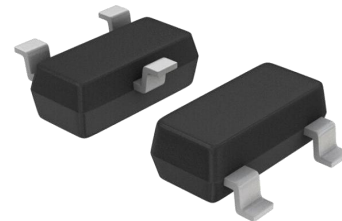


Features

- 300 Watts peak pulse power ($t_p = 8/20\mu s$)
- Unidirectional and bidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Low capacitance ($C_j = 120\text{ pF typ.}$)



SOT-23

IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 $\pm 30\text{ kV}$ contact $\pm 30\text{ kV}$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 6A (8/20 μs)

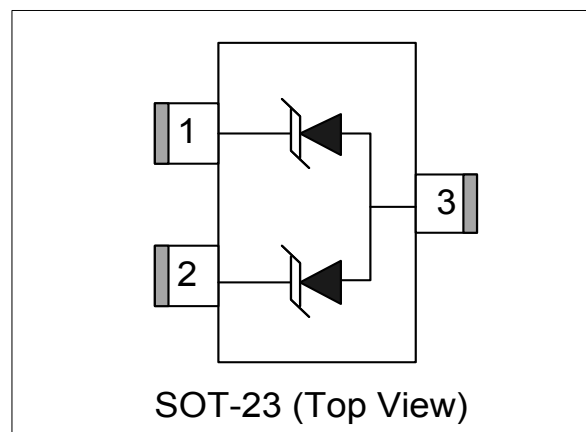
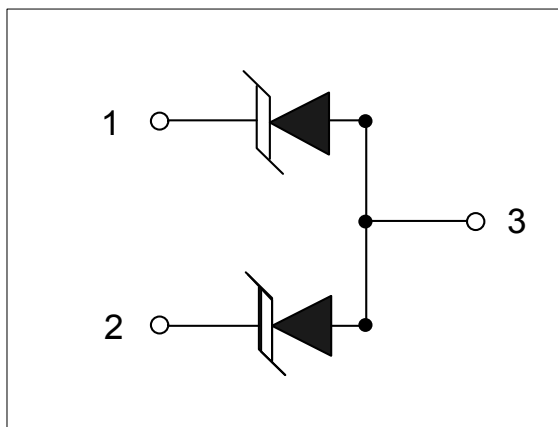
Mechanical Characteristics

- 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

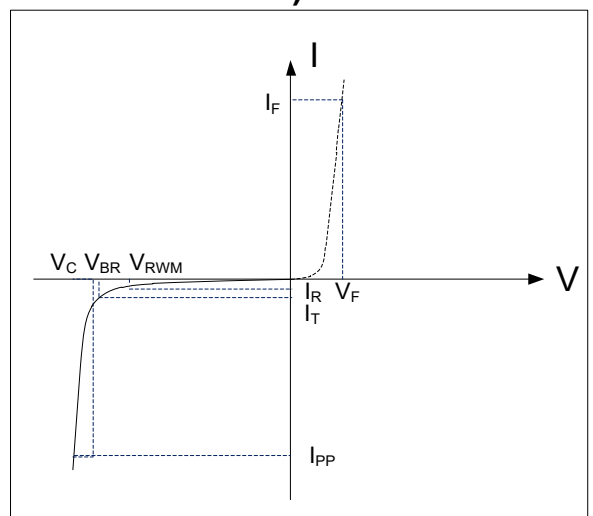
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	300	Watts
Peak Pulse Current ($t_p = 8/20\mu s$) (note1)	I_{pp}	20	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Junction Temperature	T_J	-55 to + 125	°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	μA
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	$V_R = 0V, f = 1MHz$ (PIN1 to PIN3)		120		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 μs pulse waveform.

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

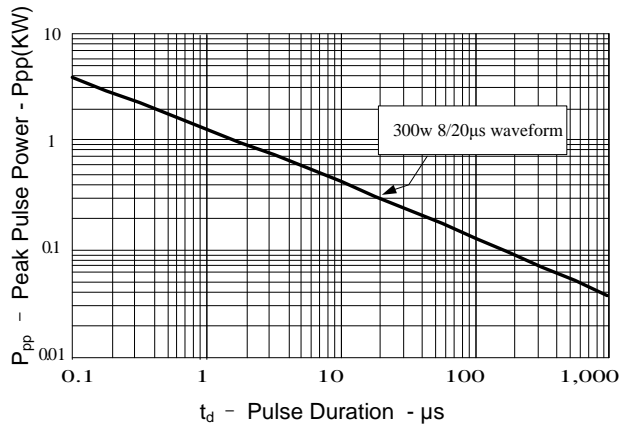


Figure 2: Power Derating Curve

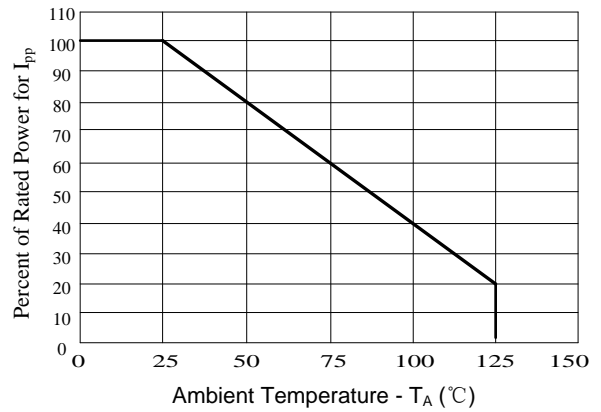


Figure 3: Pulse Waveform

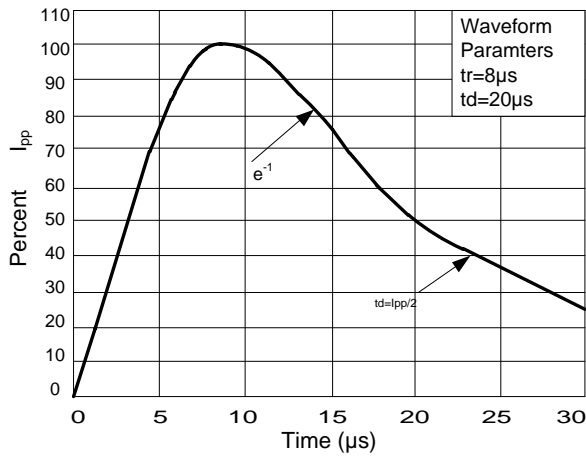
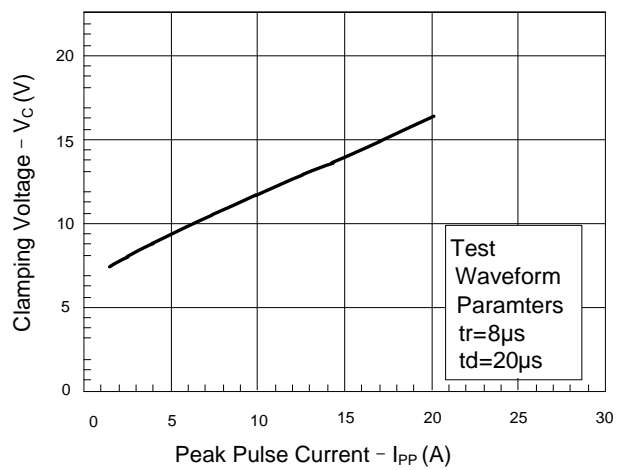
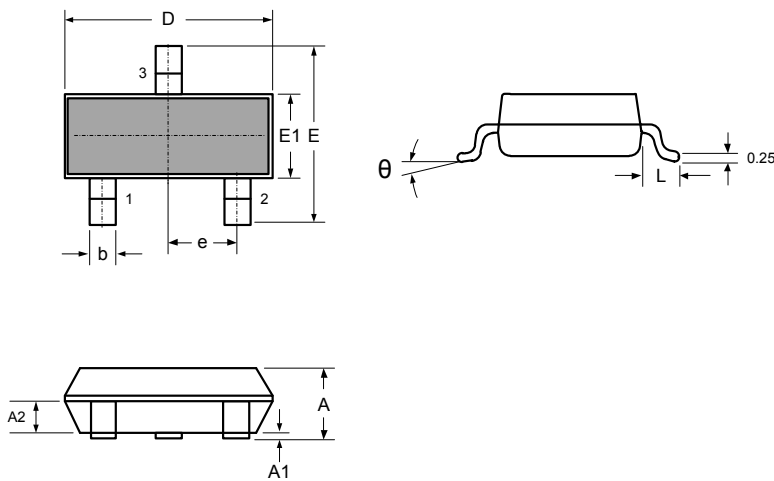


Figure 4: Clamping Voltage vs. I_pp

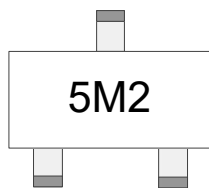


Outline Drawing – SOT-23



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
PTT233H120M5CA30	SOT-23	3k	Tape and reel