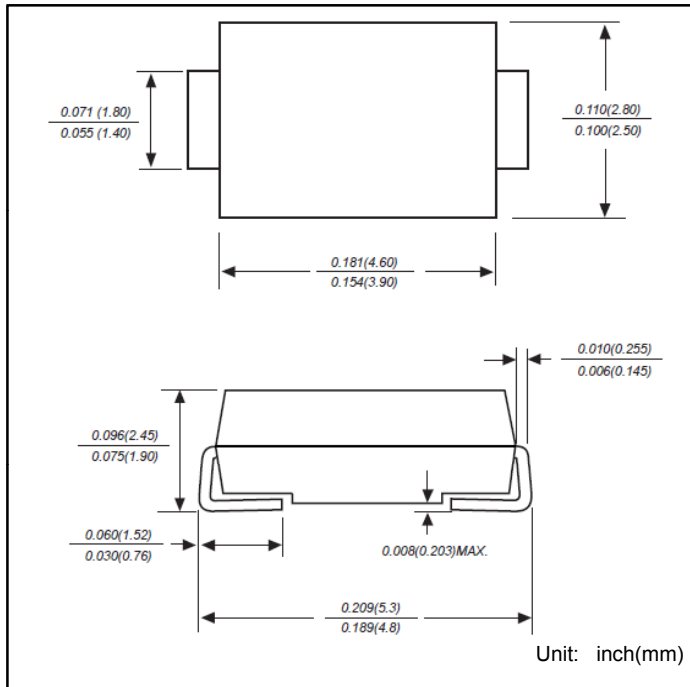


Surface Mount SILICON ZENER DIODES

Zener Voltage 3.0 ~ 330 V

2.0 Watt Power Dissipation

DO214AC(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: DO214AC(SMA) 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 $T_L = 50\text{ }^\circ\text{C}^{(1)}$ | P_D | 2.0 | W |
| Maximum forward voltage at $I_F=200\text{mA}$ | V_F | 1.2 | V |
| Junction temperature range | T_J, T_{STG} | -55 to +150 | $^\circ\text{C}$ |
| Storage temperature range | T_J, T_{STG} | -55 to +150 | $^\circ\text{C}$ |

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)

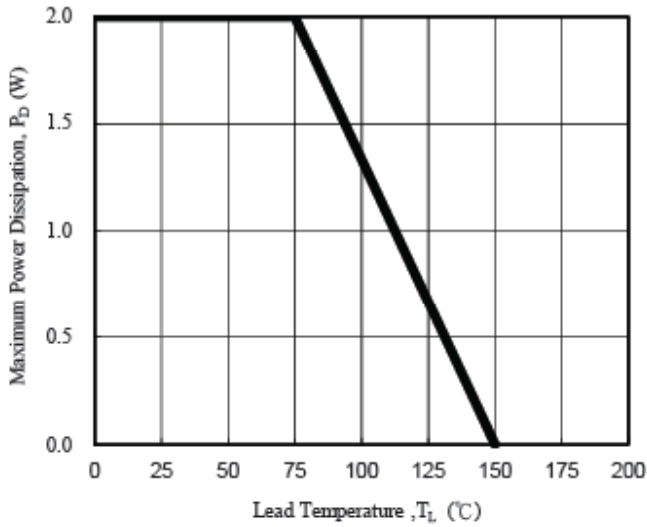


Fig. 1 - Power Temperature Derating Curve

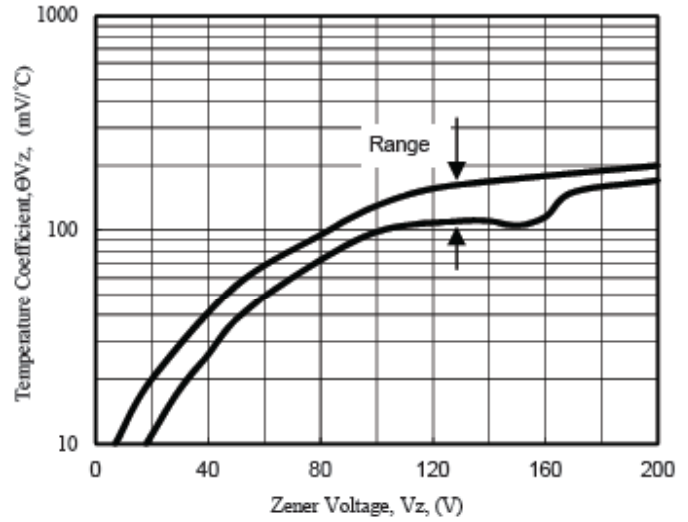


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

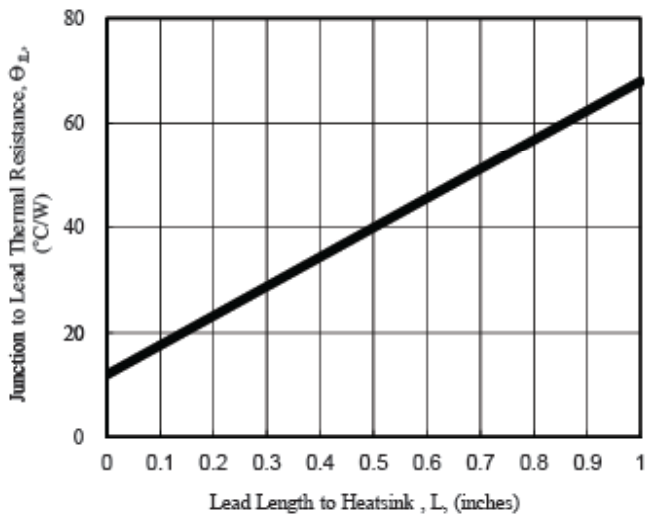


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

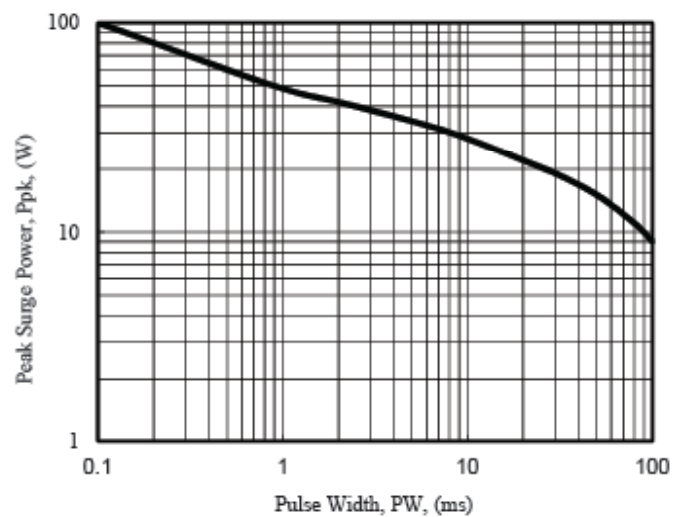


Fig. 4 - Maximum Surge Power

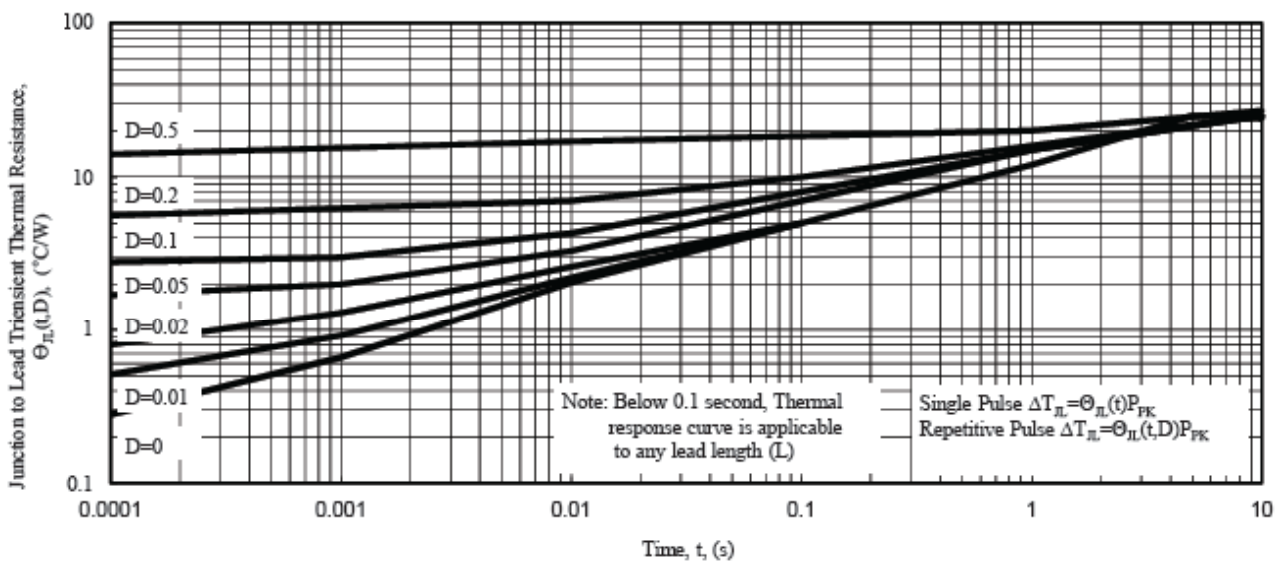


Fig. 5 - Typical Thermal Response L, Lead Length=3/8inch



SMA2ZxxA SERIES

| 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) | |
| SMA2Z3.0A | 2H1 | 3.0 | 2.85 | 3.15 | 160 | 8.0 | 400 | 1.00 | 100 | 1.0 | 603.0 |
| SMA2Z3.3A | 2H2 | 3.3 | 3.14 | 3.47 | 145.0 | 8.0 | 400 | 1.00 | 100 | 1.0 | 548.0 |
| SMA2Z3.6A | 2H3 | 3.6 | 3.42 | 3.78 | 139.0 | 5.0 | 400 | 1.00 | 100 | 1.0 | 502.0 |
| SMA2Z3.9A | 2H4 | 3.9 | 3.71 | 4.10 | 128.0 | 5.0 | 400 | 1.00 | 50 | 1.0 | 464.0 |
| SMA2Z4.3A | 2H5 | 4.3 | 4.09 | 4.52 | 116.0 | 4.5 | 400 | 1.00 | 50 | 1.0 | 421.0 |
| SMA2Z4.7A | 2H6 | 4.7 | 4.47 | 4.94 | 106.0 | 4.5 | 550 | 1.00 | 10 | 1.0 | 385.0 |
| SMA2Z5.1A | 2H7 | 5.1 | 4.85 | 5.36 | 98.0 | 3.5 | 600 | 1.00 | 10 | 1.0 | 354.0 |
| SMA2Z5.6A | 2H8 | 5.6 | 5.32 | 5.88 | 89.5 | 2.5 | 500 | 1.00 | 10 | 2.0 | 323.0 |
| SMA2Z6.2A | 2A0 | 6.2 | 5.89 | 6.51 | 80.5 | 1.5 | 700 | 1.00 | 10 | 3.0 | 292.0 |
| SMA2Z6.8A | 2A1 | 6.8 | 6.46 | 7.14 | 73.5 | 2.0 | 700 | 1.00 | 10 | 4.0 | 266.0 |
| SMA2Z7.5A | 2A2 | 7.5 | 7.13 | 7.88 | 66.5 | 2.0 | 700 | 0.50 | 10 | 5.0 | 242.0 |
| SMA2Z8.2A | 2A3 | 8.2 | 7.79 | 8.61 | 61.0 | 2.3 | 700 | 0.50 | 10 | 6.0 | 220.0 |
| SMA2Z9.1A | 2A4 | 9.1 | 8.65 | 9.56 | 55.0 | 2.5 | 700 | 0.50 | 10 | 7.0 | 200.0 |
| SMA2Z10A | 2A5 | 10.0 | 9.50 | 10.50 | 50.0 | 3.5 | 700 | 0.25 | 10 | 7.6 | 182.0 |
| SMA2Z11A | 2A6 | 11.0 | 10.45 | 11.55 | 45.5 | 4.0 | 700 | 0.25 | 1.0 | 8.4 | 166.0 |
| SMA2Z12A | 2A7 | 12.0 | 11.40 | 12.60 | 41.5 | 4.5 | 700 | 0.25 | 1.0 | 9.1 | 152.0 |
| SMA2Z13A | 2A8 | 13.0 | 12.35 | 13.65 | 38.5 | 5.0 | 700 | 0.25 | 0.5 | 9.9 | 138.0 |
| SMA2Z14A | 2A9 | 14.0 | 13.30 | 14.70 | 35.7 | 5.5 | 700 | 0.25 | 0.5 | 10.6 | 130.0 |
| SMA2Z15A | 2B0 | 15.0 | 14.25 | 15.75 | 33.4 | 7.0 | 700 | 0.25 | 0.5 | 11.4 | 122.0 |
| SMA2Z16A | 2B1 | 16.0 | 15.20 | 16.80 | 31.2 | 8.0 | 700 | 0.25 | 0.5 | 12.2 | 114.0 |
| SMA2Z17A | 2B2 | 17.0 | 16.15 | 17.85 | 29.4 | 9.0 | 750 | 0.25 | 0.5 | 13.0 | 107.0 |
| SMA2Z18A | 2B3 | 18.0 | 17.10 | 18.90 | 27.8 | 10.0 | 750 | 0.25 | 0.5 | 13.7 | 100.0 |
| SMA2Z19A | 2B4 | 19.0 | 18.05 | 19.95 | 26.3 | 11.0 | 750 | 0.25 | 0.5 | 14.4 | 95.0 |
| SMA2Z20A | 2B5 | 20.0 | 19.00 | 21.00 | 25.0 | 11.0 | 750 | 0.25 | 0.5 | 15.2 | 90.0 |
| SMA2Z22A | 2B6 | 22.0 | 20.90 | 23.10 | 22.8 | 12.0 | 750 | 0.25 | 0.5 | 16.7 | 82.0 |
| SMA2Z24A | 2B7 | 24.0 | 22.80 | 25.20 | 20.8 | 13.0 | 750 | 0.25 | 0.5 | 18.2 | 76.0 |
| SMA2Z27A | 2B8 | 27.0 | 25.65 | 28.35 | 18.5 | 18.0 | 750 | 0.25 | 0.5 | 20.6 | 68.0 |
| SMA2Z30A | 2B9 | 30.0 | 28.50 | 31.50 | 16.6 | 20.0 | 1000 | 0.25 | 0.5 | 22.5 | 60.0 |
| SMA2Z33A | 2C0 | 33.0 | 31.35 | 34.65 | 15.1 | 23.0 | 1000 | 0.25 | 0.5 | 25.1 | 55.0 |
| SMA2Z36A | 2C1 | 36.0 | 34.20 | 37.80 | 13.9 | 25.0 | 1000 | 0.25 | 0.5 | 27.4 | 50.0 |
| SMA2Z39A | 2C2 | 39.0 | 37.05 | 40.95 | 12.8 | 30.0 | 1000 | 0.25 | 0.5 | 29.7 | 47.0 |
| SMA2Z43A | 2C3 | 43.0 | 40.85 | 45.15 | 11.6 | 35.0 | 1500 | 0.25 | 0.5 | 32.7 | 43.0 |
| SMA2Z47A | 2C4 | 47.0 | 44.65 | 49.35 | 10.6 | 40.0 | 1500 | 0.25 | 0.5 | 35.8 | 39.0 |
| SMA2Z51A | 2C5 | 51.0 | 48.45 | 53.55 | 9.8 | 48.0 | 1500 | 0.25 | 0.5 | 38.8 | 36.0 |
| SMA2Z56A | 2C6 | 56.0 | 53.20 | 58.80 | 9.0 | 55.0 | 2000 | 0.25 | 0.5 | 42.6 | 32.0 |
| SMA2Z62A | 2C7 | 62.0 | 58.90 | 65.10 | 8.1 | 60.0 | 2000 | 0.25 | 0.5 | 47.1 | 29.0 |
| SMA2Z68A | 2C8 | 68.0 | 64.60 | 71.40 | 7.4 | 75.0 | 2000 | 0.25 | 0.5 | 51.7 | 27.0 |
| SMA2Z75A | 2C9 | 75.0 | 71.25 | 78.75 | 6.7 | 90.0 | 2000 | 0.25 | 0.5 | 56.0 | 24.0 |
| SMA2Z82A | 2F0 | 82.0 | 77.90 | 86.10 | 6.1 | 100.0 | 3000 | 0.25 | 0.5 | 62.2 | 22.0 |
| SMA2Z91A | 2F1 | 91.0 | 86.45 | 95.55 | 5.5 | 125.0 | 3000 | 0.25 | 0.5 | 69.2 | 20.0 |
| SMA2Z100A | 2F2 | 100.0 | 95.00 | 105.00 | 5.0 | 175.0 | 3000 | 0.25 | 0.5 | 76.0 | 18.0 |
| SMA2Z110A | 2F3 | 110.0 | 104.50 | 115.50 | 4.5 | 250.0 | 4000 | 0.25 | 0.5 | 83.6 | 17.0 |
| SMA2Z120A | 2F4 | 120.0 | 114.00 | 126.00 | 4.2 | 325.0 | 4500 | 0.25 | 0.5 | 91.2 | 15.0 |
| SMA2Z130A | 2F5 | 130.0 | 123.50 | 136.50 | 3.8 | 400.0 | 5000 | 0.25 | 0.5 | 98.8 | 14.0 |
| SMA2Z140A | 2F6 | 140.0 | 133.00 | 147.00 | 3.6 | 500.0 | 5500 | 0.25 | 0.5 | 106.4 | 13.0 |
| SMA2Z150A | 2F7 | 150.0 | 142.50 | 157.50 | 3.3 | 575.0 | 6000 | 0.25 | 0.5 | 114.0 | 12.0 |
| SMA2Z160A | 2F8 | 160.0 | 152.00 | 168.00 | 3.1 | 650.0 | 6500 | 0.25 | 0.5 | 121.6 | 11.0 |
| SMA2Z170A | 2F9 | 170.0 | 161.50 | 178.50 | 2.9 | 675.0 | 7000 | 0.25 | 0.5 | 130.4 | 11.0 |
| SMA2Z180A | 2G1 | 180.0 | 171.00 | 189.00 | 2.8 | 725.0 | 7000 | 0.25 | 0.5 | 136.8 | 10.0 |
| SMA2Z190A | 2G2 | 190.0 | 180.50 | 199.50 | 2.6 | 825.0 | 8000 | 0.25 | 0.5 | 144.8 | 10.0 |
| SMA2Z200A | 2G3 | 200.0 | 190.00 | 210.00 | 2.5 | 1900.0 | 9990 | 0.25 | 0.5 | 152.0 | 9.0 |
| SMA2Z220A | 2G4 | 220.0 | 209.00 | 231.00 | 2.0 | 2000.0 | 8500 | 0.25 | 0.5 | 167.0 | 8.0 |
| SMA2Z270A | 2G5 | 270.0 | 256.50 | 283.50 | 1.6 | 2200.0 | 8500 | 0.25 | 0.5 | 205.0 | 6.7 |
| SMA2Z300A | 2G6 | 300.0 | 285.00 | 315.00 | 1.5 | 2200.0 | 9000 | 0.25 | 0.5 | 228.0 | 5.9 |
| SMA2Z330A | 2G7 | 330.0 | 313.50 | 346.50 | 1.4 | 2300.0 | 9000 | 0.25 | 0.5 | 250.0 | 5.4 |