

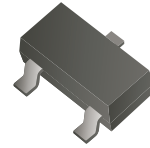
CDST-7000-HF

Reverse Voltage: 100 V

Forward Current: 200 mA

RoHS Device

Halogen Free



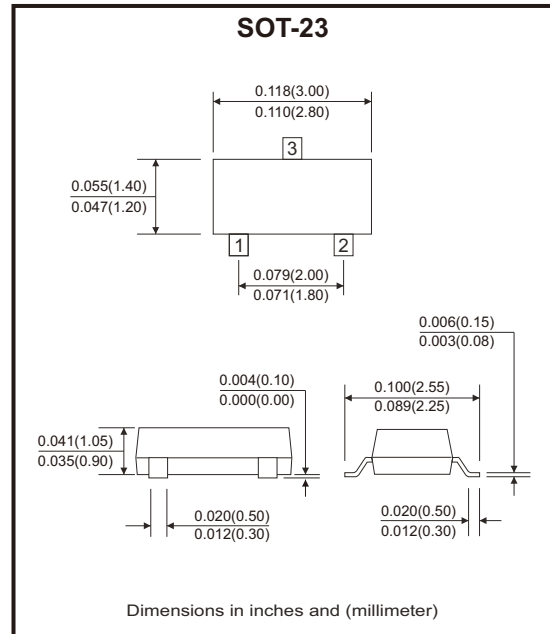
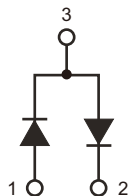
Features

- Dual switching diode.
- Fast switching speed.
- Surface mount package ideally suited for automatic insertion.
- For general purpose switching applications.

Mechanical Data

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

Circuit Diagram



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

Parameter	Symbol	Value	Unit
Non-repetitive peak reverse voltage	V_{RM}	100	V
Peak repetitive reverse voltage	V_{RRM}	75	V
Working peak reverse voltage	V_{RWM}	75	V
RMS reverse voltage	$V_{R(RMS)}$	53	V
Average rectified output current	I_o	200	mA
Non-repetitive peak forward surge current @ $t = 8.3ms$	I_{FSM}	2	A
Power dissipation	P_D	225	mW
Thermal resistance, junction to ambient	$R_{\theta JA}$	556	°C/W
Operation junction and storage temperature range	T_J, T_{STG}	-55 to +150	°C

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

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Reverse breakdown voltage	$V_{(BR)}$	$I_R = 100\mu\text{A}$	100			V
Reverse voltage leakage current	I_R	$V_R = 50\text{V}$ $V_R = 100\text{V}$			1 3	μA
Forward voltage	V_F	$I_F = 1\text{mA}$ $I_F = 10\text{mA}$ $I_F = 100\text{mA}$	0.55 0.67 0.75		0.70 0.82 1.1	V
Diode capacitance	C_T	$V_R = 0\text{V}, f = 1\text{MHz}$			2	pF
Reverse recovery time	T_{rr}	$I_F = I_R = 10\text{mA}, I_{rr} = 0.1 \times I_R, R_L = 100\Omega$			4	nS

Rating and Characteristic Curves (CDST-7000-HF)

Fig.1 - Forward Characteristics

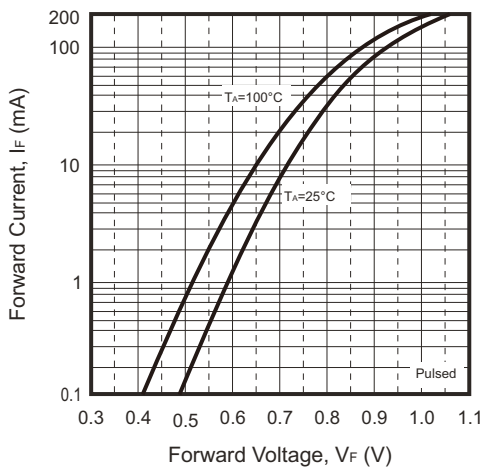


Fig.2 - Reverse Characteristics

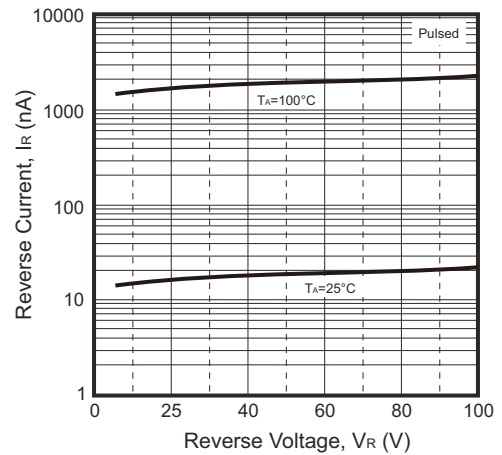


Fig.3 - Capacitance Characteristics

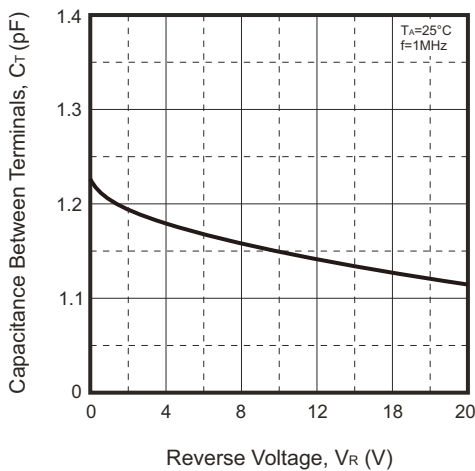
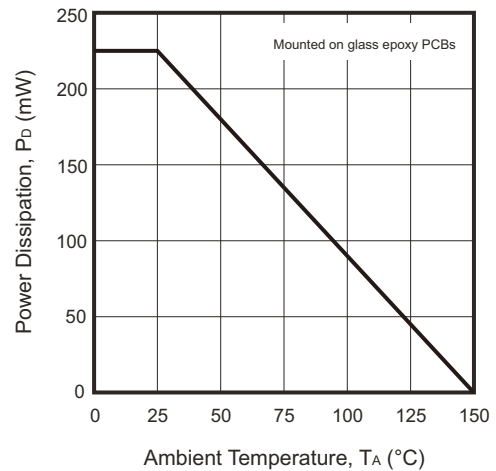
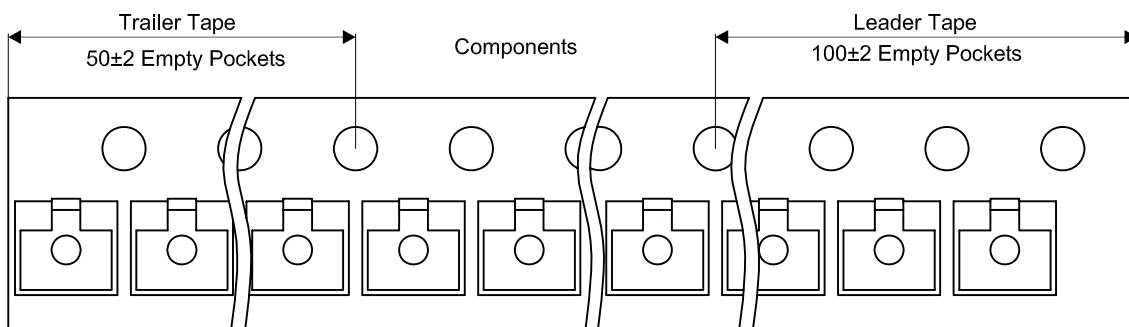
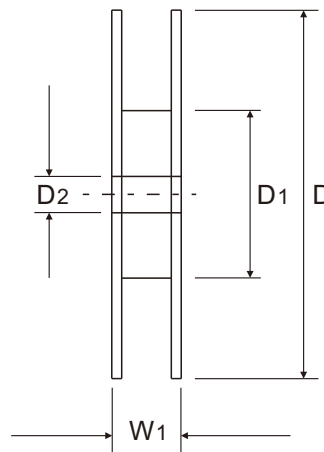
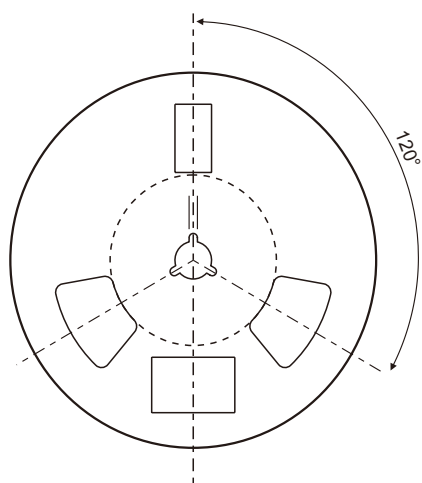
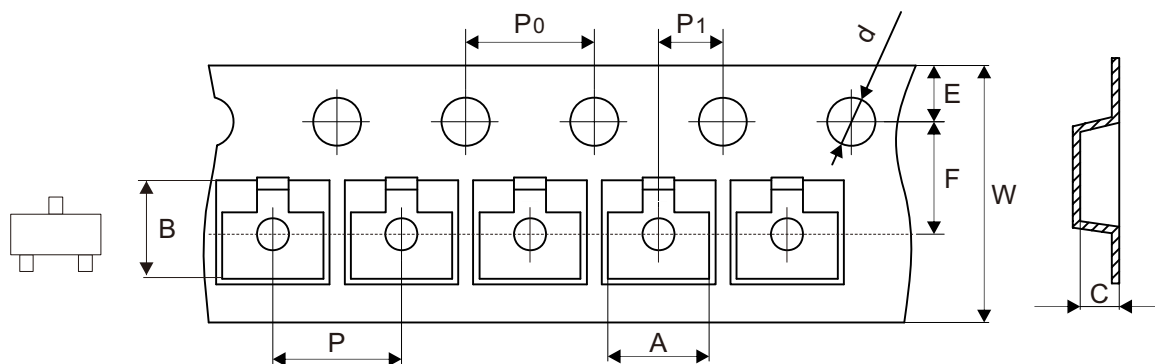


Fig.4 - Power Derating Curve



Reel Taping Specification

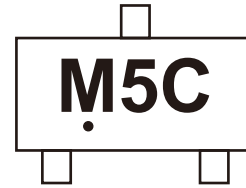


SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 ± 0.10	1.50 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

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

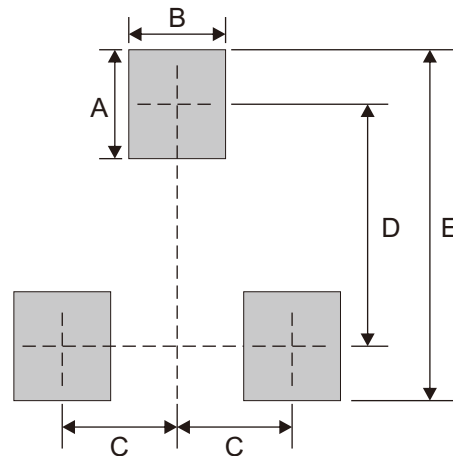
Part Number	Marking Code
CDST-7000-HF	M5C



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