

## Dual Schottky Diode

### FEATURES

- Monolithic Two Diode Array
- Exceptional Efficiency
- Low Forward Voltage
- Fast Recovery Time
- High Peak Current
- Small Size

### DESCRIPTION

The two-diode array is designed for high-current, low duty-cycle applications typical of flyback voltage clamping for inductive loads.

The use of Schottky diode technology features high efficiency through lowered forward voltage drop and decreased reverse recovery time.

This single monolithic chip is fabricated in hermetic CERDIP as well as copper leaded plastic MINIDIP and SOIC surface mount power pack. The UC1612 in ceramic is designed for  $-55^{\circ}\text{C}$  to  $+125^{\circ}\text{C}$  environments, but with reduced peak current capability; while the UC3612 has higher current rating over a  $0^{\circ}\text{C}$  to  $+70^{\circ}\text{C}$  ambient temperature range.

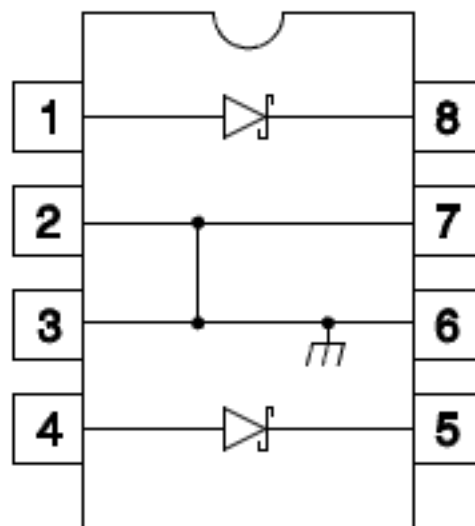
### ABSOLUTE MAXIMUM RATINGS

Peak Inverse Voltage (per diode)	.....50V
Peak Forward Current, UC3612	.....3A
Peak Forward Current, UC1612	.....1A
Storage Temperature Range	..... $-85^{\circ}\text{C}$ to $+150^{\circ}\text{C}$
Junction Temperature	..... $-55^{\circ}\text{C}$ to $+150^{\circ}\text{C}$
Lead Temperature (Soldering, 10 seconds)	..... $300^{\circ}\text{C}$

*Currents are positive into, negative out of the specified terminal.  
 Consult Packaging Section of Databook for thermal limitations  
 and considerations of packages.*

### CONNECTION DIAGRAM

**DIL-8, SOIC-8**  
**(Top View)**  
**J, N, or DP Package**

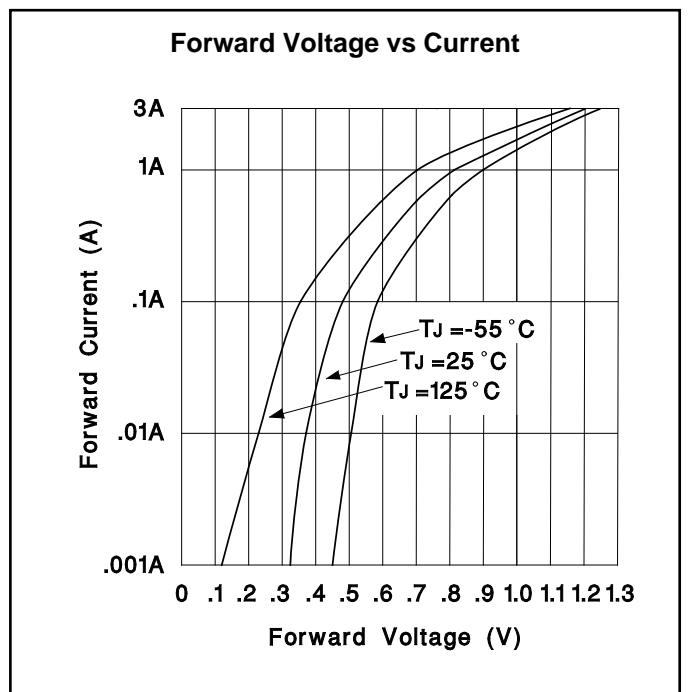
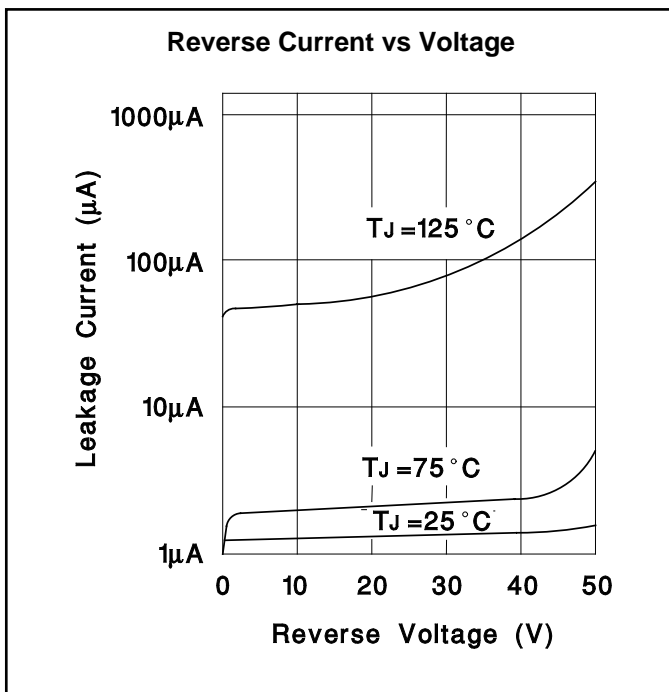


Pins 2, 3, 6, 7 are connected to substrate and must be electrically isolated.

**ELECTRICAL CHARACTERISTICS** All specifications apply to each individual diode.  $T_J = 25^\circ\text{C}$  except as noted.

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNITS
Forward Leakage Drop	$I_F = 100\text{mA}$		0.49	0.55	V
	$I_F = 1\text{A}$		0.9	1.0	V
Leakage Current	$V_R = 40\text{V}$		.01	0.1	mA
	$V_R = 40\text{V}, T_J = 100^\circ\text{C}$		0.1	1.0	mA
Reverse Recovery	0.5A Forward to 0.5A Reverse		15		ns
Forward Recovery	1A Forward to 1.1V Recovery		30		ns
Junction Capacitance	$V_R = 5\text{V}$		70		pF

Note: At forward currents of greater than 1.0A, a parasitic current of approximately 10mA may be collected by adjacent diodes.



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