



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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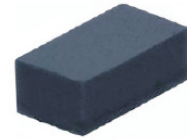
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## CPDUR Series

### RoHS Device

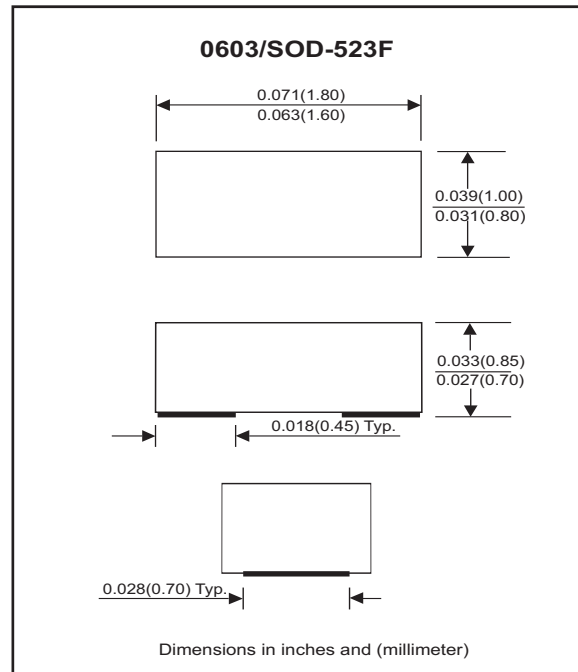


#### Features

- Bi-directional ESD protection
- Surface mount package.
- High component density.

#### Mechanical data

- Case: 0603/SOD-523F standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Marking Code:
  - CPDUR5V0: E05
  - CPDUR12V: E12
  - CPDUR24V: E24
- Mounting position: Any.
- Weight: 0.003 gram (approx.).



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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Diode breakdown voltage	CPDUR5V0 CPDUR12V CPDUR24V I <sub>R</sub> = 1mA	V <sub>BD</sub>	5.1 13 25	7.0 17 28		V
Leakage current	CPDUR5V0 CPDUR12V CPDUR24V V <sub>R</sub> = 5V V <sub>R</sub> = 12V V <sub>R</sub> = 24V	I <sub>L</sub>		0.1	2.0	uA
Junction capacitance	CPDUR5V0 CPDUR12V CPDUR24V V <sub>R</sub> = 0V, f = 1MHz	C <sub>T</sub>		15 12 10	20 --- ---	pF
ESD capability	CPDUR Series IEC 61000-4-2 (air) IEC 61000-4-2 (contact)	ESD			16 8	kV
Clamping voltage	CPDUR5V0 CPDUR12V CPDUR24V I <sub>PP</sub> = 5A, T <sub>P</sub> = 8/20us I <sub>PP</sub> = 1A, T <sub>P</sub> = 8/20us I <sub>PP</sub> = 1A, T <sub>P</sub> = 8/20us	V <sub>C</sub>			15 25 47	V
Peak pulse power	CPDUR5V0 CPDUR12V CPDUR24V T <sub>P</sub> = 8/20us	P <sub>PP</sub>			75 25 47	W
Operation temperature	CPDUR Series	T <sub>j</sub>			125	°C
Storage temperature	CPDUR Series	T <sub>STG</sub>	-55		150	°C

## RATING AND CHARACTERISTIC CURVES (CPDUR Series)

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

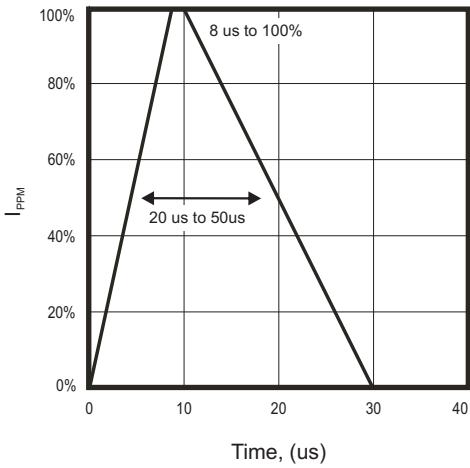


Fig. 2 - Reverse characteristics

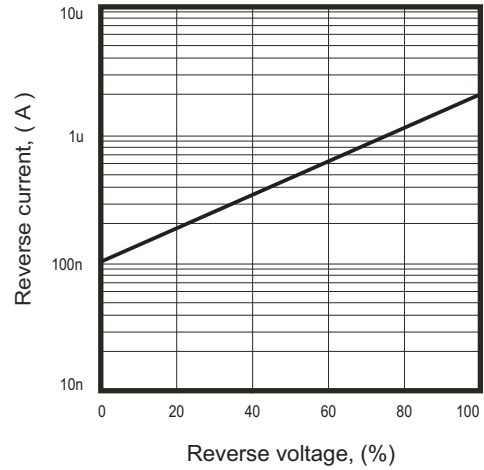


Fig. 3 - Capacitance between terminals characteristics

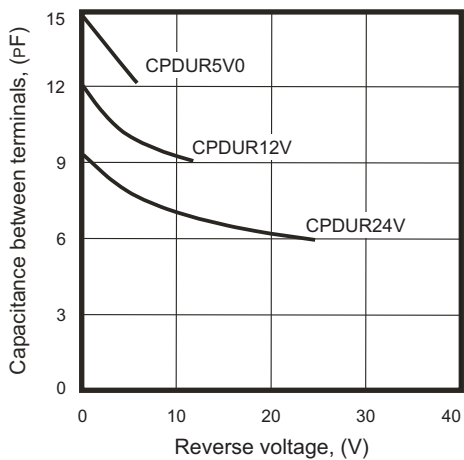
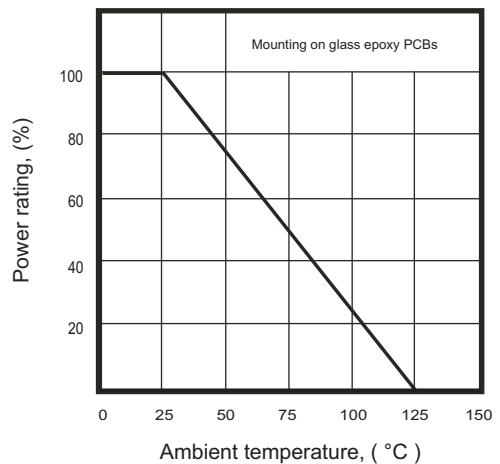
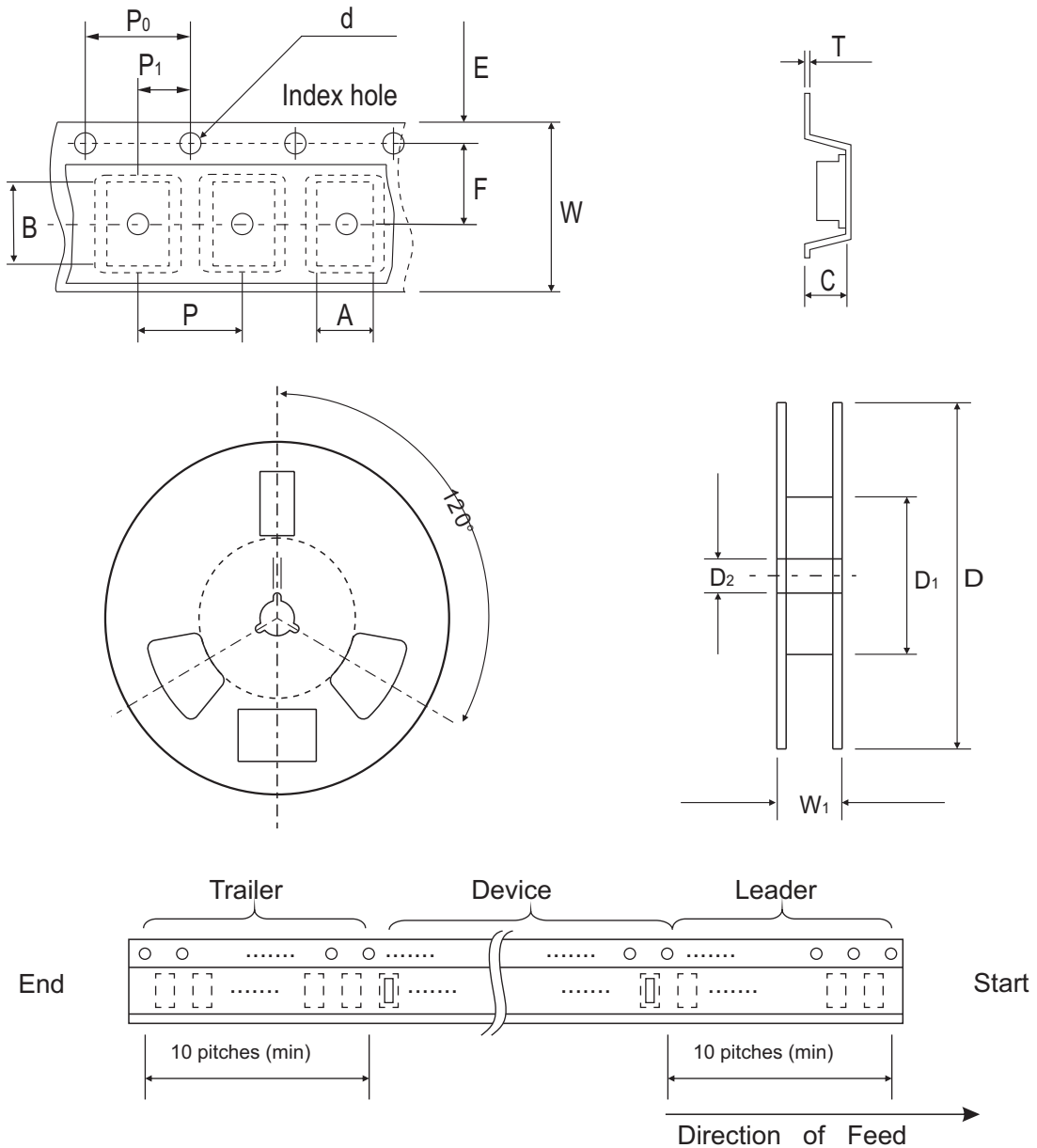


Fig. 4 - Power rating derating curve



## Reel Taping Specification



0603 (SOD-523)	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	1.00 ± 0.10	1.85 ± 0.10	1.00 ± 0.10	1.55 ± 0.05	178 ± 1	60.0 MIN.	13.0 ± 0.20
	(inch)	0.039 ± 0.004	0.073 ± 0.004	0.039 ± 0.004	0.061 ± 0.002	7.008 ± 0.04	2.362 MIN.	0.512 ± 0.008

0603 (SOD-523)	SYMBOL	E	F	P	P <sub>0</sub>	P <sub>1</sub>	T	W	W <sub>1</sub>
	(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

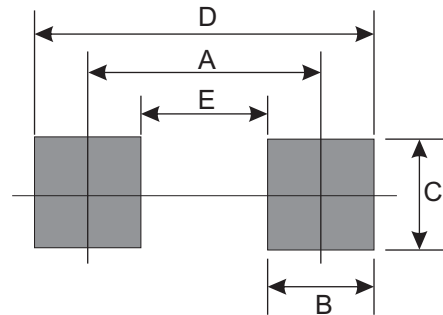
Part Number	Marking Code
CPDUR5V0	E05
CPDUR12V	E12
CPDUR24V	E24



xxx = Product type marking code

## Suggested PAD Layout

SIZE	0603/SOD-523F	
	(mm)	(inch)
A	1.25	0.049
B	0.60	0.024
C	1.00	0.039
D	1.85	0.073
E	0.65	0.026



## Standard Packaging

Case Type	Qty Per Reel	Reel Size
	(Pcs)	(inch)
0603/SOD-523F	4,000	7