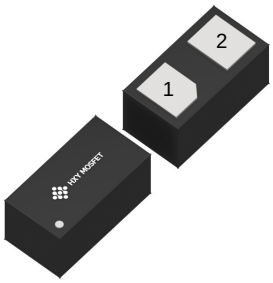
CTLTVS5V0B TR PBFREE
ESD PROTECTION DIODE

Discription

The CTLTVS5V0B TR PBFREE 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

Features

- ★ Small Body Outline Dimensions: 0.61 mm x 0.31 mm
- ★ Low Body Height: 0.28 mm
- ★ Low Leakage
- ★ Response Time is Typically < 1 ns
- ★ ESD Rating of Class 3 per Human Body Model
- ★ IEC61000−4−2 Level 4 ESD Protection
- ★ These are Pb−Free Devices
- ★ We declare that the material of product compliance with RoHS requirements and Halogen Free.



Circuit Diagram

Ordering information

Product ID	Pack	Qty(PCS)
CTLTVS5V0B TR PBFREE	DFN0603-2L	10000

Absolute Ratings(Tamb = 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

V_{RWM} (V)	I_R(uA) @ V_{RWM}	V_{BR} (V)@ I_T (Note 1)	I_T	V_C (V) @ I_{PP}=1 A*	V_C (V) @ Max I_{PP}*	I_{PP} (A)*	P_{PK} (W)*	C (pF)
Max	Max	Min	mA	Typ	Max	Max	Max	Max
5.0	1.0	6.0	1	8	12	2.5	30	3.0

*Surge current waveform per Figure 1.

1. V_{BR} is measured with a pluse test current I_T at an ambient temperature of 25℃.

Typical Characteristics

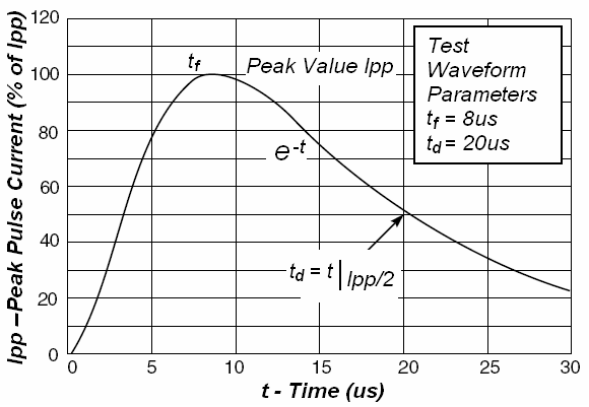


Fig1. Pulse Waveform

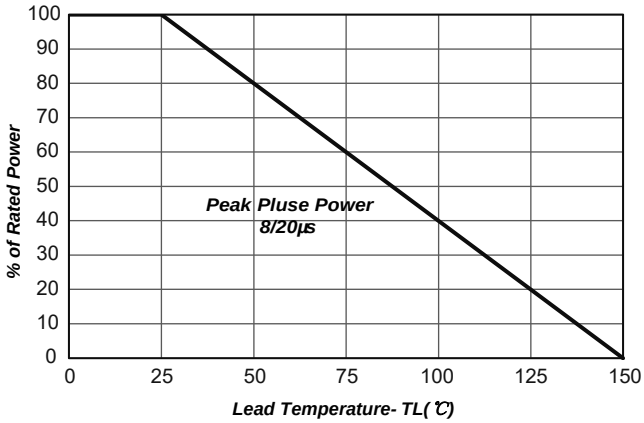


Fig2.Power Derating Curve

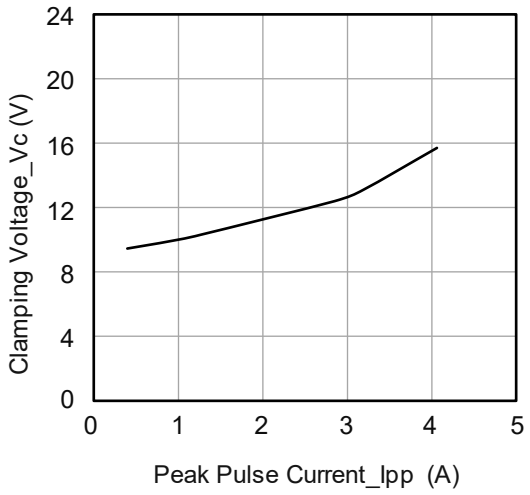


Fig 3.Clamping Voltage vs.Peak Pulse Current

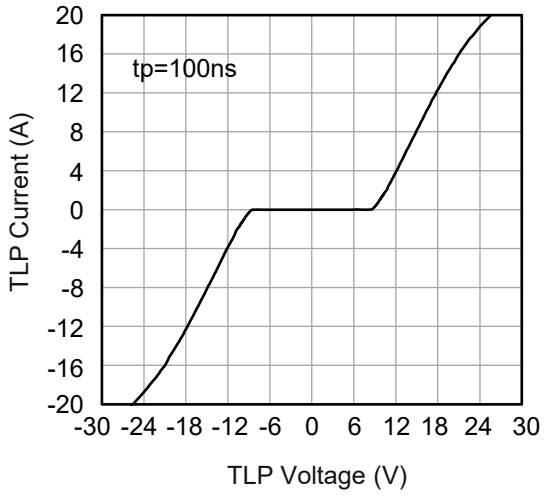
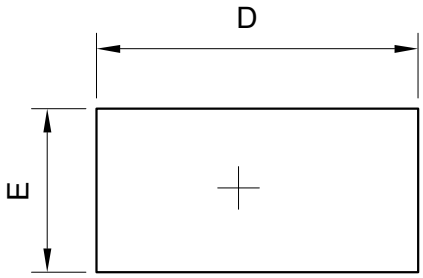
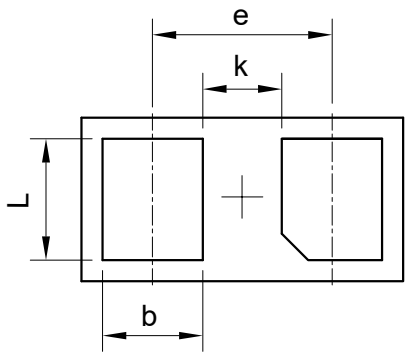


Fig 4. TLP Measurement

Package Outline Dimension



TOP VIEW



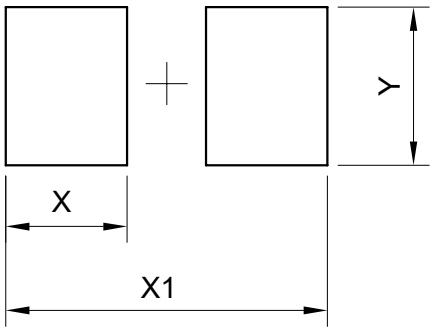
BOTTOM VIEW

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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