

## 1SMB5914~1SMB5949

### SURFACE MOUNT SILICON ZENER DIODE

**VOLTAGE** 3.6 to 100 Volts **POWER** 3 Watts

**SMB/DO-214AA**

Unit: inch (mm)

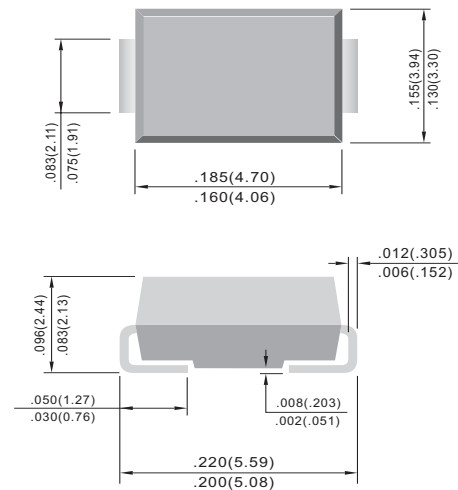
#### FEATURES

- For surface mounted applications in order to optimize board space.
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- High temperature soldering : 260°C /10 seconds at terminals
- Pb free product are available : 99% Sn above can meet RoHS environment substance request

#### MECHANICAL DATA

Case: JEDEC DO-214AA, Molded plastic over passivated junction.  
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026  
Polarity: Color band denotes positive end (cathode)  
Standard Packaging: 12mm tape (EIA-481)

Weight: 0.003 ounce, 0.093 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter                                                                         | Symbol                            | Value       | Units |
|-----------------------------------------------------------------------------------|-----------------------------------|-------------|-------|
| DC Power Dissipation on TL=75°C ,Measure at Zero Lead Length<br>Derate above 75°C | P <sub>D</sub>                    | 3           | Watts |
| Operating Junction and Storage Temperature Range                                  | T <sub>J</sub> , T <sub>STG</sub> | -55 to +150 | °C    |



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| Part Number | V <sub>Z</sub> @ I <sub>ZT</sub> |        |        | Maximum Zener Impedance           |       |                                   |      | Leakage Current |                | Marking Code |
|-------------|----------------------------------|--------|--------|-----------------------------------|-------|-----------------------------------|------|-----------------|----------------|--------------|
|             |                                  |        |        | Z <sub>zT</sub> @ I <sub>ZT</sub> |       | Z <sub>zK</sub> @ I <sub>zK</sub> |      | I <sub>R</sub>  | V <sub>R</sub> |              |
|             | Nom. V                           | Min. V | Max. V | Ω                                 | mA    | Ω                                 | mA   | μA              | V              |              |
| 1SMB5914    | 3.6                              | 3.42   | 3.78   | 9                                 | 104.2 | 500                               | 1.00 | 75.00           | 1.00           | 914B         |
| 1SMB5915    | 3.9                              | 3.71   | 4.10   | 8                                 | 96.1  | 500                               | 1.00 | 25.00           | 1.00           | 915B         |
| 1SMB5916    | 4.3                              | 4.09   | 4.52   | 6                                 | 87.2  | 500                               | 1.00 | 5.00            | 1.00           | 916B         |
| 1SMB5917    | 4.7                              | 4.47   | 4.94   | 5                                 | 79.8  | 500                               | 1.00 | 5.00            | 1.50           | 917B         |
| 1SMB5918    | 5.1                              | 4.85   | 5.36   | 4                                 | 73.5  | 350                               | 1.00 | 5.00            | 2.0            | 918B         |
| 1SMB5919    | 5.6                              | 5.32   | 5.88   | 2                                 | 66.9  | 250                               | 1.00 | 5.00            | 3.00           | 919B         |
| 1SMB5920    | 6.2                              | 5.89   | 6.51   | 2                                 | 60.5  | 200                               | 1.00 | 5.00            | 4.00           | 920B         |
| 1SMB5921    | 6.8                              | 6.46   | 7.14   | 3                                 | 55.1  | 200                               | 1.00 | 5.00            | 5.20           | 921B         |
| 1SMB5922    | 7.5                              | 7.13   | 7.88   | 3                                 | 50.0  | 400                               | 0.50 | 5.00            | 6.00           | 922B         |
| 1SMB5923    | 8.2                              | 7.79   | 8.61   | 4                                 | 45.7  | 400                               | 0.50 | 5.00            | 6.50           | 923B         |
| 1SMB5924    | 9.1                              | 8.65   | 9.56   | 4                                 | 41.2  | 500                               | 0.50 | 5.00            | 7.00           | 924B         |
| 1SMB5925    | 10                               | 9.50   | 10.50  | 5                                 | 37.5  | 500                               | 0.25 | 5.00            | 8.00           | 925B         |
| 1SMB5926    | 11                               | 10.45  | 11.55  | 6                                 | 34.1  | 550                               | 0.25 | 1.00            | 8.40           | 926B         |
| 1SMB5927    | 12                               | 11.40  | 12.60  | 7                                 | 31.2  | 550                               | 0.25 | 1.00            | 9.10           | 927B         |
| 1SMB5928    | 13                               | 12.35  | 13.65  | 7                                 | 28.8  | 550                               | 0.25 | 1.00            | 9.90           | 928B         |
| 1SMB5929    | 15                               | 14.25  | 15.75  | 9                                 | 25.0  | 600                               | 0.25 | 1.00            | 11.40          | 929B         |
| 1SMB5930    | 16                               | 15.20  | 16.80  | 10                                | 23.4  | 600                               | 0.25 | 1.00            | 12.20          | 930B         |
| 1SMB5931    | 18                               | 17.10  | 18.90  | 12                                | 20.8  | 650                               | 0.25 | 1.00            | 13.70          | 931B         |
| 1SMB5932    | 20                               | 19.00  | 21.00  | 14                                | 18.7  | 650                               | 0.25 | 1.00            | 15.20          | 932B         |
| 1SMB5933    | 22                               | 20.90  | 23.10  | 18                                | 17.0  | 650                               | 0.25 | 1.00            | 16.70          | 933B         |
| 1SMB5934    | 24                               | 22.80  | 25.20  | 19                                | 15.6  | 700                               | 0.25 | 1.00            | 18.20          | 934B         |
| 1SMB5935    | 27                               | 25.65  | 28.35  | 23                                | 13.9  | 700                               | 0.25 | 1.00            | 20.60          | 935B         |
| 1SMB5936    | 30                               | 28.50  | 31.50  | 26                                | 12.5  | 750                               | 0.25 | 1.00            | 22.80          | 936B         |
| 1SMB5937    | 33                               | 31.35  | 34.65  | 33                                | 11.4  | 800                               | 0.25 | 1.00            | 25.10          | 937B         |
| 1SMB5938    | 36                               | 34.20  | 37.80  | 38                                | 10.4  | 850                               | 0.25 | 1.00            | 27.40          | 938B         |
| 1SMB5939    | 39                               | 37.05  | 40.95  | 45                                | 9.6   | 900                               | 0.25 | 1.00            | 29.70          | 939B         |
| 1SMB5940    | 43                               | 40.85  | 45.15  | 53                                | 8.7   | 950                               | 0.25 | 1.00            | 32.70          | 940B         |
| 1SMB5941    | 47                               | 44.65  | 49.35  | 67                                | 8.0   | 1000                              | 0.25 | 1.00            | 35.80          | 941B         |
| 1SMB5942    | 51                               | 48.45  | 53.55  | 70                                | 7.3   | 1100                              | 0.25 | 1.00            | 38.80          | 942B         |
| 1SMB5943    | 56                               | 53.20  | 58.80  | 86                                | 6.7   | 1300                              | 0.25 | 1.00            | 42.60          | 943B         |
| 1SMB5944    | 62                               | 58.90  | 65.10  | 100                               | 6.0   | 1500                              | 0.25 | 1.00            | 47.10          | 944B         |
| 1SMB5945    | 68                               | 64.60  | 71.40  | 120                               | 5.5   | 1700                              | 0.25 | 1.00            | 51.70          | 945B         |
| 1SMB5946    | 75                               | 71.25  | 78.75  | 140                               | 5.0   | 2000                              | 0.25 | 1.00            | 56.00          | 946B         |
| 1SMB5947    | 82                               | 77.90  | 86.10  | 160                               | 4.6   | 2500                              | 0.25 | 1.00            | 62.20          | 947B         |
| 1SMB5948    | 91                               | 86.45  | 95.55  | 200                               | 4.1   | 3000                              | 0.25 | 1.00            | 69.20          | 948B         |
| 1SMB5949    | 100                              | 95.00  | 105.00 | 250                               | 3.7   | 3100                              | 0.25 | 1.00            | 76.00          | 949B         |



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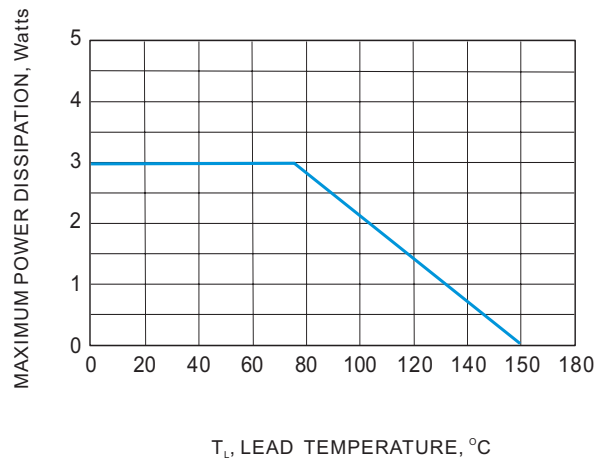


Fig.1 Steady State Power Derating