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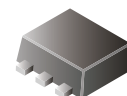
[sales@integrated-circuit.com](mailto:sales@integrated-circuit.com)

## SMD ESD Protection Diode



# CPDH6-5V0U-HF

RoHS Device  
 Halogen Free

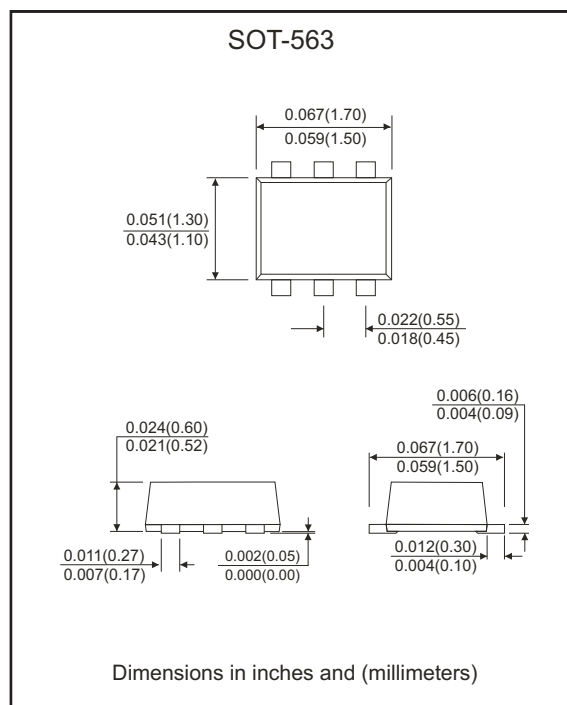


### Features

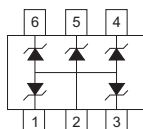
- IEC61000-4-2 Level 4 ESD protection
- Surface mount package.
- High component density.

### Mechanical data

- Case: SOT-563 Standard package, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Marking code: E5U
- Mounting position: Any.
- Weight: 0.0034 gram (approx.).



### Circuit diagram



## Maximum Rating and Electrical Characteristics

(at TA=25°C unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Diode breakdown voltage	V <sub>BD</sub>	I <sub>R</sub> = 1mA	6.1			V
Leakage current	I <sub>L</sub>	V <sub>R</sub> = 3V		0.1	1.0	uA
Forward voltage	V <sub>F</sub>	I <sub>F</sub> = 10mA			1.2	V
Junction capacitance	C <sub>T</sub>	V <sub>R</sub> = 0V, f = 1MHz		60	80	pF
Clamping voltage	V <sub>C</sub>	I <sub>PP</sub> = 1A, T <sub>P</sub> = 8/20us I <sub>PP</sub> = 8A, T <sub>P</sub> = 8/20us			8 10	V
ESD capability	ESD	IEC 61000-4-2(air) IEC 61000-4-2(contact)			15 8	kV
Peak pulse power	P <sub>PP</sub>				80	W
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 (CPDH6-5V0U-HF)

Fig. 1 - 8/20us Peak pulse current waveform acc. IEC 61000-4-5

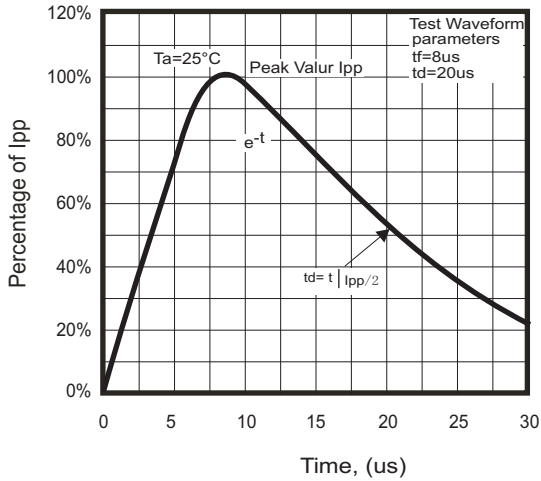


Fig.2 - Power rating derating curve

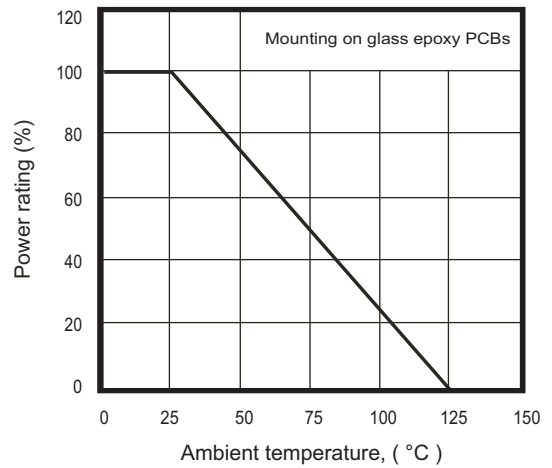


Fig.3 - Clamping voltage vs. peak pulse current

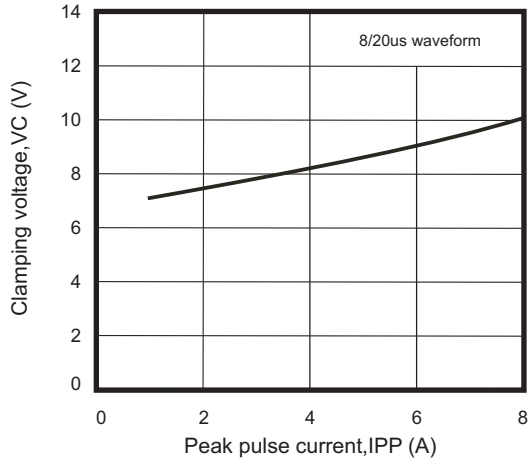
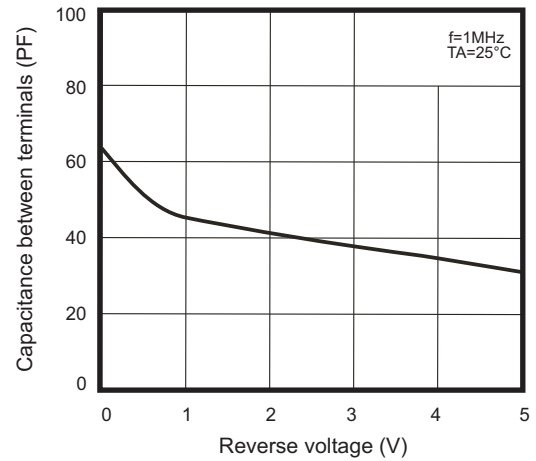


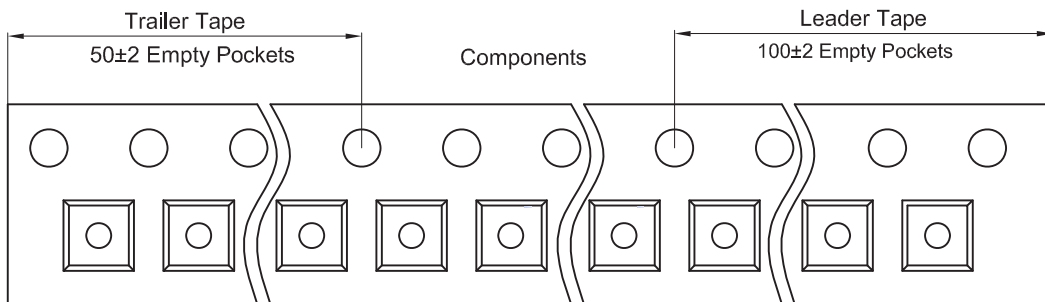
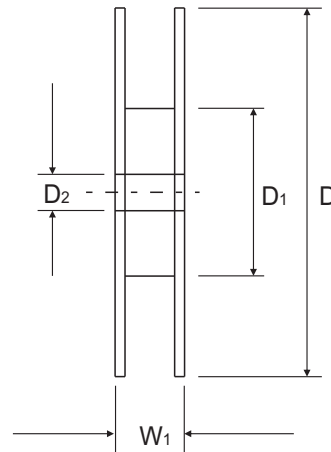
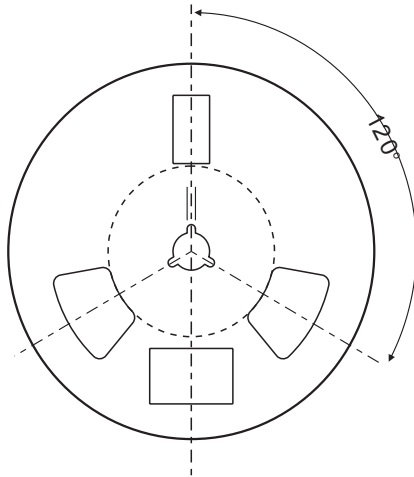
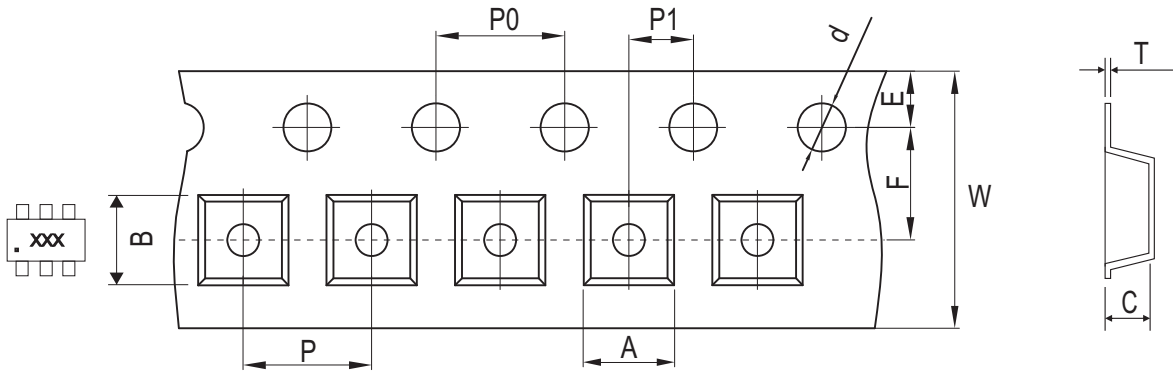
Fig.4 - Capacitance between terminals characteristics



# SMD ESD Protection Diode



## Reel Taping Specification



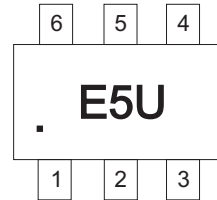
SOT-563	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.78 ± 0.10	1.78 ± 0.10	0.69 ± 0.10	1.50 ± 0.10	178 ± 2.00	54.4 ± 1.00	13.0 ± 1.00
	(inch)	0.070 ± 0.004	0.070 ± 0.004	0.027 ± 0.004	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.040	0.512 ± 0.040

SOT-563	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 ± 0.10	8.00 ± 0.10	12.30 ± 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 ± 0.004	0.567 ± 0.040

## SMD ESD Protection Diode

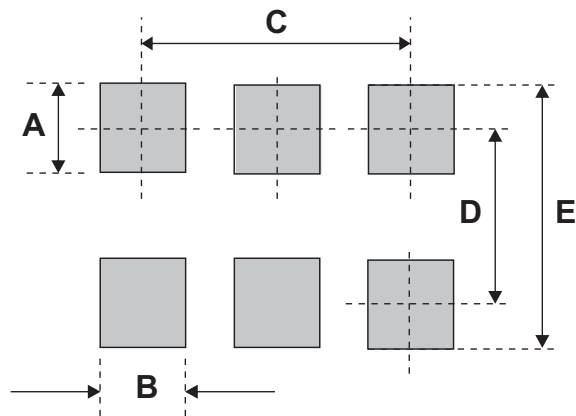
### Marking Code

Part Number	Marking Code
CPDH6-5V0U-HF	E5U



### Suggested PAD Layout

SIZE	SOT-563	
	(mm)	(inch)
A	0.30	0.012
B	0.30	0.012
C	1.00	0.039
D	1.40	0.055
E	1.70	0.067



### Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
SOT-563	3,000	7