MCL4148

Silicon Epitaxial Planar Switching Diode

Features

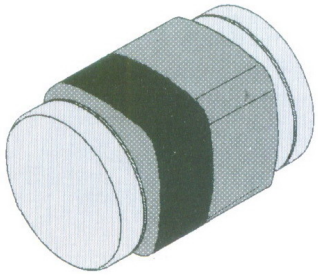
Saving space

Hermetic sealed parts

Fits onto SOD 323 / SOT 23 footprints

Electrical data identical with the device 1N4148

LS-31



Glass Case MicroMELF

Applications

Extreme fast switches

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V_{RM}	100	V
Reverse Voltage	V_R	75	V
Average Rectified Forward Current	$I_{F(AV)}$	200	mA
Repetitive Peak Forward Current	I_{FRM}	450	mA
Non-repetitive Peak Forward Surge Current at t = 1 s at t = 1 ms at t = 1 µs	I_{FSM}	0.5 1 4	A
Power Dissipation	P_{tot}	500 [1]	mW
Junction Temperature	T_j	175	°C
Storage Temperature Range	T_{stg}	- 65 to + 175	°C

[1] Valid provided that electrodes are kept at ambient temperature.

Characteristics at T_a = 25 °C

Parameter	Symbol	Min.	Max.	Unit
Forward Voltage at IF = 50 mA	V_F	-	1	V
Leakage Current at V_R = 20 V at V_R = 75 V at V_R = 20 V, T_j = 150 °C	I_R I_R I_R	- - -	25 5 50	nA µA µA
Reverse Breakdown Voltage at I_R = 100 µA	$V_{(BR)R}$	100	-	V
Capacitance at V_R = 0, f = 1 MHz	C_{tot}	-	4	pF
Voltage Rise when Switching ON tested with 50 mA Forward Pulses tp = 0.1 s, Rise Time < 30 ns, fp = 5 to 100 KHz	V_{fr}	-	2.5	V
Reverse Recovery Time at I_F = 10 mA to I_R = 1 mA, V_R = 6 V, R_L = 100 Ω	t_{rr}	-	4	ns
Rectification Efficiency at f = 100 MHz, V_{RF} = 2 V	η_V	0.45	-	-

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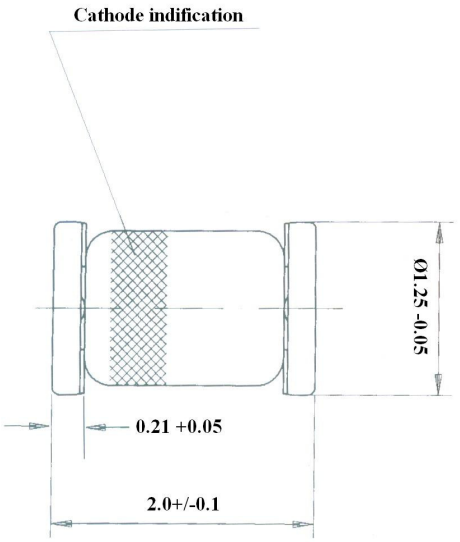
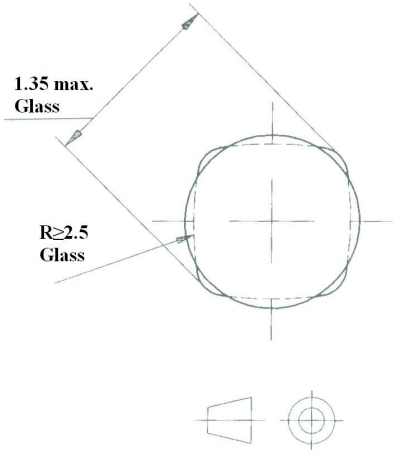


Glass case MicroMELF
Dimensions in mm
(LS-31)



technical drawings
according to DIN
specifications