

**SCHOTTKY BARRIER RECTIFIERS**

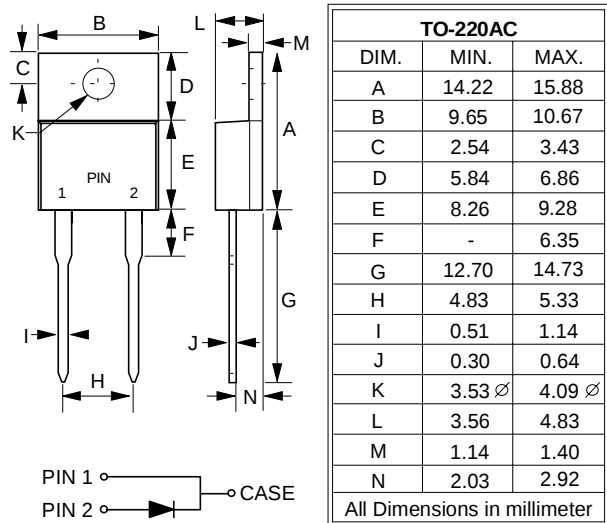
REVERSE VOLTAGE - **30 to 60** Volts  
FORWARD CURRENT - **16** Amperes

**FEATURES**

- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- High current capability, low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

**MECHANICAL DATA**

- Case : TO-220AC molded plastic
- Polarity : As marked on the body
- Weight : 0.08 ounces, 2.24 grams
- Mounting position : Any

**TO-220AC**

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

| CHARACTERISTICS                                                                                        | SYMBOL | SBL1630     | SBL1635 | SBL1640 | SBL1645 | SBL1650 | SBL1660 | UNIT |
|--------------------------------------------------------------------------------------------------------|--------|-------------|---------|---------|---------|---------|---------|------|
| Maximum Recurrent Peak Reverse Voltage                                                                 | VRRM   | 30          | 35      | 40      | 45      | 50      | 60      | V    |
| Maximum RMS Voltage                                                                                    | VRMS   | 21          | 24.5    | 28      | 31.5    | 35      | 42      | V    |
| Maximum DC Blocking Voltage                                                                            | VDC    | 30          | 35      | 40      | 45      | 50      | 60      | V    |
| Maximum Average Forward Rectified Current (See Fig.1) @Tc=95°C                                         | I(AV)  | 16          |         |         |         |         |         | A    |
| Peak Forward Surge Current<br>8.3ms single half sine-wave<br>superimposed on rated load (JEDEC METHOD) | IFSM   | 275         |         |         |         |         |         | A    |
| Maximum Forward Voltage<br>at 16A DC (Note 1)                                                          | VF     | 0.57        |         |         |         | 0.75    |         | V    |
| Maximum DC Reverse Current<br>at Rated DC Blocking Voltage @Tj =25°C<br>@Tj =100°C                     | IR     | 1<br>50     |         |         |         |         |         | mA   |
| Typical Junction Capacitance (Note 2)                                                                  | CJ     | 500         |         |         |         |         |         | pF   |
| Typical Thermal Resistance (Note 3)                                                                    | RθJC   | 1.5         |         |         |         |         |         | °C/W |
| Operating Temperature Range                                                                            | TJ     | -55 to +125 |         |         |         |         |         | °C   |
| Storage Temperature Range                                                                              | TSTG   | -55 to +150 |         |         |         |         |         | °C   |

NOTES : 1. 300us Pulse Width, 2% Duty Cycle.  
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.  
3. Thermal Resistance Junction to Case.

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FIG.1 - FORWARD CURRENT DERATING CURVE

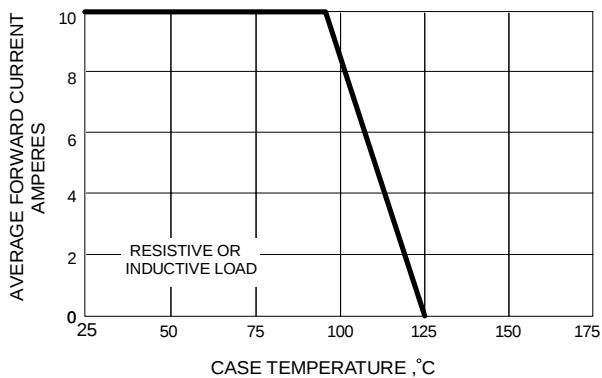


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

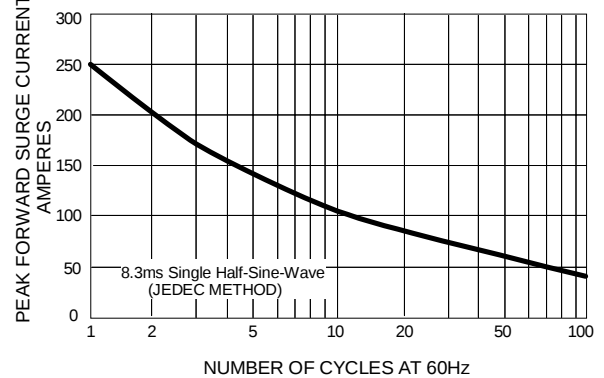


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

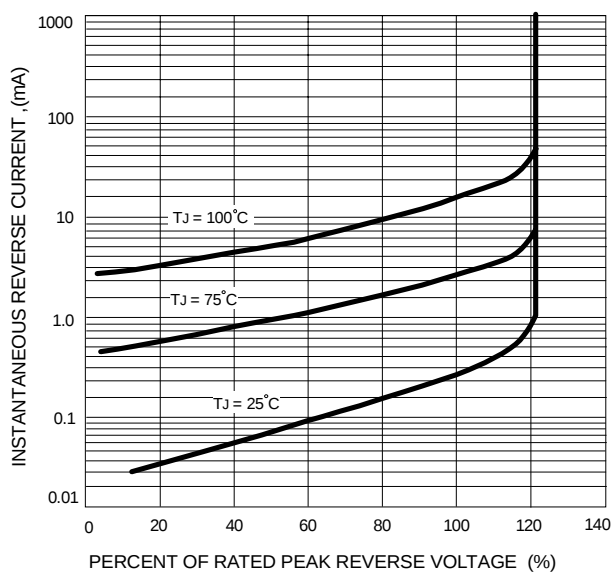


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

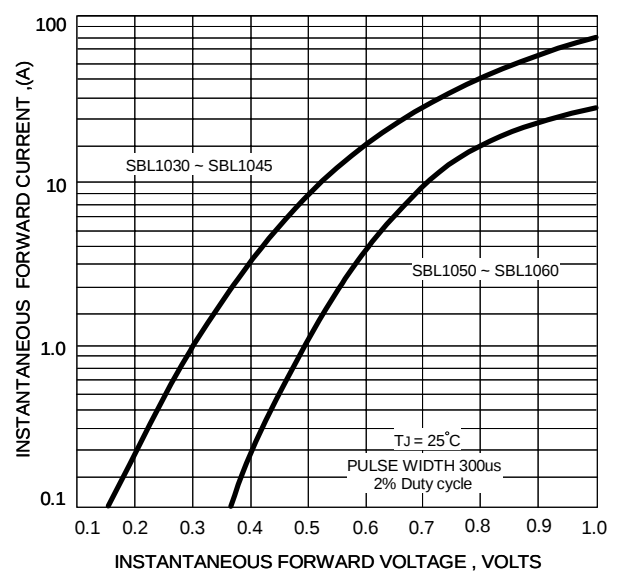


FIG.5 - TYPICAL JUNCTION CAPACITANCE

