



# 1 AMP SILICON RECTIFIERS 1N4001 THRU 1N4007

## TECHNICAL SPECIFICATION

<p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>● Low cost construction utilising void - free moulded plastic technique</li> <li>● Plastic package has Underwriters Laboratories Flammability Classification 94V-0</li> <li>● Diffused junction</li> <li>● High surge current capability</li> <li>● Low leakage</li> <li>● High temperature soldering capability : 250°C/10 seconds/9.5mm (.375in.) lead length at 2.3kg (5lb) tension</li> <li>● Easily cleaned with Freon, Alcohol, Chlorothene and other similar solvents</li> </ul> <hr style="width: 20%; margin-left: 0;"/> <p><b>MECHANICAL DATA</b></p> <p>Case : JEDEC DO-41, moulded plastic.</p> <p>Terminals : Plated axial leads, solderable per MIL-STD-202, Method 208.</p> <p>Polarity : Colour band denotes cathode end.</p> <p>Mounting Position : Any</p> <p>Weight : 0.3 grams (0.012 ounce)</p>	<p style="text-align: center;"><b>VOLTAGE</b> 50 to 1000 Volts</p> <p style="text-align: right;"><b>CURRENT</b> 1.0 Amp</p> <p style="text-align: center;"><b>DIMENSIONS</b> - millimeters (inches)</p> <p style="text-align: right;">DO-41</p>
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### 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	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	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	$I_R$	$T_A = 25^\circ\text{C}$						5.0	$\mu\text{A}$
		$T_A = 100^\circ\text{C}$						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							$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	- 50 to + 175							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 50 to + 175							$^\circ\text{C}$

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

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## RATING AND CHARACTERISTIC CURVES

FIG. 1 - FORWARD CURRENT DERATING CURVE

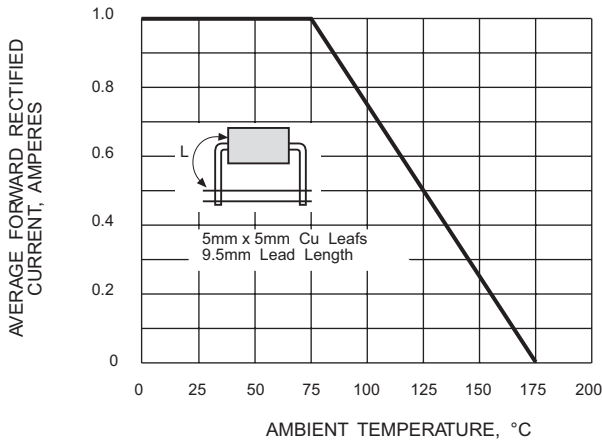


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

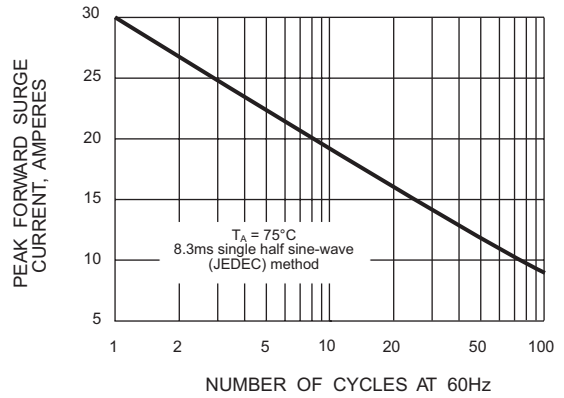


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

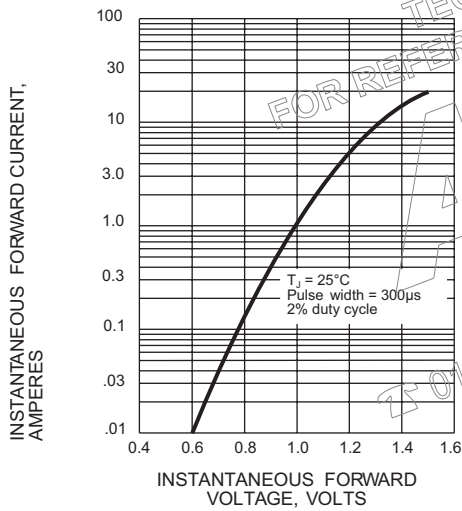


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

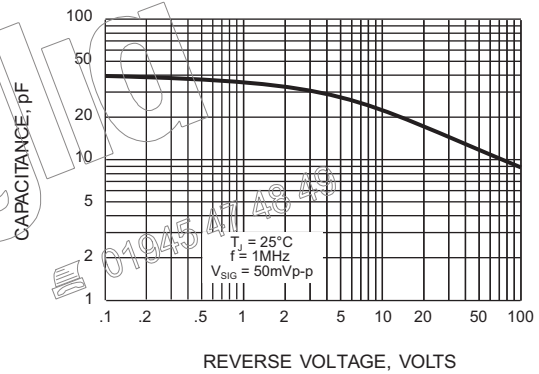


FIG. 5 - TYPICAL REVERSE CHARACTERISTICS

