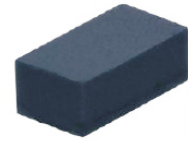


CPDER Series-HF

RoHS Device

Halogen Free



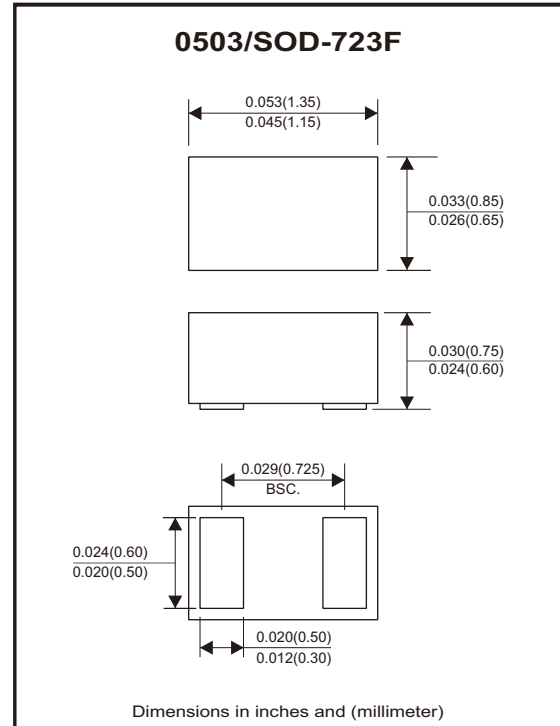
Features

- Bi-directional ESD protection.
- Surface mount package.
- Ultra small SMD package:0503.
- High component density.

Mechanical data

- Case: 0503/SOD-723F standard package, molded plastic.
- Terminals: Gold plated, solderable per MIL-STD-750, method 2026.
- Mounting position: Any.
- Weight: 0.002 grams (approx.).

Circuit Diagram



Maximum Rating (at $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Value	Unit
Peak pulse power	CPDER5V0-HF CPDER24V-HF $T_P = 8/20\mu\text{s}$	P_{PP}	75 47	W
Peak pulse current	CPDER5V0-HF CPDER24V-HF $T_P = 8/20\mu\text{s}$	I_{PP}	5 1	A
ESD capability	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	± 16 ± 8	kV
Operating temperature range		T_j	-40 to +125	$^{\circ}\text{C}$
Storage temperature range		T_{STG}	-55 to +150	$^{\circ}\text{C}$

Electrical Characteristics (at $T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Diode breakdown voltage	CPDER5V0-HF CPDER24V-HF $I_R = 1\text{mA}$	V_{BD}	5.1 25	7.0 28		V
Leakage current	CPDER5V0-HF CPDER24V-HF $V_R = 5\text{V}$ $V_R = 24\text{V}$	I_L		0.1	2.0	μA
Clamping voltage	CPDER5V0-HF $I_{PP} = 1\text{A}, T_P = 8/20\mu\text{s}$ $I_{PP} = 5\text{A}, T_P = 8/20\mu\text{s}$	V_C			10 15	V
	CPDER24V-HF $I_{PP} = 1\text{A}, T_P = 8/20\mu\text{s}$	V_C			47	
Junction capacitance	CPDER5V0-HF CPDER24V-HF $V_R = 0\text{V}, f = 1\text{MHz}$	C_T		15 10	20 -	pF

Rating and Characteristic Curves (CPDER Series-HF)

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

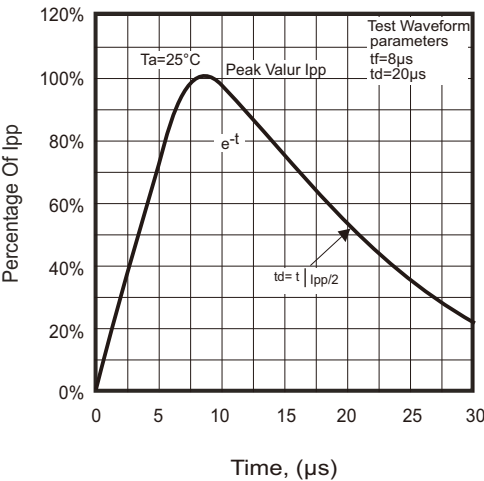


Fig.2-1 - Reverse Characteristics

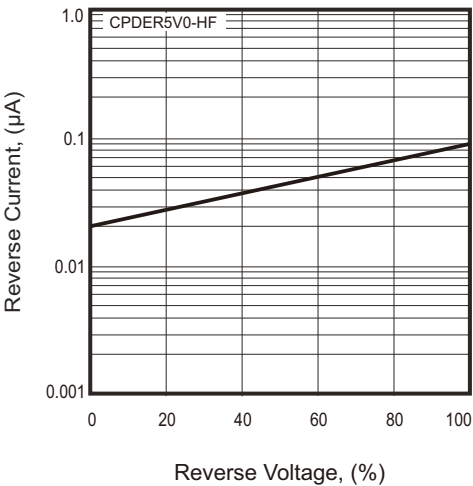


Fig.2-2 - Reverse Characteristics

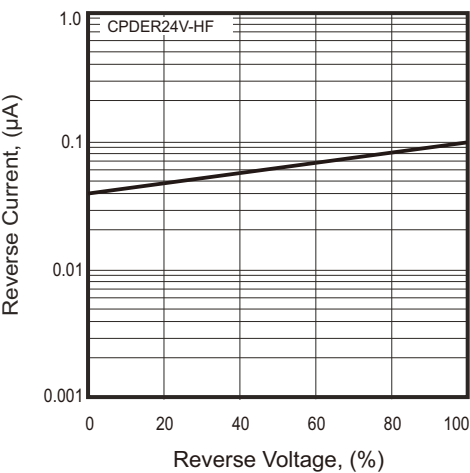


Fig.3 - Capacitance Between Terminals Characteristics

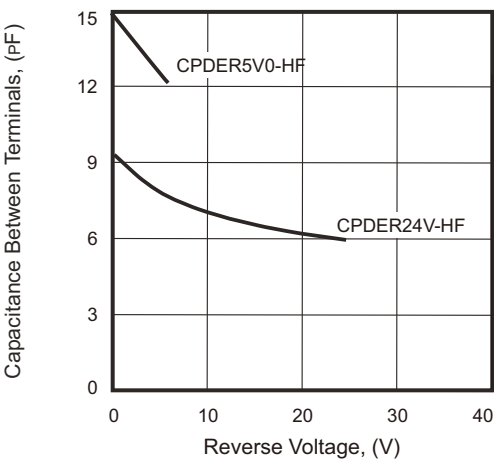
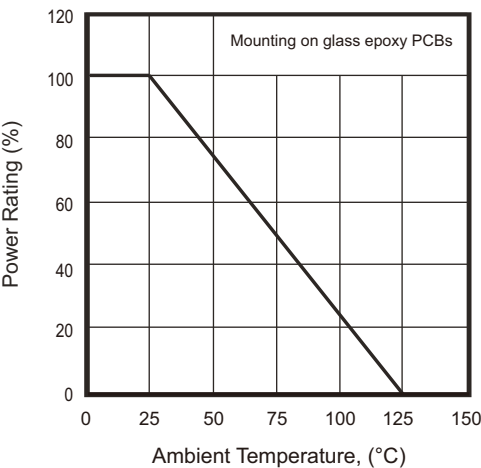
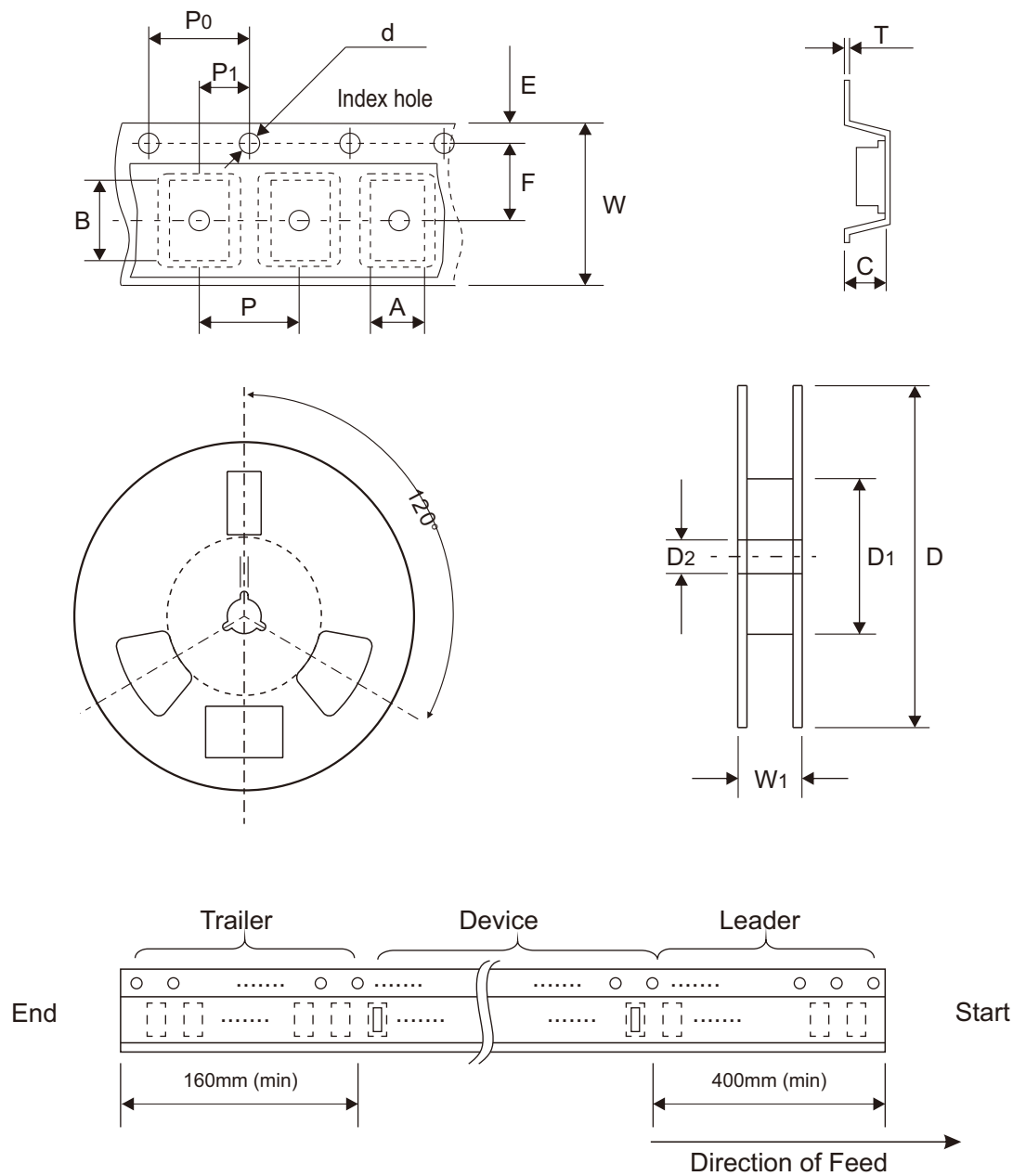


Fig.4 - Power Rating Derating Curve



Reel Taping Specification



0503 (SOD-723F)	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	0.92 ± 0.05	1.50 ± 0.05	0.87 ± 0.05	$1.50 + 0.10 - 0.00$	178.00 ± 1.00	60.00 ± 0.50	13.50 ± 0.20
	(inch)	0.036 ± 0.002	0.059 ± 0.002	0.034 ± 0.002	$0.059 + 0.004 - 0.000$	7.008 ± 0.039	2.362 ± 0.020	0.531 ± 0.008

0503 (SOD-723F)	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	$0.23 + 0.02 - 0.05$	8.00 ± 0.20	$12.00 + 0.50 - 0.00$
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	$0.009 + 0.001 - 0.002$	0.315 ± 0.008	$0.472 + 0.020 - 0.000$

Marking Code

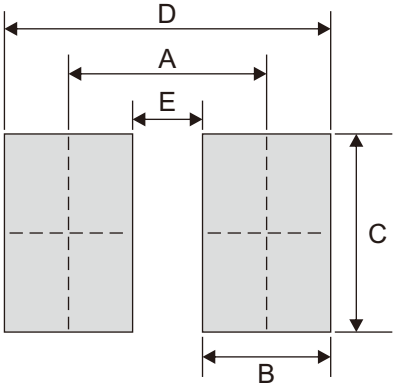
Part Number	Marking Code
CPDER5V0-HF	E05
CPDER24V-HF	E24



xxx = Product type marking code

Suggested P.C.B. PAD Layout

SIZE	0503/SOD-723F	
	(mm)	(inch)
A	0.85	0.033
B	0.55	0.022
C	0.85	0.033
D	1.40	0.055
E	0.30	0.012



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
0503/SOD-723F	4,000	7