



FUKUCOM COMPANY LTD.

福靈有限公司

FLAT P, 3/F., EVEREST INDUSTRIAL CENTRE, 396 KWUN TONG ROAD,
KWUN TONG, KOWLOON, HONG KONG.
TEL: 2790-0314 FAX: 2790-0206

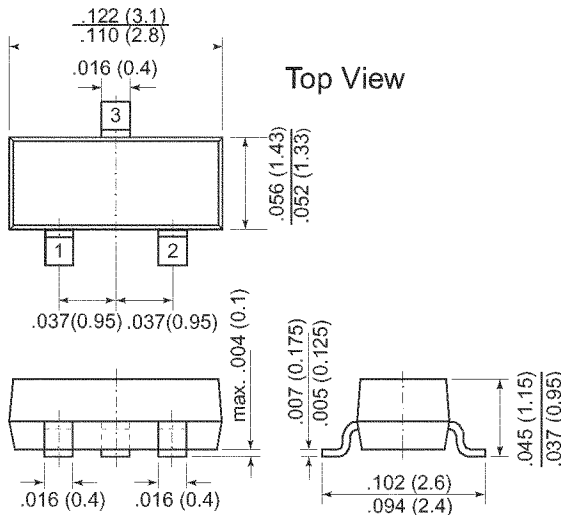
GENERAL SEMICONDUCTOR®

BAT54 thru BAT54S

Schottky Diodes



TO-236AB (SOT-23)



Features

- These diodes feature very low turn-on voltage and fast switching.
- These devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges.

Mechanical Data

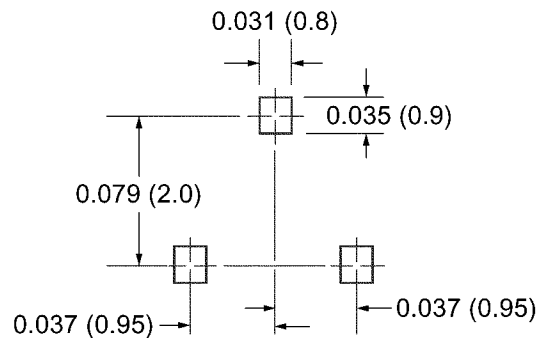
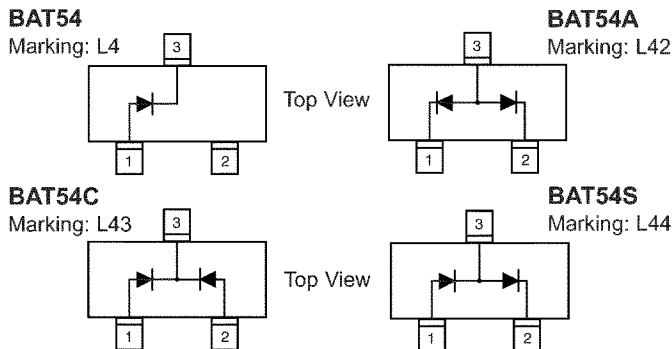
Case: SOT-23 Plastic Package

Weight: approx. 0.008g

Packaging Codes/Options:

- E8/10K per 13" reel (8mm tape), 30K/box
- E9/3K per 7" reel (8mm tape), 30K/box

Mounting Pad Layout



Maximum Ratings and Thermal Characteristics (T_A = 25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V _{RRM}	30	V
Forward Continuous Current at T _{amb} = 25°C	I _F	200 ⁽¹⁾	mA
Repetitive Peak Forward Current at T _{amb} = 25°C	I _{FRM}	300 ⁽¹⁾	mA
Surge Forward Current at t _p < 1 s, T _{amb} = 25°C	I _{FSM}	600 ⁽¹⁾	mA
Power Dissipation at T _{amb} = 25°C	P _{tot}	230	mW
Thermal Resistance Junction to Ambient Air	R _{θJA}	430 ⁽¹⁾	°C/W
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _s	-65 to +150	°C

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



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Electrical Characteristics (T_J = 25°C unless otherwise noted)

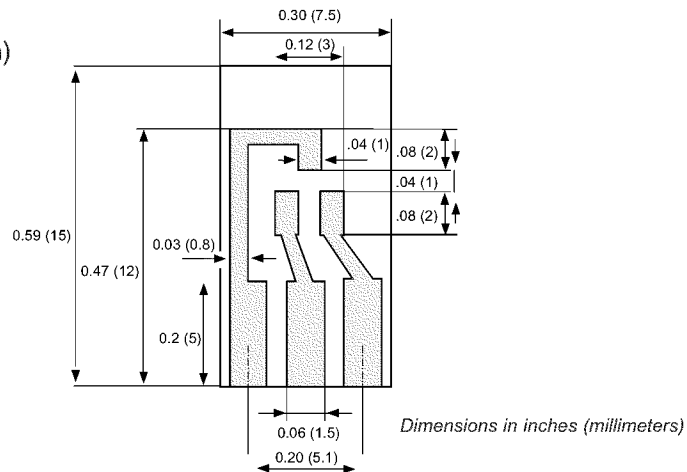
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	V _{(BR)R}	100μA pulses	30	—	—	V
Leakage Current	I _R	Pulse Test t _p < 300μs δ < 2% at V _R = 25V	—	20	100	nA
Forward Voltage	V _F	Pulse Test t _p < 300μs, δ < 2% I _F = 0.1mA	—	—	240	mV
		I _F = 1mA	—	—	320	mV
		I _F = 10mA	—	—	400	mV
		I _F = 30mA	—	—	500	mV
		I _F = 100mA	—	—	1000	mV
Capacitance	C _{tot}	V _F = 1V f = 1MHz	—	—	10	pF
Reverse Recovery Time	t _{rr}	I _F = 10mA, I _R = 10mA I _{rr} = 1mA, R _L = 100Ω	—	—	5	ns

Note:

(1) Device on fiberglass substrate, see layout.

Layout for R_{θJA} test

Thickness: Fiberglass 0.059 in. (1.5 mm)
Copper leads 0.012 in. (0.3 mm)





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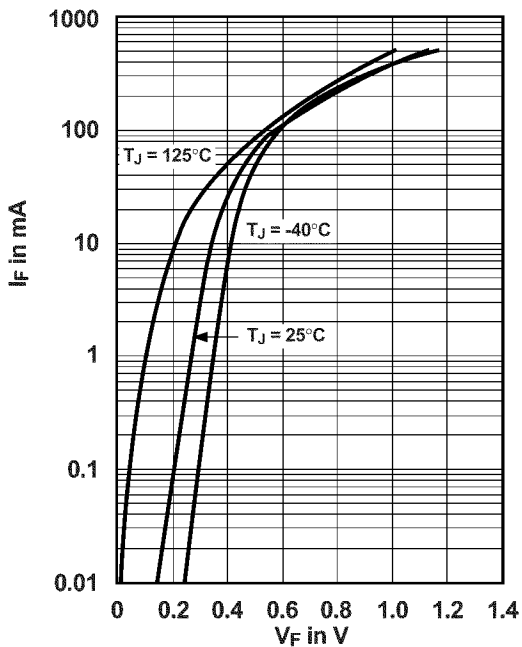


BAT54 thru BAT54S

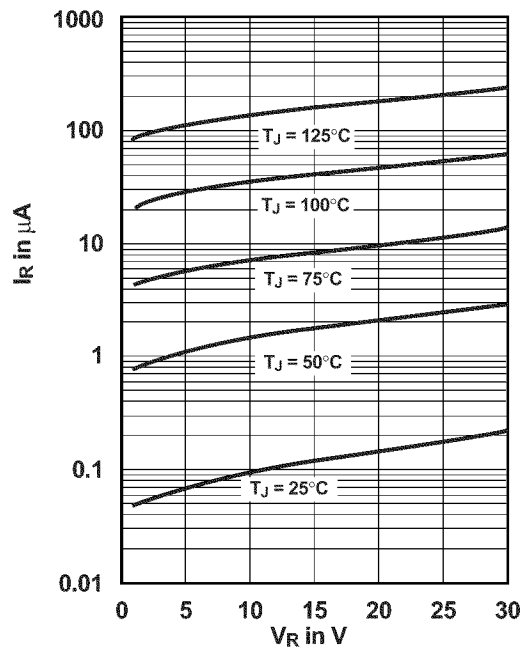
Schottky Diodes

Ratings and Characteristic Curves

Typical Forward Voltage Forward Current at Various Temperatures



Typical Variation of Reverse Current at Various Temperatures



Typical Capacitance vs. Reverse Applied Voltage V_r

