

CDBW140-G

Forward current: 1.0A

Reverse voltage: 40V

RoHS Device

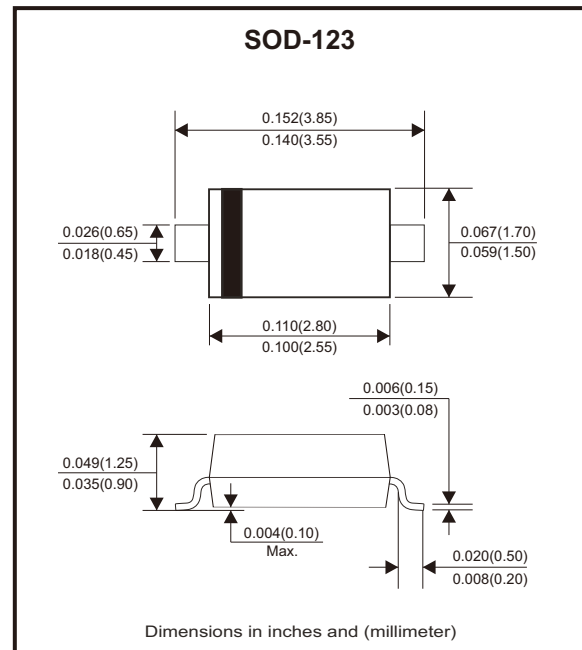


Features

- 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 grams (approx.).



Circuit Diagram



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

Parameter	Symbol	CDBW140-G	Unit
Non-repetitive peak reverse voltage	V _{RM}	40	V
Peak repetitive peak reverse voltage	V _{RRM}	40	V
Working peak reverse voltage	V _{RWM}		
DC blocking voltage	V _R		
RMS reverse voltage	V _{R(RMS)}	28	V
Average rectified output current	I _O	1	A
Peak forward surge current @ 8.3ms	I _{FSM}	9	A
Power dissipation	P _D	500	mW
Thermal resistance, junction to ambient	R _{θJA}	250	°C/W
Junction temperature range	T _J	-55 ~ +125	°C
Storage temperature range	T _{STG}	-55 ~ +150	°C

Electrical Characteristics (At $T_a=25^{\circ}\text{C}$, unless otherwise noted)

Parameter	Conditions	Symbol	Min.	Max.	Unit
Reverse breakdown voltage	$I_R=1\text{mA}$	V_{BR}	40		V
Reverse voltage leakage current	$V_R=40\text{V}$	I_R		1	mA
Forward voltage	$I_F=1\text{A}$	V_F		0.60	V
	$I_F=3\text{A}$			0.90	
Diode capacitance	$V_R=4\text{V}$, $f=1\text{MHz}$	C_D		120	pF

Rating and Characteristic Curves (CDBW140-G)

Fig.1- Power Derating Curve

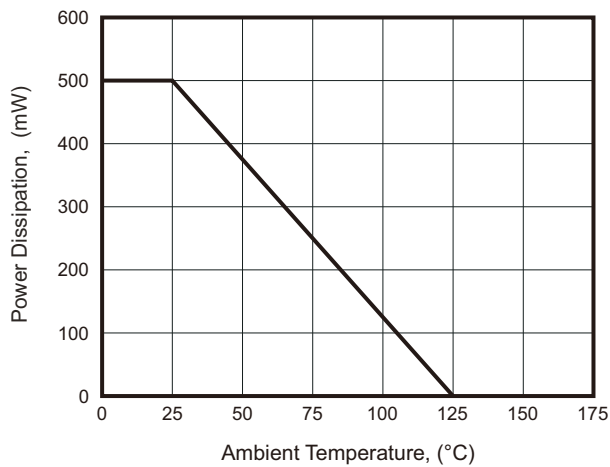


Fig.2 - Typical Junction Capacitance

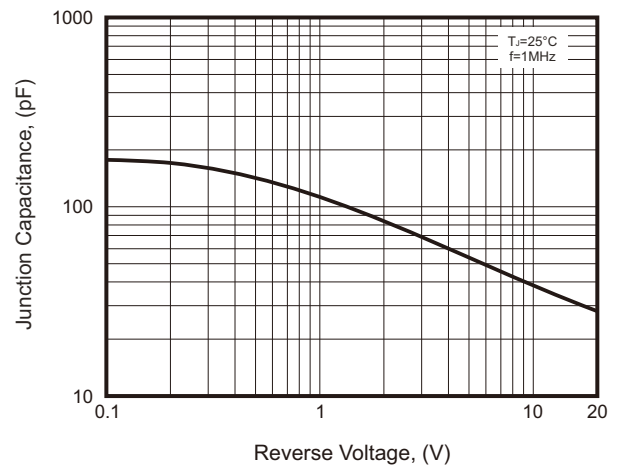


Fig.3 - Typical Instantaneous Forward Characteristics

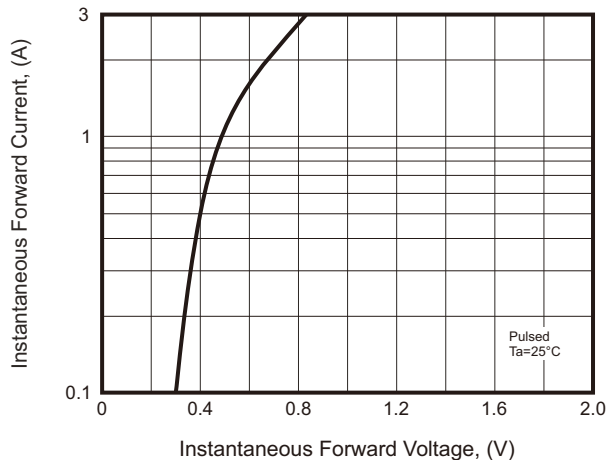
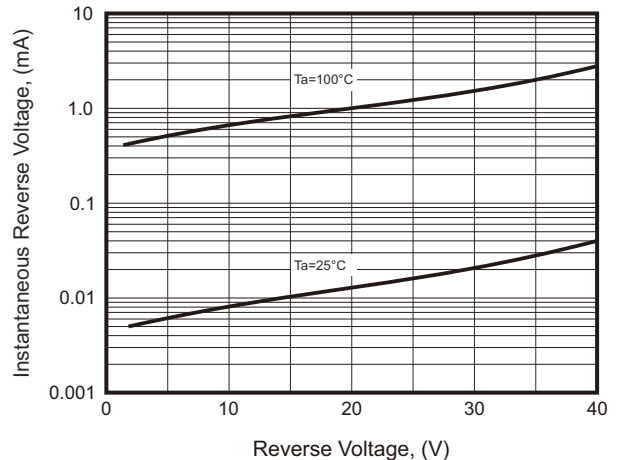
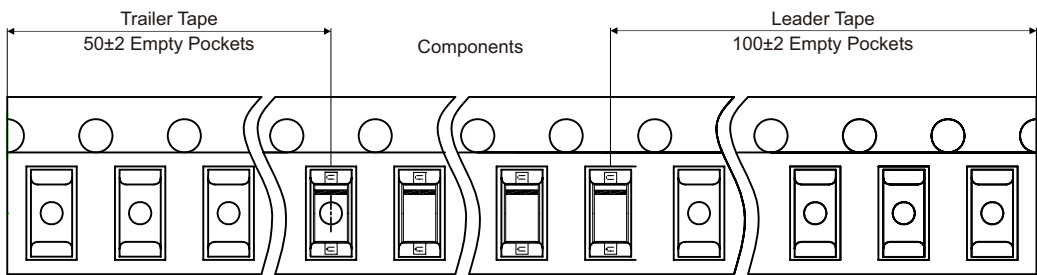
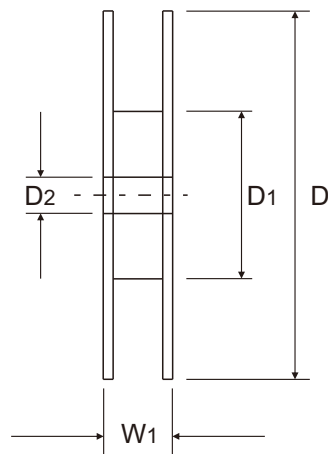
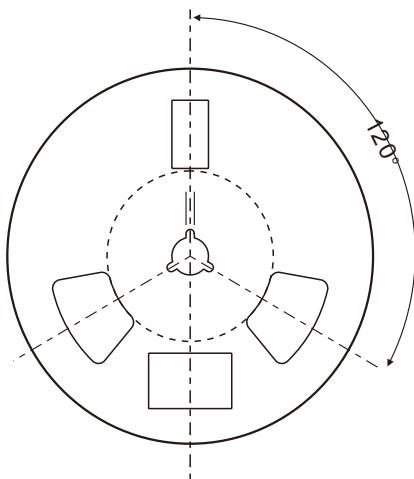
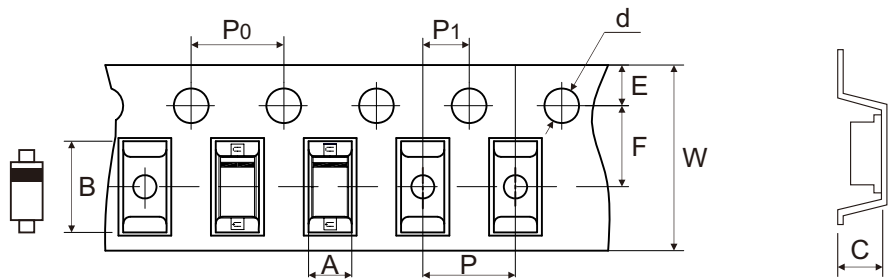


Fig.4 - Typical Reverse Characteristics



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 ± 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	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	8.00 + 0.30 - 0.10	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.315 + 0.012 - 0.004	0.484 ± 0.039

Marking Code

Part Number	Marking Code
CDBW140-G	SL

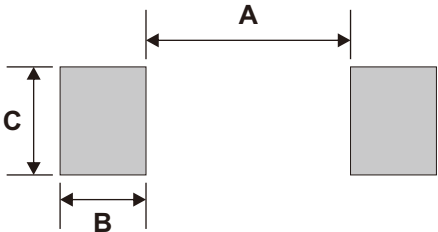


xx = Product type marking code

 = Cathode band

Suggested PAD Layout

SIZE	SOD-123	
	(mm)	(inch)
A	2.31	0.091
B	0.97	0.038
C	1.22	0.048



Standard Packaging

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