

SBL520 THRU SBL5100

SCHOTTKY BARRIER RECTIFIERS

Reverse Voltage - 20 to 100 V

Forward Current - 5 A

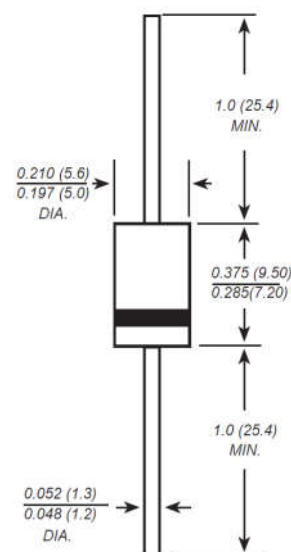
Features

- The plastic package carries Underwriters Laboratory
- Flammability Classification 94V-0
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High forward surge current capability

Mechanical Data

- Case: Molded plastic JEDEC DO-201AD molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any

DO-201AD



Dimensions in inches and (millimeters)

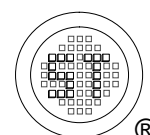
Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, resistive or inductive load, for capacitive load, derate by 20%

Parameter	Symbols	SBL520	SBL530	SBL540	SBL550	SBL560	SBL580	SBL5100	Units
	Marking	SBL520	SBL530	SBL540	SBL550	SBL560	SBL580	SBL5100	-
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	20	30	40	50	60	80	100	V
Maximum RMS Voltage	V _{RMS}	14	21	28	35	42	56	70	V
Maximum DC Blocking Voltage	V _{DC}	20	30	40	50	60	80	100	V
Maximum Average Forward Rectified Current	I _{F(AV)}	5							A
Peak Forward Surge Current 8.3mS Single Half Sine-Wave Superimposed On Rated Load (JEDEC Method)	I _{FSM}	150							A
Maximum Instantaneous Forward Voltage at I _F = 5 A	V _F	0.45			0.5		0.7		V
Maximum DC Reverse Current at T _A = 25 °C at Rated DC Blocking Voltage at T _A =100 °C	I _R	0.5					0.2		mA
		20					10		mA
Typical junction capacitance ¹⁾	C _J	500			400				pF
Typical Thermal Resistance ²⁾	R _{θJA}	25							°C/W
Operating JunctionTemperature Range	T _J	- 55 to + 125						- 55 to + 150	°C
Storage Temperature Range	T _{Stg}	- 55 to + 150							°C

¹⁾ Measured at 1MHz and applied reverse voltage of 4.0V D.C.

²⁾ Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted.

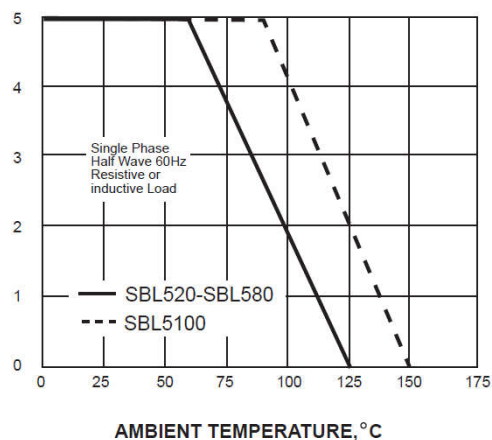


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Electrical Characteristics Curves

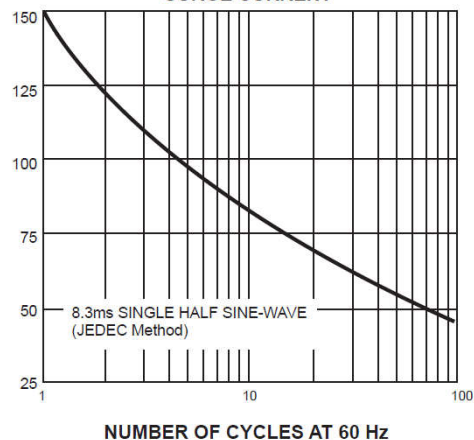
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



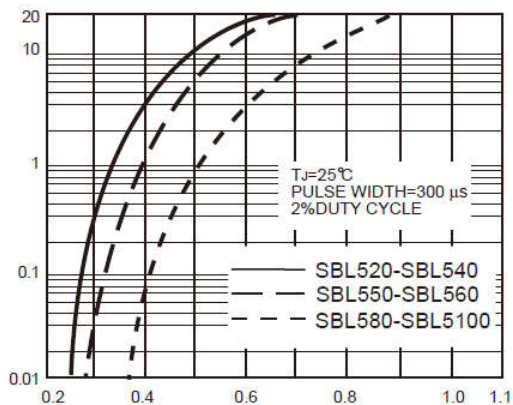
PEAK FORWARD SURGE CURRENT,
AMPERES

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



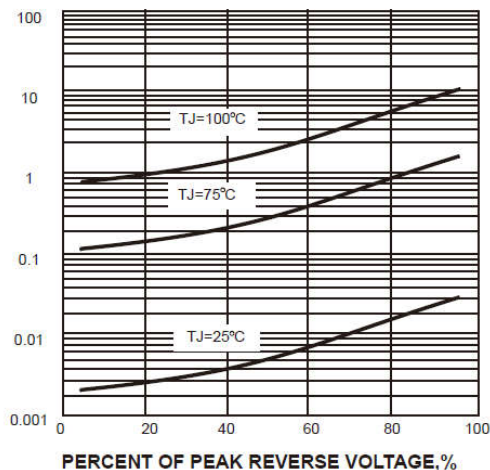
INSTANTANEOUS FORWARD
CURRENT,AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

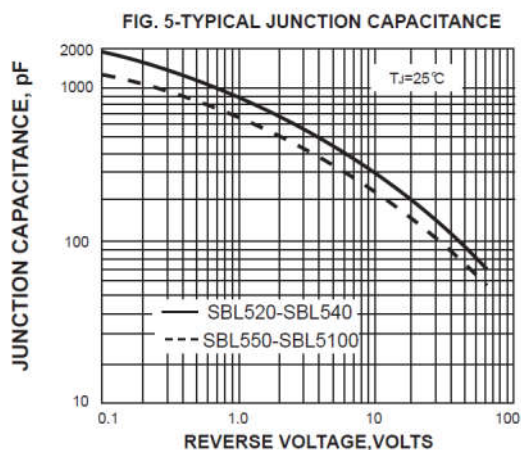


INSTANTANEOUS REVERSE CURRENT,
MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



INSTANTANEOUS FORWARD VOLTAGE,
VOLTS



TRANSIENT THERMAL IMPEDANCE,
°C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

