

±500V, 1W, PRECISION HIGH VOLTAGE AMPLIFIER

FEATURES

- Output ±500V / ±2mA
- High Precision
- High Stability
- Low Noise
- Remote On / Off
- Monitor Outputs
- 19" Plug-in Unit 3U / 6HP

APPLICATIONS

- Electrostatic deflection
- HV Voltage Reference
- Testing
- Ion guidance

The high voltage amplifier HA05B2 is a standard 19" plug-in unit of 3U / 6HP. The output voltage is -500V to +500V at load current of ±2mA. The control voltage ranges from -10V to +10V and the gain is 50.

The amplifier features high precision, very high stability and low noise, thereby making the unit well suited even for voltage reference applications.

The output voltage is controlled by a control voltage which can be either provided via its nominal value input or set by a 10-turn potentiometer. Monitor outputs for voltage and current are provided. Furthermore, the unit is equipped with a fast inhibit input effectively clamping the output voltage to 0V.

The output is protected against overload, short circuit and transient overvoltage.

High-Speed versions up to 15kHz bandwidth / 50V/μs slew rate are available on request.



SPECIFICATIONS

Output Voltage:	-500 V to +500 V	Power Bandwidth:	> 500 Hz
Load Current:	-2 mA to +2 mA	Slew Rate:	> 2 V/μs
Gain:	50 ±0,2%	Operating Temp:	0 °C to +40 °C
Temp. Coeff.:	5 ppm/K (typ.)		
Stability:	< ±100 ppm		
Load Regulation:	< 100 ppm (no load / full load)		
Ripple / Noise:	≤ 10 mV _{PP} / ≤ 1 mV _{RMS}		
Voltage Monitor:	-10 - +10V == -500V - +500V ±0.2 %		
Current Monitor:	-10 - +10V == -2mA - +2mA ±0.2 %		
Inhibit Input:	Amplifier On: -15V - +1.5V		
	Amplifier Off: +2.4V - +15V or open		
	Amplifier On→Off: < 10 μs		
	Amplifier Off→On: ca. 2.5 ms		
Inhibit Response Time:			
Supply Voltage +24V:	+20 - +28 V _{DC} , < 100 mA		
Supply Voltage +540V:	+530 - +550 V _{DC} , < 4 mA		
Supply Voltage -540V:	-530 - -550 V _{DC} , < 4 mA		

CONNECTORS

Front panel: Inputs and monitor outputs via BNC connectors

Back panel: Supply voltages and HV output via DIN41612 type F connector

BLOCK DIAGRAM

