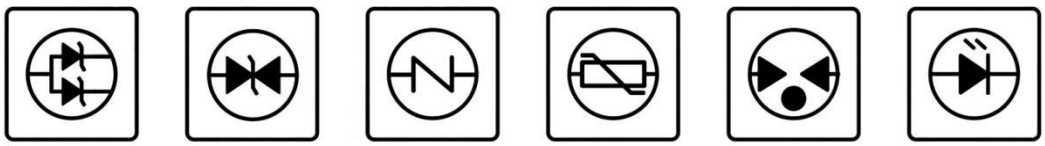
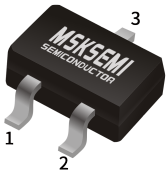
MSKSEMI
SEMICONDUCTOR



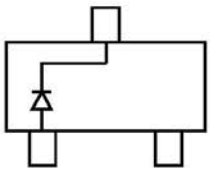
Product data sheet



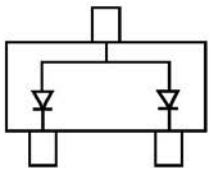
SOT-23

FEATURES

- Low Forward Voltage
- Fast Switching



BAS40



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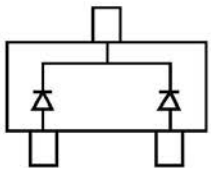
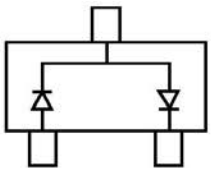
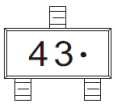
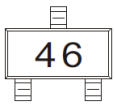
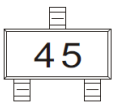


BAS40-05



BAS40-04

MARKING:

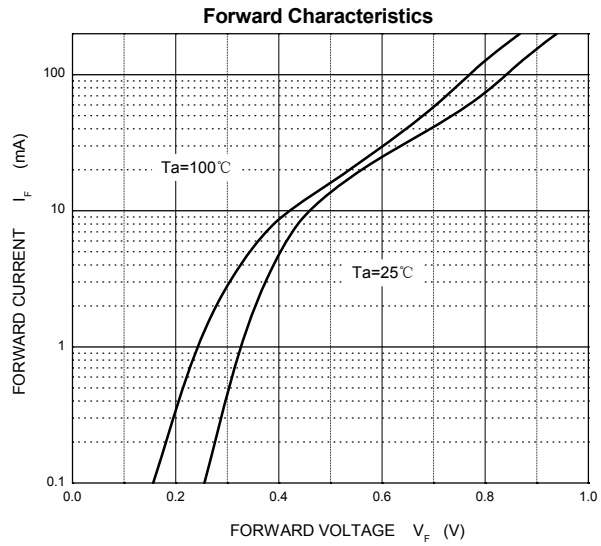
BAS40	BAS40-06	BAS40-05	BAS40-04
			

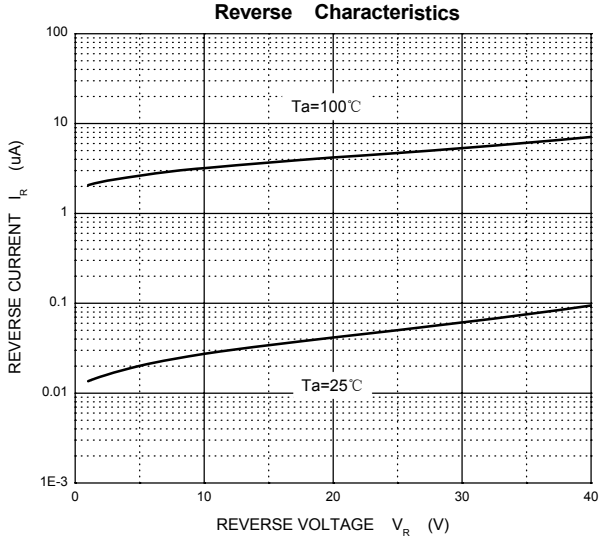
Maximum Ratings @Ta=25℃

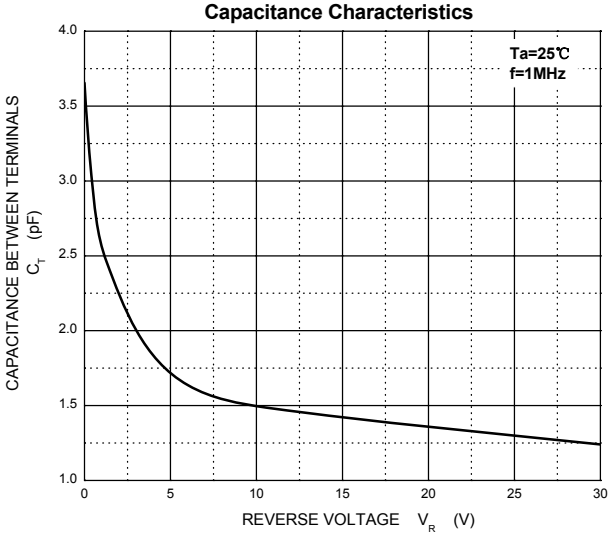
Parameter	Symbol	Limit	Unit
Peak Repetitive Peak Reverse Voltage **Working Peak Reverse Voltage** **DC Blocking Voltage**	V_{RRM} V_{RWM} V_R	40	V
Forward Continuous Current	I_{FM}	200	mA
Average Rectified Output Current	I_O	200	mA
Non-Repetitive Peak Forward Surge Current @ t = 8.3ms	I_{FSM}	0.6	A
Power Dissipation	P_D	200	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500	℃/W
Operating Junction Temperature	T_J	125	℃
Storage Temperature	T_{STG}	-55~+150	℃

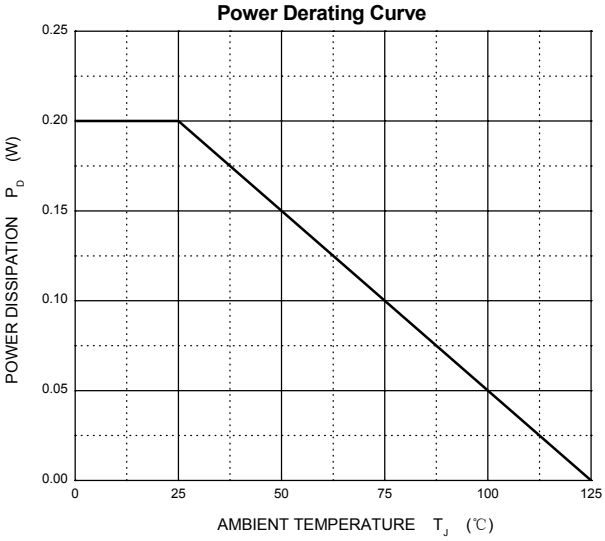
ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	I_R=10μA	40		V
Reverse voltage leakage current	I_R	V_R=30V		200	nA
Forward voltage	V_F	I_F=1mA I_F=40mA		380 1000	mV
Diode capacitance	C_D	V_R=0,f=1MHz		5	pF
Reverse recovery time	t_{rr}	I_{rr}=1mA, I_R=I_F=10mA R_L=100Ω		5	ns

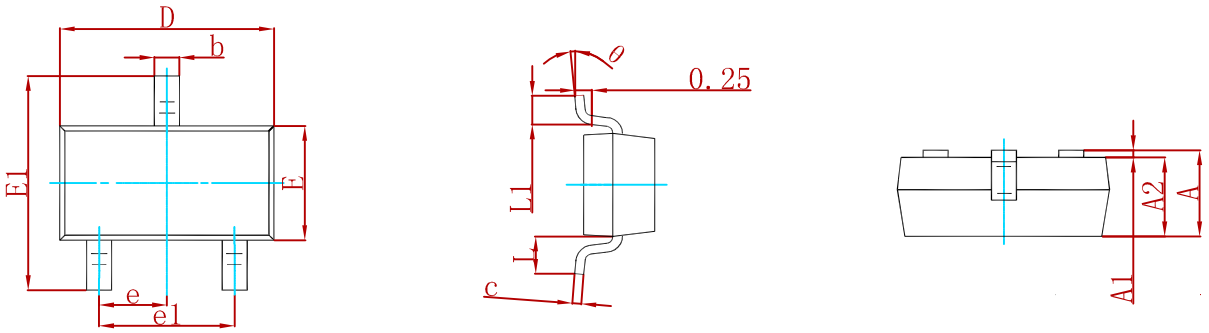

Forward Characteristics
FORWARD CURRENT I_F (mA)
100
10
1
0.1
Ta=100℃
Ta=25℃
0.0
0.2
0.4
0.6
0.8
1.0
FORWARD VOLTAGE V_F (V)


Reverse Characteristics
REVERSE CURRENT I_R (uA)
100
10
1
0.1
0.01
1E-3
Ta=100℃
Ta=25℃
0
10
20
30
40
REVERSE VOLTAGE V_R (V)


Capacitance Characteristics
CAPACITANCE BETWEEN TERMINALS C_T (pF)
4.0
3.5
3.0
2.5
2.0
1.5
1.0
Ta=25℃
f=1MHz
0
5
10
15
20
25
30
REVERSE VOLTAGE V_R (V)

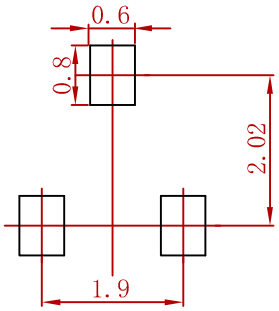

Power Derating Curve
POWER DISSIPATION P_D (W)
0.25
0.20
0.15
0.10
0.05
0.00
0
25
50
75
100
125
AMBIENT TEMPERATURE T_J (℃)

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
BAS40/-04/-05/-06	SOT-23	3000

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