

# 1 AMP GENERAL PURPOSE SILICON DIODES

## FEATURES

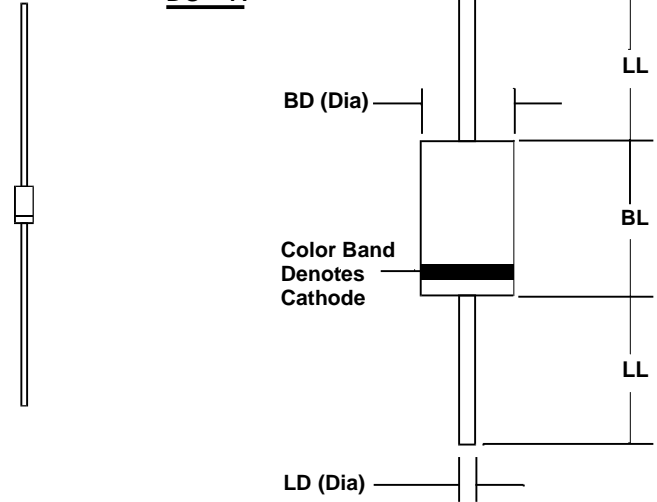
- Low cost
- Low leakage
- Low forward voltage drop
- High current capacity
- Easily cleaned with freon, alcohol, chlorothene and similar solvents

## MECHANICAL SPECIFICATION

ACTUAL SIZE OF  
DO-41 PACKAGE

SERIES 1N4001 - 1N4007

DO - 41



## MECHANICAL DATA

- Case: JEDEC DO-41, molded plastic (U/L Flammability Rating 94V-0)
- Terminals: Plated axial leads
- Soldering: Per MIL-STD 202 Method 208 guaranteed
- Polarity: Color band denotes cathode
- Mounting Position: Any
- Weight: 0.012 Ounces (0.34 Grams)

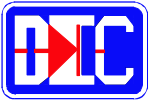
Sym	Minimum		Maximum	
	In	mm	In	mm
BL	0.160	4.1	0.205	5.2
BD	0.103	2.6	0.107	2.7
LL	1.00	25.4		
LD	0.028	0.71	0.034	0.86

## MAXIMUM RATINGS & ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.  
 Single phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive loads, derate current by 20%.

PARAMETER (TEST CONDITIONS)	SYMBOL	RATINGS								UNITS
		1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007		
Series Number		1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007		
Maximum DC Blocking Voltage	V <sub>RM</sub>	50	100	200	400	600	800	1000	VOLTS	
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700		
Maximum Peak Recurrent Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000		
Average Forward Rectified Current @ T <sub>A</sub> = 75 °C (Lead length = 0.375 in. (9.5 mm))	I <sub>o</sub>	1								AMPS
Peak Forward Surge Current (8.3 mSec single half sine wave superimposed on rated load)	I <sub>FSM</sub>	50								
Maximum Forward Voltage at 1 Amp DC	V <sub>FM</sub>	1								VOLTS
Maximum Full Cycle Reverse Current @ T <sub>L</sub> = 75 °C (Note 1)	I <sub>RM(AV)</sub>	30								μA
Maximum Average DC Reverse Current At Rated DC Blocking Voltage	I <sub>RM</sub>	50								
Typical Thermal Resistance, Junction to Ambient (Note 1)	R <sub>θJA</sub>	30								°C/W
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	26								pF
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +175								°C

NOTES: (1) Lead length = 0.375 in. (9.5 mm)  
 (2) Measured at 1MHz & applied reverse voltage of 4 volts



# 1 AMP GENERAL PURPOSE SILICON DIODES

## RATING & CHARACTERISTIC CURVES FOR SERIES 1N4001 - 1N4007

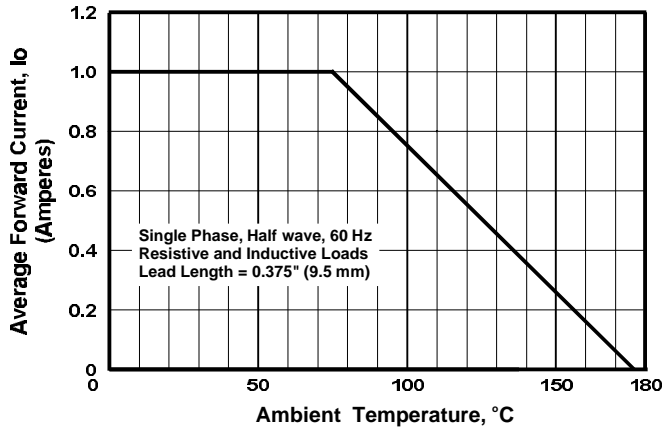


FIGURE 1. FORWARD CURRENT DERATING CURVE

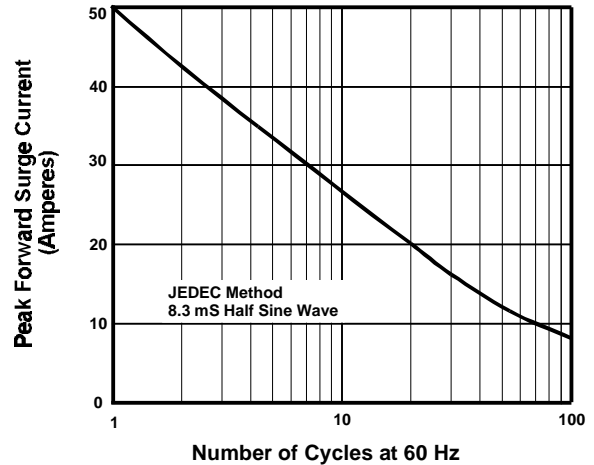


FIGURE 2. MAXIMUM NON-REPETITIVE SURGE CURRENT

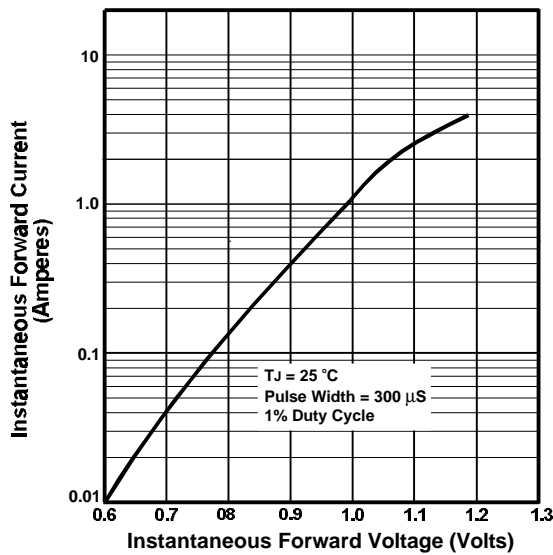


FIGURE 3. TYPICAL FORWARD CHARACTERISTIC PER DIODE

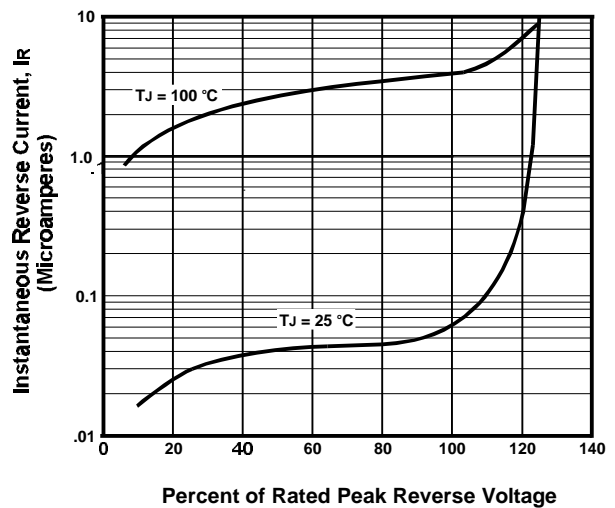


FIGURE 4. TYPICAL REVERSE CHARACTERISTICS

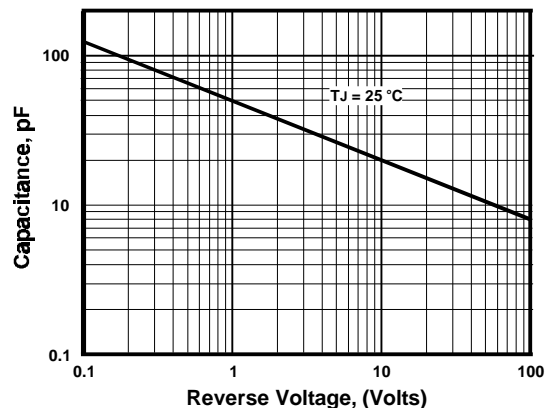


FIGURE 5. TYPICAL JUNCTION CAPACITANCE PER DIODE

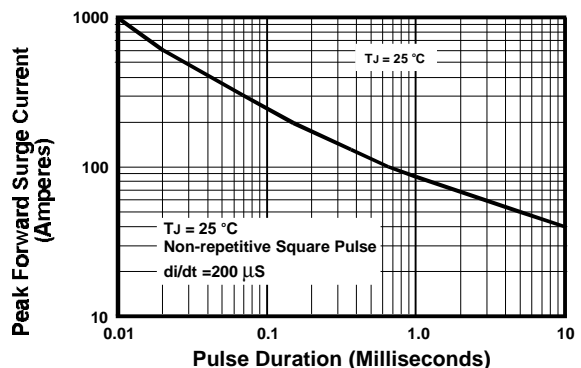


FIGURE 6. PEAK FORWARD SURGE CURRENT