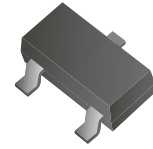


## CDBT-40/S/C/A-G

**Reverse Voltage: 40 Volts**  
**Forward Current: 200 mA**  
**RoHS Device**



### Features

- Design for mounting on small surface.
- High speed switching application, circuit protection.
- Low forward voltage drop.

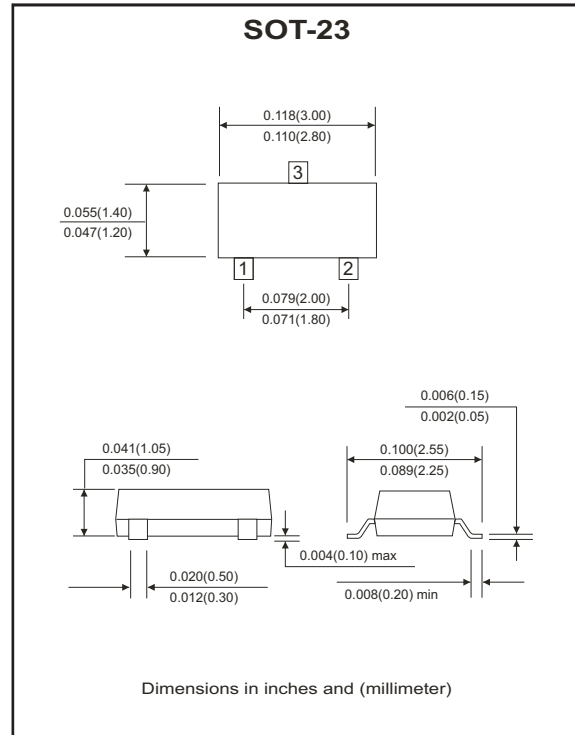
### Mechanical data

- Case: SOT-23, molded plastic.
- Terminals: solderable per MIL-STD-750, method 2026.
- Approx. weight: 0.0078 grams

### Circuit diagram



CDBT-40-G Marking Code: 43    CDBT-40S-G Marking Code: 44    CDBT-40C-G Marking Code: 45    CDBT-40A-G Marking Code: 46



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

Parameter	Symbol	Value	Unit
Peak repetitive peak reverse voltage	$V_{RRM}$	40	V
Working peak reverse voltage	$V_{RWM}$		
DC blocking voltage	$V_R$		
Forward continuous current	$I_{FM}$	200	mA
Power dissipation	$P_D$	200	mW
Thermal resistance, junction to ambient	$R_{\theta JA}$	625	°C/W
Junction temperature	$T_J$	125	°C
Storage temperature	$T_{STG}$	-65 to +125	°C

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

Parameter	Symbol	Conditions	Min.	Max.	Unit
Reverse breakdown voltage	$V_{BR}$	$I_R=10\mu A$	40		V
Reverse voltage leakage current	$I_R$	$V_R=30V$		200	nA
Forward voltage	$V_F$	$I_F=1mA$ $I_F=40mA$		380 1000	mV
Diode capacitance	$C_D$	$V_R=0V, f=1.0MHz$		5	pF
Reverse recovery time	$T_{rr}$	$I_{rr}=1mA, I_F=I_R=10mA,$ $R_L=100\Omega$		5	nS

## RATING AND CHARACTERISTIC CURVES (CDBT-40/S/C/A-G)

Fig.1 Forward Characteristics

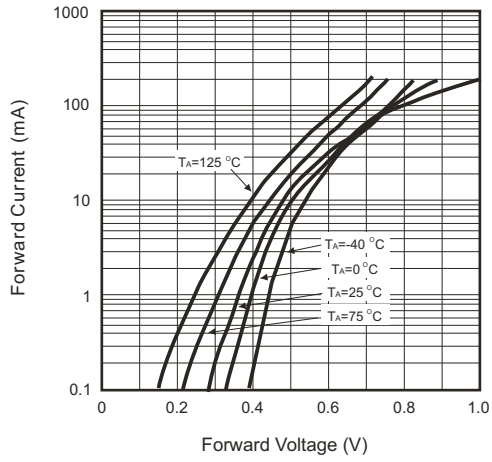


Fig.2 Reverse Characteristics

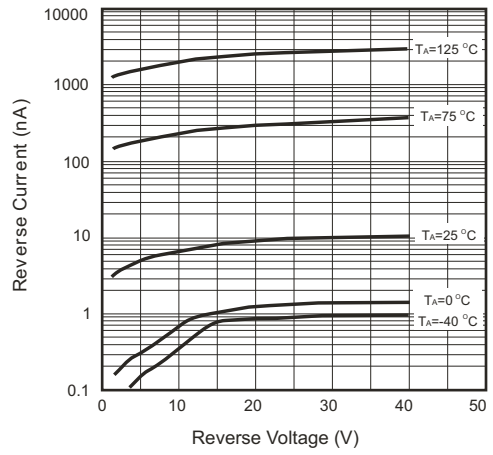


Fig.3 Capacitance Between Terminals Characteristics

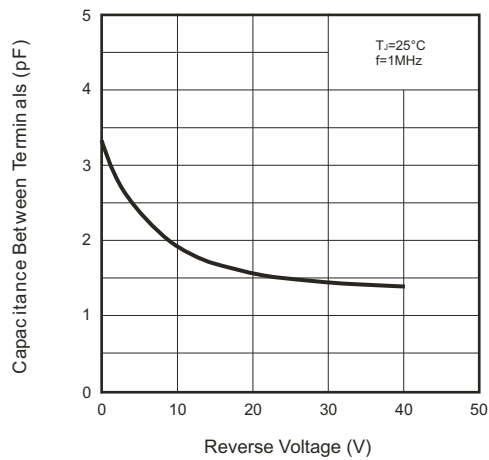
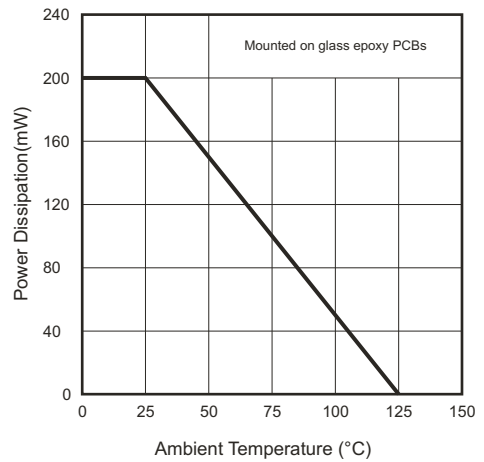
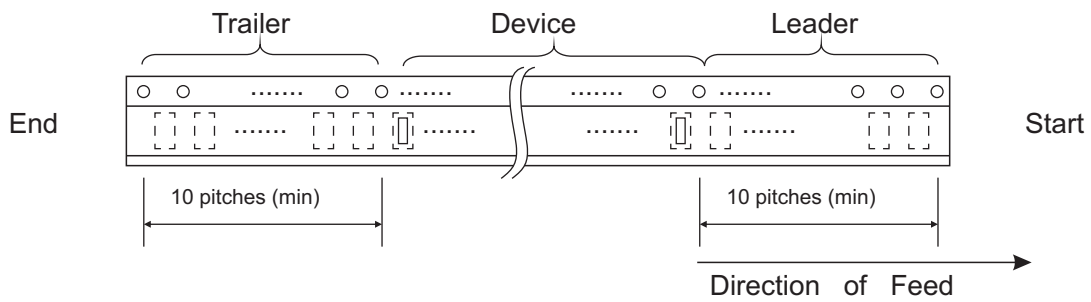
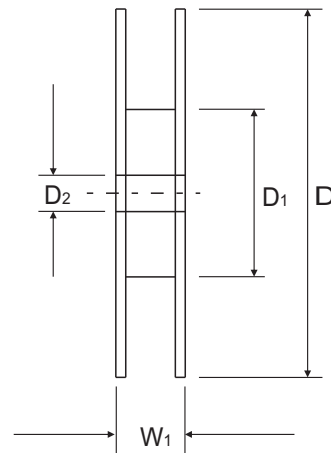
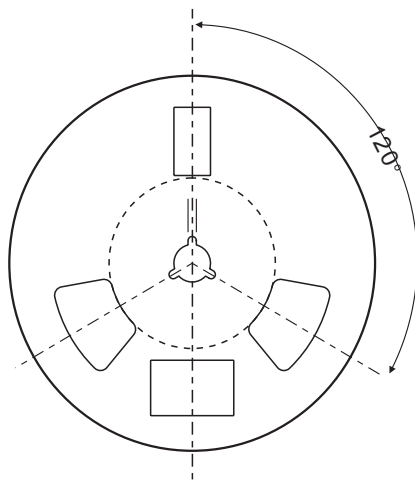
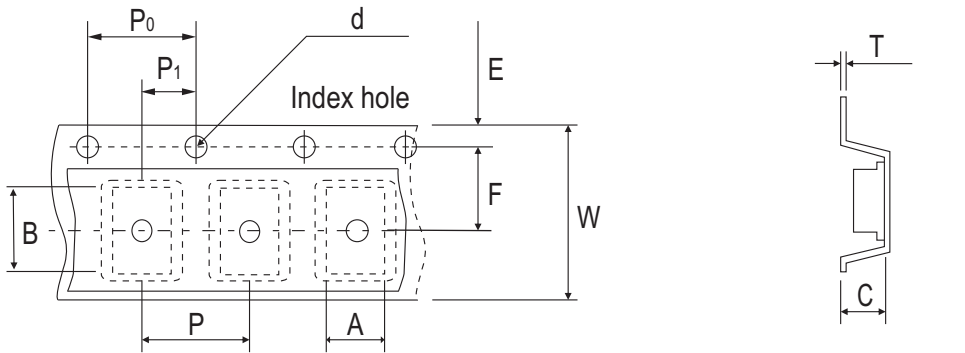


Fig.4 Power Derating Curve



## Reel Taping Specification

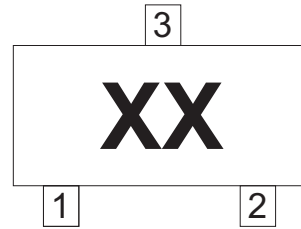


SOT-23	SYMBOL	A	B	C	d	D	D <sub>1</sub>	D <sub>2</sub>
	(mm)	3.10 ± 0.10	2.85 ± 0.10	1.40 ± 0.10	1.55 ± 0.10	178 ± 1	50.0 MIN.	13.0 ± 0.20
	(inch)	0.122 ± 0.004	0.112 ± 0.004	0.055 ± 0.004	0.061 ± 0.004	7.008 ± 0.04	1.969 MIN.	0.512 ± 0.008

SOT-23	SYMBOL	E	F	P	P <sub>0</sub>	P <sub>1</sub>	W	W <sub>1</sub>
	(mm)	1.75 ± 0.10	3.50 ± 0.05	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	8.00 ± 0.30	14.4 MAX.
	(inch)	0.069 ± 0.004	0.138 ± 0.002	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	0.315 ± 0.008	0.567 MAX.

## Marking Code

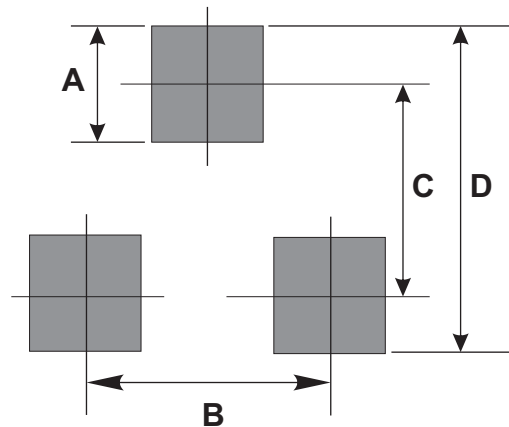
Part Number	Marking Code
CDBT-40-G	43
CDBT-40S-G	44
CDBT-40C-G	45
CDBT-40A-G	46



xx = Product type marking code

## Suggested PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.80	0.031
B	1.90	0.075
C	2.02	0.080
D	2.82	0.111



## Standard Packaging

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