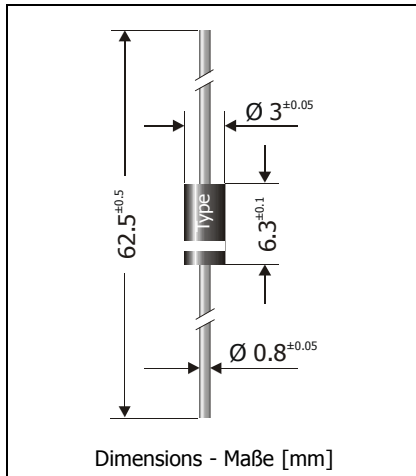


## BZW06-5V8 ... BZW06-376B

### Unidirectional and bidirectional Transient Voltage Suppressor Diodes Unidirektionale und bidirektionale Spannungs-Begrenzer-Dioden

Version 2005-07-19



|   |                     |
|---|---------------------|
| Peak pulse power dissipation<br>Impuls-Verlustleistung                                | 600 W               |
| Nominal stand-off voltage<br>Nominale Sperrspannung                                   | 5.8...376 V         |
| Plastic case<br>Kunststoffgehäuse   | DO-15<br>(DO-204AC) |
| Weight approx.<br>Gewicht ca.   | 0.4 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    |                     |



For bidirectional types (add suffix "B"), electrical characteristics apply in both directions.  
Für bidirektionale Dioden (ergänze Suffix "B") gelten die elektrischen Werte in beiden Richtungen.

#### Maximum ratings and Characteristics

#### Grenz- und Kennwerte

|  |  |                |  |
|--|--|----------------|--|
| Peak pulse power dissipation (10/1000 $\mu$ s waveform)<br>Impuls-Verlustleistung (Strom-Impuls 10/1000 $\mu$ s) | $T_A = 25^\circ\text{C}$   | $P_{PPM}$      | 600 W <sup>1)</sup>                            |
| Steady state power dissipation<br>Verlustleistung im Dauerbetrieb  | $T_L = 75^\circ\text{C}$   | $P_{M(AV)}$    | 5 W  |
| Peak forward surge current, 60 Hz half sine-wave<br>Stoßstrom für eine 60 Hz Sinus-Halbwelle                     | $T_A = 25^\circ\text{C}$   | $I_{FSM}$      | 100 A <sup>2)</sup>                            |
| Max. instantaneous forward voltage<br>Augenblickswert der Durchlass-Spannung                                     | $I_F = 50\text{ A}$<br>$V_{BR} \leq 200\text{ V}$<br>$V_{BR} > 200\text{ V}$ | $V_F$<br>$V_F$ | < 3.0 V <sup>2)</sup><br>< 6.5 V <sup>2)</sup> |
| Operating junction temperature – Sperrschichttemperatur<br>Storage temperature – Lagerungstemperatur             |  | $T_j$<br>$T_s$ | -50...+175°C<br>-50...+175°C                   |
| Thermal resistance junction to ambient air<br>Wärmewiderstand Sperrschicht – umgebende Luft                      |  | $R_{thA}$      | < 45 K/W                                       |
| Thermal resistance junction to terminal<br>Wärmewiderstand Sperrschicht – Anschluss                              |  | $R_{thL}$      | < 15 K/W                                       |

- 1 Non-repetitive pulse see curve  $I_{pp} = f(t) / P_{pp} = f(t)$   
Höchstzulässiger Spitzenwert eines einmaligen Impulses, siehe Kurve  $I_{pp} = f(t) / P_{pp} = f(t)$
- 2 Unidirectional diodes only – Nur für unidirektionale Dioden

**Maximum ratings**
**Grenzwerte**

| Type<br>Typ | Stand-off voltage<br>Sperrspannung | Max. rev. current<br>Max. Sperrstrom<br>at / bei $V_{WM}$ | Breakdown voltage at $I_T = 1$ mA<br>Abbruch-Spannung bei $I_T = 1$ mA<br>) at / bei $I_T = 10$ mA |                | Max. clamping voltage<br>Max. Begrenzer-Spannung<br>at / bei $I_{PPM}$ (10/1000 $\mu$ s) |               |
|-------------|------------------------------------|---|--|----------------|--|---------------|
|             | $V_{WM}$ [V]                       | $I_D$ [ $\mu$ A]  | $V_{BR}$ [V]   |                | $V_C$ [V]  | $I_{PPM}$ [A] |
| BZW06-5V8   | 5.8                                | 1000  | 6.8 $\pm$ 5%   | 6.45...7.14 *) | 10.5   | 57            |
| BZW06-6V4   | 6.4                                | 500   | 7.5 $\pm$ 5%   | 7.13...7.88 *) | 11.3   | 53            |
| BZW06-7V0   | 7.02                               | 200   | 8.2 $\pm$ 5%   | 7.79...8.61 *) | 12.1   | 50            |
| BZW06-7V8   | 7.78                               | 50  | 9.1 $\pm$ 5%   | 8.65...9.55    | 13.4   | 45            |
| BZW06-8V5   | 8.55                               | 10  | 10 $\pm$ 5%  | 9.5...10.5     | 14.5   | 41            |
| BZW06-9V4   | 9.4                                | 5   | 11 $\pm$ 5%  | 10.5...11.6    | 15.6   | 38            |
| BZW06-10    | 10.2                               | 5   | 12 $\pm$ 5%  | 11.4...12.6    | 16.7   | 36            |
| BZW06-11    | 11.1                               | 5   | 13 $\pm$ 5%  | 12.4...13.7    | 18.2   | 33            |
| BZW06-13    | 12.8                               | 5   | 15 $\pm$ 5%  | 14.3...15.8    | 21.2   | 28            |
| BZW06-14    | 13.6                               | 5   | 16 $\pm$ 5%  | 15.2...16.8    | 22.5   | 27            |
| BZW06-15    | 15.3                               | 5   | 18 $\pm$ 5%  | 17.1...18.9    | 25.2   | 24            |
| BZW06-17    | 17.1                               | 5   | 20 $\pm$ 5%  | 19.0...21.0    | 27.7   | 22            |
| BZW06-19    | 18.8                               | 5   | 22 $\pm$ 5%  | 20.9...23.1    | 30.6   | 20            |
| BZW06-20    | 20.5                               | 5   | 24 $\pm$ 5%  | 22.8...25.2    | 33.2   | 18            |
| BZW06-23    | 23.1                               | 5   | 27 $\pm$ 5%  | 25.7...28.4    | 37.5   | 16            |
| BZW06-26    | 25.6                               | 5   | 30 $\pm$ 5%  | 28.5...31.5    | 41.5   | 14.5          |
| BZW06-28    | 28.2                               | 5   | 33 $\pm$ 5%  | 31.4...34.7    | 45.7   | 13.1          |
| BZW06-31    | 30.8                               | 5   | 36 $\pm$ 5%  | 34.2...37.8    | 49.9   | 12.0          |
| BZW06-33    | 33.3                               | 5   | 39 $\pm$ 5%  | 37.1...41.0    | 53.9   | 11.1          |
| BZW06-37    | 36.8                               | 5   | 43 $\pm$ 5%  | 40.9...45.2    | 59.3   | 10.1          |
| BZW06-40    | 40.2                               | 5   | 47 $\pm$ 5%  | 44.7...49.4    | 64.8   | 9.3           |
| BZW06-44    | 43.6                               | 5   | 51 $\pm$ 5%  | 48.5...53.6    | 70.1   | 8.6           |
| BZW06-48    | 47.8                               | 5   | 56 $\pm$ 5%  | 53.2...58.8    | 77.0   | 7.8           |
| BZW06-53    | 53.0                               | 5   | 62 $\pm$ 5%  | 58.9...65.1    | 85.0   | 7.1           |
| BZW06-58    | 58.1                               | 5   | 68 $\pm$ 5%  | 64.6...71.4    | 92.0   | 6.5           |
| BZW06-64    | 64.1                               | 5   | 75 $\pm$ 5%  | 71.3...78.8    | 103  | 5.8           |
| BZW06-70    | 70.1                               | 5   | 82 $\pm$ 5%  | 77.9...86.1    | 113  | 5.3           |
| BZW06-78    | 77.8                               | 5   | 91 $\pm$ 5%  | 86.5...95.5    | 125  | 4.8           |
| BZW06-85    | 85.8                               | 5   | 100 $\pm$ 5%   | 95.0...105     | 137  | 4.4           |
| BZW06-94    | 94.0                               | 5   | 110 $\pm$ 5%   | 105...116      | 152  | 3.9           |
| BZW06-102   | 102                                | 5   | 120 $\pm$ 5%   | 114...126      | 165  | 3.6           |
| BZW06-111   | 111                                | 5   | 130 $\pm$ 5%   | 124...137      | 179  | 3.4           |
| BZW06-128   | 128                                | 5   | 150 $\pm$ 5%   | 143...158      | 207  | 2.9           |
| BZW06-136   | 136                                | 5   | 160 $\pm$ 5%   | 152...168      | 219  | 2.7           |
| BZW06-145   | 145                                | 5   | 170 $\pm$ 5%   | 162...179      | 234  | 2.6           |
| BZW06-154   | 154                                | 5   | 180 $\pm$ 5%   | 171...189      | 246  | 2.4           |
| BZW06-171   | 171                                | 5   | 200 $\pm$ 5%   | 190...210      | 274  | 2.2           |
| BZW06-188   | 188                                | 5   | 220 $\pm$ 5%   | 209...231      | 301  | 2.0           |
| BZW06-213   | 213                                | 5   | 250 $\pm$ 5%   | 237...263      | 344  | 1.8           |
| BZW06-239   | 239                                | 5   | 280 $\pm$ 5%   | 266...294      | 384  | 1.7           |
| BZW06-256   | 256                                | 5   | 300 $\pm$ 5%   | 285...315      | 414  | 1.6           |
| BZW06-273   | 273                                | 5   | 320 $\pm$ 5%   | 304...336      | 438  | 1.6           |
| BZW06-299   | 299                                | 5   | 350 $\pm$ 5%   | 332...368      | 482  | 1.6           |
| BZW06-342   | 342                                | 5   | 400 $\pm$ 5%   | 380...420      | 548  | 1.3           |
| BZW06-376   | 376                                | 5   | 440 $\pm$ 5%   | 418...462      | 603  | 1.3           |

