

Features

- AEC-Q101 Qualified
- V_Z Tolerance: $\pm 5\%$
- For Surface Mount Applications
- Halogen Free
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix Designates Compliant. See Ordering Information)

Maximum Ratings

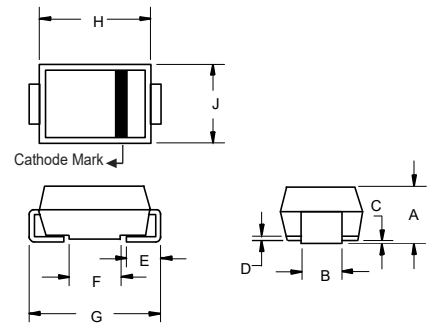
- Operating Junction Temperature Range: -65°C to $+150^{\circ}\text{C}$
- Storage Temperature Range: -65°C to $+150^{\circ}\text{C}$
- Thermal Resistance : 50°C/W Junction to Lead
- Thermal Resistance : 83°C/W Junction to Ambient

| Parameter | Symbol | Rating | Conditions |
|-------------------------|--------|--------|-------------------------------|
| Power Dissipation | P_D | 1.5W | $T_L \leq 75^{\circ}\text{C}$ |
| Maximum Forward Voltage | V_F | 1.5V | $I_F = 200\text{mA}$ |

Note: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

1.5 Watt Zener Diode 10 to 200 Volts

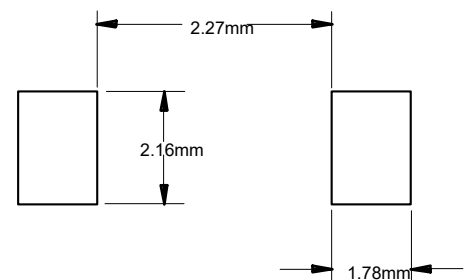
SMA (DO-214AC) LEAD FRAME



DIMENSIONS

| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|-------|-------|------|
| | MIN | MAX | MIN | MAX | |
| A | 0.075 | 0.096 | 1.90 | 2.44 | |
| B | 0.050 | 0.064 | 1.27 | 1.63 | |
| C | 0.002 | 0.008 | 0.051 | 0.203 | |
| D | --- | 0.020 | --- | 0.51 | |
| E | 0.030 | 0.060 | 0.76 | 1.52 | |
| F | 0.065 | 0.091 | 1.65 | 2.32 | |
| G | 0.189 | 0.220 | 4.80 | 5.59 | |
| H | 0.157 | 0.187 | 4.00 | 4.75 | |
| J | 0.090 | 0.115 | 2.25 | 2.92 | |

SUGGESTED SOLDER PAD LAYOUT



Electrical Characteristics @ 25°C Unless Otherwise Specified

| MCC Part Number | Zener Voltage(1) | Test Current | Maximum Dynamic Impedance | Knee Current | Knee Impedance | Maximum Reverse Current | Reverse Voltage | Marking Code |
|--------------------|---------------------|-----------------|---------------------------------|--------------|-------------------|----------------------------|--------------------|-----------------|
| | V_Z | I_{ZT} | $Z_{ZT} @ I_{ZT}$ | I_{ZK} | Z_{ZK} | I_R | V_R | |
| | V | mA | Ω | mA | Ω | μA | V | |
| SMAJ5925BHE3 | 10 | 37.5 | 4.5 | 0.25 | 500 | 5 | 8 | 25B |
| SMAJ5926BHE3 | 11 | 34.1 | 5.5 | 0.25 | 550 | 1 | 8.4 | 26B |
| SMAJ5927BHE3 | 12 | 31.2 | 6.5 | 0.25 | 550 | 1 | 9.1 | 27B |
| SMAJ5928BHE3 | 13 | 28.8 | 7 | 0.25 | 550 | 1 | 9.9 | 28B |
| SMAJ5929BHE3 | 15 | 25 | 9 | 0.25 | 600 | 1 | 11.4 | 29B |
| SMAJ5930BHE3 | 16 | 23.4 | 10 | 0.25 | 600 | 1 | 12.2 | 30B |
| SMAJ5931BHE3 | 18 | 20.8 | 12 | 0.25 | 650 | 1 | 13.7 | 31B |
| SMAJ5932BHE3 | 20 | 18.7 | 14 | 0.25 | 650 | 1 | 15.2 | 32B |
| SMAJ5933BHE3 | 22 | 17 | 17.5 | 0.25 | 650 | 1 | 16.7 | 33B |
| SMAJ5934BHE3 | 24 | 15.6 | 19 | 0.25 | 700 | 1 | 18.2 | 34B |
| SMAJ5935BHE3 | 27 | 13.9 | 23 | 0.25 | 700 | 1 | 20.6 | 35B |
| SMAJ5936BHE3 | 30 | 12.5 | 28 | 0.25 | 750 | 1 | 22.8 | 36B |
| SMAJ5937BHE3 | 33 | 11.4 | 33 | 0.25 | 800 | 1 | 25.1 | 37B |
| SMAJ5938BHE3 | 36 | 10.4 | 38 | 0.25 | 850 | 1 | 27.4 | 38B |
| SMAJ5939BHE3 | 39 | 9.6 | 45 | 0.25 | 900 | 1 | 29.7 | 39B |
| SMAJ5940BHE3 | 43 | 8.7 | 53 | 0.25 | 950 | 1 | 32.7 | 40B |
| SMAJ5941BHE3 | 47 | 8 | 67 | 0.25 | 1000 | 1 | 35.8 | 41B |
| SMAJ5942BHE3 | 51 | 7.3 | 70 | 0.25 | 1100 | 1 | 38.8 | 42B |
| SMAJ5943BHE3 | 56 | 6.7 | 86 | 0.25 | 1300 | 1 | 42.6 | 43B |
| SMAJ5944BHE3 | 62 | 6 | 100 | 0.25 | 1500 | 1 | 47.1 | 44B |
| SMAJ5945BHE3 | 68 | 5.5 | 120 | 0.25 | 1700 | 1 | 51.7 | 45B |
| SMAJ5946BHE3 | 75 | 5 | 140 | 0.25 | 2000 | 1 | 56 | 46B |
| SMAJ5947BHE3 | 82 | 4.6 | 160 | 0.25 | 2500 | 1 | 62.2 | 47B |
| SMAJ5948BHE3 | 91 | 4.1 | 200 | 0.25 | 3000 | 1 | 69.2 | 48B |
| SMAJ5949BHE3 | 100 | 3.7 | 250 | 0.25 | 3100 | 1 | 76 | 49B |
| SMAJ5950BHE3 | 110 | 3.4 | 300 | 0.25 | 4000 | 1 | 83.6 | 50B |
| SMAJ5951BHE3 | 120 | 3.1 | 380 | 0.25 | 4500 | 1 | 91.2 | 51B |
| SMAJ5952BHE3 | 130 | 2.9 | 450 | 0.25 | 5000 | 1 | 98.8 | 52B |
| SMAJ5953BHE3 | 150 | 2.5 | 600 | 0.25 | 6000 | 1 | 114 | 53B |
| SMAJ5954BHE3 | 160 | 2.3 | 700 | 0.25 | 6500 | 1 | 121.6 | 54B |
| SMAJ5955BHE3 | 180 | 2.1 | 900 | 0.25 | 7000 | 1 | 136.8 | 55B |
| SMAJ5956BHE3 | 200 | 1.9 | 1200 | 0.25 | 8000 | 1 | 152 | 56B |

 Note:2. Based on DC-measurement at Thermal Equilibrium While Maintaining The Lead Temperature(T_L) at 30°C , 9.5mm(3/8) from The Diode Body

Curve Characteristics

Fig. 1 - Power Derating Curve

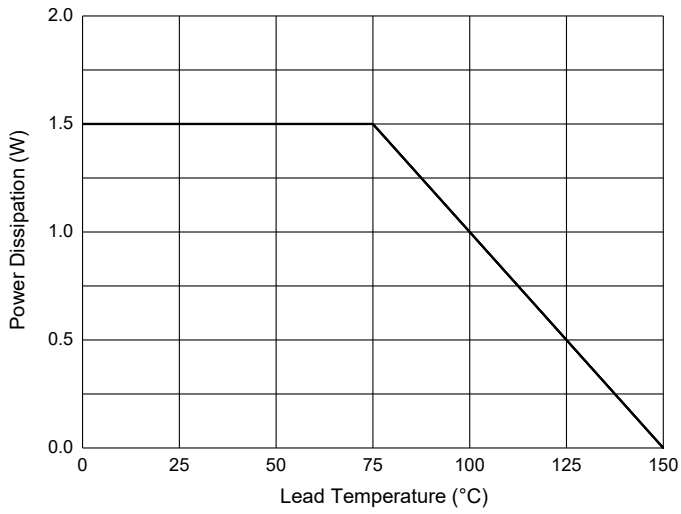


Fig. 2 - Typical Zener Breakdown Characteristics

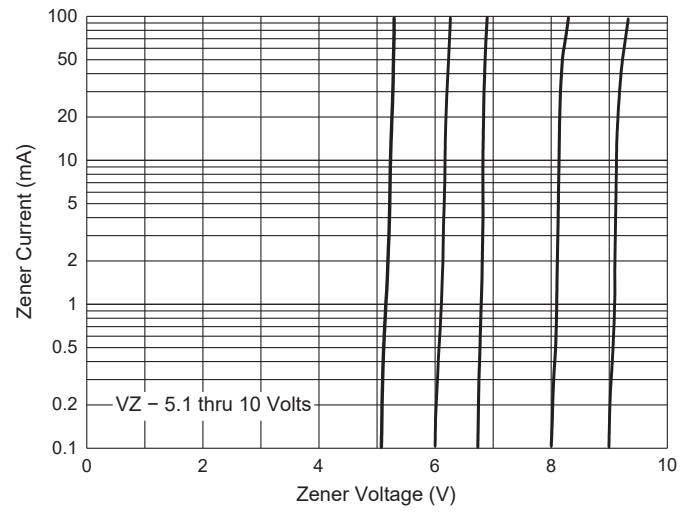
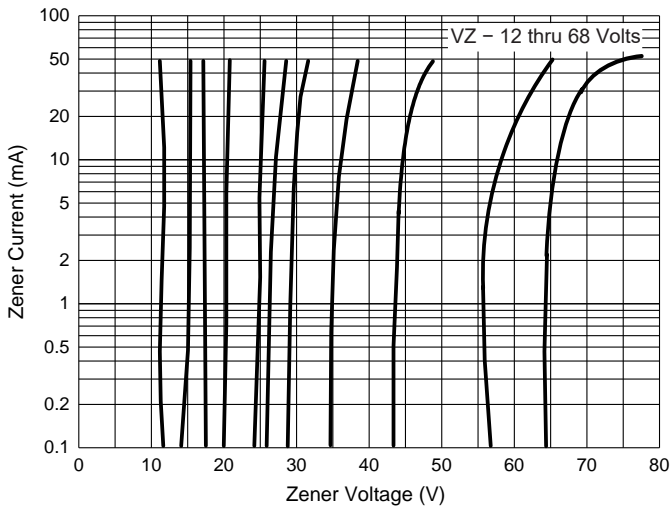


Fig. 3 - Typical Zener Breakdown Characteristics



Ordering Information

| Device | Packing |
|----------------|------------------------|
| Part Number-TP | Tape&Reel:7.5Kpcs/Reel |

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