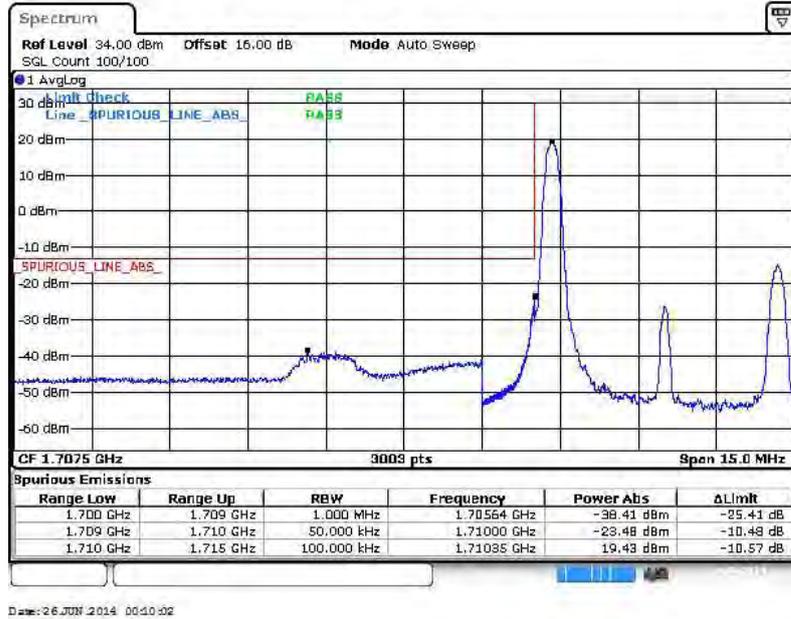


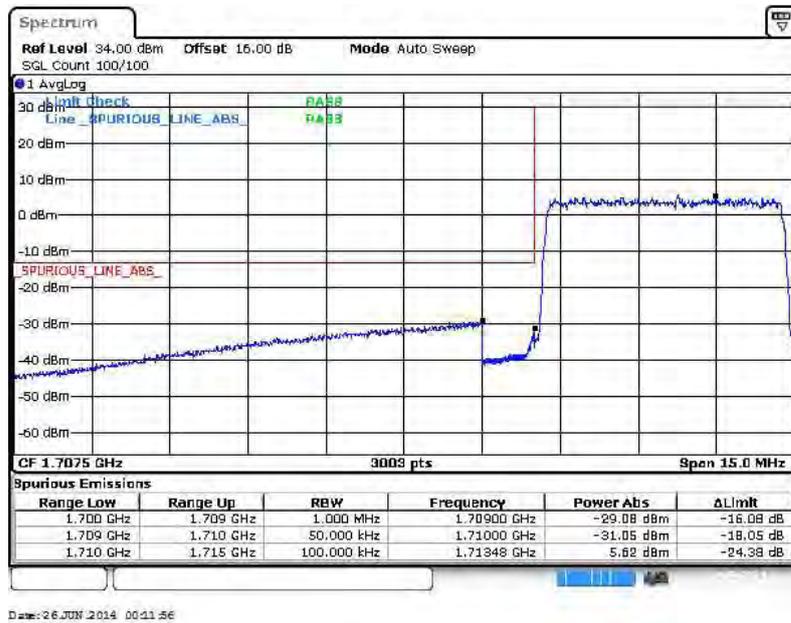


| | | | |
|--------|------------|--------------|--------------|
| Band : | LTE Band 4 | Band Width : | 5MHz / 16QAM |
|--------|------------|--------------|--------------|

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

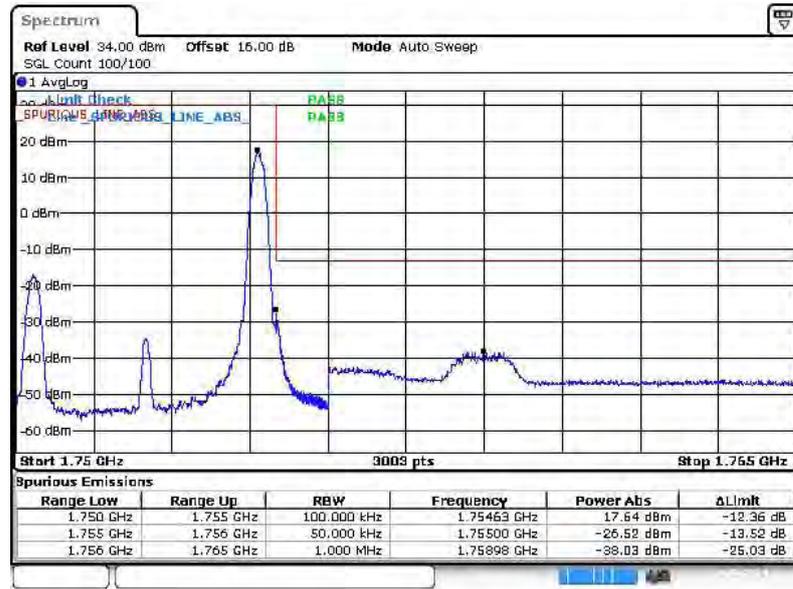


Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



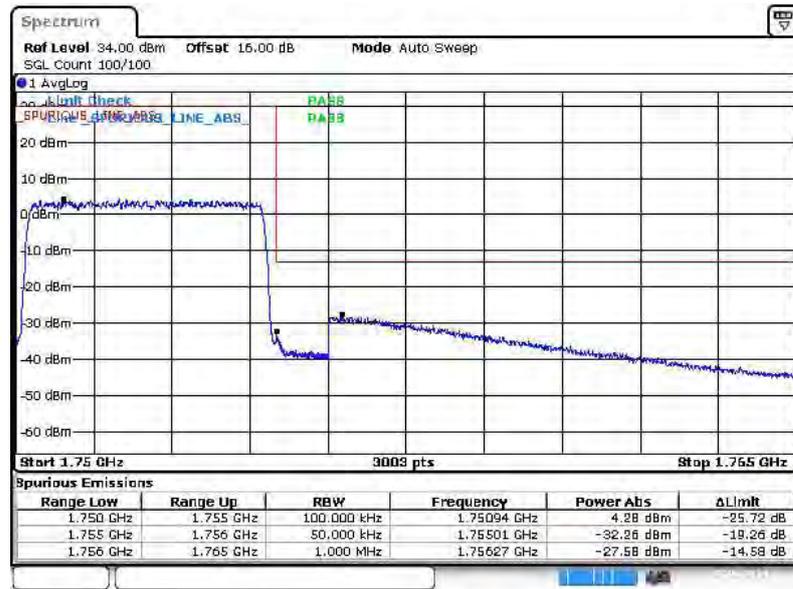


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 26 JUN 2014 00:45:06

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

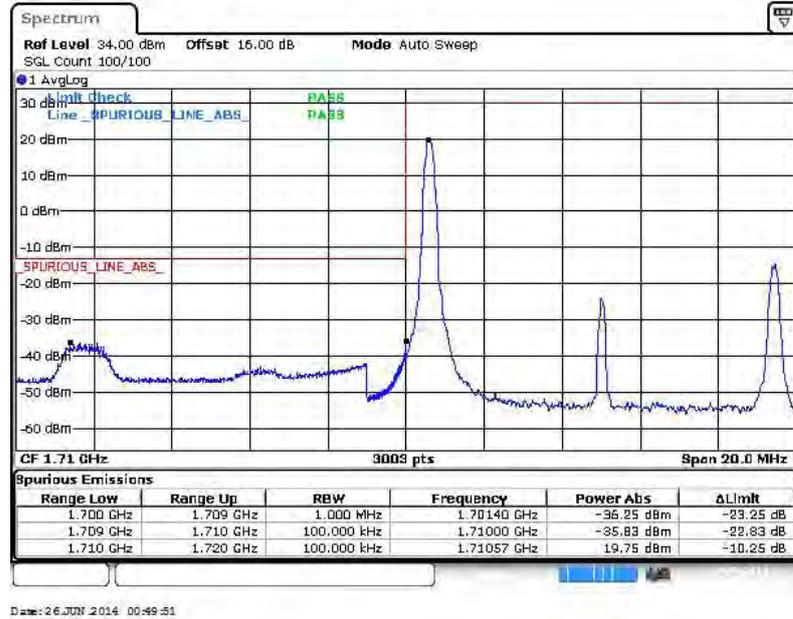


Date: 2 JUL 2014 09:32:02

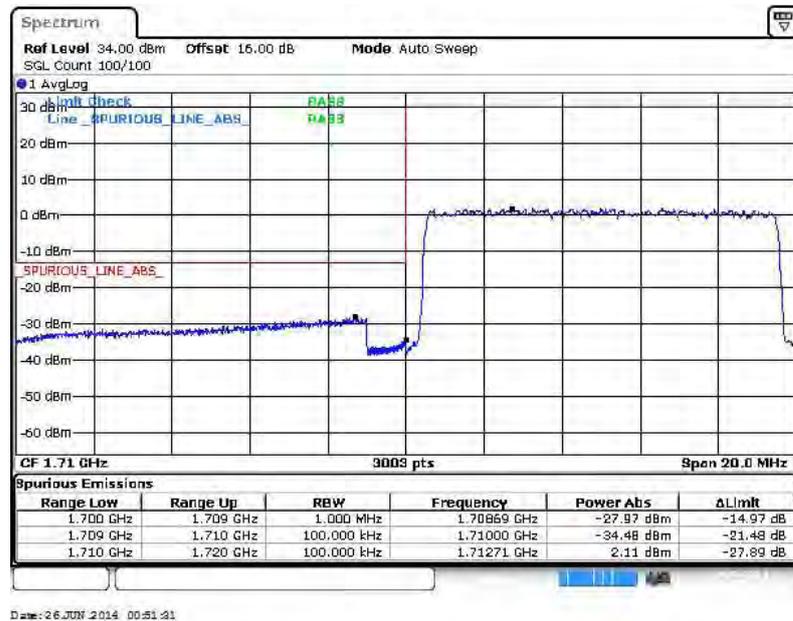


| | | | |
|--------|------------|--------------|--------------|
| Band : | LTE Band 4 | Band Width : | 10MHz / QPSK |
|--------|------------|--------------|--------------|

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

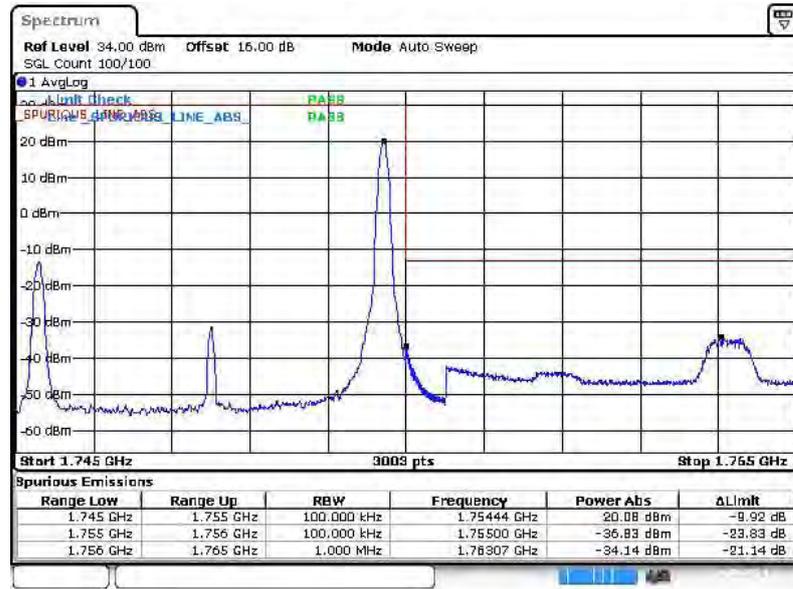


Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0



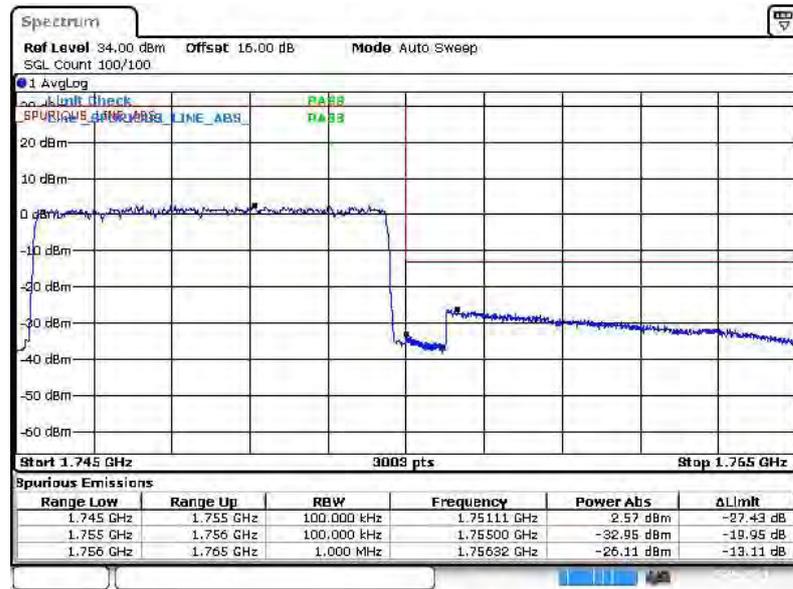


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



Date: 26 JUN 2014 00:54:43

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

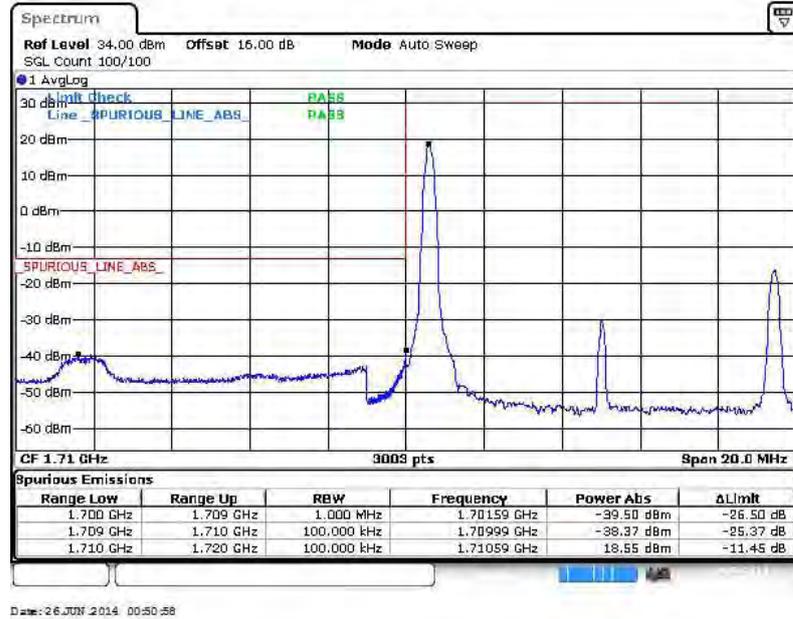


Date: 2 JUL 2014 09:33:42

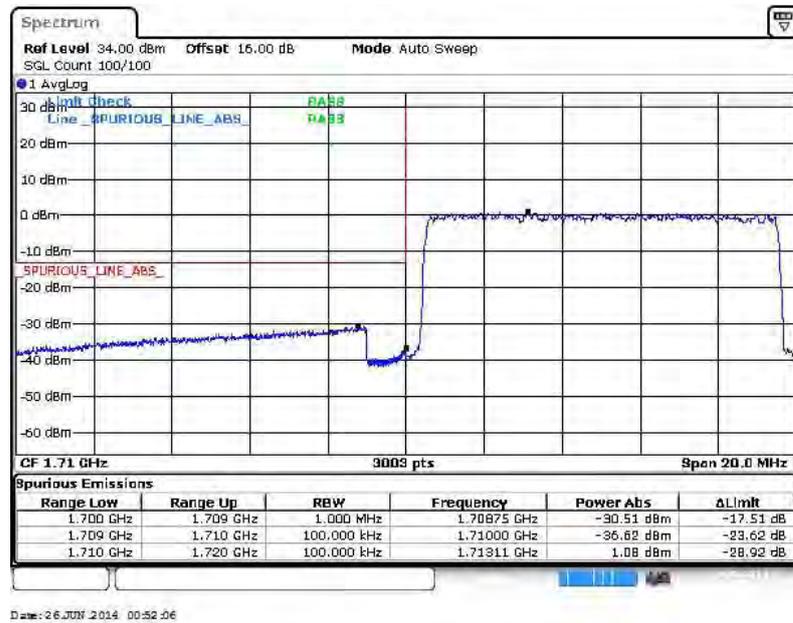


| | | | |
|--------|------------|--------------|---------------|
| Band : | LTE Band 4 | Band Width : | 10MHz / 16QAM |
|--------|------------|--------------|---------------|

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

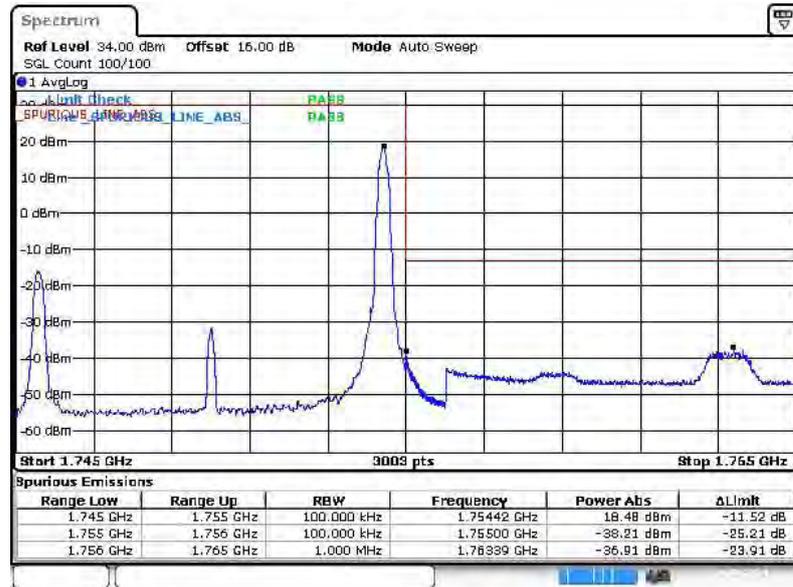


Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



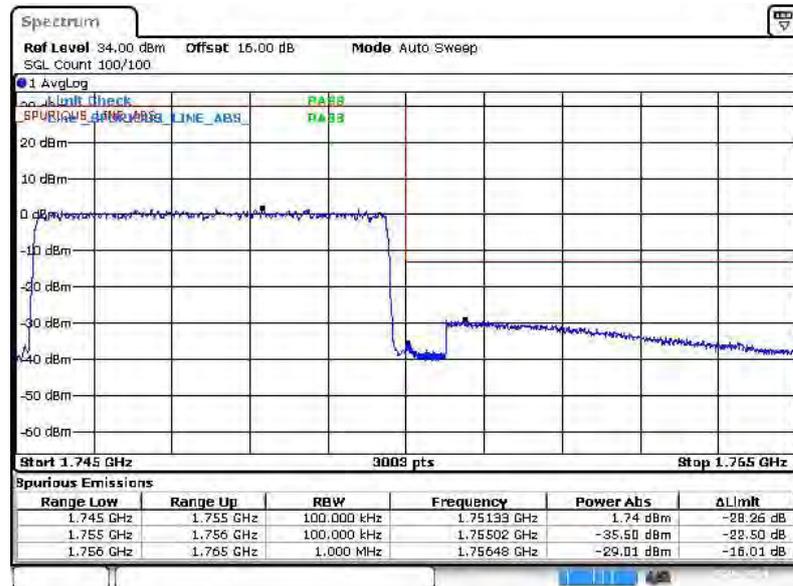


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



Date: 26 JUN 2014 00:55:25

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

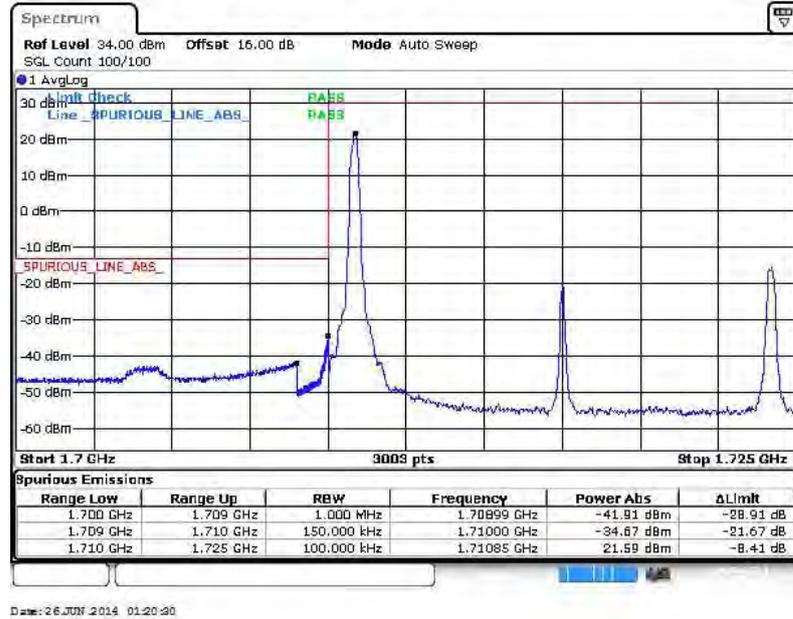


Date: 2 JUL 2014 09:24:22

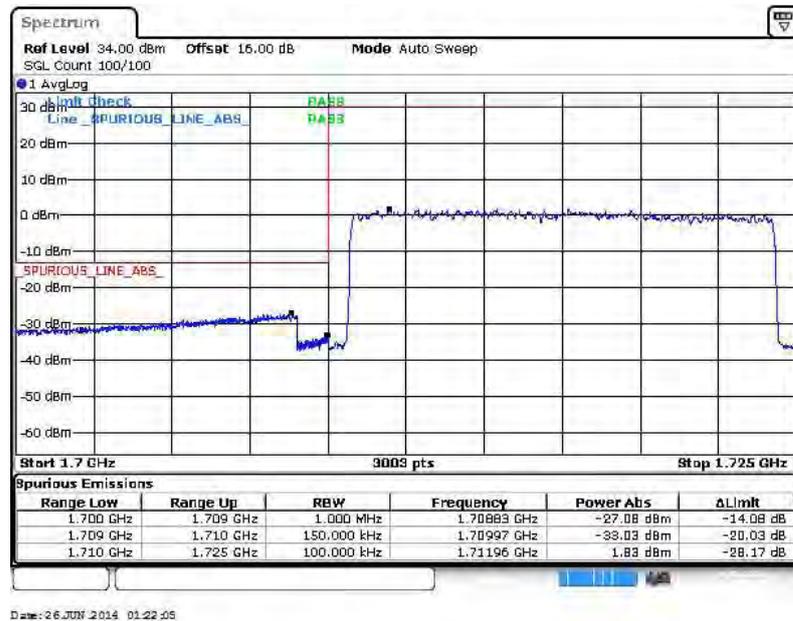


| | | | |
|--------|------------|--------------|--------------|
| Band : | LTE Band 4 | Band Width : | 15MHz / QPSK |
|--------|------------|--------------|--------------|

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

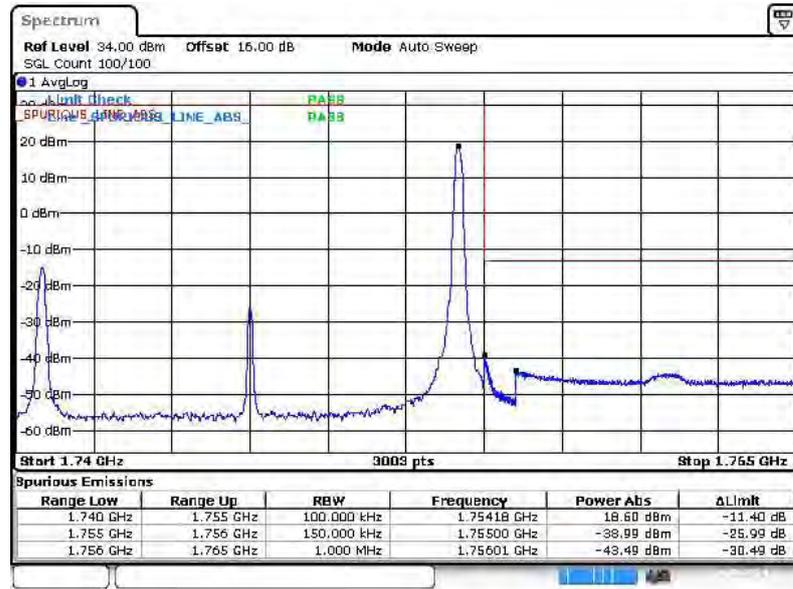


Lower Band Edge Plot for QPSK-RB Size 75, RB Offset 0



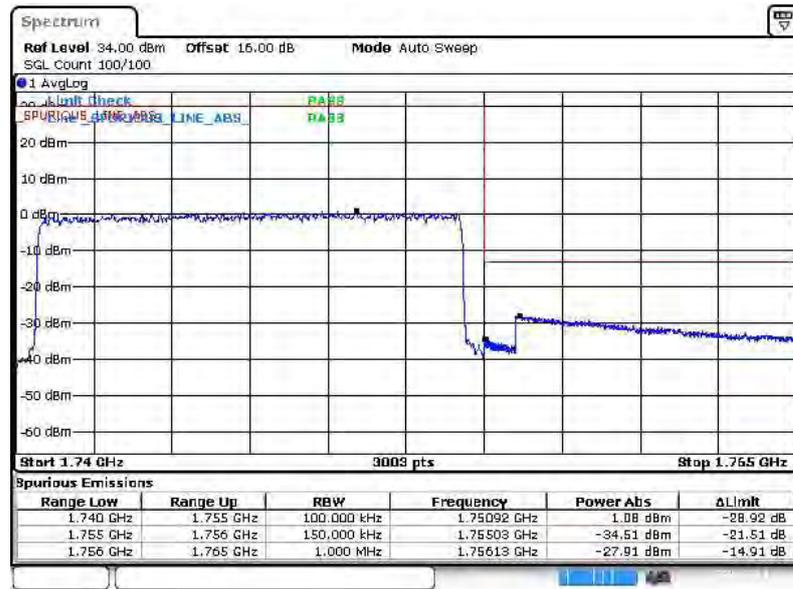


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 74



Date: 26 JUN 2014 01:24:39

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

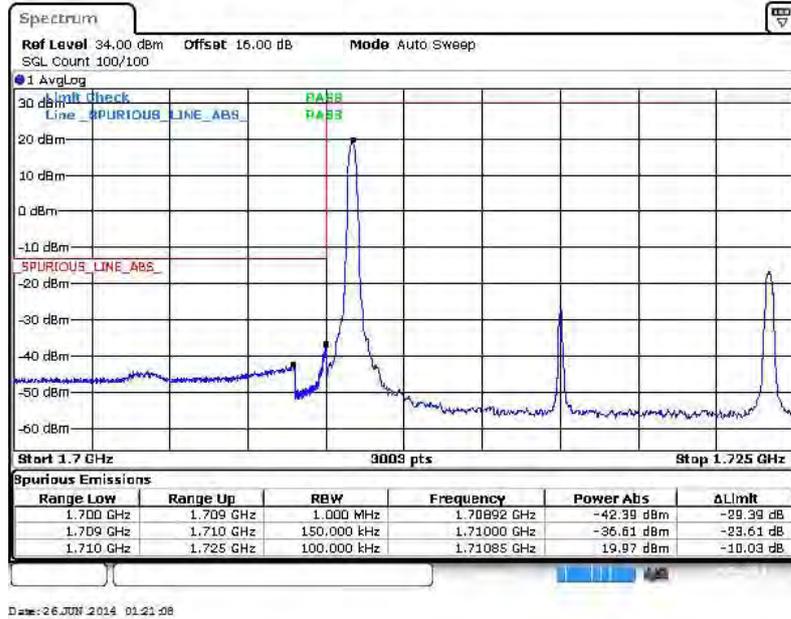


Date: 2 JUL 2014 09:34:39

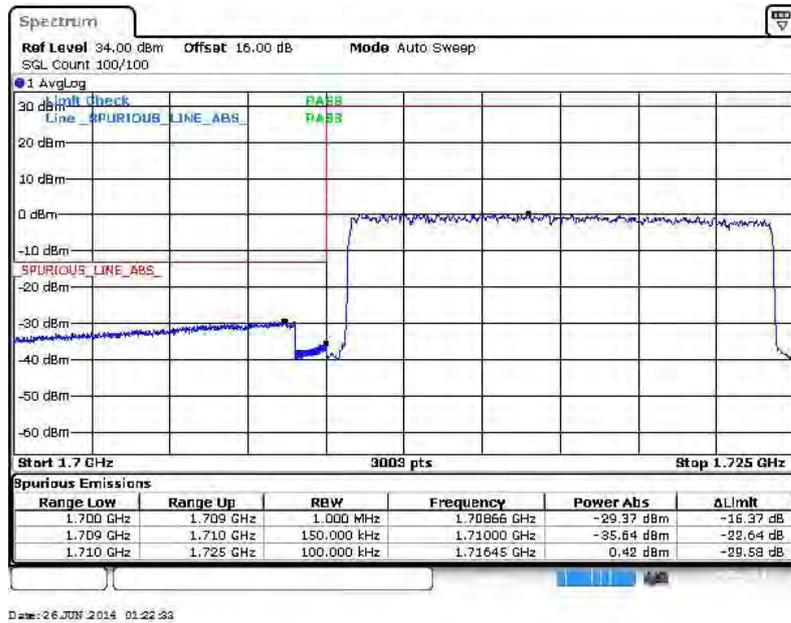


| | | | |
|--------|------------|--------------|---------------|
| Band : | LTE Band 4 | Band Width : | 15MHz / 16QAM |
|--------|------------|--------------|---------------|

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

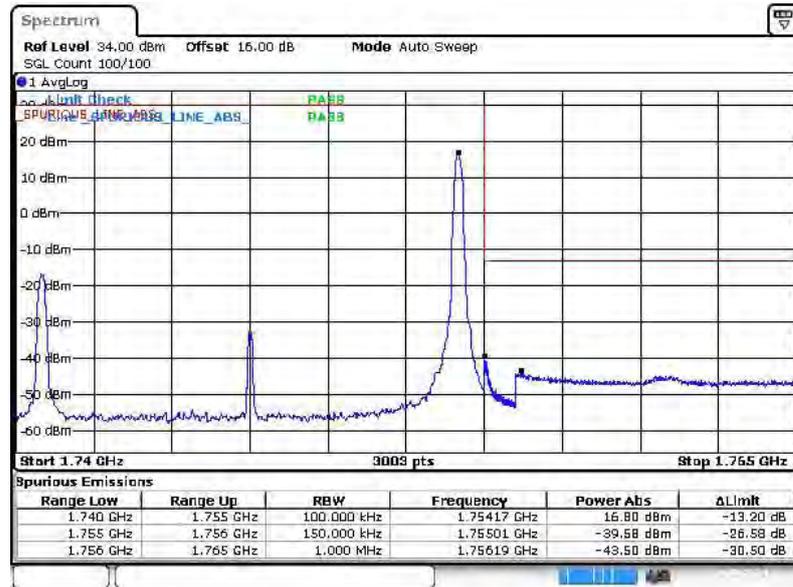


Lower Band Edge Plot for 16QAM-RB Size 75, RB Offset 0



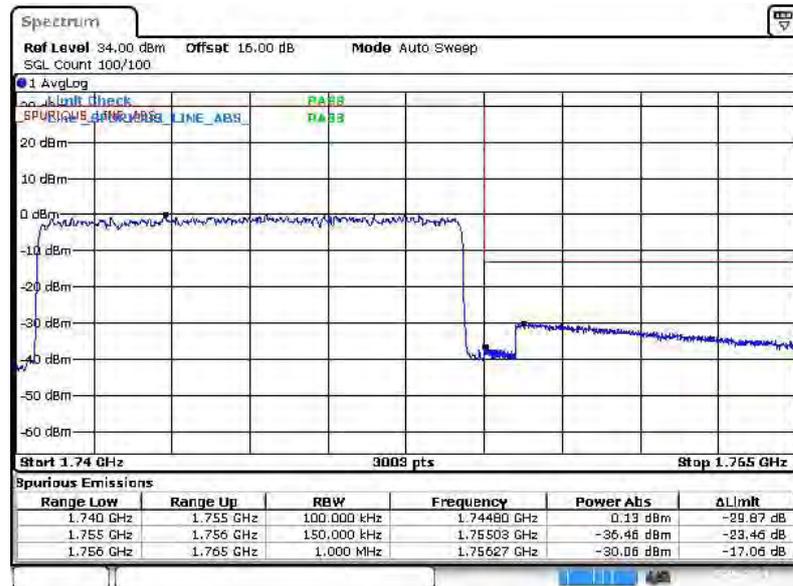


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 74



Date: 26 JUN 2014 01:26:13

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

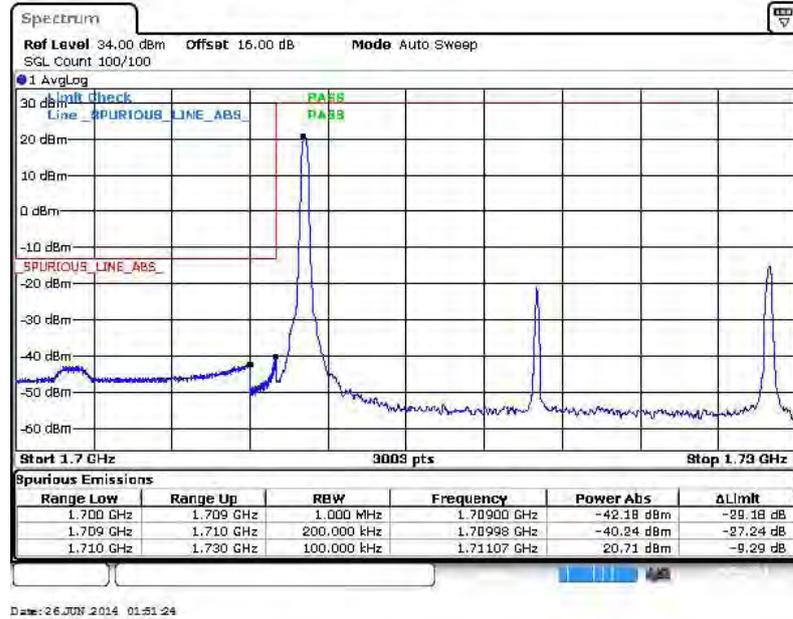


Date: 2 JUL 2014 09:35:26

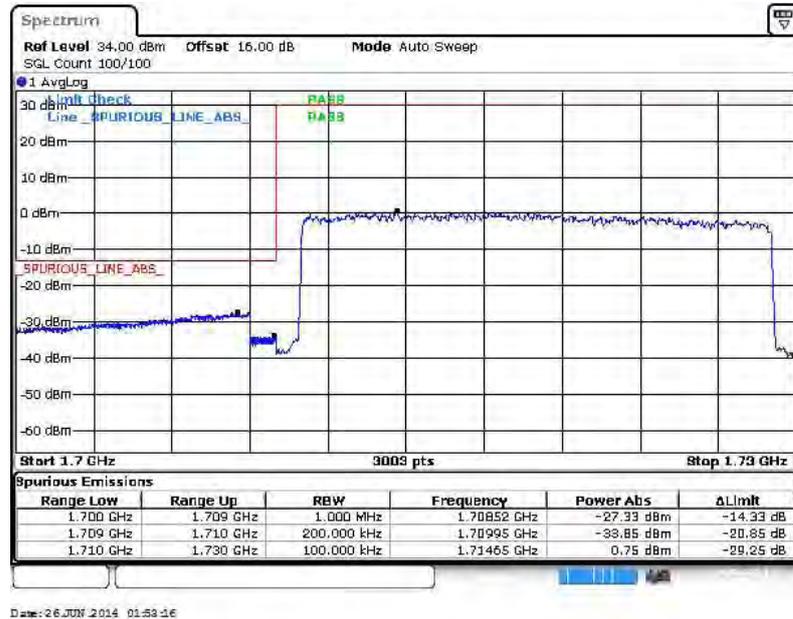


| | | | |
|--------|------------|--------------|--------------|
| Band : | LTE Band 4 | Band Width : | 20MHz / QPSK |
|--------|------------|--------------|--------------|

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

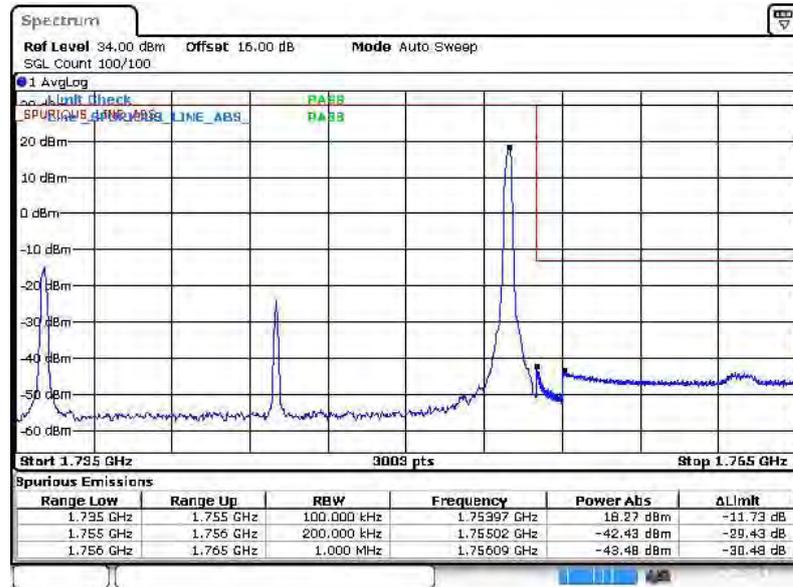


Lower Band Edge Plot for QPSK-RB Size 100, RB Offset 0



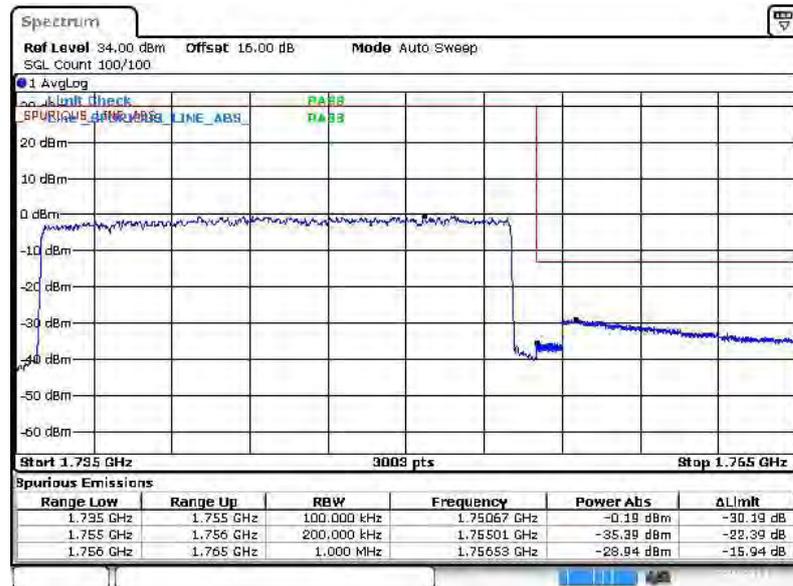


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 99



Date: 26 JUN 2014 01:57:40

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

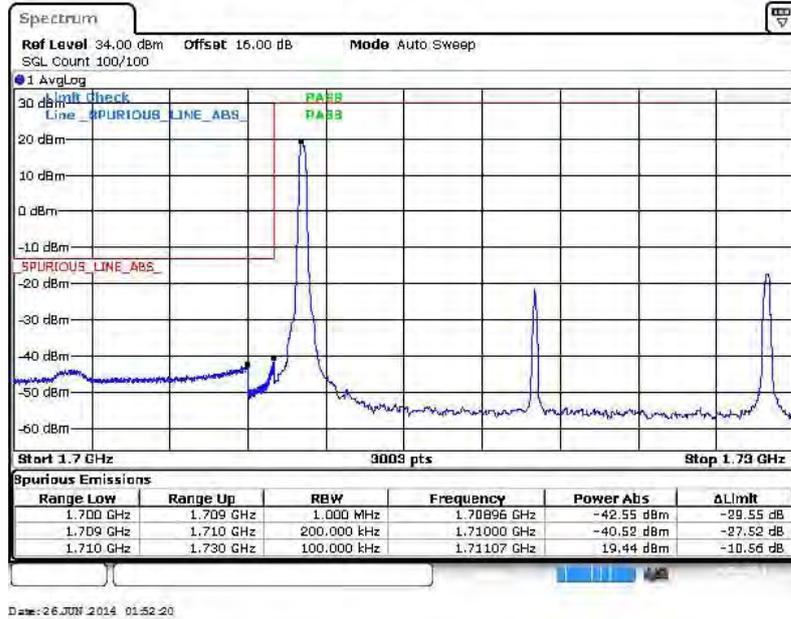


Date: 2 JUL 2014 09:26:09

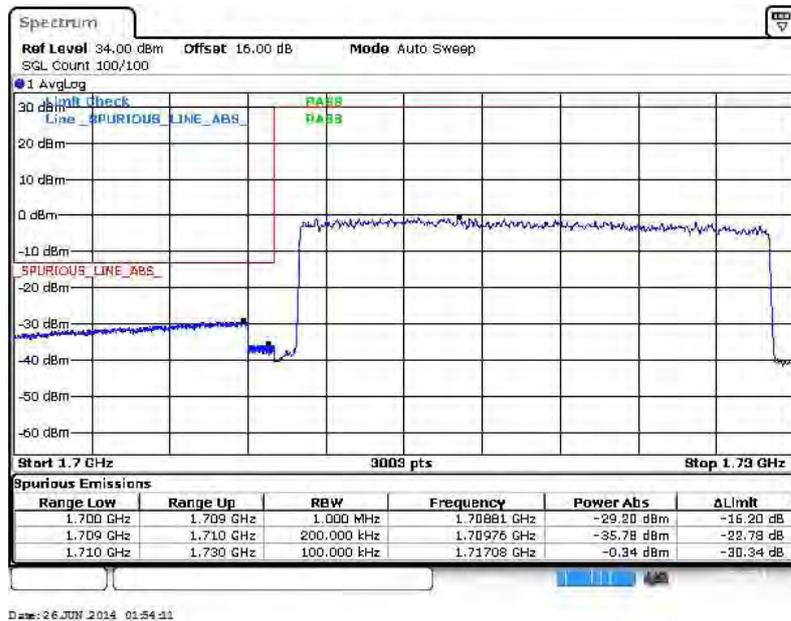


| | | | |
|--------|------------|--------------|---------------|
| Band : | LTE Band 4 | Band Width : | 20MHz / 16QAM |
|--------|------------|--------------|---------------|

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

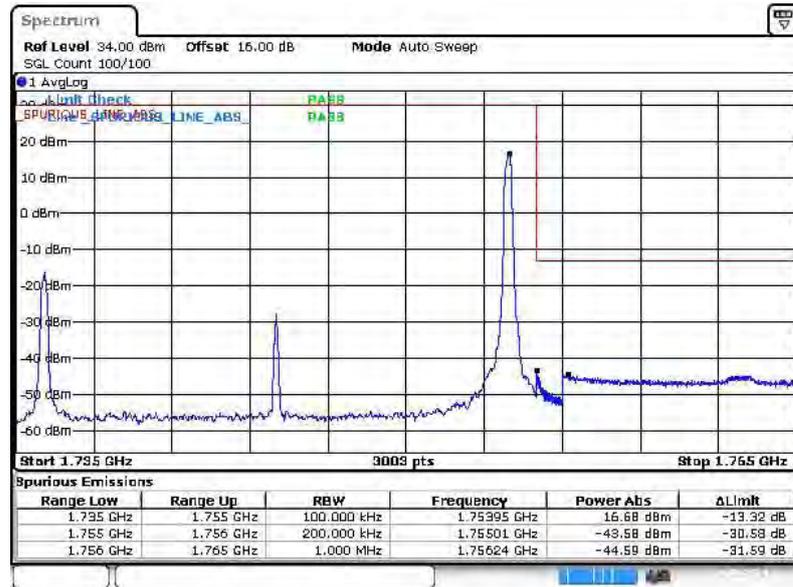


Lower Band Edge Plot for 16QAM-RB Size 100, RB Offset 0



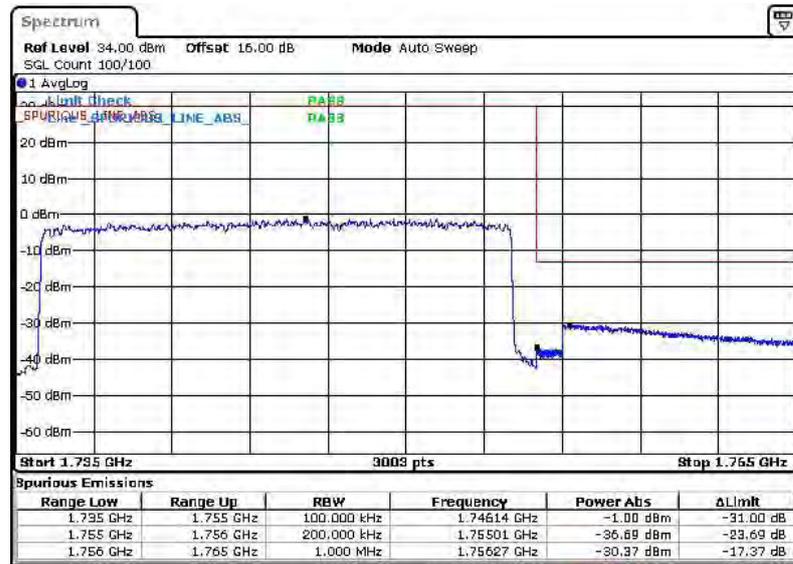


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 99



Date: 26 JUN 2014 01:59:09

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



Date: 2 JUL 2014 09:26:38

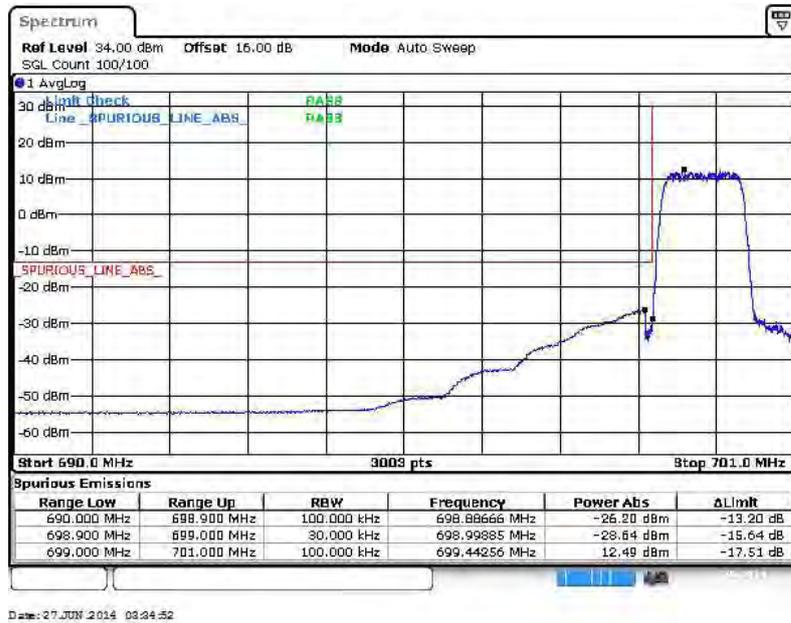


| | | | |
|---------------|-------------|---------------------|---------------|
| Band : | LTE Band 12 | Band Width : | 1.4MHz / QPSK |
|---------------|-------------|---------------------|---------------|

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

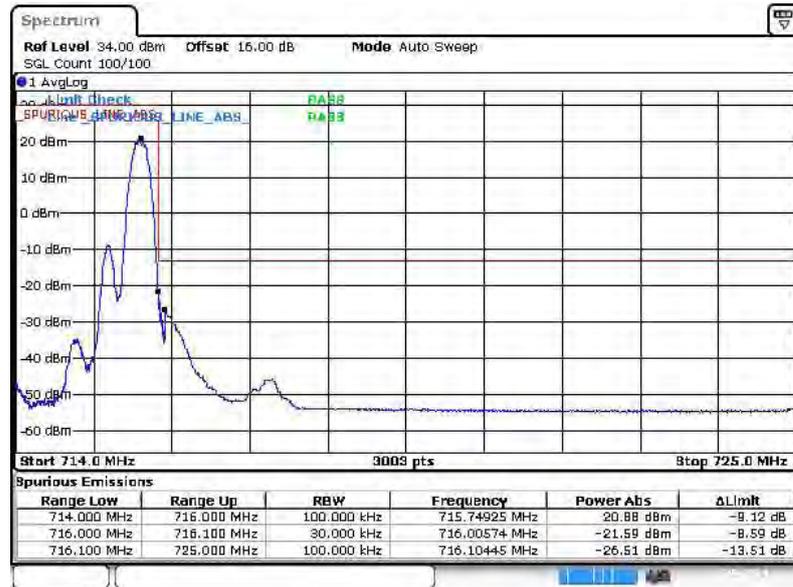


Lower Band Edge Plot for QPSK-RB Size 6, RB Offset 0





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



Date: 27 JUL 2014 09:38:45

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

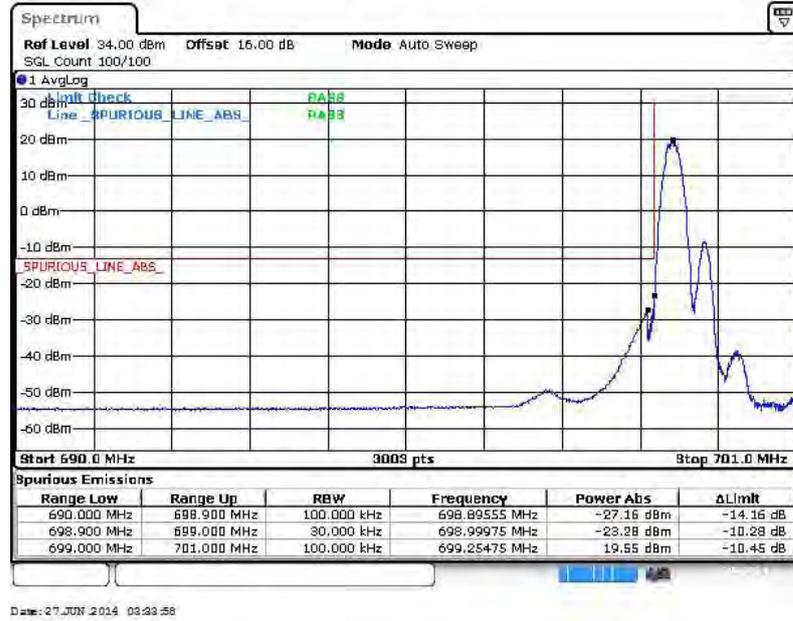


Date: 2 JUL 2014 09:39:48

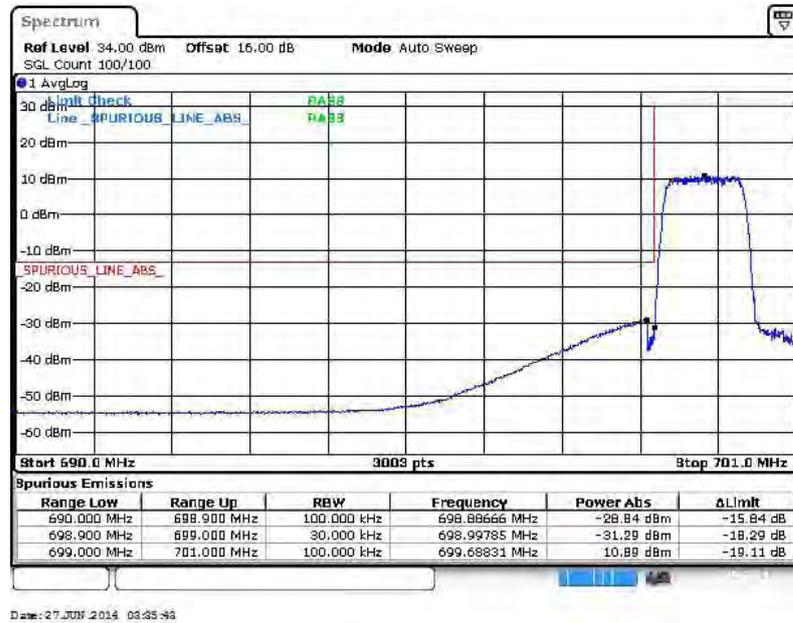


| | | | |
|--------|-------------|--------------|----------------|
| Band : | LTE Band 12 | Band Width : | 1.4MHz / 16QAM |
|--------|-------------|--------------|----------------|

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

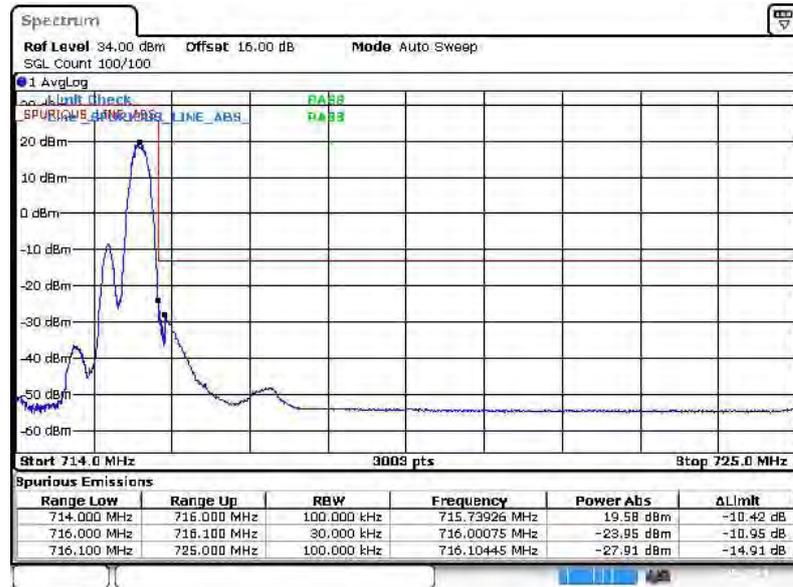


Lower Band Edge Plot for 16QAM-RB Size 6, RB Offset 0





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



Date: 27 JUL 2014 09:39:34

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

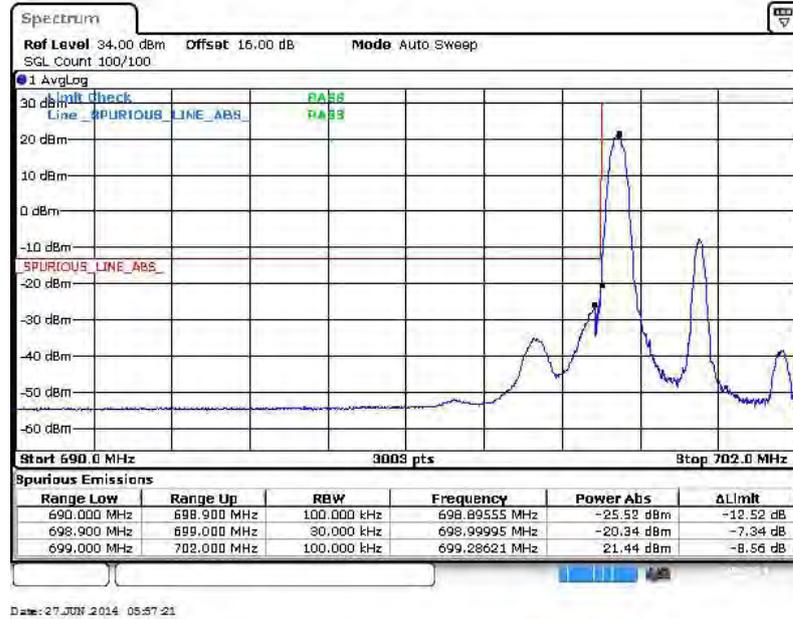


Date: 2 JUL 2014 09:40:34

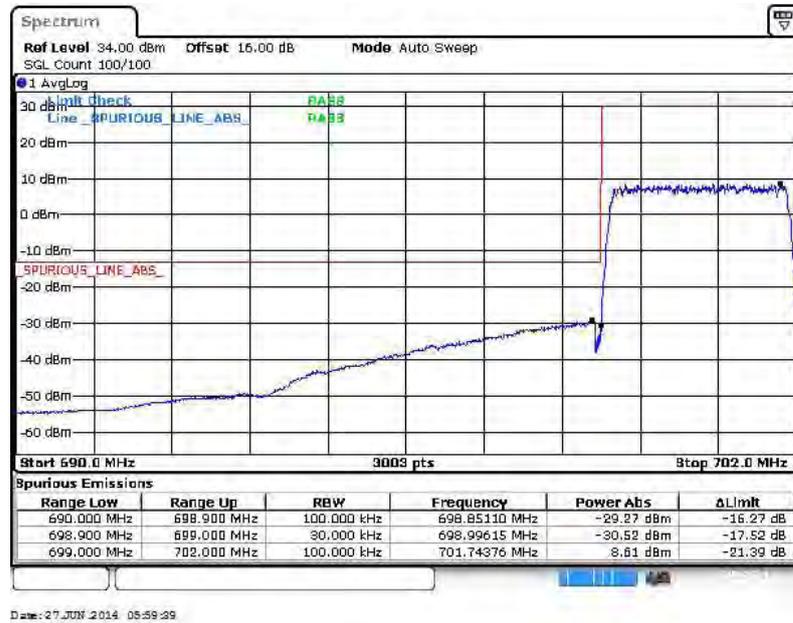


| | | | |
|--------|-------------|--------------|-------------|
| Band : | LTE Band 12 | Band Width : | 3MHz / QPSK |
|--------|-------------|--------------|-------------|

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

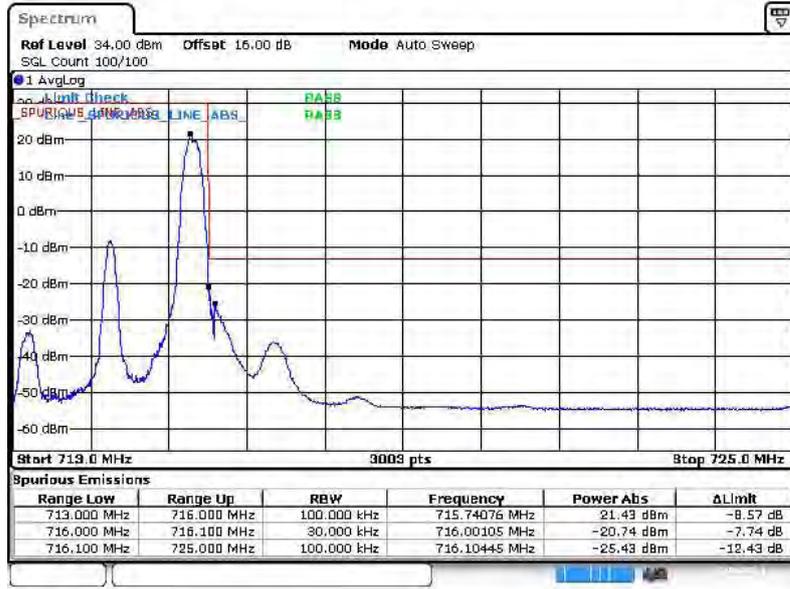


Lower Band Edge Plot for QPSK-RB Size 15, RB Offset 0



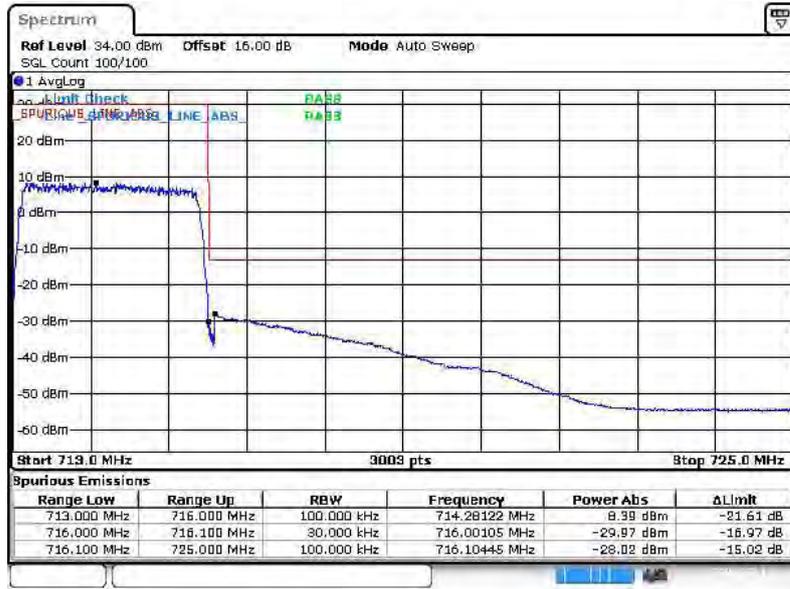


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 14



Date: 27 JUN 2014 06:03:16

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

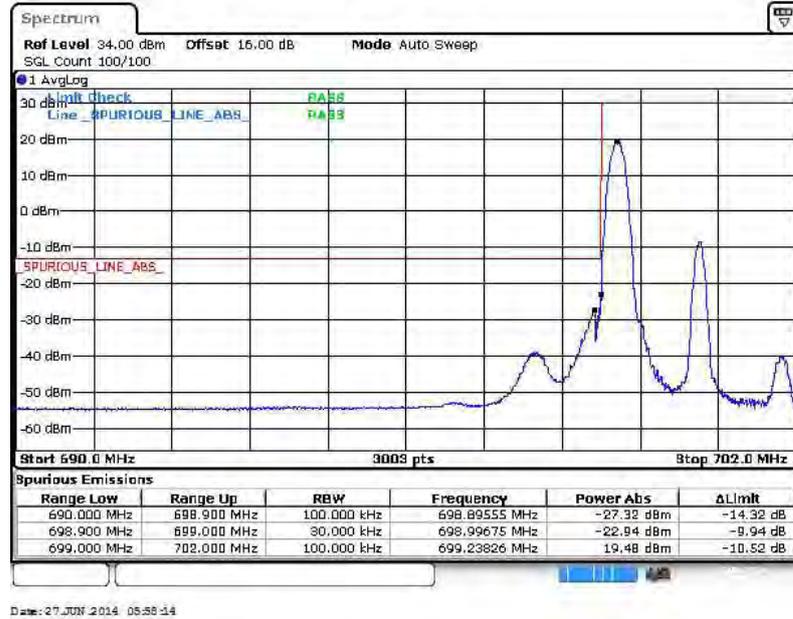


Date: 2 JUL 2014 09:41:29

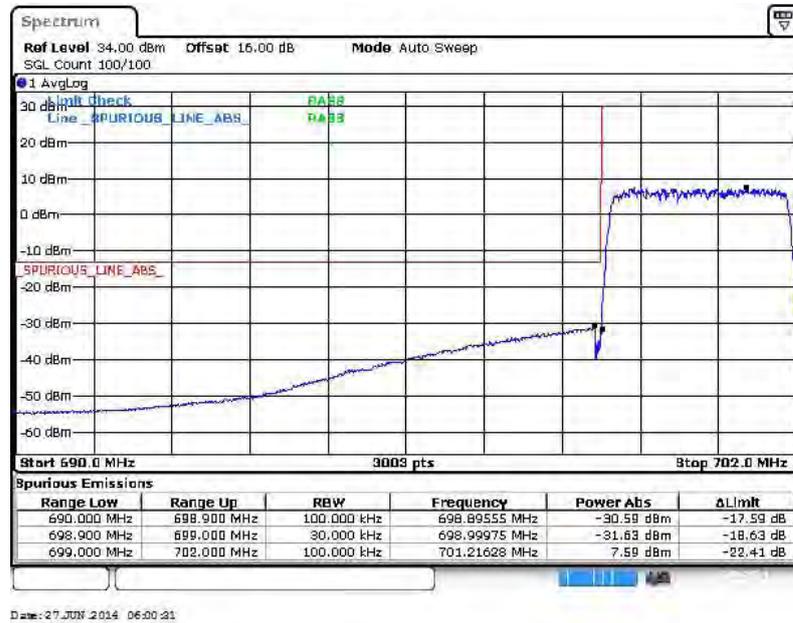


| | | | |
|---------------|-------------|---------------------|--------------|
| Band : | LTE Band 12 | Band Width : | 3MHz / 16QAM |
|---------------|-------------|---------------------|--------------|

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

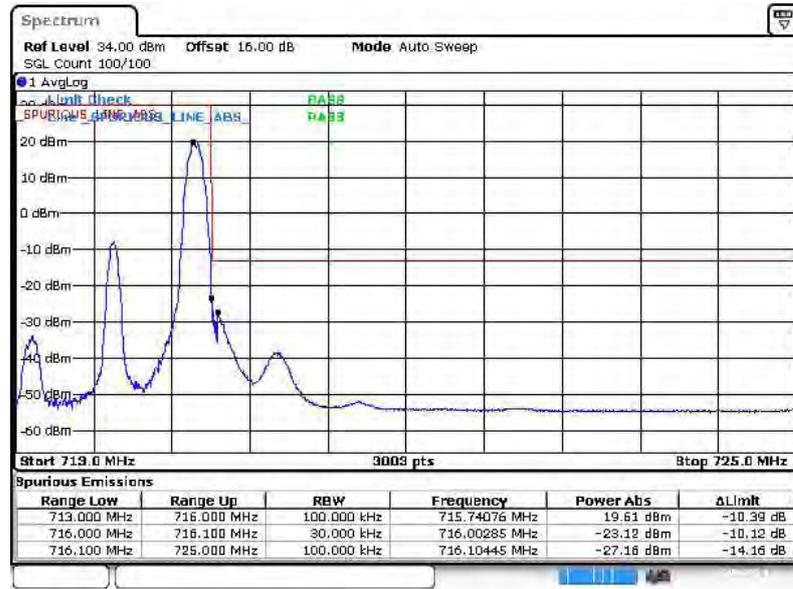


Lower Band Edge Plot for 16QAM-RB Size 15, RB Offset 0



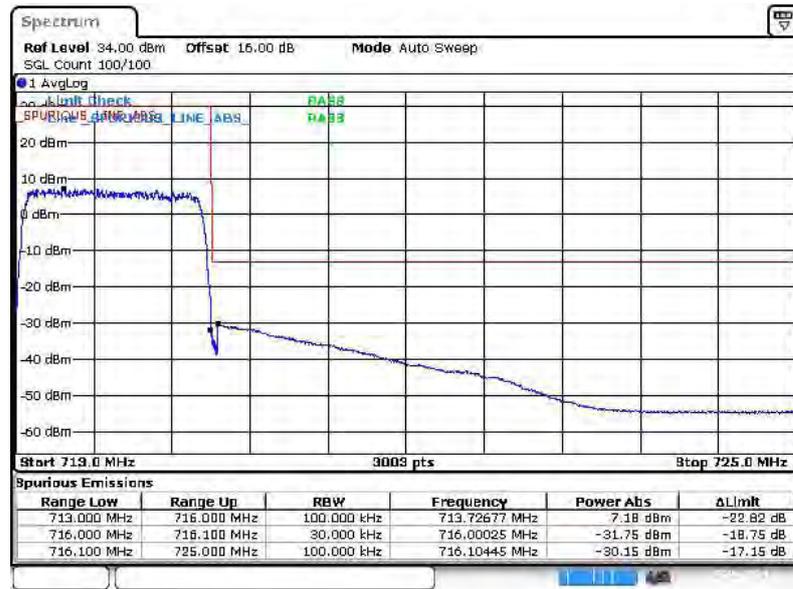


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 14



Date: 27 JUN 2014 06:04:09

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

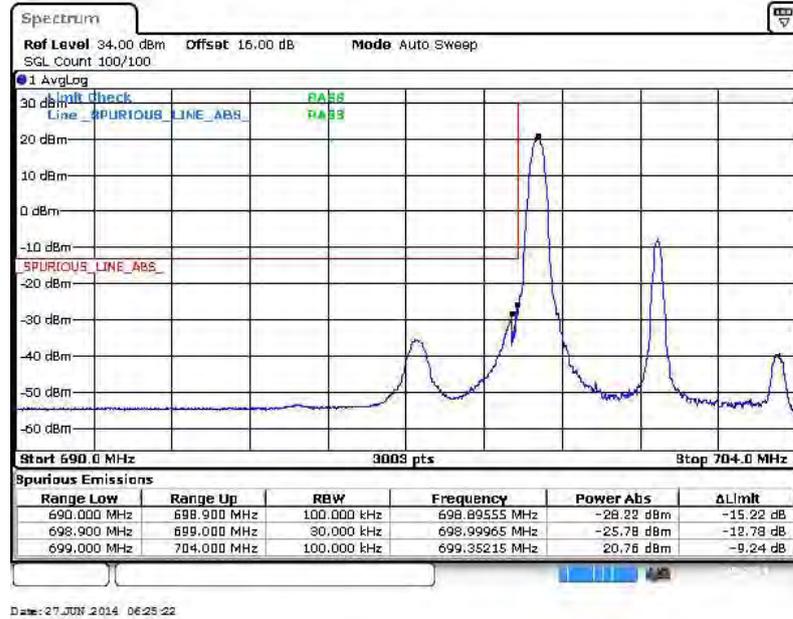


Date: 2 JUL 2014 09:42:29

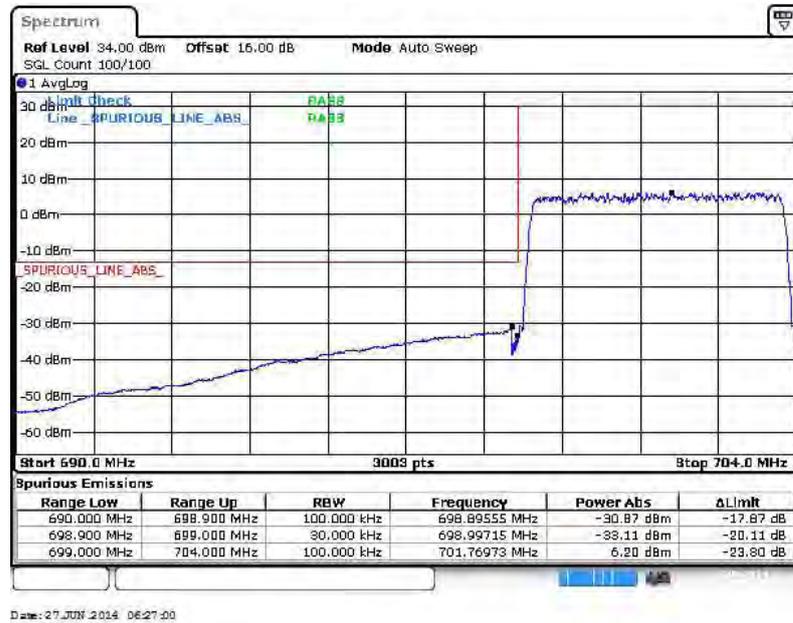


| | | | |
|--------|-------------|--------------|-------------|
| Band : | LTE Band 12 | Band Width : | 5MHz / QPSK |
|--------|-------------|--------------|-------------|

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

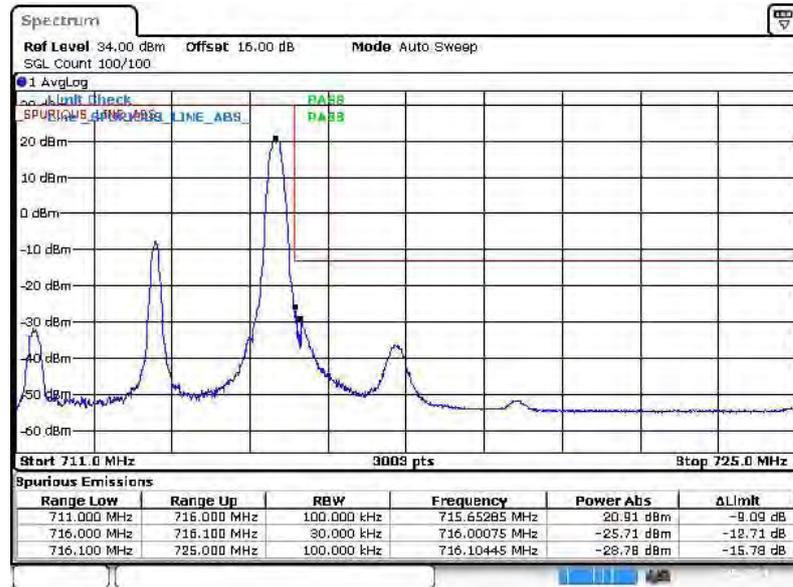


Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0



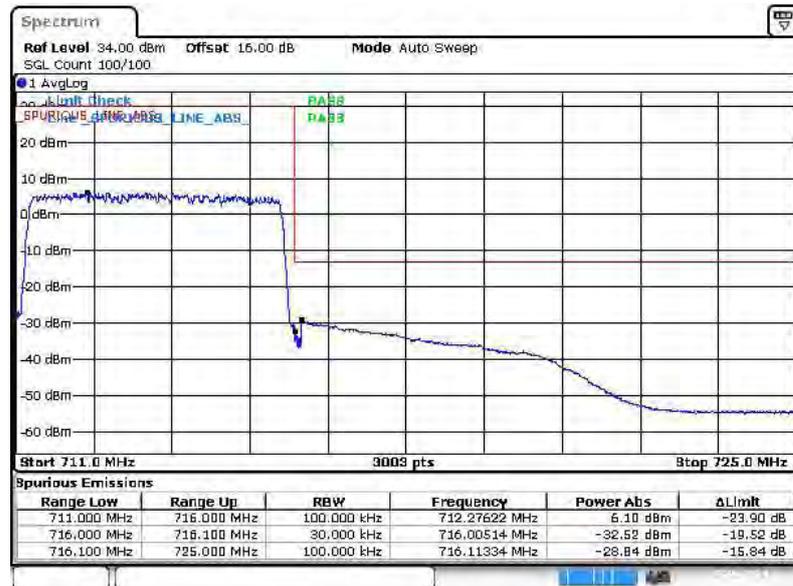


Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 24



Date: 27 JUN 2014 06:30:25

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

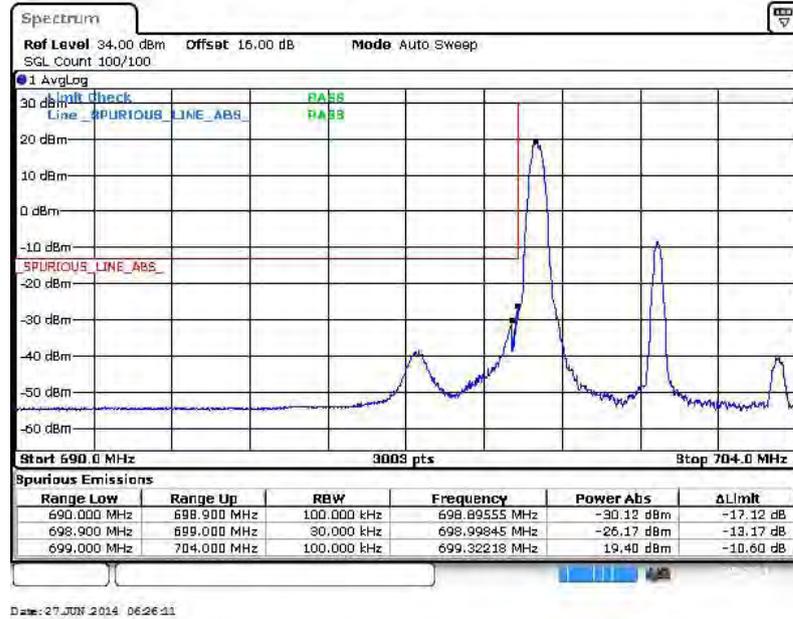


Date: 2 JUL 2014 09:43:22

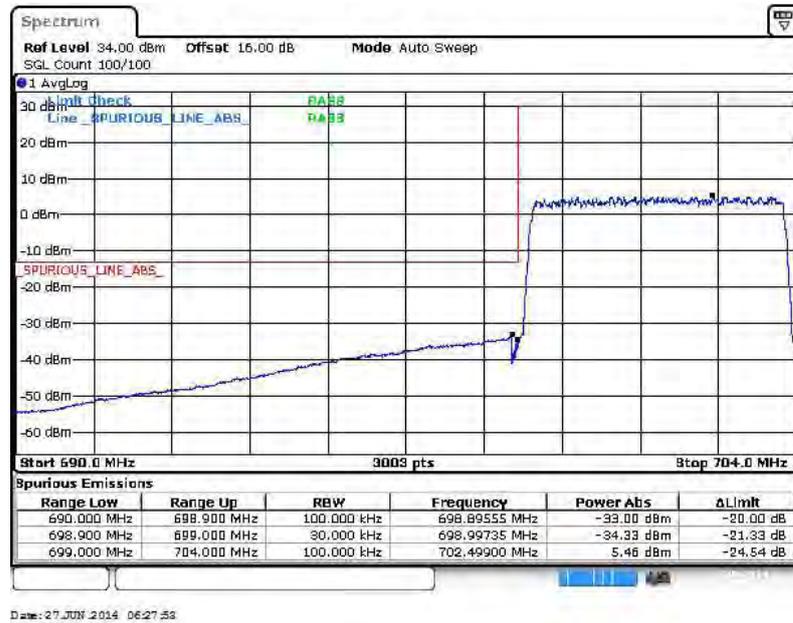


| | | | |
|---------------|-------------|---------------------|--------------|
| Band : | LTE Band 12 | Band Width : | 5MHz / 16QAM |
|---------------|-------------|---------------------|--------------|

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

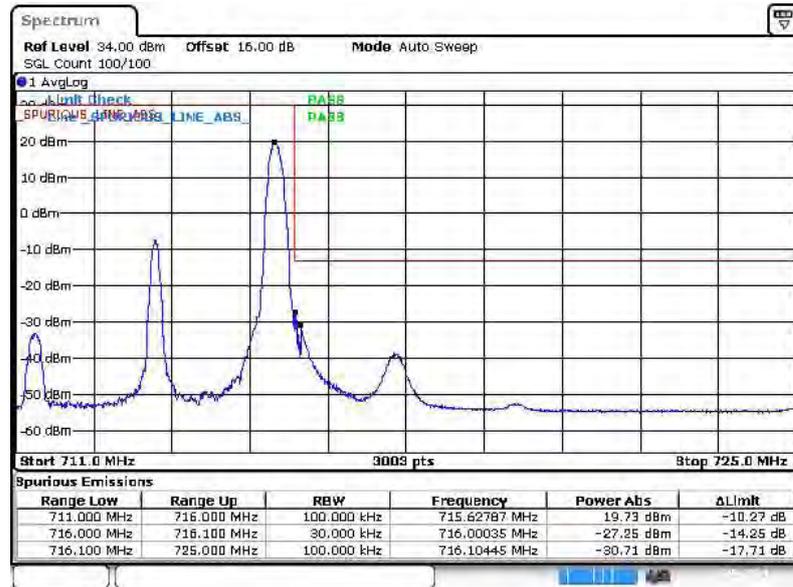


Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



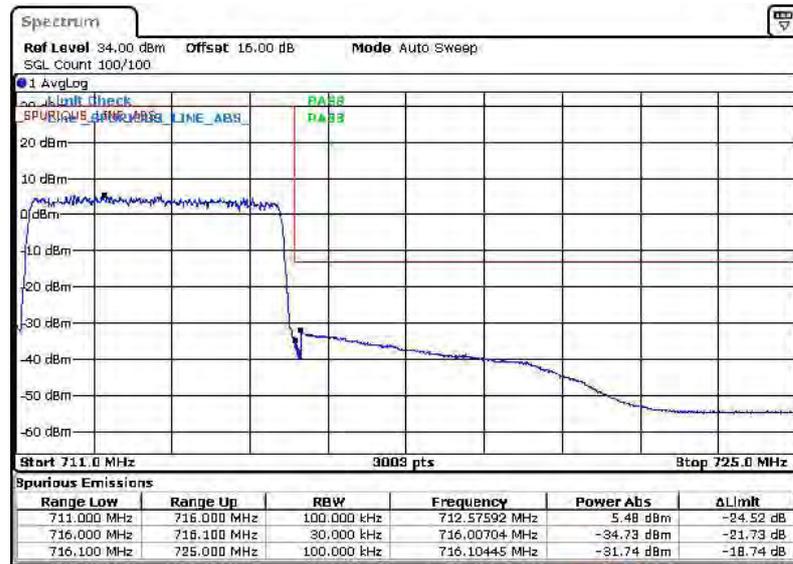


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 27 JUN 2014 06:31:28

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

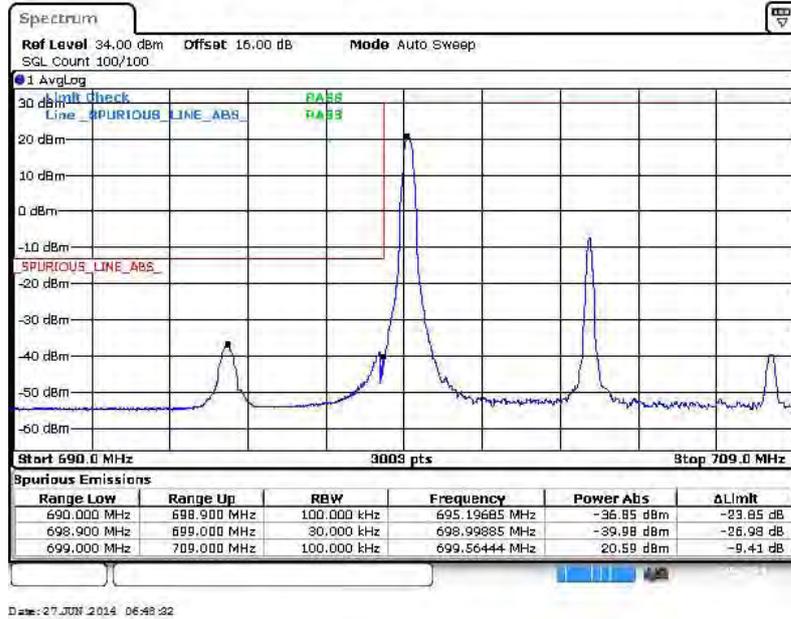


Date: 2 JUL 2014 09:44:33

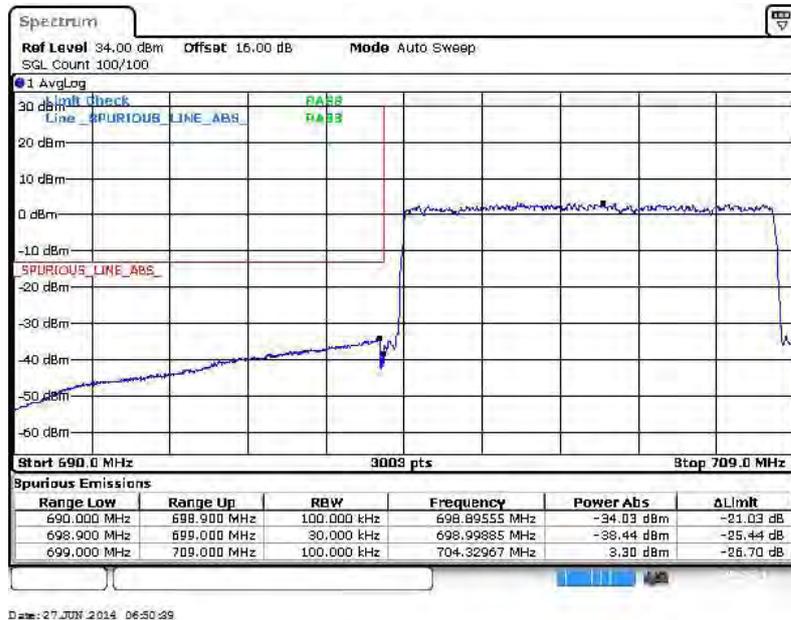


| | | | |
|---------------|-------------|---------------------|--------------|
| Band : | LTE Band 12 | Band Width : | 10MHz / QPSK |
|---------------|-------------|---------------------|--------------|

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

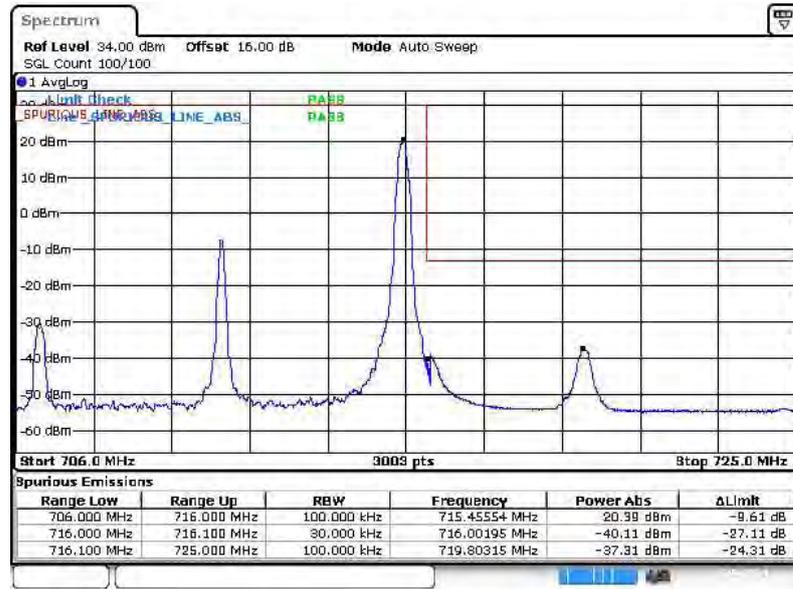


Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0

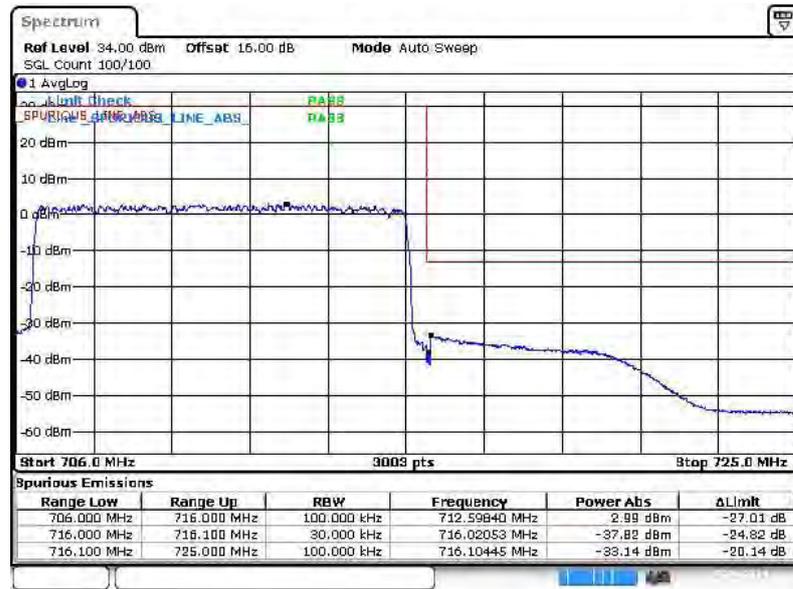




Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



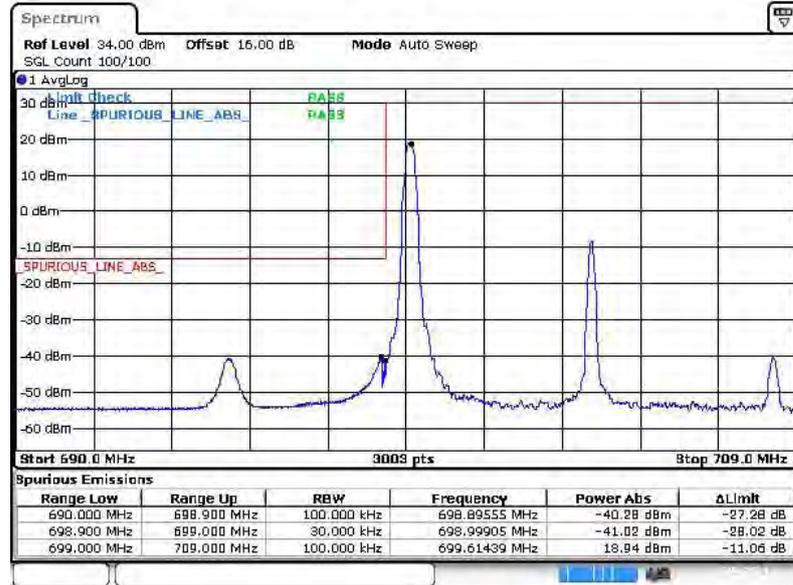
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0





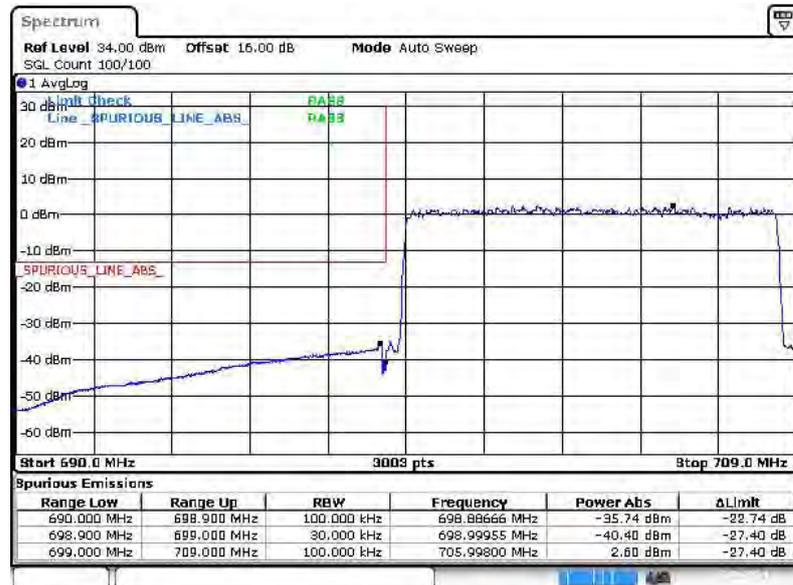
| | | | |
|--------|-------------|--------------|---------------|
| Band : | LTE Band 12 | Band Width : | 10MHz / 16QAM |
|--------|-------------|--------------|---------------|

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



Date: 27_JUN 2014 06:49:38

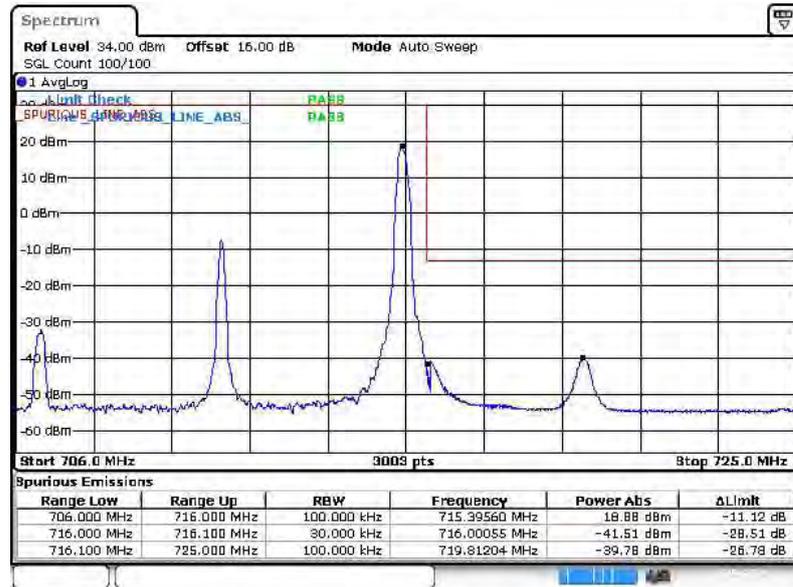
Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



Date: 27_JUN 2014 06:51:26

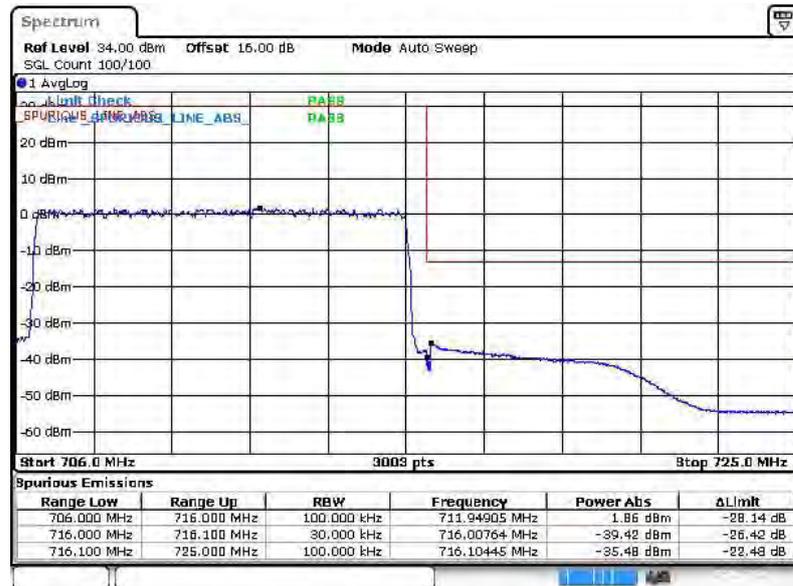


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



Date: 27 JUN 2014 08:45:13

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

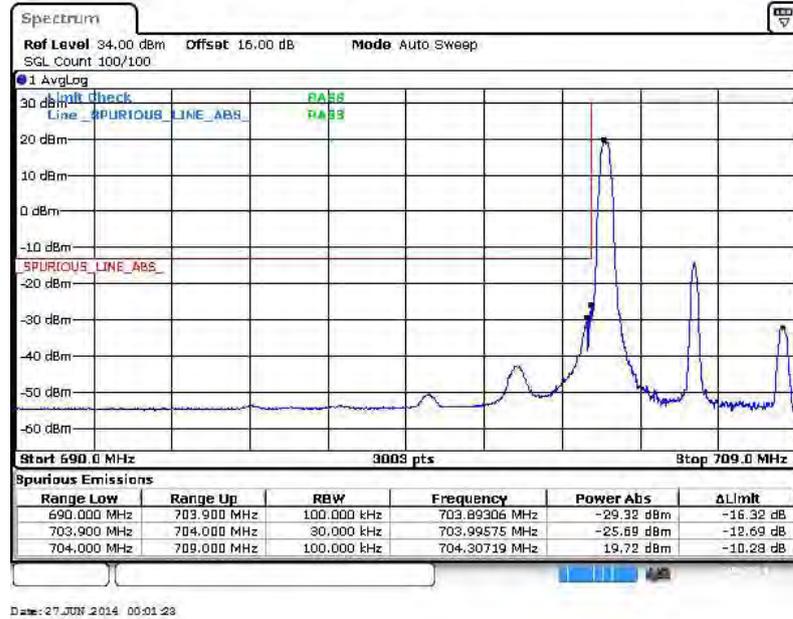


Date: 2 JUL 2014 09:47:04



| | | | |
|--------|-------------|--------------|-------------|
| Band : | LTE Band 17 | Band Width : | 5MHz / QPSK |
|--------|-------------|--------------|-------------|

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

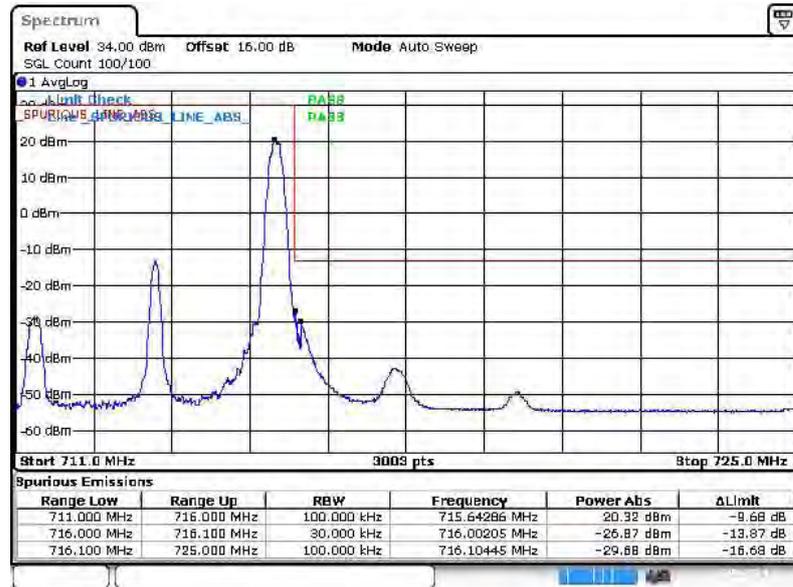


Lower Band Edge Plot for QPSK-RB Size 25, RB Offset 0





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



Date: 27 JUN 2014 00:08:22

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

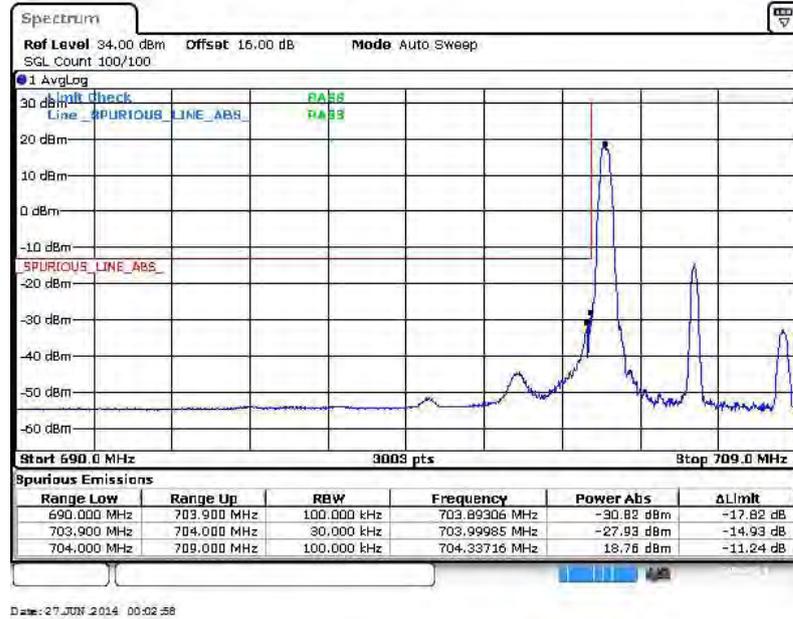


Date: 2 JUL 2014 09:48:08

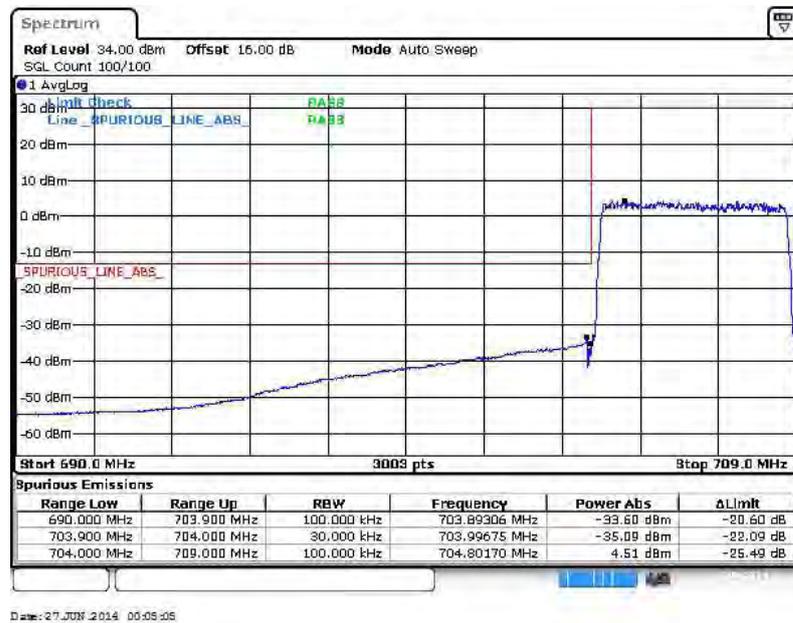


| | | | |
|---------------|-------------|---------------------|--------------|
| Band : | LTE Band 17 | Band Width : | 5MHz / 16QAM |
|---------------|-------------|---------------------|--------------|

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

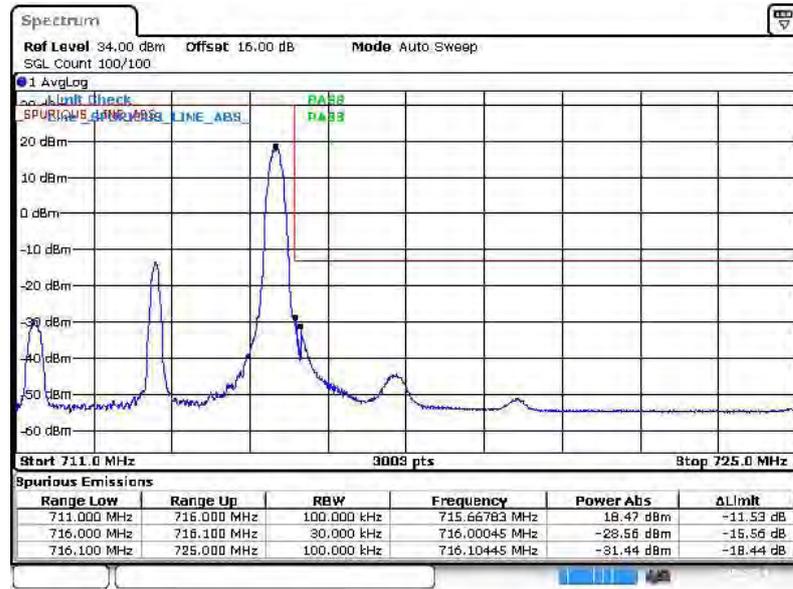


Lower Band Edge Plot for 16QAM-RB Size 25, RB Offset 0



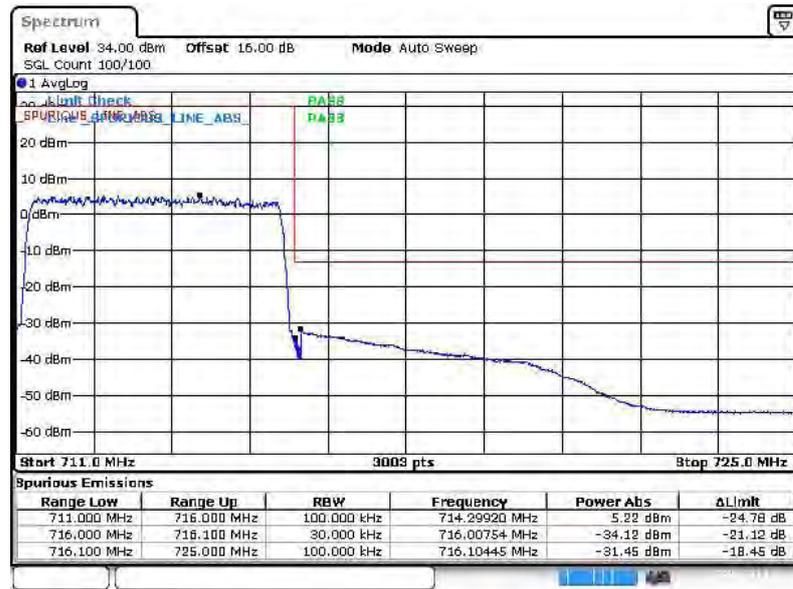


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 24



Date: 27 JUN 2014 00:09:27

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

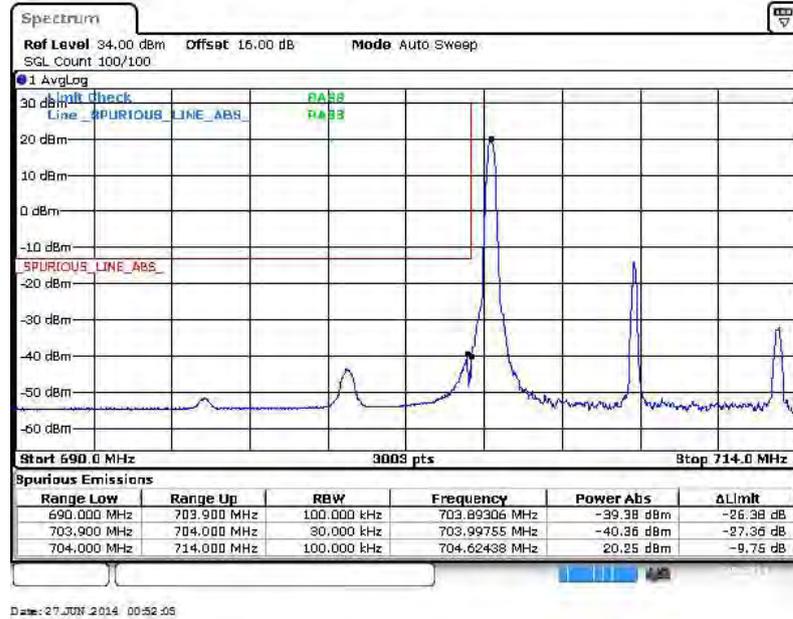


Date: 2 JUL 2014 09:48:56

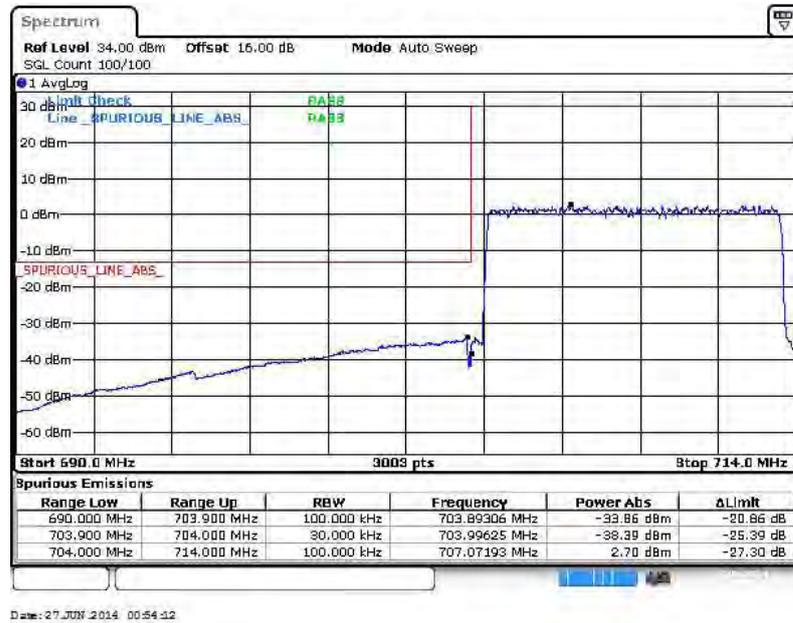


| | | | |
|--------|-------------|--------------|--------------|
| Band : | LTE Band 17 | Band Width : | 10MHz / QPSK |
|--------|-------------|--------------|--------------|

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

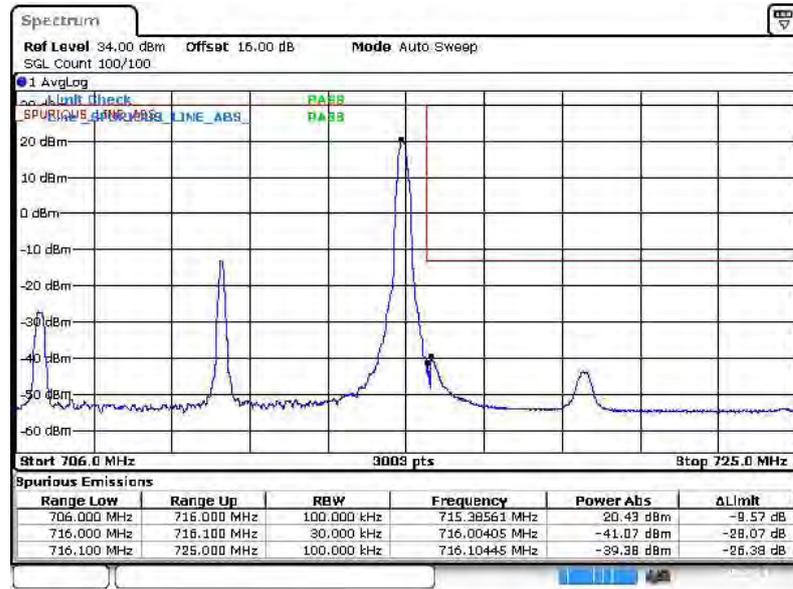


Lower Band Edge Plot for QPSK-RB Size 50, RB Offset 0

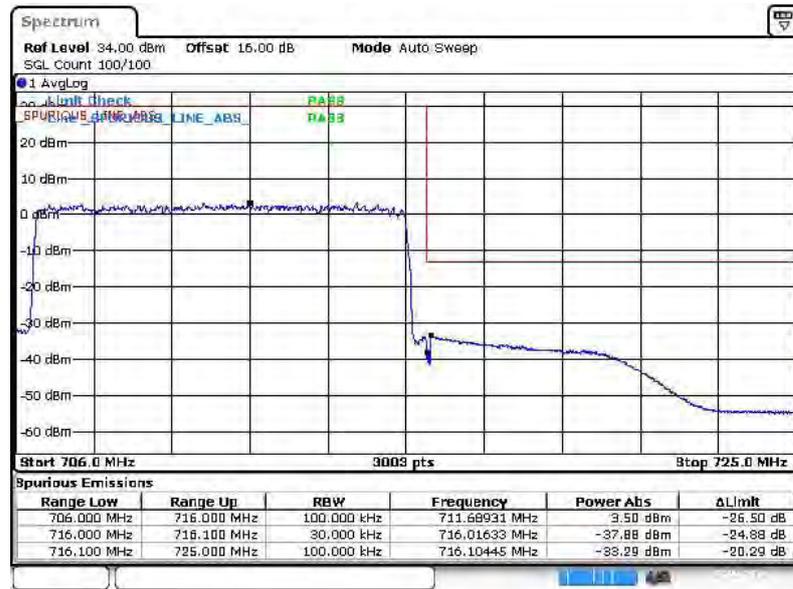




Higher Band Edge Plot for QPSK-RB Size 1, RB Offset 49



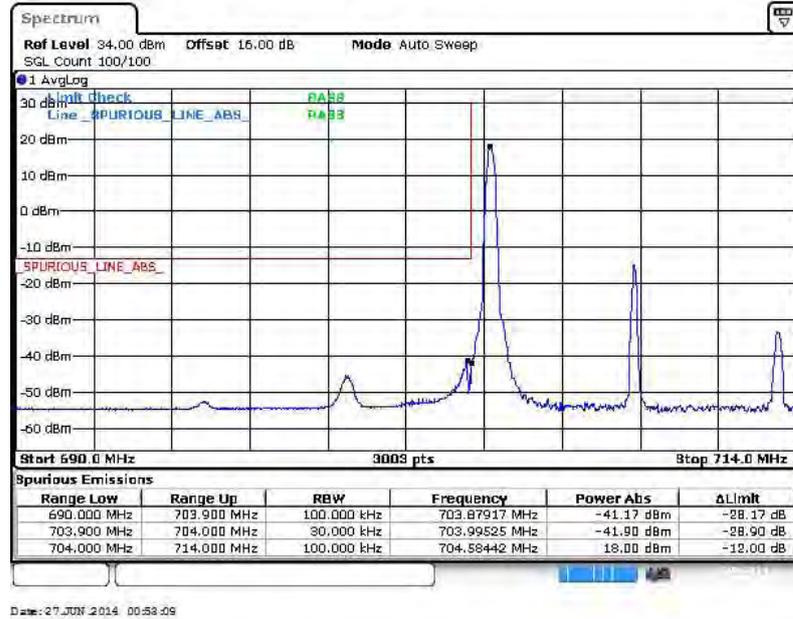
Higher Band Edge Plot for QPSK-RB Size 50, RB Offset 0



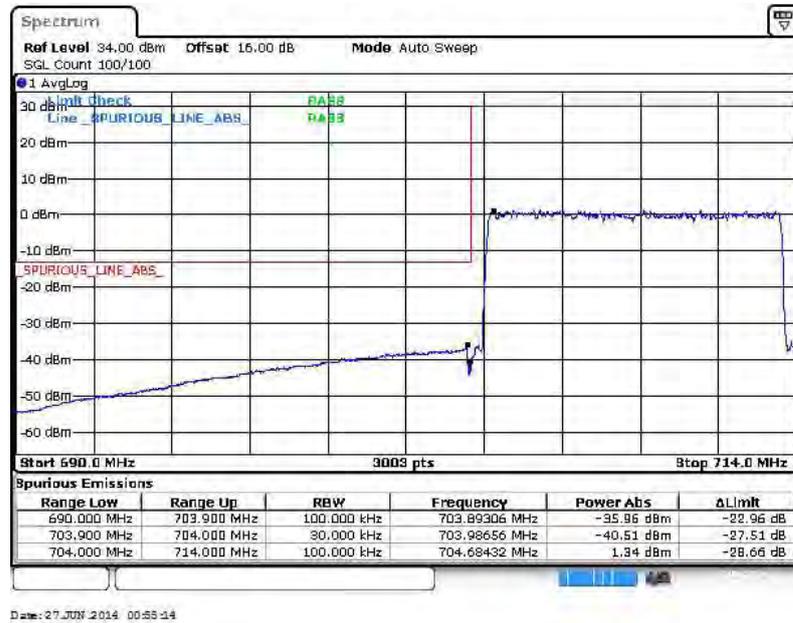


| | | | |
|--------|-------------|--------------|---------------|
| Band : | LTE Band 17 | Band Width : | 10MHz / 16QAM |
|--------|-------------|--------------|---------------|

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

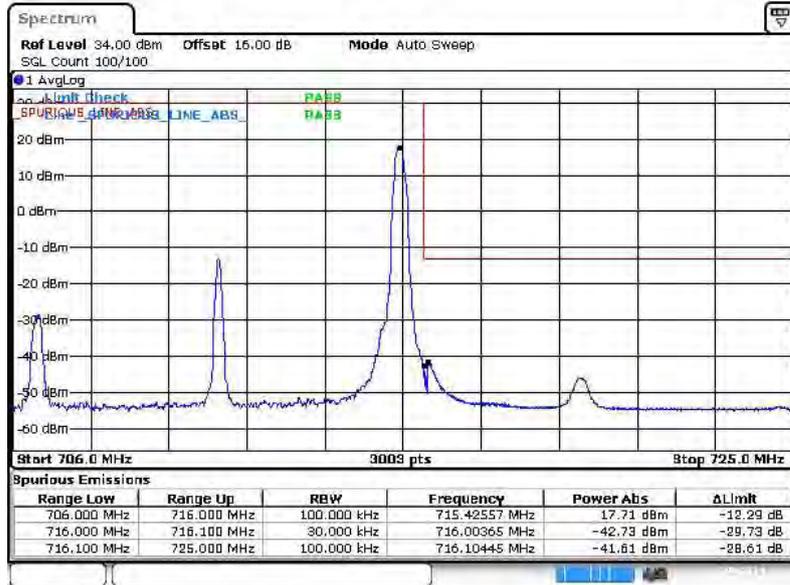


Lower Band Edge Plot for 16QAM-RB Size 50, RB Offset 0



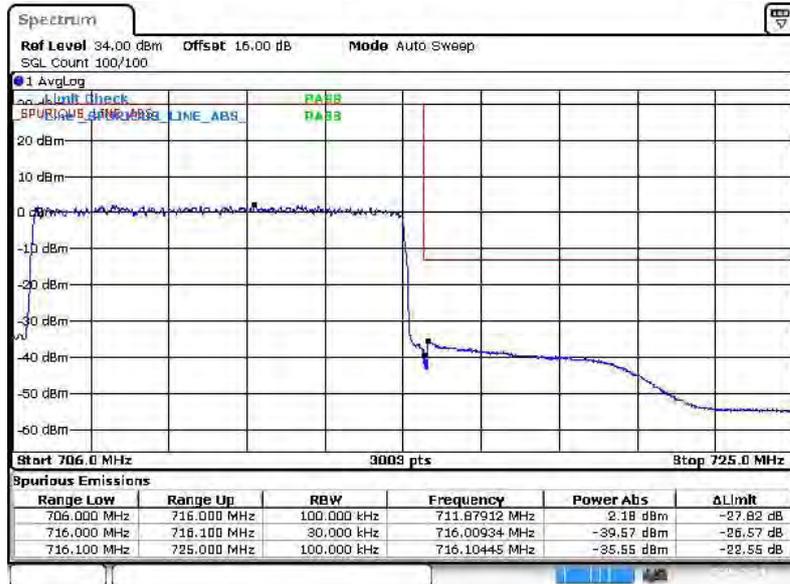


Higher Band Edge Plot for 16QAM-RB Size 1, RB Offset 49



Date: 27 JUN 2014 01:06:09

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



Date: 2 JUL 2014 09:50:36



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.

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

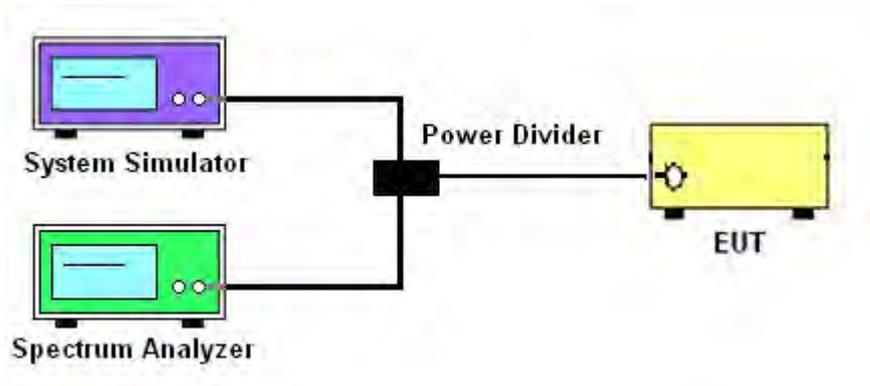
3.6.2 Measuring Instruments

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 + 10log(P)] (dB)
= [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
= -13dBm.

3.6.4 Test Setup

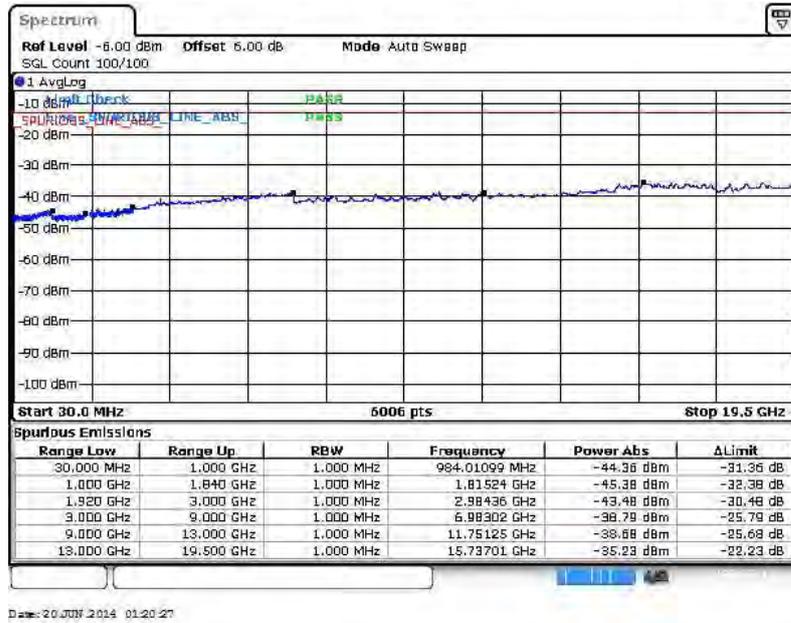




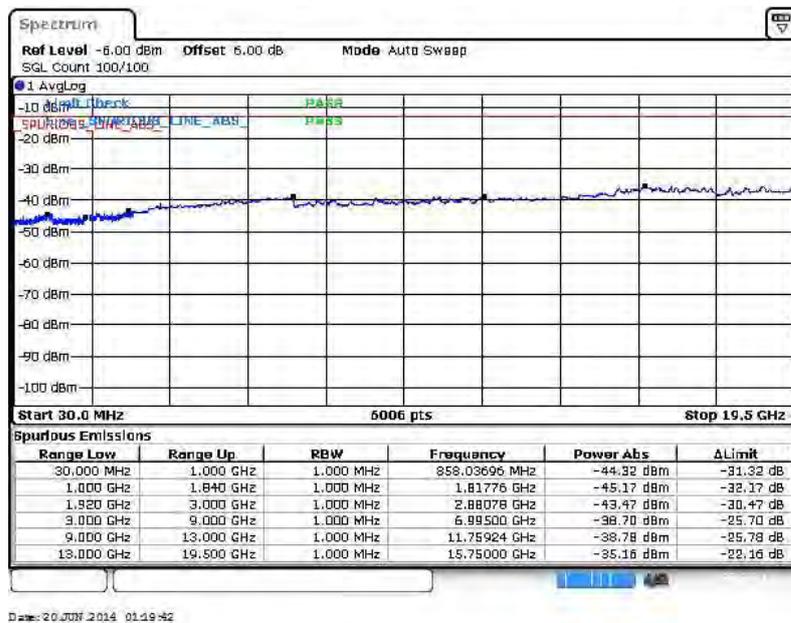
3.6.5 Test Result (Plots) of Conducted Spurious Emission

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

QPSK (RB Size 1, RB Offset 0)



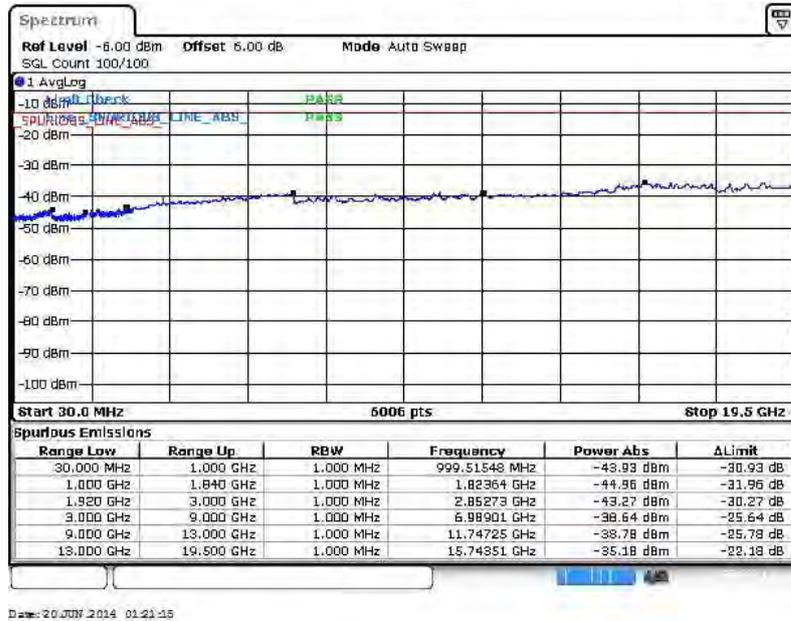
16QAM (RB Size 1, RB Offset 0)



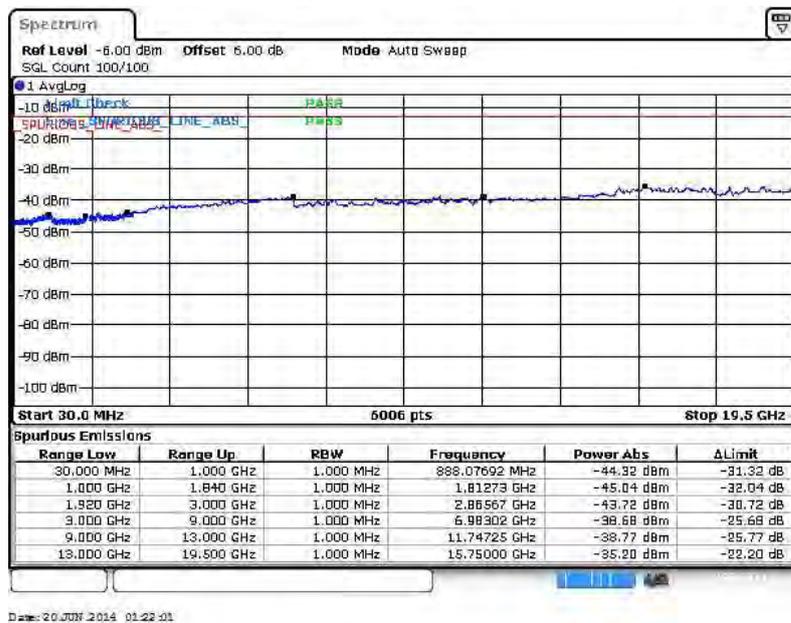


| | | | |
|---------------------|------------|------------------|------------------|
| Band : | LTE Band 2 | Channel : | CH18900 (Middle) |
| Band Width : | 1.4MHz | | |

QPSK (RB Size 1, RB Offset 0)



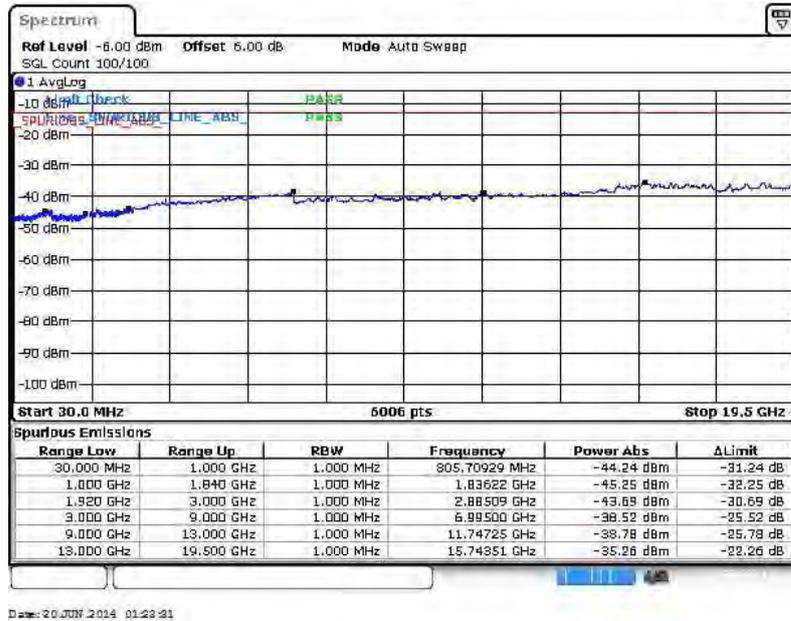
16QAM (RB Size 1, RB Offset 0)



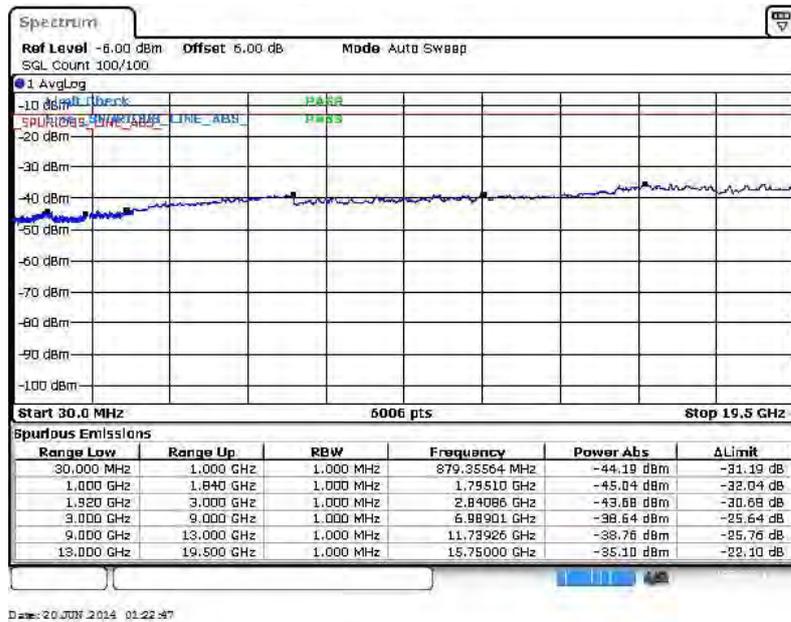


| | | | |
|--------------|------------|-----------|----------------|
| Band : | LTE Band 2 | Channel : | CH19193 (High) |
| Band Width : | 1.4MHz | | |

QPSK (RB Size 1, RB Offset 0)



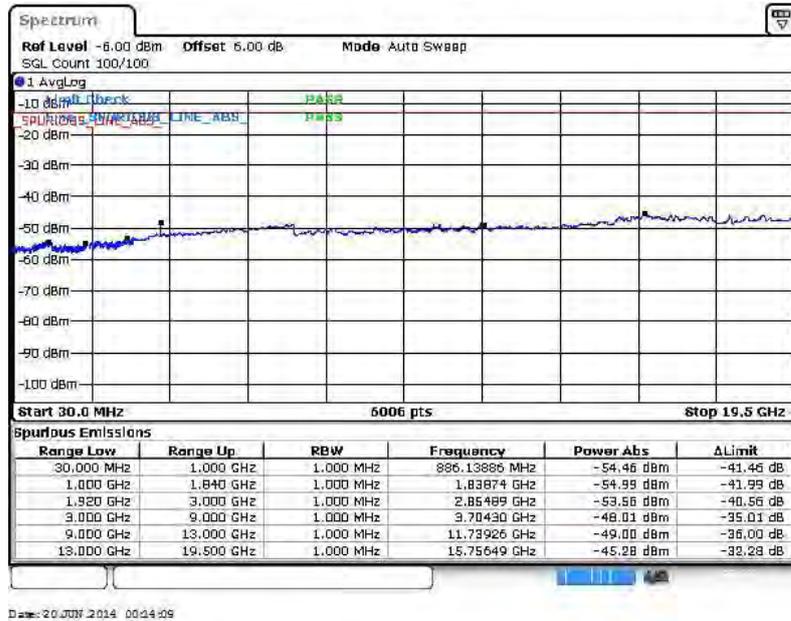
16QAM (RB Size 1, RB Offset 0)



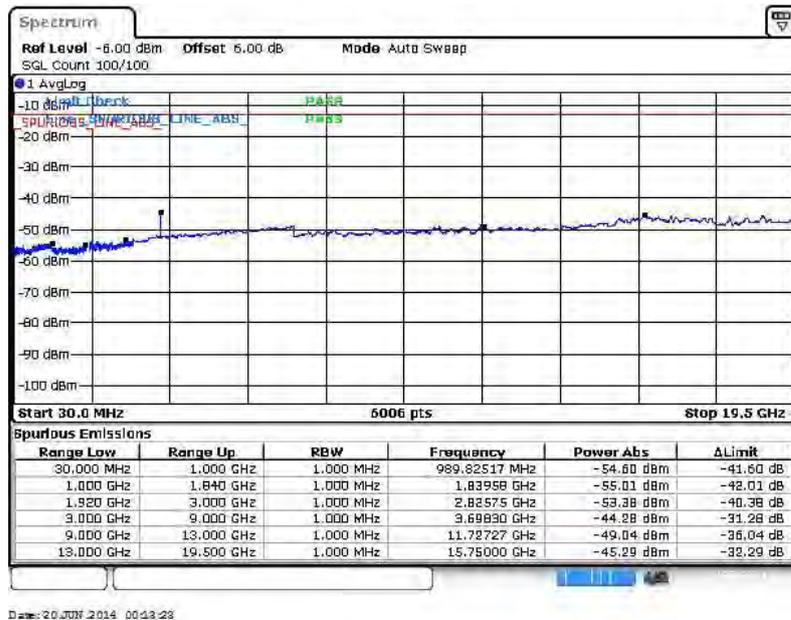


| | | | |
|--------------|------------|-----------|---------------|
| Band : | LTE Band 2 | Channel : | CH18615 (Low) |
| Band Width : | 3MHz | | |

QPSK (RB Size 1, RB Offset 0)



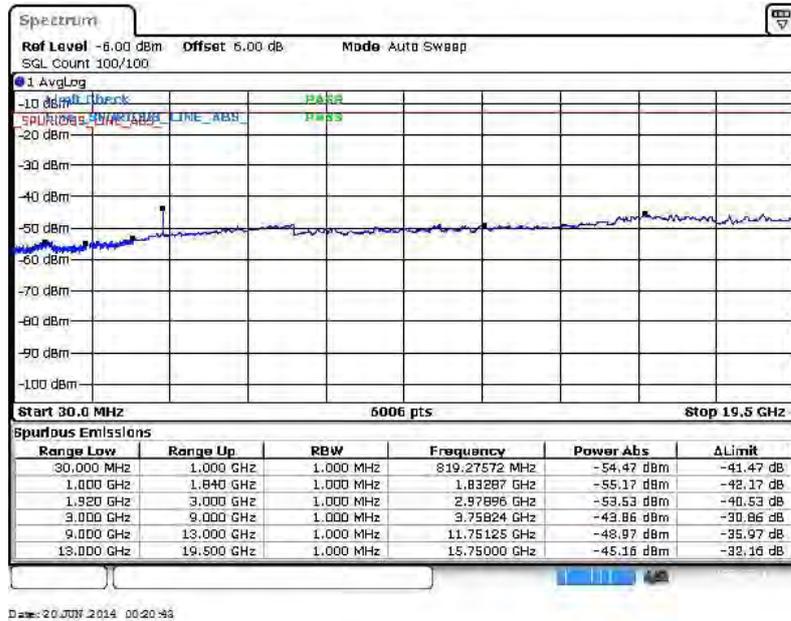
16QAM (RB Size 1, RB Offset 0)



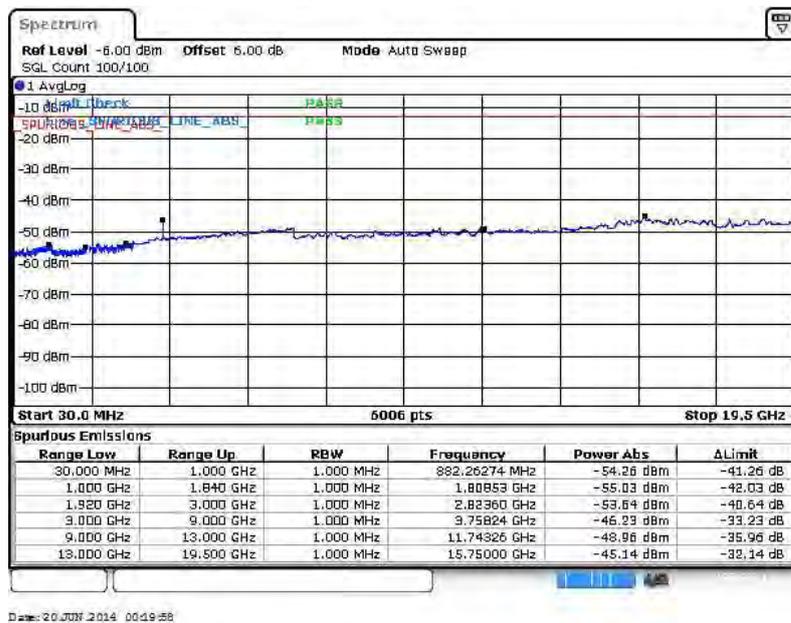


| | | | |
|--------------|------------|-----------|------------------|
| Band : | LTE Band 2 | Channel : | CH18900 (Middle) |
| Band Width : | 3MHz | | |

QPSK (RB Size 1, RB Offset 0)



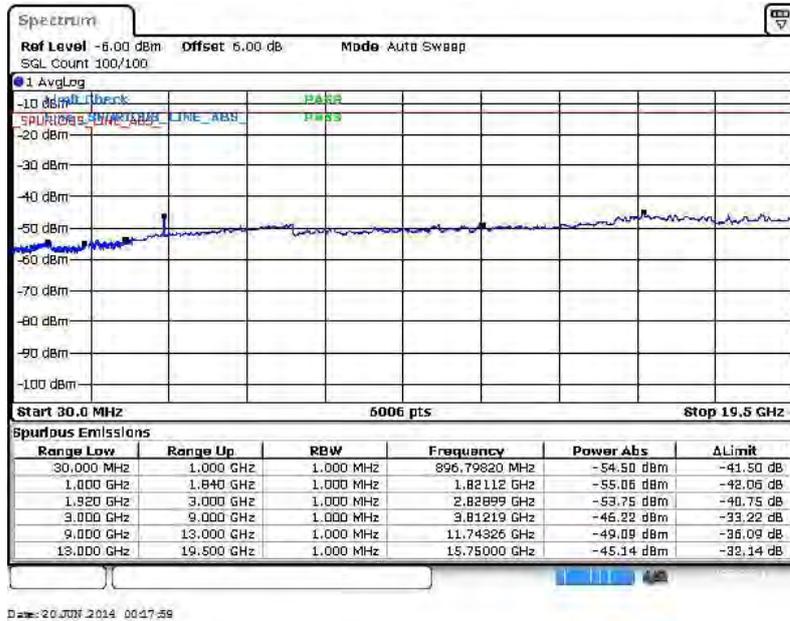
16QAM (RB Size 1, RB Offset 0)



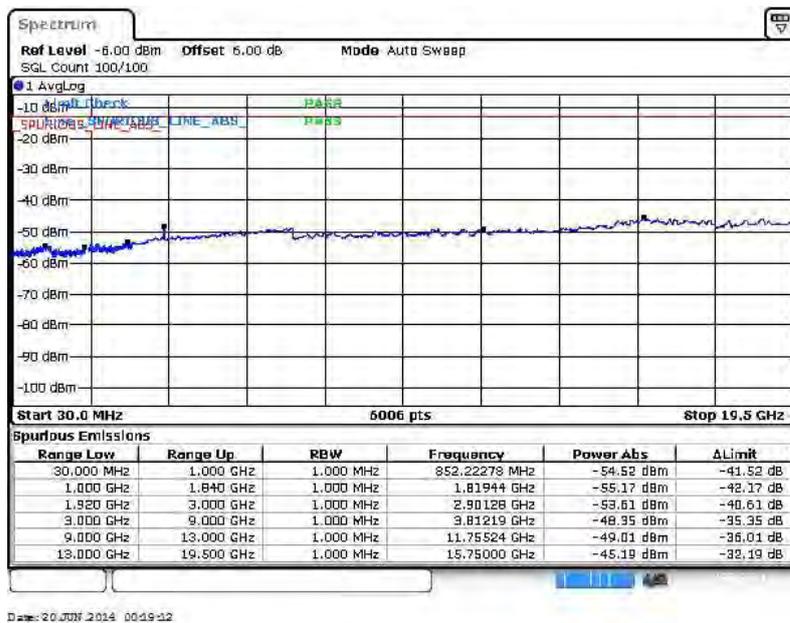


| | | | |
|---------------------|------------|------------------|----------------|
| Band : | LTE Band 2 | Channel : | CH19185 (High) |
| Band Width : | 3MHz | | |

QPSK (RB Size 1, RB Offset 0)



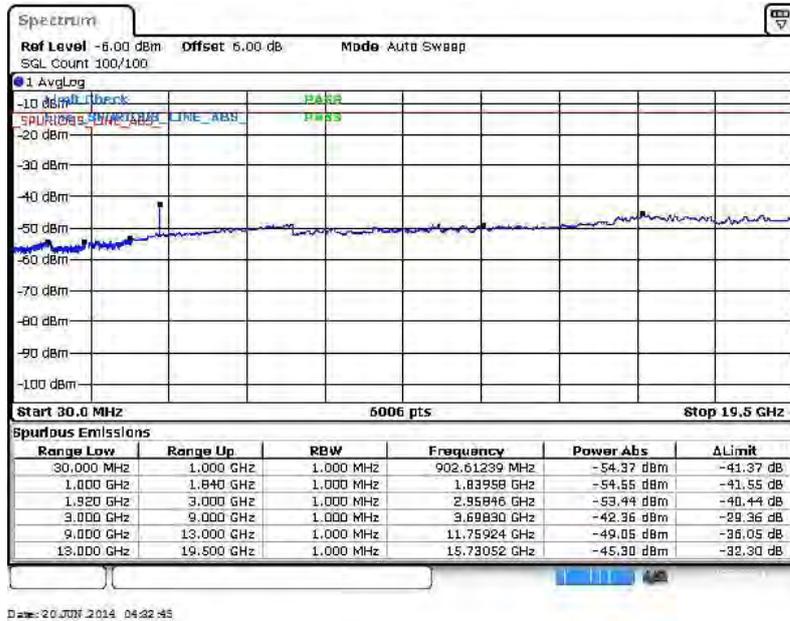
16QAM (RB Size 1, RB Offset 0)



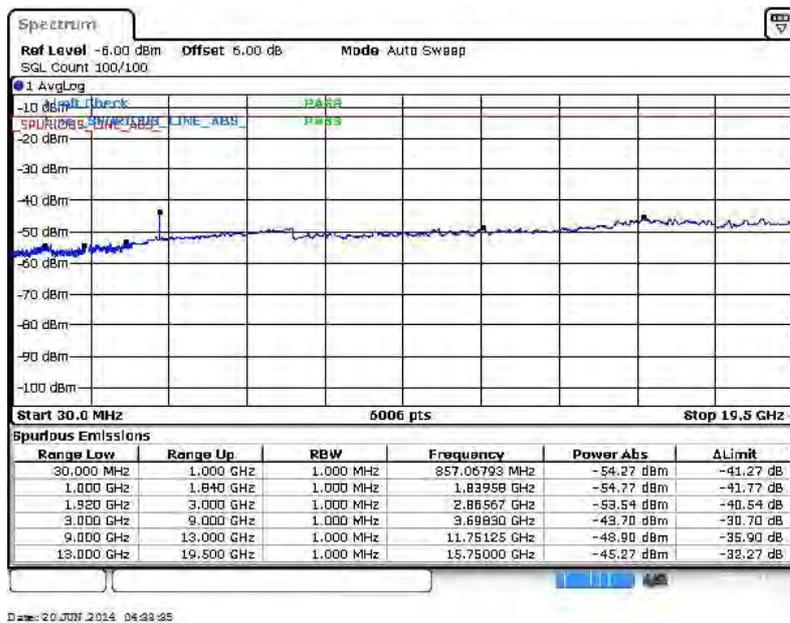


| | | | |
|---------------------|------------|------------------|---------------|
| Band : | LTE Band 2 | Channel : | CH18625 (Low) |
| Band Width : | 5MHz | | |

QPSK (RB Size 1, RB Offset 0)



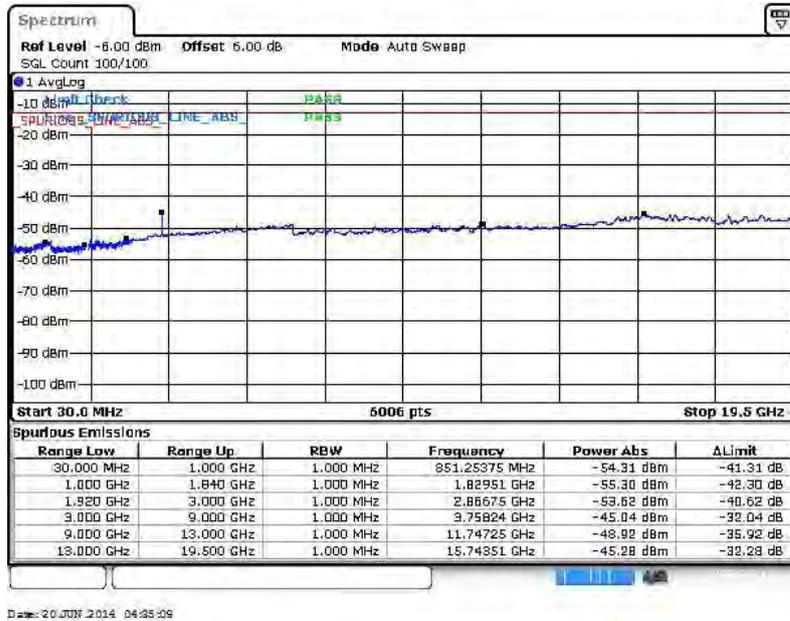
16QAM (RB Size 1, RB Offset 0)



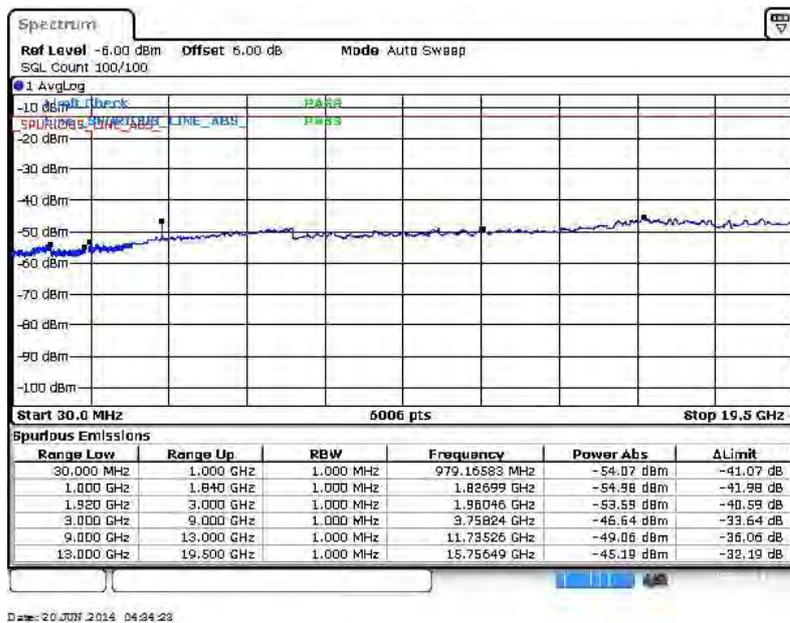


| | | | |
|---------------------|------------|------------------|------------------|
| Band : | LTE Band 2 | Channel : | CH18900 (Middle) |
| Band Width : | 5MHz | | |

QPSK (RB Size 1, RB Offset 0)



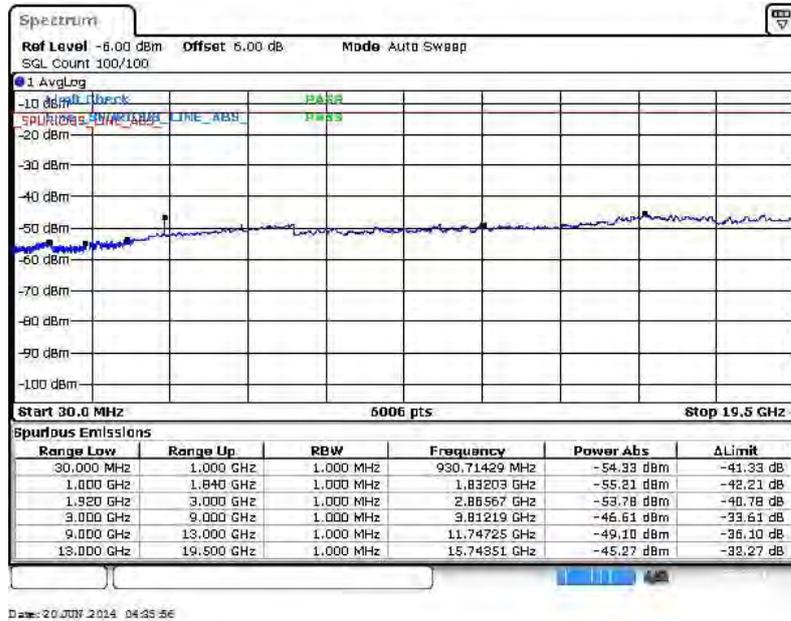
16QAM (RB Size 1, RB Offset 0)



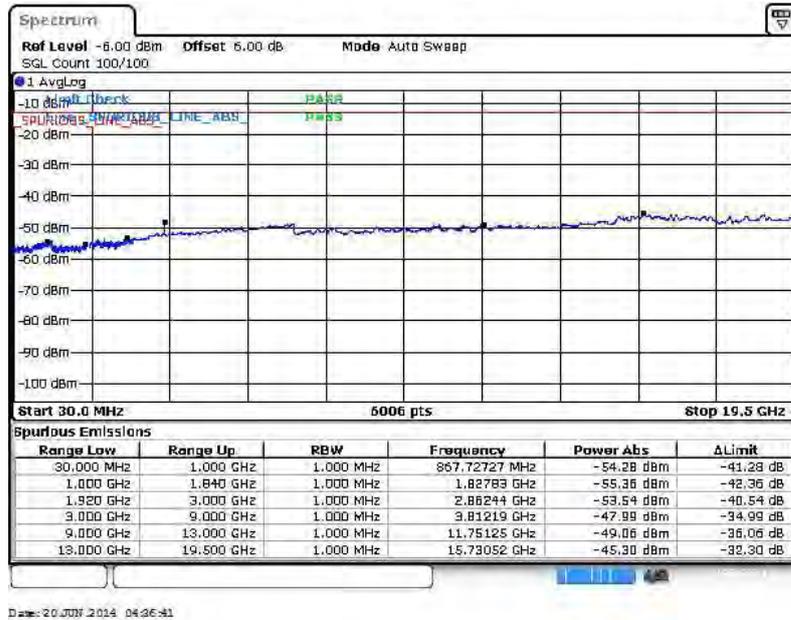


| | | | |
|--------------|------------|-----------|----------------|
| Band : | LTE Band 2 | Channel : | CH19175 (High) |
| Band Width : | 5MHz | | |

QPSK (RB Size 1, RB Offset 0)



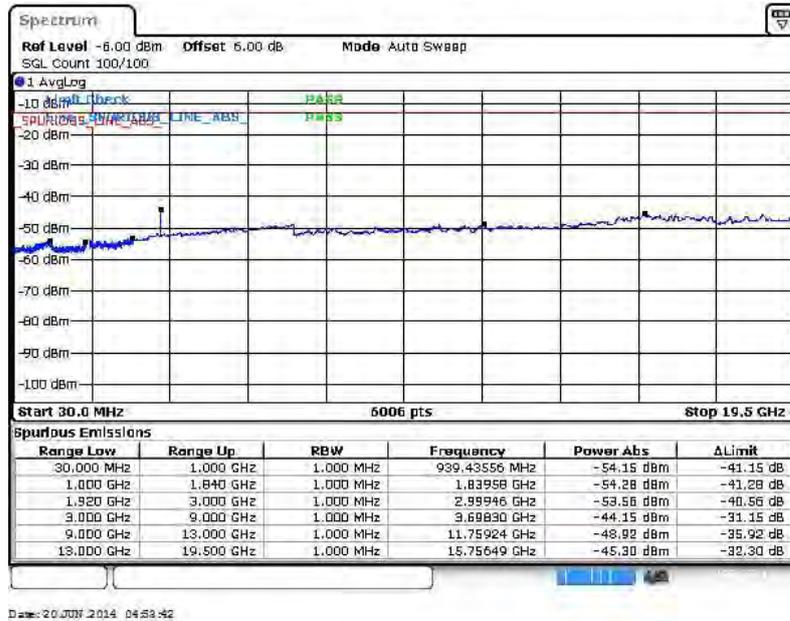
16QAM (RB Size 1, RB Offset 0)



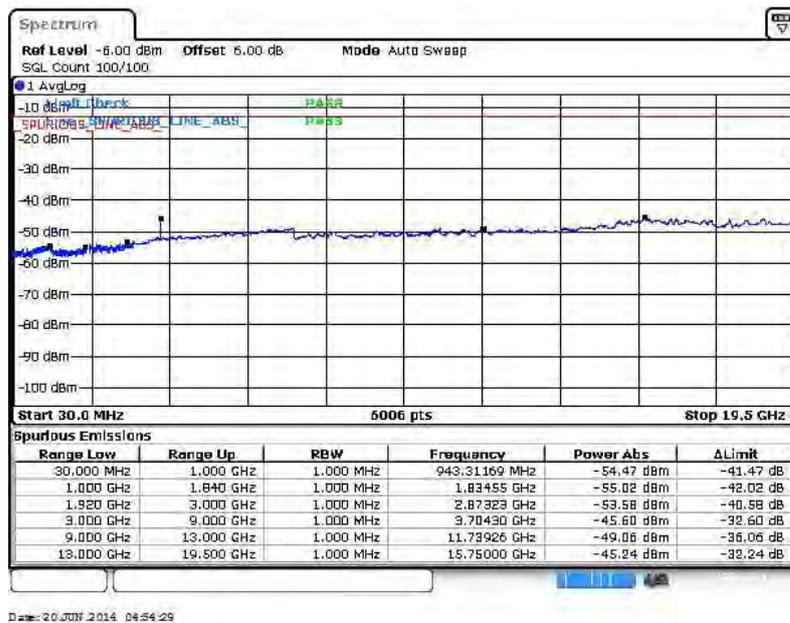


| | | | |
|---------------------|------------|------------------|---------------|
| Band : | LTE Band 2 | Channel : | CH18650 (Low) |
| Band Width : | 10MHz | | |

QPSK (RB Size 1, RB Offset 0)



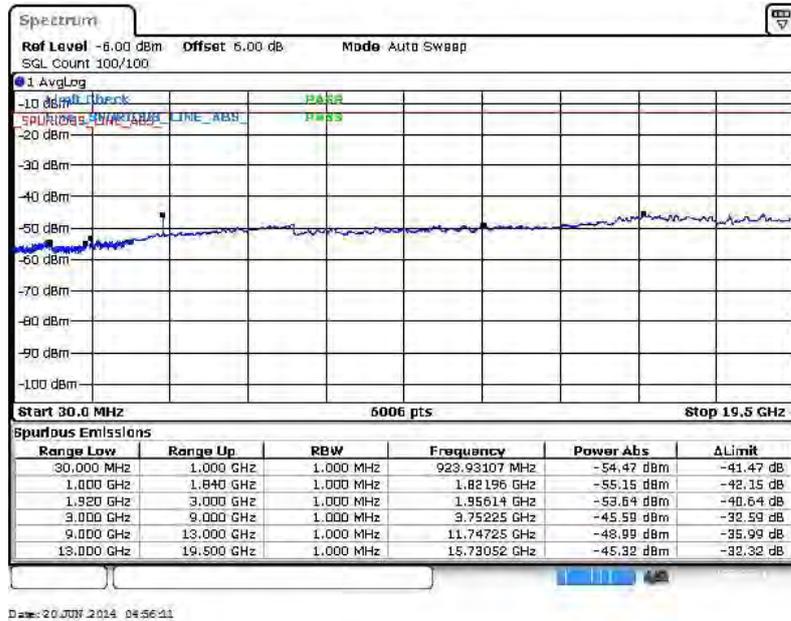
16QAM (RB Size 1, RB Offset 0)



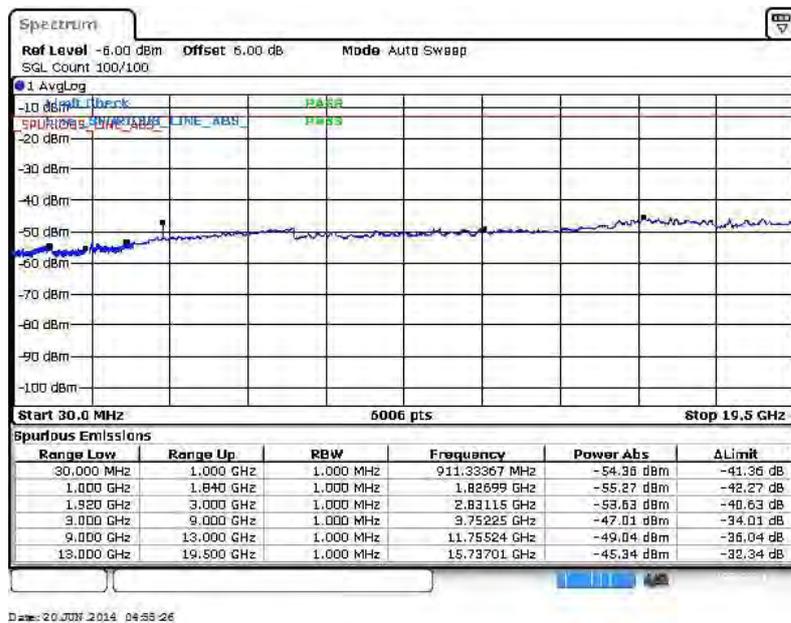


| | | | |
|---------------------|------------|------------------|------------------|
| Band : | LTE Band 2 | Channel : | CH18900 (Middle) |
| Band Width : | 10MHz | | |

QPSK (RB Size 1, RB Offset 0)



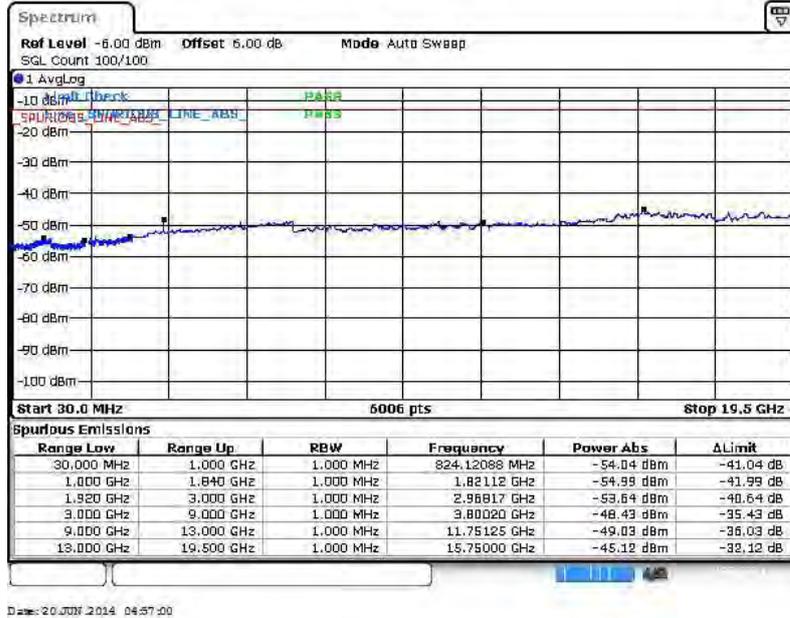
16QAM (RB Size 1, RB Offset 0)



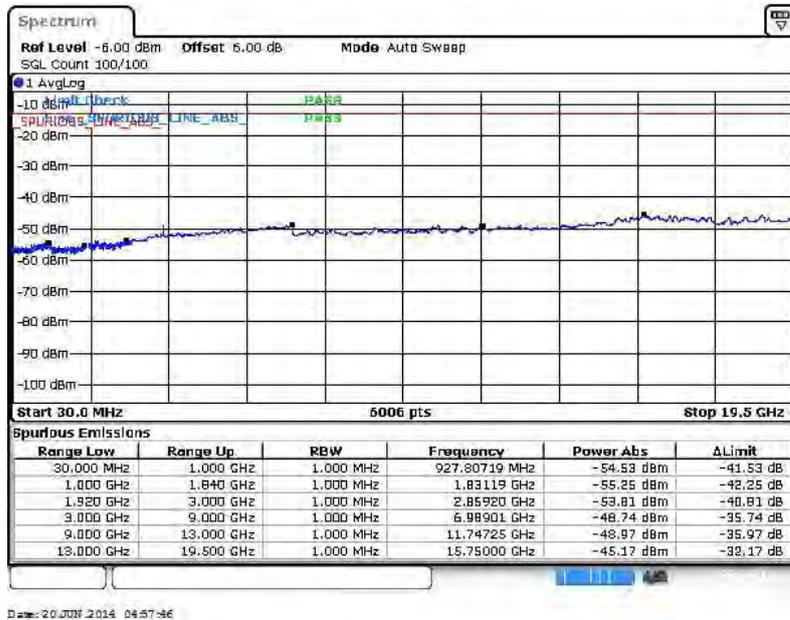


| | | | |
|---------------------|------------|------------------|----------------|
| Band : | LTE Band 2 | Channel : | CH19150 (High) |
| Band Width : | 10MHz | | |

QPSK (RB Size 1, RB Offset 0)



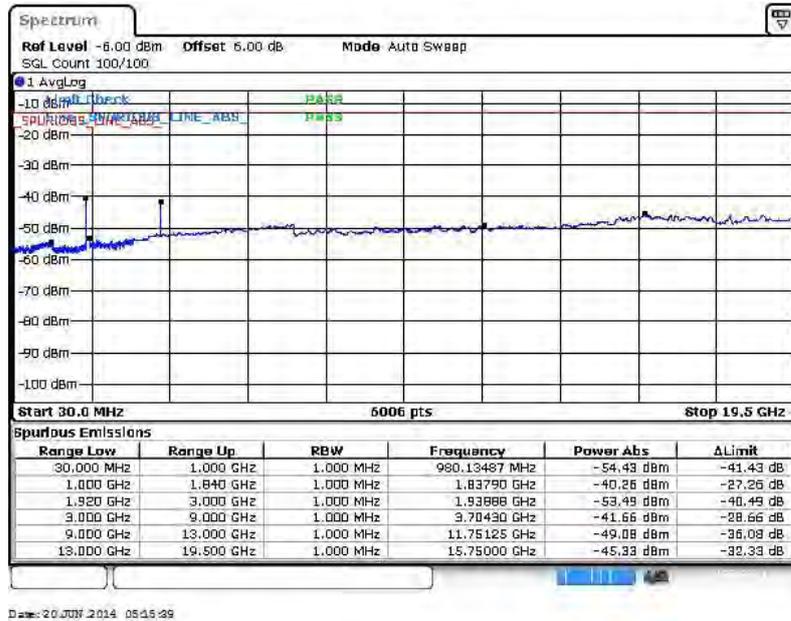
16QAM (RB Size 1, RB Offset 0)



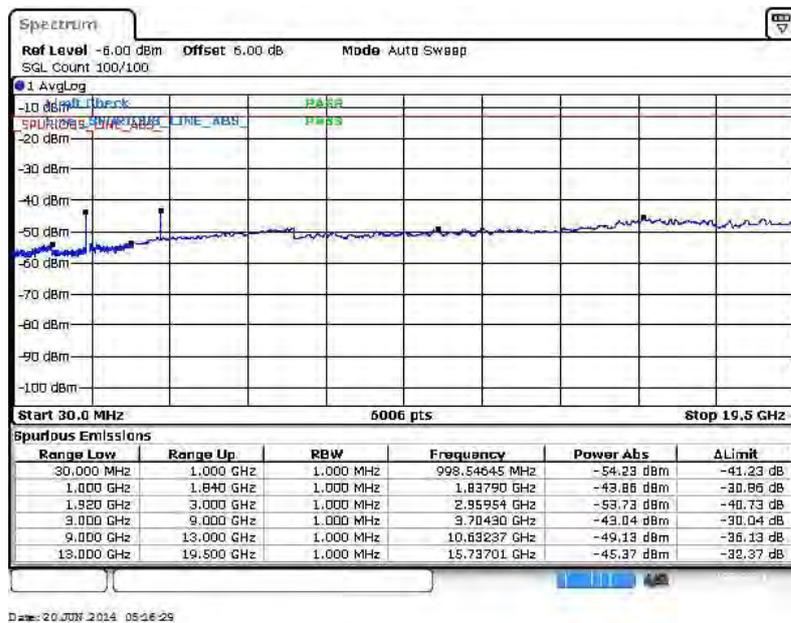


| | | | |
|---------------------|------------|------------------|---------------|
| Band : | LTE Band 2 | Channel : | CH18675 (Low) |
| Band Width : | 15MHz | | |

QPSK (RB Size 1, RB Offset 0)



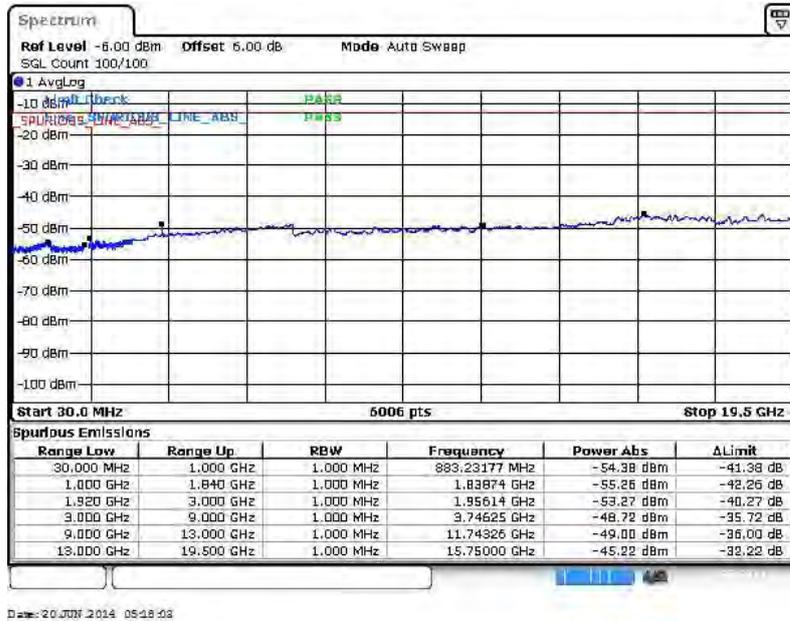
16QAM (RB Size 1, RB Offset 0)



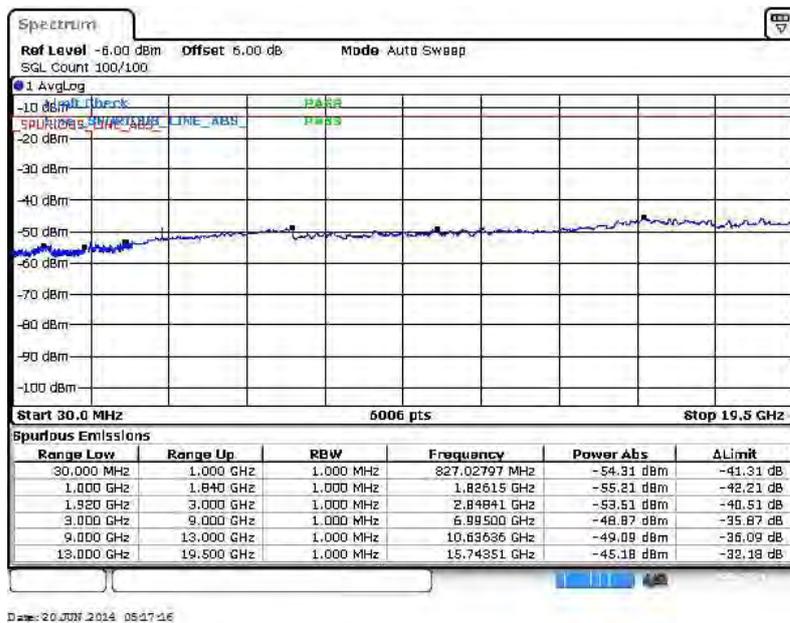


| | | | |
|--------------|------------|-----------|------------------|
| Band : | LTE Band 2 | Channel : | CH18900 (Middle) |
| Band Width : | 15MHz | | |

QPSK (RB Size 1, RB Offset 0)



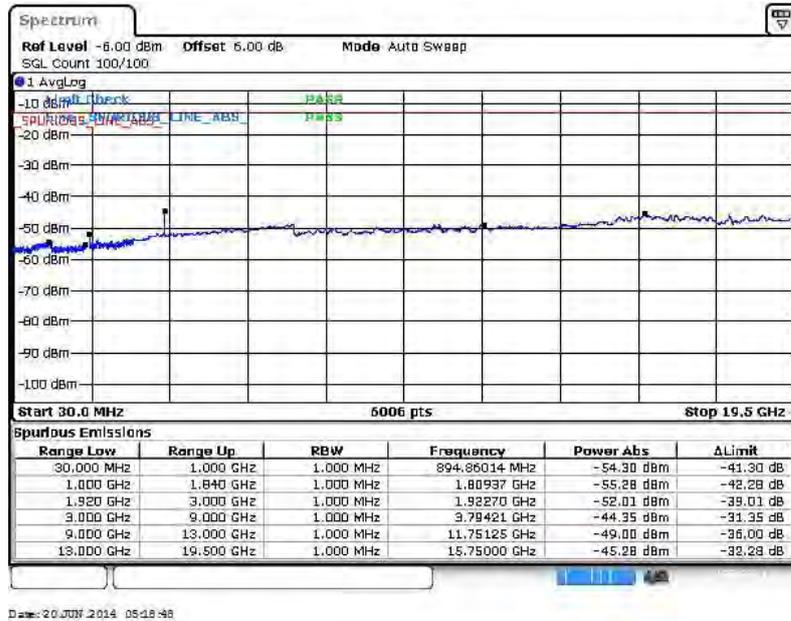
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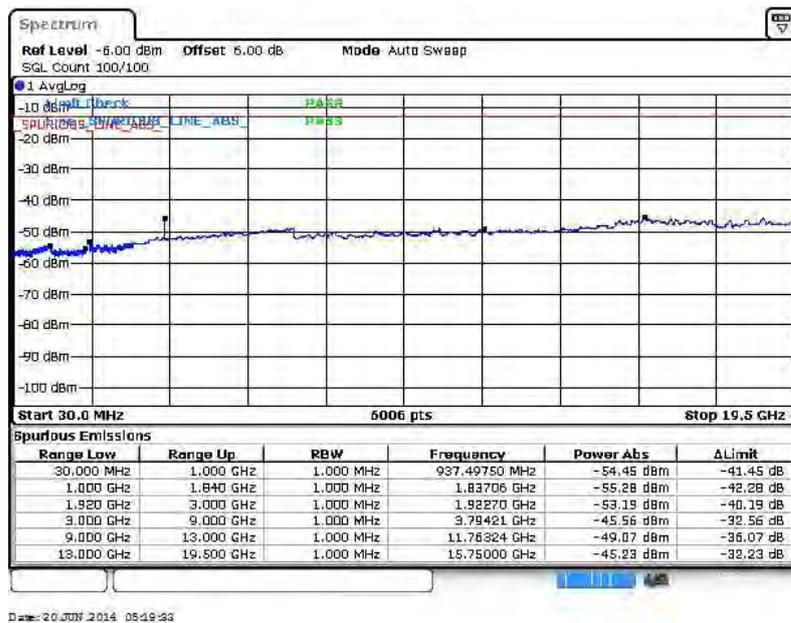


| | | | |
|--------------|------------|-----------|----------------|
| Band : | LTE Band 2 | Channel : | CH19125 (High) |
| Band Width : | 15MHz | | |

QPSK (RB Size 1, RB Offset 0)



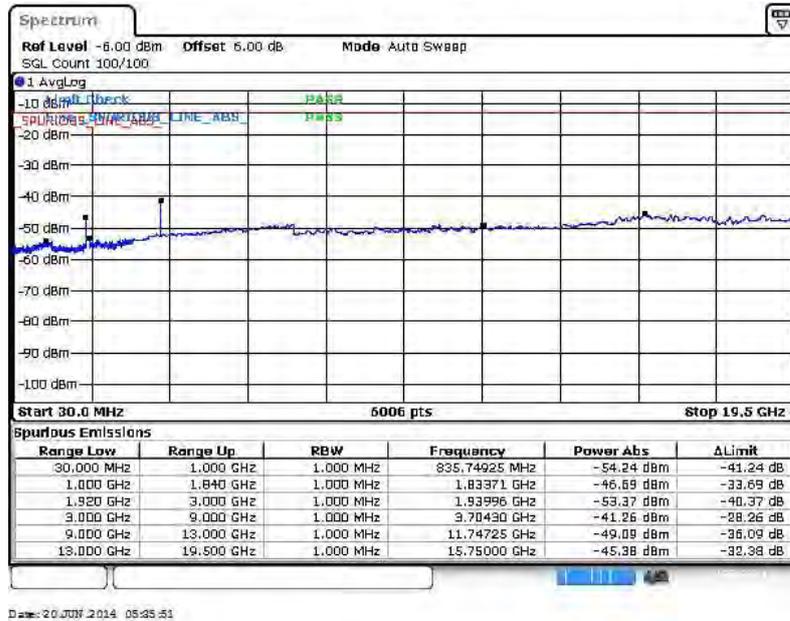
16QAM (RB Size 1, RB Offset 0)



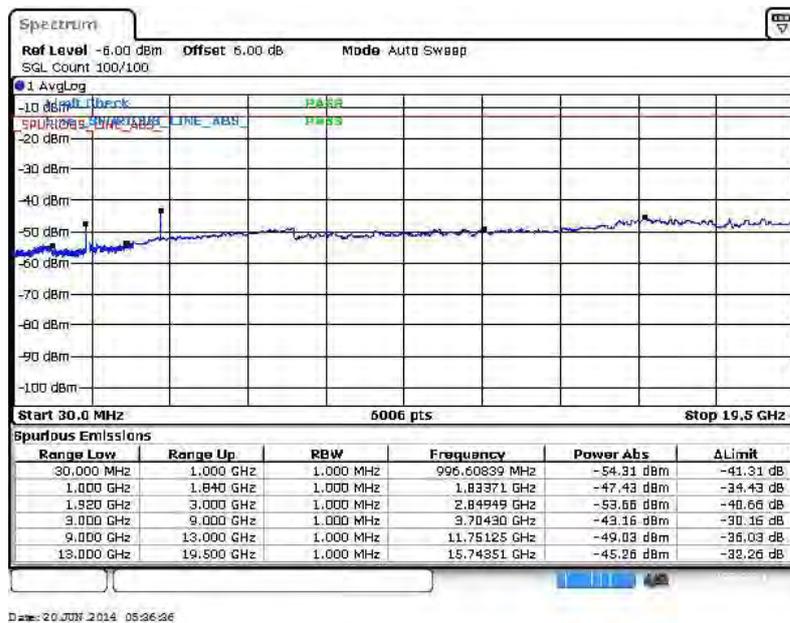


| | | | |
|---------------------|------------|------------------|---------------|
| Band : | LTE Band 2 | Channel : | CH18700 (Low) |
| Band Width : | 20MHz | | |

QPSK (RB Size 1, RB Offset 0)



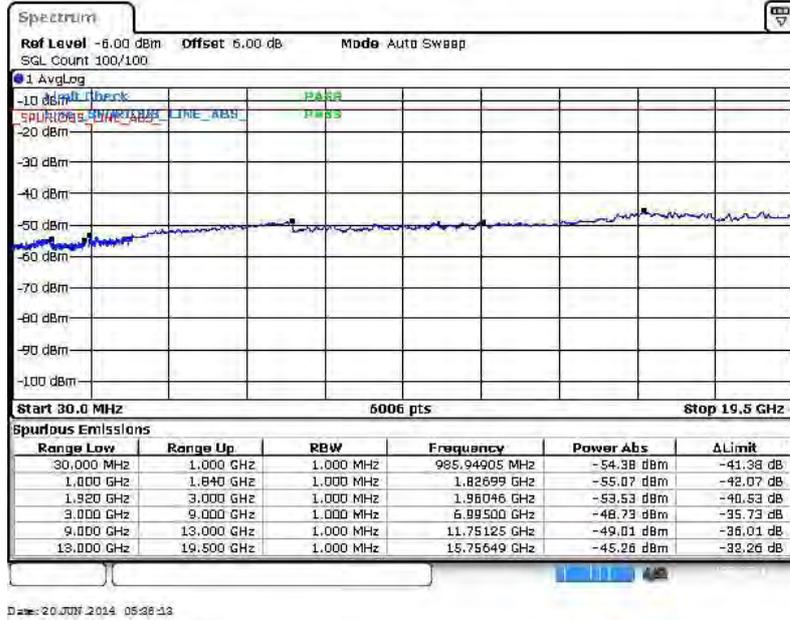
16QAM (RB Size 1, RB Offset 0)



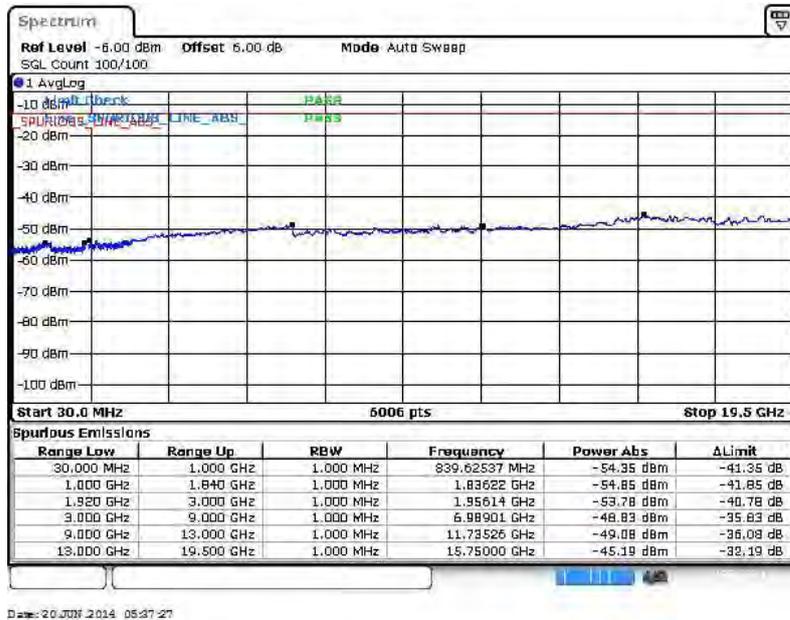


| | | | |
|--------------|------------|-----------|------------------|
| Band : | LTE Band 2 | Channel : | CH18900 (Middle) |
| Band Width : | 20MHz | | |

QPSK (RB Size 1, RB Offset 0)



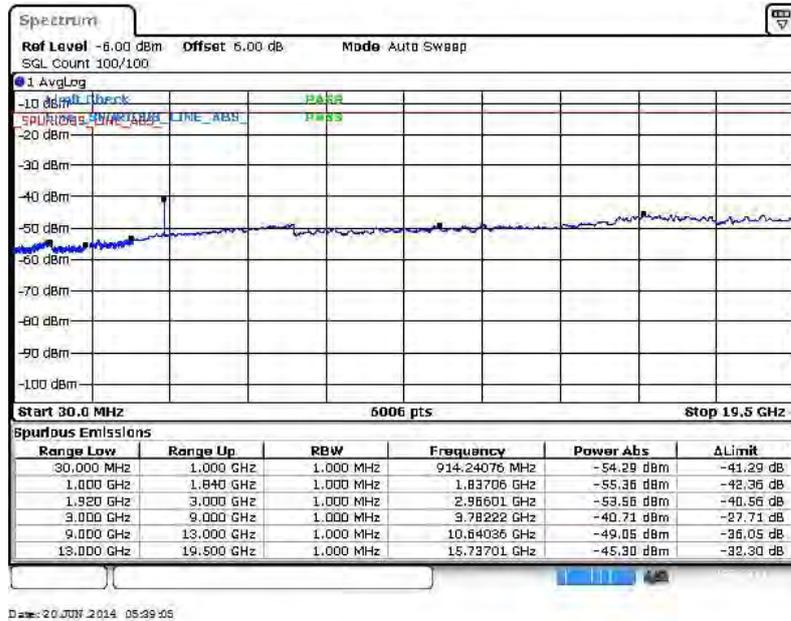
16QAM (RB Size 1, RB Offset 0)



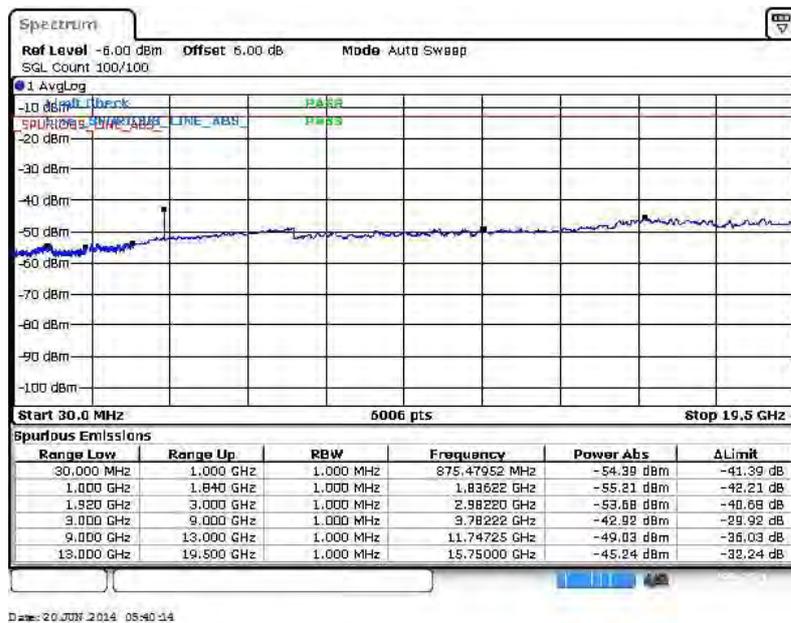


| | | | |
|---------------------|------------|------------------|----------------|
| Band : | LTE Band 2 | Channel : | CH19100 (High) |
| Band Width : | 20MHz | | |

QPSK (RB Size 1, RB Offset 0)



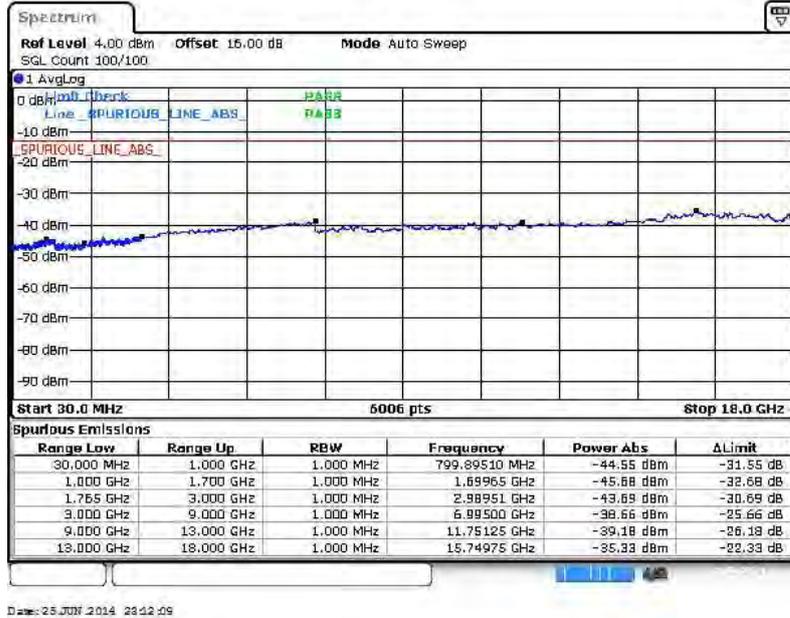
16QAM (RB Size 1, RB Offset 0)



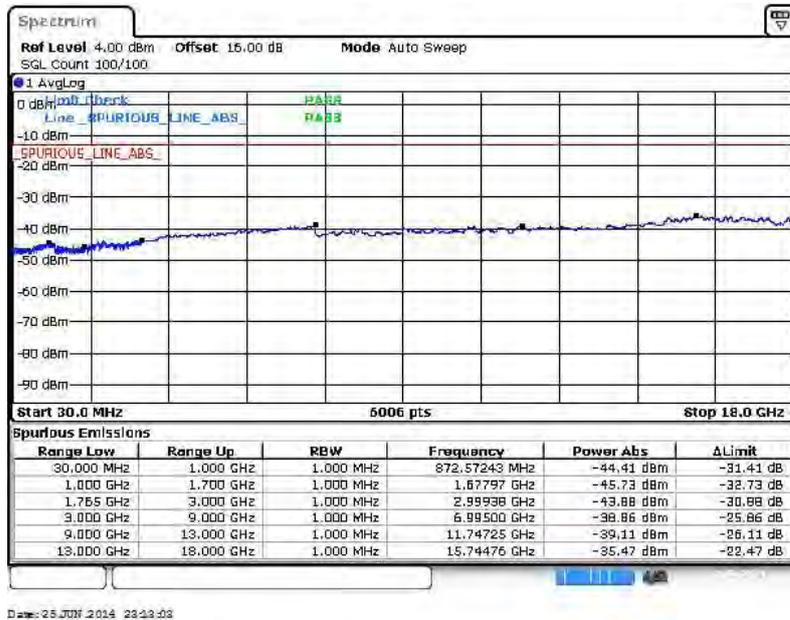


| | | | |
|---------------------|------------|------------------|---------------|
| Band : | LTE Band 4 | Channel : | CH19957 (Low) |
| Band Width : | 1.4MHz | | |

QPSK (RB Size 1, RB Offset 0)



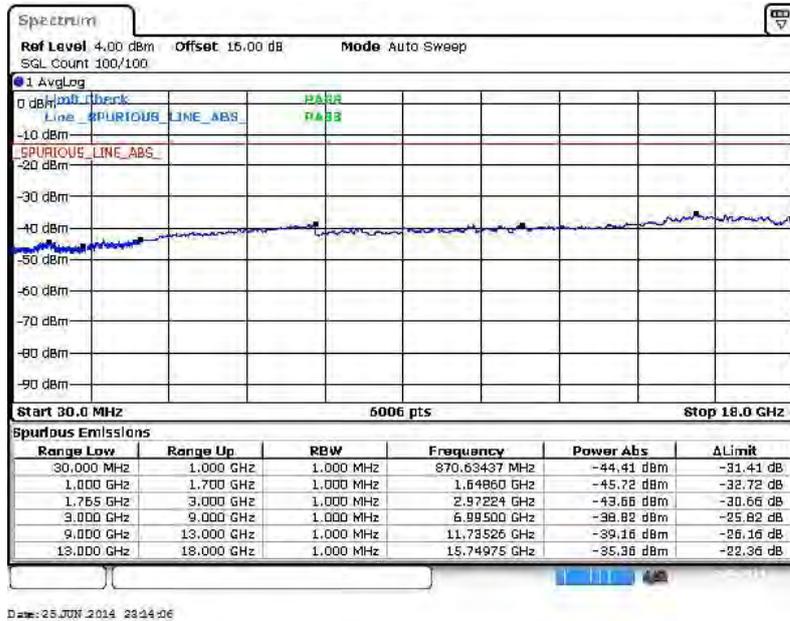
16QAM (RB Size 1, RB Offset 0)



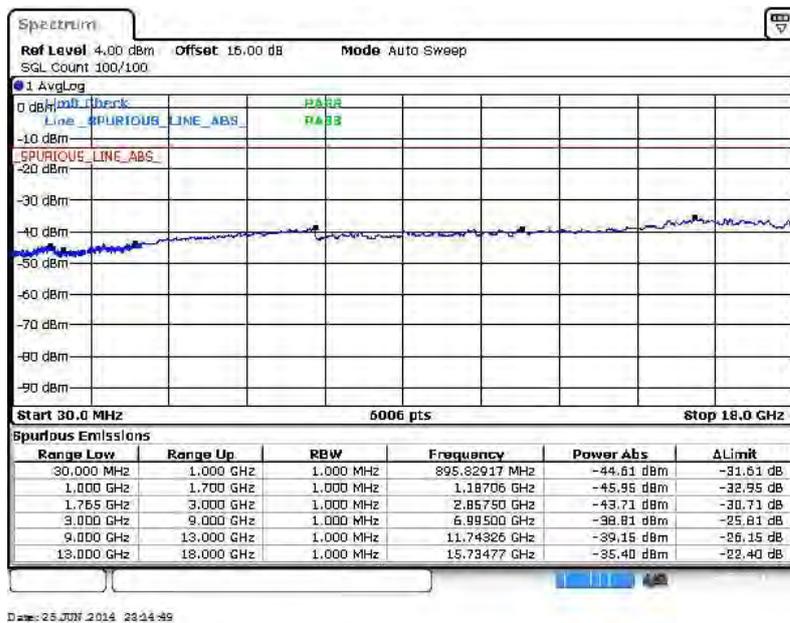


| | | | |
|---------------------|------------|------------------|------------------|
| Band : | LTE Band 4 | Channel : | CH20175 (Middle) |
| Band Width : | 1.4MHz | | |

QPSK (RB Size 1, RB Offset 0)



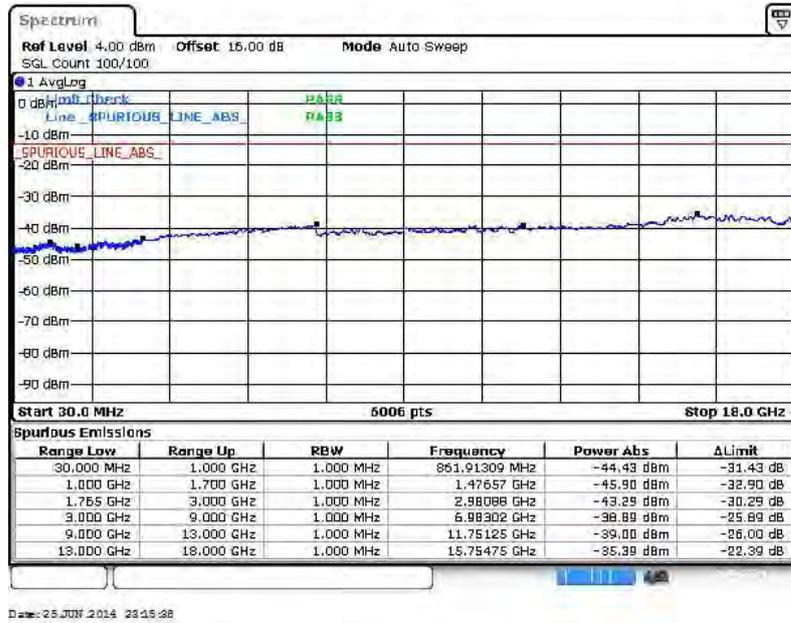
16QAM (RB Size 1, RB Offset 0)



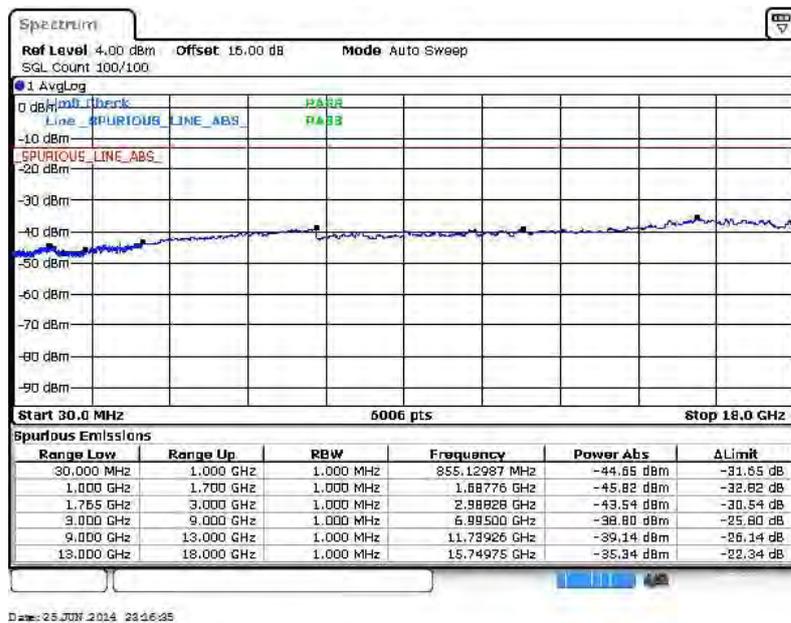


| | | | |
|---------------------|------------|------------------|----------------|
| Band : | LTE Band 4 | Channel : | CH20393 (High) |
| Band Width : | 1.4MHz | | |

QPSK (RB Size 1, RB Offset 0)



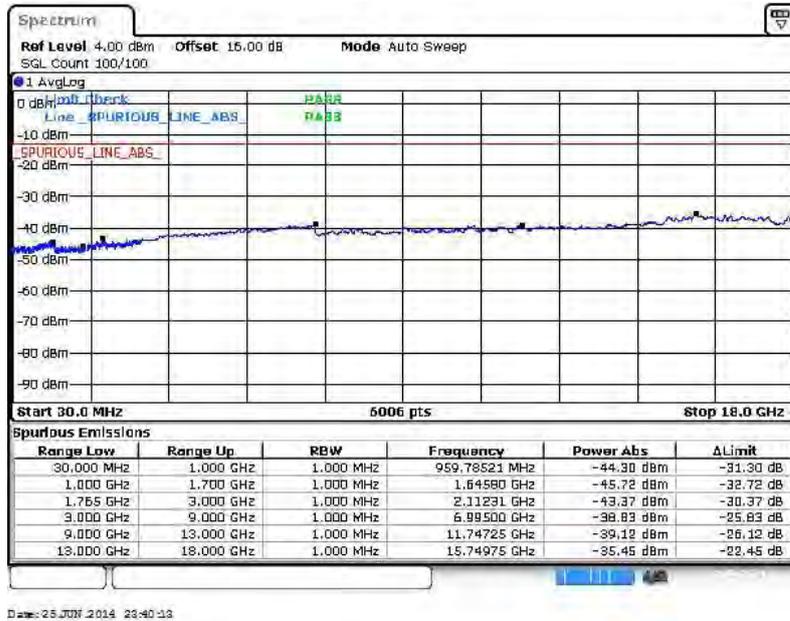
16QAM (RB Size 1, RB Offset 0)



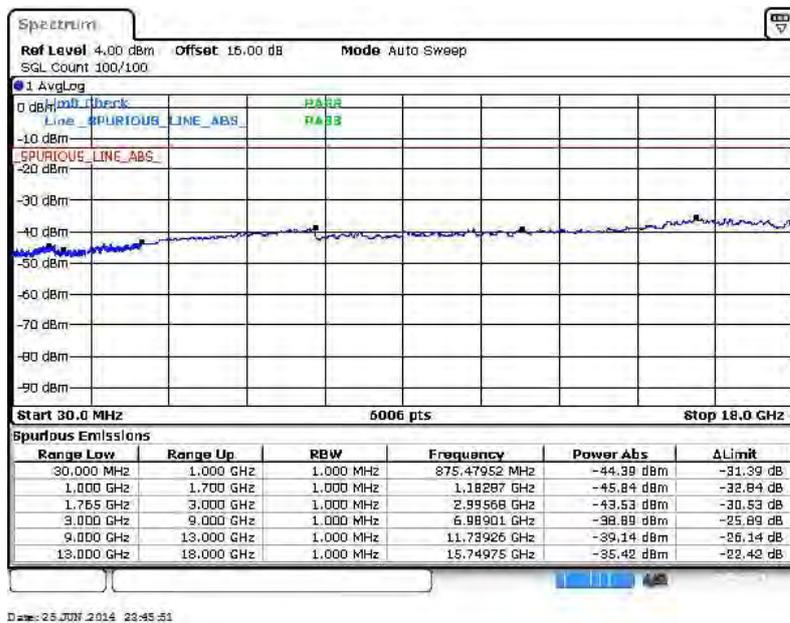


| | | | |
|---------------------|------------|------------------|---------------|
| Band : | LTE Band 4 | Channel : | CH19965 (Low) |
| Band Width : | 3MHz | | |

QPSK (RB Size 1, RB Offset 0)



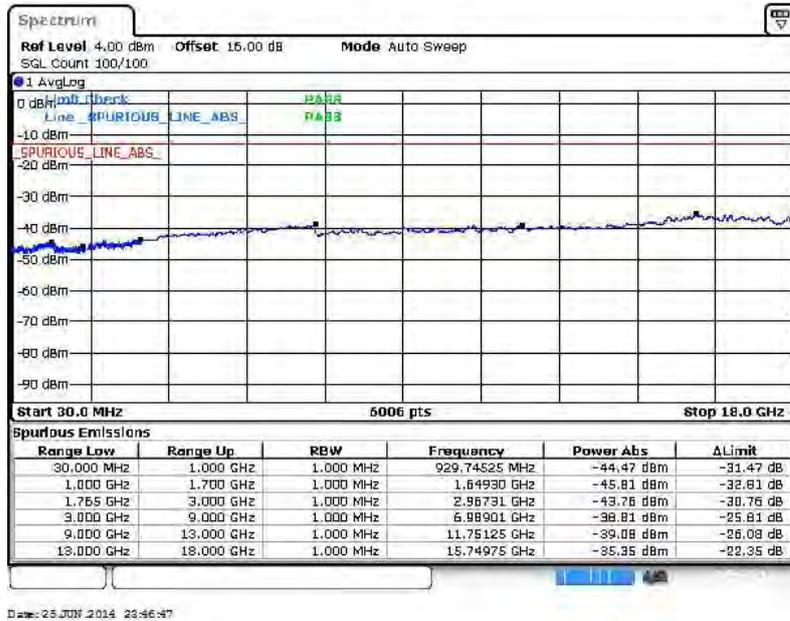
16QAM (RB Size 1, RB Offset 0)



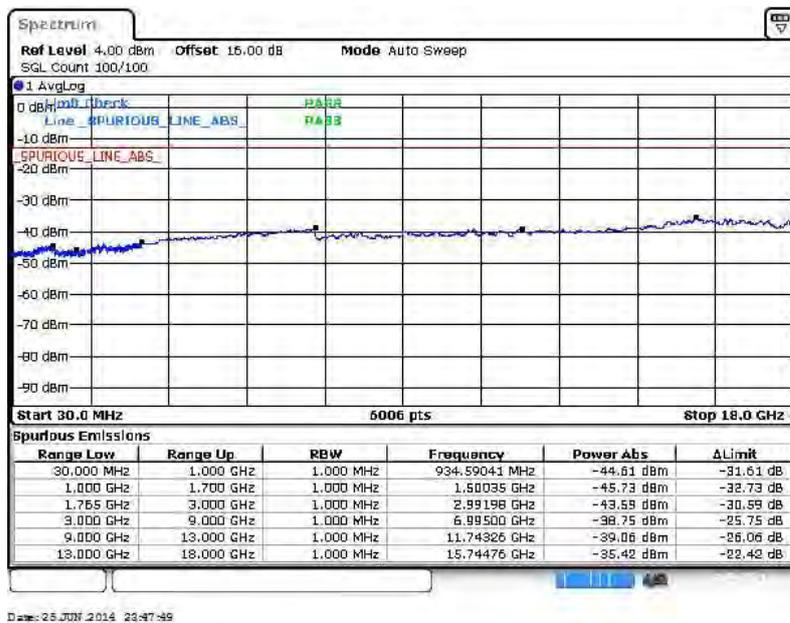


| | | | |
|--------------|------------|-----------|------------------|
| Band : | LTE Band 4 | Channel : | CH20175 (Middle) |
| Band Width : | 3MHz | | |

QPSK (RB Size 1, RB Offset 0)



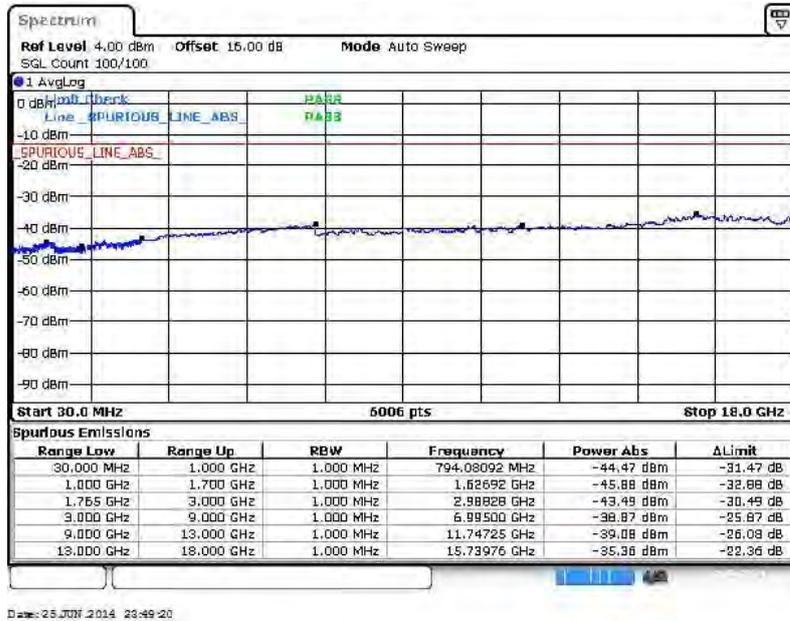
16QAM (RB Size 1, RB Offset 0)



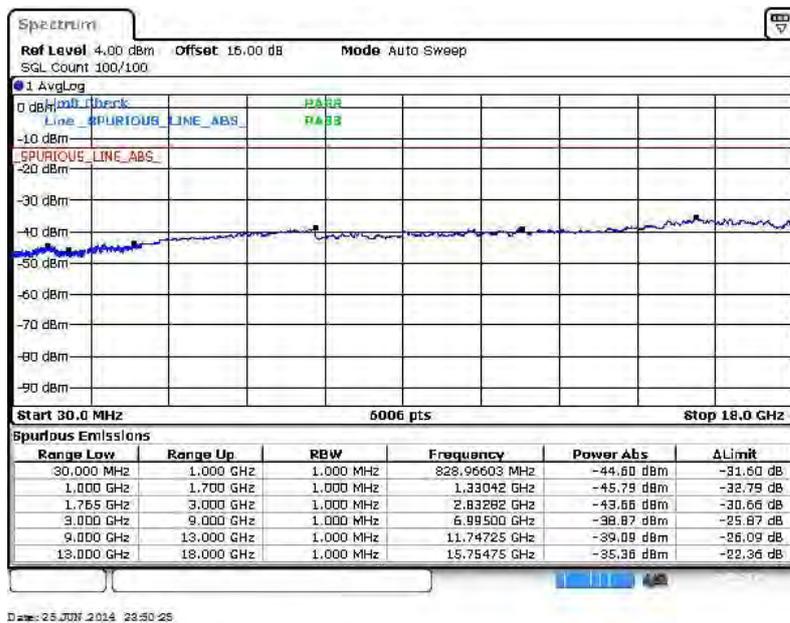


| | | | |
|---------------------|------------|------------------|----------------|
| Band : | LTE Band 4 | Channel : | CH20385 (High) |
| Band Width : | 3MHz | | |

QPSK (RB Size 1, RB Offset 0)



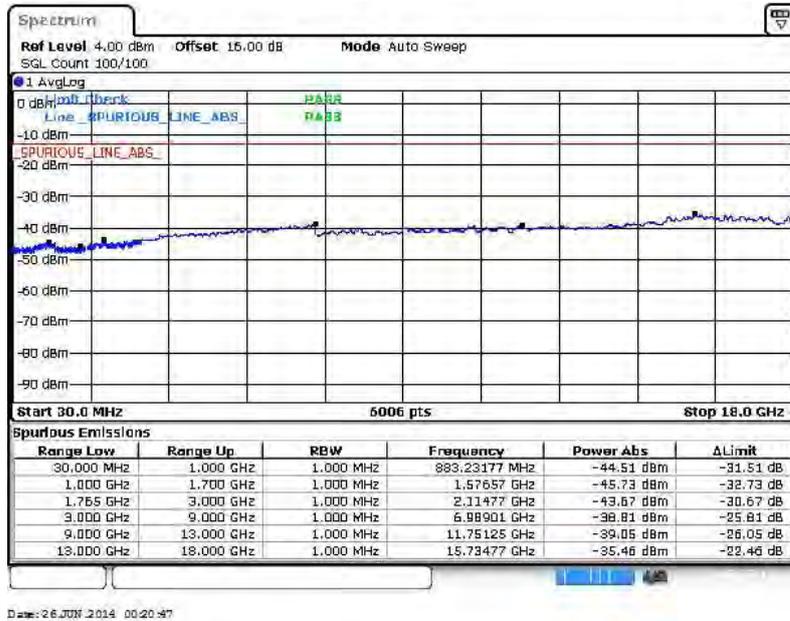
16QAM (RB Size 1, RB Offset 0)



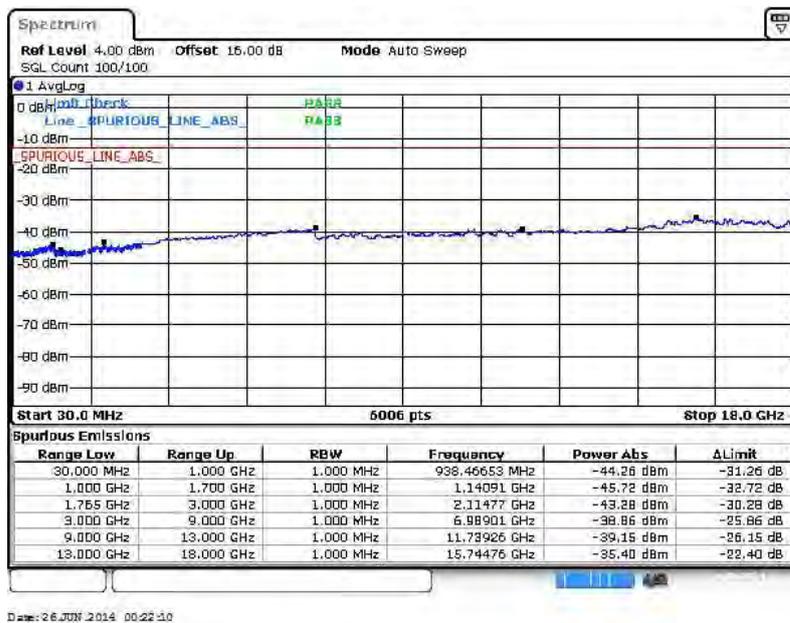


| | | | |
|---------------------|------------|------------------|---------------|
| Band : | LTE Band 4 | Channel : | CH19975 (Low) |
| Band Width : | 5MHz | | |

QPSK (RB Size 1, RB Offset 0)



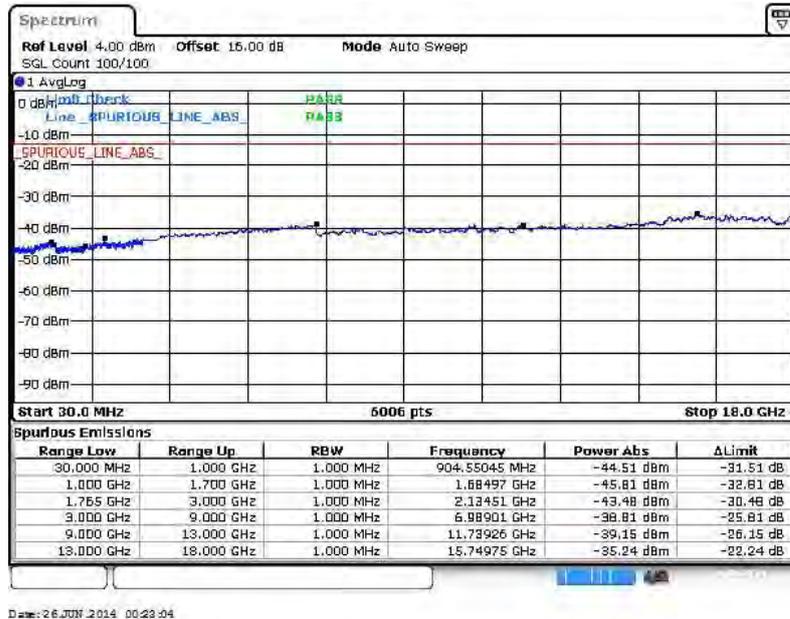
16QAM (RB Size 1, RB Offset 0)



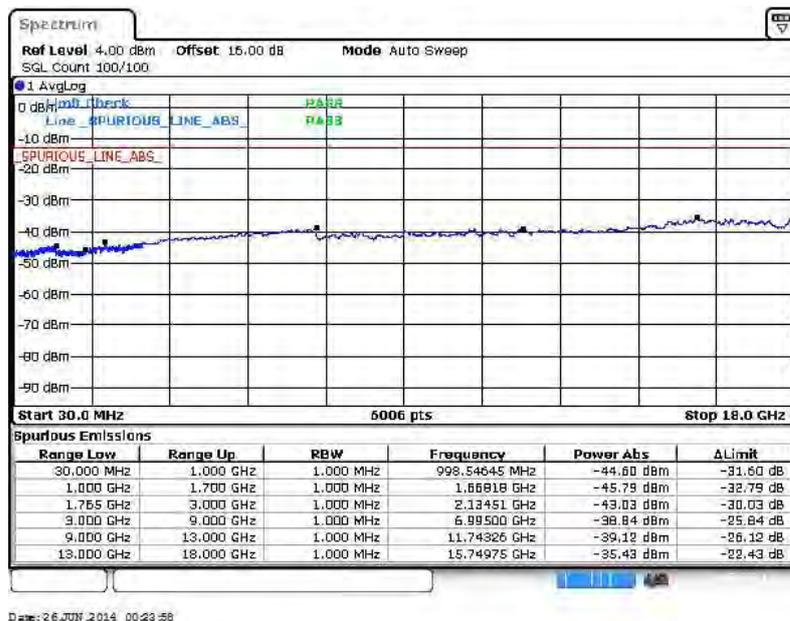


| | | | |
|---------------------|------------|------------------|------------------|
| Band : | LTE Band 4 | Channel : | CH20175 (Middle) |
| Band Width : | 5MHz | | |

QPSK (RB Size 1, RB Offset 0)



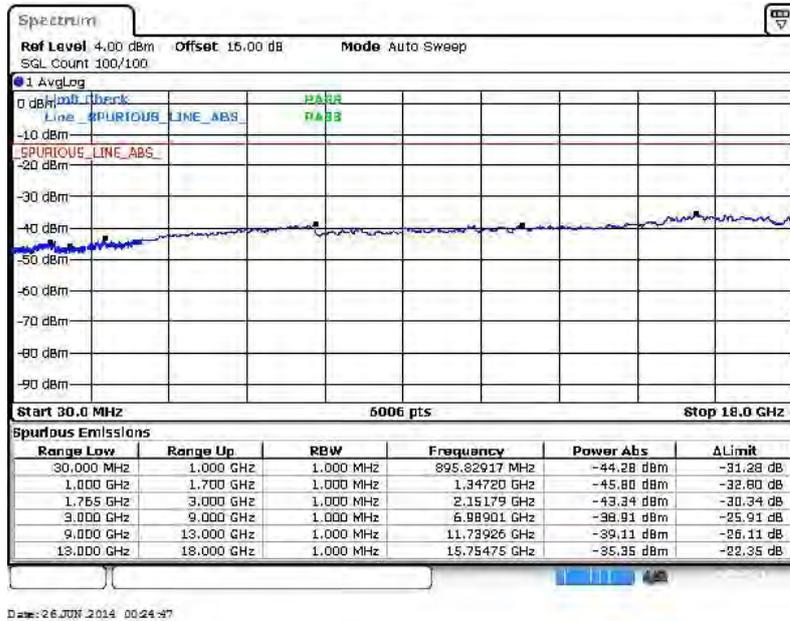
16QAM (RB Size 1, RB Offset 0)



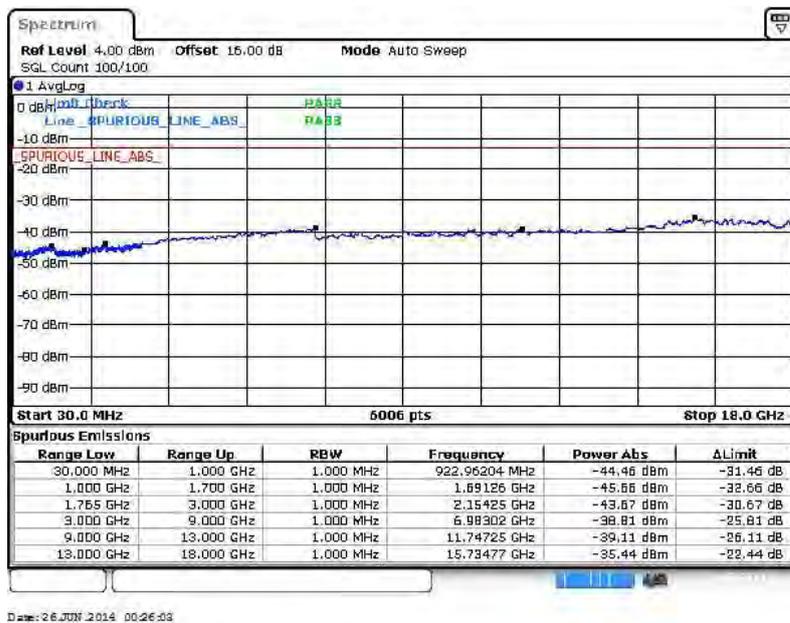


| | | | |
|---------------------|------------|------------------|----------------|
| Band : | LTE Band 4 | Channel : | CH20375 (High) |
| Band Width : | 5MHz | | |

QPSK (RB Size 1, RB Offset 0)



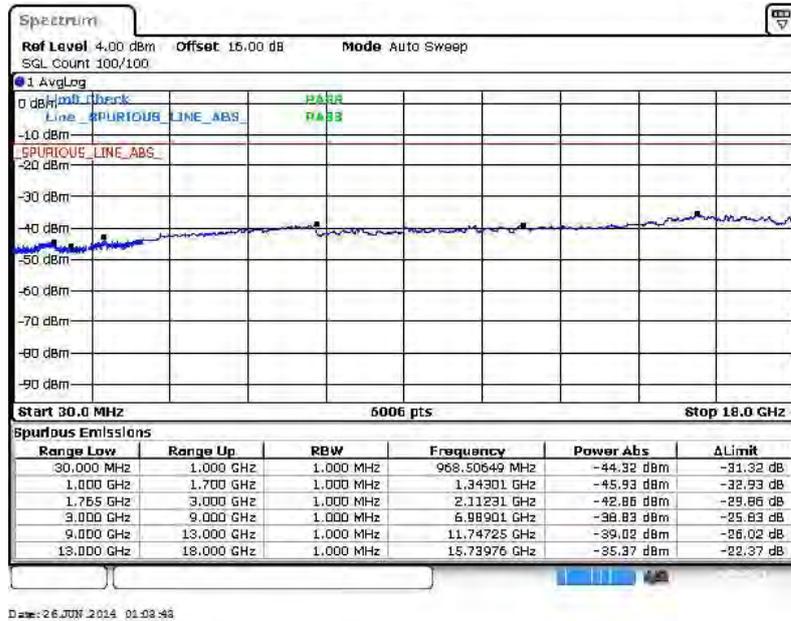
16QAM (RB Size 1, RB Offset 0)



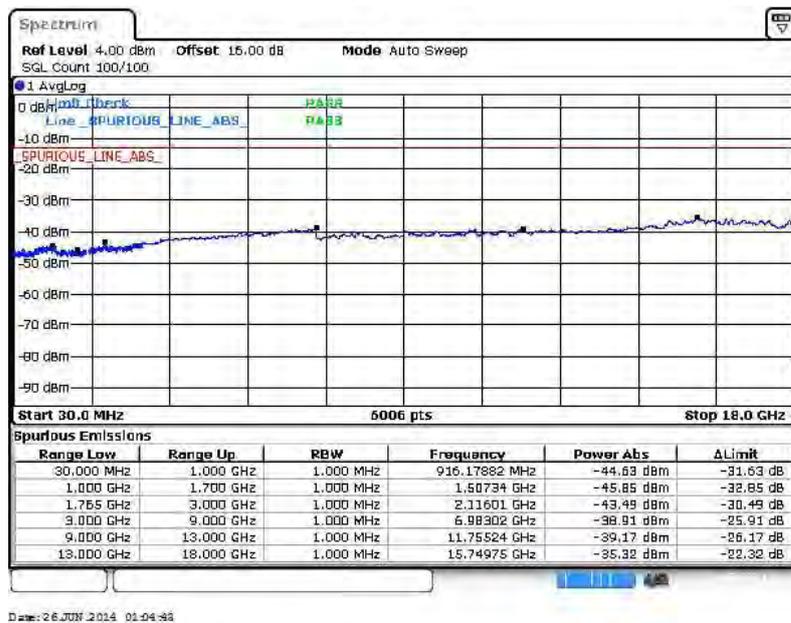


| | | | |
|--------------|------------|-----------|---------------|
| Band : | LTE Band 4 | Channel : | CH20000 (Low) |
| Band Width : | 10MHz | | |

QPSK (RB Size 1, RB Offset 0)



16QAM (RB Size 1, RB Offset 0)



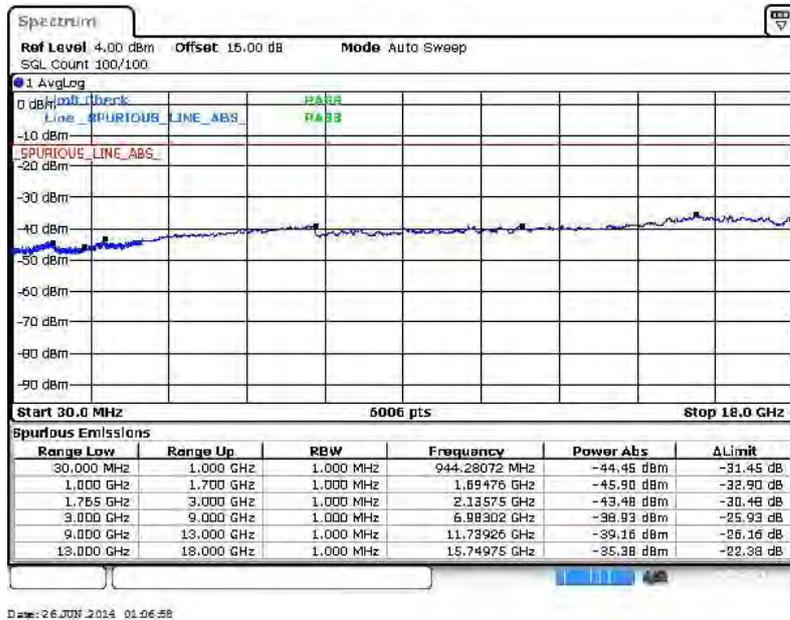


| | | | |
|--------------|------------|-----------|------------------|
| Band : | LTE Band 4 | Channel : | CH20175 (Middle) |
| Band Width : | 10MHz | | |

QPSK (RB Size 1, RB Offset 0)



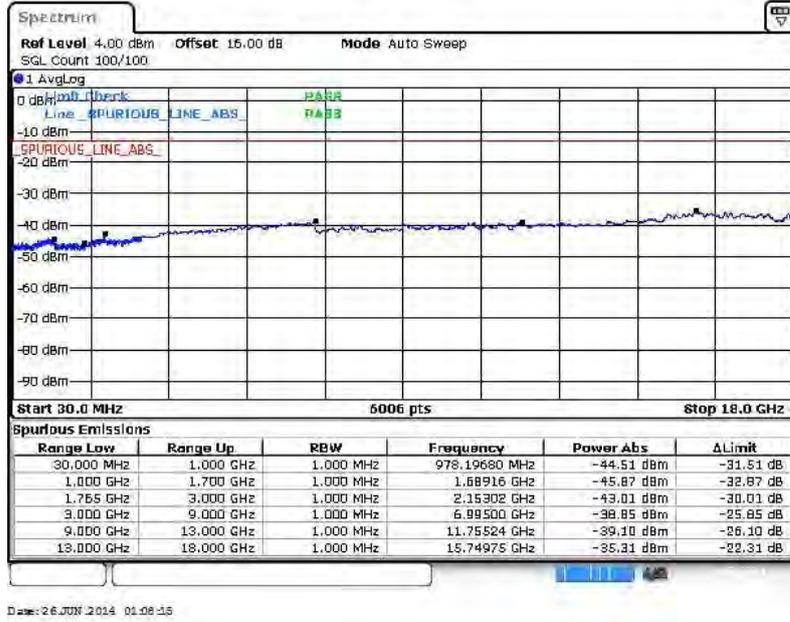
16QAM (RB Size 1, RB Offset 0)



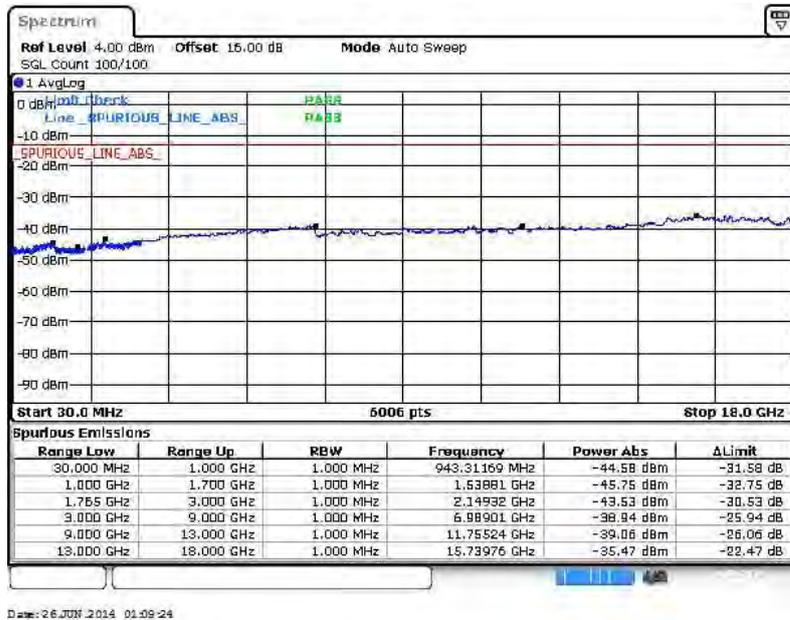


| | | | |
|--------------|------------|-----------|----------------|
| Band : | LTE Band 4 | Channel : | CH20350 (High) |
| Band Width : | 10MHz | | |

QPSK (RB Size 1, RB Offset 0)



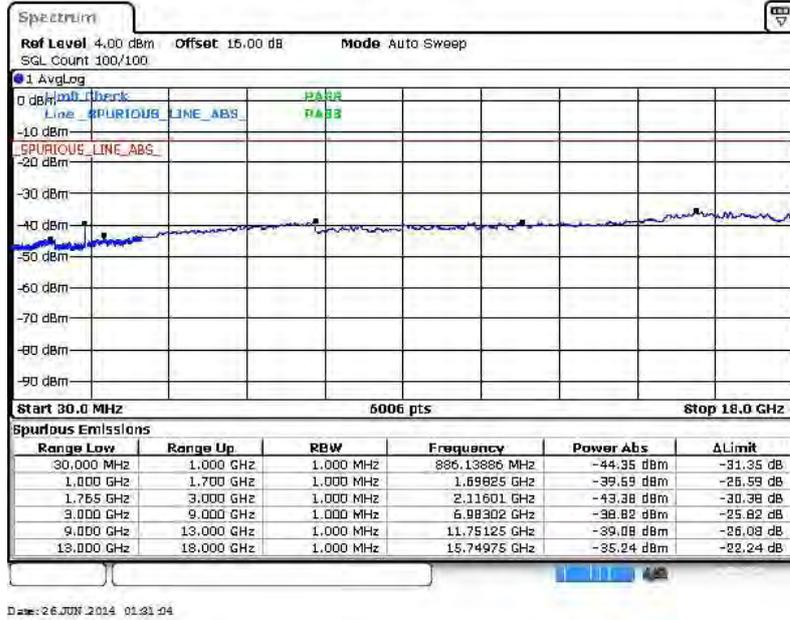
16QAM (RB Size 1, RB Offset 0)



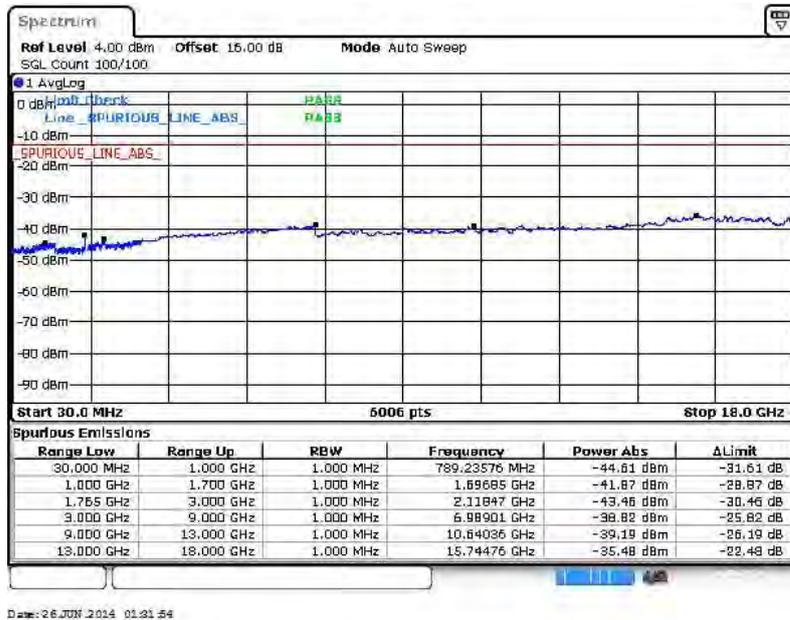


| | | | |
|---------------------|------------|------------------|---------------|
| Band : | LTE Band 4 | Channel : | CH20025 (Low) |
| Band Width : | 15MHz | | |

QPSK (RB Size 1, RB Offset 0)



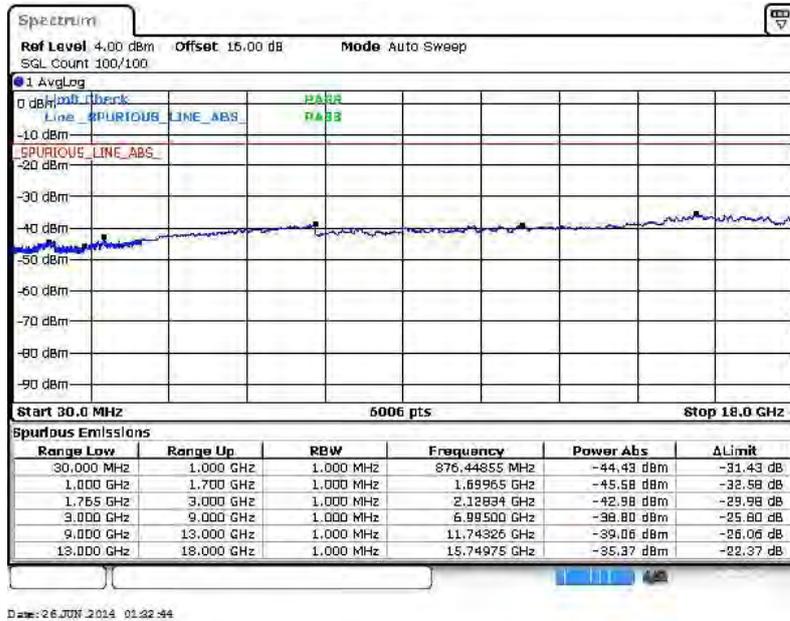
16QAM (RB Size 1, RB Offset 0)



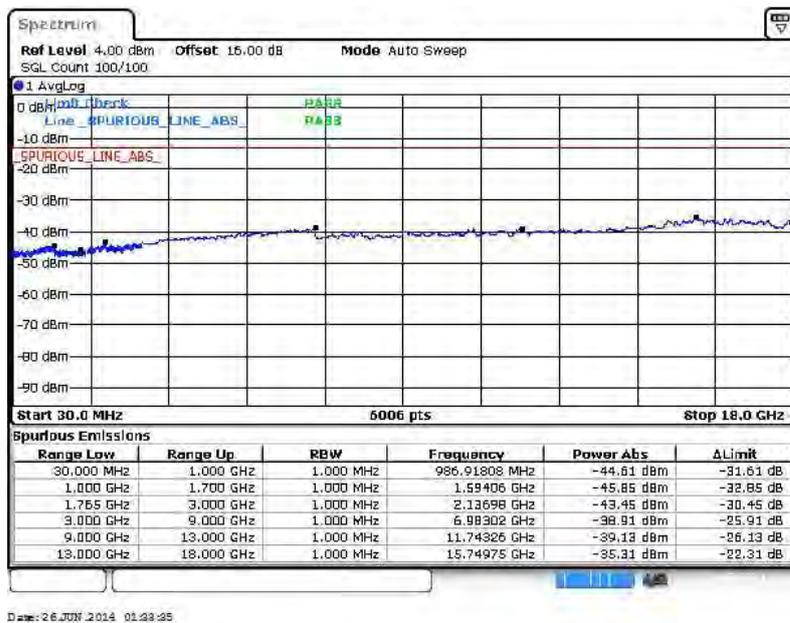


| | | | |
|---------------------|------------|------------------|------------------|
| Band : | LTE Band 4 | Channel : | CH20175 (Middle) |
| Band Width : | 15MHz | | |

QPSK (RB Size 1, RB Offset 0)



16QAM (RB Size 1, RB Offset 0)



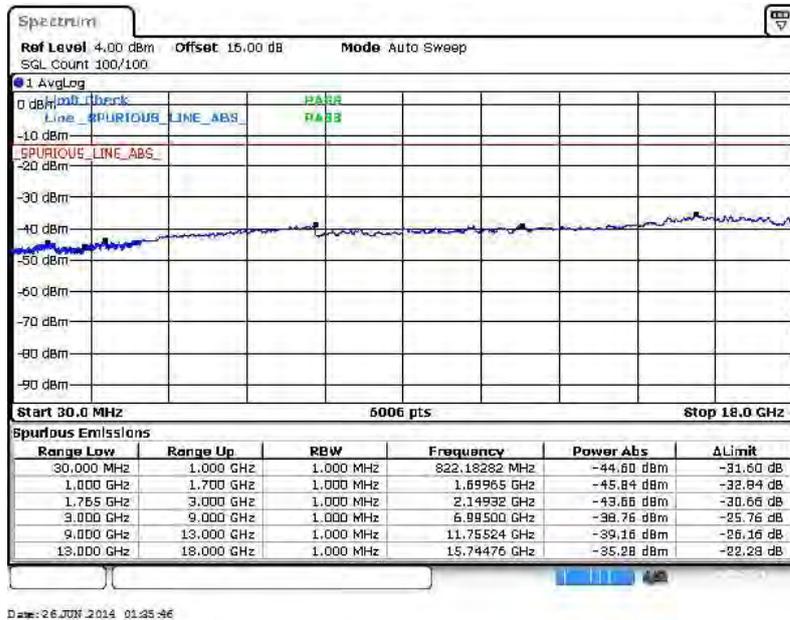


| | | | |
|---------------------|------------|------------------|----------------|
| Band : | LTE Band 4 | Channel : | CH20325 (High) |
| Band Width : | 15MHz | | |

QPSK (RB Size 1, RB Offset 0)



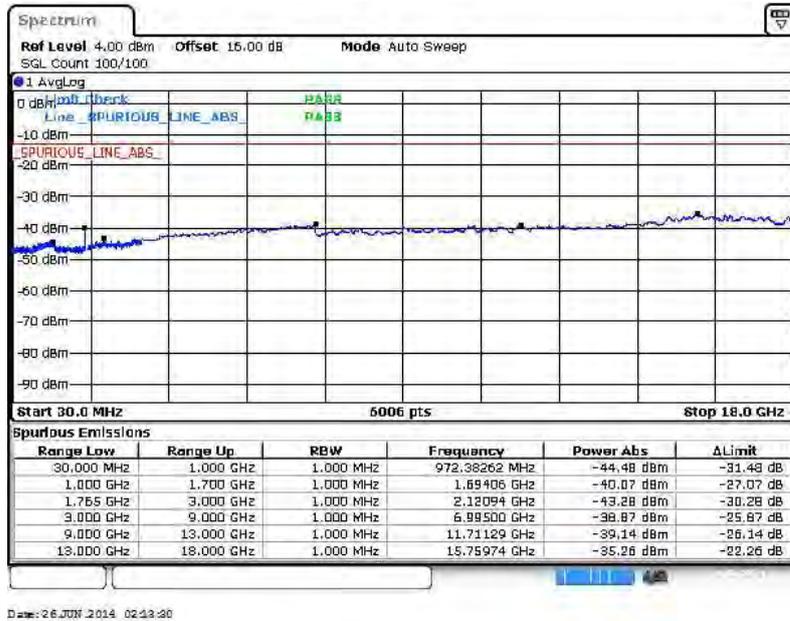
16QAM (RB Size 1, RB Offset 0)



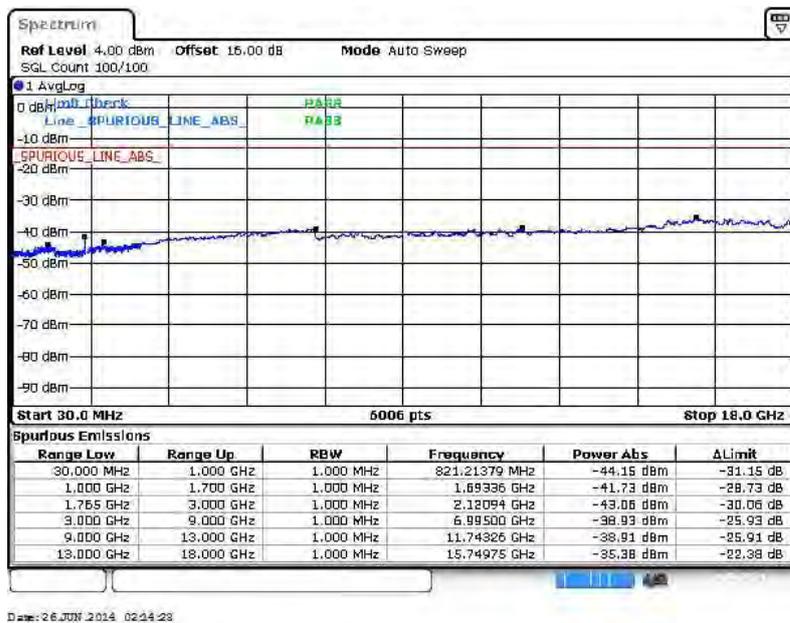


| | | | |
|---------------------|------------|------------------|---------------|
| Band : | LTE Band 4 | Channel : | CH20050 (Low) |
| Band Width : | 20MHz | | |

QPSK (RB Size 1, RB Offset 0)



16QAM (RB Size 1, RB Offset 0)



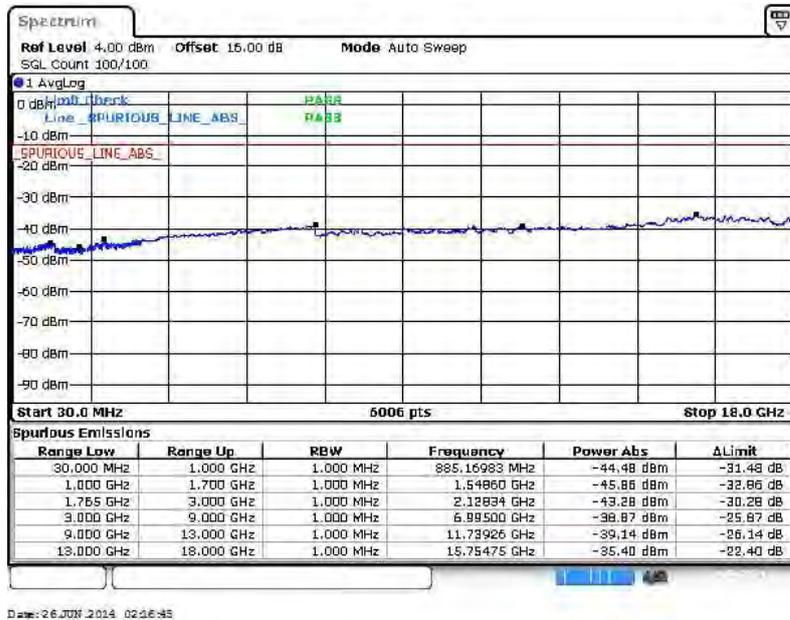


| | | | |
|---------------------|------------|------------------|------------------|
| Band : | LTE Band 4 | Channel : | CH20175 (Middle) |
| Band Width : | 20MHz | | |

QPSK (RB Size 1, RB Offset 0)



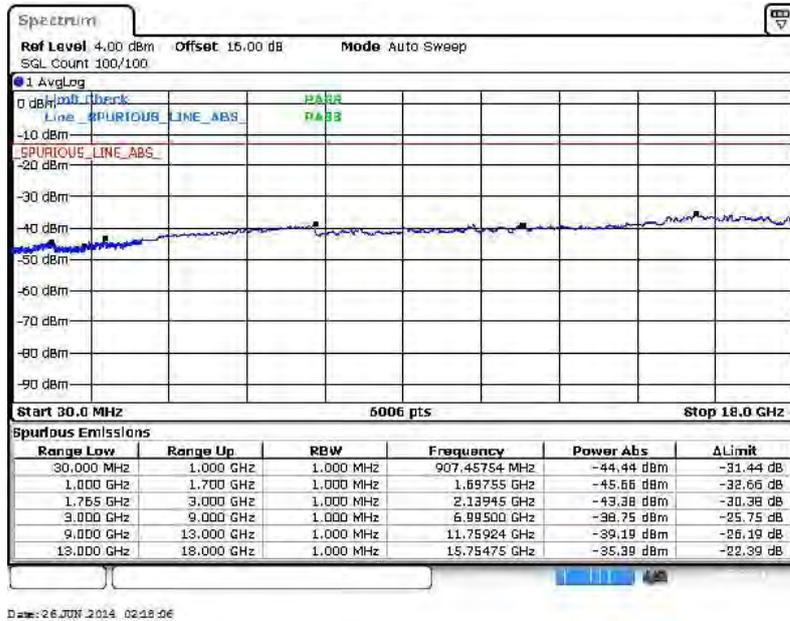
16QAM (RB Size 1, RB Offset 0)



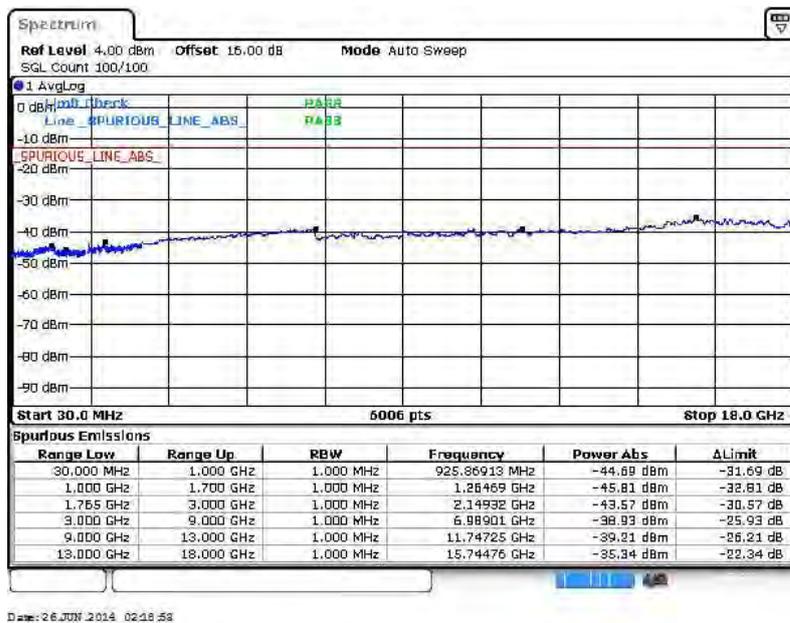


| | | | |
|--------------|------------|-----------|----------------|
| Band : | LTE Band 4 | Channel : | CH20300 (High) |
| Band Width : | 20MHz | | |

QPSK (RB Size 1, RB Offset 0)



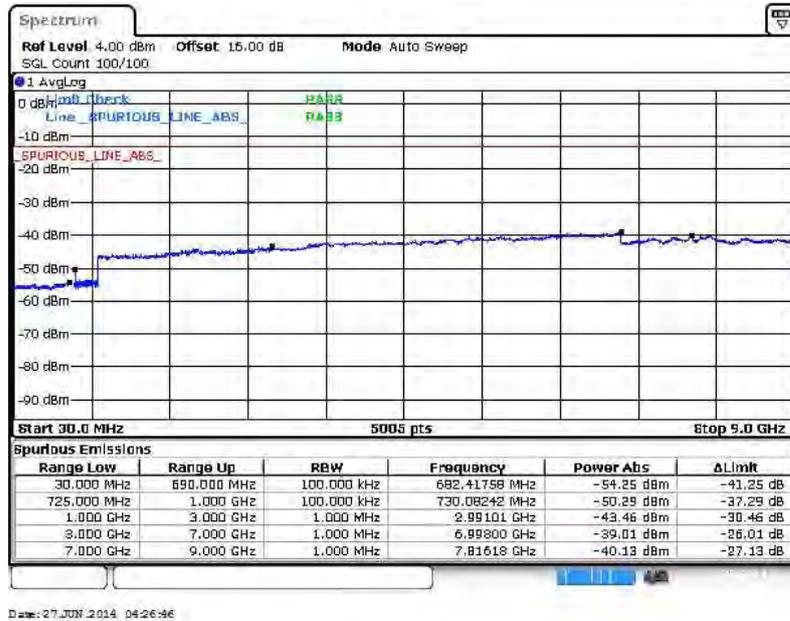
16QAM (RB Size 1, RB Offset 0)



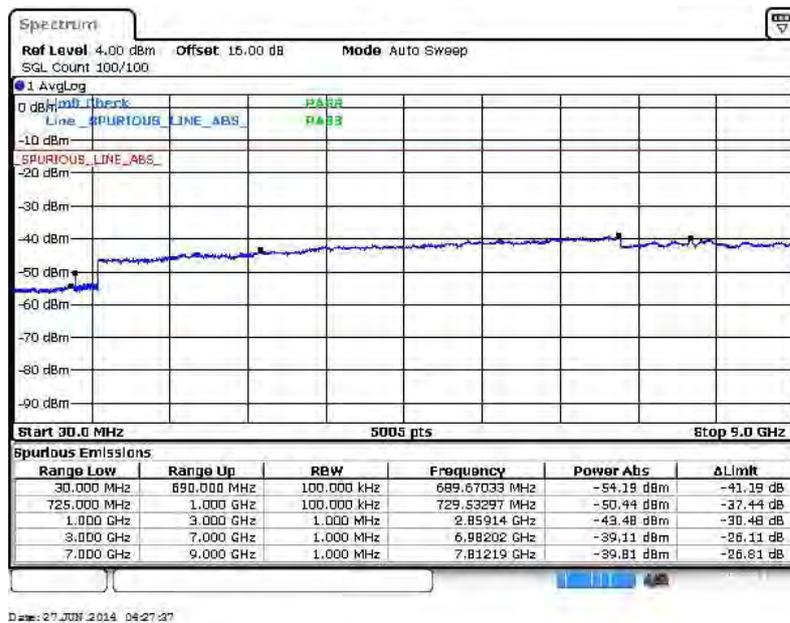


| | | | |
|--------------|-------------|-----------|---------------|
| Band : | LTE Band 12 | Channel : | CH23017 (Low) |
| Band Width : | 1.4MHz | | |

QPSK (RB Size 1, RB Offset 0)



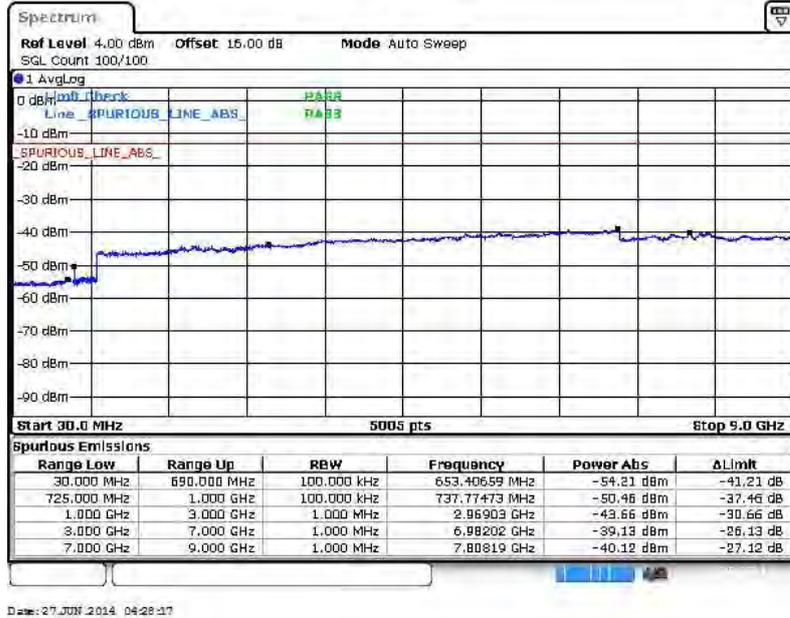
16QAM (RB Size 1, RB Offset 0)



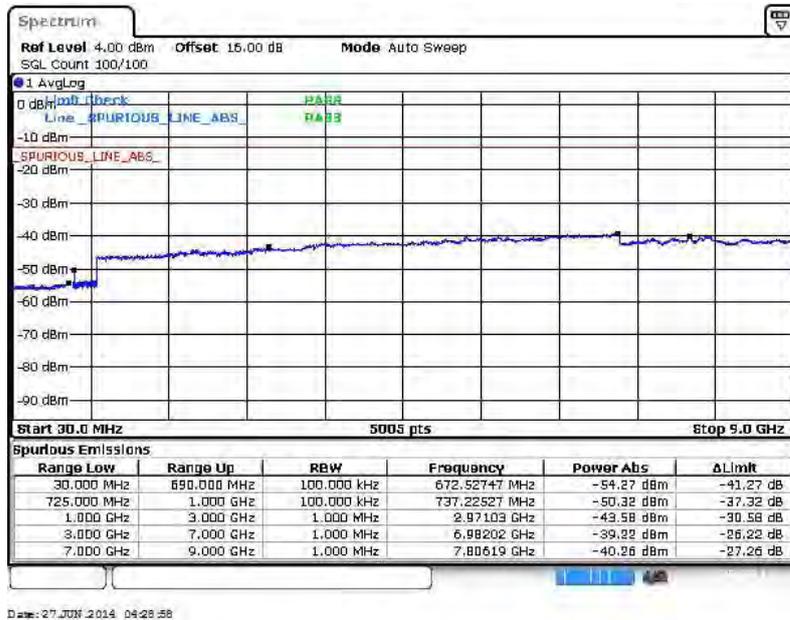


| | | | |
|---------------------|-------------|------------------|------------------|
| Band : | LTE Band 12 | Channel : | CH23095 (Middle) |
| Band Width : | 1.4MHz | | |

QPSK (RB Size 1, RB Offset 0)



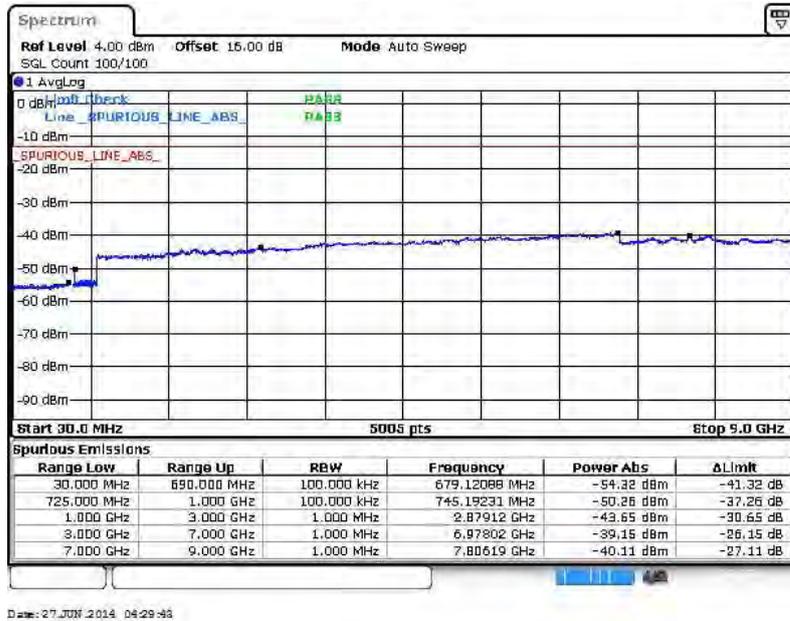
16QAM (RB Size 1, RB Offset 0)



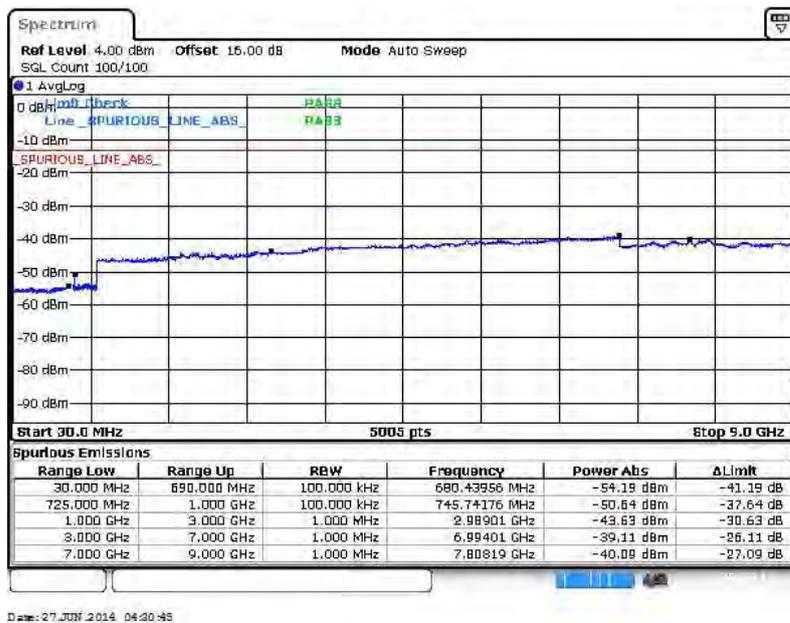


| | | | |
|---------------------|-------------|------------------|----------------|
| Band : | LTE Band 12 | Channel : | CH23173 (High) |
| Band Width : | 1.4MHz | | |

QPSK (RB Size 1, RB Offset 0)



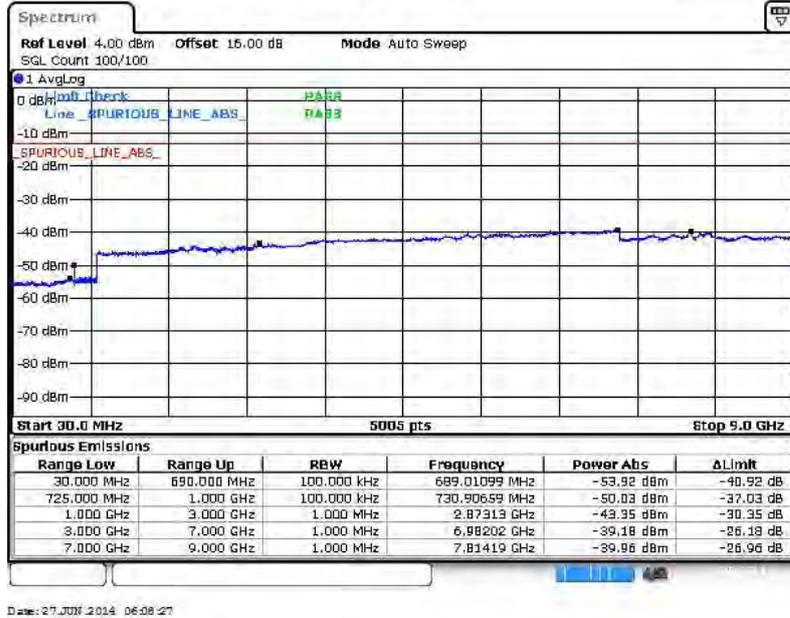
16QAM (RB Size 1, RB Offset 0)



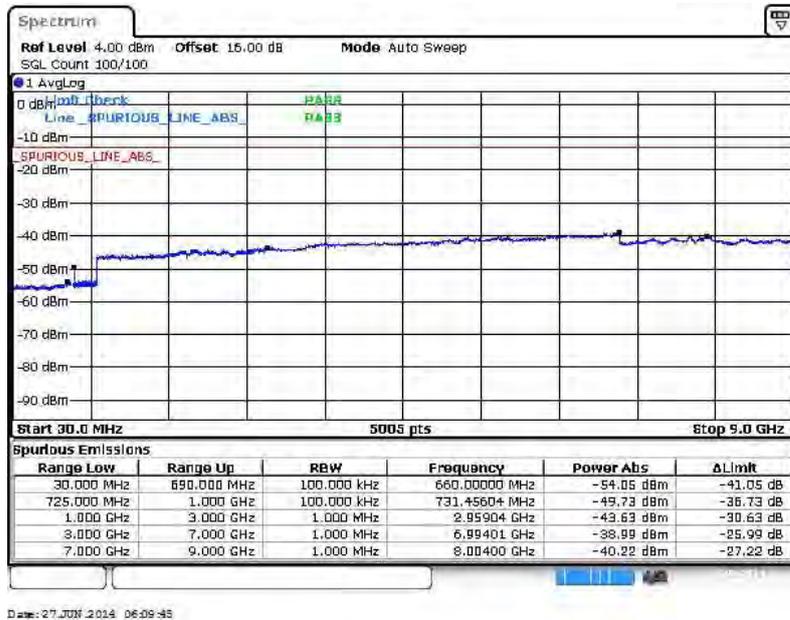


| | | | |
|---------------------|-------------|------------------|---------------|
| Band : | LTE Band 12 | Channel : | CH23025 (Low) |
| Band Width : | 3MHz | | |

QPSK (RB Size 1, RB Offset 0)



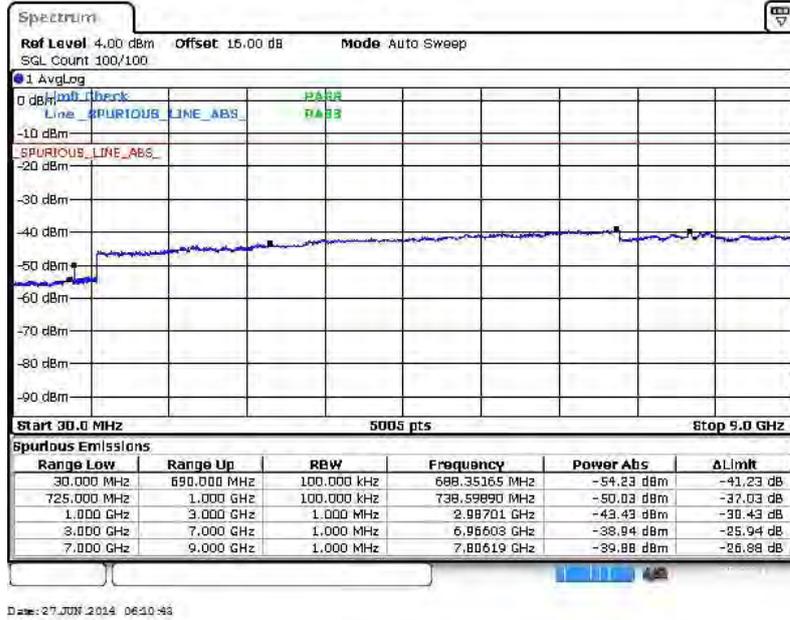
16QAM (RB Size 1, RB Offset 0)



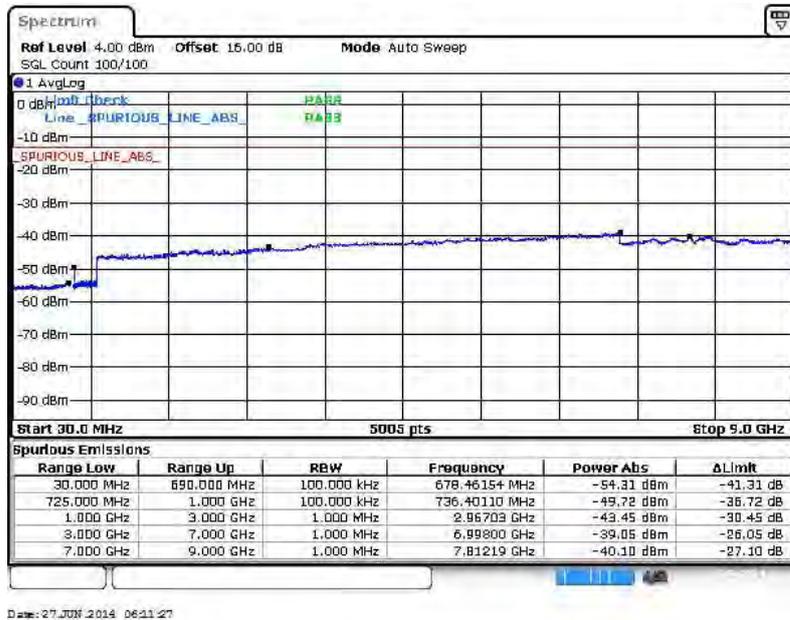


| | | | |
|---------------------|-------------|------------------|------------------|
| Band : | LTE Band 12 | Channel : | CH23095 (Middle) |
| Band Width : | 3MHz | | |

QPSK (RB Size 1, RB Offset 0)



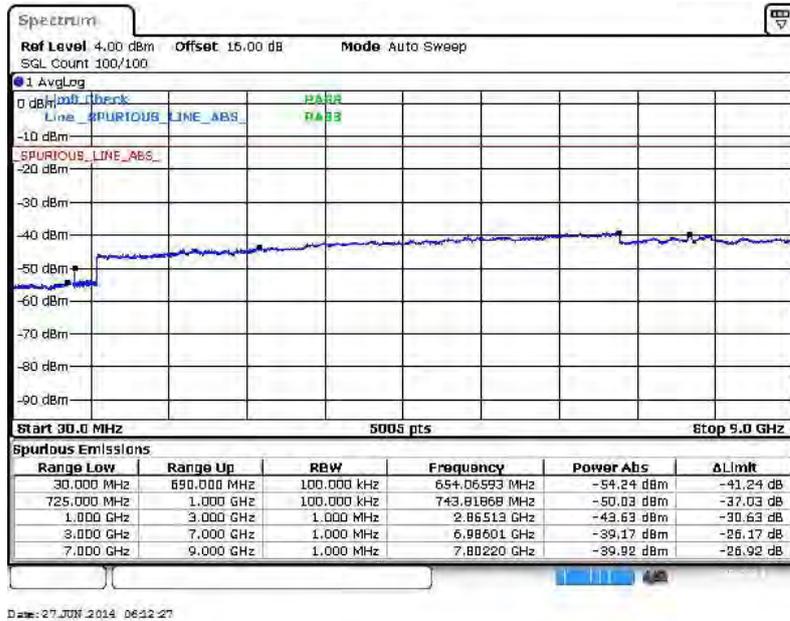
16QAM (RB Size 1, RB Offset 0)



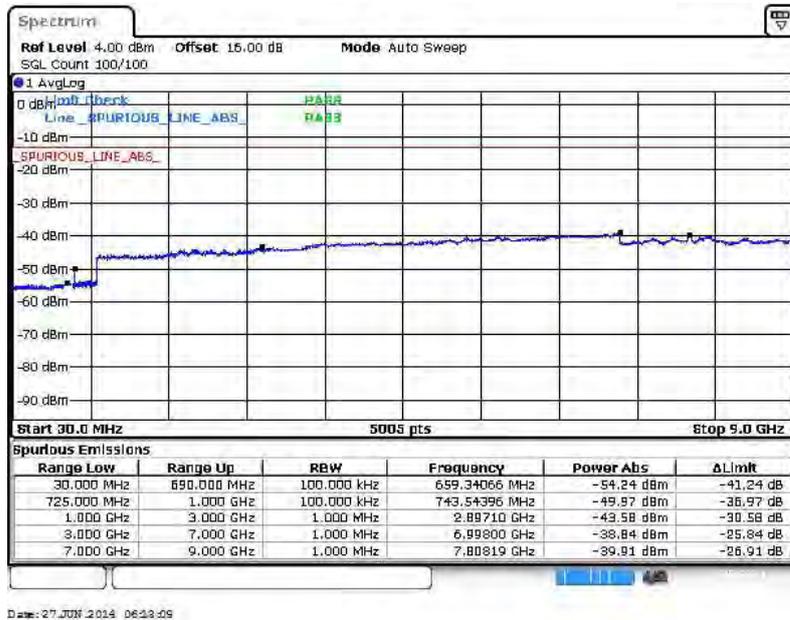


| | | | |
|---------------------|-------------|------------------|----------------|
| Band : | LTE Band 12 | Channel : | CH23165 (High) |
| Band Width : | 3MHz | | |

QPSK (RB Size 1, RB Offset 0)



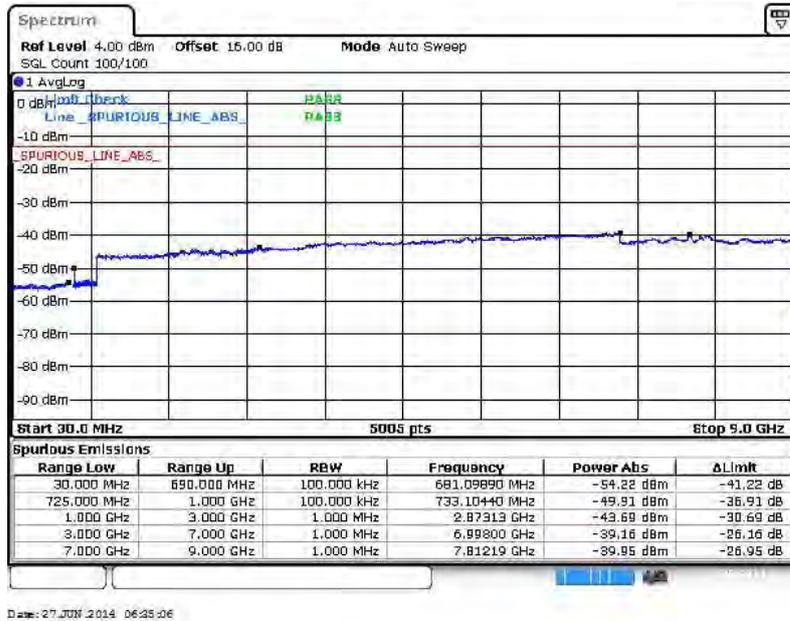
16QAM (RB Size 1, RB Offset 0)



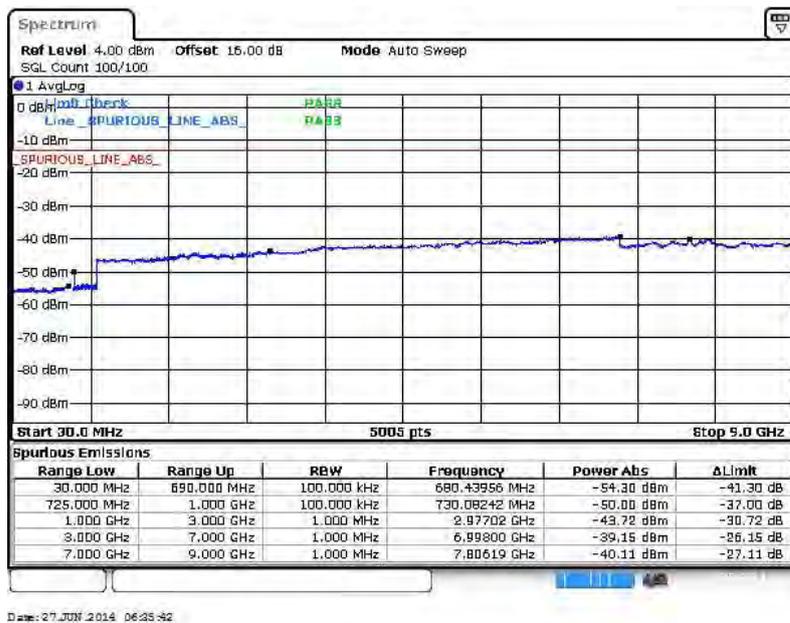


| | | | |
|--------------|-------------|-----------|---------------|
| Band : | LTE Band 12 | Channel : | CH23035 (Low) |
| Band Width : | 5MHz | | |

QPSK (RB Size 1, RB Offset 0)



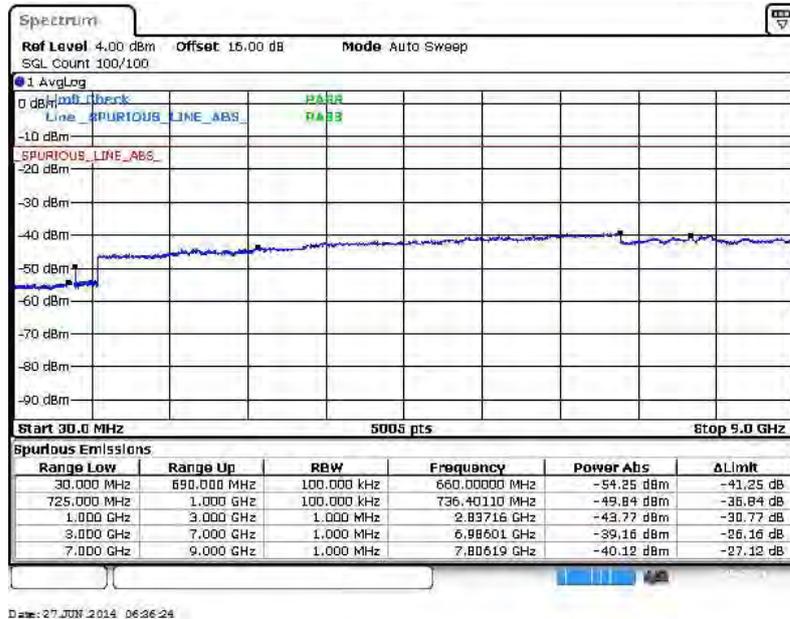
16QAM (RB Size 1, RB Offset 0)



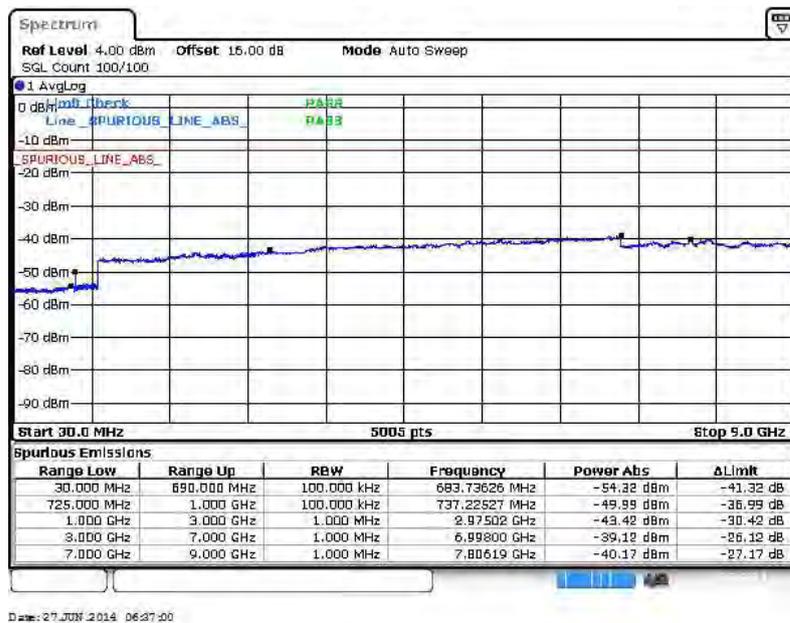


| | | | |
|---------------------|-------------|------------------|------------------|
| Band : | LTE Band 12 | Channel : | CH23095 (Middle) |
| Band Width : | 5MHz | | |

QPSK (RB Size 1, RB Offset 0)



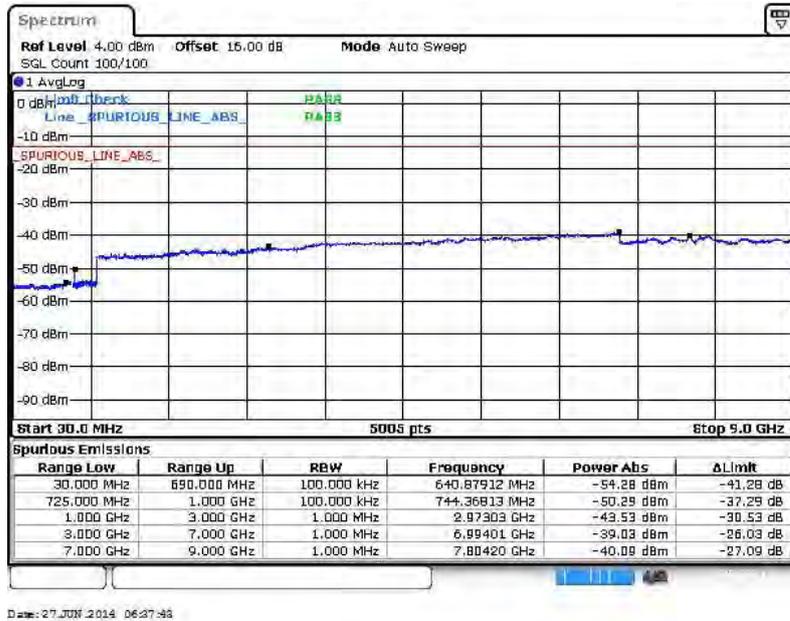
16QAM (RB Size 1, RB Offset 0)



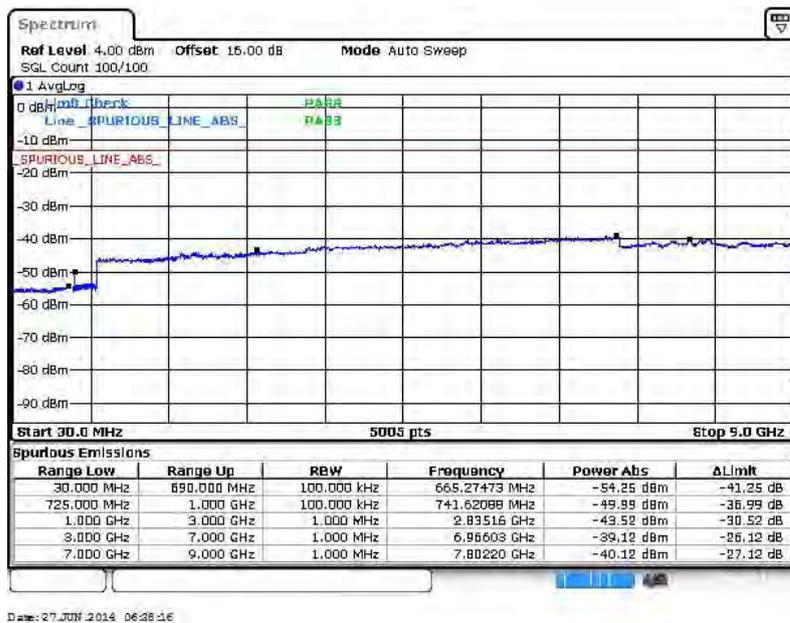


| | | | |
|---------------------|-------------|------------------|----------------|
| Band : | LTE Band 12 | Channel : | CH23155 (High) |
| Band Width : | 5MHz | | |

QPSK (RB Size 1, RB Offset 0)



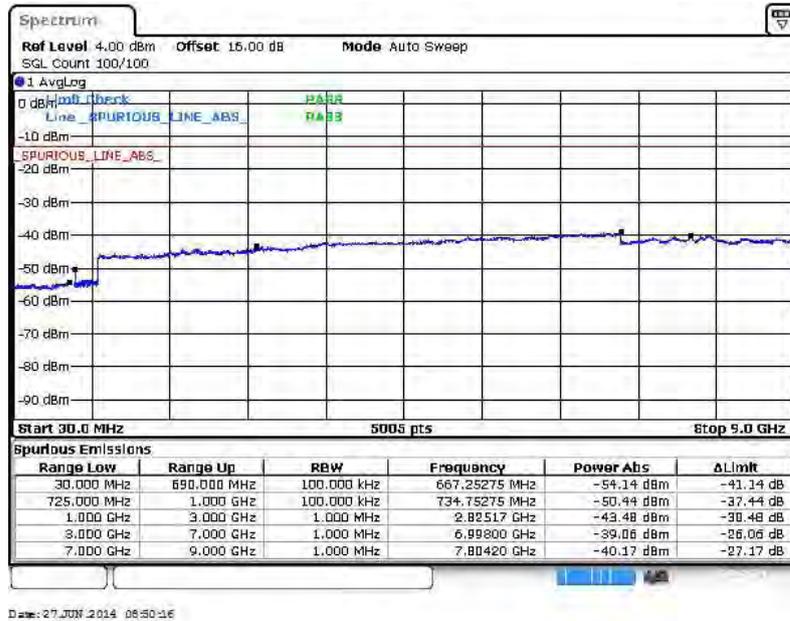
16QAM (RB Size 1, RB Offset 0)



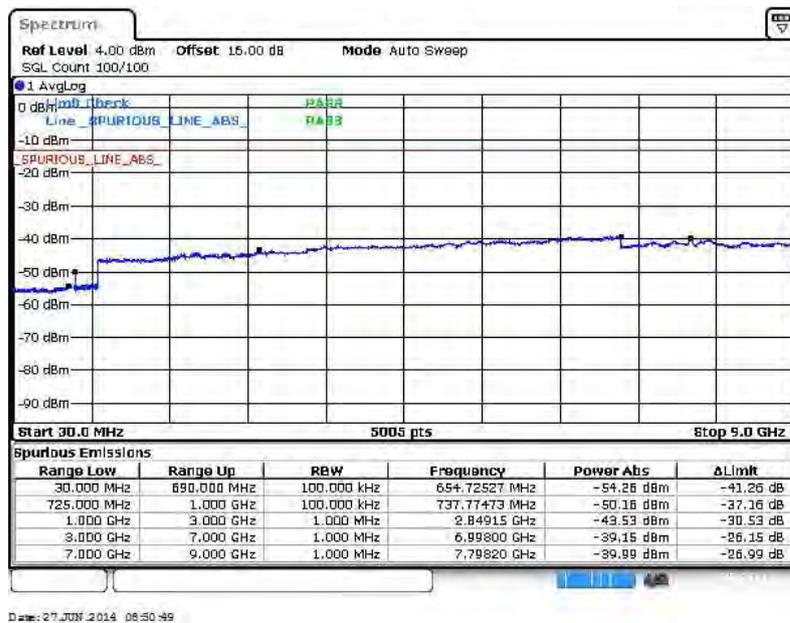


| | | | |
|---------------------|-------------|------------------|---------------|
| Band : | LTE Band 12 | Channel : | CH23060 (Low) |
| Band Width : | 10MHz | | |

QPSK (RB Size 1, RB Offset 0)



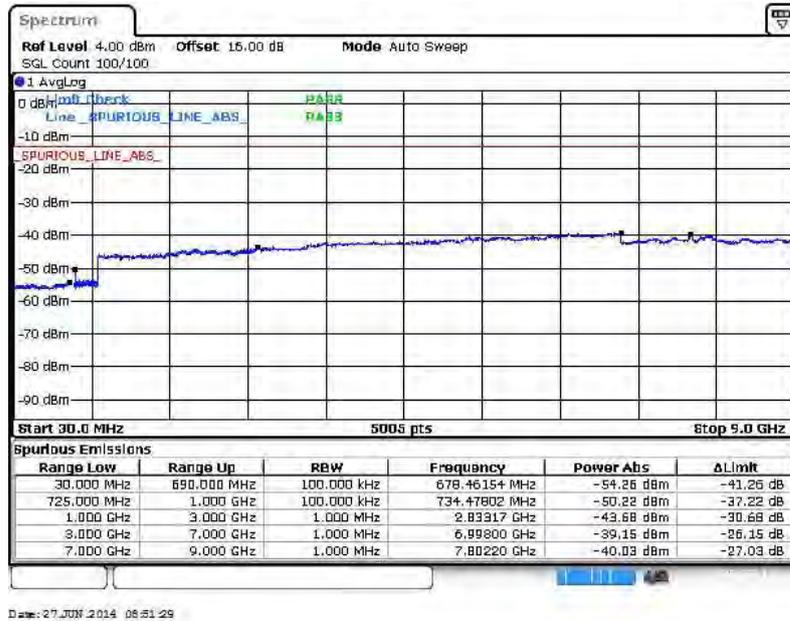
16QAM (RB Size 1, RB Offset 0)



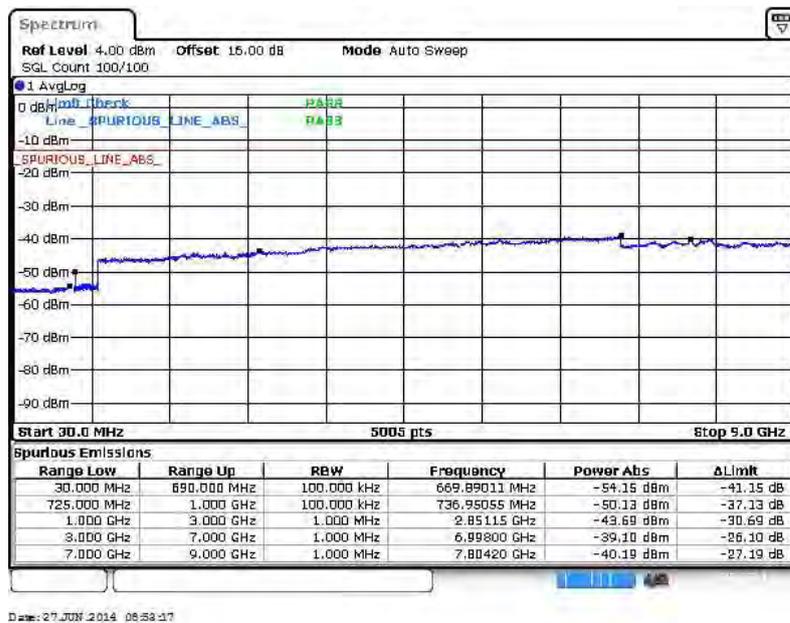


| | | | |
|--------------|-------------|-----------|------------------|
| Band : | LTE Band 12 | Channel : | CH23095 (Middle) |
| Band Width : | 10MHz | | |

QPSK (RB Size 1, RB Offset 0)



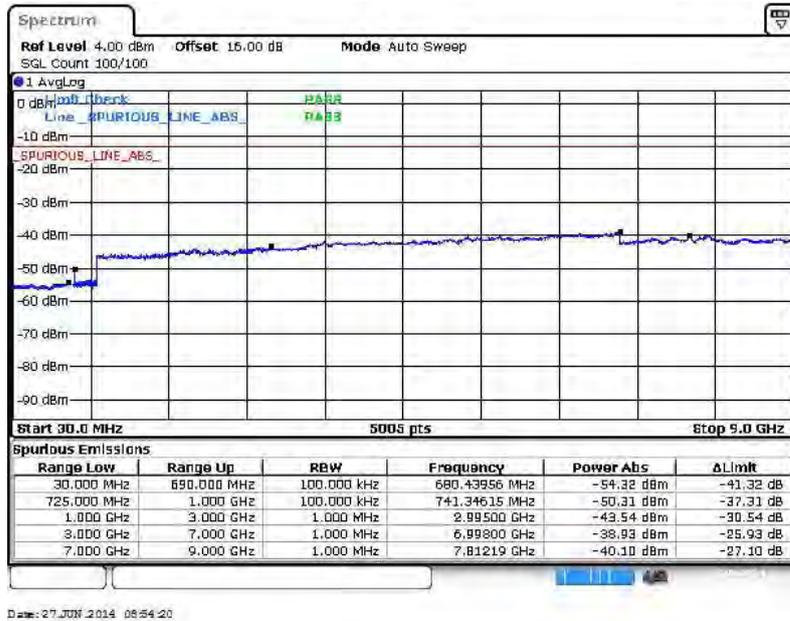
16QAM (RB Size 1, RB Offset 0)



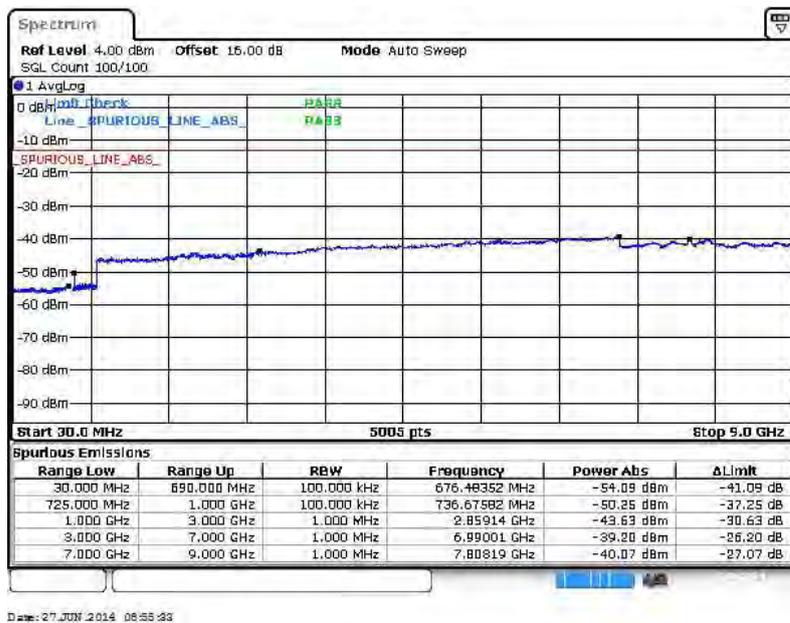


| | | | |
|--------------|-------------|-----------|----------------|
| Band : | LTE Band 12 | Channel : | CH23130 (High) |
| Band Width : | 10MHz | | |

QPSK (RB Size 1, RB Offset 0)



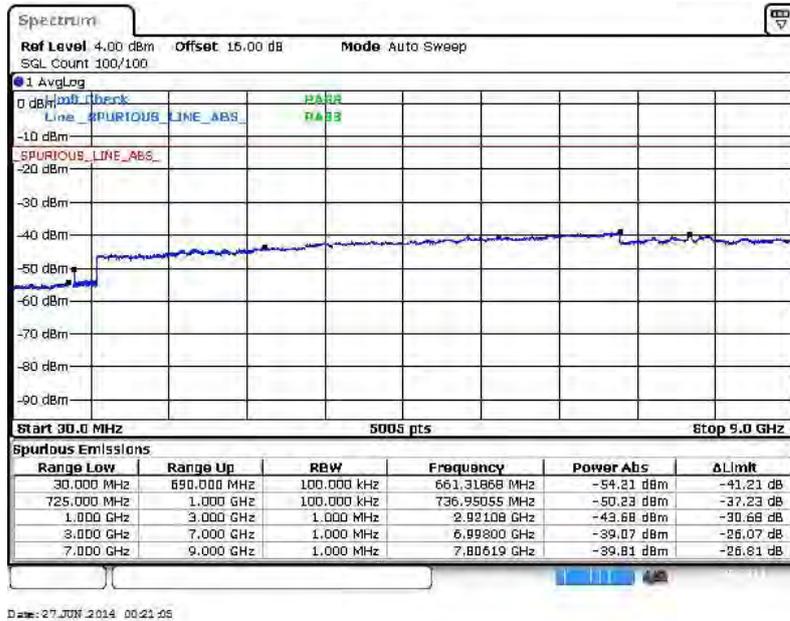
16QAM (RB Size 1, RB Offset 0)



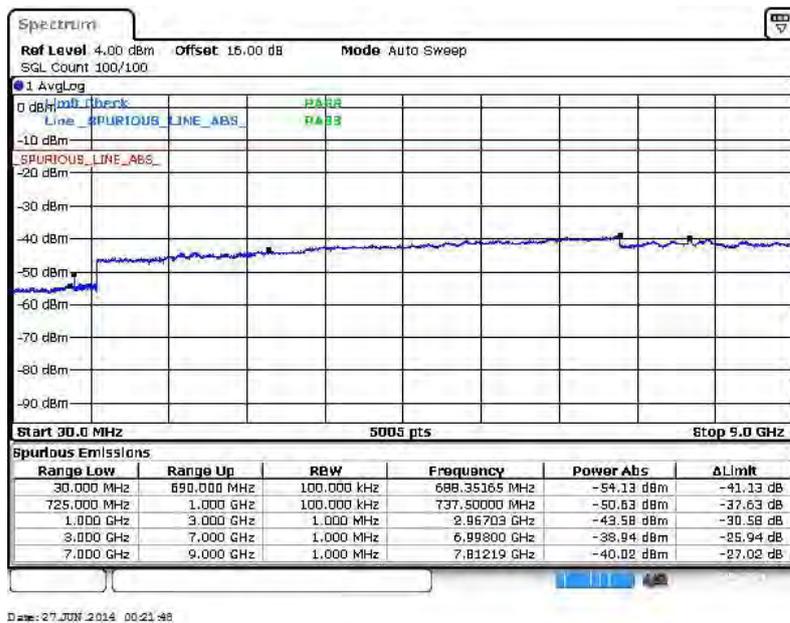


| | | | |
|--------------|-------------|-----------|---------------|
| Band : | LTE Band 17 | Channel : | CH23755 (Low) |
| Band Width : | 5MHz | | |

QPSK (RB Size 1, RB Offset 0)



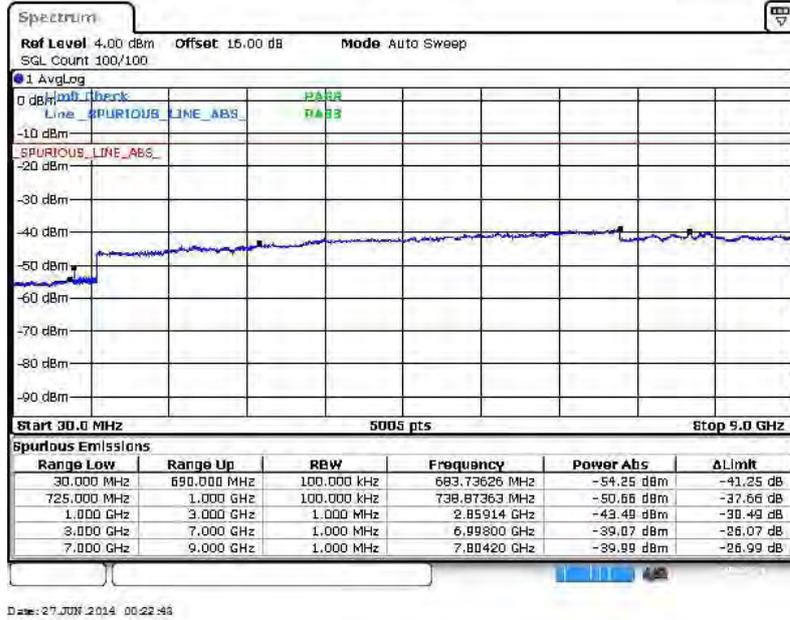
16QAM (RB Size 1, RB Offset 0)



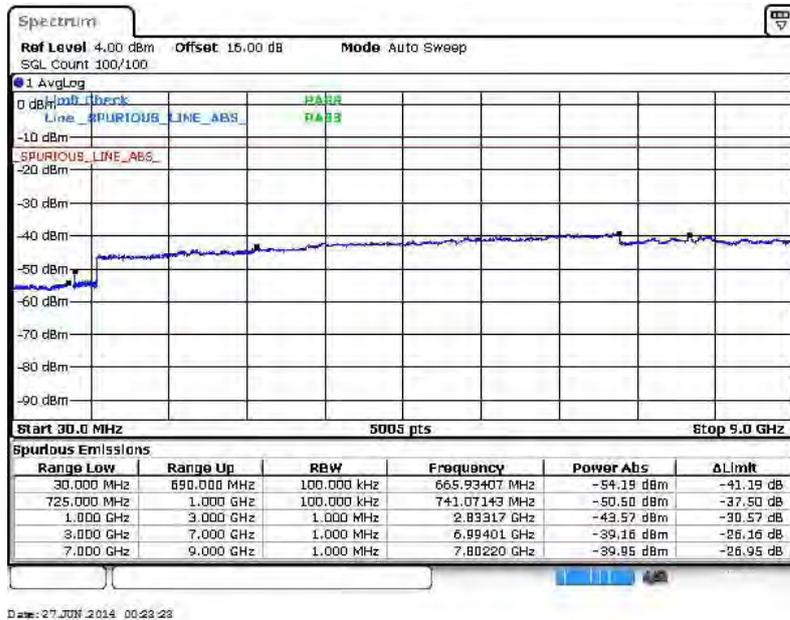


| | | | |
|--------------|-------------|-----------|------------------|
| Band : | LTE Band 17 | Channel : | CH23790 (Middle) |
| Band Width : | 5MHz | | |

QPSK (RB Size 1, RB Offset 0)



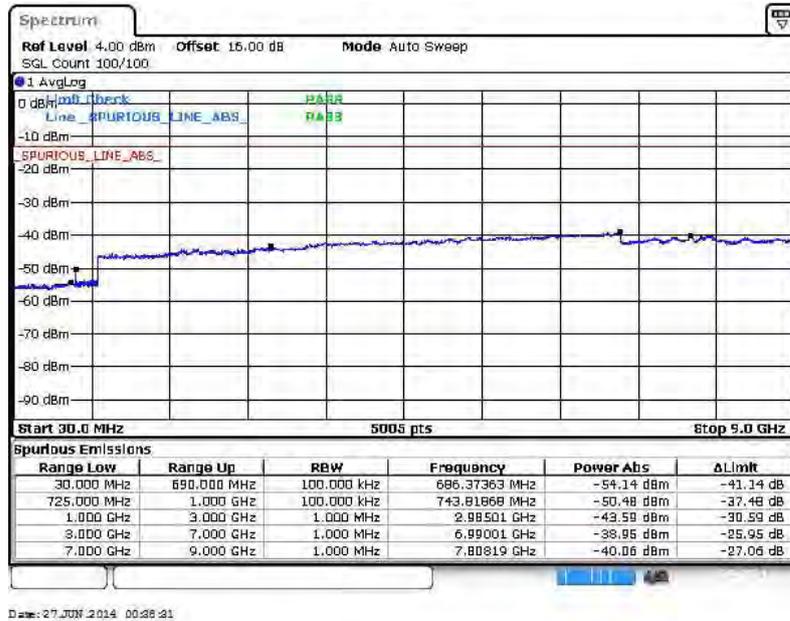
16QAM (RB Size 1, RB Offset 0)



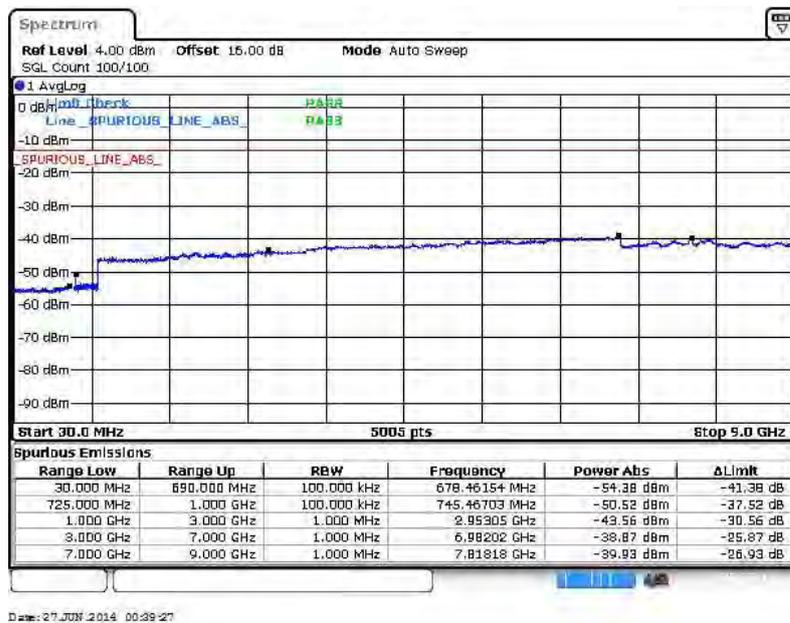


| | | | |
|--------------|-------------|-----------|----------------|
| Band : | LTE Band 17 | Channel : | CH23825 (High) |
| Band Width : | 5MHz | | |

QPSK (RB Size 1, RB Offset 0)



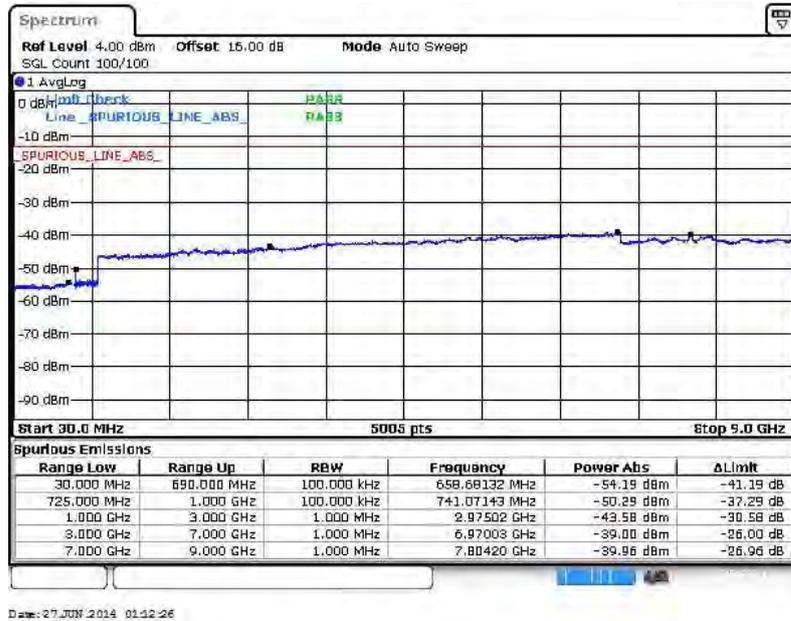
16QAM (RB Size 1, RB Offset 0)



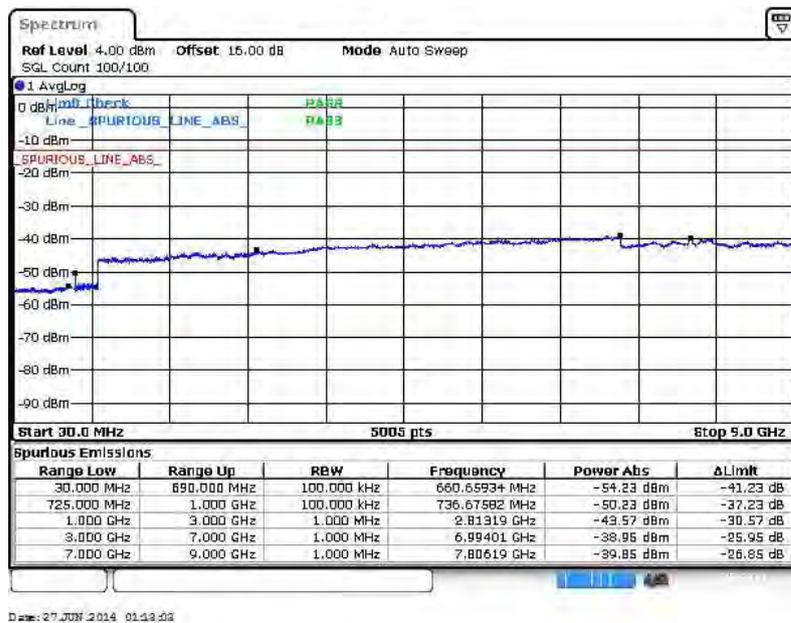


| | | | |
|--------------|-------------|-----------|---------------|
| Band : | LTE Band 17 | Channel : | CH23780 (Low) |
| Band Width : | 10MHz | | |

QPSK (RB Size 1, RB Offset 0)



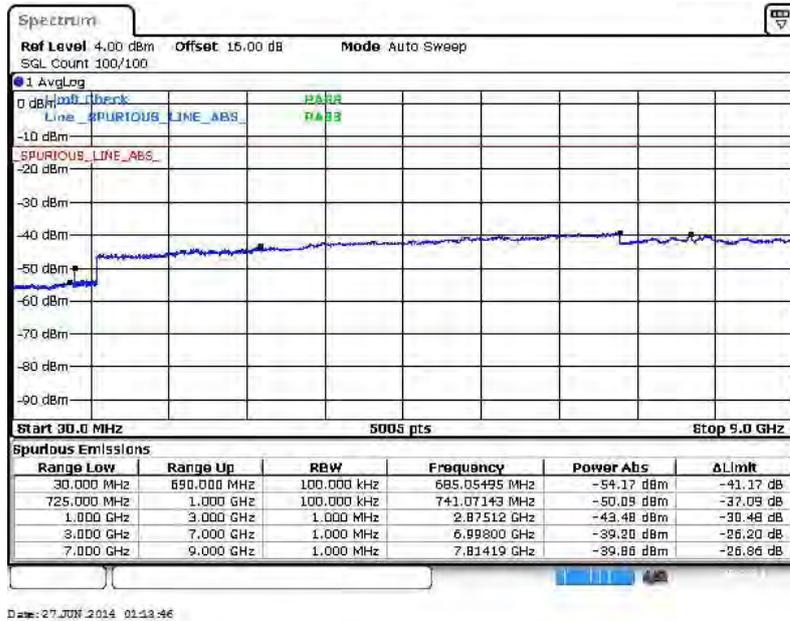
16QAM (RB Size 1, RB Offset 0)



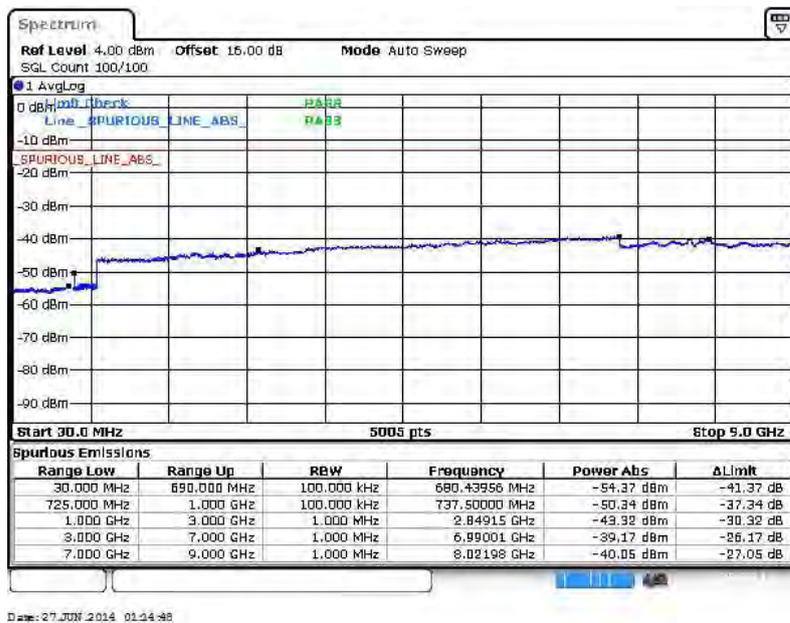


| | | | |
|---------------------|-------------|------------------|------------------|
| Band : | LTE Band 17 | Channel : | CH23790 (Middle) |
| Band Width : | 10MHz | | |

QPSK (RB Size 1, RB Offset 0)



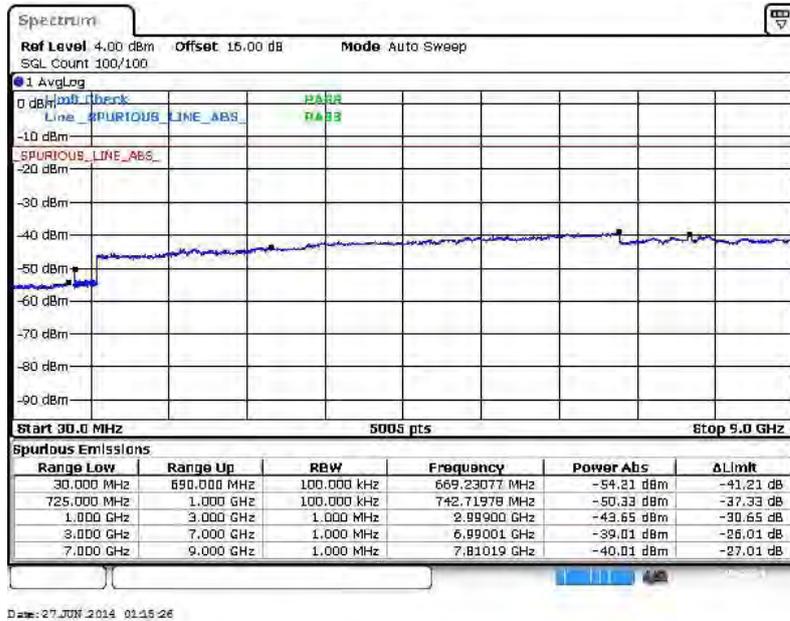
16QAM (RB Size 1, RB Offset 0)



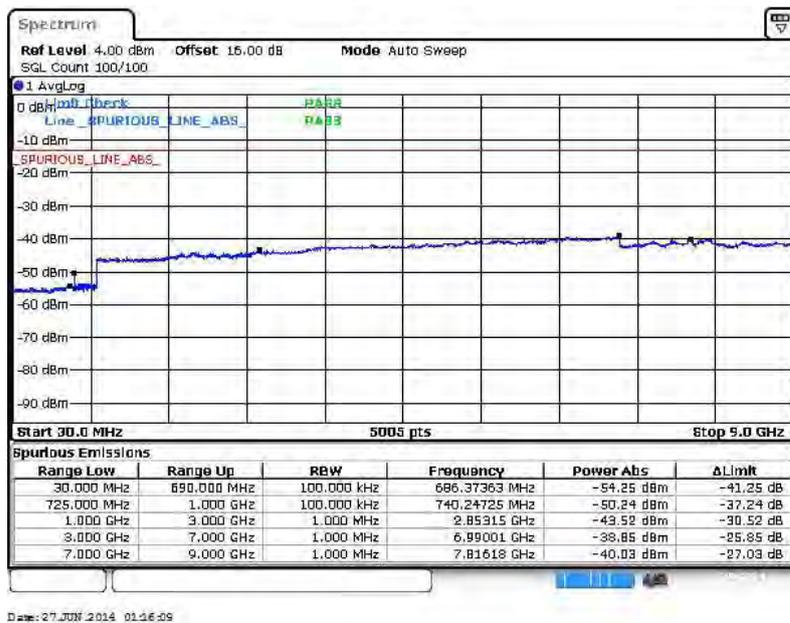


| | | | |
|--------------|-------------|-----------|----------------|
| Band : | LTE Band 17 | Channel : | CH23800 (High) |
| Band Width : | 10MHz | | |

QPSK (RB Size 1, RB Offset 0)



16QAM (RB Size 1, RB Offset 0)





3.7 Radiated Spurious Emission Measurement

3.7.1 Description of Radiated Spurious Emission

The radiated spurious emission was measured by substitution method according to ANSI / TIA / EIA-603-C-2004. The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB.

For LTE Band 12,17

For operations in the 746-758 MHz, 775-788 MHz bands, emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.7.2 Measuring Instruments

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

3.7.3 Test Procedures

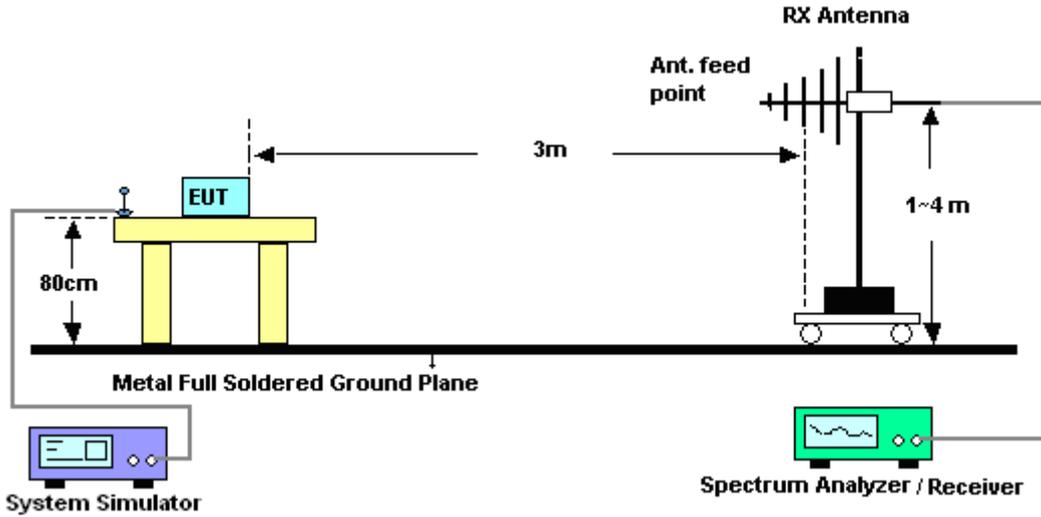
1. The EUT was placed on a rotatable wooden table with 0.8 meter above ground.
2. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
3. The table was rotated 360 degrees to determine the position of the highest spurious emission.
4. The height of the receiving antenna is varied between one meter and four meters to search the maximum spurious emission for both horizontal and vertical polarizations.
5. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking the record of maximum spurious emission.
6. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
7. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
8. Taking the record of output power at antenna port.
9. Repeat step 7 to step 8 for another polarization.
10. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.

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.

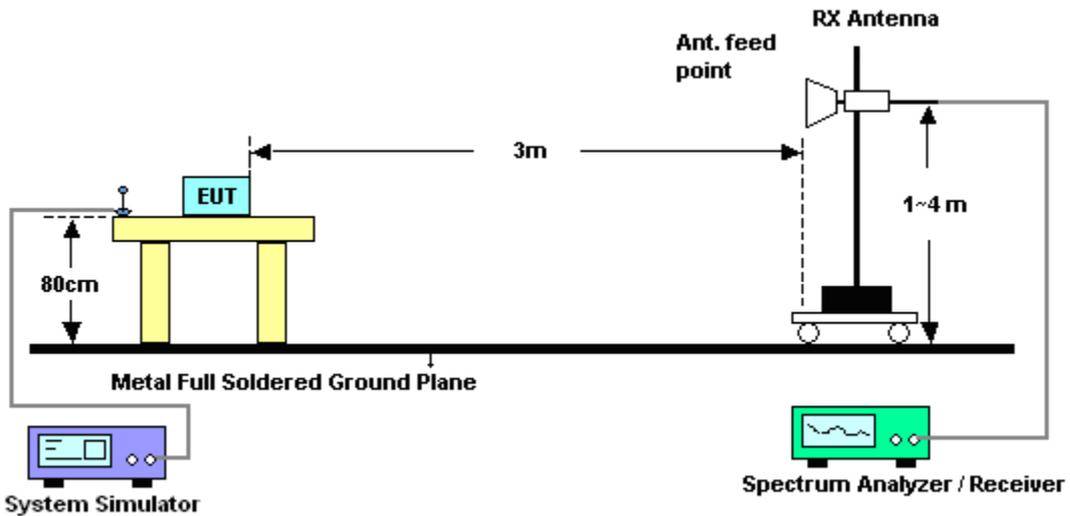
11. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
12. ERP (dBm) = EIRP - 2.15

3.7.4 Test Setup

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz





3.7.5 Test Result of Field Strength of Spurious Radiated

| Band : | LTE Band 2 | | Temperature : | 23~24°C | | | | | |
|------------------------|--|------------------|----------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 1.4MHz QPSK RB Size 1 Offset 0 | | Relative Humidity : | 43~44% | | | | | |
| Test Engineer : | Stone Gu and Star Wei | | Polarization : | Horizontal | | | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3759 | -51.38 | -13 | -38.38 | -58.24 | -57.76 | 0.78 | 7.16 | H | Pass |
| 5640 | -49.24 | -13 | -36.24 | -60.71 | -57.78 | 1.04 | 9.58 | H | Pass |
| 7518 | -43.82 | -13 | -30.82 | -58.48 | -53.93 | 1.35 | 11.46 | H | Pass |

| Band : | LTE Band 2 | | Temperature : | 23~24°C | | | | | |
|------------------------|--|------------------|----------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 1.4MHz QPSK RB Size 1 Offset 0 | | Relative Humidity : | 43~44% | | | | | |
| Test Engineer : | Stone Gu and Star Wei | | Polarization : | Vertical | | | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3759 | -52.28 | -13 | -39.28 | -60.68 | -58.66 | 0.78 | 7.16 | V | Pass |
| 5640 | -44.19 | -13 | -31.19 | -58.96 | -52.73 | 1.04 | 9.58 | V | Pass |
| 7518 | -39.43 | -13 | -26.43 | -56.66 | -49.54 | 1.35 | 11.46 | V | Pass |



| Band : | LTE Band 2 | Temperature : | 23~24°C | | | | | | |
|------------------------|--|----------------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 3MHz QPSK RB Size 1 Offset 0 | Relative Humidity : | 43~44% | | | | | | |
| Test Engineer : | Stone Gu and Star Wei | Polarization : | Horizontal | | | | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3756 | -52.74 | -13 | -39.74 | -59.25 | -59.12 | 0.78 | 7.16 | H | Pass |
| 5637 | -47.15 | -13 | -34.15 | -59.09 | -55.69 | 1.04 | 9.58 | H | Pass |
| 7515 | -51.64 | -13 | -38.64 | -63.18 | -61.75 | 1.35 | 11.46 | H | Pass |

| Band : | LTE Band 2 | Temperature : | 23~24°C | | | | | | |
|------------------------|--|----------------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 3MHz QPSK RB Size 1 Offset 0 | Relative Humidity : | 43~44% | | | | | | |
| Test Engineer : | Stone Gu and Star Wei | Polarization : | Vertical | | | | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3756 | -53.44 | -13 | -40.44 | -61.84 | -59.82 | 0.78 | 7.16 | V | Pass |
| 5637 | -49.84 | -13 | -36.84 | -62.56 | -58.38 | 1.04 | 9.58 | V | Pass |
| 7515 | -41.49 | -13 | -28.49 | -57.86 | -51.60 | 1.35 | 11.46 | V | Pass |



| Band : | LTE Band 2 | Temperature : | 23~24°C | | | | | | |
|------------------------|--|----------------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 5MHz QPSK RB Size 1 Offset 0 | Relative Humidity : | 43~44% | | | | | | |
| Test Engineer : | Stone Gu and Star Wei | Polarization : | Horizontal | | | | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3756 | -52.15 | -13 | -39.15 | -58.84 | -58.53 | 0.78 | 7.16 | H | Pass |
| 5634 | -46.81 | -13 | -33.81 | -58.93 | -55.35 | 1.04 | 9.58 | H | Pass |
| 7512 | -49.72 | -13 | -36.72 | -61.42 | -59.83 | 1.35 | 11.46 | H | Pass |

| Band : | LTE Band 2 | Temperature : | 23~24°C | | | | | | |
|------------------------|--|----------------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 5MHz QPSK RB Size 1 Offset 0 | Relative Humidity : | 43~44% | | | | | | |
| Test Engineer : | Stone Gu and Star Wei | Polarization : | Vertical | | | | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3756 | -52.44 | -13 | -39.44 | -60.84 | -58.82 | 0.78 | 7.16 | V | Pass |
| 5634 | -47.28 | -13 | -34.28 | -61.26 | -55.82 | 1.04 | 9.58 | V | Pass |
| 7512 | -46.31 | -13 | -33.31 | -60.8 | -56.42 | 1.35 | 11.46 | V | Pass |



| Band : | LTE Band 2 | | | | Temperature : | 23~24°C | | | |
|------------------------|--|------------------|-------------------------|---------------------------|----------------------------|----------------------------|-------------------------------|-----------------------|--------|
| Test Mode : | 10MHz QPSK RB Size 1 Offset 0 | | | | Relative Humidity : | 43~44% | | | |
| Test Engineer : | Stone Gu and Star Wei | | | | Polarization : | Horizontal | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3750 | -52.80 | -13 | -39.80 | -59.29 | -59.18 | 0.78 | 7.16 | H | Pass |
| 5628 | -51.41 | -13 | -38.41 | -61.42 | -59.95 | 1.04 | 9.58 | H | Pass |
| 7503 | -50.16 | -13 | -37.16 | -61.70 | -60.27 | 1.35 | 11.46 | H | Pass |

| Band : | LTE Band 2 | | | | Temperature : | 23~24°C | | | |
|------------------------|--|------------------|-------------------------|---------------------------|----------------------------|----------------------------|-------------------------------|-----------------------|--------|
| Test Mode : | 10MHz QPSK RB Size 1 Offset 0 | | | | Relative Humidity : | 43~44% | | | |
| Test Engineer : | Stone Gu and Star Wei | | | | Polarization : | Vertical | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3750 | -52.89 | -13 | -39.89 | -61.29 | -59.27 | 0.78 | 7.16 | V | Pass |
| 5628 | -50.59 | -13 | -37.59 | -63.24 | -59.13 | 1.04 | 9.58 | V | Pass |
| 7503 | -47.32 | -13 | -34.32 | -61.41 | -57.43 | 1.35 | 11.46 | V | Pass |



| Band : | LTE Band 2 | | | | Temperature : | 23~24°C | | | |
|------------------------|--|------------------|-------------------------|---------------------------|----------------------------|----------------------------|-------------------------------|-----------------------|--------|
| Test Mode : | 15MHz QPSK RB Size 1 Offset 0 | | | | Relative Humidity : | 43~44% | | | |
| Test Engineer : | Stone Gu and Star Wei | | | | Polarization : | Horizontal | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3747 | -52.87 | -13 | -39.87 | -59.34 | -59.25 | 0.78 | 7.16 | H | Pass |
| 5622 | -47.75 | -13 | -34.75 | -59.43 | -56.29 | 1.04 | 9.58 | H | Pass |
| 7494 | -52.07 | -13 | -39.07 | -63.61 | -62.18 | 1.35 | 11.46 | H | Pass |

| Band : | LTE Band 2 | | | | Temperature : | 23~24°C | | | |
|------------------------|--|------------------|-------------------------|---------------------------|----------------------------|----------------------------|-------------------------------|-----------------------|--------|
| Test Mode : | 15MHz QPSK RB Size 1 Offset 0 | | | | Relative Humidity : | 43~44% | | | |
| Test Engineer : | Stone Gu and Star Wei | | | | Polarization : | Vertical | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3747 | -52.36 | -13 | -39.36 | -60.76 | -58.74 | 0.78 | 7.16 | V | Pass |
| 5622 | -47.72 | -13 | -34.72 | -61.55 | -56.26 | 1.04 | 9.58 | V | Pass |
| 7494 | -41.50 | -13 | -28.50 | -57.87 | -51.61 | 1.35 | 11.46 | V | Pass |



| Band : | LTE Band 2 | | | | Temperature : | 23~24°C | | | |
|------------------------|--|------------------|-------------------------|---------------------------|----------------------------|----------------------------|-------------------------------|-----------------------|--------|
| Test Mode : | 20MHz QPSK RB Size 1 Offset 0 | | | | Relative Humidity : | 43~44% | | | |
| Test Engineer : | Stone Gu and Star Wei | | | | Polarization : | Horizontal | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3741 | -55.04 | -13 | -42.04 | -60.22 | -61.42 | 0.78 | 7.16 | H | Pass |
| 5616 | -47.86 | -13 | -34.86 | -59.49 | -56.40 | 1.04 | 9.58 | H | Pass |
| 7485 | -52.81 | -13 | -39.81 | -64.35 | -62.92 | 1.35 | 11.46 | H | Pass |

| Band : | LTE Band 2 | | | | Temperature : | 23~24°C | | | |
|------------------------|--|------------------|-------------------------|---------------------------|----------------------------|----------------------------|-------------------------------|-----------------------|--------|
| Test Mode : | 20MHz QPSK RB Size 1 Offset 0 | | | | Relative Humidity : | 43~44% | | | |
| Test Engineer : | Stone Gu and Star Wei | | | | Polarization : | Vertical | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3741 | -52.68 | -13 | -39.68 | -61.08 | -59.06 | 0.78 | 7.16 | V | Pass |
| 5616 | -47.65 | -13 | -34.65 | -61.5 | -56.19 | 1.04 | 9.58 | V | Pass |
| 7485 | -47.67 | -13 | -34.67 | -61.76 | -57.78 | 1.35 | 11.46 | V | Pass |



| Band : | LTE Band 4 | | Temperature : | 23~24°C | | | | | |
|------------------------|--|------------------|----------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 1.4MHz QPSK RB Size 1 Offset 0 | | Relative Humidity : | 43~44% | | | | | |
| Test Engineer : | Stone Gu and Star Wei | | Polarization : | Horizontal | | | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3462 | -58.93 | -13 | -45.93 | -61.16 | -64.33 | 2.20 | 7.60 | H | Pass |
| 5196 | -49.72 | -13 | -36.72 | -62.17 | -56.50 | 3.12 | 9.90 | H | Pass |
| 6927 | -57.83 | -13 | -44.83 | -66.12 | -65.72 | 2.98 | 10.87 | H | Pass |

| Band : | LTE Band 4 | | Temperature : | 23~24°C | | | | | |
|------------------------|--|------------------|----------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 1.4MHz QPSK RB Size 1 Offset 0 | | Relative Humidity : | 43~44% | | | | | |
| Test Engineer : | Stone Gu and Star Wei | | Polarization : | Vertical | | | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3462 | -56.56 | -13 | -43.56 | -59.57 | -61.96 | 2.20 | 7.6 | V | Pass |
| 5196 | -48.92 | -13 | -35.92 | -60.36 | -55.70 | 3.12 | 9.9 | V | Pass |
| 6927 | -54.79 | -13 | -41.79 | -65.31 | -62.68 | 2.98 | 10.87 | V | Pass |



| Band : | LTE Band 4 | | | | | | Temperature : | 23~24°C | | |
|------------------------|--|------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|--|
| Test Mode : | 3MHz QPSK RB Size 1 Offset 0 | | | | | | Relative Humidity : | 43~44% | | |
| Test Engineer : | Stone Gu and Star Wei | | | | | | Polarization : | Horizontal | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result | |
| 3462 | -51.36 | -13 | -38.36 | -59.01 | -56.76 | 2.20 | 7.60 | H | Pass | |
| 5193 | -39.11 | -13 | -26.11 | -54.98 | -45.89 | 3.12 | 9.90 | H | Pass | |
| 6924 | -57.22 | -13 | -44.22 | -65.51 | -65.11 | 2.98 | 10.87 | H | Pass | |

| Band : | LTE Band 4 | | | | | | Temperature : | 23~24°C | | |
|------------------------|--|------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|--|
| Test Mode : | 3MHz QPSK RB Size 1 Offset 0 | | | | | | Relative Humidity : | 43~44% | | |
| Test Engineer : | Stone Gu and Star Wei | | | | | | Polarization : | Vertical | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result | |
| 3462 | -54.97 | -13 | -41.97 | -58.61 | -60.37 | 2.20 | 7.6 | V | Pass | |
| 5196 | -49.21 | -13 | -36.21 | -60.46 | -55.99 | 3.12 | 9.9 | V | Pass | |
| 6924 | -55.51 | -13 | -42.51 | -66.03 | -63.40 | 2.98 | 10.87 | V | Pass | |



| Band : | LTE Band 4 | | | | | | Temperature : | 23~24°C | |
|------------------------|--|------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 5MHz QPSK RB Size 1 Offset 0 | | | | | | Relative Humidity : | 43~44% | |
| Test Engineer : | Stone Gu and Star Wei | | | | | | Polarization : | Horizontal | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3459 | -51.25 | -13 | -38.25 | -58.85 | -56.65 | 2.20 | 7.60 | H | Pass |
| 5190 | -40.21 | -13 | -27.21 | -55.95 | -46.99 | 3.12 | 9.90 | H | Pass |
| 6921 | -58.87 | -13 | -45.87 | -67.16 | -66.76 | 2.98 | 10.87 | H | Pass |

| Band : | LTE Band 4 | | | | | | Temperature : | 23~24°C | |
|------------------------|--|------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 5MHz QPSK RB Size 1 Offset 0 | | | | | | Relative Humidity : | 43~44% | |
| Test Engineer : | Stone Gu and Star Wei | | | | | | Polarization : | Vertical | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3459 | -55.71 | -13 | -42.71 | -59.04 | -61.11 | 2.20 | 7.6 | V | Pass |
| 5193 | -48.94 | -13 | -35.94 | -60.38 | -55.72 | 3.12 | 9.9 | V | Pass |
| 6921 | -54.03 | -13 | -41.03 | -64.55 | -61.92 | 2.98 | 10.87 | V | Pass |



| Band : | LTE Band 4 | | | | | | Temperature : | 23~24°C | |
|------------------------|--|------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 10MHz QPSK RB Size 1 Offset 0 | | | | | | Relative Humidity : | 43~44% | |
| Test Engineer : | Stone Gu and Star Wei | | | | | | Polarization : | Horizontal | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3456 | -53.55 | -13 | -40.55 | -57.91 | -58.95 | 2.20 | 7.60 | H | Pass |
| 5184 | -40.60 | -13 | -27.60 | -56.32 | -47.38 | 3.12 | 9.90 | H | Pass |
| 6912 | -57.47 | -13 | -44.47 | -65.76 | -65.36 | 2.98 | 10.87 | H | Pass |

| Band : | LTE Band 4 | | | | | | Temperature : | 23~24°C | |
|------------------------|--|------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 10MHz QPSK RB Size 1 Offset 0 | | | | | | Relative Humidity : | 43~44% | |
| Test Engineer : | Stone Gu and Star Wei | | | | | | Polarization : | Vertical | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 3456 | -54.76 | -13 | -41.76 | -58.54 | -60.16 | 2.20 | 7.6 | V | Pass |
| 5187 | -51.44 | -13 | -38.44 | -61.37 | -58.22 | 3.12 | 9.9 | V | Pass |
| 6912 | -52.85 | -13 | -39.85 | -63.37 | -60.74 | 2.98 | 10.87 | V | Pass |



| Band : | LTE Band 4 | | | | | | Temperature : | 23~24°C | | |
|------------------------|--|------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|--|
| Test Mode : | 15MHz QPSK RB Size 1 Offset 0 | | | | | | Relative Humidity : | 43~44% | | |
| Test Engineer : | Stone Gu and Star Wei | | | | | | Polarization : | Horizontal | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result | |
| 3450 | -53.89 | -13 | -40.89 | -58.23 | -59.29 | 2.20 | 7.60 | H | Pass | |
| 5178 | -44.13 | -13 | -31.13 | -58.96 | -50.91 | 3.12 | 9.90 | H | Pass | |
| 6900 | -57.87 | -13 | -44.87 | -66.16 | -65.76 | 2.98 | 10.87 | H | Pass | |

| Band : | LTE Band 4 | | | | | | Temperature : | 23~24°C | | |
|------------------------|--|------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|--|
| Test Mode : | 15MHz QPSK RB Size 1 Offset 0 | | | | | | Relative Humidity : | 43~44% | | |
| Test Engineer : | Stone Gu and Star Wei | | | | | | Polarization : | Vertical | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result | |
| 3450 | -56.84 | -13 | -43.84 | -59.75 | -62.24 | 2.20 | 7.6 | V | Pass | |
| 5178 | -51.20 | -13 | -38.20 | -61.27 | -57.98 | 3.12 | 9.9 | V | Pass | |
| 6903 | -53.04 | -13 | -40.04 | -63.56 | -60.93 | 2.98 | 10.87 | V | Pass | |



| Band : | LTE Band 4 | | | | | | Temperature : | 23~24°C | | |
|------------------------|--|------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|--|
| Test Mode : | 20MHz QPSK RB Size 1 Offset 0 | | | | | | Relative Humidity : | 43~44% | | |
| Test Engineer : | Stone Gu and Star Wei | | | | | | Polarization : | Horizontal | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result | |
| 3447 | -51.53 | -13 | -38.53 | -56.70 | -56.93 | 2.20 | 7.60 | H | Pass | |
| 5172 | -41.53 | -13 | -28.53 | -57.02 | -48.31 | 3.12 | 9.90 | H | Pass | |
| 6891 | -59.13 | -13 | -46.13 | -67.42 | -67.02 | 2.98 | 10.87 | H | Pass | |

| Band : | LTE Band 4 | | | | | | Temperature : | 23~24°C | | |
|------------------------|--|------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|--|
| Test Mode : | 20MHz QPSK RB Size 1 Offset 0 | | | | | | Relative Humidity : | 43~44% | | |
| Test Engineer : | Stone Gu and Star Wei | | | | | | Polarization : | Vertical | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | | |
| Frequency (MHz) | EIRP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result | |
| 3447 | -54.94 | -13 | -41.94 | -58.6 | -60.34 | 2.20 | 7.6 | V | Pass | |
| 5172 | -48.34 | -13 | -35.34 | -59.9 | -55.12 | 3.12 | 9.9 | V | Pass | |
| 6894 | -53.11 | -13 | -40.11 | -63.63 | -61.00 | 2.98 | 10.87 | V | Pass | |



| Band : | LTE Band 12 | Temperature : | 23~24°C | | | | | | |
|------------------------|--|----------------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 1.4MHz QPSK RB Size 1 Offset 0 | Relative Humidity : | 43~44% | | | | | | |
| Test Engineer : | Stone Gu and Star Wei | Polarization : | Horizontal | | | | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 1414 | -72.85 | -13 | -59.85 | -63.97 | -73.50 | 0.57 | 3.37 | H | Pass |
| 2122 | -65.88 | -13 | -52.88 | -64.55 | -68.11 | 0.78 | 5.16 | H | Pass |
| 2828 | -67.40 | -13 | -54.40 | -67.03 | -71.04 | 0.87 | 6.66 | H | Pass |

| Band : | LTE Band 12 | Temperature : | 23~24°C | | | | | | |
|------------------------|--|----------------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 1.4MHz QPSK RB Size 1 Offset 0 | Relative Humidity : | 43~44% | | | | | | |
| Test Engineer : | Stone Gu and Star Wei | Polarization : | Vertical | | | | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 1414 | -68.98 | -13 | -55.98 | -65.18 | -69.63 | 0.57 | 3.37 | V | Pass |
| 2120 | -64.35 | -13 | -51.35 | -66.78 | -66.58 | 0.78 | 5.16 | V | Pass |
| 2827 | -66.30 | -13 | -53.30 | -67.36 | -69.94 | 0.87 | 6.66 | V | Pass |



| Band : | LTE Band 12 | | | | Temperature : | 23~24°C | | | |
|------------------------|--|------------------|-------------------------|---------------------------|----------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 3MHz QPSK RB Size 1 Offset 0 | | | | Relative Humidity : | 43~44% | | | |
| Test Engineer : | Stone Gu and Star Wei | | | | Polarization : | Horizontal | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 1412 | -73.70 | -13 | -60.70 | -64.82 | -74.35 | 0.57 | 3.37 | H | Pass |
| 2120 | -64.46 | -13 | -51.46 | -63.13 | -66.69 | 0.78 | 5.16 | H | Pass |
| 2824 | -65.98 | -13 | -52.98 | -65.61 | -69.62 | 0.87 | 6.66 | H | Pass |

| Band : | LTE Band 12 | | | | Temperature : | 23~24°C | | | |
|------------------------|--|------------------|-------------------------|---------------------------|----------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 3MHz QPSK RB Size 1 Offset 0 | | | | Relative Humidity : | 43~44% | | | |
| Test Engineer : | Stone Gu and Star Wei | | | | Polarization : | Vertical | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 1412 | -68.54 | -13 | -55.54 | -64.74 | -69.19 | 0.57 | 3.37 | V | Pass |
| 2118 | -64.72 | -13 | -51.72 | -67.15 | -66.95 | 0.78 | 5.16 | V | Pass |
| 2824 | -65.71 | -13 | -52.71 | -66.77 | -69.35 | 0.87 | 6.66 | V | Pass |



| Band : | LTE Band 12 | | | | Temperature : | 23~24°C | | | |
|------------------------|--|------------------|-------------------------|---------------------------|----------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 5MHz QPSK RB Size 1 Offset 0 | | | | Relative Humidity : | 43~44% | | | |
| Test Engineer : | Stone Gu and Star Wei | | | | Polarization : | Horizontal | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 1410 | -74.77 | -13 | -61.77 | -65.89 | -75.42 | 0.57 | 3.37 | H | Pass |
| 2115 | -66.85 | -13 | -53.85 | -65.52 | -69.08 | 0.78 | 5.16 | H | Pass |
| 2820 | -67.32 | -13 | -54.32 | -66.95 | -70.96 | 0.87 | 6.66 | H | Pass |

| Band : | LTE Band 12 | | | | Temperature : | 23~24°C | | | |
|------------------------|--|------------------|-------------------------|---------------------------|----------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 5MHz QPSK RB Size 1 Offset 0 | | | | Relative Humidity : | 43~44% | | | |
| Test Engineer : | Stone Gu and Star Wei | | | | Polarization : | Vertical | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 1410 | -69.78 | -13 | -56.78 | -65.98 | -70.43 | 0.57 | 3.37 | V | Pass |
| 2115 | -64.89 | -13 | -51.89 | -67.32 | -67.12 | 0.78 | 5.16 | V | Pass |
| 2820 | -66.43 | -13 | -53.43 | -67.49 | -70.07 | 0.87 | 6.66 | V | Pass |



| Band : | LTE Band 12 | Temperature : | 23~24°C | | | | | | |
|------------------------|--|----------------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 10MHz QPSK RB Size 1 Offset 0 | Relative Humidity : | 43~44% | | | | | | |
| Test Engineer : | Stone Gu and Star Wei | Polarization : | Horizontal | | | | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 1404 | -75.55 | -13 | -62.55 | -66.67 | -76.20 | 0.57 | 3.37 | H | Pass |
| 2110 | -63.83 | -13 | -50.83 | -62.50 | -66.06 | 0.78 | 5.16 | H | Pass |
| 2810 | -66.90 | -13 | -53.90 | -66.53 | -70.54 | 0.87 | 6.66 | H | Pass |

| Band : | LTE Band 12 | Temperature : | 23~24°C | | | | | | |
|------------------------|--|----------------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 10MHz QPSK RB Size 1 Offset 0 | Relative Humidity : | 43~44% | | | | | | |
| Test Engineer : | Stone Gu and Star Wei | Polarization : | Vertical | | | | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 1404 | -71.10 | -13 | -58.10 | -67.30 | -71.75 | 0.57 | 3.37 | V | Pass |
| 2108 | -64.84 | -13 | -51.84 | -67.27 | -67.07 | 0.78 | 5.16 | V | Pass |
| 2810 | -65.44 | -13 | -52.44 | -66.50 | -69.08 | 0.87 | 6.66 | V | Pass |



| Band : | LTE Band 17 | Temperature : | 23~24°C | | | | | | |
|------------------------|--|----------------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 5MHz QPSK RB Size 1 Offset 0 | Relative Humidity : | 43~44% | | | | | | |
| Test Engineer : | Stone Gu and Star Wei | Polarization : | Horizontal | | | | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 1416 | -73.78 | -13 | -60.78 | -64.90 | -74.43 | 0.57 | 3.37 | H | Pass |
| 2123 | -66.87 | -13 | -53.87 | -65.54 | -69.10 | 0.78 | 5.16 | H | Pass |
| 2830 | -67.47 | -13 | -54.47 | -67.10 | -71.11 | 0.87 | 6.66 | H | Pass |

| Band : | LTE Band 17 | Temperature : | 23~24°C | | | | | | |
|------------------------|--|----------------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 5MHz QPSK RB Size 1 Offset 0 | Relative Humidity : | 43~44% | | | | | | |
| Test Engineer : | Stone Gu and Star Wei | Polarization : | Vertical | | | | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 1416 | -68.96 | -13 | -55.96 | -65.16 | -69.61 | 0.57 | 3.37 | V | Pass |
| 2123 | -63.82 | -13 | -50.82 | -66.25 | -66.05 | 0.78 | 5.16 | V | Pass |
| 2830 | -65.71 | -13 | -52.71 | -66.77 | -69.35 | 0.87 | 6.66 | V | Pass |



| Band : | LTE Band 17 | Temperature : | 23~24°C | | | | | | |
|------------------------|--|----------------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 10MHz QPSK RB Size 1 Offset 0 | Relative Humidity : | 43~44% | | | | | | |
| Test Engineer : | Stone Gu and Star Wei | Polarization : | Horizontal | | | | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 1410 | -73.61 | -13 | -60.61 | -64.73 | -74.26 | 0.57 | 3.37 | H | Pass |
| 2115 | -67.68 | -13 | -54.68 | -66.35 | -69.91 | 0.78 | 5.16 | H | Pass |
| 2820 | -68.01 | -13 | -55.01 | -67.64 | -71.65 | 0.87 | 6.66 | H | Pass |

| Band : | LTE Band 17 | Temperature : | 23~24°C | | | | | | |
|------------------------|--|----------------------------|-------------------------|---------------------------|--------------------------|----------------------------|-------------------------------|-------------------------|--------|
| Test Mode : | 10MHz QPSK RB Size 1 Offset 0 | Relative Humidity : | 43~44% | | | | | | |
| Test Engineer : | Stone Gu and Star Wei | Polarization : | Vertical | | | | | | |
| Remark : | Spurious emissions within 30-10th harmonic were found more than 20dB below limit line. | | | | | | | | |
| Frequency (MHz) | ERP (dBm) | Limit (dBm) | Over Limit (dB) | SPA Reading (dBm) | S.G. Power (dBm) | TX Cable loss (dB) | TX Antenna Gain (dBi) | Polarization (H/V) | Result |
| 1410 | -69.20 | -13 | -56.20 | -65.40 | -69.85 | 0.57 | 3.37 | V | Pass |
| 2115 | -63.57 | -13 | -50.57 | -66.00 | -65.80 | 0.78 | 5.16 | V | Pass |
| 2820 | -66.29 | -13 | -53.29 | -67.35 | -69.93 | 0.87 | 6.66 | V | Pass |



3.8 Frequency Stability Measurement

3.8.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.

3.8.2 Measuring Instruments

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

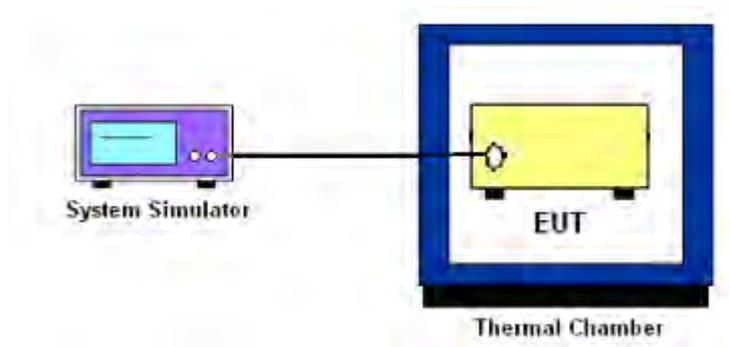
3.8.3 Test Procedures for Temperature Variation

1. The EUT was set up in the thermal chamber and connected with the system simulator.
2. With power OFF, the temperature was decreased to -30°C and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
3. With power OFF, the temperature was raised in 10°C step up to 50°C . The EUT was stabilized at each step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.8.4 Test Procedures for Voltage Variation

1. The EUT was placed in a temperature chamber at $25\pm 5^{\circ}\text{C}$ and connected with the system simulator.
2. The power supply voltage to the EUT was varied from 85% to 115% of the nominal value measured at the input to the EUT.
3. The variation in frequency was measured for the worst case.

3.8.5 Test Setup





3.8.6 Test Result of Temperature Variation (FCC)

| Band : | LTE Band 2 (QPSK) | Limit (ppm) : | 2.5 |
|------------------|-------------------|----------------------|--------|
| Temperature (°C) | BW 10MHz | | Result |
| | Deviation (ppm) | | |
| 50 | +0.0047 | | PASS |
| 40 | +0.0085 | | |
| 30 | +0.0016 | | |
| 20(Ref.) | +0.0030 | | |
| 10 | +0.0048 | | |
| 0 | +0.0043 | | |
| -10 | +0.0019 | | |
| -20 | +0.0023 | | |
| -30 | +0.0040 | | |

| Band : | LTE Band 4 (QPSK) | Limit (ppm) : | 2.5 |
|------------------|-------------------|----------------------|--------|
| Temperature (°C) | BW 10MHz | | Result |
| | Deviation (ppm) | | |
| 50 | +0.0072 | | PASS |
| 40 | +0.0039 | | |
| 30 | +0.0055 | | |
| 20(Ref.) | +0.0036 | | |
| 10 | +0.0046 | | |
| 0 | +0.0041 | | |
| -10 | +0.0019 | | |
| -20 | +0.0012 | | |
| -30 | +0.0059 | | |



| Band : | LTE Band 12 (QPSK) | Limit (ppm) : | 2.5 |
|------------------|--------------------|---------------|--------|
| Temperature (°C) | BW 10MHz | | Result |
| | Deviation (ppm) | | |
| 50 | +0.0226 | | PASS |
| 40 | +0.0184 | | |
| 30 | +0.0122 | | |
| 20(Ref.) | +0.0130 | | |
| 10 | +0.0062 | | |
| 0 | +0.0073 | | |
| -10 | +0.0092 | | |
| -20 | +0.0099 | | |
| -30 | +0.0139 | | |

| Band : | LTE Band 17 (QPSK) | Limit (ppm) : | 2.5 |
|------------------|--------------------|---------------|--------|
| Temperature (°C) | BW 10MHz | | Result |
| | Deviation (ppm) | | |
| 50 | +0.0093 | | PASS |
| 40 | +0.0051 | | |
| 30 | +0.0138 | | |
| 20(Ref.) | +0.0106 | | |
| 10 | +0.0046 | | |
| 0 | +0.0176 | | |
| -10 | +0.0035 | | |
| -20 | +0.0068 | | |
| -30 | +0.0135 | | |



3.8.7 Test Result of Voltage Variation (FCC)

| Band | Bandwidth | Voltage (Volt) | Deviation (ppm) | Limit (ppm) | Result |
|-------------|-----------|----------------|-----------------|-------------|--------|
| LTE Band 2 | 10M | 4.2 | +0.0020 | 2.5 | PASS |
| | | Normal | +0.0060 | | |
| | | 3.4 | +0.0056 | | |
| LTE Band 4 | 10M | 4.2 | +0.0052 | 2.5 | PASS |
| | | Normal | +0.0043 | | |
| | | 3.4 | +0.0040 | | |
| LTE Band 12 | 10M | 4.2 | +0.0158 | 2.5 | PASS |
| | | Normal | +0.0076 | | |
| | | 3.4 | +0.0042 | | |
| LTE Band 17 | 10M | 4.2 | +0.0100 | 2.5 | PASS |
| | | Normal | +0.0144 | | |
| | | 3.4 | +0.0039 | | |

Remark:

1. Normal Voltage = 3.7V.
2. The manufacturer declared that the EUT could work properly between voltage 3.4V ~ 4.2V.



4 List of Measuring Equipment

| Instrument | Manufacturer | Model No. | Serial No. | Characteristics | Calibration Date | Test Date | Due Date | Remark |
|------------------------------|--------------|-----------|----------------|---------------------------|------------------|---------------------------------|---------------|-----------------------|
| Spectrum Analyzer | R&S | FSV30 | 101338 | 9kHz~30GHz | May 04, 2014 | Jun. 19, 2014~ Jul. 02, 2014 | May 03, 2015 | Conducted (TH01-KS) |
| Thermal Chamber | Ten Billion | TTC-B3S | TBN-960502 | -40~+150°C | Dec. 10, 2013 | Jun. 19, 2014~ Jul. 02, 2014 | Dec. 09, 2014 | Conducted (TH01-KS) |
| EMI Test Receiver | R&S | ESCI | 100534 | 9kHz~3GHz | Nov. 05, 2013 | Jul. 10, 2014 | Nov. 04, 2014 | Radiation (03CH01-KS) |
| Spectrum Analyzer | R&S | FSP30 | 101399 | 9kHz~30GHz | May 04, 2014 | Jul. 10, 2014 | May 03, 2015 | Radiation (03CH01-KS) |
| Bilog Antenna | SCHAFFNER | CBL6112D | 23182 | 25MHz~2GHz | Jan. 08, 2014 | Jul. 10, 2014 | Jan. 07, 2015 | Radiation (03CH01-KS) |
| Double Ridge Horn Antenna | ETS-Lindgren | 3117 | 75959 | 1GHz~18GHz | Jan. 08, 2014 | Jul. 10, 2014 | Jan. 07, 2015 | Radiation (03CH01-KS) |
| Active Horn Antenna | com-power | AHA-118 | 701030 | 1GHz~18GHz | Nov. 18, 2013 | Jul. 10, 2014 | Nov. 17, 2014 | Radiation (03CH01-KS) |
| SHF-EHF Horn | Schwarzbeck | BBHA 9170 | BBHA17024 9 | 15GHz~40GHz | Mar. 10, 2014 | Jul. 10, 2014 | Mar. 09, 2015 | Radiation (03CH01-KS) |
| Amplifier | com-power | PA-103A | 161073 | 1MHz~1GHz | May 04, 2014 | Jul. 10, 2014 | May 03, 2015 | Radiation (03CH01-KS) |
| Amplifier | Agilent | 8449B | 3008A02371 | 1GHz~26.5GHz | Dec. 10, 2013 | Jul. 10, 2014 | Dec. 09, 2014 | Radiation (03CH01-KS) |
| AC Power Source | Chroma | 61601 | F104090004 | N/A | NCR | Jul. 10, 2014 | NCR | Radiation (03CH01-KS) |
| Turn Table | MF | MF7802 | N/A | 0~360 degree | NCR | Jul. 10, 2014 | NCR | Radiation (03CH01-KS) |
| Antenna Mast | MF | MF7802 | N/A | 1 m~4 m | NCR | Jul. 10, 2014 | NCR | Radiation (03CH01-KS) |
| Spectrum Analyzer | R&S | FSP 7 | 100819 | 9kHz~7GHz | May 04, 2014 | Jul. 22, 2014 | May 03, 2015 | ERP/EIRP (OTA01-KS) |
| Switch Control Manframe | Agilent | 3499A | MY4200545 2 | N/A | N/A | Jul. 22, 2014 | N/A | ERP/EIRP (OTA01-KS) |
| Dual 1-to-6(4) MW MUX | Agilent | N2276A | MY4200084 1 | N/A | N/A | Jul. 22, 2014 | N/A | ERP/EIRP (OTA01-KS) |
| Microwave Switch | Agilent | 44476A | MY4200257 3 | N/A | N/A | Jul. 22, 2014 | N/A | ERP/EIRP (OTA01-KS) |
| Microwave Switch | Agilent | 44476A | MY4200258 6 | N/A | N/A | Jul. 22, 2014 | N/A | ERP/EIRP (OTA01-KS) |
| Diagonal Dual Polarized Horn | ETS-Lindgren | 3164-04 | 00066993 | 700MHz~6GHz | N/A | Jul. 22, 2014 | N/A | ERP/EIRP (OTA01-KS) |
| Multi-Devices Controller | ETS-Lindgren | 2090-OPT1 | 00066604 | N/A | N/A | Jul. 22, 2014 | N/A | ERP/EIRP (OTA01-KS) |
| Conical Log Spiral (Small) | ETS-Lindgren | 3102 | 00066951 | 1~10GHz | N/A | Jul. 22, 2014 | N/A | ERP/EIRP (OTA01-KS) |
| Turn Table | ETS-Lindgren | 2088 | N/A | Resolution : 0.1degree | N/A | Jul. 22, 2014 | N/A | ERP/EIRP (OTA01-KS) |
| Limiting Amplifier | ETS-lindgren | 109643 | 920326 | 10MHz~2.5GHz | N/A | Jul. 22, 2014 | N/A | ERP/EIRP (OTA01-KS) |



| | | | | | | | | |
|-----------------------|--------------|---------|------|-----|-----|---------------|-----|------------------------|
| EMQuest | ETS-Lindgren | EMQ-100 | 1125 | N/A | N/A | Jul. 22, 2014 | N/A | ERP/EIRP (OTA01-KS) |
| Medium Duty Holder | ETS-Lindgren | 2015 | N/A | N/A | N/A | Jul. 22, 2014 | N/A | ERP/EIRP (OTA01-KS) |



5 Uncertainty of Evaluation

Uncertainty of Radiated Emission Measurement (30 MHz ~ 1000 MHz)

| | |
|---|-----|
| Measuring Uncertainty for a Level of Confidence of 95% ($U = 2Uc(y)$) | 2.5 |
|---|-----|