

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

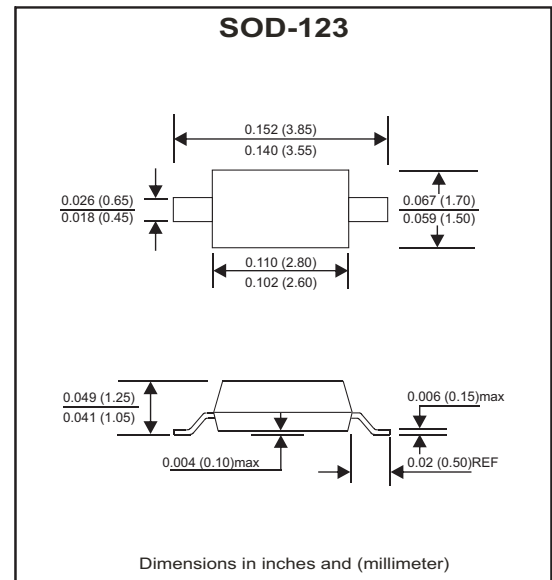
- Case: SOD-123, molded plastic.
- Terminals: solderable per MIL-STD-750, method 2026.
- Polarity: indicated by cathode end.
- Weight: 0.0097 gram(approx.).

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_{RM}	20	30	40	V
Peak repetitive peak reverse voltage	V_{RRM}	20	30	40	V
Working peak reverse voltage	V_{RWM}				
DC blocking voltage	V_R				
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}	25			A
Repetitive peak forward current	I_{FRM}	625			mA
Power dissipation	P_D	250			mW
Thermal resistance, junction to ambient	$R_{\theta JA}$	500			°C/W
Storage temperature	T_{STG}	-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 $I_R=1mA$	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 Typical Forward Current Derating Curve

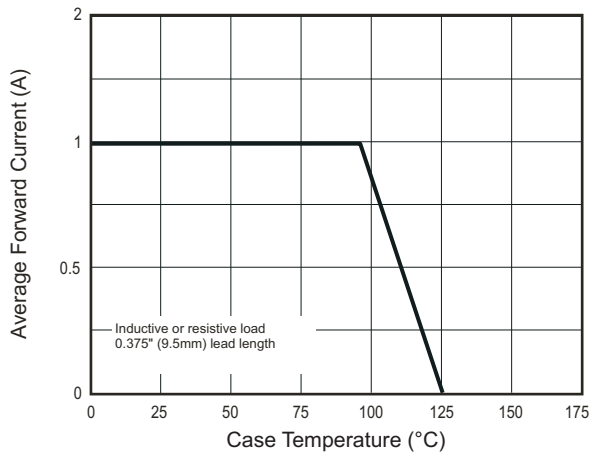


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

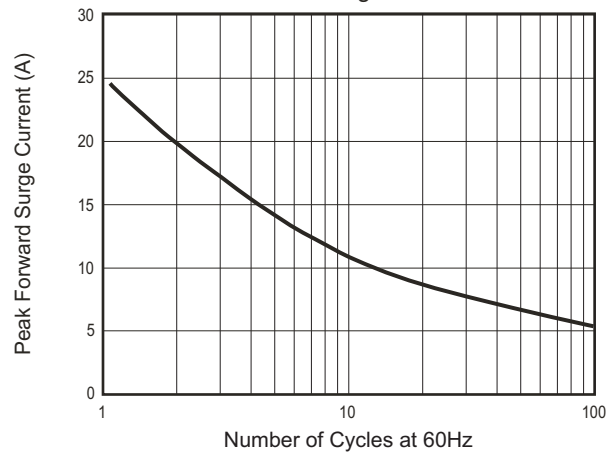


Fig.3 Typical Instantaneous Forward Characteristics

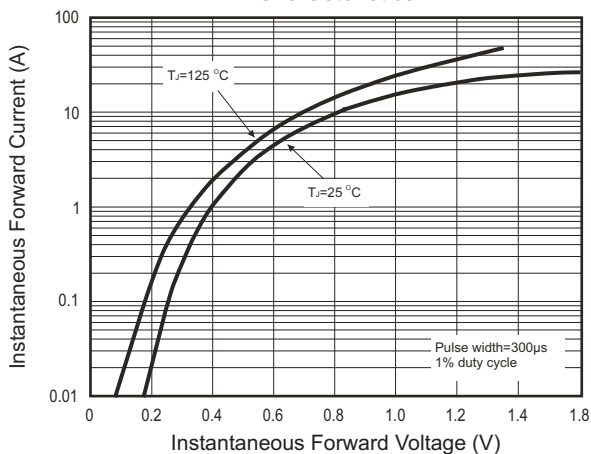


Fig.4 Typical Reverse Characteristics

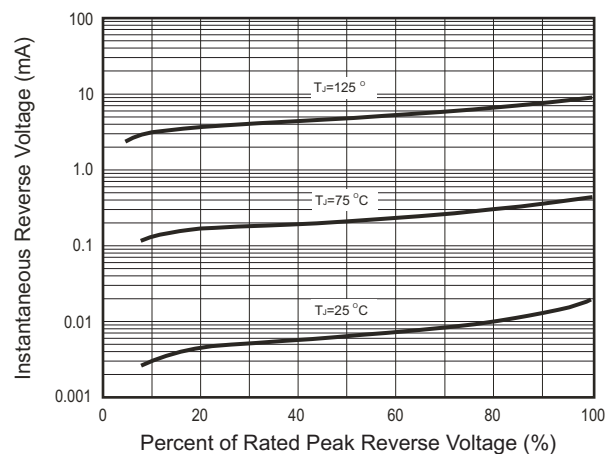


Fig.5 Typical Junction Capacitance

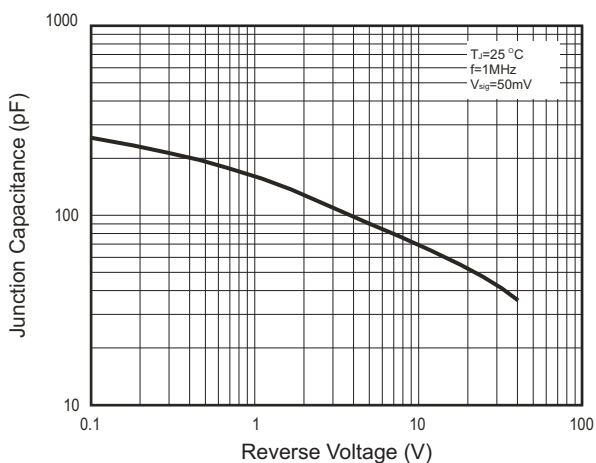
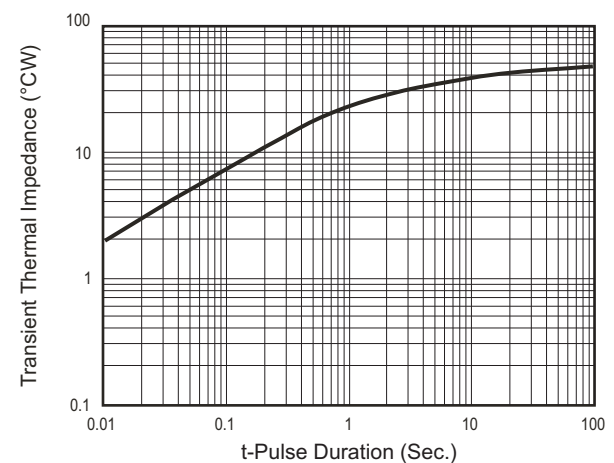
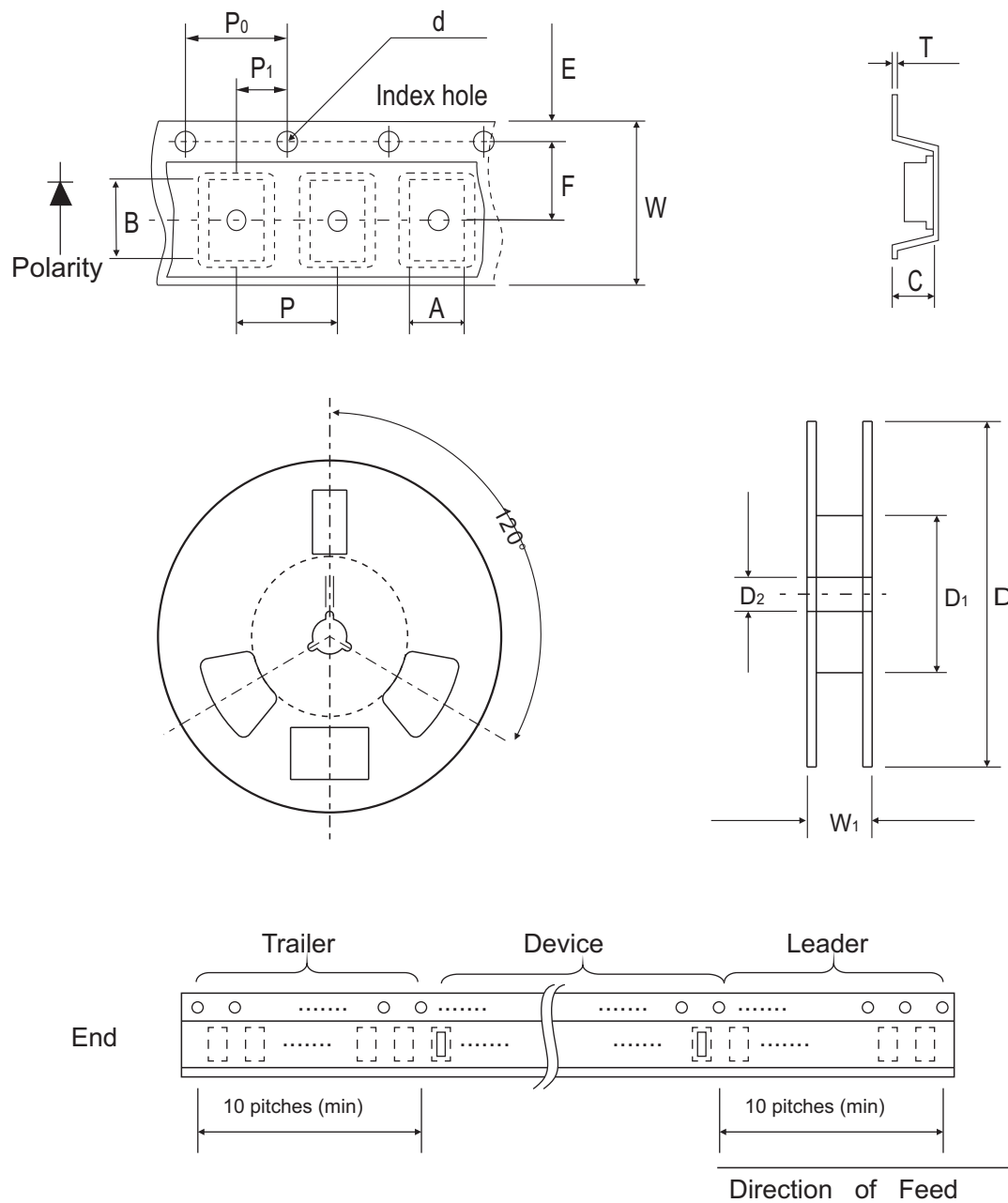


Fig.6 Typical Transient Thermal Impedance



Reel Taping Specification



SOD-123	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.90 ± 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

Marking Code

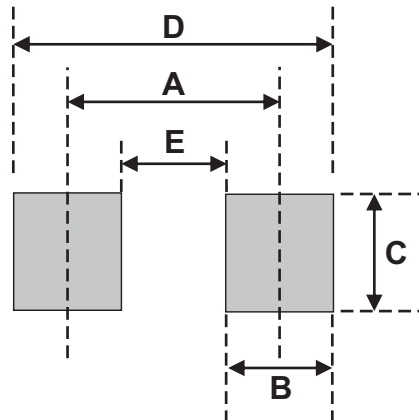
Part Number	Marking Code
CDBW120-G	SJ
CDBW130-G	SK
CDBW140-G	SL



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