SB2040L THRU SB20100L

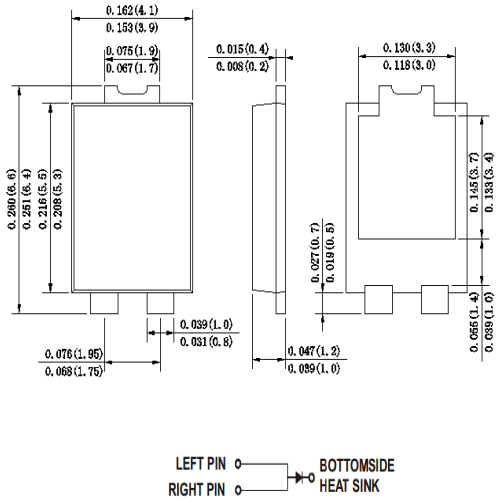
Surface Mount Schottky Barrier Rectifiers

Datasheet

Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Built-in strain relief,ideal for automated placement
- Low forward voltage drop
- High forward surge current capability
- High temperature soldering guaranteed 250℃/10 seconds at terminals

TO-277



Dimensions in inches and (millimeters)

Mechanical Data

Case : Molded plastic body
Terminals : Solder plated, solderable per MIL-STD-750,Method 2026
Polarity : Polarity symbol marking on body
Mounting Position : Any
Weight : 0.003 ounce, 0.092 grams

Maximum Ratings And Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified. Single phase half-wave 60Hz,resistive or inductive load, for capacitive load current derate by 20%.

Parameter	SYMBOLS	SB2040L	SB2045L	SB2050L	SB2060L	SB2080L	SB20100L	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	40	45	50	60	80	100	V
Maximum RMS voltage	V_{RMS}	28	31.5	35	42	56	70	V
Maximum DC blocking voltage	V_{DC}	40	45	50	60	80	100	V
Maximum average forward rectified current at T_L=100℃	$I_{(AV)}$	20.0						A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	250.0						A
Maximum instantaneous forward voltage at 2.0A at 20.0A	V_F	0.35 0.48		0.40 0.55		0.45 0.70		V
Maximum DC reverse current T_A =25℃ at rated DC blocking voltage T_A=125℃	I_R	0.5 50				0.2 20		mA
Typical thermal resistance	R_{qJA}	60.0						°C/W
Operating junction temperature range	T_J	-55 to +150						°C
Storage temperature range	T_{STG}	-55 to +150						°C

Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

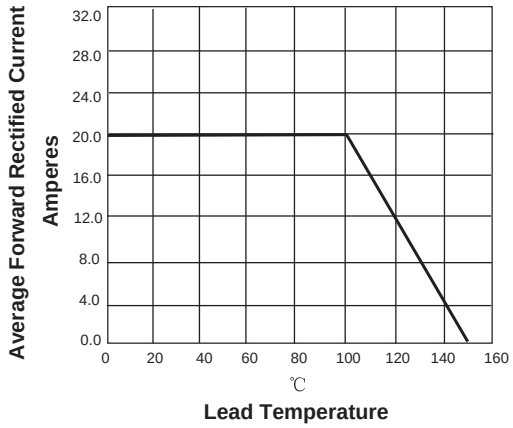


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PERLEG

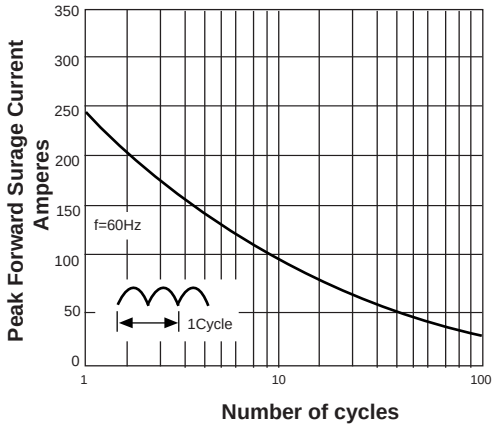


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

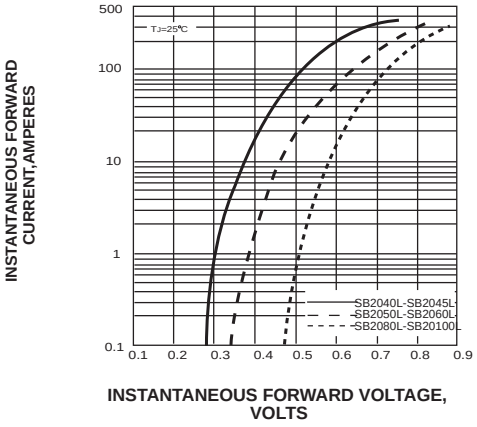
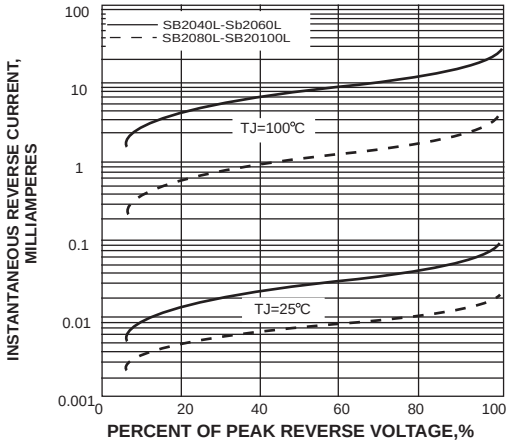
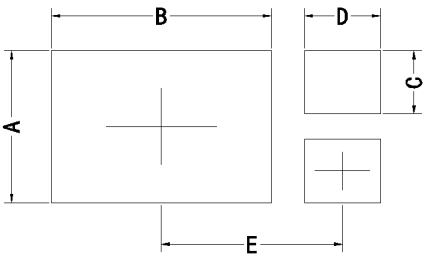


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

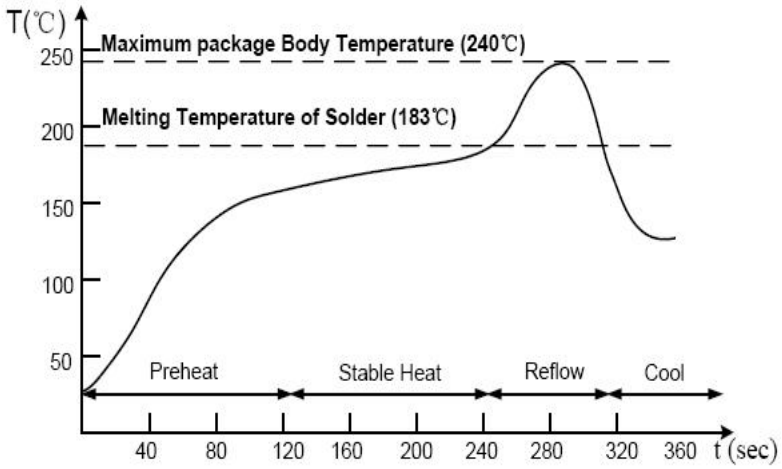


Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	3.60	0.142
B	5.35	0.211
C	1.50	0.059
D	1.85	0.073
E	4.30	0.169

Suggested Soldering Temperature Profile

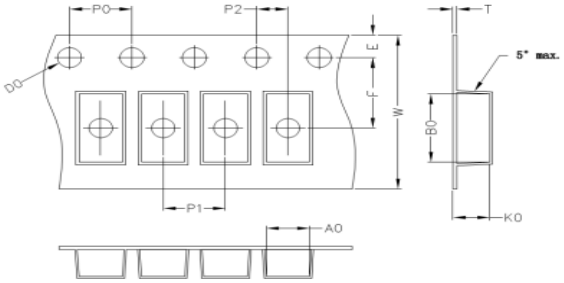


Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

Package Information

Carrier Dimension(mm)



A0	B0	K0	D0	E	F
4.40	6.90	1.30	1.55	1.75	7.50
P0	**P1**	**P2**	**T**	**W**	**Tolerance**
4.0	8.0	2.0	0.25	12	0.1