# SBDB10150CT SCHOTTKY BARRIER RECTIFIER

## MAIN CHARACTERISTICS

| | |
|---|---|
| $I_O$ | 10（2×5）A |
| $V_{RRM}$ | 150 V |
| $T_j$ | 150 ℃ |
| $V_{F(typ)}$ | 0.69V （@Ta=125℃） |

TO-263

1.ANODE
2.CATHODE
3.ANODE

## FEATURES

- Low Power Loss,High Efficiency
- Guard Ring Die Construction for Transient Protection
- High Current Capability and Low Forward Voltage Drop

## MAXIMUM RATINGS ( $T_a$=25℃ unless otherwise noted )

| Symbol | Parameter | Value | Unit |
|---|---|---|---|
| $V_{RRM}$ | Peak repetitive reverse voltage | 150 | V |
| $V_{RWM}$ | Working peak reverse voltage | | |
| $V_R$ | DC blocking voltage | | |
| $V_{R(RMS)}$ | RMS reverse voltage | 105 | V |
| $I_O$ | Average rectified output current | 10 | A |
| $I_{FSM}$ | Non-Repetitive peak forward surge current (8.3ms half sine wave) | 120 | A |
| $R_{\Theta JC}$ | Thermal resistance from junction to case ,Tc=25℃ | 2.0 | ℃/W |
| $R_{\Theta JA}$ | Thermal resistance from junction to ambient | 62.5 | ℃/W |
| $T_j$ | Junction temperature | 150 | ℃ |
| $T_{stg}$ | Storage temperature | -55~+150 | ℃ |

## ELECTRICAL CHARACTERISTICS ($T_a$=25℃ unless otherwise specified)

| Parameter | Symbol | Test conditions | | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|---|
| Reverse voltage | $V_{(BR)}$ | $I_R$=0.1mA | | 150 | | | V |
| Reverse current | $I_R$ | $V_R$=150V | Tj =25℃ | | 1.0 | 100 | uA |
| | | | Tj =125℃ | | 1.0 | | mA |
| Forward voltage | $V_F$ | $I_F$=3A | Tj =25℃ | | 0.78 | | V |
| | | | Tj =125℃ | | 0.64 | | V |
| | | $I_F$=5A | Tj =25℃ | | 0.80 | 0.87 | V |
| | | | Tj =125℃ | | 0.69 | | V |

*Pulse test: pulse width ≤300μs, duty cycle≤ 2.0%.

FIG.1: FORWARD CURRENT DERATING CURVE

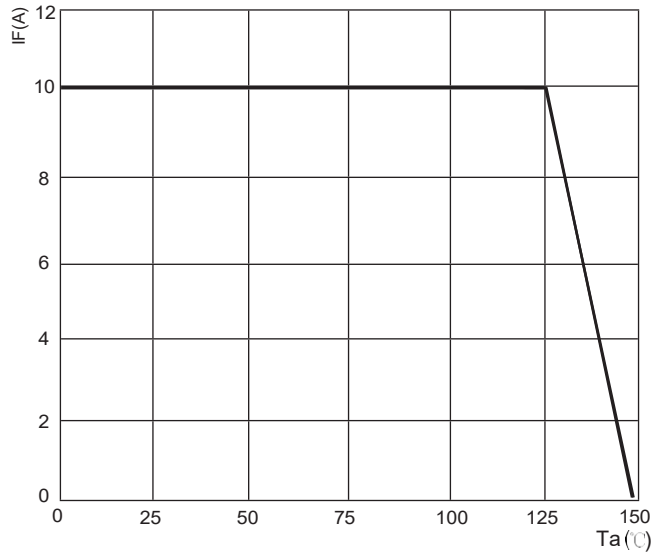


FIG.2: TYPICAL FORWARD CHARACTERISTICS

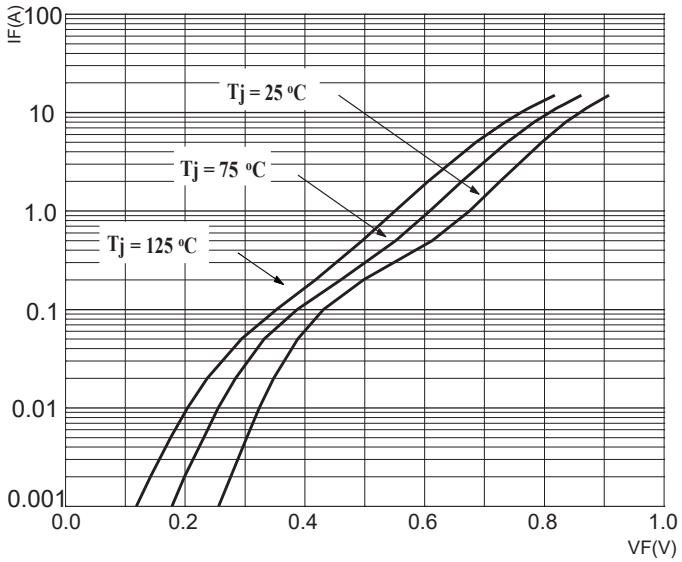


FIG.3: TOTAL CAPACITANCE DERATING CURVE

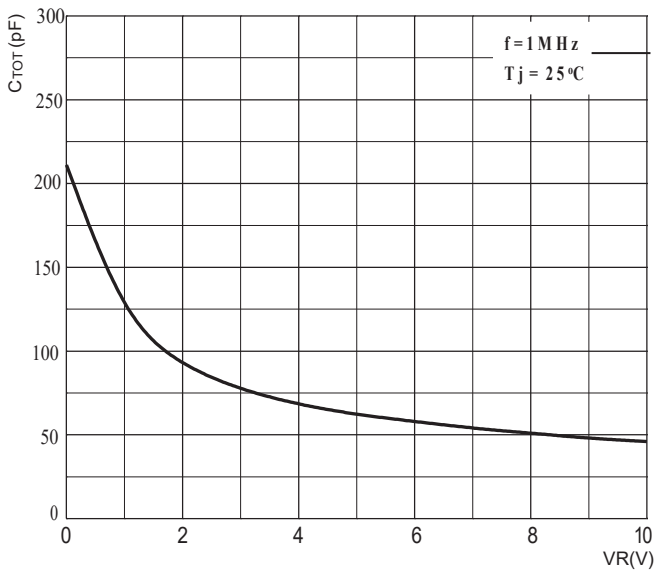


FIG.4: TYPICAL REVERSE CHARACTERISTICS