



Features

- 1600Watts 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) 50A (8/20 μs)



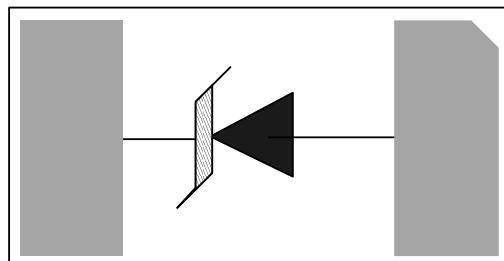
Applications

- 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

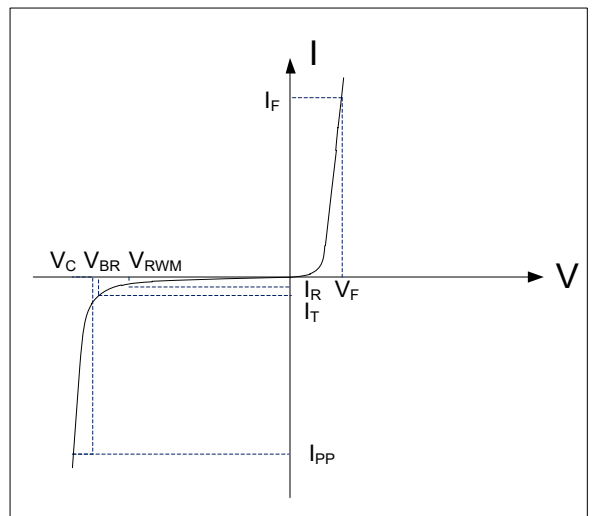
Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	1600	Watts
Peak Pulse Current ($t_p = 8/20\mu s$) (note1)	I_{PP}	50	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30 30	kV
Lead Soldering Temperature	T_L	260(10seconds)	°C
Junction Temperature	T_J	-55 to + 125	°C
Storage Temperature	T_{stg}	-55 to + 125	°C

Electrical Characteristics

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				18	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1mA$	19.8			V
Reverse Leakage Current	I_R	$V_{RWM} = 18V, T = 25^\circ C$			1	μA
Peak Pulse Current	I_{PP}	$t_p = 8/20\mu s$		50		A
Clamping Voltage	V_C	$I_{PP} = 50A, t_p = 8/20\mu s$		32		V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		85		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

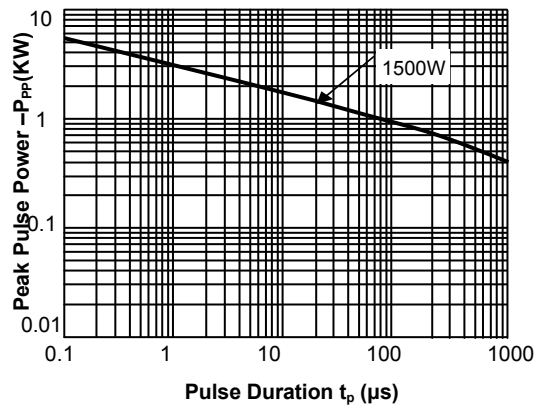


Fig.2 Pulse Derating Curve

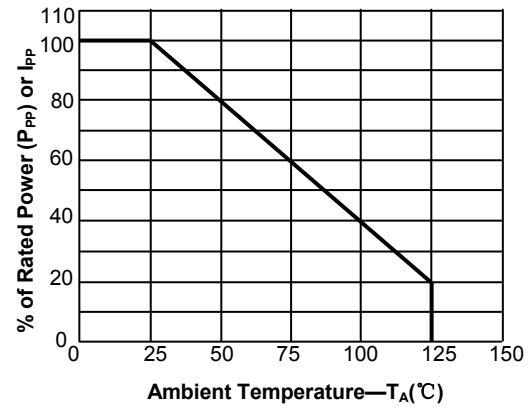


Fig.3 Pulse Waveform-8/20 μ s

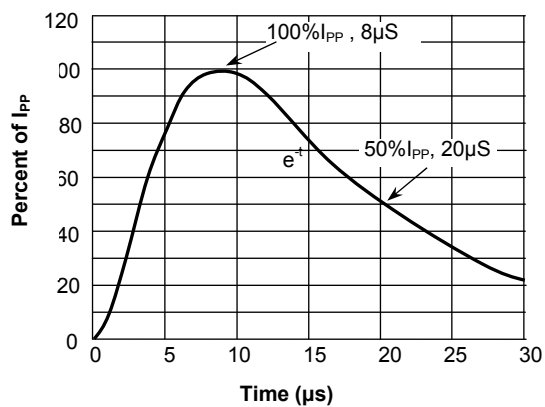


Fig.4 Pulse Waveform-ESD(IEC61000-4-2)

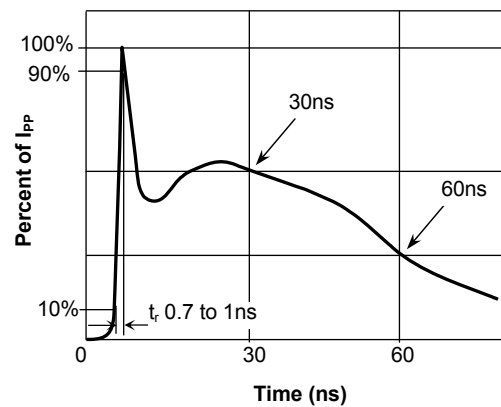


Fig.5 IEC61000-4-2 +8kV Contact Discharge

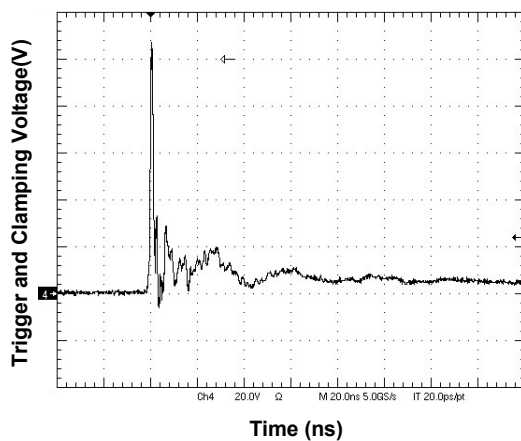
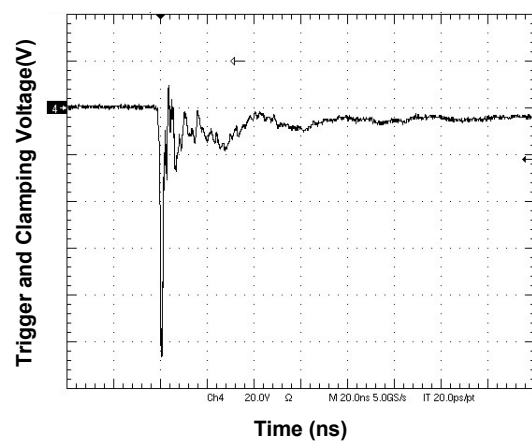
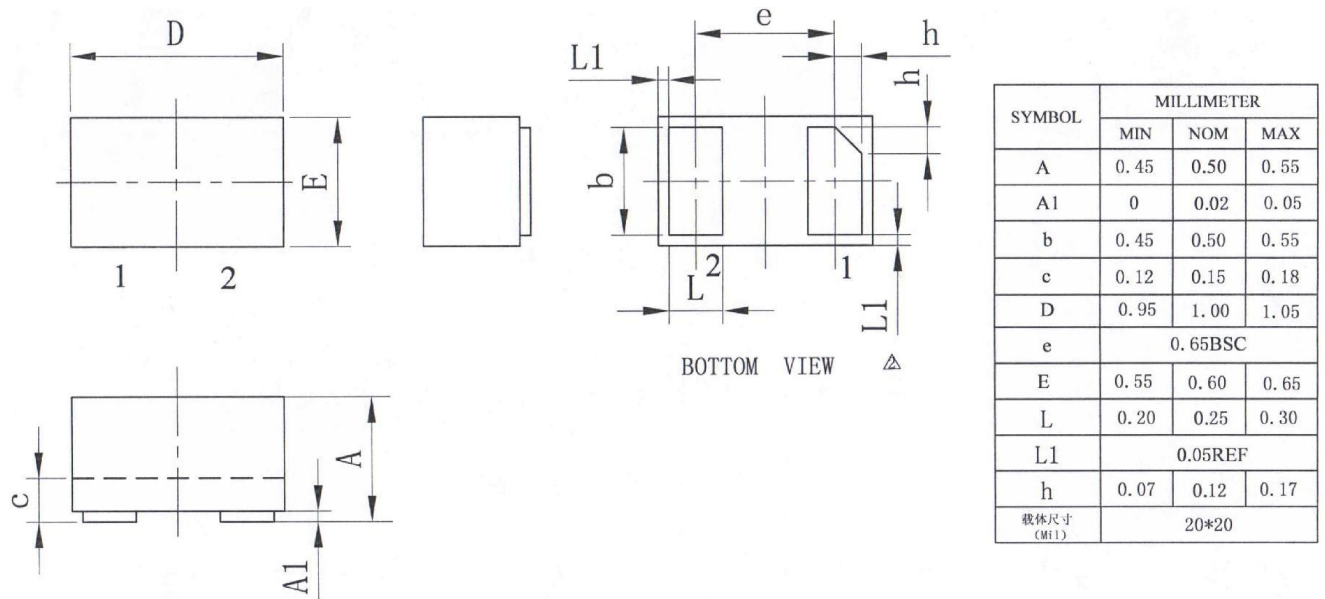


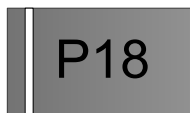
Fig.6 IEC61000-4-2 -8kV Contact Discharge



Outline Drawing – DFN1006



Marking



Ordering information

Order code	Package	Base qty	Delivery mode
SESF4N1812PH	DFN1006	10k	Tape and reel