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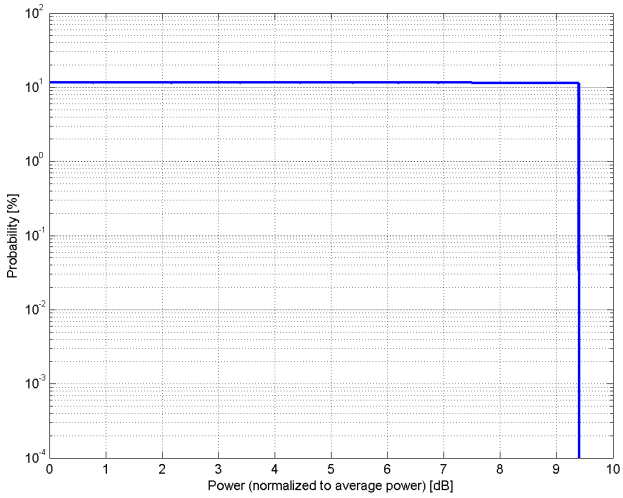
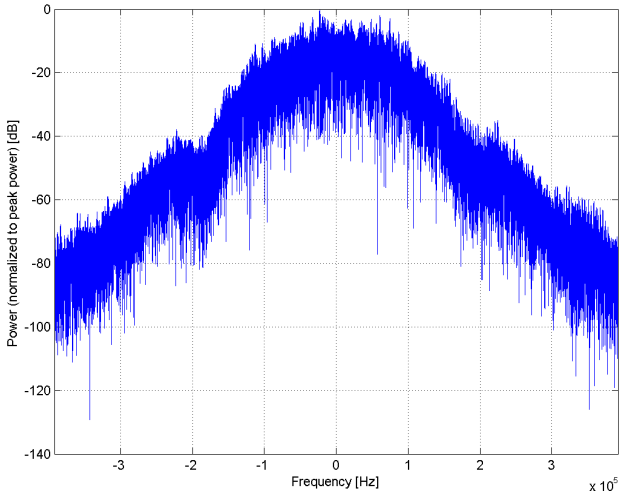
Zeughausstrasse 43, 8004 Zurich, Switzerland

Name:	**GSM-FDD (TDMA, GMSK)**
Group:	GSM
UID:	10021-DAC
PAR: [1]	**9.39 dB**
MIF: [2]	**3.63 dB**
Standard Reference:	ETSI TS 100 909 V8.9.0 (2005-01) FCC OET KDB 941225, D03 and D04
Category:	Periodic pulsed modulation
Modulation:	GMSK
Frequency Band:	GSM 450 (450.4 - 457.6 MHz) GSM 480 (478.8 - 486.0 MHz) GSM 710 (698.0 - 716.0 MHz) GSM 750 (747.0 - 763.0 MHz) GSM 850 (824.0 - 849.0 MHz) P-GSM 900 (890.0 - 915.0 MHz) E-GSM 900 (880.0 - 915.0 MHz) R-GSM 900 (876.0 - 915.0 MHz) DCS 1800 (1710.0 - 1785.0 MHz) PCS 1900 (1850.0 - 1910.0 MHz) ER-GSM 900 (873.0 - 915.0 MHz) Validation band (0.0 - 6000.0 MHz)
Detailed Specification:	Active Slot: TN0 Data: PN9 continuous Frame: composed out of 8 Slots Multiframe: 26th (IDLE) Frame set blank Slottype & -timing: Normal burst for GMSK
Bandwidth:	0.2 MHz
Integration Time:	120.0 ms

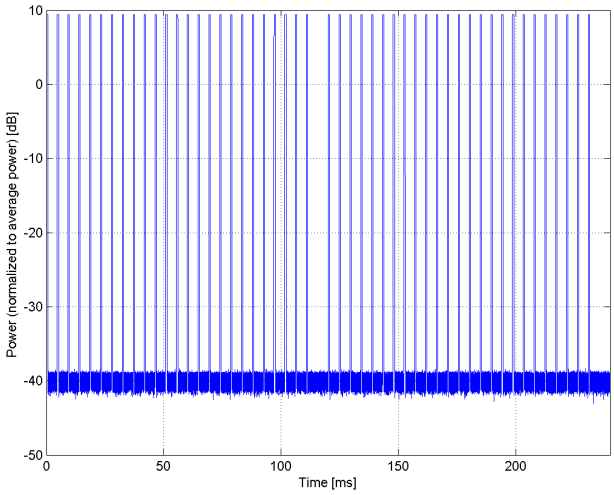
[1] PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "'Measurement of the Peak-to-Average Power Ratio (PAPR)'"
[2] Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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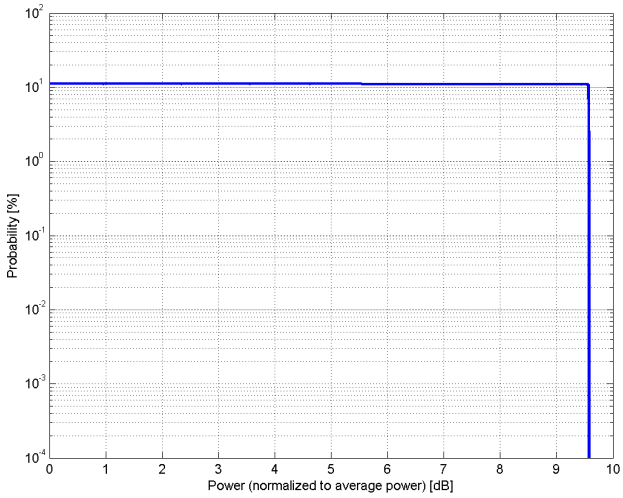
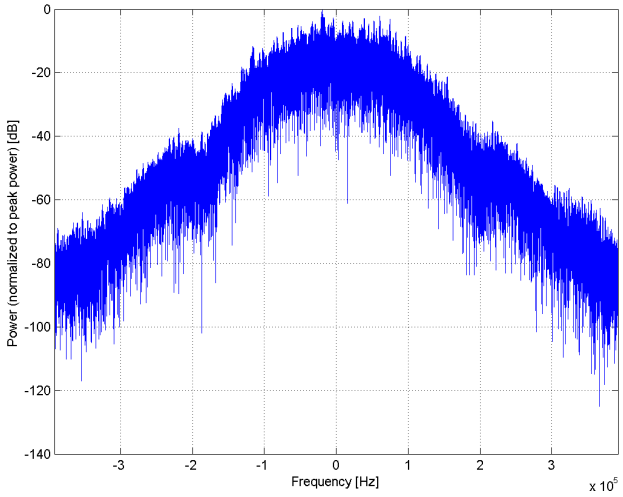
Name:	**GPRS-FDD (TDMA, GMSK, TN 0)**
Group:	GSM
UID:	10023-DAC
PAR: [1]	**9.57 dB**
MIF: [2]	**3.80 dB**
Standard Reference:	ETSI TS 100 909 V8.9.0 (2005-01) FCC OET KDB 941225, D03 and D04
Category:	Periodic pulsed modulation
Modulation:	GMSK
Frequency Band:	GSM 450 (450.4 - 457.6 MHz) GSM 480 (478.8 - 486.0 MHz) GSM 710 (698.0 - 716.0 MHz) GSM 750 (747.0 - 763.0 MHz) GSM 850 (824.0 - 849.0 MHz) P-GSM 900 (890.0 - 915.0 MHz) E-GSM 900 (880.0 - 915.0 MHz) R-GSM 900 (876.0 - 915.0 MHz) DCS 1800 (1710.0 - 1785.0 MHz) PCS 1900 (1850.0 - 1910.0 MHz) ER-GSM 900 (873.0 - 915.0 MHz) Validation band (0.0 - 6000.0 MHz)
Detailed Specification:	Active Slot: TN0 Data: PN9 continuous Frame: composed out of 8 Slots Multiframe: 13th (PTCCH) and 26th (IDLE) Frame set blank Slottype & -timing: Normal burst for GMSK
Bandwidth:	0.2 MHz
Integration Time:	60.0 ms

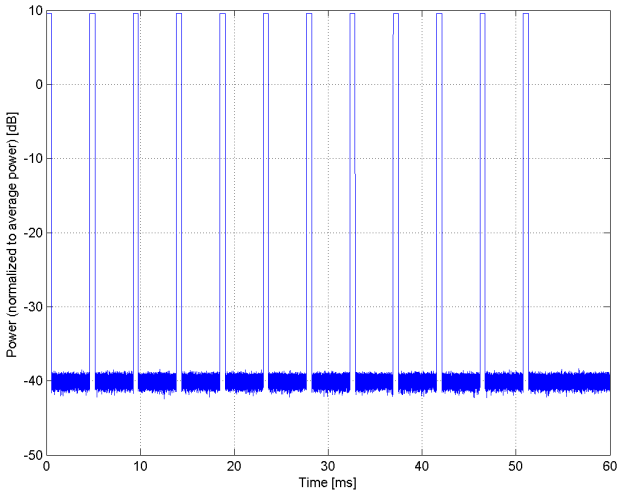
1 PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "'Measurement of the Peak-to-Average Power Ratio (PAPR)'"
2 Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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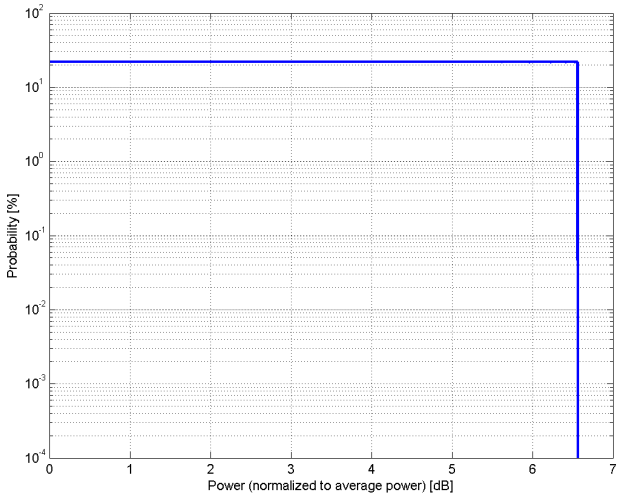
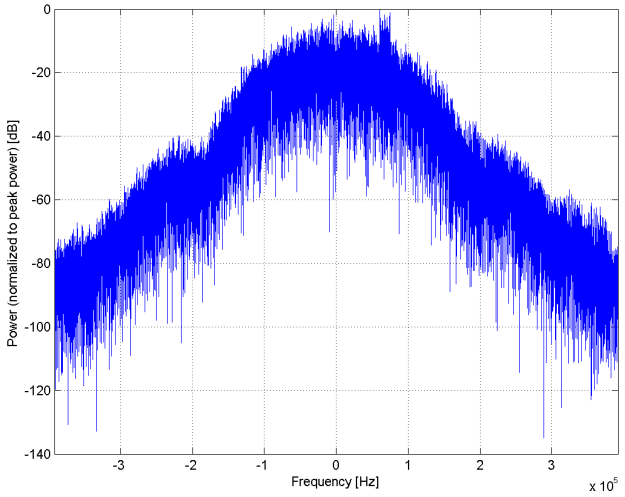
Name:	**GPRS-FDD (TDMA, GMSK, TN 0-1)**
Group:	GSM
UID:	10024-DAC
PAR: [1]	**6.56 dB**
MIF: [2]	**1.15 dB**
Standard Reference:	ETSI TS 100 909 V8.9.0 (2005-01) FCC OET KDB 941225, D03 and D04
Category:	Periodic pulsed modulation
Modulation:	GMSK
Frequency Band:	GSM 450 (450.4 - 457.6 MHz) GSM 480 (478.8 - 486.0 MHz) GSM 710 (698.0 - 716.0 MHz) GSM 750 (747.0 - 763.0 MHz) GSM 850 (824.0 - 849.0 MHz) P-GSM 900 (890.0 - 915.0 MHz) E-GSM 900 (880.0 - 915.0 MHz) R-GSM 900 (876.0 - 915.0 MHz) DCS 1800 (1710.0 - 1785.0 MHz) PCS 1900 (1850.0 - 1910.0 MHz) ER-GSM 900 (873.0 - 915.0 MHz) Validation band (0.0 - 6000.0 MHz)
Detailed Specification:	Active Slots: TN0, TN1 Data: PN9 continuous Frame: composed out of 8 Slots Multiframe: 13th (PTCCH) and 26th (IDLE) Frame set blank Slottype & -timing: Normal burst for GMSK
Bandwidth:	0.2 MHz
Integration Time:	60.0 ms

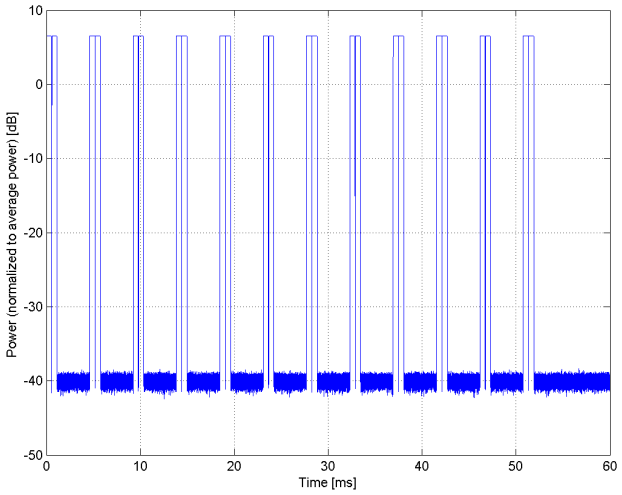
1 PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "'Measurement of the Peak-to-Average Power Ratio (PAPR)'"
2 Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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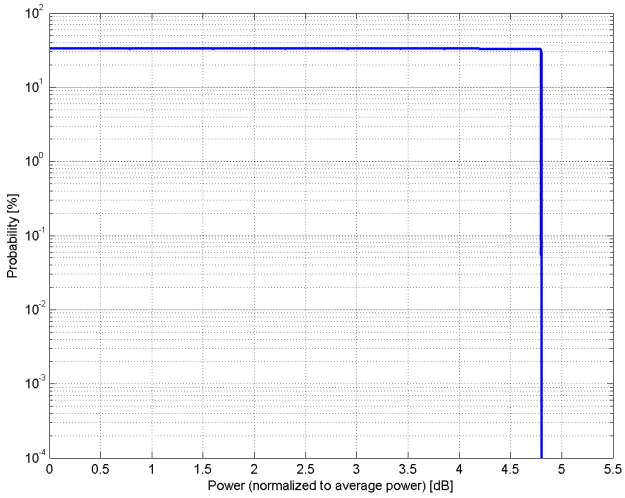
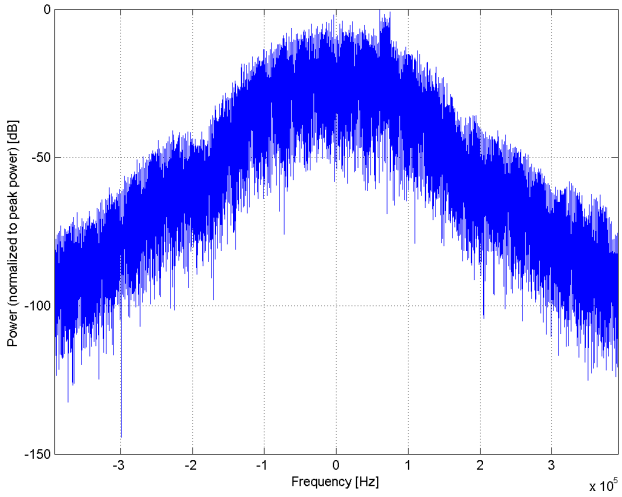
Name:	**GPRS-FDD (TDMA, GMSK, TN 0-1-2)**
Group:	GSM
UID:	10027-DAC
PAR: [1]	**4.80 dB**
MIF: [2]	**-0.67 dB**
Standard Reference:	ETSI TS 100 909 V8.9.0 (2005-01) FCC OET KDB 941225, D03 and D04
Category:	Periodic pulsed modulation
Modulation:	GMSK
Frequency Band:	GSM 450 (450.4 - 457.6 MHz) GSM 480 (478.8 - 486.0 MHz) GSM 710 (698.0 - 716.0 MHz) GSM 750 (747.0 - 763.0 MHz) GSM 850 (824.0 - 849.0 MHz) P-GSM 900 (890.0 - 915.0 MHz) E-GSM 900 (880.0 - 915.0 MHz) R-GSM 900 (876.0 - 915.0 MHz) DCS 1800 (1710.0 - 1785.0 MHz) PCS 1900 (1850.0 - 1910.0 MHz) ER-GSM 900 (873.0 - 915.0 MHz) Validation band (0.0 - 6000.0 MHz)
Detailed Specification:	Active Slots: TN0, TN1, TN2 Data: PN9 continuous Frame: composed out of 8 Slots Multiframe: 13th (PTCCH) and 26th (IDLE) Frame set blank Slottype & -timing: Normal burst for GMSK
Bandwidth:	0.2 MHz
Integration Time:	60.0 ms

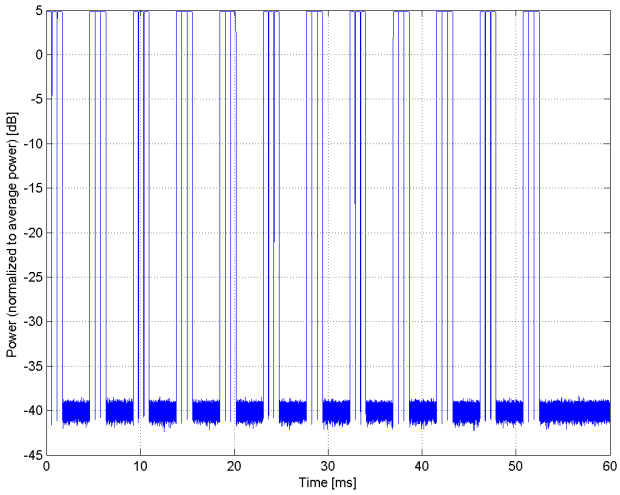
[1] PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "'Measurement of the Peak-to-Average Power Ratio (PAPR)'"
[2] Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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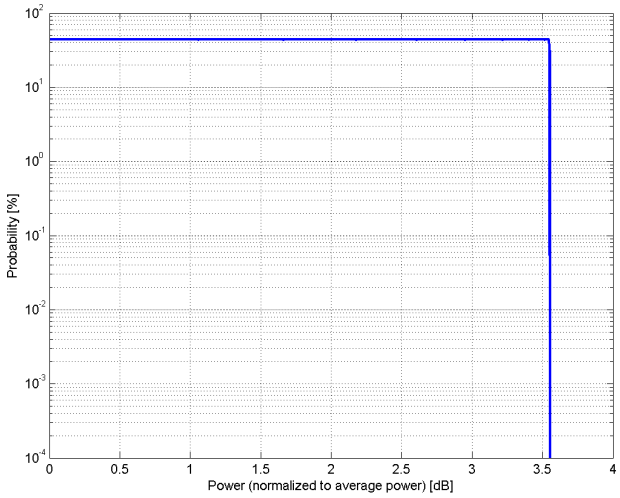
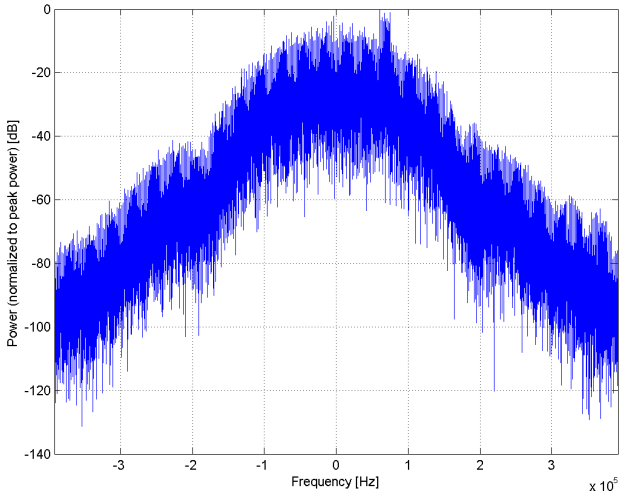
Name:	**GPRS-FDD (TDMA, GMSK, TN 0-1-2-3)**
Group:	GSM
UID:	10028-DAC
PAR: [1]	**3.55 dB**
MIF: [2]	**-2.05 dB**
Standard Reference:	ETSI TS 100 909 V8.9.0 (2005-01) FCC OET KDB 941225, D03 and D04
Category:	Periodic pulsed modulation
Modulation:	GMSK
Frequency Band:	GSM 450 (450.4 - 457.6 MHz) GSM 480 (478.8 - 486.0 MHz) GSM 710 (698.0 - 716.0 MHz) GSM 750 (747.0 - 763.0 MHz) GSM 850 (824.0 - 849.0 MHz) P-GSM 900 (890.0 - 915.0 MHz) E-GSM 900 (880.0 - 915.0 MHz) R-GSM 900 (876.0 - 915.0 MHz) DCS 1800 (1710.0 - 1785.0 MHz) PCS 1900 (1850.0 - 1910.0 MHz) ER-GSM 900 (873.0 - 915.0 MHz) Validation band (0.0 - 6000.0 MHz)
Detailed Specification:	Active Slots: TN0, TN1, TN2, TN3 Data: PN9 continuous Frame: composed out of 8 Slots Multiframe: 13th (PTCCH) and 26th (IDLE) Frame set blank Slottype & -timing: Normal burst for GMSK
Bandwidth:	0.2 MHz
Integration Time:	60.0 ms

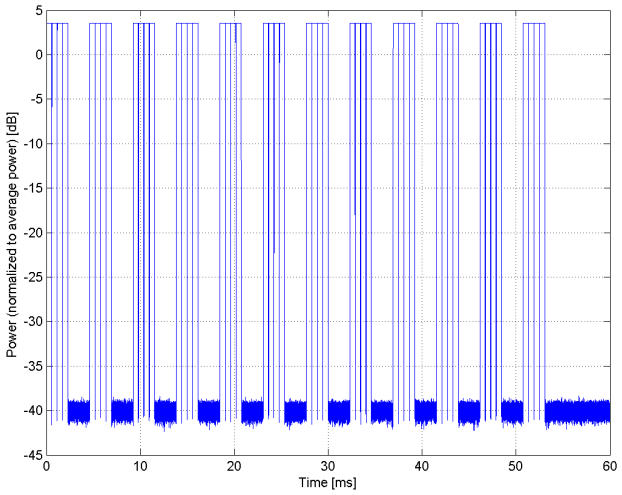
[1] PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "'Measurement of the Peak-to-Average Power Ratio (PAPR)'"
[2] Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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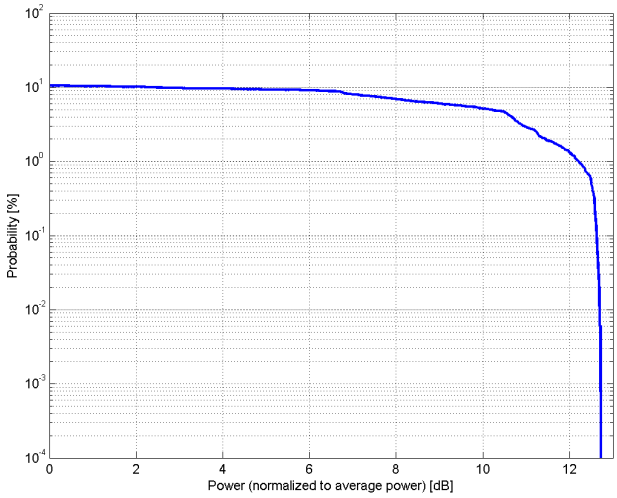
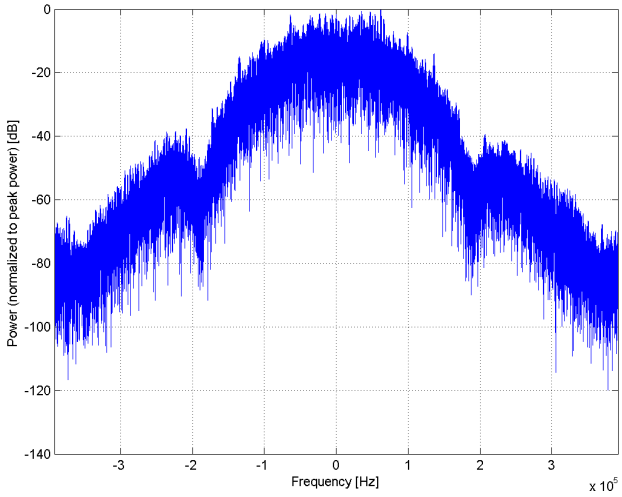
Name:	**EDGE-FDD (TDMA, 8PSK, TN 0)**
Group:	GSM
UID:	10025-DAC
PAR: [1]	**12.62 dB**
MIF: [2]	**3.75 dB**
Standard Reference:	ETSI TS 100 909 V8.9.0 (2005-01) FCC OET KDB 941225, D03 and D04
Category:	Periodic pulsed modulation
Modulation:	8PSK
Frequency Band:	GSM 450 (450.4 - 457.6 MHz) GSM 480 (478.8 - 486.0 MHz) GSM 710 (698.0 - 716.0 MHz) GSM 750 (747.0 - 763.0 MHz) GSM 850 (824.0 - 849.0 MHz) P-GSM 900 (890.0 - 915.0 MHz) E-GSM 900 (880.0 - 915.0 MHz) R-GSM 900 (876.0 - 915.0 MHz) DCS 1800 (1710.0 - 1785.0 MHz) PCS 1900 (1850.0 - 1910.0 MHz) ER-GSM 900 (873.0 - 915.0 MHz) Validation band (0.0 - 6000.0 MHz)
Detailed Specification:	Active Slot: TN0 Data: PN9 continuous Frame: composed out of 8 Slots Multiframe: 13th (PTCCH) and 26th (IDLE) Frame set blank Slottype & -timing: Normal burst for 8PSK
Bandwidth:	0.2 MHz
Integration Time:	60.0 ms

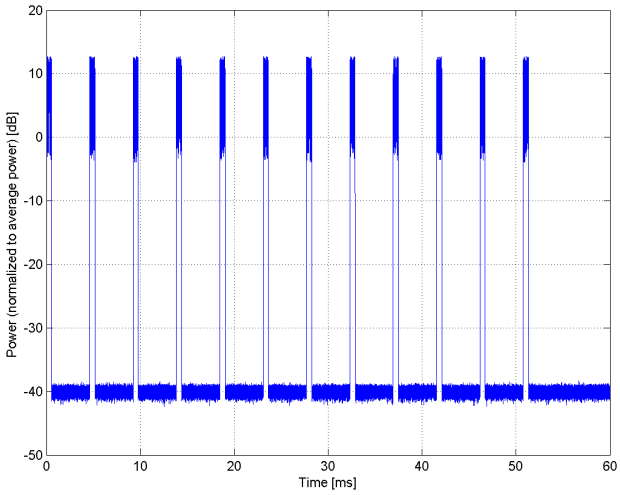
[1] PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "'Measurement of the Peak-to-Average Power Ratio (PAPR)'"
[2] Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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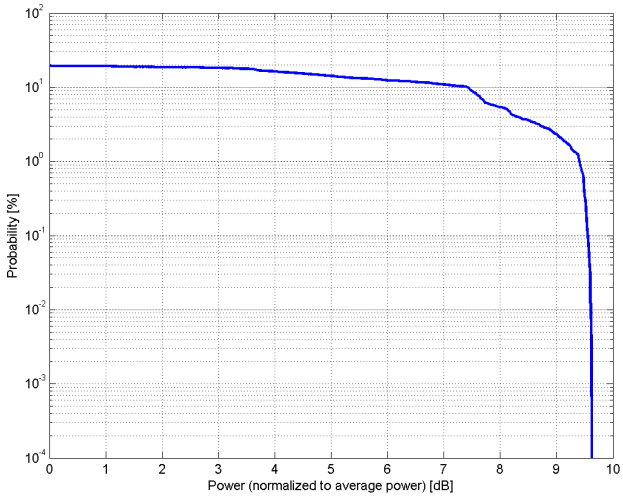
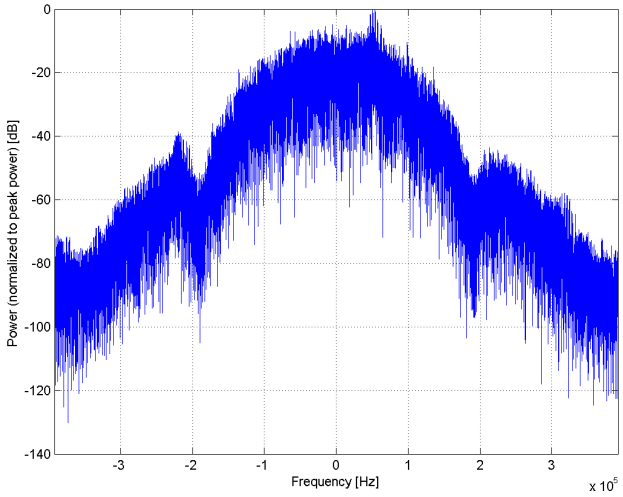
Name:	**EDGE-FDD (TDMA, 8PSK, TN 0-1)**
Group:	GSM
UID:	10026-DAC
PAR: [1]	**9.55 dB**
MIF: [2]	**1.23 dB**
Standard Reference:	ETSI TS 100 909 V8.9.0 (2005-01) FCC OET KDB 941225, D03 and D04
Category:	Periodic pulsed modulation
Modulation:	8PSK
Frequency Band:	GSM 450 (450.4 - 457.6 MHz) GSM 480 (478.8 - 486.0 MHz) GSM 710 (698.0 - 716.0 MHz) GSM 750 (747.0 - 763.0 MHz) GSM 850 (824.0 - 849.0 MHz) P-GSM 900 (890.0 - 915.0 MHz) E-GSM 900 (880.0 - 915.0 MHz) R-GSM 900 (876.0 - 915.0 MHz) DCS 1800 (1710.0 - 1785.0 MHz) PCS 1900 (1850.0 - 1910.0 MHz) ER-GSM 900 (873.0 - 915.0 MHz) Validation band (0.0 - 6000.0 MHz)
Detailed Specification:	Active Slot:s TN0, TN1 Data: PN9 continuous Frame: composed out of 8 Slots Multiframe: 13th (PTCCH) and 26th (IDLE) Frame set blank Slottype & -timing: Normal burst for 8PSK
Bandwidth:	0.2 MHz
Integration Time:	60.0 ms

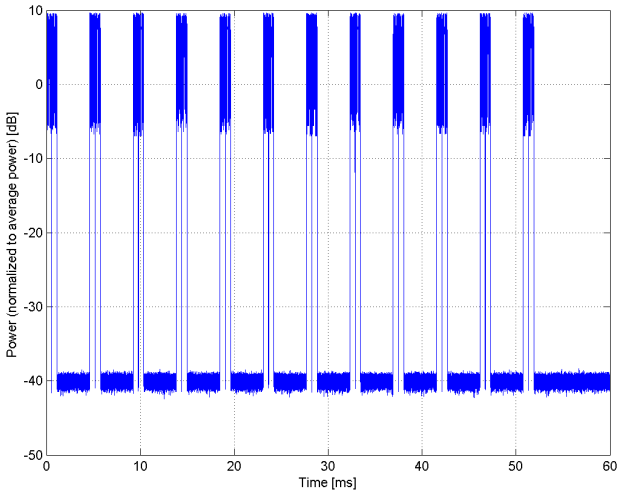
[1] PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "'Measurement of the Peak-to-Average Power Ratio (PAPR)'"
[2] Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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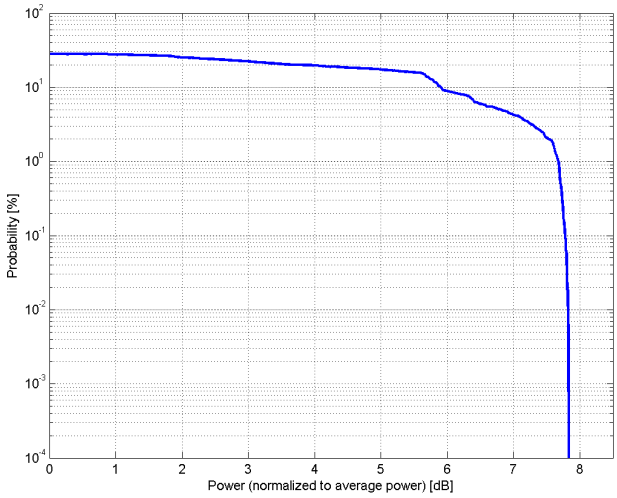
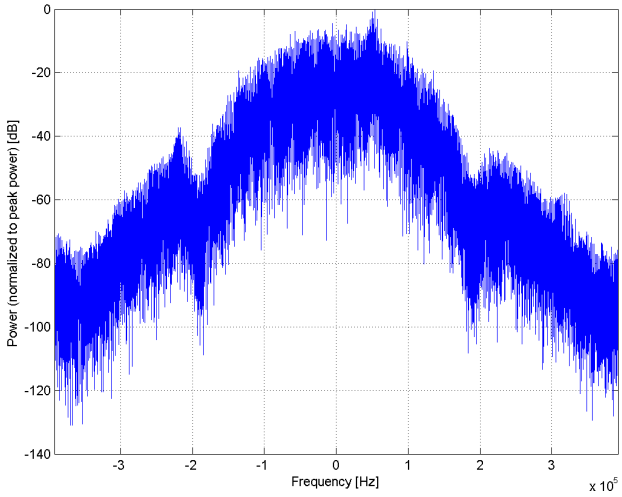
Name:	**EDGE-FDD (TDMA, 8PSK, TN 0-1-2)**
Group:	GSM
UID:	10029-DAC
PAR: [1]	**7.78 dB**
MIF: [2]	**-0.52 dB**
Standard Reference:	ETSI TS 100 909 V8.9.0 (2005-01) FCC OET KDB 941225, D03 and D04
Category:	Periodic pulsed modulation
Modulation:	8PSK
Frequency Band:	GSM 450 (450.4 - 457.6 MHz) GSM 480 (478.8 - 486.0 MHz) GSM 710 (698.0 - 716.0 MHz) GSM 750 (747.0 - 763.0 MHz) GSM 850 (824.0 - 849.0 MHz) P-GSM 900 (890.0 - 915.0 MHz) E-GSM 900 (880.0 - 915.0 MHz) R-GSM 900 (876.0 - 915.0 MHz) DCS 1800 (1710.0 - 1785.0 MHz) PCS 1900 (1850.0 - 1910.0 MHz) ER-GSM 900 (873.0 - 915.0 MHz) Validation band (0.0 - 6000.0 MHz)
Detailed Specification:	Active Slots: TN0, TN1, TN2 Data: PN9 continuous Frame: composed out of 8 Slots Multiframe: 13th (PTCCH) and 26th (IDLE) Frame set blank Slottype & -timing: Normal burst for 8PSK
Bandwidth:	0.2 MHz
Integration Time:	60.0 ms

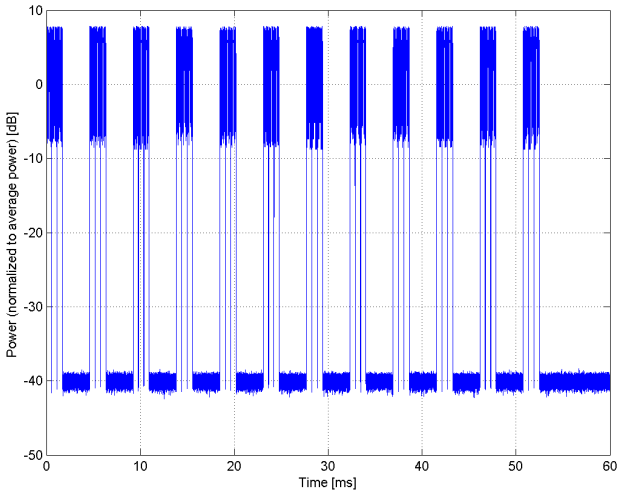
1 PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "'Measurement of the Peak-to-Average Power Ratio (PAPR)'"
2 Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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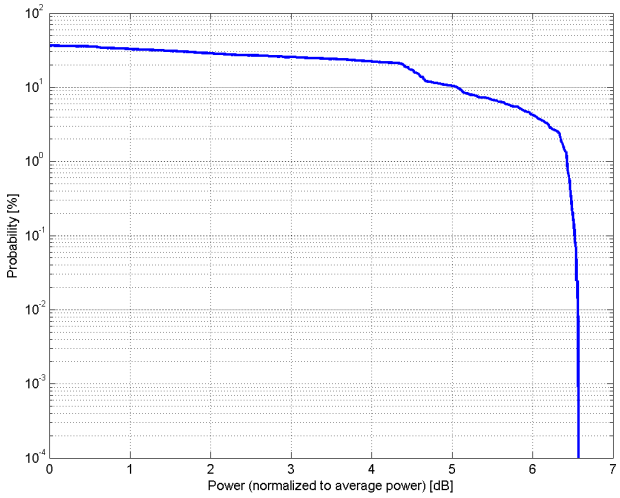
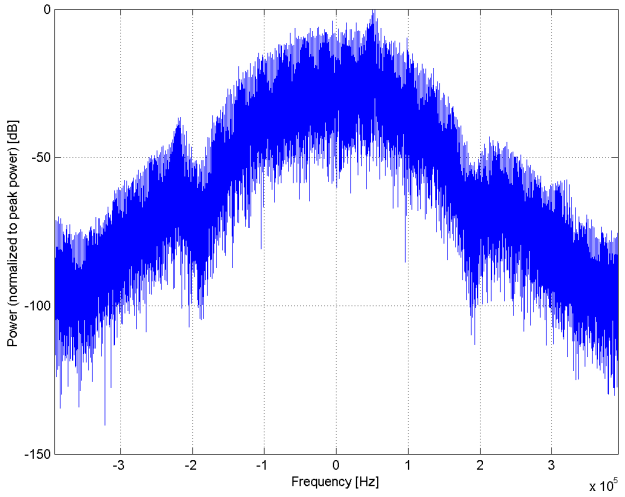
Name:	**EDGE-FDD (TDMA, 8PSK, TN 0-1-2-3)**
Group:	GSM
UID:	10058-DAC
PAR: [1]	**6.52 dB**
MIF: [2]	**-1.82 dB**
Standard Reference:	ETSI TS 100 909 V8.9.0 (2005-01) FCC OET KDB 941225, D03 and D04
Category:	Periodic pulsed modulation
Modulation:	8PSK
Frequency Band:	GSM 450 (450.4 - 457.6 MHz) GSM 480 (478.8 - 486.0 MHz) GSM 710 (698.0 - 716.0 MHz) GSM 750 (747.0 - 763.0 MHz) GSM 850 (824.0 - 849.0 MHz) P-GSM 900 (890.0 - 915.0 MHz) E-GSM 900 (880.0 - 915.0 MHz) R-GSM 900 (876.0 - 915.0 MHz) DCS 1800 (1710.0 - 1785.0 MHz) PCS 1900 (1850.0 - 1910.0 MHz) ER-GSM 900 (873.0 - 915.0 MHz) Validation band (0.0 - 6000.0 MHz)
Detailed Specification:	Active Slots: TN0, TN1, TN2, TN3 Data: PN9 continuous Frame: composed out of 8 Slots Multiframe: 13th (PTCCH) and 26th (IDLE) Frame set blank Slottype & -timing: Normal burst for 8PSK
Bandwidth:	0.2 MHz
Integration Time:	60.0 ms

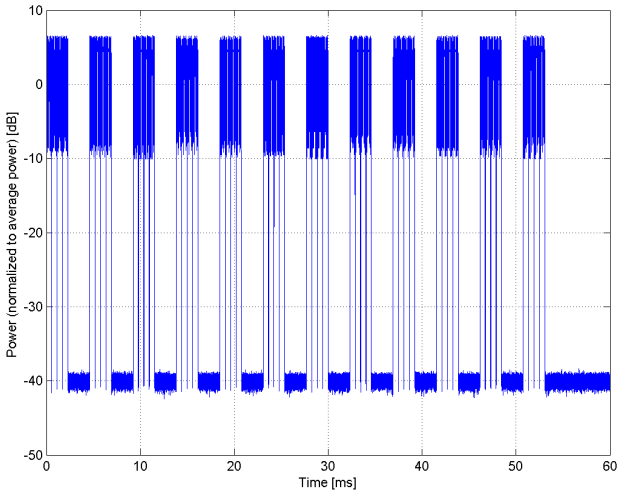
[1] PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "'Measurement of the Peak-to-Average Power Ratio (PAPR)'"
[2] Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

Calibration Laboratory of
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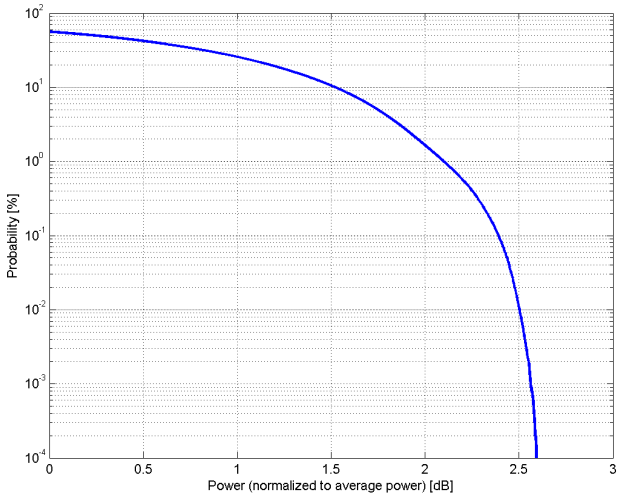
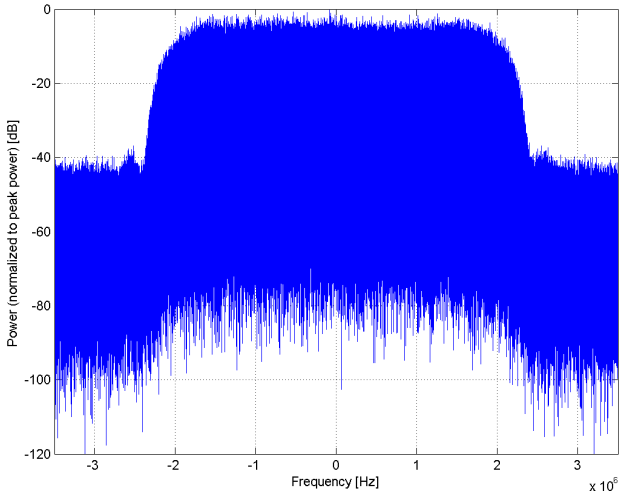
Name:	**UMTS-FDD (WCDMA, AMR)**
Group:	WCDMA
UID:	10460-AAA
PAR: [1]	**2.39 dB**
MIF: [2]	**-25.43 dB**
Standard Reference:	FCC OET KDB 941225 D01 SAR test for 3G devices v03
Category:	Random amplitude modulation
Modulation:	QPSK
Frequency Band:	Band 1, UTRA/FDD (1920.0-1980.0 MHz, 20000) Band 2, UTRA/FDD (1850.0-1910.0 MHz, 20001) Band 3, UTRA/FDD (1710.0-1785.0 MHz, 20002) Band 4, UTRA/FDD (1710.0-1755.0 MHz, 20003) Band 5, UTRA/FDD (824.0-849.0 MHz, 20004) Band 6, UTRA/FDD (830.0-840.0 MHz, 20005) Band 7, UTRA/FDD (2500.0-2570.0 MHz, 20006) Band 8, UTRA/FDD (880.0-915.0 MHz, 20007) Band 9, UTRA/FDD (1749.9-1784.9 MHz, 20008) Band 10, UTRA/FDD (1710.0-1770.0 MHz, 20009) Band 11, UTRA/FDD (1427.9-1452.9 MHz, 20010) Band 12, UTRA/FDD (698.0-716.0 MHz, 20011) Band 13, UTRA/FDD (777.0-787.0 MHz, 20012) Band 14, UTRA/FDD (788.0-798.0 MHz, 20013) Band 19, UTRA/FDD (830.0-845.0 MHz, 20130) Band 20, UTRA/FDD (832.0-862.0 MHz, 20131) Band 21, UTRA/FDD (1447.9-1462.9 MHz, 20132) Band 22, UTRA/FDD (3410.0-3490.0 MHz, 20217) Band 25, UTRA/FDD (1850.0-1915.0 MHz, 20218) Band 26, UTRA/FDD (814.0-849.0 MHz, 20219)
Detailed Specification:	Dedicated Channel Type: 12.2 kbps AMR 3.4 kbps SRB
Bandwidth:	5.0 MHz
Integration Time:	100.0 ms

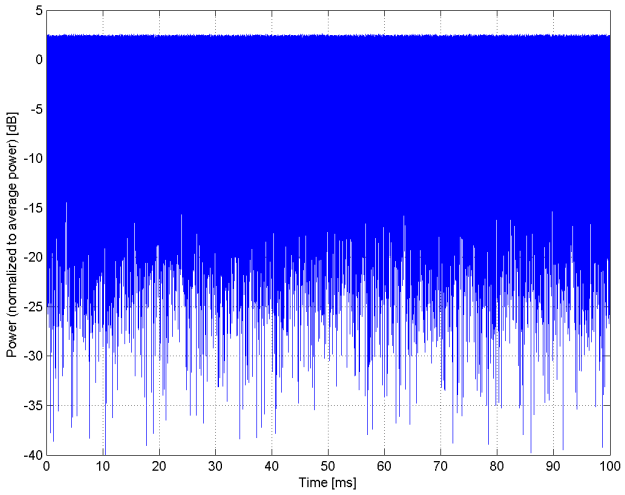
[1] PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "'Measurement of the Peak-to-Average Power Ratio (PAPR)'"
[2] Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

Calibration Laboratory of
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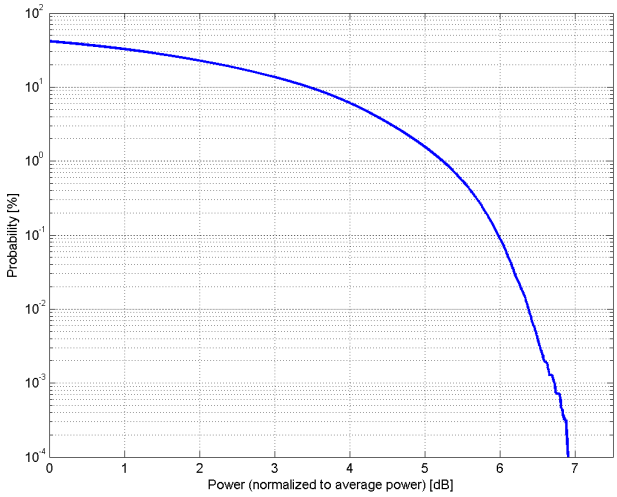
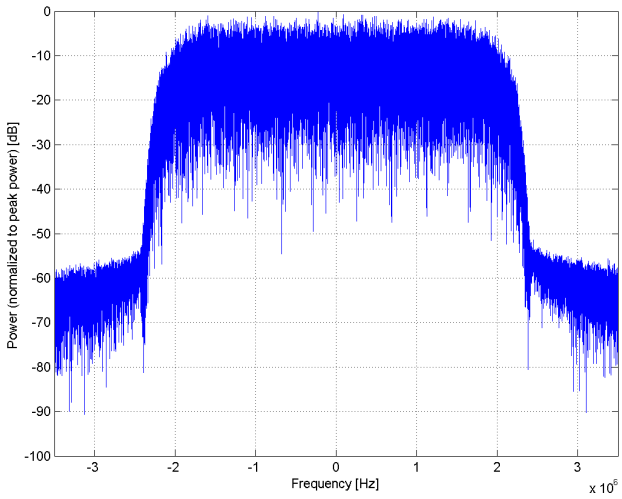
Name:	**UMTS-FDD (HSPA+)**
Group:	WCDMA
UID:	10225-CAB
PAR: [1]	**5.97 dB**
MIF: [2]	**-20.39 dB**
Standard Reference:	3GPP Rel 7 TS 34.121 FCC OET KDB 941225 D01 SAR test for 3G devices v02 FCC OET KDB 941225 D02 Guidance for 3GPP R6 and R7 HSPA v02v01
Category:	Random amplitude modulation
Modulation:	16QAM
Frequency Band:	Band 1, UTRA/FDD (1920.0-1980.0 MHz, 20000) Band 2, UTRA/FDD (1850.0-1910.0 MHz, 20001) Band 3, UTRA/FDD (1710.0-1785.0 MHz, 20002) Band 4, UTRA/FDD (1710.0-1755.0 MHz, 20003) Band 5, UTRA/FDD (824.0-849.0 MHz, 20004) Band 6, UTRA/FDD (830.0-840.0 MHz, 20005) Band 7, UTRA/FDD (2500.0-2570.0 MHz, 20006) Band 8, UTRA/FDD (880.0-915.0 MHz, 20007) Band 9, UTRA/FDD (1749.9-1784.9 MHz, 20008) Band 10, UTRA/FDD (1710.0-1770.0 MHz, 20009) Band 11, UTRA/FDD (1427.9-1452.9 MHz, 20010) Band 12, UTRA/FDD (698.0-716.0 MHz, 20011) Band 13, UTRA/FDD (777.0-787.0 MHz, 20012) Band 14, UTRA/FDD (788.0-798.0 MHz, 20013) Band 19, UTRA/FDD (830.0-845.0 MHz, 20130) Band 20, UTRA/FDD (832.0-862.0 MHz, 20131) Band 21, UTRA/FDD (1447.9-1462.9 MHz, 20132) Band 22, UTRA/FDD (3410.0-3490.0 MHz, 20217) Band 25, UTRA/FDD (1850.0-1915.0 MHz, 20218) Band 26, UTRA/FDD (814.0-849.0 MHz, 20219)
Detailed Specification:	12.2 kbps RMC, FRC H-Set 2 CQI value: 2 Sub-test 2 Conditions: DPCCH gain factor (Beta_c) = 6/15 DPDCH gain factor (Beta_d): 15/15 E-DPDCH Settings: Symbol Rate: 2x1960 Mbps Modulation 4PAM Data Type: PN9
Bandwidth:	5.0 MHz
Integration Time:	100.0 ms

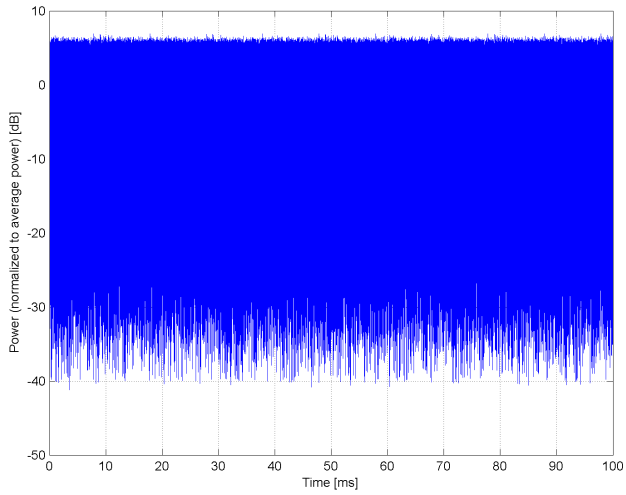
[1] PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "'Measurement of the Peak-to-Average Power Ratio (PAPR)'"
[2] Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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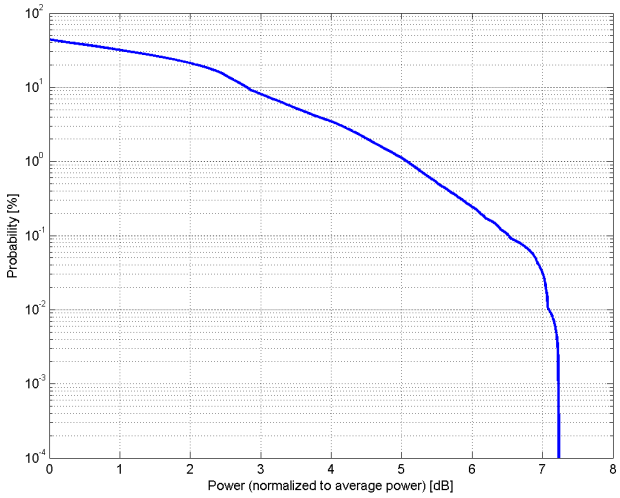
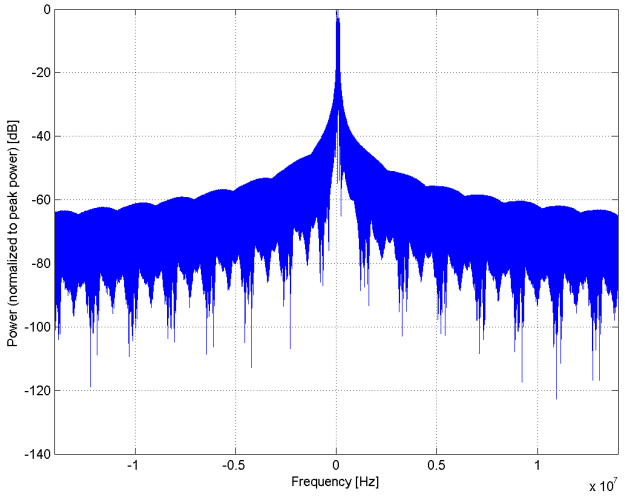
Name:	**LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)**
Group:	LTE-FDD
UID:	10170-CAE
PAR: [1]	**6.52 dB**
MIF: [2]	**-9.76 dB**
Standard Reference:	3GPP / ETSI TS 136.101 V8.4.0 3GPP / ETSI TS 136.213 V8.4.0 FCC OET KDB 941225 D05 SAR for LTE Devices v01
Category:	Random amplitude modulation
Modulation:	16-QAM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

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

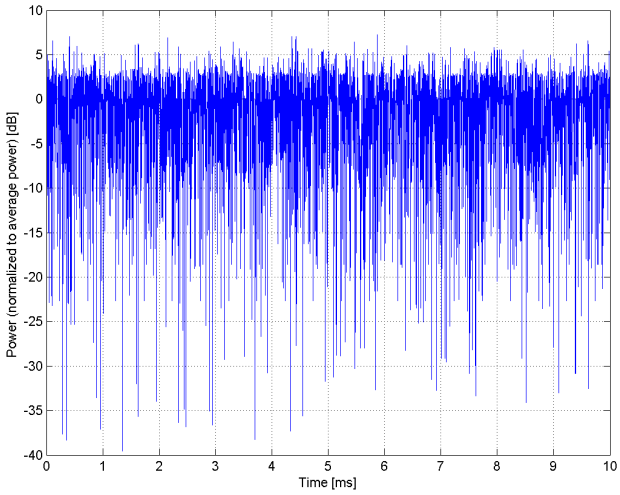
2 Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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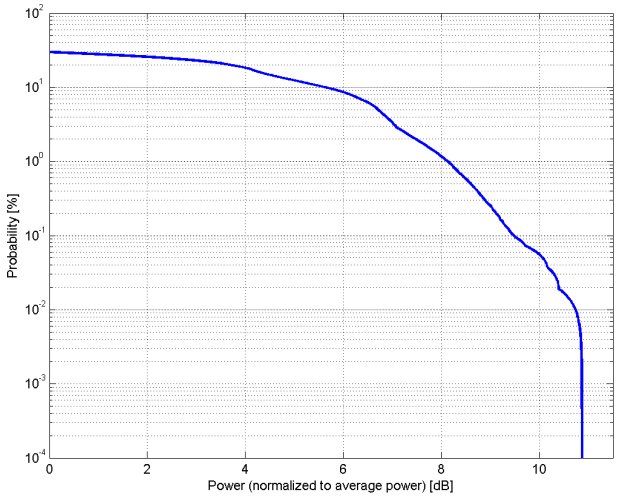
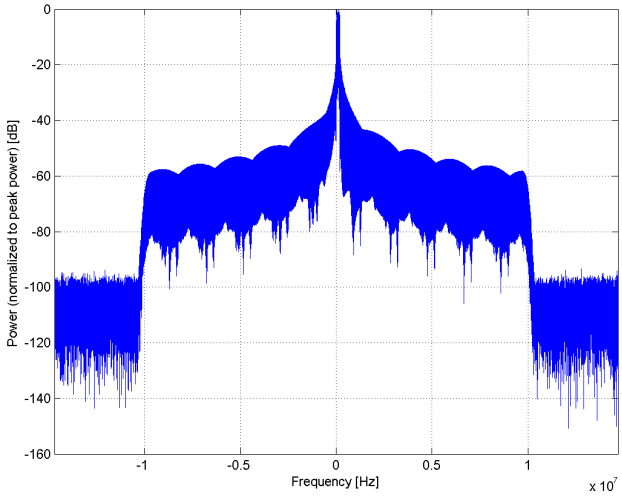
Name:	**LTE-TDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)**
Group:	LTE-TDD
UID:	10173-CAG
PAR: [1]	**9.48 dB**
MIF: [2]	**-1.44 dB**
Standard Reference:	3GPP / ETSI TS 136.101 V8.4.0 3GPP / ETSI TS 136.213 V8.4.0 FCC OET KDB 941225 D05 SAR for LTE Devices v02
Category:	Random amplitude modulation
Modulation:	16-QAM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

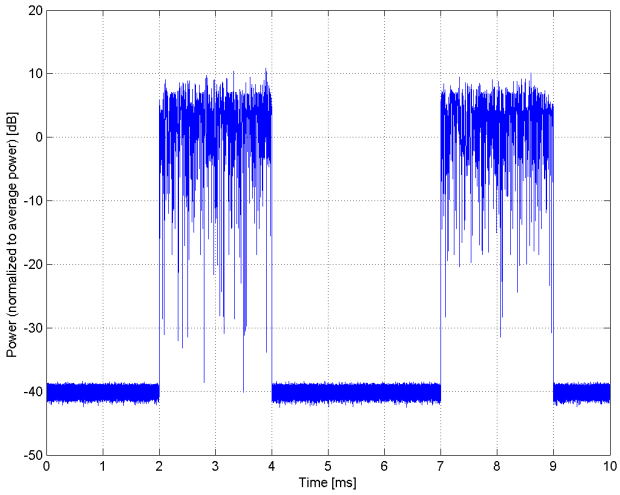
[1] PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "'Measurement of the Peak-to-Average Power Ratio (PAPR)'"
[2] Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

Calibration Laboratory of
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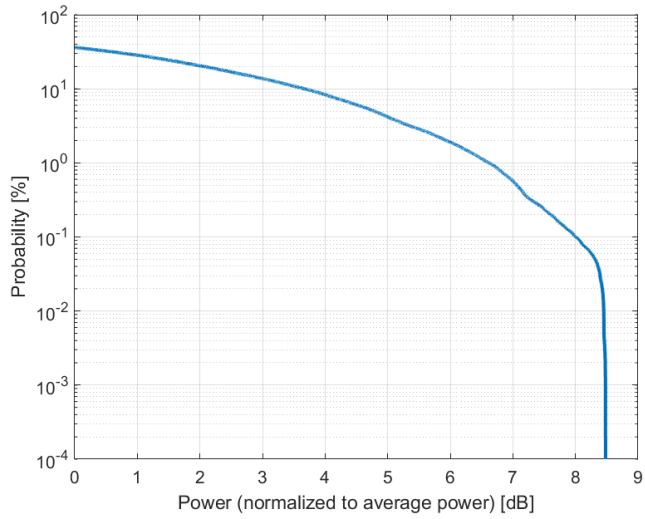
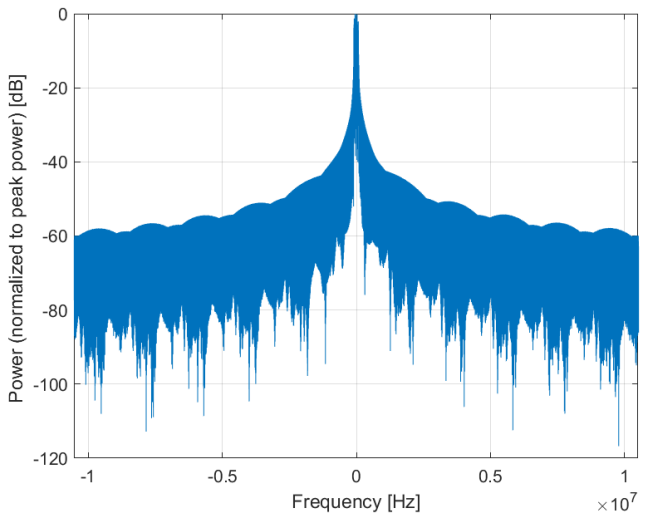
Name:	**5G NR (CP-OFDM, 1 RB, 15 MHz, QPSK, 15 kHz)**
Group:	5G NR FR1 TDD
UID:	10769-AAB
PAR: [1]	**8.01 dB**
MIF: [2]	**-12.08 dB**
Standard Reference:	SPEAG
Category:	Random amplitude modulation
Modulation:	QPSK
Frequency Band:	Band n34 (2010 - 2025 MHz) Band n38 (2570 - 2620 MHz) Band n39 (1880 - 1920 MHz) Band n40 (2300 - 2400 MHz) Band n41 (2496 - 2690 MHz) Band n48 (3550 - 3700 MHz) Band n50 (1432 - 1517 MHz) Band n77 (3300 - 4200 MHz) Band n78 (3300 - 3800 MHz) Band n79 (4400 - 5000 MHz) Validation band (0.0 - 6000.0 MHz)
Detailed Specification:	Multiplexing Scheme: CP-OFDM Modulation Scheme: QPSK Subcarrier Spacing: 15 kHz Number RBs: 1 Slot Format Index: 14 Data Type: PN9
Bandwidth:	15.0 MHz
Integration Time:	10.0 ms

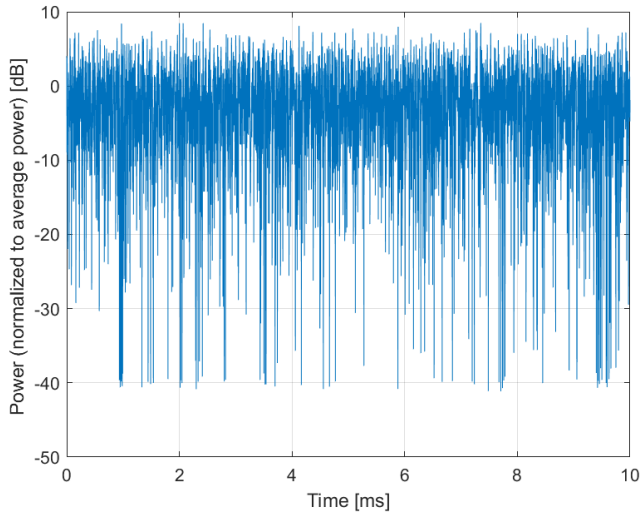
[1] PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "'Measurement of the Peak-to-Average Power Ratio (PAPR)'"
[2] Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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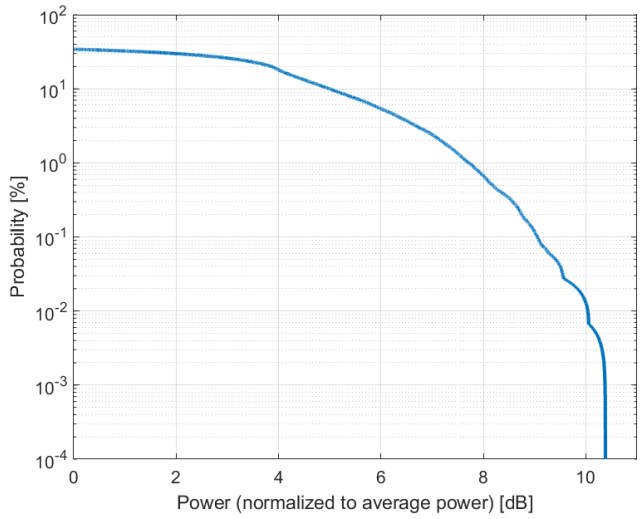
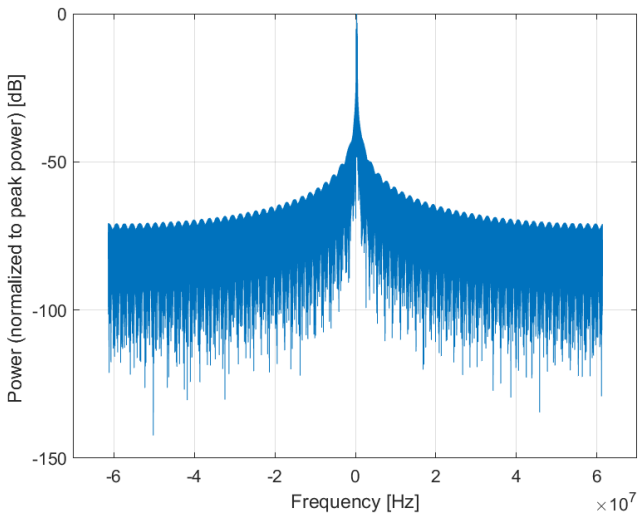
Name:	**5G NR (DFT-s-OFDM, 1 RB, 100 MHz, QPSK, 30 kHz)**
Group:	5G NR FR1 TDD
UID:	10973-AAB
PAR: [1]	**9.06 dB**
MIF: [2]	**-1.64 dB**
Standard Reference:	SPEAG
Category:	Random amplitude modulation
Modulation:	QPSK
Frequency Band:	Band n41 (2496 - 2690 MHz) Band n48 (3550 - 3700 MHz) Band n77 (3300 - 4200 MHz) Band n78 (3300 - 3800 MHz) Band n79 (4400 - 5000 MHz) Band n90 (2496 - 2690 MHz) Validation band (0.0 - 6000.0 MHz)
Detailed Specification:	Multiplexing Scheme: DFT-s-OFDM Modulation Scheme: QPSK Subcarrier Spacing: 30 kHz Number RBs: 1 Slot Format Index: - Data Type: PN9
Bandwidth:	100.0 MHz
Integration Time:	10.0 ms

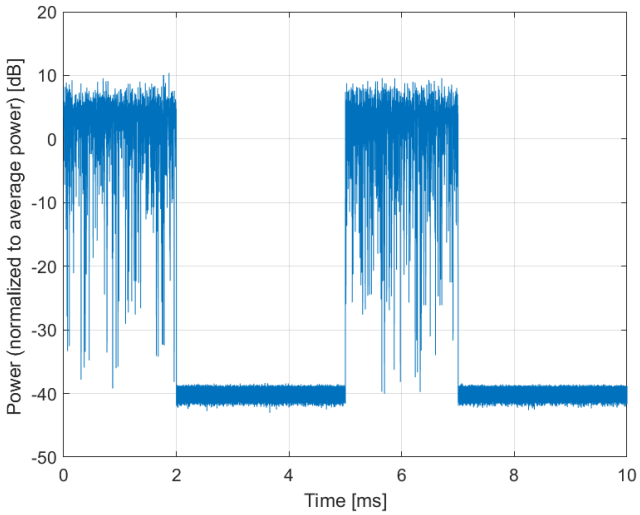
[1] PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "'Measurement of the Peak-to-Average Power Ratio (PAPR)'"
[2] Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

Calibration Laboratory of
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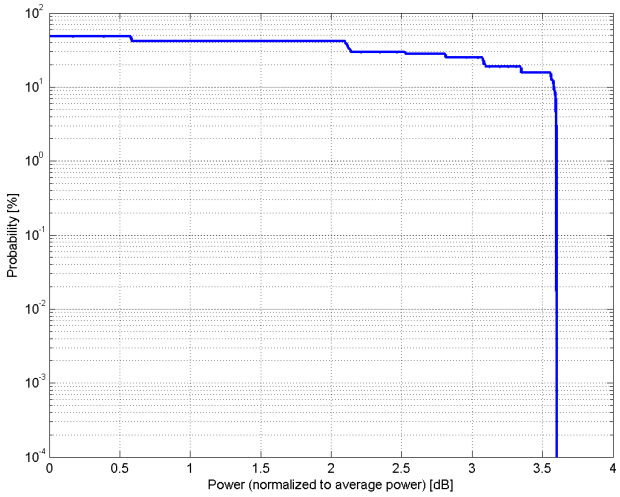
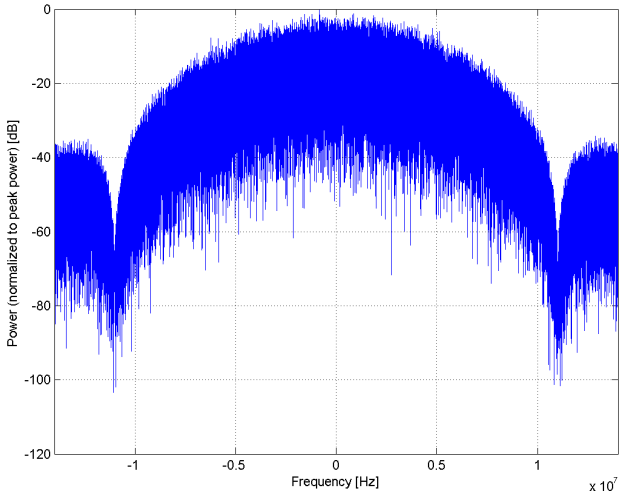
Name:	**IEEE 802.11b WiFi 2.4 GHz (DSSS, 11 Mbps)**
Group:	WLAN
UID:	10061-CAB
PAR: [1]	**3.60 dB**
MIF: [2]	**-2.02 dB**
Standard Reference:	IEEE 802.11b-1999 , Part 11, FCC SAR meas for 802 11 a b g v01r02 (248227 D01)
Category:	Random amplitude modulation
Modulation:	DQPSK
Frequency Band:	WLAN 2.4GHz (2412.0-2484.0 MHz, 20230)
Detailed Specification:	Data Rate: 11 Mbps Spreading, Coding: CCK PPDU format: Long Preamble & Heading PSDU Length: 1024 PSDU Data: PN9
Bandwidth:	20.0 MHz
Integration Time:	1.5 ms

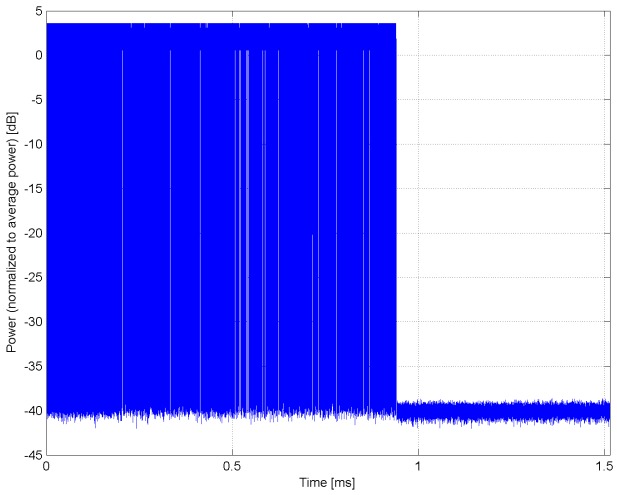
[1] PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "'Measurement of the Peak-to-Average Power Ratio (PAPR)'"
[2] Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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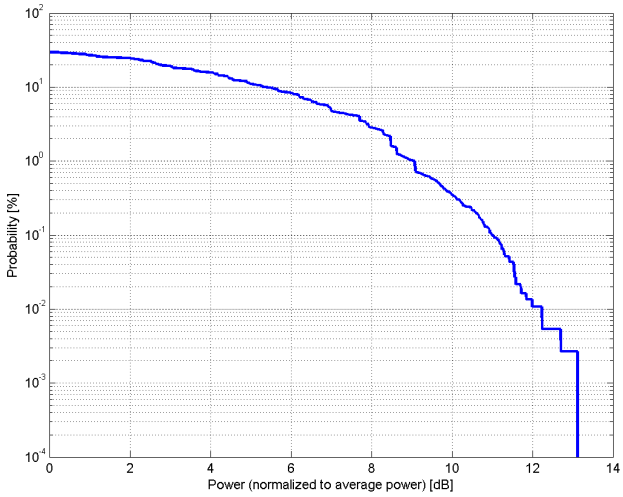
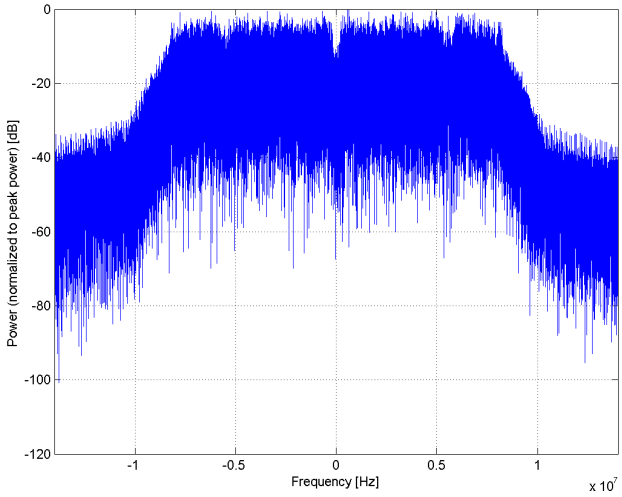
Name:	**IEEE 802.11g WiFi 2.4 GHz (DSSS/OFDM, 54 Mbps)**
Group:	WLAN
UID:	10077-CAB
PAR: [1]	**11.00 dB**
MIF: [2]	**0.12 dB**
Standard Reference:	IEEE 802.11g-2003 , Part 11 FCC SAR meas for 802 11 a b g v01r02 (248227 D01)
Category:	Random amplitude modulation
Modulation:	64-QAM
Frequency Band:	WLAN 2.4GHz (2412.0-2484.0 MHz, 20230)
Detailed Specification:	Data Rate: 54 Mbps Coding Rate: 3/4 Coded bits per subcarrier: 6 Coded bits per OFDM symbol: 288 Data bits per OFDM symbol: 216 PSDU Length: 1000 Bytes PSDU Data: PN9
Bandwidth:	20.0 MHz
Integration Time:	0.9 ms

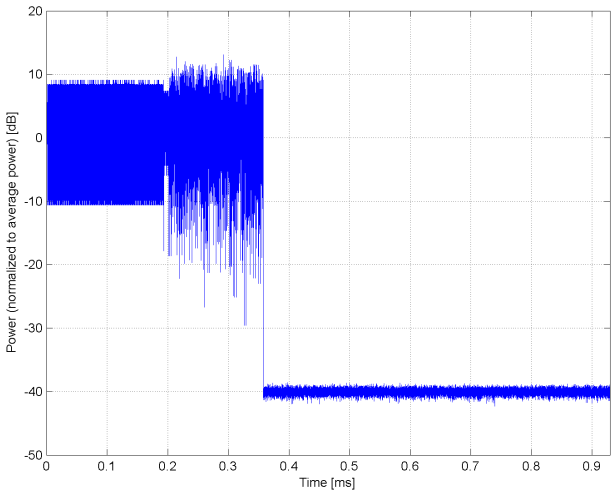
[1] PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "'Measurement of the Peak-to-Average Power Ratio (PAPR)'"
[2] Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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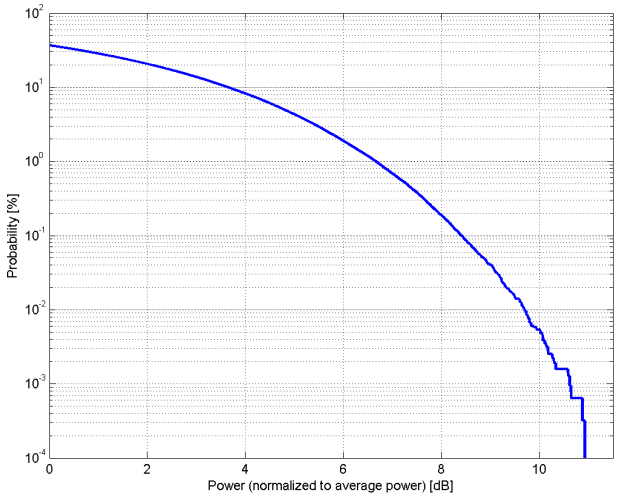
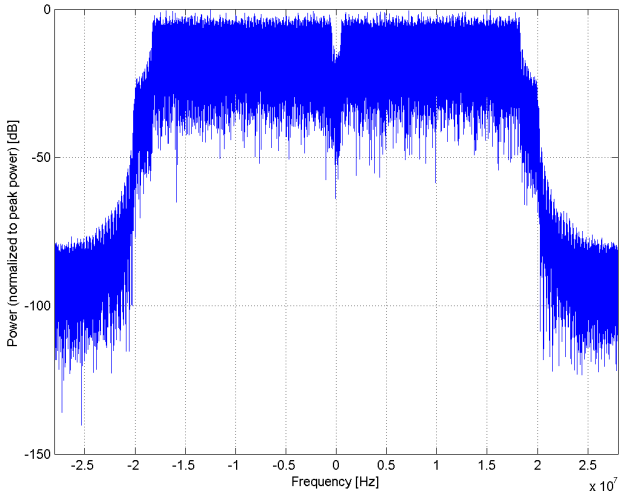
Name:	**IEEE 802.11n (HT Greenfield, 150 Mbps, 64-QAM)**
Group:	WLAN
UID:	10427-AAB
PAR: [1]	**8.41 dB**
MIF: [2]	**-13.44 dB**
Standard Reference:	IEEE 802.11n-2009
Category:	Random amplitude modulation
Modulation:	BPSK
Frequency Band:	WLAN 2.4GHz (2412.0 - 2484.0 MHz) WLAN 5GHz (4915.0 - 5825.0 MHz) 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) Validation band (0.0 - 6000.0 MHz)
Detailed Specification:	Modulation: 64-QAM Data Rate: 150 Mbps PPDU Format: HT Greenfield PPDU Type: 40 MHz MCS Index: 7 Guard Interval: Short Duty Cycle: 99%
Bandwidth:	40.0 MHz
Integration Time:	2.0 ms

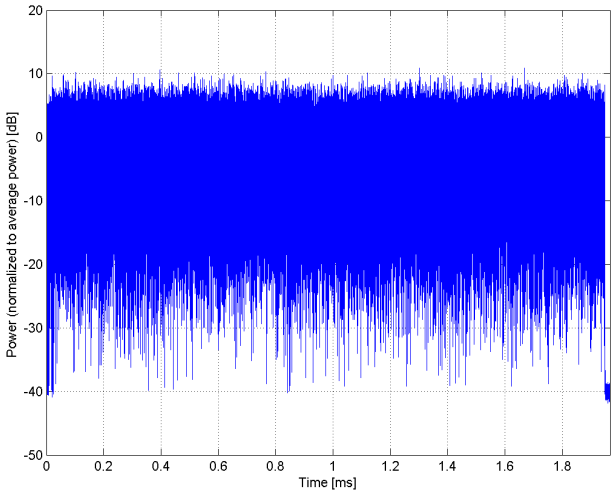
[1] PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "'Measurement of the Peak-to-Average Power Ratio (PAPR)'"
[2] Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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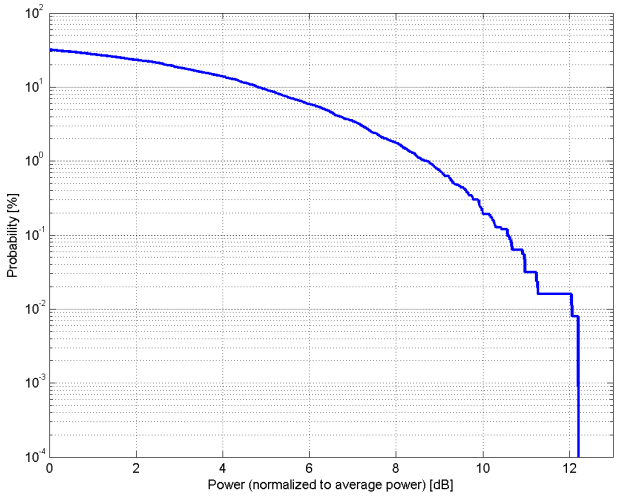
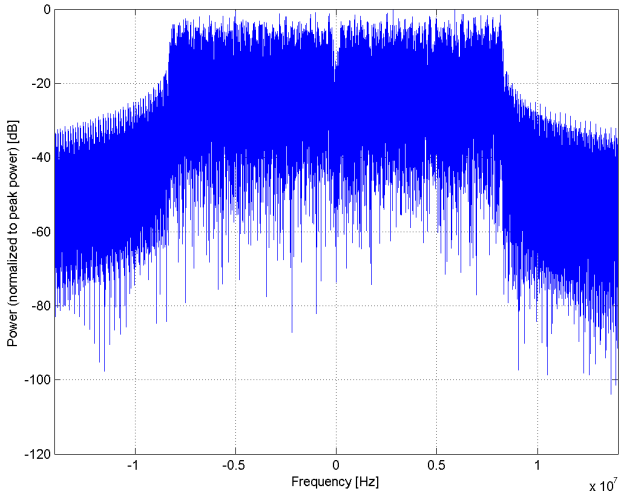
Name:	**IEEE 802.11a/h WiFi 5 GHz (OFDM, 54 Mbps)**
Group:	WLAN
UID:	10069-CAC
PAR: [1]	**10.56 dB**
MIF: [2]	**-3.15 dB**
Standard Reference:	IEEE 802.11a-1999 (R2003) , Part 11 IEEE 802.11h-2003 , Part 11 FCC SAR meas for 802 11 a b g v01r02 (248227 D01)
Category:	Random amplitude modulation
Modulation:	64-QAM
Frequency Band:	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) Validation band (0.0 - 6000.0 MHz)
Detailed Specification:	Data Rate: 54 Mbps Coding Rate: 3/4 Coded bits per subcarrier: 6 Coded bits per OFDM symbol: 288 Data bits per OFDM symbol: 216 PSDU Length: 1000 Bytes PSDU Data: PN9
Bandwidth:	20.0 MHz
Integration Time:	0.3 ms

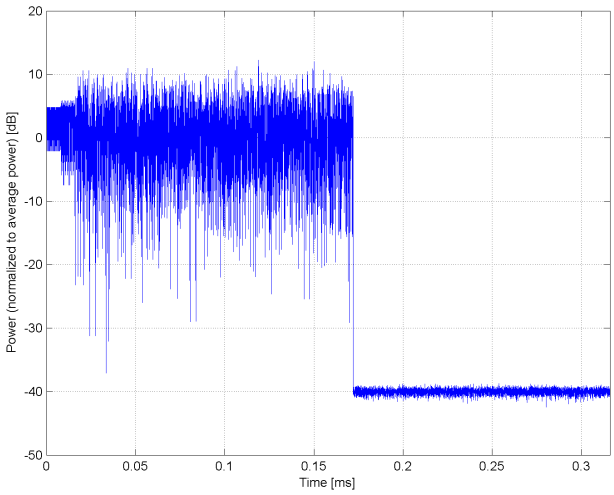
1 PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "'Measurement of the Peak-to-Average Power Ratio (PAPR)'"
2 Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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Name:	**IEEE 802.11ac WiFi (40MHz, MCS0, 90pc duty cycle)**
Group:	WLAN
UID:	10616-AAB
PAR: [1]	**8.82 dB**
MIF: [2]	**-5.57 dB**
Standard Reference:	IEEE 802.11-2013 FCC OET KDB 248227 D01 802.11 Wi-Fi SAR v02r01
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) Validation band (0.0 - 6000.0 MHz)
Detailed Specification:	Bandwidth: 40MHz Duty cycle: 90% MCS: 0 Number of spatial streams: 1 MPDU length: 8192
Bandwidth:	40.0 MHz
Integration Time:	5.4 ms

[1] PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "'Measurement of the Peak-to-Average Power Ratio (PAPR)'"
[2] Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).

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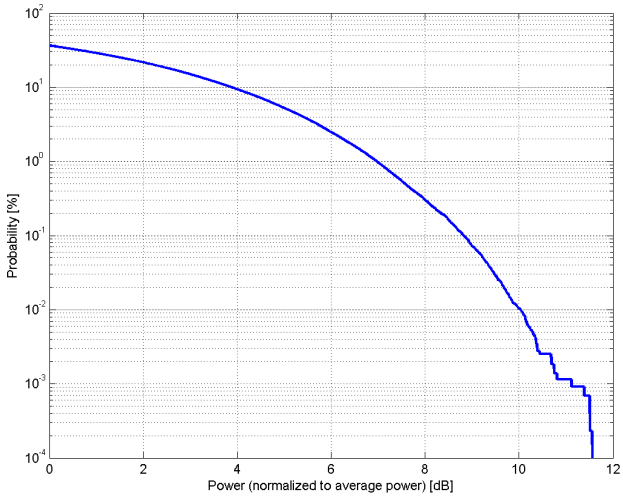
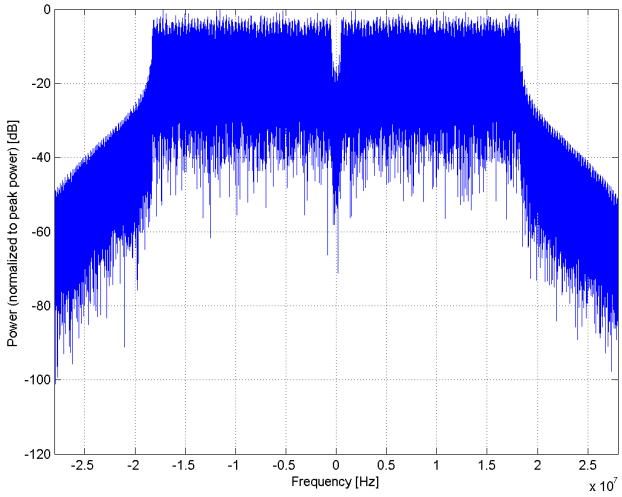
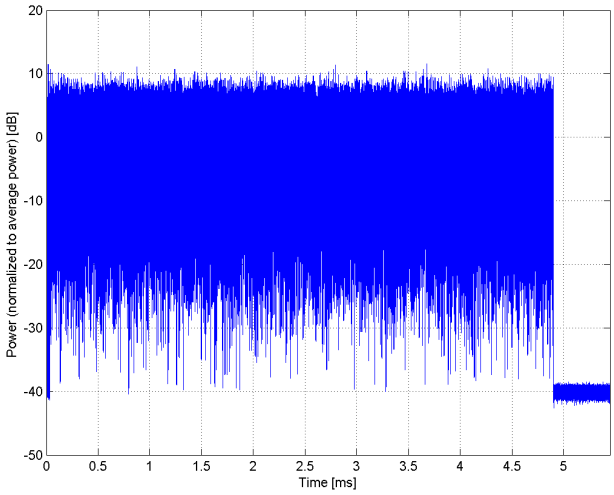


Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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Name:	**IEEE 802.11ax (20MHz, MCS0, 90pc duty cycle)**
Group:	WLAN
UID:	10671-AAC
PAR: [1]	**9.09 dB**
MIF: [2]	**-5.58 dB**
Standard Reference:	SPEAG
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-5 (5925 - 6425 MHz) U-NII-6 (6425 - 6525 MHz) U-NII-7 (6525 - 6875 MHz) U-NII-8 (6875 - 7125 MHz) U-NII-4 (5.825 - 5.925 MHz) Validation band (0.0 - 6000.0 MHz)
Detailed Specification:	Bandwidth: 20MHz Duty Cycle: 90% Number of spatial stream: 1
Bandwidth:	20.0 MHz
Integration Time:	5.0 ms

[1] PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "'Measurement of the Peak-to-Average Power Ratio (PAPR)'"
[2] Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).

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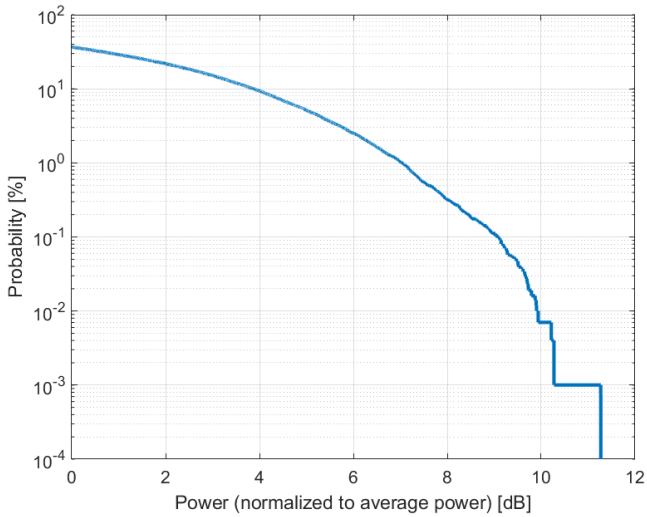
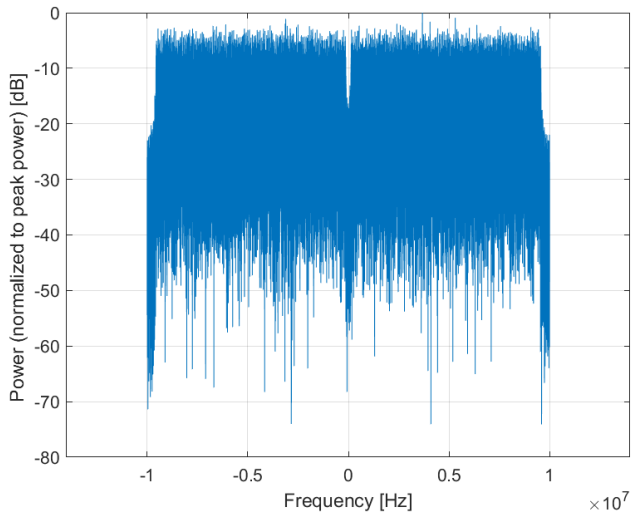
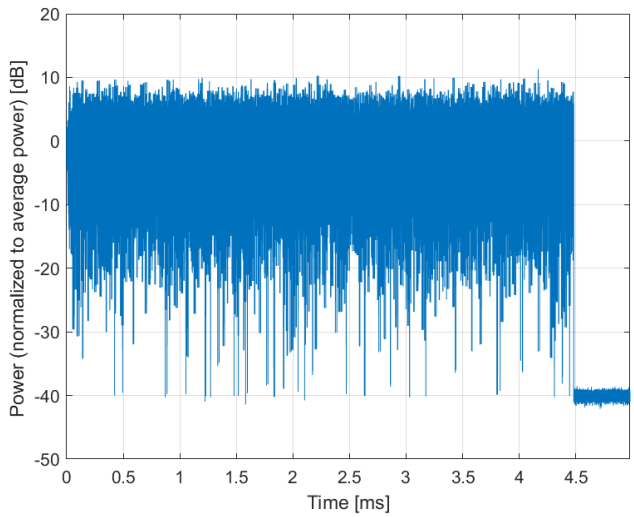


Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain