RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

ESD8D SERIES

ESD Protection Diode

DESCRIPTION

The ESD8D 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.

FEATURES

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

MACHANICAL DATA

- ✧DFN1006 package
- ✧Flammability Rating: UL 94V-0
- ✧Packaging: Tape and Reel
- ✧High temperature soldering guaranted: 260℃/10s
- ✧Reel size: 7 inch

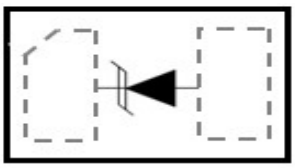
ORDERING INFORMATION

- ✧ Device: ESD8D SERIES
- ✧Package: DFN1006
- ✧Material: Halogen free
- ✧Packing: Tape & Reel
- ✧Quantity per reel: 10,000pcs

APPLICATIONS

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

PIN CONFIGURATION



PACKAGE OUTLINE

2020-12/01
REV:A

ABSOLUTE MAXIMUM RATING (Tamb=25°C, unless otherwise specified)

Symbol	Parameter	Value	Units
V_{ESD}	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	±30 ±22	kV
P_D	Total Power Dissipation on FR-5 Board (Note 1) @ Ta=25°C	150	mW
T_J, T_{STG}	Junction and Storage Temperature	-55/+150	°C
T_L	Lead Solder Temperature – Maximum (10 Second Duration)	260	°C

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 (Tamb=25°C,unless otherwise specified)

Part Number	Device Marking	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	YA	3.3	2.5	5.0	1	10.0	5.0	11.5	7.5	105	105
ESD8D5V0	YB	5.0	1	6.2	1	11.6	5.0	15.0	7.0	105	80
ESD8D8V0	YC	8.0	1	8.5	1	15.0	5.0	18.0	6.0	108	65
ESD8D12	YD	12.0	1	13.3	1	20.0	1.0	26.0	4.0	104	45

RATING AND CHARACTERISTICS CURVES (ESD8D SERIES)

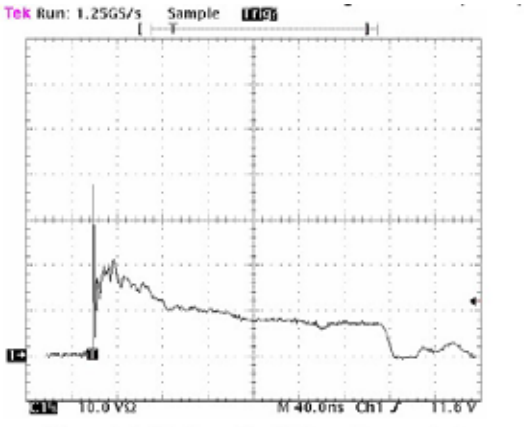


Figure 1. ESD Clamping Voltage Screenshot
Positive 8 kV contact per IEC 61000-4-2

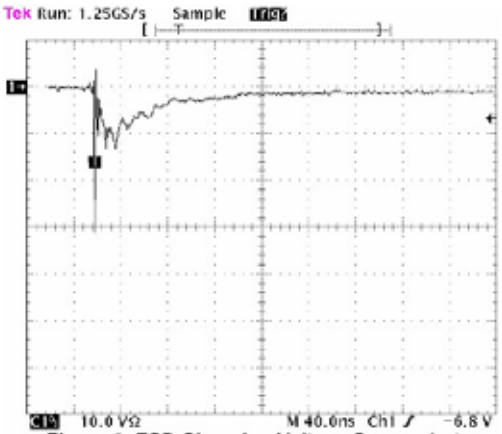
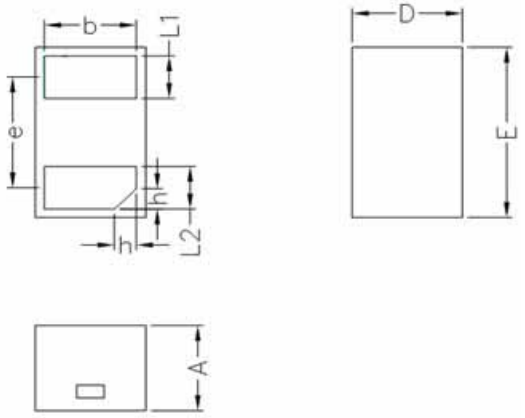


Figure 2. ESD Clamping Voltage Screenshot
Negative 8 kV contact per IEC 61000-4-2

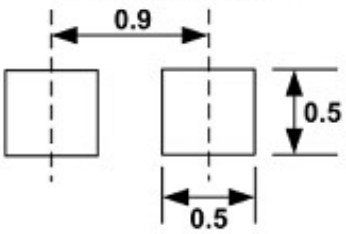
DFN1006 PACKAGE OUTLINE DIMENSIONS



Unit: mm

	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	0.65BSC		
A	0.45	0.50	0.55
h	0.07	0.12	0.17

Dimension: Millimeter
(Stencil thickness: 0.1)



Soldering Footprint

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