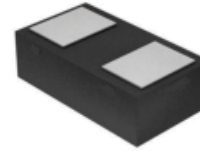


1. Features

- Capacitance: 15pF(typ.)
- Reverse Working Voltage: 5V
- IEC 61000-4-2 (ESD Air): ±25KV
IEC 61000-4-2 (ESD Contact): ±25KV
IEC 61000-4-5 (Lightning 8/20µs): 7A

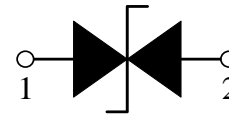
2. Pin Description



3. Applications

- Smart Phone and Tablet PC
- TV and Set Top Box
- Wearable Devices
- PDA

4. Schematic Diagram



5. Limiting Values($T_A = 25\text{ }^\circ\text{C}$, unless otherwise specified)

| Symbol | Parameter | Conditions | Min | Max | Unit |
|-----------|---------------------------------|----------------------------------|-----|-----|------------------|
| V_{ESD} | Electrostatic Discharge Voltage | IEC 61000-4-2; Contact Discharge | - | ±25 | kV |
| | | IEC 61000-4-2; Air Discharge | - | ±25 | kV |
| P_{PP} | Peak Pulse Power | $t_P = 8/20\ \mu s$ | - | 70 | W |
| I_{PPM} | Rated Peak Pulse Current | $t_P = 8/20\ \mu s$ | - | 7 | A |
| T_A | Ambient Temperature Range | - | -55 | 125 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | - | -55 | 150 | $^\circ\text{C}$ |

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

| Symbol | Parameter | Conditions | Min | Typ. | Max | Unit |
|-----------|-------------------------|--|-----|------|-----|---------------|
| V_{RWM} | Reverse Working Voltage | $T_A = 25\text{ }^\circ\text{C}$ | - | - | 5.0 | V |
| V_{BR} | Breakdown Voltage | $I_R = 1\text{ mA}; T_A = 25\text{ }^\circ\text{C}$ | 5.6 | 6.5 | 8.4 | V |
| I_R | Reverse Leakage Current | $V_{RWM} = 5\text{ V}; T_A = 25\text{ }^\circ\text{C}$ | - | - | 0.1 | μA |
| V_C | Clamping Voltage | $I_{PP}=1\text{ A}, t_P = 8/20\ \mu s$ | - | - | 6 | V |
| | | $I_{PP}=7\text{ A}, t_P = 8/20\ \mu s$ | - | - | 10 | V |
| C_J | Junction Capacitance | $V_R = 0\text{ V}, f = 1\text{ MHz}$ | - | 15 | 18 | pF |

7. Typical Characteristics

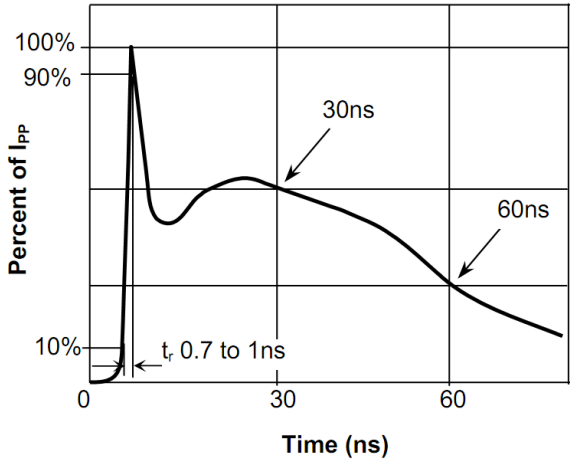


Fig.1 Pulse Waveform-ESD (IEC61000-4-2)

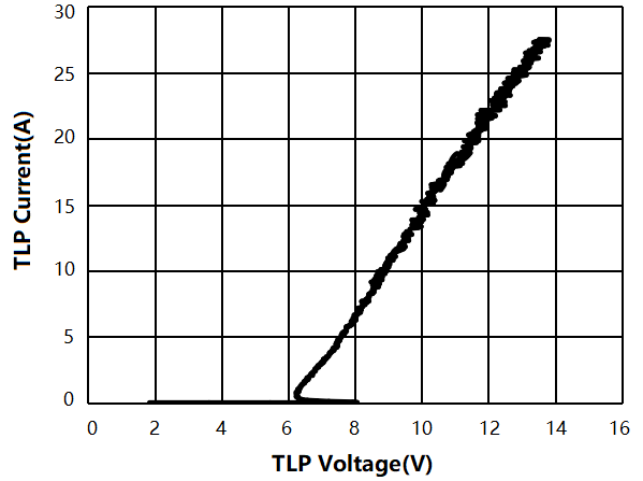


Fig.2 Transmission Line Pulse (TLP)

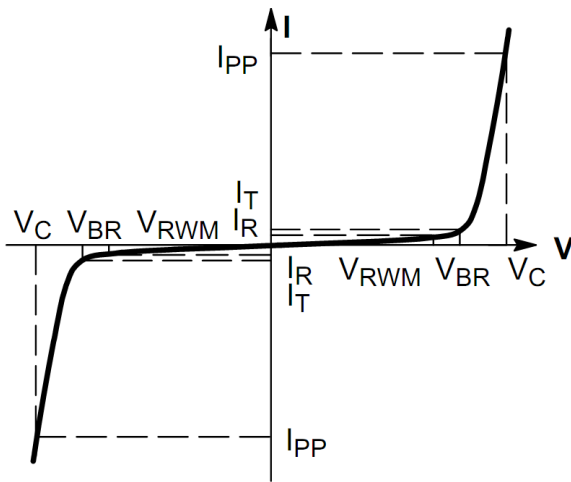


Fig.3 V-I Characteristics for Bidirectional Diode

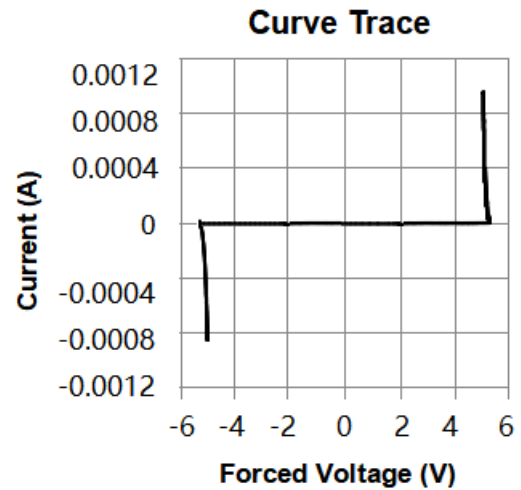


Fig.4 IV Curve

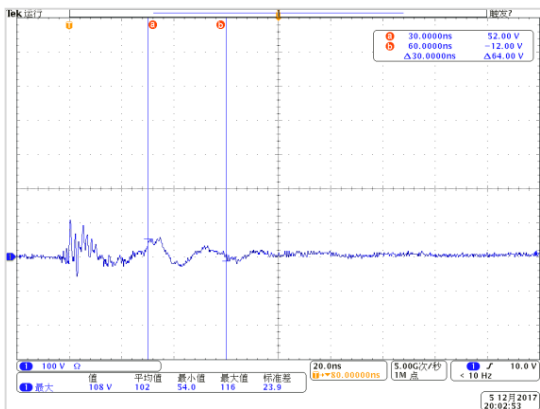


Fig.5 Clamping Voltage at IEC61000-4-2 +8kV Pulse Waveform

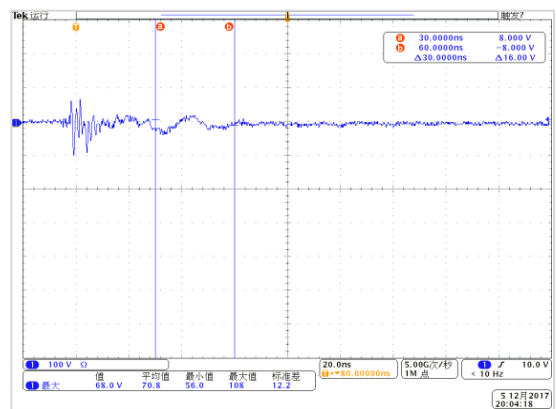
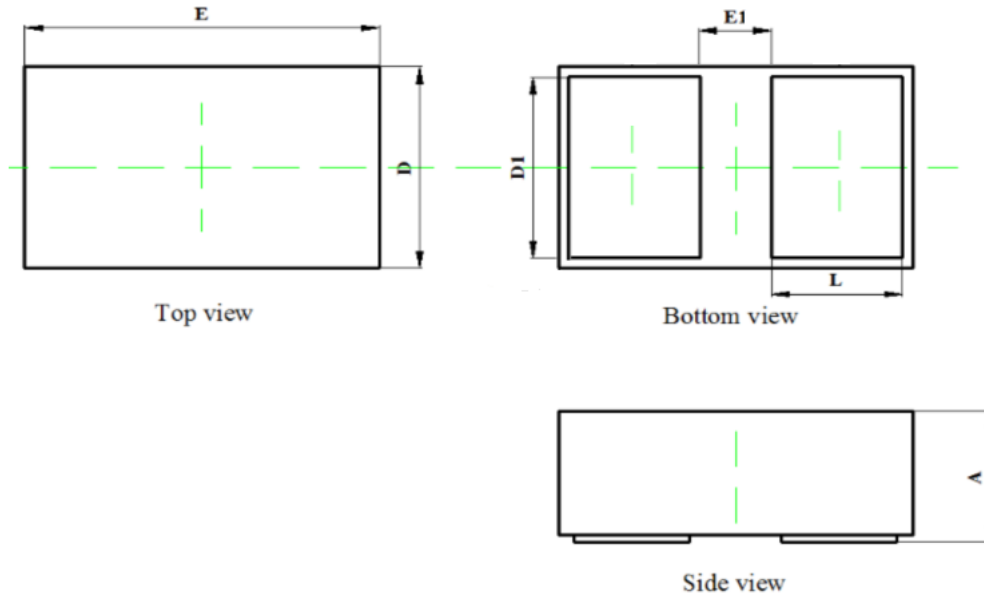


Fig.6 Clamping Voltage at IEC61000-4-2 -8kV Pulse Waveform

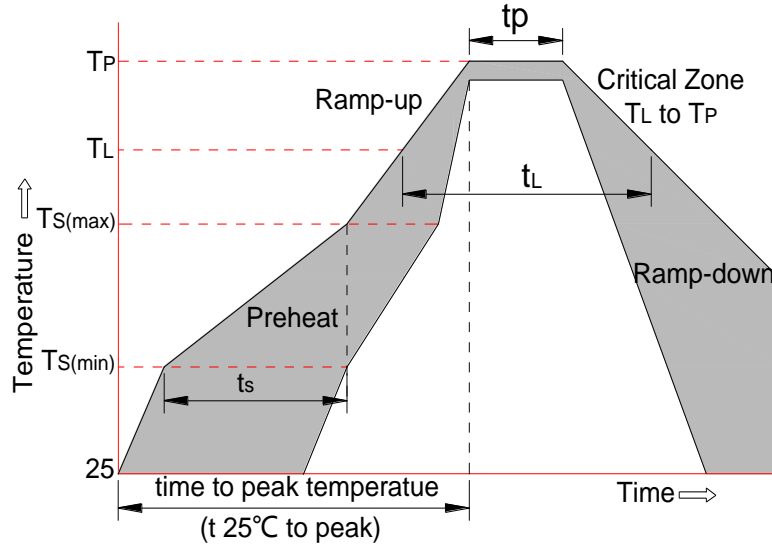
8. Package Outline Dimensions

DFN0603 Package Outline



| Symbol | Dimensions In Millimeters | | |
|-----------|---------------------------|---------|------|
| | Min | Typical | Max |
| A | 0.28 | 0.30 | 0.32 |
| D | 0.29 | 0.32 | 0.35 |
| E | 0.59 | 0.62 | 0.65 |
| D1 | 0.22 | 0.25 | 0.28 |
| E1 | 0.15 | 0.18 | 0.21 |
| L | 0.16 | 0.19 | 0.22 |

9. Soldering Parameters



| Reflow Condition | | Pb-Free Assembly |
|---|-----------------------------------|------------------|
| Pre-heat | -Temperature Min ($T_{s(min)}$) | +150°C |
| | -Temperature Max($T_{s(max)}$) | +200°C |
| | -Time (Min to Max) (t_s) | 60-180 secs. |
| Average ramp up rate (Liquid us Temp (T_L) to peak) | | 3°C/sec. Max |
| $T_{s(max)}$ to T_L - Ramp-up Rate | | 3°C/sec. Max |
| Reflow | -Temperature(T_L)(Liquid us) | +217°C |
| | -Temperature(t_L) | 60-150 secs. |
| Peak Temp (T_p) | | +260(+0/-5)°C |
| Time within 5°C of actual Peak Temp (t_p) | | 30 secs. Max |
| Ramp-down Rate | | 6°C/sec. Max |
| xTime 25°C to Peak Temp (T_p) | | 8 min. Max |
| Do not exceed | | +260°C |

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