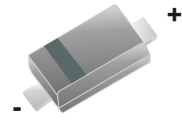


CPDE5V0U-HF

RoHS Device
Halogen Free



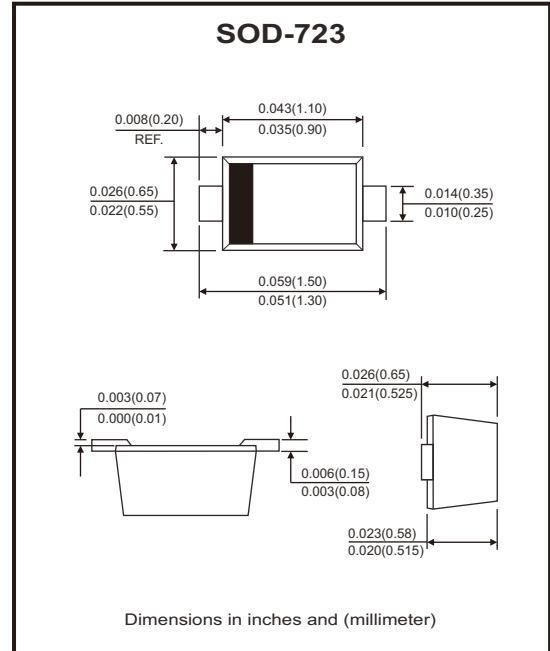
Features

- Uni-directional ESD protection of one line.
- Fast response time.
- Low reverse clamping voltage.
- Low leakage current.

Mechanical data

- Case: SOD-723, molded plastic.
- Terminals: Tin plated, solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Mounting position: Any

Circuit Diagram



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

Parameter	Conditions	Symbol	Value	Unit
Peak pulse power (Note 2)	$T_P = 8/20\mu\text{s}$	P_{PP}	169	W
Peak pulse current (Note 2)	$T_P = 8/20\mu\text{s}$	I_{PP}	13	A
ESD capability (Note 1)	IEC 61000-4-2(air) IEC 61000-4-2(contact)	ESD	± 25	kV
JESD22-A114-B ESD voltage (Note 1)	Per human body model (HBM)		± 16	
ESD voltage (Note 1)	Machine model (MM)		± 0.4	
Lead solder temperature - Maximum (10second duration)		T_L	260	$^\circ\text{C}$
Operation junction and storage temperature range		T_J, T_{STG}	-55 to +150	$^\circ\text{C}$

Notes: 1. Device stressed with ten non-repetitive ESD pulses.

2. Non-repetitive current pulse $8/20\mu\text{s}$ exponential decay waveform according to IEC 61000-4-5.

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse stand off voltage (Note 1)		V_{RWM}			5	V
Reverse leakage current	$V_{RWM} = 5\text{V}$	I_R			1	μA
Breakdown voltage	$I_T = 1\text{mA}$	V_{BR}	6.2		7.3	V
Clamping voltage (Note 2)	$I_{PP} = 13\text{A}, T_P = 8/20\mu\text{s}$	V_C			13	V
Forward voltage	$I_F = 10\text{mA}$	V_F			0.9	V
Junction capacitance	$V_R = 0\text{V}, f = 1\text{MHz}$	C_J		95		pF

Notes: 1. Other voltage available upon request.

2. Non-repetitive current pulse $8/20\mu\text{s}$ exponential decay waveform according to IEC 61000-4-5.

Typical Rating and Characteristic Curves (CPDE5V0U-HF)

Fig.1 - Forward Characteristic

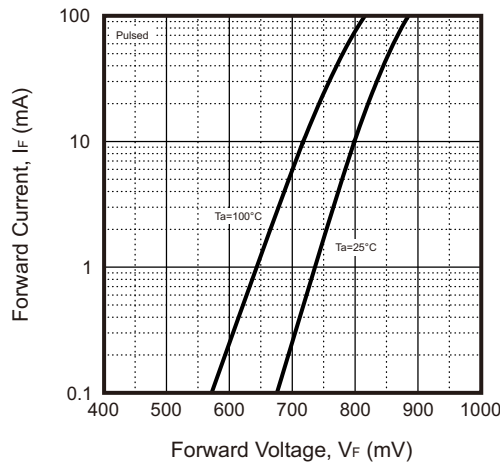


Fig.2 - Reverse Characteristic

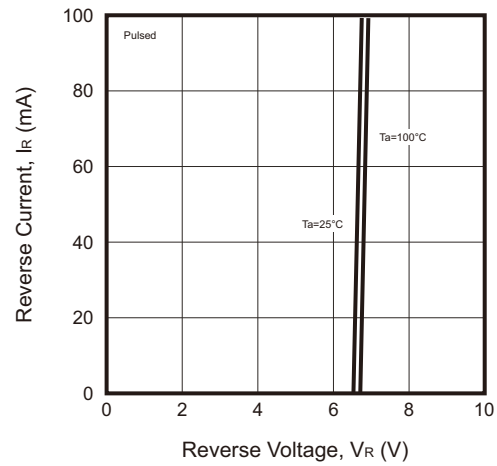


Fig.3 - V_C — I_{PP}

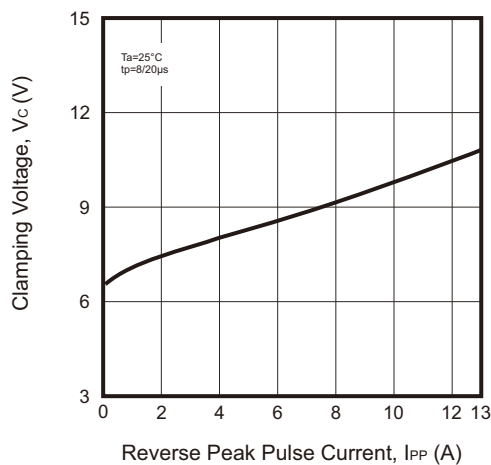
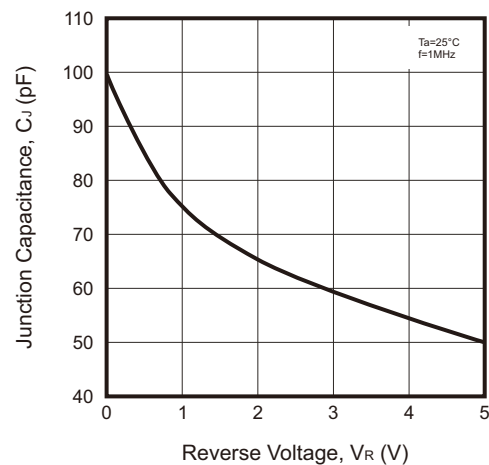
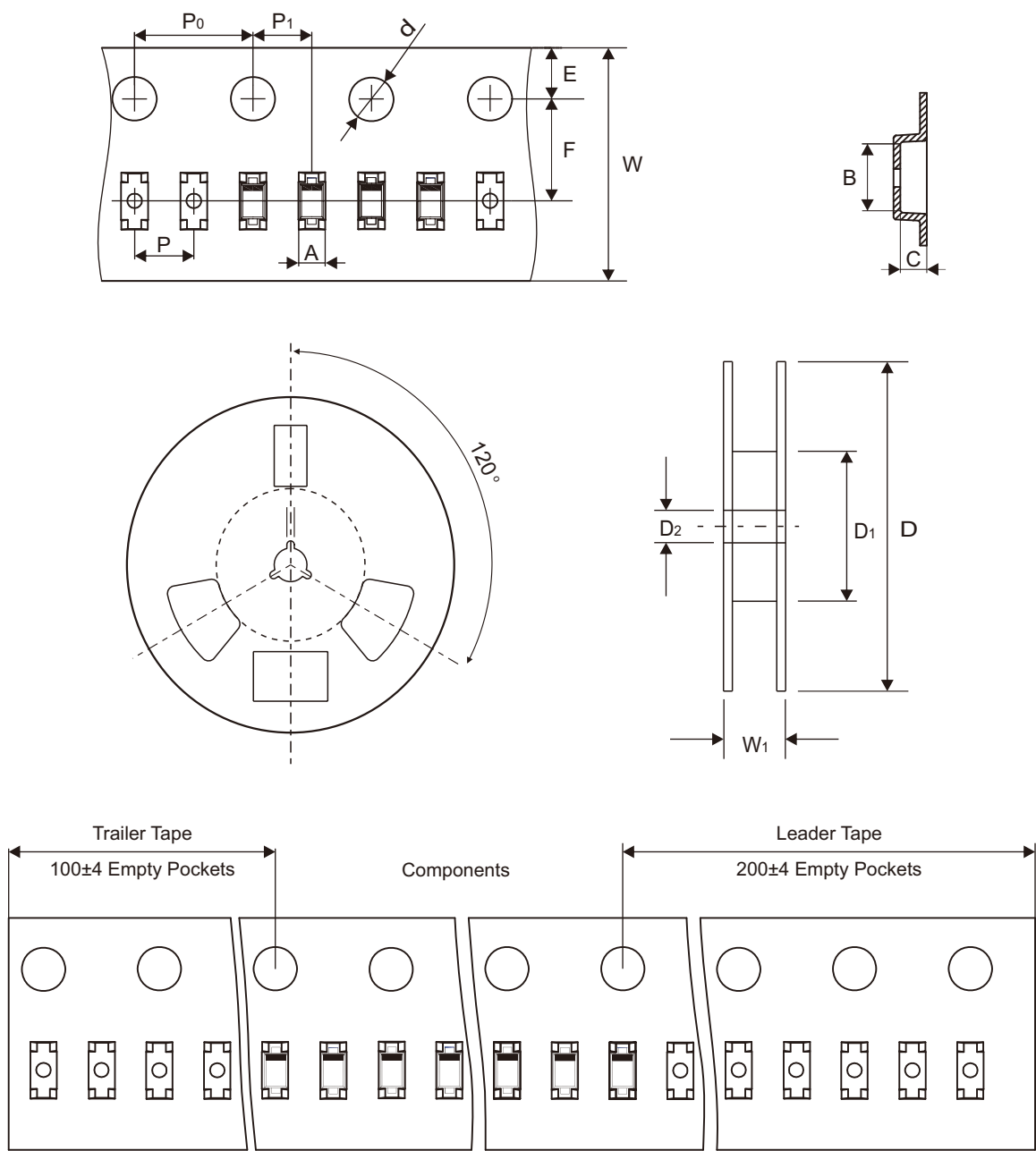


Fig.4 - Capacitance Characteristics



Reel Taping Specification



SOD-723	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	0.73 ± 0.05	1.71 ± 0.05	0.62 ± 0.05	$1.50 + 0.10 - 0.00$	178.00 ± 1.00	54.40 ± 0.40	13.00 ± 0.20
	(inch)	0.029 ± 0.002	0.067 ± 0.002	0.024 ± 0.002	$0.059 + 0.004 - 0.000$	7.008 ± 0.039	2.142 ± 0.016	0.512 ± 0.008

SOD-723	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	2.00 ± 0.05	4.00 ± 0.10	2.00 ± 0.05	$8.00 + 0.20 - 0.10$	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.079 ± 0.002	0.157 ± 0.004	0.079 ± 0.002	$0.315 + 0.008 - 0.004$	0.484 ± 0.039

Marking Code

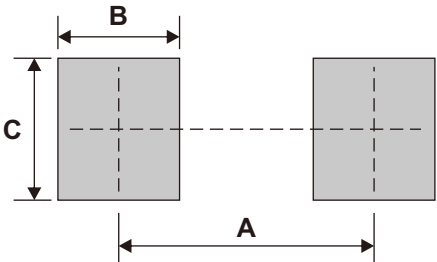
Part Number	Marking Code
CPDE5V0U-HF	E2



█ = Cathode band

Suggested P.C.B. PAD Layout

SIZE	SOD-723	
	(mm)	(inch)
A	1.26	0.050
B	0.60	0.024
C	0.70	0.028



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-723	8,000	7