

CPD1E5V0

RoHS Device

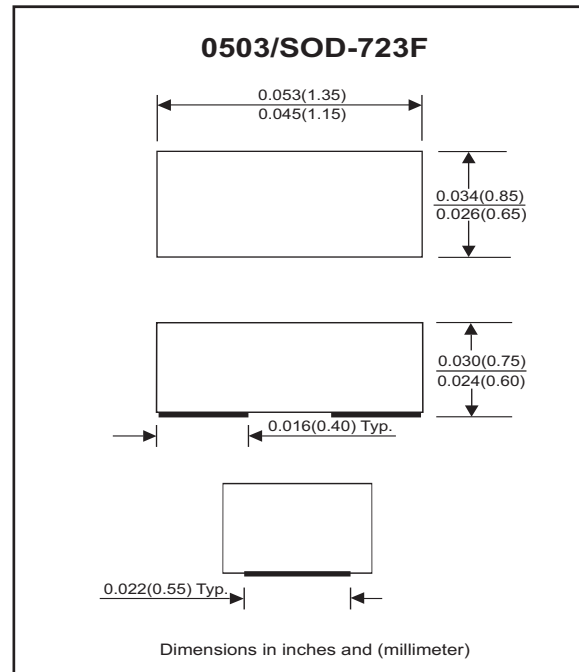


Features

- Bi-directional ESD protection.
- Surface mount package.
- Ultra small SMD package:0503.
- High component density.

Mechanical data

- Case: 0503/SOD-723F standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750,method 2026.
- Marking Code: E05
- Mounting position: Any.
- Weight: 0.002 gram(approx.).



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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Diode breakdown voltage	$I_R = 1\text{mA}$	V_{BD}	5.1	7.0		V
Leakage current	$V_R = 5\text{V}$	I_L		± 0.1	± 2.0	μA
Capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$	C_T		15	20	pF
Channel clamp voltage	8kV event	V_C			± 7.0	V
Peak ESD voltage capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	V_{ESD}			± 16 ± 8	kV
Peak pulse current	$T_P = 8 / 20 \mu\text{s}$	I_{PP}^*			5.1	A
Power Dissipation		P_D			150	mW
Operation temperature		T_J			+125	°C
Storage temperature		T_{STG}	-55		+150	°C

* one diode conducting.

RATING AND CHARACTERISTIC CURVES (CPD1E5V0)

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

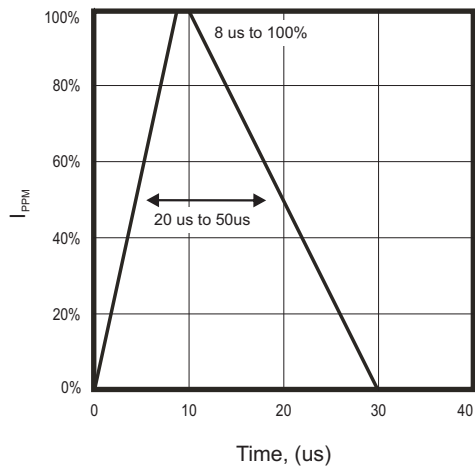


Fig. 2 - Reverse characteristics

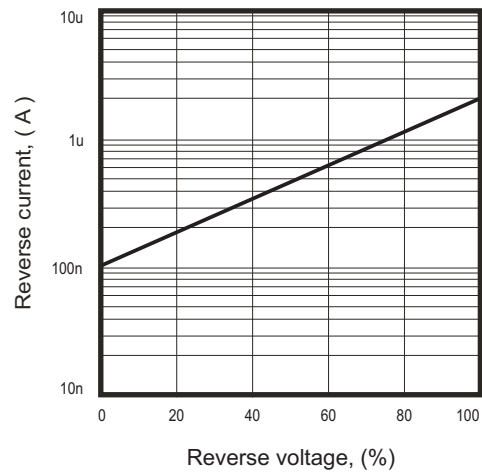


Fig. 3 - Capacitance between terminals characteristics

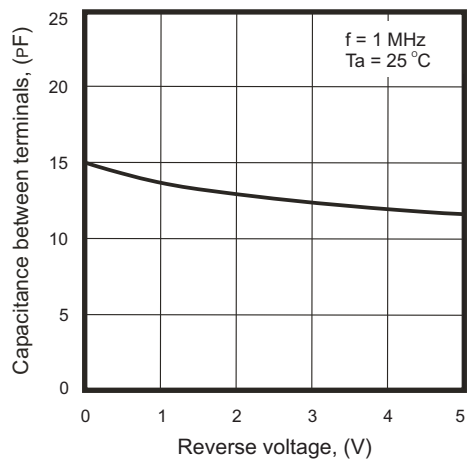


Fig. 4 - Power rating derating curve

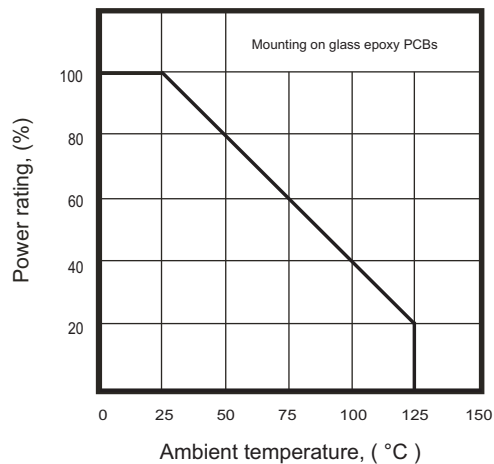
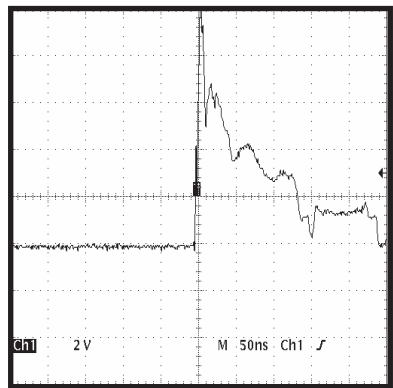
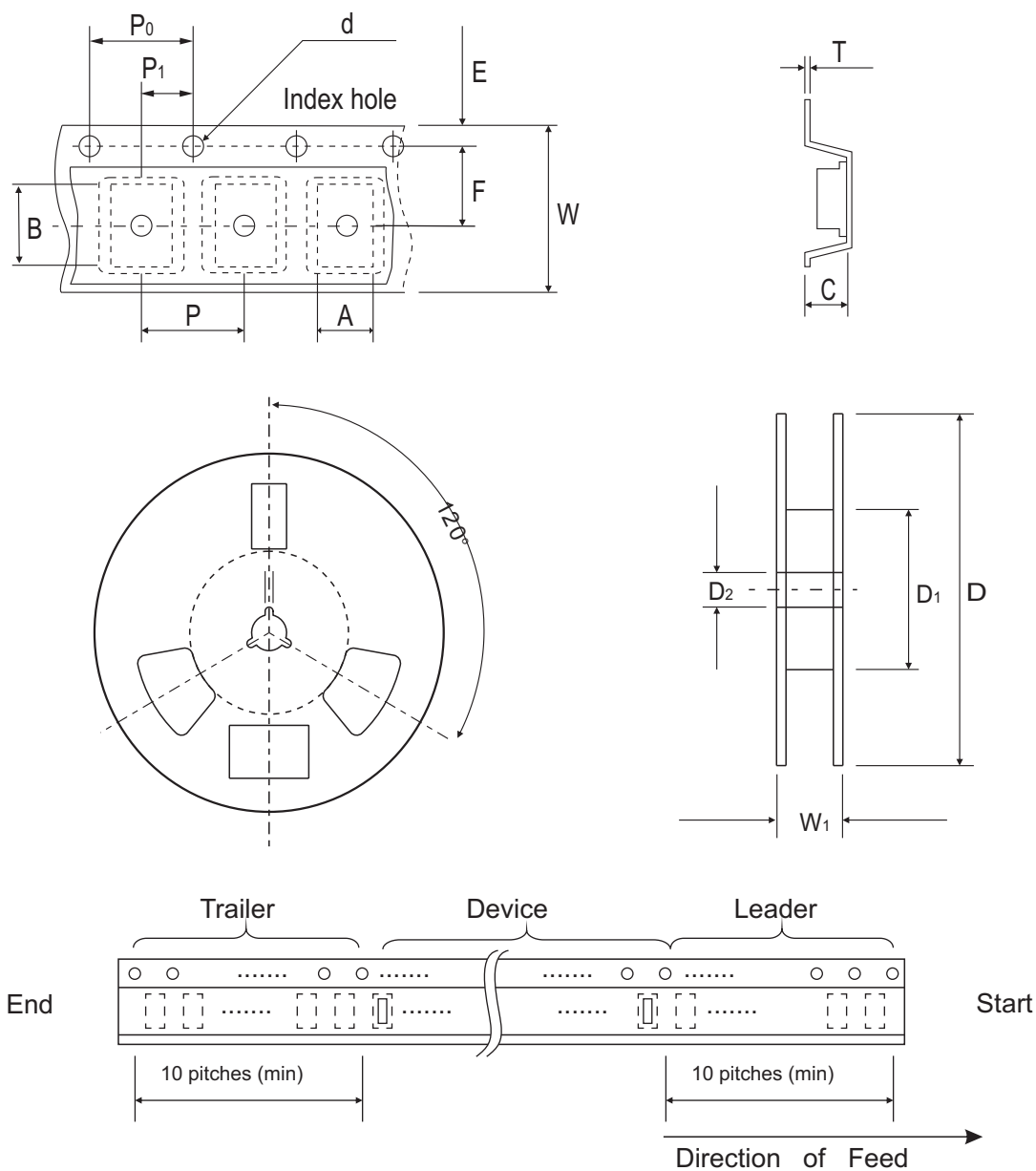


Fig. 5 - ESD Clamping
(8kv Contant per IEC 61000-4-2)



Reel Taping Specification



0503 (SOD-723F)	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	0.90 ± 0.10	1.46 ± 0.10	0.80 ± 0.10	1.55 ± 0.05	178 ± 1	60.0 MIN.	13.0 ± 0.20
	(inch)	0.035 ± 0.004	0.057 ± 0.004	0.031 ± 0.004	0.061 ± 0.002	7.008 ± 0.04	2.362 MIN.	0.512 ± 0.008

0503 (SOD-723F)	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 ± 0.10	0.22 ± 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.

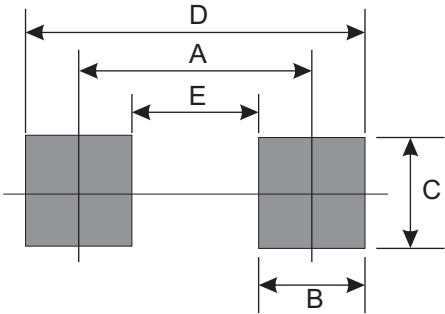
Marking Code

Park Number	Marking Code
CPD1E5V0	E05

E05

Suggested PAD Layout

SIZE	0503/SOD-723F	
	(mm)	(inch)
A	0.85	0.033
B	0.55	0.022
C	0.85	0.033
D	1.40	0.055
E	0.30	0.011



Standard Packaging

Case Type	Qty Per Reel	Reel Size
	(Pcs)	(inch)
0503/SOD-723F	4,000	7