

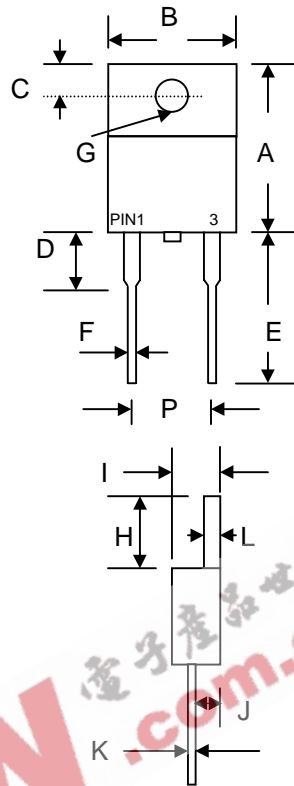
10A SCHOTTKY BARRIER RECTIFIER

Features

- Schottky Barrier Chip
- Guard Ring for Transient Protection
- Low Forward Voltage Drop
- 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
- Mounting Torque: 11.5 cm·kg (10 in·lbs) Max.
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



| ITO-220A | | |
|----------------------|--------|--------|
| Dim | Min | Max |
| A | 14.60 | 15.40 |
| B | 9.70 | 10.30 |
| C | 2.55 | 2.85 |
| D | 3.56 | 4.16 |
| E | 13.00 | 13.80 |
| F | 0.30 | 0.90 |
| G | 3.00 Ø | 3.50 Ø |
| H | 6.30 | 6.90 |
| I | 4.20 | 4.80 |
| J | 2.50 | 2.90 |
| K | 0.36 | 0.80 |
| L | 2.90 | 3.30 |
| P | 4.83 | 5.33 |
| All Dimensions in mm | | |

Maximum Ratings and Electrical Characteristics @T_A=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 1045F | SB 1050F | SB 1060F | SB 1080F | SB 10100F | Unit |
|---|-----------------------------------|-------------|----------|----------|----------|----------|----------|----------|-----------|------|
| Peak Repetitive Reverse Voltage | V _{RRM} | 20 | 30 | 40 | 45 | 50 | 60 | 80 | 100 | V |
| Working Peak Reverse Voltage | V _{RWM} | | | | | | | | | V |
| DC Blocking Voltage | V _R | | | | | | | | | V |
| RMS Reverse Voltage | V _{R(RMS)} | 14 | 21 | 28 | 32 | 35 | 42 | 56 | 70 | V |
| Average Rectified Output Current @T _L = 95°C | I _O | 10 | | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 150 | | | | | | | | A |
| Forward Voltage @I _F = 10A | V _{FM} | 0.55 | | | 0.75 | | 0.85 | | | V |
| Peak Reverse Current @T _A = 25°C | I _{RM} | | | | | 0.5 | | | | mA |
| At Rated DC Blocking Voltage @T _A = 100°C | | | | | | 50 | | | | |
| Typical Junction Capacitance (Note 1) | C _j | | | | | 700 | | | | pF |
| Typical Thermal Resistance (Note 2) | R _{θJC} | | | | | 4.0 | | | | °C/W |
| Operating and Storage Temperature Range | T _j , T _{STG} | -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.

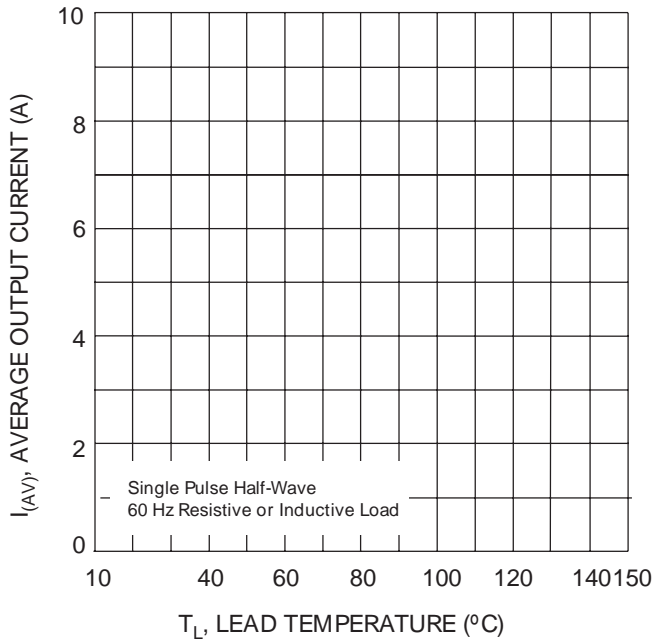


Fig. 1 Forward Current Derating Curve

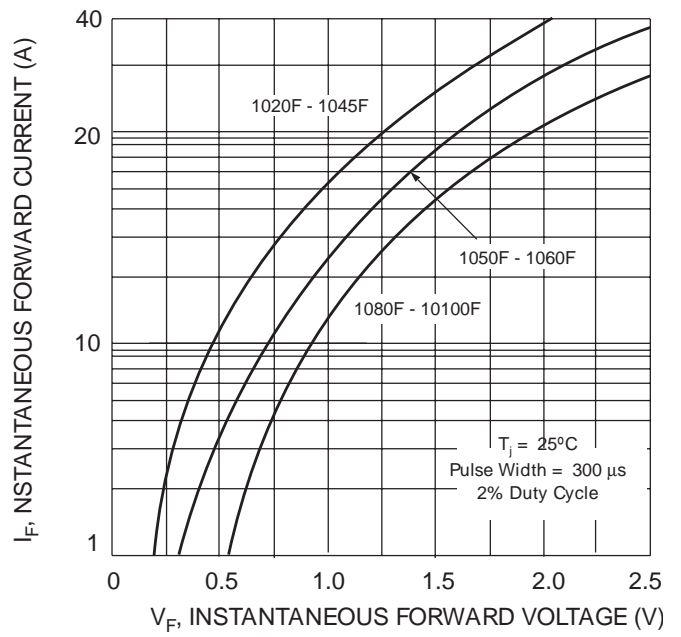


Fig. 2 Typical Forward Characteristics

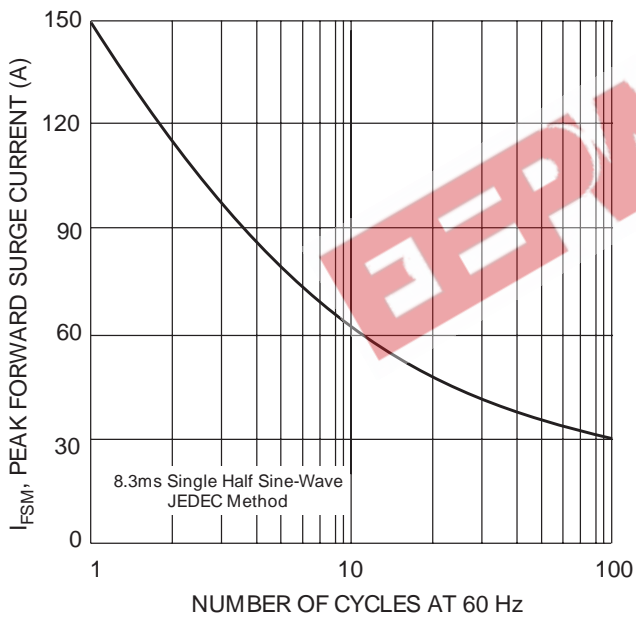


Fig. 3 Maximum Non-Repetitive Peak Fwd Surge Current

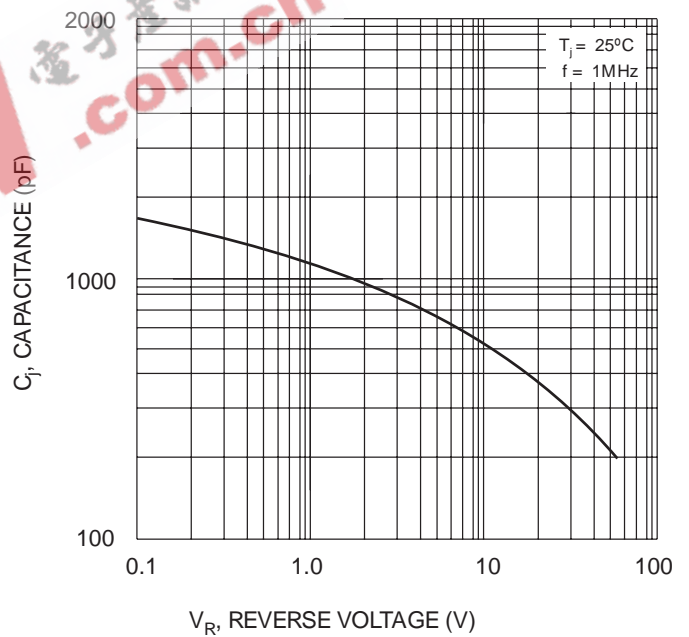
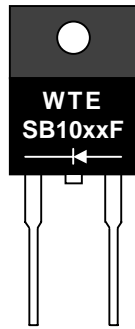


Fig. 4 Typical Junction Capacitance

MARKING INFORMATION



WTE = Manufacturer's Logo
 SB10xxF = Device Number
 xx = 20, 30, 40, 45, 50, 60, 80 or 100
 Polarity = As Marked on Body

PACKAGING INFORMATION

BULK

| Tube Size L x W x H (mm) | Quantity (PCS) | Inner Box Size L x W x H (mm) | Quantity (PCS) | Carton Size L x W x H (mm) | Quantity (PCS) | Approx. Gross Weight (KG) |
|-----------------------------|-------------------|----------------------------------|-------------------|-------------------------------|-------------------|------------------------------|
| 525 x 31 x 6 | 50 | 555 x 145 x 95 | 2,000 | 572 x 306 x 218 | 8,000 | 19.0 |

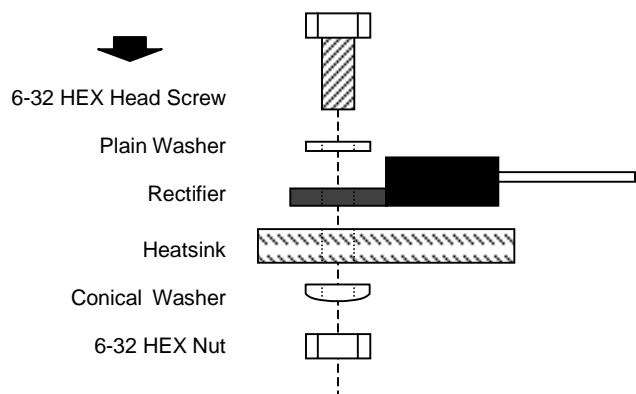
Note: 1. Anti-static tube, water clear color.

RECOMMENDED SCREW MOUNTING ARRANGEMENT

The full molded plastic package affords a major reduction of hardware as compared to a standard TO-220 package. However, precautions should be made in mounting procedure.

A conical washer should be used to apply proper force to the device. Screw should not be tightened with any type of air-forced torque or equipment that may cause crack on device package.

A layer of thermal grease or thermal pad in the interface will be considerably helpful for heat dissipation.



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 |
| SB1045F | 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 |

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. **To order RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, SB1020F-LF.**

EEPW 电子产品世界
.com.cn

Won-Top Electronics Co., Ltd (WTE) has checked all information carefully and believes it to be correct and accurate. However, WTE cannot assume any responsibility for inaccuracies. Furthermore, this information does not give the purchaser of semiconductor devices any license under patent rights to manufacturer. WTE reserves the right to change any or all information herein without further notice.

WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

Won-Top Electronics Co., Ltd.

No. 44 Yu Kang North 3rd Road, Chine Chen Dist., Kaohsiung, Taiwan

Phone: 886-7-822-5408 or 886-7-822-5410

Fax: 886-7-822-5417

Email: sales@wontop.com

Internet: <http://www.wontop.com>

We power your everyday.