Elektronische Bauelemente

# SIESD12-C

**2275W, 12V**
**Transient Voltage Suppressors**
**for ESD Protection (Uni-direction)**

RoHS Compliant Product
A suffix of “-C” specifies halogen and lead-free

## DESCRIPTION

The SIESD12-C is a transient voltage suppressor designed to protect power interfaces. It is suitable to replace multiple discrete components in portable electronics.

The SIESD12-C is specifically designed to protect power lines.

**DFN1610**

## FEATURES

- Transient protection for high-speed data lines
- Low Clamping Voltage
- Solid-State Silicon Technology
- Reverse Stand−off Voltage: 12V

## MARKING

**MT**

## PACKAGE INFORMATION

| Package | MPQ | Leader Size |
|---|---|---|
| DFN1610 | 3K | 7 inch |

## ORDER INFORMATION

| Part Number | Type |
|---|---|
| SIESD12-C | Lead (Pb)-free and Halogen-free |


## ABSOLUTE MAXIMUM RATINGS ($T_A$=25℃ unless otherwise noted.)

| Parameter | | Symbol | Ratings | Unit |
|---|---|---|---|---|
| ESD Rating per IEC61000−4−2 | Air | $V_{ESD}$ | ±30 | kV |
| | Contact | | ±30 | |
| Peak Pulse Power @tp=8/20μs | | $P_{PP}$ | 2275 | W |
| Peak Pulse Current @tp=8/20μs | | $I_{PP}$ | 65 | A |
| Operating Junction & Storage Temperature Range | | $T_J$, $T_{STG}$ | 125, -55~150 | ℃ |

## ELECTRICAL CHARACTERISTICS ($T_A$=25℃ unless otherwise noted.)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|---|---|---|---|---|---|---|
| Reverse Stand-off Voltage | $V_{RWM}$ | - | - | 12 | V | |
| Breakdown Voltage | $V_{(BR)}$ | 12.7 | - | - | | $I_T$=1mA |
| Reverse Leakage Current | $I_R$ | - | - | 100 | nA | $V_{RWM}$=12V |
| Surge Clamping Voltage @tp=8/20μs | $V_C$ | - | - | 25 | V | $I_{PP}$=25A |
| | | - | - | 35 | | $I_{PP}$=65A |
| Junction Capacitance | $C_J$ | - | 510 | - | pF | $V_R$=0V, f=1MHz |

## TYPICAL CHARACTERISTICS

Fig 1 8/20μs Waveform per IEC61000-4-5

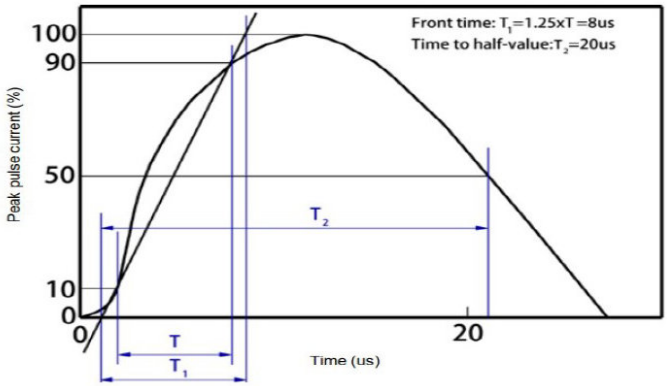



Fig 2 Contact Discharge Current Waveform per IEC 61000-4-2)

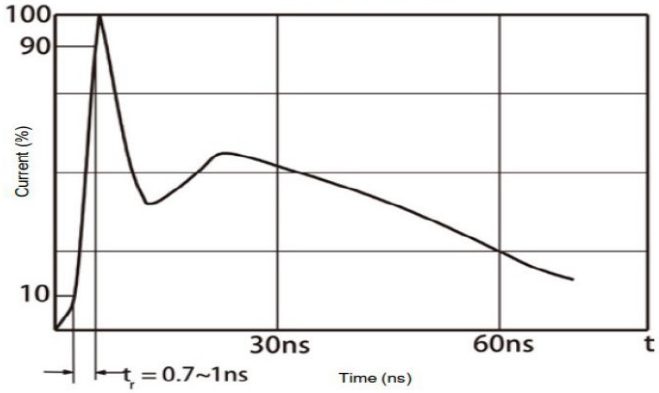



Fig 3 Voltage vs Capacitance

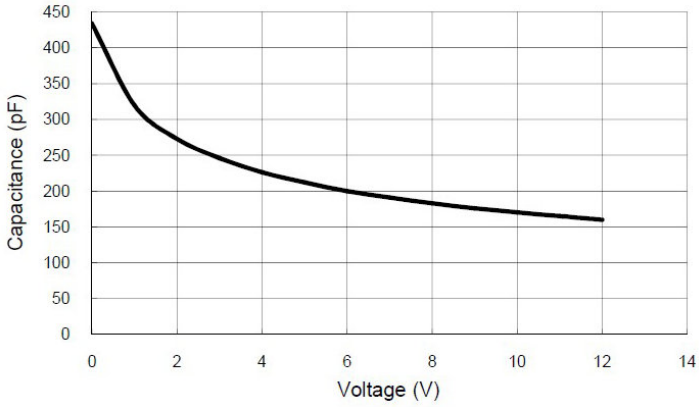
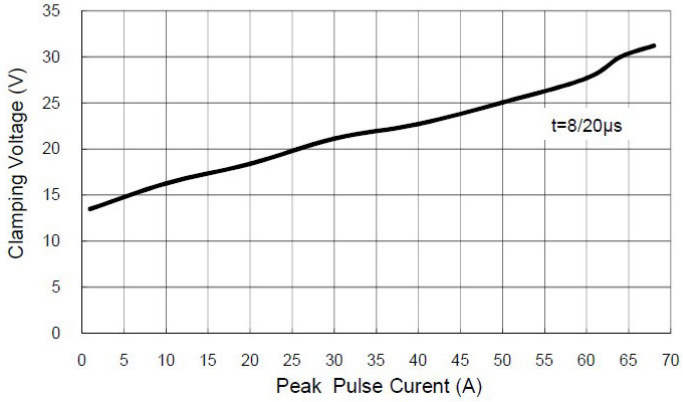
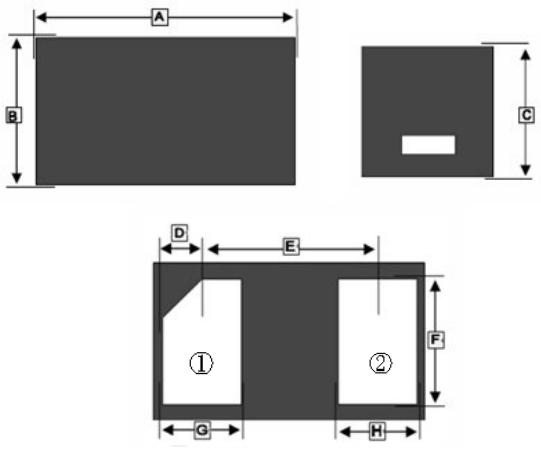



Fig 4 Clamping Voltage vs Peak Pulse Current



## PACKAGE OUTLINE DIMENSIONS

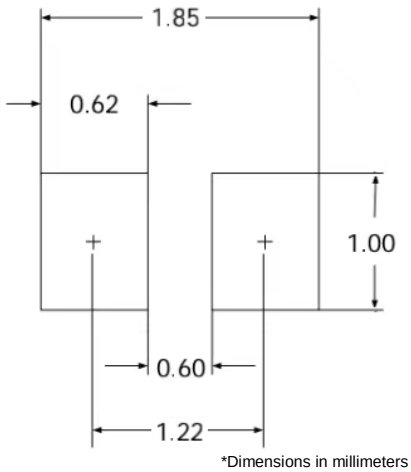
**DFN1610**




| REF. | Millimeter | |
|---|---|---|
| | Min. | Max. |
| A | 1.55 | 1.65 |
| B | 0.95 | 1.05 |
| C | 0.45 | 0.55 |
| D | 0.10 TYP | |
| E | 1.10 BSC | |
| F | 0.75 | 0.95 |
| G | 0.35 | 0.45 |
| H | 0.35 | 0.45 |

## MOUNTING PAD LAYOUT

**DFN1610**




*Dimensions in millimeters