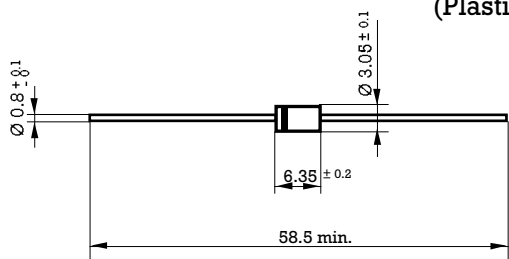


## 1.5 W Zener Diodes

|                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>Dimensions in mm.</b></p> <p><b>DO-15 (Plastic)</b></p>                                                                                                                                                          | <p><b>Voltage</b><br/>10 to 200 V</p> <p><b>Power</b><br/>1.5 W</p>                                                                                                                                                    |
| <p><b>Mounting instructions</b></p> <ol style="list-style-type: none"> <li>1. Min. distance from body to soldering point, 4 mm.</li> <li>2. Max. solder temperature, 350°C.</li> <li>3. Max. soldering time, 3.5 sec.</li> <li>4. Do not bend lead at a point closer than 2 mm. to the body.</li> </ol> | <ul style="list-style-type: none"> <li>• Diffused junction</li> <li>• The plastic material carries U/L recognition 94 V-0</li> <li>• Terminals: Axial Leads</li> <li>• Polarity: Color band denotes cathode</li> </ul> |

### Maximum Ratings, according to IEC publication No. 134

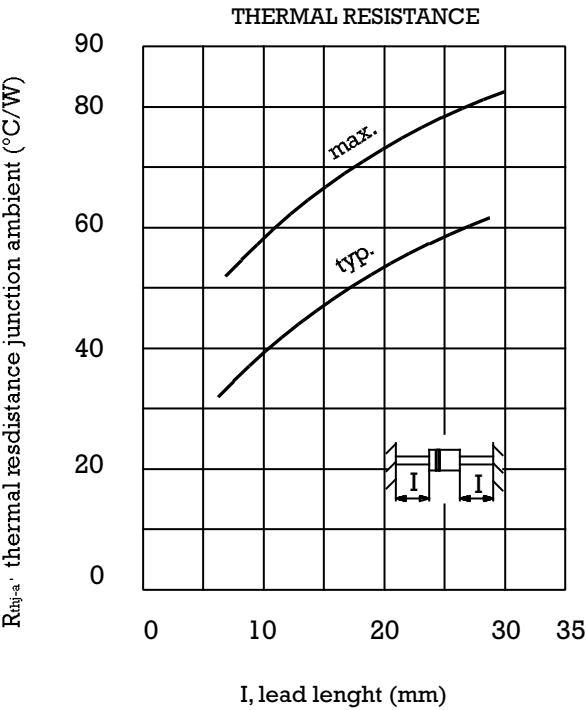
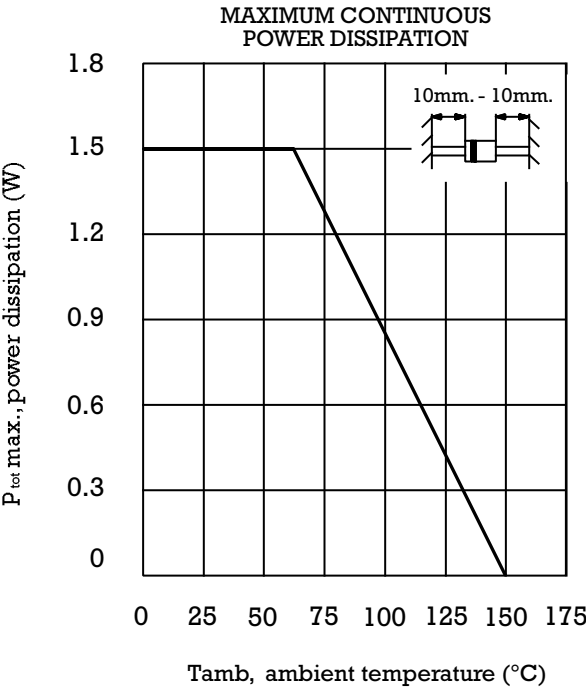
|           |                                                               |                  |
|-----------|---------------------------------------------------------------|------------------|
| $P_{tot}$ | Power dissipation at $T_{amb} = 60\text{ °C}$                 | 1.5 W            |
| $P_{ZSM}$ | Non repetitive peak zener dissipation ( $t = 10\text{ ms.}$ ) | 40 W             |
| $T_j$     | Operating temperature range                                   | - 55 to + 150 °C |
| $T_{stg}$ | Storage temperature range                                     | - 55 to + 150 °C |

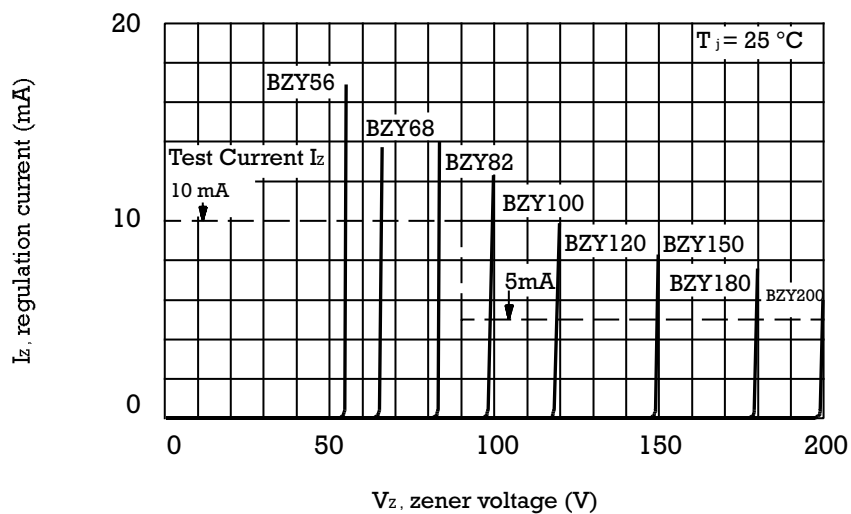
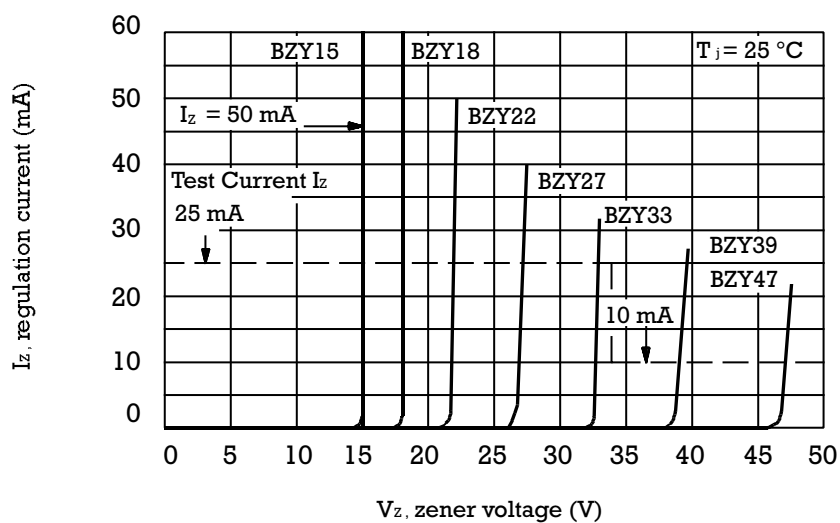
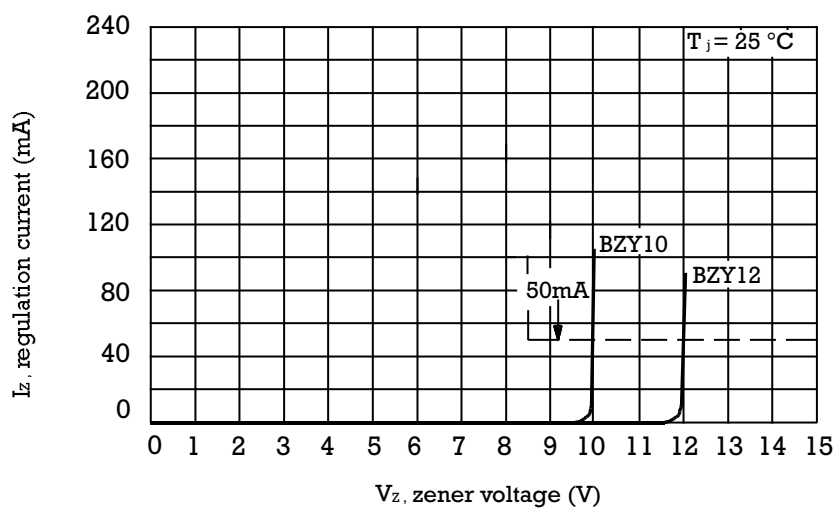
### Electrical Characteristics at $T_{amb} = 25\text{ °C}$

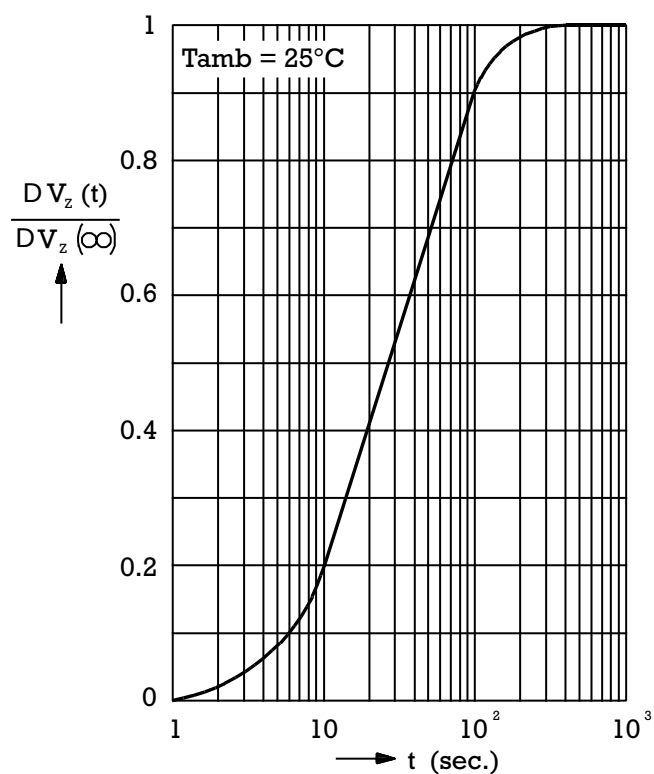
|             |                                                   |         |
|-------------|---------------------------------------------------|---------|
| $V_F$       | Max. forward voltage drop at $I_F = 1.0\text{ A}$ | 1.1 V   |
| $R_{thj-a}$ | Max. thermal resistance at 10 mm. lead length     | 60° C/W |

| Type      | Zener Voltage Range<br>$V_Z$ at $I_{ZT}$ | Maximum Zener Impedance<br>$Z_{ZT}$ at $I_{ZT}$ | Typical Temperature Coefficient<br>at $I_{ZT}$ | Test Current<br>$I_{ZT}$ | Min. Reverse Voltage<br>at $I_R = 1 \mu A$<br>$V_R$ |
|-----------|------------------------------------------|-------------------------------------------------|------------------------------------------------|--------------------------|-----------------------------------------------------|
|           | (V)                                      | (W)                                             | (% / °C)                                       | (mA)                     | (V)                                                 |
| BZY97C10  | 9.4 - 10.6                               | 4                                               | + 0.070                                        | 50                       | 5.0                                                 |
| BZY97C11  | 10.4 - 11.6                              | 7                                               | + 0.075                                        | 50                       | 5.0                                                 |
| BZY97C12  | 11.4 - 12.7                              | 7                                               | + 0.075                                        | 50                       | 7.0                                                 |
| BZY97C13  | 12.4 - 14.1                              | 10                                              | + 0.075                                        | 50                       | 7.0                                                 |
| BZY97C15  | 13.8 - 15.8                              | 10                                              | + 0.075                                        | 50                       | 10                                                  |
| BZY97C16  | 15.3 - 17.1                              | 15                                              | + 0.085                                        | 25                       | 10                                                  |
| BZY97C18  | 16.8 - 19.1                              | 15                                              | + 0.085                                        | 25                       | 10                                                  |
| BZY97C20  | 18.8 - 21.2                              | 15                                              | + 0.085                                        | 25                       | 10                                                  |
| BZY97C22  | 20.8 - 23.3                              | 15                                              | + 0.085                                        | 25                       | 12                                                  |
| BZY97C24  | 22.8 - 25.6                              | 15                                              | + 0.085                                        | 25                       | 12                                                  |
| BZY97C27  | 25.1 - 28.9                              | 15                                              | + 0.085                                        | 25                       | 14                                                  |
| BZY97C30  | 28 - 32                                  | 15                                              | + 0.085                                        | 25                       | 14                                                  |
| BZY97C33  | 31 - 35                                  | 15                                              | + 0.085                                        | 25                       | 17                                                  |
| BZY97C36  | 34 - 38                                  | 40                                              | + 0.085                                        | 10                       | 17                                                  |
| BZY97C39  | 37 - 41                                  | 40                                              | + 0.085                                        | 10                       | 20                                                  |
| BZY97C43  | 40 - 46                                  | 45                                              | + 0.095                                        | 10                       | 20                                                  |
| BZY97C47  | 44 - 50                                  | 45                                              | + 0.095                                        | 10                       | 24                                                  |
| BZY97C51  | 48 - 54                                  | 60                                              | + 0.095                                        | 10                       | 24                                                  |
| BZY97C56  | 52 - 60                                  | 60                                              | + 0.095                                        | 10                       | 28                                                  |
| BZY97C62  | 58 - 66                                  | 80                                              | + 0.105                                        | 10                       | 28                                                  |
| BZY97C68  | 64 - 72                                  | 80                                              | + 0.105                                        | 10                       | 34                                                  |
| BZY97C75  | 70 - 79                                  | 100                                             | + 0.105                                        | 10                       | 34                                                  |
| BZY97C82  | 77 - 88                                  | 100                                             | + 0.105                                        | 10                       | 41                                                  |
| BZY97C91  | 85 - 96                                  | 200                                             | + 0.11                                         | 5                        | 41                                                  |
| BZY97C100 | 94 - 106                                 | 200                                             | + 0.11                                         | 5                        | 50                                                  |
| BZY97C110 | 104 - 116                                | 250                                             | + 0.11                                         | 5                        | 50                                                  |
| BZY97C120 | 114 - 127                                | 250                                             | + 0.11                                         | 5                        | 60                                                  |
| BZY97C130 | 124 - 141                                | 300                                             | + 0.11                                         | 5                        | 60                                                  |
| BZY97C150 | 138 - 156                                | 300                                             | + 0.11                                         | 5                        | 75                                                  |
| BZY97C160 | 153 - 171                                | 350                                             | + 0.11                                         | 5                        | 75                                                  |
| BZY97C180 | 168 - 191                                | 350                                             | + 0.11                                         | 5                        | 90                                                  |
| BZY97C200 | 188 - 212                                | 350                                             | + 0.11                                         | 5                        | 90                                                  |

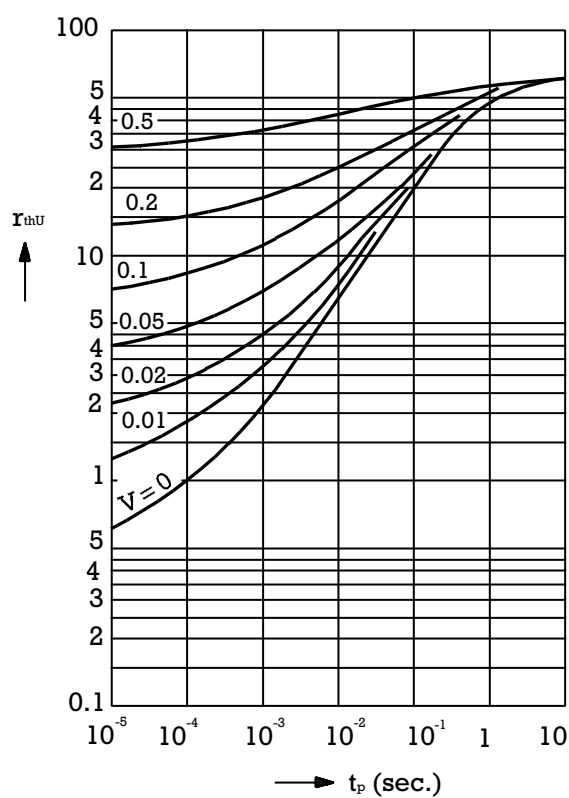
Characteristic Curves



**BREAKDOWN CHARACTERISTICS**




Relative change of Zener voltage versus turn-on time.



Pulse thermal resistance versus pulse duration. Valid provided that leads are kept at ambient temperature at a distance of 10mm. from case.

