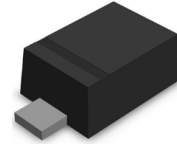


Feature

- Forward Current: 2A
- Reverse voltage: 40V
- Low forward voltage
- Low leakage current
- Trench MOS barrier Schottky technology
- Ultra Small mold type. (SOD-323F)



SOD-323F(Top View)

Applications

- Low current rectification
- Voltage clamping
- Protection circuits
- Ultra high-speed switching



Circuit Diagram



Marking (Top View)

Mechanical Characteristics

- Lead finish:100% matte Sn(Tin)
- Mounting position: Any
- Device meets MSL 1 requirements
- Qualified max reflow temperature:260℃

Electrical characteristics per line@25℃

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|----------------------|--------|------|------|------|---------------|---------------------------------|
| Forward voltage | V_F | - | 0.38 | 0.42 | V | $I_F=500\text{mA}$ |
| Forward voltage | V_F | - | 0.42 | 0.46 | V | $I_F=1\text{A}$ |
| Forward voltage | V_F | - | 0.44 | 0.49 | V | $I_F=1.5\text{A}$ |
| Forward voltage | V_F | | 0.47 | 0.53 | V | $I_F=2\text{A}$ |
| Reverse current | I_R | - | - | 50 | μA | $V_R=40\text{V}$ |
| Junction Capacitance | C_J | - | 300 | - | pF | $V_R=0\text{V}$ $f=1\text{MHz}$ |

Absolute maximum rating@25°C

| Parameter | Symbol | limits | Unit |
|---------------------------------------------------------------------------------------------------|-----------|--------|------|
| Reverse voltage(repetitive peak) | V_{RM} | 40 | V |
| Reverse voltage (DC) | V_R | 40 | V |
| Average rectified forward current | I_o | 2 | A |
| Non-Repetitive Peak Forward Surge Current(8.3ms single half sine-wave superimposed on rated load) | I_{FSM} | 15 | A |

| Parameter | Symbol | limits | Unit |
|--------------------------------------|-----------------|------------|------|
| Power Dissipation | PD | 280 | mW |
| Thermal resistance,Note1 | $R_{\theta JA}$ | 350 | °C/W |
| Operating Junction temperature Range | T_J | -55 to 125 | °C |
| Storage temperature | T_{STG} | -55 to 125 | °C |

Note1: R-4 PCB, Minimum recommended pad layout.

Typical Characteristics

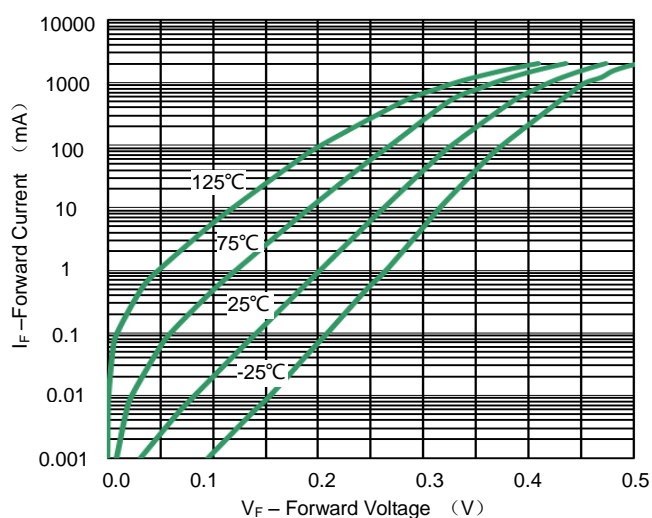


Fig 1. Forward Voltage

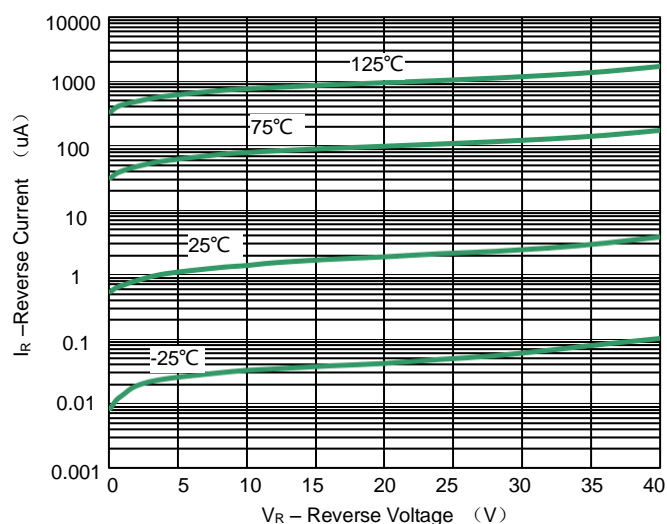


Fig 2. Leakage Current

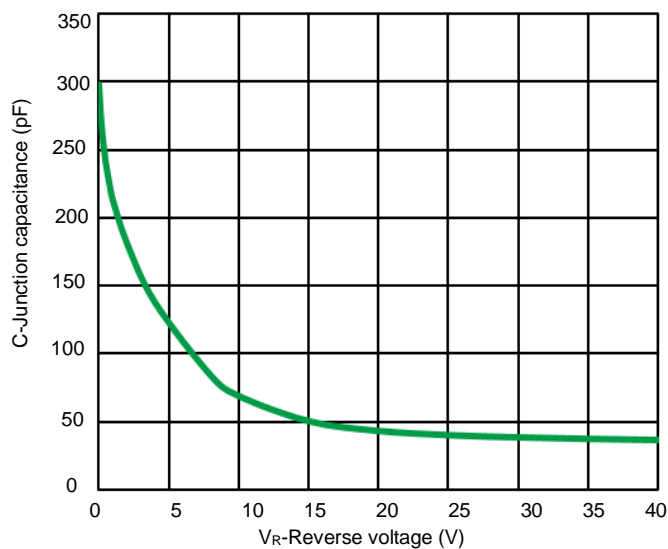
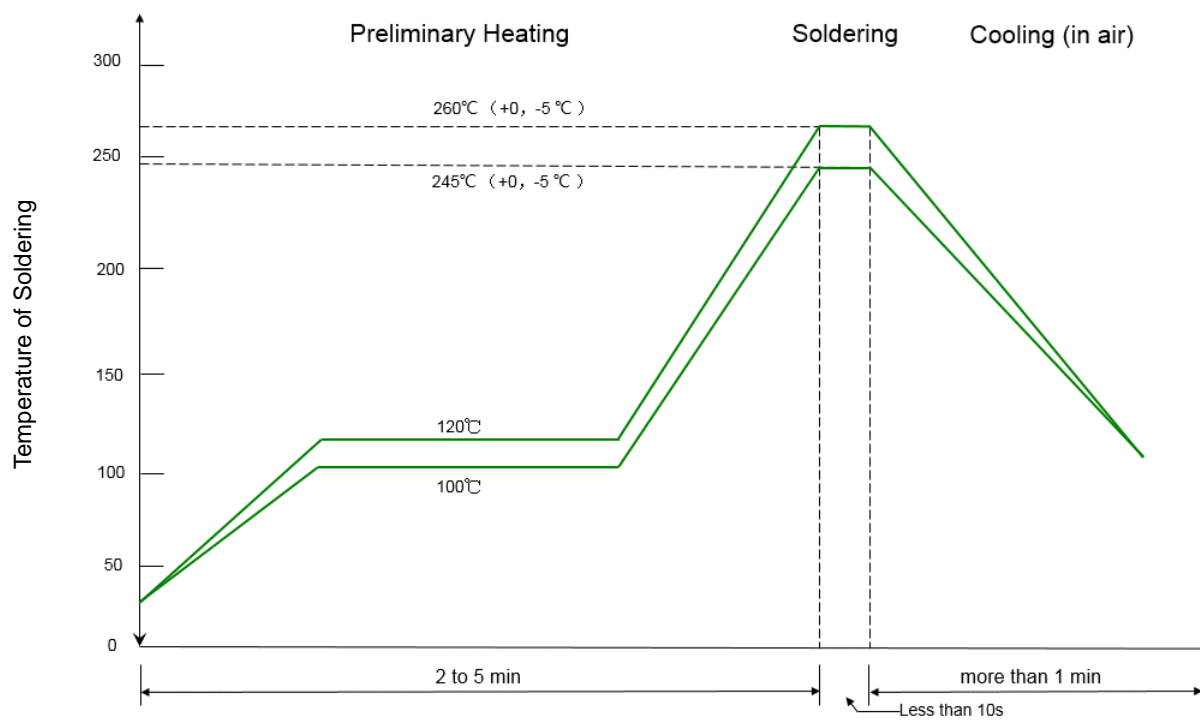


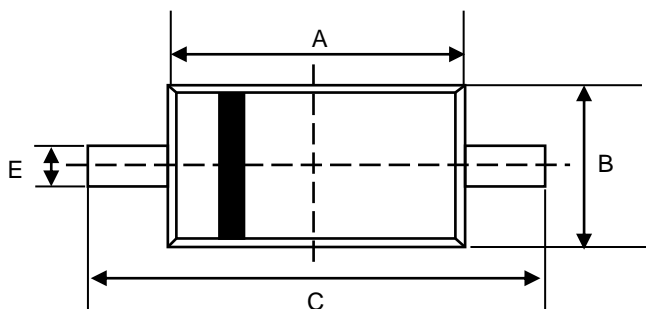
Fig 3. Capacitance vs. Reverse voltage

Solder Reflow Recommendation

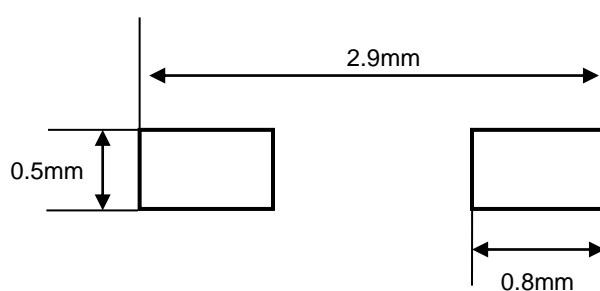
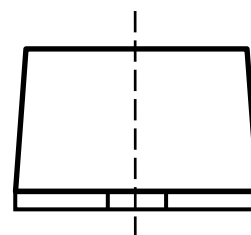
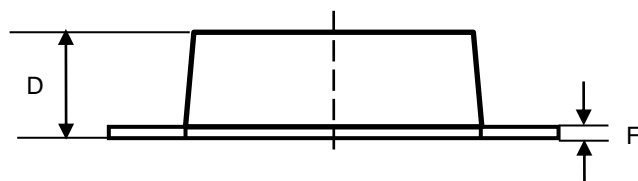


Remark: Pb free for 260°C; Pb for 245°C.

Product dimension (SOD-323F)



| Dim | Millimeters | | |
|-----|-------------|------|------|
| | MIN | TYP | MAX |
| A | 1.60 | 1.70 | 1.80 |
| B | 1.15 | 1.25 | 1.35 |
| C | 2.30 | 2.50 | 2.70 |
| D | 0.60 | 0.70 | 0.80 |
| E | 0.20 | 0.30 | 0.40 |
| F | 0.08 | 0.13 | 0.18 |

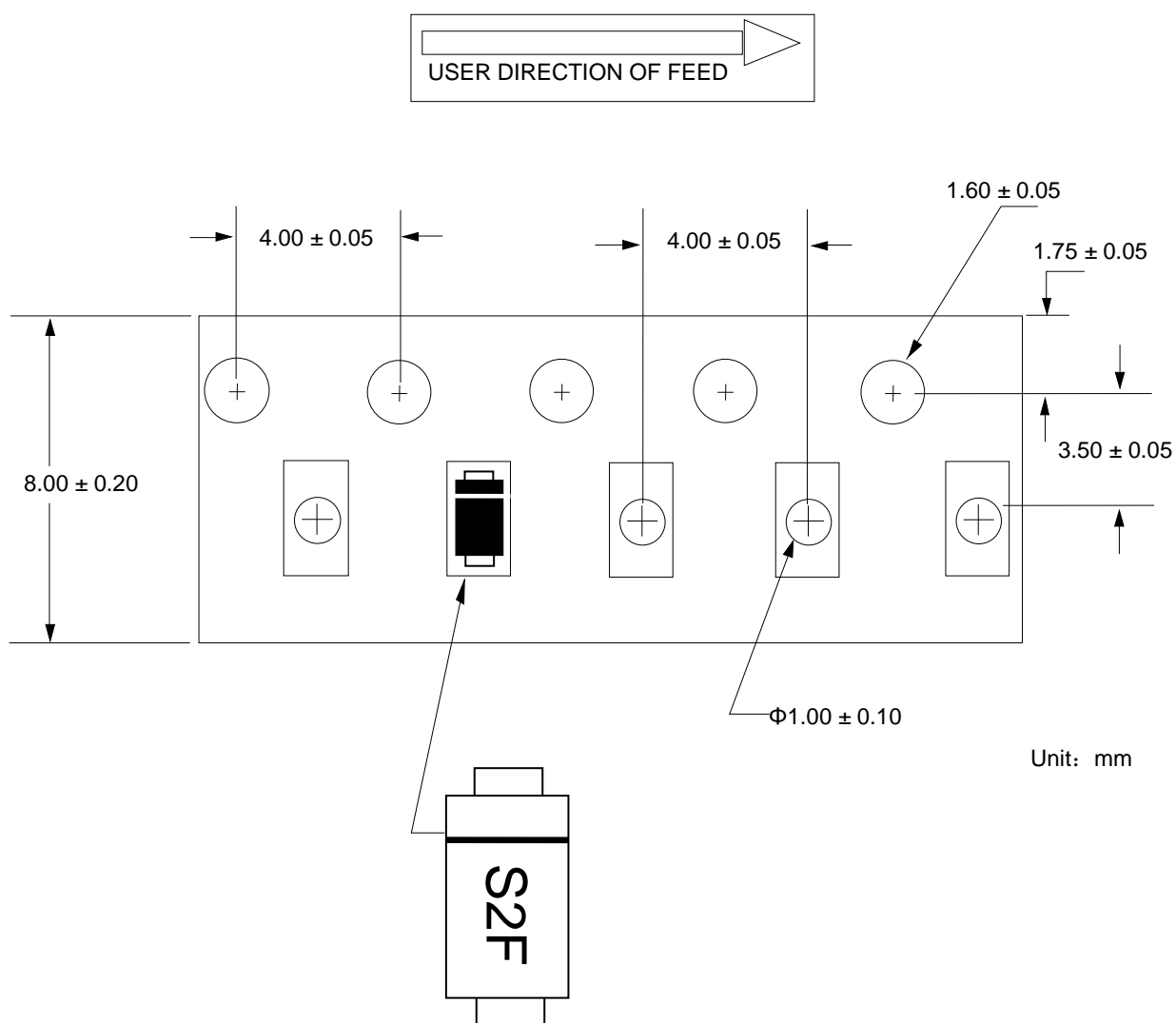


Suggested PCB Layout


Ordering information

| Device | Package | Reel | MPQ |
|--------------|-------------------|------|--------------------|
| PSBD3DF40V2H | SOD-323F(Pb-Free) | 7" | 3000 / Tape & Reel |

Load with information




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