

# Kingtronics®

# S1A THRU S1M

## SURFACE MOUNT GLASS PASSIVATED JUNCTION RECTIFIER

**REVERSE VOLTAGE 50 to 1000 Volts FORWARD CURRENT 1.0 Ampere**

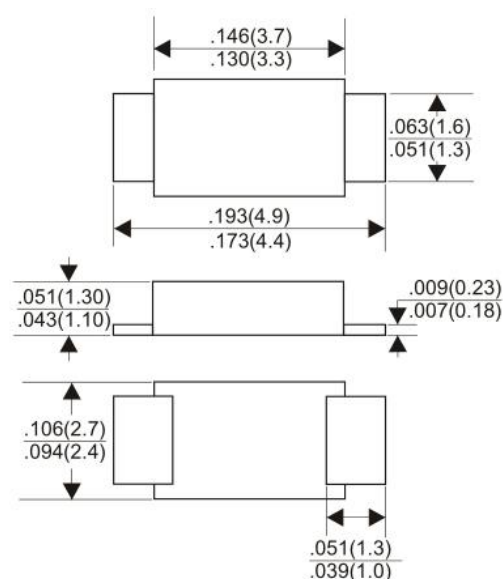
### FEATURES

- Ideal for surface mount applications
- Easy pick and place
- Built-in strain relief
- High surge current capability

### MECHANICAL DATA

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Terminals: Solder plated, solderable per MIL-STD-202F, method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting position: Any

### SMAF



### 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%

Dimensions in inches and (millimeters)

| Catalog Number   | SYMBOLS         | S1A                 | S1B | S1D | S1G | S1J | S1K | S1M  | UNIT         |    |
|--|-----------------|---------------------|-----|-----|-----|-----|-----|------|--------------|----|
| Maximum Repetitive 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<br>375"(9.5mm) Lead Length At $T_A = 75^\circ C$                             | $I_{(AV)}$      | 1                   |     |     |     |     |     |      | Amps         |    |
| Peak Forward Surge Current 8.3ms single half sine-wave<br>superimposed on rated load (JEDEC Method) $T_L = 90^\circ C$ | $I_{FSM}$       | 30                  |     |     |     |     |     |      | Amps         |    |
| Maximum instantaneous forward voltage per at 1.0A  | $V_F$           | 1.0                 |     |     |     |     |     |      | VOLTS        |    |
| Maximum DC Reverse Current<br>at Rated DC Blocking Voltage at  | $I_R$           | $T_A = 25^\circ C$  |     |     |     |     |     |      | 5            | uA |
|  |                 | $T_A = 100^\circ C$ |     |     |     |     |     |      |              |    |
| Typical Junction Capacitance (Note 1)  | $C_J$           | 9                   |     |     |     |     |     |      | pF           |    |
| Typical Thermal Resistance $R_{\theta JA}$ (Note 2)  | $R_{\theta JL}$ | 110                 |     |     |     |     |     |      | $^\circ C/W$ |    |
| Operating and Storage Temperature Rang   | $T_J, T_{STG}$  | -55 to +150         |     |     |     |     |     |      | $^\circ C$   |    |

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V.D.C  
 2. Thermal resistance from junction to ambient

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## RATINGS AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD

CHARACTERISTICS

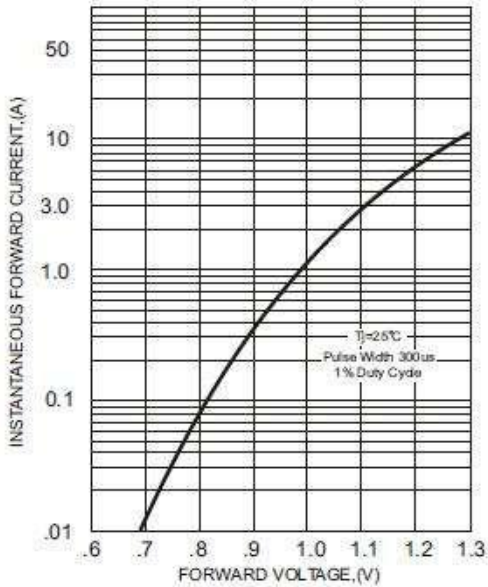


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

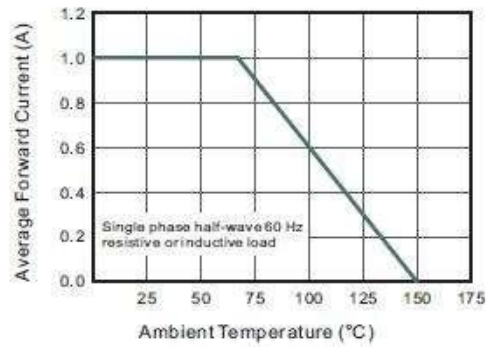


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

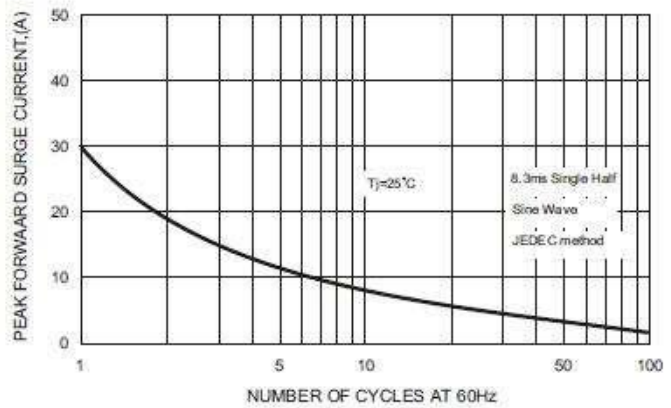


FIG.3 - TYPICAL REVERSE

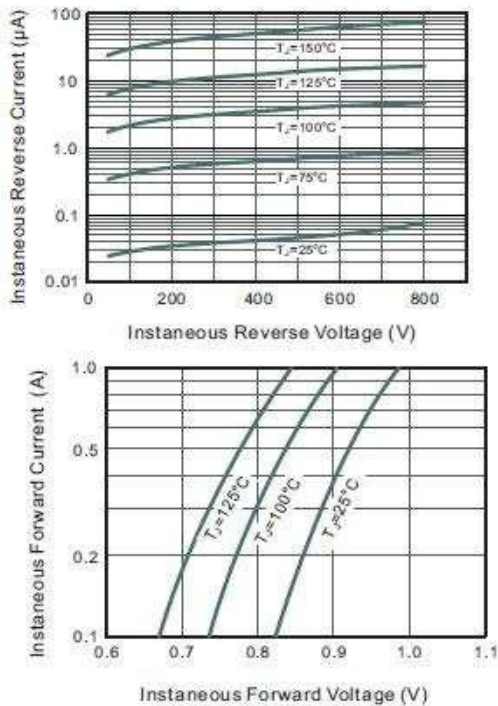
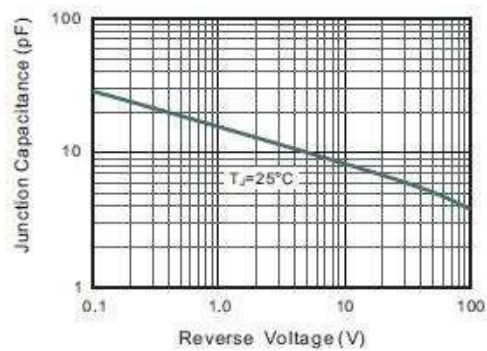


FIG.5-TYPICAL JUNCTION CAPACITANCE



Note: Specifications are subject to change without notice.

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