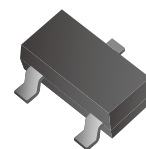


CPDT-5V0LPC-HF

RoHS Device

Halogen Free

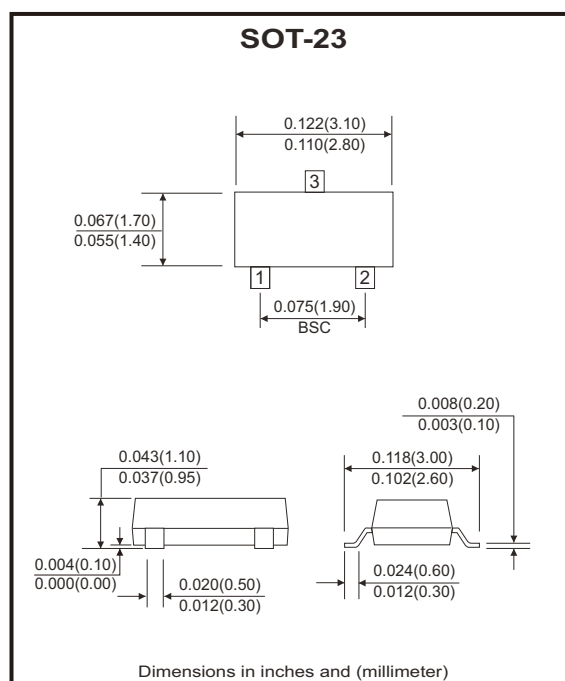


Features

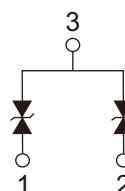
- Bi-directional ESD protection.
- High-speed data line protection.
- IEC61000-4-2 ESD protection $\pm 30\text{KV}$ (Contact).
- Surface mount package.
- Low clamping voltage.
- Response time is typically $< 1\text{ns}$.

Mechanical data

- Case: SOT-23 Standard package, molded plastic.
- Terminals: Matte tin plated Solderable per MIL-STD-750, method 2026.
- Mounting position: Any.
- Weight: 0.0078 grams(approx.).



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}	150	W
Peak pulse current	$T_P = 8/20\mu\text{s}$	I_{PP}	10	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	± 30	kV
Operation temperature range		T_j	$-40 \sim +125$	$^\circ\text{C}$
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
Working peak reverse voltage		V_{RWM}			5	V
Breakdown voltage	$I_T = 5\text{mA}$	V_{BR}	7			V
Reverse leakage current	$V_{RWM} = 5\text{V}$	I_R			1	μA
Clamping voltage	$I_{PP} = 1\text{A}, T_P = 8/20\mu\text{s}$ $I_{PP} = 10\text{A}, T_P = 8/20\mu\text{s}$	V_C			11 15	V
Junction capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$	C_J		1.5	3	pF

Rating and Characteristic Curves (CPDT-5V0LPC-HF)

Fig.1 - 8/20μs Peak Pulse Current
Wave Form Acc. IEC 61000-4-5

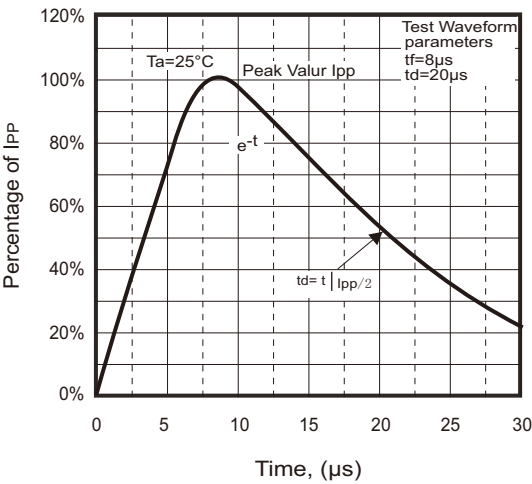


Fig.2 - Power Rating Derating Curve

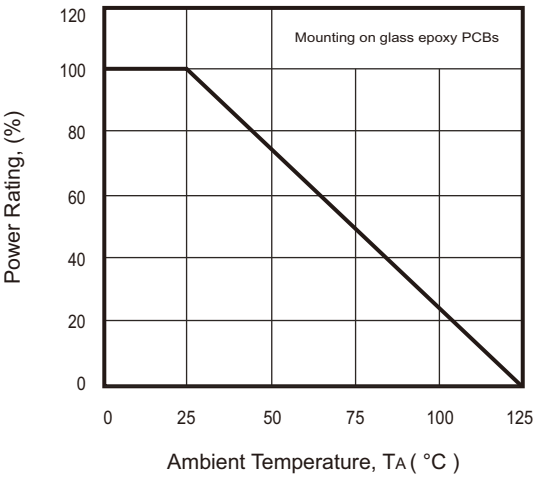


Fig.3 - Clamping Voltage Vs.
Peak Pulse Current

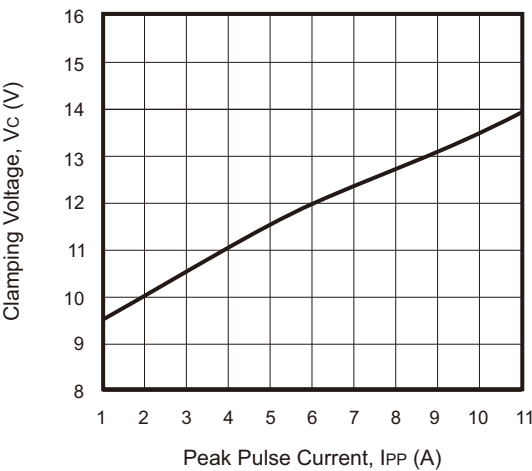
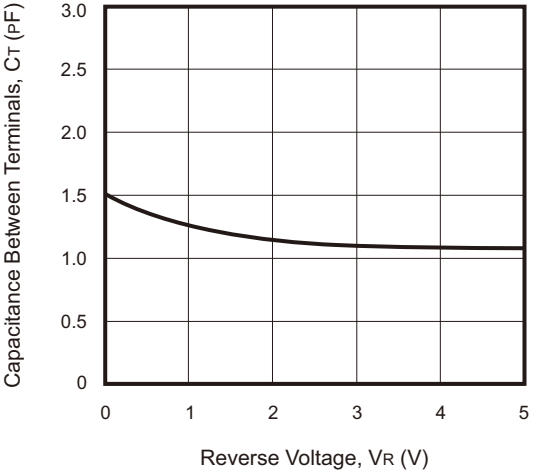
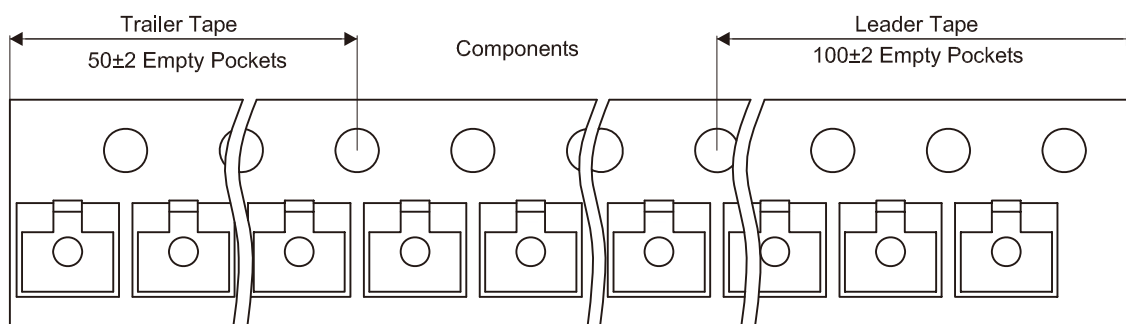
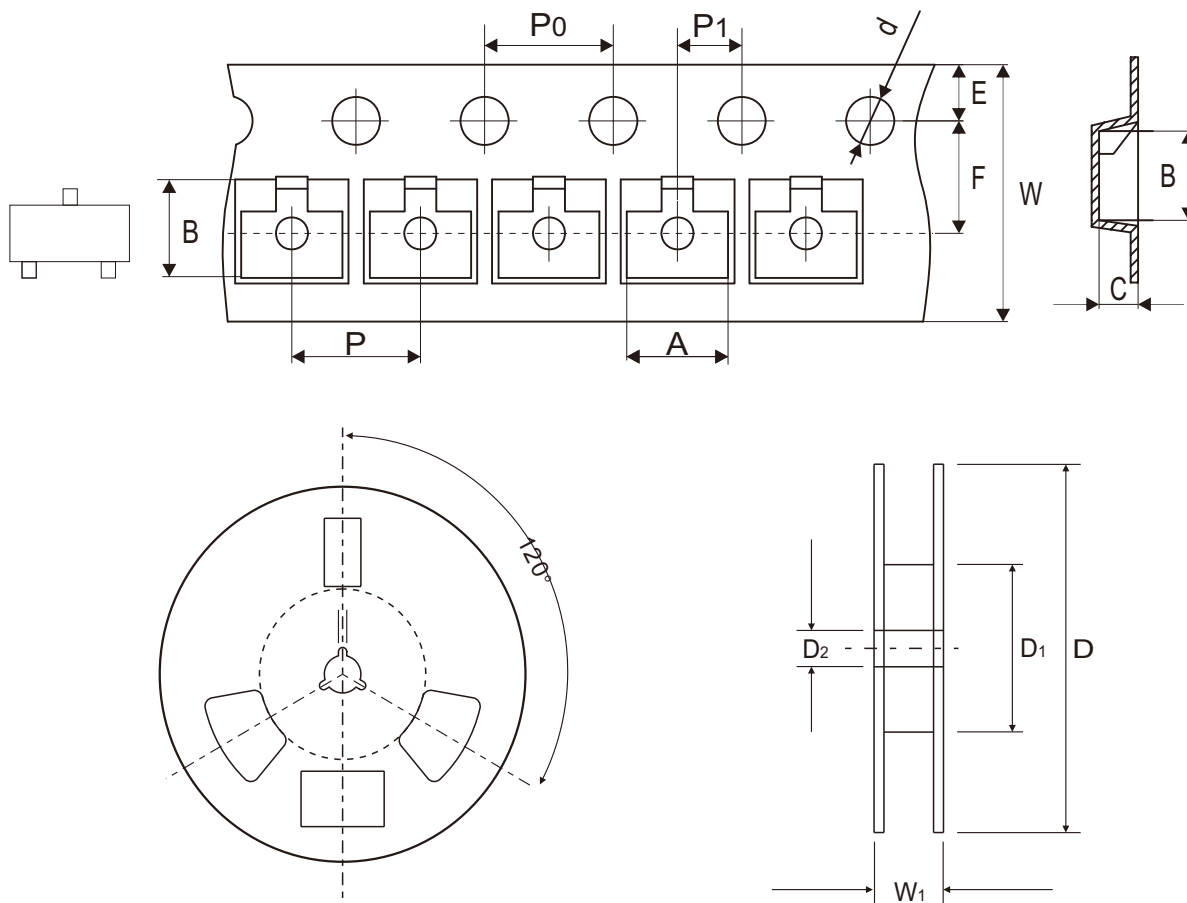


Fig.4 - Capacitance Between
Terminals Characteristics



Reel Taping Specification

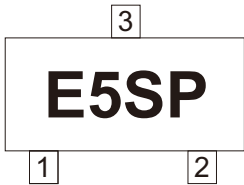


SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.15 ± 0.10	3.15 ± 0.10	1.30 ± 0.10	1.55 ± 0.05	$180.00 + 0.00 - 3.00$	$60.00 + 1.00 - 0.40$	13.00 ± 0.20
	(inch)	0.124 ± 0.004	0.124 ± 0.004	0.051 ± 0.004	0.061 ± 0.002	$7.087 + 0.000 - 0.118$	$2.362 + 0.039 - 0.016$	0.512 ± 0.008

SOT-23	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	8.00 ± 0.20	11.40 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.315 ± 0.008	0.449 ± 0.039

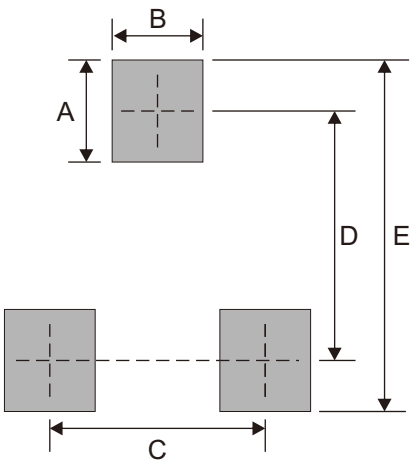
Marking Code

Part Number	Marking Code
CPDT-5V0LPC-HF	E5SP



Suggested PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.90	0.035
B	0.80	0.031
C	1.90	0.075
D	2.20	0.087
E	3.10	0.122



Standard Packaging

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