

## 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.).

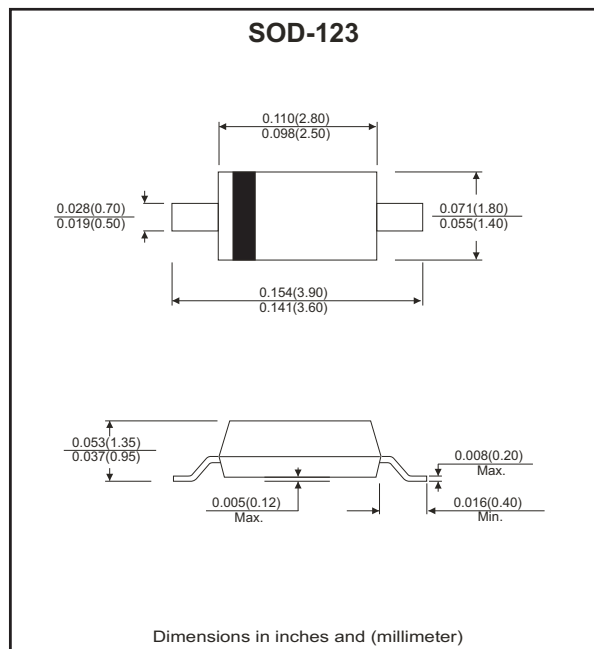
### Marking

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	$V_{RRM}$	20	30	40	V
Max. DC blocking voltage	$V_{DC}$	20	30	40	V
Max. RMS voltage	$V_{RMS}$	14	21	28	V
Peak surge forward current, 8.3ms single half sine-wave superimposed on rate load (JEDEC method)	$I_{FSM}$	5.5			A
Max. average forward current	$I_o$	0.5			A
Max. forward voltage	$V_F$	0.3@ $I_F=0.1A$ 0.385@ $I_F=0.5A$	0.375@ $I_F=0.1A$ 0.430@ $I_F=0.5A$	0.51@ $I_F=0.5A$ 0.62@ $I_F=1.0A$	V
Max. reverse current	$I_R$	0.075@ $V_R=10V$ 0.25@ $V_R=20V$	0.02@ $V_R=15V$ 0.13@ $V_R=30V$	0.01@ $V_R=20V$ 0.02@ $V_R=40V$	mA
Max. thermal resistance (Note 1)	$R_{\theta JA}$ $R_{\theta JL}$	206 150			°C/W
Max. operating junction temperature	$T_J$	125			°C
Storage temperature	$T_{STG}$	-55 to +125			°C

Notes: 1. Thermal resistance from junction to ambient and junction to lead, mounted on P.C.B. with 0.2x0.2 inch copper pad area.

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

REV:A

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

Fig.1 Forward Characteristics

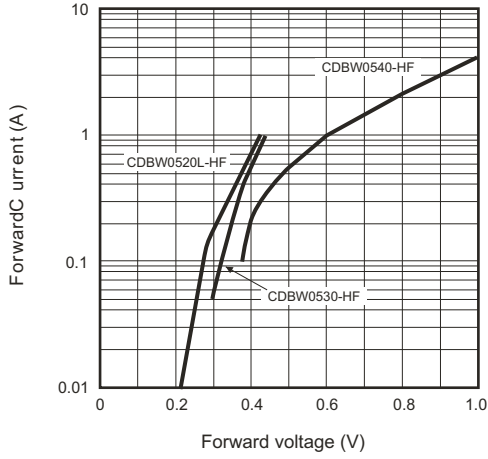


Fig.2 Current Derating Curve

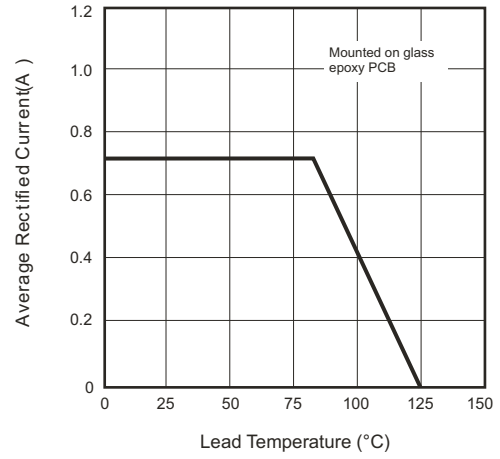
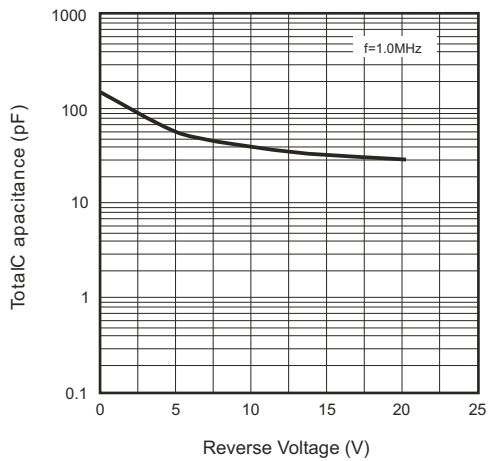
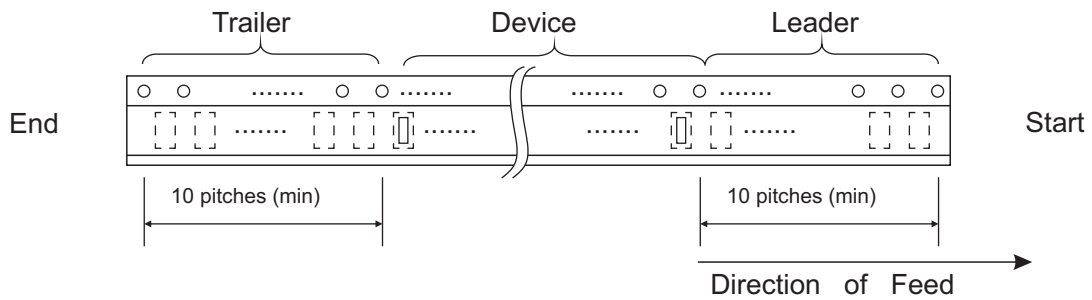
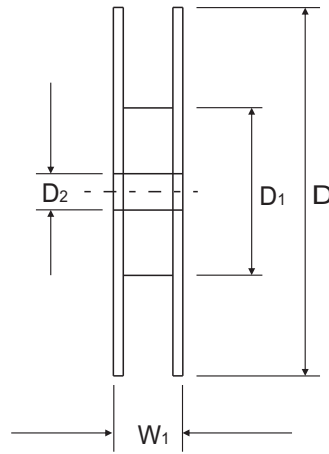
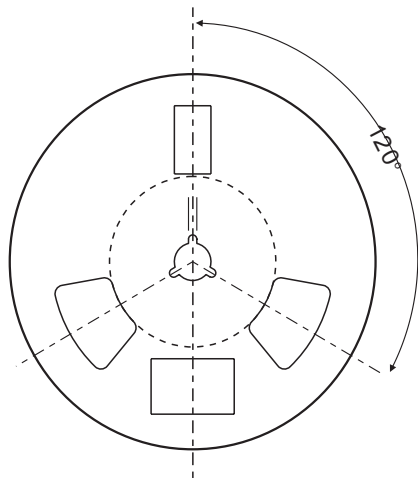
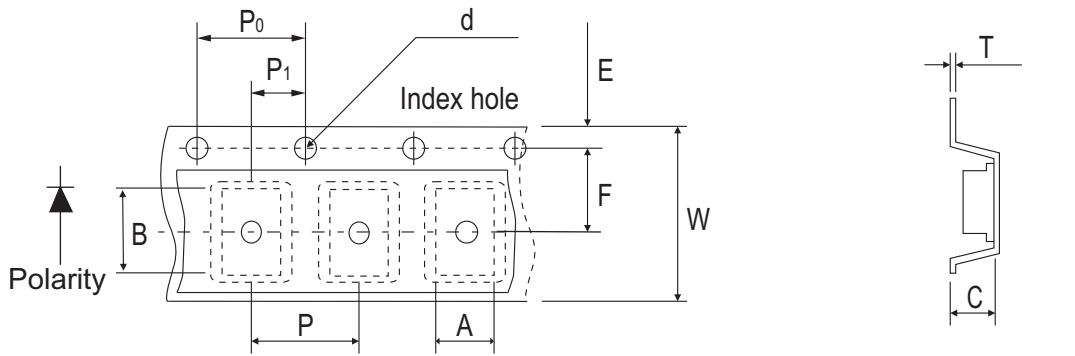


Fig.3 Total Capacitance vs. Reverse voltage



## 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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## Marking Code

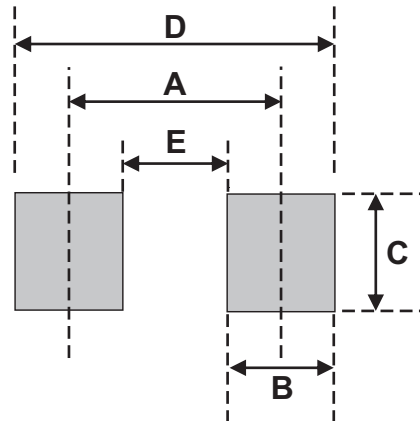
Part Number	Marking Code
CDBW0520L-HF	SD
CDBW0530-HF	SE
CDBW0540-HF	SF



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