

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

FEATURES

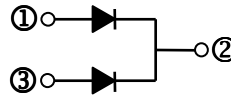
- Trench Barrier Schottky technology
- Low forward voltage drop, low power losses.
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction

MECHANICAL DATA

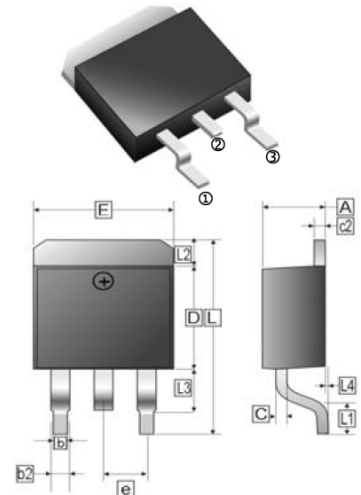
- Case: Molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Lead: Lead solderable per MIL-STD-202 method 208 guaranteed
- Polarity: As Marked

PACKAGE INFORMATION

| Package | MPQ | Leader Size |
|---------|------|-------------|
| TO-263 | 0.8K | 13 inch |



TO-263



| REF. | Millimeter | | REF. | Millimeter | |
|------|------------|-------|------|------------|------|
| | Min. | Max. | | Min. | Max. |
| A | 4.00 | 4.87 | c2 | 1.07 | 1.65 |
| b | 0.51 | 1.01 | b2 | 1.34 REF | |
| L4 | 0.00 | 0.30 | D | 8.0 | 9.65 |
| C | 0.30 | 0.74 | e | 2.54 REF | |
| L3 | 1.50 REF | | L | 14.6 | 16.1 |
| L1 | 2.5 REF | | L2 | 1.27 REF | |
| E | 9.60 | 10.67 | | | |

ORDER INFORMATION

| Part Number | Type |
|--------------|---------------------------------|
| SBL30U100D | Lead (Pb)-free |
| SBL30U100D-C | Lead (Pb)-free and Halogen-free |

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} | 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 | 15 | A |
| | (Per Device) | | 30 | |
| Peak Forward Surge Current, 8.3 ms single half sine-wave Superimposed on rated load (JEDEC method) | | I_{FSM} | 200 | A |
| Voltage Rate of Change (Rated V_R) | | dv/dt | 10000 | V / μs |
| Typical Thermal Resistance | | $R_{\theta JC}$ | 3 | °C / W |
| Operating and Storage Temperature Range | | T_J, T_{STG} | -40~150 | °C |

ELECTRICAL CHARACTERISTICS

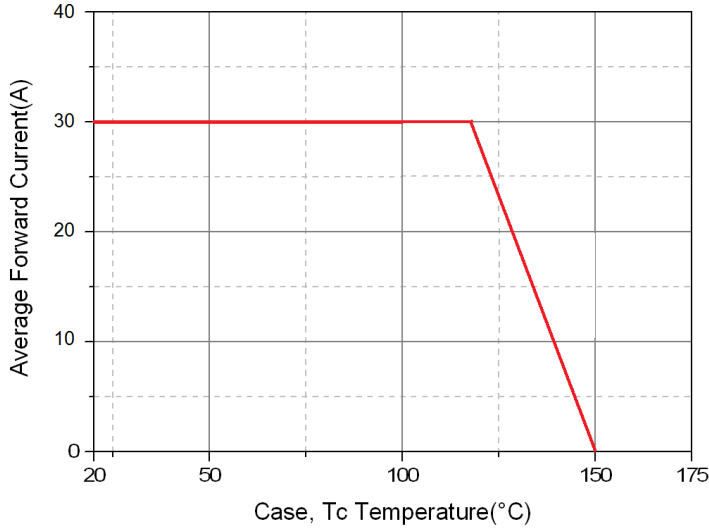
| Parameter | Symbol | Typ. | Max. | Unit | Test Condition |
|--|--------|------|------|------|----------------------------|
| Maximum Instantaneous Forward Voltage | V_F | 0.45 | 0.48 | V | $I_F=3A, T_J=25^\circ C$ |
| | | 0.61 | 0.64 | | $I_F=10A, T_J=25^\circ C$ |
| | | 0.71 | 0.74 | | $I_F=15A, T_J=25^\circ C$ |
| | | 0.66 | - | | $I_F=15A, T_J=125^\circ C$ |
| Maximum DC Reverse Current at Rated DC Blocking Voltage ² | I_R | - | 0.15 | mA | $T_J=25^\circ C$ |
| | | - | 10 | | $T_J=100^\circ C$ |
| Typical Junction Capacitance ¹ | C_J | 630 | - | pF | |

Notes:

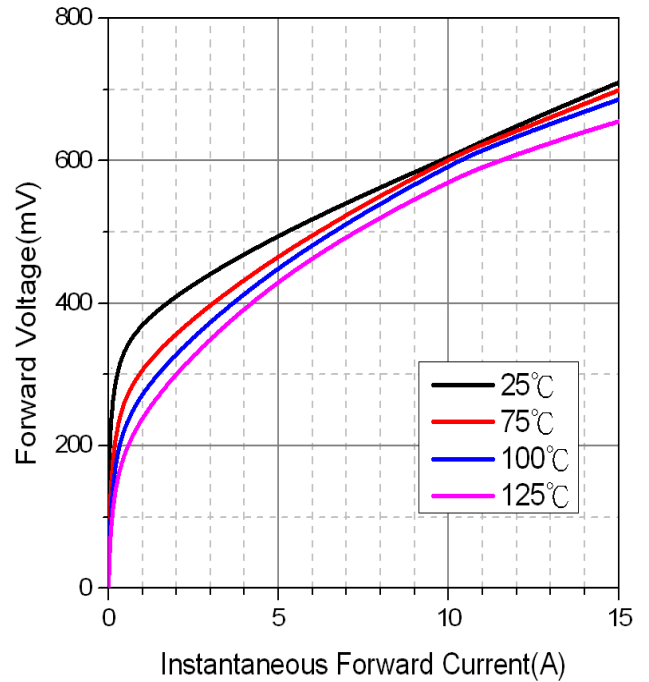
1. Measured at 1MHz and applied reverse voltage of 5.0V D.C.
2. Pulse Test: Pulse Width = 300 μs , Duty Cycle \leq 2.0%.

RATINGS AND CHARACTERISTIC CURVES

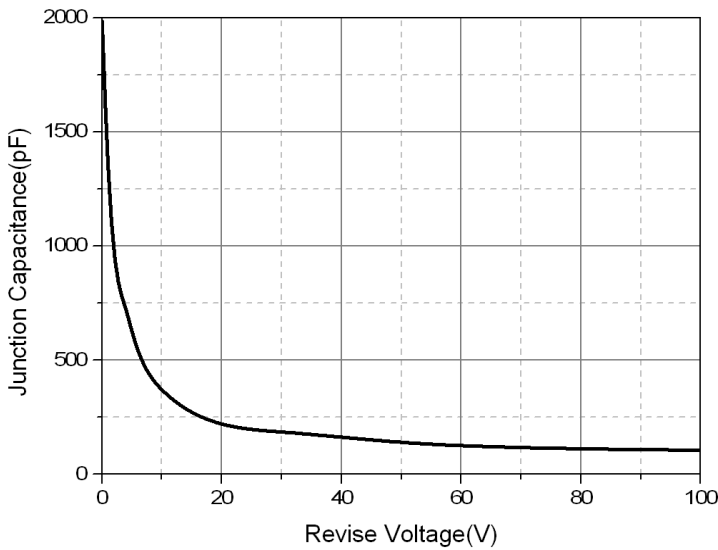
Typical Forward Current Derating Curve



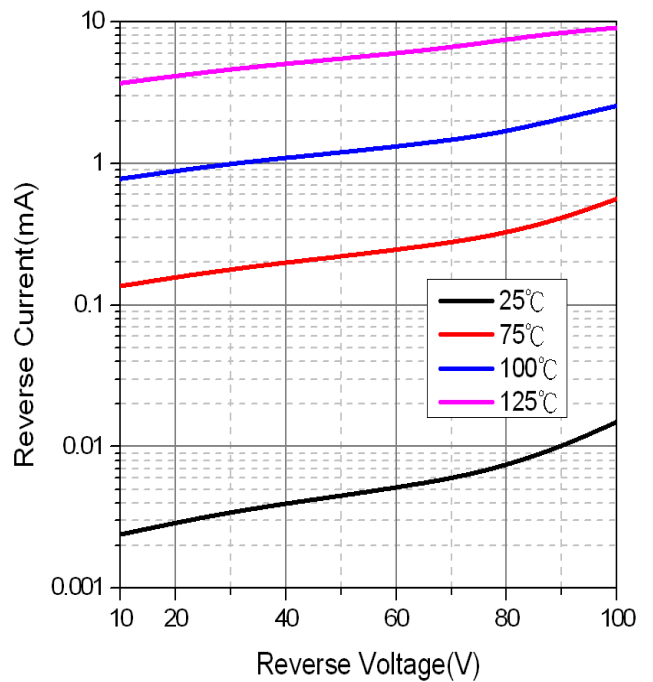
Typical Forward Characteristic



Typical Junction Capacitance



Typical Reverse Characteristic



Maximum Non-Repetitive Forward Surge Current

