

# SB120 - SB1B0

# SCHOTTKY BARRIER RECTIFIER DIODES

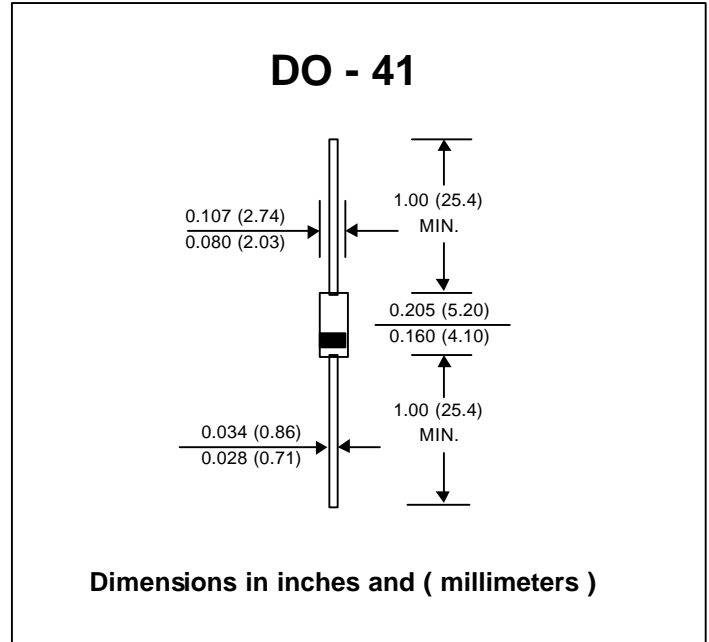
**PRV : 20 - 100 Volts**  
**I<sub>o</sub> : 1.0 Ampere**

### FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* High efficiency
- \* Low power loss
- \* Low forward voltage drop
- \* Low cost

### MECHANICAL DATA :

- \* Case : DO-41 Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.339 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

RATING	SYMBOL	SB 120	SB 130	SB 140	SB 150	SB 160	SB 170	SB 180	SB 190	SB 1B0	UNITS	
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	70	80	90	100	Volts	
Maximum RMS Voltage	V <sub>RMS</sub>	14	21	28	35	42	49	56	63	70	Volts	
Maximum DC Blocking Voltage	V <sub>DC</sub>	20	30	40	50	60	70	80	90	100	Volts	
Maximum Average Forward Current 0.375", 9.5mm Lead Length See Fig.1	I <sub>F(AV)</sub>	1.0									Amp.	
Peak Forward Surge Current, 8.3ms single half sine wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	40									Amps.	
Maximum Forward Voltage at I <sub>F</sub> = 1.0 Amp. (Note 2)	V <sub>F</sub>	0.5			0.7			0.79			Volt.	
Maximum Reverse Current at Ta = 25 °C	I <sub>R</sub>	0.5									mA	
Rated DC Blocking Voltage (Note 1) Ta = 100 °C	I <sub>R(H)</sub>	10.0			5.0						mA	
Typical Thermal Resistance (Note 2)	R <sub>θJL</sub>	15									°C/W	
Junction Temperature Range	T <sub>J</sub>	- 40 to + 125				- 65 to + 150						°C
Storage Temperature Range	T <sub>STG</sub>	- 65 to + 150									°C	

### Notes :

- (1) Pulse Test : Pulse Width = 300 μs, Duty Cycle = 2%.
- (2) Thermal Resistance from junction to lead, PC board Mounting with 0.375" (9.5mm) Lead Lengths.

## RATING AND CHARACTERISTIC CURVES ( SB120 - SB1B0 )

FIG.1 - FORWARD CURRENT DERATING CURVE

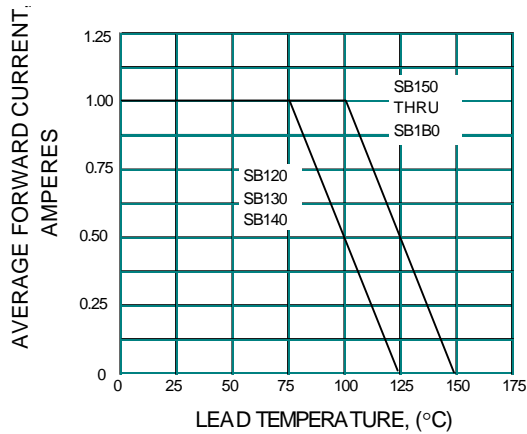


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

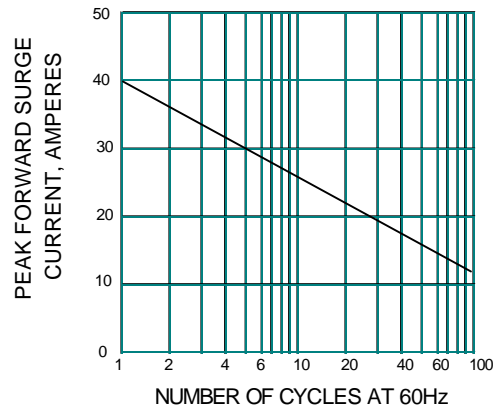


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

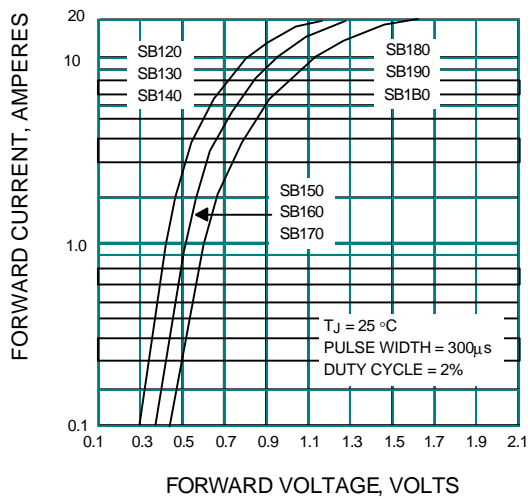


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

