



EBRT20E150C



Excellent Schottky Barrier Rectifiers



DO-214AB(SMC)

| Features |
|--|
| <ul style="list-style-type: none"> • Low profile package • Ideal for automated placement • Guard Ring for over voltage protection • Low forward voltage drop • Component in accordance to RoHS 2002/95/EC • AEC-Q101 qualified |

| Ordering Information | | |
|----------------------|---------|--------------------|
| Part No. | Package | Packing |
| EBRT20E150C | SMC | 3000 / Tape & Reel |

| Device P/N | |
|---------------|--------------|
| Part Number | Remark |
| EBRT20E150C | General |
| EBRT20E150C-H | Halogen Free |
| EBRT20E150C-Q | Automotive |

| Primary Characteristics | | |
|-------------------------|-----|----|
| I_F | 20 | A |
| V_{RRM} | 150 | V |
| I_{FSM} | 300 | A |
| V_F | 0.8 | V |
| $T_J \text{ max}$ | 150 | °C |

| Mechanical Data |
|--|
| <ul style="list-style-type: none"> • Case: DO-214AB (SMC) • 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: 0.231 grams (approximate) |

| Maximum Ratings (TA=25°C unless otherwise noted) | | | |
|--|-----------------|------------------------|------|
| PARAMETER | SYMBOL | EBRT20E150C | UNIT |
| Maximum repetitive peak reverse voltage | V_{RRM} | 150 | V |
| Maximum RMS voltage | V_{RMS} | 105 | V |
| Maximum DC blocking voltage | V_{DC} | 150 | V |
| Maximum average forward rectified current | I_F | 20 | A |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load | I_{FSM} | 300 | A |
| Maximum Instantaneous Forward Voltage IF=3A @ 25°C IF=20A @ 25°C | V_F | 0.53 Typ. 0.80 Max. | V |
| Maximum DC Reverse Current @ TA=25°C at Rated DC Blocking Voltage @ TA=125°C | I_R | 0.2 30 | mA |
| Typical Junction Capacitance(NOTE1) | C_j | 1650 | pF |
| Typical Thermal Resistance | $R_{\theta JC}$ | 20 | °C/W |
| Operating Temperature Range | T_J | -55 to +150 | °C |
| Storage Temperature Range | T_{STG} | -55 to +150 | °C |
| Marking Code | | 20E150C · T20E150C | |

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

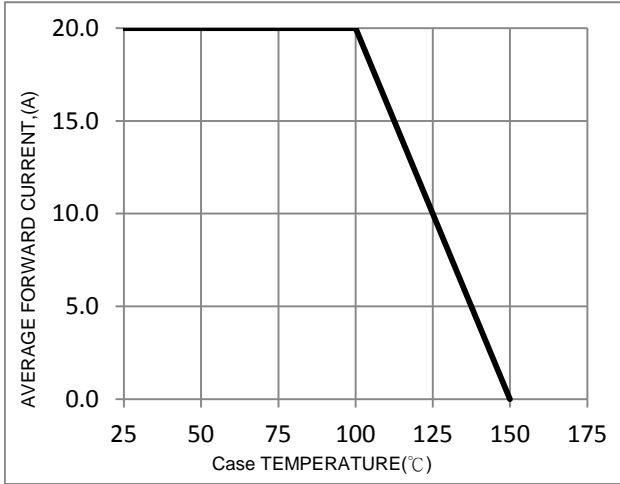


FIG. 2-Typical Forward Characteristics

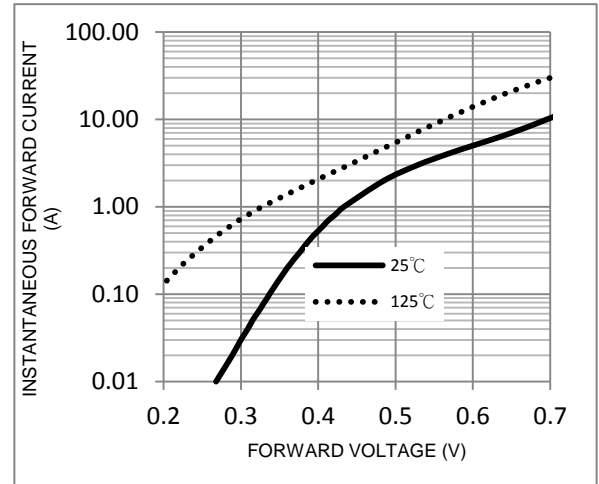


FIG. 3-Maximum Non-Repetitive Forward Surge Current

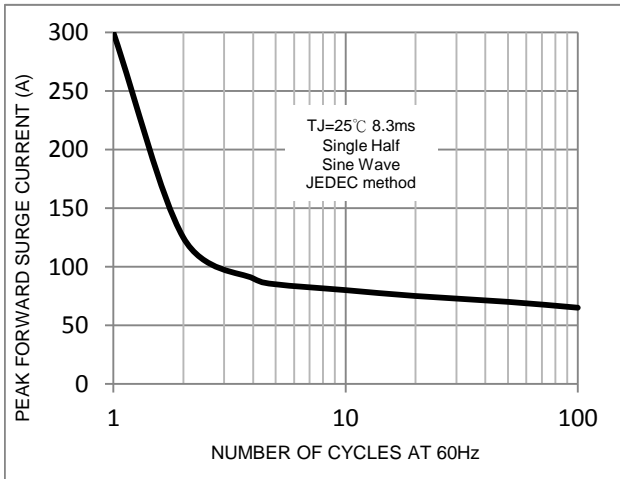


FIG. 4-Typical Reverse Characteristics

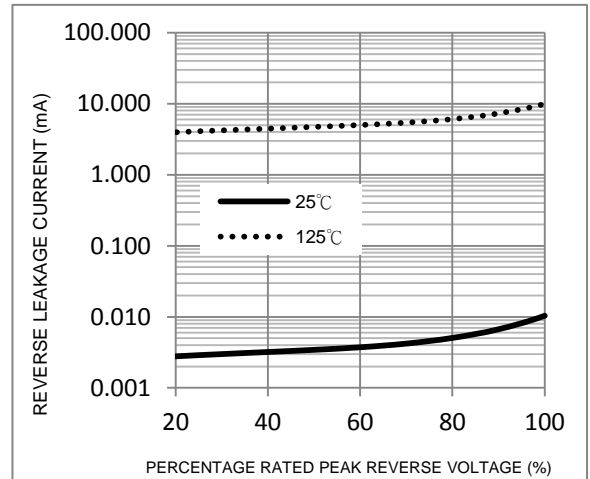
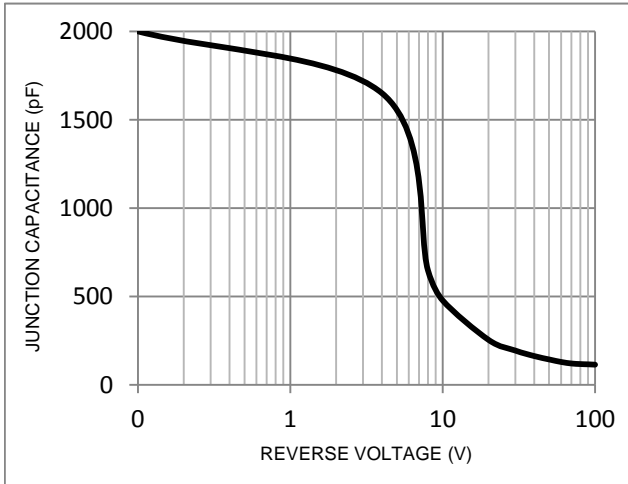


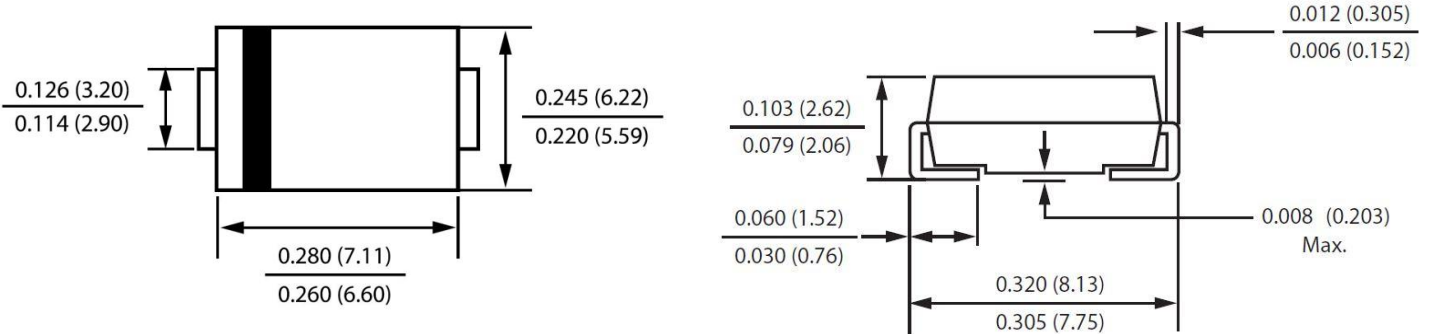
FIG. 5-Typical Junction Capacitance





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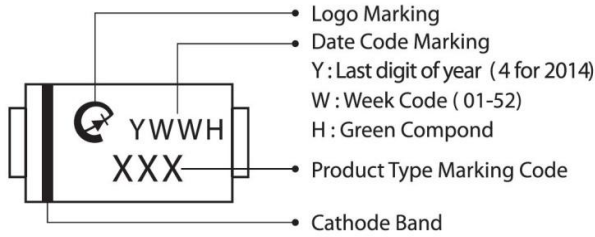
Package Outline Dimensions



DO-214AB(SMC)

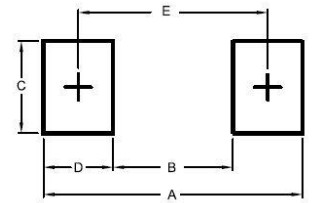
Dimensions in inches and (millimeters)

Marking Information



Suggested Pad Layout

| Dimension | Outline | SMC (DO-214AB) |
|-----------|---------|----------------|
| A | | 9.40 |
| B | | 4.40 |
| C | | 3.30 |
| D | | 2.50 |
| E | | 6.80 |



Tape & Reel Specification

| ITEM | SYMBOL | SMC (mm) |
|------------------------|--------|------------|
| | | DO-214AB |
| Carrier width | A | 6.3(max) |
| Carrier length | B | 8.6(max) |
| Carrier depth | C | 2.9(max) |
| Sprocket hole | d | 1.50±0.1 |
| Reel outside diameter | D | 330±2.0 |
| Feed hole diameter | D0 | 13.5±1 |
| Reel inner diameter | D1 | 50 (min.) |
| Sprocket hole position | E | 1.75±0.1 |
| Punch hole position | F | 7.5±0.05 |
| Sprocket hole pitch | P | 8.0±0.1 |
| Sprocket hole pitch | Po | 4.0±0.1 |
| Embossment center | P1 | 2.0±0.05 |
| Overall tape thickness | T | 0.6 (max) |
| Tape width | W | 16.0±0.3 |
| Reel width | W2 | 22.4 (max) |
| Reel width | W1 | 18.4 (max) |

