

MSKSEMI

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

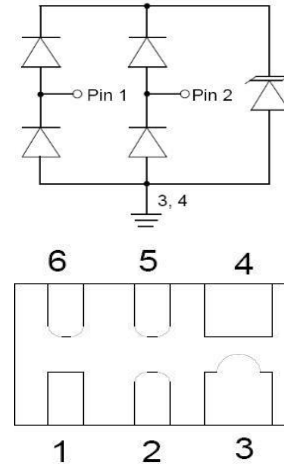
Product data sheet

Features

- ◆ 150 Watts peak pulse power ($t_p = 8/20\mu s$)
- ◆ Transient protection for high speed data lines to
- ◆ IEC 61000-4-2 (ESD) $\pm 15kV$ (air), $\pm 8kV$ (contact)
IEC 61000-4-4 (EFT) 40A (5/50ns)
- ◆ Working voltages : 5V
- ◆ Protects One Power or I/O Port
- ◆ Low operating and clamping voltages
- ◆ Solid-state silicon avalanche technology

Applications

- ◆ Notebooks, Desktops, Servers and Video Graphics Cards
- ◆ USB Power & Data Line Protection
- ◆ Monitors and Flat Panel Displays
- ◆ I²C Bus Protection
- ◆ Portable Instrumentation
- ◆ Set Top Box



SLP1610P4

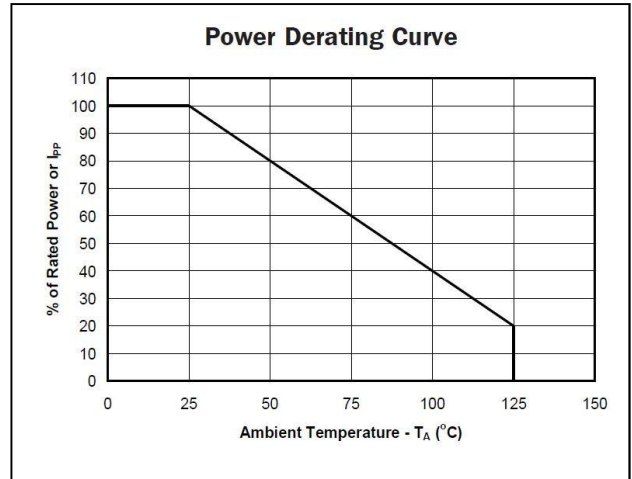
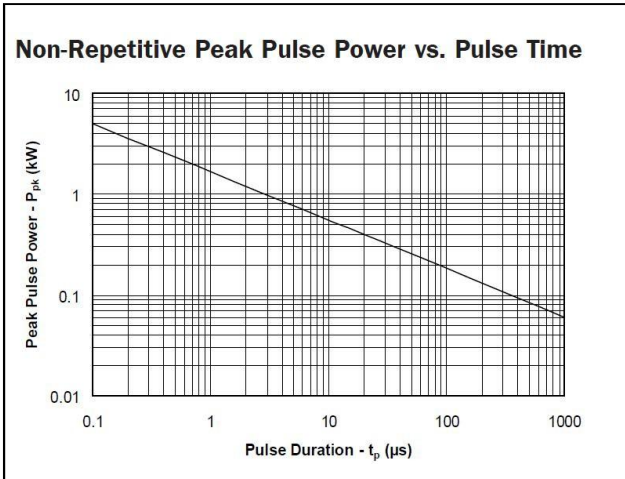
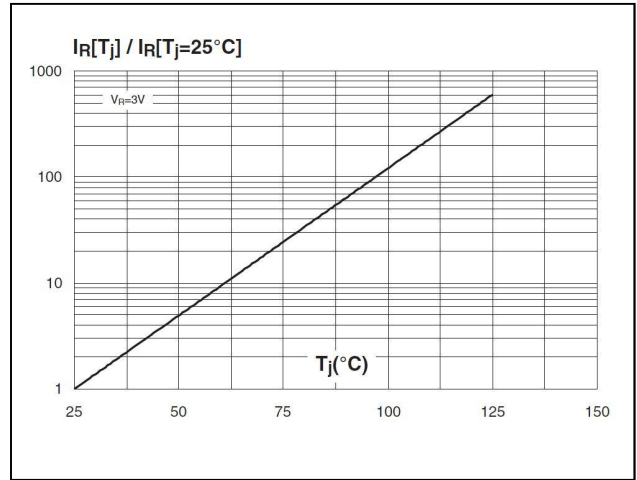
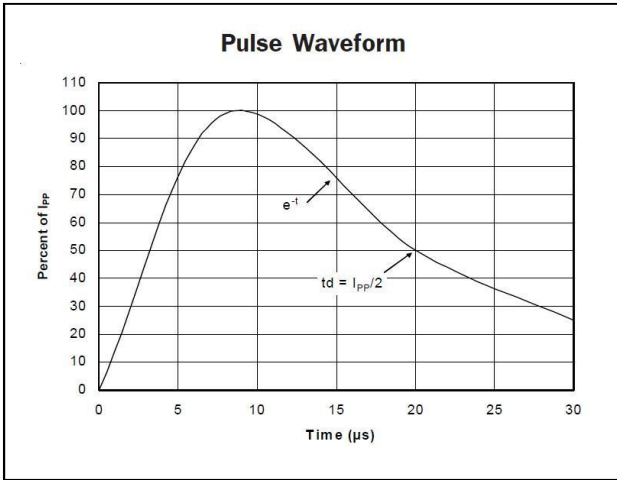
Electrical Characteristics @ $T_a = 25^\circ C$ unless otherwise

| P/N | VRWM @IR | | VBR@1mA | Vc@1A | Vc@IPP | | CJ |
|------------|----------|---------|---------|-------|--------|---|-----|
| | V | μA | V | V | V | A | pF |
| | | MAX | MIN | MAX | MAX | | TYP |
| MSESD0522P | 5 | 1 | 5.8 | 11.8 | 15 | 3 | 0.5 |

Maximum Rating @ $T_a = 25^\circ C$ unless otherwise specified

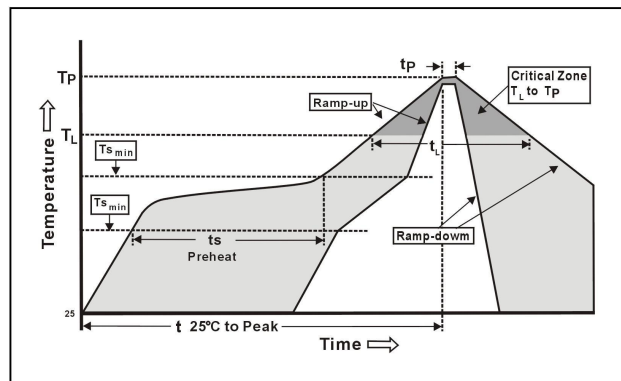
| Symbol | Parameter | Ratings | Units |
|-----------|--|-------------|------------|
| P_{PK} | Peak Pulse Power ($t_p = 8/20\mu s$) | 150 | Watts |
| T_L | Lead Soldering Temperature | 260(10sec.) | $^\circ C$ |
| T_J | Operating Temperature | -55 to +125 | $^\circ C$ |
| T_{STG} | Storage Temperature | -55 to +150 | $^\circ C$ |

Typical Characteristics@ Ta=25°C unless otherwise specified

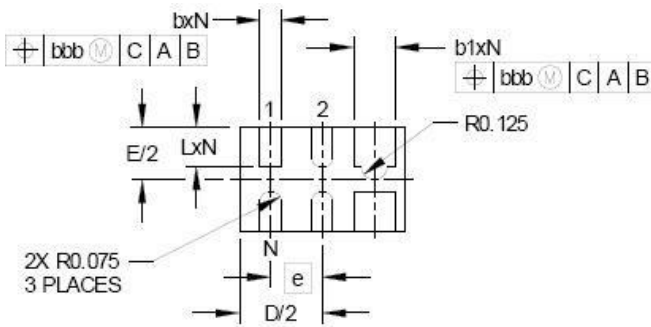
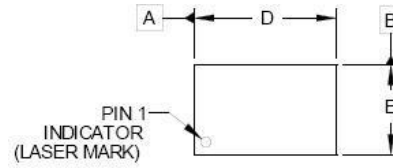
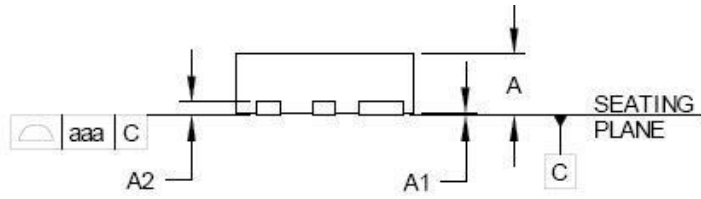


Soldering Parameters

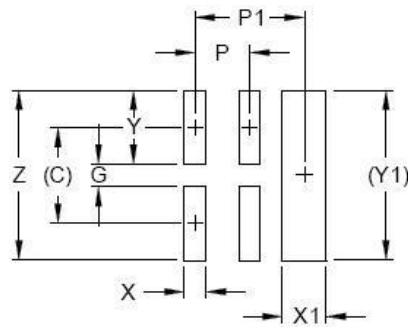
| | | |
|--|------------------------------------|-------------------------|
| Reflow Condition | | Fb – Free assembly |
| Pre Heat | - Temperature Min ($T_{s(Min)}$) | 150°C |
| | - Temperature Max ($T_{s(Max)}$) | 200°C |
| | - Time (Min to max) (t_s) | 60 – 180 secs |
| Average ramp up rate (Liquidus) 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 Outline



| DIM | DIMENSIONS | | | | | |
|-----|------------|--------|------|-------------|--------|-------|
| | 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 | .059 | .063 | .067 | 1.50 | 1.60 | 1.70 |
| 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 | 6 | | | 6 | | |
| aaa | .003 | | | 0.08 | | |
| bbb | .004 | | | 0.10 | | |



| 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 |

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