

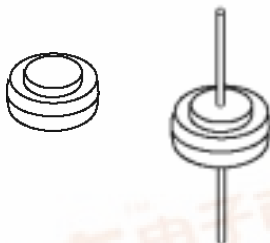


Data Sheet

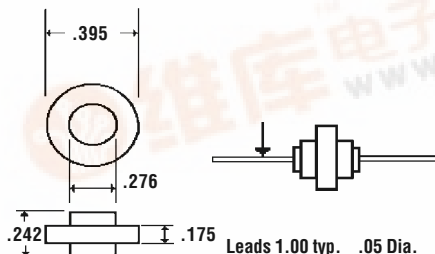
50 Amp PLASTIC SILICON AUTOMOTIVE RECTIFIERS

FR5001 . . . 5004 Series

Description



Mechanical Dimensions



Features

- LOW COST
- HIGH SURGE CAPABILITY
- DIFFUSED JUNCTION

- LOW LEAKAGE CURRENT
- HIGH TEMPERATURE CAPABILITY
- MEETS UL SPECIFICATION 94V-0

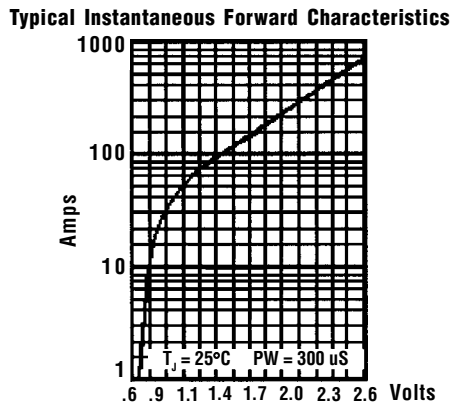
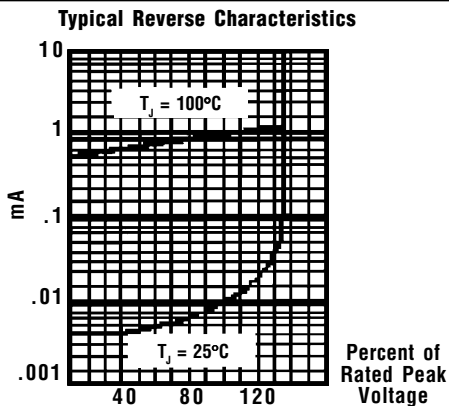
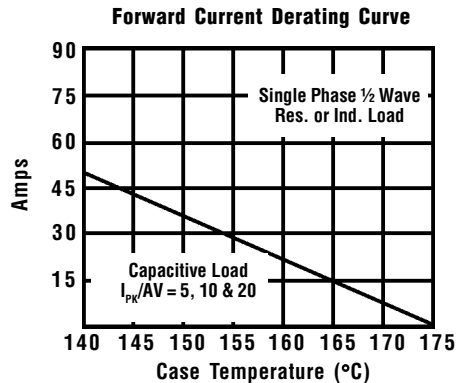
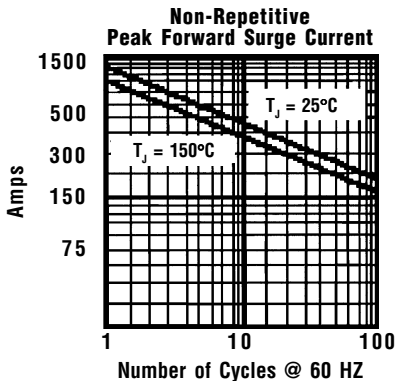
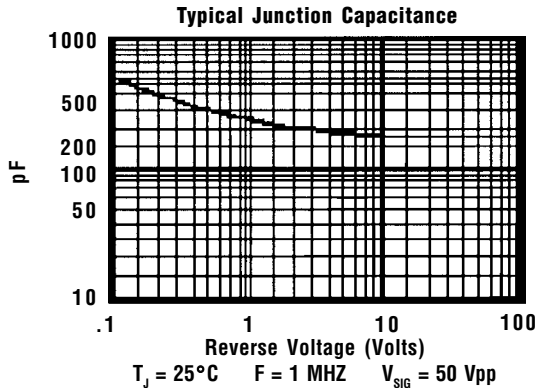
Electrical Characteristics @ 25°C.	FR5001 . . . 5004 Series				Units
Maximum Ratings	FR5001	FR5002	FR5003	FR5004	
Peak Repetitive Reverse Voltage... V_{RRM}	100	200	300	400	Volts
RMS Reverse Voltage... $V_{R(rms)}$	70	140	210	280	Volts
DC Blocking Voltage... V_{DC}	100	200	300	400	Volts
Average Forward Rectified Current... $I_{F(av)}$ Single Phase Resistive Load, 60 HZ, $T_c = 150^\circ\text{C}$	50				Amps
Non-Repetitive Peak Forward Surge Current... I_{FSM} Surge Supplied @ Rated Load Conditions, ½ Sine Wave, Single Phase, 60 HZ	600				Amps
Forward Voltage @ 80A... V_F (Note 4)	1.06				Volts
DC Reverse Current... I_R @ Rated DC Blocking Voltage, 150°C	2.0 500				μAmps μAmps
Typical Junction Capacitance... C_j (Note 1)	300				pF
Typical Thermal Resistance... $R_{\theta JC}$ (Note 2)	0.8				°C / W
Typical Reverse Recovery Time... t_{RR}	3.0				μS
Operating & Storage Temperature Range... T_J, T_{STRG}	-50 to 175				°C





50 Amp PLASTIC SILICON AUTOMOTIVE RECTIFIERS

FR5001 . . . 5004 Series



Ratings at
25 Deg. C ambient
temperature
unless otherwise
specified.

Single Phase Half
Wave, 60 HZ
Resistive or
Inductive Load.

For Capacitive
Load, Derate
Current by 20%.

NOTES: 1. Measured @ 1 MHz and applied reverse voltage of 4.0V.

2. Thermal Resistance Junction to Case, Jedec Method.

3. When Mounted to heat sink, from body.

4. Pulse Test, Pulse Width = 200 μS , Duty Cycle 2%