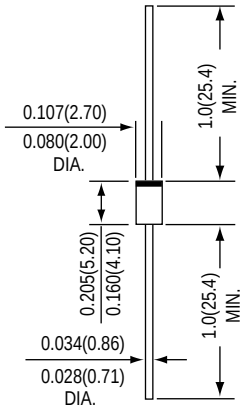
SB120 THRU SB1100

SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 100 Volts *Forward Current - 1.0 Ampere*

DO-204AL



*Dimensions in inches and (millimeters)

FEATURES

* Compliance to RoHS product
* Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
* Metal silicon junction, majority carrier conduction
* Guardring for overvoltage protection
* Low power loss, high efficiency
* High current capability, low forward voltage drop
* High surge capability
* For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
* High temperature soldering guaranteed : 260°C / 10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case : JEDEC DO-204AL Molded plastic body
Terminals : Tin Plated, solderable per MIL-STD-750, Method 2026
Polarity : Color band denotes cathode end
Mounting Position : Any
Weight : 0.012 ounce, 0.3 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.	*SYMBOLS*	***SB120***	***SB140***	***SB160***	***SB1100***	*UNITS*
Maximum repetitive peak reverse voltage	V_{RRM}	20	40	60	100	Volts
Maximum RMS voltage	V_{RMS}	14	28	42	70	Volts
Maximum DC blocking voltage	V_{DC}	20	40	60	100	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length (SEE FIG.1)	$I_{(AV)}$	1.0				Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30				Amps
Maximum instantaneous forward voltage at 1.0 A (NOTE 1)	V_F	0.50		0.70	0.85	Volts
Maximum instantaneous reverse current at rated DC blocking voltage T_A=25°C T_A=100°C	I_R	0.5 10.0				mA
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$ $R_{\theta JL}$	50 15				°C / W
Operating junction temperature range	T_J	-65 to +125		-65 to +150		°C
Storage temperature range	T_{STG}	-65 to +150				°C

NOTES : (1) Pulse test 300us pulse widh, 1% duty cycle
(2) Thermal resistance junction to lead P.C.B. mounted 0.375" (9.5mm) lead length

RATINGS AND CHARACTERISTIC CURVES SB120 THRU SB1100

FIG.1 - FORWARD CURRENT DERATING CURVE

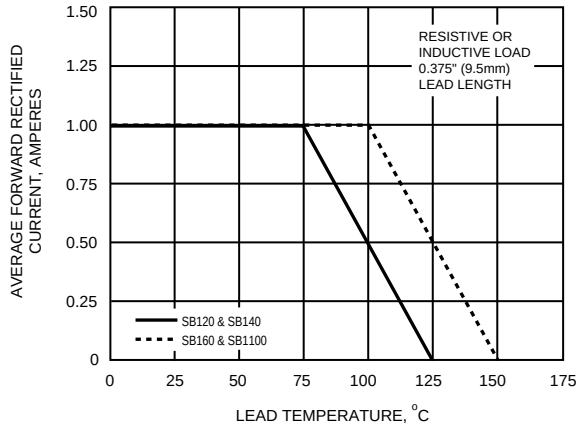


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

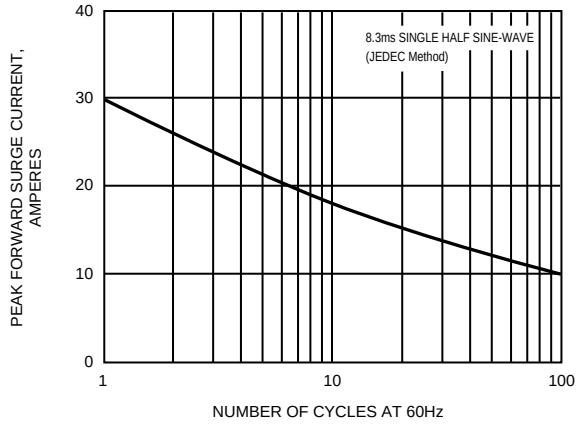


FIG.3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

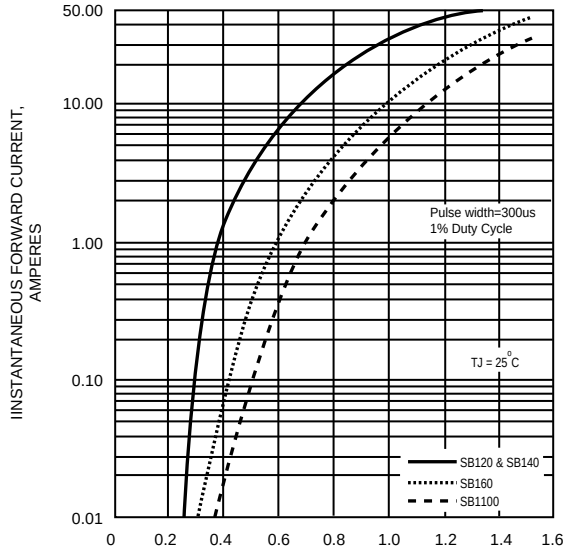


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

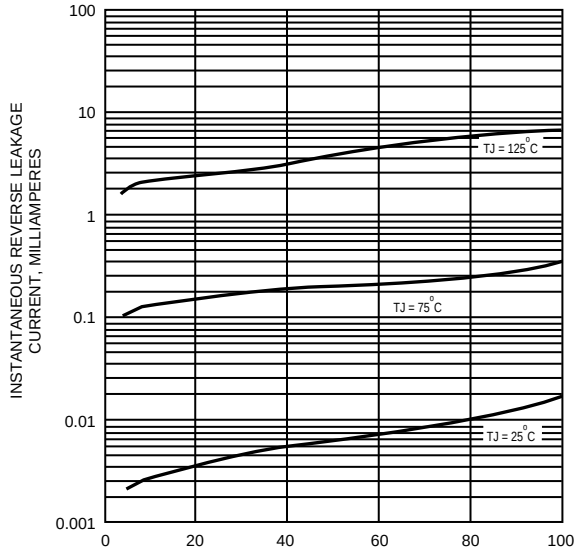


FIG.5 - TYPICAL JUNCTION CAPACITANCE

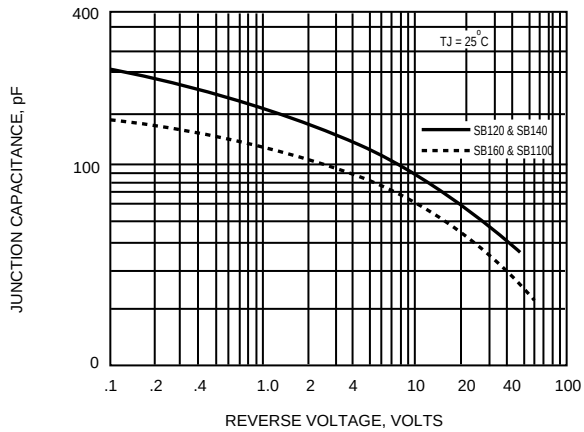


FIG.6 - TYPICAL TRANSIENT THERMAL IMPEDANCE