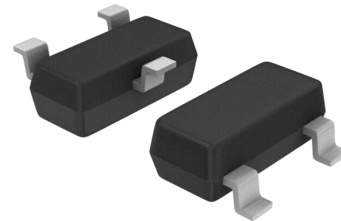


## Features

- 40 Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance ( $C_j = 2.7pF$  typ.)



**SOT-23**

## IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2  $\pm 10kV$  contact  $\pm 15kV$  air
- IEC 61000-4-4 (EFT) 40A (5/50ns) IEC
- 61000-4-5 (Lightning) 3.5A (8/20 $\mu s$ )

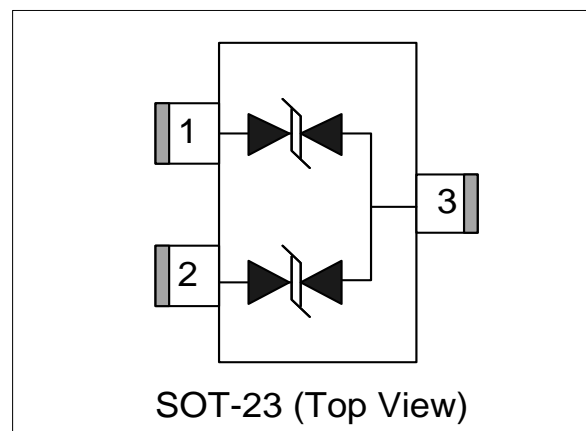
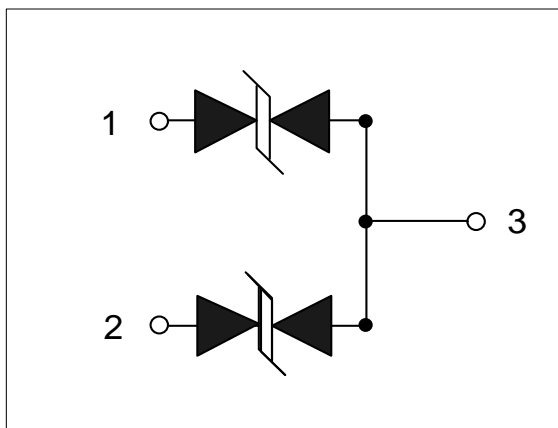
## Mechanical Characteristics

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

## Applications

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

## Schematic & PIN Configuration



### Absolute Maximum Rating

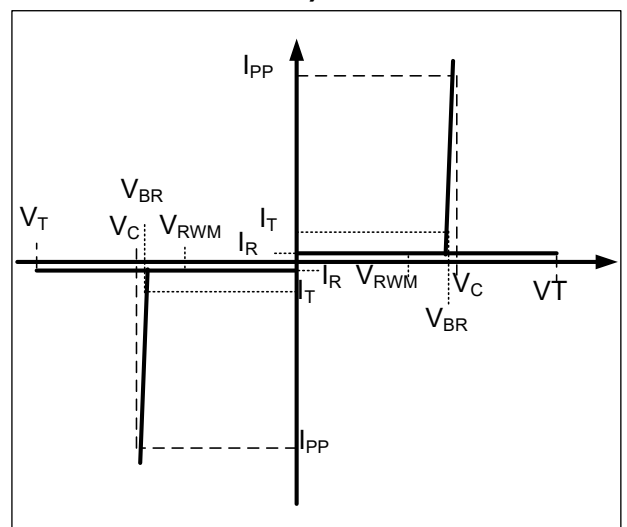
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu s$ )	$P_{PP}$	40	Watts
Peak Pulse Current ( $t_p = 8/20\mu s$ ) (note1)	$I_{pp}$	3.5	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$V_{ESD}$	15 10	kV
Lead Soldering Temperature	$T_L$	260(10seconds)	$^{\circ}C$
Junction Temperature	$T_J$	-55 to + 125	$^{\circ}C$
Storage Temperature	$T_{stg}$	-55 to + 125	$^{\circ}C$

### Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$			5.0		V
Reverse Breakdown Voltage	$V_{BR}$	$I_T = 1mA$	5.5	6.5	8.5	V
Trigger Voltage	$V_T$		12		18	V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5V, T = 25^{\circ}C$		0.1	0.5	$\mu A$
Clamping Voltage	$V_C$	$I_{pp} = 3.5A, t_p = 8/20\mu s$			11	V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		2.7	3.5	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
$V_T$	Trigger Voltage



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

## Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

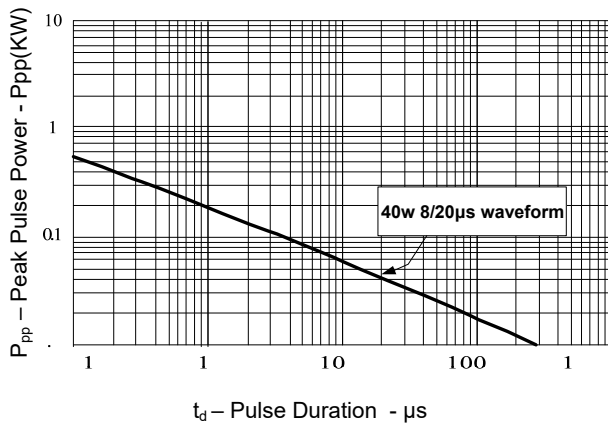


Figure 2: Power Derating Curve

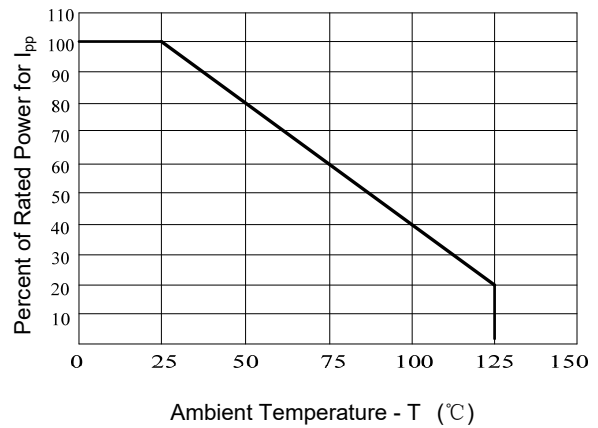


Figure 3: Pulse Waveform

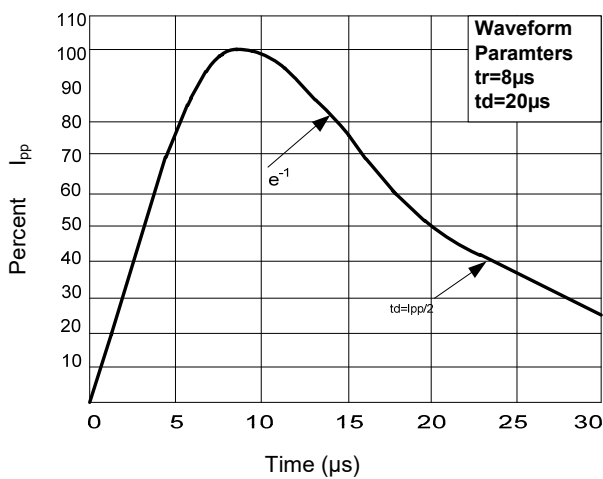
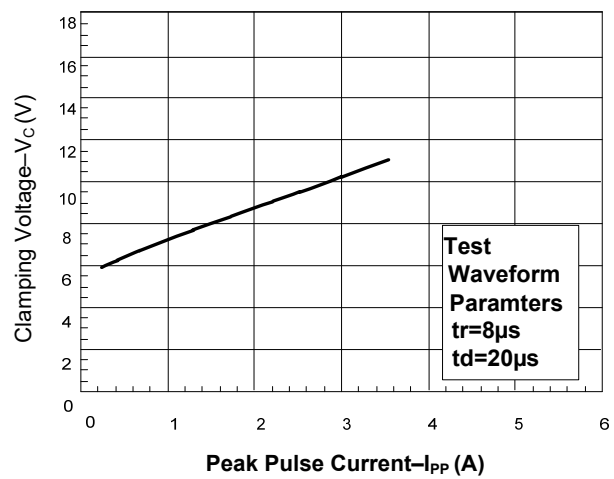
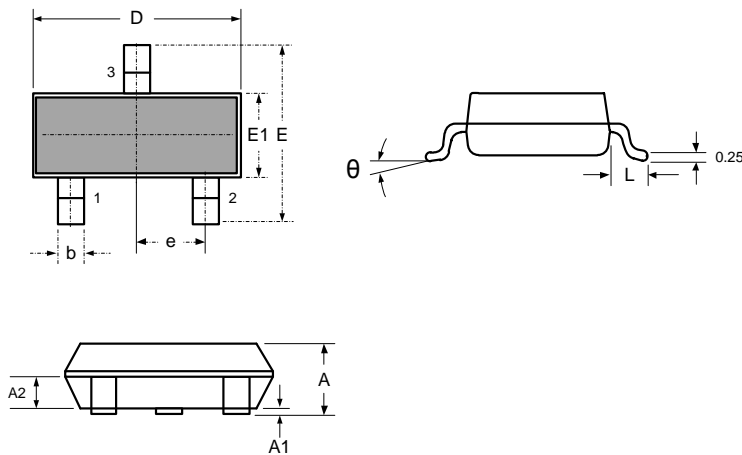


Figure 4: Clamping Voltage vs. I\_pp

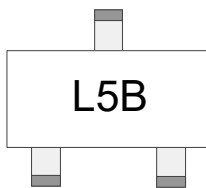


### Outline Drawing – SOT-23



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°

### Marking



### Ordering information

Order code	Package	Base qty	Delivery mode
PTT233L3M5BA4	SOT-23	3K	Tape and reel