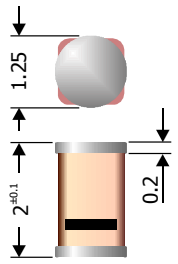
MCL4148, MCL4448

Surface Mount Small Signal Diodes
Kleinsignal-Dioden für die Oberflächenmontage

Version 2007-09-21



Dimensions - Maße [mm]

Power dissipation Verlustleistung	500 mW
Repetitive peak reverse voltage Periodische Spitzensperrspannung	100 V
Glass case Quadro-MicroMELF Glasgehäuse Quadro-MicroMELF	(LS-31)
Weight approx. – Gewicht ca.	0.01 g
Standard packaging taped and reeled Standard Lieferform gegurtet auf Rolle	

Maximum ratings (T_A = 25°C) **Grenzwerte (T_A = 25°C)**

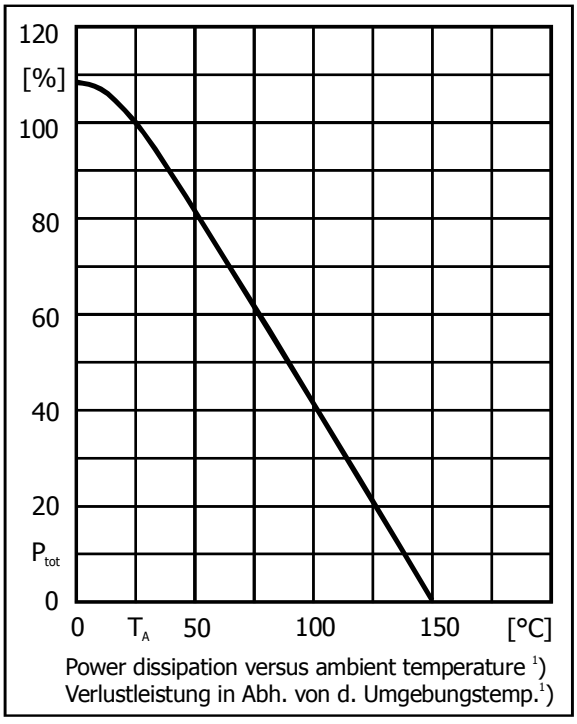
		MCL4148, MCL4448	
Power dissipation – Verlustleistung		P_{tot}	500 mW [1])
Max. average forward current – Dauergrenzstrom (dc)		I_{FAV}	150 mA [1])
Repetitive peak forward current – Periodischer Spitzenstrom		I_{FRM}	300 mA [1])
Non repetitive peak forward surge current Stoßstrom-Grenzwert	$t_p \le 1$ s $t_p \le 1$ µs	I_{FSM} I_{FSM}	500 mA [1]) 2 A
Reverse voltage – Sperrspannung		V_R	75 V
Repetitive peak reverse voltage – Periodische Spitzensperrspannung		V_{RRM}	100 V
Junction temperature – Sperrschichttemperatur Storage temperature – Lagerungstemperatur		T_j T_S	-55...+175°C -55...+175°C

Characteristics (T_j = 25°C) **Kennwerte (T_j = 25°C)**

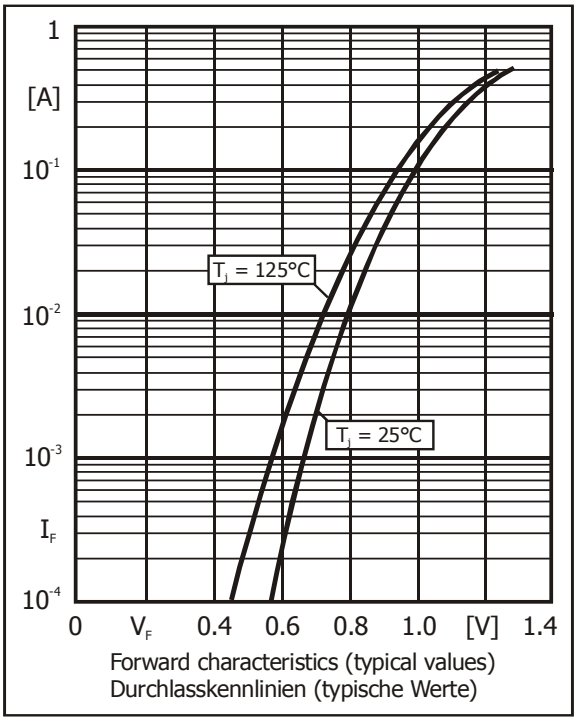
Forward voltage Durchlass-Spannung	MCL4148	I_F = 50 mA	V_F	< 1.0 V
	MCL4448	I_F = 5 mA I_F = 100 mA	V_F V_F	0.62...0.72 V < 1 V
Leakage current – Sperrstrom [2])		V_R = 20 V V_R = 75 V	I_R I_R	< 25 nA < 5 µA
Leakage current – Sperrstrom, T_j = 125°C [2])		V_R = 20 V V_R = 75 V	I_R I_R	< 30 µA < 50 µA
Typ. junction capacitance – Typ. Sperrschichtkapazität V_R = 0 V, f = 1 MHz			C_T	4 pF
Reverse recovery time – Sperrverzug I_F = 10 mA über/through I_R = 10 mA bis/to I_R = 1 mA			t_{rr}	< 4 ns

1 Mounted on P.C. board with 3 mm² copper pad at each terminal
Montage auf Leiterplatte mit 3 mm² Kupferbelag (Lötpad) an jedem Anschluss
2 Tested with pulses t_p = 300 µs, duty cycle ≤ 2% – Gemessen mit Impulsen t_p = 300 µs, Schaltverhältnis ≤ 2%

Characteristics (T_j = 25°C)		**Kennwerte (T_j = 25°C)**
Thermal resistance junction to ambient air Wärmewiderstand Sperrschicht – umgebende Luft	R_{thA}	< 300 K/W [1])
These diodes are also available in other case styles Diese Dioden sind auch in anderen Gehäuseformen lieferbar		DO-35 = 1N4148 MiniMELF = LL4148 Quadro-MiniMELF = LS4148 SOD-123 = 1N4148W SOD-323 = 1N4148WS



Power dissipation versus ambient temperature [1])
Verlustleistung in Abh. von d. Umgebungstemp.[1])



Forward characteristics (typical values)
Durchlasskennlinien (typische Werte)

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