

## CPDUT7VMUHT-HF

RoHS Device

Halogen Free



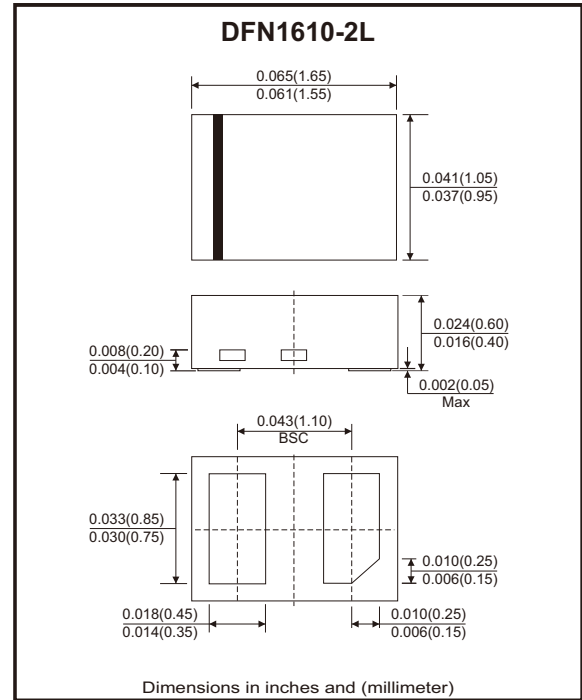
### Features

- ESD/surge protection for 1 line with Uni-directional.
- High surge protection.
- Fast turn-on and low clamping voltage.
- IEC 61000-4-2 (ESD)  $\pm 30$ kV (air/contact)
- IEC 61000-4-4 (EFT) 80A (5/50ns)
- IEC 61000-4-5 (Lightning) 70A (8/20 $\mu$ s)

### Mechanical data

- Case: DFN1610-2L package, molded plastic.
- Polarity: Indicated by cathode band.
- Mounting position: Any.

### Circuit Diagram



### Maximum Rating (at TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Value	Unit
Peak pulse power	$T_P = 8/20\mu s$	$P_{PP}$	1050	W
Peak pulse current	$T_P = 8/20\mu s$	$I_{PP}$	70	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	$\pm 30$	kV
Operating temperature range		$T_J$	-55 to +125	°C
Storage temperature range		$T_{STG}$	-55 to +150	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Working peak reverse voltage		$V_{RWM}$			7	V
Forward voltage	$I_F = 15mA$	$V_F$	0.5		1.2	V
Reverse leakage current	$V_{RWM} = 7V$	$I_R$			1	$\mu A$
Breakdown voltage	$I_T = 1mA$	$V_{BR}$	7.8		10.5	V
Clamping voltage	$I_{PP} = 5A, T_P = 8/20\mu s$	$V_C$		9	11	V
	$I_{PP} = 70A, T_P = 8/20\mu s$	$V_C$		13	15	
Clamping voltage	$TLP = 16A, T_P = 100ns$	$V_C$		9		V
Junction capacitance	$V_R = 0V, f = 1MHz$	$C_J$		686		pF

## Typical Rating and Characteristic Curves (CPDUT7VMUHT-HF)

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

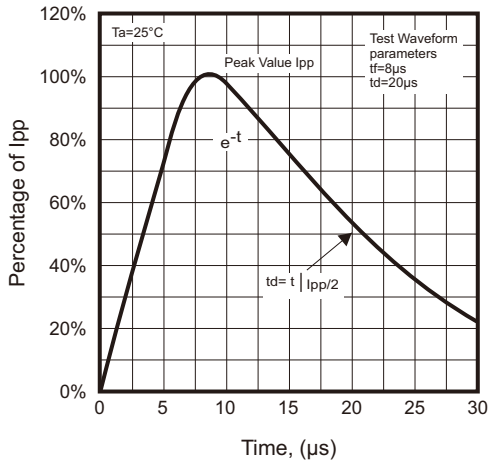


Fig.2 - Power Rating Derating Curve

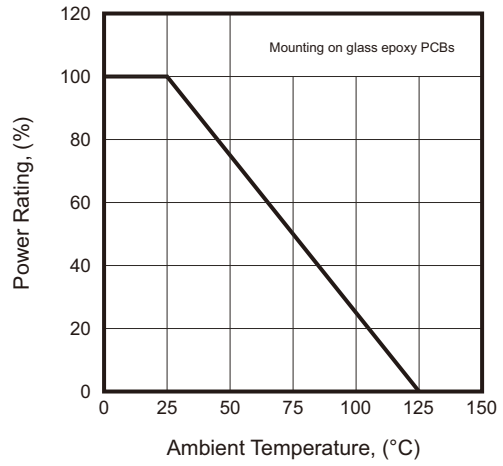


Fig.3 - Typical Clamping Voltage vs. Peak Pulse Current

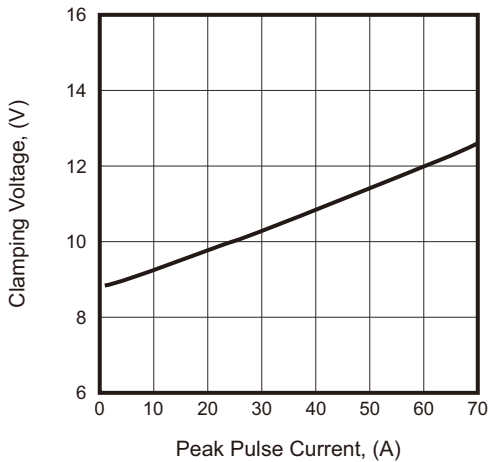


Fig.4 - Typical Capacitance Between Terminals Characteristics

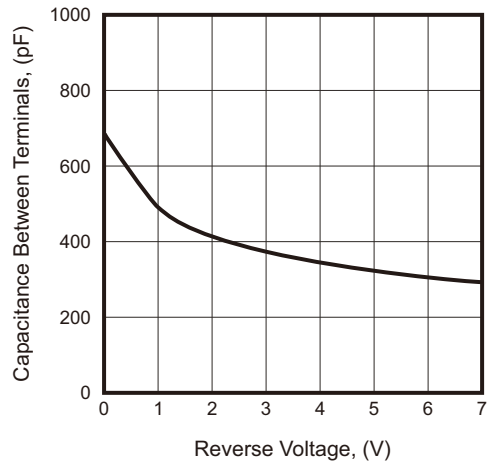
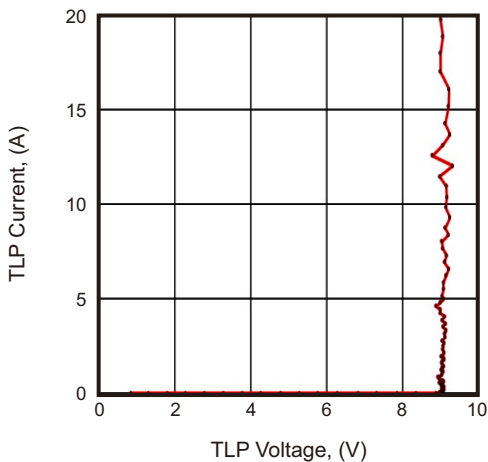
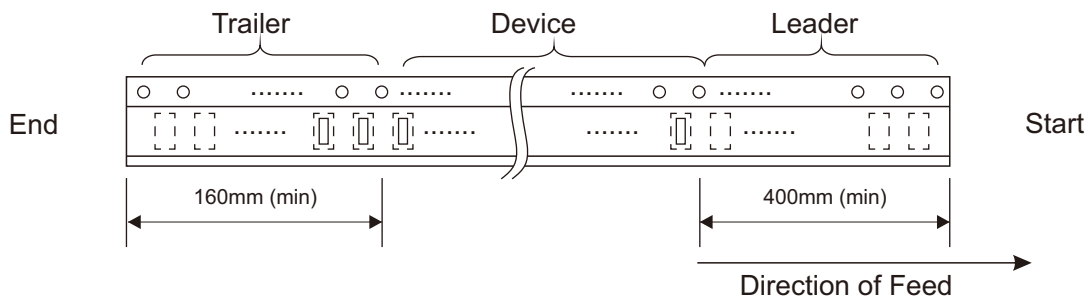
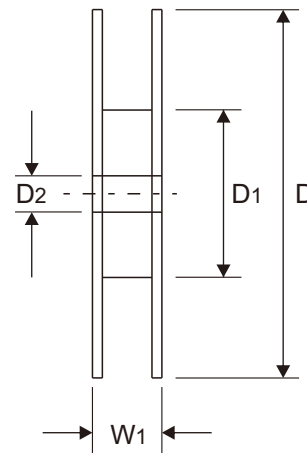
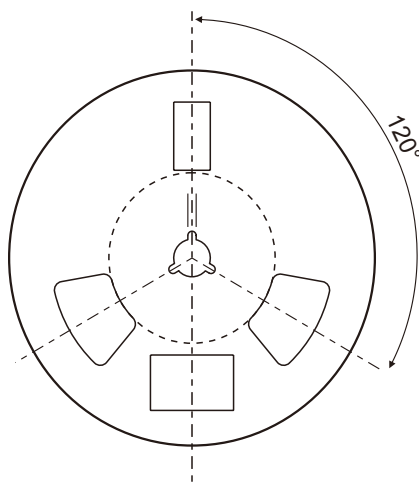
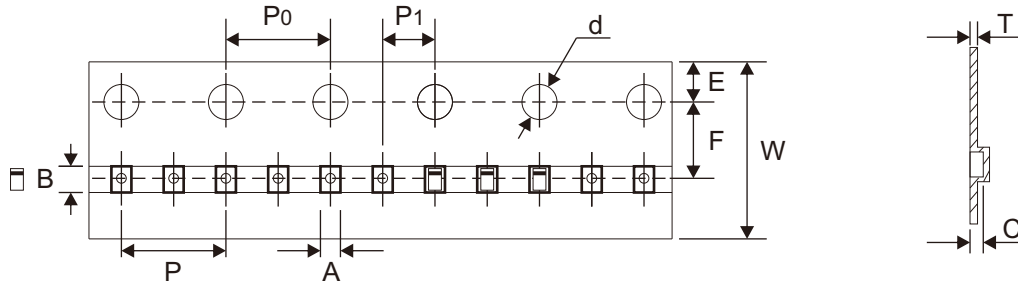


Fig.5 - TLP- Positive Pulse



## Reel Taping Specification



DFN1610 -2L	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.14 ± 0.05	1.74 ± 0.05	0.62 ± 0.05	1.50 ± 0.05	180.00 ± 1.00	54.40 ± 1.00	13.00 + 0.50 - 0.20
	(inch)	0.045 ± 0.002	0.069 ± 0.002	0.024 ± 0.002	0.059 ± 0.002	7.087 ± 0.039	2.142 ± 0.039	0.512 + 0.020 - 0.008

DFN1610 -2L	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.20 ± 0.05	8.00 ± 0.10	12.00 ± 1.30
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.008 ± 0.002	0.315 ± 0.004	0.472 ± 0.051

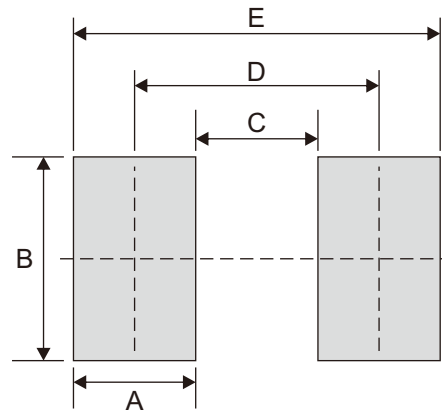
## Marking Code

Park Number	Marking Code
CPDUT7VMUHT-HF	H7N



## Suggested P.C.B. PAD Layout

SIZE	DFN1610-2L	
	(mm)	(inch)
A	0.625	0.025
B	1.00	0.039
C	0.60	0.024
D	1.225	0.048
E	1.85	0.073



## Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
DFN1610-2L	3,000	7