



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!



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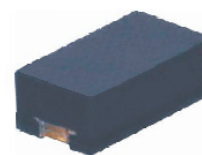
Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



CPDU Series-HF

RoHS Device

Halogen Free

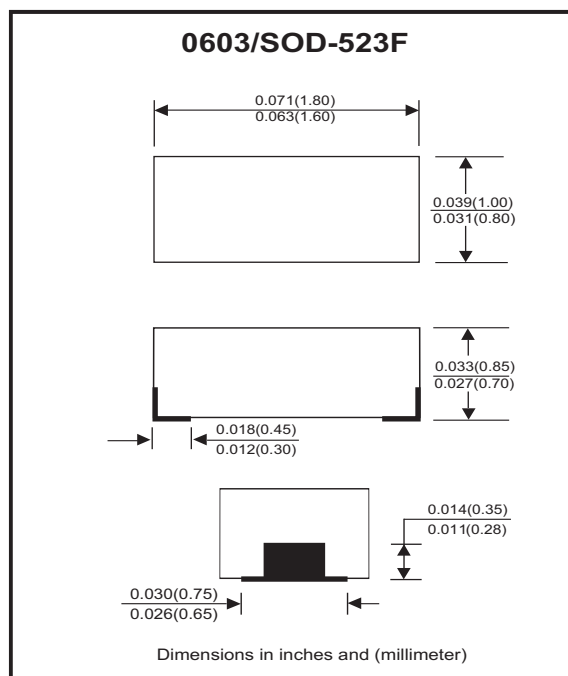


Features

- 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:
 - CPDU5V0-HF: E05
 - CPDU12V-HF: E12
 - CPDU24V-HF: E24
- Mounting position: Any.
- Weight: 0.003 grams(approx.).



Circuit Diagram



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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Diode breakdown voltage	CPDU5V0-HF CPDU12V-HF CPDU24V-HF I _R = 1mA	V _{BD}	5.1 13 25	7.0 17 28		V
Leakage current	CPDU5V0-HF CPDU12V-HF CPDU24V-HF V _R = 5V V _R = 12V V _R = 24V	I _L		0.1	2.0	uA
Junction capacitance	CPDU5V0-HF CPDU12V-HF CPDU24V-HF V _R = 0V, f = 1MHz	C _T		15 12 10	20 - -	pF
ESD capability	CPDU Series-HF IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD			16 8	kV
Clamping voltage	CPDU5V0-HF CPDU12V-HF CPDU24V-HF I _{PP} = 1A, T _P = 8/20us I _{PP} = 5A, T _P = 8/20us I _{PP} = 1A, T _P = 8/20us I _{PP} = 1A, T _P = 8/20us	V _C			10 15 25 47	V
Peak pulse power	CPDU5V0-HF CPDU12V-HF CPDU24V-HF T _P = 8/20us	P _{PP}			75 25 47	W
Operation temperature range	CPDU Series-HF	T _j	-40		125	°C
Storage temperature range	CPDU Series-HF	T _{STG}	-55		150	°C

Company reserves the right to improve product design, functions and reliability without notice.

REV:F

RATING AND CHARACTERISTIC CURVES (CPDU Series-HF)

Fig.1 - Peak Pulse Current Wave
Form Acc. IEC 61000-4-5

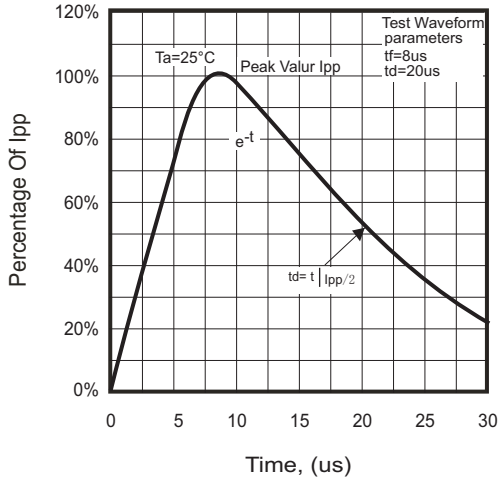


Fig.2-1 - Reverse Characteristics

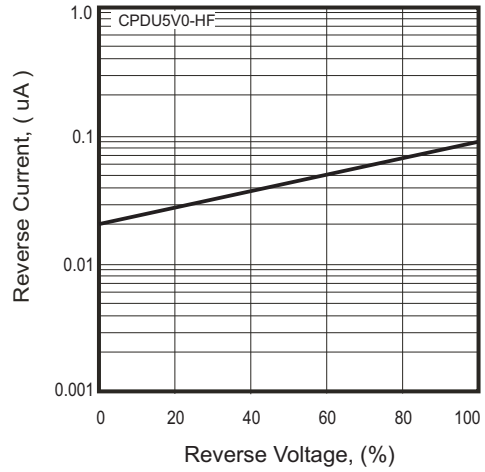


Fig.2-2 - Reverse Characteristics

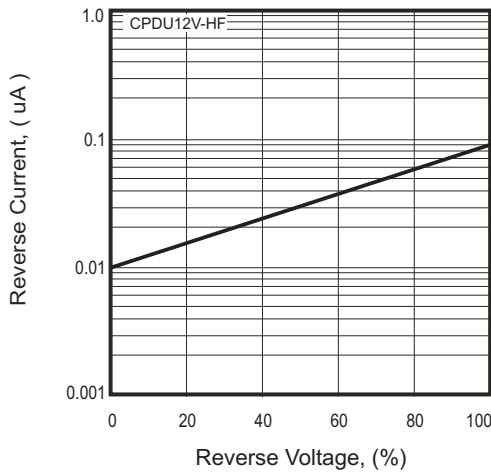


Fig.2-3 - Reverse Characteristics

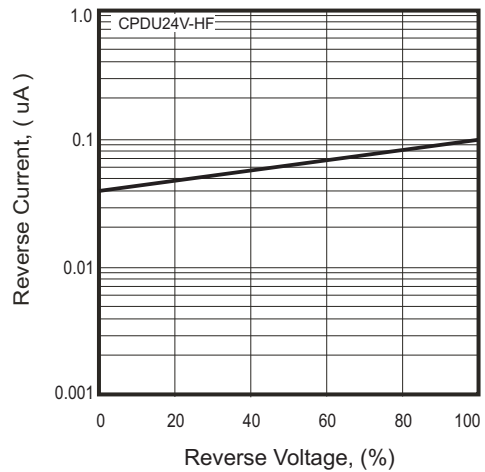


Fig.3 - Capacitance Between
Terminals Characteristics

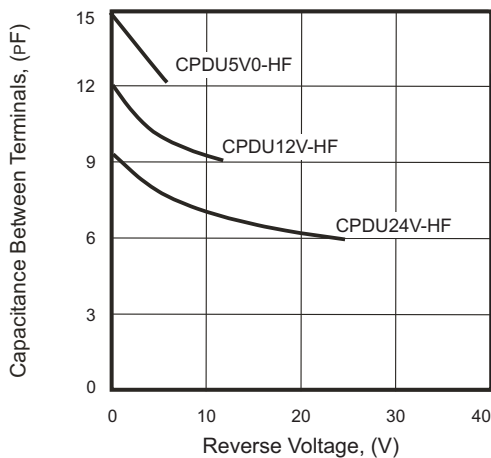
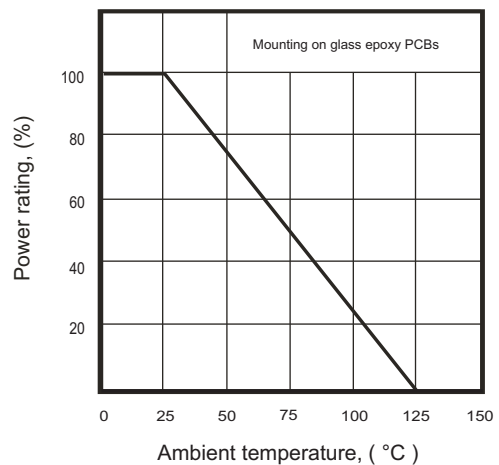
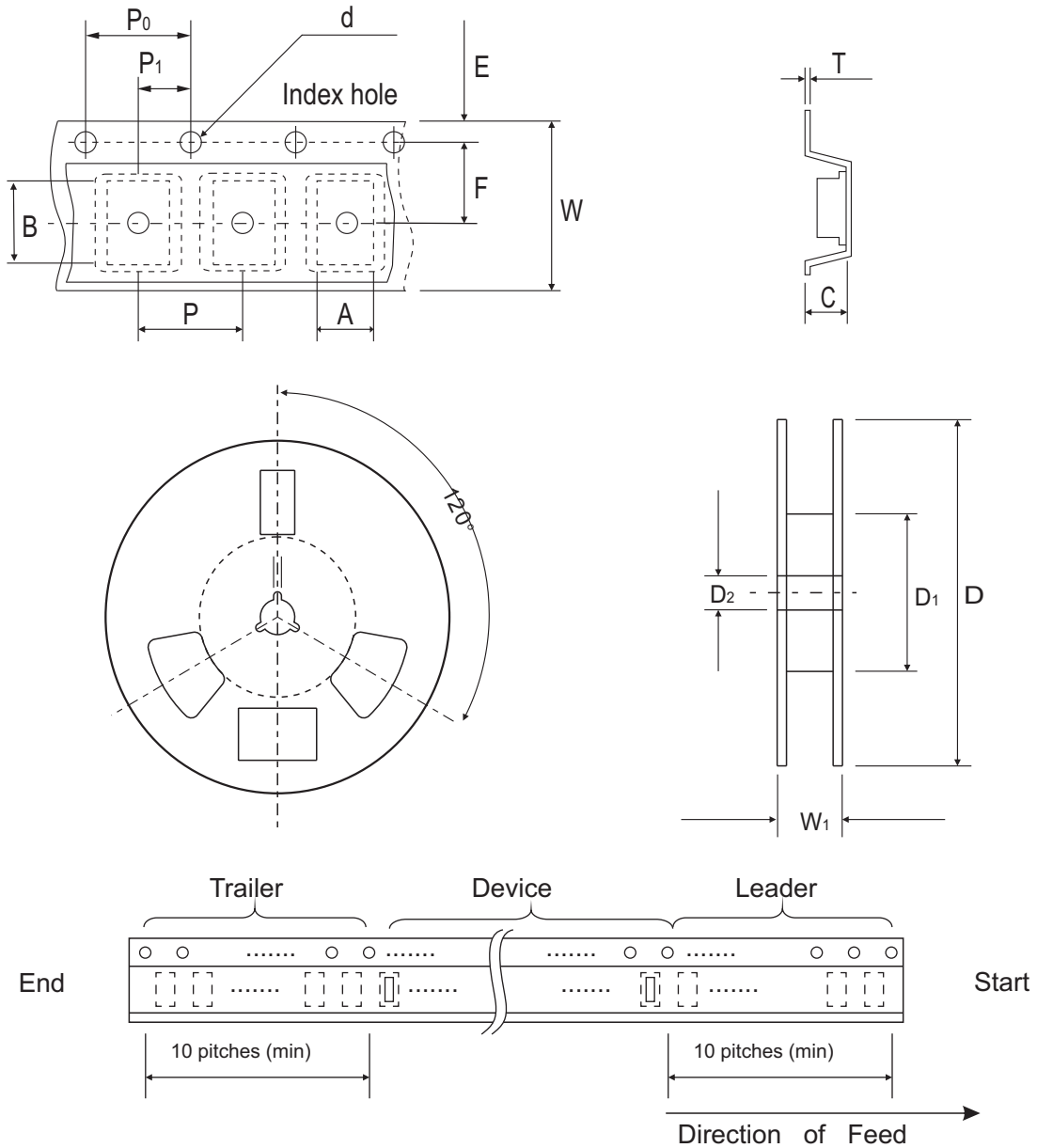


Fig. 4 - Power rating derating curve



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Reel Taping Specification



0603 (SOD-523)	SYMBOL	A	B	C	d	D	D ₁	D ₂
	(mm)	1.00 ± 0.10	1.85 ± 0.10	1.00 ± 0.10	1.55 ± 0.05	178 ± 1.00	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 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	13.50 MAX.
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.009 ± 0.002	0.315 ± 0.008	0.531 MAX.

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REV:F

Marking Code

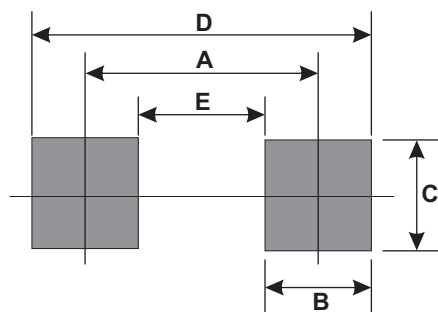
Part Number	Marking Code
CPDU5V0-HF	E05
CPDU12V-HF	E12
CPDU24V-HF	E24



xxx = Product type marking code

Suggested PAD Layout

SIZE	0603/SOD-523F	
	(mm)	(inch)
A	1.70	0.067
B	0.60	0.024
C	0.80	0.031
D	2.30	0.091
E	1.10	0.043



Standard Packaging

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