



PRODUCT DATA SHEET



To learn more about JGSEMI, please visit our website at



Datasheet



Resources

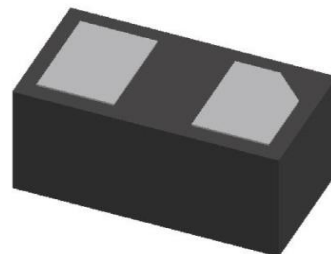


Samples

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. Please email any questions regarding the system integration to JINGAO_questions@jgsemi.com.

Features

- Protects one power line with uni-directional
- Low clamping voltage
- Low leakage current
- Response time is typically $<1\text{ns}$
- Solid-state silicon-avalanche technology
- IEC61000-4-2 $\pm 30\text{kV}$ (contact) $\pm 30\text{kV}$ (air)
- IEC61000-4-4(EFT) 40A (5/50ns)
- IEC61000-4-5(Lightning) 35A(8/20 μs)

**DFN1006-2**

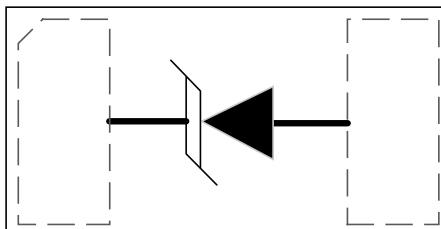
Applications

- Power management
- Battery protection
- Notebooks, Desktops, and Handhelds
- Personal Digital Assistants (PDA's)
- Portable Instrumentation

Mechanical Data

- DFN1006 package
- Molding compound flammability rating: UL 94V-0
- Quantity per reel: 10k
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Schematic & PIN Configuration

**DFN1006-2(Top View)**

Absolute Maximum Rating($T_J=25^{\circ}\text{C}$ unless otherwise noted)

Rating	Symbol	Value	Units
Reverse Stand-Off Voltage	P_{PP}	500	Watts
Peak Pluse Current($t_p=8/20\mu\text{s}$)	I_{PP}	35	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30 30	KV
Lead Soldering Temperature	T_L	260(10seconds)	$^{\circ}\text{C}$
OperatingTemperature	T_J	-55 to + 150	$^{\circ}\text{C}$
Storage Temperature	T_{STG}	-55 to + 150	$^{\circ}\text{C}$

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

Parameter	Symbol	Conditions	Min	Typical	Max	
Reverse Voltage	V_{RWM}	$T=25^{\circ}\text{C}$			6.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$	7.0			V
Reverse Leakage Current	I_R	$V_{RWM}=6.3\text{V}$, $T=25^{\circ}\text{C}$			0.5	μA
Forward Voltage	V_F	$I_F=10\text{mA}$	0.6		1.2	V
Clamping Voltage	V_C	$I_{PP}=35\text{A}$, $t_p=8/20\mu\text{s}$			15	V
Junction Capacitance	C_j	$V_R=0\text{V}$, $f=1\text{MHz}$		225	250	pF

Electrical Parameters ($T_A = 25^{\circ}\text{C}$ unless otherwise noted)

V_{RWM} Reverse Working Voltage Max.

I_R Maximum Reverse Leakage Current @ V_{RWM}

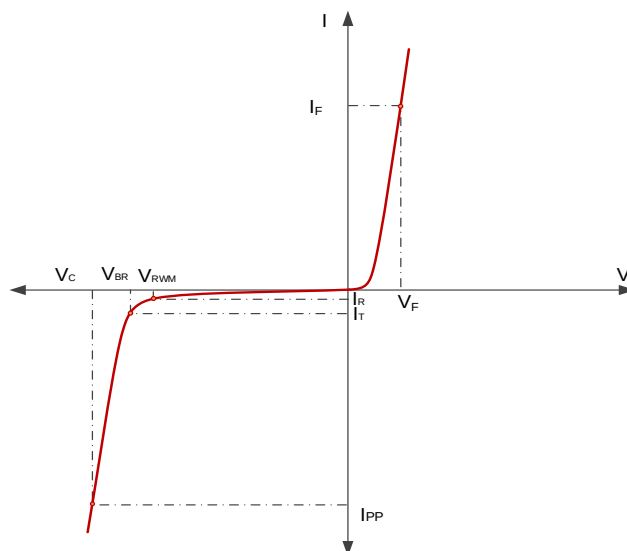
V_F Forward Voltage

I_F Forward Current

V_{BR} Reverse Breakdown Voltage

I_{PP} Maximum Reverse Peak Pulse Current

V_C Clamping Voltage @ I_{PP}



Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

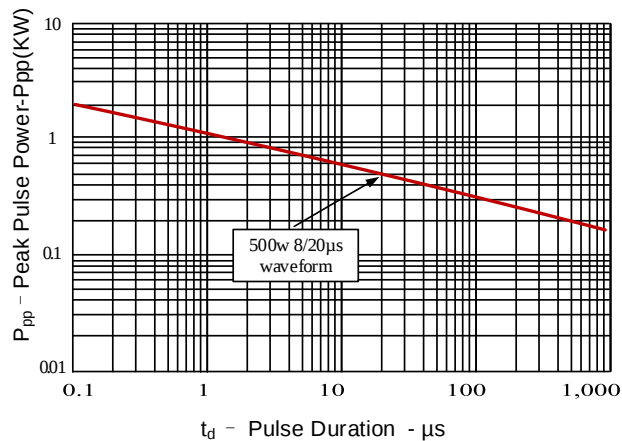


Figure 2: Power Derating Curve

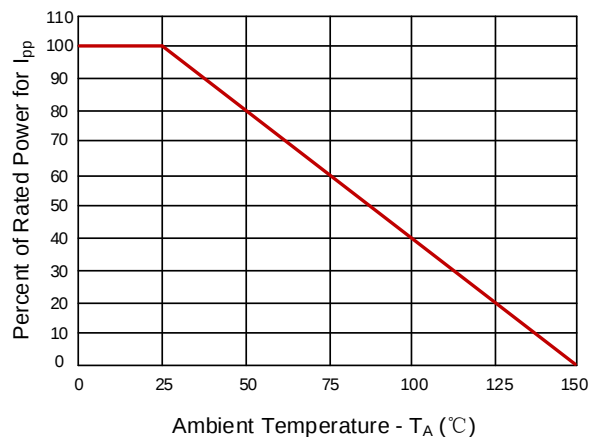


Figure3: Pulse Waveform

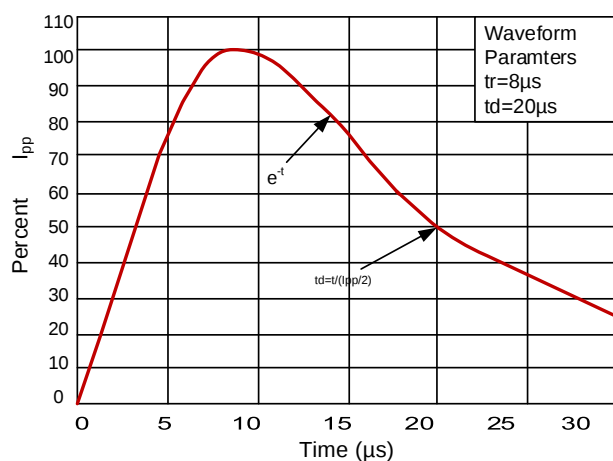
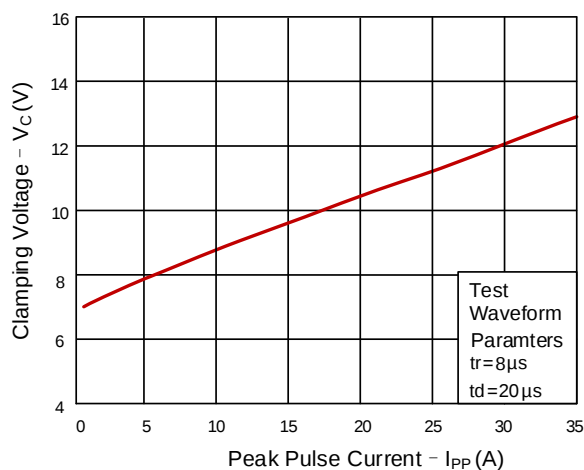
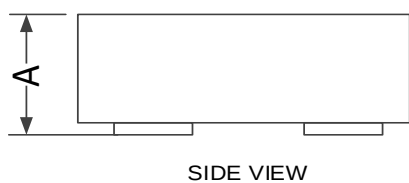
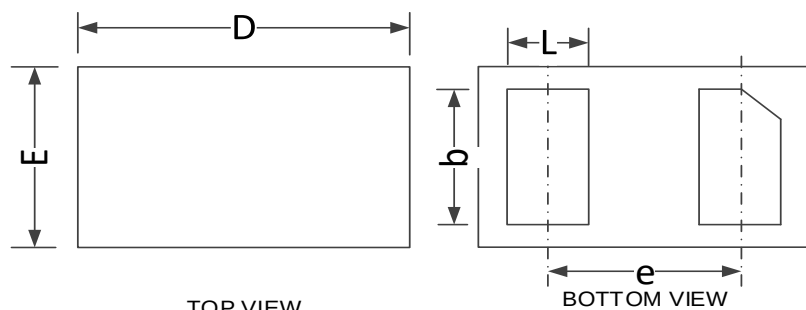


Figure 4: Clamping Voltage vs. Ipp

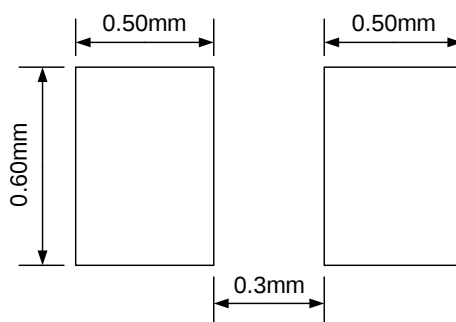


Outline Drawing-DFN1006



COMMON DIMENSION (mm)			
PKG	DFN1006		
REF.	MIN.	NOM.	MAX.
A	0.40		0.55
b	0.45	0.50	0.55
D	0.95	1.00	1.05
e	0.65BSC		
E	0.55	0.60	0.65
L	0.20	0.25	0.30

Land Pattern *



* This land pattern is for reference purposes only

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 and 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.