



## LOW FORWARD VOLTAGE SCHOTTKY BARRIER RECTIFIER

**SRBL2030C THRU SRBL2060C**

**VOLTAGE RANGE**

**30 t o 60 Volts**

**CURRENT**

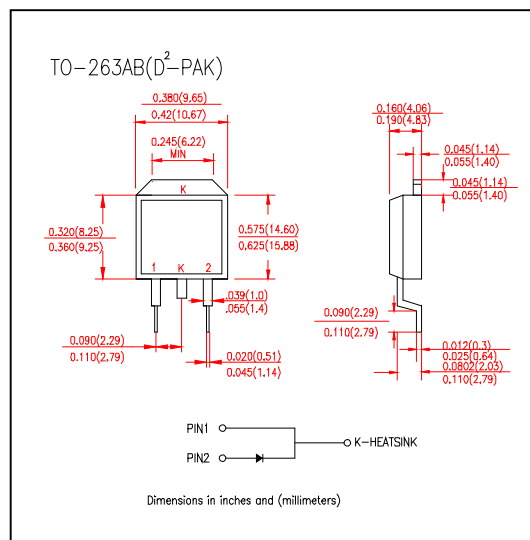
**20.0 Ampere**

### FEATURES

- Schottky Barrier Chip
- Guard Ring Die Construction for Transient Protection
- Low Power Loss, High efficiency
- High Surge Capability
- High Current capacity and Low Forward Voltage Drop
- For use in low voltage high frequency inverters, Free wheeling, and polarity protection applications
- Plastic Material has UL Flammability Classification 94V-0

### MECHANICAL DATA

- Case: D<sup>2</sup>-PAK molded plastic
- Terminals: Plated Lead solderable per MIL-STD-202 Method 208
- Polarity: As Marked on Body
- Weight: 1.9 grams (approx)
- Mounting Position: Any
- Marking: Type Number



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

|   | SYMBOLS                         | SRBL 2030C    | SRBL 2035C | SRBL 2040C | SRBL 2045C | SRBL 2050C | SRBL 2060C | UNIT |
|---|---------------------------------|---------------|------------|------------|------------|------------|------------|------|
| Peak Repetitive Reverse Voltage   | $V_{RRM}$                       | 30            | 35         | 40         | 45         | 50         | 60         | V    |
| Working Peak Reverse Voltage  | $V_{RWM}$                       |               |            |            |            |            |            |      |
| DC Blocking Voltage   | $V_R$                           |               |            |            |            |            |            |      |
| RMS Reverse Voltage   | $V_{R(RMS)}$                    | 21            | 25         | 28         | 32         | 35         | 42         | V    |
| Average Rectified Output Current (Note 1)@T <sub>c</sub> =95°C  | $I_O$                           | 20.0          |            |            |            |            |            | A    |
| Non-Repetitive Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method) | $I_{FSM}$                       | 175           |            |            |            |            |            | A    |
| Forward Voltage Drop @ I <sub>F</sub> =10A, T <sub>c</sub> =25°C  | $V_{FM}$                        | 0.55          |            |            |            | 0.75       |            | V    |
| Peak Reverse Current at Rated DC Blocking Voltage   | T <sub>c</sub> = 25°C           | 1.0           |            |            |            |            |            | mA   |
|   | T <sub>c</sub> = 100°C          | 50            |            |            |            |            |            |      |
| Typical Junction Capacitance(Note2)   | $C_j$                           | 650           |            |            |            |            |            | pF   |
| Typical Resistance Junction to case(Note1)  | $R_{\theta JC}$                 | 2.8           |            |            |            |            |            | °C/W |
| Operating and Storage Temperature Range   | T <sub>J</sub> T <sub>STG</sub> | (-55 to +150) |            |            |            |            |            | °C   |

#### Notes:

1. Thermal Resistance Junction to case mounted on heatsink
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC



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CURRENT 20.0 Ampere

## RATINGE AND CHARACTERISTIC CURVES SRBL2030C THRU SRBL2060C

FIG.1-FORWARD CURRENT DERATING CURVE

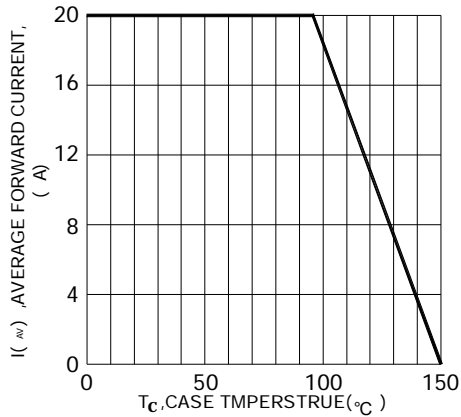


FIG.2-TYPICAL FORWARD CHARACTERISTICS

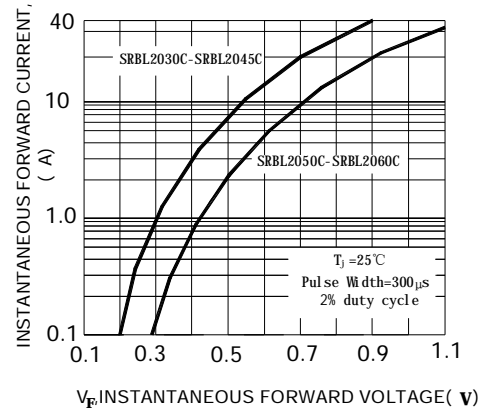


FIG.3 MAX NON-REPETITIVE SURGE CURRENT

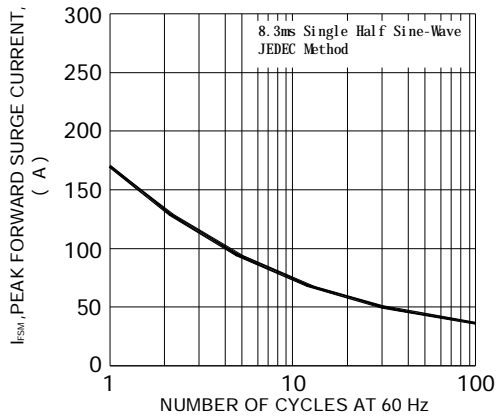


FIG4 TYPICAL JUNCTION CAPACITANCE PER ELEMENT

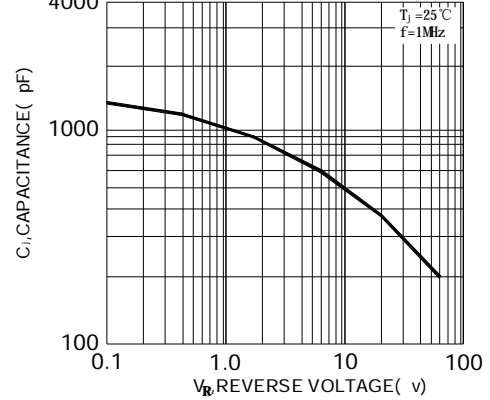


FIG.5-TYPICAL REVERSE CHARACTERISTICS

