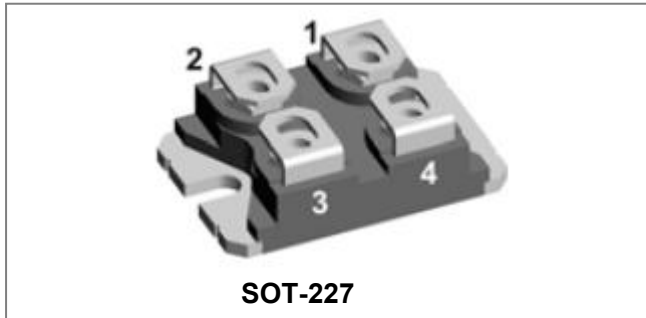


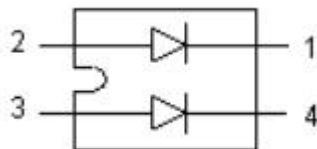
SK2S300-170 Power Schottky Rectifier



Features

- International standard package SOT-227
- Extremely low switching losses
- Low I_{RM} -values
- Copper internally DBC isolated
- Base plate: Nickel plated; Terminals: Nickel plated
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Applications

- Rectifiers in switch mode power Supplies(SMPS)
- Free wheeling diode in low voltage Converters

Advantages

- High reliability circuit operation
- Low voltage peaks for reduced Protection circuits
- Low noise switching
- Low losses

Maximum Ratings(limiting values, $T_C = 25^\circ\text{C}$ unless otherwise specified) :

| Characteristics | Symbol | Condition | Max. | Units |
|--|---------------------------------|-----------------------------------|------|-------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | - | 170 | V |
| Average Rectified Forward Current (Per Device) | $I_{F(AV)}$ | $T_C = 132^\circ\text{C}$, In DC | 300 | A |
| Peak One Cycle Non-Repetitive Surge Current (Per Leg) | I_{FSM} | 8.3 ms, half Sine pulse | 700 | A |

Electrical Characteristics:

| Characteristics | Symbol | Condition | Typ. | Max. | Units |
|------------------------------------|-------------------|--|--------------|--------------|-------|
| Forward Voltage Drop(Per Leg)* | V _{F1} | @ 100A, Pulse, T _J = 25 °C @ 200A, Pulse, T _J = 25 °C | 0.80 0.92 | 0.85 0.98 | V |
| | V _{F2} | @ 100A, Pulse, T _J = 150 °C @ 200A, Pulse, T _J = 150 °C | 0.62 0.76 | 0.68 0.86 | V |
| Reverse Current(Per Leg)* | I _{R1} | @V _R = rated V _R , T _J = 25 °C | 50 | 200 | uA |
| | I _{R2} | @V _R = rated V _R , T _J = 125 °C | 9 | 100 | mA |
| Isolation Breakdown Voltage(R.M.S) | V _{isol} | Ac.50Hz; R.M.S; 1min, T _J = 25 °C | - | 2500 | V |
| | | Ac.50Hz; R.M.S; 1sec, T _J = 25 °C | - | 3500 | |

* Pulse width < 300 μs, duty cycle < 2%

Thermal-Mechanical Specifications:

| Characteristics | Symbol | Condition | Specification | Units |
|-------------------------------------|------------------|--------------|------------------|---------------|
| Junction Temperature | T _J | - | -55 to +150 | °C |
| Storage Temperature | T _{stg} | - | -55 to +150 | °C |
| Thermal Resistance Junction to Case | R _{θJC} | DC operation | 0.26(Per Leg) | °C/W |
| | | | 0.13(Peg Device) | |
| Mounting torque(M4) | M _D | - | 1.1-1.5/9-13 | Nm/ lb.in. |
| Terminal connection torque(M4) | | | 1.1-1.5/9-13 | |
| Typical Approximate Weight | wt | - | 30 | g |

Ratings and Characteristics Curves

Figure 1 Typical Forward Characteristics

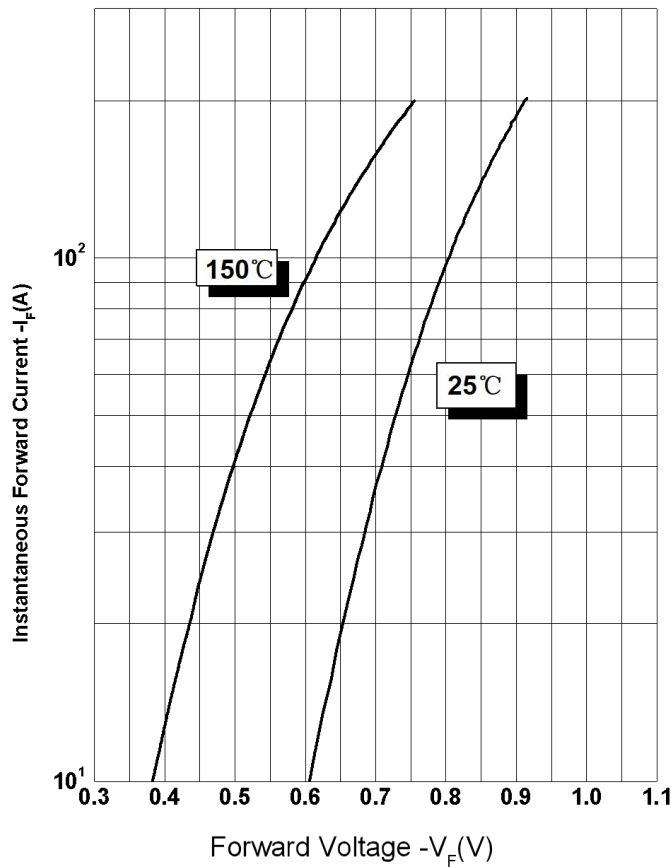


Figure 2 Typical Reverse Characteristics

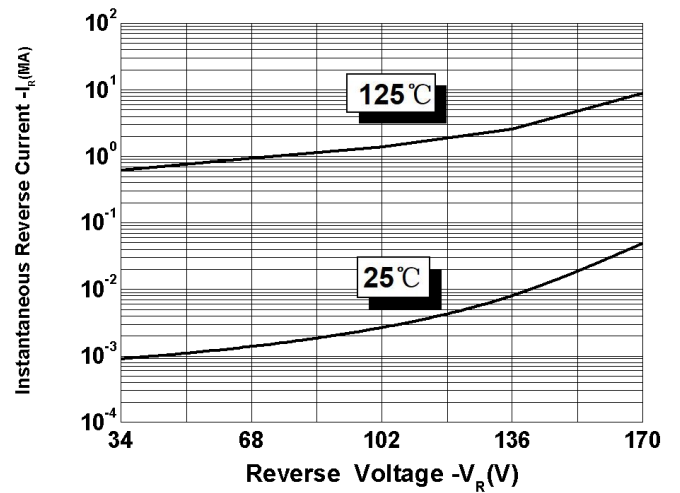
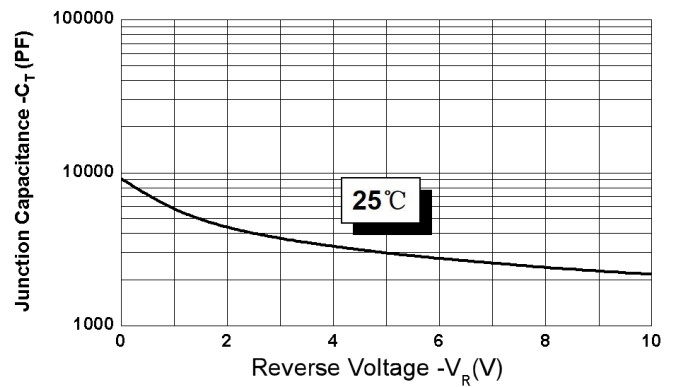
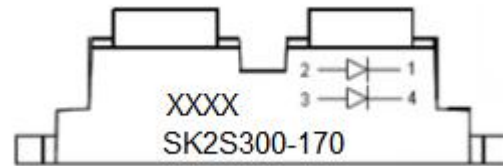


Figure 3 Typical Junction Capacitance



Ordering Information **Marking Diagram**

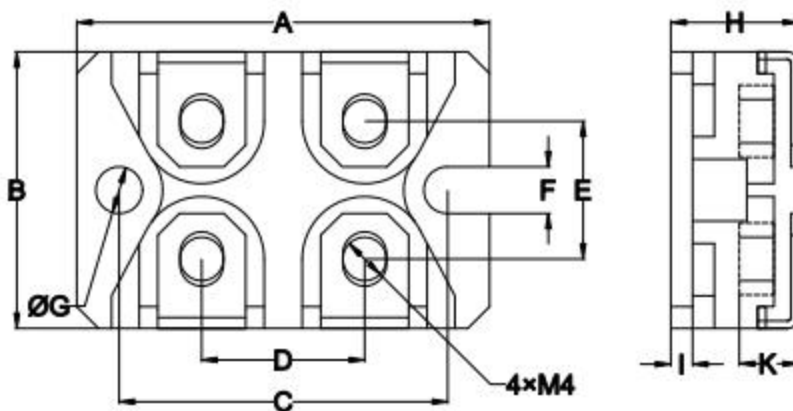
| Device | Package | Shipping |
|-------------|-------------------|-------------|
| SK2S300-170 | SOT-227 (Pb-Free) | 36pcs /BULK |



Where XXXX is YYWW

- S = SMC's Power Module
- K = SOT-227 Package
- 2 = Circuit Configuration
- S = Schottky Rectifier
- 300 = Forward Current (300A)
- 170 = Reverse Voltage (170V)
- YY = Year
- WW = Week

Mechanical Dimensions SOT-227(Millimeters)



| SYMBOL | Dimensions in millimeters | |
|--------|---------------------------|-------|
| | Min. | Max. |
| A | 37.8 | 38.2 |
| B | 24.8 | 25.21 |
| C | 29.9 | 30.55 |
| D | 14.5 | 15.5 |
| E | 12.2 | 13.45 |
| F | 4.1 | 4.31 |
| G | φ4.1 | φ4.31 |
| H | 11 | 12.5 |
| I | 1.9 | 2.1 |
| K | 4.3 | 6.5 |

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