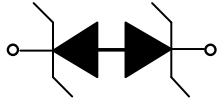


# ESDLC15VLB

## 1-Line, Bi-directional, Transient Voltage Suppressor



### Features

- " Ultra small package
- " Stand-off voltage:  $\pm 15V$  Max
- " Transient protection for each line according to
  - IEC61000-4-2(ESD):  $\pm 30kV$  (contact)
  - IEC61000-4-4 (EFT): 40A (5/50ns)
  - IEC61000-4-5(surge): 6A (8/20 s)
- " Ultra-low capacitance:  $C_J = 5pF$  typ
- " Low leakage current
- " Low clamping voltage
- " RoHS Compliant

### Applications

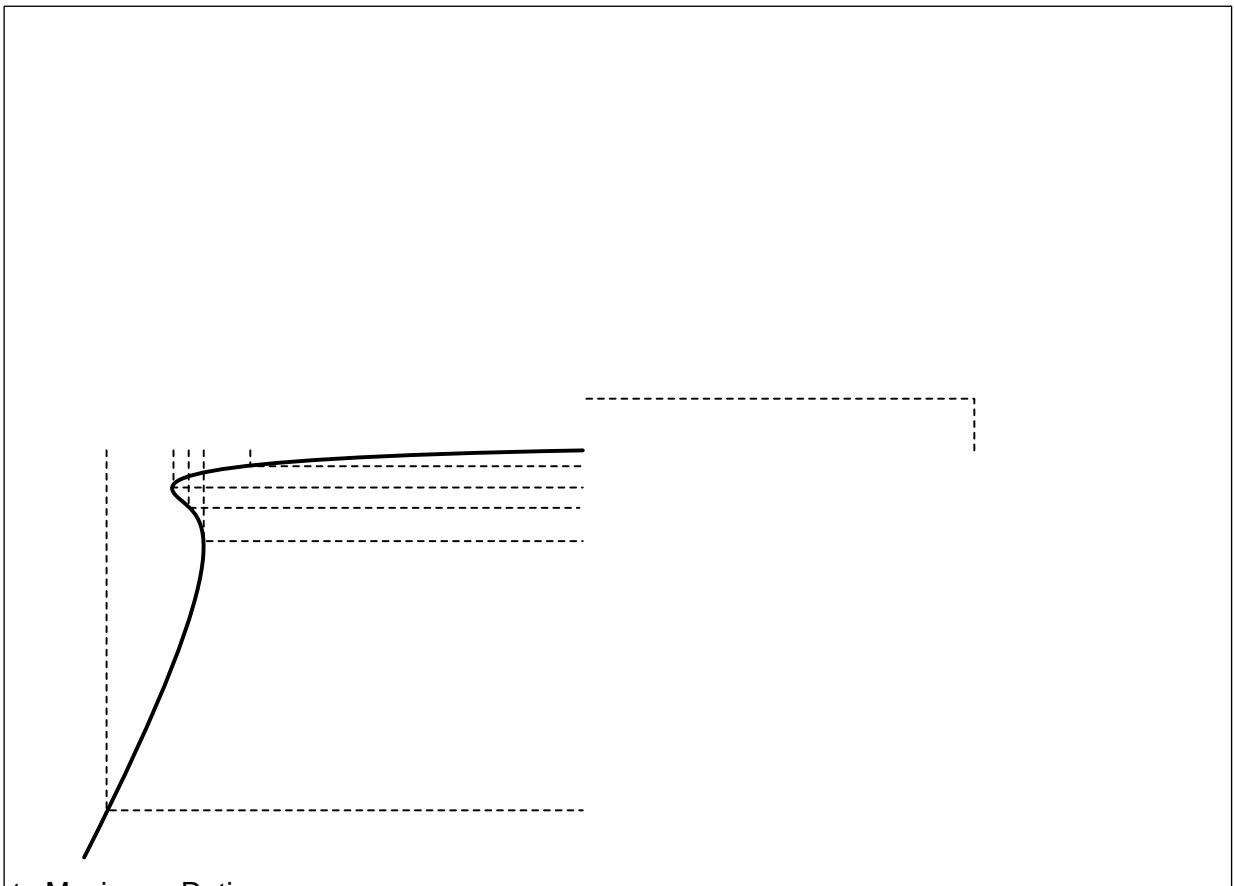
- " Cellular handsets
- " USB VBUS and CC Line Protection
- " Microphone Line Protection
- " GPIO Protection

DFN10062L

### Mechanical Characteristics

- " Package: DFN1006-2L
- " Case Material: "Green" Molding Compound.
- " Moisture Sensitivity: Level 3 per J-STD-020
- " Marking Information: See Below

### Definitions of electrical characteristics



Absolute Maximum Ratings

# ESDLC15VLB

PARAMETER	SYMBOL	Rating	UNIT
Peak pulse power ( $t_p = 8/20$ s)	$P_{pk}$	140	W
Peak pulse current ( $t_p = 8/20$ s)	$I_{PP}$	6	A
ESD according to IEC61000-4-2 air discharge	$V_{ESD}$	$\pm 30$	KV
ESD according to IEC61000-4-2 contact discharge		$\pm 30$	KV
Junction temperature	$T_J$	125	$^{\circ}\text{C}$
Operating temperature	$T_{OP}$	-40~85	$^{\circ}\text{C}$
Storage temperature	$T_{STG}$	-55~150	$^{\circ}\text{C}$

## √Electrical Characteristics ( $T_a=25$ Unless otherwise specified)

PARAMETER	Symbol	UNIT	Conditions	Min	Typ	Max
Reverse maximum working voltage	$V_{RWM}$	V				$\pm 15$
Reverse leakage current	$I_R$	nA	$V_{RWM} = 15\text{V}$			100
Reverse breakdown voltage	$V_{BR}$	V	$I_{BR} = 1\text{mA}$	15.5		20
Reverse holding voltage	$V_{HOLD}$	V	$I_{HOLD} = 50\text{mA}$	15.5		20
Clamping voltage <sup>1)</sup>	$V_{CL}$	V	$I_{PP} = 16\text{A}$ , $t_p = 100\text{ns}$		21.0	
Dynamic resistance <sup>1)</sup>	$R_{DYN}$				0.35	
Clamping voltage <sup>2)</sup>	$V_{CL}$	V	$V_{ESD} = 8\text{kV}$		21.0	
Clamping voltage <sup>3)</sup>	$V_{CL}$	V	$I_{PP} = 1\text{A}$ , $t_p = 8/20$ s		16	18
		V	$I_{PP} = 6\text{A}$ , $t_p = 8/20$ s		21	23
Junction capacitance	$C_J$	pF	$V_R = 0\text{V}$ , $f = 1\text{MHz}$		5	7
		pF	$V_R = 2.5\text{V}$ , $f = 1\text{MHz}$		4	6

(1). TLP parameter:  $Z_0 = 50$  ,  $t_p = 100\text{ns}$ ,  $t_r = 2\text{ns}$ , averaging window from 60ns to 80ns.  $R_{DYN}$  is calculated from 4A to 16A.

(2). Contact discharge mode, according to IEC61000-4-2.

(3). Non-repetitive current pulse, according to IEC61000-4-5.

## √Ordering Information (Example)

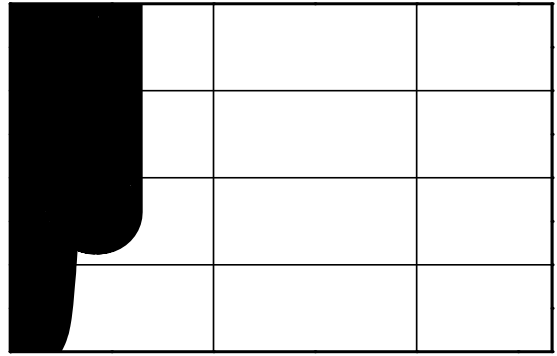
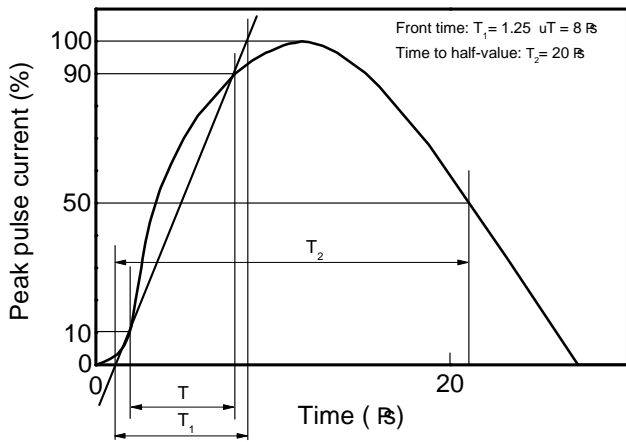
PREFERRED P/N	UNIT WEIGHT(mg)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ESDLC15VLB	Approximate 0.9	10000	100000	400000	Tae& reel

# ESDLC15VLB

v Typical Performance Characteristics (Ta=25 unless otherwise Specified)

820 μs waveform per IEC61000-4-5

Contact discharge current waveform per IEC61000-4-2



Clamping voltage vs. Peak pulse current

Capacitance vs. Reverse voltage

Non repetitive peak pulse power vs. Pulsetime

Power derating vs. Ambient temperature

# ESDLC15VLB

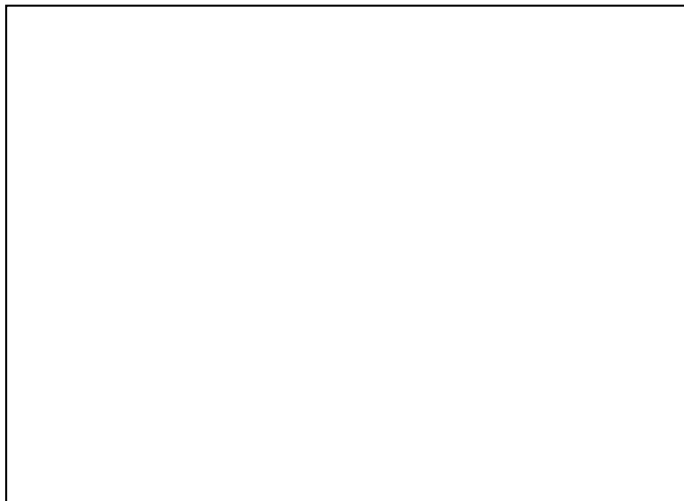
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ESDclamping  
(+8kVcontact dischargeper IEC610004 2)

ESDclamping  
( 8kVcontact dischargeper IEC610004 2)

TLPMeasurement

vOutline Dimensions



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Recommend land pattern (Unit:mm)

# ESDLC15VLB

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## Disclaimer

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The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety