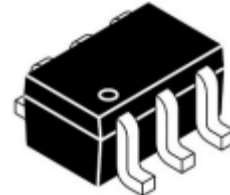


## Features

- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge:  $\pm 25\text{kV}$
    - Contact discharge:  $\pm 16\text{kV}$
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) 5A (8/20 $\mu\text{s}$ )
- RoHS Compliant

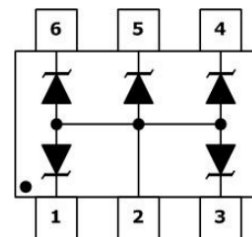
## Dimensions SOT-363



## Applications

- USB 2.0 power and data line
- Set-top box and digital TV
- Digital video interface (DVI)
- Notebook Computers
- SIM Ports
- 10/100 Ethernet

## Pin Configuration



## Mechanical Characteristics

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

## 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>	100	W
ESD per IEC 61000-4-2 (Air)	V <sub>ESD</sub>	$\pm 25$	Kv
ESD per IEC 61000-4-2 (Contact)		$\pm 16$	
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)

Part Number	Device Marking	V <sub>RWM</sub> (V)	V <sub>BR</sub> (V)	I <sub>T</sub> (mA)	V <sub>C</sub> @1A	V <sub>C</sub>		I <sub>R</sub> μA (Max)	C (Pf) (Typ.)
						(Max)	(@A)		
SP1001-05JTG	WF	5	6	1	9.8	12.5	5	1	50

## Characteristic Curves

Fig1. 8/20μs Pulse Waveform

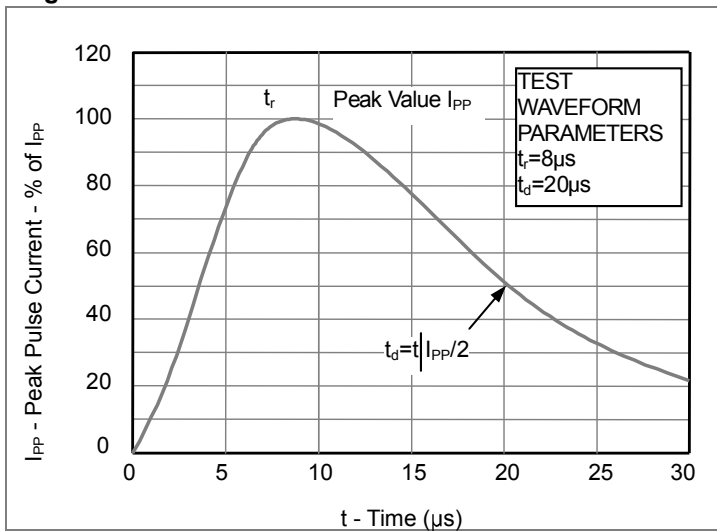


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

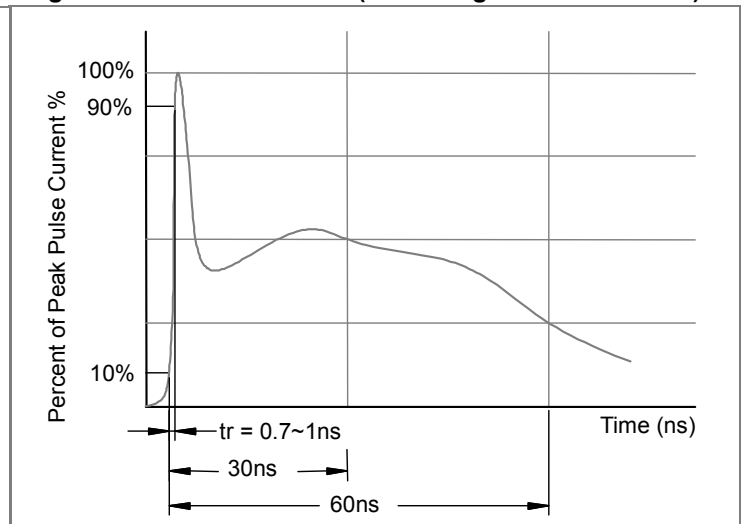
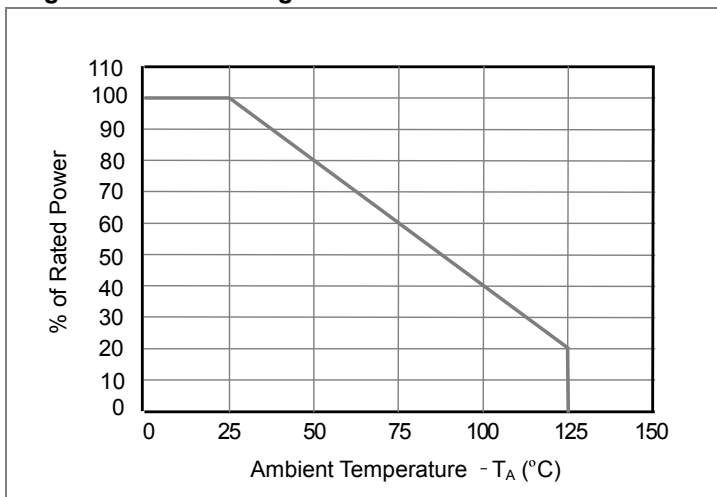
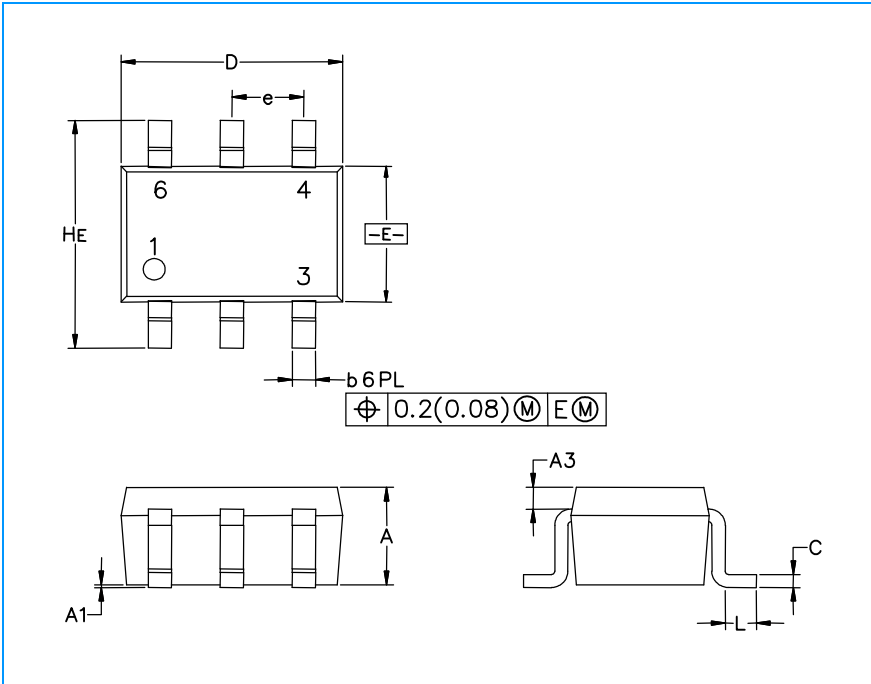


Fig3. Power Derating Curve

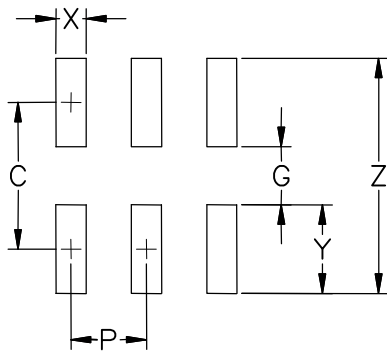


## SOT-363 Package Outline & Dimensions



Symbol	Inches			Millimeters		
	Min.	Nom.	Max.	Min.	Nom.	Max.
A	0.031	0.037	0.043	0.80	0.95	1.10
A1	0.000	0.002	0.004	0.00	0.05	0.10
A3	0.08 REF			0.2 REF		
b	0.004	0.008	0.012	0.10	0.21	0.30
C	0.004	0.005	0.010	0.10	0.14	0.25
D	0.070	0.078	0.086	1.80	2.00	2.20
E	0.045	0.049	0.053	1.15	1.25	1.35
e	0.026 BSC			0.65 BSC		
L	0.004	0.008	0.012	0.10	0.20	0.30
HE	0.078	0.082	0.086	2.00	2.10	2.20

### Soldering Footprint



Symbol	Inches	Millimeters
C	0.0748	1.9
G	0.055	1.40
P	0.025	0.65
X	0.0157	0.40
Y	0.019	0.50
Z	0.0945	2.4