

# SF101~SF107

## SUPER FAST RECOVERY SILICON DIODES

Reverse Voltage – 50 to 1000 Volts

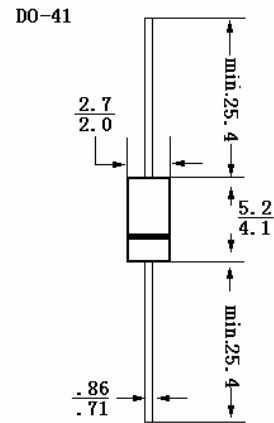
Forward Current – 1.0 Ampere

### Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0.
- Void free moulded plastic technique
- Fast switching for high efficiency
- High forward surge current capability
- High temperature soldering: 250°C/10s, 0.375"(9.5mm) lead length, 5lbs(2.3Kg) tension

### Mechanical Data

- **Case:** DO-41 plastic moulded
- **Terminals:** Lead –Tin plated axial leads, solderable per MIL-STD-750, method 2026
- **Polarity:** Colored band (silver) denotes cathode
- **Mounting position:** Any



**VOLTAGE RANGE**  
50 to 1000 Volts  
**CURRENT**  
1.0 Amperes

Dimensions in mm

### Absolute Maximum Ratings and Characteristics

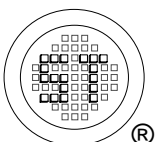
Rating at 25°C ambient temperature unless otherwise specified.

	Symbols	SF101	SF102	SF103	SF104	SF105	SF106	SF107	Units
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
Maximum Average Forward Rectified Current 0.375" Lead Length at $T_A = 50^\circ C$	$I_{(AV)}$	1.0							A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (MIL-STD-750D 4065 method)	$I_{FSM}$	30							A
Maximum Forward Voltage at 1.0A	$V_F$	1.0		1.25		1.4			V
Maximum DC Reverse Current at $T_a = 25^\circ C$ at Rated DC Blocking Voltage at $T_a = 125^\circ C$	$I_R$	5.0 400							$\mu A$
Maximum Time of Reverse Recovery (note1)	$T_{rr}$	35							nS
Typical Junction Capacitance(note2)	$C_j$	22							pF
Typical Thermal Resistance(note3)	$R_{ja}$	50							$^\circ C/W$
Operating Junction Temperature	$T_j$	-55 to +150							$^\circ C$
Storage Temperature Range	$T_s$	-55 to +150							$^\circ C$

Notes: 1.Reverse recovery test conditions:  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{rr} = 0.25A$ .

2.Measured at 1.0MHz and applied reverse voltage of 4.0V

3.Thermal resistance from junction ambient and from junction to lead at 9.5mm lead length, P.C.B mounted.



**SEMTECH ELECTRONICS LTD.**

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002  
Certificate No. 05103



ISO 14001:2004  
Certificate No. 7116



ISO 9001:2000  
Certificate No. 0506098

Dated : 02/05/2003