

## DESCRIPTION

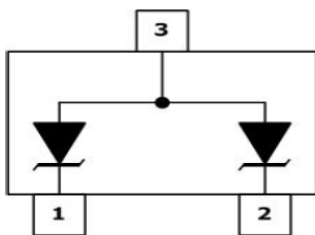
The PESDxxS2UT is designed for applications requiring transient overvoltage protection capability. They are intended for use in voltage and ESD sensitive equipment such as computers, printers, business machines, communication systems, medical equipment and other applications. These devices are ideal for situations where board space is at a premium.

KESDxxS2UT has been specifically designed to protect sensitive components which are connected to power, data and transmission lines from overvoltage caused by ESD (electrostatic discharge), CDE (Cable Discharge Events), and EFT (electrical fast transients).

## ORDERING INFORMATION

- ✧ Package: SOT-23
- ✧ Material: Halogen free
- ✧ Packing: Tape & Reel
- ✧ Quantity per reel: 3,000pcs

## PIN CONFIGURATION



## FEATURES

- ✧ IEC61000-4-2 (ESD)  $\pm 15\text{kV}$  (air),  $\pm 8\text{kV}$  (contact)
- ✧ IEC61000-4-4 (EFT) 40A (5/50ns)
- ✧ 350 Watts Peak Pulse Power per (tp=8/20 $\mu\text{s}$ )
- ✧ Protects one bidirectional line or two unidirectional lines
- ✧ Low clamping voltage
- ✧ Working voltages : 3.3V to 36V
- ✧ Low leakage current

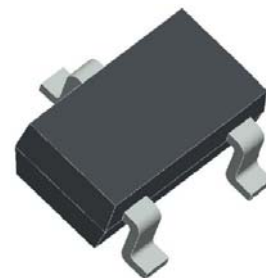
## MACHANICAL DATA

- ✧ SOT-23 package
- ✧ Flammability Rating: UL 94V-0
- ✧ Packaging: Tape and Reel
- ✧ High temperature soldering guaranteed: 260 °C /10s
- ✧ Reel size: 7 inch
- ✧ MSL 1

## APPLICATIONS

- ✧ Cell Phone Handsets and Accessories
- ✧ Microprocessor based equipment
- ✧ Personal Digital Assistants (PDA's)
- ✧ Notebooks, Desktops, and Servers
- ✧ Portable Instrumentation
- ✧ Networking and Telecom
- ✧ Serial and Parallel Ports.
- ✧ Peripherals

## PACKAGE OUTLINE



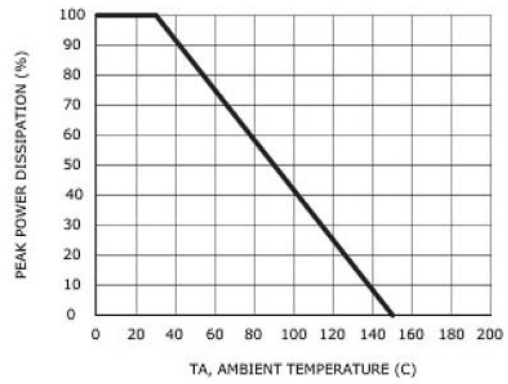
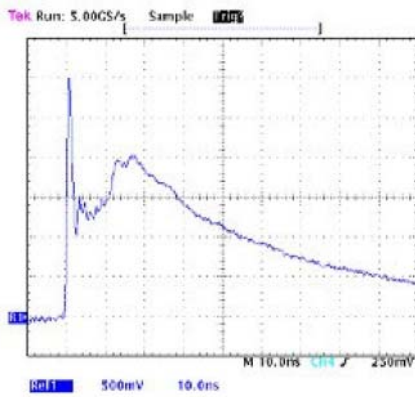
**ABSOLUTE MAXIMUM RATING**

Symbol	Parameter	Value	Units
$V_{ESD}$	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$\pm 15$ $\pm 8$	kV
$P_{PP}$	Peak Pulse Power (8/20 $\mu$ s)	350	W
$T_{OPT}$	Operating Temperature	-55/+150	$^{\circ}$ C
$T_{STG}$	Storage Temperature	-55/+150	$^{\circ}$ C
$T_L$	Lead Soldering Temperature	260 (10 sec.)	$^{\circ}$ C

**ELECTRICAL CHARACTERISTICS (Tamb=25 $^{\circ}$ C)**

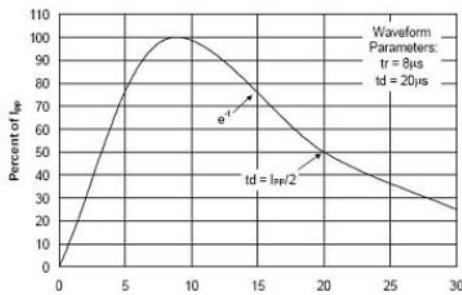
PART NUMBER	DEVICE MARKING	$V_{RWM}$ (V) (max.)	$V_B$ (V) (min.)	$I_T$ (mA)	$V_{C@1A}$ (V) (max.)	$V_C$ (V) (max.) (@A)		$I_R$ ( $\mu$ A) (max.)	$C_J$ (pF) (max.)
PESD3V3S2UT	M03	3.3	4	1	7.0	14	20	40	450
PESD5V0S2UT	M05	5	6	1	9.8	18	17	10	300
PESD8V0S2UT	M08	8	8.5	1	13.4	24	15	2	240
PESD12VS2UT	M12	12	13.3	1	19	32	11	1	130
PESD15VS2UT	M15	15	16.7	1	24	38	10	1	120
PESD18VS2UT	M18	18	20	1	29	45	9	1	100
PESD20VS2UT	M20	20	22.3	1	35	50	8	1	90
PESD24VS2UT	M24	24	26.7	1	43	52	7	1	80
PESD36VS2UT	M36	36	40	1	60	75	5	1	60

**ELECTRICAL CHARACTERISTICS CURVE**

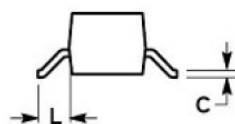
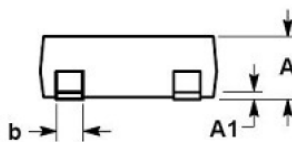
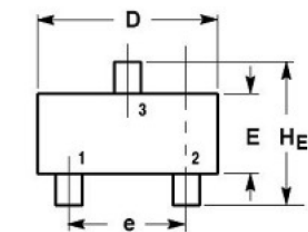


Power Derating Curve

Pulse Waveform



**SOT-23 PACKAGE OUTLINE DIMENSIONS**



DIM	MILLIMETERS			INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	0.89	1.00	1.11	0.035	0.040	0.044
A1	0.01	0.06	0.10	0.001	0.002	0.004
b	0.37	0.44	0.50	0.015	0.018	0.020
c	0.09	0.13	0.18	0.003	0.005	0.007
D	2.80	2.90	3.04	0.110	0.114	0.120
E	1.20	1.30	1.40	0.047	0.051	0.055
e	1.78	1.90	2.04	0.070	0.075	0.081
L	0.35	0.54	0.69	0.014	0.021	0.029
HE	2.10	2.40	2.64	0.083	0.094	0.104