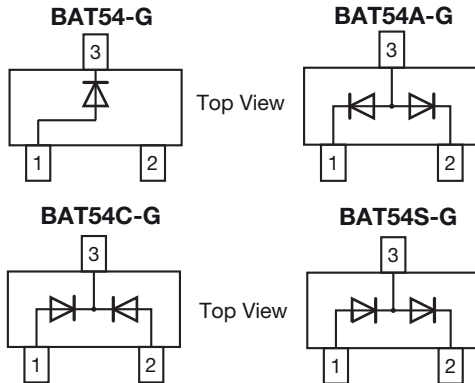


Small Signal Schottky Diodes, Single and Dual



FEATURES

- These diodes feature very low turn-on voltage and fast switching
- These devices are protected by a PN junction guarding against excessive voltage, such as electrostatic discharges
- AEC-Q101 qualified available (part number on request)
- 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: SOT-23

Weight: approx. 8.1 mg

Packaging codes/options:

18/10K per 13" reel (8 mm tape), 10K/box

08/3K per 7" reel (8 mm tape), 15K/box

DESIGN SUPPORT TOOLS click logo to get started



PARTS TABLE				
PART	ORDERING CODE	CIRCUIT CONFIGURATION	TYPE MARKING	REMARKS
BAT54-G	BAT54-G3-08 or BAT54-G3-18	Single	L8	Tape and reel
BAT54A-G	BAT54A-G3-08 or BAT54A-G3-18	Common anode	L46	
BAT54C-G	BAT54C-G3-08 or BAT54C-G3-18	Common cathode	L47	
BAT54S-G	BAT54S-G3-08 or BAT54S-G3-18	Dual serial	L48	

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}	30	V
Forward continuous current ⁽¹⁾		I_F	200	mA
Repetitive peak forward current ⁽¹⁾		I_{FRM}	300	mA
Surge forward current ⁽¹⁾	$t_p < 1\text{ s}$	I_{FSM}	600	mA
Power dissipation		P_{tot}	230	mW

Note

⁽¹⁾ Device on fiberglass substrate, see layout on next page.

THERMAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air ⁽¹⁾		R_{thJA}	430	K/W
Junction temperature		T_j	125	$^{\circ}\text{C}$
Storage temperature range		T_{stg}	-65 to +150	$^{\circ}\text{C}$
Operating temperature range		T_{op}	-55 to +125	$^{\circ}\text{C}$

Note

⁽¹⁾ Device on fiberglass substrate, see layout on next page.

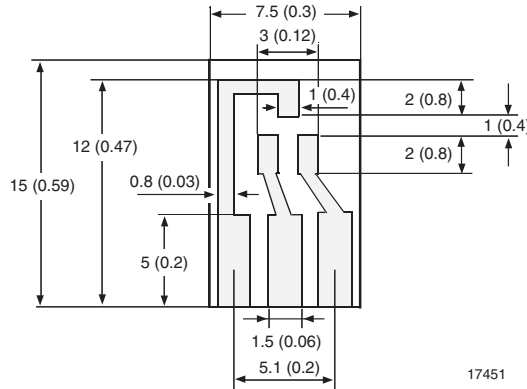
ELECTRICAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)						
PARAMETER	TEST CONDITION	SYMBOL	MIN.	TYP.	MAX.	UNIT
Reverse breakdown voltage	I _R = 100 μA (pulsed)	V _(BR)	30			V
Leakage current	Pulse test t _p < 300 μs, δ < 2 % at V _R = 25 V	I _R			2	μA
Forward voltage	I _F = 0.1 mA, t _p < 300 μs, δ < 2 %	V _F			240	mV
	I _F = 1 mA, t _p < 300 μs, δ < 2 %	V _F			320	mV
	I _F = 10 mA, t _p < 300 μs, δ < 2 %	V _F			400	mV
	I _F = 30 mA, t _p < 300 μs, δ < 2 %	V _F			500	mV
	I _F = 100 mA, t _p < 300 μs, δ < 2 %	V _F			800	mV
Diode capacitance	V _R = 1 V, f = 1 MHz	C _D			10	pF
Reverse recovery time	I _F = 10 mA to I _R = 10 mA, i _R = 1 mA, R _L = 100 Ω	t _{rr}			5	ns

LAYOUT FOR R_{thJA} TEST

Thickness:

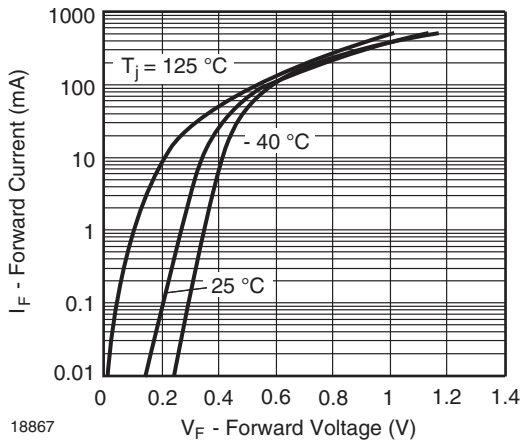
Fiberglass 1.5 mm (0.059 inches)

Copper leads 0.3 mm (0.012 inches)



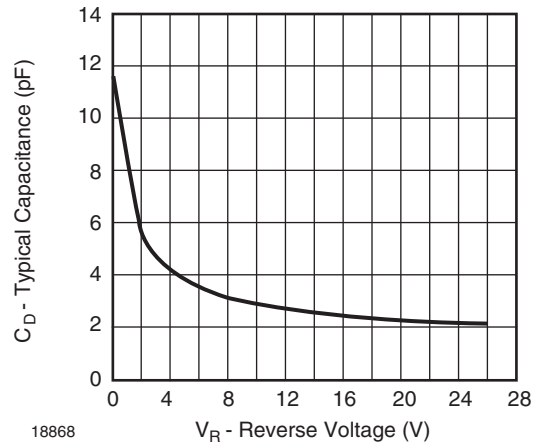
17451

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



18867

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



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Fig. 2 - Diode Capacitance vs. Reverse Voltage V_R

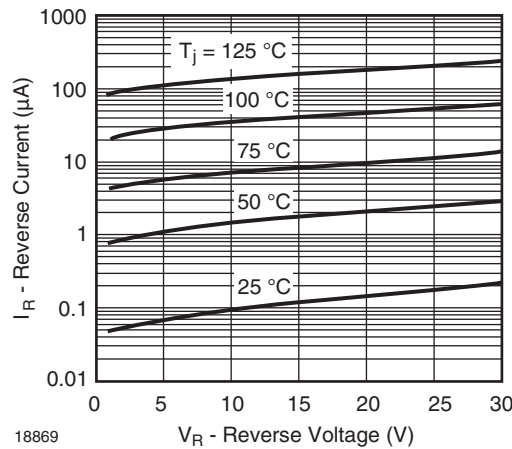
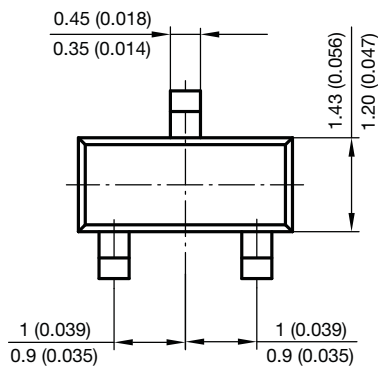
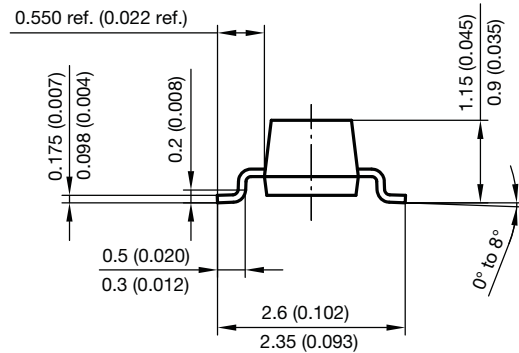
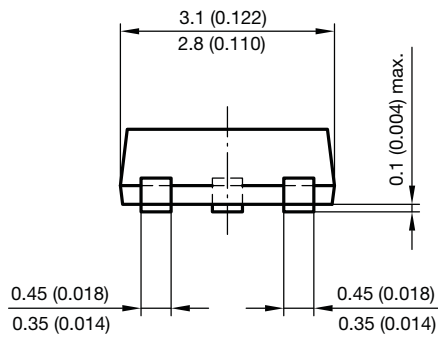
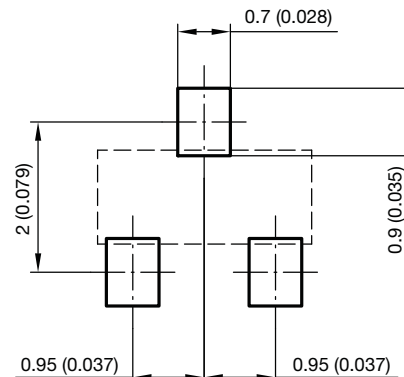


Fig. 3 - Typical Variation of Reverse Current vs. Various Temperatures

PACKAGE DIMENSIONS in millimeters (inches): SOT-23



Foot print recommendation:



Document no.: 6.541-5014.01-4
 Rev. 8 - Date: 23.Sept.2009
 17418



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