

MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



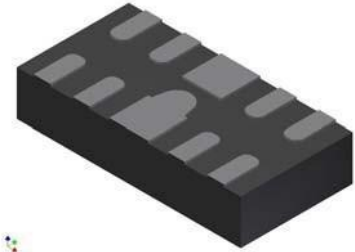
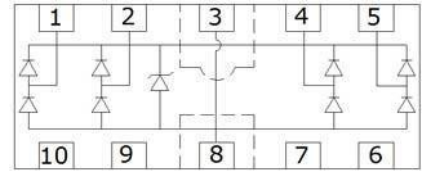
PLED

Product data sheet

www.msksemi.com

Features

- ◆ 150 Watts peak pulse power (tp = 8/20µs)
- ◆ Transient protection for high speed data lines to IEC 61000-4-2 (ESD) ±15kV (air), ±8kV (contact) IEC 61000-4-4 (EFT) 40A (5/50ns)
- ◆ Working voltages : 3.3V
- ◆ Protects two or four I/O lines
- ◆ Ultra Low capacitance:0.3pf (typical between I/O channel)
- ◆ Low operating and clamping voltages
- ◆ Solid-state silicon avalanche technology



DFN2510

Applications

- ◆ High Definition Multi-Media Interface (HDMI)
- ◆ USB 1.1/2.0/3.0/OTG
- ◆ IEEE 1394 Firewire Ports
- ◆ Projection TV Monitors and Flat Panel Displays
- ◆ Notebook Computers
- ◆ Set Top Box

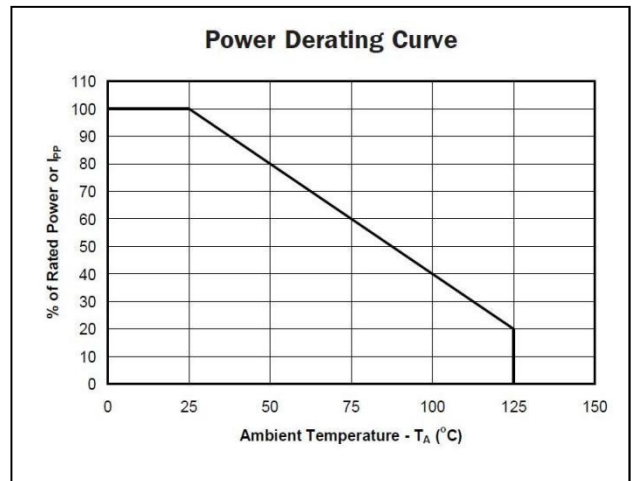
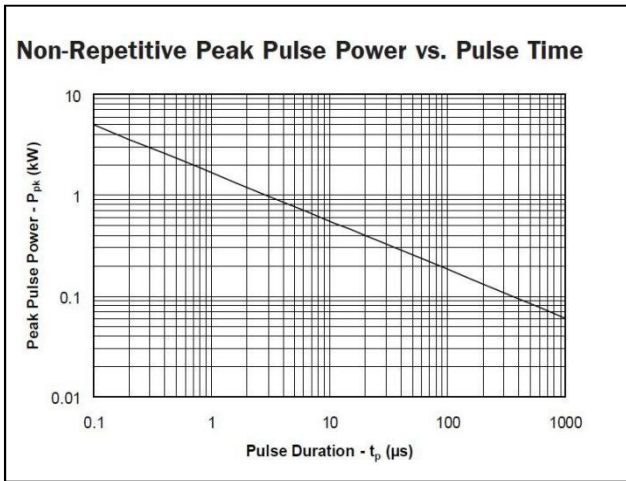
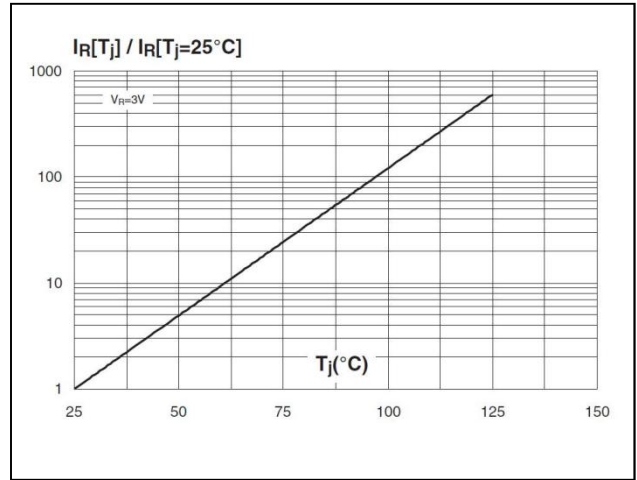
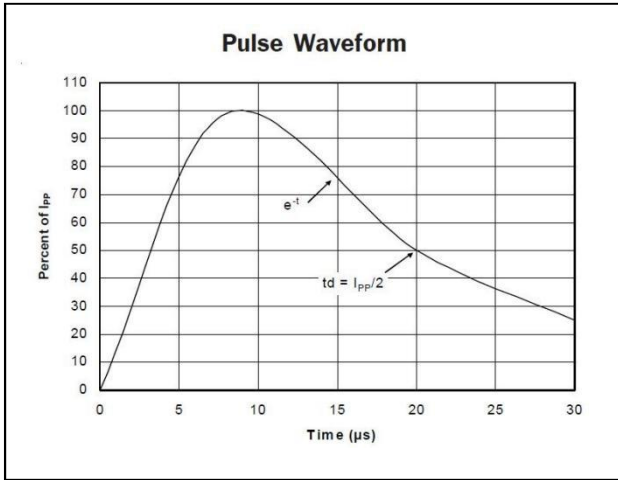
Maximum Rating @ Ta=25°C unless otherwise specified

| Symbol | Parameter | Ratings | Units |
|------------------|--------------------------------|-------------|-------|
| P _{PK} | Peak Pulse Power (tp = 8/20µs) | 150 | Watts |
| T _L | Lead Soldering Temperature | 260(10sec.) | °C |
| T _J | Operating Temperature | -55 to +125 | °C |
| T _{STG} | Storage Temperature | -55 to +150 | °C |

Electrical Characteristics@ Ta=25°C unless otherwise

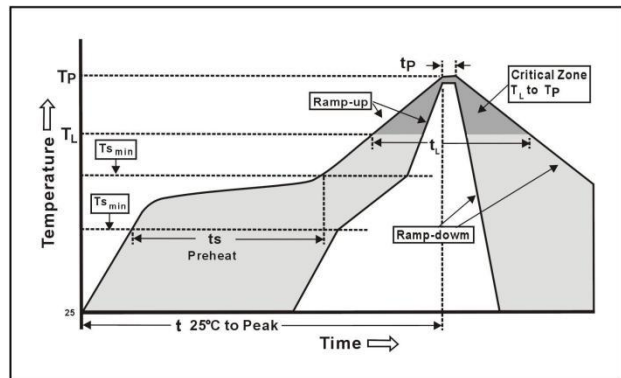
| Symbol | Parameter | Conditions | Min. | Typ. | Max. | Units |
|------------------|---------------------------|--|------|------|------|-------|
| V _{RWM} | Reverse Working Voltage | Any I/O to Ground | | 3.3 | | V |
| V _{BR} | Reverse Breakdown Voltage | I _T = 1mA, Any I/O to Ground | 4.5 | | | V |
| I _R | Reverse Leakage Current | V _{RWM} = 5V, Any I/O to Ground | | | 1 | µA |
| V _F | Diode Forward Voltage | I _F = 15mA | | 0.85 | 1.2 | V |
| V _C | Clamping Voltage | I _{PP} = 1A, tp =8/20µs, any I/O pin to Ground | | | 9.8 | V |
| | | I _{PP} = 5A, tp =8/20µs, any I/O pin to Ground | | | 15 | V |
| C _J | Junction Capacitance | V _R = 0V, f = 1MHz, between I/O pins | | 0.25 | 0.3 | pF |
| | | V _R = 0V, f = 1MHz, any I/O pin to Ground | | 0.5 | 0.6 | pF |

Typical Characteristics@ Ta=25°C unless otherwise specified

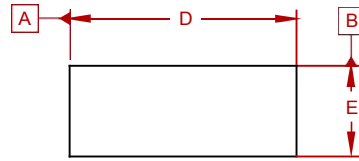
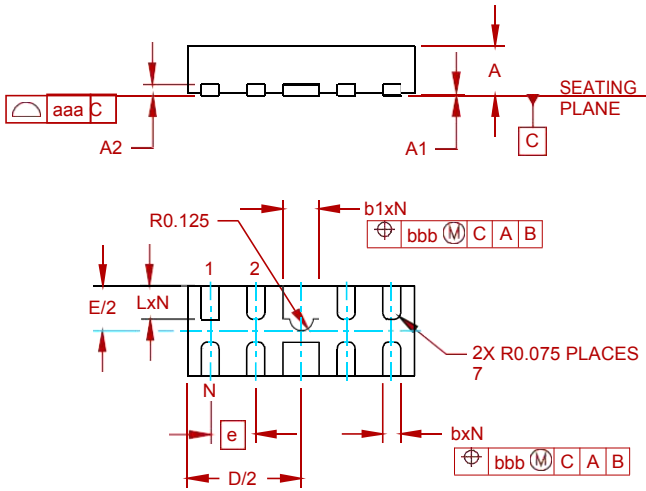


Soldering Parameters

| | | |
|--|------------------------------------|-------------------------|
| Reflow Condition | | Fb – Free assembly |
| Pre Heat | - Temperature Min ($T_{s(Min)}$) | 150°C |
| | - Temperature Max ($T_{s(Max)}$) | 200°C |
| | - Time (Min to max) (t_s) | 60 – 180 secs |
| Average ramp up rate (Liquidus) Temp (T_L) to peak | | 3°C/second Max |
| $T_{s(Max)}$ to T_L - Ramp-up Rate | | 3°C/second Max |
| Reflow | - Temperature (T_L) (Liquidus) | 217°C |
| | - Temperature (t_l) | 60 – 150 seconds |
| Peak Temperature (T_p) | | 250 ^{+0/-5} °C |
| Time within 5°C of actual peak Temperature (t_p) | | 20 – 40 seconds |
| Ramp-down Rate | | 6°C/second Max |
| Time 25°C to peak Temperature (T_p) | | 8 minutes Max. |
| Do not exceed | | 260°C |



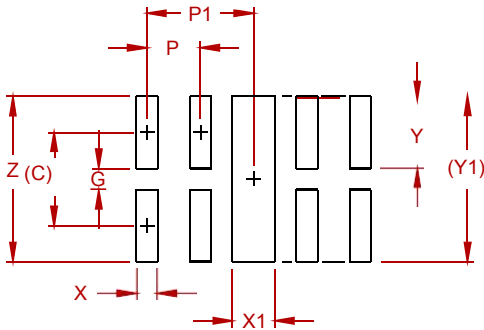
PACKAGE MECHANICAL DATA



| DIM | DIMENSI ONS | | | | | |
|-----|-------------|------|------|-------------|------|-------|
| | INCHES | | | MILLIMETERS | | |
| | MIN | NOM | MAX | MIN | NOM | MAX |
| A | .020 | .023 | .026 | 0.50 | 0.58 | 0.65 |
| A1 | 0.00 | .001 | .002 | 0.00 | 0.03 | 0.05 |
| A2 | (.005) | | | (0.13) | | |
| b | .006 | .008 | .010 | 0.15 | 0.20 | 0.25 |
| b1 | .014 | .016 | .018 | 0.35 | 0.40 | 0.45 |
| D | .094 | .098 | .102 | 2.40 | 2.50 | 2.60 |
| E | .035 | .039 | .043 | 0.90 | 1.00 | 1.10 |
| e | .020 BSC | | | 0.50 BSC | | |
| L | .012 | .015 | .017 | 0.30 | 0.38 | 0.425 |
| N | 8 | | | 8 | | |
| aaa | .003 | | | 0.08 | | |
| bbb | .004 | | | 0.10 | | |

Dimensions in millimeters

Suggested Pad Layout



| DIM | DIMENSIONS | |
|-----|------------|-------------|
| | INCHES | MILLIMETERS |
| C | (.034) | (0.875) |
| G | .008 | 0.20 |
| P | .020 | 0.50 |
| P1 | .039 | 1.00 |
| X | .008 | 0.20 |
| X1 | .016 | 0.40 |
| Y | .027 | 0.675 |
| Y1 | (.061) | (1.55) |
| Z | .061 | 1.55 |

NOTES:

CONTROLLING DIMENSIONS ARE IN MILLIMETERS (ANGLES IN DEGREES).
 THIS LAND PATTERN IS FOR REFERENCE PURPOSES ONLY.
 CONSULT YOUR MANUFACTURING GROUP TO ENSURE YOUR COMPANY'S MANUFACTURING GUIDELINES ARE MET.

REEL SPECIFICATION

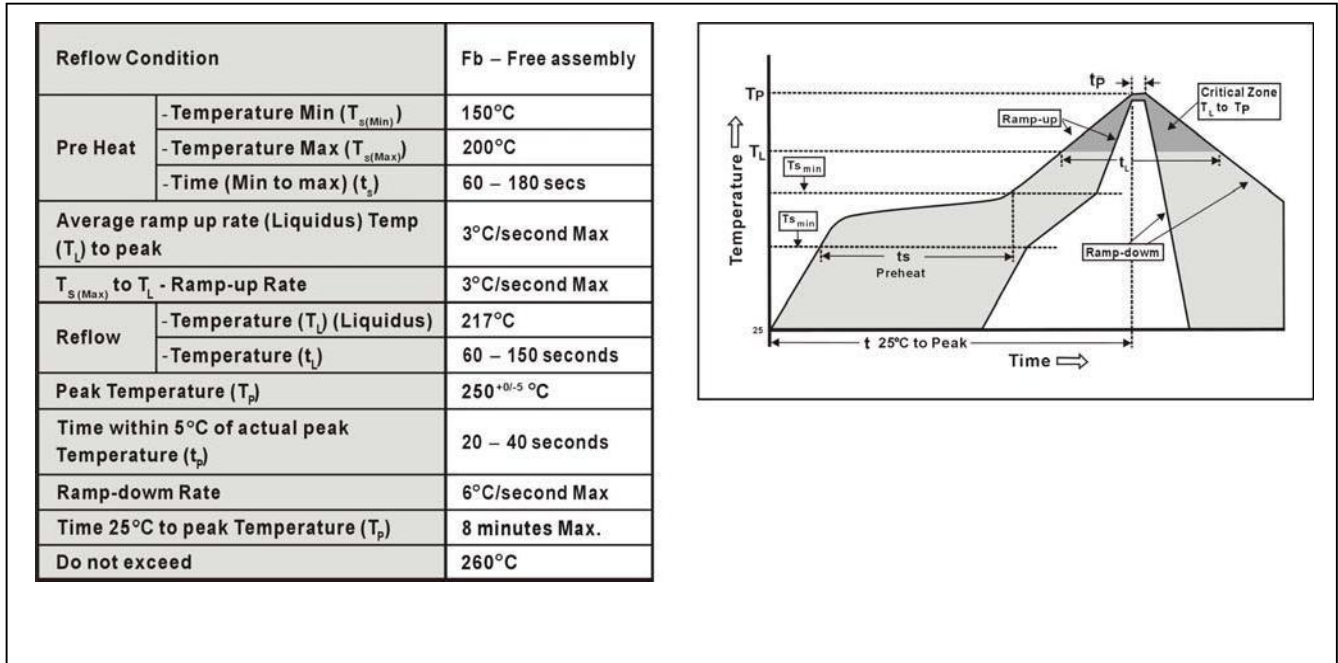
| P/N | PKG | QTY |
|---------------|---------|------|
| AZ9143-04F-MS | DFN2510 | 3000 |

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Transient Voltage Suppressors for ESD Protection

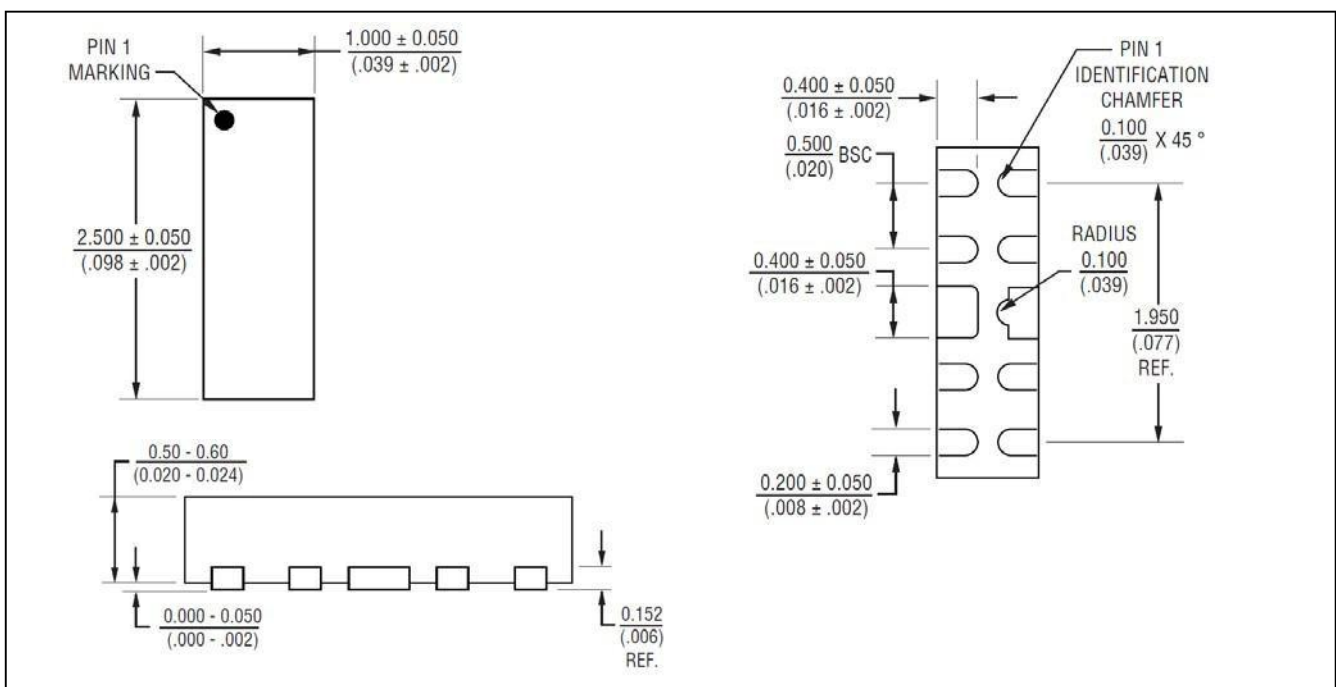
Soldering Parameters



Package Outline

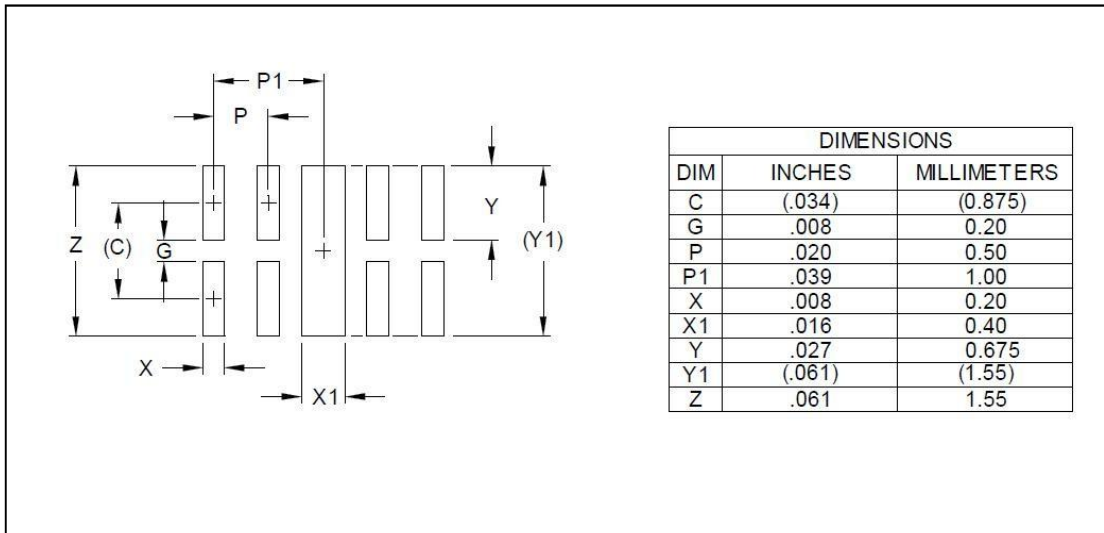
Plastic surface mounted package

DFN2510



Transient Voltage Suppressors for ESD Protection

Soldering Footprint



Package And Marking Information

| Device | Package | Shipping | Reel Size |
|--------|---------|-----------|-----------|
| TAPING | DFN2510 | 3000/Reel | 7 inch |

单击下面可查看定价，库存，交付和生命周期等信息

[>>MSKSEMI\(美森科\)](#)