

FR301 THRU FR307

FAST RECOVERY PLASTIC RECTIFIER

VOLTAGE: 50-1000V

CURRENT: 3.0A

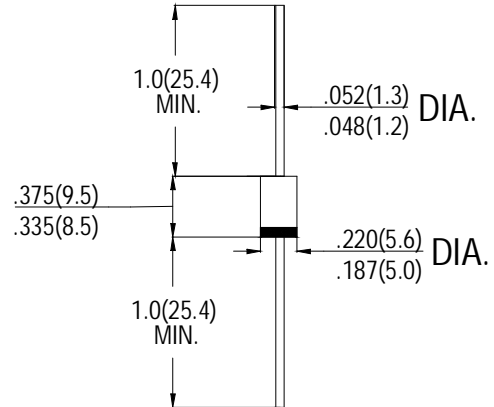
FEATURES

- Fast switching
- Low leakage
- Low forward voltage drop
- High current capability
- High surge capability
- High reliability

MECHANICAL DATA

- **Case:** Molded plastic
- **Epoxy:** UL94V-0 rate flame retardant
- **Lead:** MIL-STD- 202E, Method 208 guaranteed
- **Polarity:** Color band denotes cathode end
- **Mounting position:** Any
- **Weight:** 1.18 grams

DO-27



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	SYMBOL	FR301	FR302	FR303	FR304	FR305	FR306	FR307	units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward rectified Current at $T_A=75^\circ\text{C}$	I_o	3.0							A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	125							A
Maximum Instantaneous forward Voltage at 3.0A DC	V_F	1.3							V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_A=25^\circ\text{C}$	I_R	10							μA
Maximum Full Load Reverse Current Full Cycle Average, .375"(9.5mm) lead length at $T_L=55^\circ\text{C}$		150							
Maximum Reverse Recovery Time (Note 1)	t_{rr}	150			250	500		nS	
Typical Junction Capacitance (Note 2)	C_J	65							pF

Notes: 1. Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

2. Measured at 1MHz and applied reverse voltage of 4.0 volts