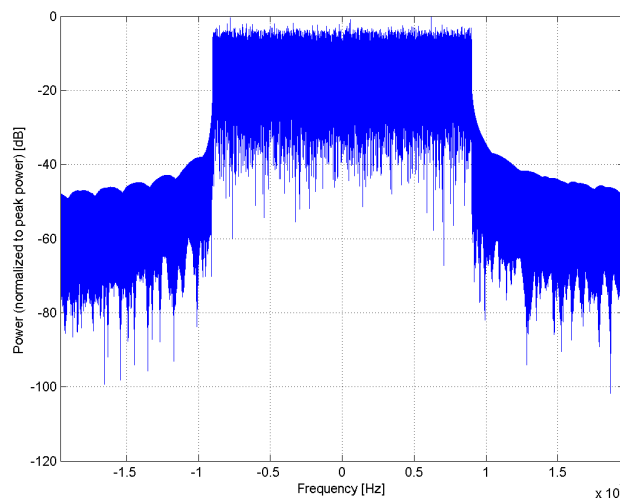
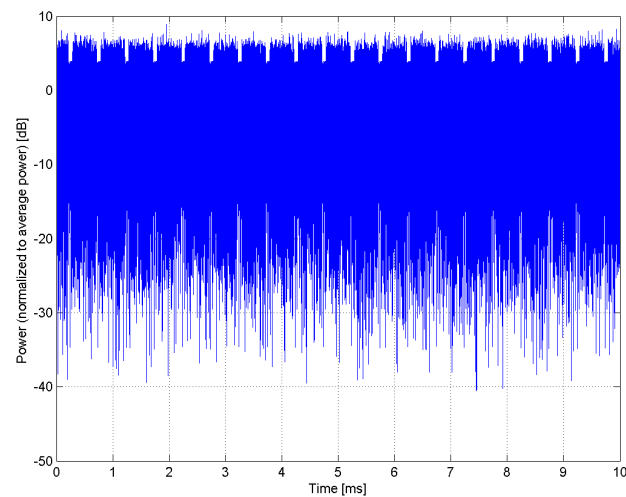


### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



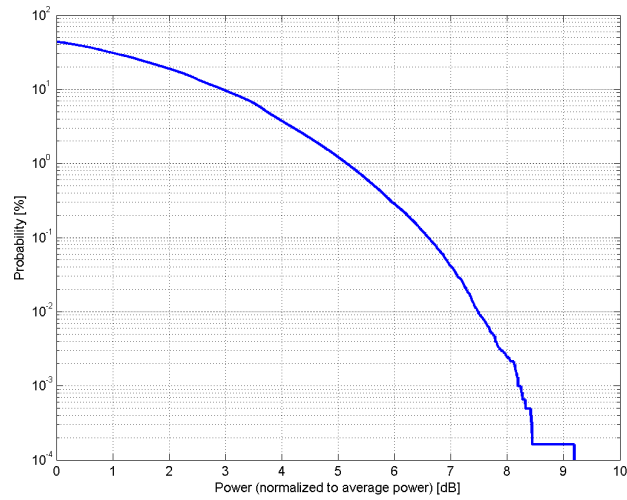
### Time Domain

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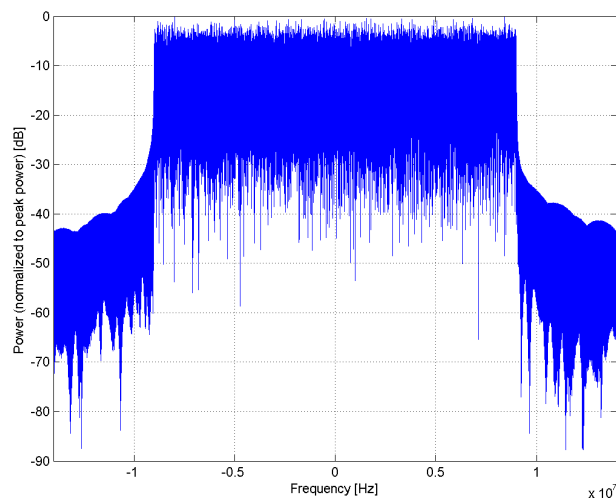
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)</b>  |
| Group:                  | LTE-FDD  |
| UID:                    | 10102-CAE  |
| PAR: <sup>1</sup>       | <b>6.60 dB</b>   |
| MIF: <sup>2</sup>       | <b>-17.05 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 64-QAM   |
| Modulation:             | 64-QAM   |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 64-QAM<br>Data Type: UL-SCH<br>Number RB: 100<br>Transport Block Size: 57336<br>TBS Index: 23<br>MCS Index: 25<br>Data Type: PN9  |
| Bandwidth:              | 20.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

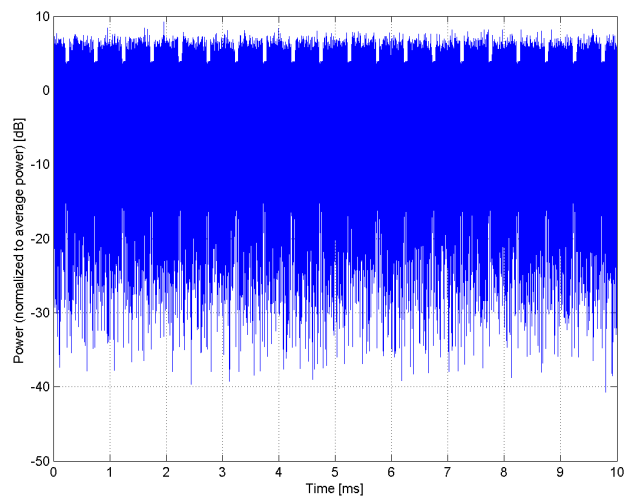
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



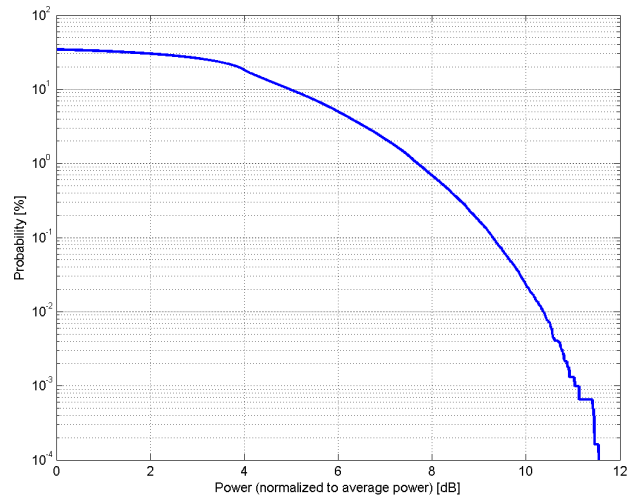
### Time Domain

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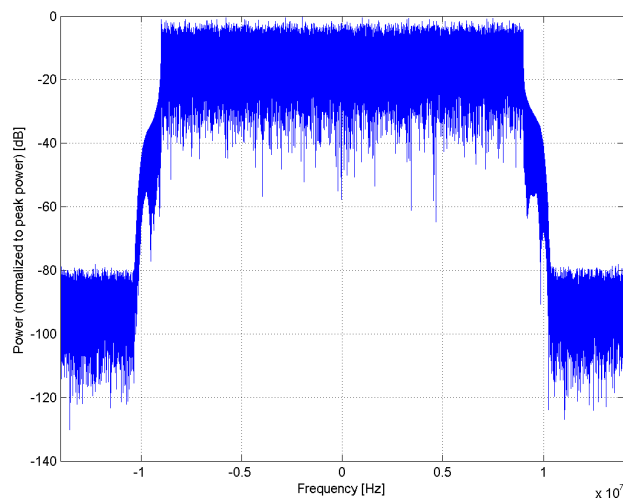
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-TDD (SC-FDMA, 100% RB, 20 MHz, QPSK)</b>  |
| Group:                  | LTE-TDD  |
| UID:                    | 10103-CAG  |
| PAR: <sup>1</sup>       | <b>9.29 dB</b>   |
| MIF: <sup>2</sup>       | <b>-1.64 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | QPSK   |
| Modulation:             |  |
| Frequency Band:         | Band 33, E-UTRA/TDD (1900.0 - 1920.0 MHz)<br>Band 35, E-UTRA/TDD (1850.0 - 1910.0 MHz)<br>Band 36, E-UTRA/TDD (1930.0 - 1990.0 MHz)<br>Band 37, E-UTRA/TDD (1910.0 - 1930.0 MHz)<br>Band 38, E-UTRA/TDD (2570.0 - 2620.0 MHz)<br>Band 39, E-UTRA/TDD (1880.0 - 1920.0 MHz)<br>Band 40, E-UTRA/TDD (2300.0 - 2400.0 MHz)<br>Band 41, E-UTRA/TDD (2496.0 - 2690.0 MHz)<br>Band 42, E-UTRA/TDD (3400.0 - 3600.0 MHz)<br>Band 43, E-UTRA/TDD (3600.0 - 3800.0 MHz)<br>Band 44, E-UTRA/TDD (703.0 - 803.0 MHz)<br>Band 45, E-UTRA/FDD (1447.0 - 1467.0 MHz)<br>Band 46, E-UTRA/FDD (5150.0 - 5925.0 MHz)<br>Band 47, E-UTRA/TDD (5855.0 - 5925.0 MHz)<br>Band 48, E-UTRA/TDD (3550.0 - 3700.0 MHz)<br>Band 49, E-UTRA/TDD (3550.0 - 3700.0 MHz)<br>Band 50, E-UTRA/TDD (1432.0 - 1517.0 MHz)<br>Band 76, E-UTRA/FDD (3300.0 - 3400.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Uplink-downlink configuration: 1<br>Special Subframe configuration: 4<br>Number of Frames: 1<br>Settings for UL Subframe 2,3,7,8:<br>Number of PUSCHs: 1<br>Modulation Scheme: QPSK<br>Allocated RB: 100<br>Start Number of RB: 0<br>Data Type: PN9fix   |
| Bandwidth:              | 20.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

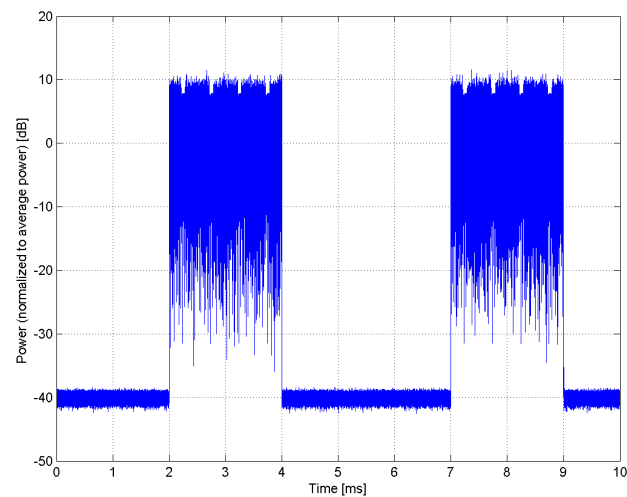
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



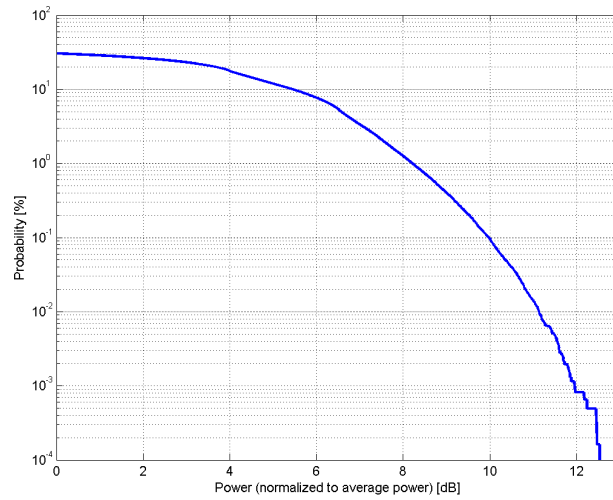
### Time Domain

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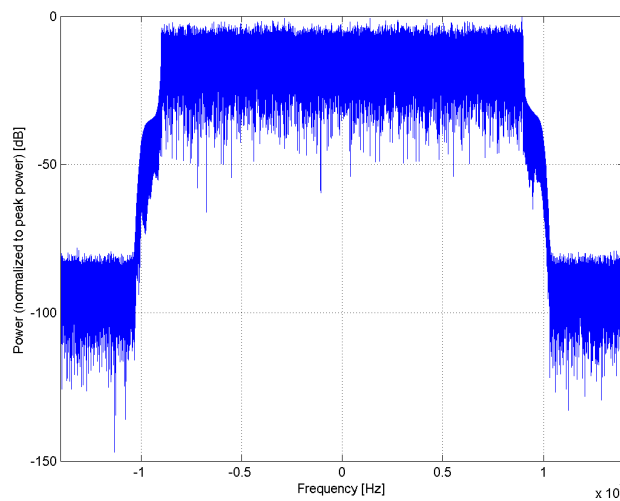
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 16-QAM)</b>  |
| Group:                  | LTE-TDD  |
| UID:                    | 10104-CAG  |
| PAR: <sup>1</sup>       | <b>9.97 dB</b>   |
| MIF: <sup>2</sup>       | <b>-1.66 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 16-QAM   |
| Modulation:             |  |
| Frequency Band:         | Band 33, E-UTRA/TDD (1900.0 - 1920.0 MHz)<br>Band 35, E-UTRA/TDD (1850.0 - 1910.0 MHz)<br>Band 36, E-UTRA/TDD (1930.0 - 1990.0 MHz)<br>Band 37, E-UTRA/TDD (1910.0 - 1930.0 MHz)<br>Band 38, E-UTRA/TDD (2570.0 - 2620.0 MHz)<br>Band 39, E-UTRA/TDD (1880.0 - 1920.0 MHz)<br>Band 40, E-UTRA/TDD (2300.0 - 2400.0 MHz)<br>Band 41, E-UTRA/TDD (2496.0 - 2690.0 MHz)<br>Band 42, E-UTRA/TDD (3400.0 - 3600.0 MHz)<br>Band 43, E-UTRA/TDD (3600.0 - 3800.0 MHz)<br>Band 44, E-UTRA/TDD (703.0 - 803.0 MHz)<br>Band 45, E-UTRA/FDD (1447.0 - 1467.0 MHz)<br>Band 46, E-UTRA/FDD (5150.0 - 5925.0 MHz)<br>Band 47, E-UTRA/TDD (5855.0 - 5925.0 MHz)<br>Band 48, E-UTRA/TDD (3550.0 - 3700.0 MHz)<br>Band 49, E-UTRA/TDD (3550.0 - 3700.0 MHz)<br>Band 50, E-UTRA/TDD (1432.0 - 1517.0 MHz)<br>Band 76, E-UTRA/FDD (3300.0 - 3400.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Uplink-downlink configuration: 1<br>Special Subframe configuration: 4<br>Number of Frames: 1<br>Settings for UL Subframe 2,3,7,8:<br>Number of PUSCHs: 1<br>Modulation Scheme: 16QAM<br>Allocated RB: 100<br>Start Number of RB: 0<br>Data Type: PN9fix  |
| Bandwidth:              | 20.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

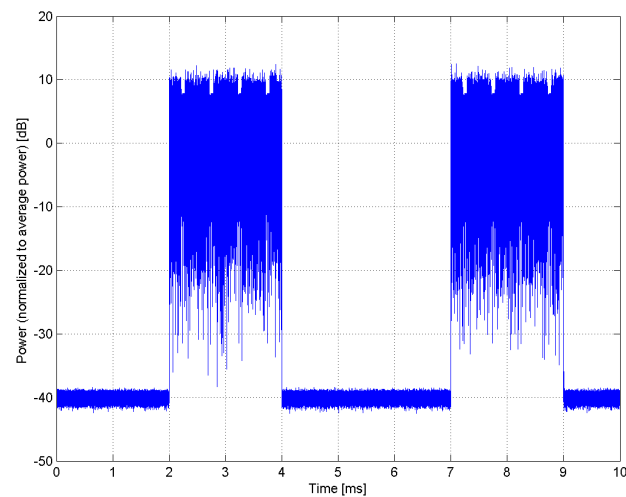
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



### Time Domain

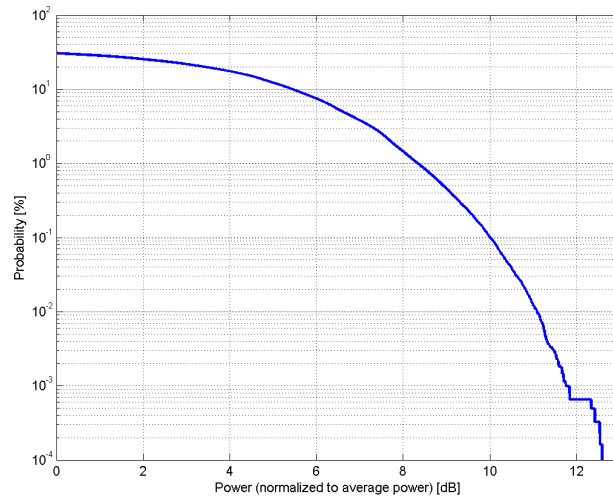
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|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-TDD (SC-FDMA, 100% RB, 20 MHz, 64-QAM)</b>  |
| Group:                  | LTE-TDD  |
| UID:                    | 10105-CAG  |
| PAR: <sup>1</sup>       | <b>10.01 dB</b>  |
| MIF: <sup>2</sup>       | <b>-1.67 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 64-QAM   |
| Modulation:             |  |
| Frequency Band:         | Band 33, E-UTRA/TDD (1900.0 - 1920.0 MHz)<br>Band 35, E-UTRA/TDD (1850.0 - 1910.0 MHz)<br>Band 36, E-UTRA/TDD (1930.0 - 1990.0 MHz)<br>Band 37, E-UTRA/TDD (1910.0 - 1930.0 MHz)<br>Band 38, E-UTRA/TDD (2570.0 - 2620.0 MHz)<br>Band 39, E-UTRA/TDD (1880.0 - 1920.0 MHz)<br>Band 40, E-UTRA/TDD (2300.0 - 2400.0 MHz)<br>Band 41, E-UTRA/TDD (2496.0 - 2690.0 MHz)<br>Band 42, E-UTRA/TDD (3400.0 - 3600.0 MHz)<br>Band 43, E-UTRA/TDD (3600.0 - 3800.0 MHz)<br>Band 44, E-UTRA/TDD (703.0 - 803.0 MHz)<br>Band 45, E-UTRA/FDD (1447.0 - 1467.0 MHz)<br>Band 46, E-UTRA/FDD (5150.0 - 5925.0 MHz)<br>Band 47, E-UTRA/TDD (5855.0 - 5925.0 MHz)<br>Band 48, E-UTRA/TDD (3550.0 - 3700.0 MHz)<br>Band 49, E-UTRA/TDD (3550.0 - 3700.0 MHz)<br>Band 50, E-UTRA/TDD (1432.0 - 1517.0 MHz)<br>Band 76, E-UTRA/FDD (3300.0 - 3400.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Uplink-downlink configuration: 1<br>Special Subframe configuration: 4<br>Number of Frames: 1<br>Settings for UL Subframe 2,3,7,8:<br>Number of PUSCHs: 1<br>Modulation Scheme: 64QAM<br>Allocated RB: 100<br>Start Number of RB: 0<br>Data Type: PN9fix  |
| Bandwidth:              | 20.0 MHz   |
| Integration Time:       | 10.0 ms  |

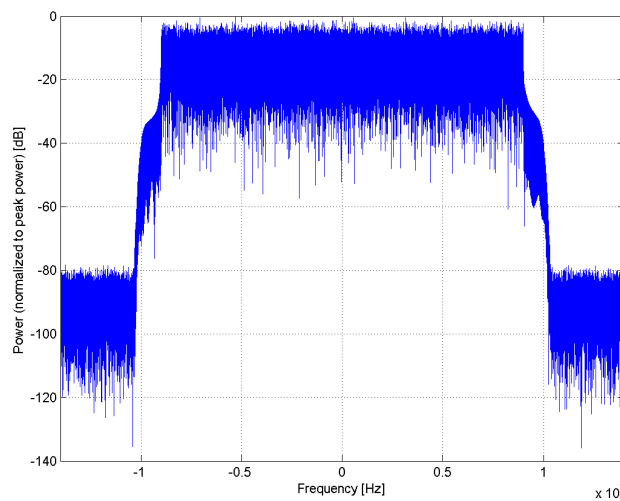
<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).

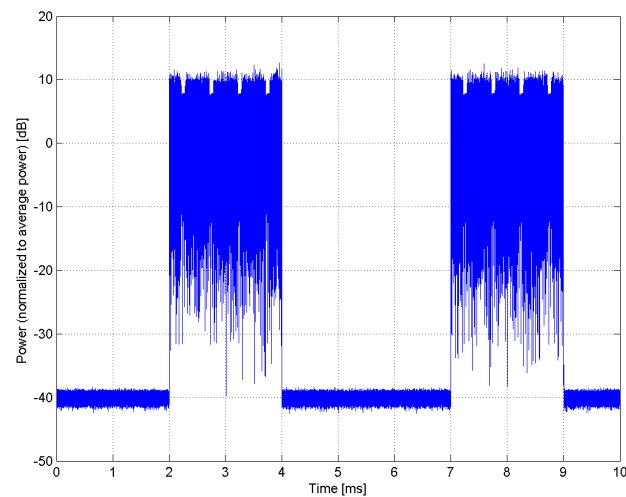




### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



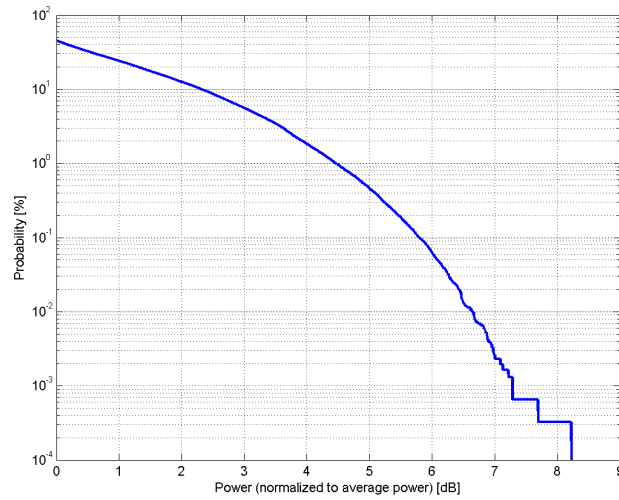
### Time Domain

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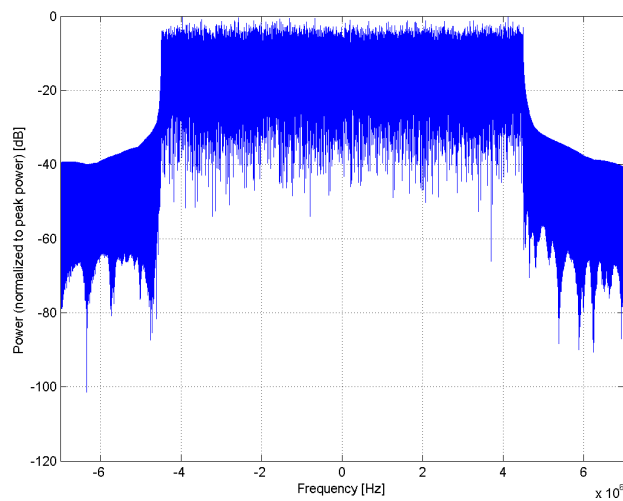
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 100% RB, 10 MHz, QPSK)</b>  |
| Group:                  | LTE-FDD  |
| UID:                    | 10108-CAG  |
| PAR: <sup>1</sup>       | <b>5.80 dB</b>   |
| MIF: <sup>2</sup>       | <b>-21.57 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | QPSK   |
| Modulation:             | QPSK   |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 6, E-UTRA/FDD (830.0 - 840.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 11, E-UTRA/FDD (1427.9 - 1447.9 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 13, E-UTRA/FDD (777.0 - 787.0 MHz)<br>Band 14, E-UTRA/FDD (788.0 - 798.0 MHz)<br>Band 17, E-UTRA/FDD (704.0 - 716.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 24, E-UTRA/FDD (1626.5 - 1660.5 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 30, E-UTRA/FDD (2305.0 - 2315.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Band 85, E-UTRA/FDD (698.0 - 716.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: QPSK<br>Data Type: UL-SCH<br>Number RB: 50<br>Transport Block Size: 4392<br>TBS Index: 5<br>MCS Index: 5<br>Data Type: PN9  |
| Bandwidth:              | 10.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

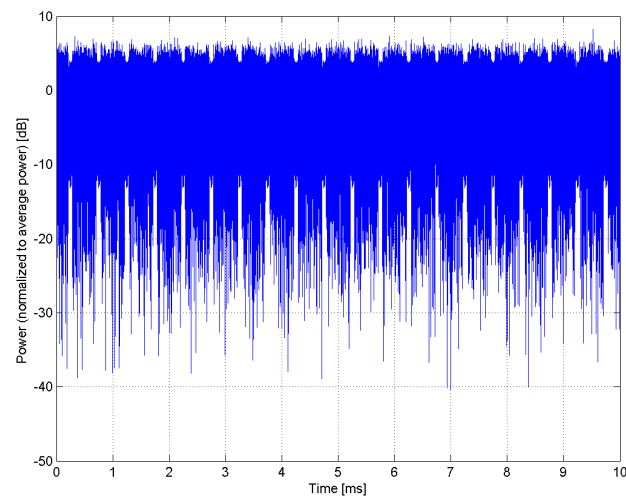
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



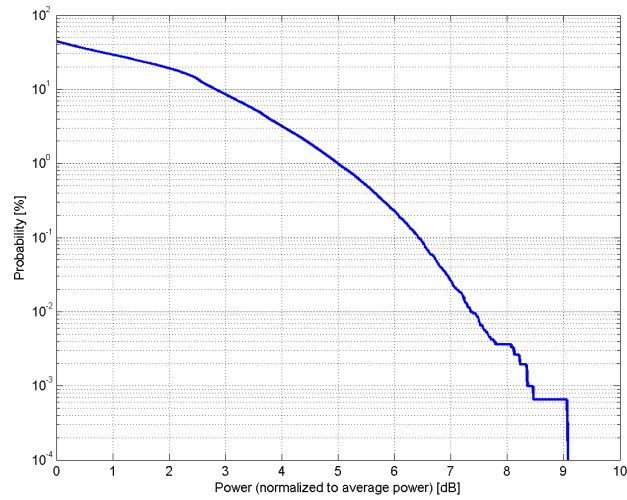
### Time Domain

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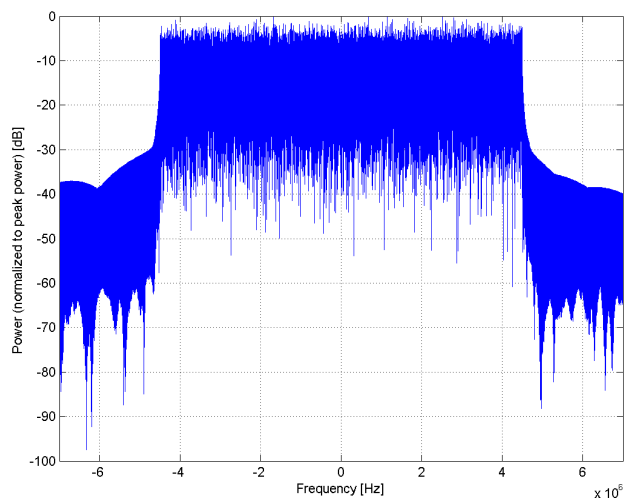
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 16-QAM)</b>  |
| Group:                  | LTE-FDD  |
| UID:                    | 10109-CAG  |
| PAR: <sup>1</sup>       | <b>6.43 dB</b>   |
| MIF: <sup>2</sup>       | <b>-16.87 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 16-QAM   |
| Modulation:             |  |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 6, E-UTRA/FDD (830.0 - 840.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 11, E-UTRA/FDD (1427.9 - 1447.9 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 13, E-UTRA/FDD (777.0 - 787.0 MHz)<br>Band 14, E-UTRA/FDD (788.0 - 798.0 MHz)<br>Band 17, E-UTRA/FDD (704.0 - 716.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 24, E-UTRA/FDD (1626.5 - 1660.5 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 30, E-UTRA/FDD (2305.0 - 2315.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Band 85, E-UTRA/FDD (698.0 - 716.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 16-QAM<br>Data Type: UL-SCH<br>Number RB: 50<br>Transport Block Size: 14112<br>TBS Index: 14<br>MCS Index: 15<br>Data Type: PN9   |
| Bandwidth:              | 10.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

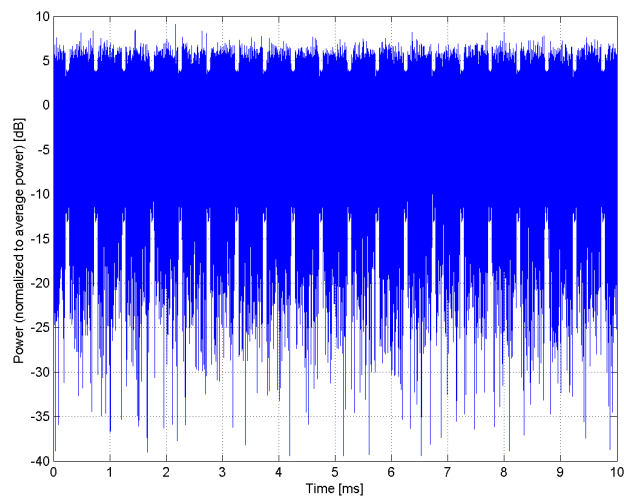
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



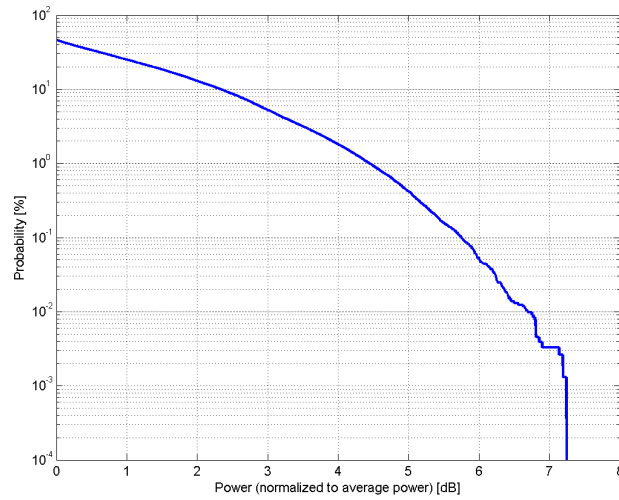
### Time Domain

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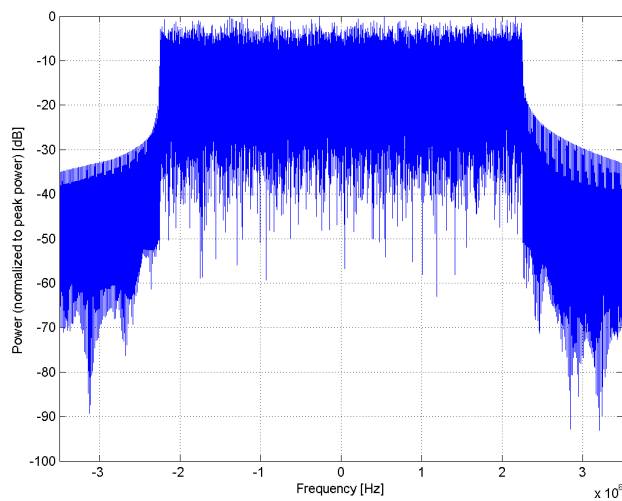
|                         |   |
|-------------------------|---|
| Name:                   | <b>LTE-FDD (SC-FDMA, 100% RB, 5 MHz, QPSK)</b>  |
| Group:                  | LTE-FDD   |
| UID:                    | 10110-CAG   |
| PAR: <sup>1</sup>       | <b>5.75 dB</b>  |
| MIF: <sup>2</sup>       | <b>-23.39 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation   |
| Category:               | QPSK  |
| Modulation:             | QPSK  |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 6, E-UTRA/FDD (830.0 - 840.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 11, E-UTRA/FDD (1427.9 - 1447.9 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 13, E-UTRA/FDD (777.0 - 787.0 MHz)<br>Band 14, E-UTRA/FDD (788.0 - 798.0 MHz)<br>Band 17, E-UTRA/FDD (704.0 - 716.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 24, E-UTRA/FDD (1626.5 - 1660.5 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 30, E-UTRA/FDD (2305.0 - 2315.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Band 85, E-UTRA/FDD (698.0 - 716.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: QPSK<br>Data Type: UL-SCH<br>Number RB: 25<br>Transport Block Size: 2216<br>TBS Index: 5<br>MCS Index: 5<br>Data Type: PN9   |
| Bandwidth:              | 5.0 MHz   |
| Integration Time:       | 10.0 ms   |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

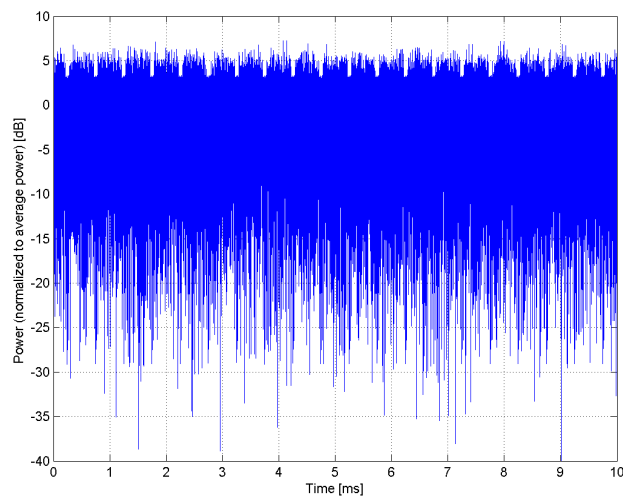
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



### Time Domain

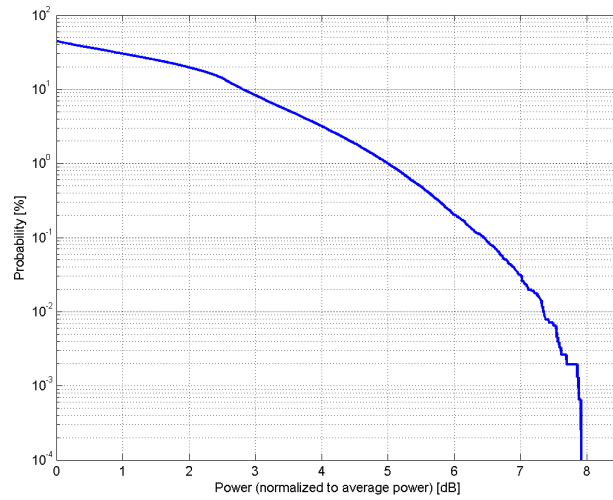
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|                         |   |
|-------------------------|---|
| Name:                   | <b>LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 16-QAM)</b>  |
| Group:                  | LTE-FDD   |
| UID:                    | 10111-CAG   |
| PAR: <sup>1</sup>       | <b>6.44 dB</b>  |
| MIF: <sup>2</sup>       | <b>-16.35 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation   |
| Category:               | 16-QAM  |
| Modulation:             |   |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 6, E-UTRA/FDD (830.0 - 840.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 11, E-UTRA/FDD (1427.9 - 1447.9 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 13, E-UTRA/FDD (777.0 - 787.0 MHz)<br>Band 14, E-UTRA/FDD (788.0 - 798.0 MHz)<br>Band 17, E-UTRA/FDD (704.0 - 716.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 24, E-UTRA/FDD (1626.5 - 1660.5 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 30, E-UTRA/FDD (2305.0 - 2315.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Band 85, E-UTRA/FDD (698.0 - 716.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 16-QAM<br>Data Type: UL-SCH<br>Number RB: 25<br>Transport Block Size: 7224<br>TBS Index: 14<br>MCS Index: 15<br>Data Type: PN9   |
| Bandwidth:              | 5.0 MHz   |
| Integration Time:       | 10.0 ms   |

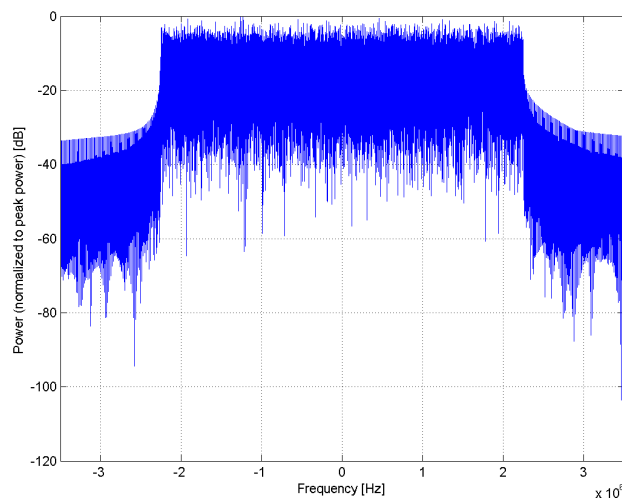
<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).

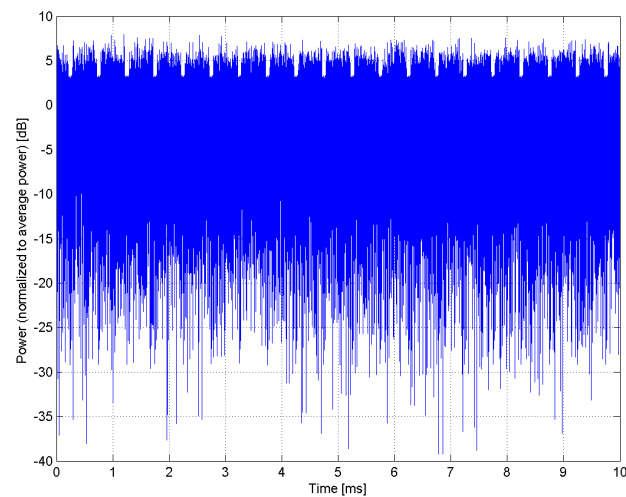




### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



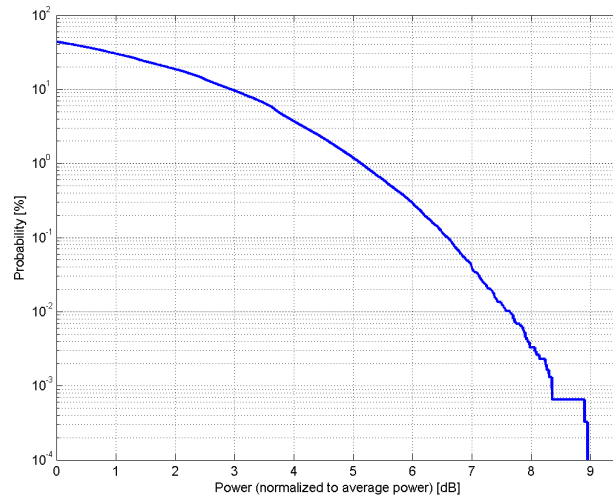
### Time Domain

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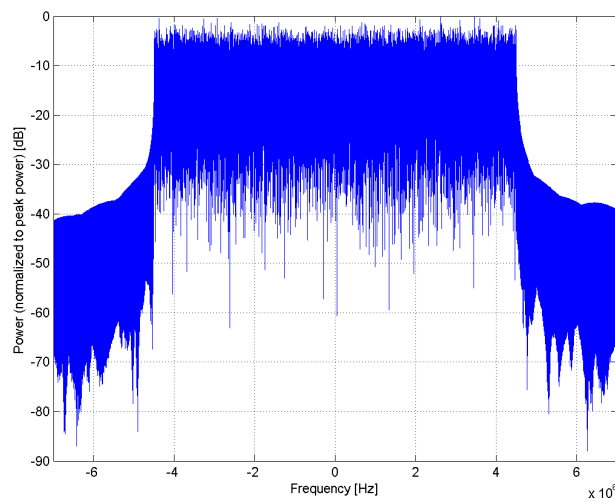
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 100% RB, 10 MHz, 64-QAM)</b>  |
| Group:                  | LTE-FDD  |
| UID:                    | 10112-CAG  |
| PAR: <sup>1</sup>       | <b>6.59 dB</b>   |
| MIF: <sup>2</sup>       | <b>-16.34 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 64-QAM   |
| Modulation:             |  |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 6, E-UTRA/FDD (830.0 - 840.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 11, E-UTRA/FDD (1427.9 - 1447.9 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 13, E-UTRA/FDD (777.0 - 787.0 MHz)<br>Band 14, E-UTRA/FDD (788.0 - 798.0 MHz)<br>Band 17, E-UTRA/FDD (704.0 - 716.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 24, E-UTRA/FDD (1626.5 - 1660.5 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 30, E-UTRA/FDD (2305.0 - 2315.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Band 85, E-UTRA/FDD (698.0 - 716.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 64-QAM<br>Data Type: UL-SCH<br>Number RB: 50<br>Transport Block Size: 28336<br>TBS Index: 23<br>MCS Index: 25<br>Data Type: PN9   |
| Bandwidth:              | 10.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

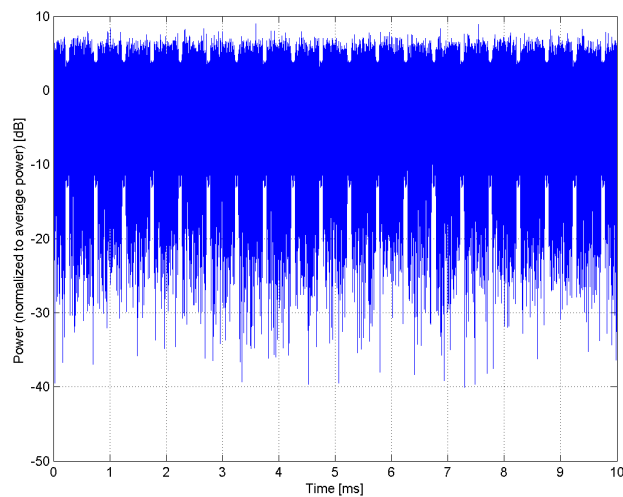
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



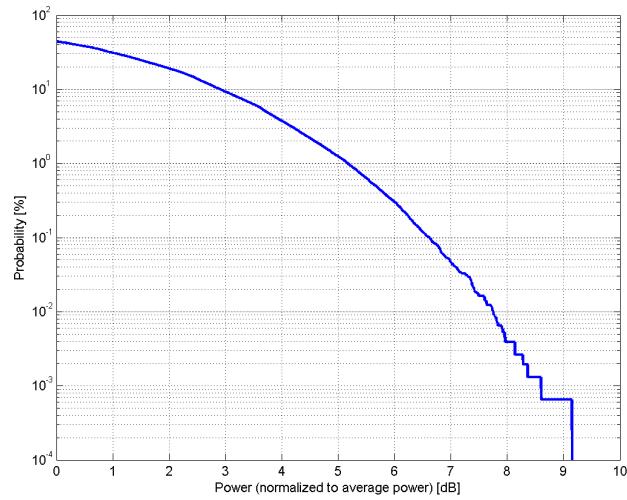
### Time Domain

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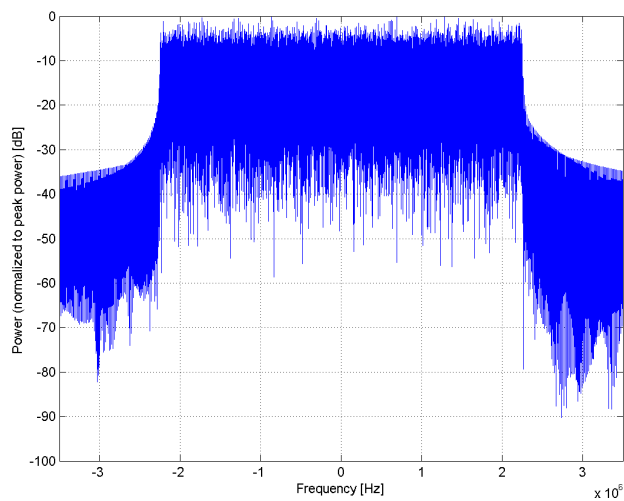
|                         |   |
|-------------------------|---|
| Name:                   | <b>LTE-FDD (SC-FDMA, 100% RB, 5 MHz, 64-QAM)</b>  |
| Group:                  | LTE-FDD   |
| UID:                    | 10113-CAG   |
| PAR: <sup>1</sup>       | <b>6.62 dB</b>  |
| MIF: <sup>2</sup>       | <b>-15.98 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation   |
| Category:               | 64-QAM  |
| Modulation:             |   |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 6, E-UTRA/FDD (830.0 - 840.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 11, E-UTRA/FDD (1427.9 - 1447.9 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 13, E-UTRA/FDD (777.0 - 787.0 MHz)<br>Band 14, E-UTRA/FDD (788.0 - 798.0 MHz)<br>Band 17, E-UTRA/FDD (704.0 - 716.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 24, E-UTRA/FDD (1626.5 - 1660.5 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 30, E-UTRA/FDD (2305.0 - 2315.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Band 85, E-UTRA/FDD (698.0 - 716.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 64-QAM<br>Data Type: UL-SCH<br>Number RB: 25<br>Transport Block Size: 14112<br>TBS Index: 23<br>MCS Index: 25<br>Data Type: PN9  |
| Bandwidth:              | 5.0 MHz   |
| Integration Time:       | 10.0 ms   |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

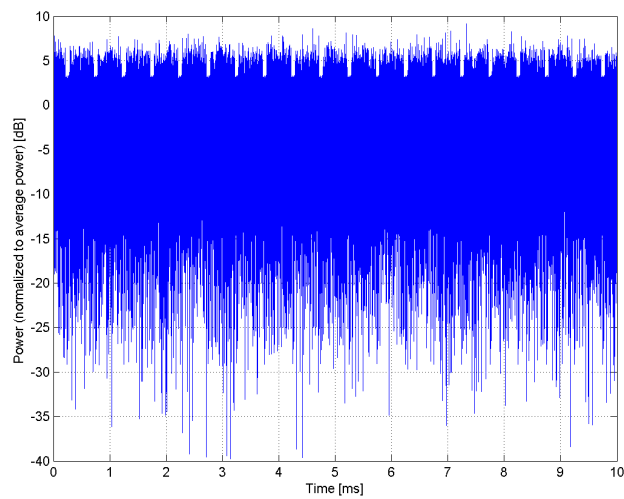
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



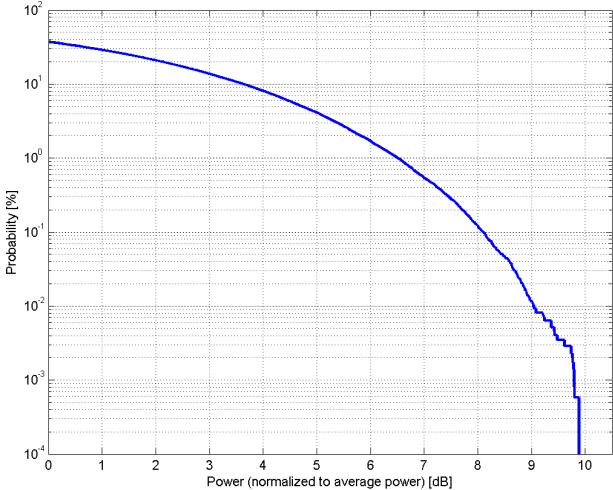
### Time Domain

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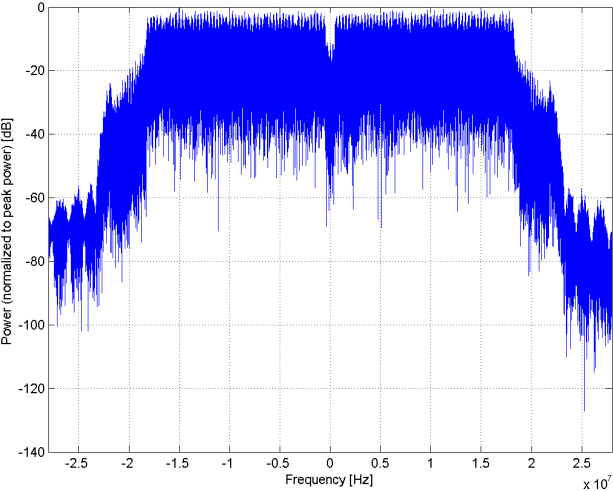
|                         |  |
|-------------------------|--|
| Name:                   | <b>IEEE 802.11n (HT Greenfield, 13.5 Mbps, BPSK)</b>   |
| Group:                  | WLAN   |
| UID:                    | 10114-CAD  |
| PAR: <sup>1</sup>       | <b>8.10 dB</b>   |
| MIF: <sup>2</sup>       | <b>-17.24 dB</b>   |
| Standard Reference:     | IEEE 802.11n-2009  |
| Category:               | Random amplitude modulation  |
| Modulation:             | BPSK   |
| Frequency Band:         | WLAN 2.4GHz (2412.0 - 2484.0 MHz)<br>WLAN 5GHz (4915.0 - 5825.0 MHz)<br>U-NII-1, U-NII-2A (5170 - 5330 MHz)<br>U-NII-2C Standalone (5490 - 5710 MHz)<br>U-NII-2C <5.65 GHz (5490 - 5650 MHz)<br>U-NII-3 Standalone (5735 - 5835 MHz)<br>U-NII-2C, U-NII-3 (5650 - 5835 MHz)<br>U-NII-4 (5.825 - 5.925 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation: BPSK<br>Data Rate: 13.5 Mbps<br>PPDU Format: HT Greenfield<br>PPDU Type: 40 MHz<br>MCS Index: 0<br>Guard Interval: Long<br>Payload Length: 3567  |
| Bandwidth:              | 40.0 MHz   |
| Integration Time:       | 2.2 ms   |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

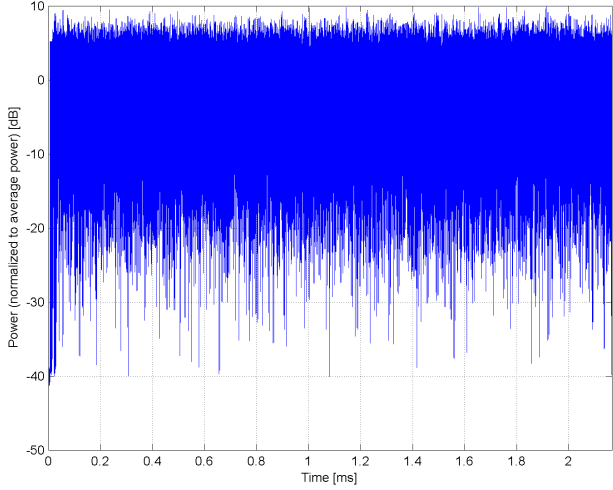
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



**Complementary Cumulative Distribution Function (CCDF)**



**Frequency Domain**



**Time Domain**

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Name: **IEEE 802.11n (HT Greenfield, 81 Mbps, 16-QAM)**

Group: WLAN  
UID: 10115-CAD

PAR: <sup>1</sup> **8.46 dB**  
MIF: <sup>2</sup> **-17.11 dB**

Standard Reference: IEEE 802.11n-2009  
Category: Random amplitude modulation  
Modulation: 16-QAM  
Frequency Band: WLAN 2.4GHz (2412.0 - 2484.0 MHz)  
WLAN 5GHz (4915.0 - 5825.0 MHz)  
U-NII-1, U-NII-2A (5170 - 5330 MHz)  
U-NII-2C Standalone (5490 - 5710 MHz)  
U-NII-2C <5.65 GHz (5490 - 5650 MHz)  
U-NII-3 Standalone (5735 - 5835 MHz)  
U-NII-2C, U-NII-3 (5650 - 5835 MHz)  
U-NII-4 (5.825 - 5.925 MHz)  
Validation band (0.0 - 6000.0 MHz)

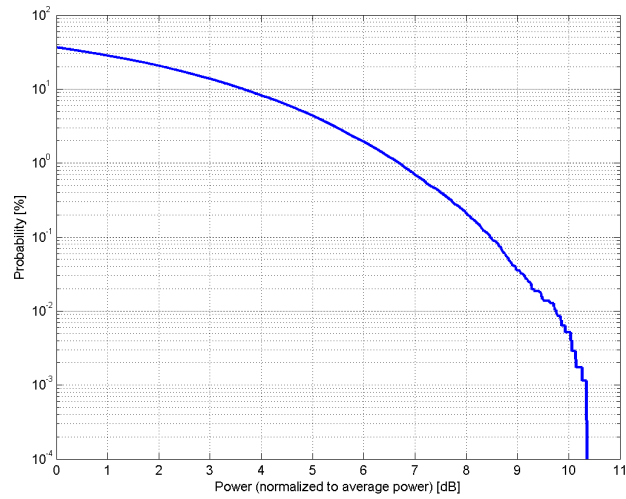
Detailed Specification: Modulation: 16-QAM  
Data Rate: 81 Mbps  
PPDU Format: HT Greenfield  
PPDU Type: 40 MHz  
MCS Index: 4  
Guard Interval: Long  
Payload Length: 21590

Bandwidth: 40.0 MHz  
Integration Time: 2.2 ms

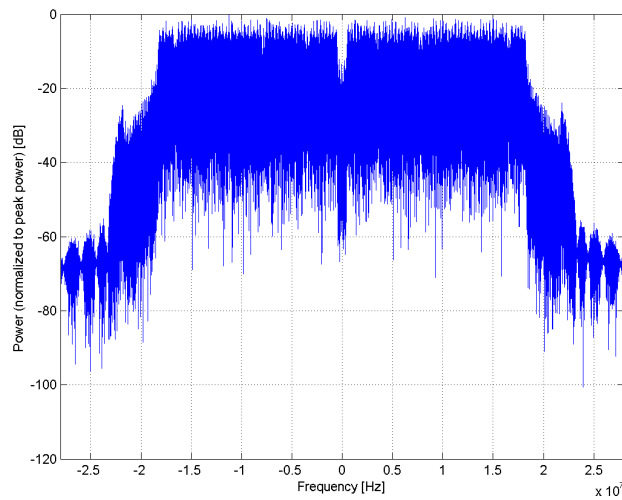
<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).

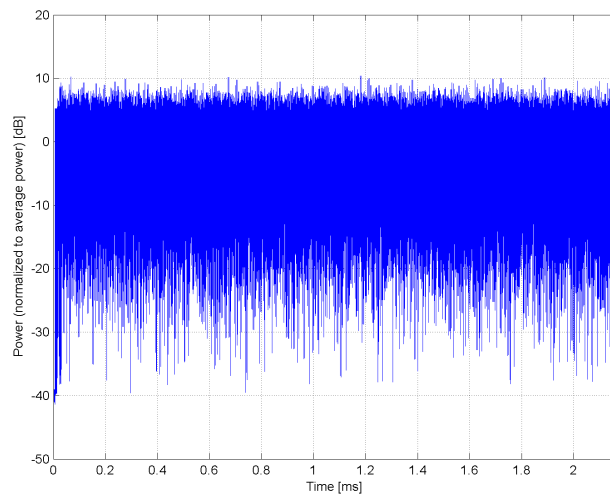




### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



### Time Domain

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Engineering AG**  
Zeughausstrasse 43, 8004 Zurich, Switzerland

Name: **IEEE 802.11n (HT Greenfield, 135 Mbps, 64-QAM)**

Group: WLAN  
UID: 10116-CAD

PAR: <sup>1</sup> **8.15 dB**  
MIF: <sup>2</sup> **-17.09 dB**

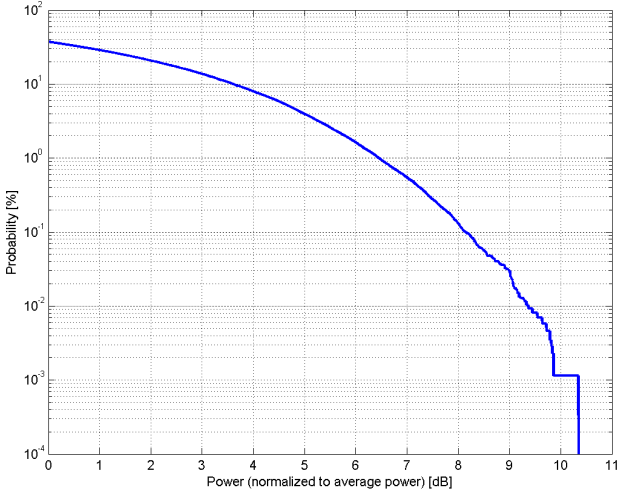
Standard Reference: IEEE 802.11n-2009  
Category: Random amplitude modulation  
Modulation: 64-QAM  
Frequency Band: WLAN 2.4GHz (2412.0 - 2484.0 MHz)  
WLAN 5GHz (4915.0 - 5825.0 MHz)  
U-NII-1, U-NII-2A (5170 - 5330 MHz)  
U-NII-2C Standalone (5490 - 5710 MHz)  
U-NII-2C <5.65 GHz (5490 - 5650 MHz)  
U-NII-3 Standalone (5735 - 5835 MHz)  
U-NII-2C, U-NII-3 (5650 - 5835 MHz)  
U-NII-4 (5.825 - 5.925 MHz)  
Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Modulation: 64-QAM  
Data Rate: 135 Mbps  
PPDU Format: HT Greenfield  
PPDU Type: 40 MHz  
MCS Index: 7  
Guard Interval: Long  
Payload Length: 36008

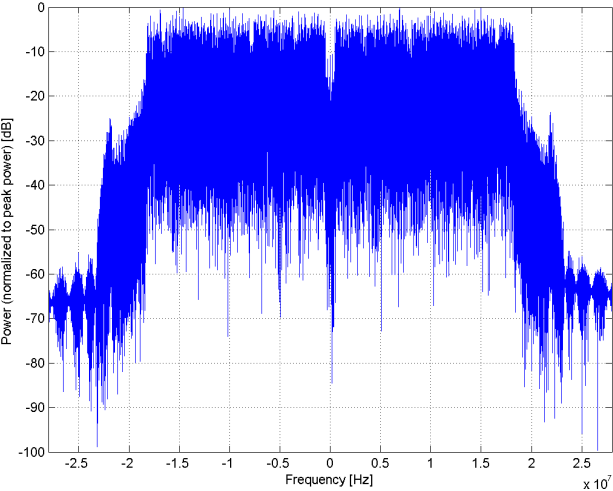
Bandwidth: 40.0 MHz  
Integration Time: 2.2 ms

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

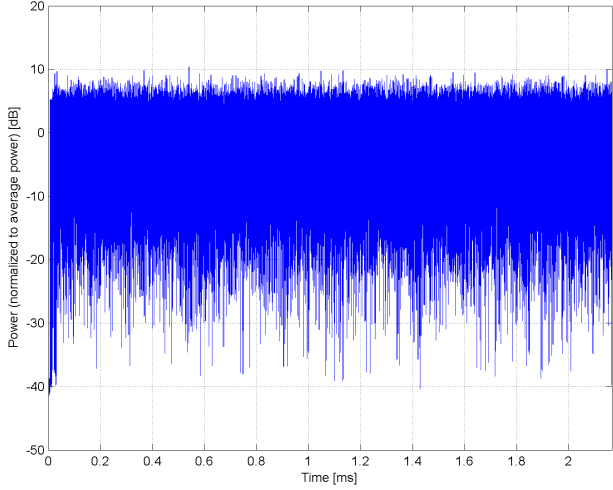
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



**Complementary Cumulative Distribution Function (CCDF)**



**Frequency Domain**



**Time Domain**

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Name: **IEEE 802.11n (HT Mixed, 13.5 Mbps, BPSK)**

Group: WLAN  
UID: 10117-CAD

PAR: <sup>1</sup> **8.07 dB**  
MIF: <sup>2</sup> **-17.16 dB**

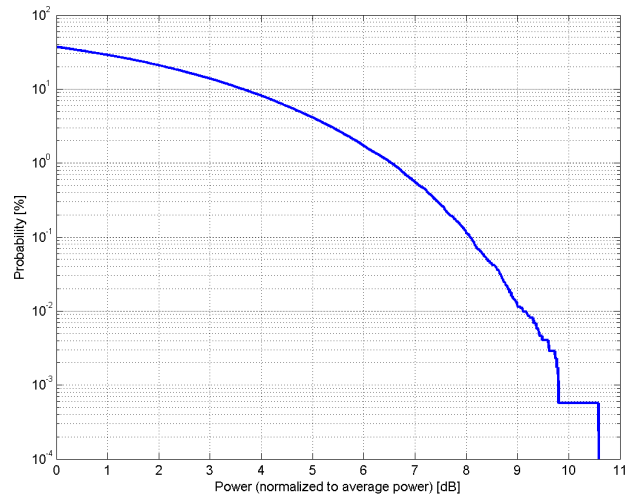
Standard Reference: IEEE 802.11n-2009  
Category: Random amplitude modulation  
Modulation: BPSK  
Frequency Band: WLAN 2.4GHz (2412.0 - 2484.0 MHz)  
WLAN 5GHz (4915.0 - 5825.0 MHz)  
U-NII-1, U-NII-2A (5170 - 5330 MHz)  
U-NII-2C Standalone (5490 - 5710 MHz)  
U-NII-2C <5.65 GHz (5490 - 5650 MHz)  
U-NII-3 Standalone (5735 - 5835 MHz)  
U-NII-2C, U-NII-3 (5650 - 5835 MHz)  
U-NII-4 (5.825 - 5.925 MHz)  
Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Modulation: BPSK  
Data Rate: 13.5 Mbps  
PPDU Format: HT Mixed  
PPDU Type: 40 MHz  
MCS Index: 0  
Guard Interval: Long  
Payload Length: 3567

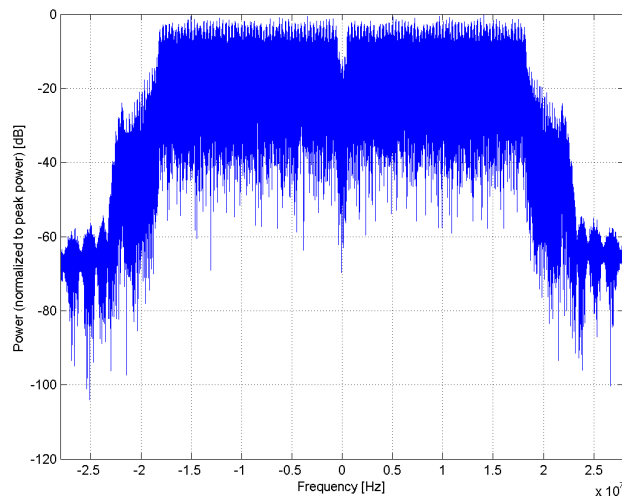
Bandwidth: 40.0 MHz  
Integration Time: 2.2 ms

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

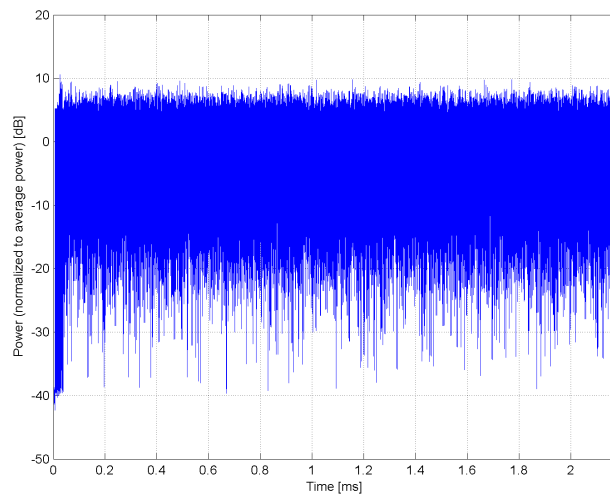
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



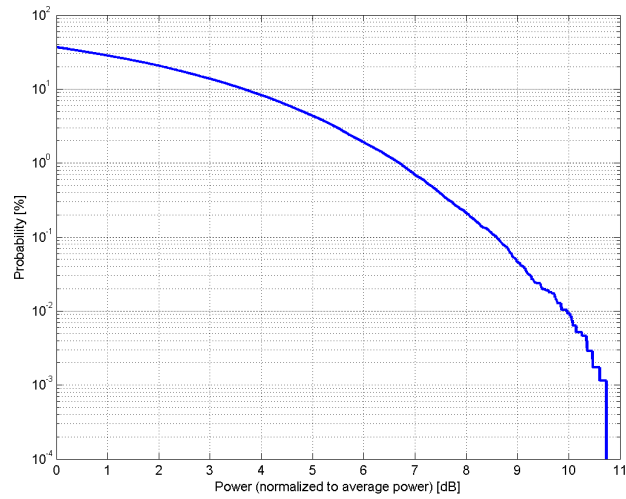
### Time Domain

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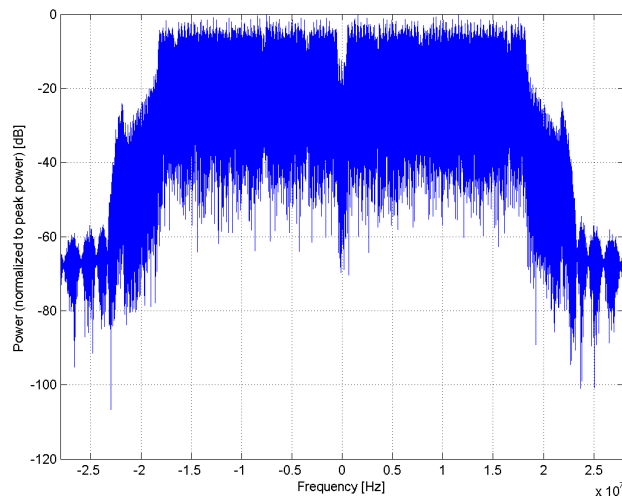
|                         |  |
|-------------------------|--|
| Name:                   | <b>IEEE 802.11n (HT Mixed, 81 Mbps, 16-QAM)</b>  |
| Group:                  | WLAN   |
| UID:                    | 10118-CAD  |
| PAR: <sup>1</sup>       | <b>8.59 dB</b>   |
| MIF: <sup>2</sup>       | <b>-17.09 dB</b>   |
| Standard Reference:     | IEEE 802.11n-2009  |
| Category:               | Random amplitude modulation  |
| Modulation:             | 16-QAM   |
| Frequency Band:         | WLAN 2.4GHz (2412.0 - 2484.0 MHz)<br>WLAN 5GHz (4915.0 - 5825.0 MHz)<br>U-NII-1, U-NII-2A (5170 - 5330 MHz)<br>U-NII-2C Standalone (5490 - 5710 MHz)<br>U-NII-2C <5.65 GHz (5490 - 5650 MHz)<br>U-NII-3 Standalone (5735 - 5835 MHz)<br>U-NII-2C, U-NII-3 (5650 - 5835 MHz)<br>U-NII-4 (5.825 - 5.925 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation: 16-QAM<br>Data Rate: 81 Mbps<br>PPDU Format: HT Mixed<br>PPDU Type: 40 MHz<br>MCS Index: 4<br>Guard Interval: Long<br>Payload Length: 21590  |
| Bandwidth:              | 40.0 MHz   |
| Integration Time:       | 2.2 ms   |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

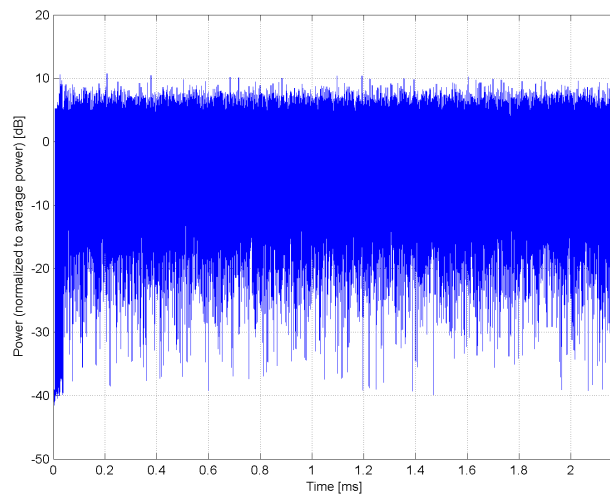
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



### Time Domain

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Name: **IEEE 802.11n (HT Mixed, 135 Mbps, 64-QAM)**

Group: WLAN  
UID: 10119-CAD

PAR: <sup>1</sup> **8.13 dB**  
MIF: <sup>2</sup> **-17.00 dB**

Standard Reference: IEEE 802.11n-2009  
Category: Random amplitude modulation  
Modulation: 64-QAM  
Frequency Band: WLAN 2.4GHz (2412.0 - 2484.0 MHz)  
WLAN 5GHz (4915.0 - 5825.0 MHz)  
U-NII-1, U-NII-2A (5170 - 5330 MHz)  
U-NII-2C Standalone (5490 - 5710 MHz)  
U-NII-2C <5.65 GHz (5490 - 5650 MHz)  
U-NII-3 Standalone (5735 - 5835 MHz)  
U-NII-2C, U-NII-3 (5650 - 5835 MHz)  
U-NII-4 (5.825 - 5.925 MHz)  
Validation band (0.0 - 6000.0 MHz)

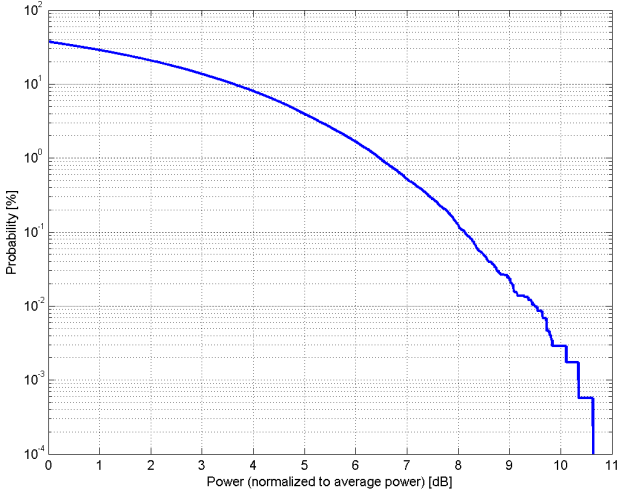
Detailed Specification: Modulation: 64-QAM  
Data Rate: 135 Mbps  
PPDU Format: HT Mixed  
PPDU Type: 40 MHz  
MCS Index: 7  
Guard Interval: Long  
Payload Length: 36008

Bandwidth: 40.0 MHz  
Integration Time: 2.2 ms

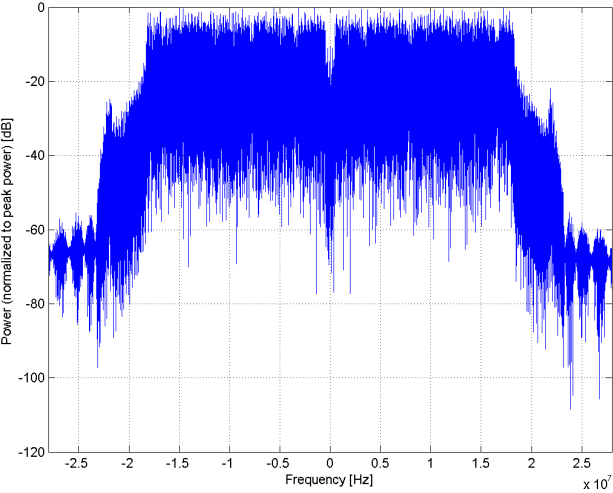
<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).

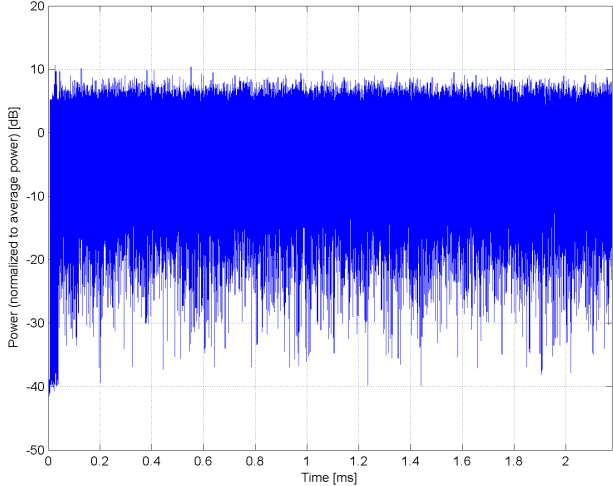




**Complementary Cumulative Distribution Function (CCDF)**



**Frequency Domain**



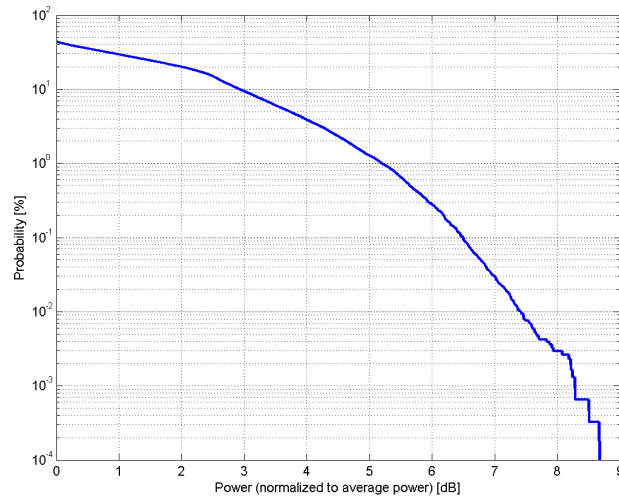
**Time Domain**

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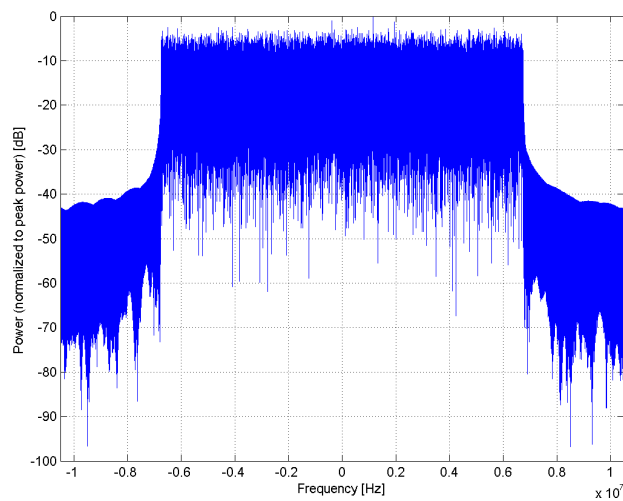
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 16-QAM)</b>  |
| Group:                  | LTE-FDD  |
| UID:                    | 10140-CAE  |
| PAR: <sup>1</sup>       | <b>6.49 dB</b>   |
| MIF: <sup>2</sup>       | <b>-19.37 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 16-QAM   |
| Modulation:             |  |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 16QAM<br>Data Type: UL-SCH<br>Number RB: 75<br>Transport Block Size: 21384<br>TBS Index: 14<br>MCS Index: 15<br>Data Type: PN9  |
| Bandwidth:              | 15.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

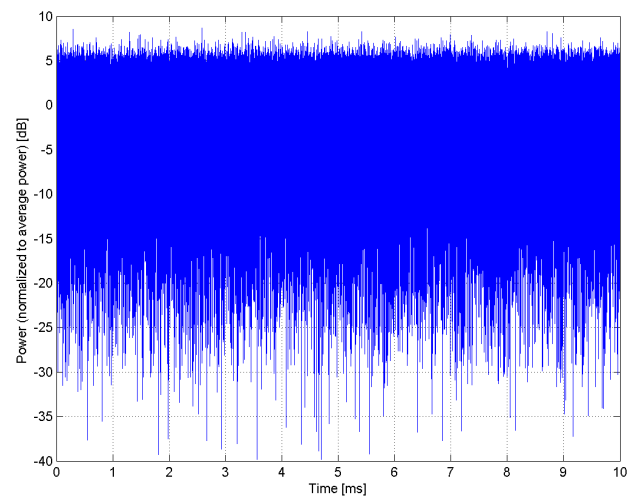
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



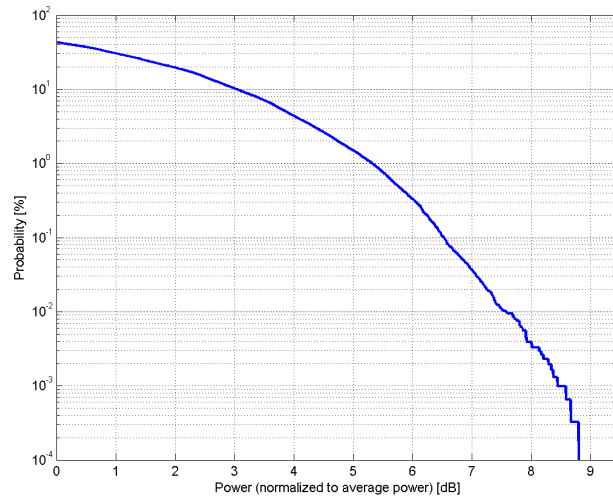
### Time Domain

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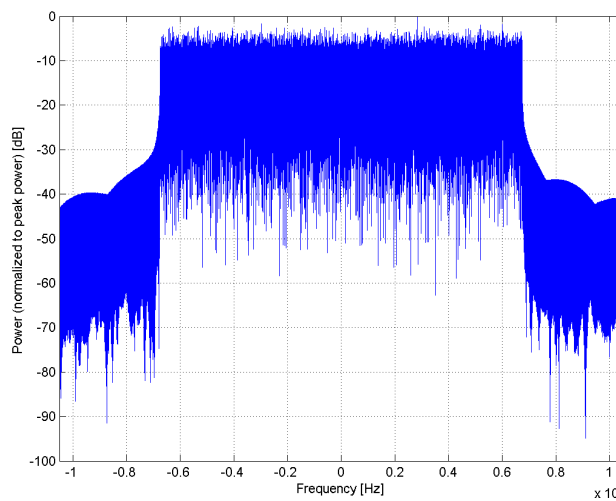
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 100% RB, 15 MHz, 64-QAM)</b>  |
| Group:                  | LTE-FDD  |
| UID:                    | 10141-CAE  |
| PAR: <sup>1</sup>       | <b>6.53 dB</b>   |
| MIF: <sup>2</sup>       | <b>-19.44 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 64-QAM   |
| Modulation:             | 64-QAM   |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 64QAM<br>Data Type: UL-SCH<br>Number RB: 75<br>Transport Block Size: 43816<br>TBS Index: 23<br>MCS Index: 25<br>Data Type: PN9  |
| Bandwidth:              | 15.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

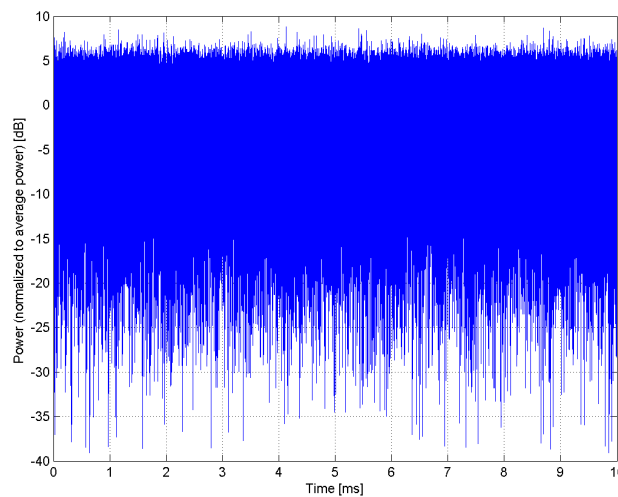
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



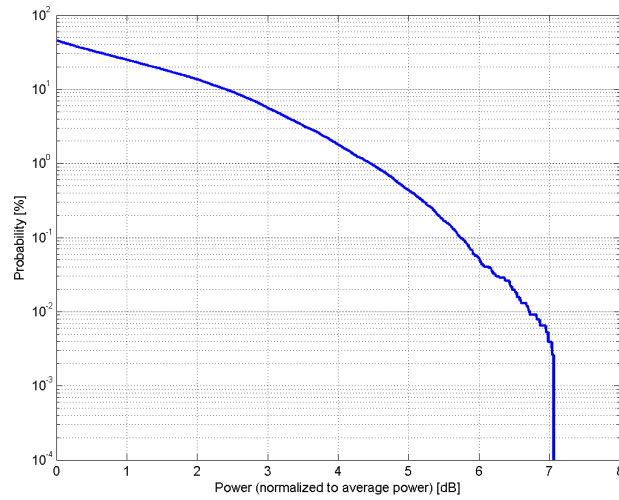
### Time Domain

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Engineering AG**  
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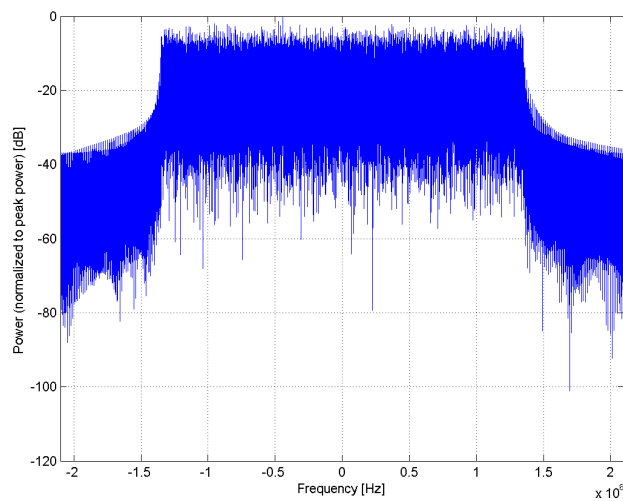
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 100% RB, 3 MHz, QPSK)</b>   |
| Group:                  | LTE-FDD  |
| UID:                    | 10142-CAE  |
| PAR: <sup>1</sup>       | <b>5.73 dB</b>   |
| MIF: <sup>2</sup>       | <b>-22.36 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | QPSK   |
| Modulation:             |  |
| Frequency Band:         | Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: QPSK<br>Data Type: UL-SCH<br>Number RB: 15<br>Transport Block Size: 1320<br>TBS Index: 5<br>MCS Index: 5<br>Data Type: PN9  |
| Bandwidth:              | 3.0 MHz  |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

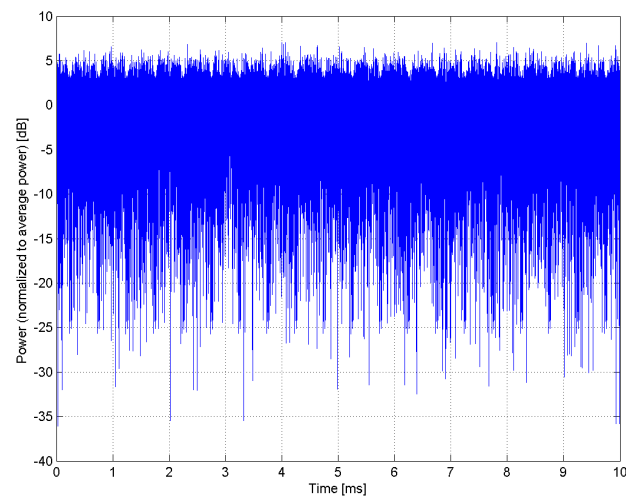
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



### Time Domain

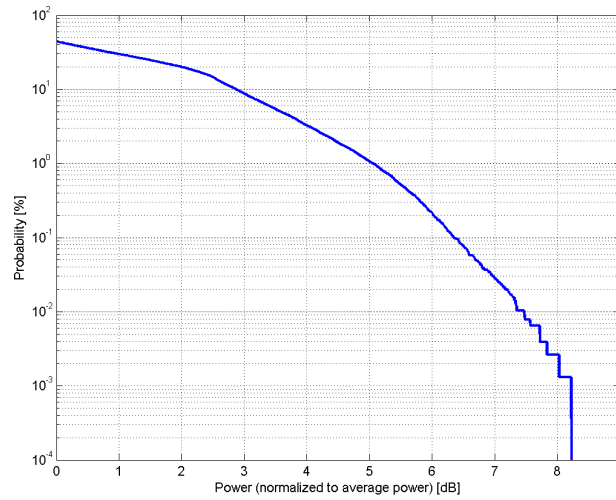
**Calibration Laboratory of  
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Engineering AG**  
Zeughausstrasse 43, 8004 Zurich, Switzerland

|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 16-QAM)</b>   |
| Group:                  | LTE-FDD  |
| UID:                    | 10143-CAE  |
| PAR: <sup>1</sup>       | <b>6.35 dB</b>   |
| MIF: <sup>2</sup>       | <b>-14.75 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 16-QAM   |
| Modulation:             |  |
| Frequency Band:         | Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 16QAM<br>Data Type: UL-SCH<br>Number RB: 15<br>Transport Block Size: 4264<br>TBS Index: 14<br>MCS Index: 15<br>Data Type: PN9   |
| Bandwidth:              | 3.0 MHz  |
| Integration Time:       | 10.0 ms  |

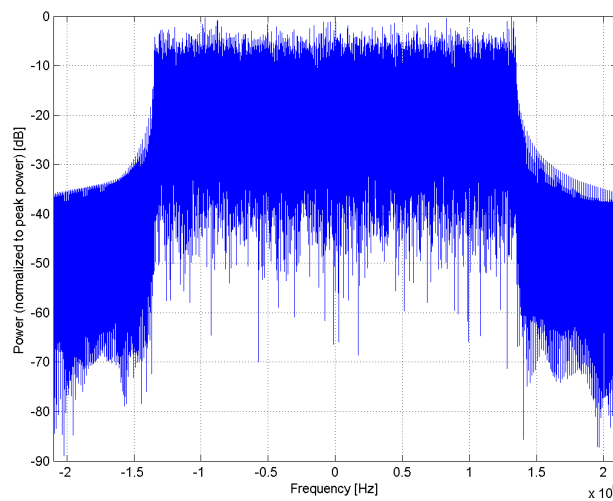
<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).

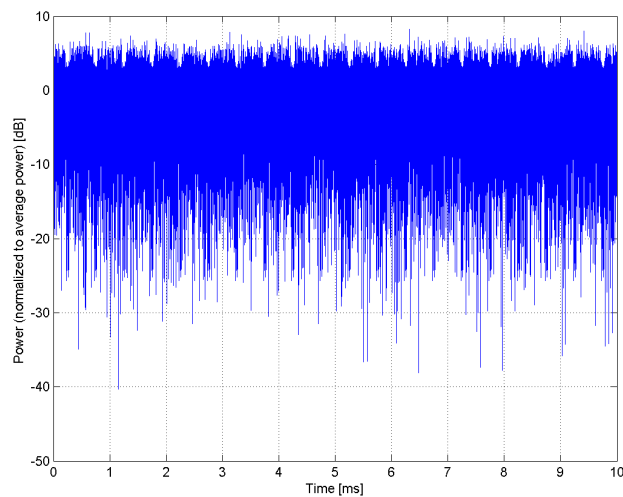




### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



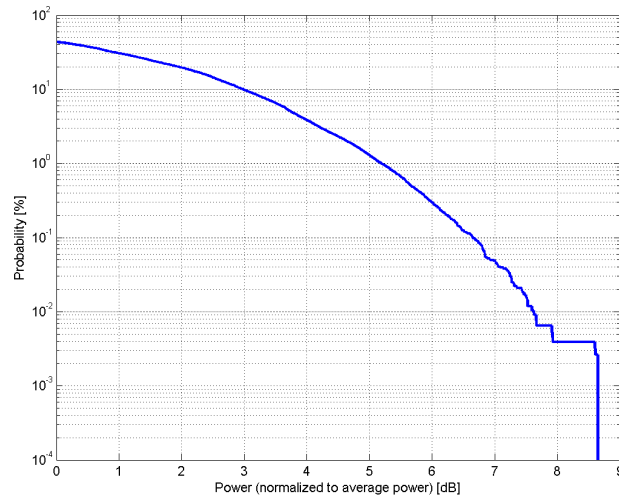
### Time Domain

**Calibration Laboratory of  
Schmid & Partner  
Engineering AG**  
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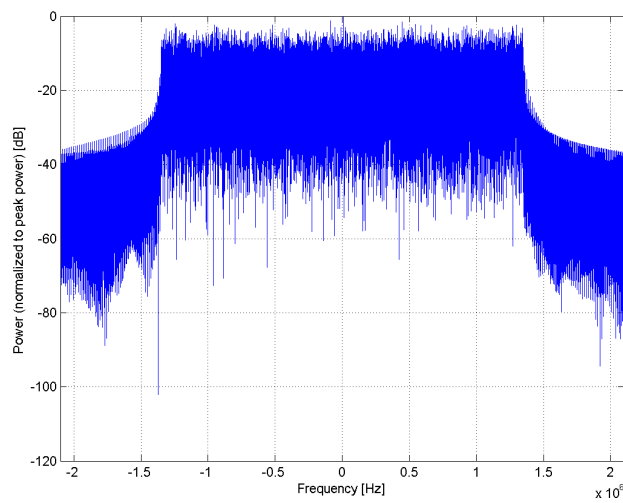
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 100% RB, 3 MHz, 64-QAM)</b>   |
| Group:                  | LTE-FDD  |
| UID:                    | 10144-CAE  |
| PAR: <sup>1</sup>       | <b>6.65 dB</b>   |
| MIF: <sup>2</sup>       | <b>-15.02 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 64-QAM   |
| Modulation:             |  |
| Frequency Band:         | Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 64QAM<br>Data Type: UL-SCH<br>Number RB: 15<br>Transport Block Size: 8504<br>TBS Index: 23<br>MCS Index: 25<br>Data Type: PN9   |
| Bandwidth:              | 3.0 MHz  |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

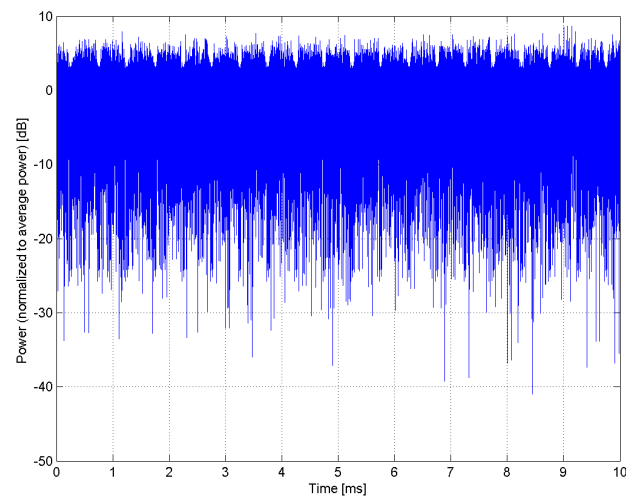
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



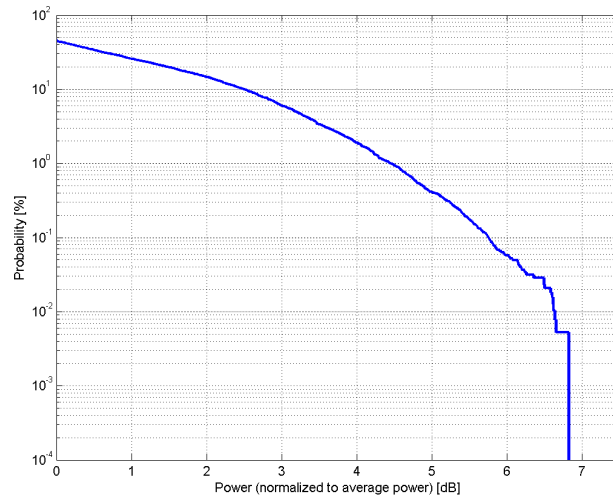
### Time Domain

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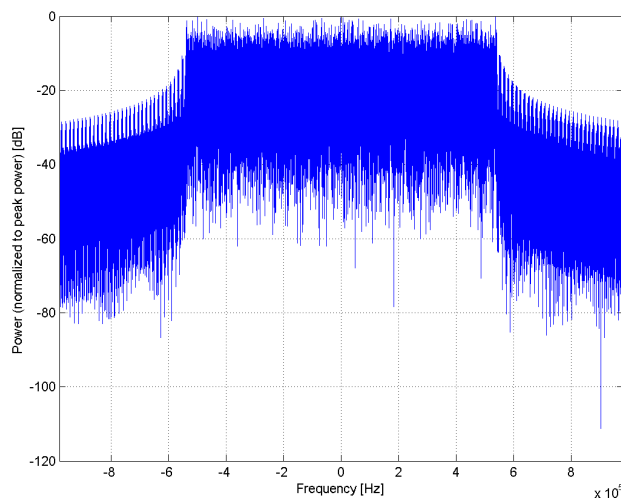
|                         |   |
|-------------------------|---|
| Name:                   | <b>LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, QPSK)</b>  |
| Group:                  | LTE-FDD   |
| UID:                    | 10145-CAF   |
| PAR: <sup>1</sup>       | <b>5.76 dB</b>  |
| MIF: <sup>2</sup>       | <b>-17.39 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation   |
| Category:               | QPSK  |
| Modulation:             |   |
| Frequency Band:         | Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: QPSK<br>Data Type: UL-SCH<br>Number RB: 6<br>Transport Block Size: 504<br>TBS Index: 5<br>MCS Index: 5<br>Data Type: PN9   |
| Bandwidth:              | 1.4 MHz   |
| Integration Time:       | 10.0 ms   |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

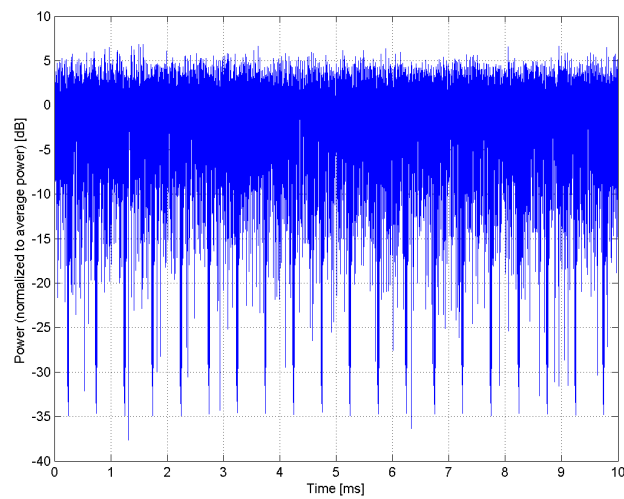
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



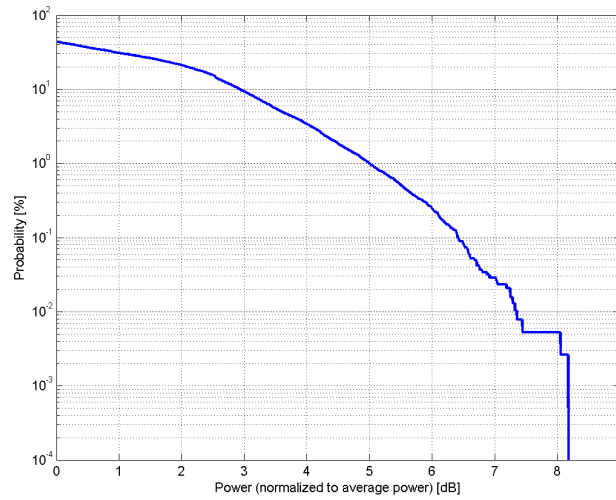
### Time Domain

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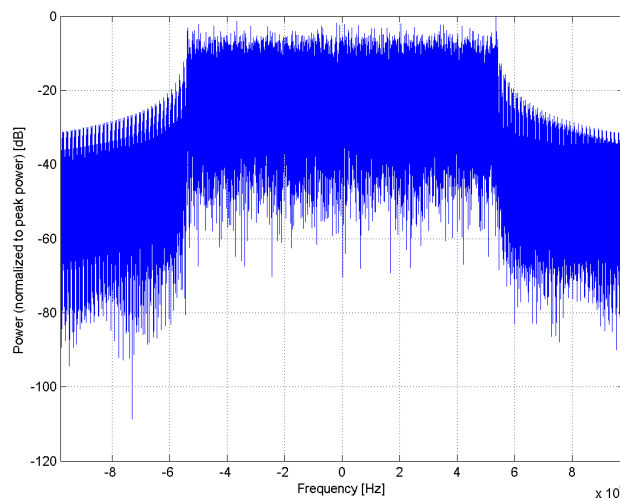
|                         |   |
|-------------------------|---|
| Name:                   | <b>LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 16-QAM)</b>  |
| Group:                  | LTE-FDD   |
| UID:                    | 10146-CAF   |
| PAR: <sup>1</sup>       | <b>6.41 dB</b>  |
| MIF: <sup>2</sup>       | <b>-13.60 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation   |
| Category:               | 16-QAM  |
| Modulation:             |   |
| Frequency Band:         | Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 16QAM<br>Data Type: UL-SCH<br>Number RB: 15<br>Transport Block Size: 1736<br>TBS Index: 14<br>MCS Index: 15<br>Data Type: PN9  |
| Bandwidth:              | 1.4 MHz   |
| Integration Time:       | 10.0 ms   |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

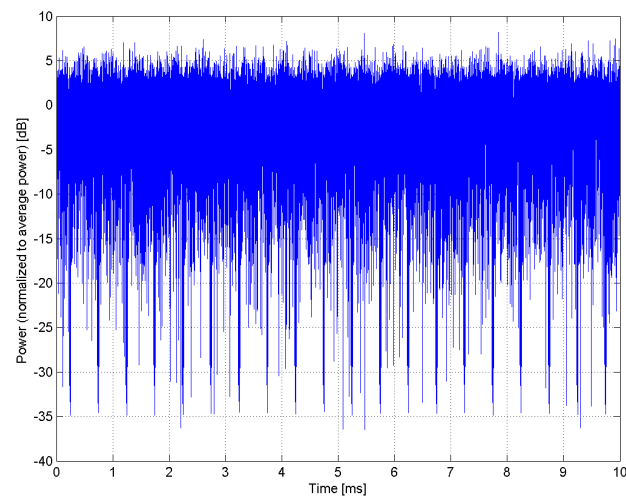
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



### Time Domain

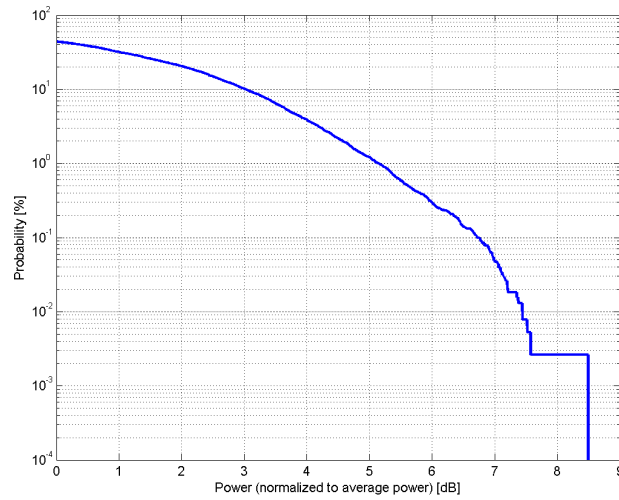
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|                         |   |
|-------------------------|---|
| Name:                   | <b>LTE-FDD (SC-FDMA, 100% RB, 1.4 MHz, 64-QAM)</b>  |
| Group:                  | LTE-FDD   |
| UID:                    | 10147-CAF   |
| PAR: <sup>1</sup>       | <b>6.72 dB</b>  |
| MIF: <sup>2</sup>       | <b>-13.90 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation   |
| Category:               | 64-QAM  |
| Modulation:             |   |
| Frequency Band:         | Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 64QAM<br>Data Type: UL-SCH<br>Number RB: 6<br>Transport Block Size: 3496<br>TBS Index: 23<br>MCS Index: 25<br>Data Type: PN9   |
| Bandwidth:              | 1.4 MHz   |
| Integration Time:       | 10.0 ms   |

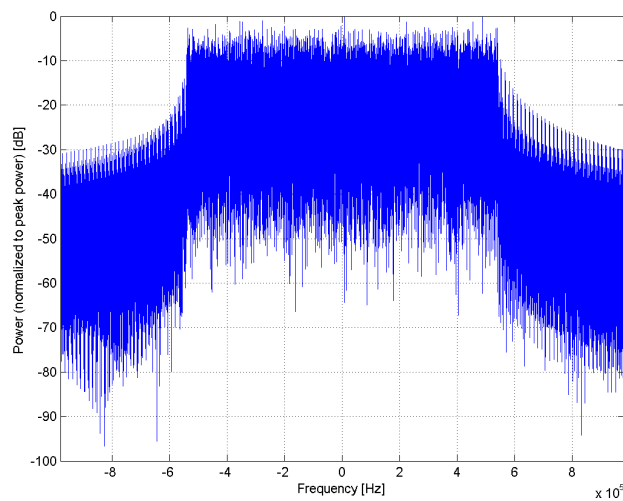
<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).

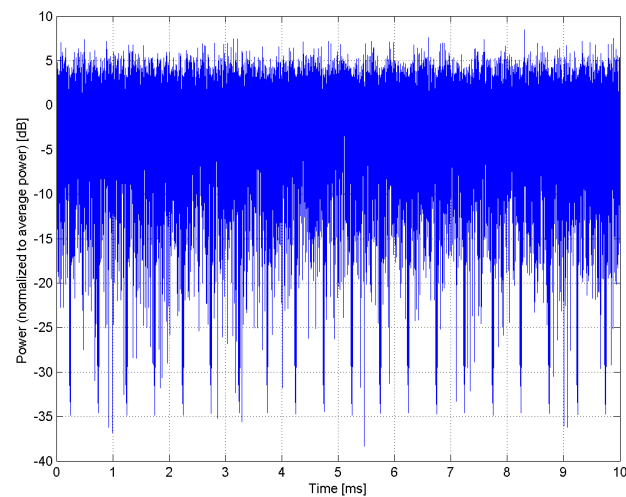




### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



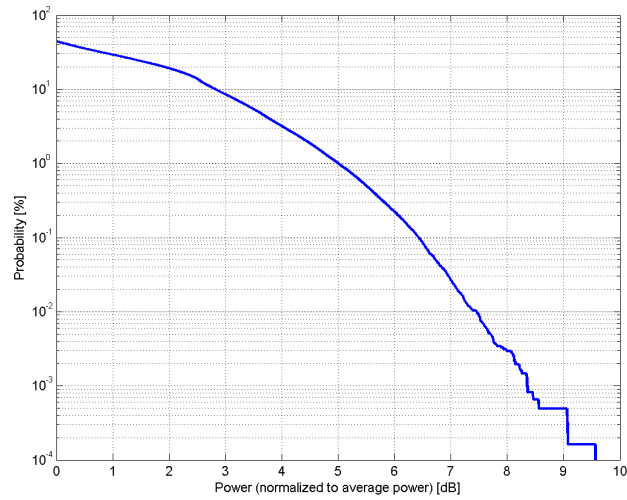
### Time Domain

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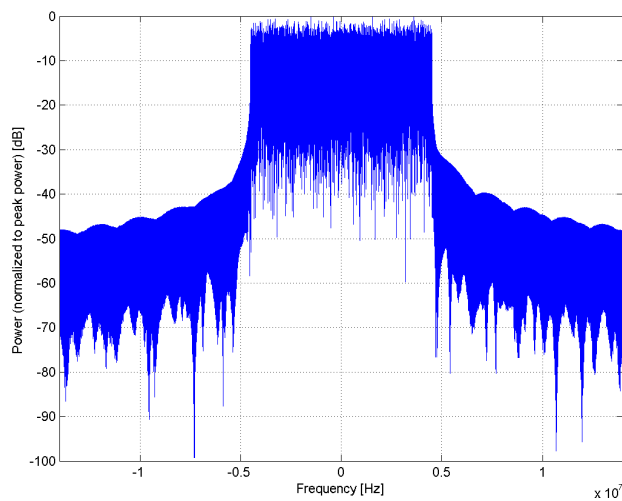
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)</b>   |
| Group:                  | LTE-FDD  |
| UID:                    | 10149-CAE  |
| PAR: <sup>1</sup>       | <b>6.42 dB</b>   |
| MIF: <sup>2</sup>       | <b>-16.87 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01   |
| Category:               | Random amplitude modulation  |
| Modulation:             | 16-QAM   |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 16QAM<br>Data Type: UL-SCH<br>Number RB: 50<br>Transport Block Size: 14112<br>TBS Index: 14<br>MCS Index: 15<br>Data Type: PN9  |
| Bandwidth:              | 20.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

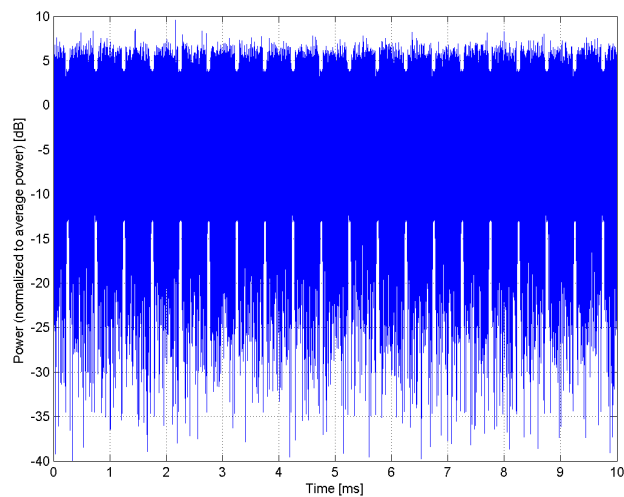
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



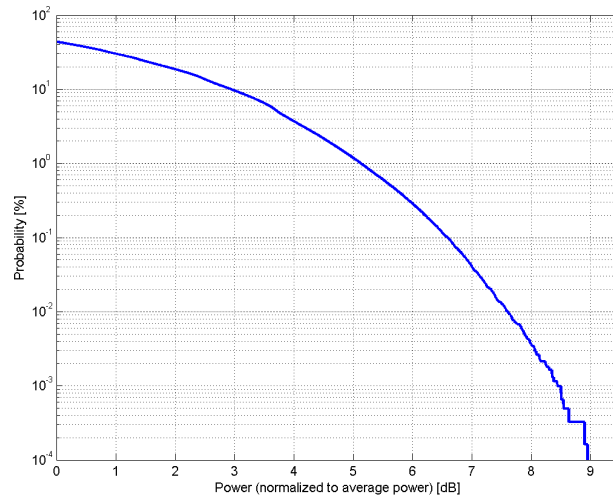
### Time Domain

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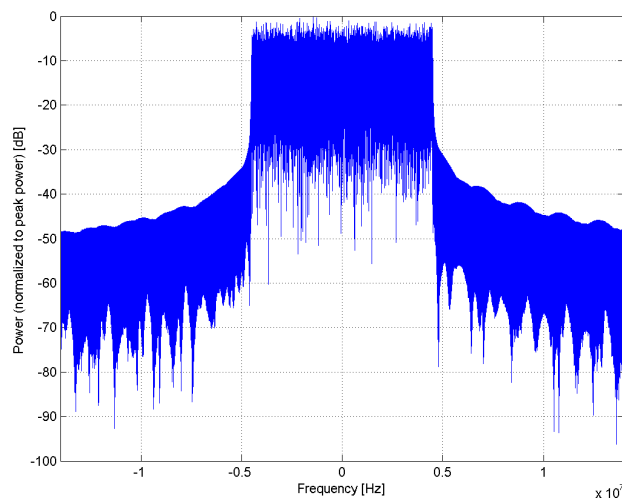
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)</b>   |
| Group:                  | LTE-FDD  |
| UID:                    | 10150-CAE  |
| PAR: <sup>1</sup>       | <b>6.60 dB</b>   |
| MIF: <sup>2</sup>       | <b>-16.33 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 64-QAM   |
| Modulation:             | 64-QAM   |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 64QAM<br>Data Type: UL-SCH<br>Number RB: 50<br>Transport Block Size: 28336<br>TBS Index: 23<br>MCS Index: 25<br>Data Type: PN9  |
| Bandwidth:              | 20.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

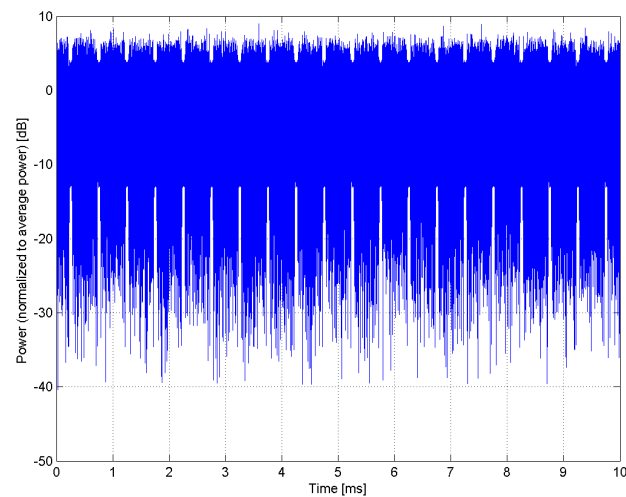
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



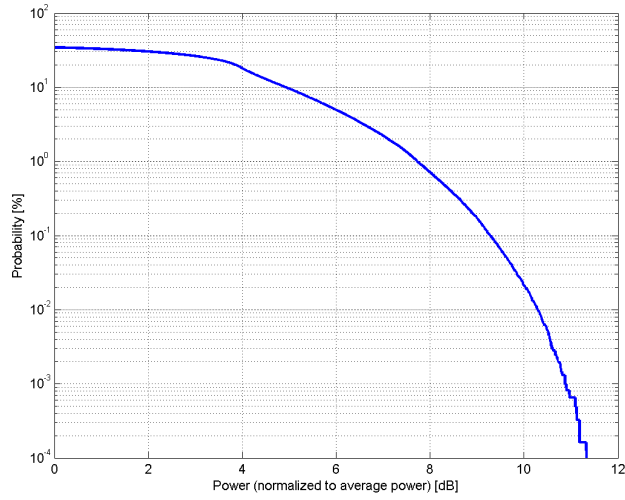
### Time Domain

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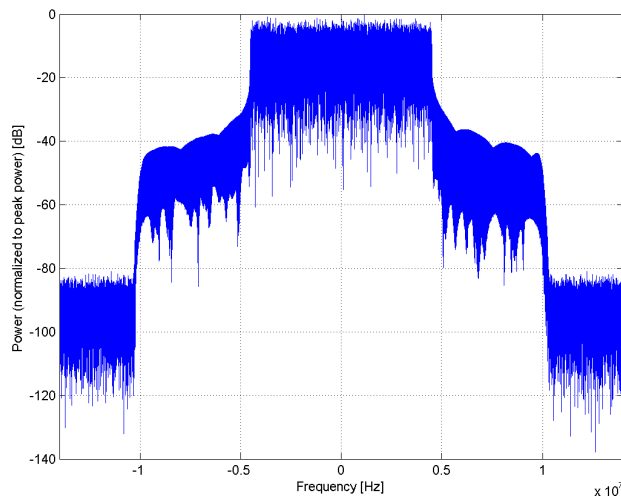
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-TDD (SC-FDMA, 50% RB, 20 MHz, QPSK)</b>   |
| Group:                  | LTE-TDD  |
| UID:                    | 10151-CAG  |
| PAR: <sup>1</sup>       | <b>9.28 dB</b>   |
| MIF: <sup>2</sup>       | <b>-1.64 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | QPSK   |
| Modulation:             |  |
| Frequency Band:         | Band 33, E-UTRA/TDD (1900.0 - 1920.0 MHz)<br>Band 35, E-UTRA/TDD (1850.0 - 1910.0 MHz)<br>Band 36, E-UTRA/TDD (1930.0 - 1990.0 MHz)<br>Band 37, E-UTRA/TDD (1910.0 - 1930.0 MHz)<br>Band 38, E-UTRA/TDD (2570.0 - 2620.0 MHz)<br>Band 39, E-UTRA/TDD (1880.0 - 1920.0 MHz)<br>Band 40, E-UTRA/TDD (2300.0 - 2400.0 MHz)<br>Band 41, E-UTRA/TDD (2496.0 - 2690.0 MHz)<br>Band 42, E-UTRA/TDD (3400.0 - 3600.0 MHz)<br>Band 43, E-UTRA/TDD (3600.0 - 3800.0 MHz)<br>Band 44, E-UTRA/TDD (703.0 - 803.0 MHz)<br>Band 45, E-UTRA/FDD (1447.0 - 1467.0 MHz)<br>Band 46, E-UTRA/FDD (5150.0 - 5925.0 MHz)<br>Band 47, E-UTRA/TDD (5855.0 - 5925.0 MHz)<br>Band 48, E-UTRA/TDD (3550.0 - 3700.0 MHz)<br>Band 49, E-UTRA/TDD (3550.0 - 3700.0 MHz)<br>Band 50, E-UTRA/TDD (1432.0 - 1517.0 MHz)<br>Band 76, E-UTRA/FDD (3300.0 - 3400.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Uplink-downlink configuration: 1<br>Special Subframe configuration: 4<br>Number of Frames: 1<br>Settings for UL Subframe 2,3,7,8:<br>Number of PUSCHs: 1<br>Modulation Scheme: QPSK<br>Allocated RB: 50<br>Start Number of RB: 25<br>Data Type: PN9fix   |
| Bandwidth:              | 20.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

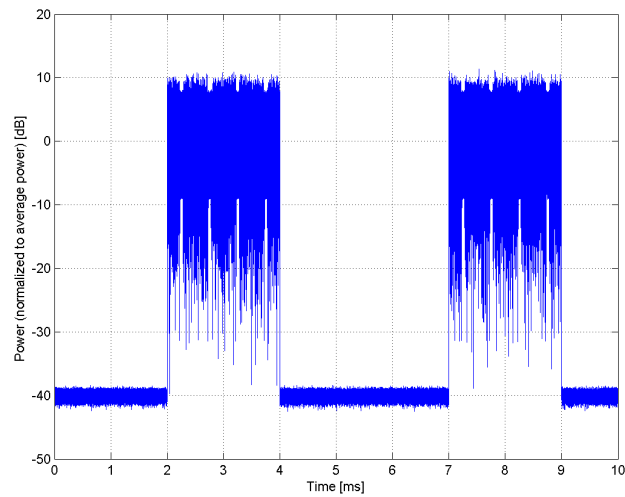
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



**Complementary Cumulative Distribution Function (CCDF)**



**Frequency Domain**



**Time Domain**

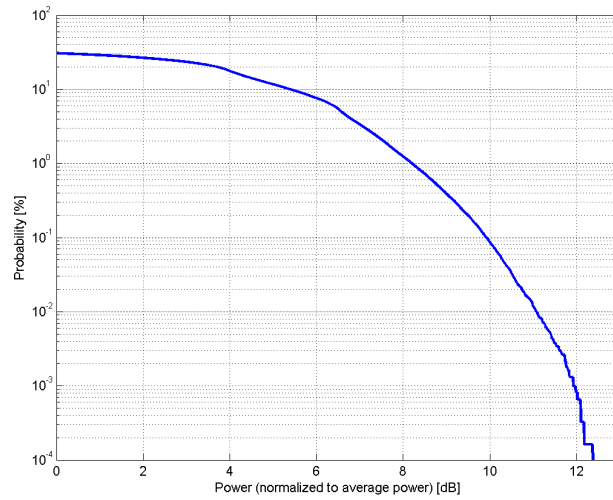
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Engineering AG**  
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|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 16-QAM)</b>   |
| Group:                  | LTE-TDD  |
| UID:                    | 10152-CAG  |
| PAR: <sup>1</sup>       | <b>9.92 dB</b>   |
| MIF: <sup>2</sup>       | <b>-1.66 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 16-QAM   |
| Modulation:             |  |
| Frequency Band:         | Band 33, E-UTRA/TDD (1900.0 - 1920.0 MHz)<br>Band 35, E-UTRA/TDD (1850.0 - 1910.0 MHz)<br>Band 36, E-UTRA/TDD (1930.0 - 1990.0 MHz)<br>Band 37, E-UTRA/TDD (1910.0 - 1930.0 MHz)<br>Band 38, E-UTRA/TDD (2570.0 - 2620.0 MHz)<br>Band 39, E-UTRA/TDD (1880.0 - 1920.0 MHz)<br>Band 40, E-UTRA/TDD (2300.0 - 2400.0 MHz)<br>Band 41, E-UTRA/TDD (2496.0 - 2690.0 MHz)<br>Band 42, E-UTRA/TDD (3400.0 - 3600.0 MHz)<br>Band 43, E-UTRA/TDD (3600.0 - 3800.0 MHz)<br>Band 44, E-UTRA/TDD (703.0 - 803.0 MHz)<br>Band 45, E-UTRA/FDD (1447.0 - 1467.0 MHz)<br>Band 46, E-UTRA/FDD (5150.0 - 5925.0 MHz)<br>Band 47, E-UTRA/TDD (5855.0 - 5925.0 MHz)<br>Band 48, E-UTRA/TDD (3550.0 - 3700.0 MHz)<br>Band 49, E-UTRA/TDD (3550.0 - 3700.0 MHz)<br>Band 50, E-UTRA/TDD (1432.0 - 1517.0 MHz)<br>Band 76, E-UTRA/FDD (3300.0 - 3400.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Uplink-downlink configuration: 1<br>Special Subframe configuration: 4<br>Number of Frames: 1<br>Settings for UL Subframe 2,3,7,8:<br>Number of PUSCHs: 1<br>Modulation Scheme: 16QAM<br>Allocated RB: 50<br>Start Number of RB: 25<br>Data Type: PN9fix  |
| Bandwidth:              | 20.0 MHz   |
| Integration Time:       | 10.0 ms  |

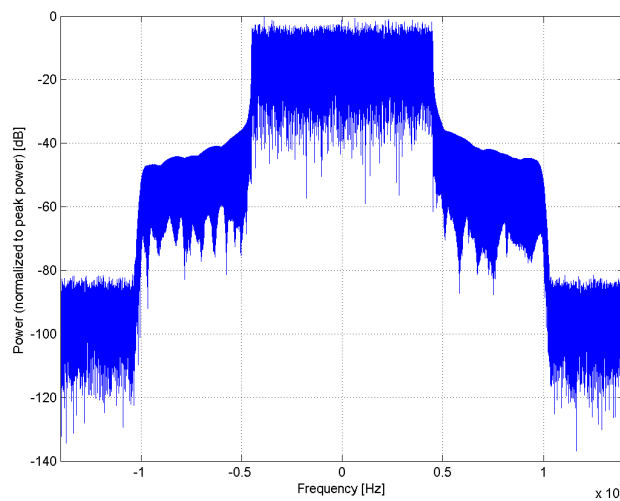
<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).

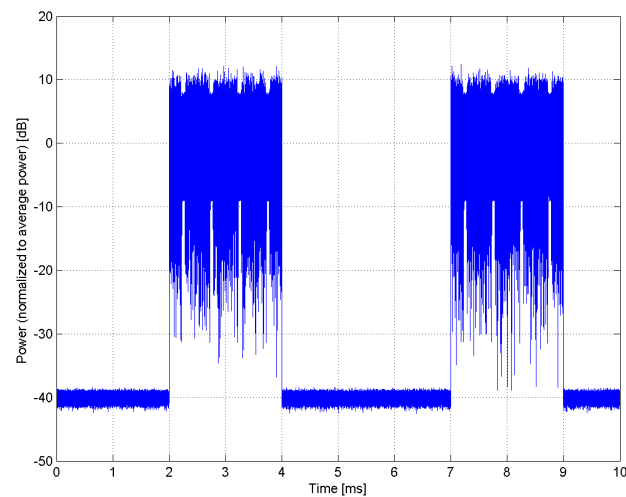




### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



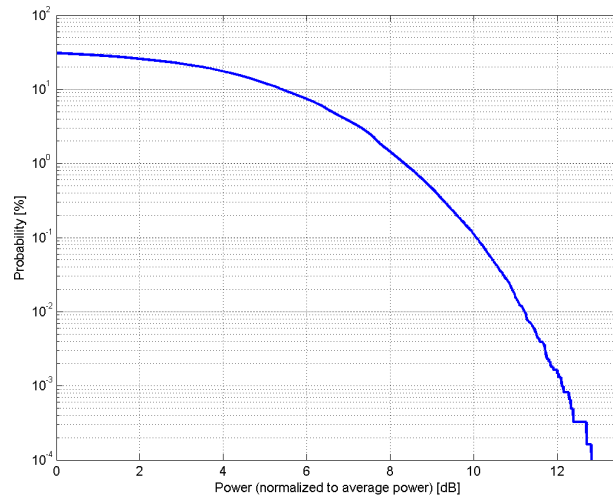
### Time Domain

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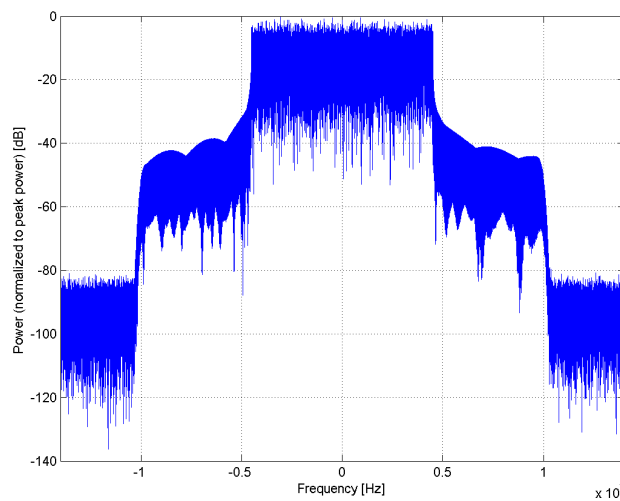
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-TDD (SC-FDMA, 50% RB, 20 MHz, 64-QAM)</b>   |
| Group:                  | LTE-TDD  |
| UID:                    | 10153-CAG  |
| PAR: <sup>1</sup>       | <b>10.05 dB</b>  |
| MIF: <sup>2</sup>       | <b>-1.66 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 64-QAM   |
| Modulation:             |  |
| Frequency Band:         | Band 33, E-UTRA/TDD (1900.0 - 1920.0 MHz)<br>Band 35, E-UTRA/TDD (1850.0 - 1910.0 MHz)<br>Band 36, E-UTRA/TDD (1930.0 - 1990.0 MHz)<br>Band 37, E-UTRA/TDD (1910.0 - 1930.0 MHz)<br>Band 38, E-UTRA/TDD (2570.0 - 2620.0 MHz)<br>Band 39, E-UTRA/TDD (1880.0 - 1920.0 MHz)<br>Band 40, E-UTRA/TDD (2300.0 - 2400.0 MHz)<br>Band 41, E-UTRA/TDD (2496.0 - 2690.0 MHz)<br>Band 42, E-UTRA/TDD (3400.0 - 3600.0 MHz)<br>Band 43, E-UTRA/TDD (3600.0 - 3800.0 MHz)<br>Band 44, E-UTRA/TDD (703.0 - 803.0 MHz)<br>Band 45, E-UTRA/FDD (1447.0 - 1467.0 MHz)<br>Band 46, E-UTRA/FDD (5150.0 - 5925.0 MHz)<br>Band 47, E-UTRA/TDD (5855.0 - 5925.0 MHz)<br>Band 48, E-UTRA/TDD (3550.0 - 3700.0 MHz)<br>Band 49, E-UTRA/TDD (3550.0 - 3700.0 MHz)<br>Band 50, E-UTRA/TDD (1432.0 - 1517.0 MHz)<br>Band 76, E-UTRA/FDD (3300.0 - 3400.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Uplink-downlink configuration: 1<br>Special Subframe configuration: 4<br>Number of Frames: 1<br>Settings for UL Subframe 2,3,7,8:<br>Number of PUSCHs: 1<br>Modulation Scheme: 64QAM<br>Allocated RB: 50<br>Start Number of RB: 25<br>Data Type: PN9fix  |
| Bandwidth:              | 20.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

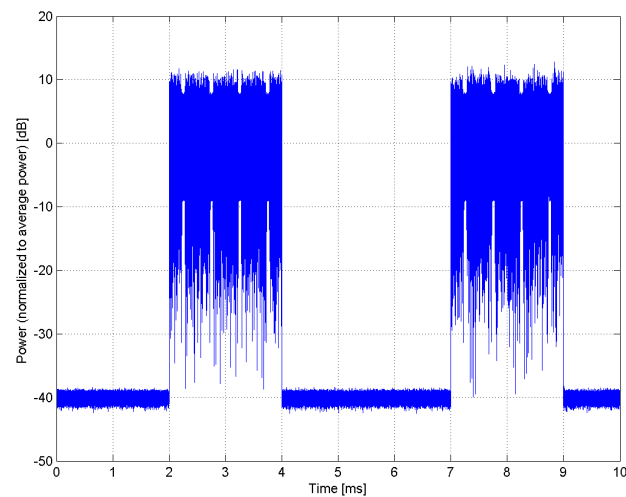
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



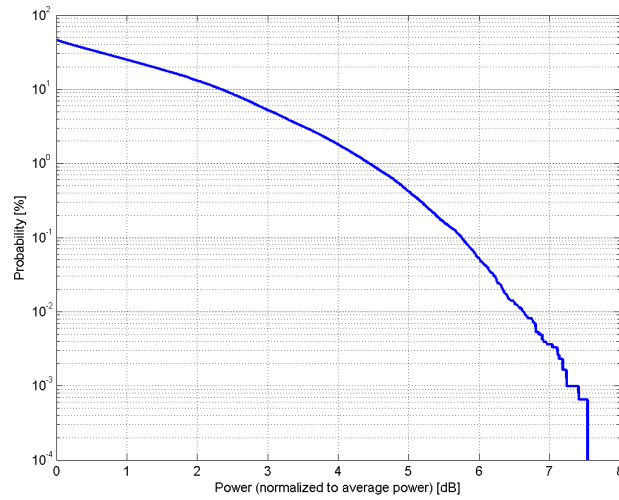
### Time Domain

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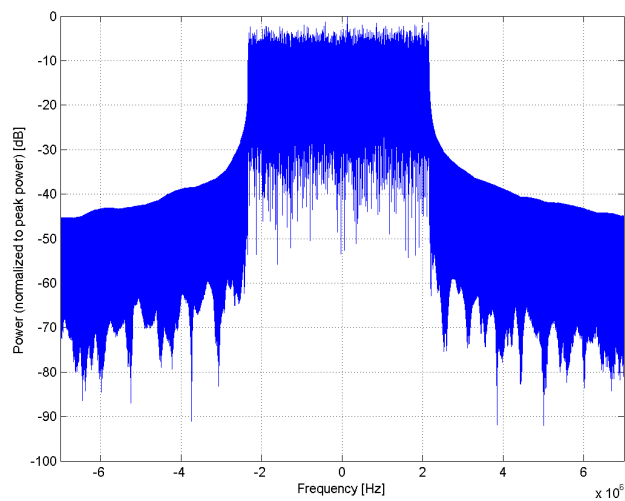
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 50% RB, 10 MHz, QPSK)</b>   |
| Group:                  | LTE-FDD  |
| UID:                    | 10154-CAG  |
| PAR: <sup>1</sup>       | <b>5.75 dB</b>   |
| MIF: <sup>2</sup>       | <b>-23.42 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | QPSK   |
| Modulation:             |  |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 6, E-UTRA/FDD (830.0 - 840.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 11, E-UTRA/FDD (1427.9 - 1447.9 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 13, E-UTRA/FDD (777.0 - 787.0 MHz)<br>Band 14, E-UTRA/FDD (788.0 - 798.0 MHz)<br>Band 17, E-UTRA/FDD (704.0 - 716.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 24, E-UTRA/FDD (1626.5 - 1660.5 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 30, E-UTRA/FDD (2305.0 - 2315.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Band 85, E-UTRA/FDD (698.0 - 716.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: QPSK<br>Data Type: UL-SCH<br>Number RB: 25<br>Transport Block Size: 2216<br>TBS Index: 5<br>MCS Index: 5<br>Data Type: PN9  |
| Bandwidth:              | 10.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

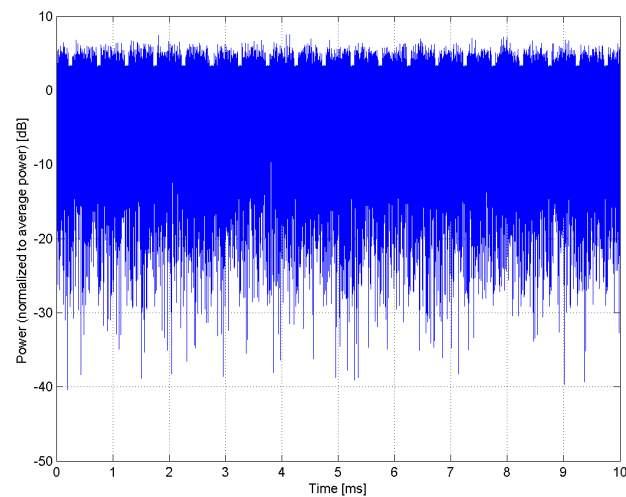
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



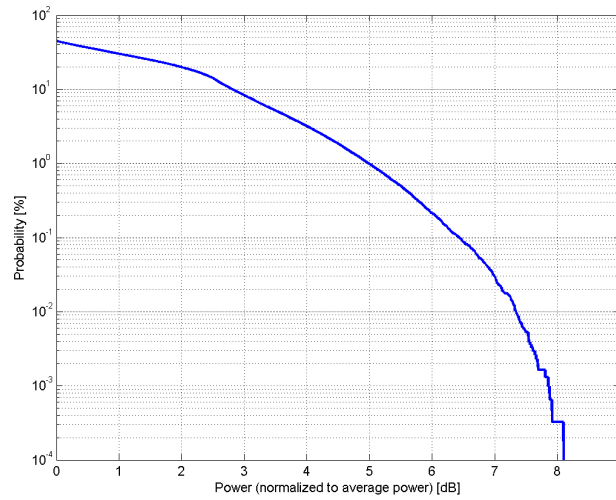
### Time Domain

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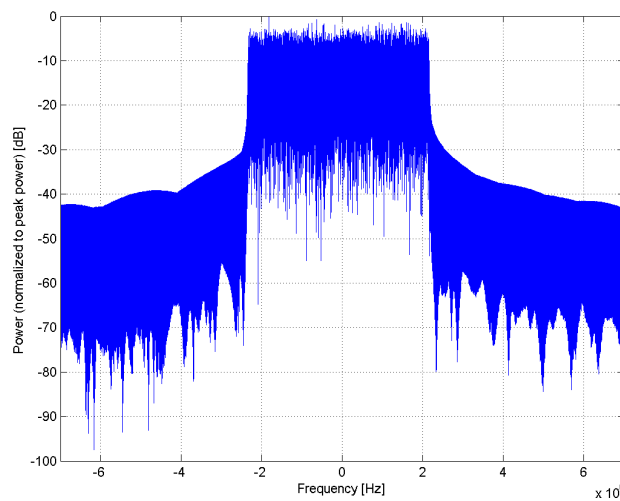
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 16-QAM)</b>   |
| Group:                  | LTE-FDD  |
| UID:                    | 10155-CAG  |
| PAR: <sup>1</sup>       | <b>6.43 dB</b>   |
| MIF: <sup>2</sup>       | <b>-16.36 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 16-QAM   |
| Modulation:             |  |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 6, E-UTRA/FDD (830.0 - 840.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 11, E-UTRA/FDD (1427.9 - 1447.9 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 13, E-UTRA/FDD (777.0 - 787.0 MHz)<br>Band 14, E-UTRA/FDD (788.0 - 798.0 MHz)<br>Band 17, E-UTRA/FDD (704.0 - 716.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 24, E-UTRA/FDD (1626.5 - 1660.5 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 30, E-UTRA/FDD (2305.0 - 2315.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Band 85, E-UTRA/FDD (698.0 - 716.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: QPSK<br>Data Type: UL-SCH<br>Number RB: 25<br>Transport Block Size: 7224<br>TBS Index: 14<br>MCS Index: 15<br>Data Type: PN9  |
| Bandwidth:              | 10.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

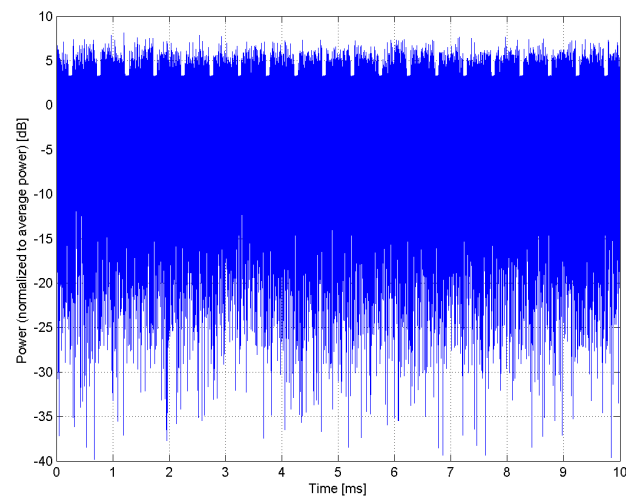
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



### Time Domain

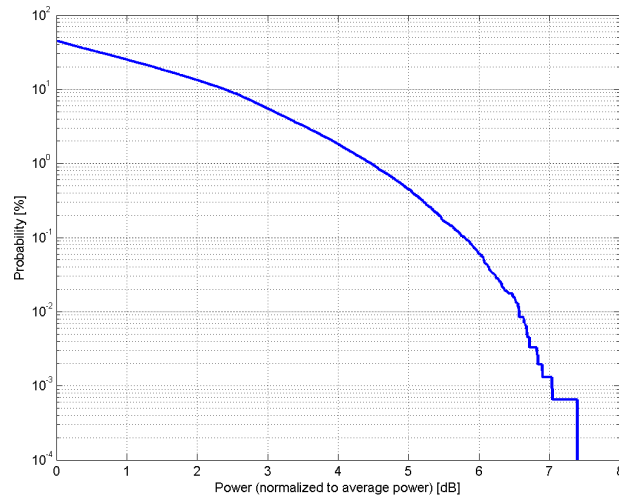
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|                         |   |
|-------------------------|---|
| Name:                   | <b>LTE-FDD (SC-FDMA, 50% RB, 5 MHz, QPSK)</b>   |
| Group:                  | LTE-FDD   |
| UID:                    | 10156-CAG   |
| PAR: <sup>1</sup>       | <b>5.79 dB</b>  |
| MIF: <sup>2</sup>       | <b>-21.71 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01  |
| Category:               | Random amplitude modulation   |
| Modulation:             | QPSK  |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 6, E-UTRA/FDD (830.0 - 840.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 11, E-UTRA/FDD (1427.9 - 1447.9 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 13, E-UTRA/FDD (777.0 - 787.0 MHz)<br>Band 14, E-UTRA/FDD (788.0 - 798.0 MHz)<br>Band 17, E-UTRA/FDD (704.0 - 716.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 24, E-UTRA/FDD (1626.5 - 1660.5 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 30, E-UTRA/FDD (2305.0 - 2315.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Band 85, E-UTRA/FDD (698.0 - 716.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: QPSK<br>Data Type: UL-SCH<br>Number RB: 12<br>Transport Block Size: 1032<br>TBS Index: 5<br>MCS Index: 5<br>Data Type: PN9   |
| Bandwidth:              | 5.0 MHz   |
| Integration Time:       | 10.0 ms   |

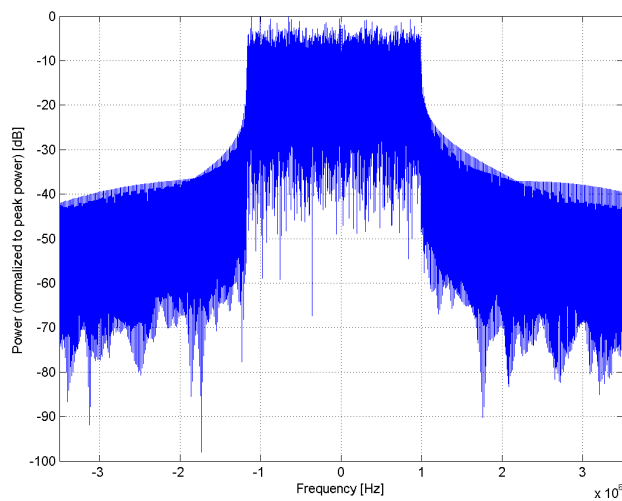
<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).

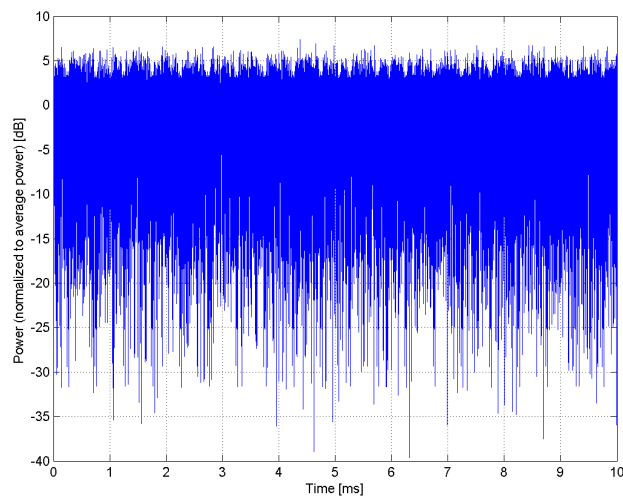




### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



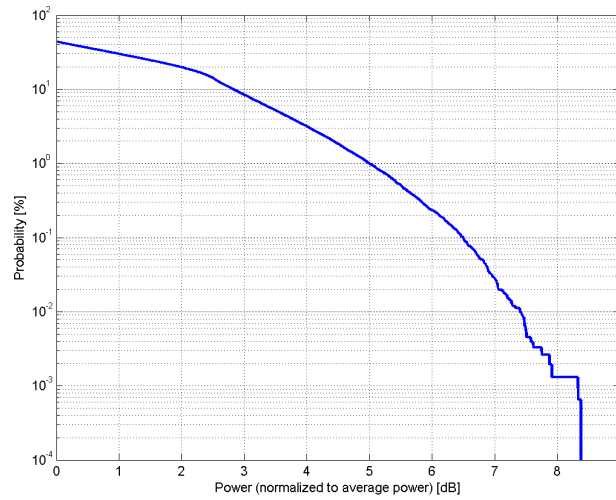
### Time Domain

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Engineering AG**  
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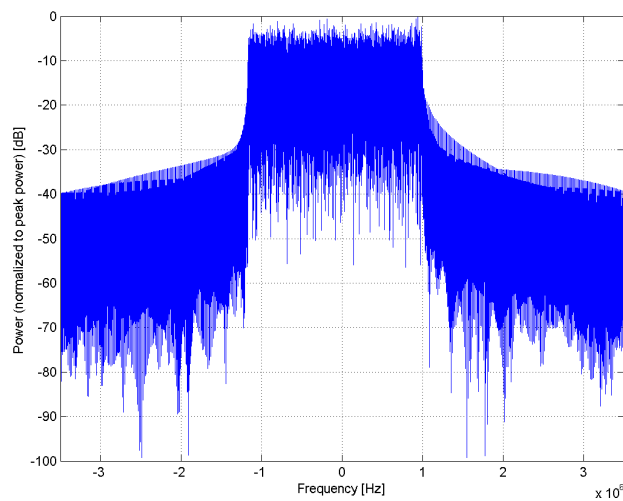
|                         |   |
|-------------------------|---|
| Name:                   | <b>LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 16-QAM)</b>   |
| Group:                  | LTE-FDD   |
| UID:                    | 10157-CAG   |
| PAR: <sup>1</sup>       | <b>6.49 dB</b>  |
| MIF: <sup>2</sup>       | <b>-15.78 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation   |
| Category:               | 16-QAM  |
| Modulation:             |   |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 6, E-UTRA/FDD (830.0 - 840.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 11, E-UTRA/FDD (1427.9 - 1447.9 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 13, E-UTRA/FDD (777.0 - 787.0 MHz)<br>Band 14, E-UTRA/FDD (788.0 - 798.0 MHz)<br>Band 17, E-UTRA/FDD (704.0 - 716.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 24, E-UTRA/FDD (1626.5 - 1660.5 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 30, E-UTRA/FDD (2305.0 - 2315.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Band 85, E-UTRA/FDD (698.0 - 716.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 16QAM<br>Data Type: UL-SCH<br>Number RB: 12<br>Transport Block Size: 3496<br>TBS Index: 14<br>MCS Index: 15<br>Data Type: PN9  |
| Bandwidth:              | 5.0 MHz   |
| Integration Time:       | 10.0 ms   |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

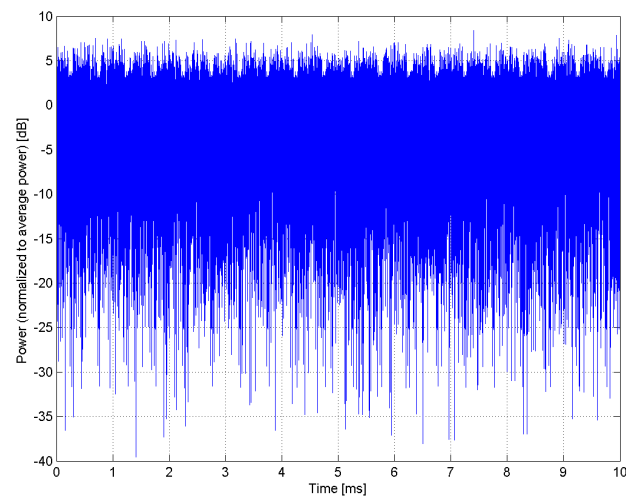
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



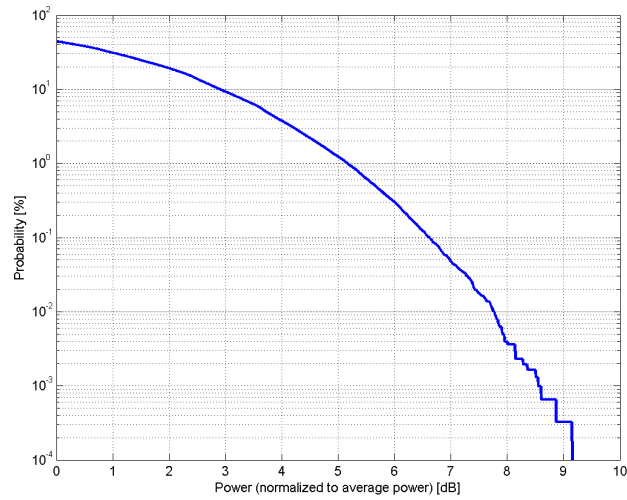
### Time Domain

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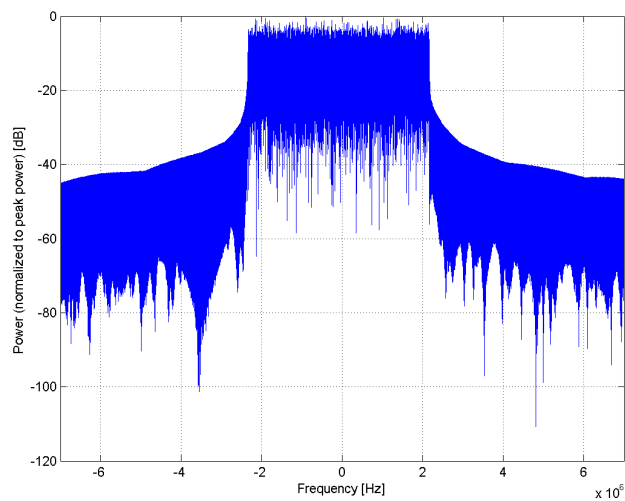
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 50% RB, 10 MHz, 64-QAM)</b>   |
| Group:                  | LTE-FDD  |
| UID:                    | 10158-CAG  |
| PAR: <sup>1</sup>       | <b>6.62 dB</b>   |
| MIF: <sup>2</sup>       | <b>-15.99 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 64-QAM   |
| Modulation:             |  |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 6, E-UTRA/FDD (830.0 - 840.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 11, E-UTRA/FDD (1427.9 - 1447.9 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 13, E-UTRA/FDD (777.0 - 787.0 MHz)<br>Band 14, E-UTRA/FDD (788.0 - 798.0 MHz)<br>Band 17, E-UTRA/FDD (704.0 - 716.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 24, E-UTRA/FDD (1626.5 - 1660.5 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 30, E-UTRA/FDD (2305.0 - 2315.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Band 85, E-UTRA/FDD (698.0 - 716.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 64QAM<br>Data Type: UL-SCH<br>Number RB: 25<br>Transport Block Size: 14112<br>TBS Index: 23<br>MCS Index: 25<br>Data Type: PN9  |
| Bandwidth:              | 10.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

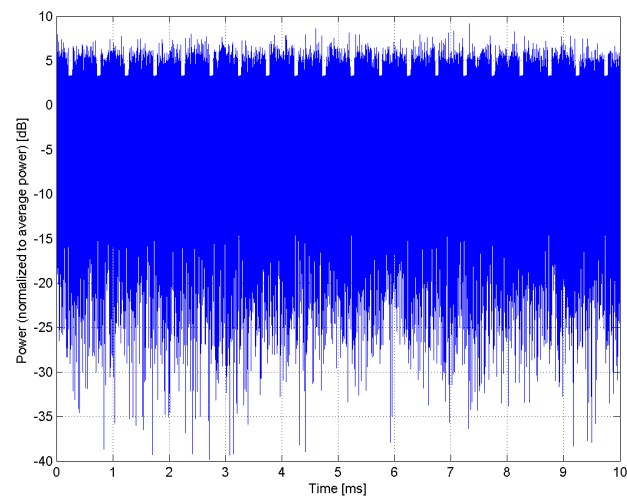
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



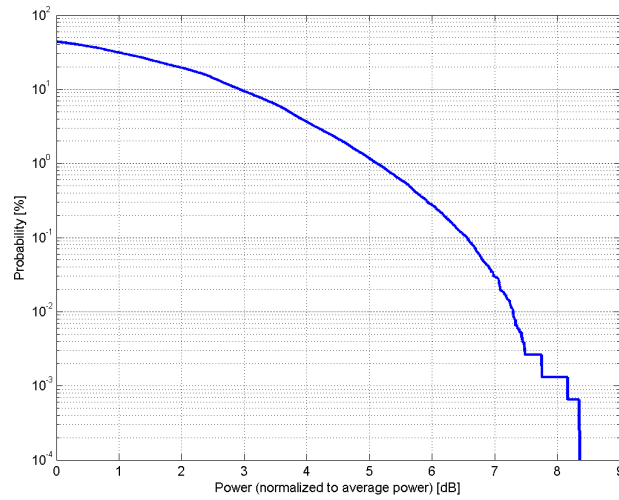
### Time Domain

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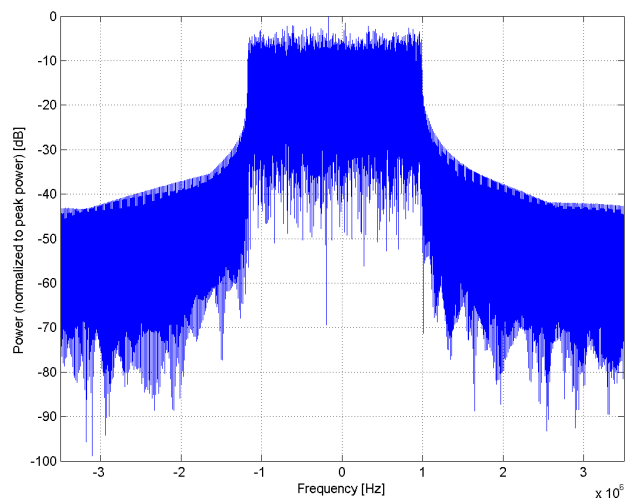
|                         |   |
|-------------------------|---|
| Name:                   | <b>LTE-FDD (SC-FDMA, 50% RB, 5 MHz, 64-QAM)</b>   |
| Group:                  | LTE-FDD   |
| UID:                    | 10159-CAG   |
| PAR: <sup>1</sup>       | <b>6.56 dB</b>  |
| MIF: <sup>2</sup>       | <b>-14.49 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation   |
| Category:               | 64-QAM  |
| Modulation:             |   |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 6, E-UTRA/FDD (830.0 - 840.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 11, E-UTRA/FDD (1427.9 - 1447.9 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 13, E-UTRA/FDD (777.0 - 787.0 MHz)<br>Band 14, E-UTRA/FDD (788.0 - 798.0 MHz)<br>Band 17, E-UTRA/FDD (704.0 - 716.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 24, E-UTRA/FDD (1626.5 - 1660.5 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 30, E-UTRA/FDD (2305.0 - 2315.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Band 85, E-UTRA/FDD (698.0 - 716.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 64QAM<br>Data Type: UL-SCH<br>Number RB: 12<br>Transport Block Size: 6968<br>TBS Index: 23<br>MCS Index: 25<br>Data Type: PN9  |
| Bandwidth:              | 5.0 MHz   |
| Integration Time:       | 10.0 ms   |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

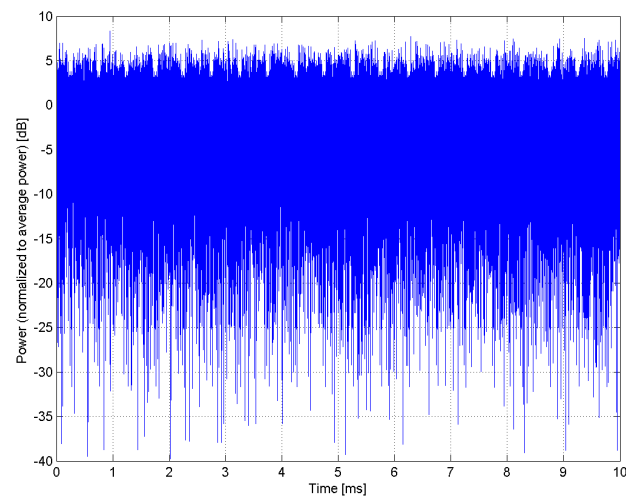
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



### Time Domain

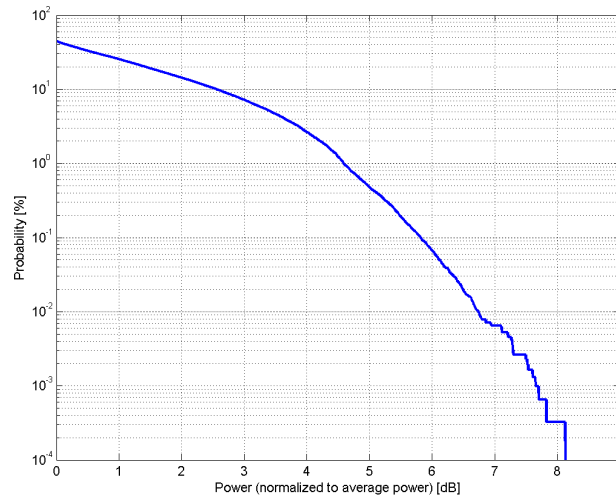
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|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 50% RB, 15 MHz, QPSK)</b>   |
| Group:                  | LTE-FDD  |
| UID:                    | 10160-CAE  |
| PAR: <sup>1</sup>       | <b>5.82 dB</b>   |
| MIF: <sup>2</sup>       | <b>-17.95 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | QPSK   |
| Modulation:             | QPSK   |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: QPSK<br>Data Type: UL-SCH<br>Number RB: 36<br>Transport Block Size: 3112<br>TBS Index: 5<br>MCS Index: 5<br>Data Type: PN9  |
| Bandwidth:              | 15.0 MHz   |
| Integration Time:       | 10.0 ms  |

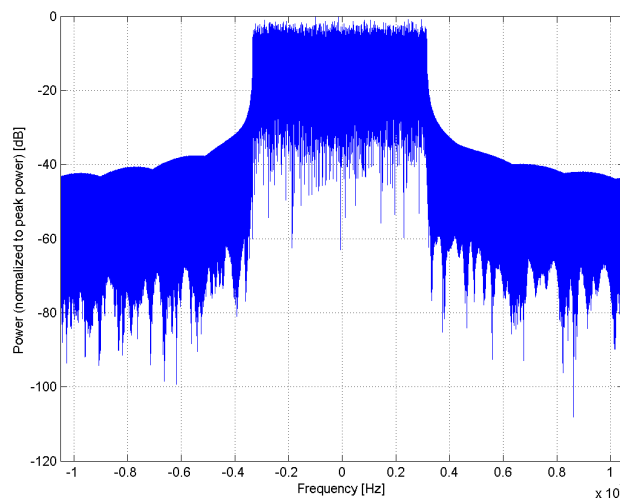
<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).

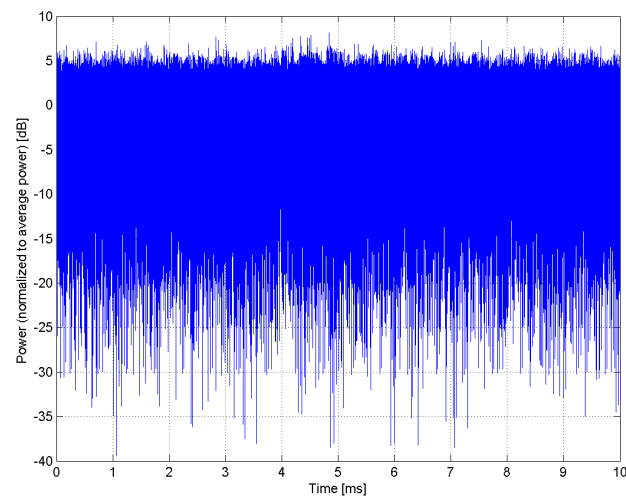




### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



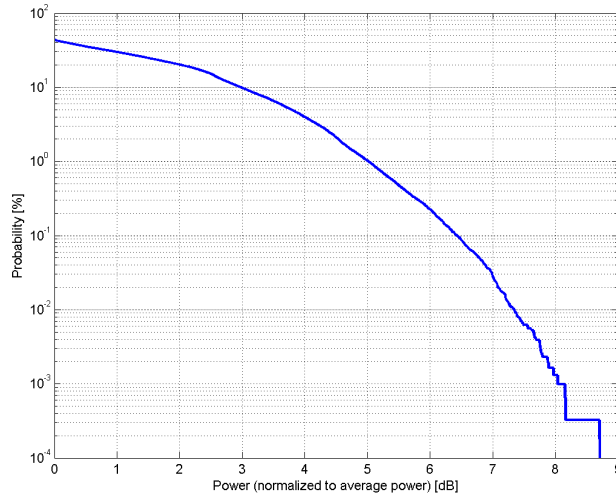
### Time Domain

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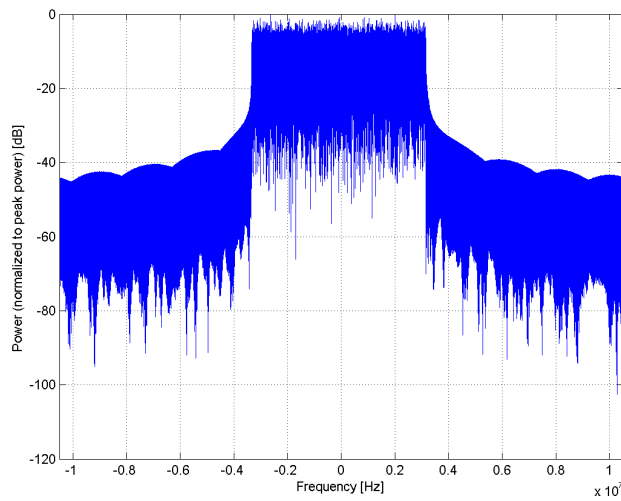
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 16-QAM)</b>   |
| Group:                  | LTE-FDD  |
| UID:                    | 10161-CAE  |
| PAR: <sup>1</sup>       | <b>6.43 dB</b>   |
| MIF: <sup>2</sup>       | <b>-17.54 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 16-QAM   |
| Modulation:             |  |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 16QAM<br>Data Type: UL-SCH<br>Number RB: 36<br>Transport Block Size: 10296<br>TBS Index: 14<br>MCS Index: 15<br>Data Type: PN9  |
| Bandwidth:              | 15.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

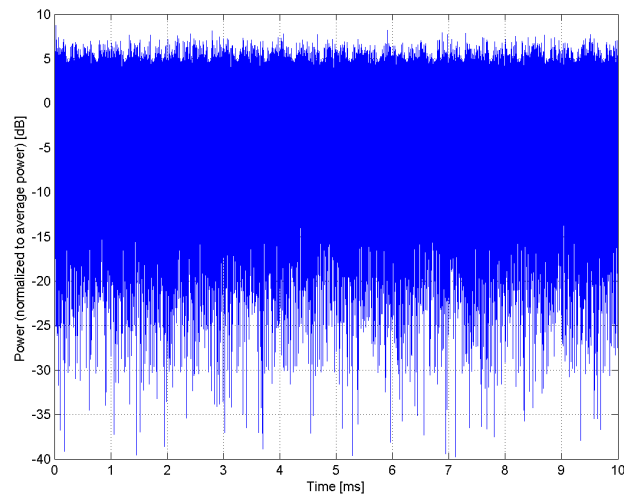
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



**Complementary Cumulative Distribution Function (CCDF)**



**Frequency Domain**



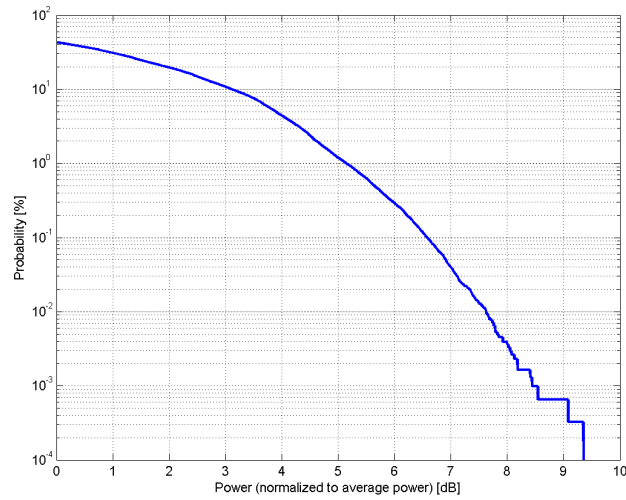
**Time Domain**

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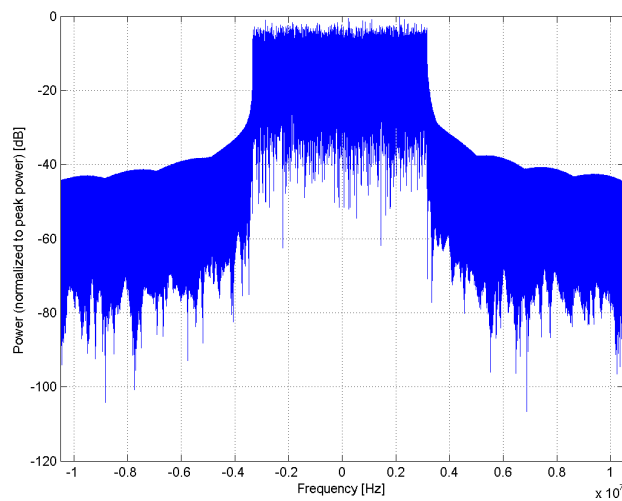
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 50% RB, 15 MHz, 64-QAM)</b>   |
| Group:                  | LTE-FDD  |
| UID:                    | 10162-CAE  |
| PAR: <sup>1</sup>       | <b>6.58 dB</b>   |
| MIF: <sup>2</sup>       | <b>-17.63 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 64-QAM   |
| Modulation:             | 64-QAM   |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 64QAM<br>Data Type: UL-SCH<br>Number RB: 36<br>Transport Block Size: 20616<br>TBS Index: 23<br>MCS Index: 25<br>Data Type: PN9  |
| Bandwidth:              | 15.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

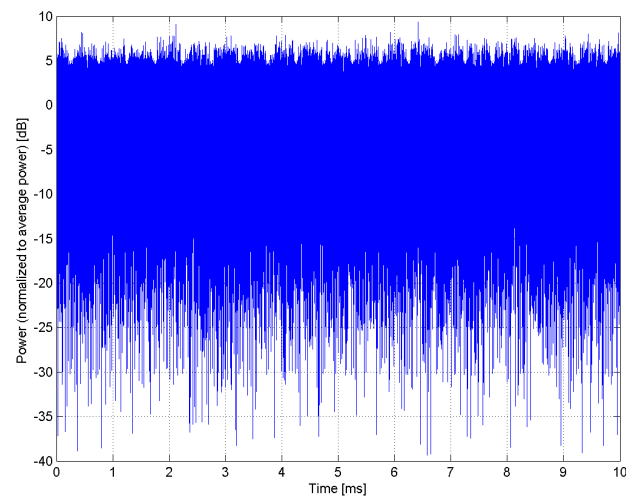
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



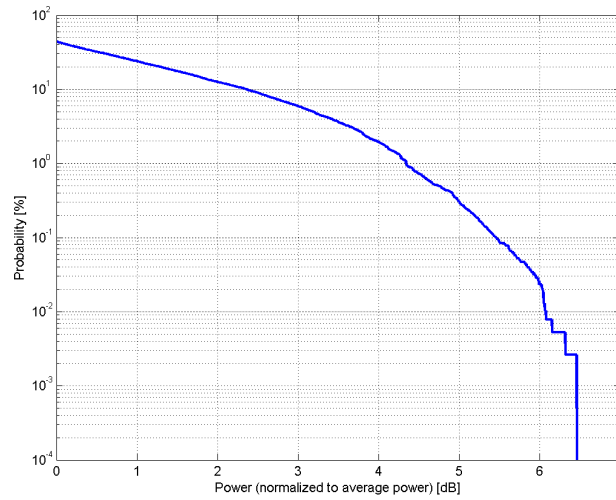
### Time Domain

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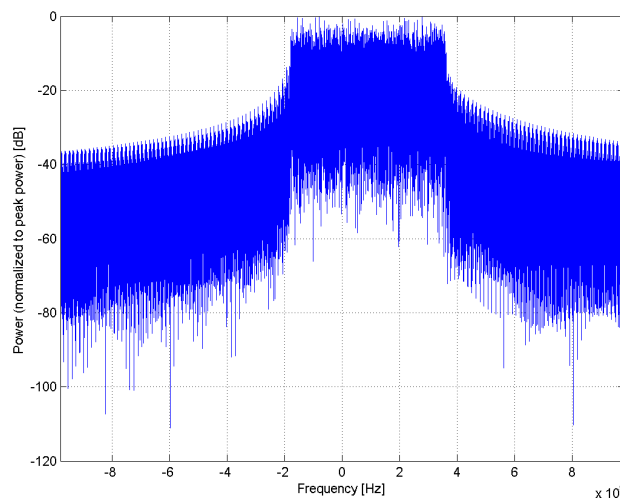
|                         |   |
|-------------------------|---|
| Name:                   | <b>LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, QPSK)</b>   |
| Group:                  | LTE-FDD   |
| UID:                    | 10166-CAF   |
| PAR: <sup>1</sup>       | <b>5.46 dB</b>  |
| MIF: <sup>2</sup>       | <b>-18.10 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation   |
| Category:               | QPSK  |
| Modulation:             | QPSK  |
| Frequency Band:         | Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: QPSK<br>Data Type: UL-SCH<br>Number RB: 3<br>Transport Block Size: 224<br>TBS Index: 5<br>MCS Index: 5<br>Data Type: PN9   |
| Bandwidth:              | 1.4 MHz   |
| Integration Time:       | 10.0 ms   |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

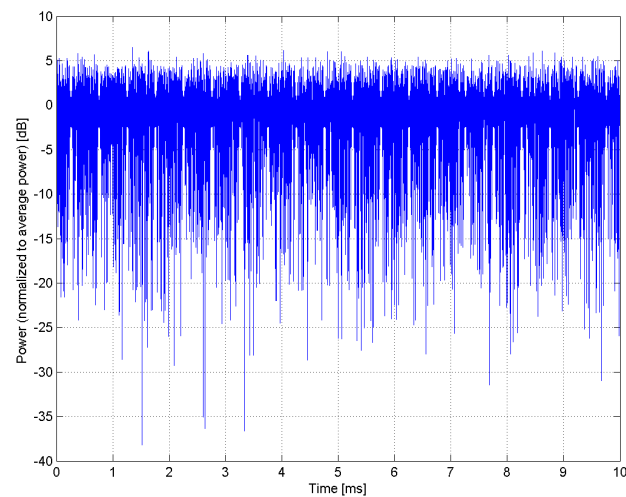
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



### Time Domain

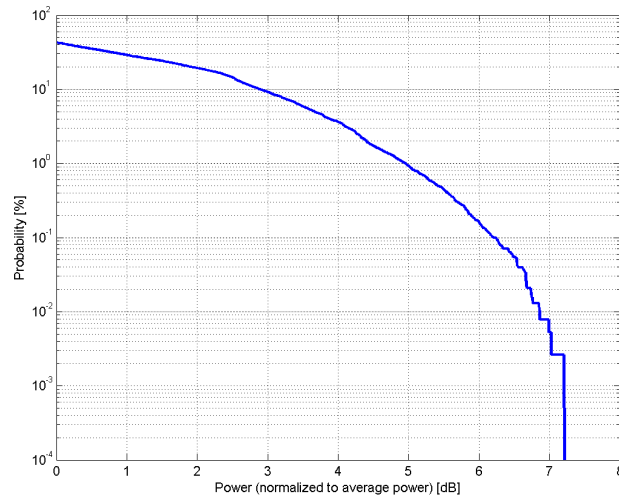
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|                         |   |
|-------------------------|---|
| Name:                   | <b>LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 16-QAM)</b>   |
| Group:                  | LTE-FDD   |
| UID:                    | 10167-CAF   |
| PAR: <sup>1</sup>       | <b>6.21 dB</b>  |
| MIF: <sup>2</sup>       | <b>-12.15 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation   |
| Category:               | 16-QAM  |
| Modulation:             |   |
| Frequency Band:         | Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 16QAM<br>Data Type: UL-SCH<br>Number RB: 3<br>Transport Block Size: 840<br>TBS Index: 14<br>MCS Index: 15<br>Data Type: PN9  |
| Bandwidth:              | 1.4 MHz   |
| Integration Time:       | 10.0 ms   |

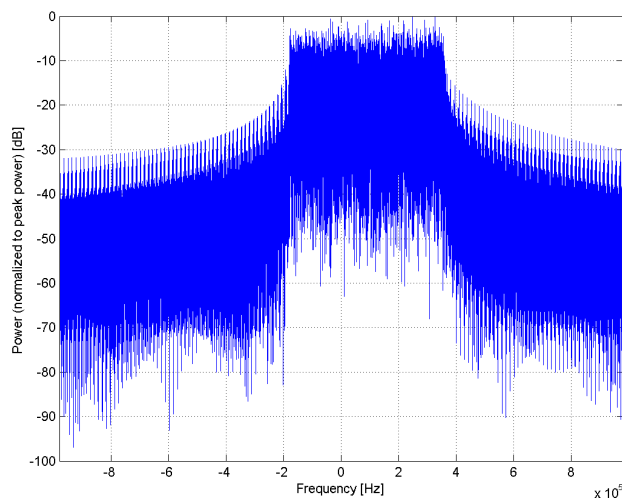
<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).

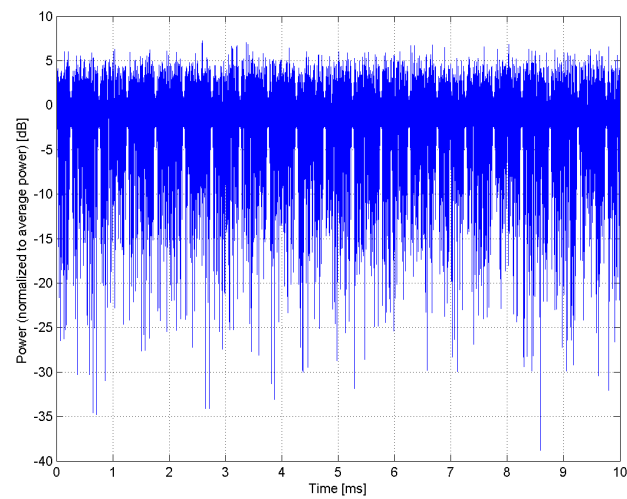




### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



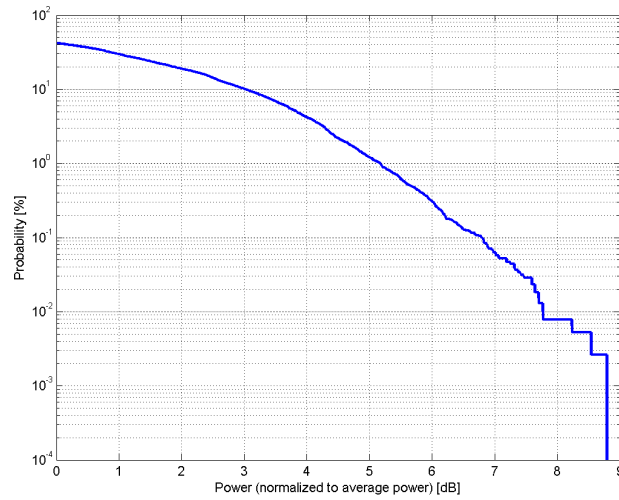
### Time Domain

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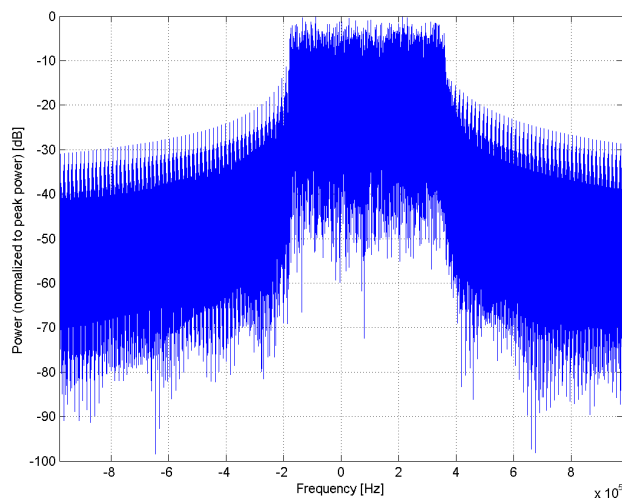
|                         |   |
|-------------------------|---|
| Name:                   | <b>LTE-FDD (SC-FDMA, 50% RB, 1.4 MHz, 64-QAM)</b>   |
| Group:                  | LTE-FDD   |
| UID:                    | 10168-CAF   |
| PAR: <sup>1</sup>       | <b>6.79 dB</b>  |
| MIF: <sup>2</sup>       | <b>-12.10 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation   |
| Category:               | 64-QAM  |
| Modulation:             |   |
| Frequency Band:         | Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 64QAM<br>Data Type: UL-SCH<br>Number RB: 3<br>Transport Block Size: 1736<br>TBS Index: 23<br>MCS Index: 25<br>Data Type: PN9   |
| Bandwidth:              | 1.4 MHz   |
| Integration Time:       | 10.0 ms   |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

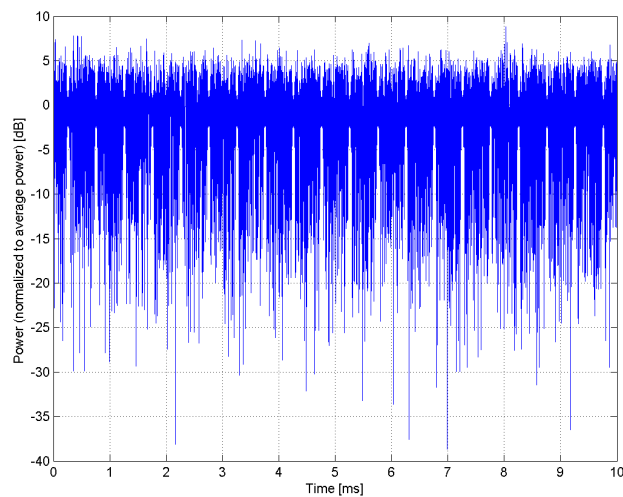
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



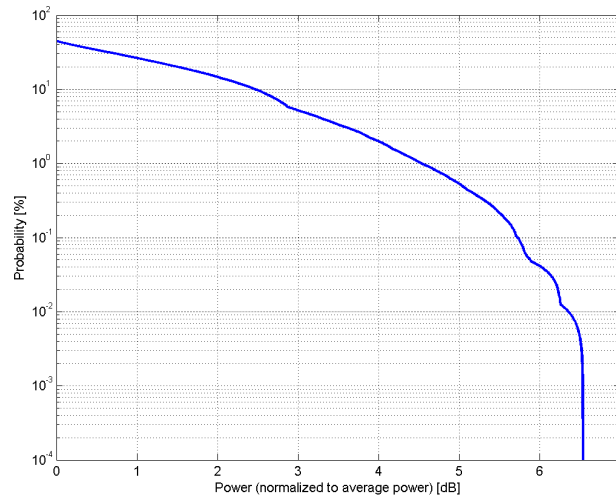
### Time Domain

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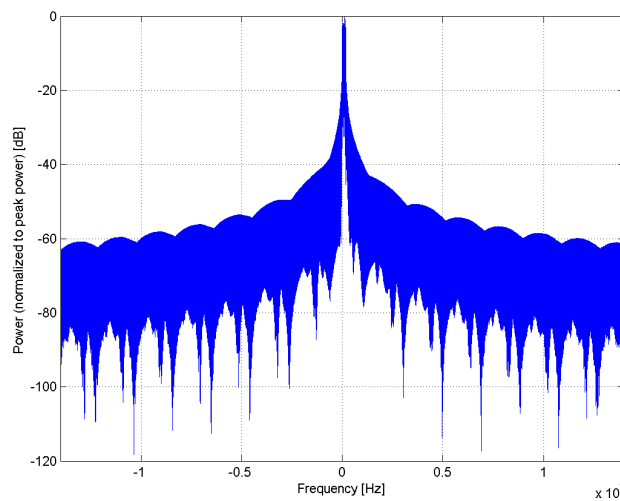
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 1 RB, 20 MHz, QPSK)</b>   |
| Group:                  | LTE-FDD  |
| UID:                    | 10169-CAE  |
| PAR: <sup>1</sup>       | <b>5.73 dB</b>   |
| MIF: <sup>2</sup>       | <b>-15.63 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | QPSK   |
| Modulation:             | QPSK   |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: QPSK<br>Data Type: UL-SCH<br>Number RB: 1<br>Transport Block Size: 72<br>TBS Index: 14<br>MCS Index: 15<br>Data Type: PN9   |
| Bandwidth:              | 20.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

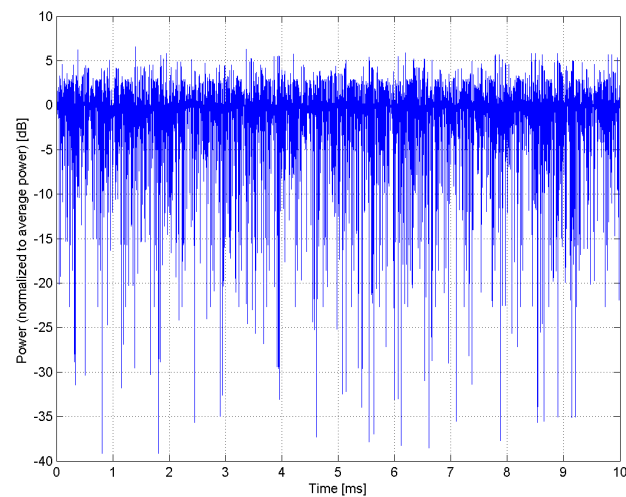
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



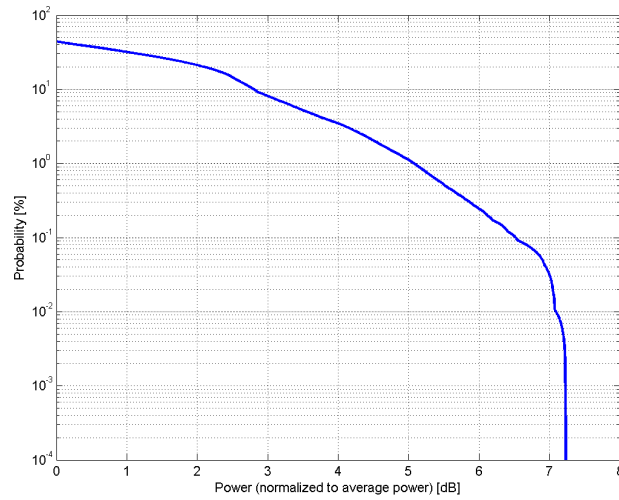
### Time Domain

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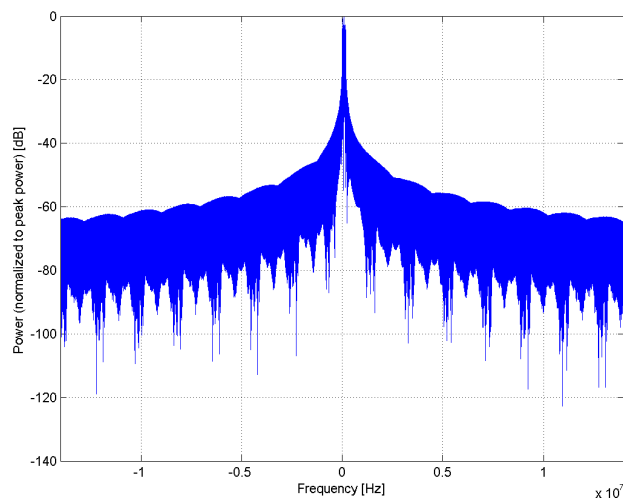
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)</b>   |
| Group:                  | LTE-FDD  |
| UID:                    | 10170-CAE  |
| PAR: <sup>1</sup>       | <b>6.52 dB</b>   |
| MIF: <sup>2</sup>       | <b>-9.76 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 16-QAM   |
| Modulation:             | 16-QAM   |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 16QAM<br>Data Type: UL-SCH<br>Number RB: 1<br>Transport Block Size: 256<br>TBS Index: 14<br>MCS Index: 15<br>Data Type: PN9   |
| Bandwidth:              | 20.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

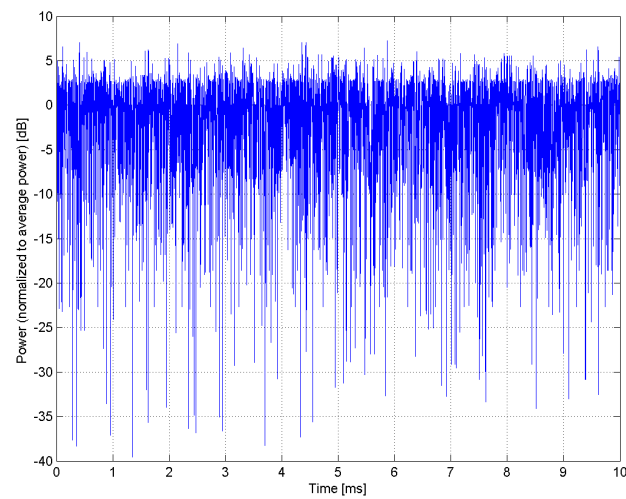
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



### Time Domain

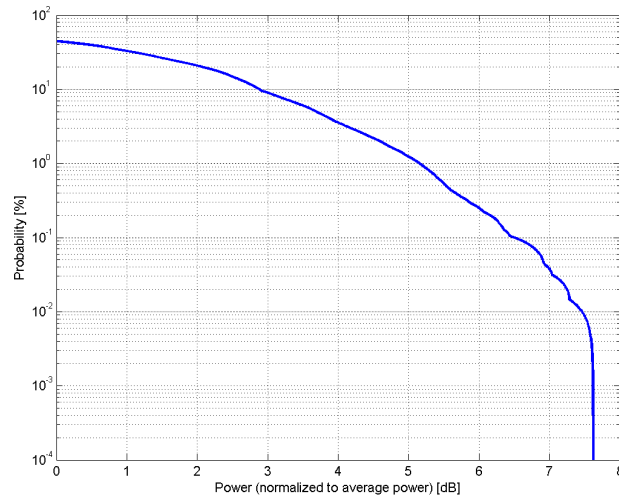
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|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)</b>   |
| Group:                  | LTE-FDD  |
| UID:                    | 10171-AAE  |
| PAR: <sup>1</sup>       | <b>6.49 dB</b>   |
| MIF: <sup>2</sup>       | <b>-9.93 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 64-QAM   |
| Modulation:             | 64-QAM   |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 64QAM<br>Data Type: UL-SCH<br>Number RB: 1<br>Transport Block Size: 552<br>TBS Index: 23<br>MCS Index: 25<br>Data Type: PN9   |
| Bandwidth:              | 20.0 MHz   |
| Integration Time:       | 100.0 ms   |

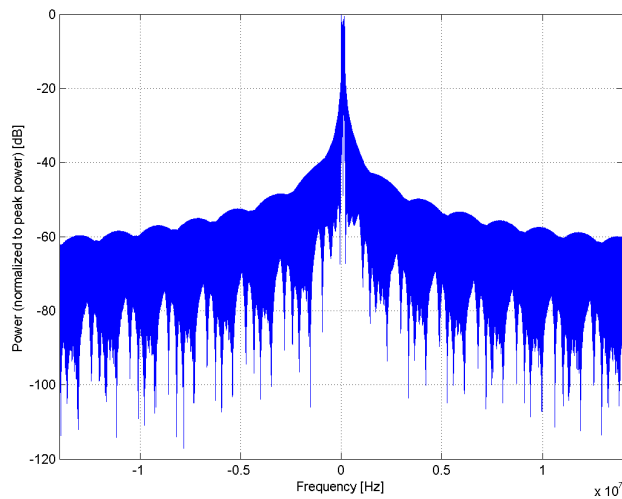
<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).

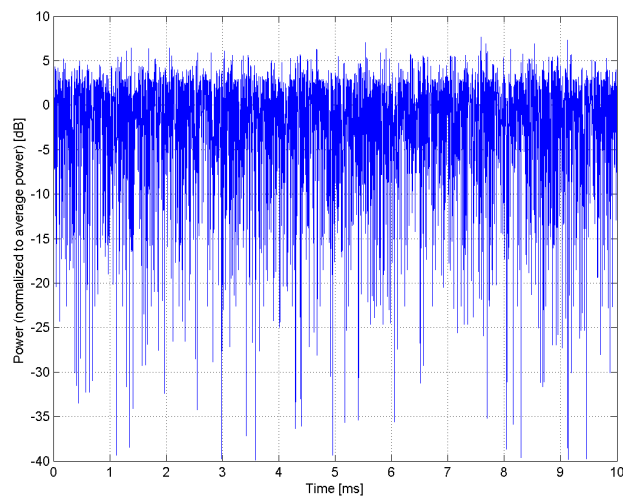




### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



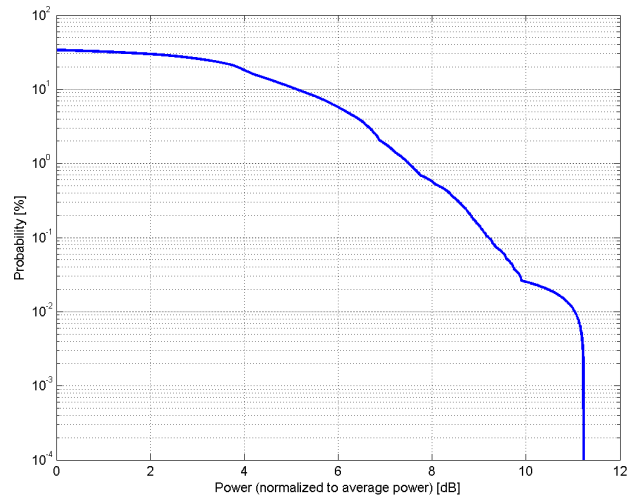
### Time Domain

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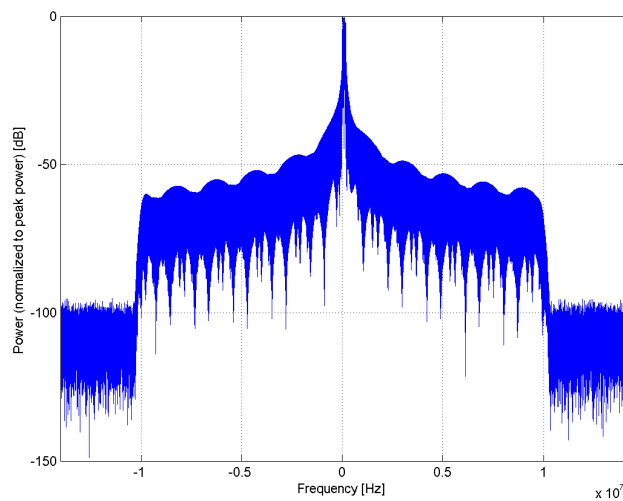
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-TDD (SC-FDMA, 1 RB, 20 MHz, QPSK)</b>   |
| Group:                  | LTE-TDD  |
| UID:                    | 10172-CAG  |
| PAR: <sup>1</sup>       | <b>9.21 dB</b>   |
| MIF: <sup>2</sup>       | <b>-1.62 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01   |
| Category:               | Random amplitude modulation  |
| Modulation:             | QPSK   |
| Frequency Band:         | Band 33, E-UTRA/TDD (1900.0 - 1920.0 MHz)<br>Band 35, E-UTRA/TDD (1850.0 - 1910.0 MHz)<br>Band 36, E-UTRA/TDD (1930.0 - 1990.0 MHz)<br>Band 37, E-UTRA/TDD (1910.0 - 1930.0 MHz)<br>Band 38, E-UTRA/TDD (2570.0 - 2620.0 MHz)<br>Band 39, E-UTRA/TDD (1880.0 - 1920.0 MHz)<br>Band 40, E-UTRA/TDD (2300.0 - 2400.0 MHz)<br>Band 41, E-UTRA/TDD (2496.0 - 2690.0 MHz)<br>Band 42, E-UTRA/TDD (3400.0 - 3600.0 MHz)<br>Band 43, E-UTRA/TDD (3600.0 - 3800.0 MHz)<br>Band 44, E-UTRA/TDD (703.0 - 803.0 MHz)<br>Band 45, E-UTRA/FDD (1447.0 - 1467.0 MHz)<br>Band 46, E-UTRA/FDD (5150.0 - 5925.0 MHz)<br>Band 47, E-UTRA/TDD (5855.0 - 5925.0 MHz)<br>Band 48, E-UTRA/TDD (3550.0 - 3700.0 MHz)<br>Band 49, E-UTRA/TDD (3550.0 - 3700.0 MHz)<br>Band 50, E-UTRA/TDD (1432.0 - 1517.0 MHz)<br>Band 76, E-UTRA/FDD (3300.0 - 3400.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Uplink-downlink configuration: 1<br>Special Subframe configuration: 4<br>Number of Frames: 1<br>Settings for UL Subframe 2,3,7,8:<br>Number of PUSCHs: 1<br>Modulation Scheme: QPSK<br>Allocated RB: 1<br>Start Number of RB: 50<br>Data Type: PN9fix  |
| Bandwidth:              | 20.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

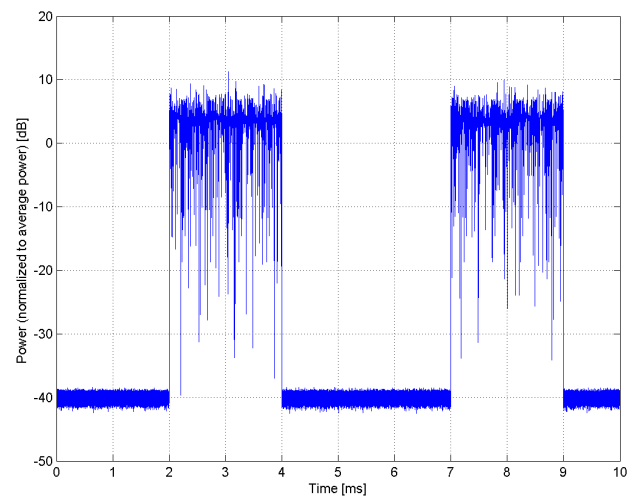
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



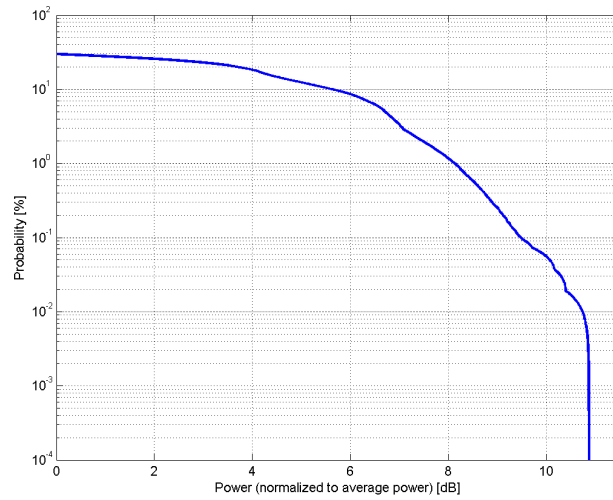
### Time Domain

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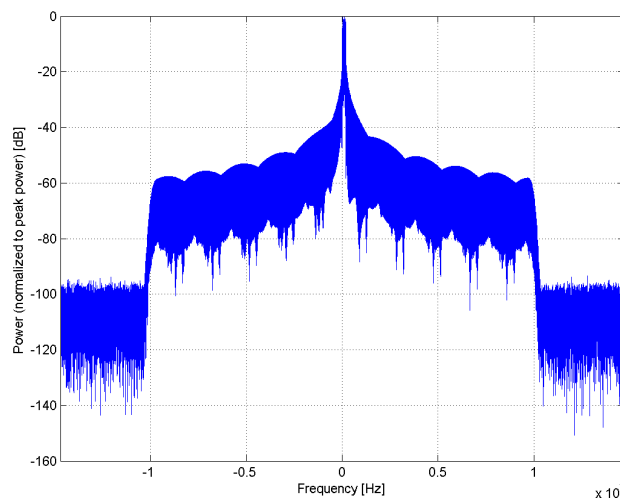
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)</b>   |
| Group:                  | LTE-TDD  |
| UID:                    | 10173-CAG  |
| PAR: <sup>1</sup>       | <b>9.48 dB</b>   |
| MIF: <sup>2</sup>       | <b>-1.44 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v02<br>Random amplitude modulation  |
| Category:               | 16-QAM   |
| Modulation:             |  |
| Frequency Band:         | Band 33, E-UTRA/TDD (1900.0 - 1920.0 MHz)<br>Band 35, E-UTRA/TDD (1850.0 - 1910.0 MHz)<br>Band 36, E-UTRA/TDD (1930.0 - 1990.0 MHz)<br>Band 37, E-UTRA/TDD (1910.0 - 1930.0 MHz)<br>Band 38, E-UTRA/TDD (2570.0 - 2620.0 MHz)<br>Band 39, E-UTRA/TDD (1880.0 - 1920.0 MHz)<br>Band 40, E-UTRA/TDD (2300.0 - 2400.0 MHz)<br>Band 41, E-UTRA/TDD (2496.0 - 2690.0 MHz)<br>Band 42, E-UTRA/TDD (3400.0 - 3600.0 MHz)<br>Band 43, E-UTRA/TDD (3600.0 - 3800.0 MHz)<br>Band 44, E-UTRA/TDD (703.0 - 803.0 MHz)<br>Band 45, E-UTRA/FDD (1447.0 - 1467.0 MHz)<br>Band 46, E-UTRA/FDD (5150.0 - 5925.0 MHz)<br>Band 47, E-UTRA/TDD (5855.0 - 5925.0 MHz)<br>Band 48, E-UTRA/TDD (3550.0 - 3700.0 MHz)<br>Band 49, E-UTRA/TDD (3550.0 - 3700.0 MHz)<br>Band 50, E-UTRA/TDD (1432.0 - 1517.0 MHz)<br>Band 76, E-UTRA/FDD (3300.0 - 3400.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Uplink-downlink configuration: 1<br>Special Subframe configuration: 4<br>Number of Frames: 1<br>Settings for UL Subframe 2,3,7,8:<br>Number of PUSCHs: 1<br>Modulation Scheme: 16QAM<br>Allocated RB: 1<br>Start Number of RB: 50<br>Data Type: PN9fix   |
| Bandwidth:              | 20.0 MHz   |
| Integration Time:       | 6.0 ms   |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

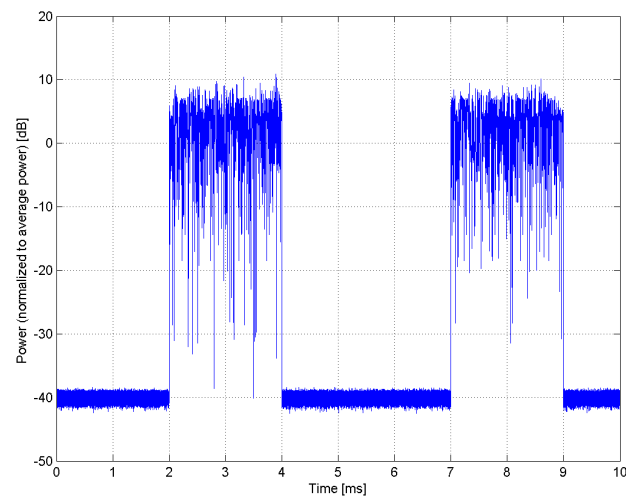
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



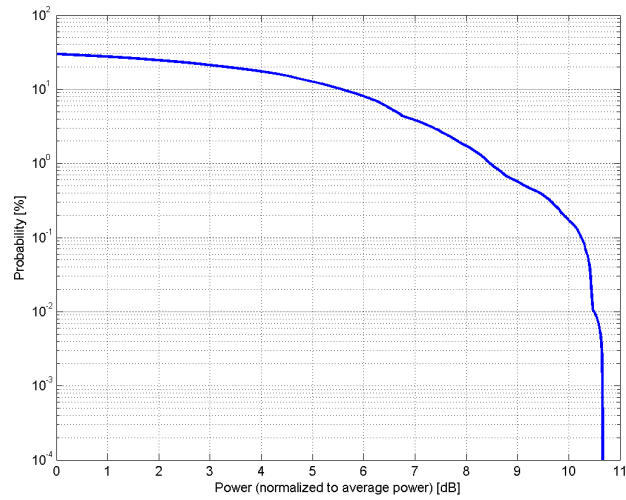
### Time Domain

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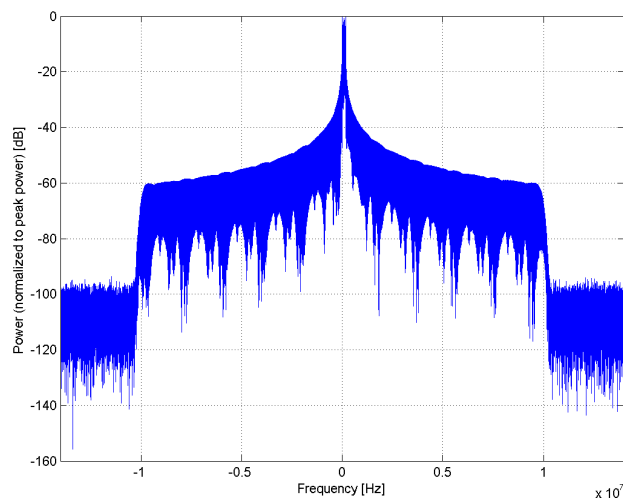
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 64-QAM)</b>   |
| Group:                  | LTE-TDD  |
| UID:                    | 10174-CAG  |
| PAR: <sup>1</sup>       | <b>10.25 dB</b>  |
| MIF: <sup>2</sup>       | <b>-1.54 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 64-QAM   |
| Modulation:             |  |
| Frequency Band:         | Band 33, E-UTRA/TDD (1900.0 - 1920.0 MHz)<br>Band 35, E-UTRA/TDD (1850.0 - 1910.0 MHz)<br>Band 36, E-UTRA/TDD (1930.0 - 1990.0 MHz)<br>Band 37, E-UTRA/TDD (1910.0 - 1930.0 MHz)<br>Band 38, E-UTRA/TDD (2570.0 - 2620.0 MHz)<br>Band 39, E-UTRA/TDD (1880.0 - 1920.0 MHz)<br>Band 40, E-UTRA/TDD (2300.0 - 2400.0 MHz)<br>Band 41, E-UTRA/TDD (2496.0 - 2690.0 MHz)<br>Band 42, E-UTRA/TDD (3400.0 - 3600.0 MHz)<br>Band 43, E-UTRA/TDD (3600.0 - 3800.0 MHz)<br>Band 44, E-UTRA/TDD (703.0 - 803.0 MHz)<br>Band 45, E-UTRA/FDD (1447.0 - 1467.0 MHz)<br>Band 46, E-UTRA/FDD (5150.0 - 5925.0 MHz)<br>Band 47, E-UTRA/TDD (5855.0 - 5925.0 MHz)<br>Band 48, E-UTRA/TDD (3550.0 - 3700.0 MHz)<br>Band 49, E-UTRA/TDD (3550.0 - 3700.0 MHz)<br>Band 50, E-UTRA/TDD (1432.0 - 1517.0 MHz)<br>Band 76, E-UTRA/FDD (3300.0 - 3400.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Uplink-downlink configuration: 1<br>Special Subframe configuration: 4<br>Number of Frames: 1<br>Settings for UL Subframe 2,3,7,8:<br>Number of PUSCHs: 1<br>Modulation Scheme: 64QAM<br>Allocated RB: 1<br>Start Number of RB: 50<br>Data Type: PN9fix   |
| Bandwidth:              | 20.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

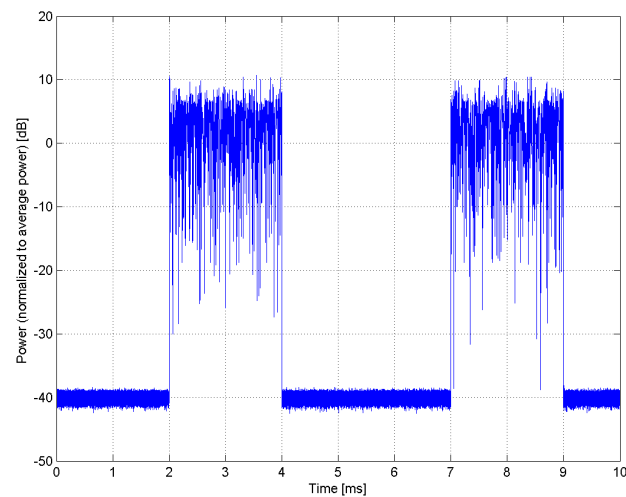
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



### Time Domain

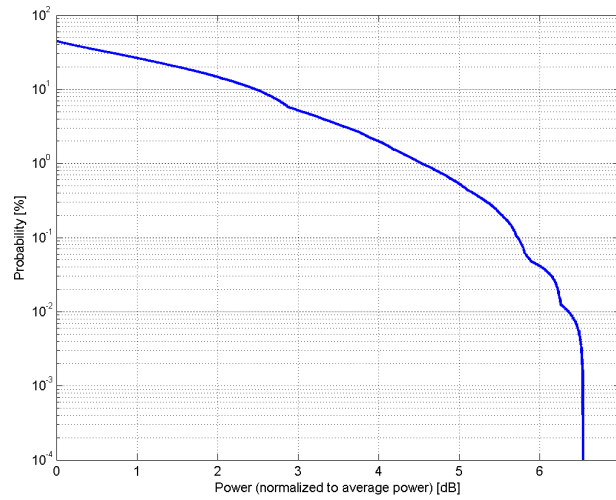
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|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 1 RB, 10 MHz, QPSK)</b>   |
| Group:                  | LTE-FDD  |
| UID:                    | 10175-CAG  |
| PAR: <sup>1</sup>       | <b>5.72 dB</b>   |
| MIF: <sup>2</sup>       | <b>-15.63 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01   |
| Category:               | Random amplitude modulation  |
| Modulation:             | QPSK   |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 6, E-UTRA/FDD (830.0 - 840.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 11, E-UTRA/FDD (1427.9 - 1447.9 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 13, E-UTRA/FDD (777.0 - 787.0 MHz)<br>Band 14, E-UTRA/FDD (788.0 - 798.0 MHz)<br>Band 17, E-UTRA/FDD (704.0 - 716.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 24, E-UTRA/FDD (1626.5 - 1660.5 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 30, E-UTRA/FDD (2305.0 - 2315.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Band 85, E-UTRA/FDD (698.0 - 716.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: QPSK<br>Data Type: UL-SCH<br>Number RB: 1<br>Transport Block Size: 72<br>TBS Index: 5<br>MCS Index: 5<br>Data Type: PN9   |
| Bandwidth:              | 10.0 MHz   |
| Integration Time:       | 10.0 ms  |

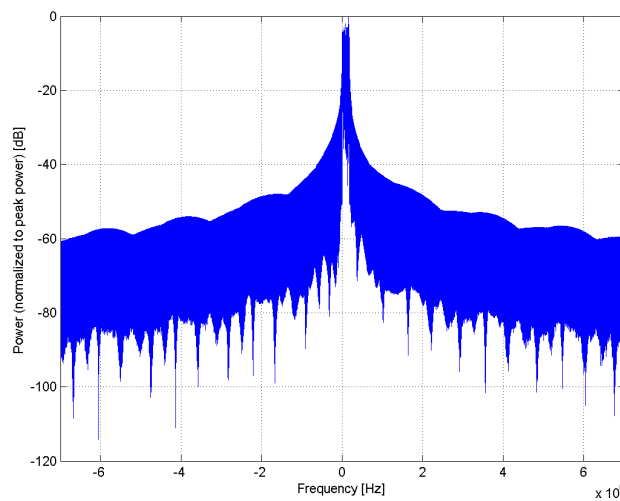
<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).

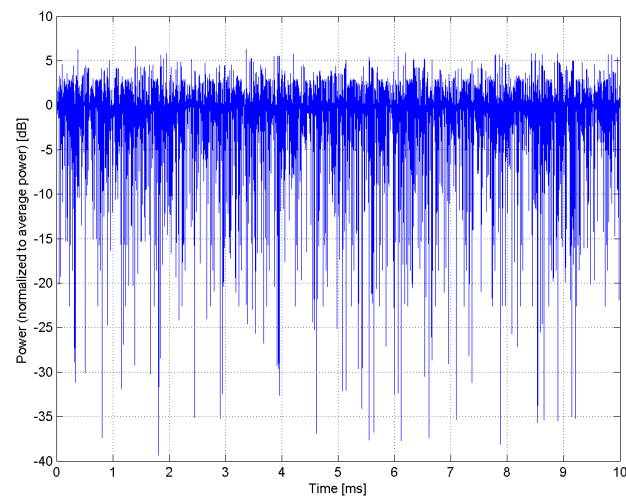




### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



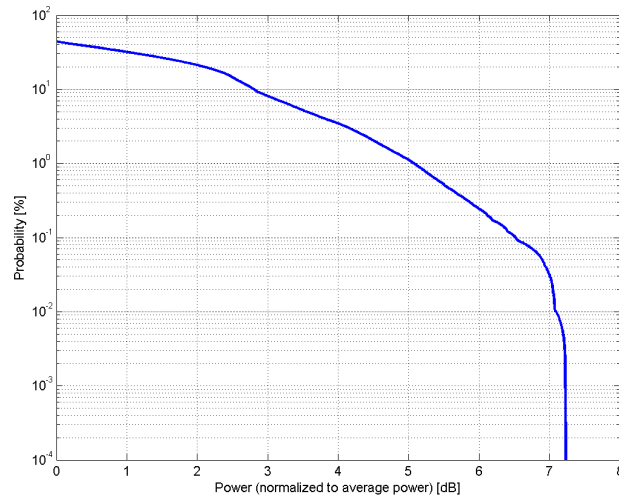
### Time Domain

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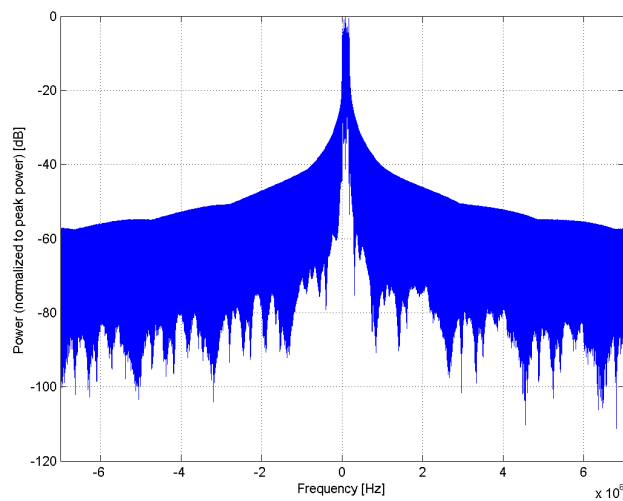
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)</b>   |
| Group:                  | LTE-FDD  |
| UID:                    | 10176-CAG  |
| PAR: <sup>1</sup>       | <b>6.52 dB</b>   |
| MIF: <sup>2</sup>       | <b>-9.76 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 16-QAM   |
| Modulation:             | 16-QAM   |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 6, E-UTRA/FDD (830.0 - 840.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 11, E-UTRA/FDD (1427.9 - 1447.9 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 13, E-UTRA/FDD (777.0 - 787.0 MHz)<br>Band 14, E-UTRA/FDD (788.0 - 798.0 MHz)<br>Band 17, E-UTRA/FDD (704.0 - 716.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 24, E-UTRA/FDD (1626.5 - 1660.5 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 30, E-UTRA/FDD (2305.0 - 2315.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Band 85, E-UTRA/FDD (698.0 - 716.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: QPSK<br>Data Type: UL-SCH<br>Number RB: 1<br>Transport Block Size: 256<br>TBS Index: 14<br>MCS Index: 15<br>Data Type: PN9  |
| Bandwidth:              | 10.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

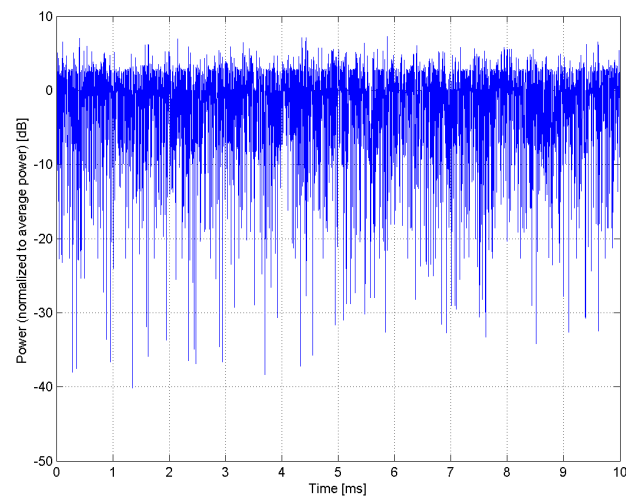
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



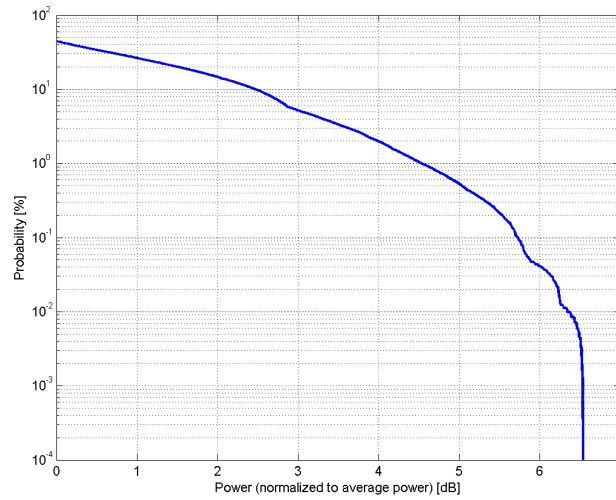
### Time Domain

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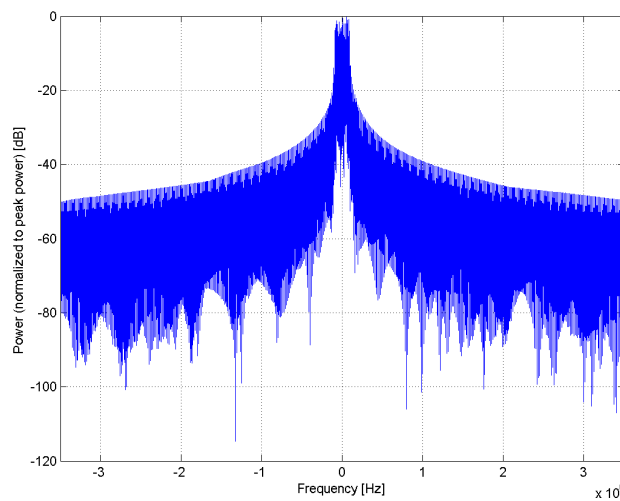
|                         |   |
|-------------------------|---|
| Name:                   | <b>LTE-FDD (SC-FDMA, 1 RB, 5 MHz, QPSK)</b>   |
| Group:                  | LTE-FDD   |
| UID:                    | 10177-CAI   |
| PAR: <sup>1</sup>       | <b>5.73 dB</b>  |
| MIF: <sup>2</sup>       | <b>-15.63 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01  |
| Category:               | Random amplitude modulation   |
| Modulation:             | QPSK  |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 6, E-UTRA/FDD (830.0 - 840.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 11, E-UTRA/FDD (1427.9 - 1447.9 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 13, E-UTRA/FDD (777.0 - 787.0 MHz)<br>Band 14, E-UTRA/FDD (788.0 - 798.0 MHz)<br>Band 17, E-UTRA/FDD (704.0 - 716.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 24, E-UTRA/FDD (1626.5 - 1660.5 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 30, E-UTRA/FDD (2305.0 - 2315.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Band 85, E-UTRA/FDD (698.0 - 716.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: QPSK<br>Data Type: UL-SCH<br>Number RB: 1<br>Transport Block Size: 72<br>TBS Index: 5<br>MCS Index: 5<br>Data Type: PN9  |
| Bandwidth:              | 5.0 MHz   |
| Integration Time:       | 10.0 ms   |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

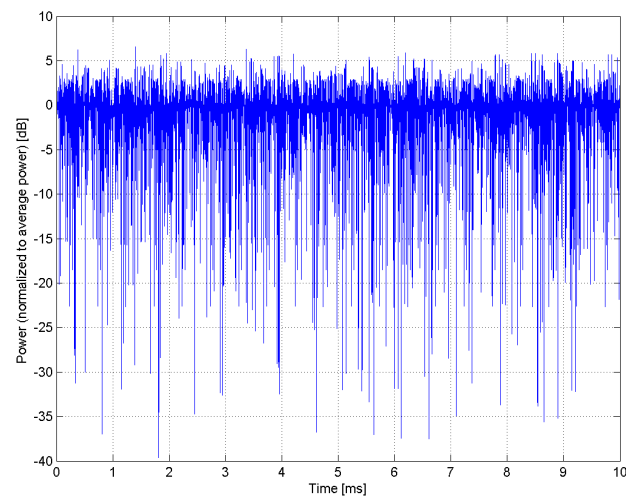
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



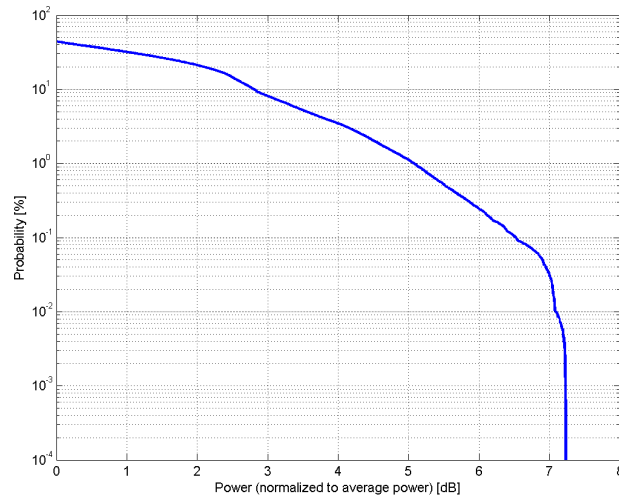
### Time Domain

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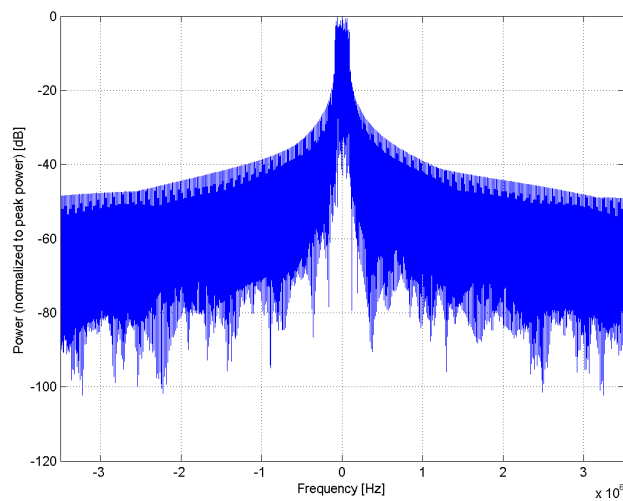
|                         |   |
|-------------------------|---|
| Name:                   | <b>LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 16-QAM)</b>   |
| Group:                  | LTE-FDD   |
| UID:                    | 10178-CAG   |
| PAR: <sup>1</sup>       | <b>6.52 dB</b>  |
| MIF: <sup>2</sup>       | <b>-9.76 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation   |
| Category:               | 16-QAM  |
| Modulation:             | 16-QAM  |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 6, E-UTRA/FDD (830.0 - 840.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 11, E-UTRA/FDD (1427.9 - 1447.9 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 13, E-UTRA/FDD (777.0 - 787.0 MHz)<br>Band 14, E-UTRA/FDD (788.0 - 798.0 MHz)<br>Band 17, E-UTRA/FDD (704.0 - 716.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 24, E-UTRA/FDD (1626.5 - 1660.5 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 30, E-UTRA/FDD (2305.0 - 2315.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Band 85, E-UTRA/FDD (698.0 - 716.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 16QAM<br>Data Type: UL-SCH<br>Number RB: 1<br>Transport Block Size: 256<br>TBS Index: 14<br>MCS Index: 15<br>Data Type: PN9  |
| Bandwidth:              | 5.0 MHz   |
| Integration Time:       | 10.0 ms   |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

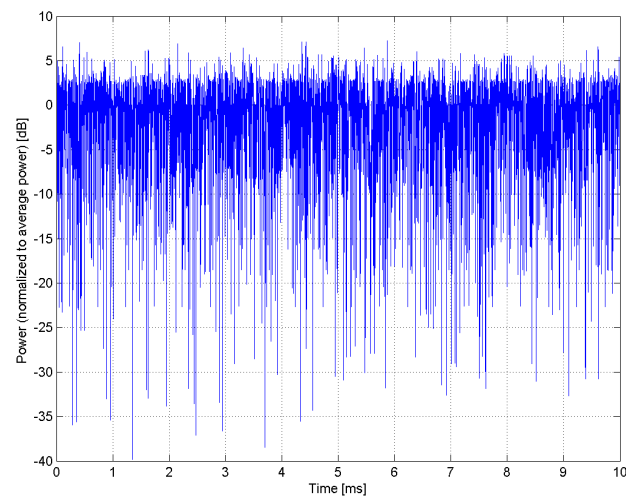
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



### Time Domain

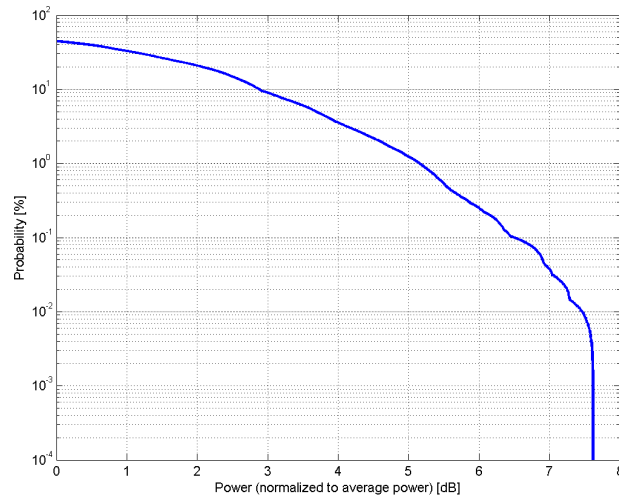
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|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 64-QAM)</b>   |
| Group:                  | LTE-FDD  |
| UID:                    | 10179-CAG  |
| PAR: <sup>1</sup>       | <b>6.50 dB</b>   |
| MIF: <sup>2</sup>       | <b>-9.93 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 64-QAM   |
| Modulation:             | 64-QAM   |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 6, E-UTRA/FDD (830.0 - 840.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 11, E-UTRA/FDD (1427.9 - 1447.9 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 13, E-UTRA/FDD (777.0 - 787.0 MHz)<br>Band 14, E-UTRA/FDD (788.0 - 798.0 MHz)<br>Band 17, E-UTRA/FDD (704.0 - 716.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 24, E-UTRA/FDD (1626.5 - 1660.5 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 30, E-UTRA/FDD (2305.0 - 2315.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Band 85, E-UTRA/FDD (698.0 - 716.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 64QAM<br>Data Type: UL-SCH<br>Number RB: 1<br>Transport Block Size: 552<br>TBS Index: 23<br>MCS Index: 25<br>Data Type: PN9   |
| Bandwidth:              | 10.0 MHz   |
| Integration Time:       | 10.0 ms  |

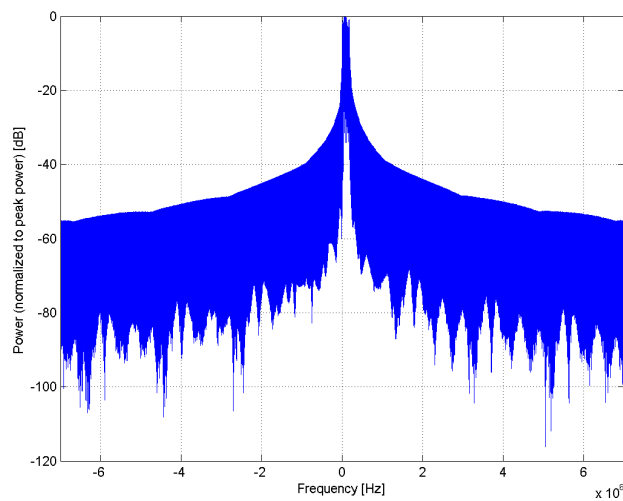
<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).

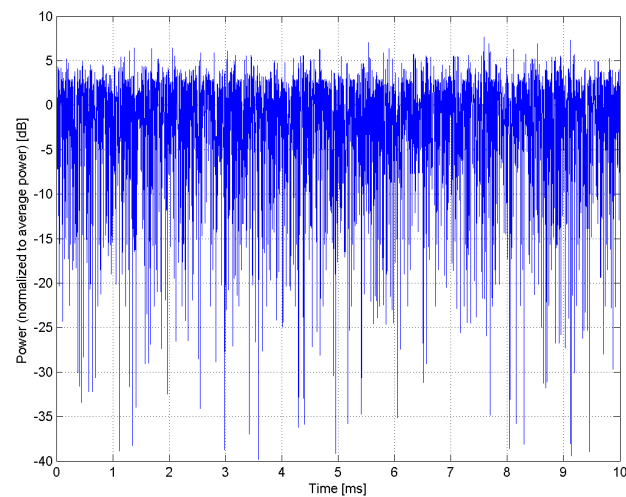




### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



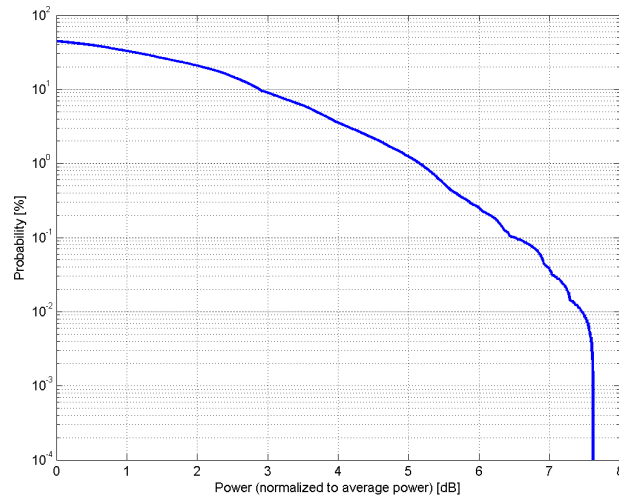
### Time Domain

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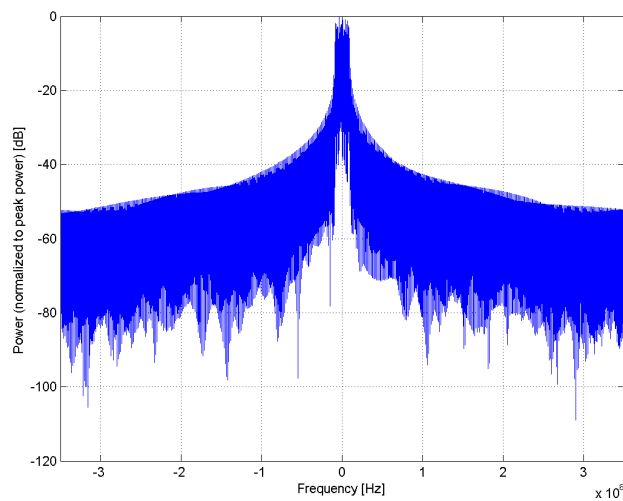
|                         |   |
|-------------------------|---|
| Name:                   | <b>LTE-FDD (SC-FDMA, 1 RB, 5 MHz, 64-QAM)</b>   |
| Group:                  | LTE-FDD   |
| UID:                    | 10180-CAG   |
| PAR: <sup>1</sup>       | <b>6.50 dB</b>  |
| MIF: <sup>2</sup>       | <b>-9.93 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation   |
| Category:               | 64-QAM  |
| Modulation:             | 64-QAM  |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 6, E-UTRA/FDD (830.0 - 840.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 11, E-UTRA/FDD (1427.9 - 1447.9 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 13, E-UTRA/FDD (777.0 - 787.0 MHz)<br>Band 14, E-UTRA/FDD (788.0 - 798.0 MHz)<br>Band 17, E-UTRA/FDD (704.0 - 716.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 24, E-UTRA/FDD (1626.5 - 1660.5 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 30, E-UTRA/FDD (2305.0 - 2315.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Band 85, E-UTRA/FDD (698.0 - 716.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 64QAM<br>Data Type: UL-SCH<br>Number RB: 1<br>Transport Block Size: 552<br>TBS Index: 23<br>MCS Index: 25<br>Data Type: PN9  |
| Bandwidth:              | 5.0 MHz   |
| Integration Time:       | 10.0 ms   |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

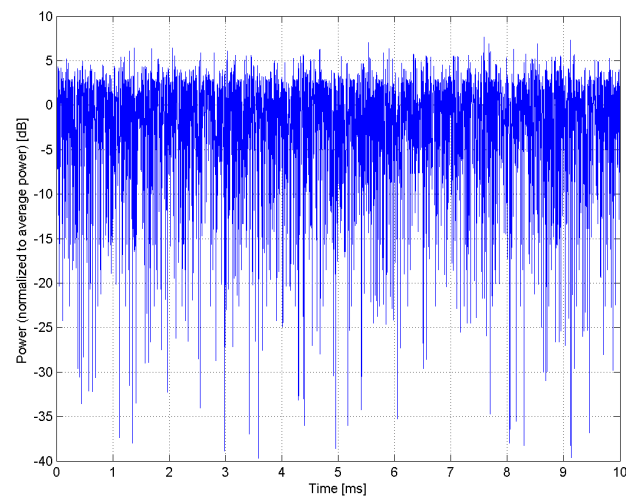
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



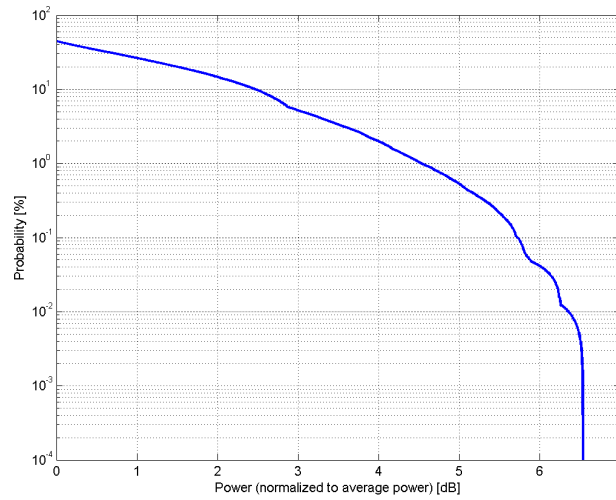
### Time Domain

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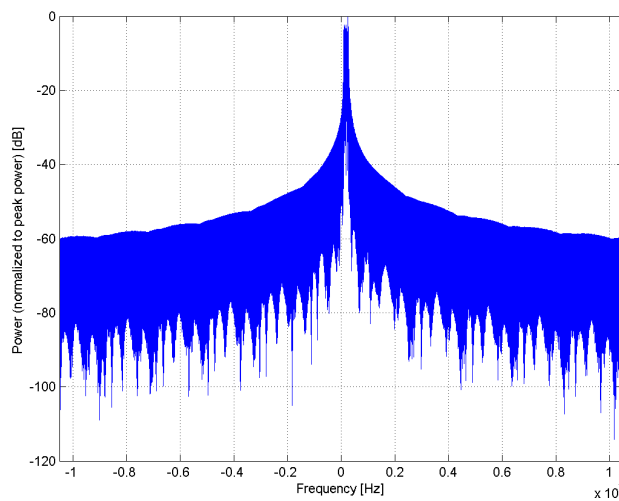
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 1 RB, 15 MHz, QPSK)</b>   |
| Group:                  | LTE-FDD  |
| UID:                    | 10181-CAE  |
| PAR: <sup>1</sup>       | <b>5.72 dB</b>   |
| MIF: <sup>2</sup>       | <b>-15.63 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | QPSK   |
| Modulation:             | QPSK   |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: QPSK<br>Data Type: UL-SCH<br>Number RB: 1<br>Transport Block Size: 72<br>TBS Index: 14<br>MCS Index: 15<br>Data Type: PN9   |
| Bandwidth:              | 15.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

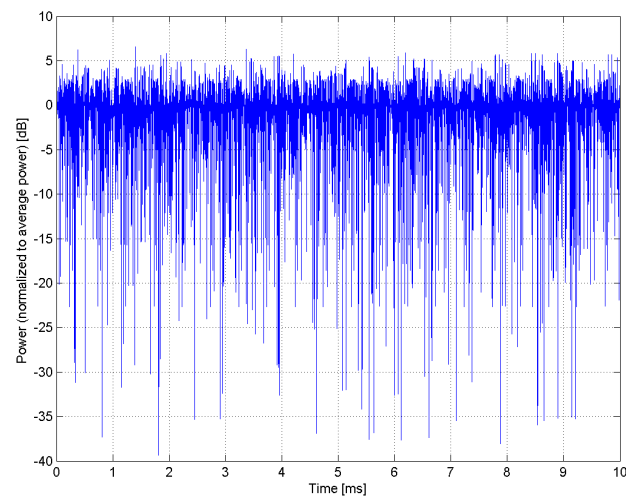
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



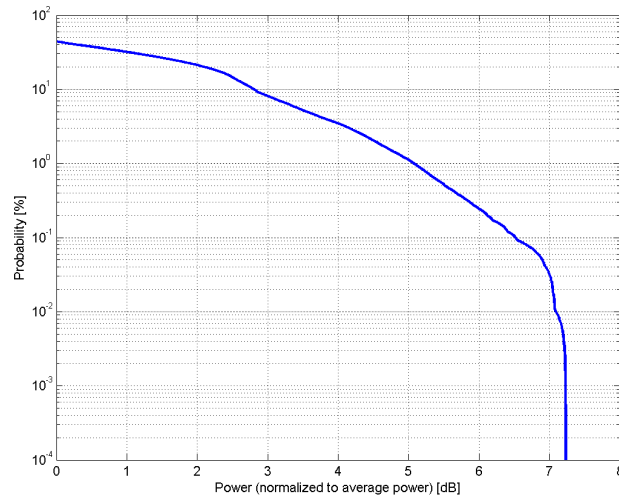
### Time Domain

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Engineering AG**  
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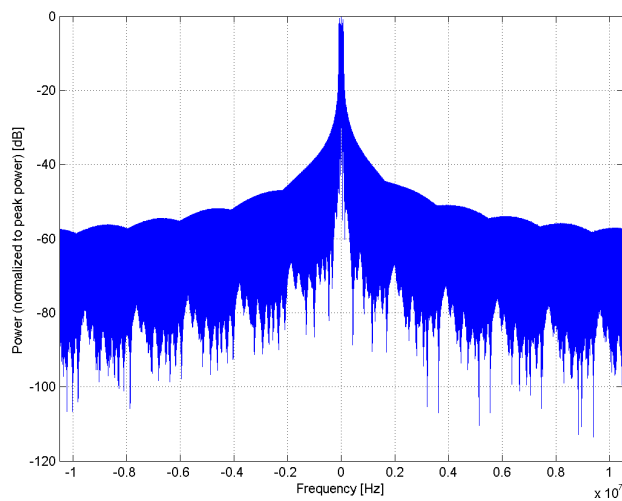
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 16-QAM)</b>   |
| Group:                  | LTE-FDD  |
| UID:                    | 10182-CAE  |
| PAR: <sup>1</sup>       | <b>6.52 dB</b>   |
| MIF: <sup>2</sup>       | <b>-9.76 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 16-QAM   |
| Modulation:             | 16-QAM   |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 16QAM<br>Data Type: UL-SCH<br>Number RB: 1<br>Transport Block Size: 256<br>TBS Index: 14<br>MCS Index: 15<br>Data Type: PN9   |
| Bandwidth:              | 15.0 MHz   |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

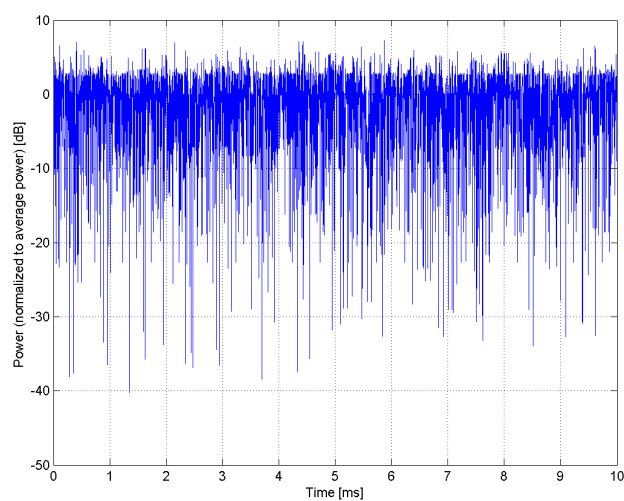
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



### Time Domain

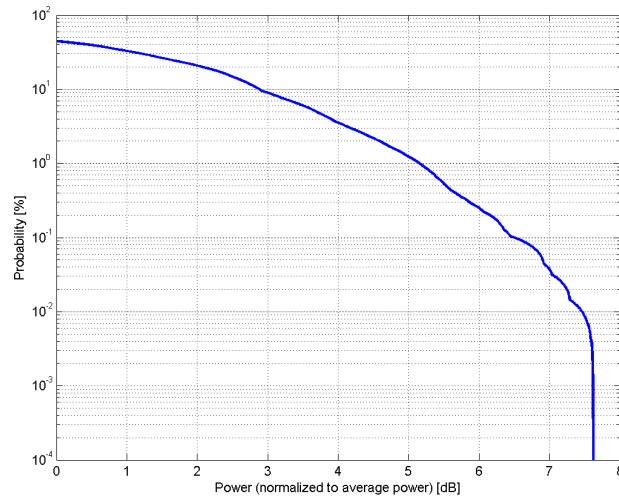
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|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 1 RB, 15 MHz, 64-QAM)</b>   |
| Group:                  | LTE-FDD  |
| UID:                    | 10183-AAD  |
| PAR: <sup>1</sup>       | <b>6.50 dB</b>   |
| MIF: <sup>2</sup>       | <b>-9.93 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 64-QAM   |
| Modulation:             | 64-QAM   |
| Frequency Band:         | Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)<br>Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz)<br>Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz)<br>Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz)<br>Band 18, E-UTRA/FDD (815.0 - 830.0 MHz)<br>Band 19, E-UTRA/FDD (830.0 - 845.0 MHz)<br>Band 20, E-UTRA/FDD (832.0 - 862.0 MHz)<br>Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz)<br>Band 22, E-UTRA/FDD (3410.0 - 3490.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)<br>Band 70, E-UTRA/FDD (1695.0 - 1710.0 MHz)<br>Band 71, E-UTRA/FDD (663.0 - 698.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 64QAM<br>Data Type: UL-SCH<br>Number RB: 1<br>Transport Block Size: 552<br>TBS Index: 23<br>MCS Index: 25<br>Data Type: PN9   |
| Bandwidth:              | 15.0 MHz   |
| Integration Time:       | 100.0 ms   |

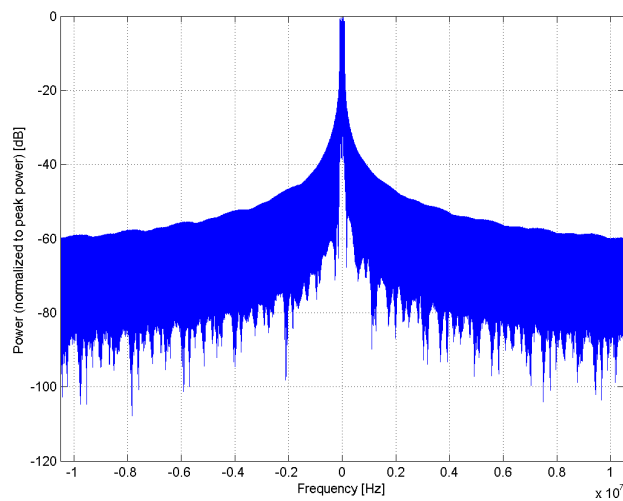
<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).

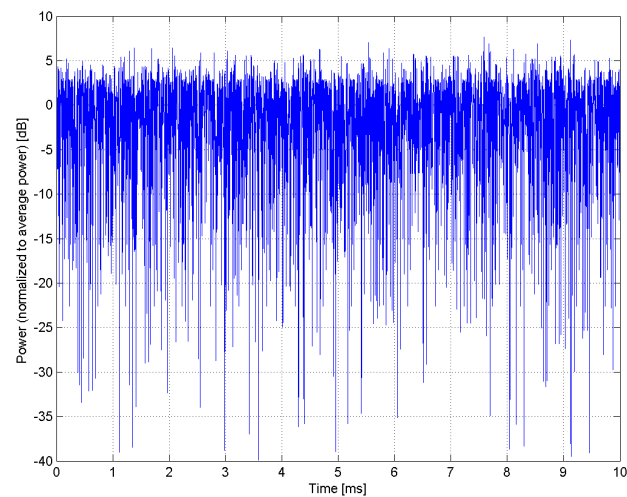




### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



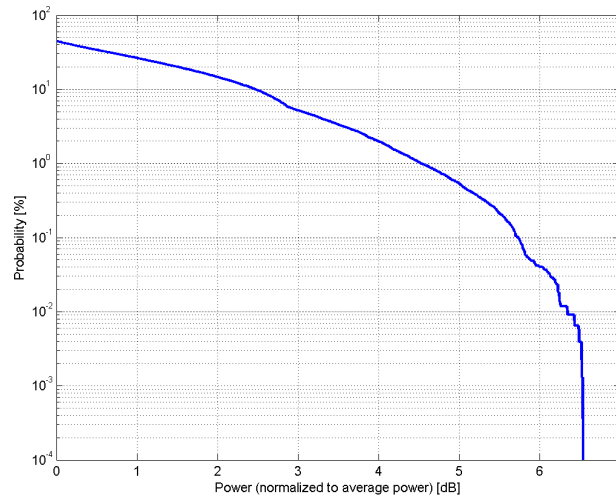
### Time Domain

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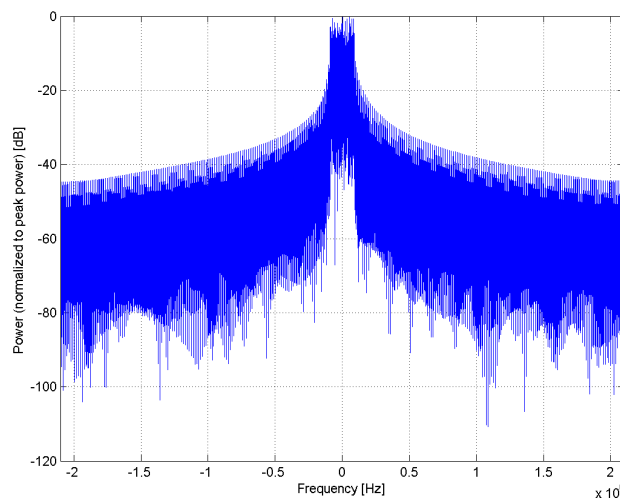
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 1 RB, 3 MHz, QPSK)</b>  |
| Group:                  | LTE-FDD  |
| UID:                    | 10184-CAE  |
| PAR: <sup>1</sup>       | <b>5.73 dB</b>   |
| MIF: <sup>2</sup>       | <b>-15.62 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01   |
| Category:               | Random amplitude modulation  |
| Modulation:             | QPSK   |
| Frequency Band:         | Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: QPSK<br>Data Type: UL-SCH<br>Number RB: 1<br>Transport Block Size: 72<br>TBS Index: 5<br>MCS Index: 5<br>Data Type: PN9   |
| Bandwidth:              | 3.0 MHz  |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

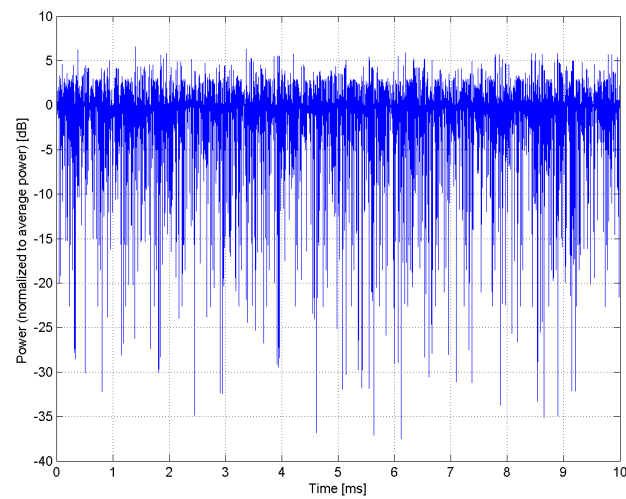
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



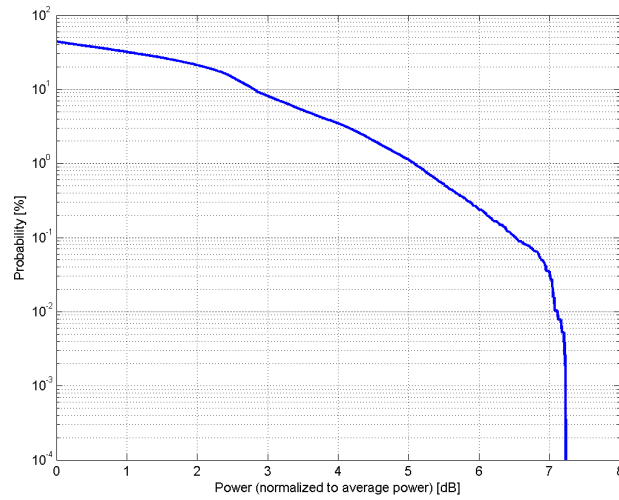
### Time Domain

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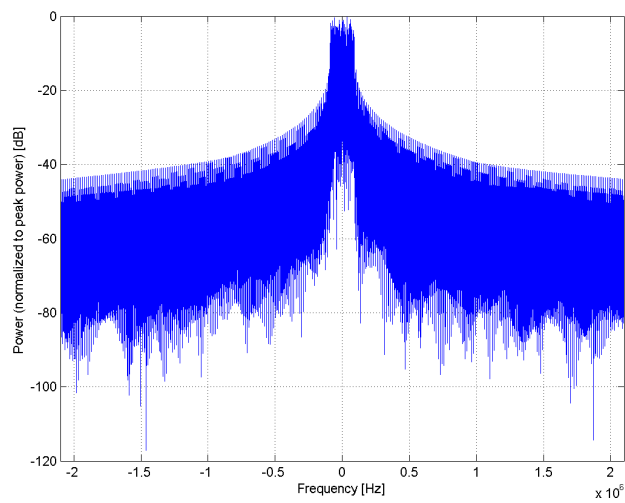
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 16-QAM)</b>  |
| Group:                  | LTE-FDD  |
| UID:                    | 10185-CAE  |
| PAR: <sup>1</sup>       | <b>6.51 dB</b>   |
| MIF: <sup>2</sup>       | <b>-9.76 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 16-QAM   |
| Modulation:             | Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Frequency Band:         |  |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 16QAM<br>Data Type: UL-SCH<br>Number RB: 1<br>Transport Block Size: 256<br>TBS Index: 14<br>MCS Index: 15<br>Data Type: PN9   |
| Bandwidth:              | 3.0 MHz  |
| Integration Time:       | 10.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

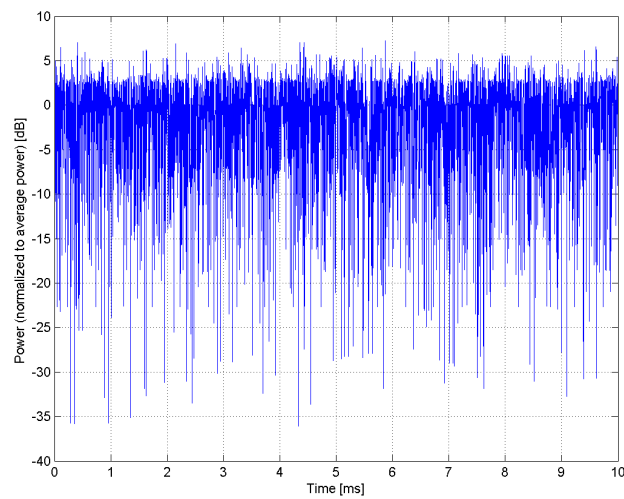
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



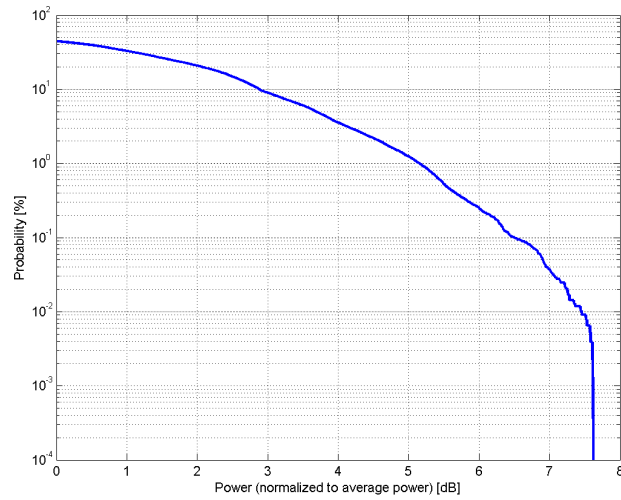
### Time Domain

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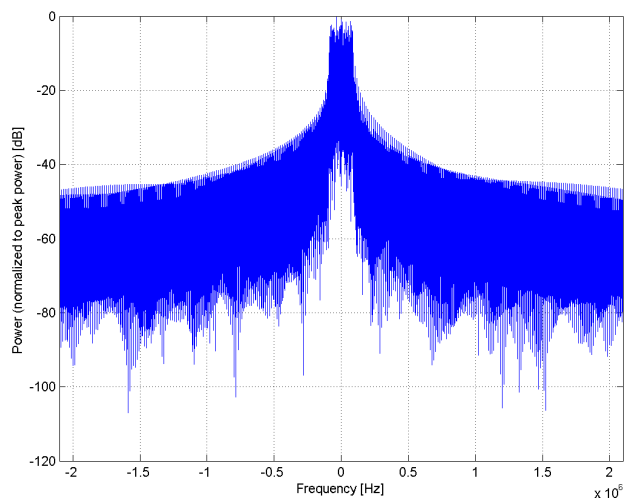
|                         |  |
|-------------------------|--|
| Name:                   | <b>LTE-FDD (SC-FDMA, 1 RB, 3 MHz, 64-QAM)</b>  |
| Group:                  | LTE-FDD  |
| UID:                    | 10186-AAE  |
| PAR: <sup>1</sup>       | <b>6.50 dB</b>   |
| MIF: <sup>2</sup>       | <b>-9.93 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation  |
| Category:               | 64-QAM   |
| Modulation:             | 64-QAM   |
| Frequency Band:         | Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 64QAM<br>Data Type: UL-SCH<br>Number RB: 1<br>Transport Block Size: 552<br>TBS Index: 23<br>MCS Index: 25<br>Data Type: PN9   |
| Bandwidth:              | 3.0 MHz  |
| Integration Time:       | 100.0 ms   |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

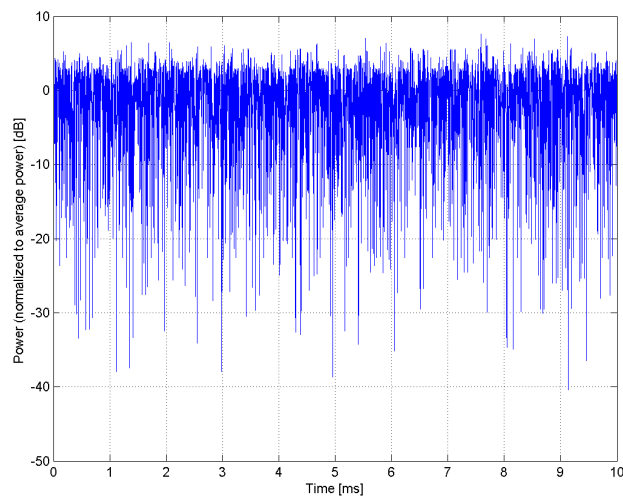
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



### Time Domain

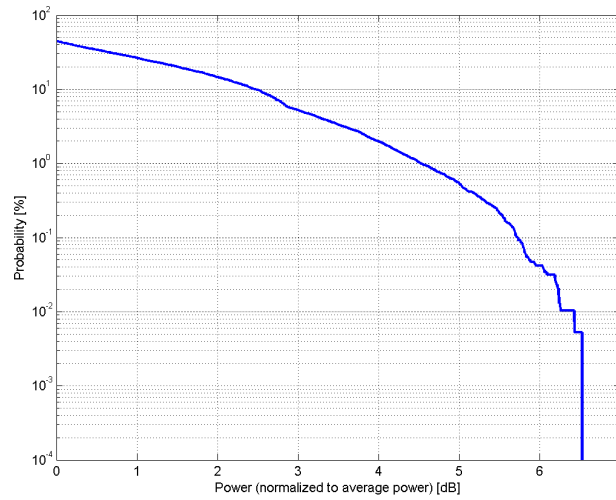
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|                         |   |
|-------------------------|---|
| Name:                   | <b>LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, QPSK)</b>   |
| Group:                  | LTE-FDD   |
| UID:                    | 10187-CAF   |
| PAR: <sup>1</sup>       | <b>5.73 dB</b>  |
| MIF: <sup>2</sup>       | <b>-15.62 dB</b>  |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation   |
| Category:               | QPSK  |
| Modulation:             | QPSK  |
| Frequency Band:         | Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: QPSK<br>Data Type: UL-SCH<br>Number RB: 1<br>Transport Block Size: 72<br>TBS Index: 5<br>MCS Index: 5<br>Data Type: PN9  |
| Bandwidth:              | 1.4 MHz   |
| Integration Time:       | 10.0 ms   |

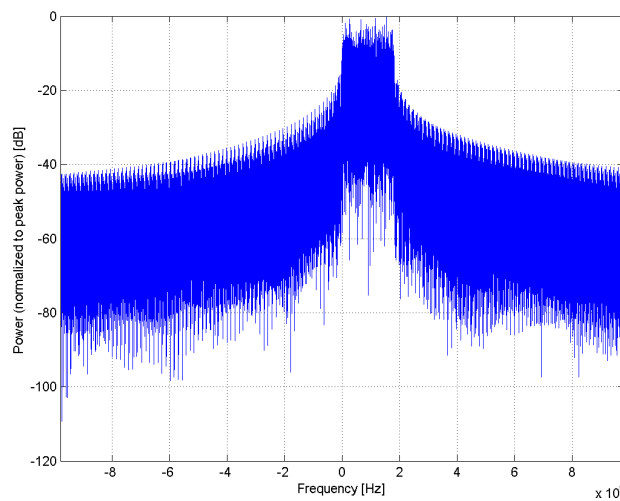
<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).

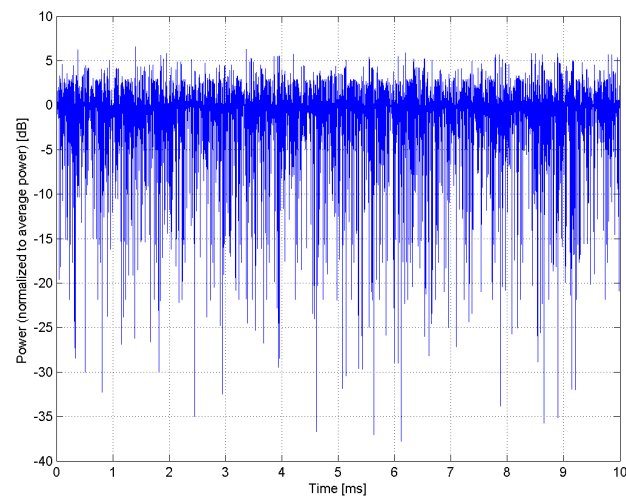




### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



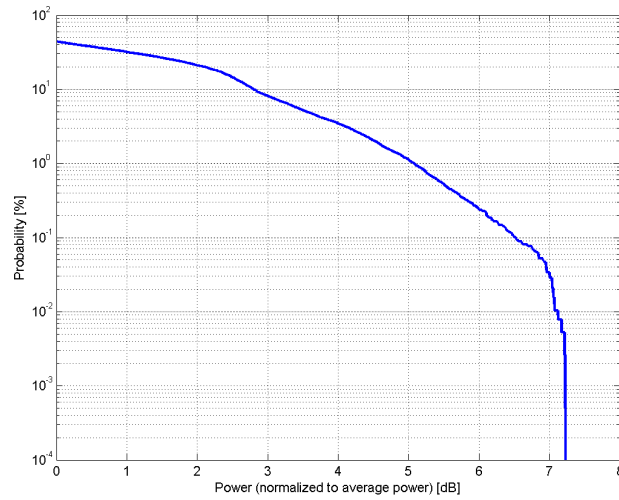
### Time Domain

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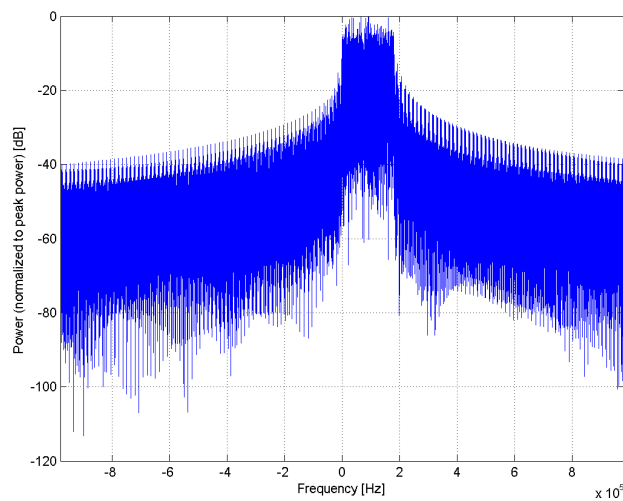
|                         |   |
|-------------------------|---|
| Name:                   | <b>LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 16-QAM)</b>   |
| Group:                  | LTE-FDD   |
| UID:                    | 10188-CAF   |
| PAR: <sup>1</sup>       | <b>6.52 dB</b>  |
| MIF: <sup>2</sup>       | <b>-9.76 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation   |
| Category:               | 16-QAM  |
| Modulation:             |   |
| Frequency Band:         | Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 16QAM<br>Data Type: UL-SCH<br>Number RB: 1<br>Transport Block Size: 256<br>TBS Index: 14<br>MCS Index: 15<br>Data Type: PN9  |
| Bandwidth:              | 1.4 MHz   |
| Integration Time:       | 10.0 ms   |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

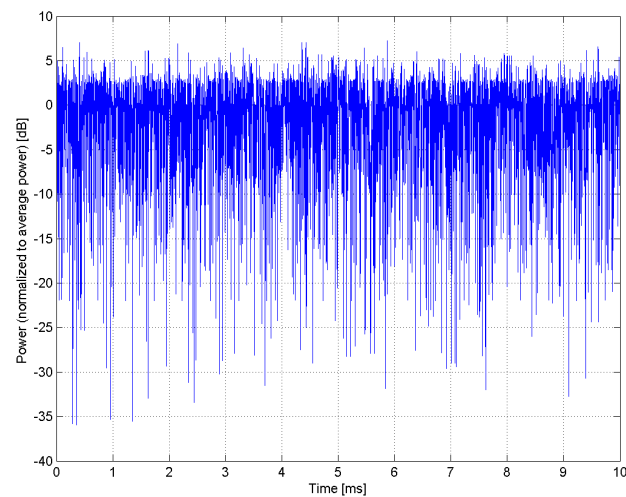
<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



### Complementary Cumulative Distribution Function (CCDF)



### Frequency Domain



### Time Domain

**Calibration Laboratory of  
Schmid & Partner  
Engineering AG**  
Zeughausstrasse 43, 8004 Zurich, Switzerland

|                         |   |
|-------------------------|---|
| Name:                   | <b>LTE-FDD (SC-FDMA, 1 RB, 1.4 MHz, 64-QAM)</b>   |
| Group:                  | LTE-FDD   |
| UID:                    | 10189-AAF   |
| PAR: <sup>1</sup>       | <b>6.50 dB</b>  |
| MIF: <sup>2</sup>       | <b>-9.93 dB</b>   |
| Standard Reference:     | 3GPP / ETSI TS 136.101 V8.4.0<br>3GPP / ETSI TS 136.213 V8.4.0<br>FCC OET KDB 941225 D05 SAR for LTE Devices v01<br>Random amplitude modulation   |
| Category:               | 64-QAM  |
| Modulation:             | 64-QAM  |
| Frequency Band:         | Band 2, E-UTRA/FDD (1850.0 - 1910.0 MHz)<br>Band 3, E-UTRA/FDD (1710.0 - 1785.0 MHz)<br>Band 4, E-UTRA/FDD (1710.0 - 1755.0 MHz)<br>Band 5, E-UTRA/FDD (824.0 - 849.0 MHz)<br>Band 8, E-UTRA/FDD (880.0 - 915.0 MHz)<br>Band 12, E-UTRA/FDD (699.0 - 716.0 MHz)<br>Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)<br>Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz)<br>Band 26 E-UTRA/FDD (814.0 - 849.0 MHz)<br>Band 27 E-UTRA/FDD (807.0 - 824.0 MHz)<br>Band 31, E-UTRA/FDD (452.5 - 457.5 MHz)<br>Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)<br>Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)<br>Band 72, E-UTRA/FDD (451.0 - 456.0 MHz)<br>Band 73, E-UTRA/FDD (450.0 - 455.0 MHz)<br>Band 74, E-UTRA/FDD (1427.0 - 1470.0 MHz)<br>Validation band (0.0 - 6000.0 MHz) |
| Detailed Specification: | Modulation Scheme: SC-FDMA<br>Number of PUSCHs: 1<br>Settings for Subframe #0 to #9:<br>Modulation Scheme: 64QAM<br>Data Type: UL-SCH<br>Number RB: 1<br>Transport Block Size: 552<br>TBS Index: 23<br>MCS Index: 25<br>Data Type: PN9  |
| Bandwidth:              | 1.4 MHz   |
| Integration Time:       | 100.0 ms  |

<sup>1</sup> PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

<sup>2</sup> Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).