

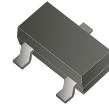
CDBT0540-HF

Reverse Voltage: 40 V

Forward Current: 0.5 A

RoHS Device

Halogen Free



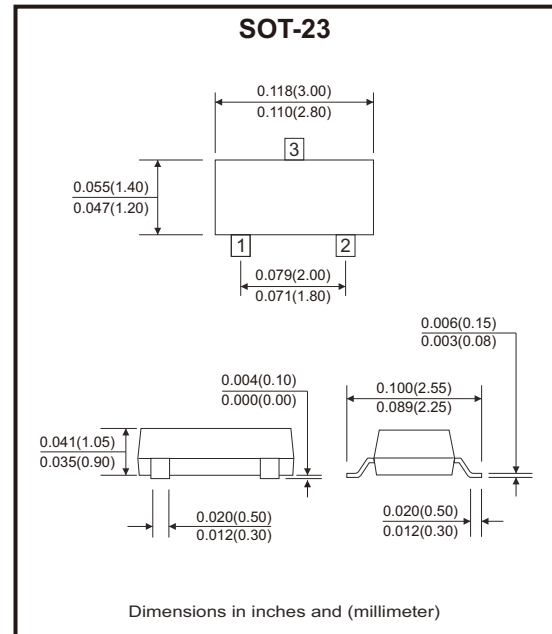
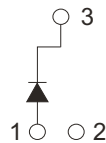
Features

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

Mechanical Data

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

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
Operation 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	Conditions	Symbol	Min	Typ	Max	Unit
Reverse breakdown voltage	$I_R = 100\mu A$	V_R	40			V
Forward voltage	$I_F = 0.5A$	V_F			0.55	V
Reverse current	$V_R = 10V$	I_R			30	μA
	$V_R = 30V$				50	
Capacitance between terminals	$V_R = 0V, f = 1MHz$	C_T		125		pF
	$V_R = 10V, f = 1MHz$			20		

Rating and Characteristic Curves (CDBT0540-HF)

Fig.1 - Forward Characteristics

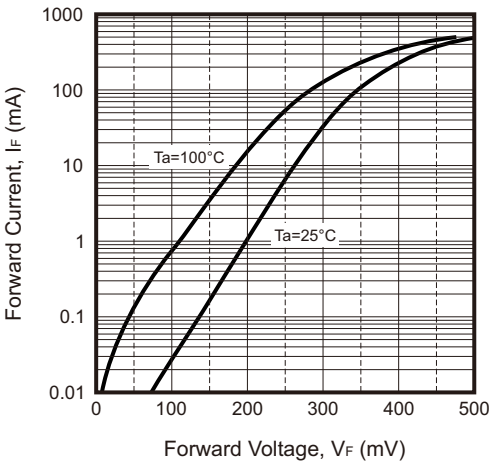


Fig.2 - Reverse Characteristics

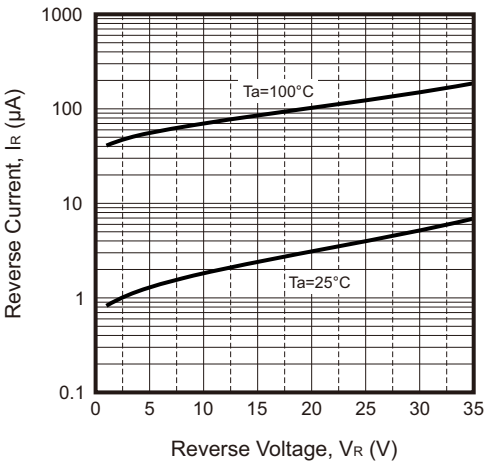


Fig.3 - Capacitance Characteristics

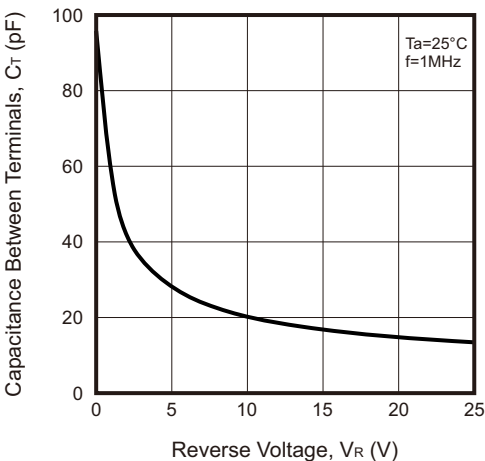
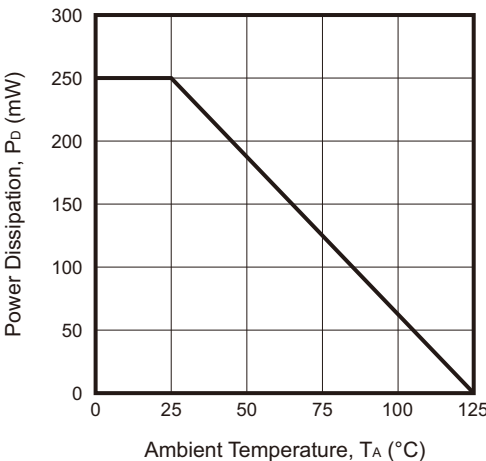
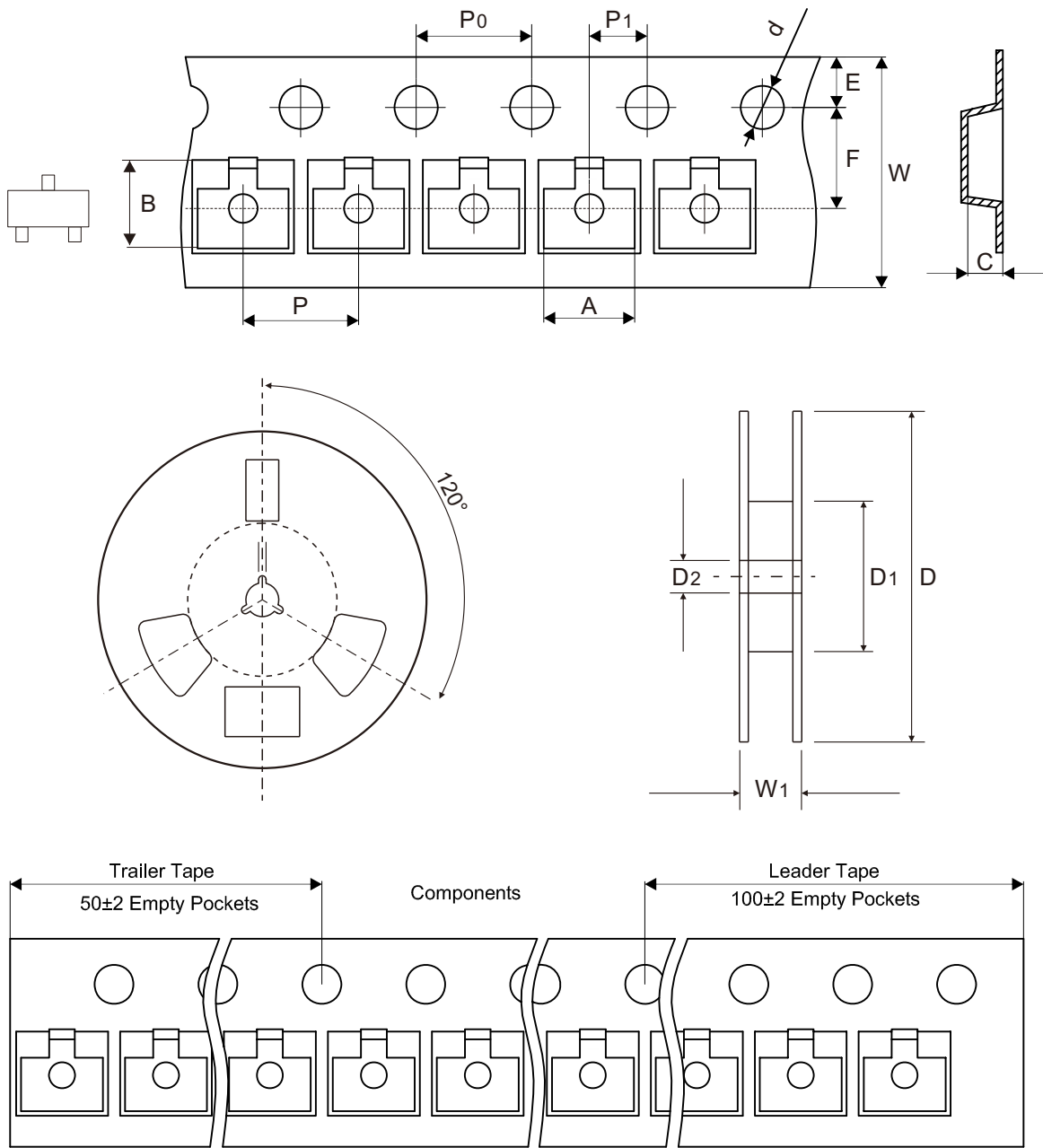


Fig.4 - Power Derating Curve



Reel Taping Specification

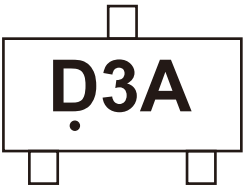


SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 ± 0.10	1.50 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

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

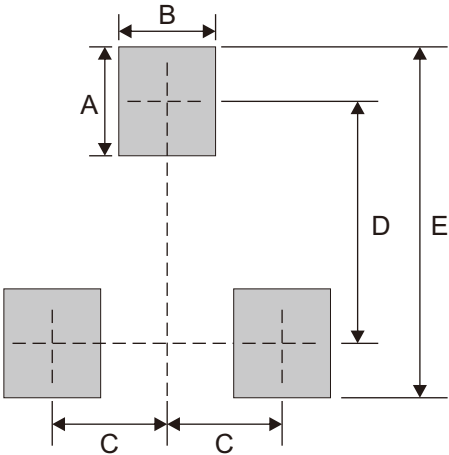
Part Number	Marking Code
CDBT0540-HF	D3A



Solid dot = Control 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