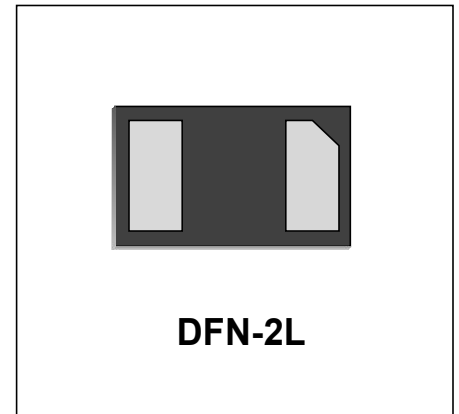


## Features

- Small Body Outline Dimensions:  
0.039" x 0.024" (1.0 mm x 0.60 mm)
- Protects one I/O or power line
- Low Clamping Voltage
- Ultra Low Capacitance:0.5pF
- Working Voltage: 5 V
- Low Leakage Current
- Response Time is Typically < 1 ns



## IEC COMPATIBILITY (EN61000-4)

- IEC 61000-4-2 (ESD)  $\pm 15\text{kV}$  (air),  $\pm 8\text{kV}$  (contact)
- IEC 61000-4-4 (EFT) 40A (5/50ns)

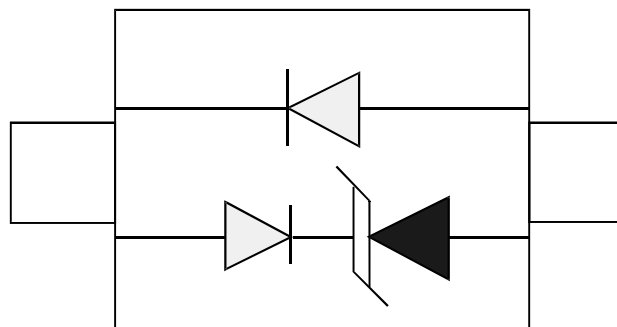
## Mechanical Characteristics

- DFN-2L package
- Molding compound flammability rating:  
UL 94V-0
- Marking: Marking Code
- Packaging: Tape and Reel per EIA 481
- RoHS/WEEE Compliant

## Applications

- Laptop Computers
- Cellular Phones
- Digital Cameras
- Personal Digital Assistants (PDAs)

## Schematic & PIN Configuration

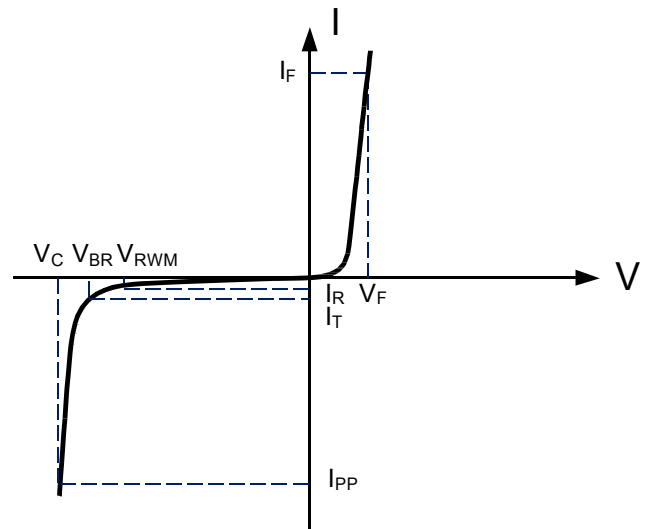


DFN-2L (Top View)

Absolute Maximum Rating			
Rating	Symbol	Value	Units
Electrostatic discharge Voltage (See Note1 ,2)	$V_{ESD}$	8KV (contact)	Volts
		15KV (air)	
Operating Temperature	$T_J$	-55 to + 125	°C
Storage Temperature	$T_{STG}$	-55 to +150	°C

### Electrical Parameters (T=25°C)

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 @ $V_{RWM}$
$V_{BR}$	Breakdown Voltage @ $I_T$
$I_T$	Test Current
$I_F$	Forward Current
$V_F$	Forward Voltage @ $I_F$



### Electrical Characteristics

BDFN2A051U						
Parameter	Symbol	Conditions	Minimum	Typical	Maximum	Units
Reverse Stand-Off Voltage	$V_{RWM}$	5.0			5.5	V
Reverse Breakdown Voltage	$V_{BR}$	$I_T=1mA$	6.0			V
Reverse Leakage Current	$I_R$	$V_{RWM}=5V, T=25^\circ C$			1	$\mu A$
Clamping Voltage	$V_C$	$I_{PP}=1A, t_p=8/20\mu s$		8.5	12.5	V
Junction Capacitance	$C_j$	$V_R = 0V, f = 1MHz$		0.5	0.8	pF

**Note1:** ESD Pulse Waveform according to IEC 61000-4-2. see Table1 and Figure4.

**Note2:** ESD tests Setup see Figure 5.

## Typical Characteristics

Figure 1: Power Derating Curve

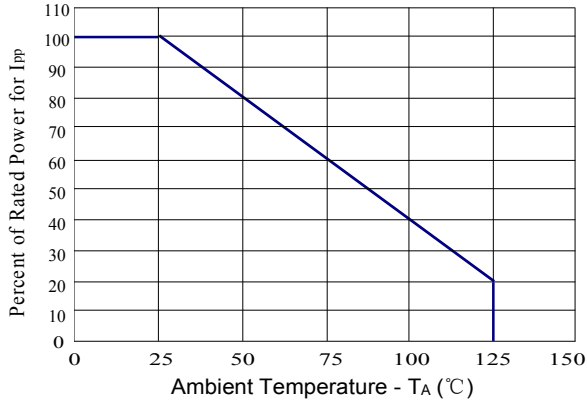


Figure 2: Insertion Loss

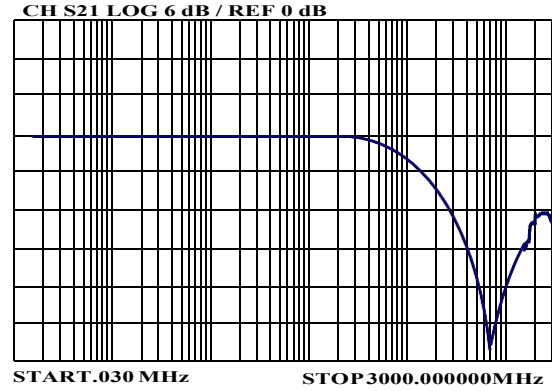


Figure 3: Normalized Junction Capacitance vs. Reverse Voltage

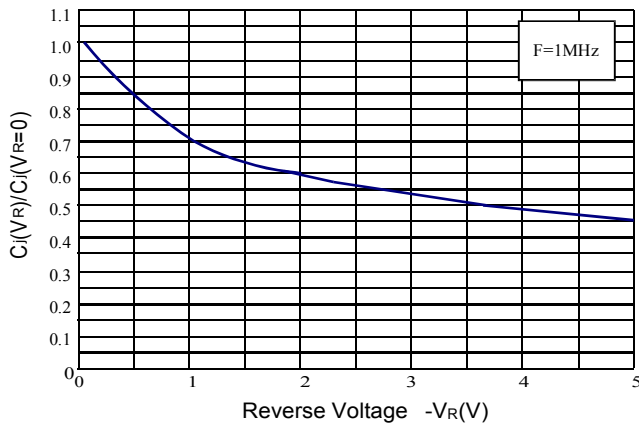


Table 1. IEC 61000-4-2 Discharge Parameters

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

Figure 4. IEC 61000-4-2 Waveform

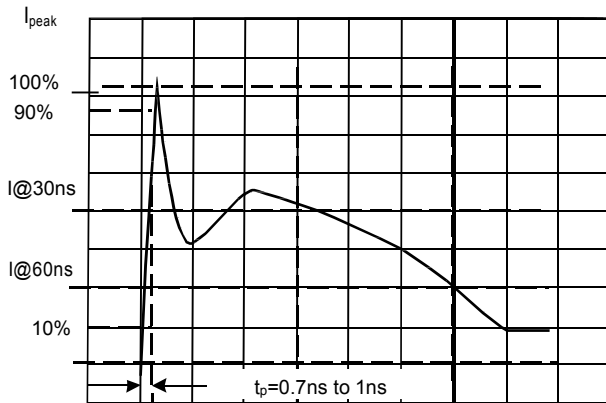
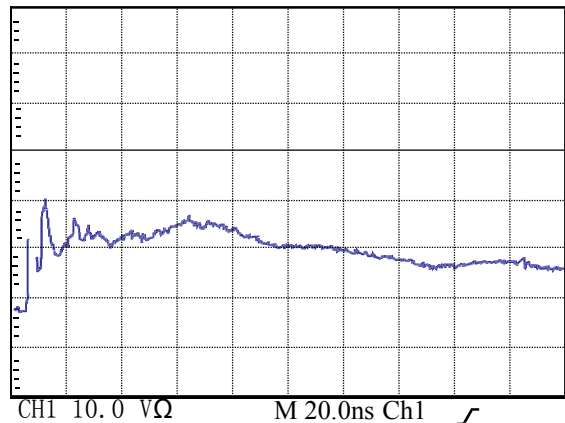
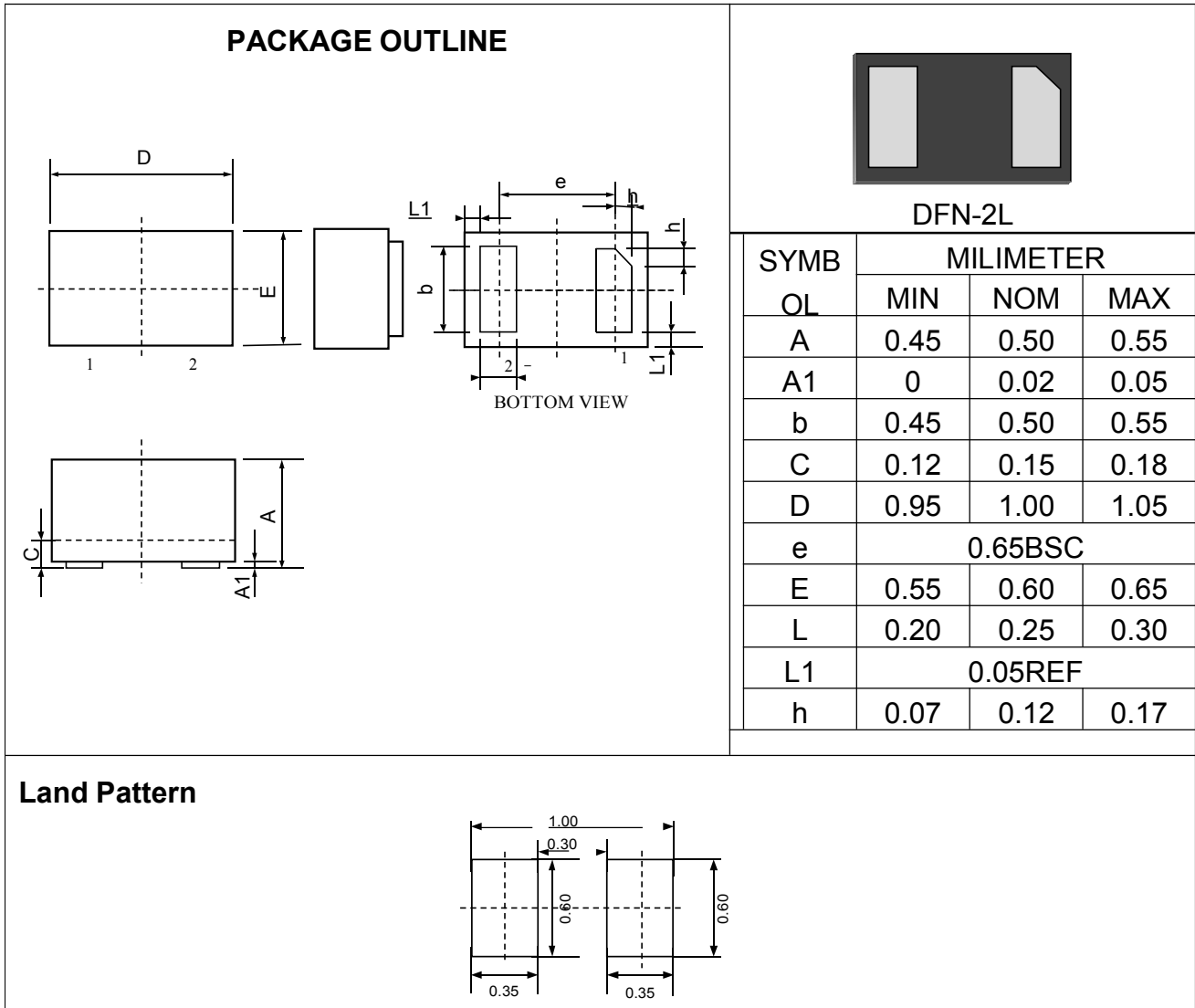


Figure 5: ESD Clamping (8kV Contact per IEC 61000-4-2)

Tek Run: 2.50GS/s Sample



## Outline Drawing –DFN-2L



## Marking Codes

Part Number	Marking Code
BDFN2A051U	

## Package Information

Qty:10 k/Reel

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[HD1-GS08](#) [CPDUR5V0R-HF](#) [CPDQC5V0U-HF](#) [CPDQC5V0USP-HF](#) [CPDQC5V0-HF](#) [D1213A-01LP4-7B](#) [D1213A-02WL-7](#)  
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