

DESCRIPTION

The KPESDxxxS1UB 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

- ✧ IEC61000-4-2 Level 4 ESD Protection
- ✧ Protects one directional I/O line
- ✧ Low clamping voltage
- ✧ Working voltages : 2.5V,3.3V, 5V,6V,7V,12V,15V
- ✧ Low leakage current

MACHANICAL DATA

- ✧ SOD-523 package
- ✧ Flammability Rating: UL 94V-0
- ✧ Packaging: Tape and Reel
- ✧ High temperature soldering guaranteed:260°C/10s
- ✧ Reel size: 7 inch

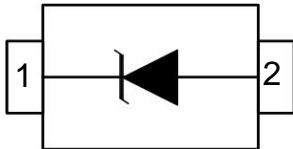
ORDERING INFORMATION

- ✧ Device: KPESDxxxS1UB
- ✧ Package: SOD-523
- ✧ Material: Halogen free
- ✧ Packing: Tape & Reel
- ✧ Quantity per reel: 3,000pcs

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	
ESD	ESD Voltage per human body model	16	kV
	ESD Voltage per machine model	400	V
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}	I _R	V _B	I _T	V _C		V _C		P _{PK}	C _J
		(V)	(μA)	(V)	(mA)	(V)	@A	(V)	@A	(W)	(pF)
		Max	Max	Min		Max		Max		Max	Max
KPESD2V5S1UB	ZD + code	2.5	6.0	4.0	1	9.0	5.0	11.5	9.0	104	145
KPESD3V3S1UB	ZE + code	3.3	0.90	5.0	1	10.0	5.0	14.0	7.5	105	105
KPESD5V0S1UB	ZF + code	5.0	0.08	6.2	1	11.6	5.0	15.0	7.0	105	80
KPESD6V0S1UB	ZG + code	6.0	0.05	6.8	1	13.5	5.0	17.5	6.0	105	70
KPESD7V0S1UB	ZH + code	7.0	0.03	7.5	1	14.0	5.0	18.0	6.0	108	65
KPESD12VS1UB	ZM + code	12.0	0.03	14.1	1	20.0	1.0	26.0	4.0	104	45
KPESD15VS1UB	ZN + code	15.0	0.50	16.0	1	23.0	1.0	30.0	4.0	120	28

ELECTRICAL CHARACTERISTICS CURVE

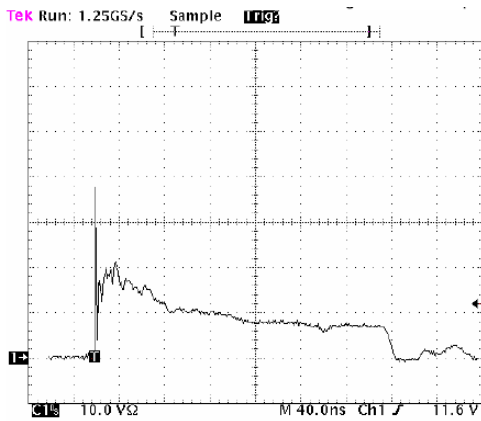


Figure 1. ESD Clamping Voltage Screenshot
Positive 8 kV contact per IEC 61000-4-2

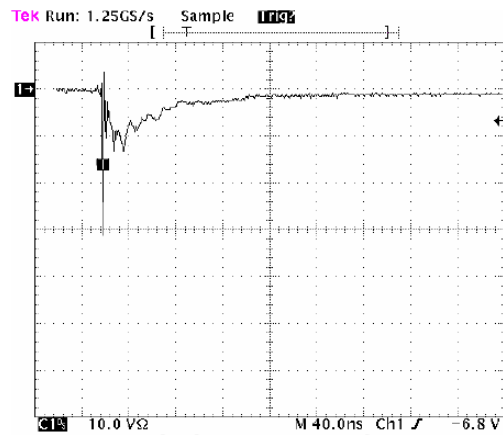
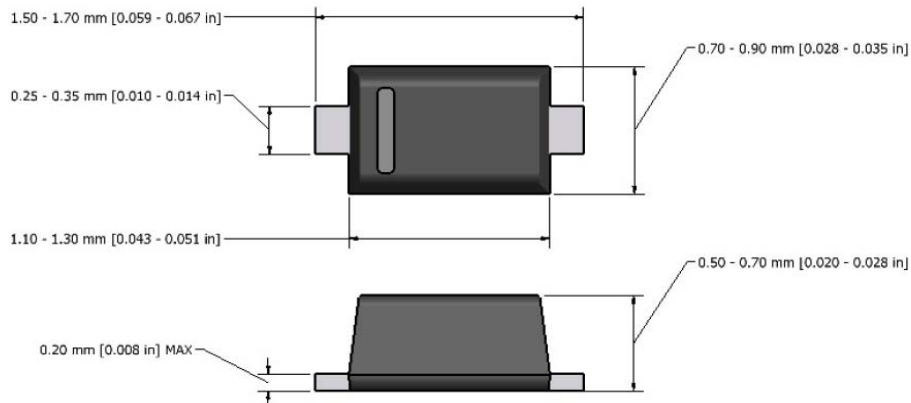


Figure 2. ESD Clamping Voltage Screenshot
Negative 8 kV contact per IEC 61000-4-2

SOD-523 PACKAGE OUTLINE DIMENSIONS



Note: Dimensions are exclusive of Burrs, Mold Flash & Tie Bar extrusions.

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