

Product Summary Sheet

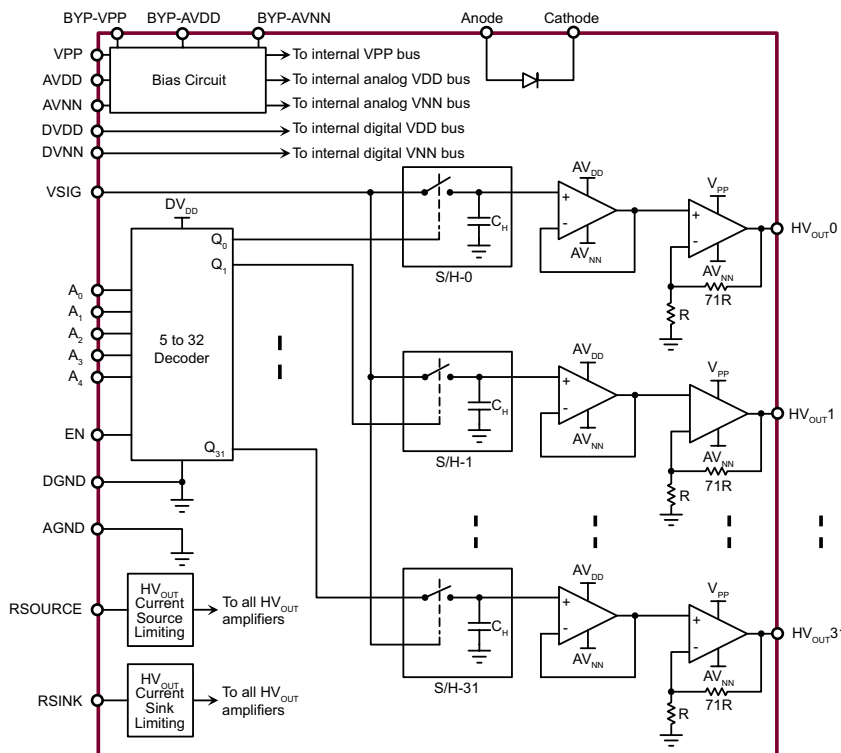
32-Channel, High Voltage Amplifier Array

Applications:

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



100-Lead MQFP (FG)



Block Diagram

Product Overview:

The HV257 is a 32-channel, high voltage, sample-and-hold amplifier array integrated circuit. All 32 sample and hold circuits share a common analog input VSIG. The individual sample-and-hold circuits are selected by a 5 to 32 logic decoder. The sampled voltage on the holding capacitor is buffered by a low voltage amplifier and amplified by a high voltage amplifier with a closed loop gain of 72V/V. This feature will reduce the number of input DACs needed by a factor of 32x, resulting in substantial cost savings.

The HV257 operates on a 300V supply and two low voltage supplies, $V_{DD} = 7.5V$ and $V_{NN} = -6.5V$. It is designed to operate on minimal power while still maintaining a slew rate of $2.0V/\mu s$. 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.

Features:	Benefits:
32 independent high voltage amplifiers	Saves board space by reducing the number of external DACs needed
Output voltage up to 295V	Provides adequate movement for an optical MEMS switch
2V/ μs 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 μA 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



32-Channel High Voltage Amplifier Array

Ordering Information / Availability

Part Number	Package	Samples	Lead Time
HV257FG-G	100-Lead MQFP (FG)	Now	4-5 Weeks
HV257X	Die Form	---	Consult Factory

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



Product Contact

For any questions regarding the HV257, please contact your local area Supertex sales office, or contact the main office in the US at:

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