

SSG-6000RC Replacement Guide

This guide summarizes the replacements available for SSG-6000RC. Refer to the table below for a comparison of specifications.

SSG-6001RC

SSG-6001RC is judged to be a suitable replacement for SSG-6000RC in form, fit and function. The two models share the same package, interfaces and control software, so existing test setups and software require no changes. RF electrical specifications of SSG-6001RC match or exceed those of SSG-6000RC.

SSG-9G(D)-RC

Where a direct like-for-like replacement is not required, Mini-Circuits' SSG-9G-RC (single-channel) and SSG-9GD-RC (dual-channel) signal generators are recommended. This latest generation of signal generators extends coverage to 9 GHz with enhanced modulation and integration capabilities.

Benefits:

- Cover more applications with a single source – Wider bandwidth with finer frequency & power resolution
- 2-tone test capabilities – Dual phase-coherent, independently controlled channels increase test effectiveness and minimize equipment cost.
- Modulation flexibility — Add AM, FM, and chirp outputs on top of CW and pulse.
- Better measurement fidelity – Improved low phase noise synthesizer design
- Minimize bench and rack space — The tiny package is a fraction of the footprint of SSG-6000RC, with an integrated display.
- Simplified control of multi-source test setups – Daisy-chain multiple sources for control through a single USB / Ethernet connection.
- Flexible calibration options — Support for third-party local / on-site / ISO-17025 accreditation.
- Try before you buy — Demo units available.

Trade-Off:

The harmonic suppression of SSG-6000RC / SSG-6001RC cannot be matched in the small form factor of SSG-9GD-RC. For applications sensitive to harmonic content, Mini-Circuits' applications engineers can work with you to suggest suitable external filters for your frequencies of interest, but where that is not practical, SSG-6001RC would be the best option.

RECOMMENDATIONS

Choose SSG-6001RC for a drop-in replacement, no mechanical changes and best harmonic rejection.

Move to SSG-9G(D)-RC for multi-channel / phase-coherent sources, AM / FM / chirp modulation, tighter bench space, or finer frequency / power resolution.

FURTHER INFORMATION

- Datasheets: <https://www.minicircuits.com/WebStore/RF-Synthesized-Signal-Generators.html>
- Contact: testsolutions@minicircuits.com

REPLACEMENT COMPARISON

Feature	SSG-6000RC	SSG-6001RC	SSG-9G(D)-RC
Image			
Frequency	25 MHz to 6 GHz	1 MHz to 6 GHz	10 MHz to 9 GHz
Frequency Resolution	3 Hz	3 Hz	1 Hz
Output Power	-65 to +14 dBm	-70 to +15 dBm	-55 to +21 dBm
Power Resolution	0.25 dB	0.25 dB	0.1 dB
Output Types	CW & pulse	CW & pulse	CW, pulse, AM, FM & chirp
Channels	Single-channel	Single-channel	Single & dual-channel
Phase Noise (Typical) @ 5 GHz	-93 dBc/Hz @ 1 kHz -97 dBc/Hz @ 10 kHz -98 dBc/Hz @ 100 kHz -132 dBc/Hz @ 1 MHz	-91 dBc/Hz @ 1 kHz -97 dBc/Hz @ 10 kHz -99 dBc/Hz @ 100 kHz -133 dBc/Hz @ 1 MHz	-102 dBc/Hz @ 1 kHz -112.5 dBc/Hz @ 10 kHz -117 dBc/Hz @ 100 kHz -125.5 dBc/Hz @ 1 MHz
Harmonics (Typical)	-64 dBc up to 3 GHz -51 dBc up to 6 GHz	-70 dBc up to 3 GHz -63 dBc up to 6 GHz	-15 dBc up to 9 GHz
Interfaces	USB & Ethernet	USB & Ethernet	USB, Ethernet, Daisy-Chain & LCD
Ethernet Data-Rate	10 Mbps	10 Mbps	1 Gbps
Dimensions (W x H x D)	8.5 x 2.43 x 11" 215.9 x 61.7 x 279.4 mm	8.5 x 2.43 x 11" 215.9 x 61.7 x 279.4 mm	4.8 x 1.19 x 3.6" 121.9 x 30.1 x 91.4 mm
Power Supply	12V DC	12V DC	6V DC or PoE