

Dual series switching diode

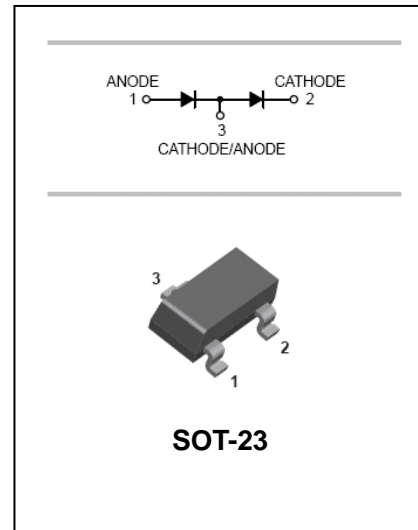
BAV99

FEATURES

- Fast switching speed Max:6ns
- High conductance
- Connected in series
- Surface mount package ideally suited for automatic insertion



Lead-free



APPLICATIONS

- Small signal switching

ORDERING INFORMATION

Type No.	Marking	Package Code
BAV99	A7	SOT-23

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Parameter	Symbol	Value	Unit
Repetitive peak reverse voltage	V_{RRM}	85	V
Continuous Reverse voltage	V_R	75	V
Peak forward surge current	I_{FSM}	@t=1.0μs 4	A
		@t=1.0ms 1	
		@t=1.0s 0.5	
Forward continuous current	I_F	single diode loaded 215	mA
		double diodes loaded 125	
Non-Repetitive peak forward current	I_{FRM}	450	mA
Power dissipation	P_d	250	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	500	°C/W
Operating and storage temperature range	T_j, T_{STG}	-65 to 150	°C

Dual series switching diode

BAV99

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Reverse breakdown voltage	$V_{(BR)}$	$I_R = 2.5\mu A$	75		V
Reverse voltage leakage current	I_R	$V_R = 25V$		35	nA
		$V_R = 75V$		1	μA
		$V_R = 25V T_j = 150^\circ C$		30	μA
		$V_R = 75V T_j = 150^\circ C$		50	μA
Forward voltage	V_F	$I_F = 1mA$		715	mV
		$I_F = 10mA$		855	
		$I_F = 50mA$		1000	
		$I_F = 150mA$		1250	
Diode capacitance	C_D	$V_R = 0V f = 1MHz$		1.5	pF
Reverse recovery time	t_{rr}	$I_F = I_R = 10mA,$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$		4	nS

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

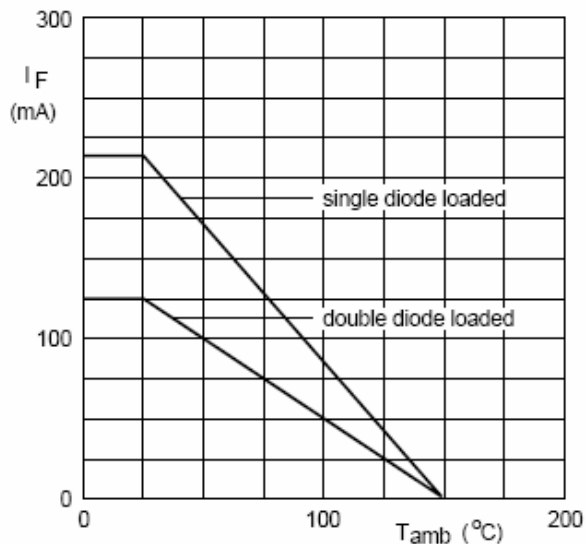
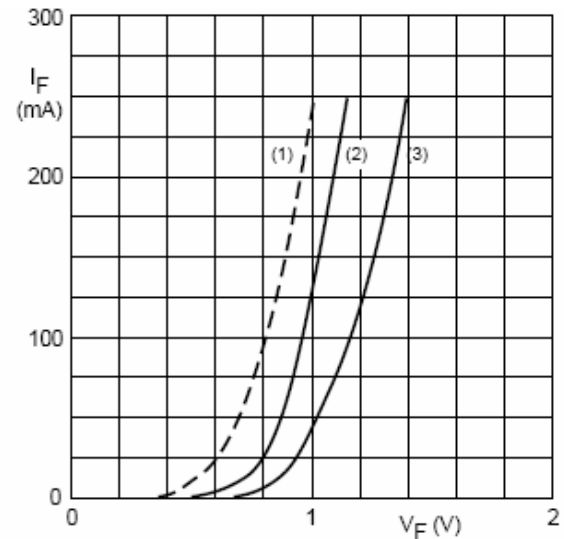


Fig.2 Maximum permissible continuous forward current as a function of ambient temperature.



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

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

Dual series switching diode

BAV99

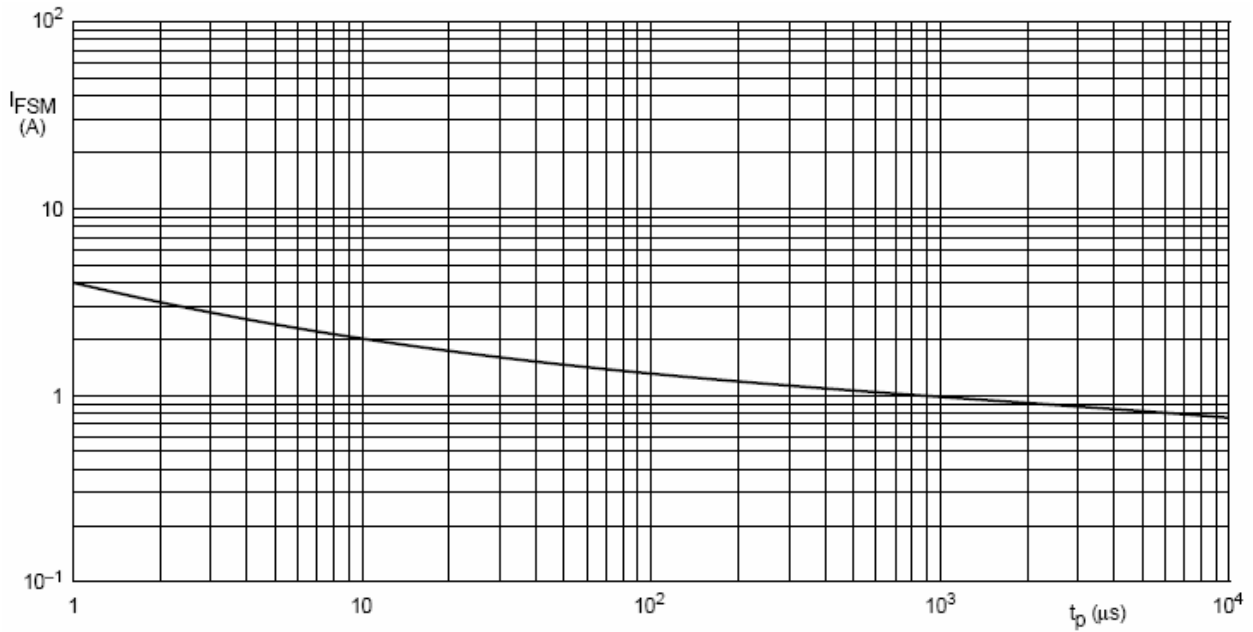


Fig.4 Maximum permissible non-repetitive peak forward current as a function of pulse duration.

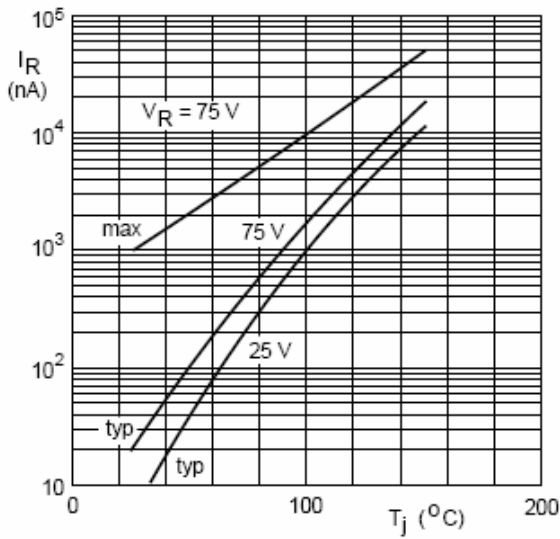


Fig.5 Reverse current as a function of junction temperature.

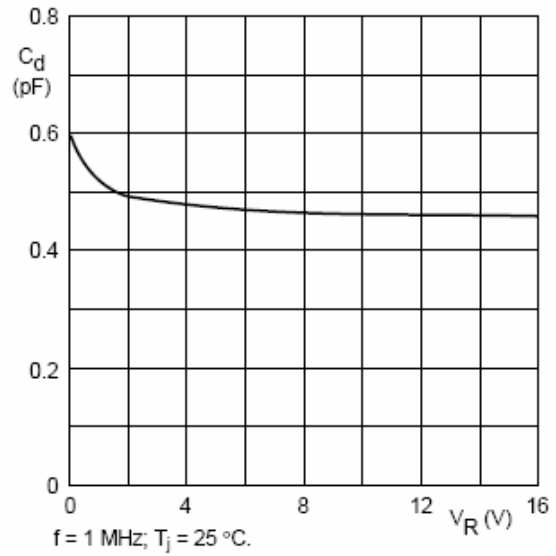


Fig.6 Diode capacitance as a function of reverse voltage; typical values.

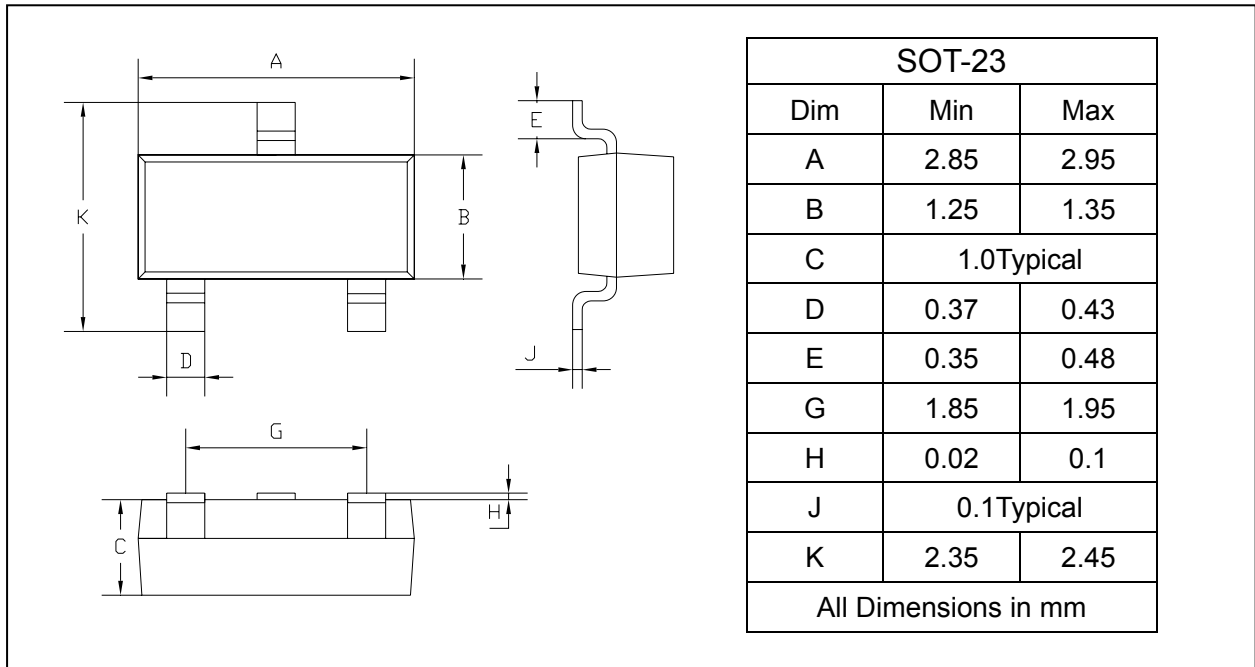
Dual series switching diode

BAV99

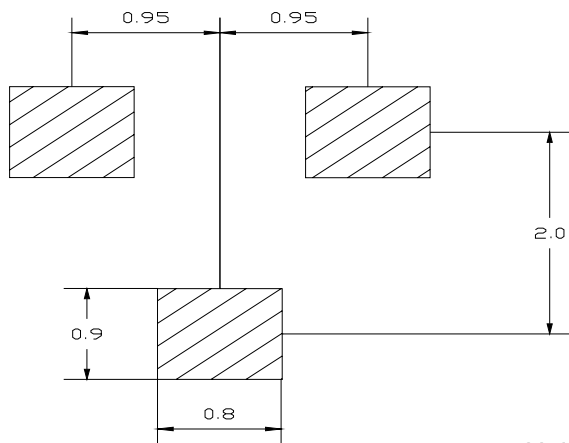
PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
BAV99	SOT-23	3000/Tape&Reel