



PRODUCT DATA SHEET



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Datasheet



Resources



Samples

Please note: Please check the JINGAO Semiconductor website to verify the updated device numbers. The most current and up-to-date ordering information can be found at www.jg-semi.cn. Please email any questions regarding the system integration to JINGAO_questions@jgsemi.com.

Features

- 450Watts peak pulse power($t_p=8/20\mu s$)
- Uni-directional configurations
- Solid-state silicon-avalanche technology
- Low leakage current
- Low clamping voltage
- Protection one power line
- Transient protection for each line according to
IEC61000-4-2 (ESD): $\pm 30kV$ (contact discharge)
 $\pm 30kV$ (air discharge)
- IEC 61000-4-5 (Lightning) 30A ($8/20\mu s$)



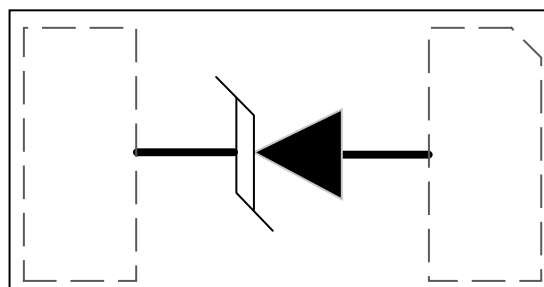
Applications

- Power Supply Protection
- Laptop Computers
- Personal Digital Assestants(PDA's)
- Cellular Handsets and Accessories
- Notebooks, Desktops, and Servers

Mechanical Data

- DFN1610-2L package
- Molding compound flammability rating: UL 94V-0
- Packaging: Tape and Reel
- RoHS/WEEE Compliant

Schematic & PIN Configuration



DFN1610

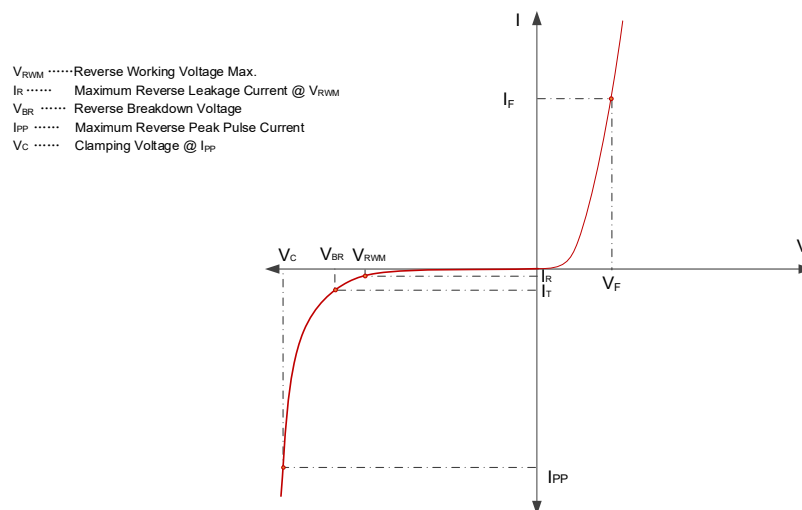
Absolute Maximum Rating

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}	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}				5.0	V
Reverse Leakage Current	I_R	$V_{RWM}=5V, T=25^\circ C$			0.8	μA
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	6.0			
Clamping Voltage	V_{CL}	$I_{PP}=30A, t_p=8/20\mu s$			20	V
Junction Capacitance	C_j	$V_R = 0V, f = 1MHz$		165		pF

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



Note1: 8/20 μs pulse waveform.

Typical Characteristics

Figure 1: Peak Pulse Power vs. Pulse Time

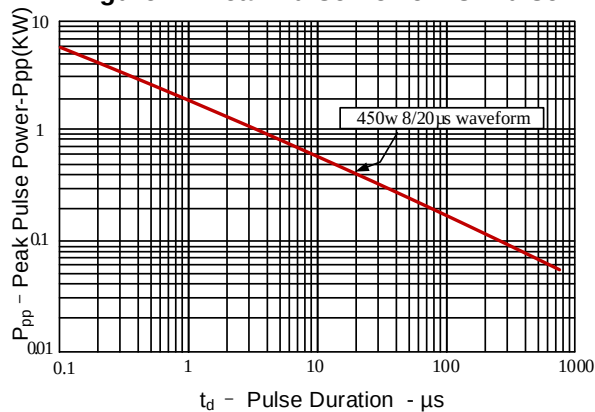


Figure 2: Power Derating Curve

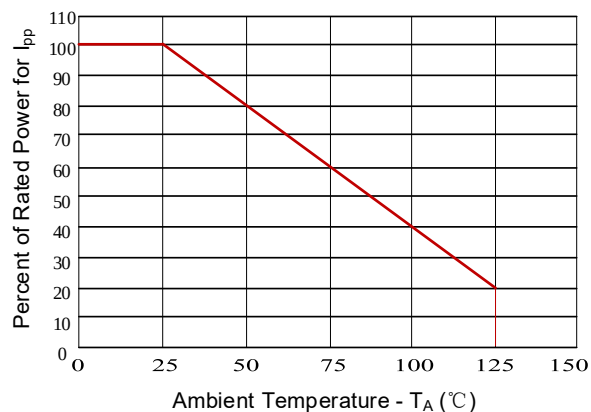


Figure3: 8/20 μs Pulse Waveform

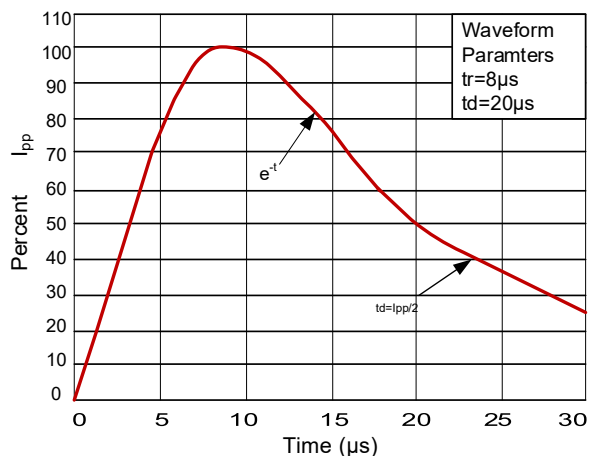
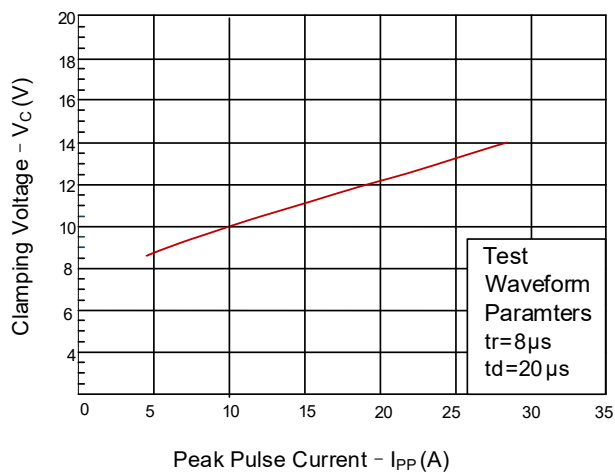
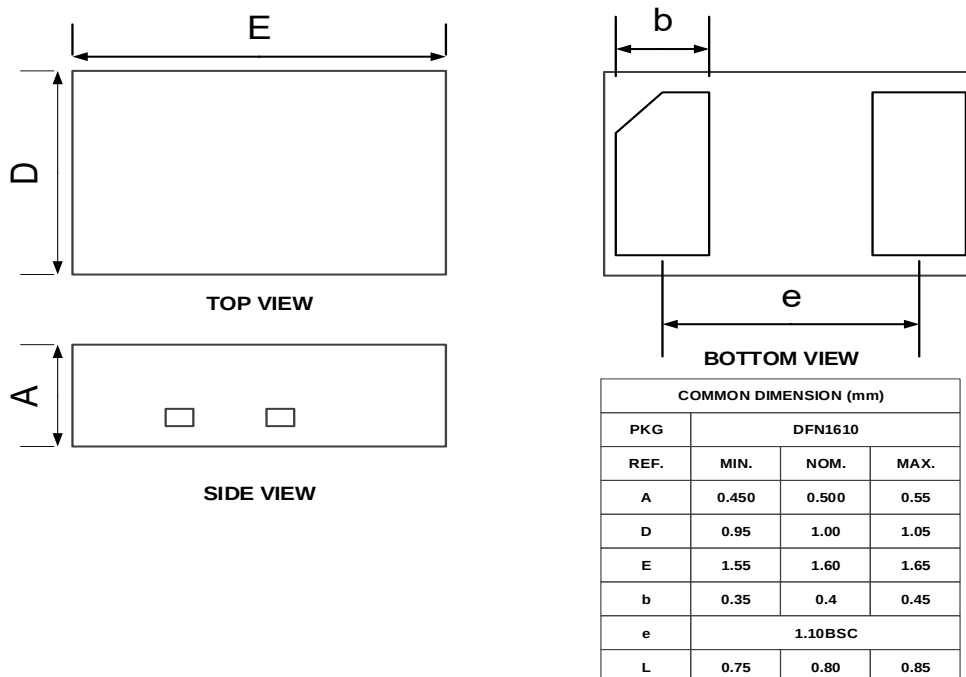


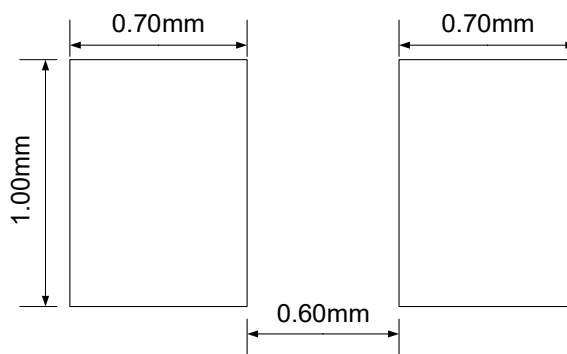
Figure 4: Clamping Voltage vs. Ipp



Outline Drawing-DFN1610



Recommend PCB Layout



Notes: This PCB Layout Is For Reference Purposes Only.

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