

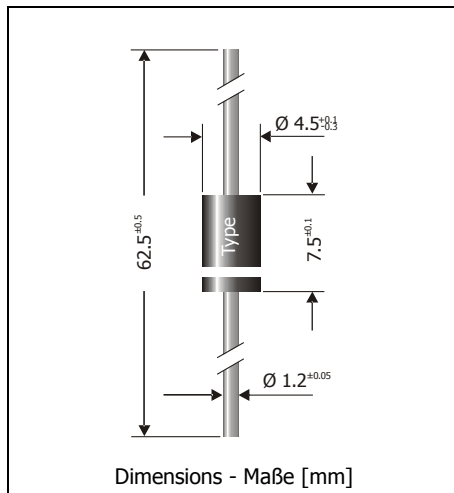


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**1N5345B ... 1N5388B (5 W)**
**Silicon-Power-Zener Diodes (non-planar technology)**  
**Silizium-Leistungs-Zener-Dioden (flächendiffundierte Dioden)**

Version 2011-02-10



|                                                                                       |             |
|---------------------------------------------------------------------------------------|-------------|
| Maximum power dissipation<br>Maximale Verlustleistung                                 | 5 W         |
| Nominal Z-voltage<br>Nominale Z-Spannung                                              | 8.7...200 V |
| Plastic case<br>Kunststoffgehäuse                                                     | ~ DO-201    |
| Weight approx.<br>Gewicht ca.                                                         | 0.8 g       |
| Plastic material has UL classification 94V-0<br>Gehäusematerial UL94V-0 klassifiziert |             |
| Standard packaging taped in ammo pack<br>Standard Lieferform gegurtet in Ammo-Pack    |             |



Standard Zener voltage tolerance is  $\pm 5\%$ ). Other voltage tolerances and higher Zener voltages on request.  
 Die Toleranz der Zener-Spannung ist in der Standard-Ausführung  $\pm 5\%$ . Andere Toleranzen oder höhere Arbeitsspannungen auf Anfrage.

**Maximum ratings and Characteristics****Grenz- und Kennwerte**

|                                                                                                      |                          |                  |                              |
|------------------------------------------------------------------------------------------------------|--------------------------|------------------|------------------------------|
| Power dissipation<br>Verlustleistung                                                                 | $T_A = 25^\circ\text{C}$ | $P_{\text{tot}}$ | 5 W <sup>1)</sup>            |
| Non repetitive peak power dissipation, $t < 10$ ms<br>Einmalige Impuls-Verlustleistung, $t < 10$ ms  | $T_A = 25^\circ\text{C}$ | $P_{\text{ZSM}}$ | 80 W                         |
| Operating junction temperature – Sperrschichttemperatur<br>Storage temperature – Lagerungstemperatur |                          | $T_j$<br>$T_s$   | -50...+150°C<br>-50...+175°C |
| Thermal resistance junction to ambient air<br>Wärmewiderstand Sperrschicht – umgebende Luft          |                          | $R_{\text{thA}}$ | < 25 K/W <sup>1)</sup>       |
| Thermal resistance junction to terminal<br>Wärmewiderstand Sperrschicht – Anschluss                  |                          | $R_{\text{thL}}$ | < 8 K/W                      |

Zener voltages see table on next page – Zener-Spannungen siehe Tabelle auf der nächsten Seite

1 Valid, if leads are kept at ambient temperature at a distance of 10 mm from case  
 Gültig, wenn die Anschlussdrähte in 10 mm Abstand vom Gehäuse auf Umgebungstemperatur gehalten werden  
 2 Tested with pulses – Gemessen mit Impulsen

# Maximum ratings

# Grenzwerte

| Type<br>Typ | Zener voltage <sup>2)</sup><br>Zener-Spannung <sup>2)</sup><br>$I_Z = I_{Ztest}$ | Test current<br>Mess-Strom | Dynamic resistance<br>Diff. Widerstand<br>$I_Z = I_{Ztest}$ $I_Z = 1 \text{ mA}$ |      | Reverse volt.<br>Sperrspanng.<br>$I_R = 1 \mu\text{A}$ | Surge current<br>Stoßstrom<br>$t_p = 8.3 \text{ ms}$ | Z-current <sup>1)</sup><br>Z-Strom <sup>1)</sup><br>$T_A = 50^\circ\text{C}$ |
|-------------|----------------------------------------------------------------------------------|----------------------------|----------------------------------------------------------------------------------|------|--------------------------------------------------------|------------------------------------------------------|------------------------------------------------------------------------------|
|             | $V_Z [\text{V}]$                                                                 | $I_{Ztest} [\text{mA}]$    | $r_{zj} [\Omega]$                                                                |      | $V_R [\text{V}]$                                       | $I_{ZS} [\text{A}]$                                  | $I_{Zmax} [\text{mA}]$                                                       |
| 1N5345B     | 8.7                                                                              | 150                        | 2                                                                                | 200  | > 6.6 (10 $\mu\text{A}$ )                              | 9.5                                                  | 546                                                                          |
| 1N5346B     | 9.1                                                                              | 150                        | 2                                                                                | 150  | > 6.9 (7.5 $\mu\text{A}$ )                             | 9.2                                                  | 522                                                                          |
| 1N5347B     | 10                                                                               | 125                        | 2                                                                                | 125  | > 7.6 (5 $\mu\text{A}$ )                               | 8.6                                                  | 475                                                                          |
| 1N5348B     | 11                                                                               | 125                        | 2.5                                                                              | 125  | > 8.4 (5 $\mu\text{A}$ )                               | 8.0                                                  | 432                                                                          |
| 1N5349B     | 12                                                                               | 100                        | 2.5                                                                              | 125  | > 9.1 (2 $\mu\text{A}$ )                               | 7.5                                                  | 396                                                                          |
| 1N5350B     | 13                                                                               | 100                        | 2.5                                                                              | 100  | > 9.9 (1 $\mu\text{A}$ )                               | 7.0                                                  | 365                                                                          |
| 1N5351B     | 14                                                                               | 100                        | 2.5                                                                              | 75   | > 10.6 (1 $\mu\text{A}$ )                              | 6.7                                                  | 339                                                                          |
| 1N5352B     | 15                                                                               | 75                         | 2.5                                                                              | 75   | > 11.5 (1 $\mu\text{A}$ )                              | 6.3                                                  | 317                                                                          |
| 1N5353B     | 16                                                                               | 75                         | 2.5                                                                              | 75   | > 12.2 (1 $\mu\text{A}$ )                              | 6.0                                                  | 297                                                                          |
| 1N5354B     | 17                                                                               | 70                         | 2.5                                                                              | 75   | > 12.9                                                 | 5.8                                                  | 279                                                                          |
| 1N5355B     | 18                                                                               | 65                         | 2.5                                                                              | 75   | > 13.7                                                 | 5.5                                                  | 264                                                                          |
| 1N5356B     | 19                                                                               | 65                         | 3                                                                                | 75   | > 14.4                                                 | 5.3                                                  | 250                                                                          |
| 1N5357B     | 20                                                                               | 65                         | 3                                                                                | 75   | > 15.2                                                 | 5.1                                                  | 238                                                                          |
| 1N5358B     | 22                                                                               | 50                         | 3.5                                                                              | 75   | > 16.7                                                 | 4.7                                                  | 216                                                                          |
| 1N5359B     | 24                                                                               | 50                         | 3.5                                                                              | 100  | > 18.2                                                 | 4.4                                                  | 198                                                                          |
| 1N5360B     | 25                                                                               | 50                         | 4                                                                                | 110  | > 19.0                                                 | 4.3                                                  | 190                                                                          |
| 1N5361B     | 27                                                                               | 50                         | 5                                                                                | 120  | > 20.6                                                 | 4.1                                                  | 176                                                                          |
| 1N5362B     | 28                                                                               | 50                         | 6                                                                                | 130  | > 21.2                                                 | 3.9                                                  | 170                                                                          |
| 1N5363B     | 30                                                                               | 40                         | 8                                                                                | 140  | > 22.8                                                 | 3.7                                                  | 158                                                                          |
| 1N5364B     | 33                                                                               | 40                         | 10                                                                               | 150  | > 25.1                                                 | 3.5                                                  | 144                                                                          |
| 1N5365B     | 36                                                                               | 30                         | 11                                                                               | 160  | > 27.4                                                 | 3.3                                                  | 132                                                                          |
| 1N5366B     | 39                                                                               | 30                         | 14                                                                               | 170  | > 29.7                                                 | 3.1                                                  | 122                                                                          |
| 1N5367B     | 43                                                                               | 30                         | 20                                                                               | 190  | > 32.7                                                 | 2.8                                                  | 110                                                                          |
| 1N5368B     | 47                                                                               | 25                         | 25                                                                               | 210  | > 35.8                                                 | 2.7                                                  | 101                                                                          |
| 1N5369B     | 51                                                                               | 25                         | 27                                                                               | 230  | > 38.8                                                 | 2.5                                                  | 93                                                                           |
| 1N5370B     | 56                                                                               | 20                         | 35                                                                               | 280  | > 42.6                                                 | 2.3                                                  | 85                                                                           |
| 1N5371B     | 60                                                                               | 20                         | 40                                                                               | 350  | > 45.5                                                 | 2.2                                                  | 79                                                                           |
| 1N5372B     | 62                                                                               | 20                         | 42                                                                               | 400  | > 47.1                                                 | 2.1                                                  | 77                                                                           |
| 1N5373B     | 68                                                                               | 20                         | 44                                                                               | 500  | > 51.7                                                 | 2.0                                                  | 70                                                                           |
| 1N5374B     | 75                                                                               | 20                         | 45                                                                               | 620  | > 56.0                                                 | 1.9                                                  | 63                                                                           |
| 1N5375B     | 82                                                                               | 15                         | 65                                                                               | 720  | > 62.2                                                 | 1.8                                                  | 58                                                                           |
| 1N5376B     | 87                                                                               | 15                         | 75                                                                               | 760  | > 66.0                                                 | 1.7                                                  | 55                                                                           |
| 1N5377B     | 91                                                                               | 15                         | 75                                                                               | 760  | > 69.2                                                 | 1.6                                                  | 52                                                                           |
| 1N5378B     | 100                                                                              | 12                         | 90                                                                               | 800  | > 76.0                                                 | 1.5                                                  | 48                                                                           |
| 1N5379B     | 110                                                                              | 12                         | 125                                                                              | 1000 | > 83.6                                                 | 1.4                                                  | 43                                                                           |
| 1N5380B     | 120                                                                              | 10                         | 170                                                                              | 1150 | > 91.2                                                 | 1.3                                                  | 40                                                                           |
| 1N5381B     | 130                                                                              | 10                         | 190                                                                              | 1250 | > 98.8                                                 | 1.2                                                  | 37                                                                           |
| 1N5382B     | 140                                                                              | 8                          | 230                                                                              | 1500 | > 106                                                  | 1.2                                                  | 34                                                                           |
| 1N5383B     | 150                                                                              | 8                          | 330                                                                              | 1500 | > 114                                                  | 1.1                                                  | 32                                                                           |
| 1N5384B     | 160                                                                              | 8                          | 350                                                                              | 1650 | > 122                                                  | 1.1                                                  | 30                                                                           |
| 1N5385B     | 170                                                                              | 8                          | 380                                                                              | 1750 | > 129                                                  | 1.0                                                  | 28                                                                           |
| 1N5386B     | 180                                                                              | 5                          | 430                                                                              | 1750 | > 137                                                  | 1.0                                                  | 26                                                                           |
| 1N5387B     | 190                                                                              | 5                          | 450                                                                              | 1850 | > 144                                                  | 0.9                                                  | 25                                                                           |
| 1N5388B     | 200                                                                              | 5                          | 480                                                                              | 1850 | > 152                                                  | 0.9                                                  | 24                                                                           |

1 Notes see previous page – Fußnoten siehe vorhergehende Seite