

# No.I21N02075-HAC RF

# Calibration Laboratory of

Schmid & Partner Engineering AG

Zeughausstrasse 43, 8004 Zurich, Switzerland

Name: UMTS-FDD (HSDPA)

Group: WCDMA UID: 10097-CAB

PAR: <sup>1</sup> **3.98 dB** MIF: <sup>2</sup> **-20.75 dB** 

Standard Reference: ETSI-3GPP TS 134.121 Rel. 5

FCC OET KDB 941225 D01 SAR test for 3G devices v02

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 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)

Band 19, UTRA/FDD (830.0-845.0 MHz, 20130) Band 20, UTRA/FDD (832.0-862.0 MHz, 20131)

Detailed Specification: CQI value: 2

Sub-test 2 Conditions:

DPCCH gain factor (Beta\_c) = 12/15 DPDCH gain factor (Beta\_d): 15/15

Bandwidth: 5.0 MHz Integration Time: 100.0 ms

**UID Specification Sheet** 

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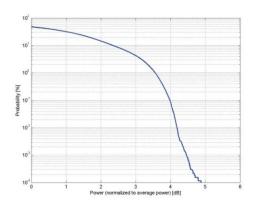
PAR (0.1%) in accordance with FCC KDB 971168, Section 6.0 "Measurement of the Peak-to-Average Power Ratio (PAPR)"

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

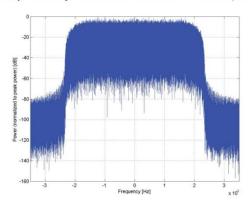


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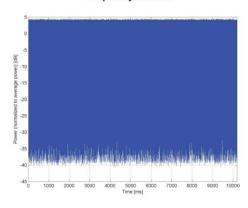
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# Complementary Cumulative Distribution Function (CCDF)



#### Frequency Domain



Time Domain

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16.01.2014

#### No.I21N02075-HAC RF

# Calibration Laboratory of

#### Schmid & Partner **Engineering AG**

Name:

Zeughausstrasse 43, 8004 Zurich, Switzerland

LTE-FDD (SC-FDMA, 1 RB, 10 MHz, 16-QAM)

Group: UID: LTE-FDD 10176-CAE

PAR: 1 MIF: 2 6.52 dB -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 Random amplitude modulation

Category: 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 5, E-UTRA/FDD (824.0 - 849.0 MHz) Band 5, E-UTRA/FDD (824.0 - 849.0 MHz) Band 6, E-UTRA/FDD (830.0 - 840.0 MHz) Band 7, E-UTRA/FDD (2500.0 - 2570.0 MHz) Band 8, E-UTRA/FDD (880.0 - 915.0 MHz) Band 9, E-UTRA/FDD (1749.9 - 1784.9 MHz) Band 10, E-UTRA/FDD (1710.0 - 1770.0 MHz) Band 11, E-UTRA/FDD (1427.9 - 1447.9 MHz) Band 12, E-UTRA/FDD (999.0 - 716.0 MHz)

Band 13, E-UTRA/FDD (777.0 - 787.0 MHz) Band 14, E-UTRA/FDD (788.0 - 798.0 MHz) Band 17, E-UTRA/FDD (704.0 - 716.0 MHz) Band 18, E-UTRA/FDD (815.0 - 830.0 MHz) Band 19, E-UTRA/FDD (830.0 - 845.0 MHz) Band 20, E-UTRA/FDD (832.0 - 862.0 MHz) Band 21, E-UTRA/FDD (1447.9 - 1462.9 MHz) Band 22, E-UTRA/FDD (341.0. - 349.0. MHz)
Band 23, E-UTRA/FDD (3410.0 - 349.0. MHz)
Band 23, E-UTRA/FDD (2000.0 - 2020.0 MHz)
Band 24, E-UTRA/FDD (1626.5 - 1660.5 MHz)
Band 25, E-UTRA/FDD (1850.0 - 1915.0 MHz) Band 27 E-UTRA/FDD (807.0 - 824.0 MHz) Band 28 E-UTRA/FDD (703.0 - 748.0 MHz)

Band 30, E-UTRA/FDD (2305.0 - 2315.0 MHz)
Band 65, E-UTRA/FDD (1920.0 - 2010.0 MHz)
Band 66, E-UTRA/FDD (1710.0 - 1780.0 MHz)
Band 68, E-UTRA/FDD (1710.0 - 1780.0 MHz)
Band 68, E-UTRA/FDD (698.0 - 728.0 MHz)
Band 70, E-Band 71, E-UTRA/FDD (663.0 - 698.0 MHz) Validation band (0.0 - 6000.0 MHz)

Modulation Scheme: SC-FDMA Number of PUSCHs: 1 Settings for Subframe #0 to #9: Modulation Scheme: QPSK Data Type: UL-SCH Number RB: 1

Transport Block Size: 256 TBS Index: 14 MCS Index: 15 Data Type: PN9 10.0 MHz

Bandwidth: Integration Time: 10.0 ms

**UID Specification Sheet** 

Detailed Specification:

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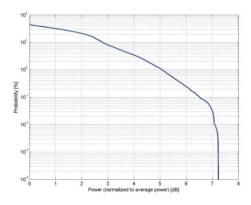
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Modulation Interference Factor (MIF) value valid only in conjunction with advanced probe response linearization calibration for the same communication system (same UID and version).

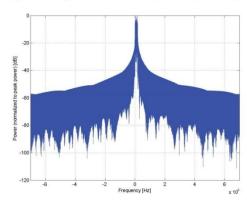


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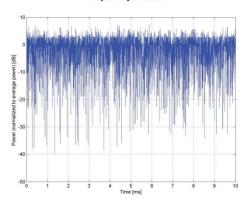
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#### Complementary Cumulative Distribution Function (CCDF)



#### Frequency Domain



Time Domain

UID Specification Sheet

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#### Calibration Laboratory of

# Schmid & Partner

Name:

Bandwidth: Integration Time:

Engineering AG Zeughausstrasse 43, 8004 Zurich, Switzerland

LTE-FDD (SC-FDMA, 1 RB, 20 MHz, 16-QAM)

Group: UID: LTE-FDD 10170-CAD

PAR: 1 MIF: 2 6.52 dB -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 Random amplitude modulation

Category: Modulation:

16-QAM

Frequency Band:

Random amplitude modulation
16-QAM
Band 1, E-UTRA/FDD (1920.0 - 1980.0 MHz)
Band 2, E-UTRA/FDD (1950.0 - 1910.0 MHz)
Band 3, E-UTRA/FDD (1950.0 - 1910.0 MHz)
Band 4, 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 (1740.9 - 1784.9 MHz)
Band 10, E-UTRA/FDD (1740.0 - 1770.0 MHz)
Band 20, E-UTRA/FDD (830.0 - 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 26, E-UTRA/FDD (1900.0 - 2010.0 MHz)
Band 65, E-UTRA/FDD (1710.0 - 1780.0 MHz)
Band 66, E-UTRA/FDD (1920.0 - 2010.0 MHz)
Band 67, E-UTRA/FDD (683.0 - 698.0 MHz)
Band 70, E-UTRA/FDD (663.0 - 698.0 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 20.0 MHz 10.0 ms

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**UID Specification Sheet** 

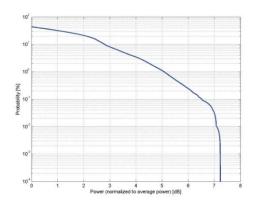
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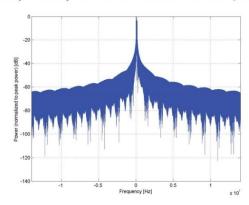


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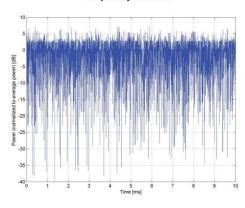
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#### Complementary Cumulative Distribution Function (CCDF)



#### Frequency Domain



Time Domain

UID Specification Sheet

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