



Discription

The HESDLC5VB1GF-A protects sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events. Excellent clamping capability, low leakage, low capacitance, and fast response time provide best in class protection on designs that are exposed to ESD.

It gives designer the flexibility to protect one bi-directional line in applications where arrays are not practical.



DFN0603-2L

Specification Features:

- ★ Ultra Low Capacitance 3 pF
- ★ Low Clamping Voltage
- ★ Small Body Outline Dimensions:
(0.61 mm x 0.31 mm)
- ★ Low Body Height: 0.28 mm
- ★ Stand-off Voltage: 5 V
- ★ Low Leakage
- ★ Response Time is Typically < 1.0 ns
- ★ IEC61000-4-2 Level 4 ESD Protection
- ★ This is a Pb-Free Device



Circuit Diagram

Ordering information

Product ID	Pack	Qty(PCS)
HESDLC5VB1GF-A	DFN0603-2L	15000

Absolute Ratings (T_{amb}=25°C)

Symbol	Parameter	Value	Units
P _{PP}	Peak Pulse Power (t _p = 8/20μs)	30	W
T _L	Maximum lead temperature for soldering during 10s	260	°C
T _{stg}	Storage Temperature Range	-55 to +150	°C
T _{op}	Operating Temperature Range	-40 to +125	°C
T _j	Maximum junction temperature	150	°C
	IEC61000-4-2 (ESD)	air discharge contact discharge	±20 ±20 KV



ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Device	V_{RWM} (V)	I_R (μA) @ V_{RWM}	V_{BR} (V) @ $I_T = 1\text{mA}$ (Note 2)		C (pF)	V_C (V) @ $I_{PP} = 3.5\text{A}$ (Note 3)	I_{PP} (A) $t_p=8/20\mu\text{s}$	P_{PP} (W)	V_C
	Max	Max	Min	Max	Typ	Max	Max	Max	Per IEC61000-4-2 (Note4)
HESDLC5VB1GF-A	5.0	1	5.5	9.6	2.5	15	2	30	Figures 1 and 2 See Below

- V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C .
- Surge current waveform per Figure 4.
- For test procedure see Figures 3.

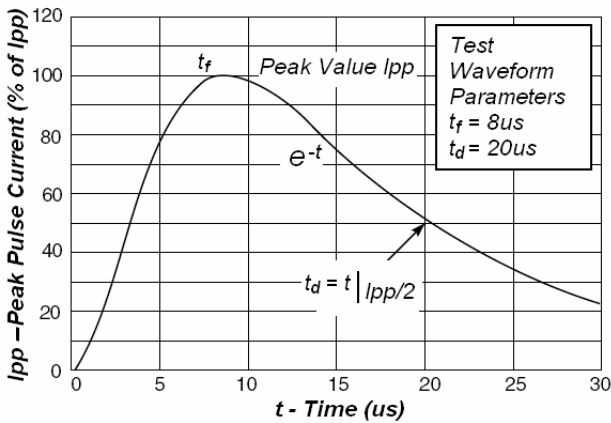


Fig1. Pulse Waveform

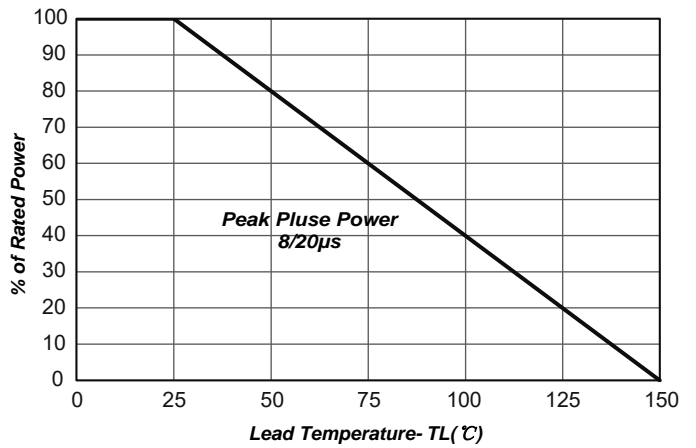


Fig2. Power Derating Curve

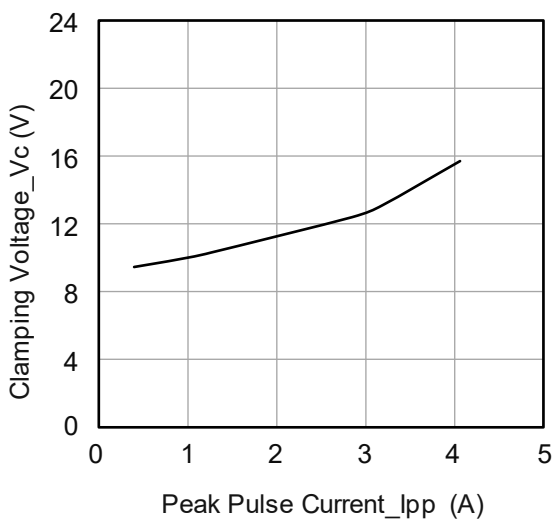


Fig 3. Clamping Voltage vs. Peak Pulse Current

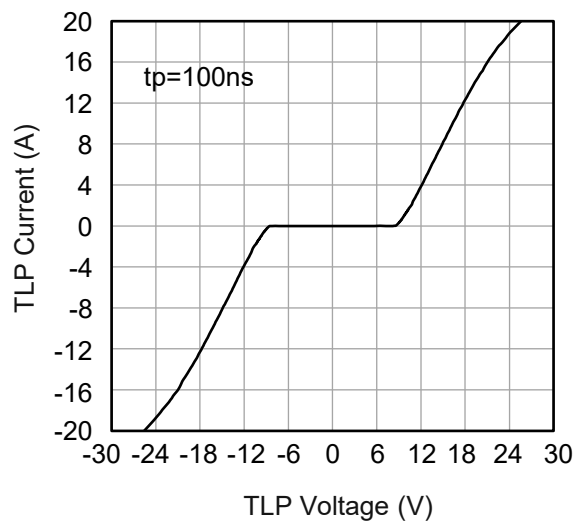
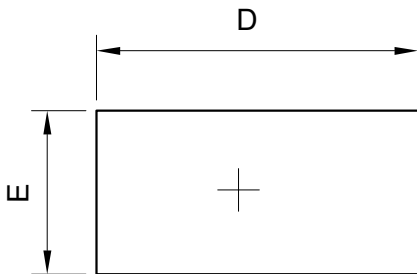


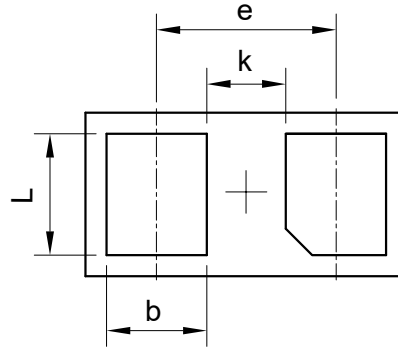
Fig 4. TLP Measurement



Package Outline Dimension



TOP VIEW



BOTTOM VIEW

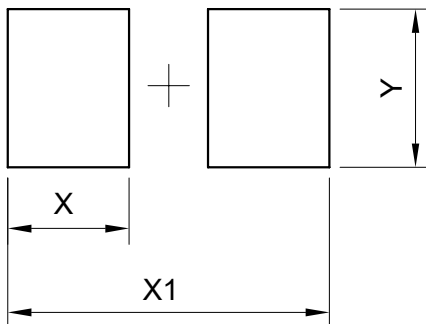
DFN0603-DL			
Dim	Min	Typ.	Max
D	0.58	0.61	0.64
E	0.28	0.31	0.34
e	-	0.34	-
L	0.20	0.23	0.26
b	0.16	0.19	0.22
A	0.25	0.28	0.31
k	0.12	0.15	0.18

All Dimensions in mm



SIDE VIEW

Suggested Pad layout



DFN0603-DL	
DIM	(mm)
X	0.23
X1	0.61
Y	0.30



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