



SCHOTTKY BARRIER RECTIFIERS

FEATURES

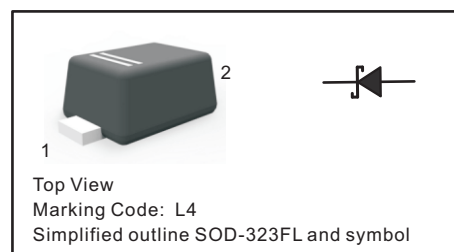
- Metal silicon junction, majority carrier conduction
- Guarding for overvoltage protection
- Low power loss, high efficiency
- High current capability
- low forward voltage drop
- High surge capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

- Case: SOD-323FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 4.5mg / 0.00016oz

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Cathode |
| 2 | Anode |



Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

| Parameter | Symbols | BAT54WFL | Units |
|---|-----------------|---|-------|
| Peak Repetitive Reverse Voltage | V_{RRM} | 30 | V |
| Maximum Average Forward Current at Ta=25°C | I_O | 0.2 | A |
| Power dissipation | P_D | 500 | mW |
| Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 13 | A |
| Maximum Instantaneous Forward Voltage | V_F | 0.32 @ $I_F=0.001A$ 1.0 @ $I_F=0.1A$ | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | I_R | 2.0 @ $V_R=25V$ | uA |
| Thermal Resistance, Junction to Ambient Air | $R_{\theta JA}$ | 635 | °C/W |
| Storage and Operating Junction Temperature Range | T_j, T_{stg} | -55 ~ +125 | °C |



Fig.1 Forward Current Derating Curve

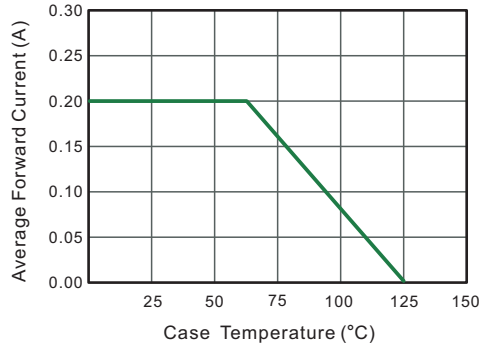


Fig.2 Typical Reverse Characteristics

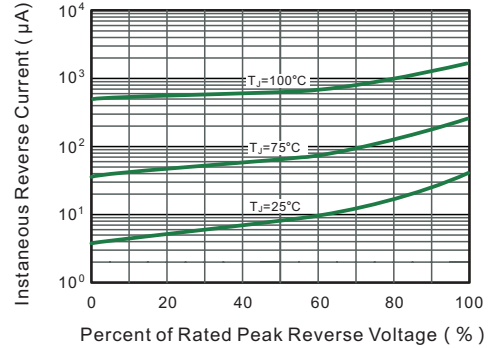


Fig.3 TYPICAL FORWARD VOLTAGE

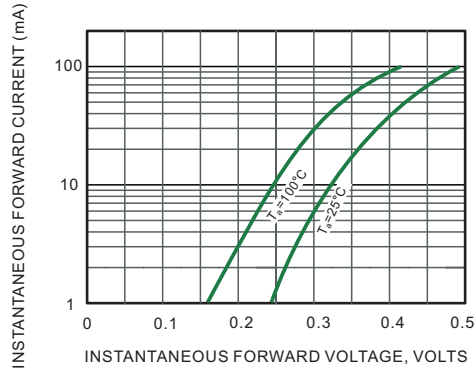


Fig.4 Typical Junction Capacitance

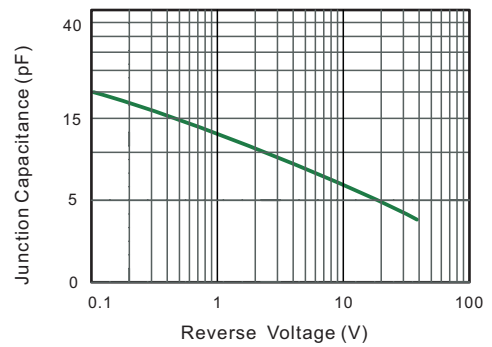


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

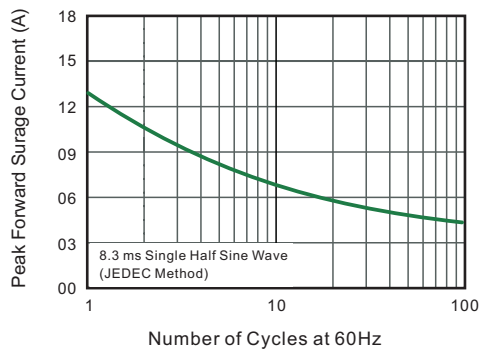
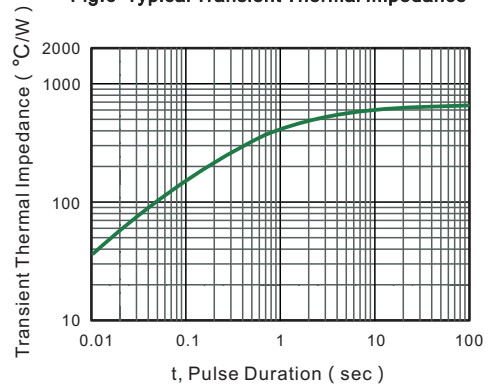


Fig.6 Typical Transient Thermal Impedance

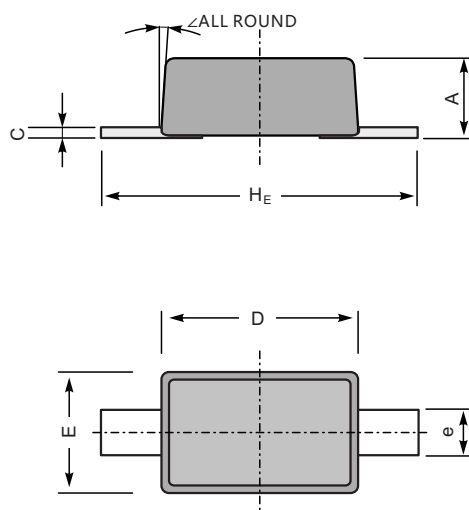




PACKAGE OUTLINE

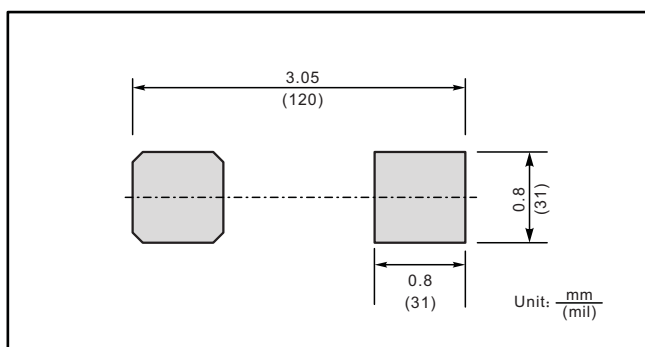
Plastic surface mounted package; 2 leads

SOD-323FL



| UNIT | | A | C | D | E | e | H _E | ∠ |
|------|-----|-----|------|-----|------|------|----------------|----|
| mm | max | 1.0 | 0.25 | 1.8 | 1.35 | 0.4 | 2.7 | 8° |
| | min | 0.8 | 0.05 | 1.6 | 1.15 | 0.25 | 2.3 | |
| mil | max | 39 | 9.8 | 71 | 53 | 18 | 106 | |
| | min | 31 | 2.0 | 63 | 45 | 10 | 91 | |

The recommended mounting pad size



Marking

| Type number | Marking code |
|-------------|--------------|
| BAT54WFL | L4 |