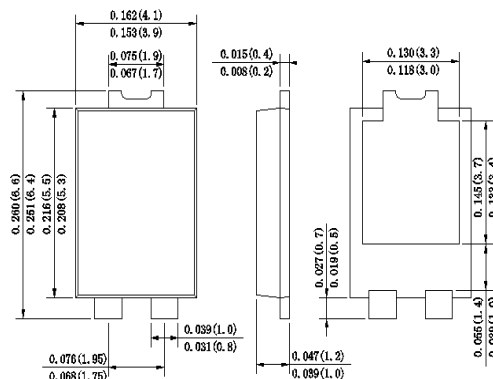


Surface Mount Schottky Barrier Diode

Features

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

TO-277B



LEFT PIN  BOTTOMSIDE
RIGHT PIN  HEAT SINK

Dimensions in inches and (millimeters)

Mechanical Data

- Case: TO-277B
- Polarity: Indicated by cathode band
- Epoxy: UL 94V-0 rate flame retardant
- Mounting Position : Any

Maximum Ratings and Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	Symbol	SB1020	SB1040	SB1060	SB1080	SB10100	SB10150	SB10200	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	20	40	60	80	100	150	200	V
Maximum RMS voltage	V _{RMS}	14	28	42	56	70	105	140	V
Maximum DC blocking voltage	V _{DC}	20	40	60	80	100	150	200	V
Maximum average forward rectified current at T _L =100°C	I _(AV)	10.0							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	175.0							A
Maximum instantaneous forward voltage at 10.0A	V _F	0.55		0.70	0.85		0.95		V
Maximum DC reverse current at rated DC blocking voltage T _A =25°C T _A =125°C	I _R	0.5 50			0.05 10			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

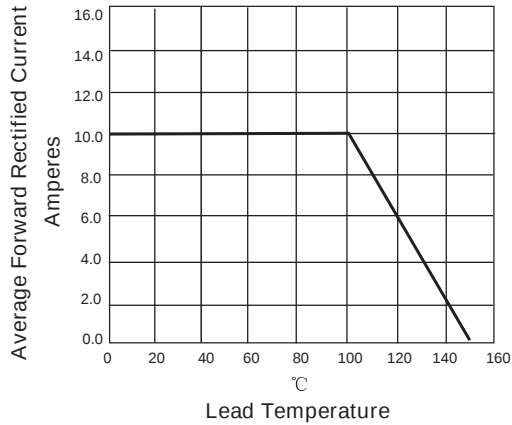


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

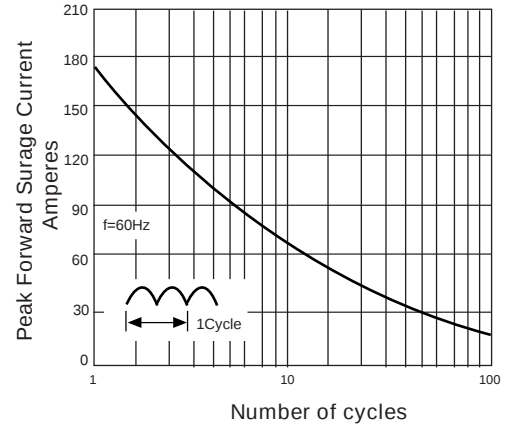


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

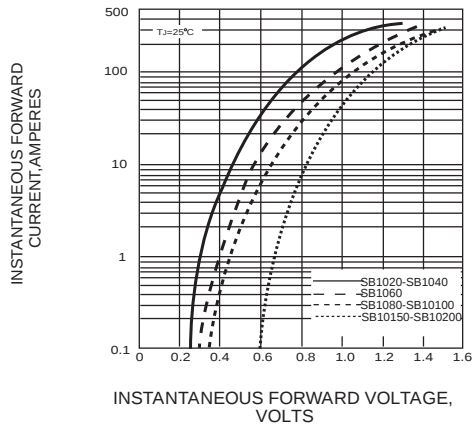
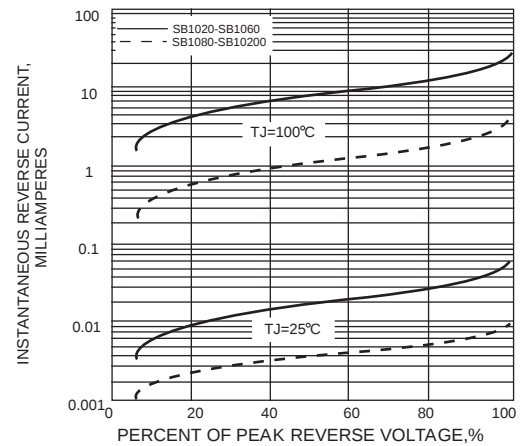
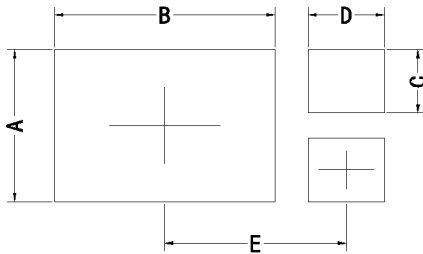


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



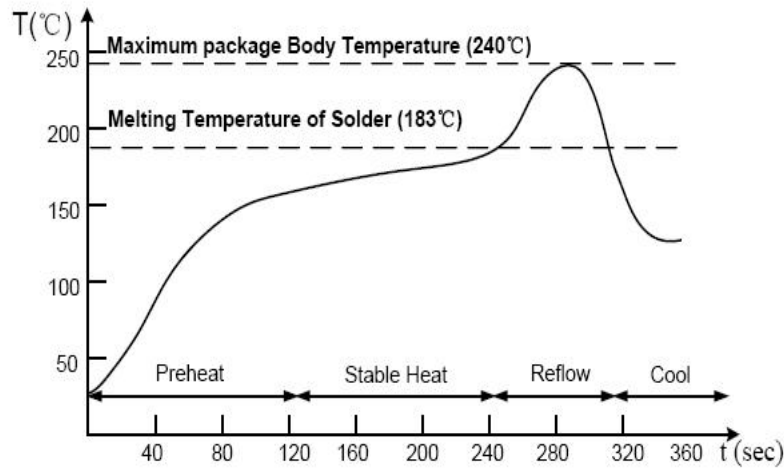
Suggested Pad Layout



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

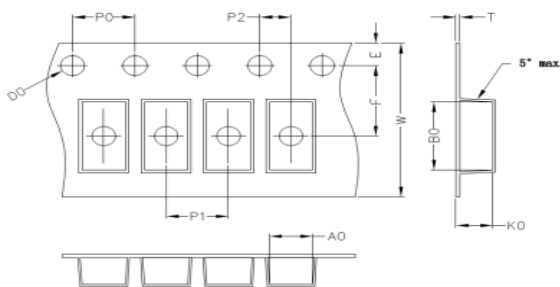


Note

- 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

Package Specifications

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (Kpcs)	Box Size (mm)	QTY/Box (Kpcs)	Carton Size (mm)	Q'TY/Carton (Kpcs)
TO-277B	13'	330	5.0	340	10.0	360*360*360	80