Elektronische Bauelemente

# SBL20A100

**Voltage 100V 20.0 Amp**

**Low VF Planar MOS Barrier Schottky Rectifier**

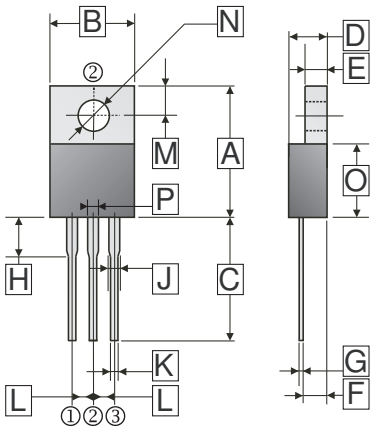
RoHS Compliant Product

A suffix of "-C" specifies halogen free

## FEATURES

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

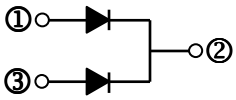
**TO-220**




| REF. | Millimeter | | REF. | Millimeter | |
|---|---|---|---|---|---|
| | Min. | Max. | | Min. | Max. |
| A | 14.22 | 16.51 | J | 0.7 | 1.78 |
| B | 9.65 | 10.67 | K | 0.38 | 1.02 |
| C | 12.50 | 14.75 | L | 2.39 | 2.69 |
| D | 3.56 | 4.90 | M | 2.50 | 3.43 |
| E | 0.51 | 1.45 | N | 3.10 | 4.09 |
| F | 2.03 | 2.92 | O | 8.38 | 9.65 |
| G | 0.31 | 0.76 | P | 0.89 | 1.45 |
| H | 3.5 | 4.5 | | | |

## 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)




## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25℃ ambient temperature unless otherwise s pecified. 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 | | $V_{RRM}$ | 100 | V |
| Working Peak Reverse Voltage | | $V_{RSM}$ | 100 | V |
| Maximum DC Blocking Voltage | | $V_{DC}$ | 100 | V |
| Maximum Average Forward Rectified Current | (Per Leg) | $I_F$ | 10 | A |
| | (Per Device) | | 20 | |
| Peak Forward Surge Current, 8.3 ms single half sine-wave | | $I_{FSM}$ | 120 | A |
| Voltage Rate of Chance (Rated $V_R$) | | dv/dt | 10000 | V / μs |
| Typical Thermal Resistance | | $R_{\theta JC}$ | 2 | ℃ /W |
| Operating and Storage Temperature Range | | $T_J$,$T_{STG}$ | -40~150 | ℃ |

## ELECTRICAL CHARACTERISTICS

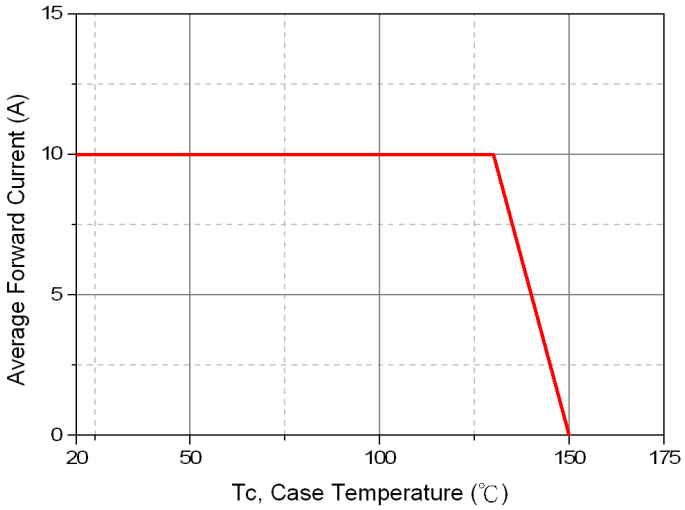
| Parameter | Symbol | Typ. | Max. | Unit | Test Condition |
|---|---|---|---|---|---|
| Maximum Instantaneous Forward Voltage | $V_F$ | 0.57 | 0.64 | V | $I_F$ = 3A, $T_J$ = 25℃ |
| | | 0.69 | 0.74 | | $I_F$ = 5A, $T_J$ = 25℃ |
| | | 0.79 | 0.84 | | $I_F$ = 10 A, $T_J$ = 25℃ |
| | | 0.7 | - | | $I_F$ = 10 A, $T_J$ = 125℃ |
| Maximum DC Reverse Current at Rated DC Blocking Voltage [2] | $I_R$ | - | 0.2 | mA | $T_J$=25℃ |
| | | - | 10 | | $T_J$=100℃ |
| Typical Junction Capacitance [1] | $C_J$ | 160 | - | pF | |

NOTES:

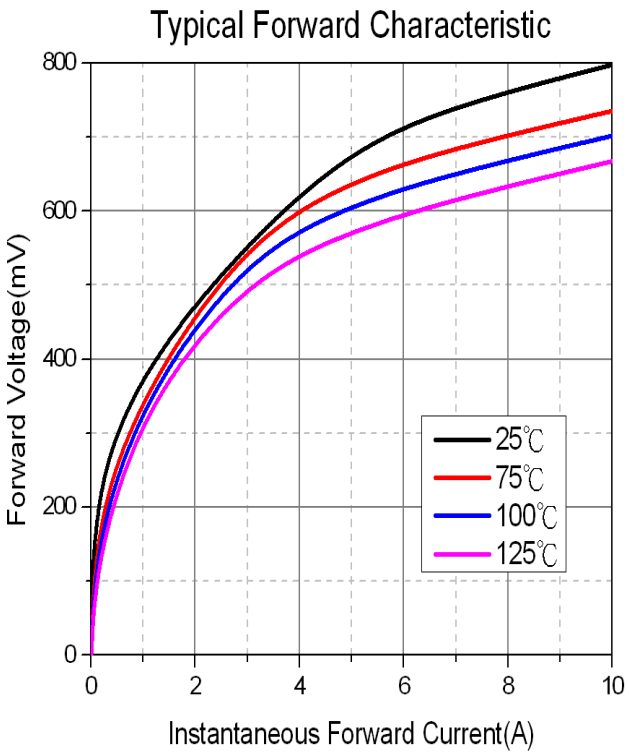
1. Measured at 1MHz and applied reverse voltage of 5.0V D.C.
2. Pulse Test：Pulse Width = 300 μs, Duty Cycle ≦ 2.0%.

## RATINGS AND CHARACTERISTIC CURVES

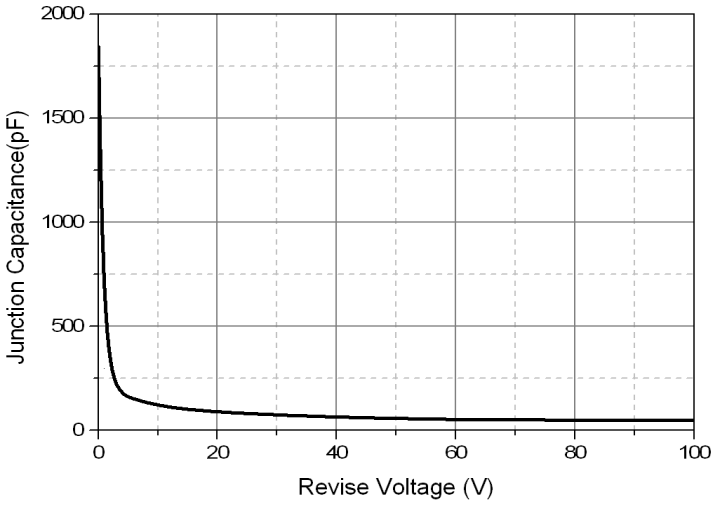
Typical Forward Current Derating Curve



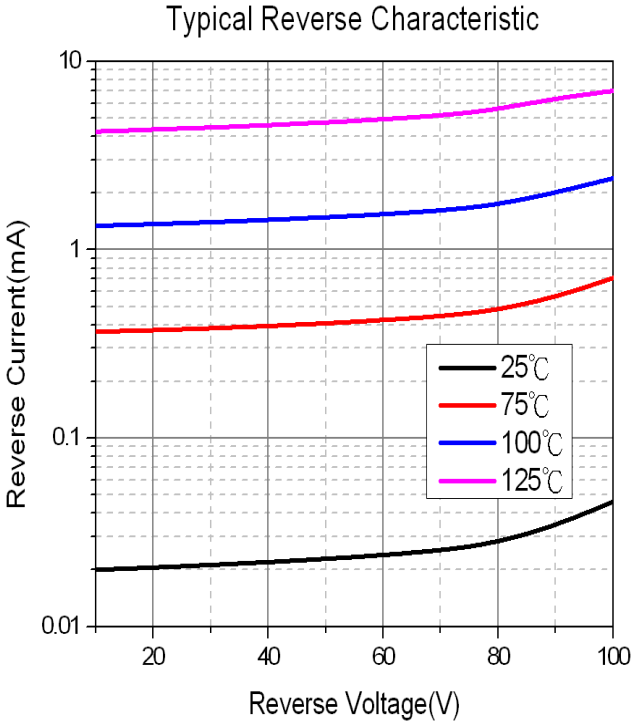

Typical Forward Characteristic




Typical Junction Capacitance(pF)




Typical Reverse Characteristic




Maximum Non-Repetitive Forward Surge Current