350 MHz Preamplifier

SR445A — 350 MHz preamplifier (4-channel)



The Model SR445A 350 MHz Preamplifier contains four wide-bandwidth, DC-coupled amplifiers, each with a gain of 5. The four channels may be used independently, or cascaded to provide a total gain of up to 625. The fast rise time, low noise, and excellent DC accuracy of the SR445A make it an ideal instrument for amplifying the outputs of fast photomultiplier tubes and photodiodes. The SR445A can be used to improve the sensitivity of oscilloscopes, photon counters, boxcar averagers, spectrum analyzers, and other high-frequency test equipment.

Each channel has an input and output impedance of 50 Ω. The input impedance of channel one can be increased to approximately 500 Ω by a front-panel switch. This can improve the sensitivity of signals from current and charge output devices, such as photomultiplier tubes. Each channel has a separate offset adjustment allowing you to quickly null DC errors.

- 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

SR445A 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
Dimensions	8.3" × 1.5" × 8" (WHD)
Power	10 W, 100/120/220/240 VAC, 50/60 Hz
Warranty	One year parts and labor on defects in materials and workmanship

Ordering Information

SR445A	350 MHz preamplifier