ESDULC5V0F1

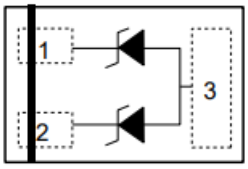
Features

- DFN1006-3L package
- Response time is typically < 1ns
- Ultra-low leakage current
- Low operating voltage: 5V
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    Air discharge: ±20kV
    Contact discharge: ±15kV

Applications

- USB2.0 Power and Data Line Protection
- Digital camera
- PDA
- Other electronics equipments

Circuit Diagram



Description

The ESDULC5V0F1 is an ultra-low capacitance TVS (Transient Voltage Suppressor) array designed to protect high speed data interfaces. It has been specifically designed to protect sensitive electronic components which are connected to data and transmission lines from over-stress caused by ESD.

Absolute Maximum Ratings

Tamb=25°C unless otherwise specified

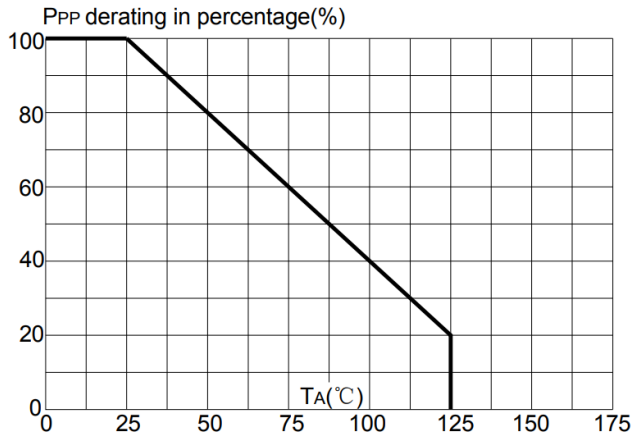
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	P_{PK}	70	W
Maximum Reverse Peak Pulse Current (8/20μs)	I_{PP}	4	A
ESD per IEC 61000−4−2 (Air)	V_{ESD}	±20	KV
ESD per IEC 61000−4−2 (Contact)		±15	
Storage Temperature Range	T_{STJ}	-55 to +150	℃
Operating Temperature Range	T_J	-55 to +125	℃

Electrical Characteristics

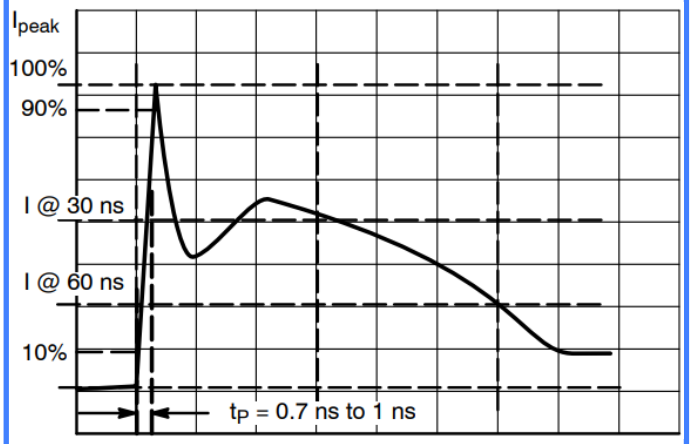
TA=25°C unless otherwise specified

Symbol	Parameter	Conditions	Min	Typ	Max	Units
V_{RWM}	Reverse Working Peak Voltage	-			5.0	V
V_{BR}	Reverse Breakdown Voltage	IT = 1mA	6.0	7.5	9	V
I_R	Reverse Current	V_{RWM} = 5V			0.1	μA
V_{C1}	Clamping Voltage	I_{PP}=1A, tP =8/20μs			9	V
V_{C2}	Clamping Voltage	I_{PP}=4A, tP =8/20μs			14	V
C_J	Diode Capacitance	VR = 0V, f = 1MHz Pin1or2 to Pin3		0.5	0.65	pF
		VR = 0V, f = 1MHz Pin1 to Pin2		0.25	0.40	

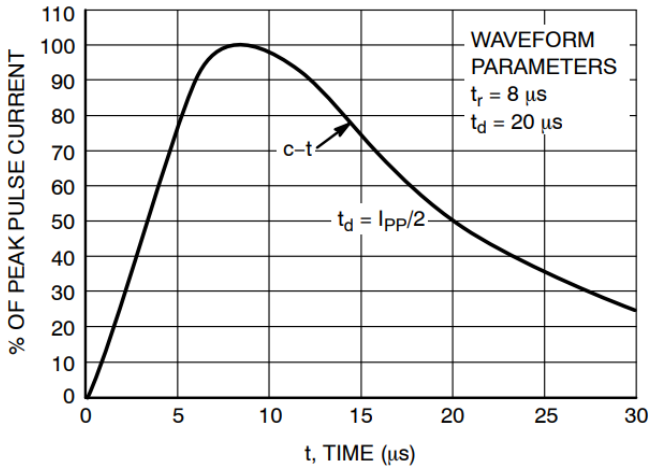
Characteristic Curves



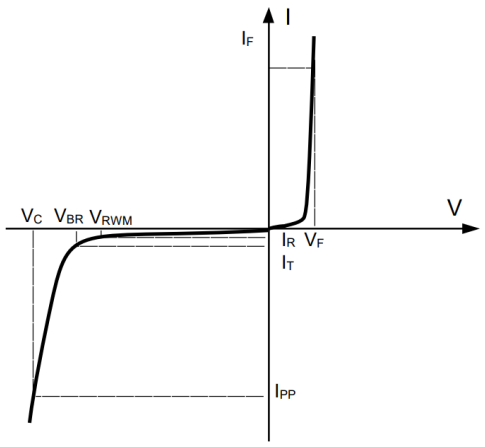
Power Derating Curve



IEC61000-4-2 Pulse Waveform

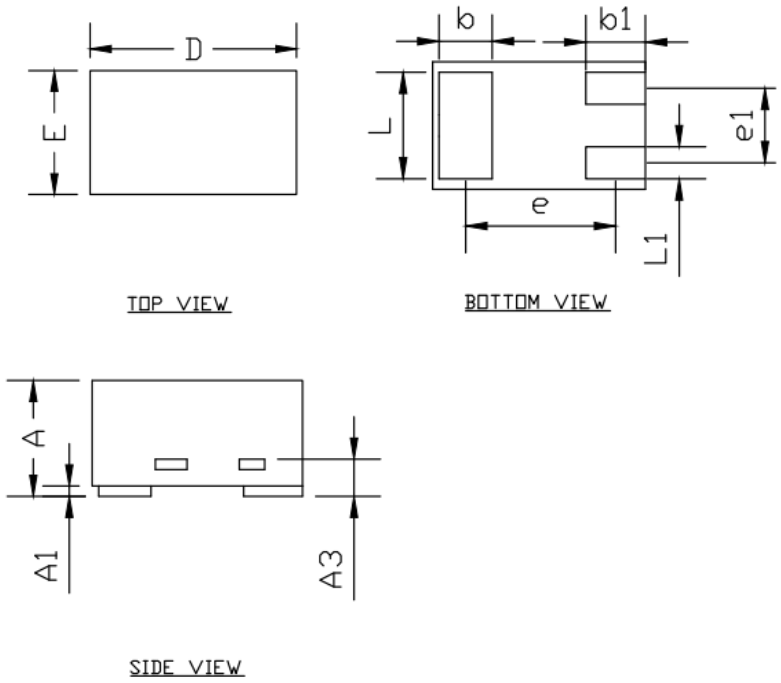


8/20µ s Pulse Waveform



V-I Characteristics for Unidirectional Diode

DFN1006-3L Package Outline & Dimensions



SYM	DIMENSIONS		
	MILLIMETERS		
	MIN	NOM	MAX
A	0.40	-	0.50
A1	0.00	-	0.05
A3	0.127REF		
D	0.95	1.00	1.05
E	0.55	0.60	0.65
b	0.20	0.25	0.30
b1	0.20	0.30	0.40
L	0.45	0.50	0.55
L1	0.10	0.15	0.20
e	0.675		
e1	0.35		

Disclaimer

Specifications are subject to change without notice.

The device characteristics and parameters in this data sheet can and do vary in different applications and actual device performance may vary over time.

Users should verify actual device performance in their specific applications.