

## 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:  $\pm 30\text{kV}$   
Contact discharge:  $\pm 30\text{kV}$
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) 9A (8/20 $\mu\text{s}$ )
- RoHS Compliant

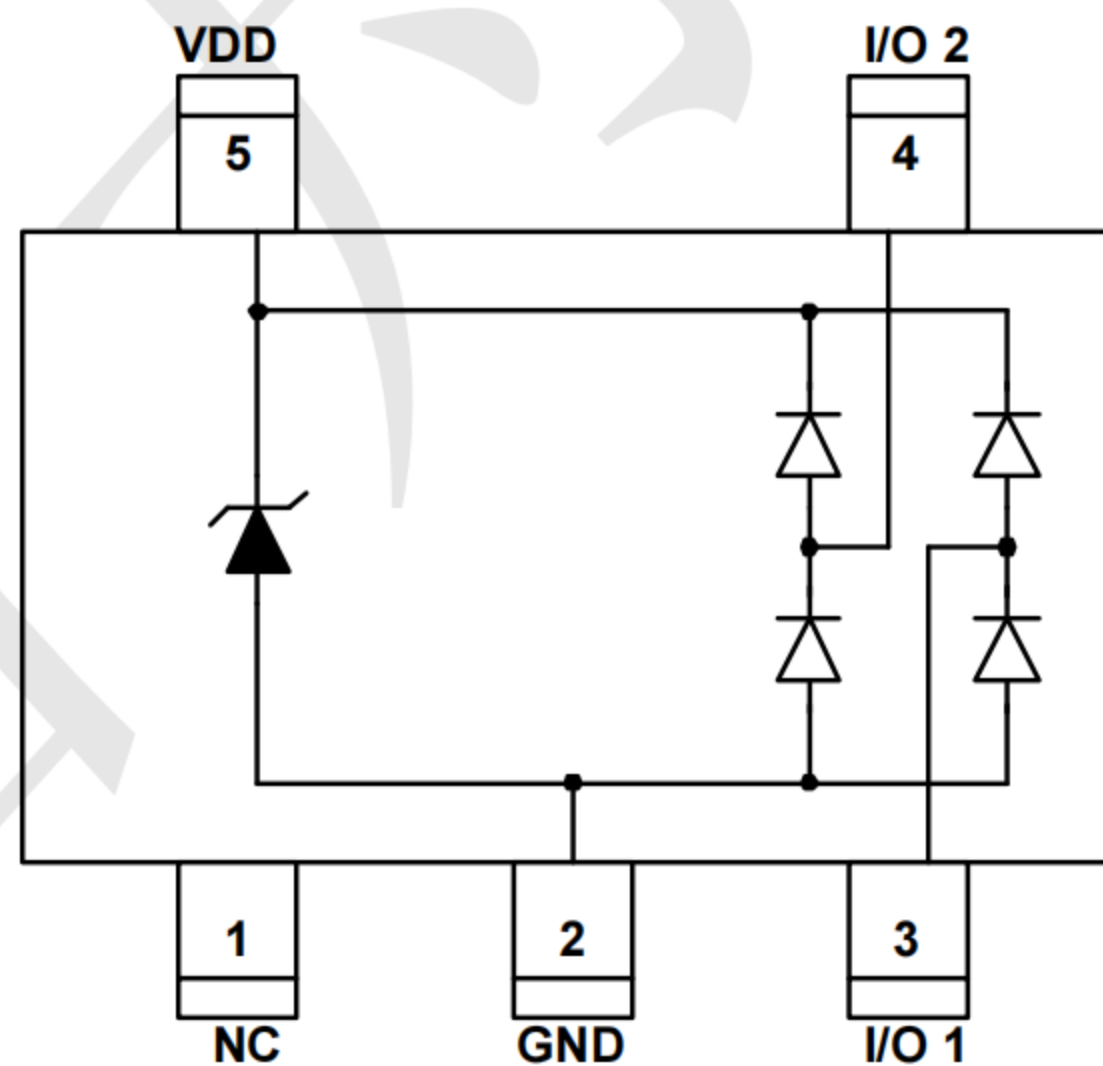
## Mechanical Characteristics

- Package: SOT23-5L
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Shipping Qty : 3000pcs/7Inch Tape & Reel

## 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

## Dimensions and Pin Configuration



**Marking:115TP**

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

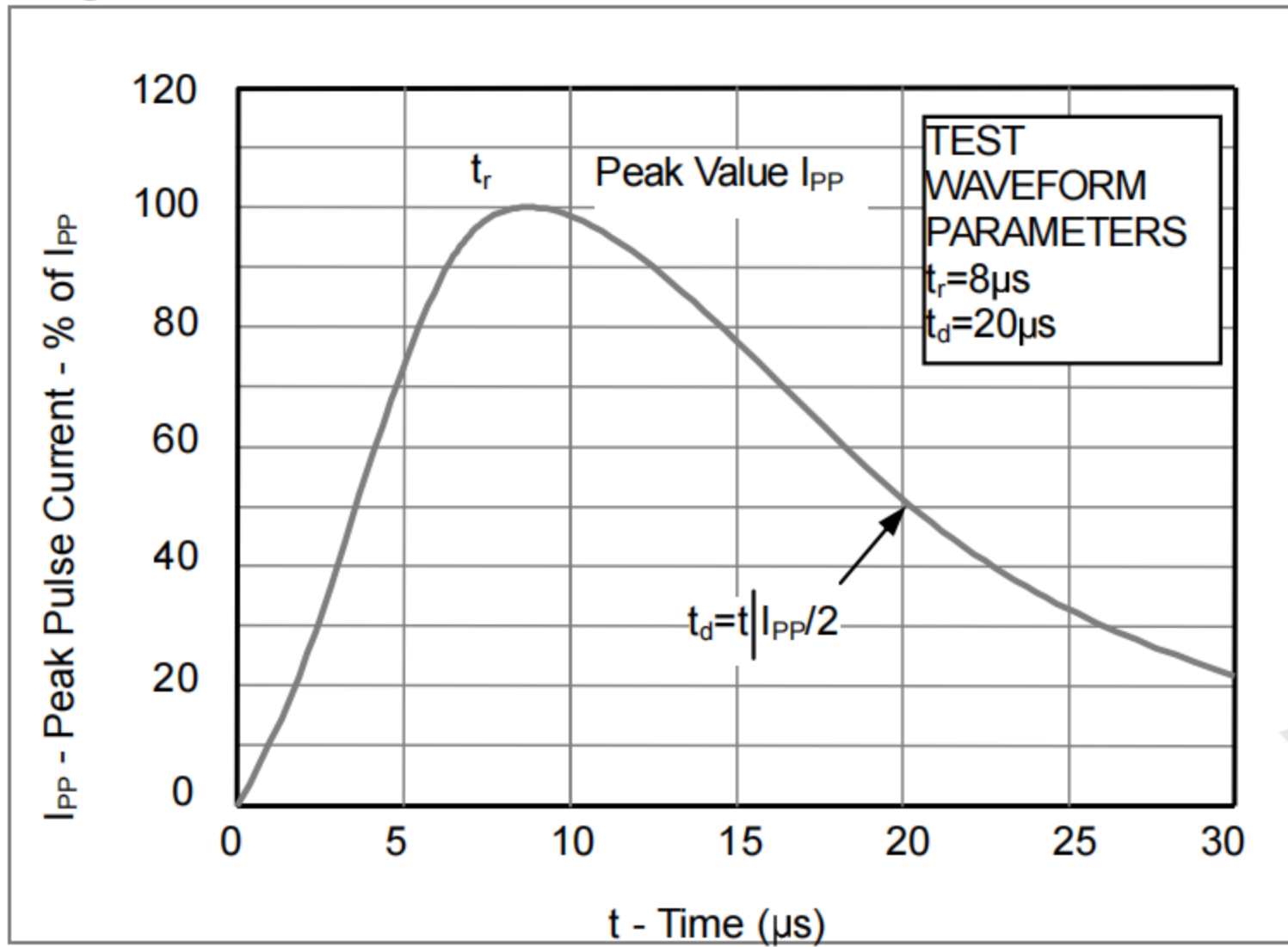
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20µs)	Ppk	150	W
Peak Pulse Current (8/20µs)	Ipp	9	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	±30 ±30	kV
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

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

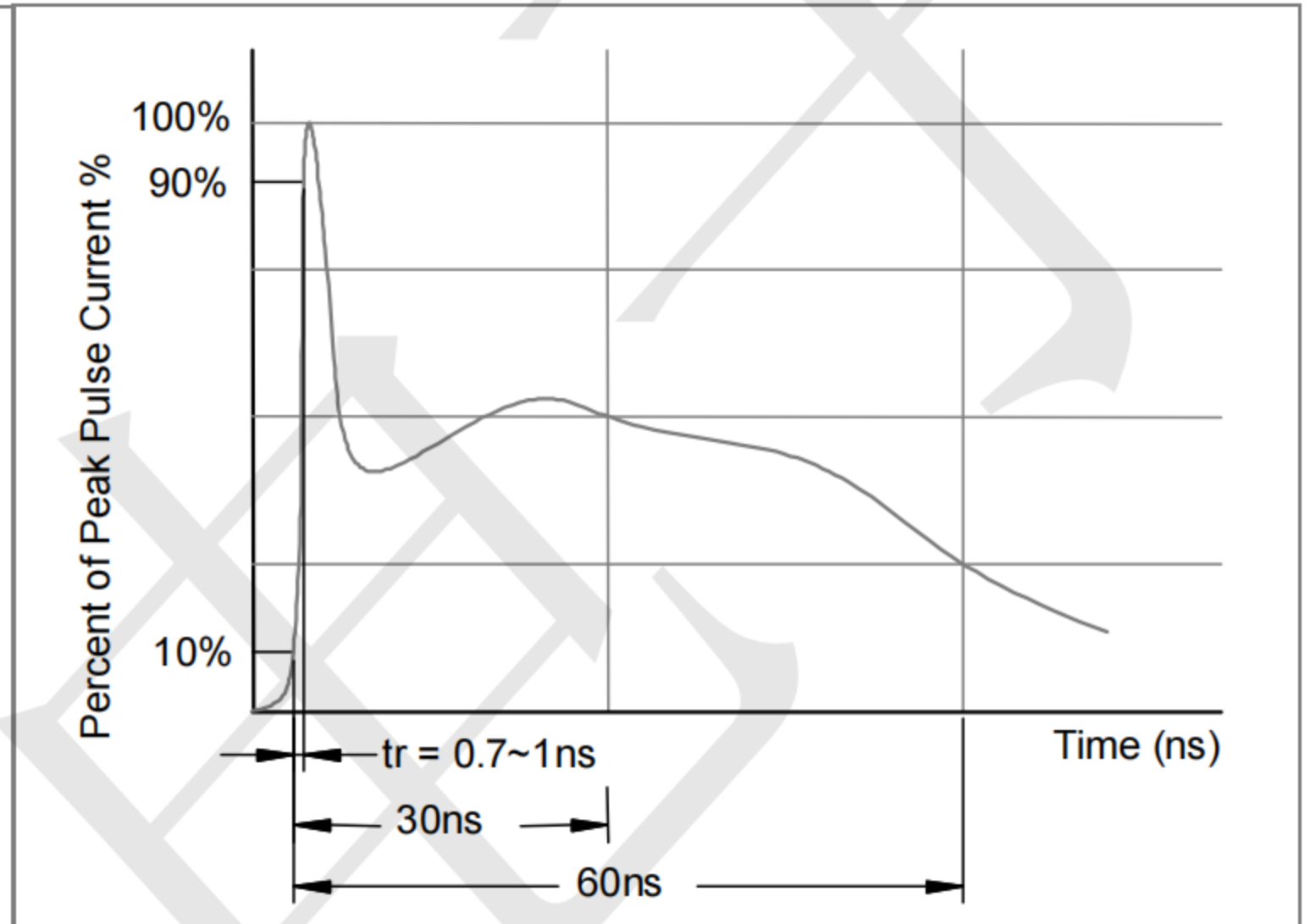
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			5	V	
Breakdown Voltage	VBR	6			V	IT = 1mA
Reverse Leakage Current	IR			0.08	uA	VRWM = 5V
Clamping Voltage	VC			15	V	I <sub>PP</sub> = 1A (8 x 20µs pulse)
Clamping Voltage	VC			24	V	I <sub>PP</sub> = 9A (8 x 20us pulse)
Junction Capacitance	CJ		0.6	1.1	pF	VR = 0V, f = 1MHz IO to IO

**Typical Performance Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise Specified)**

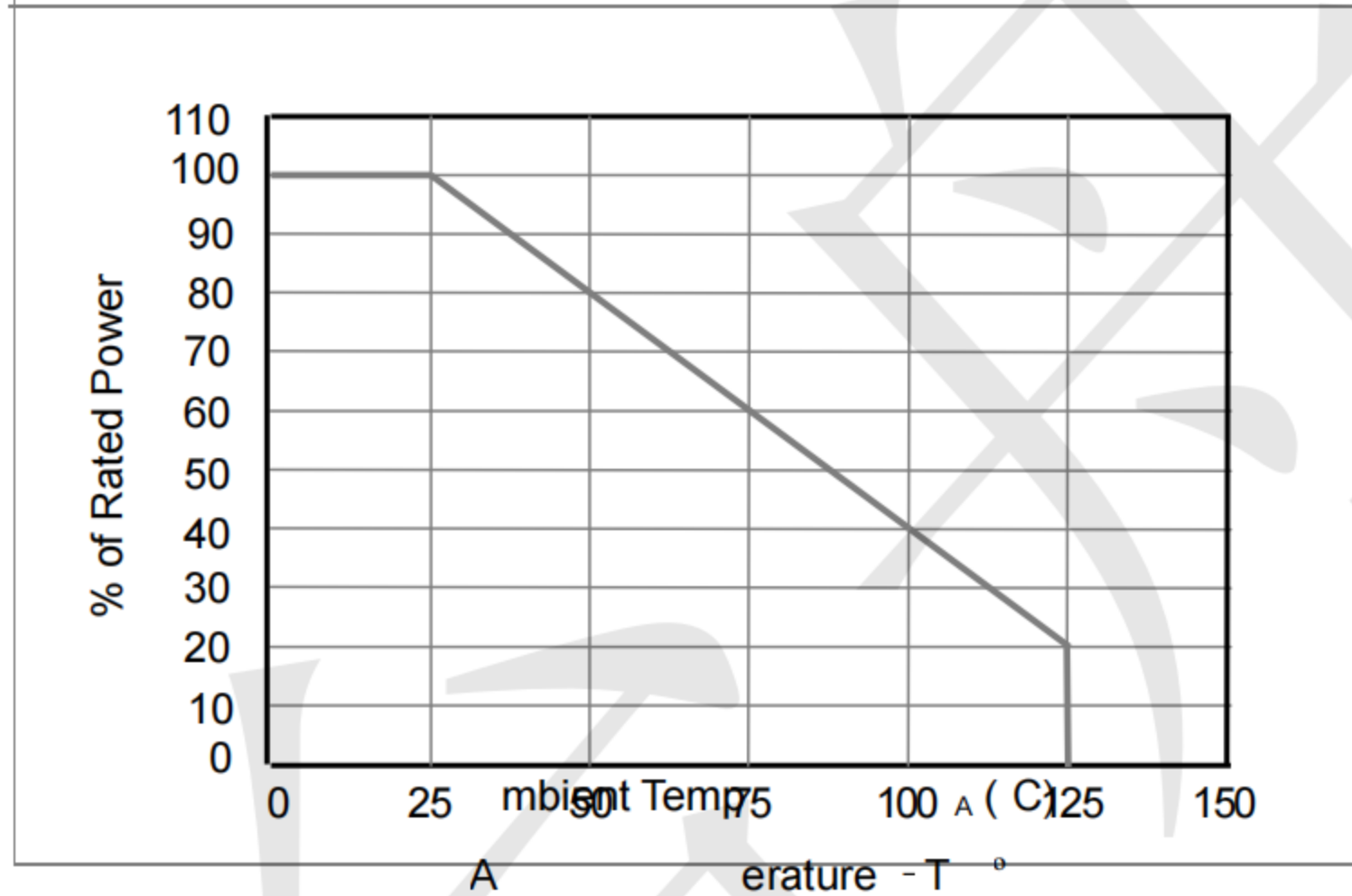
**Fig1. 8/20 $\mu\text{s}$  Pulse Waveform**



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



**Fig3. Power Derating Curve**

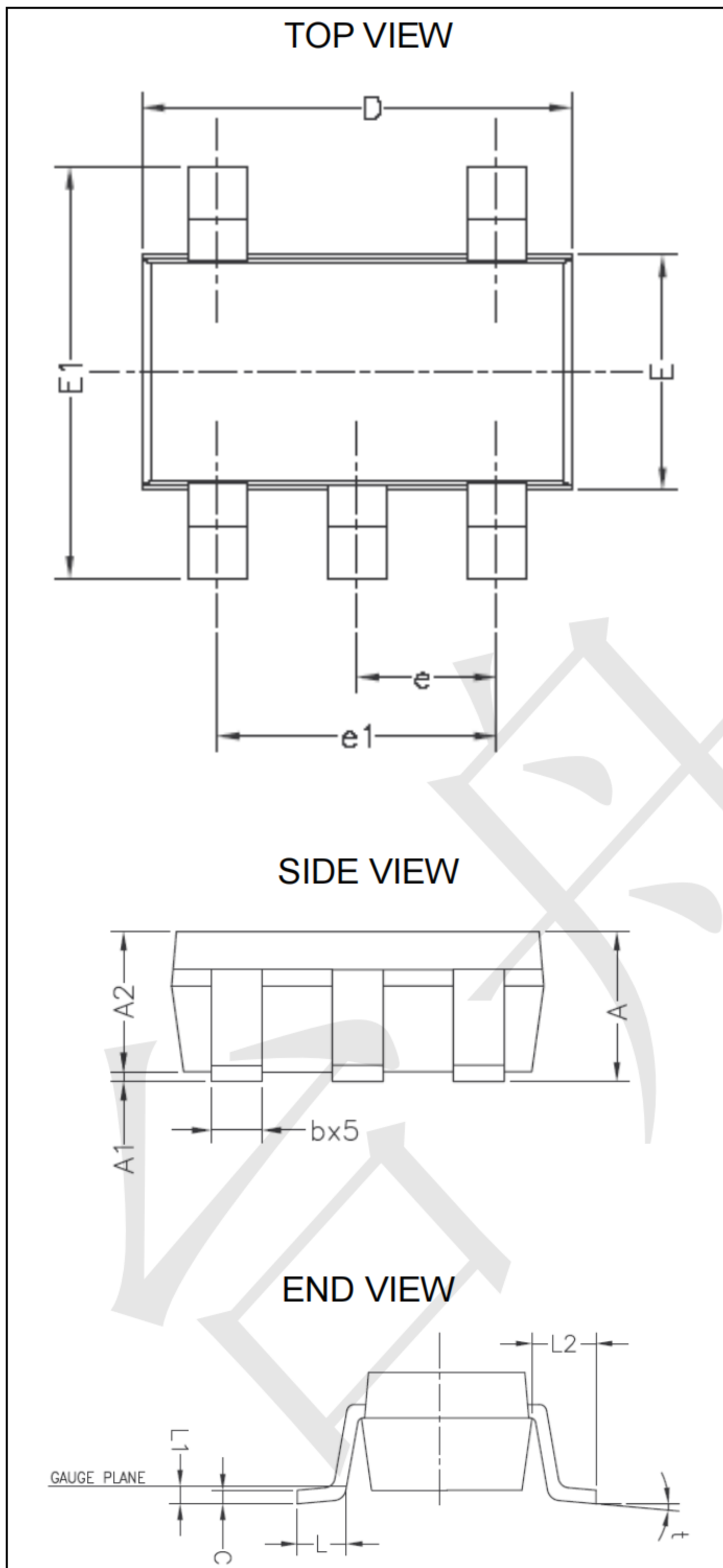




**Mechanical Details**

**SOT23-5L**  
PACKAGE DIAGRAMS

PACKAGE DIMENSIONS



Symbol	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
<b>A</b>	0.95	1.45	0.037	0.057
<b>A1</b>	0	0.15	0.000	0.006
<b>A2</b>	0.9	1.3	0.035	0.051
<b>b</b>	0.3	0.5	0.012	0.020
<b>C</b>	0.08	0.21	0.003	0.008
<b>D</b>	2.72	3.12	0.107	0.123
<b>E</b>	1.4	1.8	0.055	0.071
<b>E1</b>	2.6	3	0.102	0.118
<b>e</b>	0.95BSC		0.037BSC	
<b>e1</b>	1.8	2	0.071	0.079
<b>L</b>	0.3	0.6	0.012	0.024
<b>L1</b>	0.2BSC		0.008BSC	
<b>L2</b>	0.6REF		0.024REF	
<b>θ</b>	0	8	0	8