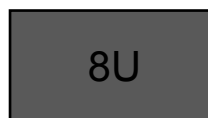


Features

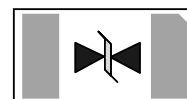
70Watts peak pulse power ($t_p = 8/20\mu s$)
Tiny DFN1006 package
Bidirectional configurations
Solid-state silicon-avalanche technology
Low clamping voltage
Low leakage current
Low capacitance ($C_j = 0.25pF$ typ. IO to IO)
Protection one data/power line to:
IEC 61000-4-2 $\pm 20kV$ contact $\pm 20kV$ air
IEC 61000-4-4 (EFT) 40A (5/50ns)
IEC 61000-4-5 (Lightning) 4A (8/20 μs)

Applications

Cell Phone Handsets and Accessories
Microprocessor based equipment
Personal Digital Assistants (PDA's)
Notebooks, Desktops, and Servers
Portable Instrumentation



DFN1006-2L(Pb-Free)



Schematic Diagram

Absolute Maximum Rating

Rating	Symbol	Value	Units
Peak Pulse Power ($t_p = 8/20\mu s$)	P_{PP}	70	Watts
Peak Pulse Current ($t_p = 8/20\mu s$) (note1)	I_{PP}	4.0	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	20 20	kV
Lead Soldering Temperature	T_L	260(10seconds)	$^{\circ}C$
Junction Temperature	T_J	-55 to + 125	$^{\circ}C$
Storage Temperature	T_{stg}	-55 to + 125	$^{\circ}C$

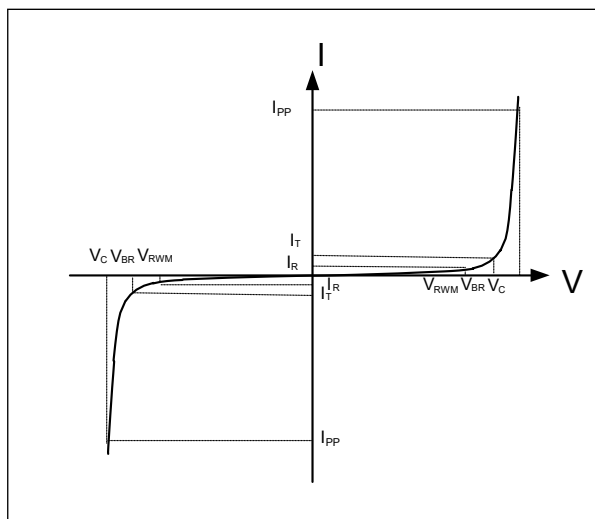
Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Conditions	Min	Typical	Max	Units
Reverse Stand-Off Voltage	V_{RWM}				5.0	V
Reverse Breakdown Voltage	V_{BR}	$I_T=1mA$	6.2			V
Reverse Leakage Current	I_R	$V_{RWM}=5V, T=25^\circ C$			100	nA
Peak Pulse Current	I_{PP}	$t_p=8/20\mu s$			4.0	A
Clamping Voltage	V_C	$I_{PP}=4A, t_p=8/20\mu s$			23	V
Junction Capacitance	C_j	IO to IO $V_R = 0V, f = 1MHz$		0.25	0.45	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: 8/20μs pulse waveform.



RATING AND CHARACTERISTIC CURVES

Figure 1: Peak Pulse Power vs. Pulse Time

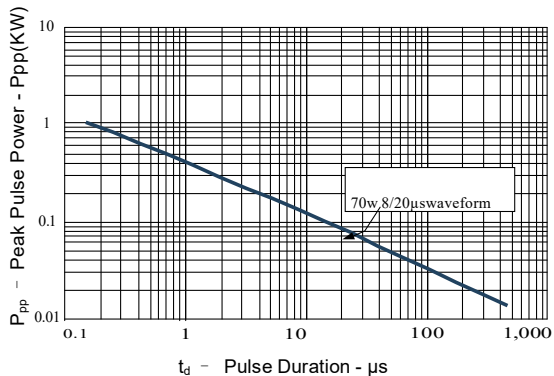


Figure 2: Power Derating Curve

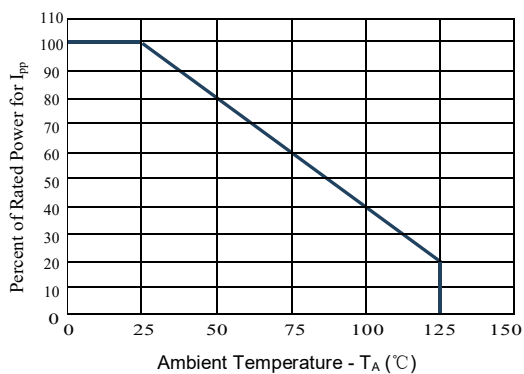


Figure3: Pulse Waveform

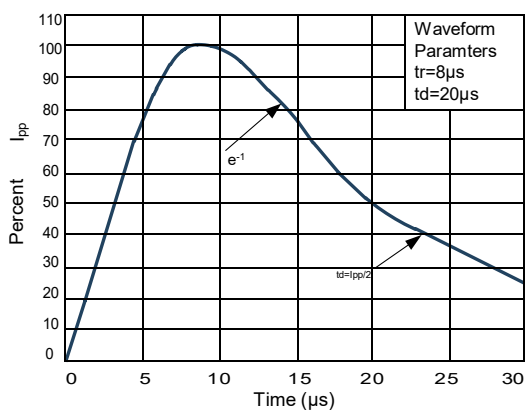


Figure 4: Clamping Voltage vs. Ipp

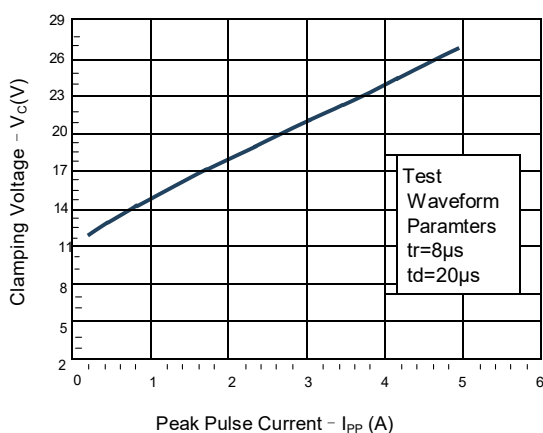


Figure5: Positive Clamping voltage (TLP)

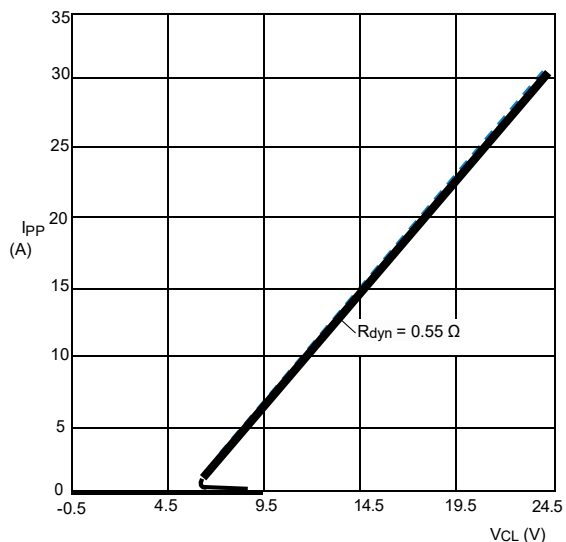
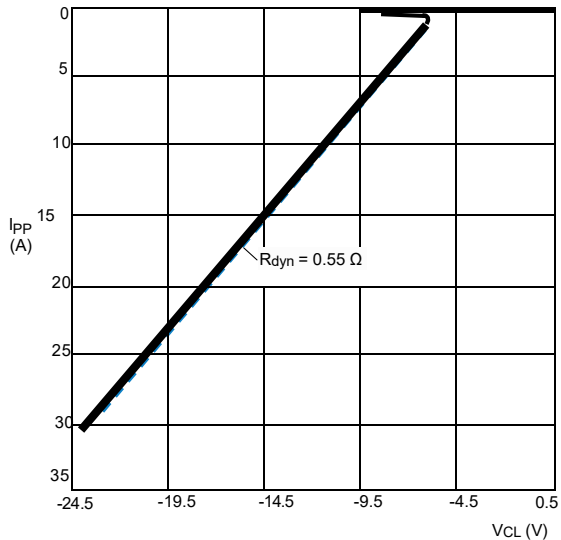


Figure5: Negative Clamping voltage (TLP)



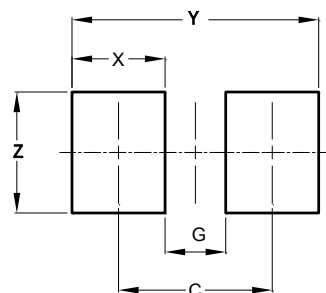
Soldering parameters

FIG5: Reflow condition

The graph illustrates the reflow condition for a soldering process. The y-axis represents Temperature ($^{\circ}\text{C}$) and the x-axis represents Time. The curve shows the temperature profile over time, starting from a preheat temperature $T_{S(\min)}$ for a duration t_s , then ramping up to a peak temperature T_P for a duration t_p . The temperature then levels off at T_P for a duration t , and finally ramps down. The critical zone is defined as the time between T_L and T_P . The total time to peak temperature is indicated as 2 minutes.

Package Dimensions & Suggested Pad Layout

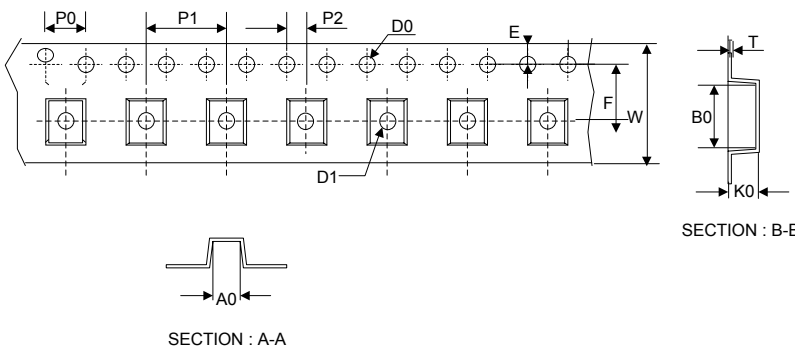
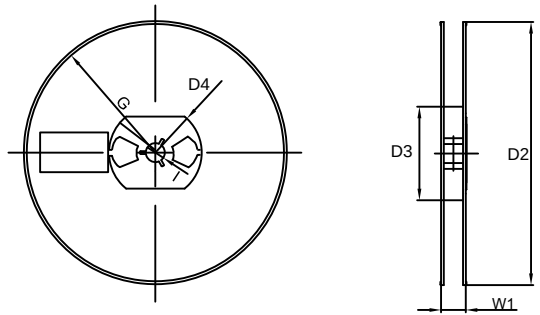
DFN1006-2L



DFN1006-2L

Dimensions	Value (in mm)
C	0.70
G	0.30
X	0.40
Y	1.10
Z	0.65

Tape & reel specification

Tape		Symbol	Dimension (mm)
 SECTION : A-A SECTION : B-B		P0	4.00±0.20
		P1	2.00±0.20
		P2	1.55±0.20
		D0	1.55±0.20
		D1	0.40±0.20
		E	1.55±0.25
		F	3.60±0.20
		W	8.00±0.20
		A0	1.00±0.20
		B0	1.40±0.20
		K0	0.75±0.20
		T	0.20±0.20
		D2	177.0±5.0
		D3	55Min.
		D4	R24.6±2.0
7" Reel		G	R82.0±2.0
		I	13.0±2.0
		W1	10.20±3.0
		Quantity: 3000PCS	