Small Signal Fast Switching Diode

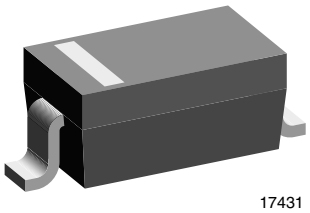
Features

- Silicon Epitaxial Planar Diode
- Fast switching diode
- This diode is also available in other case styles including the DO-35 case with the type designation 1N4448, the MiniMELF case with the type designation LL4448, and the SOT-23 case with the type designation IMBD4448
- AEC-Q101 qualified
- Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC

Pb-free

e3

RoHS COMPLIANT



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Mechanical Data

Case: SOD-123

Weight: approx. 10.3 mg

Packaging codes/options:

GS18 / 10 k per 13" reel (8 mm tape), 10 k/box

GS08 / 3 k per 7" reel (8 mm tape), 15 k/box

Parts Table

Part	Ordering code	Type Marking	Remarks
1N4448W-V	1N4448W-V-GS18 or 1N4448W-V-GS08	A3	Tape and Reel

Absolute Maximum Ratings

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Reverse voltage		V_R	75	V
Peak reverse voltage		V_{RM}	100	V
Average rectified current half wave rectification with resistive load	f ≥ 50 Hz	$I_{F(AV)}$	150[1)]	mA
Surge current	t < 1 s and T_j = 25 °C	I_{FSM}	500	mA
Power dissipation		P_{tot}	500[1)]	mW

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

For technical questions within your region, please contact one of the following:
DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com

Thermal Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Thermal resistance junction to ambient air		R_{thJA}	350[1)]	K/W
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	- 65 to + 150	°C

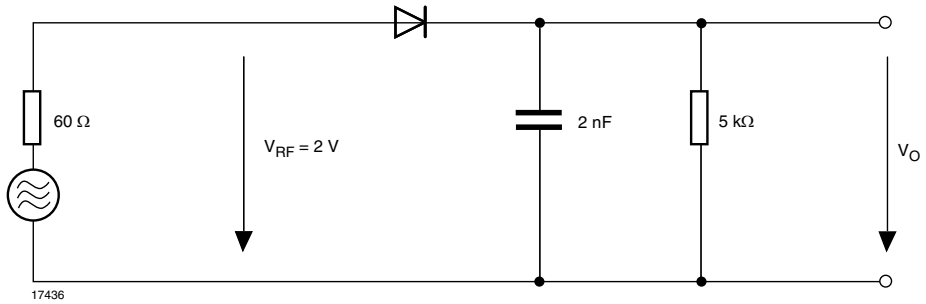
[1)] Valid provided that leads at a distance of 8 mm from case are kept at ambient temperature.

Electrical Characteristics

T_{amb} = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Min.	Typ.	Max.	Unit
Forward voltage	I_F = 5 mA	V_F	0.62		0.72	V
	I_F = 100 mA	V_F			1	V
Leakage current	V_R = 20 V	I_R			25	nA
	V_R = 75 V	I_R			5	µA
	V_R = 20 V, T_J = 150 °C	I_R			50	µA
Capacitance	$V_F = V_R$ = 0 V				4	pF
Reverse recovery time	I_F = 10 mA to I_R = 10 mA, V_R = 6 V, R_L = 100 Ω	t_{rr}			4	ns
Rectification efficiency	f = 100 MHz, V_{RF} = 2 V	ηv	0.45			

Rectification Efficieny Measurement Circuit



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Typical Characteristics

T_{amb} = 25 °C unless otherwise specified

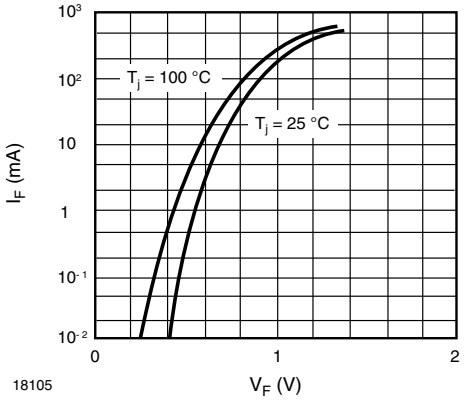


Figure 1. Forward characteristics

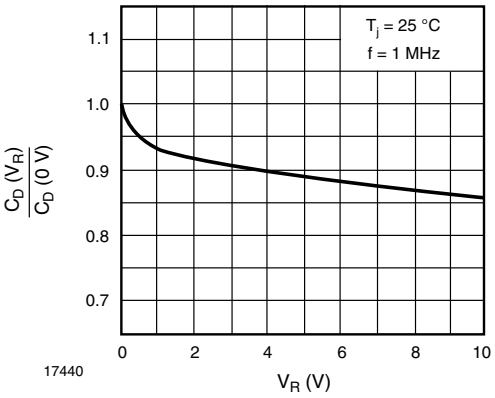


Figure 4. Relative Capacitance vs. Reverse Voltage

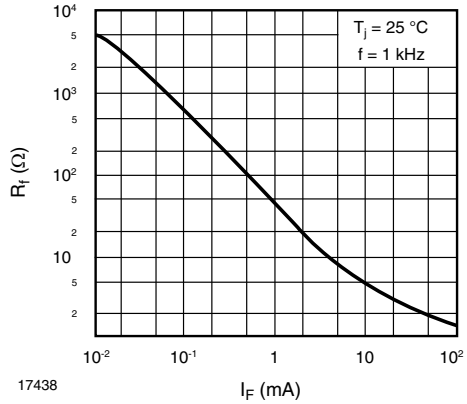


Figure 2. Dynamic Forward Resistance vs. Forward Current

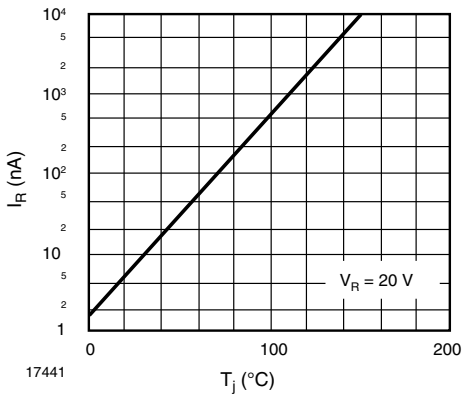


Figure 5. Leakage Current vs. Junction Temperature

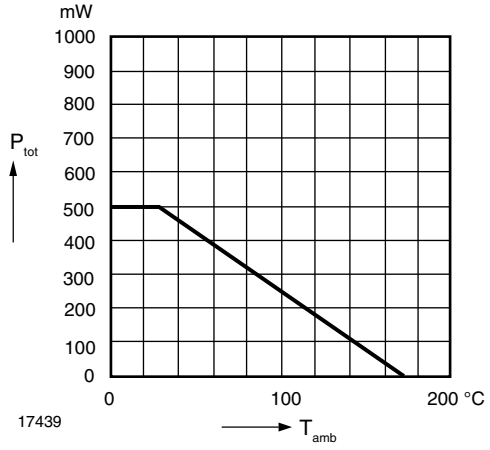


Figure 3. Admissible Power Dissipation vs. Ambient Temperature

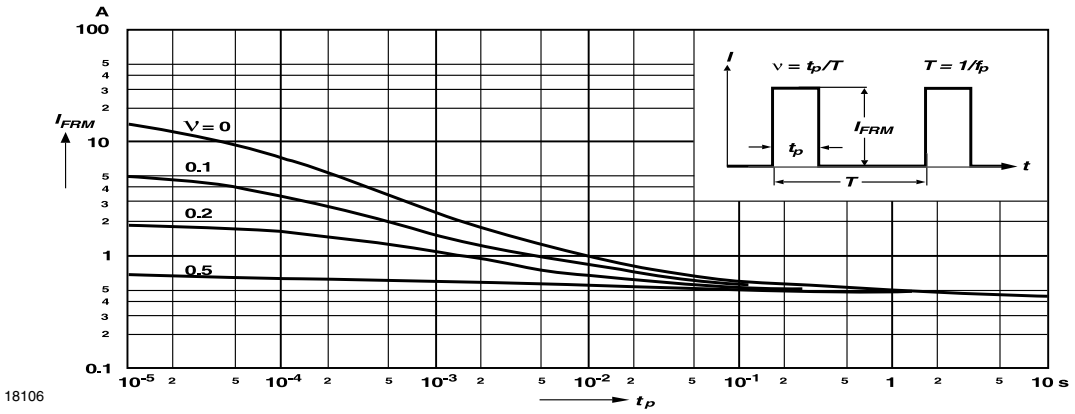
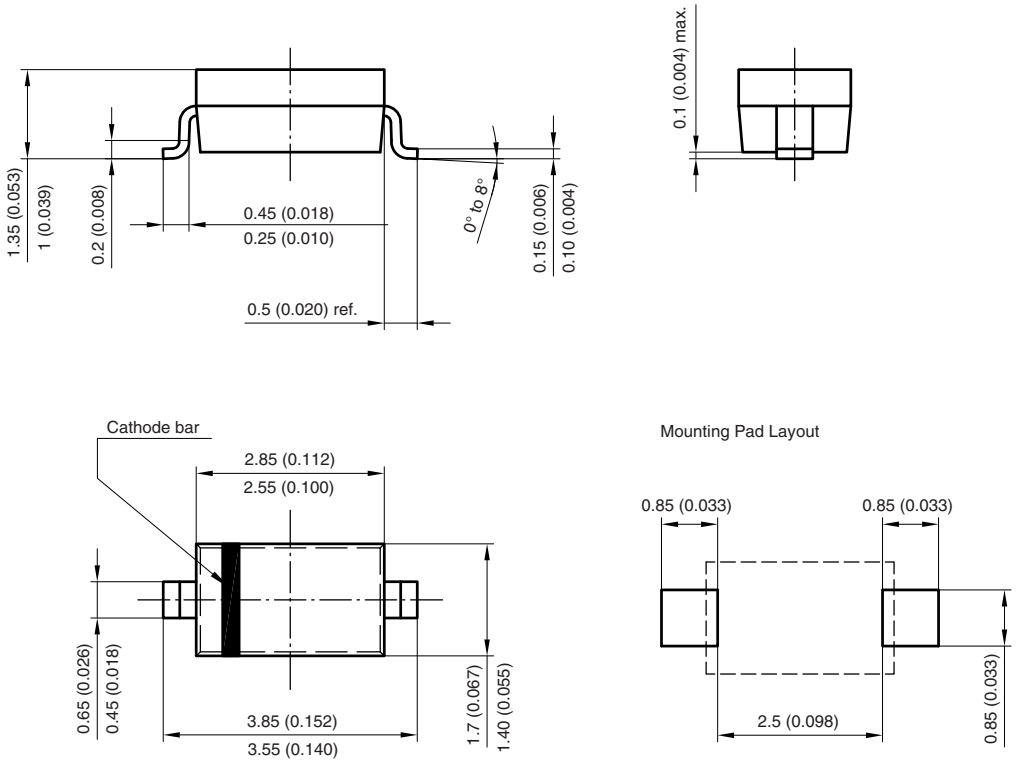


Figure 6. Admissible Repetitive Peak Forward Current vs. Pulse Duration

Package Dimensions in millimeters (inches): **SOD-123**



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