

Surface mount switching diode

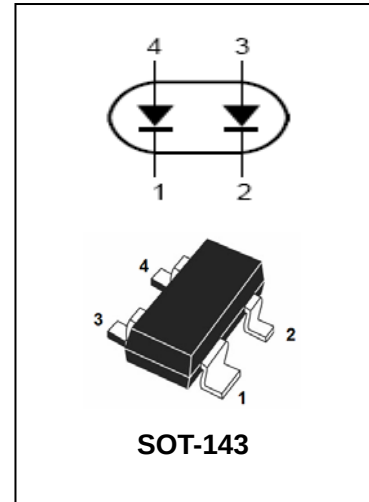
BAV23

FEATURES

- Continuous reverse voltage:max.75V
- Switching speed:50ns.
- Repetitive peak reverse voltage:max.250V
- Repetitive peak forward current:max.625mA



Lead-free



APPLICATIONS

- General application.

ORDERING INFORMATION

Type No.	Marking	Package Code
BAV23	L30	SOT-143

MAXIMUM RATING @ Ta=25 °C 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	I_F	single diodes 225	mA
double diodes		125	
Repetitive peak forward current	I_{FRM}	625	mA
Surge current	I_{FSM}	$t=1\mu s$ 9	A
		$t=1ms$ 3	
		$t=1s$ 1.7	
Power Dissipation	P_d	250	mW
Operating Junction Temperature Range	T_j	150	°C
Storage Temperature Range	T_{STG}	-65 to +150	°C

Surface mount switching diode

BAV23

ELECTRICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

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

TYPICAL CHARACTERISTICS @ $T_a=25^\circ\text{C}$ unless otherwise specified

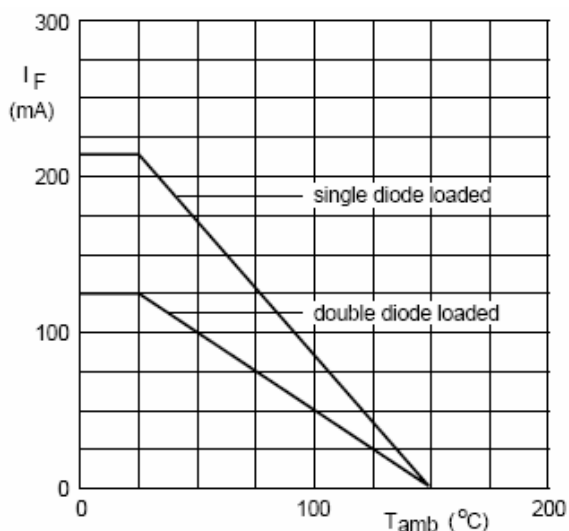
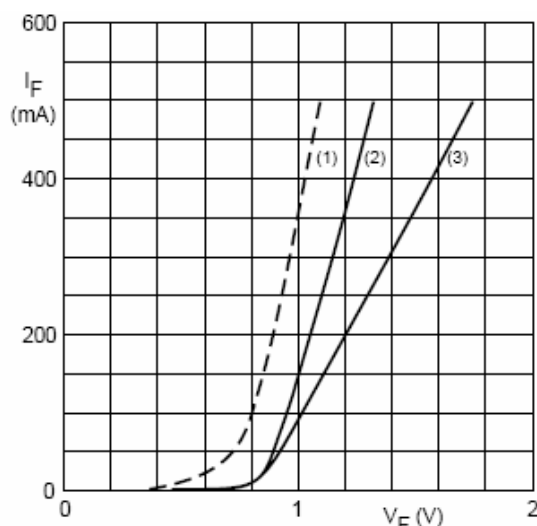


Fig.2 Maximum permissible continuous forward current as a function of ambient temperature.



(1) $T_j = 150^\circ\text{C}$; typical values.
(2) $T_j = 25^\circ\text{C}$; typical values.
(3) $T_j = 25^\circ\text{C}$; maximum values.

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

Surface mount switching diode

BAV23

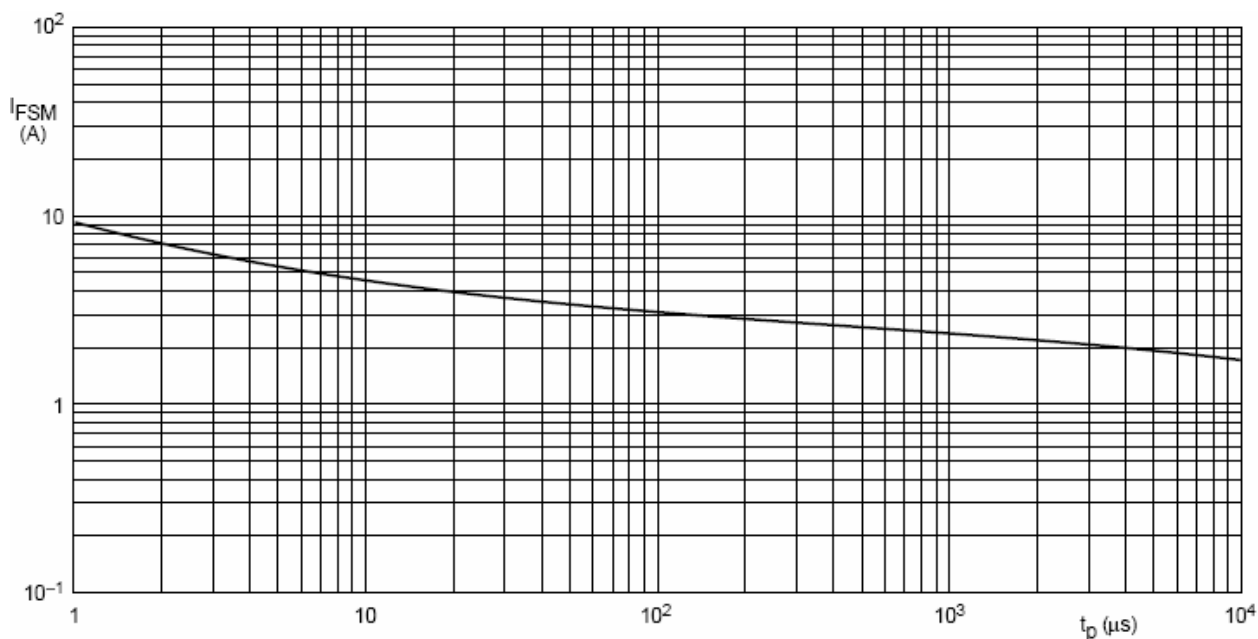
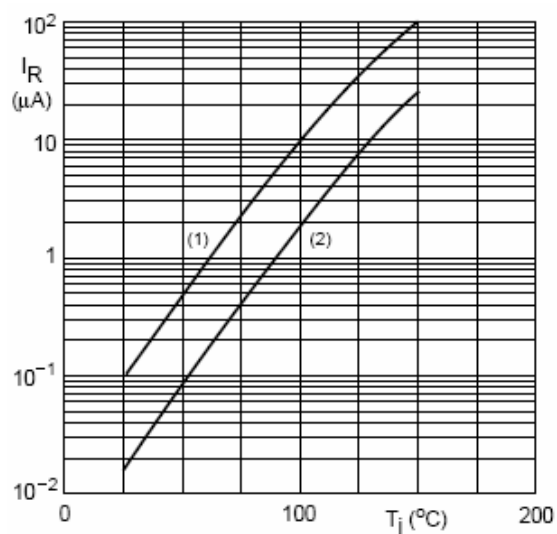
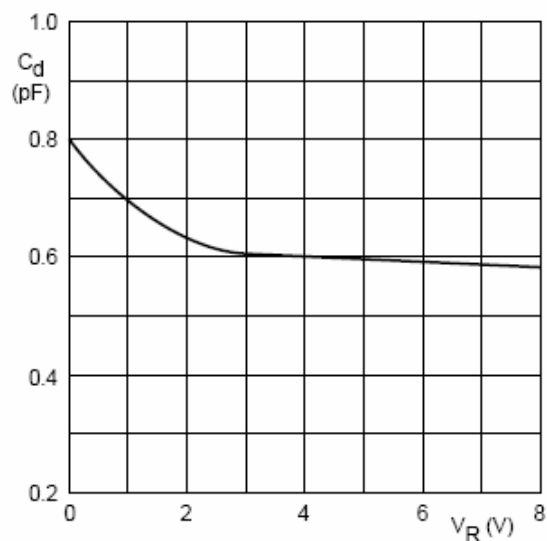


Fig.4 Maximum permissible non-repetitive peak forward current as a function of pulse duration.



- (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.

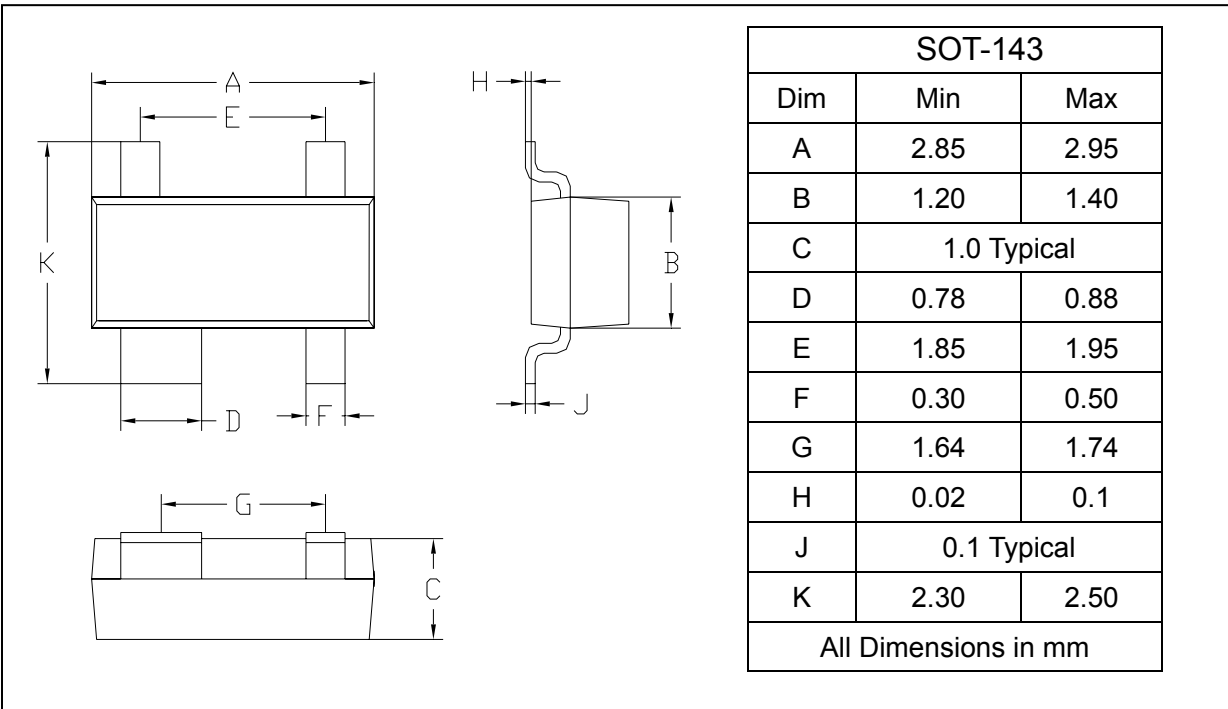
Surface mount switching diode

BAV23

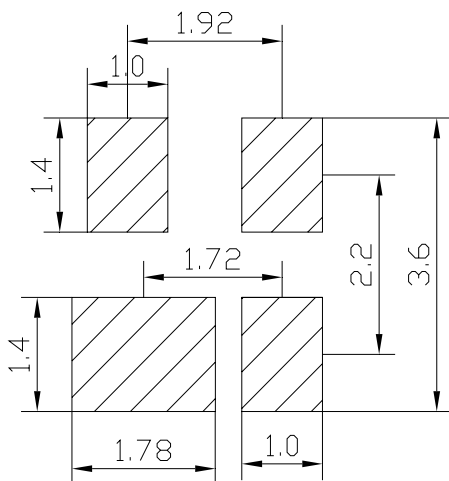
PACKAGE OUTLINE

Plastic surface mounted package

SOT-143



SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

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