KPESD8V0S1UL

ESD Protection Diode

Datasheet

DESCRIPTION

The KPESD8V0S1UL 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
✧Low leakage current

MACHANICAL DATA

✧DFN1006 package
✧Packaging: Tape and Reel
✧High temperature soldering guaranted: 260℃/10s
✧Reel size: 7 inch

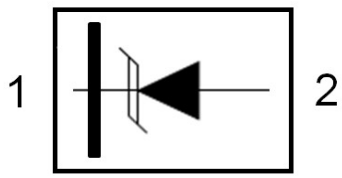
ORDERING INFORMATION

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

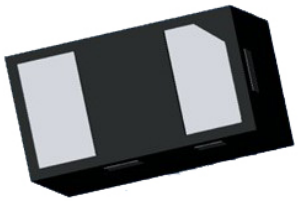
APPLICATIONS

✧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) 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)

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.
KPESD8V0S1UL	YC	8.0	1	8.5	1	15.0	5.0	18.0	6.0	108	65

ELECTRICAL CHARACTERISTICS CURVE

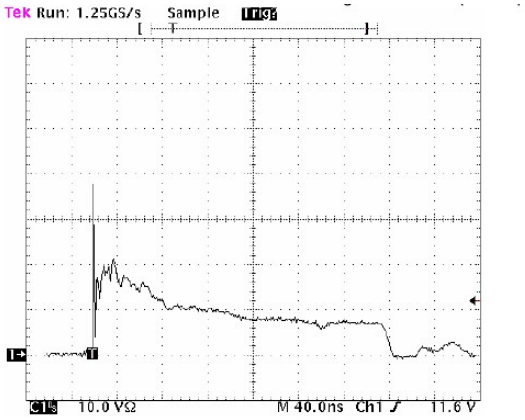


Figure 1. ESD Clamping Voltage Screenshot
Positive 8 kV contact per IEC 61000-4-2

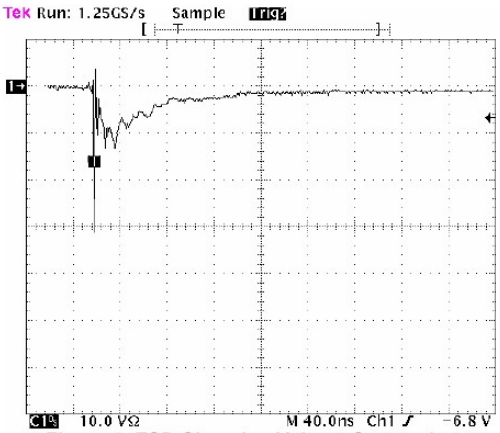
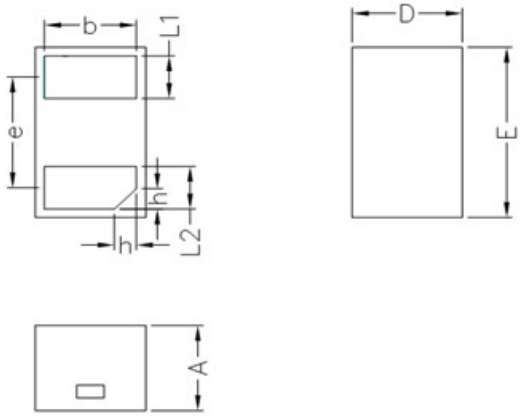


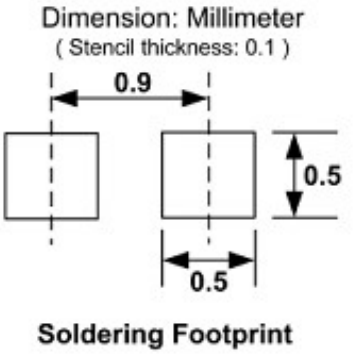
Figure 2. ESD Clamping Voltage Screenshot
Negative 8 kV contact per IEC 61000-4-2

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



Soldering Footprint