

## 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)
- ◆ ROHS Compliant

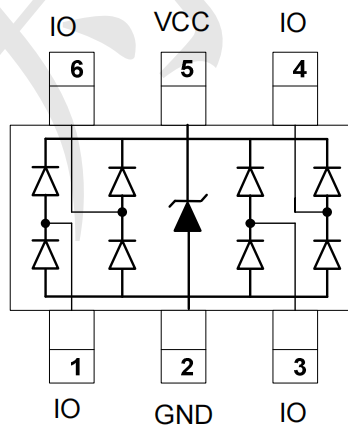
## Mechanical Characteristics

- ◆ Package: SOT363
- ◆ Lead Finish: Matte Tin
- ◆ Case Material: “Green” Molding Compound.
- ◆ UL Flammability Classification Rating 94V-0
- ◆ Moisture Sensitivity: Level 3 per J-STD-020
- ◆ Shipping Qty :3000/7Inch Tape & Reel

## 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...)

## Dimensions and Pin Configuration



Marking: C074W

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

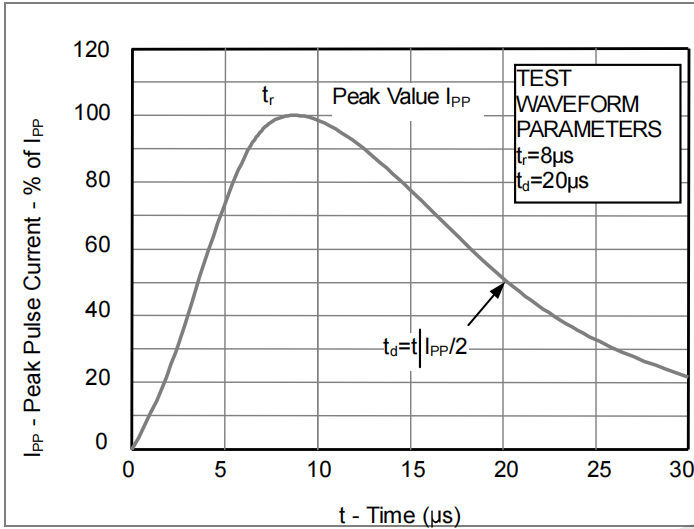
Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs) (Vcc-GND)	P <sub>pk</sub>	170	W
ESD per IEC61000-4-2 (Air)	V <sub>ESD</sub>	±25	kV
ESD per IEC61000-4-2 (Contact)		±20	
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to +150	°C

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

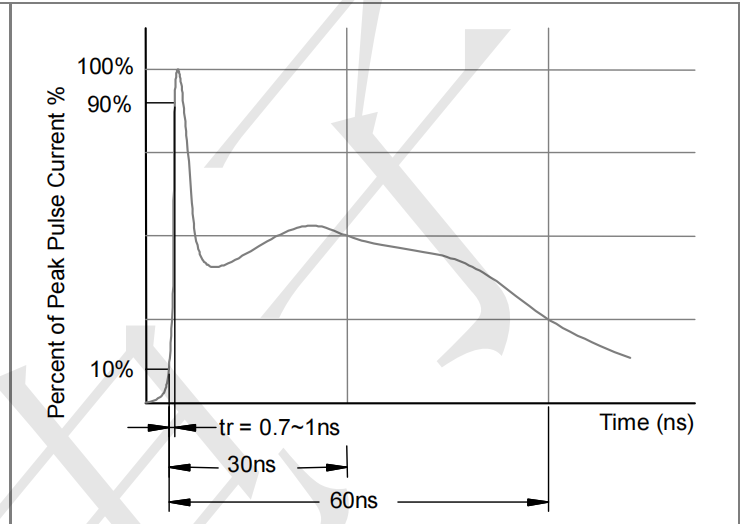
Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V <sub>RWM</sub>			5	V	
Breakdown Voltage	V <sub>BR</sub>	6		9.5	V	I <sub>T</sub> =1mA
Leakage Current	I <sub>Leak</sub>			100	nA	V <sub>RWM</sub> =5V
Clamping Voltage (I/O-GND)	V <sub>C</sub>			16	V	I <sub>PP</sub> =4.5A, T <sub>p</sub> =8/20μs
Clamping Voltage(Vcc-GND)	V <sub>C</sub>			17	V	I <sub>PP</sub> =10A, T <sub>p</sub> =8/20μs
Junction Capacitance (I/O to GND)	C <sub>J</sub>		0.6	0.7	pF	V <sub>R</sub> =0V, f=1MHz,
Junction Capacitance (I/O to I/O)	C <sub>J</sub>		0.3	0.5	pF	V <sub>R</sub> =0V, f=1MHz,

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

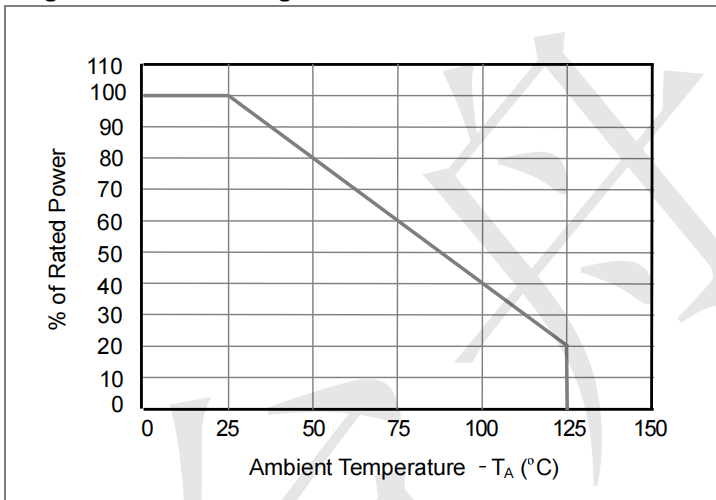
**Fig1. 8/20 $\mu\text{s}$  Pulse Waveform**



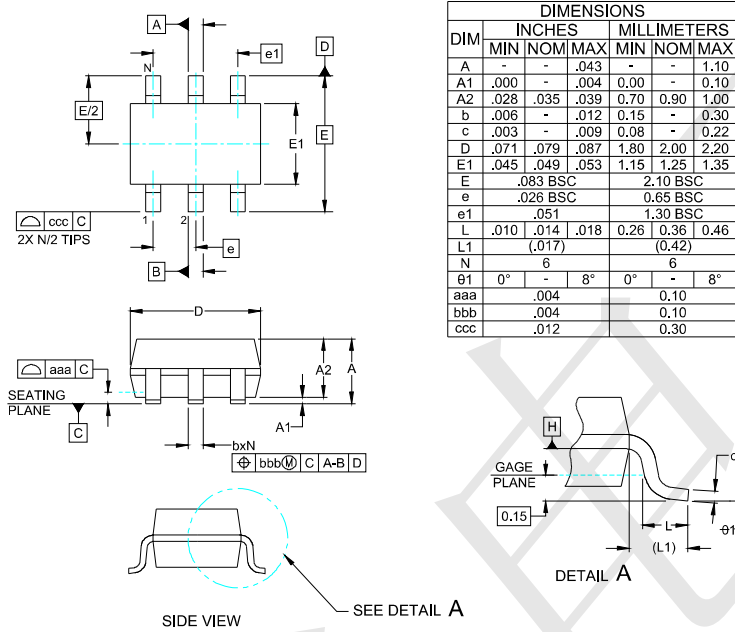
**Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)**



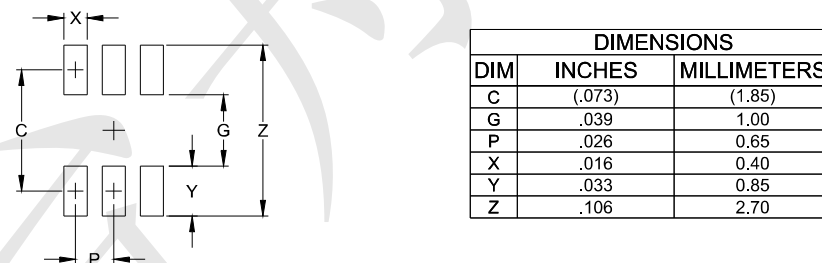
**Fig3. Power Derating Curve**



**Outline Drawing - SOT-363(2.0X2.1)**



**Land Pattern - SOT-363**



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