

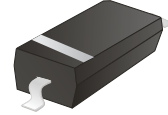
## CDSW4148-HF

Reverse Voltage: 100 V

Forward Current: 150mA

RoHS Device

Halogen Free

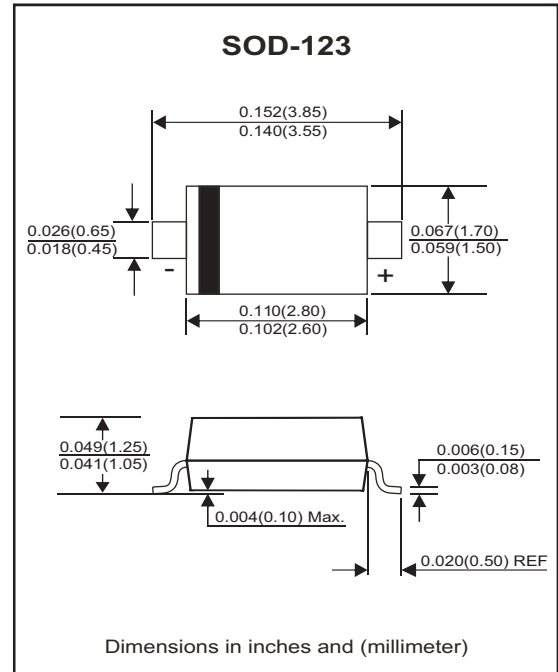


### Features

- Fast switching speed
- High speed
- High conductance
- Surface mount package ideally suited for automatic insertion
- For general purpose switching applications
- Flat Package SOD-123 in Stead mini-MELF package

### Mechanical data

- Case: SOD-123, Molded Plastic
- Terminals: Solderable per MIL-STD-750, method 2026.
- Weight: 0.0097 grams(approx.).



### Circuit diagram



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

Parameter	Symbol	Value	Unit
Peak repetitive peak reverse voltage	VRRM	100	V
Working peak reverse voltage	VRWM		
DC blocking voltage	VR		
RMS reverse voltage	VR(RMS)	71	V
Average rectified output current	Io	150	mA
Non-Repetitive peak forward surge current @t=1μs	IFSM	2	A
Power dissipation	PD	350	mW
Thermal resistance from junction to ambient	RθJA	250	°C/W
Junction temperature range	Tj	-40~+150	°C
Storage temperature range	TSTG	-55~+150	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Forward voltage	I <sub>F</sub> = 1 mA	V <sub>F1</sub>			0.715	V
	I <sub>F</sub> = 10mA	V <sub>F2</sub>			0.855	V
	I <sub>F</sub> = 50mA	V <sub>F3</sub>			1.0	V
	I <sub>F</sub> = 150mA	V <sub>F4</sub>			1.25	V
Reverse current	V <sub>R</sub> = 20 V	I <sub>R1</sub>			25	nA
	V <sub>R</sub> = 75 V	I <sub>R2</sub>			1	μA
Capacitance between terminals	f = 1 MHz and V <sub>R</sub> =0V	C <sub>J</sub>			2	pF
Reverse recovery time	I <sub>F</sub> = I <sub>R</sub> = 10 mA, R <sub>L</sub> = 100 Ω, I <sub>rr</sub> = 0.1 X I <sub>R</sub>	T <sub>RR</sub>			4	nS

## Typical Characteristics (CDSW4148-HF)

Fig.1 - Forward Characteristics

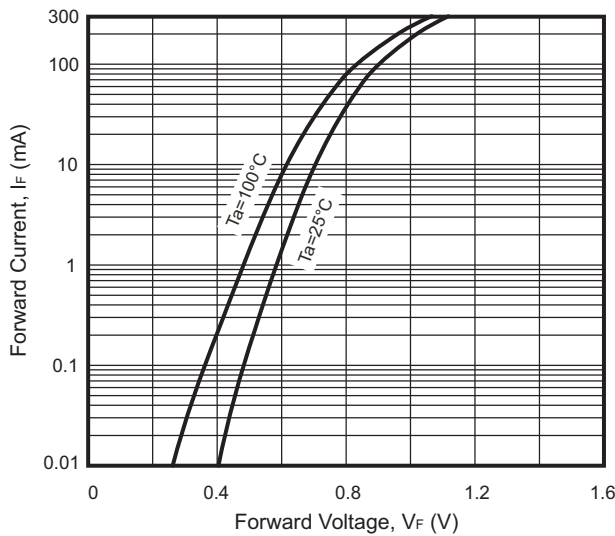


Fig.2 - Reverse Characteristics

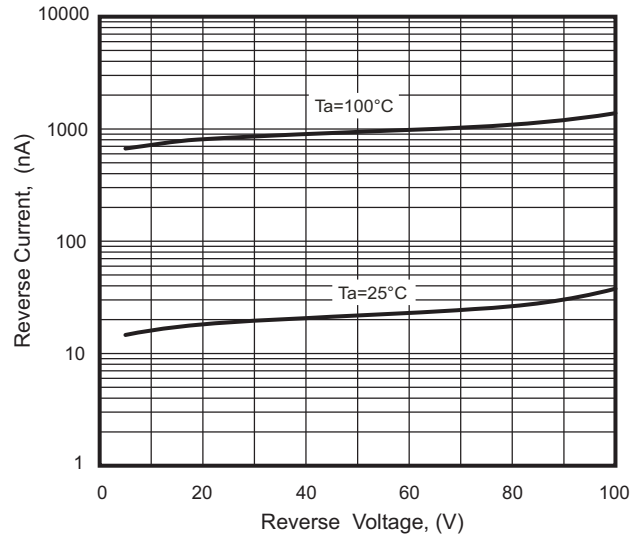


Fig.3 - Capacitance Characteristics

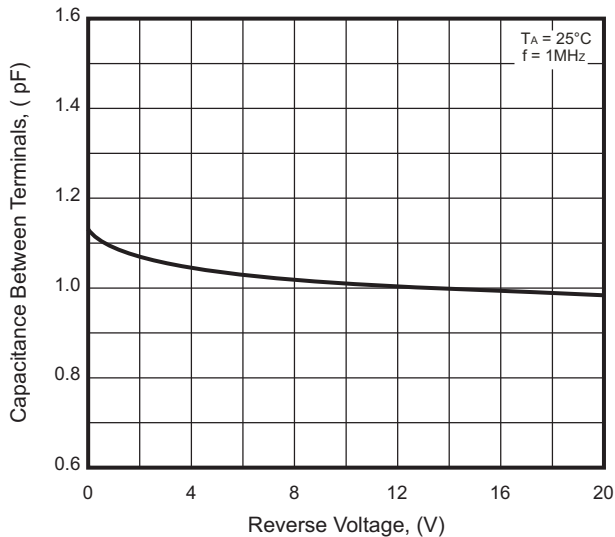
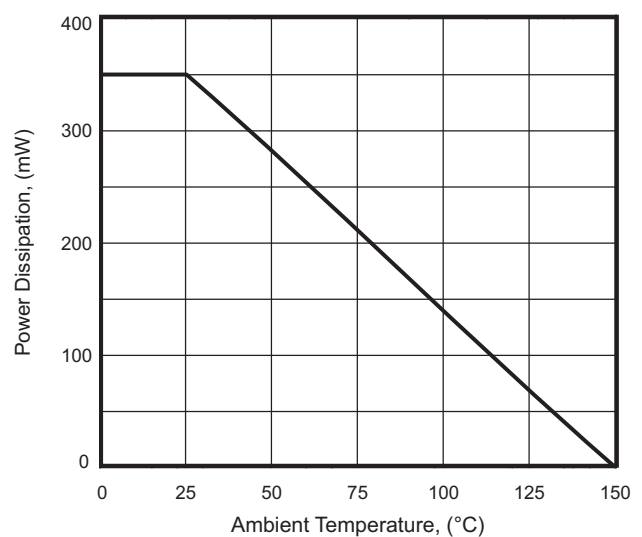
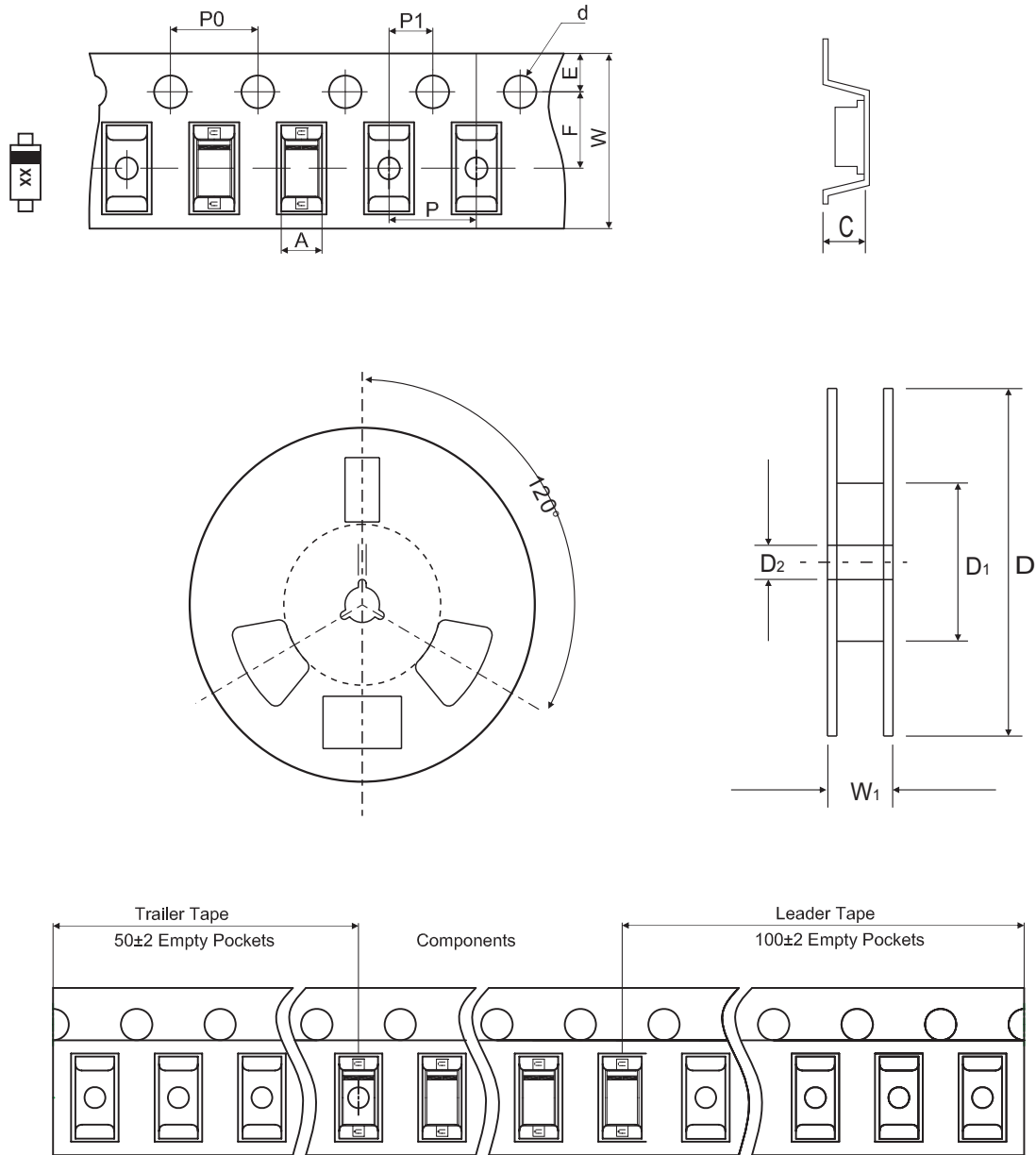


Fig.4 - Power Derating Curve



## Reel Taping Specification



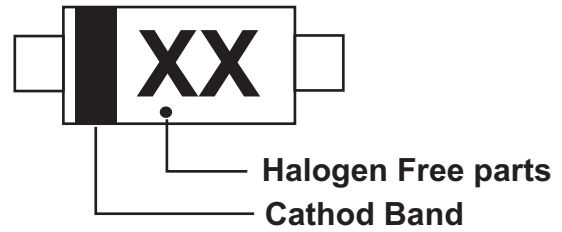
SOD-123	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	1.85 ± 0.05	3.94 ± 0.05	1.57 ± 0.05	1.55 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.073 ± 0.002	0.155 ± 0.002	0.062 ± 0.002	0.061 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

SOD-123	SYMBOL	E	F	P	P <sub>0</sub>	P <sub>1</sub>	W	W <sub>1</sub>
	(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 ± 1.00
	(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

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

## Marking Code

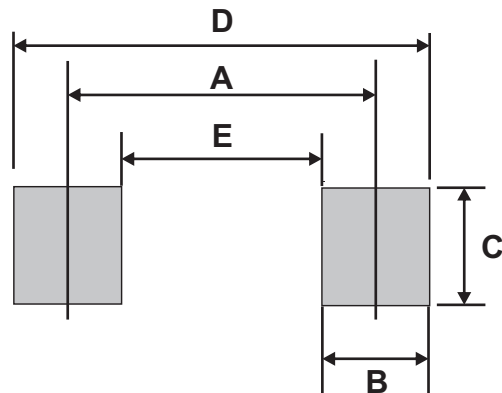
Part Number	Marking Code
CDSW4148-HF	T4



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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