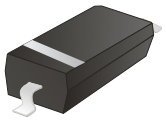
THE DATASHEET OF

CDBW140-G

CDBW120-G Thru. CDBW140-G

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

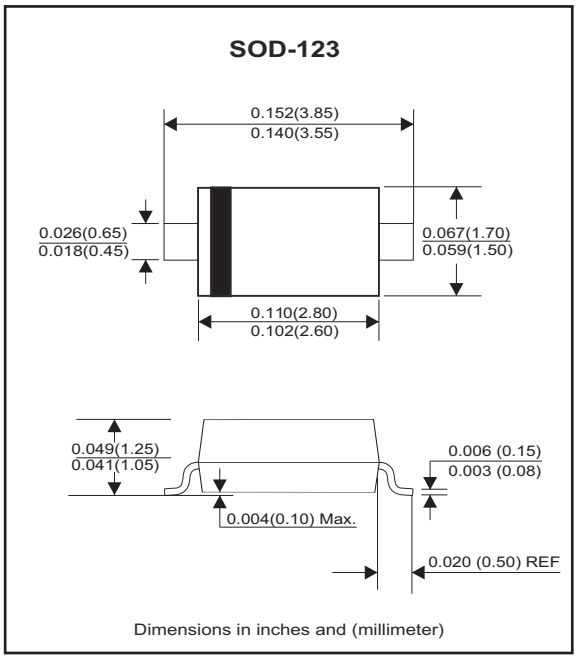


Features

-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

Circuit Diagram

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

Parameter	Symbol	CDBW120-G	CDBW130-G	CDBW140-G	Unit
Non-repetitive peak reverse voltage	V_{RM}	20	30	40	V
Peak repetitive peak reverse voltage Working peak reverse voltage DC blocking voltage	V_{RRM} V_{RWM} V_R	20	30	40	V
RMS reverse voltage	$V_{R(RMS)}$	14	21	28	V
Average rectified output current	I_O	1			A
Peak forward surge current @8.3ms	I_{FSM}	9			A
Repetitive peak forward current	I_{FRM}	1.5			A
Power dissipation	P_D	500			mW
Thermal resistance, junction to ambient	$R_{\theta JA}$	250			°C/W
Junction temperature	T_J	-55 ~ +125			°C
Storage temperature	T_{STG}	-55 ~ +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_R=1mA	V_{BR}	20 30 40		V
Reverse voltage leakage current	CDBW120-G CDBW130-G CDBW140-G	V_R=20V V_R=30V V_R=40V	I_R		1	mA
Forward voltage	CDBW120-G CDBW130-G CDBW140-G	I_F=1A	V_F		0.45 0.55 0.60	V
	CDBW120-G CDBW130-G CDBW140-G	I_F=3A			0.75 0.875 0.90	
Diode capacitance		V_R=4V, f=1MHz	C_D		120	pF

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

Fig.1- Power Derating Curve

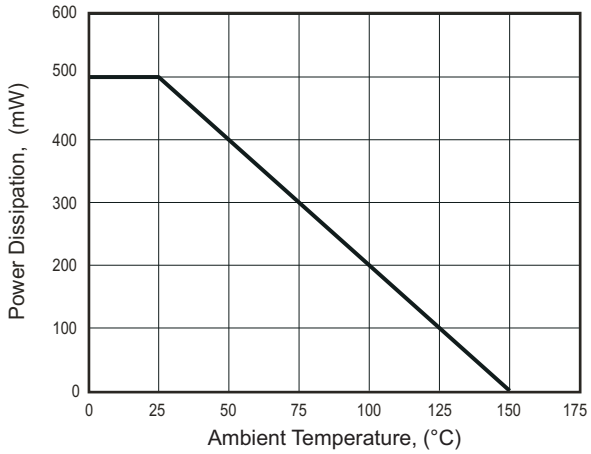


Fig.2- Maximum Non-Repetitive Peak Forward Surge Current

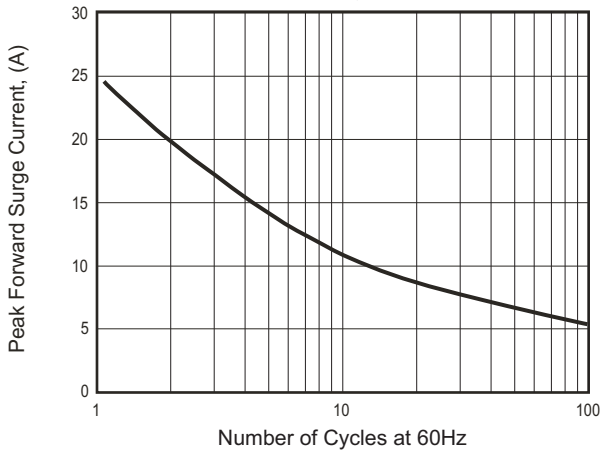


Fig.3- Typical Instantaneous Forward Characteristics

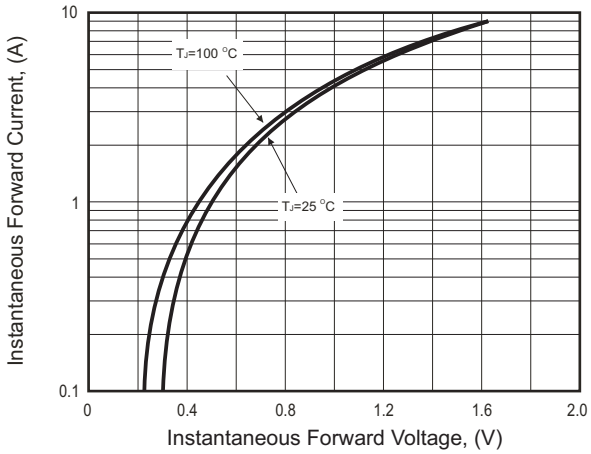


Fig.4- Typical Reverse Characteristics

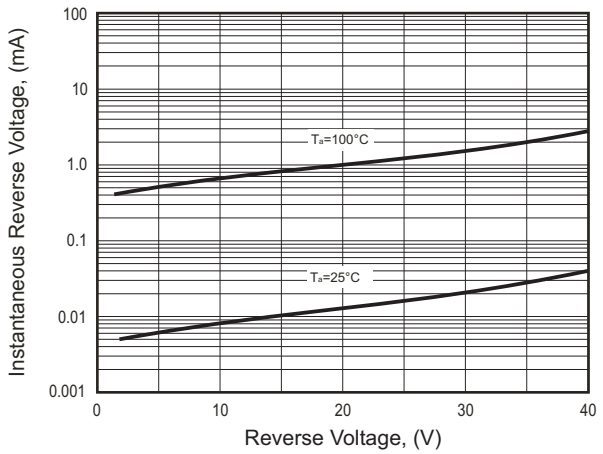


Fig.5- Typical Junction Capacitance

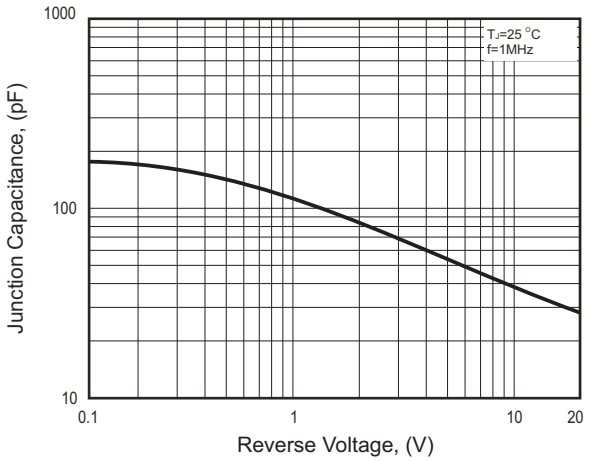
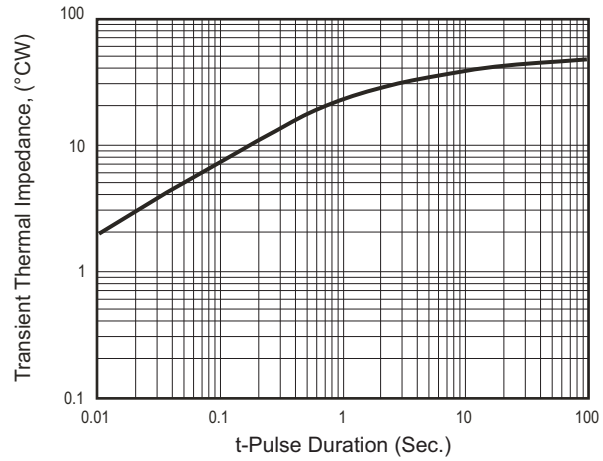
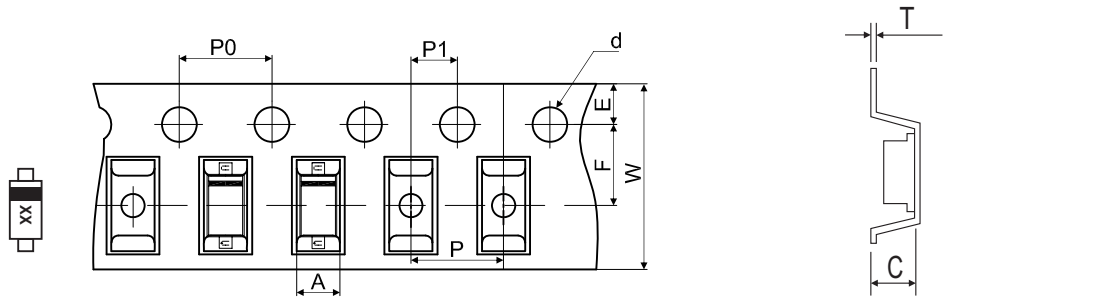
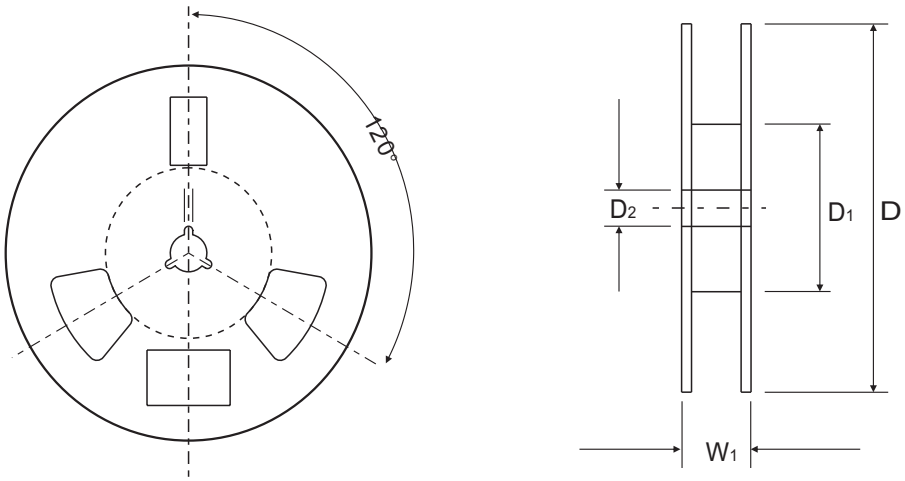


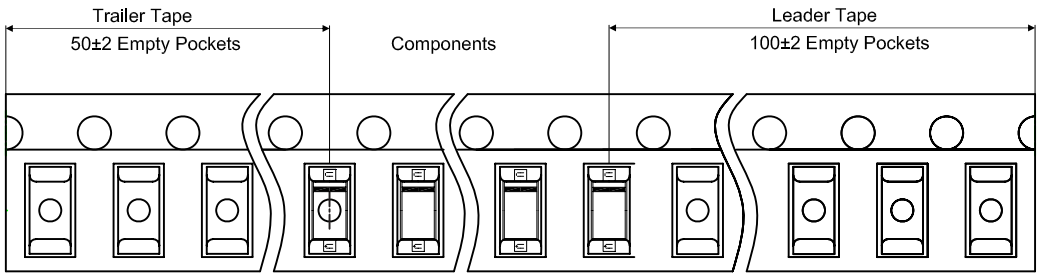
Fig.6- Typical Transient Thermal Impedance



Reel Taping Specification







	SYMBOL	A	B	C	d	D	D_1	D_2
SOD-123	(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

	SYMBOL	E	F	P	P_0	P_1	W	W_1
SOD-123	(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 ± 1.0
	(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

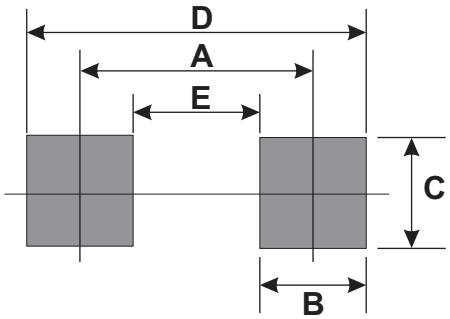
Marking Code

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

xx = Product type marking code

Suggested PAD Layout

SIZE	SOD-123	
	(mm)	(inch)
A	3.24	0.128
B	0.80	0.031
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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- Shortage Management
- Alternative Solution
- Excess Inventory Management