



ESD8D3V3 THRU ESD8D15V

ESD Protection Diodes

Description

The ESD8Dxxx Series is designed to protect voltage sensitive components from ESD and transient voltage events. Excellent clamping capability, low leakage, and fast response time, make these parts ideal for ESD protection on designs where board space is at a premium. Because of its small size, it is suited for use in cellular phones, portable devices, digital cameras, power supplies and many other portable applications.

Ordering Information

- Device:ESD8Dxxx
- Package:DFN1006
- Material:Halogen free
- Packing:Tape & Reel
- Quantity per reel:10,000pcs

Mechanical Data

- Protects one directional I/O line
- Low clamping voltage
- Working voltage: 3.3V, 5V, 8V, 12V, 15V
- Low leakage current

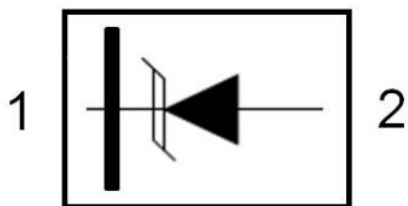
Features

- IEC 61000-4-2(ESD) $\pm 30\text{kV}(\text{air})$
 $\pm 22\text{kV}(\text{contact})$
- Transient protection for high-speed data lines
- DFN1006 package
- Flammability Rating: UL 94V-0
- Packaging: Tape and Reel
- High temperature soldering guaranteed: $260^{\circ}\text{C}/10\text{s}$
- Reel size: 7 inch

Applications

- Cell Phone Handsets and Accessories
- Microprocess or Based Equipment
- Personal Digital Assistants(PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Peripherals
- Pagers

Pin Configuration



Package Outline



DFN1006



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Absolute Maximum Rating

Parameter	Symbol	Value	Units
ESD per IEC 61000-4-2(Air)	V_{ESD}	± 30	kV
ESD per IEC 61000-4-2(Contact)		± 22	
Total Power Dissipation on FR-5 Board ⁽¹⁾ @ $T_A=25^\circ\text{C}$	P_D	150	mW
Junction and Storage Temperature	T_{STG}	$-55\sim+150$	$^\circ\text{C}$
Lead Soldering Temperature(10S)	T_L	260	$^\circ\text{C}$

These ratings are limiting vales above which the serviceability of the diode may be impaired

Note:(1). FR-5=1.0x0.75x0.62 in.

Electrical Characteristics ($T_A=25^\circ\text{C}$)

Part Number	Device Marking	V_{RWM} (V) (max.)	I_R (μA) (max.)	V_{BR} (V) (min.)	I_T (mA)	V_C (V) (max.) @A	V_C (V) (max.) @A	P_{PK} (W) (max.)	C_J (pF) (typ.)
ESD8D3V3	YA	3.3	2.5	5.0	1	10.0	5.0	11.5	105
ESD8D5V0	YB	5.0	1	6.2	1	11.6	5.0	15.0	80
ESD8D8V0	YC	8.0	1	8.5	1	15.0	5.0	18.0	65
ESD8D12V	YD	12.0	1	13.3	1	20.0	1.0	26.0	45
ESD8D15V	YE	15.0	1	16.0	1	23.0	1.0	30.0	28

Electrical Characteristics Curve

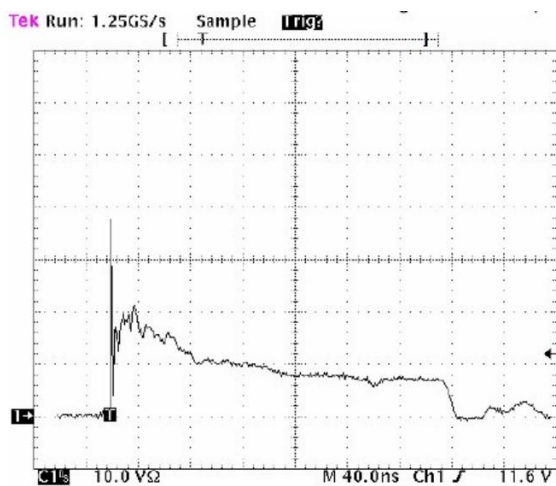


Figure 1. ESD Clamping Voltage Screenshot
Positive 8 kV contact per IEC 61000-4-2

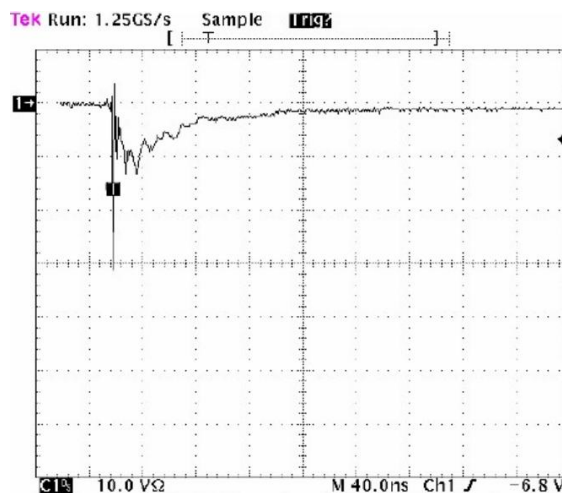


Figure 2. ESD Clamping Voltage Screenshot
Negative 8 kV contact per IEC 61000-4-2

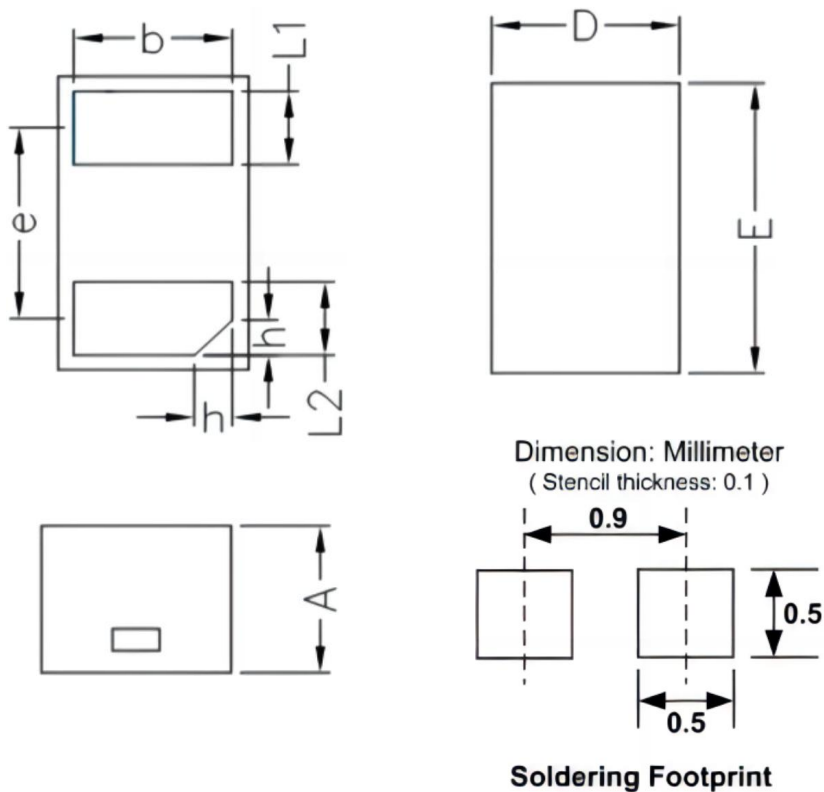


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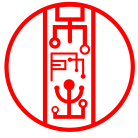
Package Information

DFN1006

Dimensions in mm



Symbol	Dimensions In Millimeters		
	Min	Nom	Max
D	0.55	0.60	0.65
E	0.95	1.00	1.05
L1	0.20	0.25	0.30
L2	0.20	0.25	0.30
b	0.45	0.50	0.55
e	0.65 BSC		
A	0.45	0.50	0.55
h	0.07	0.12	0.17



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