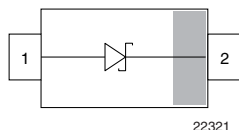


Small Signal Schottky Diode



FEATURES

- This diode features very low turn-on voltage and fast switching
- This device is protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges
- Space saving SOD-523 package
- Material categorization:
For definitions of compliance please see www.vishay.com/doc?99912



RoHS
COMPLIANT
HALOGEN
FREE
GREEN
(5-2008)

MECHANICAL DATA

Case: SOD-523

Weight: approx. 1.4 mg

Molding compound flammability rating: UL94 V-0

Terminals: high temperature soldering guaranteed:

260 °C/4 x 10 s at terminals

Packaging codes/options:

18/3K 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
BAT54-02V-V-G	BAT54-02V-V-G-18 or BAT54-02V-V-G-08	Single diode	.V	Tape and reel

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

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage = working peak reverse voltage		V_{RRM}	30	V
Forward continuous current		I_F	200	mA
Repetitive peak forward current		I_{FRM}	300	mA
Surge forward current		I_{FSM}	600	mA
Power dissipation		P_{tot}	150	mW

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

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air		R_{thJA}	680	K/W
Junction temperature		T_j	125	°C
Storage temperature range		T_{stg}	- 65 to + 150	°C

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

PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	100 μ A pulses	$V_{(BR)}$	30			V
Leakage current	Pulse test $t_p < 300\text{ }\mu$ s, $\delta < 2\%$ at $V_R = 25\text{ V}$	I_R			2	μ A
Forward voltage	$I_F = 0.1\text{ mA}$, $t_p < 300\text{ }\mu$ s, $\delta < 2\%$	V_F			240	mV
	$I_F = 1\text{ mA}$, $t_p < 300\text{ }\mu$ s, $\delta < 2\%$	V_F			320	mV
	$I_F = 10\text{ mA}$, $t_p < 300\text{ }\mu$ s, $\delta < 2\%$	V_F			400	mV
	$I_F = 30\text{ mA}$, $t_p < 300\text{ }\mu$ s, $\delta < 2\%$	V_F			500	mV
	$I_F = 100\text{ mA}$, $t_p < 300\text{ }\mu$ s, $\delta < 2\%$	V_F			800	mV
Diode capacitance	$V_R = 1\text{ V}$, $f = 1\text{ MHz}$	C_D			10	pF
Reverse recovery time	$I_F = 10\text{ mA}$, $I_R = 10\text{ mA}$, $i_R = 1\text{ mA}$, $R_L = 100\text{ }\Omega$	t_{rr}			5	ns

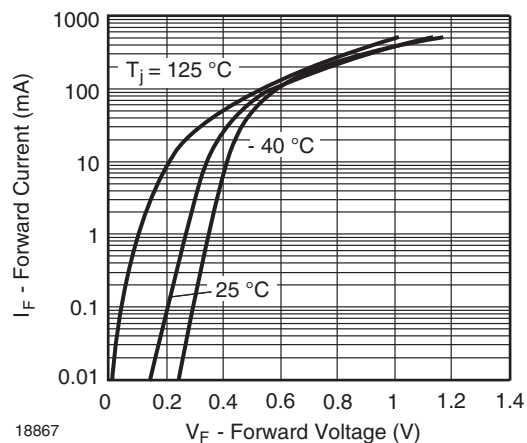
TYPICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)


Fig. 1 - Typical Forward Voltage Forward Current vs. Various Temperatures

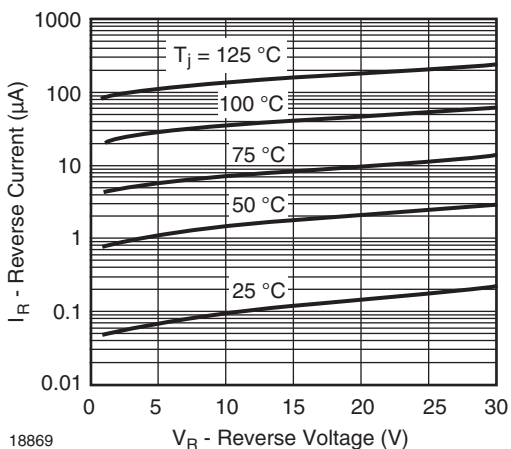


Fig. 2 - Typical Variation of Reverse Current vs. Various Temperatures

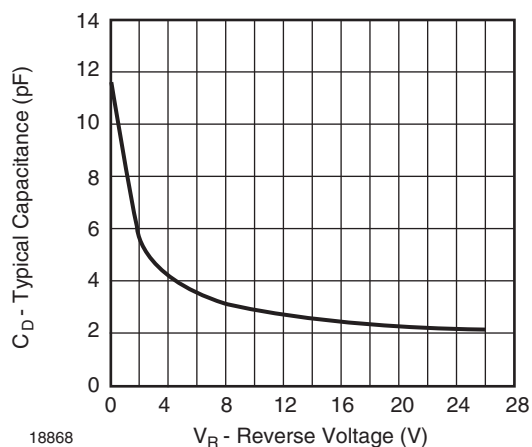
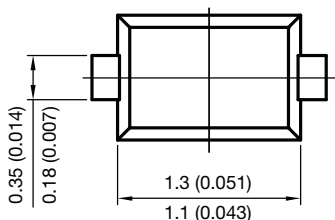
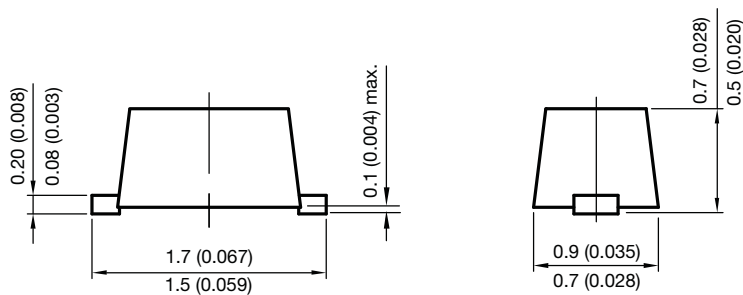


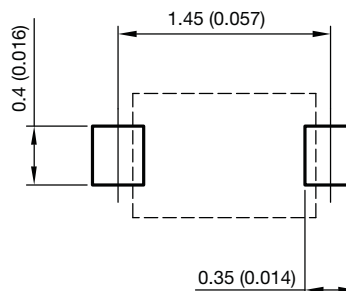
Fig. 3 - Typical Capacitance vs. Reverse Applied Voltage V_R



PACKAGE DIMENSIONS in millimeters (inches): **SOD-523**



foot print recommendation:



Document no.: S8-V-3880.02-001 (4)

Rev. h - Date: 13. Oct. 2010

16864



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Contact Us :

➤ Address :

401 Building No.5, JiuGe Business Center, Lane 2301, Yishan Rd
Minhang District, Shanghai , China

➤ Sales :

Direct +86 (21) 6401-6692
Email amall@ameya360.com
QQ 800077892
Skype ameyasales1 ameyasales2

➤ Customer Service :

Email service@ameya360.com

➤ Partnership :

Tel +86 (21) 64016692-8333
Email mkt@ameya360.com