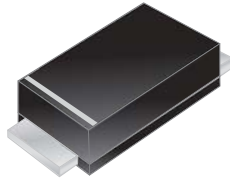




Excellent Schottky Barrier Rectifiers



SOD-123F

Primary Characteristics

| | | |
|-----------|------|----|
| I_F | 3 | A |
| V_{RRM} | 45 | V |
| I_{FSM} | 30 | A |
| V_F | 0.43 | V |
| T_J max | 125 | °C |

Features

- Ideal for surface mount applications
- Easy pick and place
- Built-in strain relief
- Fast switching speed

Mechanical Data

- Cases: SOD-123F
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Terminals: Lead free Plating (Tin Finish)
Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.022 grams (approximate)

Ordering Information

| Part No. | Remark | Package | Packing |
|-------------|--------------------|----------|--------------------|
| EBRT3E45P | General | SOD-123F | 3000 / Tape & Reel |
| EBRT3E45P-H | Halogen Free | | |
| EBRT3E45P-Q | AEC-Q101 qualified | | |

Maximum Ratings (TA=25°C unless otherwise noted)

| PARAMETER | SYMBOL | EBRT3E45P | UNIT |
|--|-----------------|-------------|------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 45 | V |
| Maximum RMS voltage | V_{RMS} | 31.5 | V |
| Maximum DC blocking voltage | V_{DC} | 45 | V |
| Maximum average forward rectified current | I_F | 3.0 | A |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load | I_{FSM} | 30.0 | A |
| Maximum Instantaneous Forward Voltage IF=3A @ 25°C | V_F | 0.43 | V |
| Maximum DC Reverse Current @ TA=25°C at Rated DC Blocking Voltage @ TA=100°C | I_R | 0.5 25 | mA |
| Typical Junction Capacitance(NOTE1) | C_j | 355 | pF |
| Typical Thermal Resistance | $R_{\theta JC}$ | 40 | °C/W |
| Operating Temperature Range | T_J | -55 to +125 | °C |
| Storage Temperature Range | T_{STG} | -55 to +150 | °C |
| Marking Code | | T34 | |

NOTES:

1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC



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Rating and Characteristics Curves

FIG. 1-Typical Forward Current Derating Curve

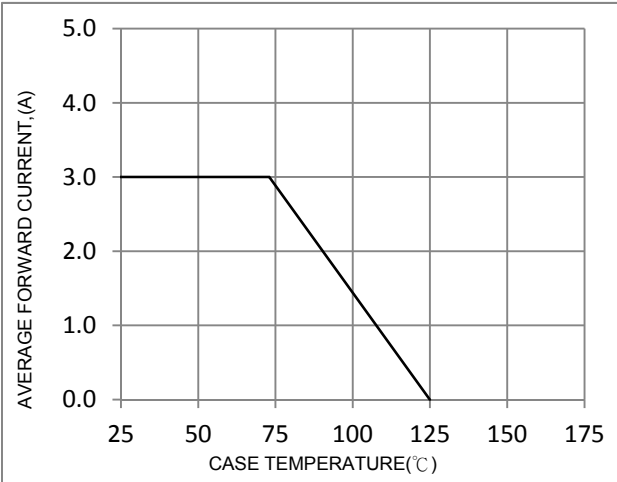


FIG. 2-Typical Forward Characteristics

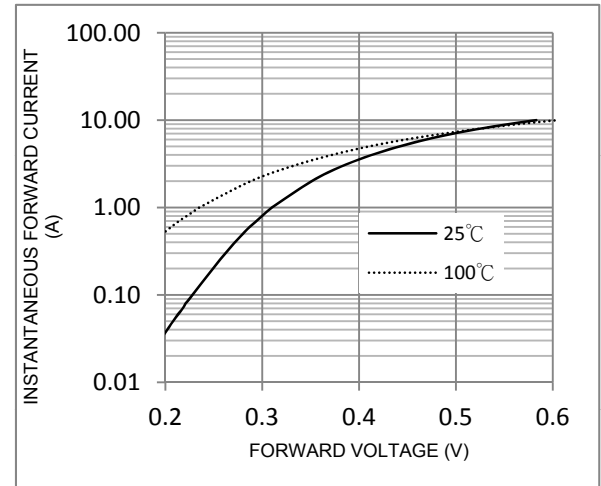


FIG. 3-Maximum Non-Repetitive Forward Surge Current

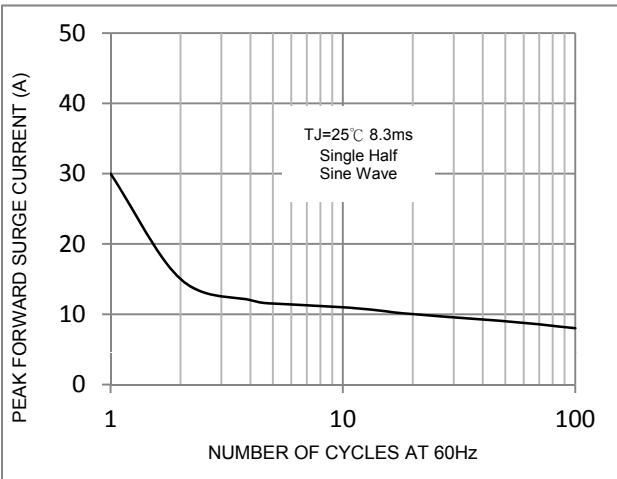


FIG. 4-Typical Reverse Characteristics

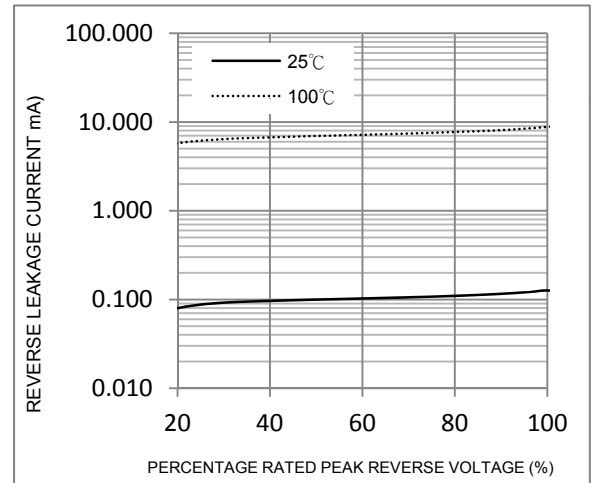
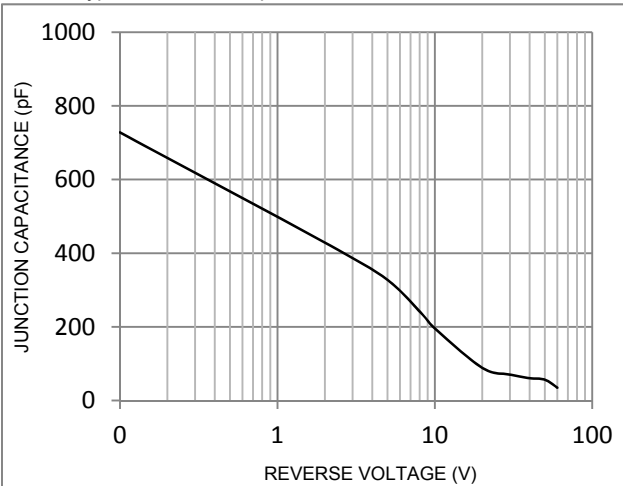


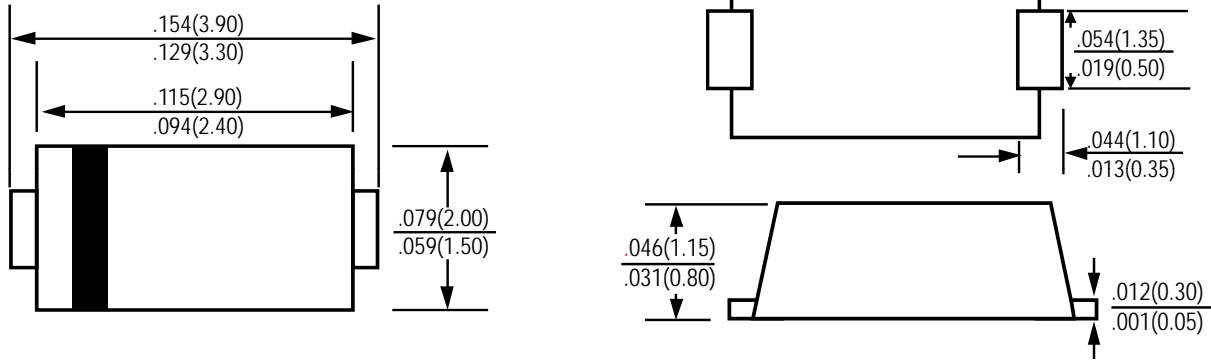
FIG. 5-Typical Junction Capacitance





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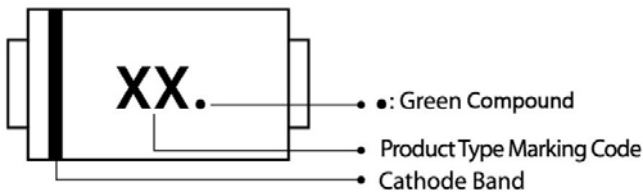
Package Outline Dimensions



SOD-123F

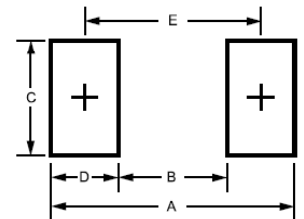
Dimensions in inches and (millimeters)

Marking Information



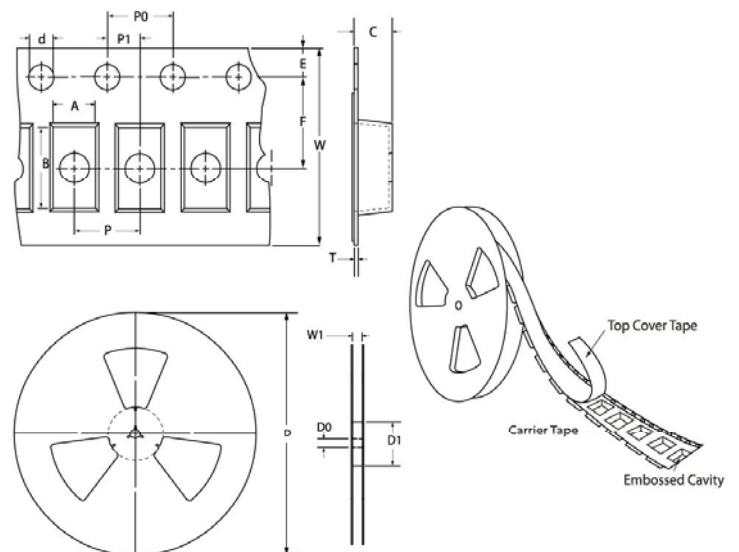
Suggested Pad Layout

| Dimension | Outline | SOD-123F (mm) |
|-----------|---------|---------------|
| A | | 4.25 |
| B | | 1.52 |
| C | | 1.80 |
| D | | 1.34 |
| E | | 2.86 |



Tape & Reel Specification

| ITEM | SYMBOL | SOD-123F (mm) |
|------------------------|--------|---------------|
| Carrier width | A | 2.05±0.1 |
| Carrier length | B | 4.01±0.1 |
| Carrier depth | C | 1.32±0.1 |
| Sprocket hole | d | 2.00±0.1 |
| Reel outside diameter | D | 178(max) |
| Reel inner diameter | D1 | 50(min) |
| Feed Hole diameter | D0 | 13.3±0.1 |
| Sprocket hole position | E | 1.75±0.1 |
| Punch hole position | F | 3.5±0.1 |
| Punch hole pitch | P | 4.0±0.1 |
| Sprocket hole pitch | P0 | 4.0±0.1 |
| Embossment center | P1 | 2.0±0.05 |
| Overall tape thickness | T | 0.24±0.03 |
| Tape width | W | 8.0±0.03 |
| Reel width | W1 | 9.3±1 |





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