

CDBW120-HF Thru. CDBW140-HF

Forward current: 1.0A

Reverse voltage: 20 to 40V

RoHS Device

Halogen Free

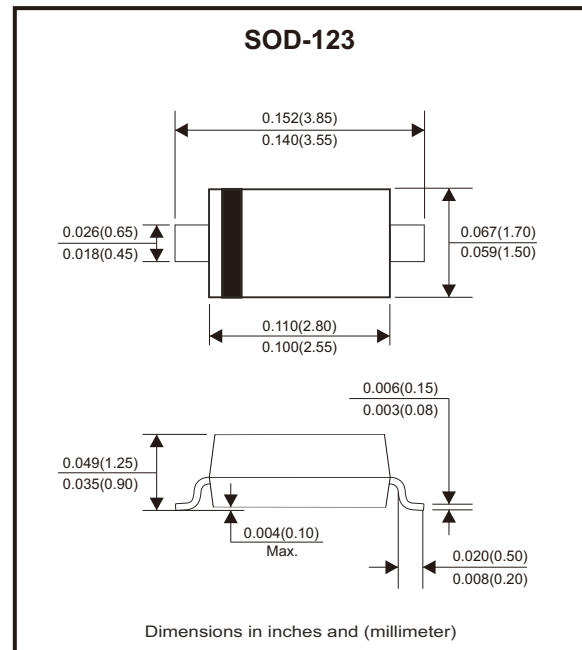


Features

- For use in low voltage, high frequency inverters.
- Free wheeling, and polarity protection applications.

Mechanical Data

- Case: SOD-123, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: indicated by cathode end.
- Weight: 0.0097 grams (approx.).



Circuit Diagram



Maximum Ratings (At Ta=25°C, unless otherwise noted)

Parameter	Symbol	CDBW120-HF	CDBW130-HF	CDBW140-HF	Unit
Non-repetitive peak reverse voltage	V _{RM}	20	30	40	V
Peak repetitive peak reverse voltage	V _{RRM}				
Working peak reverse voltage	V _{RWM}	20	30	40	V
DC blocking voltage	V _R				
RMS reverse voltage	V _{R(RMS)}	14	21	28	V
Average rectified output current	I _O	1			A
Peak forward surge current @ 8.3ms	I _{FSM}	9			A
Power dissipation	P _D	500			mW
Thermal resistance, junction to ambient	R _{θJA}	250			°C/W
Junction temperature range	T _J	-55 ~ +125			°C
Storage temperature range	T _{STG}	-55 ~ +150			°C

Electrical Characteristics (At Ta=25°C, unless otherwise noted)

Parameter	Conditions	Symbol	Min.	Max.	Unit
Reverse breakdown voltage	CDBW120-HF CDBW130-HF CDBW140-HF $I_R=1\text{mA}$	V_{BR}	20 30 40		V
Reverse voltage leakage current	CDBW120-HF CDBW130-HF CDBW140-HF $V_R=20\text{V}$ $V_R=30\text{V}$ $V_R=40\text{V}$	I_R		1	mA
Forward voltage	CDBW120-HF CDBW130-HF CDBW140-HF $I_F=1\text{A}$	V_F		0.45 0.55 0.60	V
	CDBW120-HF CDBW130-HF CDBW140-HF $I_F=3\text{A}$			0.75 0.875 0.90	
Diode capacitance	$V_R=4\text{V}$, $f=1\text{MHz}$	C_D		120	pF

Rating and Characteristic Curves (CDBW120-HF Thru. CDBW140-HF)

Fig.1- Power Derating Curve

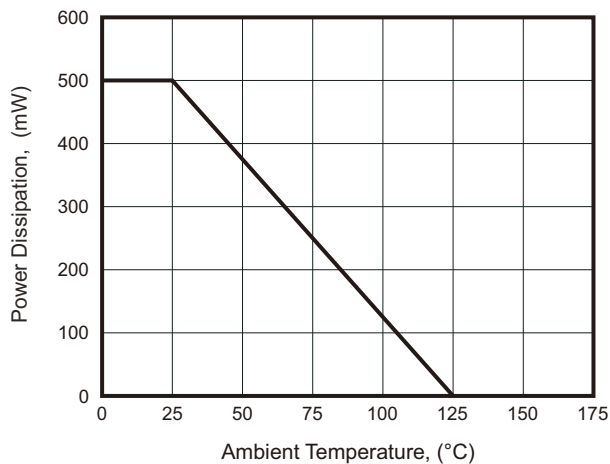


Fig.2 - Typical Junction Capacitance

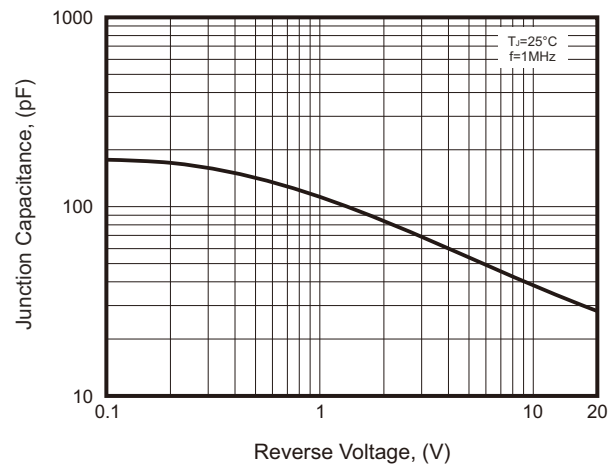


Fig.3 - Typical Instantaneous Forward Characteristics

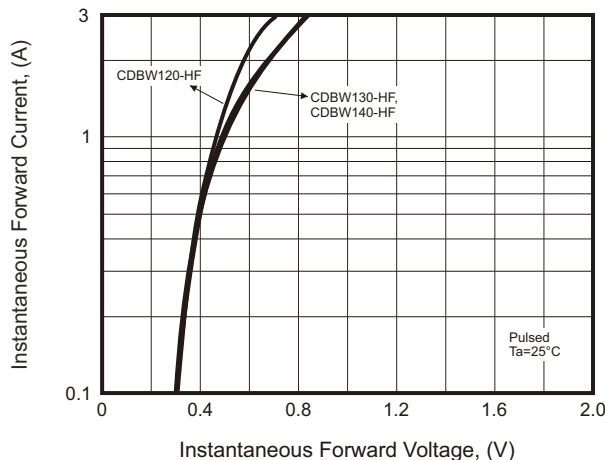
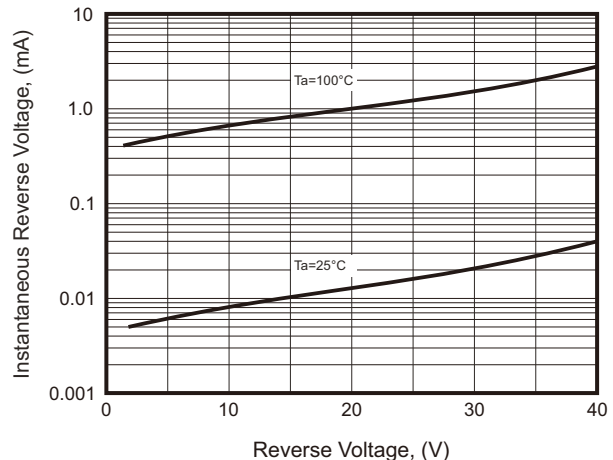
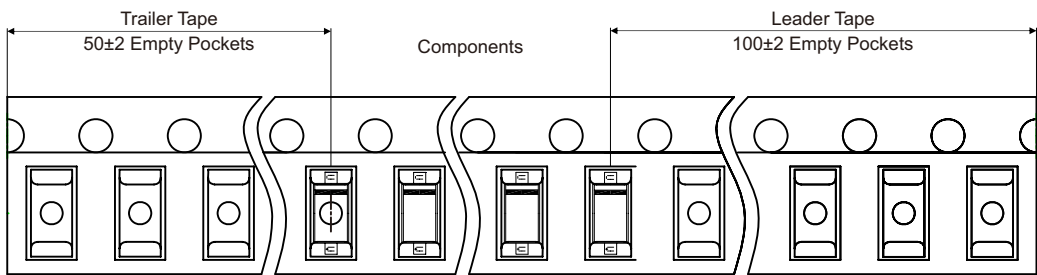
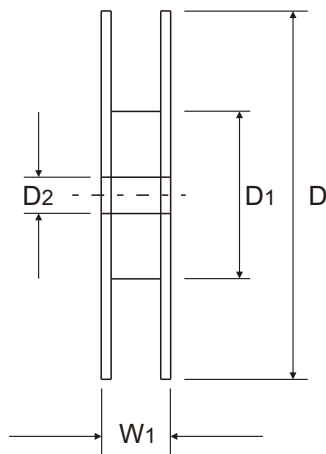
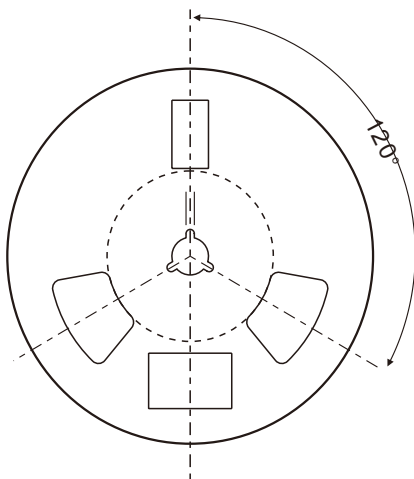
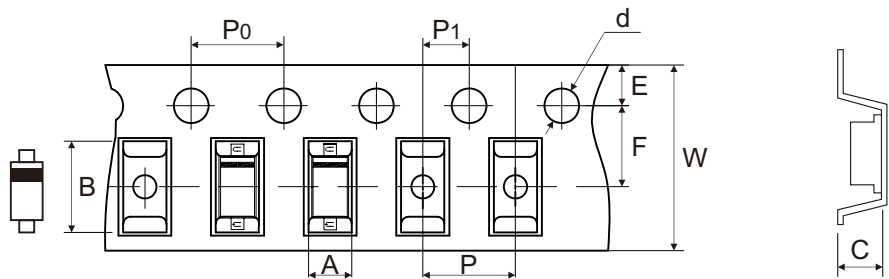


Fig.4 - Typical Reverse Characteristics



Reel Taping Specification



SOD-123	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.85 ± 0.05	3.94 ± 0.05	1.57 ± 0.05	1.55 ± 0.10	178 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.073 ± 0.002	0.155 ± 0.002	0.062 ± 0.002	0.061 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

SOD-123	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	8.00 + 0.30 - 0.10	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.315 + 0.012 - 0.004	0.484 ± 0.039

Marking Code

Part Number	Marking Code
CDBW120-HF	SJ
CDBW130-HF	SK
CDBW140-HF	SL

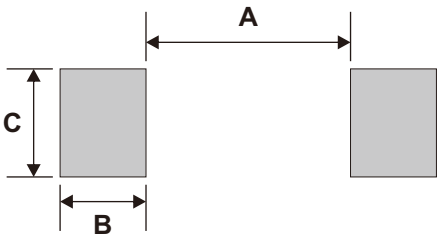


xx = Product type marking code

 = Cathode band

Suggested PAD Layout

SIZE	SOD-123	
	(mm)	(inch)
A	2.31	0.091
B	0.97	0.038
C	1.22	0.048



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-123	3,000	7