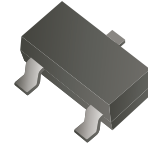


## CPDT-3V3UB-HF Thru. CPDT-36VUB-HF

**RoHS Device**  
**Halogen Free**

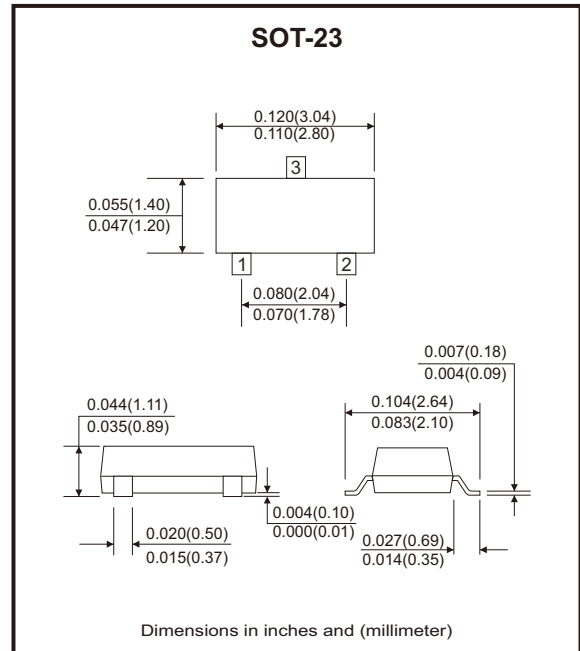


### Features

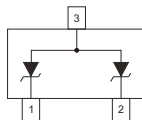
- IEC61000-4-2 (ESD)  $\pm 15\text{kV}$  (air),  $\pm 8\text{kV}$ (contact).
- IEC61000-4-4 (EFT) 40A (5/50ns).
- 350W peak pulse power per (tp=8/20 $\mu\text{s}$ ).
- Protects one bidirectional line or two unidirectional lines.
- Low clamping voltage.
- Working voltages: 3.3V~36V
- Low leakage current.

### Mechanical data

- Case: SOT-23 package.
- Flammability rating: UL 94V-0.
- High temperature soldering guaranteed: 260°C/10s.



### Circuit Diagram



### Maximum Rating (at Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
ESD per IEC 61000-4-2 (air)	V <sub>ESD</sub>	$\pm 15$	kV
ESD per IEC 61000-4-2 (contact)		$\pm 8$	
Peak pulse power (8/20 $\mu\text{s}$ )	P <sub>PP</sub>	350	W
Operating temperature range	T <sub>OPT</sub>	-55 to +150	°C
Storage temperature range	T <sub>STG</sub>	-55 to +150	°C
Lead solder temperature	T <sub>L</sub>	260 (10 sec.)	°C

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

Part No.	V <sub>RWM</sub> (V) Max	V <sub>B</sub> (V) Min	I <sub>T</sub> (mA)	V <sub>C</sub> @1A (V)	V <sub>C</sub> (V)		I <sub>R</sub> (μA) Max	C <sub>J</sub> (pF) Max
				Max	Max	@A		
CPDT-3V3UB-HF	3.3	4	1	7.0	10.5	20	40	450
CPDT-5V0UB-HF	5	6	1	9.8	18	17	10	300
CPDT-8V0UB-HF	8	8.5	1	13.4	24	15	2	240
CPDT-12VUB-HF	12	13.3	1	19	32	11	1	130
CPDT-15VUB-HF	15	16.7	1	24	38	10	1	120
CPDT-18VUB-HF	18	20	1	29	45	9	1	100
CPDT-20VUB-HF	20	22.3	1	35	50	8	1	90
CPDT-24VUB-HF	24	26.7	1	43	52	7	1	80
CPDT-36VUB-HF	36	40	1	60	75	5	1	60

## Rating and Characteristic Curves (CPDT-3V3UB-HF Thru. CPDT-36VUB-HF)

Fig.1 - Pulse Waveform

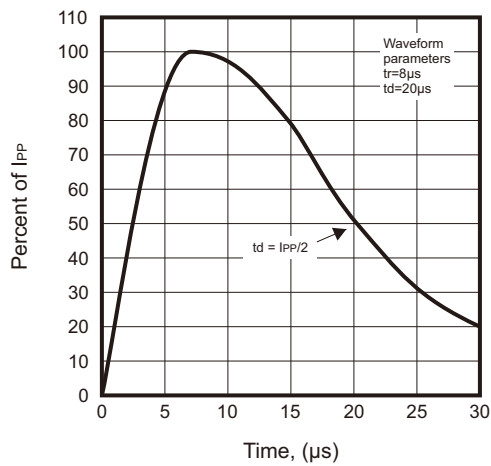
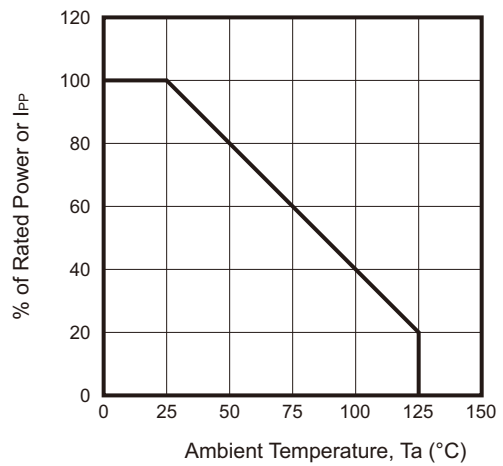
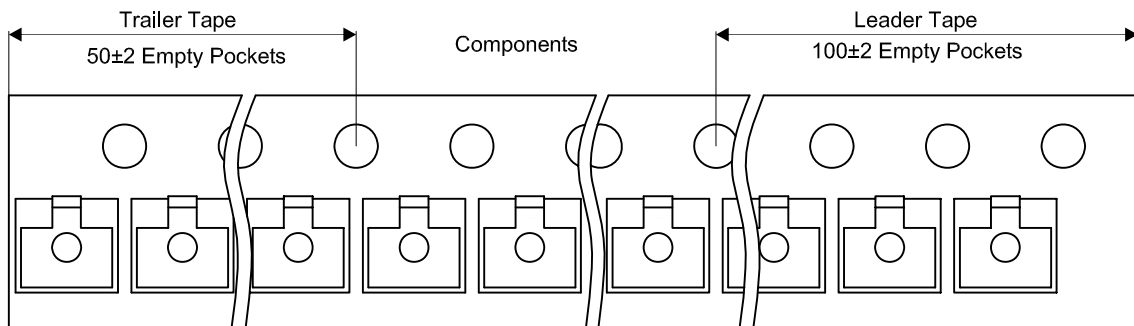
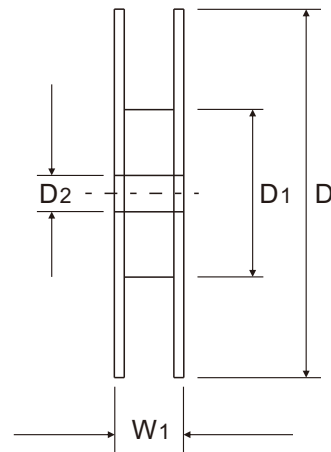
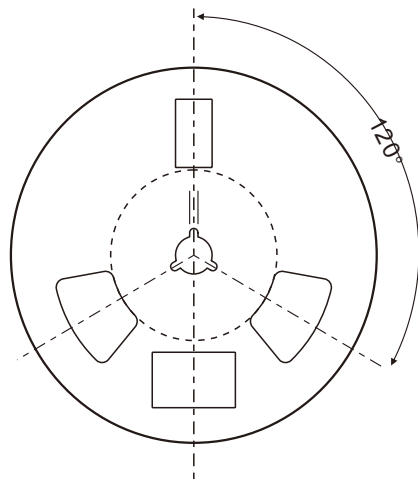
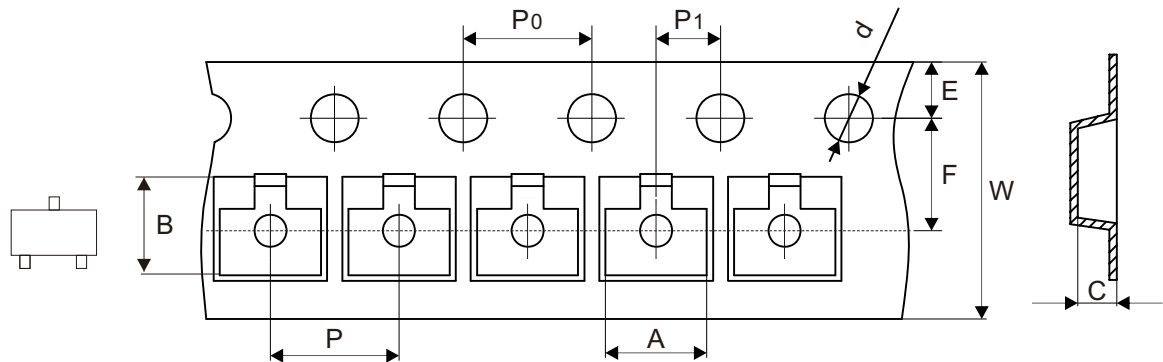


Fig.2 - Power Derating Curve



## Reel Taping Specification



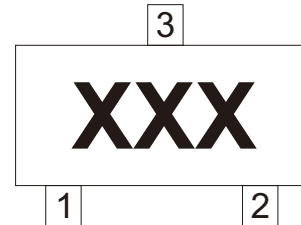
SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 ± 0.10	1.50 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

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 + 0.30 - 0.10	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.315 + 0.012 - 0.004	0.484 ± 0.039

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

## Marking Code

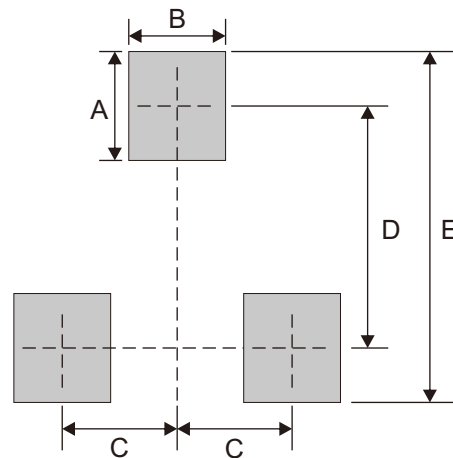
Part Number	Marking Code
CPDT-3V3UB-HF	M03
CPDT-5V0UB-HF	M05
CPDT-8V0UB-HF	M08
CPDT-12VUB-HF	M12
CPDT-15VUB-HF	M15
CPDT-18VUB-HF	M18
CPDT-20VUB-HF	M20
CPDT-24VUB-HF	M24
CPDT-36VUB-HF	M36



xxx = Product type marking code

## Suggested PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.90	0.035
B	0.80	0.031
C	0.95	0.037
D	2.00	0.079
E	2.90	0.114



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