



# SB520 SERIES

## SCHOTTKY BARRIER RECTIFIERS

**VOLTAGE** 20 to 60 Volt **CURRENT** 5 Ampere

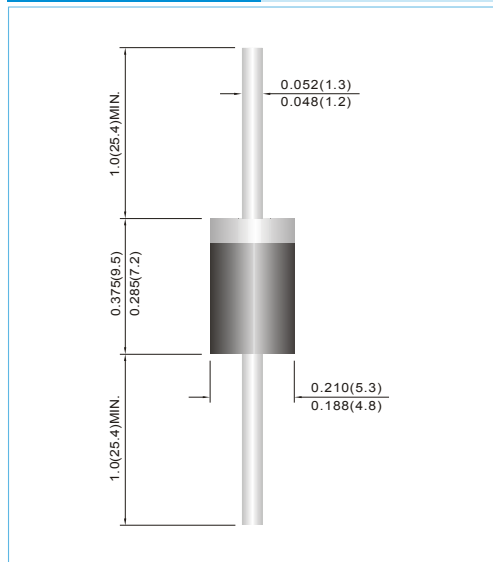
**DO-201AD** Unit : inch(mm)

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.
- ESD Passed devices : Air mode 15KV, human body mode 8KV
- Lead free in compliance with EU RoHS 2.0

### MECHANICAL DATA

- Case: DO-201AD Molded plastic
- Terminals: Axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode
- Weight: 0.04 ounces, 1.122 grams



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.

PARAMETER	SYMBOL	SB520	SB530	SB540	SB550	SB560	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	V
Maximum Average Forward Rectified Current (See Fig 1)	$I_{F(AV)}$	5					A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	150					A
Maximum Forward Voltage at 5A (NOTES 3)	$V_F$	0.55			0.7		V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J=25^{\circ}C$ $T_J=100^{\circ}C$	$I_R$	0.2 50			0.1 50		mA
Typical Thermal Resistance (NOTES 2) (NOTES 1) (NOTES 1)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	50 12 15					$^{\circ}C / W$
Power Dissipation	$P_D$	5					W
Operating Junction Temperature Range	$T_J$	-55 to +125			-55 to +150		$^{\circ}C$
Storage Temperature Range	$T_{STG}$	-55 to +150					$^{\circ}C$

### NOTES :

1. Measured at ambient temperature at a distance of 9.5mm from the case
2. Minimum Pad Area
3. Pulse test : 300 $\mu$ s pulse width, 1% duty cycle



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## RATING AND CHARACTERISTIC CURVES

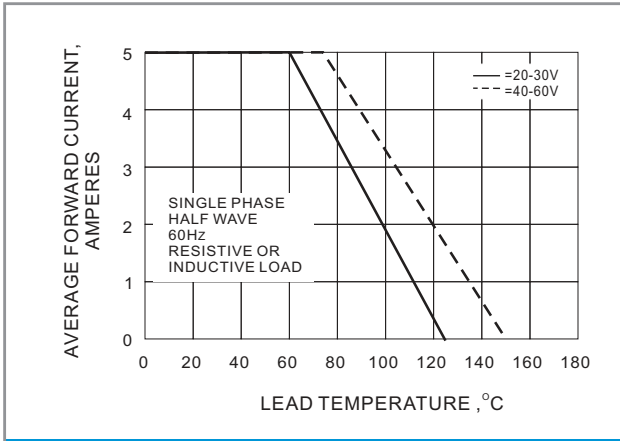


Fig.1 FORWARD CURRENT DERATING CURVE

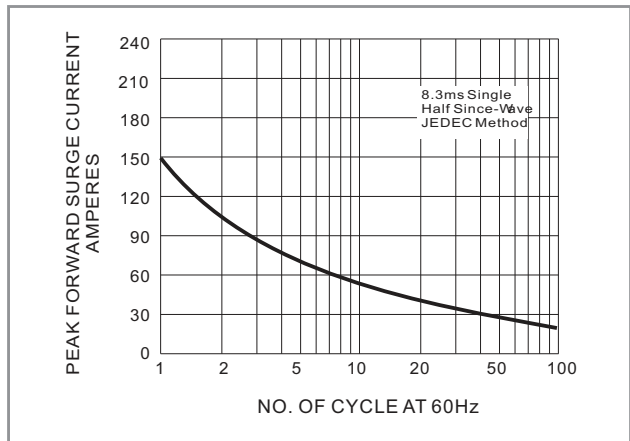


Fig.2 MAXIMUM NON-REPETITIVE SURGE CURRENT

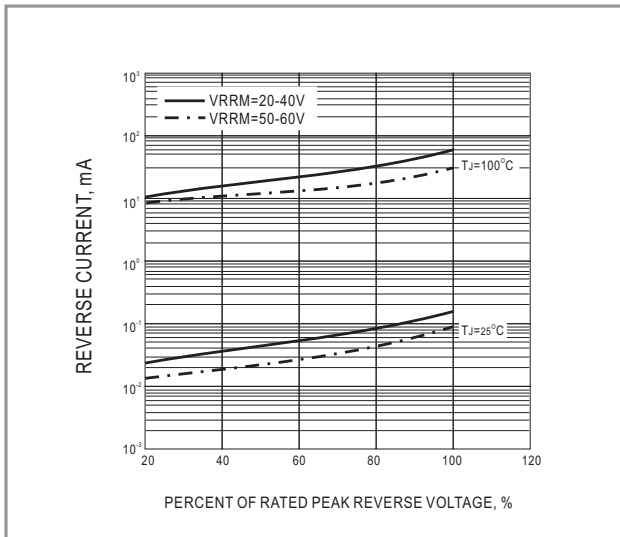


Fig.3 TYPICAL REVERSE CHARACTERISTIC

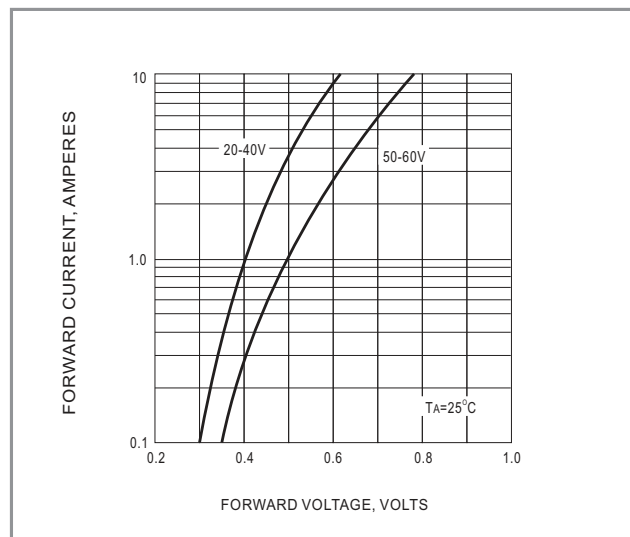


Fig.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

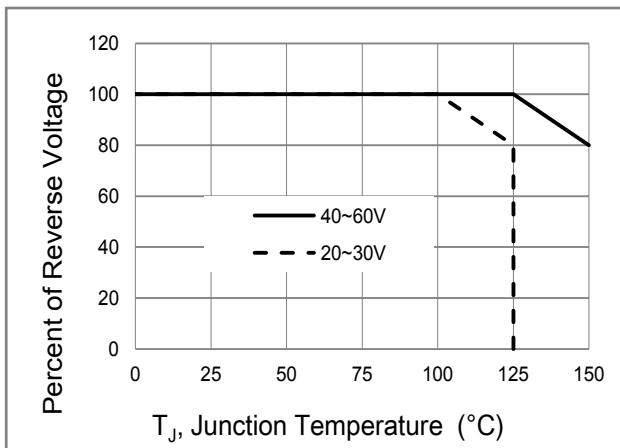


Fig.5 Operating Temperature Derating Curve



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### Part No\_packing code\_Version

SB520\_AY\_00001  
SB520\_AY\_10001  
SB520\_B0\_00001  
SB520\_B0\_10001  
SB520\_R2\_00001  
SB520\_R2\_10001

For example :

**RB500V-40 R2 00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	<b>A</b>	N/A	<b>0</b>	<b>HF</b>	<b>0</b>	serial number
Tape and Reel (T/R)	<b>R</b>	7"	<b>1</b>	<b>RoHS</b>	<b>1</b>	serial number
Bulk Packing (B/P)	<b>B</b>	13"	<b>2</b>			
Tube Packing (T/P)	<b>T</b>	26mm	<b>X</b>			
Tape and Reel (Right Oriented) (TRR)	<b>S</b>	52mm	<b>Y</b>			
Tape and Reel (Left Oriented) (TRL)	<b>L</b>	PANASERT T/B CATHODE UP (PBCU)	<b>U</b>			
FORMING	<b>F</b>	PANASERT T/B CATHODE DOWN (PBCD)	<b>D</b>			



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