

Features

- 1000Watts 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 to:
- IEC 61000-4-2 $\pm 30kV$ contact $\pm 30kV$ air
- IEC 61000-4-4 (EFT) 40A (5/50ns)
- IEC 61000-4-5 (Lightning)30A (8/20 μs)



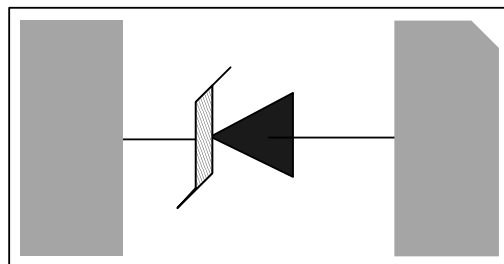
Applications

- Power supply protection
- Power management servers

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

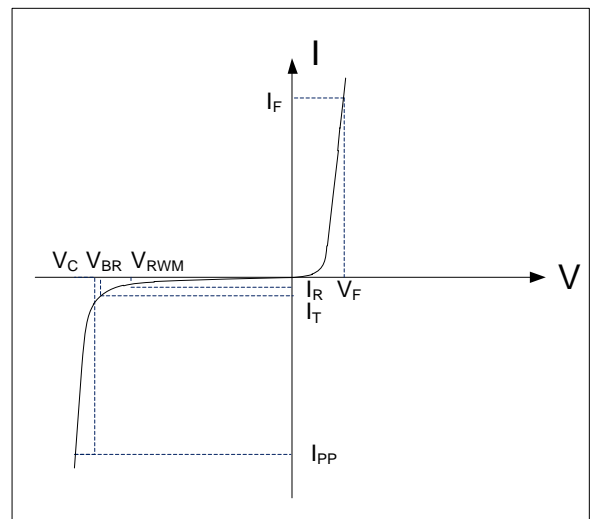
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	1000	Watts
Peak Pulse Current ($t_p = 8/20\mu s$) (note1)	I_{PP}	30	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Junction Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{stg}	-55 to + 125	°C

Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				20	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	22			V
Reverse Leakage Current	I_R	$V_{RWM} = 20V, T = 25^\circ C$			1	μA
Clamping Voltage	V_C	$I_{PP} = 30A, t_p = 8/20\mu s$		36		V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		65		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



Note: 8/20 μs pulse waveform.



Typical Characteristic

Fig.1 Peak Pulse Power Rating Curve

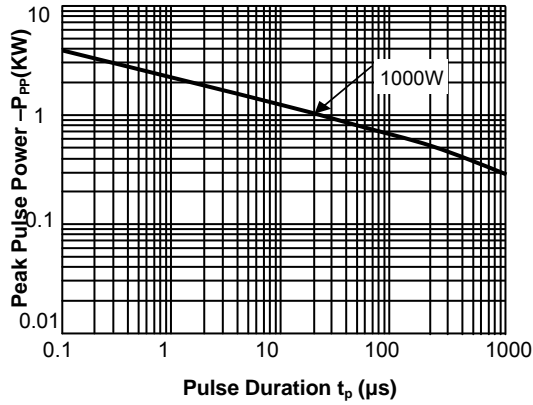


Fig.2 Pulse Derating Curve

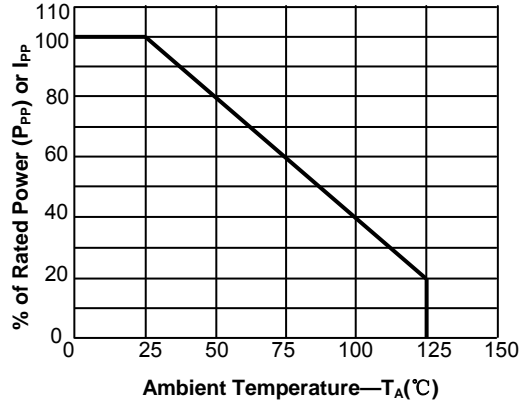


Fig.3 Pulse Waveform-8/20μs

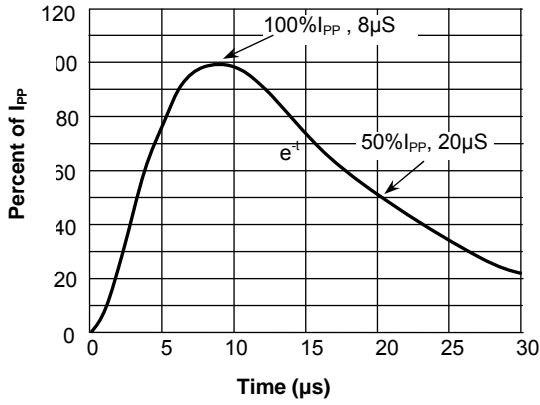


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

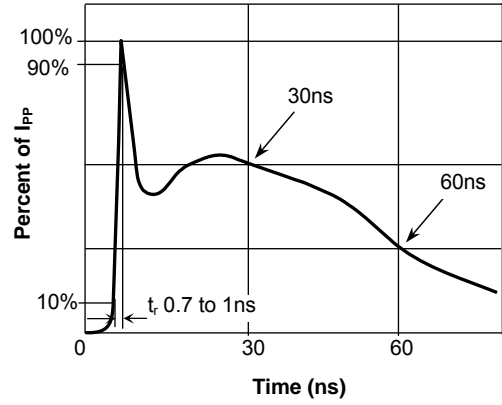


Fig.5 IEC61000-4-2 +8kV Contact Discharge

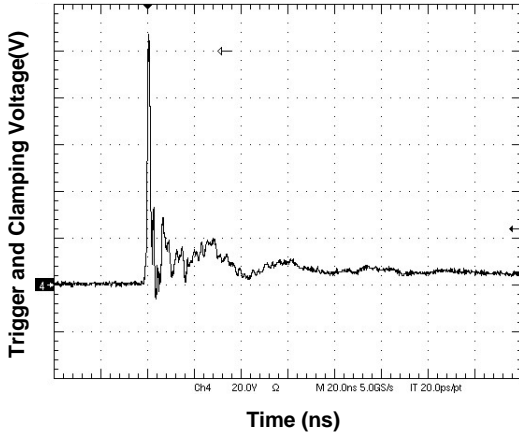
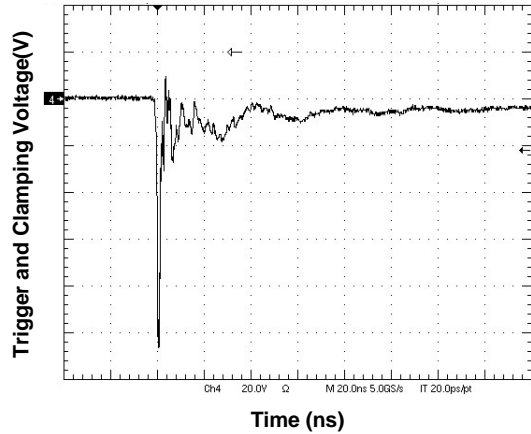
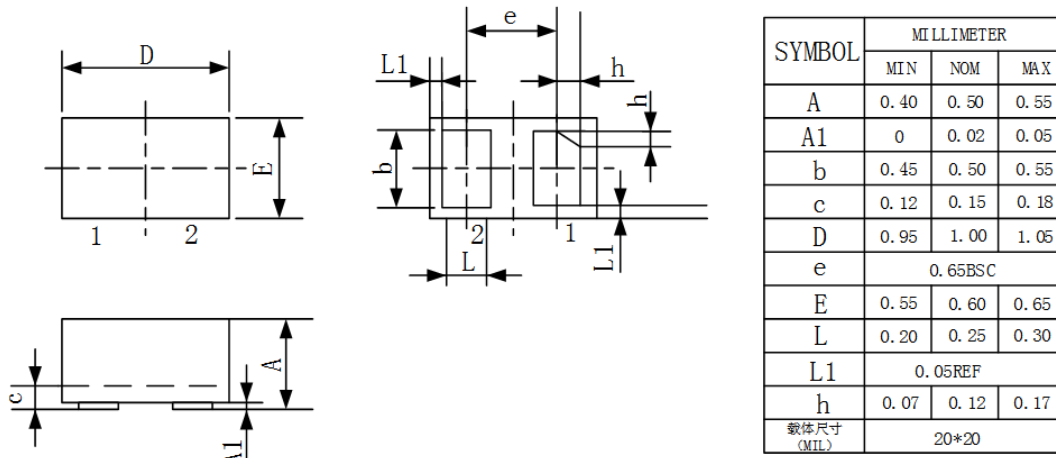


Fig.6 IEC61000-4-2 -8kV Contact Discharge



Outline Drawing – DFN1006

Marking

Ordering information

Order code	Package	Base qty	Delivery mode
RLSD92Q201VH	DFN1006	10k	Tape and reel

