Gated Integrators and Boxcar Averagers

SR240 — 300 MHz preamplifier (4-channel)

- **Four independent channels**
- **2.8 nV/√Hz input noise**
- **DC to 300 MHz bandwidth**
- **1.2 ns rise and fall time**
- **Voltage gain to 125**
- **50 Ω input and output impedance**
- **Fast overload recovery**

- **SR240 ... $1000** *(U.S. list)*

SR240 300 MHz Preamplifier

The model SR240 300 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 or 125. The fast rise time, low noise and DC accuracy of the SR240 make it the ideal instrument for use with photomultiplier tubes and photodiodes.

The SR240 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 SR240 can be used in front of the SR250 to ensure sufficient signal amplitude.

Ordering Information

SR240	300 MHz preamplifier, 4 ch.	$1000

SR240 Specifications

Inputs	50 Ω, DC coupled
Outputs	50 Ω, DC coupled
Operating range	Inputs: ±200 mV, Outputs: ±1.0 V
Voltage gain	5 per channel. Up to 3 channels can be cascaded.
Bandwidth	DC to 300 MHz (–3 dB)
Noise	<50 µVrms referenced to input (2.8 nV/√Hz)
Stability (0 to 50 °C)	10 µV/°C referenced to input
Input offset	±50 µV (adjustable)
Propagation delay	2.2 ns per channel
Rise/fall time	1.2 ns (single channel)
Recovery time	<4 ns for a 20× overload
Protection	±3.5 VDC, ±50 V transient
Mechanical	Single-width NIM module
Power	+12 V (300 mA), –12 V (325 mA)
Warranty	One year parts and labor on defects in materials and workmanship