

SOD-123FL

Features

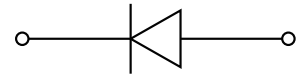
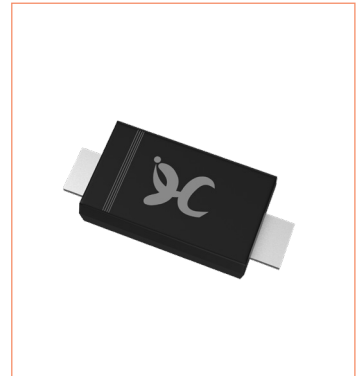
- High Current Capability
- Low Forward Voltage Drop
- Low IR
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Applications

The device is a single rectifier offering low VF and excellent high temperature stability.

Mechanical Data

- Case: SOD-123FL
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end



Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER | SYMBOL | UNIT | DSK32 | DSK34 | DSK35 | DSK36 | DSK38 | DSK310 | DSK315 | DSK320 |
|---|------------------|-------|------------|-------|-------|-------|-------|--------|--------|--------|
| Maximum repetitive peak reverse voltage | V_{RRM} | V | 20 | 40 | 50 | 60 | 80 | 100 | 150 | 200 |
| Maximum RMS Voltage | V_{RMS} | V | 14 | 28 | 35 | 42 | 56 | 70 | 105 | 140 |
| Maximum DC blocking Voltage | V_{DC} | V | 20 | 40 | 50 | 60 | 80 | 100 | 150 | 200 |
| Maximum Average Forward Rectified Current @60Hz sinewave, Resistance load, TL (Fig.1) | $I_{F(AV)}$ | A | 3.0 | | | | | | | |
| Non-repetitive Peak Forward Surge Current @t=8.3ms Half-sine wave | I_{FSM} | A | 80 | | | | | | | |
| Storage temperature | T_{stg} | °C | -55 ~ +150 | | | | | | | |
| Junction temperature | T_j | °C | -55 ~ +125 | | | | | | | |
| Typical Thermal Resistance | $R_{\theta J-A}$ | °C /W | 80 | | | | | | | |

Electrical Characteristics (Ta=25°C Unless otherwise specified)

| PARAMETER | TEST CONDITIONS | SYMBOL | UNIT | DSK32 | DSK34 | DSK35 | DSK36 | DSK38 | DSK310 | DSK315 | DSK320 |
|---------------------------------------|-------------------------------|--------|------|-------|-------|-------|-------|-------|--------|--------|--------|
| Maximum instantaneous forward voltage | $I_F=3.0A$ | V_F | V | 0.55 | | 0.70 | | 0.85 | | 0.95 | |
| Maximum reverse current | $V_R=V_{RRM} T_A=25^\circ C$ | I_R | mA | 0.2 | | | | 0.05 | | | |
| | $V_R=V_{RRM} T_A=100^\circ C$ | | | 20 | | | | 5 | | | |
| Typical junction capacitance | 4.0V DC, 1MHz | C_J | pF | 250 | | | 160 | | | | |

► Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

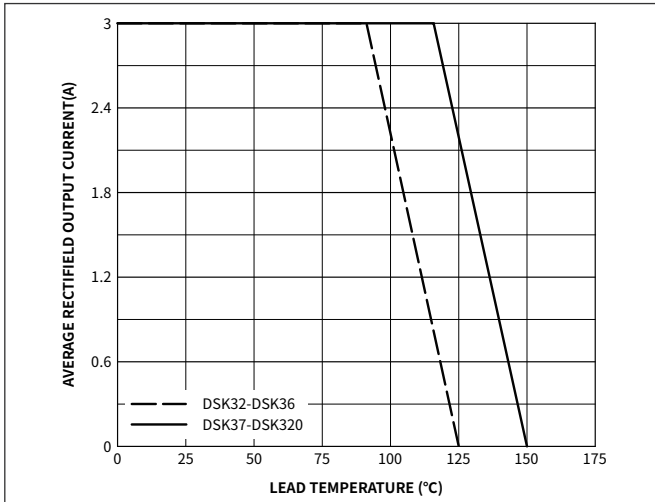


Fig. 1 Forward Current Derating Curve

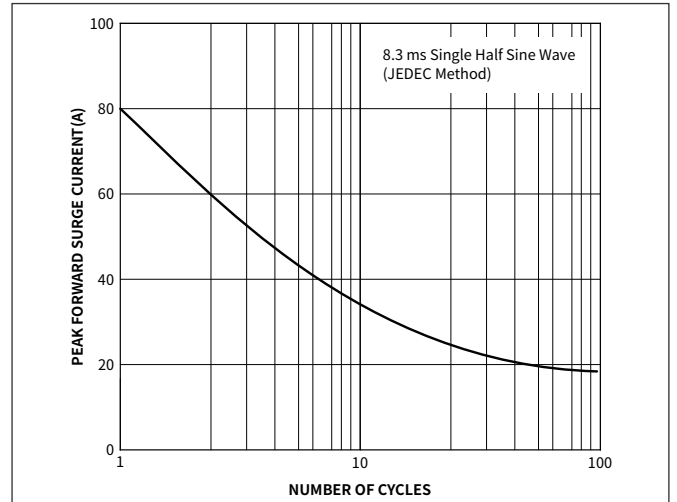


Fig. 2 Maximum Non-Repetitive Peak Forward Surge Current

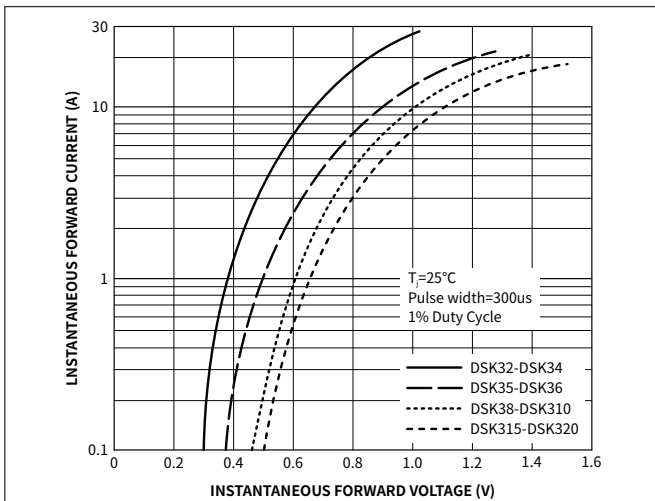


Fig. 3 Typical Forward Voltage

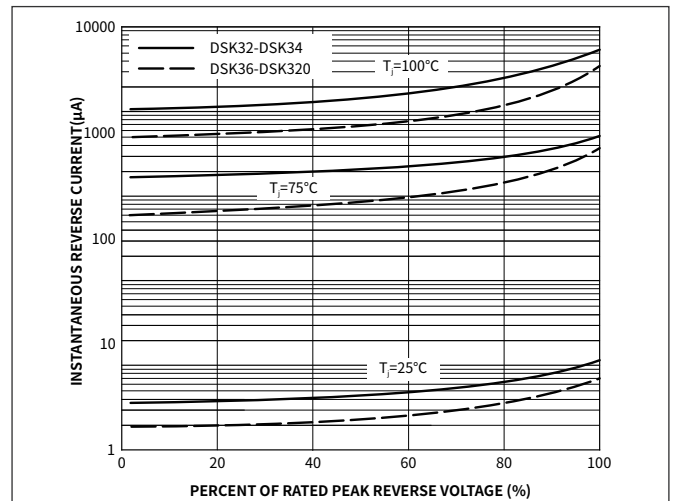


Fig. 4 Typical Reverse Characteristics

▶ Ordering Information

| PACKAGE | PACKAGE CODE | UNIT WEIGHT(g) | REEL(pcs) | BOX(pcs) | CARTON(pcs) | DELIVERY MODE |
|-----------|--------------|----------------|-----------|----------|-------------|---------------|
| SOD-123FL | R1 | 0.0169 | 3000 | 30000 | 120000 | 7" |

▶ Package Outline Dimensions (SOD-123FL)

| Symbol | Dimensions | | | |
|--------|-------------|------|--------|-------|
| | Millimeters | | Inches | |
| | Min. | Max. | Min. | Max. |
| A | 0.90 | 1.10 | 0.035 | 0.430 |
| B | 2.55 | 2.85 | 0.100 | 0.111 |
| C | 1.60 | 1.90 | 0.063 | 0.074 |
| D | 3.60 | 3.90 | 0.031 | 0.043 |
| E | 1.00 | 1.20 | 0.031 | 0.035 |
| F | 0.40 | 0.90 | 0.047 | 0.055 |
| G | 0.10 | 0.25 | 0.003 | 0.007 |

▶ Suggested Pad Layout

| Symbol | Dimensions | | | |
|--------|-------------|------|--------|-------|
| | Millimeters | | Inches | |
| | Min. | Max. | Min. | Max. |
| J | 1.00 | - | 0.040 | - |
| K | - | 1.90 | - | 0.074 |
| M | 1.50 | - | 0.059 | - |

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