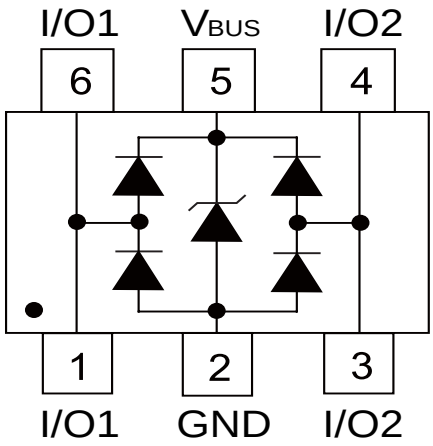
Low Capacitance 2-Line ESD Protection

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: ±30kV
    - Contact discharge: ±30kV
  - – IEC61000-4-4 (EFT) 40A (5/50ns)
  - –IEC61000-4-5 (Lightning) 6A (8/20μs)
- RoHS Compliant



Applications

- USB 2.0 interface
- 10/100 Ethernet
- Personal digital assistants (PDA's)
- Notebooks, Desktops and Servers
- Portable instrumentation
- Digital cameras

Mechanical Characteristics

- Package: SOT23-6 Lead
- Finish: Matte Tin
- UL Flammability Classification Rating 94V-0
- Pb-Free, Halogen Free, RoHS/WEEE Compliant

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs)	Ppk	150	W
Peak Pulse Current (8/20μs)	Ipp	6	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 (T_A=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse stand-off voltage	V_{RWM}				5	V
Reverse breakdown voltage	V_{BR}	I_{BR}=1mA	6		9	V
Reverse leakage current	I_R	V_R=5V			0.1	μA
Clamping voltage (tp=8/20μs)	V_C	I_{PP}=1A			10	V
Clamping voltage (tp=8/20μs)	V_C	I_{PP}=6A			15	V
Junction capacitance	C_J	0Vdc,f=1MHz Between I/O pins and GND		0.8	1	pF
	C_J	0Vdc,f=1MHz I/O to I/O		0.35	0.4	pF

Typical Characteristics

Fig1. 8/20μs Pulse Waveform

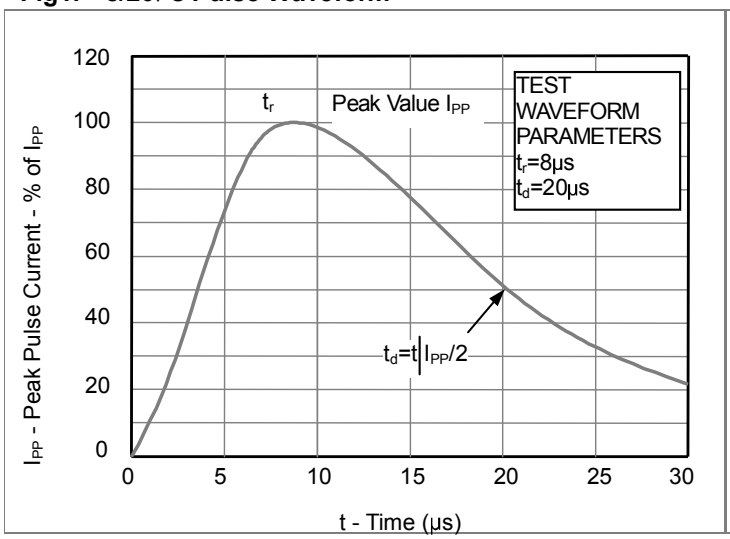


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

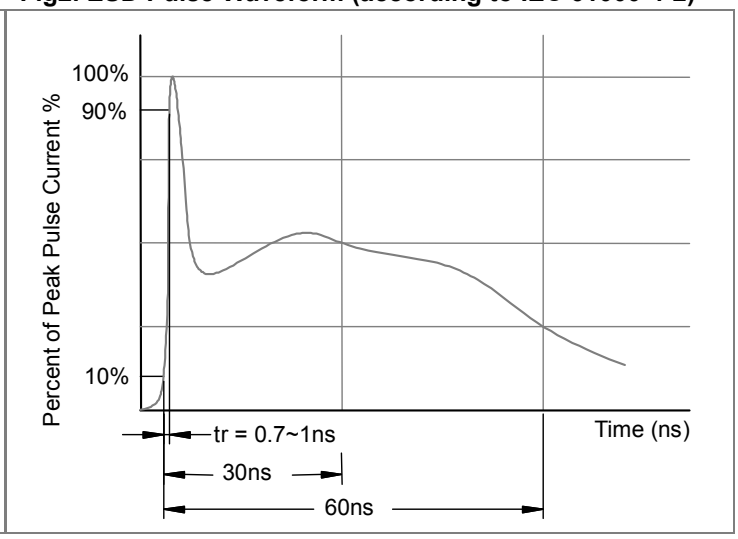
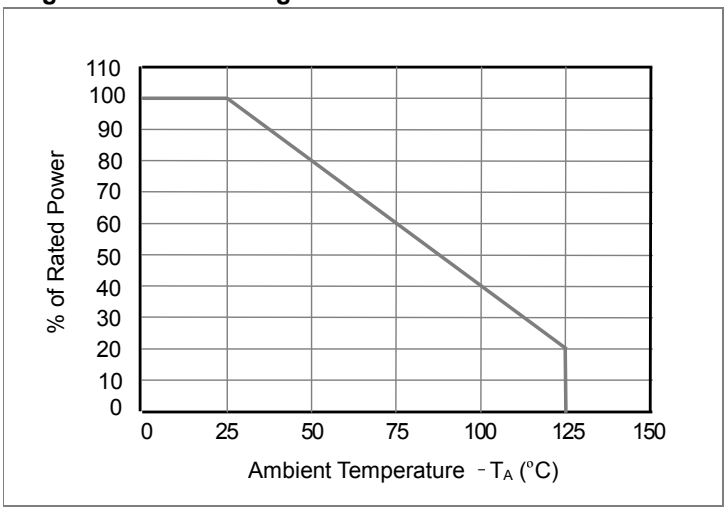
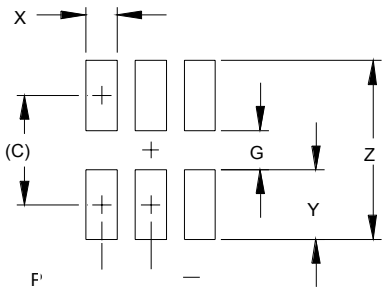


Fig3. Power Derating Curve



Outline Drawing – SOD323



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

Marking



Ordering information

Order code	Package	Base qty	Delivery mode
UMW USBLC6-2SC6	SOD323	3000	Tape and reel