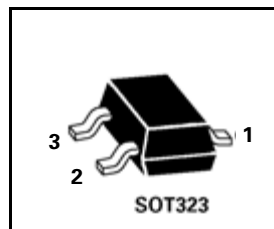


SOT323 SILICON EPITAXIAL SCHOTTKY BARRIER DIODES

ISSUE 1– DECEMBER 1998

ZUMD54 ZUMD54C

| | |
|---------------|-----------------------|
| | |
| SINGLE | COMMON CATHODE |
| ZUMD54 | ZUMD54C |
| Partmark: D8 | Partmark: D8C |



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 | T_j | 125 | $^\circ\text{C}$ |

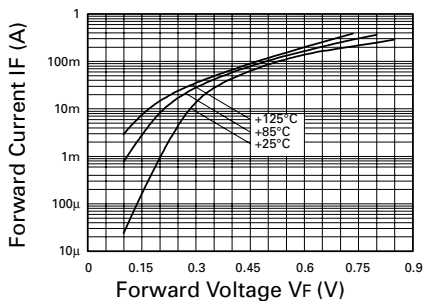
ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^\circ\text{C}$ unless otherwise stated).

| 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 | | 1.4 | 2 | μA | $V_R = 25\text{V}$ |
| Diode Capacitance | C_D | | 7.5 | 10 | pF | $f = 1\text{MHz}, V_R = 1\text{V}$ |
| Reverse Recovery Time | t_{rr} | | | 5 | ns | switched from $I_F = 10\text{mA}$ to $I_R = 10\text{mA}$ $R_L = 100\Omega, I_R = 1\text{mA}$ |

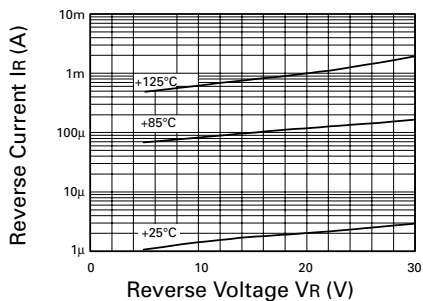
▣ Dual Device; For simultaneous continuous use $T_j = 100^\circ\text{C}$.

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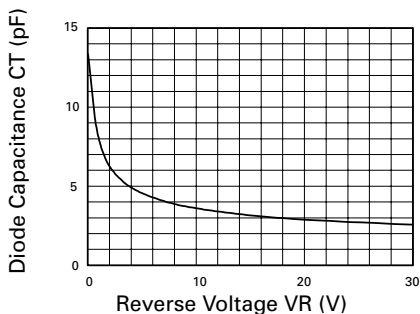
TYPICAL CHARACTERISTICS



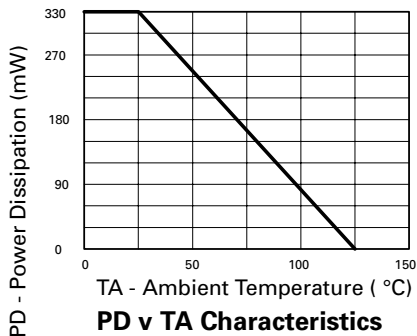
I_F v V_F Characteristics



I_R v V_R Characteristics



C_T v V_R Characteristics



PD v T_A Characteristics