

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: SOD123FL 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 $T_L = 75\text{ }^\circ\text{C}^{(1)}$ | P_D | 1.0 | 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



| 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) | |
| SMF4727A | 27A | 3.0 | 2.85 | 3.15 | 80.0 | 15 | 400 | 1.00 | 100.0 | 1.0 | 301.0 |
| SMF4728A | 28A | 3.3 | 3.14 | 3.47 | 76.0 | 10 | 400 | 1.00 | 100.0 | 1.0 | 274.0 |
| SMF4729A | 29A | 3.6 | 3.42 | 3.78 | 69.0 | 10 | 400 | 1.00 | 100.0 | 1.0 | 251.0 |
| SMF4730A | 30A | 3.9 | 3.71 | 4.10 | 64.0 | 9 | 400 | 1.00 | 50.0 | 1.0 | 232.0 |
| SMF4731A | 31A | 4.3 | 4.09 | 4.52 | 58.0 | 9 | 400 | 1.00 | 10.0 | 1.0 | 210.0 |
| SMF4732A | 32A | 4.7 | 4.47 | 4.94 | 53.0 | 8 | 500 | 1.00 | 10.0 | 1.0 | 192.0 |
| SMF4733A | 33A | 5.1 | 4.85 | 5.36 | 49.0 | 7 | 550 | 1.00 | 10.0 | 1.0 | 177.0 |
| SMF4734A | 34A | 5.6 | 5.32 | 5.88 | 45.0 | 5 | 600 | 1.00 | 10.0 | 2.0 | 161.0 |
| SMF4735A | 35A | 6.2 | 5.89 | 6.51 | 41.0 | 2 | 700 | 1.00 | 10.0 | 3.0 | 146.0 |
| SMF4736A | 36A | 6.8 | 6.46 | 7.14 | 37.0 | 4 | 700 | 1.00 | 10.0 | 4.0 | 133.0 |
| SMF4737A | 37A | 7.5 | 7.13 | 7.88 | 34.0 | 4 | 700 | 0.50 | 10.0 | 5.0 | 121.0 |
| SMF4738A | 38A | 8.2 | 7.79 | 8.61 | 31.0 | 5 | 700 | 0.50 | 10.0 | 6.0 | 110.0 |
| SMF4739A | 39A | 9.1 | 8.65 | 9.56 | 28.0 | 5 | 700 | 0.50 | 10.0 | 7.0 | 100.0 |
| SMF4740A | 40A | 10.0 | 9.50 | 10.50 | 25.0 | 7 | 700 | 0.25 | 10.0 | 7.6 | 91.0 |
| SMF4741A | 41A | 11.0 | 10.45 | 11.55 | 23.0 | 8 | 700 | 0.25 | 0.5 | 8.4 | 83.0 |
| SMF4742A | 42A | 12.0 | 11.40 | 12.60 | 21.0 | 9 | 700 | 0.25 | 0.5 | 9.1 | 76.0 |
| SMF4743A | 43A | 13.0 | 12.35 | 13.65 | 19.0 | 10 | 700 | 0.25 | 0.5 | 9.9 | 69.0 |
| SMF4744A | 44A | 15.0 | 14.25 | 15.75 | 17.0 | 14 | 700 | 0.25 | 0.5 | 11.4 | 61.0 |
| SMF4745A | 45A | 16.0 | 15.20 | 16.80 | 15.5 | 16 | 700 | 0.25 | 0.5 | 12.2 | 57.0 |
| SMF4746A | 46A | 18.0 | 17.10 | 18.90 | 14.0 | 20 | 750 | 0.25 | 0.5 | 13.7 | 50.0 |
| SMF4747A | 47A | 20.0 | 19.00 | 21.00 | 12.5 | 22 | 750 | 0.25 | 0.5 | 15.2 | 45.0 |
| SMF4748A | 48A | 22.0 | 20.90 | 23.10 | 11.5 | 23 | 750 | 0.25 | 0.5 | 16.7 | 41.0 |
| SMF4749A | 49A | 24.0 | 22.80 | 25.20 | 10.5 | 25 | 750 | 0.25 | 0.5 | 18.2 | 38.0 |
| SMF4750A | 50A | 27.0 | 25.65 | 28.35 | 9.5 | 35 | 750 | 0.25 | 0.5 | 20.6 | 34.0 |
| SMF4751A | 51A | 30.0 | 28.50 | 31.50 | 8.5 | 40 | 1000 | 0.25 | 0.5 | 22.8 | 30.0 |
| SMF4752A | 52A | 33.0 | 31.35 | 34.65 | 7.5 | 45 | 1000 | 0.25 | 0.5 | 25.1 | 27.0 |
| SMF4753A | 53A | 36.0 | 34.20 | 37.80 | 7.0 | 50 | 1000 | 0.25 | 0.5 | 27.4 | 25.0 |
| SMF4754A | 54A | 39.0 | 37.05 | 40.95 | 6.5 | 60 | 1000 | 0.25 | 0.5 | 29.7 | 23.0 |
| SMF4755A | 55A | 43.0 | 40.85 | 45.15 | 6.0 | 70 | 1500 | 0.25 | 0.5 | 32.7 | 22.0 |
| SMF4756A | 56A | 47.0 | 44.65 | 49.35 | 5.5 | 80 | 1500 | 0.25 | 0.5 | 35.8 | 19.0 |
| SMF4757A | 57A | 51.0 | 48.45 | 53.55 | 5.0 | 95 | 1500 | 0.25 | 0.5 | 38.8 | 18.0 |



| 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) | |
| SMF4758A | 58A | 56.0 | 53.20 | 58.80 | 4.5 | 110 | 2000 | 0.25 | 0.5 | 42.6 | 16.0 |
| SMF4759A | 59A | 62.0 | 58.90 | 65.10 | 4.0 | 125 | 2000 | 0.25 | 0.5 | 47.1 | 14.0 |
| SMF4760A | 60A | 68.0 | 64.60 | 71.40 | 3.7 | 150 | 2000 | 0.25 | 0.5 | 51.7 | 13.0 |
| SMF4761A | 61A | 75.0 | 71.25 | 78.75 | 3.3 | 175 | 2000 | 0.25 | 0.5 | 56.0 | 12.0 |
| SMF4762A | 62A | 82.0 | 77.90 | 86.10 | 3.0 | 200 | 3000 | 0.25 | 0.5 | 62.2 | 11.0 |
| SMF4763A | 63A | 91.0 | 86.45 | 95.55 | 2.8 | 250 | 3000 | 0.25 | 0.5 | 69.2 | 10.0 |
| SMF4764A | 64A | 100.0 | 95.00 | 105.00 | 2.5 | 350 | 3000 | 0.25 | 0.5 | 76.0 | 9.0 |
| SZF1110A | 11Z | 110.0 | 104.50 | 115.50 | 2.3 | 450 | 4000 | 0.25 | 0.5 | 83.6 | 8.6 |
| SZF1120A | 12Z | 120.0 | 114.00 | 126.00 | 2.0 | 550 | 4500 | 0.25 | 0.5 | 91.2 | 7.8 |
| SZF1130A | 13Z | 130.0 | 123.50 | 136.50 | 1.9 | 700.0 | 5000 | 0.25 | 0.5 | 98.8 | 7.0 |
| SZF1150A | 15Z | 150.0 | 142.50 | 157.50 | 1.7 | 1000 | 6000 | 0.25 | 0.5 | 114.0 | 6.4 |
| SZF1160A | 16Z | 160.0 | 152.00 | 168.00 | 1.6 | 1100 | 6500 | 0.25 | 0.5 | 121.6 | 5.8 |
| SZF1180A | 18Z | 180.0 | 171.00 | 189.00 | 1.4 | 1200 | 7000 | 0.25 | 0.5 | 136.8 | 5.2 |
| SZF1200A | 20Z | 200.0 | 190.00 | 210.00 | 1.2 | 1900 | 9990 | 0.25 | 0.5 | 152.0 | 4.7 |
| SZF1210A | 21Z | 210.0 | 199.50 | 220.50 | 1.0 | 2000 | 9990 | 0.25 | 0.5 | 160.0 | 4.0 |
| SZF1220A | 22Z | 220.0 | 209.00 | 231.00 | 1.0 | 2000 | 9990 | 0.25 | 0.5 | 168.0 | 4.0 |

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

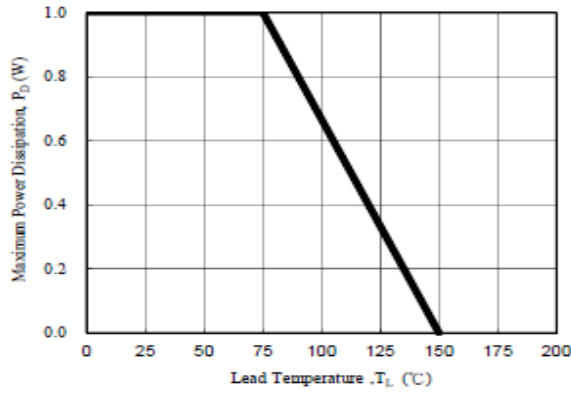


Fig. 1 - Power Temperature Derating Curve

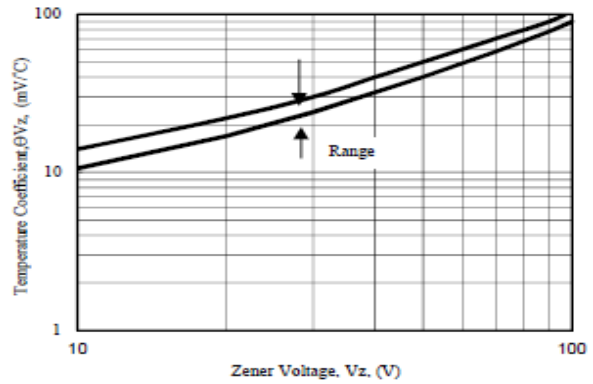


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

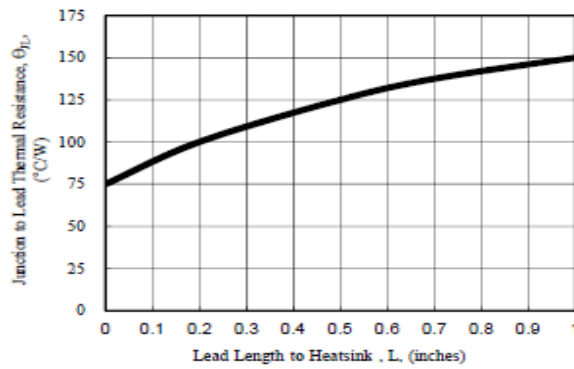


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

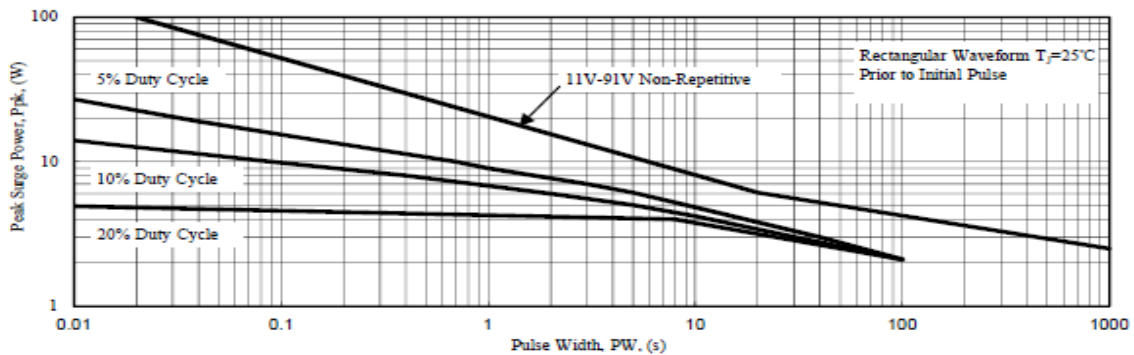


Fig. 4 - Maximum Surge Power