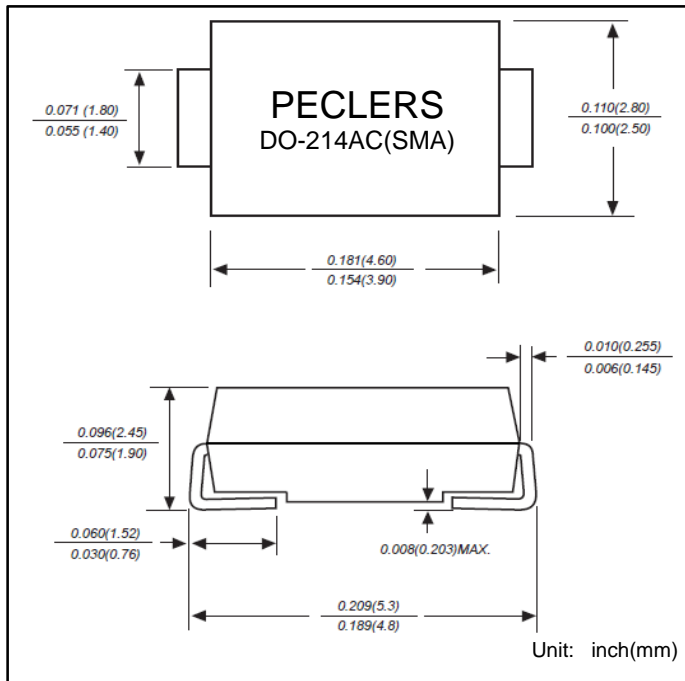


Surface Mount Silicon Zener Diodes

Zener Voltage 3.3 ~ 390 V

1.0 Watt Power Dissipation



### Features

- Glass passivated chip
- Built-in strain relief
- Low inductance
- High peak reverse power dissipation
- Low reverse leakage
- For use in stabilizing and clipping with high power rating
- RoHS compliant

### Mechanical Data

- Case: DO214AC Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Color band denotes cathode end
- Mounting position: Any

| Parameter   | Symbols                           | Value       | Unit |
|---|-----------------------------------|-------------|------|
| DC Power dissipation at TL = 75 °C <sup>(1)</sup> | P <sub>D</sub>                    | 1.0         | W    |
| Maximum forward voltage at if=200mA               | V <sub>F</sub>                    | 1.2         | V    |
| Junction temperature range                        | T <sub>J</sub> , T <sub>STG</sub> | -55 to +150 | °C   |
| Storage temperature range                         | T <sub>J</sub> , T <sub>STG</sub> | -55 to +150 | °C   |

Note :

( 1 ) T<sub>L</sub>=Lead temperature at 3/8" (9.5mm)from body

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

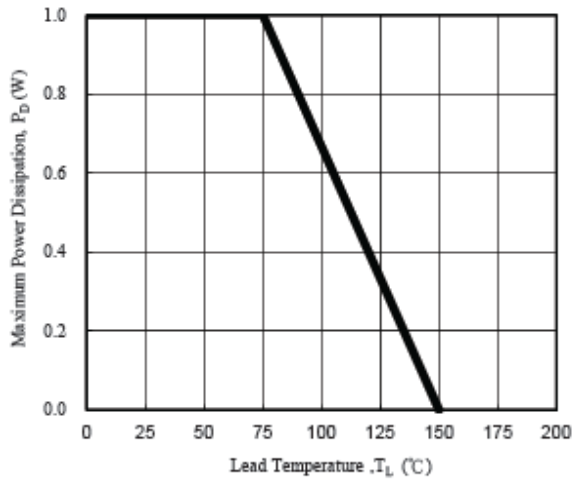


Fig. 1 - Power Temperature Derating Curve

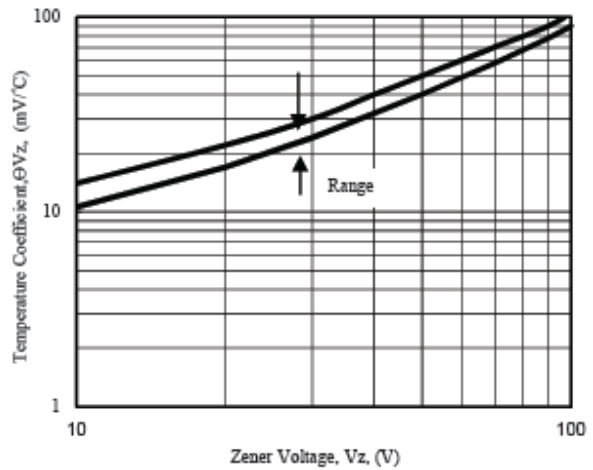


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

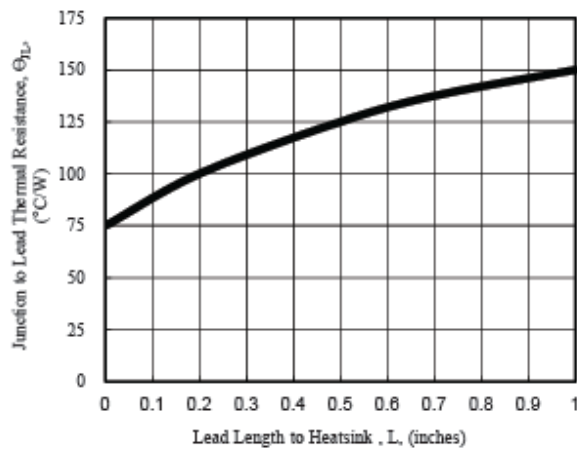


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

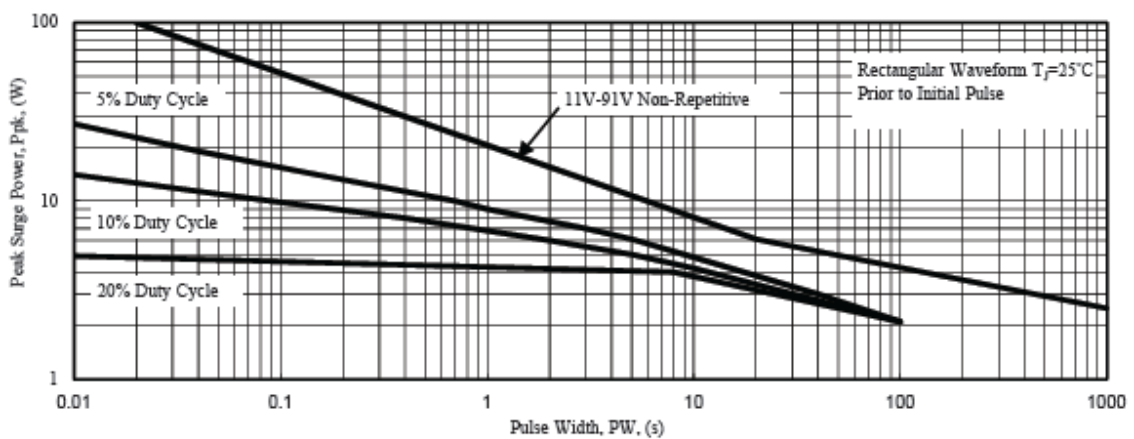


Fig. 4 - Maximum Surge Power

| Part Number | Device Marking Code | Nominal Zener Voltage @I <sub>T</sub> |                         |                         | I <sub>ZT</sub> (mA) | Maximum Zener Impedance                      |  |                      | Maximum Reverse Leakage Current    |                    | Maximum DC Zener Current |
|-------------|---------------------|---------------------------------------|-------------------------|-------------------------|----------------------|--|--|----------------------|------------------------------------|--------------------|--------------------------|
|             |                     | V <sub>Z AVE.</sub> (V)               | V <sub>Z MIN.</sub> (V) | V <sub>Z MAX.</sub> (V) |                      | Z <sub>ZT MAX.</sub> (Ω)<br>@I <sub>ZT</sub> | Z <sub>ZK MAX.</sub> (Ω)<br>@I <sub>ZK</sub> | I <sub>ZK</sub> (mA) | I <sub>R</sub> (uA)@V <sub>R</sub> | V <sub>R</sub> (V) |                          |
| SMA4727A    | 727A                | 3.0                                   | 2.85                    | 3.15                    | 80.0                 | 10.0   | 400.0  | 1.00                 | 100.0                              | 1.0                | 288.0                    |
| SMA4728A    | 728A                | 3.3                                   | 3.14                    | 3.47                    | 76.0                 | 10.0   | 400.0  | 1.00                 | 100.0                              | 1.0                | 274.0                    |
| SMA4729A    | 729A                | 3.6                                   | 3.42                    | 3.78                    | 69.0                 | 10.0   | 400.0  | 1.00                 | 100.0                              | 1.0                | 251.0                    |
| SMA4730A    | 730A                | 3.9                                   | 3.71                    | 4.10                    | 64.0                 | 9.0  | 400.0  | 1.00                 | 50.0                               | 1.0                | 232.0                    |
| SMA4731A    | 731A                | 4.3                                   | 4.09                    | 4.52                    | 58.0                 | 9.0  | 400.0  | 1.00                 | 10.0                               | 1.0                | 210.0                    |
| SMA4732A    | 732A                | 4.7                                   | 4.47                    | 4.94                    | 53.0                 | 8.0  | 500.0  | 1.00                 | 10.0                               | 1.0                | 192.0                    |
| SMA4733A    | 733A                | 5.1                                   | 4.85                    | 5.36                    | 49.0                 | 7.0  | 550.0  | 1.00                 | 10.0                               | 1.0                | 177.0                    |
| SMA4734A    | 734A                | 5.6                                   | 5.32                    | 5.88                    | 45.0                 | 5.0  | 600.0  | 1.00                 | 10.0                               | 2.0                | 161.0                    |
| SMA4735A    | 735A                | 6.2                                   | 5.89                    | 6.51                    | 41.0                 | 2.0  | 700.0  | 1.00                 | 10.0                               | 3.0                | 146.0                    |
| SMA4736A    | 736A                | 6.8                                   | 6.46                    | 7.14                    | 37.0                 | 3.5  | 700.0  | 1.00                 | 10.0                               | 4.0                | 133.0                    |
| SMA4737A    | 737A                | 7.5                                   | 7.13                    | 7.88                    | 34.0                 | 4.0  | 700.0  | 0.50                 | 10.0                               | 5.0                | 121.0                    |
| SMA4738A    | 738A                | 8.2                                   | 7.79                    | 8.61                    | 31.0                 | 4.5  | 700.0  | 0.50                 | 10.0                               | 6.0                | 110.0                    |
| SMA4739A    | 739A                | 9.1                                   | 8.65                    | 9.56                    | 28.0                 | 5.0  | 700.0  | 0.50                 | 10.0                               | 7.0                | 100.0                    |
| SMA4740A    | 740A                | 10.0                                  | 9.50                    | 10.50                   | 25.0                 | 7.0  | 700.0  | 0.25                 | 10.0                               | 7.6                | 91.0                     |
| SMA4741A    | 741A                | 11.0                                  | 10.45                   | 11.55                   | 23.0                 | 8.0  | 700.0  | 0.25                 | 0.5                                | 8.4                | 83.0                     |
| SMA4742A    | 742A                | 12.0                                  | 11.40                   | 12.60                   | 21.0                 | 9.0  | 700.0  | 0.25                 | 0.5                                | 9.1                | 76.0                     |
| SMA4743A    | 743A                | 13.0                                  | 12.35                   | 13.65                   | 19.0                 | 10.0   | 700.0  | 0.25                 | 0.5                                | 9.9                | 69.0                     |
| SMA4744A    | 744A                | 15.0                                  | 14.25                   | 15.75                   | 17.0                 | 14.0   | 700.0  | 0.25                 | 0.5                                | 11.4               | 61.0                     |
| SMA4745A    | 745A                | 16.0                                  | 15.20                   | 16.80                   | 15.5                 | 16.0   | 700.0  | 0.25                 | 0.5                                | 12.2               | 57.0                     |
| SMA4746A    | 746A                | 18.0                                  | 17.10                   | 18.90                   | 14.0                 | 20.0   | 750.0  | 0.25                 | 0.5                                | 13.7               | 50.0                     |
| SMA4747A    | 747A                | 20.0                                  | 19.00                   | 21.00                   | 12.5                 | 22.0   | 750.0  | 0.25                 | 0.5                                | 15.2               | 45.0                     |
| SMA4748A    | 748A                | 22.0                                  | 20.90                   | 23.10                   | 11.5                 | 23.0   | 750.0  | 0.25                 | 0.5                                | 16.7               | 41.0                     |
| SMA4749A    | 749A                | 24.0                                  | 22.80                   | 25.20                   | 10.5                 | 25.0   | 750.0  | 0.25                 | 0.5                                | 18.2               | 38.0                     |
| SMA4750A    | 750A                | 27.0                                  | 25.65                   | 28.35                   | 9.5                  | 35.0   | 750.0  | 0.25                 | 0.5                                | 20.6               | 34.0                     |
| SMA4751A    | 751A                | 30.0                                  | 28.50                   | 31.50                   | 8.5                  | 40.0   | 1000.0                                       | 0.25                 | 0.5                                | 22.8               | 30.0                     |
| SMA4752A    | 752A                | 33.0                                  | 31.35                   | 34.65                   | 7.5                  | 45.0   | 1000.0                                       | 0.25                 | 0.5                                | 25.1               | 27.0                     |
| SMA4753A    | 753A                | 36.0                                  | 34.20                   | 37.80                   | 7.0                  | 50.0   | 1000.0                                       | 0.25                 | 0.5                                | 27.4               | 25.0                     |
| SMA4754A    | 754A                | 39.0                                  | 37.05                   | 40.95                   | 6.5                  | 60.0   | 1000.0                                       | 0.25                 | 0.5                                | 29.7               | 23.0                     |
| SMA4755A    | 755A                | 43.0                                  | 40.85                   | 45.15                   | 6.0                  | 70.0   | 1500.0                                       | 0.25                 | 0.5                                | 32.7               | 22.0                     |
| SMA4756A    | 756A                | 47.0                                  | 44.65                   | 49.35                   | 5.5                  | 80.0   | 1500.0                                       | 0.25                 | 0.5                                | 35.8               | 19.0                     |
| SMA4757A    | 757A                | 51.0                                  | 48.45                   | 53.55                   | 5.0                  | 95.0   | 1500.0                                       | 0.25                 | 0.5                                | 38.8               | 18.0                     |
| SMA4758A    | 758A                | 56.0                                  | 53.20                   | 58.80                   | 4.5                  | 110.0  | 2000.0                                       | 0.25                 | 0.5                                | 42.6               | 16.0                     |
| SMA4759A    | 759A                | 62.0                                  | 58.90                   | 65.10                   | 4.0                  | 125.0  | 2000.0                                       | 0.25                 | 0.5                                | 47.1               | 14.0                     |
| SMA4760A    | 760A                | 68.0                                  | 64.60                   | 71.40                   | 3.7                  | 150.0  | 2000.0                                       | 0.25                 | 0.5                                | 51.7               | 13.0                     |
| SMA4761A    | 761A                | 75.0                                  | 71.25                   | 78.75                   | 3.3                  | 175.0  | 2000.0                                       | 0.25                 | 0.5                                | 56.0               | 12.0                     |
| SMA4762A    | 762A                | 82.0                                  | 77.90                   | 86.10                   | 3.0                  | 200.0  | 3000.0                                       | 0.25                 | 0.5                                | 62.2               | 11.0                     |
| SMA4763A    | 763A                | 91.0                                  | 86.45                   | 95.55                   | 2.8                  | 250.0  | 3000.0                                       | 0.25                 | 0.5                                | 69.2               | 10.0                     |
| SMA4764A    | 764A                | 100.0                                 | 95.00                   | 105.00                  | 2.5                  | 350.0  | 3000.0                                       | 0.25                 | 0.5                                | 76.0               | 9.0                      |
| SZ1110A     | 711Z                | 110.0                                 | 104.50                  | 115.50                  | 2.3                  | 450.0  | 4000.0                                       | 0.25                 | 0.5                                | 83.6               | 8.6                      |
| SZ1120A     | 712Z                | 120.0                                 | 114.00                  | 126.00                  | 2.0                  | 550.0  | 4500.0                                       | 0.25                 | 0.5                                | 91.2               | 7.8                      |
| SZ1130A     | 713Z                | 130.0                                 | 123.50                  | 136.50                  | 1.9                  | 700.0  | 5000.0                                       | 0.25                 | 0.5                                | 98.8               | 7.0                      |
| SZ1150A     | 715Z                | 150.0                                 | 142.50                  | 157.50                  | 1.7                  | 1000.0                                       | 6000.0                                       | 0.25                 | 0.5                                | 114.0              | 6.4                      |
| SZ1160A     | 716Z                | 160.0                                 | 152.00                  | 168.00                  | 1.6                  | 1100.0                                       | 6500.0                                       | 0.25                 | 0.5                                | 121.6              | 5.8                      |
| SZ1180A     | 718Z                | 180.0                                 | 171.00                  | 189.00                  | 1.4                  | 1200.0                                       | 7000.0                                       | 0.25                 | 0.5                                | 136.8              | 5.2                      |
| SZ1200A     | 720Z                | 200.0                                 | 190.00                  | 210.00                  | 1.2                  | 1900.0                                       | 9990.0                                       | 0.25                 | 0.5                                | 152.0              | 4.7                      |
| SZ1220A     | 722Z                | 220.0                                 | 209.00                  | 231.00                  | 1.0                  | 1600.0                                       | 8000.0                                       | 0.25                 | 0.5                                | 167.2              | 4.0                      |
| SZ1240A     | 724Z                | 240.0                                 | 228.00                  | 252.00                  | 0.9                  | 1800.0                                       | 8500.0                                       | 0.25                 | 0.5                                | 182.4              | 3.8                      |
| SZ1250A     | 725Z                | 250.0                                 | 237.50                  | 262.50                  | 0.9                  | 2000.0                                       | 9000.0                                       | 0.25                 | 0.5                                | 190.0              | 3.6                      |
| SZ1270A     | 727Z                | 270.0                                 | 256.50                  | 283.50                  | 0.8                  | 2100.0                                       | 9000.0                                       | 0.25                 | 0.5                                | 205.0              | 3.3                      |
| SZ1300A     | 730Z                | 300.0                                 | 285.00                  | 315.00                  | 0.8                  | 2300.0                                       | 9500.0                                       | 0.25                 | 0.5                                | 228.0              | 3.0                      |
| SZ1330A     | 733Z                | 330.0                                 | 313.50                  | 346.50                  | 0.7                  | 2500.0                                       | 9500.0                                       | 0.25                 | 0.5                                | 250.2              | 2.7                      |
| SZ1360A     | 736Z                | 360.0                                 | 342.00                  | 378.00                  | 0.7                  | 2700.0                                       | 10000.0                                      | 0.25                 | 0.5                                | 275.0              | 2.5                      |
| SZ1390A     | 739Z                | 390.0                                 | 370.50                  | 409.50                  | 0.7                  | 3000.0                                       | 10000.0                                      | 0.25                 | 0.5                                | 300.0              | 2.2                      |