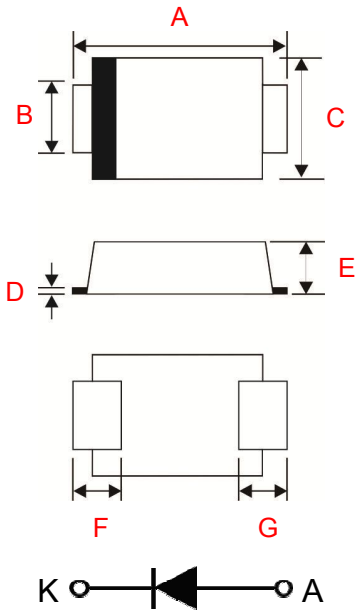
Surface Mount Low VF Low IR Schottky Barrier Rectifier

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℃ Max. for 10 Seconds
- Device Weight : Approximated 0.018 grams

Maximum Ratings & Electrical Characteristics (T_A = 25℃ 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℃	V_F	0.45	0.65	Volts
Instantaneous Reverse Current $V_R = V_{RRM}$, T_A = 25℃	I_R	0.5		mA
$V_R = V_{RRM}$, T_A = 100℃		20		
Total Capacitance V_R = 4V , f = 1MHz	C_T	200		pF

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

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

Thermal Characteristics (T_A = 25℃ unless otherwise specified)

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

Ratings and Characteristics Curves (T_A = 25℃ unless otherwise specified)

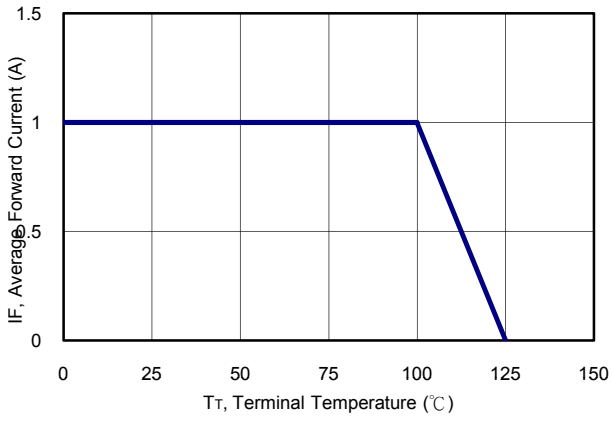


Figure 1: Current Derating Curves

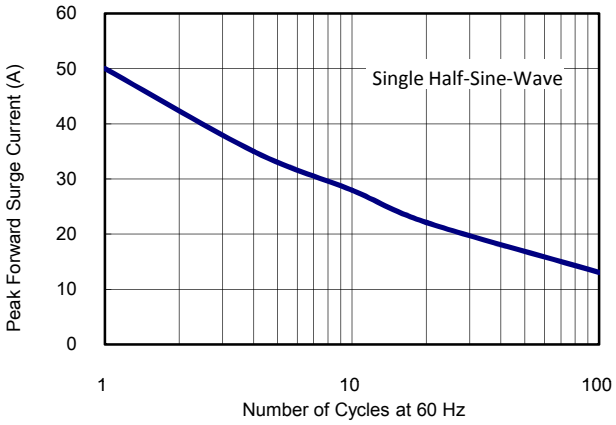


Figure 2: Peak Forward Surge Current

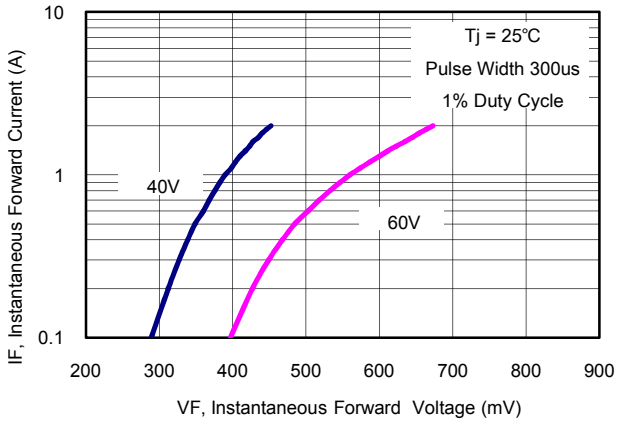


Figure 3: Typical Forward Characteristics

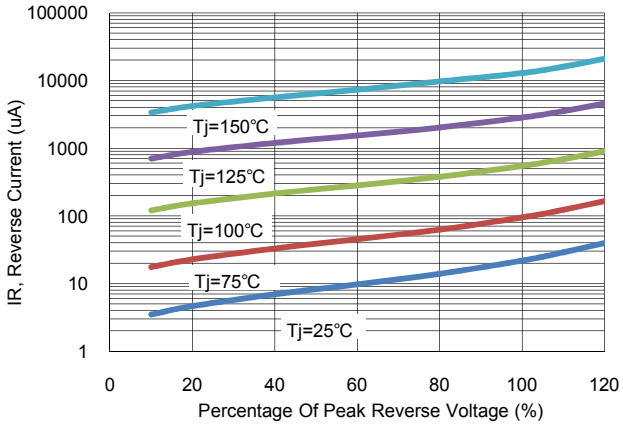
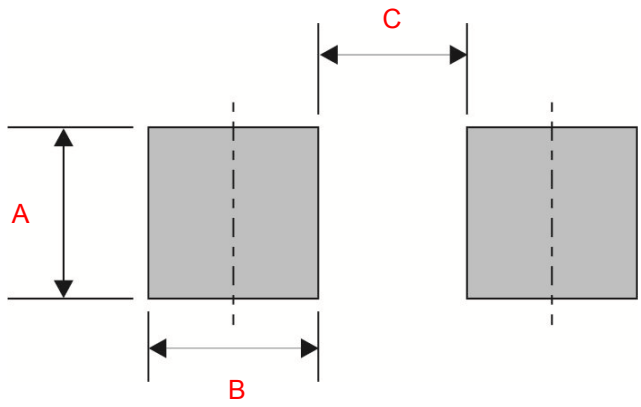


Figure 4: Typical Reverse Characteristics

Suggested Pad Layout



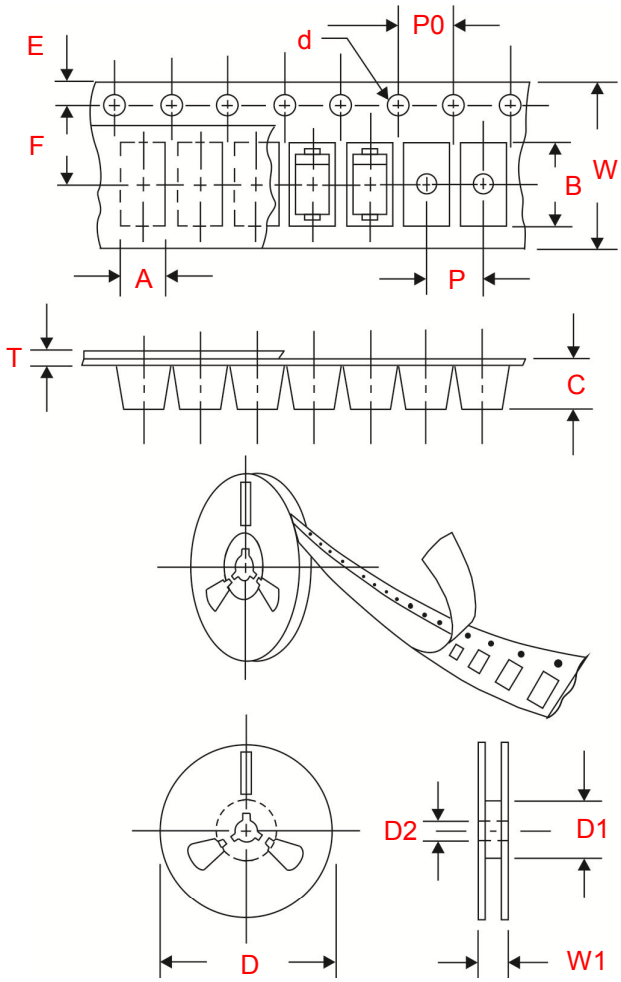
SOD-123S	
Symbol	Dimensions
A	1.10
B	1.00
C	2.00
All Dimensions in millimeter	

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

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