

**Product  
Summary  
Sheet**

**Low Switch Resistance, Low Charge Injection,  
8-Channel, High Voltage Analog Switch IC**

**Applications:**

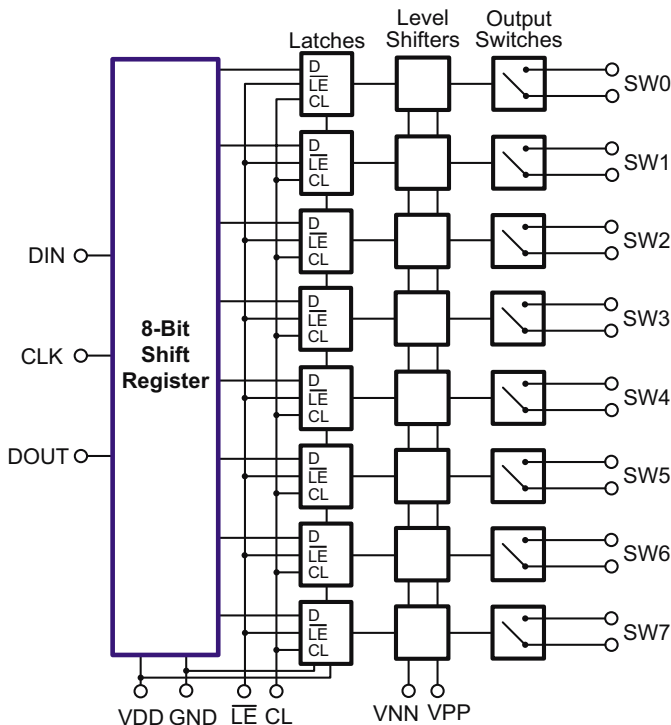
- ▶ Medical Ultrasound Imaging
- ▶ NDT Metal Flaw Detection



**48-Lead LQFP (FG)  
(7x7x1.4mm)**



**28-Lead PLCC (PJ)**



**Block Diagram**

**Product Overview:**

The Supertex HV219 is a low switch resistance, low charge injection 8-channel 200V analog switch integrated circuit (IC) intended primarily for medical ultrasound imaging. The device can also be used for NDE, nondestructive evaluation applications. The HV219 is a lower switch resistance, 11Ω versus 22Ω, version of the Supertex HV20220 device. The lower switch resistance will help reduce insertion loss. It has the same pin configurations as that of the Supertex HV20220PJ and the HV20220FG.

The device is manufactured using Supertex’s HVC MOS (high voltage CMOS) technology with high voltage bilateral DMOS structures for the outputs and low voltage CMOS logic for the input control. The outputs are configured as eight independent single pole single throw 11Ω analog switches. The input logic is an 8-bit serial to parallel shift register followed by an 8-bit parallel latch. The switch states are determined by the data in the latch. Logic high will correspond to a closed switch and logic low as an opened switch.

The HV219 is designed to operate on various combinations of high voltage supplies. For example the  $V_{PP}$  and  $V_{NN}$  supplies can be: +40V/-160V, +100V/-100V, or +160V/-40V. This allows the user to maximize the signal voltage for uni-polar negative, bi-polar, or uni-polar positive.

Features:	Benefits:
Up to 200V operating voltage	Allows for higher transmit voltages for deeper body tissue imaging capability
11Ω switch resistance	Minimizes return signal attenuation for increased signal-to-noise ratio for clearer images
Low charge injection	Allows for clearer images and faster frame rate
CMOS serial shift register control	Minimizes I/O connections and power dissipation



## Low Switch Resistance, Low Charge Injection, 8-Channel, High Voltage Analog Switch IC

### Ordering Information / Availability

Part Number	Package Option	Samples	Lead Time
HV219FG	48-Lead LQFP (7x7x1.4mm) (FG)	Now	4-5 Weeks
HV219FG-G	48-Lead LQFP (7x7x1.4mm) (FG) (Green)		
HV219PJ	28-Lead PLCC (PJ)		
HV219PJ-G	28-Lead PLCC (PJ) (Green)		

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



### Product Contact

For any questions regarding the HV219, please contact your local area Supertex sales office, or contact the main office in the US at:

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