Small Instrumentation Modules

SIM914 — 350 MHz preamplifier (2-channel)

- ***DC to 350 MHz bandwidth***
- ***Two independent amplifier channels***
- ***Voltage gain of 5 (14 dB) per channel***
- ***6.4 nV/√Hz input noise***
- ***3 ns overload recovery***
- ***Excellent phase linearity***

- ***SIM914 ... $975*** *(U.S. list)*

SIM914 Dual 350 MHz Preamplifier

The SIM914 350 MHz preamplifier contains two wide-bandwidth, DC-coupled amplifiers, each with a gain of 5 (14 dB). Its fast rise time, low noise, and excellent DC accuracy make it an ideal instrument for amplifying signals like those from photomultiplier tubes and photodiodes.

The gain stages of several SIM914 can be cascaded without creating oscillation problems. Input clamping gives a 3 ns recovery time from a 10× overload.

Wide bandwidth, along with 50 Ω input and output impedance, ensures a linear phase response across the entire frequency range, preserving pulse shapes.

SIM914 Specifications

Amplifier channels	2
Inputs, outputs	50 Ω, DC coupled
Bandwidth	DC to 350 MHz (1 ns rise/fall time)
Voltage gain	5 per channel (14 dB)
Input noise	6.4 nV/√Hz (typ.)
Operating range	±200 mV (inputs), ±1 V (outputs)
Propagation delay	2.7 ns (typ.)
Recovery time	3 ns for 10× overload
Input protection	±50 V for <1 µs
Output clamp	±1.6 V
Output overload detect	±1.3 V
Crosstalk	–60 dB
Operating temperature	0 °C to 40 °C, non-condensing
Connectors	BNC (4 front), DB15/M SIM interface
Power	Powered by SIM900 Mainframe, or external DC supply (+5 V)
Dimensions, weight	1.5" × 3.6" × 7.0" (WHD), 1.4 lbs.
Warranty	One year parts and labor on defects in materials and workmanship

Ordering Information

SIM914	350 MHz preamplifier	$975