

CPDF5V0U (RoHS Device)

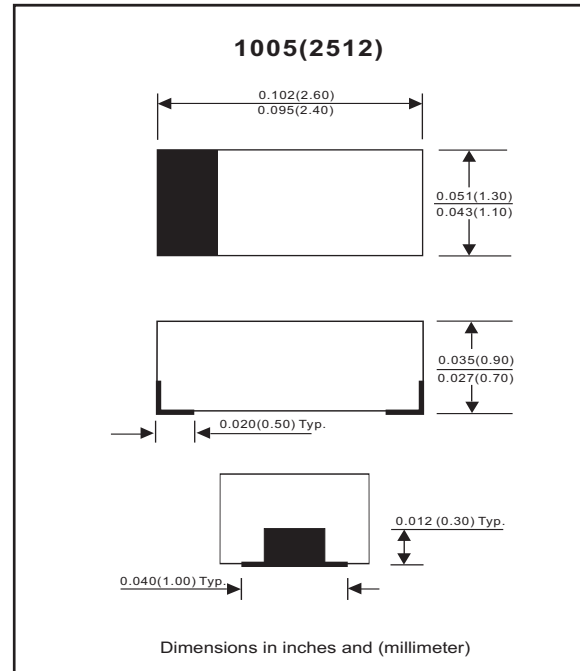


Features

- Uni-directional ESD protection
- IEC 61000-4-2 15kV(contact), 20kV(air).
- Working voltage:5V
- Surface mount package.
- High component density.

Mechanical data

- Case:1005 (2512) Standard package , molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Marking Code: Cathode band & E05
- Mounting position: Any.
- Weight: 0.006 gram (approx.).



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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	$I_F = 10\text{mA}$	V_F		0.8		V
Diode breakdown voltage	$I_R = 1\text{mA}$	V_{BD}	6			V
Leakage current	$V_R = 5\text{V}$	I_L		0.3	2.0	μA
Junction capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$	C_T		90	120	pF
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD			20 15	kV
Clamping voltage	$I_{PP} = 5\text{A}, T_P=8/20\mu\text{s}$ $I_{PP} = 16\text{A}, T_P=8/20\mu\text{s}$	V_C			9.8 12.5	V
Peak pulse power		P_{PP}			200	W
Operation temperature		T_J			125	$^{\circ}\text{C}$
Storage temperature		T_{STG}	-55		150	$^{\circ}\text{C}$

RATING AND CHARACTERISTIC CURVES (CPDF5V0U)

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

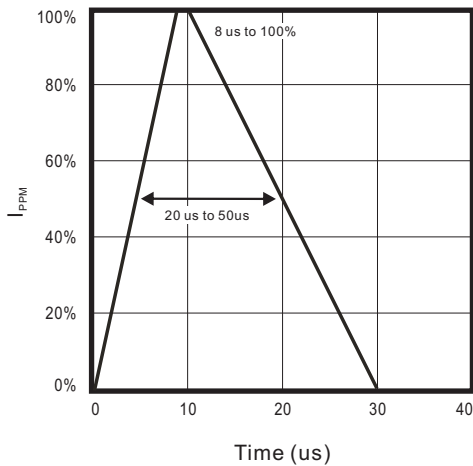


Fig. 2 - Power rating derating curve

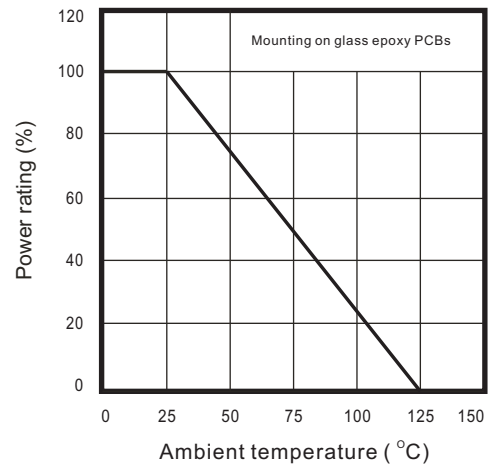


Fig. 3 - Clamping voltage vs. peak pulse current

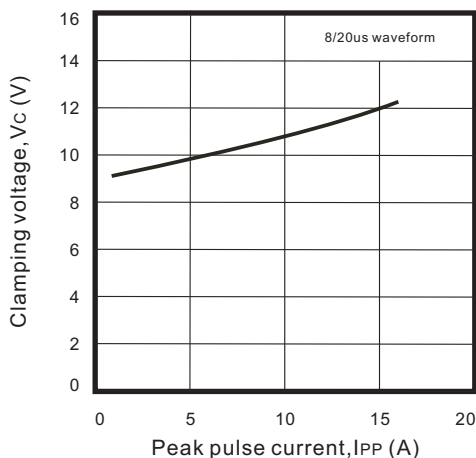


Fig. 4 - Forward voltage vs. forward current

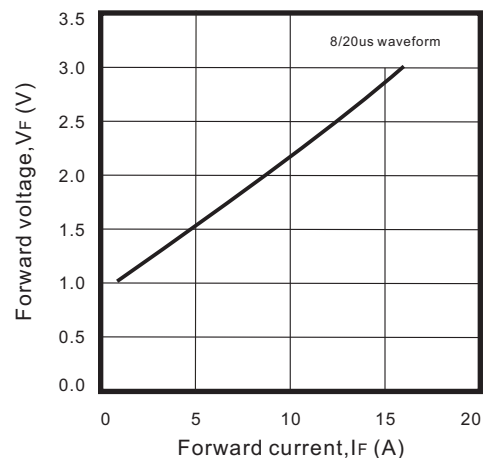


Fig. 5 - Capacitance between terminals characteristics

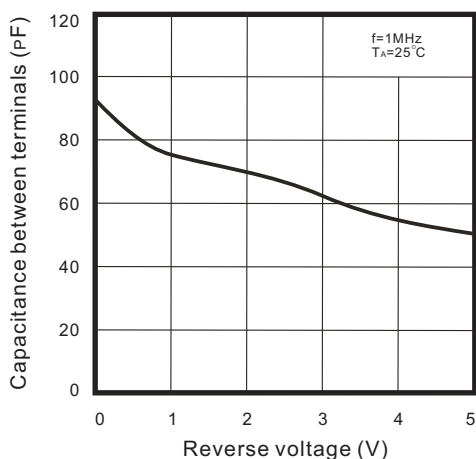
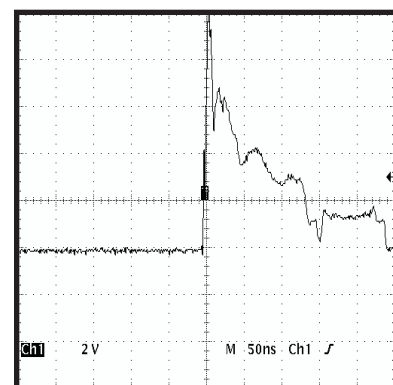
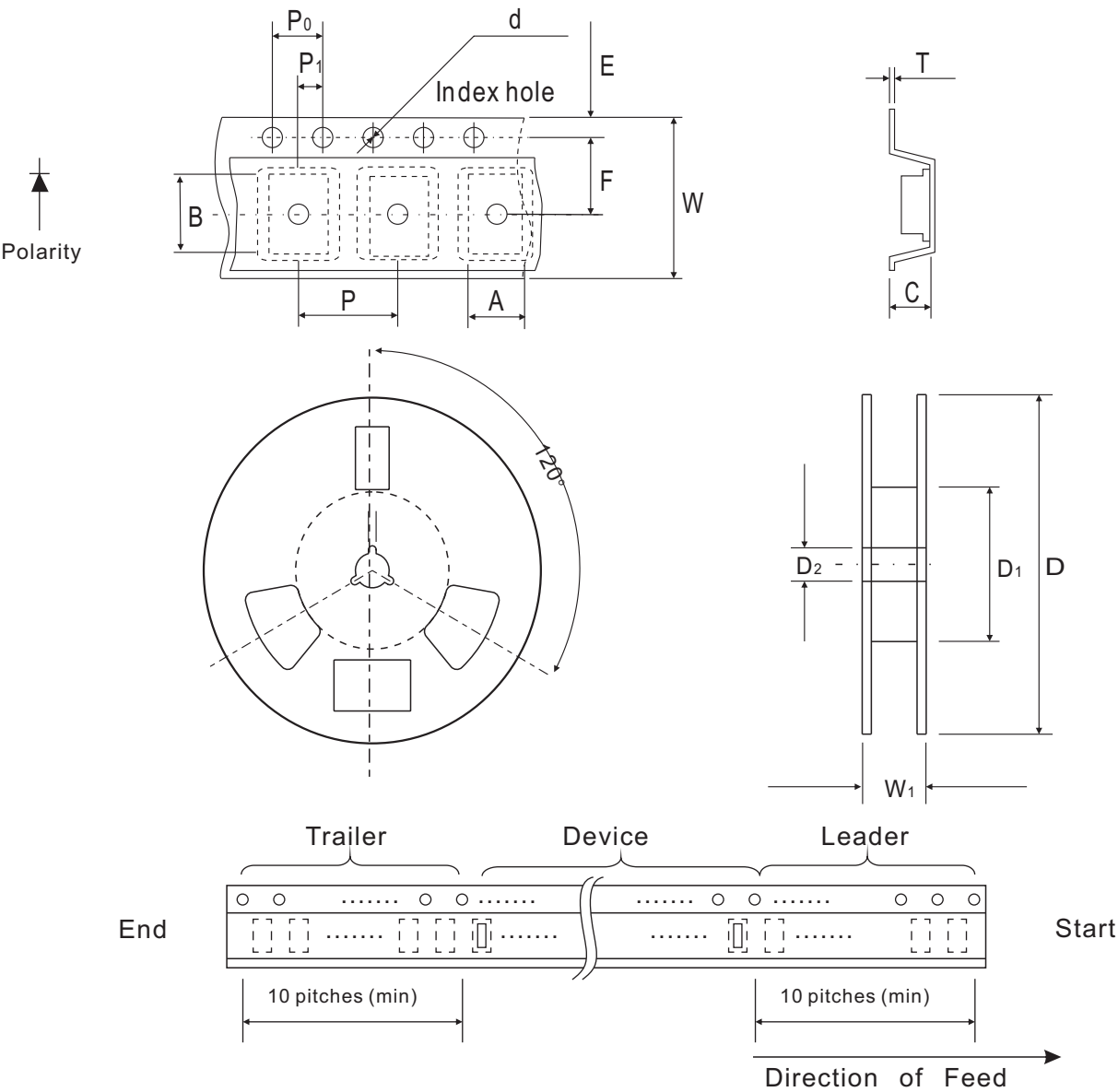


Fig. 6 - ESD Clamping (8kV Contant per IEC 61000-4-2)



Reel Taping Specification



F/1005	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	1.55 ± 0.10	2.65 ± 0.10	1.05 ± 0.10	1.55 ± 0.05	178 ± 1	60.0 MIN.	13.0 ± 0.20
	(inch)	0.061 ± 0.004	0.104 ± 0.004	0.041 ± 0.004	0.061 ± 0.002	7.008 ± 0.04	2.362 MIN.	0.512 ± 0.008

F/1005	SYMBOL	E	F	P	P ₀	P ₁	T	W	W ₁
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.23 ± 0.05	8.00 ± 0.20	13.5 MAX.
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.009 ± 0.002	0.315 ± 0.008	0.531 MAX.

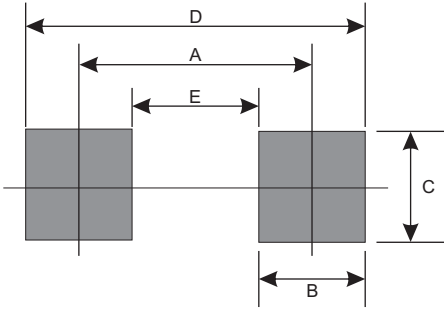
Marking Code

Part Number	Marking Code
CPDF5V0U	E05



Suggested PAD Layout

SIZE	F/1005	
	(mm)	(inch)
A	2.10	0.083
B	1.20	0.047
C	1.20	0.047
D	3.30	0.130
E	0.90	0.035



Standard Package

Case Type	Qty per Reel	Reel Size
	(Pcs)	(inch)
F/1005	4000	7