

# SM320B thru SM3100B

## Schottky Barrier Rectifiers

Reverse Voltage 20 to 100V 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

### 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 precaution:** 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)	$R_{\theta JA}$	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 $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$	IR	0.5				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



We declare that the material of product compliance with ROHS requirements

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

Fig. 1 - Forward Current Derating Curve

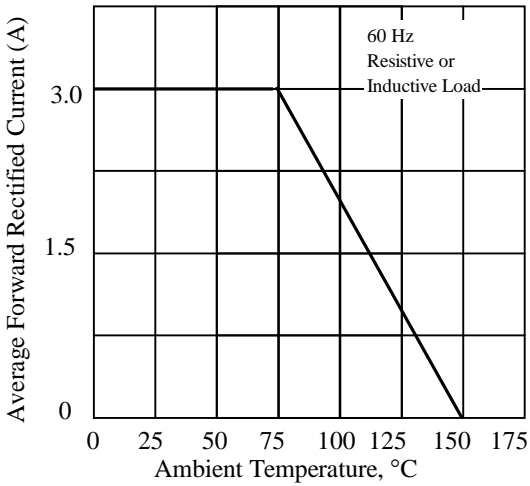


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

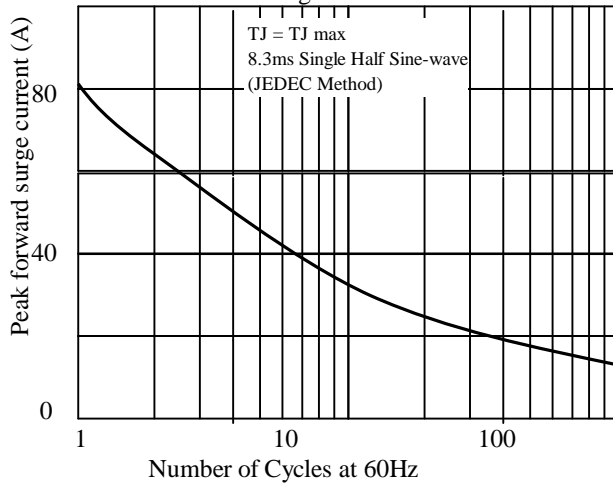


Fig 3. - Typical Instantaneous Forward Characteristics

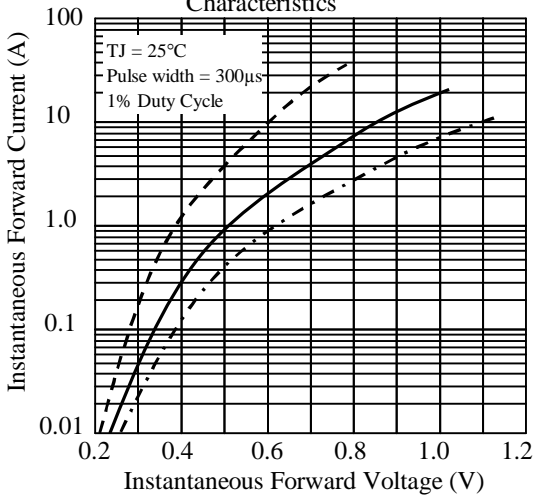


Fig 4. - Typical Reverse Characteristics

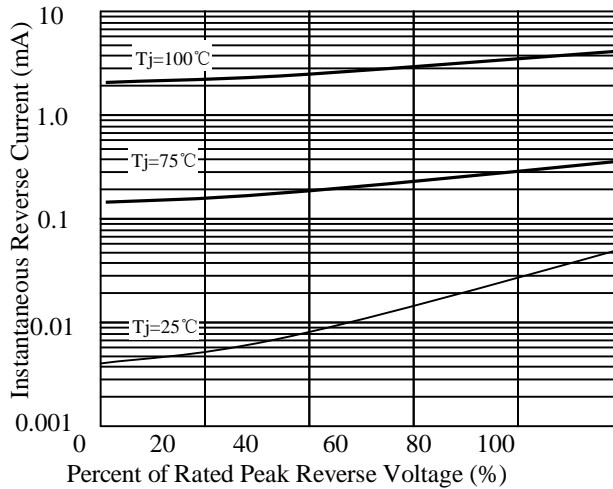


Fig 5. - typical transient thermal impedance

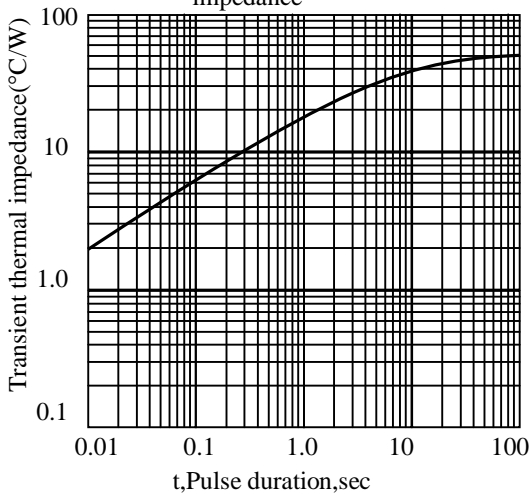
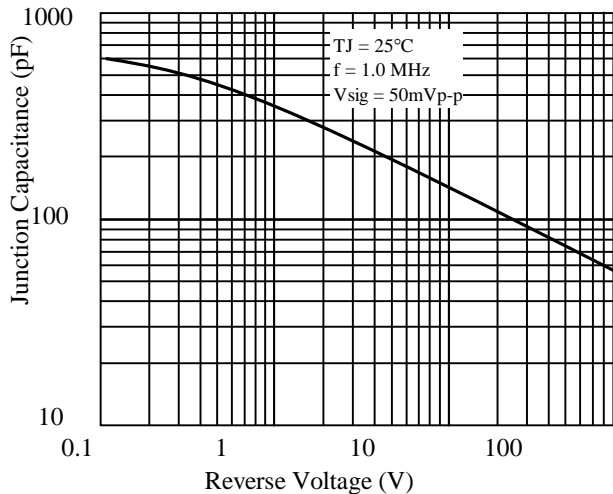
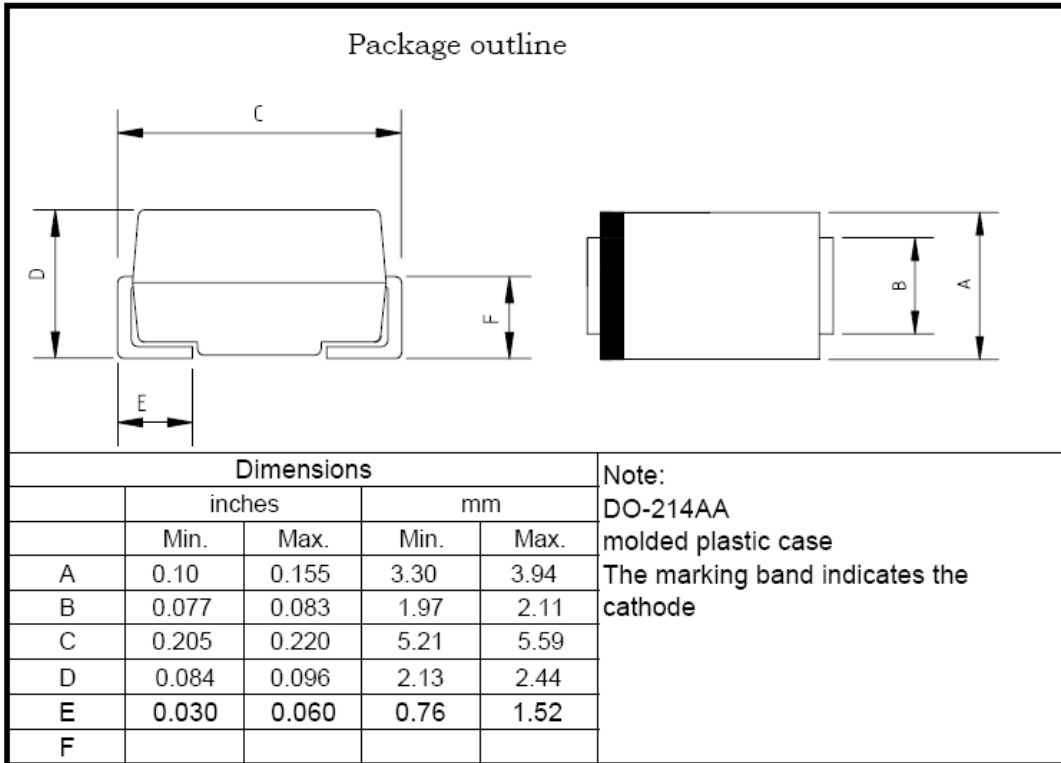


Fig 6. - Typical Junction Capacitance

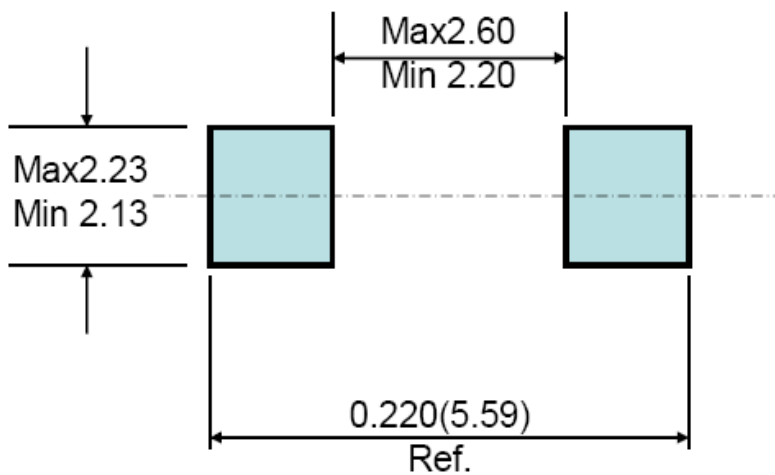


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### 3. dimension:



### Mounting Pad Layout ---SMB



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### 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