



LANKERSEMI

TVS Protection Diode

LKS06N4AX40

Rev. 02 — 3 June 2022

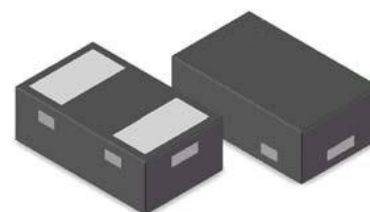


Halogen Free

Product Profile

1. Features

- 450Watts peak pulse power ($t_p = 8/20\mu s$)
- Unidirectional configurations
- Reverse Working Voltage: 6.5V
- capacitance: $C_j = 140pF$ typ
- 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 μs)



DFN1006-2L

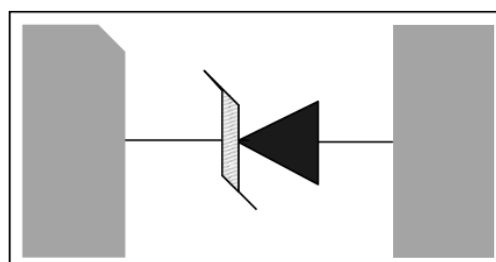
2. Applications

- Microprocessor based equipment
- Personal Digital Assistants
- Notebooks, Desktops, and Servers
- Portable Instrumentation

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}	450	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 μs pulse waveform.

6. Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				6.5	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	7.0	7.2		V
Forward Voltage	V_F	$I_F = 10mA$		0.8		V
Reverse Leakage Current	I_R	$V_{RWM} = 6.5V, T = 25^{\circ}C$			1	μA
Peak Pulse Current	V_C	$t_p = 8/20\mu s$			40	A
Clamping Voltage	V_C	$I_{PP} = 40A, t_p = 8/20\mu s$		11		V
Forward Clamping Voltage	V_C	$I_{PP} = 40A, t_p = 8/20\mu s$		6.0		V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		270		pF

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

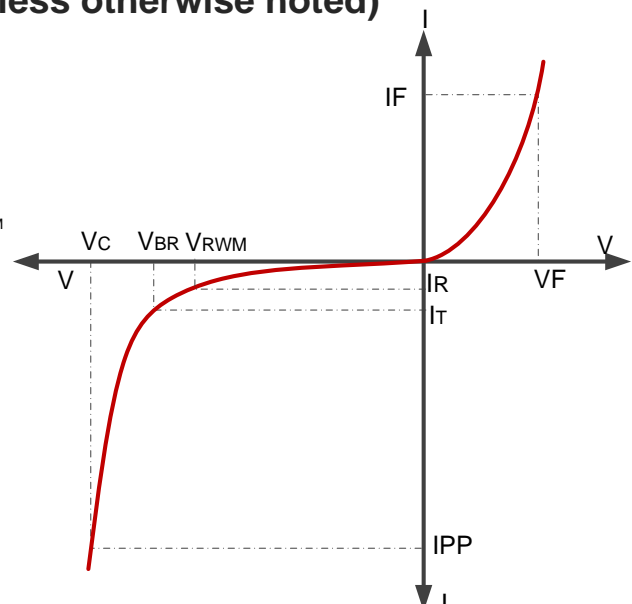
V_{RWM} Reverse Working Voltage Max

I_R Maximum Reverse Leakage Current @ V_{RWM}

V_{BR} Reverse Breakdown Voltage

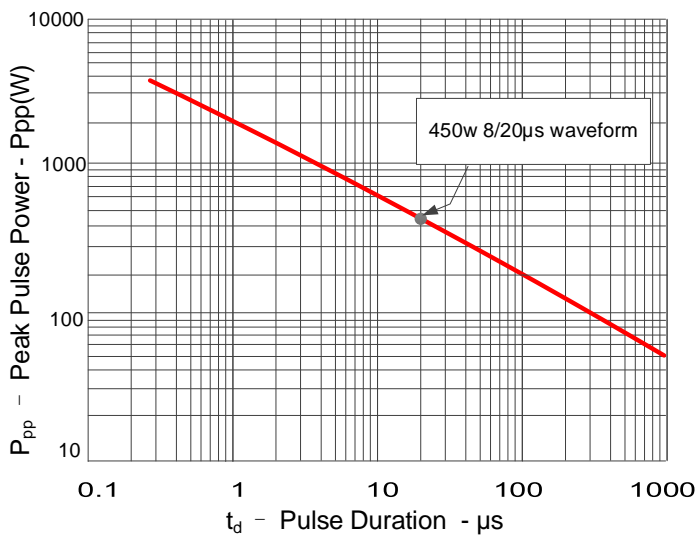
V_C Clamping Voltage @ I_{PP}

I_{PP} Maximum Reverse Peak Pulse Current

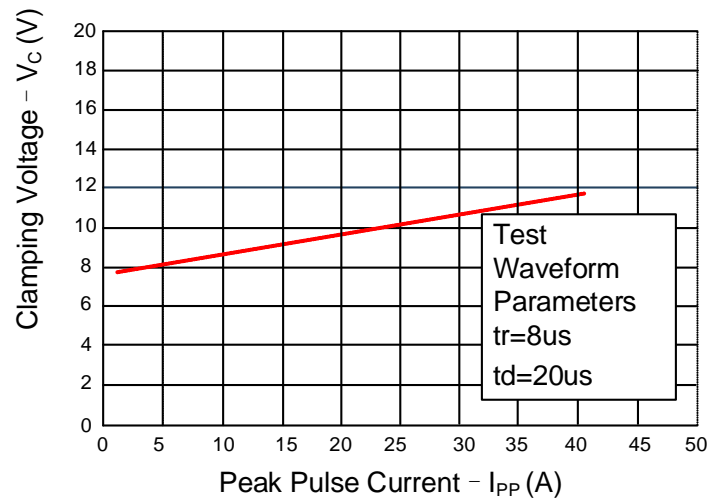


8. Typical Characteristics

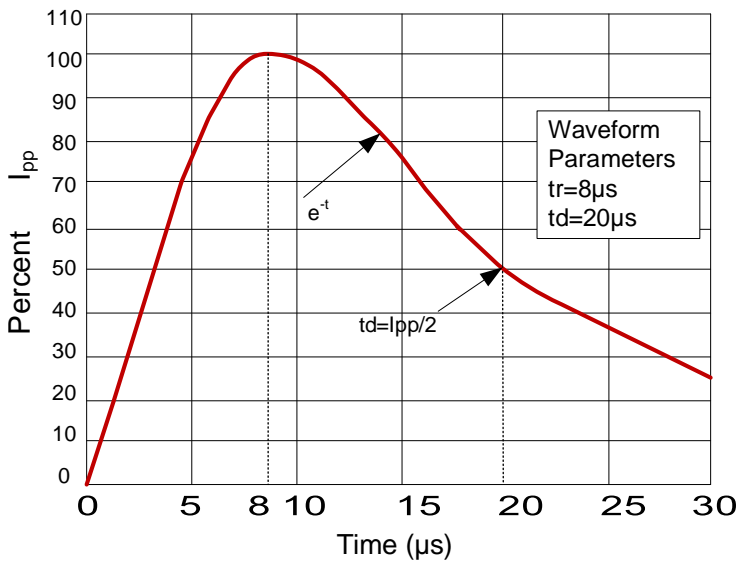
Non-repetitive Peak Pulse Power vs. Pulse Time



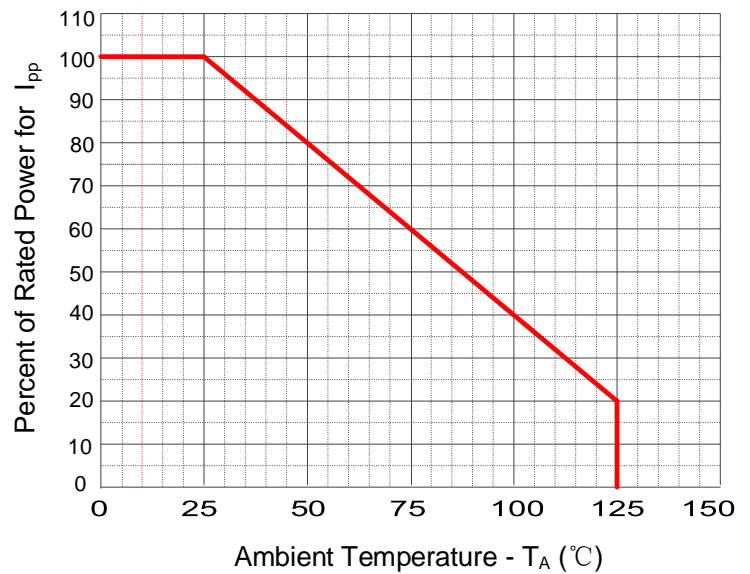
Reverse Clamping Voltage vs. Peak Pulse Current



8/20 μ s Pulse Waveform



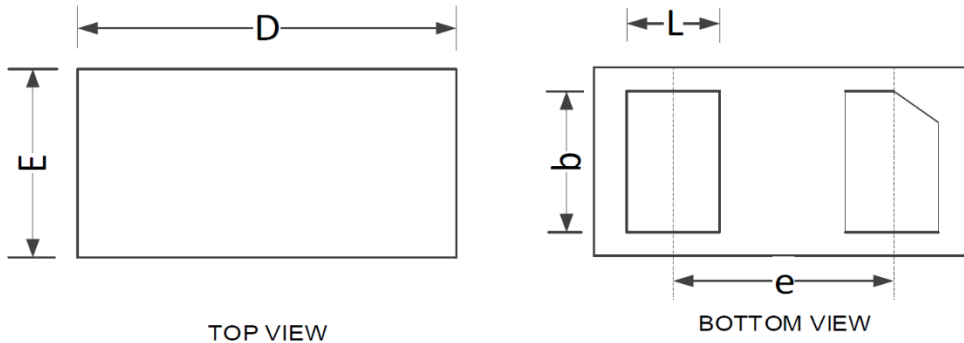
Power derating vs. Ambient temperature





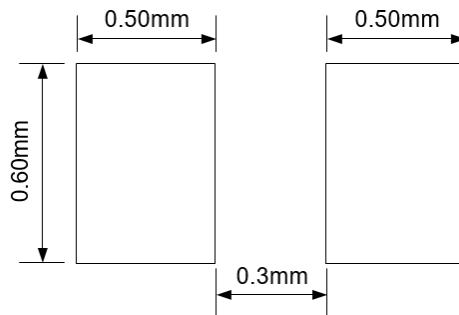
Outline Drawing – DFN1006

9. Package information



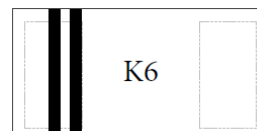
COMMON DIMENSION (MM)			
PKG	DFN1006		
REF.	MIN.	NOM.	MAX.
A	0.40		0.55
b	0.45	0.50	0.55
D	0.95	1.00	1.05
e	0.65BSC		
E	0.55	0.60	0.65
L	0.20	0.25	0.30

10. Recommend PCB Layout



11. Marking Code

Part Number	Marking Code
LKS06N4AX40	K6



12. Ordering information

Order code	Package	Base qty	Delivery mode
LKS06N4AX40	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](mailto:sales@lanker-semi.com)

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This product is intended for use in commercial applications.

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15. Reversion History

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