

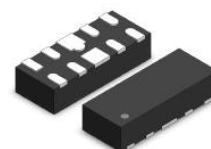
4 Channel Ultra-Low Capacitance ESD Protection Diode

1KE0524P

■ Features

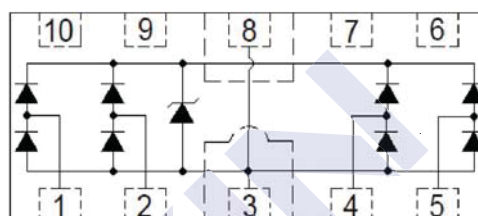
- Ultra-Low capacitance:0.5pF(typ.)
- Reverse stand-off voltage:5V
- IEC 61000-4-2 (Air): $\pm 20\text{KV}$
IEC 61000-4-2 (Contact): $\pm 15\text{KV}$

DFN2510-10



■ Applications

- USB 3.0, USB 2.0
- HDMI 1.3/1.4, Display Port 1.3, eSATA
- Unified Display Interface (UDI)
- Digital Visual Interface (DVI)
- High speed serial interfaces



Top View

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

| Parameter | Symbol | Value | Unit |
|---|-------------------------------------|-------------|------------------|
| IEC 61000-4-2(ESD) Contact | V _{ESD} | ± 15 | KV |
| IEC 61000-4-2(ESD) Air | | ± 20 | |
| Rated Peak Pulse Current ($t_P = 8/20 \mu\text{s}$) | I _{PPM} | 5 | A |
| Operating and Storage Temperature Range | T _{opr} , T _{stg} | -55 to +150 | $^\circ\text{C}$ |

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

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|-------------------------|------------------|--|-----|-----|-----|---------------|
| Reverse Working Voltage | V _{RWM} | | | | 5 | V |
| Breakdown Voltage | V _{BR} | I _R = 1 mA | 6 | | | |
| Reverse Leakage Current | I _R | V _{RWM} = 5V | | | 1 | μA |
| Clamping Voltage | V _C | I _{PP} =1A, t _P =8/20 μs , Any I/O to GND, Positive | | 8.5 | 12 | V |
| | | I _{PP} =5A, t _P =8/20 μs , Any I/O to GND, Positive | | 12 | 16 | |
| Junction Capacitance | C _L | V _R = 0V, f = 1 MHz, I/O to I/O | | 0.3 | 0.4 | pF |
| | | V _R = 0V, f = 1 MHz, I/O to GND | | 0.5 | 0.8 | |

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■ Typical Characteristics

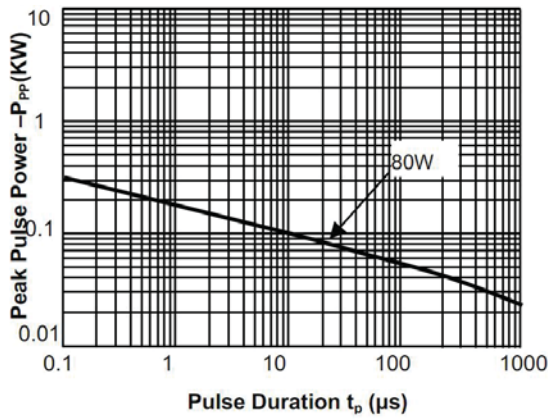


Fig.1 Peak Pulse Power Rating Curve

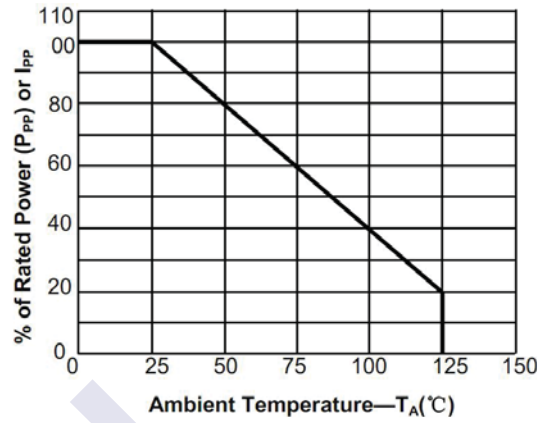


Fig.2 Pulse Derating Curve

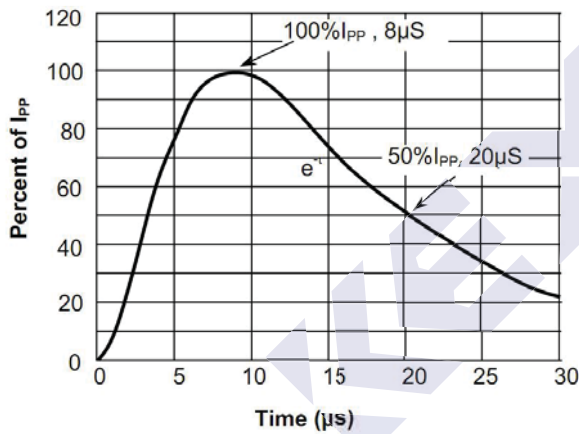


Fig.3 Pulse Waveform-8/20μs

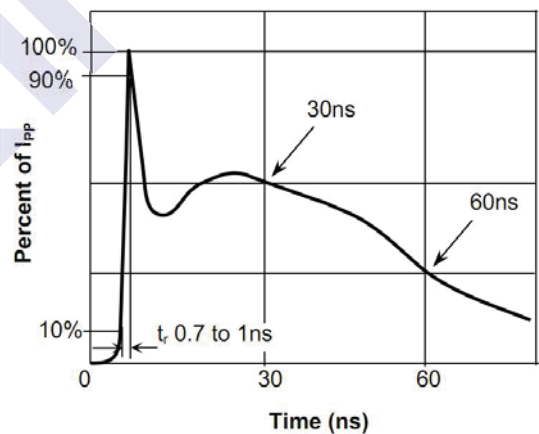
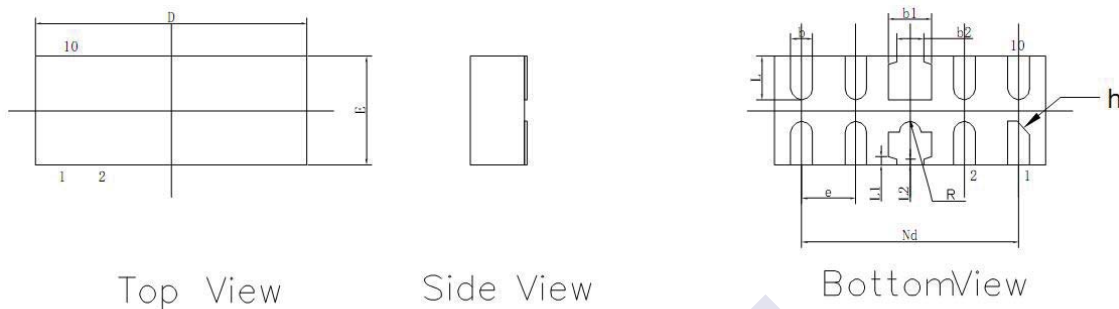


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

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■ DFN2510-10 Package Outline Dimensions



| Symbol | Dimensions in millimeters | | |
|-----------|---------------------------|------|------|
| | Min | Nom | Max |
| A | 0.45 | 0.50 | 0.55 |
| A1 | - | 0.02 | 0.05 |
| b | 0.15 | 0.20 | 0.25 |
| b1 | 0.35 | 0.40 | 0.45 |
| b2 | 0.20 | 0.25 | 0.30 |
| c | 0.10 | 0.15 | 0.20 |
| D | 2.45 | 2.50 | 2.55 |
| e | 0.50BSC | | |
| Nd | 2.00 BSC | | |
| E | 0.95 | 1.00 | 1.05 |
| L | 0.35 | 0.40 | 0.45 |
| L1 | 0.075 REF | | |
| L2 | 0.05 REF | | |
| h | 0.08 | 0.12 | 0.15 |
| R | 0.05 | 0.10 | 0.15 |