



1 AMP SILICON RECTIFIERS 1N4001 THRU 1N4007

TECHNICAL SPECIFICATION

FEATURES

- Low cost construction utilising 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, Chlorothene and other similar solvents

MECHANICAL DATA

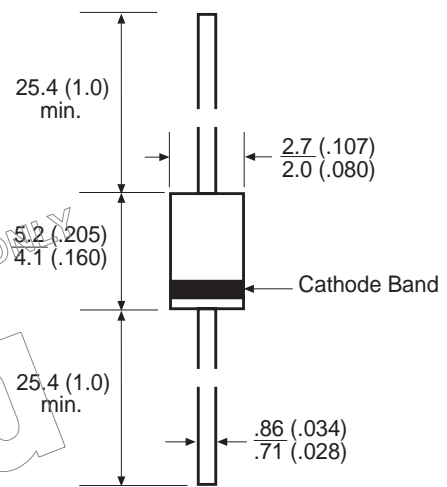
Case	: JEDEC DO-41, moulded plastic.
Terminals	: Plated axial leads, solderable per MIL-STD-202, Method 208.
Polarity	: Colour band denotes cathode end.
Mounting Position	: Any
Weight	: 0.3 grams (0.012 ounce)

VOLTAGE
50 to 1000 Volts

CURRENT
1.0 Amp

DIMENSIONS - millimeters (inches)

DO-41



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	$T_A = 25^\circ\text{C}$							μA
		$T_A = 100^\circ\text{C}$							μA
Maximum Full load Reverse Current Full Cycle Average, 9.5mm (.375in.) Lead Length at $T_L = 75^\circ\text{C}$	$I_{R(AV)}$	30							μA
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

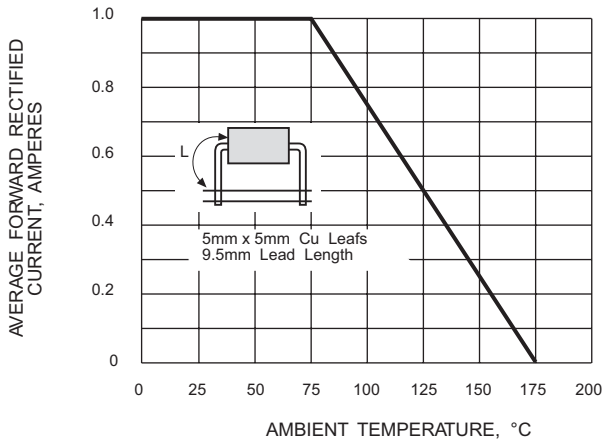


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

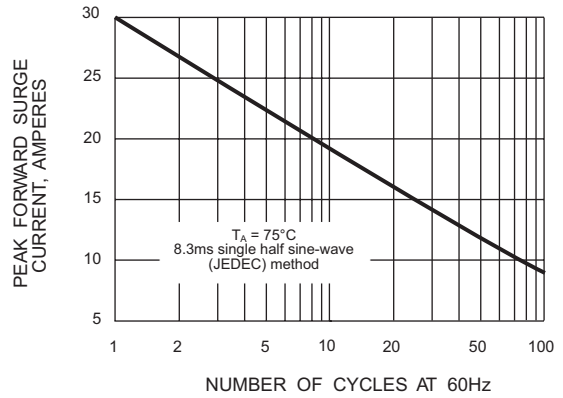


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

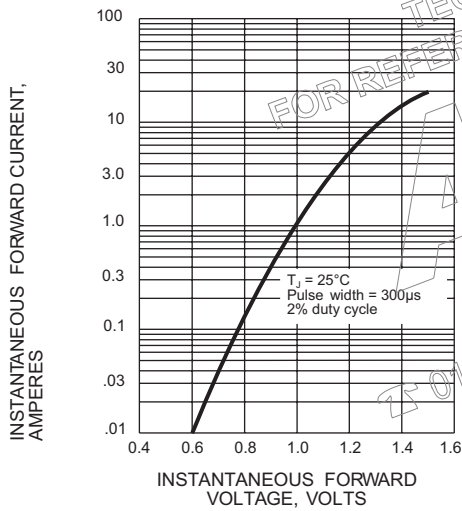


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

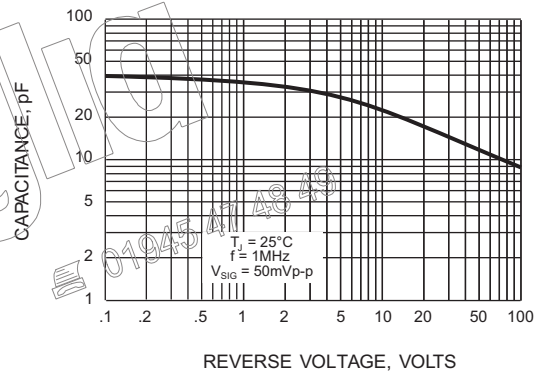


FIG. 5 - TYPICAL REVERSE CHARACTERISTICS

