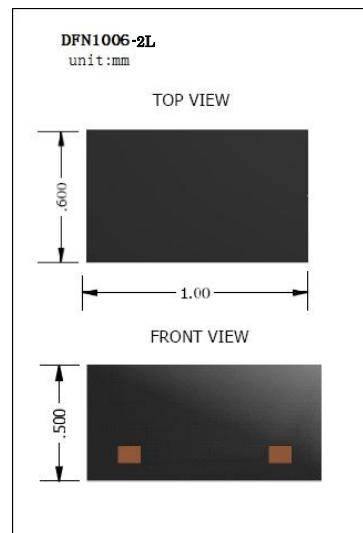
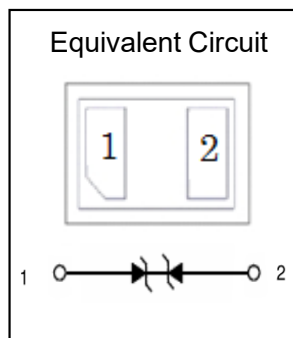


## Transient Voltage Suppressors

- ◆ Bi-Directional Transient Voltage Suppressor
- ◆ Low Leakage
- ◆ Response Time is Typically < 1 ns
- ◆ IEC61000-4-2 Level 4 ESD Protection
- ◆ ROHS Compliant
- ◆ UL-94 V-0 / Green EMC
- ◆ Matte Tin Lead finish (Pb-Free)

| Device Marking Code |           |
|---------------------|-----------|
| <b>ESD8D3.3C</b>    | <b>BK</b> |



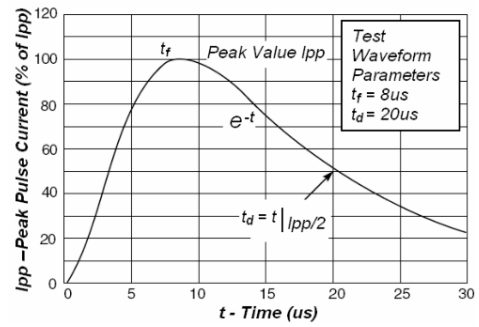
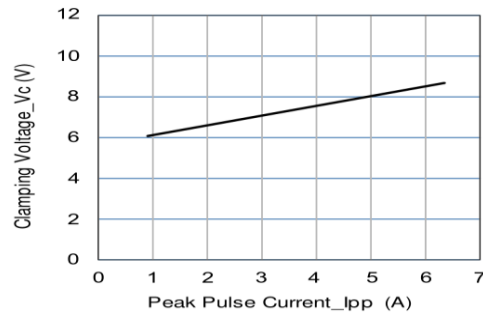
### Maximum Ratings (Ta = 25 °C)

| Symbol             | Parameter                          | Value       | Units |
|--------------------|------------------------------------|-------------|-------|
| $P_{PK}$           | Peak Power Dissipation             | 60          | W     |
| $I_{PP}^{*1}$      | Maximum Reverse Peak Pulse Current | 8           | A     |
| $V_{ESD\ Air}$     | ESD Voltage IEC61000-4-2 Air       | ± 30        | kV    |
| $V_{ESD\ contact}$ | ESD Voltage IEC61000-4-2 Contact   | ± 30        | kV    |
| $T_J$              | Junction Temperature               | 150         | °C    |
| $T_L$              | Lead Temperature                   | 260         | °C    |
| $T_{STG}$          | Storage Temperature                | -55 to +150 | °C    |
| $P_D$              | Power Dissipation                  | 200         | mW    |

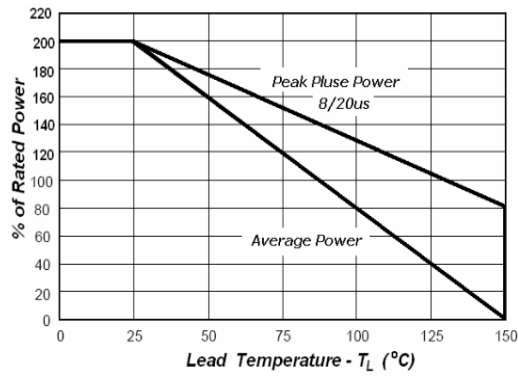
### Electrical Characteristics (Ta = 25 °C Unless Otherwise Noted)

| Symbol    | Parameter                    | Conditions                     | Min | Typ | Max | Units |
|-----------|------------------------------|--------------------------------|-----|-----|-----|-------|
| $V_{RWM}$ | Reverse Working Peak Voltage | -                              |     |     | 3.3 | V     |
| $V_{BR}$  | Reverse Breakdown Voltage    | $I_T = 1mA$                    | 4.5 | 5.2 | 6.5 | V     |
| $I_R$     | Reverse Current              | $V_{RWM} = 3.3V$               |     |     | 200 | nA    |
| $V_C$     | Clamping Voltage             | $I_{PP} = 1A, t_P = 8/20\mu s$ |     |     | 7   | V     |
|           |                              | $I_{PP} MAX, t_P = 8/20\mu s$  |     |     | 9   | V     |
| $C_D$     | Diode Capacitance            | $V_R = 0V, f = 1MHz$           |     | 15  |     | pF    |

## Typical Characteristics



## Clamping Voltage vs. Peak Pulse Current



## Power Derating Curve

## Pulse Waveform

## Ordering Information

| Device    | Package    | Shipping                         | Tape wide | Emboss pitch | Tape specification | Notes |
|-----------|------------|----------------------------------|-----------|--------------|--------------------|-------|
| ESD8D3.3C | DFN1006-2L | Tape & Reel<br>10000pcs /7" Reel | 8mm       | 4mm          | Conductive         |       |

## Package Dimensions

