

## SM120A thru SM1100A

### 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:** 0.0028 oz., 0.08 g  
**Handling precaution:** None

### Schottky Barrier Rectifiers

**Reverse Voltage 20 to 100V**  
**Forward Current 1.0A**



We declare that the material of product compliance with RoHS requirements.

### Electrical Characteristic

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

Parameter Symbol	symbol	SM 120A	SM 130A	SM 140A	SM 150A	SM 160A	SM 180A	SM 1100A	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	100	V
Maximum RMS voltage	$V_{RMS}$	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)	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30							A
Typical thermal resistance (Note 1)	$R_{\theta JA}$	50							°C/W
Operating junction and storage temperature range	$T_J, T_{STG}$	-40 to +125							°C

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

Parameter Symbol	symbol	SM 120A	SM 130A	SM 140A	SM 150A	SM 160A	SM 180A	SM 1100A	Unit
Maximum instantaneous forward voltage at 1.0A	$V_F$	0.50			0.70		0.85		V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 125^\circ\text{C}$	$I_R$	0.5							mA
Typical junction capacitance at 4.0V, 1MHz	$C_J$	110							PF

#### NOTES:

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

## Ratings and Characteristic Curves

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

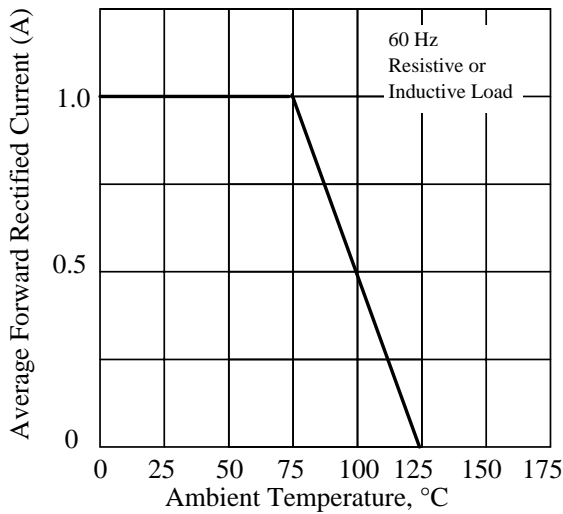


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

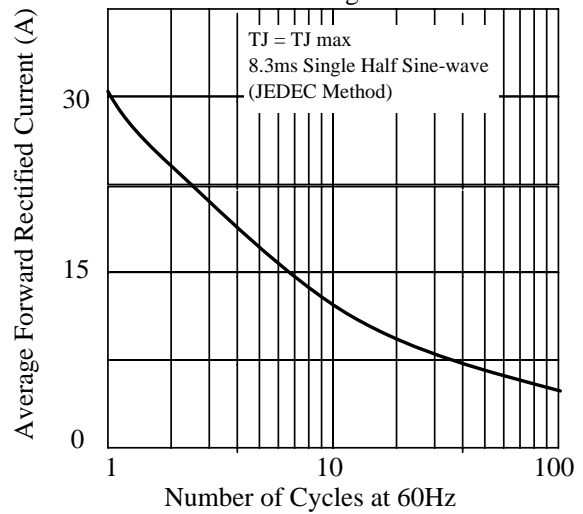


Fig 3. - Typical Instantaneous Forward Characteristics

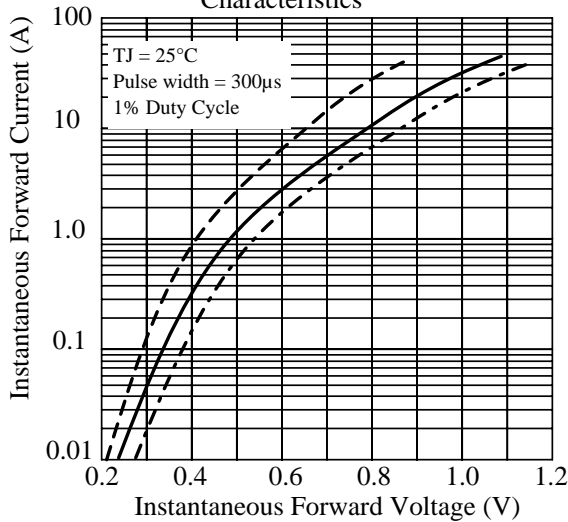


Fig 4. - Typical Reverse Characteristics

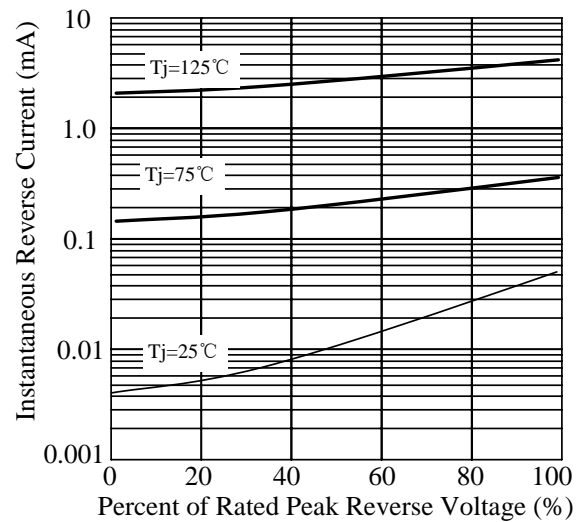


Fig 5. - typical transient thermal impedance

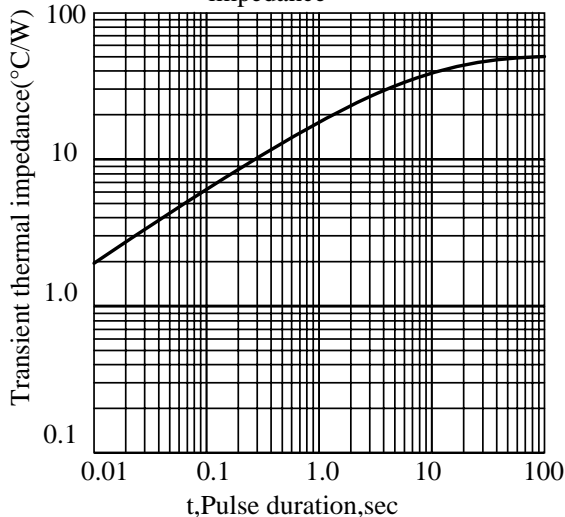
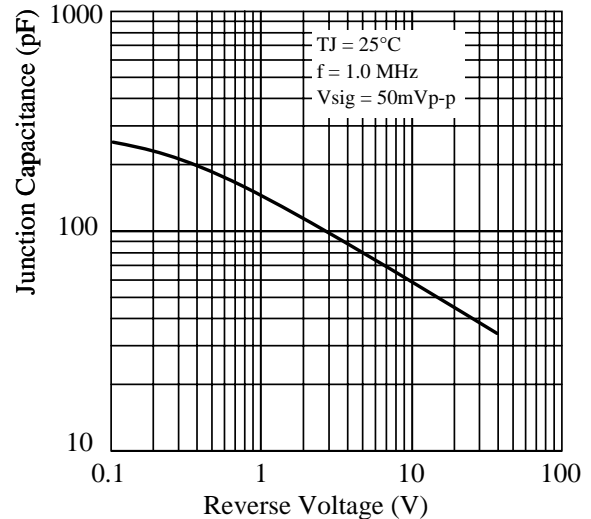
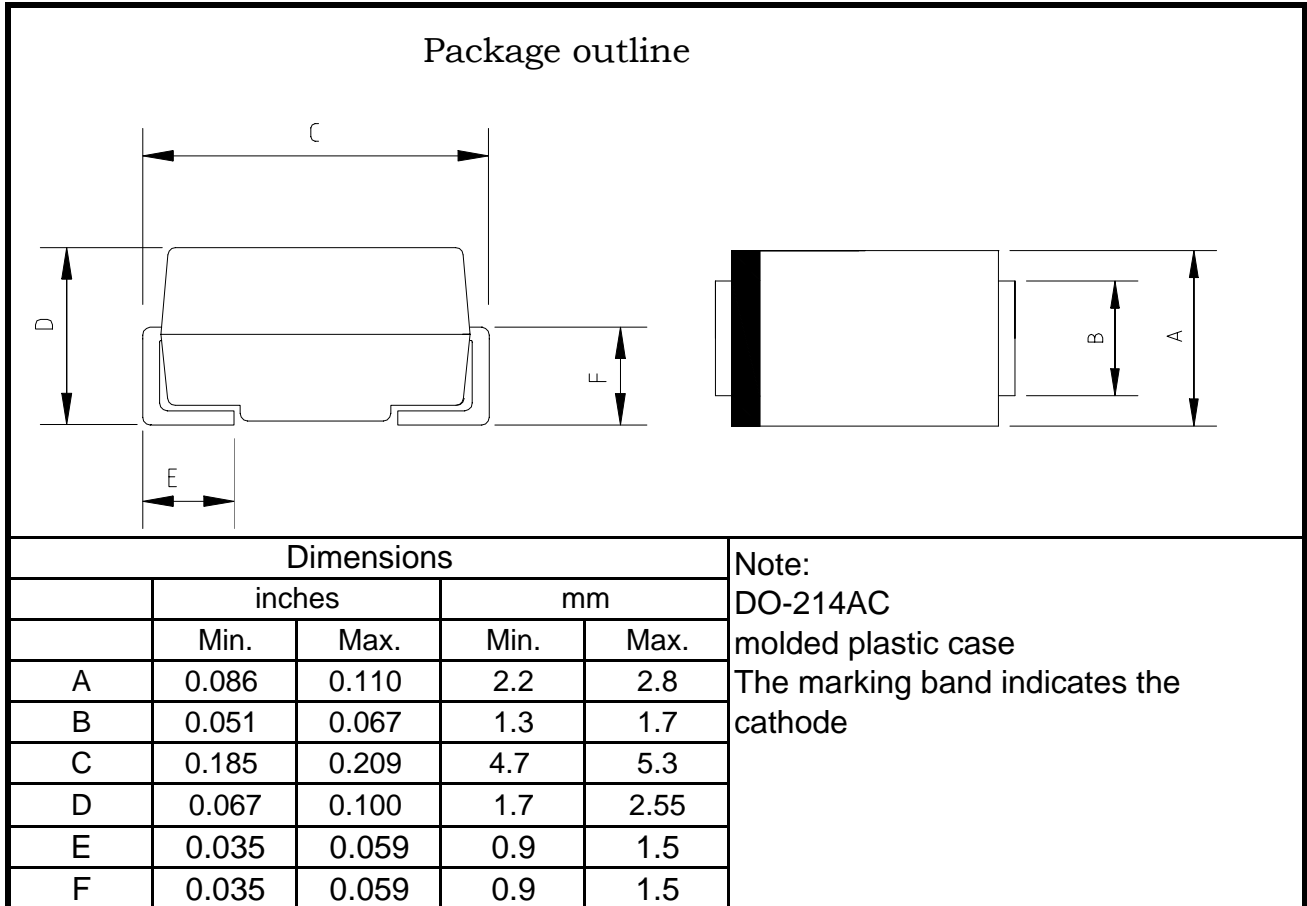


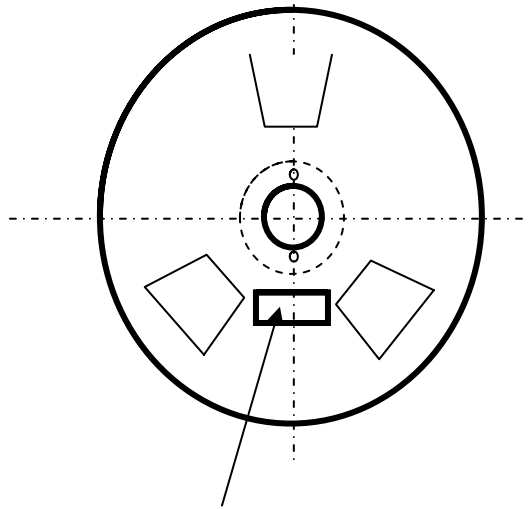
Fig 6. - Typical Junction Capacitance



**Package Dimensions in inches and (millimeters)**


## SMA Packing Specification

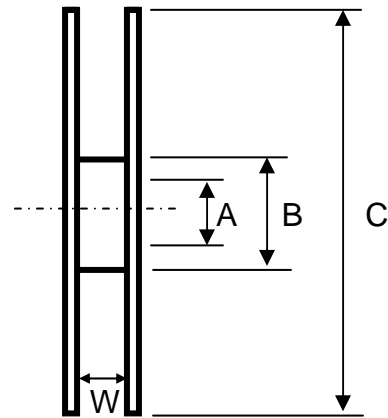
### 1. 卷盘规格/Reel Packing



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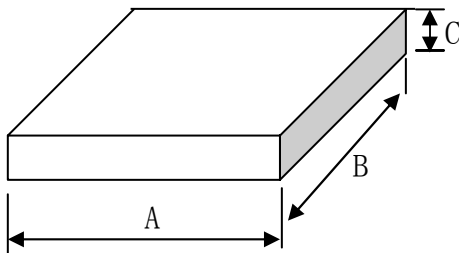
Item	Q'ty/Taping
7"	2K
13"	5K

Unit:mm



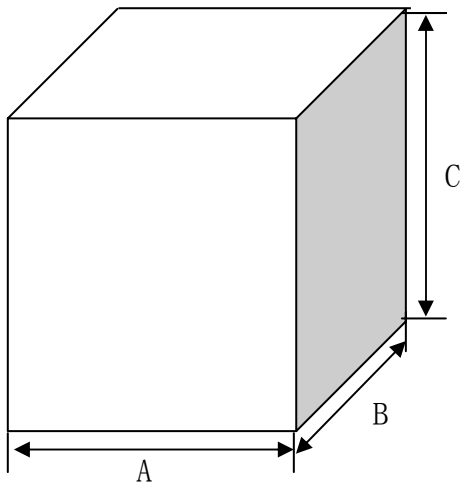
Item	Symbol	Dimension
13" Size	A	13.0±0.2
	B	75.0±0.5
	C	330±1.0
	W	13.2±1.0
7" Size	A	13.0±0.2
	B	54±0.5
	C	177±1.0
	W	13.2±1.0

### 2. 内箱规格/ Inside Box Specification



Item	Symbol	Dimension
Size	A	335±2
	B	335±2
	C	40±1

### 3. 外箱规格/Outer Box Specification



Item	Symbol	Dimension
Size	A	350±2
	B	350±2
	C	345±2