

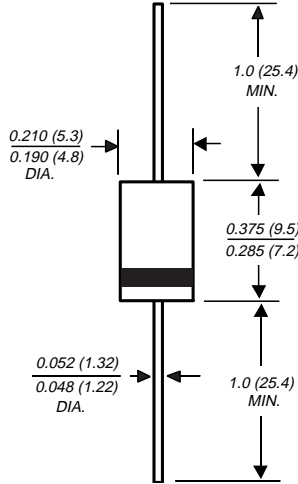
SRP300A THRU SRP300K

FAST SWITCHING PLASTIC RECTIFIER

Reverse Voltage - 50 to 800 Volts

Forward Current - 3.0 Amperes

DO-201AD



Dimensions are in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ High surge current capability
- ◆ Construction utilizing void-free molded plastic technique
- ◆ 3.0 Ampere operation at $T_A=55^\circ\text{C}$ with no thermal runaway
- ◆ Fast switching for high efficiency
- ◆ 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-204AD 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 AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	SRP 300A	SRP 300B	SRP 300D	SRP 300G	SRP 300J	SRP 300K	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	Volts
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{(AV)}$	3.0						Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_A=55^\circ\text{C}$	I_{FSM}	150.0						Amps
Maximum instantaneous forward voltage at 3.0A	V_F	1.3						Volts
Maximum DC reverse current at rated DC blocking voltage	I_R	10.0						μA
$T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$		200		300	400	500		
Maximum reverse recovery time (NOTE 1)	t_{rr}	100	100	150	150	200	200	ns
Typical junction capacitance (NOTE 2)	C_J	28.0						pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	22.0						$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	-50 to +125						$^\circ\text{C}$
Storage temperature range	T_{STG}	-50 to +150						$^\circ\text{C}$

NOTES:

(1) Reverse recovery test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts

(3) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length with both leads equally heat sink

RATINGS AND CHARACTERISTIC CURVES SRP300A THRU SRP300K

FIG. 1 - FORWARD CURRENT DERATING CURVE

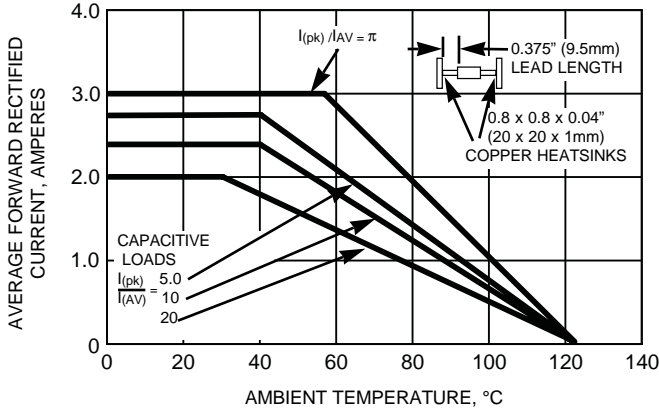


FIG. 2 - MAXIMUM NON REPETITIVE PEAK FORWARD SURGE CURRENT

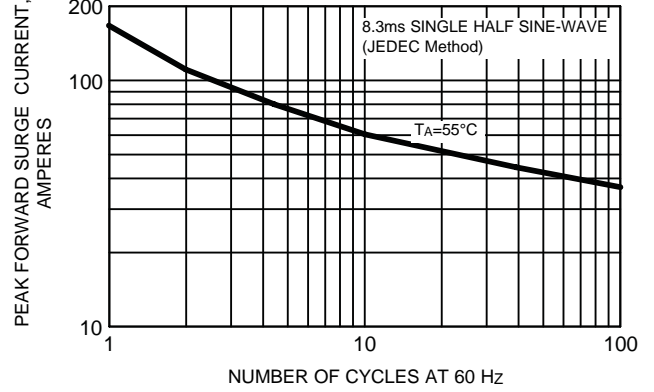


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

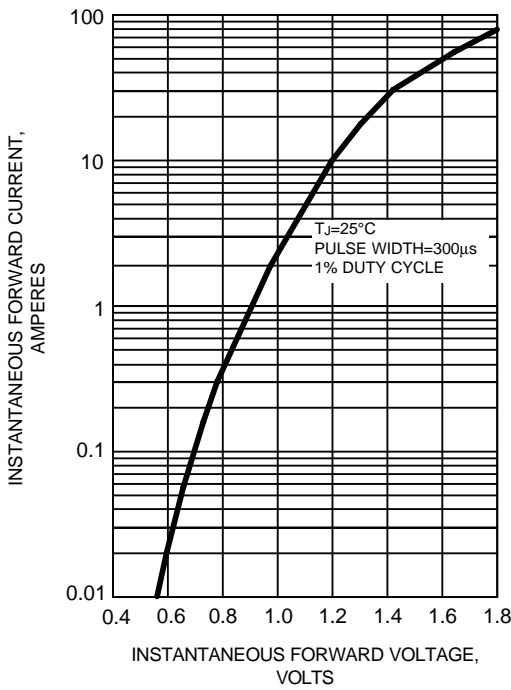


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

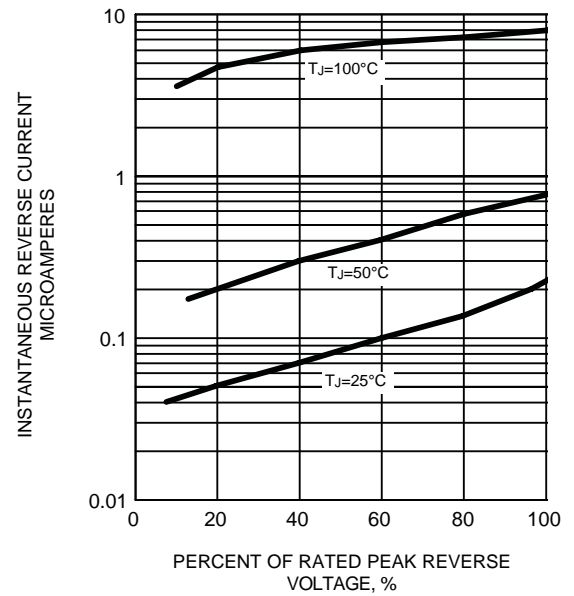


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

