

Features

- Reverse stand-off voltage: 5V max.
- Transient protection for each line according to IEC61000-4-2 (ESD): $\pm 30\text{kV}$ (contact discharge)
IEC61000-4-5 (surge): 5A (8/20 μs)
- Low capacitance: $C_{\text{I/O-GND}} = 0.65\text{pF}$ typ. ($V_{\text{CC}} = \text{floated}$)
 $C_{\text{I/O-GND}} = 0.35\text{pF}$ typ. ($V_{\text{CC}} = 5\text{V}$)
- Ultra-low leakage current: $I_{\text{R}} < 1\text{nA}$ typ.
- Low clamping voltage: $V_{\text{CL}} = 16.5\text{V}$ @ $I_{\text{PP}} = 16\text{A}$ (TLP)
- Solid-state silicon technology

Mechanical Characteristics

- JEDEC SOT23-6L package
- Molding compound flammability rating: UL 94V-0

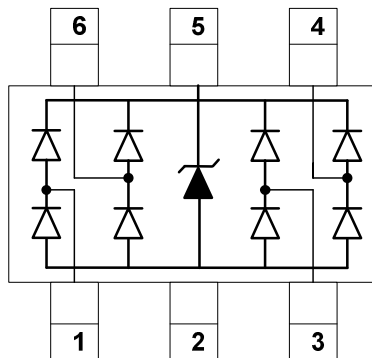
Applications

- USB 2.0
- HDMI 1.3
- SATA and eSATA
- DVI
- IEEE 1394
- PCI Express
- Portable Electronics
- Notebooks

Ordering Information

Part Number	Qty per Reel	Reel Size
ESDUEG5V0T4-TP	3000	7"

Dimensions and Pin Configuration



Absolute Maximum Ratings (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Rating	Unit
Peak pulse power (t _p = 8/20μs)	P _{pk}	150	W
Peak pulse current (t _p = 8/20μs)	I _{PP}	5	A
ESD according to IEC61000-4-2 air discharge	V _{ESD}	±30	kV
ESD according to IEC61000-4-2 contact discharge		±30	
Junction temperature	T _J	125	°C
Operating temperature	T _{OP}	-40~85	°C
Lead temperature	T _L	260	°C
Storage temperature	T _{STG}	-55~150	°C

Electrical Characteristics (T_A=25°C unless otherwise specified)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse stand-off voltage	V _{RWM}				5.0	V
Reverse leakage current	I _R	V _{RWM} = 5V			1	uA
Reverse breakdown voltage	V _{BR}	I _{BR} = 1mA	7.0	8.0	9.0	V
Forward voltage	V _F	I _F = 10mA	0.6	0.9	1.2	V
Clamping voltage ¹⁾	V _{CL}	I _{PP} = 16A, t _p = 100ns		16.5		V
Dynamic resistance ¹⁾	R _{DYN}			0.45		Ω
Clamping voltage ²⁾	V _{CL}	I _{PP} = 1A, t _p = 8/20μs			10	V
		I _{PP} = 5A, t _p = 8/20μs			15	V.
Junction capacitance	C _{I/O - GND}	V _R = 0V, f = 1MHz, V _{cc} = floated, Any I/O to GND		0.65	1.0	pF
		V _R = 0V, f = 1MHz, V _{cc} = 5V, Any I/O to GND		0.35	0.50	pF
	C _{I/O - I/O}	V _R = 0V, f = 1MHz, Any I/O to I/O		0.35	0.50	pF

Characteristic Curves

Fig1. 8/20 μ s Pulse Waveform

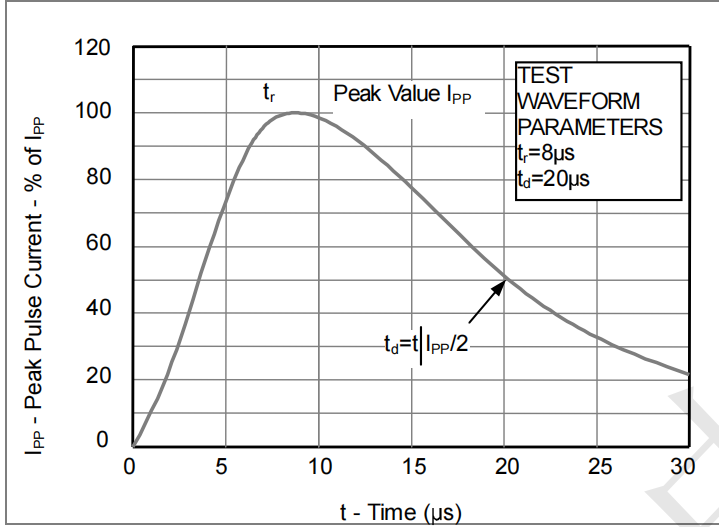


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

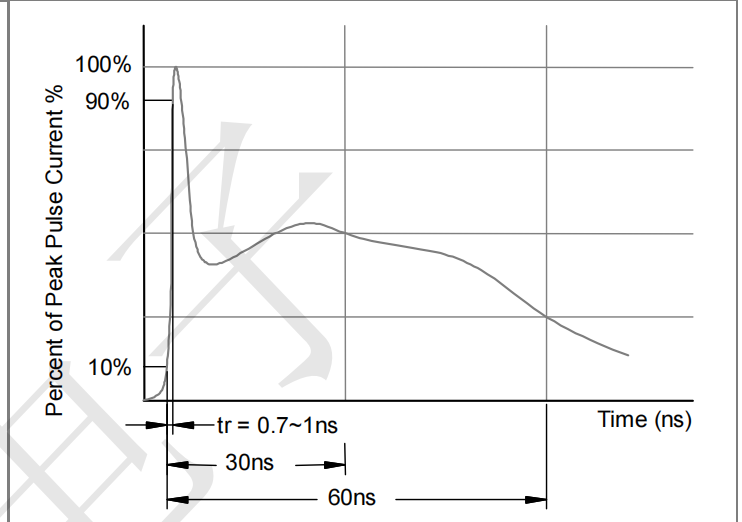
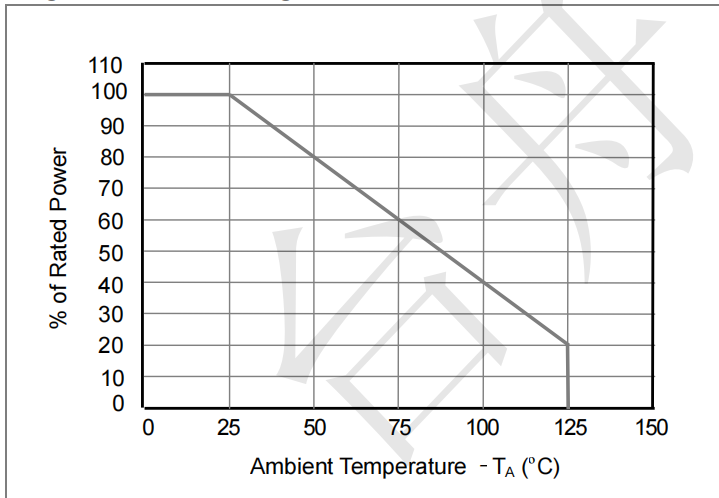
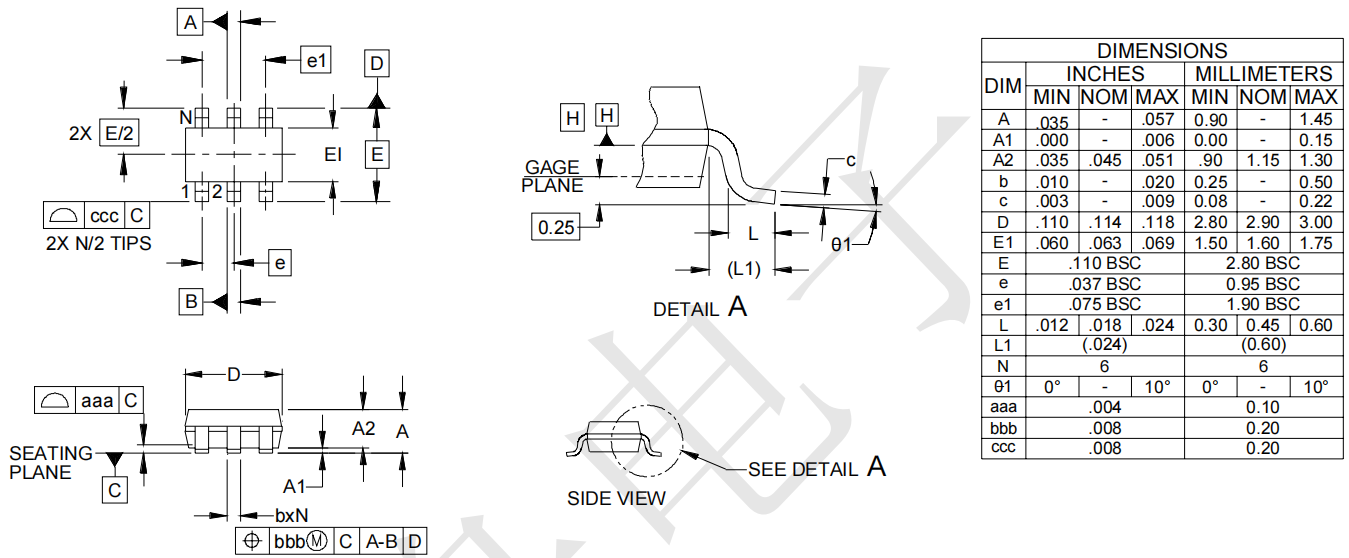


Fig3. Power Derating Curve



Outline Drawing - SOT23-6



Land Pattern - SOT23-6

