



31DF4 THRU 31DF6

3.0 AMPS. Ultra Fast Recovery Rectifiers



Voltage Range
400 to 600 Volts
Current
3.0 Amperes

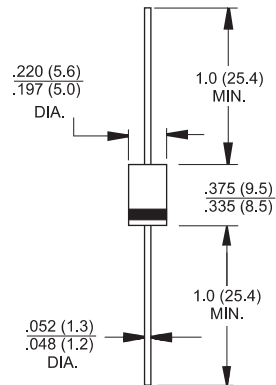
Features

- ✧ Low forward voltage drop
- ✧ Low power loss, high efficiency
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability

Mechanical Data

- ✧ Case: Molded plastic
- ✧ Epoxy: UL 94V-O rate flame retardant
- ✧ Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode end
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.375" (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 1.2 grams

DO-201AD



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Rating 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%

Type Number	Symbol	31DF4	31DF6	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	400	600	V
Maximum RMS Voltage	V_{RMS}	280	420	V
Maximum DC Blocking Voltage	V_{DC}	400	600	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @ $T_A = 29^\circ\text{C}$ (Note 1) @ $T_L = 109^\circ\text{C}$	$I_{(AV)}$	1.2 3.0		A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	45		A
Maximum Instantaneous Forward Voltage @ 3.0A	V_F	1.7		V
Maximum DC Reverse Current @ $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage	I_R	20		μA
Maximum Reverse Recovery Time (Note 3)	T_{rr}	35		nS
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	80		$^\circ\text{C/W}$
Operating Temperature Range	T_J	-40 to +150		$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-40 to +150		$^\circ\text{C}$

Notes: 1. Without Fin or P.C.Board..

2. Thermal Resistance from Junction to Ambient .375" (9.5mm) Lead Length.

3. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$

RATINGS AND CHARACTERISTIC CURVES (31DF4 THRU 31DF6)

