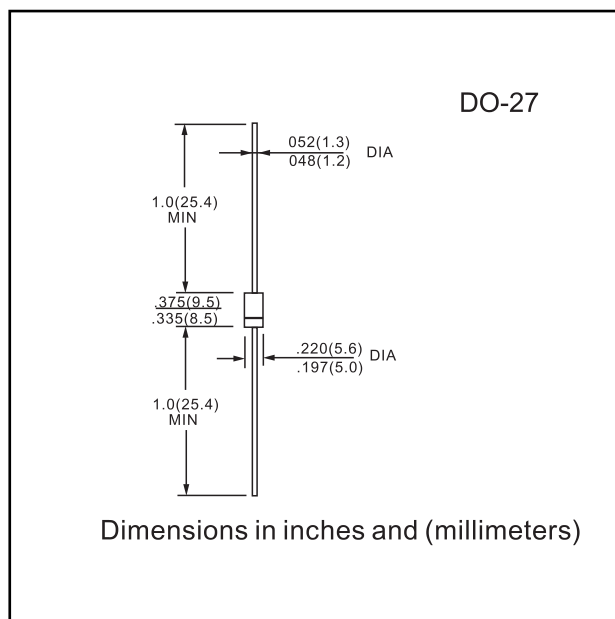


## FEATURES

- Metal-Semiconductor junction with guard ring
- Epitaxial construction
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

## MECHANICAL DATA

- Case : JEDEC DO-201AD molded plastic
- Polarity : Color band denotes cathode
- Weight : 1.071grams
- Mounting position : Any



## 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, derate current by 20%

PARAMETER	SYMBOL	SB 520	SB 530	SB 540	SB 550	SB 560	SB 580	SB 5100	SB 5150	SB 5200	UNIT	
Maximum repetitive peak reverse voltage	VRRM	20	30	40	50	60	80	100	150	200	V	
Maximum RMS voltage	VRMS	14	21	28	35	42	56	70	105	140	V	
Maximum DC blocking voltage	VDC	20	30	40	50	60	80	100	150	200	V	
Maximum average forward rectified current	IF	5.0									A	
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	IFSM	100.0									A	
Maximum instantaneous I <sub>F</sub> =5A@25°C Forward Voltage I <sub>F</sub> =5A@100°C	V <sub>F</sub>	0.55		0.70		0.85		0.87		0.9	V	
		0.50		0.65		0.75		0.77		0.8		
Maximum DC Reverse Current @TA=25°C	I <sub>R</sub>	0.5					0.2					mA
at Rated DC Blocking Voltage @TA=100°C		15.0					5.0					
Typical Junction Capacitance	C <sub>J</sub>	250		200		150		140		110	pF	
Typical Thermal Resistance	R <sub>θJA</sub> R <sub>θJC</sub>	50					12					°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +125					-55 to +150					°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150					-55 to +150					°C

## RATINGS AND CHARACTERISTIC CURVES SB520 THRU SB5200

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

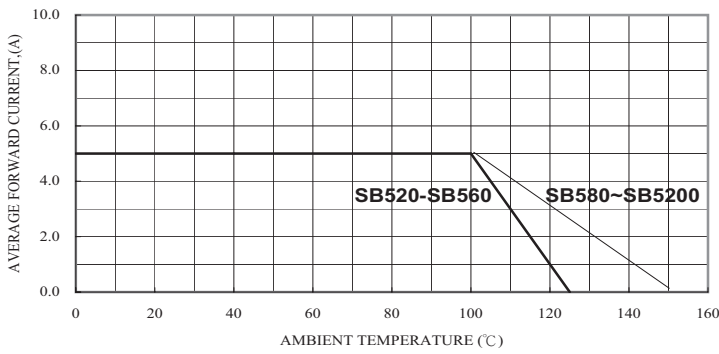


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

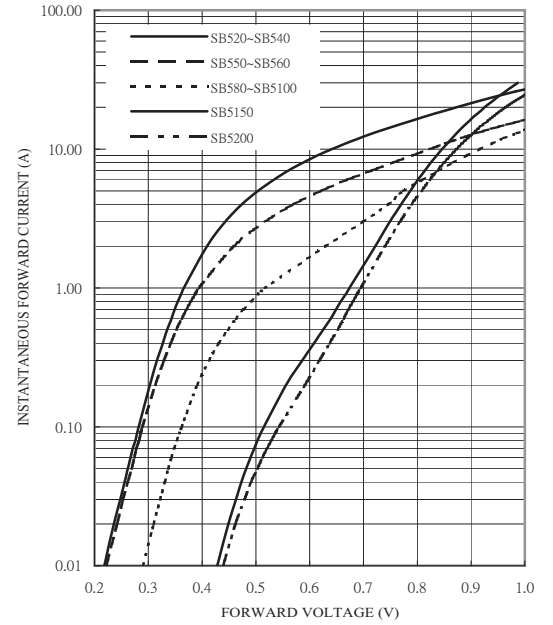


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

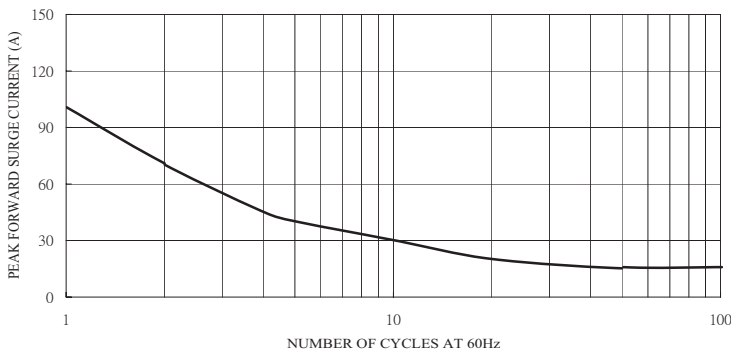


FIG. 5-TYPICAL REVERSE CHARACTERISTICS

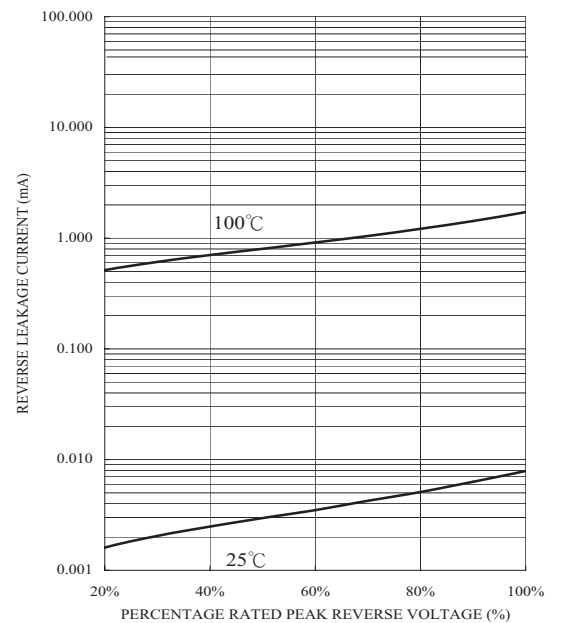


FIG. 4-TYPICAL JUNCTION CAPACITANCE

