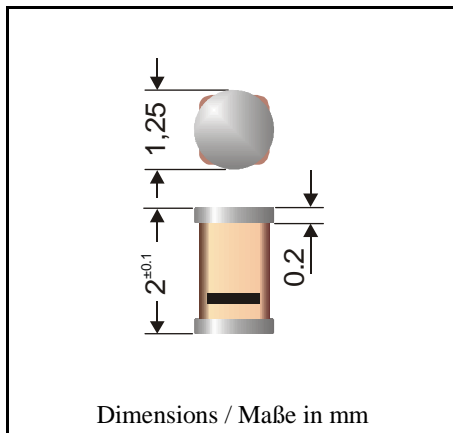


## Surface mount Schottky-Barrier Diodes Schottky-Barrier Dioden für die Oberflächenmontage

Version 2004-02-03



|   |                  |
|---|------------------|
| Power dissipation<br>Verlustleistung  | 400 mW           |
| Repetitive peak reverse voltage<br>Periodische Spitzensperrspannung           | 20 ... 40 V      |
| Glass case<br>Glasgehäuse   | Quadro-MicroMELF |
| Weight approx. – Gewicht ca.  | 0.01 g           |
| Standard packaging taped and reeled<br>Standard Lieferform gegurtet auf Rolle |                  |

**Maximum ratings ( $T_A = 25/^\circ\text{C}$ )****Grenzwerte ( $T_A = 25/^\circ\text{C}$ )**

|  |           | MCL103A              | MCL103B | MCL103C |
|--|-----------|----------------------|---------|---------|
| Repetitive peak reverse voltage<br>Periodische Spitzensperrspannung                        | $V_{RRM}$ | 40 V                 | 30 V    | 20 V    |
| Power dissipation – Verlustleistung  | $P_{tot}$ | 400 mW <sup>1)</sup> |         |         |
| Max. average forward current (dc)<br>Dauergrenzstrom                                       | $I_{FAV}$ | 200 mA <sup>1)</sup> |         |         |
| Peak fwd. surge current, 60 Hz half sine-wave<br>Stoßstrom für eine 60 Hz Sinus-Halbwellen | $I_{FSM}$ | 15 A                 |         |         |
| Junction temperature – Sperrschichttemp.   | $T_j$     | 125/°C               |         |         |
| Storage temperature – Lagerungstemperatur  | $T_s$     | - 55...+ 175/°C      |         |         |

**Characteristics ( $T_j = 25/^\circ\text{C}$ )****Kennwerte ( $T_j = 25/^\circ\text{C}$ )**

|  |         | Min.  | Typ. | Max.   |
|--|---------|-------|------|--------|
| Forward voltage – Durchlaßspannung <sup>2)</sup> |         |       |      |        |
| $I_F = 20 \text{ mA}$                            | $V_F$   | –     | –    | 0.37 V |
| $I_F = 200 \text{ mA}$                           | $V_F$   | –     | –    | 0.6 V  |
| Leakage current – Sperrstrom <sup>2)</sup>       |         |       |      |        |
| $V_R = 10 \text{ V}$                             | MCL103C | $I_R$ | –    | 5 : A  |
| $V_R = 20 \text{ V}$                             | MCL103B | $I_R$ | –    | 5 : A  |
| $V_R = 30 \text{ V}$                             | MCL103A | $I_R$ | –    | 5 : A  |

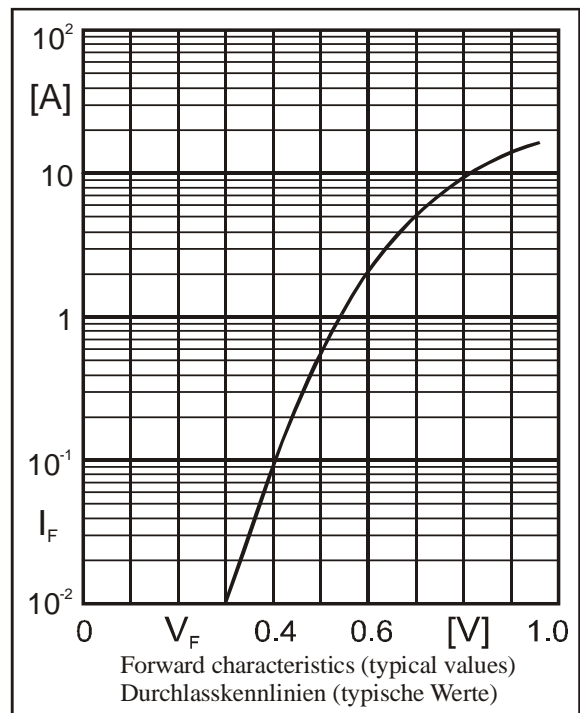
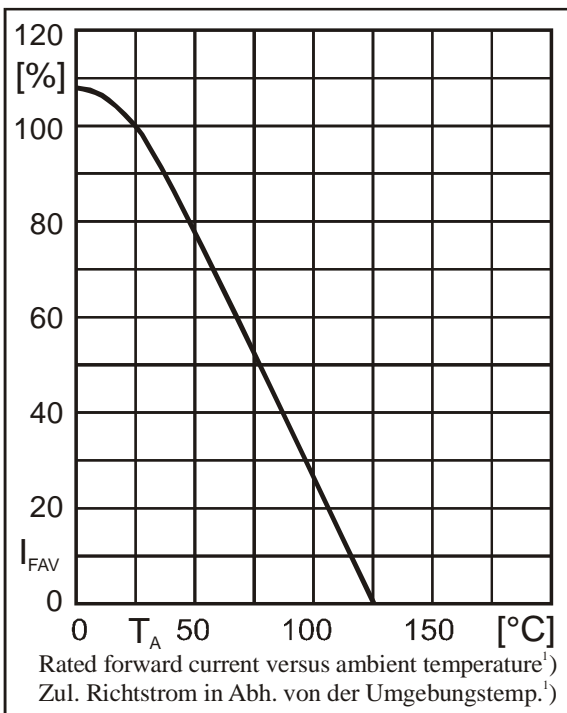
<sup>1)</sup> Mounted on P.C. board with 25 mm<sup>2</sup> copper pads at each terminal

Montage auf Leiterplatte mit 25 mm<sup>2</sup> Kupferbelag (Löt-pad) an jedem Anschluß

<sup>2)</sup> Tested with pulses  $t_p = 300 \text{ } \mu\text{s}$ , duty cycle # 2% – Gemessen mit Impulsen  $t_p = 300 \text{ } \mu\text{s}$ , Schaltverhältnis # 2%

Characteristics ( $T_j = 25^\circ\text{C}$ )Kennwerte ( $T_j = 25^\circ\text{C}$ )

|   | Min.      | Typ.  | Max.                  |
|---|-----------|-------|-----------------------|
| Junction capacitance – Sperrschichtkapazität<br>$V_R = 0, V_f = 1 \text{ MHz}$  | –         | 50 pF | –                     |
| Reverse recovery time – Sperrverzug<br>$I_F = 200 \text{ mA through/über}$<br>$I_R = 200 \text{ A to/auf } I_R = 20 \text{ mA}$ | –         | 10 ns | –                     |
| Thermal resistance junction to ambient air<br>Wärmewiderstand Sperrschicht – umgebende Luft                                     | $R_{thA}$ |       | 300 K/W <sup>1)</sup> |



<sup>1)</sup> Mounted on P.C. board with 3 mm<sup>2</sup> copper pad at each terminal  
Montage auf Leiterplatte mit 3 mm<sup>2</sup> Kupferbelag (Löt-pad) an jedem Anschluß