

## CDSW3004-HF

**Reverse Voltage: 300 V**

**Forward Current: 225mA**

**RoHS Device**

**Halogen Free**

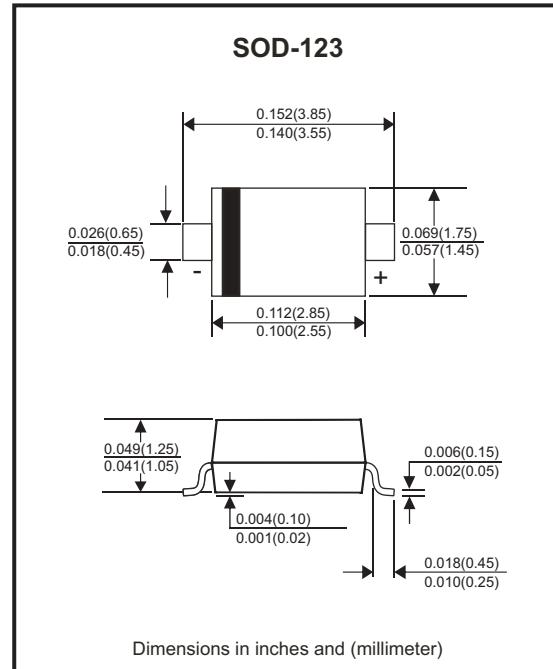


### Features

- Low leakage current.
- High reverse breakdown voltage.
- Fast switching speed.
- Surface mount package ideally suited for automatic insertion.

### Mechanical data

- Case: SOD-123, Molded Plastic
- Terminals: Solderable per MIL-STD-750, method 2026.



### Circuit diagram



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

Parameter	Symbol	Value	Unit
Peak repetitive reverse voltage	V <sub>RRM</sub>	350	V
Working peak reverse voltage @t=1.0μs DC reverse voltage @t=1.0s	V <sub>RWM</sub> V <sub>R</sub>	300	V
RMS reverse voltage	V <sub>R(RMS)</sub>	212	V
Forward continuous current	I <sub>FM</sub>	225	mA
Repetitive peak forward current	I <sub>FRM</sub>	625	mA
Non-Repetitive peak forward surge current @t=1.0μs @t=1.0s	I <sub>FSM</sub>	4.0 1.0	A
Power dissipation	P <sub>D</sub>	400	mW
Thermal resistance junction to ambient air	R <sub>θJA</sub>	312	°C/W
Junction temperature range	T <sub>j</sub>	-65~+150	°C
Storage temperature range	T <sub>STG</sub>	-65~+150	°C

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

REV: A

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse breakdown voltage	$I_R = 150 \mu\text{A}$	$V_{(BR)R}$	350	-	-	V
Forward voltage	$I_F = 20\text{mA}$	$V_{F1}$	-	0.78	0.87	V
	$I_F = 100\text{mA}$	$V_{F2}$	-	0.93	1.0	V
	$I_F = 200\text{mA}$	$V_{F3}$	-	1.03	1.25	V
Reverse current	$V_R = 240 \text{ V} , T_J = 25^\circ\text{C}$	$I_{R1}$	-	30	100	nA
	$V_R = 240 \text{ V} , T_J = 150^\circ\text{C}$	$I_{R2}$	-	35	100	$\mu\text{A}$
Total Capacitance	$f = 1 \text{ MHz} , V_R = 0 \text{ V}$	$C_T$	-	1.0	5.0	pF
Reverse recovery time	$I_F = I_R = 30 \text{ mA}, R_L = 100 \Omega$ , $I_{rr} = 0.1 \times I_R$	$t_{rr}$	-	-	50	nS

## Typical Characteristics (CDSW3004-HF)

Fig.1 - Power Derating Curve

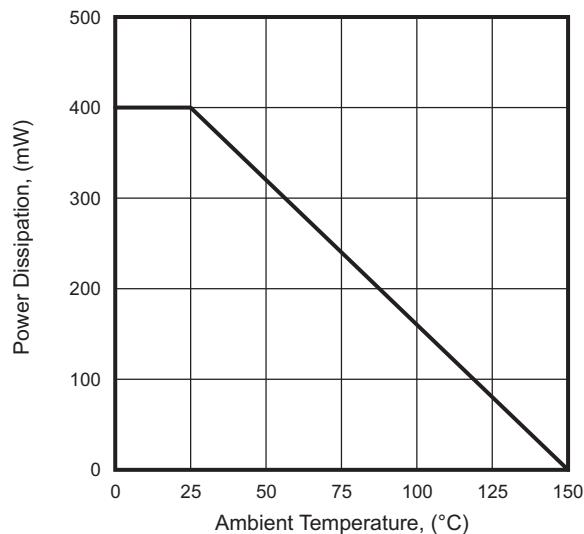


Fig.2 - Forward Characteristics

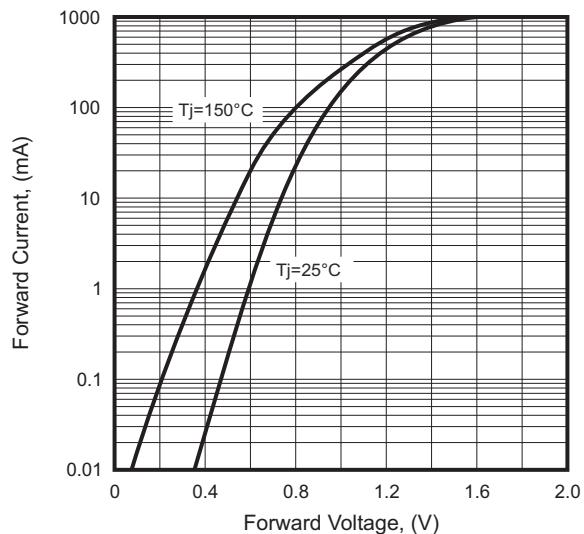


Fig.3 - Typical Reverse Characteristics

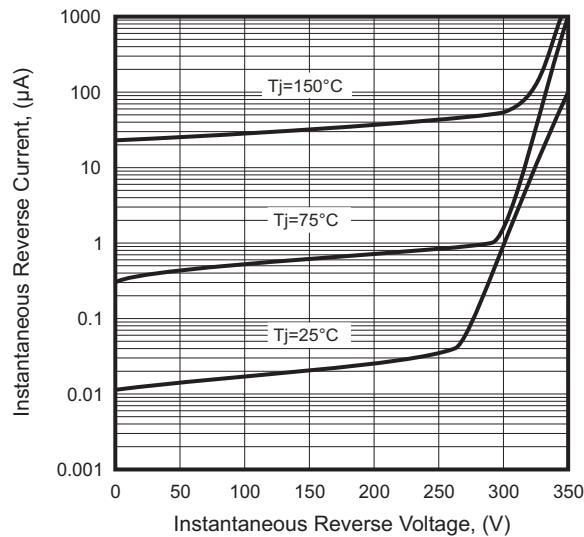
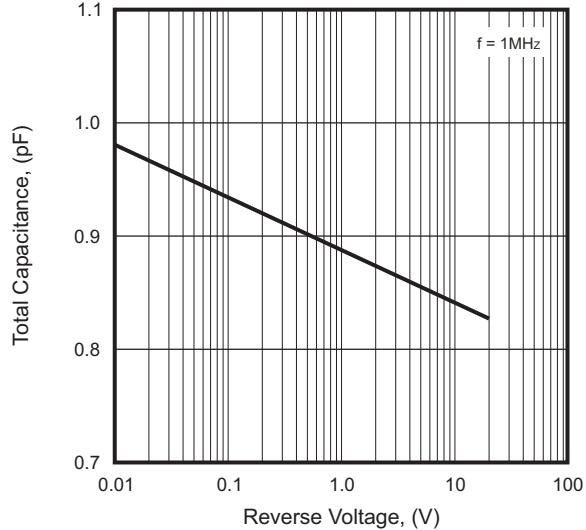


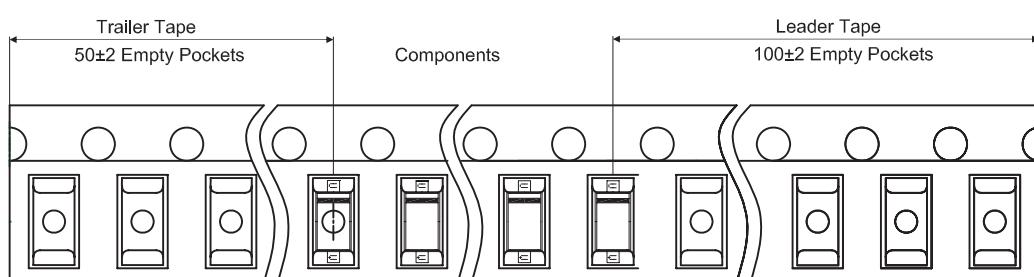
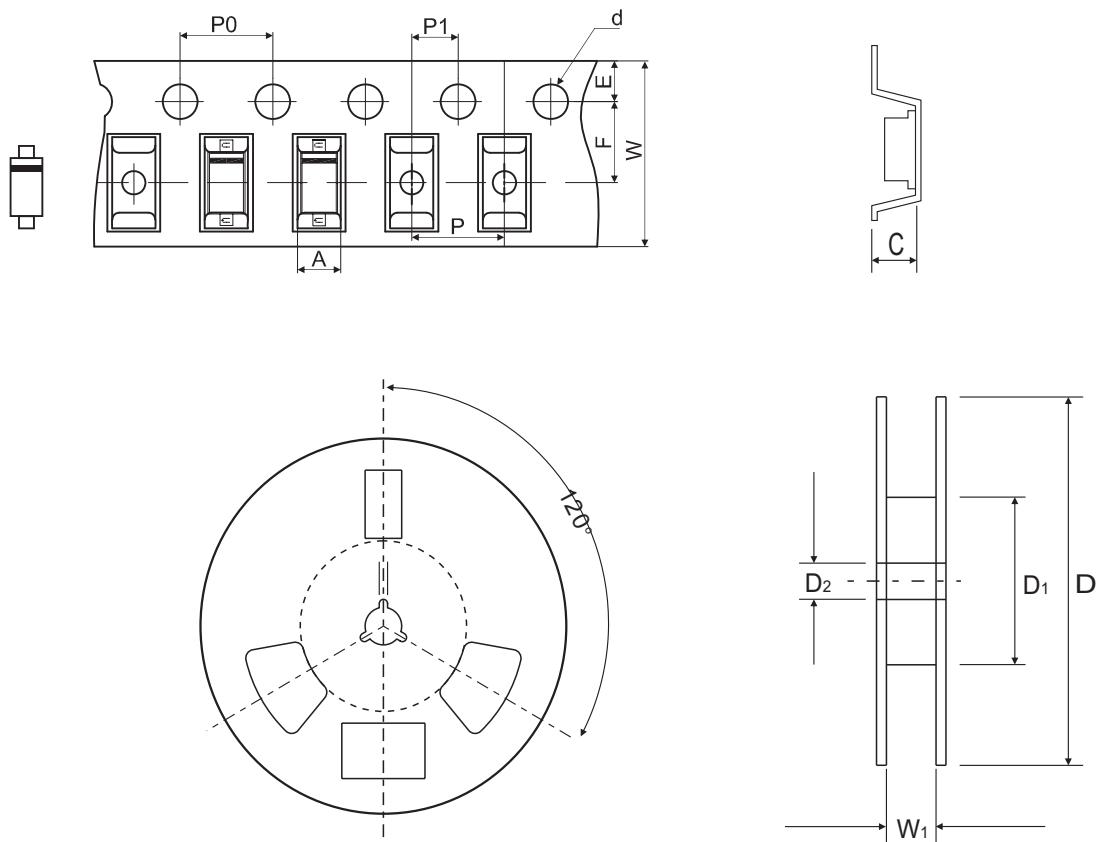
Fig.4 - Typical Total Capacitance vs. Reverse Voltage



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REV: A

## Reel Taping Specification



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

SOD-123	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	$1.75 \pm 0.10$	$3.50 \pm 0.05$	$4.00 \pm 0.10$	$4.00 \pm 0.10$	$2.00 \pm 0.05$	$8.00 \pm 0.20/-0.10$	$9.50 \pm 1.00$
	(inch)	$0.069 \pm 0.004$	$0.138 \pm 0.002$	$0.158 \pm 0.004$	$0.158 \pm 0.004$	$0.079 \pm 0.002$	$0.315 \pm 0.008/-0.004$	$0.374 \pm 0.039$

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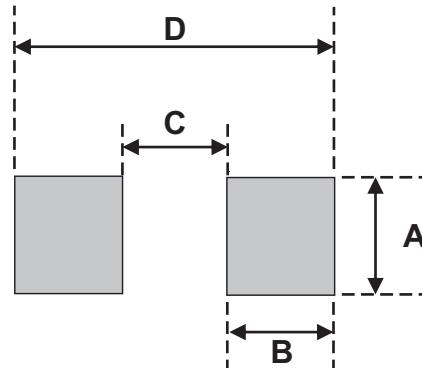
## Marking Code

Part Number	Marking Code
CDSW3004-HF	4P



## 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



## Standard Packaging

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

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