Elektronische Bauelemente

# STESDL05C-C

**30W, 5V**

**Low Capacitance ESD Protection (Bi-directional)**

RoHS Compliant Product

A suffix of "-C" specifies halogen and lead-free

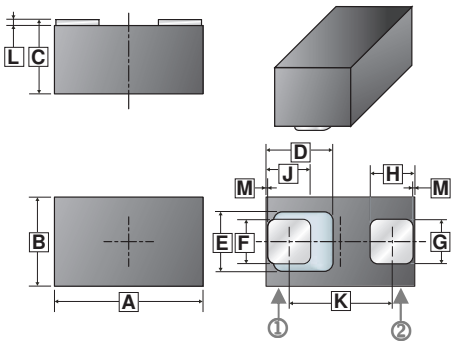
## DESCRIPTION

The STESDL05C-C is an ESD transient voltage suppression component which provides a very high level of protection for sensitive electronic components that may be subjected to electrostatic discharge (ESD).It is particularly well-suited for cellular phones, portable device, digital cameras, power supplies and many other portable applications because of its ultra small package.

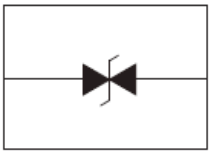
The STESDL05C-C is Bi-directional, safely dissipate ESD strikes of Level 4, IEC61000-4-2, exceeding themaximum requirement.

The STESDL05C-C is available in a WBFBP-02C package with peak reverse working voltage of 5 voltages.

**WBFBP-02C**




| REF. | Millimeter | | REF. | Millimeter | |
|---|---|---|---|---|---|
| | Min. | Max. | | Min. | Max. |
| A | 0.95 | 1.05 | G | 0.25 | 0.35 |
| B | 0.55 | 0.65 | H | 0.25 | 0.35 |
| C | 0.44 | 0.55 | J | 0.275 | 0.47 |
| D | 0.470 REF. | | K | 0.555 | 0.725 |
| E | 0.420 REF. | | L | 0.010 | 0.100 |
| F | 0.27 | 0.37 | M | 0.030 REF. | |



**Bi-direction**

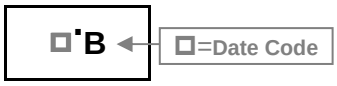
## FEATURES

- Low Clamping Voltage
- Low Leakage Current
- Small Package

## APPLICATIONS

- Digital Cameras
- Portable Instrumentation
- Notebooks, Desktops, and Serves
- Personal Digital Assistants (PDAs)
- Cell Phone Handsets and Accessories

## MARKING




## PACKAGE INFORMATION

| Package | MPQ | Leader Size |
|---|---|---|
| WBFBP-02C | 10K | 7 inch |

## ORDER INFORMATION

| Part Number | Type |
|---|---|
| STESDL05C-C | Lead (Pb)-free and Halogen-free |

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

| Parameter | | Symbol | Ratings | Unit |
|---|---|---|---|---|
| IEC 61000-4-2 (ESD) | Air Contact | | ±15 | kV |
| | Contact Discharge | | ±8 | |
| Peak Pulse Power (tp=8/20μs) | | $P_{PK}$ | 30 | W |
| Peak Pulse Current (tp=8/20μs) | | $I_{PP}$ | 3 | A |
| Lead Temperature | | $T_L$ | 260 | ℃ |
| Storage Temperature Range | | $T_J$,$T_{STG}$ | 125, -55~150 | ℃ |

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# STESDL05C-C

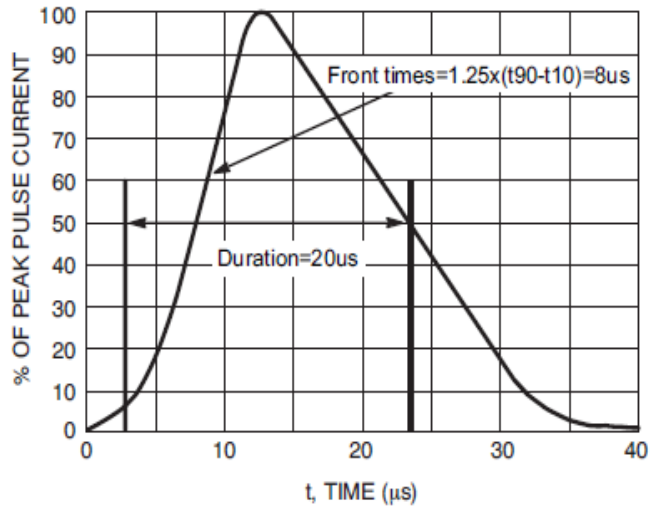
**30W, 5V**

**Low Capacitance ESD Protection (Bi-directional)**

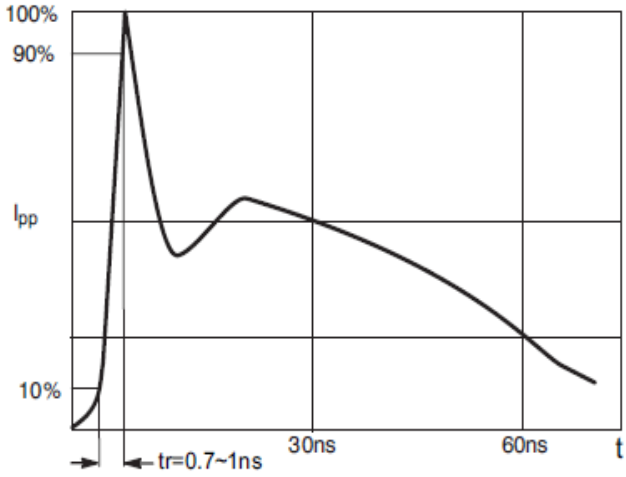
## ELECTRICAL CHARACTERISTICS ($T_A$=25℃ unless otherwise specified)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Test Conditions |
|---|---|---|---|---|---|---|
| Reveres Maximum Working Voltage | $V_{RWM}$ | - | 5 | - | V | $I_R$=1μA |
| Reveres Leakage Current | $I_R$ | - | - | 1 | μA | $V_{RWM}$=5V |
| Reveres Breakdown Voltage | $V_{BR}$ | 6.2 | 7.5 | 8 | V | $I_T$=1mA |
| Forward Voltage | $V_F$ | - | 0.7 | 1 | V | $I_F$=10mA |
| Clamping Voltage | $V_C$ | - | - | 8 | V | $I_{PP}$=1A, tp=8/20μs |
| | | - | - | 10 | V | $I_{PP}$=3A, tp=8/20μs |
| Junction Capacitance | $C_J$ | - | 4 | 6 | pF | f=1MHz, $V_R$=0 |

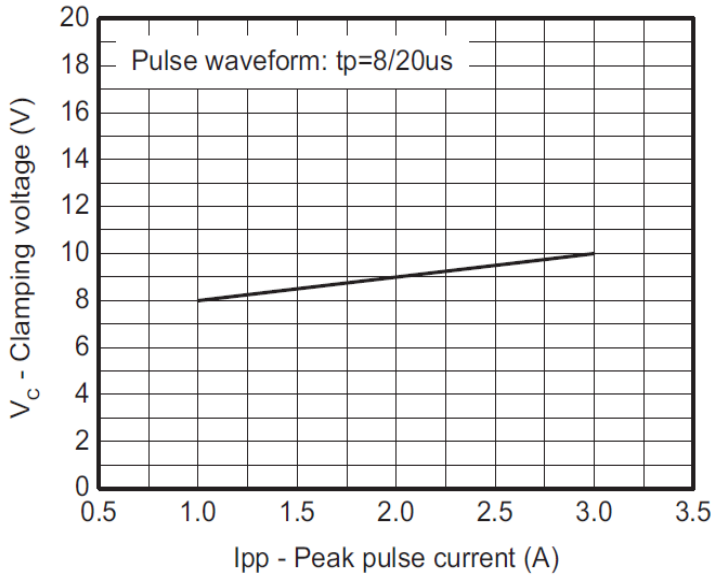
## RATINGS AND CHARACTERISTICS CURVES



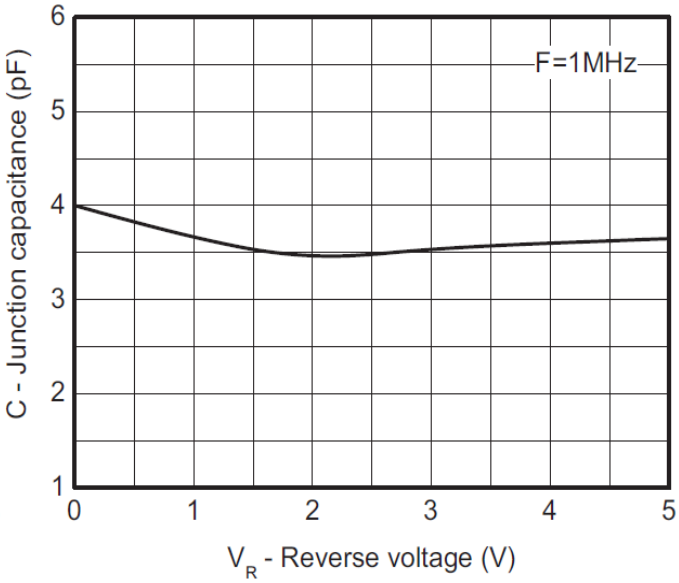

**8/20us waveform**




**IEC61000-4-2 waveform**

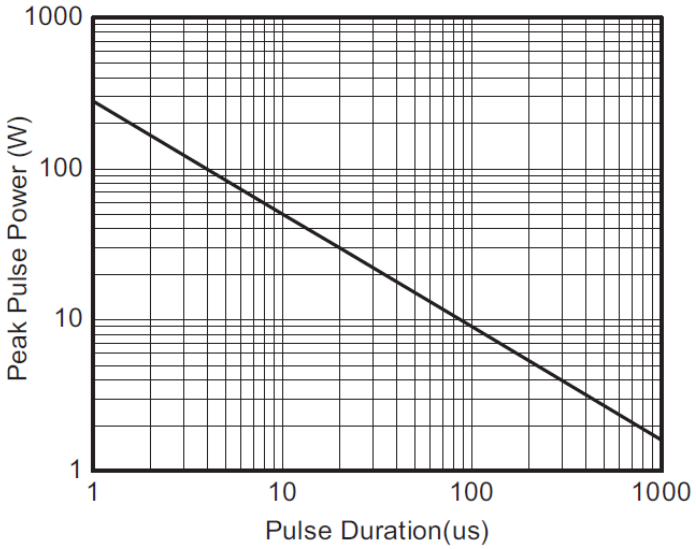



**Clamping voltage vs. Peak pulse current**

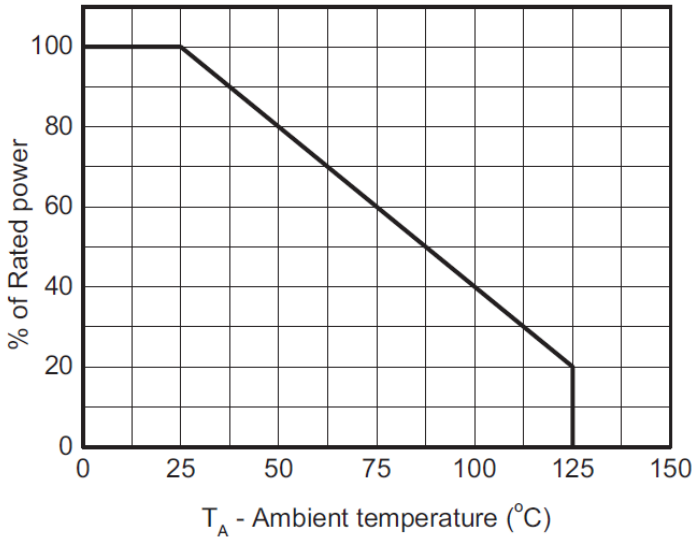



**Capacitance vs. Reveres voltage**

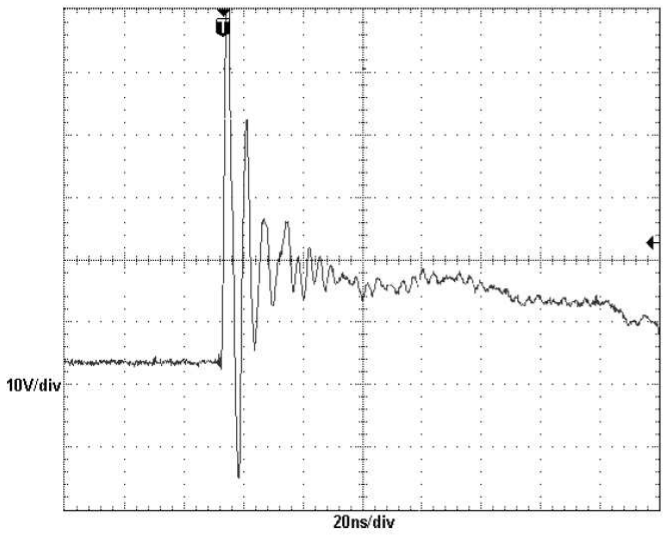
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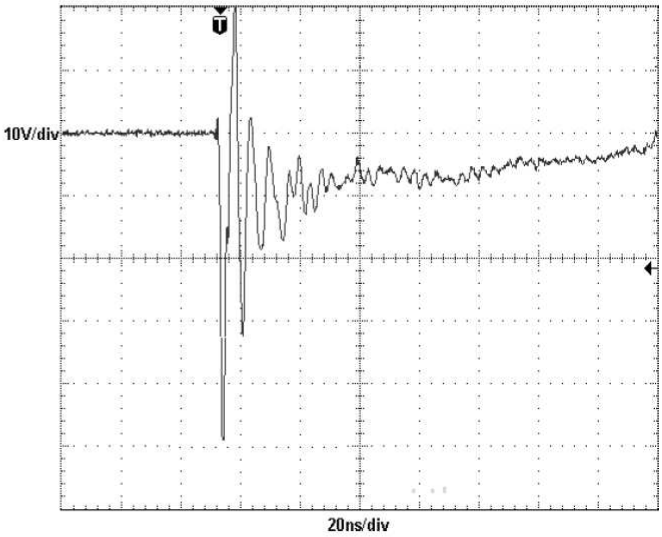

**Non-Repetitive Peak Pulse Power vs. Pulse time**




**Power derating vs. Temperature**




**ESD Clamping**
**(IEC61000-4-2 +8KV contact)**




**ESD Clamping**
**(IEC61000-4-2 -8KV contact)**