



BAT54 SERIES

SURFACE MOUNT SCHOTTKY BARRIER

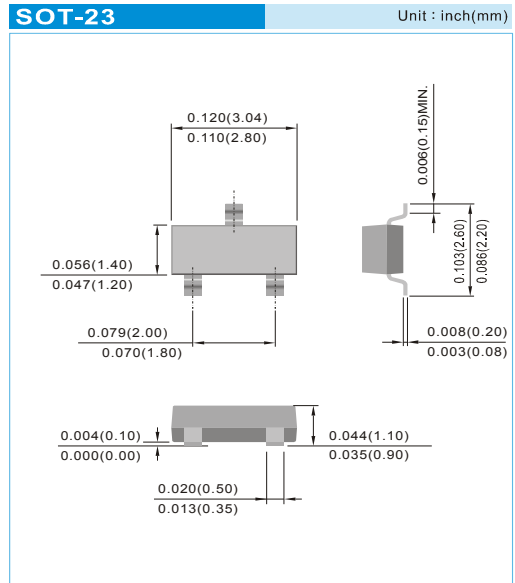
VOLTAGE 30 Volt **CURRENT** 0.2 Ampere

FEATURES

- Low turn-on voltage
- Fast switching
- PN Junction Guard Ring for Transient and ESD Protection.
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

MECHANICAL DATA

- Case: SOT-23, Plastic
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0003 ounces, 0.0084 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. For capacitive load, derate current by 20%.

| Parameter | Symbol | BAT54 | BAT54A | BAT54C | BAT54S | Units |
|---|---|-------------|--------------|----------------|--------|-------|
| Forward Power Dissipation@T _A =25°C | P _D | 225 | | | | mW |
| Peak Repetitive Reverse Voltage | V _{RRM} | 30 | | | | V |
| Maximum Average Forward Current at T _A =75°C | I _O | 0.2 | | | | A |
| Repetitive Peak Forward Current (tp=8.3ms,50%Duty Cycle) | I _{FRM} | 300 | | | | mA |
| Peak Forward Surge Current, 1s | I _{FSM} | 0.6 | | | | A |
| Maximum Instantaneous Forward Voltage @ I _F =1mA @ I _F =100mA | V _F | 0.32 0.6 | | | | V |
| Typical Instantaneous Forward Voltage @ I _F =0.1mA | V _F | 0.22 | | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage@V _R =25V | I _R | 2 | | | | μA |
| Junction Capacitance at V _R =1V | C _J | 10 | | | | pF |
| Thermal Resistance, Junction to Ambient | R _{θJA} | 500 | | | | °C/ W |
| Operating Junction and Storage Temperature Range | T _J ¹ T _{STG} | -55 to +125 | | | | °C |
| Circuit Figure | - | Single | Common Anode | Common Cathode | Series | - |

Note : 1. I_F=10mA through I_R=10mA to I_R=1mA, R_L=100Ω.

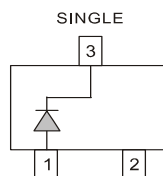


FIG.14(TOP VIEW)

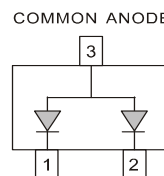


FIG.15(TOP VIEW)

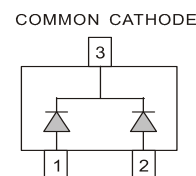


FIG.16(TOP VIEW)

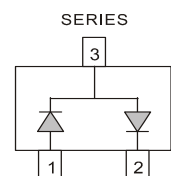


FIG.17(TOP VIEW)



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TYPICAL CHARACTERISTIC CURVES

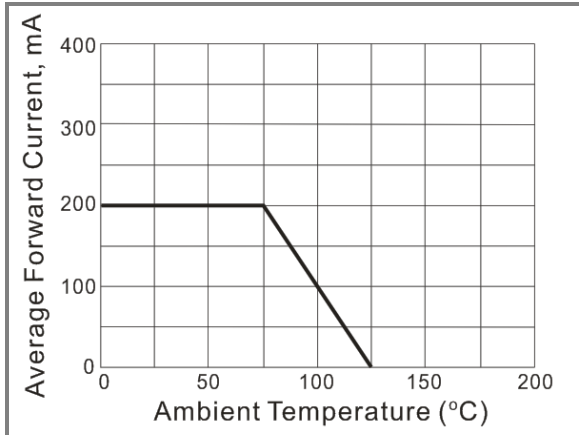


Fig.1 Forward Current Derating Curve

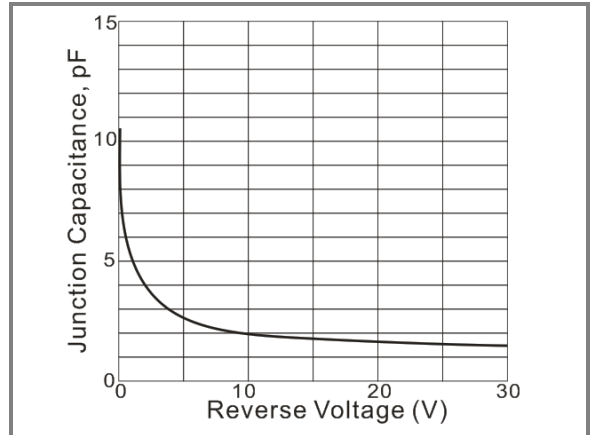


Fig.2 Typical Junction Capacitance

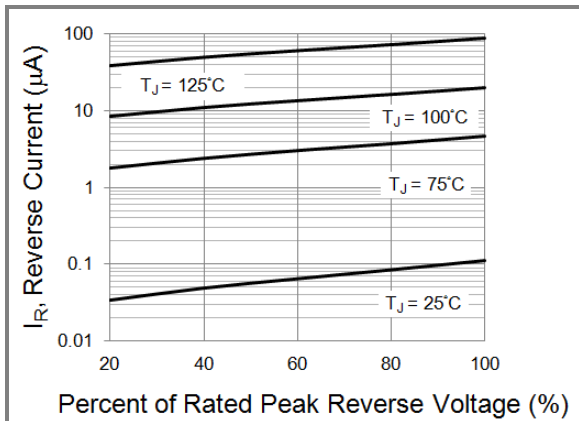


Fig.3 Typical Reverse Characteristics

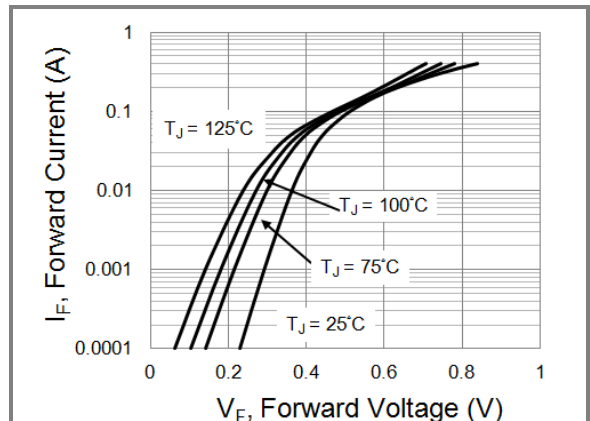


Fig.4 Typical Forward Characteristics

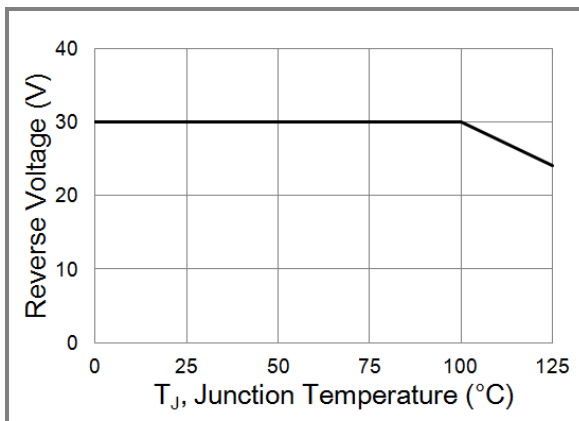


Fig.5 Operating Temperature Derating Curve

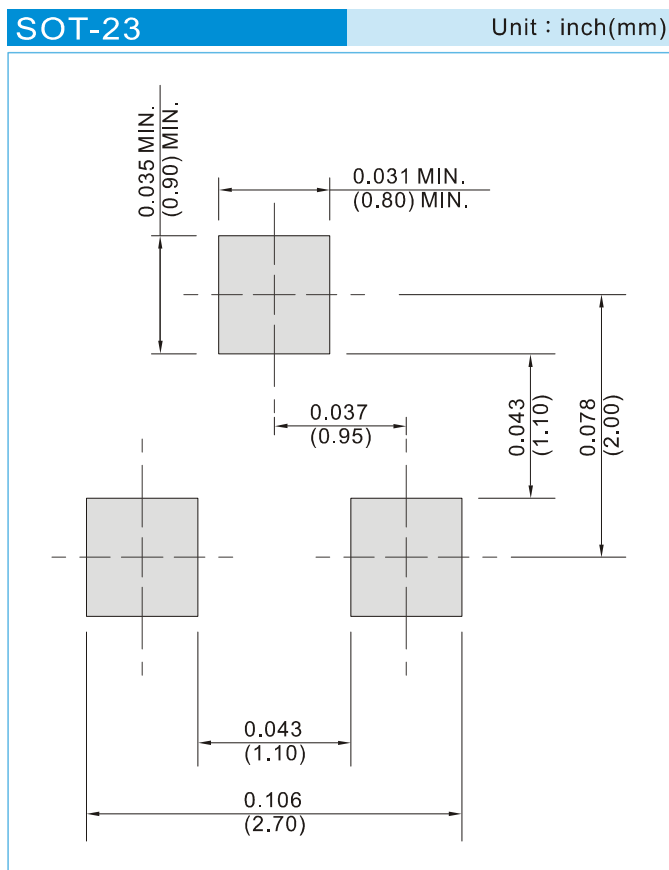


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PART NO PACKING CODE VERSION

| Part No Packing Code | Package Type | Packing Type | Marking | Version |
|----------------------|--------------|--------------------|---------|--------------|
| BAT54_R1_00001 | SOT-23 | 3K pcs / 7" reel | L4 | Halogen free |
| BAT54_R2_00001 | SOT-23 | 12K pcs / 13" reel | L4 | Halogen free |
| BAT54A_R1_00001 | SOT-23 | 3K pcs / 7" reel | L42 | Halogen free |
| BAT54A_R2_00001 | SOT-23 | 12K pcs / 13" reel | L42 | Halogen free |
| BAT54C_R1_00001 | SOT-23 | 3K pcs / 7" reel | L43 | Halogen free |
| BAT54C_R2_00001 | SOT-23 | 12K pcs / 13" reel | L43 | Halogen free |
| BAT54S_R1_00001 | SOT-23 | 3K pcs / 7" reel | L44 | Halogen free |
| BAT54S_R2_00001 | SOT-23 | 12K pcs / 13" reel | L44 | Halogen free |

MOUNTING PAD LAYOUT





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