

# SB12 THRU SB1A0

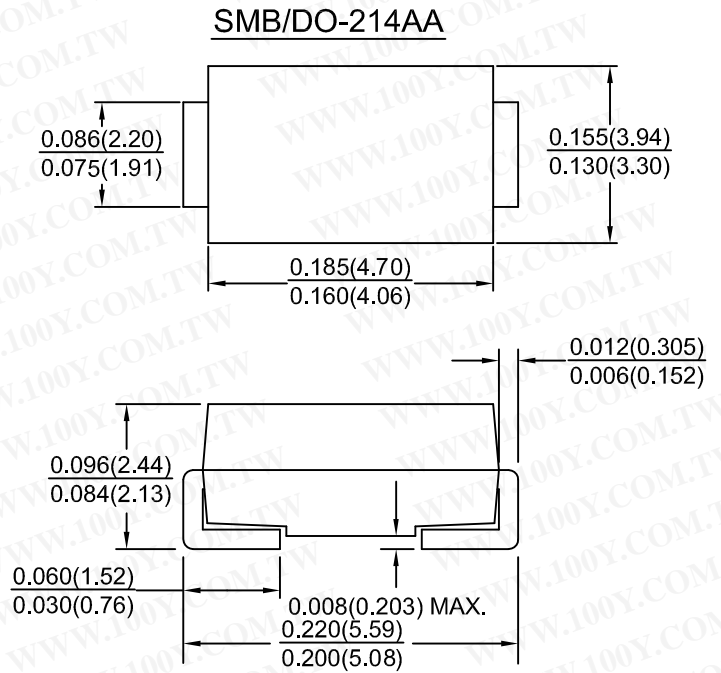
## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

### FEATURES:

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- Guard ring for overvoltage protection
- High temperature soldering guaranteed: 250° C/10 seconds at terminals

### MECHANICAL DATA

Case : JEDEC DO-214AA molded plastic body  
 Terminals : Solder plated, solderable per MIL-STD-750 Method 2026  
 Polarity : Color band on body denotes cathode end  
 Weight : 0.003 ounce, 0.093 grams



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25° C ambient temp. unless otherwise specified.  
 Single phase, half sine wave, 60 Hz, resistive or inductive load.  
 For capacitive load, derate current by 20 %.

Characteristic	Symbol	SB 12	SB 13	SB 14	SB 15	SB 16	SB 18	SB 19	SB 1A0	Units	
	Marking	S12	S13	S14	S15	S16	S18	S19	S1A0		
Maximum recurrent peak reverse voltage	V <sub>RRM</sub>	20	30	40	50	60	80	90	100	Volts	
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	35	42	56	64	70	Volts	
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	50	60	80	90	100	Volts	
Maximum average forward rectified current at TL(SEE FIG.1)	I <sub>(AV)</sub>	1.0								Amps	
Peak forward surge current 8.3mm single half sine-wave superimposed on rated load(JEDEC Method)	I <sub>FSM</sub>	30								Amps	
Maximum instantaneous forward voltage at 1.0 A(NOTE 1)	V <sub>F</sub>	0.5	0.55	0.70			0.85			Volts	
Maximum instantaneous reverse current at rated DC blocking voltage (NOTE 1)	I <sub>R</sub>					0.5					mA
						20.0					
Typical thermal resistance(NOTE 2)	R <sub>th-JA</sub>	88.0								°C/W	
	R <sub>th-JL</sub>	28.0									
Operating junction temperature range	T <sub>J</sub>	-65 to +150								°C	
Storage temperature range	T <sub>stg</sub>	-65 to +150								°C	

#### NOTES:

- (1) Pulse test: 300 μs pulse width, 1% duty cycle
- (2) P.C.B. mounted with 0.2x0.2"(5.0x5.0mm) copper pad areas

**勝特力材料 886-3-5753170**  
**勝特力电子(上海) 86-21-54151736**  
**勝特力电子(深圳) 86-755-83298787**  
[Http://www.100y.com.tw](http://www.100y.com.tw)

# RATINGS AND CHARACTERISTIC CURVES SB12 THRU SB1A0

FIG.1 - FORWARD CURRENT DERATING CURVE

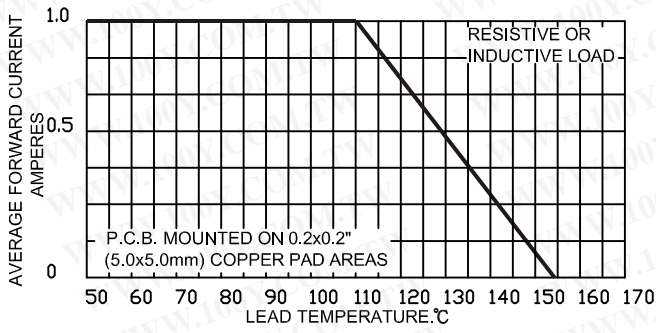


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

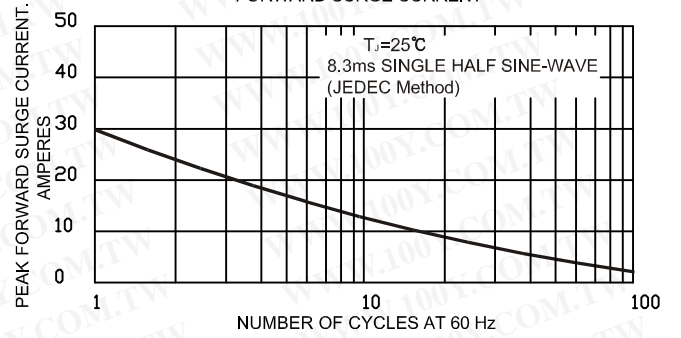


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

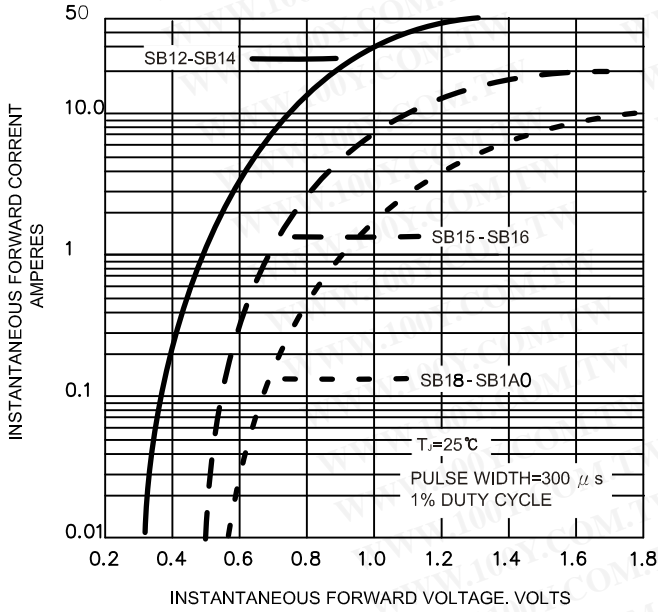


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

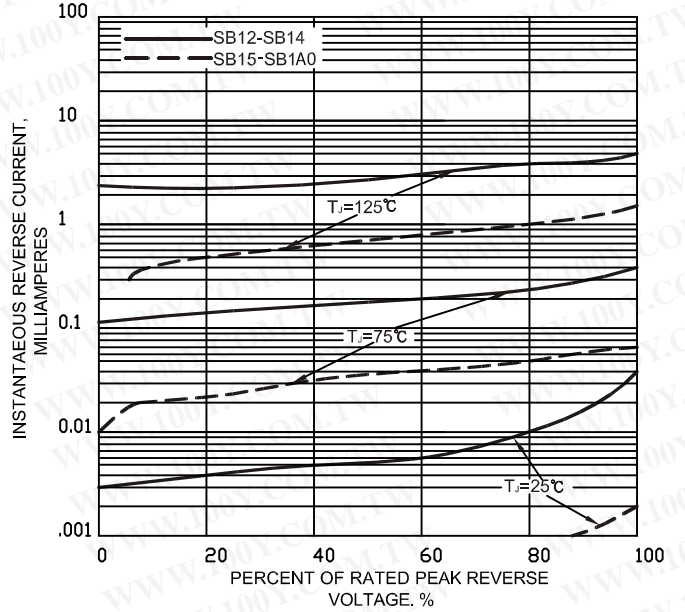
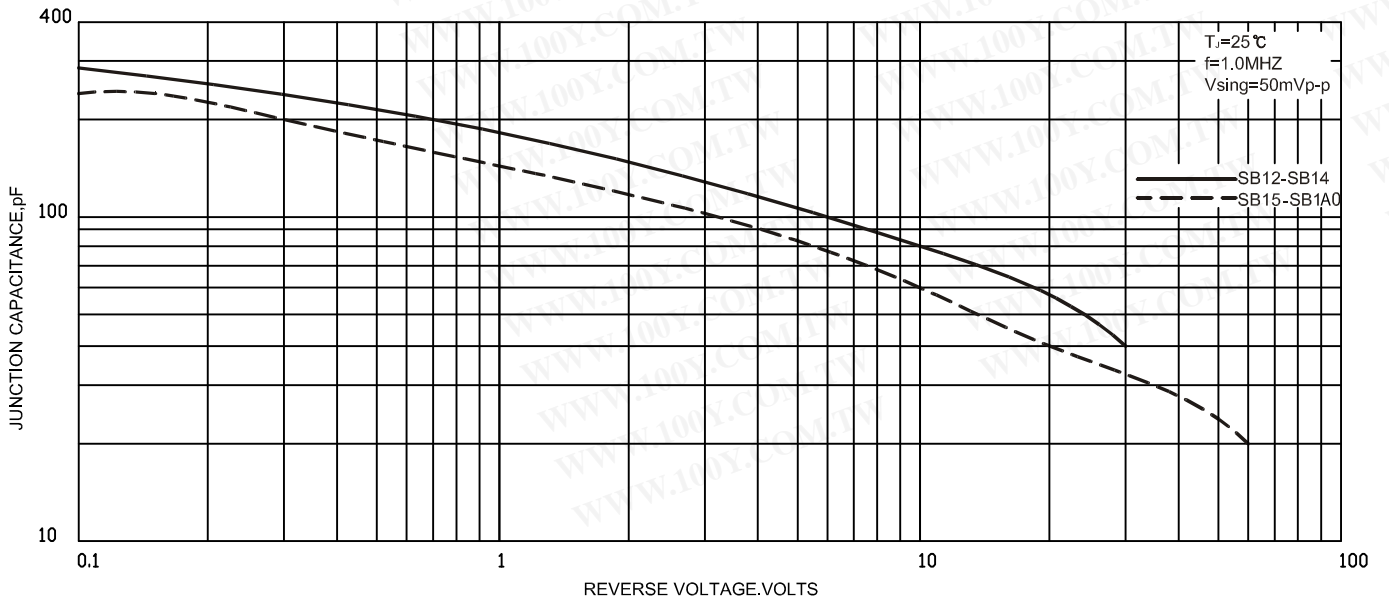


FIG.5 - TYPICAL JUNCTION CAPACITANCE



勝特力材料 886-3-5753170  
 勝特力电子(上海) 86-21-54151736  
 勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)