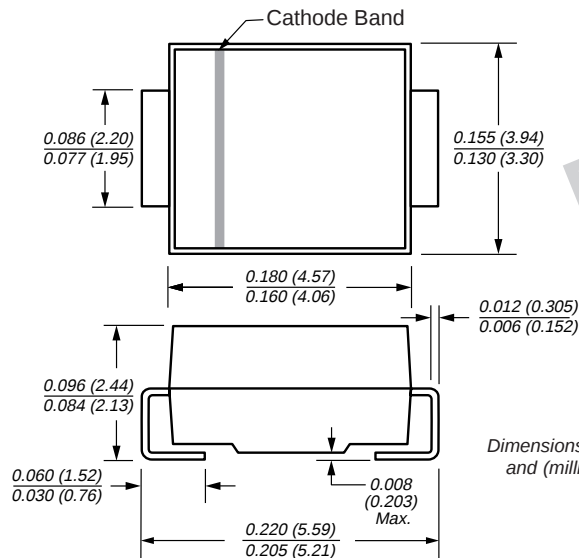




## Surface Mount Zener Diodes

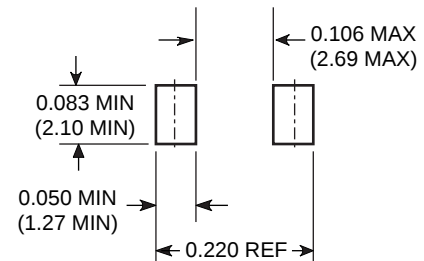
Zener Voltage 9.1 to 68V  
Steady State Power 1.5W

DO-214AA (SMBJ-Bend)



Extended Voltage Range

Mounting Pad Layout



## Mechanical Data

**Case:** JEDEC DO-214AA molded plastic over glass passivated junction**Terminals:** Solder plated, solderable per MIL-STD-750, Method 2026**Polarity:** Band denotes cathode**Mounting Position:** Any **Weight:** 0.003oz., 0.093g**Packaging Codes – Options (Antistatic):**

51 – 2K per Bulk box, 20K/carton

52 – 750 per 7" plastic Reel (12mm tape), 15K/carton

5B – 3.2K per 13" plastic Reel (12mm tape), 32K/carton

## Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Glass passivated chip junction
- Low Zener impedance
- Low regulation factor
- High temperature soldering guaranteed: 250°C/10 seconds at terminals
- Contact local sales office for gull-wing (SMZG prefix) lead form (DO-215AA)

## Maximum Electrical Characteristics

Operating Junction and Storage Temperature Range: T<sub>J</sub>, T<sub>STG</sub>: -55°C to +150°C

| Part Number | Device Marking Code | Nominal Zener Voltage<br>V <sub>Z</sub> at I <sub>ZT</sub><br>(V) | Test Current<br>I <sub>ZT</sub><br>(mA) | Max. Zener Impedance<br>Leakage Current   |                                    |      | Max. Reverse<br>Current<br>I <sub>R</sub> at V <sub>R</sub> |                    | Max. Zener<br>Current<br>I <sub>ZM</sub><br>(mA) |
|-------------|---------------------|-------------------------------------------------------------------|-----------------------------------------|-------------------------------------------|------------------------------------|------|-------------------------------------------------------------|--------------------|--------------------------------------------------|
|             |                     |                                                                   |                                         | Z <sub>KT</sub> at I <sub>ZT</sub><br>(Ω) | Z <sub>KK</sub> at I <sub>ZK</sub> |      | I <sub>R</sub> (μA)                                         | V <sub>R</sub> (V) |                                                  |
|             |                     |                                                                   |                                         |                                           | (Ω)                                | (mA) |                                                             |                    |                                                  |
| SMZJ3788A,B | VK,L                | 9.1                                                               | 41.2                                    | 4.0                                       | 1000                               | 0.50 | 50                                                          | 7.0                | 140                                              |
| SMZJ3789A,B | WA,B                | 10                                                                | 37.5                                    | 5.0                                       | 1000                               | 0.25 | 50                                                          | 7.6                | 125                                              |
| SMZJ3790A,B | WC,D                | 11                                                                | 34.1                                    | 6.0                                       | 650                                | 0.25 | 10                                                          | 8.4                | 115                                              |
| SMZJ3791A,B | WE,F                | 12                                                                | 31.2                                    | 7.0                                       | 550                                | 0.25 | 5.0                                                         | 9.1                | 105                                              |
| SMZJ3792A,B | WG,H                | 13                                                                | 28.8                                    | 7.5                                       | 550                                | 0.25 | 5.0                                                         | 9.9                | 98                                               |
| SMZJ3793A,B | WI,J                | 15                                                                | 25.0                                    | 9.0                                       | 600                                | 0.25 | 5.0                                                         | 11.4               | 85                                               |
| SMZJ3794A,B | WK,L                | 16                                                                | 23.4                                    | 10.0                                      | 600                                | 0.25 | 5.0                                                         | 12.2               | 80                                               |
| SMZJ3795A,B | XA,B                | 18                                                                | 20.8                                    | 12.0                                      | 650                                | 0.25 | 5.0                                                         | 13.7               | 70                                               |
| SMZJ3796A,B | XC,D                | 20                                                                | 18.7                                    | 14.0                                      | 650                                | 0.25 | 5.0                                                         | 15.2               | 62                                               |
| SMZJ3797A,B | XE,F                | 22                                                                | 17.0                                    | 17.5                                      | 650                                | 0.25 | 5.0                                                         | 16.7               | 56                                               |
| SMZJ3798A,B | XG,H                | 24                                                                | 15.6                                    | 19.0                                      | 700                                | 0.25 | 5.0                                                         | 18.2               | 51                                               |
| SMZJ3799A,B | XI,J                | 27                                                                | 13.9                                    | 23.0                                      | 700                                | 0.25 | 5.0                                                         | 20.6               | 46                                               |

**Notes:** (1) Standard voltage tolerance is ±20%, suffix "A" denotes ±10% and suffix "B" denotes ±5%(2) Maximum steady state power dissipation is 1.5W at T<sub>L</sub> = 75°C (See Fig. 1)

## Max. Electrical Characteristics (con't.) Operating Junction and Storage Temperature Range: $T_J, T_{STG}$ : $-55^{\circ}\text{C}$ to $+150^{\circ}\text{C}$

| Part Number<br>Modified J-Bend | Device<br>Marking<br>Code | Nominal Zener<br>Voltage<br>V <sub>z</sub> at I <sub>zT</sub><br>(V) | Test<br>Current<br>I <sub>zT</sub><br>(mA) | Max. Zener Impedance<br>Leakage Current   |                                    |      | Max. Reverse<br>Current<br>I <sub>R</sub> at V <sub>R</sub> |      | Max. Zener<br>Current<br>I <sub>zM</sub><br>(mA) |
|--------------------------------|---------------------------|----------------------------------------------------------------------|--------------------------------------------|-------------------------------------------|------------------------------------|------|-------------------------------------------------------------|------|--------------------------------------------------|
|                                |                           |                                                                      |                                            | Z <sub>zT</sub> at I <sub>zT</sub><br>(Ω) | Z <sub>zK</sub> at I <sub>zK</sub> |      | (μA)                                                        | (V)  |                                                  |
|                                |                           |                                                                      |                                            |                                           | (Ω)                                | (mA) |                                                             |      |                                                  |
| SMZJ3800A,B                    | XK,L                      | 30                                                                   | 12.5                                       | 26.0                                      | 750                                | 0.25 | 5.0                                                         | 22.8 | 41                                               |
| SMZJ3801A,B                    | YA,B                      | 33                                                                   | 11.4                                       | 33.0                                      | 800                                | 0.25 | 5.0                                                         | 25.1 | 38                                               |
| SMZJ3802A,B                    | YC,D                      | 36                                                                   | 10.4                                       | 38.0                                      | 850                                | 0.25 | 5.0                                                         | 27.4 | 35                                               |
| SMZJ3803A,B                    | YE,F                      | 39                                                                   | 9.6                                        | 45.0                                      | 900                                | 0.25 | 5.0                                                         | 29.7 | 31                                               |
| SMZJ3804A,B                    | YG,H                      | 43                                                                   | 8.7                                        | 53.0                                      | 950                                | 0.25 | 5.0                                                         | 32.7 | 28                                               |
| SMZJ3805A,B                    | YI,J                      | 47                                                                   | 8.0                                        | 67.0                                      | 1000                               | 0.25 | 5.0                                                         | 35.8 | 26                                               |
| SMZJ3806A,B                    | YK,L                      | 51                                                                   | 7.3                                        | 70.0                                      | 1100                               | 0.25 | 5.0                                                         | 38.8 | 24                                               |
| SMZJ3807A,B                    | ZA,B                      | 56                                                                   | 6.7                                        | 86.0                                      | 1300                               | 0.25 | 5.0                                                         | 42.6 | 22                                               |
| SMZJ3808A,B                    | ZC,D                      | 62                                                                   | 6.0                                        | 100.0                                     | 1500                               | 0.25 | 5.0                                                         | 47.1 | 20                                               |
| SMZJ3809A,B                    | ZE,F                      | 68                                                                   | 5.5                                        | 120.0                                     | 1700                               | 0.25 | 5.0                                                         | 51.7 | 18                                               |

Notes: (1) Standard voltage tolerance is  $\pm 20\%$ , suffix "A" denotes  $\pm 10\%$  and suffix "B" denotes  $\pm 5\%$   
(2) Maximum steady state power dissipation is 1.5W at  $T_L = 75^{\circ}\text{C}$  (See Fig. 1)

## Ratings and Characteristic Curves ( $T_A = 25^{\circ}\text{C}$ unless otherwise noted)

Fig. 1 – Maximum Continuous Power  
Dissipation

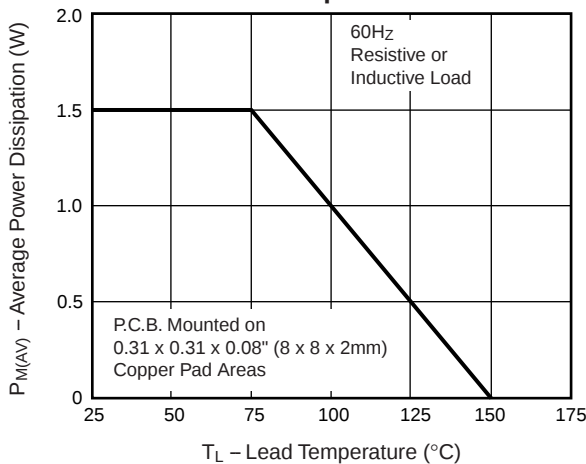


Fig. 2 – Typical Zener Impedance

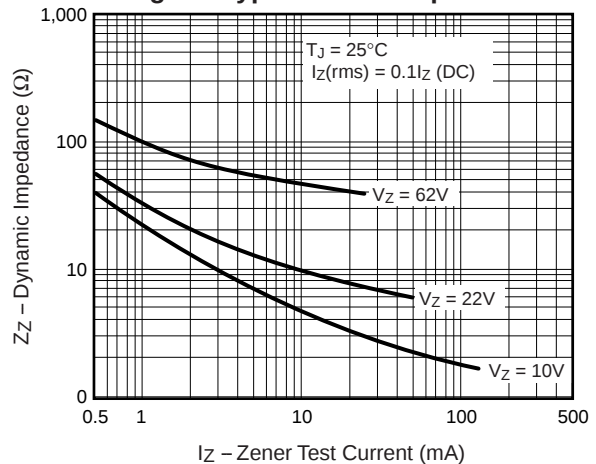


Fig. 3 – Typical Zener Impedance

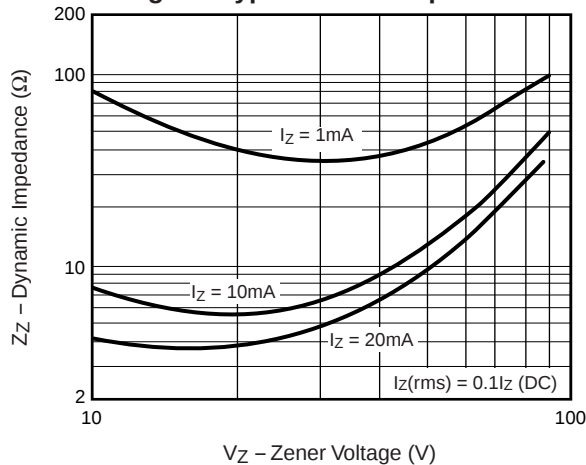


Fig. 4 – Typical Temperature  
Coefficients

