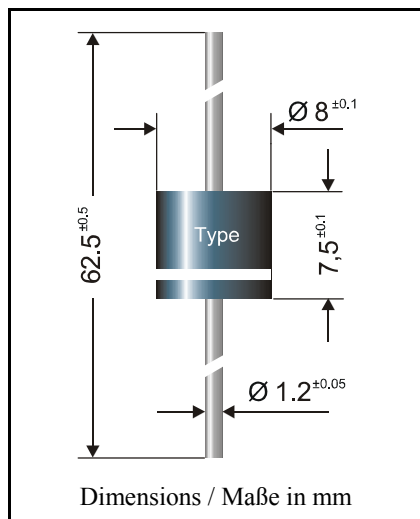


**Unidirectional and bidirectional
Transient Voltage Suppressor Diodes**
**Unidirektionale und bidirektionale
Spannungs-Begrenzer-Dioden**


| | |
|---|-------------------------------|
| Peak pulse power dissipation Impuls-Verlustleistung | 5000 W |
| Maximum stand-off voltage Maximale Sperrspannung | 6.5...110 V |
| Plastic case – Kunststoffgehäuse | Ø 8 x 7.5 [mm] |
| Weight approx. – Gewicht ca. | 1.5 g |
| Plastic material has UL classification 94V-0 Gehäusematerial UL94V-0 klassifiziert | |
| Standard packaging taped in ammo pack Standard Lieferform gegurtet in Ammo-Pack | see page 16 siehe Seite 16 |

For bidirectional types (suffix “C” or “CA”), electrical characteristics apply in both directions.
Für bidirektionale Dioden (Suffix “C” oder “CA”) gelten die el. Werte in beiden Richtungen.

Maximum ratings and Characteristics
Kenn- und Grenzwerte

| | | | |
|--|--------------------------|----------------|--|
| Peak pulse power dissipation (10/1000 μ s waveform) Impuls-Verlustleistung (Strom-Impuls 10/1000 μ s) | $T_A = 25^\circ\text{C}$ | P_{PPM} | 5000 W ¹⁾ |
| Steady state power dissipation Verlustleistung im Dauerbetrieb | $T_A = 25^\circ\text{C}$ | $P_{M(AV)}$ | 8 W ²⁾ |
| Peak forward surge current, 60 Hz half sine-wave Stoßstrom für eine 60 Hz Sinus-Halbwellen | $T_A = 25^\circ\text{C}$ | I_{FSM} | 400 A ³⁾ |
| Operating junction temperature – Sperrschichttemperatur Storage temperature – Lagerungstemperatur | | T_j T_s | $-50...+175^\circ\text{C}$ $-50...+175^\circ\text{C}$ |
| Max. instantaneous forward voltage Augenblickswert der Durchlaßspannung | $I_F = 100\text{ A}$ | V_F | $< 3.5\text{ V}^3)$ |
| Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft | | R_{thA} | $< 18\text{ K/W}^2)$ |
| Thermal resistance junction to lead Wärmewiderstand Sperrschicht – Anschlußdraht | | R_{thL} | $< 4\text{ K/W}$ |

¹⁾ Non-repetitive current puls see curve $I_{PPM} = f(t_r)$

Höchstzulässiger Spitzenwert eines einmaligen Strom-Impulses, siehe Kurve $I_{PPM} = f(t_r)$

²⁾ Valid, if leads are kept at ambient temperature at a distance of 10 mm from case

Gültig, wenn die Anschlußdrähte in 10 mm Abstand von Gehäuse auf Umgebungstemperatur gehalten werden

³⁾ Unidirectional diodes only – Nur für unidirektionale Dioden

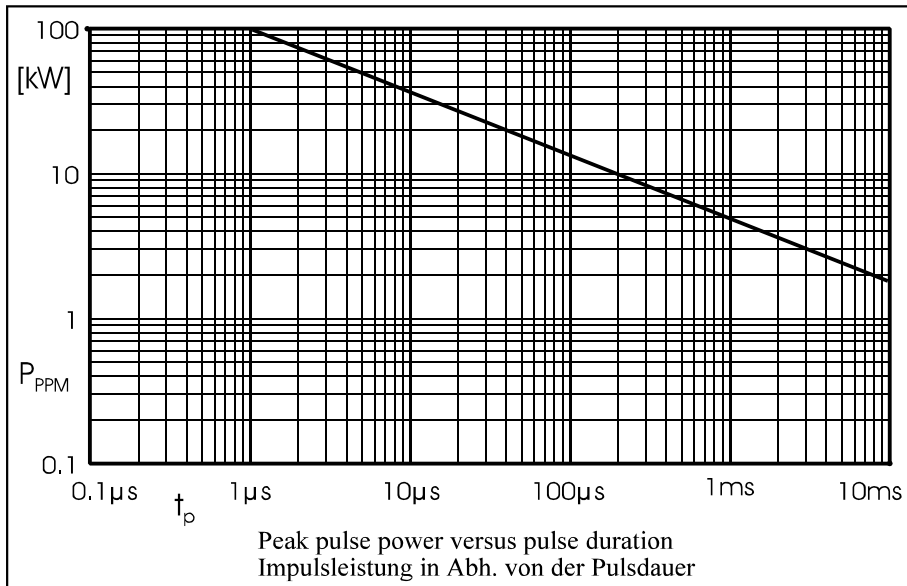
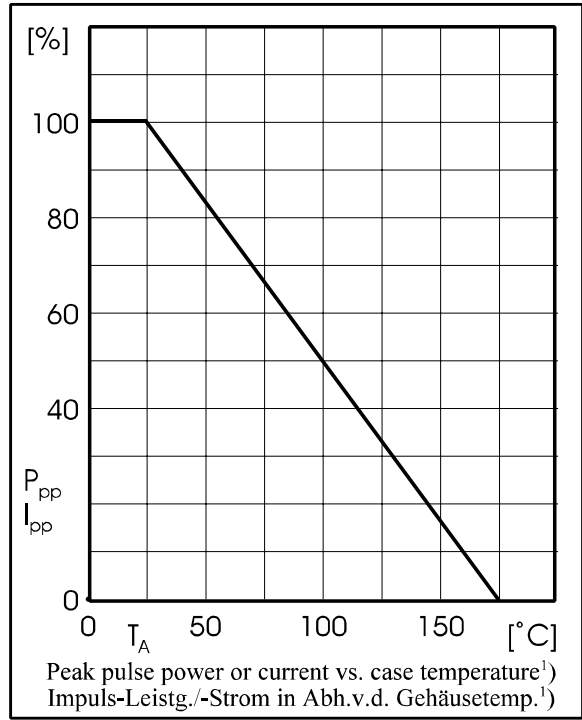
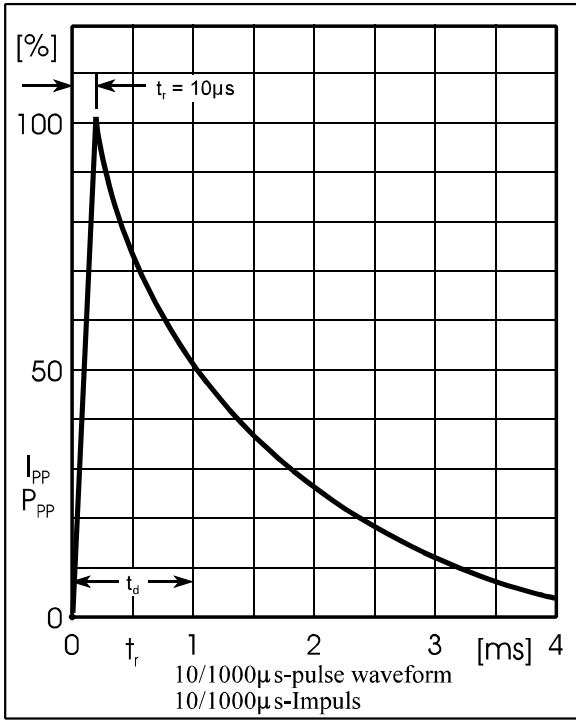
Maximum ratings
Grenzwerte

| Type Typ | Stand-off voltage Sperrspanng | Max. rev. current Max. Sperrstrom at / bei V_{WM} | Breakdown voltage at $I_T = 1$ mA Abbruch-Spannung bei $I_T = 1$ mA) at / bei $I_T = 10$ mA | | Max. clamping voltage Max. Begrenzer-Spanng at / bei $I_{PPM} (10/1000\mu s)$ | |
|-------------|-------------------------------------|---|--|-------------------|---|---------------|
| | V_{WM} [V] | I_D [μA] | V_{BR} min. [V] | V_{BR} max. [V] | V_C [V] | I_{PPM} [A] |
| 5 KP6.5A | 6.5 | 4000 | 7.22 *) | 8.30 *) | 11.2 | 446 |
| 5 KP7.0 | 7.0 | 2000 | 7.78 *) | 9.86 *) | 13.3 | 376 |
| 5 KP7.0A | 7.0 | 2000 | 7.78 *) | 8.95 *) | 12.0 | 417 |
| 5 KP7.5 | 7.5 | 500 | 8.33 | 10.67 | 14.3 | 350 |
| 5 KP7.5A | 7.5 | 500 | 8.33 | 9.58 | 12.9 | 388 |
| 5 KP8.0 | 8.0 | 300 | 8.89 | 11.30 | 15.0 | 333 |
| 5 KP8.0A | 8.0 | 300 | 8.89 | 10.23 | 13.6 | 368 |
| 5 KP8.5 | 8.5 | 100 | 9.44 | 11.92 | 15.6 | 321 |
| 5 KP8.5A | 8.5 | 100 | 9.44 | 10.82 | 14.4 | 347 |
| 5 KP9.0 | 9.0 | 40 | 10.0 | 12.6 | 16.9 | 296 |
| 5 KP9.0A | 9.0 | 40 | 10.0 | 11.5 | 15.4 | 325 |
| 5 KP10 | 10 | 10 | 11.1 | 14.1 | 18.8 | 266 |
| 5 KP10A | 10 | 10 | 11.1 | 12.8 | 17.0 | 294 |
| 5 KP11 | 11 | 10 | 12.2 | 15.4 | 20.1 | 249 |
| 5 KP11A | 11 | 10 | 12.2 | 14.0 | 18.2 | 275 |
| 5 KP12 | 12 | 10 | 13.3 | 16.9 | 22.0 | 227 |
| 5 KP12A | 12 | 10 | 13.3 | 15.3 | 19.9 | 251 |
| 5 KP13 | 13 | 10 | 14.4 | 18.2 | 23.8 | 210 |
| 5 KP13A | 13 | 10 | 14.4 | 16.5 | 21.5 | 233 |
| 5 KP14 | 14 | 10 | 15.6 | 19.8 | 25.8 | 194 |
| 5 KP14A | 14 | 10 | 15.6 | 17.9 | 23.2 | 216 |
| 5 KP15 | 15 | 10 | 16.7 | 21.1 | 26.9 | 186 |
| 5 KP15A | 15 | 10 | 16.7 | 19.2 | 24.4 | 205 |
| 5 KP16 | 16 | 10 | 17.8 | 22.6 | 28.8 | 174 |
| 5 KP16A | 16 | 10 | 17.8 | 20.5 | 26.0 | 192 |
| 5 KP17 | 17 | 10 | 18.9 | 23.9 | 30.5 | 164 |
| 5 KP17A | 17 | 10 | 18.9 | 21.7 | 27.6 | 181 |
| 5 KP18 | 18 | 10 | 20.0 | 25.3 | 32.2 | 155 |
| 5 KP18A | 18 | 10 | 20.0 | 23.3 | 29.2 | 171 |
| 5 KP20 | 20 | 10 | 22.2 | 28.1 | 35.8 | 140 |
| 5 KP20A | 20 | 10 | 22.2 | 25.5 | 32.4 | 154 |
| 5 KP22 | 22 | 10 | 24.4 | 30.9 | 39.4 | 127 |
| 5 KP22A | 22 | 10 | 24.4 | 28.0 | 35.5 | 141 |
| 5 KP24 | 24 | 10 | 26.7 | 33.8 | 43.0 | 116 |
| 5 KP24A | 24 | 10 | 26.7 | 30.7 | 38.9 | 129 |
| 5 KP26 | 26 | 10 | 28.9 | 36.6 | 46.6 | 107 |
| 5 KP26A | 26 | 10 | 28.9 | 33.2 | 42.1 | 119 |
| 5 KP28 | 28 | 10 | 31.1 | 39.4 | 50.0 | 100 |
| 5 KP28A | 28 | 10 | 31.1 | 35.8 | 45.4 | 110 |

Maximum ratings**Grenzwerte**

| Type Typ | Stand-off voltage Sperrspannung | Max. rev. current Max. Sperrstrom at / bei V_{WM} | Breakdown voltage at $I_T = 1$ mA Abbruch-Spannung bei $I_T = 1$ mA) at / bei $I_T = 10$ mA | | Max. clamping voltage Max. Begrenzer-Spannung at / bei I_{PPM} (10/1000 μ s) | |
|-------------|---------------------------------------|---|--|-------------------|--|---------------|
| | V_{WM} [V] | I_D [μ A] | V_{BR} min. [V] | V_{BR} max. [V] | V_C [V] | I_{PPM} [A] |
| 5 KP30A | 30 | 10 | 33.3 | 38.3 | 48.4 | 103 |
| 5 KP33 | 33 | 10 | 36.7 | 46.5 | 59.0 | 85 |
| 5 KP33A | 33 | 10 | 36.7 | 42.2 | 53.3 | 94 |
| 5 KP36 | 36 | 10 | 40.0 | 50.7 | 64.3 | 78 |
| 5 KP36A | 36 | 10 | 40.0 | 46.0 | 58.1 | 86 |
| 5 KP40 | 40 | 10 | 44.4 | 56.3 | 71.4 | 70 |
| 5 KP40A | 40 | 10 | 44.4 | 51.1 | 64.5 | 78 |
| 5 KP43 | 43 | 10 | 47.8 | 60.5 | 76.7 | 65 |
| 5 KP43A | 43 | 10 | 47.8 | 54.9 | 69.4 | 72 |
| 5 KP45 | 45 | 10 | 50.0 | 63.3 | 80.3 | 62 |
| 5 KP45A | 45 | 10 | 50.0 | 57.5 | 72.7 | 69 |
| 5 KP48 | 48 | 10 | 53.3 | 67.5 | 85.5 | 58 |
| 5 KP48A | 48 | 10 | 53.3 | 61.3 | 77.4 | 65 |
| 5 KP51 | 51 | 10 | 56.7 | 71.8 | 91.1 | 55 |
| 5 KP51A | 51 | 10 | 56.7 | 65.2 | 82.4 | 61 |
| 5 KP54 | 54 | 10 | 60.0 | 76.0 | 96.3 | 52 |
| 5 KP54A | 54 | 10 | 60.0 | 69.0 | 87.1 | 57 |
| 5 KP58 | 58 | 10 | 64.4 | 81.6 | 103 | 49 |
| 5 KP58A | 58 | 10 | 64.4 | 74.1 | 93.6 | 53 |
| 5 KP60 | 60 | 10 | 66.7 | 84.5 | 107 | 47 |
| 5 KP60A | 60 | 10 | 66.7 | 76.7 | 96.8 | 52 |
| 5 KP64 | 64 | 10 | 71.1 | 90.1 | 114 | 44 |
| 5 KP64A | 64 | 10 | 71.1 | 81.8 | 103 | 49 |
| 5 KP70 | 70 | 10 | 77.8 | 98.6 | 125 | 40 |
| 5 KP70A | 70 | 10 | 77.8 | 89.5 | 113 | 44 |
| 5 KP75 | 75 | 10 | 83.3 | 105.7 | 134 | 37 |
| 5 KP75A | 75 | 10 | 83.3 | 95.8 | 121 | 41 |
| 5 KP78 | 78 | 10 | 86.7 | 109.8 | 139 | 36 |
| 5 KP78A | 78 | 10 | 86.7 | 99.7 | 126 | 40 |
| 5 KP85 | 85 | 10 | 94.4 | 119.2 | 151 | 33 |
| 5 KP85A | 85 | 10 | 94.4 | 108.2 | 137 | 36 |
| 5 KP90 | 90 | 10 | 100 | 126.5 | 160 | 31 |
| 5 KP90A | 90 | 10 | 100 | 115.5 | 146 | 34 |
| 5 KP100 | 100 | 10 | 111 | 141.0 | 179 | 28 |
| 5 KP100A | 100 | 10 | 111 | 128.0 | 162 | 31 |
| 5 KP110 | 110 | 10 | 122 | 154.5 | 196 | 26 |
| 5 KP110A | 110 | 10 | 122 | 140.5 | 177 | 28 |

For bidirectional types (suffix "C" or "CA"), electrical characteristics apply in both directions.
Für bidirektionale Dioden (Suffix "C" oder "CA") gelten die el. Werte in beiden Richtungen.



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 von Gehäuse auf Umgebungstemperatur gehalten werden