



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

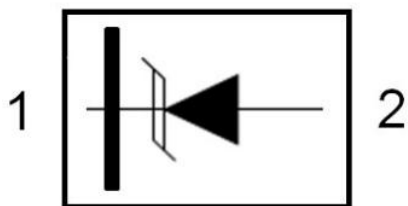
Features

- IEC 61000-4-2(ESD) $\pm 30\text{kV}$ (air)
 $\pm 22\text{kV}$ (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



ESD8D3V3 THRU ESD8D15V

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

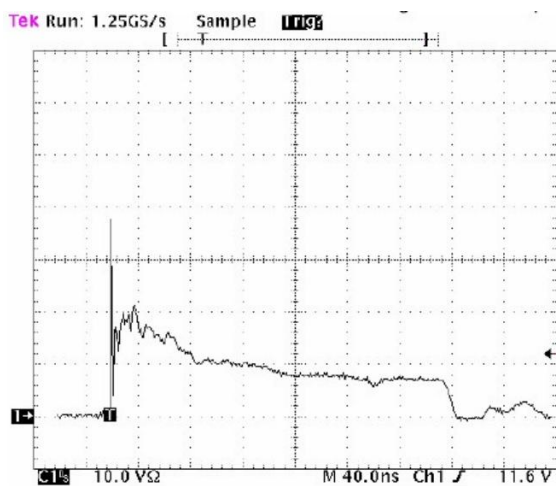


Figure 1. ESD Clamping Voltage Screenshot
Positive 8 kV contact per IEC 61000-4-2

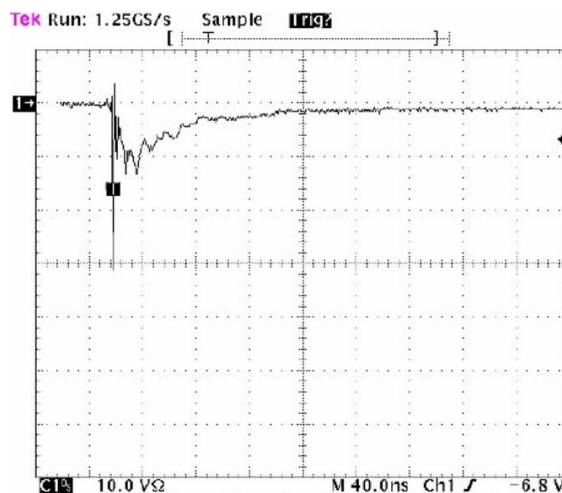


Figure 2. ESD Clamping Voltage Screenshot
Negative 8 kV contact per IEC 61000-4-2

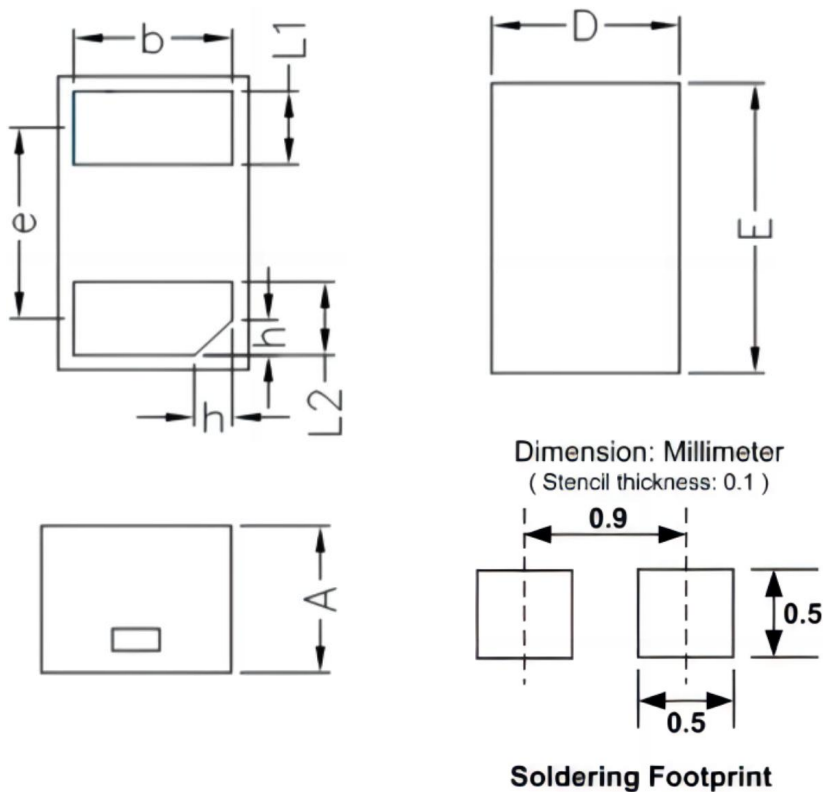


ESD8D3V3 THRU ESD8D15V

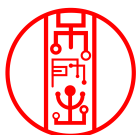
Package Information

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



ESD8D3V3 THRU ESD8D15V

Shikues Disclaimer

1.Accuracy of Information and Right to Modify

The information provided in this document is for reference only. Shikues reserves the right to make changes to this document and to the specifications of the products described herein at any time, without prior notice, for the purpose of improving reliability, function, design, or for any other reason. It is the customer's responsibility to obtain and verify the latest product information and specifications before making any final design, procurement, or usage decisions.

2.No Warranty

Shikues makes no express or implied warranties, representations, or guarantees regarding the suitability of its products for any particular purpose.

Shikues assumes no liability for any assistance provided or for the design of customer products. All products are supplied "as is."

3.Intended Use and Limitation of Liability

The products described in this document are intended for use in general-purpose electronic devices. They are neither designed nor tested nor authorized for use in transportation equipment or applications requiring high reliability. Unless expressly authorized in writing by Shikues, these products must not be used as critical components in life-support systems or any applications where failure could directly pose a risk to human life (including, but not limited to, medical devices, transportation systems, aerospace equipment, nuclear facilities, and safety-critical systems).

Shikues assumes no responsibility or liability for any consequences arising from the use of its products in unauthorized or unintended applications.

Neither Shikues nor its representatives shall be held liable for any resulting damages.

4.Intellectual Property

This document does not grant any express or implied license—whether by estoppel, implication, or otherwise—to use any intellectual property rights of Shikues.