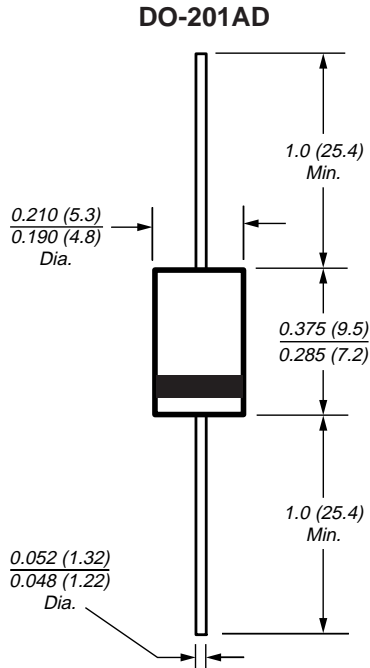


Fast Switching Plastic Rectifier

Reverse Voltage 50 to 800V
Forward Current 3.0A



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 $T_A=55^\circ\text{C}$ 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-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 oz., 1.1 g

Packaging codes/options:

1/Bulk - 1.5K per container, 15K per box

4/1.4K per 13" reel, 5.6K per box

23/1K per ammo mag., 9K per box

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

	Symbol	SRP 300A	SRP 300B	SRP 300D	SRP 300G	SRP 300J	SRP 300K	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{F(AV)}$	3.0						A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_A=55^\circ\text{C}$	I_{FSM}	150						A
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$	22						$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	-50 to +125						$^\circ\text{C}$
Storage temperature range	T_{STG}	-50 to +150						$^\circ\text{C}$

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Maximum instantaneous forward voltage at 3.0A	V_F	1.3						V
Maximum DC reverse current at rated DC blocking voltage	I_R	10						μA
		200	300	400	500			
Maximum reverse recovery time at $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$	t_{rr}	100	100	150	150	200	200	ns
Typical junction capacitance at 4.0V, 1MHz	C_J	28						pF

Notes: (1) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length with both leads equally heat sink

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

Fig. 1 – Forward Current Derating Curves

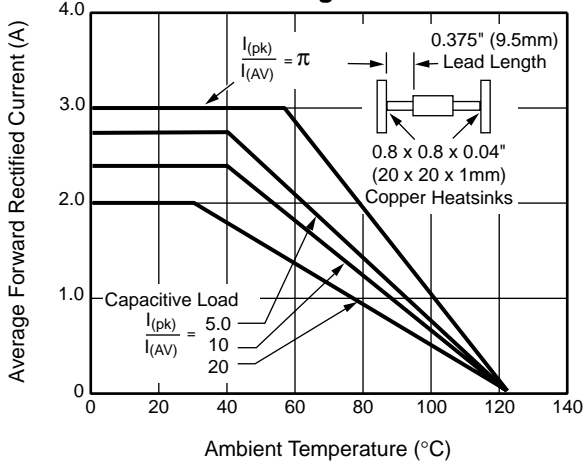


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

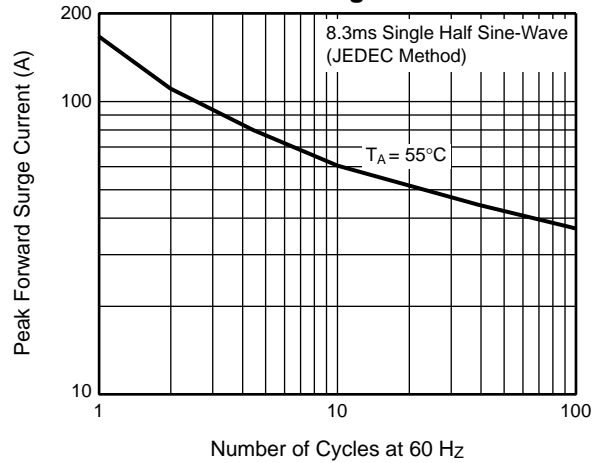


Fig. 3 – Typical Instantaneous Forward Characteristics

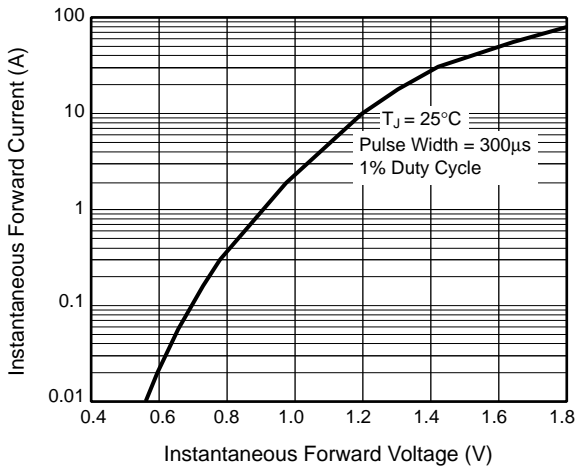


Fig. 4 – Typical Reverse Characteristics

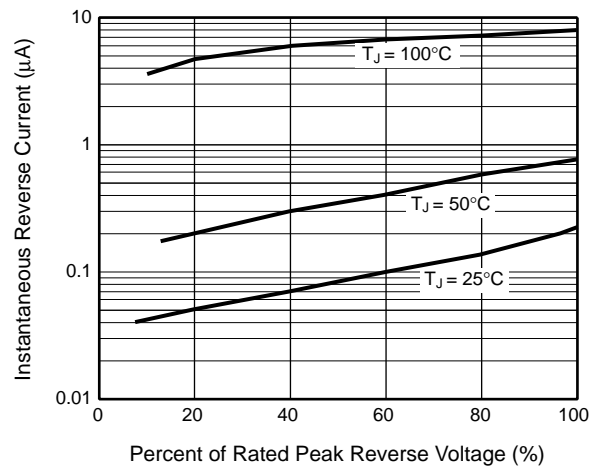


Fig. 5 – Typical Junction Capacitance

