

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Features

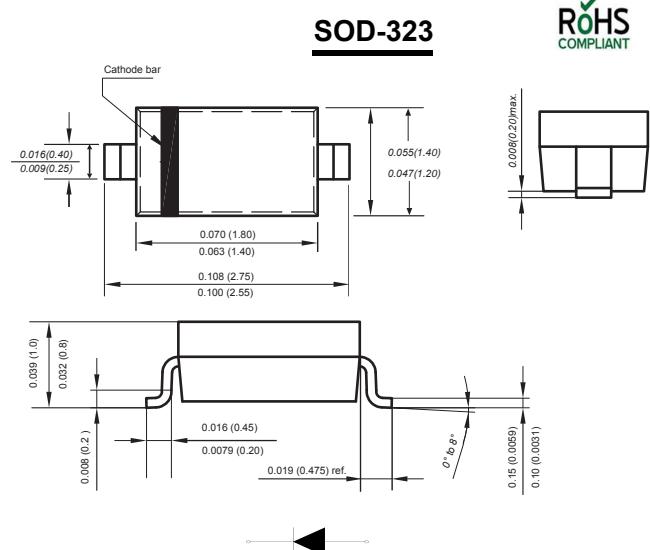
- ◆ Metal silicon junction, majority carrier conduction
- ◆ For surface mounted applications
- ◆ Low power loss, high efficiency
- ◆ High forward surge current capability
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

Mechanical Data

Case : UOD-323

Terminals : Solderable per MIL-STD-750, Method 2026A

Weight : 0.00€19 ounce, 0.00548 grams



Dimensions in inches and (millimeters)

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| Parameter | SYMBOLS | B12WS | B14WS | B16WS | B18WS | B110WS | B112WS | B115WS | B120WS | UNITS | | | | | | |
|--|-------------------|-------------|-------|----------|-------|----------|--------|--------|--------|-------|--|--|--|--|--|--|
| Marking code | | B12S | B14S | B16S | B18S | 110S | 112S | 115S | 120S | | | | | | | |
| Maximum repetitive peak reverse voltage | V _{RMM} | 20 | 40 | 60 | 80 | 100 | 120 | 150 | 200 | V | | | | | | |
| Maximum RMS voltage | V _{RMS} | 14 | 28 | 42 | 56 | 70 | 84 | 105 | 140 | V | | | | | | |
| Maximum DC blocking voltage | V _{DC} | 20 | 40 | 60 | 80 | 100 | 120 | 150 | 200 | V | | | | | | |
| Maximum average forward rectified current | I _(AV) | 1.0 | | | | | | | | A | | | | | | |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 25 | | | | | | | | A | | | | | | |
| Maximum instantaneous forward voltage at 1.0A | V _F | 0.55 | | 0.70 | | 0.85 | | 0.90 | | V | | | | | | |
| Maximum DC reverse current TA=25°C at rated DC blocking voltage TA=100°C | I _R | 0.3 10 | | 0.2 5 | | 0.1 2 | | mA | | | | | | | | |
| Typical junction capacitance (NOTE 1) | C _J | 110 | | 80 | | | | pF | | | | | | | | |
| Operating junction temperature range | T _J | -55 to +125 | | | | | | | | °C | | | | | | |
| Storage temperature range | T _{STG} | -55 to +150 | | | | | | | | °C | | | | | | |

Note:1. Measured at 1.0MHz and applied reverse voltage of 4.0V D.C.

Typical Characteristics

Fig.1 Forward Current Derating Curve

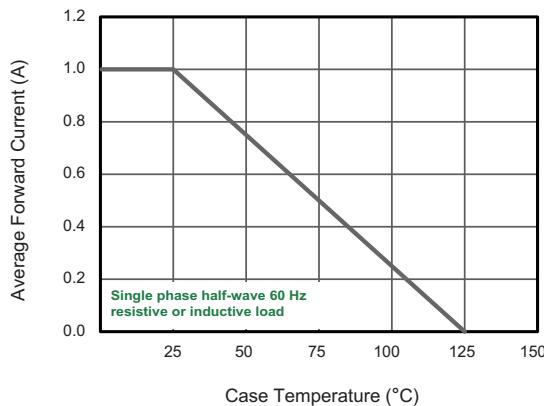


Fig.2 Typical Reverse Characteristics

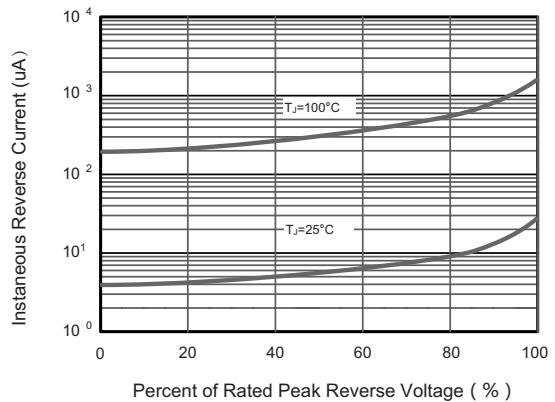


Fig.3 Typical Forward Characteristic

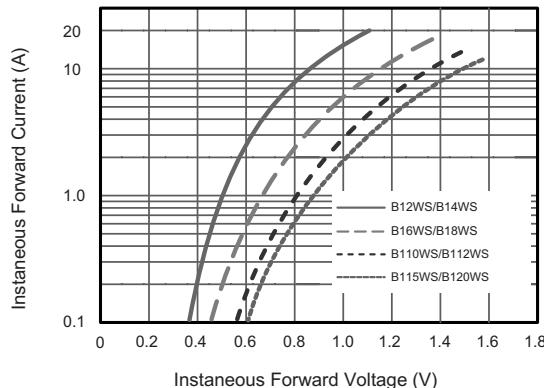


Fig.4 Typical Junction Capacitance

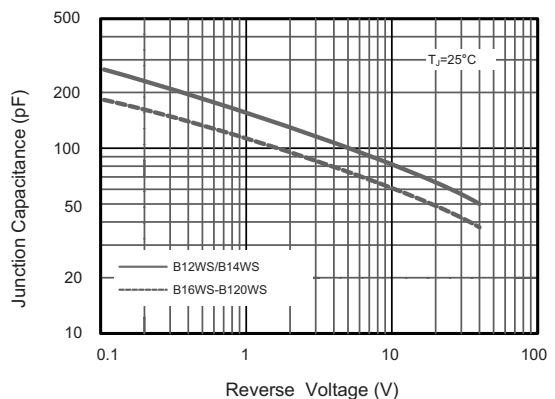
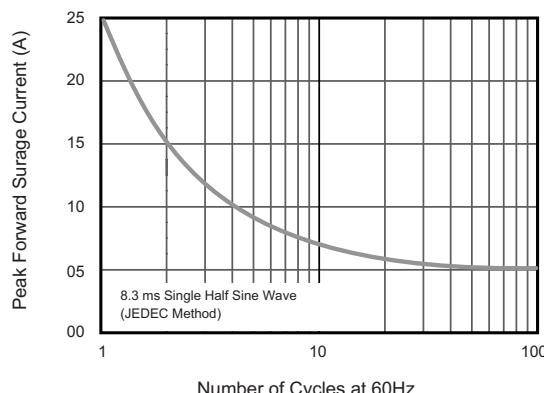
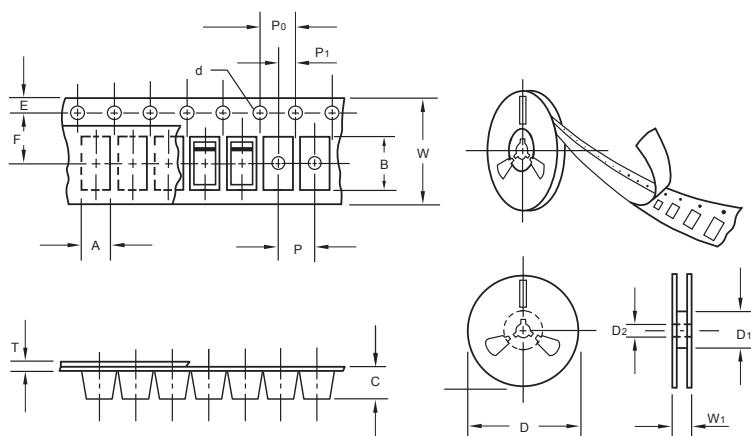


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



The curve above is for reference only.

Packing information



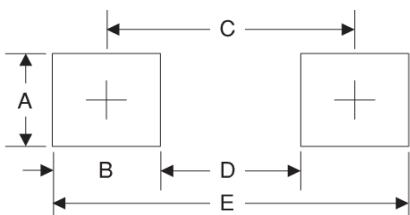
| unit:mm | | | |
|---------------------------|--------|-----------|---------|
| Item | Symbol | Tolerance | SOD-323 |
| Carrier width | A | 0.1 | 1.46 |
| Carrier length | B | 0.1 | 2.90 |
| Carrier depth | C | 0.1 | 1.25 |
| Sprocket hole | d | 0.05 | 1.50 |
| 13" Reel outside diameter | D | 2.0 | 330.00 |
| 13" Reel inner diameter | D1 | min | 50.00 |
| 7" Reel outside diameter | D | 2.0 | 178.00 |
| 7" Reel inner diameter | D1 | min | 54.40 |
| Feed hole diameter | D2 | 0.5 | 13.00 |
| Sprocket hole position | E | 0.1 | 1.75 |
| Punch hole position | F | 0.1 | 3.50 |
| Punch hole pitch | P | 0.1 | 4.00 |
| Sprocket hole pitch | P0 | 0.1 | 4.00 |
| Embossment center | P1 | 0.1 | 2.00 |
| Overall tape thickness | T | 0.1 | 0.06 |
| Tape width | W | 0.3 | 8.00 |
| Reel width | W1 | 1.0 | 12.30 |

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

Reel packing

| PACKAGE | REEL SIZE | REEL (pcs) | COMPONENT SPACING (m/m) | BOX (pcs) | INNER BOX (m/m) | REEL DIA, (m/m) | CARTON SIZE (m/m) | CARTON (pcs) | APPROX. GROSS WEIGHT (kg) |
|---------|-----------|------------|-------------------------|-----------|-----------------|-----------------|-------------------|--------------|---------------------------|
| SOD-323 | 7" | 3,000 | 4.0 | 45,000 | 210*208*203 | 178 | 430*430*235 | 180,000 | 9.0 |

Suggested Pad Layout



| Symbol | Unit (mm) | Unit (inch) |
|--------|-----------|-------------|
| A | 1.2 | 0.047 |
| B | 1.2 | 0.047 |
| C | 2.6 | 0.102 |
| D | 1.4 | 0.055 |
| E | 3.8 | 0.149 |