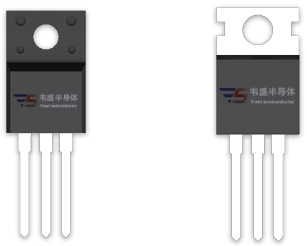
# SBD30200CT、SBDF30200CT SCHOTTKY BARRIER RECTIFIER

## MAIN CHARACTERISTICS

| | |
|---|---|
| $I_O$ | 30（2×15）A |
| $V_{RRM}$ | 200 V |
| $T_j$ | 150 ℃ |
| $V_{F(typ)}$ | 0.75V （@Tj=125℃） |



TO-220F TO-220C

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 | SBD | | Unit |
|---|---|---|---|---|
| | | 30200CT | F30200CT | |
| $V_{RRM}$ | Peak repetitive reverse voltage | 200 | | V |
| $V_{RWM}$ | Working peak reverse voltage | | | |
| $V_R$ | DC blocking voltage | | | |
| $V_{R(RMS)}$ | RMS reverse voltage | 140 | | V |
| $I_O$ | Average rectified output current | 30 | | A |
| $I_{FSM}$ | Non-Repetitive peak forward surge current (8.3ms half sine wave) | 200 | | A |
| $R_{\Theta Jc}$ | Thermal resistance from junction to case ,Tc=25℃ | 2.0 | 3.0 | ℃/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 | | 200 | | | V |
| Reverse current | $I_R$ | $V_R$=200V | Tj =25℃ | | 5.0 | 100 | uA |
| | | | Tj =125℃ | | 5.0 | | mA |
| Forward voltage | $V_F$ | $I_F$=10A | Tj =25℃ | | 0.82 | | V |
| | | | Tj =125℃ | | 0.71 | | V |
| | | $I_F$=15A | Tj =25℃ | | 0.87 | 0.95 | V |
| | | | Tj =125℃ | | 0.76 | | V |

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

FIG.1: FORWARD CURRENT DERATING CURVE

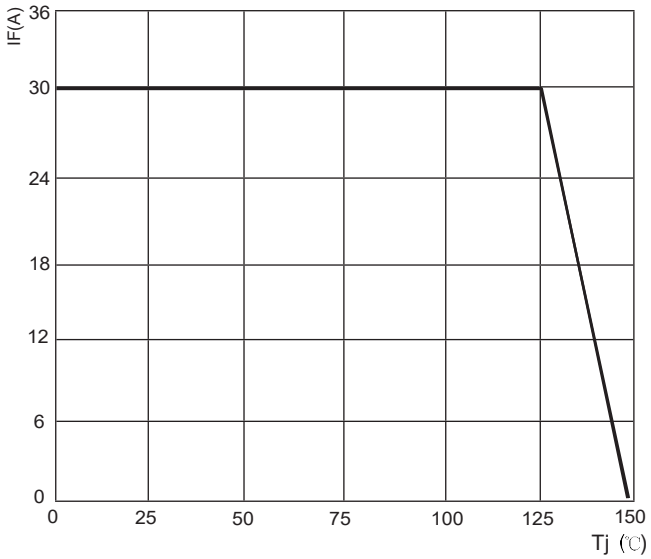



FIG.2: TYPICAL FORWARD CHARACTERISTICS

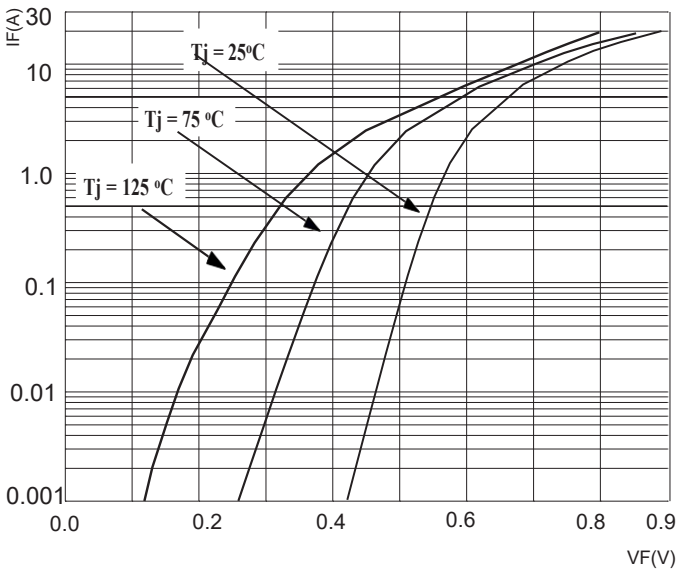



FIG.3: TOTAL CAPACITANCE DERATING CURVE

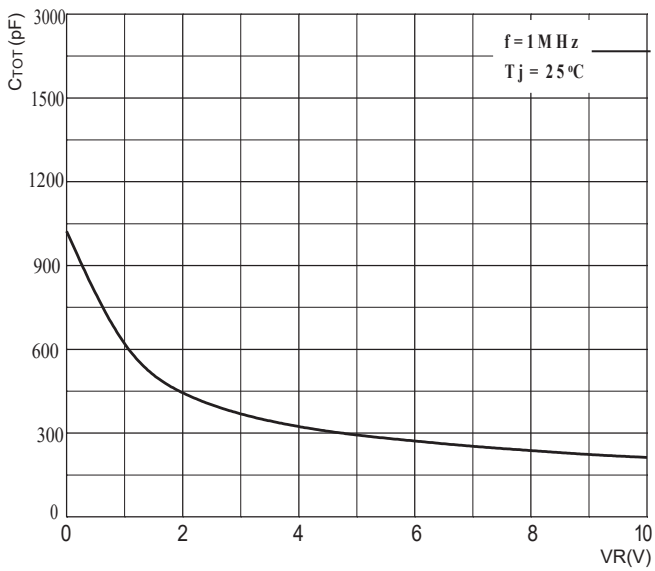



FIG.4: TYPICAL REVERSE CHARACTERISTICS