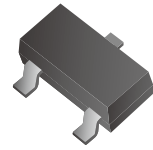


CPDT-12V

RoHS Device



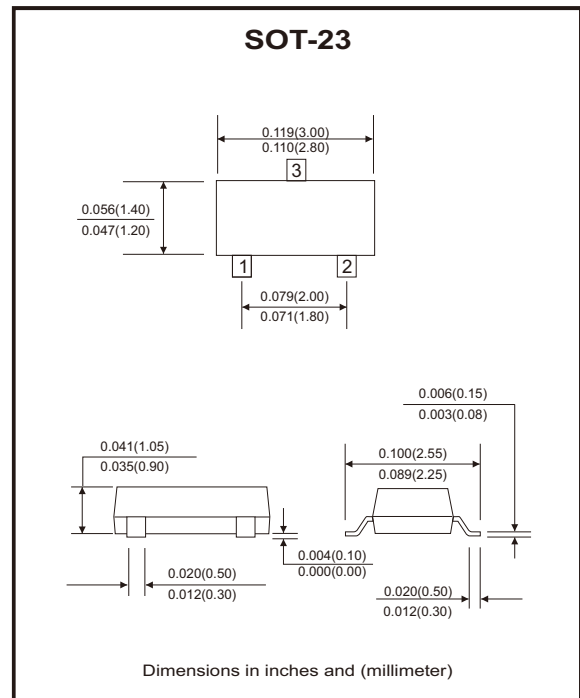
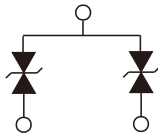
Features

- Common anode ESD protection.
- IEC 61000-4-2 Level 4 ESD protection.
- Surface mount package.
- High component density.

Mechanical data

- Case: SOT-23 Standard package, molded plastic.
- Terminals: Tin plated, 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}	25	W
Peak pulse current	$T_P = 8/20\mu\text{s}$	I_{PP}	1	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	± 16 ± 8	kV
Operating temperature range		T_J	-55 to +125	$^{\circ}\text{C}$
Storage temperature range		T_{STG}	-55 to +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}			12	V
Breakdown voltage	$I_R = 1\text{mA}$	V_{BR}	13	17		V
Reverse leakage current	$V_R = 12\text{V}$	I_R		0.1	2.0	μA
Clamping voltage	$I_{PP} = 1\text{A}$, $T_P = 8/20\mu\text{s}$	V_C			25	V
Junction capacitance	$V_R = 0\text{V}$, $f = 1\text{MHz}$	C_J		12		pF

Typical Rating and Characteristic Curves (CPDT-12V)

Fig.1 - 8/20 μ s Peak pulse Current
Waveform acc. IEC 61000-4-5

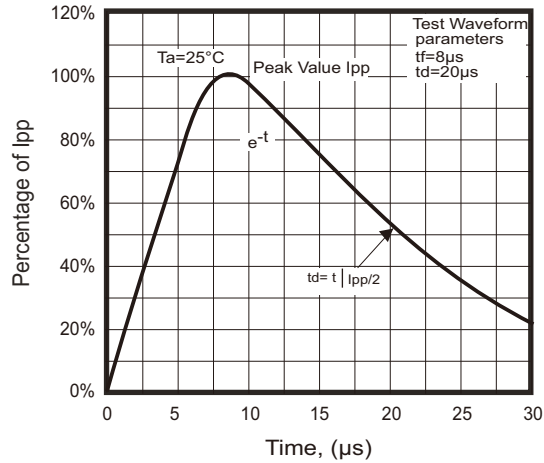


Fig. 2 - Reverse Characteristics

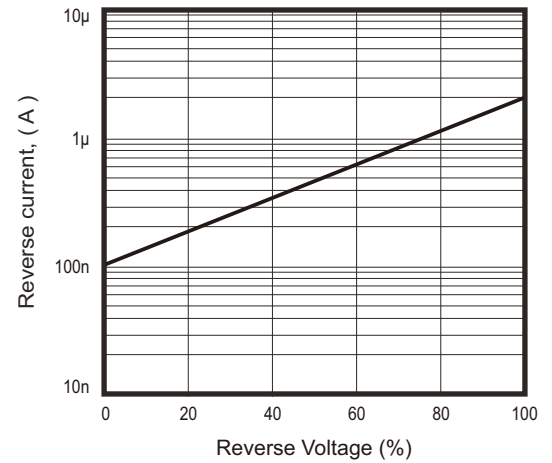


Fig.3 - Capacitance Between
Terminals Characteristics

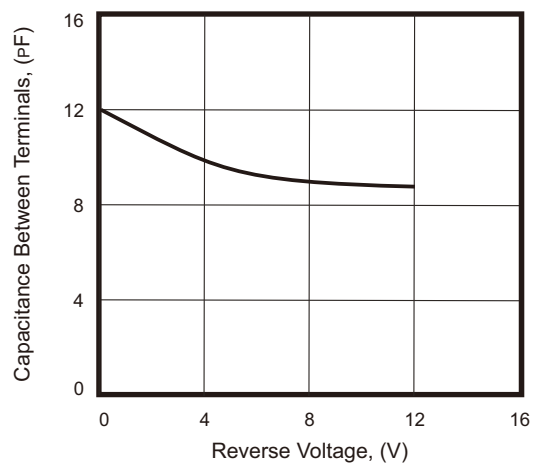
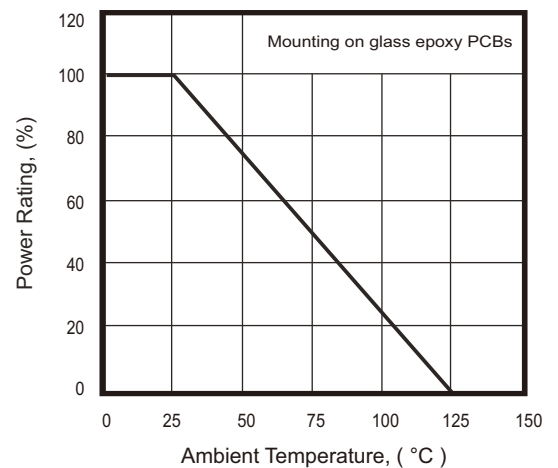
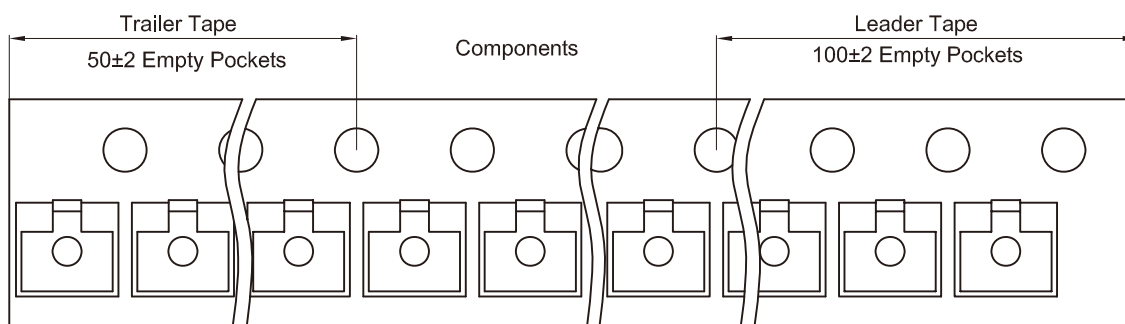
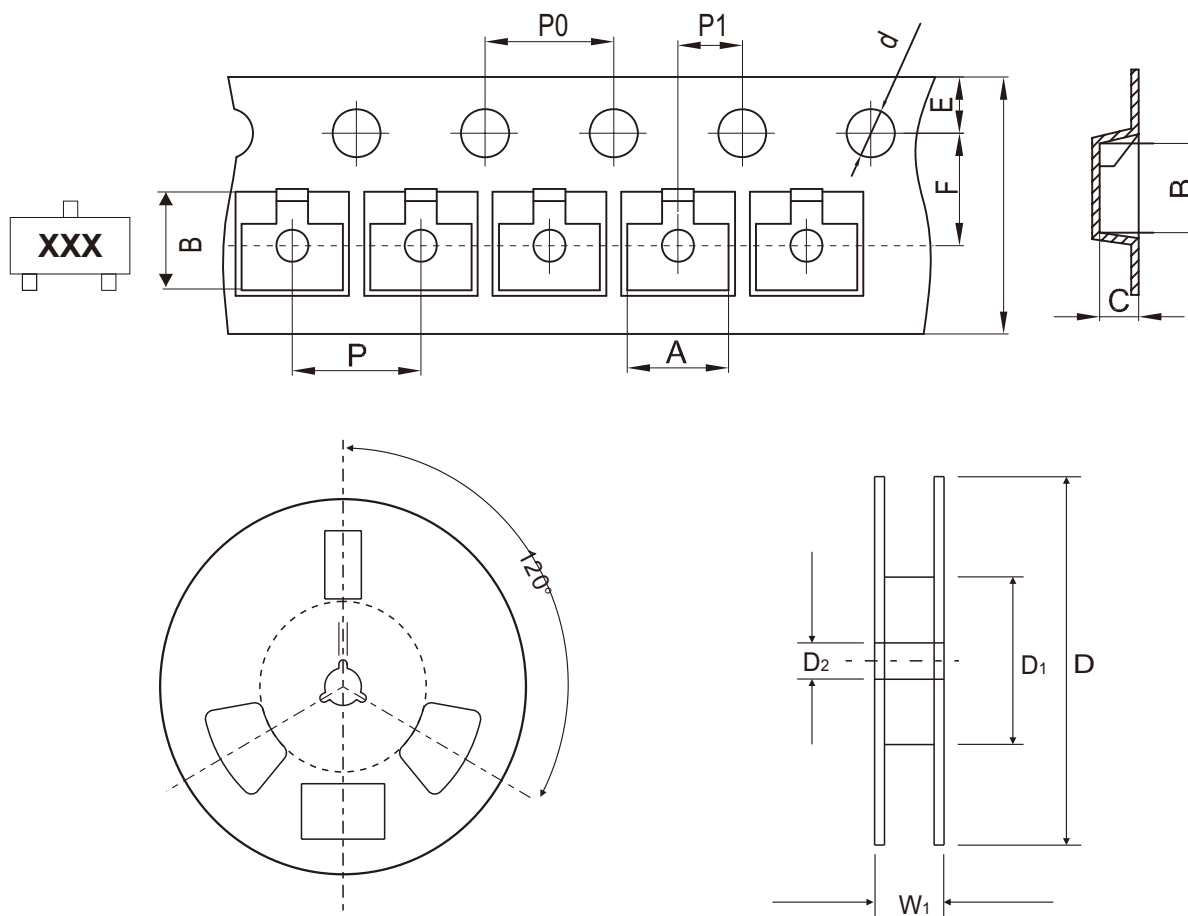


Fig.4 - Power Rating Derating Curve



Reel Taping Specification

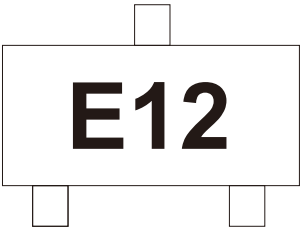


SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 ± 0.10	1.50 ± 0.10	178 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

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 ± 0.10	$8.00 \pm 0.30 / - 0.10$	12.30 ± 1.0
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	$0.315 \pm 0.012 / - 0.004$	0.484 ± 0.039

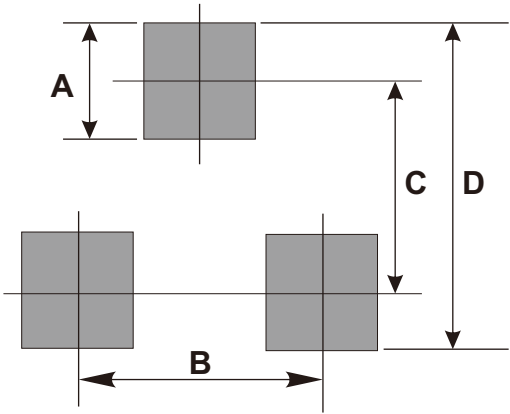
Marking Code

Part Number	Marking Code
CPDT-12V	E12



Suggested P.C.B. PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.80	0.031
B	1.90	0.075
C	2.02	0.080
D	2.82	0.111



Standard Packaging

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