

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)

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	INTERNAL CONSTRUCTION	TYPE MARKING	REMARKS
BAS16D-G	BAS16D-G3-08 or BAS16D-G3-18	Single diode	AK	Tape and reel

ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25^{\circ}C$, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Reverse voltage		V_R	75	V
Repetitive peak reverse voltage		V_{RRM}	100	V
Forward current (continuous)		I_F	250	mA
Non-repetitive peak forward current	$t = 1 \mu s$	I_{FSM}	2	A
	$t = 1 ms$	I_{FSM}	1	A
	$t = 1 s$	I_{FSM}	0.5	A
Power dissipation (1)		P_{tot}	350	mW

THERMAL CHARACTERISTICS ($T_{amb} = 25^{\circ}C$, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air (1)		R_{thJA}	375	K/W
Maximum junction temperature		T_j	150	°C
Storage temperature range (1)		T_{stg}	- 65 to + 150	°C
Operating temperature range		T_{op}	- 55 to + 150	°C

Note

(1) Valid provided 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	$I_F = 1$ mA	V_F			0.715	V
	$I_F = 10$ mA	V_F			0.855	V
	$I_F = 50$ mA	V_F			1	V
	$I_F = 150$ mA	V_F			1.25	V
Leakage current	$V_R = 25$ V, $T_j = 150$ °C	I_R			30	µA
	$V_R = 75$ V	I_R			1	µA
	$V_R = 75$ V, $T_j = 150$ °C	I_R			50	µA
Diode capacitance	$V_R = 0$; $f = 1$ MHz	C_D			2	pF
Reverse recovery time	$I_F = 10$ mA, $I_R = 10$ mA, $i_R = 1$ mA, $R_L = 100$ Ω	t_{rr}			6	ns

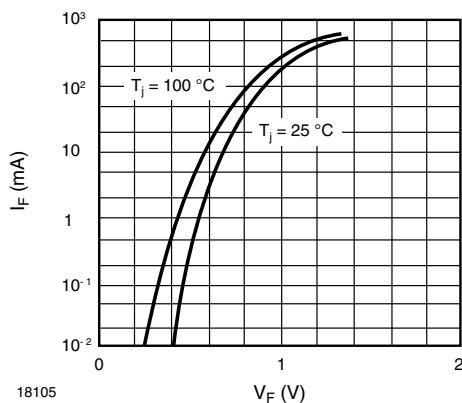
TYPICAL CHARACTERISTICS ($T_{amb} = 25$ °C, unless otherwise specified)


Fig. 1 - Forward Characteristics

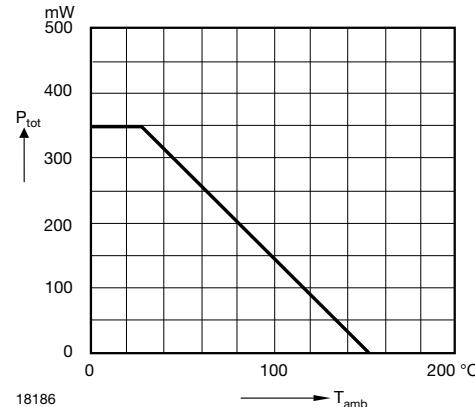


Fig. 3 - Admissible Power Dissipation vs. Ambient Temperature

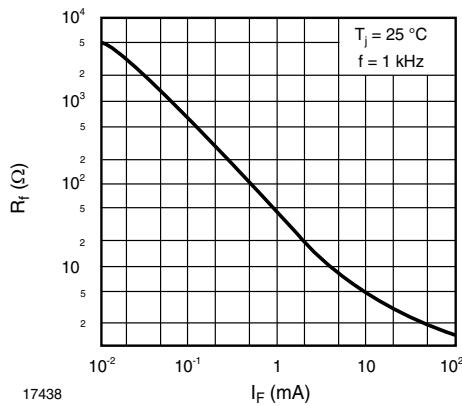


Fig. 2 - Dynamic Forward Resistance vs. Forward Current

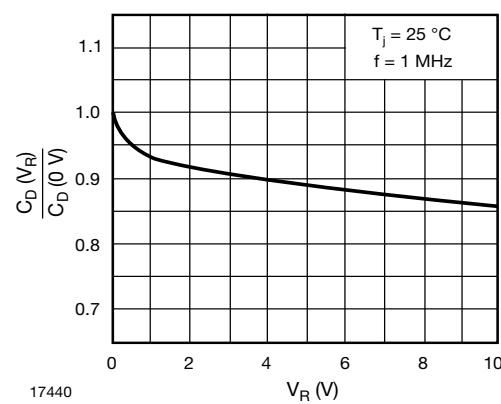


Fig. 4 - Relative Capacitance vs. Reverse Voltage

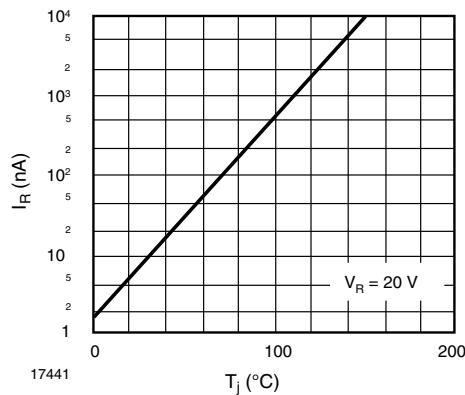


Fig. 5 - Leakage Current vs. Junction Temperature

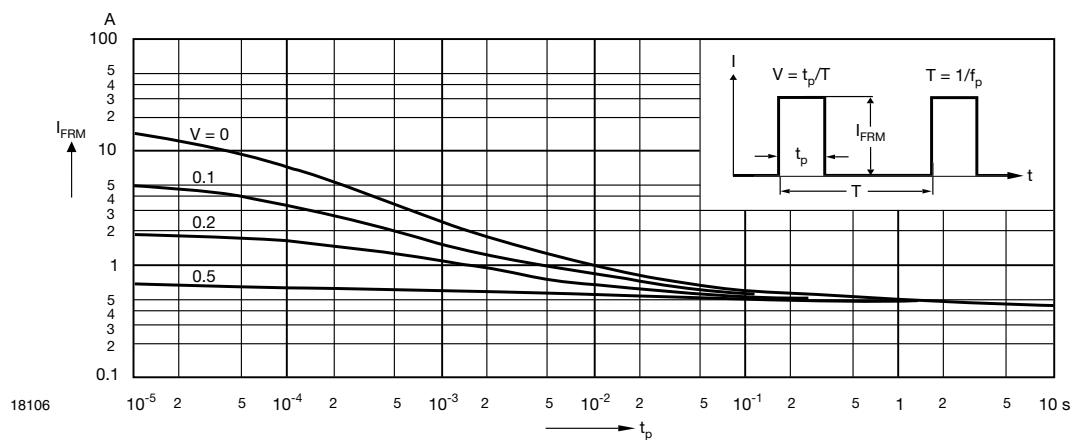
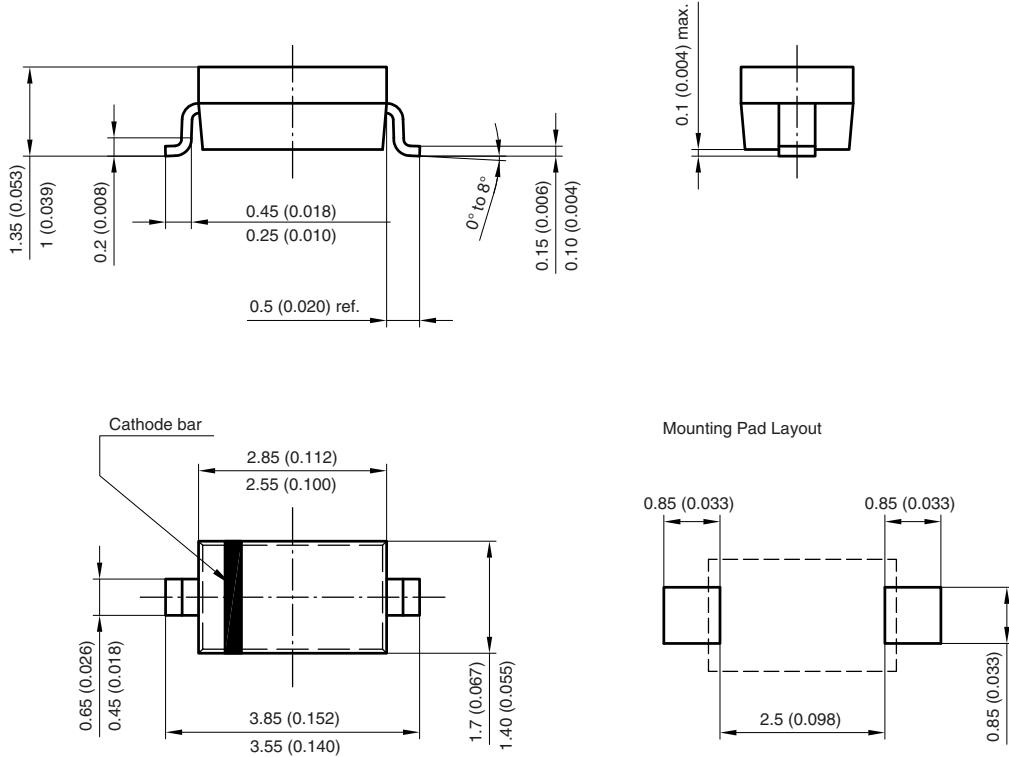


Fig. 6 - Admissible Repetitive Peak Forward Current vs. Pulse Duration

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


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