



**THE DATASHEET OF  
SBF2060CT**



**SCHOTTKY BARRIER RECTIFIERS**

**REVERSE VOLTAGE – 50 to 60 Volts  
FORWARD CURRENT – 20 Amperes**

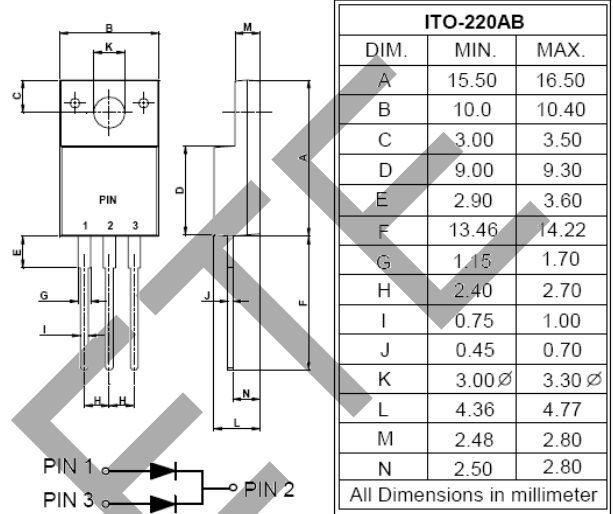
**FEATURES**

- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- High current capability, low VF
- High surge capability
- Plastic package has UL flammability classification 94V-0
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**

**MECHANICAL DATA**

- Package: ITO-220AB molded plastic
- Polarity: As marked on the body
- Weight: 0.06 ounces, 1.70 grams
- Mounting position: Any
- Max. mounting torque = 0.5 N.m (5.1 Kgf-cm)

**ITO-220AB**



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.

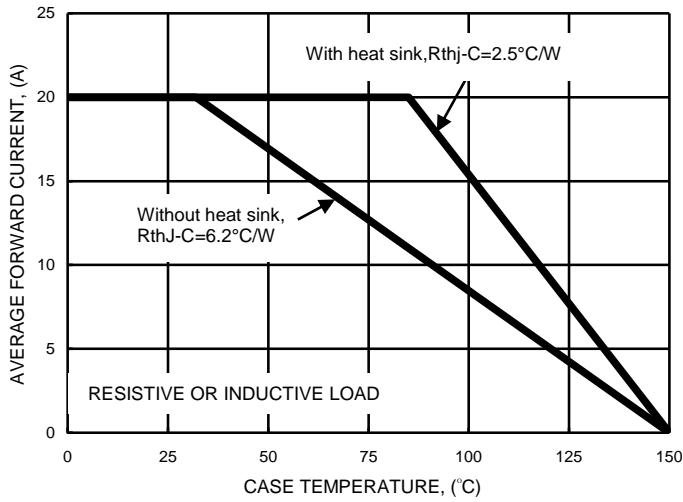
| PARAMETER  | SYMBOL          | SBF2050CT   | SBF2060CT | UNIT |
|--|-----------------|-------------|-----------|------|
| Maximum Repetitive Peak Reverse Voltage  | $V_{RRM}$       | 50          | 60        | V    |
| Maximum RMS Voltage  | $V_{RMS}$       | 35          | 42        | V    |
| Maximum DC Blocking Voltage  | $V_{DC}$        | 50          | 60        | V    |
| Maximum Average Forward Rectified Current(See Fig.1) @TC=85°C  | $I_{(AV)}$      | 20          |           | A    |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load                    | $I_{FSM}$       | 225         |           | A    |
| Maximum Forward Voltage at 10A DC (Note 3)   | $V_F$           | 0.75        |           | V    |
| Maximum DC Reverse Current at Rated DC Blocking Voltage @T <sub>J</sub> =25°C @T <sub>J</sub> =100°C | $I_R$           | 0.1<br>30   |           | mA   |
| Typical Junction Capacitance per element (Note 4)  | $C_J$           | 500         |           | pF   |
| Typical thermal resistance _ Junction to Lead (Note 5)   | $R_{\theta JC}$ | 2.5         |           | °C/W |
| Operating junction temperature range   | $T_J$           | -55 to +150 |           | °C   |
| Storage temperature range  | $T_{STG}$       | -55 to +150 |           | °C   |
| Dielectric Strength from terminals to case, AC with t=1 minute, RH<30%                               | $V_{dis}$       | 2000        |           | V    |

**Notes:**

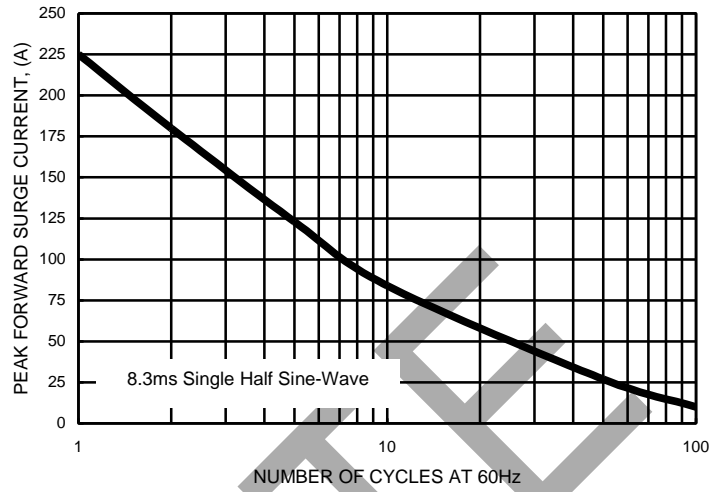
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. 300us Pulse Width, 2% Duty Cycle.
4. Measured at 1.0MHz and applied reverse voltage of 4.0 V DC.
5. Thermal Resistance Junction to Case, device mounted on L200xW200xH5mm\_black Aluminum finny heat sink.

**RATING AND CHARACTERISTIC CURVES**  
**SBF2060CT**

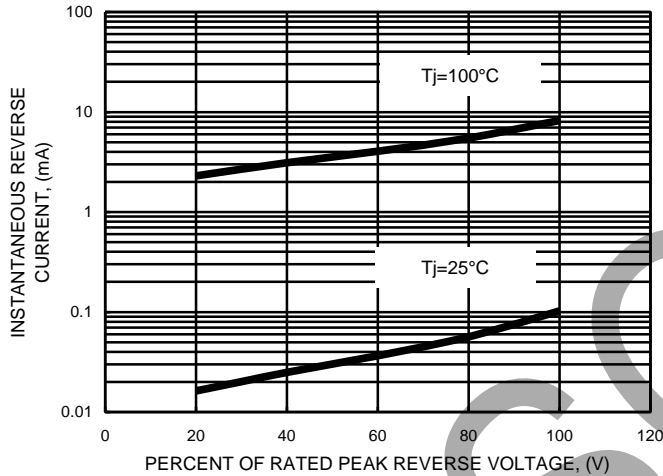
**FIG.1- FORWARD CURRENT DERATING CURVE**



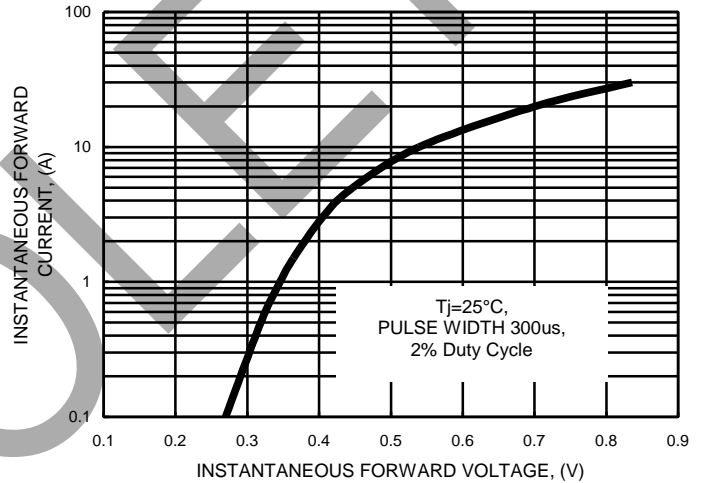
**FIG.2- MAXIMUM NON-REPETITIVE SURGE CURRENT**



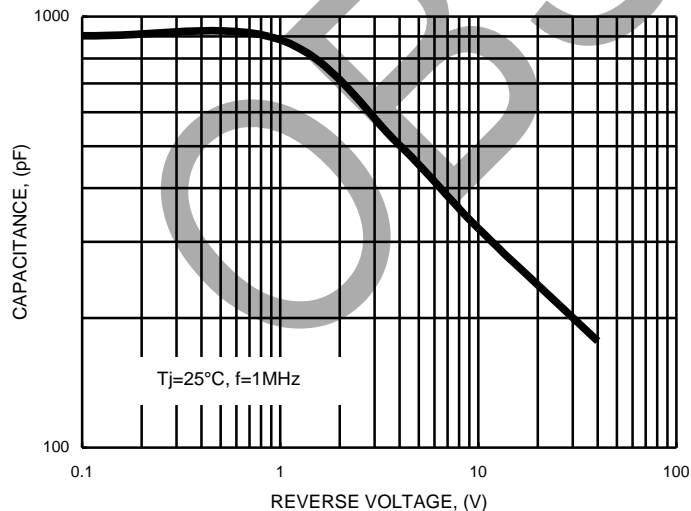
**FIG.3- TYPICAL REVERSE CHARACTERISTICS**



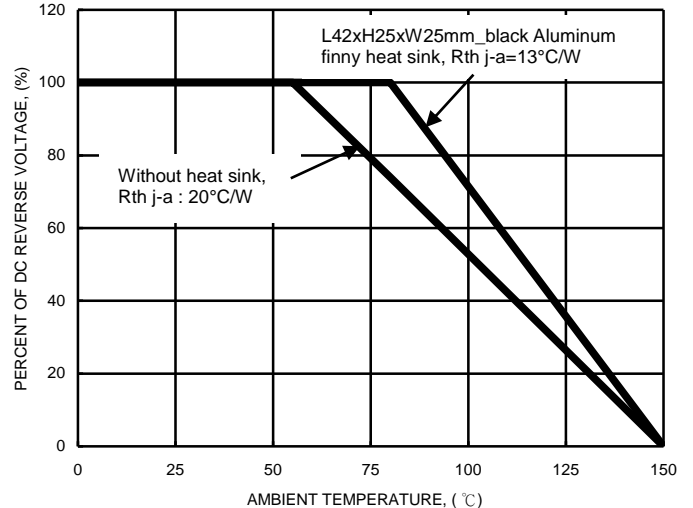
**FIG.4- TYPICAL FORWARD CHARACTERISTICS**



**FIG.5- TYPICAL JUNCTION CAPACITANCE**



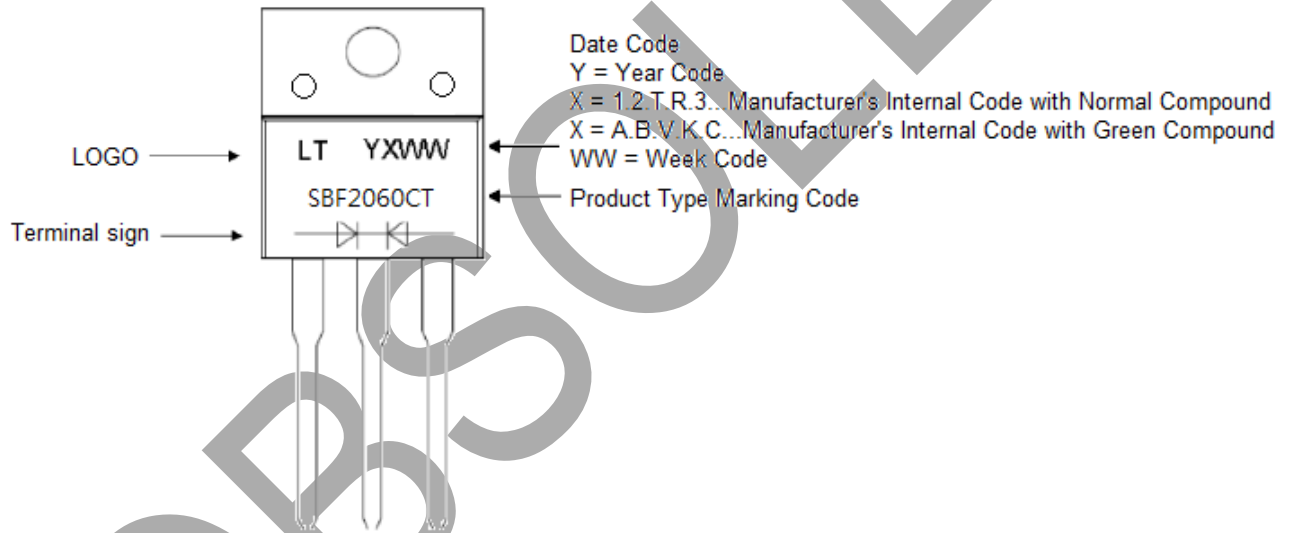
**FIG.6- DC REVERSE VOLTAGE DERATING CURVE**



**Ordering Information:**

| Part Number | Package   | Packing |         |
|-------------|-----------|---------|---------|
|             |           | Qty.    | Carrier |
| SBF2060CT   | ITO-220AB | 50pcs   | Tube    |

**Marking Information:**



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