

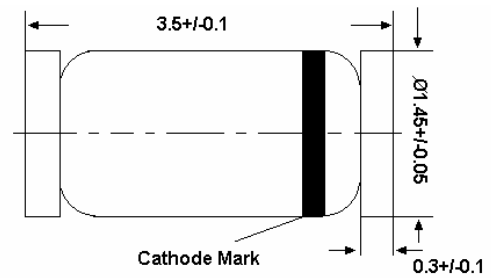
LL4148

SILICON EPITAXIAL PLANAR DIODE

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

Identical electrically to standard JEDEC 1N4148

LL-34

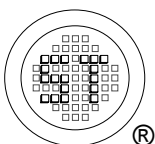


**Glass case MiniMELF
Dimensions in mm**

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

Parameter	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 $T_{amb} = 25\text{ }^\circ\text{C}$ and $f/50\text{ Hz}$	I_O	150 ¹⁾	mA
Repetitive Peak Forward Current	I_{FRM}	500	mA
Peak Forward Surge Current at $t_p = 1\mu\text{s}$	I_{FSM}	2	A
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.



SEMTECH ELECTRONICS LTD.

(Subsidiary of Sino-Tech International Holdings Limited, a company listed on the Hong Kong Stock Exchange, Stock Code: 724)



ISO/TS 16949 : 2002
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ISO 14001:2004
Certificate No. 7116



ISO 9001:2000
Certificate No. 0506098

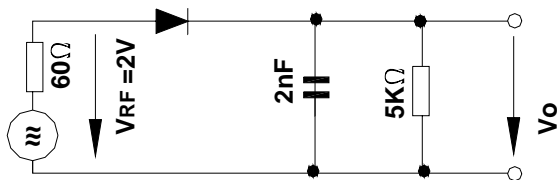
Dated : 30/11/2005

LL4148

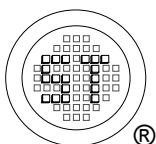
Characteristics at $T_j = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage at $I_F = 10\text{ mA}$	V_F	-	1	V
Leakage Current at $V_R = 20\text{ V}$ at $V_R = 75\text{ V}$ at $V_R = 20\text{ V}, T_j = 150\text{ }^\circ\text{C}$	I_R I_R I_R	- - -	25 5 50	nA μA μA
Reverse Breakdown Voltage tested with $100\text{ }\mu\text{A}$ 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 $< 30\text{ ns}$, $f_p = 5\text{ to }100\text{ KHz}$	V_{fr}	-	2.5	V
Reverse Recovery Time from $I_F = 10\text{ mA}$ to $I_R = 1\text{ mA}$, $V_R = 6\text{ V}$, $R_L = 100\text{ }\Omega$	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	-	-

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Rectification Efficiency Measurement Circuit



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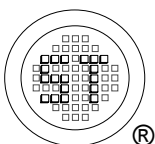
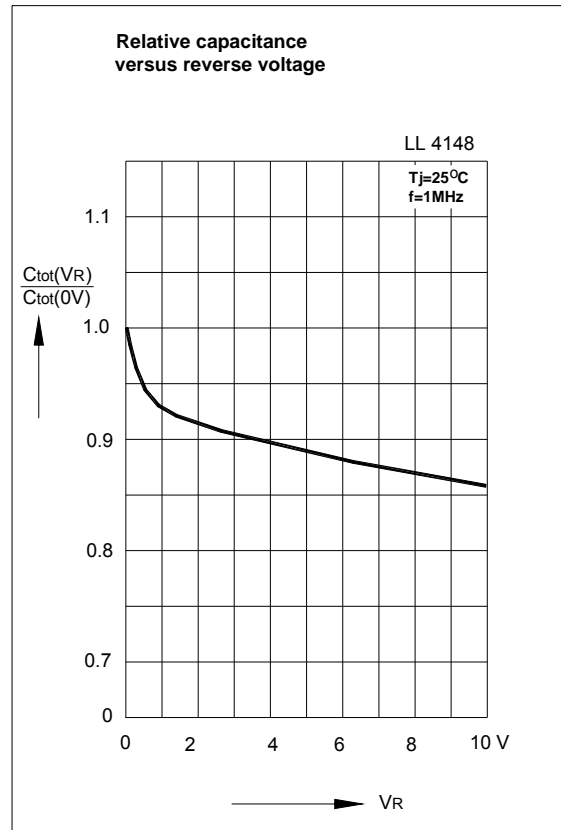
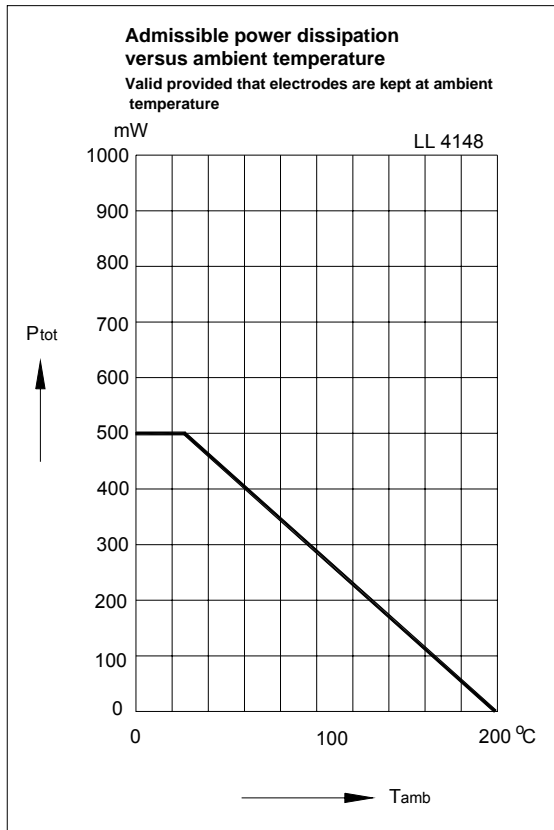
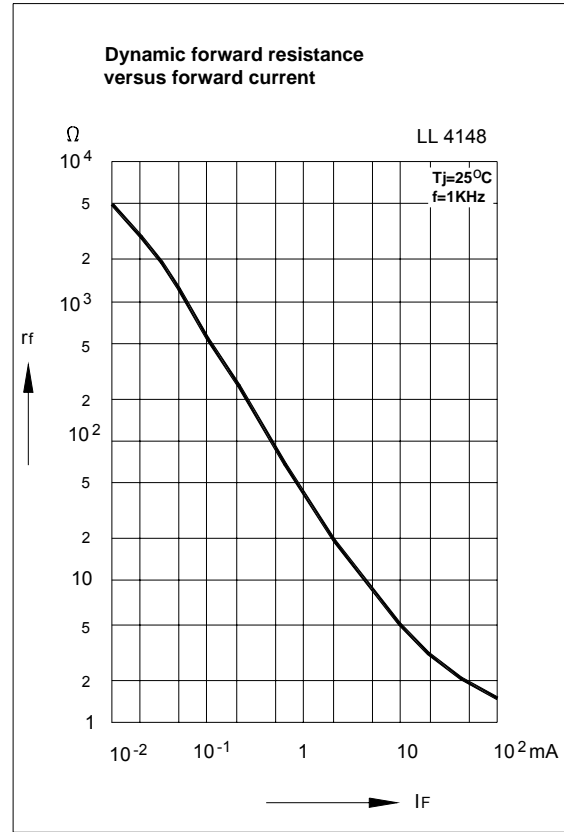
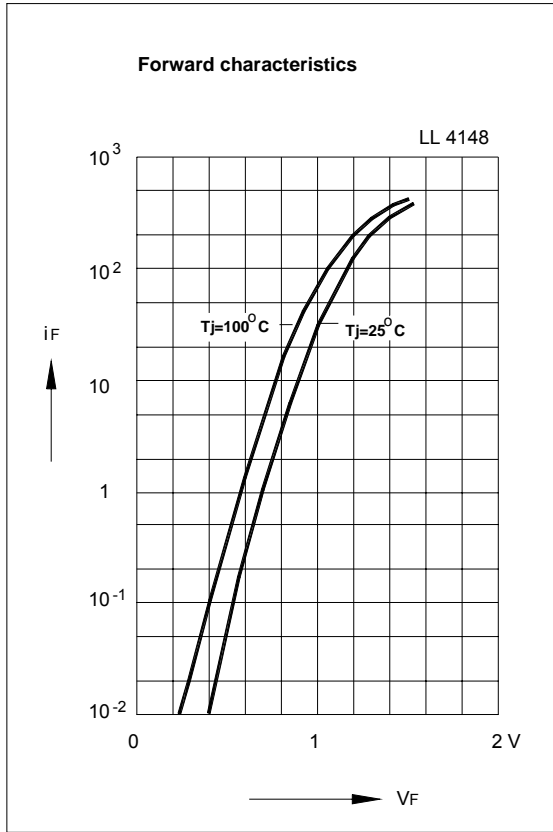


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Dated : 30/11/2005



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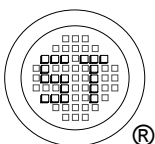
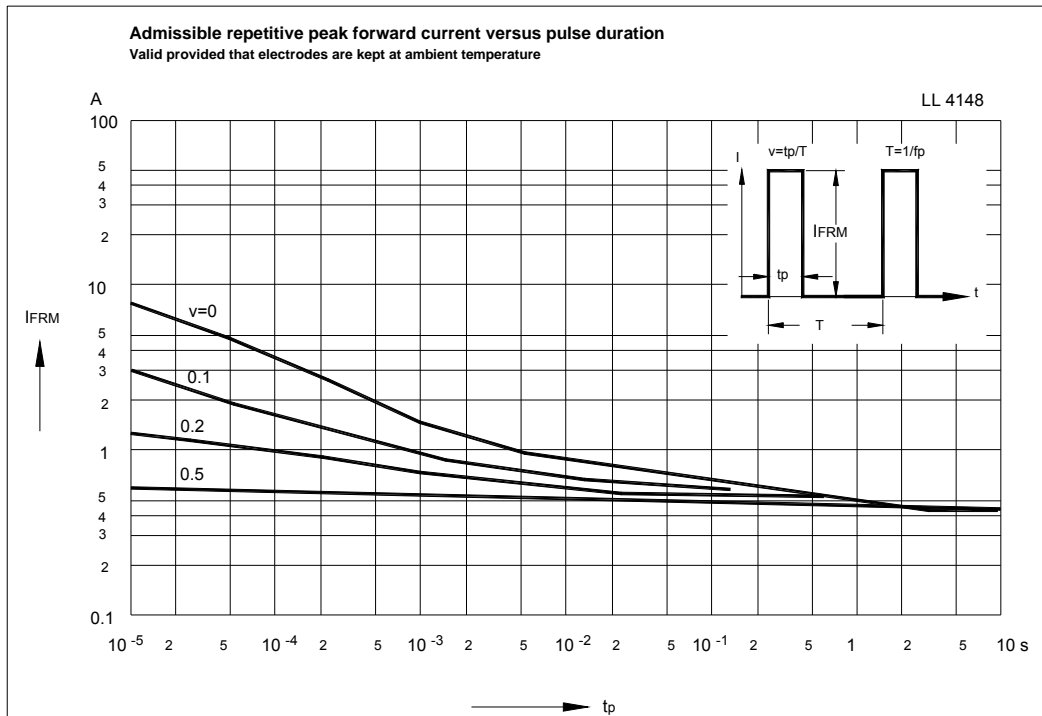
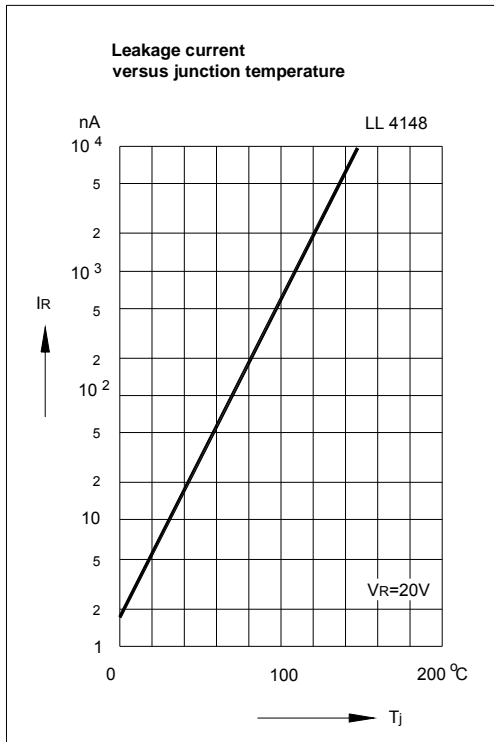
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