

Features

- Super fast switching for high efficiency
- Low leakage current
- High surge current capability
- Component in accordance to RoHS 2002/95/EC



DO-201AD

Mechanical Data

- **Case:** Molded plastic, DO-201AD
- **Epoxy:** UL 94V-O rate flame retardant
- **Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026.
- **Polarity:** Color band denotes cathode end
- **Mounting position:** Any
- **Weight:** 1.1 gram

Major Ratings and Characteristics

$I_{F(AV)}$	3.0 A
V_{RRM}	50 V to 600 V
I_{FSM}	125A
V_F	0.95V, 1.25V, 1.7V
$T_J \text{ max.}$	150 °C

Maximum Ratings & Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified

Single phase ,half wave, 60Hz, resistive or inductive load, For capacitive load, derate current by 20%.

Items	Symbol	SF31	SF32	SF33	SF34	SF35	SF36	SF38	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum average forward rectified current .375"(9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{F(AV)}$	3.0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	125							A
Typical Thermal Resistance ⁽¹⁾	$R_{\theta JA}$	30							°C/W
Operating junction temperature range	T_J	-65 to +150							°C
Storage temperature range	T_{STG}	-65 to +150							°C

Note 1: Thermal resistance from junction to ambient at 0.375"(9.5mm)lead length, P.C.B. mounted.

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Items	Test conditions		Symbol	SF31~SF34	SF35~SF36	SF38	UNIT
Instantaneous forward voltage	I _F =3.0 A		V _F	0.95	1.25	1.70	V
Reverse current	V _R =V _{DC}	T _J =25℃	I _R	5			μA
		T _J =100℃		50			
Reverse recovery time	I _F = 0.5 A , I _R = 1.0 A , I _{rr} = 0.25 A		t _{rr}	35			nS
Typical junction capacitance	4.0 V ,1MHz		C _J	100	50		pF

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

Fig.1 Forward Current Derating Curve

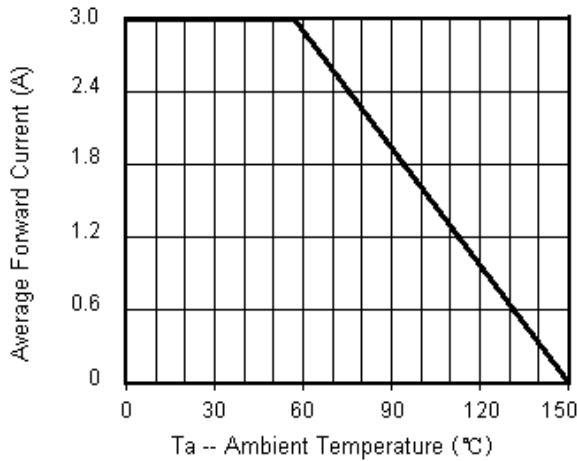


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

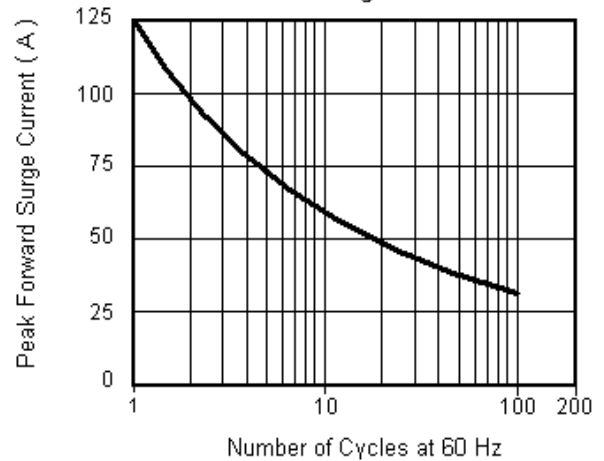


Fig.3 Typical Instantaneous Forward Characteristics

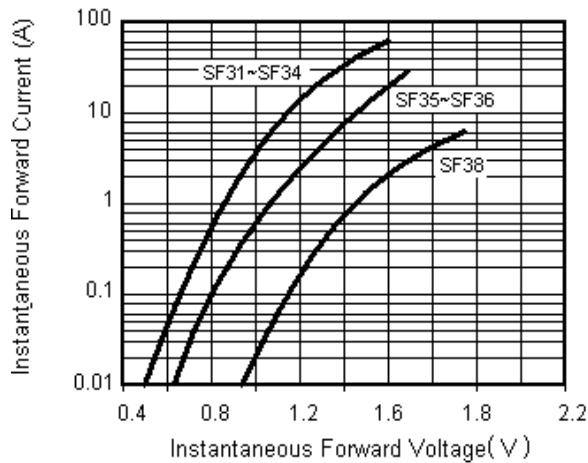
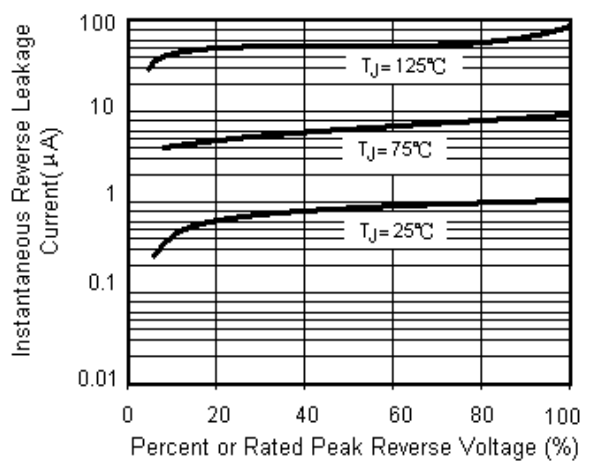
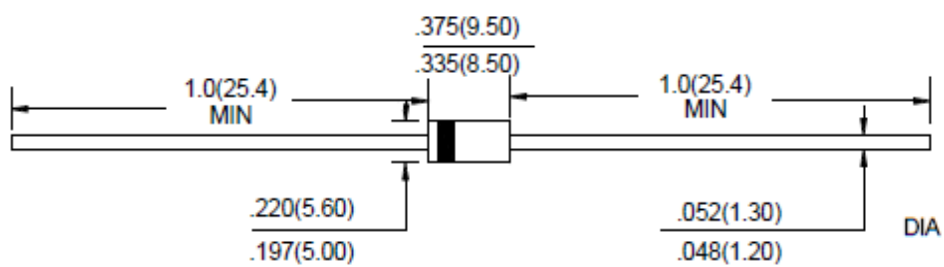


Fig.4 Typical Reverse Leakage Characteristics



Package Outline**DO-201AD**

Unit: inches (millimeters)