

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

DESCRIPTION

SBESD0801S-12 is a low capacitance Transient Voltage Suppressor (TVS) designed to provide electrostatic discharge (ESD) protection for high-speed data interfaces.

SBESD0801S-12 uses ultra-small DFN1006-2L package. Each device can protect one high-speed data line. It offers system designers flexibility to protect single data line where space is a premium concern. The combined features of low capacitance, ultra small size and high ESD robustness make SBESD0801S-12 ideal for high-speed data port and high-frequency line applications such as cellular phones and HD visual devices.

FEATURES

- Low clamping voltage
- Low leakage current
- Low capacitance

APPLICATIONS

- Serial ATA
- USB ports
- PCI express

MARKING

C5

PACKAGE INFORMATION

Package	MPQ	Leader Size
DFN1006-2L	10K	7 inch

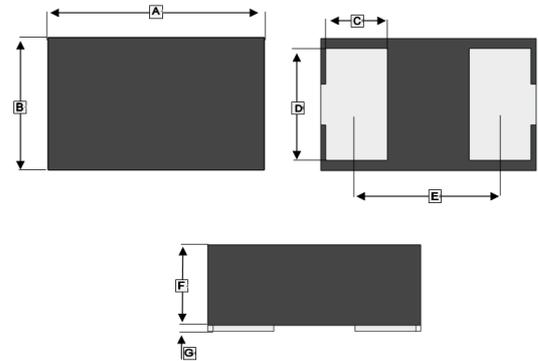
ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

Rating	Symbol	Value	Unit
IEC 61000-4-2	Air discharge	±15	kV
	Contact discharge	±12	
Peak Pulse Power@ tp=8/20µs	P _{PK}	20	W
Operating Temperature	T _{OP}	-55~125	°C
Storage Temperature Range	T _{STG}	-55~150	°C

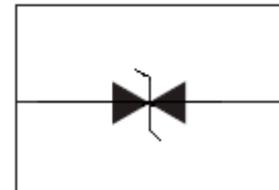
ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Reverse Working Voltage	V _{RWM}		-	-	12	V
Reverse Leakage Current	I _R	V _{RWM} =12V	-	10	1000	nA
Reverse Breakdown Voltage	V _{BR}	I _T =1mA	-	16	-	V
Clamping Voltage	V _C	I _{PP} =1A, tp=8/20µs	-	18	20	V
Junction Capacitance	C _J	V _R =0, f=1MHz	-	0.35	0.5	pF

DFN1006-2L

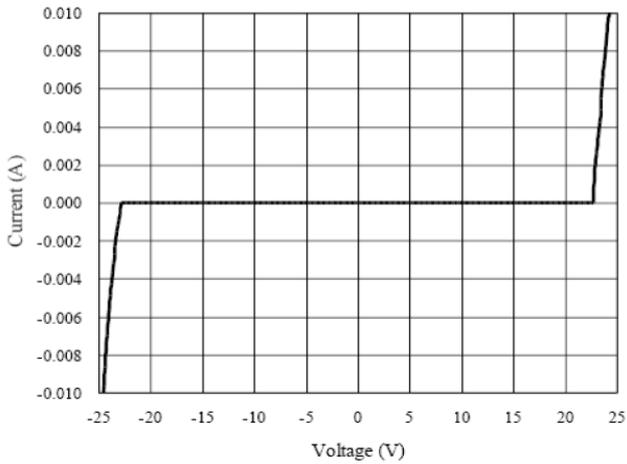


REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	0.95	1.05	E	0.65 TYP.	
B	0.55	0.65	F	0.3	0.5
C	0.2	0.4	G	0.00	0.05
D	0.45	0.55			

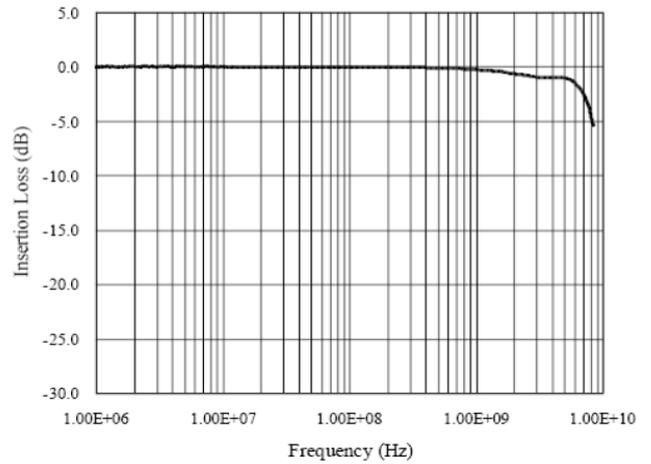


CHARACTERISTICS CURVES

Voltage Sweeping of I/O to I/O

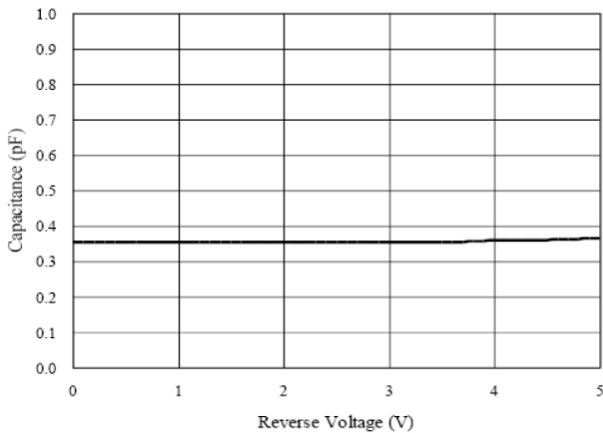


Insertion Loss S21 of I/O to I/O

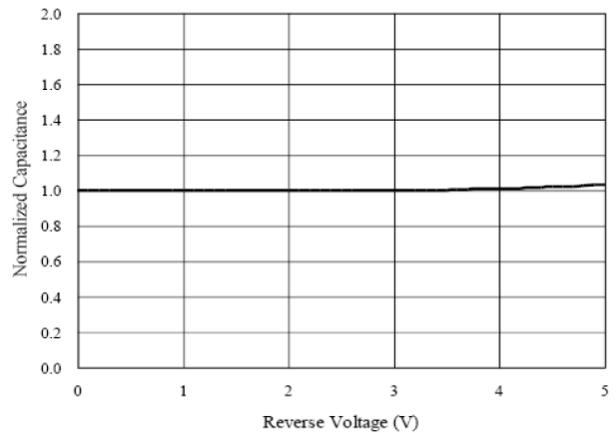


Capacitance vs. Voltage of I/O to I/O (f = 1MHz)

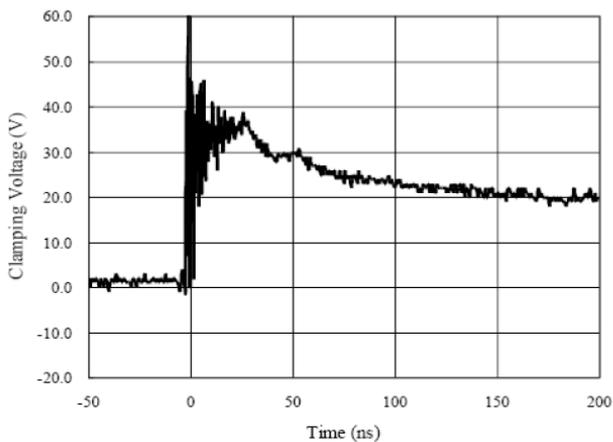
Capacitance vs. Reverse Voltage



Normalized Capacitance vs. Reverse Voltage



**ESD Clamping of I/O to I/O
(+8kV Contact per IEC 61000-4-2)**



**ESD Clamping of I/O to I/O
(-8kV Contact per IEC 61000-4-2)**

