

## Features

- 450Watts peak pulse power ( $t_p = 8/20\mu s$ )
- Unidirectional configurations
- Solid-state silicon-avalanche technology
- Low clamping voltage
- Low leakage current
- Protection one data/power line
- IEC 61000-4-2  $\pm 30kV$  contact  $\pm 30kV$  air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning) 40A for IO-GND (8/20 $\mu s$ )
- IEC 61000-4-5 (Lightning) 60A for GND-IO (8/20 $\mu s$ )



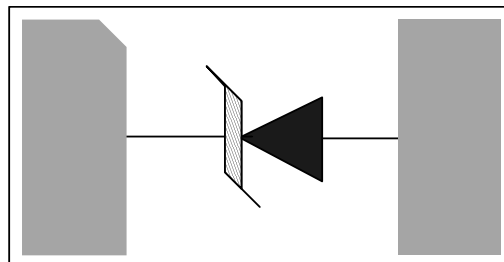
## Applications

- Microprocessor based equipment
- Personal Digital Assistants (PDA's)
- Notebooks, Desktops, and Servers
- Portable Instrumentation

## Mechanical Data

- DFN1006 package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

## Schematic & PIN Configuration



**DFN1006**



### Absolute Maximum Rating

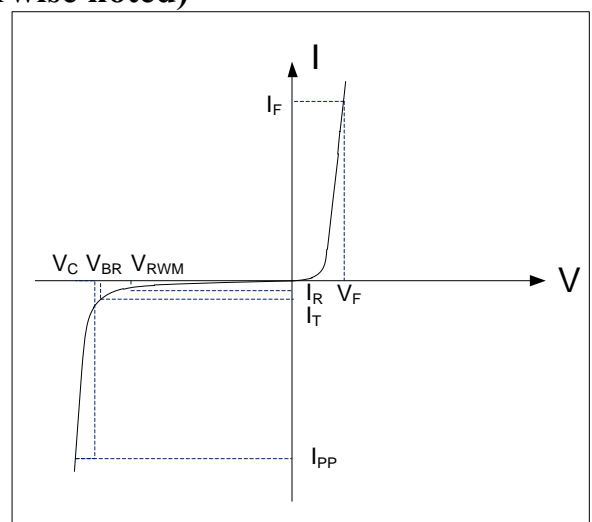
Rating	Symbol	Value	Units
Peak Pulse Power ( $t_p=8/20\mu s$ )	$P_{PP}$	450	Watts
Peak Pulse Current ( $t_p=8/20\mu s$ ) (note1)	$I_{PP}$	40	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	$V_{ESD}$	30 30	kV
Lead Soldering Temperature	$T_L$	260(10seconds)	°C
Junction Temperature	$T_J$	-55 to + 125	°C
Storage Temperature	$T_{stg}$	-55 to + 125	°C

### Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	$V_{RWM}$				6.5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	6.8	7.2		V
Forward Voltage	$V_F$	$I_F=10mA$		0.8		V
Reverse Leakage Current	$I_R$	$V_{RWM}=6.5V, T=25^\circ C$			1	$\mu A$
Clamping Voltage	$V_C$	$V_S=80V, I_{PP}=30A, t_p=8/20\mu s$		10		V
		$V_S=100V, I_{PP}=40A, t_p=8/20\mu s$		11		V
Forward Clamping Voltage	$V_C$	$V_S=80V, I_{PP}=32A, t_p=8/20\mu s$		4.5		V
		$V_S=100V, I_{PP}=40A, t_p=8/20\mu s$		6.0		V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		270		pF

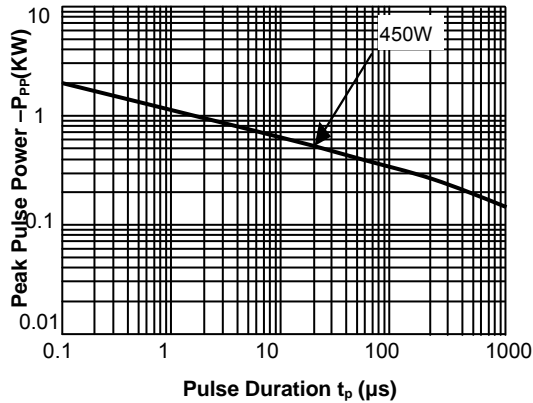
### Electrical Parameters (TA = 25°C unless otherwise noted)

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

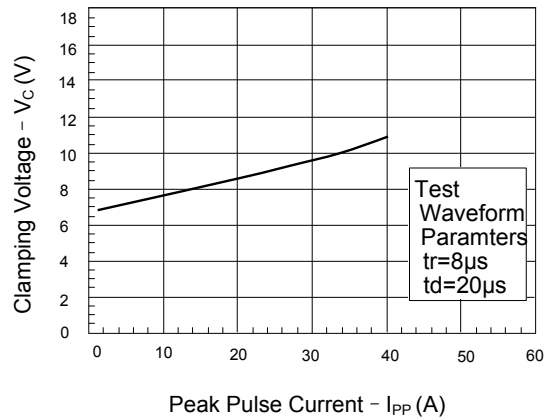


**Typical Characteristic**

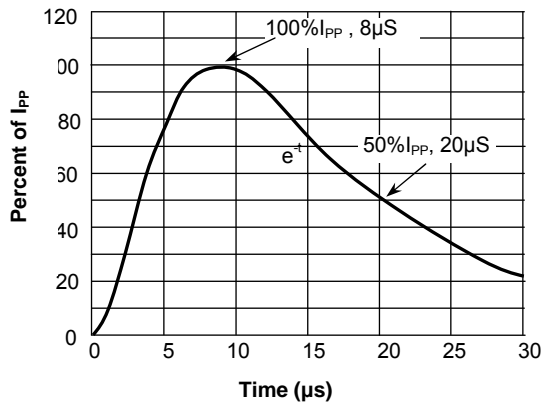
**Fig.1 Peak Pulse Power Rating Curve**



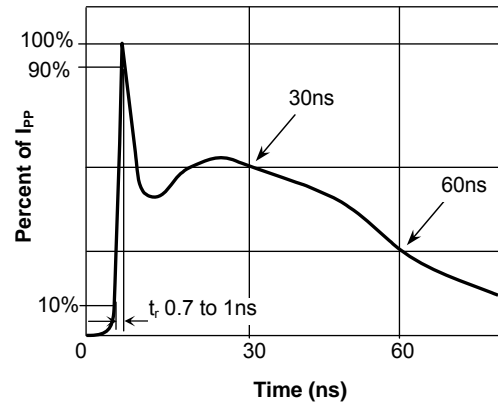
**Fig.2 Clamping Voltage vs. I<sub>pp</sub>**



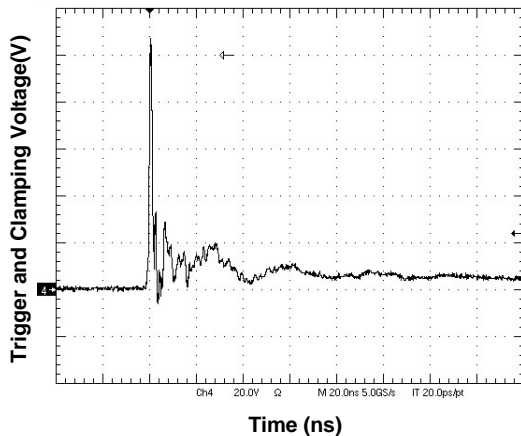
**Fig.3 Pulse Waveform-8/20μs**



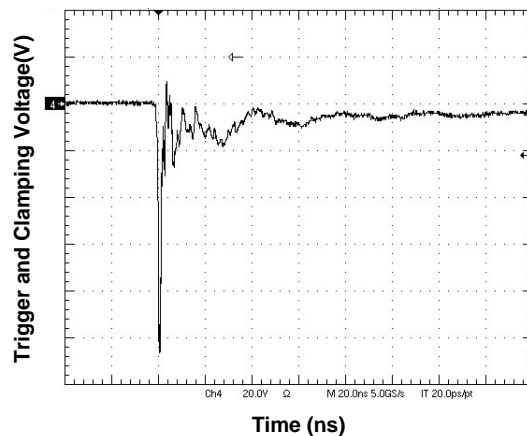
**Fig.4 Pulse Waveform-ESD(IEC61000-4-2)**



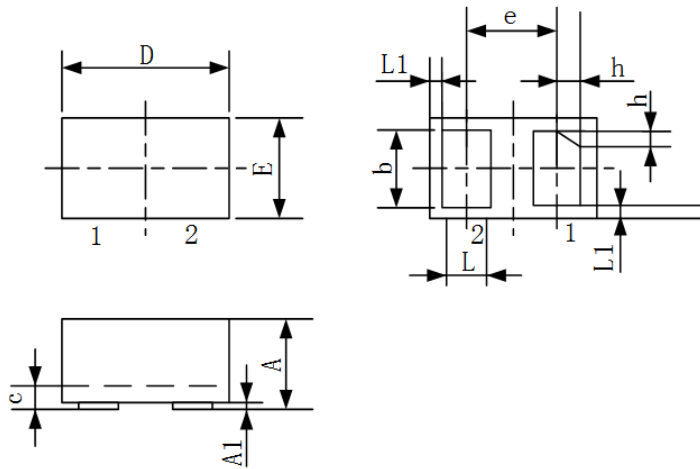
**Fig.5 IEC61000-4-2 +30kV Contact Discharge**



**Fig.6 IEC61000-4-2 -30kV Contact Discharge**

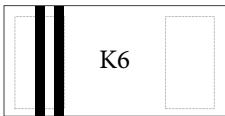


Outline Drawing – DFN1006



SYMBOL	MILLIMETER		
	MIN	NOM	MAX
A	0.40	0.50	0.55
A1	0	0.02	0.05
b	0.45	0.50	0.55
c	0.12	0.15	0.18
D	0.95	1.00	1.05
e	0.65BSC		
E	0.55	0.60	0.65
L	0.20	0.25	0.30
L1	0.05REF		
h	0.07	0.12	0.17
载体尺寸 (MIL)	20*20		

Marking



Ordering information

Order code	Package	Base qty	Delivery mode
RLSD92Q0651VH	DFN1006	10k	Tape and reel

