



LANKERSEMI



Halogen Free

# TVS Protection Diode

## LKS03D3CXX1-B

Rev. 02 — 3 June 2022

### Product Profile

#### 1. Features

- 350Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Reverse Working Voltage: 3.3V
- Low capacitance:  $C_j = 1pF$  typ
- IEC 61000-4-2 :  $\pm 30kV$  contact,  $\pm 30kV$  air
- IEC 61000-4-4 (EFT) : 40A (5/50ns)
- IEC 61000-4-5 (Lightning): 20A (8/20 $\mu s$ )



SOD-323

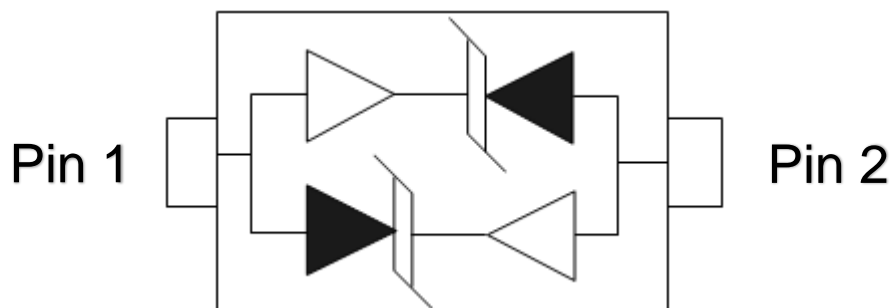
#### 2. Applications

- Ethernet - 10/100/1000 Base T
- Cellular Phones
- Handheld - Wireless Systems
- Personal Digital Assistant (PDA)
- USB Interface

#### 3. Mechanical Data

- SOD-323 package
- Molding compound flammability rating: UL94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

#### 4. Pinning information





### 5. Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	350	Watts
Peak Pulse Current ( $t_p = 8/20\mu s$ ) (note1)	$I_{pp}$	20	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	$^{\circ}C$

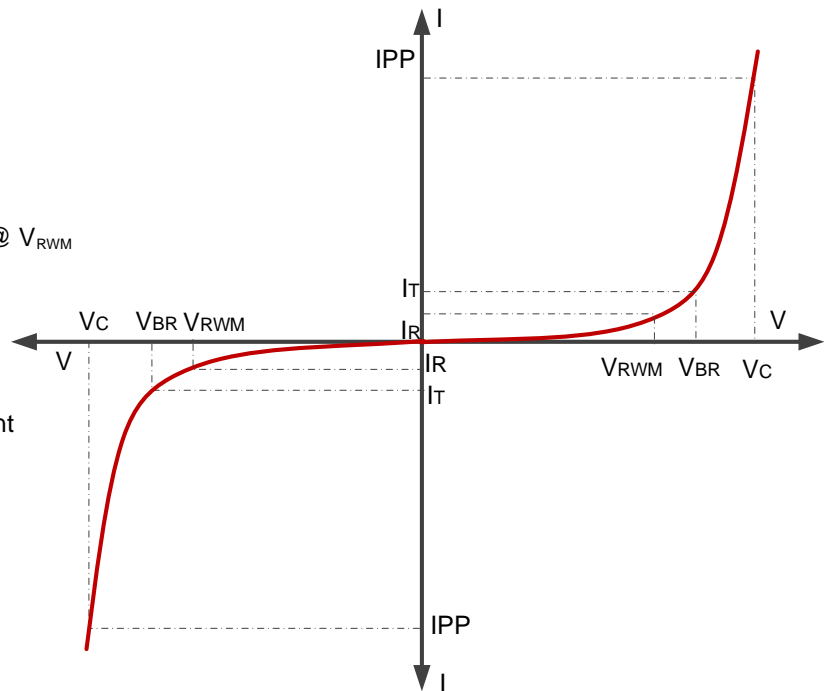
Note.: 8/20 $\mu s$  pulse waveform.

### 6. Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$				3.3	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	4.0			V
Reverse Leakage Current	$I_R$	$V_{RWM}=3.3V, T=25^{\circ}C$			1	$\mu A$
Clamping Voltage	$V_C$	$I_{PP}=20A, t_p=8/20\mu s$			18	V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		1.0	1.5	pF

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

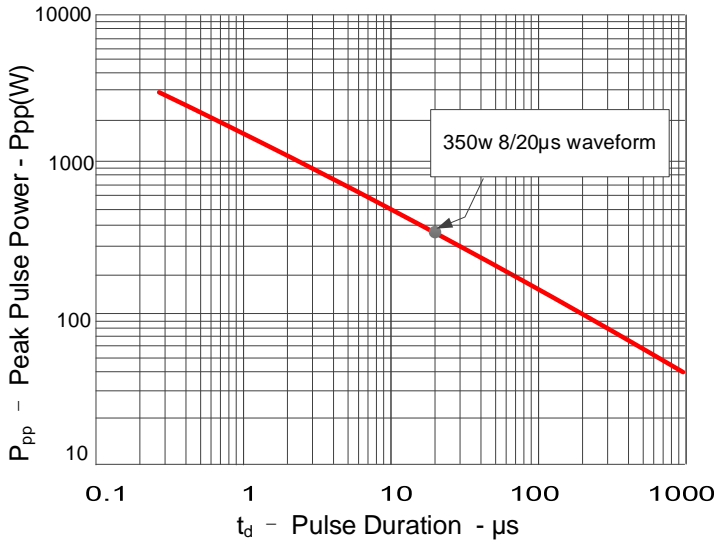
- $V_{RWM}$  ..... Reverse Working Voltage Max
- $I_R$  ..... Maximum Reverse Leakage Current @  $V_{RWM}$
- $V_{BR}$  ..... Reverse Breakdown Voltage
- $V_C$  ..... Clamping Voltage @  $I_{PP}$
- $I_{PP}$  ..... Maximum Reverse Peak Pulse Current



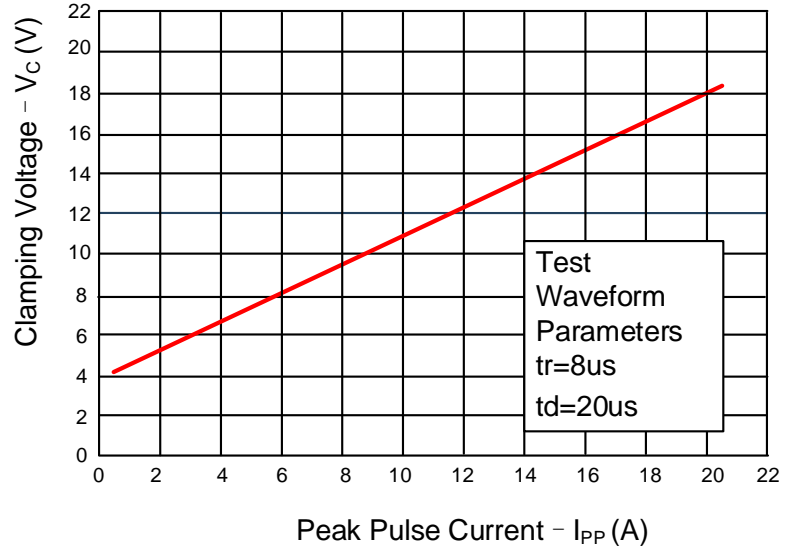


### 8. Typical Characteristics

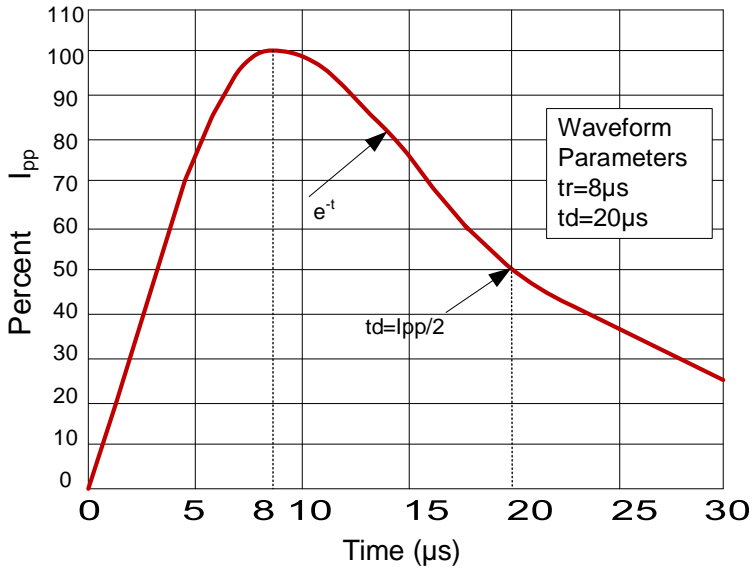
Non-repetitive Peak Pulse Power vs. Pulse Time



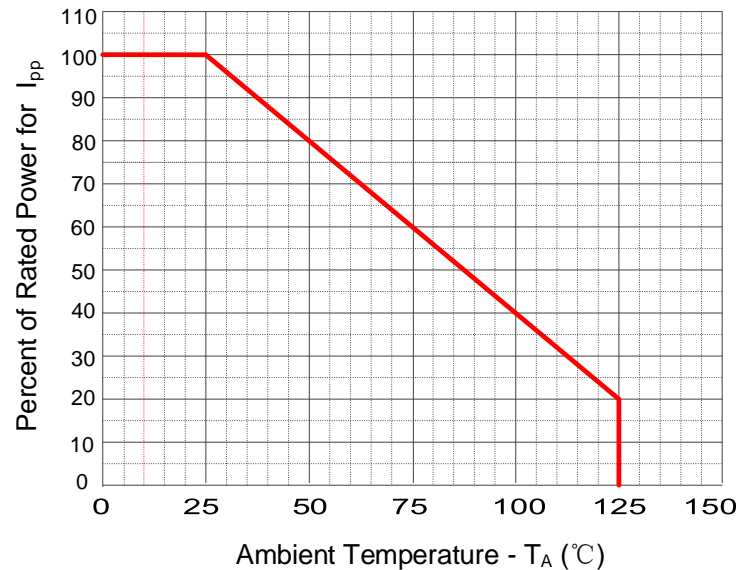
Reverse Clamping Voltage vs. Peak Pulse Current



8/20 $\mu$ s Pulse Waveform



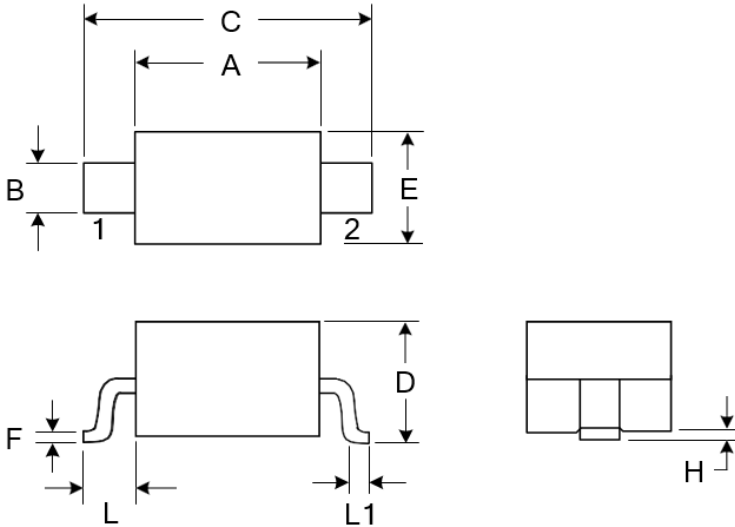
Power derating vs. Ambient temperature





## Outline Drawing – SOD-323

### 9. Package information



SYMBOL	DIMENSIONS			
	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	1.600	1.800	0.063	0.071
B	0.250	0.350	0.010	0.014
C	2.500	2.700	0.098	0.106
D		1.000		0.039
E	1.200	1.400	0.047	0.055
F	0.080	0.150	0.003	0.006
L	0.475 REF		0.019REF	
L1	0.250	0.400	0.010	0.016
H	0.000	0.100	0.000	0.004

### 10. Marking Code

Part Number	Marking Code
LKS03D3CXX1-B	3BL

### 11. Ordering information

Order code	Package	Base qty	Delivery mode
LKS03D3CXX1-B	SOD-323	3k	Tape and reel



## 12. 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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## 14. Reversion History

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