

CB202A - CHARGE SENSITIVE PREAMPLIFIER

The preamplifier CB202A is fast charge sensitive preamplifier specially studied from gas based detectors. The rise time is less 7 ns with 50 Ω termination. The module has bias input SHV connector (up to 3 KV) and protection circuit to avoid breakdown of the input of the preamplifier circuit. The module has only ± 12 Volt alimentation.

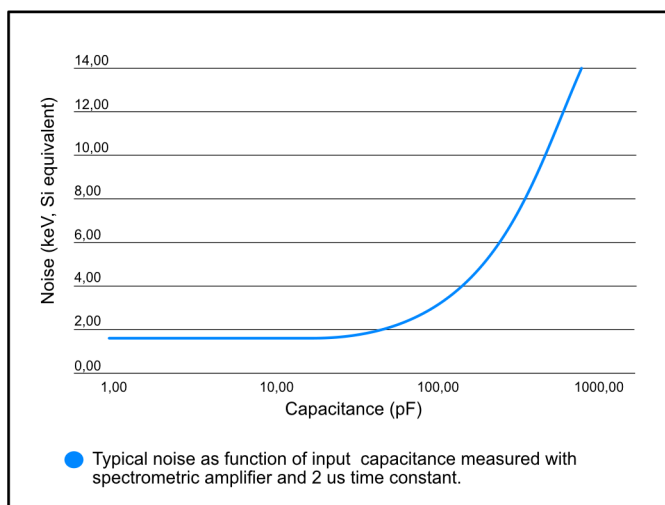
Model	Charge sensitivity	Max. Noise	Energy range
CB202A	150 mV/pC	200 e ⁻	N/S

PERFORMANCE

Decay time	50 μ s
Dynamic input capacitance	N/S
Noise/Input capacitance ratio	< 4 e ⁻ /pF
Integral nonlinearity	0,1% (without termination)
Dynamic output range	± 6 V (without termination) ± 3 V (with 50 Ω termination)
Temperature stability	± 100 ppm/C
Rise time	< 7 ns
Open loop gain	30,000
HV Bias resistor	50 Meg Ω
Output resistors	50 Ω
Test Capacitance	3 pF ($\pm 3\%$)

INPUT/OUTPUT

Input	Accepts positive or negative charge signal. BNC pin connector or SHV connector to specify in the order.
Bias	Voltage can be applied through SHV input connector. The serial resistance between input and bias connectors is 50 Meg Ω .
Test	Pulse input connector is BNC type connector. Test capacitance is 3 pF.
Power	Input power through 3m screened cable.
Energy	Output negative or positive linear pulse. BNC connector.



POWER SUPPLY REQUIREMENTS

The best solution is alimentation from a NIM standard power supply or special low noise linear power supplies.

P. Voltage (V)	Current/ch (mA)
+12	30,0
-12	24,6

Power supply pin out:

Pin number	
4	+12 V
9	-12 V
1	Ground
2	Ground

BOX DIMENSIONS

box dimensions	111x80x40 mm
weight	0,5 kg
cable length	3 m

