



# SF101G THRU SF106G

Glass Passivated Super Fast Recovery Rectifier

## Features

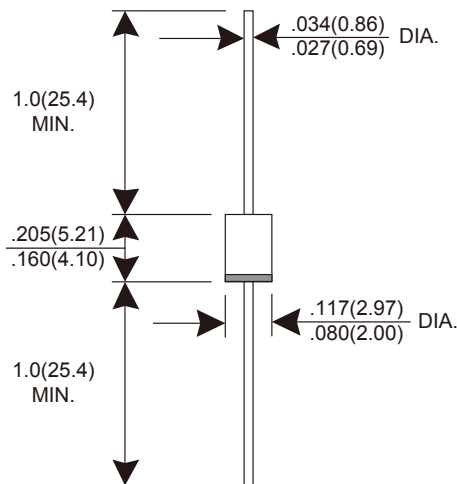
- \* Fast switching for high efficiency
- \* Low forward voltage drop
- \* High current capability
- \* Low reverse leakage current
- \* High surge current capability

## Mechanical Data

- \* Case: Molded plastic, DO-41
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solderable per MIL-STD-202, method 208
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

**Voltage Range 50 to 600 V**  
**Current 1.0 Ampere**

### DO-41



## 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%.

PARAMETER	SYMBOL	SF101G	SF102G	SF103G	SF104G	SF105G	SF106G	UNIT
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	300	400	600	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	210	280	420	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	300	400	600	V
Maximum average forward rectified current @ $T_A=55^\circ\text{C}$	$I_{F(AV)}$	1.0						A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	30						A
Maximum instantaneous forward voltage @ $I_F=1.0\text{A}$	$V_F$	0.95		1.3		1.7		V
Maximum DC reverse current at rated DC blocking voltage @ $T_A=25^\circ\text{C}$ @ $T_A=125^\circ\text{C}$	$I_R$	1 150						$\mu\text{A}$
Maximum reverse recovery time (Note 1)	$t_{rr}$	35						ns
Typical junction capacitance (Note 2)	$C_J$	40			25			pF
Typical thermal resistance from junction to ambient (Note 3)	$R_{\theta JA}$	60						$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-55 to +150						$^\circ\text{C}$

NOTES : (1) Reverse recovery test conditions  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{rr} = 0.25\text{A}$ .

(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts DC.

(3) Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length, PCB mounted.

# RATINGS AND CHARACTERISTICS CURVES SF101G THRU SF106G

Fig.1 - Forward Current Derating Curve

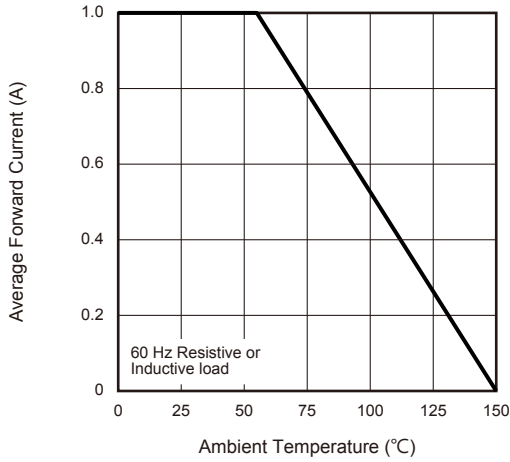


Fig.2 - Maximum Non-Repetitive Peak Forward Surge Current

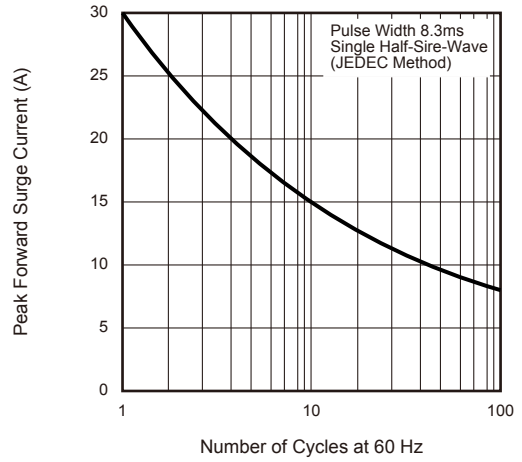


Fig.3 - Typical Instantaneous Forward Characteristics

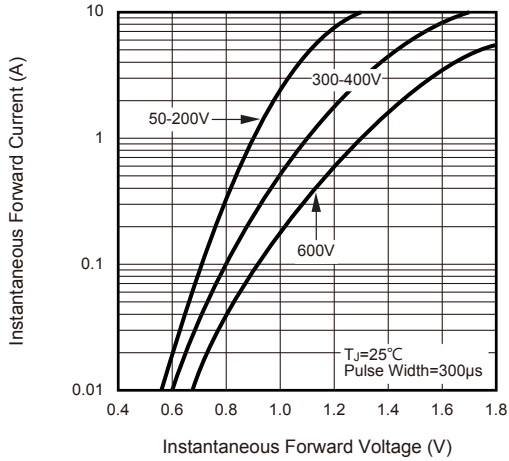


Fig.4 - Typical Reverse Leakage Characteristics

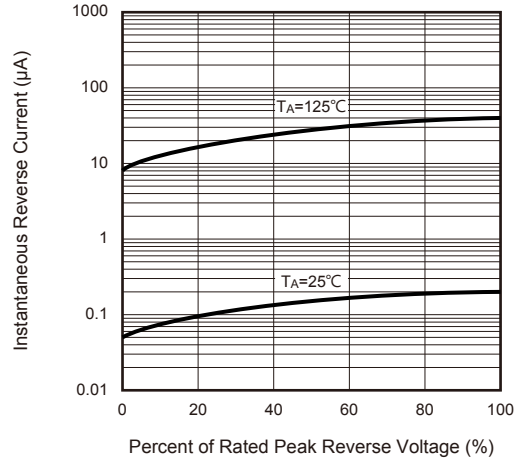


Fig.5 - Typical Junction Capacitance

