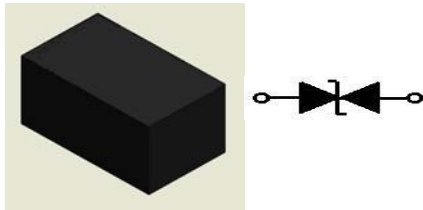




ESDQR3V3B

3.3V Bi-directional ESD

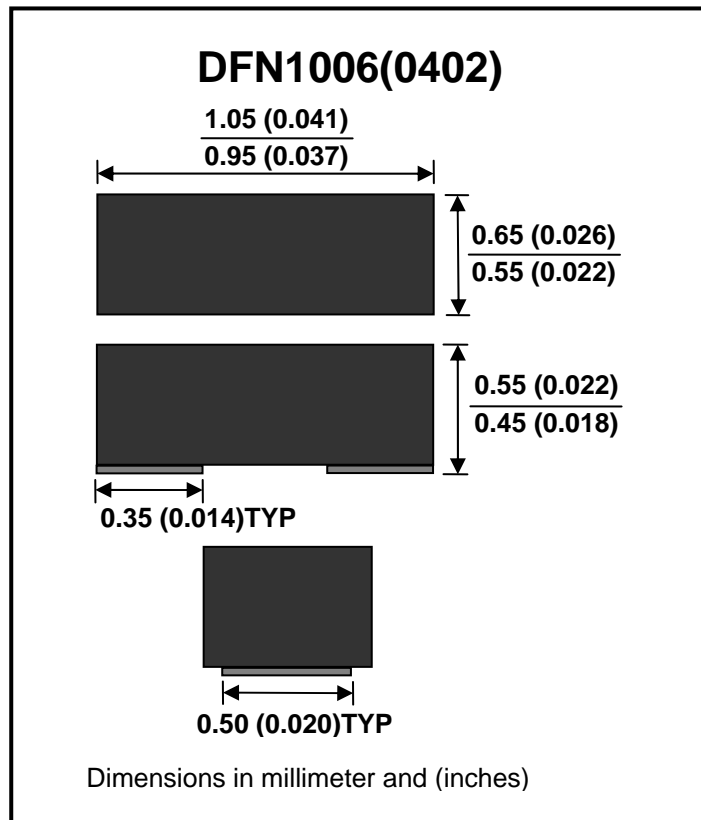


Features

- Surface mount package.
- Bi-directional ESD protection.
- Ultra small SMD package: 0402.
- Operating voltage: 3.3V
- Pb free version, RoHS compliant, and Halogen free

Mechanical Characteristics

- Case: DFN1006(0402) standard package
- Terminals: Sn / Au plated, solderable per MIL-STD-750, method 2026
- Marking Code: E2
- Mounting position: Any.
- Weight: 0.001 gram(approx.)
- MSL: Level 1



Maximum Rating And Electrical Characteristics (at Ta=25°C unless otherwise noted)

| Parameter | Condition | Symbol | Min | Typ | Max | Unit |
|---------------------------------|---|--------|-----|------|-----|------|
| Peak Pulse Power | tp=8/20 μs (According to IEC61000-4-5) | Ppp | | 150 | | W |
| Maximum Peak Pulse Current | tp=8/20 μs (According to IEC61000-4-5) | Ipp | | 15 | | A |
| ESD per IEC 61000-4-2 (Air) | | VESD | | ±30 | | kV |
| ESD per IEC 61000-4-2 (Contact) | | | | ±30 | | kV |
| Operating Junction Temperature | | Tj | | | 125 | °C |
| Storage Temperature | | Tstg | -55 | | 150 | °C |
| Reverse Stand-Off Voltage | | VRWM | | | 3.3 | V |
| Reverse Breakdown Voltage | It = 1mA | VBR | | | 5.5 | V |
| Reverse Leakage Current | VRWM = 3.3V | IR | | 0.01 | 1 | μA |
| Clamping Voltage | Ipp = 1A , tp = 8/20 μs | Vc | | 4.5 | 6 | V |
| | Ipp = 15A , tp = 8/20 μs | | | 9.5 | 12 | V |
| Junction Capacitance | Between I/O Pin and GND VR=0V , f=1MHz | Cj | | 25 | | pF |



Typical Characteristics

Fig. 1 - 8/20us Peak pulse current waveform acc. IEC 61000-4-5

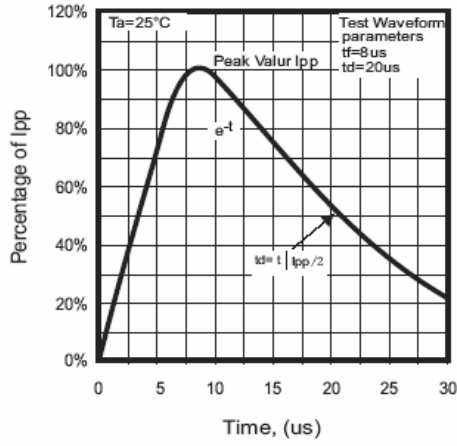


Fig. 2 - Capacitance between terminals characteristics

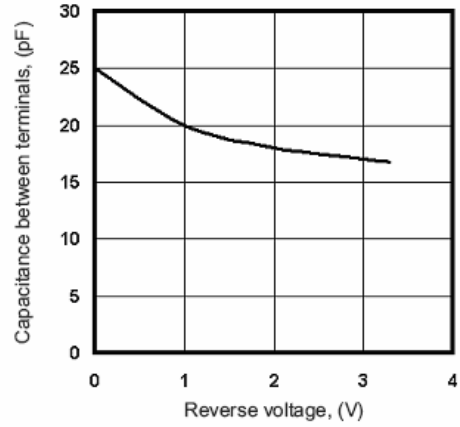


Fig.3 - Clamping voltage vs. peak pulse current

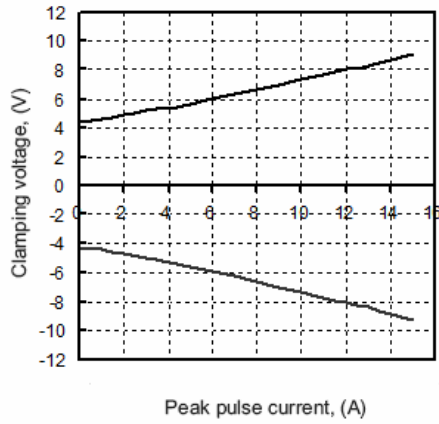


Fig. 4 - Power rating derating curve

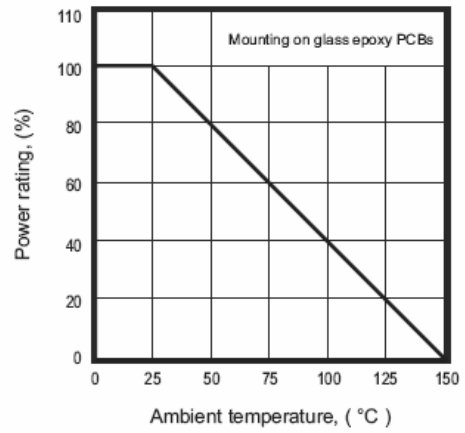
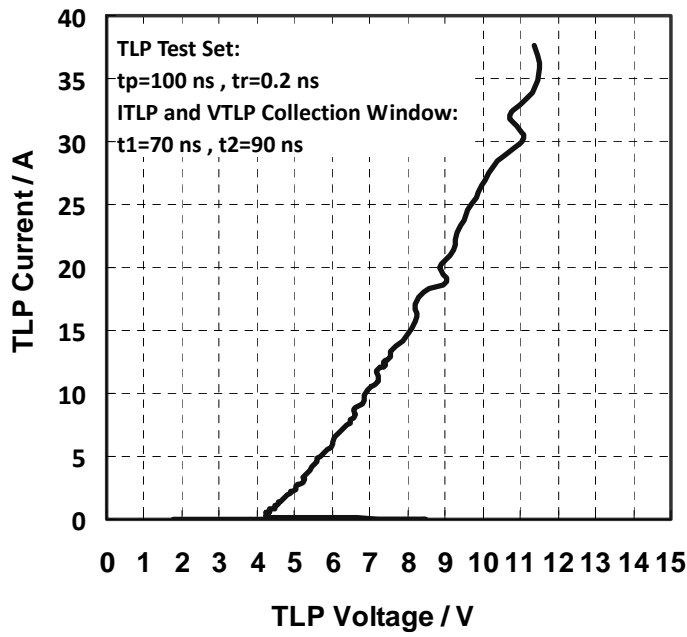




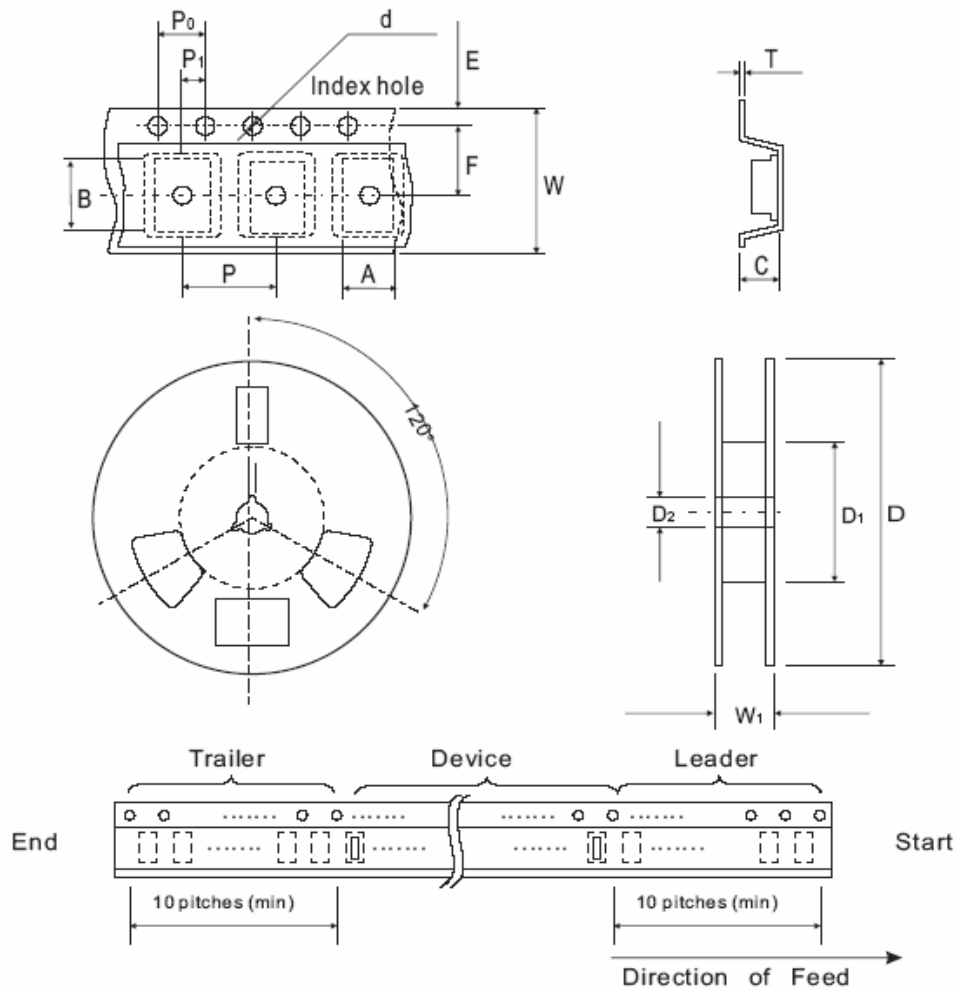
Fig. 5 - TLP Measurement





ESD Diode

Packing Specification



Tape & Reel Dimensions

| Package | Unit | A | B | C | d | D |
|---------|------|-------------|-------------|-------------|-------------|------------|
| DFN1006 | mm | 0.67±0.10 | 1.12±0.10 | 0.60±0.10 | 1.50±0.10 | 178±1 |
| | inch | 0.026±0.004 | 0.044±0.004 | 0.024±0.004 | 0.060±0.004 | 7.008±0.04 |

| Package | Unit | D1 | D2 | E | F | P |
|---------|------|----------|-------------|-------------|-------------|-------------|
| DFN1006 | mm | 60MIN | 13.0±0.20 | 1.75±0.10 | 3.5±0.10 | 4.0±0.10 |
| | inch | 2.362MIN | 0.512±0.008 | 0.069±0.004 | 0.138±0.004 | 0.157±0.004 |

| Package | Unit | P0 | P1 | T | W | W1 |
|---------|------|-------------|-------------|-------------|-------------|------------|
| DFN1006 | mm | 4.0±0.10 | 2.0±0.10 | 0.22±0.03 | 8.0±0.10 | 10.5±0.5 |
| | inch | 0.157±0.004 | 0.079±0.004 | 0.009±0.002 | 0.315±0.004 | 0.413±0.02 |

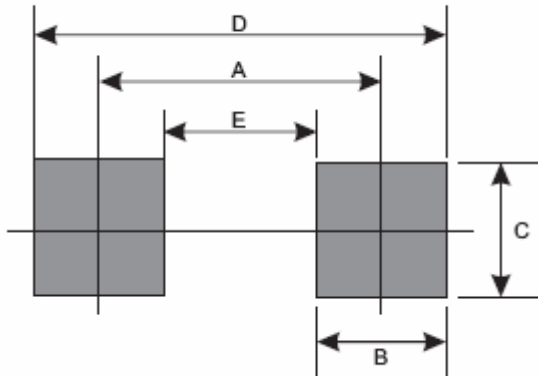


ESD Diode

Standard Package

| Package | Reel Size | Qty/Reel |
|---------|-----------|-----------|
| DFN1006 | 7" | 5,000 pcs |

Recommended Soldering Footprint



Reflow Soldering

| Product Size | Dimension/ mm | | | | |
|--------------|---------------|--------|--------|--------|--------|
| | A | B | C | D | E |
| DFN1006 | 0.750 | 0.500 | 0.700 | 1.250 | 0.250 |
| | 0.030" | 0.020" | 0.028" | 0.049" | 0.010" |

Marking Code

| Part Number | Marking Code |
|-------------|--------------|
| ESDQR3V3B | E2 |



Disclaimers

These products are not designed for use in applications where any failure or malfunction may result in personal injury, death or severe property or environmental damage such as medical, military, aircraft, space or life support equipments.

单击下面可查看定价，库存，交付和生命周期等信息

[>>LIZ\(丽智\)](#)