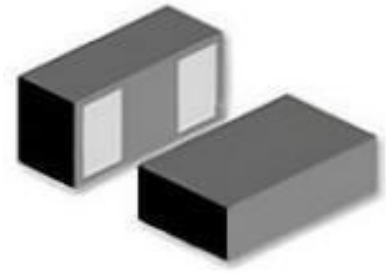
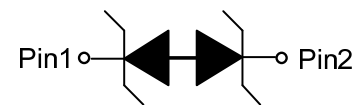


Features

- Stand-off voltage: 3.3V Max
- Transient protection for each line according to
 - IEC61000-4-2(ESD): $\pm 30\text{kV}$ (contact)
 - IEC61000-4-4 (EFT): 40A (5/50ns)
 - IEC61000-4-5(surge): 9A (8/20 μs)
- Low leakage current
- Low clamping voltage: $V_{CL} = 9\text{V typ. @ IPP} = 16\text{A (TLP)}$
- RoHS Compliant
- Compliant to Halogen-free



DFN0603



PIN Configuration

Applications

- Cellular handsets
- Tablets
- Laptops
- Network communication devices
- Other portable devices

Mechanical Data

- Package: DFN0603
- Case Material: "Green" Molding Compound
- Marking Information: A3

Maximum Ratings

| PARAMETER | SYMBOL | Rating | UNIT |
|---|-----------|----------|--------------------|
| Peak pulse power ($t_p = 8/20\mu\text{s}$) | P_{pk} | 90 | W |
| Peak pulse current ($t_p = 8/20\mu\text{s}$) | I_{PP} | 9 | A |
| ESD according to IEC61000-4-2 air discharge | V_{ESD} | ± 30 | KV |
| ESD according to IEC61000-4-2 contact discharge | | ± 30 | KV |
| Junction temperature | T_J | 125 | $^{\circ}\text{C}$ |
| Storage temperature | T_{STG} | -55~150 | $^{\circ}\text{C}$ |

Electrical Characteristics (T_a=25°C Unless otherwise specified)

| PARAMETER | Symbol | UNIT | Conditions | Min | Typ | Max |
|----------------------------------|-------------------|------|---|-----|-----|------|
| Reverse maximum working voltage | V _{RWM} | V | | | | ±3.3 |
| Reverse leakage current | I _R | nA | V _{RWM} = 3.3V | | | 100 |
| Reverse breakdown voltage | V _{BR} | V | I _{BR} = 1mA | 3.5 | 4 | |
| Reverse holding voltage | V _{HOLD} | V | I _{HOLD} = 50mA | 3.5 | 4 | |
| Clamping voltage ¹⁾ | V _{CL} | V | I _{PP} = 16A, t _p = 100ns | | 9.0 | |
| Dynamic resistance ¹⁾ | R _{DYN} | Ω | | | 0.2 | |
| Clamping voltage ²⁾ | V _{CL} | V | V _{ESD} = 8kV | | 9.0 | |
| Clamping voltage ³⁾ | V _{CL} | V | I _{PP} = 1A, t _p = 8/20μs | | | 6 |
| | | V | I _{PP} = 9A, t _p = 8/20μs | | | 10 |
| Junction capacitance | C _J | pF | V _R = 0V, f = 1MHz | | 10 | 13 |
| | | pF | V _R = 2.5V, f = 1MHz | | 8 | 11 |

(1). TLP parameter: Z₀ = 50Ω, t_p = 100ns, t_r = 2ns, averaging window from 60ns to 80ns. R_{DYN} is calculated from 4A to 16A.

(2). Contact discharge mode, according to IEC61000-4-2.

(3). Non-repetitive current pulse, according to IEC61000-4-5.

Characteristics (Typical)

Fig.1 8/20μs waveform per IEC61000-4-5

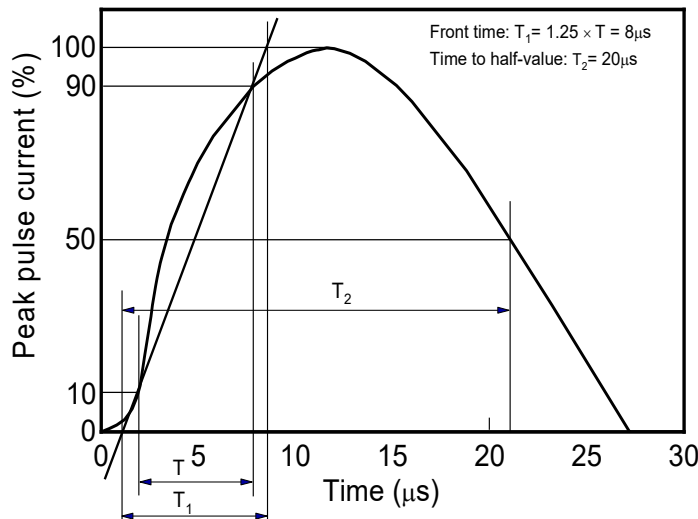


Fig.3 Clamping voltage vs. Peak pulse current

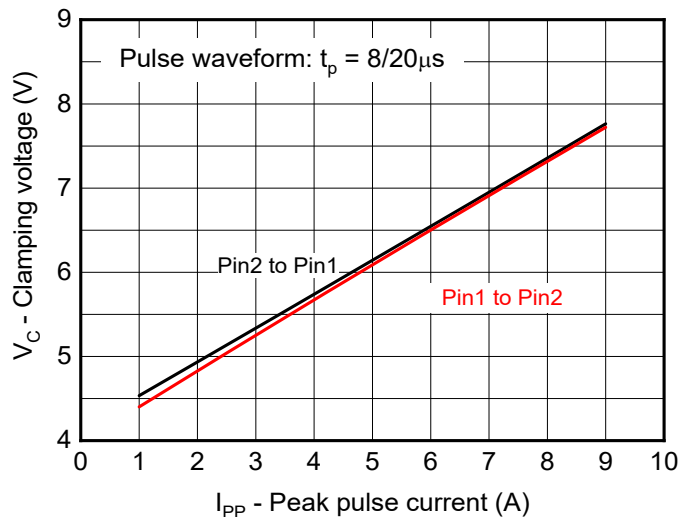


Fig.2 Contact discharge current waveform per IEC61000-4-2

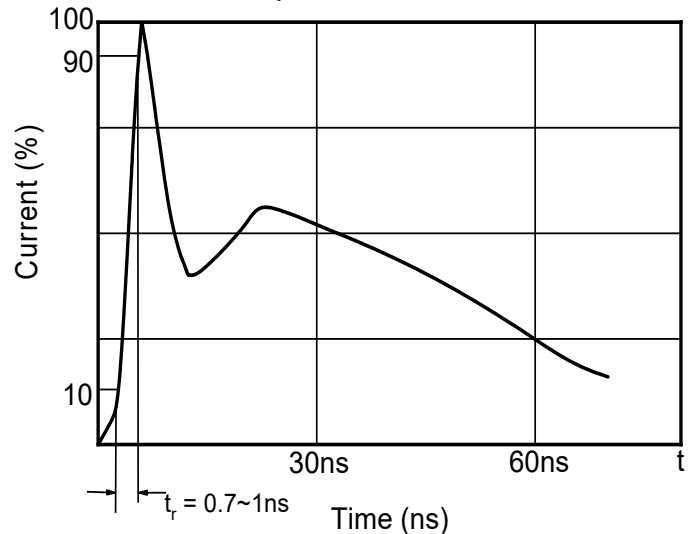
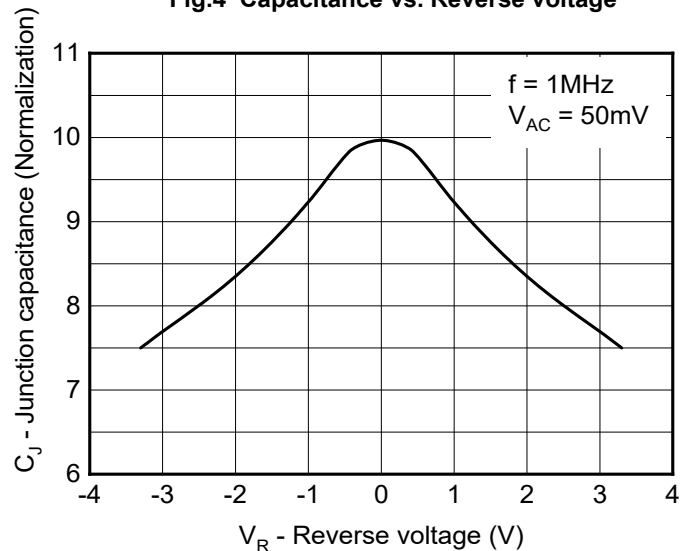


Fig.4 Capacitance vs. Reverse voltage



Characteristics (Typical)

Fig.5 Non-repetitive peak pulse power vs. Pulse time

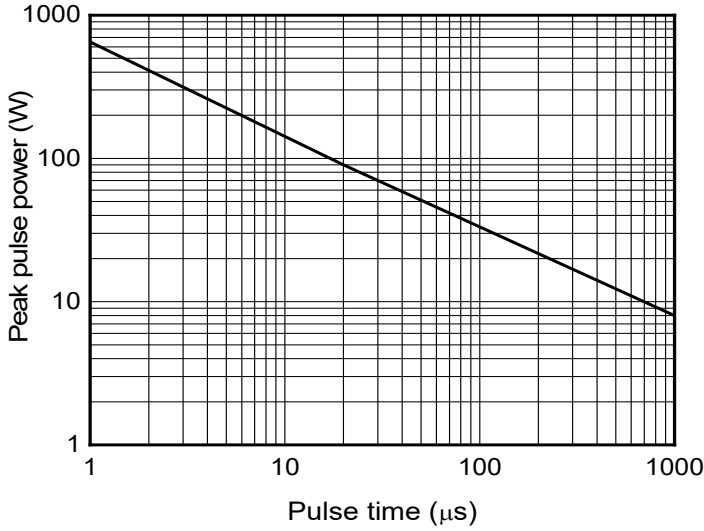


Fig.6 Power derating vs. Ambient temperature

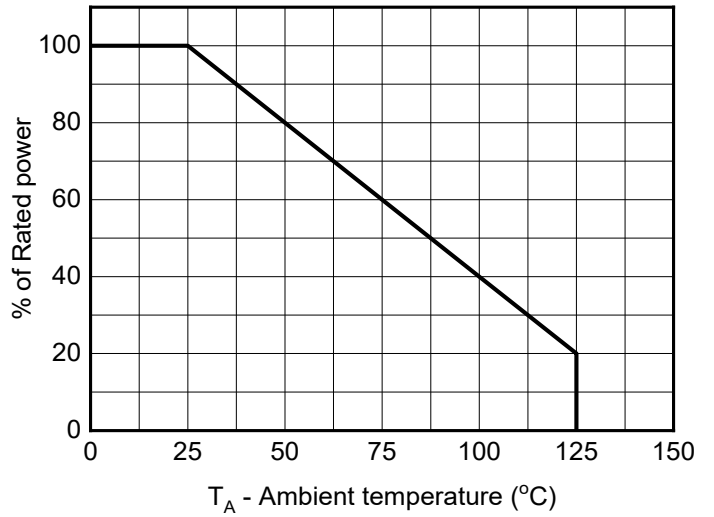


Fig.7 ESD clamping (+8kV contact discharge per IEC61000-4-2)

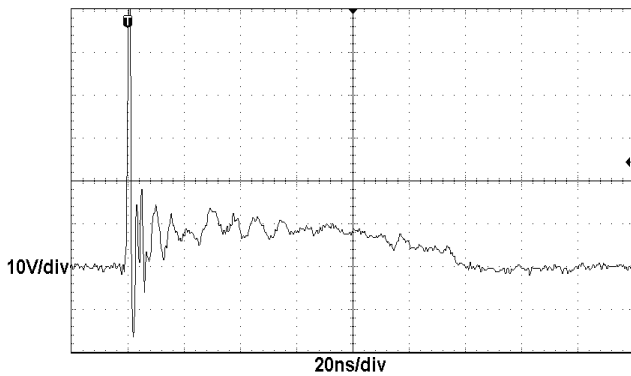


Fig.8 ESD clamping (-8kV contact discharge per IEC61000-4-2)

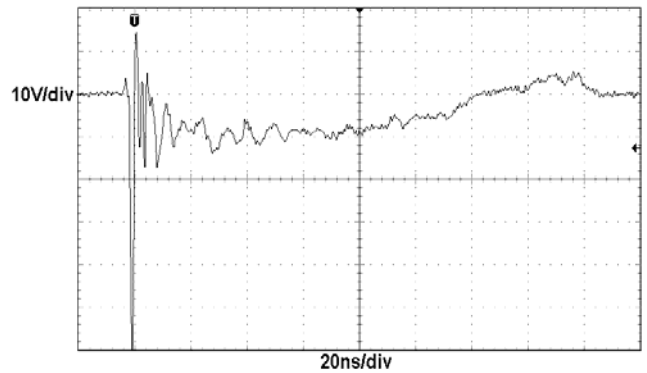
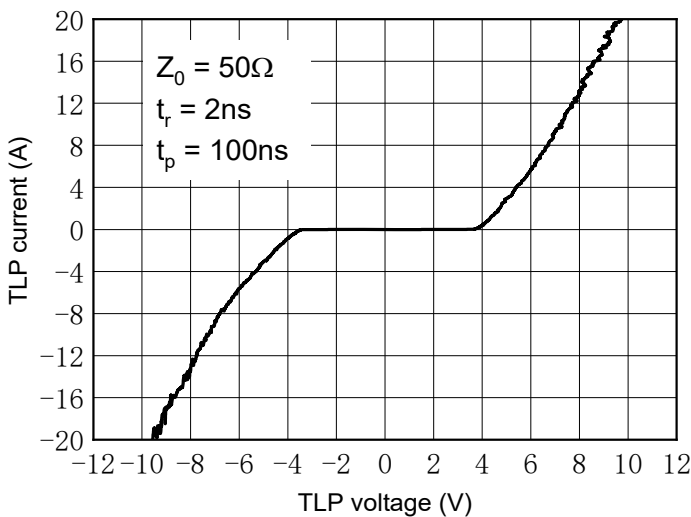
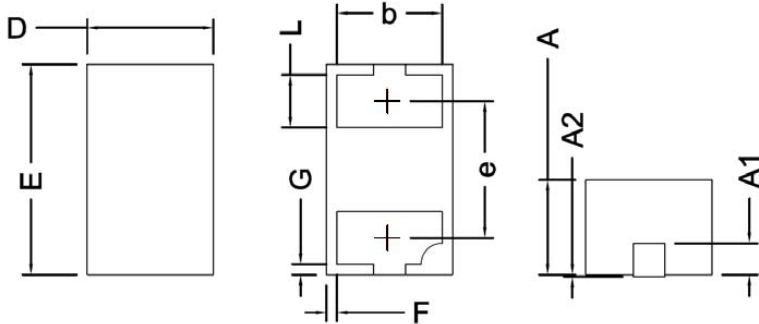


Fig.9 TLP Measurement

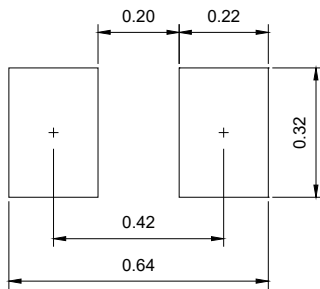


Outline Dimensions



| SYMBOL | MILLIMETER | | |
|--------|------------|------|------|
| | MIN | NOM | MAX |
| D | 0.25 | 0.30 | 0.35 |
| E | 0.55 | 0.60 | 0.67 |
| A | 0.28 | 0.30 | 0.32 |
| A1 | 0.102 BSC | | |
| A2 | | | 0.05 |
| F | 0.005 | | |
| G | 0.005 | | |
| L | 0.10 | 0.17 | 0.21 |
| b | 0.20 | 0.24 | 0.23 |
| e | 0.36 BSC | | |

Recommended PCB Layout



Unit:mm

Notes:

This recommended land pattern is for reference purposes only. Please consult your manufacturing group to ensure your PCB design guidelines are met