

RoHS Compliant Product
A suffix of "-HF" specifies halogen & lead-free

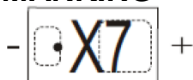
DESCRIPTION

The STESD07-C is designed to protect voltage sensitive components from ESD. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed to ESD. Because of its small size, it is suited for use in cellular phones, MP3 players, digital cameras and many other portable applications where board space is at a premium.

APPLICATIONS

- Stand-off Voltage: 7V
- Low Leakage
- Response Time Is Typically <1Ns
- ESD Rating of Class 3 (>16kv) Per Human Body Model
- IEC61000-4-2 Level 4 ESD Protection

MARKING



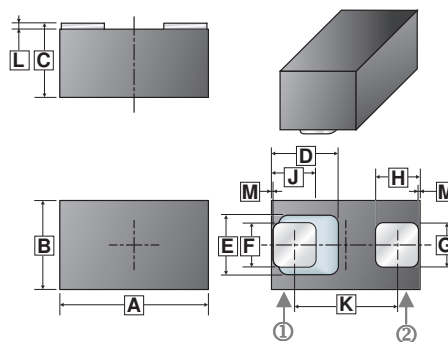
PACKAGE INFORMATION

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

ORDER INFORMATION

Part Number	Type
STESD07-C	Lead (Pb)-free and Halogen-free

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.	



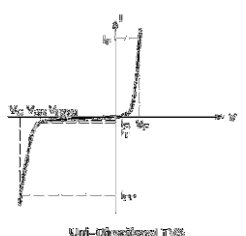
MAXIMUM RATINGS (T_A=25°C)

Parameter		Symbol	Ratings	Unit
IEC 61000-4-2 (ESD)	Contact		±30	KV
	Per Human Body Model		16	KV
	Per Machine Model		400	V
Total Power Dissipation on FR-5 Board ¹		P _D	100	mW
Thermal Resistance Junction-ambient		R _{θJA}	1250	°C/W
Lead Solder Temperature-Maximum (10 Second Duration)		T _L	260	°C
Junction and Storage Temperature Range		T _J , T _{STG}	-55~150	°C

Stresses exceeding Maximum Ratings may damage the device. Maximum Ratings are stress ratings only. Functional operation above the Recommended Operating Conditions is not implied. Extended exposure to stresses above the Recommended Operating Conditions may affect device reliability.

Note:

1. FR-5=1.0 x 0.75 x 0.62 in.



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

Parameter	Symbol	Min.	Typ.	Max.	Unit
Working Peak Reverse Voltage	V_{RWM}	-	-	7	V
Maximum Reverse Leakage Current @ V_{RWM}	I_R	-	-	1	μA
Breakdown Voltage @ I_T^2	V_{BR}	7.5	-	8.7	V
Test Current	I_T	-	-	1	mA
Maximum Reverse Peak Pulse Current ³	I_{PP}	-	-	8	A
Clamping Voltage @ I_{PP}^3	V_C	-	-	15.1	V
Peak Power Dissipation (8X20 μs)	P_{PK}	-	115	-	W
Max. Capacitance @ $V_R=0$ and $f=1\text{MHz}$	C	-	55	-	pF

Notes:

- V_{BR} is measured with a pulse test current I_T at an ambient temperature of 25°C .
- Surge current waveform per Figure 3.

CHARACTERISTICS CURVES

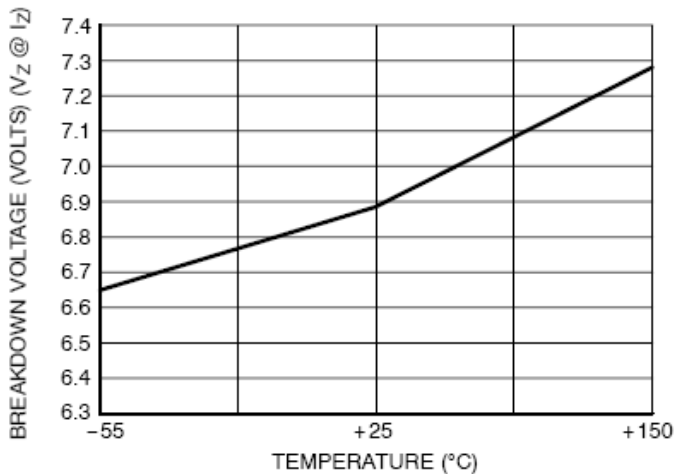


Figure 1. Typical Breakdown Voltage versus Temperature

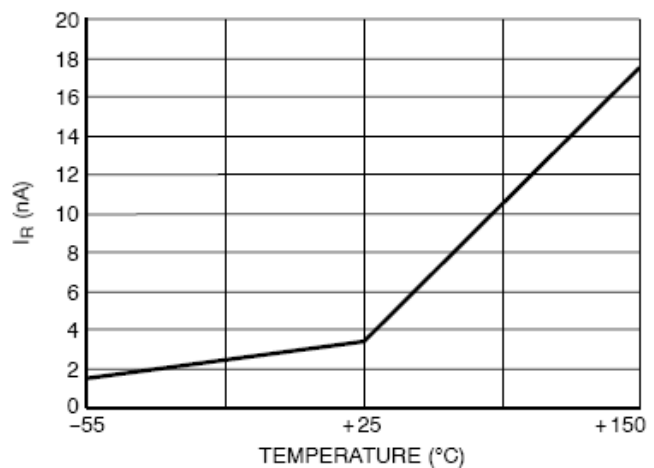


Figure 2. Typical Leakage Current versus Temperature

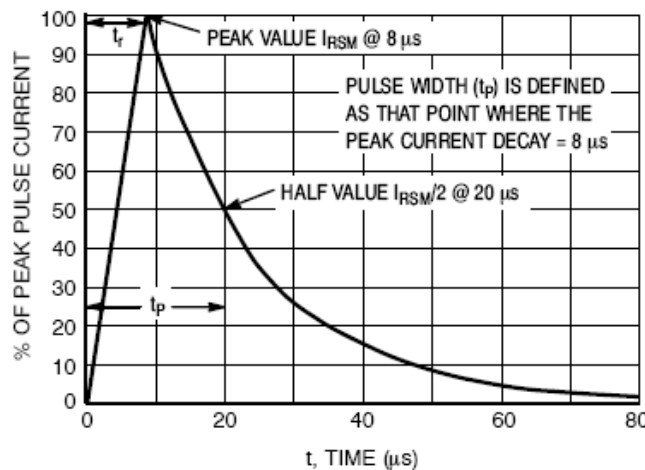


Figure 3. 8 X 20 μs Pulse Waveform