

Small Signal Product

225mW SMD Switching Diode
FEATURES

- Fast switching speed
- Surface mount device type
- Moisture sensitivity level 1
- Matte Tin(Sn) lead finish with Nickel(Ni) underplate
- Pb free 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: 0.008grams (approximately)

SOT-23

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Power dissipation	P_D	225	mW
Peak repetitive reverse voltage	V_{RRM}	70	V
Repetitive peak forward current	I_{FRM}	450	mA
Mean forward current	I_O	200	mA
Non-repetitive peak forward surge current Pulse Width=1 sec Pulse Width=1 μsec	I_{FSM}	0.5	A
		2	
Thermal resistance form junction to ambient	$R_{\theta JA}$	556	$^{\circ}\text{C/W}$
Junction and storage temperature range	T_J, T_{STG}	- 55 to + 150	$^{\circ}\text{C}$

PARAMETER	SYMBOL	MIN	MAX	UNIT
Reverse breakdown voltage $I_R = 100 \mu\text{A}$	$V_{(BR)}$	70	-	V
Forward voltage $I_F = 50 \text{ mA}$ $I_F = 150 \text{ mA}$	V_F	-	1.00	V
		-	1.25	
Reverse leakage current $V_R = 70 \text{ V}$	I_R	-	2.50	μA
Junction capacitance $V_R = 0 \text{ V},$ $f = 1 \text{ MHz}$	C_J	-	2	pF
		-	1.5	pF
Reverse recovery time $I_F = I_R = 10 \text{ mA}, R_L = 100 \Omega, I_{RR} = 1 \text{ mA}$	t_{rr}	-	6	ns

Small Signal Product

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

Fig. 1 Typical Forward Characteristics

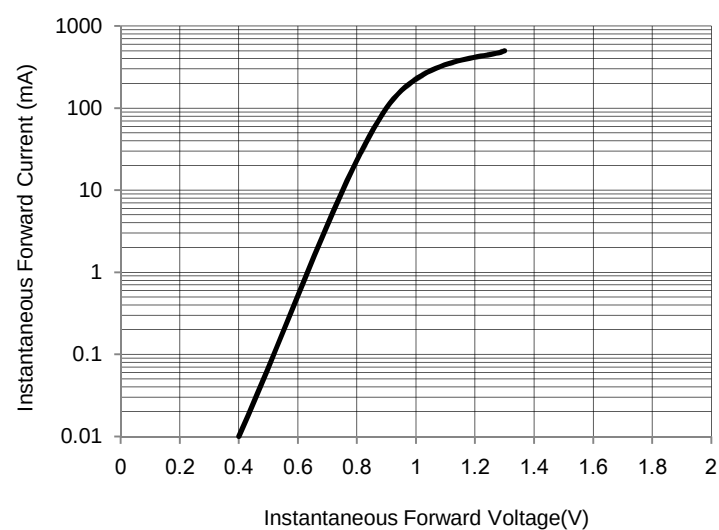


Fig. 2 Leakage Current VS. Junction Temperature

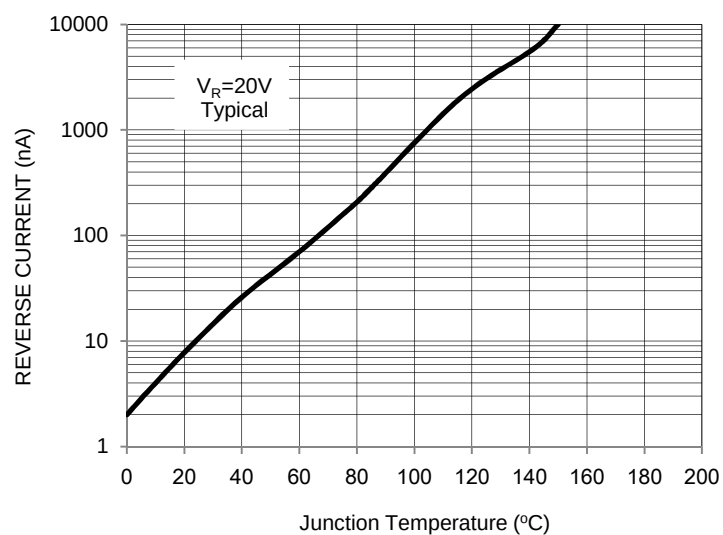
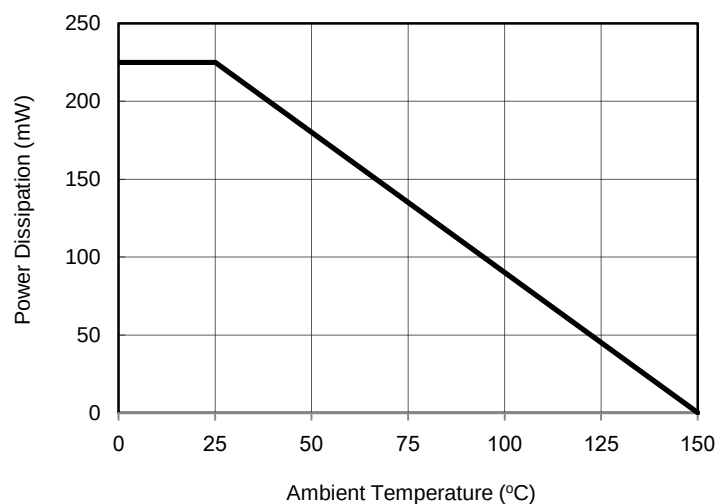


Fig. 3 Power Dissipation Derating Curve



Small Signal Product

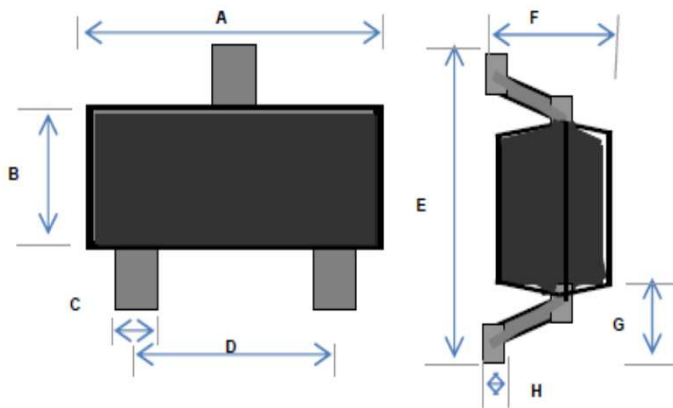
ORDERING INFORMATION						
PART NO.	MANUFACTURE CODE	PACKING CODE	GREEN COMPOUND CODE	PACKAGE	PACKING	MARKING
BAW56	(Note)	RF		SOT-23	3K / 7" Reel	A1
BAV70		RF		SOT-23	3K / 7" Reel	A4
BAV99		RF		SOT-23	3K / 7" Reel	A7
BAW56		RF	G	SOT-23	3K / 7" Reel	A1
BAV70		RF	G	SOT-23	3K / 7" Reel	A4
BAV99		RF	G	SOT-23	3K / 7" Reel	A7

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
BAV99 RF	BAV99		RF		
BAV99-B0 RF	BAV99	B0	RF		
BAV99-D0 RF	BAV99	D0	RF		
BAV99 RFG	BAV99		RF	G	Green compound
BAV99-B0 RFG	BAV99	B0	RF	G	Green compound
BAV99-D0 RFG	BAV99	D0	RF	G	Green compound

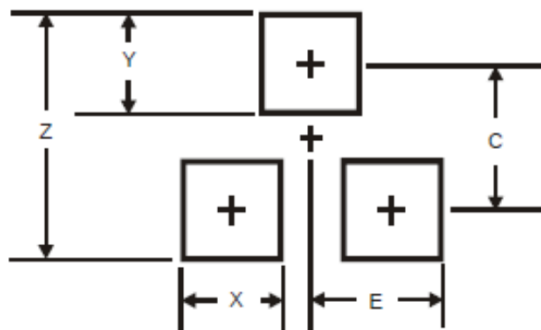
Small Signal Product

PACKAGE OUTLINE DIMENSIONS



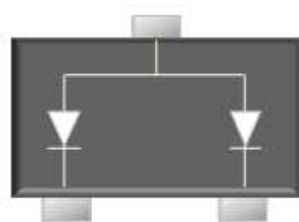
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.70	3.10	0.106	0.122
B	1.10	1.50	0.043	0.059
C	0.30	0.51	0.012	0.020
D	1.78	2.04	0.070	0.080
E	2.10	2.64	0.083	0.104
F	0.89	1.30	0.035	0.051
G	0.55 REF		0.022 REF	
H	0.1 REF		0.004 REF	

SUGGEST PAD LAYOUT

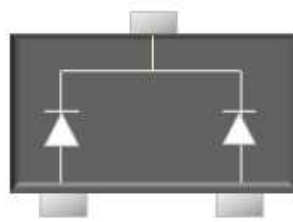


DIM.	Unit (mm)	Unit (inch)
	Typ.	Typ.
Z	2.9	0.114
X	0.8	0.031
Y	0.9	0.035
C	2.0	0.079
E	1.35	0.053

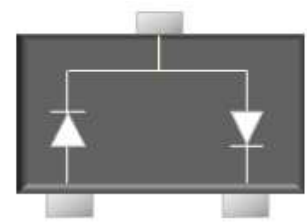
Pin Configuration



BAW56



BAV70



BAV99