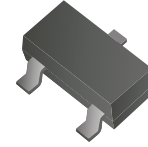


## CDBT-70SA-G

Reverse Voltage: 70 Volts

Forward Current: 70 mA

RoHS Device



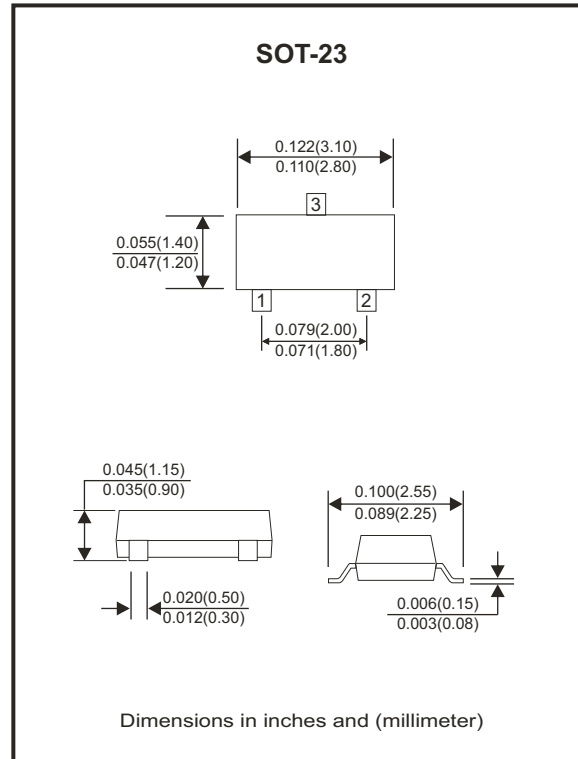
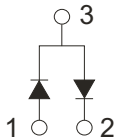
### Features

- Fast switching speed.
- Electrically identical to standard jedec.
- High conductance.
- Surface mount package ideally suited for automatic insertion.

### Mechanical data

- Case: SOT-23, molded plastic.
- Terminals: Solderable per MIL-STD-202, method 208.

### Circuit diagram



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

Parameter	Symbol	Value	Unit
Repetitive peak reverse voltage	V <sub>RRM</sub>	70	V
Reverse voltage	V <sub>R</sub>	70	V
Forward current	I <sub>F</sub>	70	mA
Peak forward surge current, t<10ms	I <sub>FSM</sub>	1.0	A
Power dissipation	P <sub>D</sub>	350	mW
Typical thermal resistance	R <sub>θJA</sub>	350	°C/W
	R <sub>θJC</sub>	150	°C/W
Junction temperature range	T <sub>J</sub>	-55 to +150	°C
Storage temperature range	T <sub>STG</sub>	-55 to +150	°C

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

Parameter	Conditions	Symbol	Value	Unit
Maximum forward voltage	$I_F = 1.0\text{mA}$	$V_F$	0.41	V
	$I_F = 10\text{mA}$		0.75	
	$I_F = 15\text{mA}$		1.00	
Maximum reverse current	$V_R = 50\text{V}$	$I_R$	100	nA
	$V_R = 70\text{V}$		10	$\mu\text{A}$
Maximum junction capacitance	$V_R = 0\text{V}, f = 1.0\text{MHz}$	$C_J$	2.0	pF
Maximum reverse recovery time (Note 1)		$T_{rr}$	5	nS

Note: 1. From  $I_F=10\text{mA}$  to  $I_R=10\text{mA}$ ,  $R_L=100\Omega$ ; measured at  $I_R=1\text{mA}$

## RATING AND CHARACTERISTIC CURVES (CDBT-70SA-G)

Fig.1 - Typical Instantaneous Forward Characteristics

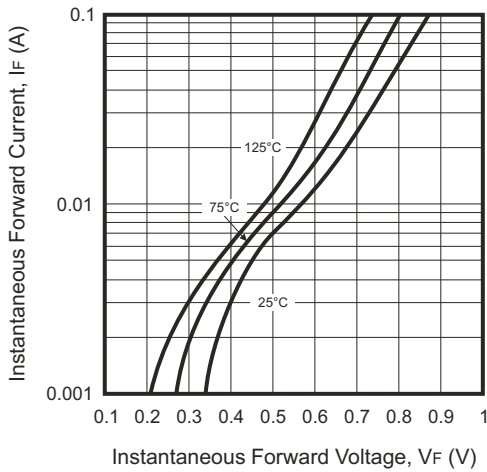


Fig.2 - Typical Reverse Characteristics

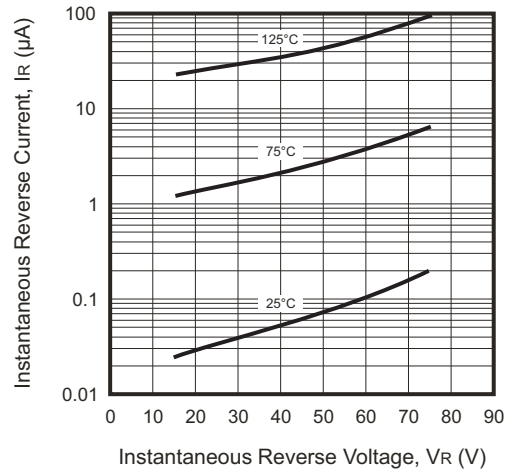


Fig.3 - Typical Junction Capacitance

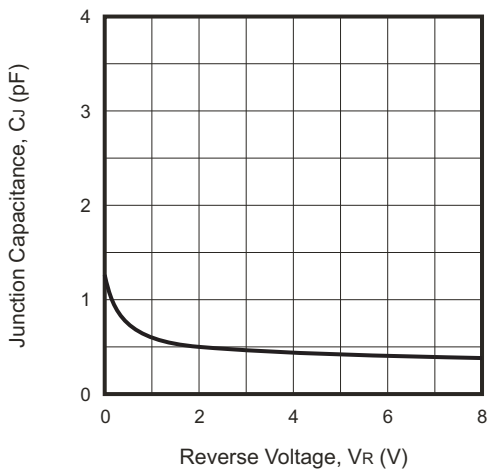
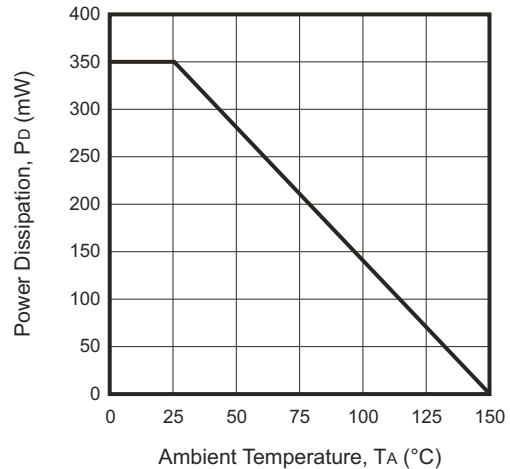


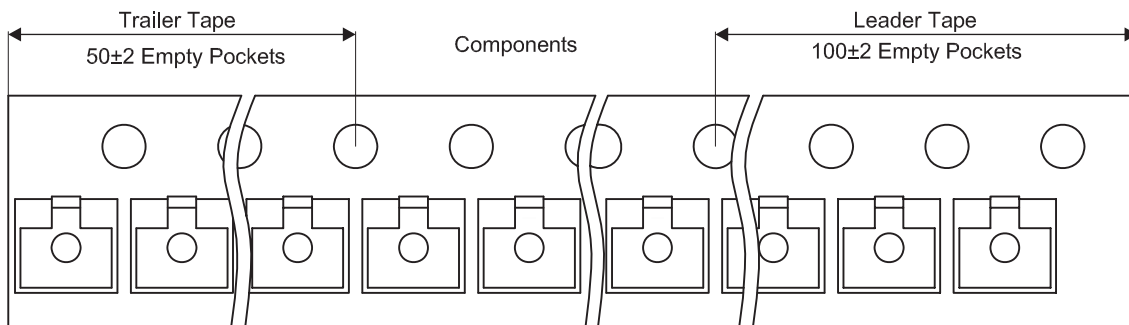
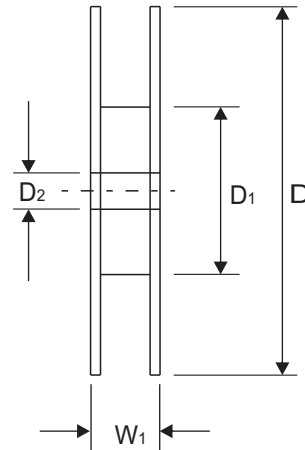
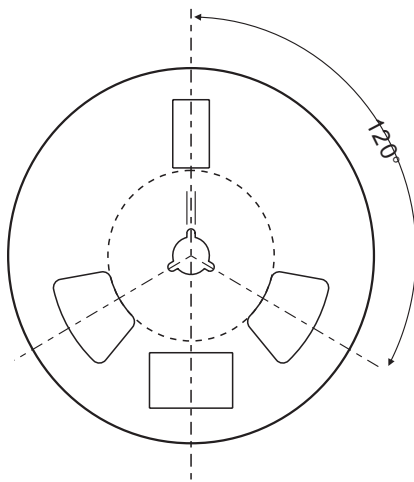
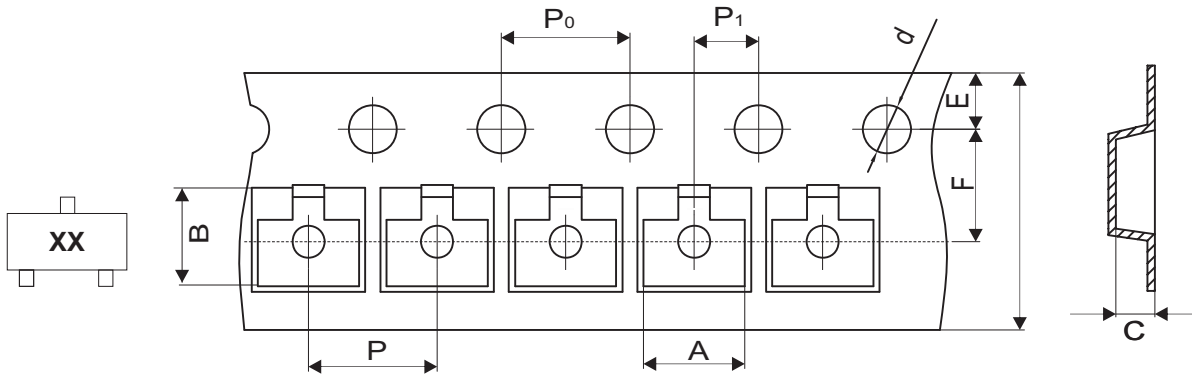
Fig.4 - Power Derating Curve



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

REV:A

## Reel Taping Specification



SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	$3.15 + 0.35 - 0.10$	$2.77 \pm 0.10$	$1.22 \pm 0.10$	$1.50 + 0.10 - 0.00$	$178.00 \pm 1.00$	$54.80 \pm 0.20$	$13.00 \pm 2.00$
	(inch)	$0.124 + 0.014 - 0.004$	$0.109 \pm 0.004$	$0.048 \pm 0.004$	$0.059 + 0.004 - 0.00$	$7.008 \pm 0.039$	$2.157 \pm 0.008$	$0.512 \pm 0.079$

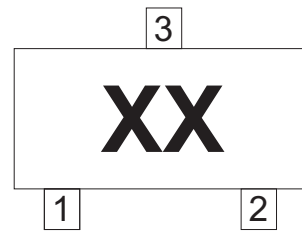
SOT-23	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	$1.75 \pm 0.10$	$3.50 \pm 0.05$	$4.00 \pm 0.10$	$4.00 \pm 0.10$	$2.00 \pm 0.05$	$8.00 + 0.30 - 0.10$	12.50 Max.
	(inch)	$0.069 \pm 0.004$	$0.138 \pm 0.004$	$0.048 \pm 0.004$	$0.157 \pm 0.004$	$0.079 \pm 0.004$	$0.315 + 0.012 - 0.004$	0.484 Max.

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

REV:A

## Marking Code

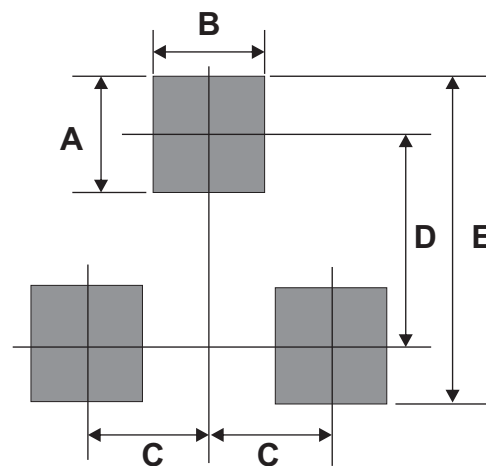
Part Number	Marking Code
CDBT-70SA-G	74



xxx = Product type marking code

## Suggested PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.90	0.035
B	0.80	0.031
C	0.95	0.037
D	2.00	0.079
E	2.90	0.114



## Standard Packaging

Case Type	REEL PACK	
	REEL ( pcs )	Reel Size (inch)
SOT-23	3,000	7