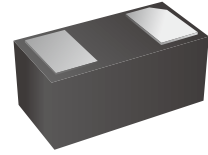


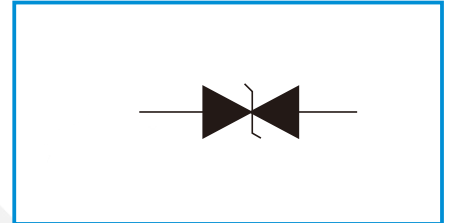
Ultra Low Capacitance ESD Protection Diode

Features

- IEC 61000-4-2(ESD) $\pm 30\text{KV}$ (air), $\pm 30\text{KV}$ (contact)
- IEC61000-4-5(Lightning) 8A (8/20 μS)
- IEC61000-4-4(EFT) 40A (5/50nS)
- 96Watts peak pulse power ($t_p=8/20 \mu \text{S}$)
- Low clamping voltage
- Weight approx. 1.0 mg
- Moisture sensitivity level: Level 1
- VSB min value 5.3V
- Small package: DFN1006-2L
- Marking:5C



Functional Diagram



Applications

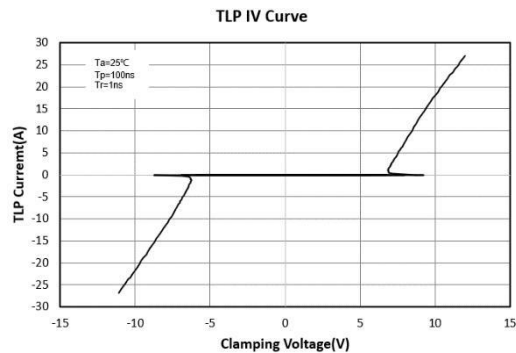
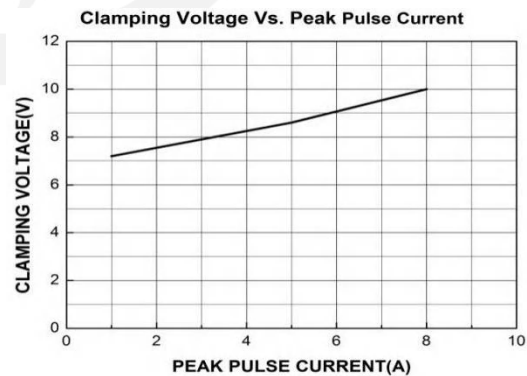
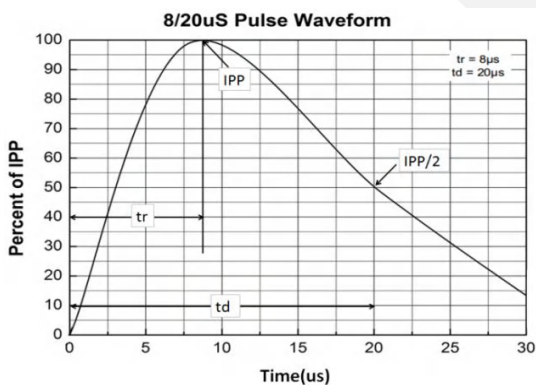
- Smart Phone and Tablet PC
- TV and Set Top Box
- Wearable Devices
- PDA

Absolute Maximum Ratings

Symbol	Parameter	Value	Units
V_{ESD}	ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	± 30 ± 30	kV
P_{PP}	Peak Pulse Power (8/20 μs)	96	W
T_{OPT}	Operating Temperature	-55~125	$^{\circ}\text{C}$
T_{STG}	Storage Temperature	-55~150	$^{\circ}\text{C}$

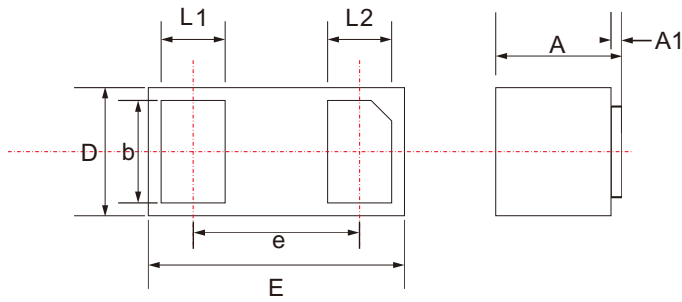
Electrical Characteristics (Ta=25)

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V_{RWM}	Reverse Working Voltage				5.0	V
V_{BR}	Reverse Breakdown Voltage	$I_T = 1mA$	5.3			V
I_R	Reverse Leakage Current	$V_{RWM} = 5V$			0.5	μA
V_C	Clamping Voltage	$I_{PP} = 1A, t_p = 8/20\mu s$			9	V
		$I_{PP} = 8A, t_p = 8/20\mu s$			12	V
V_C	Clamping Voltage	$I_{PP} = 16A, t_p = 8/20\mu s$ TPL:Z0=50Ω,tp=100ns tr=1ns,RDYN is calculated from 4A to 16A		9.5		V
R_{DYN}		TPL:Z0=50Ω,tp=100ns tr=1ns,RDYN is calculated from 4A to 16A		0.18		Ω
C_J	Junction Capacitance	$V_R = 0V, f = 1MHz$		15	18	pF

Electrical Characteristics Curve


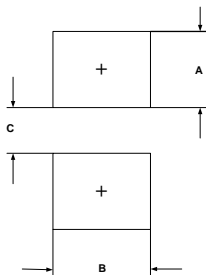
DFN-1006 Package Outline

Unit: mm



SYMBOL	DIMENSIONS	
	MIN.	MAX.
D	0.550	0.700
E	0.950	1.100
L1	0.150	0.350
L2	0.150	0.350
b	0.450	0.550
e	0.650 TYP.	
A	0.350	0.550
A1	0.000	0.050

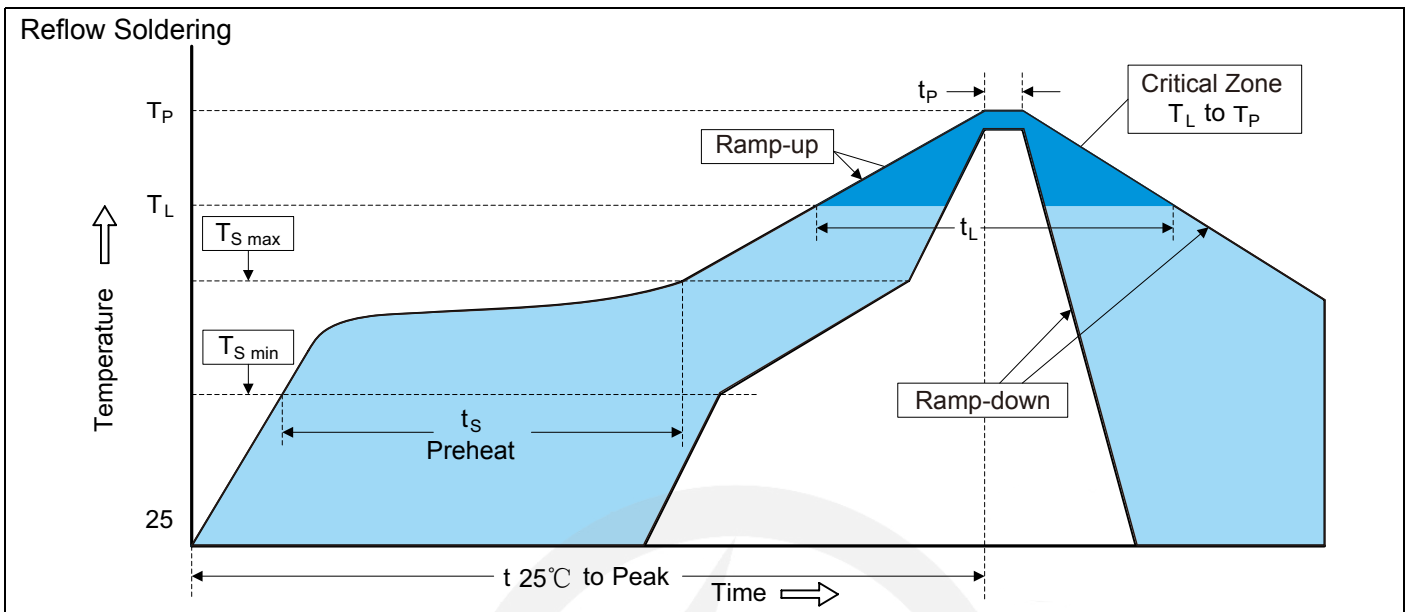
DFN-1006 Suggested Pad Layout



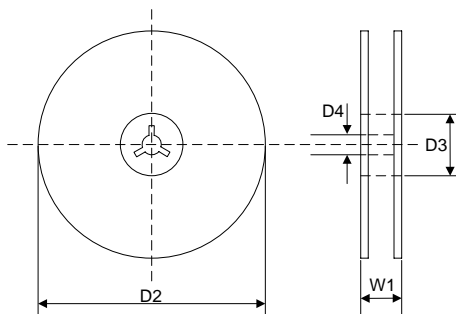
SYM	DIMENSIONS
	MILLIMETERS
A	0.60
B	0.35
C	0.35

Note:

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

Recommended Soldering Conditions

Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_s)	150°C 200°C 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	3°C/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	217°C 60-150 seconds
Peak Temperature (T_P)	260°C
Time within 5°C of actual Peak Temperature (t_P)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

7" Reel


D2	$\Phi 178.0 \pm 2.0$
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D3	$\Phi 50.0 \text{ Min.}$
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D4	$\Phi 13.0 \pm 0.5$
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W1	16.0 ± 2.0
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Quantity: 10000PCS