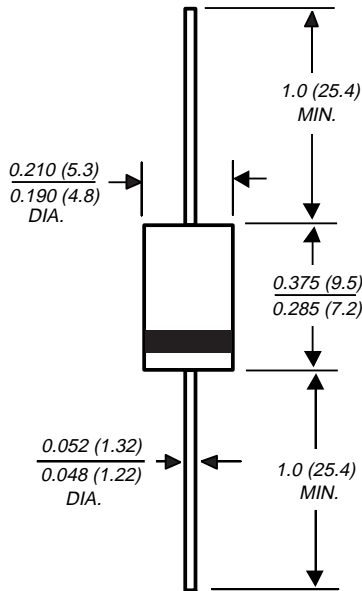


General Purpose Plastic Rectifier

Reverse Voltage 50 to 1000 V

Forward Current 3.0 A



Dimensions in inches and (millimeters)

Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- High surge current capability
- Construction utilizes void-free molded plastic technique
- 3.0 Ampere operation at $T_L=105^\circ\text{C}$ with no thermal runaway
- Typical I_R less than $0.1\mu\text{A}$
- High temperature soldering guaranteed: $250^\circ\text{C}/10$ seconds, $0.375''$ (9.5mm) lead length, 5 lbs. (2.3kg) tension

Mechanical Data

Case: JEDEC DO-201AD, molded plastic body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.04 ounce, 1.1 grams

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	1N 5400	1N 5401	1N 5402	1N 5403	1N 5404	1N 5405	1N 5406	1N 5407	1N 5408	UNITS
*Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	500	600	800	1000	V
*Maximum RMS voltage	V_{RMS}	35	70	140	210	280	350	420	560	700	V
*Maximum DC blocking voltage to $T_A=150^\circ\text{C}$	V_{DC}	50	100	200	300	400	500	600	800	1000	V
*Maximum average forward rectified current 0.5" (12.5mm) lead length at $T_L=105^\circ\text{C}$	$I_{F(AV)}$	3.0									A
*Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_L=105^\circ\text{C}$	I_{FSM}	200									A
*Maximum full load reverse current full cycle average, 0.5" (12.5mm) lead length at $T_L=105^\circ\text{C}$	$I_{R(AV)}$	500									μA
*Typical thermal resistance (NOTE 1)	$R_{\theta JA}$	20									$^\circ\text{C}/\text{W}$
Maximum DC blocking voltage temperature	T_A	+150									$^\circ\text{C}$
*Operating junction temperature range	T_J	-50 to + 170									$^\circ\text{C}$
*Storage temperature range	T_{STG}	-50 to + 170									$^\circ\text{C}$

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	1N 5400	1N 5401	1N 5402	1N 5403	1N 5404	1N 5405	1N 5406	1N 5407	1N 5408	UNITS
*Maximum instantaneous forward voltage at 3.0A	V_F	1.2									V
*Maximum DC reverse current at rated DC blocking voltage	I_R	10									μA
		500									
Typical junction capacitance at 4.0V, 1MHz	C_J	30									pF

NOTES:

(1) Thermal resistance from junction to ambient at $0.375''$ (9.5mm) lead length, P.C.B. mounted with $0.8 \times 0.8''$ (20 x 20mm) copper heatsinks

*JEDEC registered value

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

FIG. 1 - FORWARD CURRENT DERATING CURVE

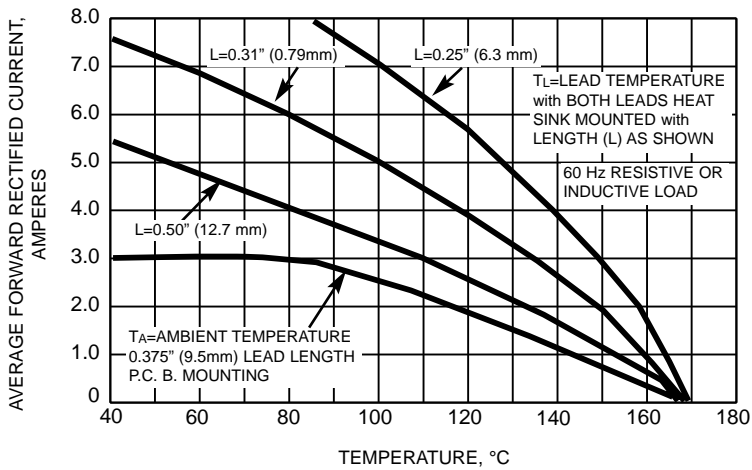


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

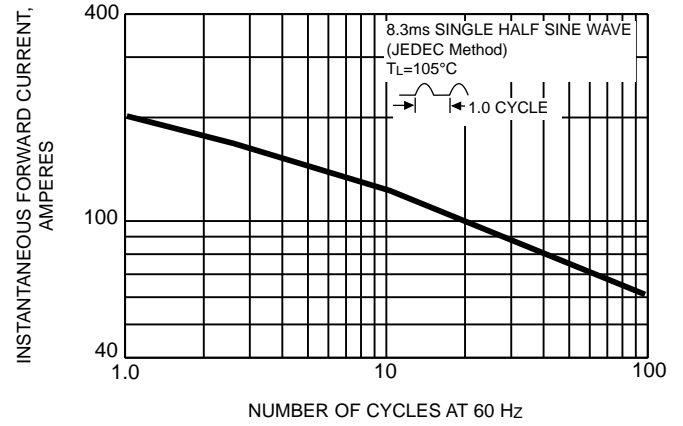


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

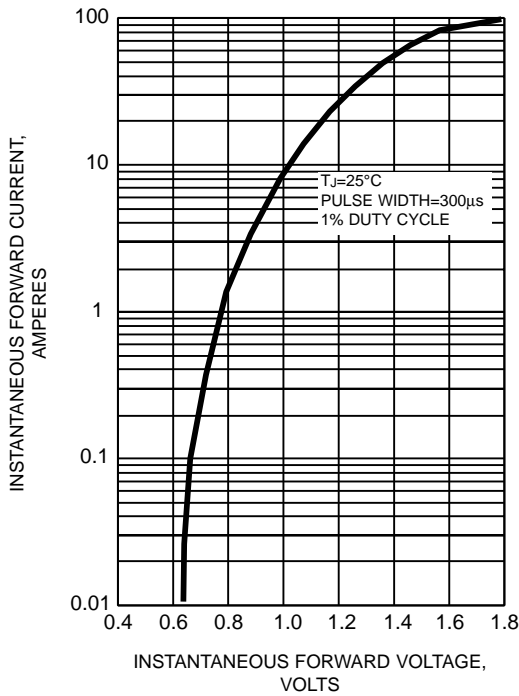


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

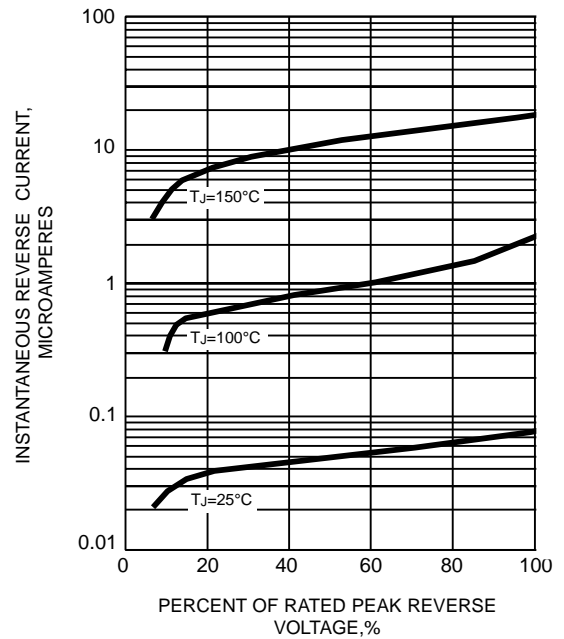


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

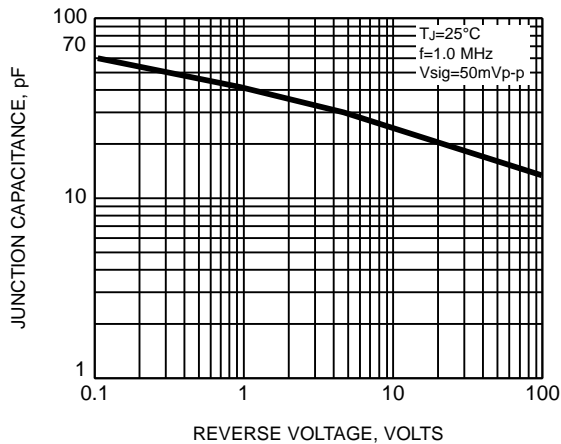


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

