

Ultra Low Capacitance TVS Diode Array

APPLICATIONS

- ◆ High Definition Multi-Media Interface (HDMI)
- ◆ Digital Visual Interface (DVI)
- ◆ Unified Display Interface (UDI)
- ◆ MDDI Ports
- ◆ PCI Express
- ◆ Serial ATA

IEC COMPATIBILITY

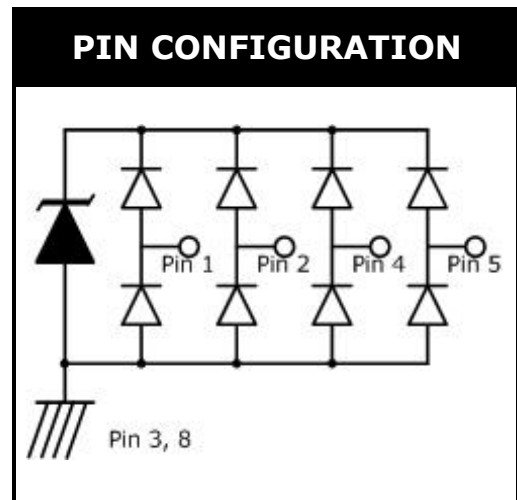
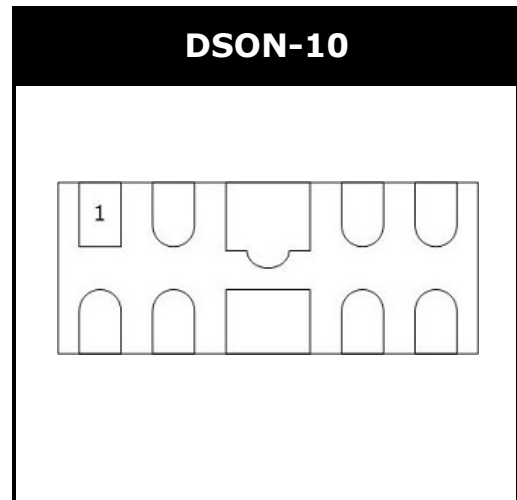
- ◆ IEC61000-4-2 (ESD) $\pm 15\text{kV}$ (air), $\pm 8\text{kV}$ (contact)
- ◆ IEC61000-4-4 (EFT) 40A (5/50 ns)
- ◆ IEC61000-4-5 (Lightning) 5A (8/20 μs)

FEATURES

- ◆ 150 Watts Peak Pulse Power per Line ($t_p=8/20\mu\text{s}$)
- ◆ Protects two or four I/O lines
- ◆ Low capacitance: 0.3pF typical (I/O to I/O)
- ◆ Low operating voltage: 5V
- ◆ RoHS Compliant

MECHANICAL CHARACTERISTICS

- ◆ DSON-10 Package
- ◆ Molding Compound Flammability Rating : UL 94V-0
- ◆ Weight 15 Milligrams (Approximate)
- ◆ Quantity Per Reel : 3,000pcs
- ◆ Reel Size : 7 inch
- ◆ Lead Finish : Lead Free



DEVICE CHARACTERISTICS

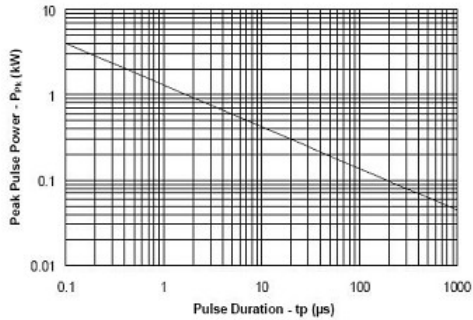
MAXIMUM RATINGS (@ 25°C Unless Otherwise Specified)

| PARAMETER | SYMBOL | VALUE | UNITS |
|---------------------------------------|------------------|---------------|-------|
| Peak Pulse Power (tp=8/20μs waveform) | P _{PP} | 150 | Watts |
| Lead Soldering Temperature | T _L | 260 (10 sec.) | °C |
| Operating Temperature Range | T _J | -55 ~ 150 | °C |
| Storage Temperature Range | T _{STG} | -55 ~ 150 | °C |

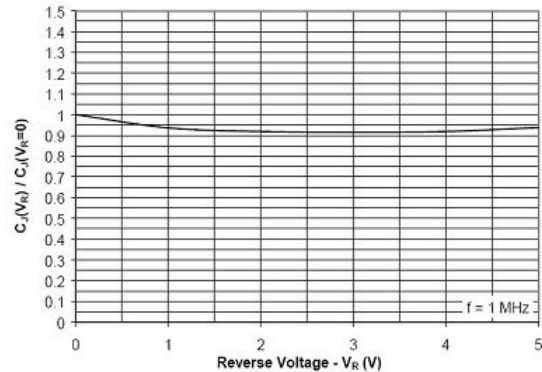
ELECTRICAL CHARACTERISTICS PER LINE (@ 25°C Unless Otherwise Specified)

| PART NUMBER | DEVICE MARKING | V _{RWM} | V _B | I _T | V _C | V _C | | I _R | C _T |
|----------------|----------------|------------------|----------------|----------------|----------------|----------------|------|----------------|----------------|
| | | (V) (max.) | (V) (min.) | (mA) | @1A (max.) | (max.) | (@A) | (μA) (max.) | (pF) (max.) |
| RLDSON10A054LV | P524 | 5 | 6.0 | 1 | 15 | 25 | 5 | 1 | 0.8 |

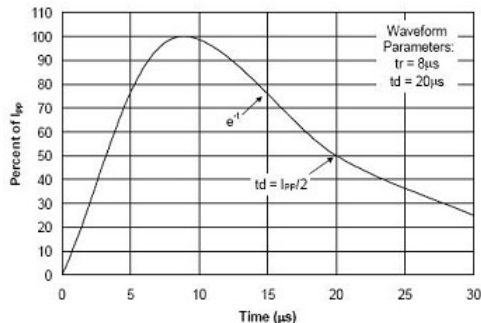
Non-Repetitive Peak Pulse Power vs. Pulse Time



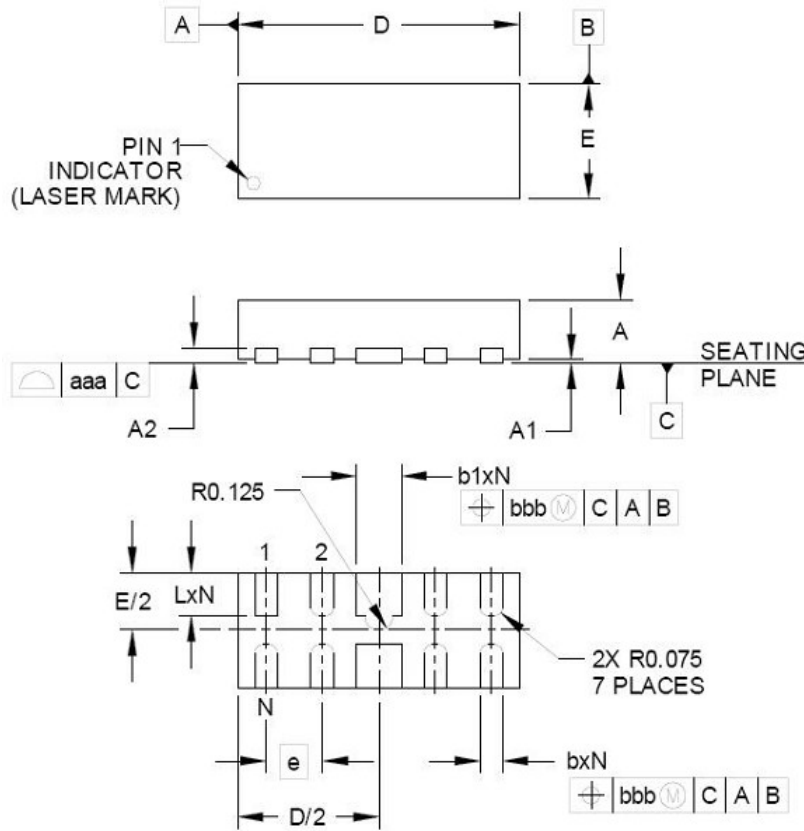
Normalized Capacitance vs. Reverse Voltage



Pulse Waveform

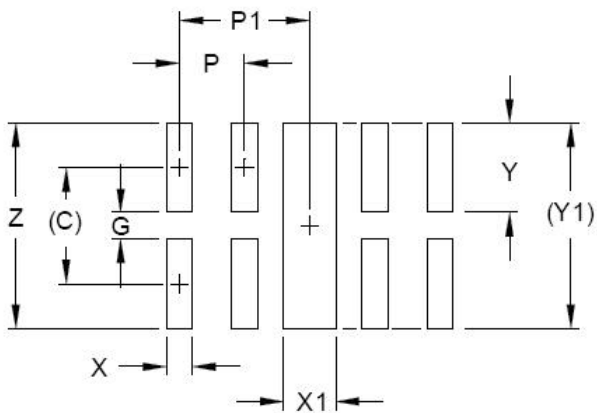


DSON-10 PACKAGE OUTLINE & DIMENSIONS



| DIM | 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 | 10 | | | 10 | | |
| aaa | .003 | | | 0.08 | | |
| bbb | .004 | | | 0.10 | | |

*** SOLDERING FOOTPRINT**



| 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 |