

Version  
02.00January  
2005

## Vector Signal Generator R&S® SMIQ03S

### Signal generation for the XM radio system

- ◆ Generation of complete XM radio compliant signals
- ◆ Both XM satellite (TDM) and terrestrial (MCM) signals can be generated
- ◆ Simulation of satellite–satellite or satellite–repeater handover using a second R&S® SMIQ03S
- ◆ User-friendly software tool for encoding user-defined audio sequences (with Software R&S® SMIQ-K4)
- ◆ 20 seconds of signal sequence consisting of 50 channels
- ◆ Generation of AM and FM signals for analog tests (with option R&S® SM-B5)
- ◆ Simulation of multipath signals present at radio receiver (with option R&S® SMIQB14)
- ◆ Simulation of realistic satellite transmission signal scenarios (with option R&S® SMIQB17)


**ROHDE & SCHWARZ**

## Specifications

The specifications indicated in the data sheet for the Vector Signal Generator R&S®SMIQ03B are also valid for the R&S®SMIQ3S with the following exception: the R&S®SMIQB15 (Second Fading Simulator, 12 paths) cannot be installed. As regards the options R&S®SM-B5 (FM/AM Modulator), R&S®SMIQB14 (Fading Simulator, 6 paths), R&S®SMIQB17 (Noise Generator and Distortion Simulator), not more than two of these options can be installed at a time.

<b>COFDM coder</b>	modulates a bit stream in line with <b>DARS SYSTEM Waveform Requirements – Terrestrial Physical Layer – DARS-FHG-FDSC-601-110000 (DARS-ENG-FHG-026-2101) Edition 03 Revision 01 FINAL DRAFT</b>
Modulation mode	COFDM with 637 active subcarriers, each DQPSK-modulated
Data rate	4.06333 Mbps
Bandwidth	2.48 MHz
Frequency response –1.2 MHz < f < +1.2 MHz	–0.5/+0.2 dB
Attenuation at 1.35 MHz carrier offset	30 dB
Attenuation at 2.0 MHz carrier offset	33 dB
Attenuation at 20 MHz carrier offset	50 dB
Data generator (memory size)	83079936 bits (20 seconds before repetition)

## Ordering information

Order Designation	Type	Order No.
Vector Signal Generator 300 kHz to 3.3 GHz	R&S®SMIQ03S	1125.5555.73
MCM Filter	R&S®FM03	3542.5004.02
Software	R&S®SMIQ-K4	1105.0135.02
Options		
Fading Simulator, 6 paths	R&S®SMIQB14	1085.4002.02
Noise Generator and Distortion Simulator	R&S®SMIQB17	1104.9000.02

More information at  
[www.rohde-schwarz.com](http://www.rohde-schwarz.com)  
 (search term: SMIQ)



[www.rohde-schwarz.com](http://www.rohde-schwarz.com)

Europe: Tel. +49 1805 12 4242, e-mail: [customersupport@rohde-schwarz.com](mailto:customersupport@rohde-schwarz.com) · North America: Tel. +1 410-910-7988, e-mail: [customer.support@rsa.rohde-schwarz.com](mailto:customer.support@rsa.rohde-schwarz.com)  
 Asia: Tel. +65 68463710, e-mail: [customer-service@rssg.rohde-schwarz.com](mailto:customer-service@rssg.rohde-schwarz.com)