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Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz SMIQ03HD 300KHz to 3.3GHz Signal Generator

Rohde & Schwarz SMIQ03HD Vector Signal Generator 300 kHz to 3.3 GHz High Dynamic The R&S SMIQ03HD (order 1125.5555.33) is the high-dynamic 3GPP-oriented member of the SMIQ vector family. Range is 300 kHz to 3.3 GHz. It retains SMIQ features plus wide dynamic range, high accuracy, excellent ACLR, and short settling. Integrated I/Q filters (2.5 / 5 / 7.5 / 10 MHz) optimize adjacent-channel leakage. With SMIQB57 High ACLR for WCDMA 2110 to 2170 MHz, typical ACLR is 77 dB adjacent / 82 dB alternate (TM1, 64 DPCH). High-power output reaches 27 dBm PEP (30 dBm overrange) in the B57 path. Reverse-power protection on the B57 high-power port is 1 W. The R&S SMIQ03HD (order 1125.5555.33) is the high-dynamic 3GPP-oriented member of the SMIQ vector family. Range is 300 kHz to 3.3 GHz. It retains SMIQ features plus wide dynamic range, high accuracy, excellent ACLR, and short settling. Integrated I/Q filters (2.5 / 5 / 7.5 / 10 MHz) optimize adjacent-channel leakage. With SMIQB57 High ACLR for WCDMA 2110 to 2170 MHz, typical ACLR is 77 dB adjacent / 82 dB alternate (TM1, 64 DPCH). High-power output reaches 27 dBm PEP (30 dBm overrange) in the B57 path. Reverse-power protection on the B57 high-power port is 1 W. 3GPP WCDMA PA and base-station component ACLR test



MODEL

**Rohde & Schwarz
SMIQ03HD**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

SMIQ03HD

LISTING

<https://aumictechlabs.com/products/smiq03hd-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Rohde & Schwarz SMIQ03HD is a signal generator covering 300 kHz to 3.3 GHz, engineered for wireless communication system development, testing, and production. It delivers high spectral purity with advanced modulation capabilities spanning analog and digital protocols. The instrument employs broadband I/Q modulation with DSP-based digital signal processing to achieve precise vector accuracy across PSK, QAM, and FSK modulation schemes, supporting multiple digital radio standards.

Technical Specifications

Frequency Range: 300 kHz to 3.3 GHz
Output Power: Up to +30 dBm PEP (with R&S SMIQB57 option)
Modulation Support: Analog: FM, PM (with optional R&S SMIQB5) Digital: PSK, QAM, FSK with coding options
Broadband I/Q modulation with superior vector accuracy
Signal Quality: Spectral purity: Excellent Error Vector Magnitude (WCDMA 3.84 Mcps): 4% RMS typical Harmonics level: < -30 dBc, -40 dBc typical Linearity error: < 0.2 dB over temperature, 0.1 dB typical Output level repeatability: 0.05 dB typical (ALC ON in CW mode; ALC OFF over 5 minutes and 5°C interval)

Performance Metrics (WCDMA with R&S SMIQB57):

Single carrier (2110–2170 MHz): 77 dB adjacent channel, 82 dB alternate channel
Multi-carrier configurations: - 2 carriers (11 dB crest factor): 62 dB adjacent, 64 dB alternate - 3 carriers (11.3 dB crest factor): 63 dB adjacent, 65 dB alternate - 4 carriers (11.8 dB crest factor): 62 dB adjacent, 64 dB alternate

Switching Performance: Frequency/level setting: < 3 ms / < 2.5 ms List mode: < 500 µs Fast Restore mode: < 800 µs

Key Features

DSP-based broadband digital modulation for multi-standard protocol support
Output level accuracy with excellent linearity across operating range
Fast frequency and amplitude switching for automated testing sequences
Optional high-power WCDMA capability with configurable I/Q filters

Optional Modules

R&S SMIQB57: High ACLR for WCDMA 3GPP (2110–2170 MHz), factory installation
R&S SMIQB11: Data Generator
R&S SMIQB17: Noise Generator and Distortion Simulator
R&S SMIQB45: Digital Standard WCDMA 3GPP

Typical Applications

Wireless communication R&D, 3GPP standard validation, multi-carrier signal generation, protocol conformance testing, and RF subsystem characterization.

SMIQ03HD Characteristics / Specifications

PARAMETER	VALUE
Model	SMIQ03HD
Manufacturer	Rohde & Schwarz
Instrument Type	High dynamic vector signal generator
Alias	SMIQ 03HD; R&S SMIQ03HD
Order Number	1125.5555.33
Frequency Range	300 kHz to 3.3 GHz
Frequency Resolution	0.1 Hz class (SMIQ family); 0.01 Hz listed on some HD sheets
I/Q Filter Bandwidths	2.5 MHz, 5 MHz, 7.5 MHz, 10 MHz
ACLR 1 DPCH 5 MHz Offset	greater than 67 dB, typically 71 dB (1850 to 2200 MHz, at or below 8 dBm PEP, 2.5 MHz filter, low distortion)
ACLR 1 DPCH 10 MHz Offset	greater than 73 dB, typically 76 dB (low noise)
ACLR TM1 64 DPCH 5 MHz	greater than 66 dB, typically 70 dB
ACLR TM1 64 DPCH 10 MHz	greater than 70 dB, typically 73 dB
B57 Frequency Range	2110 MHz to 2170 MHz
B57 Channel Bandwidth	3.84 MHz
B57 Output Level PEP	minus 130 dBm to 27 dBm
B57 Overrange	30 dBm
B57 Uninterrupted Level Fixed Att	greater than 30 dB
B57 Level Uncertainty CW Auto Att	less than 0.5 dB (minus 120 dBm to 25 dBm PEP)
B57 Level Uncertainty Digital Mod	less than 0.7 dB
B57 VSWR above 15 dBm PEP	less than 1.8
B57 VSWR at or below 15 dBm PEP	less than 1.5
B57 Reverse Power Max	1 W
B57 Harmonics below 25 dBm PEP	less than minus 30 dBc, typically minus 40 dBc
B57 Harmonics below 15 dBm PEP	less than minus 40 dBc, typically minus 50 dBc
B57 Nonharmonics 10 kHz to 1.2 MHz	less than minus 74 dBc

PARAMETER	VALUE
B57 EVM WCDMA rms	typically 4 percent
B57 Typical ACLR Adjacent	77 dB (TM1 64 DPCH)
Output Impedance	50 ohm
Sibling SMIQ03B Range	300 kHz to 3.3 GHz without HD ACLR path
Bandwidth	3.84 MHz

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Model	SMIQ03HD
Manufacturer	Rohde & Schwarz
Instrument Type	High dynamic vector signal generator
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Order Number	1125.5555.33
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PARAMETER	VALUE
Frequency Resolution	0.1 Hz class (SMIQ family); 0.01 Hz listed on some HD sheets
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ACLR 1 DPCH 5 MHz Offset	greater than 67 dB, typically 71 dB (1850 to 2200 MHz, at or below 8 dBm PEP, 2.5 MHz filter, low distortion)
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PARAMETER	VALUE
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Specifications	
PARAMETER	VALUE
B57 Frequency Range	2110 MHz to 2170 MHz
B57 Channel Bandwidth	3.84 MHz
B57 Output Level PEP	minus 130 dBm to 27 dBm

Specifications

PARAMETER	VALUE
B57 Overrange	30 dBm
B57 Uninterrupted Level Fixed Att	greater than 30 dB
B57 Level Uncertainty CW Auto Att	less than 0.5 dB (minus 120 dBm to 25 dBm PEP)

B57 Level Uncertainty Digital Mod: less than 0.7 dB

B57 VSWR above 15 dBm PEP: less than 1.8

B57 VSWR at or below 15 dBm PEP: less than 1.5

Specifications

PARAMETER	VALUE
B57 Reverse Power Max	1 W
B57 Harmonics below 25 dBm PEP	less than minus 30 dBc, typically minus 40 dBc
B57 Harmonics below 15 dBm PEP	less than minus 40 dBc, typically minus 50 dBc

Specifications

PARAMETER	VALUE
B57 Nonharmonics 10 kHz to 1.2 MHz	less than minus 74 dBc
B57 EVM WCDMA rms	typically 4 percent
B57 Typical ACLR Adjacent	77 dB (TM1 64 DPCH)

Output Impedance: 50 ohm

Sibling SMIQ03B Range: 300 kHz to 3.3 GHz without HD ACLR path

Option SMIQB45: Digital standard WCDMA 3GPP FDD

Option SMIQB60: Arbitrary waveform generator

Option SMIQB1: OCXO reference

Notes

Specs from R&S SMIQ03HD data sheet and application note 1GP52. Confirm SMIQB57, I/Q filter setting, and whether the unit is HD (.33) versus SMIQ03B (.03).

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.