

Features

- Ultra low capacitance: 0.3pF(IO to IO)
- Ultra low leakage: nA level
- Low operating voltage: 5V
- Low clamping voltage
- Protects one power line and four data lines
- Flow-through package
- Complies with following standards:
 - IEC 61000-4-2 (ESD) immunity test
Air discharge: $\pm 25\text{kV}$
Contact discharge: $\pm 20\text{kV}$
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) 5A (8/20 μs)
- RoHS Compliant

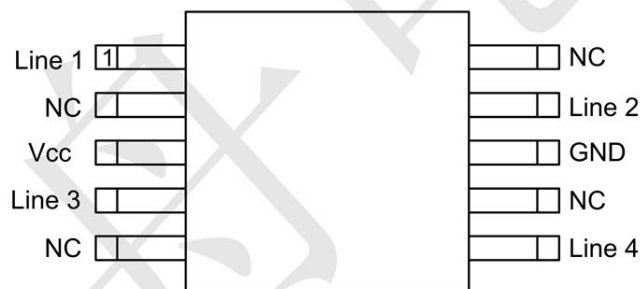
Mechanical Characteristics

- Package: MSOP-10
- Lead Finish: Matte Tin
- Case Material: "Green" Molding Compound.
- UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 3 per J-STD-020
- Shipping Qty :3000pcs/13Inch Tape & Reel

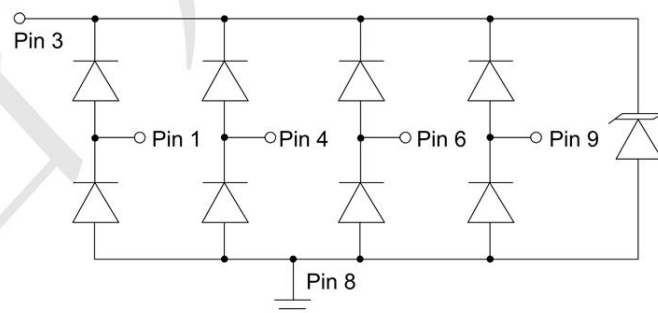
Applications

- DVI Ports
- HDMI Ports
- Set Top Box
- Projection TV
- Notebook Computers
- 10/100/1000 Ethernet

Dimensions and Pin Configuration



Marking: 514M



Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|--|------------------|-------------|------------------|
| Peak Pulse Power (8/20 μs) | Ppk | 100 | W |
| Peak Pulse Current (8/20 μs) | I _{PP} | 5 | A |
| ESD per IEC 61000-4-2 (Air) | VESD | ± 25 | kV |
| ESD per IEC 61000-4-2 (Contact) | | ± 20 | |
| Operating Temperature Range | T _J | -55 to +125 | $^\circ\text{C}$ |
| Storage Temperature Range | T _{stg} | -55 to +150 | $^\circ\text{C}$ |

Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise specified)

| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|-------------------------|------------------|-----|-----|-----|---------------|--|
| Reverse Working Voltage | V _{RWM} | | | 5 | V | Any I/O pin to ground |
| Breakdown Voltage | V _{BR} | 6 | | | V | I _T = 1mA, any I/O pin to ground |
| Reverse Leakage Current | I _R | | | 1 | μA | V _{RWM} = 5V, any I/O pin to ground |
| Clamping Voltage | V _C | | | 14 | V | I _{PP} = 1A (8 x 20 μs pulse), any I/O pin to ground |
| Clamping Voltage | V _C | | | 20 | V | I _{PP} = 5A (8 x 20 μs pulse), any I/O pin to ground |
| Junction Capacitance | C _J | | 0.7 | 1 | pF | V _R = 0V, f = 1MHz, any I/O pin to ground |
| Junction Capacitance | C _J | | 0.3 | 0.6 | pF | V _R = 0V, f = 1MHz, between I/O pins |

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

Fig1. 8/20 μs Pulse Waveform

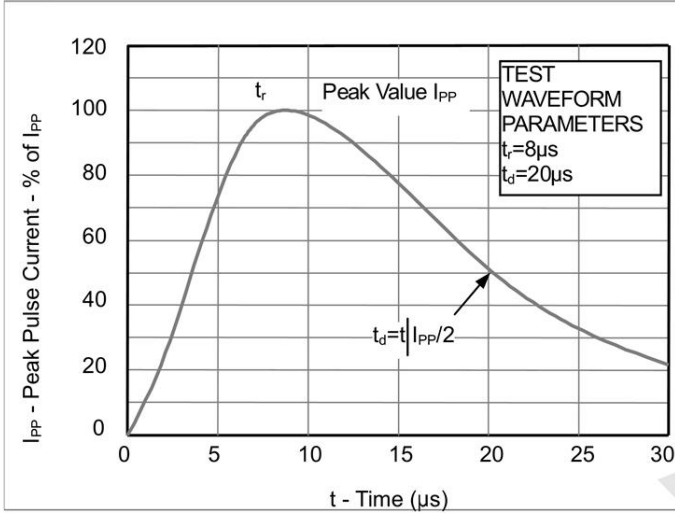


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

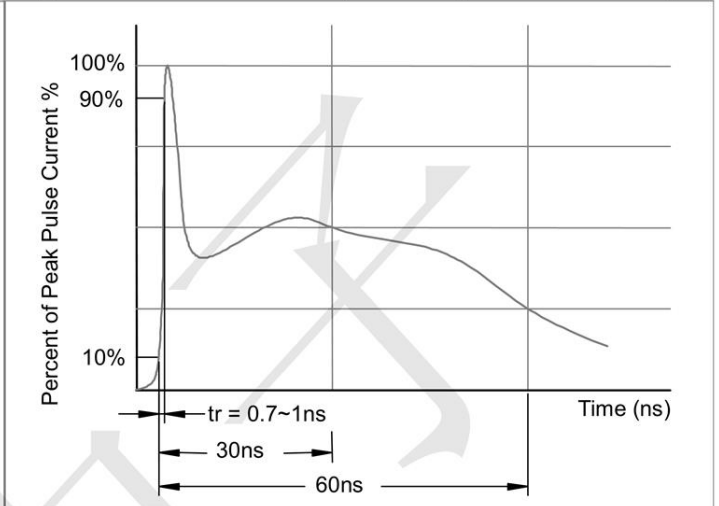
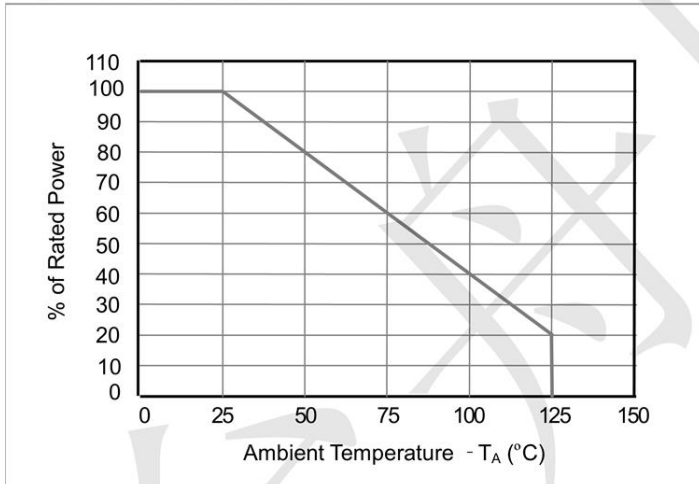
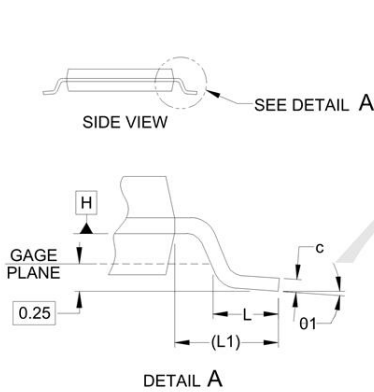
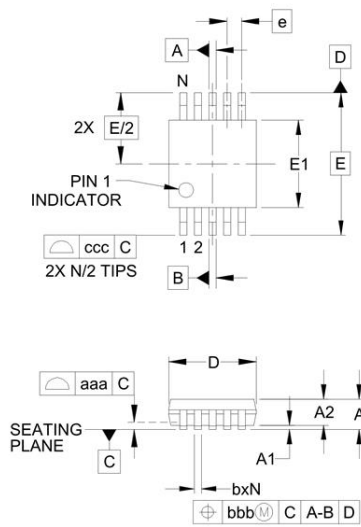


Fig3. Power Derating Curve

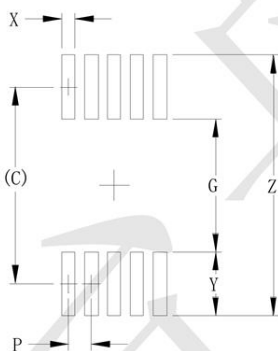


Outline Drawing -MSOP10



| 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 |
| E | .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 | | |
| 01 | 0° | - | 8° | 0° | - | 8° |
| aaa | .004 | | | 0.10 | | |
| bbb | .003 | | | 0.08 | | |
| ccc | .010 | | | 0.25 | | |

Land Pattern -MSOP-10



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

单击下面可查看定价，库存，交付和生命周期等信息

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