

### Features

- 500W peak pulse power (8/20 $\mu$ s)
- Protects four lines
- Ultra low leakage: nA level
- Low operating voltage: 5V
- Low capacitance
- Ultra low clamping voltage
- JEDEC SO-8 package
- Complies with following standards:
  - IEC 61000-4-2 (ESD) immunity test  
Air discharge:  $\pm 30$ kV  
Contact discharge:  $\pm 30$ kV
  - IEC61000-4-4 (EFT) 40A (5/50ns)
  - IEC61000-4-5 (Lightning) 25A (8/20 $\mu$ s)
- RoHS Compliant

### Applications

- Base Station
- Analog Inputs
- Switch Systems
- WAN/LAN Equipment
- Desktops, Servers, and Notebooks
- Low Voltage Interfaces

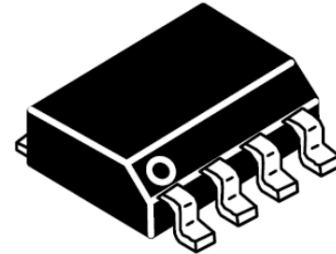
### Mechanical Characteristics

- Package: SO-8
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below
- Marking Information: See Below

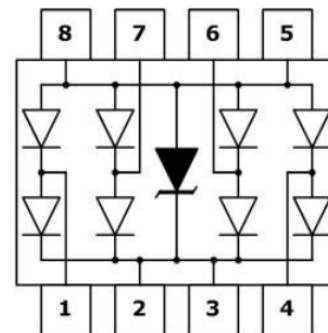
### Absolute Maximum Ratings (T<sub>amb</sub>=25°C unless otherwise specified)

| Parameter                       | Symbol           | Value       | Unit |
|---------------------------------|------------------|-------------|------|
| Peak Pulse Power (8/20 $\mu$ s) | P <sub>pp</sub>  | 500         | W    |
| ESD per IEC 61000-4-2 (Air)     | V <sub>ESD</sub> | $\pm 30$    | Kv   |
| ESD per IEC 61000-4-2 (Contact) |                  | $\pm 30$    |      |
| Operating Temperature Range     | T <sub>J</sub>   | -55 to +125 | °C   |
| Storage Temperature Range       | T <sub>STJ</sub> | -55 to +150 | °C   |

### Dimensions SOP-08



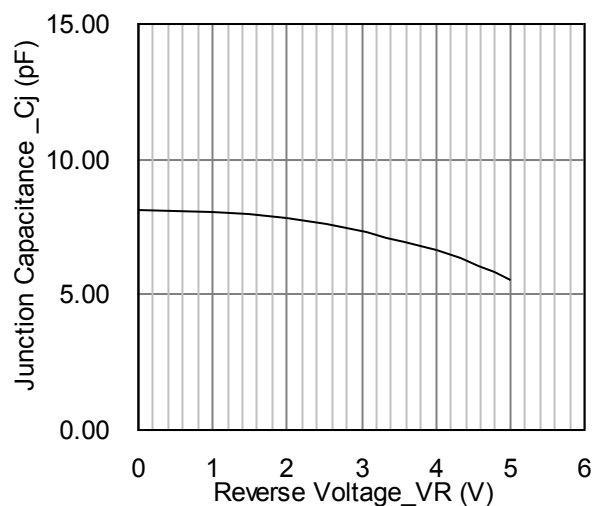
### Pin Configuration



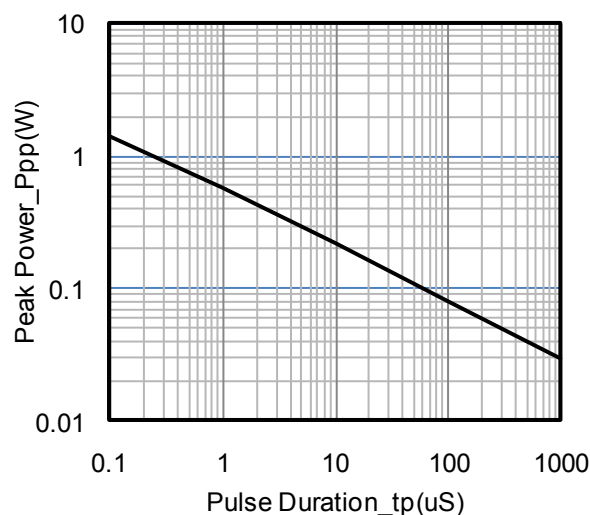
## Electrical Characteristics (TA=25°C unless otherwise specified)

| Part Number | Device Marking | $V_{RWM}$<br>(V) | $V_{BR}$<br>(V) | $I_T$<br>(mA) | $V_C$<br>@1A | $V_C$ |      | $I_R$<br>$\mu A$<br>(Max) | $C$<br>(Pf)<br>(Typ.) |
|-------------|----------------|------------------|-----------------|---------------|--------------|-------|------|---------------------------|-----------------------|
|             |                |                  |                 |               |              | (Max) | (@A) |                           |                       |
| SRDA05-4    | RDA05-4        | 5                | 6               | 1             | 9.8          | 20    | 25   | 1                         | 4                     |

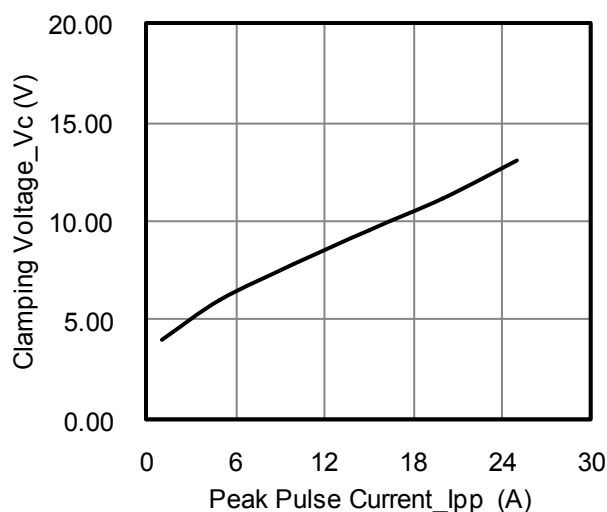
## Typical Performance Characteristics ( $T_A=25^{\circ}\text{C}$ unless otherwise Specified)



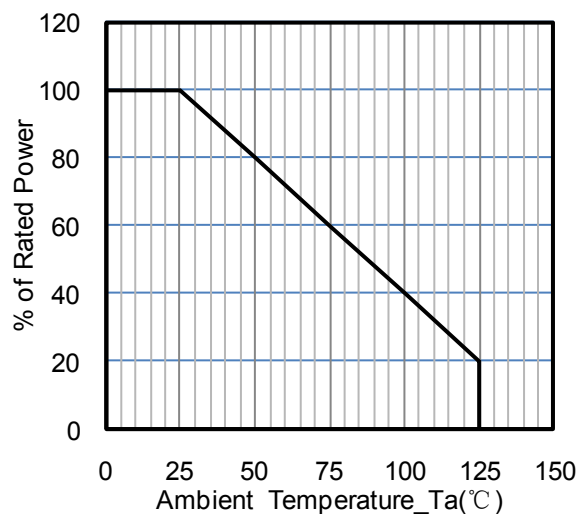
Junction Capacitance vs. Reverse Voltage



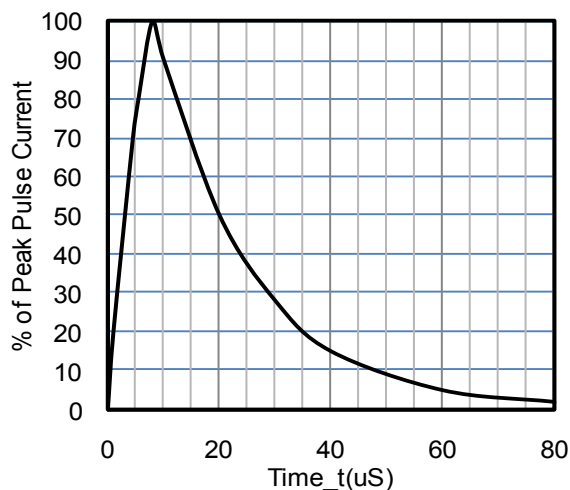
Peak Pulse Power vs. Pulse Time



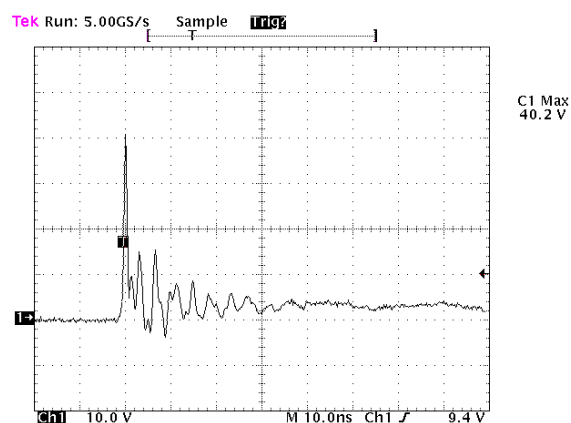
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



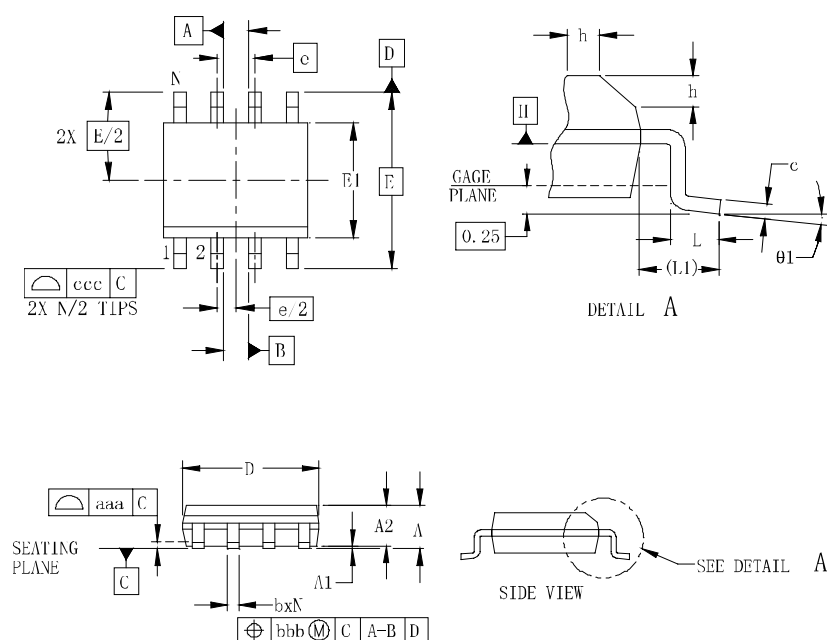
8 X 20us Pulse Waveform



ESD Clamping Voltage

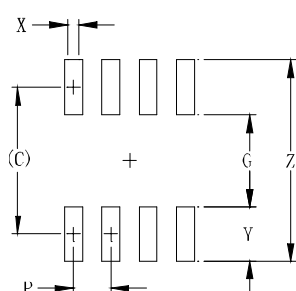
8 kV Contact per IEC61000-4-2

## SOP-08 Mechanical Data



| SY<br>M | DIMENSIONS  |      |      |           |       |       |
|---------|-------------|------|------|-----------|-------|-------|
|         | MILLIMETERS |      |      | INCHES    |       |       |
|         | MIN         | NOM  | MAX  | MIN       | NOM   | MAX   |
| A       | 1.35        |      | 1.75 | 0.053     |       | 0.069 |
| A1      | 0.10        |      | 0.25 | 0.004     |       | 0.010 |
| A2      | 1.25        |      | 1.65 | 0.049     |       | 0.065 |
| b       | 0.31        |      | 0.51 | 0.012     |       | 0.020 |
| c       | 0.17        |      | 0.25 | 0.007     |       | 0.010 |
| D       | 4.80        | 4.90 | 5.00 | 0.189     | 0.193 | 0.197 |
| E1      | 3.80        | 3.90 | 4.00 | 0.150     | 0.154 | 0.157 |
| E       | 6.00 BSC    |      |      | 0.236 BSC |       |       |
| e       | 1.27 BSC    |      |      | 0.050 BSC |       |       |
| h       | 0.25        |      | 0.50 | 0.010     |       | 0.020 |
| L       | 0.40        | 0.72 | 1.04 | 0.016     | 0.028 | 0.041 |
| L1      | (1.04)      |      |      | (0.041)   |       |       |
| N       | 8           |      |      | 8         |       |       |
| θ1      | 0°          |      | 8°   | 0°        |       | 8°    |
| aaa     | 0.10        |      |      | 0.004     |       |       |
| bbb     | 0.25        |      |      | 0.010     |       |       |
| ccc     | 0.20        |      |      | 0.008     |       |       |

### Suggested Land Pattern



| SYM | DIMENSIONS  |        |
|-----|-------------|--------|
|     | MILLIMETERS | INCHES |
| C   | (5.20)      | 0.205  |
| G   | 3.00        | 0.118  |
| P   | 1.27        | 0.050  |
| X   | 0.60        | 0.024  |
| Y   | 2.20        | 0.087  |
| Z   | 7.40        | 0.291  |

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