

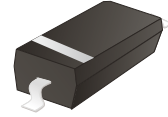
## CDBW120-HF Thru. CDBW140-HF

Forward current: 1.0A

Reverse voltage: 20 to 40V

RoHS Device

Halogen Free

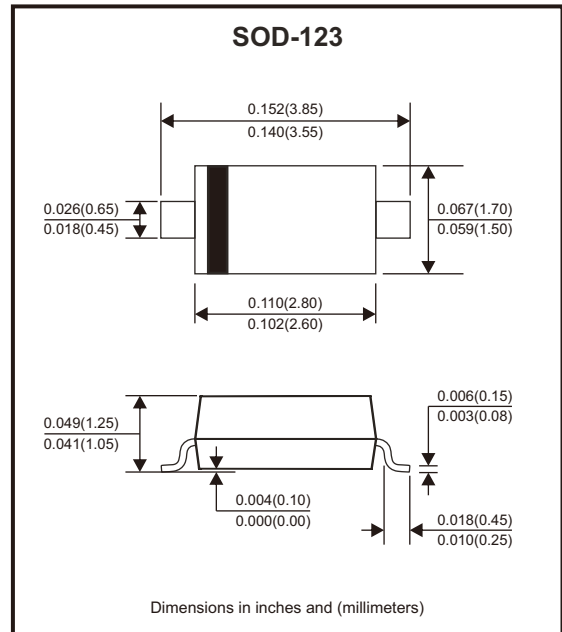


### Features

- High current capability.
- Low forward voltage drop.

### Mechanical Data

- Case: SOD-123, molded plastic.
- Polarity: Color band denotes cathode end.
- Epoxy UL: 94V-0.
- Mounting position: Any.



### Circuit Diagram



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

Parameter	Symbol	CDBW120-HF	CDBW130-HF	CDBW140-HF	Unit
Max. repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	V
Max. RMS voltage	V <sub>RMS</sub>	14	21	28	V
Max. DC blocking voltage	V <sub>DC</sub>	20	30	40	V
Max. average forward rectified current	I <sub>FM</sub>	1			A
Peak forward surge current 8.3ms single half sine-wave	I <sub>FSM</sub>	9			A
Typical thermal resistance	R <sub>θJA</sub>	250			°C/W
Power dissipation	P <sub>D</sub>	500			mW
Storage temperature range	T <sub>STG</sub>	-55 ~ +150			°C

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

Parameter	Conditions	Symbol	CDBW120-HF	CDBW130-HF	CDBW140-HF	Unit
Maximum forward voltage	I <sub>F</sub> = 1.0A	V <sub>F</sub>	0.450	0.550	0.600	V
	I <sub>F</sub> = 3.0A		0.750	0.875	0.900	
Maximum reverse breakdown voltage	I <sub>R</sub> = 1mA	V <sub>R</sub>	20	30	40	V
Maximum reverse current	V <sub>R</sub> = 20V CDBW120 V <sub>R</sub> = 30V CDBW130 V <sub>R</sub> = 40V CDBW140	I <sub>R</sub>	1			mA
Type junction capacitance	V <sub>R</sub> = 4V, f = 1MHz	C <sub>j</sub>	120			pF

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

Fig.1 - Forward Characteristics

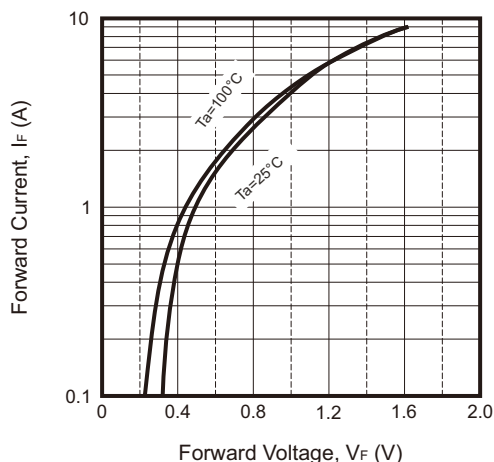


Fig.2 - Reverse Characteristics

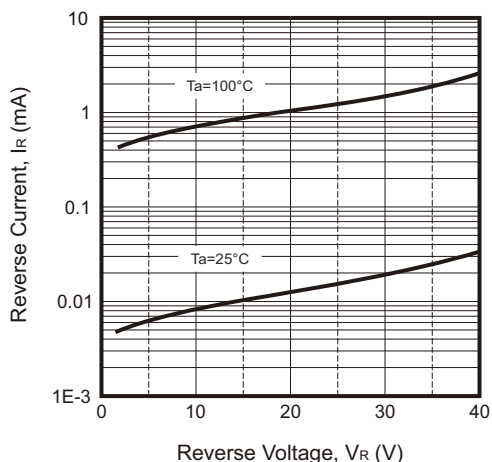


Fig.3 - Capacitance Characteristics

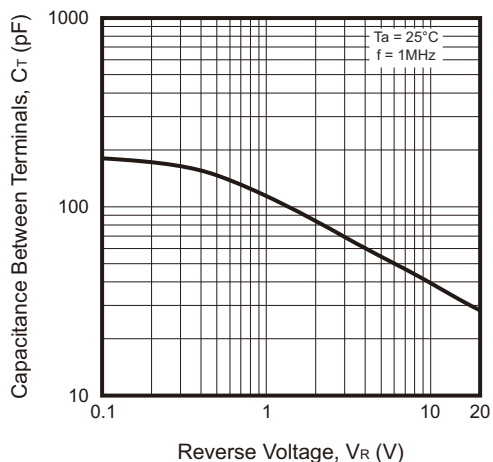
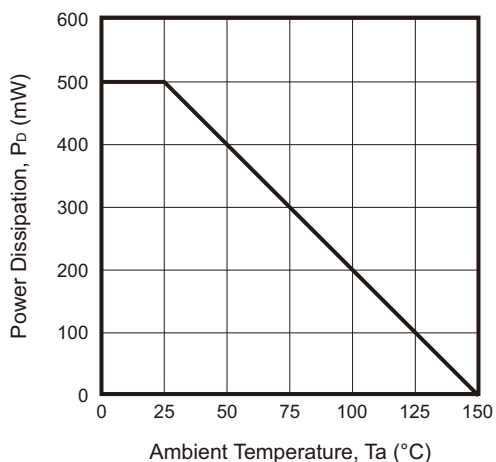
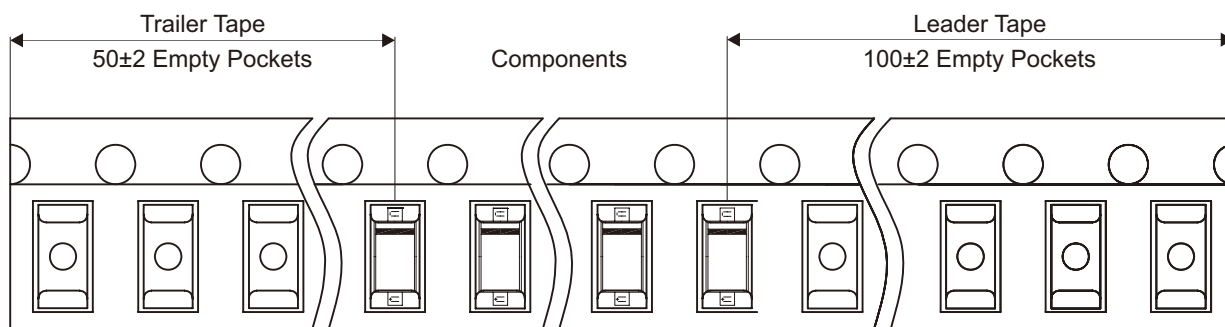
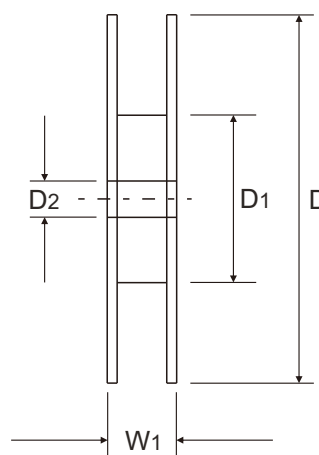
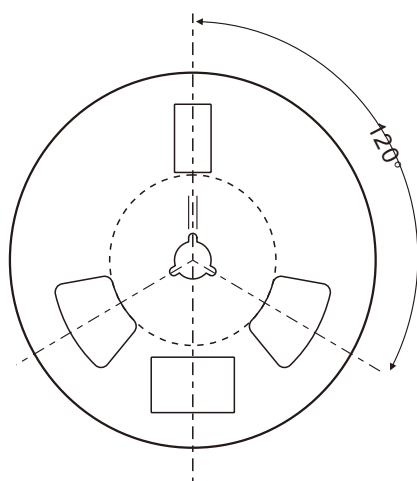
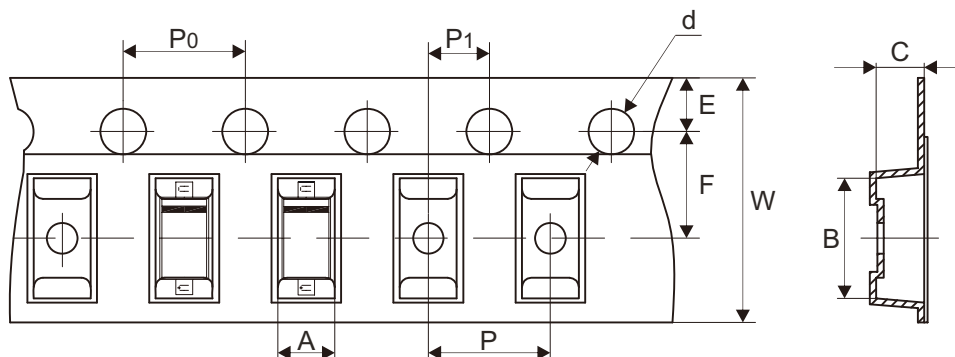


Fig.4 - Power Derating Curve



## 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	178.00 ± 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	P1	P0	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	4.00 ± 0.10	8.00 + 0.06 - 0.10	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.157 ± 0.004	0.315 + 0.002 - 0.004	0.484 ± 0.039

## Marking Code

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

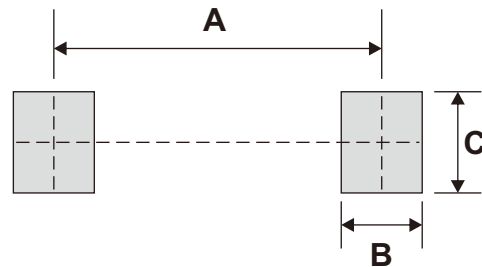


xx = Product type marking code

█ = Cathode band

## Suggested PAD Layout

SIZE	SOD-123	
	(mm)	(inch)
A	3.24	0.128
B	0.80	0.031
C	1.00	0.039



Note: 1. The pad layout is for reference purposes only.

## Standard Packaging

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