



Discription

The ESD0502U 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.

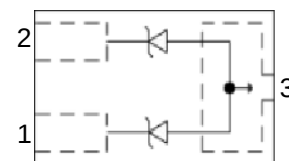
It gives designer the flexibility to protect 2 unidirectional line in applications where arrays are not practical.



DFN1006-3L

Features

- ★ Low Leakage
- ★ Response Time is Typically < 1 ns
- ★ ESD Rating of Class 3 per Human Body Model
- ★ IEC61000-4-2 Level 4 ESD Protection
- ★ We declare that the material of product compliant with RoHS requirements and Halogen Free.



Circuit Diagram

Ordering information

Product ID	Pack	Qty(PCS)
ESD0502U	DFN1006-3L	10000

Absolute Ratings(Tamb = 25°C)

Rating	Symbol	Value	Unit
IEC 61000-4-2 (ESD) Air discharge		±16	kV
Contact discharge		±10	kV
Total Power Dissipation on FR-5 Board (Note 1) @ T _A =25°C	PD	200	mW
Junction and Storage Temperature Range	TJ,TSTG	-55 to 150	°C
Lead Solder Temperature – Maximum (10 Second Duration)	TL	260	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Rating are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

1. FR-5 = 1.0*0.75*0.62 in.



Electrical Characteristics

Device	V_{RWM} (V)	I_R (μ A) @ V_{RWM}	V_{BR} (V) @ I_T (Note 2)	I_T	V_C (V) @ $I_{PP} = 1$ A (Note 3)	V_C (V) @ MAX I_{PP} (Note 3)	I_{PP} (A) (Note 3)	P_{PK} (W) (Note 3)	C (pF)
	Max	Max	Min	mA	Max	Max	Max	Max	Typ
ESD0502U	5	0.5	6	1.0	12	20	3	60	0.45

Other voltage available upon request.

2. V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C

3. Surge current waveform per Figure 1.

Typical Characteristics

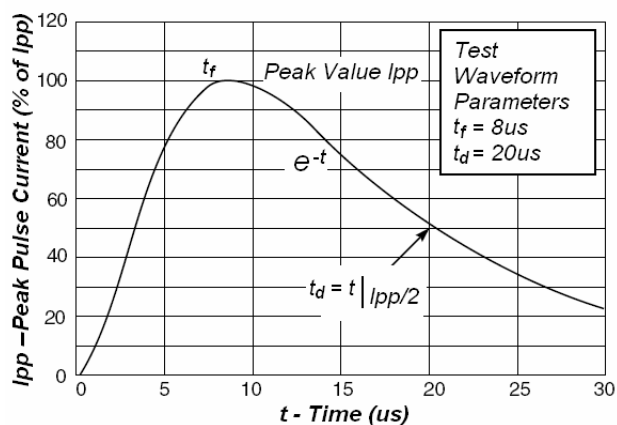


Fig1. Pulse Waveform

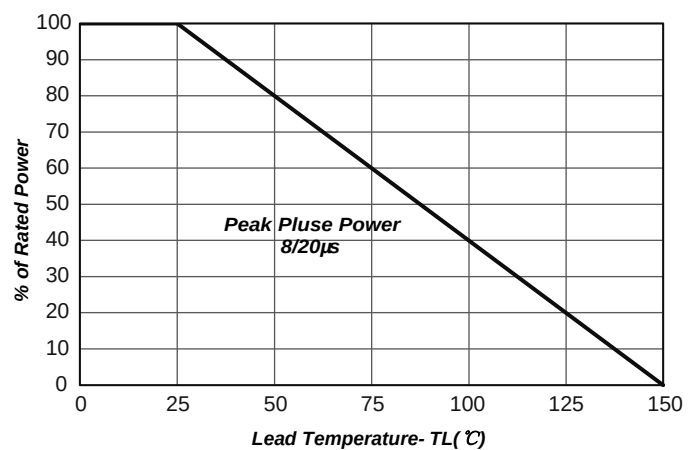
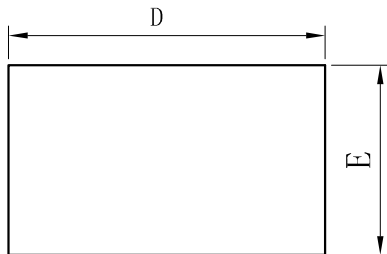


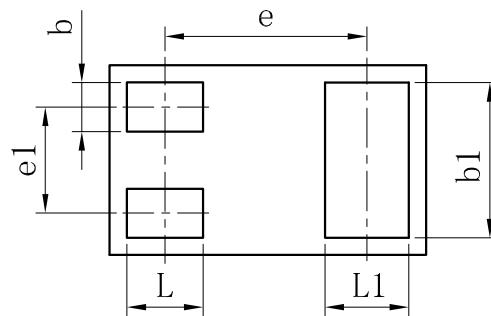
Fig2. Power Derating Curve



Outline And Dimensions

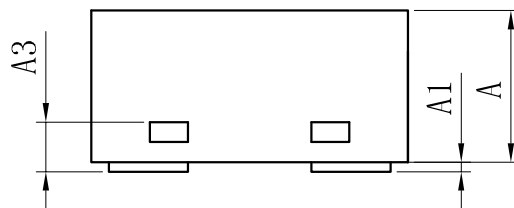


TOP VIEW



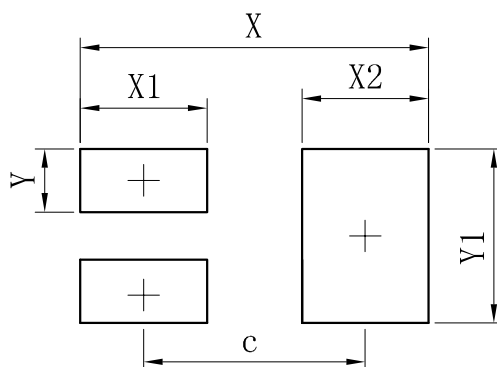
BOTTOM VIEW

DFN1006-3L			
Dim	Min	Typ	Max
D	0.95	1.00	1.05
E	0.55	0.60	0.65
e	–	0.64	–
e1	–	0.34	–
L	0.19	0.24	0.29
L1	0.22	0.27	0.32
b	0.10	0.15	0.20
b1	0.44	0.49	0.54
A	0.43	0.48	0.53
A1	0	–	0.05
All Dimensions in mm			



SIDE VIEW

Soledering Footprint



Dimensions	(mm)
c	0.70
X	1.10
X1	0.40
X2	0.40
Y	0.20
Y1	0.55



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