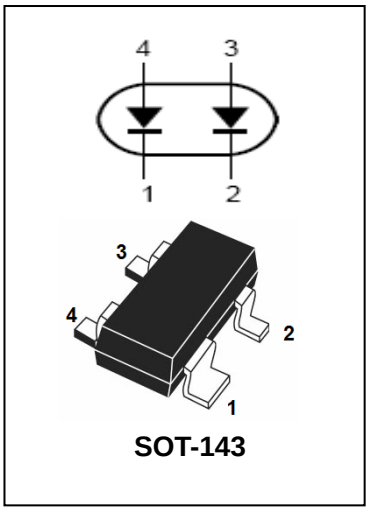
High Voltage Double Diode **BAW101**

FEATURES

- High Switching Speed:Max.50ns.
- High Continuous Reverse Voltage:300V.
- Electrically Insulated Diodes.

Pb
Lead-free



SOT-143

APPLICATIONS

- High voltage switching.
- Automotive.
- Communication.

ORDERING INFORMATION

Type No.	Marking	Package Code
BAW101	AB	SOT-143

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Characteristic	**Symbol**	**Limits**	**Unit**
Repetitive Peak Reverse Voltage Series connection	V_{RRM}	300 600	V
Continuous Reverse Voltage Series connection	V_R	300 600	V
Continuous Forward Current single diodes(note1) double diodes(note1)	I_F	 250 140	mA
Repetitive Peak Forward Current	I_{FRM}	625	mA
Non-repetitive Peak Forward Current t=1μs	I_{FSM}	4.5	A
Power Dissipation(note1)	P_d	350	mW
Junction Temperature	T_j	-65 to +150	℃
Storage Temperature	T_{STG}	150	℃
Operating Ambient Temperature	T_{amb}	-65 to +150	℃

Note:1Device mounted on an FR4 Printed-circuit board,cathode-lead mountiong pad=1cm^2.

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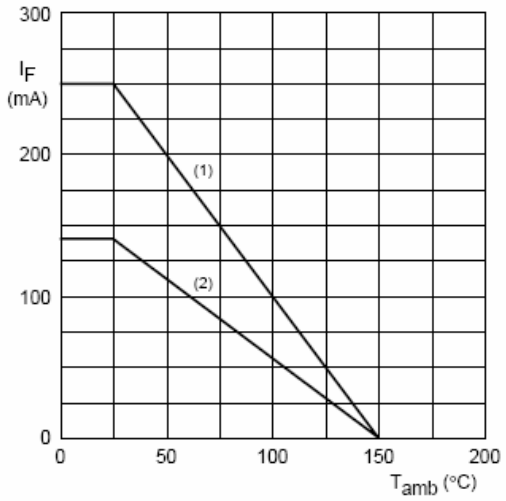
ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Characteristic	Symbol	Min	Typ	MAX	UNIT	Test Condition
Reverse Breakdown Voltage	$V_{(BR)R}$	300	-	-	V	I_R= 100μA
Forward Voltage	V_F	-	-	1.1	V	I_F=100mANote1
Reverse Leakage Current	I_R	-	-	150 50	nA μA	V_R=250V V_R=250V,T_{amb}=150℃
Diodes Capacitance	C_d	-	-	2	pF	V_R=0V,f=1.0MHz
Reverse Recovery Time	t_{rr}	-	-	50	ns	I_F=I_R=30mA,R_L=100Ω I_{rr}=0.1*I_R

Note:1.Pulse tese:pulse width=300μs;δ=0.02

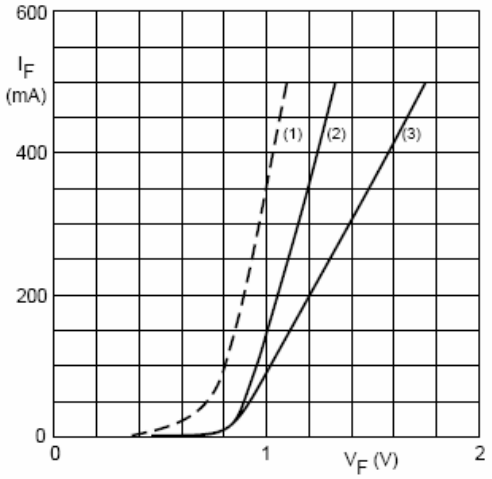
TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified



(1) Single diode loaded. (2) Double diode loaded.

Device mounted on an FR4 printed-circuit board.
Cathode-lead mounting pad = 1 cm^2.

Fig. 1 Maximum permissible continuous forward current as a function of ambient temperature.



(1) T_j = 150 °C; typical values.
(2) T_j = 25 °C; typical values.
(3) T_j = 25 °C; maximum values.

Fig. 2 Forward current as a function of forward voltage.

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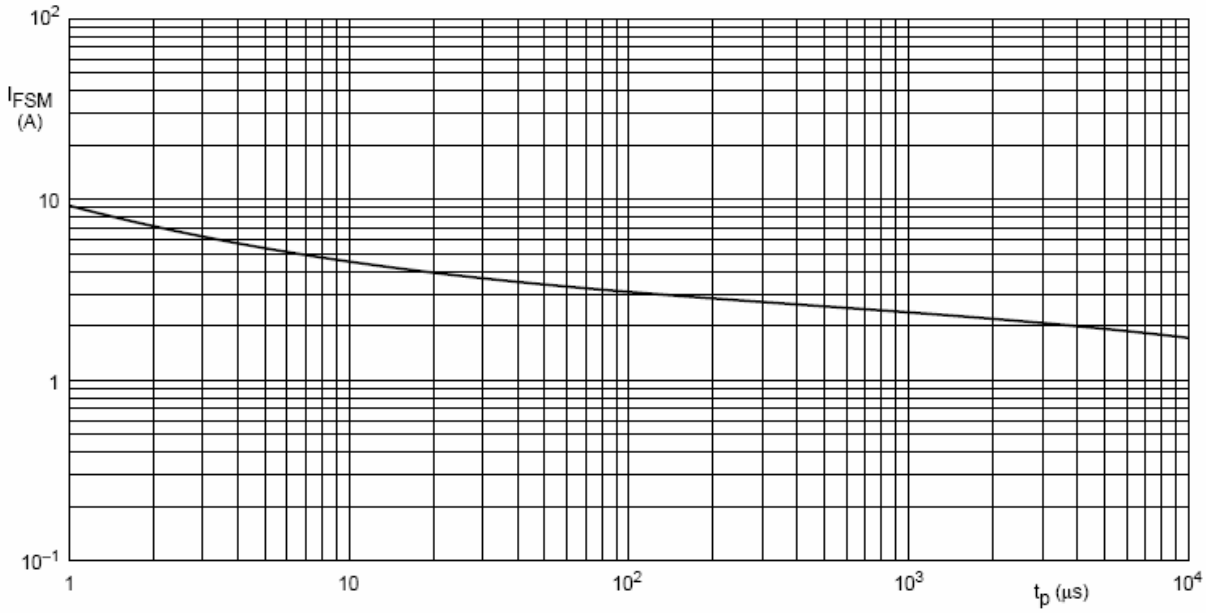
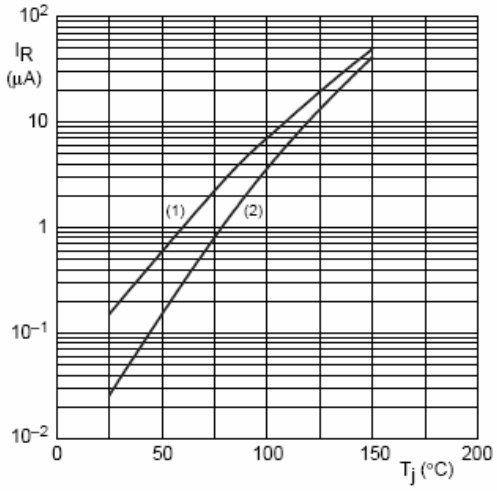


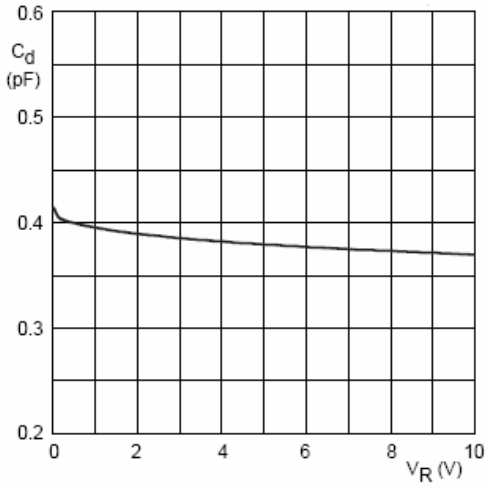
Based on square wave currents.
T_j = 25 °C prior to surge.

Fig. 3 Maximum permissible non-repetitive peak forward current as a function of pulse duration.



(1) $V_R = V_{RMAX}$: maximum values.
(2) $V_R = V_{RMAX}$: typical values.

Fig. 4 Reverse current as a function of junction temperature.



f = 1 MHz; T_j = 25 °C.

Fig. 5 Diode capacitance as a function of reverse voltage; typical values.

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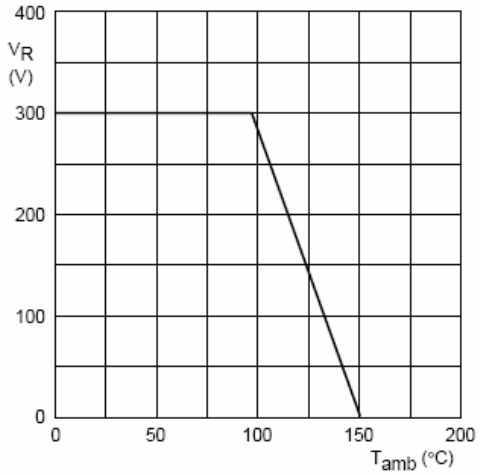
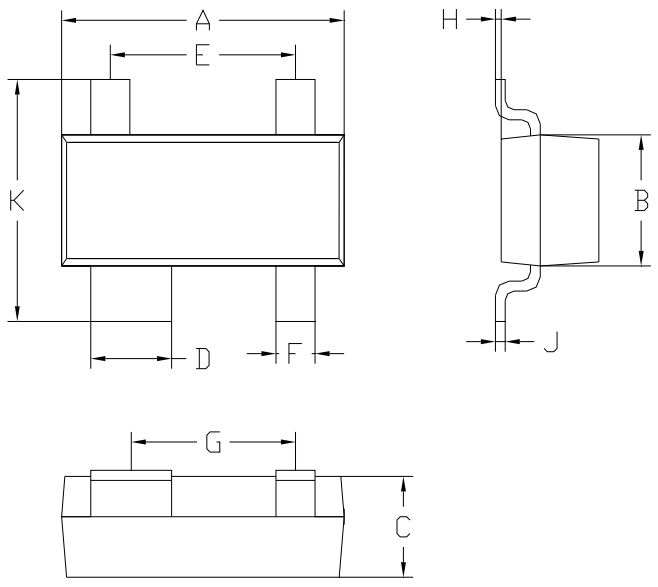


Fig.6 Maximum permissible continuous reverse voltage as a function of ambient temperature.

PACKAGE OUTLINE

Plastic surface mounted package SOT-143



SOT-143		
Dim	Min	Max
A	2.85	2.95
B	1.20	1.40
C	1.0 Typical	
D	0.78	0.88
E	1.85	1.95
F	0.30	0.50
G	1.64	1.74
H	0.02	0.1
J	0.1 Typical	
K	2.30	2.50
All Dimensions in mm		

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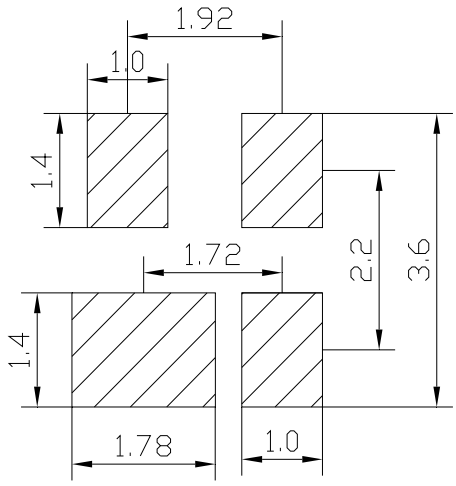
SOLDERING FOOTPRINT



Unit ： mm

PACKAGE INFORMATION

Device	Package	Shipping
BAW101	SOT-143	3000/ Tape&Reel