

# ZM-PTZ3.6B ~ ZM-PTZ36B

## SILICON EPITAXIAL PLANAR ZENER DIODES

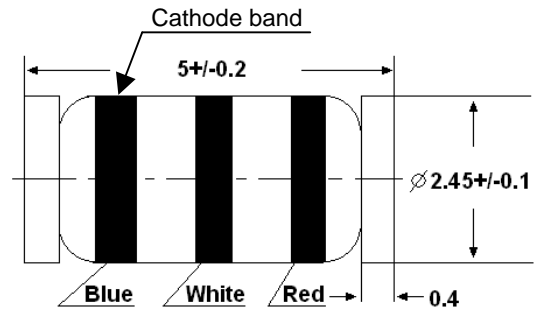
### Features

- 1) Small surface mounting type
- 2) 1W of power can be obtained despite compact size
- 3) High surge withstand level

### Applications

- 1) Voltage regulation and voltage limiting
- 2) Voltage surge absorption

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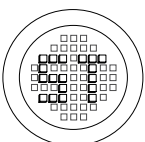


**Glass case MELF**  
**Dimensions in mm**

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

|                                 | Symbol           | Value       | Unit             |
|---------------------------------|------------------|-------------|------------------|
| Power Dissipation <sup>1)</sup> | $P_{\text{tot}}$ | 1           | W                |
| Junction Temperature            | $T_j$            | 150         | $^\circ\text{C}$ |
| Storage Temperature Range       | $T_s$            | -55 to +150 | $^\circ\text{C}$ |

1) Mounting density of other power components should be taken into consideration when laying out the pattern.



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**РАДИОТЕХ**

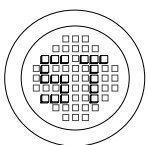
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# ZM-PTZ3.6B ~ ZM-PTZ36B

| TYPE       | Zener Voltage Range |      |            | Operating Resistance |            | Reverse current |           |
|------------|---------------------|------|------------|----------------------|------------|-----------------|-----------|
|            | Min.                | Max. | $I_z$ (mA) | Max.                 | $I_z$ (mA) | Max.            | $V_R$ (V) |
| ZM-PTZ3.6B | 3.6                 | 4    | 40         | 15                   | 40         | 20              | 1         |
| ZM-PTZ3.9B | 3.9                 | 4.4  | 40         | 15                   | 40         | 20              | 1         |
| ZM-PTZ4.3B | 4.3                 | 4.8  | 40         | 15                   | 40         | 20              | 1         |
| ZM-PTZ4.7B | 4.7                 | 5.2  | 40         | 10                   | 40         | 20              | 1         |
| ZM-PTZ5.1B | 5.1                 | 5.7  | 40         | 8                    | 40         | 20              | 1         |
| ZM-PTZ5.6B | 5.6                 | 6.3  | 40         | 8                    | 40         | 20              | 1.5       |
| ZM-PTZ6.2B | 6.2                 | 7    | 40         | 6                    | 40         | 20              | 3         |
| ZM-PTZ6.8B | 6.8                 | 7.7  | 40         | 6                    | 40         | 20              | 3.5       |
| ZM-PTZ7.5B | 7.5                 | 8.4  | 40         | 4                    | 40         | 20              | 4         |
| ZM-PTZ8.2B | 8.2                 | 9.3  | 40         | 4                    | 40         | 20              | 5         |
| ZM-PTZ9.1B | 9.1                 | 10.2 | 40         | 6                    | 40         | 20              | 6         |
| ZM-PTZ10B  | 10                  | 11.2 | 40         | 6                    | 40         | 10              | 7         |
| ZM-PTZ11B  | 11                  | 12.3 | 20         | 8                    | 20         | 10              | 8         |
| ZM-PTZ12B  | 12                  | 13.5 | 20         | 8                    | 20         | 10              | 9         |
| ZM-PTZ13B  | 13.3                | 15   | 20         | 10                   | 20         | 10              | 10        |
| ZM-PTZ15B  | 14.7                | 16.5 | 20         | 10                   | 20         | 10              | 11        |
| ZM-PTZ16B  | 16.2                | 18.3 | 20         | 12                   | 20         | 10              | 12        |
| ZM-PTZ18B  | 18                  | 20.3 | 20         | 12                   | 20         | 10              | 13        |
| ZM-PTZ20B  | 20                  | 22.4 | 20         | 14                   | 20         | 10              | 15        |
| ZM-PTZ22B  | 22                  | 24.5 | 10         | 14                   | 10         | 10              | 17        |
| ZM-PTZ24B  | 24                  | 27.6 | 10         | 16                   | 10         | 10              | 19        |
| ZM-PTZ27B  | 27                  | 30.8 | 10         | 16                   | 10         | 10              | 21        |
| ZM-PTZ30B  | 30                  | 34   | 10         | 18                   | 10         | 10              | 23        |
| ZM-PTZ33B  | 33                  | 37   | 10         | 18                   | 10         | 10              | 25        |
| ZM-PTZ36B  | 36                  | 40   | 10         | 20                   | 10         | 10              | 27        |

1) Tested with pulses  $t_p = 20$  ms.

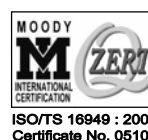
2) The operating resistances ( $Z_z$ ,  $Z_{zK}$ ) are measured by superimposing a minute alternating current on the regulated current ( $I_z$ ).



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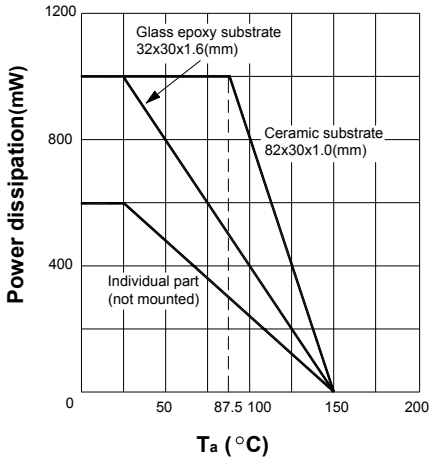
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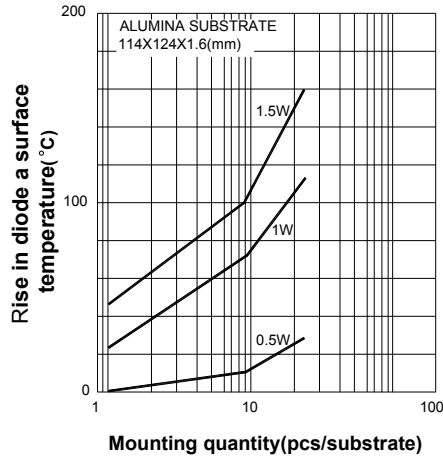
Dated : 10/05/2005

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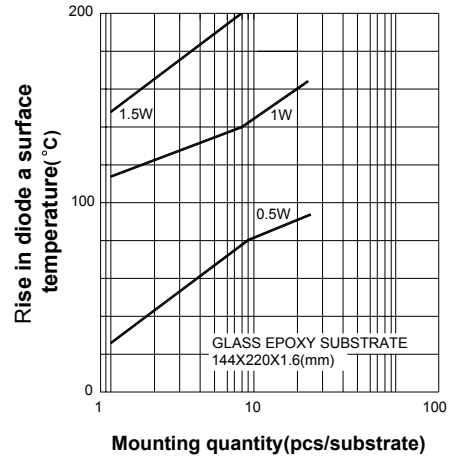
**Derating curve**



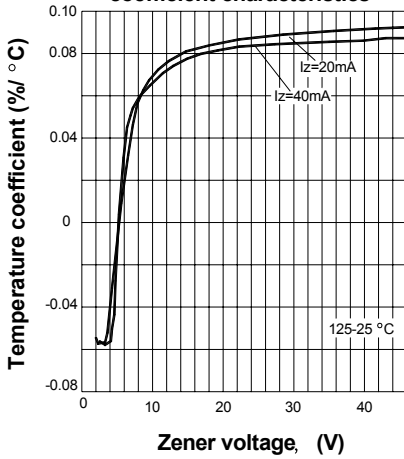
**Rise in surface temperature**



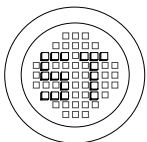
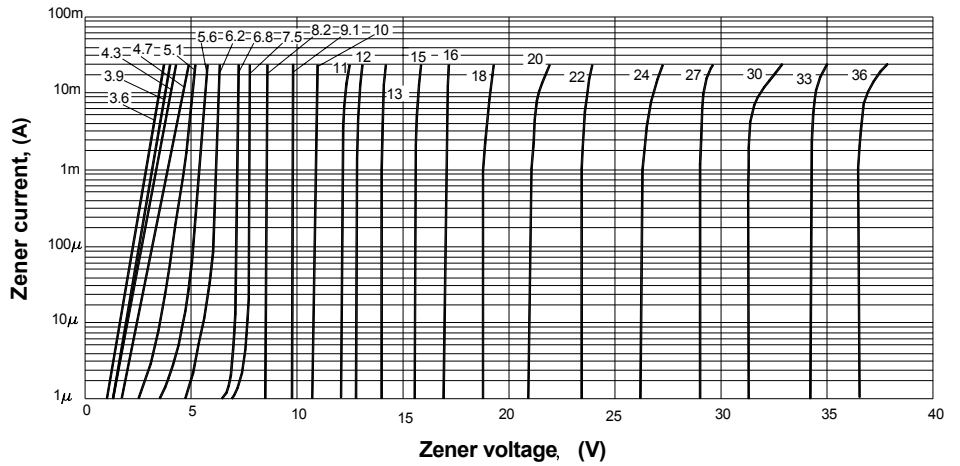
**Rise in surface temperature**



**Zener voltage - temp. coefficient characteristics**

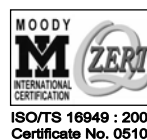


**Zener voltage characteristics**



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