

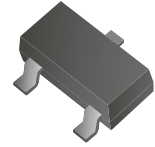
CDST-16-HF

Reverse Voltage: 75 Volts

Forward Current: 150 mA

RoHS Device

Halogen Free



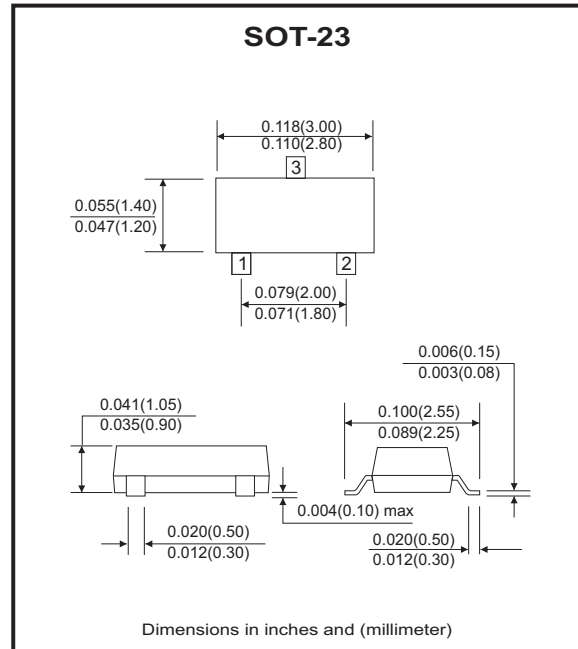
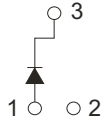
Features

- Design for mounting on small surface.
- High speed switching.
- High mounting capability, strong surge withstand, high reliability.

Mechanical data

- Case: SOT-23, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Weight: 0.0078 grams(approx.).

Circuit diagram



Maximum Rating and Electrical Characteristics, Single Diode

(at $T_A=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Limit	Unit
Non-Repetitive peak reverse voltage	V_{RM}	100	V
Peak repetitive peak reverse voltage	V_{RRM}	75	V
Working peak reverse voltage	V_{RWM}		
DC blocking voltage	V_R		
RMS reverse voltage	$V_{R(RMS)}$	53	V
Forward continuous current	I_{FM}	300	mA
Average rectified output current	I_O	150	mA
Non-Repetitive peak forward surge current @ $t=8.3\text{ms}$	I_{FSM}	2	A
Power dissipation	P_D	225	mW
Thermal resistance junction to ambient	$R_{\theta JA}$	556	$^\circ\text{C/W}$
Junction temperature range	T_j	-40 ~ +150	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 ~ +150	$^\circ\text{C}$

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse breakdown voltage	$I_R = 100\mu\text{A}$	$V_{(BR)}$	75			V
Reverse voltage leakage current	$V_R = 75\text{V}$	I_R			1	μA
Forward voltage	$I_F = 1\text{mA}$	V_F			715	mV
	$I_F = 10\text{mA}$				855	
	$I_F = 50\text{mA}$				1000	
	$I_F = 150\text{mA}$				1250	
Diode capacitance	$V_R = 0, f = 1\text{MHz}$	C_D			2	pF
Reverse recovery time	$I_F = I_R = 10\text{mA}, I_{rr} = 0.1xI_R, R_L = 100\Omega$	T_{rr}			6	nS

RATING AND TYPICAL CHARACTERISTIC CURVES (CDST-16-HF)

Fig.1 - Forward Characteristics

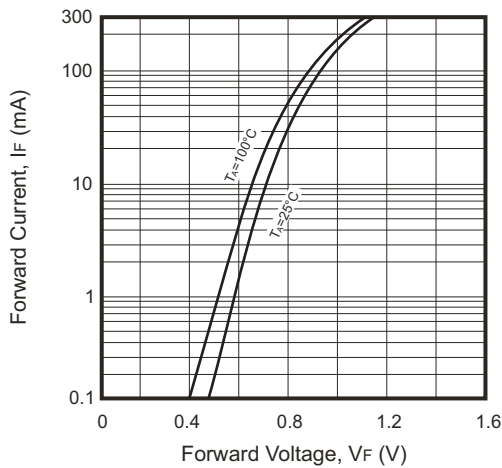


Fig.2 - Reverse Characteristics

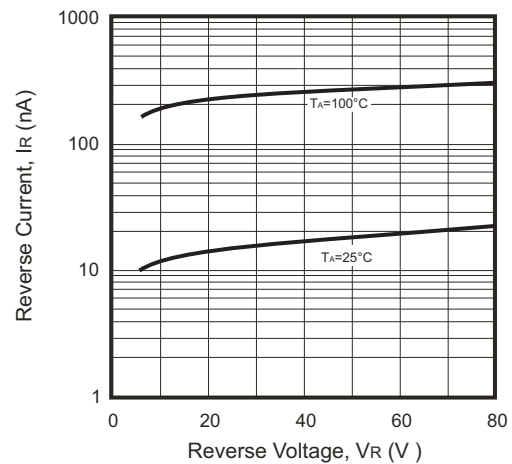


Fig.3 - Capacitance Characteristics

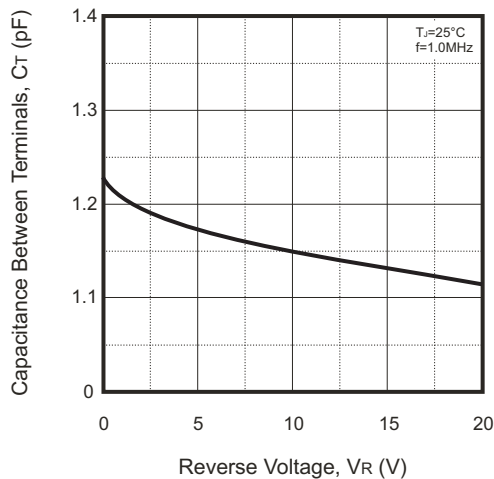
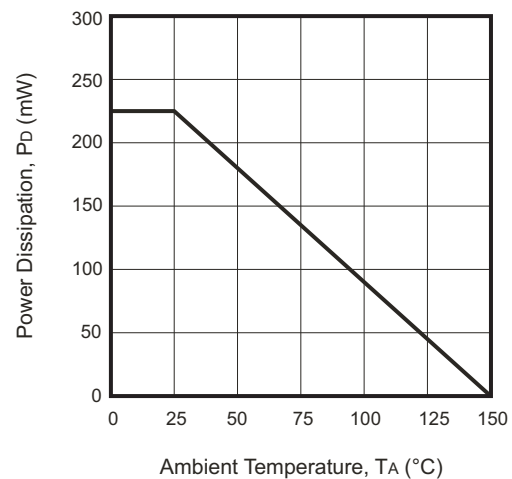
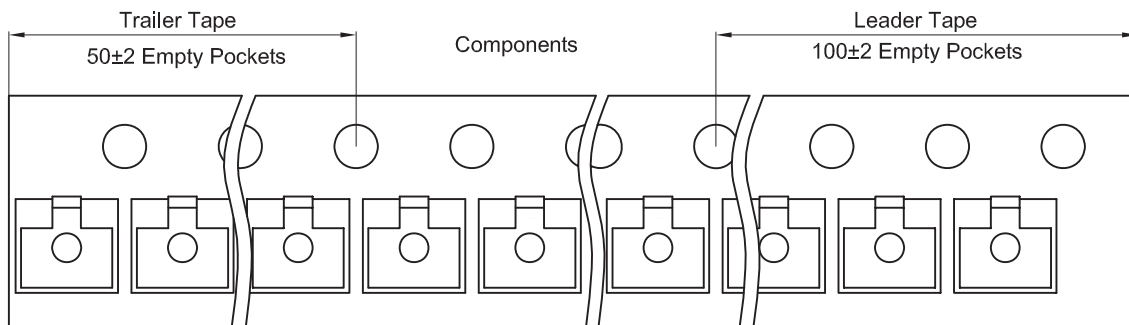
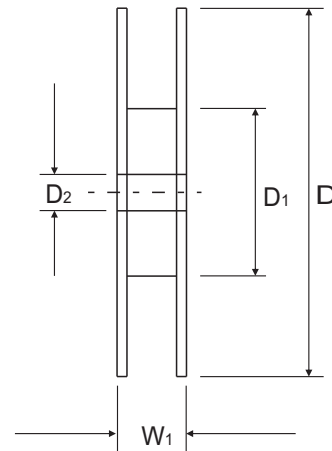
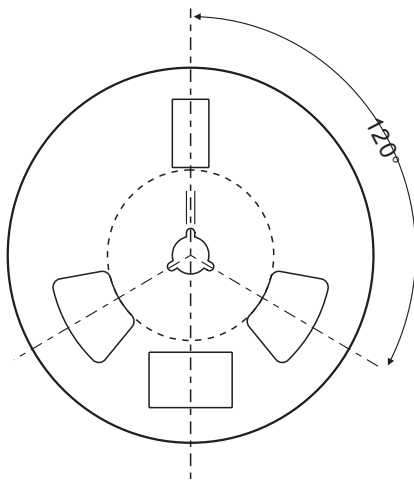
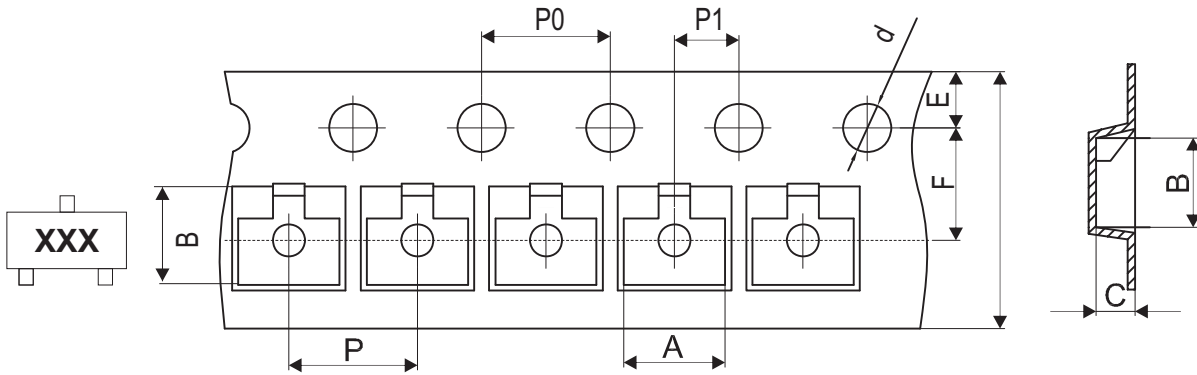


Fig.4 - Power Derating Curve



Reel Taping Specification

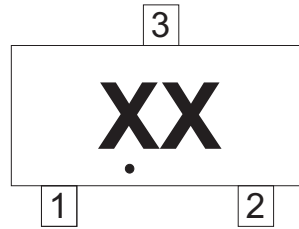


SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 ± 0.10	1.50 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

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

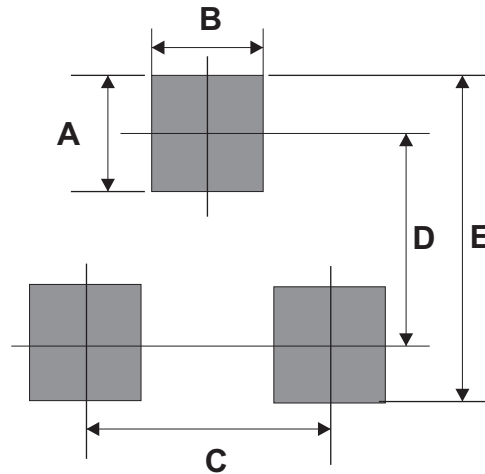
Part Number	Marking Code
CDST-16-HF	A6



xx = Product type marking code
 Solid dot = Halogen free parts

Suggested PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.80	0.031
B	0.60	0.024
C	1.90	0.075
D	2.02	0.080
E	2.82	0.111



Standard Packaging

Case Type	Qty Per Reel	Reel Size
	(Pcs)	(inch)
SOT-23	3,000	7