

# K32 THRU K310

## 3.0 AMP SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

### FEATURES

- \* Ideal for surface mount applications
- \* Easy pick and place
- \* Built-in strain relief
- \* Low forward voltage drop

### MECHANICAL DATA

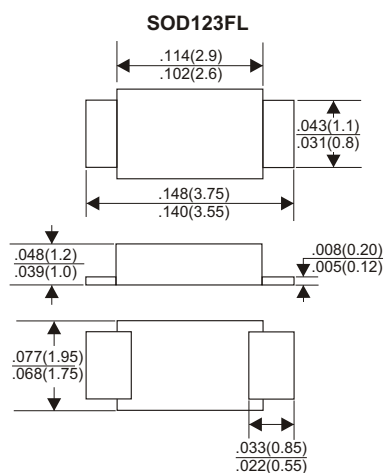
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Metallurgically bonded construction
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

### VOLTAGE RANGE

20 to 100 Volts

### CURRENT

3.0 Ampere



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| TYPE NUMBER                                                                                        | K32        | K33 | K34  | K35 | K36  | K38  | K39 | K310 | UNITS |
|----------------------------------------------------------------------------------------------------|------------|-----|------|-----|------|------|-----|------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                             | 20         | 30  | 40   | 50  | 60   | 80   | 90  | 100  | V     |
| Maximum RMS Voltage                                                                                | 14         | 21  | 28   | 35  | 42   | 56   | 63  | 70   | V     |
| Maximum DC Blocking Voltage                                                                        | 20         | 30  | 40   | 50  | 60   | 80   | 90  | 100  | V     |
| Maximum Average Forward Rectified Current                                                          | 3.0        |     |      |     |      |      |     |      | A     |
| At T <sub>L</sub> =100°C                                                                           |            |     |      |     |      |      |     |      |       |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | 80         |     |      |     |      |      |     |      | A     |
| Maximum Instantaneous Forward Voltage at 3.0A                                                      | 0.55       |     | 0.70 |     | 0.85 |      | V   |      |       |
| Maximum DC Reverse Current Ta=25°C                                                                 | 0.1        |     |      |     |      | 0.02 |     |      | mA    |
| at Rated DC Blocking Voltage Ta=100°C                                                              | 5          |     |      |     |      | 2    |     |      | mA    |
| Typical Junction Capacitance (Note1)                                                               | 300        |     |      |     |      |      |     |      | pF    |
| Typical Thermal Resistance R <sub>JL</sub> (Note 2)                                                | 10         |     |      |     |      |      |     |      | °C/W  |
| Operating Temperature Range T <sub>J</sub>                                                         | -65 — +150 |     |      |     |      |      |     |      | °C    |
| Storage Temperature Range T <sub>STG</sub>                                                         | -65 — +150 |     |      |     |      |      |     |      | °C    |

#### NOTES:

1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Thermal Resistance Junction to Lead.

## RATING AND CHARACTERISTIC CURVES (K32 THRU K310)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

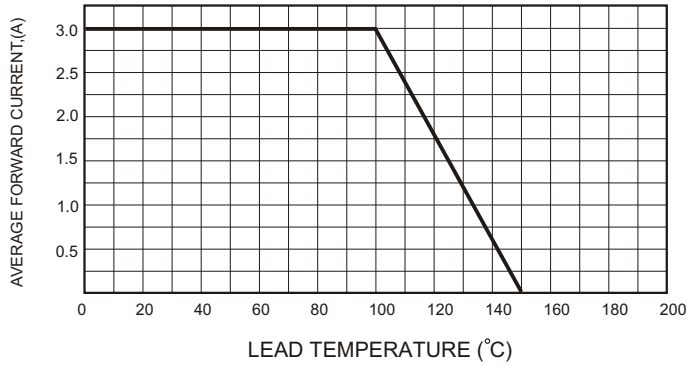


FIG.2-TYPICAL FORWARD CHARACTERISTICS

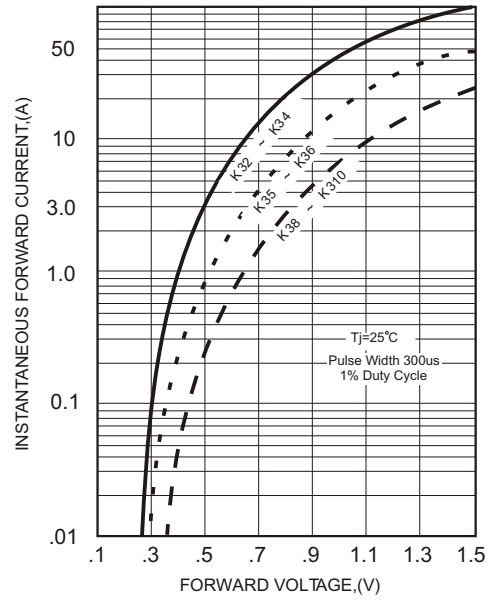


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

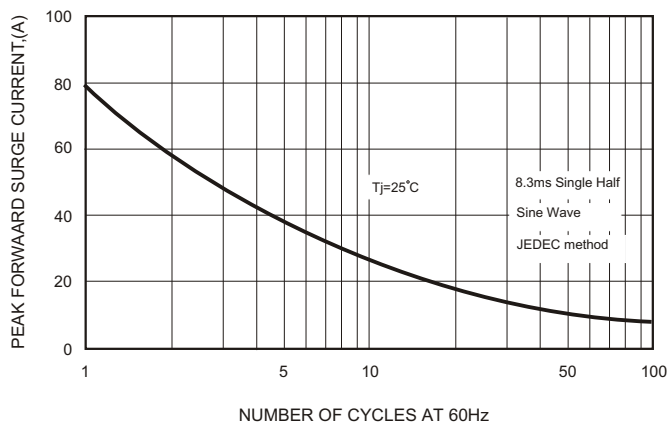


FIG.4-TYPICAL JUNCTION CAPACITANCE

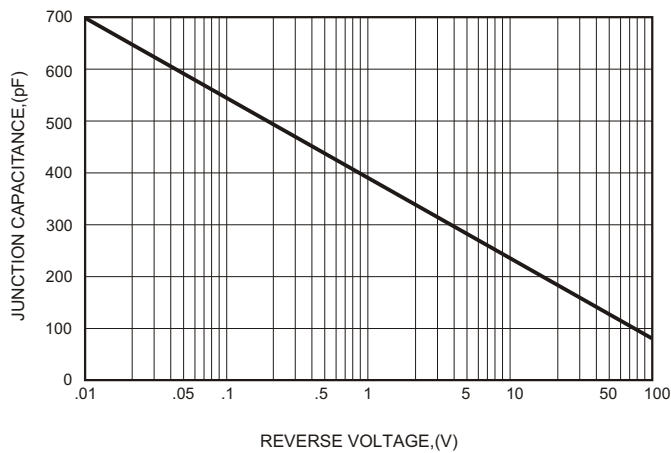


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

