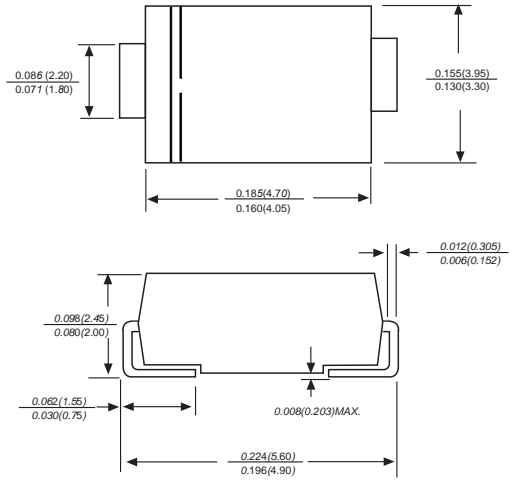


## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:  
250 °C/10 seconds at terminals

**DO-214AA/SMB**



Dimensions in inches and (millimeters)

### Mechanical Data

Case: JEDEC DO-214AA/SMB molded plastic body  
 Terminals: Solderable per MIL-STD-750, Method 2026  
 Polarity: Color band denotes cathode end Mounting  
 Position: Any  
 Weight: 0.003 ounce, 0.095 grams

### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	SYMBOLS	SS52B	SS53B	SS54B	SS55B	SS56B	SS58B	SS510B	SS5150B	SS5200B	UNITS
		MDD SS52B	MDD SS53B	MDD SS54B	MDD SS55B	MDD SS56B	MDD SS58B	MDD SS510B	MDD SS5150B	MDD SS5200B	
Maximum repetitive peak reverse voltage	$V_{RRM}$	20	30	40	50	60	80	100	150	200	V
Maximum RMS voltage	$V_{RMS}$	14	21	28	35	42	56	70	105	140	V
Maximum DC blocking voltage	$V_{DC}$	20	30	40	50	60	80	100	150	200	V
Maximum average forward rectified current at TL (see fig.1)	$I_{(AV)}$	5.0									A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	150									A
Maximum instantaneous forward voltage at 5.0A	$V_F$	0.55		0.70			0.85				V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=125^\circ\text{C}$	$I_R$	1.0		50			0.3 25				mA
Typical junction capacitance (NOTE 1)	$C_J$	500		300							pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	50.0									°C/W
Operating junction temperature range	$T_J$	-50 to +150									°C
Storage temperature range	$T_{STG}$	-50 to +150									°C

**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 2. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

## Typical Characteristics

Fig.1 Forward Current Derating Curve

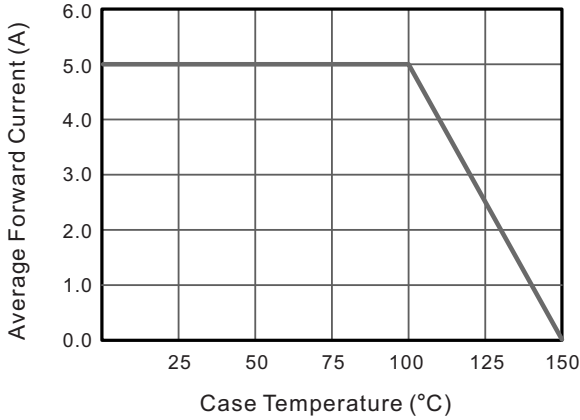


Fig.2 Typical Reverse Characteristics

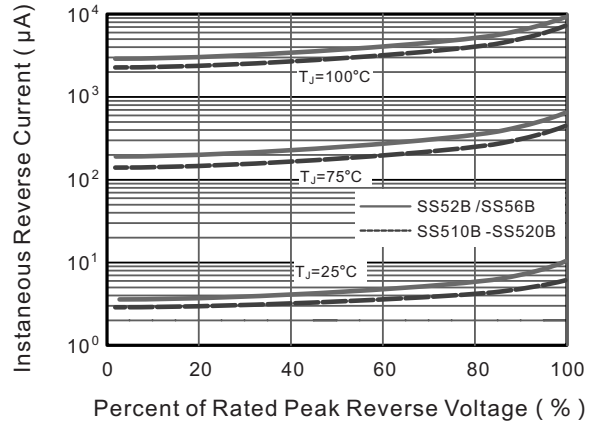


Fig.3 Typical Forward Characteristic

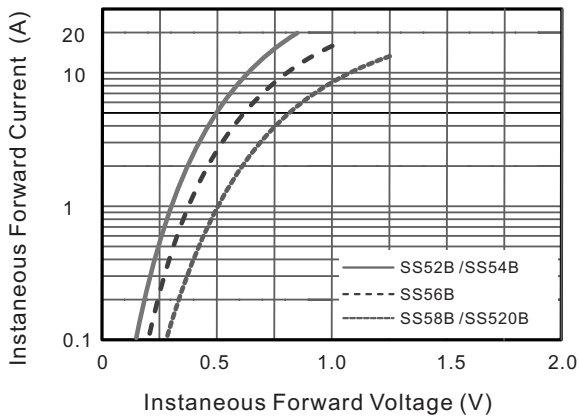


Fig.4 Typical Junction Capacitance

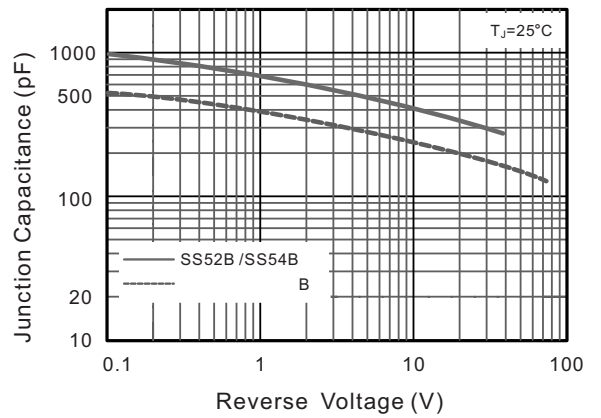


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

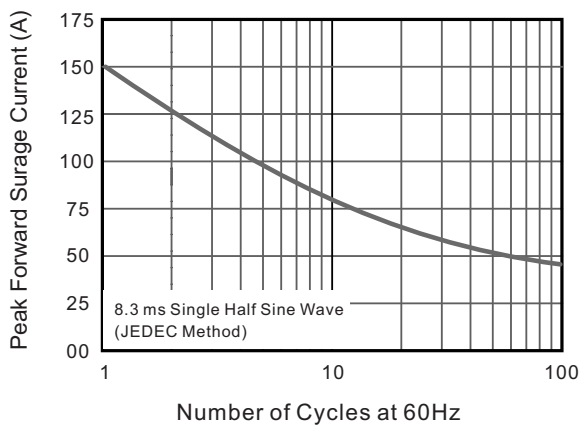
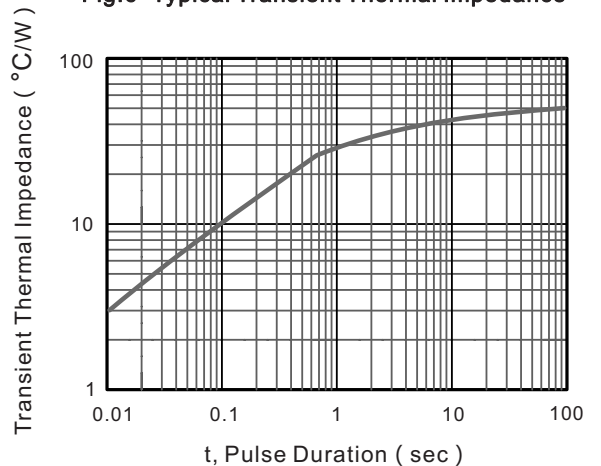
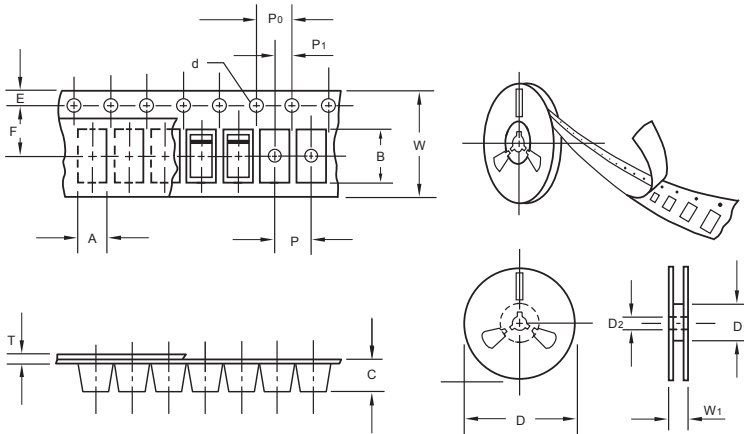


Fig.6- Typical Transient Thermal Impedance



The curve above is for reference only.

## Packing information



unit:mm

Item	Symbol	Tolerance	SMB
Carrier width	A	0.1	3.81
Carrier length	B	0.1	5.41
Carrier depth	C	0.1	2.42
Sprocket hole	d	0.05	1.50
13" Reel outside diameter	D	2.0	330.00
13" Reel inner diameter	D1	min	50.00
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	5.55
Punch hole pitch	P	0.1	8.00
Sprocket hole pitch	P0	0.1	4.00
Embossment center	P1	0.1	2.00
Overall tape thickness	T	0.1	0.30
Tape width	W	0.3	12.00
Reel width	W1	1.0	12.30

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

## Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (mm)	BOX (pcs)	INNER BOX (mm)	REEL DIA, (mm)	CARTON SIZE (mm)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SMB	13"	3,000	4.0	6,000	190*190*41	330	365*365*360	48,000	14.0

## Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	2.8	0.110
B	2.4	0.094
C	4.6	0.181
D	2.2	0.086
E	7.0	0.276