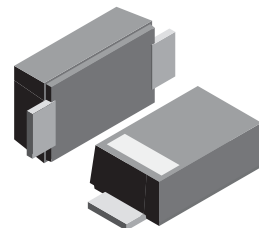


**VOLTAGE RANGE: 3.3V - 100V**

**POWER: 1.0Watts**

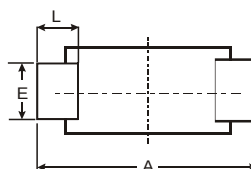
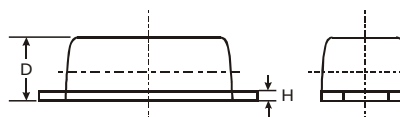
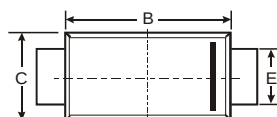


### Features

- Complete voltage range 3.3 to 100 volts
- High peak reverse power dissipation
- High reliability
- Low leakage current
- Standard zener voltage tolerance is  $\pm 5\%$

### Mechanical Data

- Case: SMAF, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- Weight: 0.0018 ounce, 0.064 grams



| SMAF |       |      |      |
|------|-------|------|------|
| Dim  | Min   | Max  | Typ  |
| A    | 4.75  | 4.85 | 4.80 |
| B    | 3.68  | 3.72 | 3.70 |
| C    | 2.57  | 2.63 | 2.60 |
| D    | 0.097 | 1.03 | 1.00 |
| E    | 1.38  | 1.42 | 1.40 |
| H    | 0.13  | 0.17 | 0.15 |
| L    | 0.63  | 0.67 | 0.65 |

All Dimensions in mm

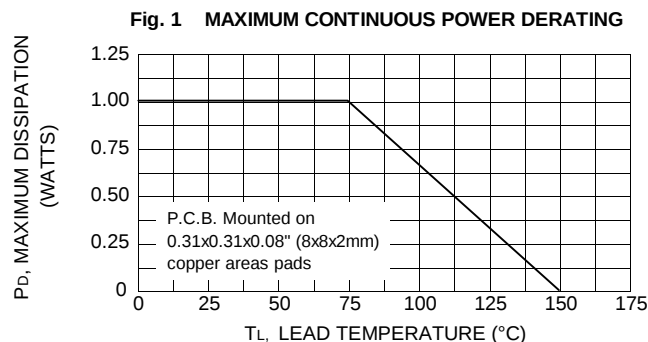


### Maximum Ratings @ $T_A = 25^\circ\text{C}$ unless otherwise specified

| Rating                                                     | Symbol          | Value         | Unit             |
|------------------------------------------------------------|-----------------|---------------|------------------|
| DC Power Dissipation at $T_L = 50^\circ\text{C}$ (Note1)   | $P_D$           | 1.0           | Watt             |
| Maximum Forward Voltage at $I_F = 200\text{ mA}$           | $V_F$           | 1.2           | Volts            |
| Maximum Thermal Resistance Junction to Ambient Air (Note2) | $R_{\theta JA}$ | 170           | K / W            |
| Junction Temperature Range                                 | $T_J$           | - 55 to + 175 | $^\circ\text{C}$ |
| Storage Temperature Range                                  | $T_S$           | - 55 to + 175 | $^\circ\text{C}$ |

**Note :**

- (1)  $T_L$  = Lead temperature at 3/8 " (9.5mm) from body
- (2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.



## ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

| Type       | Nominal Zener Voltage            |                 | Maximum Zener Impedance           |                                   |                 | Maximum Reverse Leakage Current |      | Maximum DC Zener Current | Maximum Surge Current          |
|------------|----------------------------------|-----------------|-----------------------------------|-----------------------------------|-----------------|---------------------------------|------|--------------------------|--------------------------------|
|            | V <sub>Z</sub> @ I <sub>ZT</sub> | I <sub>ZT</sub> | Z <sub>ZT</sub> @ I <sub>ZT</sub> | Z <sub>ZK</sub> @ I <sub>ZK</sub> | I <sub>ZK</sub> | I <sub>R</sub> @ V <sub>R</sub> |      | I <sub>ZM</sub>          | I <sub>RM</sub> <sup>(2)</sup> |
|            | (V)                              | (mA)            | (Ω)                               | (Ω)                               | (mA)            | (μA)                            | (V)  | (mA)                     | (mApk)                         |
| 1SMAF4728A | 3.3                              | 76.0            | 10                                | 400                               | 1.0             | 100                             | 1.0  | 276                      | 1380                           |
| 1SMAF4729A | 3.6                              | 69.0            | 10                                | 400                               | 1.0             | 100                             | 1.0  | 252                      | 1260                           |
| 1SMAF4730A | 3.9                              | 64.0            | 9.0                               | 400                               | 1.0             | 50                              | 1.0  | 234                      | 1190                           |
| 1SMAF4731A | 4.3                              | 58.0            | 9.0                               | 400                               | 1.0             | 10                              | 1.0  | 217                      | 1070                           |
| 1SMAF4732A | 4.7                              | 53.0            | 8.0                               | 500                               | 1.0             | 10                              | 1.0  | 193                      | 970                            |
| 1SMAF4733A | 5.1                              | 49.0            | 7.0                               | 550                               | 1.0             | 10                              | 1.0  | 178                      | 890                            |
| 1SMAF4734A | 5.6                              | 45.0            | 5.0                               | 600                               | 1.0             | 10                              | 2.0  | 162                      | 810                            |
| 1SMAF4735A | 6.2                              | 41.0            | 2.0                               | 700                               | 1.0             | 10                              | 3.0  | 146                      | 730                            |
| 1SMAF4736A | 6.8                              | 37.0            | 3.5                               | 700                               | 1.0             | 50                              | 4.0  | 133                      | 660                            |
| 1SMAF4737A | 7.5                              | 34.0            | 4.0                               | 700                               | 0.5             | 50                              | 5.0  | 121                      | 605                            |
| 1SMAF4738A | 8.2                              | 31.0            | 4.5                               | 700                               | 0.5             | 50                              | 6.0  | 110                      | 550                            |
| 1SMAF4739A | 9.1                              | 28.0            | 5.0                               | 700                               | 0.5             | 50                              | 7.0  | 100                      | 500                            |
| 1SMAF4740A | 10                               | 25.0            | 7.0                               | 700                               | 0.25            | 50                              | 7.6  | 91                       | 454                            |
| 1SMAF4741A | 11                               | 23.0            | 8.0                               | 700                               | 0.25            | 50                              | 8.4  | 83                       | 414                            |
| 1SMAF4742A | 12                               | 21.0            | 9.0                               | 700                               | 0.25            | 5.0                             | 9.1  | 76                       | 380                            |
| 1SMAF4743A | 13                               | 19.0            | 10                                | 700                               | 0.25            | 5.0                             | 9.9  | 69                       | 344                            |
| 1SMAF4744A | 15                               | 17.0            | 14                                | 700                               | 0.25            | 5.0                             | 11.4 | 61                       | 305                            |
| 1SMAF4745A | 16                               | 15.5            | 16                                | 700                               | 0.25            | 5.0                             | 12.2 | 57                       | 285                            |
| 1SMAF4746A | 18                               | 14.0            | 20                                | 750                               | 0.25            | 5.0                             | 13.7 | 50                       | 250                            |
| 1SMAF4747A | 20                               | 12.5            | 22                                | 750                               | 0.25            | 5.0                             | 15.2 | 45                       | 225                            |
| 1SMAF4748A | 22                               | 11.5            | 23                                | 750                               | 0.25            | 5.0                             | 16.7 | 41                       | 205                            |
| 1SMAF4749A | 24                               | 10.5            | 25                                | 750                               | 0.25            | 5.0                             | 18.2 | 38                       | 190                            |
| 1SMAF4750A | 27                               | 9.5             | 35                                | 750                               | 0.25            | 5.0                             | 20.6 | 34                       | 170                            |
| 1SMAF4751A | 30                               | 8.5             | 40                                | 1000                              | 0.25            | 5.0                             | 22.8 | 30                       | 150                            |
| 1SMAF4752A | 33                               | 7.5             | 45                                | 1000                              | 0.25            | 5.0                             | 25.1 | 27                       | 135                            |
| 1SMAF4753A | 36                               | 7.0             | 50                                | 1000                              | 0.25            | 5.0                             | 27.4 | 25                       | 125                            |
| 1SMAF4754A | 39                               | 6.5             | 60                                | 1000                              | 0.25            | 5.0                             | 29.7 | 23                       | 115                            |
| 1SMAF4755A | 43                               | 6.0             | 70                                | 1500                              | 0.25            | 5.0                             | 32.7 | 22                       | 110                            |
| 1SMAF4756A | 47                               | 5.5             | 80                                | 1500                              | 0.25            | 5.0                             | 35.8 | 19                       | 95                             |
| 1SMAF4757A | 51                               | 5.0             | 95                                | 1500                              | 0.25            | 5.0                             | 38.8 | 18                       | 90                             |
| 1SMAF4758A | 56                               | 4.5             | 110                               | 2000                              | 0.25            | 5.0                             | 42.6 | 16                       | 80                             |
| 1SMAF4759A | 62                               | 4.0             | 125                               | 2000                              | 0.25            | 5.0                             | 47.1 | 14                       | 70                             |
| 1SMAF4760A | 68                               | 3.7             | 150                               | 2000                              | 0.25            | 5.0                             | 51.7 | 13                       | 65                             |
| 1SMAF4761A | 75                               | 3.3             | 175                               | 2000                              | 0.25            | 5.0                             | 56.0 | 12                       | 60                             |
| 1SMAF4762A | 82                               | 3.0             | 200                               | 3000                              | 0.25            | 5.0                             | 62.2 | 11                       | 55                             |
| 1SMAF4763A | 91                               | 2.8             | 250                               | 3000                              | 0.25            | 5.0                             | 69.2 | 10                       | 50                             |
| 1SMAF4764A | 100                              | 2.5             | 350                               | 3000                              | 0.25            | 5.0                             | 76.0 | 9.0                      | 45                             |

### Notes :

(1) The type number listed have a standard tolerance on the nominal zener voltage of  $\pm 5\%$ .