



LANKERSEMI

SMD ESD Protection Diode

LKC03N4C022-B



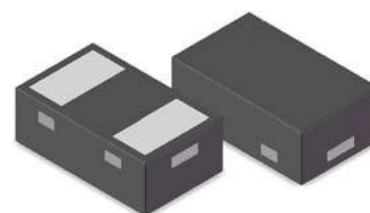
Halogen Free

Rev. 02 — 3 June 2022

Product Profile

1. Features

- 50Watts peak pulse power ($t_p = 8/20\mu s$)
- Reverse Working Voltage: 3.3V
- Low capacitance: $C_j = 0.22pF$ typ
- IEC 61000-4-2 : $\pm 15kV$ contact, $\pm 20kV$ air
- IEC 61000-4-4 (EFT) : 40A (5/50ns)
- IEC 61000-4-5 (Lightning): 6A (8/20 μs)



DFN1006-2L

2. Applications

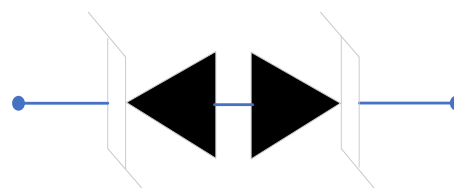
- USB 3.0 and USB3.1
- Ultra-high-speed data lines
- Very sensitive interface lines
- Notebooks, Desktops, and Servers
- Portable Instrumentation

3. Mechanical Data

- DFN1006 package
- Molding compound flammability rating: UL 94V-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}	50	Watts
Peak Pulse Current ($t_p = 8/20\mu s$) (note1)	I_{pp}	6	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}				3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	6	7		V
Holding Voltage	V_H		2.0		3.3	V
Reverse Leakage Current	I_R	$V_{RWM}=3.3V, T=25^{\circ}C$		5	200	nA
Clamping Voltage	V_{CL}	$I_{PP}=16A, t_p=100ns$		6.0	6.8	V
Clamping Voltage	V_C	$I_{PP}=6A, t_p=8/20\mu s$			8.5	V
Dynamic resistance	R_{dyn}	$T_{amb}=25^{\circ}C, I_T=10A$		0.3	0.4	Ω
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		0.22	0.32	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_T Trigger Voltage

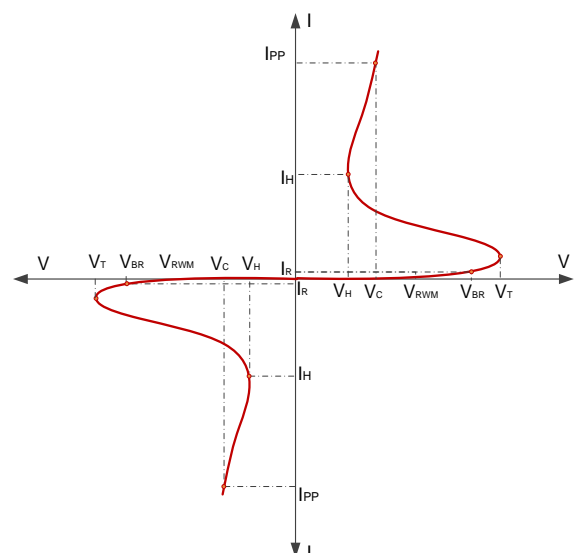
V_H Holding Voltage

I_H Holding Current

V_{BR} Reverse Breakdown Voltage

I_{PP} Maximum Reverse Peak Pulse Current

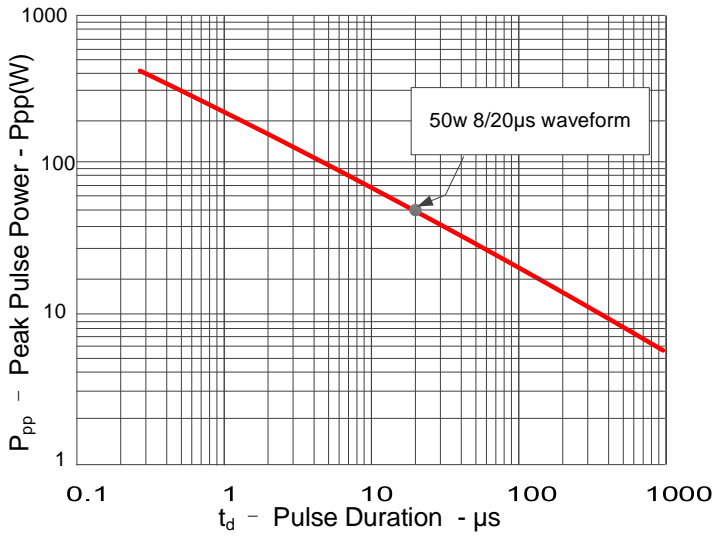
V_C Clamping Voltage @ I_{PP}



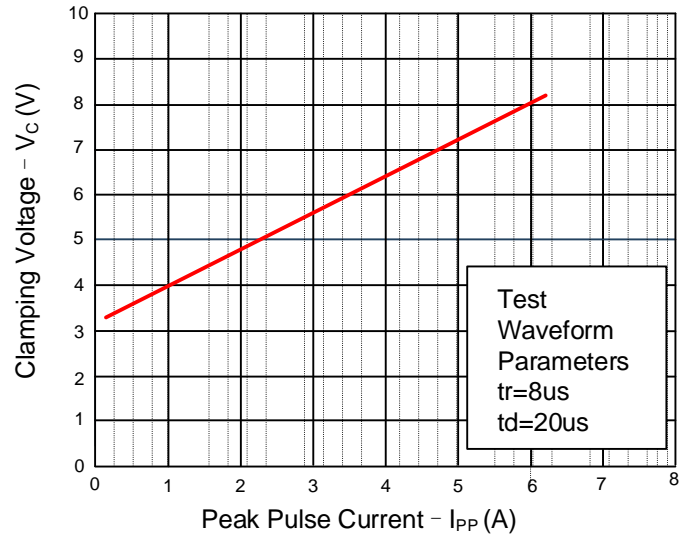


8. Typical Characteristics

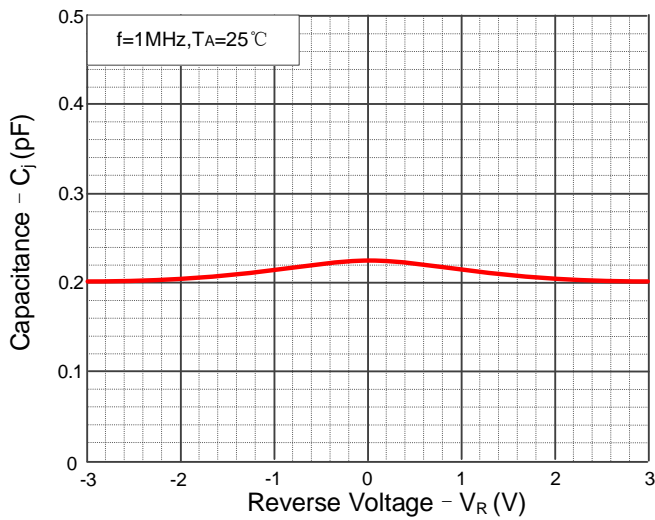
Non-repetitive Peak Pulse Power vs. Pulse Time



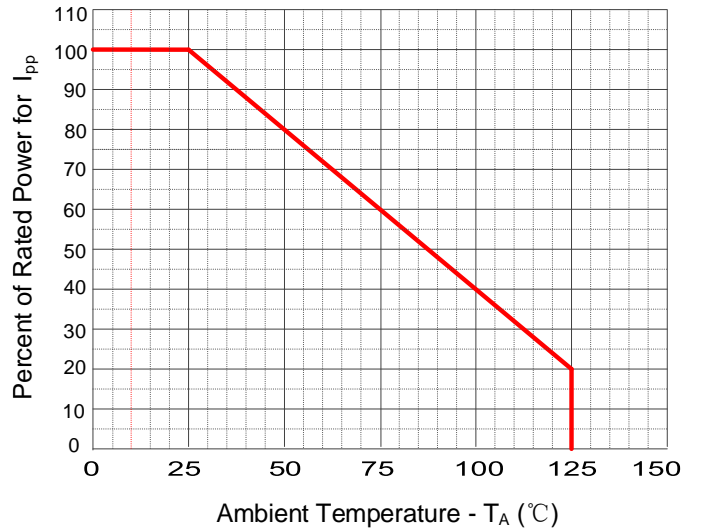
Reverse Clamping Voltage vs. Peak Pulse Current



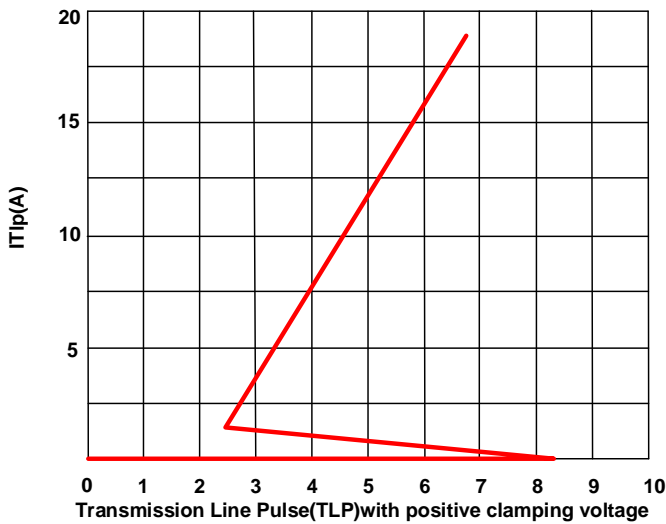
Capacitance vs. Reverse Voltage



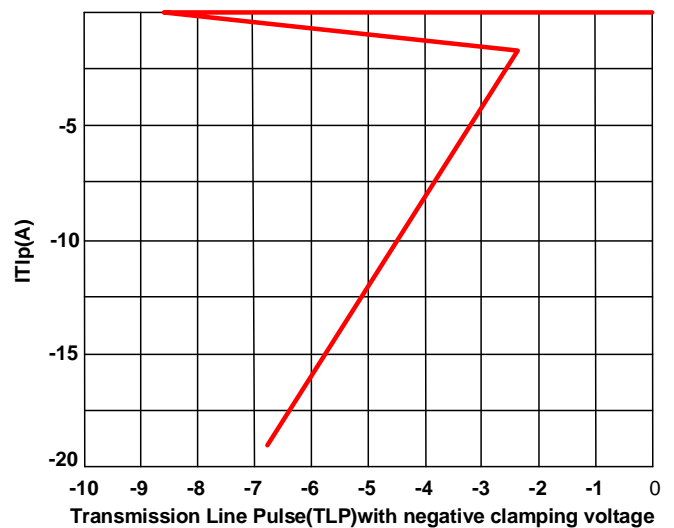
Power derating vs. Ambient temperature



Positive clamping voltage (TLP)



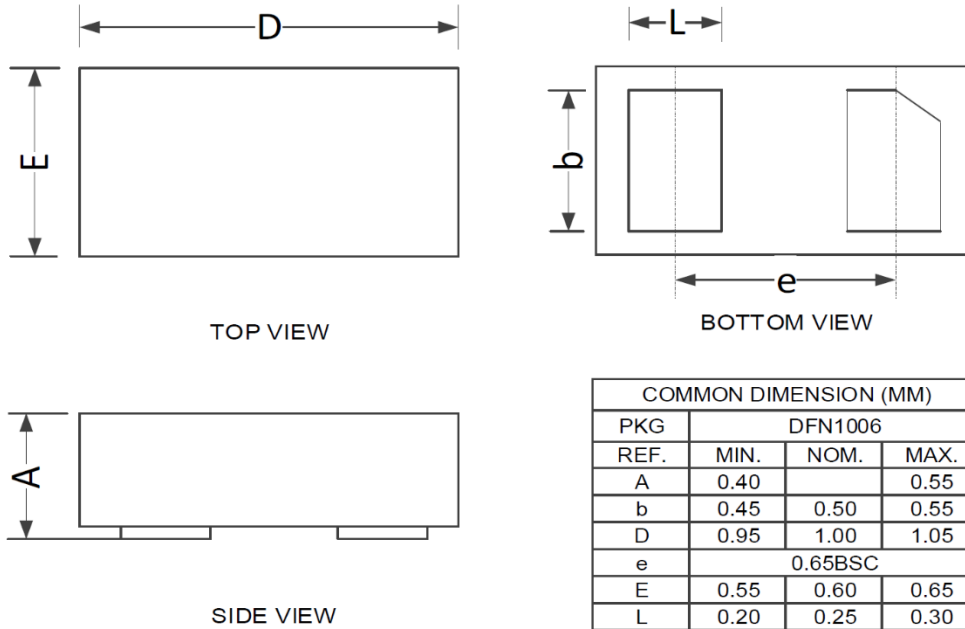
Negative clamping voltage (TLP)



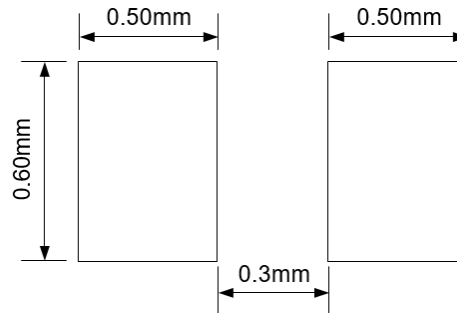


Outline Drawing – DFN1006

9. Package information



10. Recommend PCB Layout



11. Marking Code

Part Number	Marking Code
LKC03N4C022-B	T3

12. Ordering information

Order code	Package	Base qty	Delivery mode
LKC03N4C022-B	DFN1006	10k	Tape and reel



13. 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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15. Reversion History

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