

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

Name: **5G NR (DFT-s-OFDM, 50% RB, 5 MHz, QPSK, 15 kHz)**

Group: 5G NR FR1 FDD
UID: 10936-AAA

PAR: ¹ **5.90 dB**
MIF: ² **-17.91 dB**

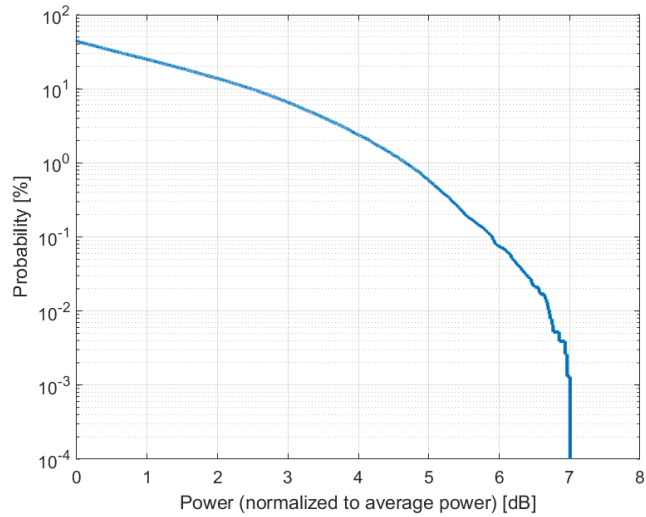
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: QPSK
Frequency Band: Band n2 (1850 - 1910 MHz)
Band n2 (824 - 849 MHz)
Band n25 (1850 - 1915 MHz)
Band n71 (1710 - 1780 MHz)
Band n71 (617 - 652 MHz)
Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: DFT-s-OFDM
Modulation Scheme: QPSK
Subcarrier Spacing: 15 kHz
Number RBs: 1
Data Type: PN9

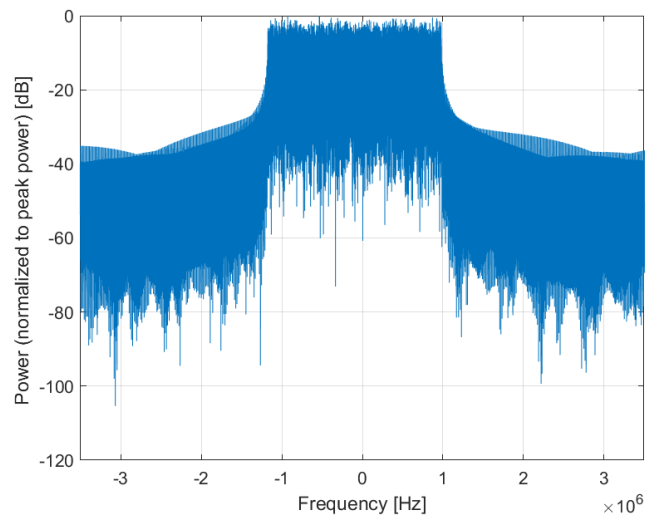
Bandwidth: 5.0 MHz
Integration Time: 10.0 ms

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

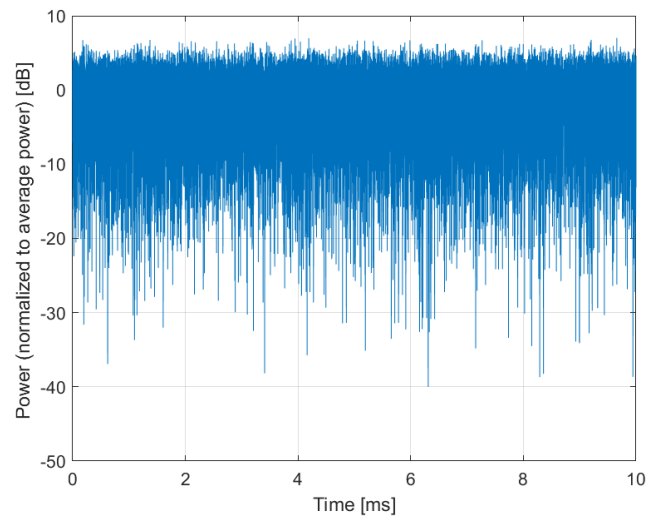
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR (DFT-s-OFDM, 50% RB, 10 MHz, QPSK, 15 kHz)**

Group: 5G NR FR1 FDD
UID: 10937-AAA

PAR: ¹ **5.77 dB**
MIF: ² **-18.38 dB**

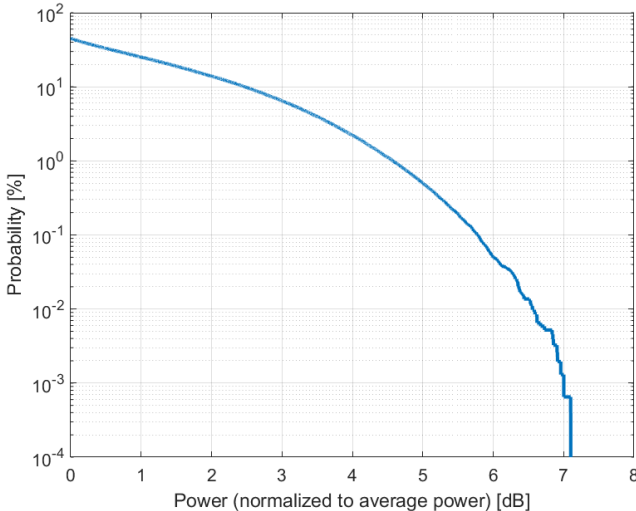
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: QPSK
Frequency Band: Band n2 (1850 - 1910 MHz)
Band n2 (824 - 849 MHz)
Band n25 (1850 - 1915 MHz)
Band n71 (1710 - 1780 MHz)
Band n71 (617 - 652 MHz)
Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: DFT-s-OFDM
Modulation Scheme: QPSK
Subcarrier Spacing: 15 kHz
Number RBs: 1
Data Type: PN9

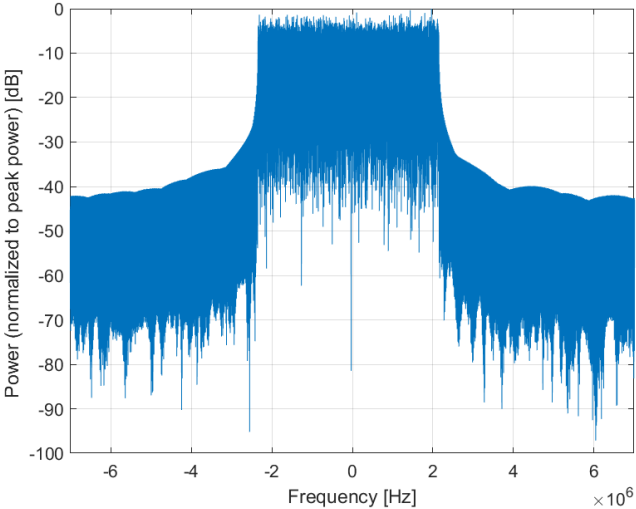
Bandwidth: 10.0 MHz
Integration Time: 10.0 ms

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

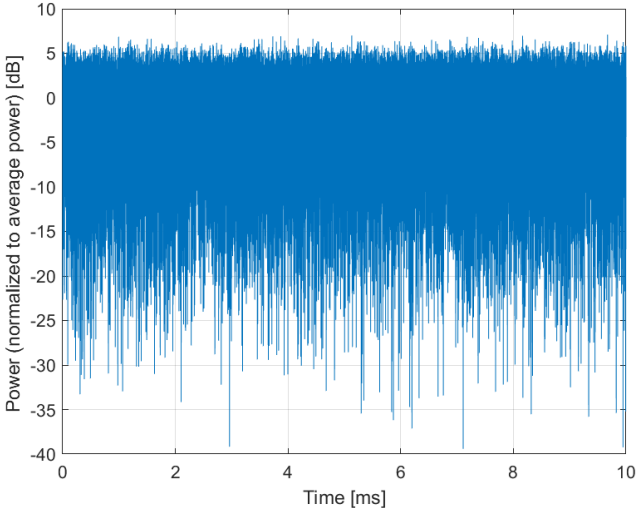
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

**Calibration Laboratory of
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Name: **5G NR (DFT-s-OFDM, 50% RB, 15 MHz, QPSK, 15 kHz)**

Group: 5G NR FR1 FDD
UID: 10938-AAA

PAR: ¹ **5.90 dB**
MIF: ² **-18.58 dB**

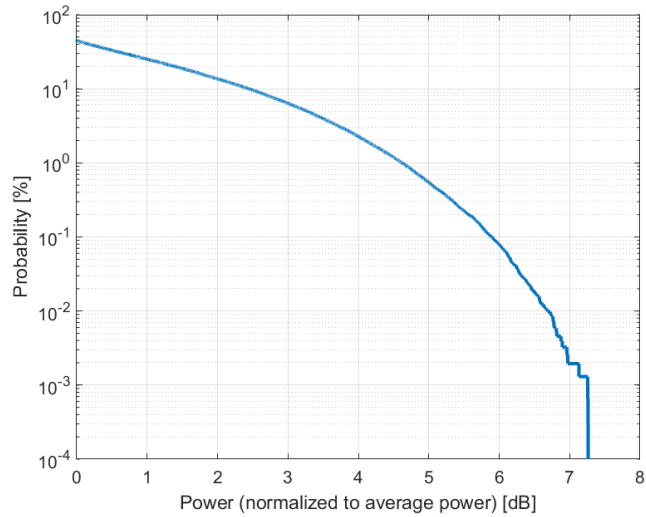
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: QPSK
Frequency Band: Band n2 (1850 - 1910 MHz)
Band n2 (824 - 849 MHz)
Band n25 (1850 - 1915 MHz)
Band n71 (1710 - 1780 MHz)
Band n71 (617 - 652 MHz)
Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: DFT-s-OFDM
Modulation Scheme: QPSK
Subcarrier Spacing: 15 kHz
Number RBs: 1
Data Type: PN9

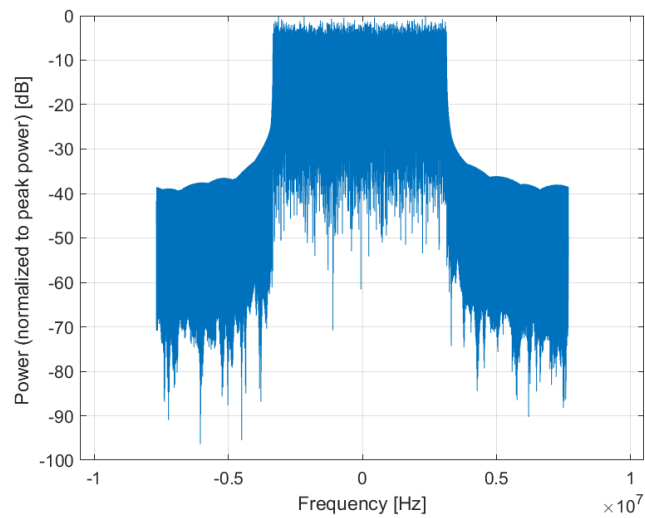
Bandwidth: 15.0 MHz
Integration Time: 10.0 ms

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

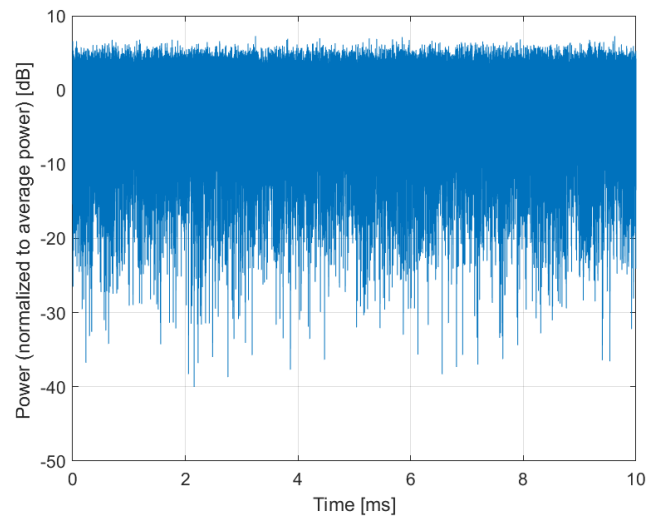
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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Name: **5G NR (DFT-s-OFDM, 50% RB, 20 MHz, QPSK, 15 kHz)**

Group: 5G NR FR1 FDD
UID: 10939-AAA

PAR: ¹ **5.82 dB**
MIF: ² **-18.65 dB**

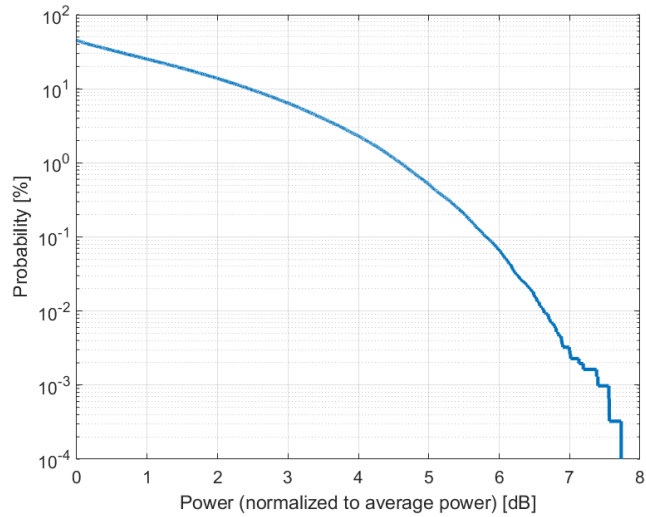
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: QPSK
Frequency Band: Band n2 (1850 - 1910 MHz)
Band n2 (824 - 849 MHz)
Band n25 (1850 - 1915 MHz)
Band n71 (1710 - 1780 MHz)
Band n71 (617 - 652 MHz)
Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: DFT-s-OFDM
Modulation Scheme: QPSK
Subcarrier Spacing: 15 kHz
Number RBs: 1
Data Type: PN9

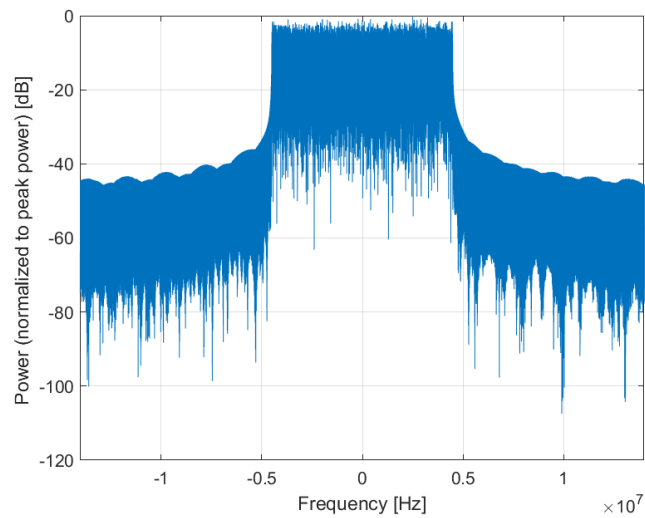
Bandwidth: 20.0 MHz
Integration Time: 10.0 ms

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

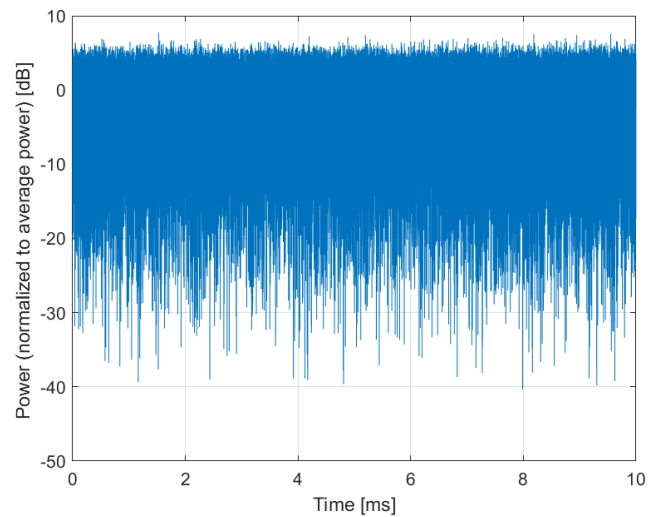
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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Name: **5G NR (DFT-s-OFDM, 50% RB, 25 MHz, QPSK, 15 kHz)**

Group: 5G NR FR1 FDD
UID: 10940-AAA

PAR: ¹ **5.89 dB**
MIF: ² **-18.65 dB**

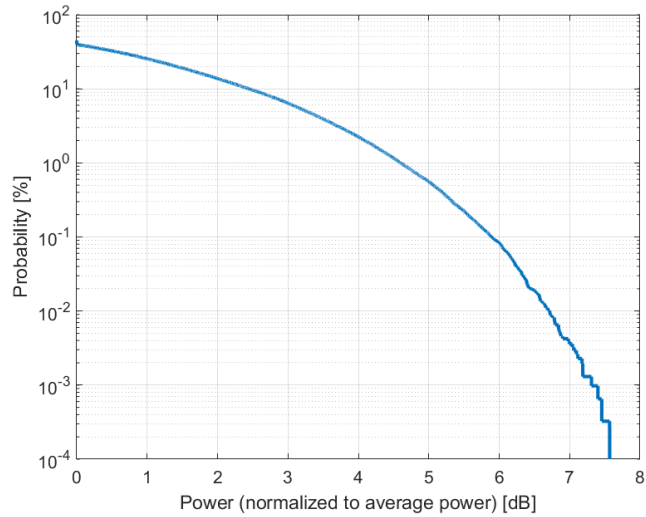
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: QPSK
Frequency Band: Band n25 (1850 - 1915 MHz)
Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: DFT-s-OFDM
Modulation Scheme: QPSK
Subcarrier Spacing: 15 kHz
Number RBs: 1
Data Type: PN9

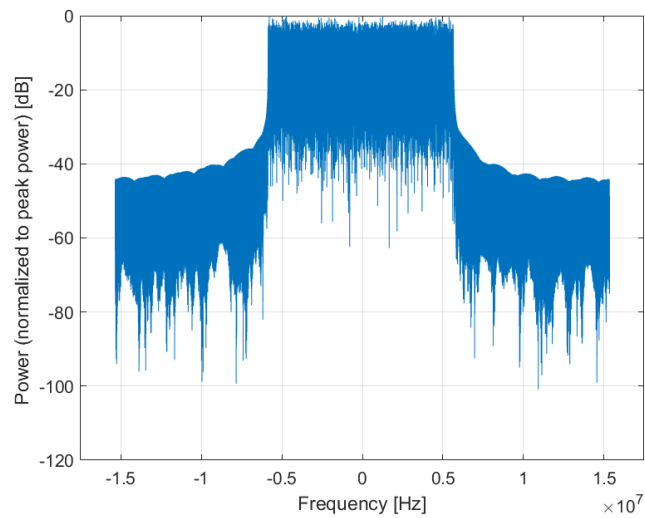
Bandwidth: 25.0 MHz
Integration Time: 10.0 ms

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

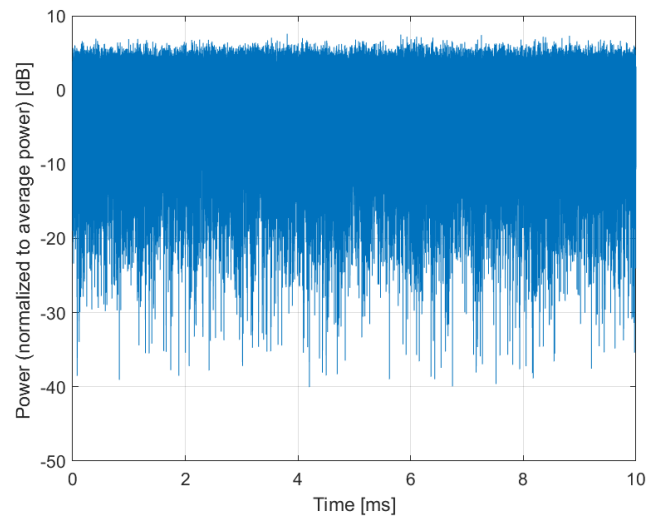
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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Zeughausstrasse 43, 8004 Zurich, Switzerland

Name: **5G NR (DFT-s-OFDM, 50% RB, 30 MHz, QPSK, 15 kHz)**

Group: 5G NR FR1 FDD
UID: 10941-AAA

PAR: ¹ **5.83 dB**
MIF: ² **-18.66 dB**

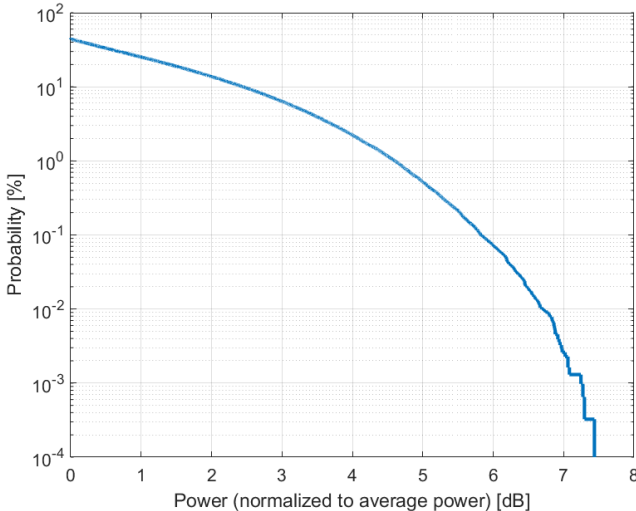
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: QPSK
Frequency Band: Band n25 (1850 - 1915 MHz)
Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: DFT-s-OFDM
Modulation Scheme: QPSK
Subcarrier Spacing: 15 kHz
Number RBs: 1
Data Type: PN9

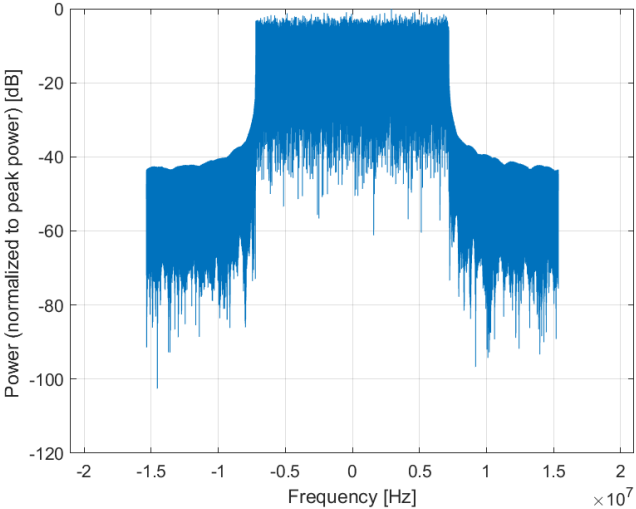
Bandwidth: 30.0 MHz
Integration Time: 10.0 ms

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

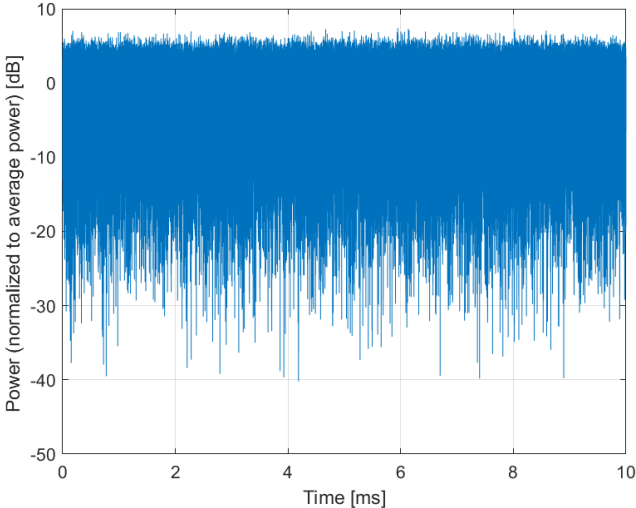
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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Name: **5G NR (DFT-s-OFDM, 50% RB, 40 MHz, QPSK, 15 kHz)**

Group: 5G NR FR1 FDD
UID: 10942-AAA

PAR: ¹ **5.85 dB**
MIF: ² **-18.71 dB**

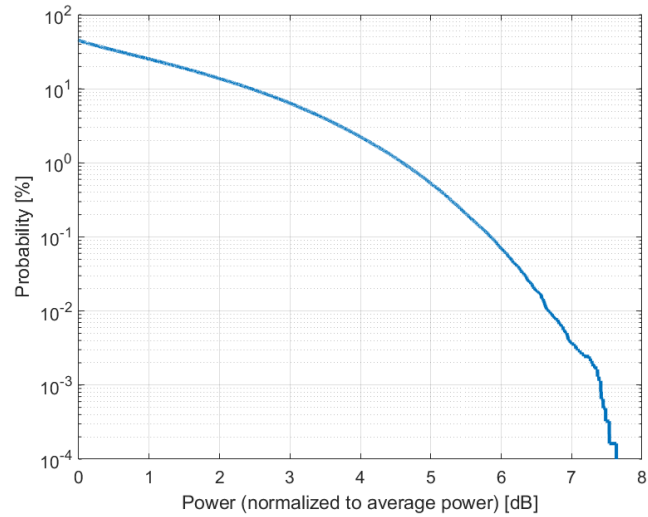
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: QPSK
Frequency Band: Band n25 (1850 - 1915 MHz)
Band n71 (1710 - 1780 MHz)
Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: DFT-s-OFDM
Modulation Scheme: QPSK
Subcarrier Spacing: 15 kHz
Number RBs: 1
Data Type: PN9

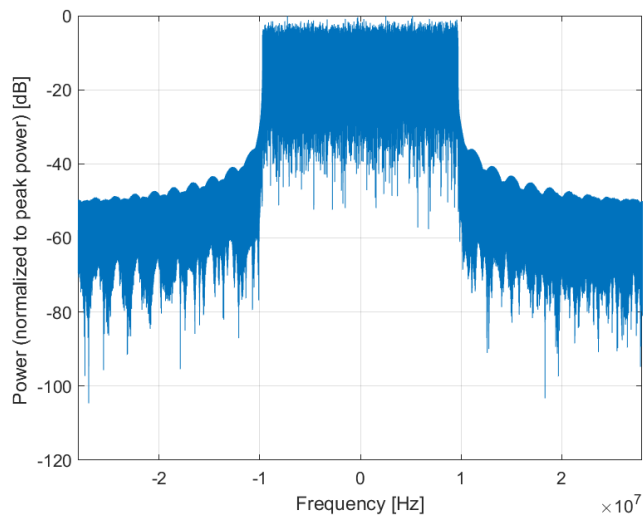
Bandwidth: 40.0 MHz
Integration Time: 10.0 ms

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

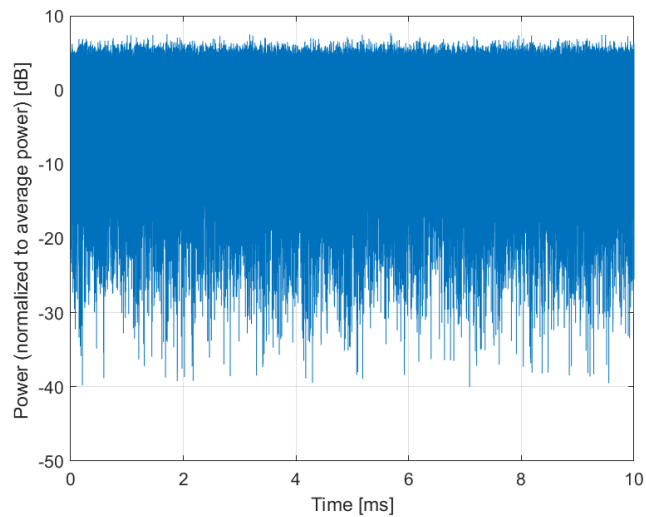
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR (DFT-s-OFDM, 50% RB, 50 MHz, QPSK, 15 kHz)**

Group: 5G NR FR1 FDD
UID: 10943-AAA

PAR: ¹ **5.95 dB**
MIF: ² **-18.52 dB**

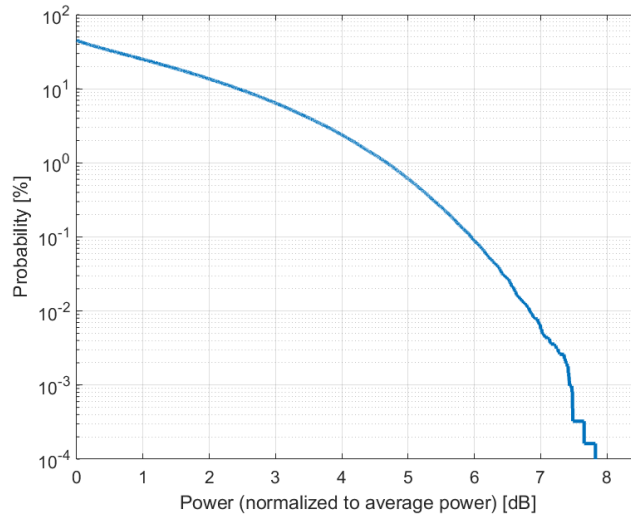
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: QPSK
Frequency Band: Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: DFT-s-OFDM
Modulation Scheme: QPSK
Subcarrier Spacing: 15 kHz
Number RBs: 1
Data Type: PN9

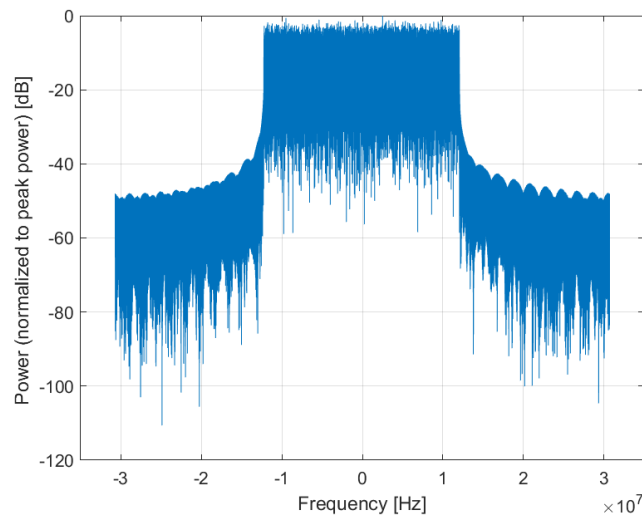
Bandwidth: 50.0 MHz
Integration Time: 10.0 ms

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

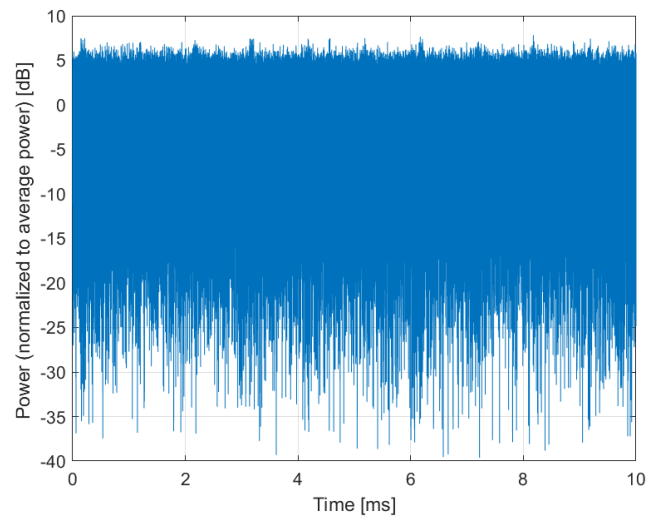
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR (DFT-s-OFDM, 100% RB, 5 MHz, QPSK, 15 kHz)**

Group: 5G NR FR1 FDD
UID: 10944-AAA

PAR: ¹ **5.81 dB**
MIF: ² **-18.38 dB**

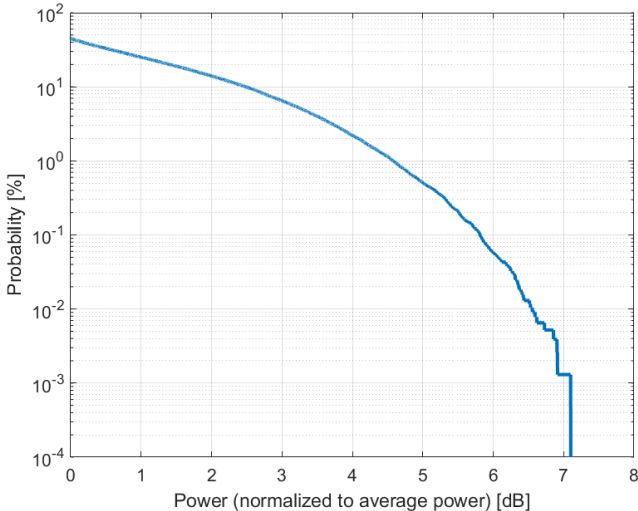
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: QPSK
Frequency Band: Band n2 (1850 - 1910 MHz)
Band n2 (824 - 849 MHz)
Band n25 (1850 - 1915 MHz)
Band n71 (1710 - 1780 MHz)
Band n71 (617 - 652 MHz)
Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: DFT-s-OFDM
Modulation Scheme: QPSK
Subcarrier Spacing: 15 kHz
Number RBs: 1
Data Type: PN9

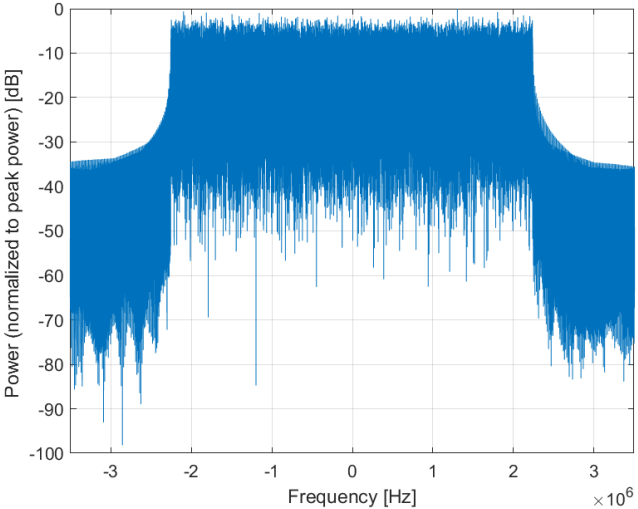
Bandwidth: 5.0 MHz
Integration Time: 10.0 ms

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

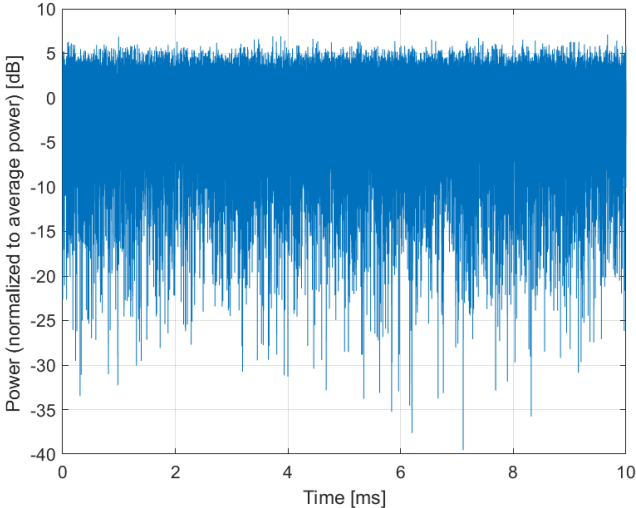
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR (DFT-s-OFDM, 100% RB, 10 MHz, QPSK, 15 kHz)**

Group: 5G NR FR1 FDD
UID: 10945-AAA

PAR: ¹ **5.85 dB**
MIF: ² **-18.65 dB**

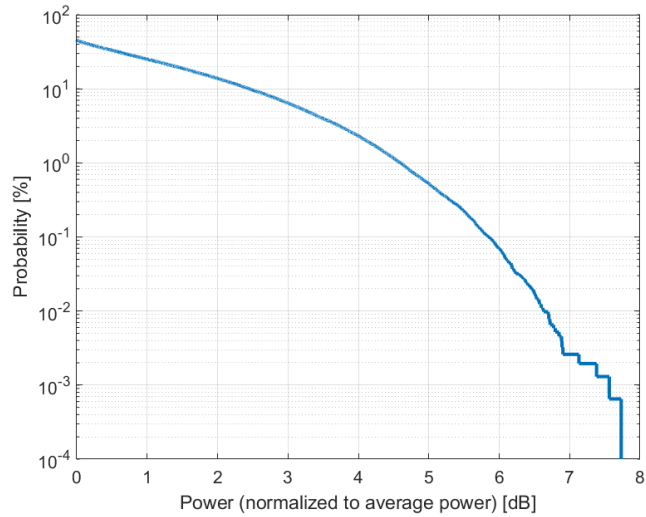
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: QPSK
Frequency Band: Band n2 (1850 - 1910 MHz)
Band n2 (824 - 849 MHz)
Band n25 (1850 - 1915 MHz)
Band n71 (1710 - 1780 MHz)
Band n71 (617 - 652 MHz)
Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: DFT-s-OFDM
Modulation Scheme: QPSK
Subcarrier Spacing: 15 kHz
Number RBs: 1
Data Type: PN9

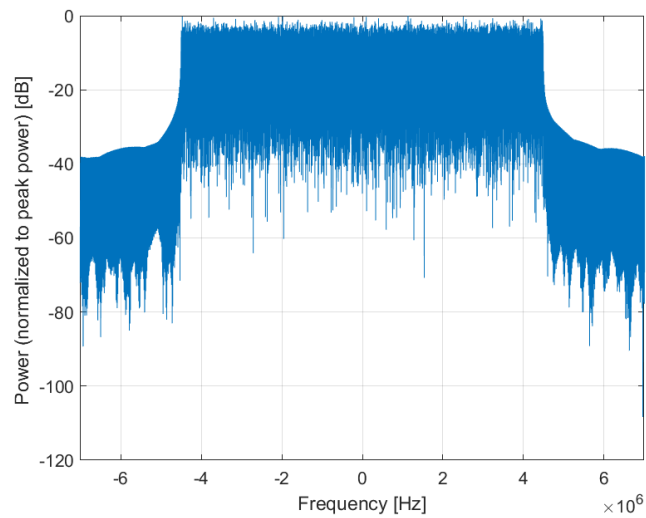
Bandwidth: 10.0 MHz
Integration Time: 10.0 ms

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

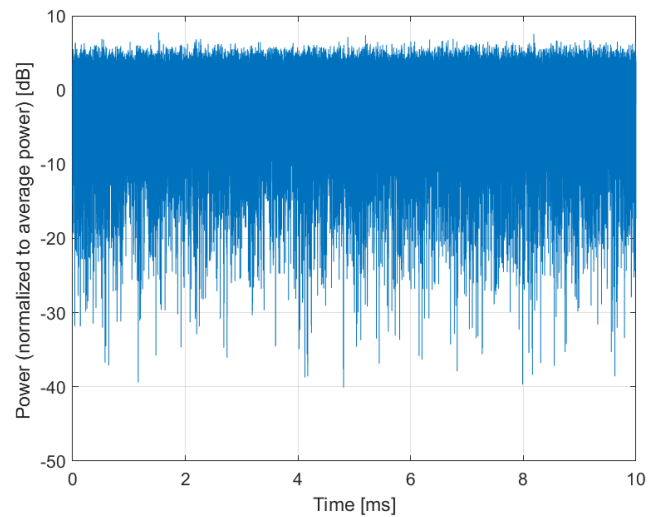
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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Name: **5G NR (DFT-s-OFDM, 100% RB, 15 MHz, QPSK, 15 kHz)**

Group: 5G NR FR1 FDD
UID: 10946-AAA

PAR: ¹ **5.83 dB**
MIF: ² **-18.70 dB**

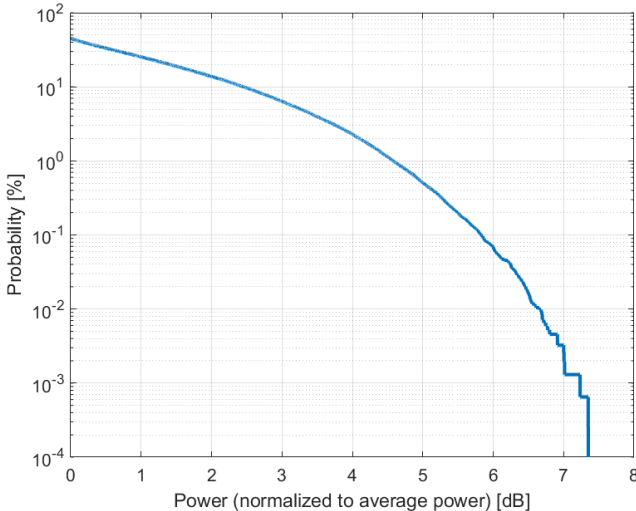
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: QPSK
Frequency Band: Band n2 (1850 - 1910 MHz)
Band n2 (824 - 849 MHz)
Band n25 (1850 - 1915 MHz)
Band n71 (1710 - 1780 MHz)
Band n71 (617 - 652 MHz)
Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: DFT-s-OFDM
Modulation Scheme: QPSK
Subcarrier Spacing: 15 kHz
Number RBs: 1
Data Type: PN9

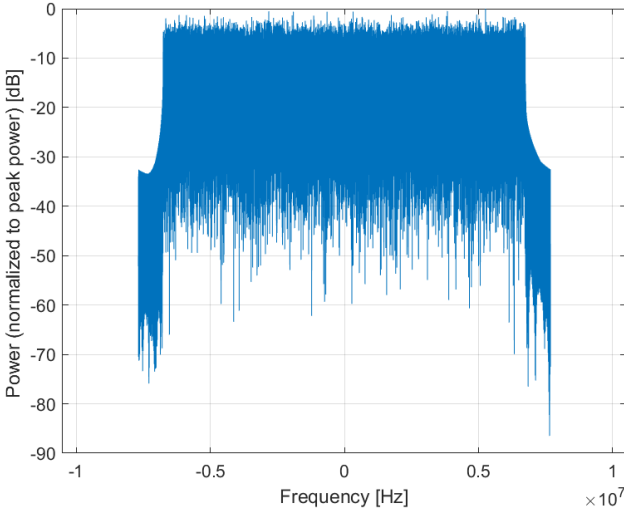
Bandwidth: 15.0 MHz
Integration Time: 10.0 ms

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

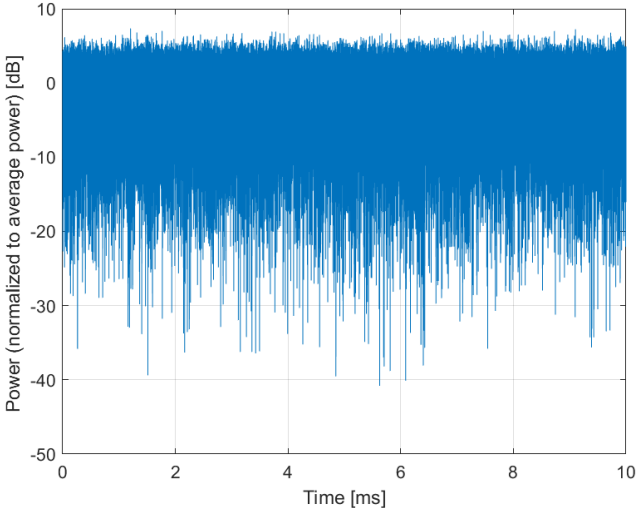
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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Name: **5G NR (DFT-s-OFDM, 100% RB, 20 MHz, QPSK, 15 kHz)**

Group: 5G NR FR1 FDD
UID: 10947-AAA

PAR: ¹ **5.87 dB**
MIF: ² **-18.60 dB**

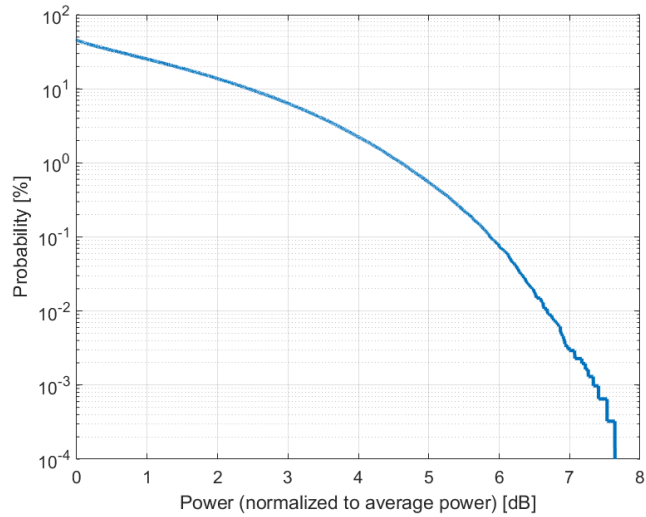
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: QPSK
Frequency Band: Band n2 (1850 - 1910 MHz)
Band n2 (824 - 849 MHz)
Band n25 (1850 - 1915 MHz)
Band n71 (1710 - 1780 MHz)
Band n71 (617 - 652 MHz)
Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: DFT-s-OFDM
Modulation Scheme: QPSK
Subcarrier Spacing: 15 kHz
Number RBs: 1
Data Type: PN9

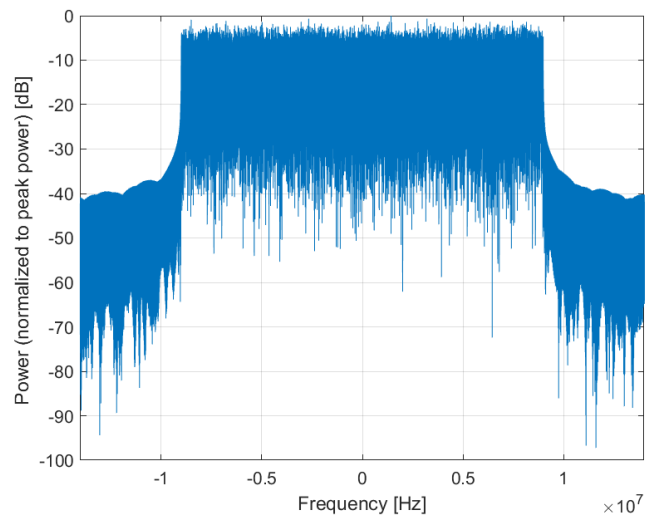
Bandwidth: 20.0 MHz
Integration Time: 10.0 ms

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

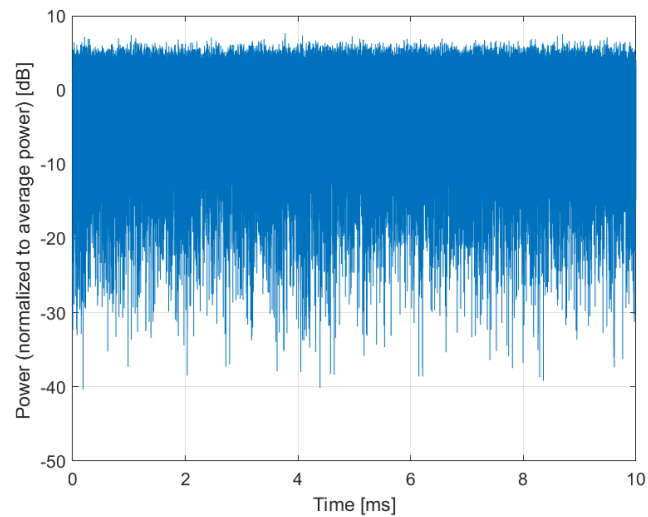
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

**Calibration Laboratory of
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Name: **5G NR (DFT-s-OFDM, 100% RB, 25 MHz, QPSK, 15 kHz)**

Group: 5G NR FR1 FDD
UID: 10948-AAA

PAR: ¹ **5.94 dB**
MIF: ² **-18.50 dB**

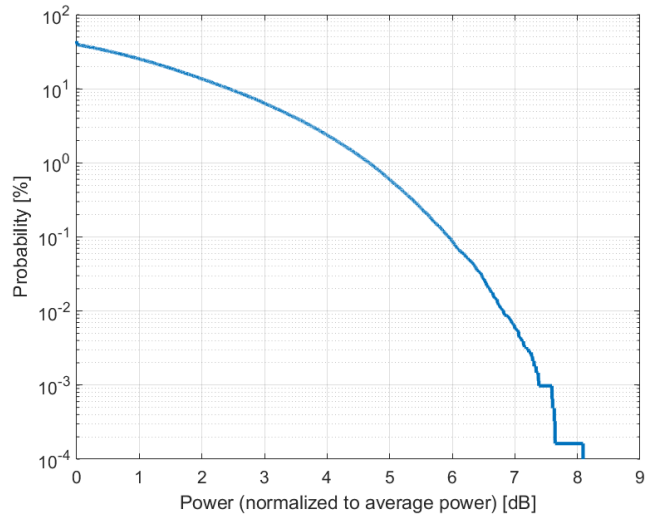
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: QPSK
Frequency Band: Band n25 (1850 - 1915 MHz)
Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: DFT-s-OFDM
Modulation Scheme: QPSK
Subcarrier Spacing: 15 kHz
Number RBs: 1
Data Type: PN9

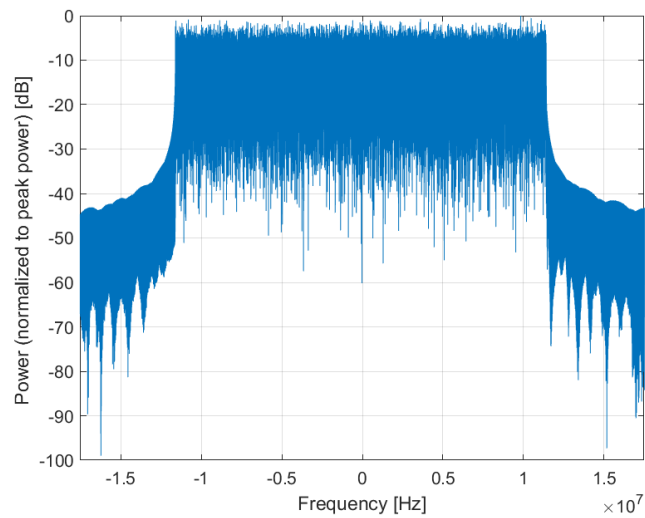
Bandwidth: 25.0 MHz
Integration Time: 10.0 ms

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

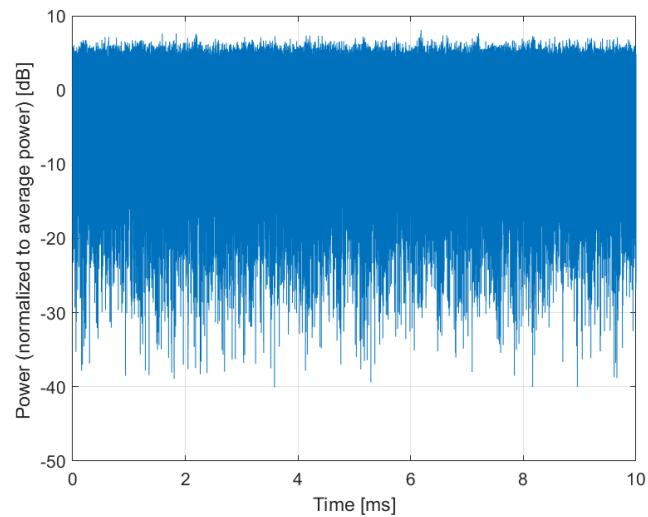
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR (DFT-s-OFDM, 100% RB, 30 MHz, QPSK, 15 kHz)**

Group: 5G NR FR1 FDD
UID: 10949-AAA

PAR: ¹ **5.87 dB**
MIF: ² **-18.85 dB**

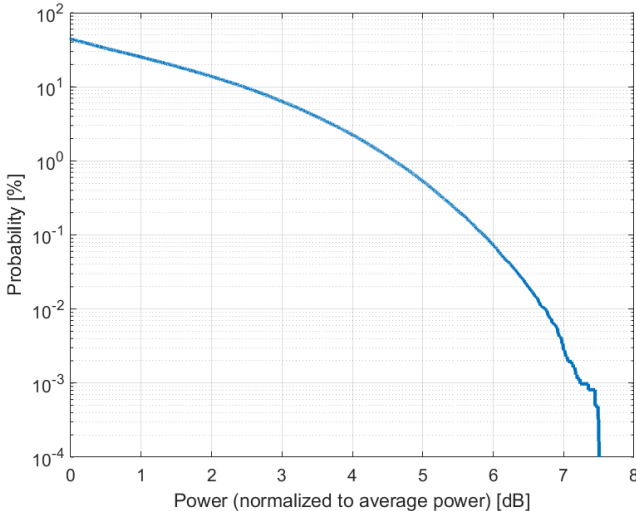
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: QPSK
Frequency Band: Band n25 (1850 - 1915 MHz)
Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: DFT-s-OFDM
Modulation Scheme: QPSK
Subcarrier Spacing: 15 kHz
Number RBs: 1
Data Type: PN9

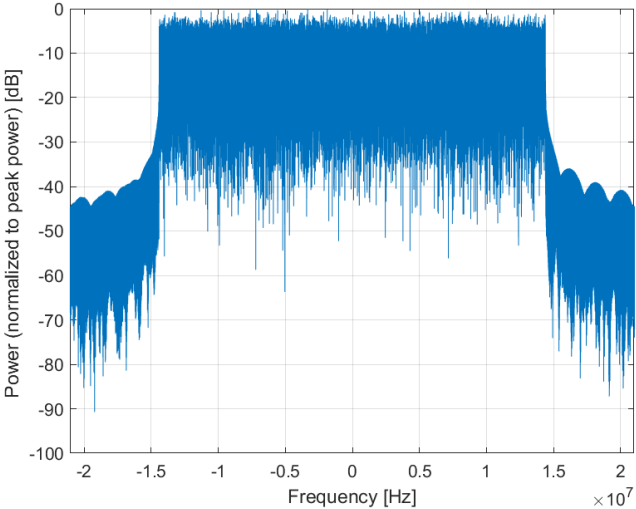
Bandwidth: 30.0 MHz
Integration Time: 10.0 ms

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

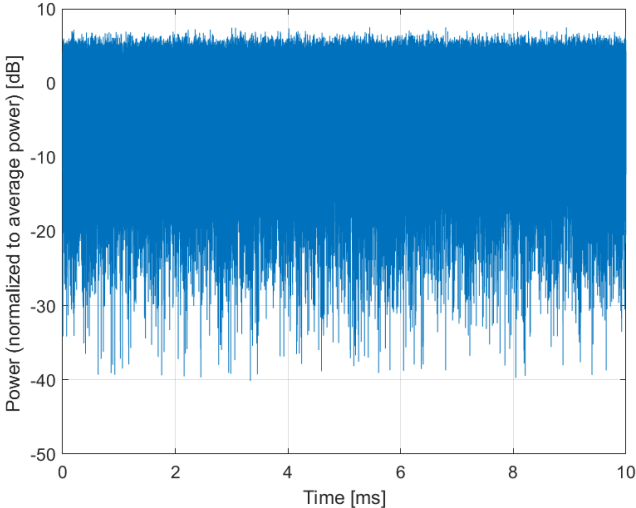
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR (DFT-s-OFDM, 100% RB, 40 MHz, QPSK, 15 kHz)**

Group: 5G NR FR1 FDD
UID: 10950-AAA

PAR: ¹ **5.94 dB**
MIF: ² **-18.50 dB**

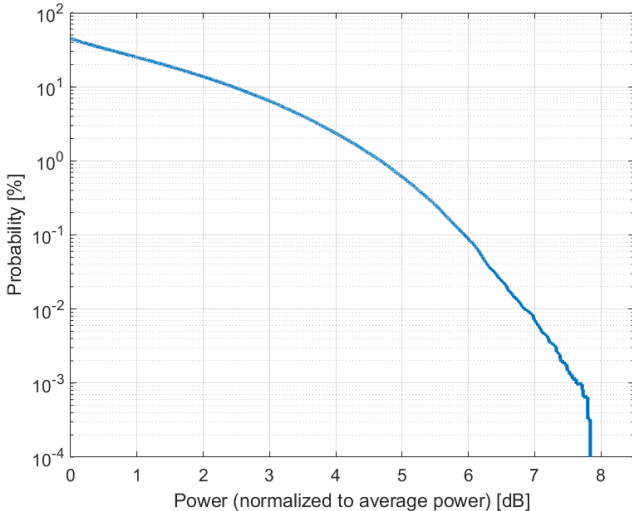
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: QPSK
Frequency Band: Band n25 (1850 - 1915 MHz)
Band n71 (1710 - 1780 MHz)
Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: DFT-s-OFDM
Modulation Scheme: QPSK
Subcarrier Spacing: 15 kHz
Number RBs: 1
Data Type: PN9

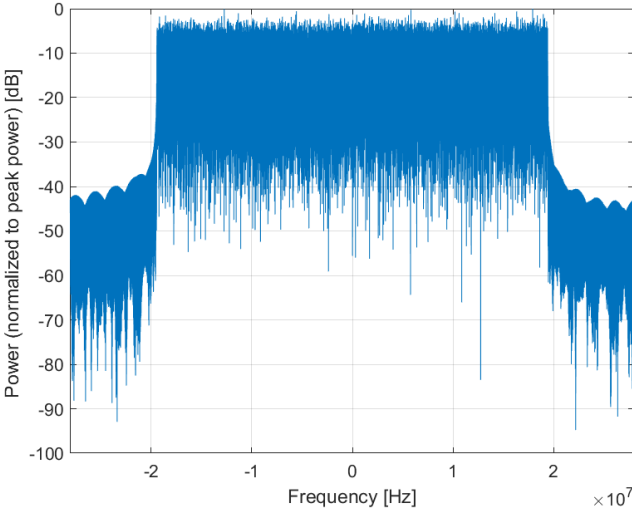
Bandwidth: 40.0 MHz
Integration Time: 10.0 ms

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

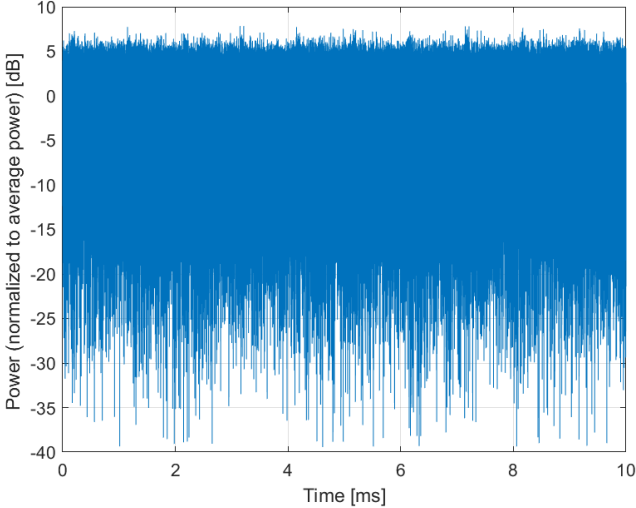
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR (DFT-s-OFDM, 100% RB, 50 MHz, QPSK, 15 kHz)**

Group: 5G NR FR1 FDD
UID: 10951-AAA

PAR: ¹ **5.92 dB**
MIF: ² **-18.56 dB**

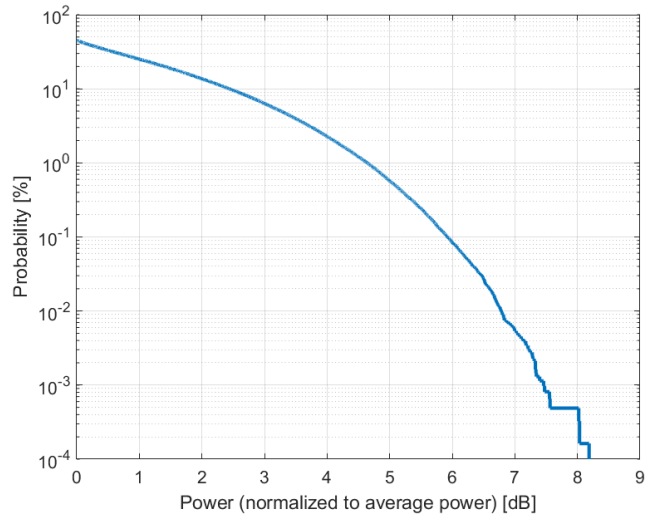
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: QPSK
Frequency Band: Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: DFT-s-OFDM
Modulation Scheme: QPSK
Subcarrier Spacing: 15 kHz
Number RBs: 1
Data Type: PN9

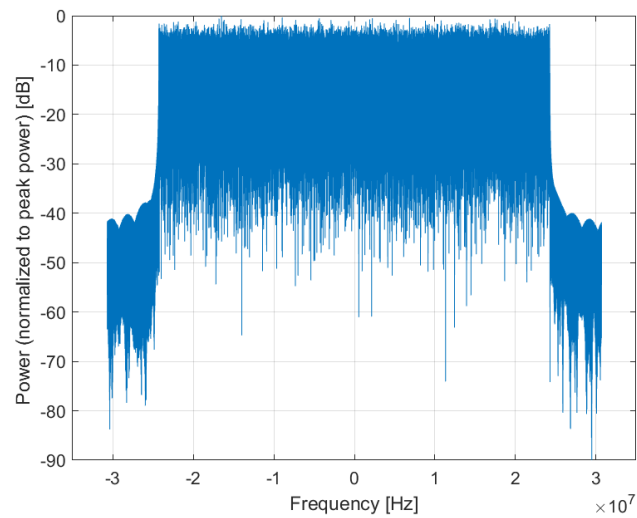
Bandwidth: 50.0 MHz
Integration Time: 10.0 ms

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

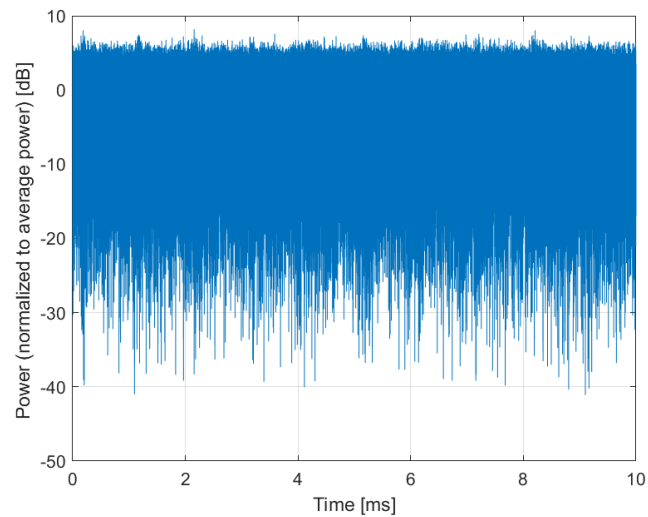
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz)**

Group: 5G NR FR1 FDD
UID: 10952-AAA

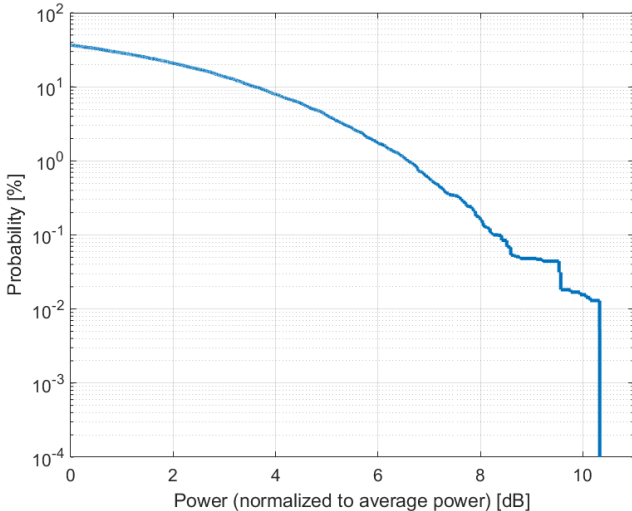
PAR: ¹ **8.25 dB**
MIF: ² **-16.10 dB**

Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: 64-QAM
Frequency Band: Validation band (0.0 - 6000.0 MHz)

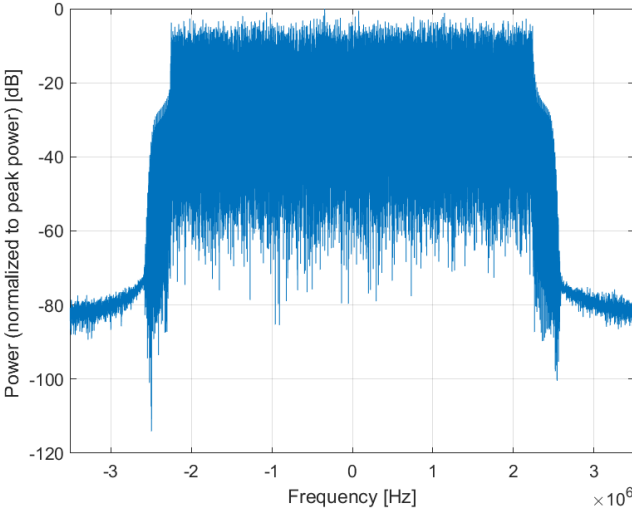
Detailed Specification: Multiplexing Scheme: CP-OFDM
Modulation Scheme: 64-QAM
Subcarrier Spacing: 15 kHz
Model: TM 3.1
Data Type: PN9

Bandwidth: 5.0 MHz
Integration Time: 10.0 ms

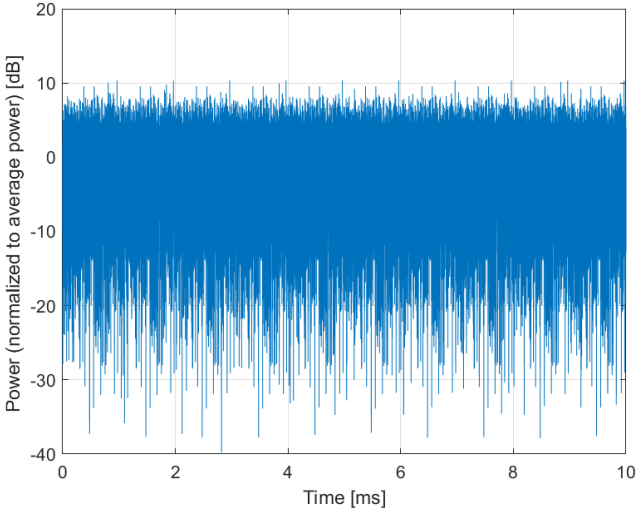
¹ PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz)**

Group: 5G NR FR1 FDD
UID: 10953-AAA

PAR: ¹ **8.15 dB**
MIF: ² **-18.27 dB**

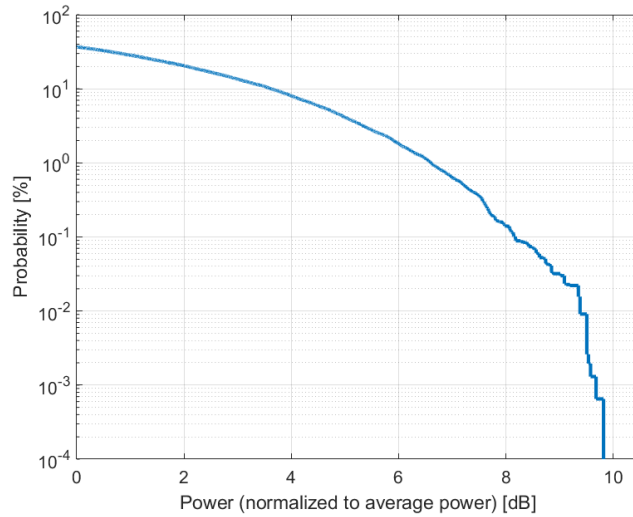
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: 64-QAM
Frequency Band: Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: CP-OFDM
Modulation Scheme: 64-QAM
Subcarrier Spacing: 15 kHz
Model: TM 3.1
Data Type: PN9

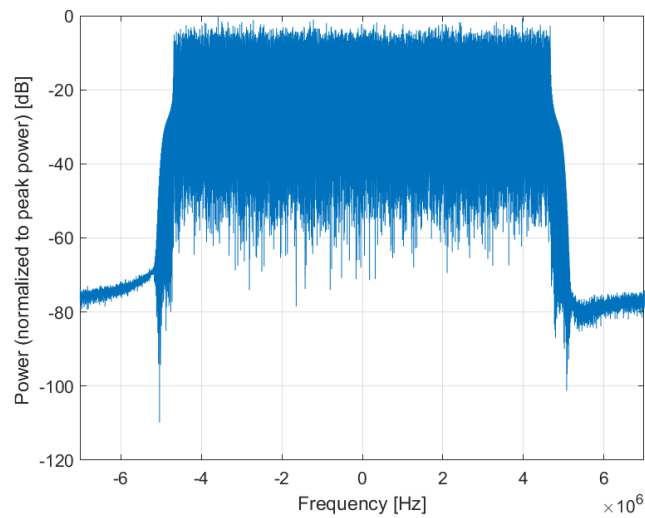
Bandwidth: 10.0 MHz
Integration Time: 10.0 ms

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

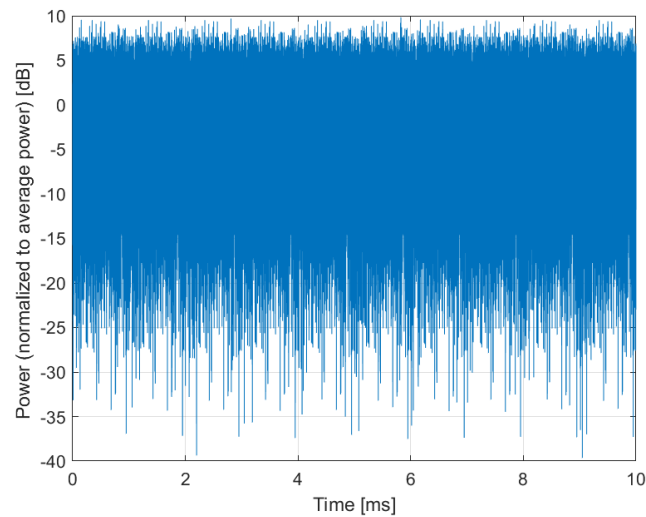
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz)**

Group: 5G NR FR1 FDD
UID: 10954-AAA

PAR: ¹ **8.23 dB**
MIF: ² **-20.40 dB**

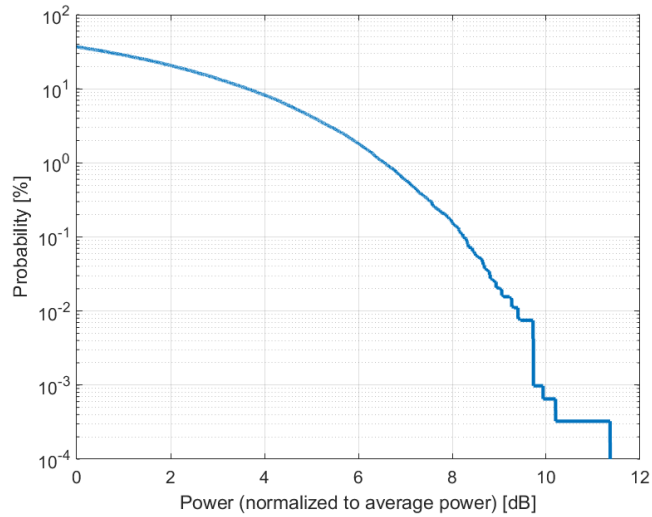
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: 64-QAM
Frequency Band: Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: CP-OFDM
Modulation Scheme: 64-QAM
Subcarrier Spacing: 15 kHz
Model: TM 3.1
Data Type: PN9

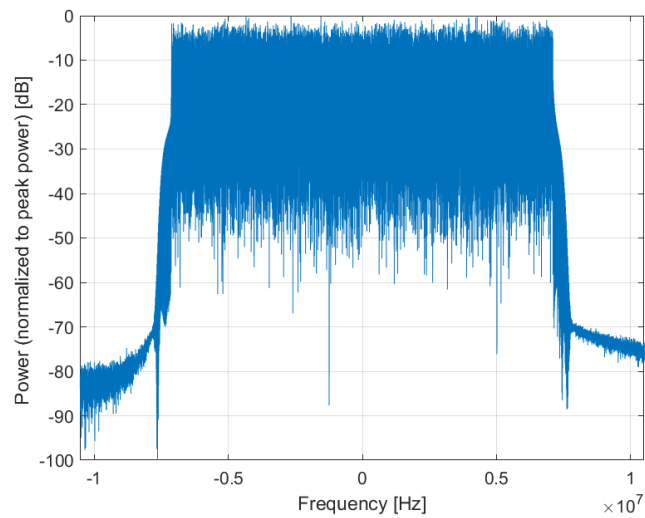
Bandwidth: 15.0 MHz
Integration Time: 10.0 ms

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

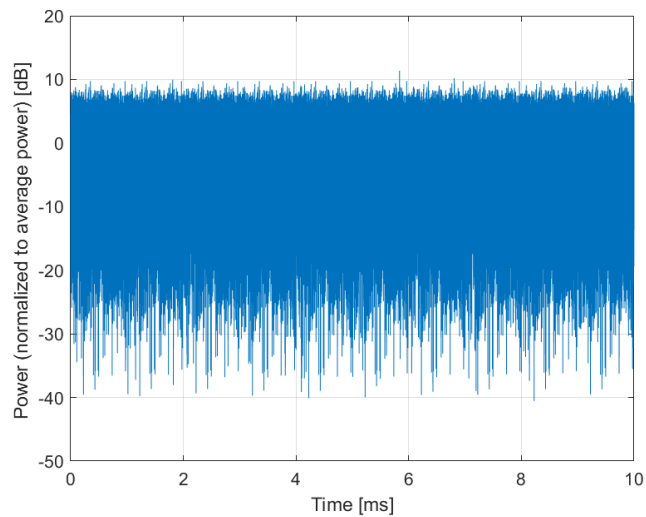
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz)**

Group: 5G NR FR1 FDD
UID: 10955-AAA

PAR: ¹ **8.42 dB**
MIF: ² **-22.55 dB**

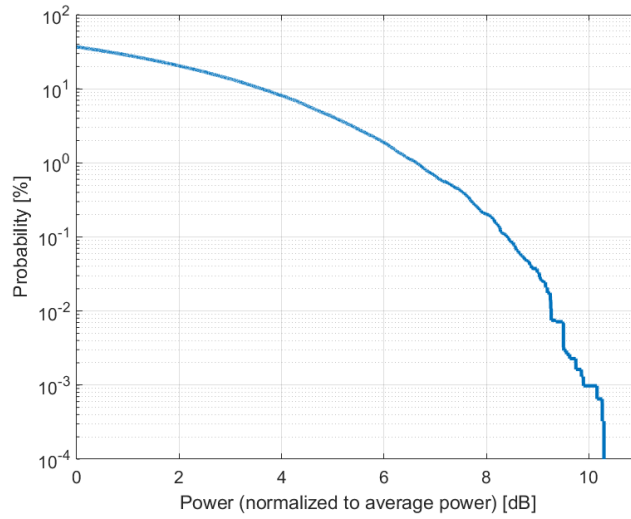
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: 64-QAM
Frequency Band: Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: CP-OFDM
Modulation Scheme: 64-QAM
Subcarrier Spacing: 15 kHz
Model: TM 3.1
Data Type: PN9

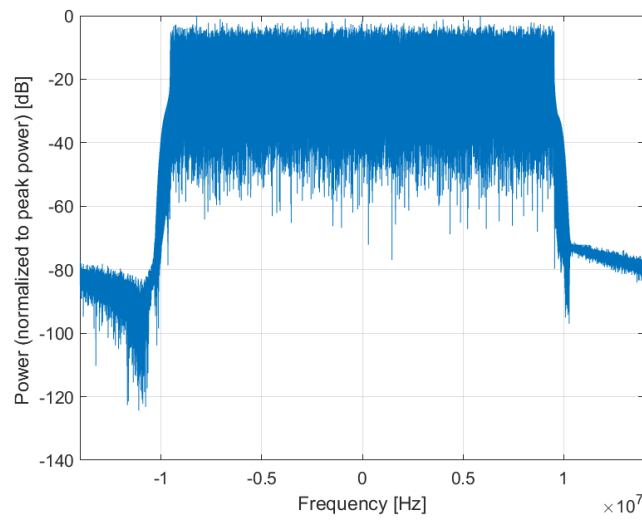
Bandwidth: 20.0 MHz
Integration Time: 10.0 ms

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

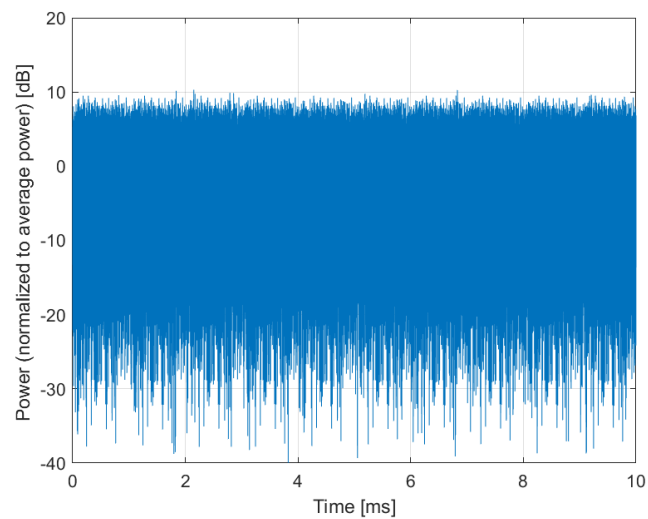
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz)**

Group: 5G NR FR1 FDD
UID: 10956-AAA

PAR: ¹ **8.14 dB**
MIF: ² **-16.37 dB**

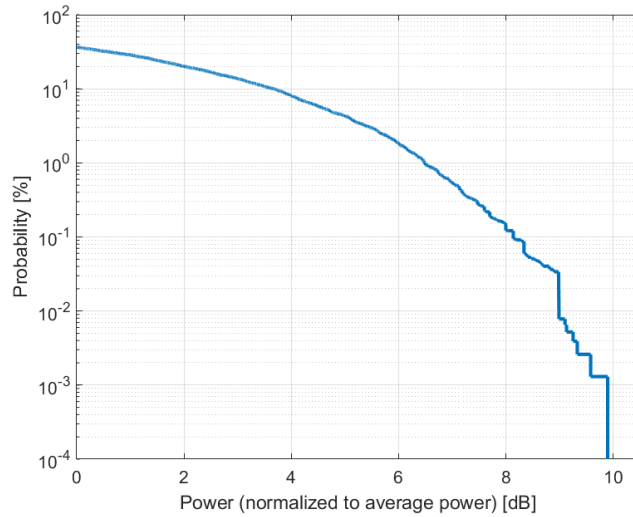
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: 64-QAM
Frequency Band: Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: CP-OFDM
Modulation Scheme: 64-QAM
Subcarrier Spacing: 30 kHz
Model: TM 3.1
Data Type: PN9

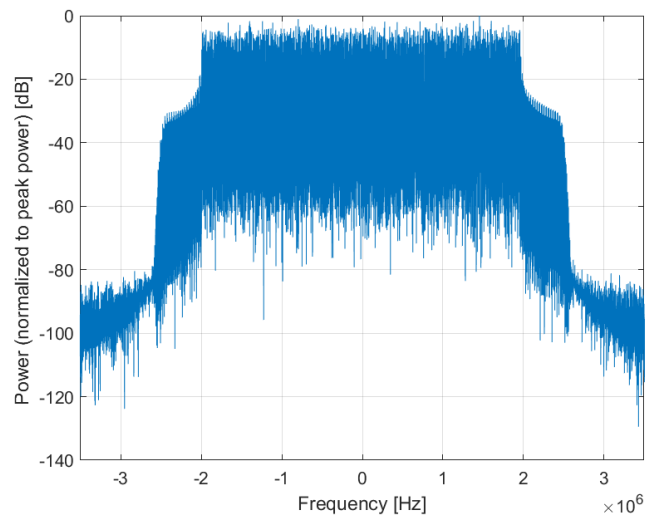
Bandwidth: 5.0 MHz
Integration Time: 10.0 ms

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

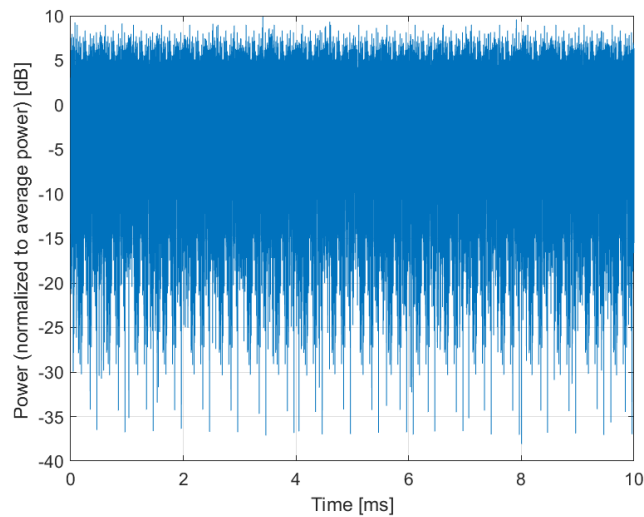
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz)**

Group: 5G NR FR1 FDD
UID: 10957-AAA

PAR: ¹ **8.31 dB**
MIF: ² **-18.08 dB**

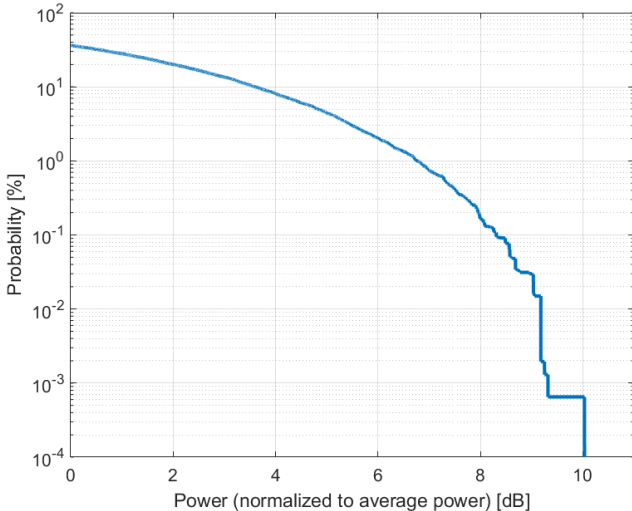
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: 64-QAM
Frequency Band: Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: CP-OFDM
Modulation Scheme: 64-QAM
Subcarrier Spacing: 30 kHz
Model: TM 3.1
Data Type: PN9

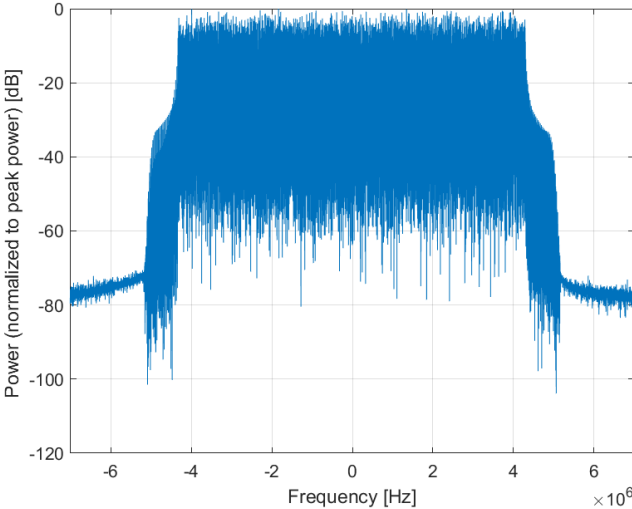
Bandwidth: 10.0 MHz
Integration Time: 10.0 ms

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

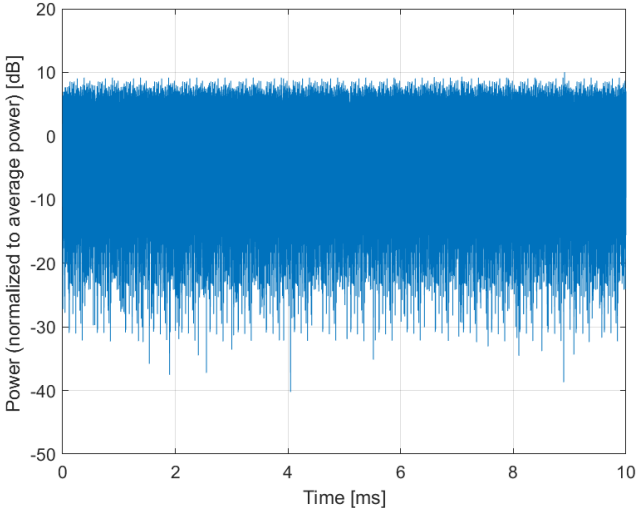
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz)**

Group: 5G NR FR1 FDD
UID: 10958-AAA

PAR: ¹ **8.61 dB**
MIF: ² **-20.42 dB**

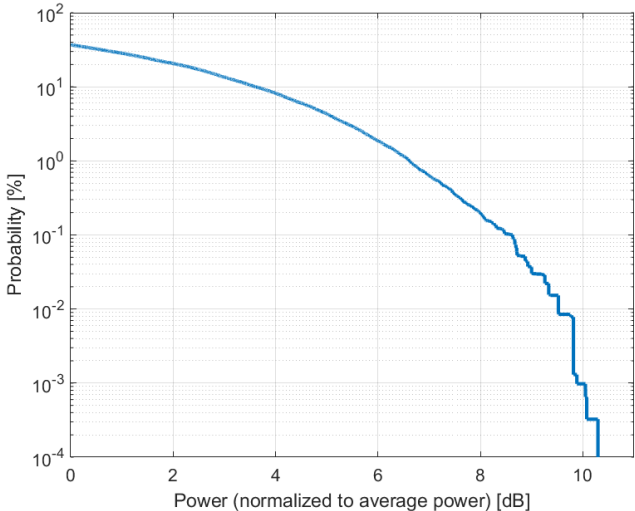
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: 64-QAM
Frequency Band: Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: CP-OFDM
Modulation Scheme: 64-QAM
Subcarrier Spacing: 30 kHz
Model: TM 3.1
Data Type: PN9

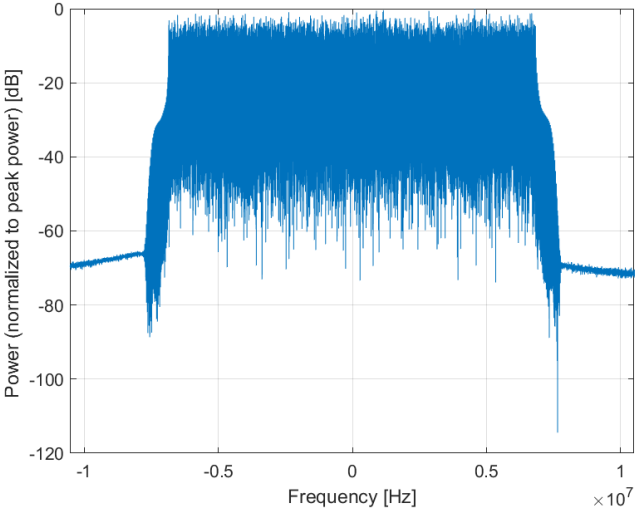
Bandwidth: 15.0 MHz
Integration Time: 10.0 ms

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

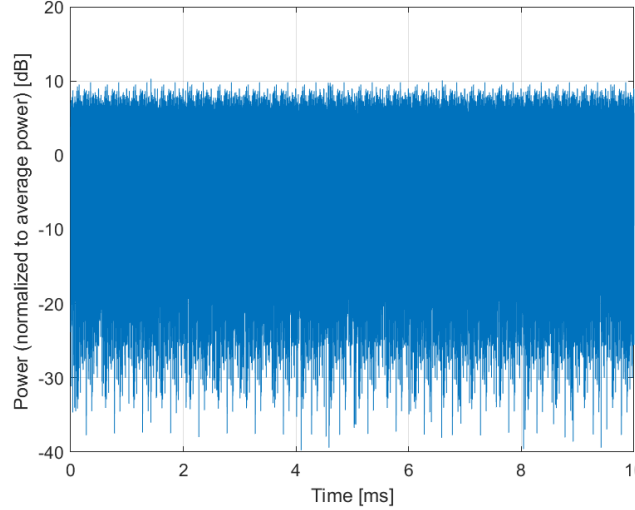
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz)**

Group: 5G NR FR1 FDD
UID: 10959-AAA

PAR: ¹ **8.33 dB**
MIF: ² **-22.82 dB**

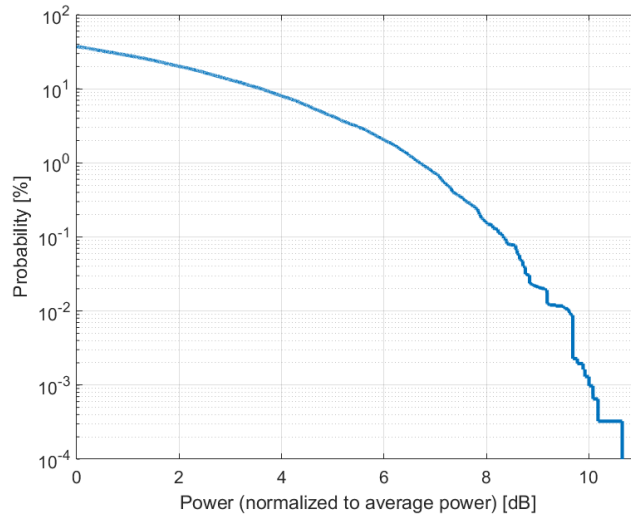
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: 64-QAM
Frequency Band: Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: CP-OFDM
Modulation Scheme: 64-QAM
Subcarrier Spacing: 30 kHz
Model: TM 3.1
Data Type: PN9

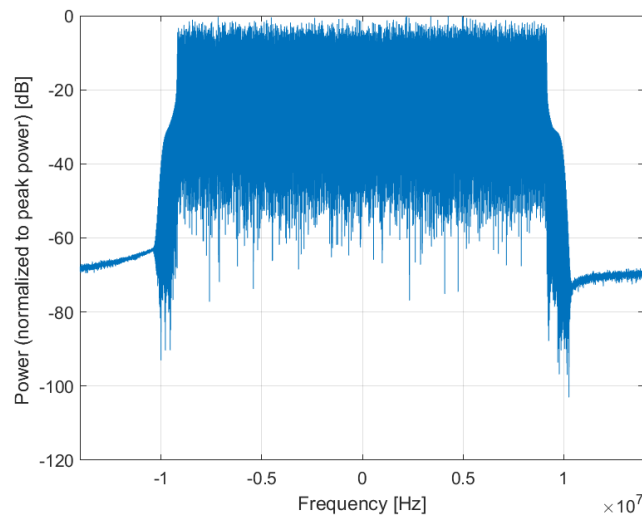
Bandwidth: 20.0 MHz
Integration Time: 10.0 ms

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

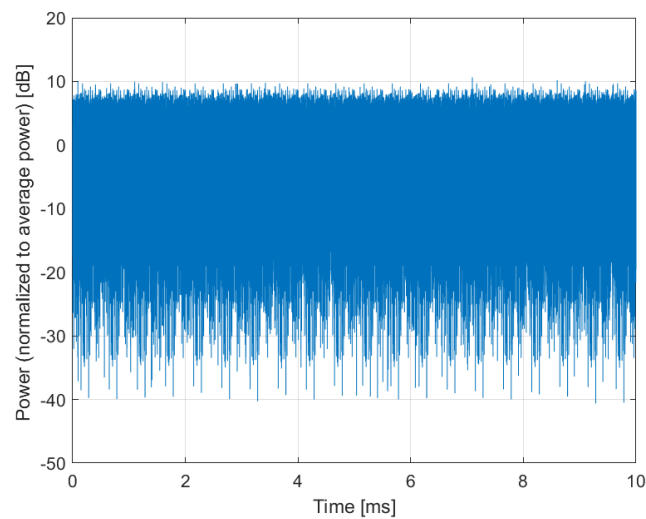
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 15 kHz)**

Group: 5G NR FR1 TDD
UID: 10960-AAA

PAR: ¹ **9.32 dB**
MIF: ² **-4.24 dB**

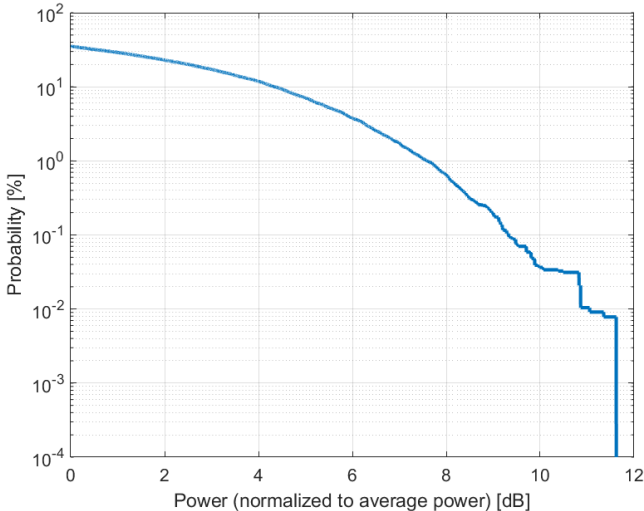
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: 64-QAM
Frequency Band: Band n34 (2010 - 2025 MHz)
Band n38 (2570 - 2620 MHz)
Band n39 (1880 - 1920 MHz)
Band n40 (2300 - 2400 MHz)
Band n41 (2496 - 2690 MHz)
Band n48 (3550 - 3700 MHz)
Band n50 (1432 - 1517 MHz)
Band n51 (1427 - 1432 MHz)
Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: CP-OFDM
Modulation Scheme: 64-QAM
Subcarrier Spacing: 15 kHz
Model: TM 3.1
Data Type: PN9

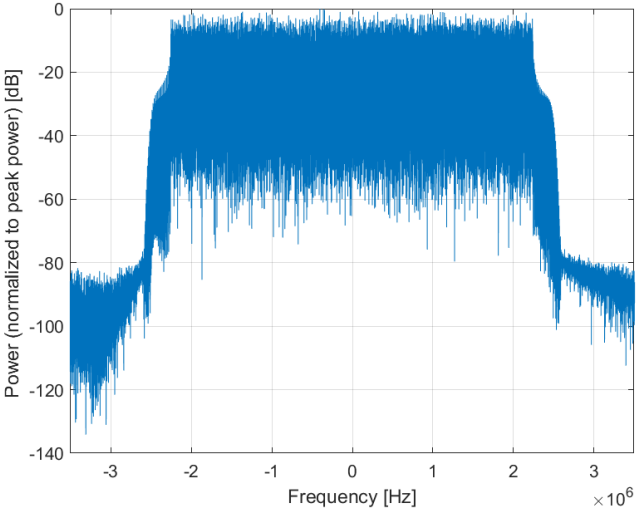
Bandwidth: 5.0 MHz
Integration Time: 10.0 ms

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

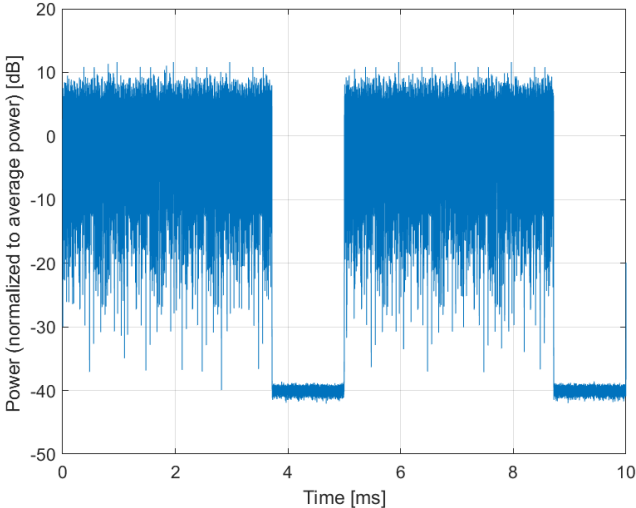
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 15 kHz)**

Group: 5G NR FR1 TDD
UID: 10961-AAA

PAR: ¹ **9.36 dB**
MIF: ² **-4.22 dB**

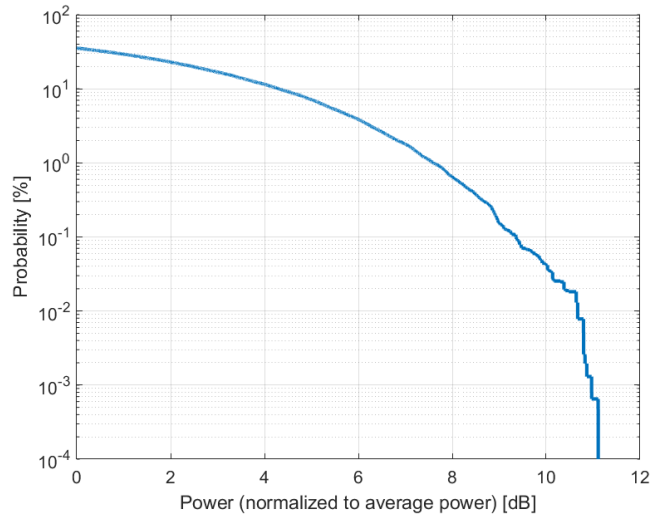
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: 64-QAM
Frequency Band: Band n34 (2010 - 2025 MHz)
Band n38 (2570 - 2620 MHz)
Band n39 (1880 - 1920 MHz)
Band n40 (2300 - 2400 MHz)
Band n41 (2496 - 2690 MHz)
Band n48 (3550 - 3700 MHz)
Band n50 (1432 - 1517 MHz)
Band n77 (3300 - 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: 64-QAM
Subcarrier Spacing: 15 kHz
Model: TM 3.1
Data Type: PN9

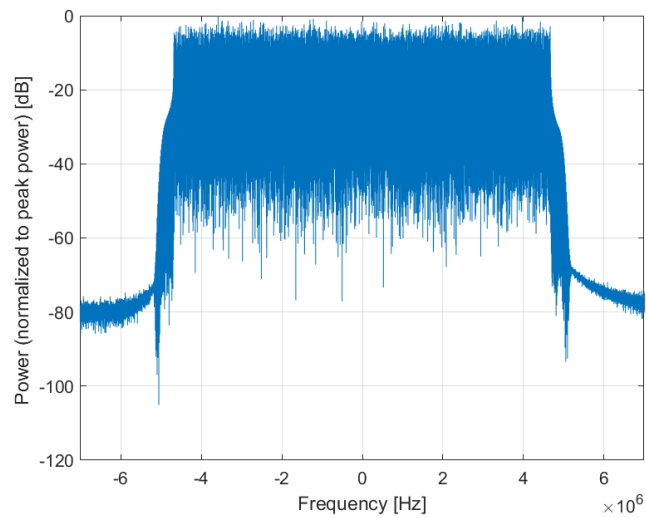
Bandwidth: 10.0 MHz
Integration Time: 10.0 ms

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

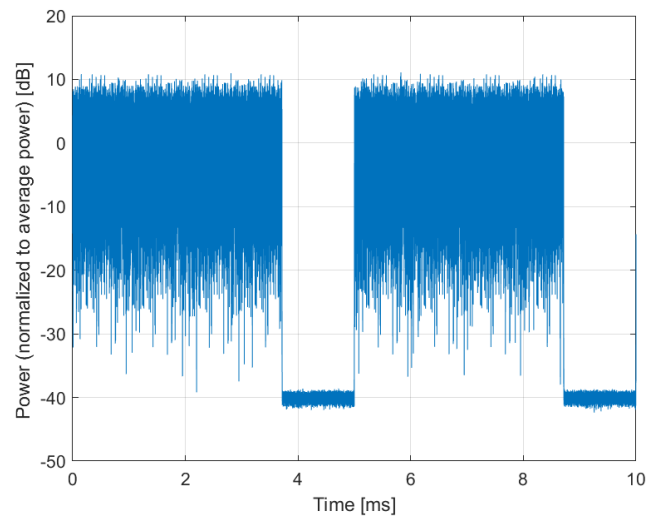
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 15 kHz)**

Group: 5G NR FR1 TDD
UID: 10962-AAA

PAR: ¹ **9.40 dB**
MIF: ² **-4.22 dB**

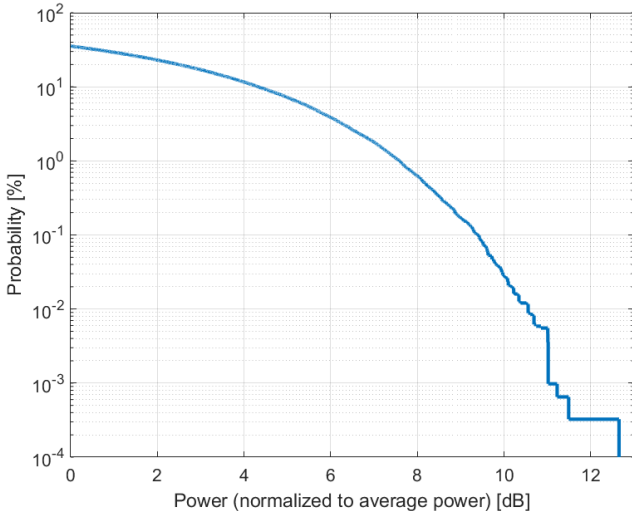
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: 64-QAM
Frequency Band: Band n34 (2010 - 2025 MHz)
Band n38 (2570 - 2620 MHz)
Band n39 (1880 - 1920 MHz)
Band n40 (2300 - 2400 MHz)
Band n41 (2496 - 2690 MHz)
Band n48 (3550 - 3700 MHz)
Band n50 (1432 - 1517 MHz)
Band n77 (3300 - 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: 64-QAM
Subcarrier Spacing: 15 kHz
Model: TM 3.1
Data Type: PN9

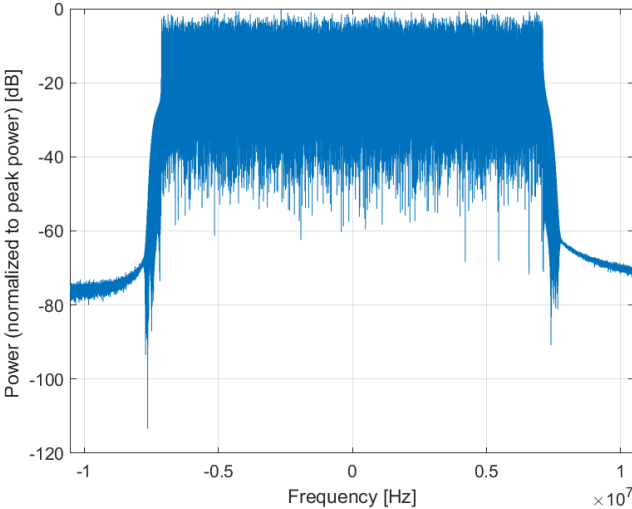
Bandwidth: 15.0 MHz
Integration Time: 10.0 ms

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

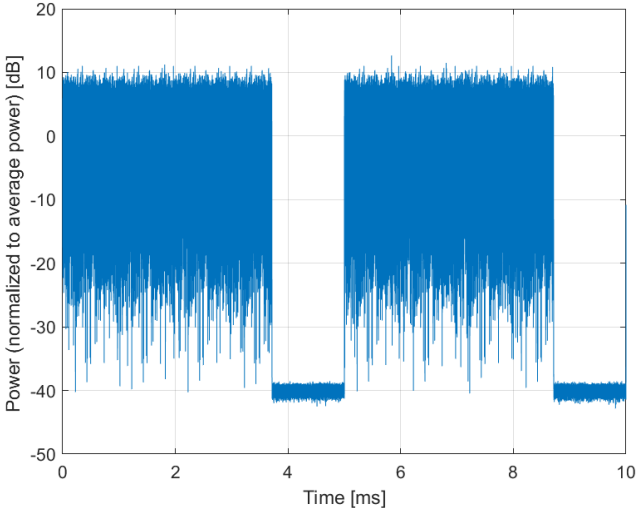
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 15 kHz)**

Group: 5G NR FR1 TDD
UID: 10963-AAA

PAR: ¹ **9.55 dB**
MIF: ² **-4.23 dB**

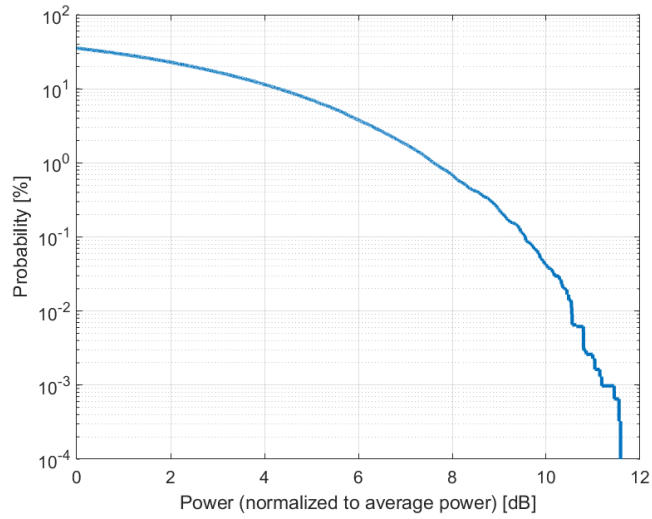
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: 64-QAM
Frequency Band: Band n38 (2570 - 2620 MHz)
Band n39 (1880 - 1920 MHz)
Band n40 (2300 - 2400 MHz)
Band n41 (2496 - 2690 MHz)
Band n48 (3550 - 3700 MHz)
Band n50 (1432 - 1517 MHz)
Band n77 (3300 - 4200 MHz)
Band n78 (3300 - 3800 MHz)
Band n79 (4400 - 5000 MHz)
Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: CP-OFDM
Modulation Scheme: 64-QAM
Subcarrier Spacing: 15 kHz
Model: TM 3.1
Data Type: PN9

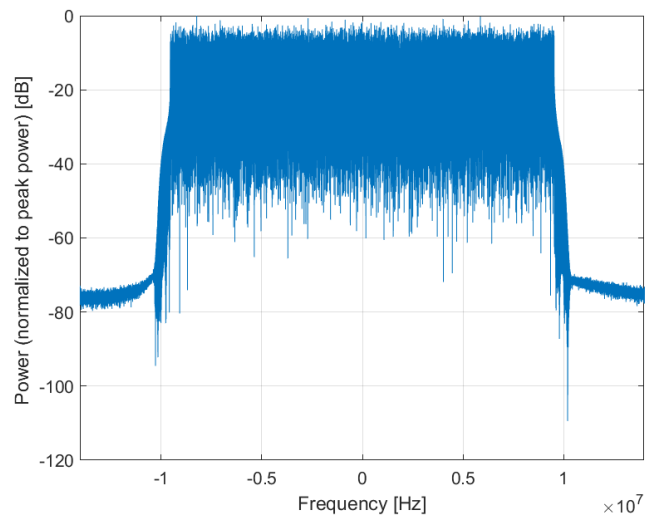
Bandwidth: 20.0 MHz
Integration Time: 10.0 ms

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

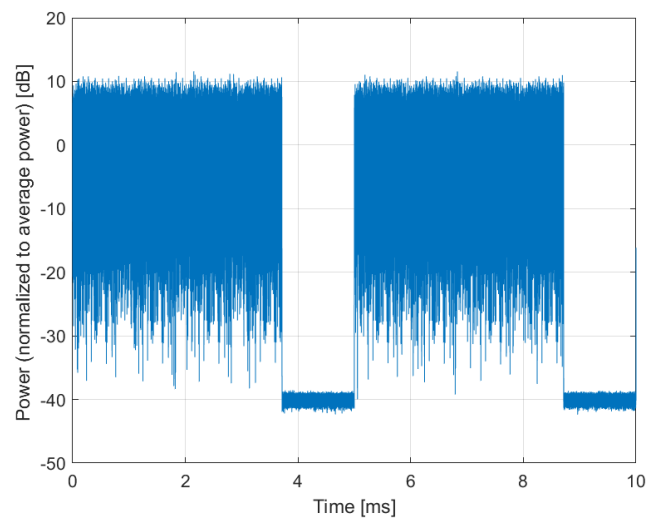
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR DL (CP-OFDM, TM 3.1, 5 MHz, 64-QAM, 30 kHz)**

Group: 5G NR FR1 TDD
UID: 10964-AAA

PAR: ¹ **9.29 dB**
MIF: ² **-4.24 dB**

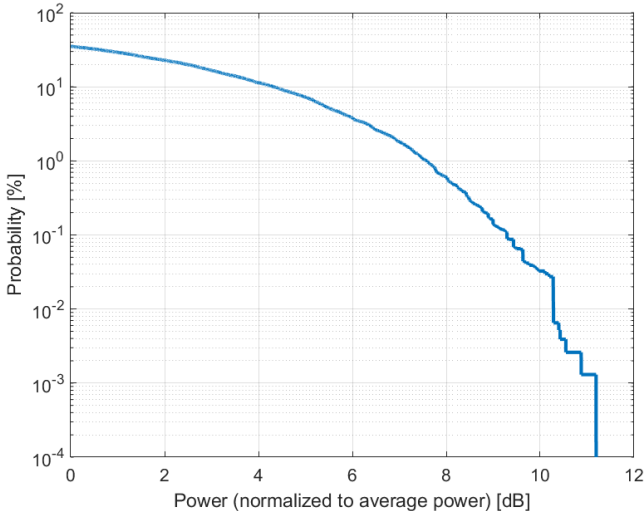
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: 64-QAM
Frequency Band: Band n34 (2010 - 2025 MHz)
Band n38 (2570 - 2620 MHz)
Band n39 (1880 - 1920 MHz)
Band n40 (2300 - 2400 MHz)
Band n41 (2496 - 2690 MHz)
Band n48 (3550 - 3700 MHz)
Band n50 (1432 - 1517 MHz)
Band n51 (1427 - 1432 MHz)
Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: CP-OFDM
Modulation Scheme: 64-QAM
Subcarrier Spacing: 30 kHz
Model: TM 3.1
Data Type: PN9

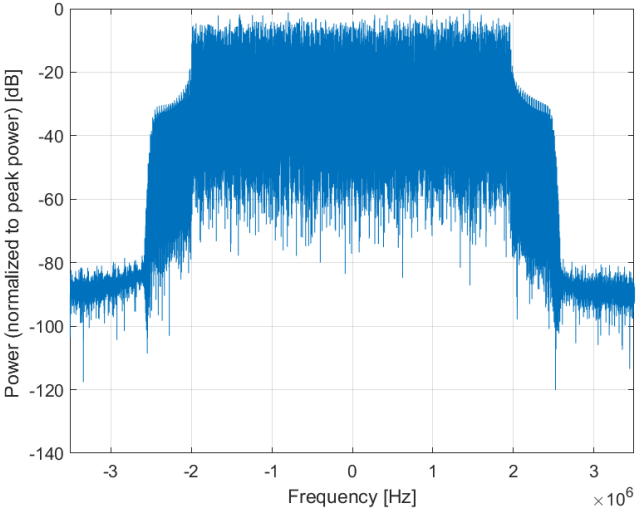
Bandwidth: 5.0 MHz
Integration Time: 10.0 ms

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

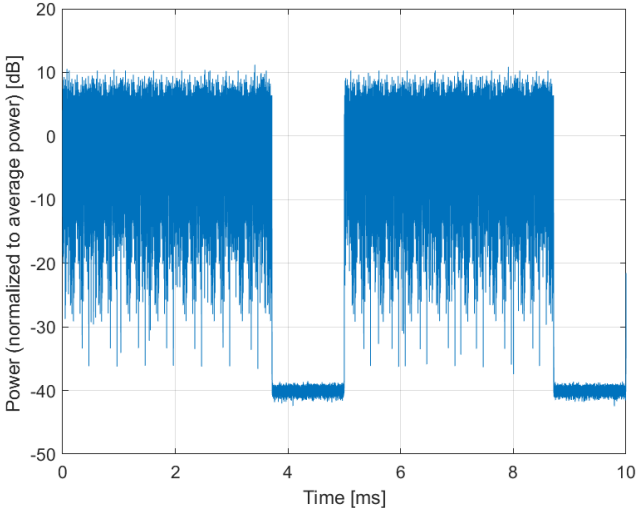
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR DL (CP-OFDM, TM 3.1, 10 MHz, 64-QAM, 30 kHz)**

Group: 5G NR FR1 TDD
UID: 10965-AAA

PAR: ¹ **9.37 dB**
MIF: ² **-4.23 dB**

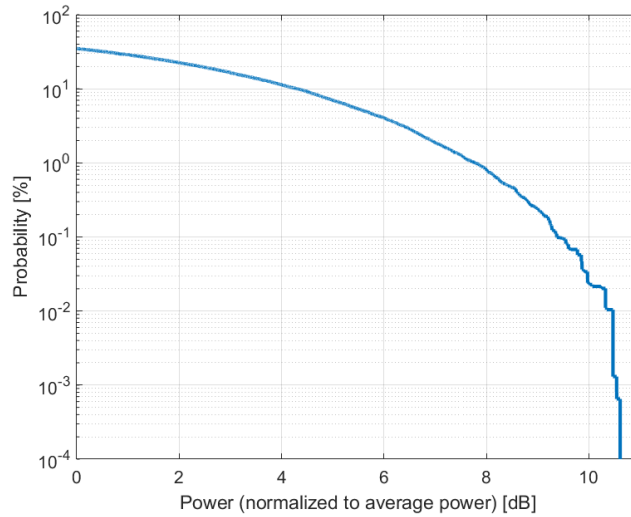
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: 64-QAM
Frequency Band: Band n34 (2010 - 2025 MHz)
Band n38 (2570 - 2620 MHz)
Band n39 (1880 - 1920 MHz)
Band n40 (2300 - 2400 MHz)
Band n41 (2496 - 2690 MHz)
Band n48 (3550 - 3700 MHz)
Band n50 (1432 - 1517 MHz)
Band n77 (3300 - 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: 64-QAM
Subcarrier Spacing: 30 kHz
Model: TM 3.1
Data Type: PN9

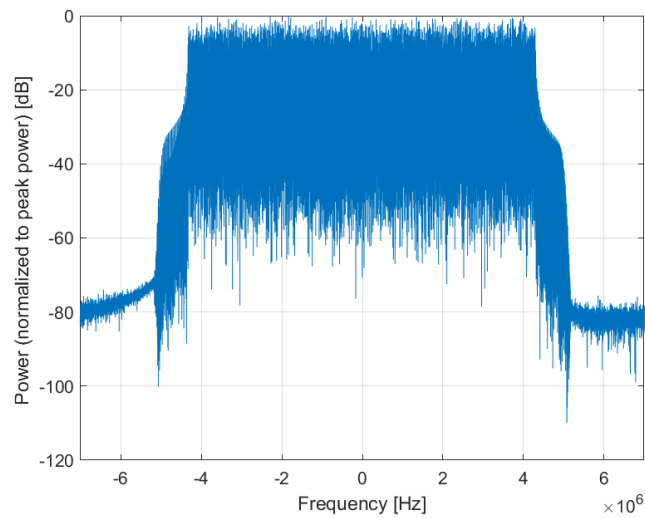
Bandwidth: 10.0 MHz
Integration Time: 10.0 ms

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

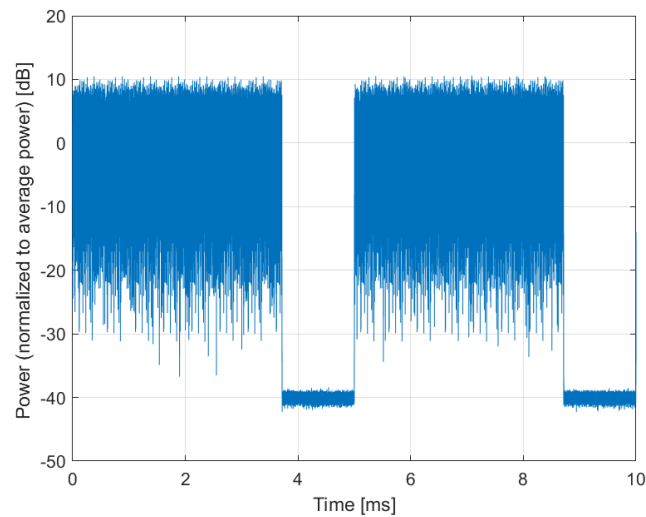
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR DL (CP-OFDM, TM 3.1, 15 MHz, 64-QAM, 30 kHz)**

Group: 5G NR FR1 TDD
UID: 10966-AAA

PAR: ¹ **9.55 dB**
MIF: ² **-4.22 dB**

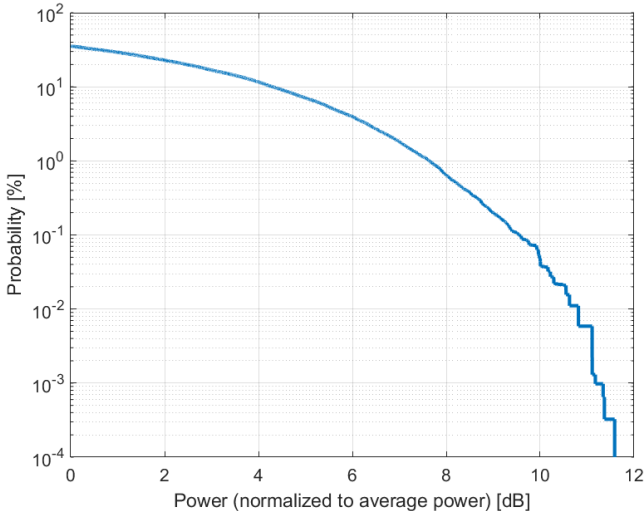
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: 64-QAM
Frequency Band: Band n34 (2010 - 2025 MHz)
Band n38 (2570 - 2620 MHz)
Band n39 (1880 - 1920 MHz)
Band n40 (2300 - 2400 MHz)
Band n41 (2496 - 2690 MHz)
Band n48 (3550 - 3700 MHz)
Band n50 (1432 - 1517 MHz)
Band n77 (3300 - 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: 64-QAM
Subcarrier Spacing: 30 kHz
Model: TM 3.1
Data Type: PN9

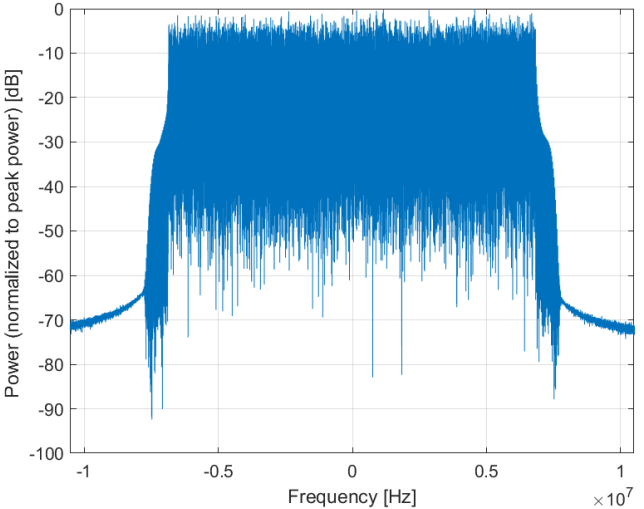
Bandwidth: 15.0 MHz
Integration Time: 10.0 ms

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

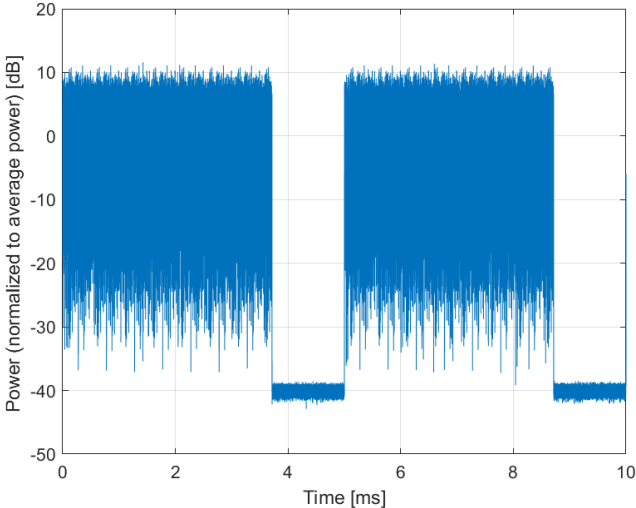
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR DL (CP-OFDM, TM 3.1, 20 MHz, 64-QAM, 30 kHz)**

Group: 5G NR FR1 TDD
UID: 10967-AAA

PAR: ¹ **9.42 dB**
MIF: ² **-4.23 dB**

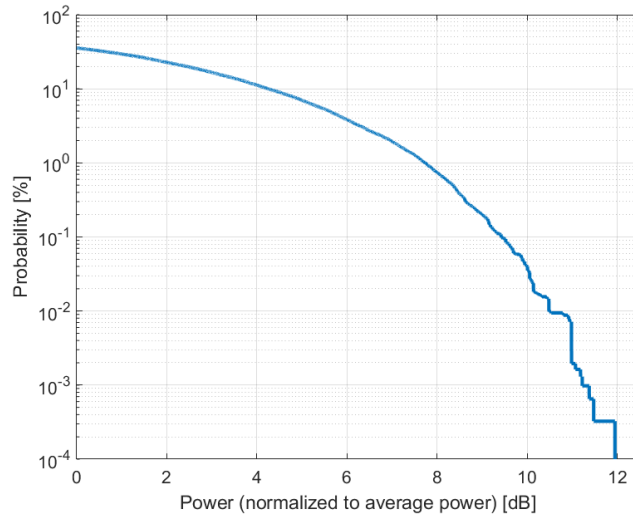
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: 64-QAM
Frequency Band: Band n38 (2570 - 2620 MHz)
Band n39 (1880 - 1920 MHz)
Band n40 (2300 - 2400 MHz)
Band n41 (2496 - 2690 MHz)
Band n48 (3550 - 3700 MHz)
Band n50 (1432 - 1517 MHz)
Band n77 (3300 - 4200 MHz)
Band n78 (3300 - 3800 MHz)
Band n79 (4400 - 5000 MHz)
Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: CP-OFDM
Modulation Scheme: 64-QAM
Subcarrier Spacing: 30 kHz
Model: TM 3.1
Data Type: PN9

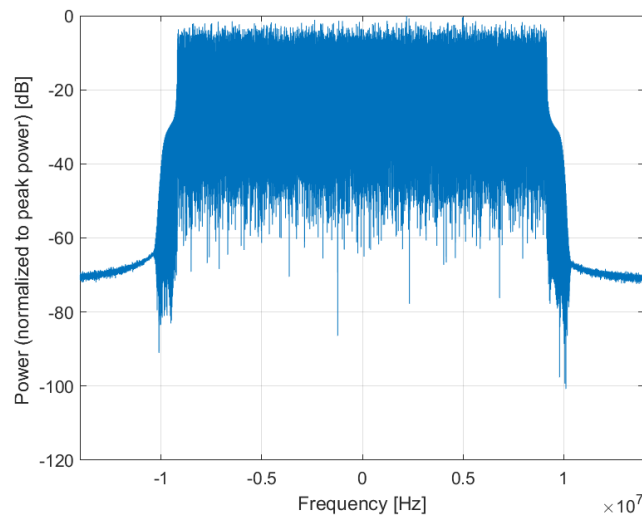
Bandwidth: 20.0 MHz
Integration Time: 10.0 ms

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

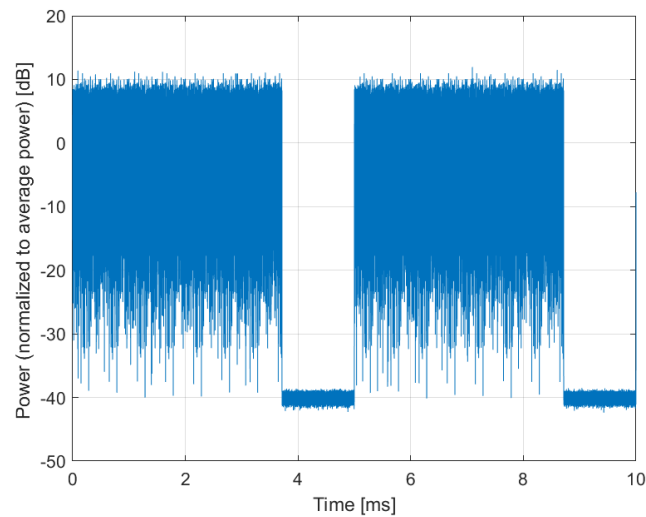
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain

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

Name: **5G NR DL (CP-OFDM, TM 3.1, 100 MHz, 64-QAM, 30 kHz)**

Group: 5G NR FR1 TDD
UID: 10968-AAA

PAR: ¹ **9.49 dB**
MIF: ² **-4.23 dB**

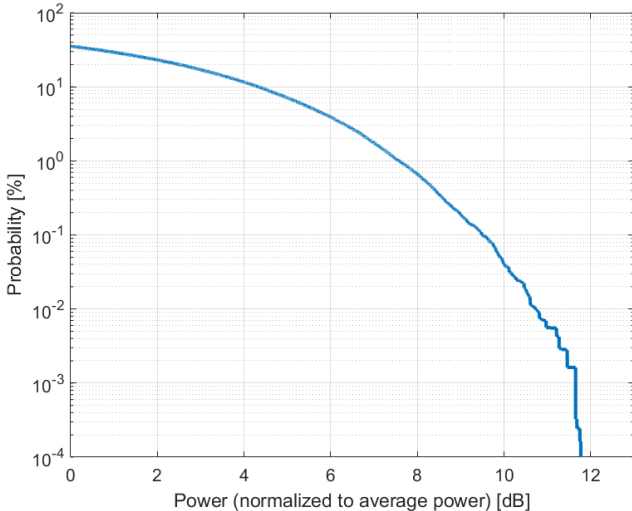
Standard Reference: SPEAG
Category: Random amplitude modulation
Modulation: 64-QAM
Frequency Band: Band n41 (2496 - 2690 MHz)
Band n48 (3550 - 3700 MHz)
Band n77 (3300 - 4200 MHz)
Band n78 (3300 - 3800 MHz)
Band n79 (4400 - 5000 MHz)
Validation band (0.0 - 6000.0 MHz)

Detailed Specification: Multiplexing Scheme: CP-OFDM
Modulation Scheme: 64-QAM
Subcarrier Spacing: 30 kHz
Model: TM 3.1
Data Type: PN9

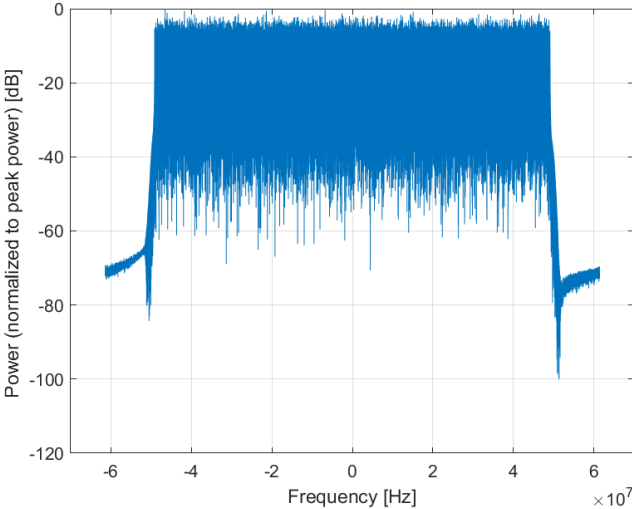
Bandwidth: 100.0 MHz
Integration Time: 10.0 ms

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

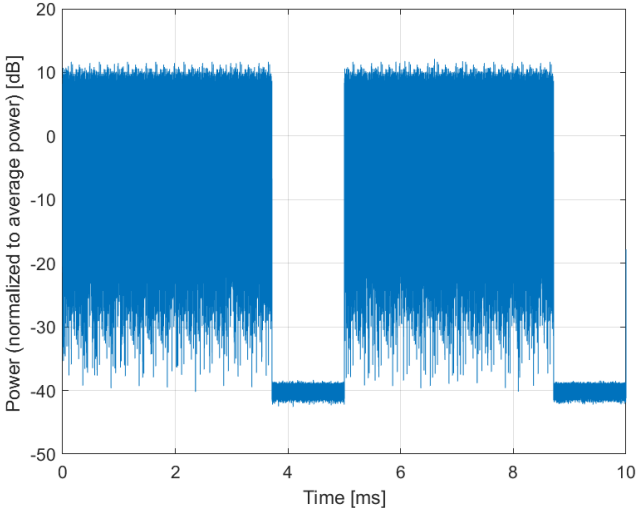
² Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).



Complementary Cumulative Distribution Function (CCDF)



Frequency Domain



Time Domain