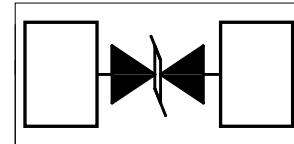


Description

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)

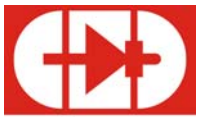


Feature

- 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



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	μA
Resistance	R_d			0.65		Ω
Junction Capacitance	C_j	$V_R=0V f=1MHz$		22		pF

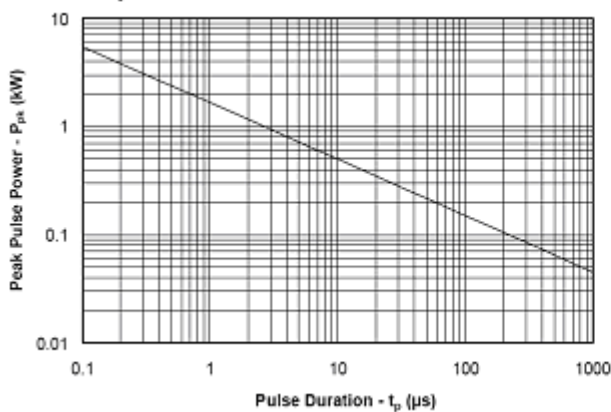
Absolute maximum rating @25°C

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	$^\circ C$

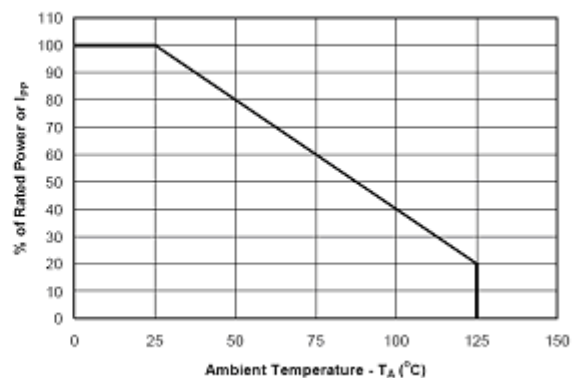
Typical Characteristics

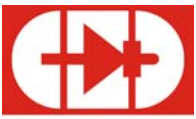
Product dimension and foot print

Non-Repetitive Peak Pulse Power vs. Pulse Time

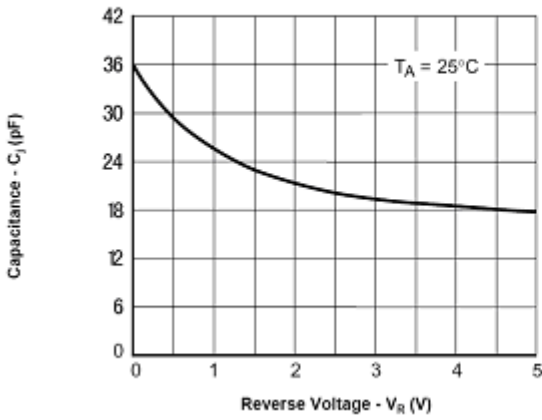


Power Derating Curve

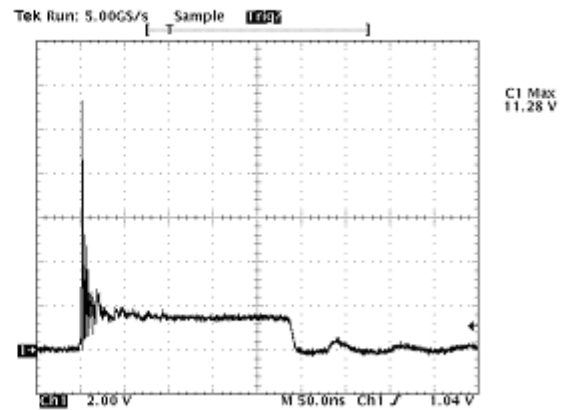




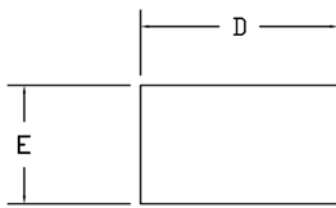
Junction Capacitance vs. Reverse Voltage



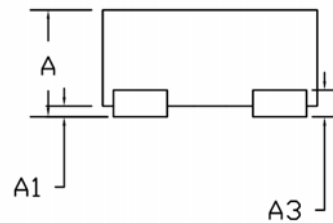
**ESD Clamping
(8kV Contact per IEC 61000-4-2)**



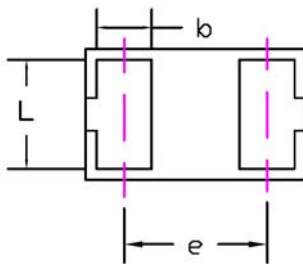
Product dimension and foot print



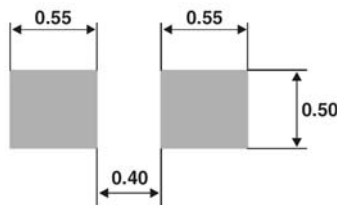
Top View



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		



GOOD-ARK

TVS for Surge Protection

SES Series

SES5VT323

ROHS 

Revision History

Revision	Date	Changes
1.0	2008-7-3	-