



**THE DATASHEET OF  
BAT54CTB6\_R1\_00001**





# BAT54TB6 SERIES

## SURFACE MOUNT SCHOTTKY DIODE ARRAYS

**VOLTAGE** 30 Volt **POWER** 200mWatt

**SOT-563 Dimension** **Unit: inch(mm)**

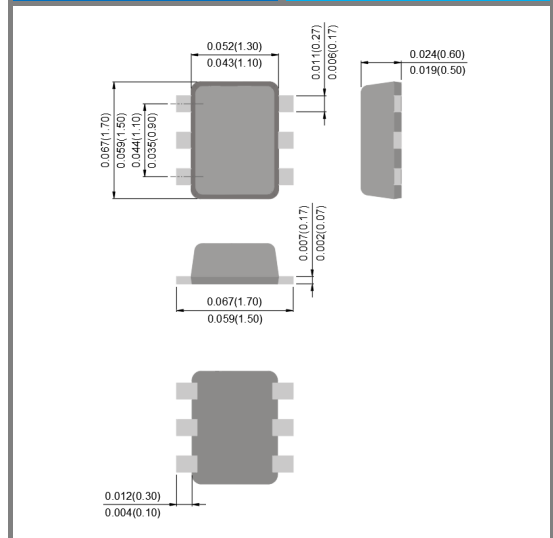
### FEATURES

- Isolated diode arrays for significant board space savings
- Surface mount package ideally suited for automatic insertion
- Extremely Fast Switching Speed
- Very Low VF: 0.347V (Typ) at IF = 10mA
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

### MECHANICAL DATA

- Case : SOT-563 plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx Weight : 0.0026 grams
- Marking :

BAT54TB6	BAT54CTB6
TH	TY



### ABSOLUTE MAXIMUM RATINGS (each diode) (TA=25°C, unless otherwise noted)

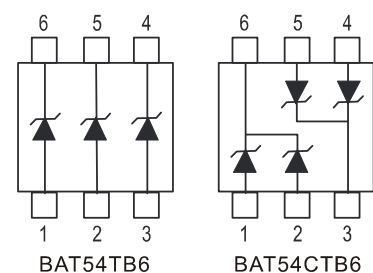
Parameter	Symbol	Value	Units
Maximum Reverse Voltage	V <sub>R</sub>	30	V
Peak Reverse Voltage	V <sub>RRM</sub>	30	V
Continuous Forward Current	I <sub>F</sub>	0.2	A

### THERMAL CHARACTERISTICS (TA=25°C, unless otherwise noted)

Parameter	Symbol	Value	Units
Power Dissipation (Note 1)	P <sub>TOT</sub>	200	mW
Thermal Resistance, Junction to Ambient (Note 1)	R <sub>θJA</sub>	625	°C/W
Junction Temperature	T <sub>J</sub>	-55 to 125	°C
Storage Temperature	T <sub>STG</sub>	-55 to 150	°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	$V_{(BR)}$	$I_R=100\ \mu\text{A}$	30	-	-	V
Reverse Current	$I_R$	$V_R=25\ \text{V}$	-	-	2	$\mu\text{A}$
Forward Voltage	$V_F$	$I_F=0.1\text{mA}$	-	-	0.24	V
		$I_F=1\text{mA}$	-	-	0.32	
		$I_F=10\text{mA}$	-	0.347	0.4	
		$I_F=30\text{mA}$	-	-	0.5	
		$I_F=100\text{mA}$	-	-	0.6	
Total Capacitance	$C_T$	$V_R=1\text{V}, f=1\text{MHz}$	-	-	10	pF

### TYPICAL CHARACTERISTIC CURVES

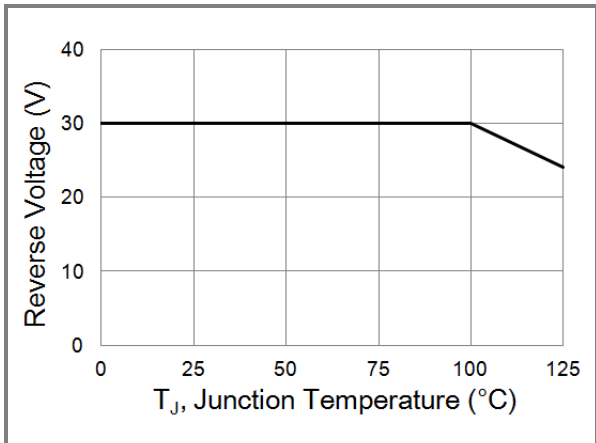


Fig.1 Operating Temperature Derating Curve

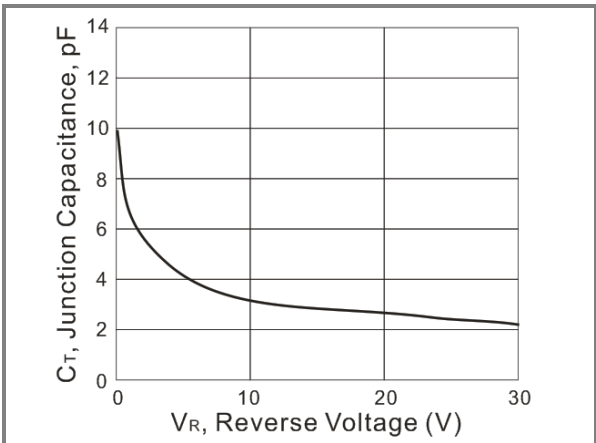


Fig.2 Typical Junction Capacitance

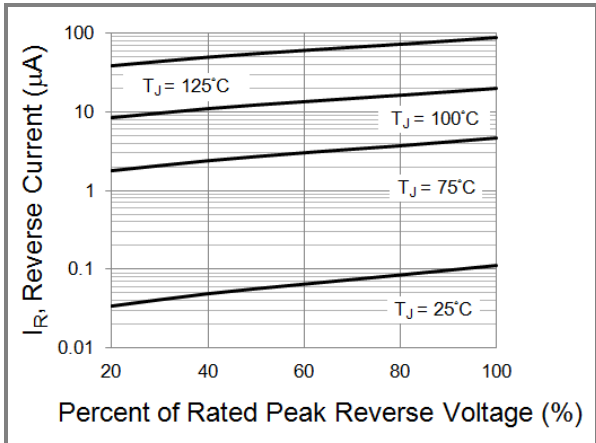


Fig.3 Typical Reverse Characteristics

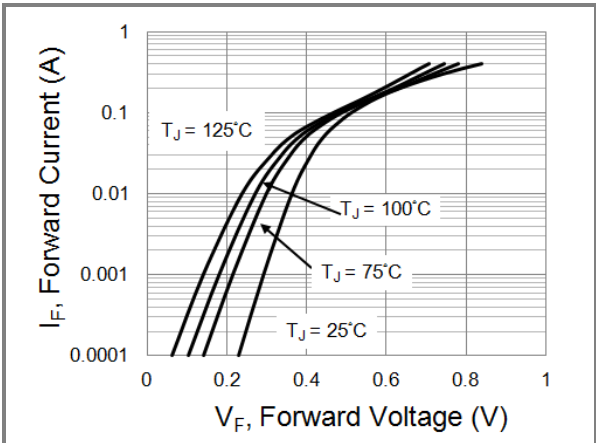
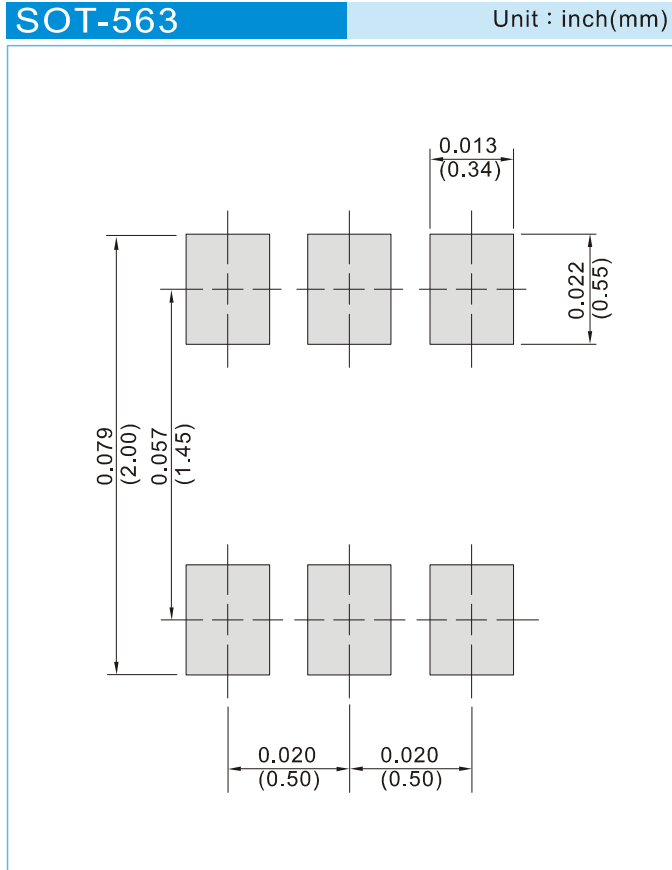


Fig.4 Typical Forward Characteristics



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information
  - T/R - 4K per 7" plastic Reel
  - T/R - 8K per 7" plastic Reel
  - T/R - 10K per 13" plastic Reel
  - T/R - 20K per 13" plastic Reel



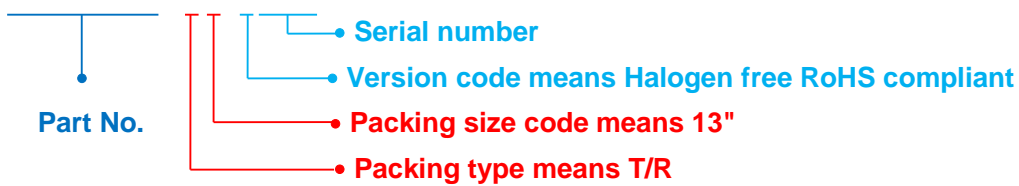
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## Part No.\_packing code\_Version

BAT54TB6\_R1\_00001  
 BAT54TB6\_R2\_00001  
 BAT54TB6\_R1\_00002  
 BAT54TB6\_R2\_00002

For example :

**RB500V-40\_R2\_00001**



Packing Code <b>XX</b>				Version Code <b>X</b>		Serial number <b>XXXX</b>
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HSF Level	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>	Halogen free RoHS compliant	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	RoHS compliant	<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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