



Description

The SPHV15-01KTG-C is designed to protect voltage sensitive components from damage or latch-up due to ESD. Excellent clamping capability, low leakage, and fast response time provide best in class protection on designs that are exposed ESD for board level. Because of its small size and bi-directional design, it is ideal for use in cellular phones, MP3 players, and portable applications that require audio line protection.



DFN1006-2L

Features

- ★ IEC 61000-4-2 Level 4 ESD Protection
 - $\pm 30\text{kV}$ Contact Discharge
 - $\pm 30\text{kV}$ Air Discharge
- ★ 250W Peak pulse Power (8/20us)
- ★ Low clamping voltage
- ★ Working voltage: 15V
- ★ Low leakage current
- ★ RoHS compliant
- ★ Protecting one bi-directional lines
- ★ Junction capacitance: 25pF Typ.



Circuit Diagram

Applications

- ★ Cellular handsets and accessories
- ★ Battery Protection
- ★ Notebooks & Handhelds
- ★ Mobile Phones
- ★ MP3 Players
- ★ Peripherals

Ordering Information

Product ID	Pack	Qty(PCS)
SPHV15-01KTG-C	DFN1006-2L	10000

Absolute Ratings(Tamb = 25°C)

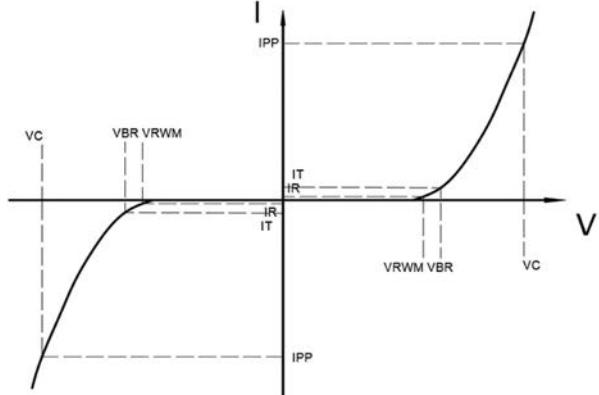
Symbol	Parameter	Value	Units
P _{PP}	Peak Pulse Power (t _p = 8/20 μ s)	288	W
T _L	Maximum lead temperature for soldering during 10s	260	°C
T _{stg}	Storage Temperature Range	-55 to +150	°C
T _{op}	Operating Temperature Range	-40 to +125	°C
T _j	Maximum junction temperature	150	°C
	IEC61000-4-2 (ESD) air discharge contact discharge	± 30 ± 30	KV
I _{PP}	Peak pulse current (tp=8/20us)@25°C	9	A



Electrical Characteristics

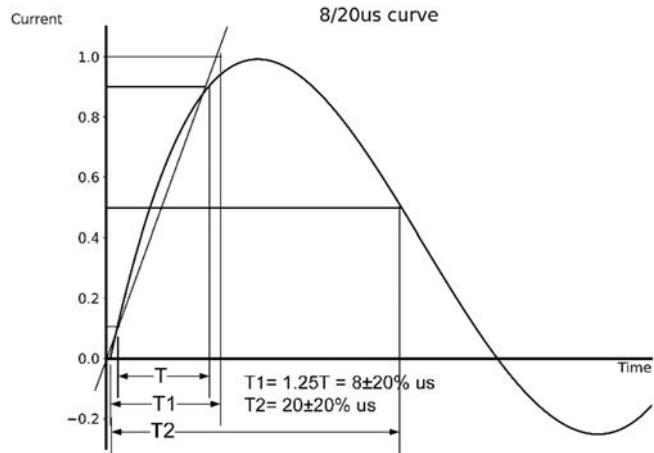
Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Working Voltage				15.0	V
V_{BR}	Reverse Breakdown Voltage	$I_T = 1\text{mA}$	16.5			V
I_R	Reverse Leakage Current	$V_{RWM} = 15.0\text{V}$			1.0	μA
V_C	Clamping Voltage	$I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$		19.0	22.0	V
		$I_{PP} = 9\text{A}, t_p = 8/20\mu\text{s}$		28.0	28.0	V
C_J	Junction Capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$		25		pF

Symbol	Parameters
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}

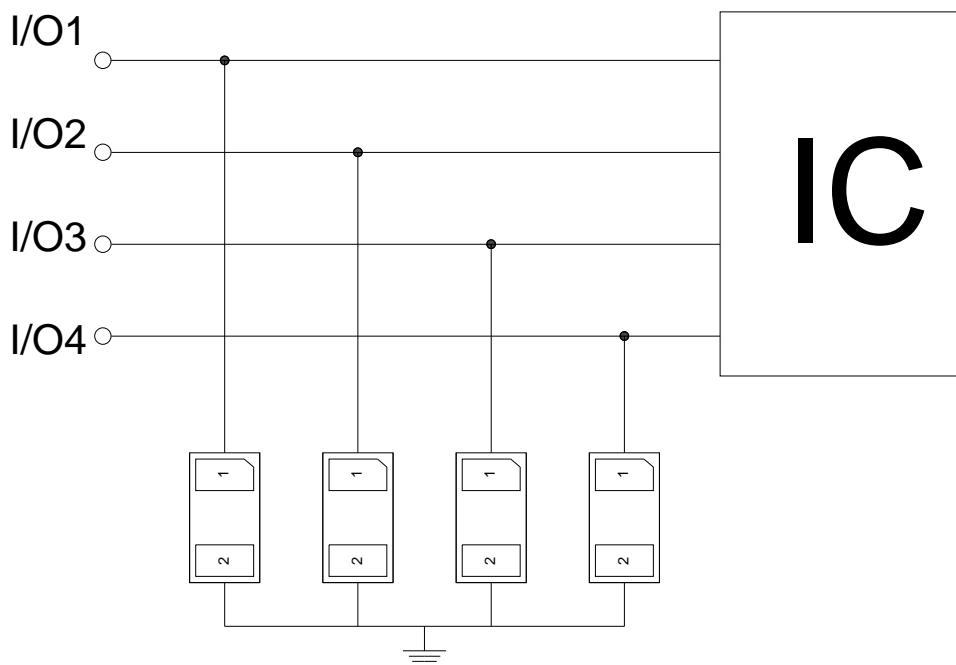




Typical Characteristics



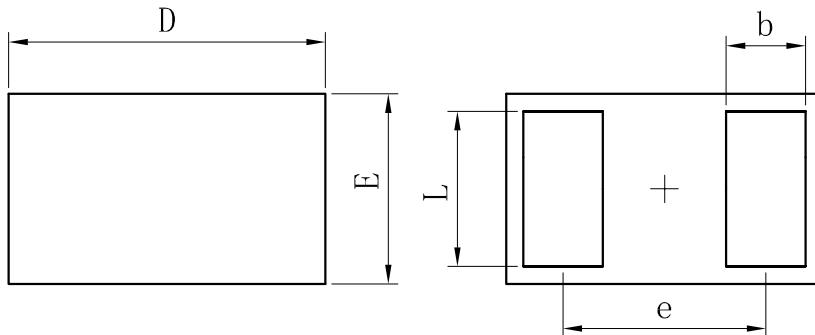
Typical Application



Typical Interface Application

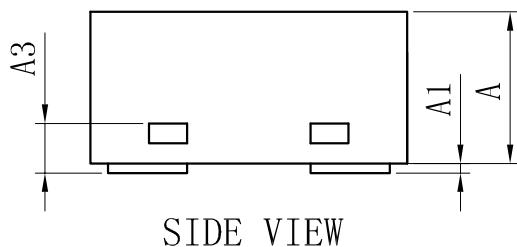


Outline And Dimensions



TOP VIEW

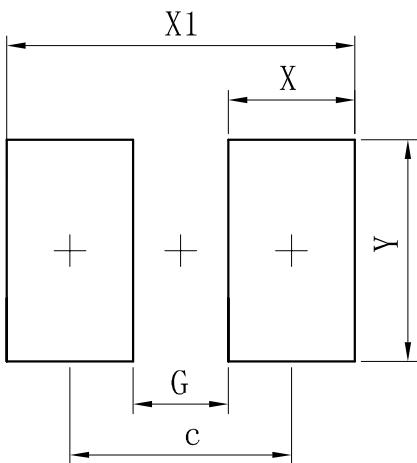
BOTTOM VIEW



SIDE VIEW

DFN1006-2L			
Dim	Min	Typ	Max
D	0.95	1.00	1.05
E	0.55	0.60	0.65
e	—	0.64	—
L	0.44	0.49	0.54
b	0.20	0.25	0.30
A	0.43	0.48	0.53
A1	0	—	0.05
A3	0.127REF.		
All Dimensions in mm			

Soldering Footprint



Dimensions	(mm)
c	0.70
G	0.30
X	0.40
X1	1.10
Y	0.70



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