

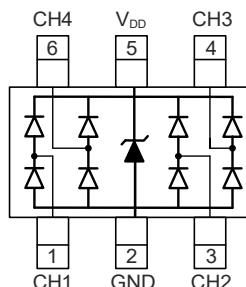
1. Description

- Ultra low capacitance: 0.3pF typical (I/O-IO)
- Ultra low leakage: nA level
- Low operating voltage: 5V
- Low clamping
- Up to 4 data lines and one power line protects
- – 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) : 4A(8/20 μs)

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. Pinning information



SOT-363



4. Absolute Maximum Rating

Parameter	Symbol	Value	Units
Peak Pulse Power ($t_p=8/20\mu s$)	P_{PP}	100	W
Peak Pulse Current ($t_p=8/20\mu s$)	I_{PP}	4	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 30	kV
ESD per IEC 61000-4-2 (Contact)		± 25	kV
Junction Temperature Range	T_J	-55 to 125	°C
Storage Temperature Range	T_{STG}	-55 to 150	°C

5. Electrical Characteristics ($T_A=25^\circ C$ unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Working Voltage	V_{RWM}	Any I/O pin to ground			5	V
Breakdown Voltage	V_{BR}	$I_T=1mA$, any I/O pin to ground	6			V
Reverse Leakage Current	I_R	$V_{RWM}=5V$, any I/O pin to ground			0.5	µA
Clamping Voltage	V_C	$I_{PP}=1A$ (8x 20µs pulse) any I/O pin to ground			15	V
		$I_{PP}=4A$ (8x 20µs pulse) any I/O pin to ground			20	V
Parasitic Capacitance	C_J	$V_R=0V$, $f=1MHz$, between I/O pins		0.3	0.4	pF
		$V_R=0V$, $f=1MHz$, any I/O pin to ground			0.8	pF

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



6.Typical characteristic

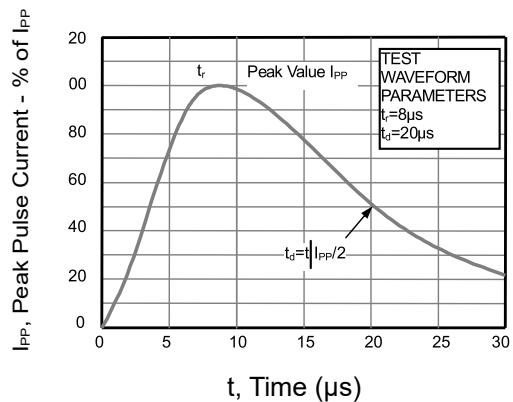


Figure 1: 8/20μs Pulse Waveform

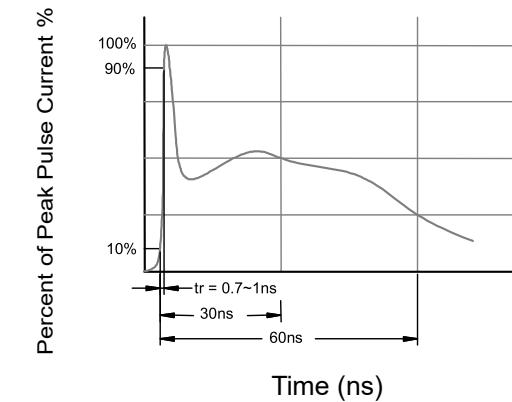
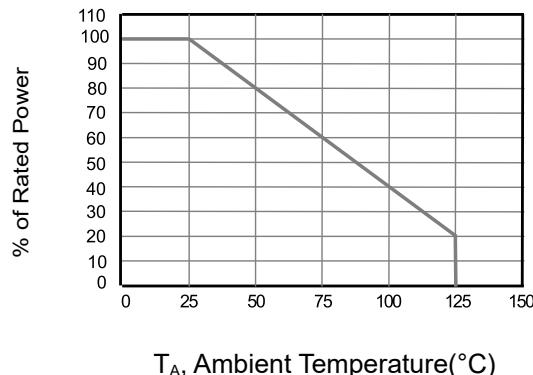
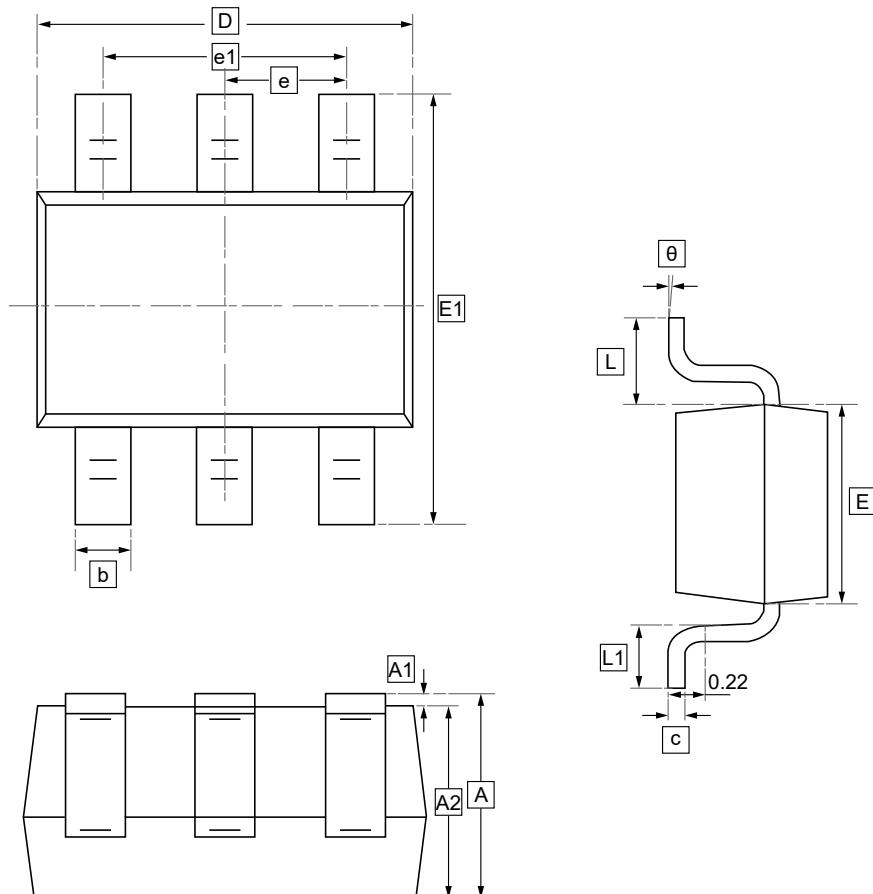
Figure 2: ESD Pulse Waveform
(according to IEC 61000-4-2)

Figure 3: Power Derating Curve



7.SOT-363 Package Outline Dimensions



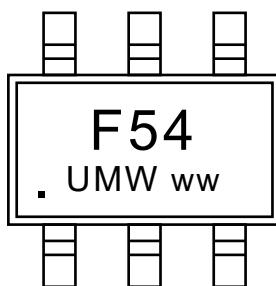
DIMENSIONS (mm are the original dimensions)

Symbol	A	A1	A2	b	c	D	E	E1	e	e1	L	L1
Min	0.900	0.000	0.900	0.150	0.080	2.000	1.150	2.150	0.65	1.200	0.525	0.260
Max	1.100	0.100	1.000	0.350	0.150	2.200	1.350	2.450	TYP	1.400	REF	0.460

Symbol	θ
Min	0°
Max	8°



8.Ordering information



ww: Batch Code

Order Code	Package	Base QTY	Delivery Mode
UMW RCLAMP0504F	SOT-363	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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