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Data Sheet

August 13, 2026

ROHDE & SCHWARZ

Rohde & Schwarz SMIQ06L 5KHz to 6.4GHz Signal Generator

Rohde & Schwarz SMIQ06L Vector Signal Generator 300 kHz to 6.4 GHz The R&S SMIQ06L is the 6.4 GHz L-series / ATE-oriented member of the SMIQ vector signal generator family. RF coverage matches SMIQ06B: 300 kHz to 6.4 GHz with 0.1 Hz resolution. Level is minus 144 dBm to +10 dBm PEP (overrange to +16 dBm). Some listings market a 5 kHz lower edge and an on-display ATE package; treat 300 kHz as the OEM SMIQ B-family RF start unless the unit label states otherwise. Broadband I/Q plus analog AM/FM/PM and the SMIQBx digital-standard option set cover 2G/3G development and production. The R&S SMIQ06L is the 6.4 GHz L-series / ATE-oriented member of the SMIQ vector signal generator family. RF coverage matches SMIQ06B: 300 kHz to 6.4 GHz with 0.1 Hz resolution. Level is minus 144 dBm to +10 dBm PEP (overrange to +16 dBm). Some listings market a 5 kHz lower edge and an on-display ATE package; treat 300 kHz as the OEM SMIQ B-family RF start unless the unit label states otherwise. Broadband I/Q plus analog AM/FM/PM and the SMIQBx digital-standard option set cover 2G/3G development and production.



MODEL

Rohde & Schwarz SMIQ06L

CALIBRATION

Available on request

CONDITION

Used

STATUS

In stock

RFQ / SKU

SMIQ06L

LISTING

<https://aumictechlabs.com/products/smiq06l-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

This unit

The Rohde & Schwarz SMIQ06L is a synthesized signal generator spanning 5 kHz to 6.4 GHz, engineered for research, development, and production testing of communication systems. It delivers high spectral purity and precision modulation across analog, digital, TDMA, CDMA, and W-CDMA standards. The instrument combines a high-grade I/Q modulator with digital signal processor technology to generate complex modulation signals at high bit rates while maintaining minimal error vector magnitude and superior intermodulation suppression.

Technical Specifications

Frequency Range: 5 kHz to 6.4 GHz
Output Impedance: 50 Ω
Broadband Noise (CW, carrier offset >5 MHz):
20 MHz to 450 MHz: <-136 dBc (typ. -142 dBc)
450 MHz to 3.04 GHz: <-138 dBc (typ. -144 dBc)
3.04 GHz to 3.3 GHz: <-136 dBc (typ. -142 dBc)
3.3 GHz to 6.4 GHz: 5 MHz): $f > 20$ MHz to 3.3 GHz: 20 MHz, 3.3 GHz to 6.4 GHz: <-133 dBc (typ. -137 dBc)
Settling Time: $f \leq 3.3$ GHz: 3.3 GHz: <1 ms
Analog Modulation Rise/Fall Time: 30 ns (typ.)

Key Features

Broadband AM, vector, analog, and digital modulation
Internal PRBS generators (2^9-1 to $2^{23}-1$) and pattern generator
Programmable PSK, QAM, and FSK coding and mapping tables
FPGA-based clock synthesis with FIR filter control
External reference clock input: 1 MHz to 16 MHz (1 MHz steps)
I/Q modulation inputs for external signal injection
Simultaneous modulation capability

Typical Applications

Designed for testing and development of PHS, PDC, IS-95 CDMA, and 3GPP-compliant mobile radio systems. Suitable for device characterization across chip rates and bit/symbol/sample rates (kbps/ksps).

Physical & Integration

Dimensions: 435 mm W $\times$ 192 mm H $\times$ 460 mm D
Weight: 25 kg (fully equipped)
Interface: SERBUS-D host communication

Features & description

From manufacturer datasheet

Features

- Family siblings SMIQ02B/03B/04B to 2.2/3.3/4.4 GHz
- Optional SM-B1 OCXO, aging less than 1e-9 per day
- Electronic attenuator mode: greater than 80 dB non-interrupting level
- Reverse-power protection 1 W (SMIQ04B/06B class); 0 V DC on the RF port
- Confirm front-panel display versus ATE/L packaging on the unit

Applications

- Vector-modulated wireless receiver and component test to 6.4 GHz
- GSM, W-CDMA, CDMA2000, and other digital standards (options)
- Fading, AWGN, ARB, and BERT option benches
- Production ATE with list-mode hops
- Analog modulation and RF/AF/level sweep

SMIQ06L Characteristics / Specifications

PARAMETER	VALUE
Model	SMIQ06L
Manufacturer	Rohde & Schwarz
Instrument Type	Vector signal generator
Alias	SMIQ 06L; R&S SMIQ06L
Frequency Range	300 kHz to 6.4 GHz
Listed Alternate Start	5 kHz on some ATE listings (confirm on unit)
Frequency Resolution	0.1 Hz
Frequency Settling to 3.3 GHz	less than 3 ms
Frequency Settling above 3.3 GHz	less than 3.3 ms
List Mode Settling above 3.3 GHz	less than 700 μ s
Phase Offset Step	0.1 degree
Level Range	minus 144 dBm to +10 dBm PEP
Level Overrange	up to +16 dBm without guarantee
Level Resolution	0.1 dB or 0.01 dB
Level Error to 2.5 GHz	less than 0.5 dB (above minus 127 dBm, CW)
Level Error 2.5 to 4 GHz	less than 0.9 dB
Level Error 4 to 6.4 GHz	less than 1.2 dB
Output Impedance	50 ohm
VSWR to 2.2 GHz at minus 3 dBm	less than 1.8
VSWR 2.2 to 6.4 GHz	less than 2.0
Level Settling Electronic Att	less than 2.5 ms
Reverse RF Power	1 W (04B/06B class)
Reverse DC Voltage	0 V (04B/06B class)
Harmonics at 7 dBm	less than minus 30 dBc
SSB Phase Noise CW at 1 GHz	less than minus 126 dBc (1 Hz) at 20 kHz

PARAMETER	VALUE
SSB Phase Noise CW at 6 GHz	less than minus 110 dBc (1 Hz) at 20 kHz
Broadband Noise CW 0.45 to 3.04 GHz	less than minus 138 dBc, typ. minus 144 dBc (1 Hz)
Residual FM at 1 GHz ITU T	less than 1 Hz (0.3 to 3 kHz)
Residual AM	less than 0.02 percent
Reference Aging Standard	1e-6 per year
OCXO SM B1 Aging	less than 1e-9 per day
Reference Output	10 MHz, 8 dBm, 50 ohm
Internal AF Generator	0.1 Hz to 1 MHz
Sibling SMIQ06B Range	300 kHz to 6.4 GHz (same RF class) Notes RF electrical specs from the R&S SMIQ Vector Signal Generator specifications (valid from 7/2002) for the SMIQ06B class. SMIQ06L is the L/ATE-oriented 6.4 GHz SKU. Confirm display/connectors and whether the unit is labeled 300 kHz or 5 kHz start. Do not confuse with SMIQ06ATE.
Electronic attenuator mode	greater than 80 dB non-interrupting level

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	SMIQ06L
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Instrument Type	Vector signal generator
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Frequency Range	300 kHz to 6.4 GHz
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Frequency Settling to 3.3 GHz	less than 3 ms
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List Mode Settling above 3.3 GHz	less than 700 µs
Phase Offset Step	0.1 degree
Level Range	minus 144 dBm to +10 dBm PEP
Level Overrange	up to +16 dBm without guarantee
Level Resolution	0.1 dB or 0.01 dB
Level Error to 2.5 GHz	less than 0.5 dB (above minus 127 dBm, CW)
Level Error 2.5 to 4 GHz	less than 0.9 dB
Level Error 4 to 6.4 GHz	less than 1.2 dB
Output Impedance	50 ohm
VSWR to 2.2 GHz at minus 3 dBm: less than 1.8	
Specifications	
PARAMETER	VALUE
VSWR 2.2 to 6.4 GHz	less than 2.0
Level Settling Electronic Att	less than 2.5 ms
Reverse RF Power	1 W (04B/06B class)
Reverse DC Voltage	0 V (04B/06B class)

PARAMETER	VALUE
Harmonics at 7 dBm	less than minus 30 dBc
SSB Phase Noise CW at 1 GHz	less than minus 126 dBc (1 Hz) at 20 kHz
SSB Phase Noise CW at 6 GHz	less than minus 110 dBc (1 Hz) at 20 kHz
Broadband Noise CW 0.45 to 3.04 GHz	less than minus 138 dBc, typ. minus 144 dBc (1 Hz)
Residual FM at 1 GHz ITU T	less than 1 Hz (0.3 to 3 kHz)
Residual AM	less than 0.02 percent
Reference Aging Standard	1e-6 per year
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Reference Output	10 MHz, 8 dBm, 50 ohm
Internal AF Generator	0.1 Hz to 1 MHz
Sibling SMIQ06B Range	300 kHz to 6.4 GHz (same RF class)

Notes

RF electrical specs from the R&S SMIQ Vector Signal Generator specifications (valid from 7/2002) for the SMIQ06B class. SMIQ06L is the L/ATE-oriented 6.4 GHz SKU. Confirm display/connectors and whether the unit is labeled 300 kHz or 5 kHz start. Do not confuse with SMIQ06ATE.

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

788 S 500 E, Pleasant Grove, UT 84062
sales@aumictech.com · +1 (484) 841-9341
<https://aumictechlabs.com>

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.