

BAS116TB-AU / BAW156TB-AU / BAV170TB-AU / BAV199TB-AU

Surface Mount Low Leakage Switching Diodes

Voltage 100 V **Power** 150 mW

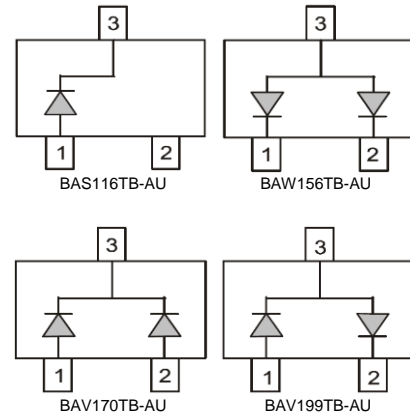
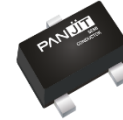
Features

- Surface mount package ideally suited for automatic insertion
- Very low leakage current. 2pA typical at $V_R=85V$.
- Low capacitance. 2pF max at $V_R=0V$, $f=1MHz$
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case : SOT-523 Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.002 grams

SOT-523



Maximum Ratings and Thermal Characteristics ($T_A = 25^\circ C$ unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Reverse Voltage	V_R	85	V
Peak Reverse Voltage	V_{RM}	100	V
Continuous Forward Current	I_F	0.2	A
Non-repetitive Peak Forward Surge Current	I_{FSM}	4	A
$t_p = 1 \text{ us}$			
Power Dissipation	P_{TOT}	150	mW
Typical Thermal Resistance	$R_{\theta JA}$	833	$^\circ C/W$
Operating Junction Temperature Range	T_J	-55~150	$^\circ C$
Storage Temperature Range	T_{STG}	-55~150	$^\circ C$

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Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Reverse Breakdown Voltage	V_{BR}	$I_R = 100\text{ }\mu\text{A}$	85	-	-	V
Forward Voltage	V_F	$I_F = 1\text{ mA}, T_J = 25^\circ\text{C}$	-	-	0.9	V
		$I_F = 10\text{ mA}, T_J = 25^\circ\text{C}$	-	-	1	
		$I_F = 50\text{ mA}, T_J = 25^\circ\text{C}$	-	-	1.1	
		$I_F = 150\text{ mA}, T_J = 25^\circ\text{C}$	-	-	1.25	
Reverse Current	I_R	$V_R = 85\text{ V}, T_J = 25^\circ\text{C}$	-	0.002	5	nA
		$V_R = 85\text{ V}, T_J = 150^\circ\text{C}$	-	8	80	
Total Capacitance	C_J	$V_R = 0\text{ V}, f=1\text{MHz}$	-	-	2	pF
Reverse Recovery Time	T_{RR}	$I_F=I_R=10\text{mA}, R_L=100\text{ }\Omega$	-	-	3	us

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TYPICAL CHARACTERISTIC CURVES

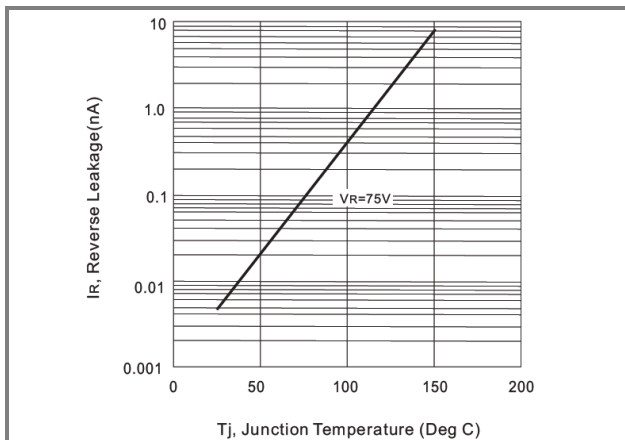


Fig.1 Reverse Leakage vs. Junction Temperature

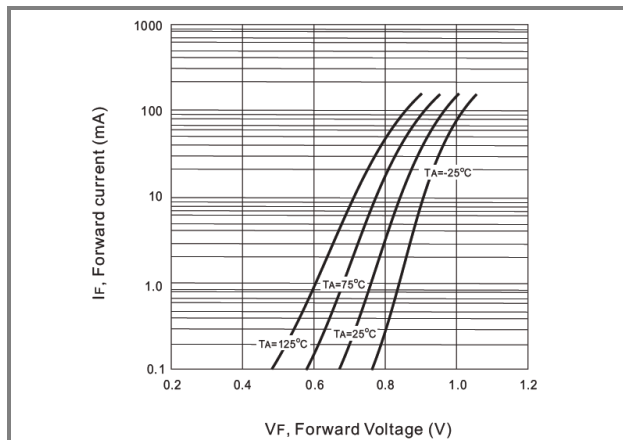


Fig.2 Forward Current vs. Forward Voltage

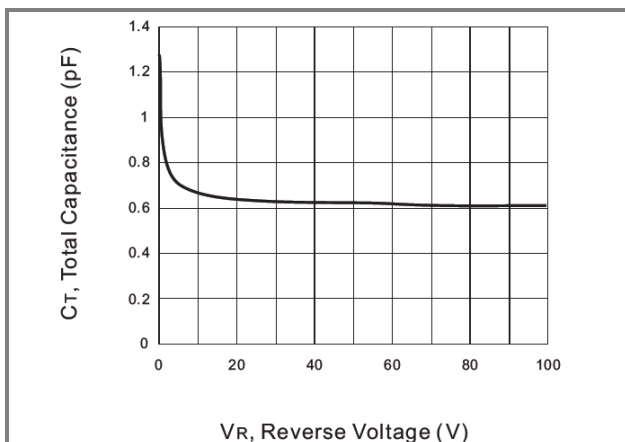


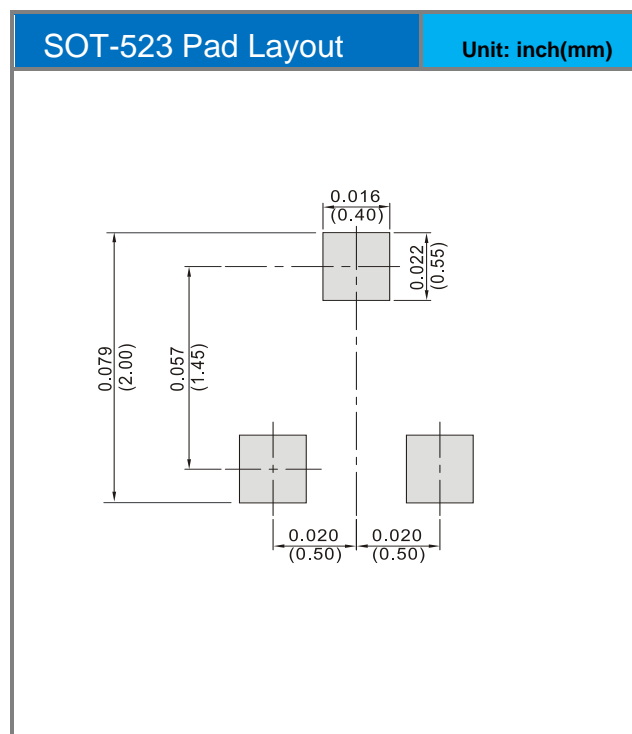
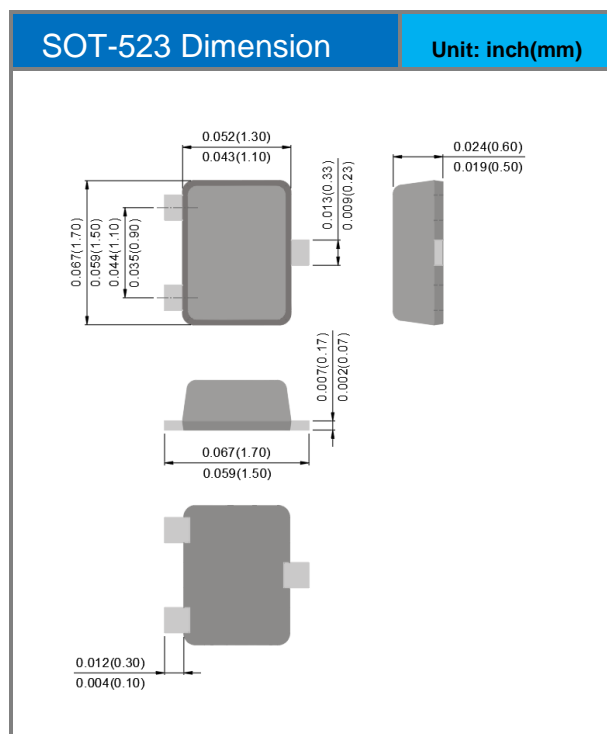
Fig.3 Total Capacitance vs. Reverse Voltage

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Product and Packing Information

Part No.	Package Type	Packing Type	Marking
BAS116TB-AU	SOT-523	4K pcs / 7" reel	PA
BAW156TB-AU	SOT-523	4K pcs / 7" reel	P4
BAV170TB-AU	SOT-523	4K pcs / 7" reel	P3
BAV199TB-AU	SOT-523	4K pcs / 7" reel	PB

Packaging Information & Mounting Pad Layout



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