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Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz SMIQ03A 300MHz to 3.3GHz Vector Signal Generator

Rohde & Schwarz SMIQ03A Vector Signal Generator 300 kHz to 3.3 GHz The R&S SMIQ03A is the A-revision 3.3 GHz vector signal generator in the original SMIQ family (order 1084.8004.53). RF coverage is 300 kHz to 3.3 GHz with 0.1 Hz resolution, matching SMIQ03. Analog and digital modulation, optional fading, noise, BERT, data generator, and digital-standard options cover 2G/3G development. Harmonics are less than minus 30 dBc at or below 10 dBm. Treat electrical RF performance as SMIQ03 class unless the A-revision supplement on the unit states otherwise. The R&S SMIQ03A is the A-revision 3.3 GHz vector signal generator in the original SMIQ family (order 1084.8004.53). RF coverage is 300 kHz to 3.3 GHz with 0.1 Hz resolution, matching SMIQ03. Analog and digital modulation, optional fading, noise, BERT, data generator, and digital-standard options cover 2G/3G development. Harmonics are less than minus 30 dBc at or below 10 dBm. Treat electrical RF performance as SMIQ03 class unless the A-revision supplement on the unit states otherwise.



MODEL

Rohde & Schwarz SMIQ03A

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

SMIQ03A

LISTING

<https://aumictechlabs.com/products/smiq03a-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Rohde & Schwarz SMIQ03A is a vector signal generator delivering complex modulated signals across 300 MHz to 3.3 GHz. Built on advanced digital signal processing technology, it generates high-precision digitally modulated signals at rates up to 7 Msymbol/s without restriction on modulation modes or standards. The instrument combines a broadband I/Q modulator with outstanding vector accuracy, low error vector magnitude, and strong intermodulation suppression. Output reaches +13 dBm to +16 dBm with power level control from -140 dBm to +13 dBm and setting times under 2.5 ms. Frequency switching occurs within 15 ms; frequency hopping capability extends to 500 μ s. Spectral purity reaches -130 dBc/Hz at 20 kHz carrier offset and -136 dBc broadband noise in vector modulation mode. The generator supports analog and digital modulation simultaneously, enabling TDMA and CDMA signal generation across major mobile radio standards including GSM, WCDMA 3GPP, IS-95 CDMA, and CDMA 2000 when equipped with optional modules.

Technical Specifications

Frequency Range: 300 MHz to 3.3 GHz
Output Power: Up to +13 dBm standard; up to +16 dBm available
Power Level Range: -140 dBm to +13 dBm
Output Level Accuracy: ± 0.5 dB precision; static error vector magnitude < 0.4 dB
Frequency Setting Time: < 3 ms (without mechanical attenuator switching)
Frequency Switching Time: 15 ms
Output Level Setting Time: < 2.5 ms
Frequency Hopping: 500 μ s capability
Spectral Purity (CW): -130 dBc/Hz at 1 Hz bandwidth, 20 kHz carrier offset
Broadband Noise (Vector Modulation): -136 dBc to 3.3 GHz (-140 dBc typical)
Digital Modulation Rate: Up to 7 Msymbol/s

Key Features

- Broadband I/Q modulator with outstanding vector accuracy and intermodulation suppression
- Simultaneous analog and digital modulation capability
- High-precision digital modulation without mode or standard restrictions
- Generation of TDMA and CDMA signals to major mobile radio standards
- Optional modules support GFSK, GMSK, $\pi/4$ DQPSK, and additional digital modes
- Internal data generator with 4 Mbit memory (optional SMIQB11)
- Memory extension capability for data generator applications (optional SMIQB12)

Typical Applications

- Mobile radio standards testing: GSM, WCDMA 3GPP, IS-95 CDMA, CDMA 2000, PHS, NADC, PDC
- Complex modulation signal development and validation
- TDMA and CDMA system characterization
- RF receiver and transceiver testing
- Fading simulation (with optional modules)

Compatibility & Integration

Optional modules SMIQB10, SMIQB11, SMIQB12, SMIQB42, and SMIQB45 extend modulation capabilities and support implementation of specific mobile radio standards.

Features & description

From manufacturer datasheet

Features

- A-revision of SMIQ03 (1084.8004.03) at the same 3.3 GHz ceiling
- Optional SM-B1 OCXO and SM-B5 FM/φM
- Optional SMIQB11 data generator and memory extension
- Optional fading, noise, BERT, digital standards
- Same option ecosystem as SMIQ03

Applications

- Development and type-approval of vector-modulated radios to 3.3 GHz
- GSM, IS-95, W-CDMA, and other digital standards (options)
- Fading and AWGN option benches
- Analog AM/FM/φM (SM-B5 as fitted)
- Production ATE when fully optioned

SMIQ03A Characteristics / Specifications

PARAMETER	VALUE
Model	SMIQ03A
Manufacturer	Rohde & Schwarz
Instrument Type	Vector signal generator
Alias	SMIQ 03A; R&S SMIQ03A
Order Number	1084.8004.53
Frequency Range	300 kHz to 3.3 GHz
Frequency Resolution	0.1 Hz
Reference Aging Standard	1e-6 per year (after 30 days)
OCXO SM B1 Aging	less than 1e-9 per day
Reference Temperature Effect Standard	2e-6 (0 C to 50 C)
Harmonics at 10 dBm	less than minus 30 dBc
FM PhiM Modulator	SM-B5 optional
Intended Role	SMIQ03 A-revision vector generator
Sibling SMIQ03 Range	300 kHz to 3.3 GHz (1084.8004.03)
Sibling SMIQ03E Range	300 kHz to 3.3 GHz (1106.1506.03)
Sibling SMIQ02 Range	300 kHz to 2.2 GHz
Output Impedance	50 ohm
Modulation Analog	AM, FM, phiM, pulse (as fitted)
Modulation Digital	GMSK, PSK, QAM class per options
Baseband Filters	root-cos, cos, Gauss, Bessel class
Data Generator Option	SMIQB11
Fading Option	SMIQB14 / B15
Noise Option	SMIQB17
BERT Option	SMIQB21
Digital Standard IS	SMIQB42 class

PARAMETER	VALUE
Remote Interface	IEC IEEE bus
Form Factor	SMIQ family benchtop
Calibration Cycle Class	three-year SMIQ family
RF Start	300 kHz
RF Stop	3.3 GHz
Level Class	SMIQ family high output with electronic attenuator
Family Identity	original SMIQArevision, not SMIQ03B

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.

performance as SMIQ03 class unless the A-revision supplement on the unit states otherwise.

Applications

- Development and type-approval of vector-modulated radios to 3.3 GHz
- GSM, IS-95, W-CDMA, and other digital standards (options)
- Fading and AWGN option benches
- Analog AM/FM/φM (SM-B5 as fitted)
- Production ATE when fully optioned

Key Features

- A-revision of SMIQ03 (1084.8004.03) at the same 3.3 GHz ceiling
- Optional SM-B1 OCXO and SM-B5 FM/φM
- Optional SMIQB11 data generator and memory extension
- Optional fading, noise, BERT, digital standards
- Same option ecosystem as SMIQ03

Technical Specifications

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Instrument Type	Vector signal generator
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OCXO SM B1 Aging	less than 1e-9 per day
Reference Temperature Effect Standard	2e-6 (0 C to 50 C)
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FM PhiM Modulator	SM-B5 optional
Intended Role	SMIQ03 A-revision vector generator
Sibling SMIQ03 Range	300 kHz to 3.3 GHz (1084.8004.03)
Sibling SMIQ03E Range	300 kHz to 3.3 GHz (1106.1506.03)
Sibling SMIQ02 Range	300 kHz to 2.2 GHz
Output Impedance	50 ohm
Modulation Analog	AM, FM, phiM, pulse (as fitted)
Modulation Digital	GMSK, PSK, QAM class per options

PARAMETER	VALUE
Baseband Filters	root-cos, cos, Gauss, Bessel class

Option SM B1: OCXO 1036.7599.02
Option SM B5: FM/phiM 1036.8489.02

Specifications

PARAMETER	VALUE
Data Generator Option	SMIQB11
Fading Option	SMIQB14 / B15
Noise Option	SMIQB17
BERT Option	SMIQB21
Digital Standard IS95	SMIQB42 class
Remote Interface	IEC IEEE bus
Form Factor	SMIQ family benchtop
Calibration Cycle Class	three-year SMIQ family
RF Start	300 kHz
RF Stop	3.3 GHz
Level Class	SMIQ family high output with electronic attenuator
Family Identity	original SMIQArevision, not SMIQ03B

Notes
Specs from the R&S SMIQ family data sheet listing SMIQ03A as 1084.8004.53 (0.3 to 3.3 GHz). Confirm A-revision firmware/hardware notes on the unit. Do not confuse with SMIQ03B or SMIQ03E.

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

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NIST-traceable calibration · SAM registered ·
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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.