ORTEC

ORTEC 142A

Preamplifier

Charge-sensitive preamplifier for charged particles or heavy ions with separate energy and timing outputs.



Energy range, Si

0–200 MeV [1]

Specifications

Recommended input capacitance	0–100 pF	[1]
Nominal sensitivity, Si equivalent	45 mV/MeV	[1]
Energy range, Si	0–200 MeV	[1]
Maximum detector bias	±1000 V	[1]
Nominal decay time	500 µs	[1]
Maximum noise, Si equivalent	1.60 keV at 0 pF; 3.40 keV at 100 pF	[1]
Rise time; E output 0–0.5 V into 93 Ω	<5 ns at 0 pF; <12 ns at 100 pF	[1]
Integral nonlinearity	≤0.03%; 0–±7 V open circuit or ±3.5 V into 93 Ω	[1]

Sources

[1] **142A, B, and C Preamplifiers**
RTEC (AMETEK) · datasheet · p. 1, Specifications – Performance; p. 1, table 'Noise' (Maximum Noise (keV) (Si)); p. 1, RISE TIME (0 to 0.5 V pulse at E output on 93-Ω load) · checked 2026-10-16
https://web.archive.org/web/20251016025614/https://www.ortec-online.com/-/media/ametekortec/brochures/1/142a...

Every value is taken from the manufacturer's own document; the number after the value refers to the source list. Always check against the latest datasheet before ordering.

The data comes from the manufacturer's published documents. Manufacturers may change specifications; the current configuration and performance are confirmed in the quotation.