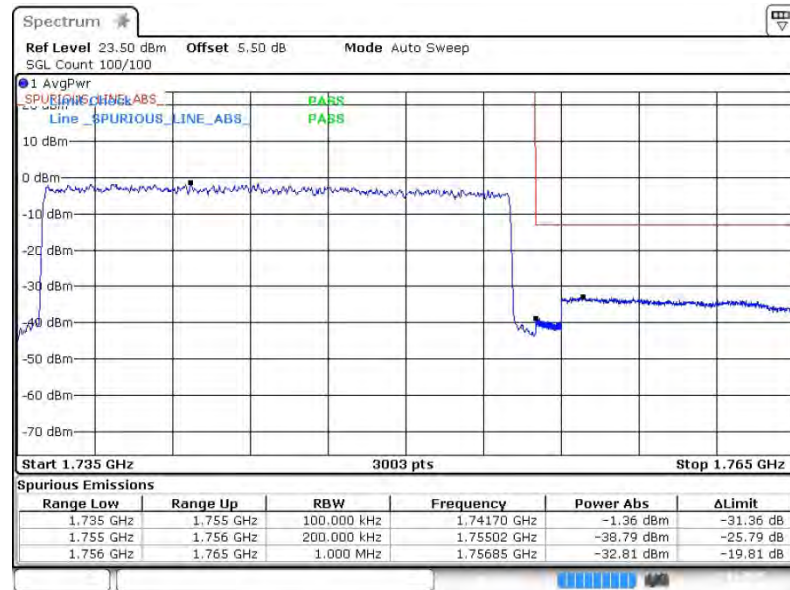
**Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0****Lower Band Edge Plot for 16QAM-RB Size 100, RB Offset 0**



## Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 99



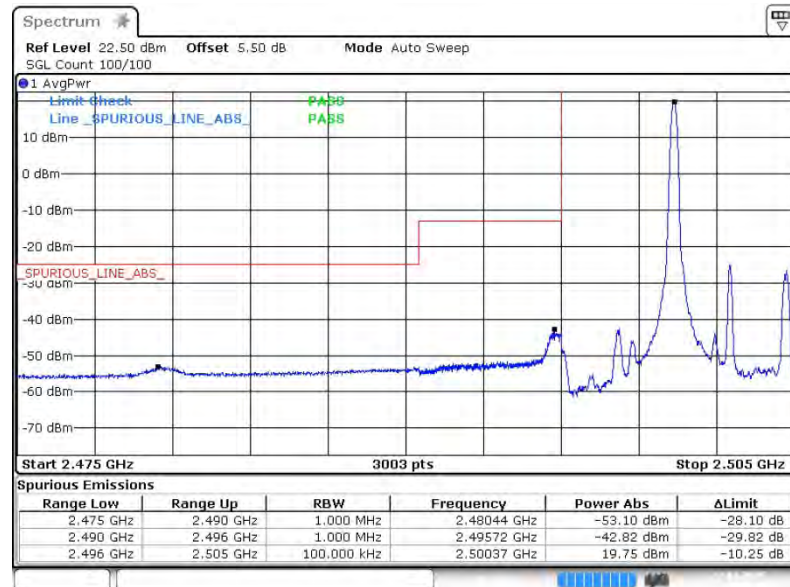
## Higher Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



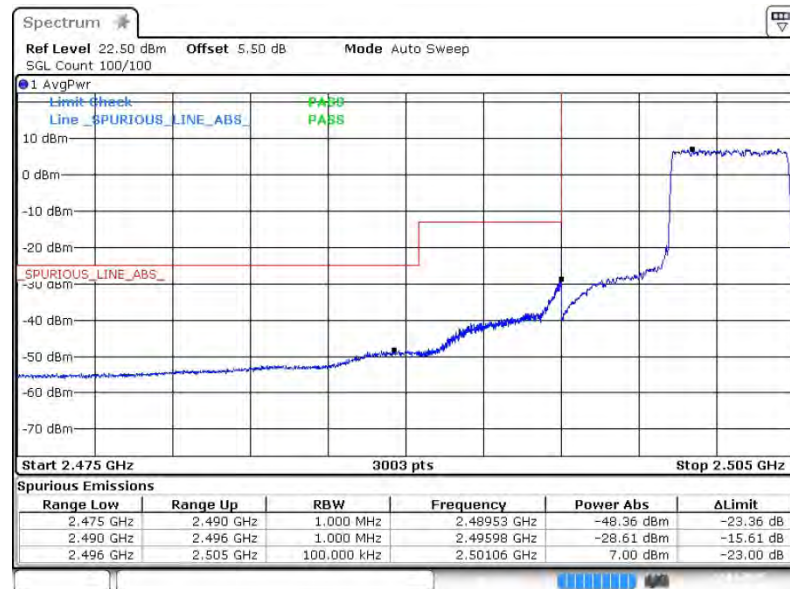


|        |            |              |             |
|--------|------------|--------------|-------------|
| Band : | LTE Band 7 | Band Width : | 5MHz / QPSK |
|--------|------------|--------------|-------------|

## Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

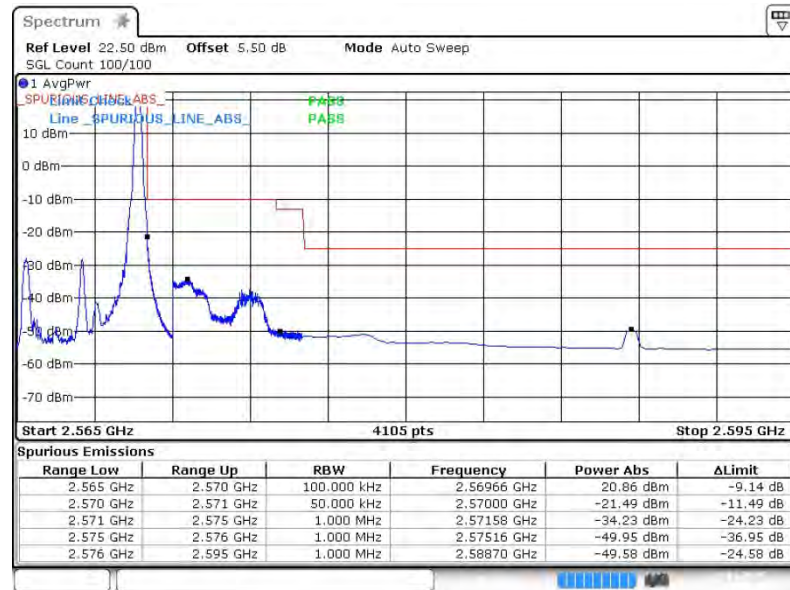


## Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0





## Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



Date: 22.JAN.2015 16:52:49

## Higher Band Edge Plot for QPSK-RB Size 25, RB Offset 0

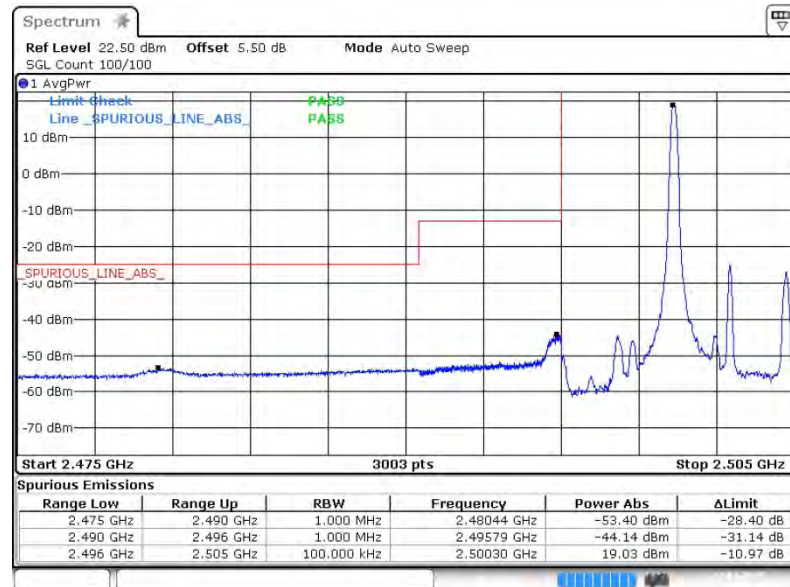


Date: 22.JAN.2015 16:51:27

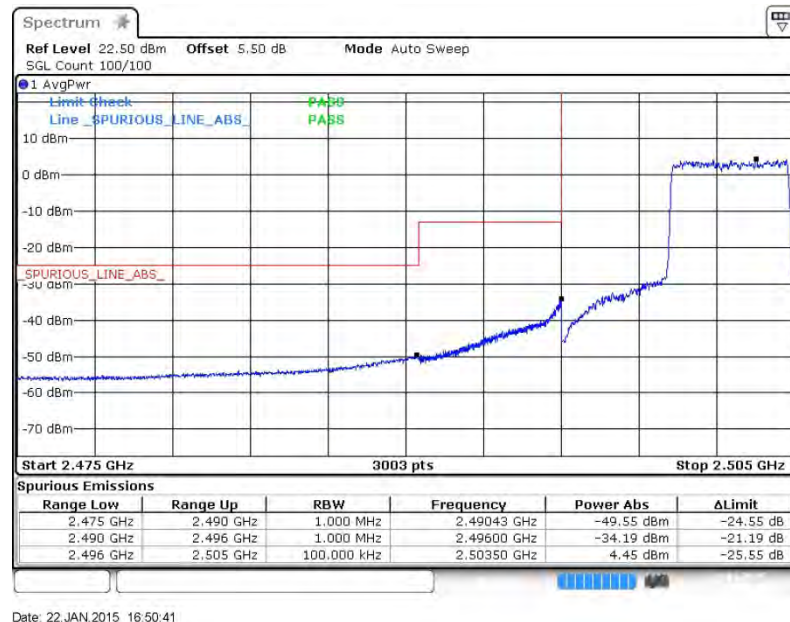


|        |            |              |              |
|--------|------------|--------------|--------------|
| Band : | LTE Band 7 | Band Width : | 5MHz / 16QAM |
|--------|------------|--------------|--------------|

## Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

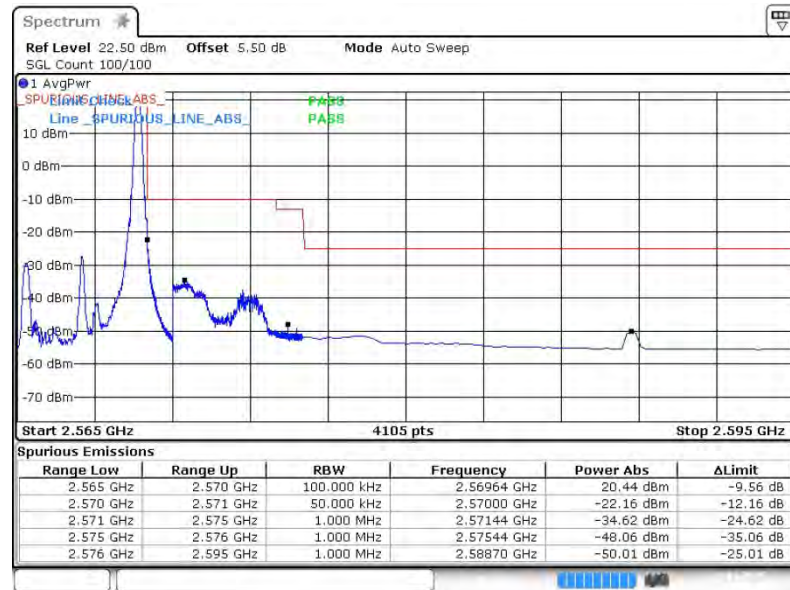


## Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0





## Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 22.JAN.2015 16:52:25

## Higher Band Edge Plot for 16QAM-RB Size 25, RB Offset 0

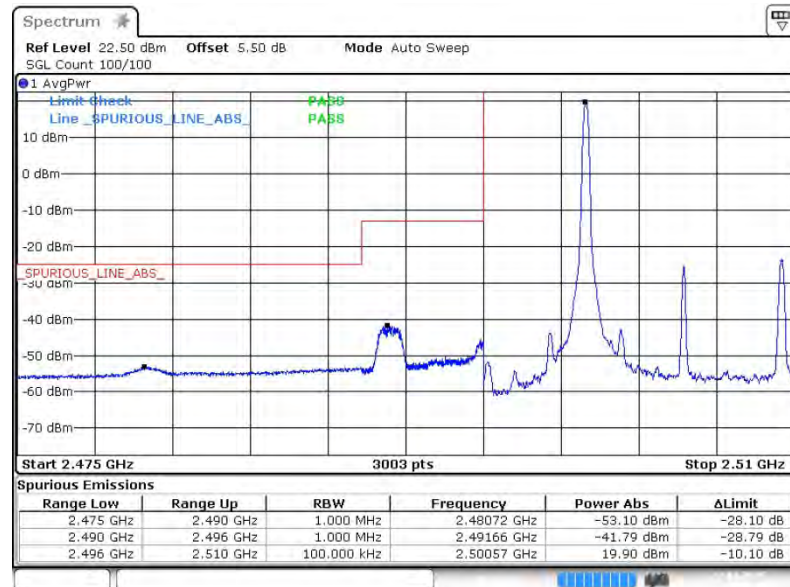


Date: 22.JAN.2015 16:52:01

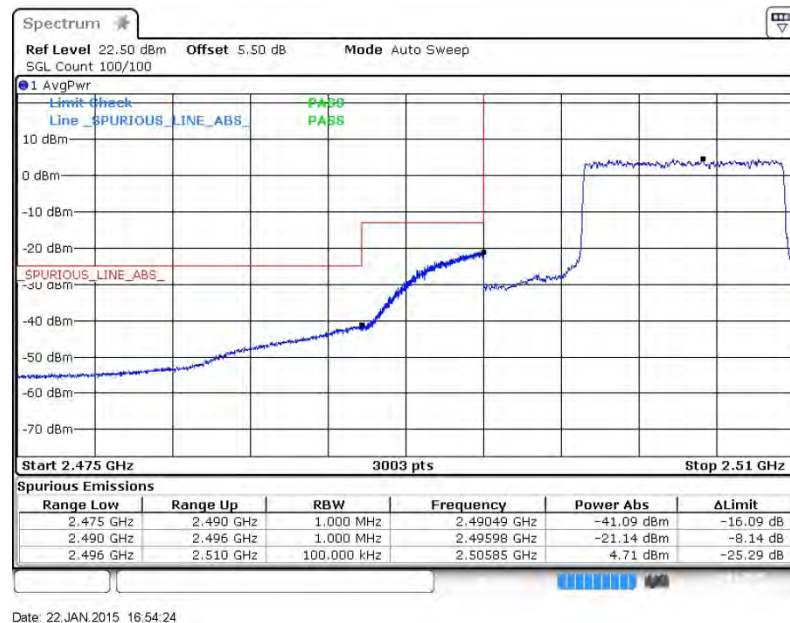


|        |            |              |              |
|--------|------------|--------------|--------------|
| Band : | LTE Band 7 | Band Width : | 10MHz / QPSK |
|--------|------------|--------------|--------------|

## Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

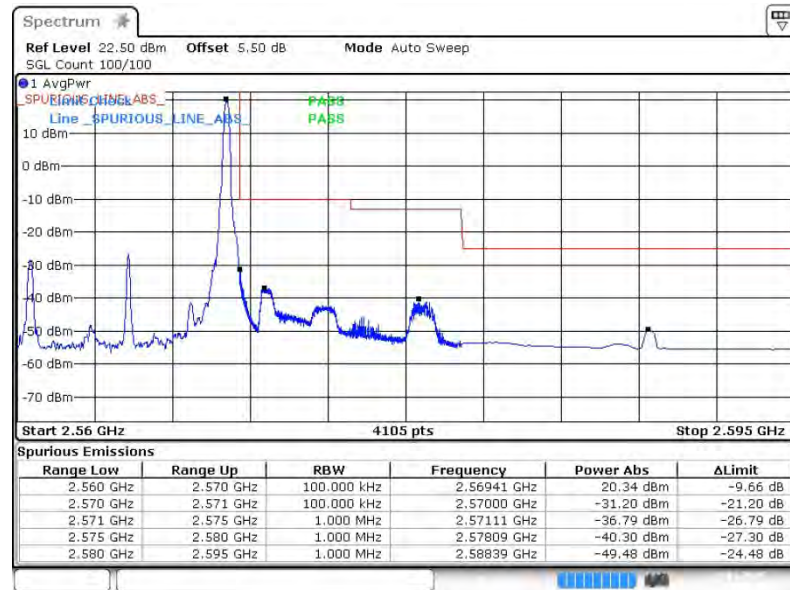


## Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0





## Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



## Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0

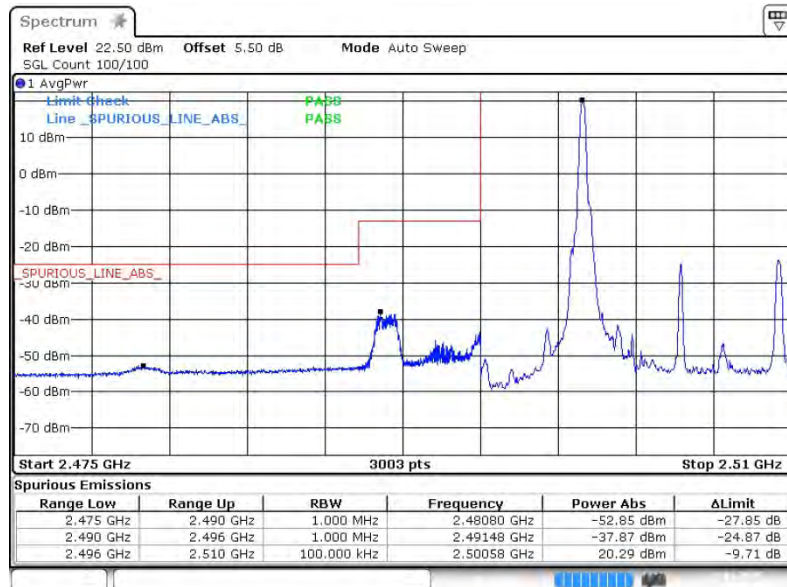




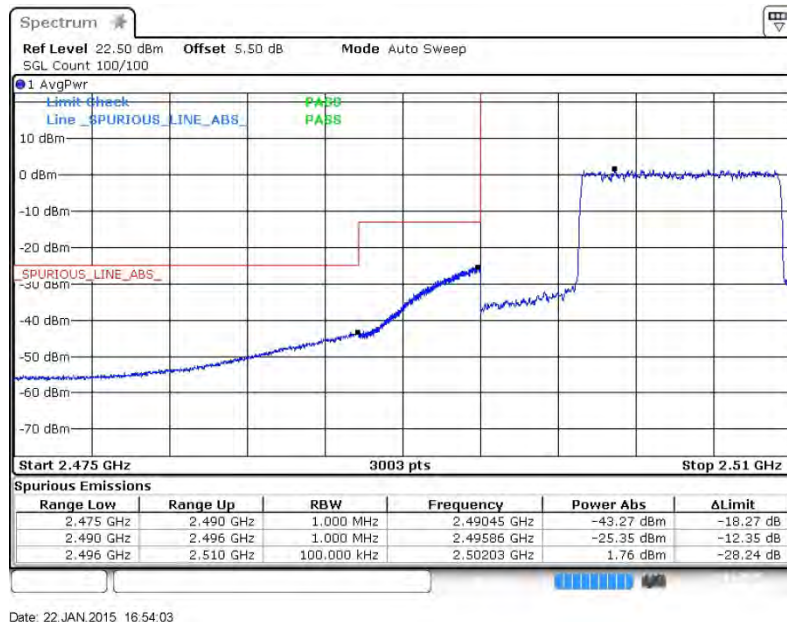
Band : LTE Band 7

Band Width : 10MHz / 16QAM

## Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

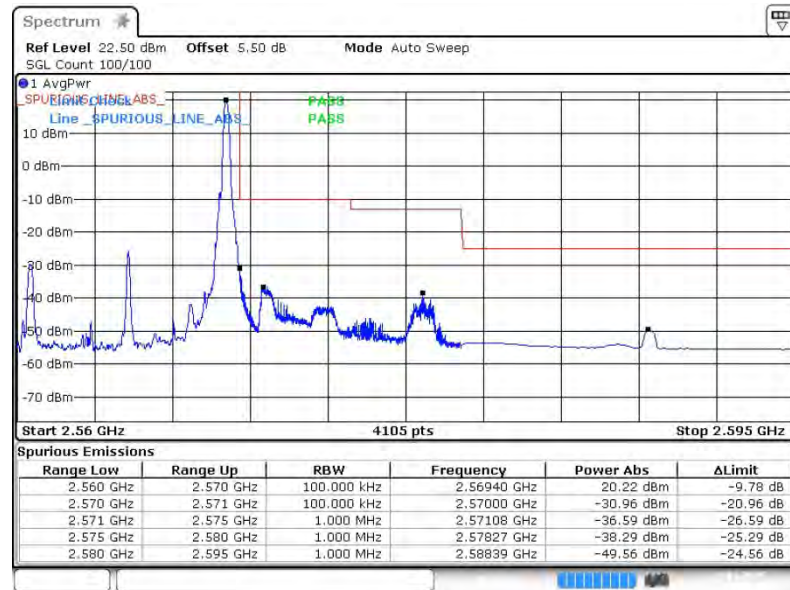


## Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0





## Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



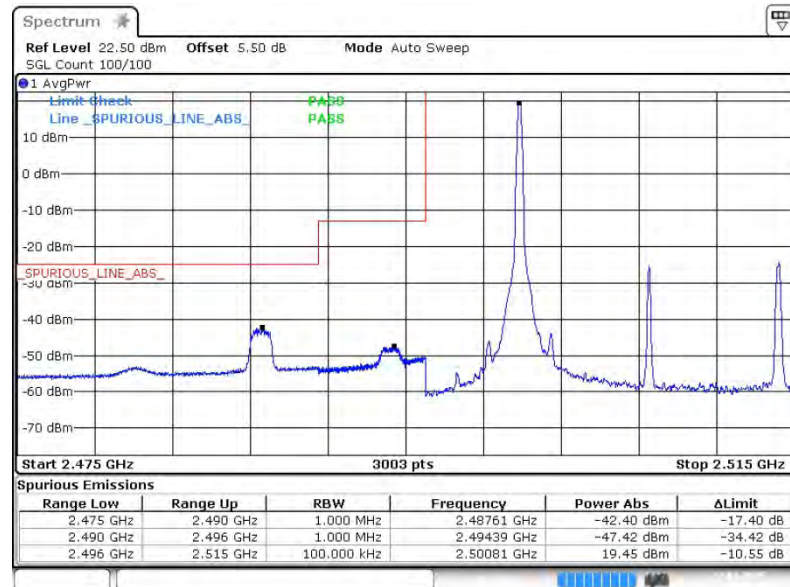
## Higher Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



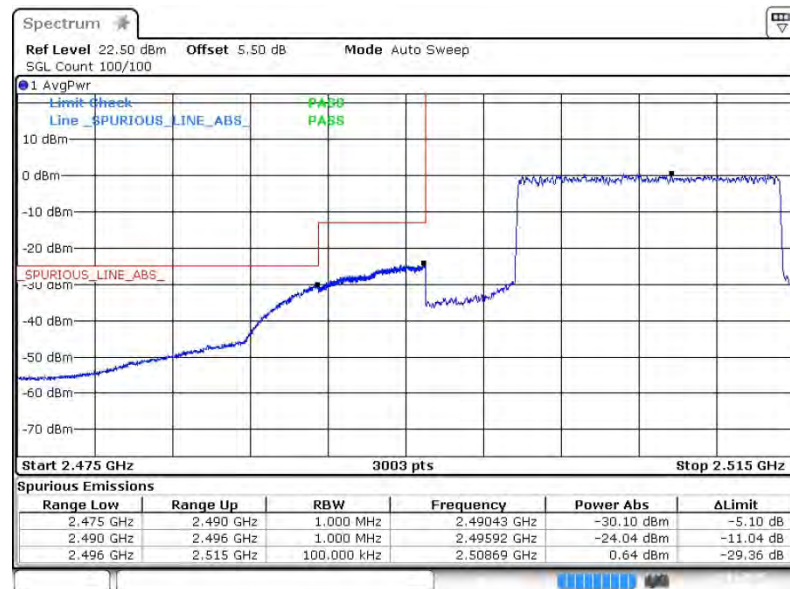


|        |            |              |              |
|--------|------------|--------------|--------------|
| Band : | LTE Band 7 | Band Width : | 15MHz / QPSK |
|--------|------------|--------------|--------------|

## Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

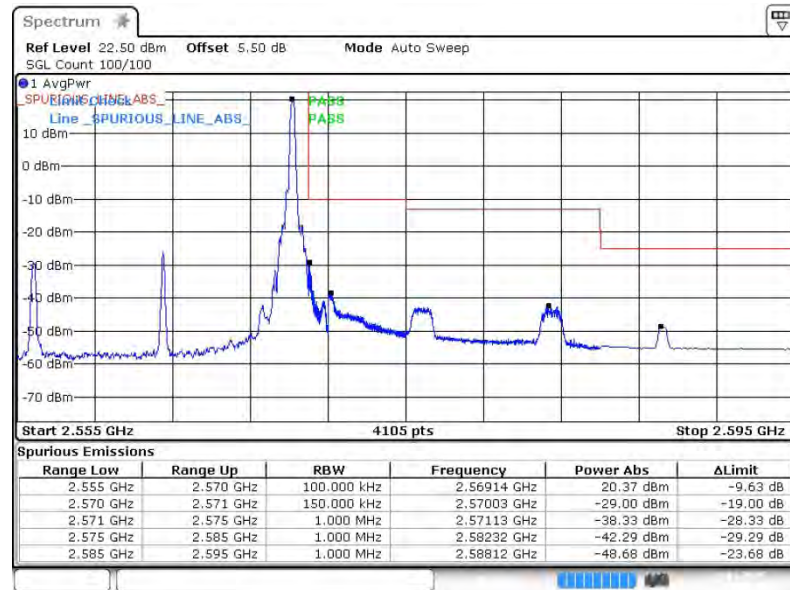


## Lower Band Edge Plot for QPSK-RB Size 75, RB Offset 0





## Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 74



## Higher Band Edge Plot for QPSK-RB Size 75, RB Offset 0

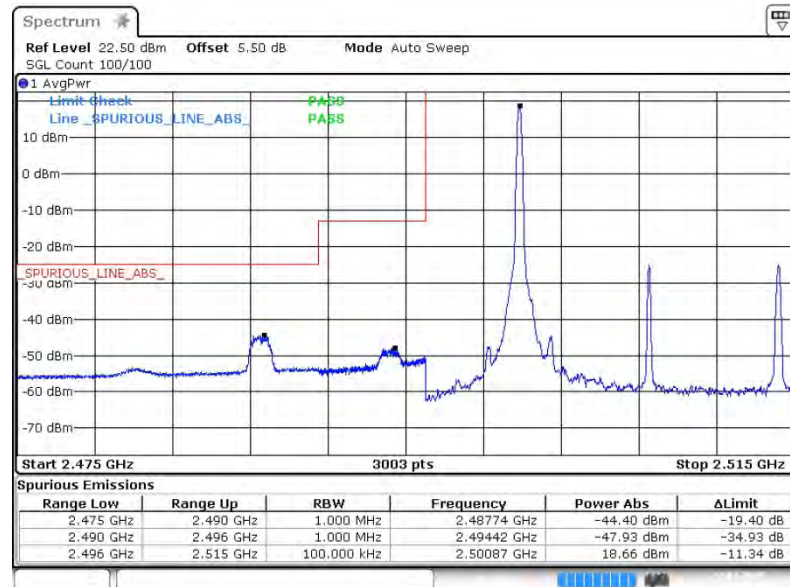




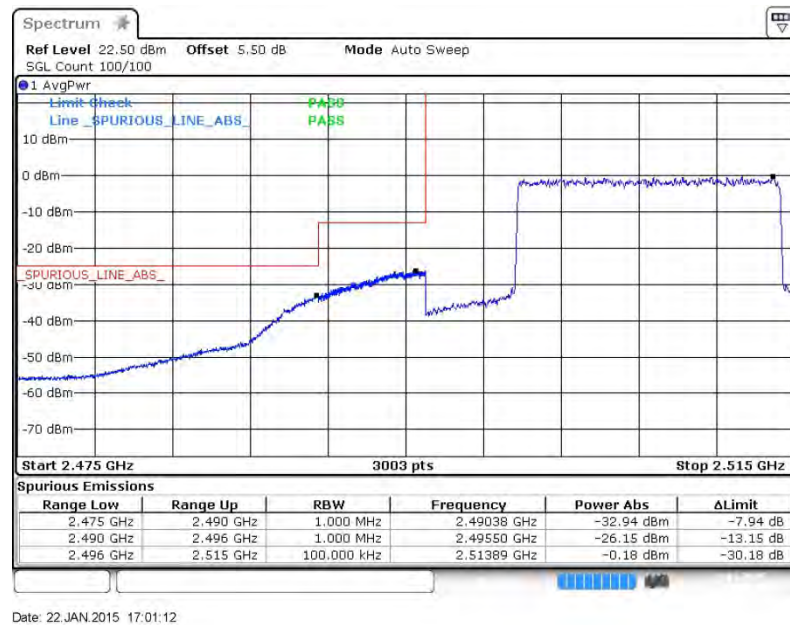
Band : LTE Band 7

Band Width : 15MHz / 16QAM

## Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

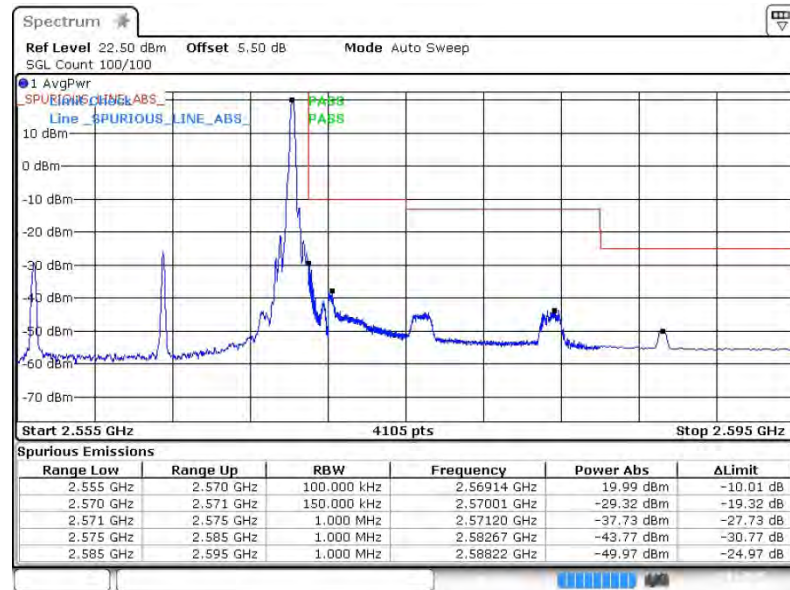


## Lower Band Edge Plot for 16QAM-RB Size 75, RB Offset 0



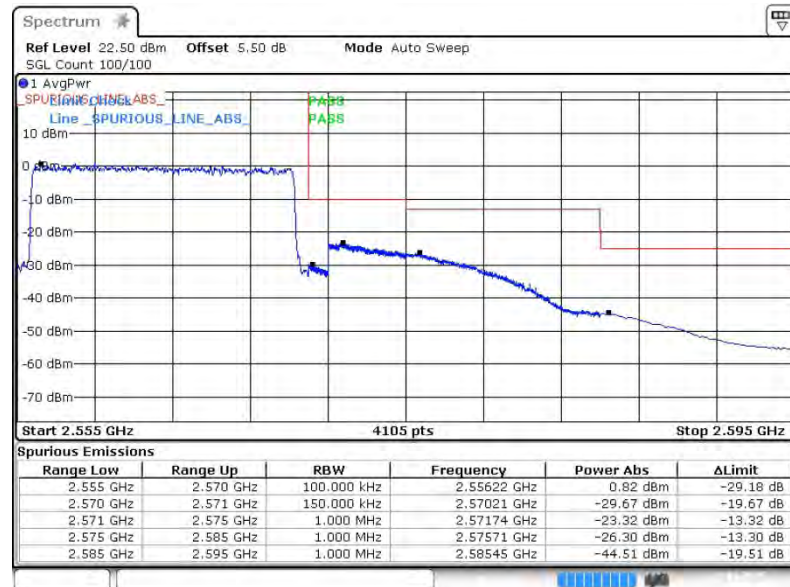


## Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 74



Date: 22.JAN.2015 17:02:44

## Higher Band Edge Plot for 16QAM-RB Size 75, RB Offset 0

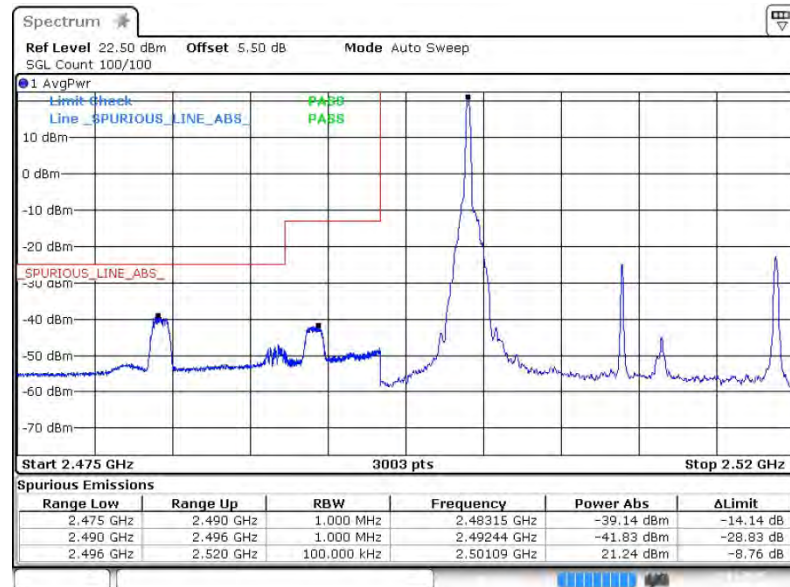


Date: 22.JAN.2015 17:02:18

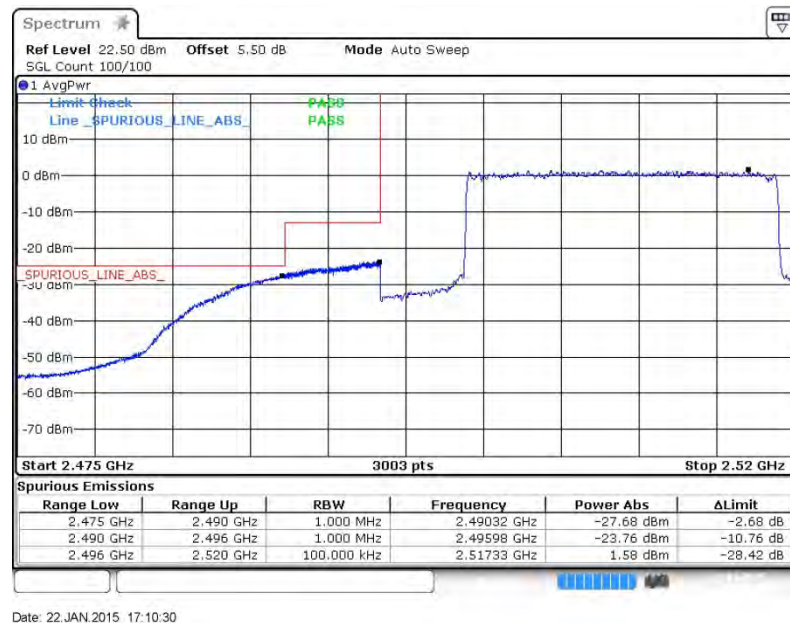


|        |            |              |              |
|--------|------------|--------------|--------------|
| Band : | LTE Band 7 | Band Width : | 20MHz / QPSK |
|--------|------------|--------------|--------------|

## Lower Band Edge Plot for QPSK-RB Size 1, RB Offset 0

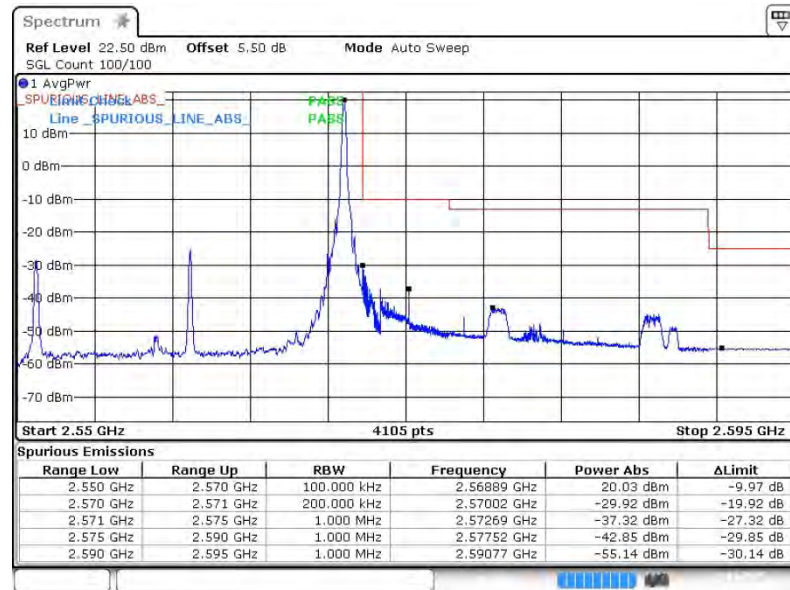


## Lower Band Edge Plot for QPSK-RB Size 100, RB Offset 0

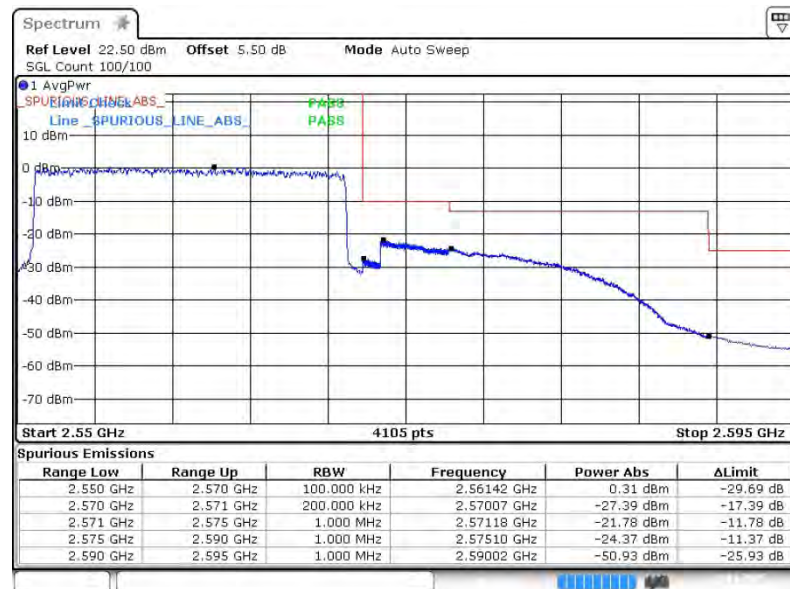




Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 99



Higher Band Edge Plot for QPSK-RB Size 100, RB Offset 0

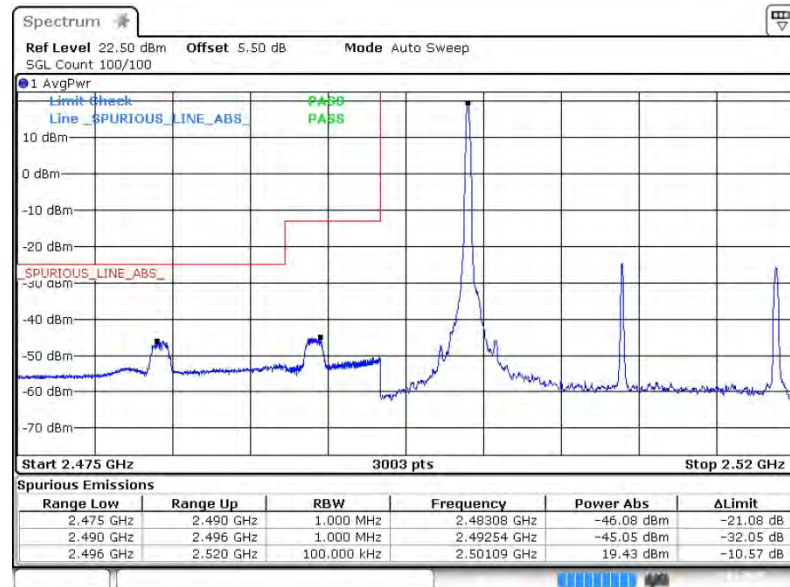




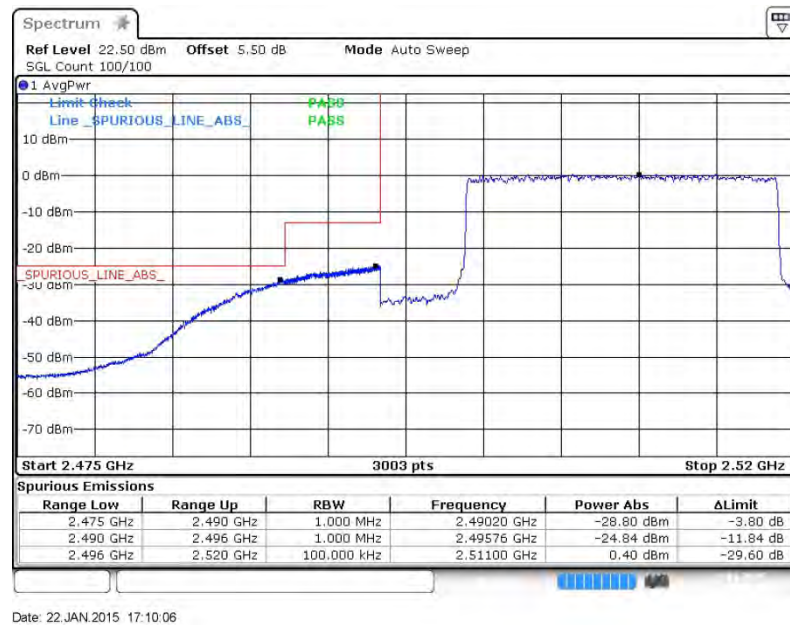
Band : LTE Band 7

Band Width : 20MHz / 16QAM

## Lower Band Edge Plot for 16QAM-RB Size 1, RB Offset 0

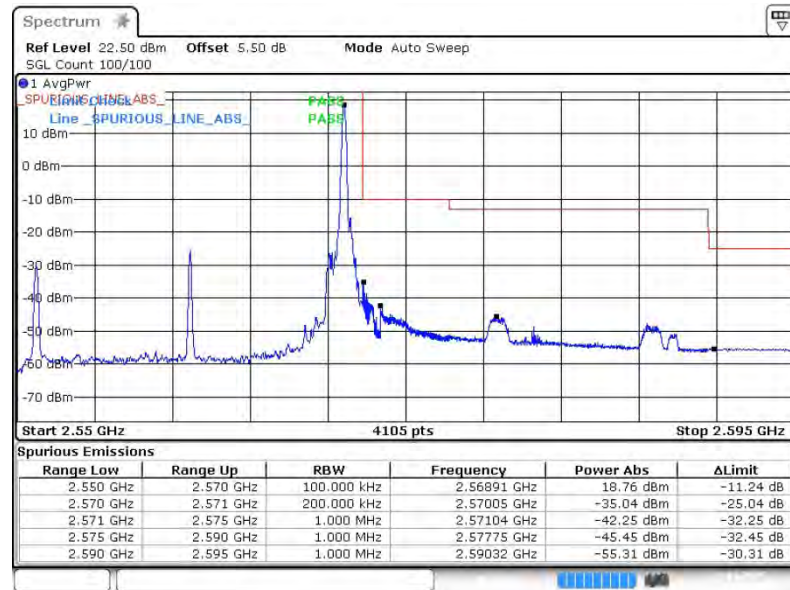


## Lower Band Edge Plot for 16QAM-RB Size 100, RB Offset 0

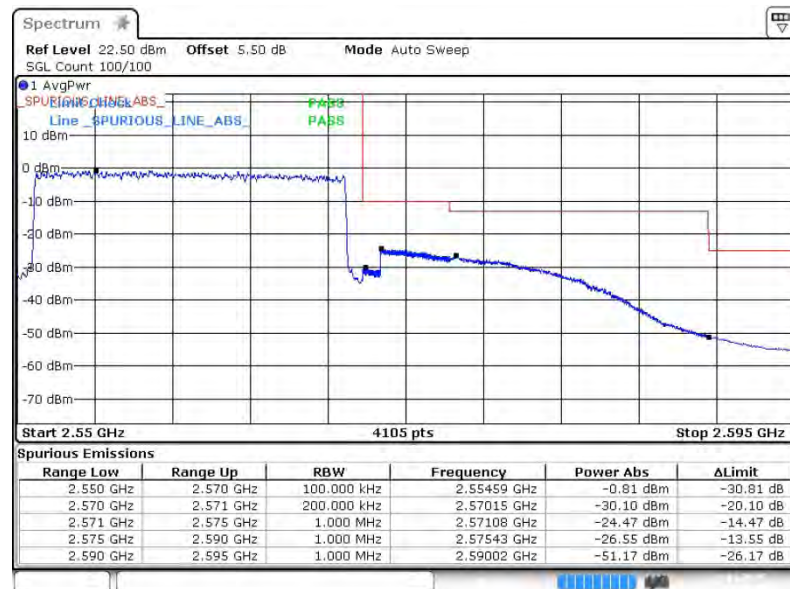




Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 99



Higher Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



## 3.6 Conducted Spurious Emission Measurement

### 3.6.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least  $43 + 10 \log (P)$  dB.

For Band 7

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least  $55 + 10 \log (P)$  dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30MHz up to a frequency including its 10<sup>th</sup> harmonic.

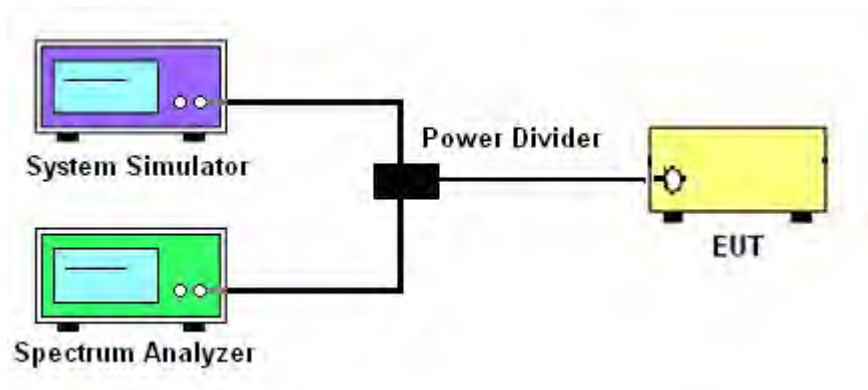
### 3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

### 3.6.3 Test Procedures

1. The EUT was connected to spectrum analyzer and system simulator via a power divider.
2. The RF output of EUT was connected to the spectrum analyzer by RF cable and attenuator.  
The path loss was compensated to the results for each measurement.
3. The middle channel for the highest RF power within the transmitting frequency was measured.
4. The conducted spurious emission for the whole frequency range was taken.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. The limit line is derived from  $43 + 10\log(P)$ dB below the transmitter power P(Watts)  
 $= P(W) - [43 + 10\log(P)]$  (dB)  
 $= [30 + 10\log(P)]$  (dBm) -  $[43 + 10\log(P)]$  (dB)  
 $= -13$ dBm.
8. For Band 7  
The limit line is derived from  $55 + 10\log(P)$ dB below the transmitter power P(Watts)  
 $= P(W) - [55 + 10\log(P)]$  (dB)  
 $= [30 + 10\log(P)]$  (dBm) -  $[55 + 10\log(P)]$  (dB)  
 $= -25$ dBm.

### 3.6.4 Test Setup

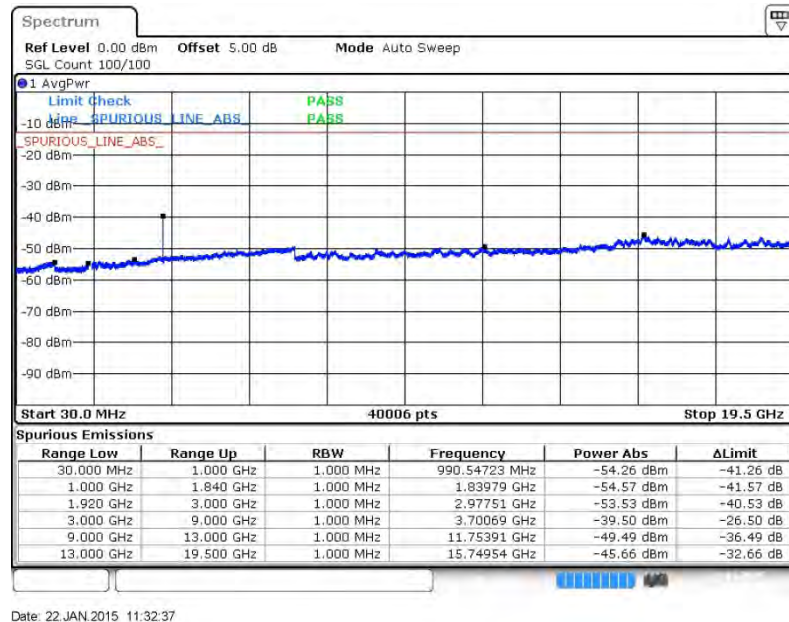




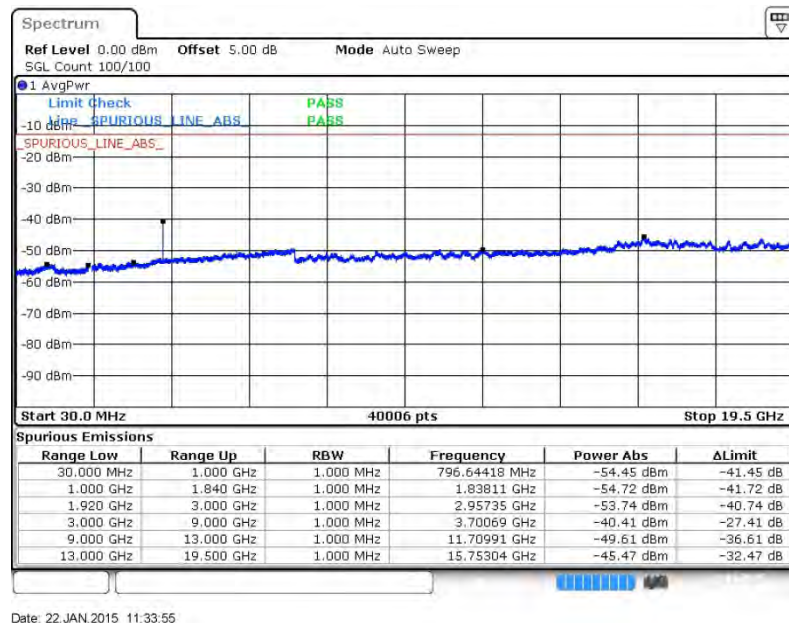
## 3.6.5 Test Result (Plots) of Conducted Spurious Emission

|              |            |           |               |
|--------------|------------|-----------|---------------|
| Band :       | LTE Band 2 | Channel : | CH18607 (Low) |
| Band Width : | 1.4MHz     |           |               |

## QPSK (RB Size 3, RB Offset 0)



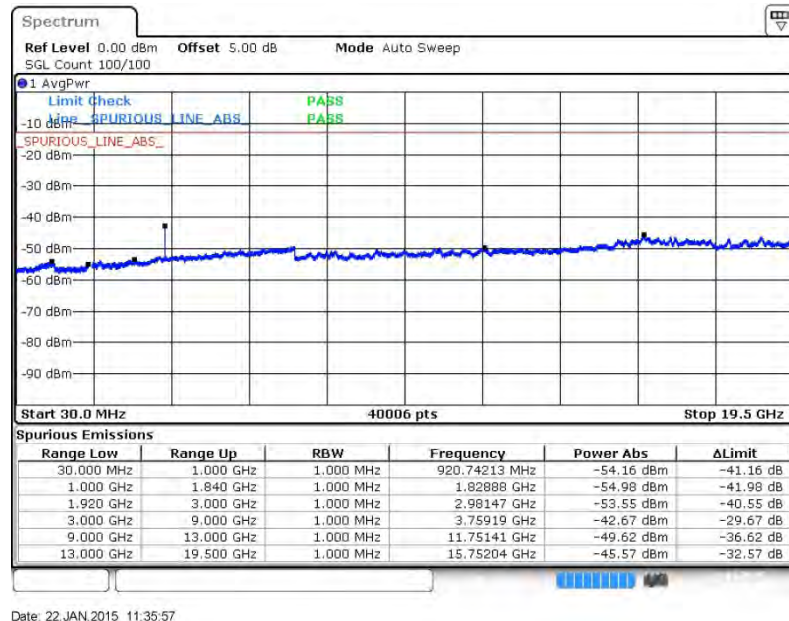
## 16QAM (RB Size 1, RB Offset 5)



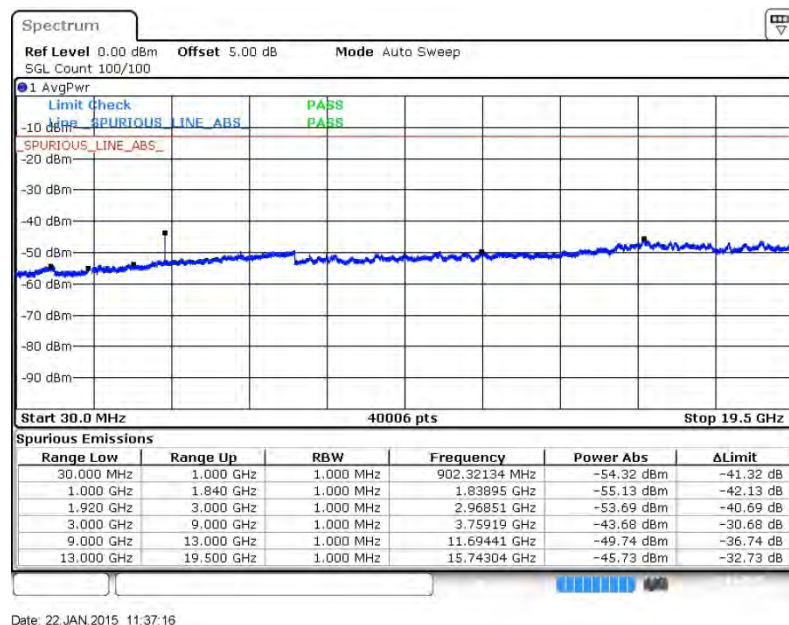


|              |            |           |                  |
|--------------|------------|-----------|------------------|
| Band :       | LTE Band 2 | Channel : | CH18900 (Middle) |
| Band Width : | 1.4MHz     |           |                  |

## QPSK (RB Size 3, RB Offset 1)



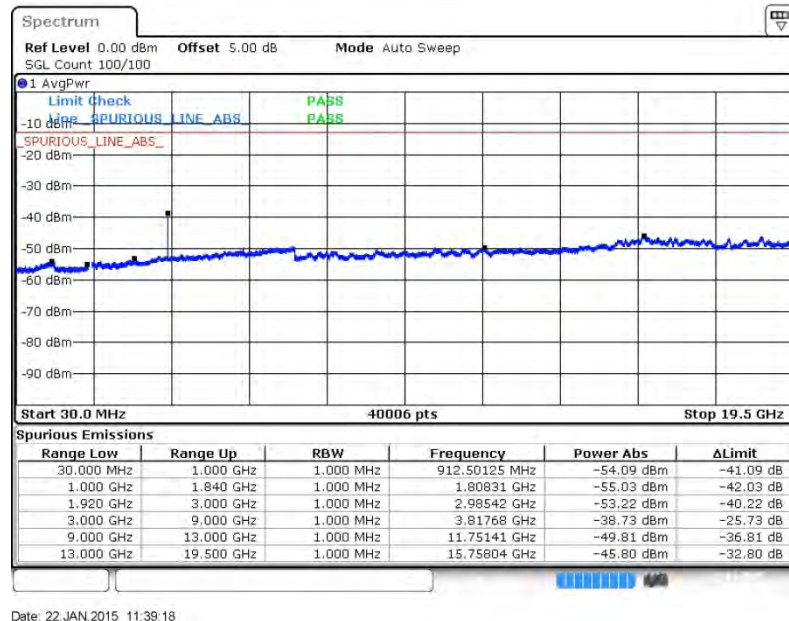
## 16QAM (RB Size 3, RB Offset 1)



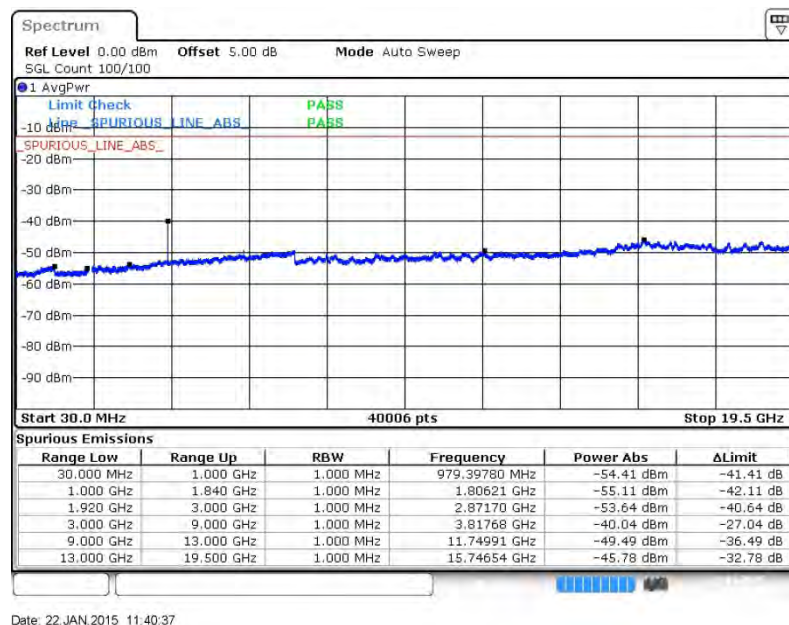


|              |            |           |                |
|--------------|------------|-----------|----------------|
| Band :       | LTE Band 2 | Channel : | CH19193 (High) |
| Band Width : | 1.4MHz     |           |                |

## QPSK (RB Size 1, RB Offset 2)



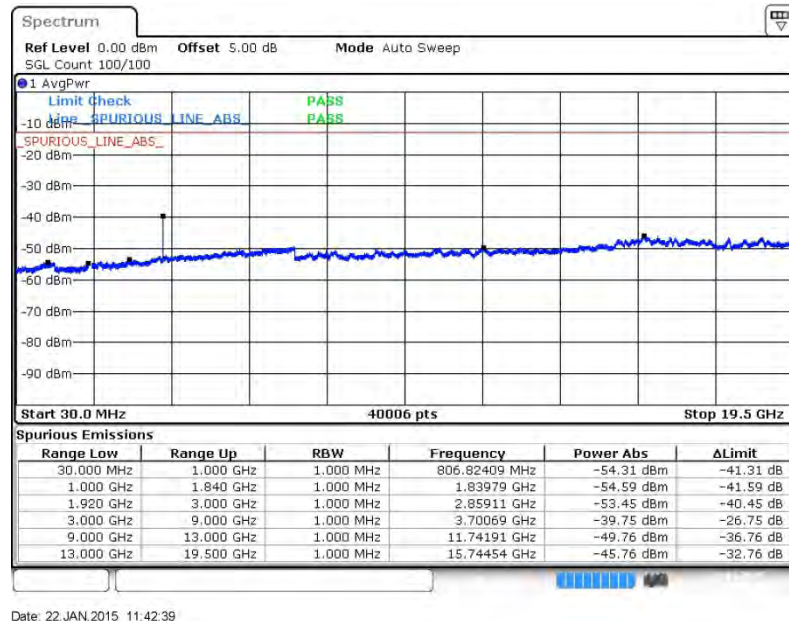
## 16QAM (RB Size 3, RB Offset 1)



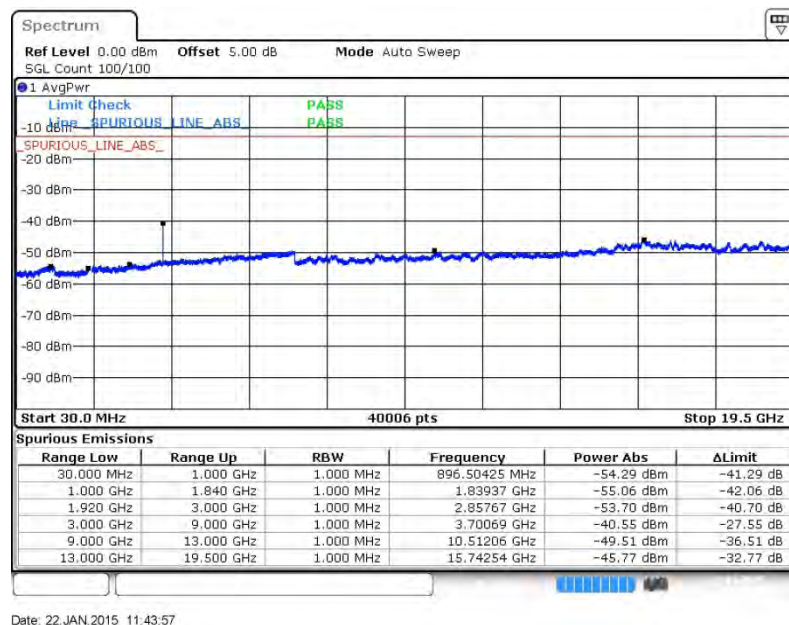


|              |            |           |               |
|--------------|------------|-----------|---------------|
| Band :       | LTE Band 2 | Channel : | CH18615 (Low) |
| Band Width : | 3MHz       |           |               |

## QPSK (RB Size 8, RB Offset 0)

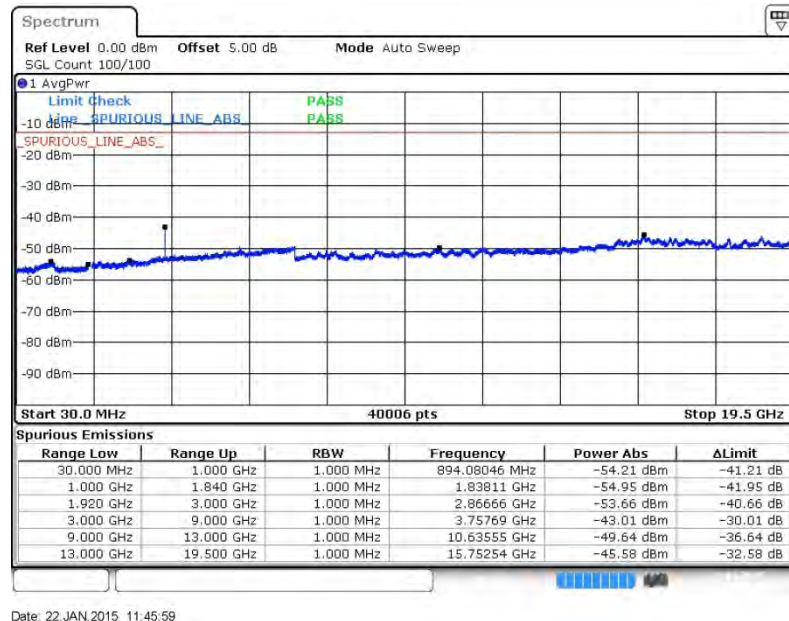
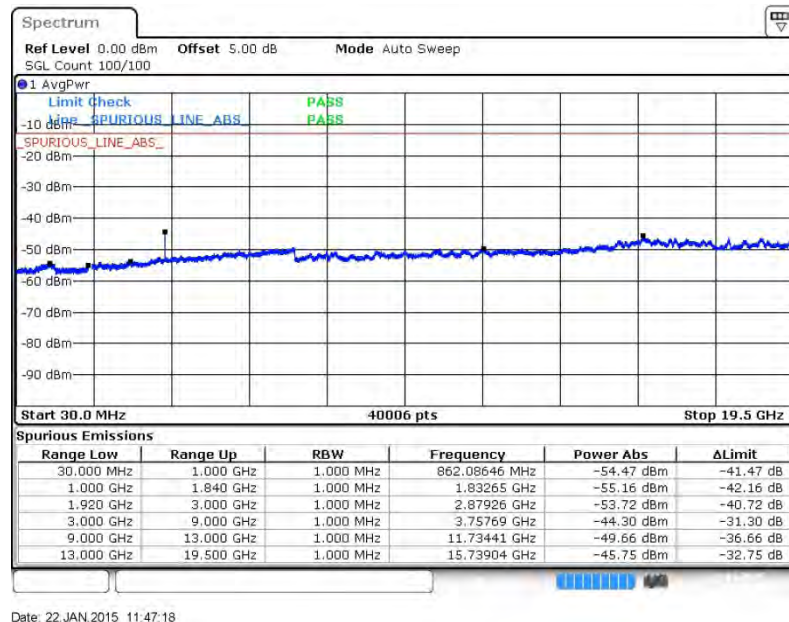


## 16QAM (RB Size 1, RB Offset 0)





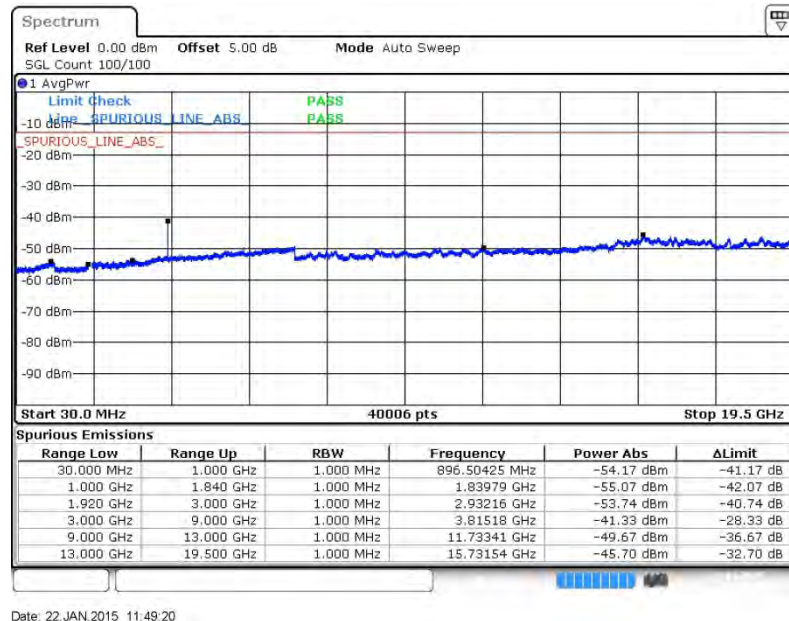
|                     |            |                  |                  |
|---------------------|------------|------------------|------------------|
| <b>Band :</b>       | LTE Band 2 | <b>Channel :</b> | CH18900 (Middle) |
| <b>Band Width :</b> | 3MHz       |                  |                  |

**QPSK (RB Size 8, RB Offset 0)****16QAM (RB Size 1, RB Offset 0)**

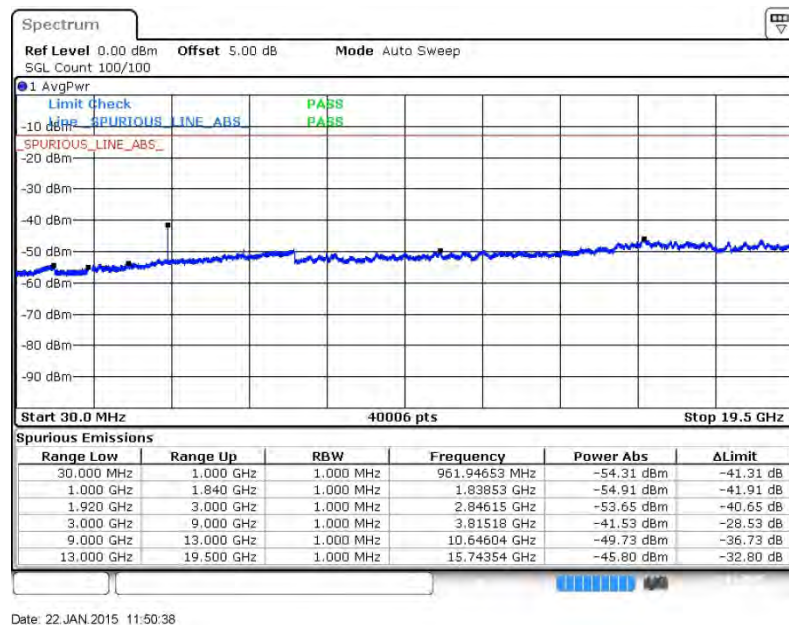


|              |            |           |                |
|--------------|------------|-----------|----------------|
| Band :       | LTE Band 2 | Channel : | CH19185 (High) |
| Band Width : | 3MHz       |           |                |

## QPSK (RB Size 1, RB Offset 7)



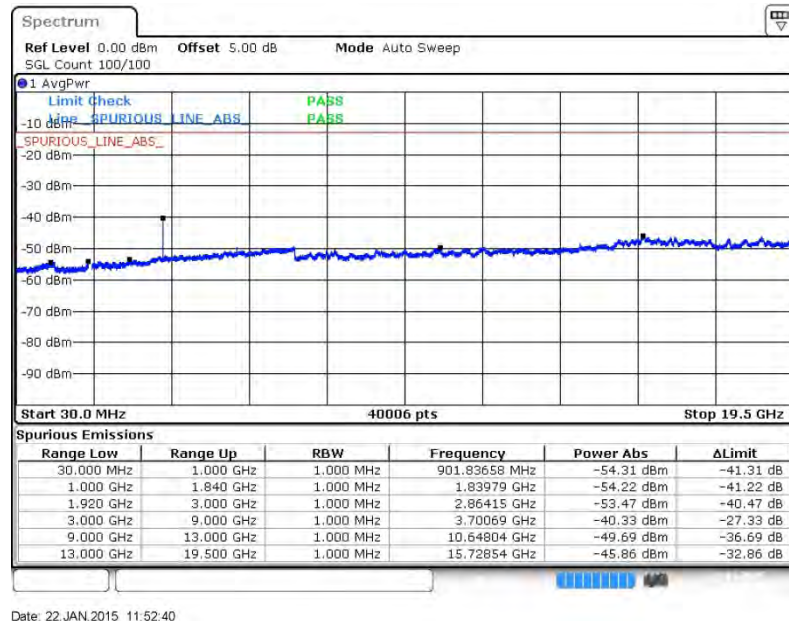
## 16QAM (RB Size 1, RB Offset 14)



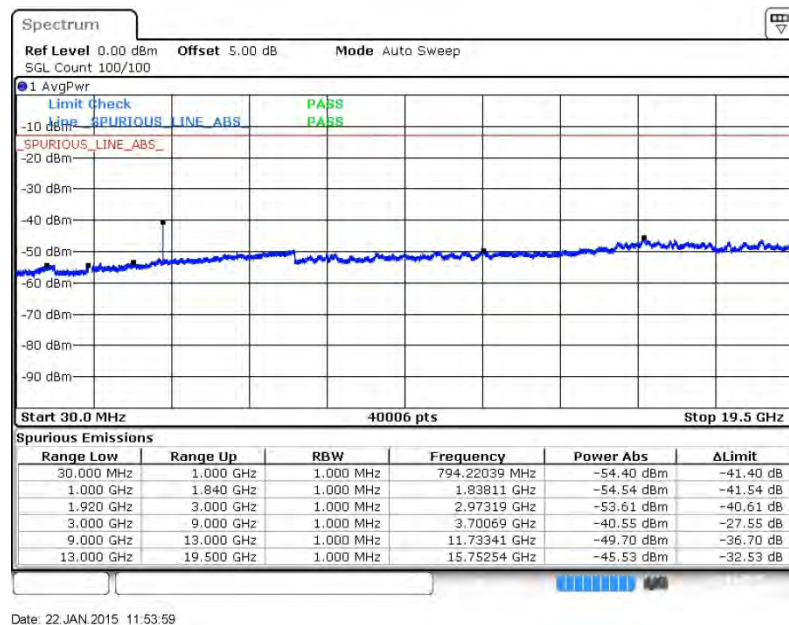


|              |            |           |               |
|--------------|------------|-----------|---------------|
| Band :       | LTE Band 2 | Channel : | CH18625 (Low) |
| Band Width : | 5MHz       |           |               |

## QPSK (RB Size 1, RB Offset 12)



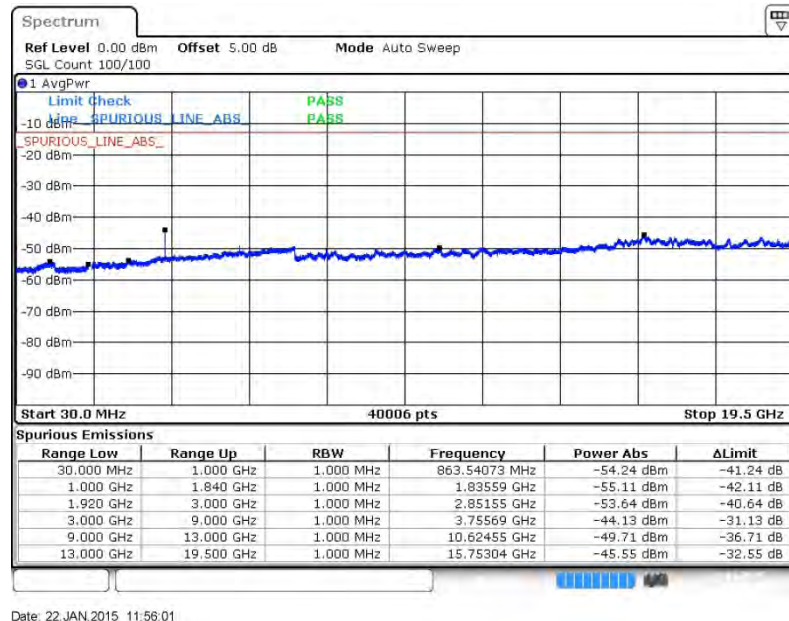
## 16QAM (RB Size 1, RB Offset 12)



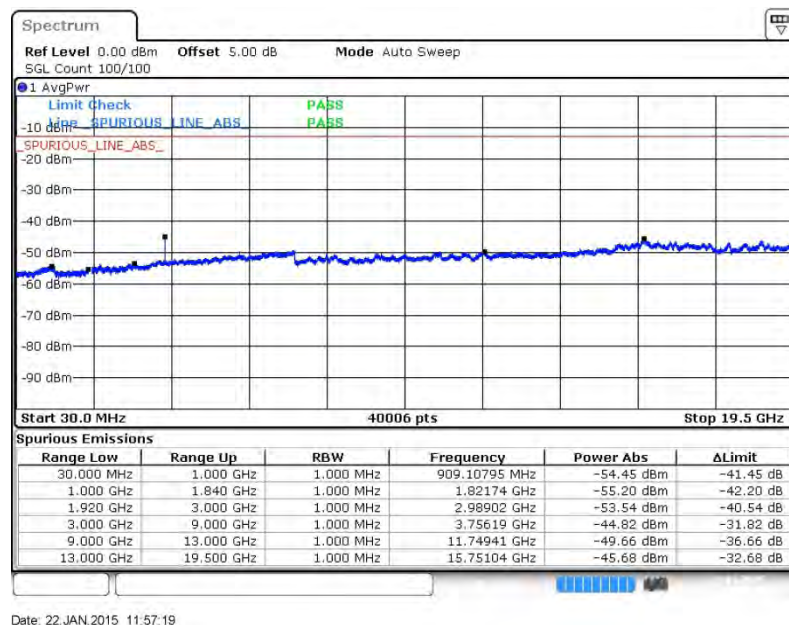


|              |            |           |                  |
|--------------|------------|-----------|------------------|
| Band :       | LTE Band 2 | Channel : | CH18900 (Middle) |
| Band Width : | 5MHz       |           |                  |

## QPSK (RB Size 1, RB Offset 12)



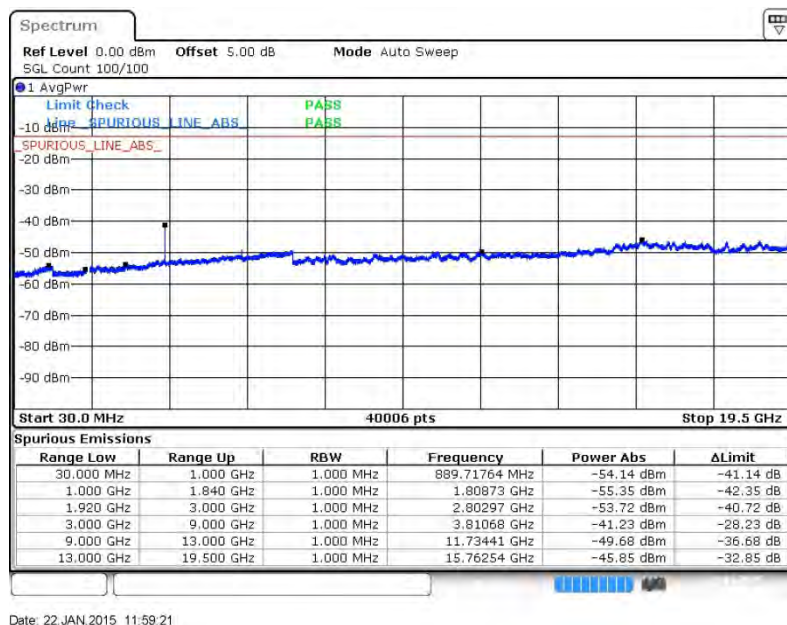
## 16QAM (RB Size 1, RB Offset 12)



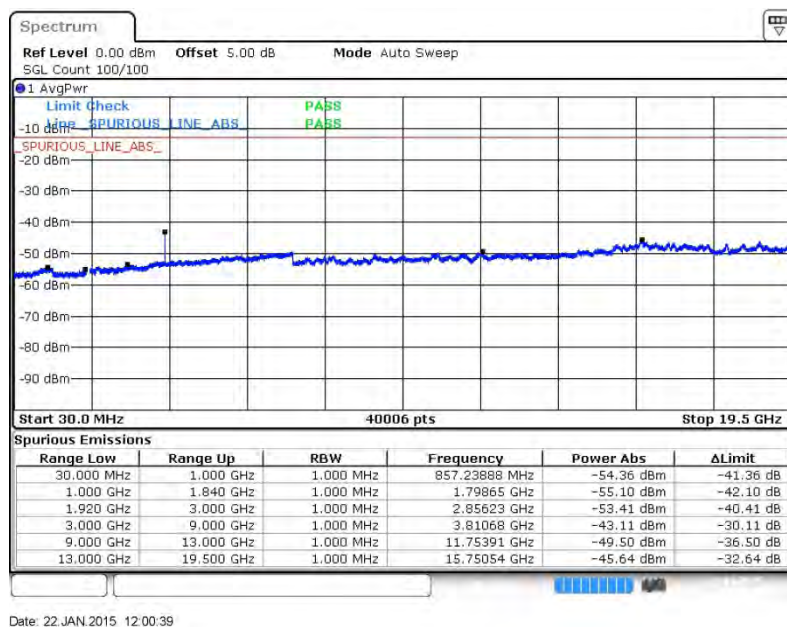


|              |            |           |                |
|--------------|------------|-----------|----------------|
| Band :       | LTE Band 2 | Channel : | CH19175 (High) |
| Band Width : | 5MHz       |           |                |

## QPSK (RB Size 1, RB Offset 12)

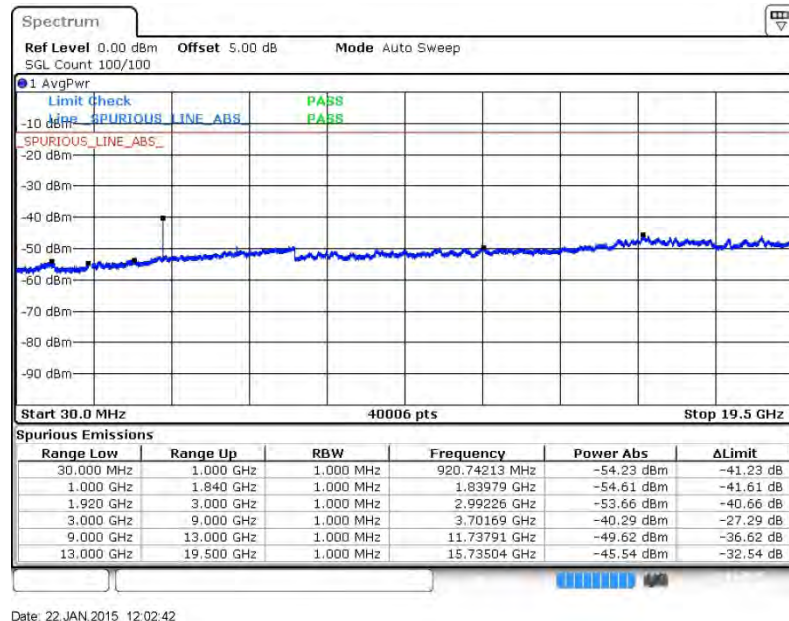


## 16QAM (RB Size 1, RB Offset 12)

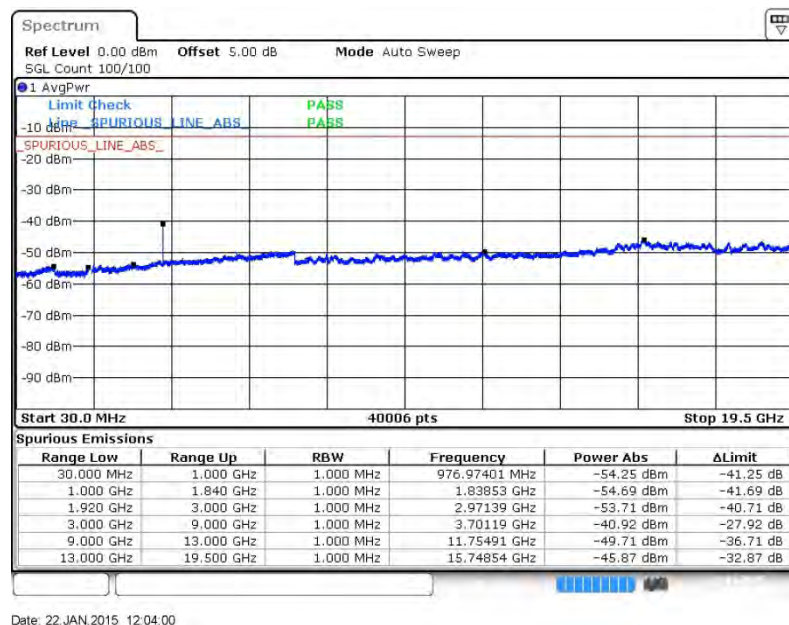


|                     |            |                  |               |
|---------------------|------------|------------------|---------------|
| <b>Band :</b>       | LTE Band 2 | <b>Channel :</b> | CH18650 (Low) |
| <b>Band Width :</b> | 10MHz      |                  |               |

### QPSK (RB Size 1, RB Offset 0)



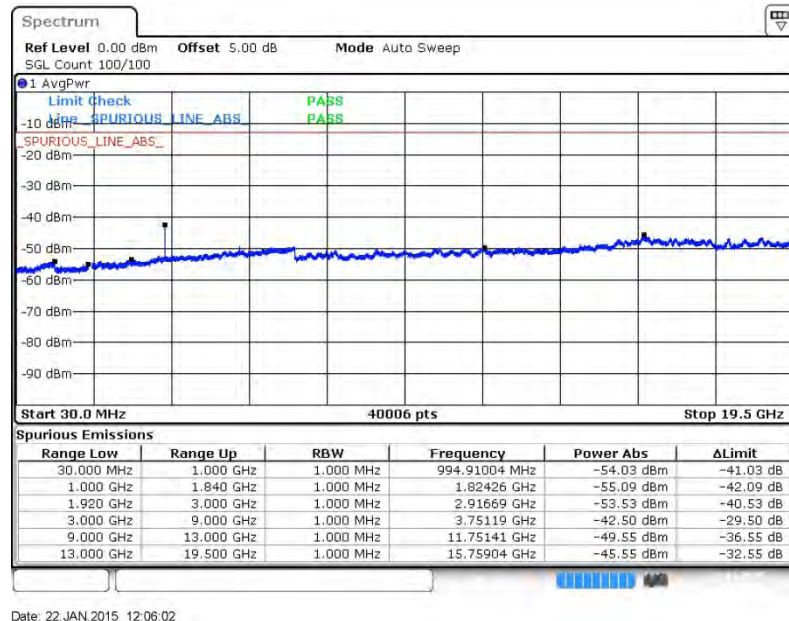
### 16QAM (RB Size 1, RB Offset 0)



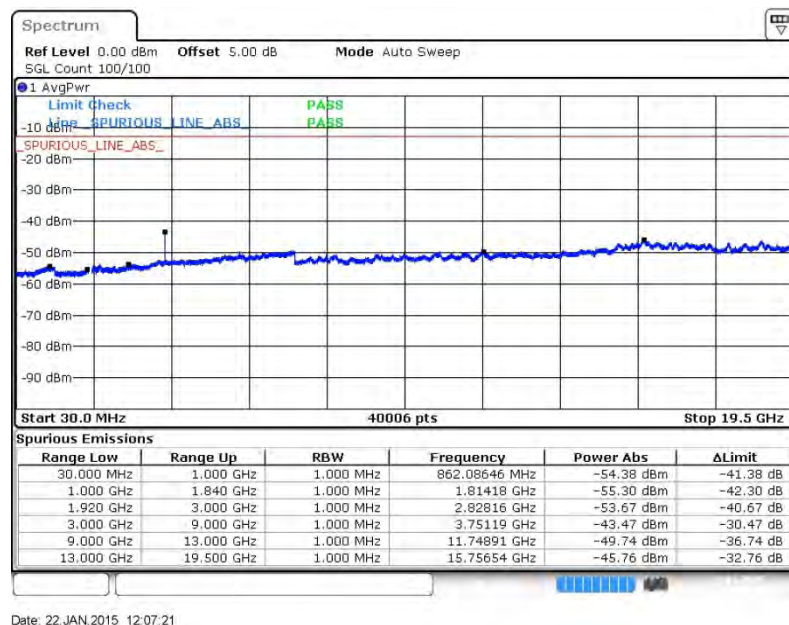


|              |            |           |                  |
|--------------|------------|-----------|------------------|
| Band :       | LTE Band 2 | Channel : | CH18900 (Middle) |
| Band Width : | 10MHz      |           |                  |

## QPSK (RB Size 1, RB Offset 24)



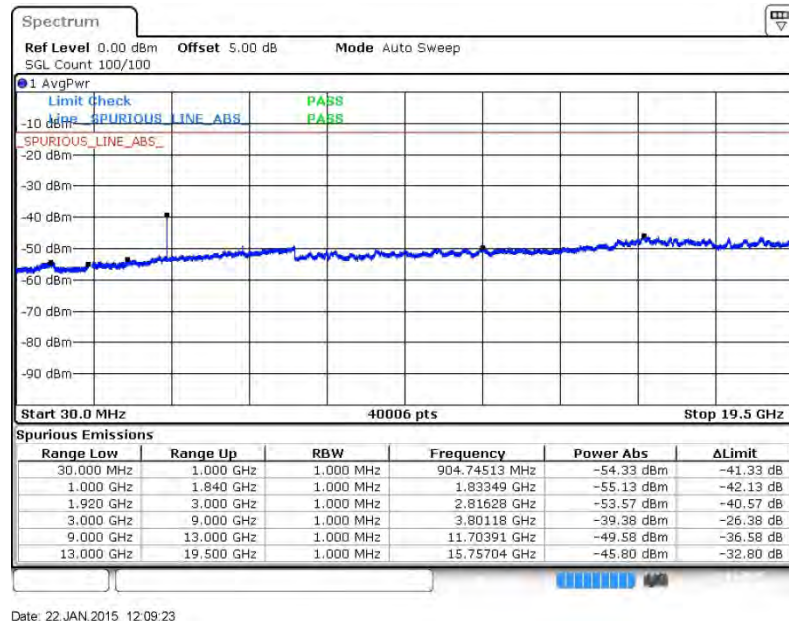
## 16QAM (RB Size 1, RB Offset 49)



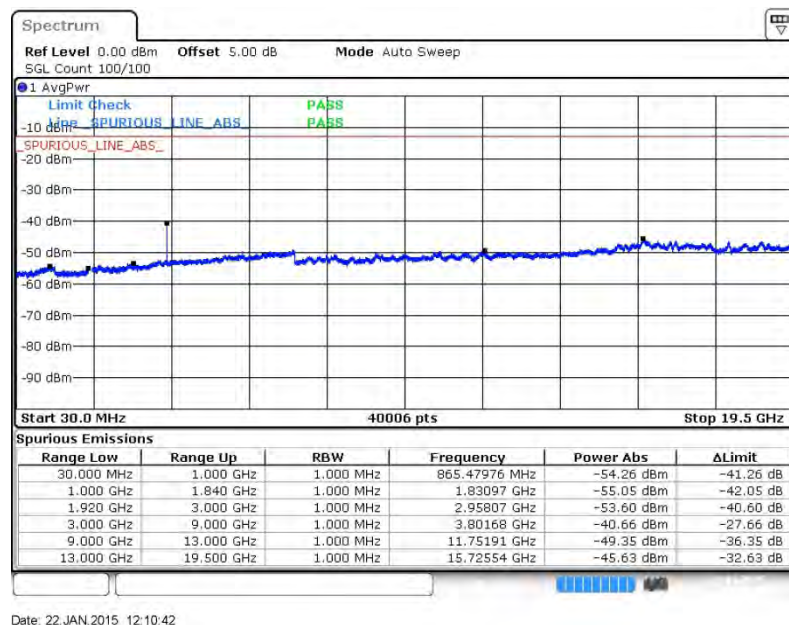


|              |            |           |                |
|--------------|------------|-----------|----------------|
| Band :       | LTE Band 2 | Channel : | CH19150 (High) |
| Band Width : | 10MHz      |           |                |

## QPSK (RB Size 1, RB Offset 0)



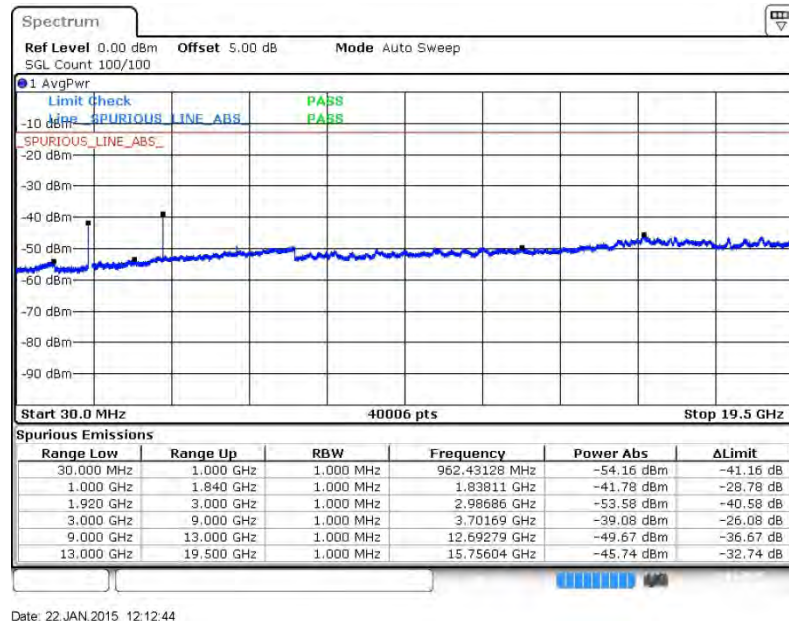
## 16QAM (RB Size 1, RB Offset 0)



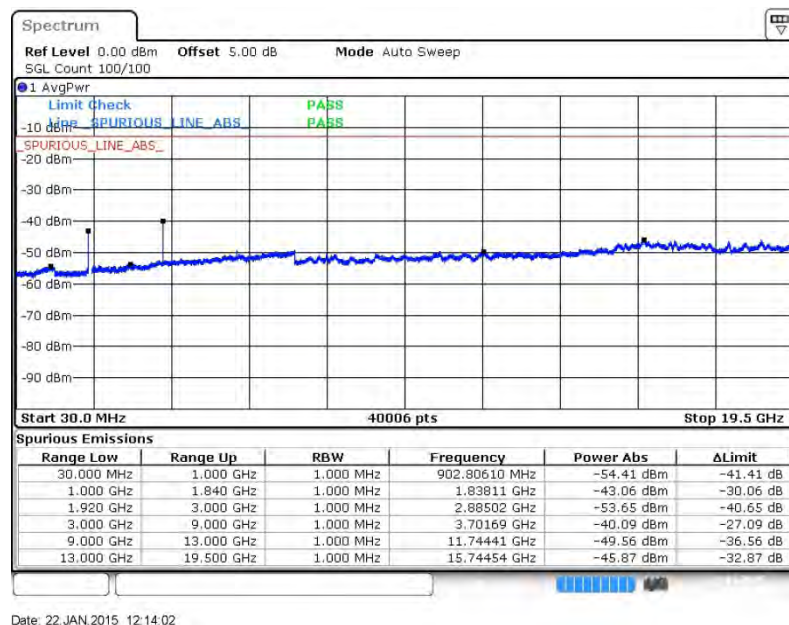


|              |            |           |               |
|--------------|------------|-----------|---------------|
| Band :       | LTE Band 2 | Channel : | CH18675 (Low) |
| Band Width : | 15MHz      |           |               |

## QPSK (RB Size 1, RB Offset 37)



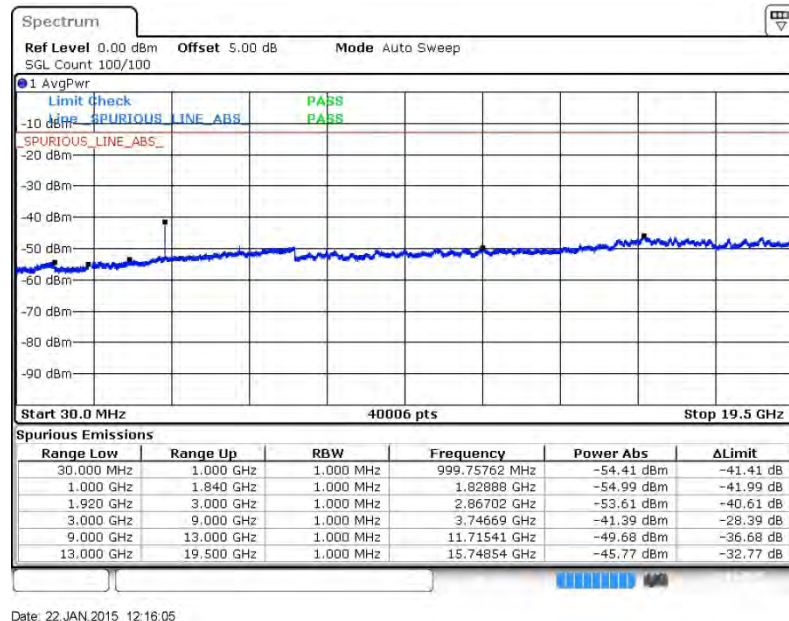
## 16QAM (RB Size 1, RB Offset 37)



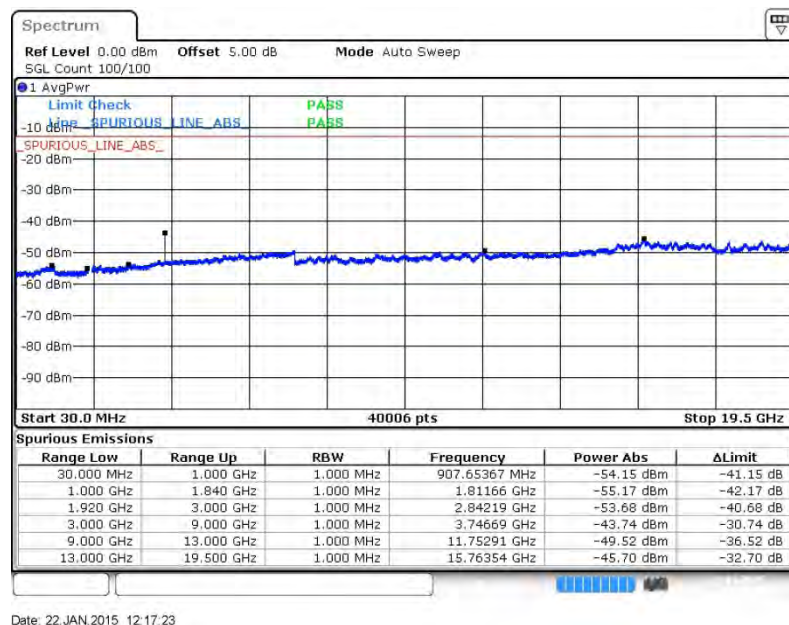


|              |            |           |                  |
|--------------|------------|-----------|------------------|
| Band :       | LTE Band 2 | Channel : | CH18900 (Middle) |
| Band Width : | 15MHz      |           |                  |

## QPSK (RB Size 1, RB Offset 0)



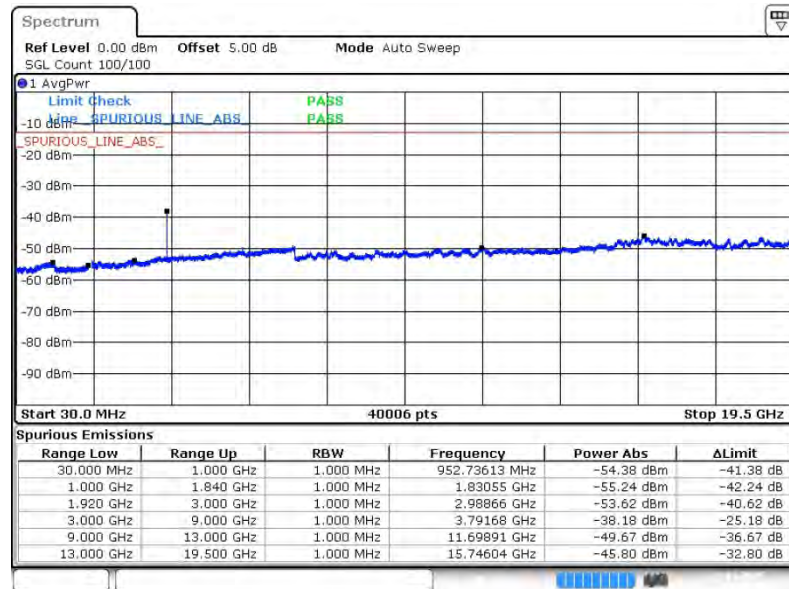
## 16QAM (RB Size 1, RB Offset 0)





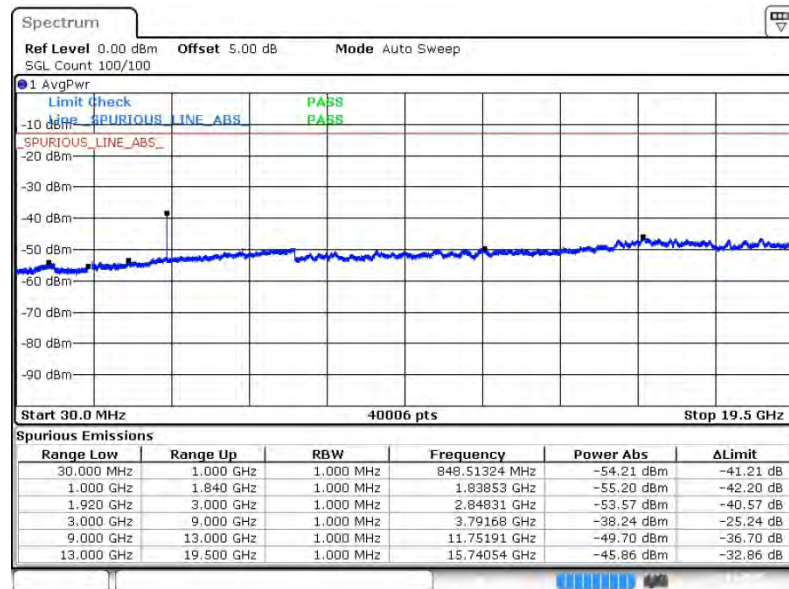
|              |            |           |                |
|--------------|------------|-----------|----------------|
| Band :       | LTE Band 2 | Channel : | CH19125 (High) |
| Band Width : | 15MHz      |           |                |

## QPSK (RB Size 1, RB Offset 74)



Date: 22.JAN.2015 12:19:26

## 16QAM (RB Size 1, RB Offset 0)



Date: 22.JAN.2015 12:20:44