

Features

- Uni-directional ESD protection of four lines
- 60Watts peak pulse power ($t_p = 8/20\mu s$)
- Working voltage: 5V
- Low clamping voltage
- Low leakage current
- Ultra-low capacitance: 0.6pF Typ
- Protecting 4 unidirectional lines
- IEC 61000-4-2 $\pm 12kV$ contact $\pm 17kV$ air
- IEC 61000-4-5 (Lightning) 4.5A ($8/20\mu s$)

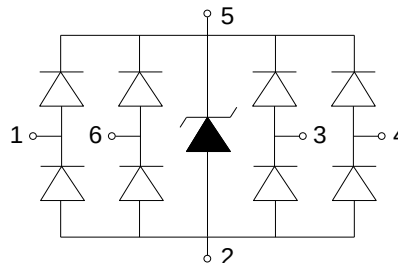
Mechanical Data

- Package: SOT-23-6L
- Molding compound flammability rating: UL 94V-0
- RoHS/WEEE Compliant

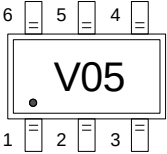
Applications

- USB 2.0
- Monitors and flat panel displays
- 10/100/1000 ethernet
- Notebook computers
- SIM ports
- ATM interface

Schematic & PIN Configuration



Ordering Information

Part Number	Package	Marking	Packing	Reel Size
USBLC6-4SC6	SOT-23-6L		3000 Tape & Reel	7 inches

■ Absolute Maximum Rating($T_A=25^{\circ}\text{C}$ unless otherwise Specified)

Parameters	Symbol	Min.	Max.	Unit
Peak pulse power ($t_p=8/20\mu\text{s}$)@ 25°C	Ppk	-	60	W
Peak pulse current ($t_p=8/20\mu\text{s}$)@ 25°C	IPP		4.5	A
ESD (IEC61000-4-2 air discharge) @ 25°C	VESD	-	± 17	kV
ESD (IEC61000-4-2 contact discharge) @ 25°C	VESD	-	± 12	kV
Junction temperature	T_J	-	150	$^{\circ}\text{C}$
Operating temperature	T_{OP}	-40	125	$^{\circ}\text{C}$
Storage temperature	T_{STG}	-55	150	$^{\circ}\text{C}$
Lead temperature	T_L	-	260	$^{\circ}\text{C}$

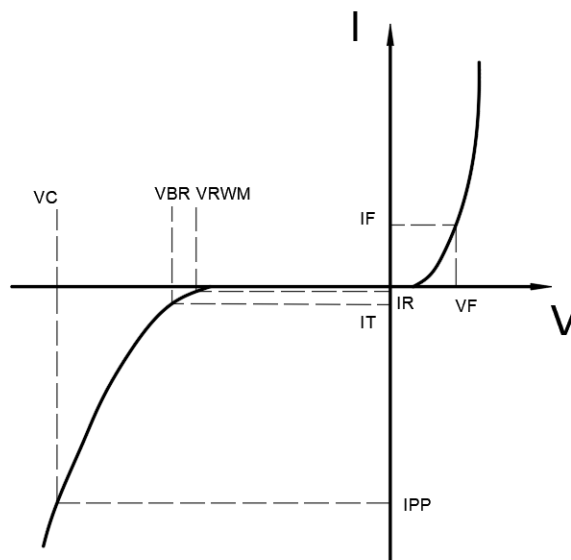
■ Electrical Characteristics($T_A=25^{\circ}\text{C}$ unless otherwise Specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	VRWM				5	V
Reverse Breakdown Voltage	VBR	$I_T=1\text{mA}$	6			V
Reverse Leakage Current	IR	VRWM=5V			1	μA
Clamping Voltage	VC	IPP=1A; $t_p=8/20\mu\text{s}$		9		V
Clamping Voltage	VC	IPP=4.5A; $t_p=8/20\mu\text{s}$		12		V
Junction Capacitance	CJ	I/O to GND; VR=0V; f=1MHz		0.6	0.8	pF
		Between I/O; VR=0V; f=1MHz		0.3	0.4	pF

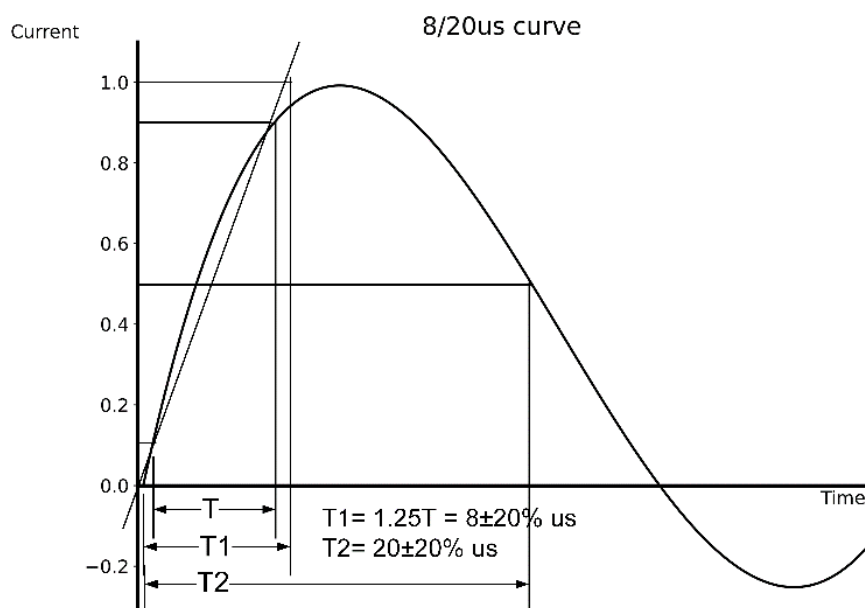


■ Electrical Parameters($T_A=25^{\circ}\text{C}$ unless otherwise Specified)

Symbol	Parameters
V_{RWM}	Peak Reverse Working Voltage
I_{R}	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_{T}
I_{T}	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_{C}	Clamping Voltage @ I_{PP}
I_{F}	Forward Current
V_{F}	Forward Voltage @ I_{F}

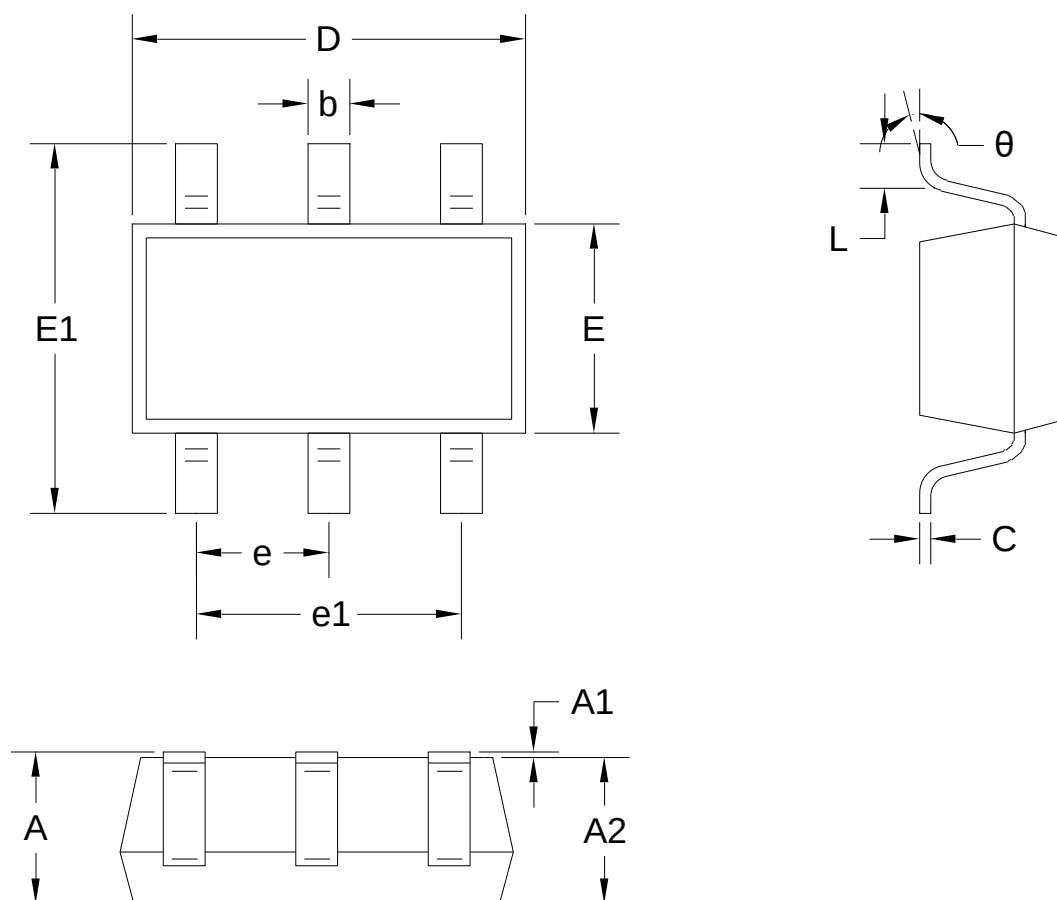


■ Typical Characteristics($T_A=25^{\circ}\text{C}$ unless otherwise Specified)





■ Outline Drawing – SOT-23-6L



Unit: mm

Symbol		A	A1	A2	b	c	D
Spec	Min	1.050	0.000	1.050	0.300	0.100	2.820
	Max	1.250	0.100	1.150	0.500	0.200	3.020
Symbol		E	E1	e	e1	L	θ
Spec	Min	1.500	2.650	0.950BSC	1.800	0.300	0°
	Max	1.700	2.950		2.000	0.600	8°