

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

DESCRIPTION

SBESDK12C-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 13pF 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, very fast charged device model (CDM) ESD and cable discharge event (CDE), etc.

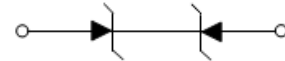
It uses ultra-small DFN1006 package. Each device can protect one data line. It offers system designers flexibility to protect single data line where space is a premium concern.

DFN1006



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

MOC

PACKAGE INFORMATION

Package	MPQ	Leader Size
DFN1006	10K	7 inch

ORDER INFORMATION

Part Number	Type
SBESDK12C-C	Lead (Pb)-free and Halogen-free

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

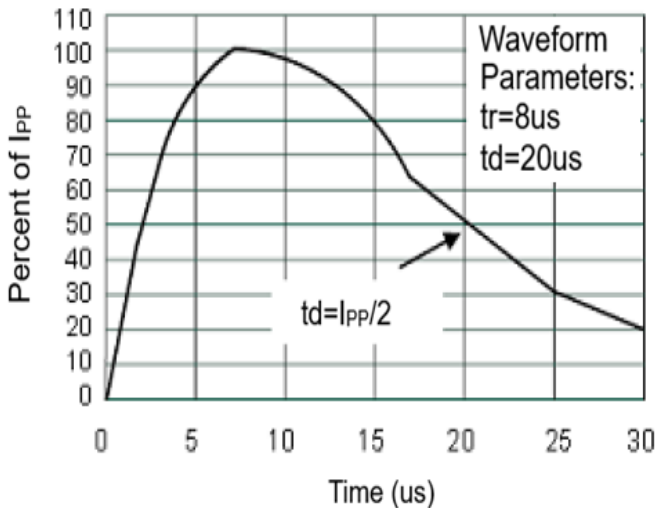
Parameter	Symbol	Ratings	Unit
IEC 61000-4-2 ESD Voltage	V _{ESD}	±25	kV
		±20	
Peak Pulse Power	P _{PP}	130	W
Peak Pulse Current	I _{PP}	5	A
Maximum Lead Solder Temperature (10 Second Duration)	T _L	260	°C
Operating Junction Temperature Range	T _J	-55~125	
Storage Temperature Range	T _{STG}	-55~150	

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

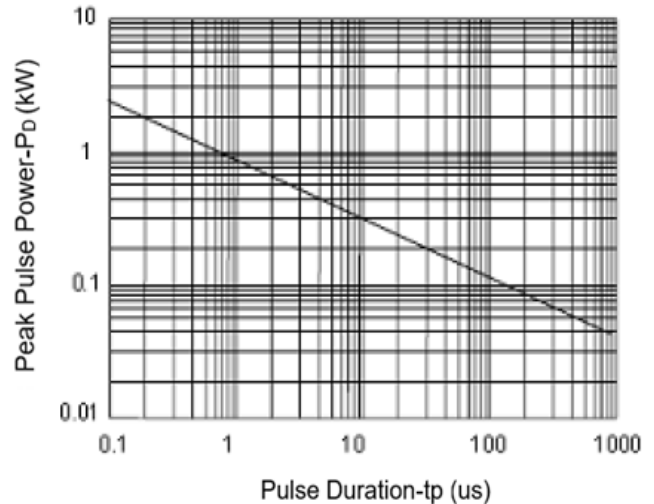
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Reverse Stand-off Voltage	V_{RWM}	-	-	12	V	
Breakdown Voltage	$V_{(BR)}$	13.3	-	-	V	$I_T=1\text{mA}$
Clamping Voltage @ $t_p=8/20\mu\text{s}$	V_C	-	-	19	V	$I_{PP}=1\text{A}$
		-	-	26		$I_{PP}=5\text{A}$
Reverse Leakage Current	I_R	-	-	0.2	μA	$V_{RWM}=12\text{V}$
Junction Capacitance	C_J	-	13	-	pF	$V_R=0\text{V}$, $f=1\text{MHz}$

TYPICAL CHARACTERISTICS

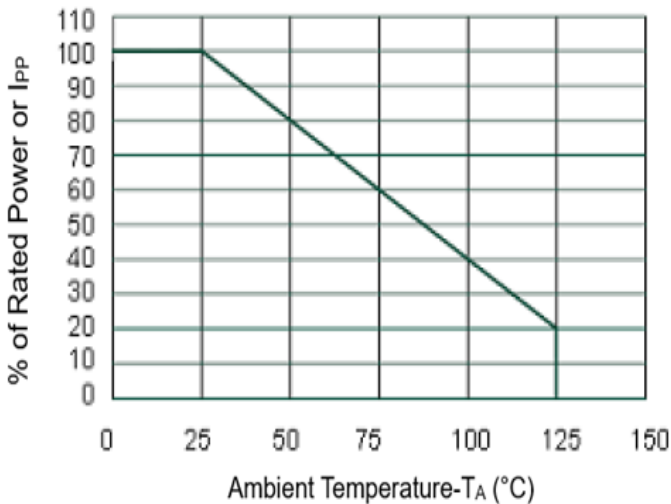
Pulse Waveform



Non-Repetitive Peak Pulse Power vs. Pulse Time

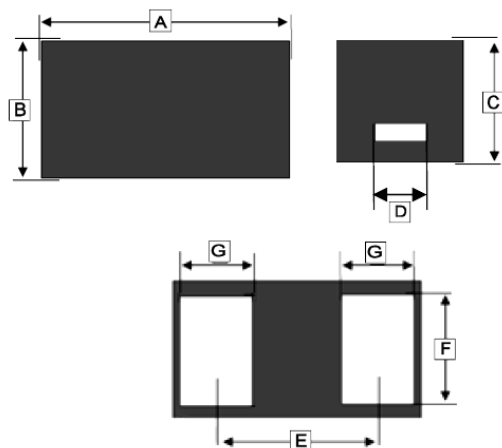


Power Derating Curve



PACKAGE OUTLINE DIMENSIONS

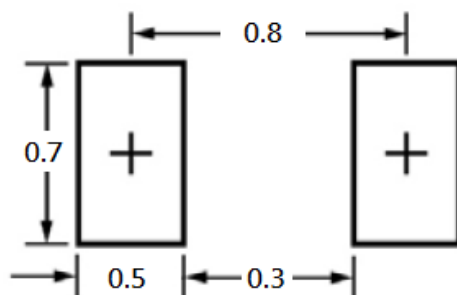
DFN1006



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

MOUNTING PAD LAYOUT

DFN1006



*Dimensions in millimeters