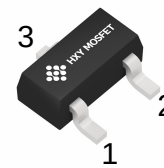




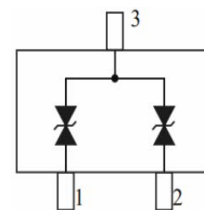
Discription

The HDESD12VL2BTQ-7 1protects 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 one bi-directional line in applications where arrays are not practical.



SOT-23



Circuit Diagram

Features

- ★ LowLeakage
- ★ IEC61000-4-2Level4ESDProtection
- ★ We declare that the material of product compliant with RoHS requirements and Halogen Free.

Orderingin formation

Product ID	Pack	Qty(PCS)
HDESD12VL2BTQ-7	SOT-23	3000

Absolute Ratings(Tamb = 25°C)

Symbol	Parameter	Value	Units
P _{PP}	Peak Pulse Power (t _p = 8/20μs)	400	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	-55 to +125	°C
T _j	Maximum junction temperature	150	°C
	IEC61000-4-2 (ESD) air discharge	± 30	KV
	contact discharge	± 30	
	IEC61000-4-4 (EFT)	15	A



Electrical Characteristics

Device	V_{RWM} (V)	I_R (μ A) @ V_{RWM}	V_{BR} (V) @ I_T (Note 1)		I_T	V_C (V) @ $I_{PP} = 1$ A (Note 2)	V_C (V) @ MAX I_{PP} (Note 2)	I_{PP} (A) (Note 2)	P_{PK} (W) (Note 2)	C (pF)
	Max	Max	Min	Max	mA	Max	Max	Max	Max	Typ
HDESD12VL2BTQ-7	12	0.5	12	15.8	1	16	27	18	400	20

Other voltage available upon request.

1. V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C
2. Surge current waveform per Figure 1.

Typical Characteristics

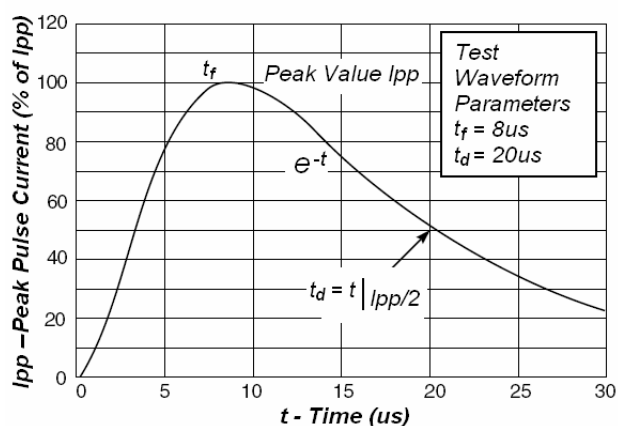


Fig1. Pulse Waveform

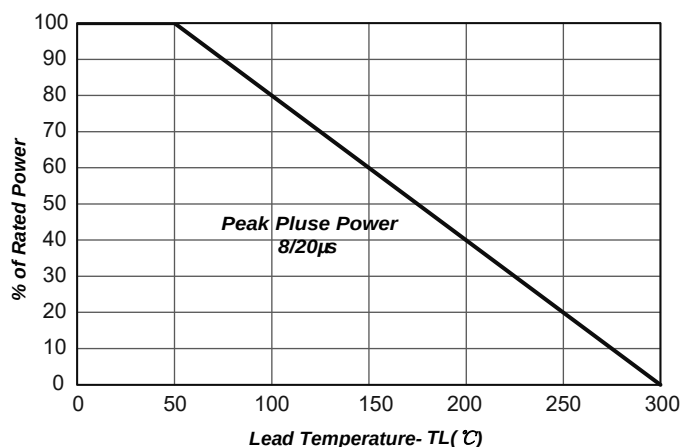
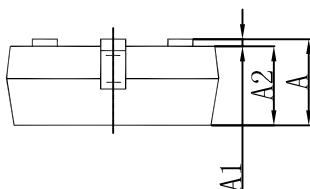
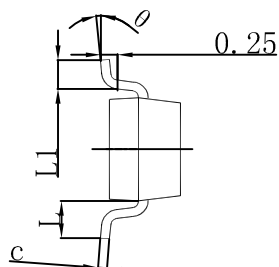
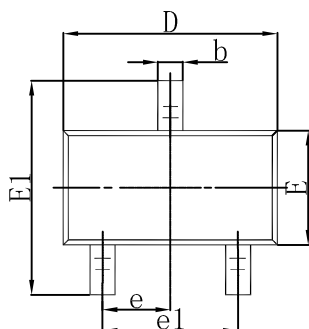


Fig2. Power Derating Curve

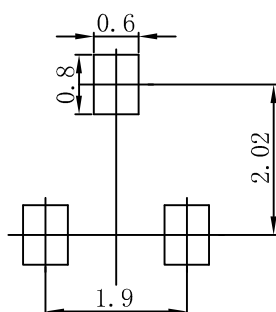


SOT-23 Package Outline Dimensions



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: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.



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