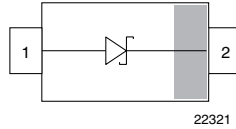


## Small Signal Schottky Diode



### 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](http://www.vishay.com/doc?99912)



### LINKS TO ADDITIONAL RESOURCES



### 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 ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , 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	$t_p = 10\text{ ms}$ square wave, $T_j = 25\text{ }^{\circ}\text{C}$ prior to surge	$I_{FSM}$	600	mA
Power dissipation	on FR-4 board with recommended soldering footprint	$P_{tot}$	150	mW

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

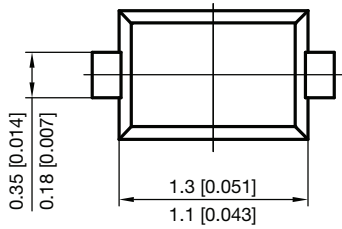
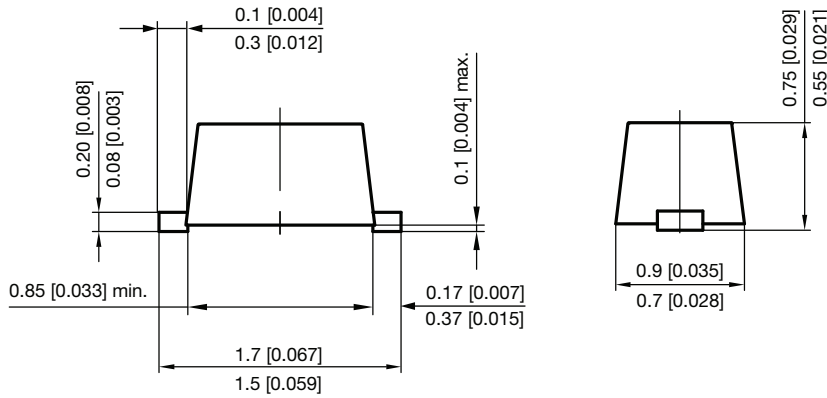
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air	on FR-4 board according to JEDEC® 51-3 with recommended soldering footprint	$R_{thJA}$	680	K/W
Thermal resistance junction to lead		$R_{thJL}$	480	K/W
Junction temperature		$T_j$	125	$^{\circ}\text{C}$
Operating temperature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

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

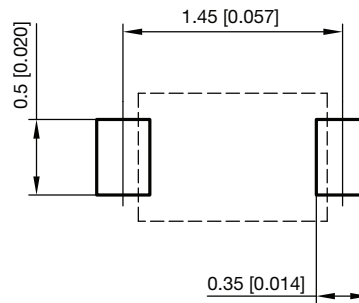
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	$I_R = 10\text{ }\mu\text{A}$ (pulsed)	$V_{(BR)}$	40			V
Leakage current	Pulse test $V_R = 30\text{ V}$ , $t_p < 300\text{ }\mu\text{s}$	$I_R$		20	100	nA
Forward voltage	Pulse test $t_p < 300\text{ }\mu\text{s}$ , $I_F = 1\text{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



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



Footprint recommendation:



Document no.: S8-V-3880.02-003 (4)

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Rev. 4 - Date: 03. Aug. 2020

23093



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