



# SF41 thru SF49

Glass Passivated Super Fast Rectifiers  
Reverse Voltage 50 to 1000 Volts Forward Current 4.0 Amperes

## Features

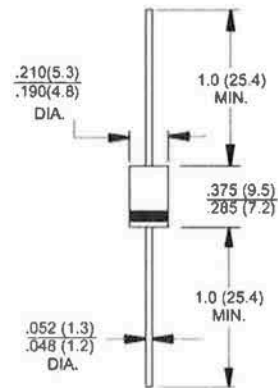
- ◆ Glass passivated chip
- ◆ Super fast switching time for high efficiency
- ◆ Low forward voltage drop and high current capability
- ◆ Low reverse leakage current
- ◆ Plastic material has UL flammability classification 94V-0



DO-201AD

## Mechanical Data

- ◆ Case: JEDEC DO-201AD molded plastic
- ◆ Polarity: Color band denotes cathode
- ◆ Weight: 0.04 ounce, 1.1 grams
- ◆ Mounting position: Any



## Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

Parameter	Symbols	SF41	SF42	SF43	SF44	SF45	SF46	SF47	SF48	SF49	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	150	200	300	400	600	800	1000	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	105	140	210	280	420	560	700	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	150	200	300	400	600	800	1000	Volts
Maximum average forward rectified current @ $T_a=55^\circ\text{C}$	$I_{AV}$	4.0									Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{SM}$	150.0									Amps
Maximum forward Voltage at 4.0A DC	$V_F$	0.95			1.25		1.3	1.7			Volts
Maximum DC reverse current at rated DC blocking voltage @ $T_j=25^\circ\text{C}$ @ $T_j=100^\circ\text{C}$	$I_R$					5.0					$\mu\text{A}$ $\mu\text{A}$
Maximum reverse recovery time (Note 1)	$t_{rr}$	35			40		50				nS
Typical junction capacitance (Note 2)	$C_J$	80					60				pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$	15									$^\circ\text{C}/\text{W}$
Operating junction 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  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$
  2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC
  3. Thermal Resistance Junction to Ambient



## RATINGS AND CHARACTERISTIC CURVES

