



# 1 AMP SILICON RECTIFIERS 1N4001S THRU 1N4007S

## TECHNICAL SPECIFICATION

### FEATURES

- 0.6mm diameter leads
- Low cost construction utilizing void - free moulded plastic technique
- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Diffused junction
- High surge current capability
- Low leakage
- High temperature soldering capability : 250°C/10 seconds/9.5mm (.375in.) lead length at 2.3kg (5lb) tension
- Easily cleaned with Freon, Alcohol, Chloroethene and other similar solvents

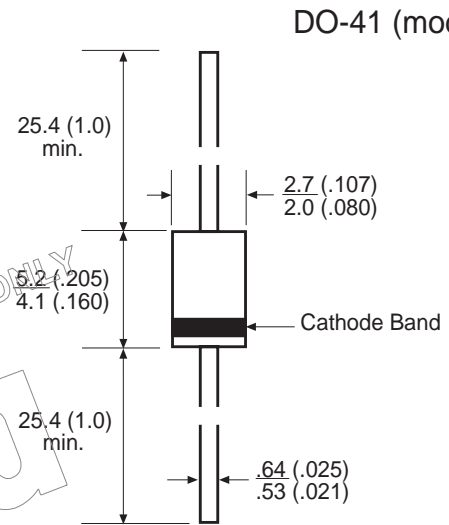
### MECHANICAL DATA

Case	: JEDEC DO-41, moulded plastic with modified terminal diameter.
Terminals	: Plated axial leads, solderable per MIL-STD-202, Method 208
Polarity	: Colour band denotes cathode end.
Mounting Position	: Any
Weight	: 0.3 grams (0.012 ounce)

**VOLTAGE**  
50 to 1000 Volts

**CURRENT**  
1.0 Amp

### DIMENSIONS - millimeters (inches)



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	Symbols	1N4001S	1N4002S	1N4003S	1N4004S	1N4005S	1N4006S	1N4007S	Units	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V	
Maximum Average Forward Rectified Current 9.5mm (.375in.) Lead Length at $T_A = 75^\circ\text{C}$	$I_{F(AV)}$	1.0								A
Peak Forward Surge Current, 8.3 ms single half sine - wave superimposed on rated load	$I_{FSM}$	30								A
Maximum Instantaneous Forward Voltage at 1.0A	$V_F$	1.1								V
Maximum Reverse Current at Rated DC Blocking Voltage	$I_R$						5.0			$\mu\text{A}$
							50			$\mu\text{A}$
Maximum Full load Reverse Current Full Cycle Average, 9.5mm (.375in.) Lead Length at $T_L = 75^\circ\text{C}$	$I_{R(AV)}$	30								$\mu\text{A}$
Typical Junction Capacitance (see Note 1)	$C_J$	30								pF
Typical Thermal Resistance (see Note 2)	$R_{THja}$	50								°C/W
Operating Temperature Range	$T_J$	- 50 to + 175								°C
Storage Temperature Range	$T_{STG}$	- 50 to + 175								°C

- Notes :
1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
  2. Thermal Resistance from Junction to Ambient

## RATING AND CHARACTERISTIC CURVES

FIG. 1 - FORWARD CURRENT DERATING CURVE

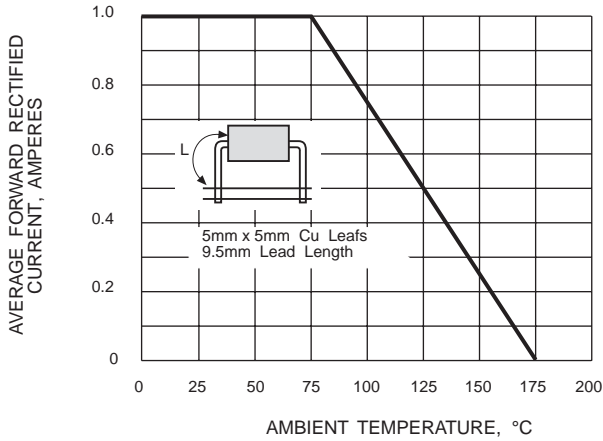


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

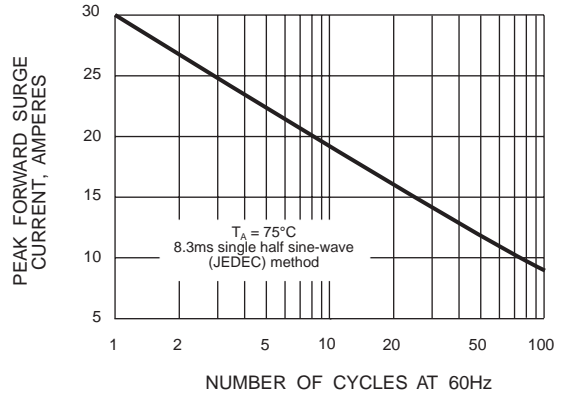


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

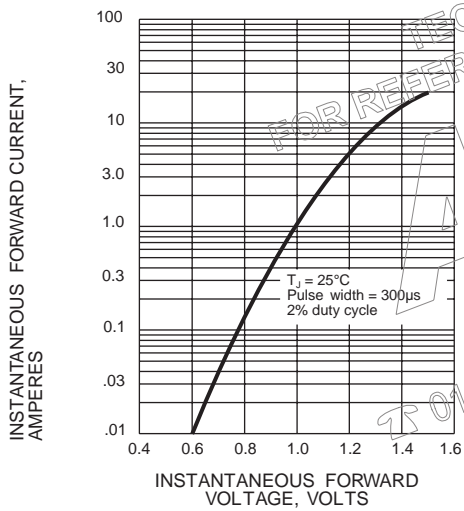


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

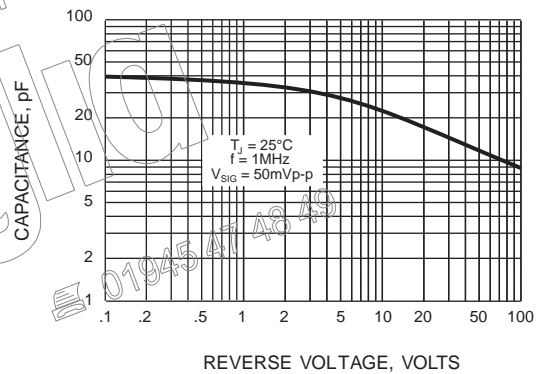
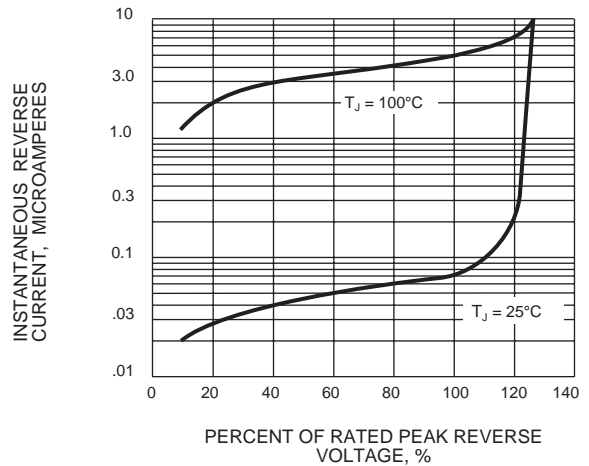
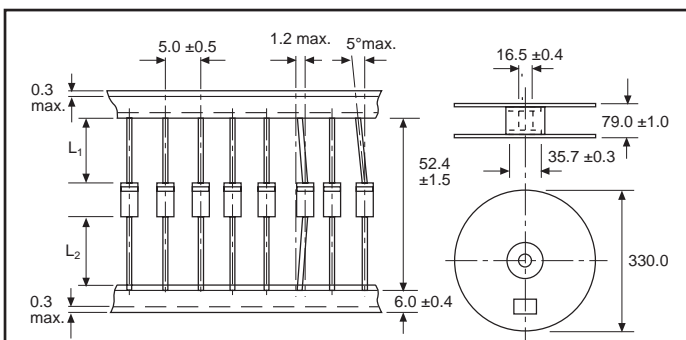


FIG. 5 - TYPICAL REVERSE CHARACTERISTICS



### TAPING AND REELING SPECIFICATION



Dimensions - millimeters

NOTES : Each component lead sandwiched between tapes for 3.2mm minimum  
Cumulative pitch tolerance 2.0mm/10 pitch