

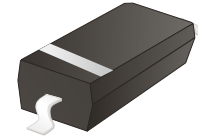
CDBW0520L-HF Thru. CDBW0540-HF

Reverse Voltage: 20 to 40 Volts

Forward Current: 0.5 Amp

RoHS Device

Halogen Free



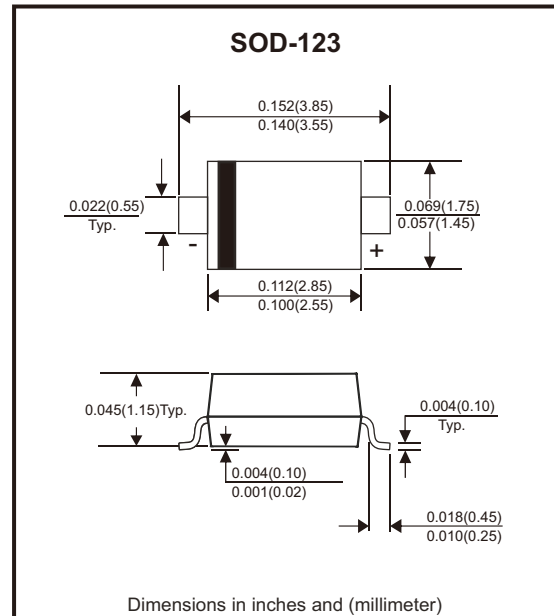
Features

- Low forward voltage drop.
- High conductance.
- Guard ring construction for transient protection.

Mechanical data

- Case: SOD-123, molded plastic.
- Polarity: Color band denotes cathode end.
- Weight: 0.01 gram(approx.).

Circuit Diagram



Maximum Rating (at Ta=25°C unless otherwise noted)

Parameter	Symbol	CDBW0520L-HF	CDBW0530-HF	CDBW0540-HF	Unit
Peak repetitive reverse voltage	V_{RRM}				
Working peak reverse voltage	V_{RWM}	20	30	40	V
DC reverse voltage	V_R				
RMS reverse voltage	$V_{R(RMS)}$	14	21	28	V
Average rectified output current @ $T_L=100^\circ\text{C}$	I_o	0.5			A
Non-repetitive peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	5.5			A
Power dissipation	P_D	410			mW
Typical thermal resistance (Junction to ambient)	$R_{\theta JA}$	244			$^\circ\text{C/W}$
Junction temperature	T_J	125			$^\circ\text{C}$
Storage temperature	T_{STG}	-55 ~ +125			$^\circ\text{C}$
Voltage rate of change	dv/dt	1000			V/ μs

Electrical Characteristics (at Ta=25°C unless otherwise noted)

Parameter	Conditions	Symbol	CDBW0520L-HF	CDBW0530-HF	CDBW0540-HF	Unit
Min.Reverse breakdown voltage	IR=20μA	V(BR)R	20	30	40	V
Max. Forward voltage	IF=0.1A, TJ=25°C	VF	0.300	0.375	-	V
	IF=0.5A, TJ=25°C		0.385	0.430	0.510	
	IF=1.0A, TJ=25°C		-	-	0.620	
	IF=0.1A, TJ=100°C		0.220	-	-	
	IF=0.5A, TJ=100°C		0.330	-	0.460	
	IF=1.0A, TJ=100°C		-	-	0.610	
Max. Leakage current	VR=10V, TJ=25°C	IR	75	-	-	μA
	VR=15V, TJ=25°C		-	20	-	
	VR=20V, TJ=25°C		250	-	10	
	VR=30V, TJ=25°C		-	130	-	
	VR=40V, TJ=25°C		-	-	20	
	VR=10V, TJ=100°C	IR	5.0	-	-	mA
	VR=20V, TJ=100°C		8.0	-	5.0	
	VR=40V, TJ=100°C		-	-	13	
Junction capacitance	VR=0V, f=1MHz	CJ	170			pF

Rating and typical characteristic curves (CDBW0520L-HF Thru. CDBW0540-HF)

Fig.1 - Forward Current Derating Curve

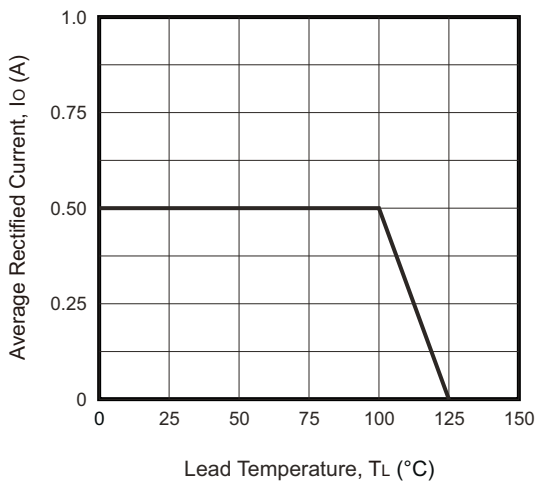


Fig.2 - Typical Forward Characteristics of CDBW0540-HF

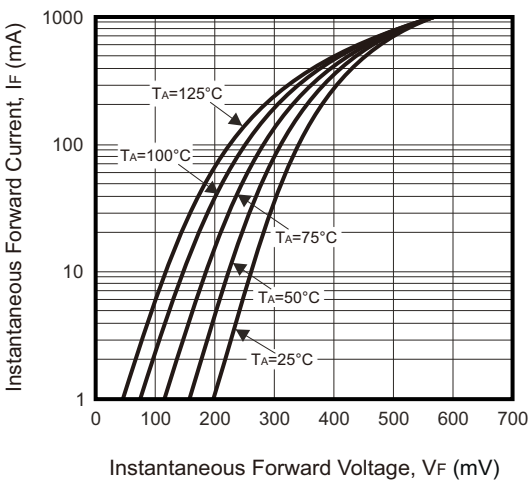
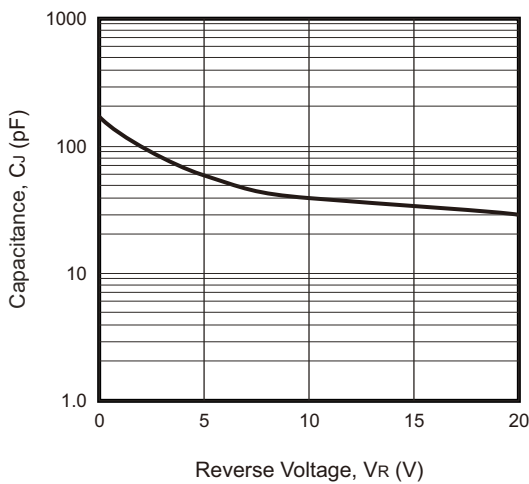
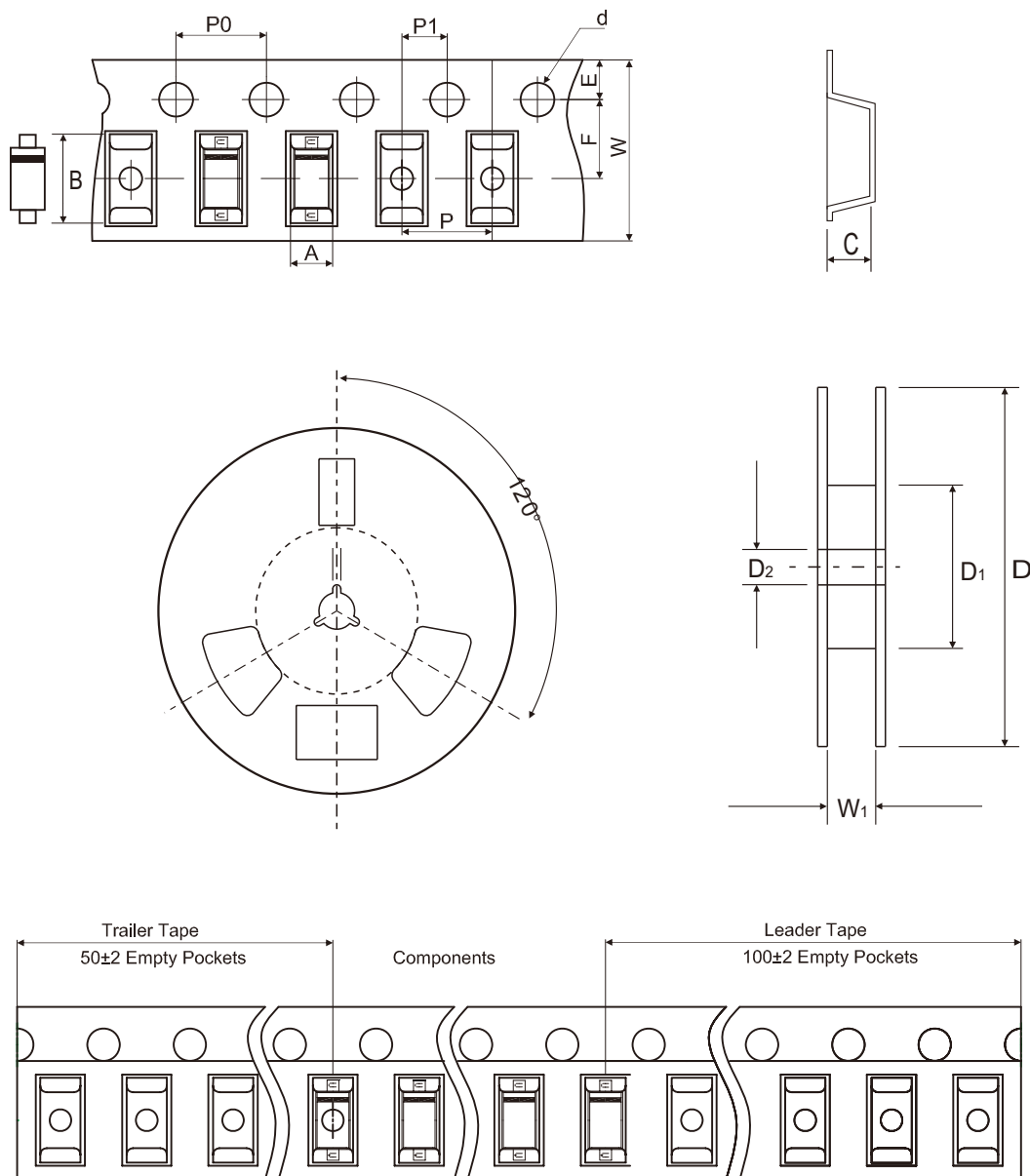


Fig.3 - Typ. Junction Capacitance vs. Reverse Voltage



Reel Taping Specification



SOD-123	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.85 ± 0.10	3.94 ± 0.10	1.57 ± 0.10	1.55 ± 0.05	178 ± 1.00	54.0 ± 0.50	13.0 ± 0.50
	(inch)	0.073 ± 0.004	0.155 ± 0.004	0.062 ± 0.004	0.061 ± 0.002	7.008 ± 0.039	2.126 ± 0.020	0.512 ± 0.020

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	$8.00 \pm 0.20/-0.10$	9.50 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.158 ± 0.004	0.158 ± 0.004	0.079 ± 0.002	$0.315 \pm 0.008/-0.004$	0.374 ± 0.039

Company reserves the right to improve product design , functions and reliability without notice.

REV: B

Marking Code

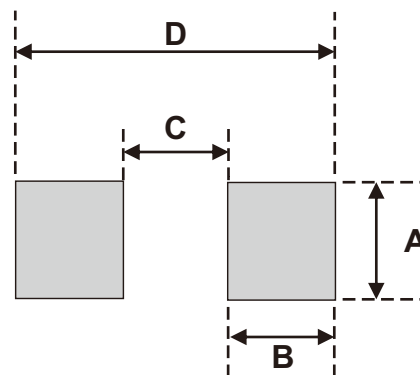
Part Number	Marking Code
CDBW0520L-HF	SD
CDBW0530-HF	SE
CDBW0540-HF	SF



xx = Product type marking code
Solid dot = Halogen free parts

Suggested PAD Layout

SIZE	SOD-123	
	(mm)	(inch)
A	1.22	0.048
B	0.91	0.036
C	2.36	0.093
D	4.19	0.165



Note:

1. The pad layout is for reference purposes only.

Standard Packaging

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