

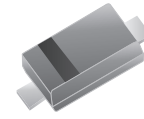
CDBW-54W-HF

Reverse Voltage: 30 Volts

Forward Current: 200 mA

RoHS Device

Halogen Free



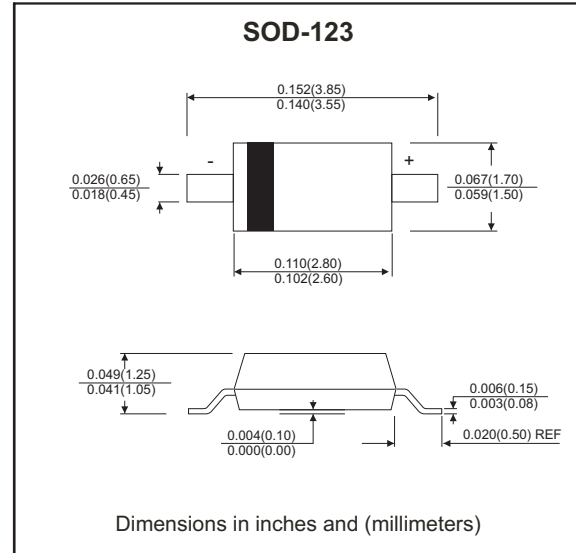
Features

- Low turn-on voltage.
- Fast switching.
- Ultra-small surface mount package.
- PN junction guard ring for transient and ESD protection.

Mechanical data

- Case: SOD-123, Molded Plastic
- Terminals: Solderable per MIL-STD-202, Method 208

Circuit diagram



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

Parameter	Conditions	Symbol	Limits	Unit
DC blocking voltage		V_R	30	V
RMS reverse voltage		$V_{R(RMS)}$		
Average rectified output current		I_o	21	mA
Forward continuous current		I_F	200	mA
Repetitive peak forward current		I_{FRM}	300	mA
Non-repetitive peak forward surge current	@t = 8.3ms	I_{FSM}	600	mA
Power dissipation		P_D	500	mW
Thermal resistance junction to ambient		$R_{\theta JA}$	200	°C/W
Operating temperature range		T_{OP}	0 to +70	°C
Junction temperature range		T_J	125	°C
Storage temperature range		T_{STG}	-55 to +150	°C

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse breakdown voltage	$I_R = 100\mu A$	$V_{(BR)}$	30			V
Forward voltage	$I_F = 0.1mA$	V_{F1}			240	mV
	$I_F = 1.0mA$	V_{F2}			320	
	$I_F = 10mA$	V_{F3}			400	
	$I_F = 30mA$	V_{F4}			500	
	$I_F = 100mA$	V_{F5}			1000	
Reverse current	$V_R = 25V$	I_R			2.0	μA
Reverse recovery time	$I_F = 10mA, I_R = 10mA$ to 1mA $R_L = 100\Omega$	t_{rr}			5.0	ns
Capacitance between terminals	$V_R = 1V, f = 1 MHz$	C_T			10	pF

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

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RATING AND CHARACTERISTIC CURVES (CDBW-54W-HF)

Fig.1 - Forward Characteristics

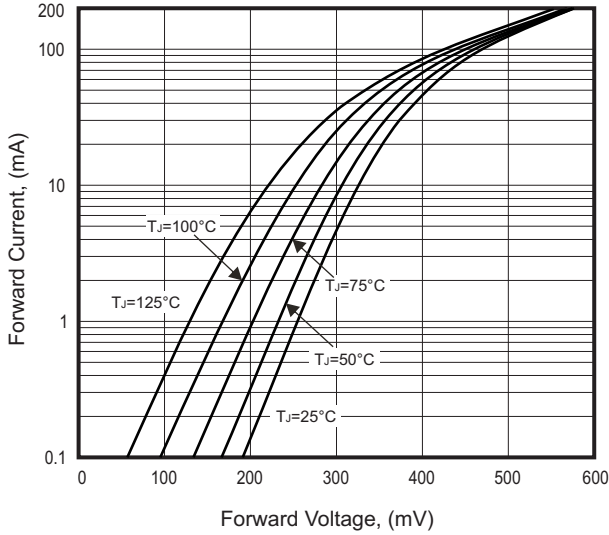


Fig.2 - Reverse Characteristics

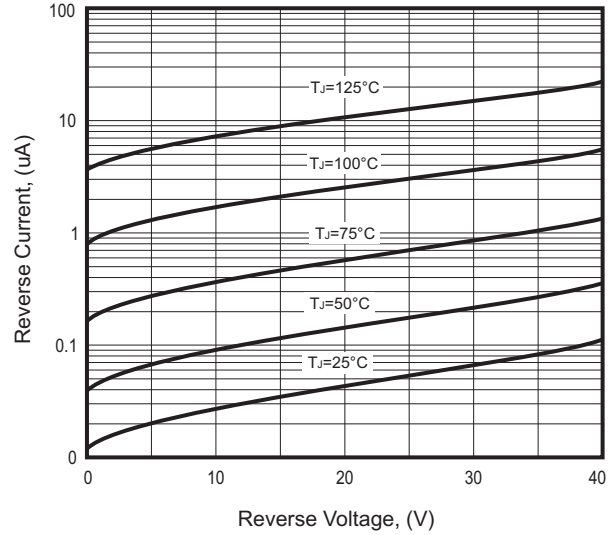


Fig.3 - Capacitance Characteristics

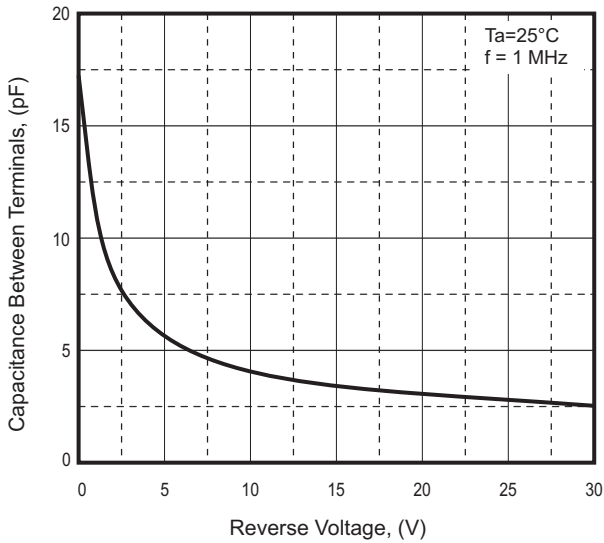
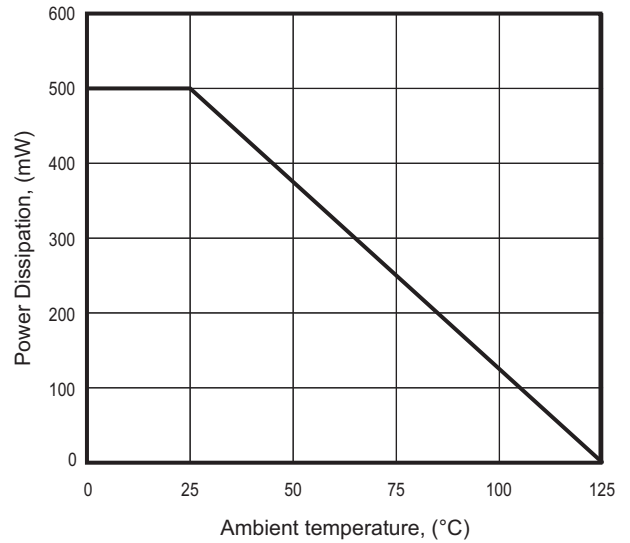
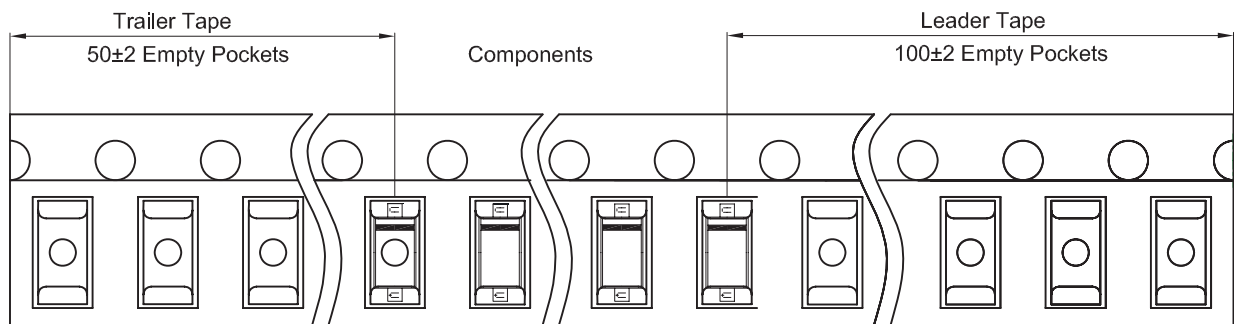
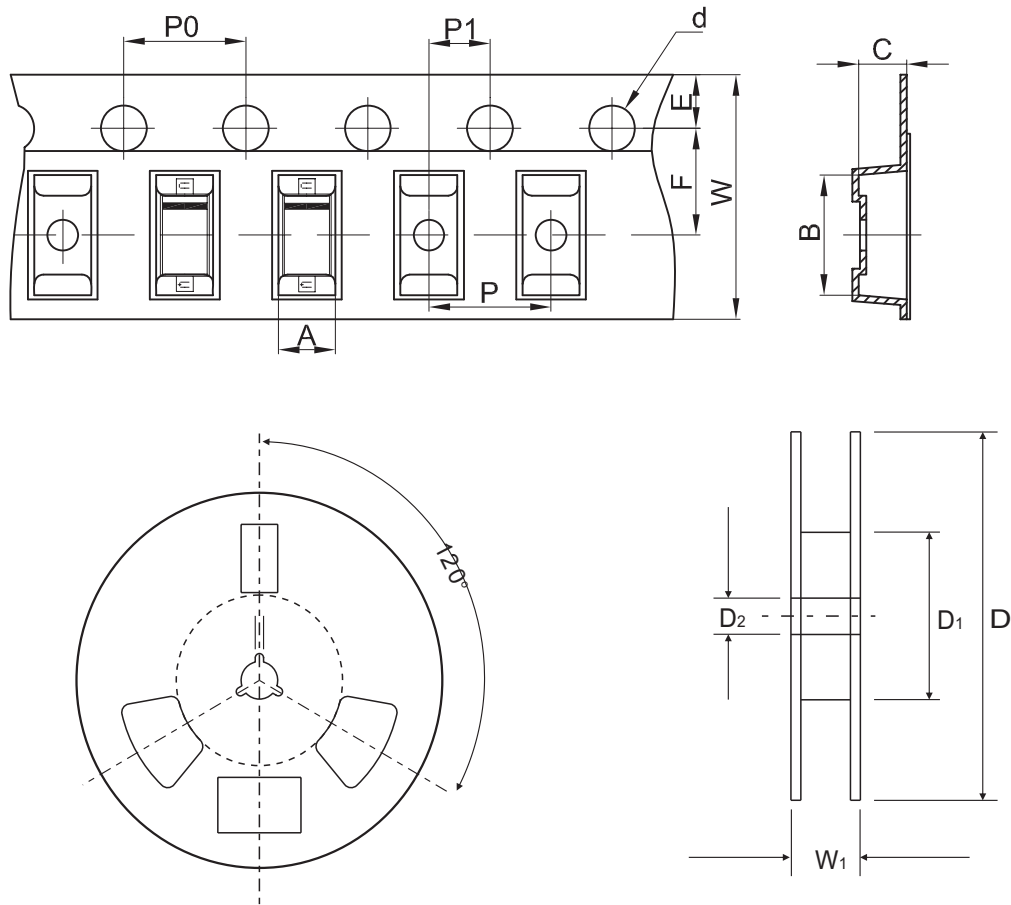


Fig.4 - Power Derating Curve



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 ± 1.00	54.40 ± 0.40	13.0 ± 0.20
	(inch)	0.073 ± 0.004	0.155 ± 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	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	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 ± 0.002	0.158 ± 0.004	0.158 ± 0.004	0.079 ± 0.004	0.315 + 0.012 / - 0.004	0.484 ± 0.039

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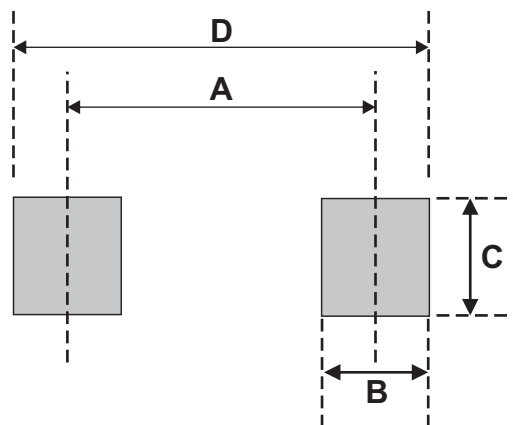
Marking Code

Part Number	Marking Code
CDBW-54W-HF	L9



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



Note:

- 1.General tolerance: $\pm 0.05\text{mm}$.
- 2.The pad layout is for reference purposes only.

Standard Packaging

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