



LANKERSEMI

# SMD ESD Protection Diode

## LKE12N4CX10-B



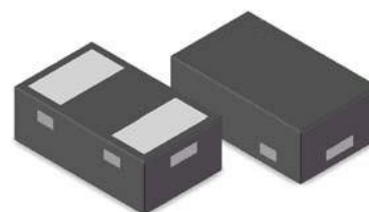
Halogen Free

Rev. 02 — 3 June 2022

### Product Profile

#### 1. Features

- 120Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Reverse Working Voltage: 12V
- Low capacitance:  $C_j = 10pF$  typ
- IEC 61000-4-2 :  $\pm 30kV$  contact,  $\pm 30kV$  air
- IEC 61000-4-4 (EFT) : 40A (5/50ns)
- IEC 61000-4-5 (Lightning): 8A (8/20 $\mu s$ )



DFN1006-2L

#### 2. Applications

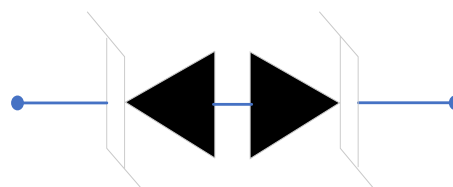
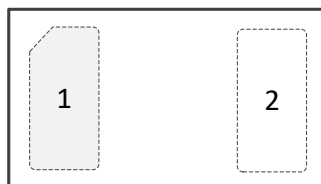
- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants
- Notebooks, Desktops, and Servers
- Portable Instrumentation

#### 3. Mechanical Data

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

#### 4. Pinning information

Pin	Description
1	Cathode 1
2	Cathode 2





### 5. Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	80	Watts
Peak Pulse Current ( $t_p = 8/20\mu s$ ) (note1)	$I_{pp}$	8	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	$^{\circ}C$

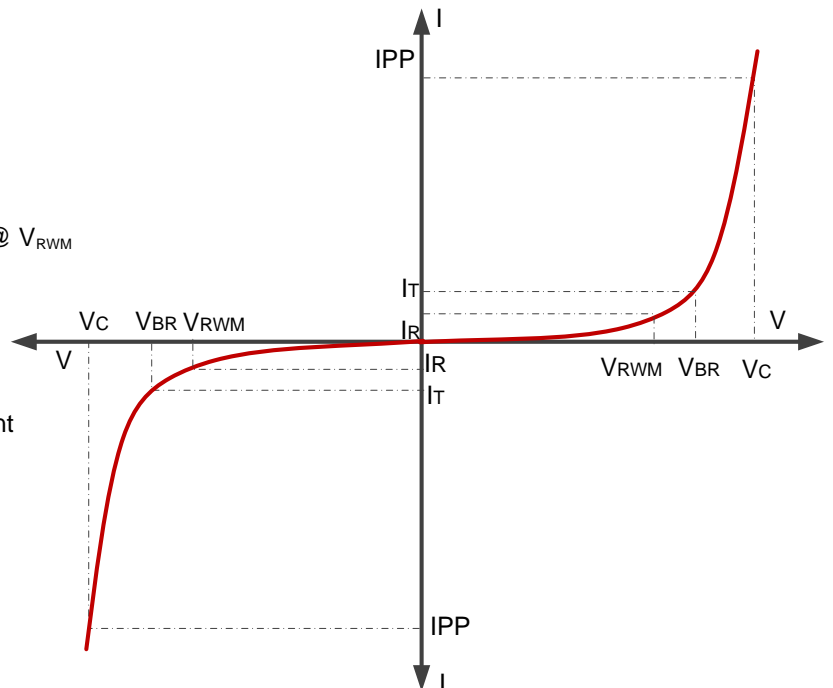
Note.: 8/20 $\mu s$  pulse waveform.

### 6. Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$				12.0	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	13.3			V
Reverse Leakage Current	$I_R$	$V_{RWM}=12.0V, T=25^{\circ}C$			1	$\mu A$
Peak Pulse Current	$I_{pp}$	$t_p=8/20\mu s$			8	A
Clamping Voltage	$V_C$	$I_{PP}=8A, t_p=8/20\mu s$		16		V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		10		pF

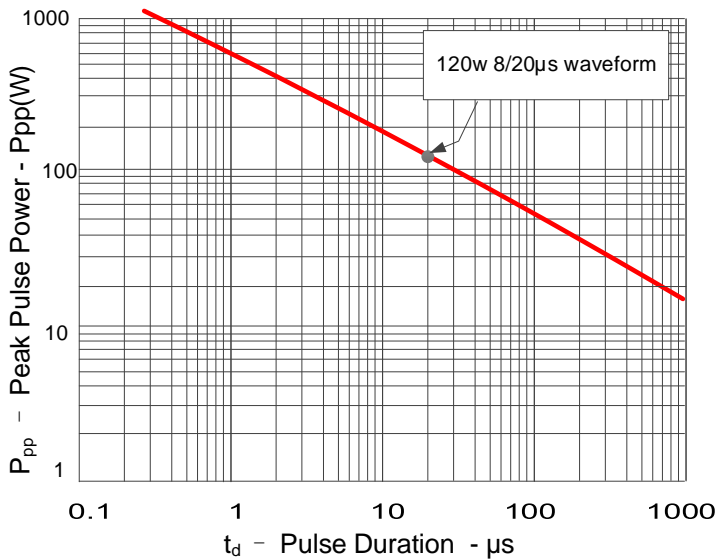
### 7. Electrical Parameters (TA = 25°C unless otherwise noted)

- $V_{RWM}$  .....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

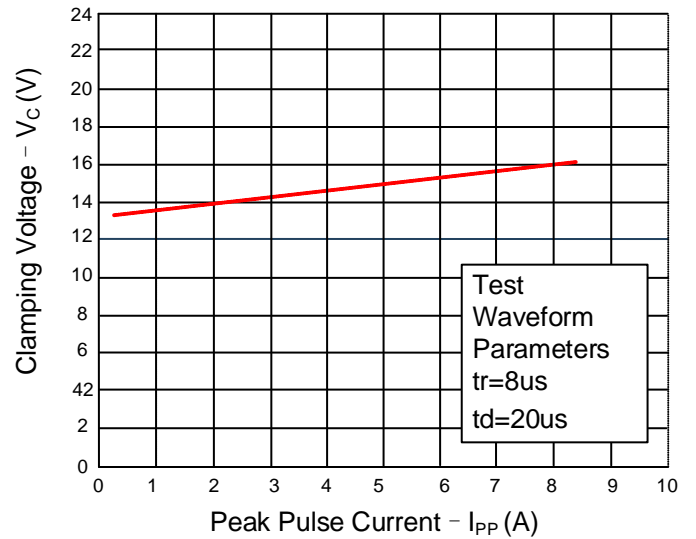


## 8. Typical Characteristics

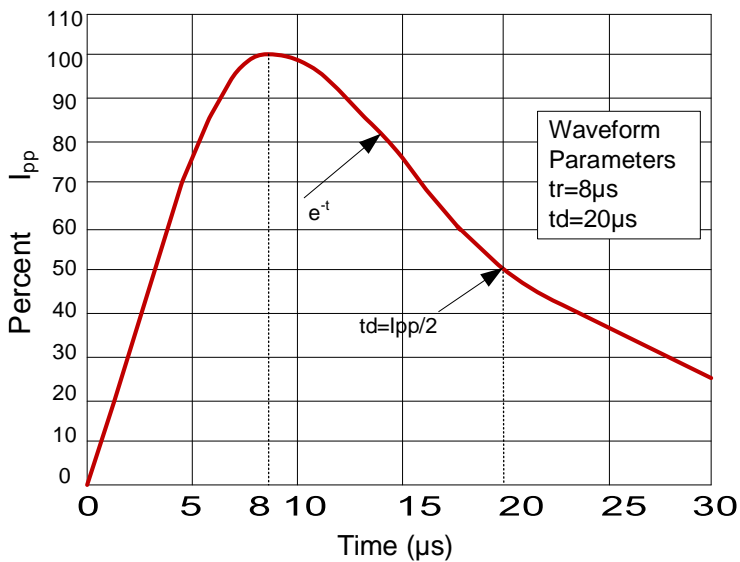
Non-repetitive Peak Pulse Power vs. Pulse Time



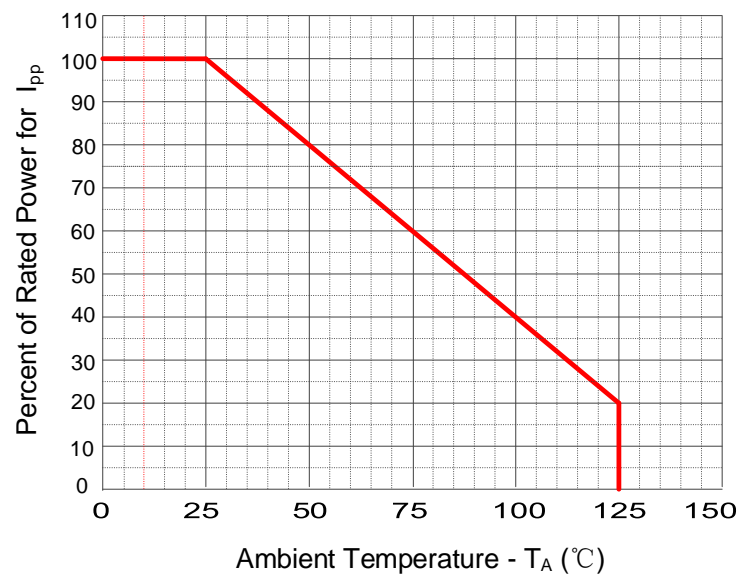
Reverse Clamping Voltage vs. Peak Pulse Current

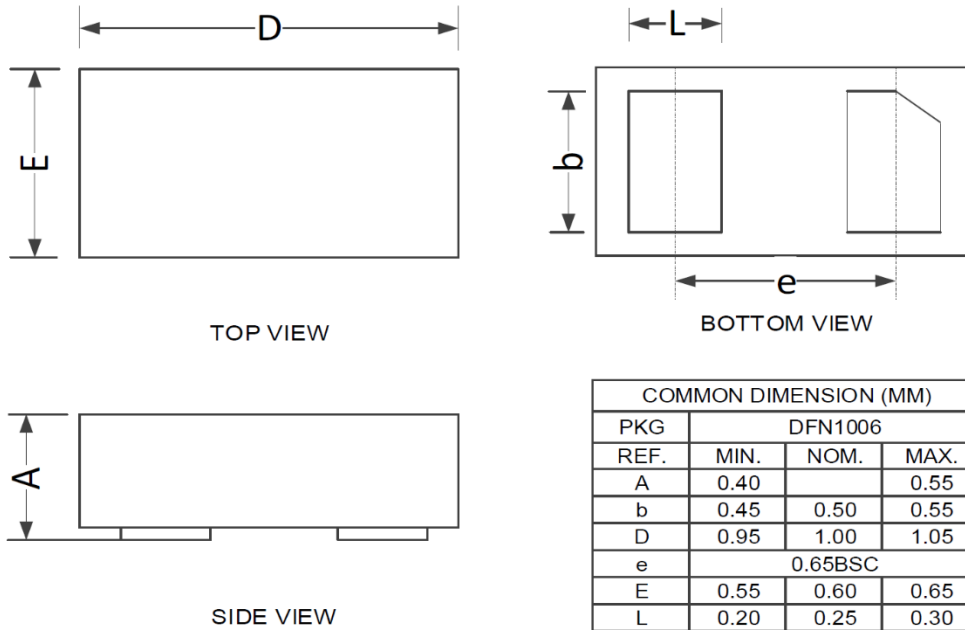
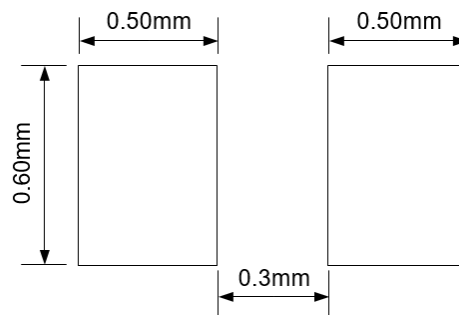


8/20μs Pulse Waveform



Power derating vs. Ambient temperature



**Outline Drawing – DFN1006****9. Package information****10. Recommend PCB Layout****11. Marking Code**

Part Number	Marking Code
LKE12N4CX10-B	12B

**12. Ordering information**

Order code	Package	Base qty	Delivery mode
LKE12N4CX10-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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### 15. Reversion History

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