

# BAV99T(LS)

**SURFACE MOUNT  
FAST SWITCHING DIODE**

**REVERSE VOLTAGE – 85 Volts  
FORWARD CURRENT – 0.075 Ampere**

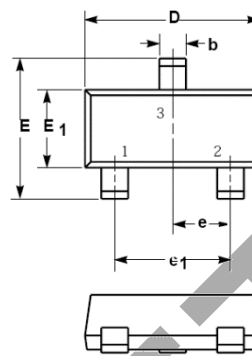
**FEATURES**

- Fast switching speed
- Ideally suited for automatic insertion
- For general purpose switching applications
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

**MECHANICAL DATA**

- Package: SOT-523 plastic
- Package material: "Green" molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl)
- Moisture sensitivity: Level 1 per J-STD-020

**SOT-523**



SOT-523		
Dim.	Min.	Max.
A	0.70	0.90
A1	0.00	0.10
b	0.15	0.32
c	0.10	0.20
D	1.50	1.70
E	1.45	1.75
E1	0.75	0.85
e	0.50 Typ.	
e1	0.90	1.10
L	0.55 Ref.	
Dimensions in millimeter		

**Maximum Ratings & Thermal Characteristics @ T<sub>A</sub> = +25°C, unless otherwise specified**

Characteristic	Symbol	Value	Unit
Working Peak Reverse Voltage DC Blocking Voltage	V <sub>R</sub>	85	V
Average Rectified Output Current	I <sub>o</sub>	75	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0μs	I <sub>FSM</sub>	4	A
Power Dissipation	P <sub>D</sub>	200	mW
Thermal Resistance Junction to Ambient	R <sub>thJA</sub>	625	°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +150	°C
Storage Temperature Range	T <sub>STG</sub>	-65 to +150	°C

**Electrical Characteristics @ T<sub>A</sub> = +25°C, unless otherwise specified**

Characteristic	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	I <sub>R</sub> = 1μA	V <sub>BR</sub>	85	--	--	V
Maximum Forward Voltage	I <sub>F</sub> = 1mA	V <sub>F</sub>	--	--	715	mV
	I <sub>F</sub> = 10mA		--	--	855	
	I <sub>F</sub> = 50mA		--	--	1000	
	I <sub>F</sub> = 150mA		--	--	1250	
Maximum DC Reverse Current at Rated DC Blocking Voltage	V <sub>R</sub> = 75V	I <sub>R</sub>	--	--	2	μA
	V <sub>R</sub> = 25V		--	--	0.03	
Maximum Total Capacitance	V <sub>R</sub> = 0V, f = 1MHz	C <sub>T</sub>	--	--	1.5	pF
Maximum Reverse Recovery Time	I <sub>rr</sub> = 1mA I <sub>R</sub> = I <sub>F</sub> = 10mA R <sub>L</sub> = 100Ω	t <sub>rr</sub>	--	--	4	ns

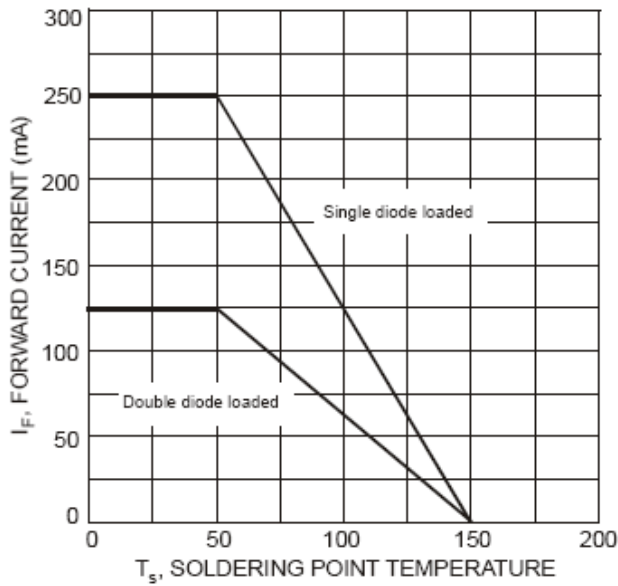
**Notes:**

1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

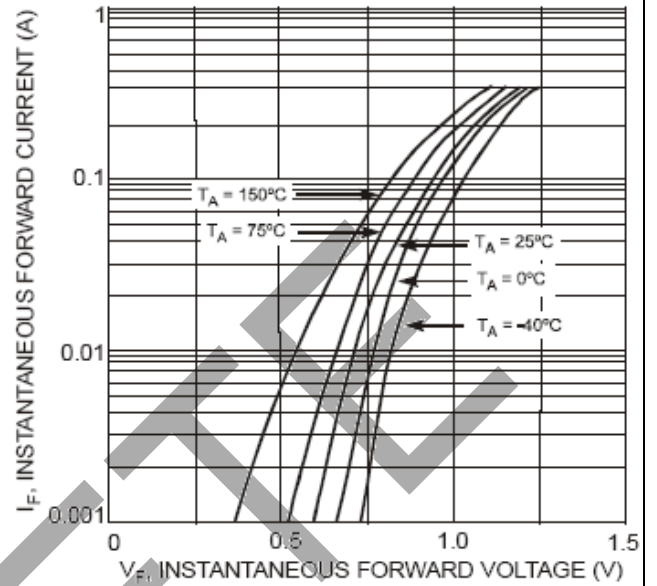
**RATING AND CHARACTERISTIC CURVES**  
**BAV99T**

OBSOLETE - PART DISCONTINUED

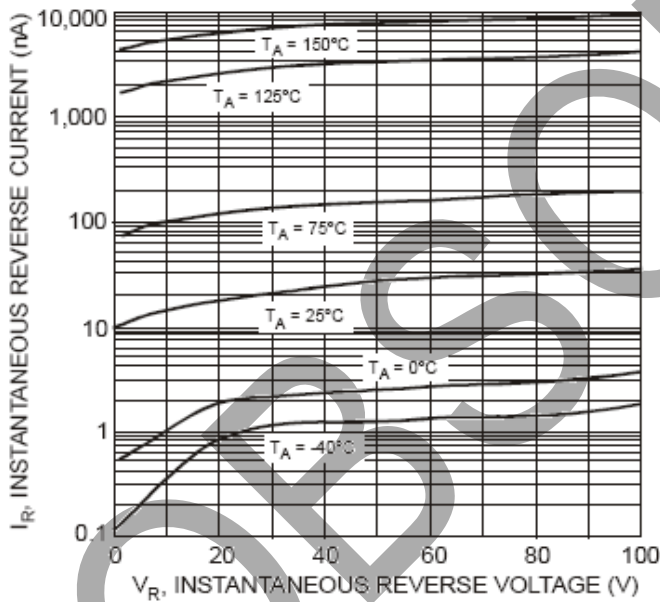
**Fig.1 Current Derating Curve**



**Fig.2 Typical Forward Characteristics**



**Fig.3 Typical Reverse Characteristics**

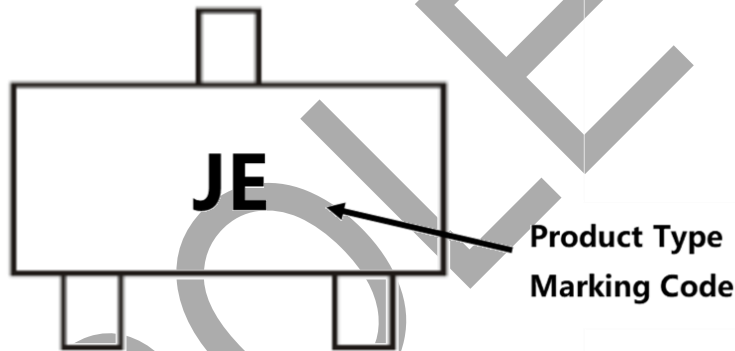


OBSOLETE - PART DISCONTINUED

**Ordering Information:**

Part Number	Package	Packing	
		Qty.	Carrier
BAV99T	SOT-523	3000pcs	Tape & Reel

**Marking Information:**



Device P/N	Marking Code	Equivalent Circuit Diagram
BAV99T	JE	<p>The equivalent circuit diagram shows a diode symbol with three terminals. Terminal 3 is on the left, terminal 1 is on the top right, and terminal 2 is on the bottom right. The diode symbol is oriented with its cathode (line) towards terminal 1 and its anode (arrow) towards terminal 2.</p>

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