



# BAV170W/BAV199W

## SURFACE MOUNT, LOW LEAKAGE SWITCHING DIODE

**VOLTAGE** 100 Volt      **POWER** 200mWatt

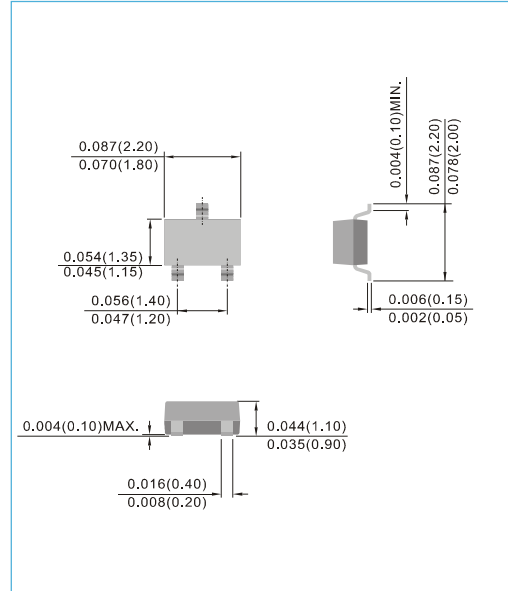
**SOT-323**      Unit : inch(mm)

### FEATURES

- Surface mount package ideally suited for automatic insertion.
- Very low leakage current. 2pA typical at VR=75V.
- Low capacitance. 4pF max at VR=0V, f=1MHz
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case : SOT-323 plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx weight : 0.00018 ounces, 0.005 grams



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Parameter	Symbol	BAV170W	BAV199W	Unit
Marking code	-	P3	PB	-
Reverse voltage	$V_R$	75		V
Peak reverse voltage	$V_{RM}$	100		V
Continuous forward current	$I_F$	0.2		A
Non-repetitive peak forward surge current at $t=1\mu s$	$I_{FSM}$	4		A
Power dissipation (Note 1)	$P_{TOT}$	200		mW
Thermal resistance, junction to ambient (Note 1)	$R_{\theta JA}$	625		$^{\circ}C/W$
Junction temperature range	$T_J$	-55 to +150		$^{\circ}C$
Storage temperature range	$T_{STG}$	-55 to +150		$^{\circ}C$
Circuit figure	-	Common Cathode	Series	-

NOTE :

1. FR-4 Board = 70 x 60 x 1mm.

COMMON CATHODE

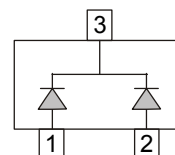


FIG. 16(TOP VIEW)

SERIES

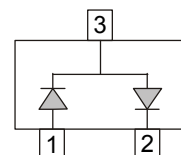


FIG. 17(TOP VIEW)



## BAV170W/BAV199W

### ELECTRICAL CHARACTERISTICS (each diode) (TA=25°C, unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Units
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=100\mu A$	75	-	-	V
Reverse Current	$I_R$	$V_R=75V$ $V_R=75V, T_J=150^\circ C$	-	0.002 8	5 80	nA
Forward Voltage	$V_F$	$I_F=1mA$ $I_F=10mA$ $I_F=50mA$ $I_F=150mA$	-	-	0.9 1 1.1 1.25	V
Total Capacitance	$C_T$	$V_R=0V, f=1MHz$	-	-	2	pF
Reverse Recovery Time	$T_{RR}$	$I_F=I_R=10mA, R_L=100\Omega$	-	-	3	$\mu s$

### CHARACTERISTIC CURVES (each diode)

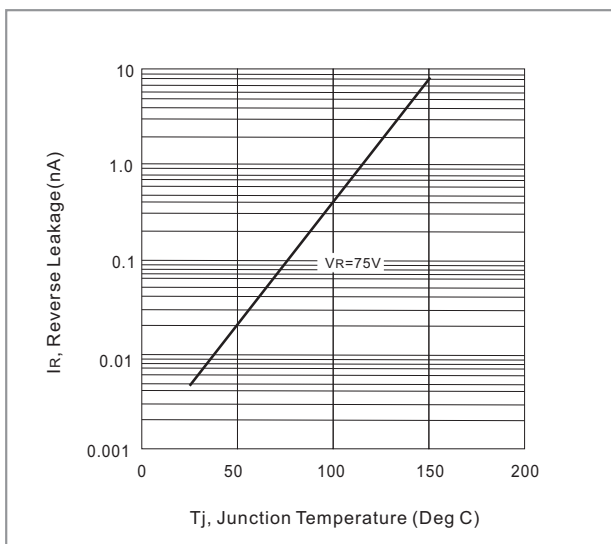


Fig. 1-Reverse Leakage vs. Junction Temperature

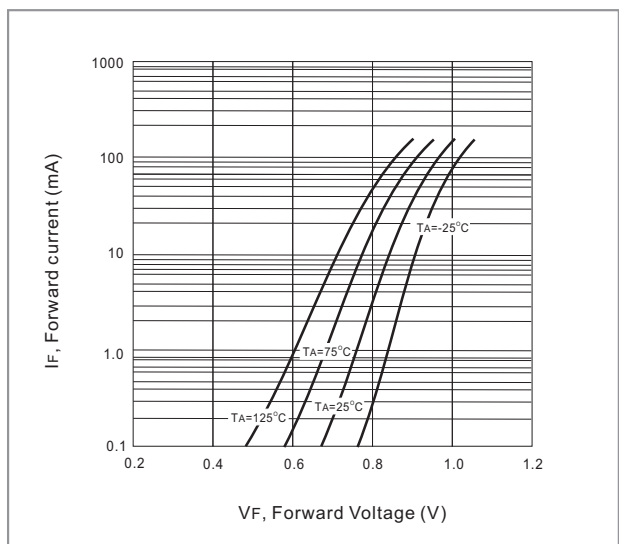


Fig. 2-Forward Current vs. Forward Voltage

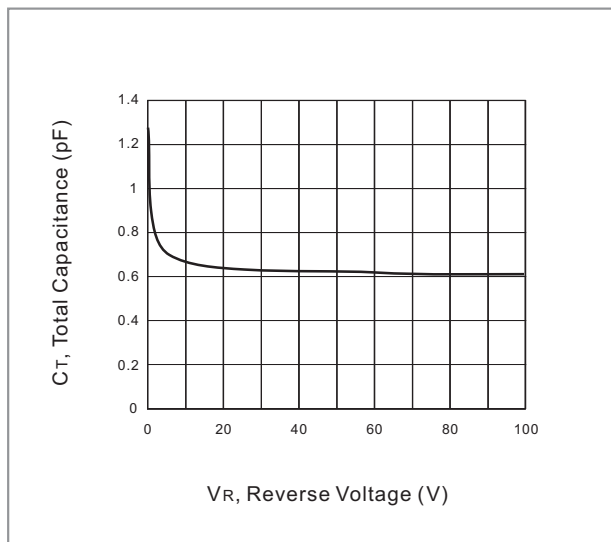


Fig. 3- Total capacitance vs. Reverse Voltage

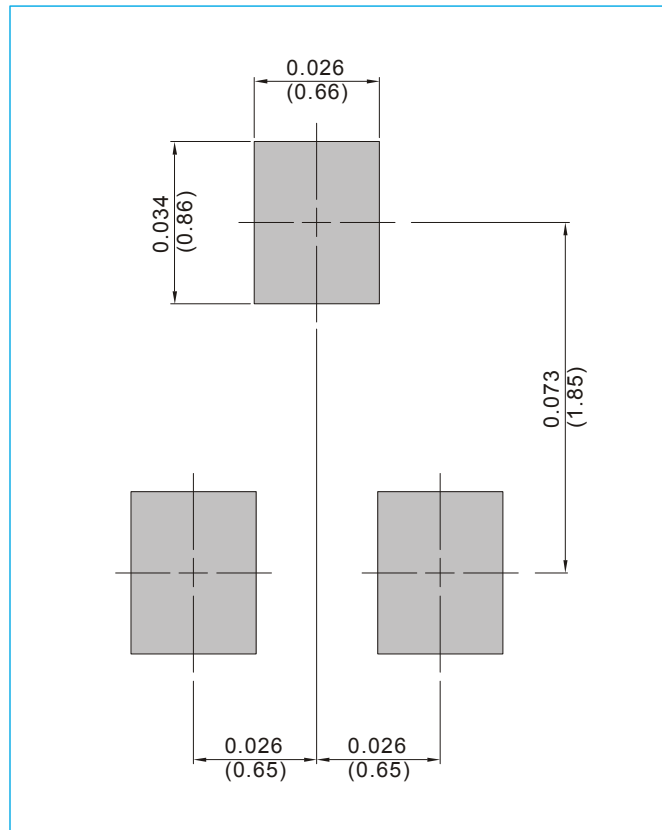


## BAV170W/BAV199W

### MOUNTING PAD LAYOUT

SOT-323

Unit : inch(mm)



### ORDER INFORMATION

- Packing information  
T/R - 12K per 13" plastic Reel  
T/R - 3K per 7" plastic Reel



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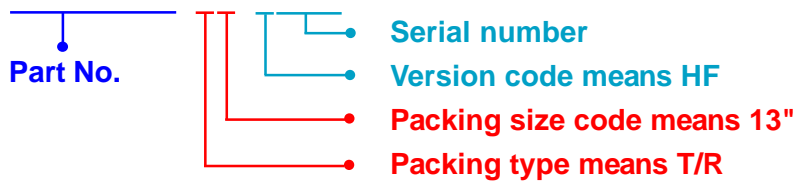
### Part No\_packing code\_Version

BAV170W\_R1\_00001

BAV170W\_R2\_00001

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



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