

Small Signal Product

225mW SMD Switching Diode

FEATURES

- Low turn-on voltage
- Fast switching
- PN junction guard ring for transient and ESD protection



MECHANICAL DATA

- Case: SOT- 23, molded plastic
- Terminal: Matte tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- High temperature soldering guaranteed: 260°C/10s
- Weight: 0.008grams (approximately)

SOT-23

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Peak Repetitive Reverse Voltage	V _{RRM}	70	V
Working Peak Reverse Voltage	V _{RWM}		
DC Blocking Voltage	V _R		
RMS Reverse Voltage	V _{R(RMS)}	49	V
Forward Continuous Current (Note 1)	I _F	70	mA
Non-Repetitive Peak Forward Surge Current @ t ≤ 1.0 s	I _{FSM}	100	mA
Power Dissipation (Note 1)	P _D	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	R _{θJA}	625	K/W
Operating Junction Temperature	T _J	-55 to + 125	°C
Storage Temperature Range	T _{STG}	-55 to + 150	°C

PARAMETER	SYMBOL	MIN	MAX	UNIT
Reverse breakdown voltage I _R = 10 μA	V _(BR)	70	-	V
Forward voltage tp=300μs , I _F =1.0mA tp < 300μs , I _F =15mA	V _F	-	410	mV
		-	1000	
Reverse leakage current tp < 300μs , V _R =50V	I _R	-	100.00	nA
Junction capacitance V _R = 0 V, f = 1 MHz	C _J	-	2	pF
Reverse recovery time I _F = I _R = 10 mA, I _{RR} = 100 Ω, I _{RR} = 1 mA	t _{rr}	-	5	ns

Notes: 1. Valid provided that terminals are kept at ambient temperature

2. Test period < 3000 μs

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RATINGS AND CHARACTERISTICS CURVES

($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Fig.1 Power Derating Curve

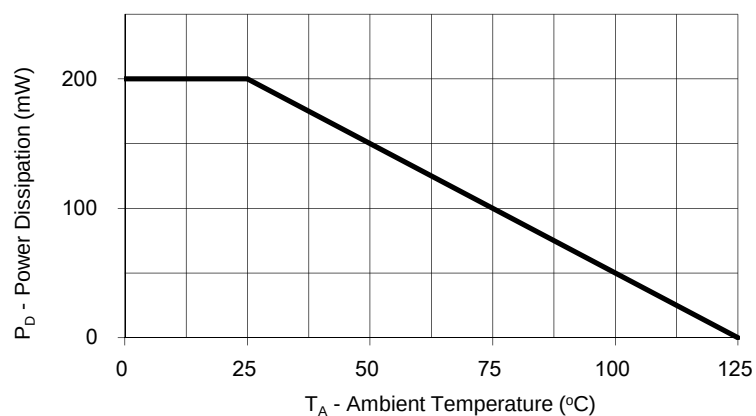


Fig. 2 Maximum Non-Repetitive Peak Forward Surge Current Per Leg

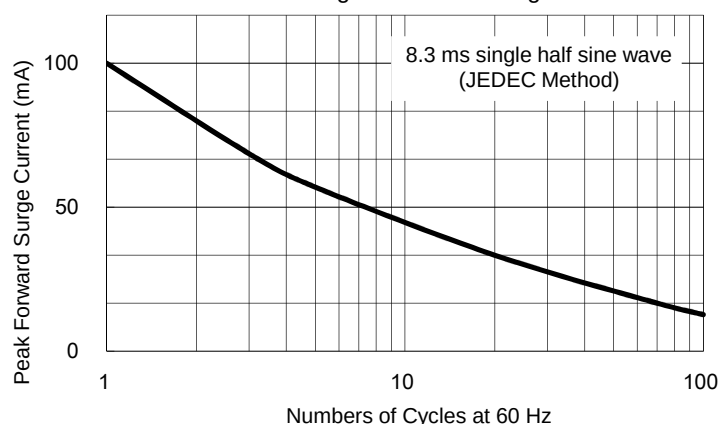


Fig. 3 Typical Forward Characteristics

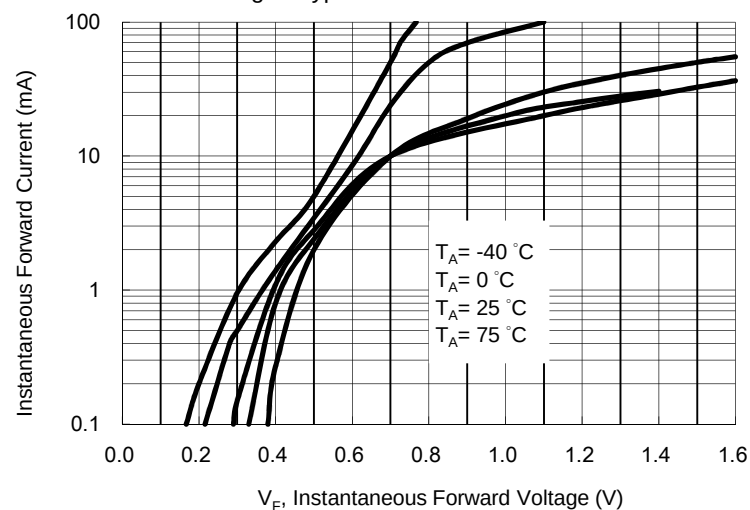


Fig. 4 Typical Reverse Characteristics

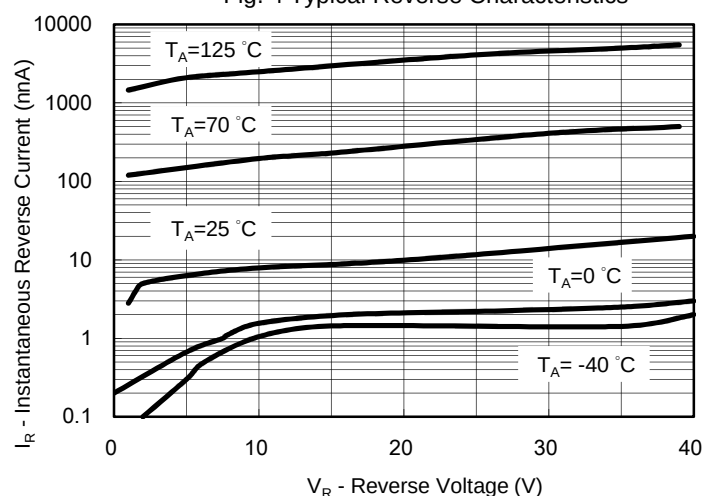


Fig. 5 Typical Total Capacitance VS. Reverse Voltage

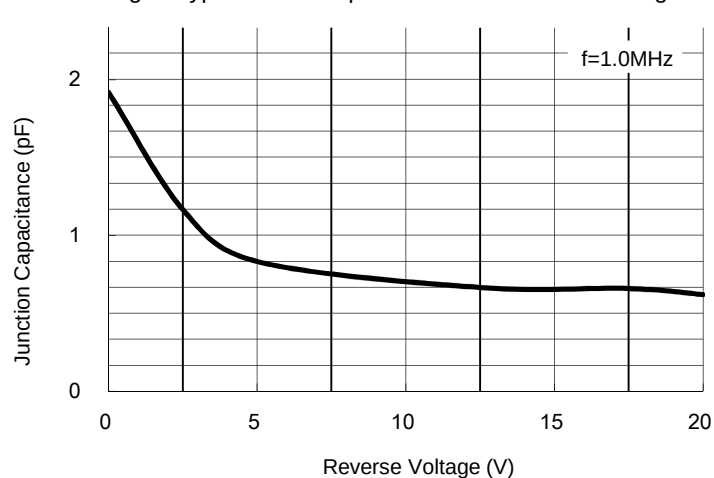
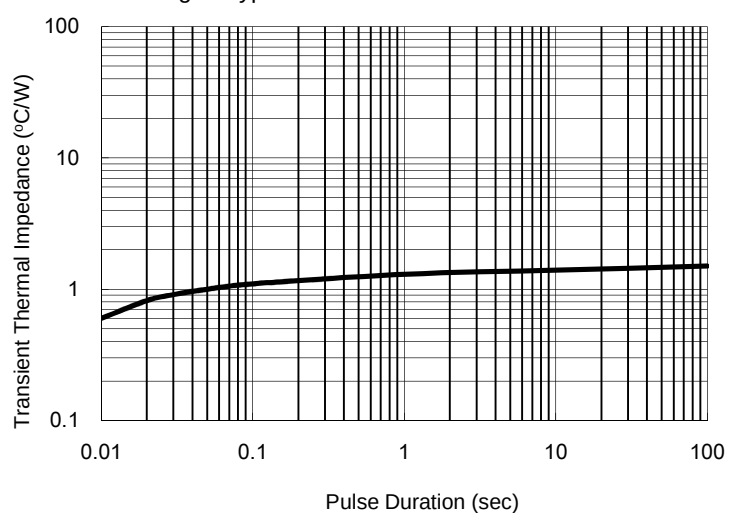


Fig. 6 Typical Transient Thermal Characteristics



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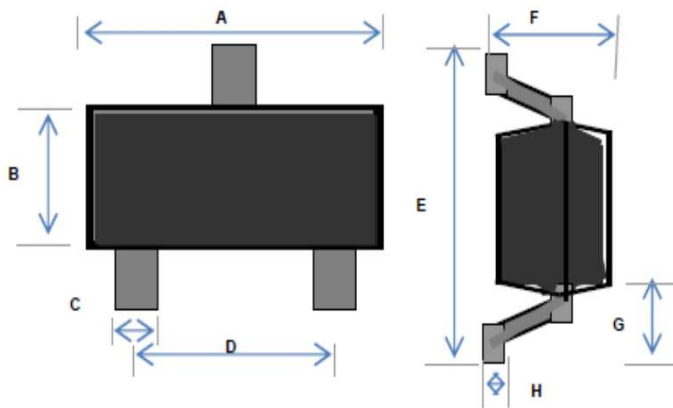
ORDERING INFORMATION						
PART NO.	MANUFACTURE CODE	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING	MARKING
BAS70	(Note)	RF	G	SOT-23	3K / 7" Reel	73
BAS70-04		RF	G	SOT-23	3K / 7" Reel	74
BAS70-05		RF	G	SOT-23	3K / 7" Reel	75
BAS70-06		RF	G	SOT-23	3K / 7" Reel	76

Note: Manufacture special control, if empty means no special control requirement.

EXAMPLE					
PREFERRED P/N	PART NO.	MANUFACTURE CODE	PACKING CODE	GREEN COMPOUND CODE	DESCRIPTION
BAS70 RFG	BAS70		RF	G	Green compound
BAS70-B0 RFG	BAS70	B0	RF	G	Green compound
BAS70-D0 RFG	BAS70	D0	RF	G	Green compound

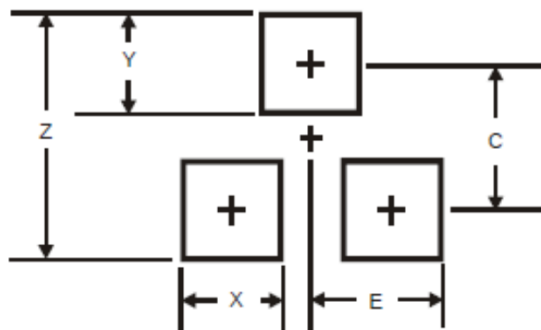
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PACKAGE OUTLINE DIMENSIONS



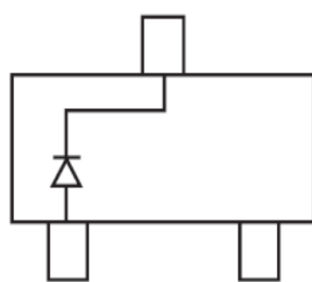
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.70	3.10	0.106	0.122
B	1.10	1.50	0.043	0.059
C	0.30	0.51	0.012	0.020
D	1.78	2.04	0.070	0.080
E	2.10	2.64	0.083	0.104
F	0.89	1.30	0.035	0.051
G	0.55 REF		0.022 REF	
H	0.1 REF		0.004 REF	

SUGGEST PAD LAYOUT

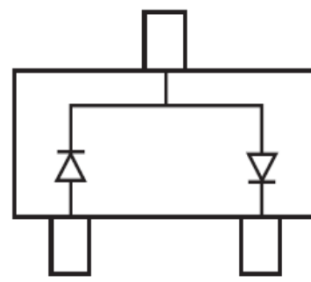


DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
Z	2.9	0.114
X	0.8	0.031
Y	0.9	0.035
C	2.0	0.079
E	1.35	0.053

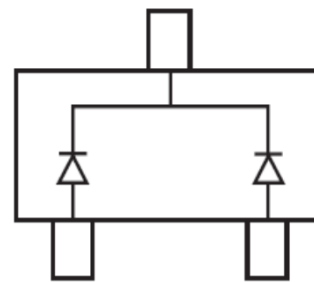
Pin Configuration



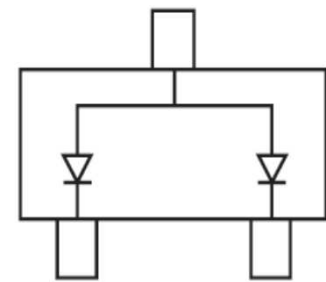
BAS70



BAS70-04



BAS70-05



BAS70-06

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