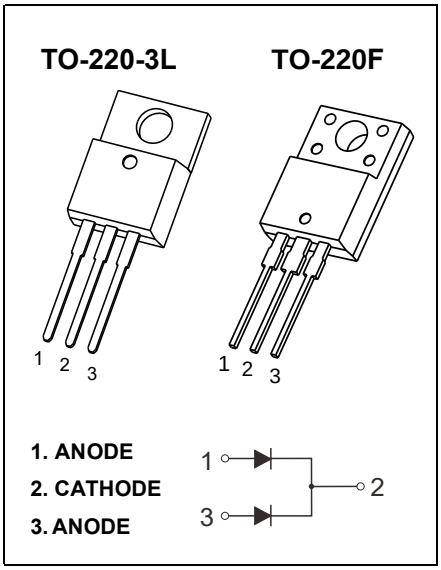
# SBD20150TCTB、SBDF20150TCTB SCHOTTKY BARRIER RECTIFIER

**MAIN CHARACTERISTICS**

| | |
|---|---|
| $I_O$ | 20（2×10）A |
| $V_{RRM}$ | 150 V |
| $T_j$ | 150 ℃ |
| $V_{F(typ)}$ | 0.68V （@Tj=125℃） |




**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 |
|---|---|---|---|---|
| | | 20150CT | F20150CT | |
| $V_{RRM}$ | 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 | 20 | | A |
| $I_{FSM}$ | Non-Repetitive peak forward surge current (8.3ms half sine wave) | 150 | | 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 | $V_{(BR)}$ | $I_R$=100uA | | 150 | | | V |
| Reverse current | $I_R$ | $V_R$=150V | Tj =25℃ | | 5.0 | 100 | uA |
| | | | Tj =125℃ | | 5.0 | | mA |
| Forward voltage | $V_F$ | $I_F$=5A | Tj =25℃ | | 0.75 | | V |
| | | | Tj =125℃ | | 0.58 | | V |
| | | $I_F$=10A | Tj =25℃ | | 1.06 | 1.1 | V |
| | | | Tj =125℃ | | 0.68 | | V |

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

FIG.1: FORWARD CURRENT DERATING CURVE

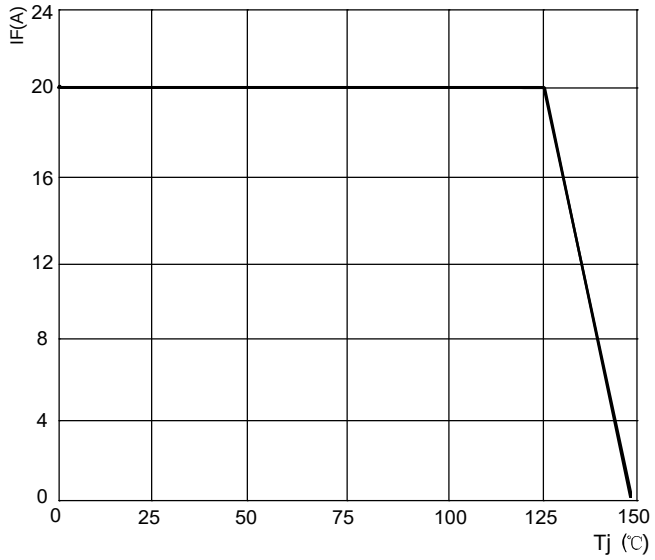



FIG.2: TYPICAL FORWARD CHARACTERISTICS

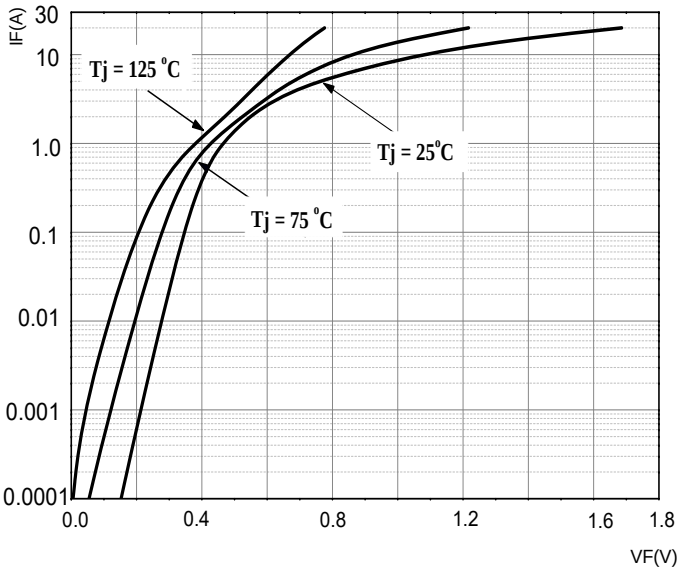



FIG.3: TOTAL CAPACITANCE DERATING CURVE

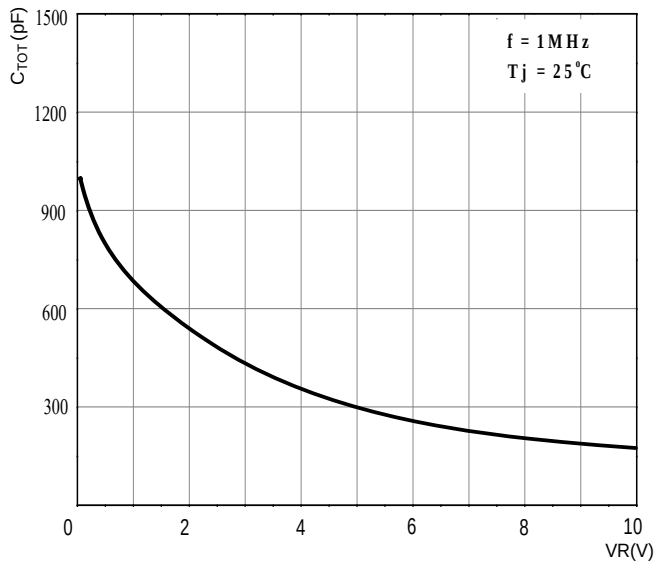
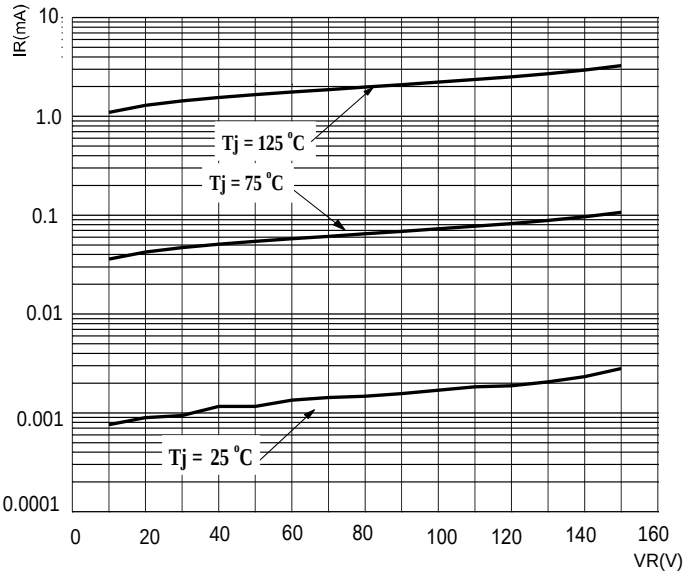
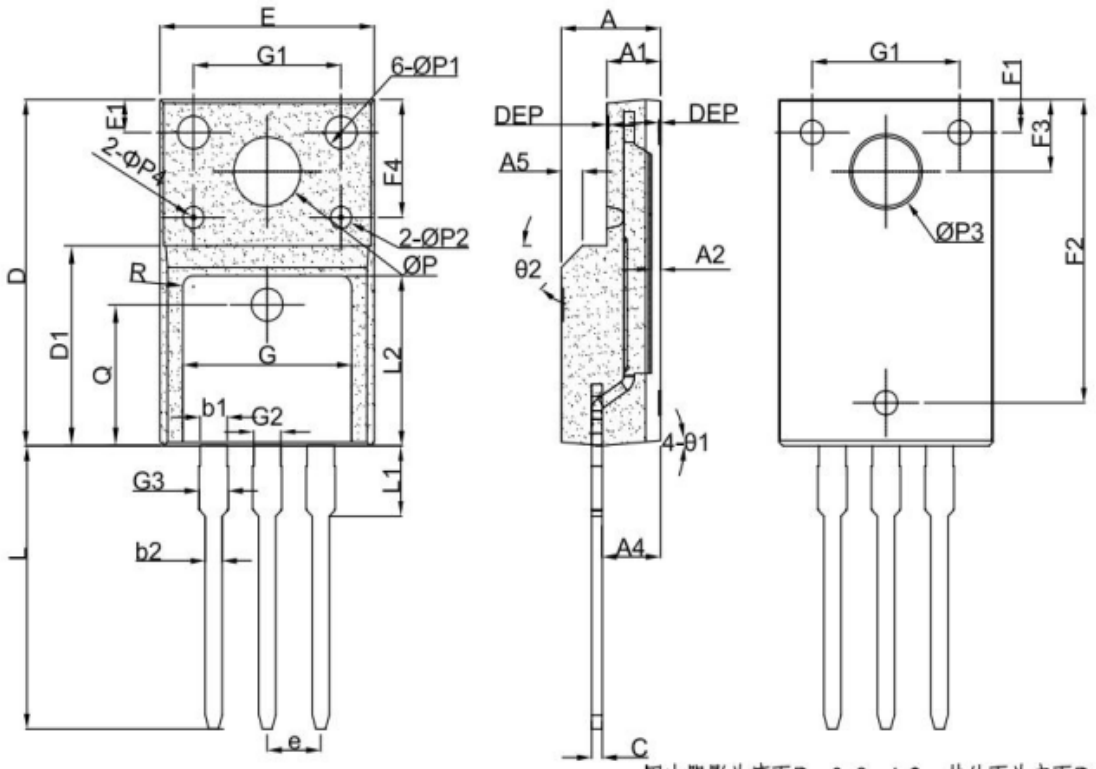
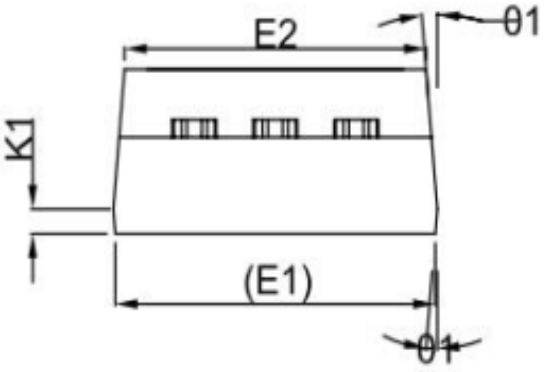



FIG.4: TYPICAL REVERSE CHARACTERISTICS






图中阴影为麻面Ra0.8-1.2，其他面为亮面Ra0.2-0.4




| SYMBOL | mm | | |
|---|---|---|---|
| | MIN | NOM | MAX |
| *A | 4.50 | 4.70 | 4.90 |
| *A1 | 2.34 | 2.54 | 2.74 |
| *A2 | 0.38 | 0.43 | 0.48 |
| *A4 | 2.66 | 2.76 | 2.86 |
| A5 | | 1.0REF | |
| b1 | 1.15 | 1.20 | 1.25 |
| *b2 | 0.75 | 0.80 | 0.85 |
| *c | 0.45 | 0.50 | 0.60 |
| *D | 15.67 | 15.87 | 16.07 |
| *D1 | 9.04 | 9.12 | 9.20 |
| *e | 2.49 | 2.54 | 2.59 |
| *E | 10.00 | 10.16 | 10.32 |
| E1 | 9.94 | 10.04 | 10.14 |
| E2 | 9.36 | 9.46 | 9.56 |
| F1 | 1.40 | 1.50 | 1.60 |
| F2 | 13.80 | 13.90 | 14.00 |
| *F3 | 3.20 | 3.30 | 3.40 |
| F4 | 5.30 | 5.40 | 5.50 |
| G | 7.80 | 8.00 | 8.20 |
| G1 | 6.90 | 7.00 | 7.10 |
| *G3 | 1.15 | - | 1.30 |
| K1 | 0.65 | 0.70 | 0.75 |
| *L | 12.78 | 12.98 | 13.18 |
| *L1 | 3.13 | 3.23 | 3.33 |
| L2 | 7.40 | 7.50 | 7.60 |
| Q | | 6.5REF | |
| R | | 0.5REF | |
| *ΦP | 3.08 | 3.18 | 3.28 |
| ΦP1 | 1.40 | 1.50 | 1.60 |
| ΦP2 | 0.95 | 1.00 | 1.05 |
| ΦP3 | 3.35 | 3.40 | 3.45 |
| ΦP4 | 0.15 | 0.20 | 0.25 |
| *θ1 | 3° | 5° | 7° |
| θ2 | - | 45° | - |
| DEP | 0.05 | 0.1 | 0.15 |
| 带*为检验尺寸 | | | |