

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: ±30kV
 - Contact discharge: ±25kV
 - IEC61000-4-4 (EFT) 40A (5/50ns)
- ◆ ROHS Compliant

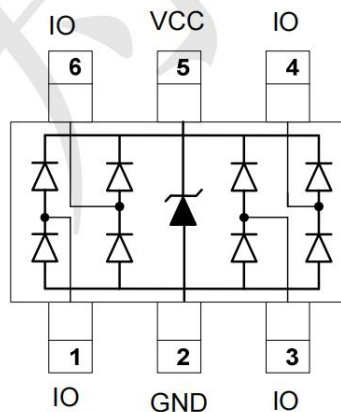
Mechanical Characteristics

- ◆ 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: 0504F
xyyy

xyyy=date code

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

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20μs) (Vcc-GND)	P _{pk}	250	W
ESD per IEC61000-4-2 (Air)	V _{ESD}	±30	kV
ESD per IEC61000-4-2 (Contact)		±25	
Operating Temperature Range	T _J	-55 to +125	°C
Storage Temperature Range	T _{stg}	-55 to +150	°C

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

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Working Voltage	V _{RWM}			5	V	
Breakdown Voltage	V _{BR}	6		9.5	V	I _T =1mA
Leakage Current	I _{Leak}			100	nA	V _{RWM} =5V
Clamping Voltage (I/O-GND)	V _C			16	V	I _{PP} =4.5A, T _p =8/20μs
Clamping Voltage(Vcc-GND)	V _C			17	V	I _{PP} =15A, T _p =8/20μs
Junction Capacitance (I/O to GND)	C _J		0.6	0.7	pF	V _R =0V, f=1MHz,
Junction Capacitance (I/O to I/O)	C _J		0.3	0.5	pF	V _R =0V, f=1MHz,

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

Fig1. 8/20 μs Pulse Waveform

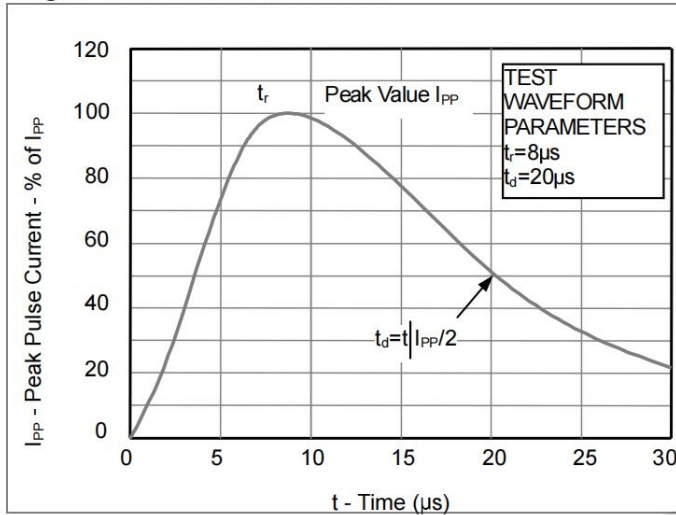


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

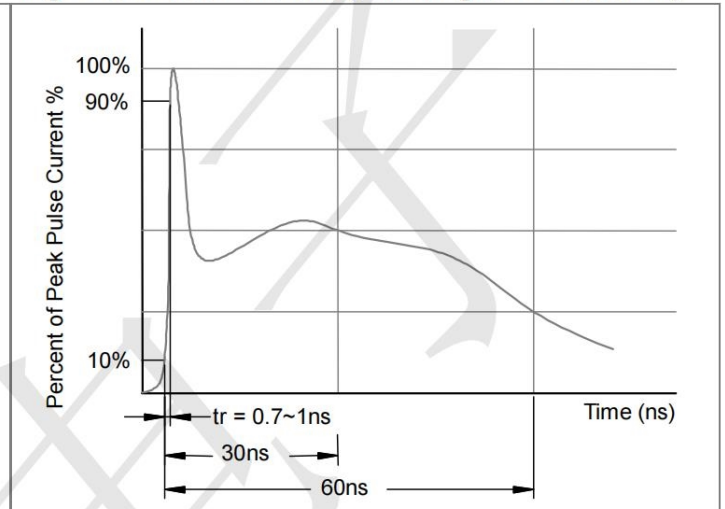
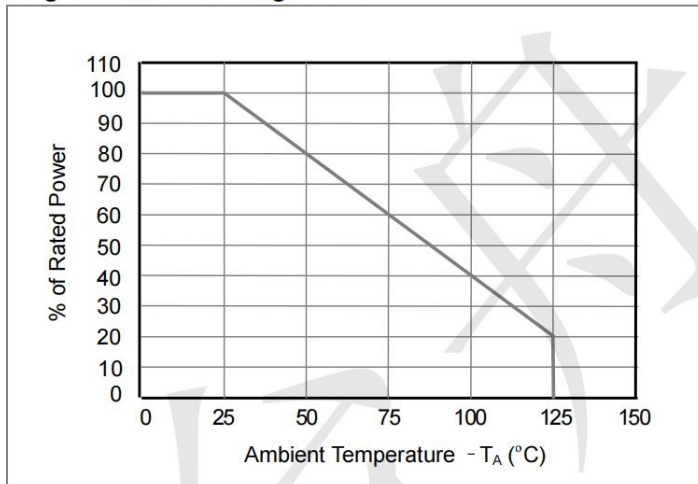
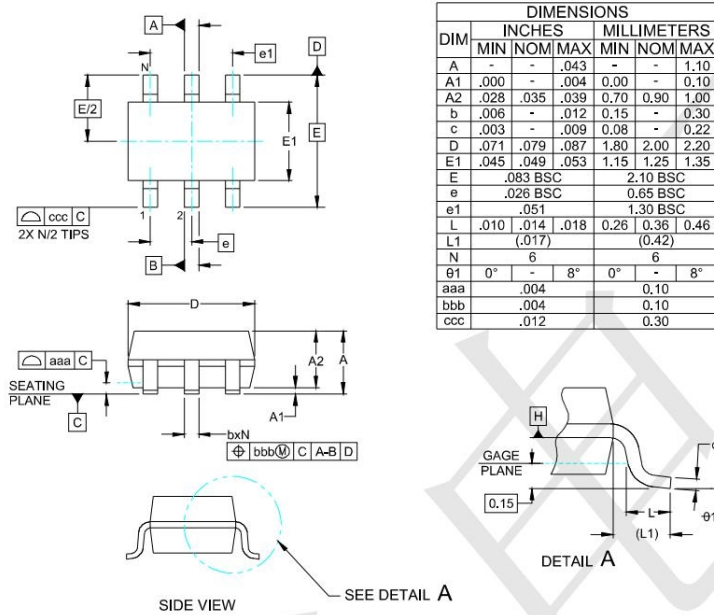


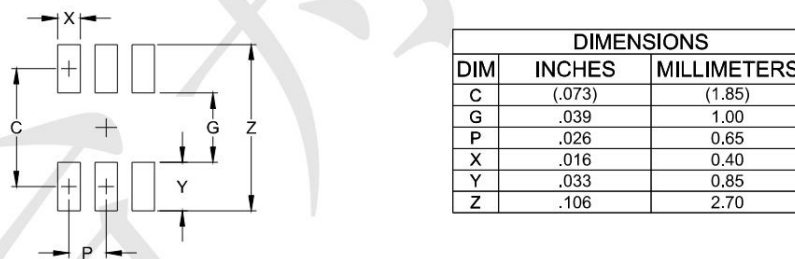
Fig3. Power Derating Curve



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



Land Pattern - SOT-363



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