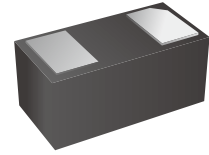


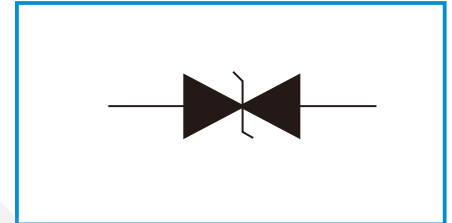
## Low Capacitance TVS/ESD Protection Diode

### Features

- IEC61000-4-2 (ESD)  $\pm 15\text{kV}$  (air),  $\pm 8\text{kV}$  (contact)
- IEC61000-4-4 (EFT) 40A (5/50ns)
- IEC61000-4-5 (Lighting) 2A (8/20 $\mu\text{s}$ )
- 200 Watts Peak Pulse Power per (tp=8/20 $\mu\text{s}$ )
- Working voltages : 24V
- Low clamping voltage
- Low leakage current



Functional Diagram



### Applications

- Serial and Parallel Ports
- Notebooks, Desktops, Servers
- Projection TV
- Cellular handsets and accessories
- Portable instrumentation
- Peripherals

### Mechanical Data

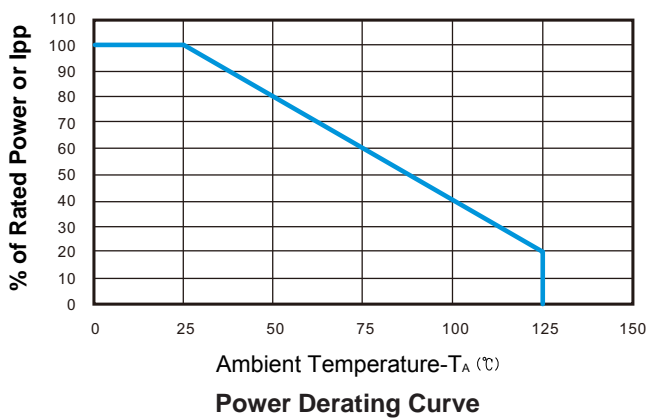
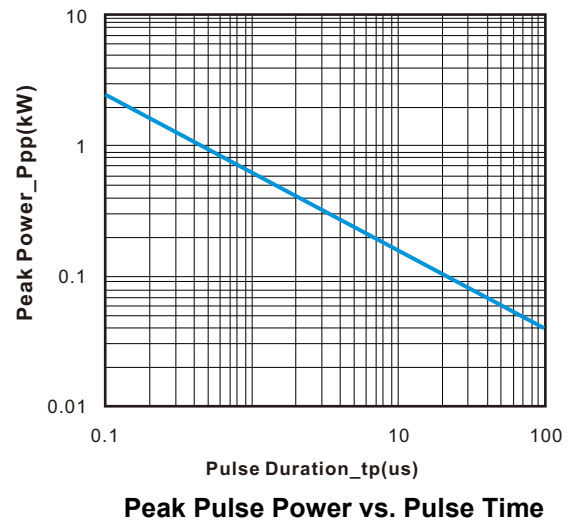
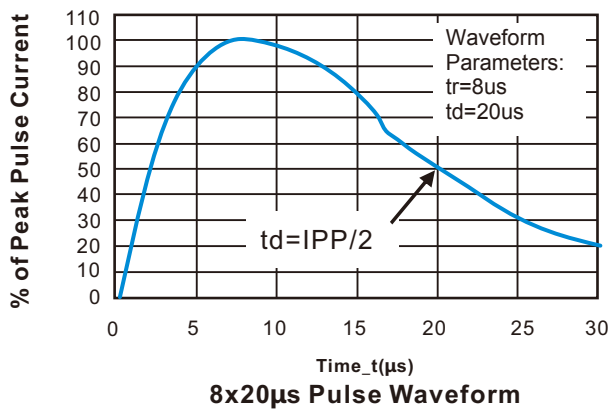
- DFN1006 package
- Flammability Rating: UL 94V-0
- Packaging: Tape and Reel
- High temperature soldering guaranteed: 260°C/10s
- Reel size: 7 inch
- Marking: DH

### Absolute Maximum Ratings (T<sub>amb</sub>=25°C unless otherwise specified)

Symbol	Parameter	Value	Units
V <sub>ESD</sub>	ESD per IEC 61000-4-2 (Air)	±30	kV
	ESD per IEC 61000-4-2 (Contact)	±20	
P <sub>PP</sub>	Peak Pulse Power (8/20 $\mu\text{s}$ )	100	W
T <sub>OPT</sub>	Operating Temperature	-55/+150	°C
T <sub>STG</sub>	Storage Temperature	-55/+150	°C
T <sub>L</sub>	Lead Soldering Temperature	260 (10 sec.)	°C

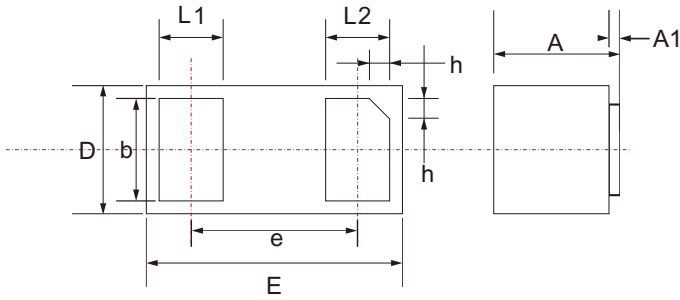
**Electrical Characteristics** (TA=25°C unless otherwise specified)

Symbol	Parameter	Test Condition	Min	Typ	Max	Units
V <sub>RWM</sub>	Reverse Working Voltage				24	V
V <sub>BR</sub>	Reverse Breakdown Voltage	I <sub>T</sub> = 1mA	26		32	V
I <sub>R</sub>	Reverse Leakage Current	V <sub>RWM</sub> = 24V			1	μA
V <sub>C1</sub>	Clamping Voltage 1	I <sub>PP</sub> = 1A, t <sub>p</sub> = 8/20μs			40	V
V <sub>C2</sub>	Clamping Voltage 2	I <sub>PP</sub> = 2A, t <sub>p</sub> = 8/20μs			50	V
C <sub>J</sub>	Junction Capacitance	V <sub>R</sub> = 0V, f = 1MHz		8	15	pF

**Electrical Characteristics Curve**


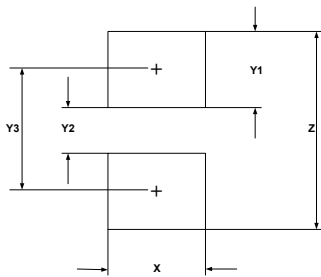
## DFN-1006 Package Outline

Unit: mm



SYMBOL	DIMENSIONS	
	MIN.	MAX.
D	0.550	0.650
E	0.950	1.050
L1	0.200	0.300
L2	0.200	0.300
b	0.450	0.550
e	0.650 TYP.	
A	0.450	0.550
A1	0.000	0.050
h	0.070	0.170

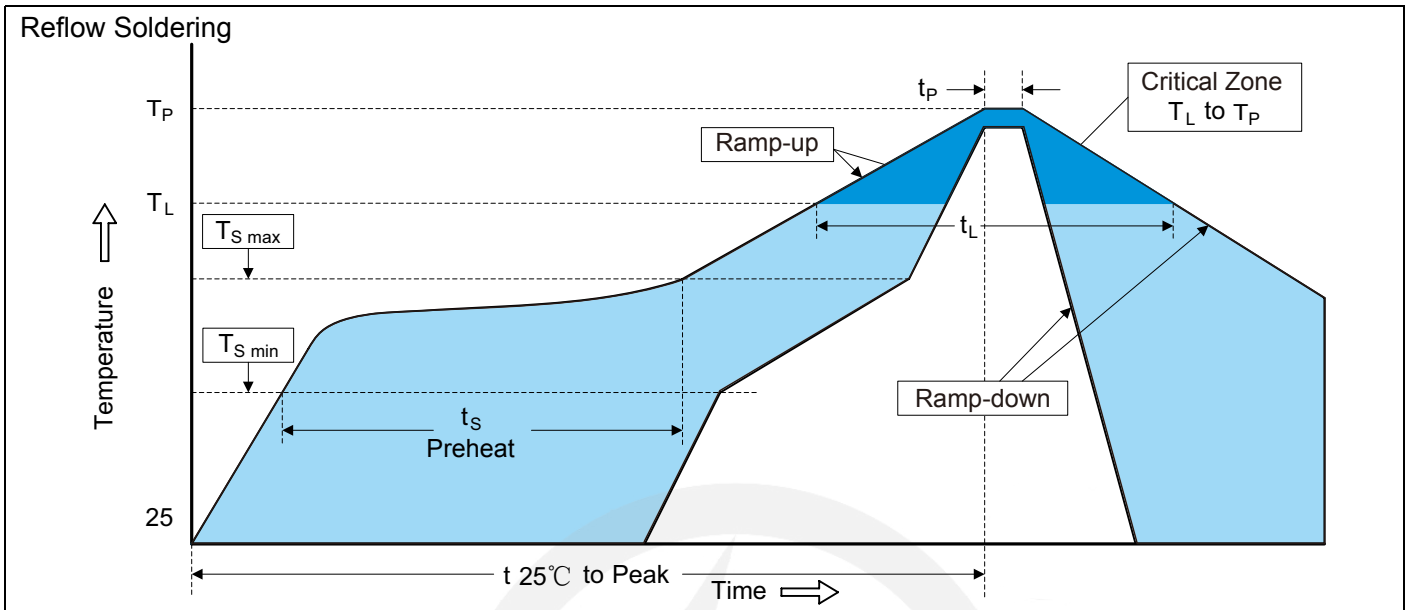
## DFN-1006 Suggested Pad Layout



SYM	DIMENSIONS
	MILLIMETERS
X	0.60
Y1	0.50
Y2	0.30
Y3	0.80
Z	1.30

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	$16.0 \pm 2.0$
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Quantity: 10000PCS