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SB120 - SB1B0

SCHOTTKY BARRIER RECTIFIER DIODES

PRV : 20 - 100 Volts
Io : 1.0 Ampere

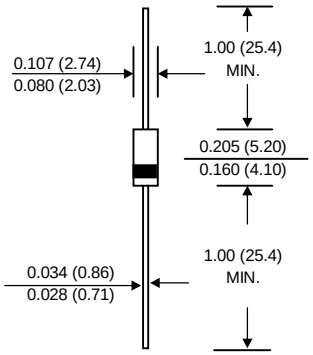
FEATURES :

* High current capability
* High surge current capability
* High reliability
* High efficiency
* Low power loss
* Low forward voltage drop
* Low cost
* Pb / RoHS Free

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 : 0.312 gram

DO - 41



Dimensions in inches and (millimeters)

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	UNIT
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	70	80	90	100	V
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	49	56	63	70	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	70	80	90	100	V
Maximum Average Forward Current 0.375", 9.5mm Lead Length See Fig.1	$I_{F(AV)}$	1.0									A
Maximum Peak Forward Surge Current, 8.3ms single half sine wave Superimposed on rated load (JEDEC Method) T_L = 75°C	I_{FSM}	40									A
Maximum Forward Voltage at I_F = 1.0 A (Note 2)	V_F	0.5			0.7			0.79			V
Maximum Reverse Current at Ta = 25 °C	I_R	0.5									mA
Rated DC Blocking Voltage (Note 1) Ta = 100 °C	$I_{R(H)}$	10			5.0						mA
Typical Thermal Resistance (Note 2)	RθJL	15									°C/W
Junction Temperature Range	T_J	- 40 to + 125				- 65 to + 150					°C
Storage Temperature Range	T_{STG}	- 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

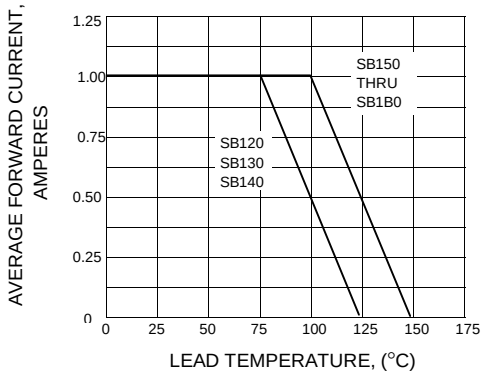


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

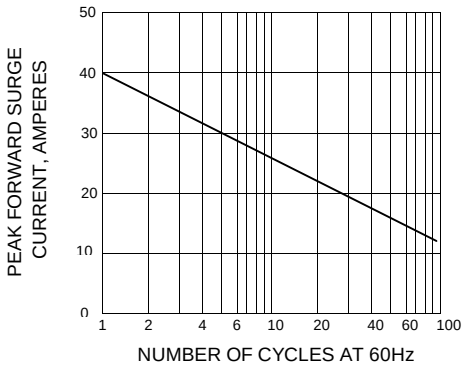


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

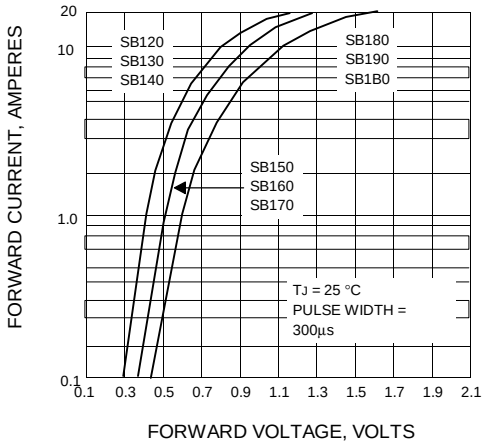


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

