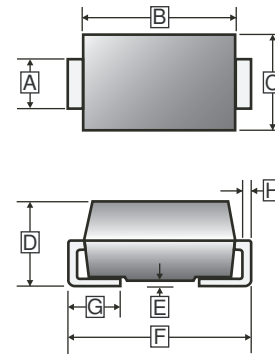


RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Glass passivated chip
- Low leakage
- Built-in strain relief
- Low inductance
- High peak reverse power dissipation
- Lead (Pb)-free component
- For use in stabilizing and clipping circuits with high power rating

SMA



| REF. | Millimeter | | REF. | Millimeter | |
|------|------------|------|------|------------|-------|
| | Min. | Max. | | Min. | Max. |
| A | 1.24 | 1.65 | E | - | 0.203 |
| B | 3.99 | 4.60 | F | 4.80 | 5.28 |
| C | 2.50 | 2.90 | G | 0.76 | 1.52 |
| D | 1.98 | 2.44 | H | 0.15 | 0.305 |

MECHANICAL DATA

- Case : SMA
- Epoxy : UL 94V-0 rate flame retardant
- Polarity : Laser band denotes cathode end
- Weight : 0.062 grams (Approximately)

PACKAGE INFORMATION

| Package | MPQ | Leader Size |
|---------|-----|-------------|
| SMA | 5K | 13' inch |

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

| PARAMETER | SYMBOL | VALUE | UNITS |
|---|------------------|-------------|-------|
| DC Power Dissipation @TL=75°C ¹ | P _D | 1.5 | W |
| Maximum Forward Voltage @ I _F =200mA | V _F | 1.5 | V |
| Junction Temperature Range | T _J | -55 ~ + 150 | °C |
| Storage Temperature Range | T _{STG} | -55 ~ + 150 | °C |

Notes :

1. TL = Lead temperature at 3/8" (9.5mm) from body.

ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.

| PART NUMBER | Nominal Zener Voltage | | Max. Zener Impedance | | | | Max. Reverse Leakage Current | | Max. DC Zener |
|-------------|-----------------------|------|----------------------|------|-------------------|------|------------------------------|-------|---------------|
| | $V_z @ I_{ZT}$ | | $Z_{ZT} @ I_{ZT}$ | | $Z_{ZK} @ I_{ZK}$ | | $I_R @ V_R$ | | I_{ZM} |
| | Nom.V | mA | Ω | mA | Ω | mA | μA | V | mA |
| SMA5920B | 6.2 | 60.5 | 2.0 | 60.5 | 200 | 1.00 | 2.5 | 4.0 | 120 |
| SMA5921B | 6.8 | 55.1 | 2.5 | 55.1 | 200 | 1.00 | 2.5 | 5.2 | 220 |
| SMA5922B | 7.5 | 50.0 | 3.0 | 50.0 | 400 | 0.50 | 2.5 | 6.0 | 200 |
| SMA5923B | 8.2 | 45.7 | 3.5 | 45.7 | 400 | 0.50 | 2.5 | 6.5 | 182 |
| SMA5924B | 9.1 | 41.2 | 4.0 | 41.2 | 500 | 0.50 | 2.5 | 7.0 | 164 |
| SMA5925B | 10.0 | 37.5 | 4.5 | 37.5 | 500 | 0.25 | 2.5 | 8.0 | 150 |
| SMA5926B | 11.0 | 34.1 | 5.5 | 34.1 | 550 | 0.25 | 0.5 | 8.4 | 136 |
| SMA5927B | 12.0 | 31.2 | 6.5 | 31.2 | 550 | 0.25 | 0.5 | 9.1 | 125 |
| SMA5928B | 13.0 | 28.8 | 7.0 | 28.8 | 550 | 0.25 | 0.5 | 9.9 | 115 |
| SMA5929B | 15.0 | 25.0 | 9.0 | 25.0 | 600 | 0.25 | 0.5 | 11.4 | 100 |
| SMA5930B | 16.0 | 23.4 | 10 | 23.4 | 600 | 0.25 | 0.5 | 12.2 | 93 |
| SMA5931B | 18.0 | 20.8 | 12 | 20.8 | 650 | 0.25 | 0.5 | 13.7 | 83 |
| SMA5932B | 20.0 | 18.7 | 14 | 18.7 | 650 | 0.25 | 0.5 | 15.2 | 75 |
| SMA5933B | 22.0 | 17.0 | 18 | 17.0 | 650 | 0.25 | 0.5 | 16.7 | 68 |
| SMA5934B | 24.0 | 15.6 | 19 | 15.6 | 700 | 0.25 | 0.5 | 18.2 | 62 |
| SMA5935B | 27.0 | 13.9 | 23 | 13.9 | 700 | 0.25 | 0.5 | 20.6 | 55 |
| SMA5936B | 30.0 | 12.5 | 26 | 12.5 | 750 | 0.25 | 0.5 | 22.8 | 50 |
| SMA5937B | 33.0 | 11.4 | 33 | 11.4 | 800 | 0.25 | 0.5 | 25.1 | 45 |
| SMA5938B | 36.0 | 10.4 | 38 | 10.4 | 850 | 0.25 | 0.5 | 27.4 | 41 |
| SMA5939B | 39.0 | 9.6 | 45 | 9.6 | 900 | 0.25 | 0.5 | 29.7 | 38 |
| SMA5940B | 43.0 | 8.7 | 53 | 8.7 | 950 | 0.25 | 0.5 | 32.7 | 34 |
| SMA5941B | 47.0 | 8.0 | 67 | 8.0 | 1000 | 0.25 | 0.5 | 35.8 | 31 |
| SMA5942B | 51.0 | 7.3 | 70 | 7.3 | 1100 | 0.25 | 0.5 | 38.8 | 29 |
| SMA5943B | 56.0 | 6.7 | 86 | 6.7 | 1300 | 0.25 | 0.5 | 42.6 | 26 |
| SMA5944B | 62.0 | 6.0 | 100 | 6.0 | 1500 | 0.25 | 0.5 | 47.1 | 24 |
| SMA5945B | 68.0 | 5.5 | 120 | 5.5 | 1700 | 0.25 | 0.5 | 51.7 | 22 |
| SMA5946B | 75.0 | 5.0 | 140 | 5.0 | 2000 | 0.25 | 0.5 | 56.0 | 20 |
| SMA5947B | 82.0 | 4.6 | 160 | 4.6 | 2500 | 0.25 | 0.5 | 62.2 | 18 |
| SMA5948B | 91.0 | 4.1 | 200 | 4.1 | 3000 | 0.25 | 0.5 | 69.2 | 16 |
| SMA5949B | 100.0 | 3.7 | 250 | 3.7 | 3100 | 0.25 | 0.5 | 76.0 | 15 |
| SMA5950B | 110.0 | 3.4 | 300 | 3.4 | 4000 | 0.25 | 0.5 | 83.6 | 13 |
| SMA5951B | 120.0 | 3.1 | 380 | 3.1 | 4500 | 0.25 | 0.5 | 91.2 | 12 |
| SMA5952B | 130.0 | 2.9 | 450 | 2.9 | 5000 | 0.25 | 0.5 | 98.8 | 11 |
| SMA5953B | 150.0 | 2.5 | 600 | 2.5 | 6000 | 0.25 | 0.5 | 114.0 | 10 |
| SMA5954B | 160.0 | 2.3 | 700 | 2.3 | 6500 | 0.25 | 0.5 | 121.6 | 9 |
| SMA5955B | 180.0 | 2.1 | 900 | 2.1 | 7000 | 0.25 | 0.5 | 136.8 | 8 |
| SMA5956B | 200.0 | 1.9 | 1200 | 1.9 | 8000 | 0.25 | 0.5 | 152.0 | 3.5 |

NOTES:

- The type number listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$.
- The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I_{ZT} per JEDEC Method

RATINGS AND CHARACTERISTIC CURVES

Fig. 1 - Power Temperature Derating Curve

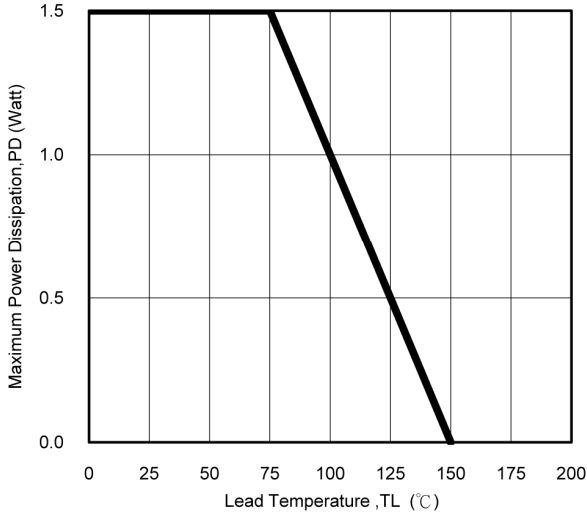


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

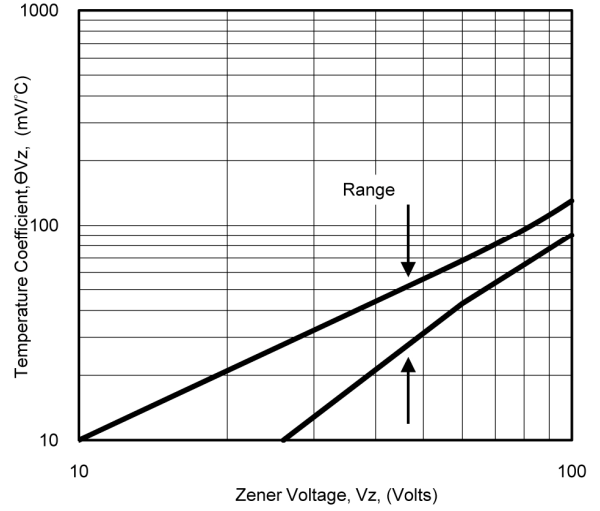


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

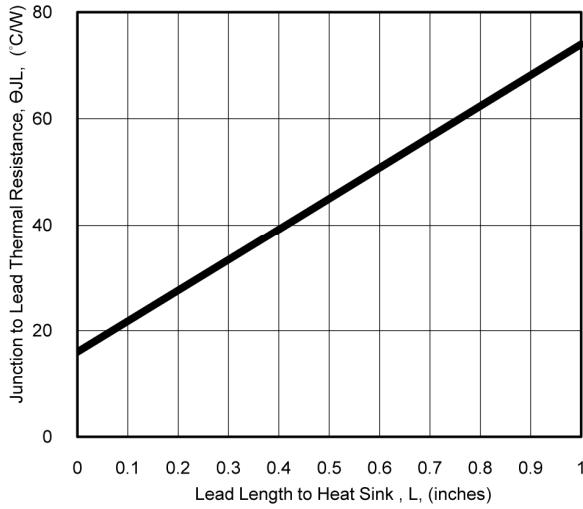


Fig. 4 - Maximum Surge Power

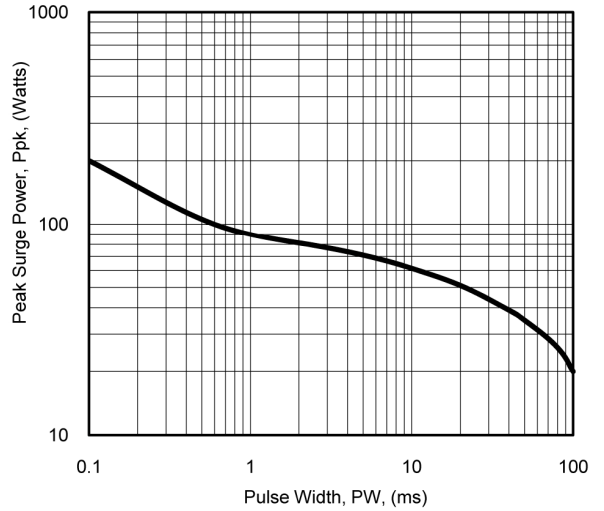


Fig. 5 - Typical Thermal Response L, Lead Length=3/8inch

