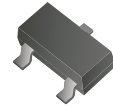


## CDBT0540-G

Reverse Voltage: 40 Volts

Forward Current: 0.5 Amp

RoHS Device



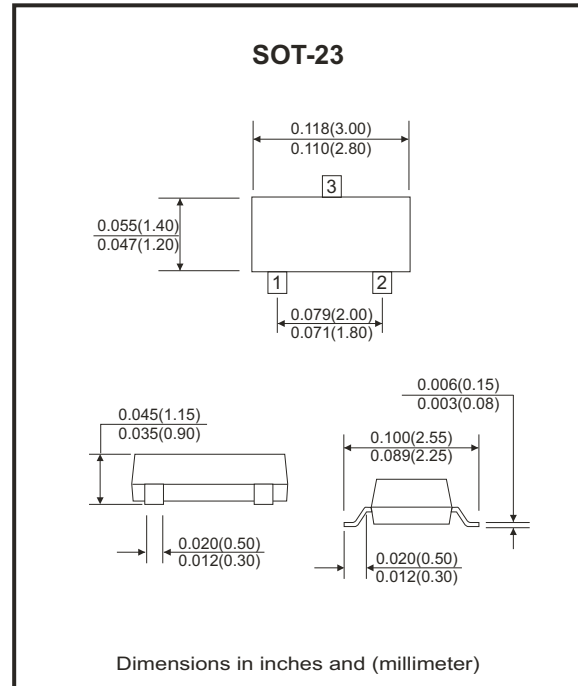
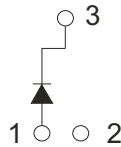
### Features

- Small surface mount type.
- Low reverse current and low forward voltage.
- High reliability.

### Mechanical data

- Case: SOT-23, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Weight: 0.008 grams(approx.)

### Circuit diagram



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

Parameter	Conditions	Symbol	Value	Unit
Peak reverse voltage		$V_{RM}$	40	V
DC reverse voltage		$V_R$	40	V
Non-repetitive peak forward surge voltage	t=8.3ms	$I_{FSM}$	3	A
Mean rectifying current		$I_o$	0.5	A
Power dissipation		$P_D$	250	mW
Thermal resistance	Junction to ambient	$R_{\theta JA}$	400	°C/W
Junction temperature		$T_J$	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	$I_R=100\mu A$	$V_{BR}$	40			V
Forward voltage	$I_F=500mA$	$V_F$			0.55	V
Reverse current	$V_R=10V$	$I_R$			30	$\mu A$
	$V_R=30V$				50	
Capacitance between terminals	$V_R=0V, f=1MHz$	$C_T$		125		pF
	$V_R=10V, f=1MHz$			20		

## RATING AND CHARACTERISTIC CURVES (CDBT0540-G)

Fig.1 - Forward Characteristics

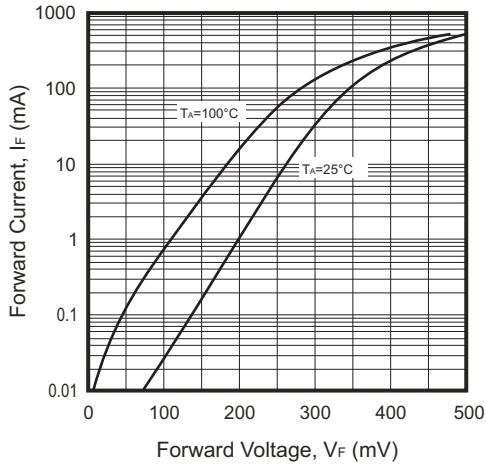


Fig.2 - Reverse Characteristics

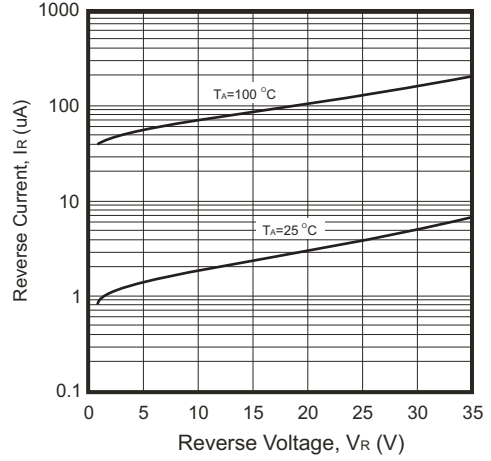


Fig.3 - Capacitance Characteristics

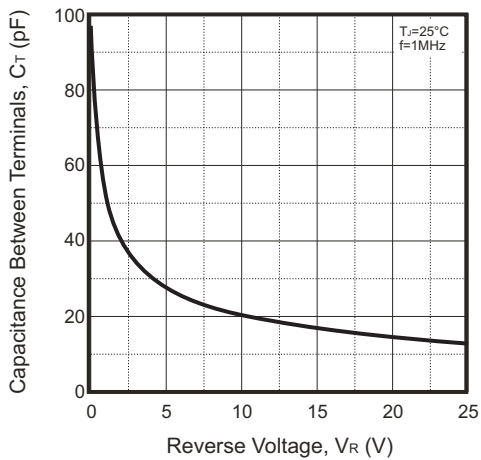
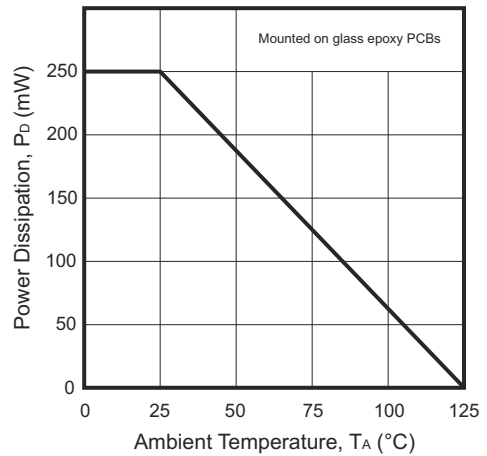
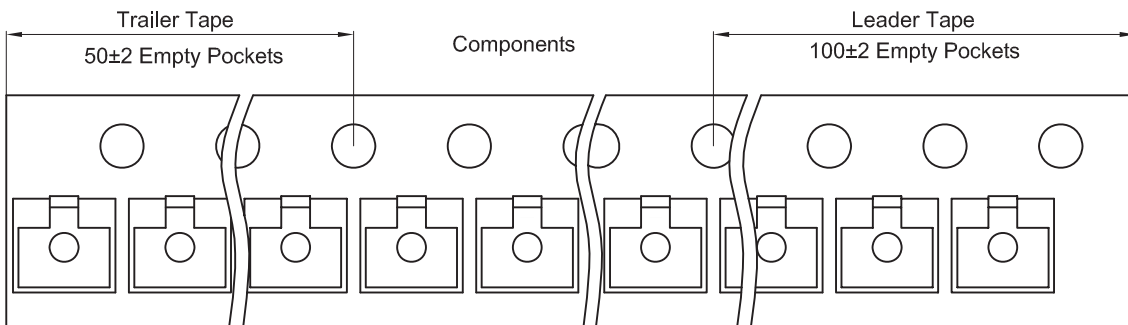
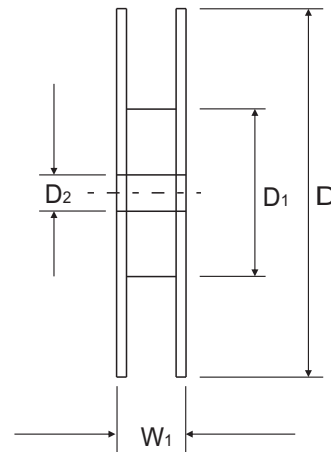
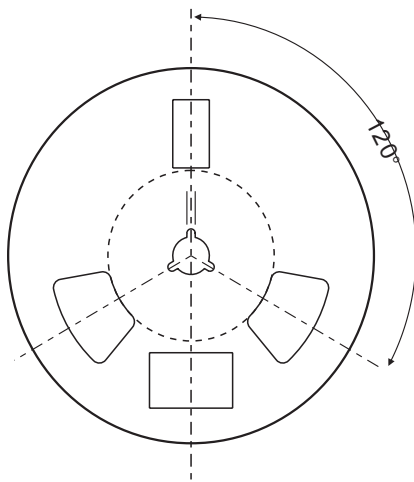
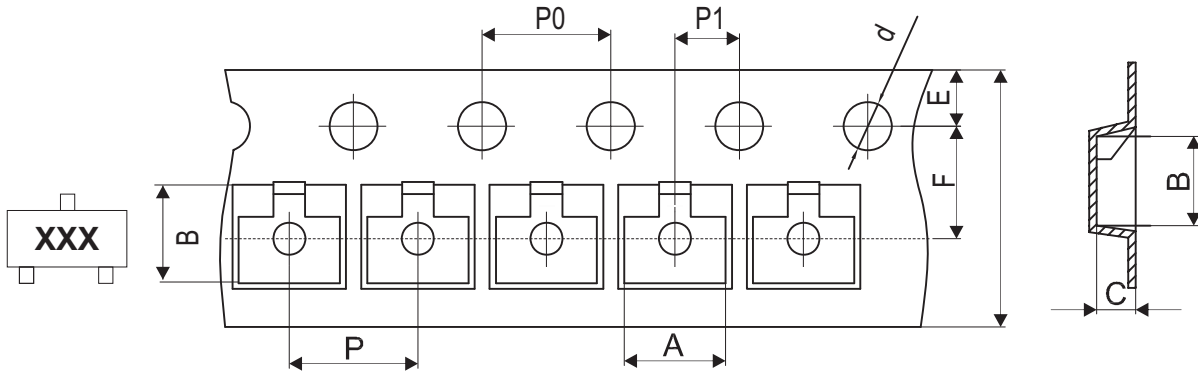


Fig.4 - Power Derating Curve



## Reel Taping Specification

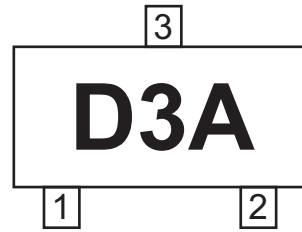


SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 ± 0.10	1.50 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

SOT-23	SYMBOL	E	F	P	P0	P1	W	W1
	(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

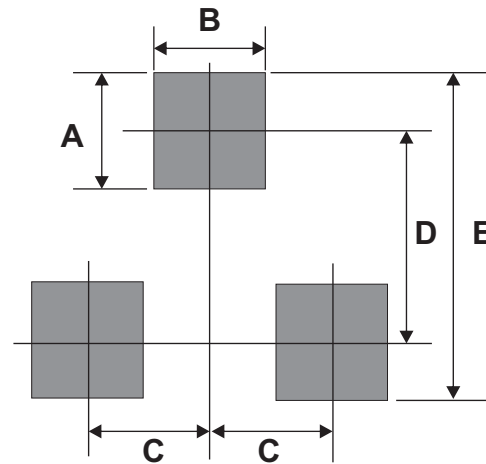
## Marking Code

Part Number	Marking Code
CDBT0540-G	D3A



## 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