Discription

The HSTS232050UL40 protects sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events.

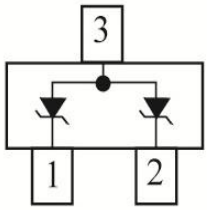
Excellent clamping capability, low leakage, low capacitance, and fast response time provide best in class protection on designs that are exposed to ESD.

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

SOT-23

Features

★ We declare that the material of product compliance with RoHS requirements and Halogen Free.
★ 2 unidirectionaltransilfunctions
★ Low leakage current:IR max< 20 μA at VRM
★ 300W peak pulse power(8/20μs)
★ Transient protection for data lines as per
★ IEC61000-4-2(ESD) 15KV(air) 8KV(contact)
★ IEC61000-4-5(Lightning) see IPPM below



Circuit Diagram

Orderingin formation

Product ID	Pack	Qty(PCS)
HSTS232050UL40	SOT-23	3000

Absolute Ratings(Tamb = 25°C)

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power (t_p = 8/20μs)	100	W
T_L	Maximum lead temperature for soldering during 10s	260	°C
T_{stg}	Storage Temperature Range	-55 to +150	°C
T_{op}	Operating Temperature Range	-40 to +125	°C
T_j	Maximum junction temperature	150	°C
	IEC61000-4-2 (ESD) air discharge contact discharge	±15 ±8	KV

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.VF = 0.9V at IF = 10mA

Device	V_{RWM} (V)	I_R(uA) @ V_{RWM}	V_{BR} (V)@ I_T (Note 1)	I_T	V_C (V) @ Max I_{PP}*	I_{PP} (A)*	C (pF)
	Max	Max	Min	mA	Max	Max	Typ
HSTS232050UL40	5	0.5	6	1	25	4	0.5

1. V_{BR} is measured with a pluse test current I_T at an ambient temperature of 25℃.

Typical Characteristics

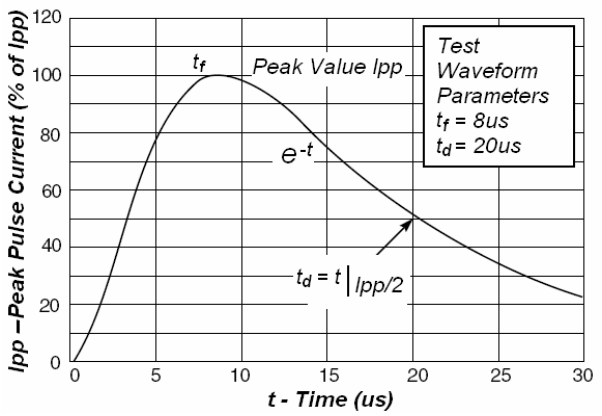


Fig 1. Pulse Waveform

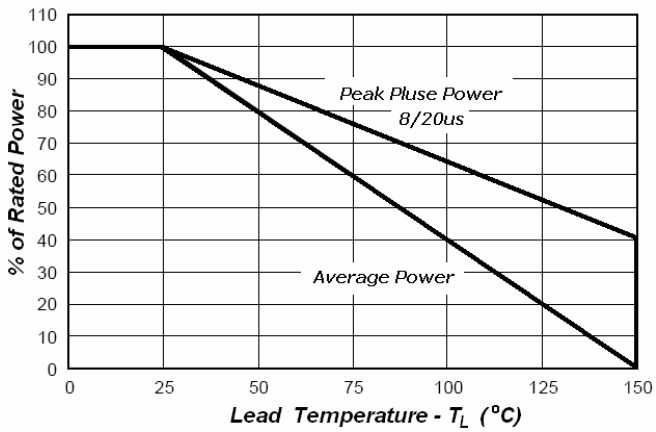
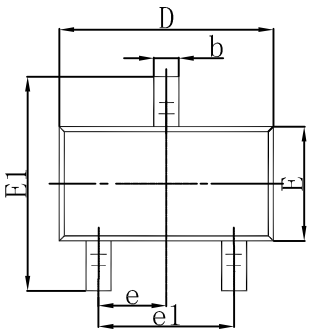
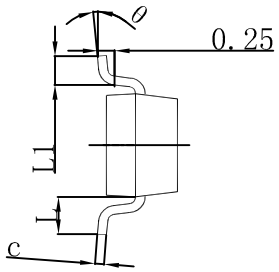
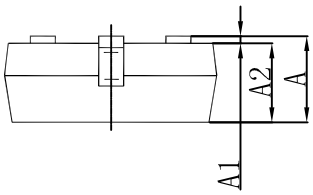


Fig 2.Power Derating

SOT-23 Package Outline Dimensions

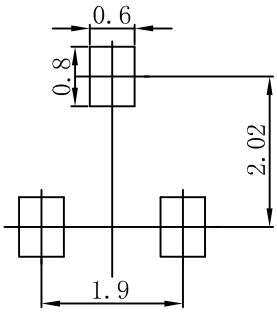






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 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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