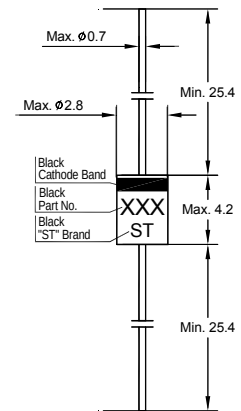


# BZV85C

## SILICON PLANAR POWER ZENER DIODES

for use in stabilizing and clipping circuits with high power rating. The Zener voltages are graded according to the international E24 standard. Smaller voltage tolerances and higher Zener voltages are upon request.



Glass Case DO-41  
Dimensions in mm

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

| Parameter                                                                                                | Symbol           | Value           | Unit             |
|----------------------------------------------------------------------------------------------------------|------------------|-----------------|------------------|
| Power Dissipation                                                                                        | $P_{\text{tot}}$ | 1 <sup>1)</sup> | W                |
| Junction Temperature                                                                                     | $T_j$            | 200             | $^\circ\text{C}$ |
| Storage Temperature Range                                                                                | $T_s$            | - 65 to + 200   | $^\circ\text{C}$ |
| <sup>1)</sup> Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature. |                  |                 |                  |

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

| Parameter                                                                                                | Symbol           | Max.              | Unit |
|----------------------------------------------------------------------------------------------------------|------------------|-------------------|------|
| Thermal Resistance Junction to Ambient Air                                                               | $R_{\text{thA}}$ | 170 <sup>1)</sup> | K/W  |
| Forward Voltage<br>at $I_F = 200\text{ mA}$                                                              | $V_F$            | 1.2               | V    |
| <sup>1)</sup> Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature. |                  |                   |      |



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Dated : 12/06/2009

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| Type      | Zener Voltage Range <sup>1)</sup> |                       |                          | Maximum Dynamic Resistance |                       |                          | Maximum Leakage Current            |                        |
|-----------|-----------------------------------|-----------------------|--------------------------|----------------------------|-----------------------|--------------------------|------------------------------------|------------------------|
|           | V <sub>Znom</sub><br>V            | I <sub>ZT</sub><br>mA | for V <sub>ZT</sub><br>V | r <sub>ZJT</sub><br>Ω      | r <sub>ZJK</sub><br>Ω | at I <sub>ZK</sub><br>mA | I <sub>R</sub> <sup>2)</sup><br>μA | at V <sub>R</sub><br>V |
|           |                                   |                       |                          |                            |                       |                          |                                    |                        |
| BZV85C2V7 | 2.7                               | 80                    | 2.5...2.9                | 20                         | 400                   | 1                        | 150                                | 1                      |
| BZV85C3V0 | 3                                 | 80                    | 2.8...3.2                | 20                         | 400                   | 1                        | 100                                | 1                      |
| BZV85C3V3 | 3.3                               | 70                    | 3.1...3.5                | 20                         | 400                   | 1                        | 40                                 | 1                      |
| BZV85C3V6 | 3.6                               | 60                    | 3.4...3.8                | 15                         | 500                   | 1                        | 20                                 | 1                      |
| BZV85C3V9 | 3.9                               | 60                    | 3.7...4.1                | 15                         | 500                   | 1                        | 10                                 | 1                      |
| BZV85C4V3 | 4.3                               | 50                    | 4...4.6                  | 13                         | 500                   | 1                        | 3                                  | 1                      |
| BZV85C4V7 | 4.7                               | 45                    | 4.4...5                  | 13                         | 600                   | 1                        | 3                                  | 1                      |
| BZV85C5V1 | 5.1                               | 45                    | 4.8...5.4                | 10                         | 500                   | 1                        | 1                                  | 1.5                    |
| BZV85C5V6 | 5.6                               | 45                    | 5.2...6                  | 7                          | 400                   | 1                        | 1                                  | 2                      |
| BZV85C6V2 | 6.2                               | 35                    | 5.8...6.6                | 4                          | 300                   | 1                        | 1                                  | 3                      |
| BZV85C6V8 | 6.8                               | 35                    | 6.4...7.2                | 3.5                        | 300                   | 1                        | 1                                  | 4                      |
| BZV85C7V5 | 7.5                               | 35                    | 7...7.9                  | 3                          | 200                   | 0.5                      | 1                                  | 4.5                    |
| BZV85C8V2 | 8.2                               | 25                    | 7.7...8.7                | 5                          | 200                   | 0.5                      | 1                                  | 6.2                    |
| BZV85C9V1 | 9.1                               | 25                    | 8.5...9.6                | 5                          | 200                   | 0.5                      | 1                                  | 6.8                    |
| BZV85C10  | 10                                | 25                    | 9.4...10.6               | 7                          | 200                   | 0.5                      | 0.5                                | 7                      |
| BZV85C11  | 11                                | 20                    | 10.4...11.6              | 8                          | 300                   | 0.5                      | 0.5                                | 8.2                    |
| BZV85C12  | 12                                | 20                    | 11.4...12.7              | 9                          | 350                   | 0.5                      | 0.5                                | 9.1                    |
| BZV85C13  | 13                                | 20                    | 12.4...14.1              | 10                         | 400                   | 0.5                      | 0.5                                | 10                     |
| BZV85C15  | 15                                | 15                    | 13.8...15.6              | 15                         | 500                   | 0.5                      | 0.5                                | 11                     |
| BZV85C16  | 16                                | 15                    | 15.3...17.1              | 15                         | 500                   | 0.5                      | 0.5                                | 12                     |
| BZV85C18  | 18                                | 15                    | 16.8...19.1              | 20                         | 500                   | 0.5                      | 0.5                                | 13                     |
| BZV85C20  | 20                                | 10                    | 18.8...21.2              | 24                         | 600                   | 0.5                      | 0.5                                | 15                     |
| BZV85C22  | 22                                | 10                    | 20.8...23.3              | 25                         | 600                   | 0.5                      | 0.5                                | 16                     |
| BZV85C24  | 24                                | 10                    | 22.8...25.6              | 25                         | 600                   | 0.5                      | 0.5                                | 18                     |
| BZV85C27  | 27                                | 8                     | 25.1...28.9              | 30                         | 750                   | 0.25                     | 0.5                                | 20                     |
| BZV85C30  | 30                                | 8                     | 28...32                  | 30                         | 1000                  | 0.25                     | 0.5                                | 22                     |
| BZV85C33  | 33                                | 8                     | 31...35                  | 35                         | 1000                  | 0.25                     | 0.5                                | 24                     |
| BZV85C36  | 36                                | 8                     | 34...38                  | 40                         | 1000                  | 0.25                     | 0.5                                | 27                     |
| BZV85C39  | 39                                | 6                     | 37...41                  | 50                         | 1000                  | 0.25                     | 0.5                                | 30                     |
| BZV85C43  | 43                                | 6                     | 40...46                  | 50                         | 1000                  | 0.25                     | 0.5                                | 33                     |
| BZV85C47  | 47                                | 4                     | 44...50                  | 90                         | 1500                  | 0.25                     | 0.5                                | 36                     |
| BZV85C51  | 51                                | 4                     | 48...54                  | 115                        | 1500                  | 0.25                     | 0.5                                | 39                     |
| BZV85C56  | 56                                | 4                     | 52...60                  | 120                        | 2000                  | 0.25                     | 0.5                                | 43                     |
| BZV85C62  | 62                                | 4                     | 58...66                  | 125                        | 2000                  | 0.25                     | 0.5                                | 47                     |
| BZV85C68  | 68                                | 4                     | 64...72                  | 130                        | 2000                  | 0.25                     | 0.5                                | 51                     |
| BZV85C75  | 75                                | 4                     | 70...79                  | 135                        | 2000                  | 0.25                     | 0.5                                | 56                     |
| BZV85C82  | 82                                | 2.7                   | 77...87                  | 200                        | 3000                  | 0.25                     | 0.5                                | 62                     |
| BZV85C91  | 91                                | 2.7                   | 85...96                  | 250                        | 3000                  | 0.25                     | 0.5                                | 68                     |
| BZV85C100 | 100                               | 2.7                   | 94...106                 | 350                        | 3000                  | 0.25                     | 0.5                                | 75                     |
| BZV85C110 | 110                               | 2.7                   | 104...116                | 450                        | 4000                  | 0.25                     | 0.5                                | 82                     |
| BZV85C120 | 120                               | 2                     | 114...127                | 550                        | 4500                  | 0.25                     | 0.5                                | 91                     |
| BZV85C130 | 130                               | 2                     | 124...141                | 700                        | 5000                  | 0.25                     | 0.5                                | 100                    |
| BZV85C150 | 150                               | 2                     | 138...156                | 1000                       | 6000                  | 0.25                     | 0.5                                | 110                    |
| BZV85C160 | 160                               | 1.5                   | 153...171                | 1100                       | 6500                  | 0.25                     | 0.5                                | 120                    |
| BZV85C180 | 180                               | 1.5                   | 168...191                | 1200                       | 7000                  | 0.25                     | 0.5                                | 130                    |
| BZV85C200 | 200                               | 1.5                   | 188...212                | 1500                       | 8000                  | 0.25                     | 0.5                                | 150                    |

<sup>1)</sup> Tested with pulses t<sub>p</sub> = 20 ms.

<sup>2)</sup> Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.

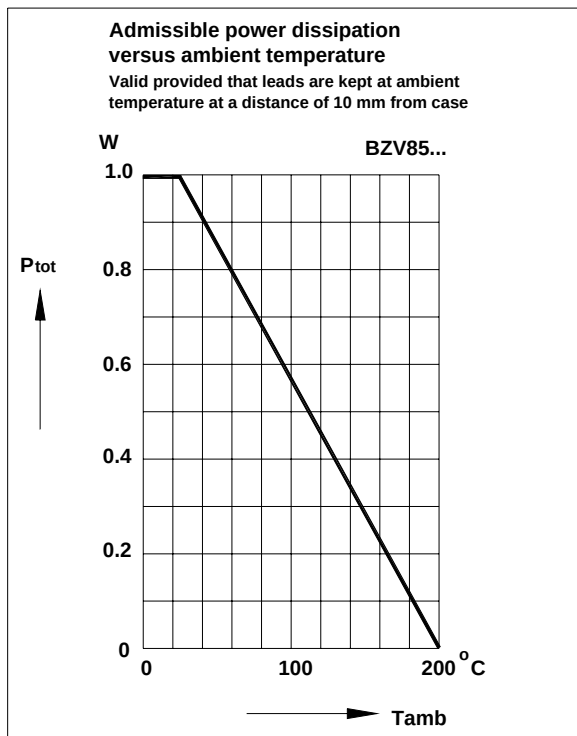


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