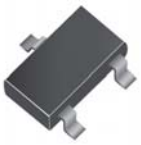
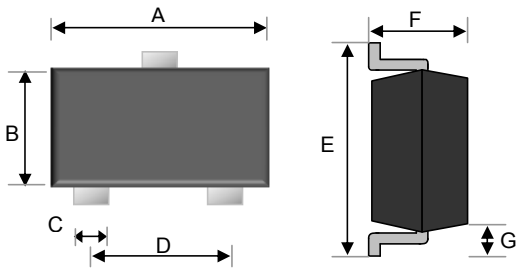
TAIWAN SEMICONDUCTOR

BAS21 / A / C / S
225mW SMD Switching Diode

Small Signal Diode



SOT-23



Dimensions	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.80	3.00	0.110	0.118
B	1.20	1.40	0.047	0.055
C	0.30	0.50	0.012	0.020
D	1.80	2.00	0.071	0.079
E	2.25	2.55	0.089	0.100
F	0.90	1.20	0.035	0.043
G	0.550 REF		0.022 REF	

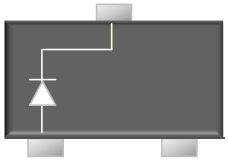
Features

- ✧Fast switching speed
- ✧Surface device type mounting
- ✧Moisture sensitivity level 1
- ✧Matte Tin(Sn) lead finish with Nickel(Ni) underplate
- ✧Pb free version and RoHS compliant
- ✧Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code

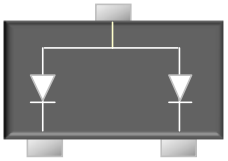
Mechanical Data

- ✧Case :SOT-23 small outline plastic package
- ✧Terminal: Matte tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✧High temperature soldering guaranteed: 260°C/10s
- ✧Weight : 0.008gram (approximately)
- ✧Marking Code : JS,JS2,JS3,JS4

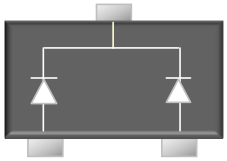
Pin Configuration



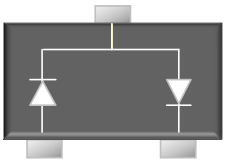
BAS21



BAS21A



BAS21C

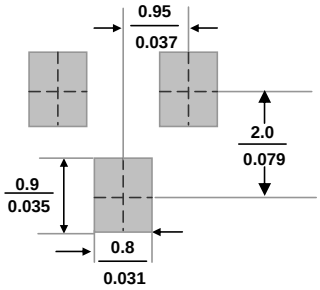


BAS21S

Ordering Information

Package	Part No.	Packing	Marking
SOT-23	BAS21 RF	3K / 7" Reel	JS
SOT-23	BAS21A RF	3K / 7" Reel	JS2
SOT-23	BAS21C RF	3K / 7" Reel	JS3
SOT-23	BAS21S RF	3K / 7" Reel	JS4
SOT-23	BAS21 RFG	3K / 7" Reel	JS
SOT-23	BAS21A RFG	3K / 7" Reel	JS2
SOT-23	BAS21C RFG	3K / 7" Reel	JS3
SOT-23	BAS21S RFG	3K / 7" Reel	JS4

Suggested PAD Layout



Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Type Number	Symbol	Value	Units
Power Dissipation	P_D	225	mW
Repetitive Peak Reverse Voltage	V_{RRM}	250	V
Repetitive Peak Forward Current	I_{FRM}	625	mA
Mean Forward Current	I_O	200	mA
Non-Repetitive Peak Forward Surge Current (Note 1)	I_{FSM}	1	A
Thermal Resistance (Junction to Ambient) (Note 2)	RθJA	500	°C/W
Junction and Storage Temperature Range	T_J, T_{STG}	-55 to + 150	°C

Notes:1. Test Condition : 8.3ms Single half Sine-Wave Superimposed on Rated Load (JEDEC Method) Pulse Width=1 μsec

Notes:2. Valid provided that electrodes are kept at ambient temperature

TAIWAN SEMICONDUCTOR

BAS21 / A / C / S
225mW SMD Switching Diode

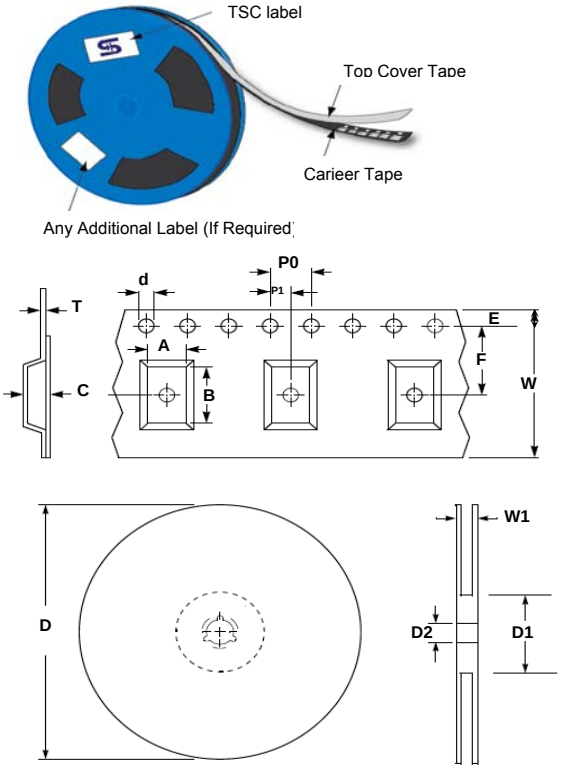
Small Signal Diode

Electrical Characteristics

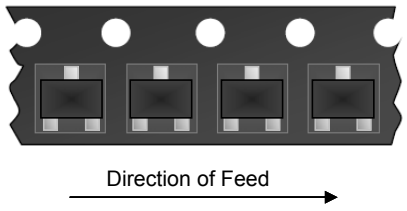
Electrical Characteristics

Type Number			Symbol	Min	Max	Units
Reverse Breakdown Voltage	I_R=	100μA	$V_{(BR)}$	250	-	V
Forward Voltage	I_F=	100mA	V_F	-	1.00	V
	I_F=	200mA		-	1.25	V
Reverse Leakage Current	V_R=	200V	I_R	-	0.1	μA
Junction Capacitance	V_R=1V,	f=1.0MHz	C_J	-	5	pF
Reverse Recovery Time I_F=I_R=10mA, R_L=100Ω, I_{RR}=1mA			Trr	-	50.0	ns

Tape & Reel specification



Item	Symbol	Dimension(mm)
Carrier width	A	3.15 ±0.10
Carrier length	B	2.77 ±0.10
Carrier depth	C	1.22 ±0.10
Sprocket hole	d	1.50 ± 0.10
Reel outside diameter	D	178 ± 1
Reel inner diameter	D1	55 Min
Feed hole width	D2	13.0 ± 0.20
Sprocke hole position	E	1.75 ±0.10
Punch hole position	F	3.50 ±0.05
Sprocke hole pitch	P0	4.00 ±0.10
Embossment center	P1	2.00 ±0.05
Overall tape thickness	T	0.229 ±0.013
Tape width	W	8.10 ±0.20
Reel width	W1	12.30 ±0.20



Small Signal Diode

Rating and Sharacteristic Curves

FIG 1 Typical Forward Characteristics

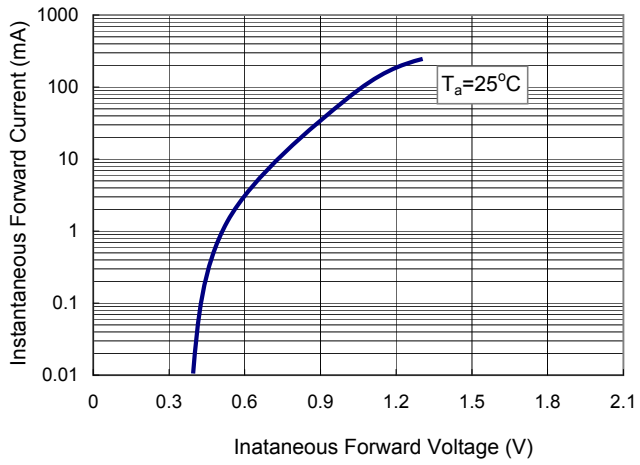


FIG 2 Reverse Current vs Junction Temperature

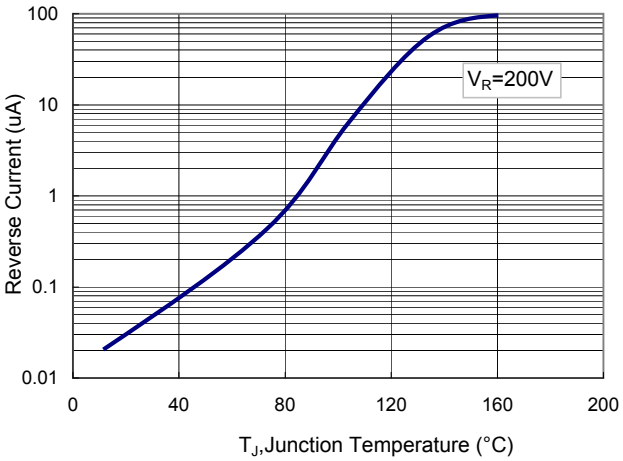


FIG 3 Admissible Power Dissipation Curve

