



# BAV199STB6

## SURFACE MOUNT, LOW LEAKAGE SWITCHING DIODES ARRAY

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

**SOT-563**    Unit : inch(mm)

### FEATURES

- Two isolated diode pairs for significant board space savings
- Surface mount package ideally suited for automatic insertion
- Very low leakage current. 5nA typical at  $V_R=75V$ .
- Low capacitance. 2pF max at  $V_R=0V$ ,  $f=1MHz$
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

- Case: SOT-563 plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx weight: 0.0001 ounces, 0.0026 grams.
- Marking: TF

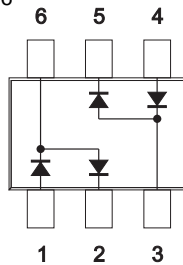
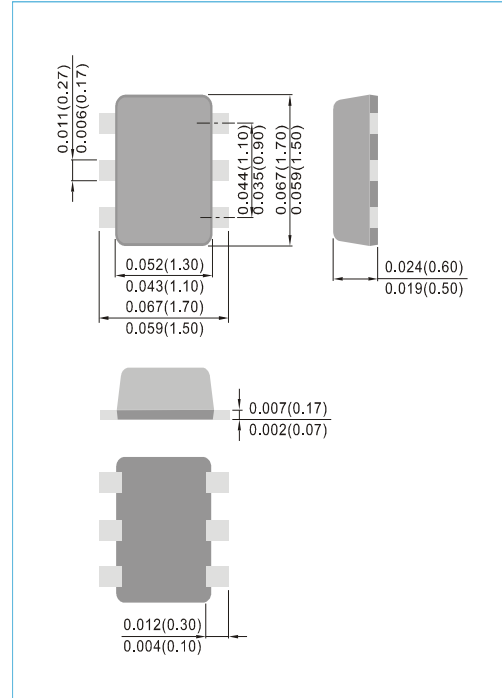


Fig.32



### ABSOLUTE RATINGS (each diode)

Parameter	Symbol	Value	Units
Maximum Reverse Voltage	$V_R$	100	V
Peak Reverse Voltage	$V_{RM}$	100	V
Continuous Forward Current	$I_F$	0.2	A
Non-repetitive Peak Forward Surge Current at $t=1.0\mu s$	$I_{FSM}$	2.0	A

### THERMAL CHARACTERISTICS

Parameter	Symbol	Value	Units
Power Dissipation (Note 1)	$P_{TOT}$	200	mW
Thermal Resistance, Junction to Ambient (Note 1)	$R\theta_{JA}$	625	$^{\circ}C/W$
Junction Temperature	$T_J$	-55 to 150	$^{\circ}C$
Storage Temperature	$T_{STG}$	-55 to 150	$^{\circ}C$

NOTE:

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



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## ELECTRICAL CHARACTERISTICS (each diode) ( $T_A=25^\circ\text{C}$ , unless otherwise noted)

PARAMETER	Symbol	Test Condition	MIN.	TYP.	MAX.	Units
Reverse Breakdown Voltage	$V_{(BR)}$	$I_R=100\ \mu\text{A}$			100	V
Reverse Current	$I_R$	$V_R=75\ \text{V}$ $V_R=75\ \text{V}, T_J=150^\circ\text{C}$			5 80	nA
Forward Voltage	$V_F$	$I_F=1\text{mA}$ $I_F=10\text{mA}$ $I_F=50\text{mA}$ $I_F=150\text{mA}$			0.9 1.0 1.1 1.25	V
Total Capacitance	$C_T$	$V_R=0\ \text{V}, f=1\text{MHz}$			2.0	pF
Reverse Recovery Time	$T_{RR}$	$I_F=I_R=10\text{mA}, R_L=100\Omega$			3.0	us

## CHARACTERISTIC CURVES (each diode)

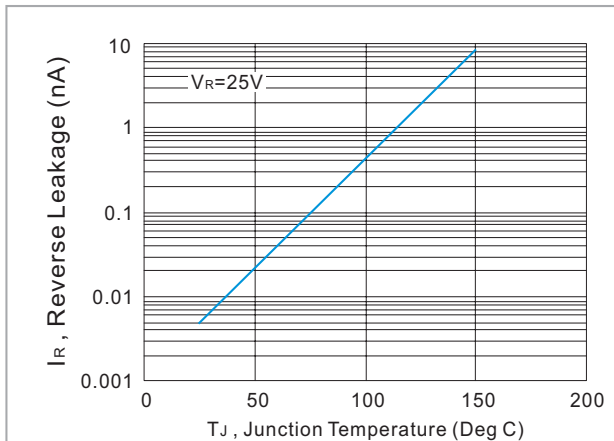


Figure 1. Reverse Leakage vs. Junction Temperature

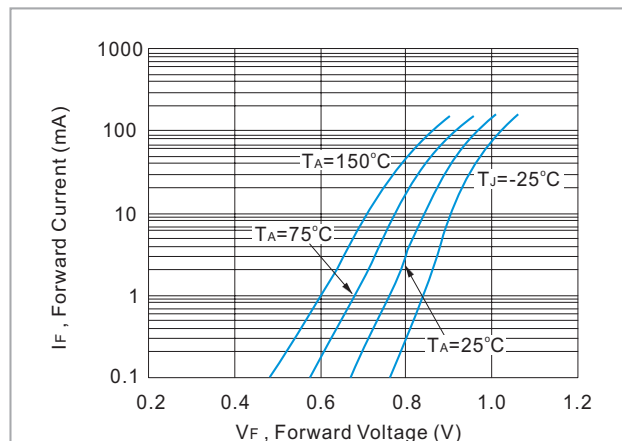


Figure 2. Forward Current vs. Forward Voltage

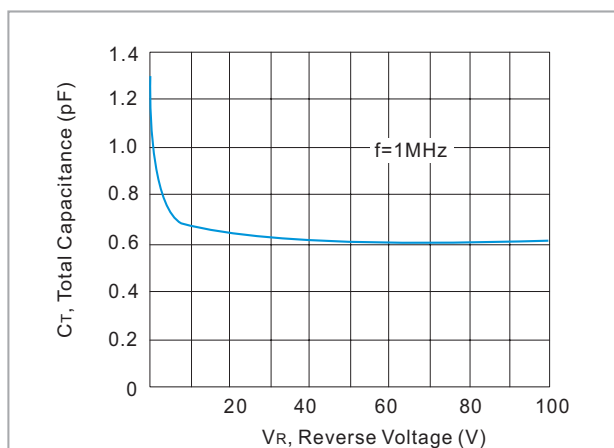
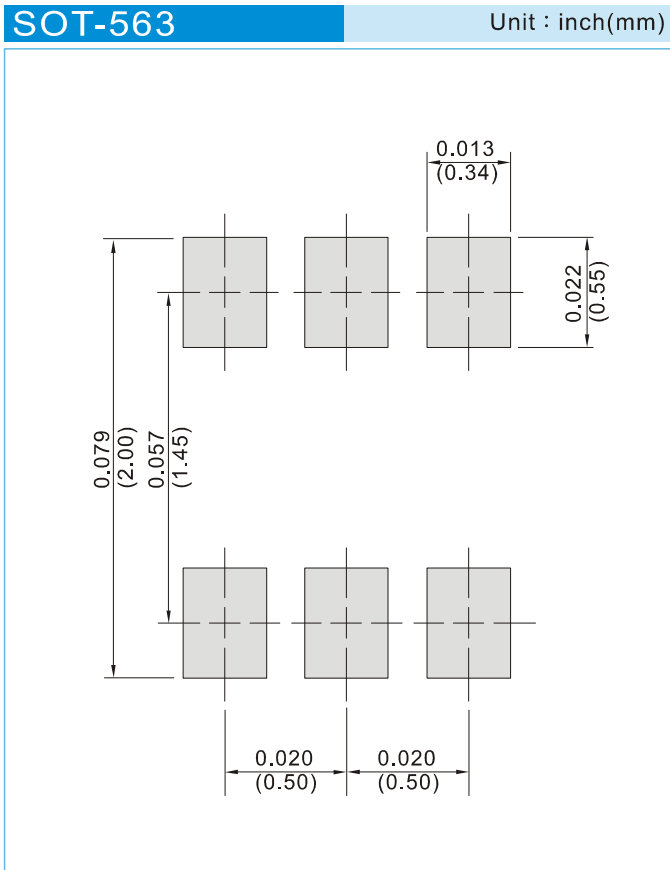


Figure 3. Total Capacitance vs. Reverse Voltage



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information  
T/R - 10K per 13" plastic Reel  
T/R - 4K per 7" plastic Reel



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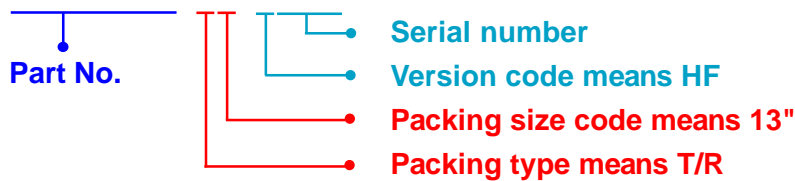
## Part No\_packing code\_Version

BAV199STB6\_R1\_00001

BAV199STB6\_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)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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