

# SM320A thru SM3100A

## 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

### Mechanical Data

Case: JEDEC DO-214AC,  
 molded plastic over glass body  
 Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026  
 Polarity: Color band denotes cathode end  
 Mounting Position: Any  
 Weight: 0.0023 oz., 0.065 g  
 Handling precaution:None



We declare that the material of product compliance with ROHS requirements

### 1.Electrical Characteristic

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

Parameter Symbol	symbol	SM320A	SM330A	SM340A	SM350A	SM360A	SM380A	SM3100A	Unit
device marking code		S32	S33	S34	S35	S36	S38	S310	
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 at TC = 75°C	$I_{F(AV)}$	3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	100							A
Typical thermal resistance (Note 1)	$R_{\theta JA}$	160							°C/W
Operating junction and storage temperature range	$T_J, T_{STG}$	-40 to +150							°C

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

Parameter Symbol	symbol	SM320A	SM330A	SM340A	SM350A	SM360A	SM380A	SM3100A	Unit	
Maximum instantaneous forward voltage at 3.0A	$V_F$	0.50			0.70		0.85		V	
Maximum DC reverse current TA = 25°C at rated DC blocking voltage TJ = 100°C	$I_R$	0.2				30				mA
Typical junction capacitance at 4.0V, 1MHz	$C_J$	180								PF

NOTES:

1. 8.0mm<sup>2</sup> (.013mm thick) land areas

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

Fig. 1 - Forward Current Derating Curve

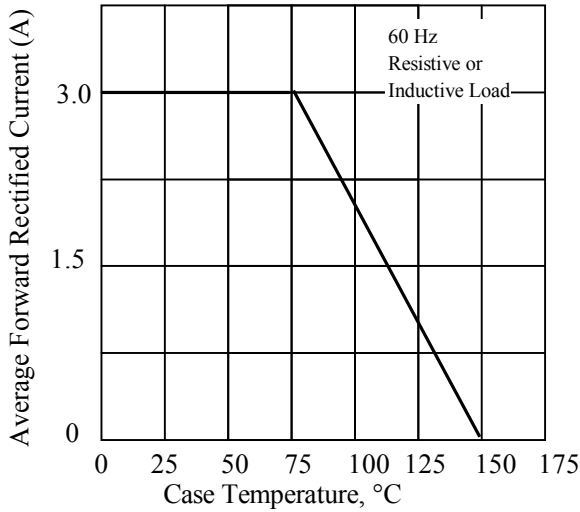


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

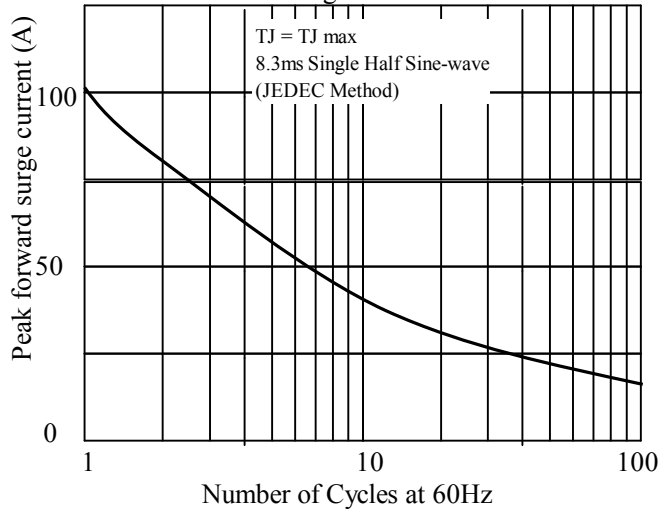


Fig 3. - Typical Instantaneous Forward Characteristics

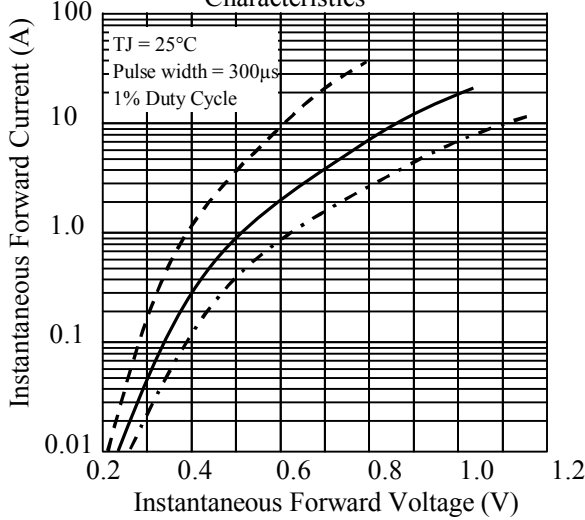


Fig 4. - Typical Reverse Characteristics

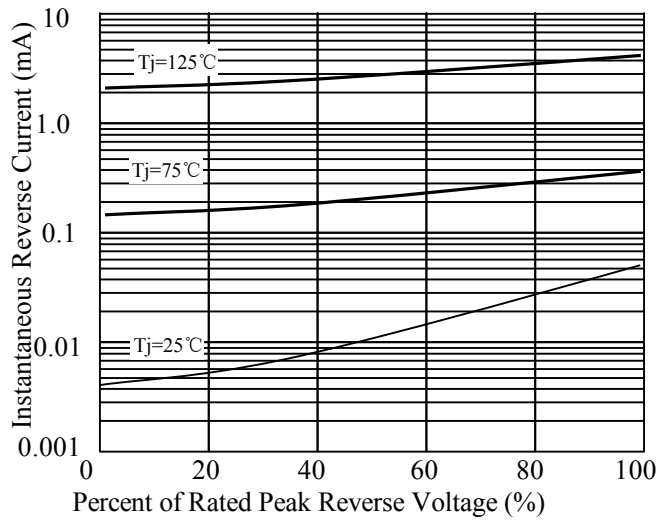


Fig 5. - typical transient thermal impedance

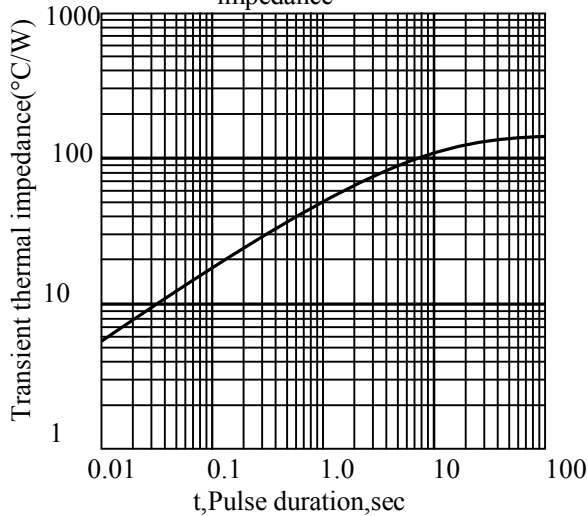
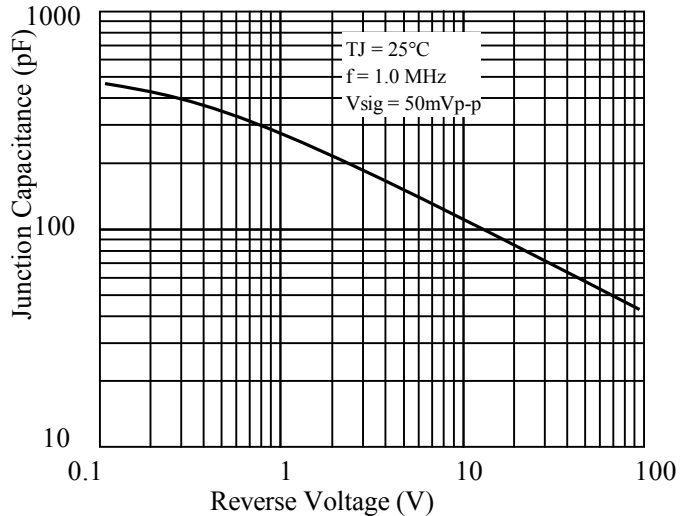
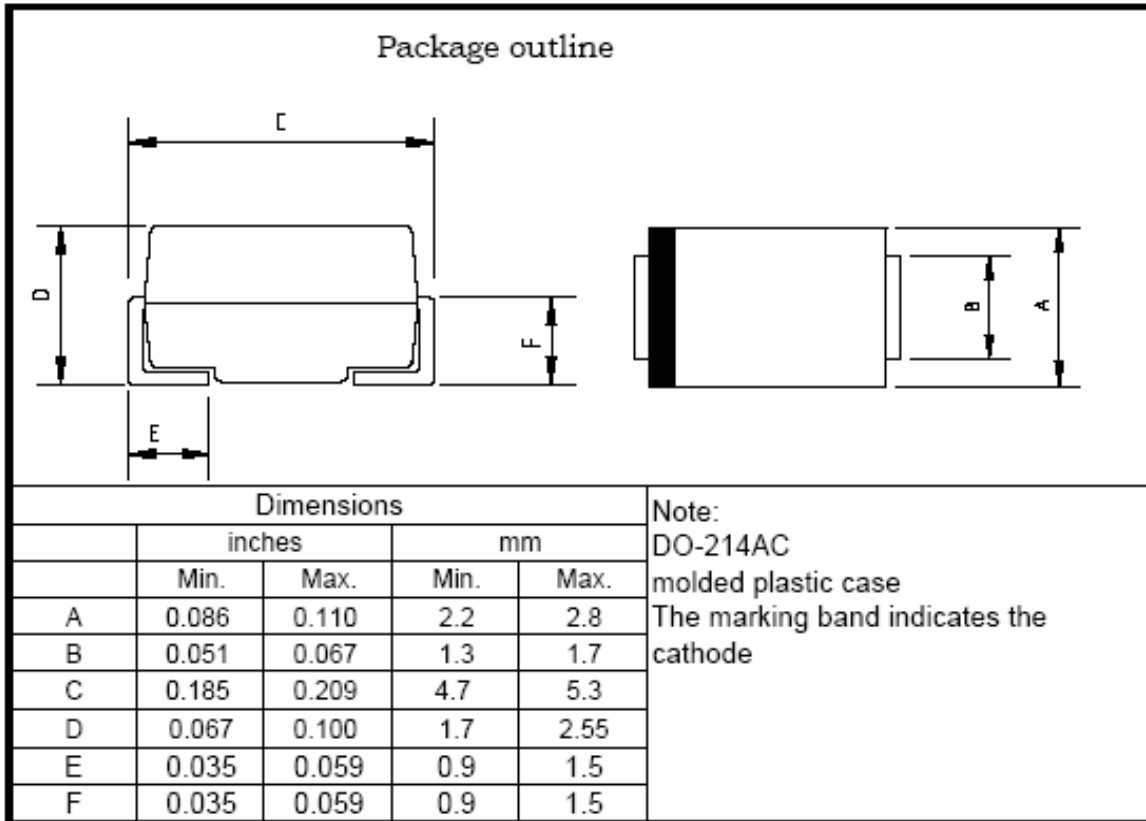


Fig 6. - Typical Junction Capacitance



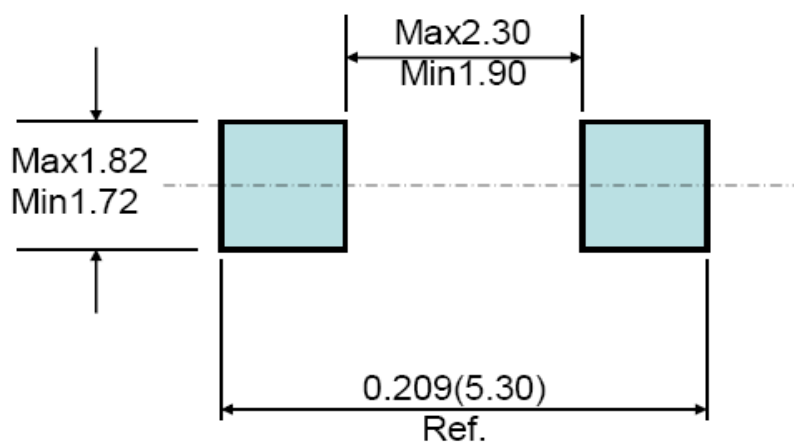
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### 3. dimension:



### Mounting Pad Layout

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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	2010-4-28
2	1. 修正VF测试条件 2. 修改结温为150度。	周杰	2010-6-8
3	更新IR规格参数	谭志伟	2018-12-25