

## Features

Miniaturized packaging size suitable for high-density applications:

nom 0.039" x 0.024" (1.0x0.6mm)

Standard Capacitance 100 pF

Low Clamping Voltage:  $V_C=12V@I_{PP}=40A$

Reverse Working (Stand-off) Voltage: 4.5V

Low Leakage current

Response Time is Typically < 1 ns

45

## Applications

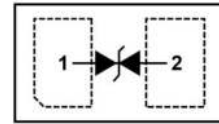
Smartphones, tablet computers

Blu-ray and DVD recorders and players

Video equipment and accessories



DFN1006-2L(Pb-Free)



Schematic Diagram

## Absolute Maximum Rating

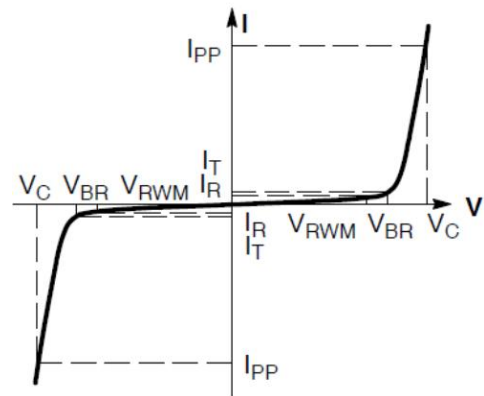
Rating	Symbol	Value	Unit
Peak pulse power ( $t_p = 8/20\mu s$ )	$P_{PK}$	480	W
ESD according to IEC61000-4-2 air discharge	$V_{ESD}$	$\pm 30$	kV
ESD according to IEC61000-4-2 contact discharge		$\pm 30$	
Operating Temperature Range	$T_J$	-55~+150	$^{\circ}C$
Storage temperature	$T_{STG}$	-55~+150	$^{\circ}C$

**Characteristics( $T_J = 25^\circ\text{C}$  unless otherwise specified)**

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Reverse Stand-off Voltage	$V_{RWM}$				4.5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1\text{mA}$	4.8	5.1	6	V
Reverse Leakage Current	$I_R$	$V_{RWM}=\pm 4.5\text{V}$			200	nA
Clamping Voltage	$V_C$	$I_{PP}=1.0\text{A}$ , $t_p=8/20\mu\text{s}$			6.5	V
Clamping Voltage	$V_C$	$I_{PP}=40.0\text{A}$ , $t_p=8/20\mu\text{s}$			12	V
Junction Capacitance	$C_J$	$V_R=0\text{V}$ , $f=1\text{MHz}$			100	pF

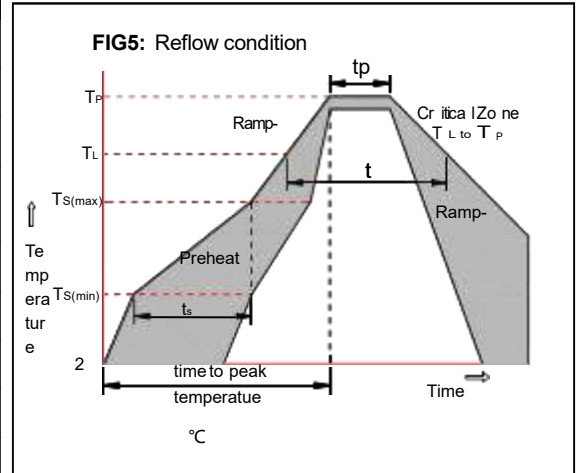
**Electrical Parameters ( $T_A = 25^\circ\text{C}$  unless otherwise noted)**

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 @ $V_{RWM}$
$I_T$	Test Current
$V_{BR}$	Breakdown Voltage @ $I_T$
$P_{PK}$	Peak Power Dissipation
$C$	Max. Capacitance @ $V_R = 0$ and freq.=1 MHz



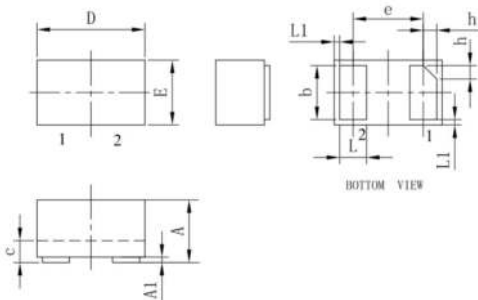
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ( $T_{s(min)}$ )	+150°C
	-Temperature Max( $T_{s(max)}$ )	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp ( $T_L$ ) to peak)		3°C/sec. Max
$T_{s(max)}$ to $T_L$ - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature( $T_L$ )(Liquid us)	+217°C
	-Temperature( $t_L$ )	60-150 secs.
Peak Temp ( $T_P$ )		+260(+0/-5)°C
Time within 5°C of actual Peak Temp ( $t_p$ )		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp ( $T_P$ )		8 min. Max
Do not exceed		+260°C



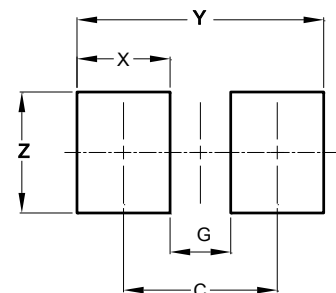
Package Dimensions & Suggested Pad Layout

DFN1006-2L



DFN1006-2L

	Millimeters			Inches		
	Min. (mm)	Typ. (mm)	Max. (mm)	Min. (mm)	Typ. (mm)	Max. (mm)
A	0.45	0.50	0.55	0.018	0.020	0.022
A1	0.00	0.02	0.05	0.000	0.001	0.002
b	0.45	0.50	0.55	0.018	0.020	0.022
c	0.12	0.15	0.18	0.005	0.006	0.007
D	0.95	1.00	1.05	0.037	0.039	0.041
e	0.59BSC			0.026BSC		
E	0.55	0.60	0.65	0.022	0.024	0.026
L	0.25	0.30	0.35	0.010	0.012	0.013
L1	0.05REF			0.002REF		
h	0.07	0.12	0.17	0.003	0.005	0.007



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)
		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		
G	R82.0±2.0		
I	13.0±2.0		
W1	10.20±3.0		
Quantity: 3000PCS			

7" Reel

