

# ZMPTZ3V6B...ZMPTZ36B

## Silicon Epitaxial Planar Zener Diodes

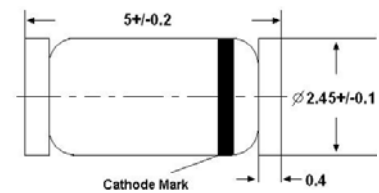
### Features

- Small surface mounting type
- 1 W of power can be obtained despite compact size
- High surge withstand level

### Applications

- Voltage regulation and voltage limiting
- Voltage surge absorption

LL-41



Glass case MELF  
Dimensions in mm

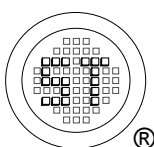
### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

| Parameter                 | Symbol    | Value         | Unit             |
|---------------------------|-----------|---------------|------------------|
| Power Dissipation         | $P_{tot}$ | 1             | W                |
| Junction Temperature      | $T_j$     | 150           | $^\circ\text{C}$ |
| Storage Temperature Range | $T_{stg}$ | - 55 to + 150 | $^\circ\text{C}$ |

### Characteristics at $T_a = 25\text{ }^\circ\text{C}$ ( $V_F = 1.2\text{ V Max. at } I_F = 200\text{ mA}$ )

| Type      | Zener Voltage |          |             | Dynamic Resistance |             | Reverse current     |          |
|-----------|---------------|----------|-------------|--------------------|-------------|---------------------|----------|
|           | $V_Z$         |          | at $I_{ZT}$ | $Z_{ZT} (\Omega)$  | at $I_{ZT}$ | $I_R (\mu\text{A})$ | at $V_R$ |
|           | Min. (V)      | Max. (V) | (mA)        | Max.               | (mA)        | Max.                | (V)      |
| ZMPTZ3V6B | 3.6           | 4        | 40          | 15                 | 40          | 20                  | 1        |
| ZMPTZ3V9B | 3.9           | 4.4      | 40          | 15                 | 40          | 20                  | 1        |
| ZMPTZ4V3B | 4.3           | 4.8      | 40          | 15                 | 40          | 20                  | 1        |
| ZMPTZ4V7B | 4.7           | 5.2      | 40          | 10                 | 40          | 20                  | 1        |
| ZMPTZ5V1B | 5.1           | 5.7      | 40          | 8                  | 40          | 20                  | 1        |
| ZMPTZ5V6B | 5.6           | 6.3      | 40          | 8                  | 40          | 20                  | 1.5      |
| ZMPTZ6V2B | 6.2           | 7        | 40          | 6                  | 40          | 20                  | 3        |
| ZMPTZ6V8B | 6.8           | 7.7      | 40          | 6                  | 40          | 20                  | 3.5      |
| ZMPTZ7V5B | 7.5           | 8.4      | 40          | 4                  | 40          | 20                  | 4        |
| ZMPTZ8V2B | 8.2           | 9.3      | 40          | 4                  | 40          | 20                  | 5        |
| ZMPTZ9V1B | 9.1           | 10.2     | 40          | 6                  | 40          | 20                  | 6        |
| ZMPTZ10B  | 10            | 11.2     | 40          | 6                  | 40          | 10                  | 7        |
| ZMPTZ11B  | 11            | 12.3     | 20          | 8                  | 20          | 10                  | 8        |
| ZMPTZ12B  | 12            | 13.5     | 20          | 8                  | 20          | 10                  | 9        |
| ZMPTZ13B  | 13.3          | 15       | 20          | 10                 | 20          | 10                  | 10       |
| ZMPTZ15B  | 14.7          | 16.5     | 20          | 10                 | 20          | 10                  | 11       |
| ZMPTZ16B  | 16.2          | 18.3     | 20          | 12                 | 20          | 10                  | 12       |
| ZMPTZ18B  | 18            | 20.3     | 20          | 12                 | 20          | 10                  | 13       |
| ZMPTZ20B  | 20            | 22.4     | 20          | 14                 | 20          | 10                  | 15       |
| ZMPTZ22B  | 22            | 24.5     | 10          | 14                 | 10          | 10                  | 17       |
| ZMPTZ24B  | 24            | 27.6     | 10          | 16                 | 10          | 10                  | 19       |
| ZMPTZ27B  | 27            | 30.8     | 10          | 16                 | 10          | 10                  | 21       |
| ZMPTZ30B  | 30            | 34       | 10          | 18                 | 10          | 10                  | 23       |
| ZMPTZ33B  | 33            | 37       | 10          | 18                 | 10          | 10                  | 25       |
| ZMPTZ36B  | 36            | 40       | 10          | 20                 | 10          | 10                  | 27       |

<sup>1)</sup> Tested with pulses  $t_p = 20\text{ ms}$ .



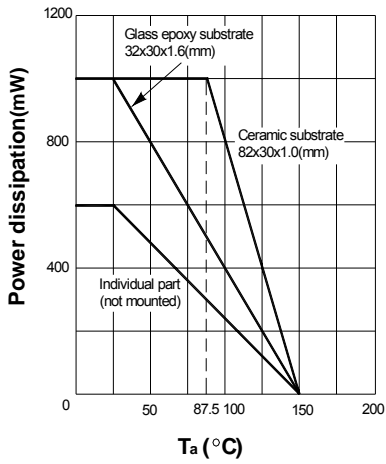
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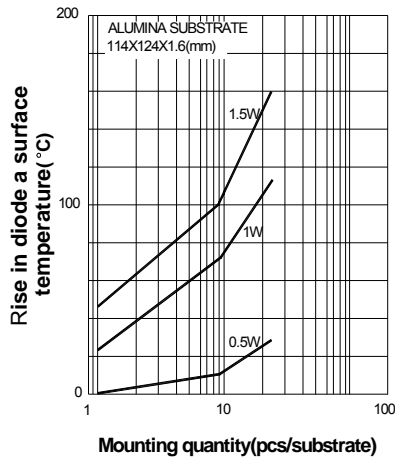
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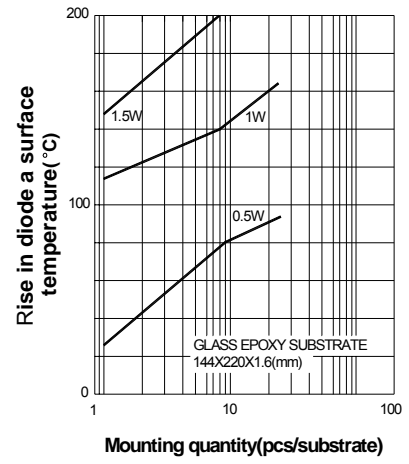
Derating curve



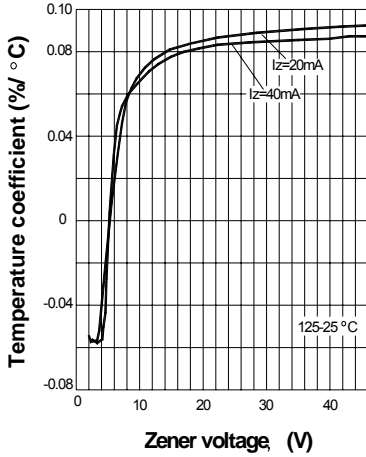
Rise in surface temperature



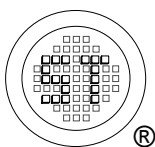
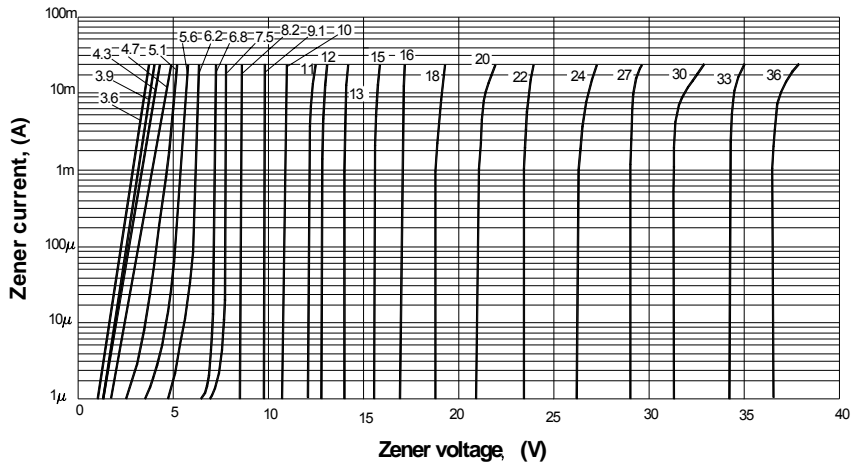
Rise in surface temperature



Zener voltage - temp. coefficient characteristics



Zener voltage characteristics



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