

# FR301 THRU FR307

**FAST SWITCHING  
PLASTIC RECTIFIER**  
VOLTAGE:50 TO 1000V      CURRENT:3.0A

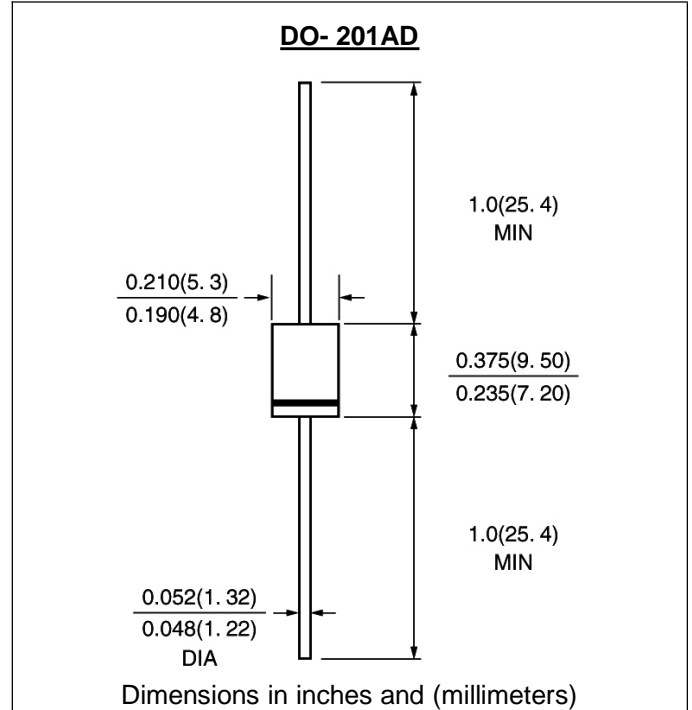


## FEATURE

Molded case feature for auto insertion  
High current capability  
Low leakage current  
High surge capability  
High temperature soldering guaranteed  
250°C/10sec/0.375"lead length at 5 lbs tension  
Fast switching for high efficiency

## MECHANICAL DATA

Terminal:Plated axial leads solderable per MIL-STD 202E, method 208C  
Case:Molded with UL-94 Class V-0 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)

	SYMBOL	FR 301	FR 302	FR 303	FR 304	FR 305	FR 306	FR 307	units
Maximum Recurrent Peak Reverse Voltage	V <sub>rrm</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>rms</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking Voltage	V <sub>dc</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current 3/8"lead length at Ta =75°C	I <sub>f(av)</sub>	3.0							A
Peak Forward Surge Current 8.3ms single Half sine-wave superimposed on rated load	I <sub>fsm</sub>	200.0							A
Maximum Forward Voltage at rated Forward Current and 25°C	V <sub>f</sub>	1.3							V
Maximum DC Reverse Current Ta =25°C at rated DC blocking voltage	I <sub>r</sub>	5.0							μA
Maximum Reverse Recovery Time (Note 1)	T <sub>rr</sub>	150			250	500		nS	
Typical Junction Capacitance (Note 2)	C <sub>j</sub>	65.0							pF
Typical Thermal Resistance (Note 3)	R(ja)	20.0							°C/W
Storage and Operating Junction Temperature	T <sub>stg</sub> ,T <sub>j</sub>	-50 to +150							°C

### Note:

- Reverse Recovery Condition I<sub>f</sub> =0.5A, I<sub>r</sub>=1.0A, I<sub>rr</sub> =0.25A
- Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
- Thermal Resistance from Junction to Ambient at 0.375"lead length, P.C. Board Mounted

# RATINGS AND CHARACTERISTIC CURVES FR301 THRU FR307

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FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

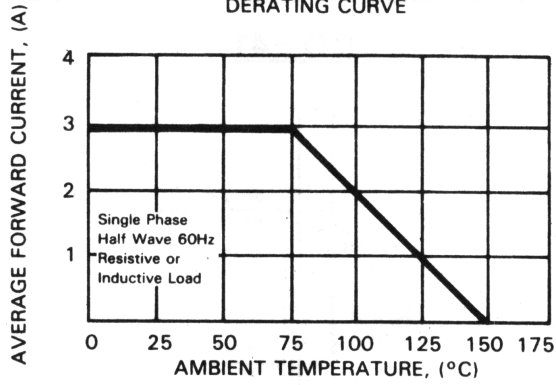


FIG. 2 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

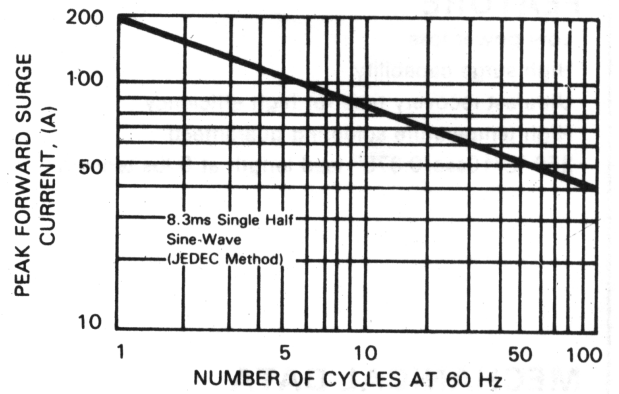


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

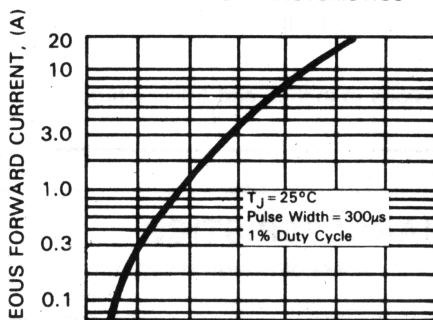


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

