

Surface Mount Fast Switching Diode

BAS16T/BAW70T/BAW56T/BAV99T

FEATURES

- Ultra-Small surface mount package.
- Fast switching speed.
- For general purpose switching applications.
- High conductance.

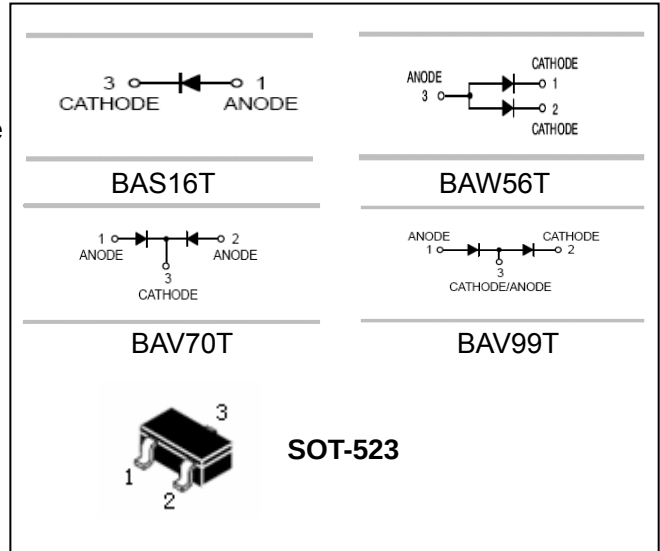


Lead-free

APPLICATIONS

- General purpose switching application.

ORDERING INFORMATION



Type No.	Marking	Package Code
BAS16T	A2	SOT-523
BAW56T	JD	SOT-523
BAV70T	JJ	SOT-523
BAV99T	JE	SOT-523

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Units
V_{RRM}	Peak repetitive reverse voltage	85	V
V_{RWM}	Working peak reverse voltage		
V_R	DC reverse voltage		
$V_{R(RMS)}$	RMS reverse voltage	60	V
I_F	Forward continuous voltage	155	mA
	single diode	75	
	double diode		
I_{FRM}	Repetitive peak forward current	500	mA
I_{FSM}	Non-repetitive peak forward surge current		A
	@t=1.0μs	4.0	
	@t=1.0ms	1.0	
	@t=1.0s	0.5	
P_d	Power dissipation	150	mW
$R_{\theta JA}$	Thermal resistance junction to ambient	833	°C/W
T_j, T_{stg}	Junction and Storage Temperature	-65~150	°C

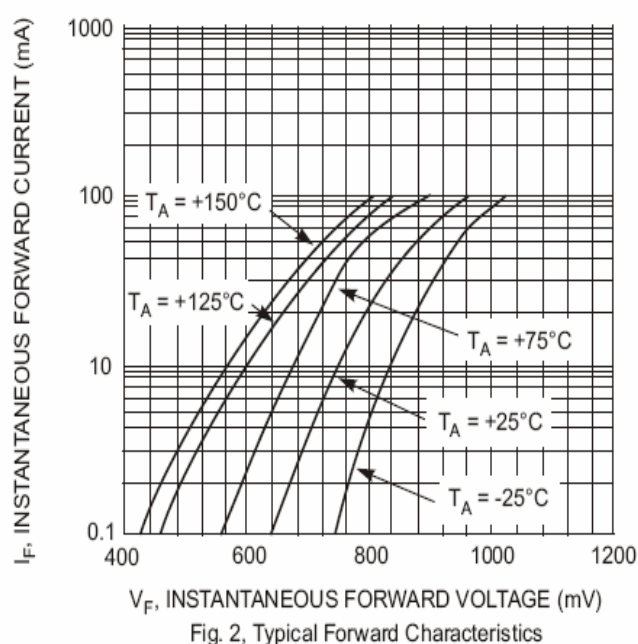
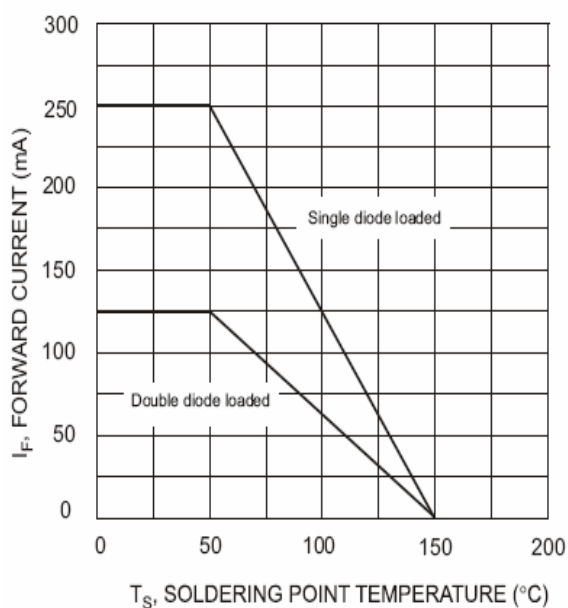
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ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Reverse breakdown voltage	$V_{(BR)R}$	$I_R=100\mu\text{A}$	85		V
Leakage current	I_R	$V_R=75\text{V}$		2.0	μA
		$V_R=75\text{V}, T_j=150^\circ\text{C}$		100	μA
		$V_R=25\text{V}, T_j=150^\circ\text{C}$		60	μA
		$V_R=25\text{V}$		30	nA
Forward voltage	V_F	$I_F=1.0\text{mA}$		0.715	V
		$I_F=10\text{mA}$		0.855	
		$I_F=50\text{mA}$		1.0	
		$I_F=150\text{mA}$		1.25	
Transition frequency	f_T	$V_{CE}=5\text{V}, I_C=10\text{mA}, f=100\text{KHz}$	100		MHz
Typical total capacitance	C_T	$V_R=0\text{V}, f=1\text{MHz}$		1.5	pF
Reverse recovery Time	t_{rr}	$I_F=I_R=10\text{mA}, I_{rr}=0.1 \cdot I_R, R_L=100\Omega$		4.0	ns

TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified



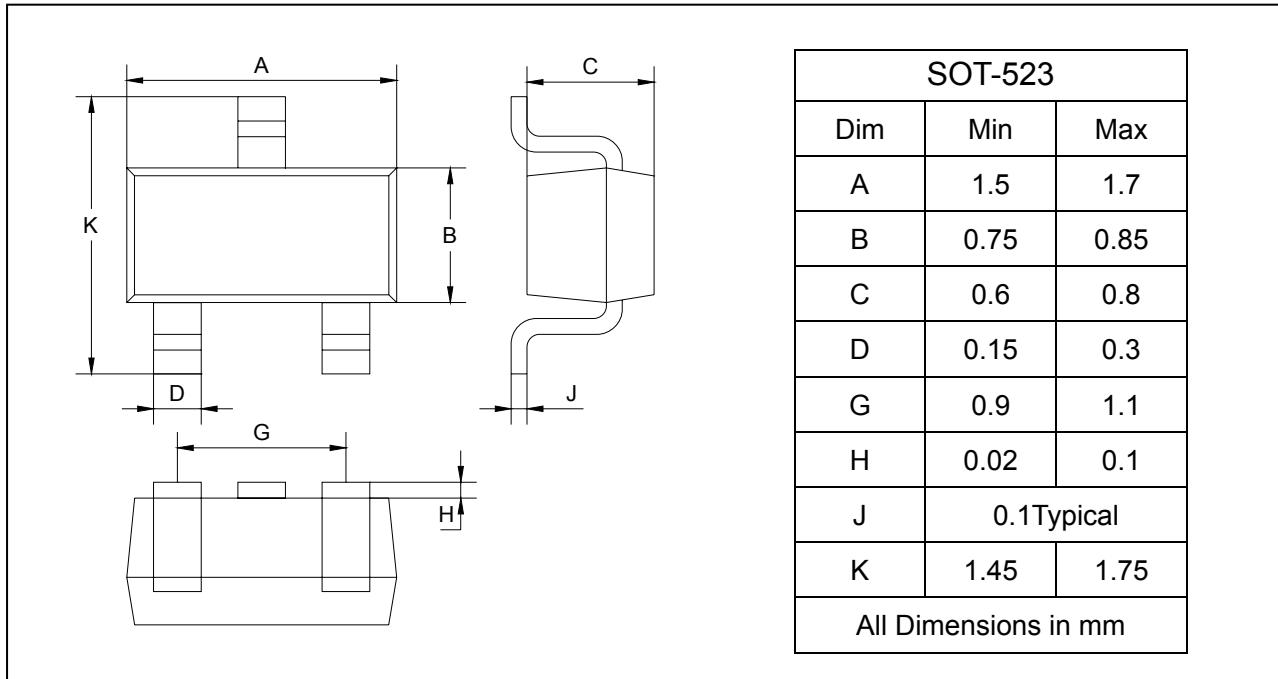
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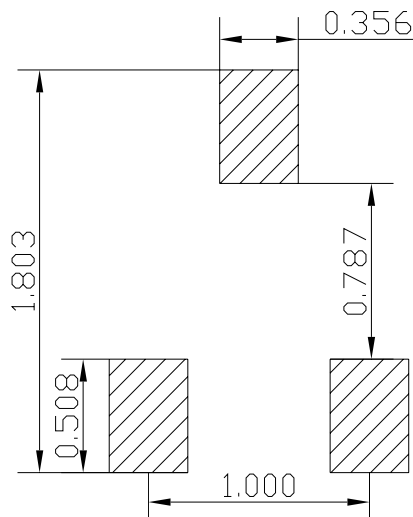
PACKAGE OUTLINE

Plastic surface mounted package

SOT-523



SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
BAS16T/BAW56T/BAV70T/BAV99T	SOT-523	3000/Tape&Reel