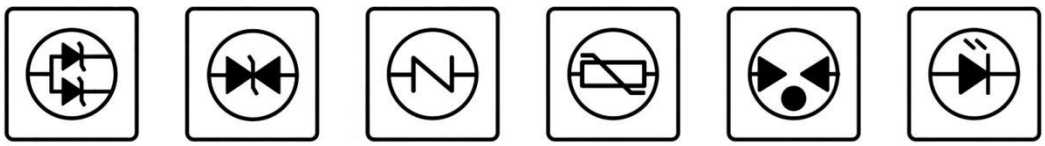
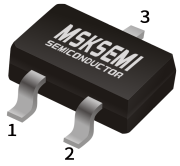
MSKSEMI
SEMICONDUCTOR



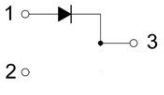
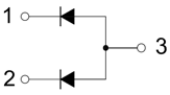
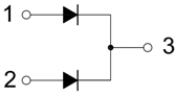
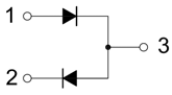
Product data sheet



SOT-23

FEATURES

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

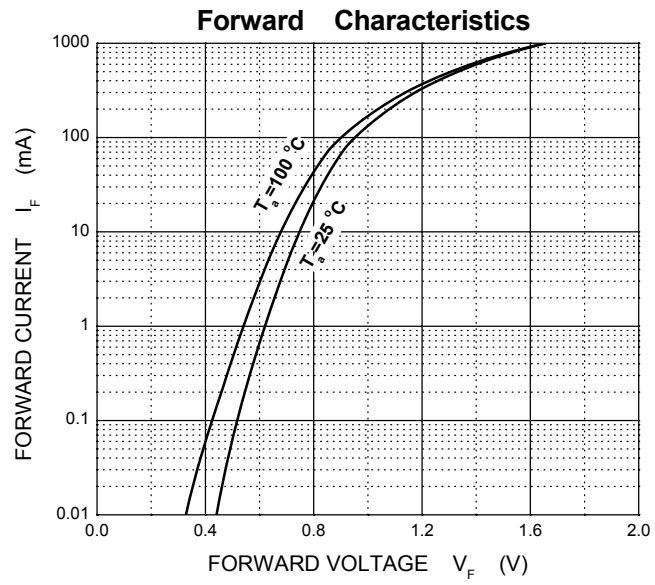
BAS21	BAS21A	BAS21C	BAS21S
			
MARKING: JS	MARKING:JS2	MARKING:JS3	MARKING:JS4
			

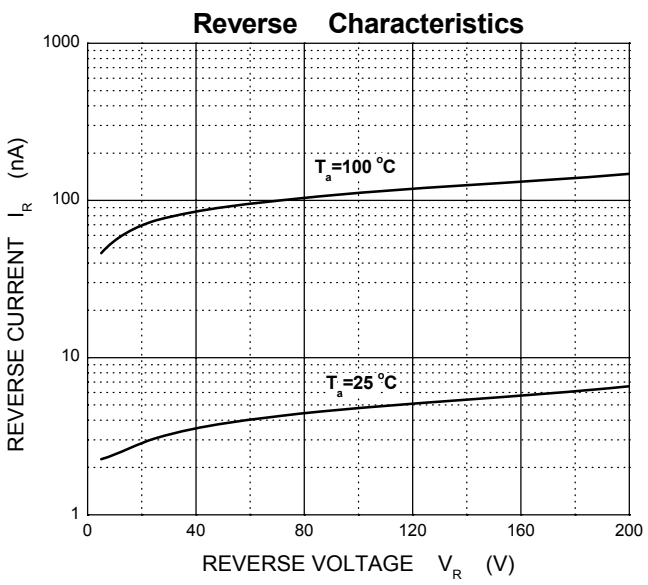
Maximum Ratings @Ta=25℃

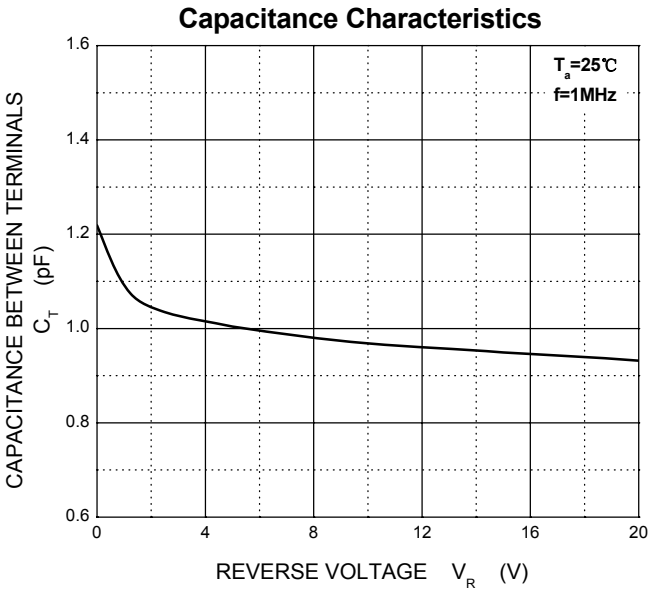
Parameter	Symbol	Limit	Unit
Repetitive peak reverse voltage Working peak reverse voltage DC blocking voltage	V_{RRM} V_{RWM} V_R	250	V
Forward continuous current	I_{FM}	400	mA
Average rectified output current	I_O	200	mA
Non-Repetitive Peak Forward Surge Current @t=8.3ms	I_{FSM}	2.5	A
Repetitive peak forward surge current	I_{FRM}	625	mA
Power dissipation	P_D	225	mW
Thermal resistance junction to ambient	$R_{\theta JA}$	555	℃/W
Junction temperature	T_J	150	℃
Storage temperature range	T_{STG}	-55~+150	℃

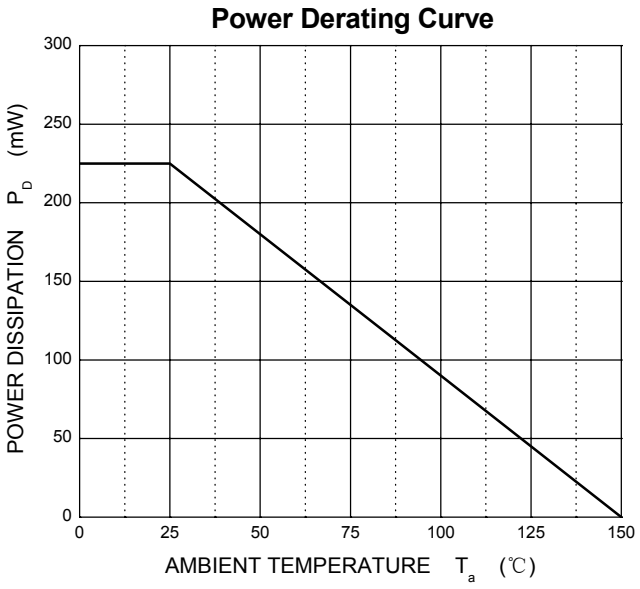
ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	I_R= 100μA	250		V
Reverse voltage leakage current	I_R	V_R= 200V		0.1	μA
Forward voltage	V_F	I_F=100mA I_F=200mA		1000 1250	mV
Diode 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,R_L=100Ω		50	ns

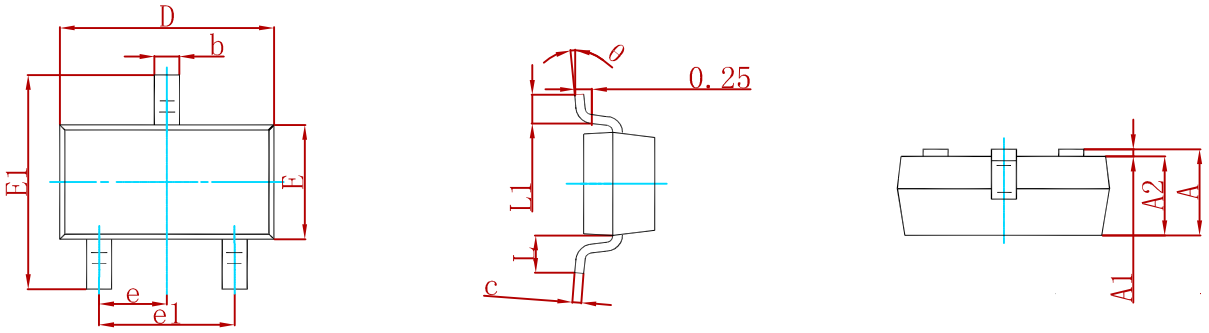

Forward Characteristics
FORWARD CURRENT I_F (mA)
1000
100
10
1
0.1
0.01
T_a=100 °C
T_a=25 °C
0.0
0.4
0.8
1.2
1.6
2.0
FORWARD VOLTAGE V_F (V)


Reverse Characteristics
REVERSE CURRENT I_R (nA)
1000
100
10
1
T_a=100 °C
T_a=25 °C
0
40
80
120
160
200
REVERSE VOLTAGE V_R (V)


Capacitance Characteristics
CAPACITANCE BETWEEN TERMINALS C_T (pF)
1.6
1.4
1.2
1.0
0.8
0.6
T_a=25℃
f=1MHz
0
4
8
12
16
20
REVERSE VOLTAGE V_R (V)

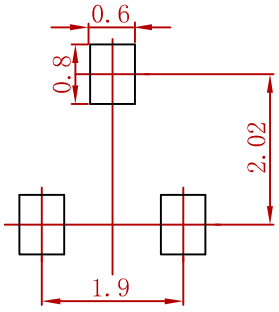

Power Derating Curve
POWER DISSIPATION P_D (mW)
300
250
200
150
100
50
0
0
25
50
75
100
125
150
AMBIENT TEMPERATURE T_a (℃)

PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
BAS21/A/C/S	SOT-23	3000

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