

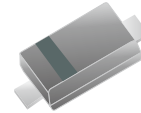
## CDBW46-HF

Reverse Voltage: 100 V

Forward Current: 150 mA

RoHS Device

Halogen Free



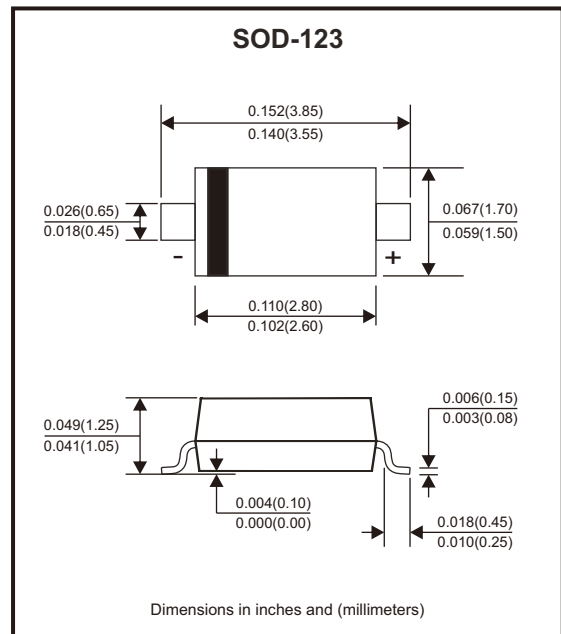
### Features

- High breakdown voltage.
- Low turn-on voltage.
- Guard ring construction for transient protection.

### Mechanical data

- Case: SOD-123, molded plastic.
- Polarity: Indicated by cathode band.
- Mounting position: Any.

### Circuit Diagram



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

Parameter	Conditions	Symbol	Limits	Unit
Peak repetitive peak reverse voltage		$V_{RRM}$	100	V
Working peak reverse voltage		$V_{RWM}$	100	V
Forward continuous current		$I_F$	150	mA
Repetitive peak forward current (Note 1)	@ tp < 1.0s, duty cycle < 50%	$I_{FRM}$	350	mA
Non-repetitive peak forward surge current	@ t = 8.3ms	$I_{FSM}$	750	mA
Power dissipation		$P_D$	500	mW
Thermal resistance junction to ambient air		$R_{\theta JA}$	200	°C/W
Operating junction temperature range		$T_J$	-40 to +125	°C
Storage temperature range		$T_{STG}$	-55 to +150	°C

Notes: 1. Part mounted on FR-4 board with recommended pad layout.

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse breakdown voltage (Note 1)	$I_R = 100\mu A$	$V_R$	100			V
Reverse voltage leakage current	$V_{R1} = 1.5V$ $V_{R2} = 10V$ $V_{R3} = 50V$ $V_{R4} = 75V$	$I_R$			0.3 0.5 1 2	$\mu A$
Forward voltage (Note 1)	$I_{F1} = 0.1mA$ $I_{F2} = 10mA$ $I_{F3} = 250mA$	$V_F$			0.25 0.45 1	V
Diode capacitance	$V_R = 0V, f = 1MHz$ $V_R = 1V, f = 1MHz$	$C_T$		20 12		pF

Notes: 1. Short duration pulse test used to minimize self-heating effect.

## Rating and Characteristic Curves (CDBW46-HF)

Fig.1 - Forward Characteristics

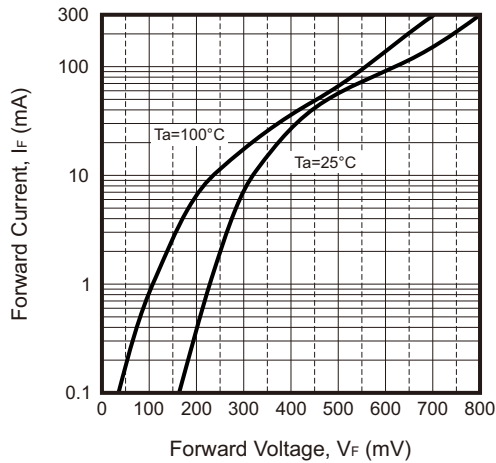


Fig.2 - Reverse Characteristics

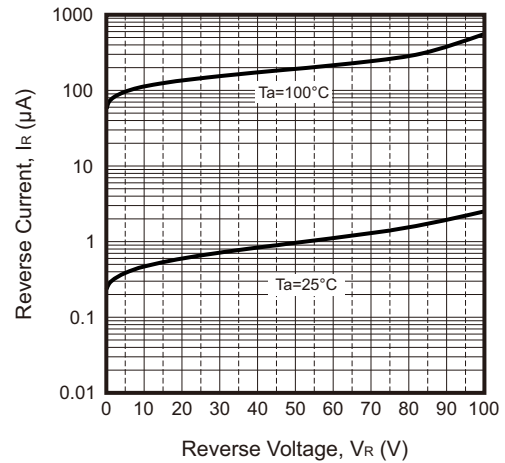


Fig.3 - Capacitance Characteristics

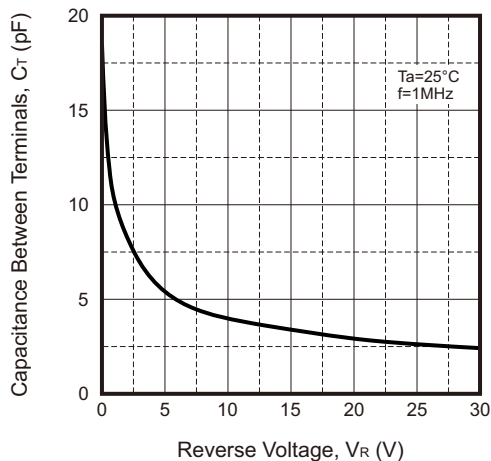
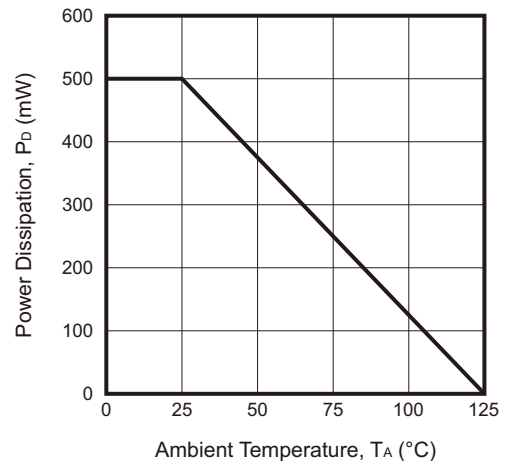
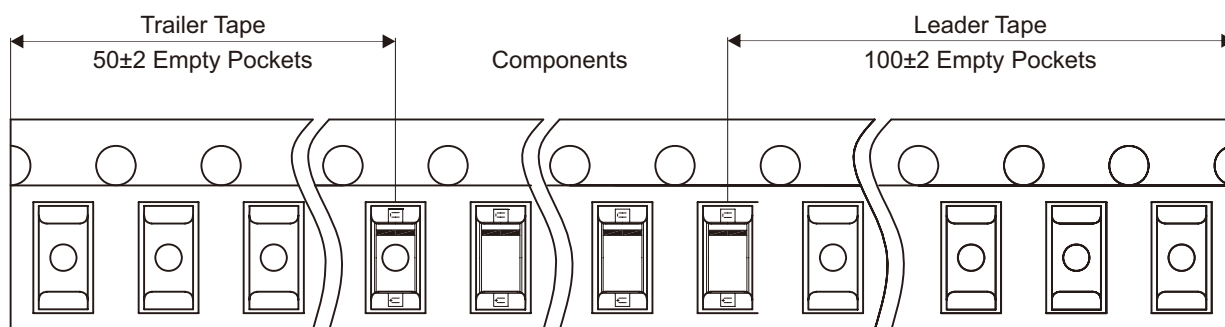
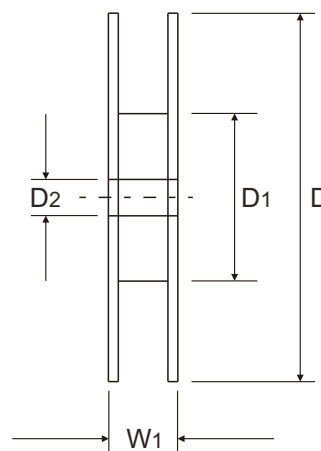
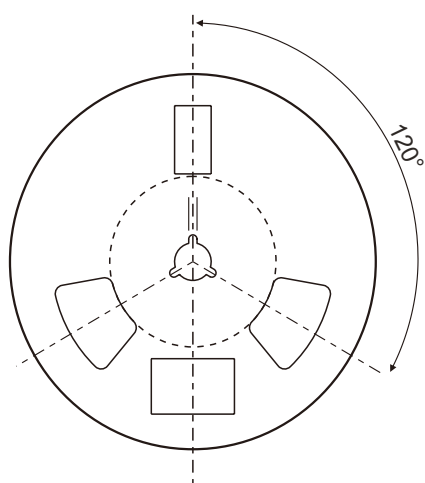
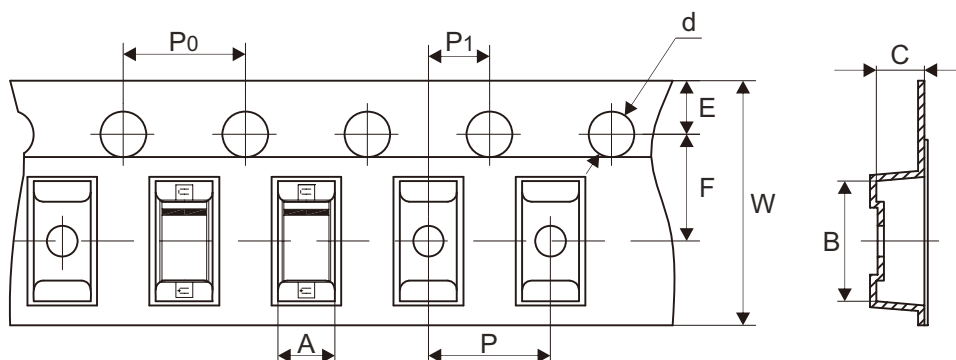


Fig.4 - Power Derating Curve



## Reel Taping Specification



SOD-123	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.85 ± 0.10	3.95 ± 0.10	1.57 ± 0.10	1.55 ± 0.10	178.00 ± 1.00	54.40 ± 0.40	13.00 ± 0.20
	(inch)	0.073 ± 0.004	0.156 ± 0.004	0.062 ± 0.004	0.061 ± 0.004	7.008 ± 0.039	2.142 ± 0.016	0.512 ± 0.008

SOD-123	SYMBOL	E	F	P	P1	P0	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	2.00 ± 0.10	4.00 ± 0.10	8.00 ± 1.00	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.079 ± 0.004	0.157 ± 0.004	0.315 ± 0.039	0.484 ± 0.039

## Marking Code

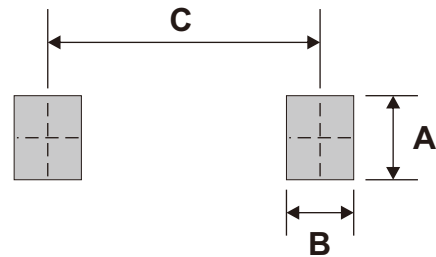
Part Number	Marking Code
CDBW46-HF	S9



■ = Cathode band  
 Solid dot = Control code

## Suggested P.C.B. PAD Layout

SIZE	SOD-123	
	(mm)	(inch)
A	1.00	0.039
B	0.80	0.031
C	3.24	0.128



## Standard Packaging

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