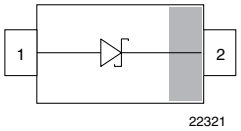
Small Signal Schottky Diode



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
- AEC-Q101 qualified available
- Space saving SOD-523 package
- Base P/N-G3 - RoHS-compliant, commercial grade
- Base P/N-HG3 - RoHS-compliant, AEC-Q101 qualified
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

Pb-free

e3

RoHS COMPLIANT

HALOGEN FREE GREEN (5-2008)

LINKS TO ADDITIONAL RESOURCES

3D Models

MECHANICAL DATA

Case: SOD-523

Weight: approx. 1.4 mg

Molding compound flammability rating: UL 94 V-0

Terminals: high temperature soldering guaranteed: 260 °C/10 s at terminals

Packaging codes / options:
08/8K per 7" reel (8 mm tape)

PARTS TABLE

PART	ORDERING CODE	AEC-Q101 QUALIFIED	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS
BAS40-02V	BAS40-02V-G3-08	no	Single	:W	Tape and reel
	BAS40-02V-HG3-08	yes			

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

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage		V_{RRM}	40	V
Forward continuous current		I_F	120	mA
Surge forward current	t_p = 10 ms square wave, T_j = 25 °C prior to surge	I_{FSM}	600	mA
Power dissipation	on FR-4 board with recommended soldering footprint	Pt_{ot}	150	mW

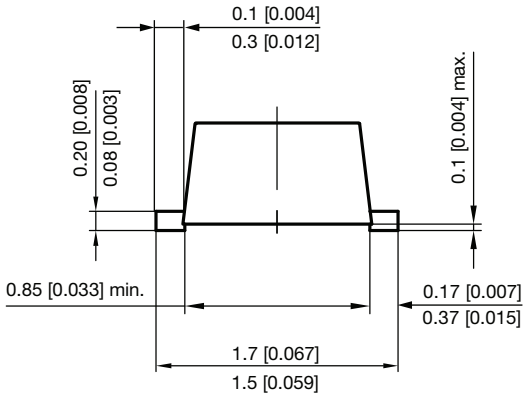
THERMAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

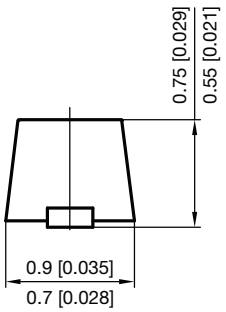
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air	on FR-4 board according to JEDEC® 51-3 with recommended soldering footprint	R_{thJA}	680	K/W
Thermal resistance junction to lead		R_{thJL}	480	K/W
Junction temperature		T_j	125	°C
Operating temperature range		T_{op}	-55 to +125	°C
Storage temperature range		T_{stg}	-55 to +150	°C

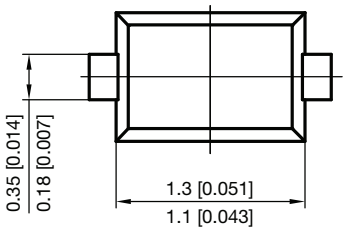
ELECTRICAL CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	I_R = 10 µA (pulsed)	$V_{(BR)}$	40			V
Leakage current	Pulse test V_R = 30 V, t_p < 300 µs	I_R		20	100	nA
Forward voltage	Pulse test t_p < 300 µs, I_F = 1 mA	V_F			380	mV
	Pulse test t_p < 300 µs, I_F = 40 mA	V_F			1000	mV
Diode capacitance	V_R = 0 V, f = 1 MHz	C_D		4	5	pF
Reverse recovery time	I_F = 10 mA, I_R = 10 mA, I_{rr} = 1 mA, R_L = 100 Ω	t_{rr}			5	ns

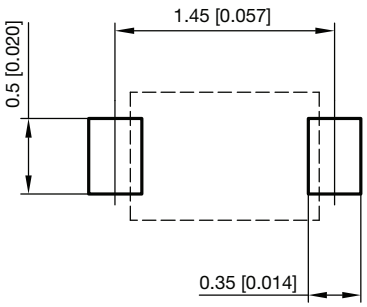
PACKAGE DIMENSIONS in millimeters [inches]: **SOD-523**







Footprint recommendation:



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