

SURFACE MOUNT FAST SWITCHING DIODE

### DESCRIPTION

The BAT56T, BAT70T and BAT99T are available in the SOT-523 package.

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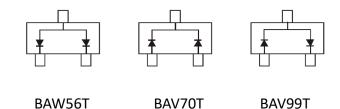
# FEATURE

- Fast Switching Speed.
- For General Purpose Switching Applications.
- High Conductance.

# **PIN DESCRIPTION**

Package Type	Part Number		
SOT-523	BAW56T		
	BAV70T		
	BAV99T		
SPQ	3,000pcs/Reel		
AiT provides all RoHS Compliant Products			





ABSOLUTE MAXIMUM RATINGS

#### $T_A = 25^{\circ}C$ , unless otherwise specified.

V <sub>R</sub> , Reverse Voltage	85 V
I <sub>o</sub> , Forward Current	75 mA
P <sub>D</sub> , Forward Power Dissipation	150 mW
T <sub>j</sub> , Junction Temperature	150 °C
T <sub>stg</sub> , Storage Temperature	-55 ~ +150 °C

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

# ORDERING INFORMATION



BAW56T\_BAV70T\_BAV99T

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## **ELECTRICAL CHARACTERISTICS**

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 $T_{\text{A}}\text{=}25^{\circ}\text{C}\,$  unless otherwise specified.

Parameter	Symbol	Condition	Min.	Тур.	Max.	Unit
Reverse Breakdown Voltage	V <sub>(BR)</sub>	Ι <sub>R</sub> = 1 μΑ	85	-	-	V
Reverse Voltage Leakage Current	I <sub>R1</sub>	V <sub>R</sub> = 75 V	-	-	2	μA
	I <sub>R2</sub>	V <sub>R</sub> = 25 V	-	-	0.03	μA
Forward Voltage	VF	I <sub>F</sub> = 1mA	-	-	715	mV
		I <sub>F</sub> = 10 mA	-	-	855	mV
		I <sub>F</sub> = 50 mA	-	-	1000	mV
		I <sub>F</sub> = 150 mA	-	-	1250	mV
Diode Capacitance	CD	V <sub>R</sub> = 0, f = 1 MHz	-	-	1.5	pF
Reverse Recovery time	trr	I <sub>F</sub> = I <sub>R</sub> = 10 mA I <sub>rr</sub> = 0.1 x 1 <sub>R</sub> ,	-	_	4	ns
		R <sub>L</sub> = 100Ω				



BAW56T\_BAV70T\_BAV99T DIODES

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#### **TYPICAL CHARACTERISTICS**

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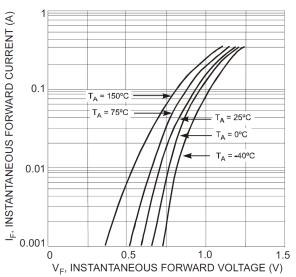


Fig 1. Typical Forward Characteristics, Per Element

Fig 3. Typical Total Capacitance vs. Reverse Voltage

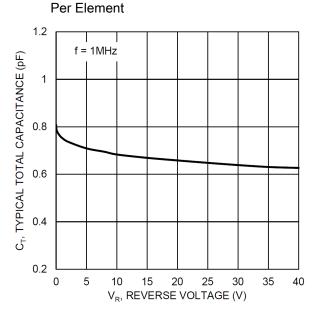


Fig 2. Typical Reverse Characteristics, Per Element

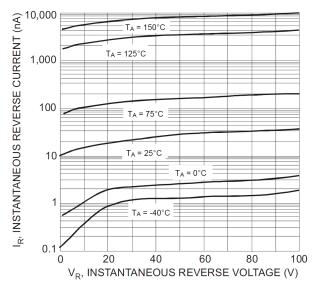
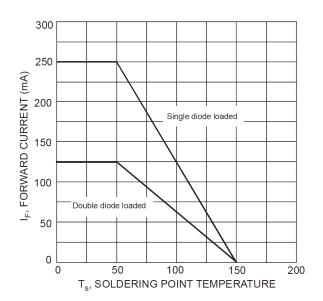


Fig 4. Current Derating Curve, Total Package

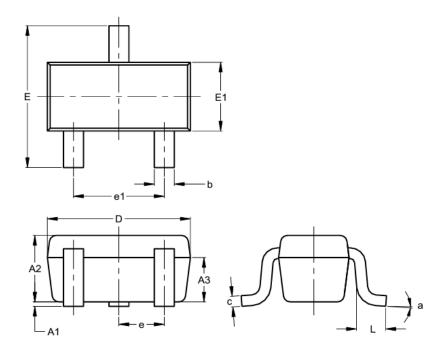




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## PACKAGE INFORMATION

Dimension in SOT-523 (Unit: mm)



Gumbal	Millimeter			
Symbol	Min.	Max.		
A1	0.000	0.100		
A2	0.600	0.800		
A3	0.450	0.650		
b	0.150	0.300		
с	0.100	0.200		
D	1.500	1.700		
E	1.450	1.750		
E1	0.750	0.850		
е	0.500 BCS			
e1	0.900	1.100		
L	0.200	0.400		
а	0°	8°		



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