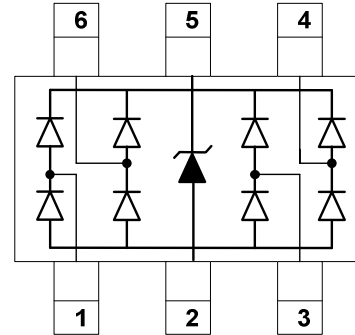


**Features**

- Ultra low capacitance: 0.3pF typical (I/O to I/O)
- Ultra low leakage: nA level
- Low operating voltage: 5.5V
- 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: ±25kV  
 Contact discharge: ±20kV
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) : 4 A(8/20µs)



Circuit and Pin Schematic

**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
- Consumer products (STB, DVD, DSC, DVC...)

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (tp=8/20µs) (Vcc-GND)	PPP	300	W
Peak Pulse Current (tp=8/20µs)	IPP	4	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	VESD	±25 ±20	kV
Operating Temperature Range	TJ	-55 to +125	°C
Storage Temperature Range	Tstg	-55 to +150	°C

**Electrical Characteristics**(TA=25°C unless otherwise specified)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	VRWM			5.5	V	Any I/O pin to ground
Breakdown Voltage	VBR	6			V	IT= 1mA, any I/O pin to ground
Reverse Leakage Current	IR			0.08	µA	VRWM= 5V, any I/O pin to ground
Clamping Voltage	VC			11	V	IPP= 1A (8 x 20µs pulse) any I/O pin to ground
Clamping Voltage	VC			15	V	IPP= 4.7 A (8 x 20µs pulse) any I/O pin to ground
Clamping Voltage	CJ			18	V	IPP=17 A (8 x 20µs pulse) VCC to ground
Junction Capacitance	CJ		0.3	0.4	pF	VR = 0V, f = 1MHz, between I/O pins
Junction Capacitance	CJ			0.8	pF	VR = 0V, f = 1MHz, any I/O pin to ground

Typical Performance Characteristics ( $T_A=25^\circ\text{C}$  unless otherwise Specified)

Fig1. 8/20 $\mu\text{s}$  Pulse Waveform

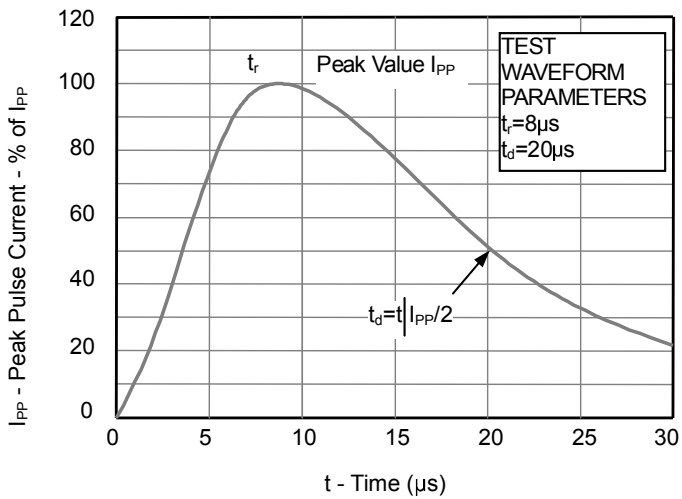


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

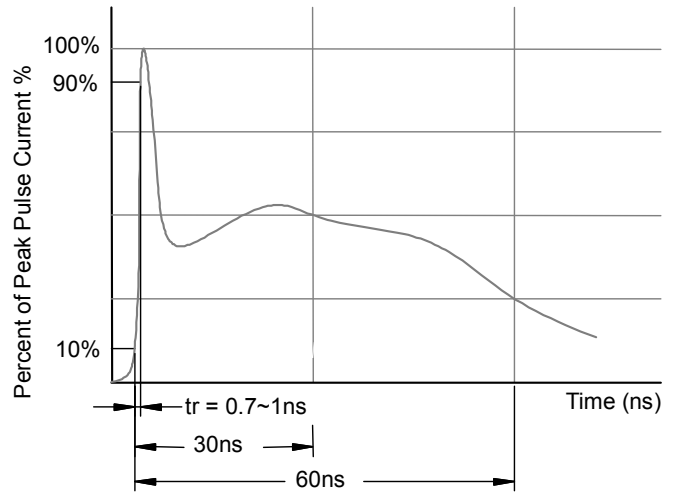
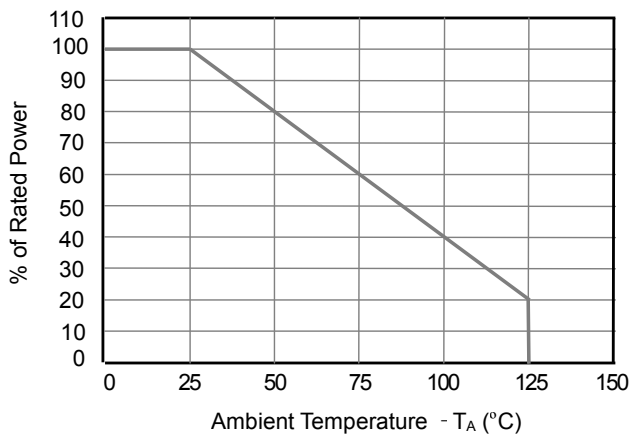
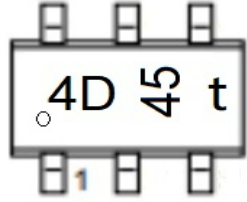


Fig3. Power Derating Curve



SOT23-6

**Marking**



**Ordering information**

Order code	Package	Base qty	Delivery mode
UMW PRTR5V0U4D	SOT23-6	3000	Tape and reel

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