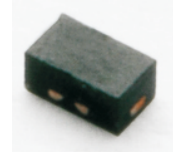


## CPDQT18V-HF

**RoHS Device**  
**Halogen Free**



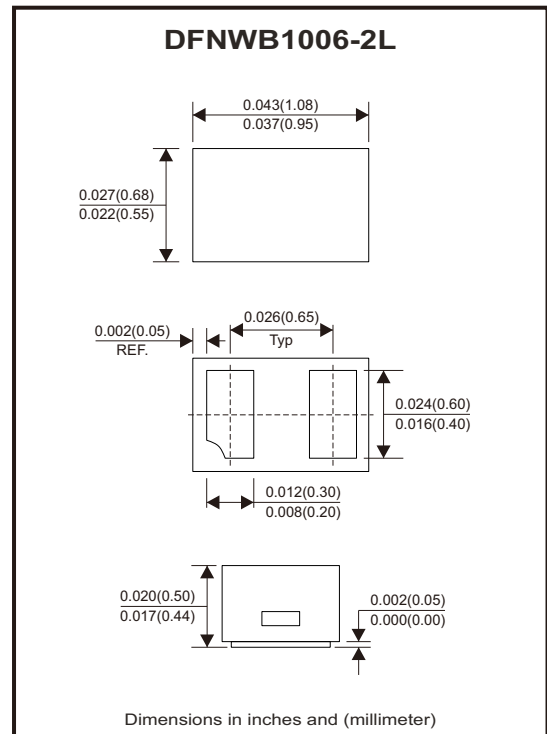
### Features

- Bi-directional ESD protection of one line.
- Low capacitance: 0.35pF.
- Low reverse clamping voltage.
- Reverse stand-off voltage: 18V.
- ESD rating of class 3(>16Kv) per human body model.
- Excellent package: 1.0mm x 0.6mm x 0.5mm.
- Fast response time.
- JESD22-A114-B ESD rating of class 3B per human body model.
- IEC 61000-4-2 Level 3 ESD protection.

### Mechanical data

- Case: DFNWB1006-2L package, molded plastic.

### Circuit Diagram



### Maximum Rating (at T<sub>A</sub>=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
IEC 61000-4-2 ESD voltage air model	V <sub>ESD</sub> (Note 1)	±20	kV
IEC 61000-4-2 ESD voltage contact model			
JESD22-A114-B ESD voltage per human body model			
ESD voltage machine model		±0.4	
Peak pulse power (Note 2)	P <sub>PP</sub>	48	W
Peak pulse current (Note 2)	I <sub>PP</sub>	4	A
Lead solder temperature - maximum (10 second duration)	T <sub>L</sub>	260	°C
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature range	T <sub>STG</sub>	-55 ~ +150	°C

Notes: 1. Device stressed with ten non-repetitive ESD pulses.  
2. Non-repetitive current pulse 8/20μs exponential decay waveform according to IEC 61000-4-5.

Company reserves the right to improve product design, functions and reliability without notice.

## Electrical Characteristics (at TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse stand off voltage (Note 1)		$V_{RWM}$			18	V
Reverse leakage current	$V_{RWM} = 18V$	$I_R$			0.1	$\mu A$
Breakdown voltage	$I_T = 1mA$	$V_{(BR)}$	19	21		V
Clamping voltage (Note 2)	$I_{PP} = 4A$	$V_C$		12		V
Junction capacitance	$V_R = 0V, f = 1MHz$	$C_J$		0.35	0.5	pF

Notes: 1. Other voltages available upon request.

2. Non-repetitive current pulse 8/20 $\mu s$  exponential decay waveform according to IEC 61000-4-5.

## Rating and Characteristic Curves (CPDQT18V-HF)

Fig.1 - 8/20 $\mu s$  Peak Pulse Current Waveform Acc. IEC 61000-4-5

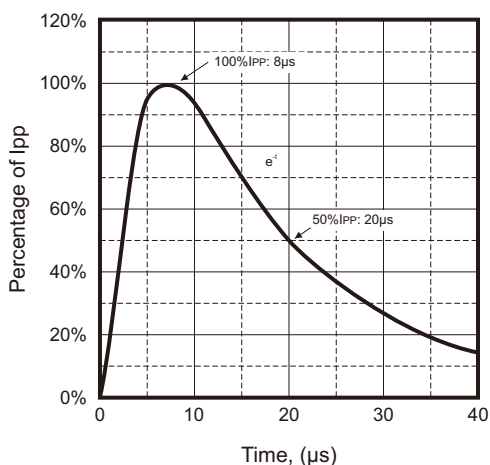


Fig.2 - TLP Measurement

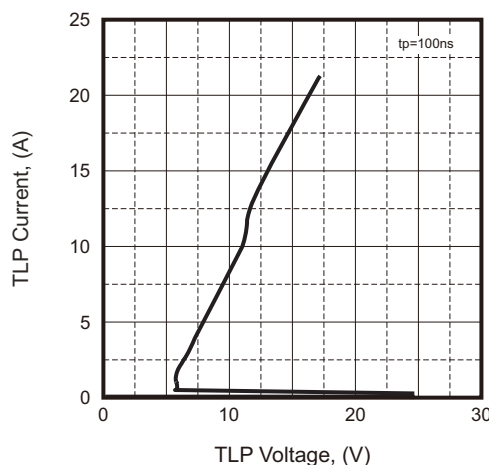
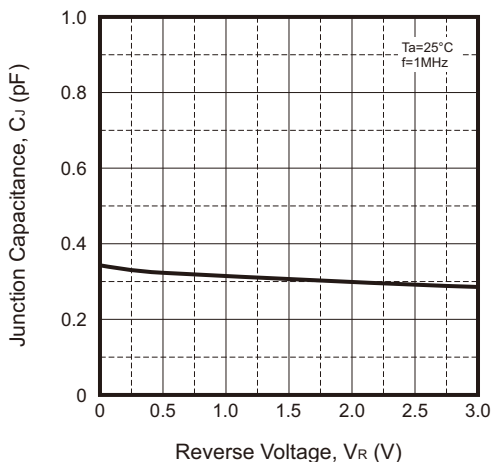


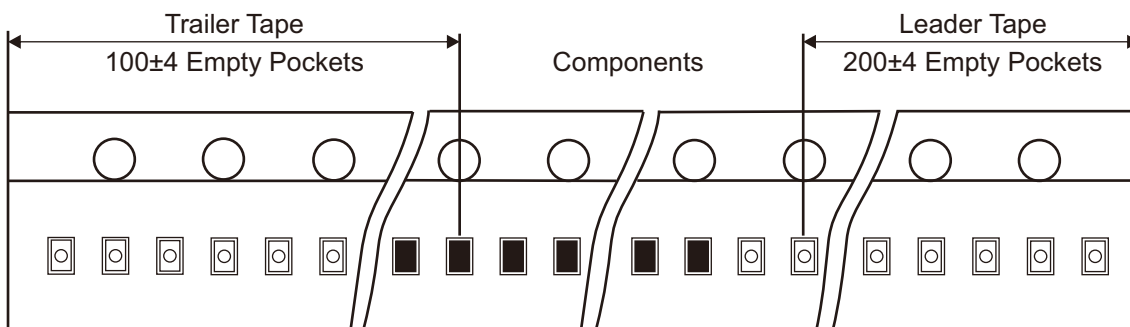
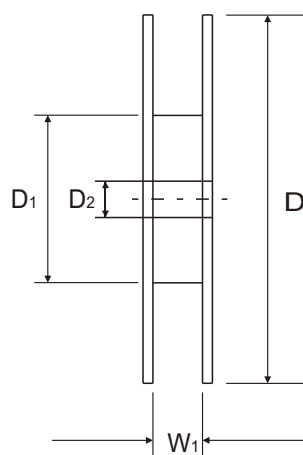
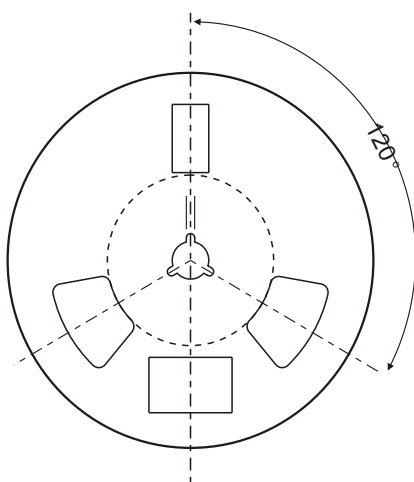
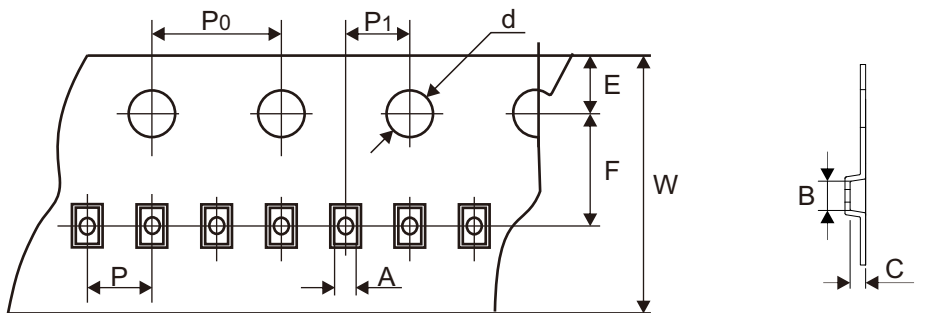
Fig.3 - Capacitance Characteristics



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REV:A

## Reel Taping Specification



DFNWB 1006-2L	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	0.66 Typ	1.15 Typ	0.66 Typ	1.50 Typ	178.00 Typ	54.40 Typ	13.00 Typ
	(inch)	0.026 Typ	0.045 Typ	0.026 Typ	0.059 Typ	7.008 Typ	2.142 Typ	0.512 Typ

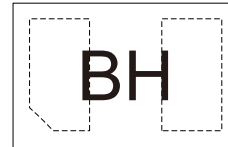
DFNWB 1006-2L	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 Typ	3.50 Typ	2.00 Typ	4.00 Typ	2.00 Typ	8.00 Typ	9.50 Typ
	(inch)	0.069 Typ	0.138 Typ	0.079 Typ	0.157 Typ	0.079 Typ	0.315 Typ	0.374 Typ

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REV:A

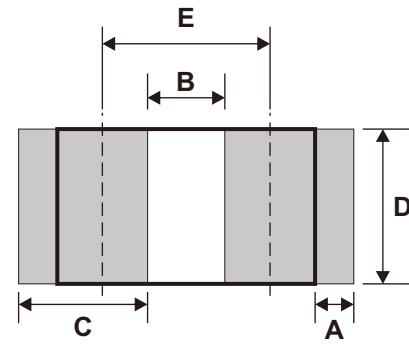
## Marking Code

Part Number	Marking Code
CPDQT18V-HF	BH



## Suggested PAD Layout

SIZE	DFNWB1006-2L	
	(mm)	(inch)
A	0.15	0.006
B	0.30	0.012
C	0.50	0.020
D	0.60	0.024
E	0.65	0.026



Note: 1. The pad layout is for reference purpose only.

## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
DFNWB1006-2L	10,000	7

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