

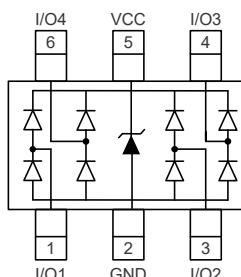
1. Features

- Ultra low capacitance: 0.3pF 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: $\pm 25\text{kV}$
 - Contact discharge: $\pm 25\text{kV}$
 - IEC61000-4-4 (EFT) 40A (5/50ns)

2. Applications

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

3. Pinning information



SOT23-6

4. Absolute Maximum Ratings $T_A = 25^\circ\text{C}$

Parameter	Symbol	Maximum	Units
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 25	kV
ESD per IEC 61000-4-2 (Contact)		± 25	kV
Junction Temperature Range	T_J	-55 to 125	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-55 to 150	$^\circ\text{C}$



5. Electrical Characteristic ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Working Voltage	V_{RWM}	Any I/O pin to ground			5	V
Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$, any I/O pin to ground	6			V
Reverse leakage current	I_R	$V_{RWM}=5\text{V}$, any I/O pin to ground			0.3	μA
Clamping voltage (8 x 20 μs pulse)	V_C	$I_{PP}=3\text{A}$, any I/O pin to ground			20	V
Junction capacitance	C_J	$V_R=0\text{V}$, $f=1\text{MHz}$, between I/O pins		0.35	0.4	pF
	C_J	$V_R=0\text{V}$, $f=1\text{MHz}$, any I/O pin to ground			0.8	pF

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



6.Typical characteristic

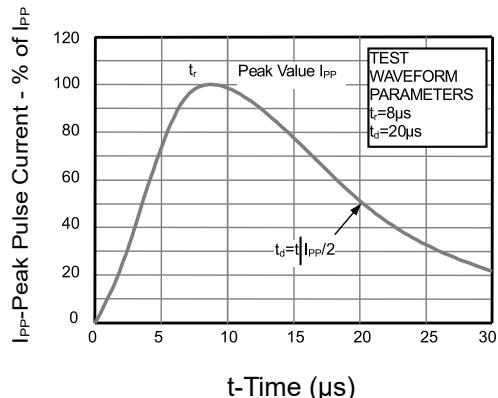


Figure 1: 8/20μs Pulse Waveform

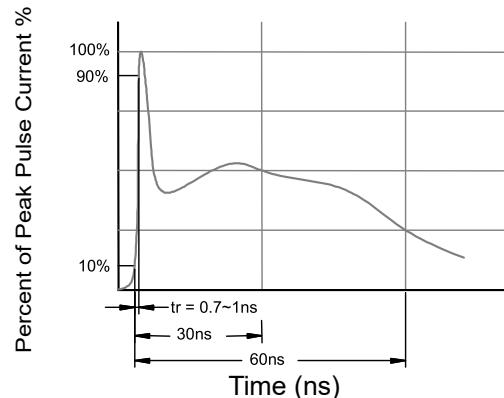
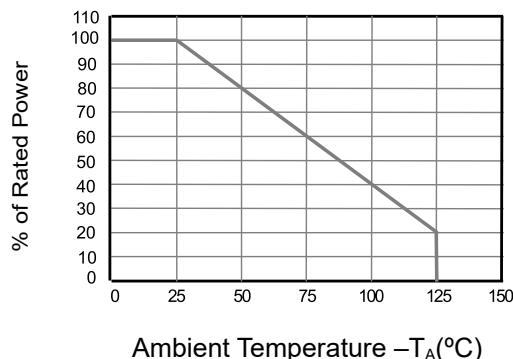
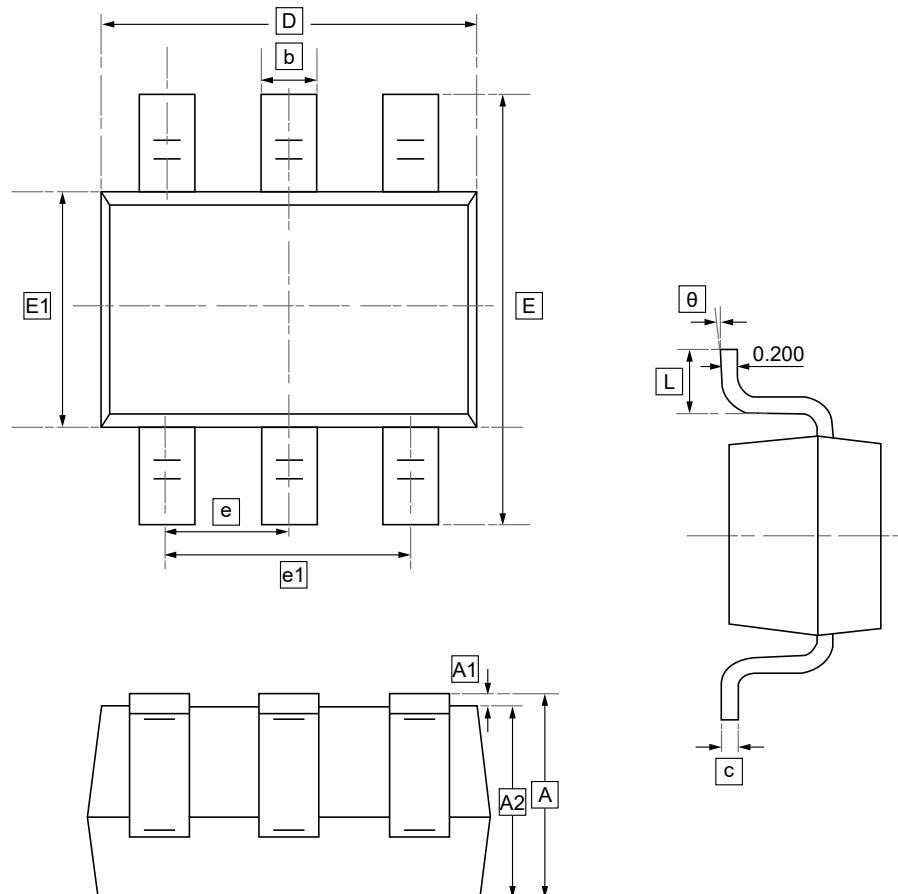
Figure 2: ESD Pulse Waveform
(according to IEC 61000-4-2)

Figure 3: Power Derating Curve



7.SOT-23-6 Package Outline Dimensions

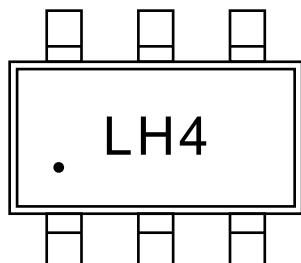


DIMENSIONS (mm are the original dimensions)

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



8.Ordering information



Order Code	Package	Base QTY	Delivery Mode
UMW SP3050-04HTG	SOT23-6	3000	Tape and reel



9.Disclaimer

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