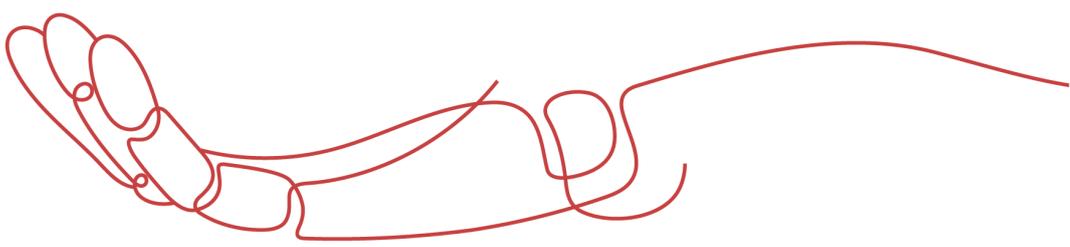


## PRODUCT DATA SHEET



To learn more about JGSEMI, please visit our website at



**Datasheet**



**Resources**

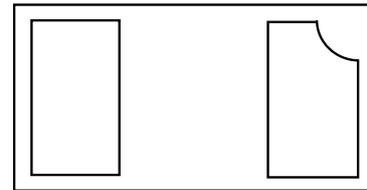


**Samples**

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).

**■ Feature**

- 100W peak pulse power per line ( $t_P = 8/20\mu s$ )
- DFN1006-2L package
- Replacement for MLV(0402)
- Bidirectional configurations
- Response time is typically  $< 1ns$
- Low clamping voltage
- RoHS compliant
- Transient protection for data lines to  
IEC61000-4-2(ESD)  $\pm 15KV$ (air),  $\pm 8KV$ (contact);  
IEC61000-4-4 (EFT) 40A (5/50ns)

**■ Simplified outline(DFN1006-2L)****■ Mechanical Characteristics**

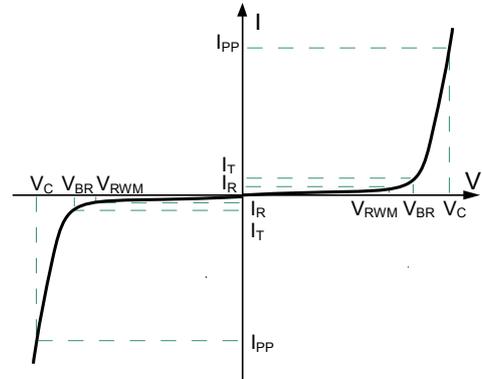
- Lead finish: 100% matte Sn(Tin)
- Mounting position: Any
- Qualified max reflow temperature:  $260^{\circ}C$
- Device meets MSL 1 requirements
- Pure tin plating:  $7 \sim 17 \mu m$
- Pin flatness:  $\leq 3mil$

**■ Applications**

- Cellular phones
- Portable devices
- Digital cameras
- Power supplies

**■ Electronics Parameter**

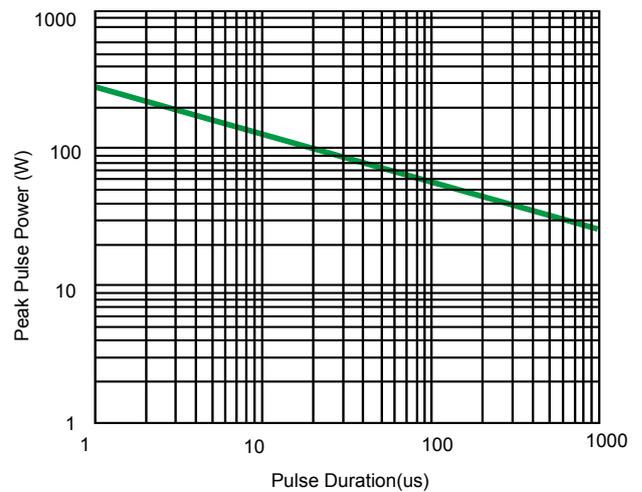
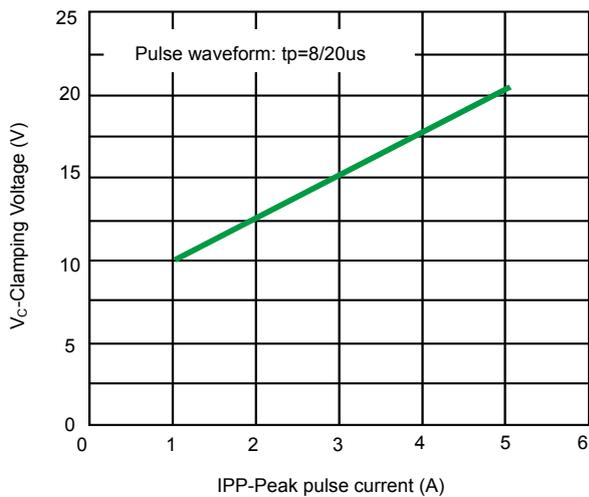
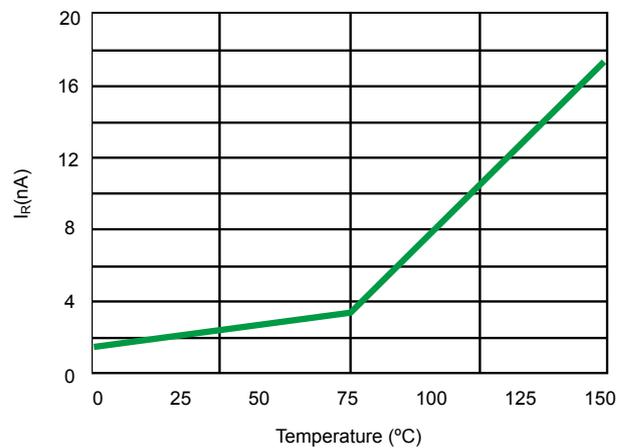
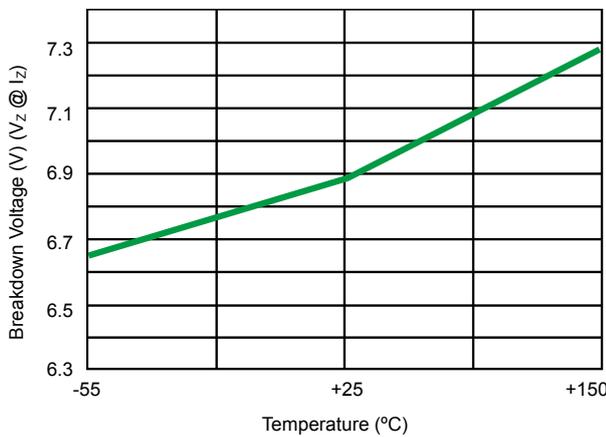
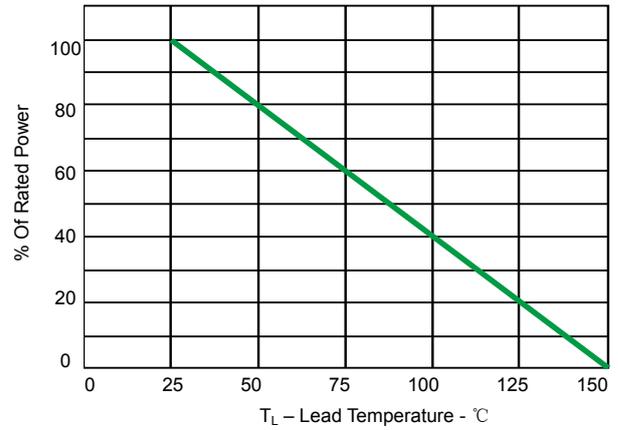
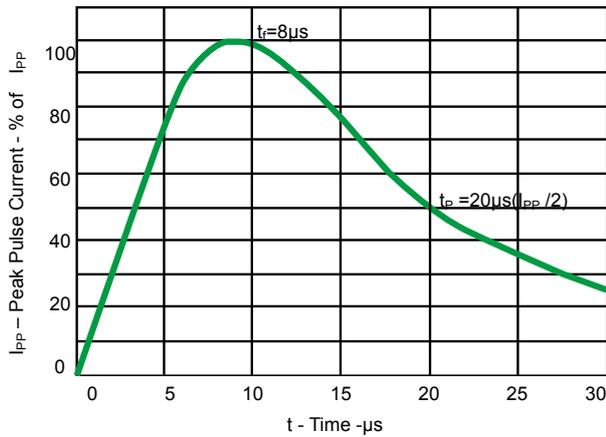
Symbol	Parameter
$V_{RWM}$	Peak Reverse Working Voltage
$I_R$	Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$P_{PP}$	Peak Pulse Power
$C_J$	Junction Capacitance
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$


**■ Electrical characteristics per line@25°C (unless otherwise specified)**

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Peak Reverse Working Voltage	$V_{RWM}$				5	V
Breakdown Voltage	$V_{BR}$	$I_T = 1\text{mA}$	5.6		8.5	V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5\text{V}$ $T=25^\circ\text{C}$			1.0	$\mu\text{A}$
Maximum Reverse Peak Pulse Current	$I_{PP}$			5.5		A
Clamping Voltage	$V_C$	$I_{PP}=1\text{A}$			10	V
Clamping Voltage	$V_C$	$I_{PP}=3\text{A}$			15	V
Clamping Voltage	$V_C$	$I_{PP}=5\text{A}$			21	V
Junction Capacitance	$C_J$	$V_R=0\text{V}$ $f = 1\text{MHz}$		0.3		pF

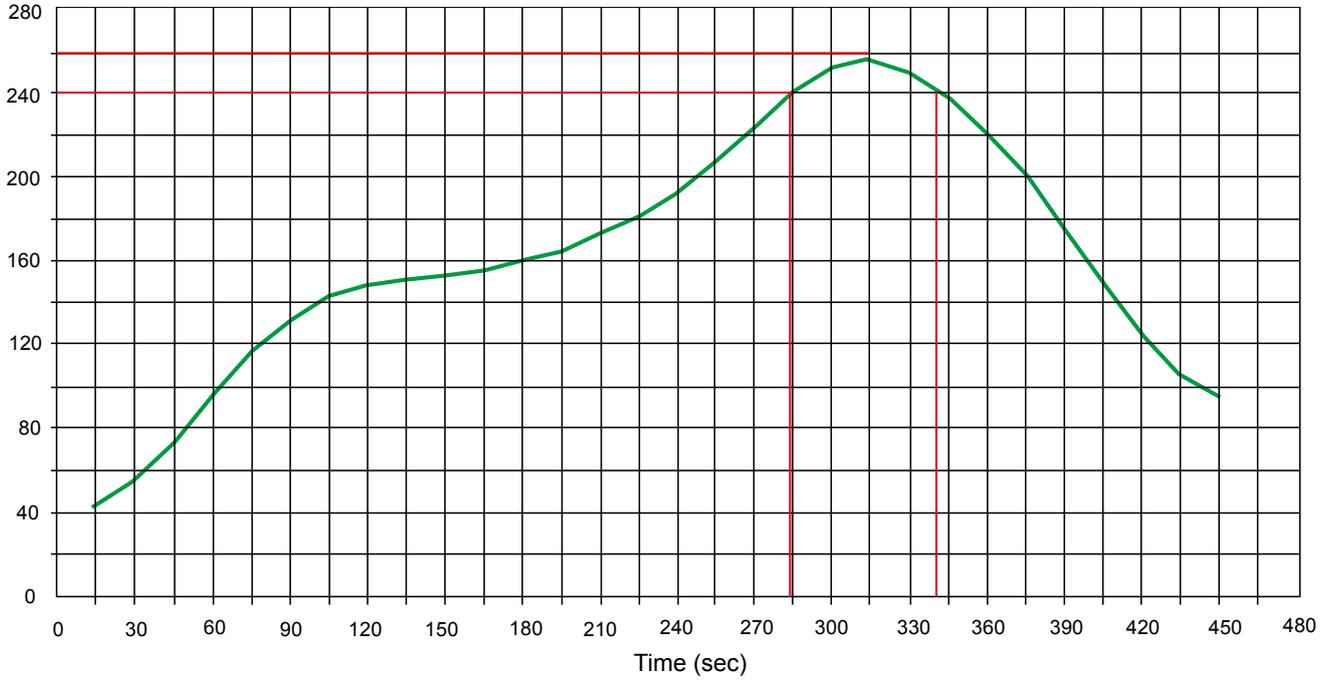
**■ Absolute maximum rating@25°C**

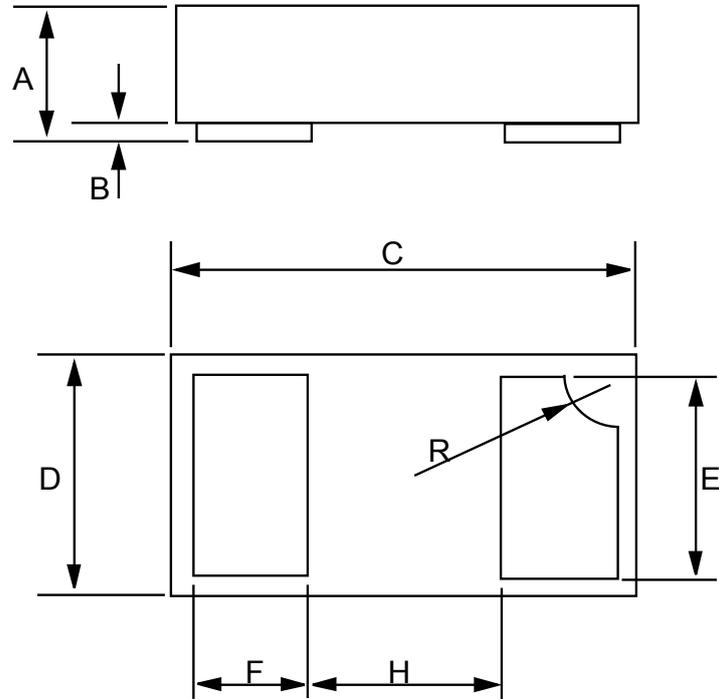
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p=8/20\mu\text{s}$ )	$P_{pp}$	100	W
Operating Temperature	$T_J$	-55 to +150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-55 to +150	$^\circ\text{C}$



■ Solder Reflow Recommendation

Peak Temp=257°C, Ramp Rate=0.802deg. °C/sec



**Package Outline**
**DFN1006-2L**


Dim	Inches		Millimeters	
	MIN	MAX	MIN	MAX
A	0.013	0.015	0.34	0.40
B	0.000	0.002	0.00	0.05
C	0.037	0.042	0.95	1.075
D	0.021	0.026	0.55	0.675
E	0.017	0.021	0.45	0.55
F	0.007	0.011	0.20	0.30
H	0.015Typ.		0.40Typ.	
R	0.001	0.005	0.05	0.15

## 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.