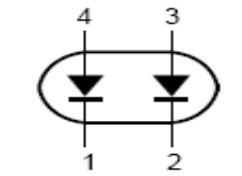
Surface mount switching diode

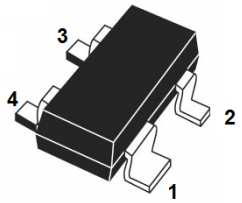
BAV23

FEATURES

- Continuous reverse voltage:max.200V
- Switching speed:50ns.
- Repetitive peak reverse voltage:max.250V
- Repetitive peak forward current:max.625mA

Lead-free





SOT-143

APPLICATIONS

- General application.

ORDERING INFORMATION

Type No.	Marking	Package Code
BAV23	L30	SOT-143

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Characteristic		**Symbol**	**Limits**	**Unit**
Repetitive Peak Reverse Voltage		V_{RRM}	250	V
Continuous Reverse Voltage		V_R	200	V
Continuous forward current	single diodes double diodes	I_F	225 125	mA
Repetitive peak forward current		I_{FRM}	625	mA
Surge current	t=1μs t=1ms t=1s	I_{FSM}	9 3 1.7	A
Power Dissipation		P_d	250	mW
Operating Junction Temperature Range		T_j	150	℃
Storage Temperature Range		T_{STG}	-65 to +150	℃

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ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Characteristic	Symbol	Min	Typ	MAX	UNIT	Test Condition
Reverse Breakdown Voltage	$V_{(BR)R}$	200	-	-	V	I_R= 100μA
Forward Voltage	V_F	-	-	1.0 1.25	V	I_F=100mA I_F=200mA
Forward Voltage series connection	V_F	-	-	2.0 2.5	V	I_F=100mA I_F=200mA
Reverse Leakage Current	I_R	-	-	100 100	nA μA	V_R=200V V_R=200V,T_j=150℃
Reverse Leakage Current series connection	I_R	-	-	100 100	nA μA	V_R=400V V_R=400V,T_j=150℃
Diodes Capacitance series connection	C_d	-	-	5 2.5	pF	V_R=0V,f=1.0MHz
Reverse Recovery Time	t_{rr}	-	-	50	ns	I_F=I_R=10mA,I_{rr}=0.1*I_R

TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

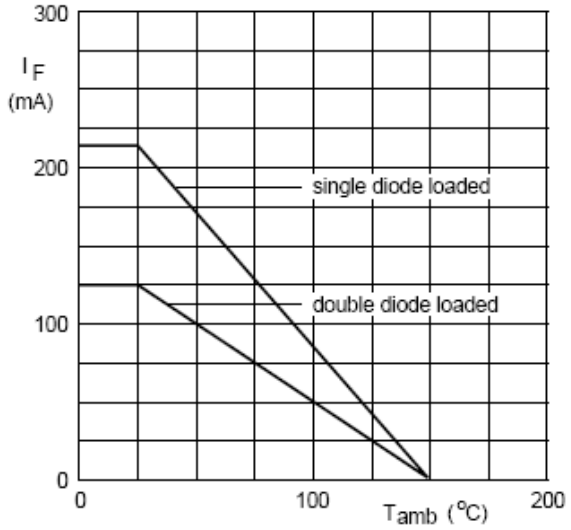
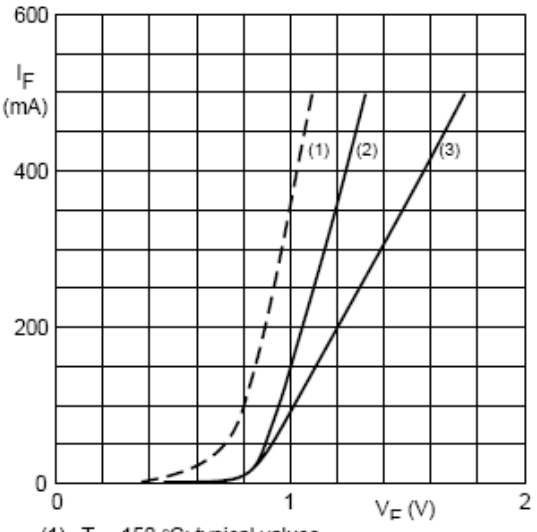


Fig.2 Maximum permissible continuous forward current as a function of ambient temperature.



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

Fig.3 Forward current as a function of forward voltage.

Surface mount switching diode **BAV23**

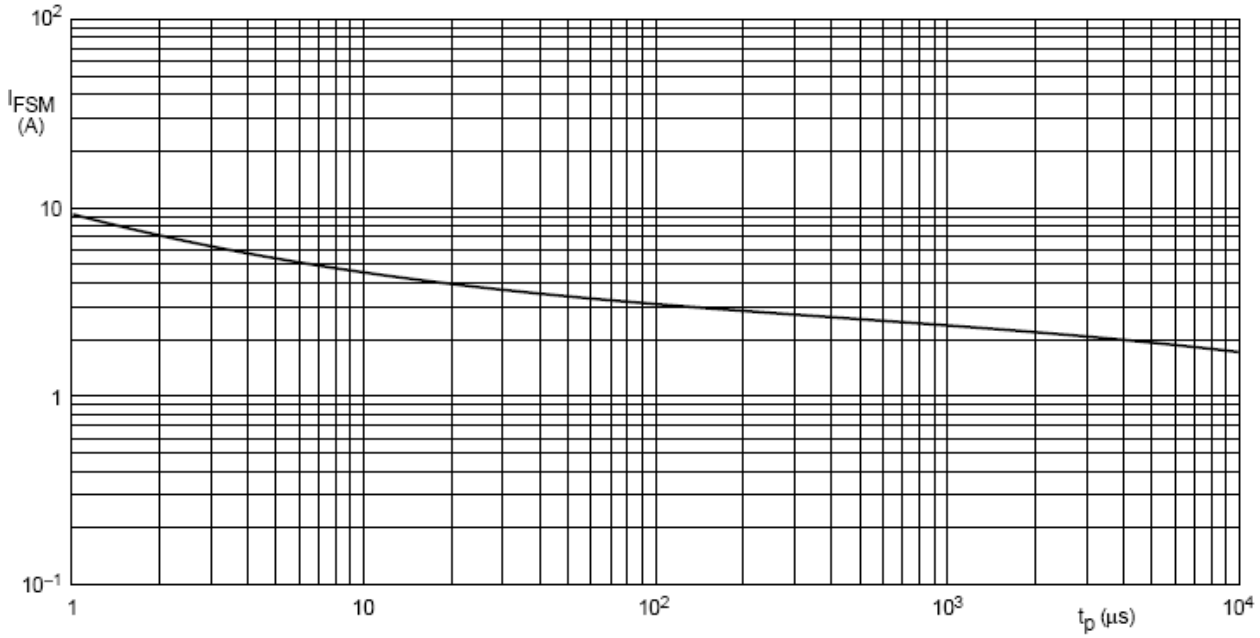
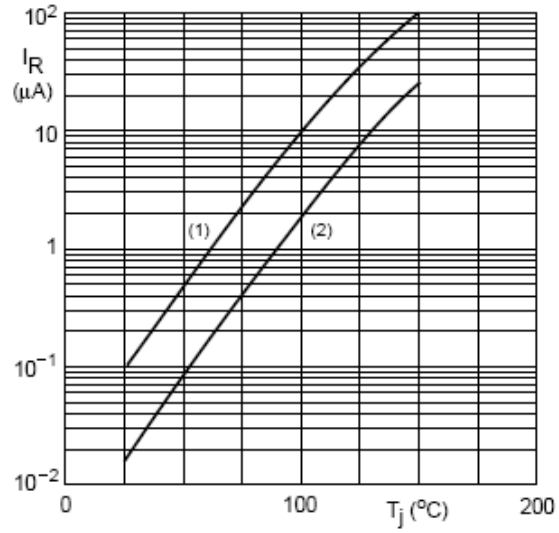
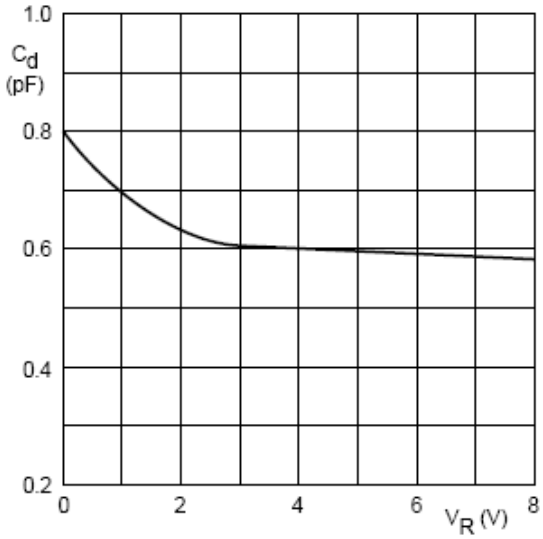


Fig.4 Maximum permissible non-repetitive peak forward current as a function of pulse duration.



(1) V_R = 200 V; maximum values.
(2) V_R = 200 V; typical values.

Fig.5 Reverse current as a function of junction temperature.



f = 1 MHz; T_j = 25 °C.

Fig.6 Diode capacitance as a function of reverse voltage; typical values.

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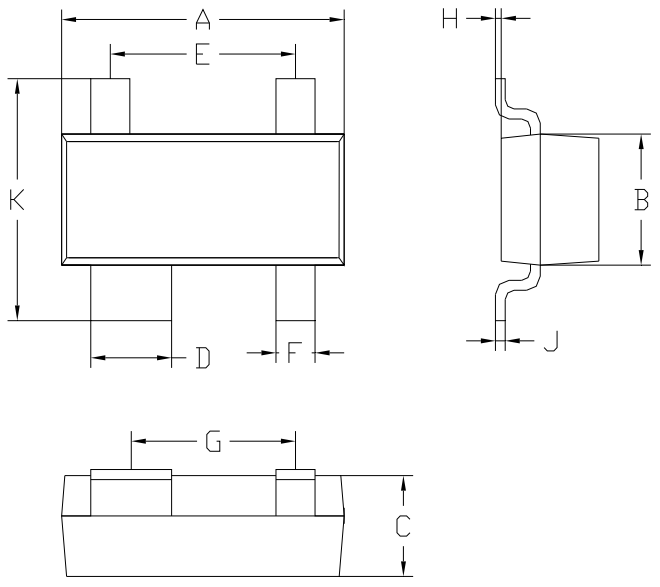
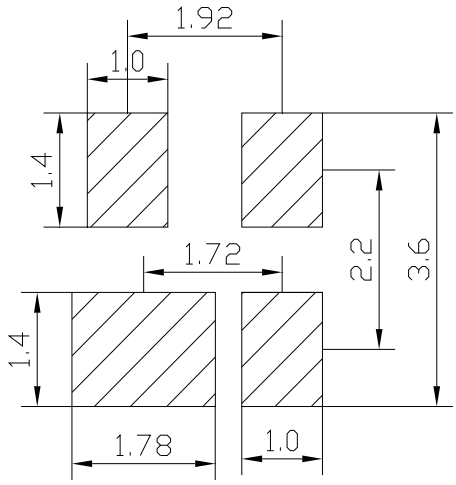
PACKAGE OUTLINE

Plastic surface mounted package SOT-143



SOT-143		
Dim	Min	Max
A	2.70	3.10
B	1.10	1.50
C	1.00 Typical	
D	0.83 Typical	
E	1.80	2.00
F	0.40 Typical	
G	1.59	1.79
H	0.02	0.1
J	0.10 Typical	
K	2.20	2.60
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit ： mm

PACKAGE INFORMATION

Device	Package	Shipping
BAV23	SOT-143	3000/ Tape&Reel