

## ESD Protection Diode

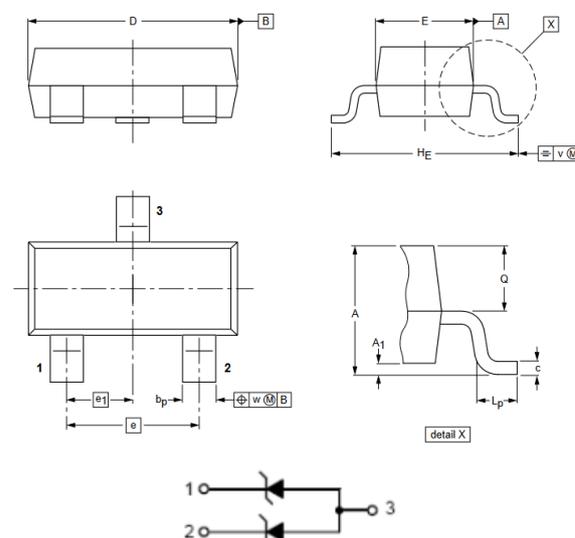
Primary characteristics			
Parameter	Symbol	Value	Unit
ESD per IEC 61000-4-2 (contact)	$V_{ESD}$	$\pm 30$	kV
ESD per IEC 61000-4-2 (air)	$V_{ESD}$	$\pm 30$	kV
Total power dissipation	$P_D$	300	W

### Features

- **SOT-23** case for easy automatic insertion.
- Pb-free and **RoHS** compliant
- IEC61000-4-2 level 4 ESD protection
- Low reverse clamping voltage
- Flammability Rating: UL 94V-0

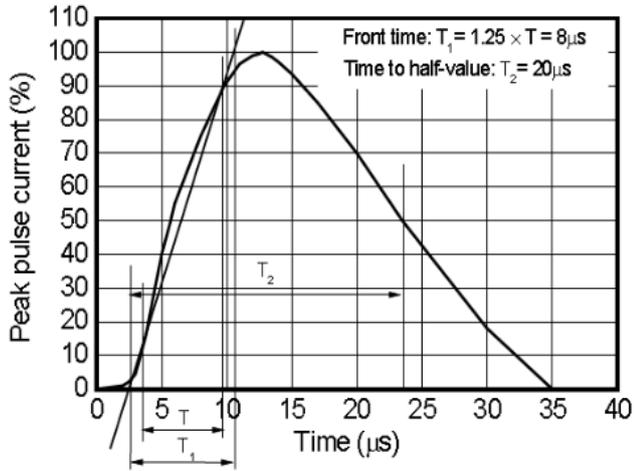
### Applications

- Computers and peripherals
- Portable electronics
- Industrial controls
- Set-top box
- Servers, notebook, and desktop PC

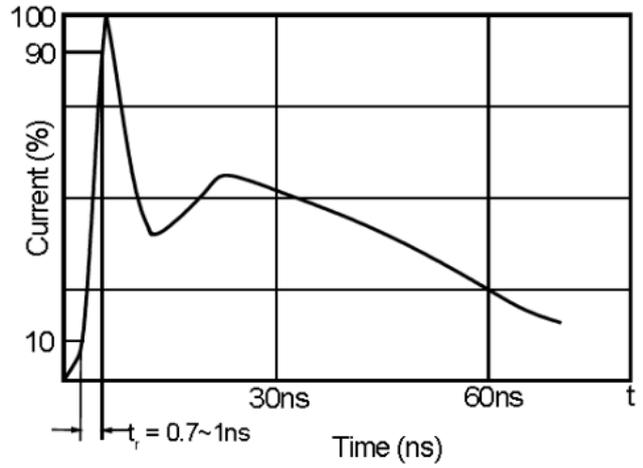
Case dimensions													
													
<b>SOT-23 (TO-236AB)</b>													
Unit	A	A <sub>1max</sub>	b <sub>p</sub>	c	D	E	e	e <sub>1</sub>	H <sub>e</sub>	L <sub>p</sub>	Q	v	w
mm	1.0 ±0.1	0.1	0.43 ±0.05	0.12 ±0.03	2.9 ±0.1	1.3 ±0.1	1.9	0.95	2.3 ±0.2	0.3 ±0.15	0.5 ±0.05	0.2	0.1

Maximum ratings and electrical characteristics (T <sub>a</sub> = 25°C)						
Characteristics	Test condition	Symbol	Value			Unit
			Min.	Typ.	Max.	
ESD per IEC 61000-4-2 (contact)	-	$V_{ESD}$	-30	-	+30	kV
ESD per IEC 61000-4-2 (air)						
Peak pulse power	$T_p = 8/20\mu s$	$P_D$	-	-	300	W
Peak pulse current	$T_p = 8/20\mu s$	$I_{PP}$	-	-	17	A
Soldering temperature	$t = 10s$	$T_L$			260	°C
Junction temperature		$T_J$			125	°C
Storage temperature	-	$T_{STG}$	-55	-	150	°C
Reverse working voltage	-	$V_{RWM}$	-	-	5.0	V
Reverse breakdown voltage	$I_T = 1.0mA$	$V_{BR}$	6.0	-	-	V
Reverse leakage current	$V_{RWM} = 5.0V$	$I_R$	-	-	20	$\mu A$
Clamping voltage	$I_{PP} = 1.0A, t_p = 8/20\mu A$	$V_C$	-	-	9.8	V
	$I_{PP} = 17A, t_p = 8/20\mu A$		-	-	18	
Junction capacitance	$V_R = 0V, f = 1.0MHz$ (Pin1 to Pin2)	$C_J$	-	-	350	pF
	$V_R = 0V, f = 1.0MHz$ (Pin1 to Pin3 and Pin2 to Pin3)		-	-	400	pF

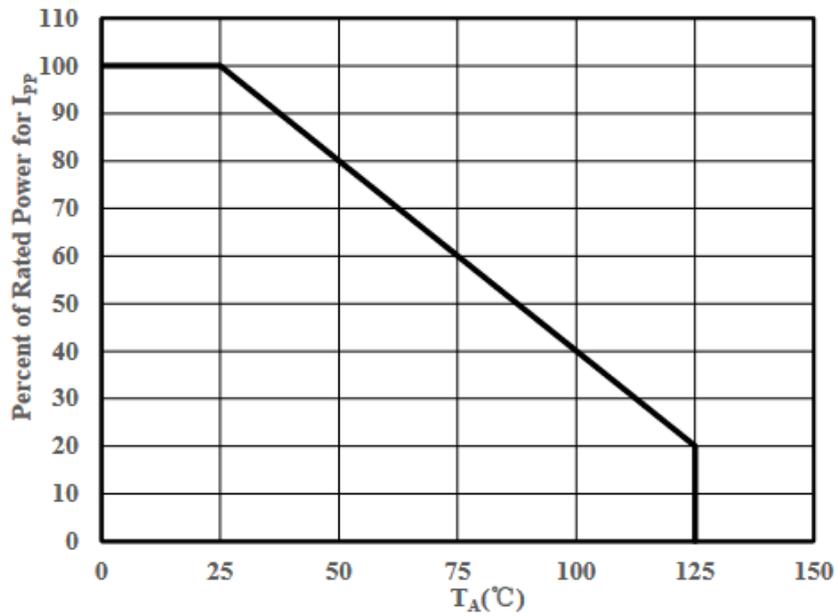
8/20µs waveform per IEC61000-4-5

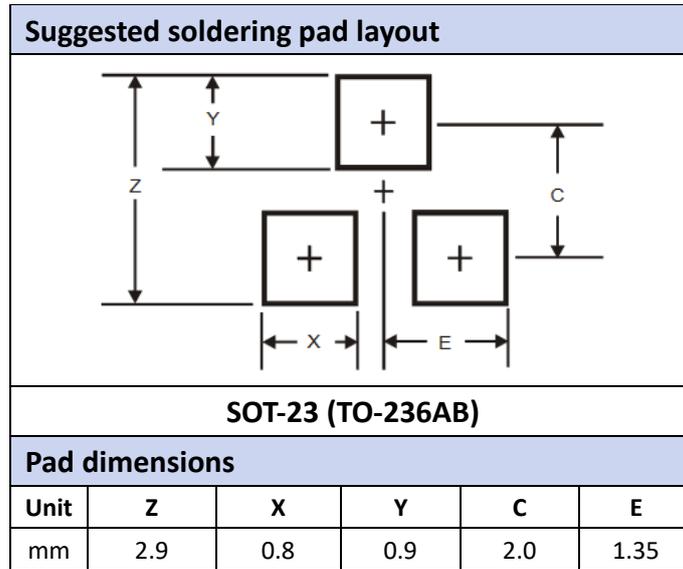


ESD pulse waveform according to IEC61000-4-2



Power derating curve





Ordering information		
Part Number	Package	Shipping Quantity
SM05	SOT-23	3 000 pcs / reel

## Disclaimer

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