



FUKUCOM COMPANY LTD.

福 靈 有 限 公 司

FLAT P, 3/F, EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.
TEL: 2790-0314 FAX: 2790-0206



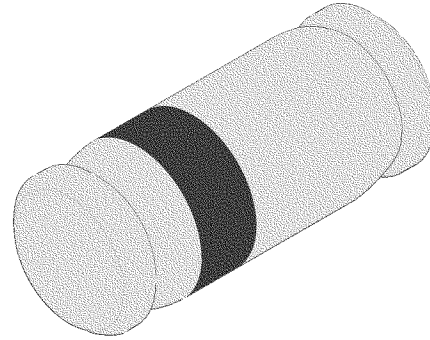
LL4148.LL4448

Vishay Telefunken

Fast Switching Diode

Features

- Silicon Epitaxial Planar Diodes
- Electrical data identical with the devices 1N4148 and 1N4448 respectively



94 9371

Applications

Extreme fast switches

Order Instruction

Type	Type Differentiation	Ordering Code	Remarks
LL4148	$V_{RRM} = 100\text{ V}$, $V_F@I_F 50\text{mA} = 1\text{ V}$	LL4148 – GS08	Tape and Reel
LL4448	$V_{RRM} = 100\text{ V}$, $V_F@I_F 100\text{mA} = 1\text{ V}$	LL4448 – GS08	Tape and Reel

Absolute Maximum Ratings

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

Parameter	Test Conditions	Type	Symbol	Value	Unit
Repetitive peak reverse voltage			V_{RRM}	100	V
Reverse voltage			V_R	75	V
Peak forward surge current	$t_p = 1\mu\text{s}$		I_{FSM}	2	A
Repetitive peak forward current			I_{FRM}	500	mA
Forward current			I_F	300	mA
Average forward current	$V_R = 0$		I_{FAV}	150	mA
Power dissipation			P_V	500	mW
Junction temperature			T_j	175	$^\circ\text{C}$
Storage temperature range			T_{stg}	-65...+175	$^\circ\text{C}$

Maximum Thermal Resistance

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

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	on PC board 50mmx50mmx1.6mm	R_{thJA}	500	K/W



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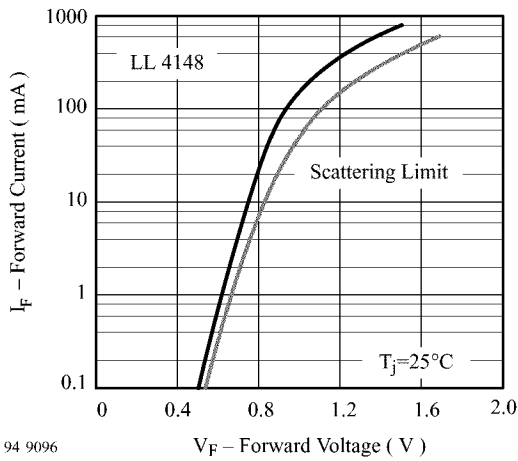


Electrical Characteristics

T_j = 25°C

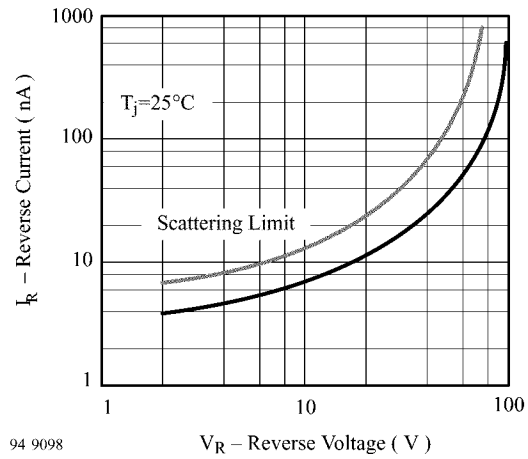
Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	I _F =5mA	LL4448	V _F	0.62		0.72	V
	I _F =50mA	LL4148	V _F		0.86	1	V
	I _F =100mA	LL4448	V _F		0.93	1	V
Reverse current	V _R =20V		I _R			25	nA
	V _R =20V, T _j =150°C		I _R			50	μA
	V _R =75V		I _R			5	μA
Breakdown voltage	I _R =100μA, t _p /T=0.01, t _p =0.3ms		V _(BR)	100			V
Diode capacitance	V _R =0, f=1MHz, V _{HF} =50mV		C _D			4	pF
Rectification efficiency	V _{HF} =2V, f=100MHz		η _r	45			%
Reverse recovery time	I _F =I _R =10mA, i _R =1mA		t _{rr}			8	ns
	I _F =10mA, V _R =6V, i _R =0.1xI _R , R _L =100Ω		t _{rr}			4	ns

Characteristics (T_j = 25°C unless otherwise specified)



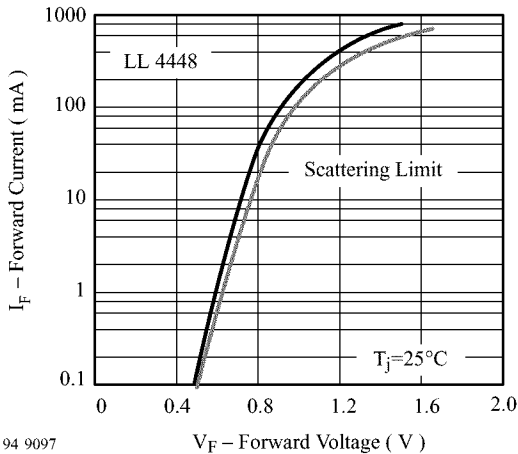
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Figure 1. Forward Current vs. Forward Voltage



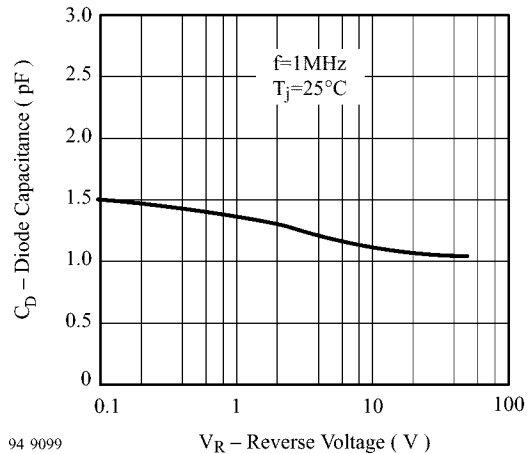
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Figure 3. Reverse Current vs. Reverse Voltage



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Figure 2. Forward Current vs. Forward Voltage



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Figure 4. Diode Capacitance vs. Reverse Voltage



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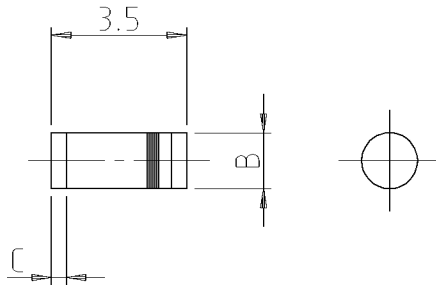
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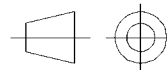
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Dimensions in mm



MiniMELF		
Dim	Min	Max
A	3.30	3.70
B	1.30	1.60
C	0.28	0.50
All Dimensions in mm		

15833



Technical drawings
according to DIN
specifications