# SB280

## 2.0AMPS. SCHOTTKY BARRIER RECTIFIERS

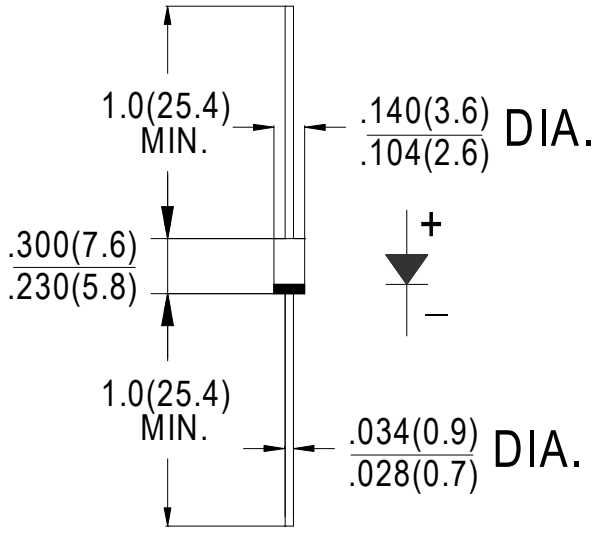
### FEATURE

- High current capability
- Low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- High temperature soldering guaranteed
  260°C /10sec/ 0.375" lead length at 5 lbs tension

### MECHANICAL DATA

- Terminal: Plated axial leads solderable per MIL-STD 202E, method 208C
- Case: Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy
- Polarity: color band denotes cathode
- Mounting position: any

**DO-15**




Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| Type Number | SYMBOL | SB280 | units |
|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | $V_{RRM}$ | 80 | V |
| Maximum RMS Voltage | $V_{RMS}$ | 56 | V |
| Maximum DC blocking Voltage | $V_{DC}$ | 80 | V |
| Maximum Average Forward Rectified Current .375"(9.5mm) lead length at $T_L$ =90°C | $I_{F(AV)}$ | 2.0 | A |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$ | 50.0 | A |
| Maximum Forward Voltage at 2.0A DC | $V_F$ | 0.85 | V |
| Maximum DC Reverse Current @$T_A$=25°C<br>at rated DC blocking voltage @$T_A$ =100°C | $I_R$ | 0.1<br>10.0 | mA |
| Typical Junction Capacitance (Note 1) | $C_J$ | 48 | pF |
| Typical Thermal Resistance (Note 2) | $R_{(JA)}$ | 65 | ℃/W |
| Storage Temperature | $T_{STG}$ | -55 to +150 | °C |
| Operation JunctionTemperature | $T_J$ | -55 to +150 | °C |

**Note:**

1. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
2. Thermal Resistance from Junction to Ambient at 0.375"（9.5mm）lead length, vertical P.C.Board Mounted.

## RATING AND CHARACTERISTIC CURVES (SB280)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

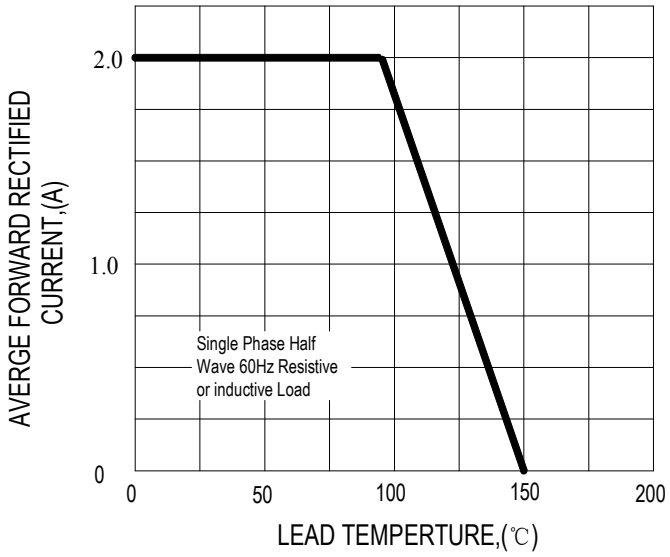



FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

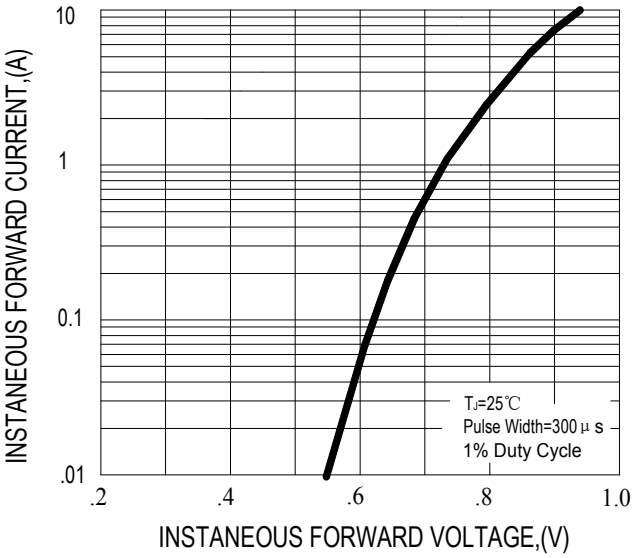



FIG.3-MAXIMUN NON-REPETITIVE FORWARD SURGE CURRENT

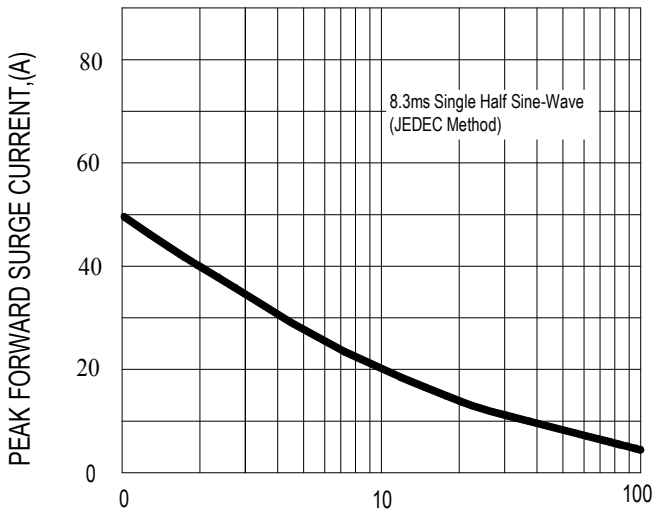
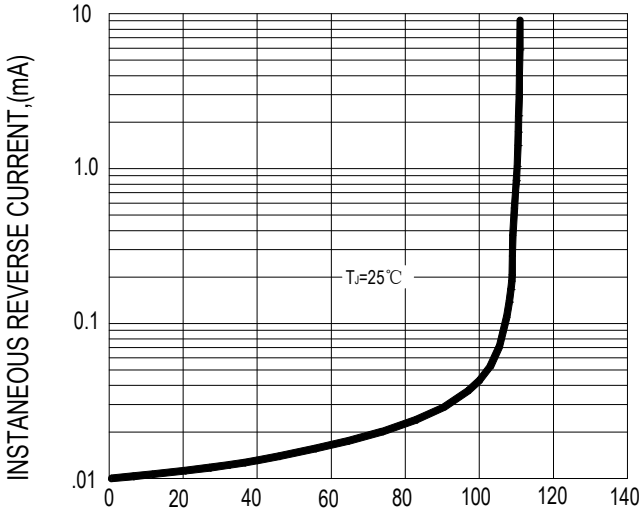



FIG.4-TYPICAL REVERSE CHARACTERISTICS



重庆平伟实业股份有限公司

# 样品测试报告

| | | | |
|---|---|---|---|
| 样品名称 | SB280 | 日期 | 2013-12-10 |
| 样品商标 | | 客户 | 昆仰 |
| | | 批号 | YD131128-03 |
| | | 记录 | 王艳明 |
| | | 审核 | |

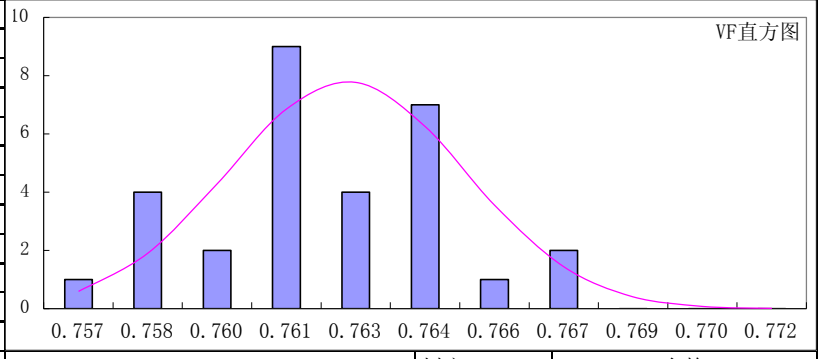
## 电参数测试

| 测试条件 | IF=2A | VR=80V | IR=0.2mA | IF=0.5A,IR=1A, Recover to0.25A |
|---|---|---|---|---|
| 合格标准 | $V_F$(V) <= 0.850 | $I_R$(uA) <= 100.0 | $V_R$ (V) >= 80.0 | TRR(nS) |
| 1 | 0.764 | 0.10 | 123.7 | |
| 2 | 0.763 | 0.14 | 125.7 | |
| 3 | 0.764 | 0.14 | 123.4 | |
| 4 | 0.765 | 0.14 | 124.5 | |
| 5 | 0.759 | 0.14 | 123.2 | |
| 6 | 0.765 | 0.15 | 126.7 | |
| 7 | 0.762 | 0.19 | 122.1 | |
| 8 | 0.761 | 0.14 | 121.2 | |
| 9 | 0.766 | 0.10 | 123.4 | |
| 10 | 0.762 | 0.10 | 123.3 | |
| 11 | 0.757 | 0.09 | 122.0 | |
| 12 | 0.761 | 0.14 | 121.8 | |
| 13 | 0.767 | 0.14 | 124.2 | |
| 14 | 0.758 | 0.10 | 120.3 | |
| 15 | 0.760 | 0.11 | 122.1 | |
| 16 | 0.762 | 0.15 | 124.2 | |
| 17 | 0.761 | 0.08 | 126.1 | |
| 18 | 0.762 | 0.09 | 123.4 | |
| 19 | 0.763 | 0.14 | 123.7 | |
| 20 | 0.764 | 0.14 | 124.9 | |
| 21 | 0.758 | 0.10 | 122.9 | |
| 22 | 0.764 | 0.14 | 120.6 | |
| 23 | 0.763 | 0.14 | 121.5 | |
| 24 | 0.762 | 0.12 | 121.5 | |
| 25 | 0.762 | 0.14 | 123.3 | |
| 26 | 0.767 | 0.12 | 123.4 | |
| 27 | 0.765 | 0.13 | 122.8 | |
| 28 | 0.760 | 0.09 | 123.1 | |
| 29 | 0.759 | 0.10 | 122.2 | |
| 30 | 0.763 | 0.11 | 123.1 | |

## 直方图分布

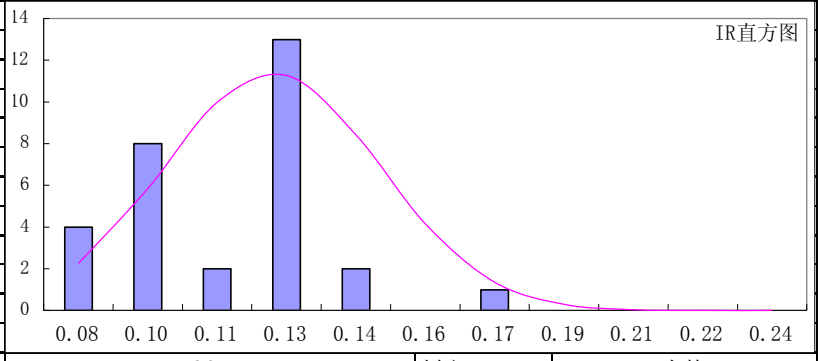
$V_F$ 判定 合格

| MAX | MIN | R | AVG | σ | CPK |
|---|---|---|---|---|---|
| 0.767 | 0.757 | 0.010 | 0.762 | 0.003 | 11.43 |



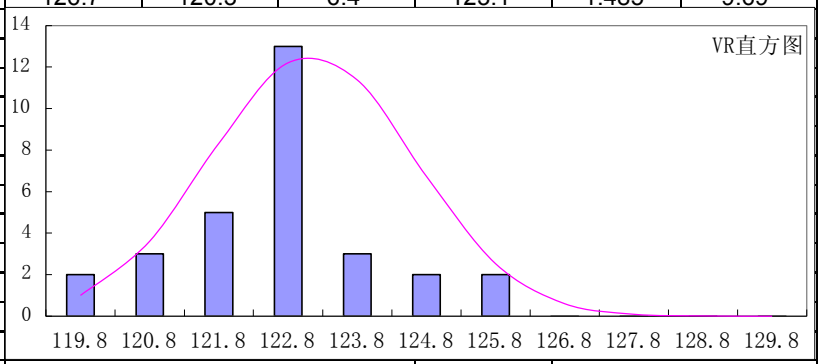

$I_R$ 判定 合格

| MAX | MIN | R | AVG | σ | CPK |
|---|---|---|---|---|---|
| 0.19 | 0.08 | 0.11 | 0.12 | 0.025 | 1355.51 |




$V_R$ 判定 合格

| MAX | MIN | R | AVG | σ | CPK |
|---|---|---|---|---|---|
| 126.7 | 120.3 | 6.4 | 123.1 | 1.485 | 9.69 |




TRR 判定 FALSE

| MAX | MIN | R | AVG | σ | CPK |
|---|---|---|---|---|---|
| 0 | 0 | 0 | #DIV/0! | #DIV/0! | 未测试 |