



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

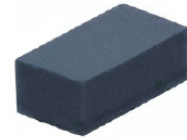
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CPDER Series RoHS Device

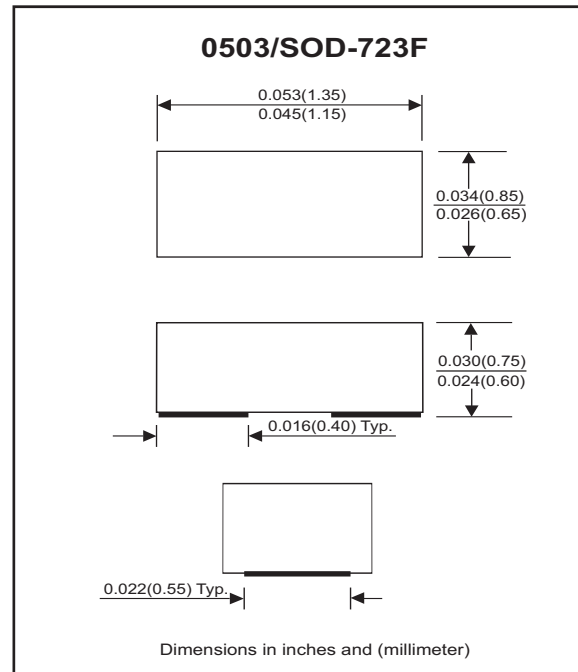


Features

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

Mechanical data

- Case: 0503(1308) standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750,method 2026.
- Marking Code:
 CPDER5V0: E05
 CPDER12V: E12
 CPDER24V: E24
- 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	CPDER5V0 CPDER12V CPDER24V I _R = 1mA	V _{BD}	5.1 13 25	7.0 17 28		V
Leakage current	CPDER5V0 CPDER12V CPDER24V V _R = 5V V _R = 12V V _R = 24V	I _L		0.1	2.0	uA
Junction capacitance	CPDER5V0 CPDER12V CPDER24V V _R = 0V, f = 1MHz	C _T		15 12 10	20 --- ---	pF
ESD capability	CPDER Series IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD			16 8	kV
Clamping voltage	CPDER5V0 CPDER12V CPDER24V I _{PP} = 5A, T _P =8/20us I _{PP} = 1A, T _P =8/20us I _{PP} = 1A, T _P =8/20us	V _C			15 25 47	V
Peak pulse power	CPDER5V0 CPDER12V CPDER24V T _P =8/20us	P _{PP}			75 25 47	W
Operation temperature	CPDER Series	T _j			125	°C
Storage temperature	CPDER Series	T _{STG}	-55		150	°C

RATING AND CHARACTERISTIC CURVES (CPDER Series)

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

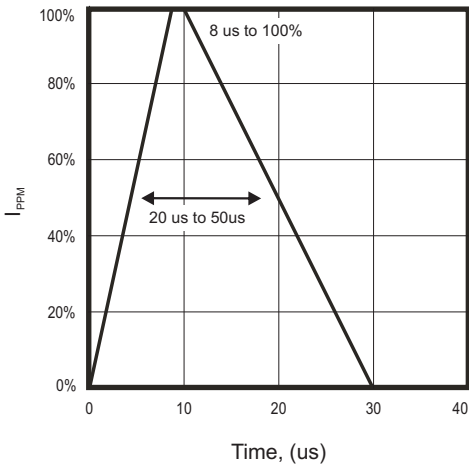


Fig. 2 - Reverse characteristics

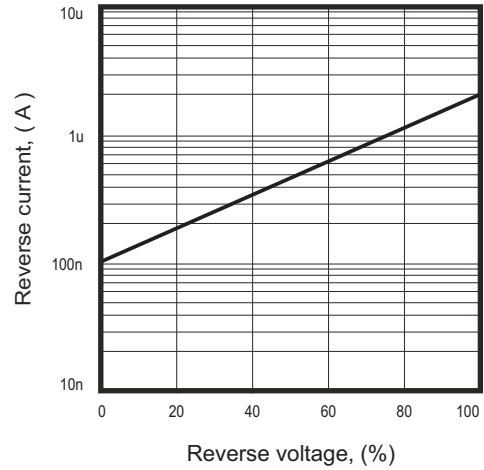


Fig. 3 - Capacitance between terminals characteristics

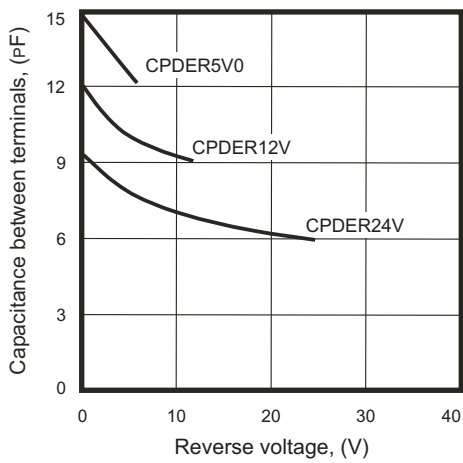
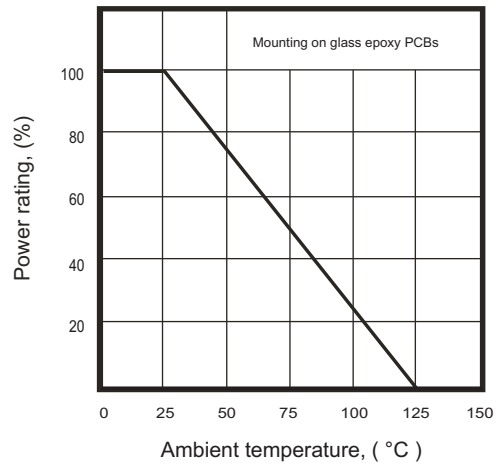
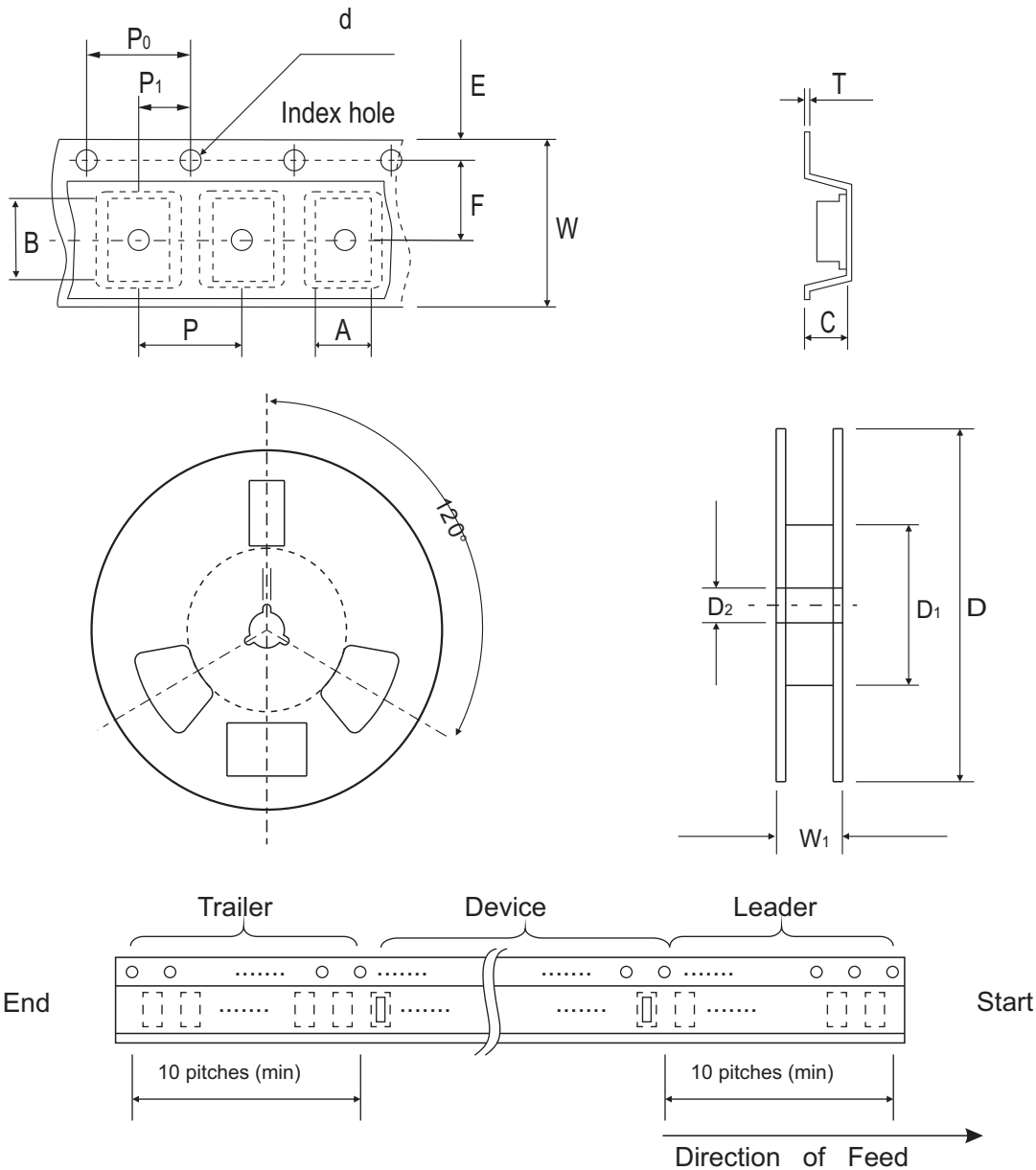


Fig. 4 - Power rating derating curve



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

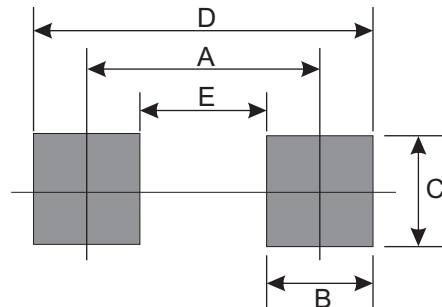
Part Number	Marking Code
CPDER5V0	E05
CPDER12V	E12
CPDER24V	E24



xxx = Product type marking code

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	0.012



Standard Packaging

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