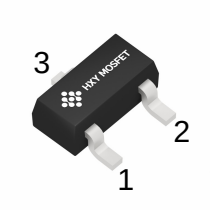
Discription

The STS232240U301 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.

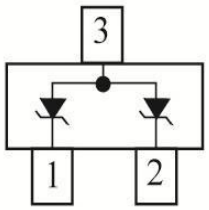
It gives designer the flexibility to protect 2 unidirectional lines in applications where arrays are not practical.



SOT-23

Features

- ★ Transient protection for high-speed data lines
  IEC 61000-4-2(ESD) ±15kV (Contact)
  ±8kV (Air)
- ★ Peak power dissipation: 300W (8/20us)
- ★ Working voltages : 24V
- ★ Protects one unidirectional line or two unidirectional lines
- ★ Low clamping voltage
- ★ Low leakage current



Circuit Diagram

Ordering Information

Product ID	Pack	Qty(PCS)
STS232240U301	SOT-23	3000

Absolute Ratings(Tamb = 25°C)

Symbol	Parameter	Value	Units
P_{PP}	Peak Pulse Power (t_p = 8/20 μ s)	100	W
T_L	Maximum lead temperature for soldering during 10s	260	°C
T_{stg}	Storage Temperature Range	-55 to +155	°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

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Working Voltage				24	V
V_{BR}	Reverse Breakdown Voltage	I_T = 1mA	26			V
I_R	Reverse Leakage Current	V_{RWM} = 5.0V			1.0	uA
V_C	Clamping Voltage	I_{PP} = 4A, t_p = 8/20μs			50	V
C_J	Junction Capacitance	V_R = 0V, f = 1MHz		25		pF

Typical Characteristics

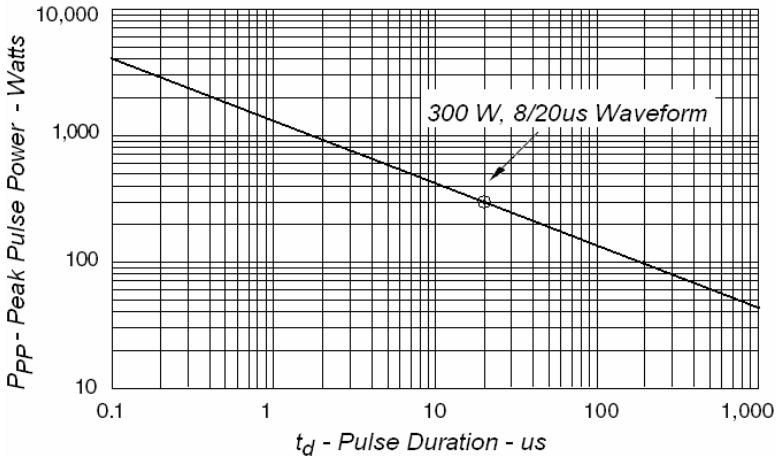


Fig1. Peak Pulse Power VS Pulse Time

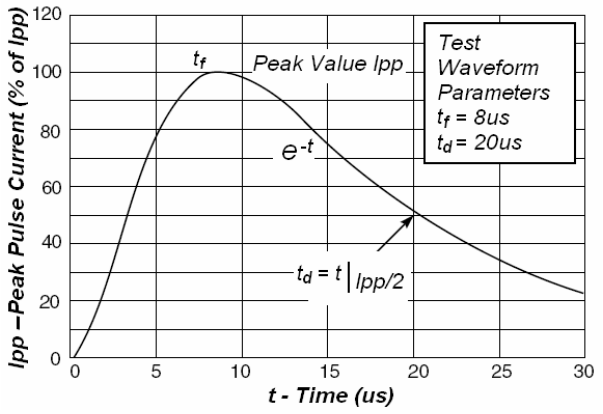


Fig2. Pulse Waveform

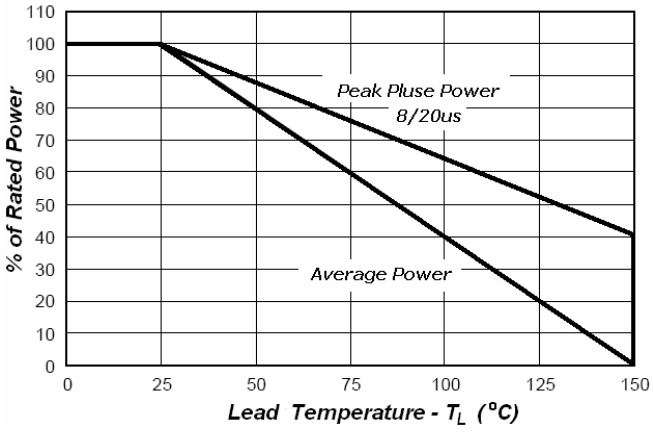
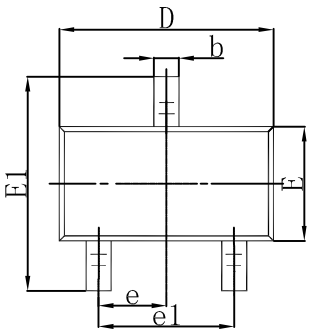
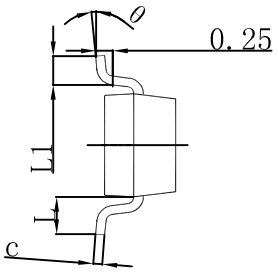
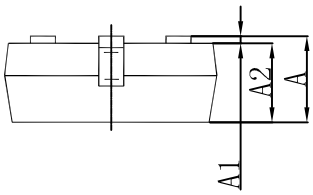


Fig3.Power Derating

SOT-23 Package Outline Dimensions

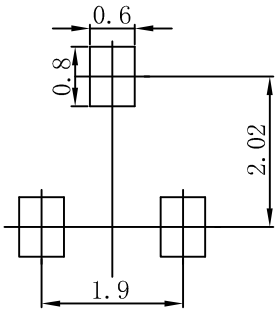






Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037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