

Product Summary Sheet

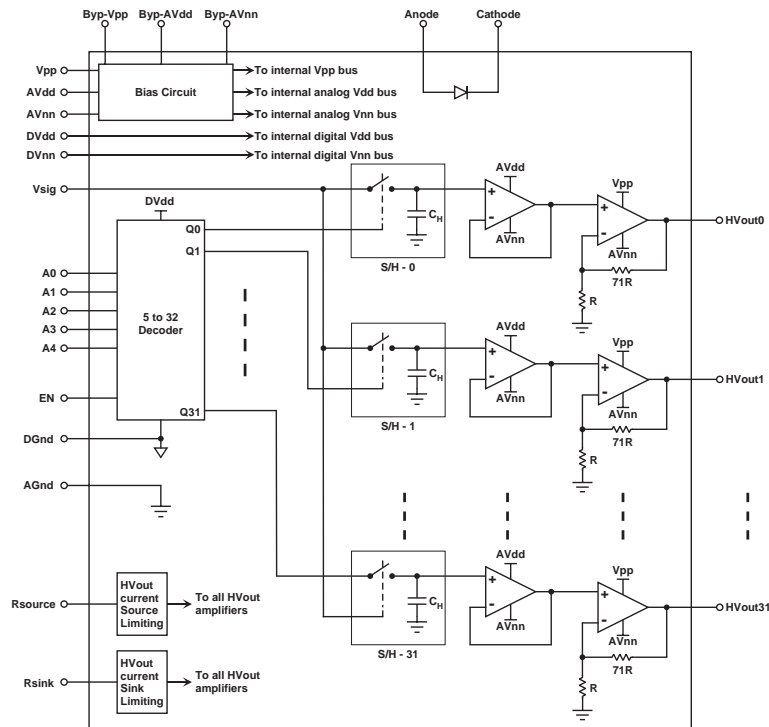
HV257 32-Channel High Voltage Sample-and-Hold Amplifier Array

Applications

- MEMS Driver (MicroElectroMechanical Systems)
- Piezoelectric Transducer Driver
- Optical Crosspoint Switches (using MEMS technology)

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 V_{sig} . 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 that can result in substantial cost savings.



Block Diagram

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:

32 independent high voltage sample-and-hold amplifiers

Benefits:

Saves board space by reducing the number of external DACs needed by a factor of 32x resulting in substantial cost savings

Output voltage up to 295V

Provides adequate movement for an optical MEMS switch

2.0V/ 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

Minimizes power consumption and dissipation

Very low operating current (maximum 25 μA per channel)

Minimizes power consumption and dissipation

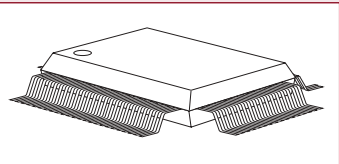
Integrated silicon diode for temperature sensing

Allows for external temperature compensation or thermal protection

Adjustable output current limit

Provides output short circuit protection to ground and supply rails

Package Type:



Low Profile MQFP Gullwing (FG)

Also available in die form

HV257

32-Channel High Voltage Sample-and-Hold Amplifier Array

Electrical Specifications

<u>Device</u>	<u># of Channels</u>	<u>Max. Output Voltage</u>	<u>Closed Loop Gain</u>
HV257	32	295V	72V/V

Ordering Information / Availability

<u>Part Number</u>	<u>Package</u>	<u>Datasheet</u>	<u>Samples</u>	<u>Lead Time</u>
HV257FG	100 Lead MQFP	Now	Now	8 - 12 weeks ARO
HV257X	Die Form	Now	Now	8 - 12 weeks ARO

MEMS Drivers IC Family

<u>Part Number</u>	<u>Channels</u>	<u>HV_{OUT}</u>	<u>Slew Rate</u>	<u>Config</u>	<u>Package</u>
HV254	32	250V	3.0V/ μ s	Amp Only	100 MQFP, Die
HV256	32	295V	2.0V/ μ s	Amp Only	100 MQFP, Die
HV257	32	295V	2.0V/ μ s	Amp + S/H	100 MQFP, Die

Product Contact

If you have questions regarding the HV257 or would like to receive samples, contact Supertex Applications at:

Telephone: (800) 222-9883
Fax: (408) 222-4895
Email: apps@supertex.com
Web: www.supertex.com

Supertex Sales:

Contact your Supertex Area Sales Office