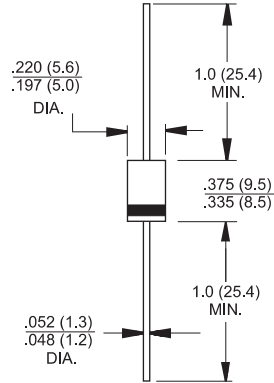




### DO-201AD



Dimensions in inches and (millimeters)

### Features

- ◇ High efficiency, Low VF
- ◇ High current capability
- ◇ High reliability
- ◇ High surge current capability
- ◇ Low power loss.

### Mechanical Data

- ◇ Cases: Molded plastic
- ◇ Epoxy: UL 94V-0 rate flame retardant
- ◇ 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

### 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	FR 301	FR 302	FR 303	FR 304	FR 305	FR 306	FR 307	FR 308	FR 309	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	1200	1300	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	840	910	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	1200	1300	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length @ $T_A = 55^\circ C$	$I_{(AV)}$	3.0									A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	$I_{FSM}$	150									A
Maximum Instantaneous Forward Voltage @ 3.0A	$V_F$	1.2									V
Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=125^\circ C$	$I_R$	5 150									uA uA
Maximum Reverse Recovery Time ( Note 1)	$T_{rr}$	150			250		500			nS	
Typical Junction Capacitance ( Note 2 )	$C_j$	60									pF
Typical Thermal resistance (Note 3)	$R_{\theta JA}$	40									°C/W
Operating Temperature Range	$T_J$	-65 to +150									°C
Storage Temperature Range	$T_{STG}$	-65 to +150									°C

- Notes:
1. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$
  2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.
  3. Mount on Cu-Pad Size 16mm x 16mm on P.C.B.

# FR301-FR309

## 3.0 AMP. Fast Recovery Rectifiers

### RATINGS AND CHARACTERISTIC CURVES (FR301 THRU FR309)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

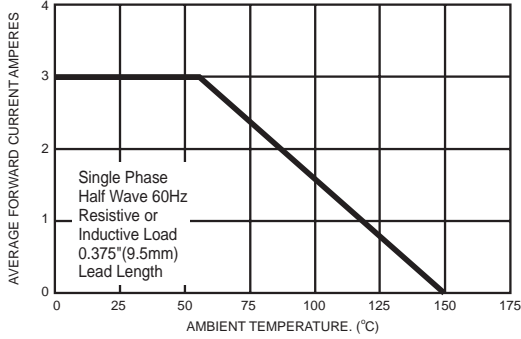


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

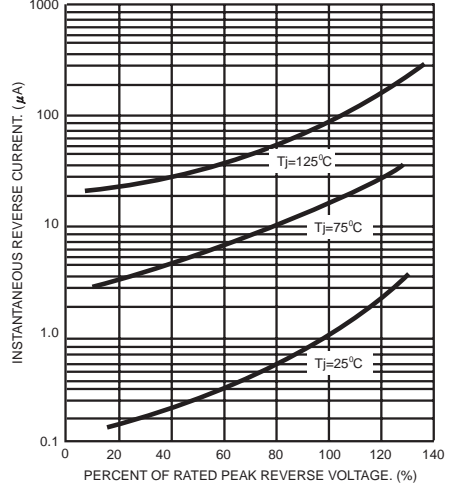


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

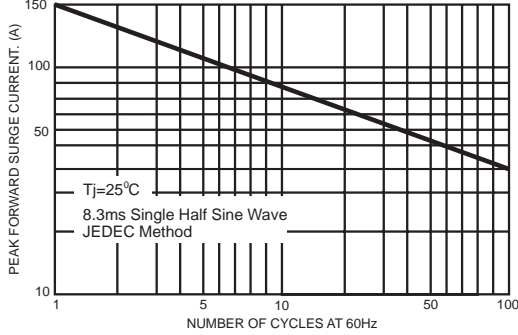


FIG.5- TYPICAL FORWARD CHARACTERISTICS

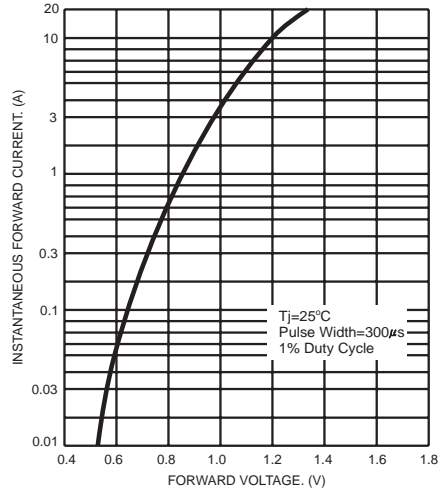


FIG.4- TYPICAL JUNCTION CAPACITANCE

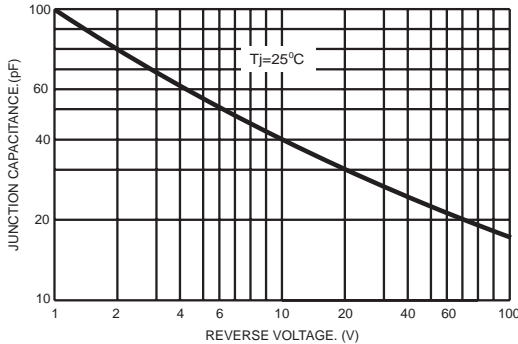


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

