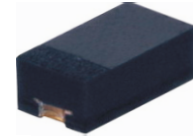


CPDU12V0U-HF

RoHS Device
Halogen Free



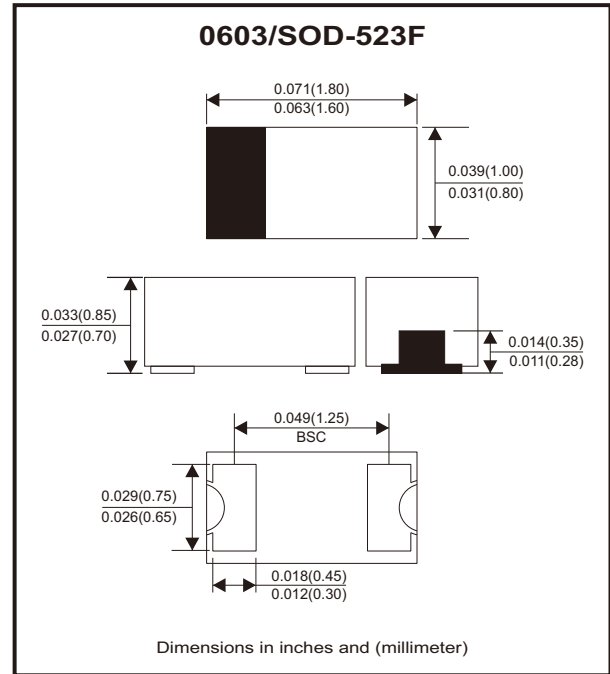
Features

- 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 (at TA=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Peak pulse power		PPP			120	W
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD			30	kV
Operating temperature range		TJ	-55		125	°C
Storage temperature range		TSTG	-55		150	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Diode breakdown voltage	IR = 1mA	VBD	13.3	15.5	17.5	V
Leakage current	VR = 12V	IL		0.1	1.0	µA
Forward voltage	IF = 10mA	VF		0.8		V
Clamping voltage	I _{PP} = 1A, TP = 8/20µs I _{PP} = 5A, TP = 8/20µs	VC			19 24	V
Junction capacitance	VR = 0V, f = 1MHz	CT			60	pF

Rating and Characteristic Curves (CPDU12V0U-HF)

Fig.1 - 8/20 μ s Peak Pulse Current WaveForm Acc. IEC 61000-4-5

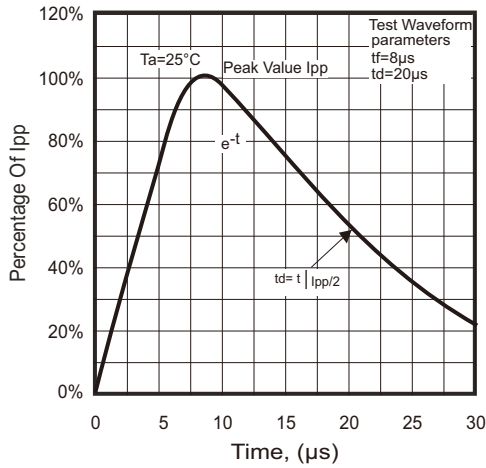


Fig.2 - Power Rating Derating Curve

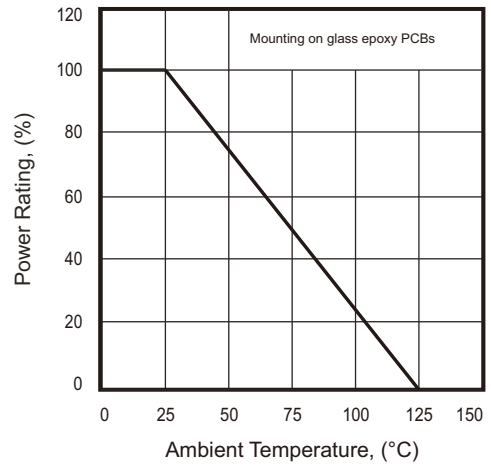


Fig.3 - Clamping Voltage Vs. Peak Pulse Current

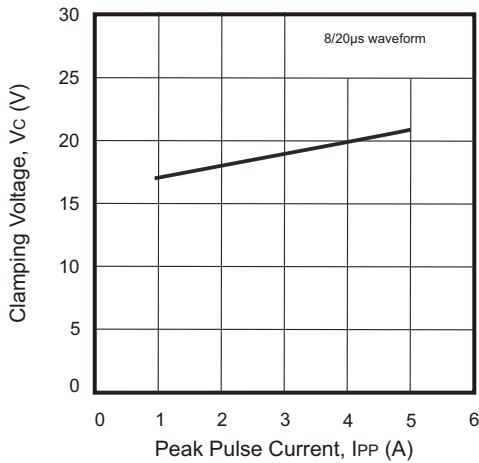


Fig.4 - Clamping Voltage Vs. Forward Peak Pulse Current

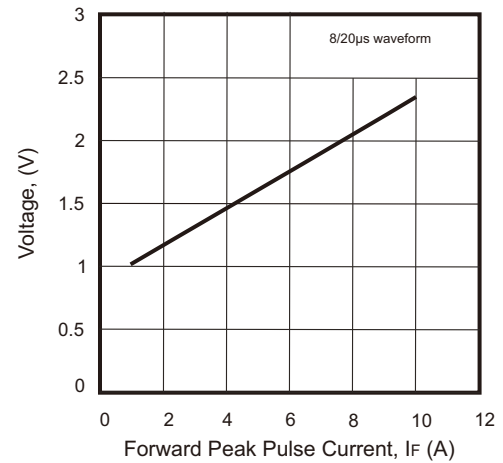
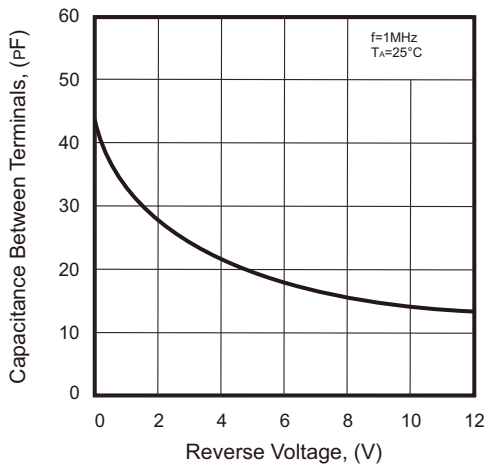
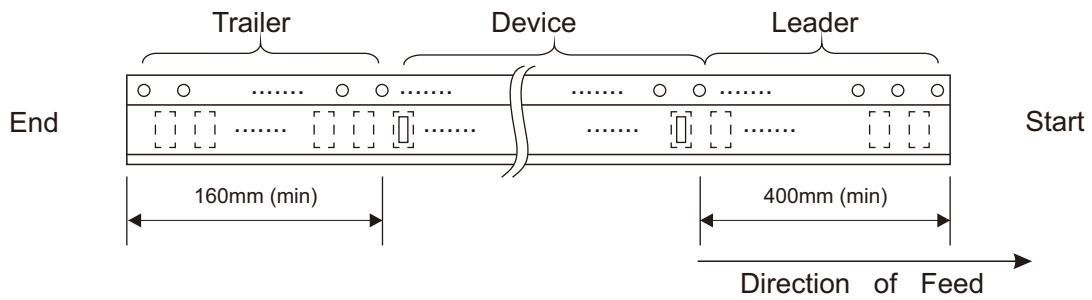
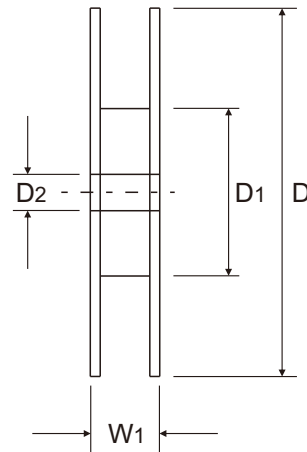
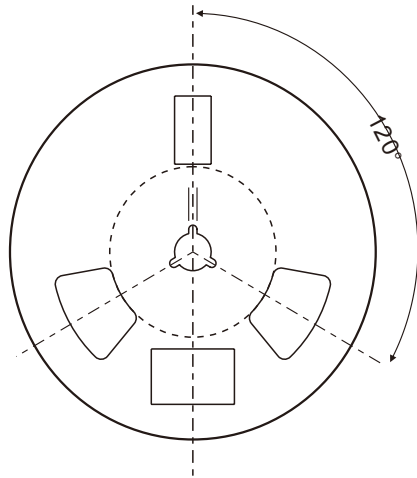
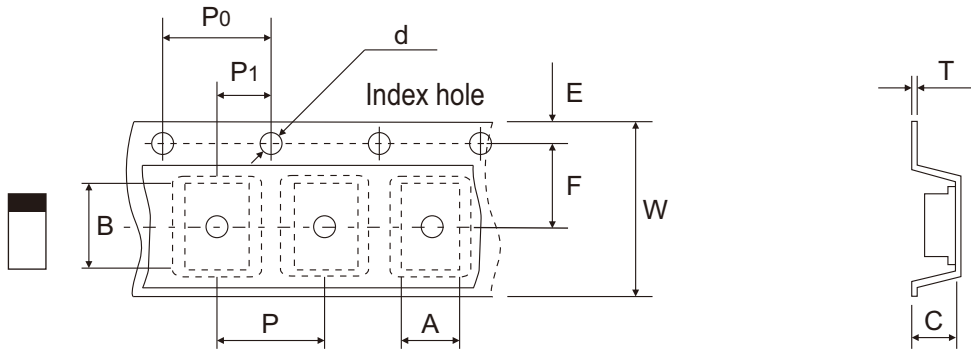


Fig.5 - Capacitance Between Terminals Characteristics



Reel Taping Specification



0603 (SOD-523F)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.16 ± 0.10	1.90 ± 0.10	0.95 ± 0.10	1.50 + 0.10 - 0.00	178.00 ± 1.00	60.00 ± 0.50	13.50 ± 0.20
	(inch)	0.046 ± 0.004	0.075 ± 0.004	0.037 ± 0.004	0.059 + 0.004 - 0.000	7.008 ± 0.039	2.362 ± 0.020	0.531 ± 0.008

0603 (SOD-523F)	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.22 ± 0.03	8.00 ± 0.20	12.00 + 0.50 - 0.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.009 ± 0.001	0.315 ± 0.008	0.472 + 0.020 - 0.000

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

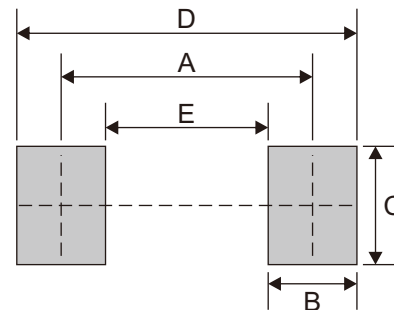
Marking Code

Part Number	Marking Code
CPDU12V0U-HF	E12



Suggested P.C.B. 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