

SOT23 SILICON EPITAXIAL SCHOTTKY BARRIER DIODES

BAT54 SERIES

ISSUE 1- SEPTEMBER 1995

| | | | | |
|--------|--------------|--------|----------------|--------------------|
| | | | | |
| BAT54 | BAT54A | BAT54S | BAT54C | Device Type |
| SINGLE | COMMON ANODE | SERIES | COMMON CATHODE | Pin Configuration |
| L4Z | L42 | L44 | L43 | Partmarking Detail |

FEATURES: Low V_F & High Current Capability

APPLICATIONS: PSU, Mobile Telecomms & SCSI

ABSOLUTE MAXIMUM RATINGS.

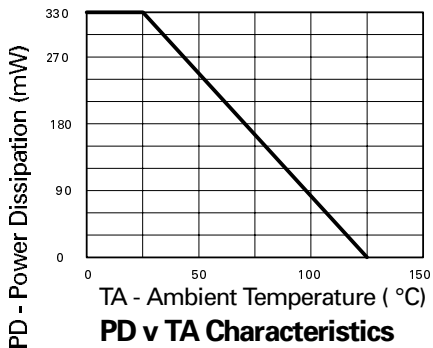
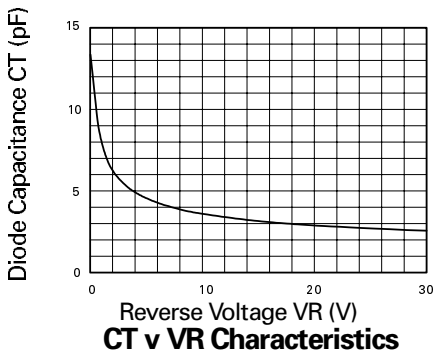
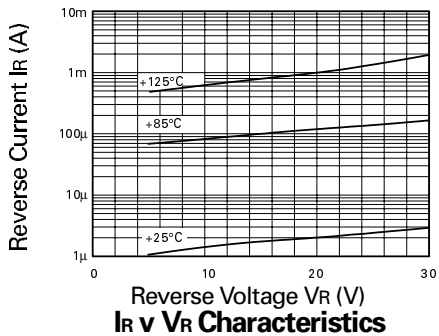
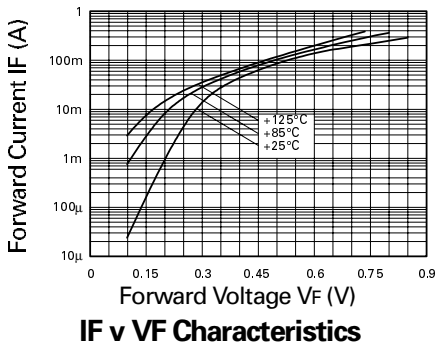
| PARAMETER | SYMBOL | VALUE | UNIT |
|---|-----------|-------------|------------------|
| Continuous Reverse Voltage | V_R | 30 | V |
| Forward Current | I_F | 200 | mA |
| Forward Voltage @ $I_F=10\text{mA}$ | V_F | 400 | mV |
| Repetitive Peak Forward Current | I_{FRM} | 300 | mA |
| Non Repetitive Forward Current $t<1\text{s}$ | I_{FSM} | 600 | mA |
| Power Dissipation at $T_{amb}=25^\circ\text{C}$ | P_{tot} | 330 | mW |
| Storage Temperature Range | T_{stg} | -55 to +150 | $^\circ\text{C}$ |
| Junction Temperature \square | T_j | 125 | $^\circ\text{C}$ |

ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^\circ\text{C}$ unless otherwise stated).

| PARAMETER | SYMBOL | MIN. | TYP. | MAX. | UNIT | CONDITIONS. |
|---------------------------|-------------|------|---------------------------------|----------------------------------|----------------------------|--|
| Reverse Breakdown Voltage | $V_{(BR)R}$ | 30 | 50 | | V | $I_R=10\mu\text{A}$ |
| Forward Voltage | V_F | | 135 200 280 350 530 | 240 320 400 500 1000 | mV mV mV mV mV | $I_F=0.1\text{mA}$ $I_F=1\text{mA}$ $I_F=10\text{mA}$ $I_F=30\text{mA}$ $I_F=100\text{mA}$ |
| Reverse Current | I_R | | 2.5 | 4 | μA | $V_R=25\text{V}$ |
| Diode Capacitance | C_D | | 7.5 | 10 | pF | $f=1\text{MHz}, V_R=1\text{V}$ |
| Reverse Recover Time | t_{rr} | | | 5 | ns | switched from $I_F=10\text{mA}$ to $I_R=10\text{mA}$ $R_L=100\Omega$, Measured at $I_R=1\text{mA}$ |

\square Dual Device; For simultaneous continuous use $T_j=100^\circ\text{C}$.

TYPICAL CHARACTERISTICS



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