



FR301G THRU FR307G

**GLASS PASSIVATED
FAST RECOVERY RECTIFIER**

VOLTAGE: 50 TO 1000V CURRENT: 3.0A

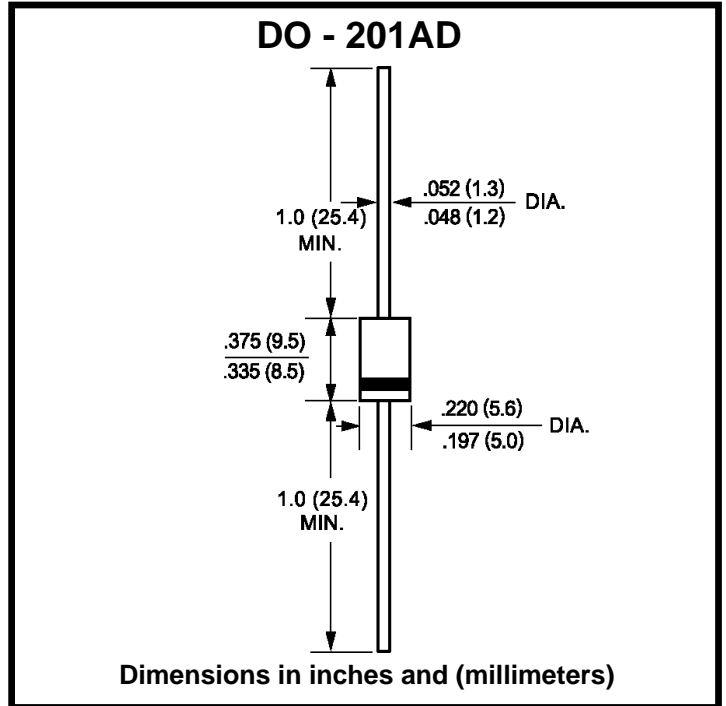
**TECHNICAL
SPECIFICATION**

FEATURES

- Molded case feature for auto insertion
- Glass passivated chip
- High current capability
- Low leakage current
- Fast switching for high efficiency
- High surge capability
- High temperature soldering guaranteed:
250°C/10sec/0.375"(9.5mm) lead length
at 5 lbs tension

MECHANICAL DATA

- Terminal: Plated axial leads solderable per
MIL-STD 202E, method 208C
- Case: Molded with UL-94 Class V-O
recognized flame retardant epoxy
- Polarity: Color band denotes cathode
- Mounting position: Any



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Single-phase, half-wave, 60Hz, resistive or inductive load rating at 25°C, unless otherwise stated, for capacitive load, derate current by 20%)

RATINGS	SYMBOL	FR 301G	FR 302G	FR 303G	FR 304G	FR 305G	FR 306G	FR 307G	UNITS
Maximum Repetitive 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 (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)	I_{FSM}	125							A
Maximum Instantaneous Forward Voltage (at rated forward current)	V_F	1.3							V
Maximum DC Reverse Current $T_a=25^\circ\text{C}$ (at rated DC blocking voltage) $T_a=100^\circ\text{C}$	I_R	5.0 100							μA μA
Maximum Reverse Recovery T_i (Note 1)	t_{rr}	150			250		500		nS
Typical Junction Capacitance (Note 2)	C_J	40							pF
Typical Thermal Resistance (Note 3)	$R_{\theta(ja)}$	30							$^\circ\text{C/W}$
Storage and Operation Junction Temperature	T_{STG}, T_J	-65 to +150							$^\circ\text{C}$

Note:

- 1.Reverse recovery condition $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$
- 2.Measured at 1.0 MHz and applied voltage of $4.0V_{dc}$
- 3.Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C. board mounted