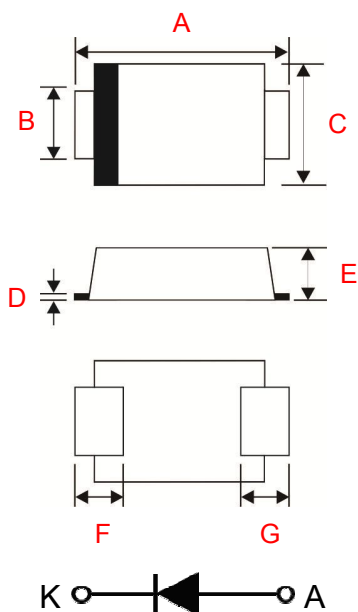


Surface Mount Low VF Low IR Schottky Barrier Rectifier

Package Outline Dimensions (millimeters)



SOD-123S		
Dim.	Min.	Max.
A	3.55	3.85
B	0.80	1.00
C	1.60	2.00
D	0.12	0.20
E	1.00	1.40
F	0.60	1.00
G	0.60	1.00
All Dimensions in millimeter		

Features

- High Current Capability
- Low Switching Noise
- High Surge Capability
- Low Power Loss & High Efficiency
- Guard Ring Protection
- Pd-free lead plating & Halogen-free part

Mechanical

- Molded Plastic Low profile SOD-123S
- Plastic materials used carries underwriters laboratory flammability classification 94V-0
- Lead Temperature for Soldering Purposes : 265°C Max. for 10 Seconds
- Device Weight : Approximated 0.018 grams

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

Parameter	Symbol	B140LW-S	B160LW-S	Units
Marking Code		14L	16L	
DC Blocking Voltage	V_{RM}	40	60	Volts
Working Peak Reverse Voltage	V_{RWM}	28	42	
Peak Repetitive Reverse Voltage	V_{RRM}	40	60	
Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% duty cycle	$I_{F(AV)}$	1		Amps
Non-Repetitive Peak Forward Surge Current (Surge applied at rated load conditions half wave, single phase, 60Hz)	I_{FSM}	50		Amps
Instantaneous Forward Voltage $I_F = 1A, T_A = 25^{\circ}C$	V_F	0.45	0.65	Volts
Instantaneous Reverse Current $V_R = V_{RRM}, T_A = 25^{\circ}C$ $V_R = V_{RRM}, T_A = 100^{\circ}C$	I_R	0.5 20		mA
Total Capacitance $V_R = 4V, f = 1MHz$	C_T	200		pF

NOTE : 1.FR-4 PCB, 2 oz Copper. Minimum recommended pad layout

2.Polyimide PCB, 2 oz Copper. Cathode pad dimensions 18.8x14.4mm , Anode pad dimensions 5.6x14.4mm

Thermal Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Value	Units
Maximum Thermal Resistance Junction to Lead	$R\theta_{JL}$	25	$^\circ\text{C} / \text{W}$
Operating & Storage Junction Temperature	T_J	125	$^\circ\text{C}$
	T_{STG}	- 65 to +150	

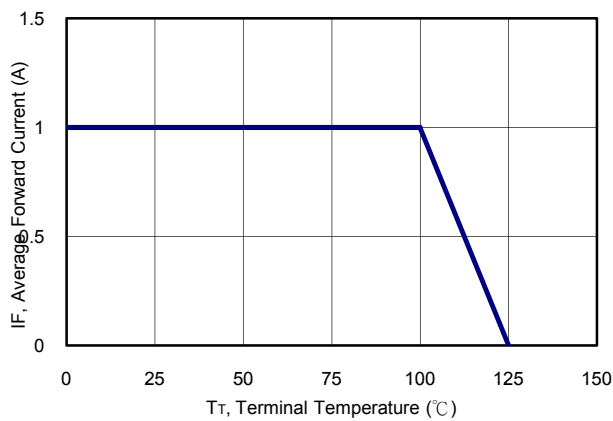
Ratings and Characteristics Curves ($T_A = 25^\circ\text{C}$ unless otherwise specified)


Figure 1: Current Derating Curves

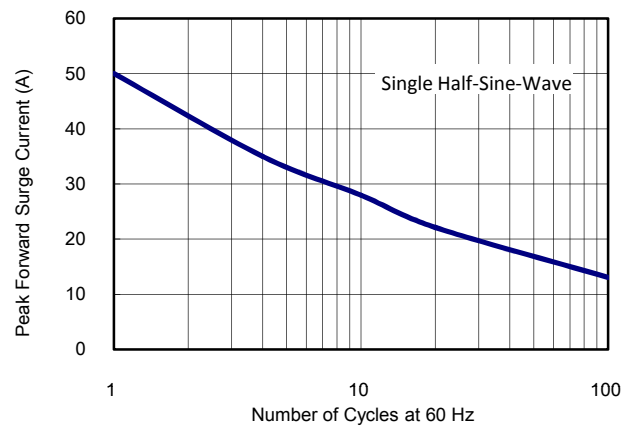


Figure 2: Peak Forward Surge Current

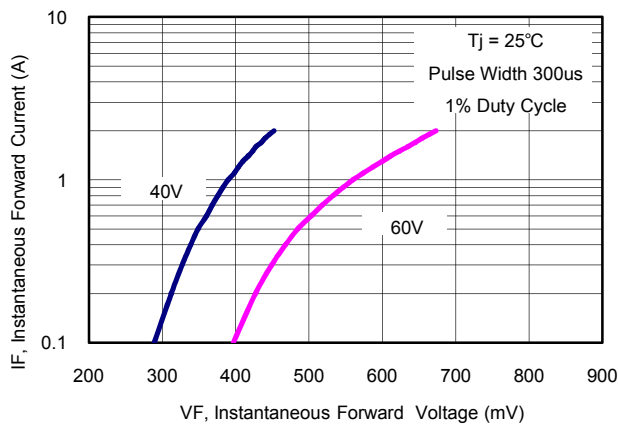


Figure 3: Typical Forward Characteristics

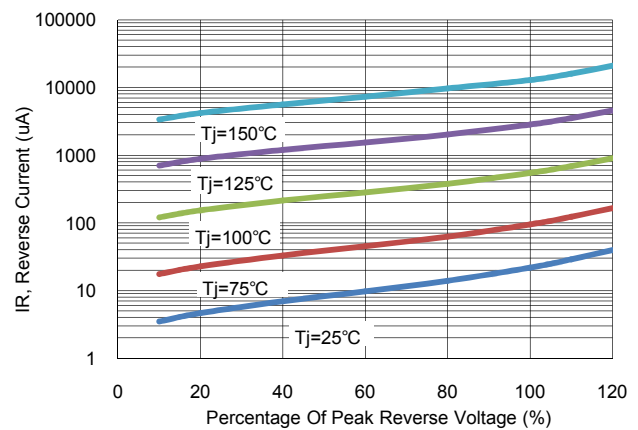
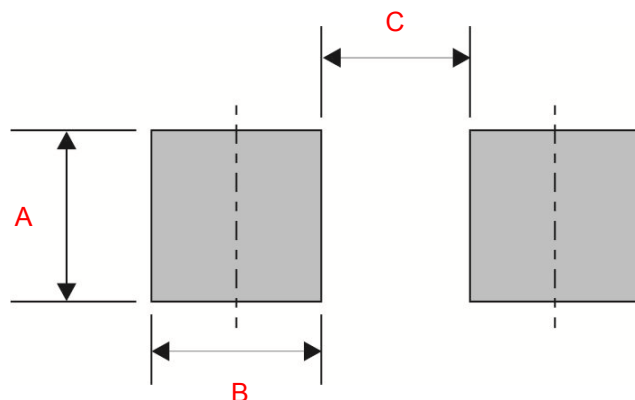


Figure 4: Typical Reverse Characteristics

Suggested Pad Layout



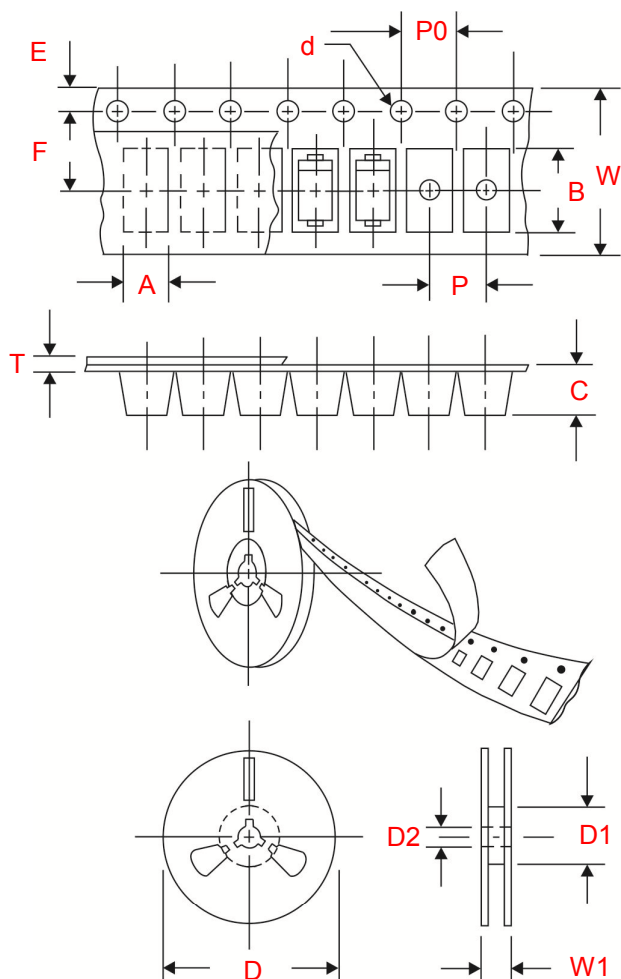
SOD-123S	
Symbol	Dimensions
A	1.10
B	1.00
C	2.00
All Dimensions in millimeter	

Ordering information

Part Number	Package	Delivery mode
B140LW-S / B160LW-S	SOD-123S	3,000 pieces / 7" Reel

Tape and Reel Dimensions (millimeters)

Surface Mount Device are packed in accordance with EIA standard RS-481-D and specification.



Item	Symbol	Dimensions (mm)
		SOD-123S
Carrier width	A	2.0 ± 0.1
Carrier length	B	3.95 ± 0.1
Carrier depth	C	1.45 ± 0.1
Sprocket hole	d	1.55 ± 0.1
Reel outside diameter	D	178.0 ± 1.0
Reel inner diameter	D1	50.0 ± 1.0
Feed hole diameter	D2	13.0 ± 1.0
Stocket hole position	E	1.75 ± 0.1
Punch hole position	F	3.5 ± 0.05
Punch hole pitch	P	4.0 ± 0.1
Sprocket hole pitch	P0	4.0 ± 0.1
Totall tape thickness	T	0.23 ± 0.1
Tape width	W	8.0 ± 0.3
Reel width	W1	11.4 ± 1.5

Disclaimer

All product specifications and data are subject to change without notice.

Sooner Power Semiconductor Co. Ltd., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "SPS"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained herein or in any other disclosure relating to any product.

SPS disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify SPS's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of SPS.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling SPS products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify SPS for any damages arising or resulting from such use or sales. Please contact authorized SPS personnel to obtain written terms and conditions regarding products designed for such applications.

Products names and markings noted herein may be trademarks of their respective owners.