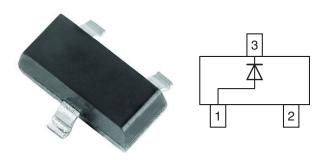


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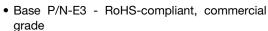
Small Signal Switching Diode



FEATURES

- Silicon epitaxial planar diode
- Fast switching diode in case SOT-23, especially suited for automatic insertion.







- Base P/N-HE3 RoHS-compliant, AEC-Q101 qualified
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

DESIGN SUPPORT TOOLS click logo to get started



MECHANICAL DATA

Case: SOT-23

Weight: approx. 8.8 mg
Packaging codes / options:

18/10K per 13" reel (8 mm tape), 10K/box 08/3K per 7" reel (8 mm tape), 15K/box

PARTS TABLE					
PART	ORDERING CODE	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS	
IMBD4448	IMBD4448-E3-08 or IMBD4448-E3-18	Single	A3	Tape and reel	
	IMBD4448-HE3-08 or IMBD4448-HE3-18	Sirigle	AS	rape 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	
Rectified current (average) half wave rectification with resistive load ⁽¹⁾	f ≥ 50 Hz	I _{F(AV)}	150	mA	
Surge forward current	t < 1 s and T _J = 25 °C	I _{FSM}	500	mA	
Power dissipation (1)		P _{tot}	350	mW	

THERMAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)					
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT	
Thermal resistance junction to ambient air (1)		R _{thJA}	450	K/W	
Junction temperature		T _j	150	°C	
Storage temperature range		T _{stg}	-65 to +150	°C	
Operating temperature range		T _{op}	-55 to +150	°C	

Note

⁽¹⁾ Device on fiberglass substrate, see layout on next page



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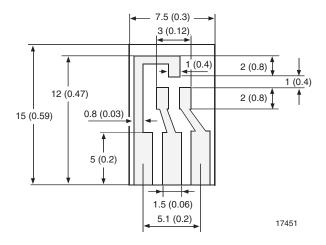
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ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 5 \text{ mA}$	V_{F}	0.62		0.72	V
Forward voltage	I _F = 100 mA	V_{F}			1	V
	V _R = 70 V	I _R			2500	nA
Leakage current	V _R = 70 V, T _j = 150 °C	I _R			50	μA
	V _R = 25 V, T _j = 150 °C	I _R			30	μΑ
Diode capacitance	$V_F = V_R = 0 V$	C _D			4	pF
Reverse recovery time	I_F = 10 mA to i_R = 1 mA, V_R = 6 V, R_L = 100 Ω	t _{rr}			4	ns

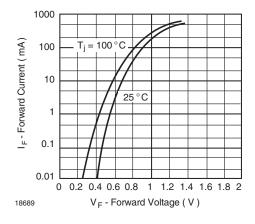
LAYOUT FOR R_{thJA} TEST

Thickness:

Fiberglass 1.5 mm (0.059 in.) Copper leads 0.3 mm (0.012 in.)



TYPICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)





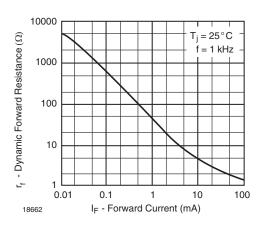
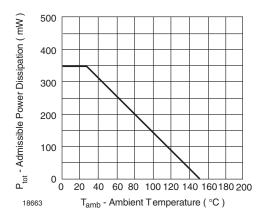


Fig. 2 - Dynamic Forward Resistance vs. Forward Current



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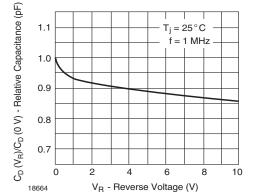


Fig. 3 - Admissible Power Dissipation vs. Ambient Temperature

Fig. 4 - Relative Capacitance vs. Reverse Voltage

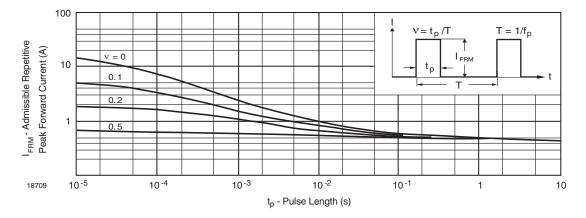
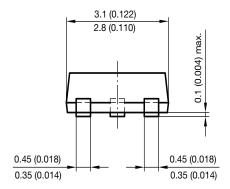
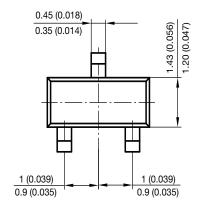


Fig. 5 - Admissible Repetitive Peak Forward Current vs. Pulse Duration

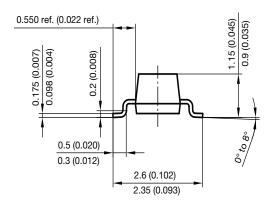
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PACKAGE DIMENSIONS in millimeters (inches): SOT-23

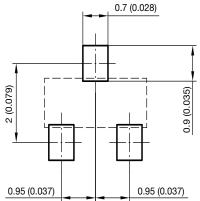




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