

Silicon Planar Zener Diodes

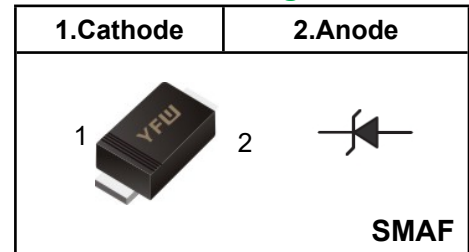
**FEATURES**

- ◆ Total power dissipation: Max. 1 W.
- ◆ Wide zener reverse voltage range 3.3V to 330V.
- ◆ Small plastic package suitable for surface mounted design.
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

**MECHANICAL DATA**

- ◆ Case: SMAF
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 27mg /0.00086oz

**Pinning**

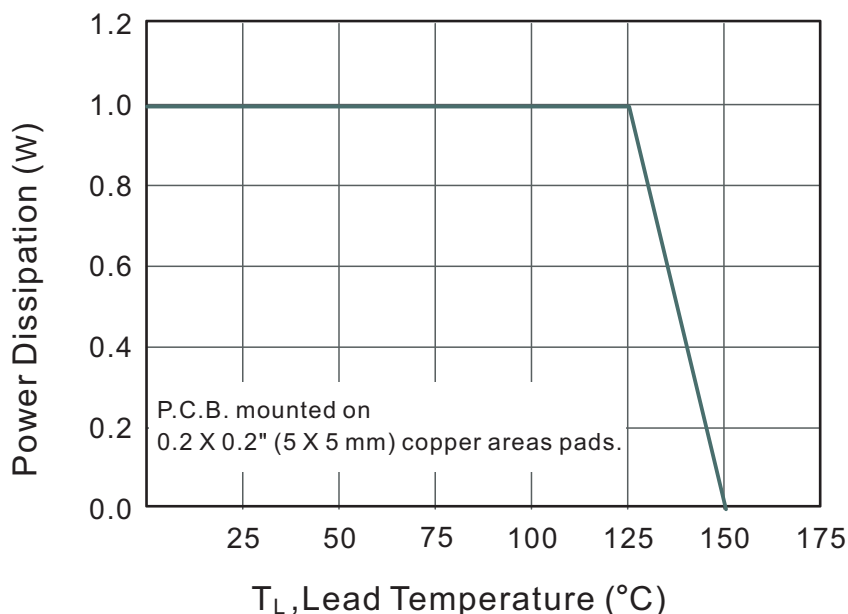


**Absolute Maximum Ratings And Characteristics (Ta = 25 °C)**

| Parameter                      | Symbol               | Value      | Unit      |
|--------------------------------|----------------------|------------|-----------|
| Power Dissipation at TL=75°C   | <b>P<sub>D</sub></b> | 1          | <b>W</b>  |
| Forward Voltage at IF = 200 mA | <b>V<sub>F</sub></b> | 1.2        | <b>V</b>  |
| Junction Temperature Range     | <b>T<sub>J</sub></b> | 55 ~ +150  | <b>°C</b> |
| Storage Temperature Range      | <b>T<sub>s</sub></b> | -55 ~ +150 | <b>°C</b> |

(1) Thermal resistance from junction to ambient at P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper areas pads.

**Fig.1 Maximum Continuous Power Derating**



Characteristics at Ta = 25°C

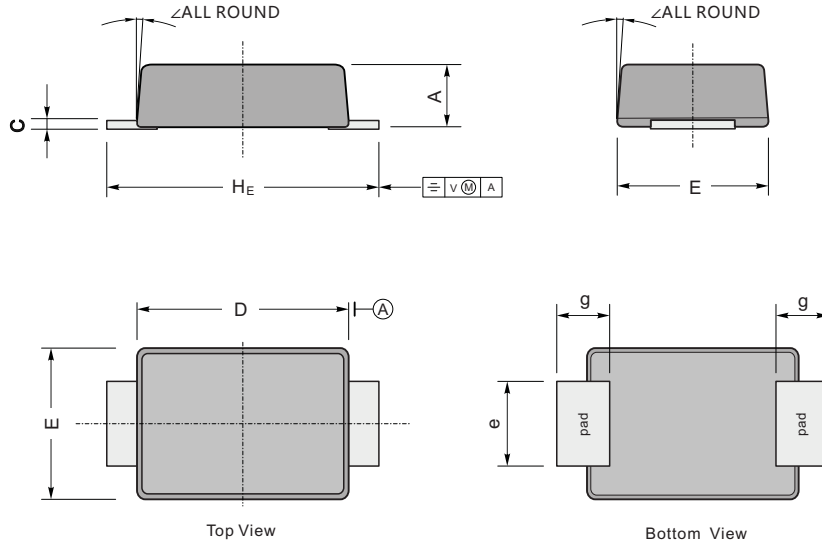
| Type       | Marking | Zener Voltage Range <sup>(1)</sup>     |           |           | I <sub>ZT</sub> | Dynamic Impedance | Reverse Current                        |                | Admissible Zener Current |
|------------|---------|--|-----------|-----------|-----------------|-------------------|--|----------------|--------------------------|
|            |         | V <sub>ZT</sub> ( at I <sub>ZT</sub> ) |           |           |                 |                   | Z <sub>ZT</sub> ( at I <sub>ZT</sub> ) | I <sub>R</sub> |                          |
|            |         | Min ( V )                              | Nom ( V ) | Max ( V ) | (mA)            | Max (Ω)           | Max ( μA )                             | ( V )          | I <sub>ZM</sub> (mA)     |
| 1SMAF4728A | 728A    | 3.10                                   | 3.3       | 3.50      | 75              | 10                | 100                                    | 1              | 285                      |
| 1SMAF4729A | 729A    | 3.40                                   | 3.6       | 3.80      | 69              | 10                | 100                                    | 1              | 263                      |
| 1SMAF4730A | 730A    | 3.70                                   | 3.9       | 4.10      | 64              | 9.0               | 50                                     | 1              | 243                      |
| 1SMAF4731A | 731A    | 4.06                                   | 4.3       | 4.56      | 58              | 9.0               | 25                                     | 1              | 219                      |
| 1SMAF4732A | 732A    | 4.50                                   | 4.7       | 4.93      | 53              | 8.0               | 10                                     | 1              | 203                      |
| 1SMAF4733A | 733A    | 4.84                                   | 5.1       | 5.36      | 49              | 7.0               | 10                                     | 1              | 186                      |
| 1SMAF4734A | 734A    | 5.32                                   | 5.6       | 5.92      | 45              | 5.0               | 10                                     | 2              | 170                      |
| 1SMAF4735A | 735A    | 5.86                                   | 6.2       | 6.51      | 41              | 2.0               | 10                                     | 3              | 154                      |
| 1SMAF4736A | 736A    | 6.46                                   | 6.8       | 7.18      | 37              | 3.5               | 10                                     | 4              | 140                      |
| 1SMAF4737A | 737A    | 7.12                                   | 7.5       | 7.88      | 34              | 4.0               | 10                                     | 5              | 127                      |
| 1SMAF4738A | 738A    | 7.79                                   | 8.2       | 8.67      | 31              | 4.5               | 10                                     | 6              | 116                      |
| 1SMAF4739A | 739A    | 8.60                                   | 9.1       | 9.59      | 28              | 5.0               | 10                                     | 7              | 104                      |
| 1SMAF4740A | 740A    | 9.50                                   | 10        | 10.5      | 25              | 7.0               | 10                                     | 7              | 95                       |
| 1SMAF4741A | 741A    | 10.4                                   | 11        | 11.6      | 23              | 8.0               | 5                                      | 8              | 86                       |
| 1SMAF4742A | 742A    | 11.4                                   | 12        | 12.6      | 21              | 9.0               | 5                                      | 9              | 79                       |
| 1SMAF4743A | 743A    | 12.4                                   | 13        | 14.1      | 19              | 10                | 5                                      | 10             | 71                       |
| 1SMAF4744A | 744A    | 13.8                                   | 15        | 15.8      | 17              | 14                | 5                                      | 11             | 63                       |
| 1SMAF4745A | 745A    | 15.2                                   | 16        | 17.1      | 16              | 16                | 5                                      | 12             | 58                       |
| 1SMAF4746A | 746A    | 16.8                                   | 18        | 19.2      | 14              | 20                | 5                                      | 13             | 52                       |
| 1SMAF4747A | 747A    | 19.0                                   | 20        | 21.2      | 13              | 22                | 5                                      | 15             | 47                       |
| 1SMAF4748A | 748A    | 20.8                                   | 22        | 23.3      | 12              | 23                | 5                                      | 17             | 43                       |
| 1SMAF4749A | 749A    | 22.8                                   | 24        | 26.0      | 11              | 25                | 5                                      | 18             | 38                       |
| 1SMAF4750A | 750A    | 25.3                                   | 27        | 28.9      | 9.5             | 35                | 5                                      | 21             | 35                       |
| 1SMAF4751A | 751A    | 28.2                                   | 30        | 32.0      | 8.5             | 40                | 5                                      | 23             | 31                       |
| 1SMAF4752A | 752A    | 31.3                                   | 33        | 34.9      | 7.5             | 45                | 5                                      | 25             | 28                       |
| 1SMAF4753A | 753A    | 34.2                                   | 36        | 37.9      | 7.0             | 50                | 5                                      | 27             | 26                       |
| 1SMAF4754A | 754A    | 37.2                                   | 39        | 41.5      | 6.5             | 60                | 5                                      | 30             | 24                       |
| 1SMAF4755A | 755A    | 40.9                                   | 43        | 45.6      | 6.0             | 70                | 1                                      | 32             | 22                       |
| 1SMAF4756A | 756A    | 44.9                                   | 47        | 49.8      | 5.5             | 80                | 1                                      | 35             | 20                       |
| 1SMAF4757A | 757A    | 48.6                                   | 51        | 54.0      | 5.0             | 95                | 1                                      | 38             | 18                       |
| 1SMAF4758A | 758A    | 53.6                                   | 56        | 58.8      | 4.5             | 110               | 1                                      | 42             | 17                       |
| 1SMAF4759A | 759A    | 58.9                                   | 62        | 65.6      | 4.0             | 125               | 1                                      | 47             | 15                       |
| 1SMAF4760A | 760A    | 64.6                                   | 68        | 71.7      | 3.7             | 150               | 1                                      | 52             | 14                       |
| 1SMAF4761A | 761A    | 71.2                                   | 75        | 78.8      | 3.3             | 175               | 1                                      | 56             | 12                       |
| 1SMAF4762A | 762A    | 77.9                                   | 82        | 87.0      | 3.0             | 200               | 1                                      | 62             | 11                       |
| 1SMAF4763A | 763A    | 86.0                                   | 91        | 96.0      | 2.8             | 250               | 1                                      | 69             | 10                       |
| 1SMAF4764A | 764A    | 95.0                                   | 100       | 105       | 2.5             | 350               | 1                                      | 76             | 9.5                      |
| 1SMAF4765A | 765A    | 104                                    | 110       | 116       | 2.3             | 450               | 1                                      | 84             | 8.6                      |
| 1SMAF4766A | 766A    | 114                                    | 120       | 127       | 2.0             | 550               | 1                                      | 91             | 7.8                      |
| 1SMAF4767A | 767A    | 125                                    | 135       | 142       | 1.9             | 700               | 1                                      | 100            | 7.0                      |
| 1SMAF4768A | 768A    | 140                                    | 150       | 157       | 1.7             | 900               | 1                                      | 110            | 6.3                      |
| 1SMAF4769A | 769A    | 155                                    | 165       | 172       | 1.6             | 1100              | 1                                      | 120            | 5.8                      |
| 1SMAF4770A | 770A    | 170                                    | 180       | 191       | 1.4             | 1200              | 1                                      | 135            | 5.2                      |
| 1SMAF4771A | 771A    | 189                                    | 200       | 211       | 1.2             | 1400              | 1                                      | 150            | 4.7                      |
| 1SMAF4772A | 772A    | 209                                    | 220       | 231       | 1.0             | 1600              | 1                                      | 165            | 4.3                      |
| 1SMAF4773A | 773A    | 229                                    | 240       | 251       | 1.0             | 1800              | 1                                      | 180            | 3.9                      |
| 1SMAF4774A | 774A    | 249                                    | 260       | 271       | 1.0             | 2000              | 1                                      | 190            | 3.7                      |
| 1SMAF4775A | 775A    | 269                                    | 280       | 291       | 1.0             | 2100              | 1                                      | 205            | 3.4                      |
| 1SMAF4776A | 776A    | 289                                    | 300       | 315       | 1.0             | 2300              | 1                                      | 230            | 3.1                      |
| 1SMAF4777A | 777A    | 313                                    | 330       | 346       | 1.0             | 2500              | 1                                      | 250            | 2.8                      |

(1) Vz<sub>T</sub> is tested with pulses (20 ms)

**Package Outline**

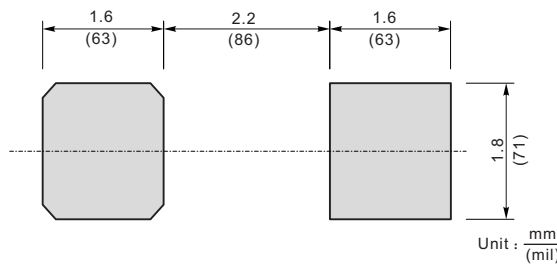
**SMAF**

Plastic surface mounted package; 2 leads



| UNIT |     | A   | C    | D   | E   | e   | g   | H <sub>E</sub> | $\angle$ |
|------|-----|-----|------|-----|-----|-----|-----|----------------|----------|
| mm   | max | 1.1 | 0.20 | 3.7 | 2.7 | 1.6 | 1.2 | 4.9            | 7°       |
|      | min | 0.9 | 0.12 | 3.3 | 2.4 | 1.3 | 0.8 | 4.4            |          |
| mil  | max | 43  | 7.9  | 146 | 106 | 63  | 47  | 193            |          |
|      | min | 35  | 4.7  | 130 | 94  | 51  | 31  | 173            |          |

**The recommended mounting pad size**



**Summary of Packing Options**

| Package | Packing Description | Packing Quantity | Industry Standard |
|---------|---------------------|------------------|-------------------|
| SMAF    | Tape/Reel, 13" reel | 10000            | EIA-481-1         |
|         | Tape/Reel, 7" reel  | 3000             | EIA-481-1         |

单击下面可查看定价，库存，交付和生命周期等信息

[>>YFW\(佑风微\)](#)