

# ProductClip

Standard Linear and Logic

## SN74HC4851/HC4852

### Analog multiplexer/demultiplexer with injection current effect control

Texas Instruments' (TI) SN74HC4851/HC4852, analog multiplexer/demultiplexer (mux/demux) device is pin compatible with the 4051/4052 function. The HC4851/HC4852 also offers injection current protection, which makes it an ideal solution in harsh environments such as automotive, where voltage spikes in excess of normal logic voltage levels are common. The injection current effect control circuitry eliminates the need for external diode/resistor networks typically used to keep the analog channel signals within the supply voltage range. TI offers the HC4851/HC4852 in a variety of package options: PDIP, SOIC, TSSOP and TVSOP.



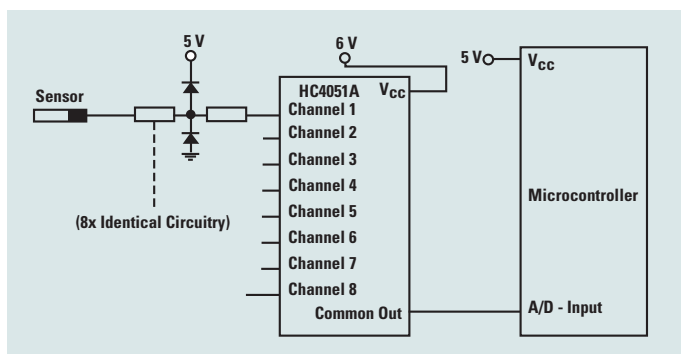
#### Benefits

- Injection current protection for use in harsh environments such as Automotive
- Injection current cross-coupling <math>< 1 \text{ mV/mA}</math>
- Low crosstalk between switches
- Extended temperature range:  $-40$  to  $125^\circ\text{C}$
- Pin compatible with CD74HC4051/4052, SN74LV4051A/4052A and CD4051B/4052B
- Direct second source to ST M74HC4851/4852 and HC4852A; and ON M74HC4851A/4852A
- Qualified in accordance with AEC-Q100 (Q1) (HC4851 only)

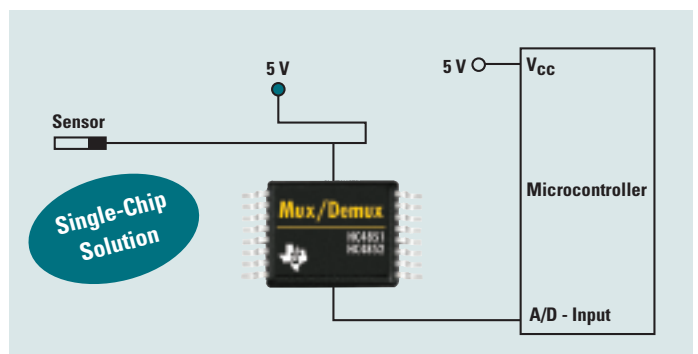
#### Features

- 2-V to 6-V  $V_{CC}$  operation
- $T_{pd} = 8.6 \text{ ns}$  (typ.) at  $T_A = 25^\circ\text{C}$ ,  $V_{CC} = 4.5 \text{ V}$
- Latch-up performance exceeds 100 mA per JESD 78, Class II
- ESD protection exceeds JESD 22:
  - 2000-V human-body model (A114-A)
  - 200-V machine model (A115-A)
  - 1000-V charged-device model (C101)

**Alternate solution** needs external passive components and one extra 6-V regulator to suppress injection current into a standard HC4051/4052 multiplexer.



TI's HC4851/HC4852 **single-chip solution** eliminates the need for external diodes and resistors.



### Ordering Information for HC4851/HC4852

T <sub>A</sub>	Package†		Orderable Part Number	Top-Side Marking
-40°C to 125°C	PDIP - N	Tube	SN74HC4851N	HC4851N
		SOIC - D	Tube	SN74HC4851D
	Tape and reel		SN74HC4851DR	
	Tape and reel		SN74HC4851DRQ1	HC4851Q
	TSSOP - PW		Tape and reel	SN74HC4851QPWR
		Tape and reel	SN74HC4851QPWRQ1	HC4851Q
TVSOP - DGV	Tape and reel	SN74HC4851DGV	HC4851	
-40°C to 125°C	PDIP - N	Tube	SN74HC4852N	SN74HC4852N
		SOIC - D	Tube	SN74HC4852D
	Tape and reel		SN74HC4852DR	
	TSSOP - PW	Tube	SN74HC4852PW	HC4852
		Tape and reel	SN74HC4852PWR	
	TVSOP - DGV	Tape and reel	SN74HC4852DGV	HC4852

†Package drawings, standard packing quantities, thermal data, symbolization, and PCB design guidelines are available at [www.ti.com/sc/package](http://www.ti.com/sc/package)

For more information about the SN74HC4851/HC4852 or other TI Logic samples, datasheets, application reports and design summaries, visit:

[www.ti.com/sc/device/SN74HC4851](http://www.ti.com/sc/device/SN74HC4851)

[www.ti.com/sc/device/SN74HC4852](http://www.ti.com/sc/device/SN74HC4852)

[www-s.ti.com/sc/techlit/SCLS542](http://www-s.ti.com/sc/techlit/SCLS542)

[www.ti.com/signalswitches](http://www.ti.com/signalswitches)

[logic.ti.com](http://logic.ti.com)

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