

LL4148

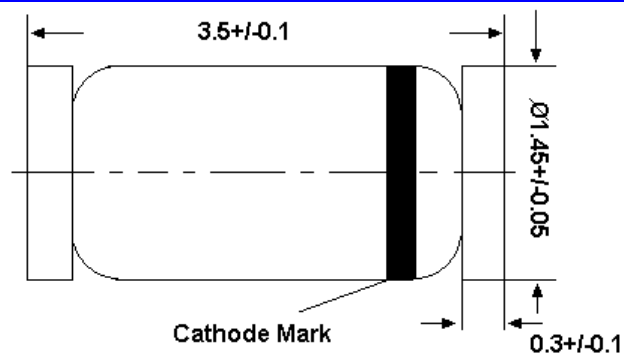
SILICON EPITAXIAL PLANAR DIODE

fast switching diode in MiniMELF case especially suited for automatic surface mounting.

Identical electrically to standard JEDEC 1N4148

These diodes are delivered taped.

Details see "Taping".



Glass case MiniMELF Weight approx. 0.05g Dimensions in mm

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

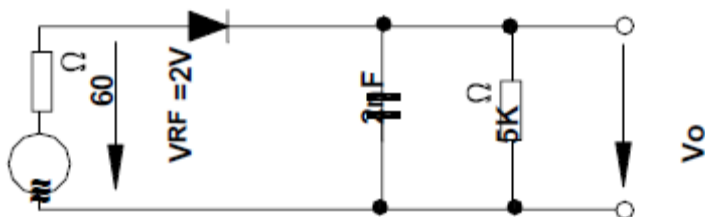
	Symbol	Value	Unit
Reverse Voltage	V_R	75	V
Peak Reverse Voltage	V_{RM}	100	V
Rectified Current (Average) Half Wave Rectification with Resist. Load at $T_{amb} = 25^\circ\text{C}$ and $f = 50\text{ Hz}$	I_O	150 ¹⁾	mA
Surge Forward Current at $t < 1\text{ s}$ and $T_j = 25^\circ\text{C}$	I_{FSM}	500	mA
Power Dissipation	P_{tot}	500 ¹⁾	mW
Junction Temperature	T_j	175	$^\circ\text{C}$
Storage Temperature Range	T_S	-65 to +175	$^\circ\text{C}$

¹⁾ Valid provided that electrodes are kept at ambient temperature

Characteristics at $T_j = 25^\circ\text{C}$

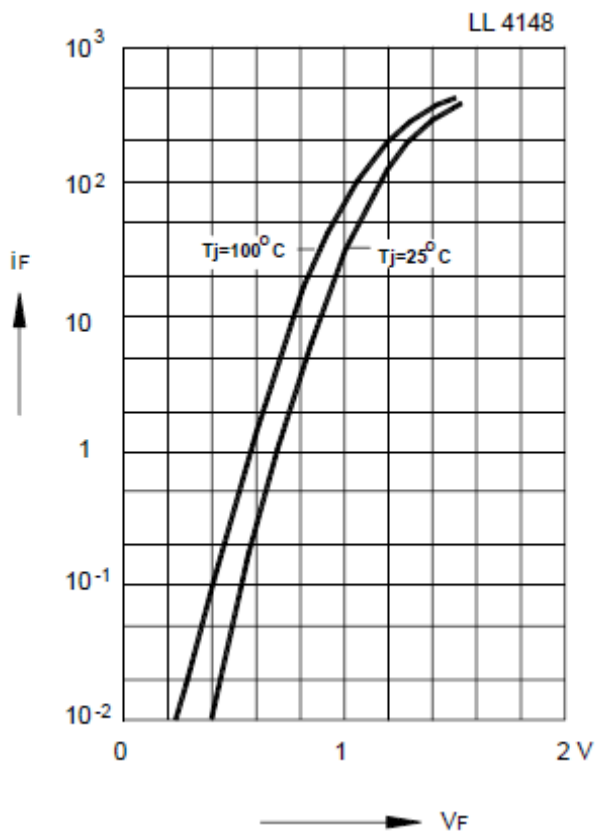
	Symbol	Min.	Typ.	Max.	Unit
Forward Voltage at $I_F = 10\text{ mA}$	V_F	-	-	1	V
Leakage Current at $V_R = 20\text{ V}$	I_R	-	-	25	μA
at $V_R = 75\text{ V}$	I_R	-	-	5	μA
at $V_R = 20\text{ V}, T_j = 150^\circ\text{C}$	I_R	-	--	50	μA
Reverse Breakdown Voltage tested with 100 μA Pulses	$V_{(BR)R}$	100	-	-	V
Capacitance at $V_F = V_R = 0$	C_{tot}	-	-	4	pF
Voltage Rise when Switching ON tested with 50 mA Forward Pulses $t_p = 0.1\text{ s}$, Rise Time < 30ns, $f_p = 5$ to 100 kHz	V_{fr}	-	-	2.5	V
Reverse Recovery Time from $I_F = 10\text{ mA}$ to $I_R = 1\text{ mA}$, $V_R = 6\text{ V}$, $R_L = 100\Omega$	t_{rr}	-	-	4	ns
Thermal Resistance Junction to Ambient Air	R_{thA}	-	-	0.35 ¹⁾	K/mW
Rectification Efficiency at $f = 100\text{ MHz}$, $V_{RF} = 2\text{ V}$	η_v	0.45	-	-	-

¹⁾ Valid provided that electrodes are kept at ambient temperature.

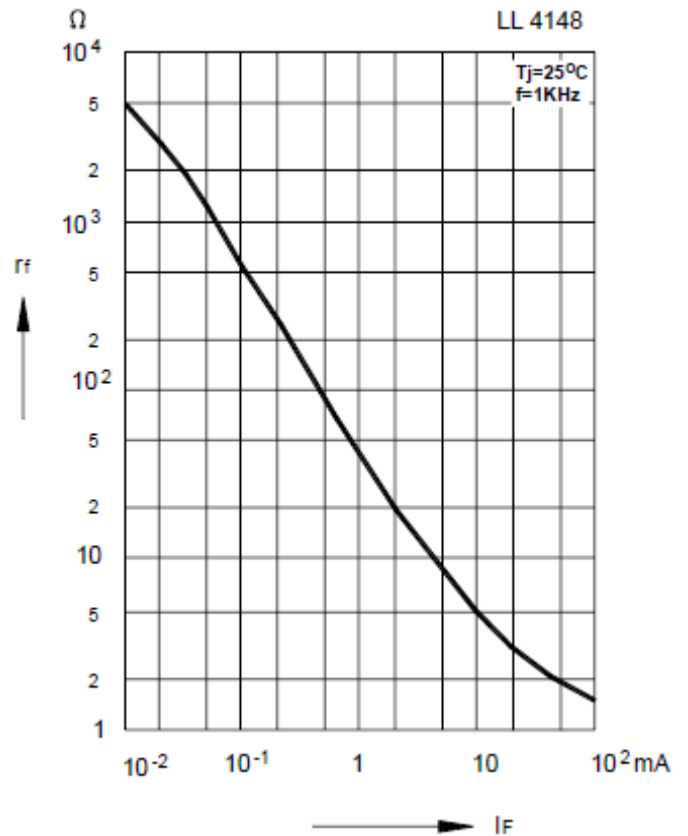


Rectification Efficiency Measurement Circuit

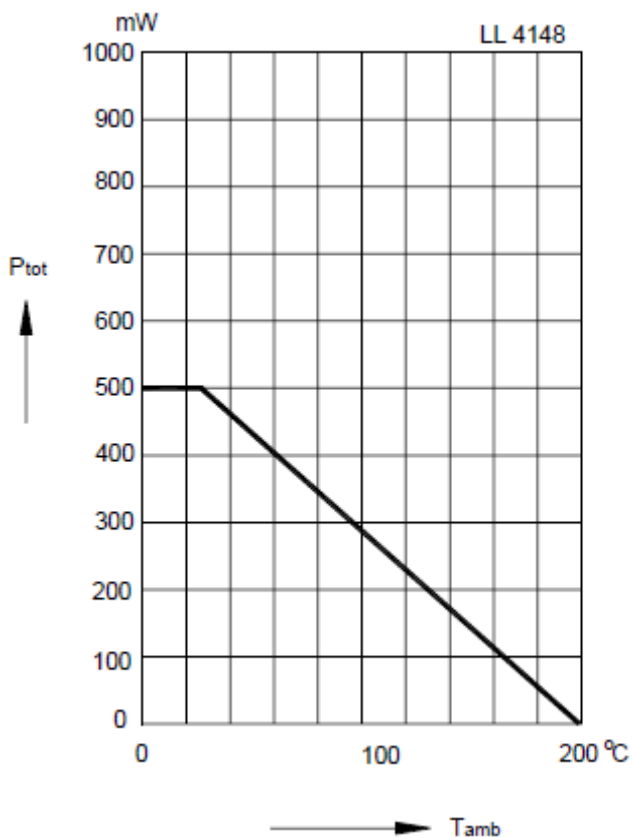
Forward characteristics



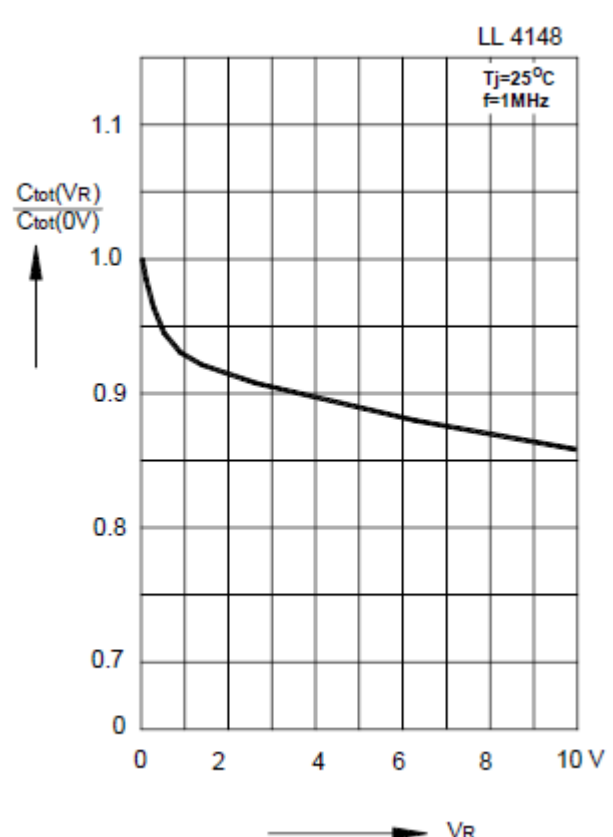
Dynamic forward resistance versus forward current



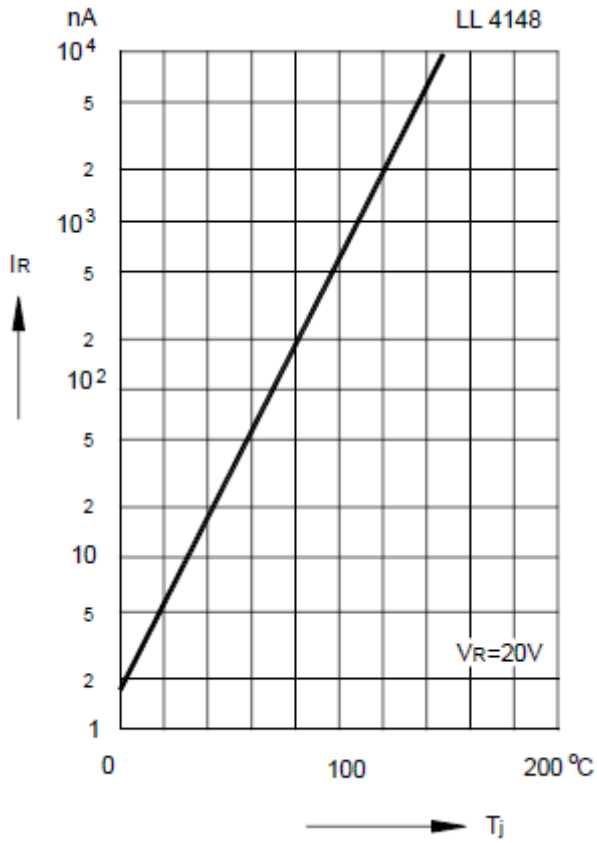
Admissible power dissipation versus ambient temperature Valid provided that electrodes are kept at ambient temperature



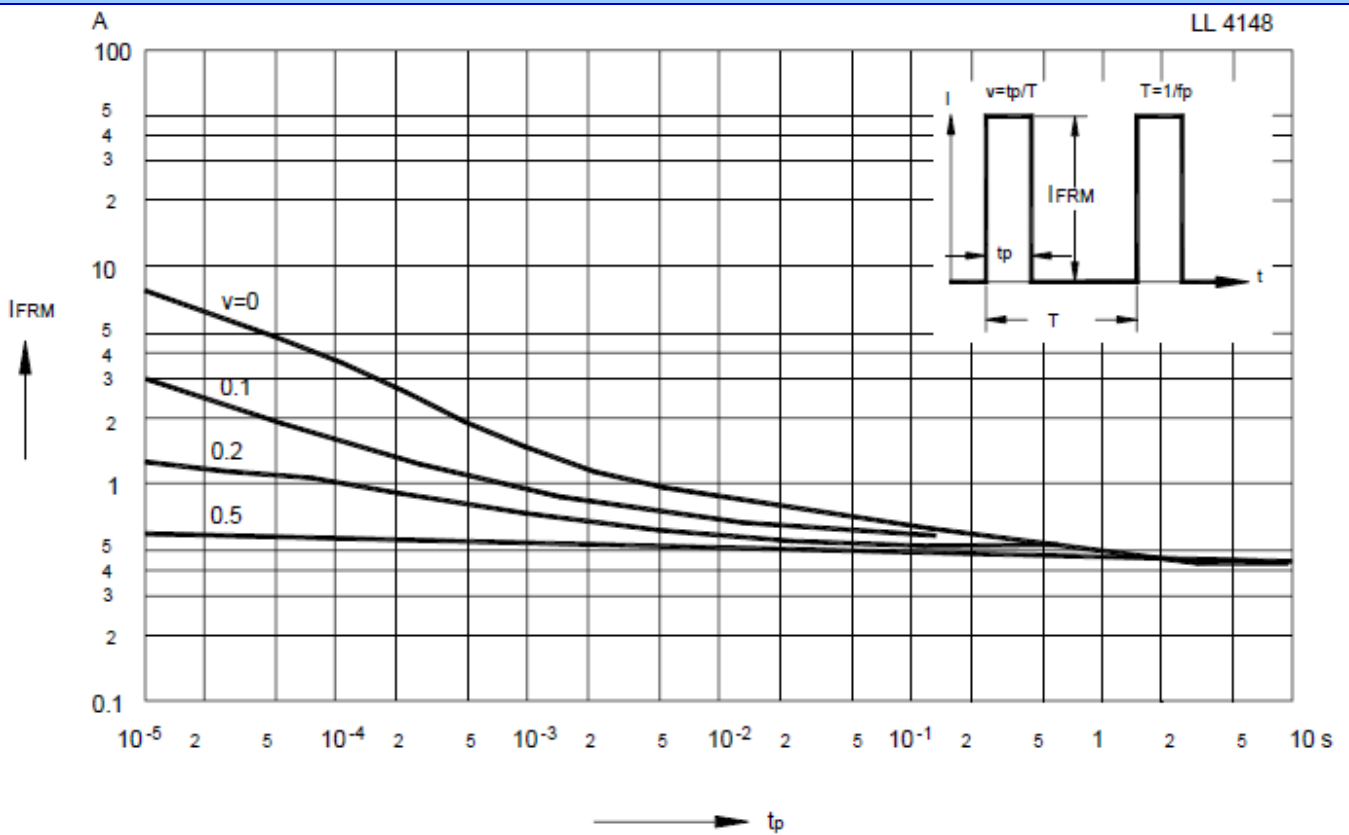
Relative capacitance versus reverse voltage



Leakage current versus junction temperature



Admissible repetitive peak forward current versus pulse duration Valid provided that electrodes are kept at ambient temperature



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