

SG6311A PSG

XG7-Class Analog Signal Generator

Introduction

This configuration guide contains information to help you configure your SG6311A PSG XG7-class analog signal generator to meet your requirements. Ordering optional capabilities at the time of purchase provides the lowest overall cost of ownership.



About the SG6311A PSG Signal Generator

The SG6311A PSG reveals true device-under-test performance with metrology-grade signal purity, exceptionally low noise, and high, calibrated output power. Its compact dual-channel design and compatibility with existing test environments help teams expand test capacity, accelerate deployment, and scale advanced test setups with greater confidence and efficiency. The result is trusted measurements, clearer insight, and faster progress from initial evaluation through deployment.



Configure Hardware

To configure the SG6311A PSG, start by selecting the desired number of channels. Then, add system features, which are ordered once per instrument. Finally, add channel features, which are ordered once per channel. Detailed information is provided below.

Select Number of Channels (Required)

Configuration	Required Options	Description	Additional Information
One channel	SG6311A-001	Add channel one	Required for all configurations
Two channels	SG6311A-001 SG6311A-002	Add channel one Add channel two	

Select Connector Configuration (Optional)

By default, the RF output connector of each channel is located on the front panel of the SG6311A PSG (option UNM). Optionally select option 1EM to move all connectors to the rear panel.

Option	Description	Additional Information
SG6311A-1EM	Move all connectors to rear panel	

Select System Features (Optional)

System features are ordered once per instrument and are compatible with all channels. All SG6311A PSGs include AC power operation (option PAC) and front and rear handles for benchtop use (option 01H).

Option	Description	Additional Information
SG6311A-1ER	Flexible reference input (1 to 110 MHz)	
SG6311A-PCL	2.4 GHz reference Input	

Select Channel Features (Required)

Channel features are ordered once per channel. On two channel SG6311A PSGs, these options will be duplicated on each channel. Each SG6311A PSG channel includes a mechanical step attenuator (option 1E1) and a 3.5 mm RF output connector (option UNC).

Option	Description	Additional Information
Frequency Options (must select one)		
SG6311A-520	CW Frequency range, 9 kHz to 20 GHz	
Phase Noise Performance Options (must select one)		
SG6311A-EP5	Low phase noise	
SG6311A-EP6	Ultra-low phase noise	
High Output Power Options (optionally select one)		
SG6311A-1EB	High output power from 9 kHz to 20 GHz	
Analog Modulation Options (optionally select any)		
SG6311A-UNT	AM, FM, phase modulation	
SG6311A-303	Multifunction generator	
SG6311A-PMR	Pulse modulation	
SG6311A-320	Pulse train generator	Requires PMR
SG6311A-1SM	Scan modulation	Requires UNT
Calibration Documentation Options (optionally select any)		
SG6311A-UK6	Commercial calibration certificate and test data	
SG6311A-A6J	ANSI Z540-1-1994 Calibration	

Configure Software

Included Software

The SG6311A PSG base configuration includes the following software tools:

- Keysight IO Libraries Suite, including Connection Expert
- Programming examples

Embedded PathWave Software Tools

Embedded PathWave software tools can be used through the PSG touch-optimized graphical user interface. Optionally select any models. One software license per instrument is required.

Model	Description
N7653APPC	PathWave automatic channel response correction and S-parameter de-embedding

Select Accessories

Each SG6311A PSG channel includes one 3.5mm (f) to 3.5 mm (f) adapter. Select additional accessories as needed from following list.

Model	Description
1CM110A	Rack mount flange kit 88.1mm H (2U)
1CN106A	Handle kit 88.1mm H (2U)
1CP104A	Rack mount flange and handle kit 88.1mm H (2U)
1CR015A	Rack slide kit
Y1310A	Additional removable SD memory
83059B	Adapter, 3.5 mm (f) to 3.5 mm (f)
83059C	Adapter, 3.5 mm (f) to 3.5 mm (m)
N4419AK20	Cable, flexible: 3.5 mm (m) to 3.5 mm (f), 91.4 cm, 36 inches

Keysight Support Services

Accelerate your learning curve, enhance your test uptime, and confidently guarantee your instrument accuracy with Keysight Support Services. Keysight Services are here to support your test needs with expert technical support, instrument repair and calibration, training, alternative acquisition program options, and more.

A KeysightCare agreement provides dedicated, proactive support through a single point of contact for an extensive group of instruments, software, and solutions to ensure optimal uptime, with fast response times and resolution. Explore the services that are right for you.

Keysight Services

Offering	Benefits
KeysightCare 	KeysightCare provides elevated support for Keysight instruments and software, with access to technical support experts who respond within a specified time and ensure committed repair and calibration turnaround times (TAT). KeysightCare offers multiple service agreement tiers, including KeysightCare Assured, Enhanced, and Application Software Support. See the KeysightCare data sheet for details.
KeysightCare Assured	KeysightCare Assured provides a commitment to respond to your engineer's technical needs quickly. When unexpected repairs are necessary, you can count on a committed repair service turnaround time to get you back up and running.
KeysightCare Enhanced	KeysightCare Enhanced includes all the benefits of KeysightCare Assured plus Keysight's accurate and reliable Calibration Services , accelerated and committed TAT, and technical response.
Keysight Support Portal & Knowledge Center	All KeysightCare tiers include access to the Keysight Support Portal, where you can manage support and service resources related to your assets, such as service requests and status, or browse the Knowledge Center.
Education Services	Build confidence and gain new skills to make accurate measurements, with flexible Education Services developed by Keysight experts. Including Start-up Assistance.
Alternative Acquisition Options	
KeysightAccess	Reduce budget challenges with a lease-based subscription service that offers low monthly payments, enabling you to get the instruments, software, and technical support you want for your test needs.

Recommended services

Maximize your instrument uptime and confidently make accurate measurements by securing technical support, repair, and calibration services with committed response and turnaround times. High-performance instruments include 1 year of KeysightCare Assured. Obtain multi-year KeysightCare upfront to eliminate the need for lengthy and tedious paperwork and yearly requests for maintenance budget. Plus, you benefit from secured service for 2, 3, or 5 years.

Service	Function
KeysightCare Enhanced ¹	Includes Tech Support, Warranty and Calibration
R-55B-001-1	KeysightCare Enhanced – Upgrade 1 year
R-55B-001-2	KeysightCare Enhanced – Extend to 2 years
R-55B-001-3	KeysightCare Enhanced – Extend to 3 years (Recommended)
R-55B-001-5	KeysightCare Enhanced – Extend to 5 years (Recommended)
KeysightCare Assured	Includes Tech Support and Warranty
R-55A-001-2	KeysightCare Assured – Extend to 2 years
R-55A-001-3	KeysightCare Assured – Extend to 3 years
R-55A-001-5	KeysightCare Assured – Extend to 5 years
Start-Up Assistance	
PS-S40-01	Included – instrument fundamentals and operations starter
PS-S40-04	Recommended – instrument fundamentals and operations starter
PS-S40-02	Optional, technology & measurement science standard learning

1. Available in select countries. For details, please view the [datasheet](#). R-55B-001-2/3/5 must be ordered with R-55B-001-1



As a mission-critical design enablement partner, Keysight connects design, emulation, and test so customers can solve the world's most complex engineering challenges. Accelerate innovation at www.keysight.com.

This information is subject to change without notice. © Keysight Technologies, 2026, Published in USA, September 23, 2026, 3126-1759.EN