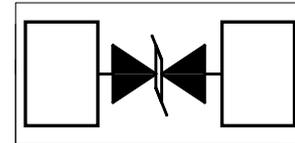


## Description

The SES5VN1006-2B ESD protector is designed to replace multilayer varistors (MLVs) in portable applications such as cell phones, notebook computers, and PDA' s. They feature large cross-sectional area junctions for conducting high transient currents, offer desirable electrical characteristics for board level protection, such as fast response time, lower operating voltage, lower clamping voltage and no device degradation when compared to MLVs. The SES5VN1006-2B protects sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events. The SES5VN1006-2B is available in a DFN-2 package with working voltages of 5 volt. It gives designer the flexibility to protect one bidirectional line in applications where arrays are not practical. Additionally, it may be “sprinkled” around the board in applications where board space is at a premium. It may be used to meet the ESD immunity requirements of IEC 61000-4-2, Level 4 ( $\pm 15\text{kV}$  air,  $\pm 8\text{kV}$  contact discharge)

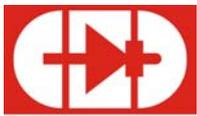


## Feature

- 120 Watts peak pulse power ( $t_p = 8/20 \mu s$ )
- Transient protection for data lines to IEC 61000-4-2 (ESD)  $\pm 15\text{kV}$  (air),  $\pm 8\text{kV}$  (contact)
- Small package for use in portable electronics
- Suitable replacement for MLVs in ESD protection applications
- Protect one I/O or power line
- Low clamping voltage
- Stand off voltages: 5V
- Low leakage current
- Solid-state silicon-avalanche technology
- Small Body Outline Dimensions:  $1.0\text{mm} \times 0.6\text{mm} \times 0.5\text{mm}$
- Equivalent to 0402 package

## Applications

- Cell Phone Handsets and Accessories
- Personal Digital Assistants (PDA' s)
- Notebooks, Desktops, and Servers
- Portable Instrumentation
- Cordless Phones
- Digital Cameras
- Peripherals
- MP3 Players



GOOD-ARK

ESD Protector

SEP2V8-4ULVC

SE\*\*\*\* Series

ROHS

Electrical characteristics @25°C (unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Working Voltage	$V_{RWM}$				5	V
Breakdown voltage	$V_{BR}$	$I_t=1mA$	6.0	6.8	8.0	V
Reverse Leakage Current	$I_R$	$V_{RWM}=3V T=25^\circ C$			0.1	$\mu A$
Resistance	$R_d$			0.65		$\Omega$
Junction Capacitance	$C_j$	$V_R=0V f=1MHz$		22		pF

Absolute maximum rating @25°C

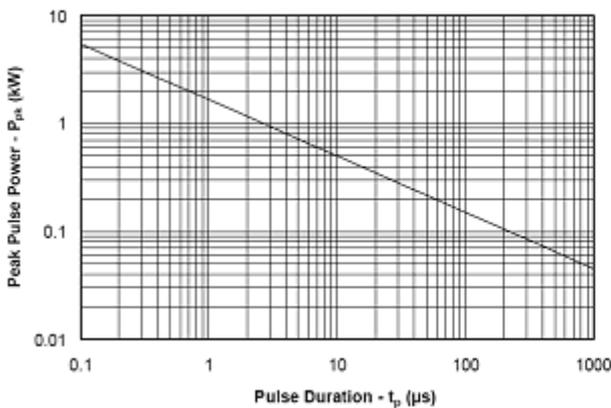
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p = 8/20\mu S$ )	$P_{pk}$	140	W
Repetitive peak pulse current ( $t_p = 8/20\mu S$ )	$I_{pp}$	9	A
Junction temperature	$T_j$	125	$^\circ C$
Lead Soldering Temperature	$T_L$	260 (10 sec)	$^\circ C$
Operating Temperature	$T_J$	-40 to +125	$^\circ C$
Storage Temperature	$T_{STG}$	-55 to +150	$^\circ C$

Typical Characteristics

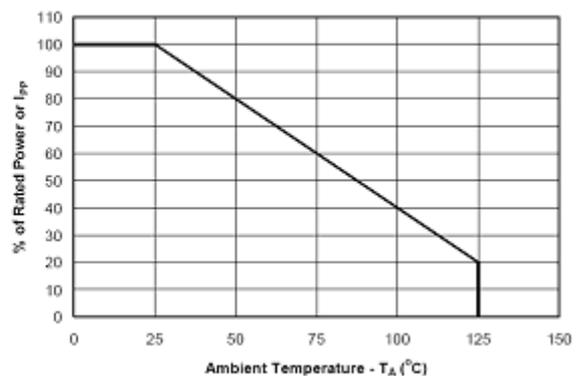
Product dimension and foot print

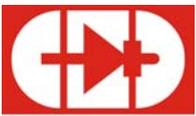
www.DataSheet4U.com

Non-Repetitive Peak Pulse Power vs. Pulse Time



Power Derating Curve





**GOOD-ARK**

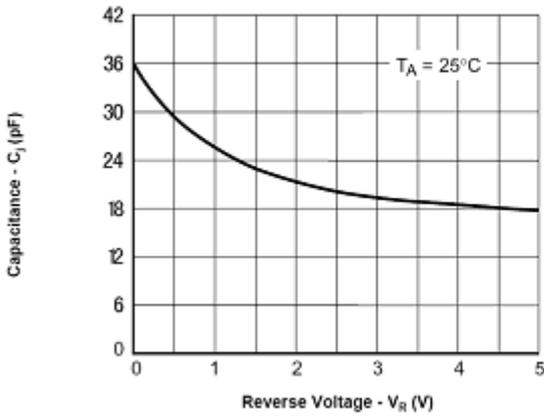
Ultra Small ESD Protector

SES Series

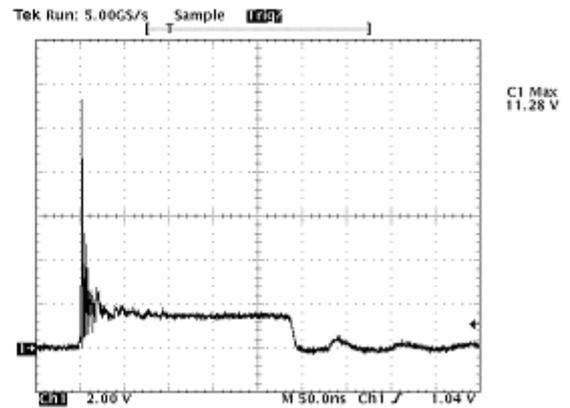
SES5VN1006-2B

ROHS

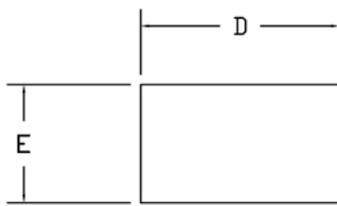
Junction Capacitance vs. Reverse Voltage



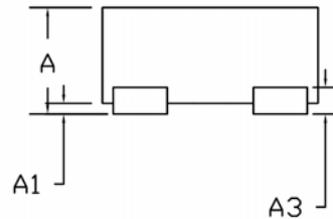
ESD Clamping  
(8kV Contact per IEC 61000-4-2)



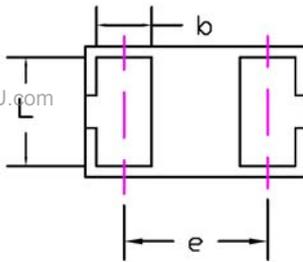
Product dimension and foot print



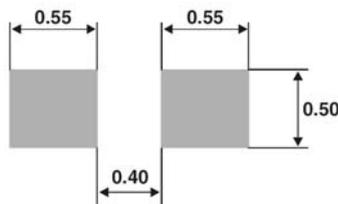
Top View



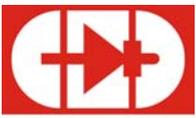
Side View



Bottom View



Common Dimensions (mm)			
PKG.	X1: Extreme thin		
Ref.	Min.	Nom.	Max
A	0.4	-	0.5
A1	0.00	-	0.05
A3	0.125 Ref.		
D	0.95	1.00	1.05
E	0.55	0.60	0.65
B	0.20	0.25	0.30
L	0.45	0.50	0.55
e	0.65 BSC		



## Revision History

Revision	Date	Changes
1.0	2008-7-3	-