

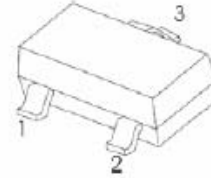
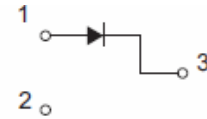


BAS19T/BAS20T SWITCHING DIODE

FEATURE

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance

MARKING: BAS19:JP
BAS20:JR



SOT - 523

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Symbol	Parameter	BAS19	BAS20	Unit
V _{RRM}	Repetitive Peak Reverse Voltage	120	200	V
V _{RWM}	Working Peak Reverse Voltage	100	150	V
I _O	Average Rectified Output Current	200		mA
I _{FSM}	Non-Repetitive Peak Forward Surge Current @t=8.3ms	2.5		A
P _d	Power Dissipation	250		mW
R _{θJA}	Thermal Resistance from Junction to Ambient	500		°C/W
T _J	Junction temperature	150		°C
T _{stg}	Storage Temperature	-55 ~ +150		°C

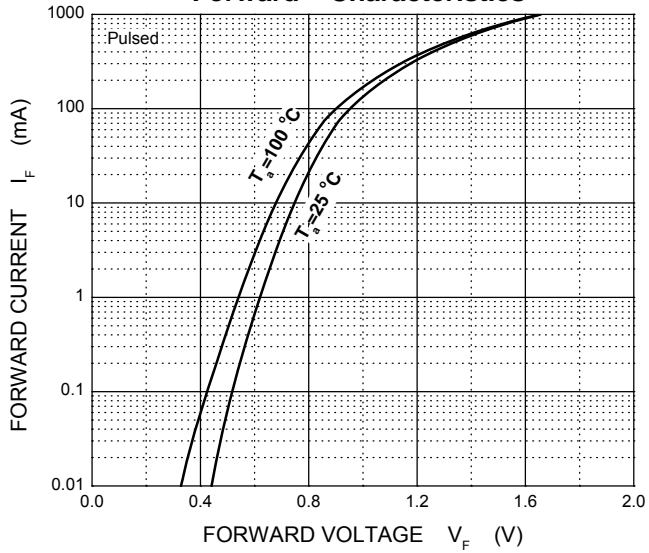
ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse breakdown voltage	BAS19 BAS20	V _(BR) I _R =100μA	120			V
			200			
Reverse current	BAS19 BAS20	I _R V _R =100V V _R =150V			0.1	μA
Forward voltage	V _F	I _F =100mA I _F =200mA			1	V
					1.25	
Diodes capacitance	C _D	V _R =0V, f=1MHz			5	pF
Reveres recovery time	t _{rr}	I _F =I _R =30mA, I _{rr} =0.1*I _R			50	ns

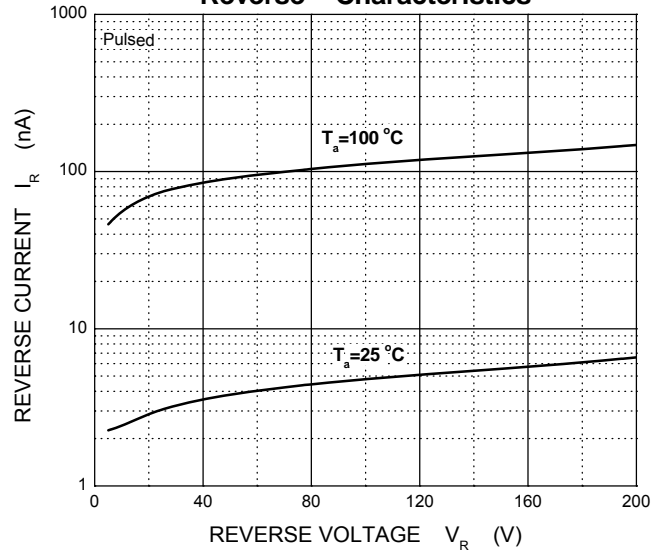


Typical Characteristics

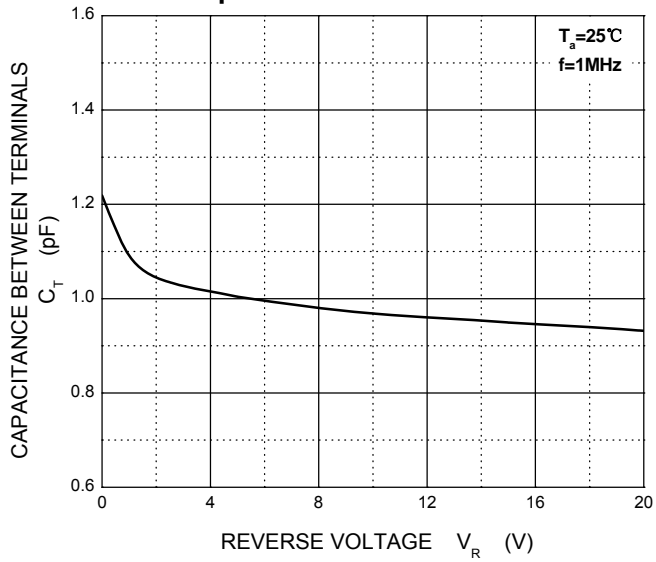
Forward Characteristics



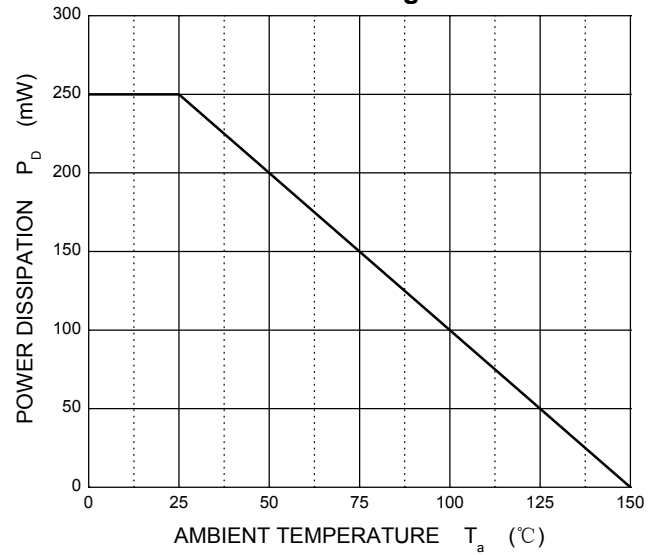
Reverse Characteristics



Capacitance Characteristics

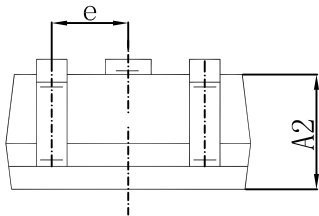
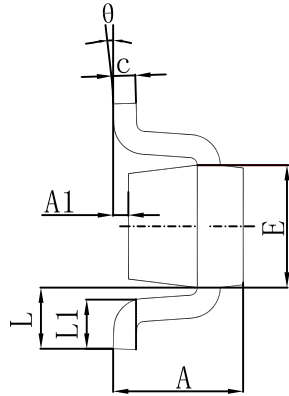
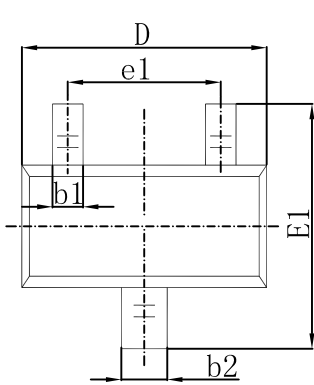


Power Derating Curve



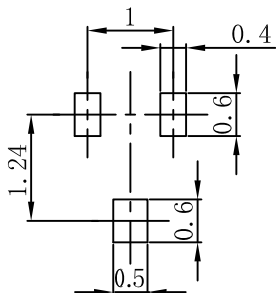


SOT-523 Package Outline Dimensions



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
theta	0°	8°	0°	8°

SOT-523 Suggested Pad Layout



- Note:
1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$.
 3. The pad layout is for reference purposes only.