

RoHS Compliant Product
A suffix of "-C" specifies halogen free

FEATURES

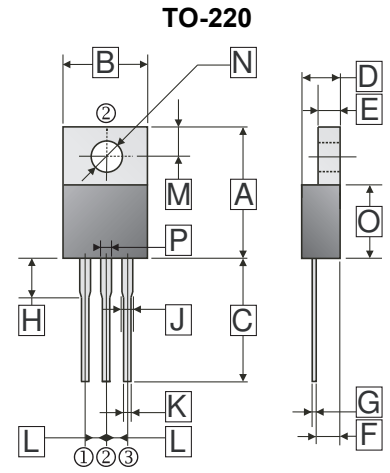
- Planar MOS Schottky technology
- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction

MECHANICAL DATA

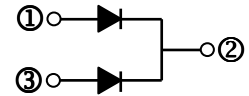
- Case: Molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Lead: Lead solderable per MIL-STD-202 method 208 guaranteed
- Polarity: As Marked
- Mounting position: Any
- Weight: 1.98 g (Approximate)

ORDER INFORMATION

| Part Number | Type |
|-------------|---------------------------------|
| SBL30A60 | Lead (Pb)-free |
| SBL30A60-C | Lead (Pb)-free and Halogen-free |



| REF. | Millimeter | | REF. | Millimeter | |
|------|------------|-------|------|------------|------|
| | Min. | Max. | | Min. | Max. |
| A | 14.22 | 16.51 | J | 0.70 | 1.78 |
| B | 9.57 | 10.90 | K | 0.38 | 1.11 |
| C | 12.50 | 14.75 | L | 2.01 | 3.07 |
| D | 3.56 | 5.10 | M | 2.22 | 3.43 |
| E | 0.51 | 1.47 | N | 3.10 | 4.31 |
| F | 2.03 | 3.19 | O | 8.10 | 9.65 |
| G | 0.279 | 0.76 | P | 1.18 Typ. | |
| H | 2.95 | 4.5 | | | |



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, de-rate current by 20%.)

| Parameter | Symbol | Rating | Unit |
|--|-----------------|--------------------|-------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 60 | V |
| Working Peak Reverse Voltage | V_{RSM} | 60 | V |
| Maximum DC Blocking Voltage | V_{DC} | 60 | V |
| Maximum Average Forward Rectified Current | I_F | (Per Leg) 15 | A |
| | | (Per Device) 30 | |
| Peak Forward Surge Current, 8.3 ms single half sine-wave Superimposed on rated load (JEDEC method) | I_{FSM} | 180 | A |
| Voltage Rate of Change (Rated V_R) | dv/dt | 10000 | V / μ s |
| Typical Thermal Resistance | $R_{\theta JC}$ | 2 | °C / W |
| Operating and Storage Temperature Range | T_J, T_{STG} | -40~150 | °C |

ELECTRICAL CHARACTERISTICS

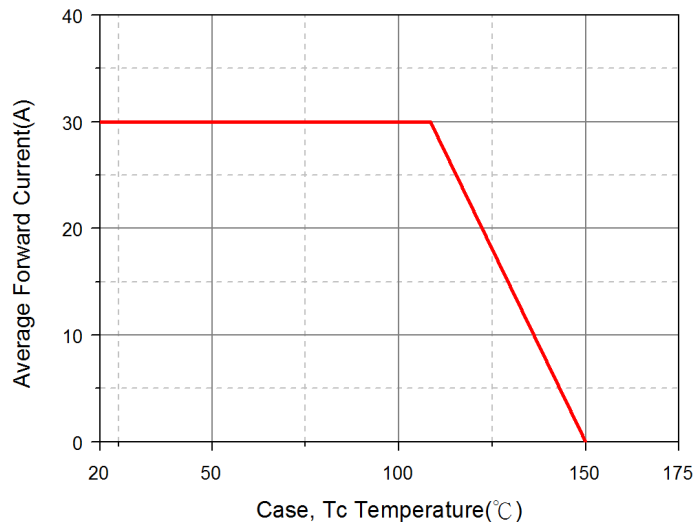
| Parameter | Symbol | Typ. | Max. | Unit | Test Condition |
|--|--------|------|------|------|----------------------------|
| Maximum Instantaneous Forward Voltage | V_F | 0.4 | - | V | $I_F=3A, T_J=25^\circ C$ |
| | | 0.5 | - | | $I_F=10A, T_J=25^\circ C$ |
| | | 0.57 | 0.63 | | $I_F=15A, T_J=25^\circ C$ |
| | | 0.52 | - | | $I_F=15A, T_J=125^\circ C$ |
| Maximum DC Reverse Current at Rated DC Blocking Voltage ² | I_R | - | 0.5 | mA | $T_J=25^\circ C$ |
| | | - | 20 | | $T_J=100^\circ C$ |
| Typical Junction Capacitance ¹ | C_J | 650 | - | pF | |

Notes:

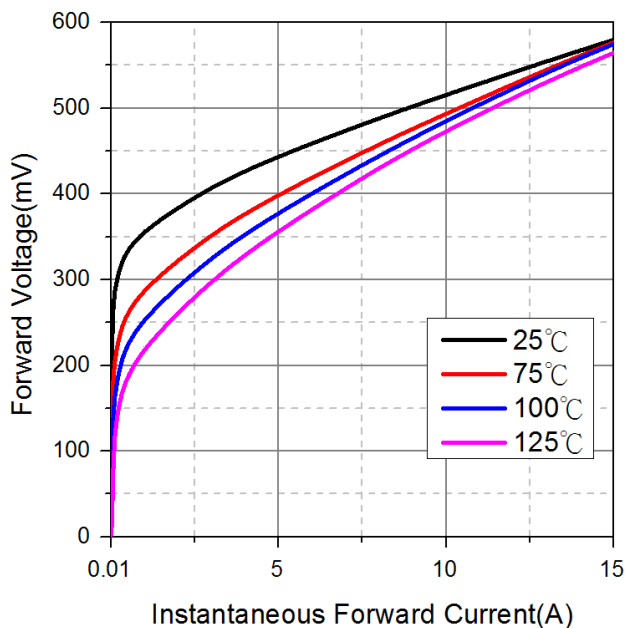
1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
2. Pulse Test : Pulse Width = 300 μ s, Duty Cycle \leq 2.0%.

RATING AND CHARACTERISTIC CURVES

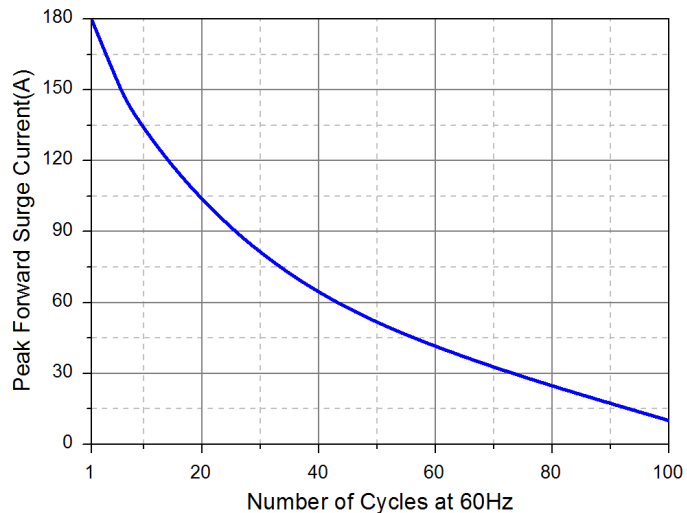
Typical Forward Current Derating Curve



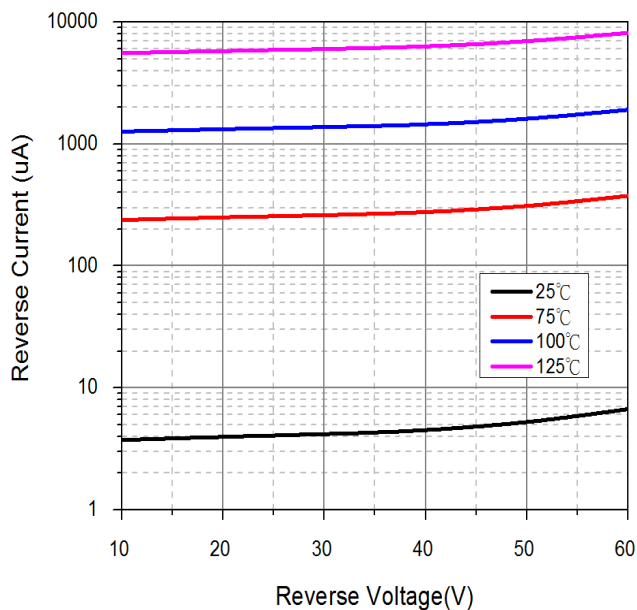
Typical Forward Characteristic



Maximum Non-Repetitive Forward Surge Current



Typical Reverse Characteristic



Typical Junction Capacitance

