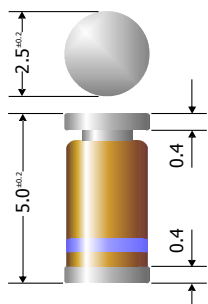
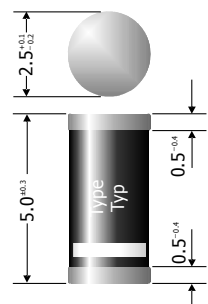


**ZMY1, ZMY3.0G ... ZMY9.1G, ZMY10 ... ZMY200**

**SMD Zener Diodes**  
**SMD Zener-Dioden**

**P<sub>tot</sub> = 1 W, 1.3W**  
**V<sub>Z</sub> = 1 V ... 200 V**  
**T<sub>jmax</sub> = 150°C, 175°C**

Version 2016-03-21

| ZMY...G   | ZMY...   |
|---|--|
| ~ DO-213AB<br>Glass MELF<br>(planar)  | ~ DO-213AB<br>Plastic MELF<br>(non-planar)   |
|      |                                       |
| Blue cathode ring<br>Type on label only<br>Blauer Kathodenring<br>Typ nur auf Etikett | White cathode mark<br>Type: Zxx where xx = V <sub>Z</sub><br>Weiße Kath.markierung<br>Typ: Zxx mit xx = V <sub>Z</sub> |
| Dimensions - Maße [mm]  |  |

**Typical Applications**

Voltage stabilization/regulators  
(For overvoltage protection  
– uni- and bi-directional – see  
TVS diodes TGL41 series)  
Commercial grade <sup>1)</sup>

**Features**

ZMY...G: Low leakage current  
Sharp Zener voltage breakdown  
ZMY...: High power dissipation  
V<sub>Z</sub> up to 200 V  
Compliant to RoHS, REACH,  
Conflict Minerals <sup>1)</sup>

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

Taped and reeled 5000 / 13"  
Weight approx. 0.12 g  
Plastic case material UL 94V-0  
Solder & assembly conditions 260°C/10s  
MSL = 1

**Typische Anwendungen**

Spannungsstabilisierung/-regler  
(Für Überspannungsschutz  
– uni- und bidirektional – siehe  
TVS-Diodenreihe TGL41)  
Standardausführung <sup>1)</sup>

**Besonderheiten**

ZMY...G: Niedriger Sperrstrom  
Scharfer Zenerabbruch  
ZMY...: Hohe Leistungsfähigkeit  
V<sub>Z</sub> bis zu 200 V  
Konform zu RoHS, REACH,  
Konfliktmineralien <sup>1)</sup>

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

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



Standard Zener voltage tolerance is graded to the international E 24 (~ ±5%) standard.  
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%). Andere Toleranzen oder höhere Arbeitsspannungen auf Anfrage.

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

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

|   |                     |                       |                  |                     |
|---|---------------------|-----------------------|------------------|---------------------|
| Power dissipation<br>Verlustleistung  | ZMY3.0G ... 9.1G    | T <sub>A</sub> = 25°C | P <sub>tot</sub> | 1.0 W <sup>3)</sup> |
|   | ZMY1, ZMY10 ... 200 | T <sub>A</sub> = 50°C | P <sub>tot</sub> | 1.3 W <sup>3)</sup> |
| Non repetitive peak pulse power, t < 1 ms<br>Einmalige Impuls-Verlustleistung, t < 1 ms | ZMY3.0G ... 9.1G    | T <sub>A</sub> = 25°C | P <sub>ZSM</sub> | N/A                 |
|   | ZMY1, ZMY10 ... 200 | T <sub>A</sub> = 25°C | P <sub>ZSM</sub> | 40 W                |
| Operating junction temperature<br>Sperrschichttemperatur                                | ZMY3.0G ... 9.1G    |                       | T <sub>j</sub>   | -50...+175°C        |
|   | ZMY1, ZMY10 ... 200 |                       | T <sub>j</sub>   | -50...+150°C        |
| Storage temperature – Lagerungstemperatur   |                     |                       | T <sub>s</sub>   | -50...+175°C        |

**Characteristics**

**Kennwerte**

|  |                     |                  |                         |
|--|---------------------|------------------|-------------------------|
| Thermal resistance junction-ambient<br>Wärmewiderstand Sperrschicht-Umgebung   | ZMY3.0G ... 9.1G    | R <sub>thA</sub> | < 150 K/W <sup>3)</sup> |
|  | ZMY1, ZMY10 ... 200 | R <sub>thA</sub> | < 45 K/W <sup>3)</sup>  |
| Thermal resistance junction-terminal<br>Wärmewiderstand Sperrschicht-Anschluss | ZMY3.0G ... 9.1G    | R <sub>thT</sub> | < 70 K/W                |
|  | ZMY1, ZMY10 ... 200 | R <sub>thT</sub> | < 10 K/W                |

- 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
- T<sub>j</sub> = 25°C unless otherwise specified – T<sub>j</sub> = 25°C wenn nicht anders angegeben
- Mounted on P.C. board with 50 mm<sup>2</sup> copper pads per terminal – Montage auf Leiterplatte mit 50 mm<sup>2</sup> Löt pads je Anschluss
- Tested with pulses – Gemessen mit Impulsen
- The ZMY1 is a diode operated in forward mode. Hence, the index of all parameters should be "F" instead of "Z".  
The cathode, indicated by a white band, has to be connected to the negative pole.  
Die ZMY1 ist eine in Durchlass betriebene Diode. Daher ist bei allen Kenn- und Grenzwerten der Index "F" anstatt "Z" zu setzen.  
Die mit weißem Balken gekennzeichnete Kathode ist mit dem Minuspol zu verbinden.

**Characteristics**

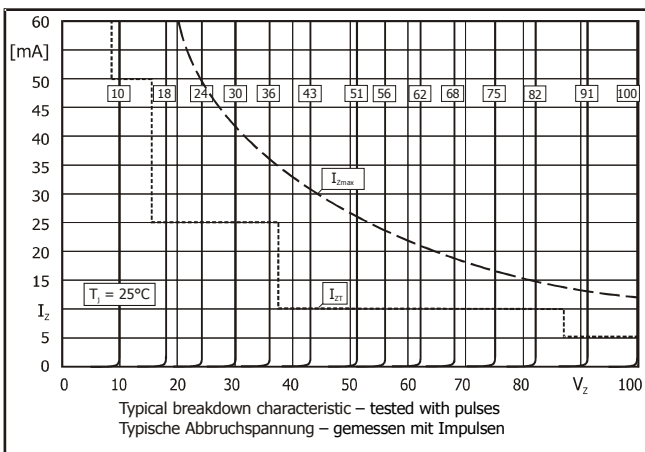
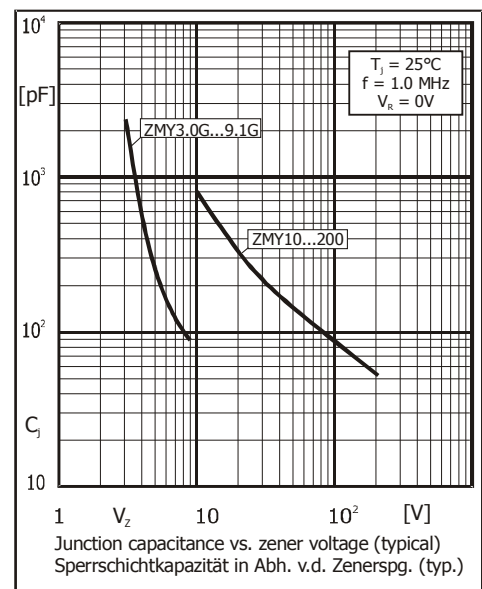
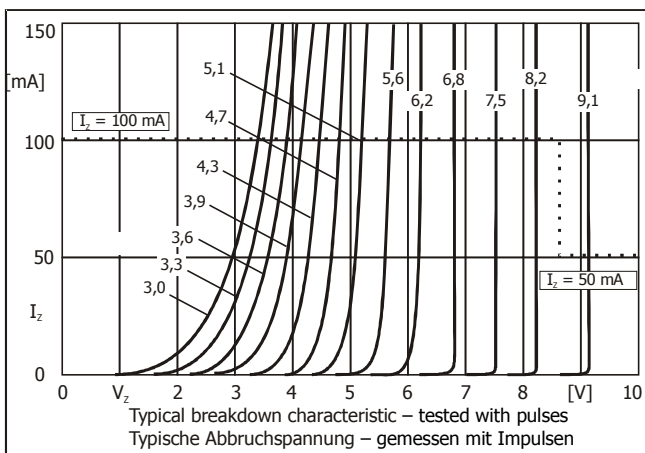
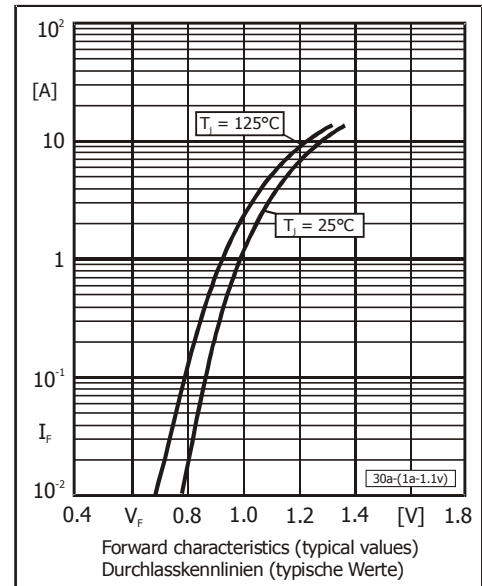
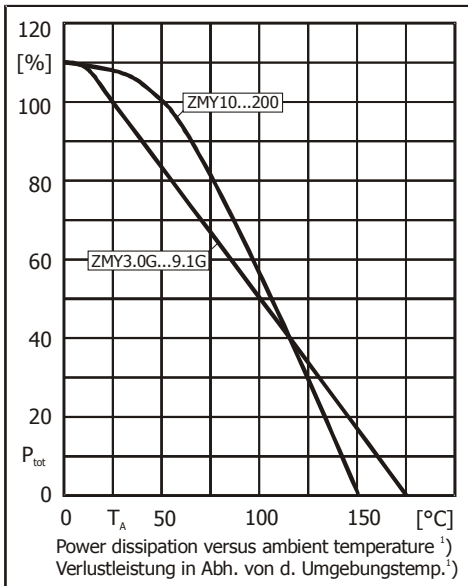
 (T<sub>j</sub> = 25°C unless otherwise specified)

**Kennwerte**

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

| Type<br>Typ        | Zener voltage <sup>4)</sup><br>Zener-Spannung <sup>4)</sup><br>I <sub>Z</sub> = I <sub>Ztest</sub> |                       | Test current<br>Mess-Strom<br>I <sub>Ztest</sub> [mA] | Dynamic resistance<br>Diff. Widerstand<br>I <sub>Ztest</sub> / f = 1 kHz<br>r <sub>Zj</sub> [Ω] | Temp. Coeffic.<br>of Z-voltage<br>...der Z-Spannung<br>α <sub>VZ</sub> [10 <sup>-4</sup> / °C] | Reverse volt.<br>Sperrspanng.<br>I <sub>R</sub> = 1 μA<br>V <sub>R</sub> [V] | Z-current <sup>3)</sup><br>Z-Strom <sup>3)</sup><br>T <sub>A</sub> = 50°C<br>I <sub>Zmax</sub> [mA] |
|--------------------|--|-----------------------|---|---|--|--|---|
|                    | V <sub>Zmin</sub> [V]  | V <sub>Zmax</sub> [V] |   |   |  |  |   |
| ZMY1 <sup>5)</sup> | 0.71   | 0.82                  | 100   | 0.5 (<1)  | -26...-16  | -  | 1000  |
| ZMY3.0G            | 2.8  | 3.2                   | 100   | 5 (<8)  | -8...+1  | -  | 313   |
| ZMY3.3G            | 3.1  | 3.5                   | 100   | 5 (<8)  | -8...+1  | > 0.7 / 150 μA   | 286   |
| ZMY3.6G            | 3.4  | 3.8                   | 100   | 5 (<8)  | -8...+1  | > 0.7 / 100 μA   | 263   |
| ZMY3.9G            | 3.7  | 4.1                   | 100   | 4 (<7)  | -7...+2  | > 0.7 / 100 μA   | 244   |
| ZMY4.3G            | 4.0  | 4.6                   | 100   | 4 (<7)  | -7...+3  | > 0.7 / 50 μA  | 217   |
| ZMY4.7G            | 4.4  | 5.0                   | 100   | 4 (<7)  | -7...+4  | > 0.7 / 10 μA  | 200   |
| ZMY5.1G            | 4.8  | 5.4                   | 100   | 2 (<5)  | -6...+5  | > 0.7 / 10 μA  | 185   |
| ZMY5.6G            | 5.2  | 6.0                   | 100   | 1 (<2)  | -3...+5  | > 0.5 / 3 μA   | 167   |
| ZMY6.2G            | 5.8  | 6.6                   | 100   | 1 (<2)  | -1...+6  | > 1.5 / 500 nA   | 152   |
| ZMY6.8G            | 6.4  | 7.2                   | 100   | 1 (<2)  | 0...+7   | > 2 / 500 nA   | 139   |
| ZMY7.5G            | 7.0  | 7.9                   | 100   | 1 (<2)  | 0...+7   | > 3 / 500 nA   | 127   |
| ZMY8.2G            | 7.7  | 8.7                   | 100   | 1 (<2)  | +3...+8  | > 6 / 500 nA   | 115   |
| ZMY9.1G            | 8.5  | 9.6                   | 50  | 2 (<4)  | +3...+8  | > 7 / 500 nA   | 104   |
| ZMY10              | 9.4  | 10.6                  | 50  | 2 (<4)  | +5...+9  | > 5  | 123   |
| ZMY11              | 10.4   | 11.6                  | 50  | 4 (<7)  | +5...+10   | > 5  | 112   |
| ZMY12              | 11.4   | 12.7                  | 50  | 4 (<7)  | +5...+10   | > 7  | 102   |
| ZMY13              | 12.4   | 14.1                  | 50  | 5 (<10)   | +5...+10   | > 7  | 92  |
| ZMY15              | 13.8   | 15.6                  | 50  | 5 (<10)   | +5...+10   | > 10   | 83  |
| ZMY16              | 15.3   | 17.1                  | 25  | 6 (<15)   | +6...+11   | > 10   | 76  |
| ZMY18              | 16.8   | 19.1                  | 25  | 6 (<15)   | +6...+11   | > 10   | 68  |
| ZMY20              | 18.8   | 21.2                  | 25  | 6 (<15)   | +6...+11   | > 10   | 61  |
| ZMY22              | 20.8   | 23.3                  | 25  | 6 (<15)   | +6...+11   | > 12   | 56  |
| ZMY24              | 22.8   | 25.6                  | 25  | 7 (<15)   | +6...+11   | > 12   | 51  |
| ZMY27              | 25.1   | 28.9                  | 25  | 7 (<15)   | +6...+11   | > 14   | 45  |
| ZMY30              | 28   | 32                    | 25  | 8 (<15)   | +6...+11   | > 14   | 41  |
| ZMY33              | 31   | 35                    | 25  | 8 (<15)   | +6...+11   | > 17   | 37  |
| ZMY36              | 34   | 38                    | 10  | 16 (<40)  | +6...+11   | > 17   | 34  |
| ZMY39              | 37   | 41                    | 10  | 20 (<40)  | +6...+11   | > 20   | 32  |
| ZMY43              | 40   | 46                    | 10  | 24 (<45)  | +7...+12   | > 20   | 28  |
| ZMY47              | 44   | 50                    | 10  | 24 (<45)  | +7...+12   | > 24   | 26  |
| ZMY51              | 48   | 54                    | 10  | 25 (<60)  | +7...+12   | > 24   | 24  |
| ZMY56              | 52   | 60                    | 10  | 25 (<60)  | +7...+12   | > 28   | 22  |
| ZMY62              | 58   | 66                    | 10  | 25 (<80)  | +8...+13   | > 28   | 20  |
| ZMY68              | 64   | 72                    | 10  | 25 (<80)  | +8...+13   | > 34   | 18  |
| ZMY75              | 70   | 79                    | 10  | 30 (<100)   | +8...+13   | > 34   | 16  |
| ZMY82              | 77   | 88                    | 10  | 30 (<100)   | +8...+13   | > 41   | 15  |
| ZMY91              | 85   | 96                    | 5   | 40 (<200)   | +9...+13   | > 41   | 14  |
| ZMY100             | 94   | 106                   | 5   | 60 (<200)   | +9...+13   | > 50   | 12  |
| ZMY110             | 104  | 116                   | 5   | 80 (<250)   | +9...+13   | > 50   | 11  |
| ZMY120             | 114  | 127                   | 5   | 80 (<250)   | +9...+13   | > 60   | 10  |
| ZMY130             | 124  | 141                   | 5   | 90 (<300)   | +9...+13   | > 60   | 9   |
| ZMY150             | 138  | 156                   | 5   | 100 (<300)  | +9...+13   | > 75   | 8   |
| ZMY160             | 153  | 171                   | 5   | 110 (<350)  | +9...+13   | > 75   | 8   |
| ZMY180             | 168  | 191                   | 5   | 120 (<350)  | +9...+13   | > 90   | 7   |
| ZMY200             | 188  | 212                   | 5   | 150 (<350)  | +9...+13   | > 90   | 6   |

ZMY1, ZMY3.0G ... ZMY9.1G, ZMY10 ... ZMY200



**Disclaimer:** See data book page 2 or [website](#)  
**Haftungsausschluss:** Siehe Datenbuch Seite 2 oder [Internet](#)

1 Mounted on P.C. board with 50 mm<sup>2</sup> copper pads at each terminal  
Montage auf Leiterplatte mit 50 mm<sup>2</sup> Kupferbelag (Löt-pad) an jedem Anschluss