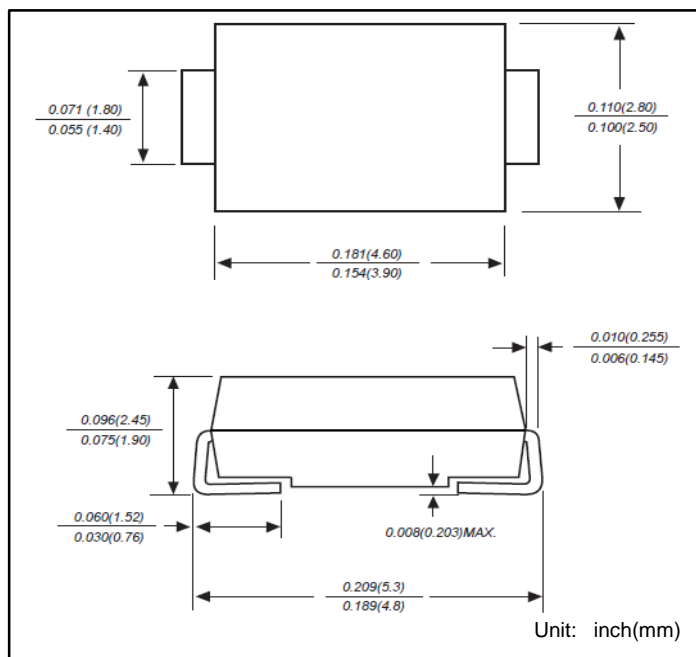


Surface Mount Silicon Zener Diodes

Zener Voltage 3.3 ~ 200 V

1.5 Watt Power Dissipation

DO-214AC(SMA)



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: DO-214AC 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 ⁽¹⁾ | P _D | 1.5 | W |
| Maximum forward voltage at if=200mA | V _F | 1.2 | V |
| Junction temperature range | T _J , T _{STG} | -55 to +150 | °C |
| Storage temperature range | T _J , T _{STG} | -55 to +150 | °C |

Note :

(1) T_L=Lead temperature at 3/8" (9.5mm)from body

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

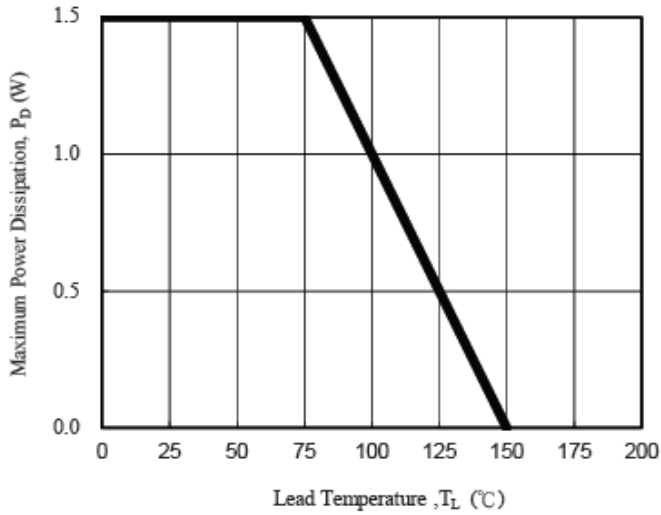


Fig. 1 - Power Temperature Derating Curve

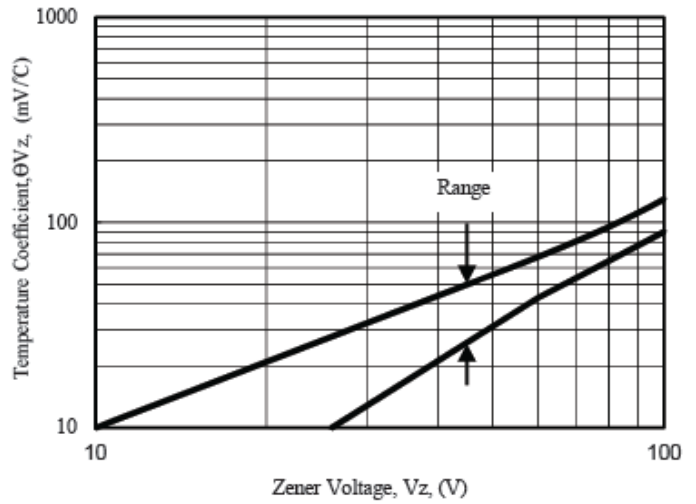


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

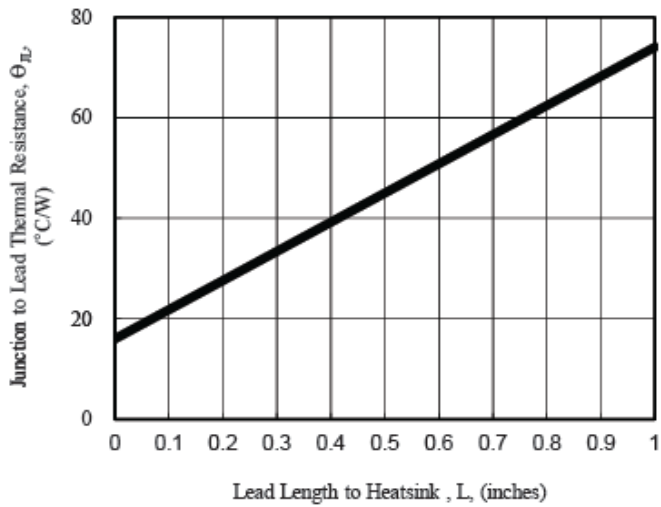


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

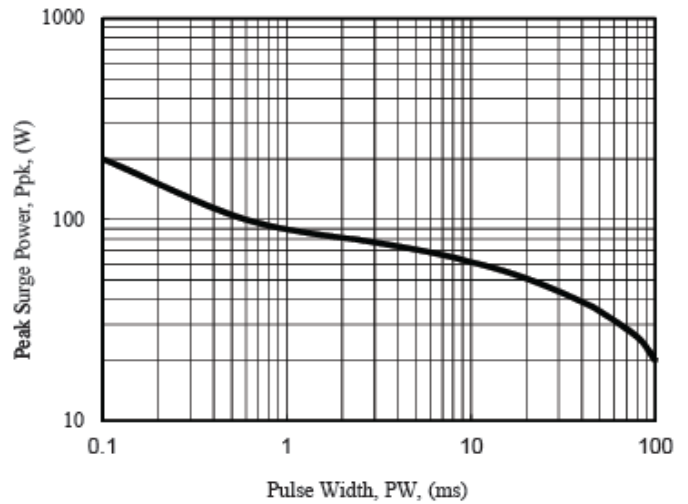


Fig. 4 - Maximum Surge Power

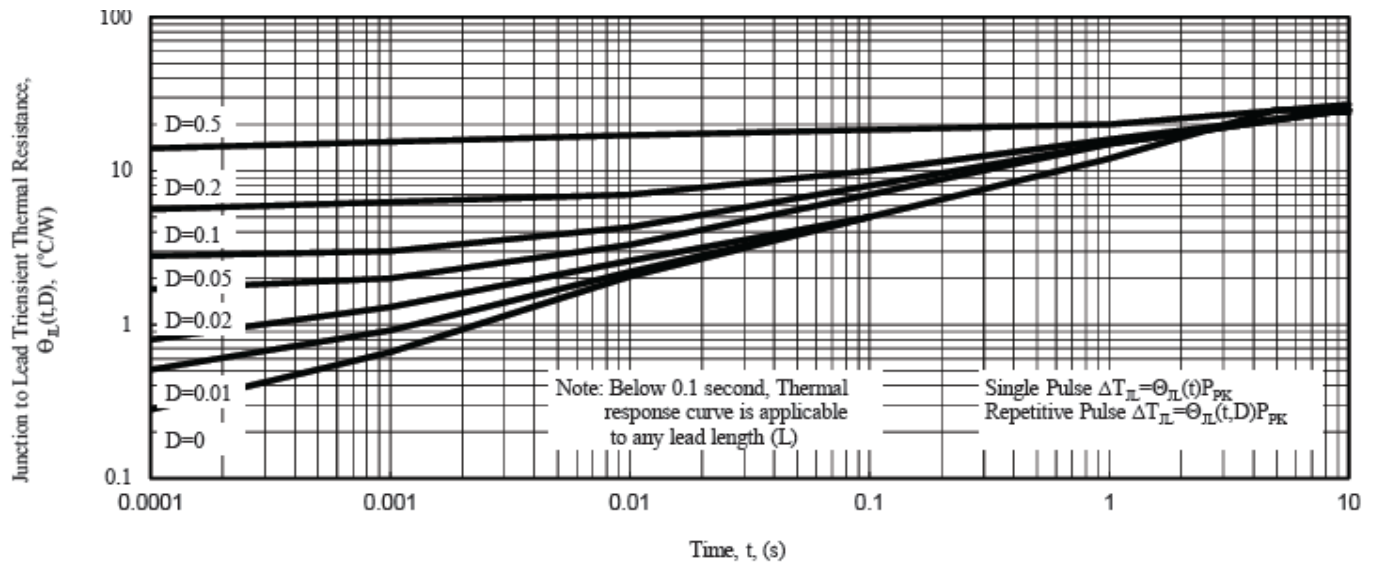


Fig. 5 - Typical Thermal Response L, Lead Length=3/8inch

| Part Number | Device Marking Code | Nominal Zener Voltage @I _T | | | I _{ZT} (mA) | Maximum Zener Impedance | | | Maximum Reverse Leakage Current | | Maximum DC Zener Current |
|-------------|---------------------|---------------------------------------|-------------------------|-------------------------|----------------------|--|--|----------------------|------------------------------------|--------------------|--------------------------|
| | | V _{Z AVE.} (V) | V _{Z MIN.} (V) | V _{Z MAX.} (V) | | Z _{ZT MAX.} (Ω) @I _{ZT} | Z _{ZK MAX.} (Ω) @I _{ZK} | I _{ZK} (mA) | I _R (μA)@V _R | V _R (V) | |
| SMA5913A | 913A | 3.3 | 3.14 | 3.47 | 113.6 | 10 | 500.0 | 1.00 | 100.0 | 1.0 | 455 |
| SMA5914A | 914A | 3.6 | 3.42 | 3.78 | 104.2 | 9.0 | 500.0 | 1.00 | 100.0 | 1.0 | 417 |
| SMA5915A | 915A | 3.9 | 3.71 | 4.10 | 96.1 | 7.5 | 500.0 | 1.00 | 50.0 | 1.0 | 385 |
| SMA5916A | 916A | 4.3 | 4.09 | 4.52 | 87.2 | 6.0 | 500.0 | 1.00 | 10.0 | 1.0 | 349 |
| SMA5917A | 917A | 4.7 | 4.47 | 4.94 | 79.8 | 5.0 | 500.0 | 1.00 | 10.0 | 1.5 | 319 |
| SMA5918A | 918A | 5.1 | 4.85 | 5.36 | 73.5 | 4.0 | 350.0 | 1.00 | 10.0 | 2.0 | 294 |
| SMA5919A | 919A | 5.6 | 5.32 | 5.88 | 66.9 | 2.0 | 250.0 | 1.00 | 10.0 | 3.0 | 268 |
| SMA5920A | 920A | 6.2 | 5.89 | 6.51 | 60.5 | 2.0 | 200.0 | 1.00 | 10.0 | 4.0 | 242 |
| SMA5921A | 921A | 6.8 | 6.46 | 7.14 | 55.1 | 2.5 | 200.0 | 1.00 | 10.0 | 5.2 | 221 |
| SMA5922A | 922A | 7.5 | 7.13 | 7.88 | 50.0 | 3.0 | 400.0 | 0.50 | 10.0 | 6.0 | 200 |
| SMA5923A | 923A | 8.2 | 7.79 | 8.61 | 45.7 | 3.5 | 400.0 | 0.50 | 10.0 | 6.5 | 183 |
| SMA5924A | 924A | 9.1 | 8.65 | 9.56 | 41.2 | 4.0 | 500.0 | 0.50 | 10.0 | 7.0 | 165 |
| SMA5925A | 925A | 10.0 | 9.50 | 10.50 | 37.5 | 4.5 | 500.0 | 0.25 | 10.0 | 8.0 | 150 |
| SMA5926A | 926A | 11.0 | 10.45 | 11.55 | 34.1 | 5.5 | 550.0 | 0.25 | 0.5 | 8.4 | 136 |
| SMA5927A | 927A | 12.0 | 11.40 | 12.60 | 31.2 | 6.5 | 550.0 | 0.25 | 0.5 | 9.1 | 125 |
| SMA5928A | 928A | 13.0 | 12.35 | 13.65 | 28.8 | 7.0 | 550.0 | 0.25 | 0.5 | 9.9 | 115 |
| SMA5929A | 929A | 15.0 | 14.25 | 15.75 | 25.0 | 9.0 | 600.0 | 0.25 | 0.5 | 11.4 | 100 |
| SMA5930A | 930A | 16.0 | 15.20 | 16.80 | 23.4 | 10.0 | 600.0 | 0.25 | 0.5 | 12.2 | 94 |
| SMA5931A | 931A | 18.0 | 17.10 | 18.90 | 20.8 | 12.0 | 650.0 | 0.25 | 0.5 | 13.7 | 83 |
| SMA5932A | 932A | 20.0 | 19.00 | 21.00 | 18.7 | 14.0 | 650.0 | 0.25 | 0.5 | 15.2 | 75 |
| SMA5933A | 933A | 22.0 | 20.90 | 23.10 | 17.0 | 17.5 | 650.0 | 0.25 | 0.5 | 16.7 | 68 |
| SMA5934A | 934A | 24.0 | 22.80 | 25.20 | 15.6 | 19.0 | 700.0 | 0.25 | 0.5 | 18.2 | 63 |
| SMA5935A | 935A | 27.0 | 25.65 | 28.35 | 13.9 | 23.0 | 700.0 | 0.25 | 0.5 | 20.6 | 56 |
| SMA5936A | 936A | 30.0 | 28.50 | 31.50 | 12.5 | 26.0 | 750.0 | 0.25 | 0.5 | 22.8 | 50 |
| SMA5937A | 937A | 33.0 | 31.35 | 34.65 | 11.4 | 33.0 | 800.0 | 0.25 | 0.5 | 25.1 | 45 |
| SMA5938A | 938A | 36.0 | 34.20 | 37.80 | 10.4 | 38.0 | 850.0 | 0.25 | 0.5 | 27.4 | 42 |
| SMA5939A | 939A | 39.0 | 37.05 | 40.95 | 9.6 | 45.0 | 900.0 | 0.25 | 0.5 | 29.7 | 38 |
| SMA5940A | 940A | 43.0 | 40.85 | 45.15 | 8.7 | 53.0 | 950.0 | 0.25 | 0.5 | 32.7 | 35 |
| SMA5941A | 941A | 47.0 | 44.65 | 49.35 | 8.0 | 67.0 | 1000.0 | 0.25 | 0.5 | 35.8 | 32 |
| SMA5942A | 942A | 51.0 | 48.45 | 53.55 | 7.3 | 70.0 | 1100.0 | 0.25 | 0.5 | 38.8 | 29 |
| SMA5943A | 943A | 56.0 | 53.20 | 58.80 | 6.7 | 86.0 | 1300.0 | 0.25 | 0.5 | 42.6 | 27 |
| SMA5944A | 944A | 62.0 | 58.90 | 65.10 | 6.0 | 100.0 | 1500.0 | 0.25 | 0.5 | 47.1 | 24 |
| SMA5945A | 945A | 68.0 | 64.60 | 71.40 | 5.5 | 120.0 | 1700.0 | 0.25 | 0.5 | 51.7 | 22 |
| SMA5946A | 946A | 75.0 | 71.25 | 78.75 | 5.0 | 140.0 | 2000.0 | 0.25 | 0.5 | 56.0 | 20 |
| SMA5947A | 947A | 82.0 | 77.90 | 86.10 | 4.6 | 160.0 | 2500.0 | 0.25 | 0.5 | 62.2 | 18 |
| SMA5948A | 948A | 91.0 | 86.45 | 95.55 | 4.1 | 200.0 | 3000.0 | 0.25 | 0.5 | 69.2 | 16 |
| SMA5949A | 949A | 100.0 | 95.00 | 105.00 | 3.7 | 250.0 | 3100.0 | 0.25 | 0.5 | 76.0 | 15 |
| SMA5950A | 950A | 110.0 | 104.50 | 115.50 | 3.4 | 300.0 | 4000.0 | 0.25 | 0.5 | 83.6 | 14 |
| SMA5951A | 951A | 120.0 | 114.00 | 126.00 | 3.1 | 380.0 | 4500.0 | 0.25 | 0.5 | 91.2 | 13 |
| SMA5952A | 952A | 130.0 | 123.50 | 136.50 | 2.9 | 450.0 | 5000.0 | 0.25 | 0.5 | 98.8 | 12 |
| SMA5953A | 953A | 150.0 | 142.50 | 157.50 | 2.5 | 600.0 | 6000.0 | 0.25 | 0.5 | 114.0 | 10 |
| SMA5954A | 954A | 160.0 | 152.00 | 168.00 | 2.3 | 700.0 | 6500.0 | 0.25 | 0.5 | 121.6 | 9.4 |
| SMA5955A | 955A | 180.0 | 171.00 | 189.00 | 2.1 | 900.0 | 7000.0 | 0.25 | 0.5 | 136.8 | 8.3 |
| SMA5956A | 956A | 200.0 | 190.00 | 210.00 | 1.9 | 1200.0 | 8000.0 | 0.25 | 0.5 | 152.0 | 7.5 |