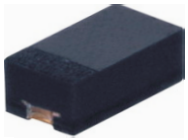
SMD ESD Protection Diode

CPDU12V0U-HF

RoHS Device
Halogen Free

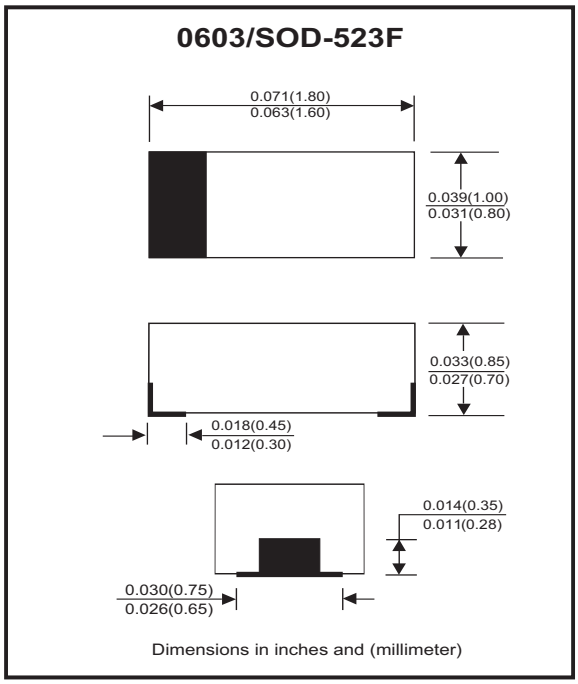


Features

- Uni-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.
- Mounting position: Any.
- Weight: 0.003 grams(approx.).



Circuit Diagram



Maximum Rating And Electrical Characteristics (at T_A=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	I_F = 10mA	V_F		0.8		V
Diode breakdown voltage	I_R = 1mA	V_{BD}	13.3	15.5	17.5	V
Leakage current	V_R = 12V	I_L		0.1	1.0	uA
Junction capacitance	V_R = 0V,f = 1MHz	C_T			60	pF
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD			30	kV
Clamping voltage	I_{PP} = 1A,T_P=8/20us I_{PP} = 5A,T_P=8/20us	V_C			19 24	V
Peak pulse power		P_{PP}			120	W
Operation temperature range		T_J	-55		125	°C
Storage temperature range		T_{STG}	-55		150	°C

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

RATING AND CHARACTERISTIC CURVES (CPDU12V0U-HF)

Fig.1 - 8/20us Peak Pulse Current Wave Form Acc. IEC 61000-4-5

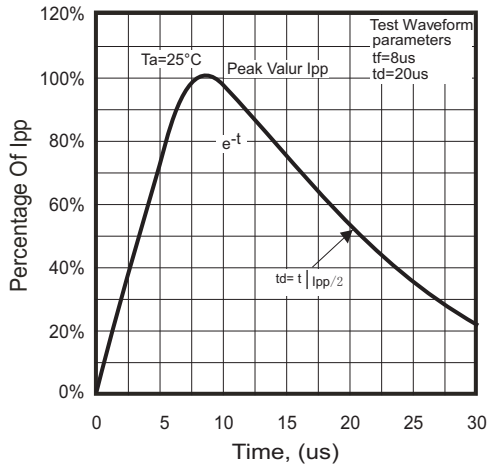


Fig.2 - Power Rating Derating Curve

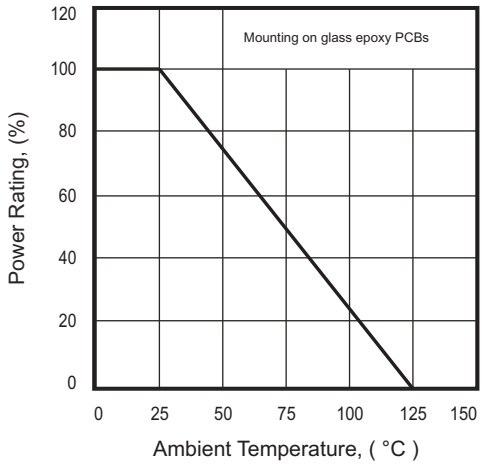


Fig.3 - Clamping Voltage Vs. Peak Pulse Current

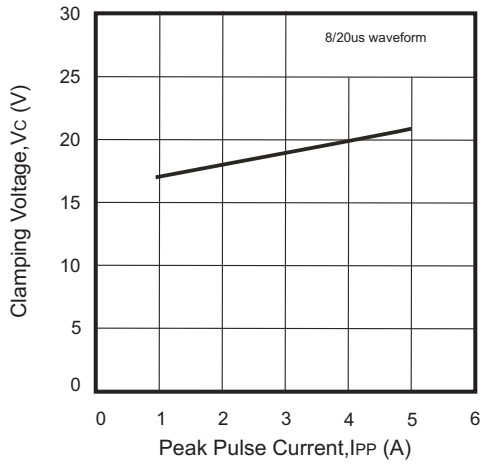


Fig.4 - Clamping Voltage Vs. Forward Peak Pulse Current

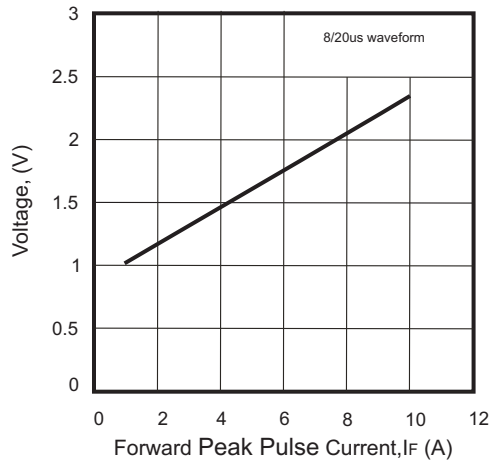
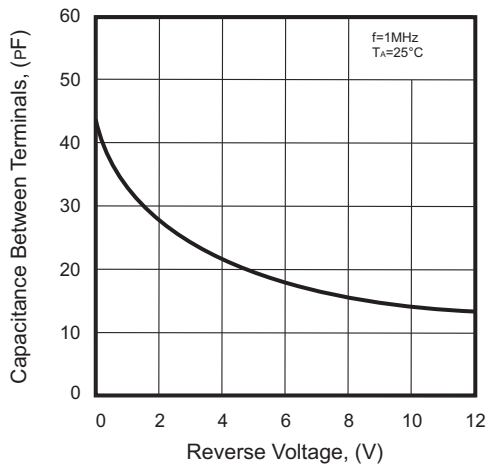
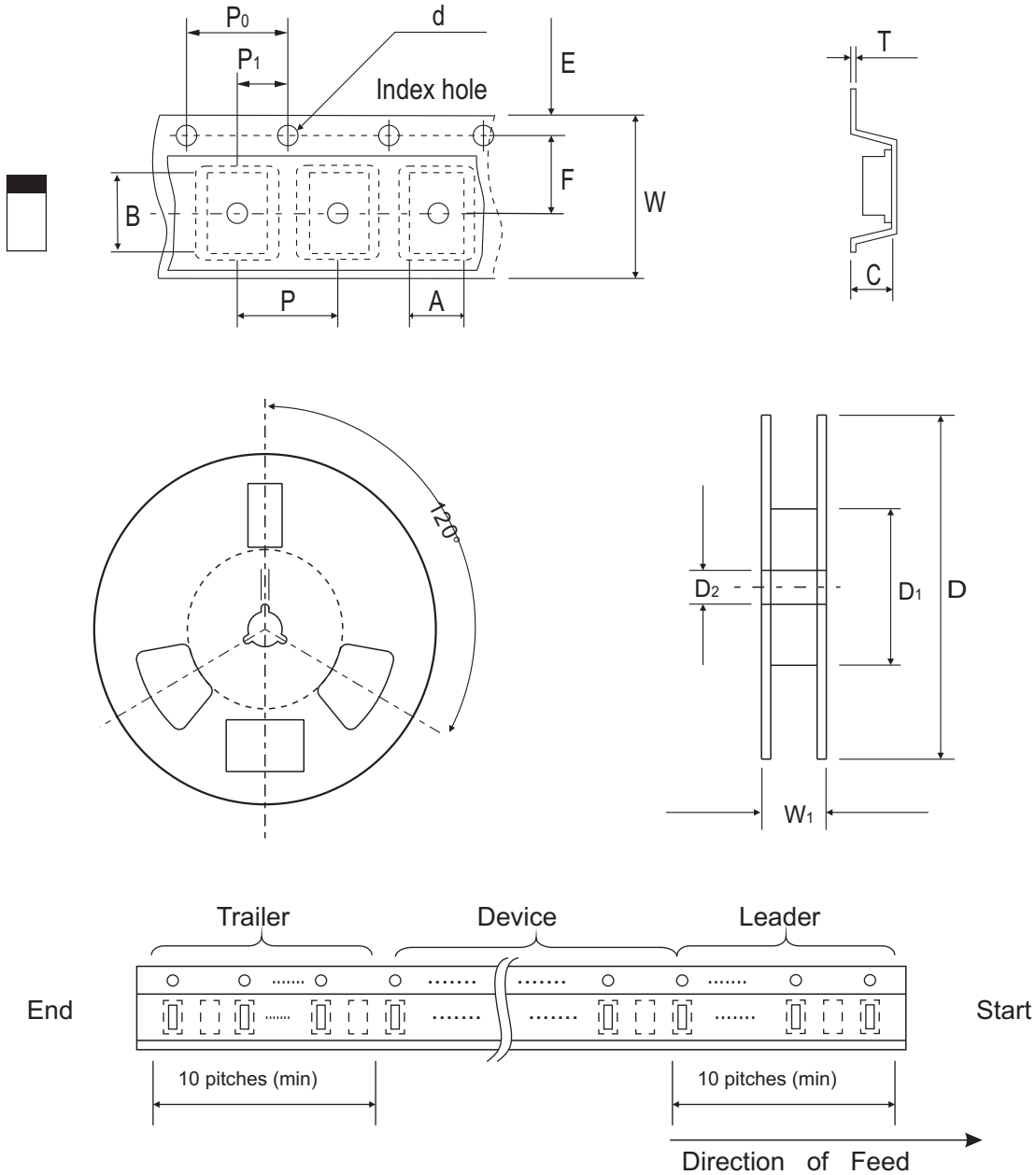


Fig.5 - Capacitance Between Terminals Characteristics



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.

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

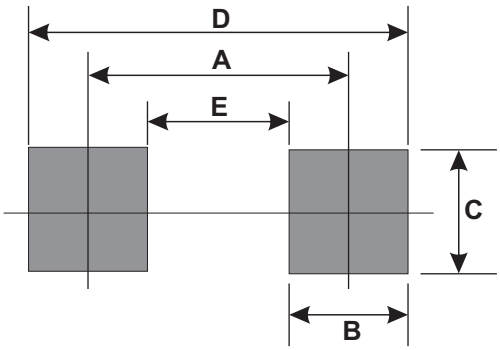
Marking Code

Part Number	Marking Code
CPDU12V0U-HF	E12



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	REEL PACK	
	REEL (pcs)	Reel Size (inch)
0603/SOD-523F	4,000	7

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Comchip Technology:

CZRU52C3-HF A5KP440A-G CDBB260-G CDBU0530-HF ATV04A360JB-HF ATV06B780JB-HF CDBQR0130L-HF CDBW0520L-G CDST-99-HF CPDQ03C5V0HP-HF 1N4005T-G CGRA4002-G ACPDQC5V0UESPC-HF BAS21-HF CDBW0530-HF FR602-G CDBJSC3650-G CDST-4448-G SS310C-HF CDBQC0130L-HF CDBUR70-HF CPDWL5V0SPC-HF CZRB5377B-HF FR603-G ACURN103-HF CDBU0130L CGRKM4001-HF CZRF52C5V6 6A01B-G CZRF52C9V1-HF