



**THE DATASHEET OF
BAT54CTB6_R1_00001**





BAT54TB6 SERIES

SURFACE MOUNT SCHOTTKY DIODE ARRAYS

| | | | |
|----------------|----------------|--------------|-----------------|
| VOLTAGE | 30 Volt | POWER | 200mWatt |
|----------------|----------------|--------------|-----------------|

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

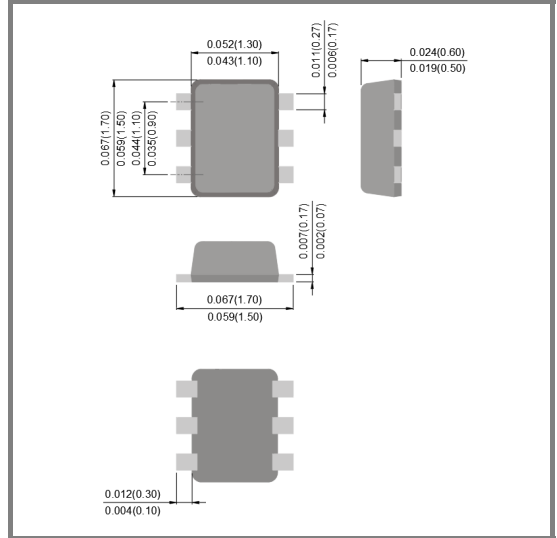
FEATURES

- 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)

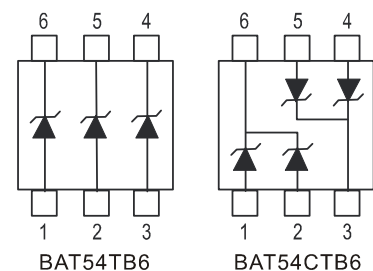
| Parameter | Symbol | Value | Units |
|----------------------------|------------------|-------|-------|
| Maximum Reverse Voltage | V _R | 30 | V |
| Peak Reverse Voltage | V _{RRM} | 30 | V |
| Continuous Forward Current | I _F | 0.2 | A |

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

| Parameter | Symbol | Value | Units |
|--|------------------|------------|-------|
| Power Dissipation (Note 1) | P _{TOT} | 200 | mW |
| Thermal Resistance, Junction to Ambient (Note 1) | R _{θJA} | 625 | °C/W |
| Junction Temperature | T _J | -55 to 125 | °C |
| Storage Temperature | T _{STG} | -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 | μA |
| 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

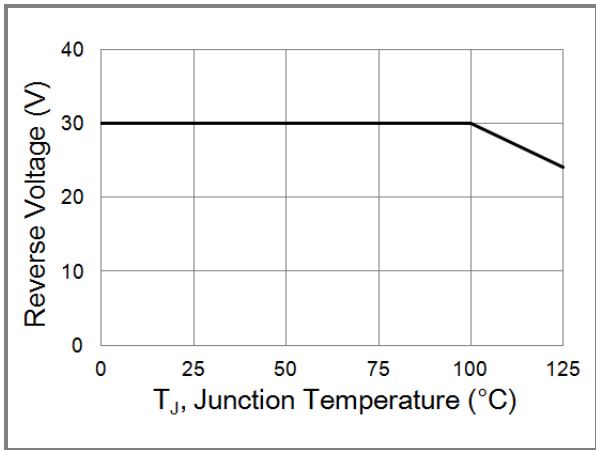


Fig.1 Operating Temperature Derating Curve

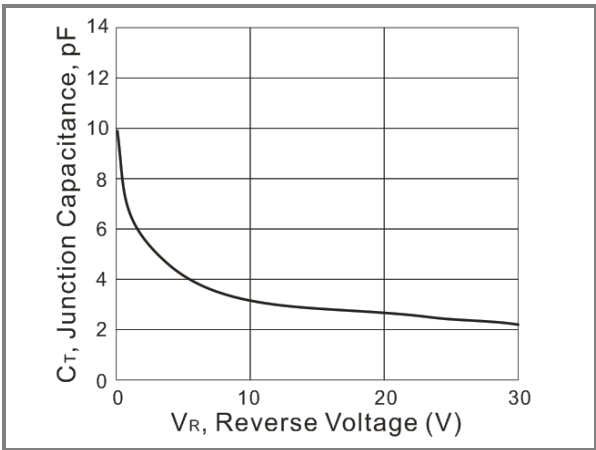


Fig.2 Typical Junction Capacitance

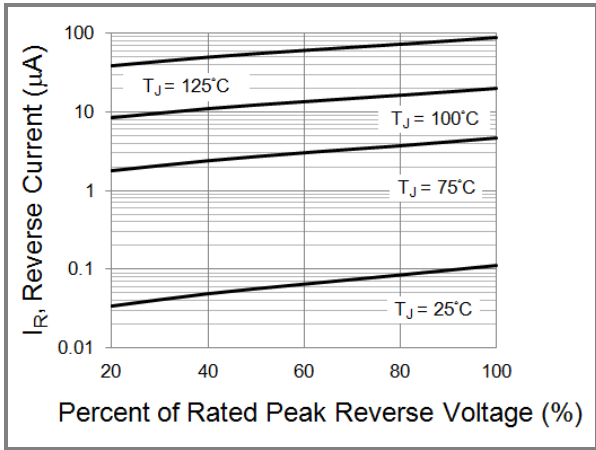


Fig.3 Typical Reverse Characteristics

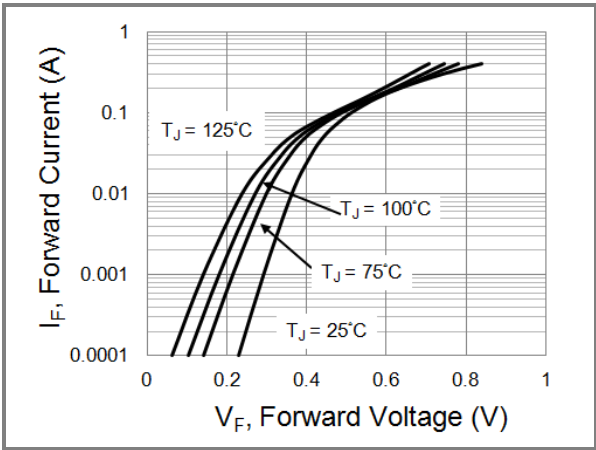
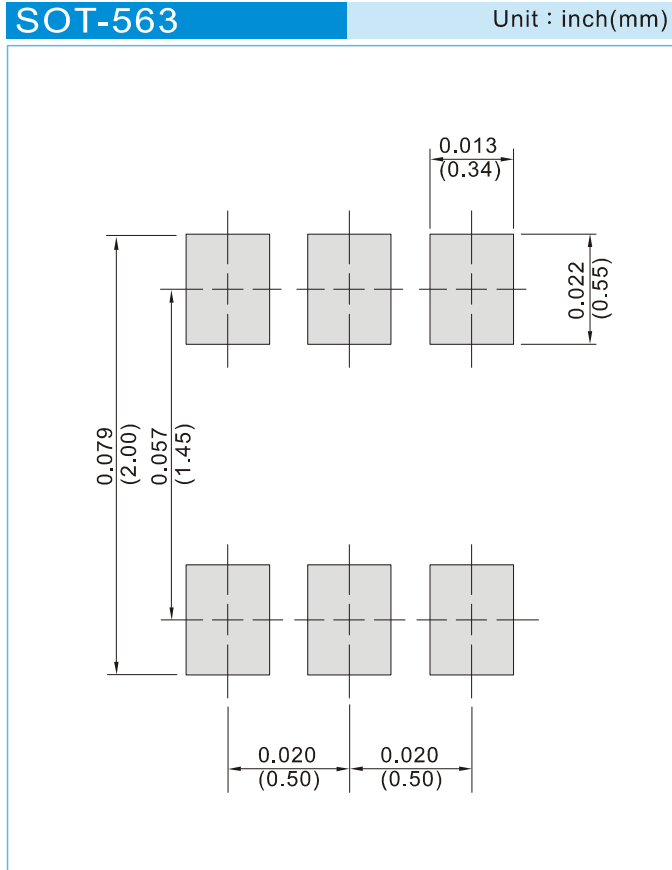


Fig.4 Typical Forward Characteristics



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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



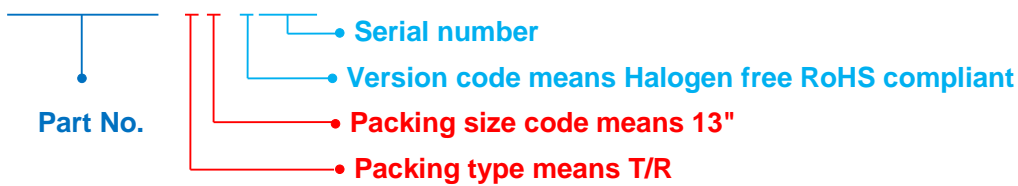
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Part No._packing code_Version

BAT54TB6_R1_00001
 BAT54TB6_R2_00001
 BAT54TB6_R1_00002
 BAT54TB6_R2_00002

For example :

RB500V-40_R2_00001



| Packing Code XX | | | | Version Code X | | Serial number XXXX |
|--------------------------------------|----------------------|----------------------------------|----------------------|-----------------------------|----------------------|---------------------------------------|
| Packing type | 1 st Code | Packing size code | 2 nd Code | HSF Level | 1 st Code | 2 nd ~5 th Code |
| Tape and Ammunition Box (T/B) | A | N/A | 0 | Halogen free RoHS compliant | 0 | serial number |
| Tape and Reel (T/R) | R | 7" | 1 | RoHS compliant | 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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