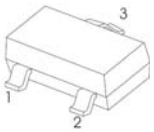
BAW56/BAV70/BAV99
DUAL SWITCHING DIODE

V_R	100 V
I_D	0.2 A

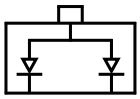
FEATURES

- Fast switching speed.
- For general purpose switching applications.
- High conductance.

SOT-23



BAW56:A1



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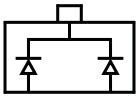

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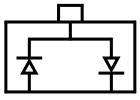


MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

MAXIMUM RATINGS (Ta=25℃ unless otherwise noted)

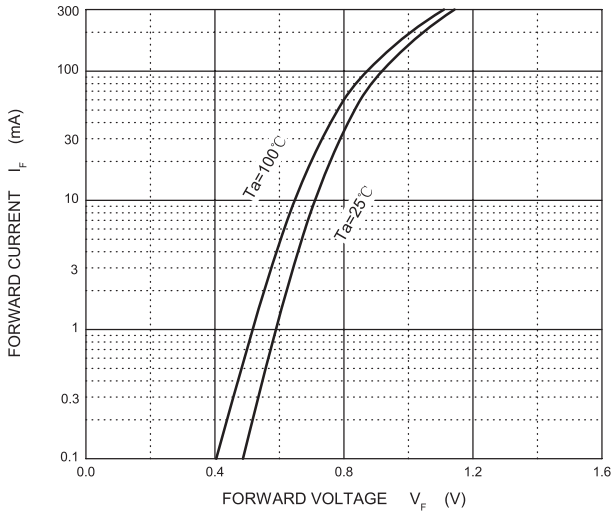
Symbol	Parameter	Vaule	Unit
V_R	Reverse Voltage	100	V
I_F	Forward Current	0.2	A
$I_{FM(SURGE)}$	Peak Forward Surge Current	0.5	A
P_D	Total Device Dissipation	0.225	W
$R_{\theta JA}$	Thermal Resistance Form Junction to Ambient	556	°C/W
T_J	Junction Temperature	150	°C
T_{STG}	Storage Temperature	-55~+150	°C

ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.)

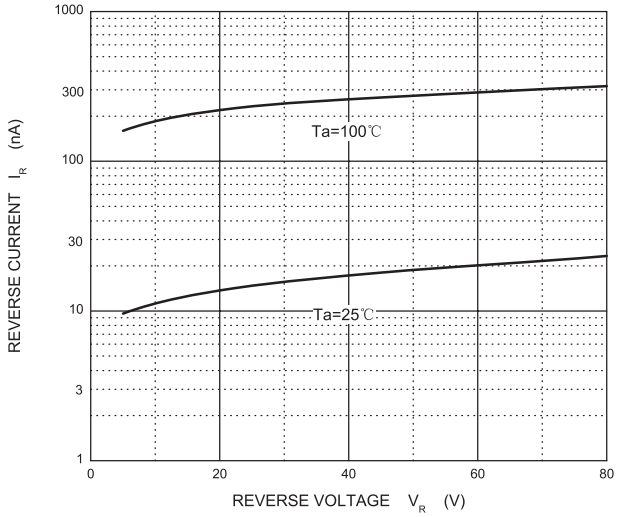
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Units
Reverse breakdown voltage	$V_{(BR)}$	I_R=100uA	100			V
Forward voltage	V_{F2}	I_F=1mA			0.715	V
	V_{F3}	I_F=10mA			0.855	V
	V_{F4}	I_F=50mA			1	V
	V_{F5}	I_F=150mA			1.25	V
Reverse current	I_R	V_R=70V			2.5	uA
Diode capacitance	C_T	V_R=1V,f=1MHz			1.5	pF
Reverse recovery time	t_{rr}	I_F=I_R=10mA, I_{RR}=0.1xI_R,R_L=100Ω			6	nS

RATING AND CHARACTERISTIC CURVES

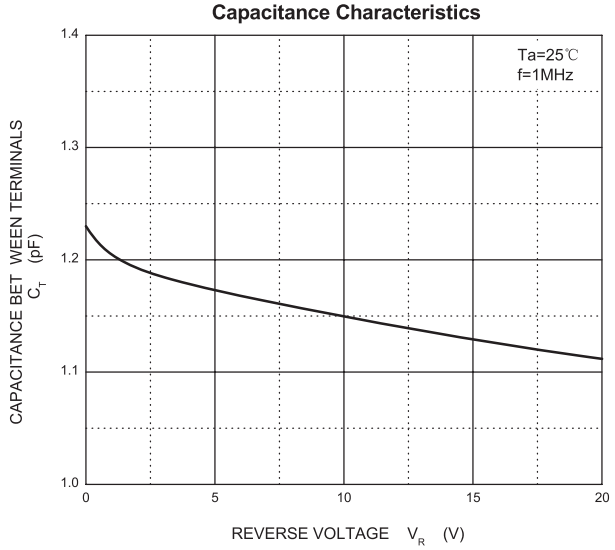
Forward Characteristics



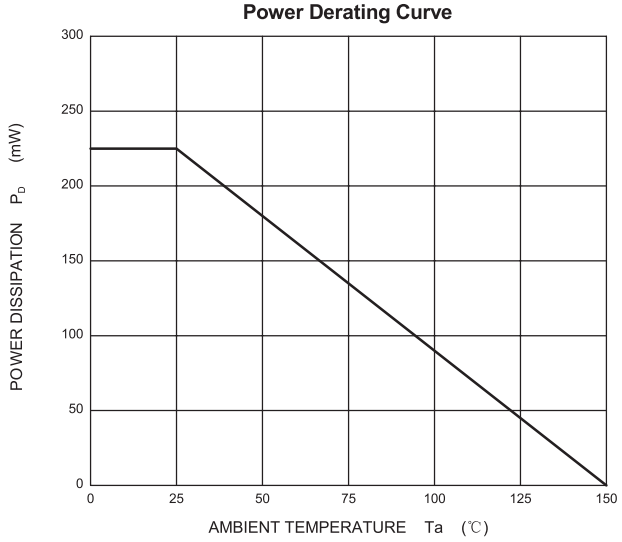
Reverse Characteristics



Capacitance Characteristics



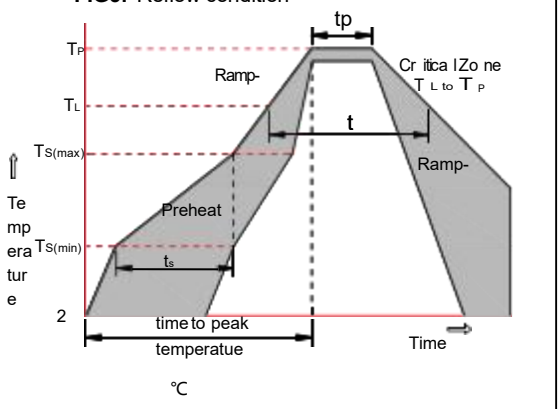
Power Derating Curve



Soldering parameters

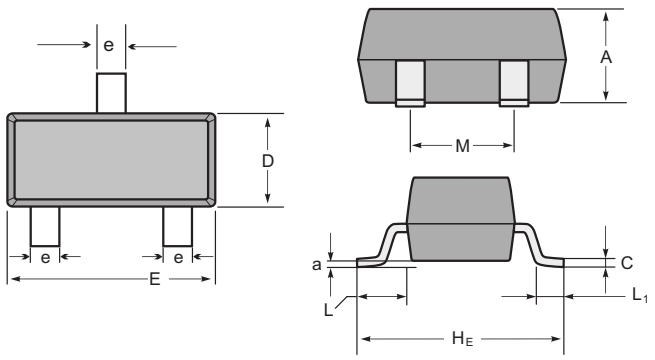
Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

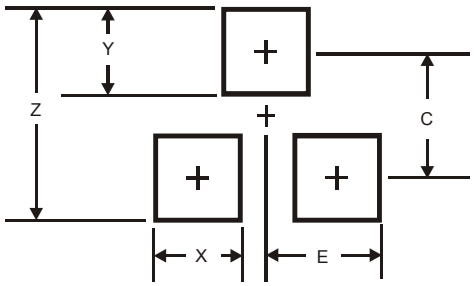
FIG5: Reflow condition



Package Dimensions & Suggested Pad Layout

SOT23





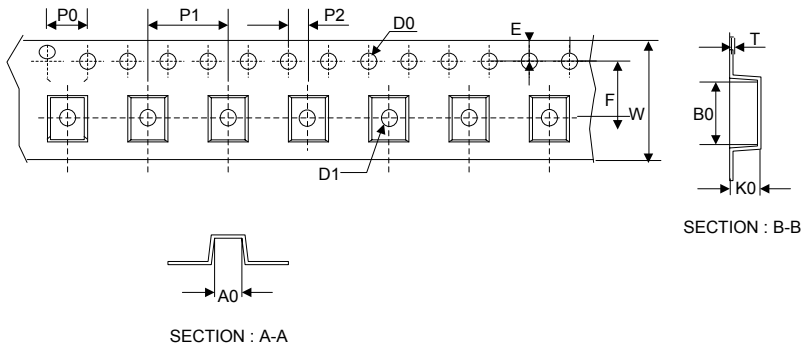
SOT-23 mechanical data

UNIT		A	C	D	E	H_E	e	M	L	L_1	a
mm	max	1.1	0.15	1.4	3.0	2.6	0.5	1.95	0.55 (ref)	0.36 (ref)	0.0
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7			0.15
mil	max	43	6	55	118	102	20	77	22 (ref)	14 (ref)	0.0
	min	35	3	47	110	87	12	67			6

Dimensions	SOT23
Z	2.9
X	0.8
Y	0.9
C	2.0
E	1.35

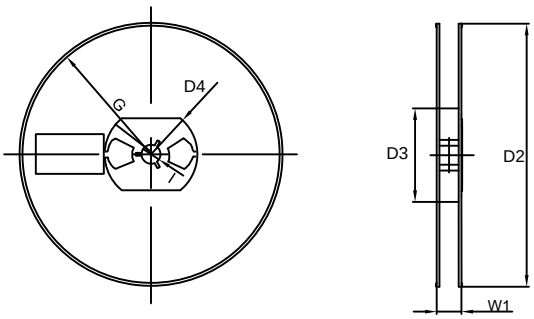
Tape & rell specification

Tape



Symbol	Dimension (mm)
P0	4.00±0.10
P1	4.00±0.10
P2	2.00±0.10
D0	1.55±0.10
D1	1.05±0.10
E	1.55±0.10
F	3.60±0.10
W	8.00±0.10
A0	3.80±0.20
B0	3.25±0.20
K0	1.45±0.10
T	0.25±0.05

7” Reel



D2	178.0±3.0
D3	55Min.
D4	R24.0±3.0
G	R82.0±3.0
I	13.0±2.0
W1	11.0±3.0

Quantity: 3000PCS