



LANKERSEMI

TVS Protection Diode

LKP20N4AX30

Rev. 02 — 3 June 2022

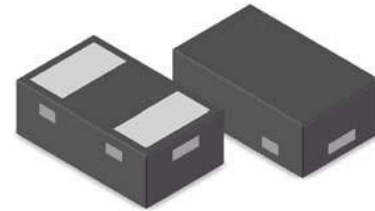


Halogen Free

Product Profile

1. Features

- 870Watts peak pulse power ($t_p = 8/20\mu s$)
- Unidirectional configurations
- Reverse Working Voltage: 20V
- IEC 61000-4-2 : $\pm 30kV$ contact, $\pm 30kV$ air
- IEC 61000-4-4 (EFT) : 40A (5/50ns)
- IEC 61000-4-5 (Lightning): 30A (8/20 μs)



DFN1006-2L

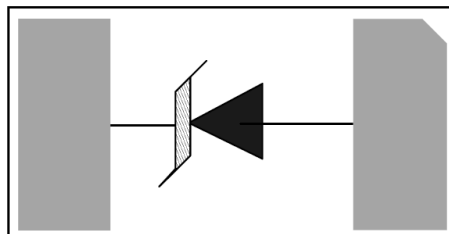
2. Applications

- Power supply protection
- Power management servers

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}	870	Watts
Peak Pulse Current ($t_p = 8/20\mu s$) (note1)	I_{pp}	30	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	$^{\circ}C$

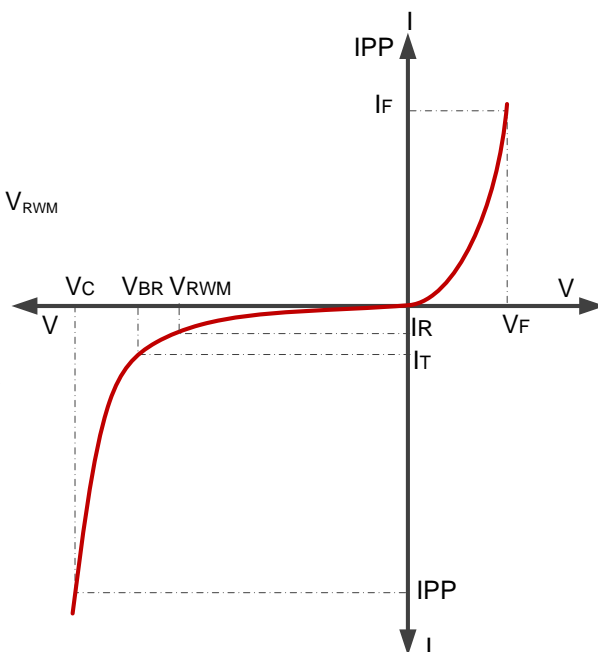
Note.: 8/20 μs pulse waveform.

6. Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				20	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	22			V
Reverse Leakage Current	I_R	$V_{RWM}=20V, T=25^{\circ}C$			500	nA
Clamping Voltage	V_C	$I_{PP}=30A, t_p=8/20\mu s$			29	V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		65		pF

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

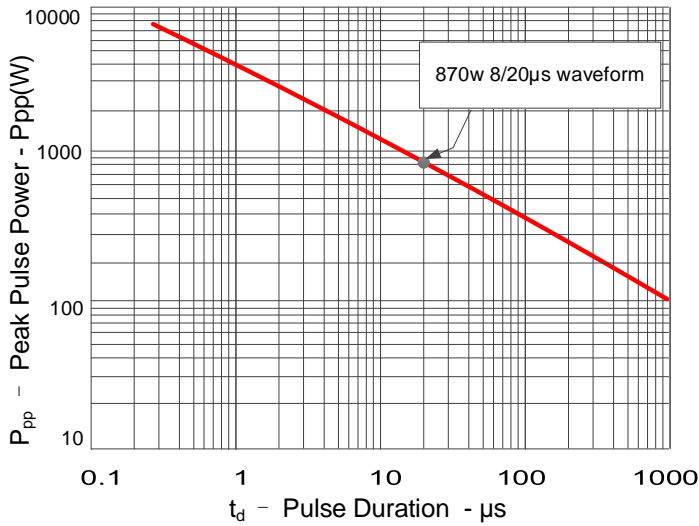
- V_{RWM} Reverse Working Voltage Max
- I_R Maximum Reverse Leakage Current @ V_{RWM}
- V_{BR} Reverse Breakdown Voltage
- V_C Clamping Voltage @ I_{PP}
- I_{PP} Maximum Reverse Peak Pulse Current



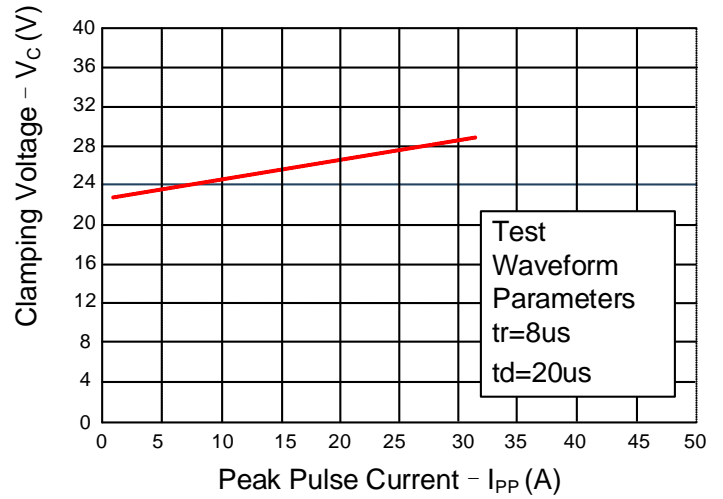


8. Typical Characteristics

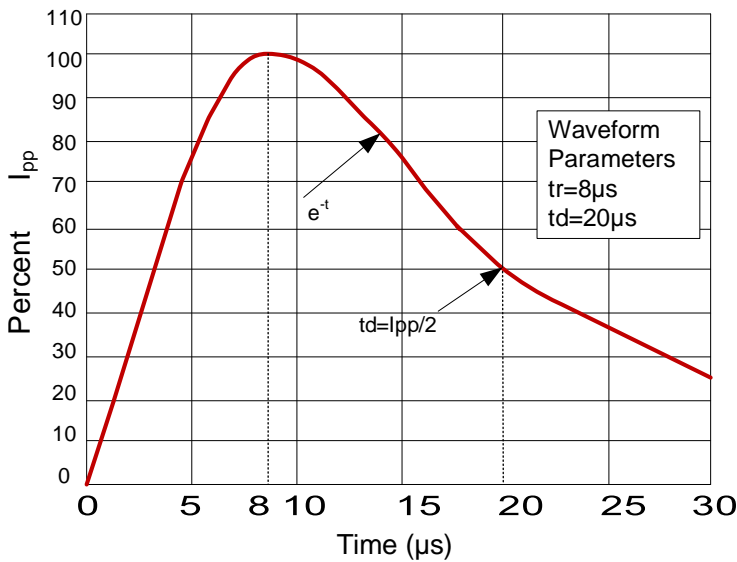
Non-repetitive Peak Pulse Power vs. Pulse Time



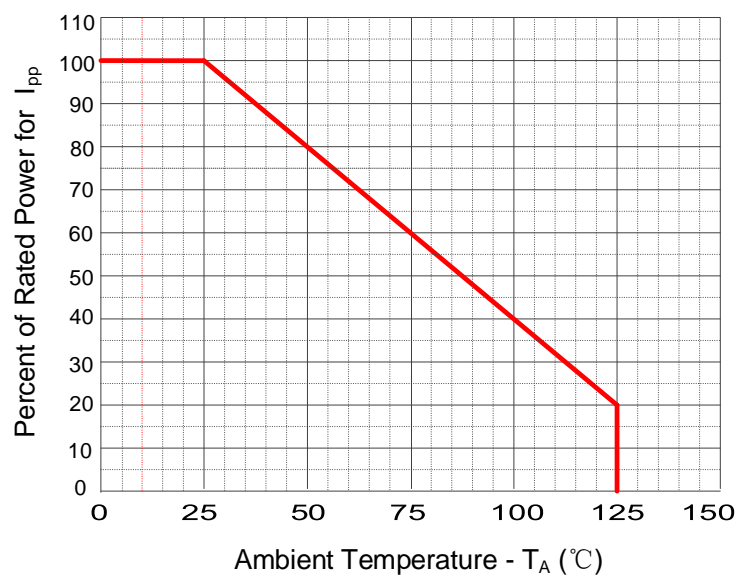
Reverse Clamping Voltage vs. Peak Pulse Current



8/20μs Pulse Waveform



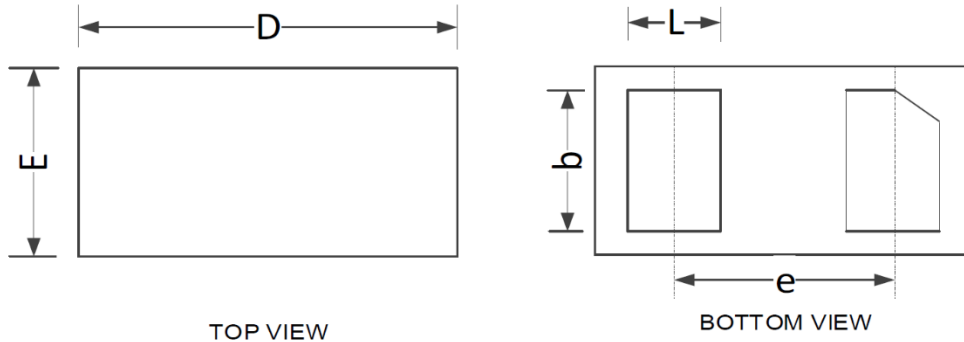
Power derating vs. Ambient temperature





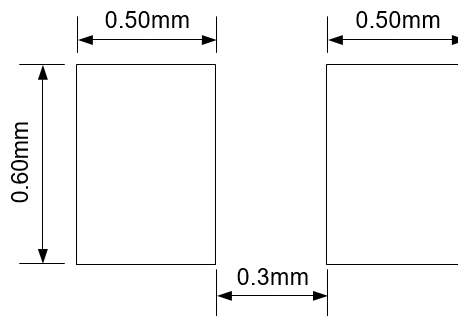
Outline Drawing – DFN1006

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
LKP20N4AX30	P20



12. Ordering information

Order code	Package	Base qty	Delivery mode
LKP20N4AX30	DFN1006	10k	Tape and reel



13. Contact Information

Online product information is available at www.lanker-semi.com

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

e-mail us at: sales@lanker-semi.com

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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.

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15. Reversion History

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