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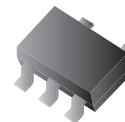
sales@integrated-circuit.com

SMD ESD Protection Diode



CPDV5-5V0U-HF

RoHS Device
 Halogen Free



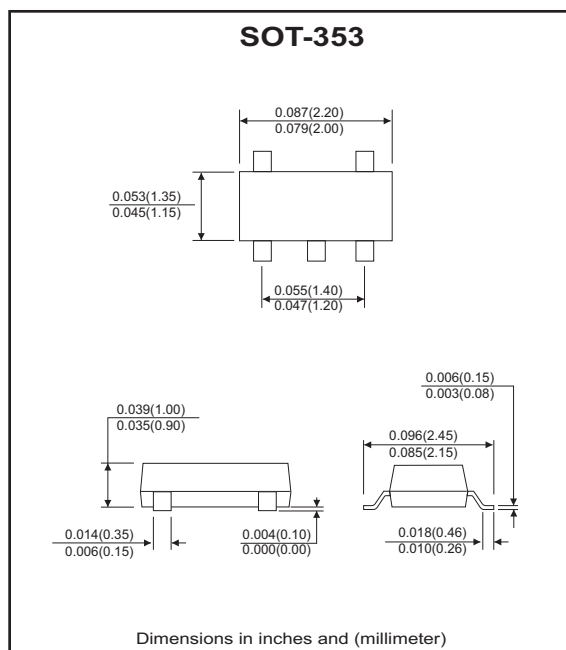
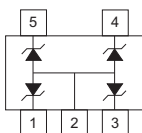
Features

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

Mechanical data

- Case: SOT-353 Standard package, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Mounting position: Any.
- Weight: 0.0070 gram (approx.).

Circuit diagram



Maximum Ratings and Electrical Characteristics

(at $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Diode breakdown voltage	V_{BD}	$I_R = 1\text{mA}$	6.1			V
Leakage current	I_L	$V_R = 3\text{V}$		0.1	1.0	μA
Forward voltage	V_F	$I_F = 10\text{mA}$			1.2	V
Junction capacitance	C_T	$V_R = 0\text{V}, f = 1\text{MHz}$		60	80	pF
Clamping voltage	V_C	$I_{PP} = 1\text{A}, T_P = 8/20\mu\text{s}$ $I_{PP} = 8\text{A}, T_P = 8/20\mu\text{s}$			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	$^{\circ}\text{C}$
Storage temperature	T_{STG}		-55		150	$^{\circ}\text{C}$

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RATING AND CHARACTERISTIC CURVES (CPDV5-5V0U-HF)

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

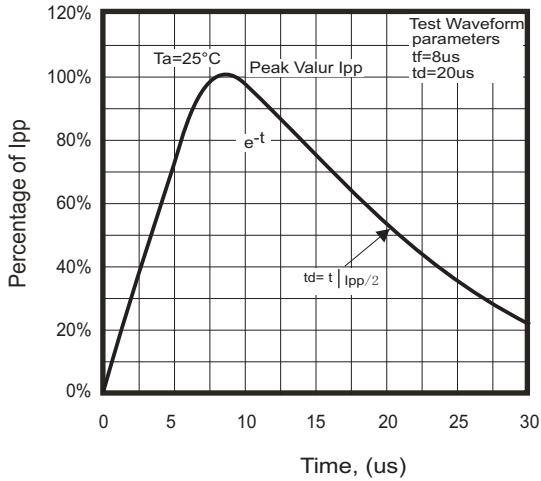


Fig.2 - Power rating derating curve

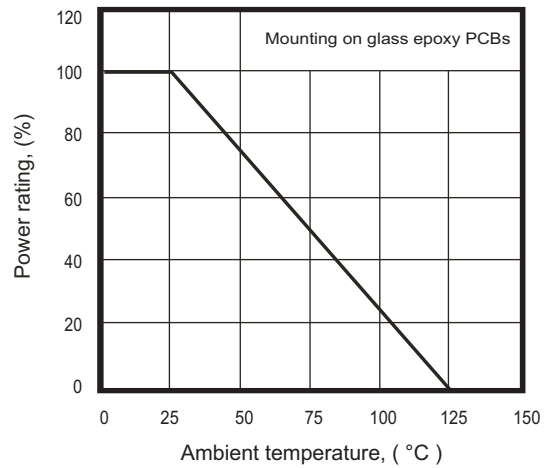


Fig.3 - Clamping voltage vs. peak pulse current

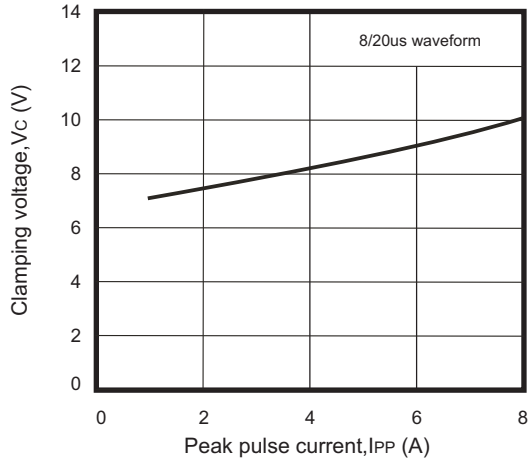
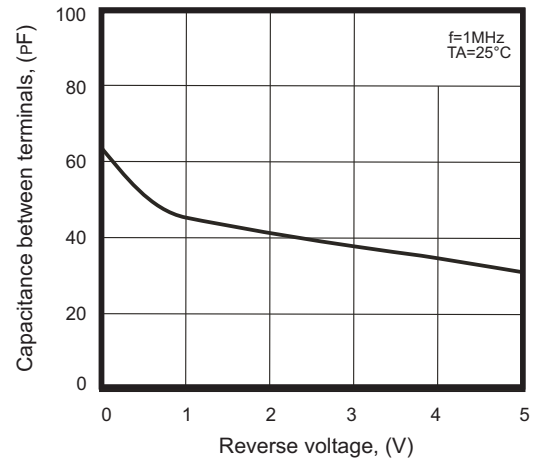


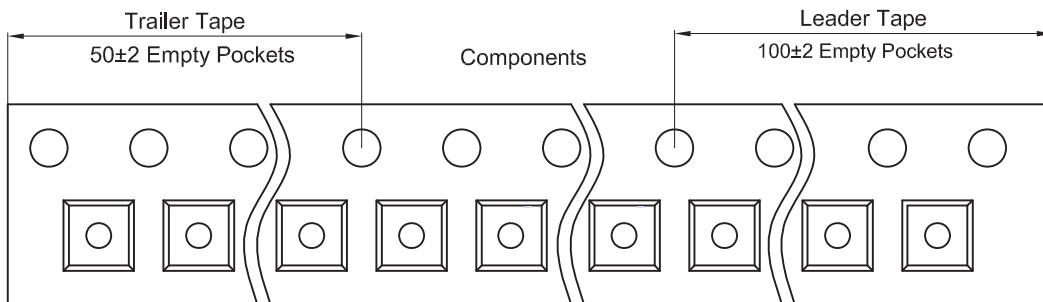
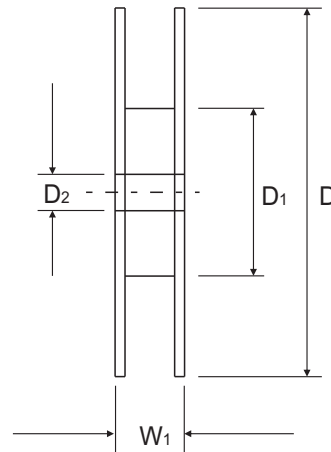
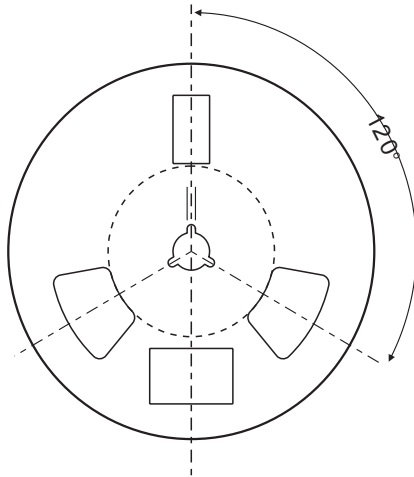
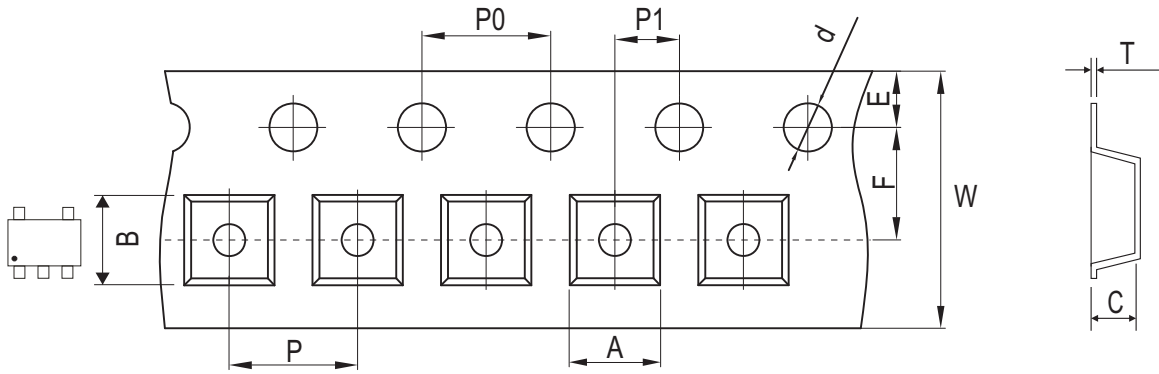
Fig.4 - Capacitance between terminals characteristics



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Reel Taping Specification



SOT-353	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	2.25±0.05	2.55±0.05	1.20±0.05	1.50±0.10	178±2.00	54.40±1.00	13.00±1.00
	(inch)	0.089±0.002	0.100±0.002	0.047±0.002	0.059±0.004	7.008±0.079	2.142±0.039	0.512±0.039

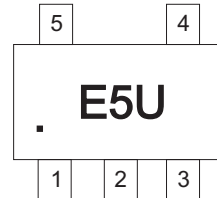
SOT-353	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75±0.10	3.50±0.10	4.00±0.10	4.00±0.10	2.00±0.10	8.00+0.30/-0.10	12.30±1.0
	(inch)	0.069±0.004	0.138±0.004	0.157±0.004	0.157±0.004	0.079±0.004	0.315+0.012/-0.004	0.484±0.039

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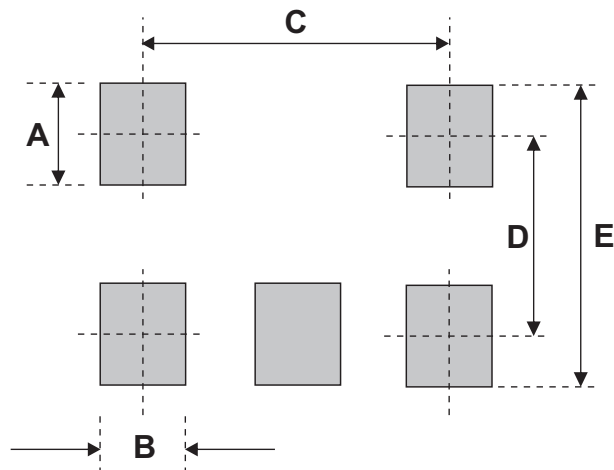
Marking Code

Part Number	Marking Code
CPDV5-5V0U-HF	E5U



Suggested PAD Layout

SIZE	SOT-353	
	(mm)	(inch)
A	0.80	0.031
B	0.40	0.016
C	1.30	0.051
D	1.94	0.076
E	2.74	0.108



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-353	3,000	7