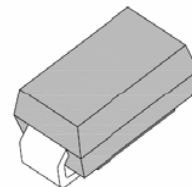


## 1W Surface Mount Zener Diodes

### Features

- For surface mounted applications in order to optimize board space
- Low profile package
- Built-in strain relief
- Glass passivated junction
- Low inductance
- High temperature soldering guaranteed: 260°C/10 seconds at terminals
- RoHS Compliant



**SMA**



### Mechanical Data

|                   |                                                              |
|-------------------|--------------------------------------------------------------|
| <b>Case:</b>      | JEDEC SMA (DO-214AC) molded plastic over passivated junction |
| <b>Epoxy:</b>     | Plastic package has UL flammability classification 94V-0     |
| <b>Terminals:</b> | Solder plated, solderable per MIL-STD-750, Method 2026       |
| <b>Polarity:</b>  | Color band denotes cathode end                               |
| <b>Weight:</b>    | 0.064 gram                                                   |

### Maximum Ratings ( $T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

| Symbol                                | Description                                              | Value       | Unit                   | Conditions                                                            |
|---------------------------------------|----------------------------------------------------------|-------------|------------------------|-----------------------------------------------------------------------|
| <b>P<sub>D</sub></b>                  | Peak Pulse Power Dissipation at $T_a=50^{\circ}\text{C}$ | 1.0         | W                      | Note 1                                                                |
|                                       | Derate above $50^{\circ}\text{C}$                        | 6.67        | mW/ $^{\circ}\text{C}$ |                                                                       |
| <b>I<sub>FSM</sub></b>                | Peak Forward Surge Current                               | 10          | A                      | 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) |
| <b>T<sub>J</sub>, T<sub>STG</sub></b> | Operating Junction and Storage Temperature Range         | -55 to +150 | $^{\circ}\text{C}$     |                                                                       |

**Note:** 1. Mounted on  $5.0\text{mm}^2$  (.013mm thick) land areas.

# 1W Surface Mount Zener Diodes

## Z1SMA4728A - Z1SMA200A

2. Measured on 8.3ms, and single half sine-wave or equivalent square wave, duty cycle=4 pulses per minute maximum.

3. Tolerance and Type Number Designation. The type numbers listed have a standard tolerance on the nominal zener voltage of  $\pm 5\%$ .

### Electrical Characteristics ( $T_{Ambient}=25^{\circ}C$ unless noted otherwise)

| P/N        | Marking Code | Normal Zener Voltage             |          |          |                      | Max. Zener impedance              |                                   |      | Max. reverse leakage current    |                    |
|------------|--------------|----------------------------------|----------|----------|----------------------|-----------------------------------|-----------------------------------|------|---------------------------------|--------------------|
|            |              | V <sub>Z</sub> @ I <sub>ZT</sub> |          |          |                      | Z <sub>ZT</sub> @ I <sub>ZT</sub> | Z <sub>Zk</sub> @ I <sub>Zk</sub> |      | I <sub>D</sub> @ V <sub>R</sub> |                    |
|            |              | Nom.(V)                          | Min. (V) | Max. (V) | I <sub>ZT</sub> (mA) | $\Omega$                          | $\Omega$                          | mA   | $\mu A$                         | V <sub>R</sub> (V) |
| Z1SMA4728A | 728B         | 3.3                              | 3.14     | 3.47     | 76                   | 10                                | 400                               | 1.00 | 100                             | 1                  |
| Z1SMA4729A | 729B         | 3.6                              | 3.42     | 3.78     | 69                   | 10                                | 400                               | 1.00 | 100                             | 1                  |
| Z1SMA4730A | 730B         | 3.9                              | 3.71     | 4.10     | 64                   | 9                                 | 400                               | 1.00 | 50                              | 1                  |
| Z1SMA4731A | 731B         | 4.3                              | 4.09     | 4.52     | 58                   | 9                                 | 400                               | 1.00 | 10                              | 1                  |
| Z1SMA4732A | 732B         | 4.7                              | 4.47     | 4.94     | 53                   | 8                                 | 500                               | 1.00 | 10                              | 1                  |
| Z1SMA4733A | 733B         | 5.1                              | 4.85     | 5.36     | 49                   | 7                                 | 550                               | 1.00 | 10                              | 1                  |
| Z1SMA4734A | 734B         | 5.6                              | 5.32     | 5.88     | 45                   | 5                                 | 600                               | 1.00 | 10                              | 2                  |
| Z1SMA4735A | 735B         | 6.2                              | 5.89     | 6.51     | 41                   | 2                                 | 700                               | 1.00 | 10                              | 3                  |
| Z1SMA4736A | 736B         | 6.8                              | 6.46     | 7.14     | 37                   | 3.5                               | 700                               | 0.50 | 5                               | 4                  |
| Z1SMA4737A | 737B         | 7.5                              | 7.13     | 7.88     | 34                   | 4                                 | 700                               | 0.50 | 5                               | 5                  |
| Z1SMA4738A | 738B         | 8.2                              | 7.79     | 8.61     | 31                   | 4.5                               | 700                               | 0.50 | 0.5                             | 6                  |
| Z1SMA4739A | 739B         | 9.1                              | 8.65     | 9.56     | 28                   | 5                                 | 700                               | 0.25 | 0.5                             | 7                  |
| Z1SMA4740A | 740B         | 10                               | 9.50     | 10.50    | 25                   | 7                                 | 700                               | 0.25 | 0.1                             | 7.6                |
| Z1SMA4741A | 741B         | 11                               | 10.45    | 11.55    | 23                   | 8                                 | 700                               | 0.25 | 0.1                             | 8.4                |
| Z1SMA4742A | 742B         | 12                               | 11.40    | 12.60    | 21                   | 9                                 | 700                               | 0.25 | 0.1                             | 9.1                |
| Z1SMA4743A | 743B         | 13                               | 12.35    | 13.65    | 19                   | 10                                | 700                               | 0.25 | 0.1                             | 9.9                |
| Z1SMA4744A | 744B         | 15                               | 14.25    | 15.75    | 17                   | 14                                | 700                               | 0.25 | 0.1                             | 11.40              |
| Z1SMA4745A | 745B         | 16                               | 15.20    | 16.80    | 15.5                 | 16                                | 700                               | 0.25 | 0.1                             | 12.20              |
| Z1SMA4746A | 746B         | 18                               | 17.10    | 18.90    | 14                   | 20                                | 750                               | 0.25 | 0.1                             | 13.70              |
| Z1SMA4747A | 747B         | 20                               | 19.00    | 21.00    | 12.5                 | 22                                | 750                               | 0.25 | 0.1                             | 15.20              |
| Z1SMA4748A | 748B         | 22                               | 20.90    | 23.10    | 11.5                 | 23                                | 750                               | 0.25 | 0.1                             | 16.70              |
| Z1SMA4749A | 749B         | 24                               | 22.80    | 25.20    | 10.5                 | 25                                | 750                               | 0.25 | 0.1                             | 18.20              |
| Z1SMA4750A | 750B         | 27                               | 25.65    | 28.35    | 9.5                  | 35                                | 750                               | 0.25 | 0.1                             | 20.60              |
| Z1SMA4751A | 751B         | 30                               | 28.50    | 31.50    | 8.5                  | 40                                | 1000                              | 0.25 | 0.1                             | 22.80              |
| Z1SMA4752A | 752B         | 33                               | 31.35    | 34.65    | 7.5                  | 45                                | 1000                              | 0.25 | 0.1                             | 25.10              |

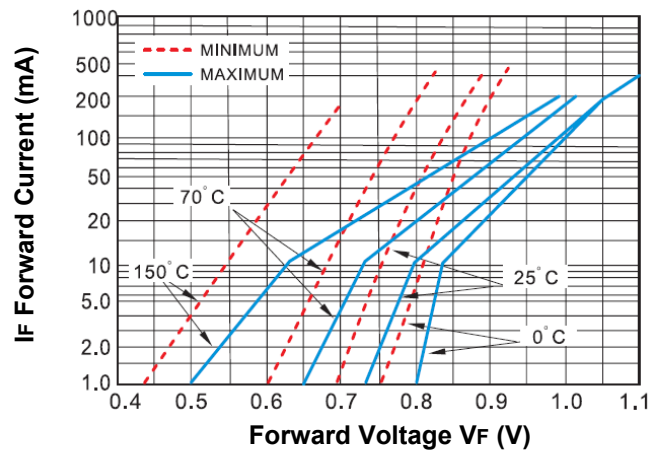
# 1W Surface Mount Zener Diodes

## Z1SMA4728A - Z1SMA200A

| P/N        | Marking Code | Normal Zener Voltage |          |          |          | Max. Zener impedance |           |      | Max. reverse leakage current |        |
|------------|--------------|----------------------|----------|----------|----------|----------------------|-----------|------|------------------------------|--------|
|            |              | VZ @ IZT             |          |          |          | ZZT @ IZT            | Zzk @ Izk |      | ID @ VR                      |        |
|            |              | Nom.(V)              | Min. (V) | Max. (V) | IZT (mA) | Ω                    | Ω         | mA   | μA                           | VR (V) |
| Z1SMA4753A | 753B         | 36                   | 34.20    | 37.80    | 7        | 50                   | 1000      | 0.25 | 0.1                          | 27.40  |
| Z1SMA4754A | 754B         | 39                   | 37.05    | 40.95    | 6.5      | 60                   | 1000      | 0.25 | 0.1                          | 29.70  |
| Z1SMA4755A | 755B         | 43                   | 40.85    | 45.15    | 6        | 70                   | 1500      | 0.25 | 0.1                          | 32.70  |
| Z1SMA4756A | 756B         | 47                   | 44.65    | 49.35    | 5.5      | 80                   | 1500      | 0.25 | 0.1                          | 35.80  |
| Z1SMA4757A | 757B         | 51                   | 48.45    | 53.55    | 5        | 95                   | 1500      | 0.25 | 0.1                          | 38.80  |
| Z1SMA4758A | 758B         | 56                   | 53.20    | 58.80    | 4.5      | 110                  | 2000      | 0.25 | 0.1                          | 42.60  |
| Z1SMA4759A | 759B         | 62                   | 58.90    | 65.10    | 4        | 125                  | 2000      | 0.25 | 0.1                          | 47.10  |
| Z1SMA4760A | 760B         | 68                   | 64.60    | 71.40    | 3.7      | 150                  | 2000      | 0.25 | 0.1                          | 51.70  |
| Z1SMA4761A | 761B         | 75                   | 71.25    | 78.75    | 3.3      | 175                  | 2000      | 0.25 | 0.1                          | 56.00  |
| Z1SMA4762A | 762B         | 82                   | 77.90    | 86.10    | 3        | 200                  | 3000      | 0.25 | 0.1                          | 62.20  |
| Z1SMA4763A | 763B         | 91                   | 86.45    | 95.55    | 2.8      | 250                  | 3000      | 0.25 | 0.1                          | 69.20  |
| Z1SMA4764A | 764B         | 100                  | 95.00    | 105.00   | 2.5      | 350                  | 3000      | 0.25 | 0.1                          | 76.00  |
| Z1SMA110A  | 110Z         | 110                  | 104.50   | 115.50   | 2.3      | 450                  | 4000      | 0.25 | 5.0                          | 83.60  |
| Z1SMA120A  | 120Z         | 120                  | 114.00   | 126.00   | 2        | 550                  | 4500      | 0.25 | 5.0                          | 91.20  |
| Z1SMA130A  | 130Z         | 130                  | 123.50   | 136.50   | 1.9      | 700                  | 5000      | 0.25 | 5.0                          | 98.80  |
| Z1SMA150A  | 150Z         | 150                  | 142.50   | 157.50   | 1.7      | 1000                 | 6000      | 0.25 | 5.0                          | 114.00 |
| Z1SMA160A  | 160Z         | 160                  | 152.00   | 168.00   | 1.6      | 1100                 | 6500      | 0.25 | 5.0                          | 121.60 |
| Z1SMA180A  | 180Z         | 180                  | 171.00   | 189.00   | 1.4      | 1200                 | 7000      | 0.25 | 5.0                          | 136.80 |
| Z1SMA200A  | 200Z         | 200                  | 190.00   | 210.00   | 1.2      | 1500                 | 8000      | 0.25 | 5.0                          | 152.00 |

### Characteristics Curves

Fig.1 Typical Forward Characteristics



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components incorporated

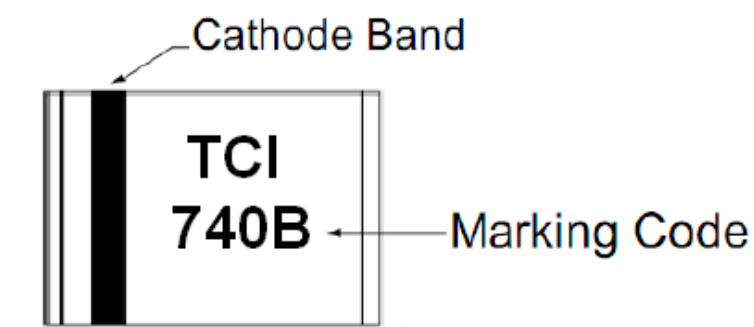
Rev. C/CH

# 1W Surface Mount Zener Diodes

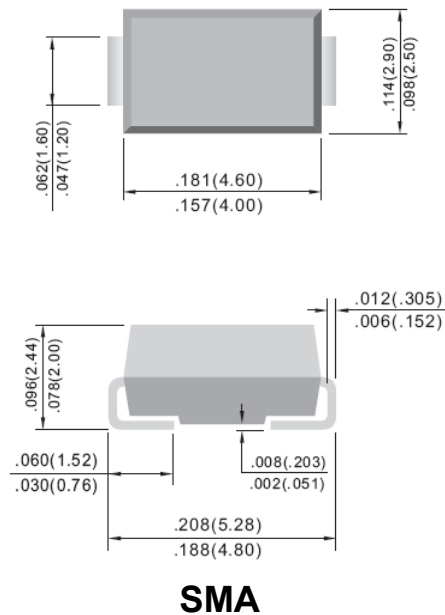
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## Z1SMA4728A - Z1SMA200A

### Marking Information:



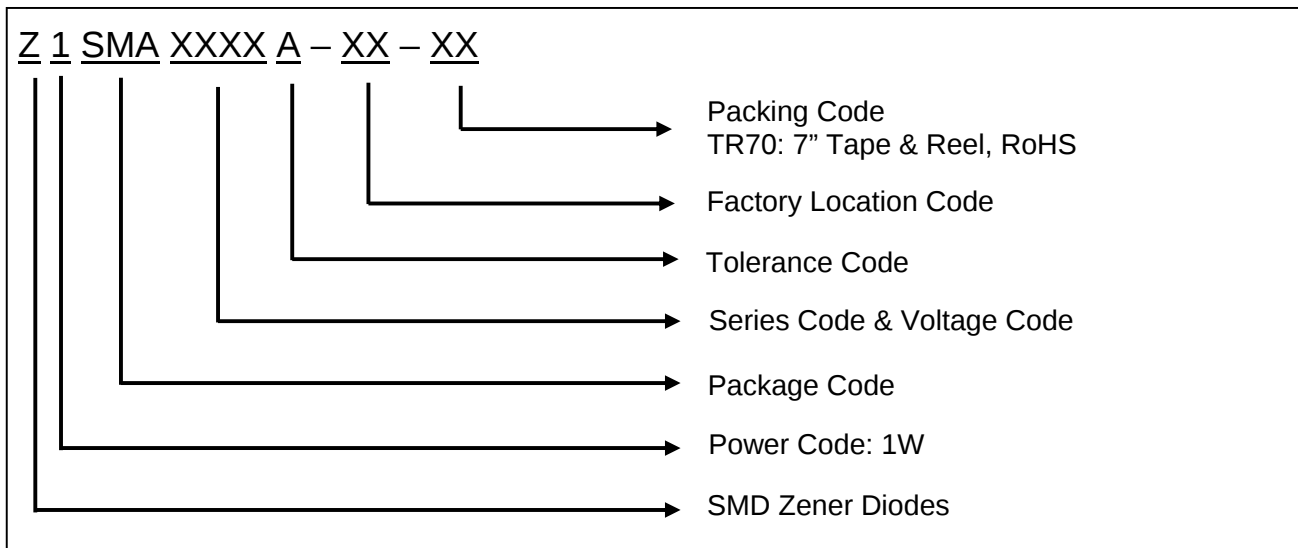
### Dimensions in inches (mm)



# 1W Surface Mount Zener Diodes

## Z1SMA4728A - Z1SMA200A

### Ordering Information



# 1W Surface Mount Zener Diodes

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## Z1SMA4728A - Z1SMA200A

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