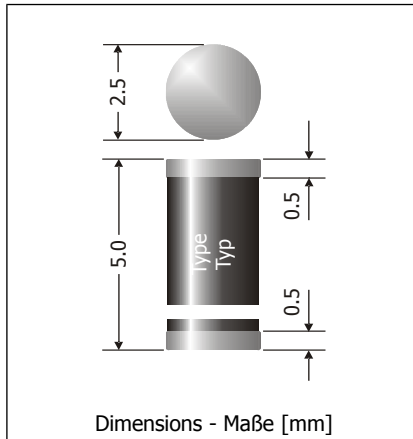



**SM4001 ... SM4007,
SM513, SM516, SM518, SM2000**
Surface Mount Silicon Rectifier Diodes
Silizium-Gleichrichterdioden für die Oberflächenmontage

Version 2013-10-01



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

Maximum ratings**Grenzwerte**

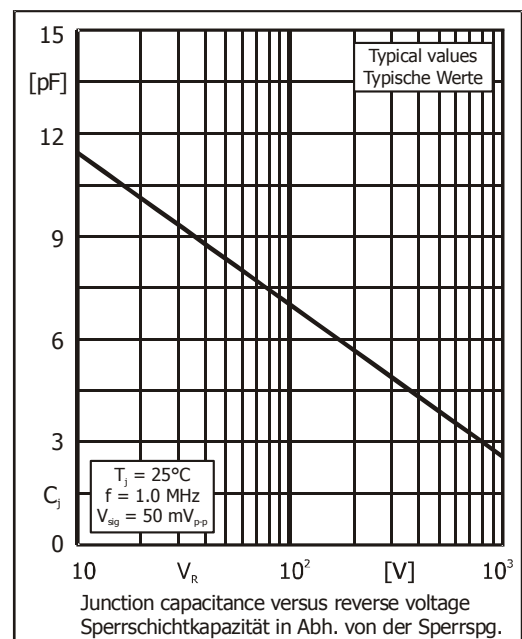
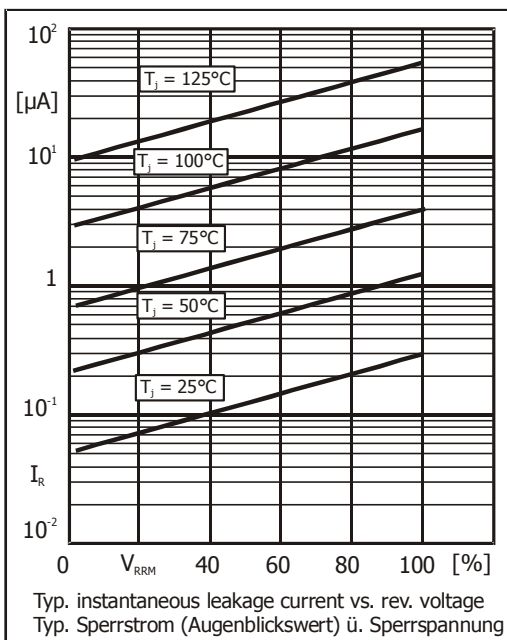
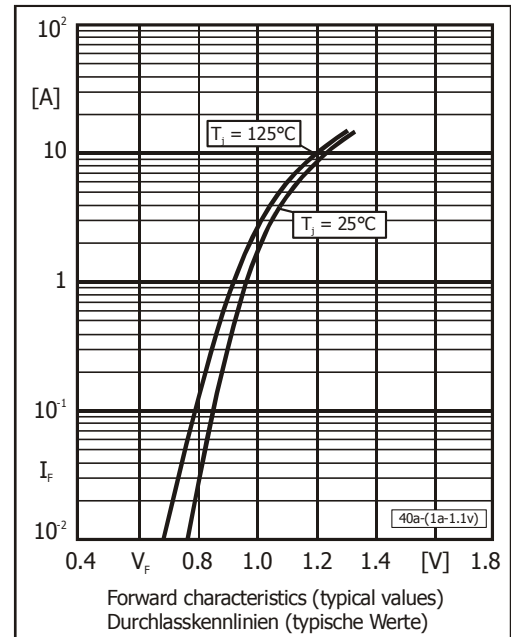
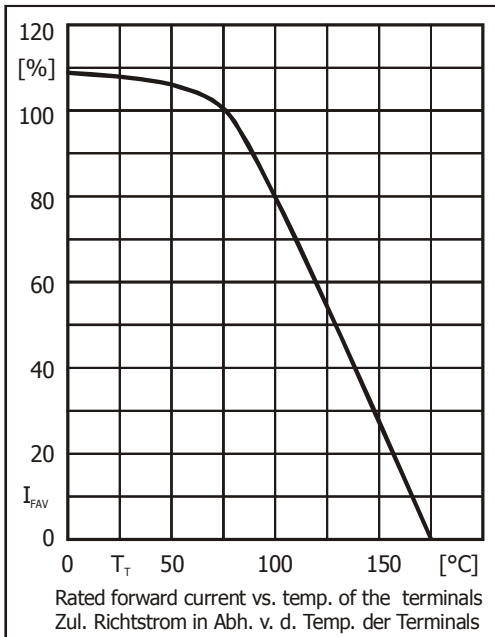
| Type Typ | Repetitive peak reverse voltage Periodische Spitzensperrespannung V_{RRM} [V] | Surge peak reverse voltage Stoßspitzensperrespannung V_{RSM} [V] |
|-------------|---|--|
| SM4001 | 50 | 50 |
| SM4002 | 100 | 100 |
| SM4003 | 200 | 200 |
| SM4004 | 400 | 400 |
| SM4005 | 600 | 600 |
| SM4006 | 800 | 800 |
| SM4007 | 1000 | 1000 |
| SM513 | 1300 | 1300 |
| SM516 | 1600 | 1600 |
| SM518 | 1800 | 1800 |
| SM2000 | 2000 | 2000 |

| | | | |
|---|---|----------------|------------------------------|
| Max. average forward rectified current, R-load Dauergrenzstrom in Einwegschaltung mit R-Last | $T_T = 75^\circ\text{C}$ $T_T = 100^\circ\text{C}$ | I_{FAV} | 1 A 0.8 A |
| Repetitive peak forward current – Periodischer Spitzenstrom | $f > 15\text{ Hz}$ | I_{FRM} | 10 A ¹⁾ |
| Peak forward pulse current – Max. zulässiger Stromimpuls, $t = 1\text{ ms}$ | $T_A = 85^\circ\text{C}$ | I_{FSM} | 100 A |
| Peak forward surge current, 50/60 Hz half sine-wave Stoßstrom für eine 50/60 Hz Sinus-Halbwellen | $T_A = 25^\circ\text{C}$ | I_{FSM} | 40/44 A ¹⁾ |
| Rating for fusing, $t < 10\text{ ms}$ – Grenzlastintegral, $t < 10\text{ ms}$ | $T_A = 25^\circ\text{C}$ | i^2t | 8 A ² s |
| Junction temperature – Sperrschichttemperatur Storage temperature – Lagerungstemperatur | | T_j T_s | -50...+175°C -50...+175°C |

¹ Mounted on P.C. board with 25 mm² copper pads at each terminal
Montage auf Leiterplatte mit 25 mm² Kupferbelag (Löt-pad) an jedem Anschluss

Characteristics
Kennwerte

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



1 Mounted on P.C. board with 25 mm² copper pads at each terminal
Montage auf Leiterplatte mit 25 mm² Kupferbelag (Löt-pad) an jedem Anschluss