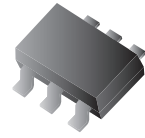


CPDT6-3V3UP

RoHS Device



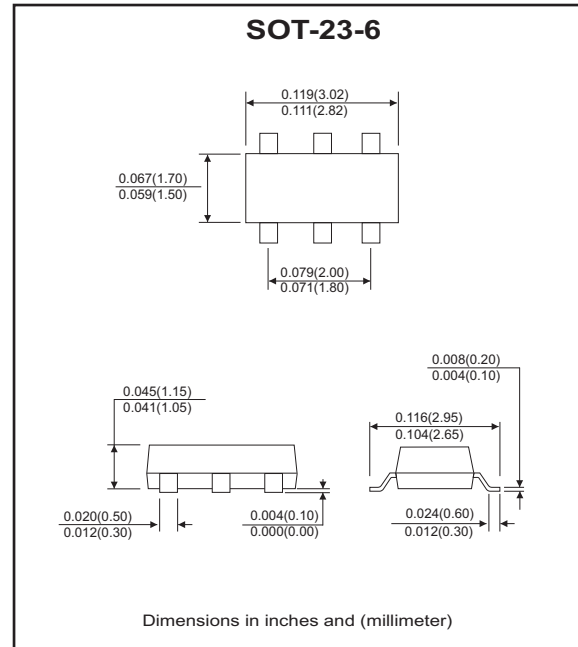
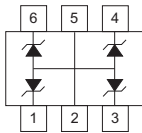
Features

- IEC61000-4-2 Level 4 ESD protection.
- Working voltage: 3.3V
- Low leakage current.
- Low operating and clamping voltages.

Mechanical data

- Case: SOT-23-6 standard package ,molded plastic.
- Terminals: Tin plated, solderable per MIL-STD-750, method 2026.
- Mounting position: Any
- Weight: 0.015 gram(approx.).

Circuit Diagram



Maximum Ratings (at TA=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak pulse power (tp = 8/20 us)	P _{PP}	40	W
Peak pulse current (tp = 8/20 us)	I _{PP}	5	A
ESD per IEC 61000-4-2(Air) ESD per IEC 61000-4-2(Contact)	V _{ESD}	±20 ±15	kV
Operating temperature	T _J	-55 to +125	°C
Storage temperature	T _{STG}	-55 to +125	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse stand-off voltage		V _{RWM}			3.3	V
Punch-through voltage	I _{PT} = 2uA	V _{PT}	3.5			V
Snap-back voltage	I _{SB} = 50mA	V _{SB}	2.8			V
Reverse leakage current	V _{RWM} = 3.3V	I _R		0.05	0.5	uA
Clamping voltage	I _{PP} = 1 A, tp=8/20us	V _C			5.5	V
	I _{PP} = 5 A, tp=8/20us	V _C			8.0	V
Reverse clamping voltage	I _{PPR} = 1 A, tp=8/20us	V _{CR}			2.4	V
Junction capacitance	V _R = 0 V, f = 1MHz	C _j		12	16	pF

RATING AND CHARACTERISTIC CURVES (CPDT6-3V3UP)

Fig. 1 - Non-repetitive max. peak pulse power vs. pulse time

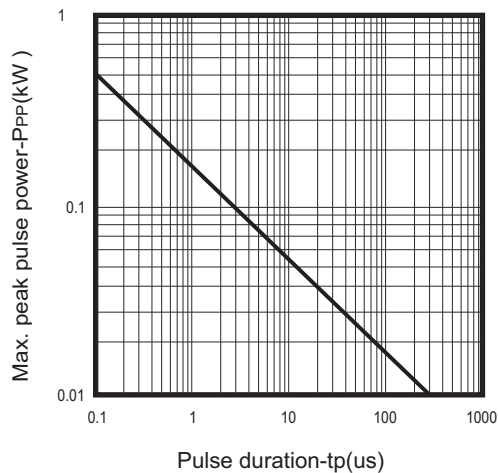


Fig. 2 - Power rating derating curve

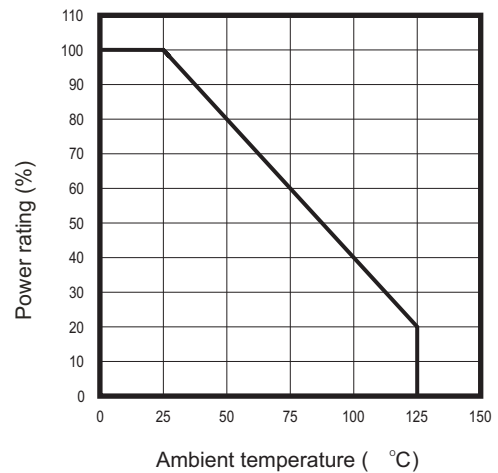


Fig.3 - Clamping voltage vs. peak pulse current

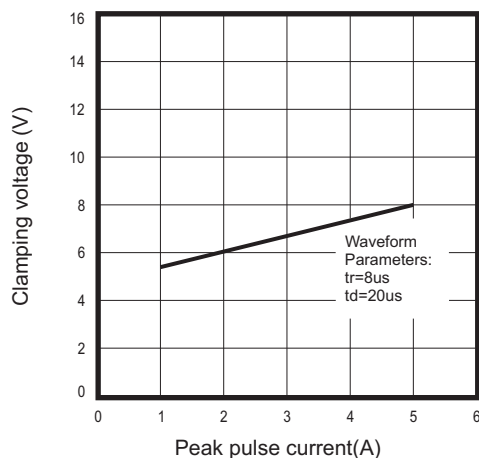


Fig.4 - Forward voltage vs. Forward current

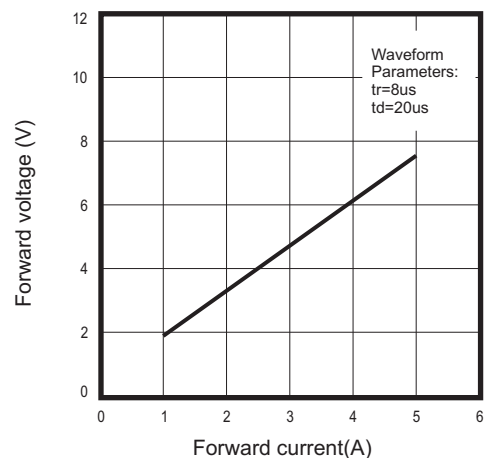
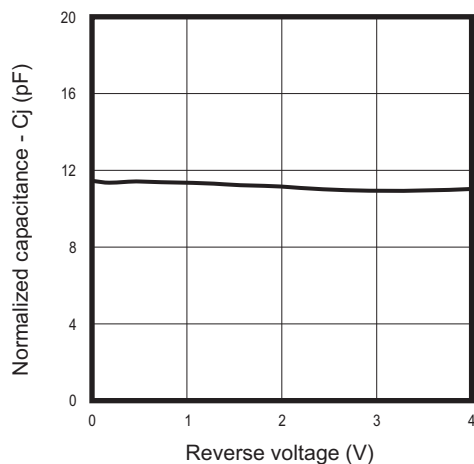
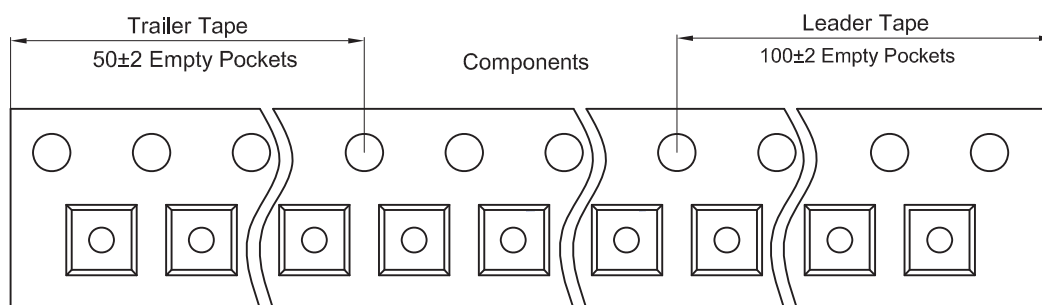
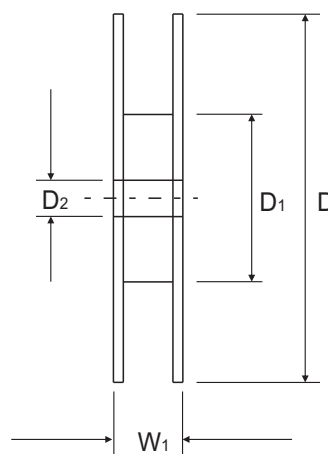
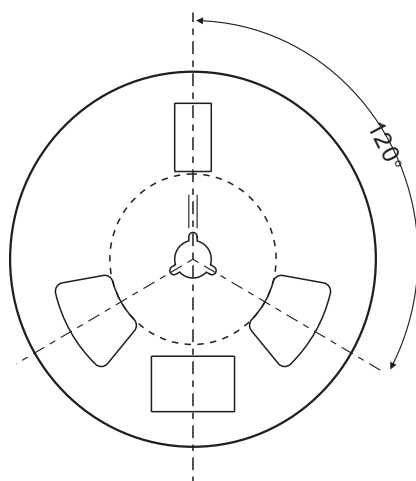
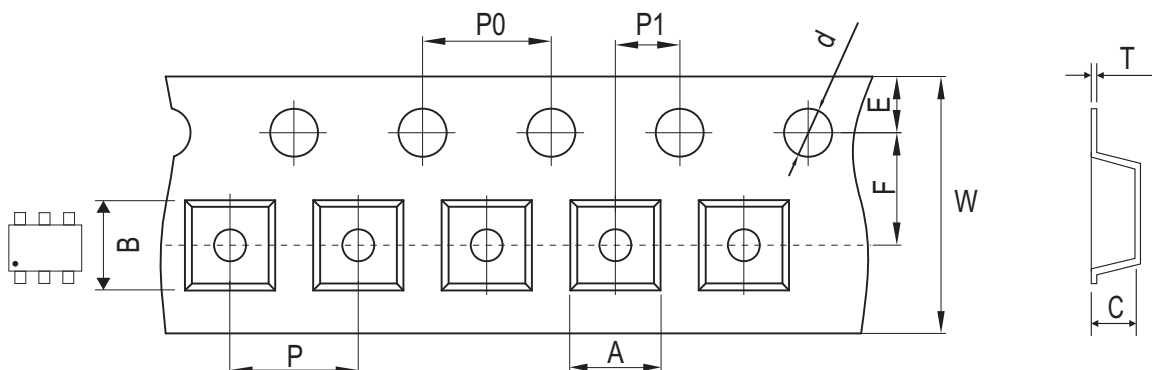


Fig.5 - Junction capacitance vs. reverse voltage



Reel Taping Specification



SOT-23-6	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.17 ± 0.10	3.23 ± 0.10	1.37 ± 0.10	1.50 ± 0.05	$180.0 + 0.00 / - 0.30$	60.00 ± 0.50	13.00 ± 0.20
	(inch)	0.125 ± 0.004	0.127 ± 0.004	0.054 ± 0.004	0.059 ± 0.002	$7.087 + 0.00 / - 0.012$	2.362 ± 0.020	0.512 ± 0.008

SOT-23-6	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	$8.00 + 0.30 / - 0.10$	12.30 ± 0.20
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	$0.315 + 0.012 / - 0.004$	0.484 ± 0.008

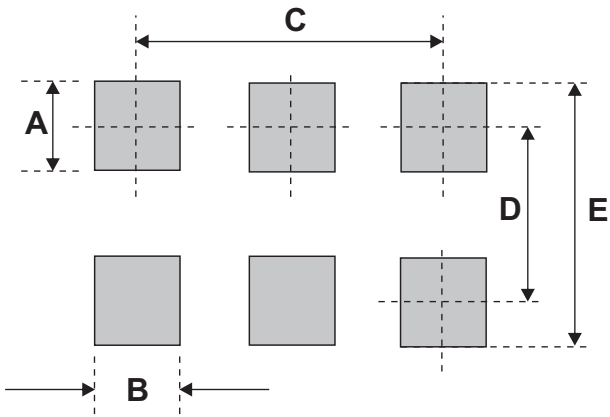
Marking Code

Part Number	Marking Code
CPDT6-3V3UP	E3V3



Suggested PAD Layout

SIZE	SOT-23-6	
	(mm)	(inch)
A	1.10	0.043
B	0.60	0.024
C	1.90	0.075
D	2.50	0.098
E	3.60	0.142



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-23-6	3,000	7