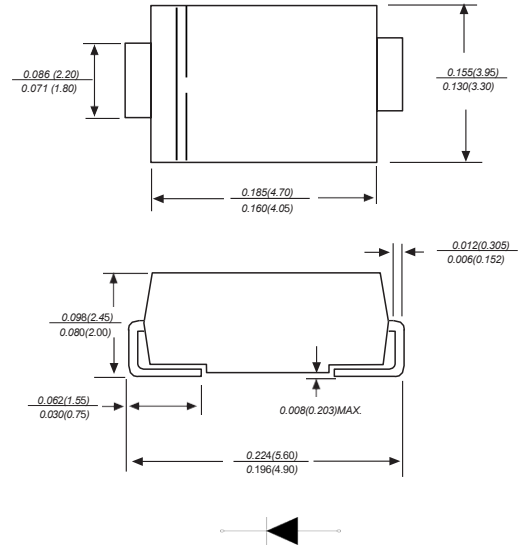


## LOW FORWARD VOLTAGE SCHOTTKY BARRIER DIODES

### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:  
260°C/10 seconds at terminals

### DO-214AA/SMB



Dimensions in inches and (millimeters)

### 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%.

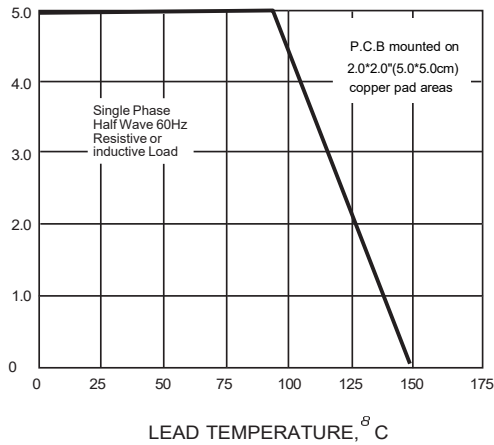
| Parameter                                                                                             | SYMBOLS                          | SL52B       | SL53B | SL54B | SL55B | SL56B | SL58B       | SL510B | UNITS |
|-------------------------------------------------------------------------------------------------------|----------------------------------|-------------|-------|-------|-------|-------|-------------|--------|-------|
| Marking Code                                                                                          |                                  |             |       |       |       |       |             |        |       |
| Maximum repetitive peak reverse voltage                                                               | V <sub>RRM</sub>                 | 20          | 30    | 40    | 50    | 60    | 80          | 100    | V     |
| Maximum RMS voltage                                                                                   | V <sub>RMS</sub>                 | 14          | 21    | 28    | 35    | 42    | 56          | 70     | V     |
| Maximum DC blocking voltage                                                                           | V <sub>DC</sub>                  | 20          | 30    | 40    | 50    | 60    | 80          | 100    | V     |
| Maximum average forward rectified current at TL=90°C                                                  | I <sub>(AV)</sub>                | 5.0         |       |       |       |       |             |        | A     |
| Peak forward surge current<br>8.3ms single half sine-wave<br>superimposed onrated load (JEDEC Method) | I <sub>FSM</sub>                 | 100         |       |       |       |       |             |        | A     |
| Maximum instantaneous forward voltage at 5.0A                                                         | V <sub>F</sub>                   | 0.45        |       |       | 0.50  |       | 0.70        |        | V     |
| Maximum DCreverse current     TA=25°C<br>at rated DCblocking voltage    TA=125°C                      | I <sub>R</sub>                   | 0.5<br>20.0 |       |       |       |       | 0.2<br>10.0 |        | mA    |
| Typical junction capacitance (NOTE 2)                                                                 | C <sub>J</sub>                   | 200         |       |       |       |       |             |        | pF    |
| Typical thermal resistance (NOTE 3)                                                                   | RθJA                             | 68.0        |       |       |       |       |             |        | °C/W  |
| Operating junction and storage temperaturerange                                                       | T <sub>J</sub> ,T <sub>STG</sub> | -55 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

## Ratings And Characteristic Curves

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

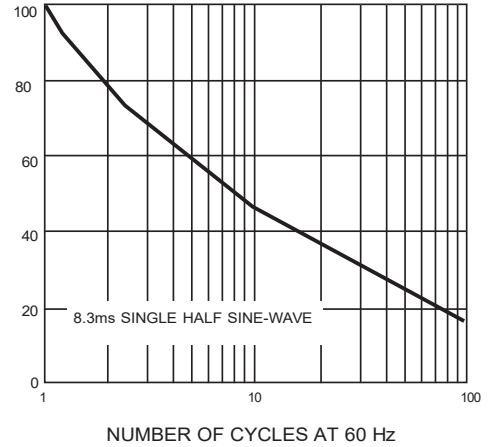


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

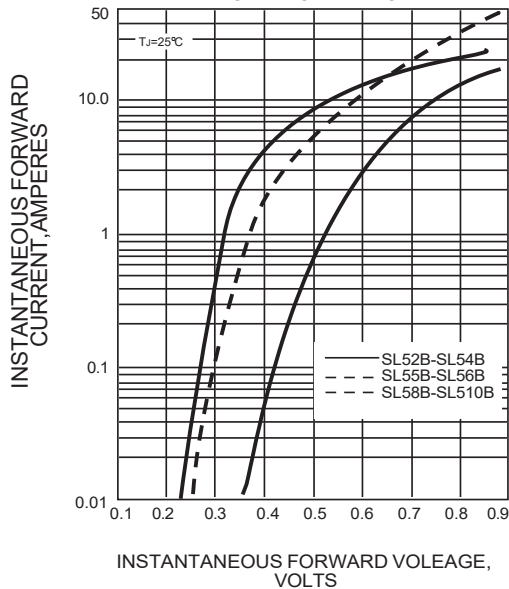


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

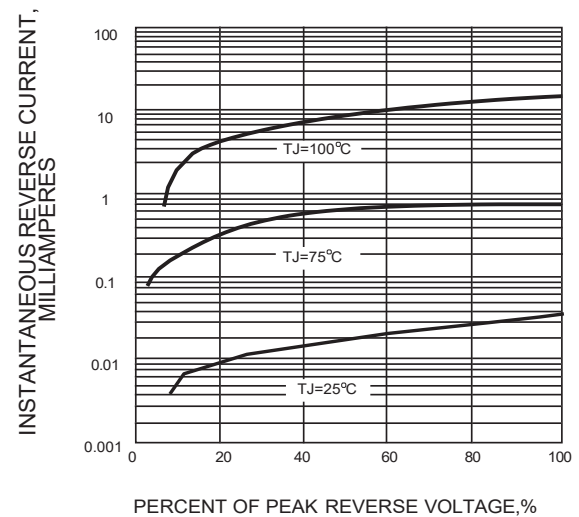
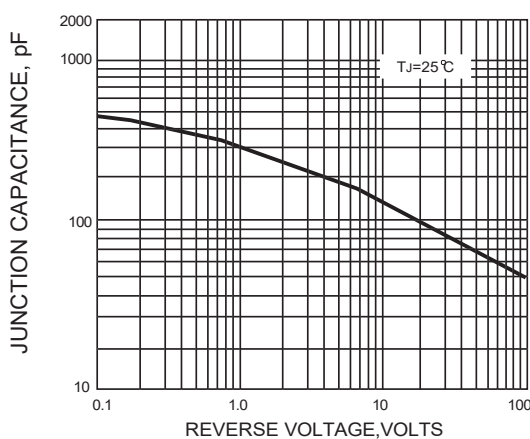
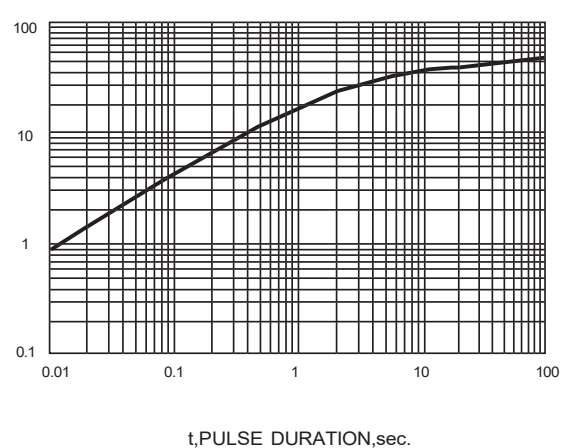


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.