

## Features

- .  $P_{tot}$  1.0W
- .  $V_Z$  3.0V- 300V
- . The marking bar indicates the cathode

SMA



**Marking:** 7XXA

XX : 27 To 64

## Limiting values(Absolute Maximum Rating)

| Item                                             | Symbol         | Unit               | Conditions               | Max         |
|--------------------------------------------------|----------------|--------------------|--------------------------|-------------|
| Power dissipation                                | $P_d$          | W                  | $T_L=75^{\circ}\text{C}$ | 1.0         |
| Zener current                                    | $I_Z$          | mA                 |                          | $P_V / V_Z$ |
| Operation Junction and Storage Temperature Range | $T_J, T_{stg}$ | $^{\circ}\text{C}$ |                          | -55 ~ +150  |

## Electrical Characteristics ( $T_a=25^{\circ}\text{C}$ Unless otherwise specified)

| Item               | Symbol          | Unit                 | Conditions                  | Max |
|--------------------|-----------------|----------------------|-----------------------------|-----|
| Thermal resistance | $R_{\theta JA}$ | $^{\circ}\text{C/W}$ | Between junction to ambient | 75  |
|                    | $R_{\theta JL}$ | $^{\circ}\text{C/W}$ | Between junction to lead    | 30  |
| Forward voltage    | $V_F$           | V                    | $I_F=200\text{mA}$          | 1.2 |

### Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

| Number    | Code | Zener Voltage                    |                 | Zener Impedance                   |                                   |                 | Reverse Leakage Current         |      | DC Zener Current | 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>     |
|           |      | (V)                              | (mA)            | (Ω)                               | (Ω)                               | (mA)            | (μA)                            | (V)  | (mA)             | (mA <sub>pk</sub> ) |
| 1SMA4727A | 727A | 3.0                              | 83.0            | 10.0                              | 400                               | 1.00            | 150.0                           | 1.0  | 274.0            | 1370                |
| 1SMA4728A | 728A | 3.3                              | 76.0            | 10.0                              | 400                               | 1.00            | 100.0                           | 1.0  | 274.0            | 1370                |
| 1SMA4729A | 729A | 3.6                              | 69.0            | 10.0                              | 400                               | 1.00            | 100.0                           | 1.0  | 251.0            | 1255                |
| 1SMA4730A | 730A | 3.9                              | 64.0            | 9.0                               | 400                               | 1.00            | 50.0                            | 1.0  | 232.0            | 1160                |
| 1SMA4731A | 731A | 4.3                              | 58.0            | 9.0                               | 400                               | 1.00            | 20.0                            | 1.0  | 210.0            | 1050                |
| 1SMA4732A | 732A | 4.7                              | 53.0            | 8.0                               | 500                               | 1.00            | 10.0                            | 1.0  | 192.0            | 960                 |
| 1SMA4733A | 733A | 5.1                              | 49.0            | 7.0                               | 550                               | 1.00            | 10.0                            | 1.0  | 177.0            | 885                 |
| 1SMA4734A | 734A | 5.6                              | 45.0            | 5.0                               | 600                               | 1.00            | 10.0                            | 2.0  | 161.0            | 805                 |
| 1SMA4735A | 735A | 6.2                              | 41.0            | 2.0                               | 700                               | 1.00            | 10.0                            | 3.0  | 146.0            | 730                 |
| 1SMA4736A | 736A | 6.8                              | 37.0            | 3.5                               | 700                               | 1.00            | 5.0                             | 4.0  | 133.0            | 660                 |
| 1SMA4737A | 737A | 7.5                              | 34.0            | 4.0                               | 700                               | 0.50            | 5.0                             | 5.0  | 121.0            | 605                 |
| 1SMA4738A | 738A | 8.2                              | 31.0            | 4.5                               | 700                               | 0.50            | 5.0                             | 6.0  | 110.0            | 550                 |
| 1SMA4739A | 739A | 9.1                              | 28.0            | 5.0                               | 700                               | 0.50            | 0.5                             | 7.0  | 100.0            | 500                 |
| 1SMA4740A | 740A | 10.0                             | 25.0            | 7.0                               | 700                               | 0.25            | 0.5                             | 7.6  | 91.0             | 454                 |
| 1SMA4741A | 741A | 11.0                             | 23.0            | 8.0                               | 700                               | 0.25            | 0.1                             | 8.4  | 83.0             | 414                 |
| 1SMA4742A | 742A | 12.0                             | 21.0            | 9.0                               | 700                               | 0.25            | 0.1                             | 9.1  | 76.0             | 380                 |
| 1SMA4743A | 743A | 13.0                             | 19.0            | 10.0                              | 700                               | 0.25            | 0.1                             | 9.9  | 69.0             | 344                 |
| 1SMA4744A | 744A | 15.0                             | 17.0            | 14.0                              | 700                               | 0.25            | 0.1                             | 11.4 | 61.0             | 305                 |
| 1SMA4745A | 745A | 16.0                             | 15.5            | 16.0                              | 700                               | 0.25            | 0.1                             | 12.2 | 57.0             | 285                 |
| 1SMA4746A | 746A | 18.0                             | 14.0            | 20.0                              | 750                               | 0.25            | 0.1                             | 13.7 | 50.0             | 250                 |
| 1SMA4747A | 747A | 20.0                             | 12.5            | 22.0                              | 750                               | 0.25            | 0.1                             | 15.2 | 45.0             | 225                 |
| 1SMA4748A | 748A | 22.0                             | 11.5            | 23.0                              | 750                               | 0.25            | 0.1                             | 16.7 | 41.0             | 205                 |
| 1SMA4749A | 749A | 24.0                             | 10.5            | 25.0                              | 750                               | 0.25            | 0.1                             | 18.2 | 38.0             | 190                 |
| 1SMA4750A | 750A | 27.0                             | 9.5             | 35.0                              | 750                               | 0.25            | 0.1                             | 20.6 | 34.0             | 170                 |
| 1SMA4751A | 751A | 30.0                             | 8.5             | 40.0                              | 1000                              | 0.25            | 0.1                             | 22.8 | 30.0             | 150                 |
| 1SMA4752A | 752A | 33.0                             | 7.5             | 45.0                              | 1000                              | 0.25            | 0.1                             | 25.1 | 27.0             | 135                 |
| 1SMA4753A | 753A | 36.0                             | 7.0             | 50.0                              | 1000                              | 0.25            | 0.1                             | 27.4 | 25.0             | 125                 |
| 1SMA4754A | 754A | 39.0                             | 6.5             | 60.0                              | 1000                              | 0.25            | 0.1                             | 29.7 | 23.0             | 115                 |
| 1SMA4755A | 755A | 43.0                             | 6.0             | 70.0                              | 1500                              | 0.25            | 0.1                             | 32.7 | 22.0             | 110                 |
| 1SMA4756A | 756A | 47.0                             | 5.5             | 80.0                              | 1500                              | 0.25            | 0.1                             | 35.8 | 19.0             | 95                  |
| 1SMA4757A | 757A | 51.0                             | 5.0             | 95.0                              | 1500                              | 0.25            | 0.1                             | 38.8 | 18.0             | 90                  |
| 1SMA4758A | 758A | 56.0                             | 4.5             | 110.0                             | 2000                              | 0.25            | 0.1                             | 42.6 | 16.0             | 80                  |
| 1SMA4759A | 759A | 62.0                             | 4.0             | 125.0                             | 2000                              | 0.25            | 0.1                             | 47.1 | 14.0             | 70                  |
| 1SMA4760A | 760A | 68.0                             | 3.7             | 150.0                             | 2000                              | 0.25            | 0.1                             | 51.7 | 13.0             | 65                  |
| 1SMA4761A | 761A | 75.0                             | 3.3             | 175.0                             | 2000                              | 0.25            | 0.1                             | 56.0 | 12.0             | 60                  |
| 1SMA4762A | 762A | 82.0                             | 3.0             | 200.0                             | 3000                              | 0.25            | 0.1                             | 62.2 | 11.0             | 55                  |
| 1SMA4763A | 763A | 91.0                             | 2.8             | 250.0                             | 3000                              | 0.25            | 0.1                             | 69.2 | 10.0             | 50                  |
| 1SMA4764A | 764A | 100.0                            | 2.5             | 350.0                             | 3000                              | 0.25            | 0.1                             | 76.0 | 9.0              | 45                  |

## Typical Characteristics

FIG1: Maximum Continuous Power Dissipation

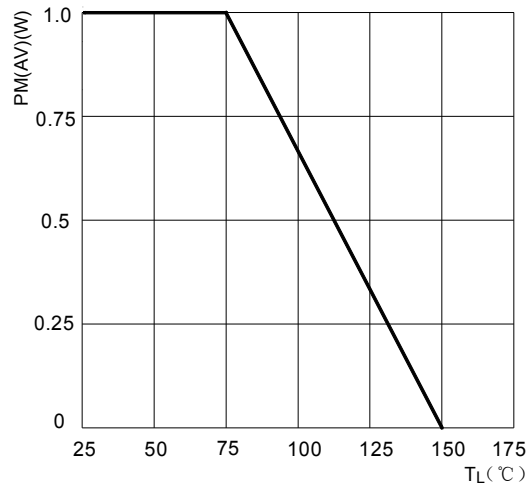


FIG2: Typical Zener Impedance

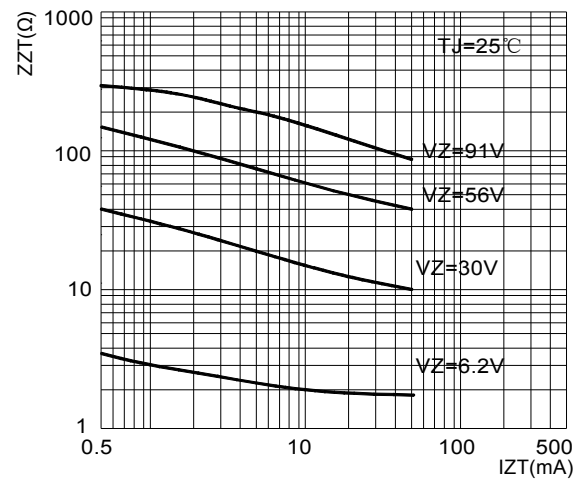


FIG3: Typical Temperature Coefficients

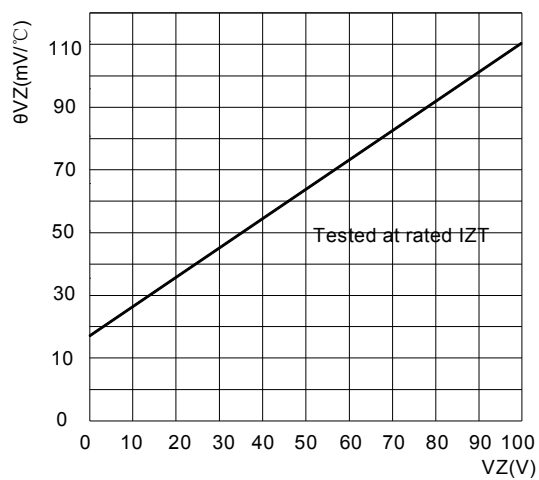


FIG4: Typical Instantaneous Forward Characteristics for SMA4763A

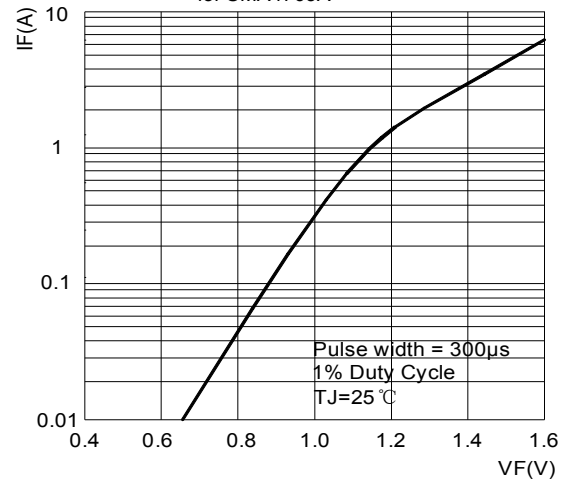
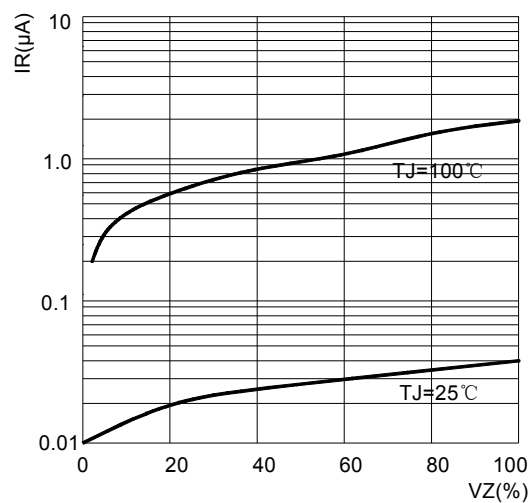
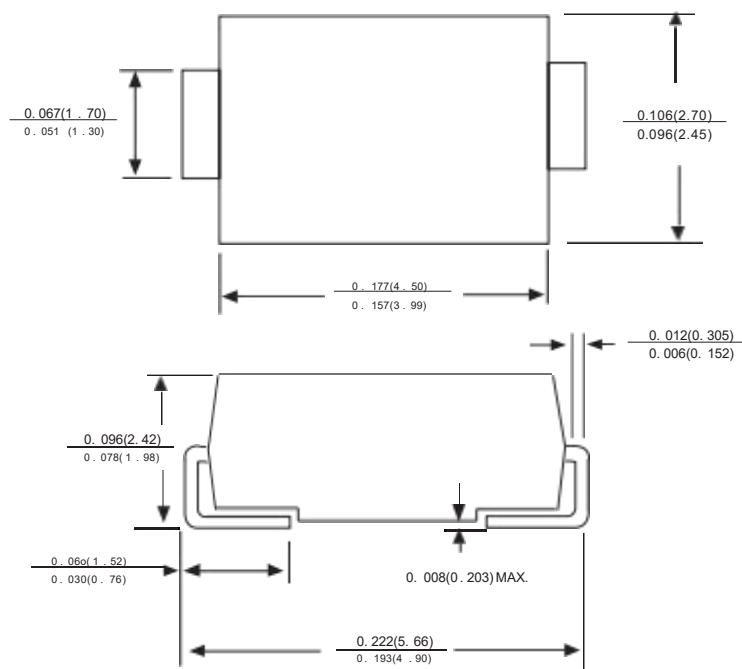


FIG5: Typical Reverse Characteristics

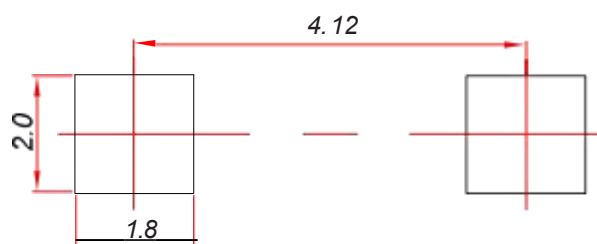


## SMA package outline Dimensions



Dimensions in inches and (millimeters)

## SMA Suggested pad Layout



### Note:

1. controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$  mm.
3. The pad layout is for reference purposes only.