

## CDBW0520L-HF Thru. CDBW0540-HF

Reverse Voltage: 20 to 40 Volts

Forward Current: 0.5 Amp

RoHS Device

Halogen Free



### Features

- Low turn on voltage.
- Fast switching.
- PN junction guard ring for transient and ESD protection.

### Mechanical data

- Case: SOD-123, molded plastic.
- Terminals: solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.
- Weight: 0.0097 gram(approx.).

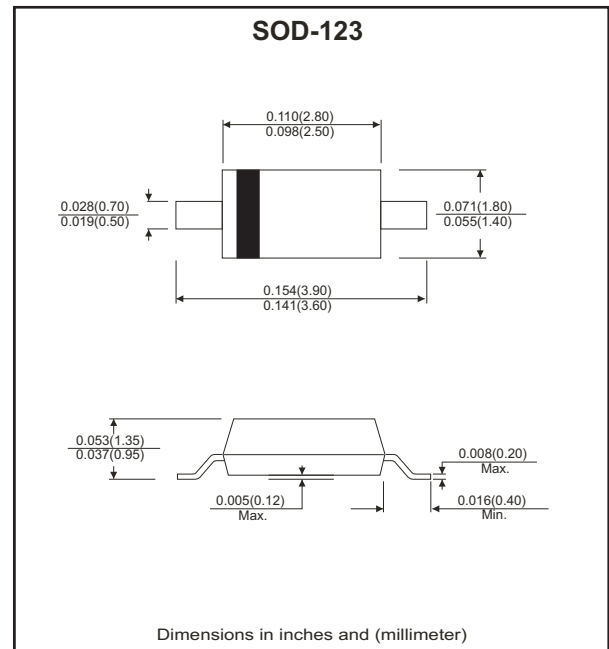
### Marking

CDBW0520L-G: SD

CDBW0530-G: SE

CDBW0540-G: SF

### Circuit Diagram



### Maximum Ratings and Electrical Characteristics (At Ta=25°C, unless otherwise noted)

Parameter	Symbol	CDBW0520L-HF	CDBW0530-HF	CDBW0540-HF	Units
Max. repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	V
Max. DC blocking voltage	V <sub>DC</sub>	20	30	40	V
Max. RMS voltage	V <sub>RMS</sub>	14	21	28	V
Peak surge forward current, 8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I <sub>FSM</sub>	5.5			A
Max. average forward current	I <sub>o</sub>	0.5			A
Max. forward voltage	V <sub>F</sub>	0.3@I <sub>F</sub> =0.1A 0.385@I <sub>F</sub> =0.5A	0.375@I <sub>F</sub> =0.1A 0.430@I <sub>F</sub> =0.5A	0.51@I <sub>F</sub> =0.5A 0.62@I <sub>F</sub> =1.0A	V
Max. reverse current	I <sub>R</sub>	0.075@V <sub>R</sub> =10V 0.25@V <sub>R</sub> =20V	0.02@V <sub>R</sub> =15V 0.13@V <sub>R</sub> =30V	0.01@V <sub>R</sub> =20V 0.02@V <sub>R</sub> =40V	mA
Max. thermal resistance (Note 1)	R <sub>θJA</sub> R <sub>θJL</sub>	206 150			°C/W
Max. operating junction temperature	T <sub>J</sub>	125			°C
Storage temperature	T <sub>STG</sub>	-55 to +125			°C

Notes: 1. Thermal resistance from junction to ambient and junction to lead, mounted on P.C.B. with 0.2×0.2 inch copper pad area.

Company reserves the right to improve product design, functions and reliability without notice.

## RATING AND CHARACTERISTIC CURVES (CDBW0520L-HF thru CDBW0540-HF)

Fig.1 Forward Characteristics

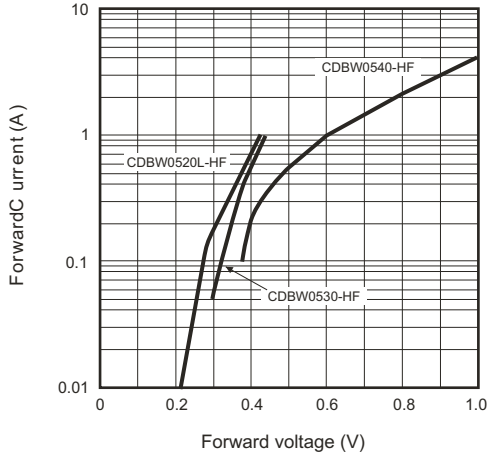


Fig.2 Current Derating Curve

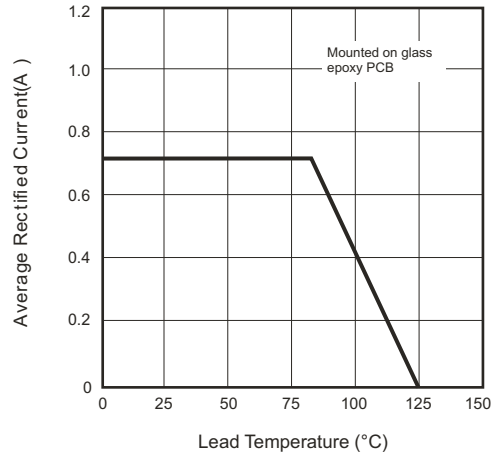
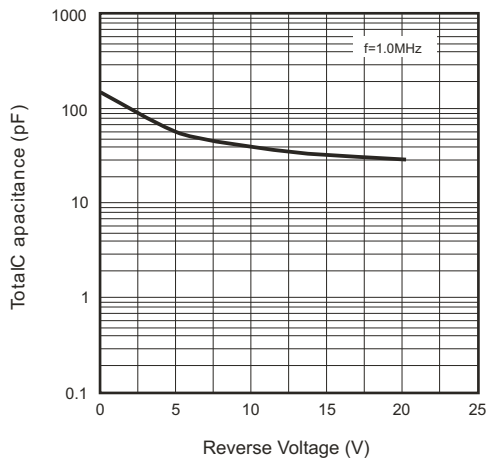
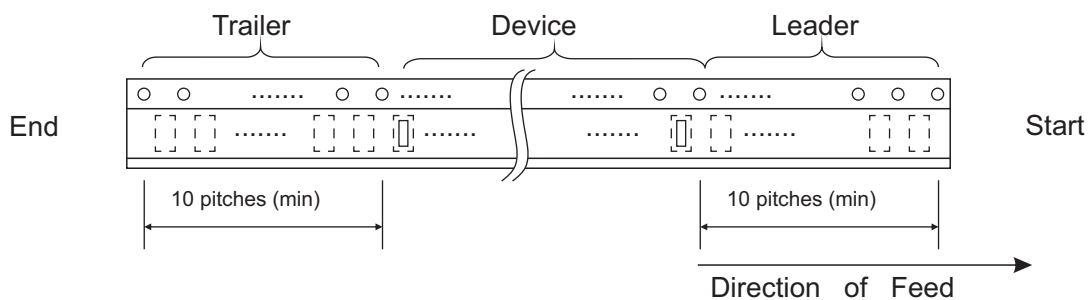
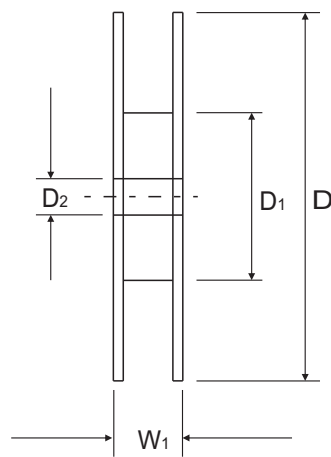
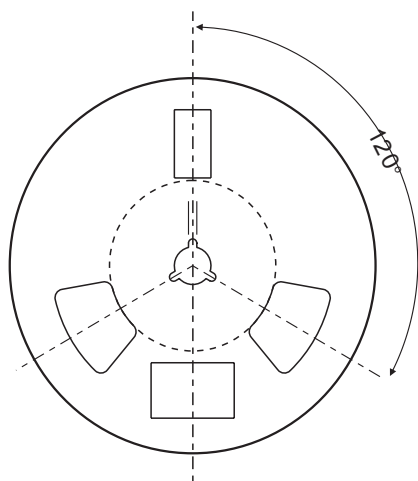
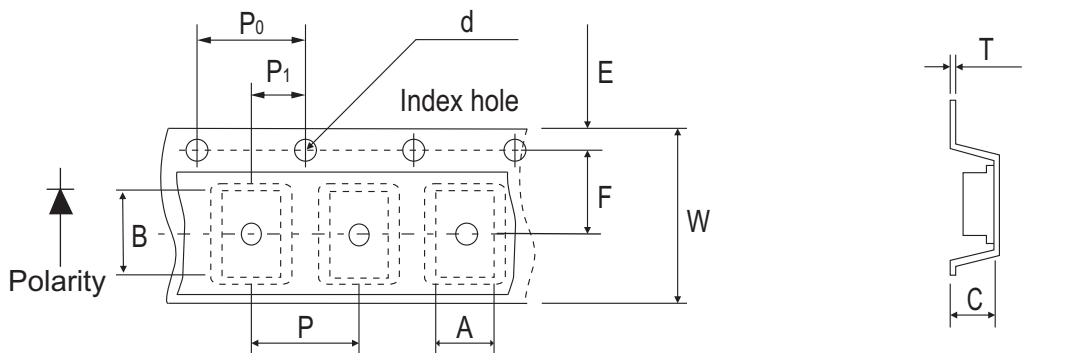


Fig.3 Total Capacitance vs. Reverse voltage



## Reel Taping Specification



SOD-123	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.90 ± 0.10	4.00 ± 0.10	1.50 ± 0.10	1.55 ± 0.10	178 ± 1.00	50.0 MIN.	13.0 ± 0.20
	(inch)	0.075 ± 0.04	0.157 ± 0.04	0.059 ± 0.04	0.061 ± 0.04	7.00 ± 0.039	1.968 MIN.	0.512 ± 0.079

SOD-123	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	8.00 ± 0.30	14.4 MAX.
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.315 ± 0.011	0.567 MAX.

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REV:A

## Marking Code

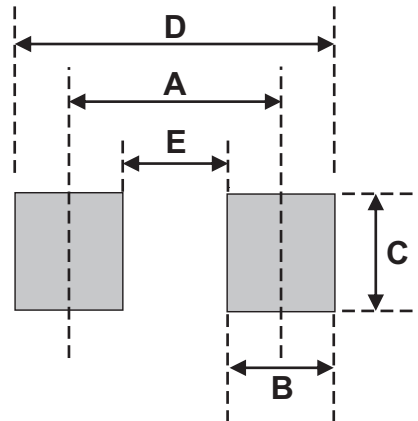
Part Number	Marking Code
CDBW0520L-HF	SD
CDBW0530-HF	SE
CDBW0540-HF	SF



xx = Product type marking code

## Suggested PAD Layout

SIZE	SOD-123	
	(mm)	(inch)
A	3.24	0.128
B	0.80	0.032
C	1.00	0.039
D	4.04	0.159
E	2.44	0.096



## Standard Packaging

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

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