



# EBRP15M45C



## Excellen Schottky Barrier Rectifiers



DO-214AB(SMC)

### Features

- 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            |
|------------|---------|--------------------|
| EBRP15M45C | SMC     | 3000 / Tape & Reel |

### Device P/N

| Part Number  | Remark       |
|--------------|--------------|
| EBRP15M45C   | General      |
| EBRP15M45C-H | Halogen Free |
| EBRP15M45C-Q | Automotive   |

### Primary Characteristics

|                   |      |    |
|-------------------|------|----|
| $I_F$             | 15   | A  |
| $V_{RRM}$         | 45   | V  |
| $I_{FSM}$         | 150  | A  |
| $V_F$             | 0.51 | V  |
| $T_J \text{ max}$ | 150  | °C |

### Mechanical Data

- 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          | EBRP15M45C             | 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                                          | $I_F$           | 15                     | A    |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load | $I_{FSM}$       | 150                    | A    |
| Maximum Instantaneous Forward Voltage<br>IF=5A @ 25°C<br>IF=15A @ 25°C             | $V_F$           | 0.36 Typ.<br>0.51 Max. | V    |
| Maximum DC Reverse Current @ TA=25°C<br>at Rated DC Blocking Voltage @ TA=125°C    | $I_R$           | 0.5<br>50              | mA   |
| Typical Junction Capacitance(NOTE1)                                                | $C_j$           | 665                    | pF   |
| Typical Thermal Resistance                                                         | $R_{\theta JC}$ | 30                     | °C/W |
| Operating Temperature Range                                                        | $T_J$           | -55 to +150            | °C   |
| Storage Temperature Range                                                          | $T_{STG}$       | -55 to +150            | °C   |
| Marking Code                                                                       |                 | P15M45CP 、 15M45C      |      |

### NOTES:

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



## Excellent Schottky Barrier Rectifiers

### Rating and Characteristics Curves

FIG. 1-Typical Forward Current Derating Curve

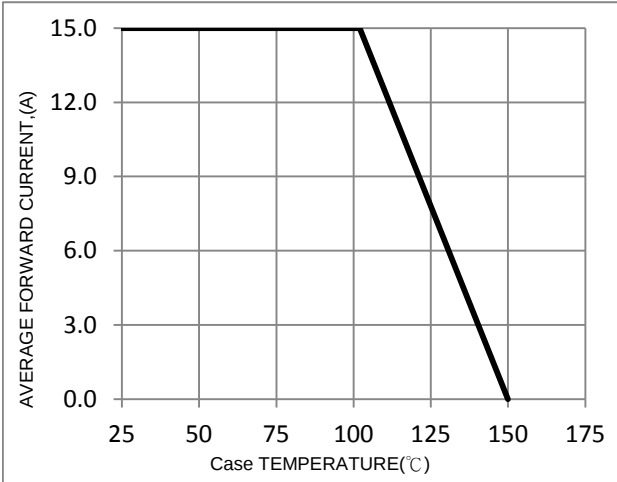


FIG. 2-Typical Forward Characteristics

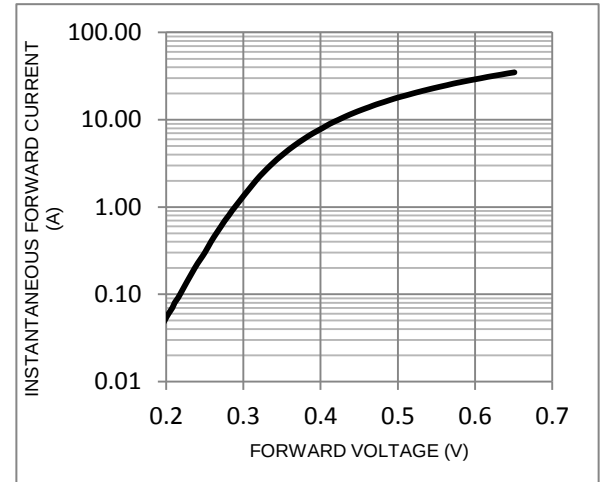


FIG. 3-Maximum Non-Repetitive Forward Surge Current

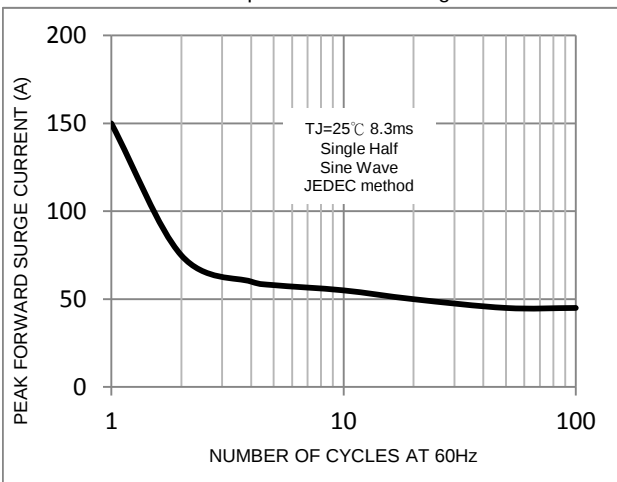


FIG. 4-Typical Reverse Characteristics

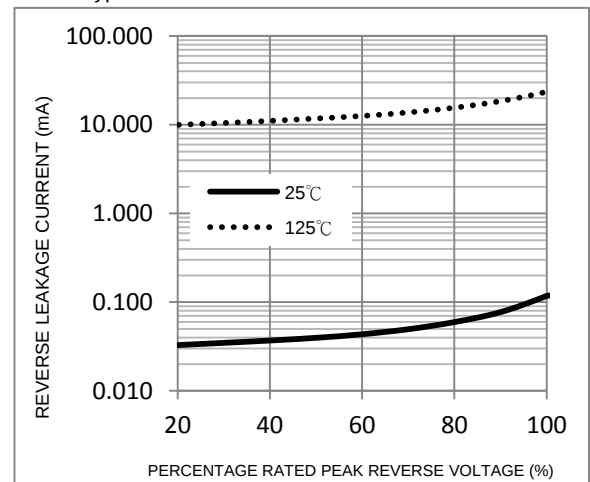
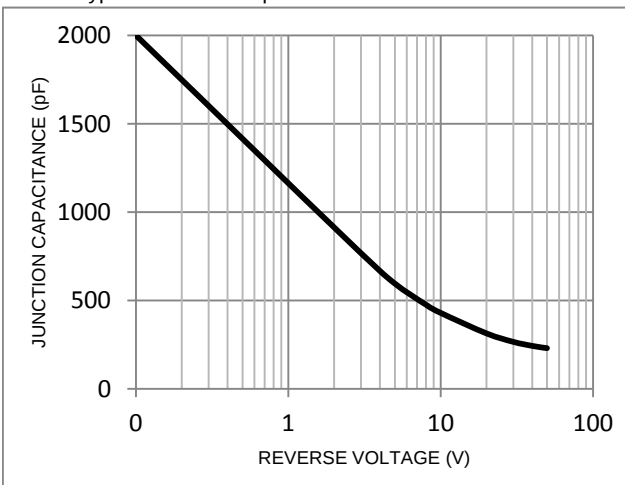


FIG. 5-Typical Junction Capacitance



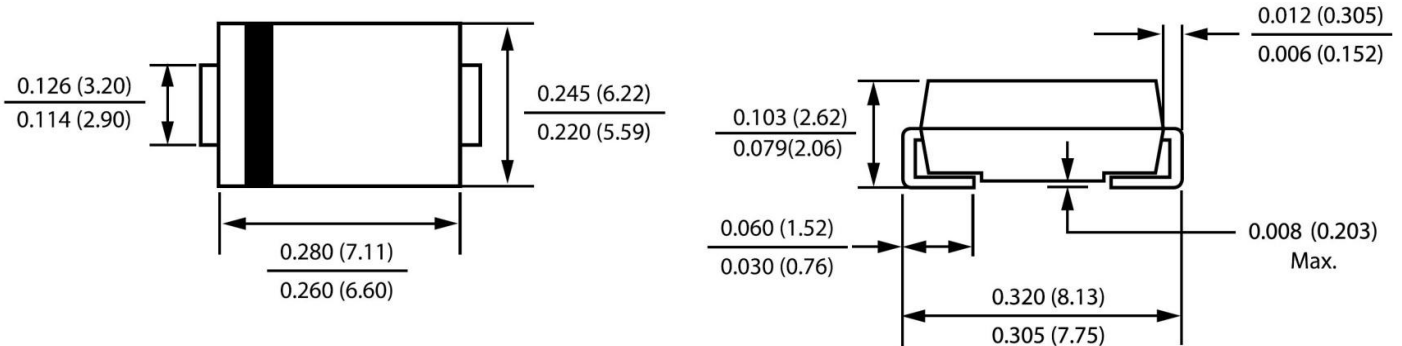


**EBRP15M45C**



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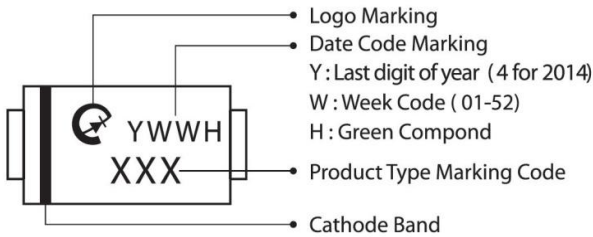
### Package Outline Dimensions



### DO-214AB(SMC)

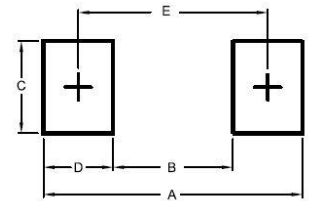
Dimensions in inches and (millimeters)

### 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    | P0     | 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) |

