



LANKERSEMI

## TVS Protection Diode

# LKP15N5AX80

Rev. 02 — 3 June 2022

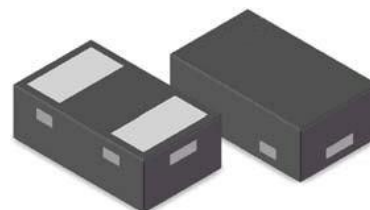


Halogen Free

## Product Profile

### 1. Features

- 2200Watts 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): 80A (8/20 $\mu s$ )



DFN1610-2L

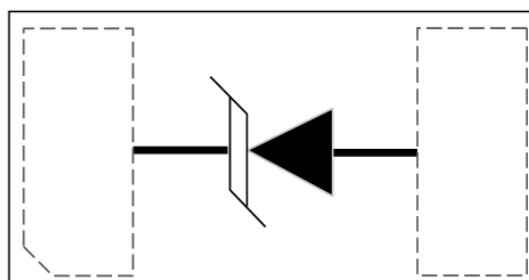
### 2. Applications

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

### 3. Mechanical Data

- DFN1610 package
- Molding compound flammability rating: UL94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

## 4. Pinning information



DFN1610



## 5. Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	2200	Watts
Peak Pulse Current ( $t_p = 8/20\mu s$ ) (note1)	$I_{pp}$	80	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	$I_R$	$V_{RWM} = 15.0V, T = 25^{\circ}C$			1	$\mu A$
Peak Pulse Current	$V_C$	$t_p = 8/20\mu s$			80	A
Clamping Voltage	$V_C$	$I_{PP} = 80A, t_p = 8/20\mu s$			28	V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		320		pF

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

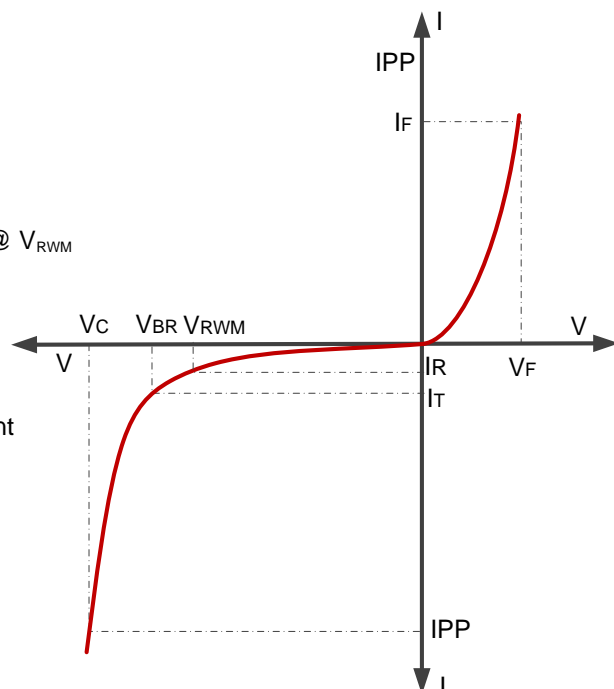
$V_{RWM}$  ..... Reverse Working Voltage Max

$I_R$  ..... Maximum Reverse Leakage Current @  $V_{RWM}$

$V_{BR}$  ..... Reverse Breakdown Voltage

$V_C$  ..... Clamping Voltage @  $I_{PP}$

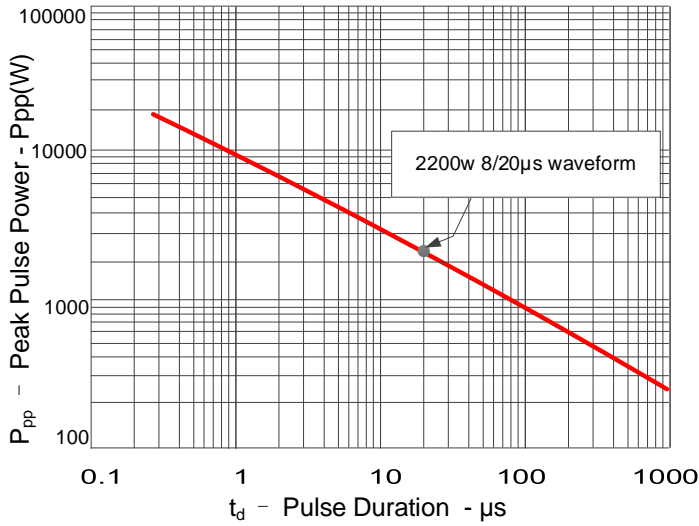
$I_{PP}$  ..... Maximum Reverse Peak Pulse Current



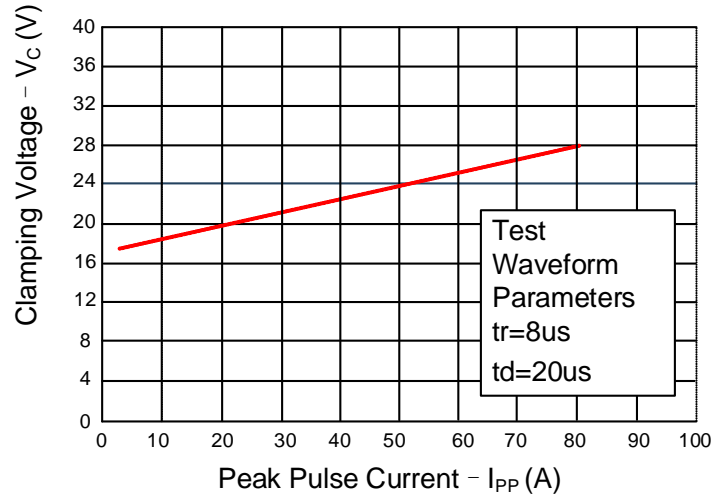


### 8. Typical Characteristics

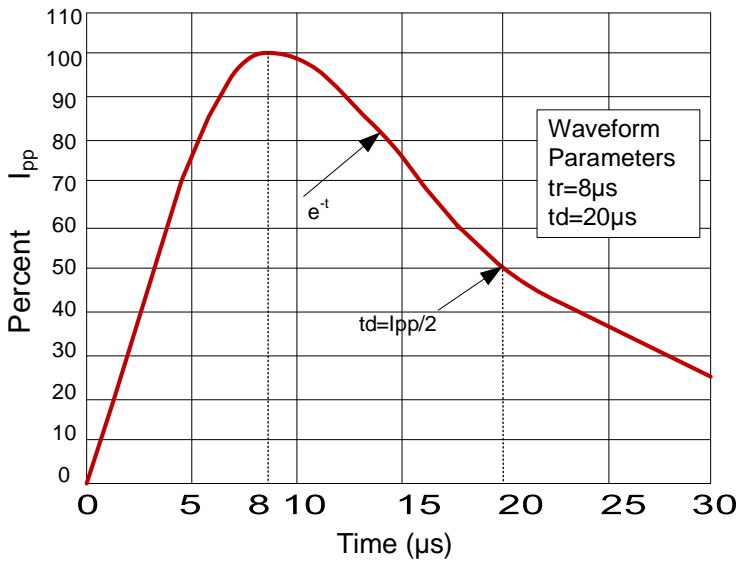
Non-repetitive Peak Pulse Power vs. Pulse Time



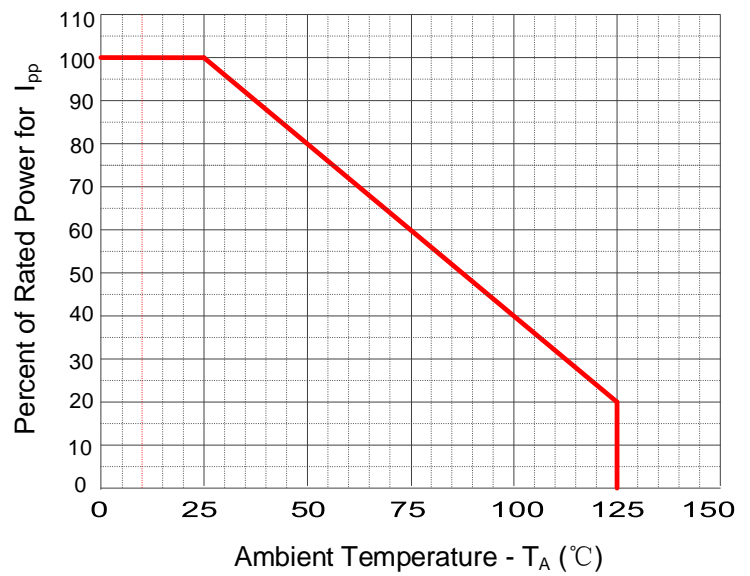
Reverse Clamping Voltage vs. Peak Pulse Current



8/20μs Pulse Waveform



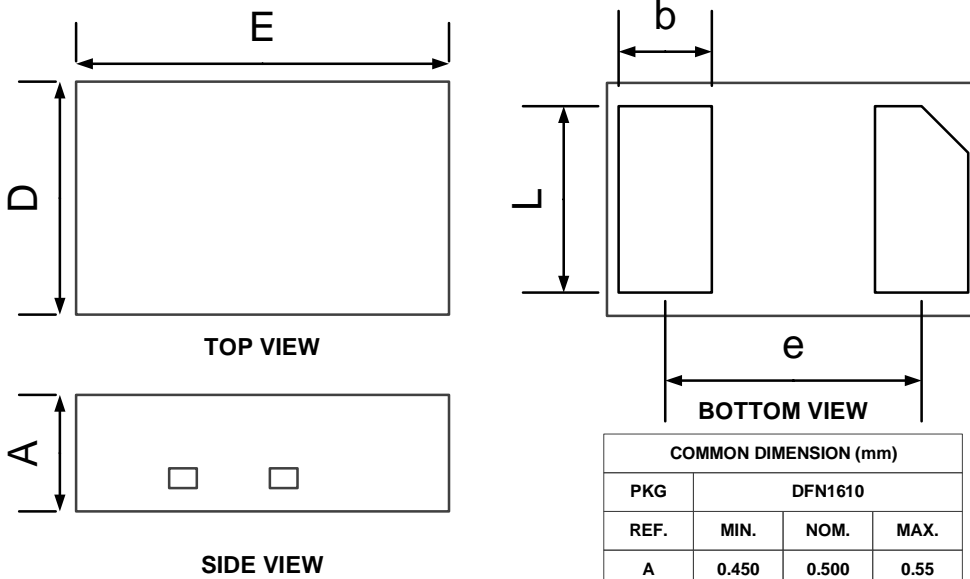
Power derating vs. Ambient temperature



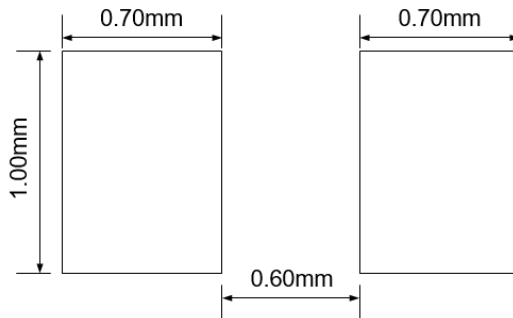


### Outline Drawing – DFN1610

#### 9. Package information



#### 10. Recommend PCB Layout



#### 11. Marking Code

Part Number	Marking Code
LKP15N5AX80	BHW

#### 12. Ordering information

Order code	Package	Base qty	Delivery mode
LKP15N5AX80	DFN1610	3k	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	-	-