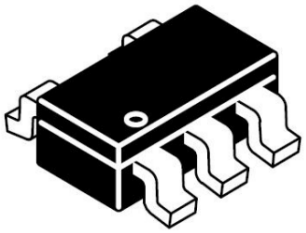
UCLAMP0504A

Bi-directional TVS Diode Array For ESD and Latch-Up Protection

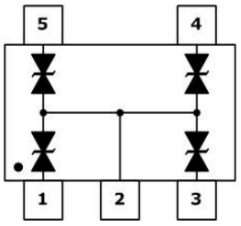
Features

- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- Complies with following standards:
  - – IEC 61000-4-2 (ESD) immunity test
    - Air discharge: ±15kV
    - Contact discharge: ±8kV
  - – IEC61000-4-4 (EFT) 40A (5/50ns)
  - – IEC61000-4-5 (Lightning) 5A (8/20μs)
- RoHS Compliant

Dimensions SOT-25



Pin Configuration



Applications

- USB 2.0 power and data line
- Set-top box and digital TV
- Digital video interface (DVI)
- Notebook Computers
- SIM Ports
- 10/100 Ethernet

Mechanical Characteristics

- Package: SOT-25
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel:3,000pcs
- Reel Size:7inch

Absolute Maximum Ratings(Tamb=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppp	100	W
ESD per IEC 61000−4−2 (Air)	V_{ESD}	±15	Kv
ESD per IEC 61000−4−2 (Contact)		±8	
Operating Temperature Range	T_J	-55 to +125	℃
Storage Temperature Range	T_{STJ}	-55 to +150	℃

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

Part Number	Device Marking	V_{RWM} (V)	V_{BR} (V)	I_T (mA)	V_C @1A	Vc		I_R μA (Max)	C (Pf) (Typ.)
						(Max)	(@A)		
UCLAMP0504A	S5V	5	6.5	1	9.8	15	2.5	1	20

Characteristic Curves

Fig1. 8/20μs Pulse Waveform

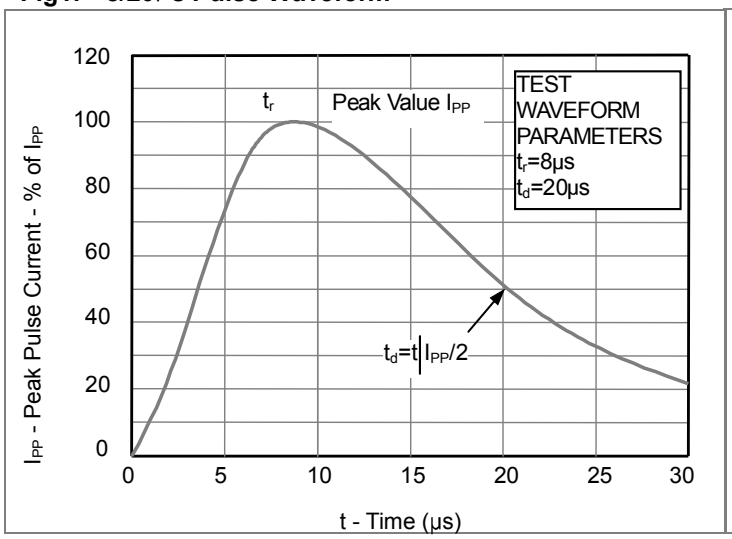


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

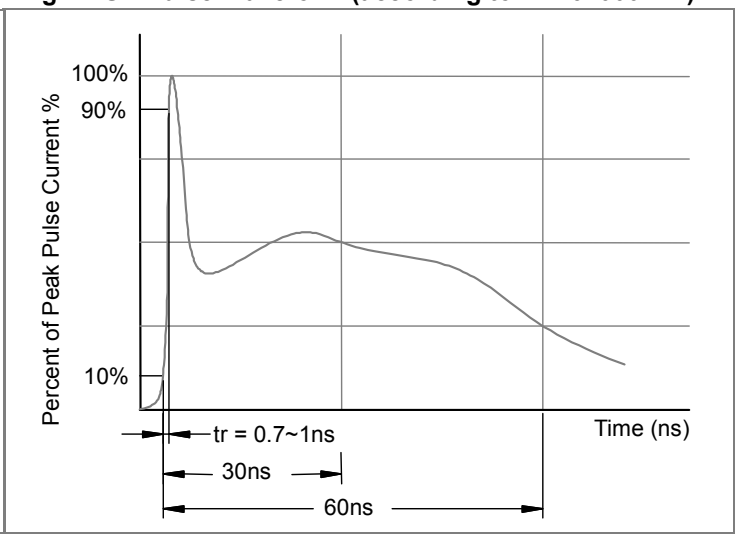
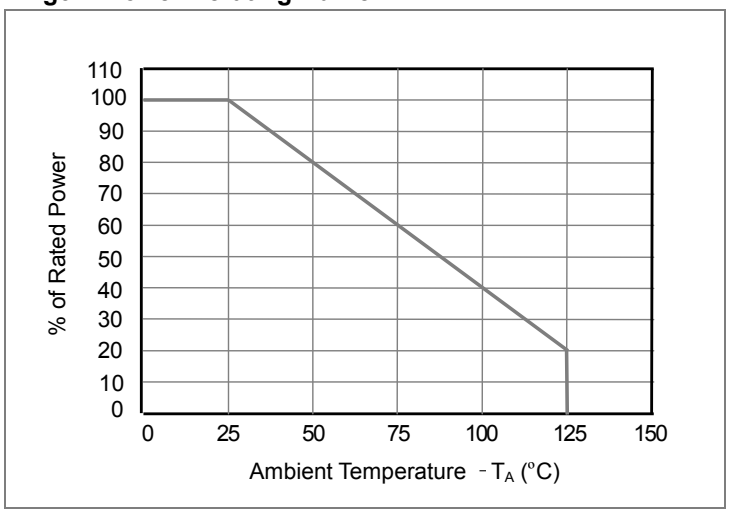
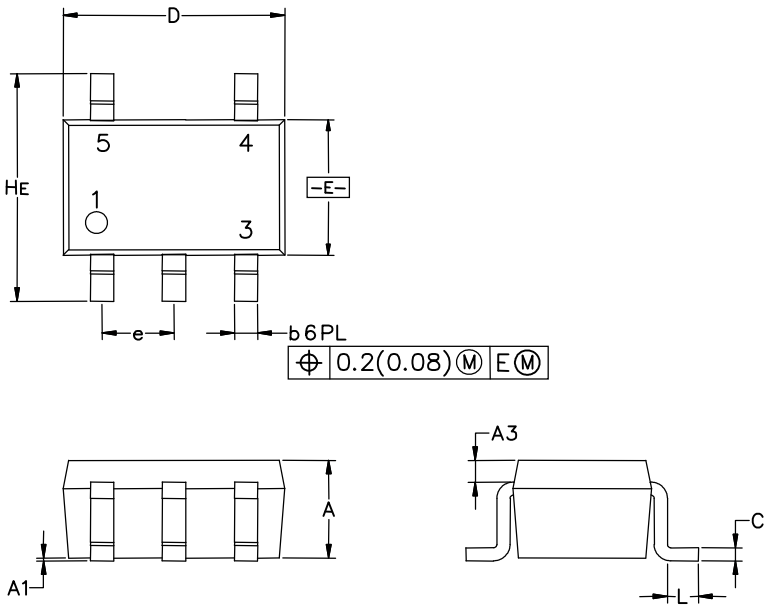


Fig3. Power Derating Curve



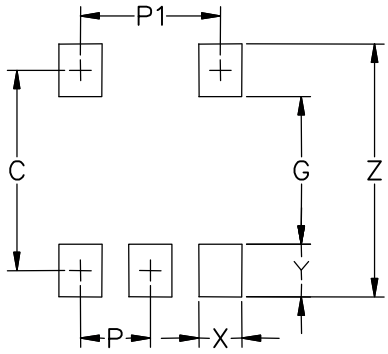
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SOT-25 Package Outline & Dimensions



Symbol	Inches			Millimeters		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	0.039	0.043	0.051	1.00	1.10	1.30
A1	-	-	0.004	0.00	-	0.10
A3	0.008	0.012	0.016	0.20	0.30	0.40
b	0.014	0.016	0.020	0.35	0.40	0.50
C	0.004	0.006	0.010	0.10	0.15	0.25
D	0.106	0.114	0.122	2.70	2.90	3.10
E	0.059	0.063	0.071	1.50	1.60	1.80
e	0.075 BSC			1.90 BSC		
L	0.015	-	-	0.37	-	-
H_E	0.102	0.110	0.118	2.60	2.80	3.00

Soldering Footprint



Symbol	Inches	Millimeters
C	0.094	2.40
G	0.055	1.40
P	0.037	0.95
P1	0.075	1.90
X	0.028	0.70
Y	0.039	1.0
Z	0.134	3.40

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