

CPDU5V0USP-HF

RoHS Device
Halogen Free

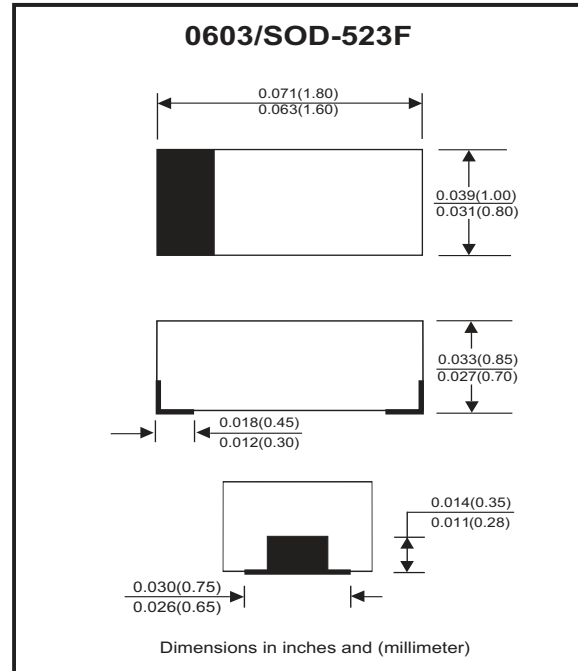


Features

- Uni-directional ESD protection.
- Surface mount package.
- Low capacitance.
- Low Leakage current.
- 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: Cathode band & E5P
- Mounting position: Any.
- Weight: 0.003 grams(approx.).



Circuit Diagram



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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse stand-off voltage		V_{RWM}			5.0	V
Forward voltage	$I_F = 10\text{mA}$	V_F			1.5	V
Breakdown voltage	$I_R = 1\text{mA}$	V_{BR}	5.4			V
Reverse leakage current	$V_R = 5\text{V}$	I_R			1.0	μA
Junction capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$	C_J		0.6	0.9	pF
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD			15 8	kV
Clamping voltage	$I_{PP} = 1\text{A}, T_P = 8/20\mu\text{s}$ $I_{PP} = 3\text{A}, T_P = 8/20\mu\text{s}$	V_C			13 25	V
Peak pulse power		PPP			75	W
Operation temperature range		T_J	-55		150	°C
Storage temperature range		T_{STG}	-55		150	°C

RATING AND CHARACTERISTIC CURVES (CPDU5V0USP-HF)

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

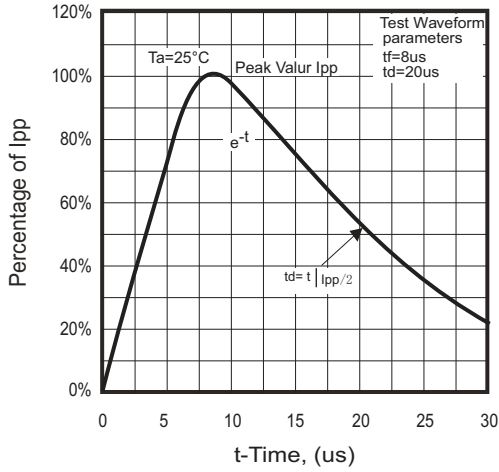


Fig.2 - Power Rating Derating Curve

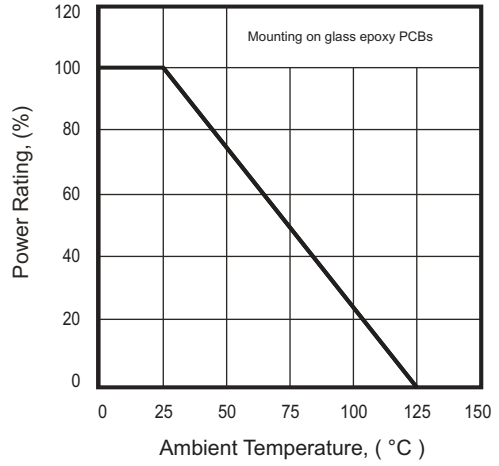


Fig.3 - Clamping Voltage Vs. Peak Pulse Current

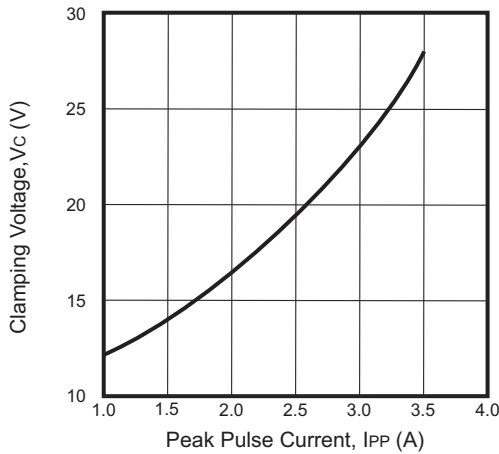


Fig.4 - Forward Voltage Vs. Forward Current

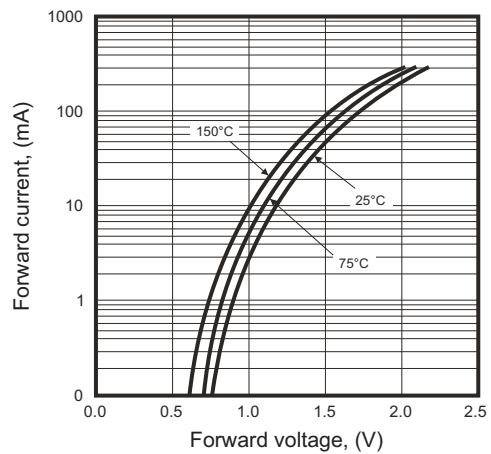
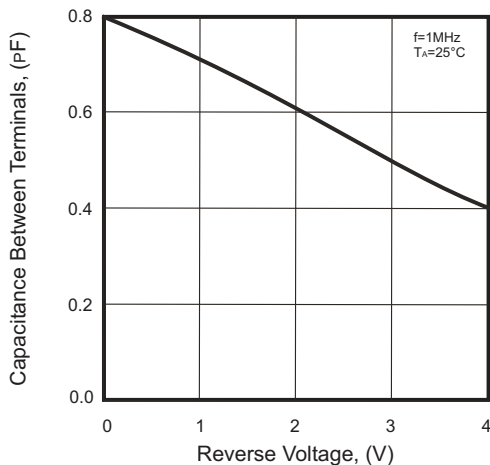
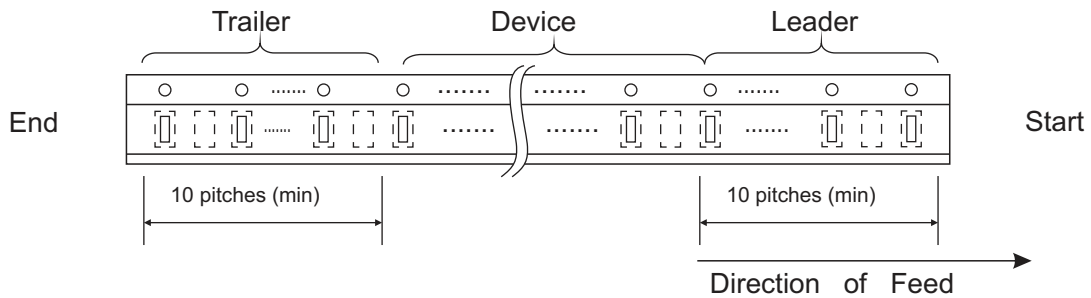
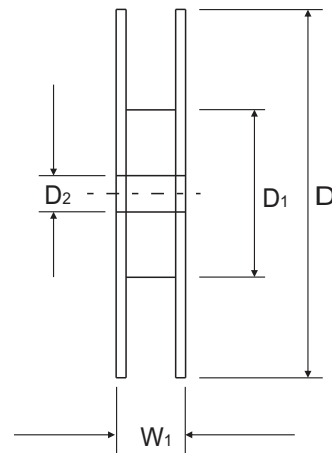
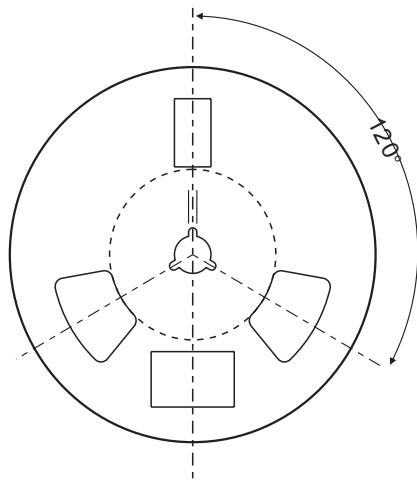
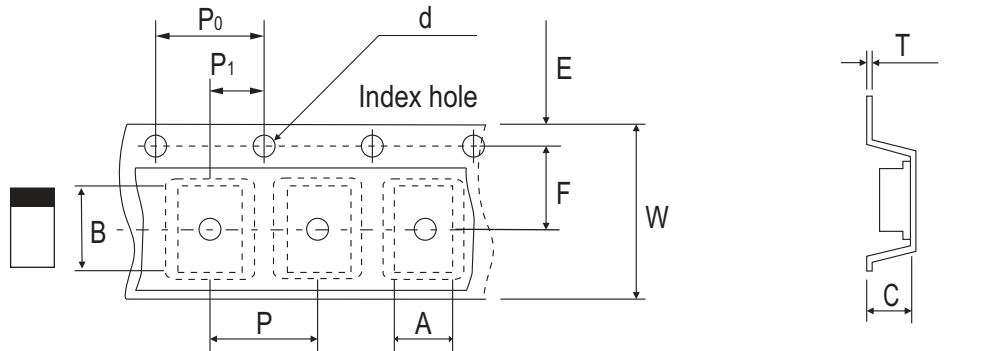


Fig.5 - Capacitance Between Terminals Characteristics



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.

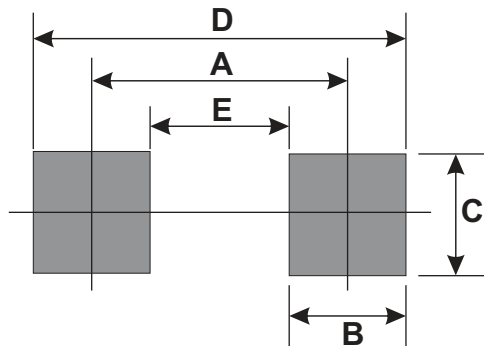
Marking Code

Part Number	Marking Code
CPDU5V0USP-HF	E5P



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