Elektronische Bauelemente

STESD05CL-C

40W, 5V

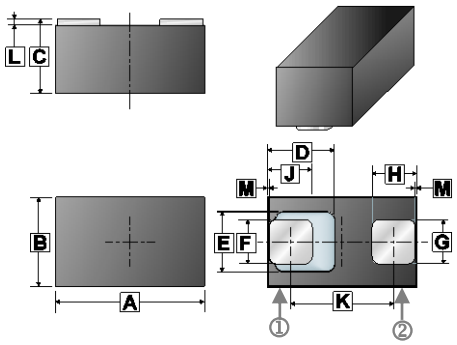
Low Capacitance ESD Protection (Bi-directional)

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

DESCRIPTION

Designed to protect voltage sensitive electronic components from ESD and other transients. Excellent clamping capability, low leakage, low capacitance, and fast response time provide best in class protection on designs that are exposed to ESD. The combination of small size, low capacitance, and high level of ESD protection makes them a flexible solution for applications such as HDMI, Display Port TM, and MDDI interfaces. It is designed to replace multiplayer varistors (MLV) in consumer equipments applications such as mobile phone, notebook, PAD, STB, LCD TV etc.

WBFBP-02C



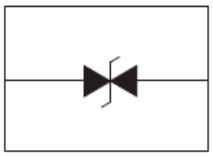
REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	0.95	1.05	G	0.25	0.35
B	0.55	0.65	H	0.25	0.35
C	0.44	0.55	J	0.275	0.47
D	0.470 REF.		K	0.555	0.725
E	0.420 REF.		L	0.010	0.100
F	0.27	0.37	M	0.030 REF.	

APPLICATIONS

- Computers and Peripherals
- High Speed Data Lines
- Audio and Video Equipment
- Cellular Handsets and Accessories
- Subscriber Identity Module(SIM) Card Protection

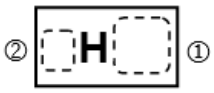
FEATURES

- Bi-Directional ESD Protection of One Line
- Low Capacitance: 12pF(Typ.)
- Low Reverse Stand-off Voltage: 5V
- Low Reverse Clamping Voltage
- Low Leakage Current
- Fast Response Time
- JESD22-A114-B ESD Rating of Class 3B Per Human Body Model
- IEC 61000-4-2 Level 4 ESD Protection



Bi-direction

MARKING



Top View

PACKAGE INFORMATION

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

ORDER INFORMATION

Part Number	Type
STESD05CL-C	Lead (Pb)-free and Halogen-free

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ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Parameter		Symbol	Ratings	Unit
IEC 61000-4-2 (ESD) [1]	Air Contact	V_{ESD}	±25	KV
	Contact Model		±25	
JESD22-A114-B ESD Voltage [1]	Per Human Body Model		±16	
ESD Voltage [1]	Machine Model		±0.4	
Peak Pulse Power [2]		P_{PP}	40	W
Peak Pulse Current [2]		I_{PP}	4	A
Maximum Lead Solder Temperature (10 Second Duration)		T_L	260	°C
Operating Junction & Storage Temperature Range		T_J, T_{STG}	150, -55~150	

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Units	Test Conditions
Reverse Stand-off Voltage	V_{RWM}	-	-	5	V	
Reveres Leakage Current	I_R	-	-	0.1	μA	V_{RWM}=5V
Reveres Breakdown Voltage	V_{BR}	5.8	-	8	V	I_T=1mA
Clamping Voltage [2]	V_C	-	-	10	V	I_{PP}=4A
Junction Capacitance	C_J	-	12	15	pF	f=1MHz, V_R=0

Notes:

1. Device stressed with ten non-repetitive ESD pulses.
2. Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC61000-4-5.

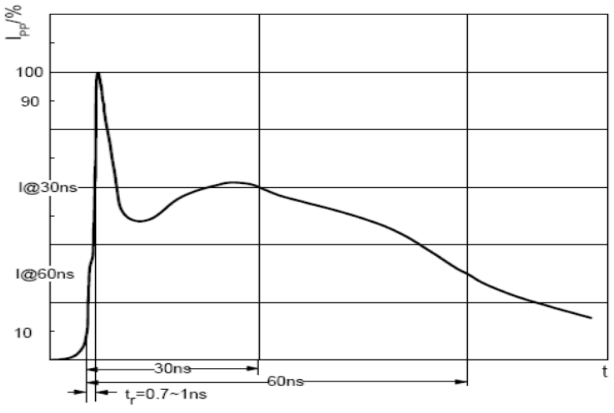
ESD STANDARDS COMPLIANCE

IEC61000-4-2 Standard

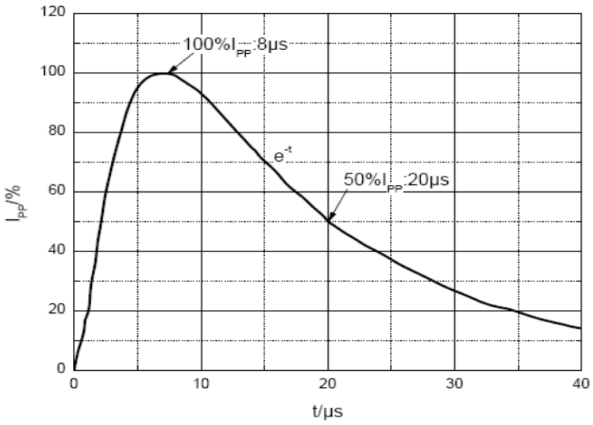
Contact Discharge		Air Discharge	
Level	Test Voltage kV	Level	Test Voltage kV
1	2	1	2
2	4	2	4
3	6	3	8
4	8	4	15

JESD22-A114-B Standard

ESD Class	Human Body Discharge V
0	0～249
1A 1B 1C	250～499 500～999 1000～1999
2	2000～3999
3A 3B	4000～7999 8000～15999



ESD pulse waveform according to IEC61000-4-2



8/20μs pulse waveform according to IEC 61000-4-5

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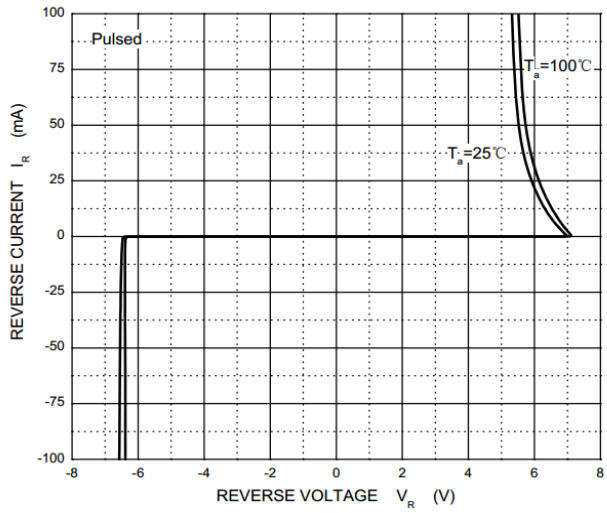
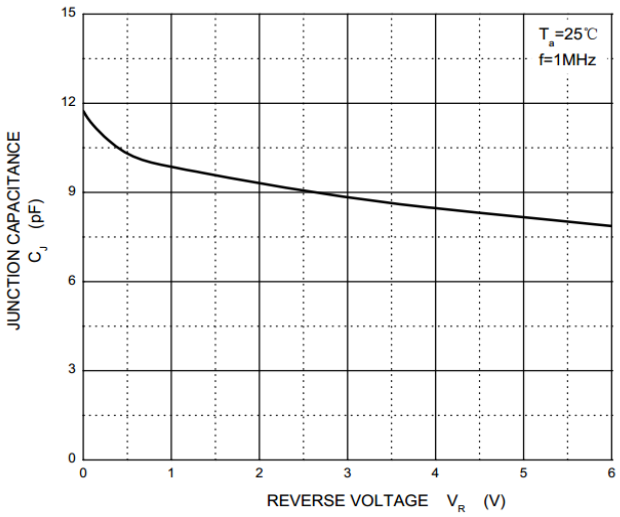
RATINGS AND CHARACTERISTICS CURVES

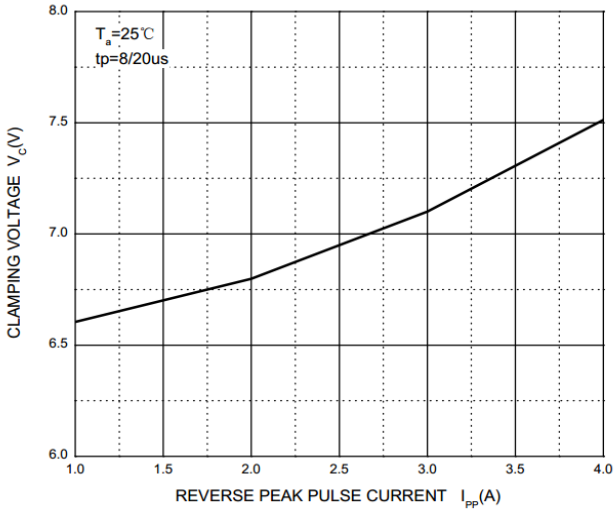
Reverse Characteristics



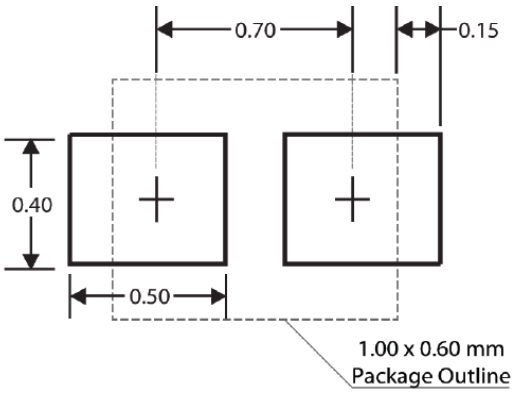
Capacitance Characteristics



V_C —— I_{PP}



Mounting Pad Layout



*Dimensions in millimeters