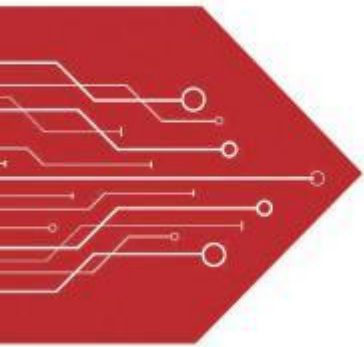


MSKSEMI

SEMICONDUCTOR



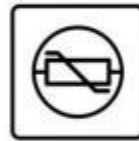
ESD



TVS



TSS



MOV



GDT



PLED

Product data sheet

Feature

Ultra Small mold type. (SOD-323)

Low I_R

High reliability.

Applications

Low current rectification



Circuit Diagram

Construction

Silicon epitaxial planar

Mechanical Characteristics

Lead finish:100% matte Sn(Tin)

Mounting position: Any

Qualified max reflow temperature:260°C

Pure tin plating: 7 ~ 17 um

Pin flatness: ≤3mil



Marking(Top View)

Electrical characteristics per line@25°C

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|----------------------|--------|------|------|------|------|----------------------|
| Forward voltage | V_F | - | 0.5 | 0.55 | V | $I_F=1A$ |
| Forward voltage | V_F | - | 0.43 | 0.48 | V | $I_F=0.5A$ |
| Reverse current | I_R | - | - | 0.1 | mA | $V_R=40V$ |
| Junction Capacitance | C_j | - | 120 | - | pF | $V_R=0V$ $f=1MHz$ |

Absolute maximum rating@25°C

| Parameter | Symbol | limits | Unit |
|-----------------------------------|----------|--------|------|
| Reverse voltage(repetitive peak) | V_{RM} | 45 | V |
| Reverse voltage (DC) | V_R | 40 | V |
| Average rectified forward current | I_o | 1 | A |

| Parameter | Symbol | limits | Unit |
|---|-----------|------------|------|
| Peak forward current(Pulse Width=1us, Single Pulse) | I_{PK} | 25 | A |
| Peak forward surge current(8.33ms 1/2sine waveform with single pulse) | I_{FSM} | 8 | A |
| Power Dissipation | PD | 500 | mW |
| Operating Junction temperature Range | T_j | -55 to 125 | °C |
| Storage temperature | T_{stg} | -55 to 125 | °C |

Typical Characteristics

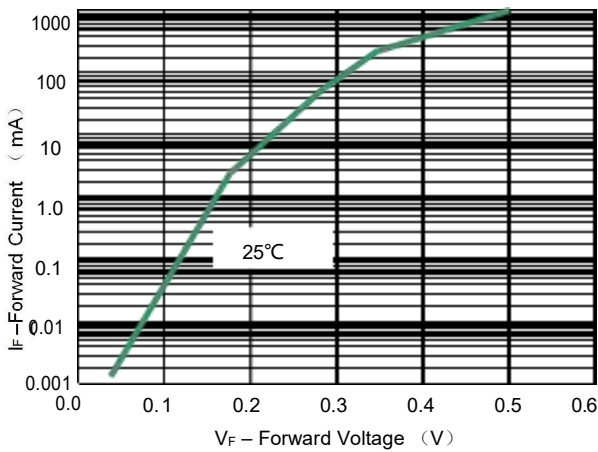


Fig 1.Forward Voltage

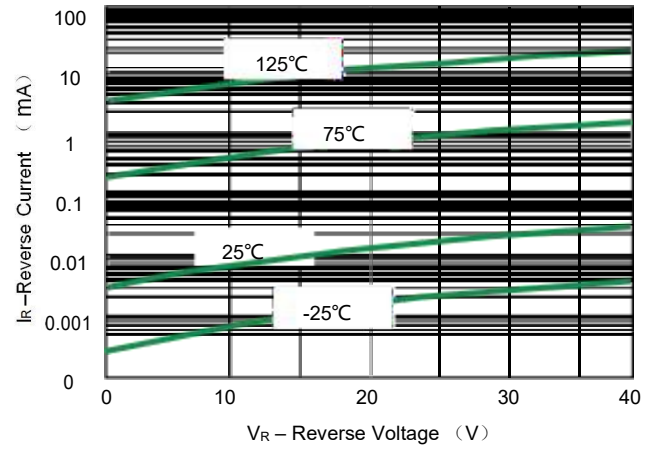
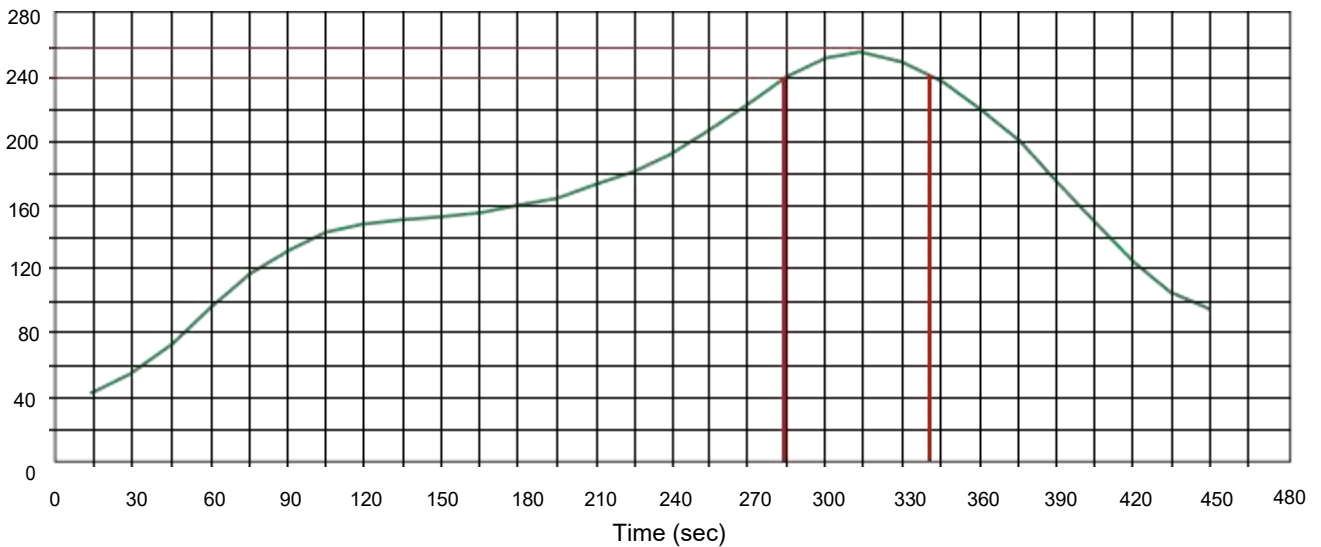


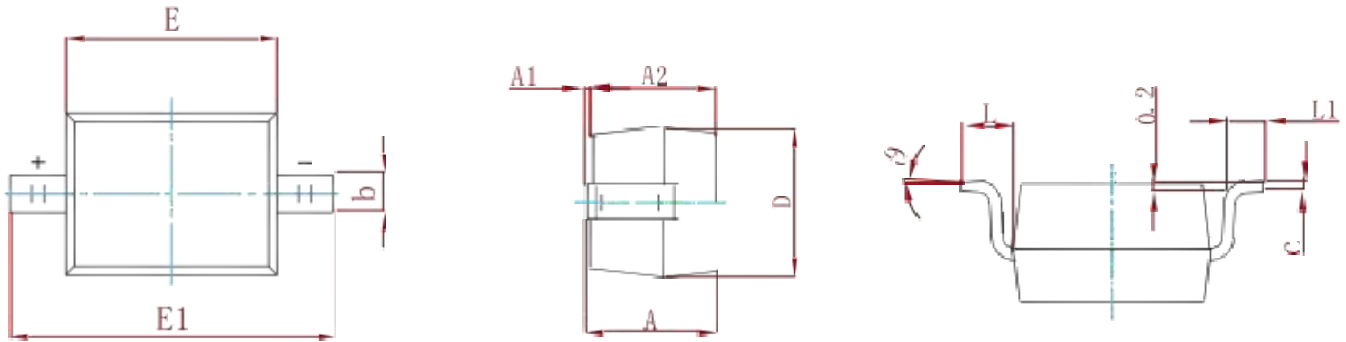
Fig 2.Leakage Current

Solder Reflow Recommendation

Peak Temp=257°C, Ramp Rate=0.802deg. °C/sec

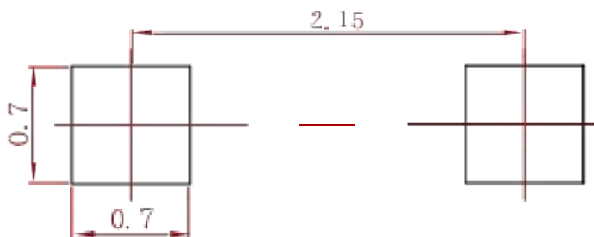


PACKAGE MECHANICAL DATA



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | | 1.000 | | 0.039 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.800 | 0.900 | 0.031 | 0.035 |
| b | 0.250 | 0.350 | 0.010 | 0.014 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 1.200 | 1.400 | 0.047 | 0.055 |
| E | 1.600 | 1.800 | 0.063 | 0.071 |
| E1 | 2.550 | 2.750 | 0.100 | 0.108 |
| L | 0.475 REF. | | 0.019 REF. | |
| L1 | 0.250 | 0.400 | 0.010 | 0.016 |
| θ | 0° | 8° | 0° | 8° |

Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05mm.
3. The pad layout is for reference purposes only.

REEL SPECIFICATION

| P/N | PKG | QTY |
|------------|---------|------|
| S7116-300A | SOD-323 | 3000 |

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