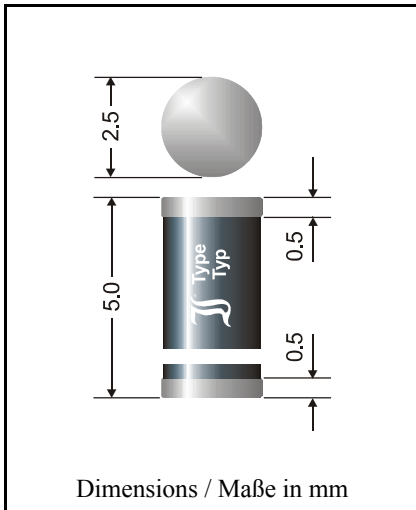


**Surface Mount Si-Rectifiers**

**Si-Gleichrichter für die Oberflächenmontage**



|                                              |                |
|----------------------------------------------|----------------|
| Nominal current – Nennstrom                  | 1 A            |
| Repetitive peak reverse voltage              | 50...2000 V    |
| Periodische Spitzensperrspannung             |                |
| Plastic case MELF                            | DO-213AB       |
| Kunststoffgehäuse MELF                       |                |
| Weight approx. – Gewicht ca.                 | 0.12 g         |
| Plastic material has UL classification 94V-0 |                |
| Gehäusematerial UL94V-0 klassifiziert        |                |
| Standard packaging taped and reeled          | see page 18    |
| Standard Lieferform gegurtet auf Rolle       | siehe Seite 18 |

**Maximum ratings**

**Grenzwerte**

| Type<br>Typ | Repetitive peak reverse voltage<br>Periodische Spitzensperrspannung<br>$V_{RRM}$ [V] | Surge peak reverse voltage<br>Stoßspitzensperrspannung<br>$V_{RSM}$ [V] |
|-------------|--------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| SM 4001     | 50                                                                                   | 50                                                                      |
| SM 4002     | 100                                                                                  | 100                                                                     |
| SM 4003     | 200                                                                                  | 200                                                                     |
| SM 4004     | 400                                                                                  | 400                                                                     |
| SM 4005     | 600                                                                                  | 600                                                                     |
| SM 4006     | 800                                                                                  | 800                                                                     |
| SM 4007     | 1000                                                                                 | 1000                                                                    |
| SM 513      | 1300                                                                                 | 1300                                                                    |
| SM 516      | 1600                                                                                 | 1600                                                                    |
| SM 518      | 1800                                                                                 | 1800                                                                    |
| SM 2000     | 2000                                                                                 | 2000                                                                    |

|                                                                                                 |                                                       |                        |                    |
|-------------------------------------------------------------------------------------------------|-------------------------------------------------------|------------------------|--------------------|
| Max. average forward rectified current, R-load<br>Dauergrenzstrom in Einwegschaltung mit R-Last | $T_T = 75^\circ\text{C}$<br>$T_T = 100^\circ\text{C}$ | $I_{FAV}$<br>$I_{FAV}$ | 1 A<br>0.8 A       |
| Repetitive peak forward current<br>Periodischer Spitzenstrom                                    | $f > 15\text{ Hz}$                                    | $I_{FRM}$              | 10 A <sup>1)</sup> |
| Peak forward surge current, 50 Hz half sine-wave<br>Stoßstrom für eine 50 Hz Sinus-Halbwellen   | $T_A = 25^\circ\text{C}$                              | $I_{FSM}$              | 40 A               |

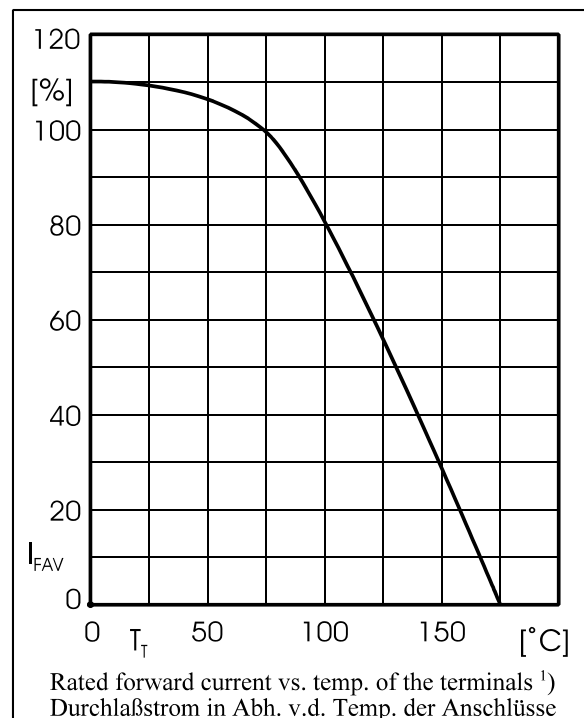
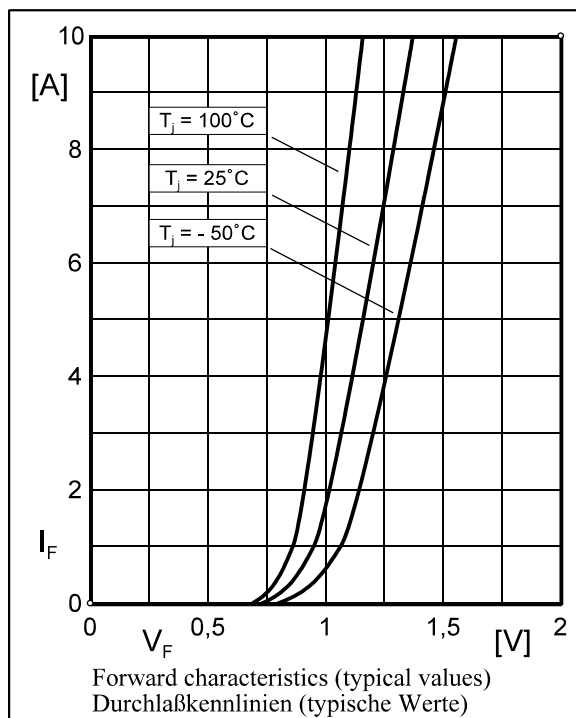
<sup>1)</sup> Max. temperature of the terminals  $T_T = 75^\circ\text{C} / 100^\circ\text{C}$  – Max. Temperatur der Kontaktflächen  $T_T = 75^\circ\text{C} / 100^\circ\text{C}$

|                                                           |                     |                          |                  |                            |
|-----------------------------------------------------------|---------------------|--------------------------|------------------|----------------------------|
| Rating for fusing – Grenzlasterintegral                   | $t < 10 \text{ ms}$ | $T_A = 25^\circ\text{C}$ | $i^2t$           | $8 \text{ A}^2\text{s}$    |
| Peak forward pulse current<br>Max. zulässiger Stromimpuls | $t = 1 \text{ ms}$  | $T_A = 85^\circ\text{C}$ | $I_{\text{FSM}}$ | $100 \text{ A}$            |
| Operating junction temperature – Sperrschichttemperatur   |                     |                          | $T_j$            | $-50...+175^\circ\text{C}$ |
| Storage temperature – Lagerungstemperatur                 |                     |                          | $T_s$            | $-50...+175^\circ\text{C}$ |

## Characteristics

## Kennwerte

|                                                                                             |                           |                        |                  |                       |
|---------------------------------------------------------------------------------------------|---------------------------|------------------------|------------------|-----------------------|
| Forward voltage – Durchlaßspannung                                                          | $T_j = 25^\circ\text{C}$  | $I_F = 1 \text{ A}$    | $V_F$            | $< 1.1 \text{ V}$     |
| Leakage current – Sperrstrom                                                                | $T_j = 25^\circ\text{C}$  | $V_R = V_{\text{RRM}}$ | $I_R$            | $< 5 \mu\text{A}$     |
|                                                                                             | $T_j = 100^\circ\text{C}$ | $V_R = V_{\text{RRM}}$ | $I_R$            | $< 50 \mu\text{A}$    |
| Thermal resistance junction to ambient air<br>Wärmewiderstand Sperrschicht – umgebende Luft |                           |                        | $R_{\text{thA}}$ | $< 45 \text{ K/W}^1)$ |
| Thermal resistance junction to terminal<br>Wärmewiderstand Sperrschicht – Kontaktfläche     |                           |                        | $R_{\text{thT}}$ | $< 10 \text{ K/W}$    |



<sup>1)</sup> 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 (Löt-pad) an jedem Anschluß