



## PRODUCT DATA SHEET



To learn more about JGSEMI, please visit our website at



**Datasheet**



**Resources**



**Samples**

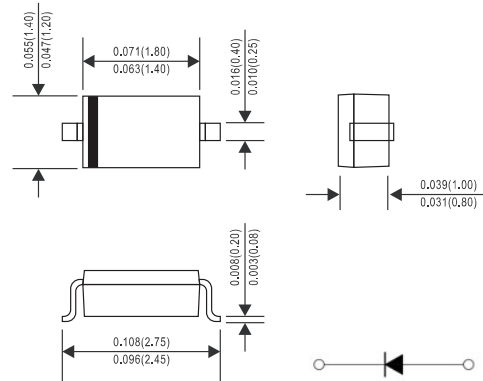
Please note: Please check the JINGAO Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at [www.jg-semi.cn](http://www.jg-semi.cn). Please email any questions regarding the system integration to [JINGAO\\_questions@jgsemi.com](mailto:JINGAO_questions@jgsemi.com).

**SOD-323**
**FEATURES**

- Low Forward Voltage Drop
- Very Small SMD Package

**APPLICATIONS**

- Low Voltage Rectification
- High Efficiency DC/DC Conversion
- Switch Mode Power Supply
- Inverse Polarity Protection
- Low Power Consumption Applications



Dimensions in inches and (millimeters)

**MAXIMUM RATINGS (  $T_a=25^\circ\text{C}$  unless otherwise noted )**

Symbol	Parameter	Value	Unit	
$V_{RRM}$	Peak Repetitive Reverse Voltage	40	V	
$V_{RWM}$	Working Peak Reverse Voltage			
$V_{R(RMS)}$	RMS Reverse Voltage	28	V	
$I_F$	Continuous Forward Current	2	A	
$I_{FSM}$	Non-repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	9	A	
$P_D$	Power Dissipation	Note1	250	mW
		Note2	480	
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	Note1	400	$^\circ\text{C/W}$
		Note2	208	
$T_j$	Operating Junction Temperature Range	-40 ~ +125	$^\circ\text{C}$	
$T_{stg}$	Storage Temperature Range	-55 ~ +150	$^\circ\text{C}$	

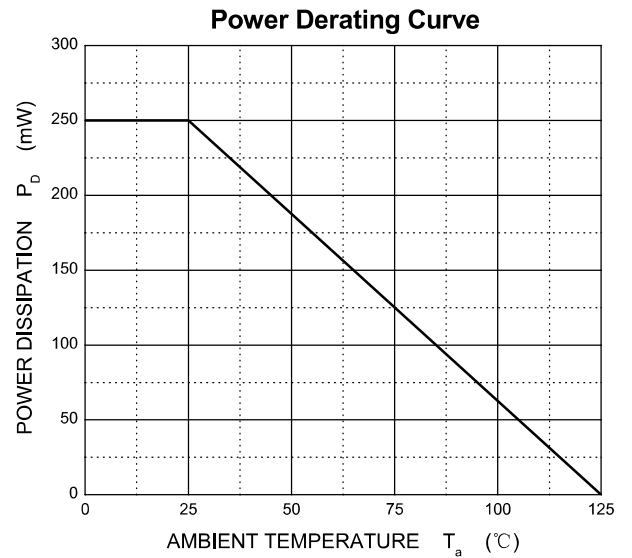
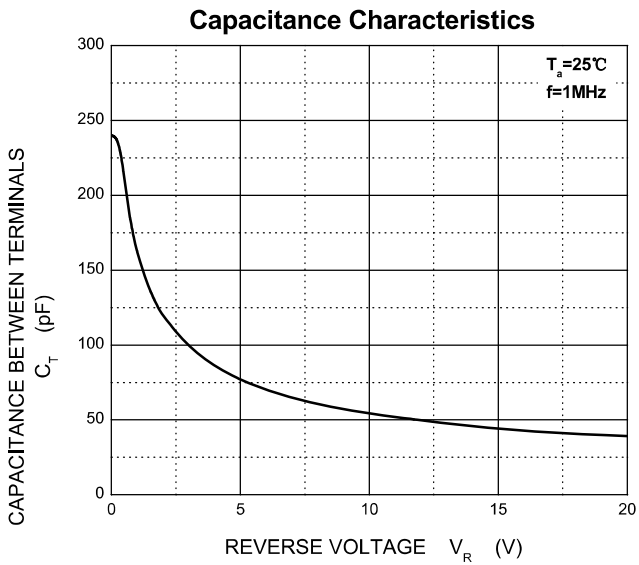
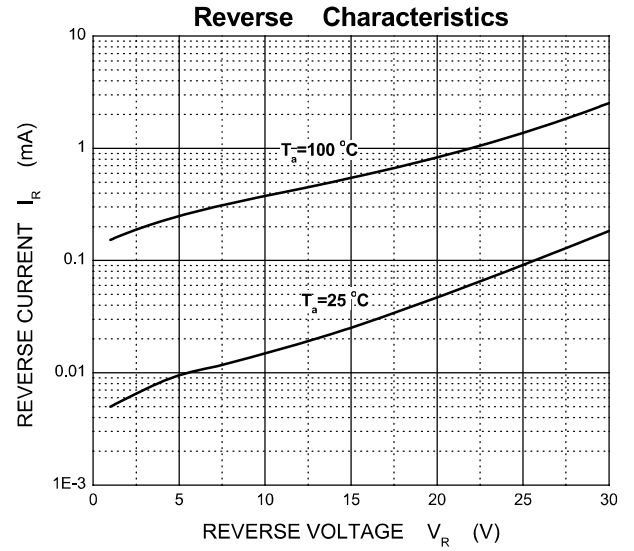
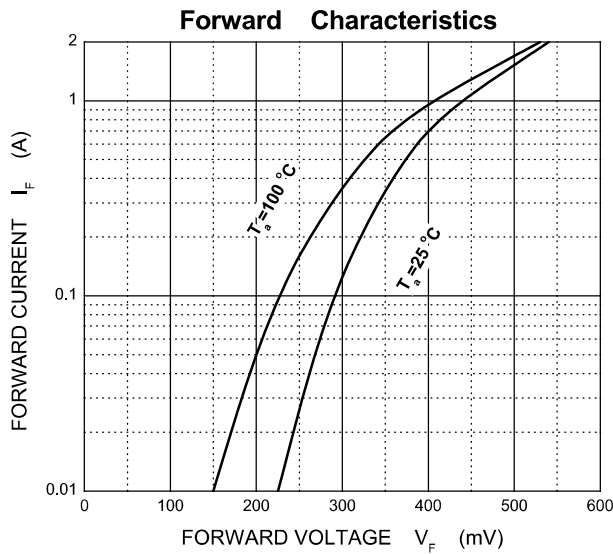
1: Device mounted on an FR4 PCB, single-sided copper, tin-plated and standard footprint.

2: Device mounted on an FR4 PCB with copper pad 10 x 10 mm.

**ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$  unless otherwise specified)**

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	$I_R=1\text{mA}$	40			V
Reverse current	$I_R$	$V_R=30\text{V}$			50	$\mu\text{A}$
		$V_R=40\text{V}$			100	
Forward voltage	$V_F^*$	$I_F=1\text{A}$		0.41	0.45	V
		$I_F=2\text{A}$		0.50	0.55	
Total capacitance	$C_{tot}$	$V_R=4\text{V}, f=1\text{MHz}$			120	pF

 \*Pulse test:  $t_p \leq 300 \mu\text{s}$ ;  $\delta \leq 0.02$ .

**Typical Characteristics**


## Attention

1, Any and all JGSEMI 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 or material damage. Consult with your JGSEMI representative nearest you before using any JGSEMI products described or contained herein in such applications.

2, JGSEMI 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 JGSEMI products described or contained herein.

3, Specifications of any and all JGSEMI 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 an d test devices mounted in the customer's products or equipment.

4, In the event that any or all JGSEMI 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.

5, 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 JGSEMI Semiconductor CO., LTD.

6, 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 JGSEMI product that you intend to use.