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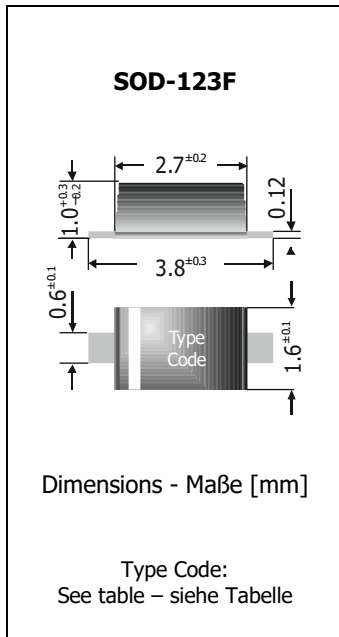
elektronikai alkatrész áruház

**EN:** This Datasheet is presented by the manufacturer.

Please visit our website for pricing and availability at [www.hestore.hu](http://www.hestore.hu).

|   |   |
|---|---|
| <b>BZT52C2V0 ... BZT52C75</b><br><b>SMD Planar Zener Diodes</b><br><b>SMD Planar Zener-Dioden</b> | <b>P<sub>tot</sub> = 500 mW</b><br><b>V<sub>Z</sub> = 2.0 V ... 75 V</b><br><b>T<sub>jmax</sub> = 150°C</b> |
|---|---|

Version 2019-12-05



**Typical Applications**  
 Voltage stabilization and regulators  
 (For overvoltage protection  
 see TVS diodes SMF series)  
 Commercial grade  
 Suffix -Q: AEC-Q101 compliant <sup>1)</sup>  
 Suffix -AQ: AEC-Q101 qualified <sup>1)</sup>

**Features**  
 Sharp Zener voltage breakdown  
 Low leakage current  
 Compliant to RoHS, REACH,  
 Conflict Minerals <sup>1)</sup>

**Mechanical Data <sup>1)</sup>**

|                              |           |
|------------------------------|-----------|
| Taped and reeled             | 3000 / 7" |
| Weight approx.               | 0.01 g    |
| Case material                | UL 94V-0  |
| Solder & assembly conditions | 260°C/10s |
|                              | MSL = 1   |



**Typische Anwendungen**  
 Spannungsstabilisierung und -regler  
 (Für Überspannungsschutz  
 siehe TVS-Diodenreihe SMF)  
 Standardausführung  
 Suffix -Q: AEC-Q101 konform <sup>1)</sup>  
 Suffix -AQ: in AEC-Q101 qualifiziert <sup>1)</sup>

**Besonderheiten**  
 Scharfer Zenerspannungsabbruch  
 Niedriger Sperrstrom  
 Konform zu RoHS, REACH,  
 Konfliktmineralien <sup>1)</sup>

**Mechanische Daten <sup>1)</sup>**

|                            |
|----------------------------|
| Gegurtet auf Rolle         |
| Gewicht ca.                |
| Gehäusematerial            |
| Löt- und Einbaubedingungen |

Standard Zener voltage tolerance is graded to the international E 24 (~ ±5%) standard. Zener voltages see table on next page. Other voltage tolerances and higher Zener voltages on request.

Die Toleranz der Zener-Spannung ist in der Standard-Ausführung gestuft nach der internationalen Reihe E 24 (~ ±5%). Zener-Spannungen siehe Tabelle auf der nächsten Seite. Andere Toleranzen oder höhere Z-Spannungen auf Anfrage.

**Maximum ratings <sup>2)</sup>**

**Grenzwerte <sup>2)</sup>**

|   |                  |                      |
|---|------------------|----------------------|
| Power dissipation<br>Verlustleistung          | P <sub>tot</sub> | 500 mW <sup>3)</sup> |
| Junction temperature – Sperrschichttemperatur | T <sub>j</sub>   | -50...+150°C         |
| Storage temperature – Lagerungstemperatur     | T <sub>s</sub>   | -50...+150°C         |

**Characteristics**

**Kennwerte**

|   |                  |                       |
|---|------------------|-----------------------|
| Typ. thermal resistance junction to ambient<br>Typ. Wärmewiderstand Sperrschicht-Umgebung | R <sub>thA</sub> | 250 K/W <sup>3)</sup> |
|---|------------------|-----------------------|

1 Please note the [detailed information on our website](#) or at the beginning of the data book  
 Bitte beachten Sie die [detaillierten Hinweise auf unserer Internetseite](#) bzw. am Anfang des Datenbuches  
 2 T<sub>A</sub> = 25°C unless otherwise specified – T<sub>A</sub> = 25°C wenn nicht anders angegeben  
 3 Mounted on P.C. board with 25 mm<sup>2</sup> copper pads per terminal – Montage auf Leiterplatte mit 25 mm<sup>2</sup> Löt pads je Anschluss

**Characteristics**

 (T<sub>j</sub> = 25°C unless otherwise specified)

**Kennwerte**

 (T<sub>j</sub> = 25°C wenn nicht anders angegeben)

| Type<br>Typ | Code             | Z-voltage range <sup>1)</sup><br>Z-Spannungs-Bereich <sup>2)</sup><br>I <sub>Z</sub> = 5 mA |                        | Dynamic resistance<br>Diff. Widerstand<br>r <sub>Zj</sub> [Ω] at f = 1 kHz | Temp. Coefficient<br>of Z-voltage<br>...der Z-Spannung | Reverse voltage<br>Sperrspannung<br>V <sub>R</sub> at/bei I <sub>R</sub> |                     | Z-current <sup>2)</sup><br>Z-Strom <sup>2)</sup><br>T <sub>A</sub> = 25°C |
|-------------|------------------|---|------------------------|--|--|--|---------------------|---|
| BZT52C...   | <sup>3)</sup>    | V <sub>Z min</sub> [V]  | V <sub>Z max</sub> [V] | I <sub>Z</sub> = 5 mA  | α <sub>VZ</sub> [10 <sup>-4</sup> /°C]                 | V <sub>R</sub> [V]   | I <sub>R</sub> [μA] | I <sub>Z max</sub> [mA]   |
| 2V0/-Q/-AQ  | 4A               | 1.8   | 2.2                    | < 100  | -9...-6  | 0.5  | 120                 | 227   |
| 2V4/-Q/-AQ  | 4C               | 2.2   | 2.6                    | < 100  | -9...-6  | 1  | 120                 | 192   |
| 2V7/-Q      | 4D               | 2.5   | 2.9                    | < 110  | -9...-6  | 1  | 120                 | 172   |
| 3V0         | 4E               | 2.8   | 3.2                    | < 120  | -8...-5  | 1  | 50                  | 156   |
| 3V3/-Q/-AQ  | 4F               | 3.1   | 3.5                    | < 130  | -8...-5  | 1  | 20                  | 143   |
| 3V6         | 4H               | 3.4   | 3.8                    | < 130  | -8...-5  | 1  | 10                  | 132   |
| 3V9         | 4J               | 3.6   | 4.2                    | < 130  | -8...-5  | 1  | 5                   | 119   |
| 4V3         | 4K               | 4.0   | 4.6                    | < 130  | -6...-3  | 1  | 5                   | 109   |
| 4V7/-Q/-AQ  | 4M               | 4.4   | 5.0                    | < 130  | -5...+2  | 1  | 2                   | 100   |
| 5V1/-Q/-AQ  | 4N               | 4.8   | 5.4                    | < 130  | -2...+2  | 1.5  | 2                   | 93  |
| 5V6/-Q/-AQ  | 4P               | 5.2   | 6.0                    | < 80   | -5...+5  | 2.5  | 1                   | 83  |
| 6V2         | 4R               | 5.8   | 6.6                    | < 50   | -3...+6  | 3  | 1                   | 76  |
| 6V8/-Q/-AQ  | 4X               | 6.4   | 7.2                    | < 30   | +3...+7  | 3.5  | 0.5                 | 69  |
| 7V5/-Q      | 4Y               | 7.0   | 7.9                    | < 30   | +3...+7  | 4  | 0.5                 | 63  |
| 8V2/-Q/-AQ  | 4Z               | 7.7   | 8.7                    | < 30   | +8...+7  | 5  | 0.5                 | 57  |
| 9V1         | 5A               | 8.5   | 9.6                    | < 30   | +3...+9  | 6  | 0.5                 | 52  |
| 10          | 5B               | 9.4   | 10.6                   | < 30   | +3...+10   | 7  | 0.1                 | 47  |
| 11          | 5C               | 10.4  | 11.6                   | < 30   | +3...+11   | 8  | 0.1                 | 43  |
| 12/-Q       | 5D               | 11.4  | 12.7                   | < 35   | +3...+11   | 9  | 0.1                 | 39  |
| 13/-Q       | 5E               | 12.4  | 14.1                   | < 35   | +3...+11   | 10   | 0.1                 | 35  |
| 15/-Q/-AQ   | 5F               | 13.8  | 15.6                   | < 40   | +3...+11   | 11   | 0.1                 | 32  |
| 16/-Q/-AQ   | 5H               | 15.3  | 17.1                   | < 40   | +3...+11   | 12   | 0.1                 | 29  |
| 18/-Q/-AQ   | 5J               | 16.8  | 19.1                   | < 45   | +3...+11   | 13   | 0.1                 | 26  |
| 20          | 5K               | 18.8  | 21.2                   | < 50   | +3...+11   | 15   | 0.1                 | 24  |
| 22          | 5M               | 20.8  | 23.3                   | < 55   | +4...+12   | 17   | 0.1                 | 21  |
| 24          | 5N               | 22.8  | 25.6                   | < 60   | +4...+12   | 19   | 0.1                 | 20  |
| 27/-Q       | 5P               | 25.1  | 28.9                   | < 70   | +4...+12   | 21   | 0.1                 | 17  |
| 30          | 5R               | 28  | 32                     | < 80   | +4...+12   | 23   | 0.1                 | 16  |
| 33          | 5X               | 31  | 35                     | < 80   | +4...+12   | 25   | 0.1                 | 14  |
| 36          | 5Y               | 34  | 38                     | < 90   | +4...+12   | 27   | 0.1                 | 13  |
|             | I <sub>Z</sub> = | 2.5 mA  |                        | 2 mA   |  |  |                     |   |
| 39          | 5Z               | 37  | 41                     | < 100  | +4...+12   | 30   | 2                   | 12  |
| 43          | 6A               | 40  | 46                     | < 130  | +4...+12   | 33   | 2                   | 11  |
| 47          | 6B               | 44  | 50                     | < 150  | +4...+12   | 36   | 2                   | 10  |
| 51          | 6C               | 48  | 54                     | < 180  | +4...+12   | 39   | 1                   | 9   |
| 56          | 6D               | 52  | 60                     | < 180  | +4...+12   | 43   | 1                   | 8   |
| 62          | 6E               | 58  | 66                     | < 200  | +4...+12   | 47   | 0.2                 | 8   |
| 68          | 6F               | 64  | 72                     | < 250  | +4...+12   | 52   | 0.2                 | 7   |
| 75/-AQ      | 6H               | 70  | 79                     | < 300  | +4...+12   | 57   | 0.2                 | 6   |

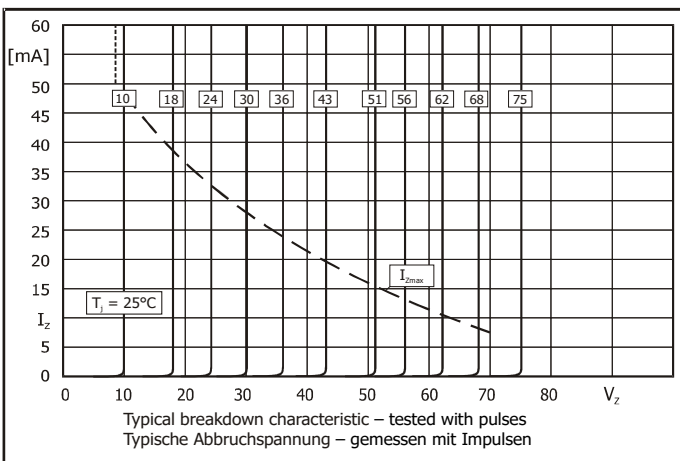
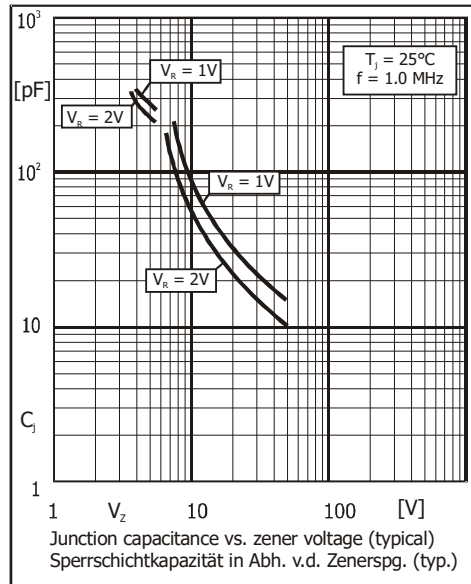
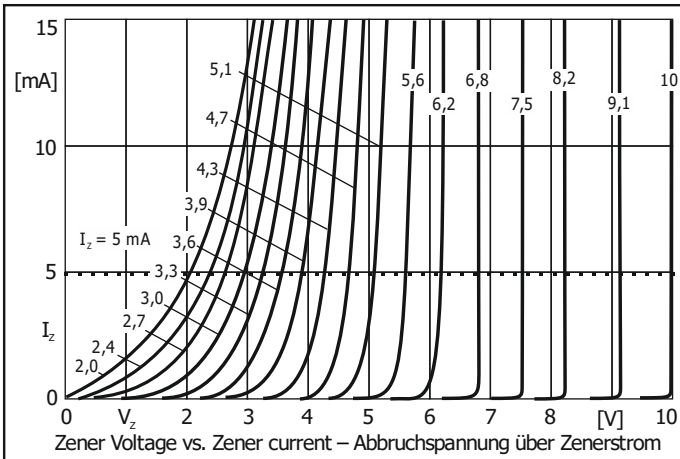
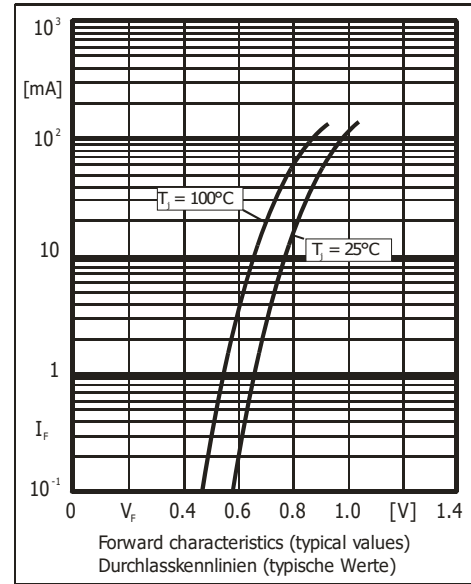
1 Tested with pulses (20 ms) – Gemessen mit Impulsen (20 ms)

 2 Mounted on P.C. board with 25 mm<sup>2</sup> copper pads per terminal – Montage auf Leiterplatte mit 25 mm<sup>2</sup> Löt-pad je Anschluss

3 Marking of -AQ parts: Nominal Zener voltage followed by "Z", e. g. "2V0Z" for BZT52C2V0-AQ and "18VZ" for BZT52C18-AQ

Markierung der -AQ Versionen: Nominelle Zenerspannung plus „Z“, z. B. „2V0Z“ für BZT52C2V0-AQ and „18VZ“ für BZT5218-AQ

BZT52C2V0 ... BZT52C75



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**Haftungsausschluss:** Siehe Datenbuch Seite 2 oder [Internet](#)