

## CDBQT140-HF

Forward current: 1.0 A

Reverse voltage: 40 V

RoHS Device

Halogen Free

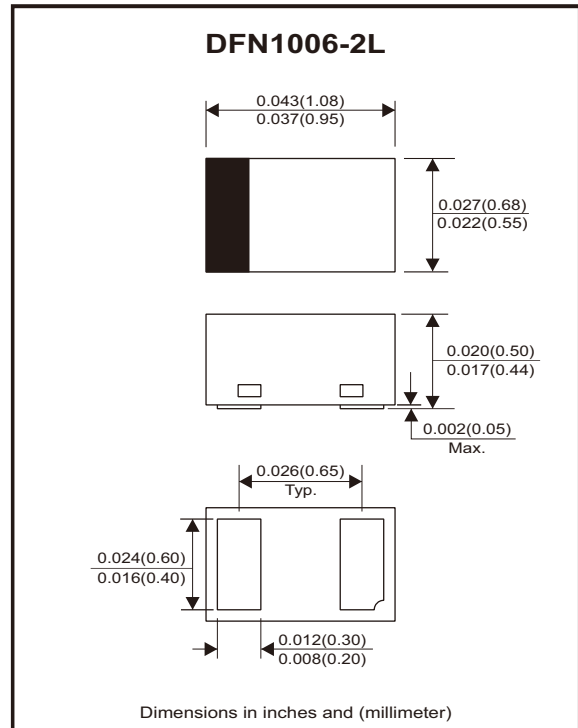
### Features

- Low forward voltage drop.
- Very small SMD package.

### Mechanical Data

- Case: DFN1006-2L, molded plastic.

### Circuit Diagram



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

Parameter	Symbol	Value	Unit
Peak repetitive reverse voltage	$V_{RRM}$	40	V
Working peak reverse voltage	$V_{RWM}$		
RMS reverse voltage	$V_{R(RMS)}$	28	V
Average rectified output current	$I_o$	1	A
Non-repetitive peak forward surge current @ t=8.3ms	$I_{FSM}$	7	A
Power dissipation (Note 1)	$P_D$	500	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	250	°C/W
Operating junction temperature range	$T_J$	150	°C
Storage temperature range	$T_{STG}$	-55 ~ +150	°C

Notes: 1. Device mounted on a 1 in.<sup>2</sup> ceramic PCB which spread 2 ounces of copper.

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

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Reverse breakdown voltage	$I_R = 1\text{mA}$	$V_{(BR)}$	40			V
Reverse current	$V_R = 40\text{V}$	$I_R$		10	40	$\mu\text{A}$
Forward voltage	$I_F = 0.1\text{A}$	$V_F$		0.35	0.38	V
	$I_F = 0.2\text{A}$			0.37	0.40	
	$I_F = 0.5\text{A}$			0.42	0.49	
	$I_F = 0.7\text{A}$			0.47	0.55	
	$I_F = 1\text{A}$			0.51	0.61	
Total capacitance	$V_R = 10\text{V}, f = 1\text{MHz}$	$C_{tot}$		19		pF

## Rating and Characteristic Curves (CDBQT140-HF)

Fig.1 - Forward Characteristics

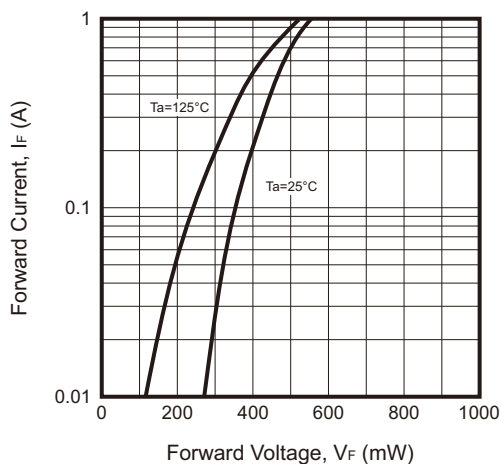


Fig.2 - Reverse Characteristics

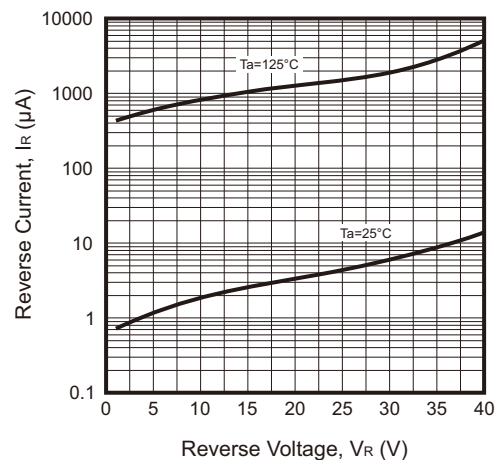
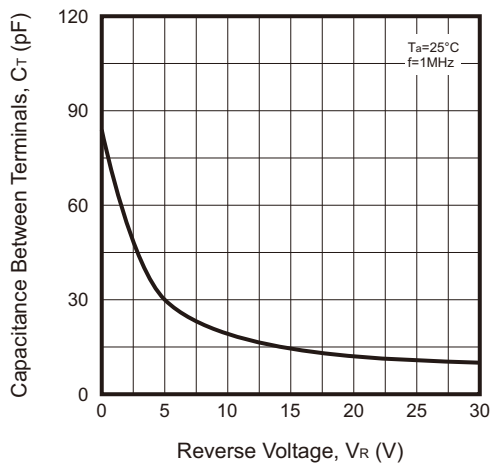
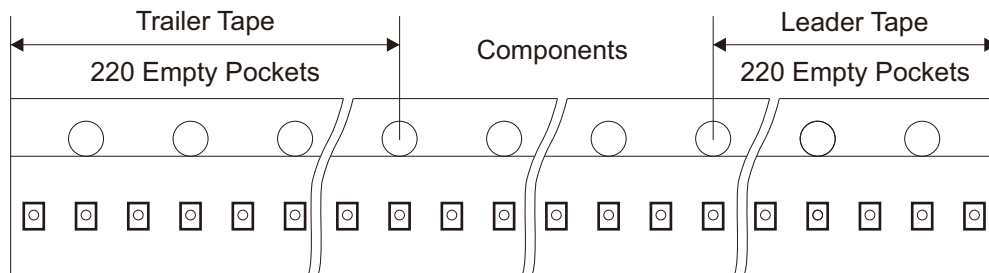
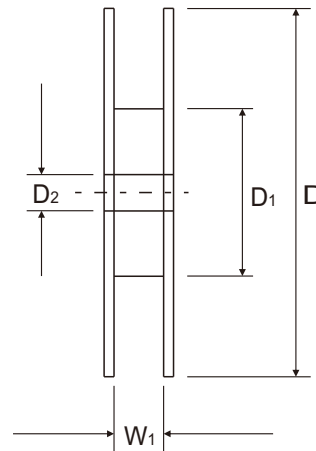
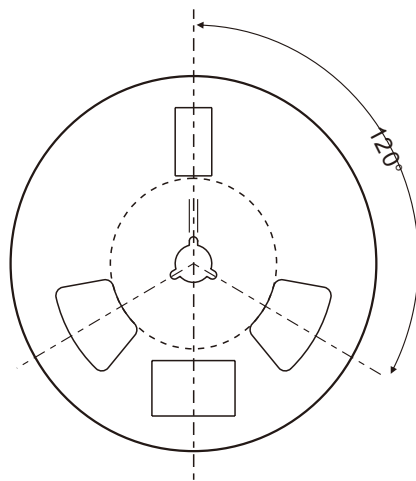
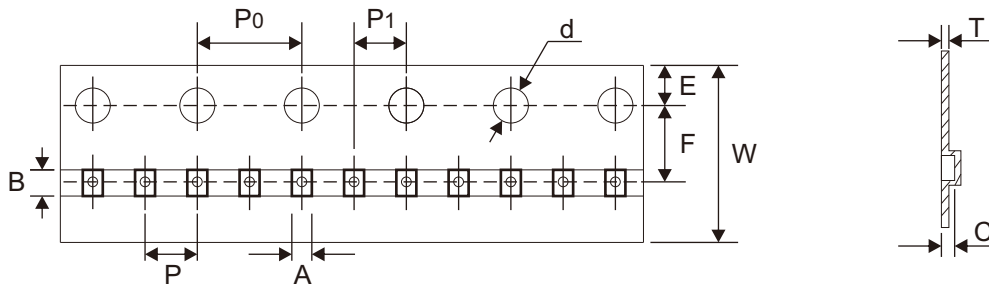


Fig.3 - Capacitance Characteristic



## Reel Taping Specification



DFN1006 -2L	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	0.71 ± 0.05	1.11 ± 0.05	0.48 ± 0.05	1.55 ± 0.05	178 ± 1.00	54.00 ± 0.40	13.00 ± 0.20
	(inch)	0.028 ± 0.002	0.044 ± 0.002	0.019 ± 0.002	0.061 ± 0.002	7.008 ± 0.039	2.126 ± 0.016	0.512 ± 0.008

DFN1006 -2L	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	2.00 ± 0.05	4.00 ± 0.10	2.00 ± 0.05	0.23 ± 0.02	8.00 + 0.30 - 0.10	9.50 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.079 ± 0.002	0.157 ± 0.004	0.079 ± 0.002	0.009 ± 0.001	0.315 + 0.012 - 0.004	0.374 ± 0.039

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

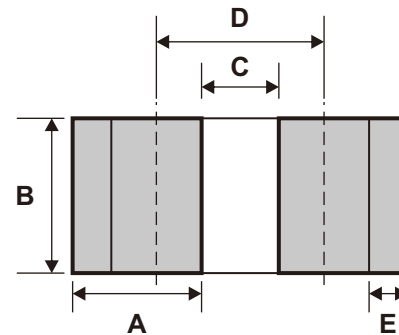
## Marking Code

Part Number	Marking Code
CPDQT140-HF	4A



## Suggested PAD Layout

SIZE	DFN1006-2L	
	(mm)	(inch)
A	0.50	0.200
B	0.60	0.024
C	0.30	0.012
D	0.65	0.026
E	0.15	0.006



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

## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
DFN1006-2L	10,000	7

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