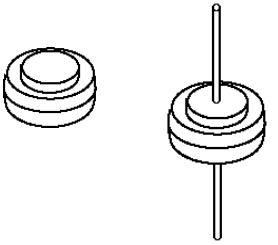
Semiconductor

Data Sheet

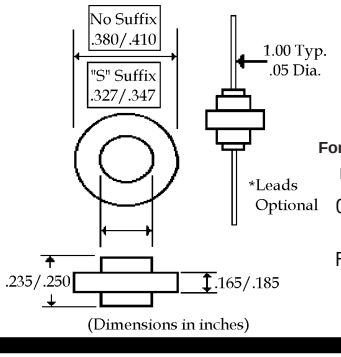
25 Amp PLASTIC SILICON AUTOMOTIVE RECTIFIERS

FR2501 . . . 2510 Series

Description



Mechanical Dimensions



(Dimensions in inches)

For 2 Lead Small Pkg
FR2501SL yellow color side = Cathode

Options - Add Suffix to Part #:
FR2500L = 2 Leads

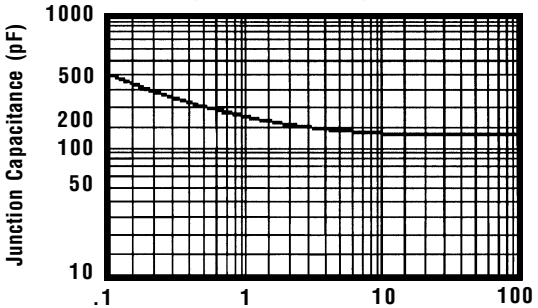
For 1 Lead Small Pkg:
FR2500SC = Lead On Cathode
FR2500SA = Lead On Anode

Features

- **LOW COST**
- **HIGH SURGE CAPABILITY**
- **DIFFUSED JUNCTION**
- **LOW LEAKAGE CURRENT**
- **HIGH TEMPERATURE CAPABILITY**
- **MEETS UL SPECIFICATION 94V-0**

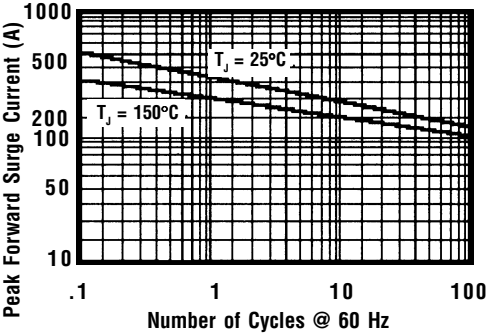
		FR2501 . . . 2510 Series							Units
Maximum Ratings		**FR2501**	**FR2502**	**FR2503**	**FR2504**	**FR2506**	**FR2508**	**FR2510**	
Peak Repetitive Reverse Voltage...V_{RRM}		100	200	300	400	600	800	1000	Volts
RMS Reverse Voltage...$V_{R(rms)}$		70	140	210	280	420	560	700	Volts
DC Blocking Voltage...V_{DC}		100	200	300	400	600	800	1000	Volts
Average Forward Rectified Current...$I_{F(av)}$ T_A = 55°C *(Note 3)*		..... 25							Amps
Non-Repetitive Peak Forward Surge Current...I_{FSM} @ Rated Current & Temp		..... 400							Amps
Operating & Storage Temperature Range...T_J, T_{STRG}		..... -65 to 175							°C
Electrical Characteristics									
Maximum Forward Voltage @ 80A...V_F		< ..... 1.1 ..... >			< ..... 1.2 ..... >				Volts
Maximum DC Reverse Current...I_R @ Rated DC Blocking Voltage,	25°C	..... 2.0							µAmps
	150°C	..... 250							µAmps
Typical Junction Capacitance...C_J *(Note 1)*		< ..... 200 ..... >			< ..... 300 ..... >				pF
Typical Thermal Resistance...$R_{\theta JA}$ *(Note 2)*		..... 1.0							°C/W
Typical Reverse Recovery Time...t_{RR}		..... 3.0							µs

Typical Junction Capacitance

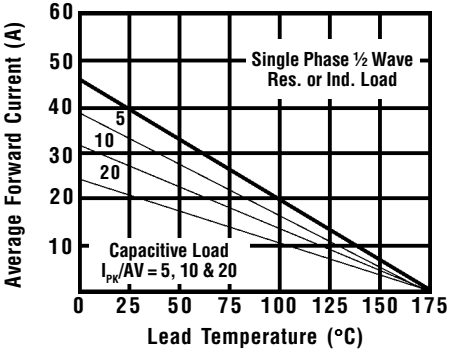


T_J = 25°C F = 1 MHz V_{SIG} = 50 Vpp

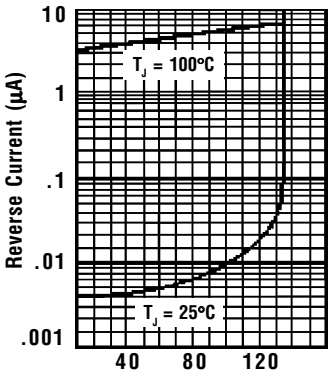
Non-Repetitive Peak Forward Surge Current



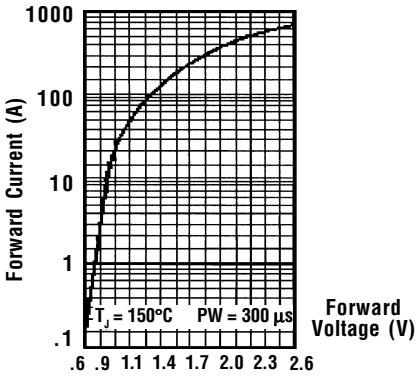
Forward Current Derating Curve



Typical Reverse Characteristics



Typical Instantaneous Forward Characteristics



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 Ambient, Jedec Method.
3. When Mounted to heat sink, from body.