

**DESCRIPTION**

The ESD8D3V3~15V is available in DFN1006-2L package.

APPLICATION

- Cell Phone Handsets and Accessories
- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Peripherals
- Pagers

FEATURE

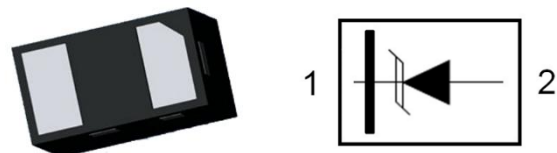
- Transient protection for high-speed data lines
IEC 61000-4-2 (ESD) $\pm 15\text{kV}$ (Air) $\pm 8\text{kV}$ (Contact)
- Transient protection for system high-speed data
lines IEC 61000-4-2 (ESD) $\pm 15\text{kV}$ (Air)
 $\pm 8\text{kV}$ (Contact)
- Protects one directional I/O line
- Low clamping voltage
- Working voltages : 3.3V, 5V, 8V, 12V, 15V
- Low leakage current

MECHANICAL DATA

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

ORDERING INFORMATION

Package Type	Part Number
DFN1006-2L	ESD8D3V3
	ESD8D5V0
	ESD8D8V0
	ESD8D12V
	ESD8D15V
Note	SPQ: 10,000pcs/Reel
AiT provides all RoHS Compliant Products	

PIN DESCRIPTION

PIN#	DESCRIPTION
1	Cathode
2	Anode



ABSOLUTE MAXIMUM RATINGS

T_A = 25°C, unless otherwise specified.

Symbol	Parameter	Value	Unit
V _{ESD}	ESD per IEC 61000-4-2 (Air)	±30	KV
	ESD per IEC 61000-4-2 (Contact)	±22	
P _D	Total Power Dissipation on FR-5 Board (Note 1) @	150	Mw
T _J , T _{STG}	Junction and Storage Temperature	-55/+150	°C
T _L	Lead Solder Temperature – Maximum (10 Second Duration)	260	°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.

These ratings are limiting values above which the serviceability of the diode may be impaired Note 1. FR-5=1.0x0.75x0.62 in.

ELECTRICAL CHARACTERISTICS

T_A = 25°C, unless otherwise specified.

Part Number	V _{RWM} (V) Max	I _R (μA) Max	V _B (V) Min	I _T (Ma)	V _C (V) Max @A		V _C (V) Max @A		P _{PK} (W) Max	C _J (Pf) Max
ESD8D3V3	3.3	2.5	5.0	1	10.0	5.0	11.5	7.5	105	105
ESD8D5V0	5.0	1	6.2	1	11.6	5.0	15.0	7.0	105	80
ESD8D8V0	8.0	1	8.5	1	15.0	5.0	18.0	6.0	108	65
ESD8D12V	12.0	1	13.3	1	20.0	5.0	26.0	4.0	104	45
ESD8D15V	15.0	1	16.0	1	23.0	5.0	30.0	4.0	120	28



TYPICAL PERFORMANCE CHARACTERISTICS

Fig 1. ESD Clamping Voltage Screenshot
Positive 8 kV contact per IEC 6100-4-2

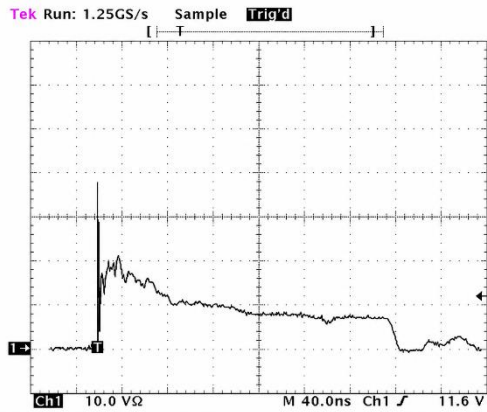
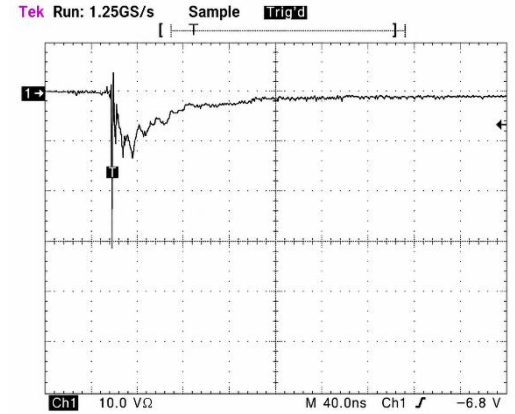


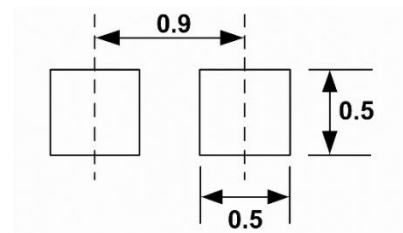
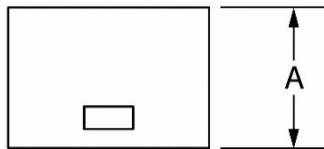
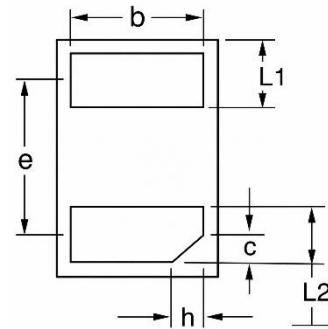
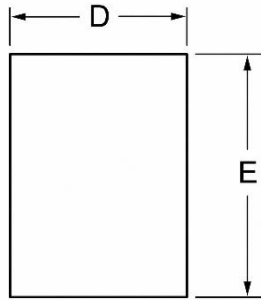
Fig 2. ESD clamping Voltage Screenshot
Negative 8 kV contact per IEC 61000-4-2





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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AiT Semiconductor Inc.

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ESD8D3V3~15V

ESD PROTECTION DIODE
TRANSIENT PROTECTION FOR HIGH-SPEED DATA LINES
