

## Features

- $V_Z$  – Tolerance:  $\pm 5\%$
- For Surface Mount Applications
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note1) ("P" Suffix Designates Compliant. See Ordering Information)

## Maximum Ratings

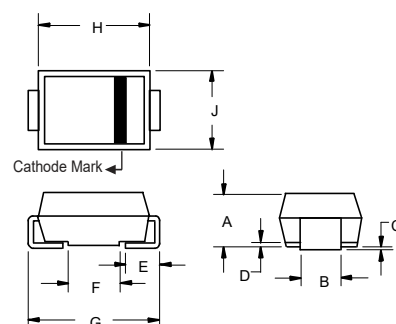
- Operating Junction Temperature Range:  $-65^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Storage Temperature Range:  $-65^{\circ}\text{C}$  to  $+150^{\circ}\text{C}$
- Thermal Resistance :  $100^{\circ}\text{C/W}$  Junction to Ambient
- Thermal Resistance :  $75^{\circ}\text{C/W}$  Junction to Lead

| Parameter               | Symbol | Rating       | Conditions                    |
|-------------------------|--------|--------------|-------------------------------|
| Power Dissipation       | $P_D$  | 1.0W         | $T_A \leq 50^{\circ}\text{C}$ |
| Zener Current           | $I_Z$  | $P_D/V_Z$ mA |                               |
| Maximum Forward Voltage | $V_F$  | 1.2V         | $I_F = 100\text{mA}$          |

Note: 1. High Temperature Solder Exemption Applied, see EU Directive Annex 7a.

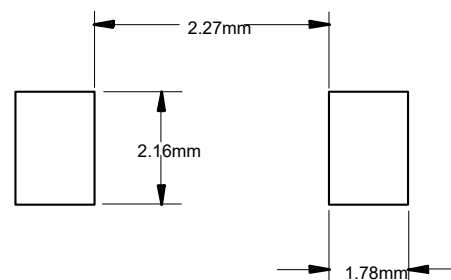
## 1.0 Watt Surface Mount Silicon Zener Diodes 5.1V to 100V

## SMA (DO-214AC) LEAD FRAME



| DIMENSIONS |        |       |       |       |      |
|------------|--------|-------|-------|-------|------|
| DIM        | INCHES |       | MM    |       | NOTE |
|            | MIN    | MAX   | MIN   | MAX   |      |
| A          | 0.079  | 0.096 | 2.00  | 2.44  |      |
| B          | 0.050  | 0.064 | 1.27  | 1.63  |      |
| C          | 0.002  | 0.008 | 0.051 | 0.203 |      |
| D          | ---    | 0.020 | ---   | 0.51  |      |
| E          | 0.030  | 0.060 | 0.76  | 1.52  |      |
| F          | 0.065  | 0.091 | 1.65  | 2.32  |      |
| G          | 0.189  | 0.220 | 4.80  | 5.59  |      |
| H          | 0.157  | 0.181 | 4.00  | 4.60  |      |
| J          | 0.090  | 0.115 | 2.25  | 2.92  |      |

## SUGGESTED SOLDER PAD LAYOUT



## Electrical Characteristics @ 25°C Unless Otherwise Specified

| MCC<br>Part Number | Zener<br>Voltage | Test<br>Current | Maximum<br>Dynamic<br>Impedance | Knee Current | Knee<br>Impedance | Maximum<br>Reverse<br>Current | Reverse<br>Voltage | Marking<br>Code |
|--------------------|------------------|-----------------|---------------------------------|--------------|-------------------|-------------------------------|--------------------|-----------------|
|                    | $V_Z$            | $I_{ZT}$        | $Z_{ZT} @ I_{ZT}$               | $I_{ZK}$     | $Z_{ZK}$          | $I_R$                         | $V_R$              |                 |
|                    | V                | mA              | $\Omega$                        | mA           | $\Omega$          | $\mu A$                       | V                  |                 |
| SMAJ4733A          | 5.1              | 49              | 7                               | 1            | 550               | 10                            | 1                  | 733A            |
| SMAJ4734A          | 5.6              | 45              | 5                               | 1            | 600               | 10                            | 2                  | 734A            |
| SMAJ4735A          | 6.2              | 41              | 2                               | 1            | 700               | 10                            | 3                  | 735A            |
| SMAJ4736A          | 6.8              | 37              | 3.5                             | 1            | 700               | 10                            | 4                  | 736A            |
| SMAJ4737A          | 7.5              | 34              | 4                               | 0.5          | 700               | 10                            | 5                  | 737A            |
| SMAJ4738A          | 8.2              | 31              | 4.5                             | 0.5          | 700               | 10                            | 6                  | 738A            |
| SMAJ4739A          | 9.1              | 28              | 5                               | 0.5          | 700               | 10                            | 7                  | 739A            |
| SMAJ4740A          | 10               | 25              | 7                               | 0.25         | 700               | 10                            | 7.6                | 740A            |
| SMAJ4741A          | 11               | 23              | 8                               | 0.25         | 700               | 5                             | 8.4                | 741A            |
| SMAJ4742A          | 12               | 21              | 9                               | 0.25         | 700               | 5                             | 9.1                | 742A            |
| SMAJ4743A          | 13               | 19              | 10                              | 0.25         | 700               | 5                             | 9.9                | 743A            |
| SMAJ4744A          | 15               | 17              | 14                              | 0.25         | 700               | 5                             | 11.4               | 744A            |
| SMAJ4745A          | 16               | 15.5            | 16                              | 0.25         | 700               | 5                             | 12.2               | 745A            |
| SMAJ4746A          | 18               | 14              | 20                              | 0.25         | 750               | 5                             | 13.7               | 746A            |
| SMAJ4747A          | 20               | 12.5            | 22                              | 0.25         | 750               | 5                             | 15.2               | 747A            |
| SMAJ4748A          | 22               | 11.5            | 23                              | 0.25         | 750               | 5                             | 16.7               | 748A            |
| SMAJ4749A          | 24               | 10.5            | 25                              | 0.25         | 750               | 5                             | 18.2               | 749A            |
| SMAJ4750A          | 27               | 9.5             | 35                              | 0.25         | 750               | 5                             | 20.6               | 750A            |
| SMAJ4751A          | 30               | 8.5             | 40                              | 0.25         | 1000              | 5                             | 22.8               | 751A            |
| SMAJ4752A          | 33               | 7.5             | 45                              | 0.25         | 1000              | 5                             | 25.1               | 752A            |
| SMAJ4753A          | 36               | 7               | 50                              | 0.25         | 1000              | 5                             | 27.4               | 753A            |
| SMAJ4754A          | 39               | 6.5             | 60                              | 0.25         | 1000              | 5                             | 29.7               | 754A            |
| SMAJ4755A          | 43               | 6               | 70                              | 0.25         | 1500              | 5                             | 32.7               | 755A            |
| SMAJ4756A          | 47               | 5.5             | 80                              | 0.25         | 1500              | 5                             | 35.8               | 756A            |
| SMAJ4757A          | 51               | 5               | 95                              | 0.25         | 1500              | 5                             | 38.8               | 757A            |
| SMAJ4758A          | 56               | 4.5             | 110                             | 0.25         | 2000              | 5                             | 42.6               | 758A            |
| SMAJ4759A          | 62               | 4               | 125                             | 0.25         | 2000              | 5                             | 47.1               | 759A            |
| SMAJ4760A          | 68               | 3.7             | 150                             | 0.25         | 2000              | 5                             | 51.7               | 760A            |
| SMAJ4761A          | 75               | 3.3             | 175                             | 0.25         | 2000              | 5                             | 56                 | 761A            |
| SMAJ4762A          | 82               | 3               | 200                             | 0.25         | 3000              | 5                             | 62.2               | 762A            |
| SMAJ4763A          | 91               | 2.8             | 250                             | 0.25         | 3000              | 5                             | 69.2               | 763A            |
| SMAJ4764A          | 100              | 2.5             | 350                             | 0.25         | 3000              | 5                             | 76                 | 764A            |

## Curve Characteristics

Fig. 1 - Power Derating Curve

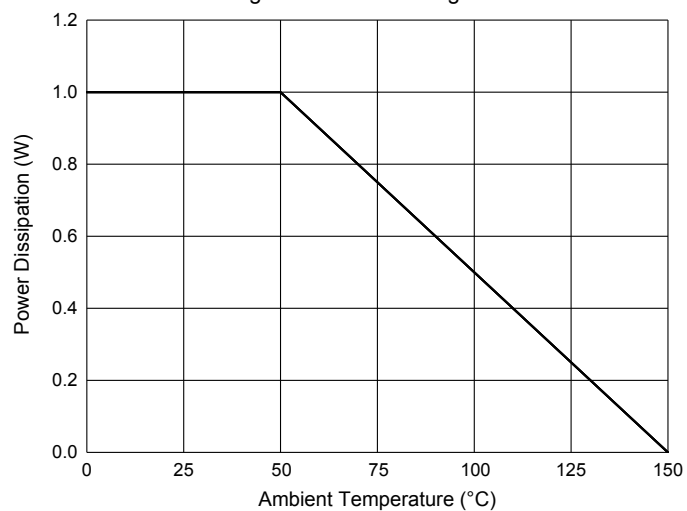
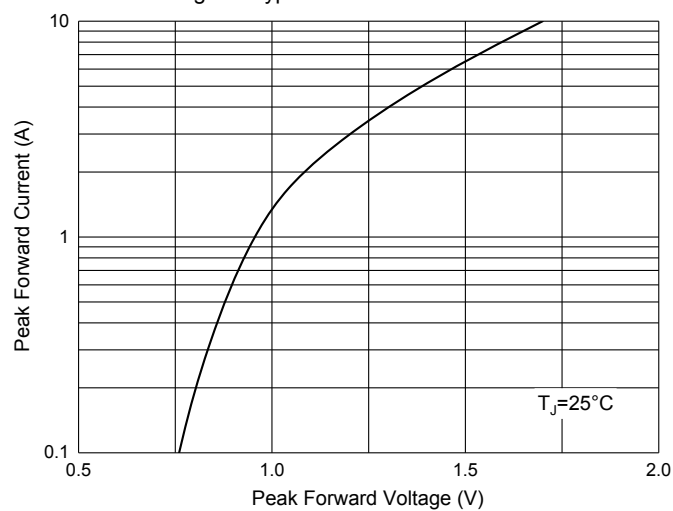


Fig. 2 - Typical Forward Characteristics



## Ordering Information

| Device         | Packing                |
|----------------|------------------------|
| Part Number-TP | Tape&Reel:7.5Kpcs/Reel |

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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