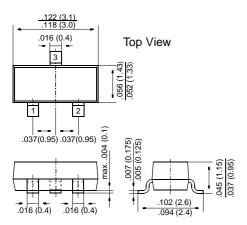
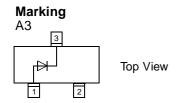
## **IMBD4448**

## **Small Signal Diodes**

#### **SOT-23**



Dimensions in inches and (millimeters)



### **FEATURES**

- ◆ Silicon Epitaxial Planar Diodes
- ◆ Fast switching diode in case SOT-23, especially suited for automatic insertion.
- ♦ This diode is also available in other case styles including: the DO-35 case with the type designation 1N4448, the Mini-MELF case with the type designation LL4448, and the SOD-123 case with the type designation 1N4448W

### **MECHANICAL DATA**

**Case:** SOT-23 Plastic Package **Weight:** approx. 0.008 g

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Value	Unit
Reverse Voltage	V <sub>R</sub>	75	V
Peak Reverse Voltage	V <sub>RM</sub>	100	V
Rectified Current (Average) Half Wave Rectification with Resist. Load at $T_{amb} = 25$ °C and $\geq f \geq 50$ Hz	I <sub>0</sub>	150 <sup>1)</sup>	mA
Surge Forward Current at t < 1 s and T <sub>j</sub> = 25 °C	I <sub>FSM</sub>	500	mA
Power Dissipation at T <sub>amb</sub> = 25 °C	P <sub>tot</sub>	350 <sup>1)</sup>	mW
Junction Temperature	Tj	150	°C
Storage Temperature Range	T <sub>S</sub>	-65 to +150	°C
1) Device on fiberglass substrate, see layout	-		-



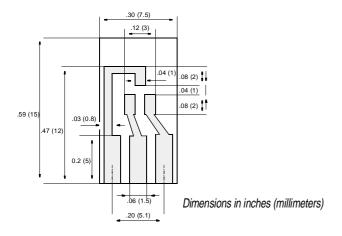
# **IMBD4448**

### **ELECTRICAL CHARACTERISTICS**

Ratings at 25 °C ambient temperature unless otherwise specified

	Symbol	Min.	Тур.	Max.	Unit
Forward Voltage at I <sub>F</sub> = 5 mA at I <sub>F</sub> = 100 mA	V <sub>F</sub> V <sub>F</sub>	0.62	- -	0.72 1	V
Leakage Current at $V_R = 70 \text{ V}$ at $V_R = 70 \text{ V}$ , $T_j = 150 ^{\circ}\text{C}$ at $V_R = 25 \text{ V}$ , $T_j = 150 ^{\circ}\text{C}$	I <sub>R</sub> I <sub>R</sub>	_ _ _	_ _ _	2.5 50 30	μΑ μΑ μΑ
Capacitance at $V_F = V_R = 0$	C <sub>tot</sub>	_	_	4	pF
Reverse Recovery Time from $I_F = 10$ mA to $I_R = 10$ mA $V_R = 6$ V, $R_L = 100$ $\Omega$	t <sub>rr</sub>	_	-	4	ns
Thermal Resistance Junction to Ambient Air	R <sub>thJA</sub>	_	_	4501)	K/W

<sup>1)</sup> Device on fiberglass substrate, see layout



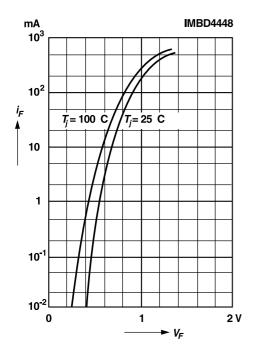
### Layout for RthJA test

Thickness: Fiberglass 0.059 in (1.5 mm) Copper leads 0.012 in (0.3 mm)



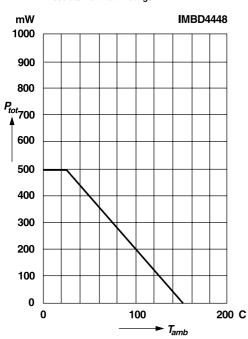
### **RATINGS AND CHARACTERISTIC CURVES IMBD4448**

#### Forward characteristics

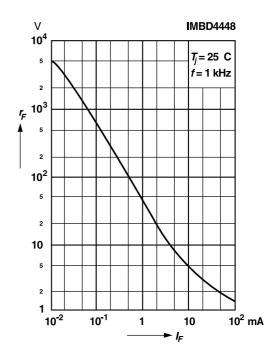


## Admissible power dissipation versus ambient temperature

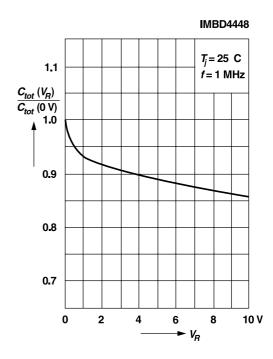
For conditions, see footnote in table "Absolute Maximum Ratings"



## Dynamic forward resistance versus forward current



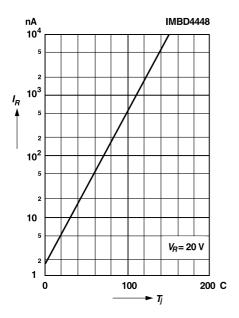
## Relative capacitance versus reverse voltage





### **RATINGS AND CHARACTERISTIC CURVES IMBD4448**

## Leakage current versus junction temperature



#### Admissible repetitive peak forward current versus pulse duration

For conditions, see footnote in table "Absolute Maximum Ratings"

