

# Surface Mount Schottky Barrier

**BAT54~BAT54S**

**30V**

**0.2A**

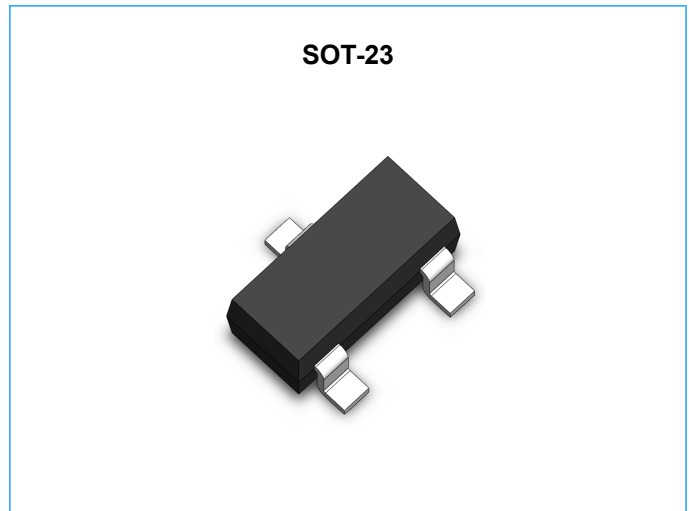
**SOT-23**

## 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

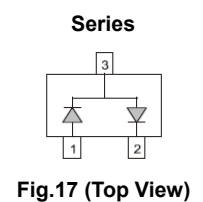
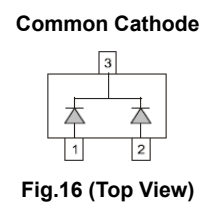
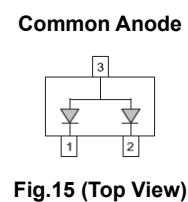
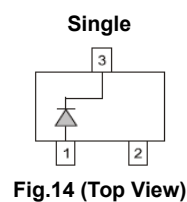


## Maximum Ratings and Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

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

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

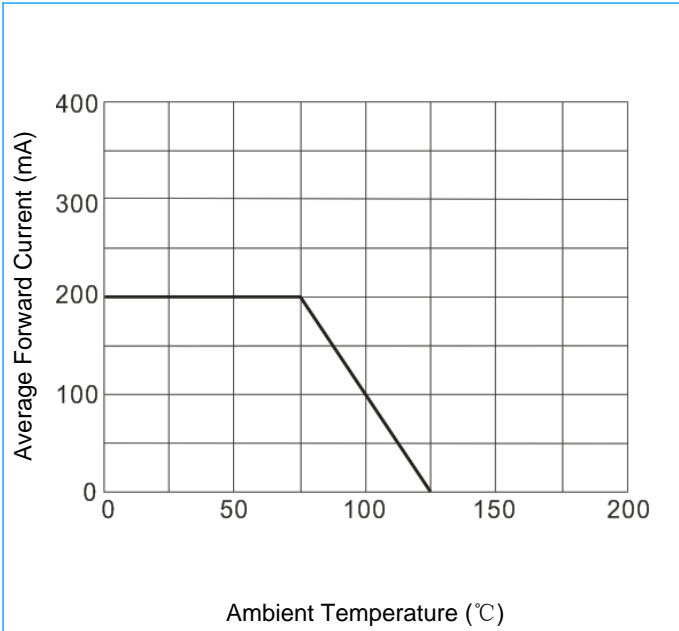
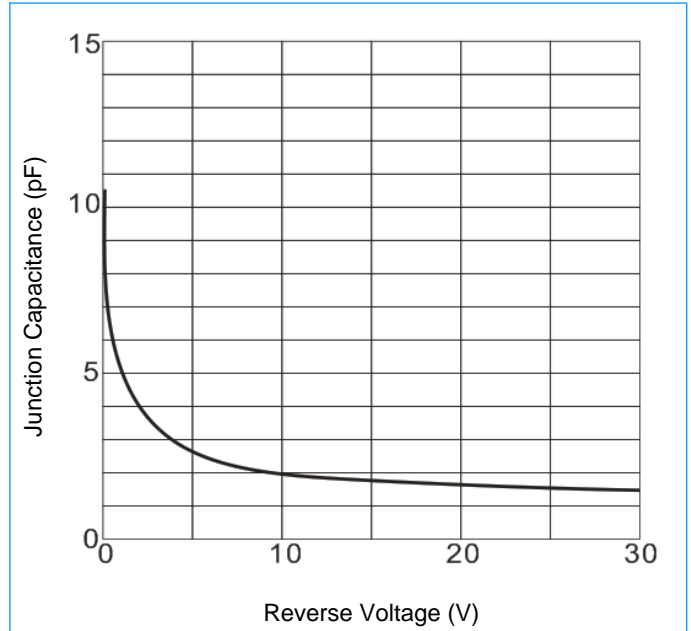
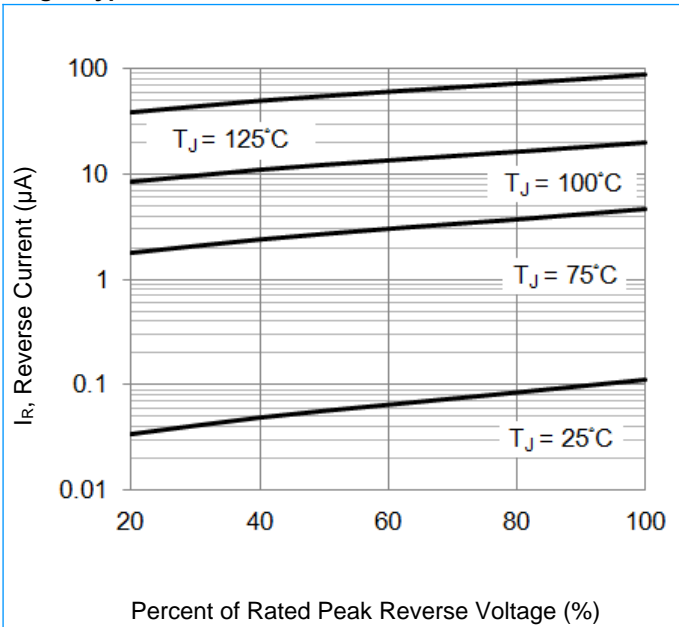
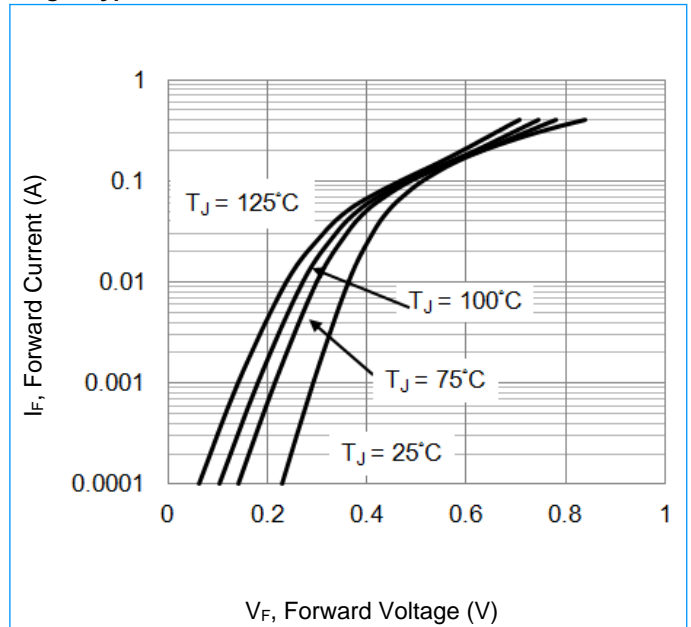
**Note:** 1. I<sub>F</sub>=10mA through I<sub>R</sub>=10mA to I<sub>R</sub>=1mA, R<sub>L</sub>=100Ω.



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## Typical Characteristic Curves

**Fig1. Forward Current Derating Curve**

**Fig2. Typical Junction Capacitance**

**Fig3. Typical Reverse Characteristics**

**Fig4. Typical Forward Characteristics**


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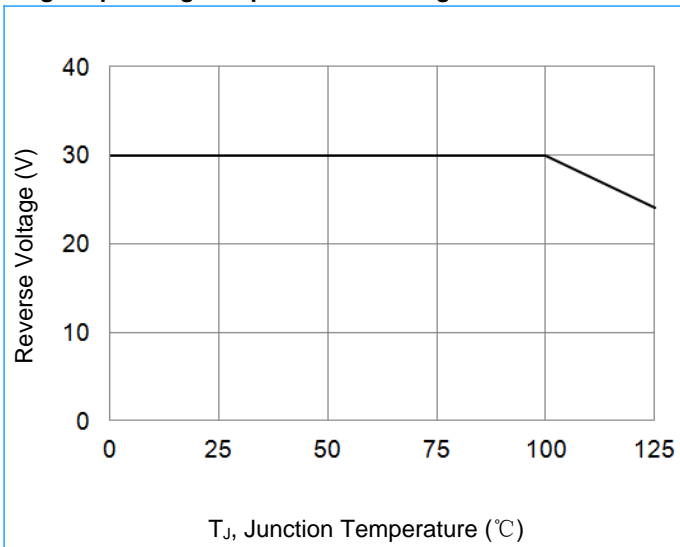
30V

0.2A

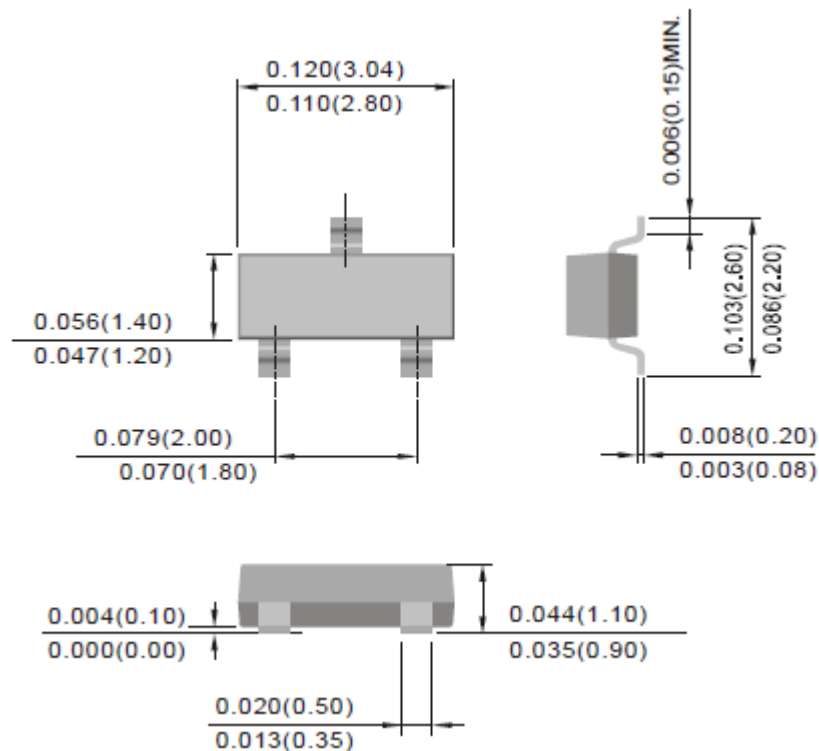
SOT-23

## Typical Characteristic Curves (Continue)

Fig5. Operating Temperature Derating Curve



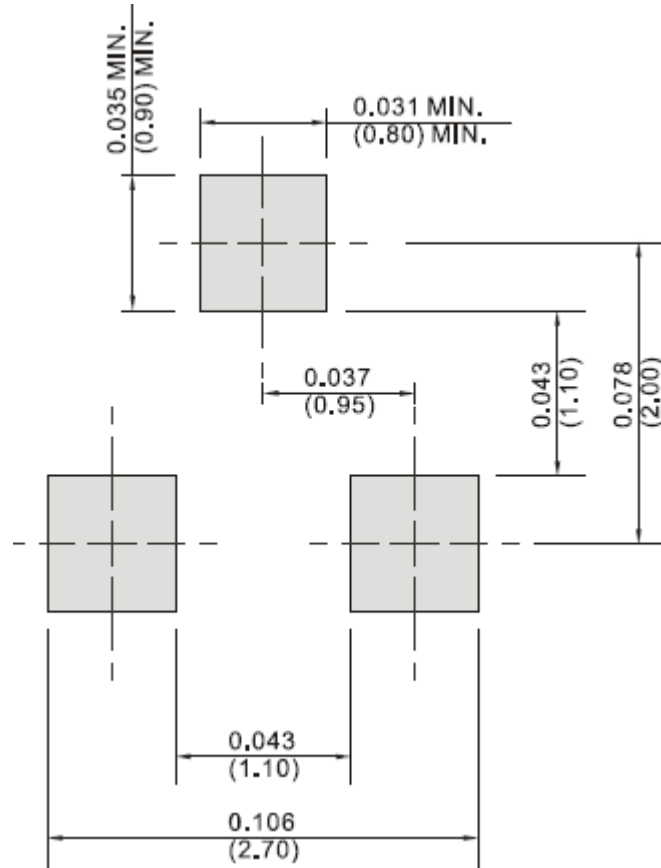
## SOT-23 Package Outline Dimensions (Unit: inch(mm))



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### SOT-23 Mounting Pad Layout (Unit: inch(mm))



### Ordering Information

Part Number	Package	Quantity
<b>BAT54~BAT54S</b>	SOT-23	3000 PCS per 7" Plastic Reel
		12000 PCS per 13" Plastic Reel