

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 the maximum requirement.

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

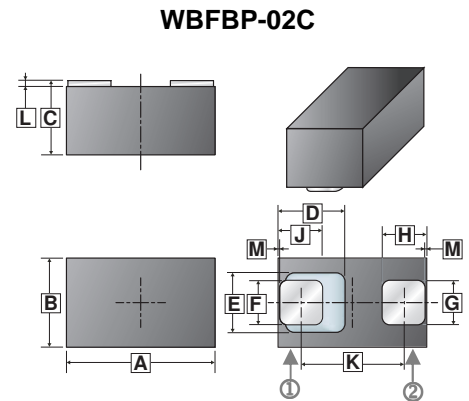
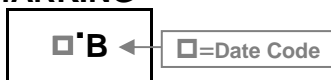
## FEATURES

- Low Clamping Voltage
- Low Leakage Current
- Small Package

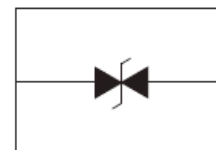
## APPLICATIONS

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

## MARKING



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

## PACKAGE INFORMATION

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

## ORDER INFORMATION

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

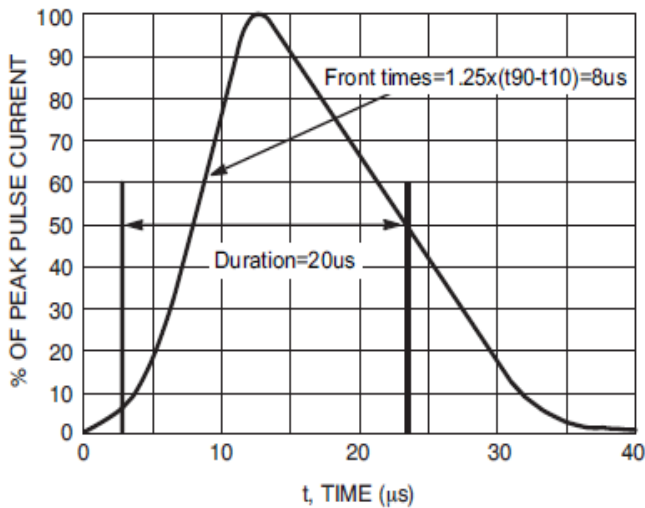
## ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	Ratings	Unit
IEC 61000-4-2 (ESD)	Air Contact	±15	kV
	Contact Discharge	±8	
Peak Pulse Power (tp=8/20µs)	P <sub>PK</sub>	30	W
Peak Pulse Current (tp=8/20µs)	I <sub>PP</sub>	3	A
Lead Temperature	T <sub>L</sub>	260	°C
Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	125, -55~150	°C

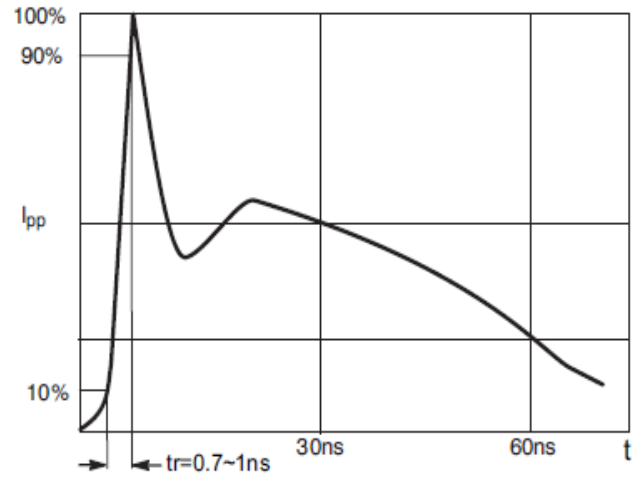
**ELECTRICAL CHARACTERISTICS** ( $T_A=25^\circ\text{C}$  unless otherwise specified)

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

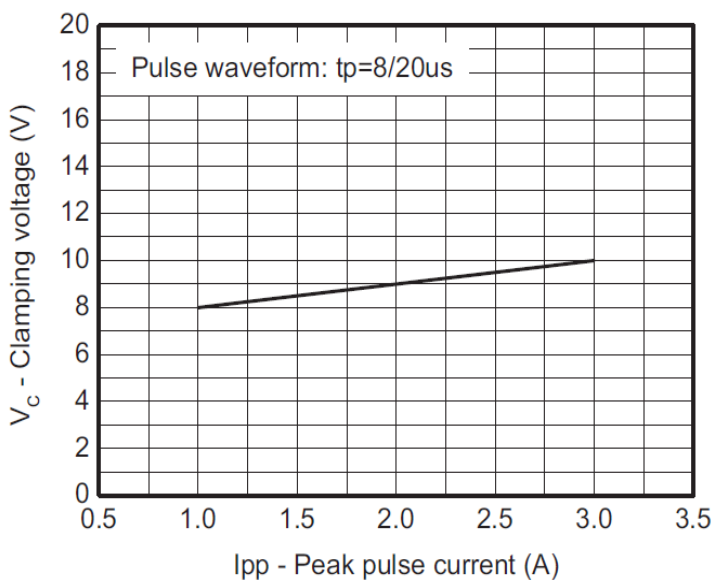
**RATINGS AND CHARACTERISTICS CURVES**



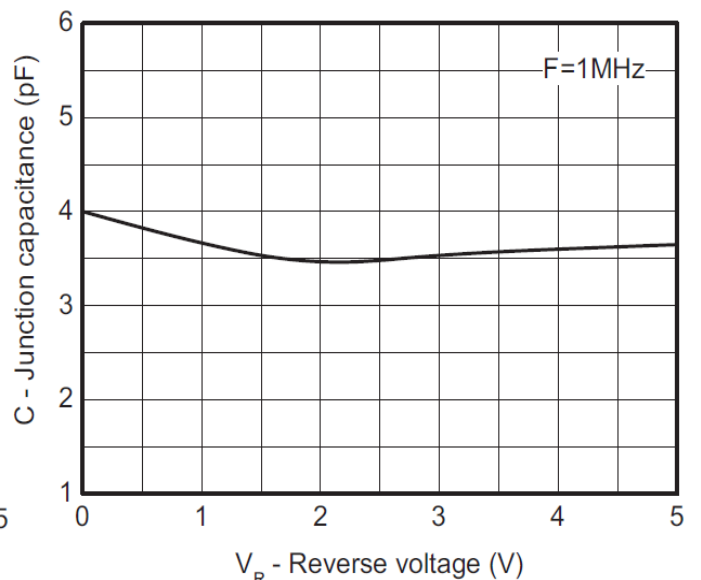
8/20us waveform



IEC61000-4-2 waveform

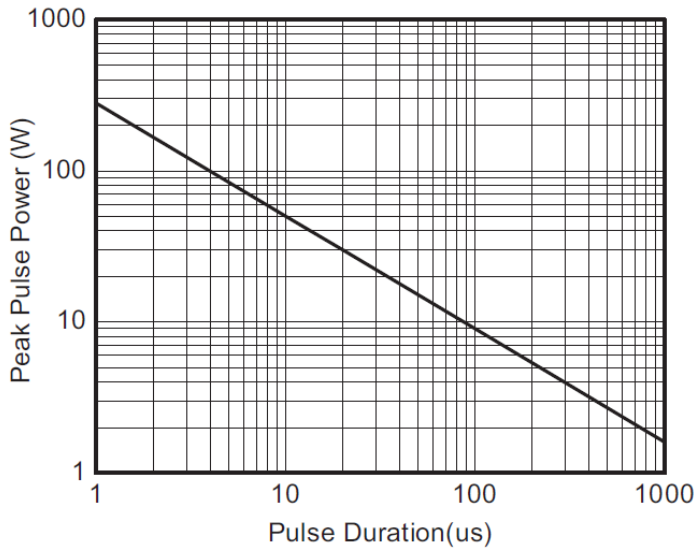


Clamping voltage vs. Peak pulse current

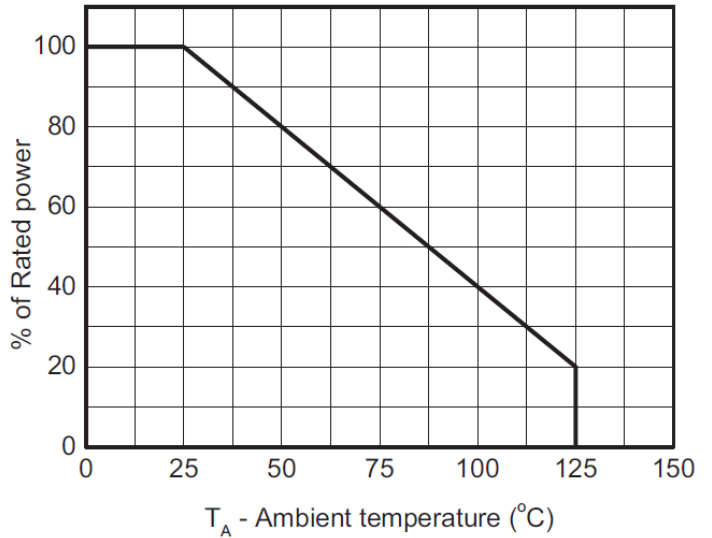


Capacitance vs. Revers voltage

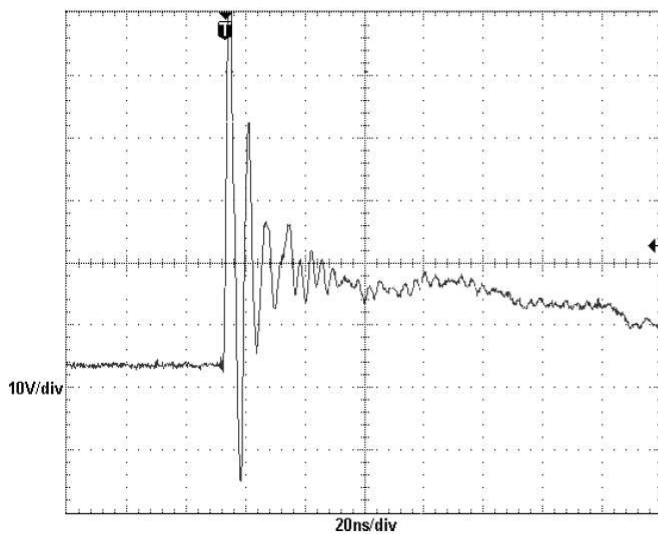
**RATINGS AND CHARACTERISTICS CURVES**



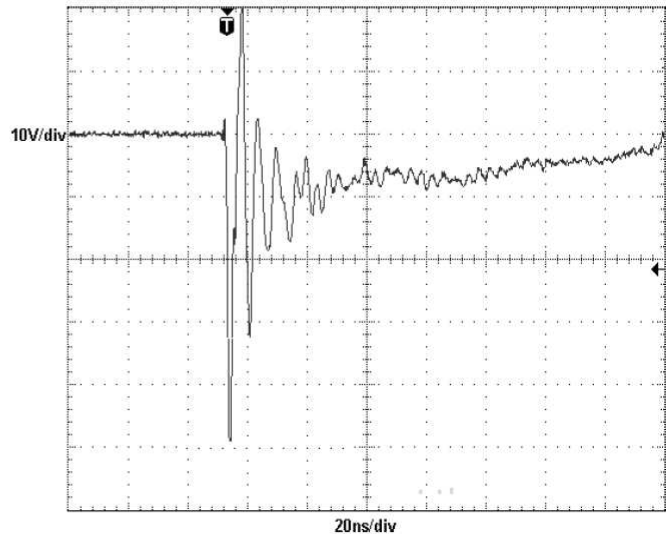
**Non-Repetitive Peak Pulse Power vs. Pulse time**



**Power derating vs. Temperature**



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



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