



LANKERSEMI

# SMD ESD Protection Diode

## LKS05NAX14-B



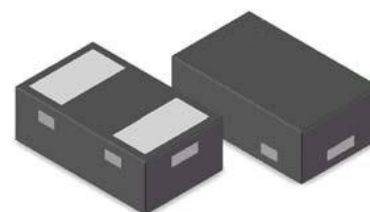
Halogen Free

Rev. 02 — 3 June 2022

### Product Profile

#### 1. Features

- 230Watts peak pulse power (tp = 8/20μs)
- Reverse Working Voltage: 5V
- capacitance: Cj = 1.5pF typ
- IEC 61000-4-2 : ±30kV contact, ±30kV air
- IEC 61000-4-4 (EFT) : 40A (5/50ns)
- IEC 61000-4-5 (Lightning): 14A (8/20μs)



DFN1006-2L

#### 2. Applications

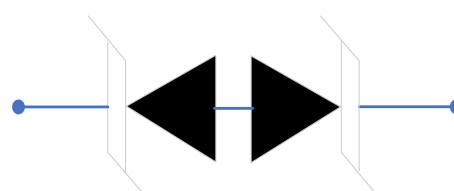
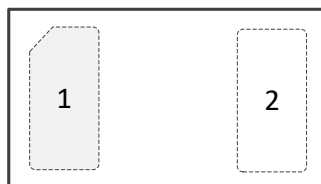
- Microprocessor based equipment
- Personal Digital Assistants
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Pagers Peripherals

#### 3. Mechanical Data

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

#### 4. Pinning information

Pin	Description
1	Cathode 1
2	Cathode 2





### 5. Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	230	Watts
Peak Pulse Current ( $t_p = 8/20\mu s$ ) (note1)	$I_{pp}$	14	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	$^{\circ}C$

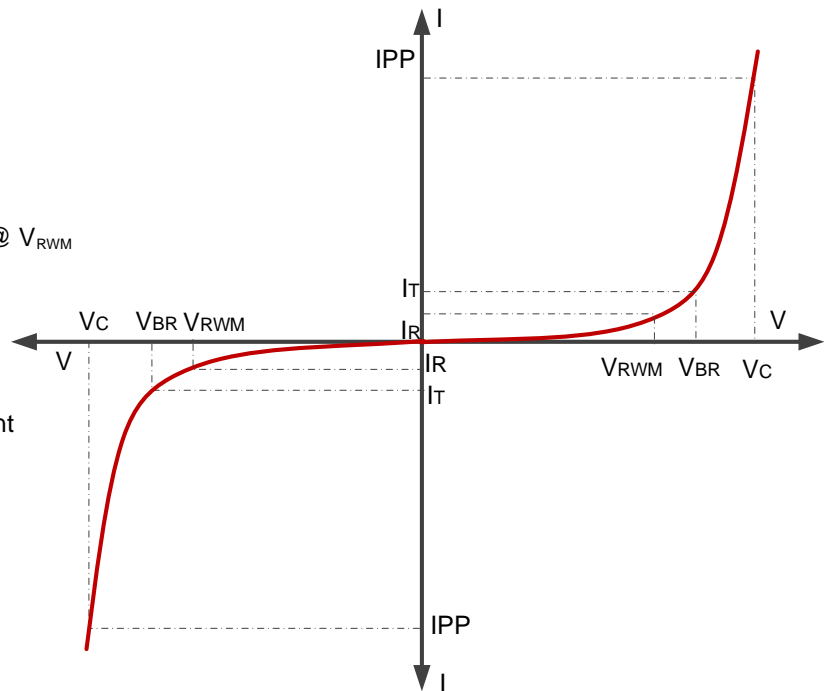
Note.: 8/20 $\mu s$  pulse waveform.

### 6. Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$				5.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	6.5			V
Reverse Leakage Current	$I_R$	$V_{RWM}=5.0V, T=25^{\circ}C$			1	$\mu A$
Clamping Voltage	$V_C$	$I_{PP}=14A, t_p=8/20\mu s$		17		V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		1.5	1.9	pF

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

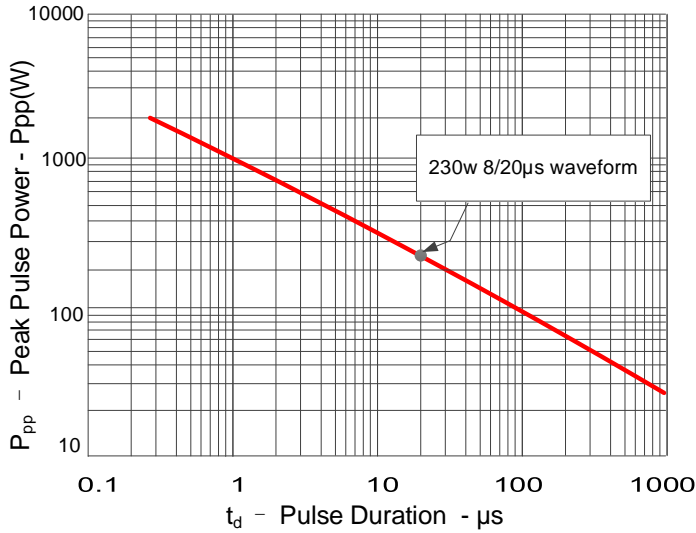
- $V_{RWM}$  ..... Reverse Working Voltage Max
- $I_R$  ..... Maximum Reverse Leakage Current @  $V_{RWM}$
- $V_{BR}$  ..... Reverse Breakdown Voltage
- $V_C$  ..... Clamping Voltage @  $I_{PP}$
- $I_{PP}$  ..... Maximum Reverse Peak Pulse Current



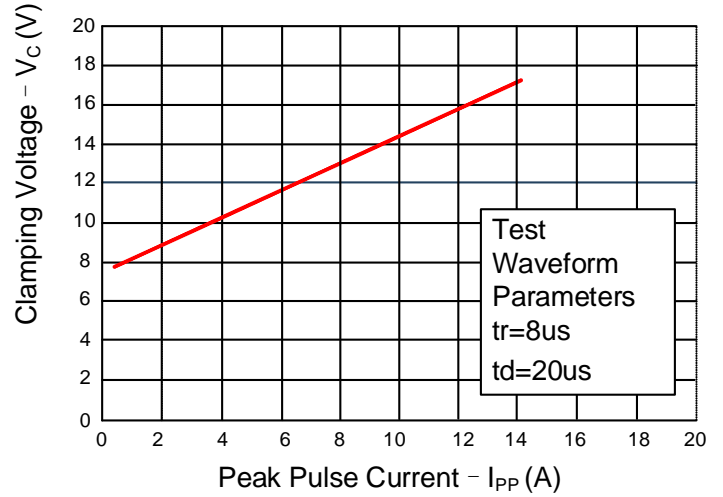


### 8. Typical Characteristics

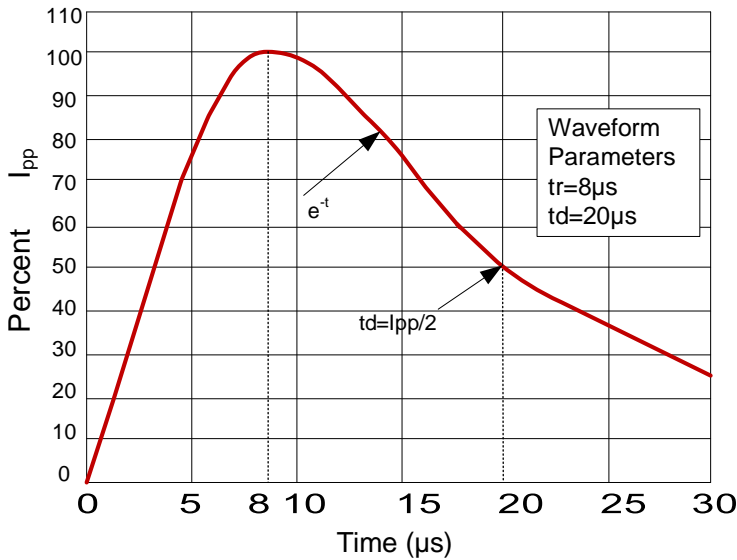
Non-repetitive Peak Pulse Power vs. Pulse Time



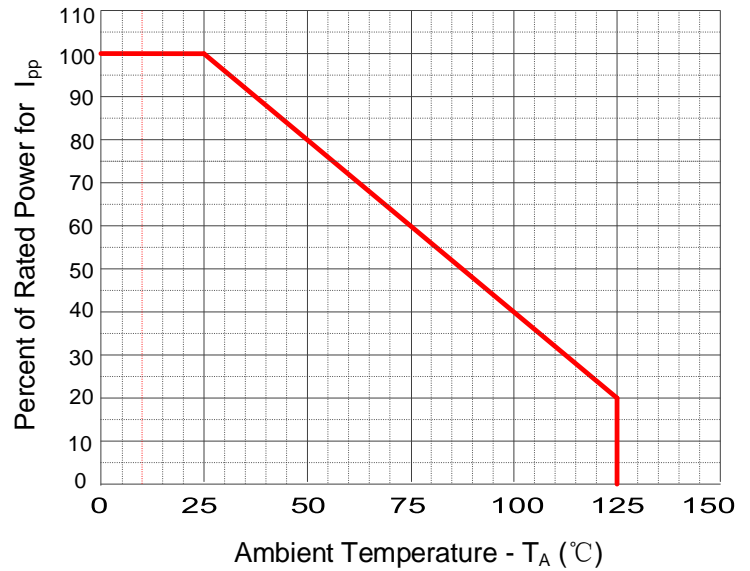
Reverse Clamping Voltage vs. Peak Pulse Current



8/20μs Pulse Waveform



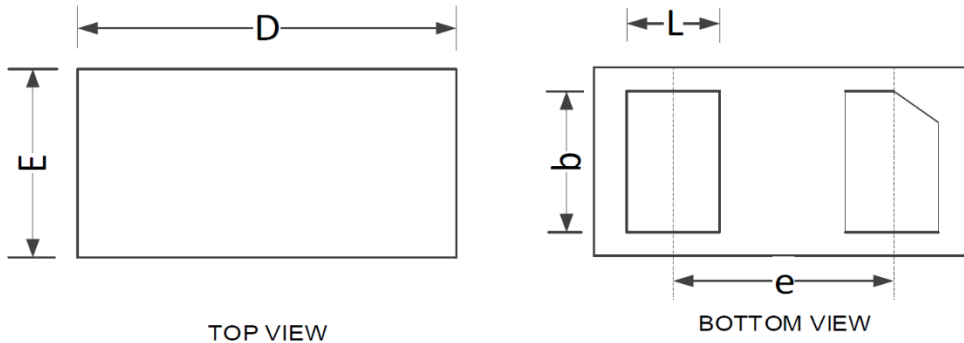
Power derating vs. Ambient temperature





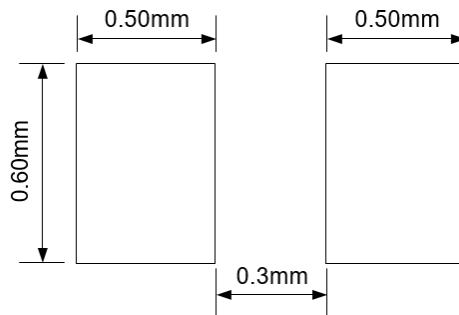
### Outline Drawing – DFN1006

### 9. Package information



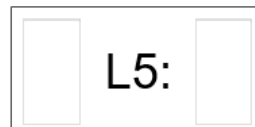
COMMON DIMENSION (MM)			
PKG	DFN1006		
REF.	MIN.	NOM.	MAX.
A	0.40		0.55
b	0.45	0.50	0.55
D	0.95	1.00	1.05
e	0.65BSC		
E	0.55	0.60	0.65
L	0.20	0.25	0.30

### 10. Recommend PCB Layout



### 11. Marking Code

Part Number	Marking Code
LKS05N4AX14-B	L5:



### 12. Ordering information

Order code	Package	Base qty	Delivery mode
LKS05N4AX14-B	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)

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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	-	-