

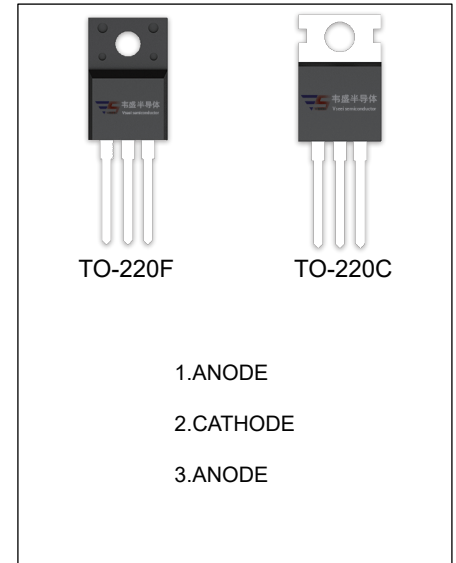
SBD30H300A、SBDF30H300A SCHOTTKY BARRIER RECTIFIER

MAIN CHARACTERISTICS

| | |
|--------------|---|
| I_O | 30A |
| V_{RRM} | 300 V |
| T_j | 175 °C |
| $V_{F(typ)}$ | 0.86V (@$T_j=150^{\circ}C$) |

FEATURES

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



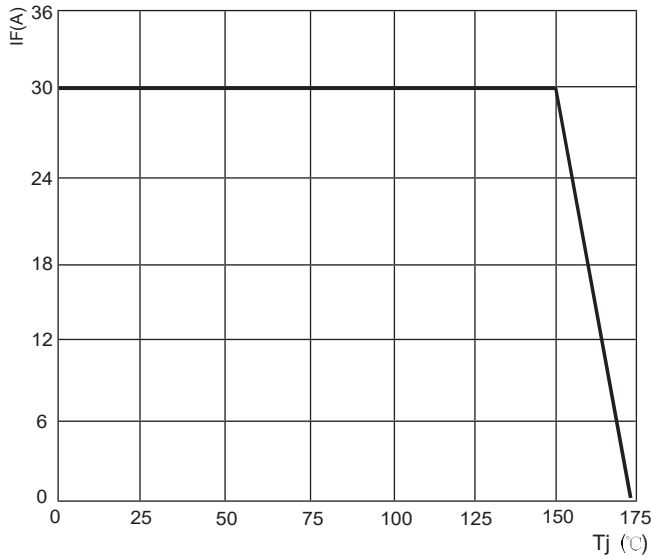
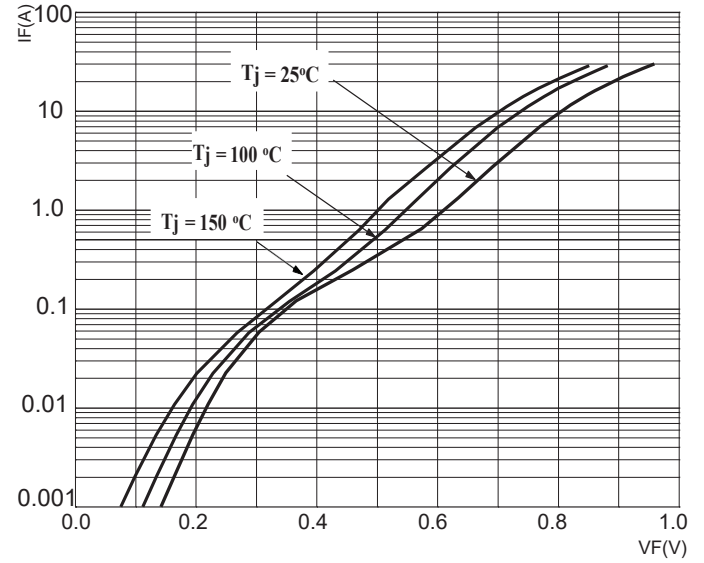
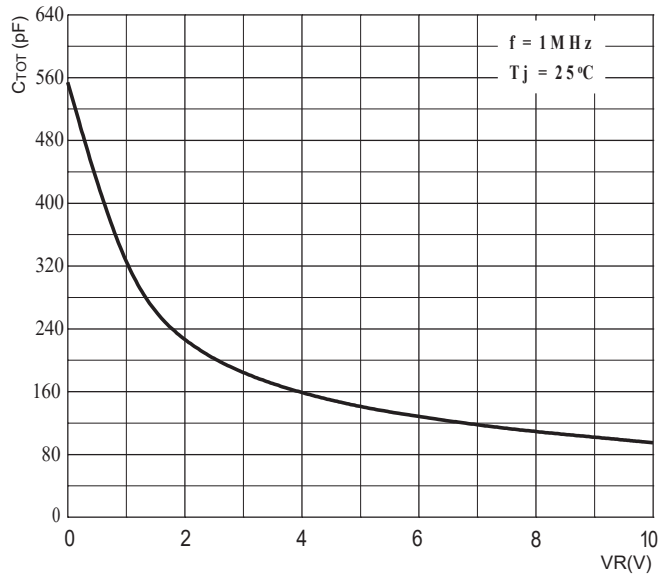
MAXIMUM RATINGS ($T_a=25^{\circ}C$ unless otherwise noted)

| Symbol | Parameter | SBD | | Unit |
|-----------------|--|----------|----------|---------------|
| | | 30H300A | F30H300A | |
| V_{RRM} | Peak repetitive reverse voltage | 300 | | V |
| V_{RWM} | Working peak reverse voltage | | | |
| V_R | DC blocking voltage | | | |
| $V_{R(RMS)}$ | RMS reverse voltage | 210 | | V |
| I_O | Average rectified output current | 30 | | A |
| I_{FSM} | Non-Repetitive peak forward surge current (8.3ms half sine wave) | 360 | | A |
| $R_{\theta Jc}$ | Thermal resistance from junction to case , $T_c=25^{\circ}C$ | 2.0 | 3.0 | $^{\circ}C/W$ |
| $R_{\theta JA}$ | Thermal resistance from junction to ambient | 75 | | $^{\circ}C/W$ |
| T_j | Junction temperature | 175 | | $^{\circ}C$ |
| T_{stg} | Storage temperature | -55~+175 | | $^{\circ}C$ |

ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}C$ unless otherwise specified)

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|-----------------|------------|-----------------|--------------------|------|------|---------|
| Reverse voltage | $V_{(BR)}$ | $I_R=0.1mA$ | 300 | | | V |
| Reverse current | I_R | $V_R=300V$ | $T_j=25^{\circ}C$ | 0.5 | 2.0 | μA |
| | | | $T_j=150^{\circ}C$ | 2.0 | | mA |
| Forward voltage | V_F | $I_F=15A$ | $T_j=25^{\circ}C$ | 0.85 | | V |
| | | | $T_j=150^{\circ}C$ | 0.72 | | V |
| | | $I_F=30A$ | $T_j=25^{\circ}C$ | 0.93 | 0.97 | V |
| | | | $T_j=150^{\circ}C$ | 0.86 | | V |

*Pulse test: pulse width $\leq 300\mu s$, duty cycles $\leq 2.0\%$.

FIG.1: FORWARD CURRENT DERATING CURVE

FIG.2: TYPICAL FORWARD CHARACTERISTICS

FIG.3: TOTAL CAPACITANCE DERATING CURVE

FIG.4: TYPICAL REVERSE CHARACTERISTICS
