



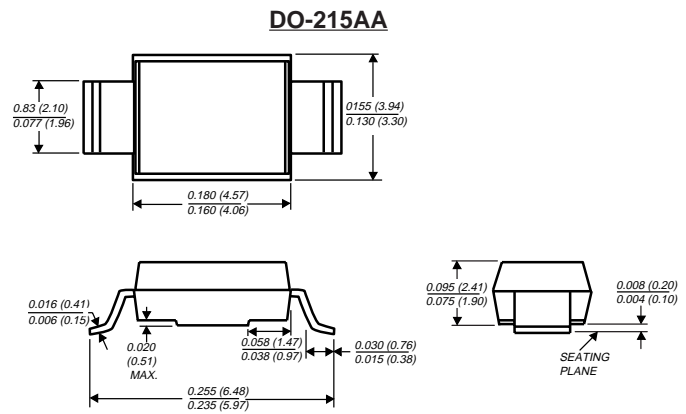
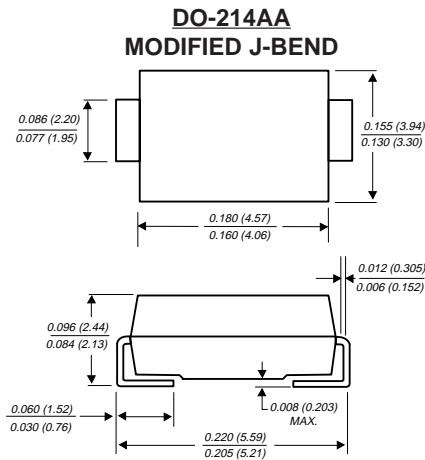
# SMZG AND SMZJ 3789 THRU 3809B



## SURFACE MOUNT ZENER DIODE

Zener Voltage -10 to 68 Volts

Steady State Power - 1.5 Watts



Dimensions in inches and (millimeters)

### FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mount applications
- ◆ Glass passivated chip junction
- ◆ Low Zener impedance
- ◆ Low regulation factor
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds at terminals

### MECHANICAL DATA

- Case:** JEDEC DO-214/DO215AA molded plastic over passivated junction
- Terminals:** Solder plated, solderable per MIL STD-750, Method 2026
- Polarity:** Color band denotes positive end (cathode)
- Mounting Position:** Any
- Weight:** 0.003 ounce , 0.093 gram

OPERATING JUNCTION AND STORAGE TEMPERATURE RANGE: T<sub>J</sub>, T<sub>STG</sub>: -55°C to +150°C

### MAXIMUM ELECTRICAL CHARACTERISTICS

| PART NUMBER |                 | DEVICE MARKING CODE | NOMINAL ZENER VOLTAGE Vz at I <sub>ZT</sub> (Volts) | TEST CURRENT I <sub>ZT</sub> (mA) | MAX. ZENER IMPEDANCE                      |                                    |      | MAX. REVERSE LEAKAGE CURRENT I <sub>R</sub> at V <sub>R</sub> |                        | MAX. ZENER CURRENT I <sub>ZM</sub> (mA) |
|-------------|-----------------|---------------------|---|-----------------------------------|---|------------------------------------|------|---|------------------------|---|
| GULL-WING   | MODIFIED J-BEND |                     |   |                                   | Z <sub>ZT</sub> at I <sub>ZT</sub> (Ohms) | Z <sub>ZK</sub> at I <sub>ZK</sub> |      | I <sub>R</sub> (μA)   | V <sub>R</sub> (Volts) |   |
|             |                 |                     |   |                                   |   | (Ohms)                             | (mA) |   |                        |   |
| SMZG3789A,B | SMZJ3789A,B     | WA,B                | 10.0  | 37.5                              | 5.0                                       | 1000                               | 0.25 | 50.0  | 7.6                    | 125                                     |
| SMZG3790A,B | SMZJ3790A,B     | WC,D                | 11.0  | 34.1                              | 6.0                                       | 650                                | 0.25 | 10.0  | 8.4                    | 115                                     |
| SMZG3791A,B | SMZJ3791A,B     | WE,F                | 12.0  | 31.2                              | 7.0                                       | 550                                | 0.25 | 5.0   | 9.1                    | 105                                     |
| SMZG3792A,B | SMZJ3792A,B     | WG,H                | 13.0  | 28.8                              | 7.5                                       | 550                                | 0.25 | 5.0   | 9.9                    | 98                                      |
| SMZG3793A,B | SMZJ3793A,B     | WI,J                | 15.0  | 25.0                              | 9.0                                       | 600                                | 0.25 | 5.0   | 11.4                   | 85                                      |
| SMZG3794A,B | SMZJ3794A,B     | WK,L                | 16.0  | 23.4                              | 10.0                                      | 600                                | 0.25 | 5.0   | 12.2                   | 80                                      |
| SMZG3795A,B | SMZJ3795A,B     | XA,B                | 18.0  | 20.8                              | 12.0                                      | 650                                | 0.25 | 5.0   | 13.7                   | 70                                      |
| SMZG3796A,B | SMZJ3796A,B     | XC,D                | 20.0  | 18.7                              | 14.0                                      | 650                                | 0.25 | 5.0   | 15.2                   | 62                                      |
| SMZG3797A,B | SMZJ3797A,B     | XE,F                | 22.0  | 17.0                              | 17.5                                      | 650                                | 0.25 | 5.0   | 16.7                   | 56                                      |
| SMZG3798A,B | SMZJ3798A,B     | XG,H                | 24.0  | 15.6                              | 19.0                                      | 700                                | 0.25 | 5.0   | 18.2                   | 51                                      |
| SMZG3799A,B | SMZJ3799A,B     | XI,J                | 27.0  | 13.9                              | 23.0                                      | 700                                | 0.25 | 5.0   | 20.6                   | 46                                      |
| SMZG3800A,B | SMZJ3800A,B     | XK,L                | 30.0  | 12.5                              | 26.0                                      | 750                                | 0.25 | 5.0   | 22.8                   | 41                                      |
| SMZG3801A,B | SMZJ3801A,B     | YA,B                | 33.0  | 11.4                              | 33.0                                      | 800                                | 0.25 | 5.0   | 25.1                   | 38                                      |
| SMZG3802A,B | SMZJ3802A,B     | YC,D                | 36.0  | 10.4                              | 38.0                                      | 850                                | 0.25 | 5.0   | 27.4                   | 35                                      |
| SMZG3803A,B | SMZJ3803A,B     | YE,F                | 39.0  | 9.6                               | 45.0                                      | 900                                | 0.25 | 5.0   | 29.7                   | 31                                      |
| SMZG3804A,B | SMZJ3804A,B     | YG,H                | 43.0  | 8.7                               | 53.0                                      | 950                                | 0.25 | 5.0   | 32.7                   | 28                                      |
| SMZG3805A,B | SMZJ3805A,B     | YI,J                | 47.0  | 8.0                               | 67.0                                      | 1000                               | 0.25 | 5.0   | 35.8                   | 26                                      |
| SMZG3806A,B | SMZJ3806A,B     | YK,L                | 51.0  | 7.3                               | 70.0                                      | 1100                               | 0.25 | 5.0   | 38.8                   | 24                                      |
| SMZG3807A,B | SMZJ3807A,B     | ZA,B                | 56.0  | 6.7                               | 86.0                                      | 1300                               | 0.25 | 5.0   | 42.6                   | 22                                      |
| SMZG3808A,B | SMZJ3808A,B     | ZC,D                | 62.0  | 6.0                               | 100.0                                     | 1500                               | 0.25 | 5.0   | 47.1                   | 20                                      |
| SMZG3809A,B | SMZJ3809A,B     | ZE,F                | 68.0  | 5.5                               | 120.0                                     | 1700                               | 0.25 | 5.0   | 51.7                   | 18                                      |

**NOTES:**

- (1) Standard voltage tolerance is ±20%, suffix "A" denotes ±10% and suffix "B" denotes ±5%
- (2) Maximum steady state power dissipation is 1.5 watts at T<sub>L</sub>=75°C (SEE FIG. 1)

# RATINGS AND CHARACTERISTIC CURVES SMZG,J3789 THRU SMZG,J3809B

FIG. 1 - MAXIMUM CONTINUOUS POWER DISSIPATION

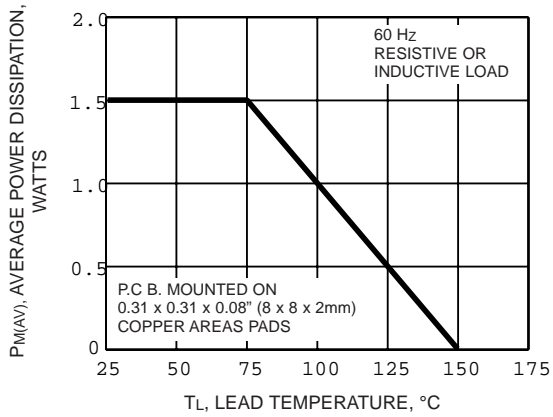


FIG. 2 - TYPICAL ZENER IMPEDANCE

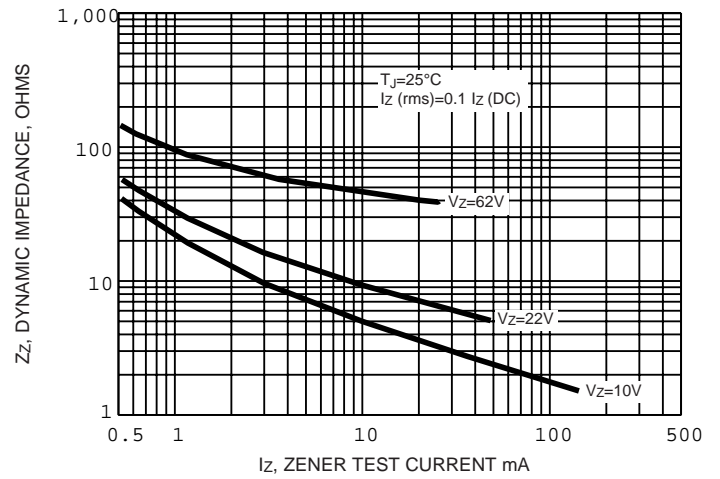


FIG. 3 - TYPICAL ZENER IMPEDANCE

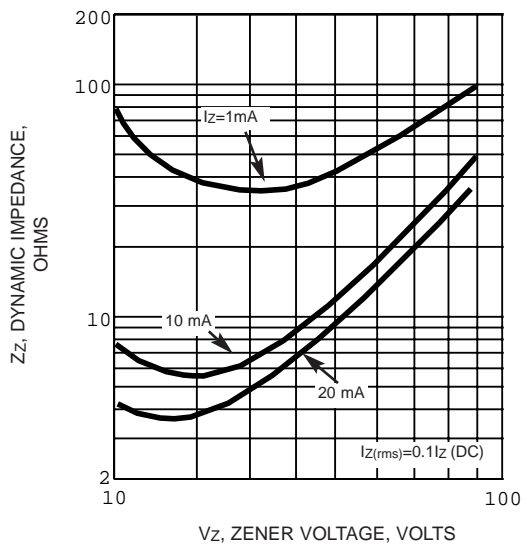


FIG. 4 - TYPICAL TEMPERATURE COEFFICIENTS

