

ORDELA MODEL VS-01 LOW-NOISE PREAMPLIFIER

DESCRIPTION

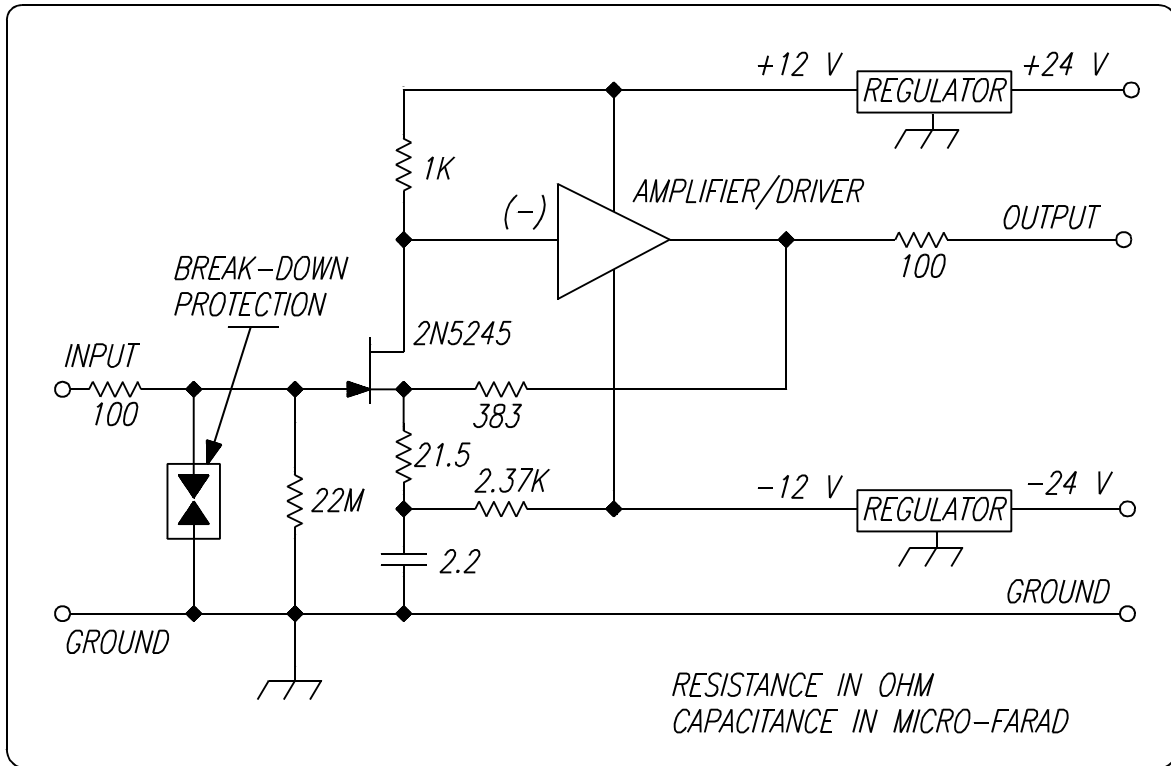
The ORDELA Model VS-01 is a low-noise, voltage-sensitive preamplifier designed with optimum transfer characteristics for pulses from proportional counters or similar signal sources. This preamplifier is fully protected against counter breakdown pulses up to ± 2.5 kV amplitude. Its output voltage is stabilized by a pole-zero cancellation network in the feedback circuit to minimize baseline drift and pileup saturation.¹

The complete preamplifier module is built on a 7.0-cm long, 2.7-cm wide printed circuit board. All output and bias connections are etched on the board for insertion into a PC board edge connector.

1. M. K. Kopp and J. A. Williams, Rev. Sci. Instrum., 48, 383 (1977).

SPECIFICATIONS

INPUT SIGNALS:	Voltage pulses, 0 to 200 mV amplitude, either polarity, 50 ns rise time, ~ 2 ms fall time
INPUT NOISE VOLTAGE:	< 2 nV (Hz) ^{-1/2} , measured at 100 kHz
INPUT RESISTANCE:	22 MS (Higher values upon request)
INPUT CAPACITANCE:	3 pF
INPUT PROTECTION:	± 2.5 kV discharges from a 100-pF capacitor into the preamplifier input will not damage the preamplifier
MID-FREQUENCY GAIN:	19 V/V
LOW-FREQUENCY GAIN:	1 V/V for frequencies below 0.1 Hz
GAIN-BANDWIDTH PRODUCT:	200 MHz
OUTPUT PULSE RISE-TIME:	30 ns (response to input voltage step)
OUTPUT PULSE FALL-TIME:	50 μ s (response to input-pulse fall-time of 2 ms)
OUTPUT VOLTAGE SWING:	± 10 V maximum
OUTPUT RESISTANCE:	100 S
POWER:	± 24 V at 21 mA
INPUT CONNECTIONS:	Two solder terminals (input, ground)
OUTPUT CONNECTIONS:	PC Board edge connector (supplied with preamplifier)
DIMENSIONS:	7.0-cm long, 2.7-cm wide, and 1.3-cm high
SHIPPING WEIGHT:	0.2 kg



ORDELA MODEL VS-01 CIRCUIT AND INTERCONNECTIONS

WARRANTY

ORDELA, Inc. warrants its products to be free from defects in materials and workmanship for 12 months after shipment. No other warranty is included. Specifically, no warranty of merchantability or fitness for a particular purpose is implied. ORDELA's liability under this warranty is limited to repairing or replacing the product at ORDELA's option. This warranty is void if the product is operated improperly, disassembled, or modified other than in the ORDELA laboratory.