

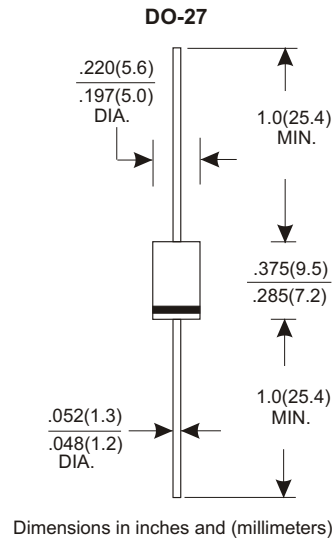


## FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability

## MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 1.10 grams



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

TYPE NUMBER	FR301	FR302	FR303	FR304	FR305	FR306	FR307	UNITS	
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	35	70	140	280	420	560	700	V	
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V	
Maximum Average Forward Rectified Current									
.375"(9.5mm) Lead Length at Ta=75°C								3.0	A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)								200	A
Maximum Instantaneous Forward Voltage at 3.0A								1.3	V
Maximum DC Reverse Current Ta=25°C								5.0	μA
at Rated DC Blocking Voltage Ta=100°C								150	μA
Maximum Reverse Recovery Time (Note 1)					150	250	500	nS	
Typical Junction Capacitance (Note 2)								60	pF
Operating and Storage Temperature Range Tj, Tstg								-65 — +150	°C

### NOTES:

1. Reverse Recovery Time test condition:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

RATING AND CHARACTERISTIC CURVES (FR301 THRU FR307)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

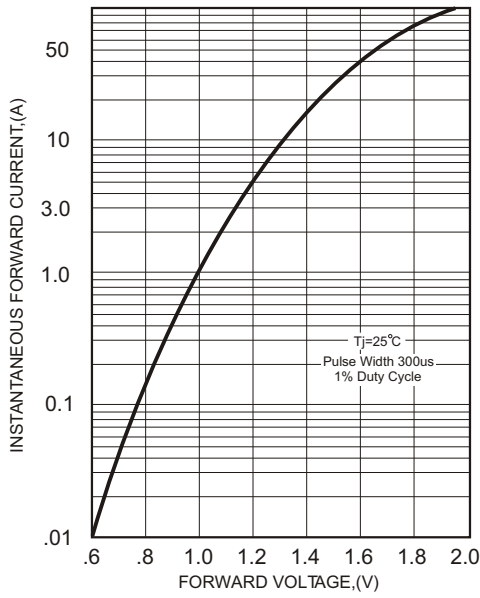


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

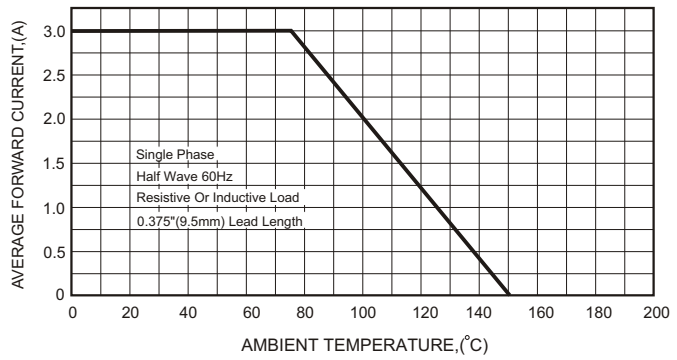


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

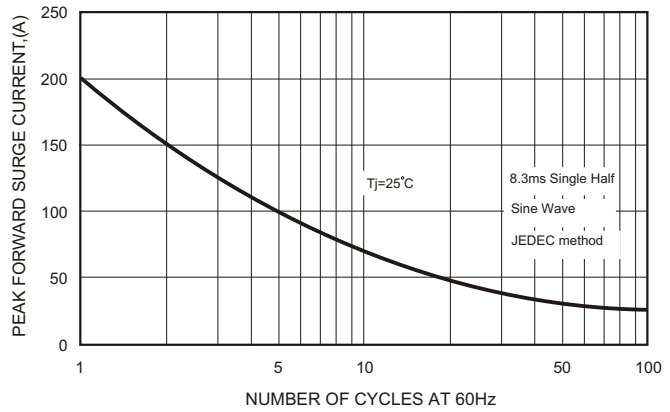
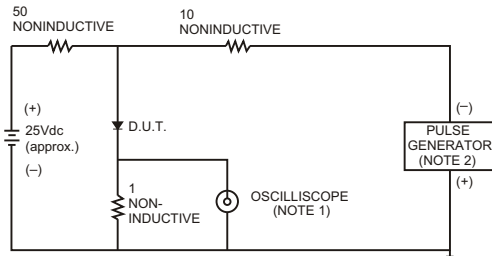


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

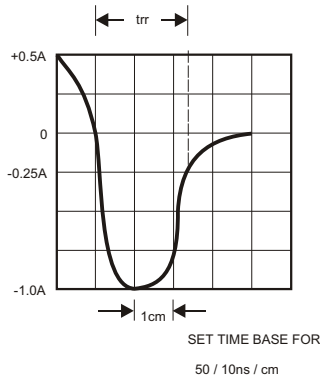


FIG.5-TYPICAL JUNCTION CAPACITANCE

