

## CDBW120-G Thru. CDBW140-G

**Forward current: 1.0A**  
**Reverse voltage: 20 to 40V**  
**RoHS Device**



### Features

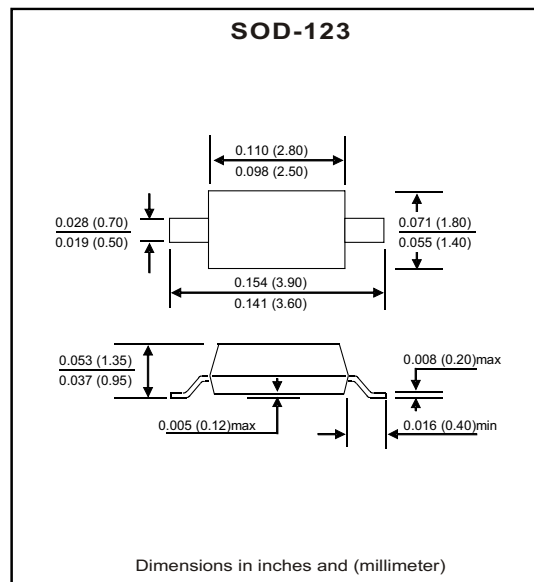
- For use in low voltage, high frequency inverters.
- Free wheeling, and polarity protection applications.

### Mechanical Data

- Case: SOD-123, molded plastic.
- Terminals: solderable per MIL-STD-750, method 2026.
- Polarity: indicated by cathode end.
- Weight: approx. 0.008 grams.

### Marking

- CDBW0120-G: SJ
- CDBW0130-G: SK
- CDBW0140-G: SL



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

Parameter	Symbol	CDBW0120-G	CDBW0130-G	CDBW0140-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	I <sub>R</sub> =1mA	CDBW0120-G	20		V
		CDBW0130-G	30		
		CDBW0140-G	40		
Reverse voltage leakage current	V <sub>R</sub> =20V V <sub>R</sub> =30V V <sub>R</sub> =40V	CDBW0120-G		1	mA
		CDBW0130-G			
		CDBW0140-G			
Forward voltage	I <sub>F</sub> =1A	CDBW0120-G CDBW0130-G CDBW0140-G		0.45 0.55 0.60	V
	I <sub>F</sub> =3A	CDBW0120-G CDBW0130-G CDBW0140-G		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

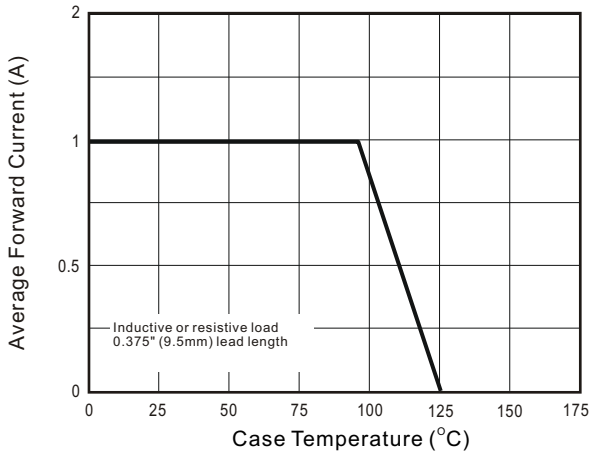


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

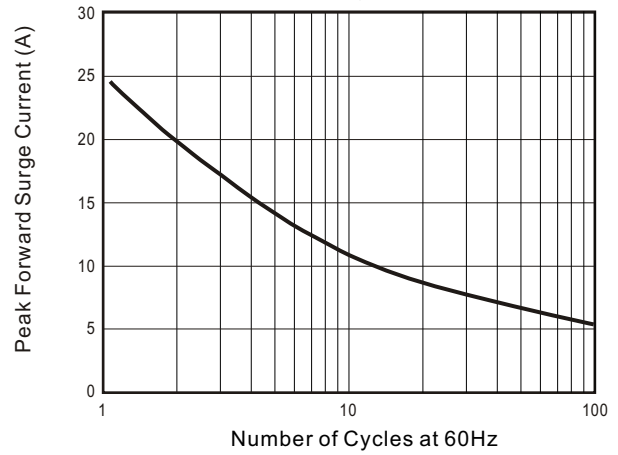


Fig.3 Typical Instantaneous Forward Characteristics

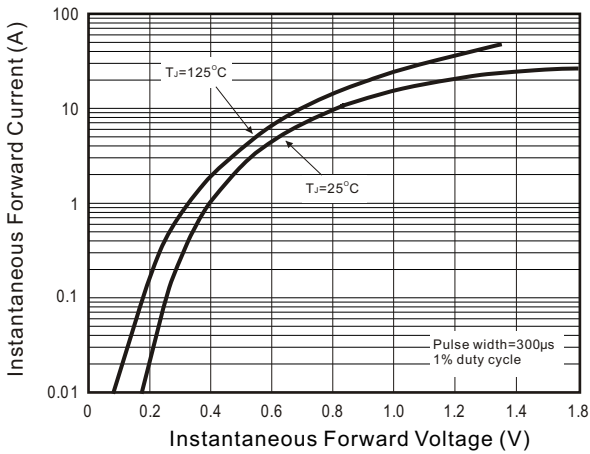


Fig.4 Typical Reverse Characteristics

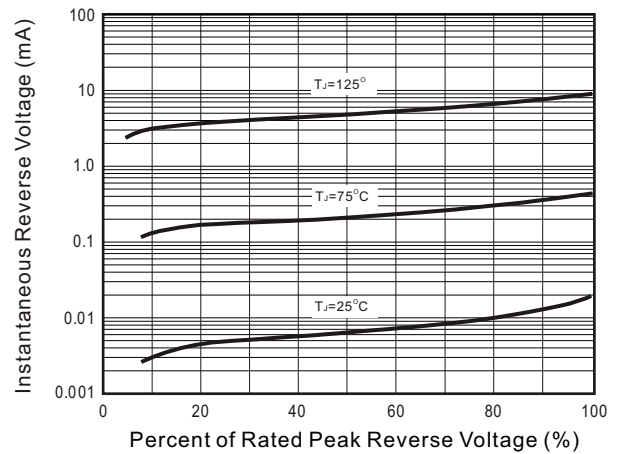


Fig.5 Typical Junction Capacitance

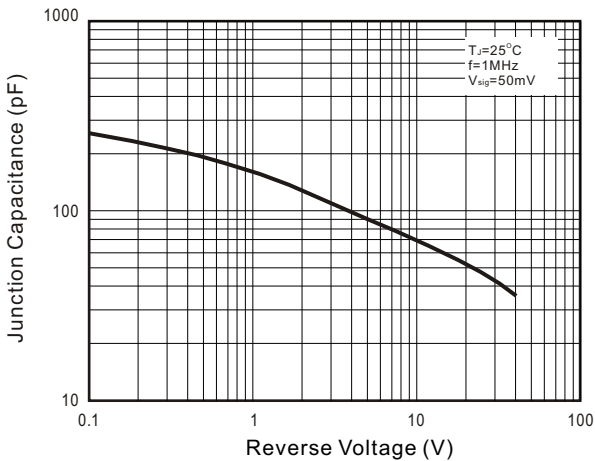


Fig.6 Typical Transient Thermal Impedance

