# DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

# S1AFL THRU S1MFL

## TECHNICAL SPECIFICATIONS OF GENERAL PRUPOSE SILICON RECTIFIER

*VOLTAGE RANGE - 50 to 1000 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

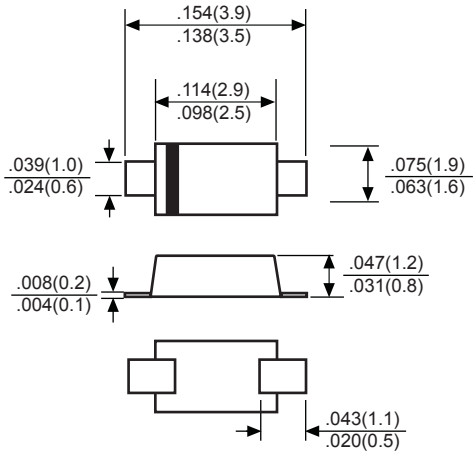
### MECHANICAL DATA

* Case: Molded plastic
* Epoxy: UL 94-V0 rate flame retardant
* Lead: MIL-STD-202E, Method 208 guaranteed
* Polarity: Color band denotes cathode end
* 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, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

SOD-123FL




Dimensions in inches and (millimeters)

| | | SYMBOL | S1AFL | S1BFL | S1DFL | S1GFL | S1JFL | S1KFL | S1MFL | UNITS |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | | $V_{RRM}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage | | $V_{RMS}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | | $V_{DC}$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Current at $T_A$ = 55°C | | $I_O$ | 1.0 | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | | $I_{FSM}$ | 30 | | | | | | | Amps |
| Maximum Instantaneous Forward Voltage at 1.0 A DC | | $V_F$ | 1.1 | | | | | | | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | @TJ = 25°C | $I_R$ | 5.0 | | | | | | | μAmps |
| | @TJ = 125°C | | 100 | | | | | | | |
| Typical Thermal Resistance (Note 1) | | $R_{\theta JA}$ | 150 | | | | | | | °C/W |
| Operating and Storage Temperature Range | | $T_J$,$T_{STG}$ | -55 to +150 | | | | | | | °C |

Note 1 :Typical thermal resistsnce from junction to ambient.

# RATING AND CHARACTERISTIC CURVES (S1AFL THRU S1MFL)

FIG. 1
TYPICAL FORWARD CURRENT
DERATING CURVE

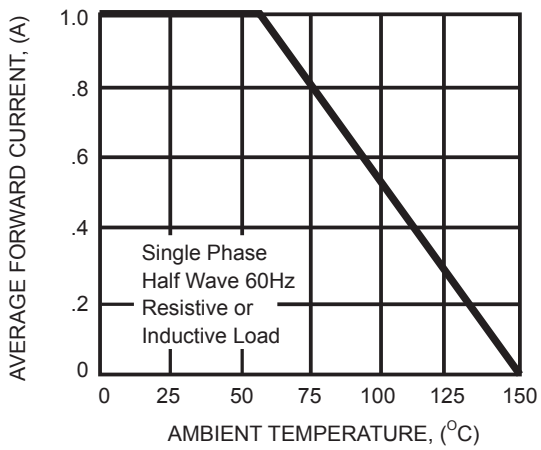



FIG. 2
MAXIMUM NON-REPETITIVE FORWARD
SURGE CURRENT

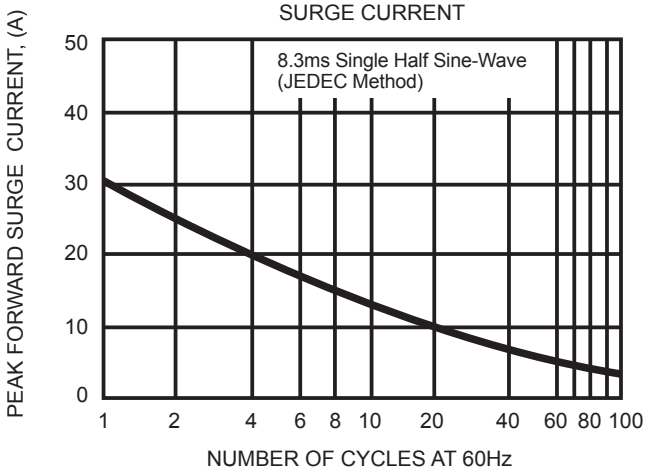



FIG. 3
TYPICAL INSTANTANEOUS
FORWARD CHARACTERISTICS

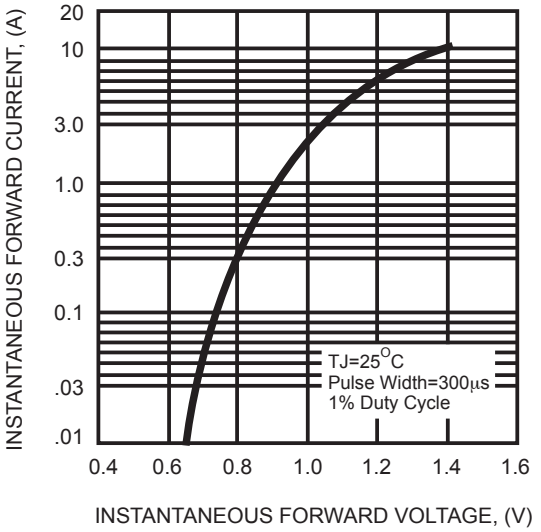
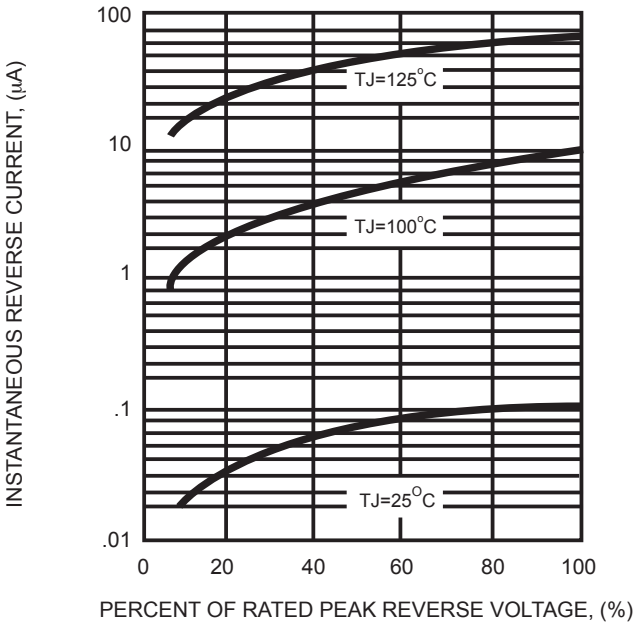



FIG. 4
TYPICAL REVERSE CHARACTERISTICS



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