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**Data Sheet**

August 13, 2026

ROHDE &amp; SCHWARZ

# Rohde & Schwarz SMV03 Vector Signal Generator 9kHz to 3.3GHz

Rohde & Schwarz SMV03 Vector Signal Generator 9 kHz to 3.3 GHz The R&S SMV03 is the vector counterpart of analog SML03 (order 1047.7509.13). Frequency 9 kHz to 3.3 GHz analog; I/Q modulation from 5 MHz to 3.3 GHz. Broadband I/Q modulator with 100 MHz RF bandwidth (50 MHz I/Q baseband class in some texts) for external I/Q sources such as AMIQ and WinIQSIM. Electronic attenuator, AM/FM/phase, optional pulse SML/SMV B3, and optional stereo/RDS B5 are shared with SML. Digital radio and WLAN vector stimulus with external ARB; ATE; R&D of I/Q modulators; analog receiver tests without I/Q; production of 2G/3G/WLAN radios when paired with AMIQ. The R&S SMV03 is the vector counterpart of analog SML03 (order 1047.7509.13). Frequency 9 kHz to 3.3 GHz analog; I/Q modulation from 5 MHz to 3.3 GHz. Broadband I/Q modulator with 100 MHz RF bandwidth (50 MHz I/Q baseband class in some texts) for external I/Q sources such as AMIQ and WinIQSIM. Electronic attenuator, AM/FM/phase, optional pulse SML/SMV B3, and optional stereo/RDS B5 are shared with SML. Digital radio and WLAN vector stimulus with external ARB; ATE; R&D of I/Q modulators; analog receiver tests without I/Q; production of 2G/3G/WLAN radios when paired with AMIQ.



MODEL

**Rohde & Schwarz SMV03**

CALIBRATION

**Available on request**

CONDITION

**Used**

STATUS

**In stock**

RFQ / SKU

**SMV03**

LISTING

<https://aumictechlabs.com/products/smv03-2/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 • 811210 • 541380

**This unit**

The Rohde & Schwarz SMV03 is a vector signal generator spanning 9 kHz to 3.3 GHz, delivering complex modulated signals for communications testing, R&D, and service applications. Built on the proven R&S SML03 analog platform, it integrates a broadband I/Q modulator enabling generation of any digital signal format when paired with an external I/Q source. The instrument excels in high data-rate testing such as WLAN standards, with I/Q bandwidth exceeding 50 MHz and interruption-free level adjustment across a 30 dB dynamic range.

**Technical Specifications**

**RF Performance**

Frequency range: 9 kHz to 3.3 GHz (5 MHz to 3.3 GHz with I/Q modulation)  
Frequency resolution: 0.1 Hz  
Output level: +13 dBm maximum; level uncertainty <0.5 dB above –120 dBm  
Frequency and level setting time: <10 ms  
RF bandwidth: 100 MHz for frequencies 500 MHz to 3 GHz  
Spectral Purity & Noise  
Phase noise (SSB): –128 dBc/Hz (1 GHz, 20 kHz offset, 1 Hz BW)  
Spurious suppression: typically –76 dBc  
Broadband noise: 50 MHz (3 dB)  
Modulation types: AM/FM/φM standard; simultaneous AM, FM/φM, pulse, and vector modulation capable  
Adjacent channel leakage ratio (WCDMA 3GPP FDD at 2.14 GHz): 62 dB typ. at 5 MHz offset; 66 dB typ. at 10 MHz offset

**Sweep Functions**

Digital step-by-step sweep modes for RF frequency, LF frequency, and RF level  
Linear and logarithmic sweep options

**Key Features**

Electronic attenuator provides interruption-free level setting with ~30 dB dynamic range  
Extended divider range  
frequency generation mode delivers SSB phase noise performance comparable to high-grade crystal oscillators  
Optional pulse modulator (R&S SML-B3) and stereo/RDS coder (R&S SML-B5) available

**Compatibility & Integration**

Compatible with external I/Q sources including R&S AMIQ  
Integrates with R&S WinIQSIM™ simulation software for digital signal generation

## SMV03 Characteristics / Specifications

| PARAMETER                                                            | VALUE                                                                          |
|----------------------------------------------------------------------|--------------------------------------------------------------------------------|
| Same option set as SML                                               | B1 OCXO, B3 pulse, B5 stereo/RDS, B19 rear connectors Technical Specifications |
| Model                                                                | SMV03                                                                          |
| Manufacturer                                                         | Rohde & Schwarz                                                                |
| Instrument Type                                                      | Vector Signal Generator                                                        |
| Alias                                                                | R&S SMV03; 1047.7509.13                                                        |
| Frequency Range Analog                                               | 9 kHz to 3.3 GHz                                                               |
| Frequency Range I/Q Modulation                                       | 5 MHz to 3.3 GHz                                                               |
| Frequency Resolution                                                 | 0.1 Hz                                                                         |
| Frequency Setting Time                                               | less than 10 ms (less than 12 ms with I/Q in family texts)                     |
| I/Q RF Bandwidth                                                     | 100 MHz                                                                        |
| I/Q Baseband Bandwidth Class                                         | 50 MHz                                                                         |
| Level Range                                                          | minus 140 dBm to plus 13 dBm (overrange plus 19 dBm)                           |
| Level Rangeless than or equal to 5 MHz<br>orfgreater than 3 GHz      | minus 140 dBm to plus 11 dBm                                                   |
| Level Accuracy 100 kHz to 2 GHz levels<br>greater than minus 120 dBm | less than 0.5 dB                                                               |
| Level Accuracyfgreater than 2 GHz                                    | less than 0.9 dB                                                               |
| Level Resolution                                                     | 0.1 dB                                                                         |
| SSB Phase Noise 1 GHz 20 kHz Offset 1<br>Hz BW                       | typically minus 128 dBc (specified less than minus 122 dBc as SML)             |
| Harmonics levels less than or equal to<br>plus 8 dBm                 | less than minus 30 dBc                                                         |
| Subharmonicsfless than or equal to 1.1<br>GHz                        | none                                                                           |
| Nonharmonicsfless than or equal to 1.1<br>GHz                        | less than minus 70 dBc                                                         |
| Nonharmonics 2.2 to 3.3 GHz                                          | less than minus 58 dBc                                                         |

| PARAMETER                                       | VALUE                                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Broadband Noise 1 GHz offset greater than 2 MHz | less than minus 140 dBc, typically minus 150 dBc                                                                                                                                                                                                                                                                  |
| Output Impedance                                | 50 ohm                                                                                                                                                                                                                                                                                                            |
| VSWRfgreater than 1.5 GHz                       | typically 2.3                                                                                                                                                                                                                                                                                                     |
| Attenuator                                      | electronic                                                                                                                                                                                                                                                                                                        |
| Noninterrupting Level Range                     | 20 dB, overrange 30 dB                                                                                                                                                                                                                                                                                            |
| AM FM Phase                                     | standard, simultaneous with pulse when B3 fitted                                                                                                                                                                                                                                                                  |
| Pulse On Off B                                  | greater than 90 dB                                                                                                                                                                                                                                                                                                |
| Max Reverse RFless than or equal to 2.2 GHz     | 50 W                                                                                                                                                                                                                                                                                                              |
| Max DC Voltage                                  | 35 V                                                                                                                                                                                                                                                                                                              |
| High Power Option SML B10 Level                 | minus 140 dBm to plus 23 dBm (plus 21 dBm atless than 5 MHz orfgreater than 3 GHz)                                                                                                                                                                                                                                |
| Dimensions                                      | 427 mm x 88 mm x 450 mm (SML/SMV chassis)                                                                                                                                                                                                                                                                         |
| Weight Fully Equipped                           | 8.5 kg class                                                                                                                                                                                                                                                                                                      |
| Remote Control                                  | IEC 60625 and RS 232 C, SCPI                                                                                                                                                                                                                                                                                      |
| Stored Setups                                   | 100                                                                                                                                                                                                                                                                                                               |
| Calibration Cycle                               | 3 years                                                                                                                                                                                                                                                                                                           |
| External I/Q Source                             | AMIQ / analog I/Q inputs                                                                                                                                                                                                                                                                                          |
| Internal AF Generator                           | 0.01 Hz to 1 MHz (SML/SMV shared) Notes Specs from R&S SML/SMV operating manual and SMV03 product descriptions. Analog RF limits match SML03; I/Q starts at 5 MHz. Confirm B1/B3/B5/B19 and whether SML B10 high power is installed. Do not confuse with SMIQ (internal digital standards) or SMU200A (two path). |
| Bandwidth                                       | (50 MHz I/Q baseband class in some texts) for external I/Q sources such as AMIQ and WinIQSIM. Electronic attenuator, AM/FM/phase, optional pulse SML/SMV B3, and optional stereo/RDS B5 are shared with SML.                                                                                                      |
| Data Rate                                       | WLAN                                                                                                                                                                                                                                                                                                              |

# 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                                                                                                  |                                                            |
|-----------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|
| Specifications                                                                                                  |                                                            |
| PARAMETER                                                                                                       | VALUE                                                      |
| Model                                                                                                           | SMV03                                                      |
| Manufacturer                                                                                                    | Rohde & Schwarz                                            |
| Instrument Type                                                                                                 | Vector Signal Generator                                    |
| Alias                                                                                                           | R&S SMV03; 1047.7509.13                                    |
| Frequency Range Analog                                                                                          | 9 kHz to 3.3 GHz                                           |
| Frequency Range I/Q Modulation                                                                                  | 5 MHz to 3.3 GHz                                           |
| Frequency Resolution                                                                                            | 0.1 Hz                                                     |
| Frequency Setting Time                                                                                          | less than 10 ms (less than 12 ms with I/Q in family texts) |
| I/Q RF Bandwidth                                                                                                | 100 MHz                                                    |
| I/Q Baseband Bandwidth Class                                                                                    | 50 MHz                                                     |
| Level Range                                                                                                     | minus 140 dBm to plus 13 dBm (overrange plus 19 dBm)       |
| Level Rangeless than or equal to 5 MHz orgreater than 3 GHz: minus 140 dBm to plus 11 dBm                       |                                                            |
| Level Accuracy 100 kHz to 2 GHz levels greater than minus 120 dBm: less than 0.5 dB                             |                                                            |
| Level Accuracyfgreater than 2 GHz: less than 0.9 dB                                                             |                                                            |
| Level Resolution: 0.1 dB                                                                                        |                                                            |
| SSB Phase Noise 1 GHz 20 kHz Offset 1 Hz BW: typically minus 128 dBc (specified less than minus 122 dBc as SML) |                                                            |
| Harmonics levels less than or equal to plus 8 dBm: less than minus 30 dBc                                       |                                                            |
| Specifications                                                                                                  |                                                            |
| PARAMETER                                                                                                       | VALUE                                                      |
| Subharmonicsfless than or equal to 1.1 GHz                                                                      | none                                                       |
| Nonharmonicsfless than or equal to 1.1 GHz                                                                      | less than minus 70 dBc                                     |
| Nonharmonics 2.2 to 3.3 GHz                                                                                     | less than minus 58 dBc                                     |
| Broadband Noise 1 GHz offset greater than 2 MHz: less than minus 140 dBc, typically minus 150 dBc               |                                                            |
| Specifications                                                                                                  |                                                            |
| PARAMETER                                                                                                       | VALUE                                                      |
| Output Impedance                                                                                                | 50 ohm                                                     |

| PARAMETER                              | VALUE                                            |
|----------------------------------------|--------------------------------------------------|
| VSWR <sub>f</sub> greater than 1.5 GHz | typically 2.3                                    |
| Attenuator                             | electronic                                       |
| Noninterrupting Level Range            | 20 dB, overrange 30 dB                           |
| AM FM Phase                            | standard, simultaneous with pulse when B3 fitted |
| Pulse On Off B3                        | greater than 90 dB                               |

Max Reverse RF less than or equal to 2.2 GHz: 50 W

### Specifications

| PARAMETER                       | VALUE                                                                               |
|---------------------------------|-------------------------------------------------------------------------------------|
| Max DC Voltage                  | 35 V                                                                                |
| High Power Option SML B10 Level | minus 140 dBm to plus 23 dBm (plus 21 dBm at less than 5 MHz or greater than 3 GHz) |
| Dimensions                      | 427 mm x 88 mm x 450 mm (SML/SMV chassis)                                           |
| Weight Fully Equipped           | 8.5 kg class                                                                        |
| Remote Control                  | IEC 60625 and RS 232 C, SCPI                                                        |
| Stored Setups                   | 100                                                                                 |
| Calibration Cycle               | 3 years                                                                             |
| External I/Q Source             | AMIQ / analog I/Q inputs                                                            |
| Internal AF Generator           | 0.01 Hz to 1 MHz (SML/SMV shared)                                                   |

#### Notes

Specs from R&S SML/SMV operating manual and SMV03 product descriptions. Analog RF limits match SML03; I/Q starts at 5 MHz. Confirm B1/B3/B5/B19 and whether SML B10 high power is installed. Do not confuse with SMIQ (internal digital standards) or SMU200A (two path).

### Available from Aumictech

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

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

#### Aumictech

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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.