

Features

- Ultra small package: 0.6x0.3x0.3mm
- Ultra low capacitance: 0.25pF 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: $\pm 20\text{kV}$
Contact discharge: $\pm 20\text{kV}$
 - IEC61000-4-4 (EFT) 40A (5/50ns)
 - IEC61000-4-5 (Lightning) 5A (8/20 μs)
- RoHS Compliant

Applications

- Cellular Handsets and Accessories
- Display Ports
- MDDI Ports
- USB Ports
- Digital Visual Interface (DVI)
- PCI Express and Serial SATA Ports

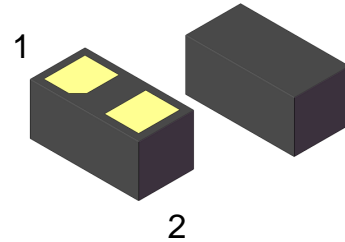
Mechanical Characteristics

- Package: DFN0603
- Lead Finish: Lead Free
- UL Flammability Classification Rating 94V-0
- Quantity Per Reel: 10,000pcs
- Reel Size: 7 inch
- Device Marking: ZZ

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

| Parameter | Symbol | Value | Unit |
|--|------------------|-------------|------|
| Peak Pulse Power (8/20 μs) | Ppp | 125 | W |
| ESD per IEC 61000-4-2 (Air) | V _{ESD} | ± 20 | Kv |
| ESD per IEC 61000-4-2 (Contact) | | ± 20 | |
| Operating Temperature Range | T _J | -55 to +125 | °C |
| Storage Temperature Range | T _{STJ} | -55 to +150 | °C |

Dimensions DFN0603



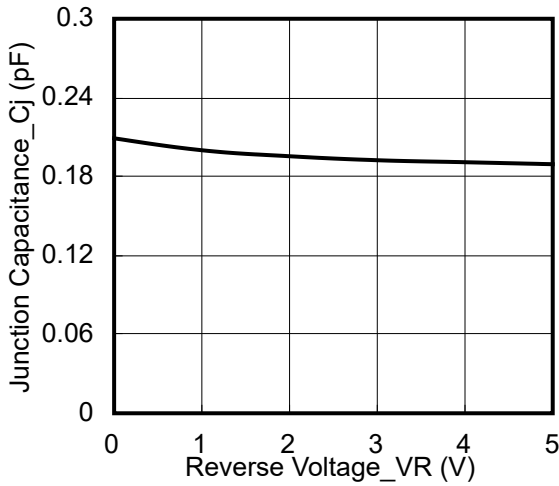
Pin Configuration



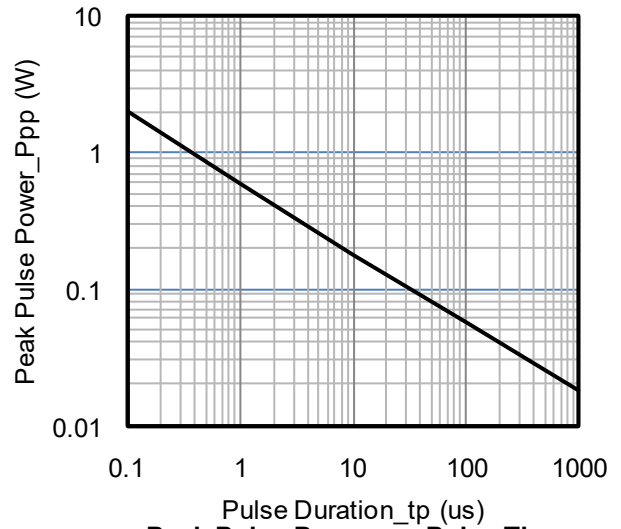
Electrical Characteristics (TA=25°C unless otherwise specified)

| Parameter | Symbol | Test Condition | Min | Typ | Max | Unit |
|-------------------------|-----------|---|-----|------|-----|---------------|
| Reverse Working Voltage | V_{RWM} | | | | 5 | V |
| Breakdown Voltage | V_{BR} | $I_T = 1\text{mA}$ | 6.5 | | 9.5 | V |
| Reverse Leakage Current | I_R | $V_{RWM} = 5\text{V}$ | | | 0.2 | μA |
| Clamping Voltage | V_C | $I_{PP} = 1\text{A}$ (8 x 20 μs pulse) | | | 12 | V |
| Clamping Voltage | V_C | $I_{PP} = 5\text{A}$ (8 x 20 μs pulse) | | | 25 | V |
| Junction Capacitance | C_J | $V_R = 0\text{V}$, $f = 1\text{MHz}$ | | 0.26 | | pF |

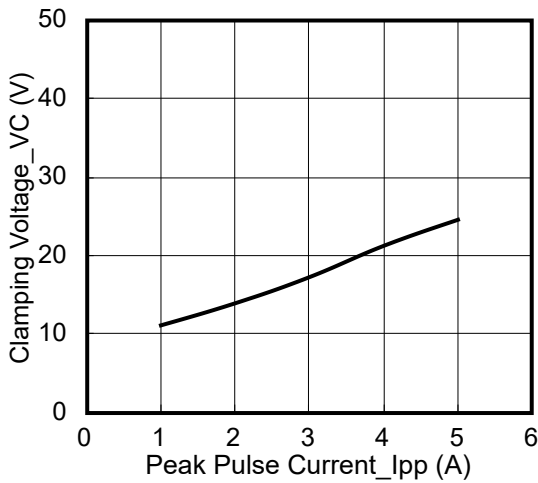
Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)



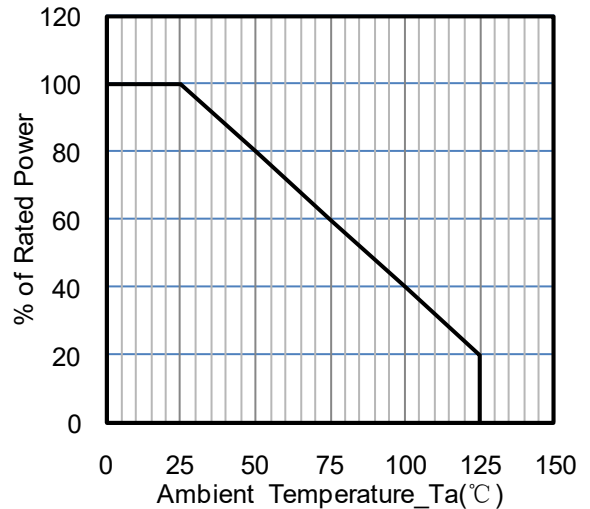
Junction Capacitance vs. Reverse Voltage



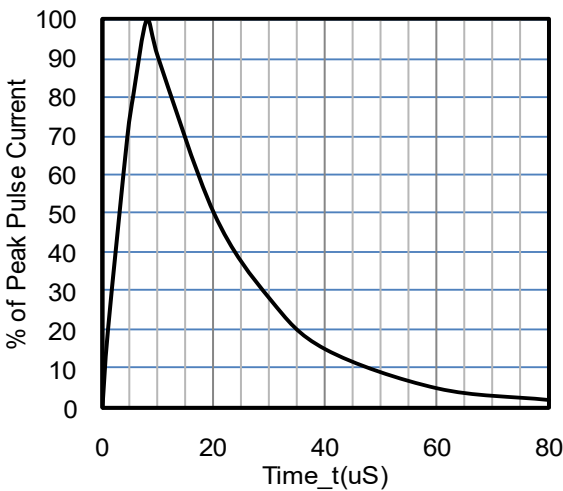
Peak Pulse Power vs. Pulse Time



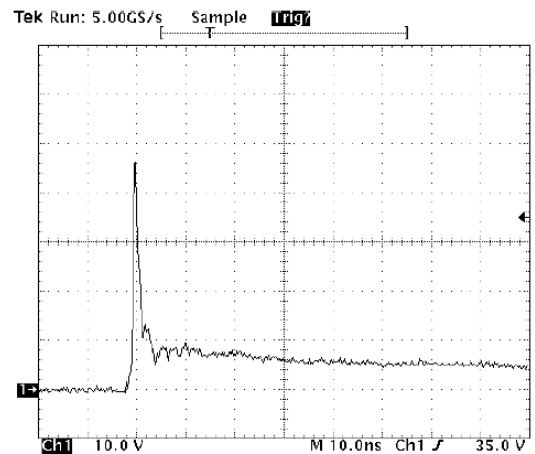
Clamping Voltage vs. Peak Pulse Current



Power Derating Curve



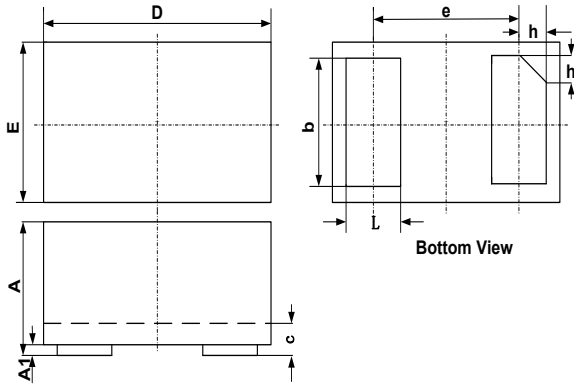
8 X 20 μs Pulse Waveform



ESD Clamping Voltage

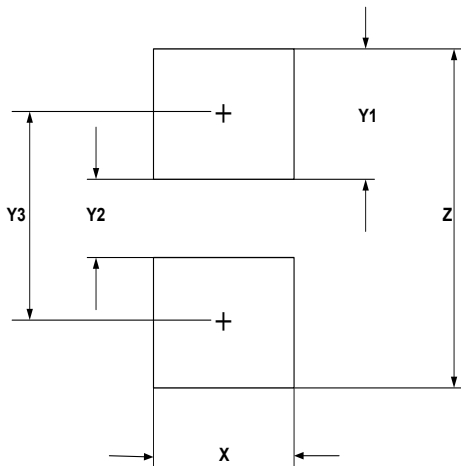
8 kV Contact per IEC61000-4-2

DFN0603 PACKAGE OUTLINE & DIMENSIONS



| SYM | DIMENSIONS | | |
|-----|-------------|-------|-------|
| | MILLIMETERS | | |
| | MIN | NOM | MAX |
| A | 0.230 | | 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 |