

# SB1020F – SB10100F

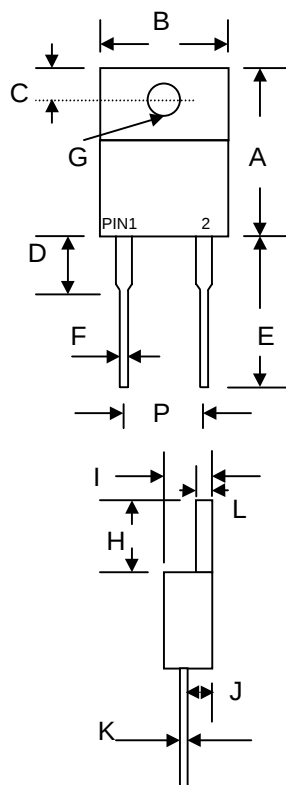
## 10A ISOLATION SCHOTTKY BARRIER RECTIFIER

### Features

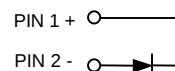
- Schottky Barrier Chip
- Guard Ring for Transient Protection
- High Current Capability, Low Forward
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-O

### Mechanical Data

- Case: ITO-220A Full Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 2.24 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



| ITO-220A             |        |        |
|----------------------|--------|--------|
| Dim                  | Min    | Max    |
| A                    | 14.9   | 15.1   |
| B                    | —      | 10.5   |
| C                    | 2.62   | 2.87   |
| D                    | 3.56   | 4.06   |
| E                    | 13.46  | 14.22  |
| F                    | 0.68   | 0.94   |
| G                    | 3.74 Ø | 3.91 Ø |
| H                    | 5.84   | 6.86   |
| I                    | 4.44   | 4.70   |
| J                    | 2.54   | 2.79   |
| K                    | 0.35   | 0.64   |
| L                    | 1.14   | 1.40   |
| P                    | 4.95   | 5.20   |
| All Dimensions in mm |        |        |



### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

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

| Characteristic                                                                                                        | Symbol                                                 | SB 1020F    | SB 1030F | SB 1040F | SB 1050F | SB 1060F | SB 1080F | SB 10100F | Unit |
|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------|----------|----------|----------|----------|----------|-----------|------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 20          | 30       | 40       | 50       | 60       | 80       | 100       | V    |
| RMS Reverse Voltage                                                                                                   | V <sub>R(RMS)</sub>                                    | 14          | 21       | 28       | 35       | 42       | 56       | 70        | V    |
| Average Rectified Output Current @T <sub>C</sub> = 95°C                                                               | I <sub>O</sub>                                         | 10          |          |          |          |          |          |           | A    |
| Non-Repetitive Peak Forward Surge Current 8.3ms<br>Single half sine-wave superimposed on rated load<br>(JEDEC Method) | I <sub>FSM</sub>                                       | 150         |          |          |          |          |          |           | A    |
| Forward Voltage @I <sub>F</sub> = 10A                                                                                 | V <sub>FM</sub>                                        | 0.55        |          |          | 0.75     |          | 0.85     |           | V    |
| Peak Reverse Current @T <sub>A</sub> = 25°C<br>At Rated DC Blocking Voltage @T <sub>A</sub> = 100°C                   | I <sub>RM</sub>                                        | 0.5<br>50   |          |          |          |          |          |           | mA   |
| Typical Junction Capacitance (Note 1)                                                                                 | C <sub>j</sub>                                         | 700         |          |          |          |          |          |           | pF   |
| Typical Thermal Resistance Junction to Case (Note 2)                                                                  | R <sub>θJC</sub>                                       | 3.5         |          |          |          |          |          |           | K/W  |
| Operating and Storage Temperature Range                                                                               | T <sub>j</sub> , T <sub>STG</sub>                      | -65 to +150 |          |          |          |          |          |           | °C   |

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
2. Thermal resistance junction to case mounted on heatsink.

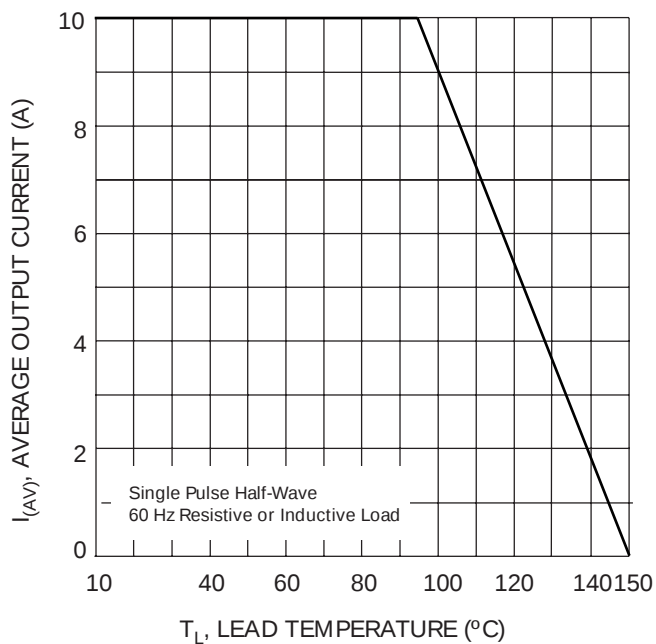


Fig. 1 Forward Current Derating Curve

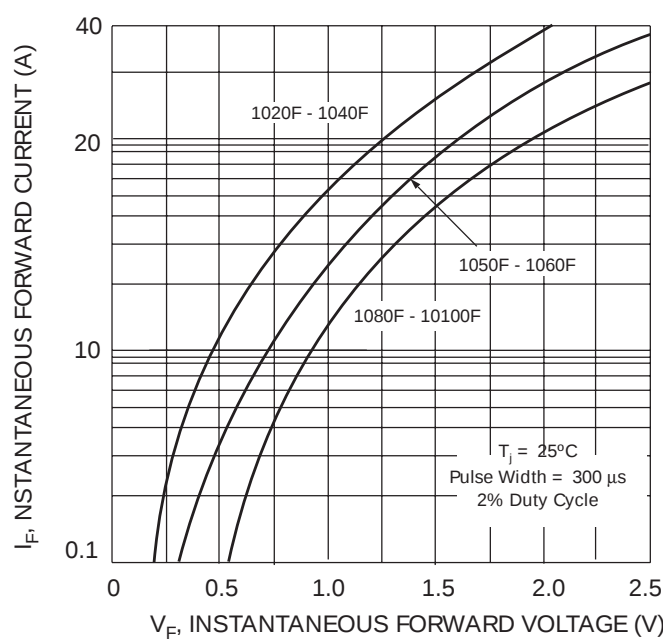


Fig. 2 Typical Forward Characteristics

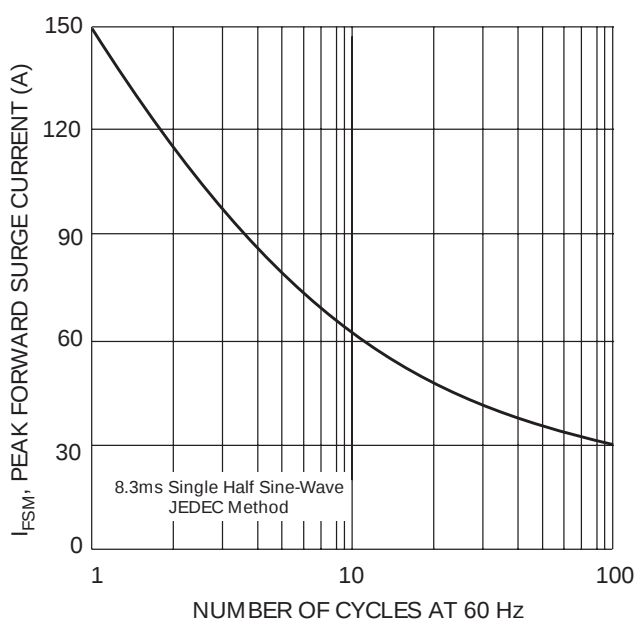


Fig. 3 Maximum Non-Repetitive Peak Fwd Surge Current

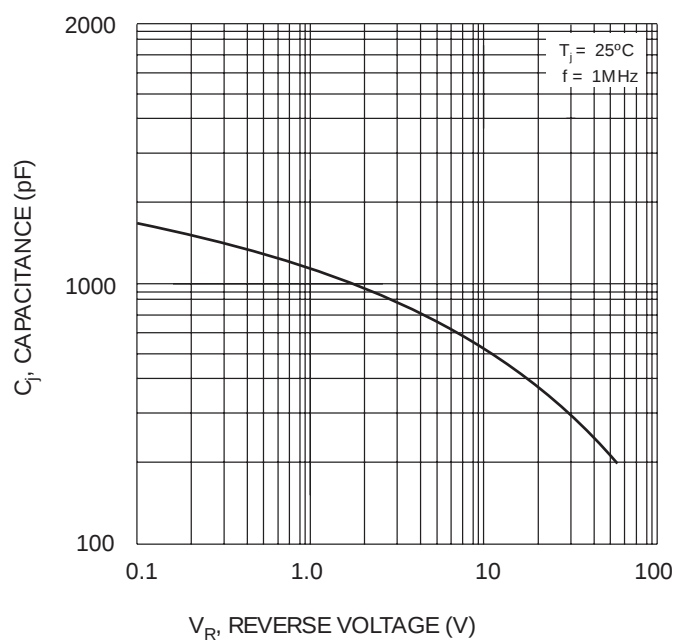


Fig. 4 Typical Junction Capacitance

## ORDERING INFORMATION

| Product No. | Package Type | Shipping Quantity |
|-------------|--------------|-------------------|
| SB1020F     | ITO-220A     | 50 Units/Tube     |
| SB1030F     | ITO-220A     | 50 Units/Tube     |
| SB1040F     | ITO-220A     | 50 Units/Tube     |
| SB1050F     | ITO-220A     | 50 Units/Tube     |
| SB1060F     | ITO-220A     | 50 Units/Tube     |
| SB1080F     | ITO-220A     | 50 Units/Tube     |
| SB10100F    | ITO-220A     | 50 Units/Tube     |

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

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