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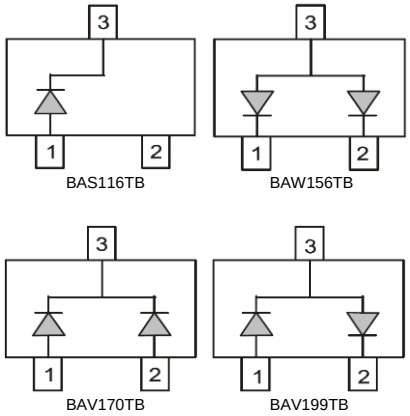
Surface Mount Low Leakage Switching Diodes

Voltage	100 V	Power	150 mW

SOT-523



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
- 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

Maximum Ratings and Thermal Characteristics (T_A = 25 °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	tp = 1 us	I_{FSM}	4	A
Power Dissipation		P_{TOT}	150	mW
Typical Thermal Resistance		$R_{\theta JA}$	833	°C/W
Operating Junction Temperature Range		T_J	-55~150	°C
Storage Temperature Range		T_{STG}	-55~150	°C

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Electrical Characteristics (T_A = 25 °C unless otherwise noted)

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

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TYPICAL CHARACTERISTIC CURVES

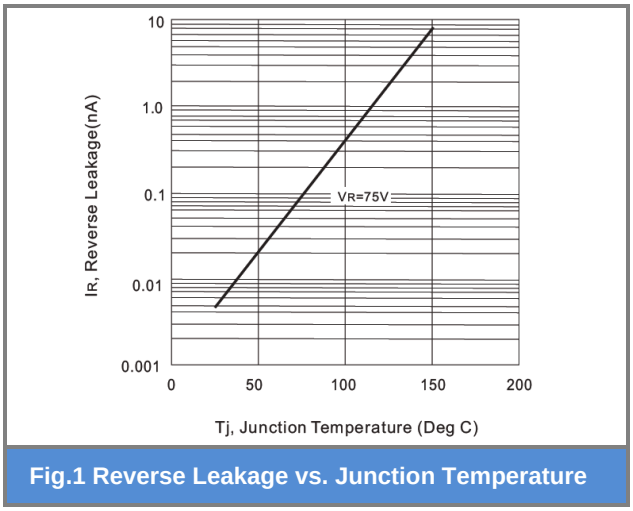

Fig.1 Reverse Leakage vs. Junction Temperature

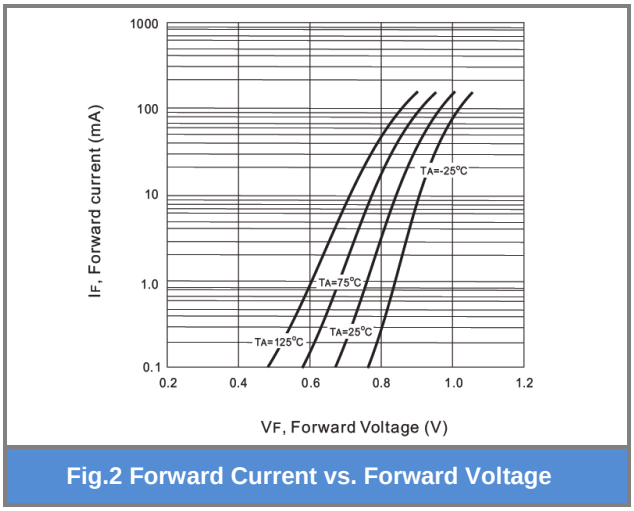

Fig.2 Forward Current vs. Forward Voltage

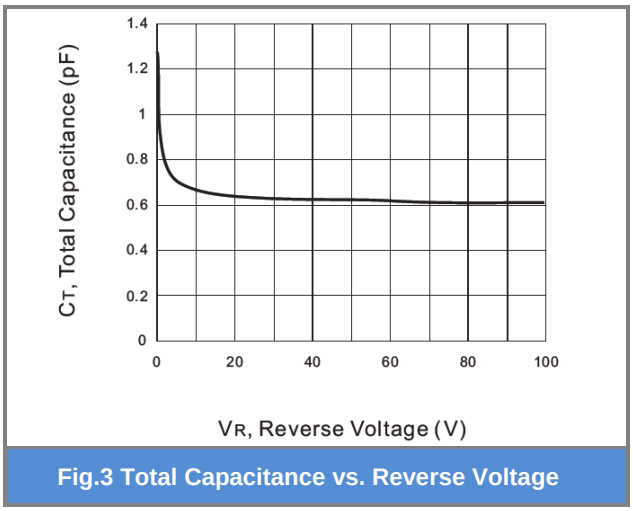

Fig.3 Total Capacitance vs. Reverse Voltage

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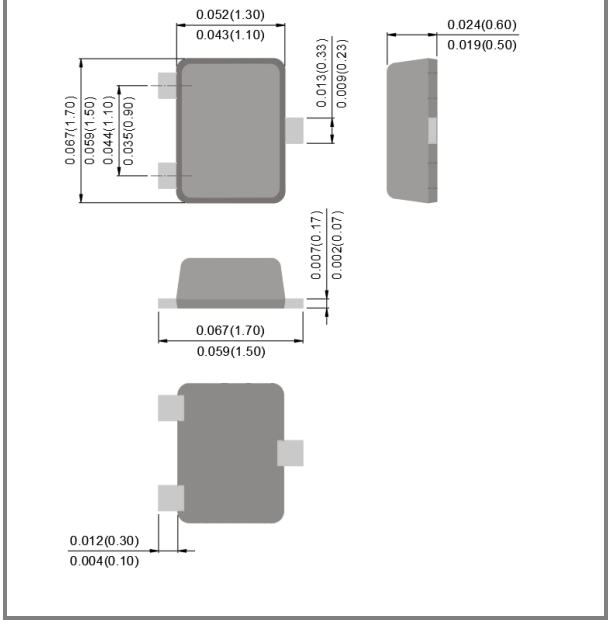
Product and Packing Information

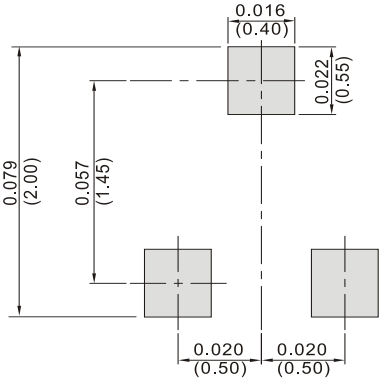
Part No.	Package Type	Packing Type	Marking
BAS116TB	SOT-523	4K pcs / 7” reel	PA
BAW156TB	SOT-523	4K pcs / 7” reel	P4
BAV170TB	SOT-523	4K pcs / 7” reel	P3
BAV199TB	SOT-523	4K pcs / 7” reel	PB

Packaging Information & Mounting Pad Layout

SOT-523 Dimension — Unit: inch(mm)



SOT-523 Pad Layout — Unit: inch(mm)



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