

1.Description

This device has been specifically designed to protect sensitive components which are connected to high-speed data and transmission lines from overvoltage caused by ESD (electrostatic discharge), CDE (Cable Discharge Events), and lightning.

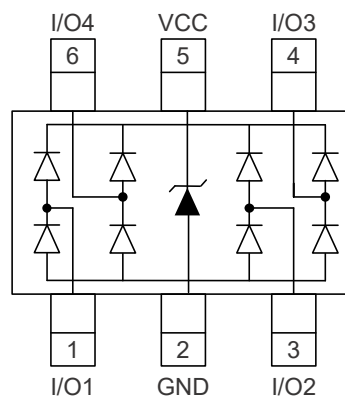
2.Features

- Protects four I/O lines and one Vcc line
- Low capacitance
- Working voltages : 5V
- Low leakage current
- Low capacitance for high-speed interfaces
- No insertion loss to 2.0GHz
- Response Time is < 1 n

3.Applications

- Digital Visual Interface (DVI)
- USB 1.1/2.0/OTG
- IEEE 1394 Firewire Ports
- Notebooks & Handhelds
- Projection TV & Monitors
- Set-top box
- Flat Panel Displays
- PCI Express

4.Pinning information



SOT23-6



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

Parameter	Symbol	Maximum	Units
Peak Pulse Power ($t_p=8/20\mu\text{s}$) ($V_{CC}-GND$)	P_{pp}	150	W
Peak Pulse Current ($t_p=8/20\mu\text{s}$)	I_{pp}	5	A
ESD per IEC 61000-4-2 (Air)	V_{ESD}	± 15	kV
ESD per IEC 61000-4-2 (Contact)		± 8	kV
Junction Temperature Range	T_J	-55 to 150	$^{\circ}\text{C}$
Storage Temperature Range	T_{STG}	-55 to 150	$^{\circ}\text{C}$



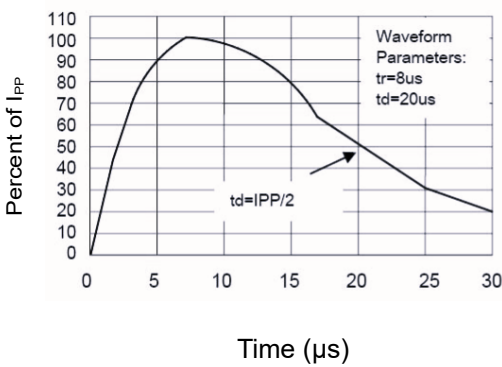
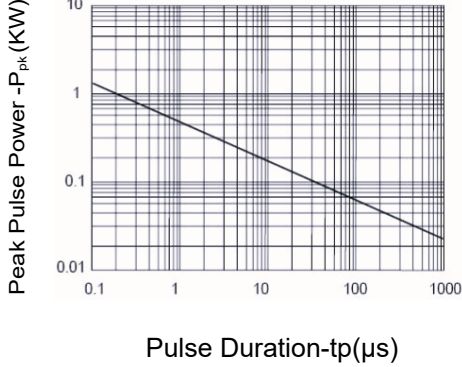
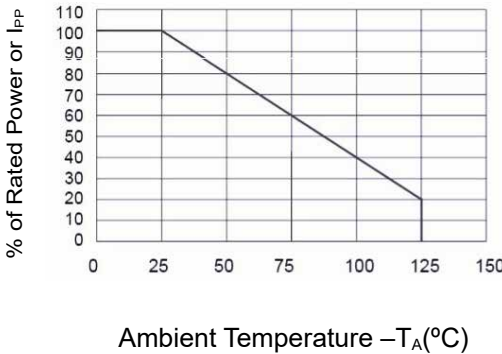
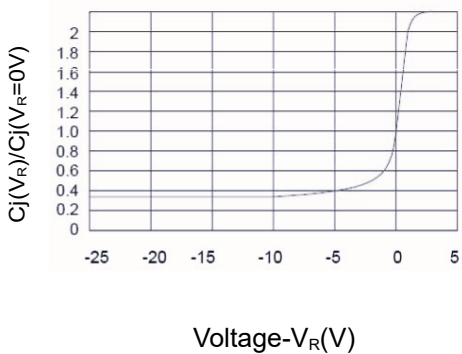
6. Electrical Characteristic ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Working Voltage	V_{RWM}	Any I/O pin to GND			5	V
Breakdown Voltage	V_{BR}	$I_T=1\text{mA}$, Any I/O pin to GND	6			V
Reverse leakage current	I_R	$V_{RWM}=5\text{V}$, Any I/O pin to GND			1	μA
Diode Forward Voltage	V_F	$I_F=15\text{mA}$			1.2	V
Clamping Voltage 1	V_{C1}	$I_{PP}=1\text{A}$, $t_p=8/20\mu\text{s}$ any I/O pin to GND			15	V
Clamping Voltage 2	V_{C2}	$I_{PP}=5\text{A}$, $t_p=8/20\mu\text{s}$ any I/O pin to GND			28	V
Junction Capacitance 1	C_{J1}	$V_R=0\text{V}$, $f=1\text{MHz}$ Between I/O pins			0.4	pF
Junction Capacitance 2	C_{J2}	$V_R=0\text{V}$, $f=1\text{MHz}$ Any I/O pin to GND			0.8	pF

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

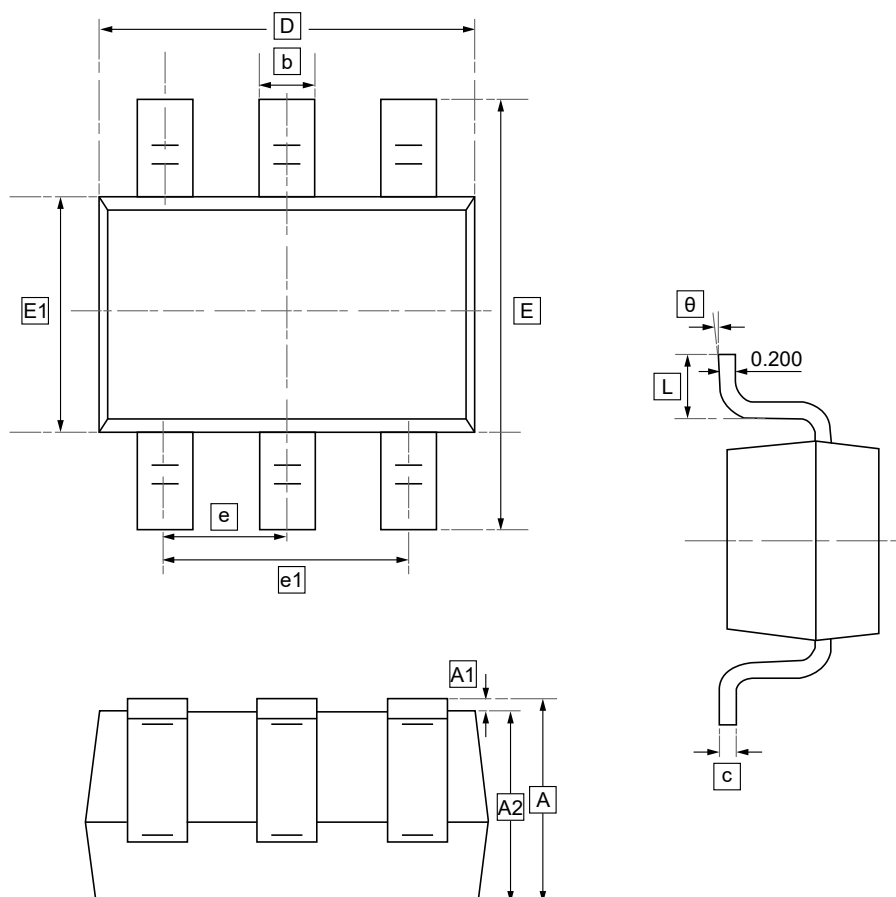


7. Typical characteristic

	
Figure 1: Pulse Waveform	Figure 2: Non-Repetitive Peak Pulse Power vs. Pulse Time
	
Figure 3: Power Derating Curve	Figure 4: Junction Capacitance vs. Reverse Voltage



8.SOT-23-6 Package Outline Dimensions

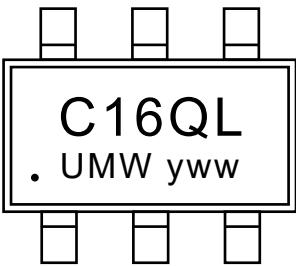


DIMENSIONS (mm are the original dimensions)

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 AZC199-04S	SOT23-6	3000	Tape and reel



10.Disclaimer

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