

## CDBW120-G Thru. CDBW140-G

Forward current: 1.0A

Reverse voltage: 20 to 40V

RoHS Device



### Features

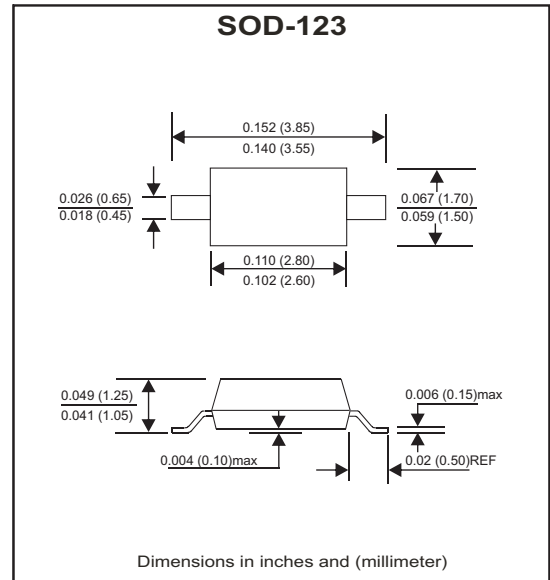
- For use in low voltage, high frequency inverters.
- Free wheeling, and polarity protection applications.

### Mechanical Data

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

### Marking

- CDBW120-G: SJ
- CDBW130-G: SK
- CDBW140-G: SL



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

Parameter	Symbol	CDBW120-G	CDBW130-G	CDBW140-G	Unit
Non-repetitive peak reverse voltage	V <sub>RM</sub>	20	30	40	V
Peak repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	V
Working peak reverse voltage	V <sub>RWM</sub>				
DC blocking voltage	V <sub>R</sub>				
RMS reverse voltage	V <sub>R(RMS)</sub>	14	21	28	V
Average rectified output current	I <sub>O</sub>	1			A
Peak forward surge current @8.3ms	I <sub>FSM</sub>	25			A
Repetitive peak forward current	I <sub>FRM</sub>	625			mA
Power dissipation	P <sub>D</sub>	250			mW
Thermal resistance, junction to ambient	R <sub>θJA</sub>	500			°C/W
Storage temperature	T <sub>STG</sub>	-65 ~ +150			°C

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

Parameter	Conditions	Symbol	Min.	Max.	Unit
Reverse breakdown voltage	CDBW120-G CDBW130-G CDBW140-G I <sub>R</sub> =1mA	V <sub>BR</sub>	20 30 40		V
Reverse voltage leakage current	CDBW120-G CDBW130-G CDBW140-G V <sub>R</sub> =20V V <sub>R</sub> =30V V <sub>R</sub> =40V	I <sub>R</sub>		1	mA
Forward voltage	CDBW120-G CDBW130-G CDBW140-G I <sub>F</sub> =1A	V <sub>F</sub>		0.45 0.55 0.60	V
	CDBW120-G CDBW130-G CDBW140-G I <sub>F</sub> =3A			0.75 0.875 0.90	
Diode capacitance	V <sub>R</sub> =4V, f=1MHz	C <sub>D</sub>		120	pF

## RATING AND CHARACTERISTIC CURVES (CDBW120-G Thru. CDBW140-G)

Fig.1 Typical Forward Current Derating Curve

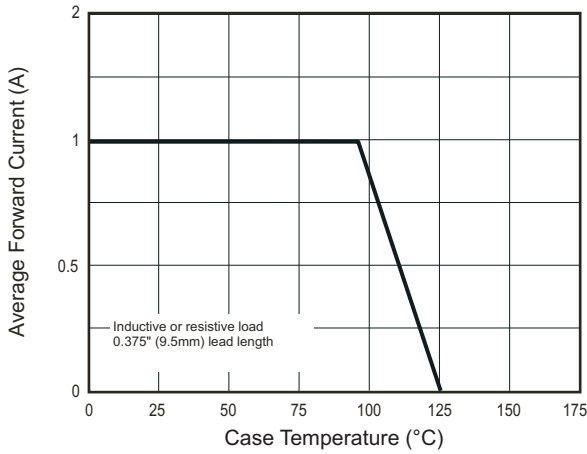


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

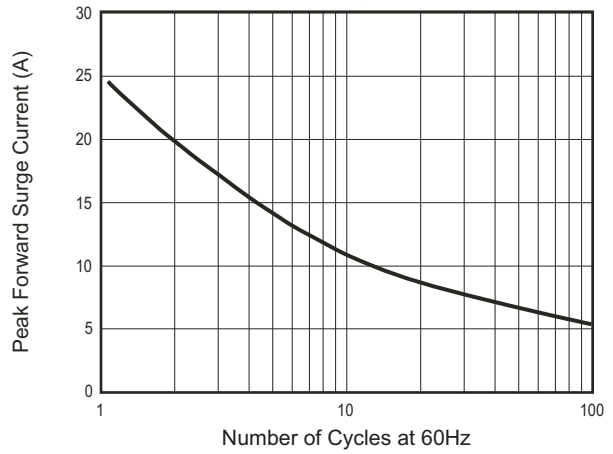


Fig.3 Typical Instantaneous Forward Characteristics

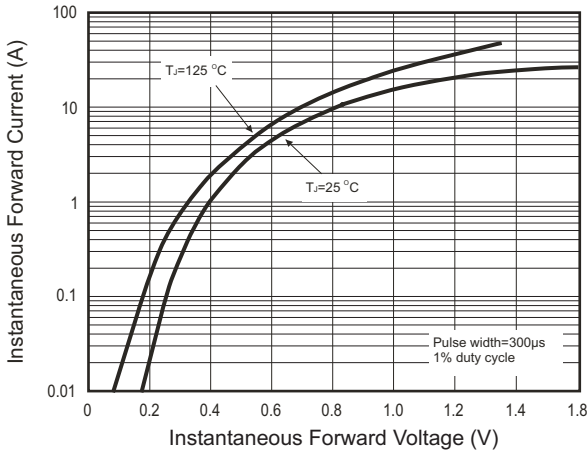


Fig.4 Typical Reverse Characteristics

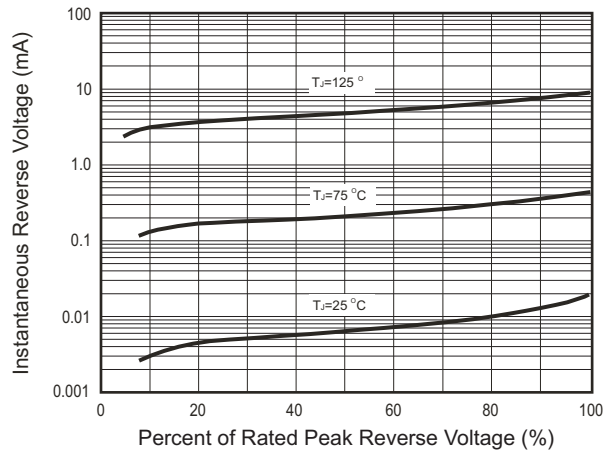


Fig.5 Typical Junction Capacitance

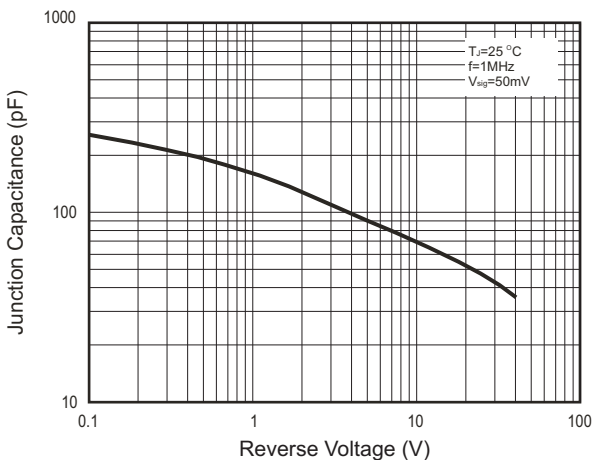
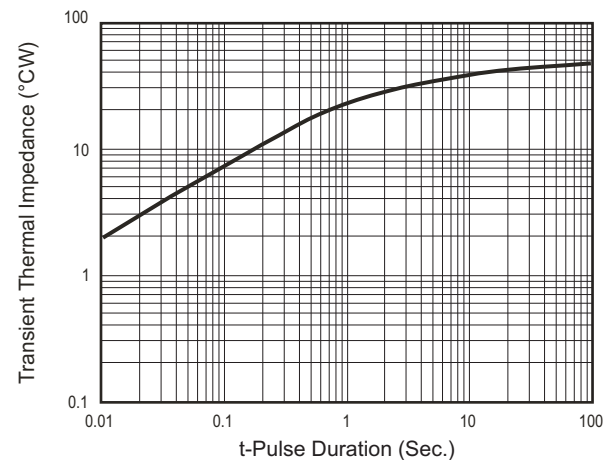
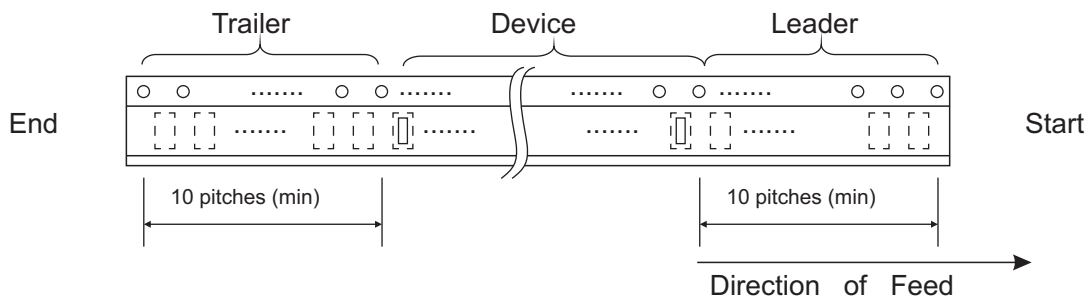
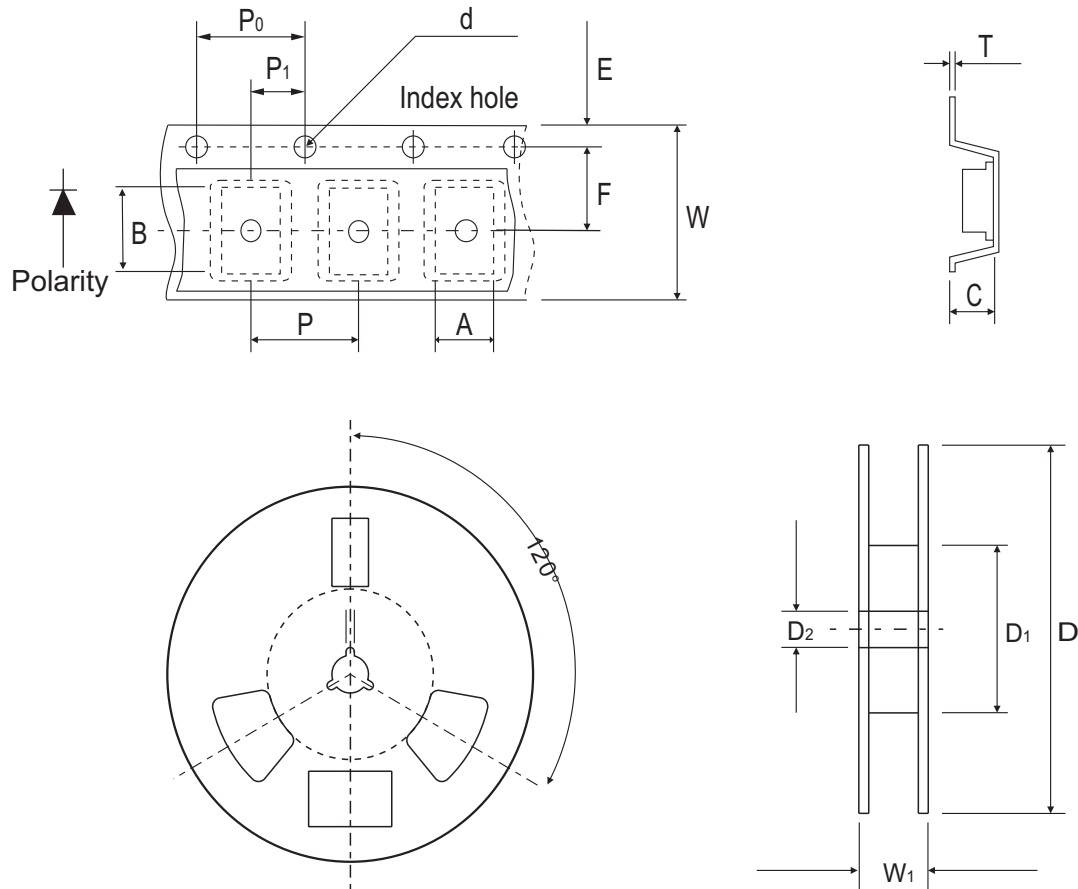


Fig.6 Typical Transient Thermal Impedance



## Reel Taping Specification



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

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

## Marking Code

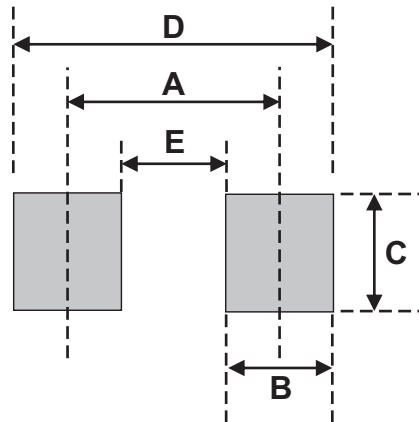
Part Number	Marking Code
CDBW120-G	SJ
CDBW130-G	SK
CDBW140-G	SL



xx = Product type marking code

## Suggested PAD Layout

SIZE	SOD-123	
	(mm)	(inch)
A	3.35	0.132
B	0.80	0.032
C	1.00	0.039
D	4.15	0.163
E	2.55	0.100



## Standard Packaging

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