



# T10E100C



## Excellent Schottky Barrier Rectifiers



**DO-214AB(SMC)**

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

| Ordering Information |         |                    |
|----------------------|---------|--------------------|
| Part No.             | Package | Packing            |
| T10E100C             | SMC     | 3000 / Tape & Reel |

| Device P/N  |              |
|-------------|--------------|
| Part Number | Remark       |
| T10E100C    | General      |
| T10E100C-H  | Halogen Free |
| T10E100C-Q  | Automotive   |

| Primary Characteristics |     |    |
|-------------------------|-----|----|
| $I_F$                   | 10  | A  |
| $V_{RRM}$               | 100 | V  |
| $I_{FSM}$               | 100 | A  |
| $V_F$                   | 0.7 | V  |
| $T_J \text{ max}$       | 150 | °C |

| Mechanical Data  |
|--|
| <ul style="list-style-type: none"> <li>• Case: DO-214AB (SMC)</li> <li>• Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0</li> <li>• Terminals: Lead Free Plating (Tin Finish). Solderable per MIL-STD-202, Method 208</li> <li>• Polarity: Cathode Band</li> <li>• Weight: 0.231 grams (approximate)</li> </ul> |

| Maximum Ratings (TA=25°C unless otherwise noted)                                   |                 |                        |      |
|--|-----------------|------------------------|------|
| PARAMETER  | SYMBOL          | T10E100C               | UNIT |
| Maximum repetitive peak reverse voltage  | $V_{RRM}$       | 100                    | V    |
| Maximum RMS voltage  | $V_{RMS}$       | 70                     | V    |
| Maximum DC blocking voltage  | $V_{DC}$        | 100                    | V    |
| Maximum average forward rectified current  | $I_F$           | 10                     | A    |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$       | 100                    | A    |
| Maximum Instantaneous Forward Voltage<br>IF=2A @ 25°C<br>IF=10A @ 25°C             | $V_F$           | 0.44 Typ.<br>0.70 Max. | V    |
| Maximum DC Reverse Current @ TA=25°C<br>at Rated DC Blocking Voltage @ TA=100°C    | $I_R$           | 0.2<br>20              | mA   |
| Typical Junction Capacitance(NOTE1)  | $C_j$           | 545                    | 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   |                 | T10E100C、10E100C       |      |

**NOTES:**

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



### Rating and Characteristics Curves

FIG. 1-Typical Forward Current Derating Curve

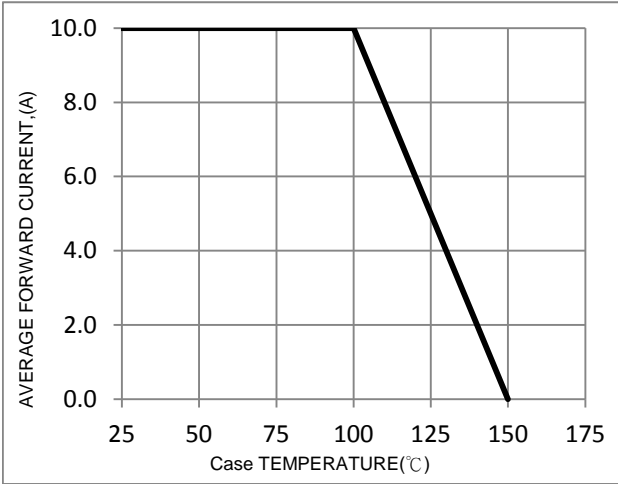


FIG. 2-Typical Forward Characteristics

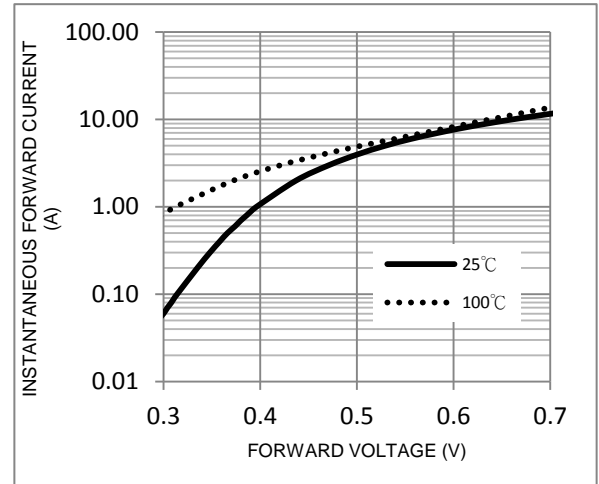


FIG. 3-Maximum Non-Repetitive Forward Surge Current

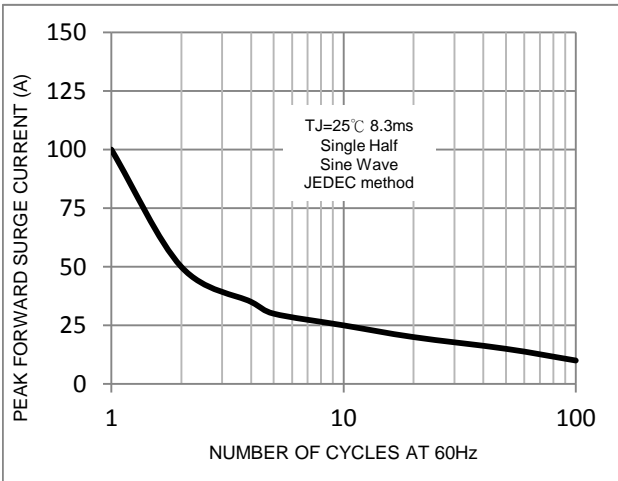


FIG. 4-Typical Reverse Characteristics

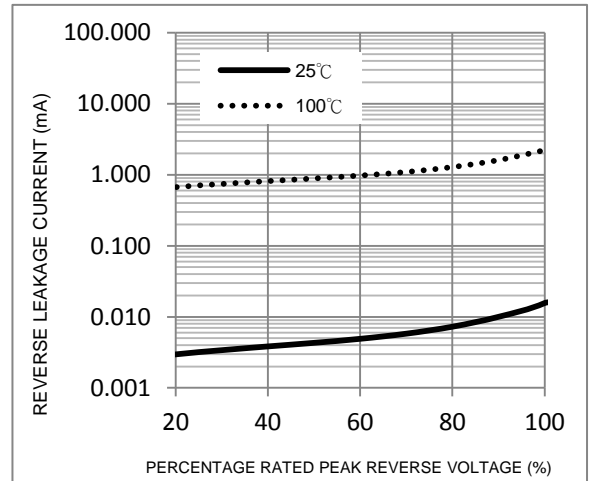
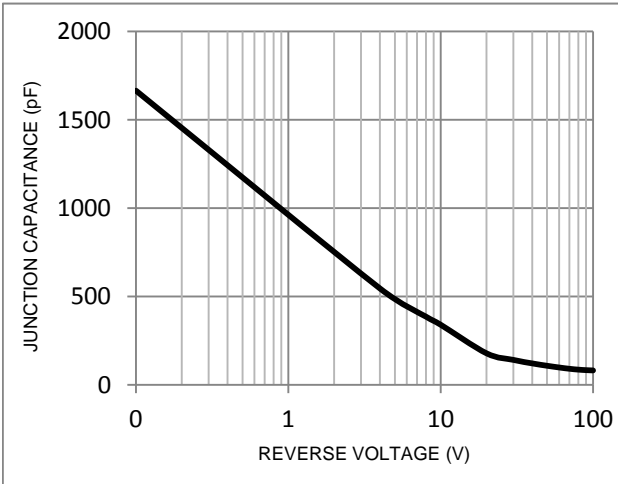
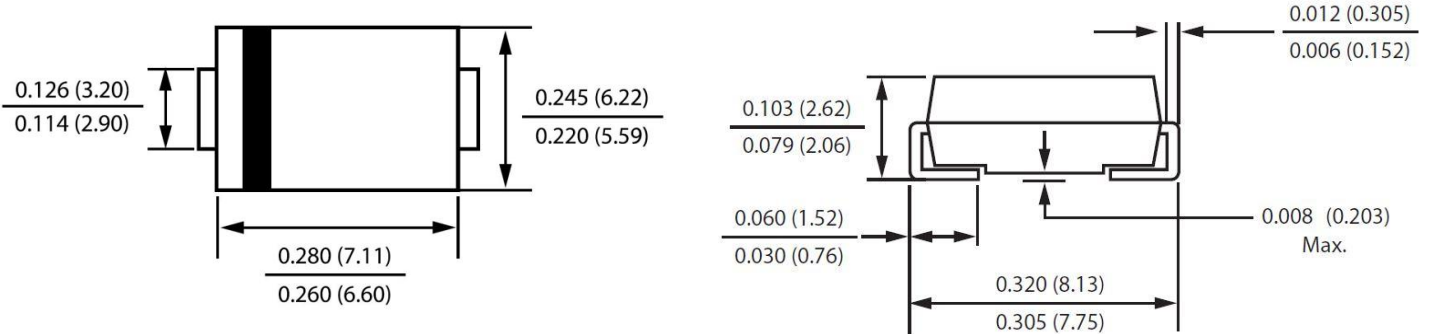


FIG. 5-Typical Junction Capacitance



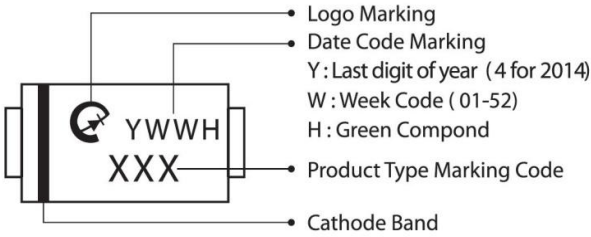
### Package Outline Dimensions



### DO-214AB(SMC)

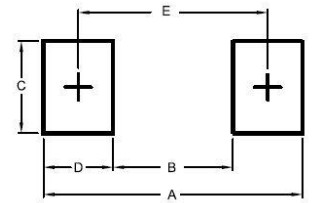
Dimensions in inches and (millimeters)

### 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) |

