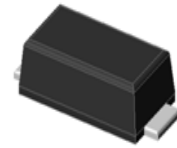


Features

- Total power dissipation: max, 1.0W
- Low leakage current
- Moisture sensitivity: level 1, per J-STD-020
- Solder dip 260 °C, 10 s
- Low profile, typical thickness 1.0mm
- For use in stabilizing and clipping circuits with high power rating



RoHS
COMPLIANT



(SOD-123FL)

Maximum Ratings and Thermal Characteristics

(TA = 25 °C unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|--------------------------------------------------|-----------------------------------|----------------|------|
| Zener current | | See Next Table | |
| Power dissipation at Tamb=75°C | Ptot | 1 | W |
| Maximum instantaneous forward voltage at 200mA | V _F | 1.2 | V |
| Thermal resistance junction to ambient air | Rthja | 100 | °C/W |
| Operating junction and storage temperature range | T _J , T _{STG} | -55 to +150 | °C |

Note:1),The thermal resistance from junction to ambient,case or mount,mounted on P.C.B with 5x5mm copper pads,2 OZ,FR4 PCB

Electrical Characteristics (TA = 25 °C unless otherwise noted)

| Part Number | Zener voltage | | Test current | Dynamic impedance | Knee current | Knee impedance | Reverse current | Reverse voltage | Max.DC current |
|-------------|----------------------|----------------------|-----------------|-------------------|-----------------|-----------------|----------------------|-----------------|-----------------|
| | V _Z /V | | I _{ZT} | Z _{ZT} | I _{ZK} | Z _{ZK} | I _R (Max) | V _R | I _{ZM} |
| | V _Z (MIN) | V _Z (MAX) | m A | Ω | m A | Ω | μA _{dc} | V | m A |
| F1N4738 | 7.79 | 8.61 | 31 | 4.5 | 0.5 | 700 | 10 | 6.5 | 110 |
| F1N4739 | 8.65 | 9.56 | 28 | 5 | 0.5 | 700 | 10 | 7 | 100 |
| F1N4740 | 9.5 | 10.5 | 25 | 7 | 0.25 | 700 | 10 | 8 | 91 |
| F1N4741 | 10.45 | 11.55 | 23 | 8 | 0.25 | 700 | 5 | 8.4 | 83 |
| F1N4742 | 11.4 | 12.6 | 21 | 9 | 0.25 | 700 | 5 | 9.1 | 76 |
| F1N4743 | 12.35 | 13.65 | 19 | 10 | 0.25 | 700 | 5 | 9.9 | 69 |
| F1N4744 | 14.25 | 15.75 | 17 | 14 | 0.25 | 700 | 5 | 11.4 | 61 |

| Electrical Characteristics (TA = 25 °C unless otherwise noted) | | | | | | | | | |
|----------------------------------------------------------------|---------------|---------|--------------|-------------------|--------------|----------------|-----------------|-----------------|----------------|
| Part Number | Zener voltage | | Test current | Dynamic impedance | Knee current | Knee impedance | Reverse current | Reverse voltage | Max.DC current |
| | VZ /V | | IZT | ZZT | IZK | ZZK | IR(Max) | VR | IZM |
| | Vz(MIN) | Vz(MAX) | m A | Ω | m A | Ω | μAdc | V | m A |
| F1N4745 | 15.2 | 16.8 | 15.5 | 16 | 0.25 | 700 | 5 | 12.2 | 57 |
| F1N4746 | 17.1 | 18.9 | 14 | 20 | 0.25 | 750 | 5 | 13.7 | 50 |
| F1N4747 | 19 | 21 | 12.5 | 22 | 0.25 | 750 | 5 | 15.2 | 45 |
| F1N4748 | 20.9 | 23.1 | 11.5 | 23 | 0.25 | 750 | 5 | 16.7 | 41 |
| F1N4749 | 22.8 | 25.2 | 10.5 | 25 | 0.25 | 750 | 5 | 18.2 | 38 |
| F1N4750 | 25.65 | 28.35 | 9.5 | 35 | 0.25 | 750 | 5 | 20.6 | 34 |
| F1N4751 | 28.5 | 31.5 | 8.5 | 40 | 0.25 | 1000 | 5 | 22.8 | 30 |
| F1N4752 | 31.35 | 34.65 | 7.5 | 45 | 0.25 | 1000 | 5 | 25.1 | 27 |
| F1N4753 | 34.2 | 37.8 | 7 | 50 | 0.25 | 1000 | 5 | 27.4 | 25 |
| F1N4754 | 37.05 | 40.95 | 6.5 | 60 | 0.25 | 1000 | 5 | 29.7 | 23 |
| F1N4755 | 40.85 | 45.15 | 6 | 70 | 0.25 | 1500 | 5 | 32.7 | 22 |
| F1N4756 | 44.65 | 49.35 | 5.5 | 80 | 0.25 | 1500 | 5 | 35.8 | 19 |
| F1N4757 | 48.45 | 53.55 | 5 | 95 | 0.25 | 1500 | 5 | 38.8 | 18 |
| F1N4758 | 53.2 | 58.8 | 4.5 | 110 | 0.25 | 2000 | 5 | 42.6 | 16 |
| F1N4759 | 58.9 | 65.1 | 4 | 125 | 0.25 | 2000 | 5 | 47.1 | 14 |
| F1N4760 | 64.6 | 71.4 | 3.7 | 150 | 0.25 | 2000 | 5 | 51.7 | 13 |
| F1N4761 | 71.25 | 78.8 | 3.3 | 175 | 0.25 | 2000 | 5 | 56 | 12 |
| F1N4762 | 77.9 | 86.1 | 3 | 200 | 0.25 | 3000 | 5 | 62.2 | 11 |
| F1N4763 | 86.45 | 95.6 | 2.8 | 250 | 0.25 | 3000 | 5 | 69.2 | 10 |
| F1N4764 | 95 | 105 | 2.5 | 350 | 0.25 | 3000 | 5 | 76 | 9 |
| FZ1110 | 104.5 | 115.5 | 2.3 | 450 | 0.25 | 4000 | 5 | 83.6 | 8.6 |
| FZ1120 | 114 | 126 | 2 | 550 | 0.25 | 4500 | 5 | 91.2 | 7.8 |
| FZ1130 | 123.5 | 136.5 | 1.9 | 700 | 0.25 | 5000 | 5 | 98.8 | 7 |
| FZ1150 | 142.5 | 157.5 | 1.7 | 1000 | 0.25 | 6000 | 5 | 114 | 6.4 |
| FZ1160 | 152 | 168 | 1.6 | 1100 | 0.25 | 6500 | 5 | 121.6 | 5.8 |
| FZ1180 | 171 | 189 | 1.4 | 1200 | 0.25 | 7000 | 5 | 136.8 | 5.2 |
| FZ1200 | 190 | 210 | 1.2 | 1900 | 0.25 | 9990 | 5 | 152 | 4.7 |

Ratings and Characteristics Curves

(TA = 25°C unless otherwise noted)

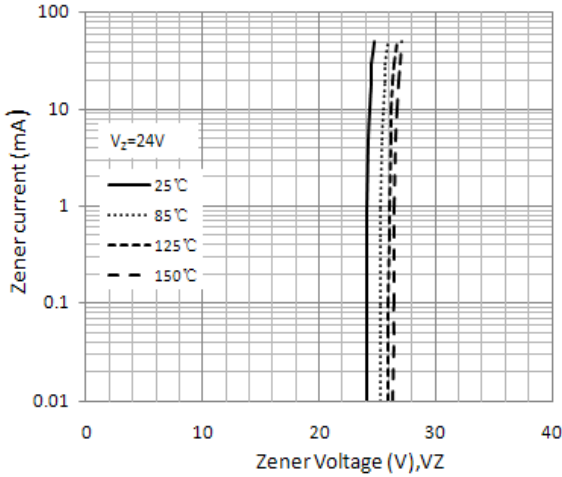


Figure 1. Typical Zener Voltage

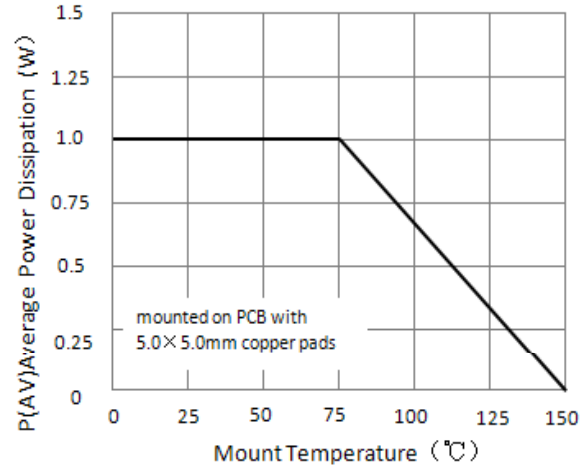


Figure 2. Steady State POWER Derating

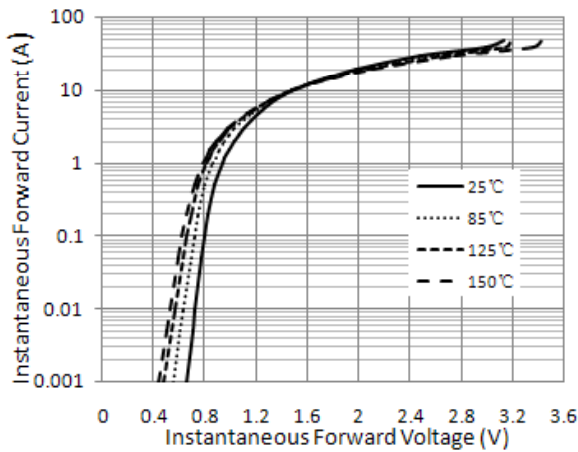


Figure 3. Typical Instantaneous Forward Characteristics

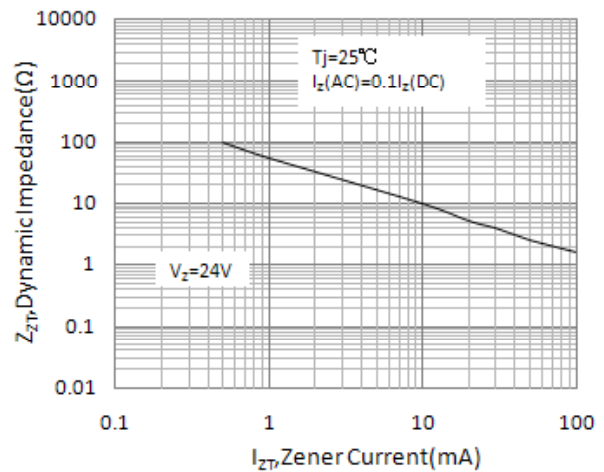


Figure 4. Typical Zener Impedance

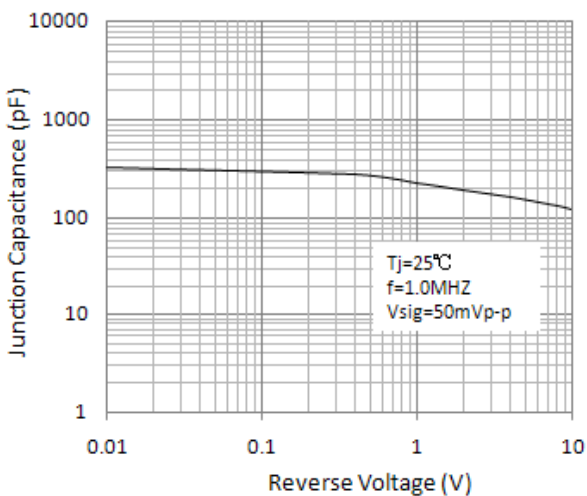
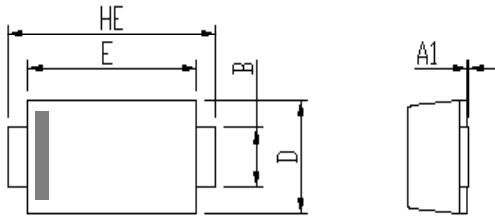


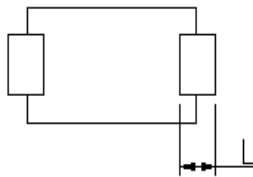
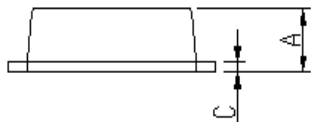
Figure 5. Typical Junction Capacitance

Package Outline Dimensions

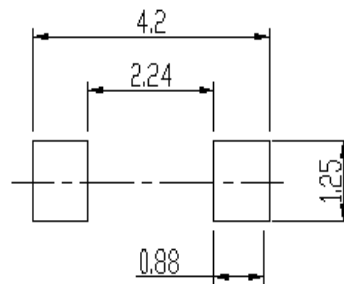
in inches (millimeters)



| DIM | Unit: mm | | Unit: inch | |
|-----|----------|------|------------|-------|
| | MIN | MAX | MIN | MAX |
| A | 0.9 | 1.08 | 0.035 | 0.043 |
| A1 | 0 | 0.1 | 0.000 | 0.004 |
| B | 0.85 | 1.05 | 0.033 | 0.041 |
| C | 0.1 | 0.25 | 0.004 | 0.010 |
| D | 1.7 | 2 | 0.067 | 0.079 |
| E | 2.9 | 3.1 | 0.114 | 0.122 |
| L | 0.43 | 0.83 | 0.017 | 0.033 |
| HE | 3.5 | 3.9 | 0.138 | 0.154 |



Soldering footprint



Packing Information

Packing quantities:

3000 pcs/Reel, 40 Reels/Box; 8mm Tape, 7" Reel

Tape & Reel Specification

