

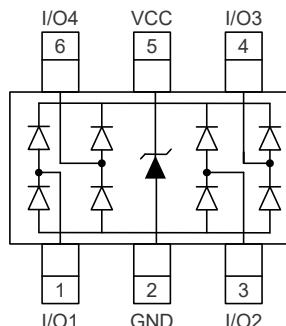
1. Features

- 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: $\pm 20\text{kV}$
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) : 4.7A(8/20 μs)

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
Peak Pulse Power ($tp=8/20\mu\text{s}$) (Vcc-GND)	P_{pp}	300	W
Peak Pulse Current ($tp=8/20\mu\text{s}$)	I_{pp}	4.7	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 25	kV
ESD per IEC 61000-4-2 (Contact)		± 20	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}	$IT = 1\text{mA}$, any I/O pin to ground	6			V
Reverse leakage current	I_R	$V_{RWM}=5\text{V}$, any I/O pin to ground			0.08	μA
Clamping voltage (8 x 20 μs pulse)	V_C	$I_{PP}=1\text{A}$, any I/O pin to ground			11	V
Clamping voltage (8 x 20 μs pulse)	V_C	$I_{PP}=4.7\text{A}$, any I/O pin to ground			15	pF
Junction capacitance	C_J	$I_{PP}=17\text{A}$ (8 x 20 μs pulse) VCC to ground			18	pF
	C_J	$V_R=0\text{V}$, $f=1\text{MHz}$, between I/O pins		0.3	0.4	pF
	C_J	$V_R=0\text{V}$, $f=1\text{MHz}$, any I/O pin to ground			0.8	pF



6.Typical characteristic

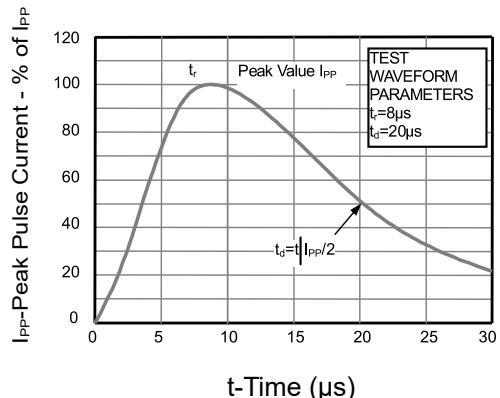


Figure 1: 8/20μs Pulse Waveform

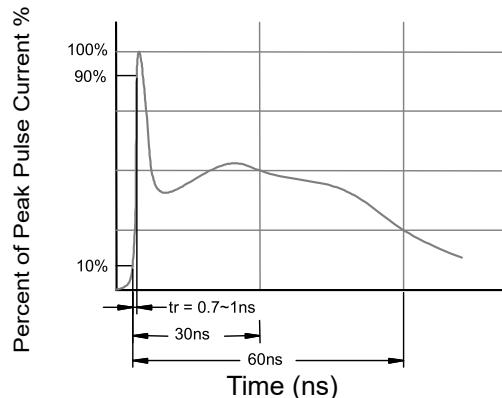


Figure 2: ESD Pulse Waveform (according to IEC 61000-4-2)

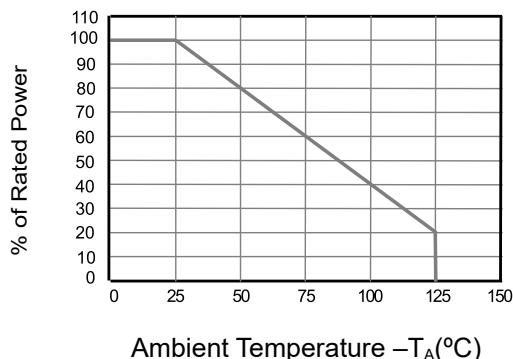
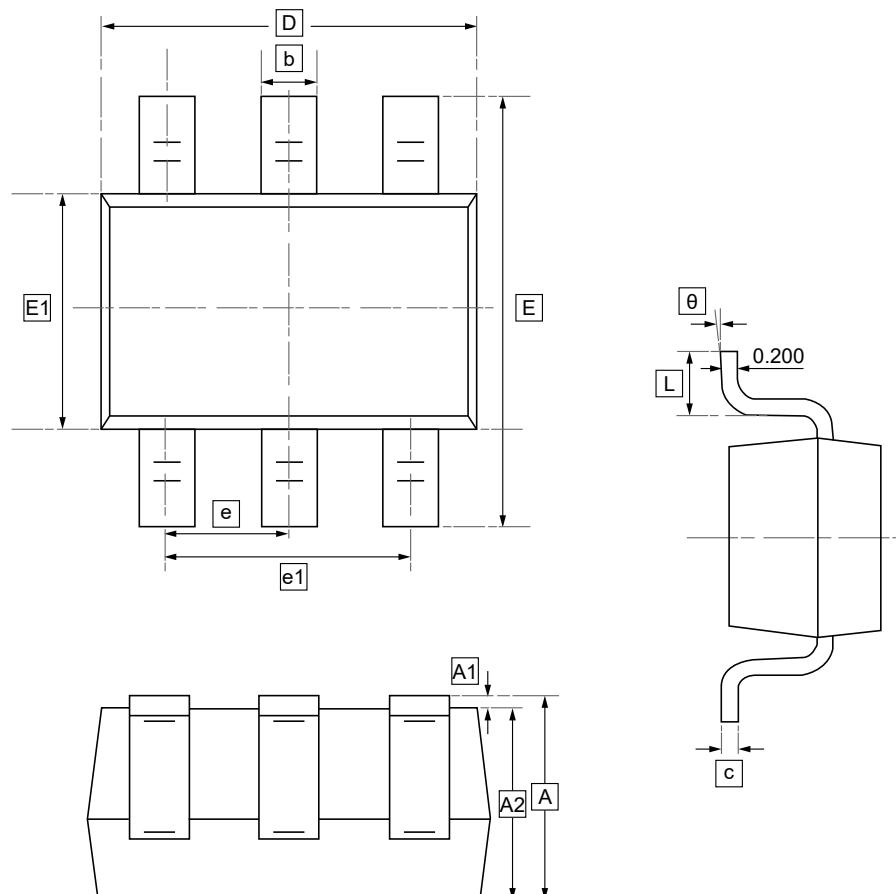


Figure 3: Power Derating Curve



7.SOT-23-6 Package Outline Dimensions

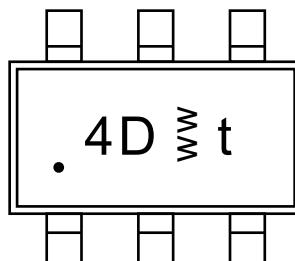


DIMENSIONS (mm are the original dimensions)

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



ww: Week Code

Order Code	Package	Base QTY	Delivery Mode
UMW PRTR5V0U4D	SOT23-6	3000	Tape and reel



9.Disclaimer

UMW reserves the right to make changes to all products, specifications. Customers should obtain the latest version of product documentation and verify the completeness and currency of the information before placing an order.

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