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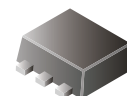
sales@integrated-circuit.com

SMD ESD Protection Diode



CPDH6-5V0U

RoHS Device

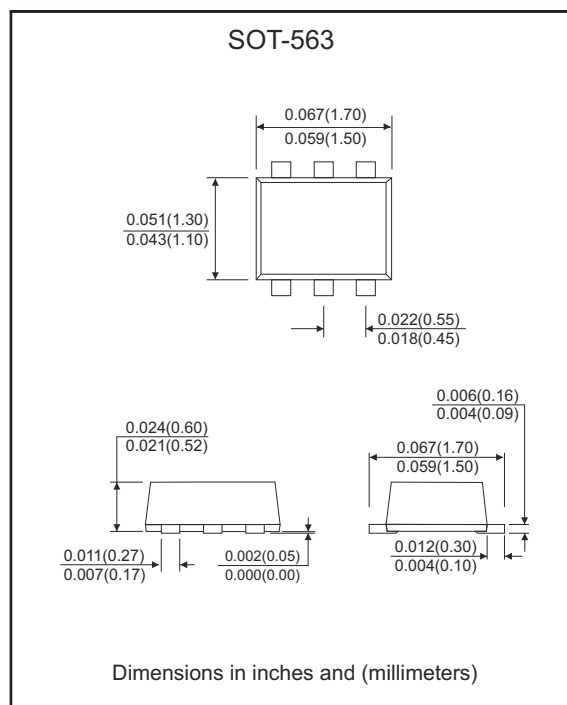


Features

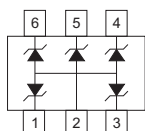
- IEC61000-4-2 Level 4 ESD protection.
- Surface mount package.
- High component density.

Mechanical data

- Case: SOT-563 Standard package, molded plastic.
- Terminals: Tin plated, 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 _{BD}	I _R = 1mA	6.1		7.1	V
Leakage current	I _L	V _R = 3V		0.1	1.0	uA
Forward voltage	V _F	I _F = 5uA			1.2	V
Junction capacitance	C _T	V _R = 0V, f = 1MHz		60	80	pF
Clamping voltage	V _C	I _{PP} = 1A, T _P =8/20us I _{PP} = 8A, T _P =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 _{PP}				80	W
Operation temperature	T _J				125	°C
Storage temperature	T _{STG}		-55		150	°C

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RATING AND CHARACTERISTIC CURVES (CPDH6-5V0U)

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

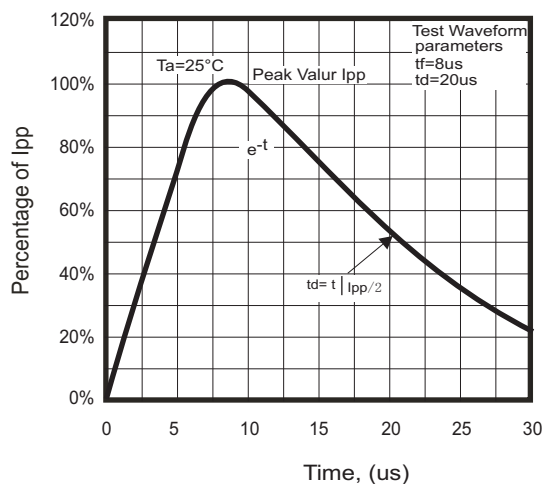


Fig.2 - Power rating derating curve

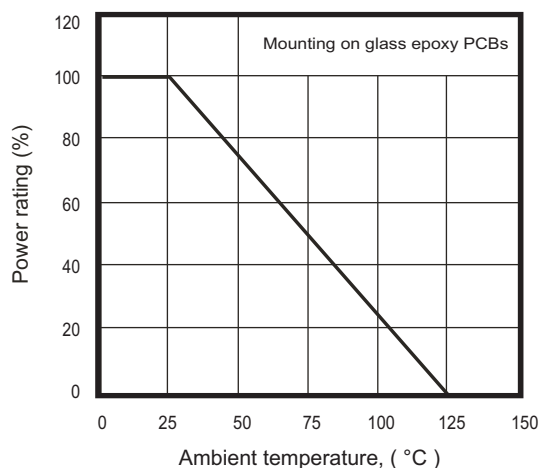


Fig.3 - Clamping voltage vs. peak pulse current

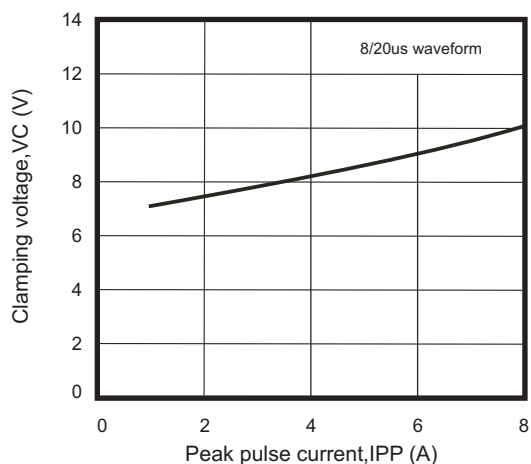
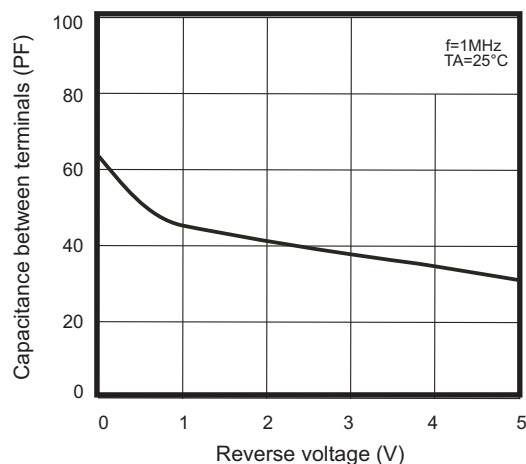
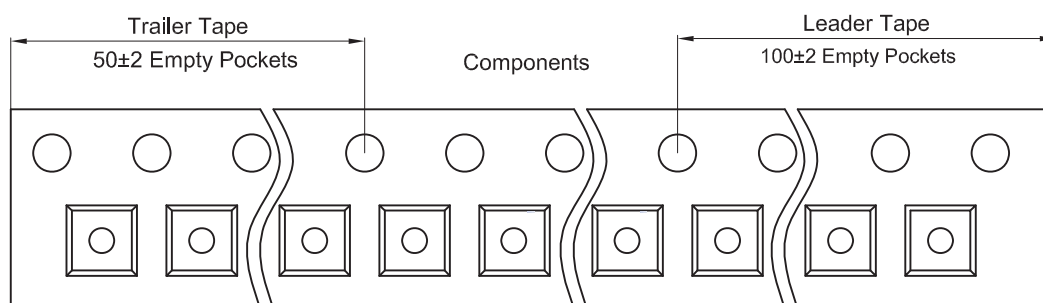
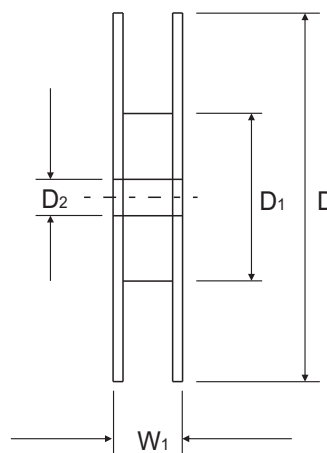
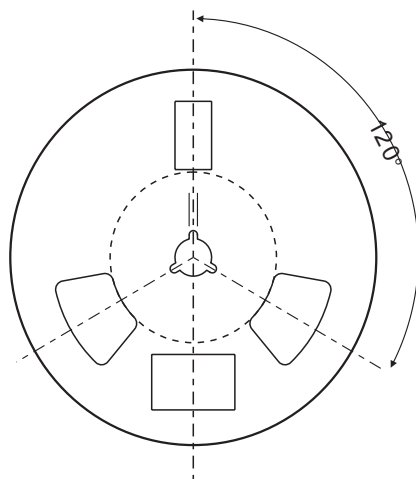
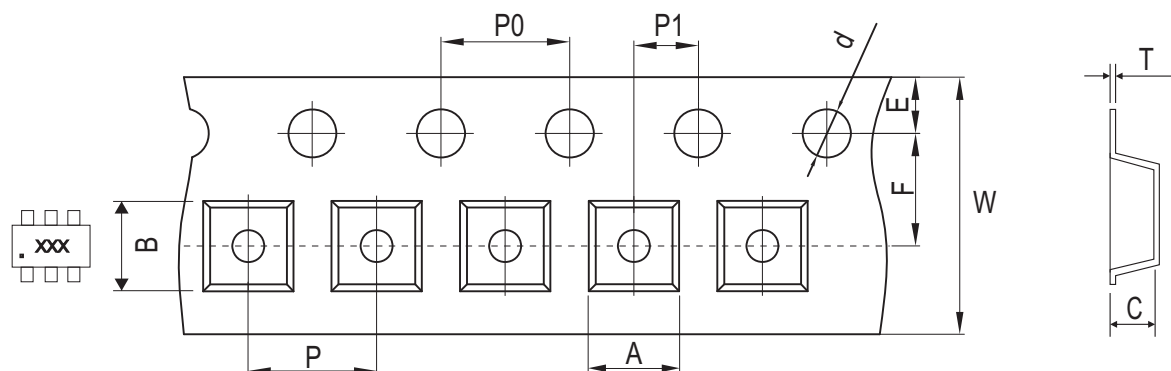


Fig.4 - Capacitance between terminals characteristics



SMD ESD Protection Diode

Reel Taping Specification



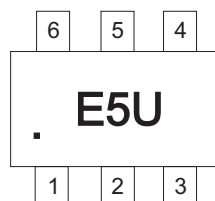
SOT-563	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.78 ± 0.10	1.78 ± 0.10	0.69 ± 0.10	1.50 ± 0.10	178 ± 2.00	54.4 ± 1.00	13.0 ± 1.00
	(inch)	0.070 ± 0.004	0.070 ± 0.004	0.027 ± 0.004	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.040	0.512 ± 0.040

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

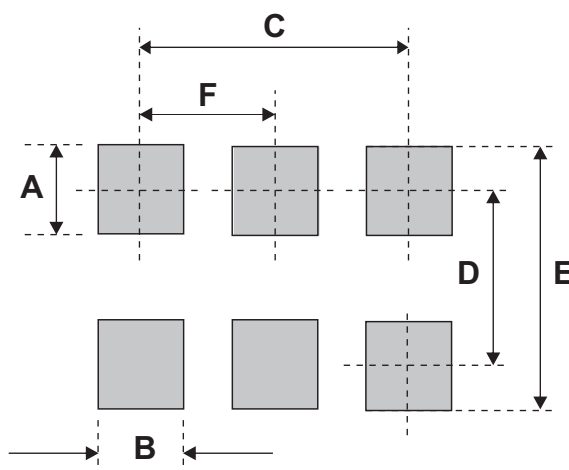
Marking Code

Part Number	Marking Code
CPDH6-5V0U	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
F	0.50	0.020



Standard Packaging

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