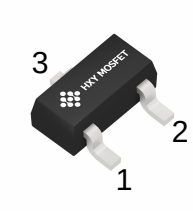
Discription

The SM05T1G protects sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events. Excellent clamping capability, low leakage, low capacitance, and fast response time provide best in class protection on designs that are exposed to ESD.

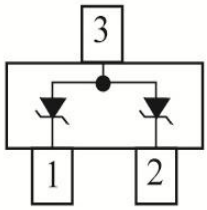
It gives designer the flexibility to protect 2 unidirectional line in applications where arrays are not practical.



SOT-23

Features

- 2 Unidirectional transil functions
- Reverse stand-off voltage: 5V Max
- Low leakage current: nA Level
- Response time is typically < 1 ns
- Transient protection for each line according to
  IEC61000-4-2(ESD) 15KV(air) 8KV(contact)
  IEC61000-4-5(Lightning) see I_{PPM} below



Circuit Diagram

Ordering Information

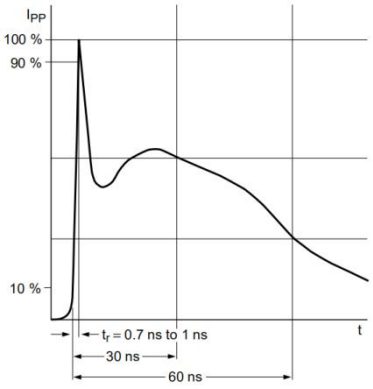
Product ID	Pack	Qty(PCS)
SM05T1G	SOT-23	3000

Absolute Ratings (T_{amb}=25℃)

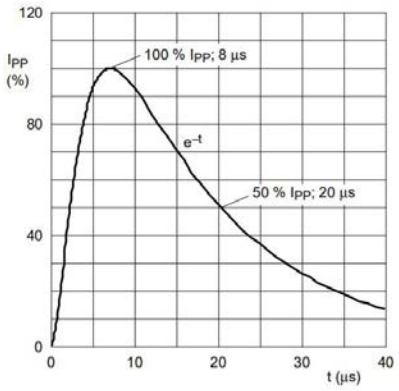
Paramete	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	130	W
Lead Solder Temperature − Maximum (10 Second Duration)	TL	260	℃
ESD per IEC61000-4-2 (Air) ESD per IEC61000-4-2 (Contact)	V_{ESD}	±15 ±8	KV
Operating Temperature Range	T_J	-40 to +125	℃
Storage Temperature Range	Tstg	-55 to +150	℃

Electrical Characteristics (T_A=25℃ unless otherwise specified)

Paramete	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V_{RWM}	--	--	5.0	V	
Breakdown Voltage	V_{BR}	6.2	--	--	V	I_T=1mA
Leakage Current ILeak	I_R	--	--	100	nA	V_{RWM}=5V
Clamping Voltage	V_C	--	--	13.0	V	I_{PP}=10A,Tp=8/20μs
Peak Pulse Current	I_{PP}	--	--	10.0	A	Tp=8/20μs
Junction Capacitance	C_J	--	60	80	pF	V_R=0V, f=1MHz (Pin 1 or 2 to 3)
Junction Capacitance	C_J	--	--	40	pF	V_R=0V, f=1MHz (Pin 1 to 2 and 2 to 1)

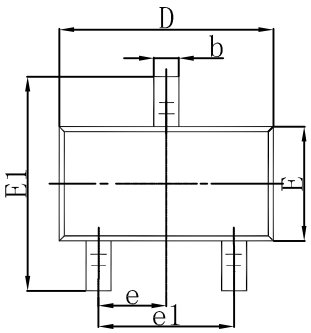


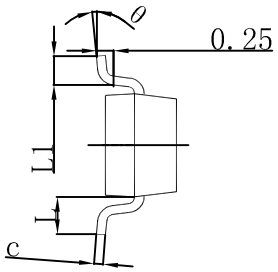
IEC61000−4−2 Waveform

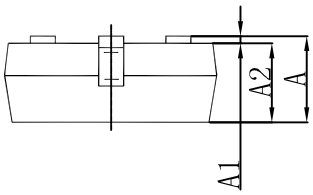


8/20 μs Pulse Waveform

SOT-23 Package Outline Dimensions

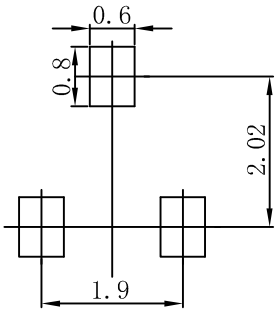






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm.
3.The pad layout is for reference purposes only.

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