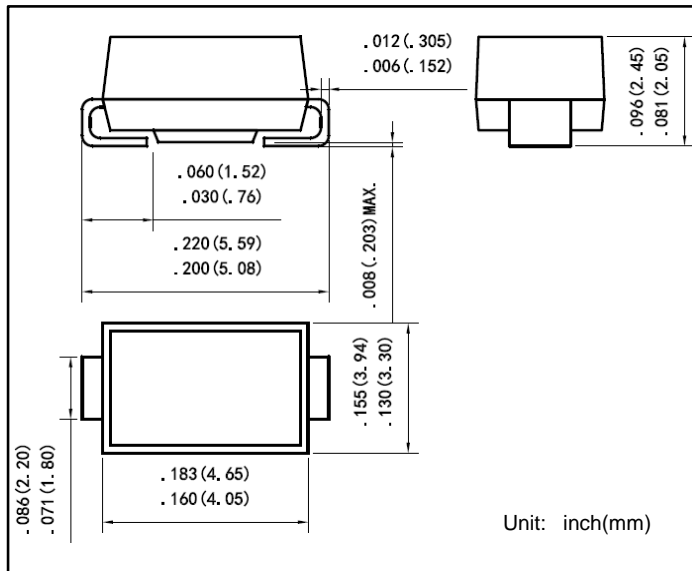


DO-214AA(SMB)



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-214AA Molded plastic
- Lead: Solderable per MIL-STD-750, method 2026
- Epoxy: UL 94V-0 rate flame retardant
- High reliability grade (AEC-Q101 qualified)
- Polarity: Color band denotes cathode end
- Mounting position: Any

| Parameter | Symbols | Value | Unit |
|--|----------------|-------------|------------------|
| DC Power dissipation at $T_L = 75\text{ }^\circ\text{C}^{(1)}$ | P_D | 3.0 | 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)

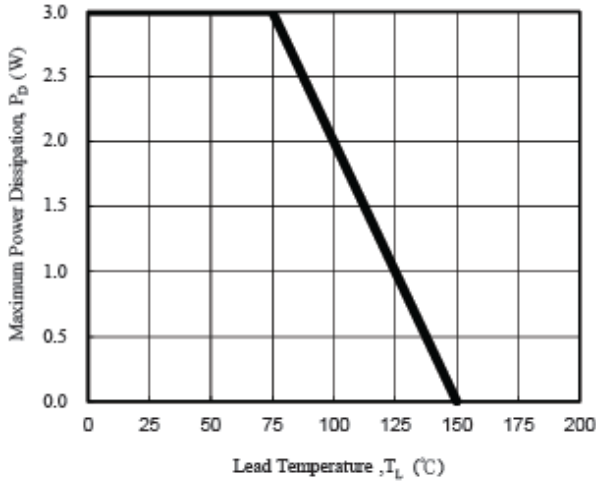


Fig. 1 - Power Temperature Derating Curve

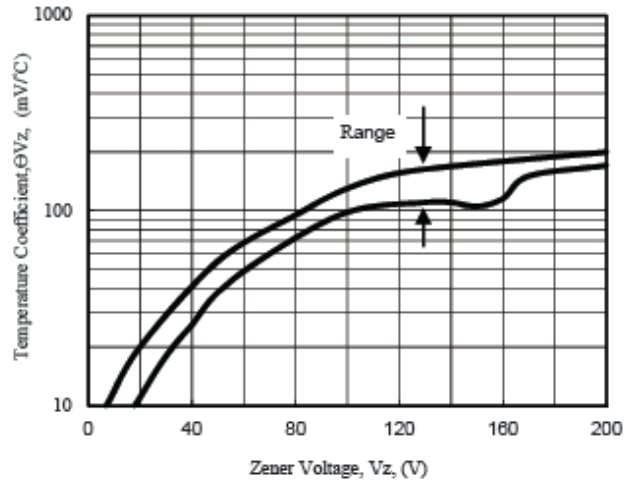


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

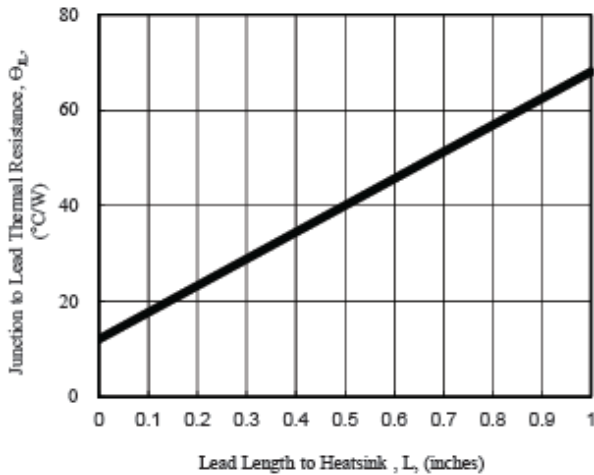


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

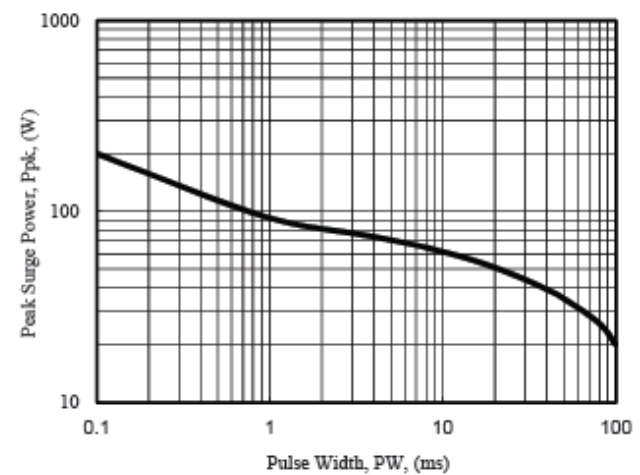


Fig. 4 - Maximum Surge Power

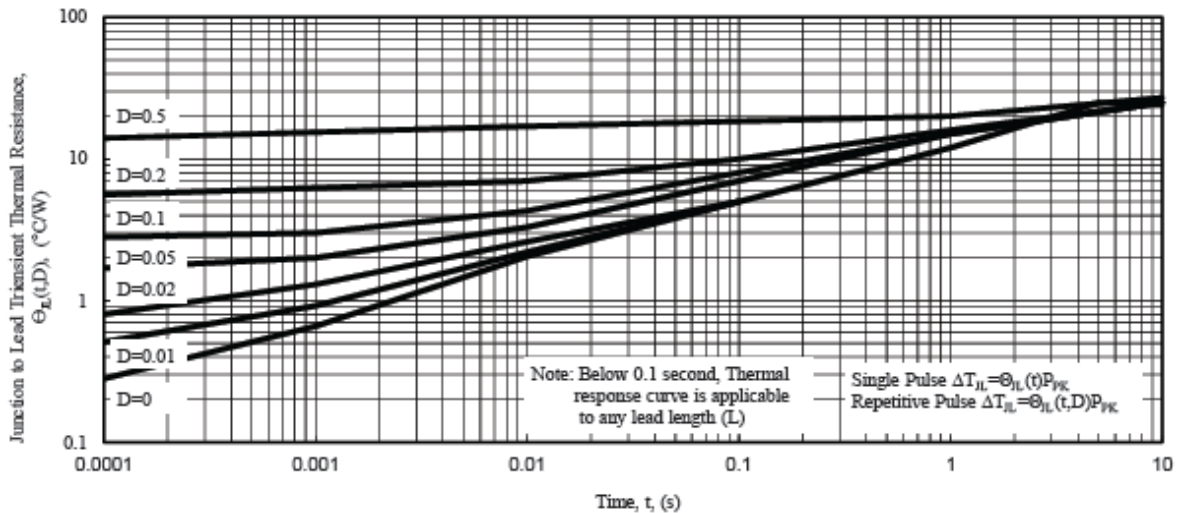


Fig. 5 - Typical Thermal Response L, Lead Length=3/8inch



SMB3ZxxA 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 (uA)@V _R | V _R (V) | |
| SMB3Z3.3A | 3H0 | 3.3 | 3.14 | 3.47 | 227.3 | 10.0 | 500.0 | 1.00 | 100.0 | 1.0 | 817.0 |
| SMB3Z3.6A | 3H1 | 3.6 | 3.42 | 3.78 | 208.3 | 9.0 | 500.0 | 1.00 | 100.0 | 1.0 | 749.0 |
| SMB3Z3.9A | 3H2 | 3.9 | 3.71 | 4.10 | 192.0 | 4.5 | 400.0 | 1.00 | 100.0 | 1.0 | 691.0 |
| SMB3Z4.3A | 3H3 | 4.3 | 4.09 | 4.52 | 174.0 | 4.5 | 400.0 | 1.00 | 50.0 | 1.0 | 627.0 |
| SMB3Z4.7A | 3H4 | 4.7 | 4.47 | 4.94 | 160.0 | 4.0 | 500.0 | 1.00 | 50.0 | 1.0 | 573.0 |
| SMB3Z5.1A | 3H5 | 5.1 | 4.85 | 5.36 | 147.0 | 3.5 | 550.0 | 1.00 | 10.0 | 1.0 | 528.0 |
| SMB3Z5.6A | 3H6 | 5.6 | 5.32 | 5.88 | 134.0 | 2.5 | 600.0 | 1.00 | 10.0 | 2.0 | 481.0 |
| SMB3Z6.2A | 3A0 | 6.2 | 5.89 | 6.51 | 121.0 | 1.5 | 700.0 | 1.00 | 10.0 | 3.0 | 435.0 |
| SMB3Z6.8A | 3A1 | 6.8 | 6.46 | 7.14 | 110.0 | 2.0 | 700.0 | 1.00 | 10.0 | 4.0 | 393.0 |
| SMB3Z7.5A | 3A2 | 7.5 | 7.13 | 7.88 | 100.0 | 2.0 | 700.0 | 0.50 | 10.0 | 5.0 | 360.0 |
| SMB3Z8.2A | 3A3 | 8.2 | 7.79 | 8.61 | 91.0 | 2.3 | 700.0 | 0.50 | 10.0 | 6.0 | 330.0 |
| SMB3Z9.1A | 3A4 | 9.1 | 8.65 | 9.56 | 82.0 | 2.5 | 700.0 | 0.50 | 10.0 | 7.0 | 297.0 |
| SMB3Z10A | 3A5 | 10.0 | 9.50 | 10.50 | 75.0 | 3.5 | 700.0 | 0.25 | 10.0 | 7.6 | 270.0 |
| SMB3Z11A | 3A6 | 11.0 | 10.45 | 11.55 | 68.0 | 4.0 | 700.0 | 0.25 | 0.5 | 8.4 | 225.0 |
| SMB3Z12A | 3A7 | 12.0 | 11.40 | 12.60 | 63.0 | 4.5 | 700.0 | 0.25 | 0.5 | 9.1 | 246.0 |
| SMB3Z13A | 3A8 | 13.0 | 12.35 | 13.65 | 58.0 | 4.5 | 700.0 | 0.25 | 0.5 | 9.9 | 208.0 |
| SMB3Z14A | 3A9 | 14.0 | 13.30 | 14.70 | 53.0 | 5.0 | 700.0 | 0.25 | 0.5 | 10.6 | 193.0 |
| SMB3Z15A | 3B0 | 15.0 | 14.25 | 15.75 | 50.0 | 5.5 | 700.0 | 0.25 | 0.5 | 11.4 | 180.0 |
| SMB3Z16A | 3B1 | 16.0 | 15.20 | 16.80 | 47.0 | 5.5 | 700.0 | 0.25 | 0.5 | 12.2 | 169.0 |
| SMB3Z17A | 3B2 | 17.0 | 16.15 | 17.85 | 44.0 | 6.0 | 750.0 | 0.25 | 0.5 | 13.0 | 159.0 |
| SMB3Z18A | 3B3 | 18.0 | 17.10 | 18.90 | 42.0 | 6.0 | 750.0 | 0.25 | 0.5 | 13.7 | 150.0 |
| SMB3Z19A | 3B4 | 19.0 | 18.05 | 19.95 | 40.0 | 7.0 | 750.0 | 0.25 | 0.5 | 14.4 | 142.0 |
| SMB3Z20A | 3B5 | 20.0 | 19.00 | 21.00 | 37.0 | 7.0 | 750.0 | 0.25 | 0.5 | 15.2 | 135.0 |
| SMB3Z22A | 3B6 | 22.0 | 20.90 | 23.10 | 34.0 | 8.0 | 750.0 | 0.25 | 0.5 | 16.7 | 123.0 |
| SMB3Z24A | 3B7 | 24.0 | 22.80 | 25.20 | 31.0 | 9.0 | 750.0 | 0.25 | 0.5 | 18.2 | 112.0 |
| SMB3Z27A | 3B8 | 27.0 | 25.65 | 28.35 | 28.0 | 10.0 | 750.0 | 0.25 | 0.5 | 20.6 | 100.0 |
| SMB3Z30A | 3B9 | 30.0 | 28.50 | 31.50 | 25.0 | 16.0 | 1000.0 | 0.25 | 0.5 | 22.5 | 90.0 |
| SMB3Z33A | 3C0 | 33.0 | 31.35 | 34.65 | 23.0 | 20.0 | 1000.0 | 0.25 | 0.5 | 25.1 | 82.0 |
| SMB3Z36A | 3C1 | 36.0 | 34.20 | 37.80 | 21.0 | 22.0 | 1000.0 | 0.25 | 0.5 | 27.4 | 75.0 |
| SMB3Z39A | 3C2 | 39.0 | 37.05 | 40.95 | 19.0 | 28.0 | 1000.0 | 0.25 | 0.5 | 29.7 | 69.0 |
| SMB3Z43A | 3C3 | 43.0 | 40.85 | 45.15 | 17.0 | 33.0 | 1500.0 | 0.25 | 0.5 | 32.7 | 63.0 |
| SMB3Z47A | 3C4 | 47.0 | 44.65 | 49.35 | 16.0 | 38.0 | 1500.0 | 0.25 | 0.5 | 35.6 | 57.0 |
| SMB3Z51A | 3C5 | 51.0 | 48.45 | 53.55 | 15.0 | 45.0 | 1500.0 | 0.25 | 0.5 | 38.8 | 53.0 |
| SMB3Z56A | 3C6 | 56.0 | 53.20 | 58.80 | 13.0 | 50.0 | 2000.0 | 0.25 | 0.5 | 42.6 | 48.0 |
| SMB3Z62A | 3C7 | 62.0 | 58.90 | 65.10 | 12.0 | 55.0 | 2000.0 | 0.25 | 0.5 | 47.1 | 44.0 |
| SMB3Z68A | 3C8 | 68.0 | 64.60 | 71.40 | 11.0 | 70.0 | 2000.0 | 0.25 | 0.5 | 51.7 | 40.0 |
| SMB3Z75A | 3C9 | 75.0 | 71.25 | 78.75 | 10.0 | 85.0 | 2000.0 | 0.25 | 0.5 | 56.0 | 36.0 |
| SMB3Z82A | 3F0 | 82.0 | 77.90 | 86.10 | 9.1 | 95.0 | 3000.0 | 0.25 | 0.5 | 62.2 | 33.0 |
| SMB3Z91A | 3F1 | 91.0 | 86.45 | 95.55 | 8.2 | 115.0 | 3000.0 | 0.25 | 0.5 | 69.2 | 30.0 |
| SMB3Z100A | 3F2 | 100.0 | 95.00 | 105.00 | 7.5 | 160.0 | 3000.0 | 0.25 | 0.5 | 76.0 | 27.0 |
| SMB3Z110A | 3F3 | 110.0 | 104.50 | 115.50 | 6.8 | 225.0 | 4000.0 | 0.25 | 0.5 | 83.6 | 25.0 |
| SMB3Z120A | 3F4 | 120.0 | 114.00 | 126.00 | 6.3 | 300.0 | 4500.0 | 0.25 | 0.5 | 91.2 | 22.0 |
| SMB3Z130A | 3F5 | 130.0 | 123.50 | 136.50 | 5.8 | 375.0 | 5000.0 | 0.25 | 0.5 | 98.8 | 21.0 |
| SMB3Z140A | 3F6 | 140.0 | 133.00 | 147.00 | 5.3 | 475.0 | 5000.0 | 0.25 | 0.5 | 106.4 | 19.0 |
| SMB3Z150A | 3F7 | 150.0 | 142.50 | 157.50 | 5.0 | 550.0 | 6000.0 | 0.25 | 0.5 | 114.0 | 18.0 |
| SMB3Z160A | 3F8 | 160.0 | 152.00 | 168.00 | 4.7 | 625.0 | 6500.0 | 0.25 | 0.5 | 121.6 | 17.0 |
| SMB3Z170A | 3F9 | 170.0 | 161.50 | 178.50 | 4.4 | 650.0 | 7000.0 | 0.25 | 0.5 | 130.4 | 16.0 |
| SMB3Z180A | 3G1 | 180.0 | 171.00 | 189.00 | 4.2 | 700.0 | 7000.0 | 0.25 | 0.5 | 136.8 | 15.0 |
| SMB3Z190A | 3G2 | 190.0 | 180.50 | 199.50 | 4.0 | 800.0 | 8000.0 | 0.25 | 0.5 | 144.8 | 14.0 |
| SMB3Z200A | 3G3 | 200.0 | 190.00 | 210.00 | 3.7 | 875.0 | 8000.0 | 0.25 | 0.5 | 152.0 | 13.0 |
| SMB3Z210A | 3G4 | 210.0 | 199.50 | 220.50 | 3.5 | 950.0 | 8300.0 | 0.25 | 0.5 | 169.0 | 12.3 |
| SMB3Z220A | 3G5 | 220.0 | 209.00 | 231.00 | 3.3 | 1600.0 | 8500.0 | 0.25 | 0.5 | 178.0 | 11.6 |
| SMB3Z230A | 3G6 | 230.0 | 218.50 | 241.50 | 3.1 | 2000.0 | 9000.0 | 0.25 | 0.5 | 186.0 | 10.9 |
| SMB3Z240A | 3G7 | 240.0 | 228.00 | 252.00 | 2.9 | 2500.0 | 9000.0 | 0.25 | 0.5 | 195.0 | 10.2 |
| SMB3Z250A | 3G8 | 250.0 | 237.50 | 262.50 | 2.7 | 3000.0 | 9500.0 | 0.25 | 0.5 | 205.0 | 9.5 |

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