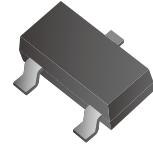


## CPDT-24VE-HF

RoHS Device

Halogen Free



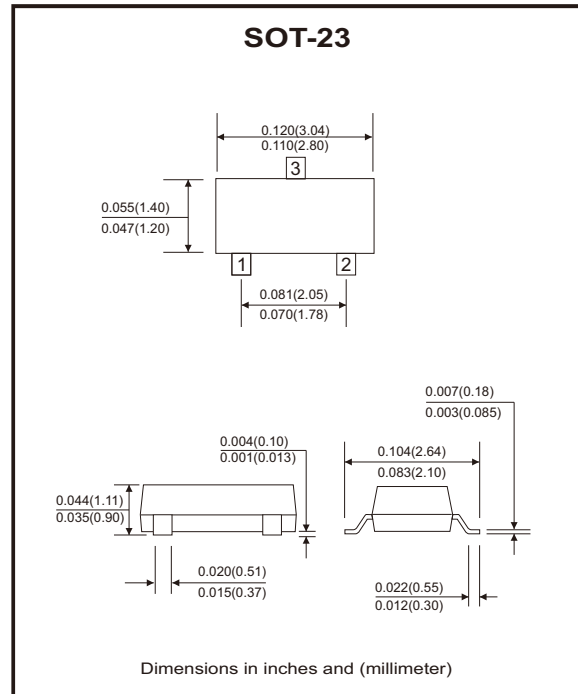
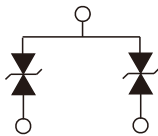
### Features

- Common anode ESD protection.
- IEC61000-4-2 Level 4 ESD protection.
- Surface mount package.
- High component density.

### Mechanical data

- Case: SOT-23 Standard package, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Mounting position: Any.

### Circuit Diagram



### Maximum Rating (at $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Value	Unit
Peak pulse power	$T_P = 8/20\mu\text{s}$	$P_{PP}$	138	W
Peak pulse current	$T_P = 8/20\mu\text{s}$	$I_{PP}$	3	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	$\pm 30$	kV
Operating temperature		$T_J$	$-55 \sim +125$	$^{\circ}\text{C}$
Storage temperature range		$T_{STG}$	$-55 \sim +150$	$^{\circ}\text{C}$

### Electrical Characteristics (at $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse stand-off voltage		$V_{RWM}$			24	V
Breakdown voltage	$I_R = 1\text{mA}$	$V_{BR}$	26.5			V
Reverse leakage current	$V_R = 24\text{V}$	$I_R$			0.1	$\mu\text{A}$
Clamping voltage	$I_{PP} = 1\text{A}, T_P = 8/20\mu\text{s}$ $I_{PP} = 3\text{A}, T_P = 8/20\mu\text{s}$	$V_C$			36 46	V
Junction capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$	$C_J$		13	20	pF

## Rating and Characteristic Curves (CPDT-24VE-HF)

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

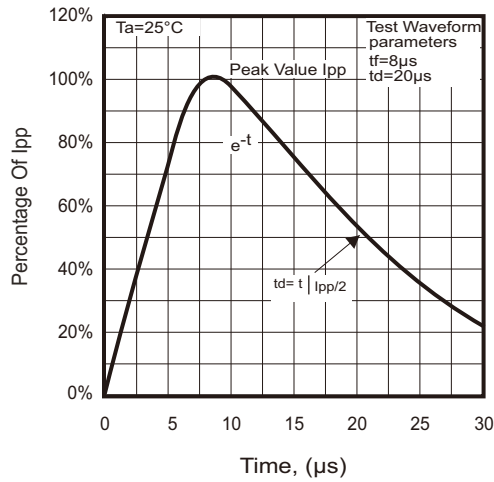


Fig.2 - Power Rating Derating Curve

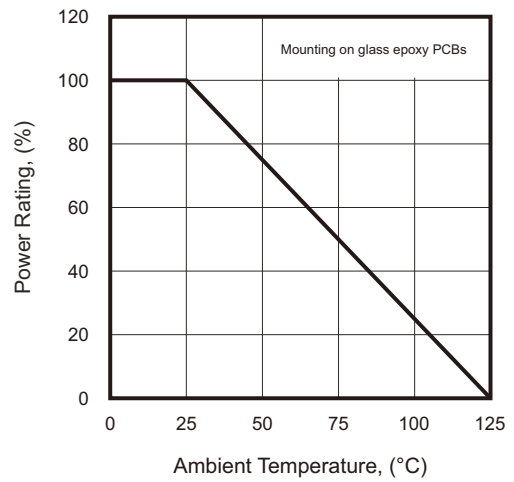


Fig.3 - Clamping Voltage Vs. Peak Pulse Current

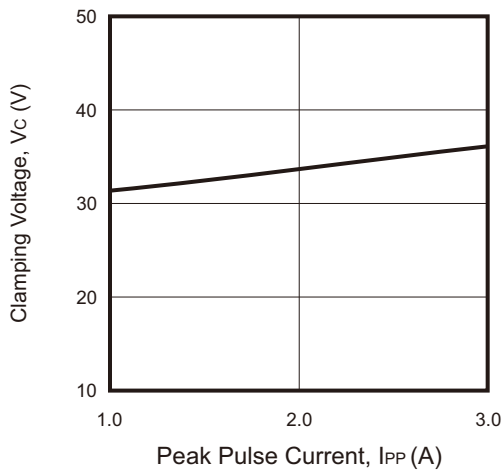
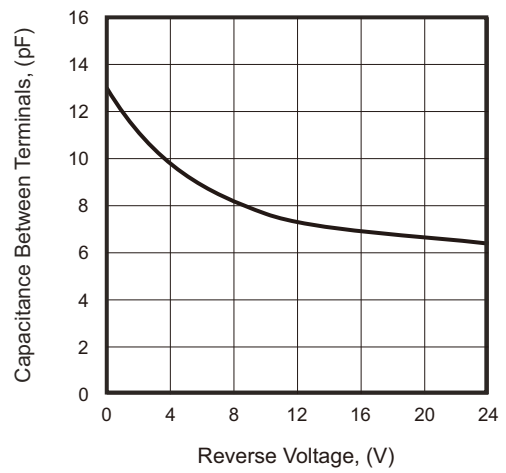
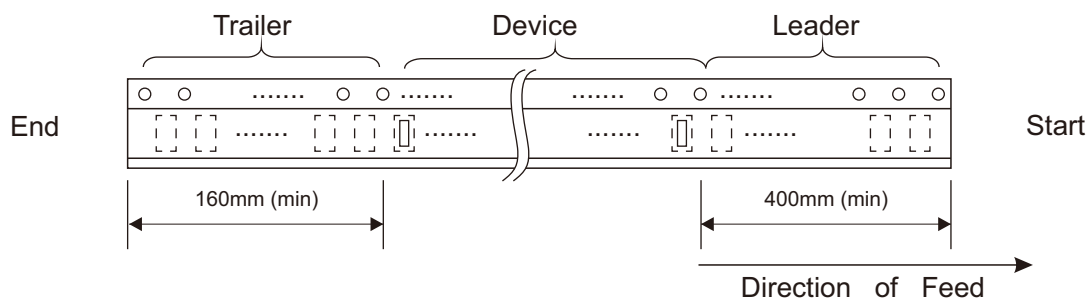
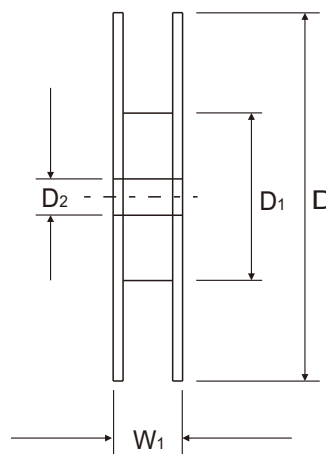
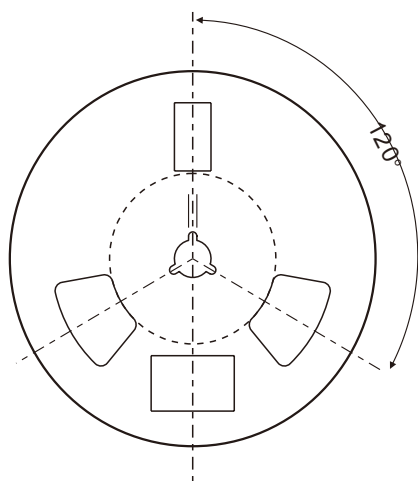
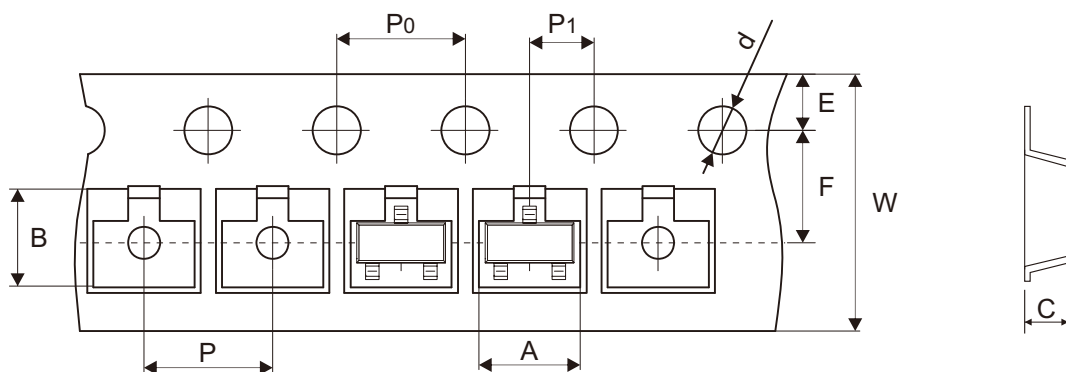


Fig.4 - Capacitance Between Terminals Characteristics



## Reel Taping Specification

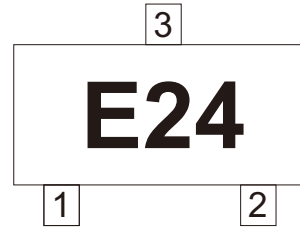


SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 ± 0.10	1.50 + 0.10 - 0.00	178.00 ± 1.00	54.40 ± 0.50	13.00 ± 0.20
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	0.059 + 0.004 - 0.000	7.008 ± 0.039	2.142 ± 0.020	0.512 ± 0.008

SOT-23	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	8.00 + 0.30 - 0.10	13.10 ± 1.30
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.315 + 0.012 - 0.004	0.516 ± 0.051

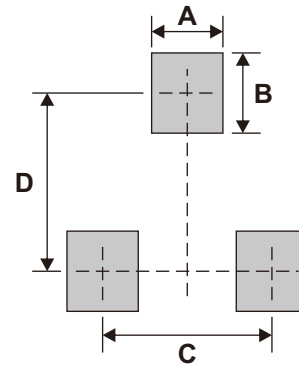
## Marking Code

Part Number	Marking Code
CPDT-24VE-HF	E24



## Suggested PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.80	0.031
B	0.90	0.035
C	1.90	0.075
D	2.00	0.079



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

## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
SOT-23	3,000	7