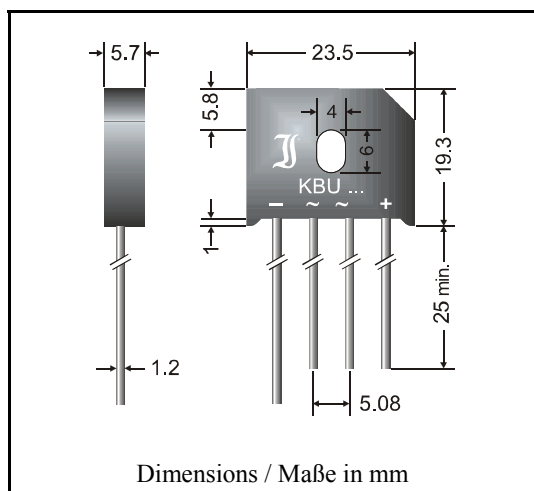


# Silicon-Bridge Rectifiers

# Silizium-Brückengleichrichter



|                                                                                       |                        |
|---------------------------------------------------------------------------------------|------------------------|
| Nominal current – Nennstrom                                                           | 12 A                   |
| Alternating input voltage<br>Eingangsswechselspannung                                 | 35...700 V             |
| Plastic case<br>Kunststoffgehäuse                                                     | 23.5 x 5.7 x 19.3 [mm] |
| Weight approx. – Gewicht ca.                                                          | 8 g                    |
| Plastic material has UL classification 94V-0<br>Gehäusematerial UL94V-0 klassifiziert |                        |
| Standard packaging: bulk                                                              | see page 22            |
| Standard Lieferform: lose im Karton                                                   | s. Seite 22            |



Recognized Product – Underwriters Laboratories Inc.® File E175067  
Anerkanntes Produkt – Underwriters Laboratories Inc.® Nr. E175067

## Maximum ratings

## Grenzwerte

| Type<br>Typ | max. alternating input voltage<br>max. Eingangsswechselspannung<br>$V_{VRMS}$ [V] | Repetitive peak reverse voltage<br>Periodische Spitzensperspannung<br>$V_{RRM}$ [V] <sup>1)</sup> |
|-------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| KBU 12A     | 35                                                                                | 50                                                                                                |
| KBU 12B     | 70                                                                                | 100                                                                                               |
| KBU 12D     | 140                                                                               | 200                                                                                               |
| KBU 12G     | 280                                                                               | 400                                                                                               |
| KBU 12J     | 420                                                                               | 600                                                                                               |
| KBU 12K     | 560                                                                               | 800                                                                                               |
| KBU 12M     | 700                                                                               | 1000                                                                                              |

|                                                                                              |                          |           |                              |
|----------------------------------------------------------------------------------------------|--------------------------|-----------|------------------------------|
| Repetitive peak fwd. current – Period. Spitzenstrom                                          | $f > 15$ Hz              | $I_{FRM}$ | 60 A <sup>2)</sup>           |
| Peak forward surge current, 60 Hz half sine-wave<br>Stoßstrom für eine 60 Hz Sinus-Halbwelle | $T_A = 25^\circ\text{C}$ | $I_{FSM}$ | 300 A                        |
| Rating for fusing – Grenzlastintegral, $t < 10$ ms                                           | $T_A = 25^\circ\text{C}$ | $i^2t$    | 375 A <sup>2</sup> s         |
| Operating junction temperature – Sperrschichttemperatur                                      |                          | $T_j$     | - 50...+150°C                |
| Storage temperature – Lagerungstemperatur                                                    |                          | $T_s$     | - 50...+150°C                |
| Admissible torque for mounting<br>Zulässiges Anzugsdrehmoment                                | M 4                      |           | 9 ± 10% lb.in.<br>1 ± 10% Nm |

<sup>1)</sup> Valid for one branch – Gültig für einen Brückenweig

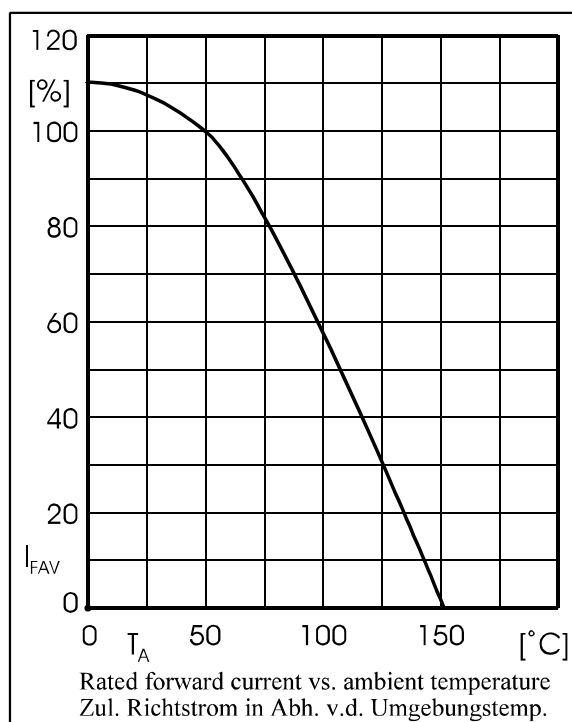
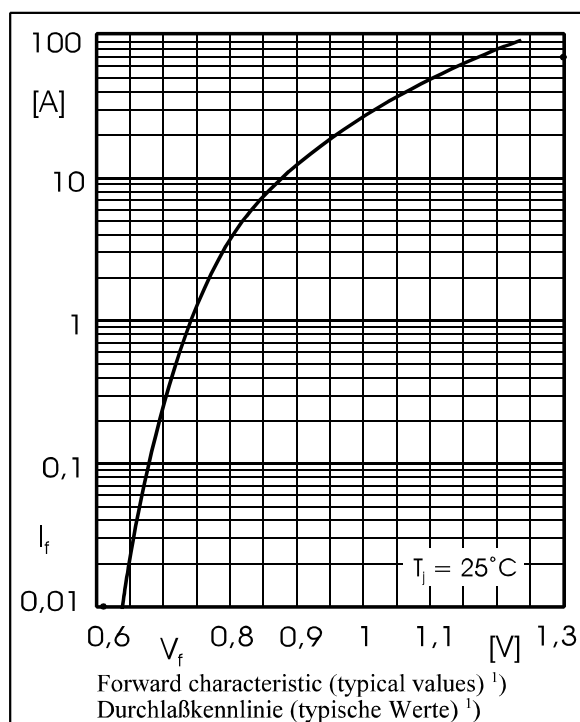
<sup>2)</sup> Valid, if leads are kept at ambient temperature at a distance of 10 mm from case  
Gültig, wenn die Anschlußdrähte in 10 mm Abstand vom Gehäuse auf Umgebungstemperatur gehalten werden

**Characteristics**

**Kennwerte**

|                                                                                                        |                          |                        |                                      |                           |
|--------------------------------------------------------------------------------------------------------|--------------------------|------------------------|--------------------------------------|---------------------------|
| Max. fwd. current without cooling fin<br>Dauergrenzstrom ohne Kühlblech                                | $T_A = 50^\circ\text{C}$ | R-load<br>C-load       | $I_{\text{FAV}}$<br>$I_{\text{FAV}}$ | 8.4 A<br>7.4 A            |
| Max. current with cooling fin 300 cm <sup>2</sup><br>Dauergrenzstrom mit Kühlblech 300 cm <sup>2</sup> | $T_A = 50^\circ\text{C}$ | R-load<br>C-load       | $I_{\text{FAV}}$<br>$I_{\text{FAV}}$ | 12.0 A<br>9.6 A           |
| Forward voltage – Durchlaßspannung                                                                     | $T_j = 25^\circ\text{C}$ | $I_F = 12\text{ A}$    | $V_F$                                | $< 1.0\text{ V}^{1)}$     |
| Leakage current – Sperrstrom                                                                           | $T_j = 25^\circ\text{C}$ | $V_R = V_{\text{RRM}}$ | $I_R$                                | $< 10\text{ }\mu\text{A}$ |
| Thermal resistance junction to case<br>Wärmewiderstand Sperrschicht – Gehäuse                          |                          |                        | $R_{\text{thC}}$                     | $< 2.7\text{ K/W}$        |

| Type<br>Typ | Max. admissible load capacitor<br>Max. zulässiger Ladekondensator<br>$C_L\text{ [}\mu\text{F]}$ | Min. required protective resistor<br>Min. erforderl. Schutzwiderstand<br>$R_t\text{ [}\Omega\text{]}$ |
|-------------|-------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| KBU 12A     | 20000                                                                                           | 0.2                                                                                                   |
| KBU 12B     | 10000                                                                                           | 0.4                                                                                                   |
| KBU 12D     | 5000                                                                                            | 0.8                                                                                                   |
| KBU 12G     | 2500                                                                                            | 1.6                                                                                                   |
| KBU 12J     | 1500                                                                                            | 2.4                                                                                                   |
| KBU 12K     | 1000                                                                                            | 3.2                                                                                                   |
| KBU 12M     | 800                                                                                             | 4.0                                                                                                   |



<sup>1)</sup> Valid for one branch – Gültig für einen Brückenweig