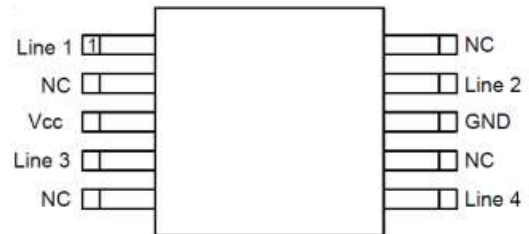


Features

- 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 μs)
- RoHS Compliant

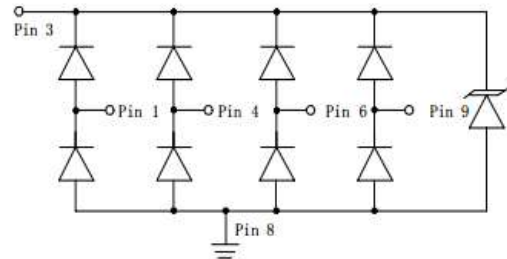
Dimensions MSOP-10



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: MSOP-10
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 3,000pcs
- Reel Size: 13 inch

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

| Parameter | Symbol | Value | Unit |
|--|------------------|-------------|------|
| Peak Pulse Power (8/20 μs) | Ppp | 100 | W |
| ESD per IEC 61000-4-2 (Air) | V _{ESD} | ± 15 | Kv |
| ESD per IEC 61000-4-2 (Contact) | | ± 8 | |
| Operating Temperature Range | T _J | -55 to +125 | °C |
| Storage Temperature Range | T _{STJ} | -55 to +150 | °C |

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

| Part Number | Device Marking | V _{RWM} (V) | V _{BR} (V) | I _T (mA) | V _C @1A | V _C | | I _R μA (Max) | C (Pf) (Typ.) |
|-------------|----------------|----------------------|---------------------|---------------------|--------------------|----------------|------|-------------------------|---------------|
| | | | | | | (Max) | (@A) | | |
| ULC0504M | 554M | 5 | 6 | 1 | 12 | 20 | 5 | 0.5 | 1.5 |

Characteristic Curves

Fig1. 8/20μs Pulse Waveform



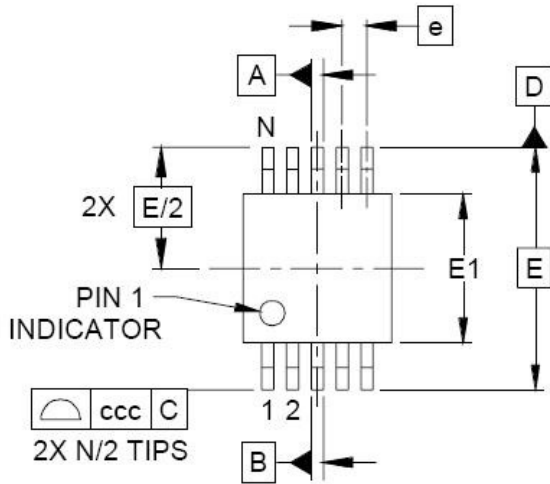
Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)



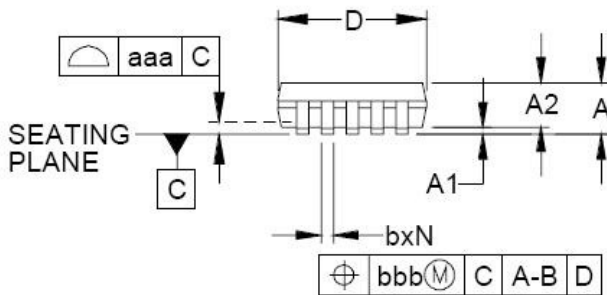
Fig3. Power Derating Curve



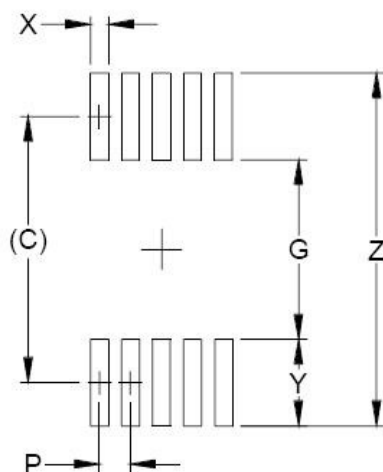
MSOP-10 PACKAGE OUTLINE & DIMENSIONS



| DIM | INCHES | | | MILLIMETERS | | |
|-----|----------|------|------|-------------|------|------|
| | MIN | NOM | MAX | MIN | NOM | MAX |
| A | - | - | .043 | - | - | 1.10 |
| A1 | .000 | - | .006 | 0.00 | - | 0.15 |
| A2 | .030 | - | .037 | 0.75 | - | 0.95 |
| b | .007 | - | .011 | 0.17 | - | 0.27 |
| c | .003 | - | .009 | 0.08 | - | 0.23 |
| D | .114 | .118 | .122 | 2.90 | 3.00 | 3.10 |
| E1 | .114 | .118 | .122 | 2.90 | 3.00 | 3.10 |
| E | .193 BSC | | | 4.90 BSC | | |
| e | .020 BSC | | | 0.50 BSC | | |
| L | .016 | .024 | .032 | 0.40 | 0.60 | 0.80 |
| L1 | (.037) | | | (.95) | | |
| N | 10 | | | 10 | | |
| θ1 | 0° | - | 8° | 0° | - | 8° |
| aaa | .004 | | | 0.10 | | |
| bbb | .003 | | | 0.08 | | |
| ccc | .010 | | | 0.25 | | |



* SOLDERING FOOTPRINT



| DIM | DIMENSIONS | |
|-----|------------|-------------|
| | INCHES | MILLIMETERS |
| C | (.161) | (4.10) |
| G | .098 | 2.50 |
| P | .020 | 0.50 |
| X | .011 | 0.30 |
| Y | .063 | 1.60 |
| Z | .224 | 5.70 |