

## Silicon Planar zener diode

### FEATURES

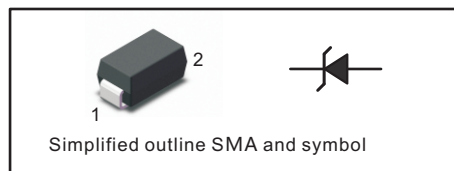
- Total power dissipation: Max. 1 W.
- Wide zener reverse voltage range 3.3V to 330V.
- Small plastic package suitable for surface mounted design.

### MECHANICAL DATA

- Case: SMA
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.055g / 0.002oz

### PINNING

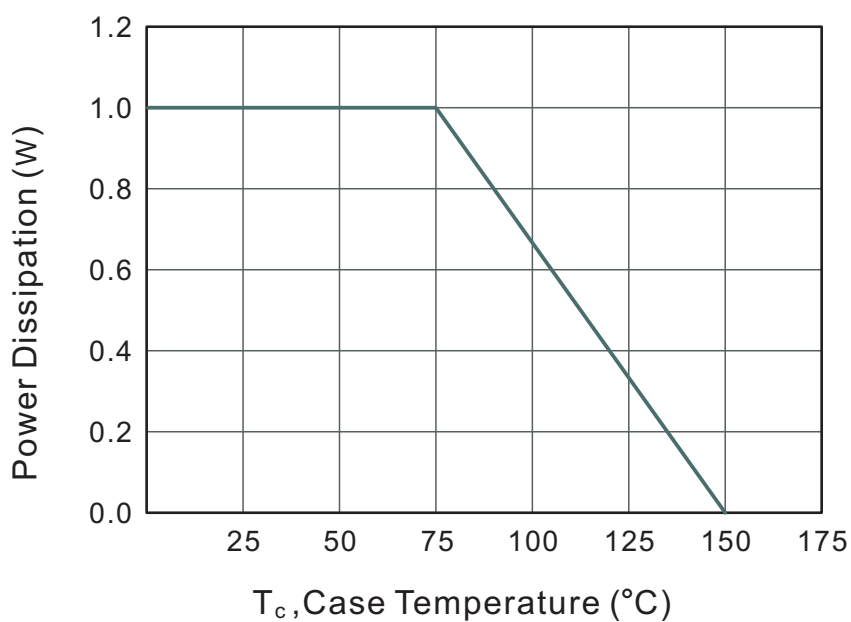
| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |



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

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

Fig.1 Maximum Continuous Power Derating



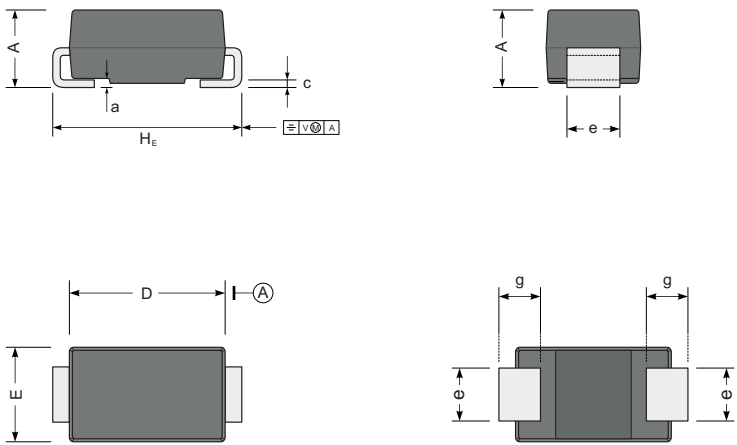
## Characteristics at Ta = 25°C

| Type      | Marking | Zener Voltage Range <sup>(1)</sup>     |           |           |                 | Dynamic Impedance                      | Reverse Current |                   | Admissible Zener Current |
|-----------|---------|----------------------------------------|-----------|-----------|-----------------|----------------------------------------|-----------------|-------------------|--------------------------|
|           |         | V <sub>ZT</sub> ( at I <sub>ZT</sub> ) |           |           | I <sub>ZT</sub> | Z <sub>ZT</sub> ( at I <sub>ZT</sub> ) | I <sub>R</sub>  | at V <sub>R</sub> |                          |
|           |         | Min ( V )                              | Nom ( V ) | Max ( V ) | (mA)            | Max (Ω)                                | Max ( μA )      | ( V )             | I <sub>ZM</sub> (mA)     |
| 1SMA4728A | 728A    | 3.10                                   | 3.3       | 3.50      | 75              | 10                                     | 100             | 1                 | 285                      |
| 1SMA4729A | 729A    | 3.40                                   | 3.6       | 3.80      | 69              | 10                                     | 100             | 1                 | 263                      |
| 1SMA4730A | 730A    | 3.70                                   | 3.9       | 4.10      | 64              | 9.0                                    | 50              | 1                 | 243                      |
| 1SMA4731A | 731A    | 4.06                                   | 4.3       | 4.56      | 58              | 9.0                                    | 25              | 1                 | 219                      |
| 1SMA4732A | 732A    | 4.50                                   | 4.7       | 4.93      | 53              | 8.0                                    | 10              | 1                 | 203                      |
| 1SMA4733A | 733A    | 4.84                                   | 5.1       | 5.36      | 49              | 7.0                                    | 10              | 1                 | 186                      |
| 1SMA4734A | 734A    | 5.32                                   | 5.6       | 5.92      | 45              | 5.0                                    | 10              | 2                 | 170                      |
| 1SMA4735A | 735A    | 5.86                                   | 6.2       | 6.51      | 41              | 2.0                                    | 10              | 3                 | 154                      |
| 1SMA4736A | 736A    | 6.46                                   | 6.8       | 7.18      | 37              | 3.5                                    | 10              | 4                 | 140                      |
| 1SMA4737A | 737A    | 7.12                                   | 7.5       | 7.88      | 34              | 4.0                                    | 10              | 5                 | 127                      |
| 1SMA4738A | 738A    | 7.79                                   | 8.2       | 8.67      | 31              | 4.5                                    | 10              | 6                 | 116                      |
| 1SMA4739A | 739A    | 8.60                                   | 9.1       | 9.59      | 28              | 5.0                                    | 10              | 7                 | 104                      |
| 1SMA4740A | 740A    | 9.50                                   | 10        | 10.5      | 25              | 7.0                                    | 10              | 7                 | 95                       |
| 1SMA4741A | 741A    | 10.4                                   | 11        | 11.6      | 23              | 8.0                                    | 5               | 8                 | 86                       |
| 1SMA4742A | 742A    | 11.4                                   | 12        | 12.6      | 21              | 9.0                                    | 5               | 9                 | 79                       |
| 1SMA4743A | 743A    | 12.4                                   | 13        | 14.1      | 19              | 10                                     | 5               | 10                | 71                       |
| 1SMA4744A | 744A    | 13.8                                   | 15        | 15.8      | 17              | 14                                     | 5               | 11                | 63                       |
| 1SMA4745A | 745A    | 15.2                                   | 16        | 17.1      | 16              | 16                                     | 5               | 12                | 58                       |
| 1SMA4746A | 746A    | 16.8                                   | 18        | 19.2      | 14              | 20                                     | 5               | 13                | 52                       |
| 1SMA4747A | 747A    | 19.0                                   | 20        | 21.2      | 13              | 22                                     | 5               | 15                | 47                       |
| 1SMA4748A | 748A    | 20.8                                   | 22        | 23.3      | 12              | 23                                     | 5               | 17                | 43                       |
| 1SMA4749A | 749A    | 22.8                                   | 24        | 26.0      | 11              | 25                                     | 5               | 18                | 38                       |
| 1SMA4750A | 750A    | 25.3                                   | 27        | 28.9      | 9.5             | 35                                     | 5               | 21                | 35                       |
| 1SMA4751A | 751A    | 28.2                                   | 30        | 32.0      | 8.5             | 40                                     | 5               | 23                | 31                       |
| 1SMA4752A | 752A    | 31.3                                   | 33        | 34.9      | 7.5             | 45                                     | 5               | 25                | 28                       |
| 1SMA4753A | 753A    | 34.2                                   | 36        | 37.9      | 7.0             | 50                                     | 5               | 27                | 26                       |
| 1SMA4754A | 754A    | 37.2                                   | 39        | 41.5      | 6.5             | 60                                     | 5               | 30                | 24                       |
| 1SMA4755A | 755A    | 40.9                                   | 43        | 45.6      | 6.0             | 70                                     | 1               | 32                | 22                       |
| 1SMA4756A | 756A    | 44.9                                   | 47        | 49.8      | 5.5             | 80                                     | 1               | 35                | 20                       |
| 1SMA4757A | 757A    | 48.6                                   | 51        | 54.0      | 5.0             | 95                                     | 1               | 38                | 18                       |
| 1SMA4758A | 758A    | 53.6                                   | 56        | 58.8      | 4.5             | 110                                    | 1               | 42                | 17                       |
| 1SMA4759A | 759A    | 58.9                                   | 62        | 65.6      | 4.0             | 125                                    | 1               | 47                | 15                       |
| 1SMA4760A | 760A    | 64.6                                   | 68        | 71.7      | 3.7             | 150                                    | 1               | 52                | 14                       |
| 1SMA4761A | 761A    | 71.2                                   | 75        | 78.8      | 3.3             | 175                                    | 1               | 56                | 12                       |
| 1SMA4762A | 762A    | 77.9                                   | 82        | 87.0      | 3.0             | 200                                    | 1               | 62                | 11                       |
| 1SMA4763A | 763A    | 86.0                                   | 91        | 96.0      | 2.8             | 250                                    | 1               | 69                | 10                       |
| 1SMA4764A | 764A    | 95.0                                   | 100       | 105       | 2.5             | 350                                    | 1               | 76                | 9.5                      |
| 1SMA4765A | 765A    | 104                                    | 110       | 116       | 2.3             | 450                                    | 1               | 84                | 8.6                      |
| 1SMA4766A | 766A    | 114                                    | 120       | 127       | 2.0             | 550                                    | 1               | 91                | 7.8                      |
| 1SMA4767A | 767A    | 125                                    | 135       | 142       | 1.9             | 700                                    | 1               | 100               | 7.0                      |
| 1SMA4768A | 768A    | 140                                    | 150       | 157       | 1.7             | 900                                    | 1               | 110               | 6.3                      |
| 1SMA4769A | 769A    | 155                                    | 165       | 172       | 1.6             | 1100                                   | 1               | 120               | 5.8                      |
| 1SMA4770A | 770A    | 170                                    | 180       | 191       | 1.4             | 1200                                   | 1               | 135               | 5.2                      |
| 1SMA4771A | 771A    | 189                                    | 200       | 211       | 1.2             | 1400                                   | 1               | 150               | 4.7                      |
| 1SMA4772A | 772A    | 209                                    | 220       | 231       | 1.0             | 1600                                   | 1               | 165               | 4.3                      |
| 1SMA4773A | 773A    | 229                                    | 240       | 251       | 1.0             | 1800                                   | 1               | 180               | 3.9                      |
| 1SMA4774A | 774A    | 249                                    | 260       | 271       | 1.0             | 2000                                   | 1               | 190               | 3.7                      |
| 1SMA4775A | 775A    | 269                                    | 280       | 291       | 1.0             | 2100                                   | 1               | 205               | 3.4                      |
| 1SMA4776A | 776A    | 289                                    | 300       | 315       | 1.0             | 2300                                   | 1               | 230               | 3.1                      |
| 1SMA4777A | 777A    | 313                                    | 330       | 346       | 1.0             | 2500                                   | 1               | 250               | 2.8                      |

## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMA



| UNIT |     | A   | D   | E   | H <sub>E</sub> | c    | e   | g   | a   |
|------|-----|-----|-----|-----|----------------|------|-----|-----|-----|
| mm   | max | 2.2 | 4.5 | 2.7 | 5.2            | 0.31 | 1.6 | 1.5 | 0.3 |
|      | min | 1.9 | 4.0 | 2.3 | 4.7            | 0.15 | 1.3 | 0.9 |     |
| mil  | max | 87  | 181 | 106 | 205            | 12   | 63  | 59  | 12  |
|      | min | 75  | 157 | 91  | 185            | 6    | 51  | 35  |     |

### The recommended mounting pad size

