

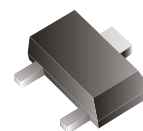
CDBR3-54M-HF

Reverse Voltage: 30 Volts

Forward Current: 200 mA

RoHS Device

Halogen Free



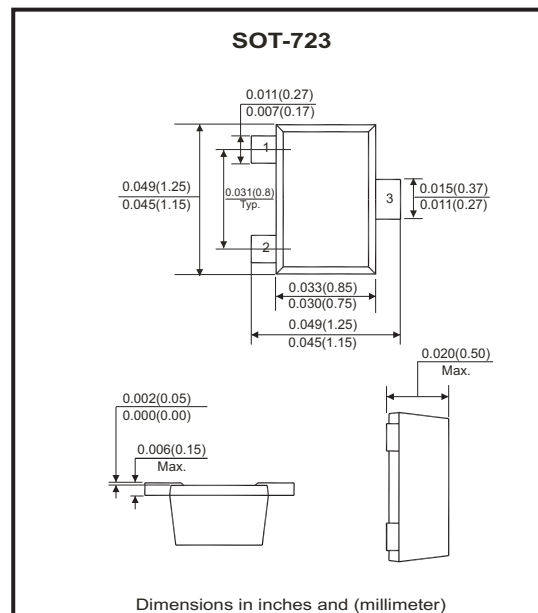
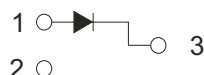
Features

- Extremely Fast Switching Speed.
- Low Forward Voltage.

Mechanical data

- Case: SOT-723, 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
Peak repetitive reverse voltage		V_{RRM}	30	V
Working peak reverse voltage		V_{RWM}	30	V
RMS reverse voltage		$V_{R(RMS)}$	21	V
Average forward current		I_o	200	mA
Non-repetitive peak forward surge current	@t < 1s	I_{FSM}	600	mA
Repetitive peak forward current	@t ≤ 1s, δ ≤ 0.5	I_{FRM}	300	mA
Power dissipation		P_D	150	mW
Thermal resistance form junction to ambient		$R_{\theta JA}$	667	°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 voltage	$I_R = 100\mu A$	$V_{(BR)}$	30			V
Reverse current	$V_R = 25V$	I_R			2	uA
Forward voltage	$I_F = 0.1mA$	V_{F1}			0.24	V
	$I_F = 1mA$	V_{F2}			0.32	
	$I_F = 10mA$	V_{F3}			0.4	
	$I_F = 30mA$	V_{F4}			0.5	
	$I_F = 100mA$	V_{F5}			1	
Total capacitance	$V_R = 1V, f = 1MHz$	C_{tot}		10		pF
Reverse recovery time	$I_F = I_R = 10mA, I_{R(REC)} = 1mA$	t_{rr}			5	ns

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

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RATING AND CHARACTERISTIC CURVES (CDBR3-54M-HF)

Fig.1 - Typical Forward Characteristics

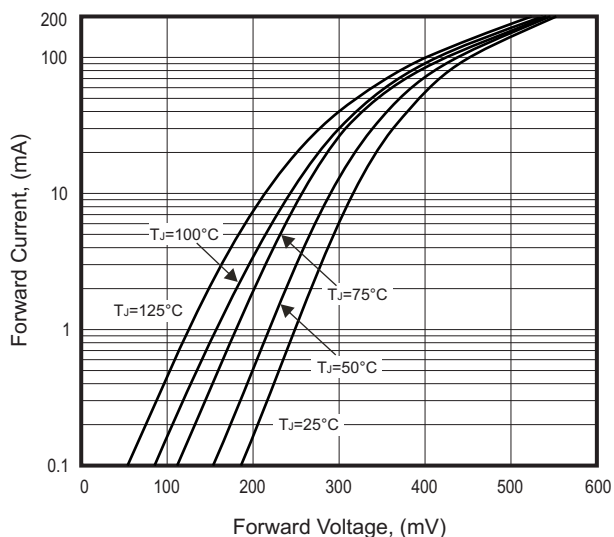


Fig.2 - Typical Reverse Characteristics

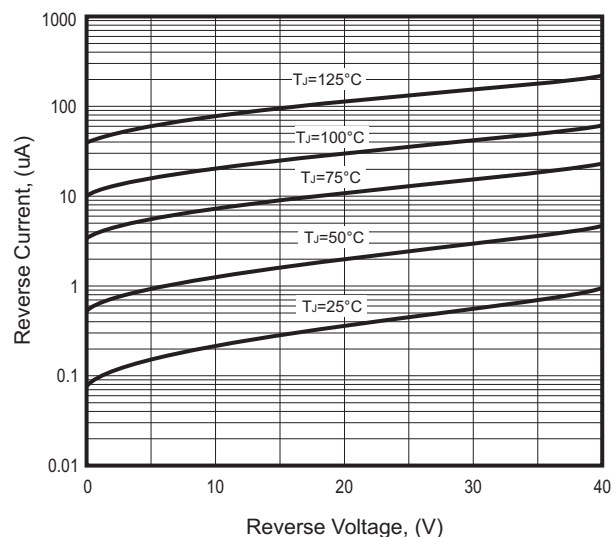


Fig.3 - Capacitance Characteristics

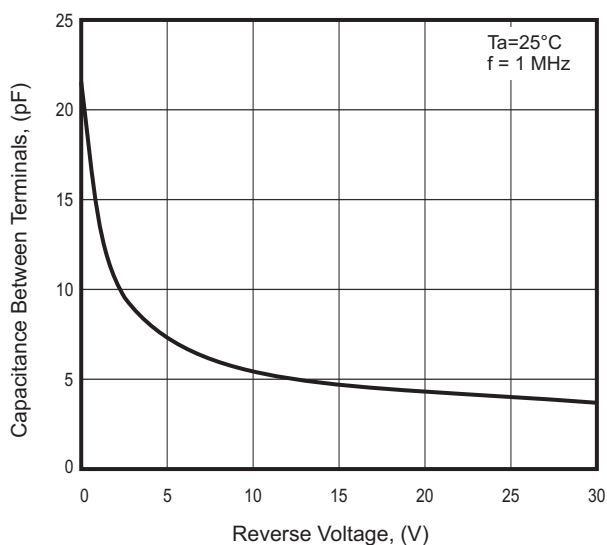
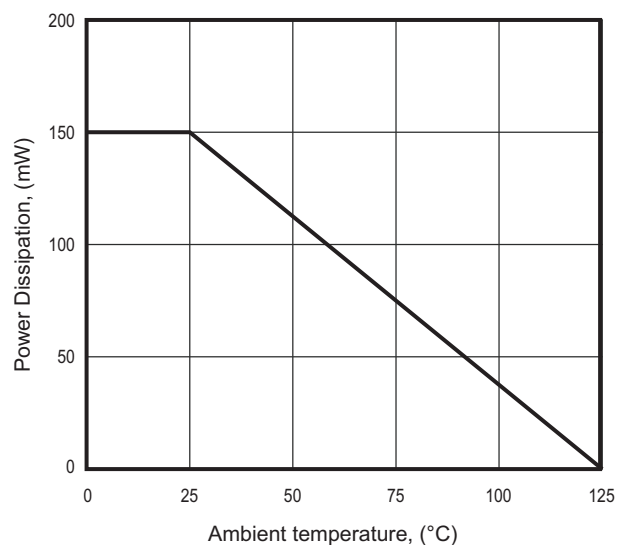
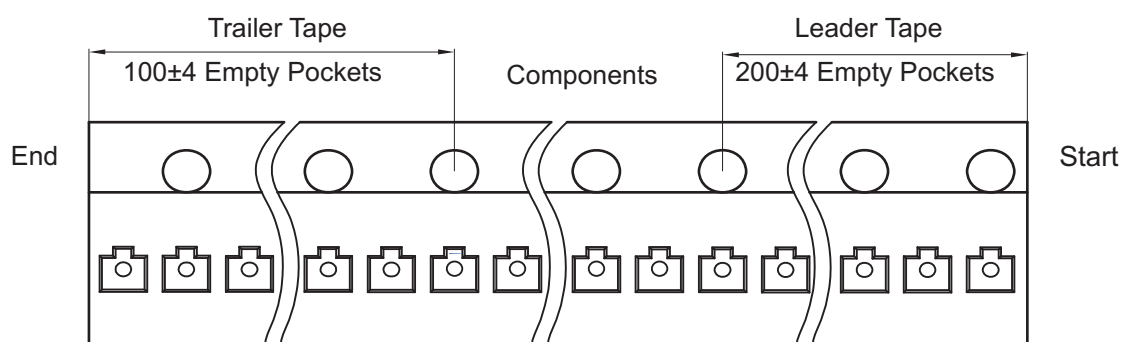
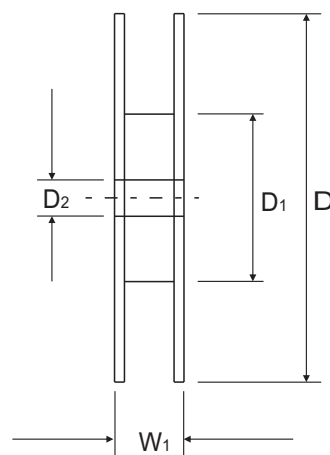
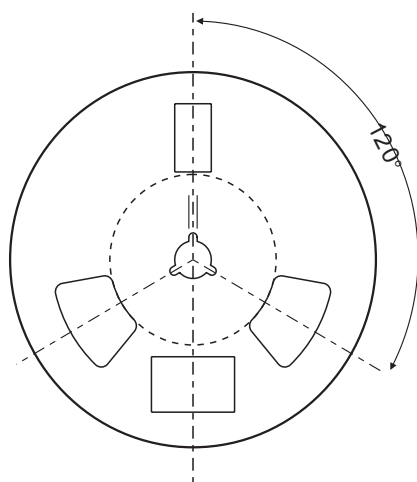
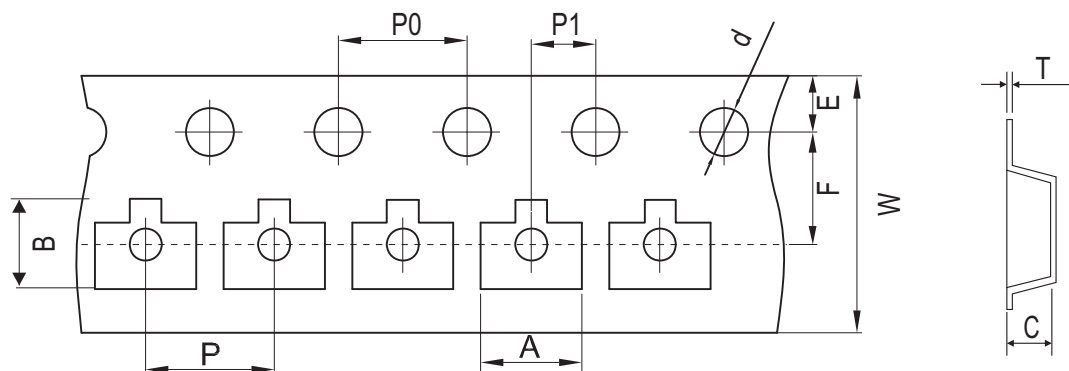


Fig.4 - Power Derating Curve



Reel Taping Specification



SOT-723	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.33 ± 0.05	1.45 ± 0.05	0.61 ± 0.05	1.50 ± 0.10	178 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.052 ± 0.002	0.057 ± 0.002	0.024 ± 0.002	0.059 ± 0.004	7.008 ± 0.078	2.142 ± 0.039	0.512 ± 0.039

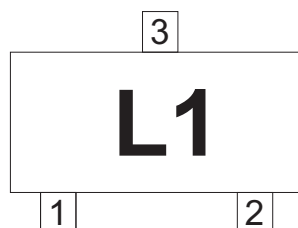
SOT-723	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.05	2.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	$8.00 \pm 0.30 / - 0.10$	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.079 ± 0.004	0.158 ± 0.004	0.079 ± 0.004	$0.315 \pm 0.012 / - 0.004$	0.484 ± 0.039

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Marking Code

Part Number	Marking Code
CDBR3-54M-HF	L1



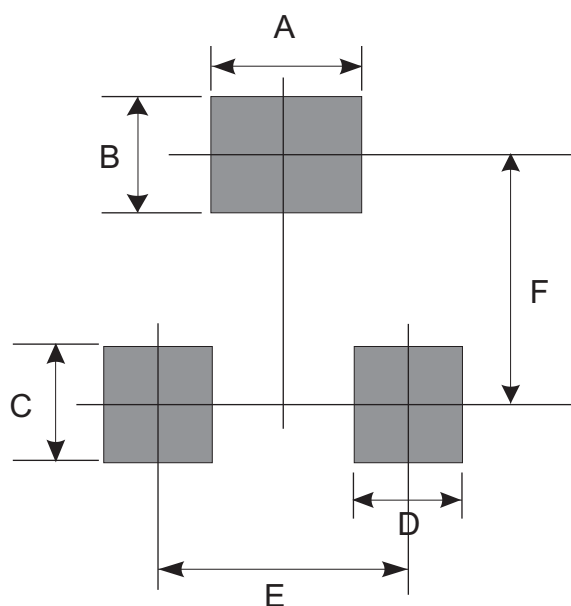
Suggested PAD Layout

SIZE	SOT-723	
	(mm)	(inch)
A	0.42	0.017
B	0.30	0.012
C	0.30	0.012
D	0.32	0.013
E	0.80	0.031
F	1.00	0.039

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)
SOT-723	8,000	7