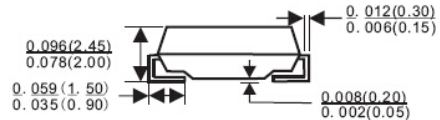
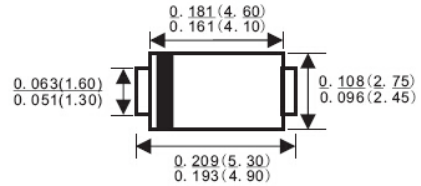




### FEATURE

- ◆ For surface mounted applications in order to optimize board space
- ◆ Low profile package
- ◆ Built-in strain relief
- ◆ Glass passivated junction
- ◆ Low inductance
- ◆ Typical  $I_R$  less than  $5.0 \mu A$  above 11V
- ◆ High temperature soldering guaranteed:  
260°C / 10 seconds at terminals
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0

### SMA/DO-214AC



Dimensions in inches and(millimeters)

### MECHANICAL DATA

**Case:** Molded plastic over passivated junction

**Terminals:** Plated leads, solderable per MIL-STD 750, method 2025

**Polarity:** Color band denotes cathode end

**Standard packaging:** 12mm tape (EIA-481)

**Weight:** 0.002 ounce,0.07 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

| MDD Catalog Number                                                                                                | SYMBOLS        | VALUE        | UNITS                   |
|-------------------------------------------------------------------------------------------------------------------|----------------|--------------|-------------------------|
| Peak Power Dissipation at $T_A=50^\circ C$ ,<br>Derate above $50^\circ C$ (Note 1)                                | $P_D$          | 1.0<br>6.67  | Watts<br>mW/ $^\circ C$ |
| Peak Forward Surge Current, 8.3 ms Single Half<br>Sine-wave Superimposed on Rated Load<br>(JEDEC method) (Note 2) | $I_{FSM}$      | 10.0         | Amps                    |
| Operating and Storage Temperature Range                                                                           | $T_J, T_{STG}$ | -55 to + 150 | $^\circ C$              |

- Notes: 1. Mounted on  $5.0mm^2$  (0.013mm thick) land areas.  
2. Measured on 8.3ms Single Half Sine-wave or Equivalent Square Wave,  
Duty Cycle=4 Pulses Per Minute Maximum.

**ELECTRICAL CHARACTERISTICS (TA=25°C unless otherwise noted) VF=1.2V max, IF=200mA for all types.**

| Part Number                        | Marking | V <sub>Z</sub> @ I <sub>ZT</sub> |        |        | Maximum Zener Impedance           |      |                                   |      | Maximum Leakage Current         |       | Package |
|------------------------------------|---------|----------------------------------|--------|--------|-----------------------------------|------|-----------------------------------|------|---------------------------------|-------|---------|
|                                    |         |                                  |        |        | Z <sub>ZT</sub> @ I <sub>ZT</sub> |      | Z <sub>ZK</sub> @ I <sub>ZK</sub> |      | I <sub>R</sub> @ V <sub>R</sub> |       |         |
|                                    |         | Nom. V                           | Min. V | Max. V | Ω                                 | mA   | Ω                                 | mA   | μA                              | V     |         |
| 1.0 Watt ZENER Diodes -- continued |         |                                  |        |        |                                   |      |                                   |      |                                 |       |         |
| 1SMA4728A                          | 728A    | 3.3                              | 3.1    | 3.5    | 10.0                              | 76.0 | 400                               | 1.00 | 100                             | 1.0   | SMA     |
| 1SMA4729A                          | 729A    | 3.6                              | 3.4    | 3.8    | 10.0                              | 69.0 | 400                               | 1.00 | 100                             | 1.0   | SMA     |
| 1SMA4730A                          | 730A    | 3.9                              | 3.7    | 4.1    | 9.0                               | 64.0 | 400                               | 1.00 | 50                              | 1.0   | SMA     |
| 1SMA4731A                          | 731A    | 4.3                              | 4.1    | 4.5    | 9.0                               | 58.0 | 400                               | 1.00 | 10                              | 1.0   | SMA     |
| 1SMA4732A                          | 732A    | 4.7                              | 4.5    | 4.9    | 8.0                               | 53.0 | 500                               | 1.00 | 10                              | 1.0   | SMA     |
| 1SMA4733A                          | 733A    | 5.1                              | 4.8    | 5.4    | 7.0                               | 49.0 | 550                               | 1.00 | 10                              | 1.0   | SMA     |
| 1SMA4734A                          | 734A    | 5.6                              | 5.3    | 5.9    | 5.0                               | 45.0 | 600                               | 1.00 | 10                              | 2.0   | SMA     |
| 1SMA4735A                          | 735A    | 6.2                              | 5.9    | 6.5    | 2.0                               | 41.0 | 700                               | 1.00 | 10                              | 3.0   | SMA     |
| 1SMA4736A                          | 736A    | 6.8                              | 6.5    | 7.1    | 3.5                               | 37.0 | 700                               | 1.00 | 10                              | 4.0   | SMA     |
| 1SMA4737A                          | 737A    | 7.5                              | 7.1    | 7.9    | 4.0                               | 34.0 | 700                               | 0.50 | 10                              | 5.0   | SMA     |
| 1SMA4738A                          | 738A    | 8.2                              | 7.8    | 8.6    | 4.5                               | 31.0 | 700                               | 0.50 | 10                              | 6.0   | SMA     |
| 1SAM4739A                          | 739A    | 9.1                              | 8.6    | 9.6    | 5.0                               | 28.0 | 700                               | 0.50 | 10                              | 7.0   | SMA     |
| 1SMA4740A                          | 740A    | 10.0                             | 9.5    | 10.5   | 7.0                               | 25.0 | 700                               | 0.25 | 10                              | 7.6   | SMA     |
| 1SMA4741A                          | 741A    | 11.0                             | 10.5   | 11.6   | 8.0                               | 23.0 | 700                               | 0.25 | 5.0                             | 8.4   | SMA     |
| 1SMA4742A                          | 742A    | 12.0                             | 11.4   | 12.6   | 9.0                               | 21.0 | 700                               | 0.25 | 5.0                             | 9.1   | SMA     |
| 1SMA4743A                          | 743A    | 13.0                             | 12.4   | 13.7   | 10.0                              | 19.0 | 700                               | 0.25 | 5.0                             | 9.9   | SMA     |
| 1SMA4744A                          | 744A    | 15.0                             | 14.3   | 15.8   | 14.0                              | 17.0 | 700                               | 0.25 | 5.0                             | 11.4  | SMA     |
| 1SMA4745A                          | 745A    | 16.0                             | 15.2   | 16.8   | 16.0                              | 15.5 | 700                               | 0.25 | 5.0                             | 12.2  | SMA     |
| 1SMA4746A                          | 746A    | 18.0                             | 17.1   | 18.9   | 20.0                              | 14.0 | 750                               | 0.25 | 5.0                             | 13.7  | SMA     |
| 1SMA4747A                          | 747A    | 20.0                             | 19.0   | 21.0   | 22.0                              | 12.5 | 750                               | 0.25 | 5.0                             | 15.2  | SMA     |
| 1SMA4748A                          | 748A    | 22.0                             | 20.9   | 23.1   | 23.0                              | 11.5 | 750                               | 0.25 | 5.0                             | 16.7  | SMA     |
| 1SMA4749A                          | 749A    | 24.0                             | 22.8   | 25.2   | 25.0                              | 10.5 | 750                               | 0.25 | 5.0                             | 18.2  | SMA     |
| 1SMA4750A                          | 750A    | 27.0                             | 25.7   | 28.4   | 35.0                              | 9.5  | 750                               | 0.25 | 5.0                             | 20.6  | SMA     |
| 1SMA4751A                          | 751A    | 30.0                             | 28.5   | 31.5   | 40.0                              | 8.5  | 1000                              | 0.25 | 5.0                             | 22.8  | SMA     |
| 1SMA4752A                          | 752A    | 33.0                             | 31.4   | 34.7   | 45.0                              | 7.5  | 1000                              | 0.25 | 5.0                             | 25.1  | SMA     |
| 1SMA4753A                          | 753A    | 36.0                             | 34.2   | 37.8   | 50.0                              | 7.0  | 1000                              | 0.25 | 5.0                             | 27.4  | SMA     |
| 1SMA4754A                          | 754A    | 39.0                             | 37.1   | 41     | 60.0                              | 6.5  | 1000                              | 0.25 | 5.0                             | 29.7  | SMA     |
| 1SMA4755A                          | 755A    | 43.0                             | 40.9   | 45.2   | 70.0                              | 6.0  | 1500                              | 0.25 | 5.0                             | 32.7  | SMA     |
| 1SMA4756A                          | 756A    | 47.0                             | 44.7   | 49.4   | 80.0                              | 5.5  | 1500                              | 0.25 | 5.0                             | 35.8  | SMA     |
| 1SMA4757A                          | 757A    | 51.0                             | 48.5   | 53.6   | 95.0                              | 5.0  | 1500                              | 0.25 | 5.0                             | 38.8  | SMA     |
| 1SMA4758A                          | 758A    | 56.0                             | 53.2   | 58.8   | 110                               | 4.5  | 2000                              | 0.25 | 5.0                             | 42.6  | SMA     |
| 1SMA4759A                          | 759A    | 62.0                             | 58.9   | 65.1   | 125                               | 4.0  | 2000                              | 0.25 | 5.0                             | 47.1  | SMA     |
| 1SMA4760A                          | 760A    | 68.0                             | 64.6   | 71.4   | 150                               | 3.7  | 2000                              | 0.25 | 5.0                             | 51.7  | SMA     |
| 1SMA4761A                          | 761A    | 75.0                             | 71.3   | 78.8   | 175                               | 3.3  | 2000                              | 0.25 | 5.0                             | 56.0  | SMA     |
| 1SMA4762A                          | 762A    | 82.0                             | 77.9   | 86.1   | 200                               | 3.0  | 3000                              | 0.25 | 5.0                             | 62.2  | SMA     |
| 1SMA4763A                          | 763A    | 91.0                             | 86.5   | 95.6   | 250                               | 2.8  | 3000                              | 0.25 | 5.0                             | 69.2  | SMA     |
| 1SMA4764A                          | 764A    | 100                              | 95.0   | 105    | 350                               | 2.5  | 3000                              | 0.25 | 5.0                             | 76.0  | SMA     |
| 1SMA110A                           | 110A    | 110                              | 104.5  | 115.5  | 450                               | 2.3  | 4000                              | 0.25 | 5.0                             | 83.6  | SMA     |
| 1SMA120A                           | 120A    | 120                              | 114    | 126    | 550                               | 2.0  | 4500                              | 0.25 | 5.0                             | 91.2  | SMA     |
| 1SMA130A                           | 130A    | 130                              | 123.5  | 136.5  | 700                               | 1.9  | 5000                              | 0.25 | 5.0                             | 98.8  | SMA     |
| 1SMA150A                           | 150A    | 150                              | 142.5  | 157.5  | 1000                              | 1.7  | 6000                              | 0.25 | 5.0                             | 114.0 | SMA     |
| 1SMA160A                           | 160A    | 160                              | 152    | 168    | 1100                              | 1.6  | 6500                              | 0.25 | 5.0                             | 121.6 | SMA     |
| 1SMA180A                           | 180A    | 180                              | 171    | 189    | 1200                              | 1.4  | 7000                              | 0.25 | 5.0                             | 136.8 | SMA     |
| 1SMA200A                           | 200A    | 200                              | 190    | 210    | 1500                              | 1.2  | 8000                              | 0.25 | 5.0                             | 152.0 | SMA     |

**Notes :**

- (1) Suffix " A " indicates ± 5.0% tolerance.
- (2) The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I<sub>ZT</sub> per JEDEC Method

### RATINGS AND CHARACTERISTIC CURVES( 1SMA4728 THRU 1SMA200A)

FIG.1- POWER TEMPERATURE DERATING CURVE

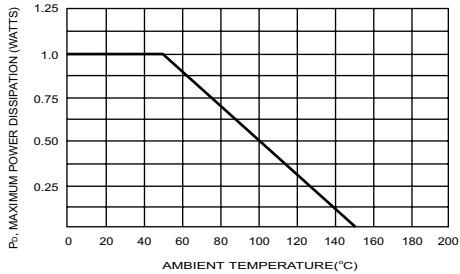


FIG.2- TYPICAL FORWARD CHARACTERISTICS

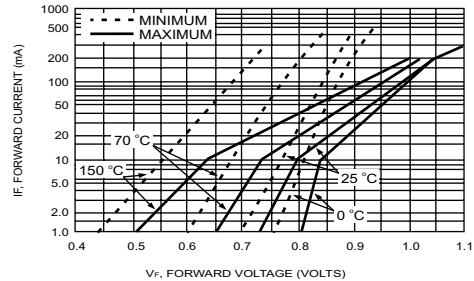


FIG.3- EFFECT OF ZENER CURRENT ON ZENER IMPEDANCE

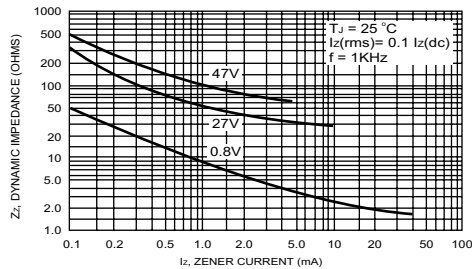


FIG.5- TYPICAL LEAKAGE CURRENT

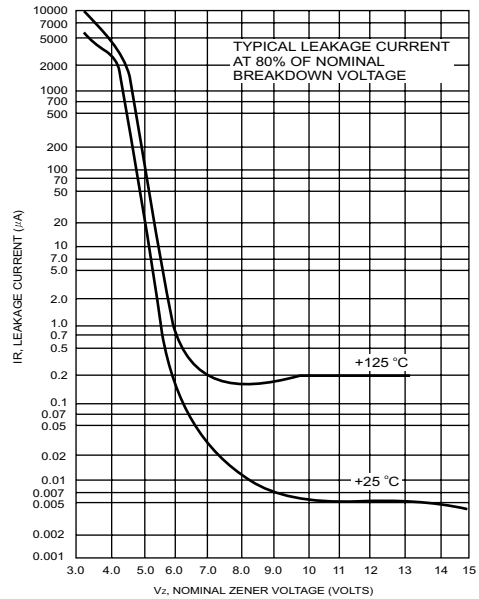


FIG.4- EFFECT OF ZENER VOLTAGE ON ZENER IMPEDANCE

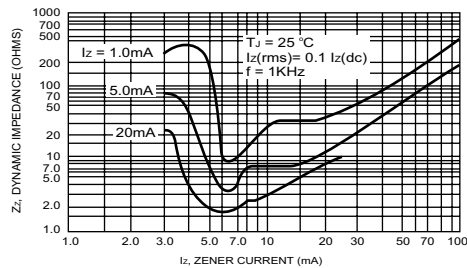


FIG.6- TYPICAL CAPACITANCE versus Vz

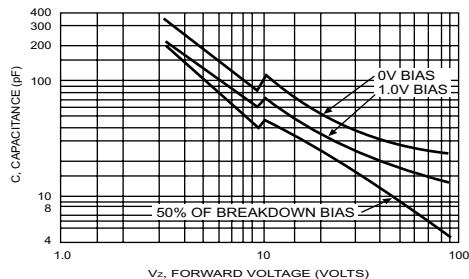
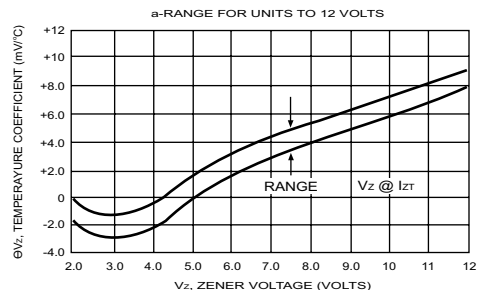


FIG.7- TEMPERATURE COEFFICIENTS



## RATINGS AND CHARACTERISTIC CURVES( 1SMA4728A THRU 1SMA200A)

FIG.7- TEMPERATURE COEFFICIENTS

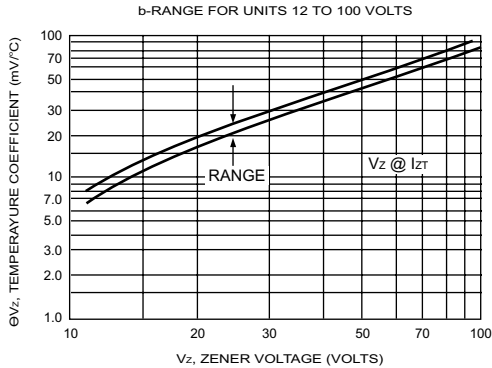


FIG.8- EFFECT OF ZENER CURRENT

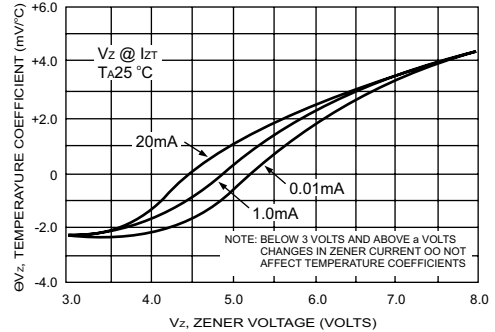
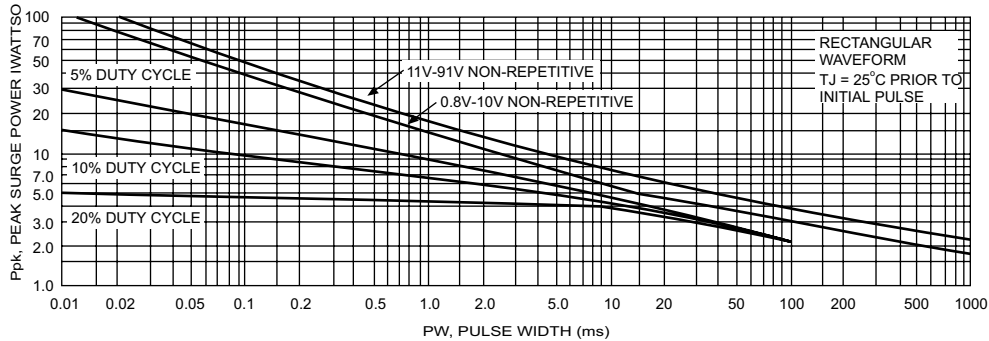


FIG.9- MAXIMUM SURGE POWER



| PACKAGE | SPQ/PCS   | CARTON SPQ/PCS | CARTON SIZE/CM | CARTON GW/KG | CARTON NW/KG |
|---------|-----------|----------------|----------------|--------------|--------------|
| SMA     | 5000/REEL | 80000          | 36X30.6X31     | 12.00        | 11.00        |

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Zener Diodes](#) category:*

*Click to view products by [LGE](#) manufacturer:*

Other Similar products are found below :

[RKZ13B2KG#P1](#) [DL5234B](#) [EDZTE6113B](#) [1N4682](#) [1N4691](#) [1N4693](#) [1N4732A](#) [1N4736A](#) [1N4750A](#) [1N4759ARL](#) [1N5241B](#) [1N5365B](#)  
[1N5369B](#) [1N747A](#) [1N959B](#) [1N964B](#) [1N966B](#) [1N968B](#) [1N972B](#) [NTE5121A](#) [NTE5147A](#) [NTE5152A](#) [NTE5155A](#) [NTE5164A](#)  
[JANS1N4974US](#) [JANTX1N5907](#) [1N4692](#) [1N4700](#) [1N4702](#) [1N4704](#) [1N4711](#) [1N4714](#) [1N4737A](#) [1N4745ARL](#) [1N4752A](#) [1N4752ARL](#)  
[1N4760ARL](#) [1N5221B](#) [1N5231B-TR](#) [1N5236B](#) [1N5241BTR](#) [1N5242BTR](#) [1N5350B](#) [1N5352B](#) [1N961BRR1](#) [1N964BRL](#) [RKZ5.1BKU#P6](#)  
[3SMAJ5946B-TP](#) [3SMAJ5950B-TP](#) [3SMBJ5925B-TP](#)