Gated Integrators and Boxcar Averagers

SR240A — 350 MHz preamplifier (4-channel)

- **Four independent channels**
- **DC to 350 MHz bandwidth**
- **1 ns rise and fall time**
- **Voltage gain to 625**
- **6.4 nV/√Hz input noise**
- **50 Ω input and output impedance**
- **3 ns overload recovery**
- **Excellent phase linearity**

SR240A 350 MHz Preamplifier

The model SR240A 350 MHz Preamplifier is a 4-channel, DC-coupled instrument with a gain of 5 per channel. The amplifiers can be used independently or cascaded to provide gains of 5, 25, 125 or 625. The fast rise time, low noise, and DC accuracy of the SR240A make it the ideal instrument for use with photomultiplier tubes and photodiodes.

The SR240A preamp is useful for amplifying small signals to levels that can be processed by other boxcar system modules. Typically, a signal of at least a few millivolts is required at the input of the SR250. If your detector does not supply this signal level, the SR240A can be used in front of the SR250 to ensure sufficient signal amplitude.

Ordering Information

SR240A	350 MHz preamplifier, 4 ch.

SR240A Specifications

Amplifier channels	4
Inputs and outputs	50 Ω, DC coupled
Bandwidth	DC to 350 MHz (–3 dB)
Rise/fall time	1 ns (single channel)
Voltage gain	5 per channel. Up to 4 channels can be cascaded.
Input noise	6.4 nV/√Hz
Operating range	Inputs: ±200 mV, Outputs: ±1.0 V
Propagation delay	2.7 ns per channel
Recovery time	3 ns for a 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
Mechanical	Single-width NIM module
Warranty	One year parts and labor on defects in materials and workmanship