

USBLC6-2SC6 Low Capacitance TVS Diode Array

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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: ±30kV Contact discharge: ±30kV

- IEC61000-4-4 (EFT) 40A (5/50ns)

-IEC61000-4-5 (Lightning) 6A (8/20µs)

RoHS Compliant

Ordering Information

Part Number	Qty per Reel	Reel Size	
USBLC6-2SC6	3000	7"	

Mechanical Characteristics

Package: SOT23-6

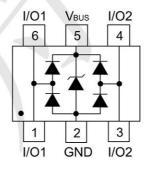
· Lead Finish: Matte Tin

• UL Flammability Classification Rating 94V-0

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:UL26



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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	6	А
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	Тур	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			5	V	
Breakdown Voltage	VBR	6			V	IT = 1mA
Reverse Leakage Current	I _R			0.08	uA	VRWM =5V
Clamping Voltage	Vc			11	V	IPP = 1A (8 x 20µs pulse)
Clamping Voltage	Vc		12		V	IPP = 6A (8 x 20us pulse)
Junction Capacitance	C1		0.35	0.5	pF	VR = 0V, f = 1MHz IO to IO



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Typical Performance Characteristics (T_A=25°C unless otherwise Specified)

Fig1. 8/20µs Pulse Waveform

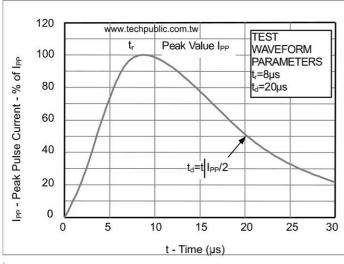
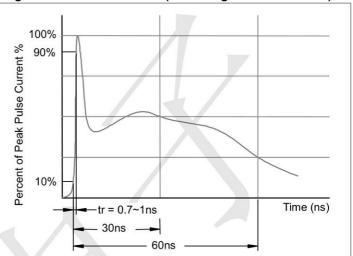
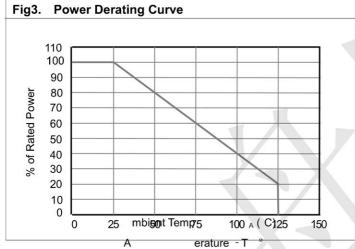


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

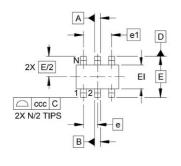


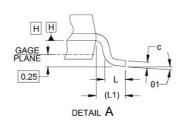


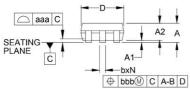


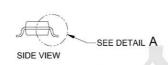
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Outline Drawing - SOT23-6



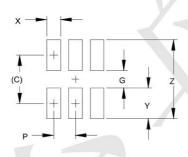






		DIN	IENSI	ONS		
DIM	INCHES			MILLIMETERS		
	MIN	NOM	MAX	MIN	NOM	MAX
Α	.035	15-	.057	0.90	-	1.45
A1	.000	-	.006	0.00	- /	0.15
A2	.035	.045	.051	.90	1.15	1.30
b	.010	150	.020	0.25	V -	0.50
С	.003	-	.009	0.08	-	0.22
D	.110	.114	.118	2.80	2.90	3.00
E1	.060	.063	.069	1.50	1.60	1.75
E	.110 BSC			2.80 BSC		
е	.037 BSC				.95 BS	С
e1	.075 BSC			1.90 BSC		
L	.012	.018	.024	0.30	0.45	0.60
L1	(.024)				(0.60)	
N	6			1	6	0
01	0°	-	10°	0°	h -	10°
aaa	.004				0.10	
bbb	.008				0.20	
CCC	.008				0.20	

Land Pattern - SOT23-6



DIMENSIONS					
DIM	INCHES	MILLIMETERS			
С	(.098)	(2.50)			
G	.055	1.40			
Р	.037	0.95			
X	.024	0.60			
Y	.043	1.10			
Z	.141	3.60			