

### DO-201AD

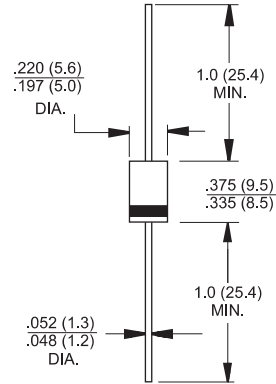


### Features

- ✧ Glass passivated chip junction.
- ✧ 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
- ✧ Mounting position: Any
- ✧ Weight: 1.2 grams



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	FR 301G	FR 302G	FR 303G	FR 304G	FR 305G	FR 306G	FR 307G	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 .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 )	$I_{FSM}$	125							A
Maximum Instantaneous Forward Voltage @ 3.0A	$V_F$	1.3							V
Maximum DC Reverse Current @ $T_A=25^\circ C$ at Rated DC Blocking Voltage @ $T_A=125^\circ C$	$I_R$	5.0 100							$\mu A$ $\mu A$
Maximum Reverse Recovery Time ( Note 1 )	$T_{rr}$	150				250	500		nS
Typical Junction Capacitance ( Note 2 )	$C_j$	30							pF
Typical Thermal Resistance	$R_{\theta JA}$	35							$^\circ C/W$
Operating Temperature Range	$T_J$	-65 to +150							$^\circ C$
Storage Temperature Range	$T_{STG}$	-65 to +150							$^\circ C$

- 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.



# FR301G-FR307G

## 3.0 AMP. Glass Passivated Fast Recovery Rectifiers

### RATINGS AND CHARACTERISTIC CURVES (FR301G THRU FR307G)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

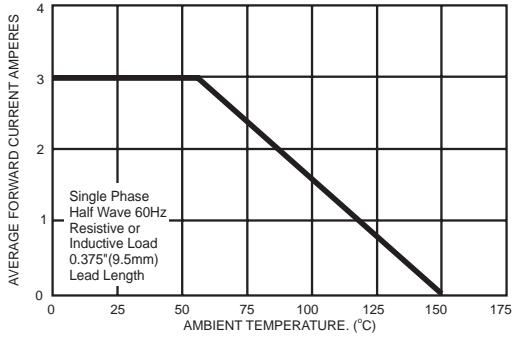


FIG.2- TYPICAL REVERSE CHARACTERISTICS PER LEG

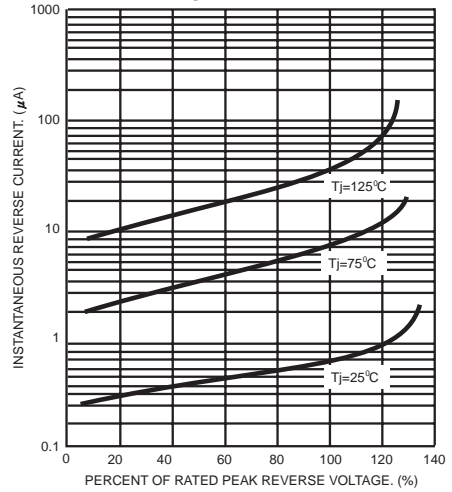


FIG.3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

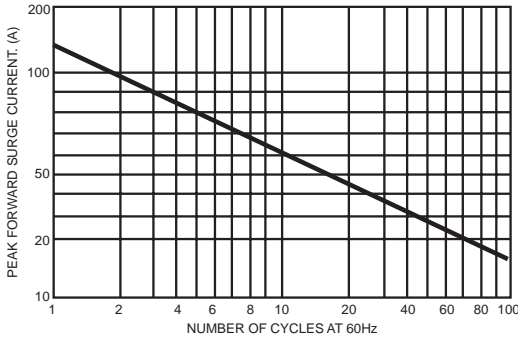


FIG.5- TYPICAL FORWARD CHARACTERISTICS

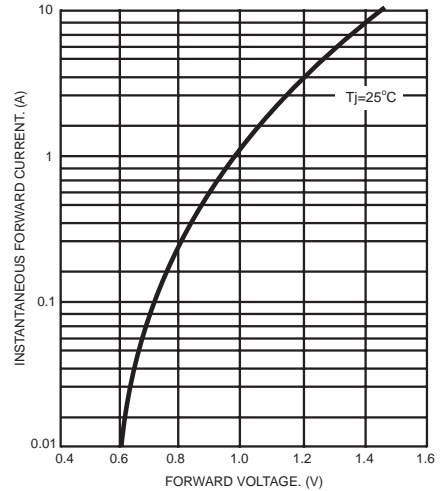


FIG.4- TYPICAL JUNCTION CAPACITANCE

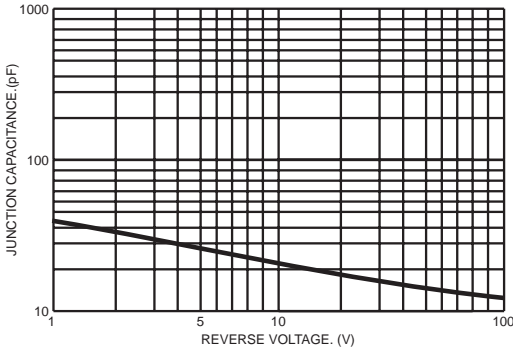
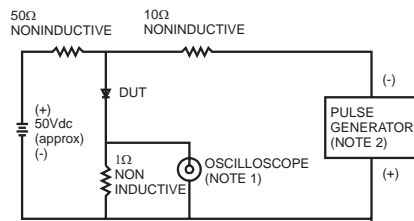


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. Rise Time=7ns max. Input Impedance= 1 megohm 22pf  
2. Rise Time=10ns max. Source Impedance= 50 ohms

