



LANKERSEMI

TVS Protection Diode

LKS05D3CXX1-B



Halogen Free

Rev. 02 — 3 June 2022

Product Profile

1. Features

- 400Watts peak pulse power ($t_p = 8/20\mu s$)
- Reverse Working Voltage: 5V
- 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 μs)



SOD-323

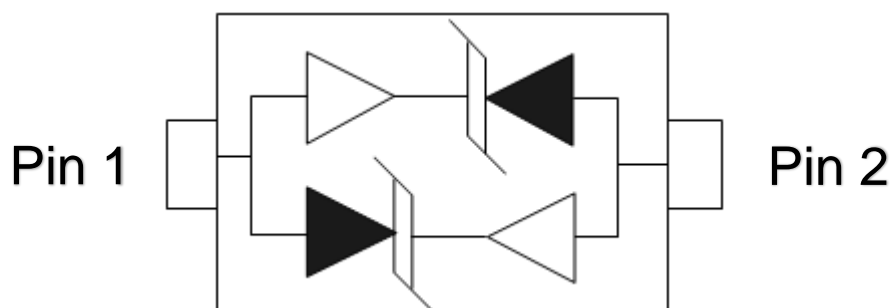
2. Applications

- 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}	400	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	$^{\circ}C$

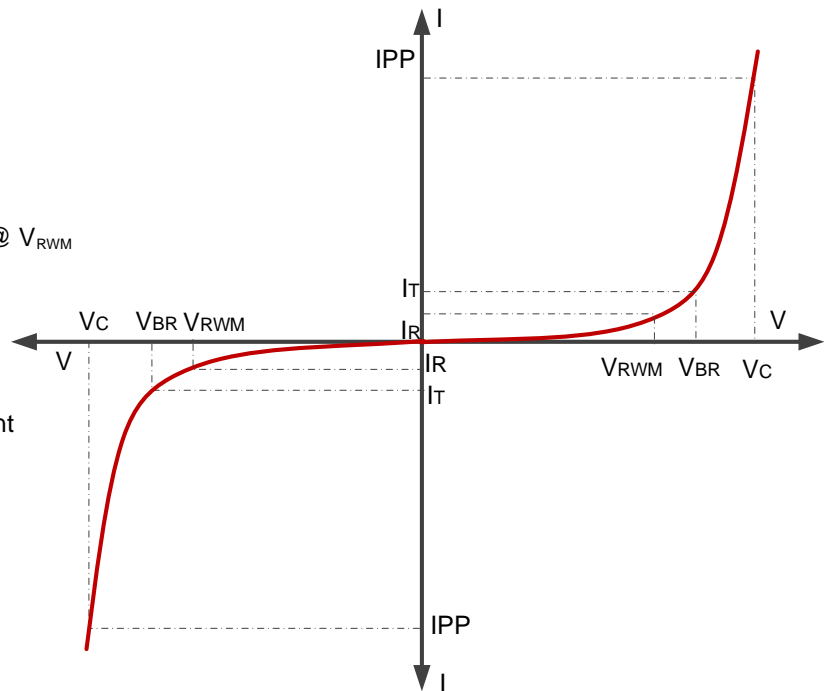
Note.: 8/20 μs pulse waveform.

6. Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	6.0			V
Reverse Leakage Current	I_R	$V_{RWM}=5.0V, T=25^{\circ}C$			1	μA
Clamping Voltage	V_C	$I_{PP}=20A, t_p=8/20\mu s$			20	V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		1.0	1.5	pF

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

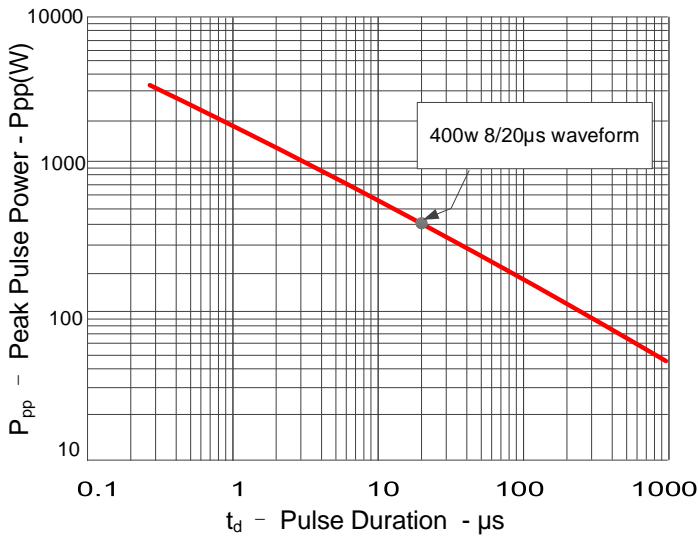
- V_{RWM} Reverse Working Voltage Max
- I_R Maximum Reverse Leakage Current @ V_{RWM}
- V_{BR} Reverse Breakdown Voltage
- V_C Clamping Voltage @ I_{PP}
- I_{PP} Maximum Reverse Peak Pulse Current



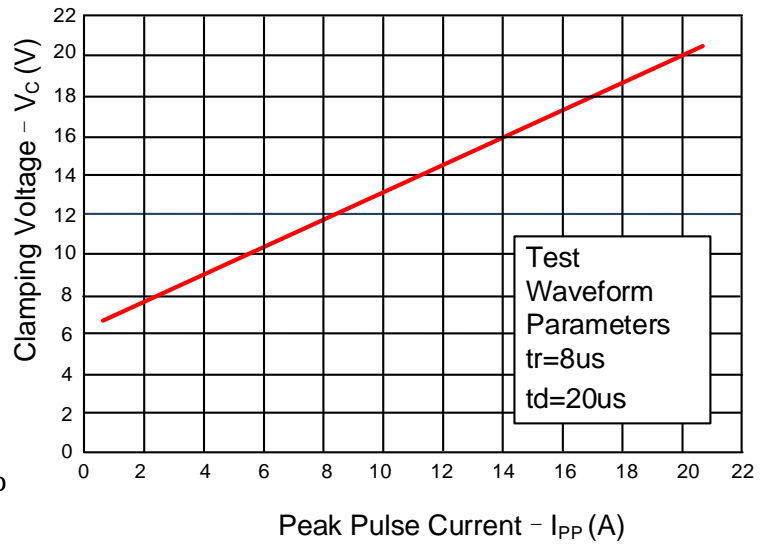


8. Typical Characteristics

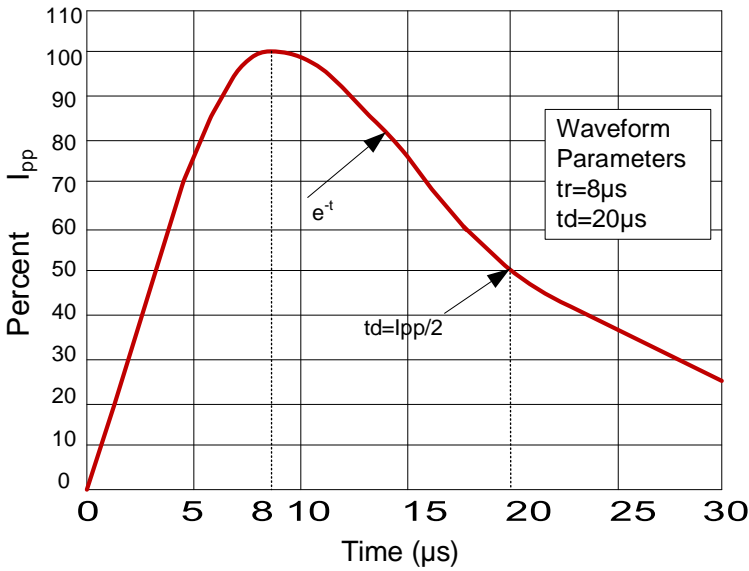
Non-repetitive Peak Pulse Power vs. Pulse Time



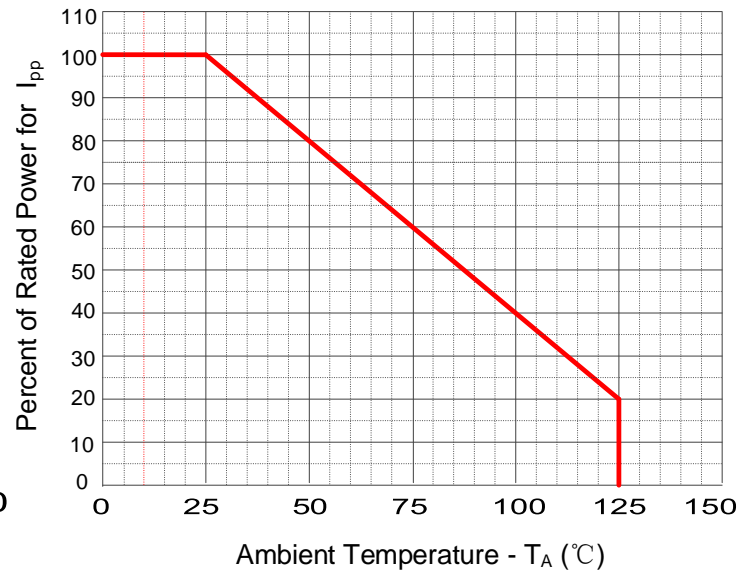
Reverse Clamping Voltage vs. Peak Pulse Current



8/20µs Pulse Waveform



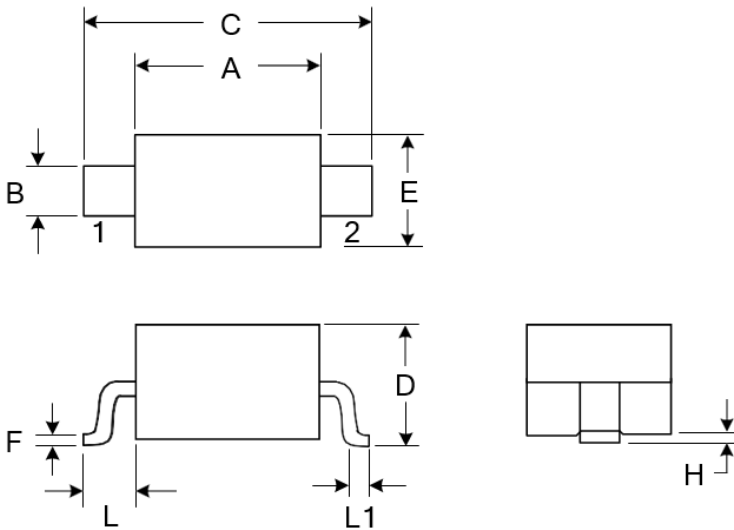
Power derating vs. Ambient temperature





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
LKS05D3CXX1-B	5BL

11. Ordering information

Order code	Package	Base qty	Delivery mode
LKS05D3CXX1-B	SOD-323	3k	Tape and reel



12. 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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14. Reversion History

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