

# FR301G THRU FR307G

GLASS PASSIVATED FAST RECOVERY RECTIFIER

Reverse Voltage: 50 to 1000 Volts

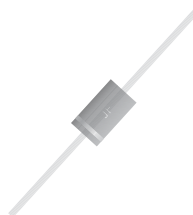
Forward Current:3.0Amperes

## FEATURES

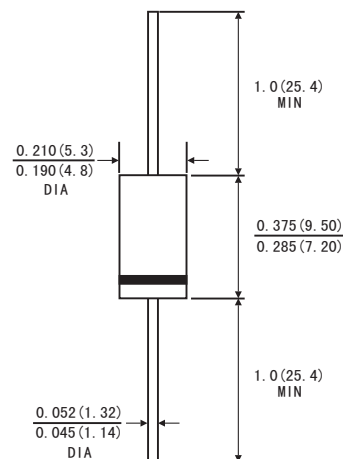
- Low leakage
- Low forward voltage drop
- High current capability
- High current surge
- High reliability
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011/65/EU

## MECHANICAL DATA

- Case: JEDEC DO-201AD molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750,Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.041 OUNCE,1.18 grams



## DO-201AD



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating at 25°C ambient temperature unless otherwise specified.Single phase ,half wave ,60Hz,resistive or inductive load. For capacitive load,derate current by 20%.)

	Symbols	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	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current	$I_{(AV)}$	3.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	150							Amps
Maximum Instantaneous Forward Voltage at 3.0A	$V_F$	1.3							Volts
Maximum DC Reverse Current at rated DC blocking voltage	$T_A=25^{\circ}C$	10							$\mu A$
	$T_A=100^{\circ}C$								
Maximum reverse recovery time(Note1)	$t_{rr}$	150			250	500		ns	
Typical junction capacitance(Note2)	$C_J$	60							pF
Operating junction and storage temperature range	$T_J$	-55 to+150							$^{\circ}C$
	$T_{STG}$	-55 to+150							

Note: 1. Test conditions:  $I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$ .

2. Measured at 1MHz and applied reverse voltage of 4.0 Volts D.C.

# RATINGS AND CHARACTERISTIC CURVES FR301G THRU FR307G

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

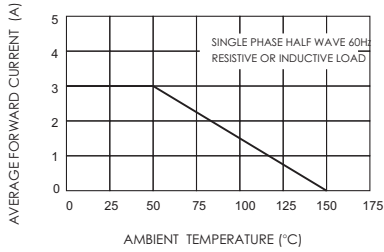


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

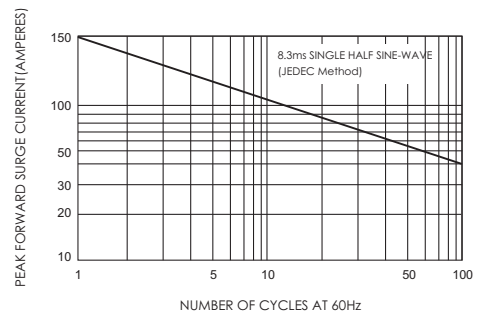


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

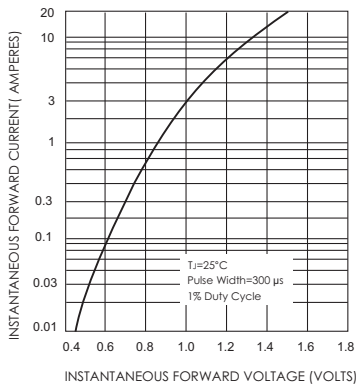


FIG.4-TYPICAL JUNCTION CAPACITANCE

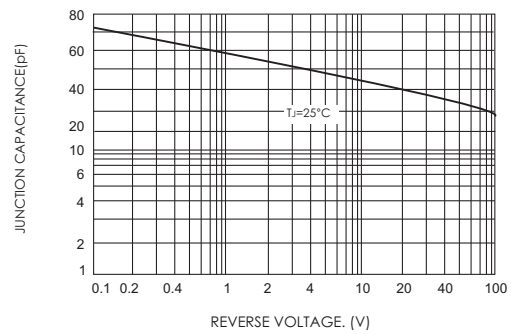
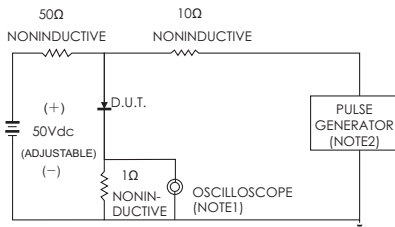


FIG.5-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time=7ns max. input Impedance=1 megohm 22pF  
 2. Rise Time=10ns max. source Impedance=50 ohms

