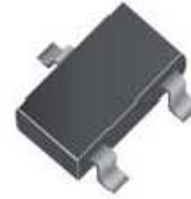


Small Signal Product

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 ($T_A=25^\circ\text{C}$ 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 @ $t \leq 1.0$ s	I_{FSM}	100	mA
Power Dissipation (Note 1)	P_D	200	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	625	K/W
Operating Junction Temperature	T_J	-55 to + 125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to + 150	$^\circ\text{C}$

PARAMETER	SYMBOL	MIN	MAX	UNIT
Reverse breakdown voltage $I_R = 10 \mu\text{A}$	$V_{(BR)}$	70	-	V
Forward voltage $t_p=300\mu\text{s}, I_F=1.0\text{mA}$ $t_p < 300\mu\text{s}, I_F=15\text{mA}$	V_F	-	410	mV
		-	1000	
Reverse leakage current $t_p < 300\mu\text{s}, V_R=50\text{V}$	I_R	-	100.00	nA
Junction capacitance $V_R = 0 \text{ V}, f = 1 \text{ MHz}$	C_J	-	2	pF
Reverse recovery time $I_F = I_R = 10 \text{ mA}, I_{RR} = 100 \Omega, I_{RR} = 1 \text{ mA}$	t_{rr}	-	5	ns

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

 2. Test period $< 3000 \mu\text{s}$

Small Signal Product

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

Fig.1 Power Derating Curve

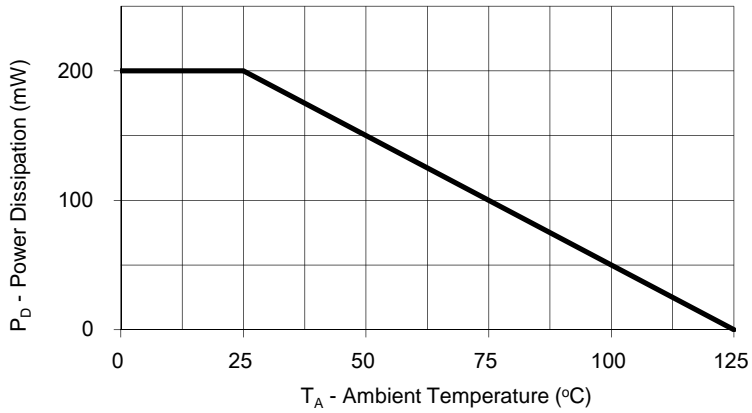


Fig. 2 Maximum Non-Repetitive Peak Forward Surge Current Per Leg

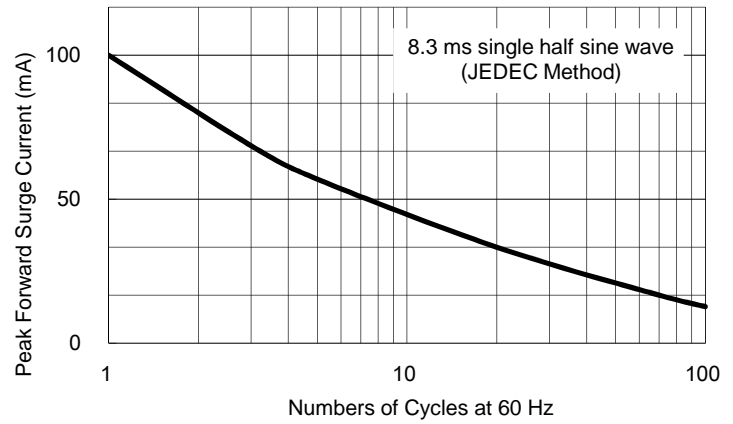


Fig. 3 Typical Forward Characteristics

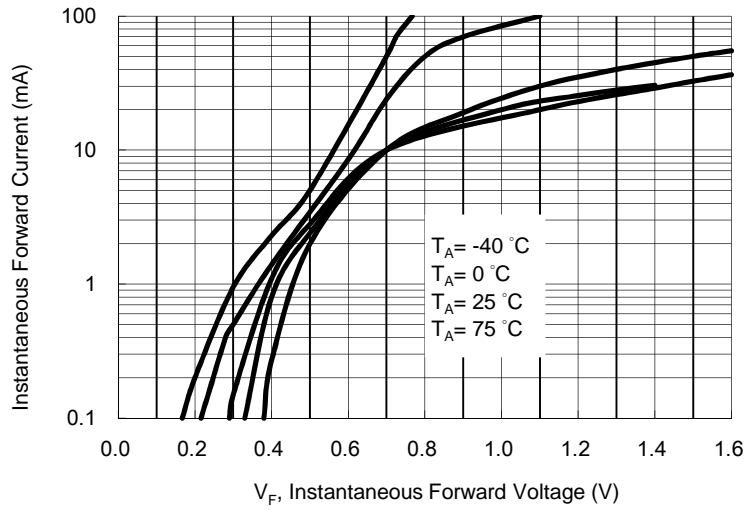


Fig. 4 Typical Reverse Characteristics

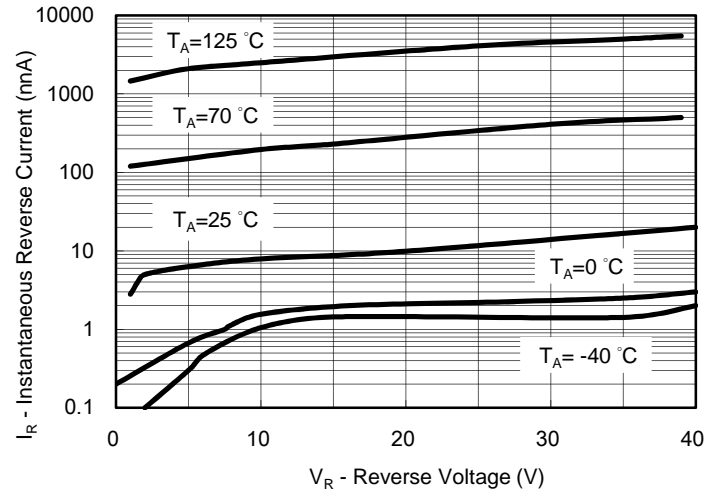


Fig. 5 Typical Total Capacitance VS. Reverse Voltage

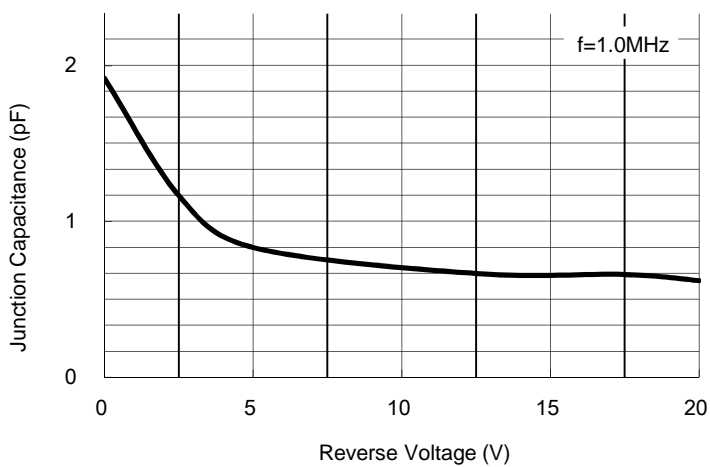
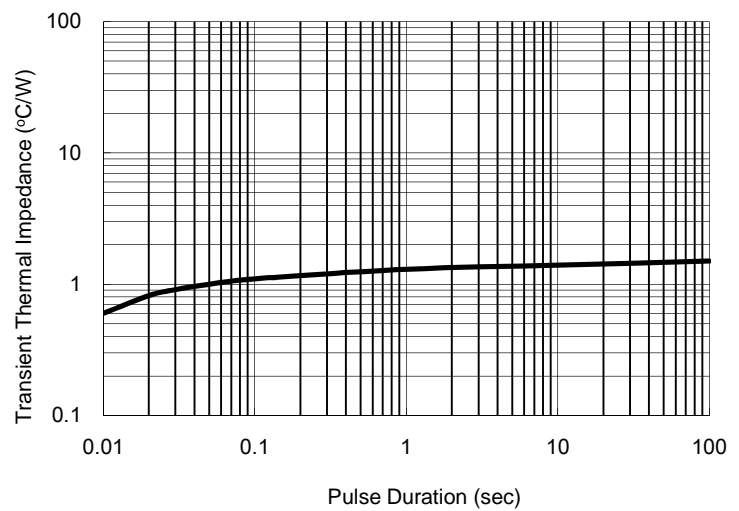


Fig. 6 Typical Transient Thermal Characteristics



Small Signal Product

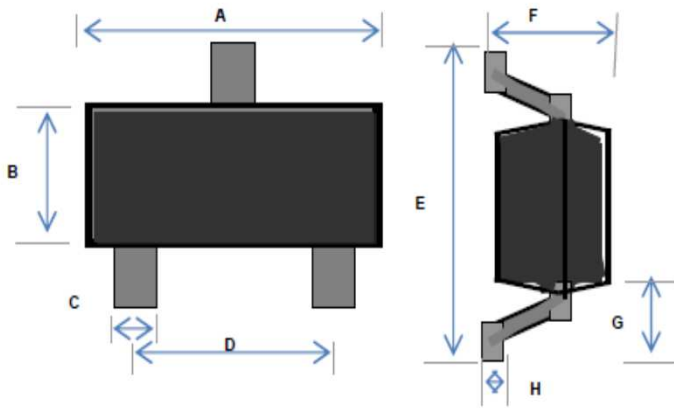
ORDERING INFORMATION						
PART NO.	MANUFACTURE CODE	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING	MARKING
BAS70	(Note)	RF	G	SOT-23	3K / 7" Reel	73
BAS70-04		RF	G	SOT-23	3K / 7" Reel	74
BAS70-05		RF	G	SOT-23	3K / 7" Reel	75
BAS70-06		RF	G	SOT-23	3K / 7" Reel	76

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

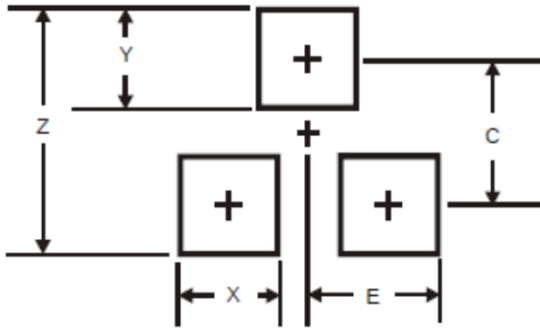
Small Signal Product

PACKAGE OUTLINE DIMENSIONS



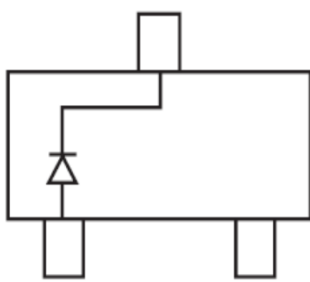
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.70	3.10	0.106	0.122
B	1.10	1.50	0.043	0.059
C	0.30	0.51	0.012	0.020
D	1.78	2.04	0.070	0.080
E	2.10	2.64	0.083	0.104
F	0.89	1.30	0.035	0.051
G	0.55 REF		0.022 REF	
H	0.1 REF		0.004 REF	

SUGGEST PAD LAYOUT

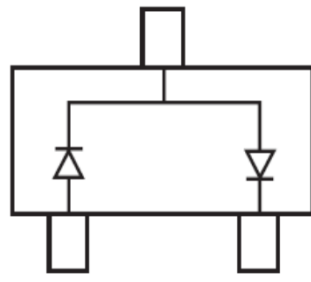


DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
Z	2.9	0.114
X	0.8	0.031
Y	0.9	0.035
C	2.0	0.079
E	1.35	0.053

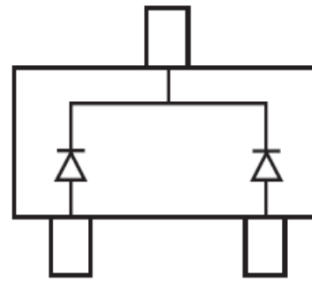
Pin Configuration



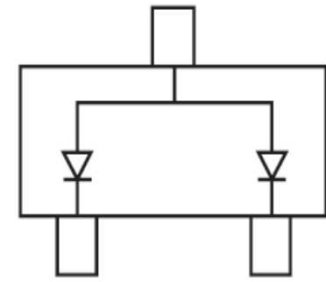
BAS70



BAS70-04



BAS70-05



BAS70-06