乐山无线电股份有限公司
Leshan Radio Company, Ltd

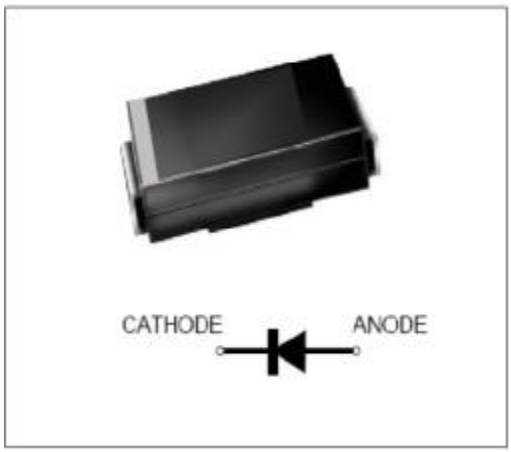
# SM320B thru SM3100B

## Schottky Barrier Rectifiers

## Reverse Voltage 20 to100V Forward Current 3.0A

## FEATURES

* Plastic package has Underwriters Laboratory Flammability Classification 94V-0
* Low power loss,high efficiency
* For use in low voltage high frequency inverters, free wheeling,and polarity protection applications
* Guardring for over voltage protection
* High temperature soldering guaranteed: 260°C/10 seconds at terminals




We declare that the material of product compliance with ROHS requirements

## Mechanical Data

**Case**: JEDEC DO-214AA / SMB molded plastic over glass die

**Terminals**: Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity**: Color band denotes cathode end

**Mounting Position**: Any

**Weight**: 0.098 g

**Handling precautin**:None

## Electrical Characteristic

### 1.Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter Symbol | symbol | SM320B | SM330B | SM340B | SM350B | SM360B | SM380B | SM3100B | Unit |
|---|---|---|---|---|---|---|---|---|---|
| device marking code | | SM320B | SM330B | SM340B | SM350B | SM360B | SM380B | SM3100B | |
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 20 | 30 | 40 | 50 | 60 | 80 | 100 | V |
| Maximum RSM voltage | $V_{RSM}$ | 14 | 21 | 28 | 35 | 42 | 56 | 70 | V |
| Maximum DC blocking voltage | $V_{DC}$ | 20 | 30 | 40 | 50 | 60 | 80 | 100 | V |
| Maximum average forward rectified current 0.375" (9.5mm) lead length (See fig. 1) | IF(AV) | 3.0 | | | | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 80 | | | | | | | A |
| Typical thermal resistance (Note 1) | RθJA | 50 | | | | | | | °C/W |
| Operating junction and storage temperature range | TJ, TSTG | –40 to +150 | | | | | | | °C |

### Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter Symbol | symbol | SM320B | SM330B | SM340B | SM350B | SM360B | SM380B | SM3100B | Unit |
|---|---|---|---|---|---|---|---|---|---|
| Maximum instantaneous forward voltage at 3.0A | $V_F$ | 0.50 | | | 0.70 | | 0.85 | | V |
| Maximum DC reverse current TA = 25°C<br>at rated DC blocking voltage TA = 100°C | IR | 0.5<br>10.0 | | | | | | | mA |
| Typical junction capacitance at 4.0V, 1MHz | CJ | 110 | | | | | | | PF |

NOTES:

1. Thermal resistance from junction to ambient at 0.375” (9.5mm) lead length, P.C.B. mounted

# SM320B thru SM3100B

## 2.Ratings and Characteristic Curves ( TA = 25°C unless otherwise noted )

Fig. 1 – Forward Current Derating Curve

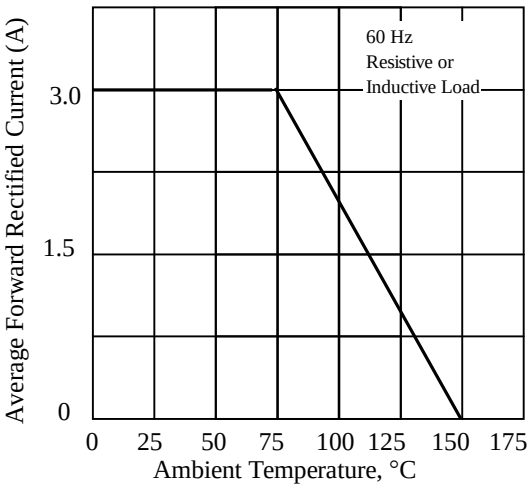



Fig. 2 – Maximum Non-repetitive Peak Forward Surge Current

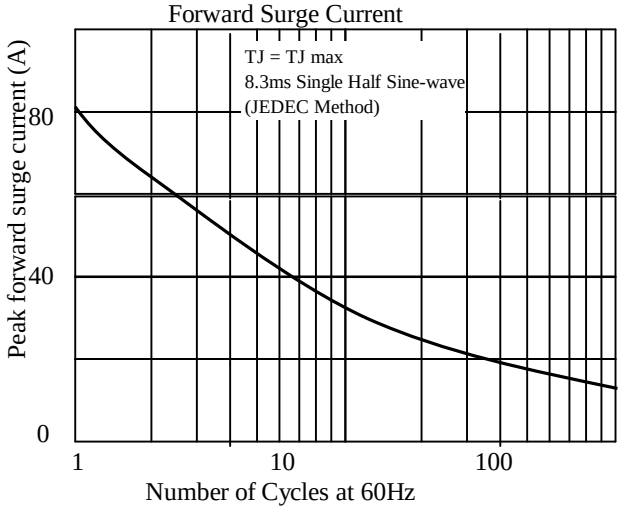



Fig 3. – Typical Instantaneous Forward Characteristics

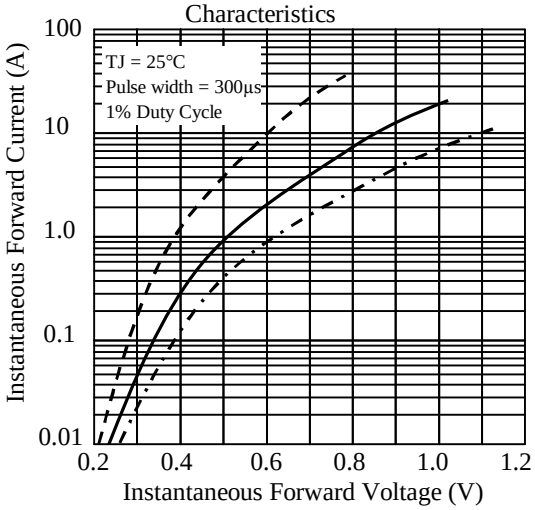



Fig 4. – Typical Reverse Characteristics

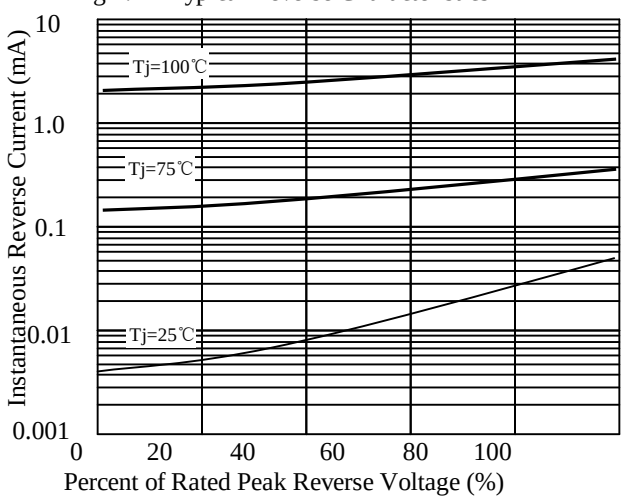



Fig 5. – typical transient thermal impedance

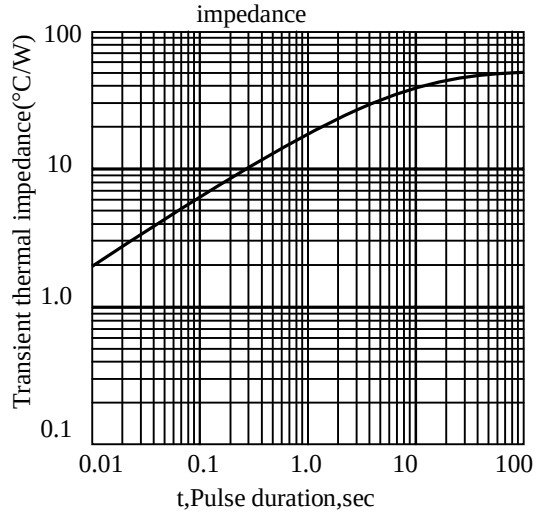
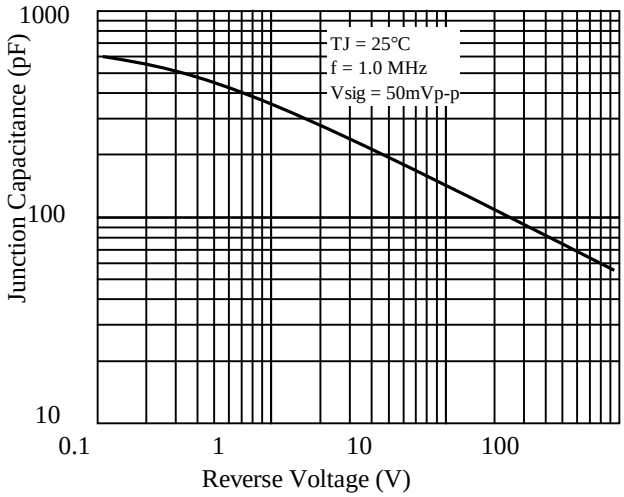


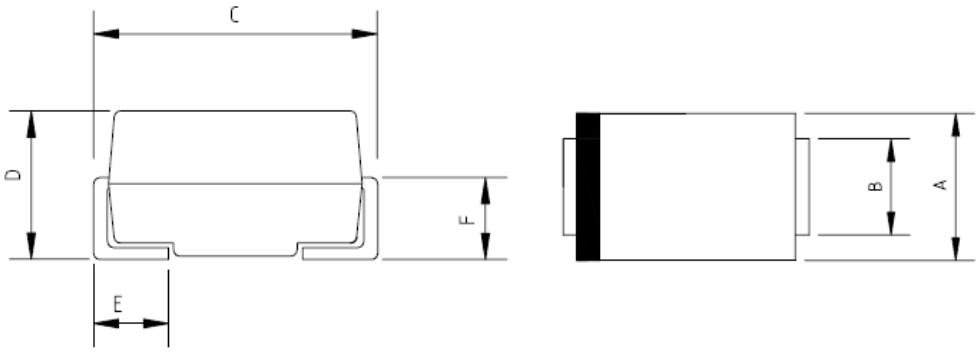

Fig 6. – Typical Junction Capacitance



# SM320B thru SM3100B

## 3. dimension:

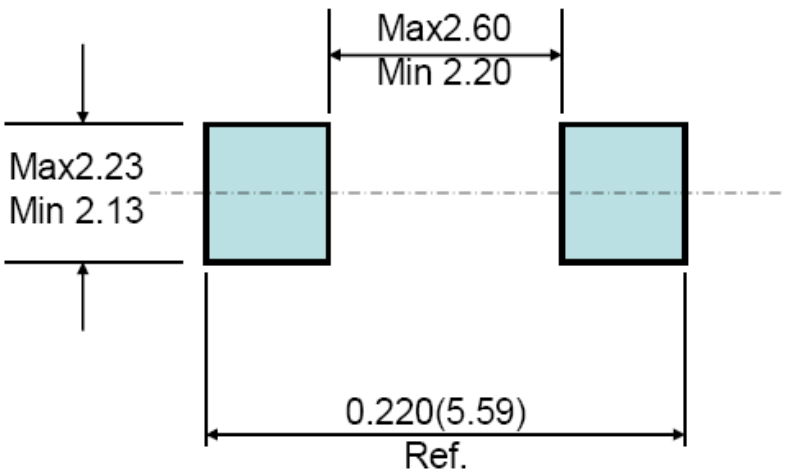
Package outline




| Dimensions | | | | |
|---|---|---|---|---|
| | inches | | mm | |
| | Min. | Max. | Min. | Max. |
| A | 0.10 | 0.155 | 3.30 | 3.94 |
| B | 0.077 | 0.083 | 1.97 | 2.11 |
| C | 0.205 | 0.220 | 5.21 | 5.59 |
| D | 0.084 | 0.096 | 2.13 | 2.44 |
| E | 0.030 | 0.060 | 0.76 | 1.52 |
| F | | | | |

Note:
DO-214AA
molded plastic case
The marking band indicates the cathode

Mounting Pad Layout
---SMB



## 4. Update Record

| 版次 | 更新记录 | 更新作者 | 更新日期 |
|---|---|---|---|
| 1 | 第一版 | 周杰 | 2011-4-9 |