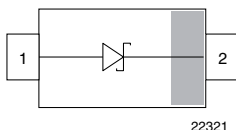


## Small Signal Schottky Diode



### 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/4 x 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
BAT54-02V	BAT54-02V-G3-08	no	Single	:V	Tape and reel
	BAT54-02V-HG3-08	yes			

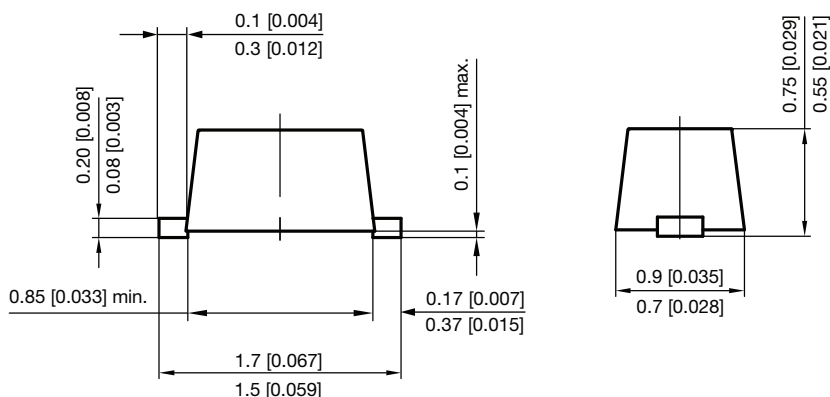
### ABSOLUTE MAXIMUM RATINGS (T<sub>amb</sub> = 25 °C, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage = working peak reverse voltage		V <sub>RRM</sub>	30	V
Forward continuous current		I <sub>F</sub>	200	mA
Repetitive peak forward current		I <sub>FRM</sub>	300	mA
Surge forward current	t <sub>p</sub> = 10 ms square wave, T <sub>j</sub> = 25 °C prior to surge	I <sub>FSM</sub>	600	mA
Power dissipation		P <sub>tot</sub>	150	mW

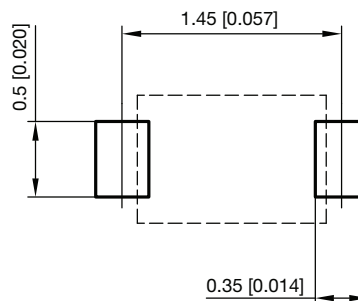
### THERMAL CHARACTERISTICS (T<sub>amb</sub> = 25 °C, unless otherwise specified)

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air		R <sub>thJA</sub>	680	K/W
Thermal resistance junction to lead		R <sub>thJL</sub>	480	K/W
Junction temperature		T <sub>j</sub>	125	°C
Operating temperature range		T <sub>op</sub>	-55 to +125	°C
Storage temperature range		T <sub>stg</sub>	-55 to +150	°C

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	100 $\mu\text{A}$ pulses	$V_{(BR)}$	30			V
Leakage current	Pulse test $t_p < 300\text{ }\mu\text{s}$ , $\delta < 2\text{ }\%$ at $V_R = 25\text{ V}$	$I_R$			2	$\mu\text{A}$
Forward voltage	$I_F = 0.1\text{ mA}$ , $t_p < 300\text{ }\mu\text{s}$ , $\delta < 2\text{ }\%$	$V_F$			240	mV
	$I_F = 1\text{ mA}$ , $t_p < 300\text{ }\mu\text{s}$ , $\delta < 2\text{ }\%$	$V_F$			320	mV
	$I_F = 10\text{ mA}$ , $t_p < 300\text{ }\mu\text{s}$ , $\delta < 2\text{ }\%$	$V_F$			400	mV
	$I_F = 30\text{ mA}$ , $t_p < 300\text{ }\mu\text{s}$ , $\delta < 2\text{ }\%$	$V_F$			500	mV
	$I_F = 100\text{ mA}$ , $t_p < 300\text{ }\mu\text{s}$ , $\delta < 2\text{ }\%$	$V_F$			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

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


Footprint recommendation:



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

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23093



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