

# MM3Z2V0~MM3Z75

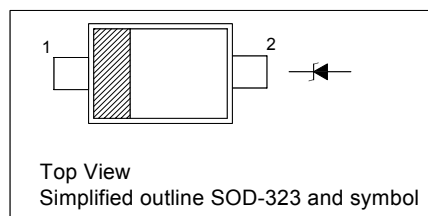
## Silicon Planar Zener Diodes

### Features

- Total power dissipation : max. 300 mW
- Small plastic package suitable for surface mounted design
- Tolerance approximately  $\pm 5\%$

### PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |



### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

| Parameter                 | Symbol           | Value         | Unit             |
|---------------------------|------------------|---------------|------------------|
| Power Dissipation         | $P_{\text{tot}}$ | 300           | mW               |
| Junction Temperature      | $T_j$            | 150           | $^\circ\text{C}$ |
| Storage Temperature Range | $T_{\text{stg}}$ | - 55 to + 150 | $^\circ\text{C}$ |

### Characteristics at $T_a = 25^\circ\text{C}$

| Parameter                                  | Symbol                | Max. | Unit               |
|--------------------------------------------|-----------------------|------|--------------------|
| Thermal Resistance Junction to Ambient Air | $R_{\theta\text{JA}}$ | 417  | $^\circ\text{C/W}$ |
| Forward Voltage<br>at $I_F = 10\text{ mA}$ | $V_F$                 | 0.9  | V                  |



CHANGZHOU GUANGDA ELECTRONIC CO. LTD

Dated : 12/06/2009

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## Characteristics at $T_a = 25\text{ }^{\circ}\text{C}$

| Type    | Marking Code | Zener Voltage Range <sup>1)</sup> |                |                   | Dynamic Impedance           |                   | Reverse Leakage Current       |               |
|---------|--------------|-----------------------------------|----------------|-------------------|-----------------------------|-------------------|-------------------------------|---------------|
|         |              | $V_{znom}$<br>V                   | $I_{ZT}$<br>mA | for $V_{ZT}$<br>V | $Z_{ZT}$ (Max.)<br>$\Omega$ | at $I_{ZT}$<br>mA | $I_R$ (Max.)<br>$\mu\text{A}$ | at $V_R$<br>V |
| MM3Z2V0 | B0           | 2.0                               | 5              | 1.8...2.15        | 100                         | 5                 | 120                           | 0.5           |
| MM3Z2V2 | C0           | 2.2                               | 5              | 2.08...2.33       | 100                         | 5                 | 120                           | 0.7           |
| MM3Z2V4 | 1C           | 2.4                               | 5              | 2.28...2.56       | 100                         | 5                 | 120                           | 1             |
| MM3Z2V7 | 1D           | 2.7                               | 5              | 2.5...2.9         | 110                         | 5                 | 120                           | 1             |
| MM3Z3V0 | 1E           | 3.0                               | 5              | 2.8...3.2         | 120                         | 5                 | 50                            | 1             |
| MM3Z3V3 | 1F           | 3.3                               | 5              | 3.1...3.5         | 130                         | 5                 | 20                            | 1             |
| MM3Z3V6 | 1H           | 3.6                               | 5              | 3.4...3.8         | 130                         | 5                 | 10                            | 1             |
| MM3Z3V9 | 1J           | 3.9                               | 5              | 3.7...4.1         | 130                         | 5                 | 5                             | 1             |
| MM3Z4V3 | 1K           | 4.3                               | 5              | 4...4.6           | 130                         | 5                 | 5                             | 1             |
| MM3Z4V7 | 1M           | 4.7                               | 5              | 4.4...5           | 130                         | 5                 | 2                             | 1             |
| MM3Z5V1 | 1N           | 5.1                               | 5              | 4.8...5.4         | 130                         | 5                 | 2                             | 1.5           |
| MM3Z5V6 | 1P           | 5.6                               | 5              | 5.2...6           | 80                          | 5                 | 1                             | 2.5           |
| MM3Z6V2 | 1R           | 6.2                               | 5              | 5.8...6.6         | 50                          | 5                 | 1                             | 3             |
| MM3Z6V8 | 1X           | 6.8                               | 5              | 6.4...7.2         | 30                          | 5                 | 0.5                           | 3.5           |
| MM3Z7V5 | 1Y           | 7.5                               | 5              | 7...7.9           | 30                          | 5                 | 0.5                           | 4             |
| MM3Z8V2 | 1Z           | 8.2                               | 5              | 7.7...8.7         | 30                          | 5                 | 0.5                           | 5             |
| MM3Z9V1 | 2A           | 9.1                               | 5              | 8.5...9.6         | 30                          | 5                 | 0.5                           | 6             |
| MM3Z10  | 2B           | 10                                | 5              | 9.4...10.6        | 30                          | 5                 | 0.1                           | 7             |
| MM3Z11  | 2C           | 11                                | 5              | 10.4...11.6       | 30                          | 5                 | 0.1                           | 8             |
| MM3Z12  | 2D           | 12                                | 5              | 11.4...12.7       | 35                          | 5                 | 0.1                           | 9             |
| MM3Z13  | 2E           | 13                                | 5              | 12.4...14.1       | 35                          | 5                 | 0.1                           | 10            |
| MM3Z15  | 2F           | 15                                | 5              | 13.8...15.6       | 40                          | 5                 | 0.1                           | 11            |
| MM3Z16  | 2H           | 16                                | 5              | 15.3...17.1       | 40                          | 5                 | 0.1                           | 12            |
| MM3Z18  | 2J           | 18                                | 5              | 16.8...19.1       | 45                          | 5                 | 0.1                           | 13            |
| MM3Z20  | 2K           | 20                                | 5              | 18.8...21.2       | 50                          | 5                 | 0.1                           | 15            |
| MM3Z22  | 2M           | 22                                | 5              | 20.8...23.3       | 55                          | 5                 | 0.1                           | 17            |
| MM3Z24  | 2N           | 24                                | 5              | 22.8...25.6       | 60                          | 5                 | 0.1                           | 19            |
| MM3Z27  | 2P           | 27                                | 5              | 25.1...28.9       | 70                          | 2                 | 0.1                           | 21            |
| MM3Z30  | 2R           | 30                                | 5              | 28...32           | 80                          | 2                 | 0.1                           | 23            |
| MM3Z33  | 2X           | 33                                | 5              | 31...35           | 80                          | 2                 | 0.1                           | 25            |
| MM3Z36  | 2Y           | 36                                | 5              | 34...38           | 90                          | 2                 | 0.1                           | 27            |
| MM3Z39  | 2Z           | 39                                | 2.5            | 37...41           | 100                         | 2                 | 2                             | 30            |
| MM3Z43  | 3A           | 43                                | 2.5            | 40...46           | 130                         | 2                 | 2                             | 33            |
| MM3Z47  | 3B           | 47                                | 2.5            | 44...50           | 150                         | 2                 | 2                             | 36            |
| MM3Z51  | 3C           | 51                                | 2.5            | 48...54           | 180                         | 2                 | 1                             | 39            |
| MM3Z56  | 3D           | 56                                | 2.5            | 52...60           | 180                         | 2                 | 1                             | 43            |
| MM3Z62  | 3E           | 62                                | 2.5            | 58...66           | 200                         | 2                 | 0.2                           | 47            |
| MM3Z68  | 3F           | 68                                | 2.5            | 64...72           | 250                         | 2                 | 0.2                           | 52            |
| MM3Z75  | 3H           | 75                                | 2.5            | 70...79           | 300                         | 2                 | 0.2                           | 57            |

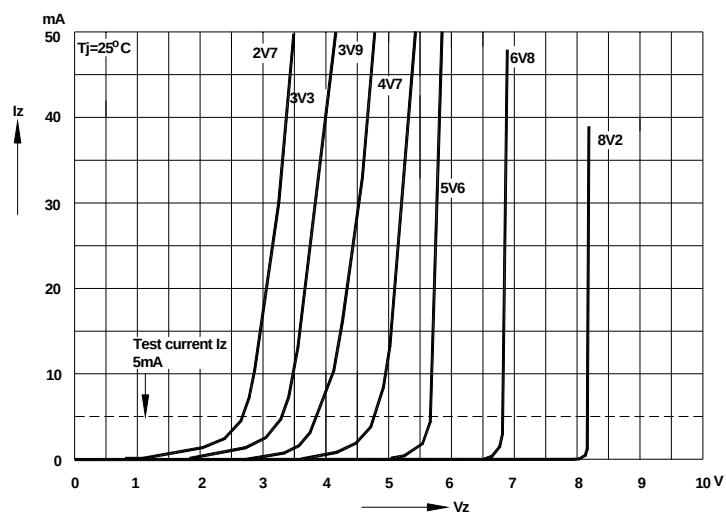
<sup>1)</sup>  $V_Z$  is tested with pulses (20 ms).



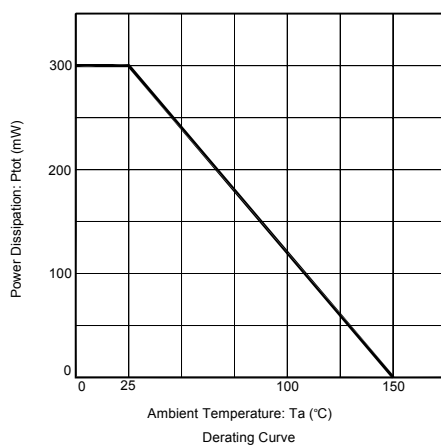
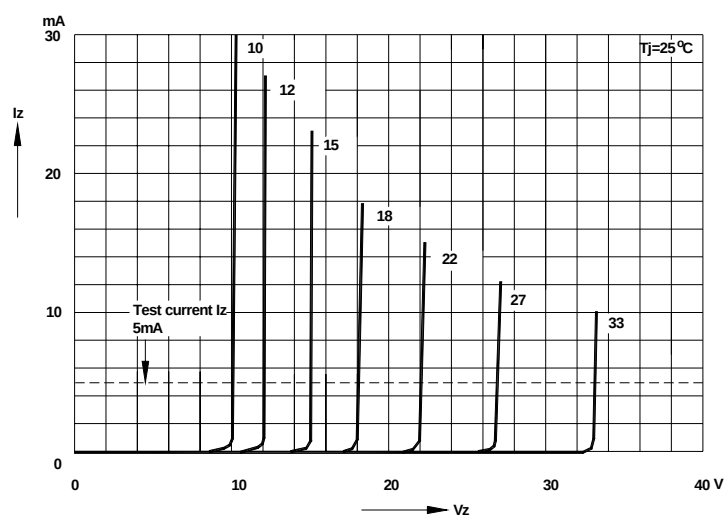
**CHANGZHOU GUANGDA ELECTRONIC CO. LTD**

Dated : 12/06/2009

Breakdown characteristics  
T<sub>j</sub> = constant (pulsed)



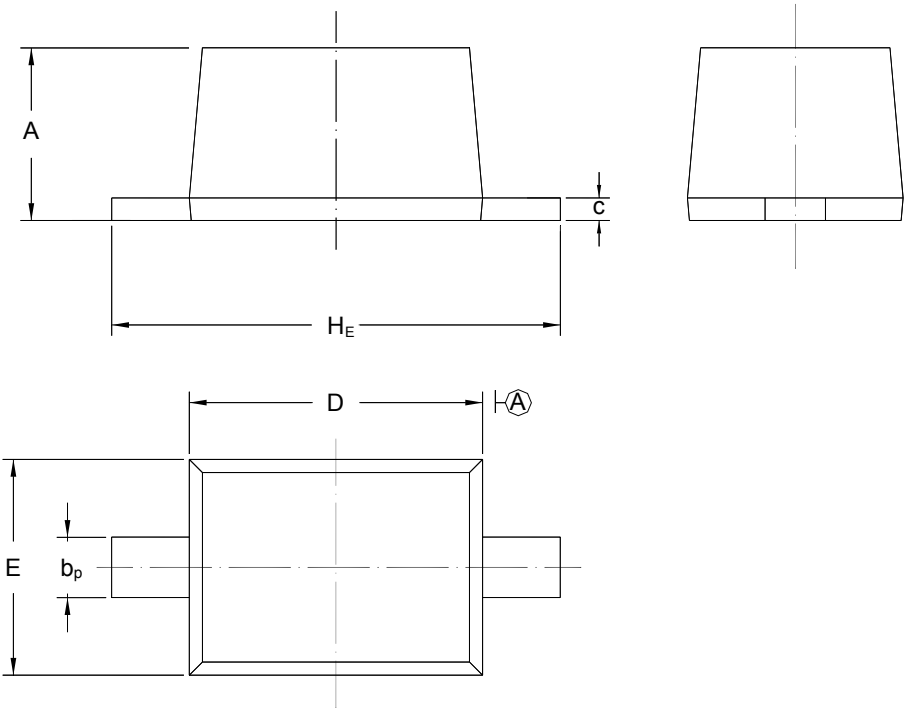
Breakdown characteristics  
T<sub>j</sub> = constant (pulsed)



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-323



| UNIT | A            | $b_p$        | C            | D            | E            | $H_E$        |
|------|--------------|--------------|--------------|--------------|--------------|--------------|
| mm   | 1.10<br>0.80 | 0.40<br>0.25 | 0.15<br>0.00 | 1.80<br>1.60 | 1.35<br>1.15 | 2.80<br>2.30 |

