

32-Channel, High Voltage Amplifier Array

Product Summary Sheet

Applications:

- ▶ MEMS Driver (microelectro-mechanical systems)
- ▶ Piezoelectric Transducer Driver
- ▶ Optical Crosspoint Switches (using MEMS technology)



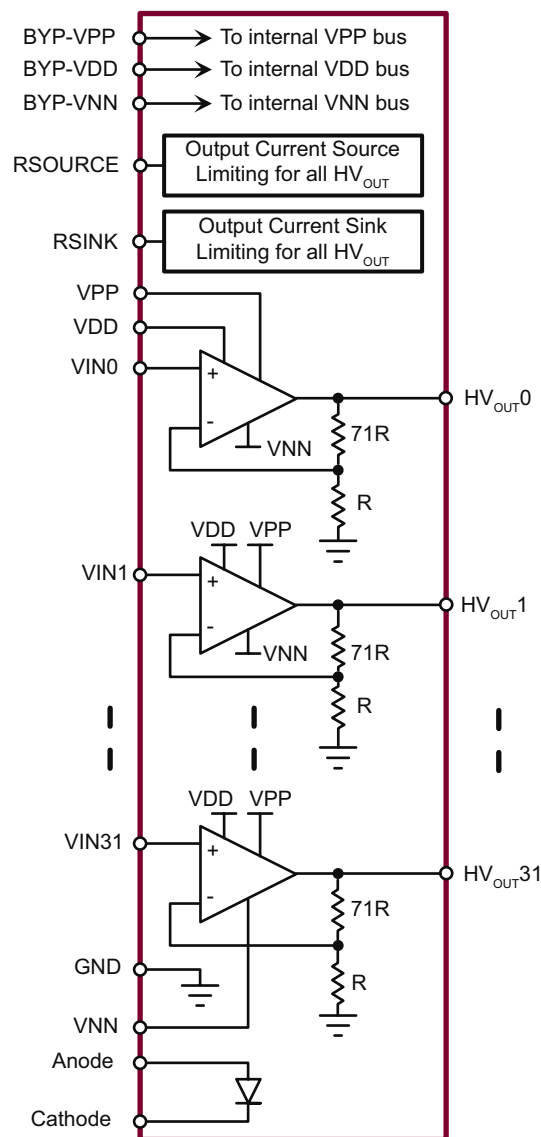
100-Lead MQFP (FG)

Product Overview:

The HV256 is a 32-channel high voltage amplifier array integrated circuit featuring a programmable, external current limit on each amplifier. Each channel is configured as a non-inverting amplifier. The maximum output voltage swing is 5.0V below the VPP high voltage supply. The outputs can drive capacitive loads of up to 3000pF. The typical slew rate under a no-load condition is 2.0V/ μ s.

The amplifier has an internal closed loop gain of 37dB, or 72V/V, saving the user from having to use external gain setting resistors. When a DAC voltage of 4.096V is applied to the input of an amplifier, an output voltage of 295V will be created.

The HV256 operates on a 300V supply and two low voltage supplies, 8.0V and -7.0V. It is de-signed to operate on minimal power, featuring a low quiescent current, while still maintaining a slew rate of 2.0V/ μ s. To further reduce power consumption, high value gain setting resistors are used for the internal feedback path. The output current for all 32 channels can be adjusted via two external resistors. This allows the user to set the amount of output current during a shorted condition. An integrated diode is also included to help monitor die temperature.



Block Diagram

Features:	Benefits:
32 independent high voltage amplifiers	Saves board space
Output voltage up to 295V	Provides adequate movement for an optical MEMS switch
2V/ μ s output slew rate	Provides adequate switching time from one line to another
Integrated feedback resistors	Saves board space. Reduces component count and simplifies board layout.
High value internal feedback resistors. Very low operating current (typically 25 μ A per channel)	Minimizes power consumption and dissipation
Integrated silicon diode for temperature sensing	Allows for external temperature compensation or thermal protection
Adjustable output current limit	Provides output short circuit protection to ground and supply rails



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Ordering Information / Availability

Part Number	Package	Samples	Lead Time
HV256FG-G	100-Lead MQFP (FG)	Now	4-5 Weeks
HV256X	Die Form	---	Consult Factory

-G indicates the part is RoHS compliant (Green).



Product Contact

For any questions regarding the HV256, please contact your local area Supertex sales office, or contact the main office in the US at:

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