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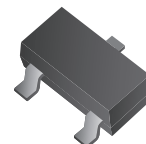
[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

## SMD ESD Protection Diode



# CPDT-5V0C-HF

RoHS Device  
 Halogen Free



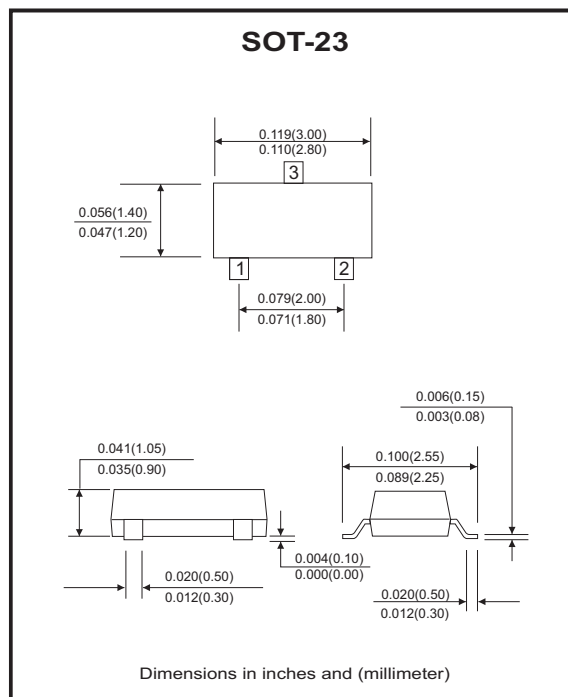
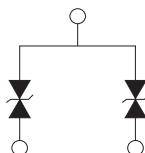
### Features

- Bi-directional ESD protection.
- IEC61000-4-2 Level 4 ESD protection
- Operating voltage: 5V.

### Mechanical data

- Case: SOT-23 Standard package, molded plastic.
- Terminals: solderable per MIL-STD-750, method 2026.
- Marking code: E05
- Mounting position: Any.
- Weight: 0.0078 gram (approx.).

### Circuit diagram



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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Diode breakdown voltage	I <sub>R</sub> = 1mA	V <sub>BD</sub>	6.1	7.0		V
Leakage current	V <sub>R</sub> = 5V	I <sub>L</sub>		0.1	2.0	uA
Junction capacitance	V <sub>R</sub> = 0V, f = 1MHz	C <sub>T</sub>		25	30	pF
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD			16 8	kV
Operation temperature		T <sub>J</sub>			125	°C
Storage temperature		T <sub>STG</sub>	-55		150	°C

# SMD ESD Protection Diode



## RATING AND CHARACTERISTIC CURVES (CPDT-5V0C-HF)

Fig. 1 - Reverse characteristics

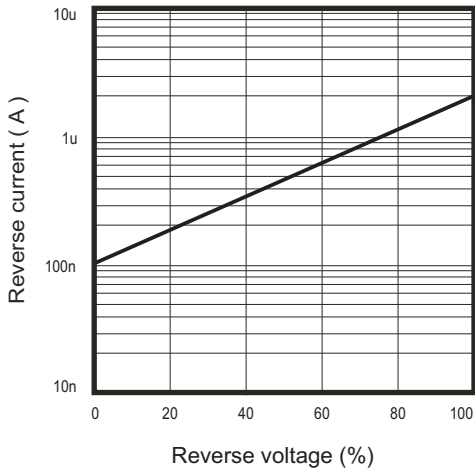


Fig. 2 - Capacitance between terminals characteristics

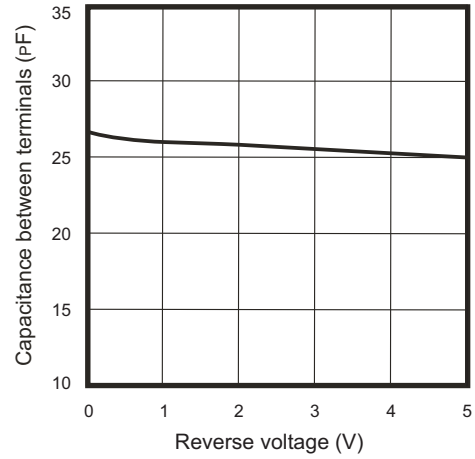
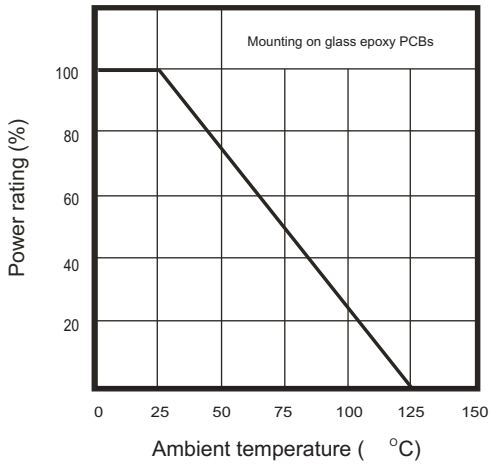


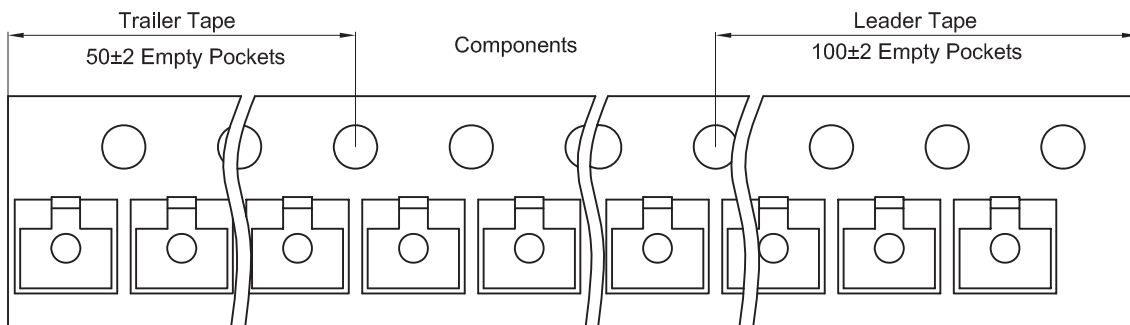
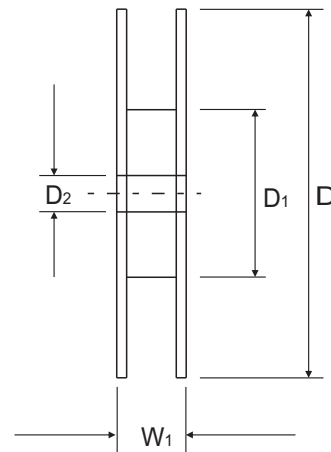
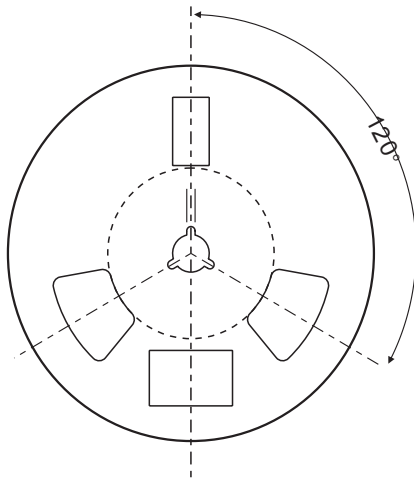
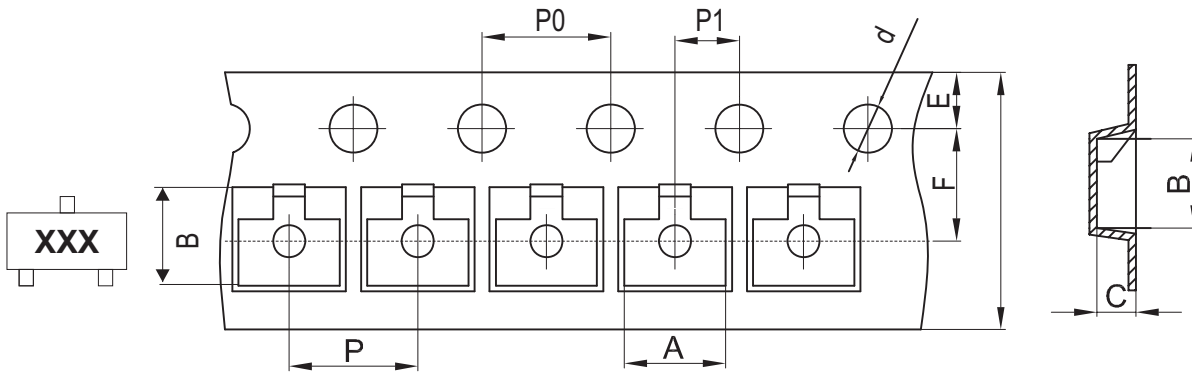
Fig. 3 - Power rating derating curve



# SMD ESD Protection Diode



## Reel Taping Specification



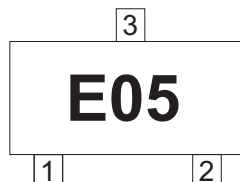
SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 ± 0.10	1.50 ± 0.10	178 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

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 + 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 + 0.012 / - 0.004	0.484 ± 0.039

## SMD ESD Protection Diode

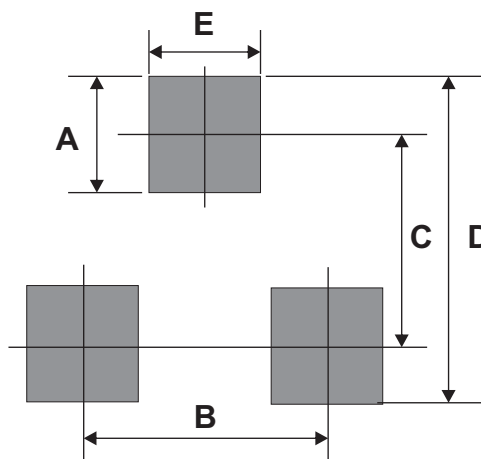
### Marking Code

Part Number	Marking Code
CPDT-5V0C-HF	E05



### Suggested 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
E	0.80	0.031



### Standard Packaging

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