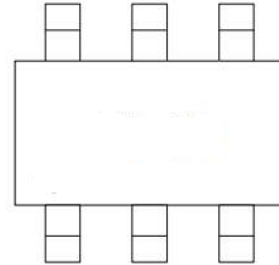


### Features

- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge:  $\pm 20\text{kV}$
    - Contact discharge:  $\pm 15\text{kV}$
  - IEC61000-4-5 (Lightning) 4.5A/17A (8/20 $\mu\text{s}$ )
- RoHS Compliant

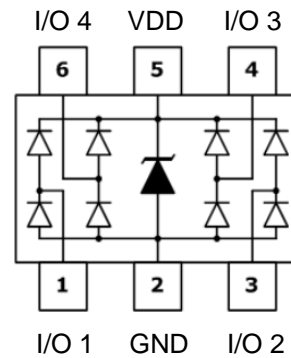
### Dimensions SOT-363



### Applications

- Monitors and flat panel displays
- Set-top box and Digital TV
- Digital video interface (DVI)
- Video graphics cards
- Notebook Computers
- PCI Express and Serial SATA Ports

### Pin Configuration



### Mechanical Characteristics

- Package: SOT-363
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 3,000pcs
- Reel Size: 7inch
- Device Marking: F54

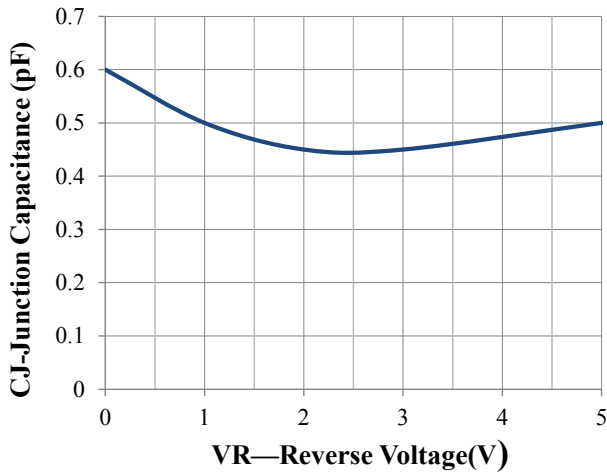
### Absolute Maximum Ratings (T<sub>amb</sub>=25°C unless otherwise specified)

Parameter	Symbol	Value	Unit
Peak Pulse Power (8/20 $\mu\text{s}$ )	P <sub>pp</sub>	250	W
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	$\pm 20$	kV
ESD per IEC 61000-4-2 (Contact)		$\pm 15$	
Operating Temperature Range	T <sub>J</sub>	-55 to +125	°C
Storage Temperature Range	T <sub>STJ</sub>	-55 to +150	°C

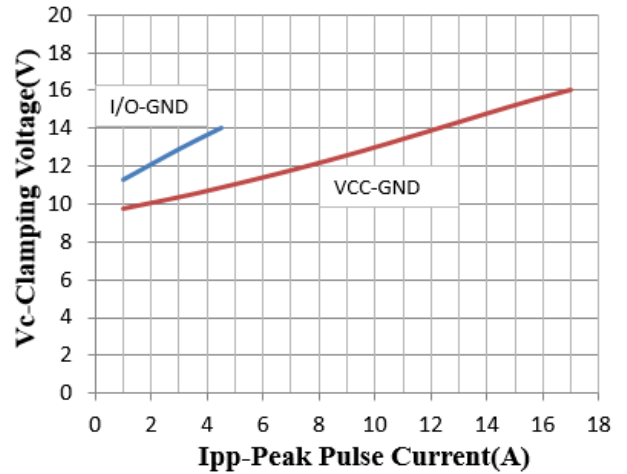
## Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Working Voltage	$V_{RWM}$				5	V
Breakdown Voltage	$V_{BR}$	$I_T = 1\text{mA}$	6	7.5	8.5	V
Reverse Leakage Current	$I_R$	$V_{RWM} = 5\text{V}$			0.5	$\mu\text{A}$
Clamping Voltage	$V_C$	$I_{PP} = 4.5\text{A}$ (8 x 20 $\mu\text{s}$ pulse) I/O to GND		14	15	V
Clamping Voltage	$V_C$	$I_{PP} = 17\text{A}$ (8 x 20 $\mu\text{s}$ pulse) VDD to GND		16	18	V
Junction Capacitance	$C_J$	$V_R = 0\text{V}$ , $f = 1\text{MHz}$ I/O to GND		0.6	0.7	pF
Junction Capacitance	$C_J$	$V_R = 0\text{V}$ , $f = 1\text{MHz}$ I/O to I/O		0.3	0.4	pF

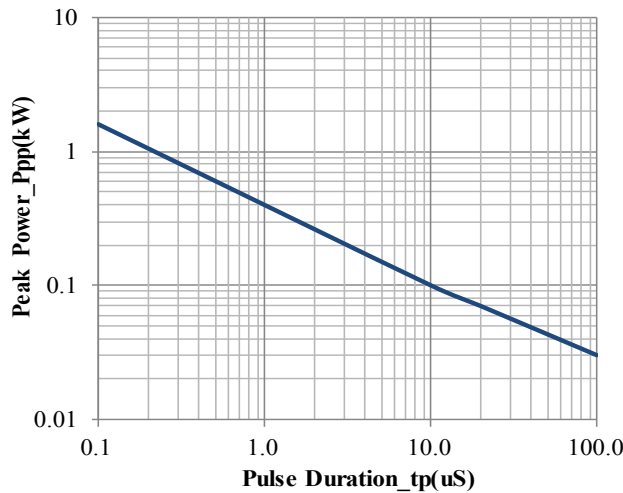
## Typical Performance Characteristics (TA=25°C unless otherwise specified)



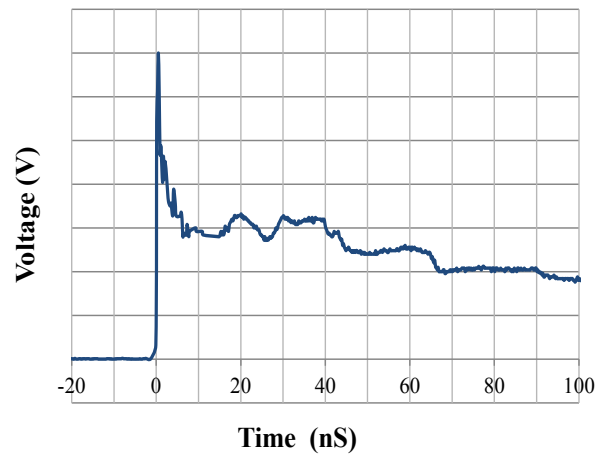
Junction Capacitance vs. Reverse Voltage



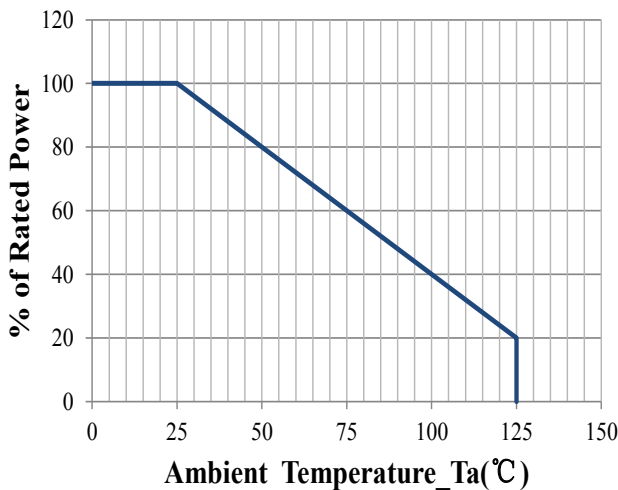
Clamping Voltage vs. Peak Pulse Current



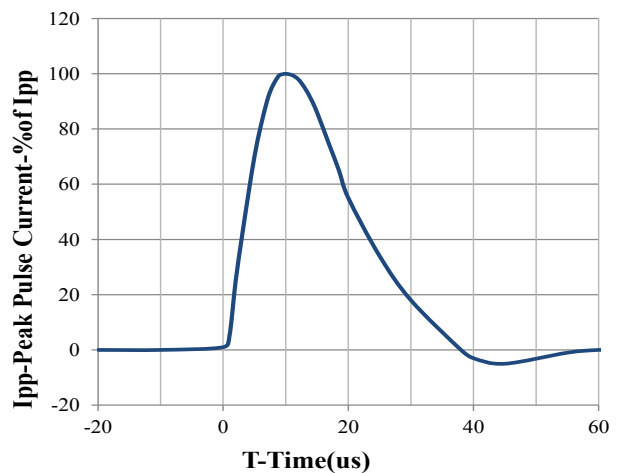
Peak Pulse Power vs. Pulse Time



IEC61000-4-2 Pulse Waveform

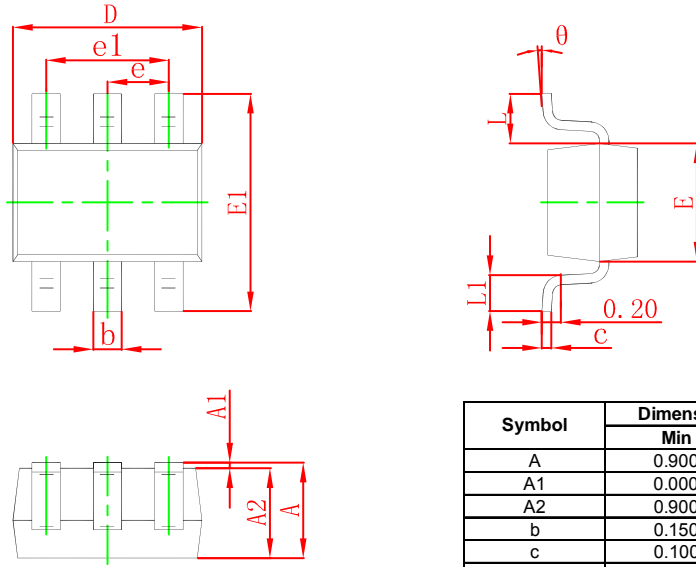


Power Derating Curve



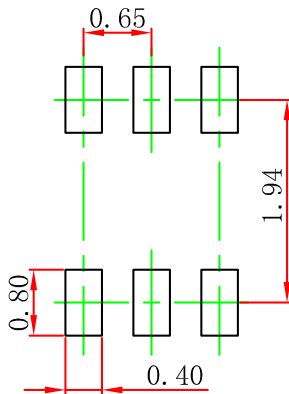
8 X 20µs Pulse Waveform

## SOT-363 Package Outline Drawing



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
theta	0°	8°	0°	8°

## Suggested Land Pattern



### Note:

1. Controlling dimension: in millimeters.
2. General tolerance:  $\pm 0.05$  mm.
3. The pad layout is for reference purposes only.

### NOTICE

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