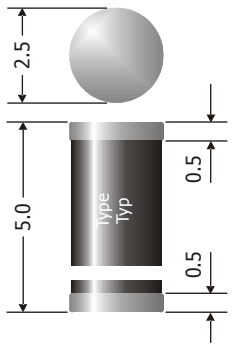
Diotec Semiconductor

# SMS220 ... SMS2100

## Surface Mount Schottky Rectifier Diodes
## Schottky-Gleichrichterdioden für die Oberflächenmontage

Version 2013-09-03




Dimensions - Maße [mm]

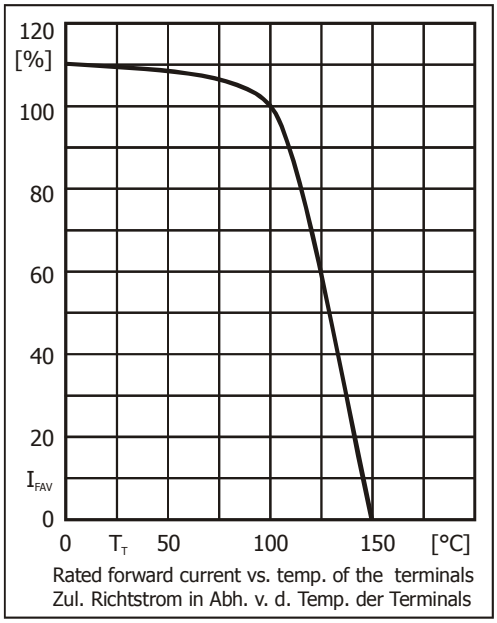
| | |
|---|---|
| Nominal current<br>Nennstrom | 2 A |
| Repetitive peak reverse voltage<br>Periodische Spitzensperrspannung | 20...100 V |
| Plastic case MELF<br>Kunststoffgehäuse MELF | DO-213AB |
| Weight approx. – Gewicht ca. | 0.12g |
| Plastic material has UL classification 94V-0<br>Gehäusematerial UL94V-0 klassifiziert | |
| Standard packaging taped and reeled<br>Standard Lieferform gegurtet auf Rolle | |

**Maximum ratings** **Grenzwerte**

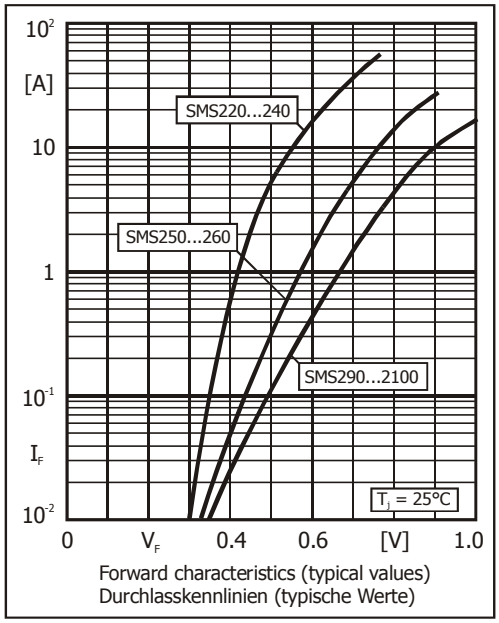
| Type<br>Typ | Repetitive peak reverse voltage<br>Periodische Spitzensperrspannung<br>$V_{RRM}$ [V] | Surge peak reverse voltage<br>Stoßspitzensperrspannung<br>$V_{RSM}$ [V] | Forward voltage<br>Durchlass-Spannung<br>$V_F$ [V] [1] |
|---|---|---|---|
| SMS220 | 20 | 20 | < 0.50 |
| SMS230 | 30 | 30 | < 0.50 |
| SMS240 | 40 | 40 | < 0.50 |
| SMS250 | 50 | 50 | < 0.70 |
| SMS260 | 60 | 60 | < 0.70 |
| SMS290 | 90 | 90 | < 0.79 |
| SMS2100 | 100 | 100 | < 0.79 |

| | | | | |
|---|---|---|---|---|
| Max. average forward rectified current, R-load<br>Dauergrenzstrom in Einwegschaltung mit R-Last | $T_T$ = 100°C | | $I_{FAV}$ | 2 A |
| Repetitive peak forward current – Periodischer Spitzenstrom | f > 15 Hz | | $I_{FRM}$ | 12 A [2] |
| Peak forward surge current, 50/60 Hz half sine-wave<br>Stoßstrom für eine 50/60 Hz Sinus-Halbwelle | $T_A$ = 25°C | | $I_{FSM}$ | 50/55 A |
| Rating for fusing, t < 10 ms – Grenzlastintegral, t < 10 ms | $T_A$ = 25°C | | $i^2t$ | 12.5 $A^2s$ |
| Operating junction temperature – Sperrschichttemperatur<br>Storage temperature – Lagerungstemperatur | | | $T_j$<br>$T_S$ | -50...+150°C<br>-50...+150°C |
| Leakage current<br>Sperrstrom | $T_j$ = 25°C<br>$T_j$ = 100°C | $V_R$ = $V_{RRM}$<br>$V_R$ = $V_{RRM}$ | $I_R$<br>$I_R$ | < 0.5 mA<br>< 10.0 mA |
| Thermal resistance junction to ambient air<br>Wärmewiderstand Sperrschicht – umgebende Luft | | | $R_{thA}$ | < 45 K/W [3] |
| Thermal resistance junction to terminal<br>Wärmewiderstand Sperrschicht – Anschluss | | | $R_{thT}$ | < 15 K/W |

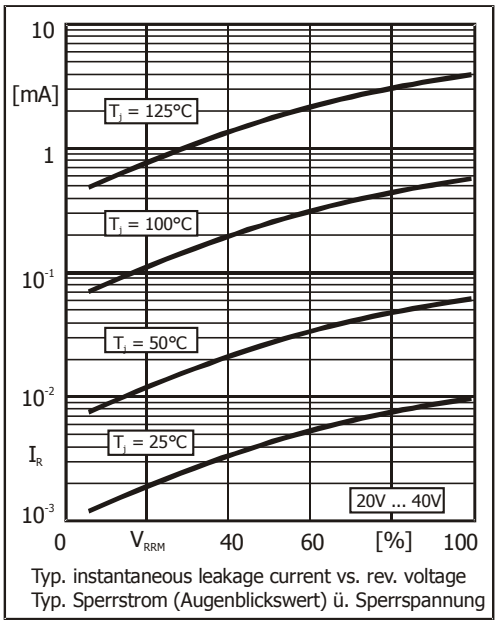
1 $I_F$ = 2 A, $T_j$ = 25°C
2 Max. temperature of the terminals $T_T$ = 100°C – Max. Temperatur der Anschlüsse $T_T$ = 100°C
3 Mounted on P.C. board with 50 $mm^2$ copper pads at each terminal
Montage auf Leiterplatte mit 50 $mm^2$ Kupferbelag (Lötpad) an jedem Anschluss



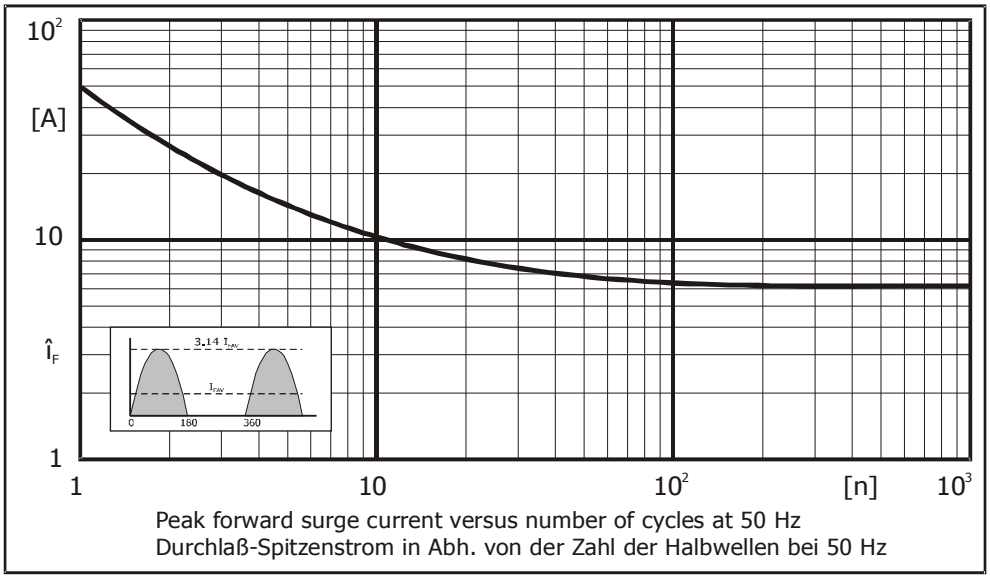

Rated forward current vs. temp. of the terminals
Zul. Richtstrom in Abh. v. d. Temp. der Terminals




Forward characteristics (typical values)
Durchlasskennlinien (typische Werte)




Typ. instantaneous leakage current vs. rev. voltage
Typ. Sperrstrom (Augenblickswert) ü. Sperrspannung




Peak forward surge current versus number of cycles at 50 Hz
Durchlaß-Spitzenstrom in Abh. von der Zahl der Halbwellen bei 50 Hz