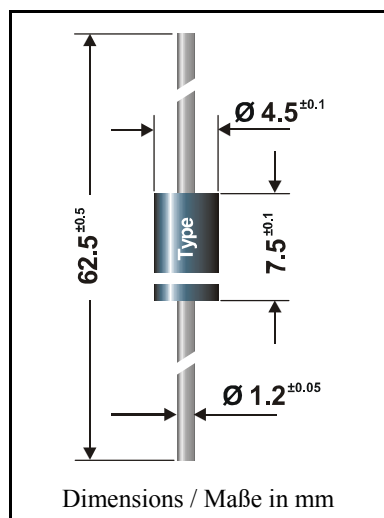


### Silicon-Power-Z-Diodes (non-planar technology)

### Silizium-Leistungs-Z-Dioden (flächendiffundierte Dioden)



|                                                                                       |                               |
|---------------------------------------------------------------------------------------|-------------------------------|
| Maximum power dissipation<br>Maximale Verlustleistung                                 | 5 W                           |
| Nominal Z-voltage – Nominale Z-Spannung                                               | 8.7...200 V                   |
| Plastic case<br>Kunststoffgehäuse                                                     | ~ DO-201                      |
| Weight approx. – Gewicht ca.                                                          | 1 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    | see page 16<br>siehe Seite 16 |

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                                                                 | $T_A = 25^\circ\text{C}$ | $P_{\text{tot}}$ | 5.0 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>$T_s$   | $-50...+150^\circ\text{C}$<br>$-50...+175^\circ\text{C}$ |
| Thermal resistance junction to ambient air<br>Wärmewiderstand Sperrschicht – umgebende Luft          |                          | $R_{\text{thA}}$ | $< 25 \text{ K/W}^1)$                                    |
| Thermal resistance junction to lead<br>Wärmewiderstand Sperrschicht – Anschlußdraht                  |                          | $R_{\text{thL}}$ | $< 8 \text{ K/W}$                                        |

Zener voltages see table on next page

Zener-Spannungen siehe Tabelle auf der nächsten Seite

<sup>1)</sup> 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

<sup>2)</sup> Tested with pulses – Gemessen mit Impulsen

## Maximum ratings

## Grenzwerte

| Type<br>Typ | Z-voltage <sup>2)</sup><br>Z-Spanng. <sup>2)</sup><br>$I_Z = I_{Z\text{test}}$<br>$V_Z$ [V] | Test<br>current<br>Meßstrom<br>$I_{Z\text{test}}$ [mA] | Dynamic resistance<br>Inhär. diff. Widerst.<br>$I_Z = I_{Z\text{test}}$ $I_Z = 1 \text{ mA}$<br>$r_{zj}$ [ $\Omega$ ] |      | Reverse volt.<br>Sperrspanng.<br>$I_R = 0.5 \mu\text{A}$<br>$V_R$ [V] | Surge current<br>Stoßstrom<br>$t_p = 8.3 \text{ ms}$<br>$I_{ZS}$ [A] | Z-current <sup>1)</sup><br>Z-Strom <sup>1)</sup><br>$T_A = 50^\circ\text{C}$<br>$I_{Z\text{max}}$ [mA] |
|-------------|---------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|------|-----------------------------------------------------------------------|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| 1N 5345B    | 8.7                                                                                         | 150                                                    | 2                                                                                                                     | 200  | > 6.6 (10 $\mu\text{A}$ )                                             | 9.5                                                                  | 546                                                                                                    |
| 1N 5346B    | 9.1                                                                                         | 150                                                    | 2                                                                                                                     | 150  | > 6.9 (7.5 $\mu\text{A}$ )                                            | 9.2                                                                  | 522                                                                                                    |
| 1N 5347B    | 10                                                                                          | 125                                                    | 2                                                                                                                     | 125  | > 7.6 (5 $\mu\text{A}$ )                                              | 8.6                                                                  | 475                                                                                                    |
| 1N 5348B    | 11                                                                                          | 125                                                    | 2.5                                                                                                                   | 125  | > 8.4 (5 $\mu\text{A}$ )                                              | 8.0                                                                  | 432                                                                                                    |
| 1N 5349B    | 12                                                                                          | 100                                                    | 2.5                                                                                                                   | 125  | > 9.1 (2 $\mu\text{A}$ )                                              | 7.5                                                                  | 396                                                                                                    |
| 1N 5350B    | 13                                                                                          | 100                                                    | 2.5                                                                                                                   | 100  | > 9.9 (1 $\mu\text{A}$ )                                              | 7.0                                                                  | 365                                                                                                    |
| 1N 5351B    | 14                                                                                          | 100                                                    | 2.5                                                                                                                   | 75   | > 10.6 (1 $\mu\text{A}$ )                                             | 6.7                                                                  | 339                                                                                                    |
| 1N 5352B    | 15                                                                                          | 75                                                     | 2.5                                                                                                                   | 75   | > 11.5 (1 $\mu\text{A}$ )                                             | 6.3                                                                  | 317                                                                                                    |
| 1N 5353B    | 16                                                                                          | 75                                                     | 2.5                                                                                                                   | 75   | > 12.2 (1 $\mu\text{A}$ )                                             | 6.0                                                                  | 297                                                                                                    |
| 1N 5354B    | 17                                                                                          | 70                                                     | 2.5                                                                                                                   | 75   | > 12.9                                                                | 5.8                                                                  | 279                                                                                                    |
| 1N 5355B    | 18                                                                                          | 65                                                     | 2.5                                                                                                                   | 75   | > 13.7                                                                | 5.5                                                                  | 264                                                                                                    |
| 1N 5356B    | 19                                                                                          | 65                                                     | 3                                                                                                                     | 75   | > 14.4                                                                | 5.3                                                                  | 250                                                                                                    |
| 1N 5357B    | 20                                                                                          | 65                                                     | 3                                                                                                                     | 75   | > 15.2                                                                | 5.1                                                                  | 238                                                                                                    |
| 1N 5358B    | 22                                                                                          | 50                                                     | 3.5                                                                                                                   | 75   | > 16.7                                                                | 4.7                                                                  | 216                                                                                                    |
| 1N 5359B    | 24                                                                                          | 50                                                     | 3.5                                                                                                                   | 100  | > 18.2                                                                | 4.4                                                                  | 198                                                                                                    |
| 1N 5360B    | 25                                                                                          | 50                                                     | 4                                                                                                                     | 110  | > 19.0                                                                | 4.3                                                                  | 190                                                                                                    |
| 1N 5361B    | 27                                                                                          | 50                                                     | 5                                                                                                                     | 120  | > 20.6                                                                | 4.1                                                                  | 176                                                                                                    |
| 1N 5362B    | 28                                                                                          | 50                                                     | 6                                                                                                                     | 130  | > 21.2                                                                | 3.9                                                                  | 170                                                                                                    |
| 1N 5363B    | 30                                                                                          | 40                                                     | 8                                                                                                                     | 140  | > 22.8                                                                | 3.7                                                                  | 158                                                                                                    |
| 1N 5364B    | 33                                                                                          | 40                                                     | 10                                                                                                                    | 150  | > 25.1                                                                | 3.5                                                                  | 144                                                                                                    |
| 1N 5365B    | 36                                                                                          | 30                                                     | 11                                                                                                                    | 160  | > 27.4                                                                | 3.3                                                                  | 132                                                                                                    |
| 1N 5366B    | 39                                                                                          | 30                                                     | 14                                                                                                                    | 170  | > 29.7                                                                | 3.1                                                                  | 122                                                                                                    |
| 1N 5367B    | 43                                                                                          | 30                                                     | 20                                                                                                                    | 190  | > 32.7                                                                | 2.8                                                                  | 110                                                                                                    |
| 1N 5368B    | 47                                                                                          | 25                                                     | 25                                                                                                                    | 210  | > 35.8                                                                | 2.7                                                                  | 101                                                                                                    |
| 1N 5369B    | 51                                                                                          | 25                                                     | 27                                                                                                                    | 230  | > 38.8                                                                | 2.5                                                                  | 93                                                                                                     |
| 1N 5370B    | 56                                                                                          | 20                                                     | 35                                                                                                                    | 280  | > 42.6                                                                | 2.3                                                                  | 85                                                                                                     |
| 1N 5371B    | 60                                                                                          | 20                                                     | 40                                                                                                                    | 350  | > 45.5                                                                | 2.2                                                                  | 79                                                                                                     |
| 1N 5372B    | 62                                                                                          | 20                                                     | 42                                                                                                                    | 400  | > 47.1                                                                | 2.1                                                                  | 77                                                                                                     |
| 1N 5373B    | 68                                                                                          | 20                                                     | 44                                                                                                                    | 500  | > 51.7                                                                | 2.0                                                                  | 70                                                                                                     |
| 1N 5374B    | 75                                                                                          | 20                                                     | 45                                                                                                                    | 620  | > 56.0                                                                | 1.9                                                                  | 63                                                                                                     |
| 1N 5375B    | 82                                                                                          | 15                                                     | 65                                                                                                                    | 720  | > 62.2                                                                | 1.8                                                                  | 58                                                                                                     |
| 1N 5376B    | 87                                                                                          | 15                                                     | 75                                                                                                                    | 760  | > 66.0                                                                | 1.7                                                                  | 55                                                                                                     |
| 1N 5377B    | 91                                                                                          | 15                                                     | 75                                                                                                                    | 760  | > 69.2                                                                | 1.6                                                                  | 52                                                                                                     |
| 1N 5378B    | 100                                                                                         | 12                                                     | 90                                                                                                                    | 800  | > 76.0                                                                | 1.5                                                                  | 48                                                                                                     |
| 1N 5379B    | 110                                                                                         | 12                                                     | 125                                                                                                                   | 1000 | > 83.6                                                                | 1.4                                                                  | 43                                                                                                     |
| 1N 5380B    | 120                                                                                         | 10                                                     | 170                                                                                                                   | 1150 | > 91.2                                                                | 1.3                                                                  | 40                                                                                                     |
| 1N 5381B    | 130                                                                                         | 10                                                     | 190                                                                                                                   | 1250 | > 98.8                                                                | 1.2                                                                  | 37                                                                                                     |
| 1N 5382B    | 140                                                                                         | 8                                                      | 230                                                                                                                   | 1500 | > 106                                                                 | 1.2                                                                  | 34                                                                                                     |
| 1N 5383B    | 150                                                                                         | 8                                                      | 330                                                                                                                   | 1500 | > 114                                                                 | 1.1                                                                  | 32                                                                                                     |
| 1N 5384B    | 160                                                                                         | 8                                                      | 350                                                                                                                   | 1650 | > 122                                                                 | 1.1                                                                  | 30                                                                                                     |
| 1N 5385B    | 170                                                                                         | 8                                                      | 380                                                                                                                   | 1750 | > 129                                                                 | 1.0                                                                  | 28                                                                                                     |
| 1N 5386B    | 180                                                                                         | 5                                                      | 430                                                                                                                   | 1750 | > 137                                                                 | 1.0                                                                  | 26                                                                                                     |
| 1N 5387B    | 190                                                                                         | 5                                                      | 450                                                                                                                   | 1850 | < 144                                                                 | 0.9                                                                  | 25                                                                                                     |
| 1N 5388B    | 200                                                                                         | 5                                                      | 480                                                                                                                   | 1850 | > 152                                                                 | 0.9                                                                  | 24                                                                                                     |

<sup>1)</sup> Notes see previous page – Fußnoten siehe vorhergehende Seite