



LANKERSEMI

SMD ESD Protection Diode

LKE05N3C040-B

Rev. 02 — 3 June 2022

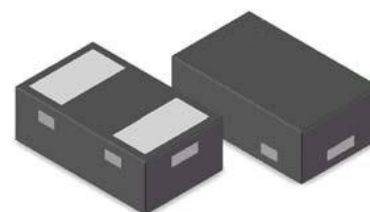


Halogen Free

Product Profile

1. Features

- 60Watts peak pulse power ($t_p = 8/20\mu s$)
- Reverse Working Voltage: 5V
- Low capacitance: $C_j = 0.40pF$ typ
- IEC 61000-4-2 : $\pm 20kV$ contact, $\pm 20kV$ air
- IEC 61000-4-4 (EFT) : 40A (5/50ns)
- IEC 61000-4-5 (Lightning): 3.5A (8/20 μs)



DFN0603-2L

2. Applications

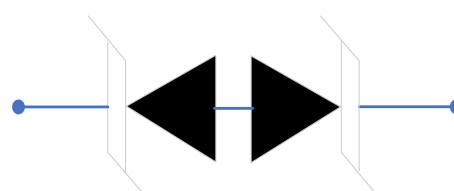
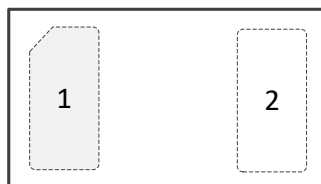
- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants
- Notebooks, Desktops, and Servers
- Portable Instrumentation

3. Mechanical Data

- DFN0603 package
- Molding compound flammability rating: UL94V-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}	60	Watts
Peak Pulse Current ($t_p = 8/20\mu s$) (note1)	I_{pp}	3.5	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	$^{\circ}C$

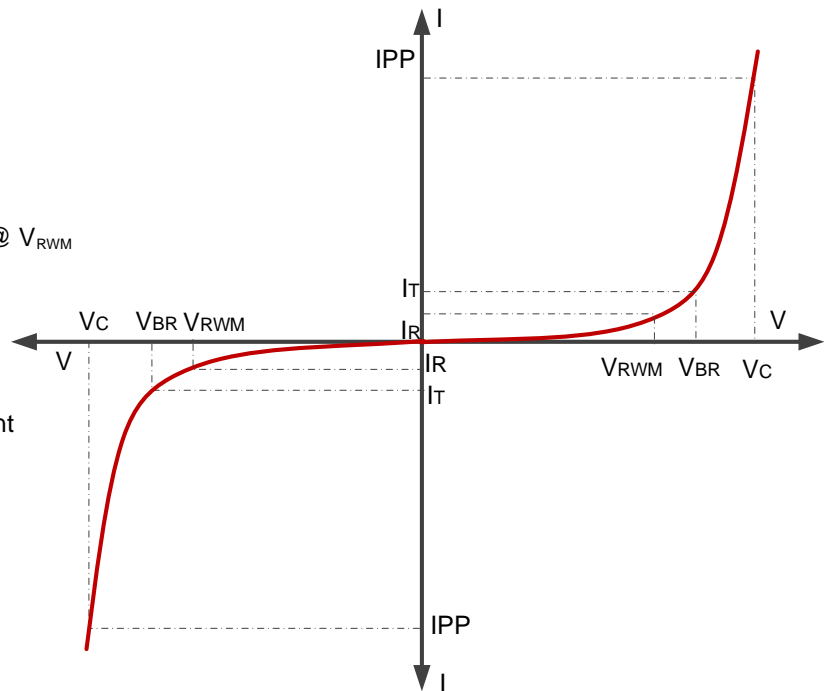
Note.: 8/20 μs pulse waveform.

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	8.0		V
Reverse Leakage Current	I_R	$V_{RWM}=5.0V, T=25^{\circ}C$		100	500	nA
Clamping Voltage	V_C	$I_{PP}=3.5A, t_p=8/20\mu s$			15	V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		0.40	0.50	pF

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

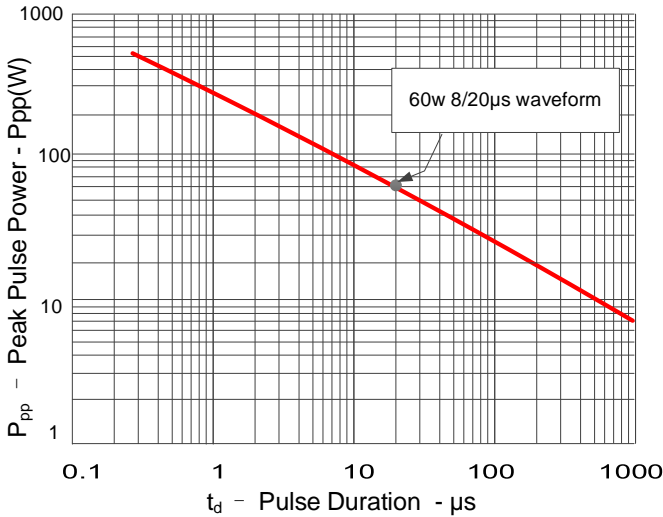
- V_{RWM} Reverse Working Voltage Max
- I_R Maximum Reverse Leakage Current @ V_{RWM}
- V_{BR} Reverse Breakdown Voltage
- V_C Clamping Voltage @ I_{PP}
- I_{PP} Maximum Reverse Peak Pulse Current



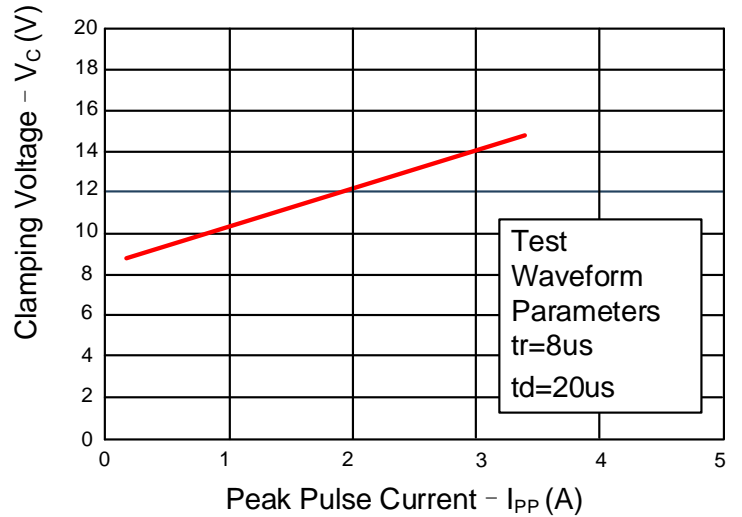


8. Typical Characteristics

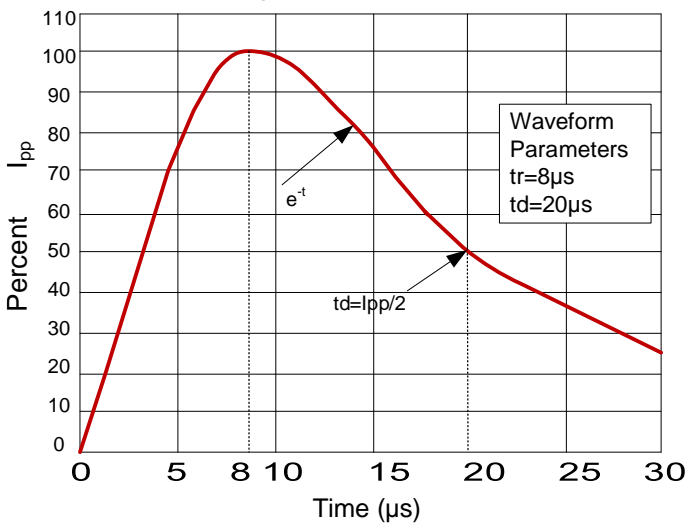
Non-repetitive Peak Pulse Power vs. Pulse Time



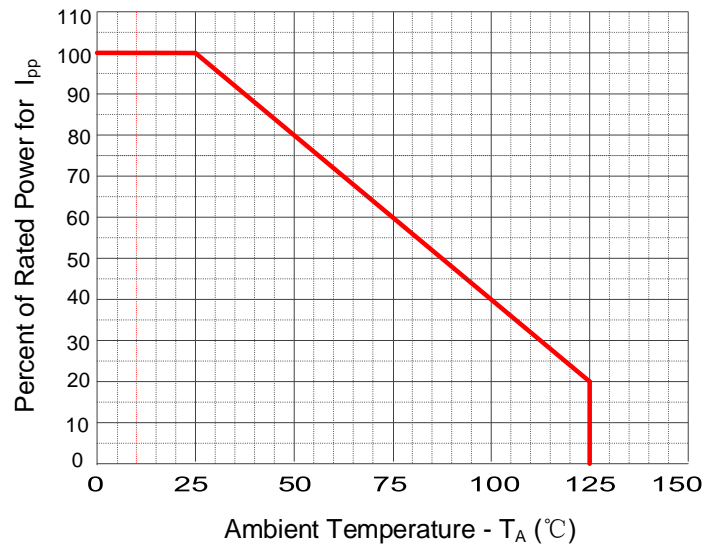
Reverse Clamping Voltage vs. Peak Pulse Current



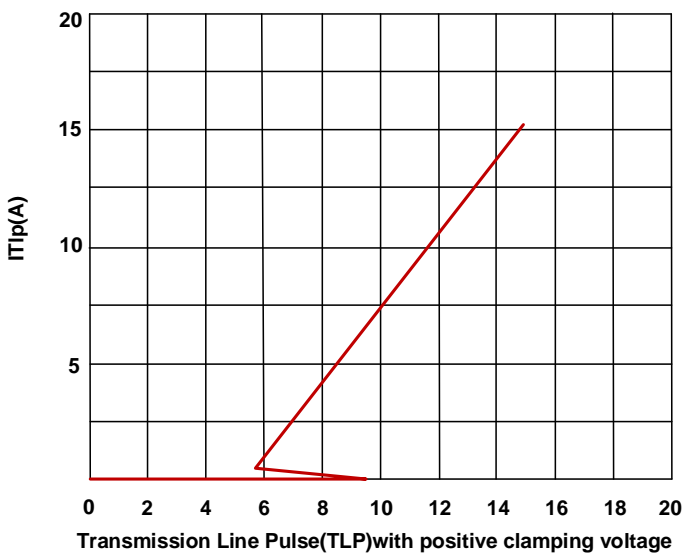
8/20μs Pulse Waveform



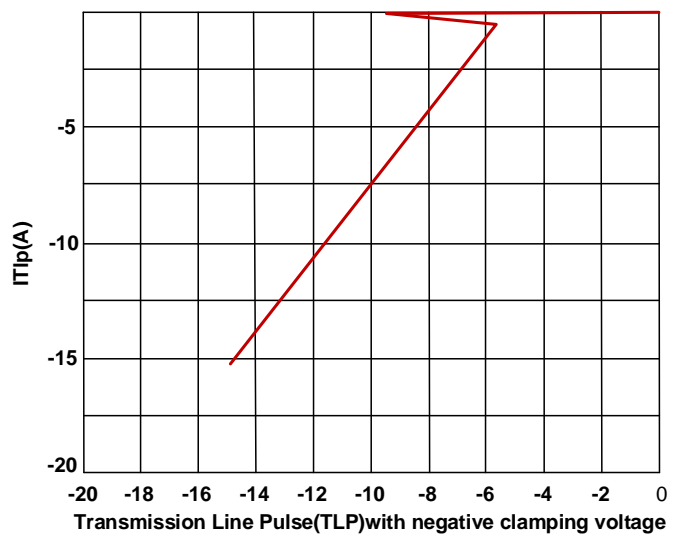
Power derating vs. Ambient temperature

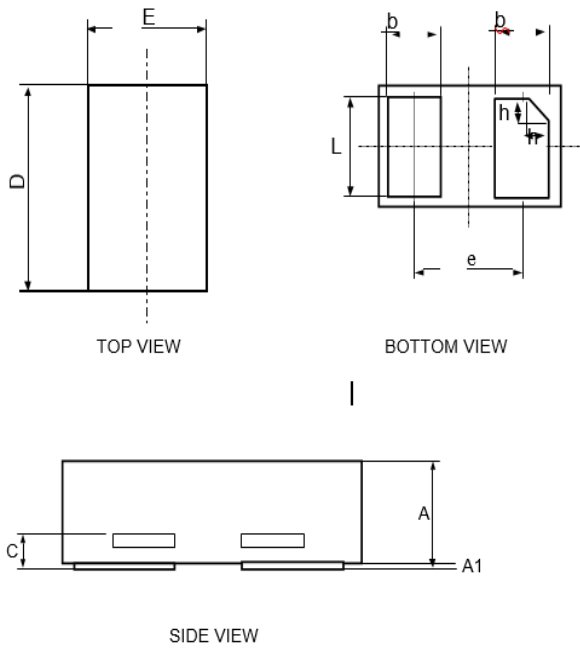


Positive clamping voltage (TLP)



Negative clamping voltage (TLP)



**Outline Drawing – DFN0603****9. Package information**

Symbol	Dimensions in millimeters		
	Min	Nom	Max
A	0.28	0.30	0.34
A1	0.00	0.02	0.05
C	0.05	0.10	0.15
D	0.55	0.60	0.65
E	0.25	0.30	0.35
e	0.40		
b	0.13	0.19	0.24
L	0.20	0.25	0.30
h	0	0.05	0.10

10. Marking Code

Part Number	Marking Code
LKE05N3C040-B	H

11. Ordering information

Order code	Package	Base qty	Delivery mode
LKE05N3C040-B	DFN0603	10k	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

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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	-	-