# DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

**SF1AFL THRU SF1JFL**

*TECHNICAL SPECIFICATIONS OF SUPER FAST SURFACE MOUNT GLASS PASSIVATED RECTIFIER*

*VOLTAGE RANGE - 50 to 600 Volts* *CURRENT - 1.0 Ampere*

## FEATURES

* Ideal for surface mounted applications
* Low leakage current
* Low profile space
* Low forward voltage drop
* High forward surge capability
* Glass passivated junction

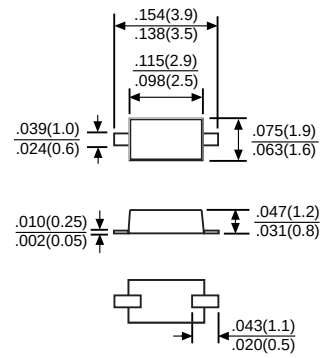
## MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94V-0 rate flame retardant
*Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
* Polarity: As marked
* Mounting position: Any
* Weight: 0.017 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

SOD-123FL




Dimensions in inches and (millimeters)

| | | SYMBOL | SF1AFL | SF1BFL | SF1CFL | SF1DFL | SF1EFL | SF1GFL | SF1JFL | UNITS |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | | $V_{RRM}$ | 50 | 100 | 150 | 200 | 300 | 400 | 600 | Volts |
| Maximum RMS Voltage | | $V_{RMS}$ | 35 | 70 | 11 | 140 | 210 | 280 | 420 | Volts |
| Maximum DC Blocking Voltage | | $V_{DC}$ | 50 | 100 | 150 | 200 | 300 | 400 | 600 | Volts |
| Maximum Average Forward Rectified Current | | $I_O$ | 1.0 | | | | | | | Amps |
| Peak Forward Surge Current $I_{FM}$(surge): 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | | $I_{FSM}$ | 25 | | | | | | | Amps |
| Maximum Forward Voltage at 1.0A DC | | $V_F$ | 0.95 | | | | 1.25 | | 1.70 | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | @$T_A$ = 25°C | $I_R$ | 5.0 | | | | | | | uAmps |
| | @$T_A$ = 125°C | | 150 | | | | | | | |
| Maximum reverse recovery time at $I_F$ = 0.5A , $I_R$ = 1.0A , Irr = 0.25A | | $t_{rr}$ | 35 | | | | | | | nS |
| Typical thermal resistance | | $R_{\theta JA}$ | 150 | | | | | | | °C/W |
| Operating and Storage Temperature Range | | $T_J$, $T_{STG}$ | -55 to + 150 | | | | | | | °C |

NOTES :1. Mounted on FR-4 P.C.B. with 0.9X1.5 mm copper pads areas.

# RATING AND CHARACTERISTIC CURVES (SF1AFL THRU SF1MFL)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

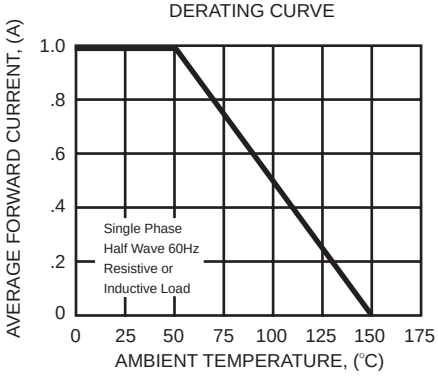



FIG. 2 - MAXIMUM NON-REPETITIVE FOREARD SURGE CURRENT

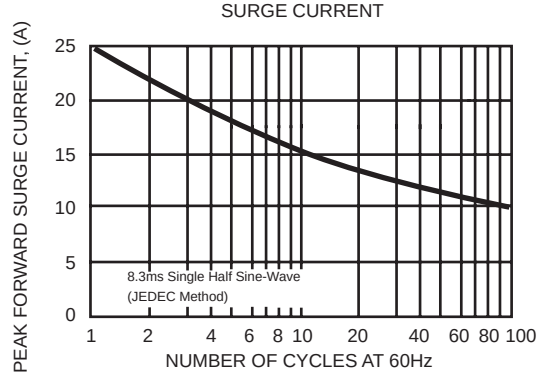



FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

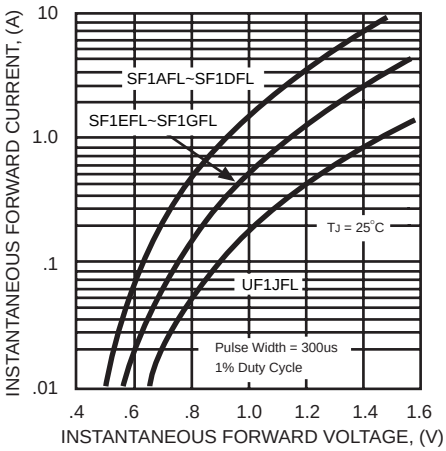



FIG. 4 - TYPICAL REVERSE CHARACTERISTICS