

CPDQT5V0USBP-HF

RoHS Device

Halogen Free



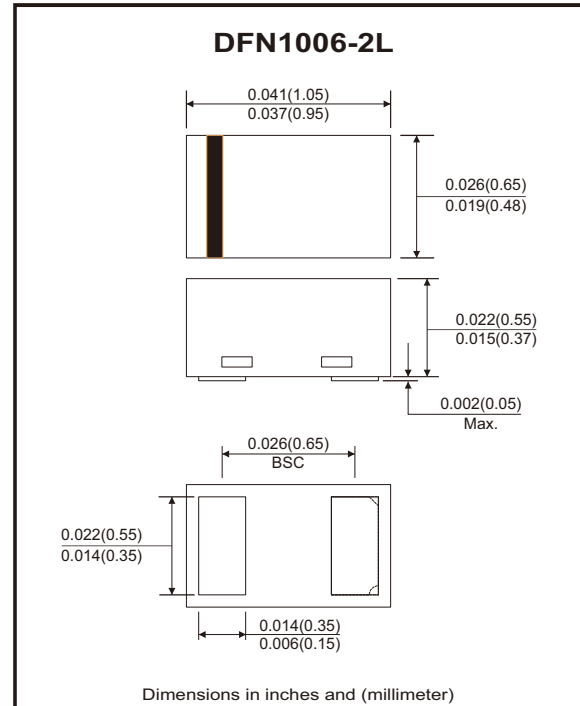
Features

- Single-channel ESD protection.
- Protects I/O Port.
- Low clamping voltage.
- Low leakage.
- Low capacitance.

Mechanical data

- Case: DFN1006-2L package.
- 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}	60	W
Peak pulse current	$T_P = 8/20\mu s$	I_{PP}	4	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	±20	kV
Lead soldering temperature		T_L	260 (10 sec)	°C
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
Reverse working voltage		V_{RWM}			5	V
Reverse breakdown voltage	$I_T = 1mA$	V_{BR}	6			V
Reverse leakage current	$V_{RWM} = 5V$	I_R		0.01	1	μA
Clamping voltage	$I_{PP} = 1A, t_p = 8/20\mu s$	V_C			9.8	V
	$I_{PP} = 4A, t_p = 8/20\mu s$	V_C			15	V
Junction capacitance	$V_R = 0V, f = 1MHz$	C_J		0.4	0.6	pF

Typical Rating and Characteristic Curves (CPDQT5V0USBP-HF)

Fig.1 - Pulse Waveform

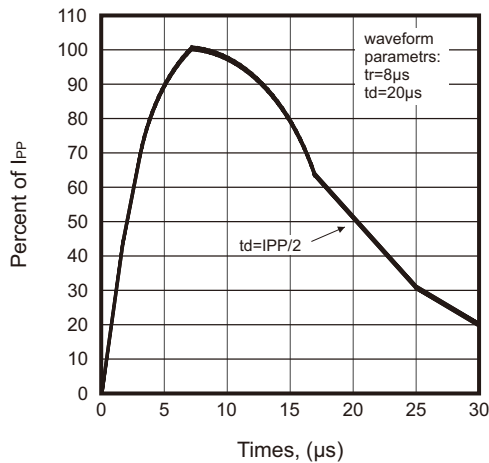


Fig.2 - Non-Repetitive Peak Power vs. Pulse Time

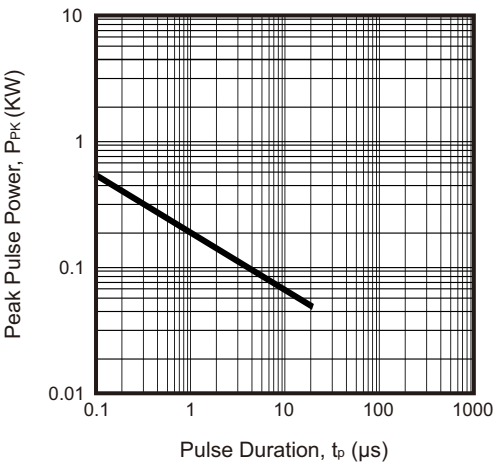
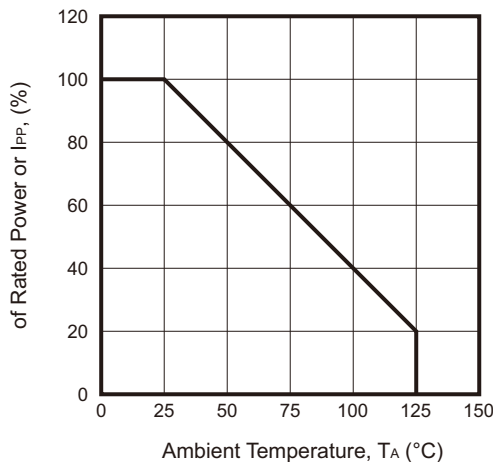
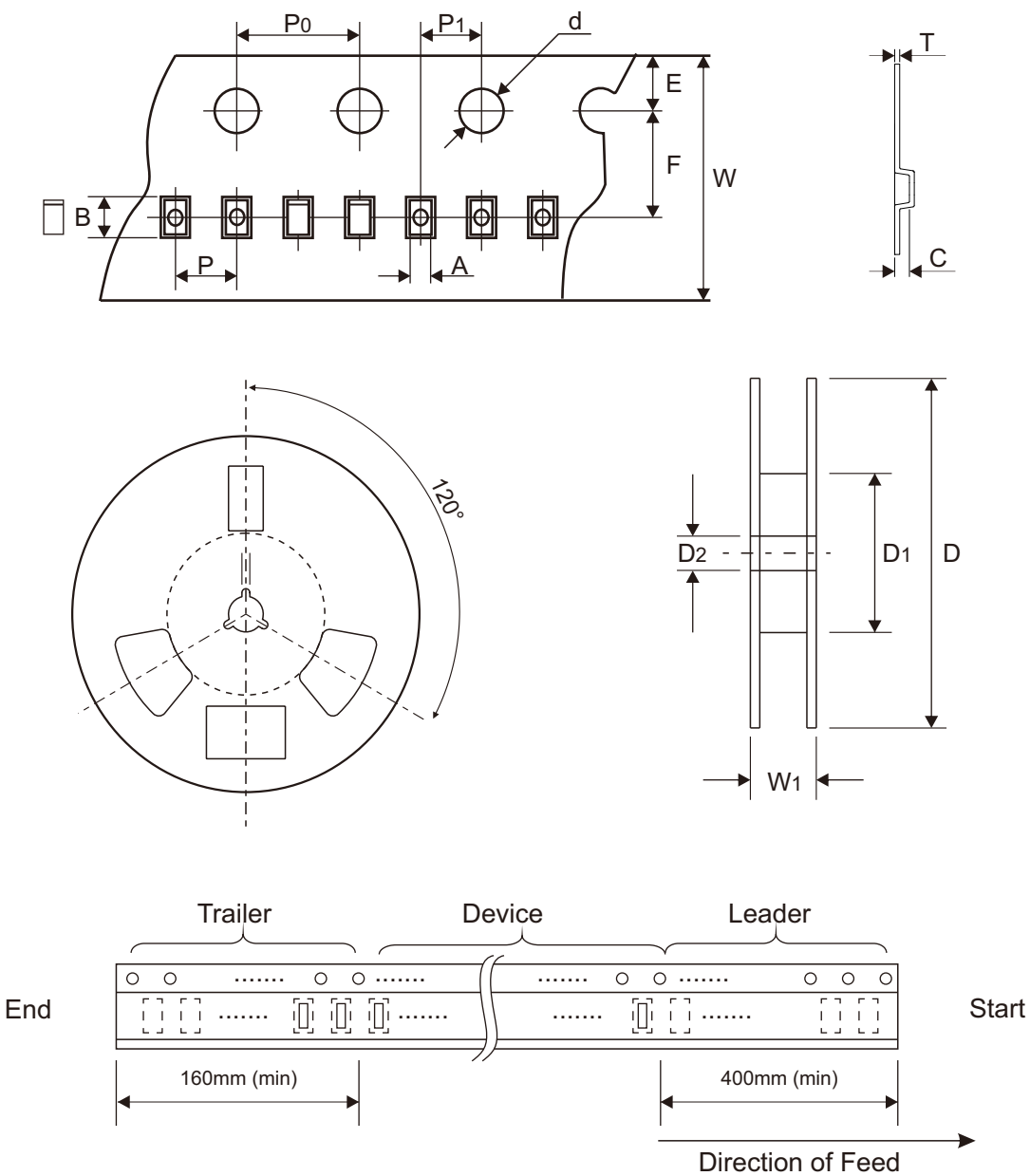


Fig.3 - Power Derating Curve



Reel Taping Specification



DFN1006 -2L	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	0.80 ± 0.05	1.30 ± 0.05	0.70 ± 0.05	1.50 ± 0.10	178.00 ± 1.00	55.00 ± 1.00	13.00 ± 1.00
	(inch)	0.031 ± 0.002	0.051 ± 0.002	0.028 ± 0.002	0.059 ± 0.004	7.008 ± 0.039	2.165 ± 0.039	0.512 ± 0.039

DFN1006 -2L	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	2.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.23 ± 0.02	8.00 ± 0.20	15.80 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.079 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.009 ± 0.009	0.315 ± 0.008	0.622 ± 0.039

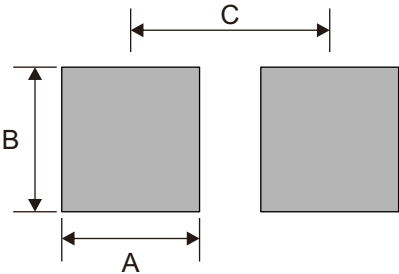
Marking Code

Part Number	Marking Code
CPDQT5V0USBP-HF	5U



Suggested P.C.B. PAD Layout

SIZE	DFN1006-2L	
	(mm)	(inch)
A	0.40	0.016
B	0.60	0.024
C	0.65	0.026



Standard Packaging

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