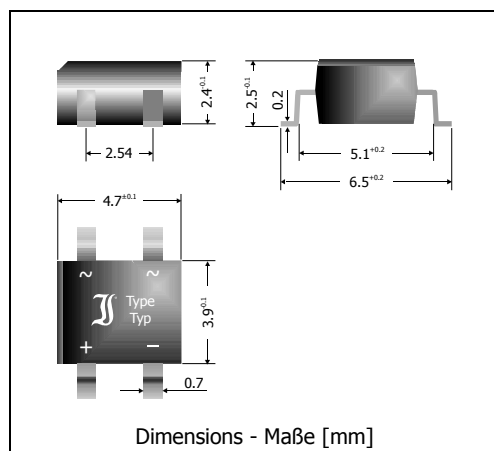


## S40 ... S500

### Surface Mount Si-Bridge-Rectifiers Si-Brückengleichrichter für die Oberflächenmontage

Version 2008-12-17



|                                                                                       |                     |
|---------------------------------------------------------------------------------------|---------------------|
| Nominal current<br>Nennstrom                                                          | 0.8 A               |
| Alternating input voltage<br>Eingangswechselspannung                                  | 40...500 V          |
| Plastic case<br>Kunststoffgehäuse                                                     | TO-269AA<br>MiniDIL |
| Weight approx. – Gewicht ca.                                                          | 0.1 g               |
| Plastic material has UL classification 94V-0<br>Gehäusematerial UL94V-0 klassifiziert |                     |
| Standard packaging taped and reeled<br>Standard Lieferform gegurtet auf Rolle         |                     |



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. Eingangswechselspannung<br>$V_{VRMS}$ [V] | Repetitive peak reverse voltage<br>Periodische Spitzensperrspannung<br>$V_{RRM}$ [V] <sup>1)</sup> |
|-------------|----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
| S40         | 50                                                                               | 80                                                                                                 |
| S80         | 110                                                                              | 160                                                                                                |
| S125        | 125                                                                              | 250                                                                                                |
| S250        | 250                                                                              | 600                                                                                                |
| S380        | 380                                                                              | 800                                                                                                |
| S500        | 500                                                                              | 1000                                                                                               |

|                                                                                                     |                          |           |                    |
|-----------------------------------------------------------------------------------------------------|--------------------------|-----------|--------------------|
| Repetitive peak forward current<br>Periodischer Spitzenstrom                                        | $f > 15$ Hz              | $I_{FRM}$ | 10 A <sup>2)</sup> |
| Peak forward surge current, 50/60 Hz half sine-wave<br>Stoßstrom für eine 50/60 Hz Sinus-Halbwellen | $T_A = 25^\circ\text{C}$ | $I_{FSM}$ | 40/44 A            |
| Rating for fusing, $t < 10$ ms<br>Grenzlastintegral, $t < 10$ ms                                    | $T_A = 25^\circ\text{C}$ | $i^2t$    | 8 A <sup>2</sup> s |
| Operating junction temperature – Sperrschichttemperatur                                             |                          | $T_j$     | -50...+150°C       |
| Storage temperature – Lagerungstemperatur                                                           |                          | $T_s$     | -50...+150°C       |

1 Valid per diode – Gültig pro Diode

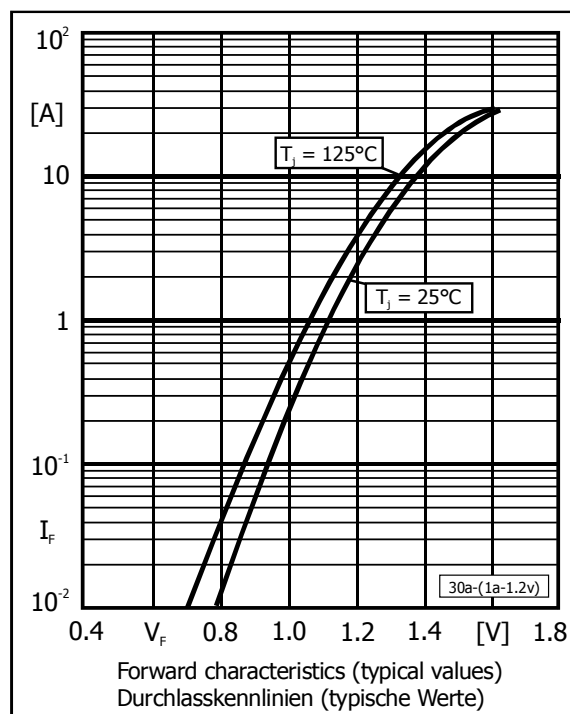
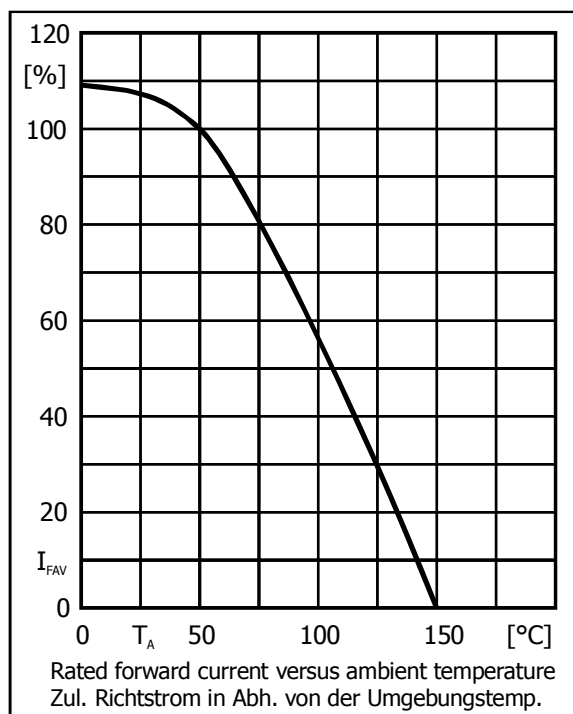
2 Max. temperature of the terminals  $T_T = 100^\circ\text{C}$  – Max. Temperatur der Anschlüsse  $T_T = 100^\circ\text{C}$

## Characteristics

## Kennwerte

|                                                                                             |                          |                      |                        |                                            |
|---------------------------------------------------------------------------------------------|--------------------------|----------------------|------------------------|--------------------------------------------|
| Max. average forward rectified current<br>Dauergrenzstrom                                   | $T_A = 50^\circ\text{C}$ | R-load<br>C-load     | $I_{FAV}$<br>$I_{FAV}$ | $0.8\text{ A}^{1)}$<br>$0.6\text{ A}^{1)}$ |
| Forward voltage – Durchlass-Spannung                                                        | $T_j = 25^\circ\text{C}$ | $I_F = 0.8\text{ A}$ | $V_F$                  | $< 1.2\text{ V}^{2)}$                      |
| Leakage current – Sperrstrom                                                                | $T_j = 25^\circ\text{C}$ | $V_R = V_{RRM}$      | $I_R$                  | $< 10\text{ }\mu\text{A}$                  |
| Thermal resistance junction to ambient air<br>Wärmewiderstand Sperrschicht – umgebende Luft |                          |                      | $R_{thA}$              | $< 60\text{ K/W}^{1)}$                     |

| 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>$R_t$ [ $\Omega$ ] |
|-------------|----------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| S40         | 2500                                                                                         | 2.0                                                                                         |
| S80         | 1250                                                                                         | 4.0                                                                                         |
| S125        | 800                                                                                          | 6.3                                                                                         |
| S250        | 333                                                                                          | 15.0                                                                                        |
| S380        | 250                                                                                          | 20.0                                                                                        |
| S500        | 200                                                                                          | 25.0                                                                                        |



- 1 Mounted on P.C. Board with 25 mm<sup>2</sup> copper pads at each terminal  
Montage auf Leiterplatte mit 25 mm<sup>2</sup> Kupferbelag (Lötpad) an jedem Anschluss
- 2 Valid per diode – Gültig pro Diode