



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		μA
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

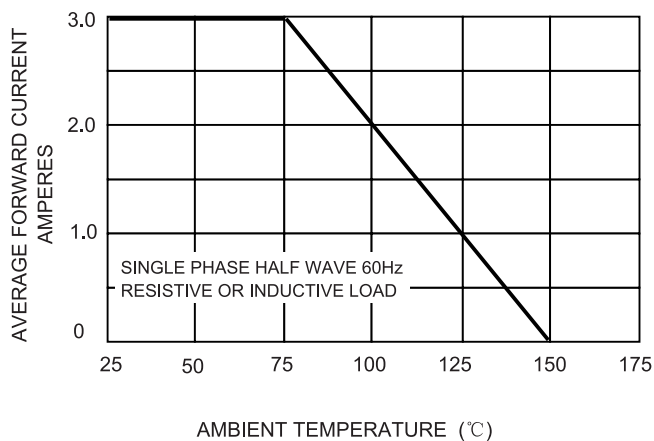


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

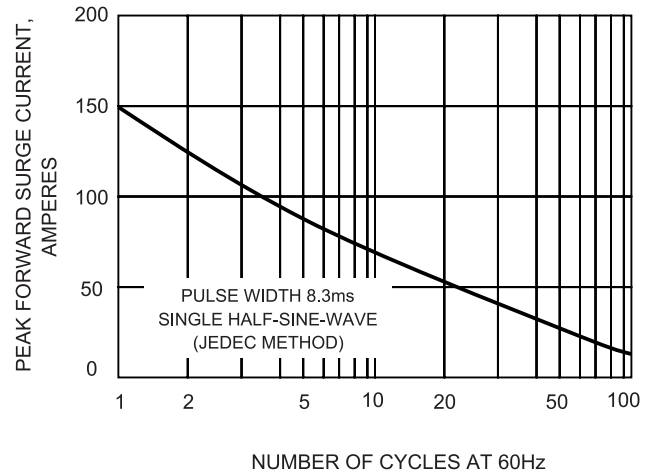


FIG. 3 – TYPICAL JUNCTION CAPACITANCE

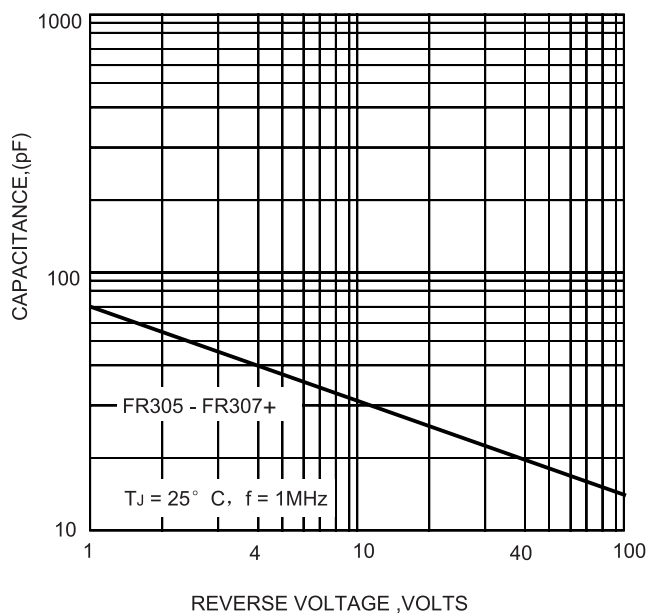
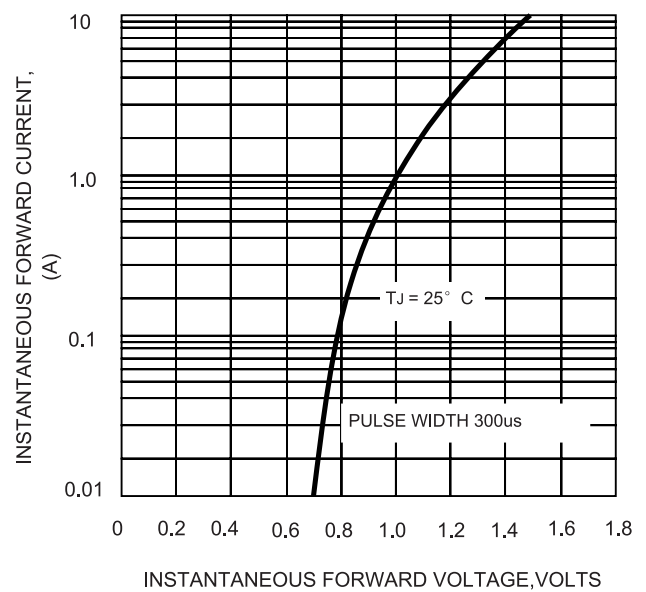
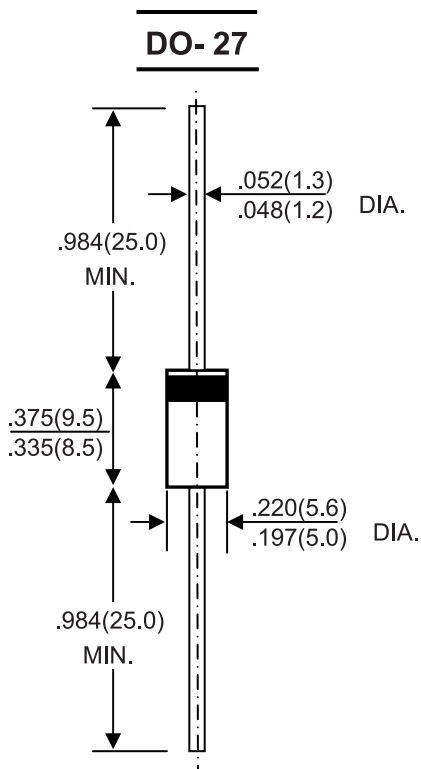


FIG.4-TYPICAL FORWARD CHARACTERISTICS



Dimensions:



Dimensions : Inches (Millimetres)

Part Number Table

Description	Part Number
Fast Recovery Rectifiers	FR305+
	FR307+

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