



LANKERSEMI

## TVS Protection Diode

# LKP15N4AX40

Rev. 02 — 3 June 2022

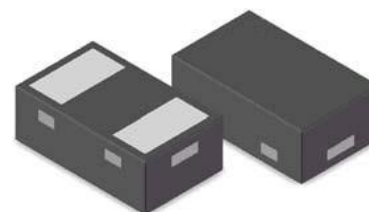


Halogen Free

## Product Profile

### 1. Features

- 1100Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Unidirectional configurations
- Reverse Working Voltage: 15V
- IEC 61000-4-2 :  $\pm 30kV$  contact,  $\pm 30kV$  air
- IEC 61000-4-4 (EFT) : 40A (5/50ns)
- IEC 61000-4-5 (Lightning): 40A (8/20 $\mu s$ )=
- 



DFN1006-2L

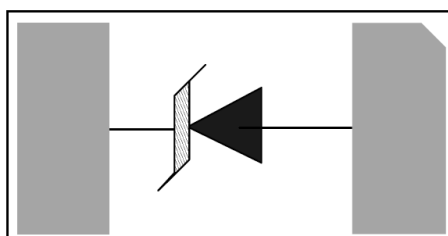
### 2. Applications

- Power supply protection
- Power managementervers

### 3. Mechanical Data

- DFN1006 package
- Molding compound flammability rating: UL94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

## 4. Pinning information



DFN1006



### 5. Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	1100	Watts
Peak Pulse Current ( $t_p = 8/20\mu s$ ) (note1)	$I_{pp}$	40	A
Lead Soldering Temperature	$T_L$	260(10seconds)	$^{\circ}C$
Junction Temperature	$T_J$	-55 to + 125	$^{\circ}C$
Storage Temperature	$T_{stg}$	-55 to + 125	$^{\circ}C$

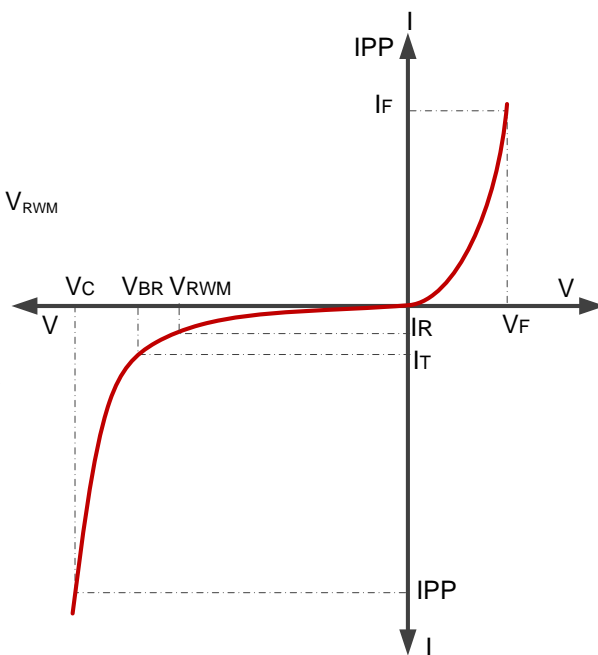
Note.: 8/20 $\mu s$  pulse waveform.

### 6. Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$				15	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	16.7			V
Reverse Leakage Current	$I_R$	$V_{RWM}=15V, T=25^{\circ}C$			1	$\mu A$
Clamping Voltage	$V_C$	$I_{PP}=40A, t_p=8/20\mu s$			28	V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		90		pF

### 7. Electrical Parameters (TA = 25°C unless otherwise noted)

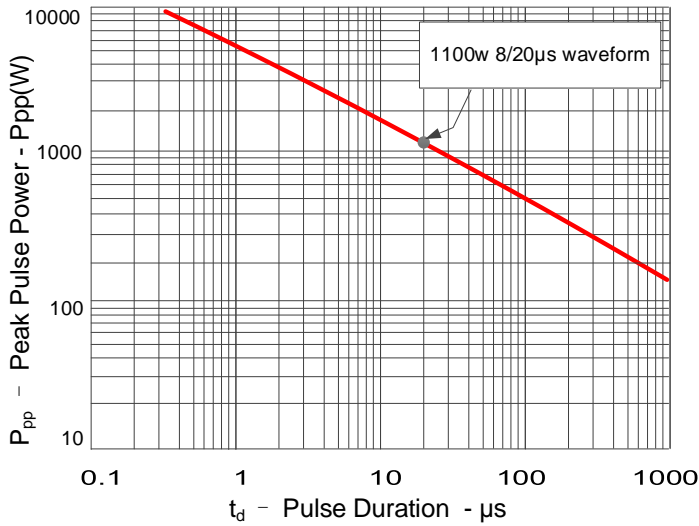
- $V_{RWM}$  .....Reverse Working Voltage Max
- $I_R$  ..... Maximum Reverse Leakage Current @  $V_{RWM}$
- $V_{BR}$  ..... Reverse Breakdown Voltage
- $V_C$  ..... Clamping Voltage @  $I_{PP}$
- $I_{PP}$  ..... Maximum Reverse Peak Pulse Current



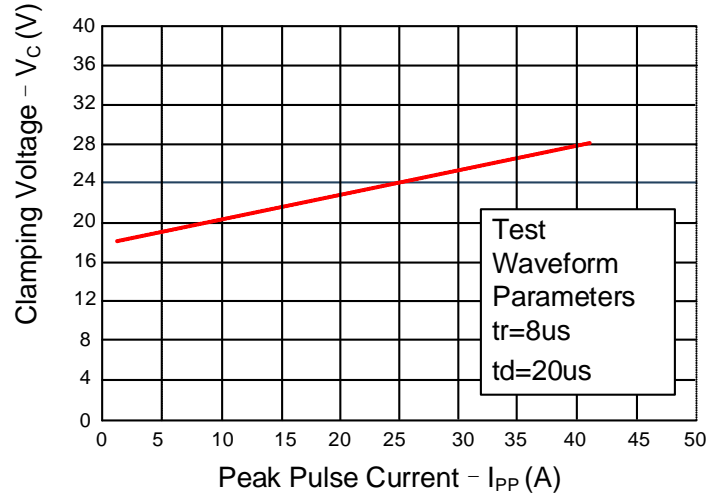


### 8. Typical Characteristics

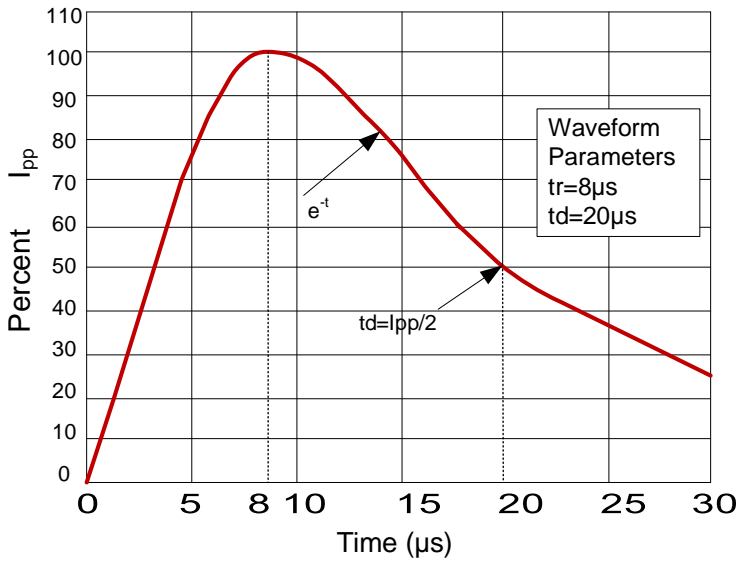
Non-repetitive Peak Pulse Power vs. Pulse Time



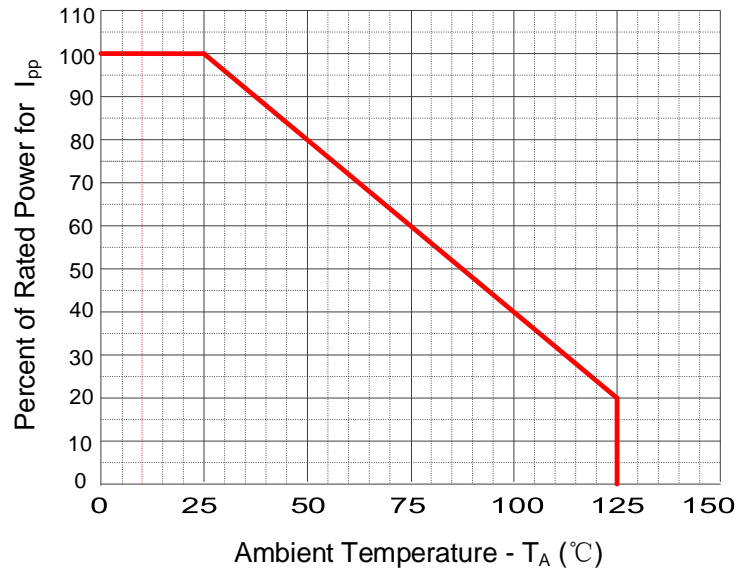
Reverse Clamping Voltage vs. Peak Pulse Current



8/20μs Pulse Waveform



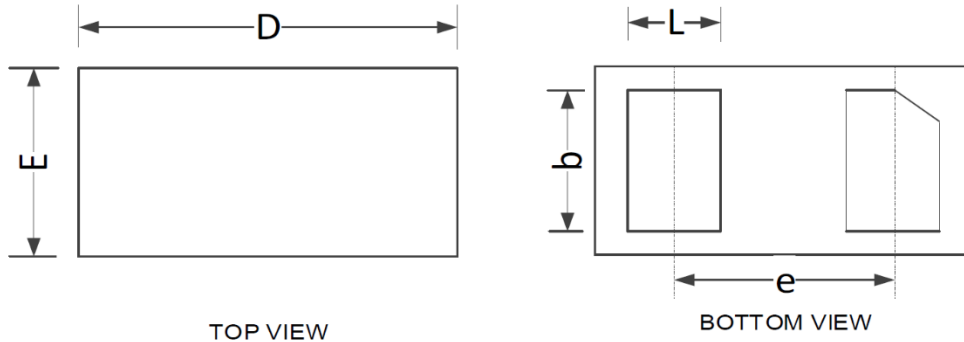
Power derating vs. Ambient temperature





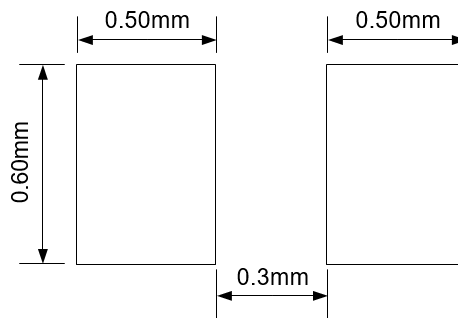
### Outline Drawing – DFN1006

### 9. Package information



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

### 10. Recommend PCB Layout



### 11. Marking Code

Part Number	Marking Code
LKP15N4AX40	P15



### 12. Ordering information

Order code	Package	Base qty	Delivery mode
LKP15N4AX40	DFN1006	10k	Tape and reel



### 13. Contact Information

Online product information is available at [www.lanker-semi.com](http://www.lanker-semi.com)

Buy our products or get free samples, for further information and requests,

e-mail us at: [sales @lanker-semi.com](mailto:sales@lanker-semi.com)

### 14. Copyrights & Disclaimer

Copyright lanker-semi trademarks Registered. All rights reserved. The material herein may not be reproduced, adapted, merged, translated, stored, or used without the prior written consent of the copyright owner.

Devices sold by lanker-semi are covered by the warranty and patent indemnification provisions appearing in its General Terms of Trade. lanker-semi makes no warranty, express, statutory, implied, or by description regarding the information set forth herein.

lanker-semi reserves the right to change specifications and prices at any time and without notice. Therefore, prior to designing this product into a system, it is necessary to check with lanker-semi for current information.

This product is intended for use in commercial applications.

Applications requiring extended temperature range, unusual environmental requirements, or high reliability applications, such as military, medical life-support or life-sustaining equipment are specifically not recommended without additional processing by lanker-semi for each application.

This product is provided by lanker-semi "AS IS" and any express or implied warranties, including, but not limited to the implied warranties of merchantability and fitness for a particular purpose are disclaimed.

Lanker-semi shall not be liable to recipient or any third party for any damages, including but not limited to personal injury property damage, loss of profits, loss of use, interruption of business or indirect, special, incidental or consequential damages, of any kind, in connection with or arising out of the furnishing, performance or use of the technical data herein. No obligation or liability to recipient or any third party shall arise or flow out of Lanker-semi rendering of technical or other services.

### 15. Reversion History

Document ID	Release Date	Sheet Status	Change Notice	Supersedes
02	03-Jun-2022	Product data sheet	-	-