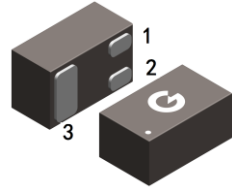
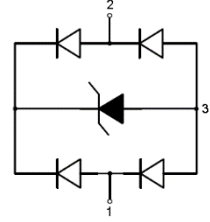


### Features

- ESD / transient protection of high speed data lines
  - IEC 61000-4-2 (ESD):  $\pm 20$  kV (air),  $\pm 20$  kV (contact)
  - IEC 61000-4-4 (EFT): 40A (5/50ns)
- 2 data-line protection
- Very low capacitance: 0.4 pF max.
- Very low leakage Current: 100nA max.
- RoHS compliant with Halogen-free

HF



DFN1006-3

### Mechanical Data

- Case: DFN1006-3
- 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 |
|-------------|-----------|------------------------|--------------|
| SRV05BL     | DFN1006-3 | 10000pcs / Tape & Reel | V5B          |

### Maximum Ratings (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

| Parameter                                      | Symbol             | Value    | Unit |
|------------------------------------------------|--------------------|----------|------|
| IEC 61000-4-2; ESD (Air)                       | $V_{\text{ESD-A}}$ | $\pm 20$ | kV   |
| IEC 61000-4-2; ESD (Contact)                   | $V_{\text{ESD-C}}$ | $\pm 20$ | kV   |
| Peak Pulse Power ( $t_p = 8/20\mu\text{s}$ )   | $P_{\text{PP}}$    | 60       | W    |
| Peak Pulse Current ( $t_p = 8/20\mu\text{s}$ ) | $I_{\text{PP}}$    | 6        | A    |

### Thermal Characteristics

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

### Electrical Characteristics (@ $T_A = 25^\circ\text{C}$ unless otherwise specified)

| Parameter                 | Symbol     | Test Condition                                                      | Min. | Typ. | Max. | Unit |
|---------------------------|------------|---------------------------------------------------------------------|------|------|------|------|
| Reverse Stand-off Voltage | $V_{RWM}$  |                                                                     | -    | -    | 5    | V    |
| Reverse Breakdown Voltage | $V_{(BR)}$ | $I_T = 1\text{mA}$                                                  | 6.5  | -    | 9    | V    |
| Reverse Leakage Current   | $I_R$      | $V_{RWM} = 5\text{V}$                                               | -    | -    | 100  | nA   |
| Forward Voltage           | $V_F$      | $I_F = 10\text{mA}$                                                 | -    | -    | 1.1  | V    |
| Clamping Voltage          | $V_C$      | $I_{PP} = 1\text{A}$ , $t_p = 8/20\mu\text{s}$<br>Pin1 or 2 to Pin3 | -    | -    | 9.5  | V    |
|                           |            | $I_{PP} = 6\text{A}$ , $t_p = 8/20\mu\text{s}$<br>Pin1 or 2 to Pin3 | -    | -    | 14   | V    |
| Junction Capacitance      | $C_J$      | $V_R = 0\text{V}$ , $f = 1\text{MHz}$<br>Pin1 or 2 to Pin3          | -    | -    | 0.9  | pF   |
|                           |            | $V_R = 0\text{V}$ , $f = 1\text{MHz}$<br>Between Pin1 and Pin2      | -    | -    | 0.4  | pF   |

Ratings and Characteristic Curves (@  $T_A = 25^\circ\text{C}$  unless otherwise specified)

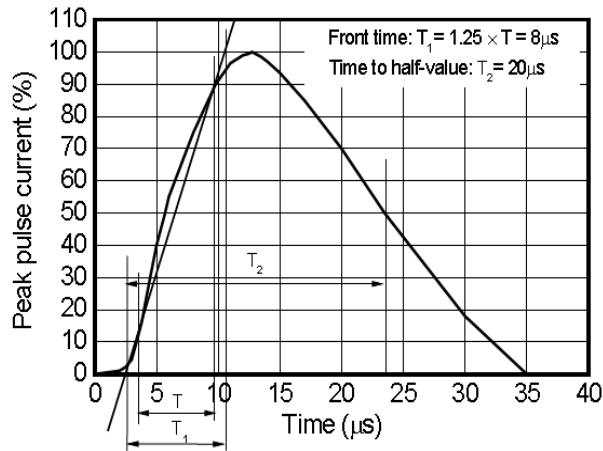


Fig 1 8/20  $\mu\text{s}$  waveform per IEC61000-4-5

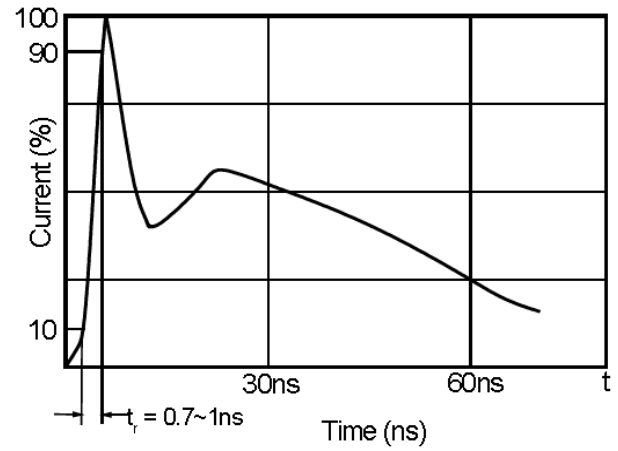


Fig 2 ESD pulse waveform according to  
IEC61000-4-2

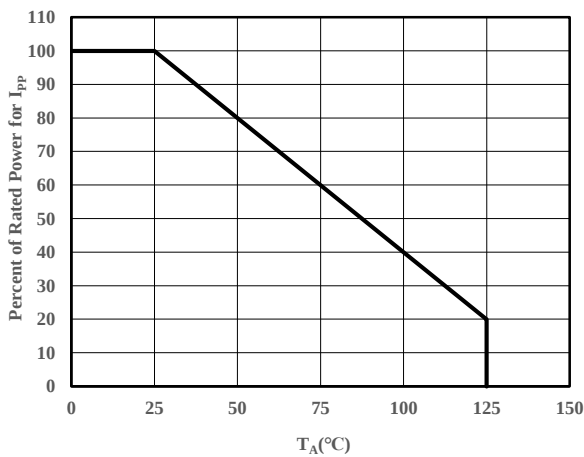


Fig 3 Power Derating Curve

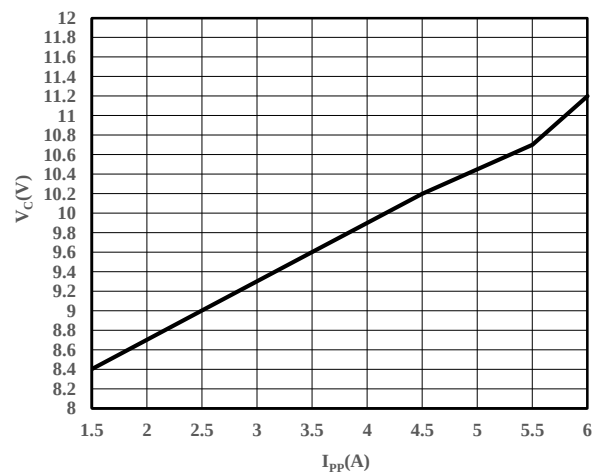


Fig 4 Clamping Voltage vs. Peak Pulse Current

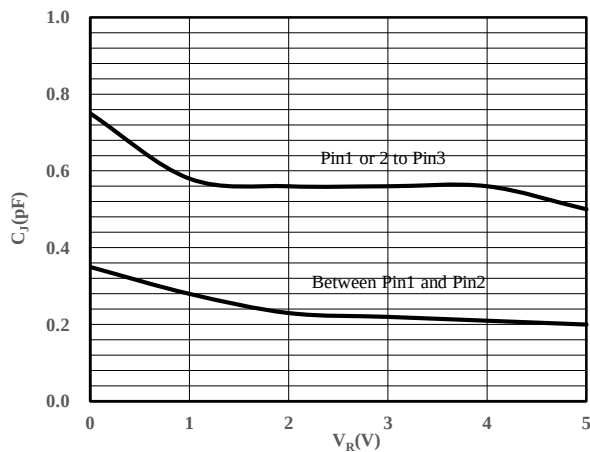
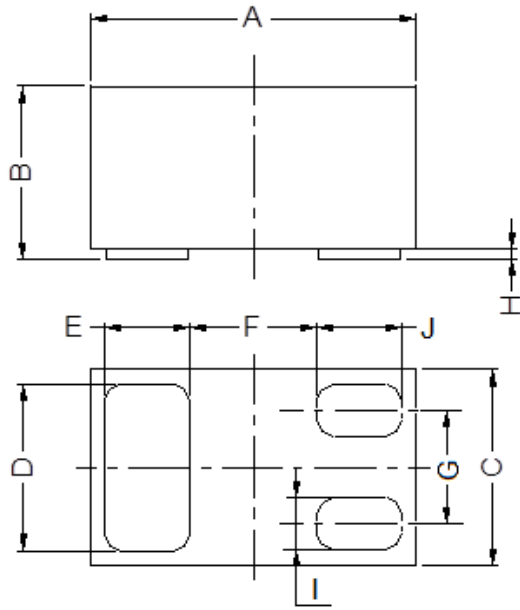


Fig 5 Capacitance vs. Reverse Voltage

**Package Outline Dimensions** (Unit: mm)



| DFN1006-3 |      |      |       |
|-----------|------|------|-------|
| Dimension | Min. | Typ. | Max.  |
| A         | 0.95 | 1.00 | 1.075 |
| B         | 0.47 | 0.50 | 0.53  |
| C         | 0.55 | 0.60 | 0.675 |
| D         | 0.45 | 0.50 | 0.55  |
| E/J       | 0.20 | 0.25 | 0.30  |
| F         | -    | 0.40 | -     |
| G         | -    | 0.35 | -     |
| H         | 0    | 0.03 | 0.05  |
| I         | 0.10 | 0.15 | 0.20  |

**Package Outline Dimensions** (Unit: mm)

**DFN1006-3**

