

Features

- ✧ Protects one bi-directional I/O line
- ✧ Low clamping voltage
- ✧ Low operating voltage: 3.3V
- ✧ ROHS & REACH compliant

Protection Solution to meet

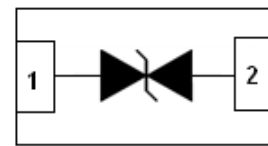
- ✧ IEC61000-4-2 (ESD) $\pm 30\text{kV}$ (air), $\pm 30\text{kV}$ (contact)
- ✧ IEC61000-4-5 (Lighting) 10A (8/20us)



DFN1006-2L

Mechanical Characteristics

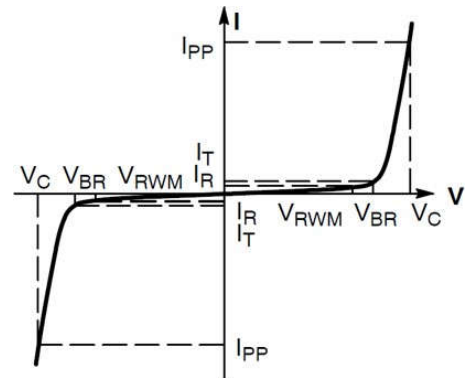
- ✧ Package DFN1006-2L
- ✧ Molding Compound Flammability Rating : UL 94V-O
- ✧ Quantity Per Reel : 10,000pcs
- ✧ Lead Finish : Lead Free
- ✧ Marking code: 3X



PIN Configuration

Portion Electronics Parameter

Symbol	Parameter
V_{RWM}	Peak Reverse Working Voltage
I_R	Reverse Leakage Current @ V_{RWM}
V_{BR}	Breakdown Voltage @ I_T
I_T	Test Current
I_{PP}	Maximum Reverse Peak Pulse Current
V_C	Clamping Voltage @ I_{PP}



Absolute Maximum Ratings ($T_A=25^\circ\text{C}$, unless otherwise noted)

Parameter	Symbol	Value	Unit
Storage temperature range	T_{stg}	-55 to +150	$^\circ\text{C}$
Operating junction temperature range	T_j	-55 to +125	$^\circ\text{C}$
Lead Soldering Temperature	T_L	260 (10 sec.)	$^\circ\text{C}$
Peak pulse power dissipation on 8/20 μs waveform	P_{Pk}	100	W
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	+/- 30 +/- 30	kV

Electrical Characteristics ($T_A=25^{\circ}\text{C}$)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse Working Voltage	V_R				3.3	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	3.7			V
Reverse Leakage Current	I_R	$V_R = 3.3\text{V}$			0.1	μA
Peak Pulse Current	I_{PP}	$t_p = 8/20\mu\text{s}$			10	A
Clamping Voltage	V_C	$I_{PP} = 1\text{A}, t_p = 8/20\mu\text{s}$			6.0	V
		$I_{PP} = 10\text{A}, t_p = 8/20\mu\text{s}$			10	V
Junction Capacitance	C_J	$V_R = 0\text{V}, f = 1\text{MHz}$		15	25	pF

Electrical Characteristics Curves ($T_A=25^\circ\text{C}$, unless otherwise noted)

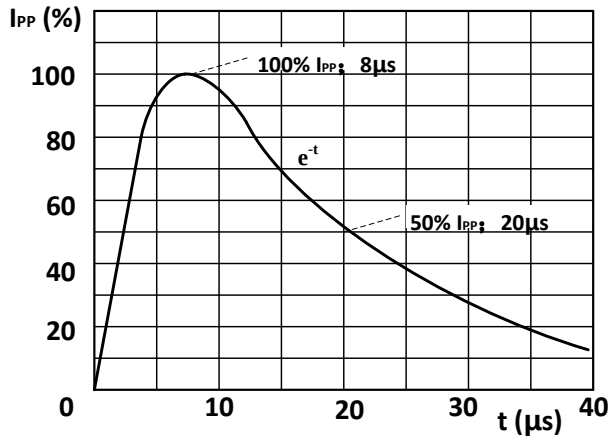


Fig. 1. 8/20 μs pulse waveform according to IEC 61000-4-5 and IEC 61643-321

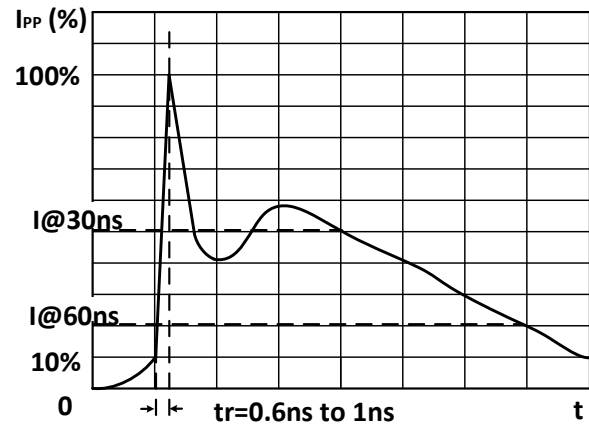


Fig. 2. ESD pulse waveform according to IEC 61000-4-2

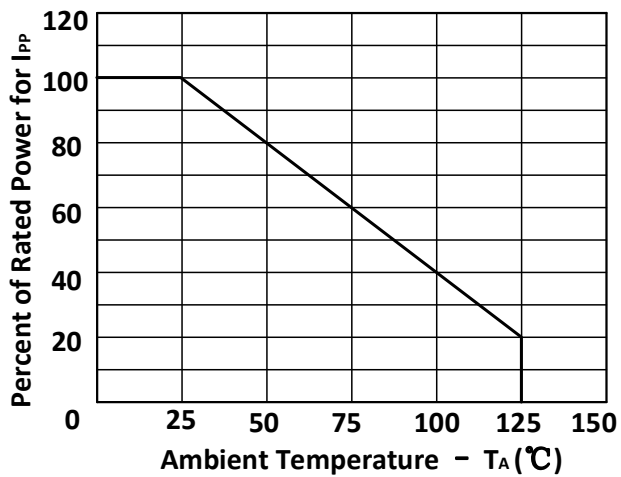


Fig. 3. Power Derating Curve

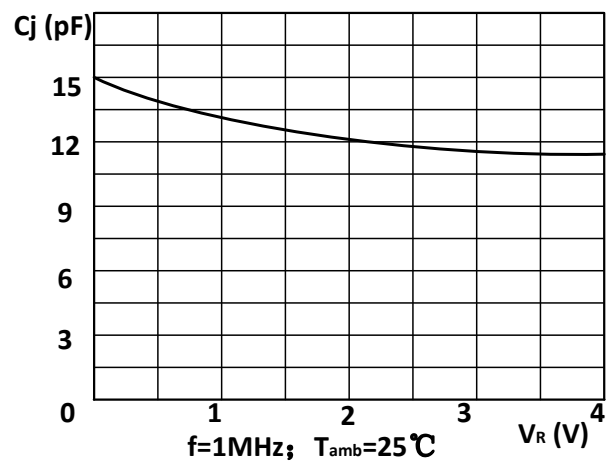
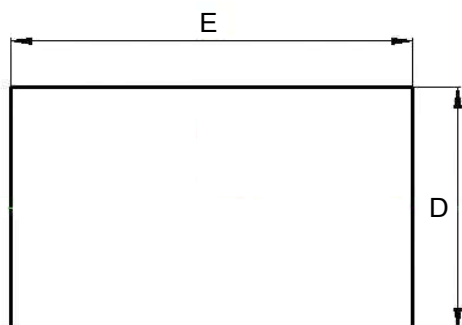
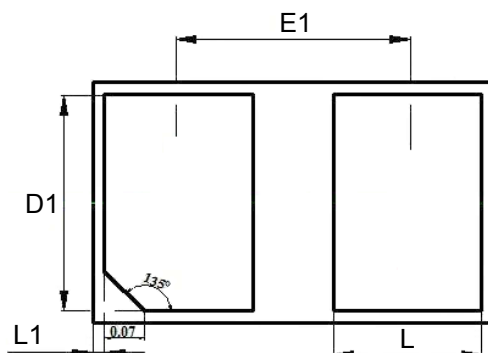


Fig. 4. Junction Capacitance vs V_R

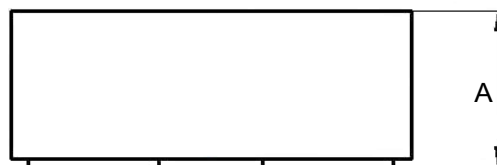
Package Mechanical Data(DFN1006-2L)



Top view



Bottom view



Side view

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.350	0.450	0.014	0.018
D	0.550	0.650	0.022	0.026
E	0.950	1.050	0.037	0.041
D1	0.420	0.520	0.017	0.020
E1	0.550	0.650	0.022	0.026
L	0.270	0.370	0.011	0.015
L1	0.000	0.100	0.000	0.004