

DESCRIPTION

The ESD8D36V 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) $\pm 8\text{kV}$ (Contact)
 $\pm 15\text{kV}$ (Air)
- ✧ Protects one directional I/O or Vcc line
- ✧ Low clamping voltage
- ✧ Working voltages : 36V
- ✧ Low leakage current

MECHANICAL DATA

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

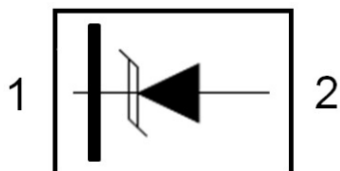
ORDERING INFORMATION

- ✧ Device: ESD8D36V
- ✧ Package: DFN1006
- ✧ Marking: YN
- ✧ 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
- ✧ LED bypass

PIN CONFIGURATION



PACKAGE OUTLINE



ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Value	Units
V_{ESD}	ESD per IEC 61000-4-2 (Contact)	± 20	kV
	ESD per IEC 61000-4-2 (Air)	± 25	
P_D	Total Power Dissipation on FR-5 Board (Note 1) @ $T_a = 25^\circ\text{C}$	150	mW
T_{OPT}	Operating Temperature	-55~125	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55~150	$^\circ\text{C}$

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

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Working Voltage				36	V
V_{BR}	Reverse Breakdown Voltage	$I_T = 1\text{mA}$	40			V
I_R	Reverse Leakage Current	$V_{RWM} = 36\text{V}$			5	μA
V_C	Clamping Voltage	$I_{PP} = 1\text{A}$, $t_p = 8/20\mu\text{s}$			55	V
C_J	Junction Capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$			28	pF

ELECTRICAL CHARACTERISTICS CURVE

Fig 1 8/20 μ s Waveform per IEC61000-4-5

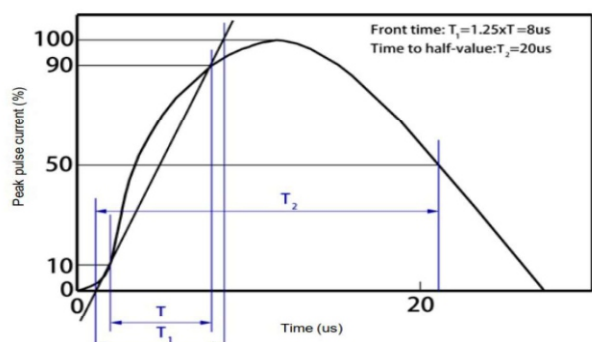


Fig 2 Contact Discharge Current Waveform per IEC 61000-4-2)

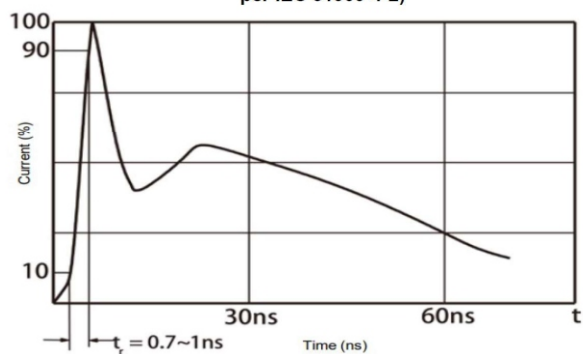


Fig 3 Power Derating Curve

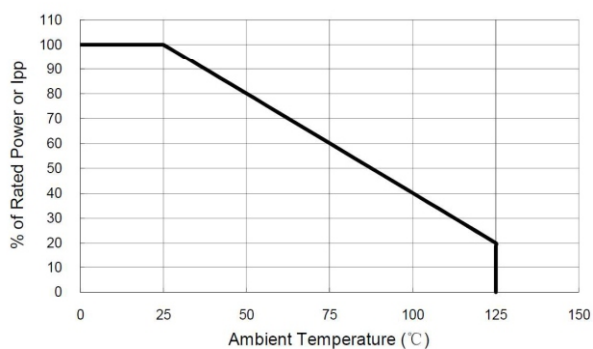


Fig 4 Voltage Sweeping

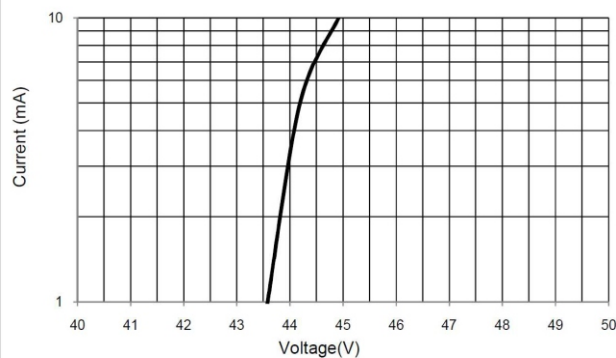


Fig 5 Voltage vs Capacitance

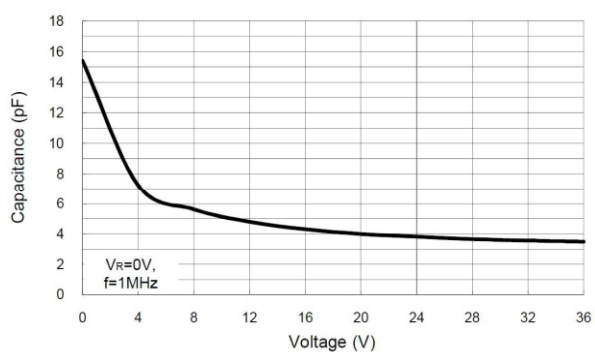
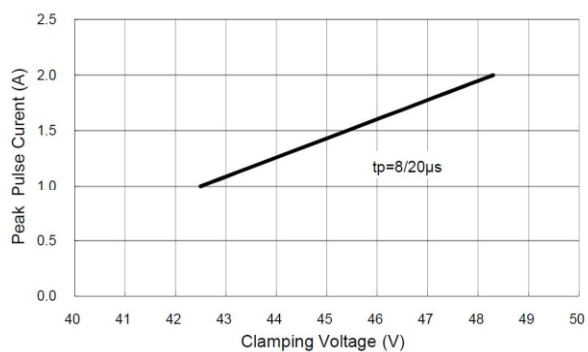
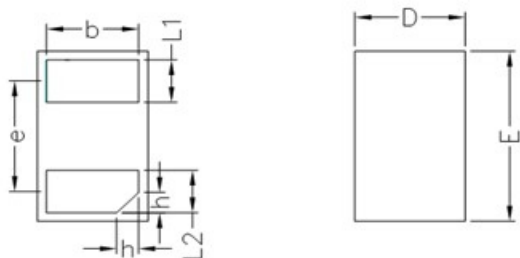


Fig 6 Clamping Voltage vs Peak Pulse Current



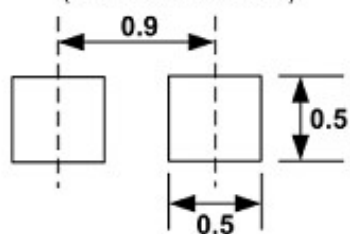
DFN1006 PACKAGE OUTLINE DIMENSIONS



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