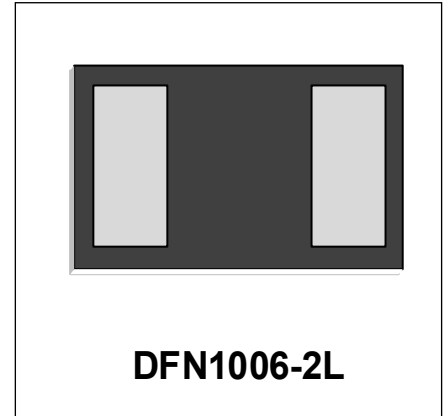




## Features

- Small Body Outline Dimensions
- Low capacitance
- Bi-directional ESD protection
- Working Voltage: 5 V
- Low Leakage Current
- Fast response time
- AEC-Q101 Qualified



## IEC Compatibility (EN61000-4)

- IEC 61000-4-2 (ESD)  $\pm 25\text{kV}$  (air),  $\pm 15\text{kV}$  (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)

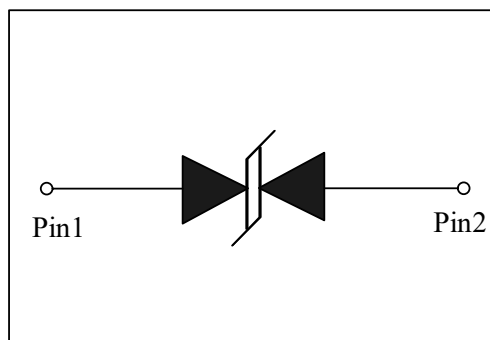
## Mechanical Characteristics

- DFN1006-2L package
- Marking : Marking Code
- Packaging : Tape and Reel per EIA 481
- RoHS Compliant

## Applications

- High Definition Multi-Media Interface (HDMI)
- Digital Visual Interface (DVI)
- Display Port Interface (DP)
- Unified Display Interface (UDI)
- Gigabit Ethernet
- USB2.0 and USB3.0

## Schematic & PIN Configuration



<b>Absolute Maximum Rating</b>			
<b>Rating</b>	<b>Symbol</b>	<b>Value</b>	<b>Units</b>
Contact discharge voltage ( IEC61000-4-2 )	V <sub>ESD</sub>	15KV	V
Air discharge voltage ( IEC61000-4-2 )	V <sub>ESD</sub>	25KV	V
Operating Temperature	T <sub>OPER</sub>	-40 to + 90	°C
Storage Temperature	T <sub>STG</sub>	-55 to +125	°C

## Electrical Characteristics

<b>DW05PGCF-B-E</b>						
<b>Parameter</b>	<b>Symbol</b>	<b>Conditions</b>	<b>Minimum</b>	<b>Typical</b>	<b>Maximum</b>	<b>Units</b>
Reverse Stand-Off Voltage	V <sub>RWM</sub>				5	V
Trigger Voltage	V <sub>T</sub>	IEC61000-4-2 8KV contact discharge		350		V
Leakage Current	I <sub>L</sub>	DC 12V shall be applied on component			100	nA
Clamping Voltage	V <sub>C</sub>	IEC61000-4-2 8KV contact discharge		30		V
Junction Capacitance	C <sub>j</sub>	V <sub>R</sub> = 0V, f = 1MHz		0.2		pF

**Note:** 1 Trigger and clamping voltage are measured per IEC 61000-4-2, 8KV contact discharge method.

2 After reliability tests such as high temp storage, temp cycles, continuous ESD strike etc, the maximum leakage current is less than 10uA.

## Typical Characteristics

Table 1: IEC 61000-4-2 Spec.

IEC 61000-4-2 Spec.

Level	Test Voltage (kV)	First Peak Current (A)	Current at 30 ns (A)	Current at 60 ns (A)
1	2	7.5	4	2
2	4	15	8	4
3	6	22.5	12	6
4	8	30	16	8

Figure 1: IEC61000-4-2 Waveform

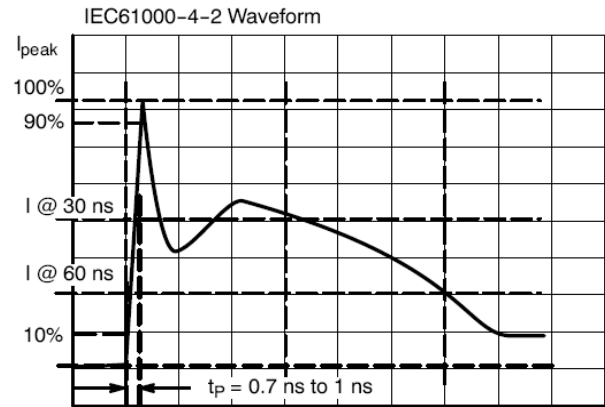


Figure 2: ESD Test Setup

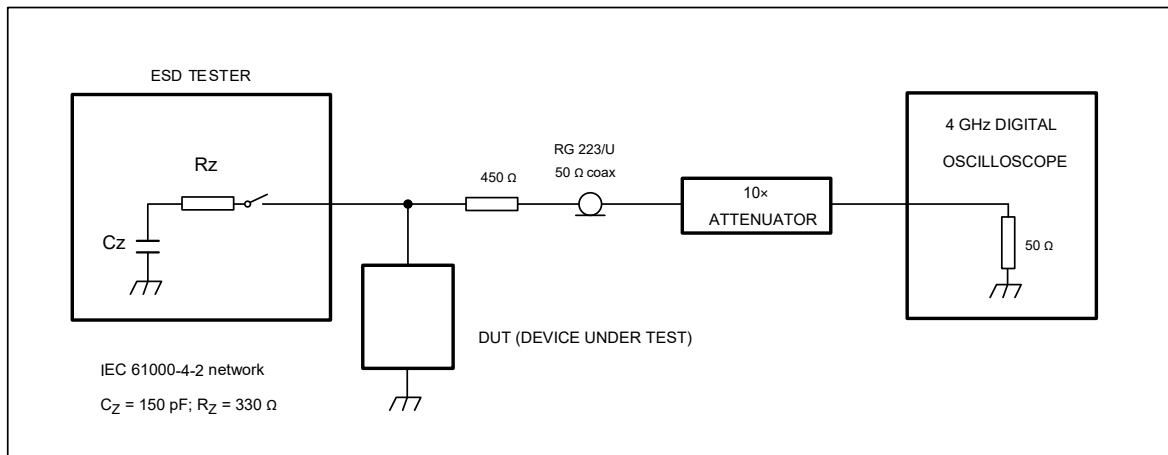
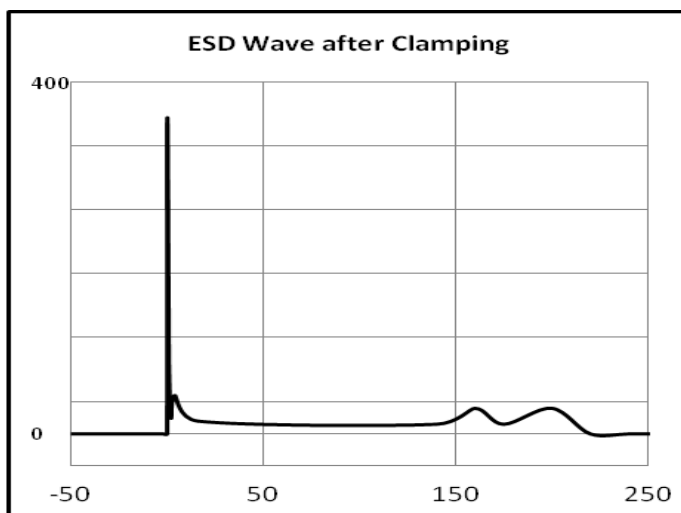


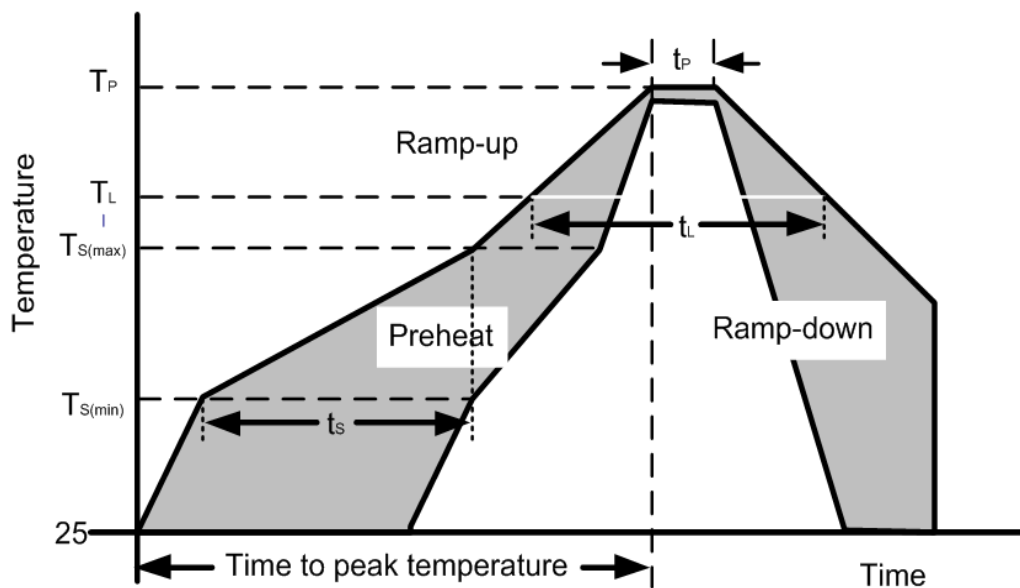
Figure 3: ESD Wave after Clamping





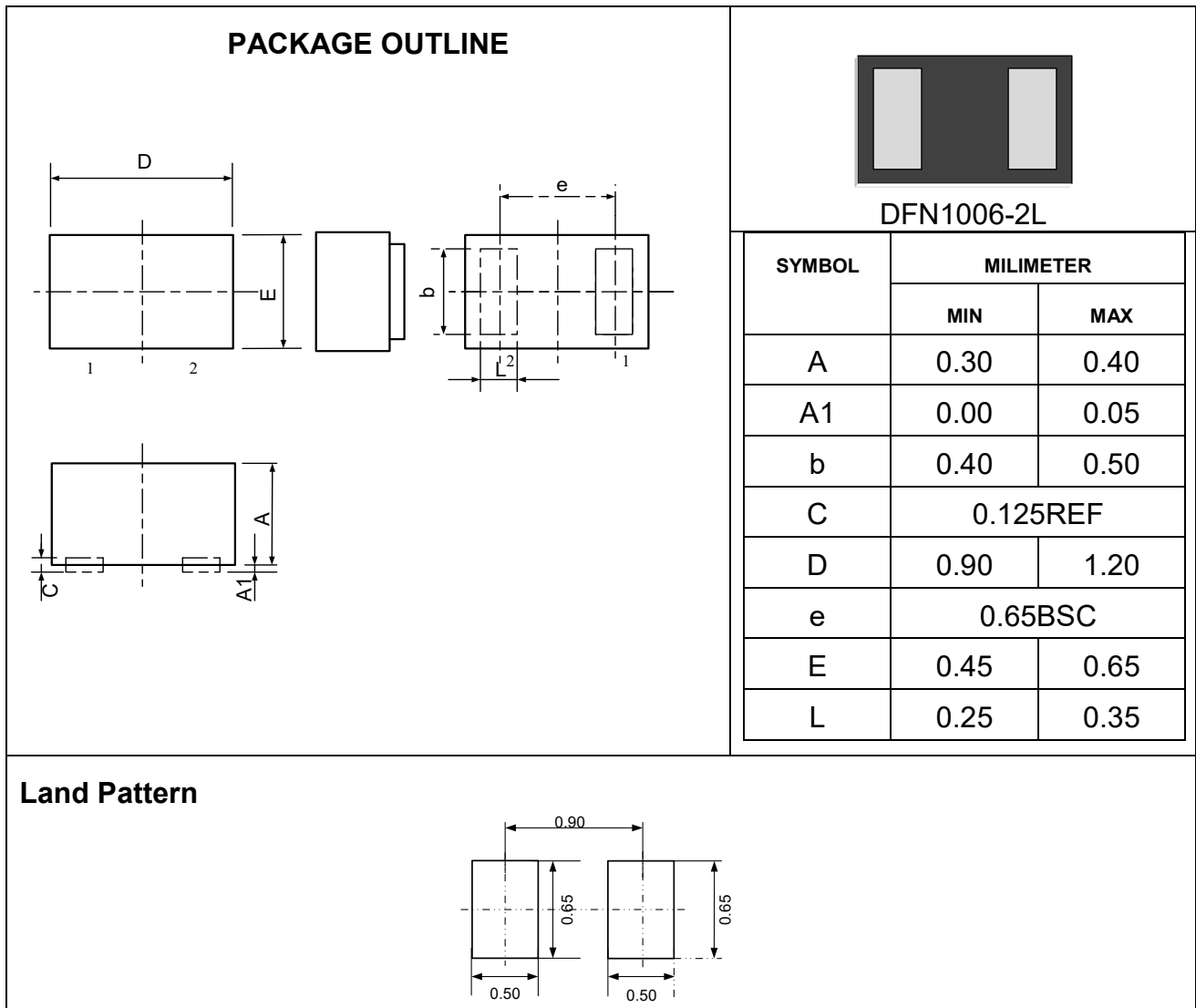
## Soldering Parameters

Reflow Condition		Pb – Free assembly
Pre Heat	Temperature Min ( $T_{S(min)}$ )	150°C
	Temperature Max ( $T_{S(max)}$ )	200°C
	Time (min to max) ( $t_s$ )	60 – 190 secs
Average ramp up rate (Liquidus Temp) ( $T_L$ ) to peak		5°C/second max
$T_{S(max)}$ to $T_L$ —Ramp-up Rate		5°C/second max
Reflow	Temperature ( $T_L$ ) (Liquidus)	217°C
	Temperature ( $t_L$ )	60 – 150 seconds
Peak Temperature ( $T_P$ )		260+0/-5 °C
Time within actual peak Temperature ( $t_p$ )		20 – 40 seconds
Ramp-down Rate		5°C/second max
Time 25°C to peak Temperature ( $T_P$ )		8 minutes Max.
Do not exceed		260°C





Outline Drawing –DFN1006-2L



Package Information

Qty: 10k/Reel