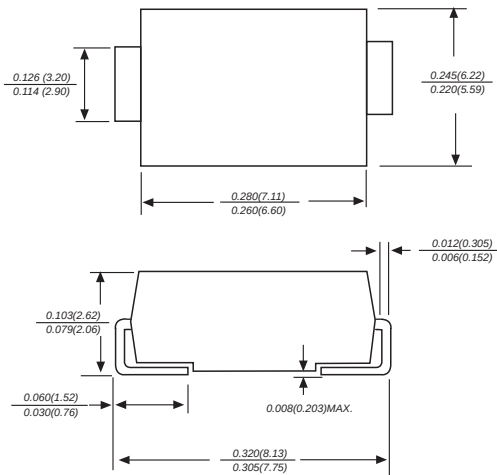


## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 200 Volts Forward Current - 5.0 Amperes

### DO-214AB/SMC



Dimensions in inches and (millimeters)

### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Low reverse leakage
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds at terminals

### MECHANICAL DATA

**Case:** JEDEC DO-214AB molded plastic body  
**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.007 ounce, 0.25grams

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

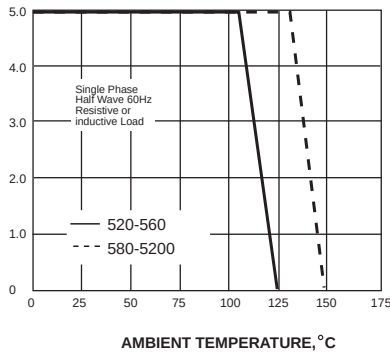
Ratings at 25°C ambient temperature unless otherwise specified.  
 Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| Catalog Number                                                                                              | SYMBOLS           | 520         | 530 | 540 | 550  | 560 | 580         | 5100 | 5150 | 5200 | UNITS |
|-------------------------------------------------------------------------------------------------------------|-------------------|-------------|-----|-----|------|-----|-------------|------|------|------|-------|
| Maximum repetitive peak reverse voltage                                                                     | V <sub>RRM</sub>  | 20          | 30  | 40  | 50   | 60  | 80          | 100  | 150  | 200  | VOLTS |
| Maximum RMS voltage                                                                                         | V <sub>RMS</sub>  | 14          | 21  | 28  | 35   | 42  | 56          | 70   | 105  | 150  | VOLTS |
| Maximum DC blocking voltage                                                                                 | V <sub>DC</sub>   | 20          | 30  | 40  | 50   | 60  | 80          | 100  | 150  | 200  | VOLTS |
| Maximum average forward rectified current at T <sub>L</sub> (see fig.1)                                     | I <sub>(AV)</sub> | 5.0         |     |     |      |     |             |      |      |      | Amps  |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)      | I <sub>FSM</sub>  | 150.0       |     |     |      |     |             |      |      |      | Amps  |
| Maximum instantaneous forward voltage at 5.0A                                                               | V <sub>F</sub>    | 0.55        |     |     | 0.70 |     | 0.85        |      |      | 0.95 | Volts |
| Maximum DC reverse current    T <sub>A</sub> =25°C<br>at rated DC blocking voltage    T <sub>A</sub> =100°C | I <sub>R</sub>    | 0.5         |     |     |      |     |             | 0.2  |      | mA   |       |
|                                                                                                             |                   | 20          |     |     |      | 10  |             | 2.0  |      |      |       |
| Typical junction capacitance (NOTE 1)                                                                       | C <sub>J</sub>    | 200         |     |     |      |     |             |      |      |      | pF    |
| Typical thermal resistance (NOTE 2)                                                                         | R <sub>θJA</sub>  | 50.0        |     |     |      |     |             |      |      |      | °C/W  |
| Operating junction temperature range                                                                        | T <sub>J</sub>    | -50 to +125 |     |     |      |     | -50 to +150 |      |      |      | °C    |
| Storage temperature range                                                                                   | T <sub>STG</sub>  | -50 to +150 |     |     |      |     |             |      |      |      | °C    |

**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 2. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

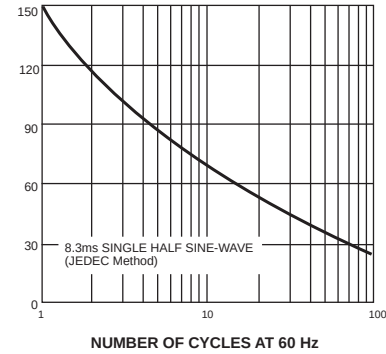
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



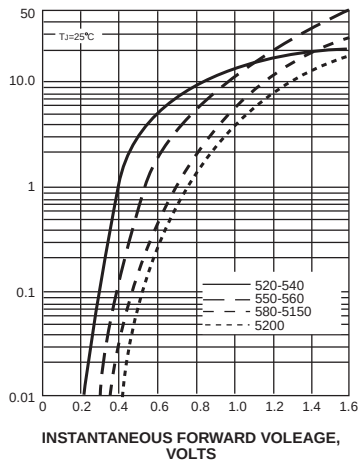
PEAK FORWARD SURGE CURRENT,  
AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



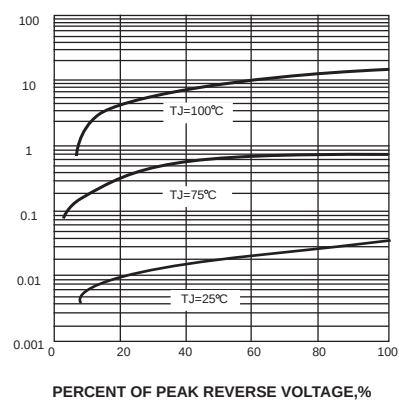
INSTANTANEOUS FORWARD  
CURRENT,AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



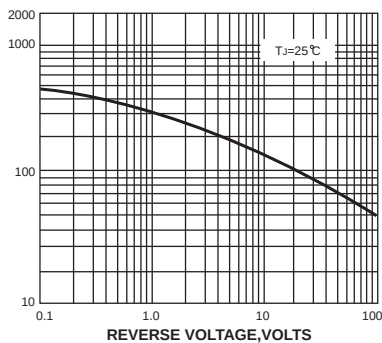
INSTANTANEOUS REVERSE CURRENT,  
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

