

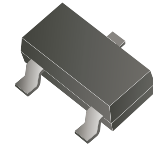
## CDBT-70/S/C/A-HF

Reverse Voltage: 70 Volts

Forward Current: 70 mA

RoHS Device

Halogen Free



### Features

- Low turn-on voltage.
- Fast switching.

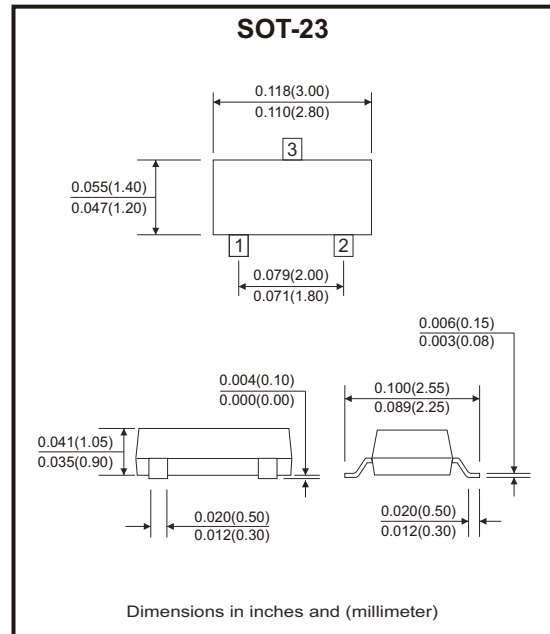
### Mechanical Data

- Case: SOT-23, molded plastic.
- Mounting position: Any.

### Circuit Diagram



CDBT-70-HF    CDBT-70S-HF    CDBT-70C-HF    CDBT-70A-HF



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

Parameter	Symbol	Value	Units
DC voltage	$V_R$	70	V
Forward continuous current	$I_F$	70	mA
Non-repetitive peak forward surge current @ t=8.3ms	$I_{FSM}$	100	mA
Power dissipation	$P_D$	200	mW
Thermal resistance junction to ambient	$R_{\theta JA}$	500	°C/W
Operating junction temperature range	$T_J$	-40 to +125	°C
Storage temperature range	$T_{STG}$	-55 to +150	°C

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

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Reverse breakdown voltage	$V_{(BR)}$	$I_R = 10\mu A$	70			V
Reverse voltage leakage current	$I_R$	$V_R = 50V$			100	nA
Forward voltage	$V_F$	$I_F = 1mA$ $I_F = 15mA$			410 1000	mV
Diode capacitance	$C_D$	$V_R = 0V, f = 1MHz$			2	pF
Reverse recovery time	$t_{rr}$	$I_F = I_R = 10mA, I_{rr} = 0.1 \times I_R, R_L = 100\Omega$			5	ns

## Rating and Characteristic Curves (CDBT-70/S/C/A-HF)

Fig.1 - Forward Characteristics

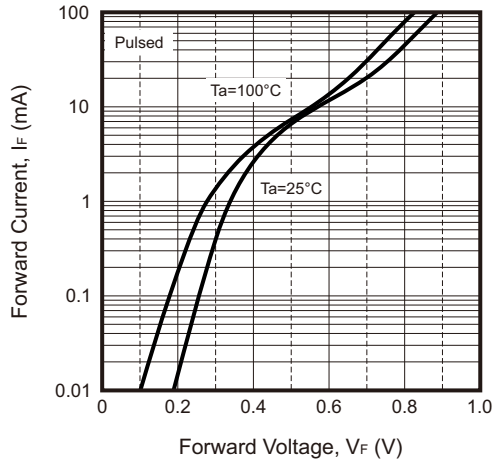


Fig.2 - Reverse Characteristics

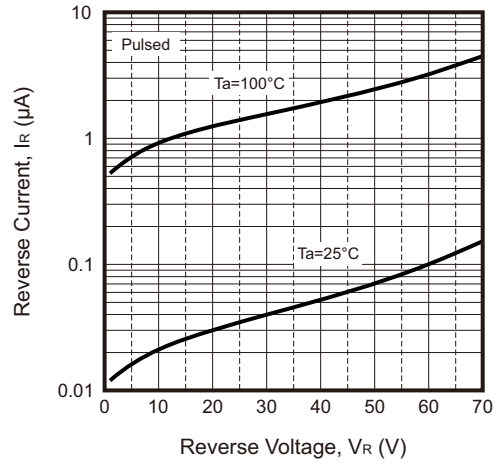


Fig.3 - Capacitance Characteristics

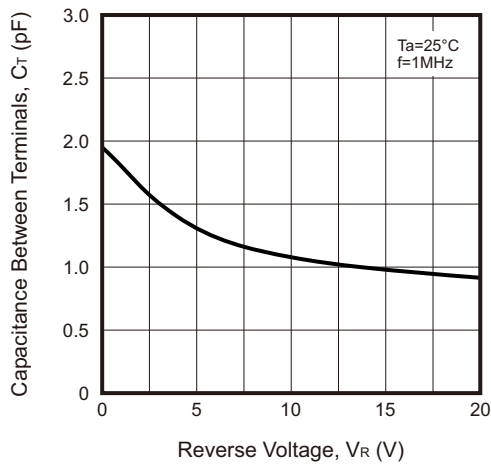
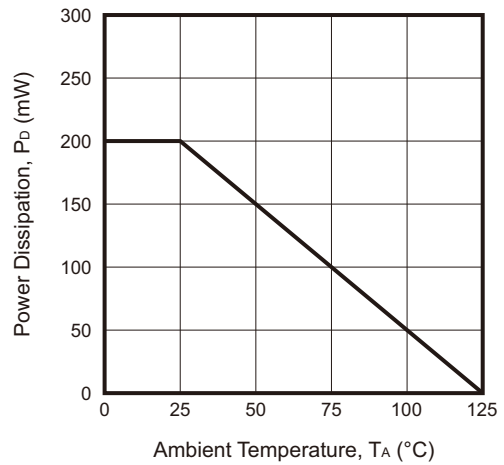
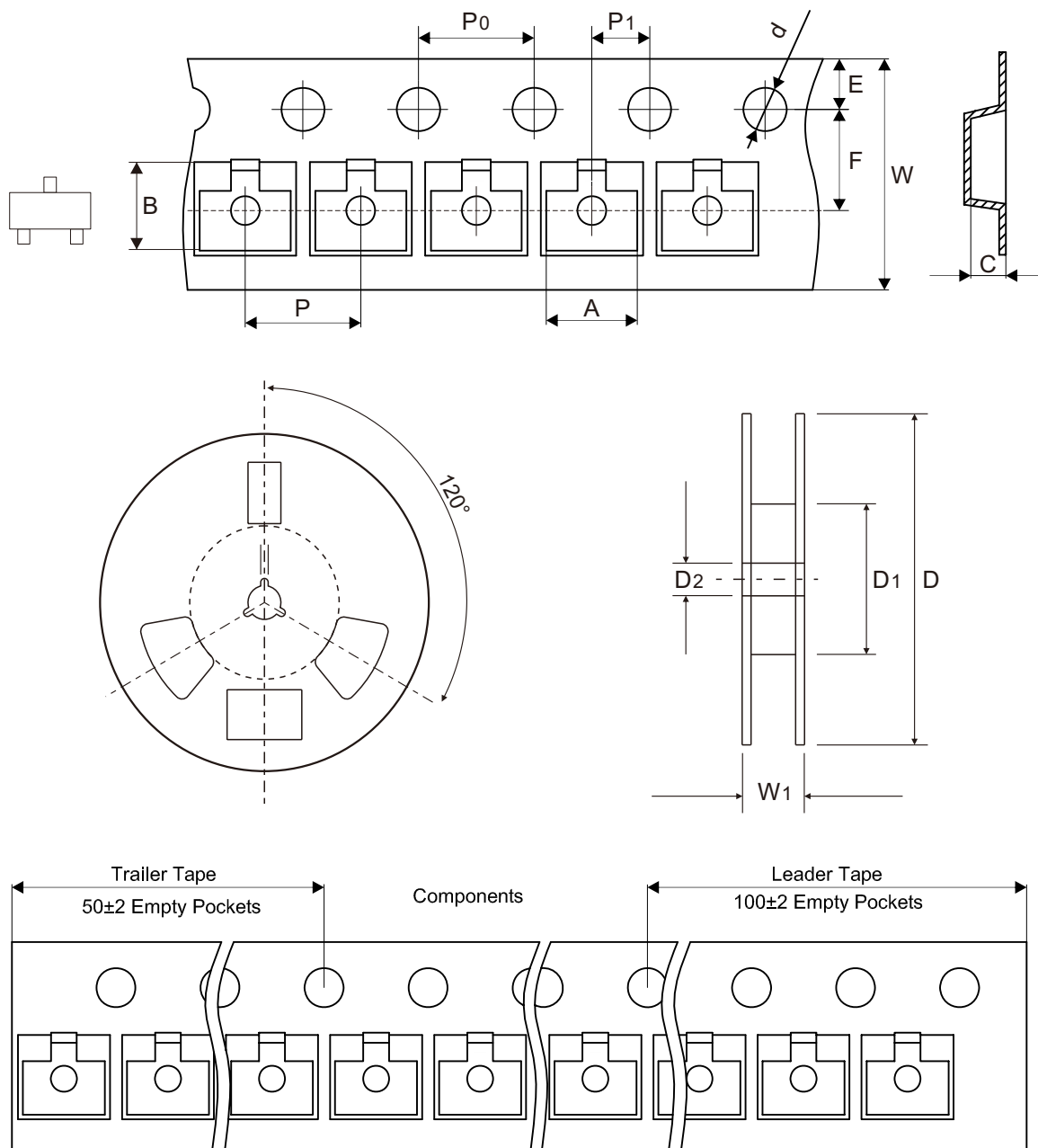


Fig.4 - Power Derating Curve



## Reel Taping Specification

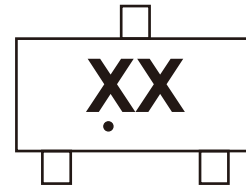


SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 ± 0.10	1.50 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

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

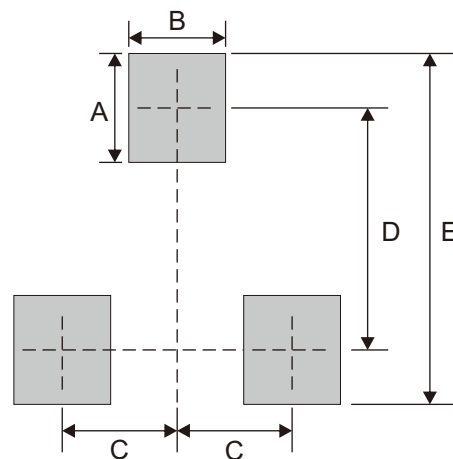
Part Number	Marking Code
CDBT-70-HF	73
CDBT-70A-HF	76
CDBT-70C-HF	75
CDBT-70S-HF	74



Solid dot = Control code  
xx = Product type marking code

## Suggested P.C.B. 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