

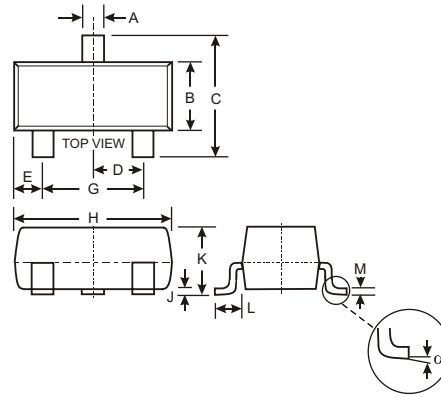


Features

- Silicon planar epitaxial high speed diode
- For switching and general purpose applications

Mechanical Data

- Case: SOT-23
- Weight: 0.008 grams (approximate)



SOT-23		
Dim	Min	Max
A	0.37	0.51
B	1.20	1.40
C	2.30	2.50
D	0.89	1.03
E	0.45	0.60
G	1.78	2.05
H	2.80	3.00
J	0.013	0.10
K	0.903	1.10
L	0.45	0.61
M	0.085	0.180
α	0°	8°
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Test Conditions	Type	Symbol	Value	Unit
Working peak reverse voltage =DC Blocking voltage		BAS19	V_{RWM} = V_R	100	V
		BAS20		150	V
		BAS21		200	V
Repetitive peak reverse voltage		BAS19	V_{RRM}	120	V
		BAS20	V_{RRM}	200	V
		BAS21	V_{RRM}	250	V
Peak forward surge current	t=1 μ s		I_{FSM}	2.5	A
	t=1s		I_{FSM}	0.5	A
Repetitive peak forward current			I_{FRM}	625	mA
Average forward current	t _p <0.3ms		I_{FAV}	200	mA
Forward current	T _{Case} =T _L (8mm from Case) =T _{amb}		I_F	400	mA
Power dissipation	T _{Case} =T _L (8mm from Case) =T _{amb}		P _{tot}	250	mW
Junction and storage temperature range	T _j = 25°C		T _j =T _{stg}	-55...+150	°C

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	I _F =100mA		V _F			1.0	V
	I _F =200mA		V _F			1.25	V
Reverse current	V _R =V _{Rmax}		I _R			100	nA
	V _R =V _{Rmax} , T _j = 150°C		I _R			100	μA
Reverse breakdown voltage	I _R =100μA, t _p <0.3ms	BAS19	V _{(BR)R}	120			V
	I _R =100μA	BAS20	V _{(BR)R}	200			V
	I _R =100μA, V _R <275V	BAS21	V _{(BR)R}	250			V
Reverse recovery time	I _F =I _R =10mA, R _L =100Ω, V _R =6V to I _R =1mA. R _L =100Ω		t _{rr}			50	ns
Diode capacitance	V _R =0, f= 1MHz		C _D			5	pF
Dynamic forward resistance	I _F =10mA		r _f		5		Ω