



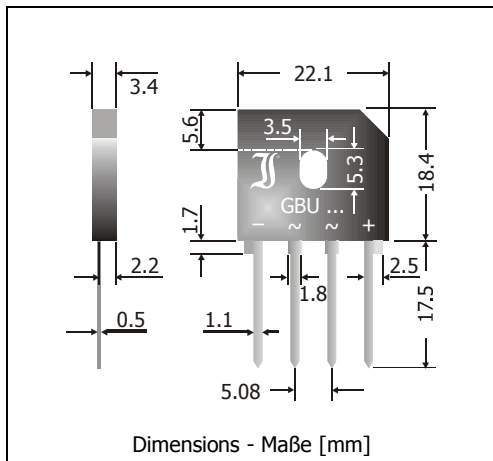
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## GBU4A ... GBU4M

### Silicon-Bridge-Rectifiers Silizium-Brückengleichrichter

Version 2006-08-11



|                                                                                       |                      |
|---------------------------------------------------------------------------------------|----------------------|
| Nominal current<br>Nennstrom                                                          | 4 A                  |
| Alternating input voltage<br>Eingangswchselfspannung                                  | 35...700 V           |
| Plastic case<br>Kunststoffgehäuse                                                     | 20.8 x 3.3 x 18 [mm] |
| Weight approx. – Gewicht ca.                                                          | 3.8 g                |
| Plastic material has UL classification 94V-0<br>Gehäusematerial UL94V-0 klassifiziert |                      |
| Standard packaging bulk<br>Standard Lieferform lose im Karton                         |                      |



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. Eingangswchselfspannung<br>$V_{VRMS}$ [V] | Repetitive peak reverse voltage<br>Periodische Spitzensperrspannung<br>$V_{RRM}$ [V] <sup>1)</sup> |
|-------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| GBU4A       | 35                                                                               | 50                                                                                                 |
| GBU4B       | 70                                                                               | 100                                                                                                |
| GBU4D       | 140                                                                              | 200                                                                                                |
| GBU4G       | 280                                                                              | 400                                                                                                |
| GBU4J       | 420                                                                              | 600                                                                                                |
| GBU4K       | 560                                                                              | 800                                                                                                |
| GBU4M       | 700                                                                              | 1000                                                                                               |

|                                                                                                      |                          |                |                              |
|------------------------------------------------------------------------------------------------------|--------------------------|----------------|------------------------------|
| Repetitive peak forward current<br>Periodischer Spitzenstrom                                         | $f > 15$ Hz              | $I_{FRM}$      | 30 A <sup>2)</sup>           |
| Peak forward surge current, 50/60 Hz half sine-wave<br>Stoßstrom für eine 50/60 Hz Sinus-Halbwellen  | $T_A = 25^\circ\text{C}$ | $I_{FSM}$      | 180/200 A                    |
| Rating for fusing, $t < 10$ ms<br>Grenzlastintegral, $t < 10$ ms                                     | $T_A = 25^\circ\text{C}$ | $i^2t$         | 166 A <sup>2</sup> s         |
| Operating junction temperature – Sperrschichttemperatur<br>Storage temperature – Lagerungstemperatur |                          | $T_j$<br>$T_s$ | -50...+150°C<br>-50...+150°C |
| Admissible torque for mounting<br>Zulässiges Anzugsdrehmoment                                        | M 4                      |                | 9 ± 10% lb.in.<br>1 ± 10% Nm |

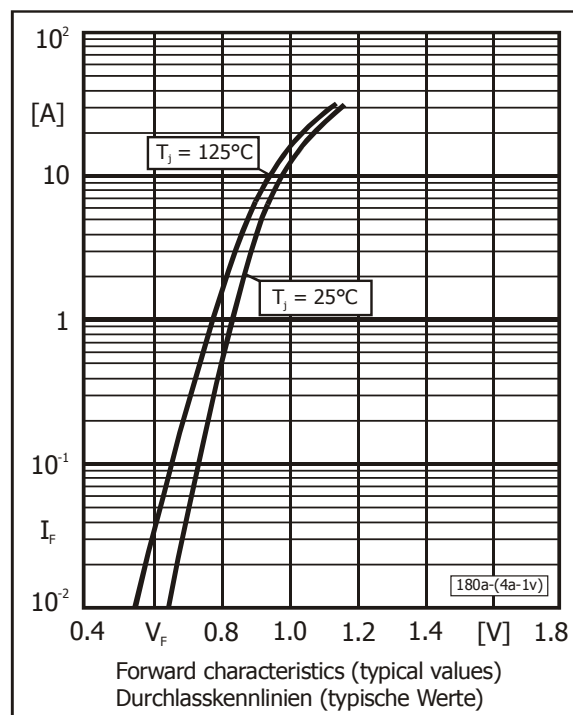
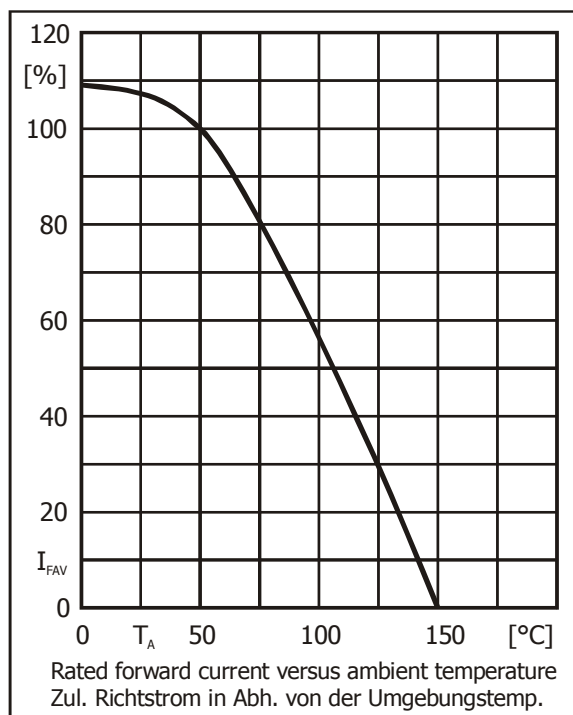
1 Valid per diode – Gültig pro Diode

2 Valid, if leads are kept at ambient temperature  $T_A = 50^\circ\text{C}$  at a distance of 5 mm from case  
Gültig, wenn die Anschlussdrähte in 5 mm vom Gehäuse auf Umgebungstemperatur  $T_A = 50^\circ\text{C}$  gehalten werden

**Characteristics**
**Kennwerte**

|                                                                                                                  |                          |                    |                        |                                            |
|------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------|------------------------|--------------------------------------------|
| Max. rectified current without cooling fin<br>Dauergrenzstrom ohne Kühlblech                                     | $T_A = 50^\circ\text{C}$ | R-load<br>C-load   | $I_{FAV}$<br>$I_{FAV}$ | 2.8 A <sup>1)</sup><br>2.2 A <sup>1)</sup> |
| Max. rectified 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   | $I_{FAV}$<br>$I_{FAV}$ | 4.0 A<br>3.2 A                             |
| Forward voltage – Durchlass-Spannung                                                                             | $T_j = 25^\circ\text{C}$ | $I_F = 4\text{ A}$ | $V_F$                  | < 1.0 V <sup>2)</sup>                      |
| Leakage current – Sperrstrom                                                                                     | $T_j = 25^\circ\text{C}$ | $V_R = V_{RRM}$    | $I_R$                  | < 10 $\mu\text{A}$                         |
| Thermal resistance junction to case<br>Wärmewiderstand Sperrschicht – Gehäuse                                    |                          |                    | $R_{thC}$              | < 3.3 K/W                                  |

| Type<br>Typ | Max. admissible load capacitor<br>Max. zulässiger Ladekondensator<br>$C_L$ [ $\mu\text{F}$ ] | Min. required protective resistor<br>Min. erforderl. Schutzwiderstand<br>$R_t$ [ $\Omega$ ] |
|-------------|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| GBU4A       | 20000                                                                                        | 0.25                                                                                        |
| GBU4B       | 10000                                                                                        | 0.5                                                                                         |
| GBU4D       | 5000                                                                                         | 1.0                                                                                         |
| GBU4G       | 2500                                                                                         | 2.0                                                                                         |
| GBU4J       | 1500                                                                                         | 4.0                                                                                         |
| GBU4K       | 1000                                                                                         | 5.0                                                                                         |
| GBU4M       | 800                                                                                          | 6.5                                                                                         |



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Gültig, wenn die Anschlussdrähte in 5 mm vom Gehäuse auf Umgebungstemperatur  $T_A = 50^\circ\text{C}$  gehalten werden
- Valid per diode – Gültig pro Diode