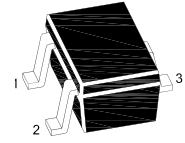
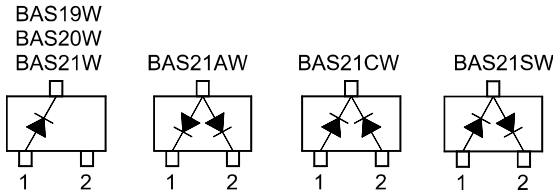


## Silicon Epitaxial Planar Diodes

High Voltage Switching Diodes



SOT-323 Plastic Package



Marking Code	
<b>BAS19W</b>	<b>KT1</b>
<b>BAS20W</b>	<b>KT2</b>
<b>BAS21W</b>	<b>KT3</b>
<b>BAS21AW</b>	<b>F2</b>
<b>BAS21CW</b>	<b>F3</b>
<b>BAS21SW</b>	<b>F4</b>

### Absolute Maximum Ratings (Ta= 25°C)

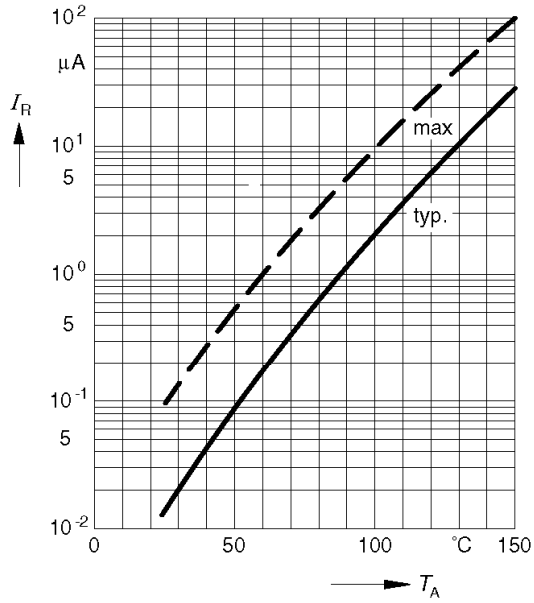
Parameter	Symbol	Value	Unit
Reverse Voltage	BAS19W BAS20W BAS21W	120 200 250	V
Continuous Forward Current	$I_{F(AV)}$	200	mA
Repetitive Peak Forward Current	$I_{FRM}$	625	mA
Non-repetitive Peak Forward Surge Current	at t = 1 s at t = 1 μs	0.5 2.5	A
Total Device Dissipation	$P_{tot}$	250	mW
Thermal Resistance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

### Characteristics at Ta= 25°C

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

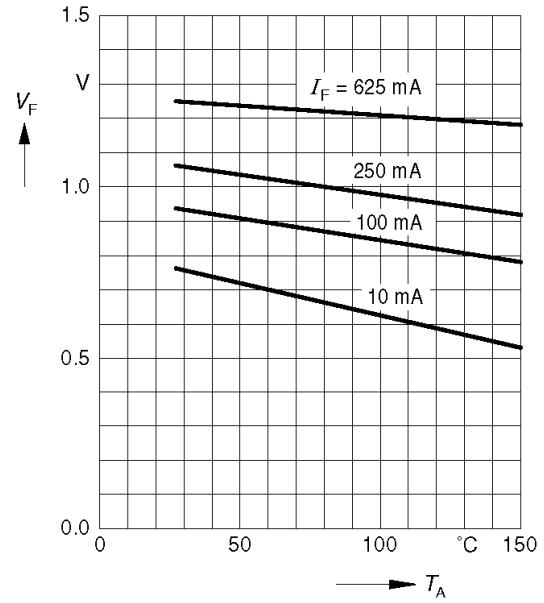
**Reverse current  $I_R = f(T_A)$**

$V_R = 200V$

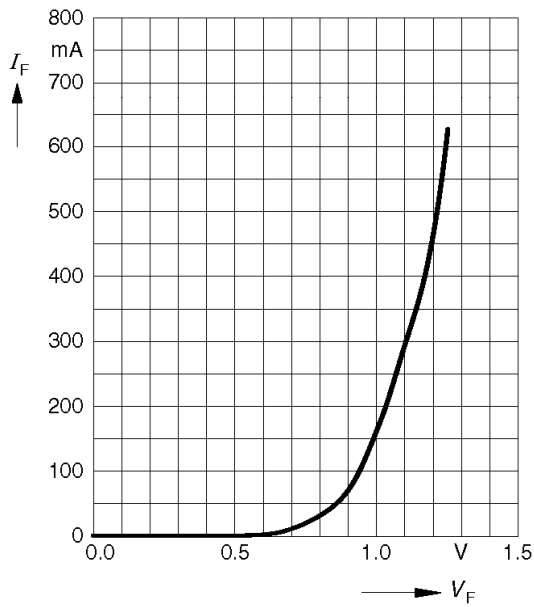


**Forward Voltage  $V_F = f(T_A)$**

$I_F = \text{Parameter}$

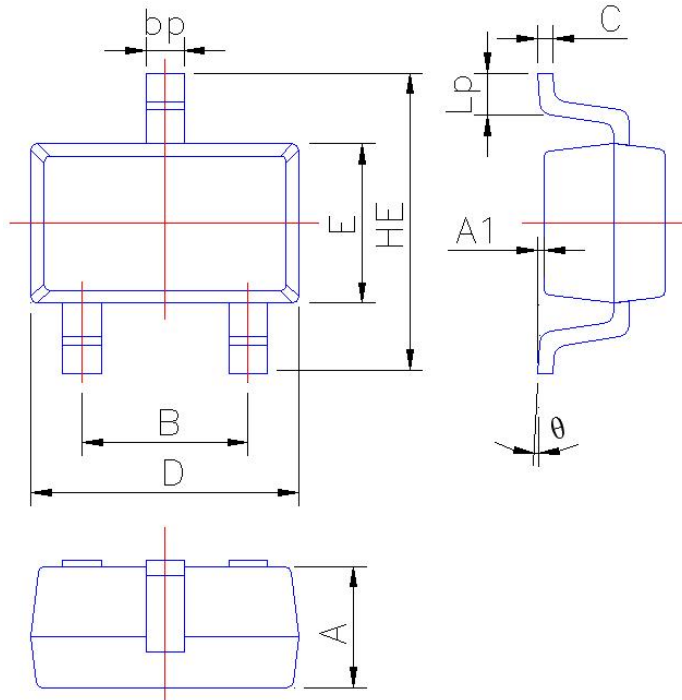


**Forward current  $I_F = f(V_F)$**



Package Outline

SOT-323



Symbol	Dimension in Millimeters	
	Min	Max
A	0.90	1.00
A1	0.010	0.100
B	1.20	1.40
bp	0.25	0.45
C	0.09	0.15
D	2.00	2.20
E	1.15	1.35
HE	2.15	2.55
Lp	0.25	0.46
θ	0°	6°

Summary of Packing Options

Package	Package Description	Packing Quantity	Industry Standard
SOT-323	Tape/Reel, 7" reel	3000	EIA-481-1