

# Fast Recovery Rectifier



## Features

- Fast switching for high efficiency
- Low cost
- Diffused junction
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0

## Mechanical Data

Case	: JEDEC DO-27 molded plastic
Polarity	: Colour band denotes cathode
Weight	: 0.04 ounces, 1.1 grams
Mounting Position	: Any
Reverse Voltage	: 600 to 1000 Volts
Forward Current	: 3 Ampere

## 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%.

Characteristics	Symbol	FR305+	FR307+	Unit
Max. Recurrent Peak Reverse Voltage	$V_{RRM}$	600	1000	V
Max. RMS Voltage	$V_{RMS}$	420	700	V
Max. DC Blocking Voltage	$V_{DC}$	600	1000	V
Max. Average Forward Rectified Current @ $T_A = 75^\circ\text{C}$	$I_{(AV)}$	3		A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load (JEDEC Method)	$I_{FSM}$	150		A
Peak Forward Voltage at 3A DC	$V_F$	1.3		V
Maximum DC Reverse Current @ $T_J = 25^\circ\text{C}$ Rated DC Blocking Voltage @ $T_J = 100^\circ\text{C}$	$I_R$	5 100		$\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	$T_{rr}$	250	500	nS
Typical Junction Capacitance (Note 2)	$C_J$	40		pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	15		$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	-55 to +150		$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150		$^\circ\text{C}$

- Notes** : 1. Measured with  $I_F = 0.5\text{A}$ ,  $I_R = 1\text{A}$ ,  $I_{RR} = 0.25\text{A}$   
2. Measured at 1MHz and applied reverse voltage of 4V DC  
3. Thermal resistance junction to ambient.  
4. The typical data above is for reference only

## Ratings and Characteristic Curves

FIG. 1 – FORWARD CURRENT DERATING CURVE

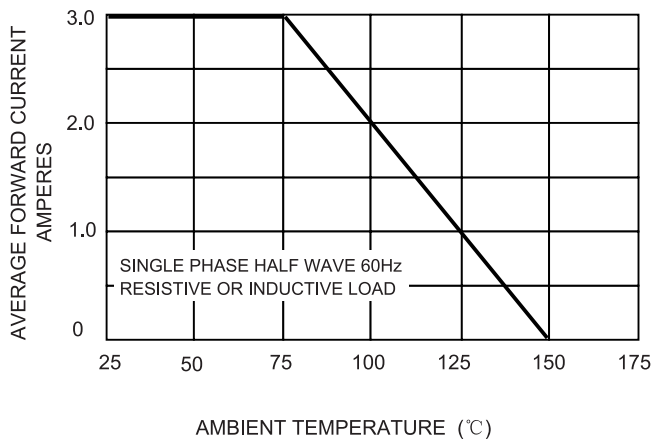


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

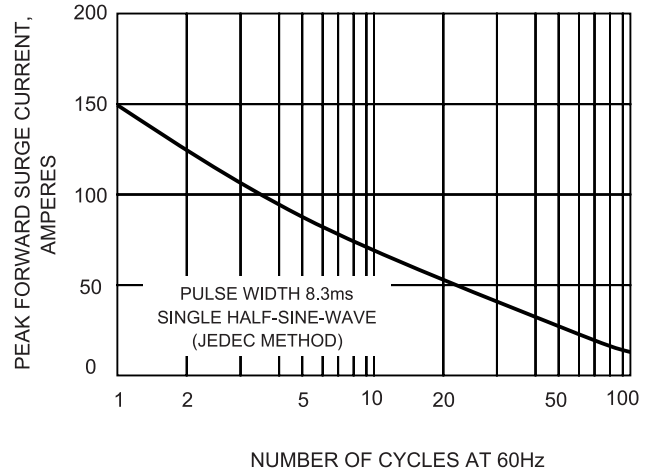


FIG. 3 – TYPICAL JUNCTION CAPACITANCE

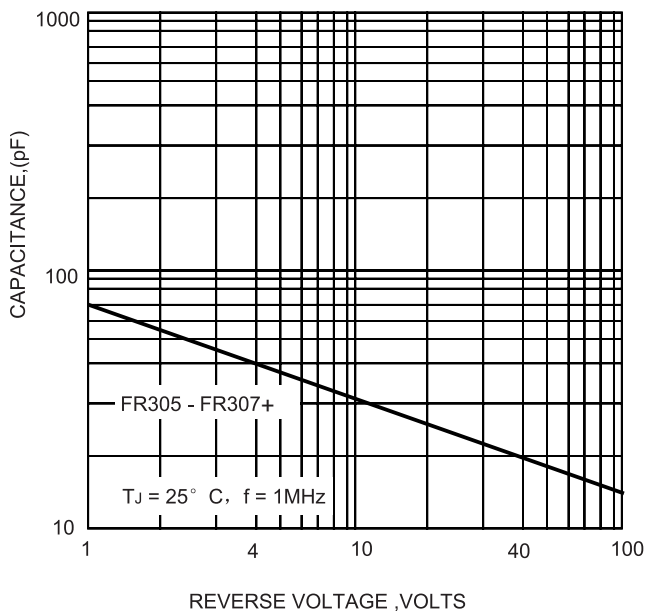
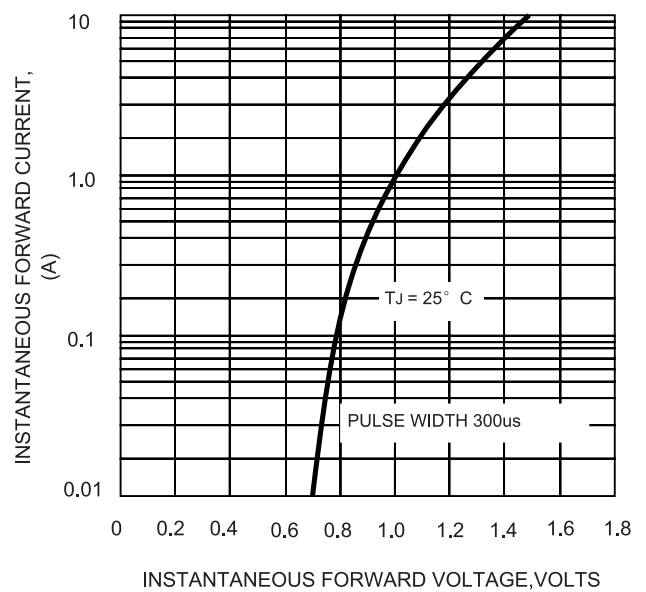


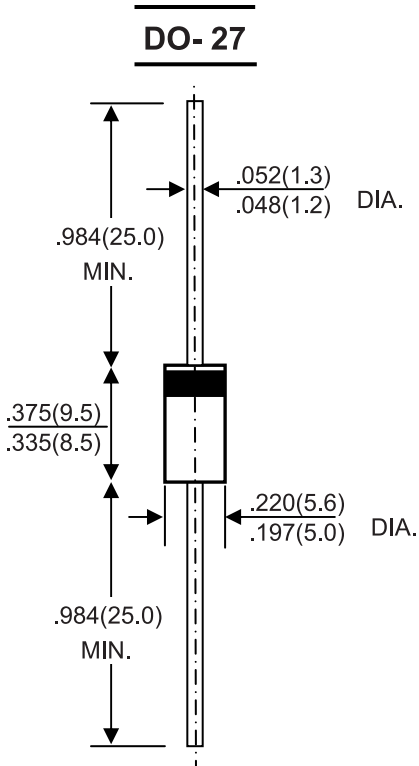
FIG.4-TYPICAL FORWARD CHARACTERISTICS



# Fast Recovery Rectifier



## Dimensions:



Dimensions : Inches (Millimetres)

## Part Number Table

Description	Part Number
Fast Recovery Rectifiers	FR305+
	FR307+

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