

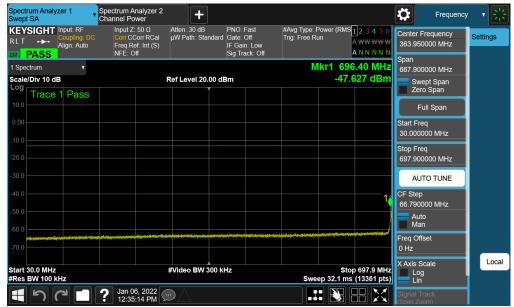


Plot 7-42. Conducted Spurious Plot (LTE Band 71 - 20MHz QPSK - 1 RB - High Channel)

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LTE Band 12



Plot 7-43. Conducted Spurious Plot (LTE Band 12 - 10MHz QPSK - 1 RB - Low Channel)



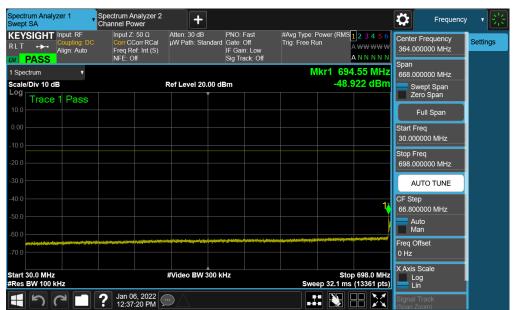
Plot 7-44. Conducted Spurious Plot (LTE Band 12 - 10MHz QPSK - 1 RB - Low Channel)

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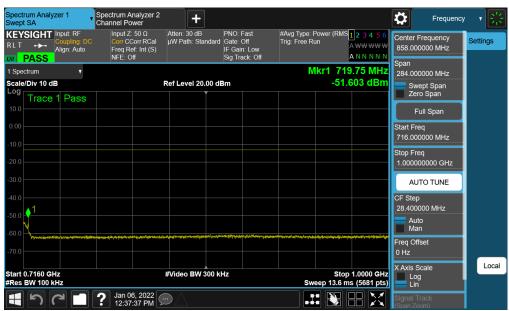
Plot 7-45. Conducted Spurious Plot (LTE Band 12 - 10MHz QPSK - 1 RB - Low Channel)



Plot 7-46. Conducted Spurious Plot (LTE Band 12 - 10MHz QPSK - 1 RB - Mid Channel)

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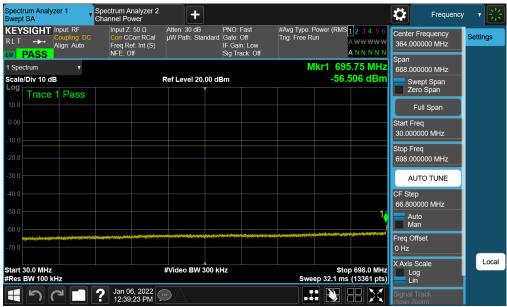
Plot 7-47. Conducted Spurious Plot (LTE Band 12 - 10MHz QPSK - 1 RB - Mid Channel)



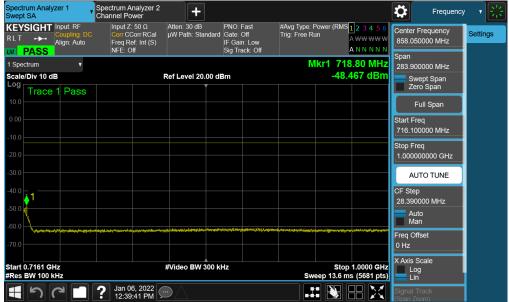
Plot 7-48. Conducted Spurious Plot (LTE Band 12 - 10MHz QPSK - 1 RB - Mid Channel)

FCC ID: A3LSMA135U	Proud to be post of ® element	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
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Plot 7-49. Conducted Spurious Plot (LTE Band 12 - 10MHz QPSK - 1 RB - High Channel)



Plot 7-50. Conducted Spurious Plot (LTE Band 12 - 10MHz QPSK - 1 RB - High Channel)

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Plot 7-51. Conducted Spurious Plot (LTE Band 12 - 10MHz QPSK - 1 RB - High Channel)

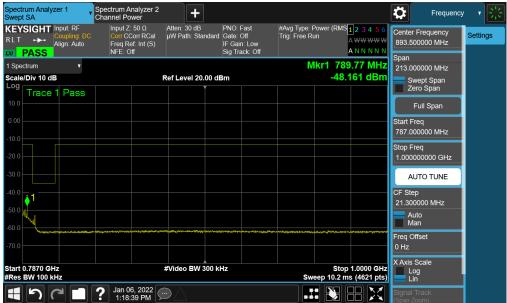
FCC ID: A3LSMA135U	Proud to be port of ® element	PART 27 MEASUREMENT REPORT	SAMSUNG	Approved by: Technical Manager
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LTE Band 13



Plot 7-52. Conducted Spurious Plot (LTE Band 13 - 10MHz QPSK - 1 RB)



Plot 7-53. Conducted Spurious Plot (LTE Band 13 - 10MHz QPSK - 1 RB)

FCC ID: A3LSMA135U	Proud to be post of ® element	PART 27 MEASUREMENT REPORT	Approved by: Technical Manager
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Plot 7-54. Conducted Spurious Plot (LTE Band 13 - 10MHz QPSK - 1 RB)

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WCDMA AWS



Plot 7-55. Conducted Spurious Plot (WCDMA Ch. 1312- Low Channel)



Plot 7-56. Conducted Spurious Plot (WCDMA Ch. 1312- Low Channel)

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Plot 7-57. Conducted Spurious Plot (WCDMA Ch. 1312- Low Channel)



Plot 7-58. Conducted Spurious Plot (WCDMA Ch. 1413- Mid Channel)

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Plot 7-59. Conducted Spurious Plot (WCDMA Ch. 1413- Mid Channel)



Plot 7-60. Conducted Spurious Plot (WCDMA Ch. 1413- Mid Channel)

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Plot 7-61. Conducted Spurious Plot (WCDMA Ch. 1513- High Channel)



Plot 7-62. Conducted Spurious Plot (WCDMA Ch. 1513- High Channel)

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Plot 7-63. Conducted Spurious Plot (WCDMA Ch. 1513- High Channel)

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LTE Band 66/4



Plot 7-64. Conducted Spurious Plot (LTE Band 66/4 - 20MHz QPSK - 1 RB - Low Channel)



Plot 7-65. Conducted Spurious Plot (LTE Band 66/4 - 20MHz QPSK - 1 RB - Low Channel)

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Plot 7-66. Conducted Spurious Plot (LTE Band 66/4 - 20MHz QPSK - 1 RB - Low Channel)



Plot 7-67. Conducted Spurious Plot (LTE Band 66/4 - 20MHz QPSK - 1 RB - Mid Channel)

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Plot 7-68. Conducted Spurious Plot (LTE Band 66/4 - 20MHz QPSK - 1 RB - Mid Channel)



Plot 7-69. Conducted Spurious Plot (LTE Band 66/4 - 20MHz QPSK - 1 RB - Mid Channel)

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Plot 7-70. Conducted Spurious Plot (LTE Band 66/4 - 20MHz QPSK - 1 RB - High Channel)



Plot 7-71. Conducted Spurious Plot (LTE Band 66/4 - 20MHz QPSK - 1 RB - High Channel)

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Plot 7-72. Conducted Spurious Plot (LTE Band 66/4 - 20MHz QPSK - 1 RB - High Channel)

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7.4 Band Edge Emissions at Antenna Terminal

Test Overview

All out of band emissions are measured with a spectrum analyzer connected to the antenna terminal of the EUT while the EUT is operating at its maximum duty cycle, at maximum power, and at the appropriate frequencies. All data rates were investigated to determine the worst case configuration. All modes of operation were investigated and the worst case configuration results are reported in this section.

The minimum permissible attenuation level of any spurious emission is 43 + 10 $log_{10}(P_{[Watts]})$, where P is the transmitter power in Watts.

Test Procedure Used

KDB 971168 D01 v03r01 - Section 6.0

Test Settings

- 1. Start and stop frequency were set such that the band edge would be placed in the center of the plot
- 2. Span was set large enough so as to capture all out of band emissions near the band edge
- 3. RBW > 1% of the emission bandwidth
- 4. $VBW > 3 \times RBW$
- 5. Detector = RMS
- 6. Number of sweep points ≥ 2 x Span/RBW
- 7. Trace mode = trace average for continuous emissions, max hold for pulse emissions
- 8. Sweep time = auto couple
- 9. The trace was allowed to stabilize

Test Setup

The EUT and measurement equipment were set up as shown in the diagram below.



Figure 7-3. Test Instrument & Measurement Setup

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Test Notes

Per 27.53(h) in the 1 MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed to demonstrate compliance with the out-of-band emissions limit. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emission are attenuated at least 26 dB below the transmitter power.

Per 27.53(g) for operations in the 663 - 698 MHz and 698 – 746MHz bands, in the 100 kHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least 30 kHz may be employed to demonstrate compliance with the out-of-band emissions limit.

Per 27.53(c)(5) for operations in the 776-788 MHz band, in the 100 kHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least 30 kHz may be employed to demonstrate compliance with the out-of-band emissions limit.

For all plots showing emissions in the 763 - 775 MHz and 793 - 805 MHz band, the FCC limit per 27.53(c)(4) is $65 + 10 \log_{10}(P) = -35 \text{dBm}$ in a 6.25 kHz bandwidth.

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LTE Band 71



Plot 7-73. Lower Band Edge Plot (LTE Band 71 - 20MHz QPSK - Full RB)



Plot 7-74. Upper Band Edge Plot (LTE Band 71 - 20MHz QPSK - Full RB)

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Plot 7-75. Lower Band Edge Plot (LTE Band 71 - 15MHz QPSK - Full RB)



Plot 7-76. Upper Band Edge Plot (LTE Band 71 - 15MHz QPSK - Full RB)

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Plot 7-77. Lower Band Edge Plot (LTE Band 71 - 10MHz QPSK - Full RB)



Plot 7-78. Upper Band Edge Plot (LTE Band 71 - 10MHz QPSK - Full RB)

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Plot 7-79. Lower Band Edge Plot (LTE Band 71 - 5MHz QPSK - Full RB)



Plot 7-80. Upper Band Edge Plot (LTE Band 71 - 5MHz QPSK - Full RB)

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LTE Band 12



Plot 7-81. Lower Band Edge Plot (LTE Band 12 - 10MHz QPSK - Full RB)



Plot 7-82. Upper Band Edge Plot (LTE Band 12 - 10MHz QPSK - Full RB)

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Plot 7-83. Lower Band Edge Plot (LTE Band 12 - 5MHz QPSK - Full RB)



Plot 7-84. Upper Band Edge Plot (LTE Band 12 - 5MHz QPSK - Full RB)

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