

Small Signal Fast Switching Diode



FEATURES

- Silicon epitaxial planar diode
- Fast switching diode
- AEC-Q101 qualified
- Base P/N-G3 - green, commercial grade
- Material categorization:
for definitions of compliance please see
www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN FREE
GREEN
(5-2008)

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MECHANICAL DATA

Case: SOD-123

Weight: approx. 9.4 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
1N4448W-G	1N4448W-G3-08 or 1N4448W-G3-18	Single	AJ	Tape and reel

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25^\circ\text{C}$, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Reverse voltage		V_R	75	V
Repetitive peak reverse voltage		V_{RRM}	100	V
Average rectified current half wave rectification with resistive load (1)	$f \geq 50 \text{ Hz}$	$I_{F(AV)}$	150	mA
Surge current	$t < 1 \text{ s}$ and $T_j = 25^\circ\text{C}$	I_{FSM}	500	mA
Power dissipation (1)		P_{tot}	500	mW

THERMAL CHARACTERISTICS ($T_{amb} = 25^\circ\text{C}$, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air (1)		R_{thJA}	350	K/W
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	-65 to +150	°C
Operating temperature		T_{op}	-55 to +150	°C

Note

(1) Valid provided that electrodes are kept at ambient temperature

ELECTRICAL CHARACTERISTICS ($T_{amb} = 25$ °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward voltage	$I_F = 100$ mA	V_F			1	V
	$I_F = 5$ mA	V_F	0.62		0.72	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, $i_R = 1$ mA, $V_R = 6$ V, $R_L = 100$ Ω	t_{rr}			4	ns

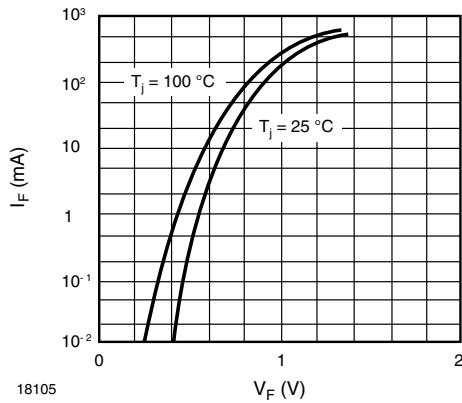
TYPICAL CHARACTERISTICS ($T_{amb} = 25$ °C, unless otherwise specified)


Fig. 1 - Forward Characteristics

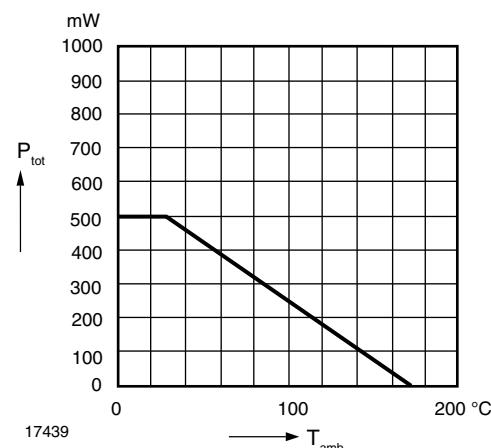


Fig. 3 - Admissible Power Dissipation vs. Ambient Temperature

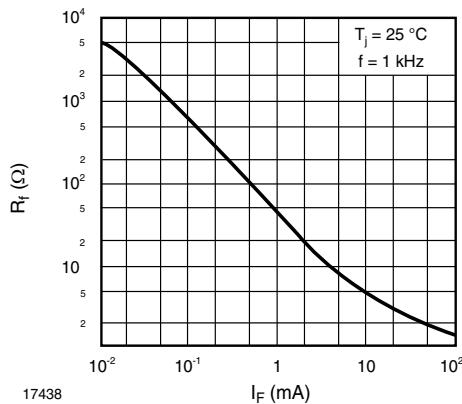


Fig. 2 - Dynamic Forward Resistance vs. Forward Current

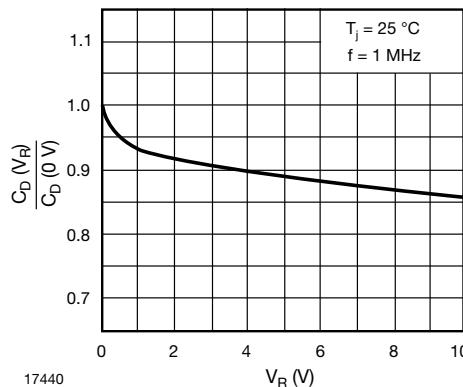


Fig. 4 - Relative Capacitance vs. Reverse Voltage

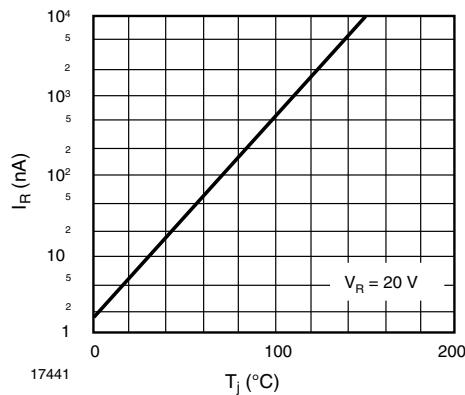


Fig. 5 - Leakage Current vs. Junction Temperature

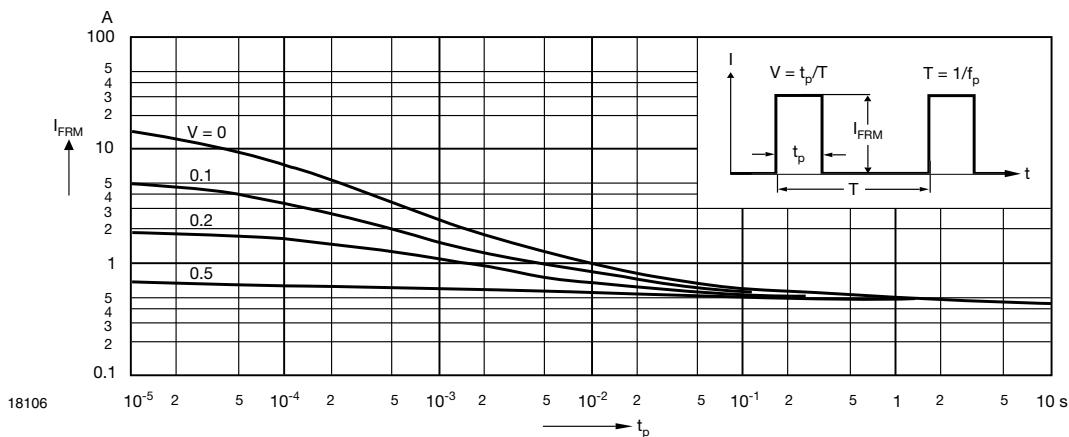
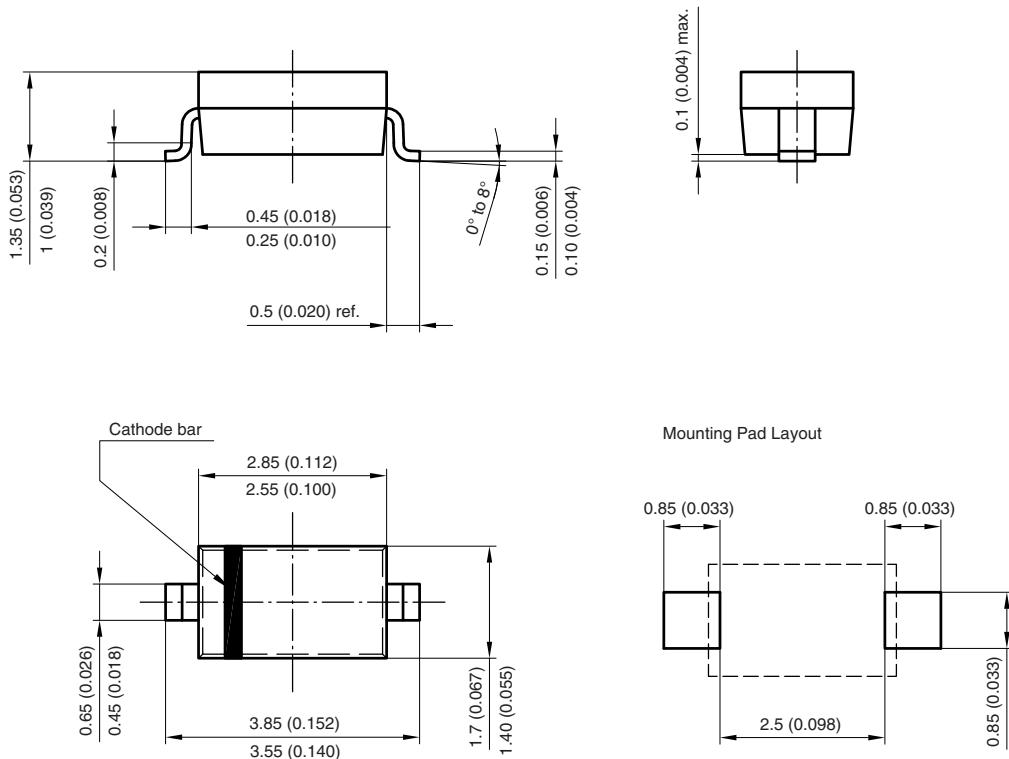


Fig. 6 - Admissible Repetitive Peak Forward Current vs. Pulse Duration

PACKAGE DIMENSIONS in millimeters (inches): **SOD-123**


Rev. 4 - Date: 24. Sep. 2009
 Document no.: S8-V-3910.01-001 (4)
 17432

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