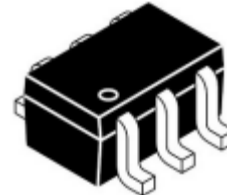


## Features

- Ultra low leakage: nA level
- Operating voltage: 5V
- Low clamping voltage
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test
    - Air discharge:  $\pm 15\text{kV}$
    - Contact discharge:  $\pm 8\text{kV}$
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) 5A (8/20 $\mu\text{s}$ )
- RoHS Compliant

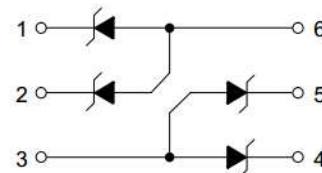
## Dimensions SOT-363



## 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>  | 75          | W    |
| ESD per IEC 61000-4-2 (Air)            | V <sub>ESD</sub> | $\pm 15$    | Kv   |
| ESD per IEC 61000-4-2 (Contact)        |                  | $\pm 8$     |      |
| 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) |                         |               |
| ESDA0504CW  | DG             | 5                    | 6.8                 | 1                   | 7.5                | 16             | 5    | 1                       | 40            |

## Characteristic Curves

Fig1. 8/20μs Pulse Waveform



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

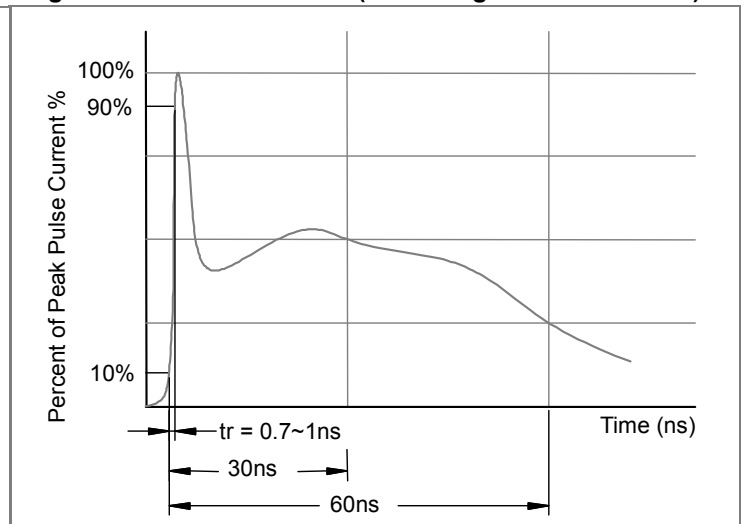
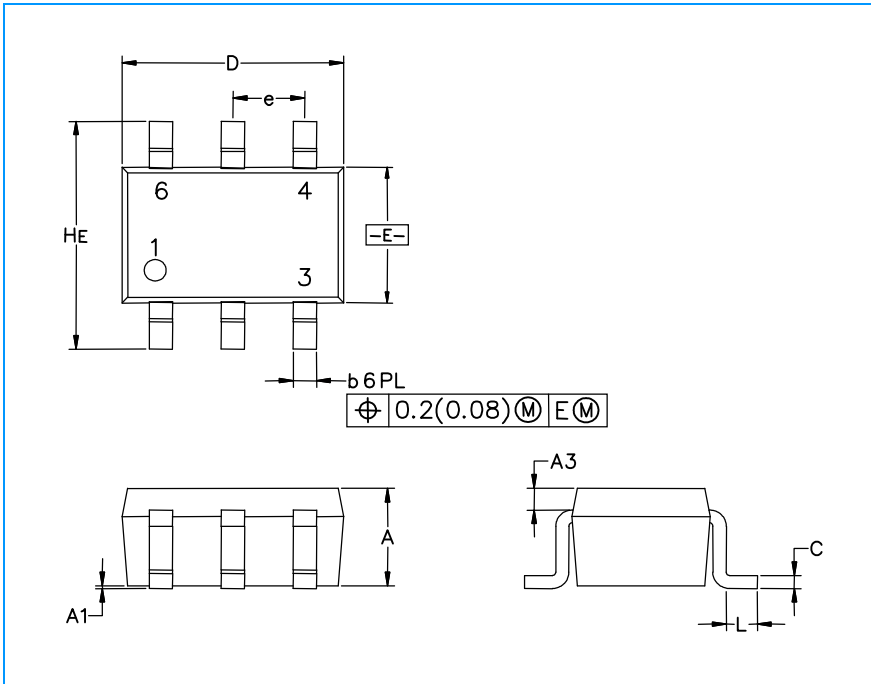


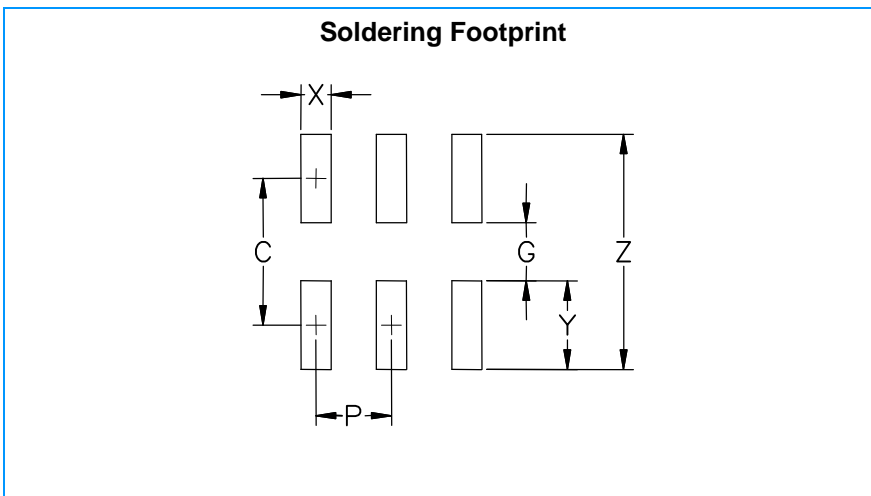
Fig3. Power Derating Curve



## 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 |



| 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         |