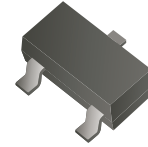


CDST-3004S-HF

RoHS Device
Halogen Free



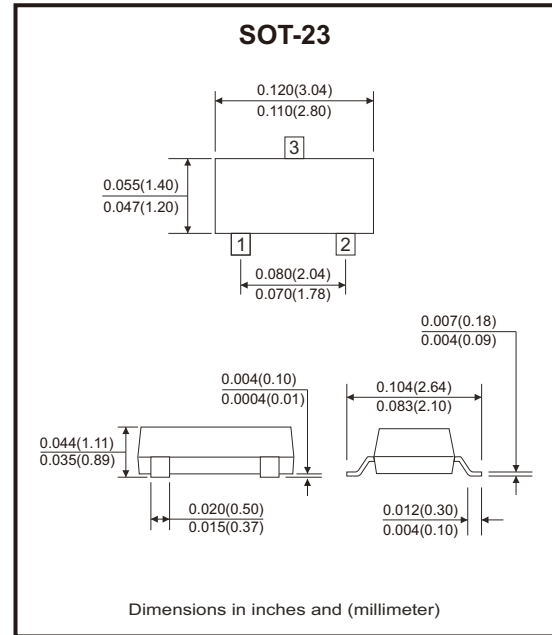
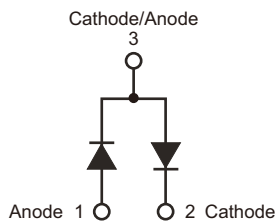
Features

- Fast switching speed.
- High conductance.
- High reverse breakdown voltage rating.

Mechanical Data

- Case: SOT-23, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Mounting position: Any.

Circuit Diagram



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

Parameter	Symbol	Value	Unit
Peak repetitive reverse voltage	V_{RRM}	350	V
Working peak reverse voltage	V_{RWM}	350	
DC blocking voltage	V_R	350	
RMS reverse voltage	V_{RMS}	212	V
Forward continuous current (Note 1)	I_O	225	mA
Repetitive peak forward current (Note 1)	I_{FRM}	625	mA
Non-repetitive peak forward surge current @ t = 8.3ms	I_{FSM}	2	A
Total device dissipation, FR-4 board (Note 2) @ T _A =25°C	P_D	280	mW
Total device dissipation, derate above 25°C	P_D	2.24	mW/°C
Thermal resistance, junction to ambient (Note 2)	$R_{\theta JA}$	446	°C/W
Operation junction and storage temperature range	T _J , T _{STG}	-65 to +150	°C

Notes: 1. Part mounted on FR-4 board with recommended pad layout.

2. FR-4 = 30mm x 25mm x 1.6mm, thickness of copper film:50μm.

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

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Reverse breakdown voltage (Note 1)	V_{BR}	$I_R = 100\mu A$	350			V
Forward voltage (Note 1)	V_F	$I_F = 20mA$		0.78	0.87	V
		$I_F = 100mA$		0.93	1	
		$I_F = 200mA$		1.03	1.25	
Reverse current (Note 1)	I_R	$V_R = 240V$		30	100	nA
		$V_R = 240V, T_J = 150^\circ C$		35	100	μA
Total capacitance	C_T	$f = 1MHz, V_R = 0V$		1	5	pF
Reverse recovery time	T_{rr}	$I_F = I_R = 30mA, I_{rr} = 3mA, R_L = 100\Omega$			50	nS

Notes: 1. Short duration test pulse used to minimize self-heating effect.

Typical Rating and Characteristic Curves (CDST-3004S-HF)

Fig.1 - Forward Characteristics

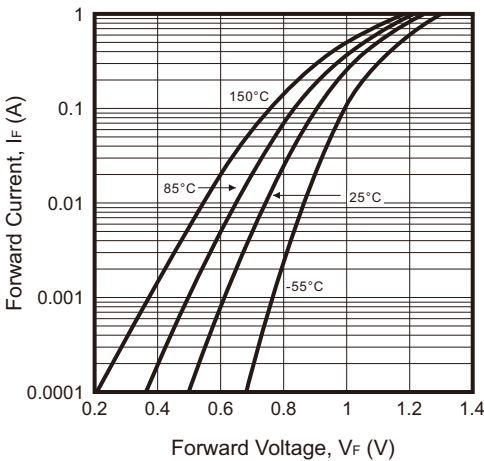


Fig.2 - Reverse Characteristics

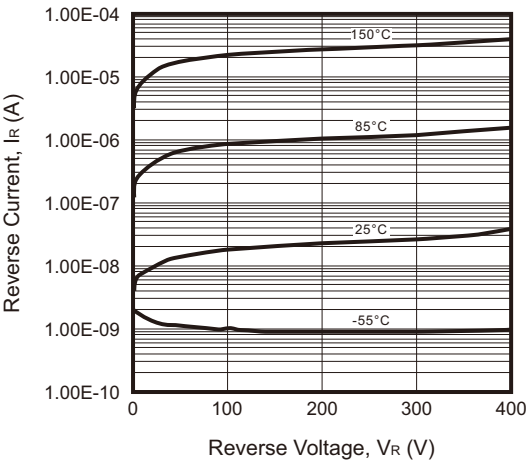
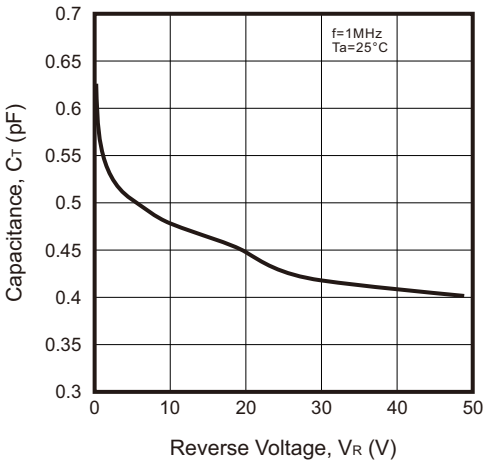
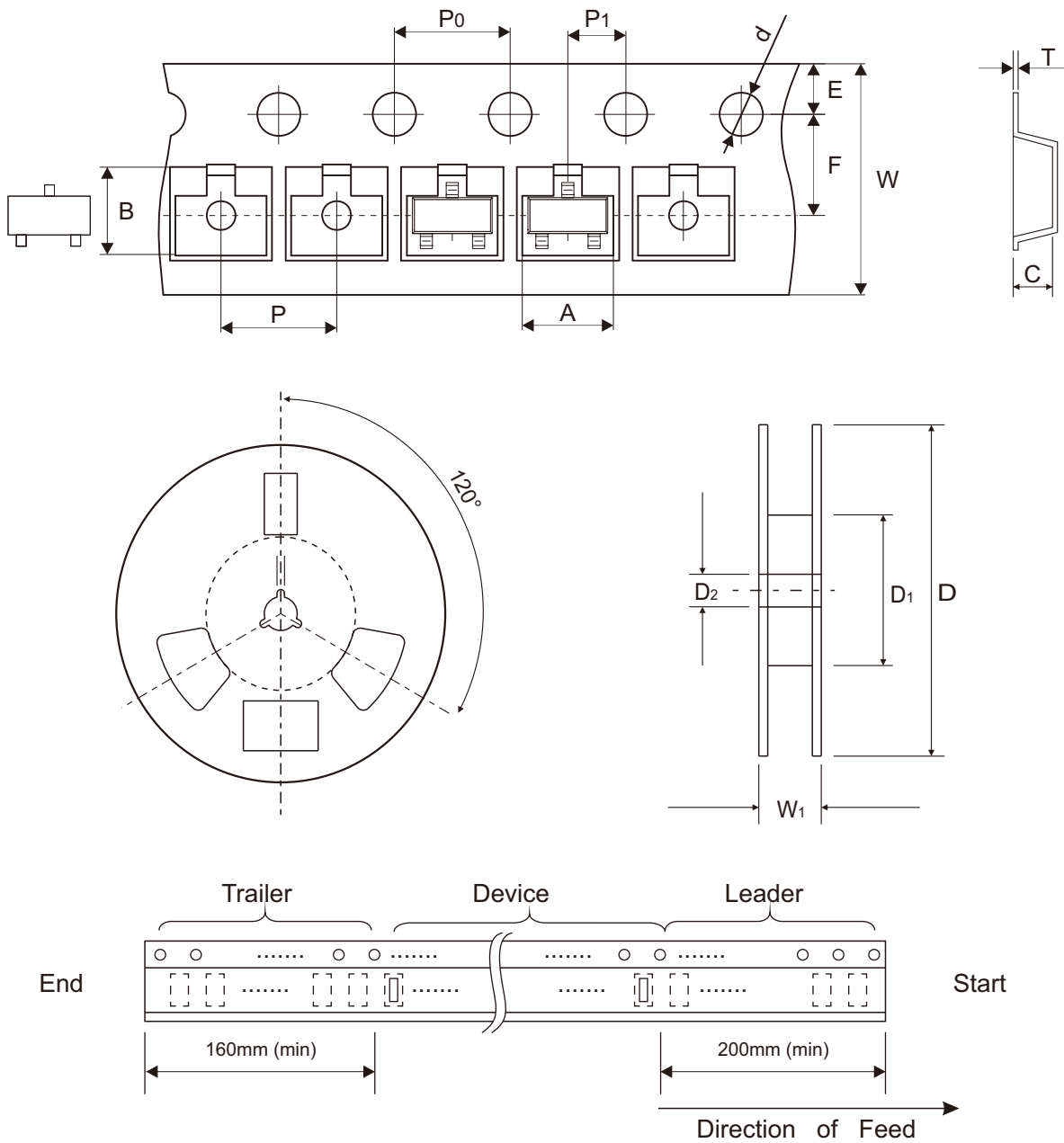


Fig.3 - Capacitance vs. Reverse Voltage



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	1.55 ± 0.05	178.00 ± 1.00	54.00 + 0.50 - 0.00	13.00 + 0.50 - 0.20
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	0.061 ± 0.002	7.008 ± 0.039	2.126 + 0.020 - 0.000	0.512 + 0.020 - 0.008

SOT-23	SYMBOL	E	F	P	P0	P1	T	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.05	0.20 ± 0.02	8.00 + 0.20 - 0.10	12.00 ± 1.20
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.002	0.008 ± 0.001	0.315 + 0.001 - 0.004	0.472 ± 0.047

Marking Code

Part Number	Marking Code
CDST-3004S-HF	KAE

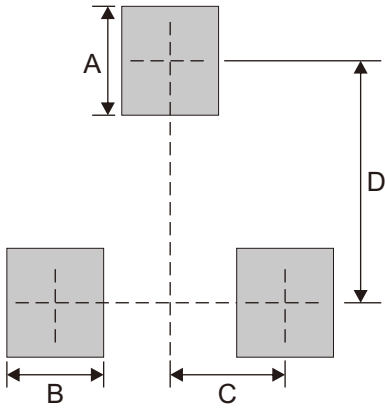


Solid dot = Control code

X = 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



Standard Packaging

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