



# 1SMA4728A-1SMA4764A

## SURFACE MOUNT ZENER DIODES

**V<sub>z</sub> : 3.3 - 100Volts 1 Watt**

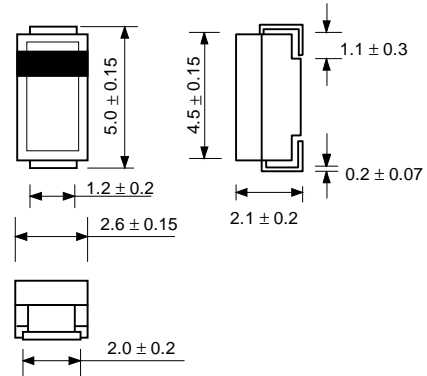
### FEATURES :

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

### MECHANICAL DATA

- \* Case : SMA (DO-214AC) Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Lead formed for Surface mount
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.064 gram

### SMA (DO-214AC)



Dimensions in millimeter

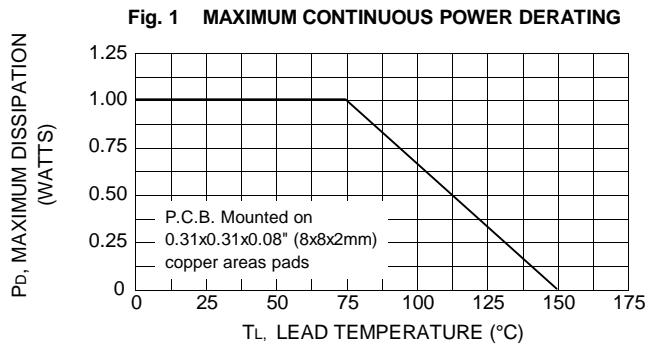
### MAXIMUM RATINGS

Rating at 25 °C ambient temperature unless otherwise specified

| Rating   | Symbol         | Value         | Unit |
|--|----------------|---------------|------|
| DC Power Dissipation at T <sub>L</sub> = 75 °C (Note1) | P <sub>D</sub> | 1.0           | W    |
| Maximum 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   |

**Note :**

(1) P.C.B. Mounted on 0.31x0.31x0.08" (8x8x2mm) copper areas pads.



# ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

| Type      | Device Marking | Nominal Zener Voltage |      | Maximum Zener Impedance |           |      | Maximum Reverse Leakage Current |      | Maximum DC Zener Current | Maximum Surge Current |
|-----------|----------------|-----------------------|------|-------------------------|-----------|------|---------------------------------|------|--------------------------|-----------------------|
|           |                | Vz @ IzT              | IzT  | ZzT @ IzT               | Zzk @ IzK | IzK  | Ir @ VR                         | IzM  | IRM <sup>(2)</sup>       |                       |
|           |                | (V)                   | (mA) | (Ω)                     | (Ω)       | (mA) | (μA)                            | (V)  | (mA)                     | (mApk)                |
| 1SMA4728A | 728A           | 3.3                   | 76.0 | 10                      | 400       | 1.0  | 100                             | 1.0  | 276                      | 1380                  |
| 1SMA4729A | 729A           | 3.6                   | 69.0 | 10                      | 400       | 1.0  | 100                             | 1.0  | 252                      | 1260                  |
| 1SMA4730A | 730A           | 3.9                   | 64.0 | 9.0                     | 400       | 1.0  | 50                              | 1.0  | 234                      | 1190                  |
| 1SMA4731A | 731A           | 4.3                   | 58.0 | 9.0                     | 400       | 1.0  | 10                              | 1.0  | 217                      | 1070                  |
| 1SMA4732A | 732A           | 4.7                   | 53.0 | 8.0                     | 500       | 1.0  | 10                              | 1.0  | 193                      | 970                   |
| 1SMA4733A | 733A           | 5.1                   | 49.0 | 7.0                     | 550       | 1.0  | 10                              | 1.0  | 178                      | 890                   |
| 1SMA4734A | 734A           | 5.6                   | 45.0 | 5.0                     | 600       | 1.0  | 10                              | 2.0  | 162                      | 810                   |
| 1SMA4735A | 735A           | 6.2                   | 41.0 | 2.0                     | 700       | 1.0  | 10                              | 3.0  | 146                      | 730                   |
| 1SMA4736A | 736A           | 6.8                   | 37.0 | 3.5                     | 700       | 1.0  | 50                              | 4.0  | 133                      | 660                   |
| 1SMA4737A | 737A           | 7.5                   | 34.0 | 4.0                     | 700       | 0.5  | 50                              | 5.0  | 121                      | 605                   |
| 1SMA4738A | 738A           | 8.2                   | 31.0 | 4.5                     | 700       | 0.5  | 50                              | 6.0  | 110                      | 550                   |
| 1SMA4739A | 739A           | 9.1                   | 28.0 | 5.0                     | 700       | 0.5  | 50                              | 7.0  | 100                      | 500                   |
| 1SMA4740A | 740A           | 10                    | 25.0 | 7.0                     | 700       | 0.25 | 50                              | 7.6  | 91                       | 454                   |
| 1SMA4741A | 741A           | 11                    | 23.0 | 8.0                     | 700       | 0.25 | 50                              | 8.4  | 83                       | 414                   |
| 1SMA4742A | 742A           | 12                    | 21.0 | 9.0                     | 700       | 0.25 | 5.0                             | 9.1  | 76                       | 380                   |
| 1SMA4743A | 743A           | 13                    | 19.0 | 10                      | 700       | 0.25 | 5.0                             | 9.9  | 69                       | 344                   |
| 1SMA4744A | 744A           | 15                    | 17.0 | 14                      | 700       | 0.25 | 5.0                             | 11.4 | 61                       | 305                   |
| 1SMA4745A | 745A           | 16                    | 15.5 | 16                      | 700       | 0.25 | 5.0                             | 12.2 | 57                       | 285                   |
| 1SMA4746A | 746A           | 18                    | 14.0 | 20                      | 750       | 0.25 | 5.0                             | 13.7 | 50                       | 250                   |
| 1SMA4747A | 747A           | 20                    | 12.5 | 22                      | 750       | 0.25 | 5.0                             | 15.2 | 45                       | 225                   |
| 1SMA4748A | 748A           | 22                    | 11.5 | 23                      | 750       | 0.25 | 5.0                             | 16.7 | 41                       | 205                   |
| 1SMA4749A | 749A           | 24                    | 10.5 | 25                      | 750       | 0.25 | 5.0                             | 18.2 | 38                       | 190                   |
| 1SMA4750A | 750A           | 27                    | 9.5  | 35                      | 750       | 0.25 | 5.0                             | 20.6 | 34                       | 170                   |
| 1SMA4751A | 751A           | 30                    | 8.5  | 40                      | 1000      | 0.25 | 5.0                             | 22.8 | 30                       | 150                   |
| 1SMA4752A | 752A           | 33                    | 7.5  | 45                      | 1000      | 0.25 | 5.0                             | 25.1 | 27                       | 135                   |
| 1SMA4753A | 753A           | 36                    | 7.0  | 50                      | 1000      | 0.25 | 5.0                             | 27.4 | 25                       | 125                   |
| 1SMA4754A | 754A           | 39                    | 6.5  | 60                      | 1000      | 0.25 | 5.0                             | 29.7 | 23                       | 115                   |
| 1SMA4755A | 755A           | 43                    | 6.0  | 70                      | 1500      | 0.25 | 5.0                             | 32.7 | 22                       | 110                   |
| 1SMA4756A | 756A           | 47                    | 5.5  | 80                      | 1500      | 0.25 | 5.0                             | 35.8 | 19                       | 95                    |
| 1SMA4757A | 757A           | 51                    | 5.0  | 95                      | 1500      | 0.25 | 5.0                             | 38.8 | 18                       | 90                    |
| 1SMA4758A | 758A           | 56                    | 4.5  | 110                     | 2000      | 0.25 | 5.0                             | 42.6 | 16                       | 80                    |
| 1SMA4759A | 759A           | 62                    | 4.0  | 125                     | 2000      | 0.25 | 5.0                             | 47.1 | 14                       | 70                    |
| 1SMA4760A | 760A           | 68                    | 3.7  | 150                     | 2000      | 0.25 | 5.0                             | 51.7 | 13                       | 65                    |
| 1SMA4761A | 761A           | 75                    | 3.3  | 175                     | 2000      | 0.25 | 5.0                             | 56.0 | 12                       | 60                    |
| 1SMA4762A | 762A           | 82                    | 3.0  | 200                     | 3000      | 0.25 | 5.0                             | 62.2 | 11                       | 55                    |
| 1SMA4763A | 763A           | 91                    | 2.8  | 250                     | 3000      | 0.25 | 5.0                             | 69.2 | 10                       | 50                    |
| 1SMA4764A | 764A           | 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  $\pm 5\%$ .
- (2) The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on IzT