

BAV56,BAV70,BAV99



HIGH SPEED SWITCHING RECTIFIERS

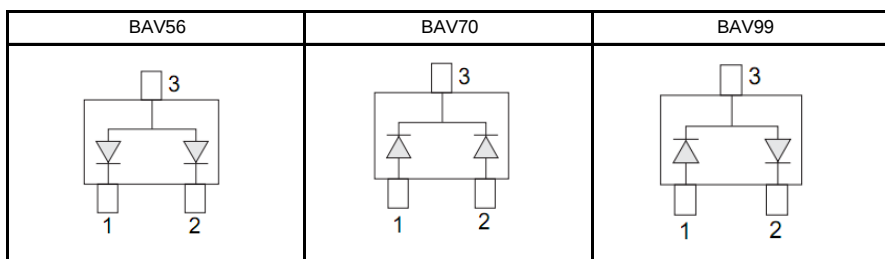
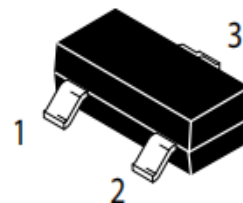
VOLTAGE 70 Volts CURRENT 0.20 Amperes SOT-23

FEATURES

- Fast Switching Device (TRR <6nS)
- Power Dissipation of 225mW
- High Stability and High Reliability
- Low reverse leakage

MECHANICAL DATA

- Case: SOT-23 Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting position: Any



Maximum Ratings & Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit
Peak Reverse Voltage	V_{RM}	70	V
Power Dissipation	P_d	225	mW
Operating junction temperature	T_j	150	°C
Storage temperature range	T_s	-65~150	°C
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	500	°C/W
Average Rectified Current	I_O	215	mA
Non-repetitive Peak Forward Current	I_{FM}	450	mA
Peak Forward Surge Current@tp=1us; TA=25°C	I_{FSM}	2	A

Notes: Valid provided that electrodes are kept at ambient temperature.

Electrical Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	TEST CONDITION	Min.	Typ.	Max.	Unit
Breakdown Voltage	B_V	$I_R=100\mu A$	70	--	--	V
Reverse Leakage Current	I_R	VR=70V	--	--	2.5	μA
Forward Voltage	V_F	IF=1mA	--	--	0.715	V
		IF=10mA	--	--	0.855	
		IF=50mA	--	--	1	
		IF=150mA	--	--	1.25	
Reverse recovery time	T_{RR}	IF=10mA, Irr=0.1xIR, RL=100Ω	--	--	6	ns
			--	--		
			--	--		
Junction Capacitance	C_j	VR=0V, f=1MHZ	--	--	1.5	pF

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RATING AND CHARACTERISTIC CURVES

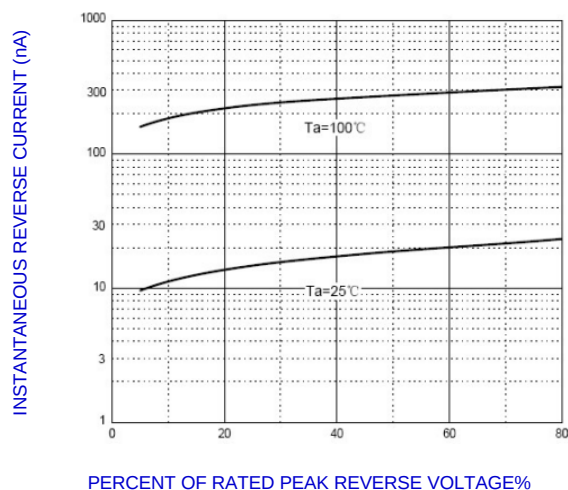


Fig.1-Reverse characteristics

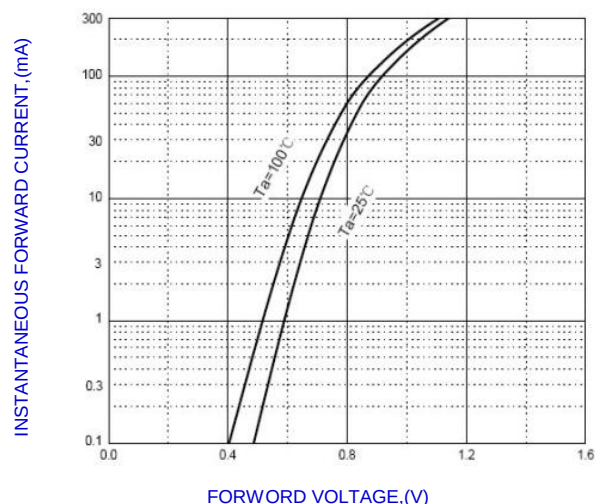


Fig.2-Forward characteristics

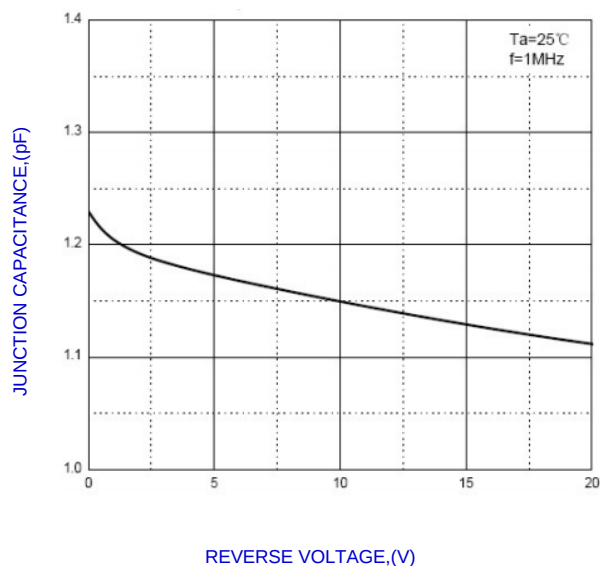


Fig.3-Capacitance characteristics

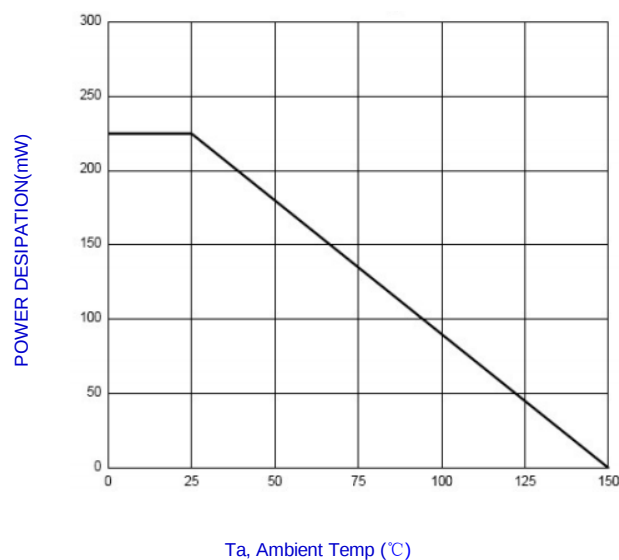


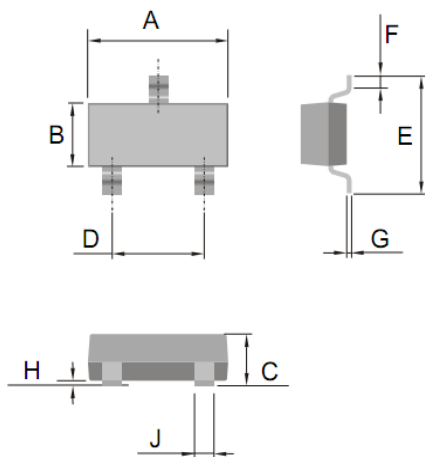
Fig.4-Power derating curve

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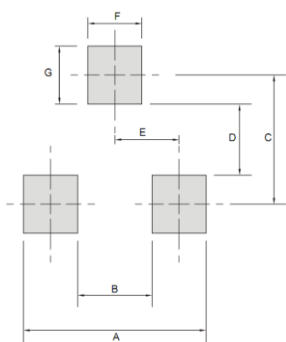


OUTLINE DRAWINGS



OUTLINE DIMENSIONS						
DIM	MILLIMETERS			INCHES		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	2.800	-	3.000	0.110	-	0.118
B	1.200	-	1.400	0.047	-	0.055
C	0.900	-	1.150	0.035	-	0.045
D	-	0.950	-	-	0.037	-
E	2.250	-	2.550	0.089	-	0.100
F	0.300	-	0.500	0.012	-	0.020
G	0.080	-	0.150	0.003	-	0.006
H	0.000	-	0.100	0.000	-	0.004
J	0.300	-	0.500	0.012	-	0.020

MOUNTING PAD LAYOUT



OUTLINE DIMENSIONS						
DIM	MILLIMETERS			INCHES		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	-	2.700	-	-	0.106	-
B	-	1.100	-	-	0.043	-
C	-	2.000	-	-	0.079	-
D	-	1.100	-	-	0.043	-
E	-	0.950	-	-	0.037	-
F	-	0.800	-	-	0.031	-
G	-	0.900	-	-	0.035	-

Packing Information

Product code	Pack	Reel Size (mm)	Quantity (pcs/reel)	Inner Box Size L×W×H(mm)	Carton Size L×W×H(mm)	Quantity (Inner Box/carton)
BAV99 SOT-23	T/R	Φ180	3000	210×208×203	440×440×230	4