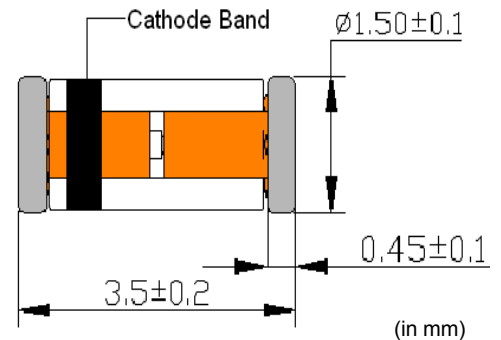


## Features

- Silicon epitaxial planar diode
- Fast switching
- Ideal for automatic insertion

## Mechanical Data

- Case: MiniMELF (SOD-80)
- Weight: approx. 0.05g
- Plating thickness: 4um to 12um
- Plating material: Pure tin (99.99%)



Package: Mini-MELF (SOD-80)

## Absolute Maximum Ratings (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Limit	Unit
Reverse voltage	V <sub>R</sub>	75	Volts
Peak reverse voltage	V <sub>RM</sub>	100	Volts
Forward DC current at T <sub>amb</sub> =25°C <sup>(1)</sup>	I <sub>F</sub>	200	mA
Average rectified current half wave rectification with resistive load at T <sub>amb</sub> =25°C f≥50 Hz <sup>(1)</sup>	I <sub>F(AV)</sub>	150	mA
Surge forward current at t<1s and T <sub>J</sub> =25°C	I <sub>FSM</sub>	500	mA
Power dissipation at T <sub>amb</sub> =25°C <sup>(1)</sup>	P <sub>tot</sub>	500	mW
Thermal resistance junction to ambient air <sup>(2)</sup>	R <sub>θJA</sub>	350	°C/W
Thermal resistance junction to tie-point	R <sub>θJtp</sub>	300	°C/W
Operation Junction temperature	T <sub>opr</sub>	175	°C
Storage temperature range	T <sub>S</sub>	-65 to +175	°C

Note: 1. Valid provided that electrodes are kept at ambient temperature

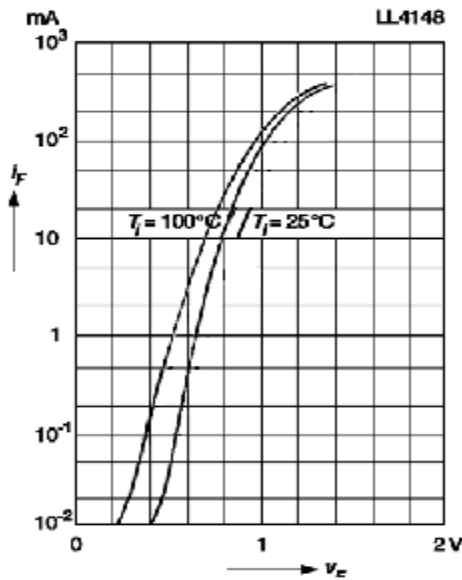
2. Device mounted on FR4 printed-circuit board

## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise specified)

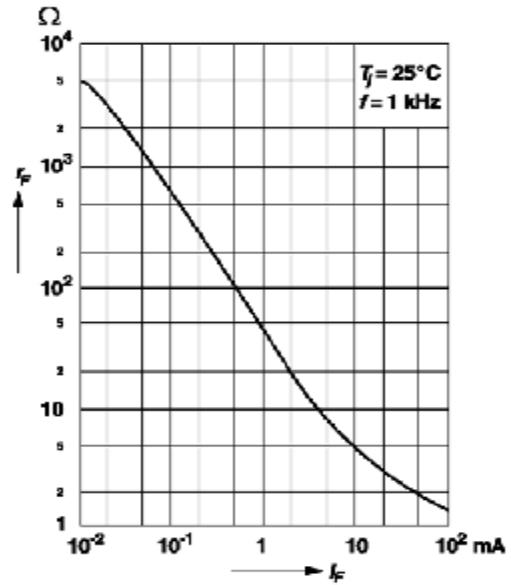
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Forward voltage	V <sub>F</sub>	I <sub>F</sub> =10mA	-	-	1.0	Volt
Leakage current	I <sub>R</sub>	V <sub>R</sub> =20V	-	-	25	nA
		V <sub>R</sub> =75V	-	-	5.0	uA
		V <sub>R</sub> =20V, T <sub>J</sub> =150°C	-	-	50	uA
Capacitance	C <sub>tot</sub>	V <sub>F</sub> =V <sub>R</sub> =0V, f=1MHz	-	-	4.0	pF
Voltage rise when switching ON (tested with 50mA forward pulses)	V <sub>fr</sub>	tp=0.1us, Rise time<30ns fp=5 to 100kHz	-	-	2.5	Volts
Reverse recovery time	t <sub>rr</sub>	I <sub>F</sub> =10mA, I <sub>R</sub> =1mA V <sub>R</sub> =6V, R <sub>L</sub> =100Ω	-	-	4.0	ns
Rectification efficiency	η <sub>V</sub>	f=100MHz, V <sub>RF</sub> =2V	0.45	-	-	-

## Typical Characteristic Curves

Forward characteristics

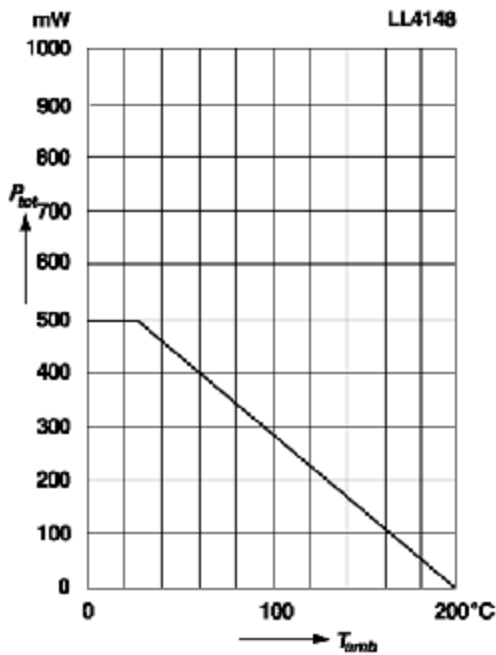


Dynamic forward resistance versus forward current

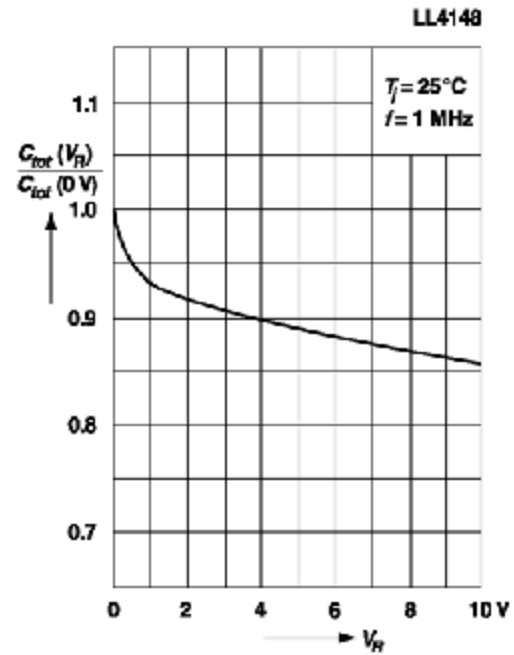


Admissible power dissipation versus ambient temperature

Valid provided that electrodes are kept at ambient temperature

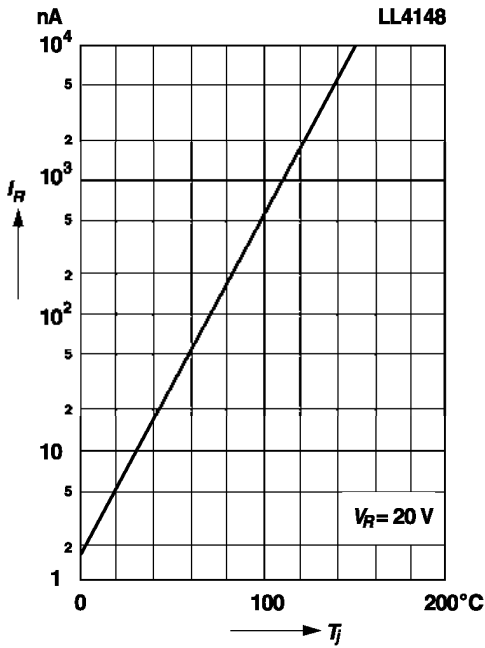


Relative capacitance versus reverse voltage

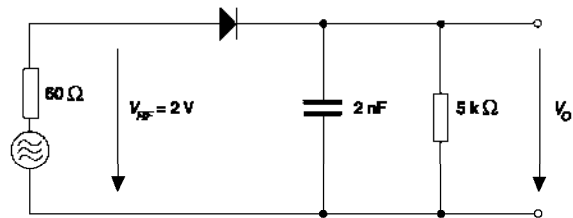


## Typical Characteristic Curves

Leakage current  
versus junction temperature



Rectification Efficiency Measurement Circuit



Admissible repetitive peak forward current versus pulse duration

Valid provided that electrodes are kept at ambient temperature

