

## 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
- ROHS Compliant
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
  - Air discharge:  $\pm 30\text{kV}$
  - Contact discharge:  $\pm 25\text{kV}$
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) : 4.7A(8/20 $\mu\text{s}$ )

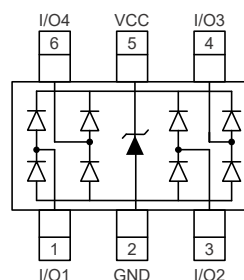
## 2.Applications

- 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...)

## 3.Mechanical Characteristics

- Package: SOT23-6
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020

## 4.Pinning information



**SOT23-6**



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

Parameter	Symbol	Maximum	Units
Peak Pulse Power ( $t_p=8/20\mu\text{s}$ )	$P_{pp}$	300	W
Peak Pulse Current ( $t_p=8/20\mu\text{s}$ )	$I_{pp}$	4.7	A
ESD per IEC 61000-4-2 (Air)	$V_{ESD}$	$\pm 30$	kV
ESD per IEC 61000-4-2 (Contact)		$\pm 25$	kV
Junction Temperature Range	$T_J$	-55 to 125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to 150	$^\circ\text{C}$



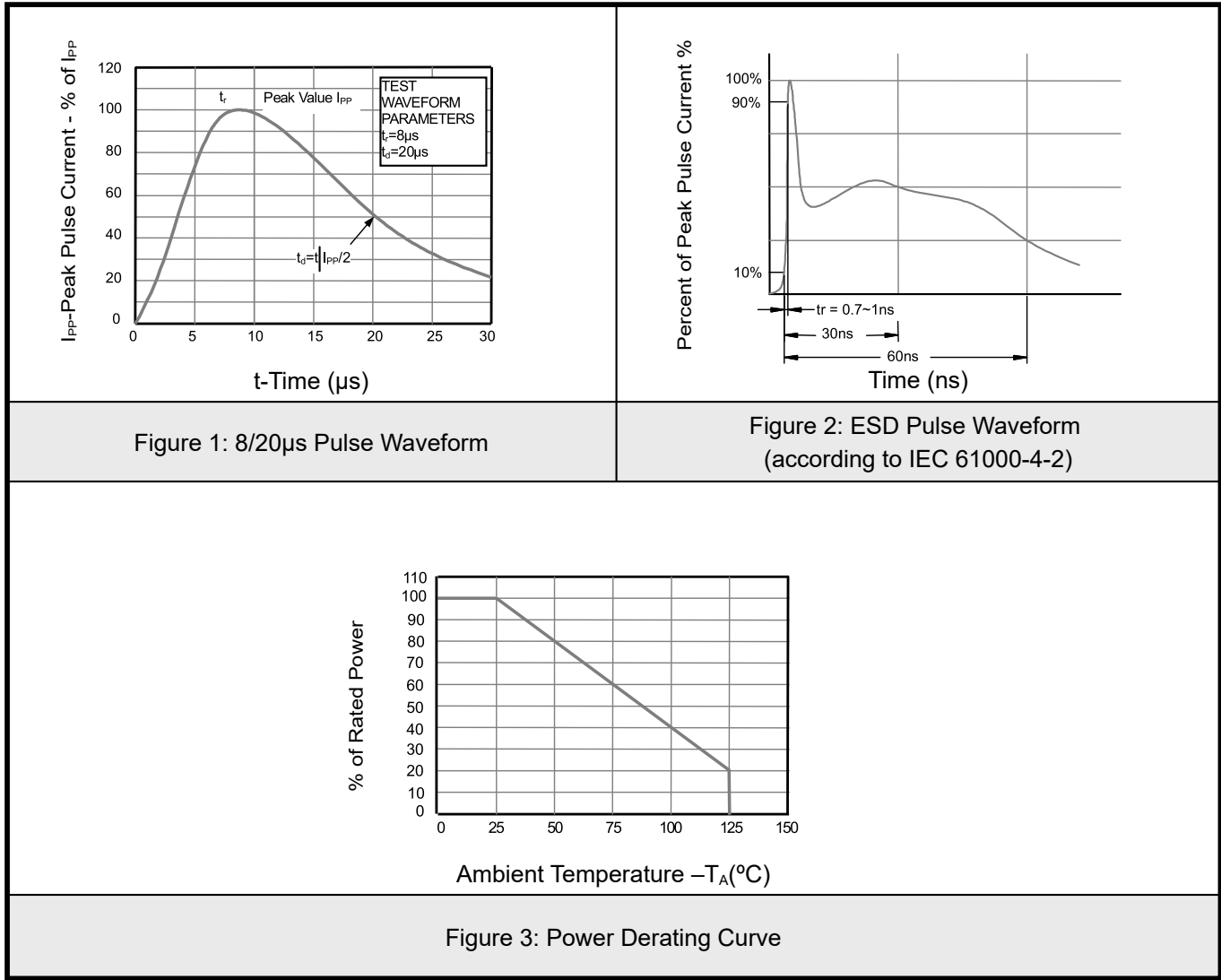
## 6. Electrical Characteristic ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

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			0.5	$\mu\text{A}$
Clamping voltage (8 x 20 $\mu\text{s}$ pulse)	$V_C$	$I_{PP}=1\text{A}$ , any I/O pin to ground			15	V
Clamping voltage (8 x 20 $\mu\text{s}$ 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		0.3	0.4	pF
	$C_J$	$V_R=0\text{V}$ , $f=1\text{MHz}$ , between I/O pins			0.8	pF

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

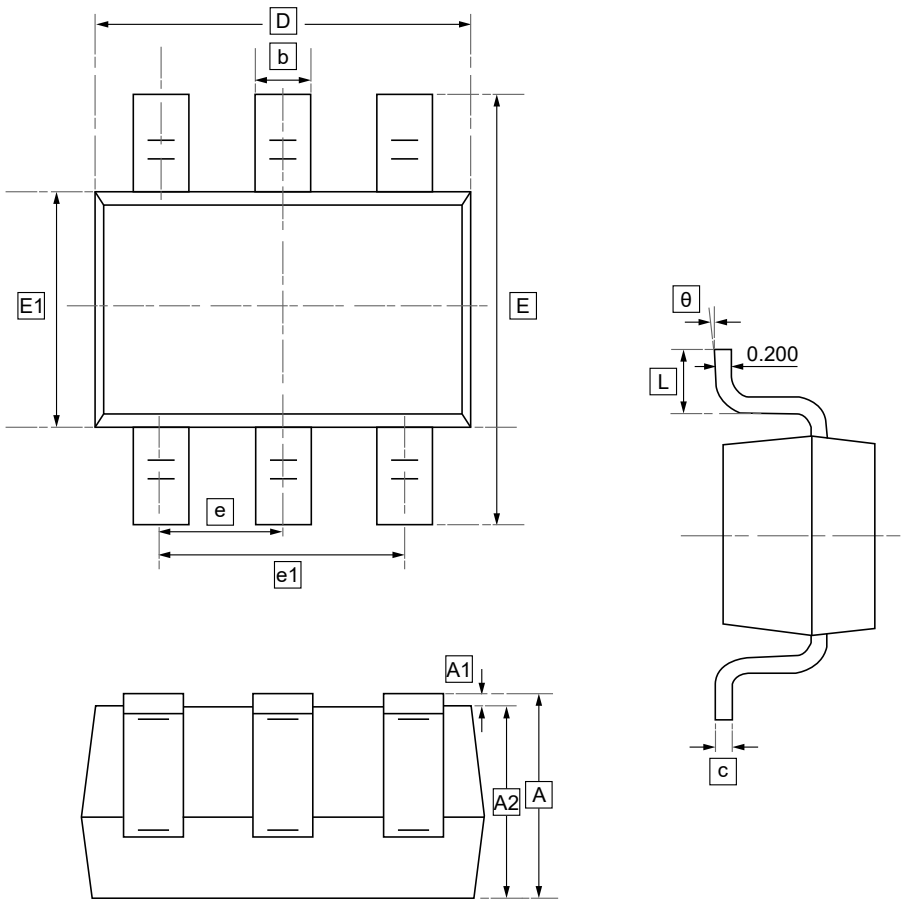


7. Typical characteristic





8.SOT-23-6 Package Outline Dimensions

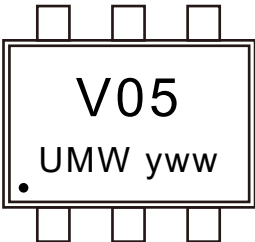


DIMENSIONS (mm are the original dimensions)

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°



9.Ordering information



yww: Batch Code

Order Code	Package	Base QTY	Delivery Mode
UMW SRV05-4.TCT	SOT23-6	3000	Tape and reel



## 10.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.

When applying our products, please do not exceed the maximum rated values, as this may affect the reliability of the entire system. Under certain conditions, any semiconductor product may experience faults or failures. Buyers are responsible for adhering to safety standards and implementing safety measures during system design, prototyping, and manufacturing when using our products to prevent potential failure risks that could lead to personal injury or property damage.

Unless explicitly stated in writing, UMW products are not intended for use in medical, life-saving, or life-sustaining applications, nor for any other applications where product failure could result in personal injury or death. If customers use or sell the product for such applications without explicit authorization, they assume all associated risks.

When reselling, applying, or exporting, please comply with export control laws and regulations of China, the United States, the United Kingdom, the European Union, and other relevant countries, regions, and international organizations.

This document and any actions by UMW do not grant any intellectual property rights, whether express or implied, by estoppel or otherwise. The product names and marks mentioned herein may be trademarks of their respective owners.