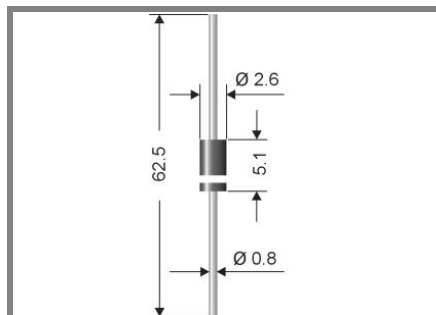


# ZPY 1 ... ZPY 200 (1,3W)



Axial lead diode

## Zener silicon diodes

### ZPY 1...ZPY 200(1,3W)

**Maximum Power  
Dissipation: 1,3 W**

**Nominal Z-voltage: 1 to 200 V**

### Features

- max. solder temperature: 260°C
- Plastic material has UL classification 94V-0
- Standard Zener voltage tolerance is graded to the international E 24 (5%) standard. Other voltage tolerances and higher Zener voltages on request.

### Mechanical Data

- Plastic case DO-41 / DO-204AL
- Weight approx.: 0,4 g
- Terminals: plated terminals solderable per MIL-STD-750
- Mounting position: any
- Standard packaging: 5000 pieces per ammo

<sup>1)</sup> Valid, if leads are kept at ambient temperature at a distance of 10 mm from case

<sup>2)</sup> Tested with pulses

<sup>3)</sup> The ZPY1 is a diode operated in forward. The cathode, indicated by a ring, is to be connected to the negative pole.

| Absolute Maximum Ratings <span style="float: right;"><math>T_c = 25^\circ\text{C}</math>, unless otherwise specified</span> |                                                           |                |       |
|-----------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------|----------------|-------|
| Symbol                                                                                                                      | Conditions                                                | Values         | Units |
| $P_{\text{tot}}$                                                                                                            | Power dissipation, $T_A = 50^\circ\text{C}$ <sup>1)</sup> | 1,3            | W     |
| $P_{\text{ZSM}}$                                                                                                            | Non repetitive peak power dissipation, $t < 10\text{ ms}$ | 40             | W     |
| $R_{\text{thA}}$                                                                                                            | Max. thermal resistance junction to ambient               | 45             | K/W   |
| $R_{\text{thT}}$                                                                                                            | Max. thermal resistance junction to terminal              | 15             | K/W   |
| $T_j$                                                                                                                       | Operating junction temperature                            | - 50 ... + 150 | °C    |
| $T_s$                                                                                                                       | Storage temperature                                       | - 50 ... + 175 | °C    |

| Type                | Zener Voltage <sup>2)</sup><br>$V_{Z@I_{ZT}}$ |                        | Test curr.<br>$I_{ZT}$ | Dyn. Resistance             | Temp. Coeff. of $V_Z$                |                        |            | Z-<br>curr. <sup>1)</sup><br>$T_A = 50^\circ\text{C}$ |
|---------------------|-----------------------------------------------|------------------------|------------------------|-----------------------------|--------------------------------------|------------------------|------------|-------------------------------------------------------|
|                     | $V_{Z\text{min}}$<br>V                        | $V_{Z\text{max}}$<br>V | mA                     | $Z_{ZT@I_{ZT}}$<br>$\Omega$ | $a_{VZ}$<br>$10^{-4}/^\circ\text{C}$ | $I_R$<br>$\mu\text{A}$ | $V_R$<br>V | $I_{Z\text{max}}$<br>mA                               |
| ZPY 1 <sup>3)</sup> | 0,71                                          | 0,82                   | 100                    | 0,5 (<1)                    | - 26 ... - 16                        | 1                      | -          | 1000                                                  |
| ZPY 10              | 9,4                                           | 10,6                   | 50                     | 2 (<4)                      | + 5 ... + 9                          | 1                      | > 5        | 123                                                   |
| ZPY 11              | 10,4                                          | 11,6                   | 50                     | 4 (<7)                      | + 5 ... + 10                         | 1                      | > 5        | 112                                                   |
| ZPY 12              | 11,4                                          | 12,7                   | 50                     | 4 (<7)                      | + 5 ... + 10                         | 1                      | > 7        | 102                                                   |
| ZPY 13              | 12,4                                          | 14,1                   | 50                     | 5 (<10)                     | + 5 ... + 10                         | 1                      | > 7        | 92                                                    |
| ZPY 15              | 13,8                                          | 15,6                   | 50                     | 5 (<10)                     | + 5 ... + 10                         | 1                      | > 10       | 83                                                    |
| ZPY 16              | 15,3                                          | 17,1                   | 25                     | 6 (<15)                     | + 6 ... + 11                         | 1                      | > 10       | 76                                                    |
| ZPY 18              | 16,8                                          | 19,1                   | 25                     | 6 (<15)                     | + 6 ... + 11                         | 1                      | > 10       | 68                                                    |
| ZPY 20              | 18,8                                          | 21,2                   | 25                     | 6 (<15)                     | + 6 ... + 11                         | 1                      | > 10       | 61                                                    |
| ZPY 22              | 20,8                                          | 23,3                   | 25                     | 6 (<15)                     | + 6 ... + 11                         | 1                      | > 12       | 56                                                    |
| ZPY 24              | 22,8                                          | 25,6                   | 25                     | 7 (<15)                     | + 6 ... + 11                         | 1                      | > 12       | 51                                                    |
| ZPY 27              | 25,1                                          | 28,9                   | 25                     | 7 (<15)                     | + 6 ... + 11                         | 1                      | > 14       | 45                                                    |
| ZPY 30              | 28                                            | 32                     | 25                     | 8 (<15)                     | + 6 ... + 11                         | 1                      | > 14       | 41                                                    |
| ZPY 33              | 31                                            | 35                     | 25                     | 8 (<15)                     | + 6 ... + 11                         | 1                      | > 17       | 37                                                    |
| ZPY 36              | 34                                            | 38                     | 10                     | 16 (<40)                    | + 6 ... + 11                         | 1                      | > 17       | 34                                                    |
| ZPY 39              | 37                                            | 41                     | 10                     | 20 (<40)                    | + 6 ... + 11                         | 1                      | > 20       | 32                                                    |
| ZPY 43              | 40                                            | 46                     | 10                     | 24 (<45)                    | + 7 ... + 12                         | 1                      | > 20       | 28                                                    |
| ZPY 47              | 44                                            | 50                     | 10                     | 24 (<45)                    | + 7 ... + 12                         | 1                      | > 24       | 26                                                    |
| ZPY 51              | 48                                            | 54                     | 10                     | 25 (<60)                    | + 7 ... + 12                         | 1                      | > 24       | 24                                                    |
| ZPY 56              | 52                                            | 60                     | 10                     | 25 (<60)                    | + 7 ... + 12                         | 1                      | > 28       | 22                                                    |
| ZPY 62              | 58                                            | 66                     | 10                     | 25 (<80)                    | + 8 ... + 13                         | 1                      | > 28       | 20                                                    |
| ZPY 68              | 64                                            | 72                     | 10                     | 25 (<80)                    | + 8 ... + 13                         | 1                      | > 34       | 18                                                    |
| ZPY 75              | 70                                            | 79                     | 10                     | 30 (<100)                   | + 8 ... + 13                         | 1                      | > 34       | 16                                                    |
| ZPY 82              | 77                                            | 88                     | 10                     | 30 (<100)                   | + 8 ... + 13                         | 1                      | > 41       | 15                                                    |
| ZPY 91              | 85                                            | 96                     | 5                      | 40 (<200)                   | + 9 ... + 13                         | 1                      | > 41       | 14                                                    |
| ZPY 100             | 94                                            | 106                    | 5                      | 60 (<200)                   | + 9 ... + 13                         | 1                      | > 50       | 12                                                    |
| ZPY 110             | 104                                           | 116                    | 5                      | 80 (<250)                   | + 9 ... + 13                         | 1                      | > 50       | 11                                                    |
| ZPY 120             | 114                                           | 127                    | 5                      | 80 (<250)                   | + 9 ... + 13                         | 1                      | > 60       | 10                                                    |
| ZPY 130             | 124                                           | 141                    | 5                      | 90 (<300)                   | + 9 ... + 13                         | 1                      | > 60       | 9                                                     |
| ZPY 150             | 138                                           | 156                    | 5                      | 100(<300)                   | + 9 ... + 13                         | 1                      | > 75       | 8                                                     |
| ZPY 160             | 153                                           | 171                    | 5                      | 110(<350)                   | + 9 ... + 13                         | 1                      | > 75       | 8                                                     |
| ZPY 180             | 168                                           | 191                    | 5                      | 120(<350)                   | + 9 ... + 13                         | 1                      | > 90       | 7                                                     |
| ZPY 200             | 188                                           | 212                    | 5                      | 150(<350)                   | + 9 ... + 13                         | 1                      | > 90       | 6                                                     |