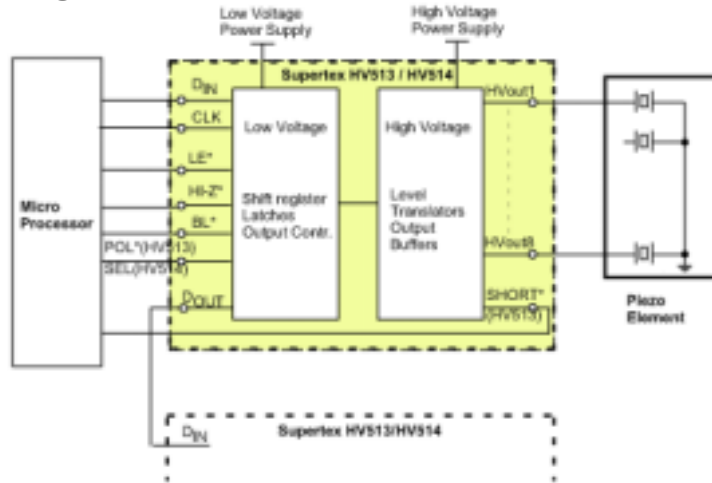


# Product Summary Sheet

## HV513WG / HV514WG

### High Voltage 8-Channel Serial to Parallel Converters



#### Applications

- ◆ Piezoelectric transducer driver
- ◆ Braille applications
- ◆ Weaving machine applications
- ◆ Printers
- ◆ Displays
- ◆ MEMS

#### OVERVIEW:

The HV513WG and the HV514WG are low voltage serial to high voltage (HV) 8-channel parallel converter integrated circuits (ICs). They are both configured with one low voltage serial input to 8 parallel high voltage outputs. By combining high voltage and low voltage devices in one IC, they replace a large number of discrete components including multiple high voltage N-channel and P-channel MOSFETs in applications such as driving piezoelectric transducers and flat panel displays in push-pull mode. Both can operate at 250V and feature an output current of +/-20mA per channel driving heavy loads where a larger current is required to drive large transducers and displays. The serial input can operate up to 8MHz.

These devices were also designed to drive medium to high capacitive loads, such as Braille and weaving machine applications. The 8-channel output configuration matches Braille modular application requirements and allows for a simplified replacement procedure. Only the HV513WG features output short circuit detection that is used to prevent damage to the IC. Low power level shifting and break-before-make output control circuitry that reduces overall power consumption is common to both devices. For flat panel display and printer applications, their small size and fine output pitch allow them to easily fit on the back panel of displays or on the head of printers saving valuable space and reducing cost.

#### Features:

HVCMOS Technology,  $V_{pp} = 250V$

Output current per channel  $\pm 20mA$   
(sink/source)

Short circuit detect (*HV513 only*)

Output hi-Z control

Data speed 8MHz

Output polarity and blank

Low power level shifting

Break-before-make output circuit

Data out pin for cascading devices

#### Benefits:

- Combines HV & Low voltage in one die
- Reduces component count, increases system MTBF
- Saves space and cost

- Meets fast switching requirements
- Can drive large loads

- Flags to power down system, prevents damage to IC due to high current or overheating

- Allows driver to be disconnected from the load
- Gives overall design flexibility

- Produces high processing speed (i.e. faster printing, display refresh)

- Flexibility in output control

- Reduces power consumption

- Reduces switching losses/reduces power consumption

- Simplifies control logic for multiple chip usage

# HV513WG / HV514WG

## High Voltage 8-Channel Serial to Parallel Converters

### Electrical Specifications

Device	V <sub>DD</sub>	V <sub>PP</sub>	Output Voltage
HV513WG	5V	250V	250V
HV514WG	5V	250V	250V

### Availability

Part Number	Package	Datasheet	Samples	Lead Time
HV513WG	24-Pin SOW	Now	Now	4-5 wks ARO
HV514WG	20-Pin SOW	Now	Now	4-5 wks ARO

### Price List

Part Number	10K
HV513WG	\$2.11 each
HV514WG	\$2.08 each

### What is the difference between the HV513WG and the HV514WG?

- *the HV513WG has output short detect*
- *the HV514WG has per channel polarity control*
- *the HV513 is offered in a 24-pin SOW package, the HV514 comes in a 20-pin SOW package*

### Product Contact

If you have any questions regarding the HV513WG / HV514WG or samples, contact Supertex Applications at:

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