

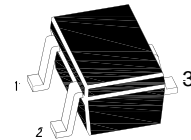
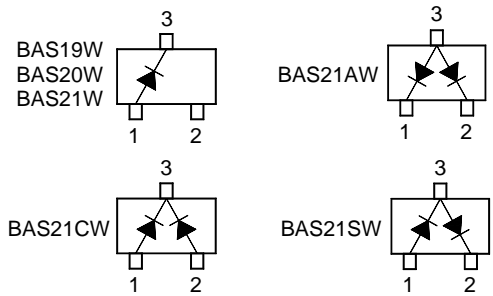


BAS19W /21W Silicon Epitaxial Planar Diodes

High Voltage Switching Diodes

Marking Code:

- BAS19W~BAS21W: T3
- BAS21AW: F2
- BAS21CW: F3
- BAS21SW: F4



SOT-323

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Reverse Voltage BAS19W BAS20W BAS21W /AW/CW/SW	V_R	120 200 250	V
Continuous Forward Current	$I_{F(AV)}$	200	mA
Repetitive Peak Forward Current	I_{FRM}	625	mA
Non-repetitive Peak Forward Surge Current at $t = 1\text{ s}$ at $t = 1\ \mu\text{s}$	I_{FSM}	0.5 2.5	A
Total Device Dissipation	P_{tot}	250	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	357	$^\circ\text{C/W}$
Junction and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150	$^\circ\text{C}$

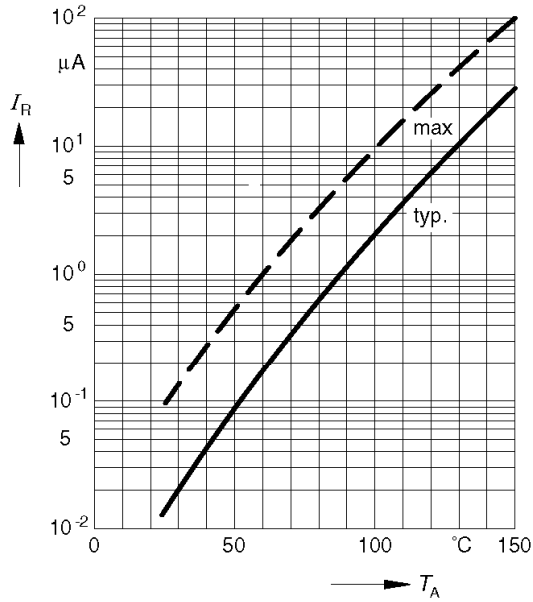
Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 100\ \mu\text{A}$ at $I_R = 100\ \mu\text{A}$ at $I_R = 100\ \mu\text{A}$ BAS19W BAS20W BAS21W /AW/CW/SW	$V_{(BR)R}$	120 200 250	- - -	V
Forward Voltage at $I_F = 100\text{ mA}$ at $I_F = 200\text{ mA}$	V_F	- -	1 1.25	V
Reverse Current at $V_R = 100\text{ V}$ at $V_R = 150\text{ V}$ at $V_R = 200\text{ V}$ at $V_R = 100\text{ V}, T_j = 150^\circ\text{C}$ at $V_R = 150\text{ V}, T_j = 150^\circ\text{C}$ at $V_R = 200\text{ V}, T_j = 150^\circ\text{C}$ BAS19W BAS20W BAS21W /AW/CW/SW	I_R	- - - - - -	0.1 0.1 0.1 100 100 100	μA
Total Capacitance at $V_R = 0, f = 1\text{ MHz}$	C_{tot}	-	5	pF
Reverse Recovery Time at $I_F = I_R = 30\text{ mA}, I_{R(REC)} = 3\text{ mA}, R_L = 100\ \Omega$	t_{rr}	-	50	ns



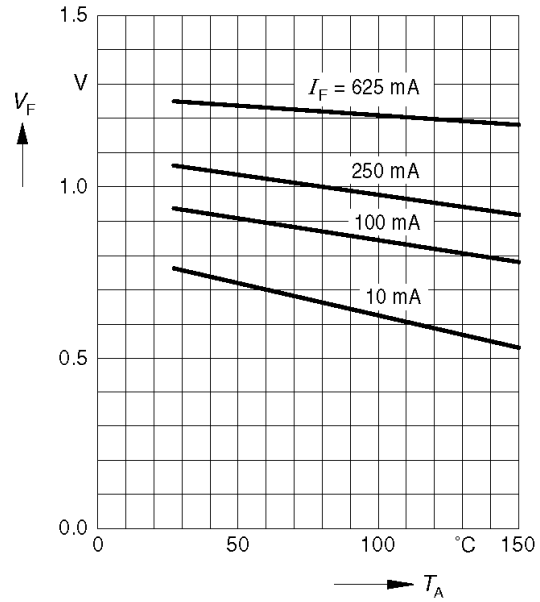
Reverse current $I_R = f(T_A)$

$V_R = 200V$

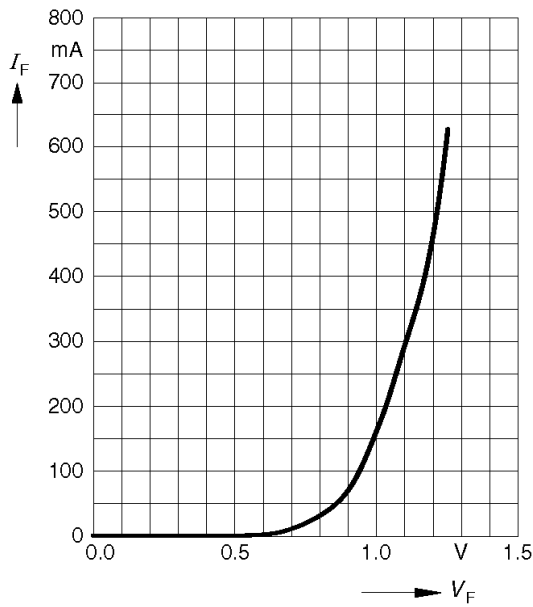


Forward Voltage $V_F = f(T_A)$

$I_F = \text{Parameter}$

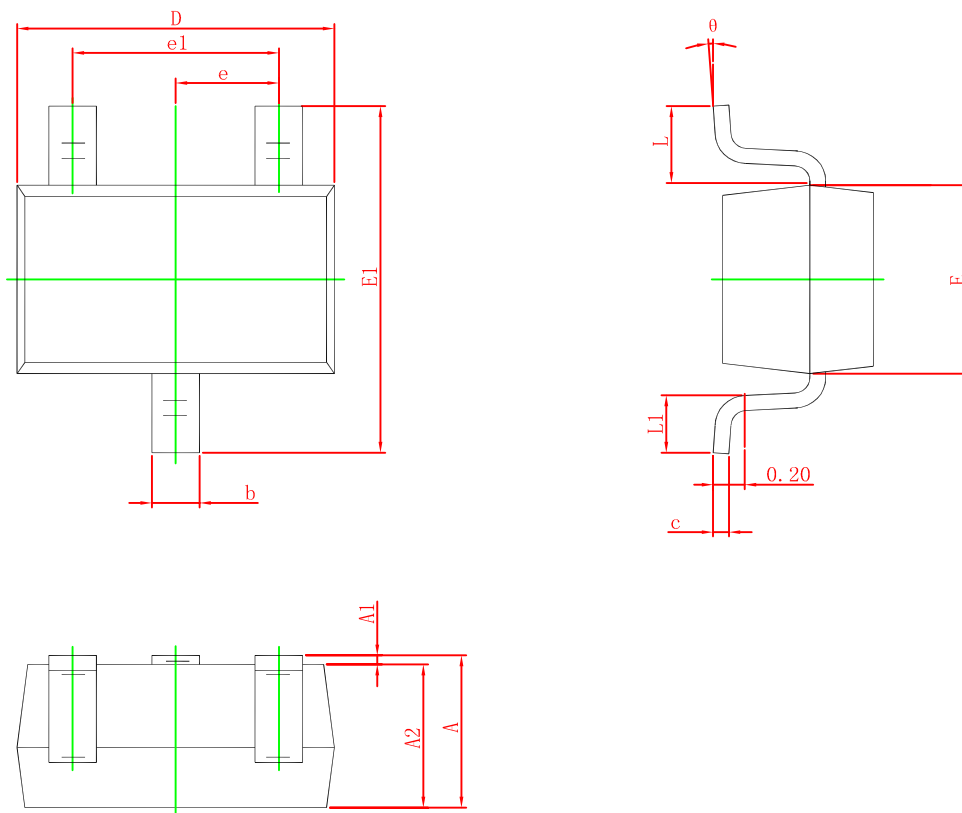


Forward current $I_F = f(V_F)$





SOT-323 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP.		0.026 TYP.	
e1	1.200	1.400	0.047	0.055
L	0.525 REF.		0.021 REF.	
L1	0.260	0.460	0.010	0.018
theta	0°	8°	0°	8°