



DESCRIPTION

The ESD0501BU is available in DFN1006-2L Package.

MECHANICAL DATA

- Package: DFN1006-2L
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD 020

APPLICATION

- Serial ATA
- Desktops, Servers and Notebooks
- Cellular Phones
- MDDI Ports
- USB Data Line Protection
- Display Ports
- Digital Visual Interfaces (DVI)

ORDERING INFORMATION

Package Type	Part Number
DFN1006-2L	ESD0501BU
Note	SPQ: 10,000pcs/Reel
AiT provides all RoHS Compliant Products	

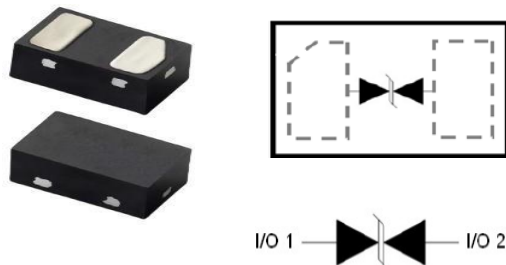
FEATURE

- Transient protection for high-speed data lines
IEC 61000-4-2 (ESD) $\pm 15\text{kV}$ (Air) ,
 $\pm 8\text{kV}$ (Contact)
IEC 61000-4-4 (EFT) 40A (5/50 ns)
Cable Discharge Event (CDE)
- Package optimized for high-speed lines
- Ultra-small package (1.0mm×0.6mm×0.5mm)
- Protects one data, control line
- Low capacitance: 0.35pF (Typical)
- Low leakage current
- Low clamping voltage

MACHANICAL DATA

- DFN1006 package
- Flammability Rating: UL 94V-0
- Packaging: Tape and Reel
- High temperature soldering
guaranted:260°C/10s

PIN DESCRIPTION



PIN#	DESCRIPTION
I/O 1	Anode
I/O 2	Anode



ABSOLUTE MAXIMUM RATINGS

T_A = 25°C, unless otherwise noted.

P _{PP} , Peak Pulse Power (8/20μs)		88W
V _{ESD} , ESD per IEC61000-4-2	Air	±20kV
	Contact	±8kV
T _{STG} , Storage Temperature Range		-55°C ~ +150°C
T _{OPT} , Operating Temperature		-55~125 °C

Stresses above may cause permanent damage to the device. These are stress ratings only and functional operation of the device at these or any other conditions beyond those indicated in the Electrical Characteristics are not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

ELECTRICAL CHARACTERISTICS

T_A = 25°C, unless otherwise noted.

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse Working Voltage	V _{RWM}		-	-	5.0	V
Reverse Breakdown Voltage	V _{BR}	I _T =1mA	6.0	-	-	V
Reverse Leakage Current	I _R	V _{RWM} =5V	-	-	100	nA
Clamping Voltage	V _C	I _{PP} =1A, t _p =8/20μs	-	-	13	V
		I _{PP} =4A, t _p =8/20μs	-	-	22	
Junction Capacitance	C _J	V _R =0V, f=1MHz	-	0.35	0.40	pF



TYPICAL PERFORMANCE CHARACTERISTICS

Fig 1. Pulse Waveform

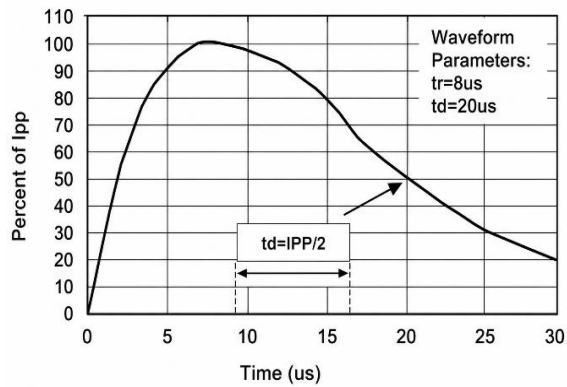
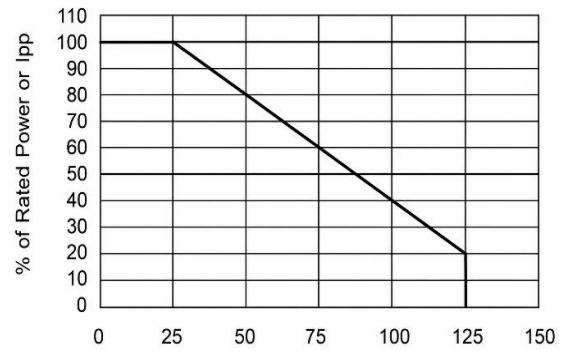


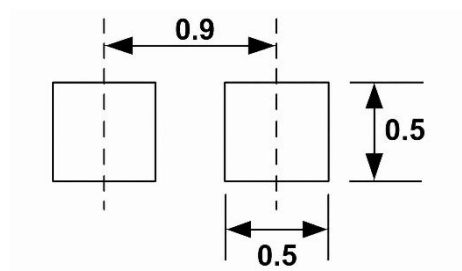
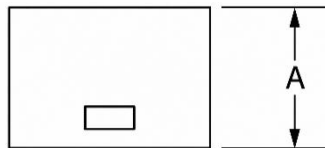
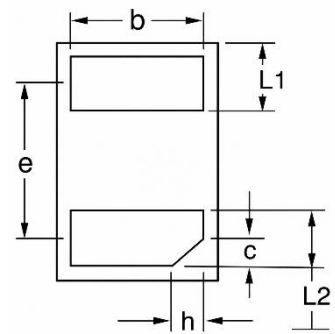
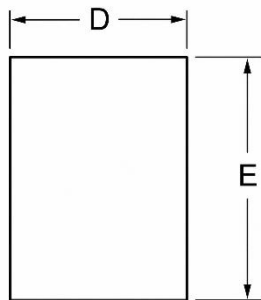
Fig 2. Power Derating Curve





PACKAGE INFORMATION

Dimension in DFN1006-2L Package (Unit: mm)



Recommended Pad Layout

Symbol	Min.	Max.
A	0.550	0.650
E	0.950	1.050
L1	0.200	0.300
L2	0.200	0.300
b	0.450	0.550
e	0.65 BSC	
A	0.450	0.550
h	0.070	0.170



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