

Features

- Ultra small package: 0.6x0.3x0.3mm
- Ultra low capacitance: 0.28 pF typical
- Ultra low leakage: nA level
- Low operating voltage: 5V
- Low clamping voltage
- 2-pin leadless package
- Complies with following standards:
 - - IEC 61000-4-2 (ESD) immunity test
Air discharge: ±23kV
Contact discharge: ±15kV
 - - IEC61000-4-5 (Lightning) 4A (8/20 μs)
- These are Pb-Free Devices
- Response Time is Typically < 1 ns

Mechanical Characteristics

- Package: DFN0603-2 (0201)
- Lead Finish: Matte Tin
- Case Material: “Green” Molding Compound.
- Moisture Sensitivity: Level 3 per J-STD-020
- Terminal Connections: See Diagram Below

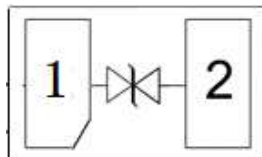
Applications

- Cellular Handsets and Accessories
- Personal Digital Assistants
- Notebooks and Handhelds
- Portable Instrumentation
- Digital Cameras
- Peripherals

Ordering Information

| Part Number | Qty per Reel | Reel Size |
|---------------|--------------|-----------|
| TPD5V0P1B2LP3 | 15000 | 7" |

Dimensions and Pin Configuration



Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|---------------------------------|--------|-------------|------|
| Peak Pulse Power (8/20μs) | Ppk | 70 | W |
| Peak Pulse Current (8/20μs) | Ipp | 4 | A |
| ESD per IEC 61000-4-2 (Air) | VESD | ±23 | kV |
| ESD per IEC 61000-4-2 (Contact) | | ±15 | |
| Operating Temperature Range | TJ | -55 to +125 | °C |
| Storage Temperature Range | Tstg | -55 to +150 | °C |

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

| Parameter | Symbol | Min | Typ | Max | Unit | Test Condition |
|-------------------------|--------|-----|------|------|------|-----------------------|
| Reverse Working Voltage | VRWM | | | 5 | V | |
| Breakdown Voltage | VBR | 6 | 7.5 | 9 | V | IT = 1mA |
| Reverse Leakage Current | IR | | | 0.07 | uA | VRWM = 5V |
| Clamping Voltage | VC | | | 10 | V | Ipp=1A(8x 20us pulse) |
| Clamping Voltage | VC | | | 16 | V | Ipp=4A(8x 20us pulse) |
| Junction Capacitance | CJ | | 0.28 | 0.4 | pF | VR = 0V, f = 1MHz |

Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)

Fig1. 8/20 μs Pulse Waveform

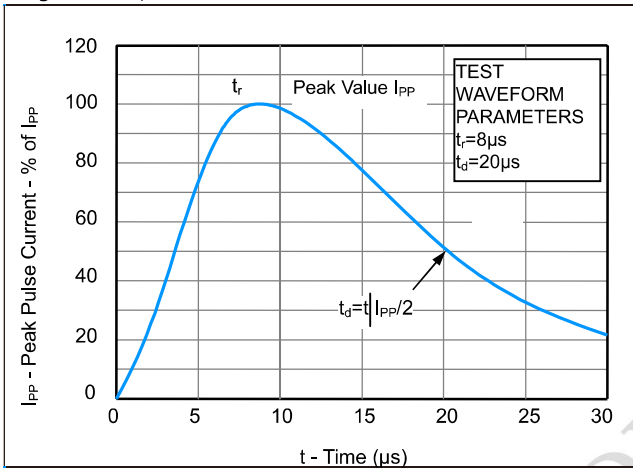


Fig2. ESD Pulse Waveform (according to IEC 61000-4-2)

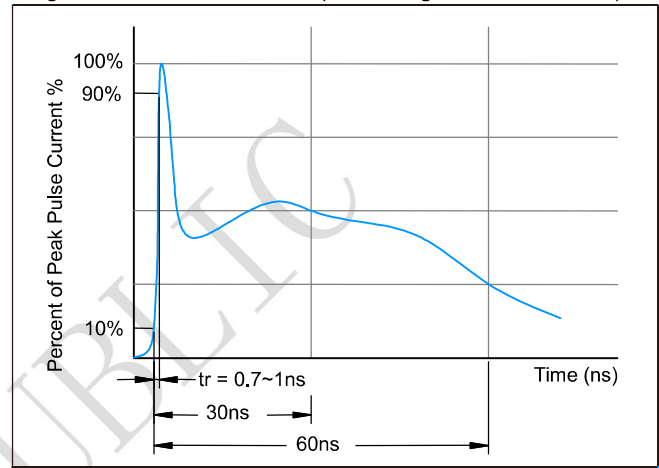
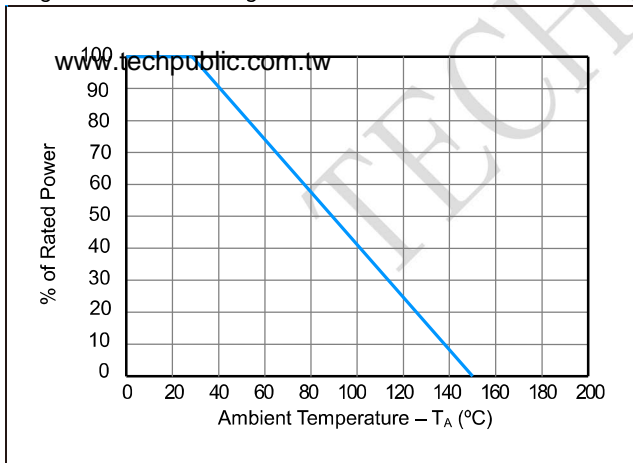
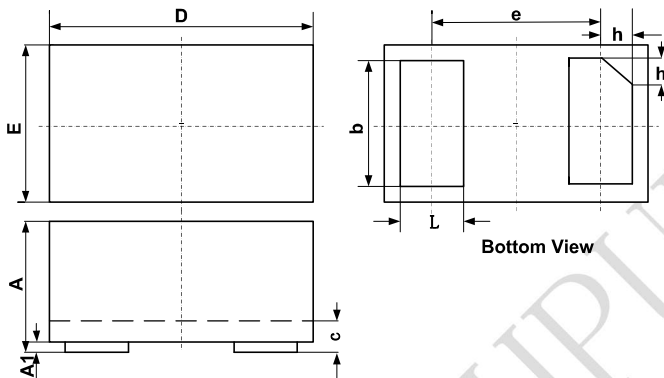


Fig3. Power Derating Curve

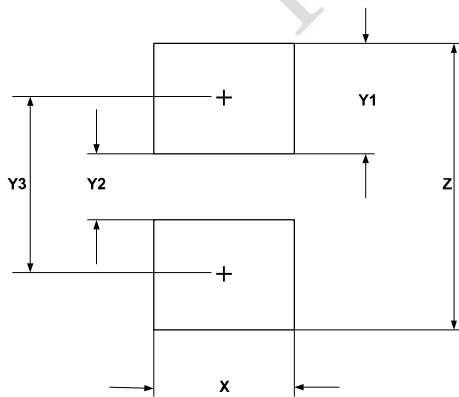


DFN0603-2 Package Outline Drawing (0201)



| SYM | DIMENSIONS | | |
|-----|-------------|-------|-------|
| | MILLIMETERS | | |
| | MIN | NOM | MAX |
| A | 0.230 | 0.300 | 0.330 |
| A1 | 0.000 | 0.020 | 0.050 |
| b | 0.215 | 0.245 | 0.275 |
| c | 0.120 | 0.150 | 0.180 |
| D | 0.550 | 0.600 | 0.650 |
| e | 0.355 BSC | | |
| E | 0.250 | 0.300 | 0.350 |
| L | 0.160 | 0.190 | 0.220 |
| h | 0.079 BSC | | |

Suggested Land Pattern



| SYM | DIMENSIONS | |
|-----|-------------|--------|
| | MILLIMETERS | INCHES |
| X | 0.30 | 0.012 |
| Y1 | 0.25 | 0.010 |
| Y2 | 0.15 | 0.006 |
| Y3 | 0.40 | 0.016 |
| Z | 0.65 | 0.026 |

Marking

