



# BAT54 SERIES

## SURFACE MOUNT SCHOTTKY BARRIER

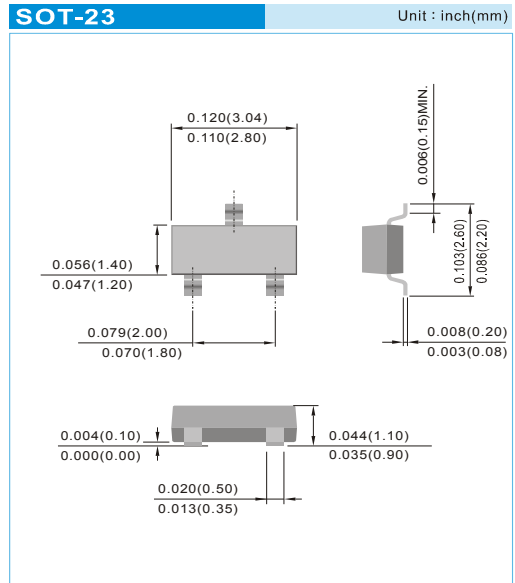
**VOLTAGE** 30 Volt **CURRENT** 0.2 Ampere

### FEATURES

- Low turn-on voltage
- Fast switching
- PN Junction Guard Ring for Transient and ESD Protection.
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case: SOT-23, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0003 ounces, 0.0084 grams



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. For capacitive load, derate current by 20%.

Parameter	Symbol	BAT54	BAT54A	BAT54C	BAT54S	Units
Forward Power Dissipation@T <sub>A</sub> =25°C	P <sub>D</sub>		225			mW
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>		30			V
Maximum Average Forward Current at T <sub>A</sub> =75°C	I <sub>O</sub>		0.2			A
Repetitive Peak Forward Current (tp=8.3ms,50%Duty Cycle)	I <sub>FRM</sub>		300			mA
Peak Forward Surge Current, 1s	I <sub>FSM</sub>		0.6			A
Maximum Instantaneous Forward Voltage @ I <sub>F</sub> =1mA @ I <sub>F</sub> =100mA	V <sub>F</sub>		0.32 0.6			V
Typical Instantaneous Forward Voltage @ I <sub>F</sub> =0.1mA	V <sub>F</sub>		0.22			V
Maximum DC Reverse Current at Rated DC Blocking Voltage@V <sub>R</sub> =25V	I <sub>R</sub>		2			μA
Junction Capacitance at V <sub>R</sub> =1V	C <sub>J</sub>		10			pF
Thermal Resistance, Junction to Ambient	R <sub>θJA</sub>		500			°C/ W
Operating Junction and Storage Temperature Range	T <sub>J</sub> <sup>1</sup> T <sub>STG</sub>		-55 to +125			°C
Circuit Figure	-	Single	Common Anode	Common Cathode	Series	-

Note : 1. I<sub>F</sub>=10mA through I<sub>R</sub>=10mA to I<sub>R</sub>=1mA, R<sub>L</sub>=100Ω.

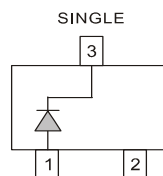


FIG.14(TOP VIEW)

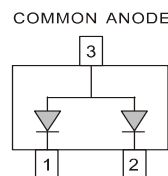


FIG.15(TOP VIEW)

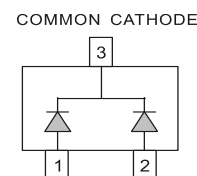


FIG.16(TOP VIEW)

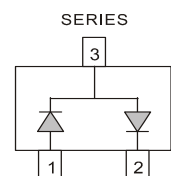


FIG.17(TOP VIEW)



# BAT54 SERIES

## TYPICAL CHARACTERISTIC CURVES

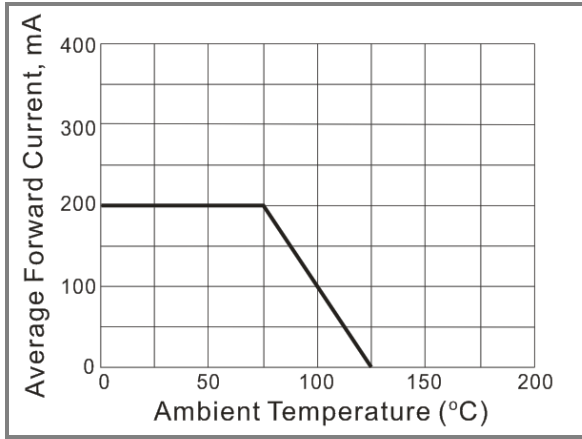


Fig.1 Forward Current Derating Curve

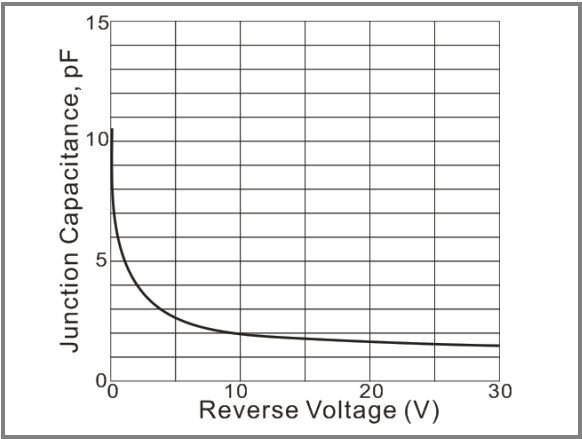


Fig.2 Typical Junction Capacitance

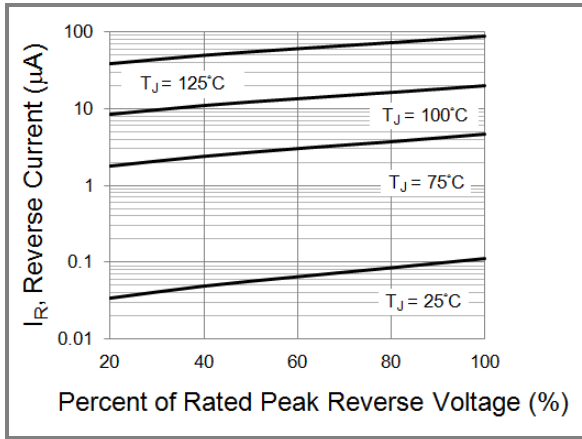


Fig.3 Typical Reverse Characteristics

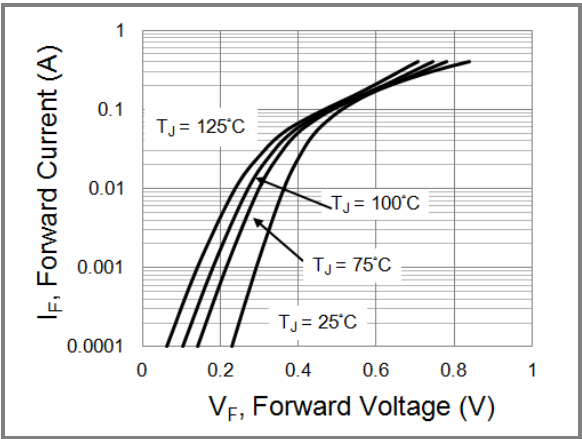


Fig.4 Typical Forward Characteristics

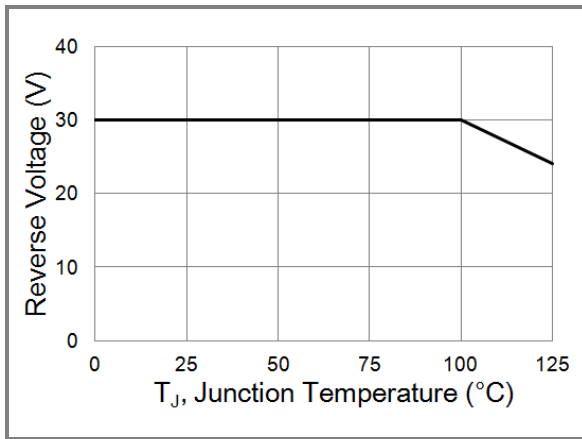


Fig.5 Operating Temperature Derating Curve

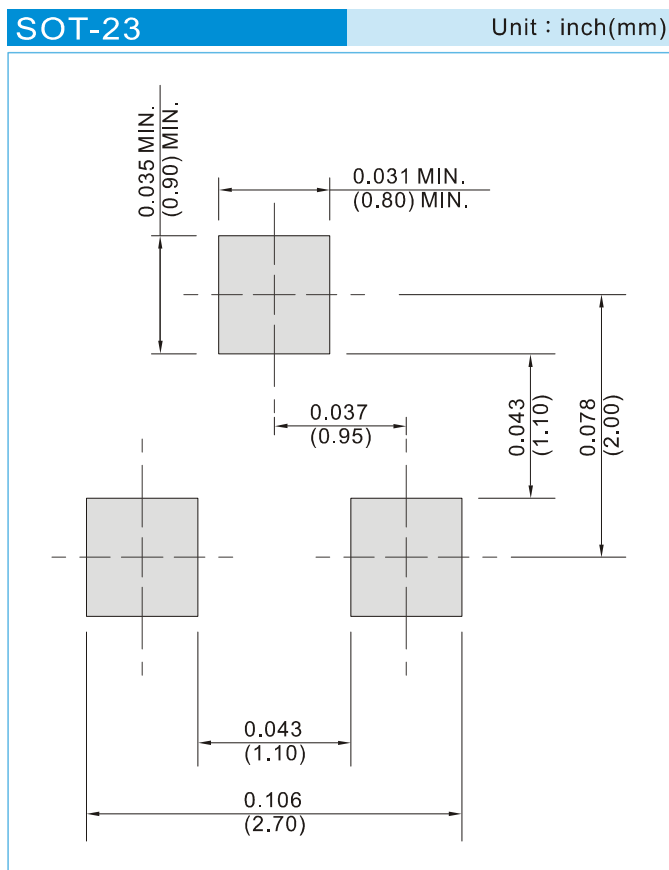


# BAT54 SERIES

## PART NO PACKING CODE VERSION

Part No Packing Code	Package Type	Packing Type	Marking	Version
BAT54_R1_00001	SOT-23	3K pcs / 7" reel	L4	Halogen free
BAT54_R2_00001	SOT-23	12K pcs / 13" reel	L4	Halogen free
BAT54A_R1_00001	SOT-23	3K pcs / 7" reel	L42	Halogen free
BAT54A_R2_00001	SOT-23	12K pcs / 13" reel	L42	Halogen free
BAT54C_R1_00001	SOT-23	3K pcs / 7" reel	L43	Halogen free
BAT54C_R2_00001	SOT-23	12K pcs / 13" reel	L43	Halogen free
BAT54S_R1_00001	SOT-23	3K pcs / 7" reel	L44	Halogen free
BAT54S_R2_00001	SOT-23	12K pcs / 13" reel	L44	Halogen free

## MOUNTING PAD LAYOUT





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