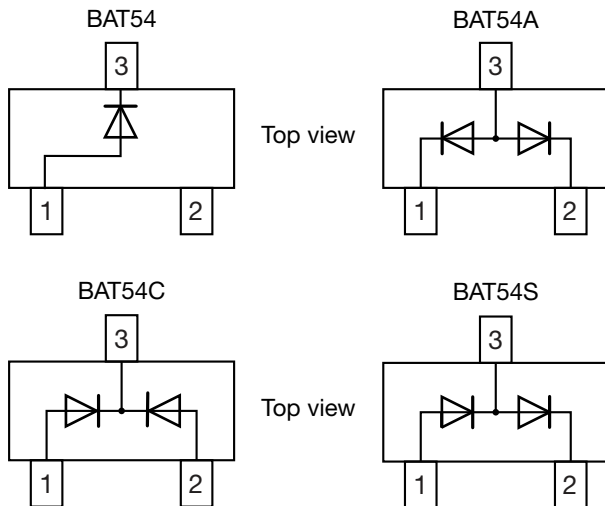
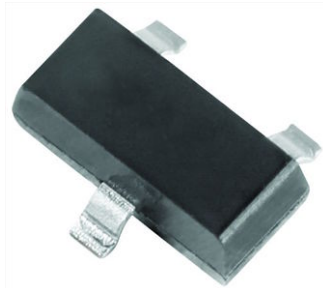




**THE DATASHEET OF
BAT54-G3-08**



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)
- Molding compound meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level (MSL) 1
- Base P/N-G3 - green, commercial grade
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



MECHANICAL DATA

Case: SOT-23

Weight: approx. 9.2 mg

Packaging codes / options:

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

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

LINKS TO ADDITIONAL RESOURCES



PARTS TABLE						
PART	ORDERING CODE	AEC-Q101 QUALIFIED	TYPE MARKING	CIRCUIT CONFIGURATION	TAPED UNITS PER REEL	MINIMUM ORDER QUANTITY
BAT54-G	BAT54-G3-08	no	L8	Single	3 000	15 000
	BAT54-G3-18	no			10 000	10 000
BAT54A-G	BAT54A-G3-08	no	L46	Common anode	3 000	15 000
	BAT54A-G3-18	no			10 000	10 000
BAT54C-G	BAT54C-G3-08	no	L47	Common cathode	3 000	15 000
	BAT54C-G3-18	no			10 000	10 000
BAT54S-G	BAT54S-G3-08	no	L48	Dual serial	3 000	15 000
	BAT54S-G3-18	no			10 000	10 000

PACKAGE				
PACKAGE NAME	WEIGHT	MOLDING COMPOUND FLAMMABILITY RATING	MOISTURE SENSITIVITY LEVEL	SOLDERING CONDITIONS
SOT-23	9.2 mg	UL 94 V-0	MSL 1 (according J-STD-020)	Peak temperature max. 260 °C



ABSOLUTE MAXIMUM RATINGS (T _{amb} = 25 °C, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Repetitive peak reverse voltage		V _{RRM} = V _{RWM} = V _R	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 s	I _{FSM}	600	mA
Power dissipation	on FR-4 board with recommended soldering footprint	P _{tot}	230	mW
	Infinite heatsink		330	mW

Note

⁽¹⁾ Infinite heatsink

THERMAL CHARACTERISTICS (T _{amb} = 25 °C, unless otherwise specified)				
PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Thermal resistance junction to ambient air	according to JEDEC® 51-3 on FR-4 board with recommended soldering footprint	R _{thJA}	430	K/W
Thermal resistance junction lead	Infinite heatsink	R _{thJL}	300	K/W
Junction temperature		T _j	125	°C
Storage temperature range		T _{stg}	-65 to +150	°C
Operating temperature range		T _{op}	-55 to +125	°C

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 ⁽¹⁾	at V _R = 25 V	I _R			2	μA
Forward voltage ⁽¹⁾	I _F = 0.1 mA	V _F			240	mV
	I _F = 1 mA	V _F			320	mV
	I _F = 10 mA	V _F			400	mV
	I _F = 30 mA	V _F			500	mV
	I _F = 100 mA	V _F			800	mV
Diode capacitance	V _R = 1 V; f = 1 MHz	C _D			10	pF
Reverse recovery time	I _F = I _R = 10 mA, i _R = 1 mA, R _L = 100 Ω	t _{rr}			5	ns

Note

⁽¹⁾ Pulse test; t_p ≤ 300 μs, duty cycle t_p/T < 0.02



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

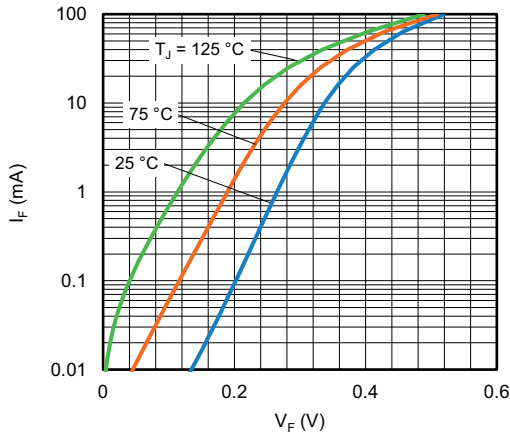


Fig. 1 - Typical Forward Current vs. Forward Voltage

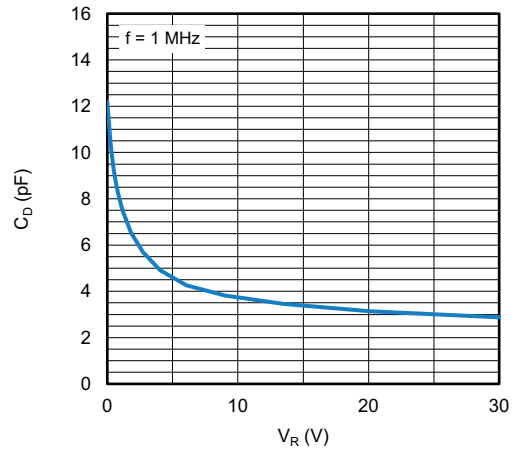


Fig. 3 - Typical Capacitance vs. Reverse Voltage

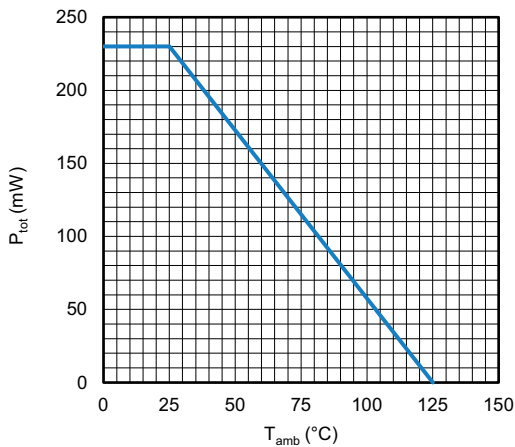


Fig. 2 - Admissible Power Dissipation vs. Ambient Temperature

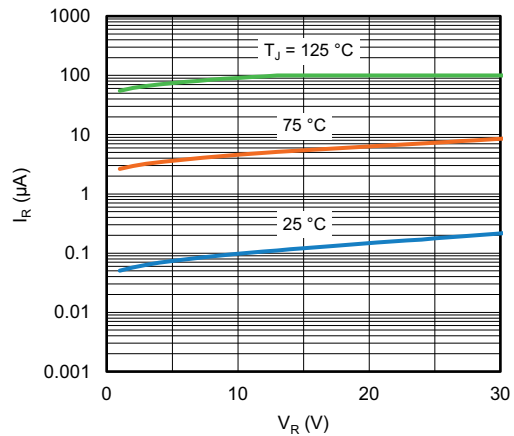
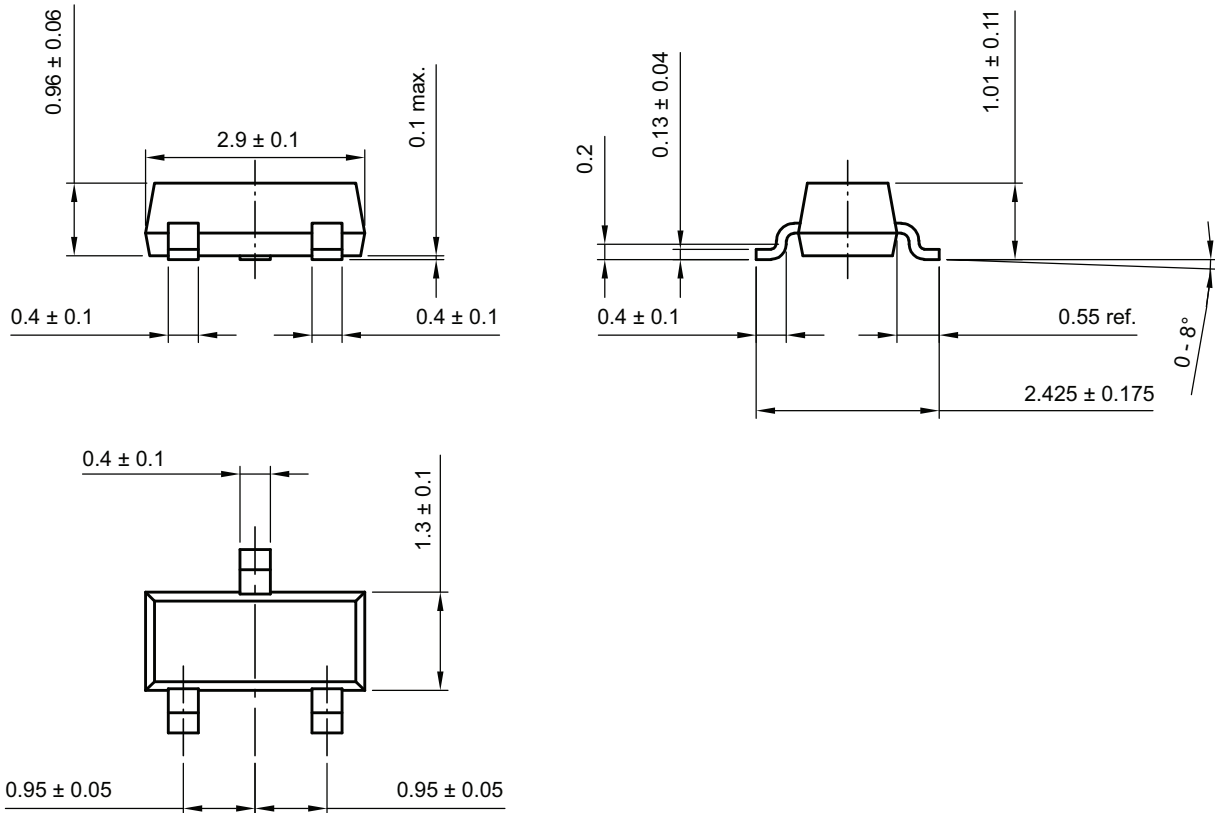


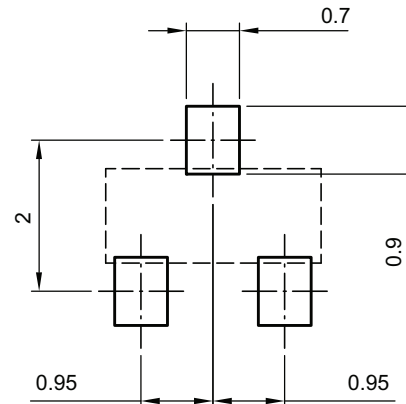
Fig. 4 - Typical Reverse Leakage Current vs. Reverse Voltage



PACKAGE DIMENSIONS in millimeters: SOT-23



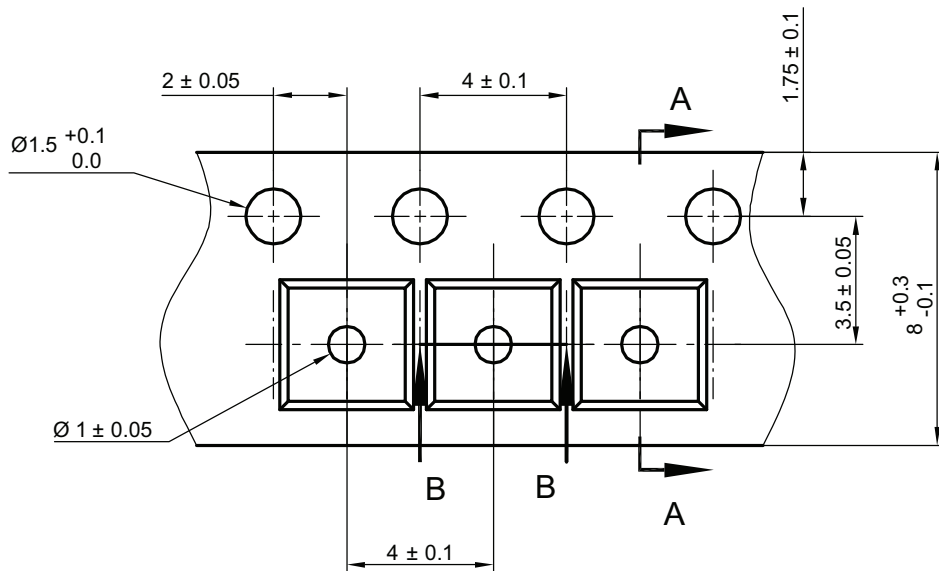
footprint recommendation:



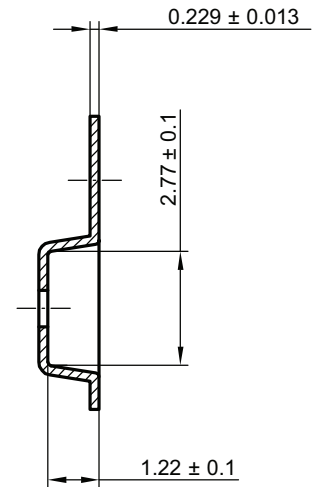
Created - Date: 18-Oct-2021
 Rev. 01 - Date: 18-Jan-2022
 S8-V-3929.01-009 (4)



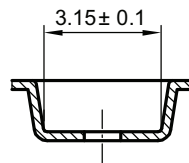
CARRIER TAPE SOT-23



A-A Section

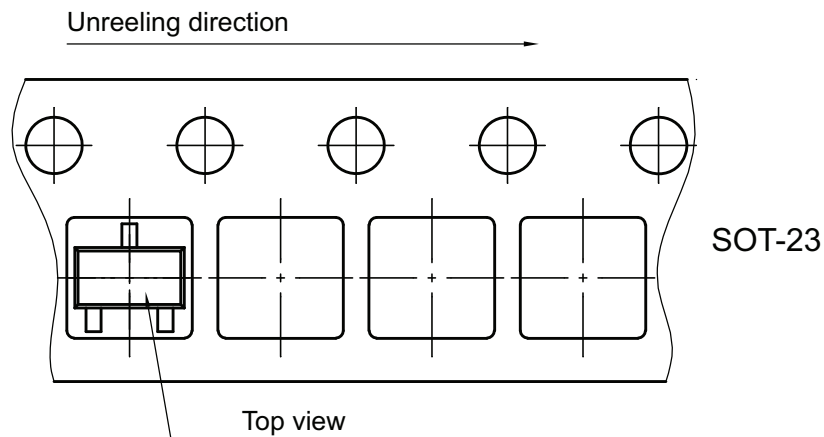


B-B Section



Created Date: 04-Feb-2010
Rev. Date: 07-Feb-2022

ORIENTATION IN CARRIER TAPE SOT-23



Created Date: 04-Feb-2010
Rev. Date: 07-Nov-2022



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