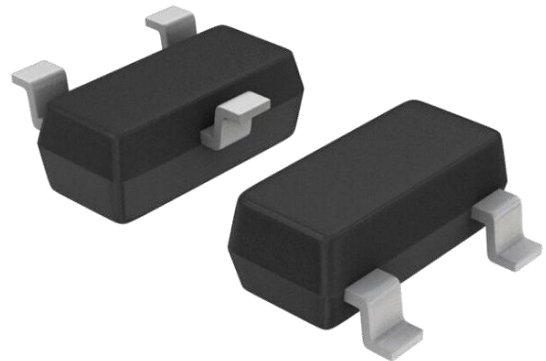


## ESD TVS Array in SOT-23

### Features

- 300 Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Bidirectional and unidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance ( $C_j = 60$  pF typ.)
- Protection two data lines:
- IEC 61000-4-2  $\pm 10$ kV contact  $\pm 15$ kV air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 10A (8/20 $\mu s$ )



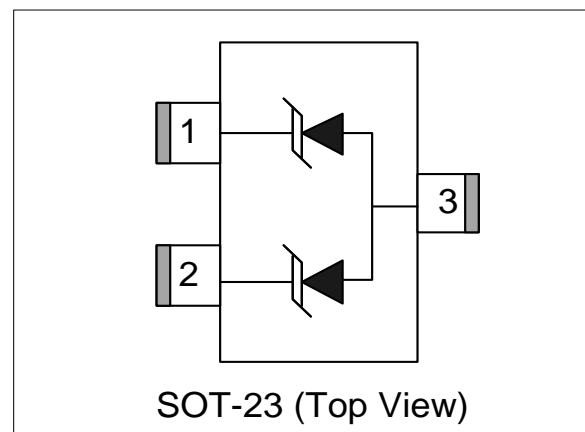
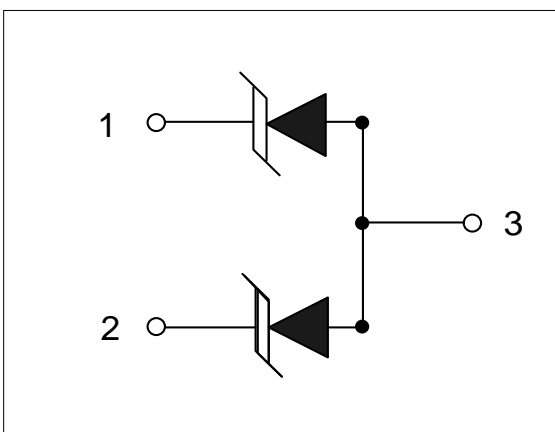
### Applications

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

### Mechanical Data

- SOT-23 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

### Schematic & PIN Configuration



## Absolute Maximum Rating

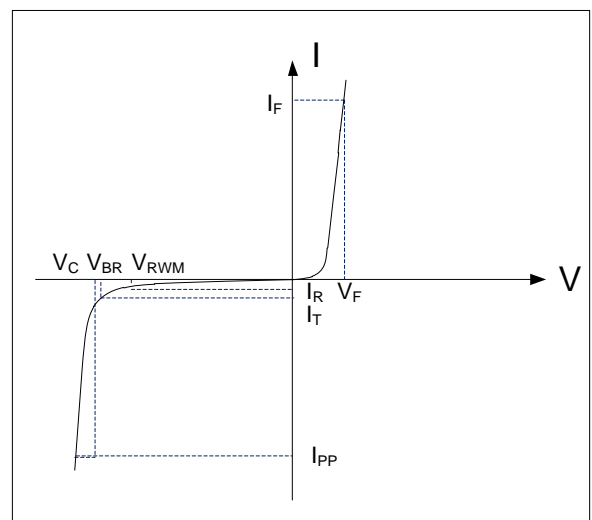
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	300	Watts
Peak Pulse Current ( $t_p = 8/20\mu s$ ) (note 1)	$I_{PP}$	20	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$V_{ESD}$	15 10	kV
Lead Soldering Temperature	$T_L$	260(10seconds)	°C
Junction Temperature	$T_J$	-55 to + 125	°C
Storage Temperature	$T_{stg}$	-55 to + 125	°C

## Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$				5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1mA$	6			V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5V, T = 25^\circ C$		0.5	1	$\mu A$
Peak Pulse Current	$I_{PP}$	$t_p = 8/20\mu s$			20	A
Clamping Voltage	$V_C$	$I_{PP} = 10A, t_p = 8/20\mu s$			12	V
		$I_{PP} = 20A, t_p = 8/20\mu s$			16	V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		70		pF

## Electrical Parameters (TA = 25 °C unless otherwise noted)

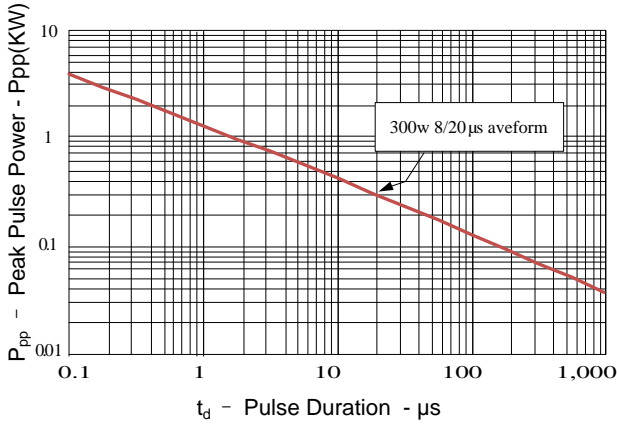
Symbol	Parameter
$I_{PP}$	Maximum Reverse Peak Pulse Current
$V_C$	Clamping Voltage @ $I_{PP}$
$V_{RWM}$	Working Peak Reverse Voltage
$I_R$	Maximum Reverse Leakage Current @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current



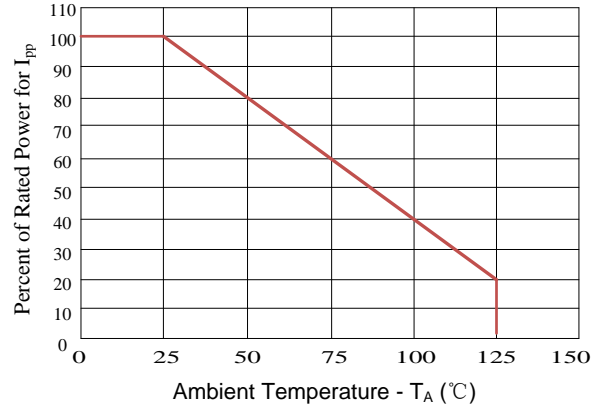
Note: 8/20 $\mu s$  pulse waveform.

**Typical Characteristics**

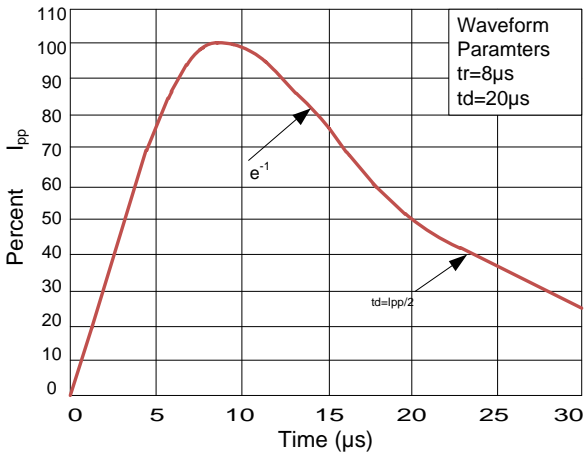
**Figure 1: Peak Pulse Power vs. Pulse Time**



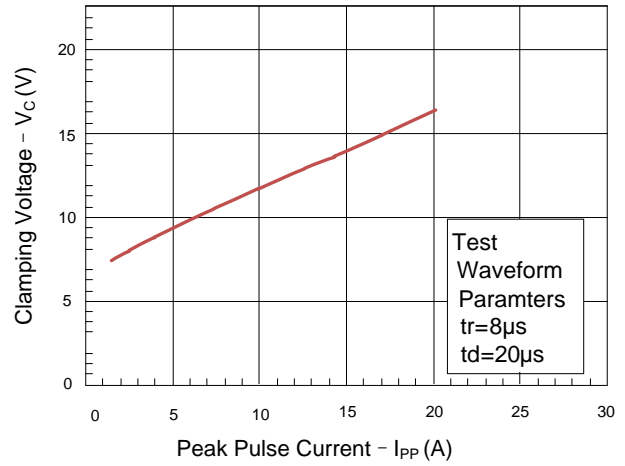
**Figure 2: Power Derating Curve**



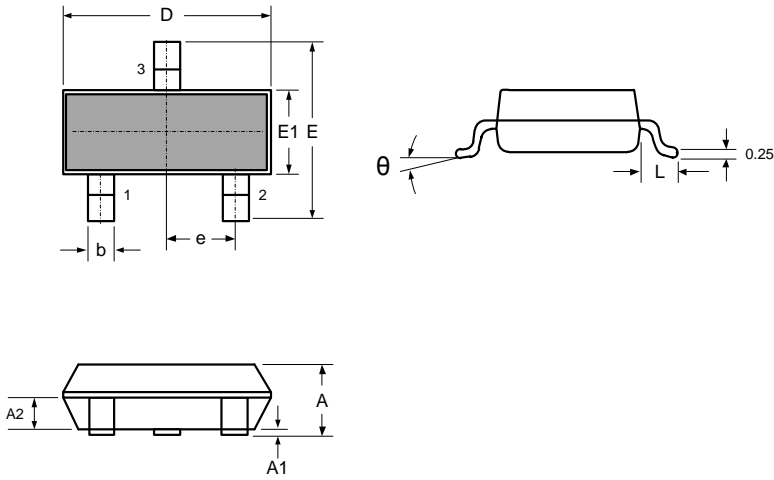
**Figure3: Pulse Waveform**



**Figure 4: Clamping Voltage vs. I<sub>pp</sub>**



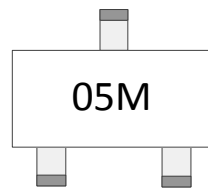
## Outline Drawing – SOT-23



**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
$\theta$	0	8°	0	8°

## Marking



## Ordering information

Order code	Package	Base qty	Delivery mode
CEST23NC5VU-M	SOT-23	3k	Tape and reel

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