



FR101 THRU FR107

1.0 AMP. Fast Recovery Rectifiers

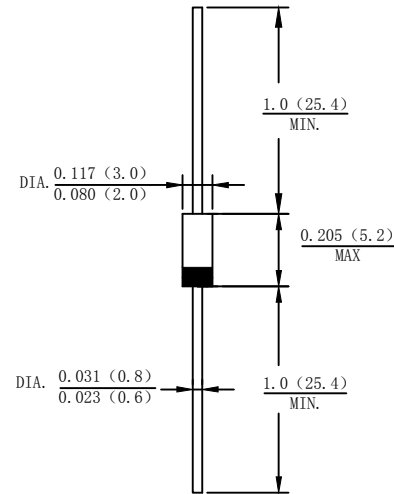
Features

- Low power loss.
- High current capability
- High reliability
- High surge current capability
- Plastic material-UL flammability 94V-0

Mechanical Data

- Case: Molded plastic DO-41
- Terminals: Plated leads solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Making: Type Number
- Lead Free: For RoHS/Lead Free Version

Case: DO-41



Dimensions in inches and (millimeters)

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%

Type Number	SYMBOL	FR101	FR102	FR103	FR104	FR105	FR106	FR107	Unit
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
Average Rectified Output Current (Note 1) @ $T_L = 90^\circ C$	$I_{F(AV)}$	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave @ $T_j = 125^\circ C$ Superimposed On Rated Load (JEDEC Method)	I_{FSM}	30							A
Non-Repetitive Peak Forward Surge Current 1.0ms Single half sine-wave @ $T_j = 125^\circ C$ Superimposed On Rated Load (JEDEC Method)	I_{FSM}	24							A
Non-Repetitive Peak Forward Surge Current 10000 times of the wave surge current (time width 1ms, time interval 3s)	I_{FSM}	60							A
10000 times of the wave surge current (time width 1ms, time interval 3s)	I_{FSM}	48							A
I^2t Rating for Fusing ($t < 8.3ms$)	I^2t	22.5							A
Forward Voltage @ $I_F = 1.0A$	V_{FM}	3.735							A^2s
Peak Reverse Current @ $T_A = 25^\circ C$	I_R	1.3							V
At Rated DC Blocking Voltage @ $T_A = 125^\circ C$		5.0							uA
Maximum Reverse Recovery Time (Note 1)	T_{RR}	150			250		500		nS
Typical Junction Capacitance (Note 2)	C_J	10							pF
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	55							$^\circ C/W$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 150							$^\circ C$

Note:

1. Reverse Recovery Test Conditions: $I_F = 0.5A$, $I_R = 1A$, $I_{rr} = 0.25A$.
2. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C



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Fig. 1 Forward Current Derating Curve

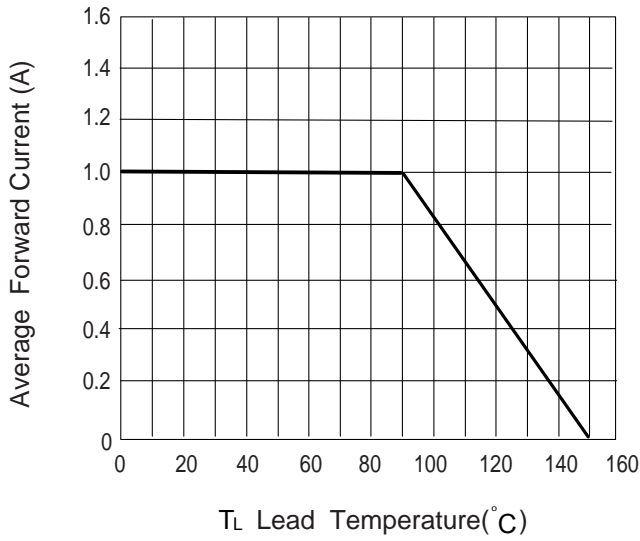


Fig. 2 Typ. Forward Characteristics

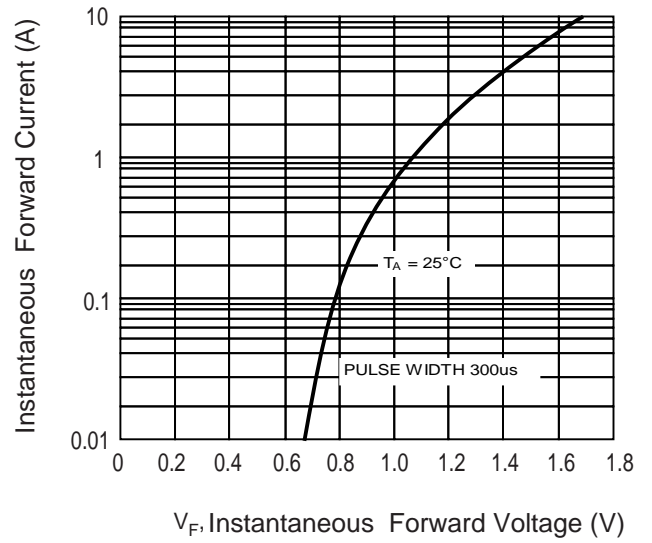


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

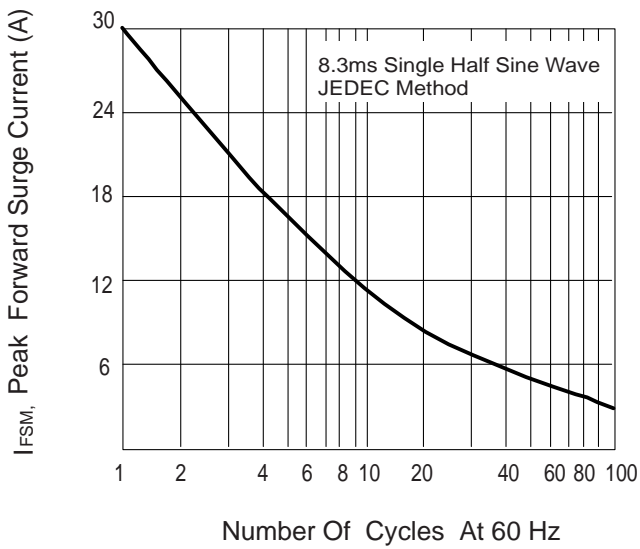


Fig. 4 Typical Junction Capacitance

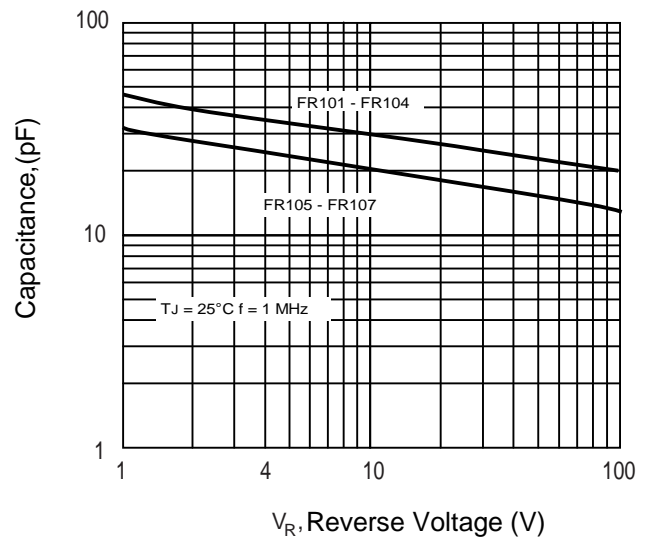
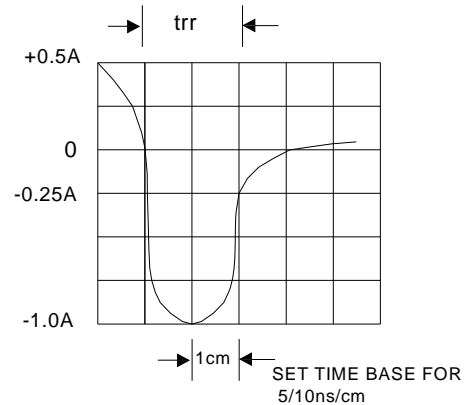
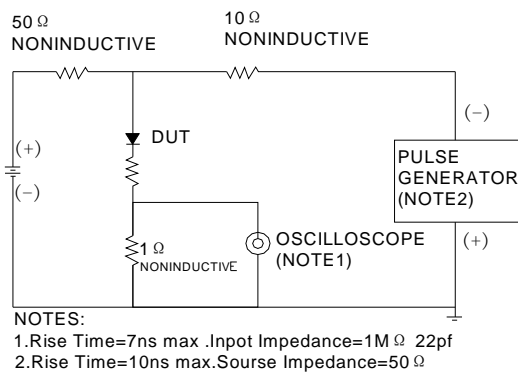


Fig. 5 Reverse Recovery Time Characteristic And Test Circuit Diagram





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