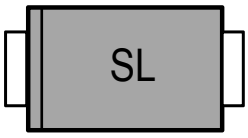
B1040W

1.0 AMP SURFACE MOUNT SCHOTTKY BARRIER RECTIFIERS

VOLTAGE RANGE
40.0 Volts
CURRENT
1.0 Ampere

FEATURES

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance



MECHANICAL DATA

* Case: Molded plastic
* Lead: Axial leads, solderable per MIL-STD-750, method 2026
* Polarity:Polarity symbols marked on case
* Marking: SL

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25℃ ambient temperature uniess otherwies specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

TYPE NUMBER	B1040W	UNITS
Maximum Recurrent Peak Reverse Voltage	40	V
Maximum RMS Voltage	28	V
Maximum DC Blocking Voltage	40	V
Maximum Average Forward Rectified Current See Fig. 1	1.0	A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	9	A
Maximum Instantaneous Forward Voltage at 1.0A	0.58	V
Maximum DC Reverse Current Ta=25℃	0.05	mA
at Rated DC Blocking Voltage Ta=100℃	8	mA
Typical Junction Capacitance (Note1)	30	pF
Typical Thermal Resistance R JA (Note 2)	400	℃/W
Operating Temperature Range T_J	-65 —+125	℃
Storage Temperature Range T_{STG}	-65 — +150	℃

NOTES:

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

2. Thermal Resistance Junction to Ambient.

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

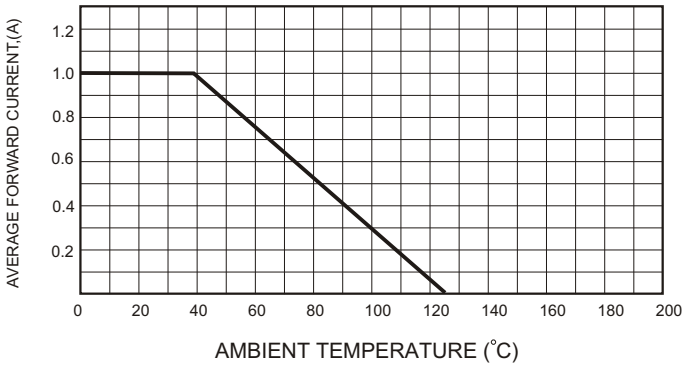


FIG.2-TYPICAL FORWARD CHARACTERISTICS

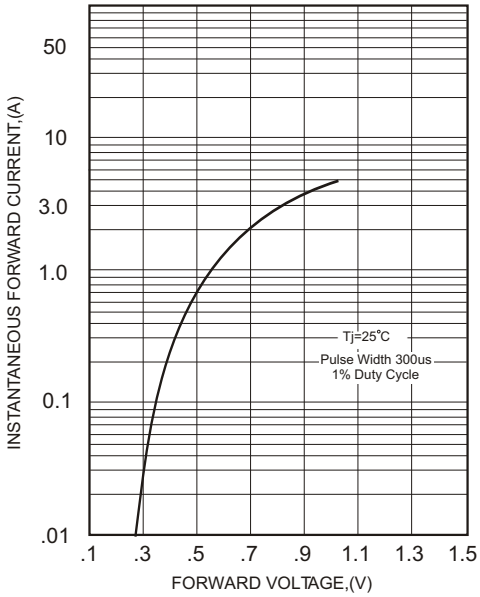


FIG.3-TYPICAL JUNCTION CAPACITANCE

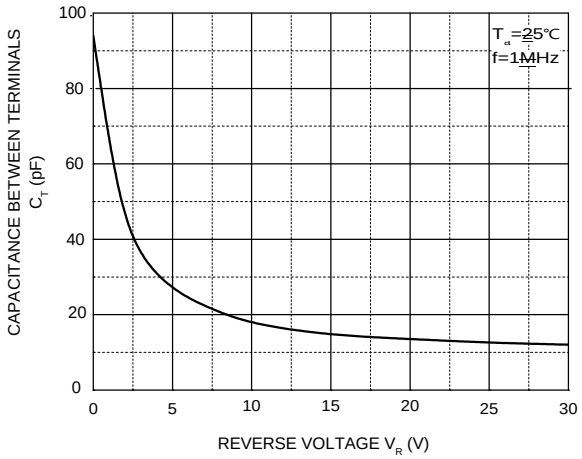
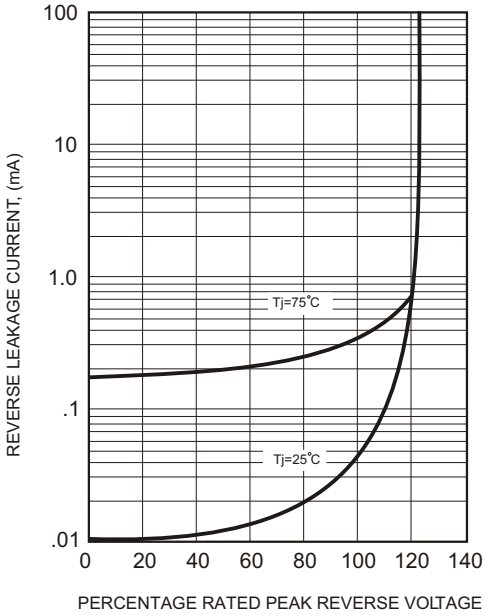


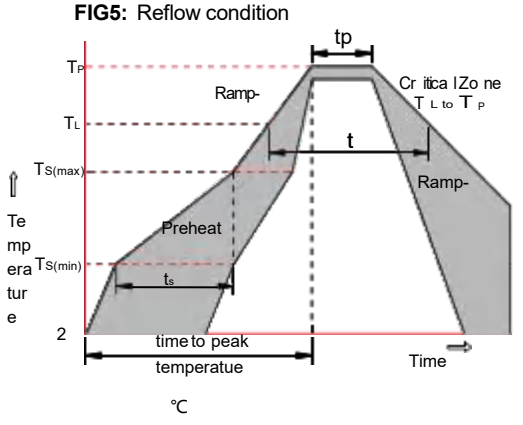
FIG.4- TYPICAL REVERSE CHARACTERISTICS



Soldering parameters

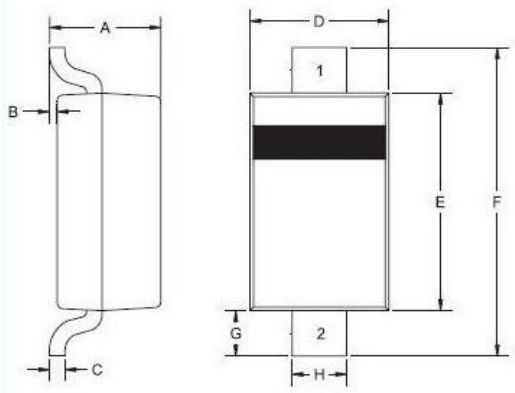
Reflow Condition		Pb-Free assembly (see as bellow)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150℃
	-Temperature Max($T_{s(max)}$)	+200℃
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3℃/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3℃/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217℃
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_p)		+260(+0/-5)℃
Time within 5℃ of actual Peak Temp (t_p)		30 secs. Max
Ramp-down Rate		6℃/sec. Max
Time 25℃ to Peak Temp (T_P)		8 min. Max
Do not exceed		+260℃

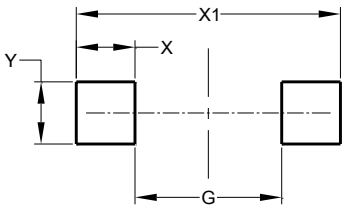
FIG5: Reflow condition



Package Dimensions & Suggested Pad Layout

SOD123



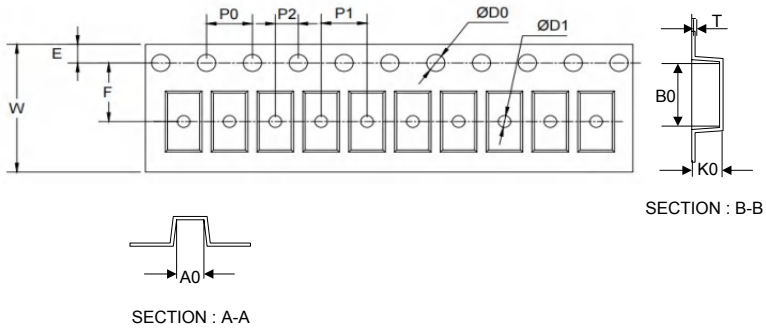


SOD123		
Dim	**Min**	**Max**
A	0.95	1.35
B	0.00	0.12
C	-	0.20
D	1.40	1.80
E	2.50	2.80
F	3.60	3.90
G	0.40	-
H	0.50	0.70
All Dimensions in mm		

Dimensions	Value (in mm)
G	2.20
X	1.20
X1	4.60
Y	1.20

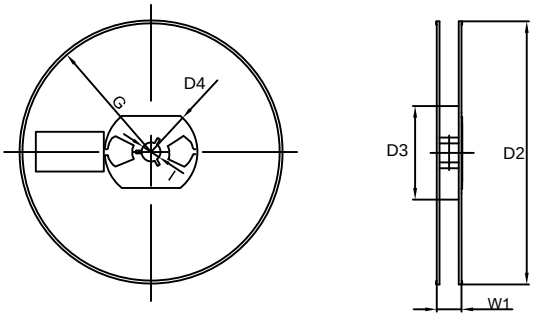
Tape & rell specification

Tape



Symbol	Dimension (mm)
P0	4.00±0.20
P1	4.00±0.20
P2	2.00±0.20
D0	1.55±0.10
D1	1.00±0.20
E	1.75±0.20
F	3.60±0.20
W	8.00±0.40
A0	2.30±0.40
B0	4.00±0.40
K0	1.50±0.40
T	0.23±0.10

7” Reel



D2	177.0±3.0
D3	55Min.
D4	R24.0±3.0
G	R82.0±3.0
I	13.0±2.0
W1	11.0±3.0
Quantity: 3000PCS	