



Features

- Small Power Mold Type
- Low I_R
- High Reliability



Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
SS10100FL_R1_00001	SOD-123FL	L1H	3000

SOD-123FL



Maximum Ratings ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Limit	Unit
DC reverse voltage	V_R	100	V
Mean rectifying current	I_o	1	A
Peak Forward Surge Current @ $t=8.3$ ms	I_{FSM}	50	A
Thermal Resistance, Junction to Ambient (Note 1)	$R_{\theta JA}$	85	$^{\circ}\text{C/W}$
Thermal Resistance, Junction to Ambient (Note 2)	$R_{\theta JA}$	330	$^{\circ}\text{C/W}$
Operating and Storage Temperature Range	T_{stg}, T_j	-65~+175	$^{\circ}\text{C}$

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

Parameter	Symbol	Value	Unit	Conditions
Maximum Instantaneous Forward Voltage	V_F	0.76 0.84 0.61 0.68	V	$I_F=1\text{A}, T_J=25^{\circ}\text{C}$ $I_F=2\text{A}, T_J=25^{\circ}\text{C}$ $I_F=1\text{A}, T_J=125^{\circ}\text{C}$ $I_F=2\text{A}, T_J=125^{\circ}\text{C}$
Maximum Instantaneous Reverse Current (Note 3)	I_R	40	μA	Rated dc Voltage, $T_J=25^{\circ}\text{C}$
		0.5	mA	Rated dc Voltage, $T_J=125^{\circ}\text{C}$

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

1. Mounted with 700 mm² copper pad size (Approximately 1 in²) 1 oz FR4 Board.
2. Mounted with pad size approximately 20 mm² copper, 1 oz FR4 Board.
3. Pulse Test: Pulse Width ≤ 380 μs , Duty Cycle $\leq 2.0\%$.



Typical Characteristics

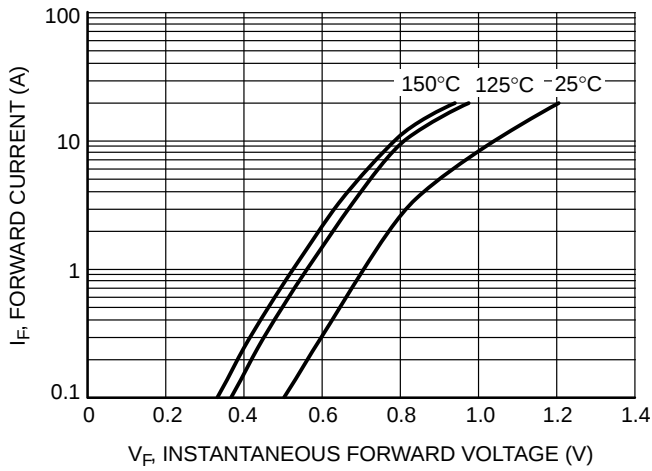


Figure 1. Typical Forward Voltage

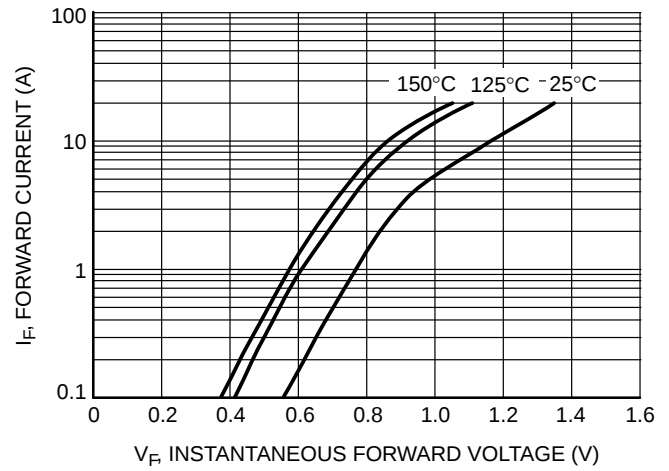


Figure 2. Maximum Forward Voltage

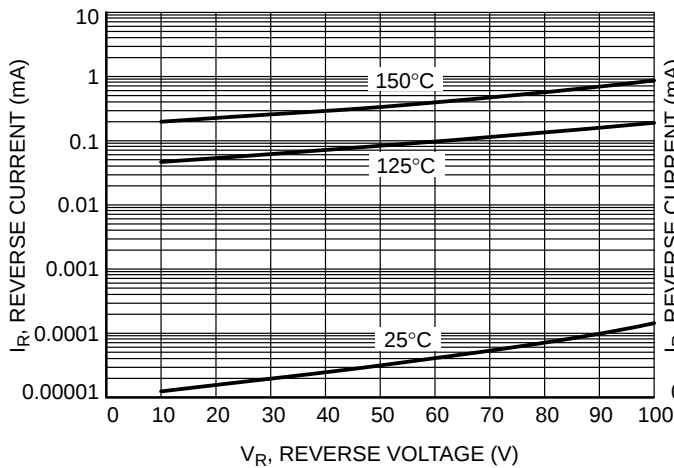


Figure 3. Typical Reverse Current

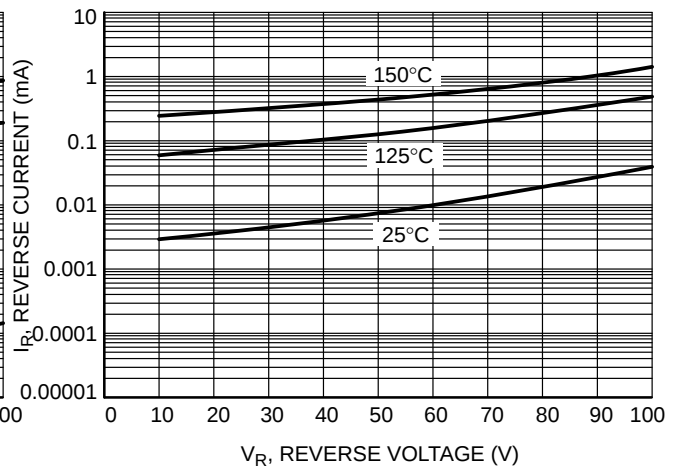


Figure 4. Maximum Reverse Current

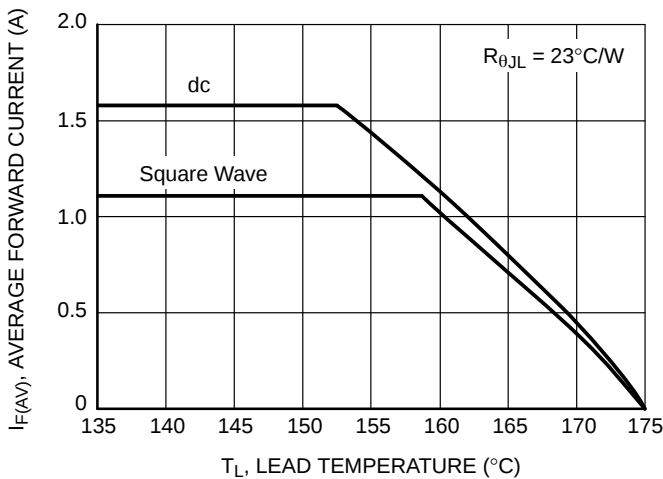


Figure 5. Current Derating

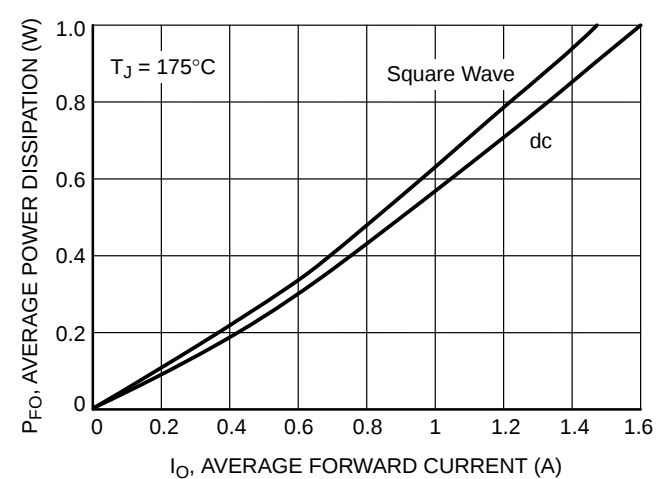
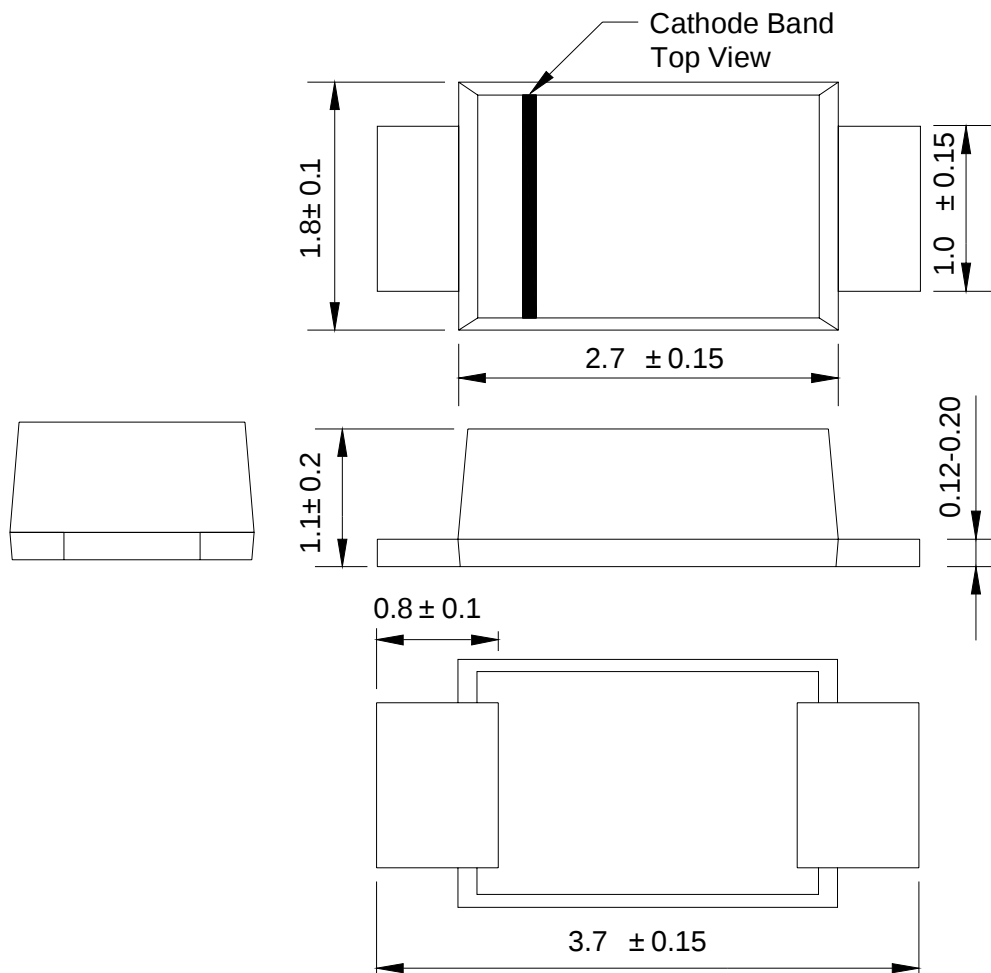


Figure 6. Forward Power Dissipation



Package Outline Dimensions
SOD-123FL





Attention

- Any and all HUA XUAN YANG ELECTRONICS products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your HUA XUAN YANG ELECTRONICS representative nearest you before using any HUA XUAN YANG ELECTRONICS products described or contained herein in such applications.
- HUA XUAN YANG ELECTRONICS assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all HUA XUAN YANG ELECTRONICS products described or contained herein.
- Specifications of any and all HUA XUAN YANG ELECTRONICS products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To verify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate and test devices mounted in the customer's products or equipment.
- HUA XUAN YANG ELECTRONICS CO.,LTD. strives to supply high-quality high-reliability products. However, any and all semiconductor products fail with some probability. It is possible that these probabilistic failures could give rise to accidents or events that could endanger human lives, that could give rise to smoke or fire, or that could cause damage to other property. When designing equipment, adopt safety measures so that these kinds of accidents or events cannot occur. Such measures include but are not limited to protective circuits and error prevention circuits for safe design, redundant design, and structural design.
- In the event that any or all HUA XUAN YANG ELECTRONICS products(including technical data, services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported without obtaining the export license from the authorities concerned in accordance with the above law.
- No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or any information storage or retrieval system, or otherwise, without the prior written permission of HUA XUAN YANG ELECTRONICS CO.,LTD.
- Information (including circuit diagrams and circuit parameters) herein is for example only ; it is not guaranteed for volume production. HUA XUAN YANG ELECTRONICS believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.
- Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the HUA XUAN YANG ELECTRONICS product that you intend to use.