

## Features:

- Protects two line pairs
- Ultra low leakage: nA level
- Ultra low operating voltage: 2.5V
- Ultra low clamping voltage
- Flow-through design simplifies layout
- Complies with following standards:
  - IEC 61000-4-2 (ESD):  $\pm 30\text{kV}$  (Contact/Air)
  - IEC 61000-4-5 (Lightning) 10A (8/20 $\mu\text{s}$ )
- RoHS Compliant

## Applications:

- LAN/WAN Equipment
- 10/100/1000 Ethernet
- RJ-45 connectors
- Industrial Controls
- Security Cameras
- Notebooks & Desktop Computers

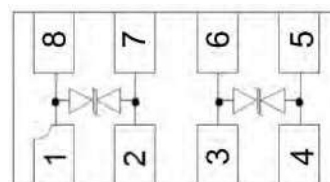
## Mechanical Characteristics

- Molding Compound Flammability Rating : UL 94V-O
- Weight 1 Milligrams (Approximate)
- Quantity Per Reel : 3,000pcs
- Reel Size : 7 inch
- Lead Finish : Lead Free

## Dimensions DFN2010-8



## Pin Configuration



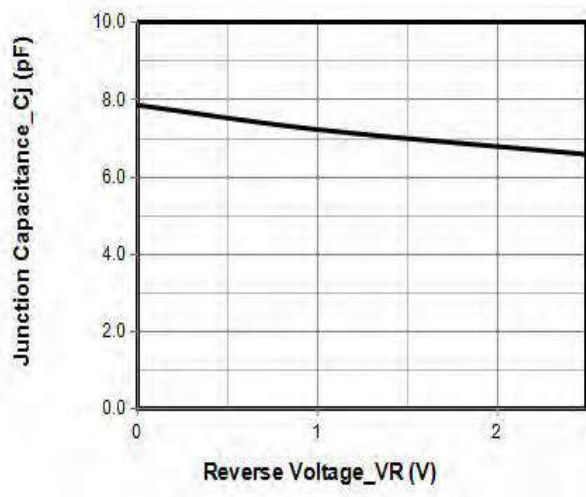
## Absolute Maximum Ratings (T<sub>amb</sub>=25°C unless otherwise specified)

| Parameter                              | Symbol           | Value       | Unit |
|----------------------------------------|------------------|-------------|------|
| Peak Pulse Power (8/20 $\mu\text{s}$ ) | P <sub>pp</sub>  | 100         | W    |
| ESD per IEC 61000-4-2 (Air)            | V <sub>ESD</sub> | $\pm 30$    | Kv   |
| ESD per IEC 61000-4-2 (Contact)        |                  | $\pm 30$    |      |
| Operating Temperature Range            | T <sub>J</sub>   | -55 to +125 | °C   |
| Storage Temperature Range              | T <sub>STJ</sub> | -55 to +150 | °C   |

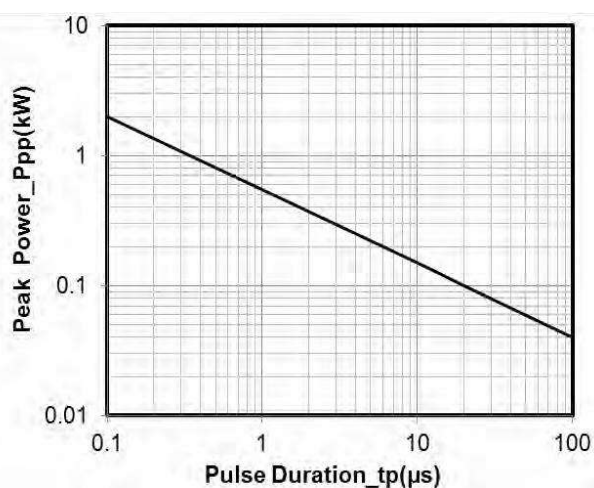
**Electrical Characteristics**(TA=25°C unless otherwise specified)

| Part Number | Device Marking | V <sub>RWM</sub><br>(V) | V <sub>BR</sub><br>(V) | I <sub>T</sub><br>(mA) | V <sub>C</sub><br>@1A | V <sub>C</sub> |      | I <sub>R</sub><br>μA<br>(Max) | C<br>(Pf)<br>(Typ.) |
|-------------|----------------|-------------------------|------------------------|------------------------|-----------------------|----------------|------|-------------------------------|---------------------|
|             |                |                         |                        |                        |                       | (Max)          | (@A) |                               |                     |
| KWESD25CT8  | 2512P          | 2.5                     | 2.7                    | 1                      | 5                     | 10             | 10   | 0.2                           | 8                   |

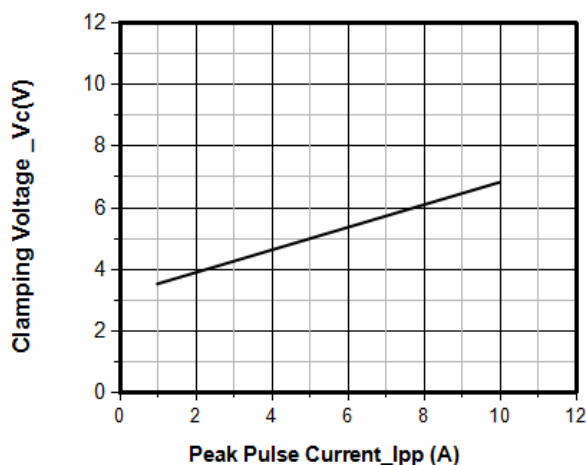
**Typical Performance Characteristics (TA=25°C unless otherwise Specified)**



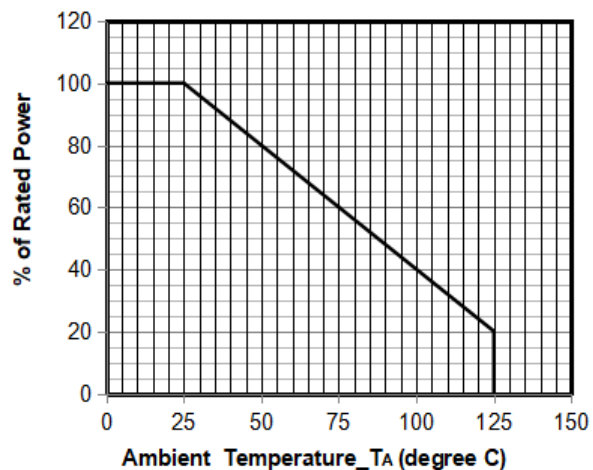
**Junction Capacitance vs. Reverse Voltage**



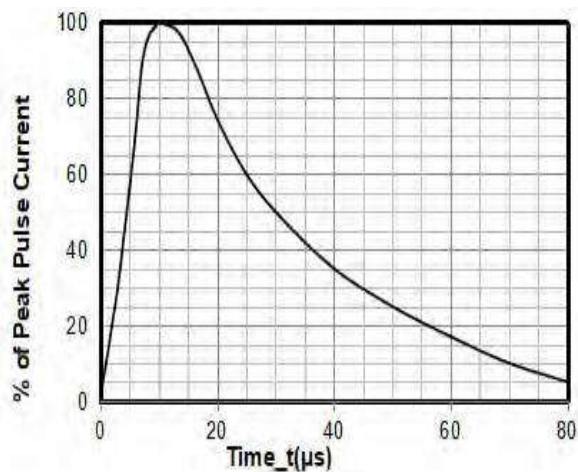
**Peak Pulse Power vs. Pulse Time**



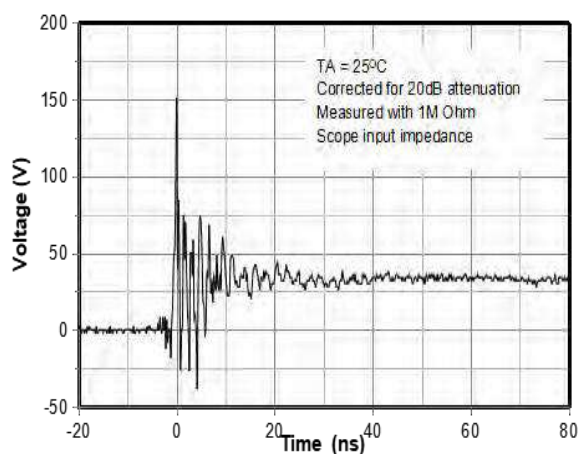
**Clamping Voltage vs. Peak Pulse Current**



**Power Derating Curve**

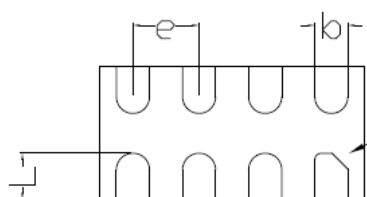


**8 X 20μs Pulse Waveform**

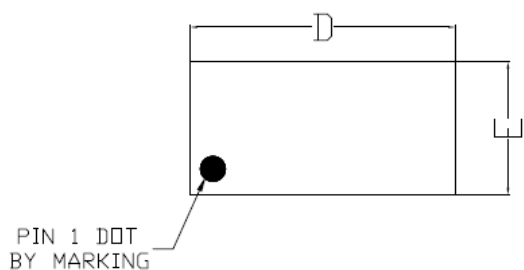


**ESD Clamping Voltage**  
**8 kV Contact per IEC61000-4-2**

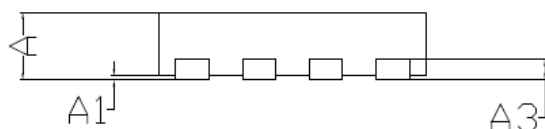
## DFN2010-8 PACKAGE OUTLINE & DIMENSIONS



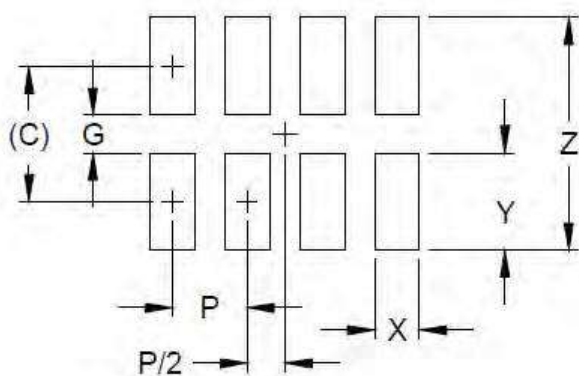
PIN #1 IDENTIFICATION  
CHAMFER 0.120



PIN 1 DOT  
BY MARKING



| COMMON DIMENSIONS(MM) |                     |      |      |
|-----------------------|---------------------|------|------|
| PKG.                  | X2:EXTREMA THIN     |      |      |
| REF.                  | MIN.                | NUM. | MAX  |
| A                     | >0.30               | —    | 0.40 |
| A1                    | 0.00                | —    | 0.05 |
| A3                    | 0.125REF.           |      |      |
| D                     | 1.95                | 2.00 | 2.05 |
| E                     | 0.95                | 1.00 | 1.05 |
| L                     | 0.25                | 0.35 | 0.45 |
| b                     | 0.20                | 0.25 | 0.30 |
| e                     | 0.50B <sub>SC</sub> |      |      |



| DIMENSIONS |             |
|------------|-------------|
| DIM        | MILLIMETERS |
| C          | (0.90)      |
| G          | 0.25        |
| P          | 0.50        |
| X          | 0.30        |
| Y          | 0.65        |
| Z          | 1.55        |