

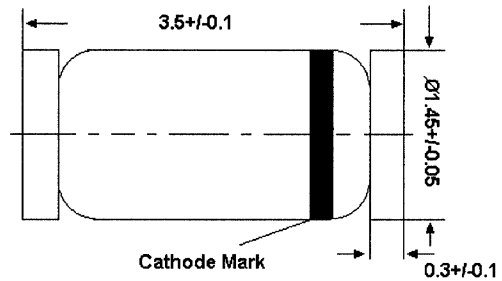
# LL4148

## 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".



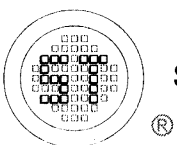
Glass case MiniMELF

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 <sup>1)</sup>	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 <sup>1)</sup>	mW
Junction Temperature	$T_j$	175	$^\circ\text{C}$
Storage Temperature Range	$T_s$	-65 to +175	$^\circ\text{C}$

<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature.



SEMTECH ELECTRONICS LTD. ( Wholly owned subsidiary of Honey Technology Ltd.)

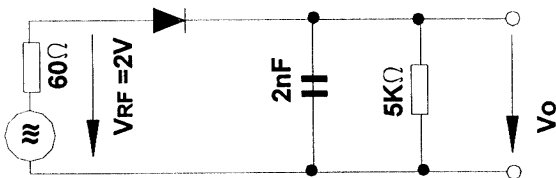


# LL4148

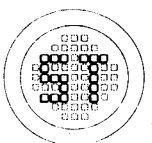
## Characteristics at $T_j = 25^\circ\text{C}$

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

<sup>1)</sup> Valid provided that electrodes are kept at ambient temperature.

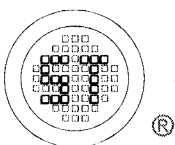
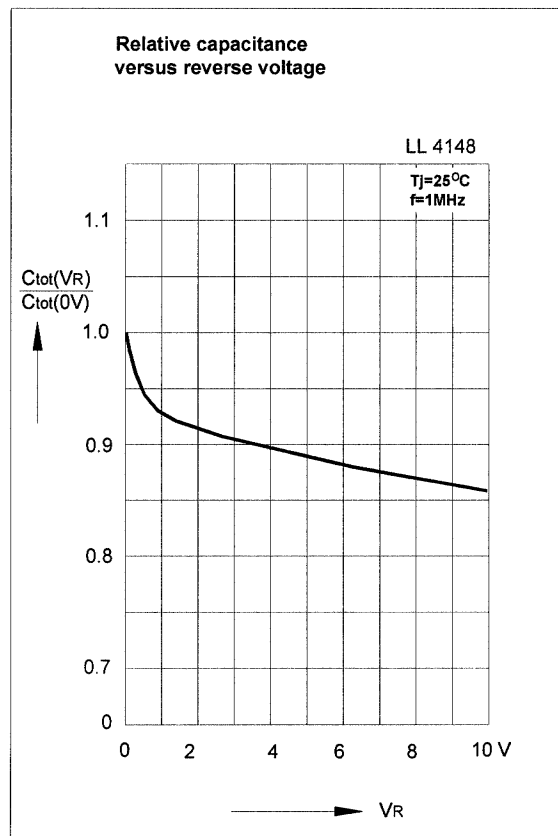
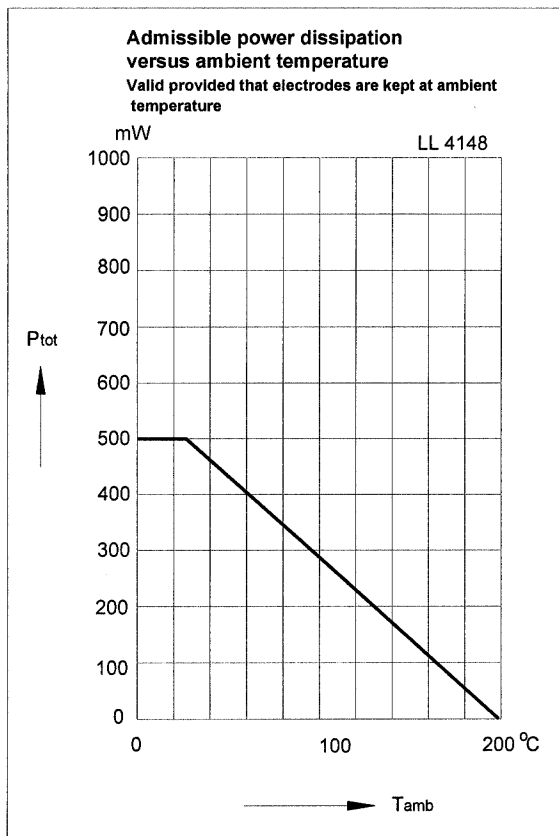
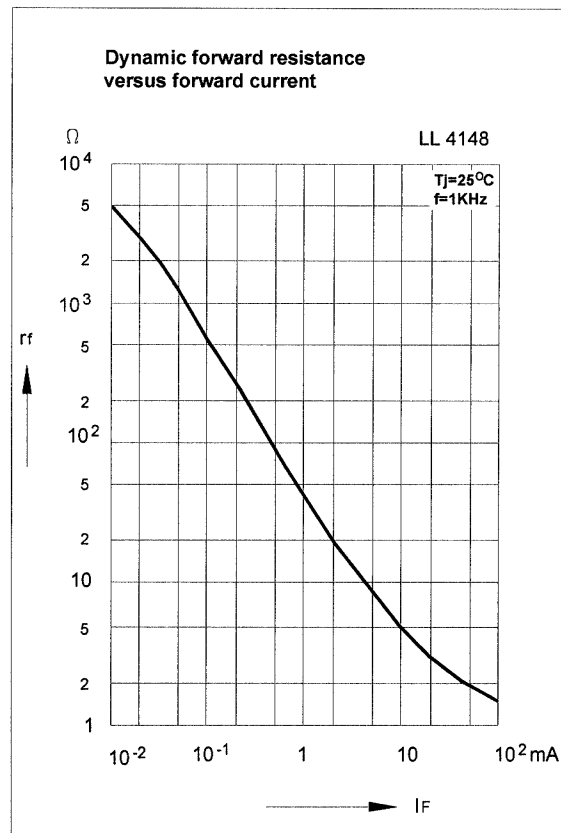
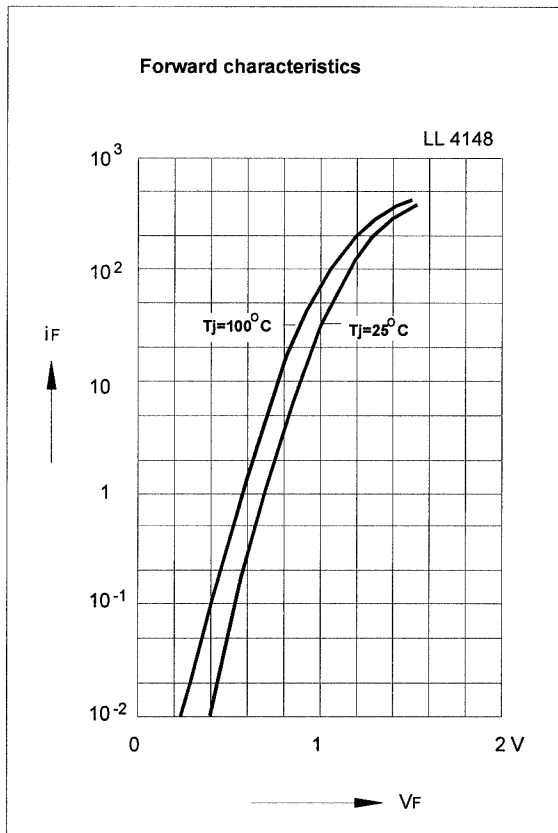


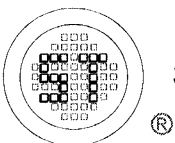
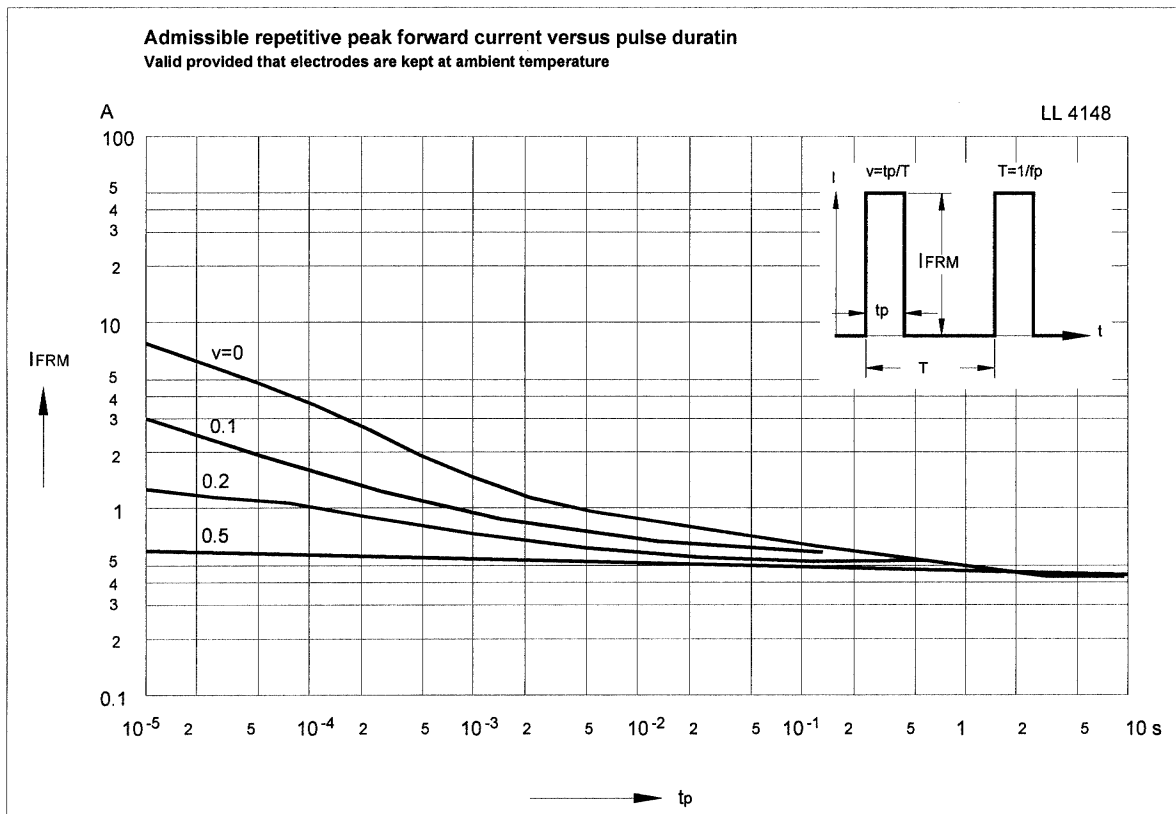
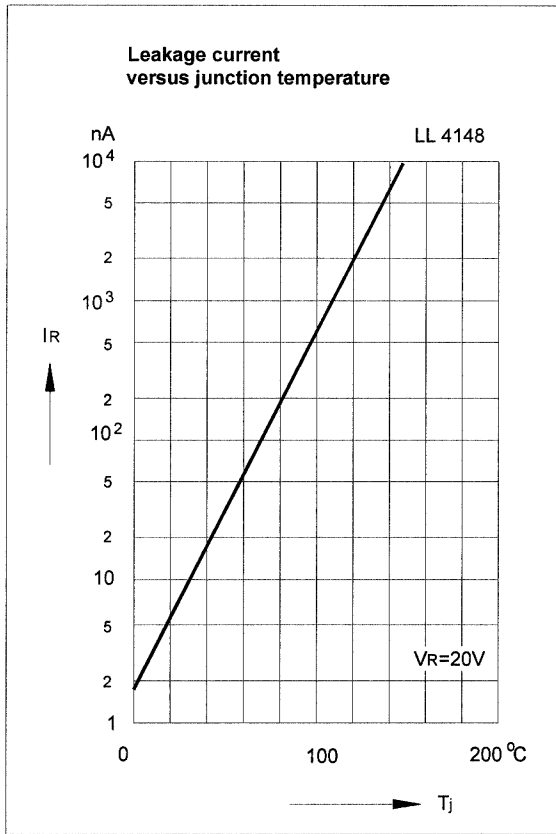
**Rectification Efficiency Measurement Circuit**



**SEMTECH ELECTRONICS LTD.** ( Wholly owned subsidiary of Honey Technology Ltd.)







**SEMTECH ELECTRONICS LTD.** ( Wholly owned subsidiary of Honey Technology Ltd.)

