ORTEC

ORTEC 142AH

Preamplifier

Charge-sensitive preamplifier for charged particles and heavy ions requiring high detector bias.



Recommended input capacitance	Maximum detector bias	Nominal sensitivity, Si equivalent
0–100 pF [1]	**±5000 V** [1]	**20 mV/MeV** [1]

Specifications

Recommended input capacitance	0–100 pF	[1]
Maximum detector bias	±5000 V	[1]
Nominal sensitivity, Si equivalent	20 mV/MeV	[1]
Decay time	Approximately 500 µs	[1]
Rise time; ENERGY 0–+0.5 V into 93 Ω	<5 ns at 0 pF; <12 ns at 100 pF	[1]
Integral nonlinearity	<±0.05%; 0–±7 V open circuit or ±3.5 V into 93 Ω	[1]
Temperature instability	<±50 ppm/°C; 0–50 °C	[1]
Open loop gain	>40,000	[1]

Sources

[1] **142AH Preamplifier**
ORTEC (AMETEK) · datasheet · p. 1, Specifications – Performance; p. 1 Performance; p. 2 Inputs (BIAS) · checked 2026-10-16
https://web.archive.org/web/20251016042342/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.