

K32 THUR K320

K32 THUR K320 Schottky Barrier Rectifiers

General description

3.0Amp Surface Mounted Schottky Barrier Rectifiers

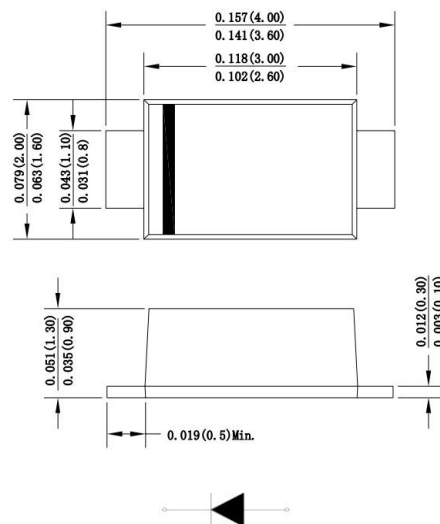
FEATURES

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Built-in strain relief, ideal for automated placement
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed
- 250 C/10 seconds at terminals.

MECHANICAL DATA

- Case: Molded plastic body
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Polarity symbol marking on body
- Mounting Position: Any
- Weight: 0.0007 ounce, 0.02 grams

SOD-123FL



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

| Parameter | SYMBOLS | K32 | K34 | K36 | K38 | K310 | K315 | K320 | UNITS |
|---|-----------|-------------|------|------|-------------|------|------|------|--------------------|
| Marking Code | Mark | K32 | K34 | K36 | K38 | K310 | K315 | K320 | N/A |
| Maximum repetitive peak reverse voltage | V_{RRM} | 20 | 40 | 60 | 80 | 100 | 150 | 200 | V |
| Maximum RMS voltage | V_{RMS} | 14 | 28 | 42 | 56 | 70 | 105 | 140 | V |
| Maximum DC blocking voltage | V_{DC} | 20 | 40 | 60 | 80 | 100 | 150 | 200 | V |
| Maximum average forward rectified current at $T_L=100^\circ\text{C}$ | I_{AV} | 3.0 | | | | | | | A |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load | I_{FSM} | 70.0 | | | | | | | A |
| Maximum instantaneous forward voltage at 2.0A | V_F | 0.55 | 0.70 | 0.85 | 0.95 | | | | V |
| Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$ | I_R | 0.5 50 | | | 0.05 10 | | | | mA |
| Typical thermal resistance | R_{qJA} | 85.0 | | | | | | | $^\circ\text{C/W}$ |
| Operating junction temperature range | T_J | -55 to +125 | | | -55 to +150 | | | | $^\circ\text{C}$ |
| Storage temperature range | T_{STG} | -55 to +150 | | | | | | | $^\circ\text{C}$ |



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Rating And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

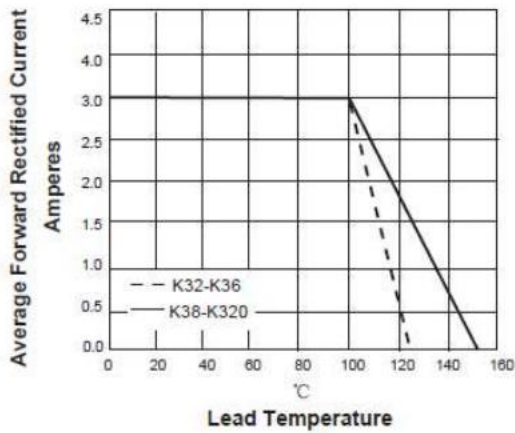


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

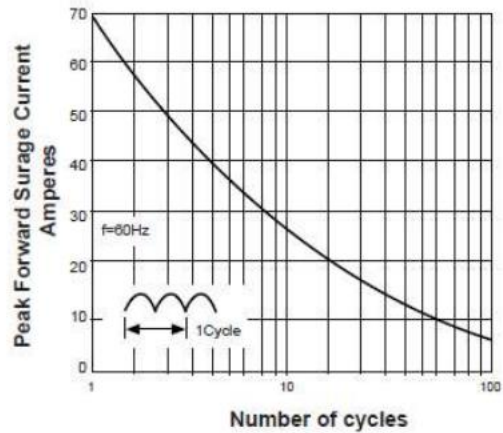


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

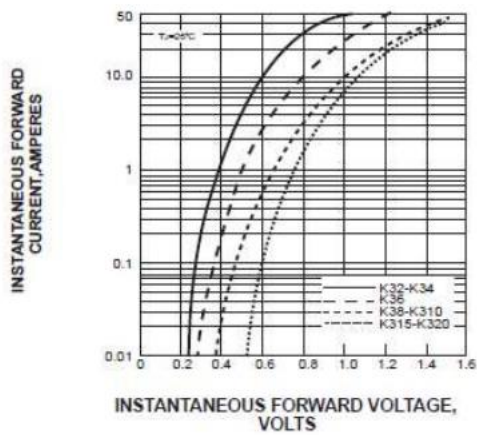
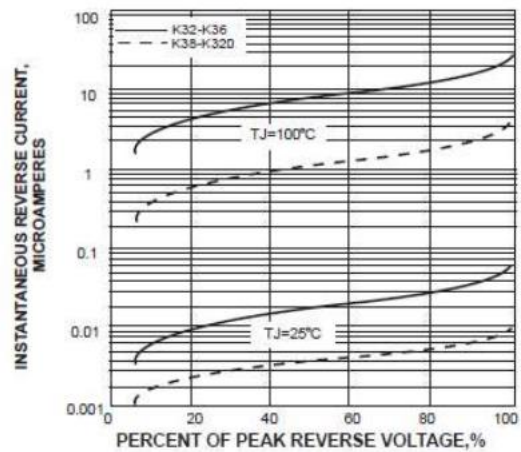
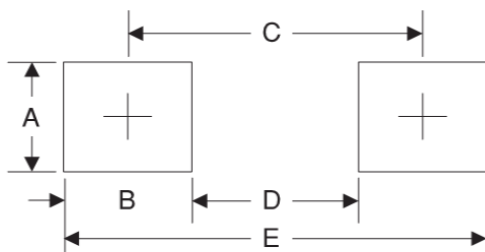


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



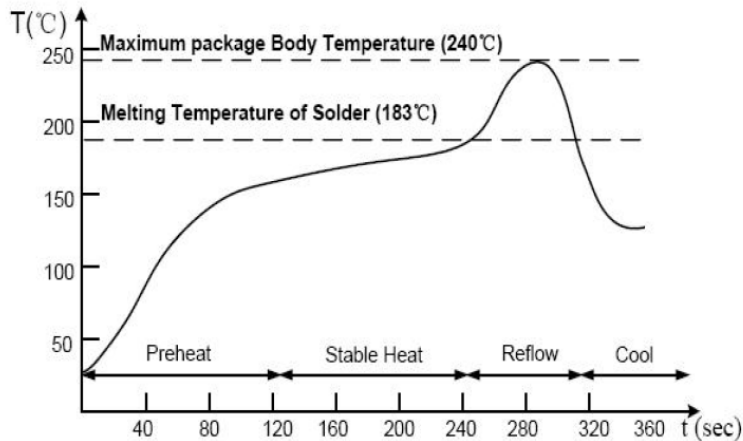
Suggested Pad Layout



| Symbol | Unit (mm) | Unit (inch) |
|--------|-----------|-------------|
| A | 1.2 | 0.048 |
| B | 1.15 | 0.045 |
| C | 3.10 | 0.122 |
| D | 1.95 | 0.077 |
| E | 4.25 | 0.167 |

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Suggested Soldering Temperature Profile

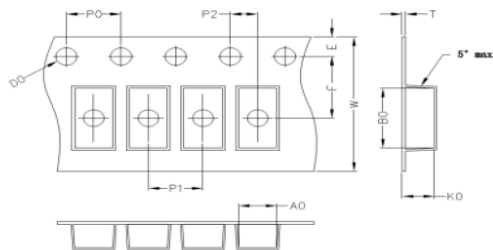


Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Package Information

Carrier Dimension(mm)



| A0 | B0 | K0 | D0 | E | F |
|------|------|------|------|------|-----------|
| 2.15 | 3.95 | 1.35 | 1.55 | 1.75 | 3.50 |
| P0 | P1 | P2 | T | W | Tolerance |
| 4.0 | 4.0 | 2.0 | 0.25 | 8 | 0.1 |

Package Specifications

| Package | Reel Size | Reel DIA. (mm) | Q'TY/Reel (Kpcs) | Box Size (mm) | QTY/Box (Kpcs) | Carton Size (mm) | Q'TY/Carton (Kpcs) |
|----------|-----------|----------------|------------------|---------------|----------------|------------------|--------------------|
| SOD123FL | 7' | 178 | 3 | 180 | 15 | 380*200*200 | 150 |

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