



LANKERSEMI

TVS Protection Diode

LKS05D5AX35-B

Rev. 02 — 3 June 2022



Halogen Free

Product Profile

1. Features

- 520Watts peak pulse power ($t_p = 8/20\mu s$)
- Reverse Working Voltage:5V
- capacitance: $C_j = 140pF$ typ
- IEC 61000-4-2 : $\pm 30kV$ contact, $\pm 30kV$ air
- IEC 61000-4-4 (EFT) : 40A (5/50ns)
- IEC 61000-4-5 (Lightning): 35A (8/20 μs)



SOD-523

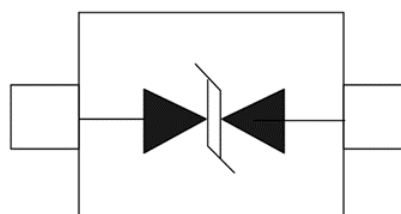
2. Applications

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

3. Mechanical Data

- SOD-523 package
- Molding compound flammability rating: UL94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

4. Pinning information



SOD-523



5. Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	520	Watts
Peak Pulse Current ($t_p = 8/20\mu s$) (note1)	I_{pp}	35	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	$^{\circ}C$

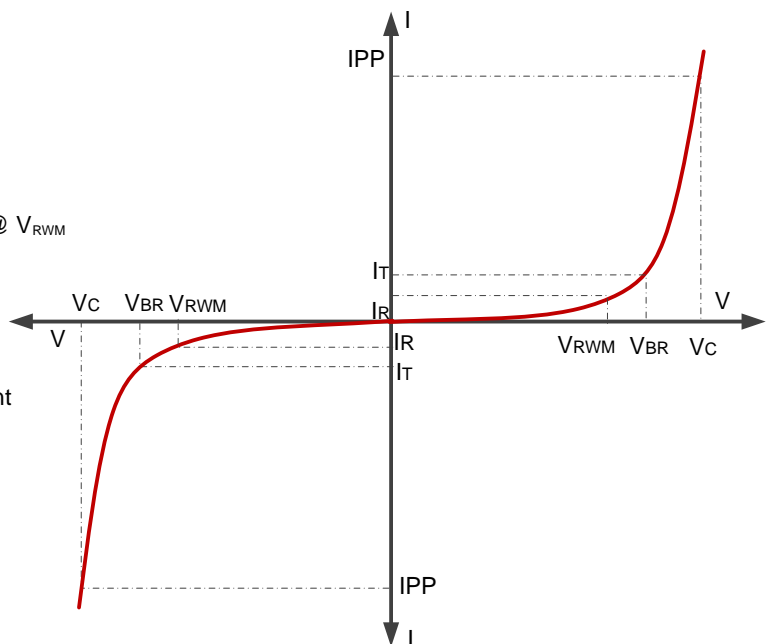
Note.: 8/20 μs pulse waveform.

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	$V_{RWM}=5.0V, T=25^{\circ}C$			500	nA
Peak Pulse Current	I_{PP}	$t_p=8/20\mu s$			40	A
Clamping Voltage	V_C	$I_{PP}=35A, t_p=8/20\mu s$		15		V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		100		pF

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

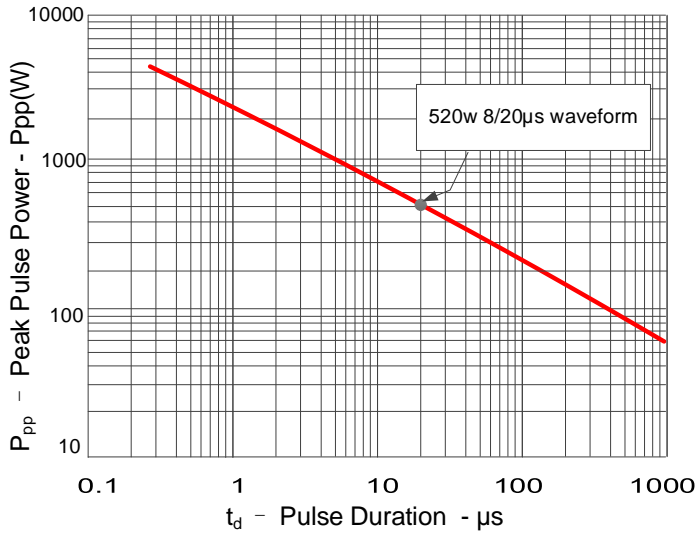
- V_{RWM} Reverse Working Voltage Max
- I_R Maximum Reverse Leakage Current @ V_{RWM}
- V_{BR} Reverse Breakdown Voltage
- V_C Clamping Voltage @ I_{PP}
- I_{PP} Maximum Reverse Peak Pulse Current



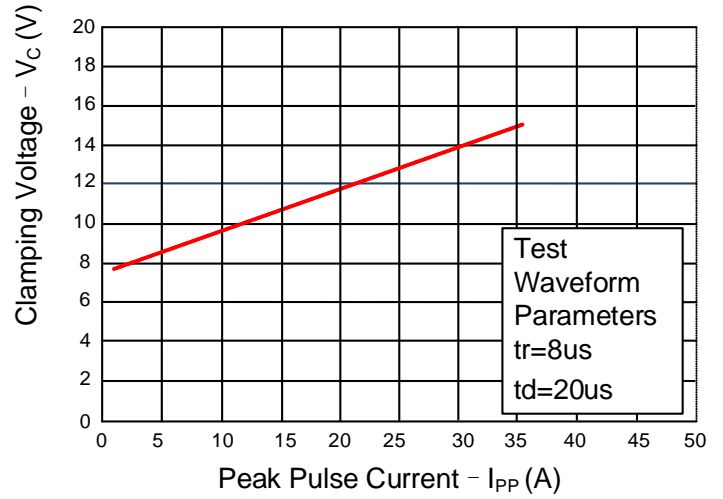


8. Typical Characteristics

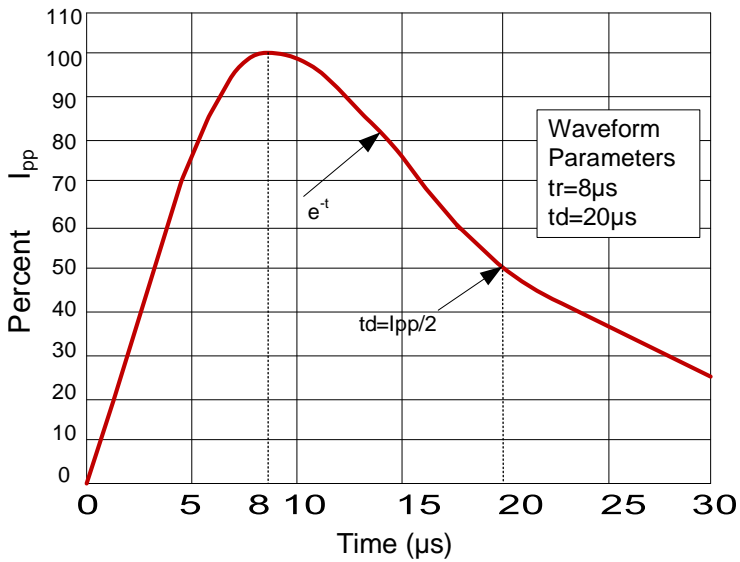
Non-repetitive Peak Pulse Power vs. Pulse Time



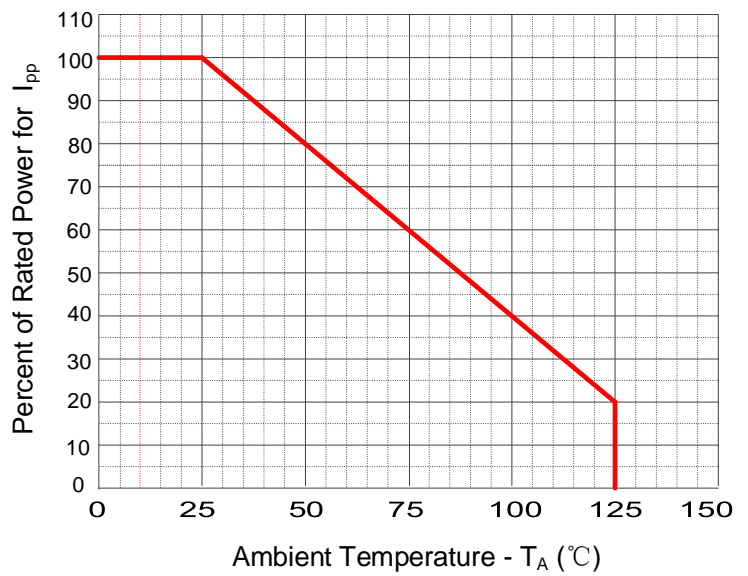
Reverse Clamping Voltage vs. Peak Pulse Current



8/20 μ s Pulse Waveform



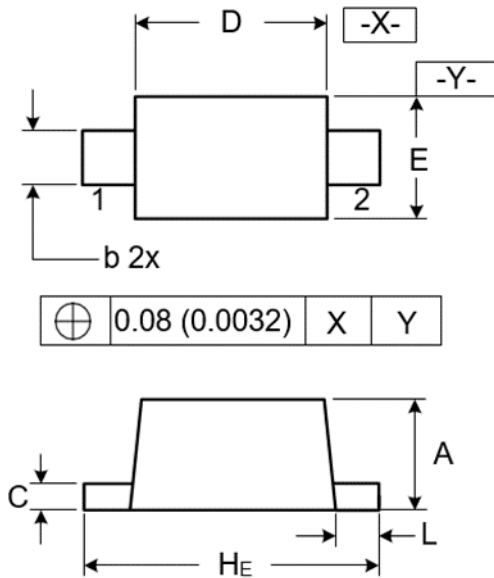
Power derating vs. Ambient temperature





Outline Drawing – SOD-523

9. Package information



DIMENSIONS

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.50	0.70	0.020	0.028
b	0.25	0.35	0.010	0.014
C	0.07	0.20	0.0028	0.0079
D	1.10	1.30	0.043	0.051
E	0.70	0.90	0.028	0.035
HE	1.50	1.70	0.059	0.067
L	0.15	0.25	0.006	0.010

10. Marking Code

Part Number	Marking Code
LKS05D5AX35-B	C5

11. Ordering information

Order code	Package	Base qty	Delivery mode
LKS05D5AX35-B	SOD-523	5k	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.

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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14. Reversion History

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