

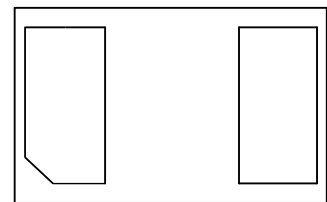
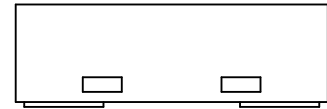
DFN1610-2L Plastic-Encapsulate Diodes

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 μs)

DFN1610-2L

RoHS
COMPLIANT



Equivalent circuit



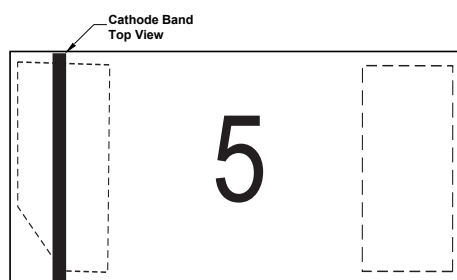
Applications

- 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

Marking



Front side

5 = Device code

The marking bar indicates the cathode

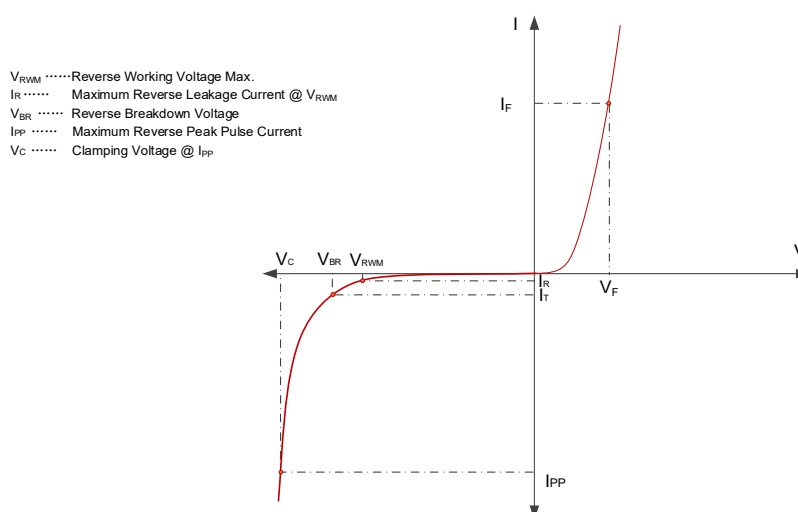
Absolute Maximum Rating

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

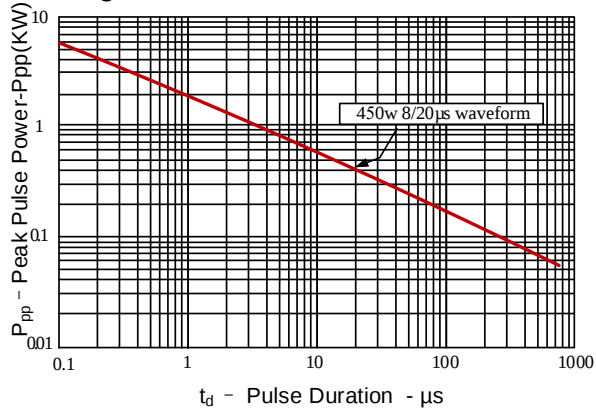


Figure 2: Power Derating Curve

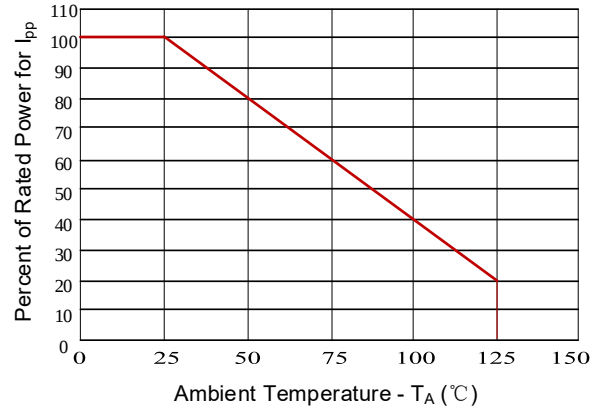


Figure3: 8/20μs Pulse Waveform

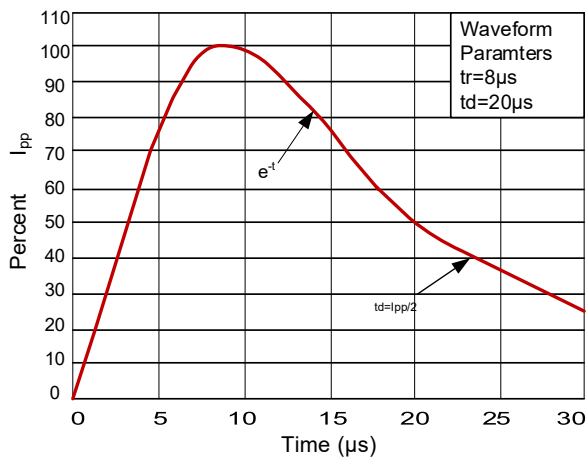
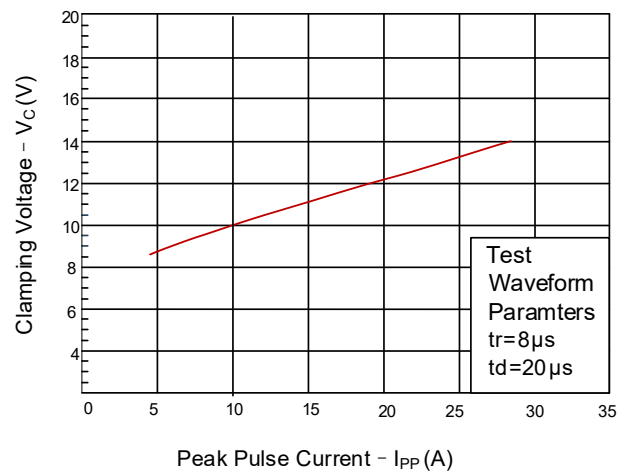
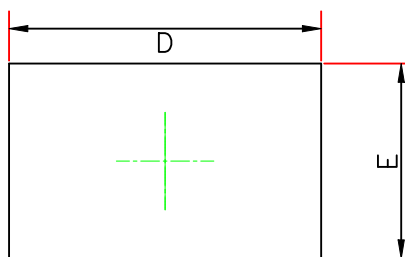


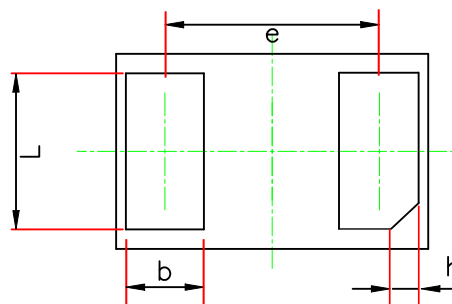
Figure 4: Clamping Voltage vs. Ipp



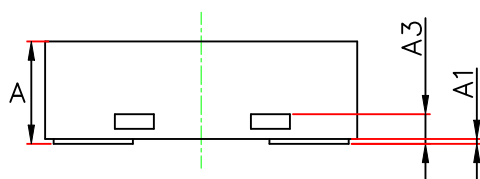
DFN1610-2L Package Outline Dimensions



TOP VIEW



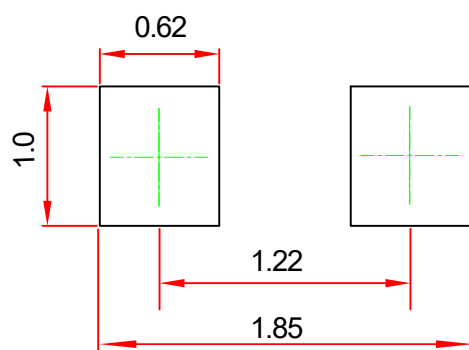
BOTTOM VIEW



SIDE VIEW

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.450	0.550	0.018	0.022
A1	0.000	0.050	0.000	0.002
A3	0.100	0.200	0.004	0.008
D	1.550	1.650	0.061	0.065
E	0.950	1.050	0.037	0.041
b	0.350	0.450	0.014	0.018
e	1.100TYP.		0.043TYP.	
L	0.750	0.850	0.030	0.033
h	0.150	0.250	0.006	0.010

Suggested Pad Layout



Note:

1. Controlling dimension: in/millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.