



### Features

- Uni-directional ESD protection of two lines
- 220 Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Working voltage: 5V
- Junction Capacitance: 190pF(Typ)
- Low clamping voltage
- Low leakage current
- IEC 61000-4-2  $\pm 30kV$  contact  $\pm 30kV$  air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 20A (8/20 $\mu s$ )

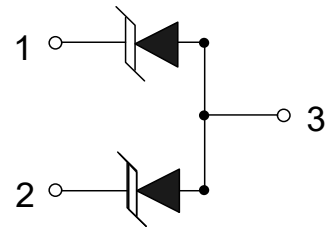
### Applications

- Dataline
- Automatic Teller Machines
- Net works
- Power line

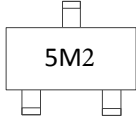
### Mechanical Data

- Package: SOT-23
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

### Schematic & PIN Configuration



### Ordering Information

Part Number	Package	Marking	Packing	Reel Size
PESD5V2S2UT	SOT-23		3000 Tape & Reel	7 inches

**Absolute Maximum Rating( $T_A=25^{\circ}\text{C}$  unless otherwise Specified)**

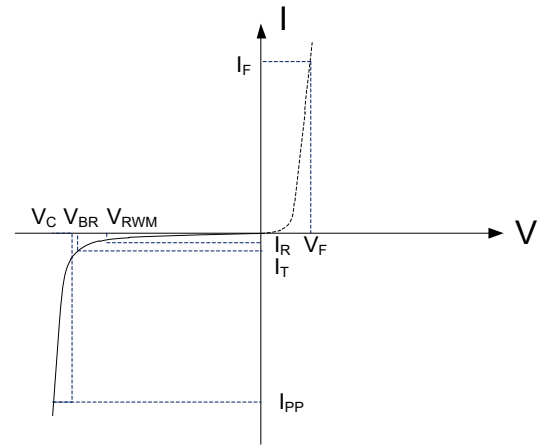
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 $\mu\text{s}$ )	$P_{pk}$	220	W
Peak Pulse Current (8/20 $\mu\text{s}$ )	$I_{PP}$	20	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$V_{ESD}$	30 30	kV
Lead Soldering Temperature	$T_L$	260(10seconds)	$^{\circ}\text{C}$
Junction Temperature	$T_J$	-55 to +125	$^{\circ}\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to +125	$^{\circ}\text{C}$

**Electrical Characteristics( $T_A=25^{\circ}\text{C}$  unless otherwise Specified)**

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	$V_{RWM}$				5	V
Breakdown Voltage	$V_{BR}$	$I_T = 1\text{mA}$	6			V
Reverse Leakage Current	$I_R$	$V_{RWM}=5\text{V}, T=25^{\circ}\text{C}$		0.5	1.0	$\mu\text{A}$
Peak Pulse Current	$I_{PP}$	$t_p=8/20\mu\text{s}$			20	A
Clamping Voltage	$V_C$	$I_{PP} = 20\text{A}$ (8 x 20 $\mu\text{s}$ pulse)		11		V
Junction Capacitance	$C_J$	$V_R = 0\text{V}, f = 1\text{MHz}$		190		pF

Electrical Parameters ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

Symbol	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ IPP
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum Reverse Leakage Current @ VRWM
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current



Note: 8/20 $\mu\text{s}$  pulse waveform.

Typical Characteristics ( $T_A = 25^\circ\text{C}$  unless otherwise Specified)

Figure 1: Peak Pulse Power vs. Pulse Time

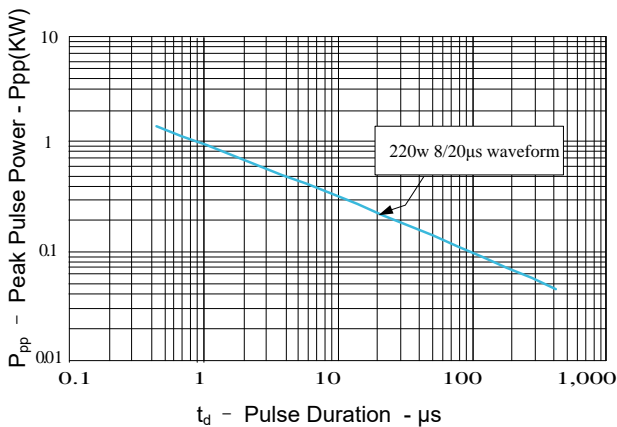


Figure 2: Power Derating Curve

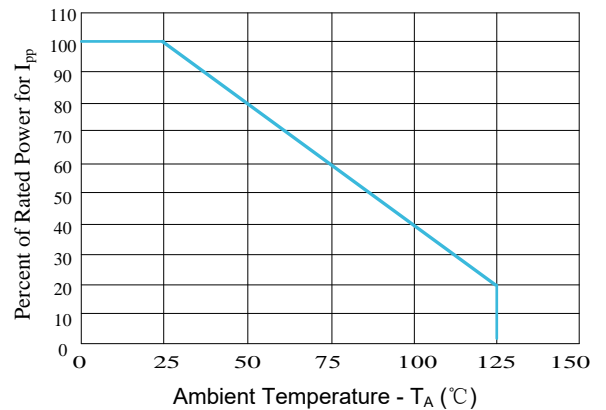


Figure3: Pulse Waveform

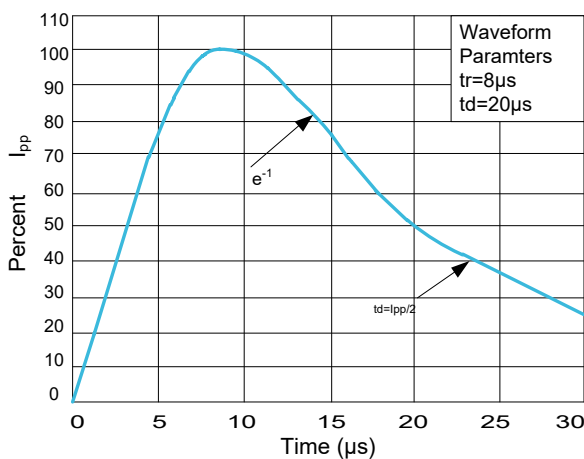
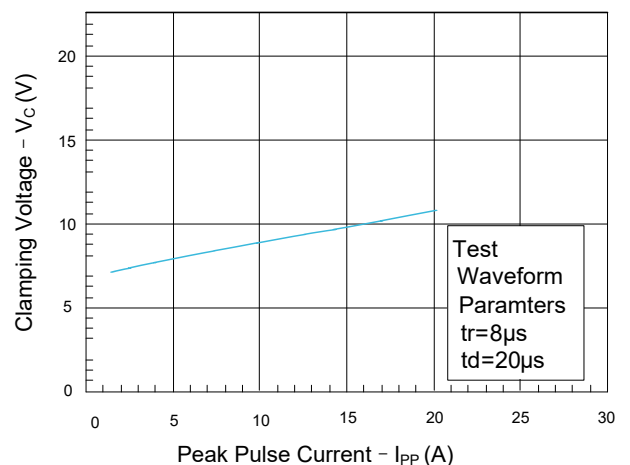
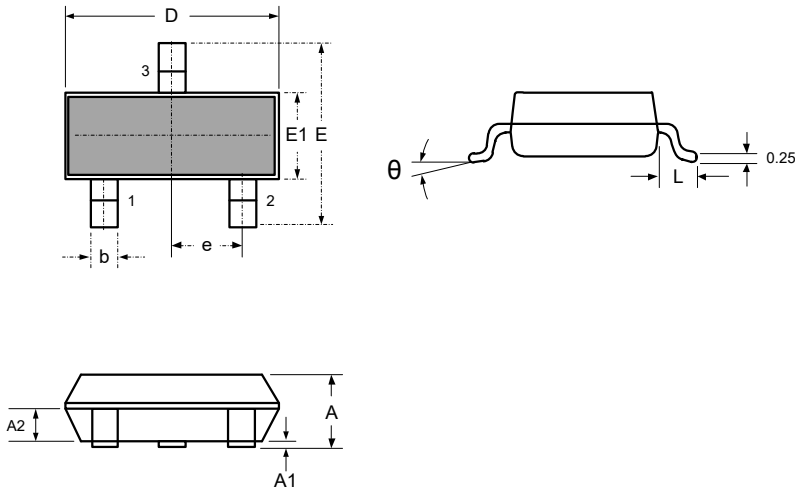


Figure 4: Clamping Voltage vs. I\_PP





Outline Drawing – SOT-23



DIMENSIONS

SYMBOL	MILLIMETER		INCHES	
	MIN	MAX	MIN	MAX
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
D	2.800	3.000	0.110	0.118
b	0.300	0.500	0.012	0.020
E	2.250	2.550	0.089	0.100
E1	1.200	1.400	0.047	0.055
e	0.950 BSC		0.037 BSC	
L	0.300	0.500	0.012	0.020
θ	0	8°	0	8°

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