

SOT-523 Plastic-Encapsulate Diodes**BAS70T/-04T/-05T/-06T**

SCHOTTKY BARRIER DIODE

FEATURES

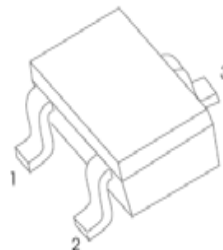
- Fast Switching Speed
- Low Trun-on Voltage

MARKING

BAS70T	BAS70-04T	BAS70-05T	BAS70-06T

Equivalent Circuit

BAS70T	BAS70-04T	BAS70-05T	BAS70-06T

SOT-523**MAXIMUM RATINGS** ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

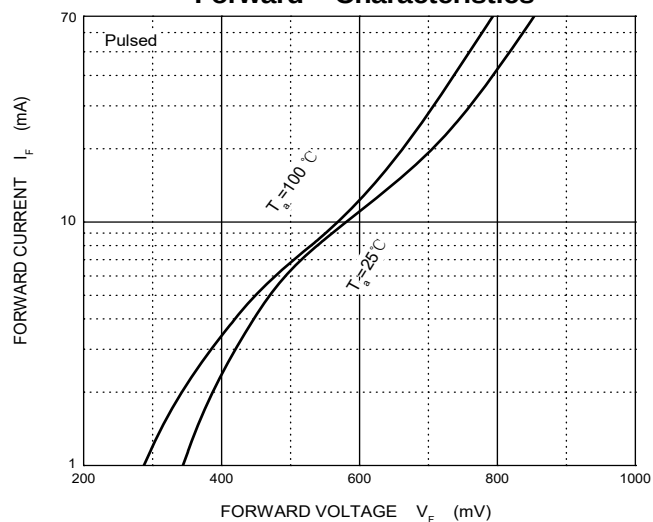
Parameter	Symbol	Limit	Unit
Peak Repetitive Peak Reverse Voltage	V_{RRM}	70	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
Forward Continuous Current	I_{FM}	70	mA
Non-Repetitive Peak Forward Surge Current @ $t = 8.3\text{ms}$	I_{FSM}	100	mA
Power Dissipation	P_D	150	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	667	$^{\circ}\text{C/W}$
Operating Junction Temperature Range	T_J	-40 ~ +125	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 ~ +150	$^{\circ}\text{C}$

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

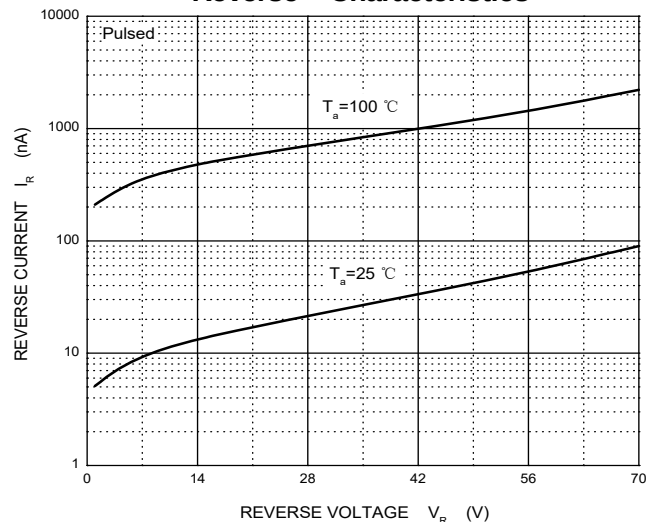
Parameter	Symbol	Test conditions	Min	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	$I_R=10\mu\text{A}$	70		V
Reverse voltage leakage current	I_R	$V_R=50\text{V}$		100	nA
Forward voltage	V_F	$I_F=1\text{mA}$ $I_F=15\text{mA}$		410 1000	mV
Diode capacitance	C_D	$V_R=0$, $f=1\text{MHz}$		2	pF
Reveres recovery time	t_{rr}	$I_F=I_R=10\text{mA}$, $I_{rr}=0.1I_R$, $R_L=100\Omega$		5	ns

Typical Characteristics

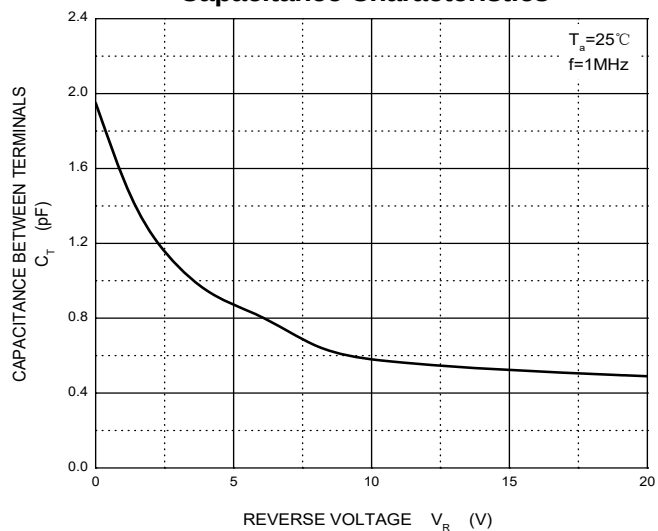
Forward Characteristics



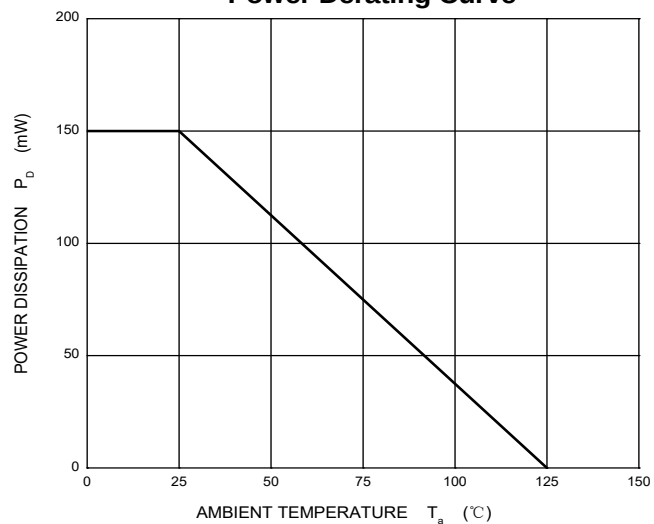
Reverse Characteristics



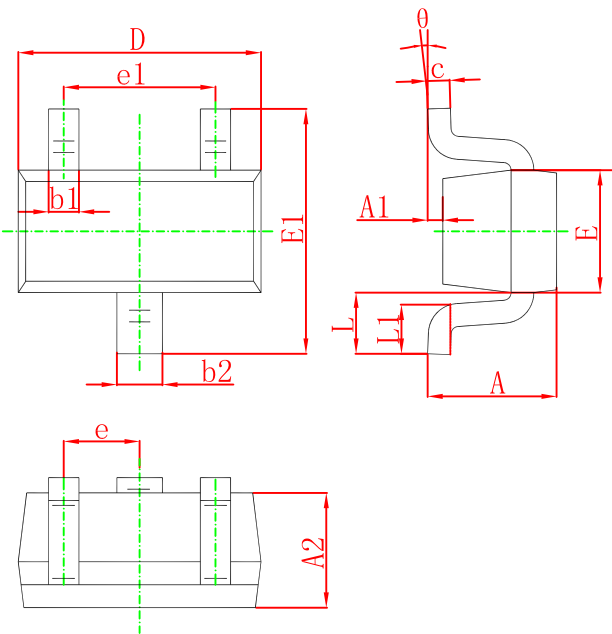
Capacitance Characteristics



Power Derating Curve

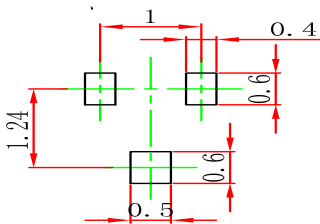


Package Outline Dimensions (SOT-523)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500 TYP.		0.020 TYP.	
e1	0.900	1.100	0.035	0.043
L	0.400 REF.		0.016 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

Suggested Pad Layout (SOT-523)



- Note:
- 1.Controlling dimension:in millimeters.
 - 2.General tolerance:± 0.05mm.
 - 3.The pad layout is for reference purposes only.