

### DESCRIPTION

The GESD8Dxxx 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, 15V
- ✧ Low leakage current

### MACHANICAL DATA

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

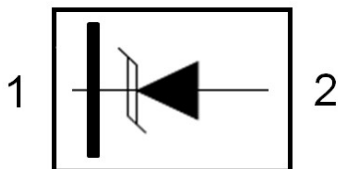
### ORDERING INFORMATION

- ✧ Device: GESD8Dxxx
- ✧ Package: DFN1006
- ✧ Material: Halogen free
- ✧ Packing: Tape & Reel
- ✧ Quantity per reel: 10,000pcs

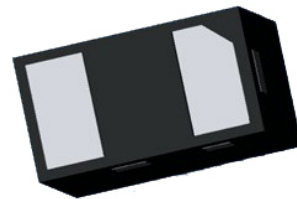
### APPLICATIONS

- ✧ 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



### ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Value	Units
$V_{ESD}$	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) @ $T_a=25^{\circ}C$	150	Mw
$T_J, T_{STG}$	Junction and Storage Temperature	-55/+150	$^{\circ}C$
$T_L$	Lead Solder Temperature – Maximum (10 Second Duration)	260	$^{\circ}C$

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 ( $T_{amb}=25^{\circ}C$ )

Part Number	Device Marking	$V_{RWM}$	$I_R$	$V_B$	$I_T$	$V_C$		$V_C$		$P_{PK}$	$C_J$
		(V) Max.	( $\mu A$ ) Max.	(V) Min.	(Ma)	(V) Max. @A	(V) Max. @A	(W) Max.	(Pf) Max.		
GESD8D3V3	YA	3.3	2.5	5.0	1	10.0	5.0	11.5	7.5	105	105
GESD8D5V0	YB	5.0	1	6.2	1	11.6	5.0	15.0	7.0	105	80
GESD8D8V0	YC	8.0	1	8.5	1	15.0	5.0	18.0	6.0	108	65
GESD8D12V	YD	12.0	1	13.3	1	20.0	1.0	26.0	4.0	104	45
GESD8D15V	YE	15.0	1	16.0	1	23.0	1.0	30.0	4.0	120	28

### ELECTRICAL CHARACTERISTICS CURVE

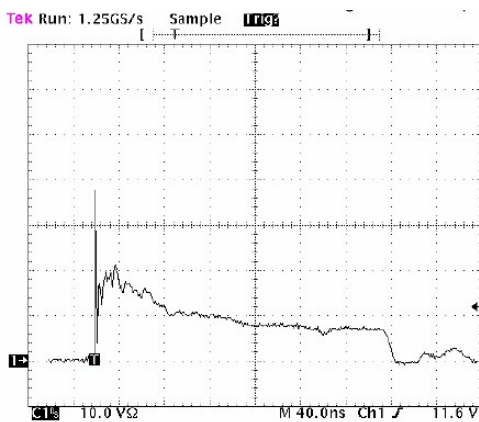


Figure 1. ESD Clamping Voltage Screenshot  
Positive 8 kV contact per IEC 61000-4-2

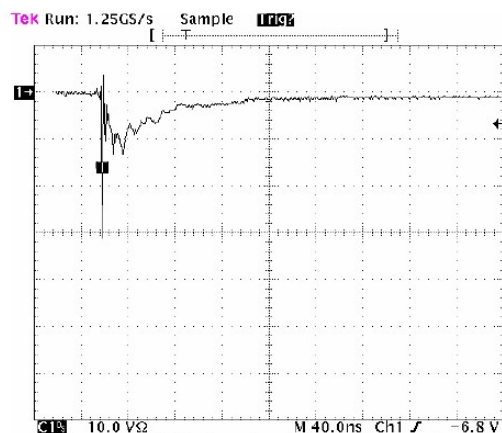
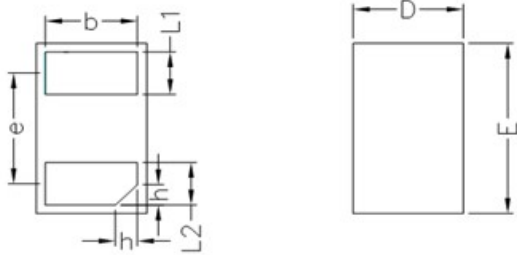


Figure 2. ESD Clamping Voltage Screenshot  
Negative 8 kV contact per IEC 61000-4-2

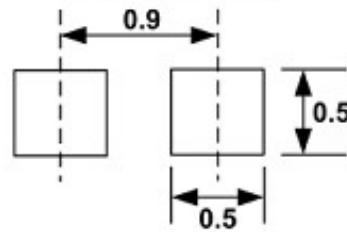
## DFN1006 PACKAGE OUTLINE DIMENSIONS



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**