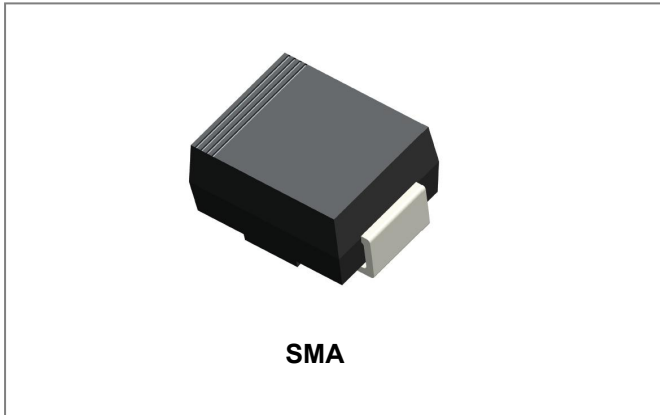


1SMA4741-1SMA4764 SURFACE MOUNT ZENER DIODE



Features

- Glass Passivated Die Construction
- 1.0W Power Dissipation
- 11 - 100V Nominal Zener Voltage
- 5% Standard Vz Tolerance
- Low Inductance
- Typical IR Less Than 5.0 μ A Above 11V
- Plastic Case Material has UL Flammability Classification Rating 94V-O
- "-A" suffix is for Automotive qualified
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Mechanical Data

- Case: SMA molded plastic body
- Terminals: Solder Plated, Solderable per MIL-STD-202, Method 208
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.06 grams

Maximum Ratings@T_A=25°C unless otherwise specified

| Parameter | Symbol | Value | Units |
|---|-----------------------------------|--------------|------------|
| Power Dissipation (Note 1) Derate Above 25°C | P _D | 1.0 8.0 | W mW/°C |
| Forward Voltage @ I _F = 200mA | V _F | 1.2 | V |
| Typical Thermal resistance junction to Ambient (Note 1) | R _{θJA} | 120 | °C/W |
| Operating Junction and Storage Temperature Range | T _J , T _{STG} | -65 to + 150 | °C |

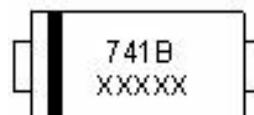
Notes: 1. Valid provided that device terminals are kept at ambient temperature

Ordering Information

| Device | Package | Shipping |
|---------------------------|------------------|----------------|
| 1SMA4741- 1SMA4764 | SMA (Pb-Free) | 5000pcs / reel |
| 1SMA4741TR- 1SMA4764TR | SMA (Pb-Free) | 5000pcs / reel |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram



Where XXXXX is YYWWL

741B = Marking Code

YY = Year

WW = Week

L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •

Ratings and Characteristics Curves

| Type Number (Note 1) | Device Marking Code | Nominal Zener Voltage (Note 2) | Test Current | Maximum Zener Impedance (Note 3) | | | Leakage Current | | Max. Surge Current 8.3ms |
|-------------------------|---------------------------|-----------------------------------|-----------------|-------------------------------------|-----------|------|-----------------|------|--------------------------------|
| | | Vz @ Izt | Izt | Zzt @ Izt | Zzk @ Izk | Izk | I _r | @ Vr | I _{zs} |
| | | (V) | (mA) | (Ω) | (Ω) | (mA) | (μA) | (V) | (mA) |
| 1SMA4741 | 741B | 11 | 23 | 8.0 | 700 | 0.25 | 5.0 | 8.4 | 414 |
| 1SMA4742 | 742B | 12 | 21 | 9.0 | 700 | 0.25 | 5.0 | 9.1 | 380 |
| 1SMA4743 | 743B | 13 | 19 | 10 | 700 | 0.25 | 5.0 | 9.9 | 344 |
| 1SMA4744 | 744B | 15 | 17 | 14 | 700 | 0.25 | 5.0 | 11.4 | 305 |
| 1SMA4745 | 745B | 16 | 15.5 | 16 | 700 | 0.25 | 5.0 | 12.2 | 285 |
| 1SMA4746 | 746B | 18 | 14 | 20 | 750 | 0.25 | 5.0 | 13.7 | 250 |
| 1SMA4747 | 747B | 20 | 12.5 | 22 | 750 | 0.25 | 5.0 | 15.2 | 225 |
| 1SMA4748 | 748B | 22 | 11.5 | 23 | 750 | 0.25 | 5.0 | 16.7 | 205 |
| 1SMA4749 | 749B | 24 | 10.5 | 25 | 750 | 0.25 | 5.0 | 18.2 | 190 |
| 1SMA4750 | 750B | 27 | 9.5 | 35 | 750 | 0.25 | 5.0 | 20.6 | 170 |
| 1SMA4751 | 751B | 30 | 8.5 | 40 | 1000 | 0.25 | 5.0 | 22.8 | 150 |
| 1SMA4752 | 752B | 33 | 7.5 | 45 | 1000 | 0.25 | 5.0 | 25.1 | 135 |
| 1SMA4753 | 753B | 36 | 7.0 | 50 | 1000 | 0.25 | 5.0 | 27.4 | 125 |
| 1SMA4754 | 754B | 39 | 6.5 | 60 | 1000 | 0.25 | 5.0 | 29.7 | 115 |
| 1SMA4755 | 755B | 43 | 6.0 | 70 | 1500 | 0.25 | 5.0 | 32.7 | 110 |
| 1SMA4756 | 756B | 47 | 5.5 | 80 | 1500 | 0.25 | 5.0 | 35.8 | 95 |
| 1SMA4757 | 757B | 51 | 5.0 | 95 | 1500 | 0.25 | 5.0 | 38.8 | 90 |
| 1SMA4758 | 758B | 56 | 4.5 | 110 | 2000 | 0.25 | 5.0 | 42.6 | 80 |
| 1SMA4759 | 759B | 62 | 4.0 | 125 | 2000 | 0.25 | 5.0 | 47.1 | 70 |
| 1SMA4760 | 760B | 68 | 3.7 | 150 | 2000 | 0.25 | 5.0 | 51.7 | 65 |
| 1SMA4761 | 761B | 75 | 3.3 | 175 | 2000 | 0.25 | 5.0 | 56.0 | 60 |
| 1SMA4762 | 762B | 82 | 3.0 | 200 | 3000 | 0.25 | 5.0 | 62.2 | 55 |
| 1SMA4763 | 763B | 91 | 2.8 | 250 | 3000 | 0.25 | 5.0 | 69.2 | 50 |
| 1SMA4764 | 764B | 100 | 2.5 | 350 | 3000 | 0.25 | 5.0 | 76.0 | 45 |

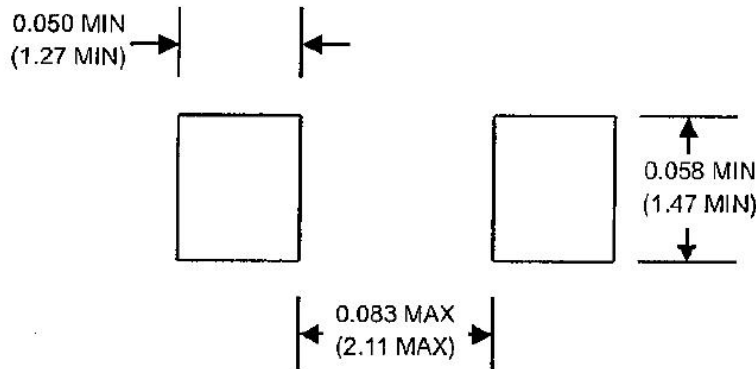
- ote: 1. Type numbers listed have standard tolerance on the nominal Zener voltage of $\pm 5\%$.
 2. Measured under thermal equilibrium and DC (Izt) test conditions.
 3. The Zener impedance is derived from the 60Hz AC voltage which results when an AC current having an RMS value equal to 10% of the Zener current (Izt or Izk) is superimposed on Izt or Izk. Zener impedance is measured at two points to insure a sharp knee on the breakdown curve and to eliminate unstable units.

Mechanical Dimensions SMA



| SYMBOL | Millimeters | | Inches | |
|--------|-------------|-------|--------|-------|
| | Min. | Max. | Min. | Max. |
| A | 2.18 | 2.84 | 0.086 | 0.112 |
| B | 3.99 | 4.75 | 0.157 | 0.187 |
| C | 1.05 | 1.70 | 0.041 | 0.067 |
| D | 0.15 | 0.51 | 0.006 | 0.020 |
| E | 4.70 | 5.66 | 0.185 | 0.223 |
| F | 1.70 | 2.95 | 0.067 | 0.116 |
| G | 0.05 | 0.203 | 0.002 | 0.008 |
| H | 0.76 | 1.52 | 0.030 | 0.600 |

Recommended Footprint (Inches/Millimeters)



Carrier Tape Specification SMA



| SYMBOL | Millimeters | |
|--------|-------------|-------|
| | Min. | Max. |
| A | 2.97 | 3.17 |
| B | 5.70 | 5.90 |
| C | 2.32 | 2.52 |
| d | 1.40 | 1.60 |
| E | 1.40 | 1.60 |
| F | 5.60 | 5.70 |
| P | 3.90 | 4.10 |
| P0 | 3.90 | 4.10 |
| P1 | 1.90 | 2.10 |
| T | 0.25 | 0.35 |
| W | 11.80 | 12.20 |

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