

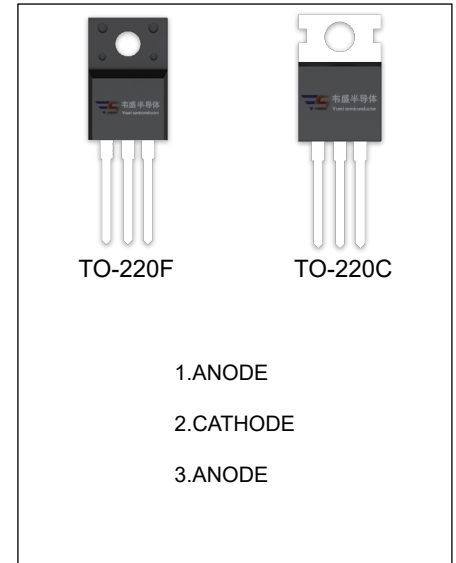
SBD30100SCTB、SBDF30100SCTB SCHOTTKY BARRIER RECTIFIER

MAIN CHARACTERISTICS

| | |
|--------------|--------------------------|
| I_O | 30 (2×15) A |
| V_{RRM} | 100 V |
| T_j | 150 °C |
| $V_{F(typ)}$ | 0.63V (@Tj=125°C) |

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°C unless otherwise noted)

| Symbol | Parameter | SBD | | Unit |
|-----------------|--|-----------|------------|------|
| | | 30100SCTB | F30100SCTB | |
| V_{RRM} | Peak repetitive reverse voltage | 100 | | V |
| V_{RWM} | Working peak reverse voltage | | | |
| V_R | DC blocking voltage | | | |
| $V_{R(RMS)}$ | RMS reverse voltage | 70 | | 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 ,T _c =25°C | 2.0 | 3.0 | °C/W |
| $R_{\theta JA}$ | Thermal resistance from junction to ambient | 62.5 | | °C/W |
| T_j | Junction temperature | 150 | | °C |
| T_{stg} | Storage temperature | -55~+150 | | °C |

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|-----------------|------------|-----------------|--------------------|------|------|------|
| Reverse voltage | $V_{(BR)}$ | $I_R=1mA$ | 100 | | | V |
| Reverse current | I_R | $V_R=100V$ | $T_j=25^{\circ}C$ | 10 | 100 | uA |
| | | | $T_j=125^{\circ}C$ | 10 | | mA |
| Forward voltage | V_F | $I_F=10A$ | $T_j=25^{\circ}C$ | 0.58 | | V |
| | | | $T_j=125^{\circ}C$ | 0.56 | | V |
| | | $I_F=15A$ | $T_j=25^{\circ}C$ | 0.67 | 0.71 | V |
| | | | $T_j=125^{\circ}C$ | 0.63 | | V |

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

FIG.1: FORWARD CURRENT DERATING CURVE

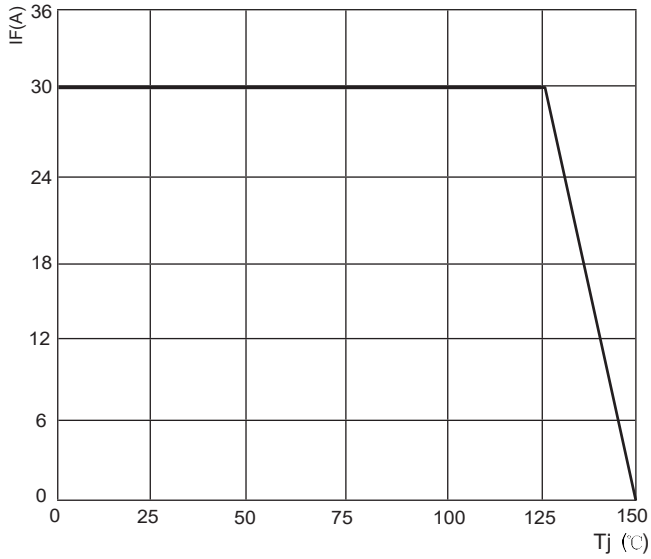


FIG.2: TYPICAL FORWARD CHARACTERISTICS

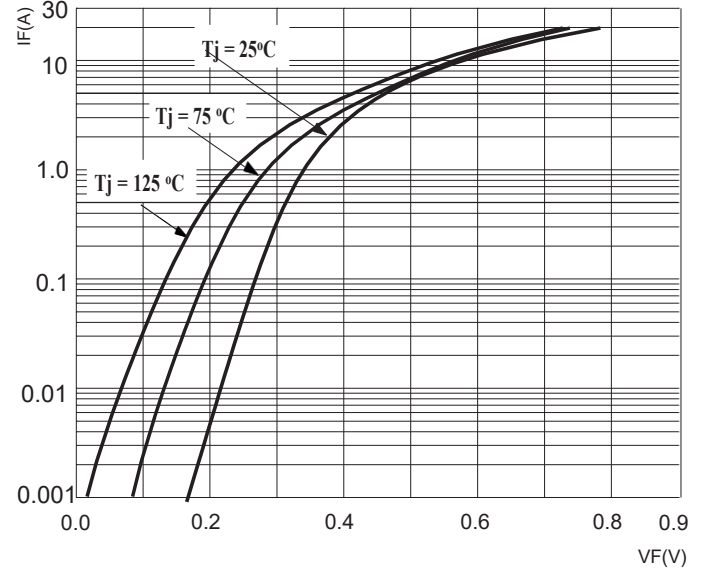


FIG.3: TOTAL CAPACITANCE DERATING CURVE

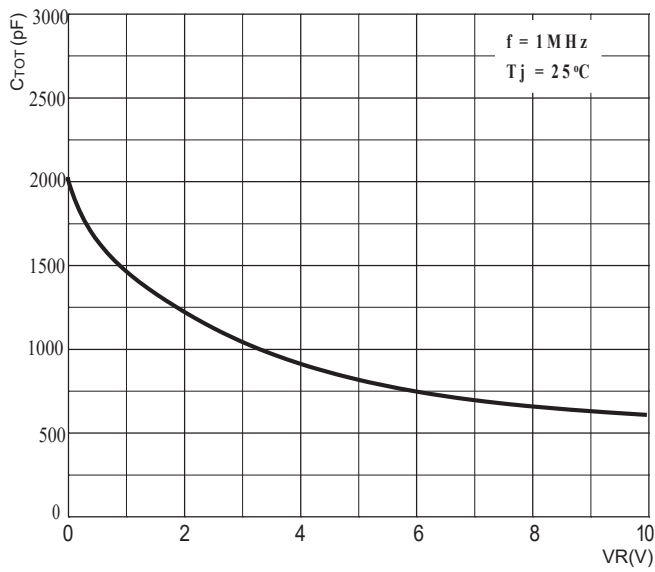


FIG.4: TYPICAL REVERSE CHARACTERISTICS

