Elektronische Bauelemente

SBESD07C-C

150W, 7V

Bi-Direction ESD Protection Diode

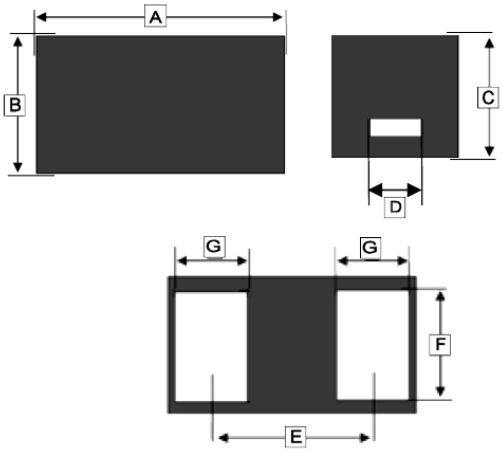
RoHS Compliant Product
A suffix of "-C" specifies halogen and lead-free

DESCRIPTION

SBESD07C-C is a low-capacitance Transient Voltage Suppressor (TVS) designed to provide electrostatic discharge (ESD) protection for data, control or power lines. With typical capacitance of 25pF only, it is designed to protect parasitic sensitive systems against over voltage and over current transient events. It complies with IEC 61000-4-2 (ESD) Level 4, IEC 61000-4-4 (EFT), very fast charged device model (CDM) ESD and cable discharge event (CDE), etc.

It uses ultra-small DFN1006 package. Each device can protect one data line. It offers system designers flexibility to protect single data line where space is a premium concern.

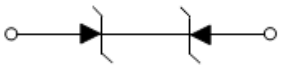
DFN1006



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	0.95	1.075	E	0.64 BSC.	
B	0.55	0.675	F	0.45	0.55
C	0.40	0.55	G	0.20	0.30
D	0.20 TYP.				

FEATURES

- Transient Protection for High-Speed Data Lines
- IEC61000-4-2 Level 4 ESD Protection
- Low Capacitance and Clamping Voltage
- Low Leakage Current
- Flammability Rating: UL 94V-0
- Meets MSL 1 Requirements
- Response Time is<1ns



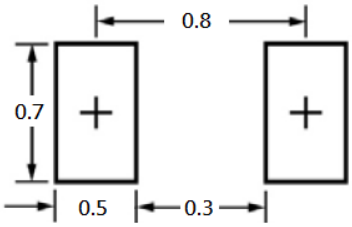
MARKING

HOC

PACKAGE INFORMATION

Package	MPQ	Leader Size
DFN1006	10K	7 inch

Mounting Pad Layout



*Dimensions in millimeters

ORDER INFORMATION

Part Number	Type
SBESD07C-C	Lead (Pb)-free and Halogen-free

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

Parameter		Symbol	Ratings	Unit
IEC 61000-4-2 ESD Voltage	Air	V_{ESD}	±25	kV
	Contact		±25	
Peak Pulse Power		P_{PP}	150	W
Maximum Lead Solder Temperature (10 Second Duration)		T_L	260	°C
Operating Junction Temperature Range		T_J	-55~125	
Storage Temperature Range		T_{STG}	-55~150	

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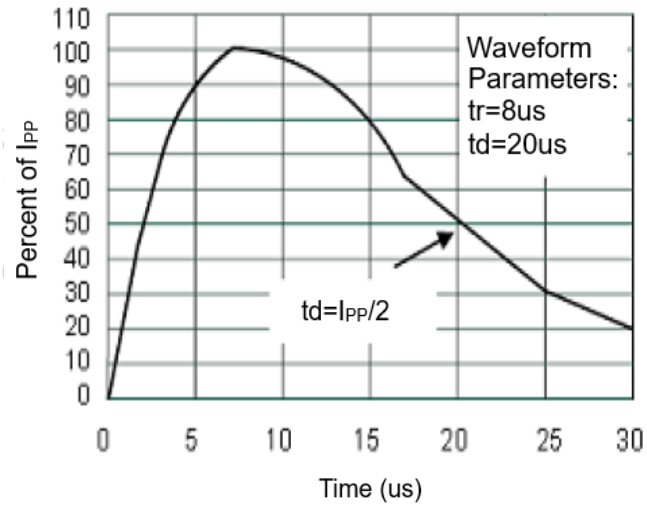
ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted.)

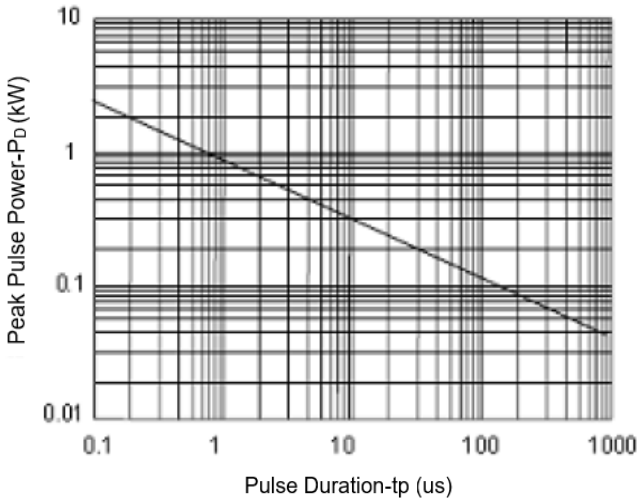
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Reverse Stand-off Voltage	V_{RWM}	-	-	7	V	
Breakdown Voltage	$V_{(BR)}$	7.5	-	-	V	I_T=1mA
Clamping Voltage @tp=8/20μs	V_C	-	-	12	V	I_{PP}=1A
		-	-	19		I_{PP}=8A
TLP Clamping Voltage @IEC61000-4-2 Level 2 Equivalent (±4kV Contact, ±8kV Air)		-	15	-		I_{PP}=8A
		-	18	-		I_{PP}=16A
Reverse Leakage Current	I_R	-	-	0.2	μA	V_{RWM}=7V
Junction Capacitance	C_J	-	25	-	pF	V_R=0V, f=1MHz

TYPICAL CHARACTERISTICS

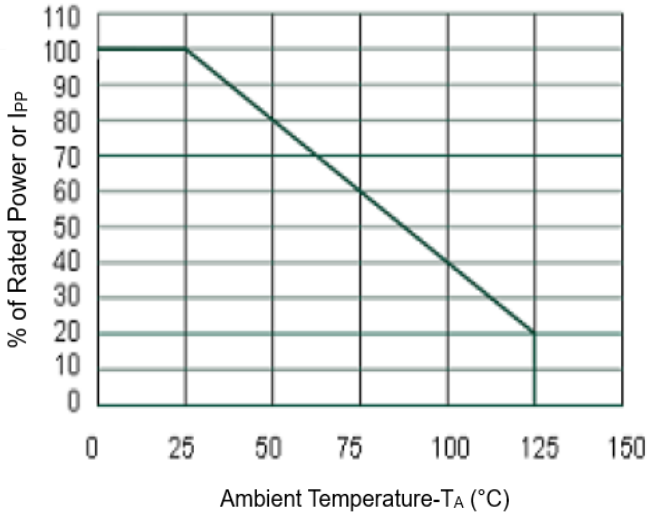
Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time



Power Derating Curve



Transmission Line Pulsing (TLP) Measurement