# Ultra-Low Capacitance Bi-directional TVS Diode

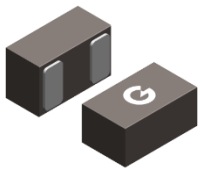
# GESD8V0B2L

## Features

- ESD / transient protection of high speed data lines
  - IEC 61000-4-2 (ESD): ±25kV (air), ±25 kV (contact)
- Low reverse stand−off voltage: 8V
- Low Leakage Current
- Low Clamping Voltage
- RoHS compliant with Halogen-free

HF



DFN1006-2

## Mechanical Data

- Case: DFN1006-2
- Molding Compound: UL Flammability Classification Rating 94V-0
- Terminals: Matte Tin-Plated Leads, Solderability-per MIL-STD-202, Method 208

## Ordering Information

| Part Number | Package | Shipping Quantity | Marking Code |
|---|---|---|---|
| GESD8V0B2L | DFN1006-2 | 10000 pcs / Tape & Reel | OO |

## Maximum Ratings (@ $T_A$ = 25℃ unless otherwise specified)

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| IEC 61000-4-2; ESD (Air) | $V_{ESD-A}$ | ±25 | kV |
| IEC 61000-4-2; ESD (Contact) | $V_{ESD-C}$ | ±25 | kV |
| Peak Pulse Power ($t_p$ = 8/20μs) | $P_{PP}$ | 70 | W |
| Peak Pulse Current ($t_p$ = 8/20μs) | $I_{PP}$ | 5 | A |

## Thermal Characteristics

| Parameter | Symbol | Value | Unit |
|---|---|---|---|
| Junction Temperature | $T_J$ | -55 ~ +125 | °C |
| Storage Temperature Range | $T_{STG}$ | -55 ~ +150 | °C |

## Electrical Characteristics (@ $T_A$ = 25℃ unless otherwise specified)

| Parameter | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|---|
| Reverse Stand-off Voltage | $V_{RWM}$ | | - | - | 8 | V |
| Reverse Breakdown Voltage | $V_{(BR)}$ | $I_T$ = 1mA | 8.5 | - | 12 | V |
| Reverse Leakage Current | $I_R$ | $V_{RWM}$ = 8V | - | - | 100 | nA |
| Clamping Voltage | $V_C$ | $I_{PP}$ = 1A, tp = 8/20μs<br>$I_{PP}$ = 5A, tp = 8/20μs | -<br>- | -<br>- | 12<br>14 | V |
| Junction Capacitance | $C_J$ | $V_R$ = 0V, f = 1MHZ | - | 8 | 10 | pF |

## Ratings and Characteristic Curves (@ $T_A$ = 25°C unless otherwise specified)

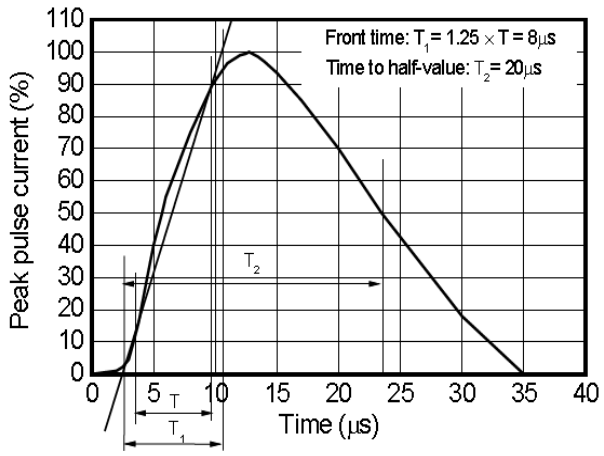



Fig 1 8/2 0μs waveform per IEC61000-4-5

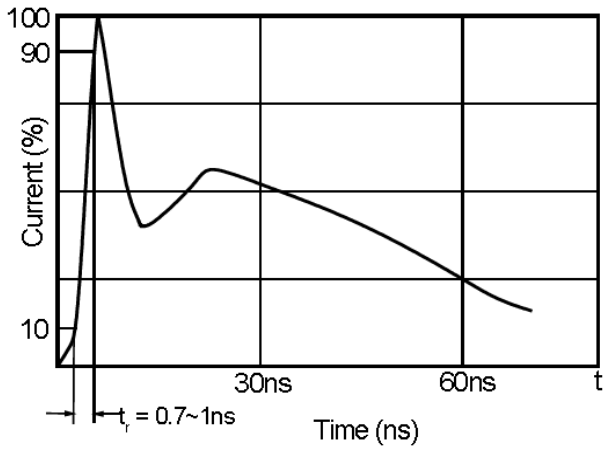



Fig 2 ESD pulse waveform according to IEC61000-4-2

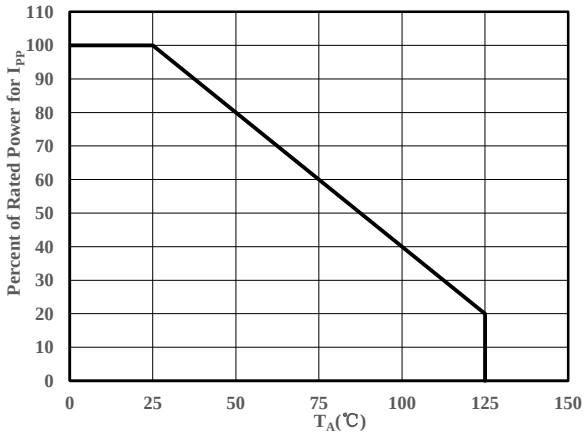
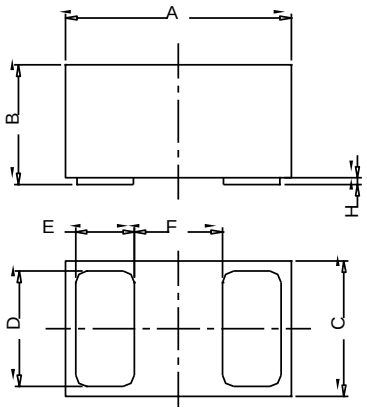



Fig 3 Power Derating Curve

## Package Outline Dimensions (Unit: mm)




| DFN1006-2 | | | |
|---|---|---|---|
| **Dimension** | **Min.** | **Typ.** | **Max.** |
| A | 0.95 | 1.00 | 1.075 |
| B | 0.45 | 0.50 | 0.55 |
| C | 0.55 | 0.60 | 0.675 |
| D | 0.45 | 0.50 | 0.55 |
| E | 0.20 | 0.25 | 0.30 |
| F | - | 0.40 | - |
| H | 0 | 0.03 | 0.05 |

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### DFN1006-2

