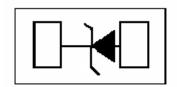




Description

The SES3V3N1006-2U ESD protector is designed to replace multilayer varistors (MLVs) in portable applications such as cell phones, notebook computers, and PDA's. They feature large crosssectional 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 degradationwhen compared to MLVs. The SES3V3N1006-2U protects sensitive semiconductor components from damage or upset due to electrostatic discharge (ESD) and other voltage induced transient events. The SES3V3N1006-2U is available in a DFN-2 package with working voltages of 3.3 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 Fapplications where board space is at a premium. It may be used to meet the ESD immunity requirements of IEC 61000-4-2, Level 4 (±15kV air, ±8kV contact discharge).



Feature

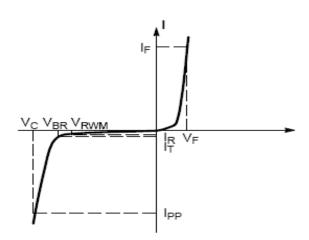
- 100 Watts peak pulse power (tp = 8/20 µ s)
- Transient protection for data lines to
 IEC 61000-4-2 (ESD) ±15kV (air), ±8kV (contact)
- Small package for use in portable electronics
- Suitable replacement for MLVs in ESD protection applications
- Protect one I/O or power line
- Low clamping voltage
- Stand off voltages: 3.3V
- Low leakage current
- Solid-state silicon-avalanche technology
- Small Body Outline Dimensions: 1.0mm×0.6mm×0.5mm

1

■ 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.	Тур.	Max.	Units
Working Voltage	V_{RWM}				3.3	V
Breakdown voltage	V_{BR}	I _t =1mA	5.0			V
Reverse Leakage Current	I _R	V _{RWM} =3.3V T=25°C			2.5	μΑ
Clamping Voltage	Vc	I_{PP} =9.8A t_P = 8/20 μ S			10.4	V
Junction Capacitance	C _j	V _R =0V f = 1MHz		12		pF

Absolute maximum rating @25℃

	Rating	Symbol	Value	Units
IEC 61000-4-2	2 (ESD) Contact		±30	kV
ESD Voltage	Per Human Body Model		16	kV
	Per Machine Model		400	V
Peak Pulse Po	ower ($t_P = 8/20 \mu S$)	P_{pk}	100	W
Maximum Pea	k Pulse Current (t_P = 8/20 μ S)	I_{pp}	9.8	А
Lead Soldering	g Temperature	TL	260 (10 sec)	$^{\circ}\!\mathbb{C}$
Operating Ten	nperature	TJ	-55 to +125	$^{\circ}$ C
Storage Temp	erature	T _{STG}	-55 to +150	$^{\circ}\! \mathbb{C}$

Typical Characteristics

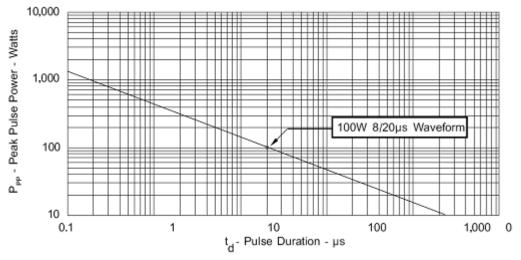


Figure 1. Peak pulse power vs pulse time

Ultra Small ESD Protector

SES3V3N1006-2U



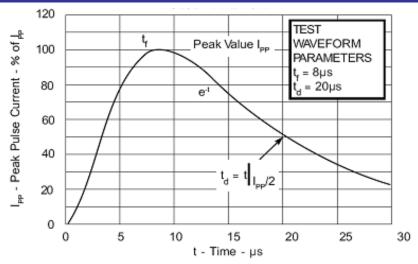


Figure 2. Pulse wave form Power Derating Curve

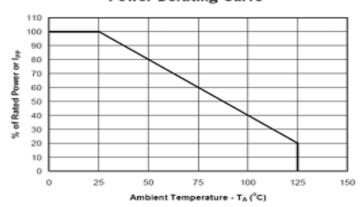


Figure 3. Power derating curve

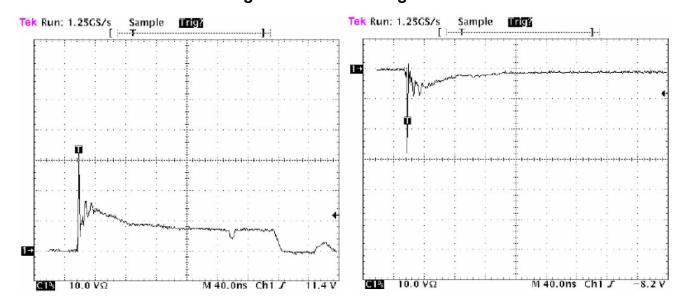


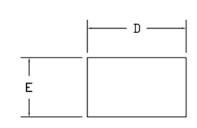
Figure 4. Positive 8kV contact per IEC 61000-4-2

Fig 5. Negative 8kV contact per IEC 61000-4-2

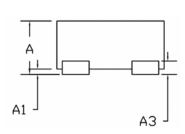




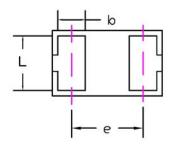
Product dimension and foot print



Top View

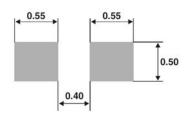


Side View



Bottom View

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



Foot Print

Revision History

Revision	Date	Changes	
1.0	2008-7-3	-	