

TPUSBLC6-4SC6

Low Capactiance 4-Line TVS Array

www.sot23.com.tw

Features

Ultra low capacitance: 0.35 pF typical (I/O to I/O)

Ultra low leakage: nA level

Low operating voltage: 5V

Low clamping voltage

Up to 4 data lines and one power line protects

Complies with following standards:

- IEC 61000-4-2 (ESD) immunity test

Air discharge: ±25kV Contact discharge: ±25kV – IEC61000-4-4 (EFT) 40A (5/50ns)

ROHS Compliant

USBLC6-4SC6 pin to pin fully compatible

Ordering Information

Part Number	Qty per Reel	Reel Size	
TPUSBLC6-4SC6	3000	7"	

Mechanical Characteristics

Package: SOT23-6Lead Finish: Matte Tin

Case Material: "Green" Molding Compound.

◆ UL Flammability Classification Rating 94V-0

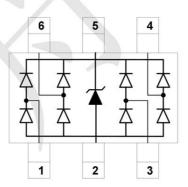
Moisture Sensitivity: Level 3 per J-STD-020



Applications

- ◆ USB 2.0 and USB 3.0 Ports
- USB OTG
- Digital video interface(DVI)
- Monitor and Flat Panel Displays
- PCI Express and Serial SATA Ports
- Gigabit Ethernet
- ♦ IEEE 1394 firewire ports
- ◆ Consumer products (STB, DVD, DSC, DVC...)

Dimensions and Pin Configuration



Circuit and Pin Schematic

Marking: UL46



www.sot23.com.tw

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

Parameter	Symbol	Value	Unit
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	±25 ±25	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	Any I/O pin to ground
Breakdown Voltage	VBR	6			V	IT = 1mA, any I/O pin to ground
Reverse Leakage Current	I _R			0.3	μA	VRWM = 5V, any I/O pin to ground
Clamping Voltage	Vc			20	V	IPP = 3A (8 x 20µs pulse) any I/O pin to ground
Junction Capacitance	CJ		0.35	0.4	pF	VR = 0V, f = 1MHz, between I/O pins
Junction Capacitance	Cì			0.8	pF	VR = 0V, f = 1MHz, any I/O pin to ground

Note 1: I/O pins are Pin 1, 3, 4 and 6

www.sot23.com.tw



Low Capactiance 4-Line TVS Array

Characteristic Curves

Fig1. 8/20µs Pulse Waveform

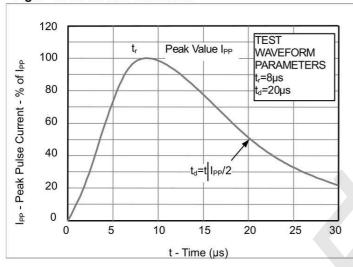
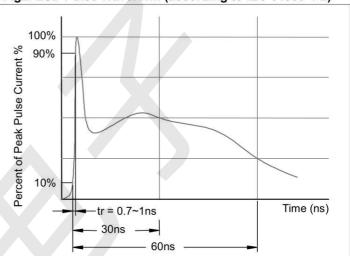
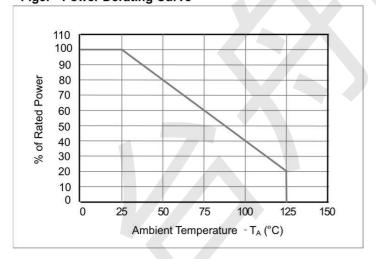


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)





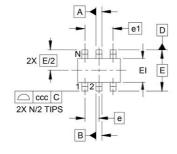


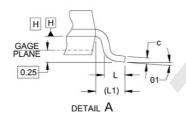


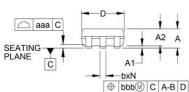
Low Capactiance 4-Line TVS Array

www.sot23.com.tw

Outline Drawing - SOT23-6



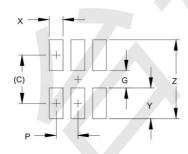






		DIN	IENSI	ONS			
DIM INCHES			MILLIMETERS				
MIN	MIN	NOM	MAX	MIN	NOM	MAX	
Α	.035	-	.057	0.90	-	1.45	
A1	.000	-	.006	0.00	-	0.15	
A2	.035	.045	.051	.90	1.15	1.30	
b	.010		.020	0.25	3.5	0.50	
С	.003	-	.009	0.08	-	0.22	
D	.110	.114	.118	2.80	2.90	3.00	
E1	.060	.063	.069	1.50	1.60	1.75	
Е	.110 BSC			2.80 BSC			
е	.037 BSC			0	.95 BS	С	
e1	0	.075 BSC			1.90 BSC		
L	.012	.018	.024	0.30	0.45	0.60	
L1	(.024)				(0.60)		
N	6				6		
01	0°		10°	0°	-	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		
7	141	3.60		