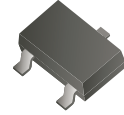


CDST-193-G

RoHS Device



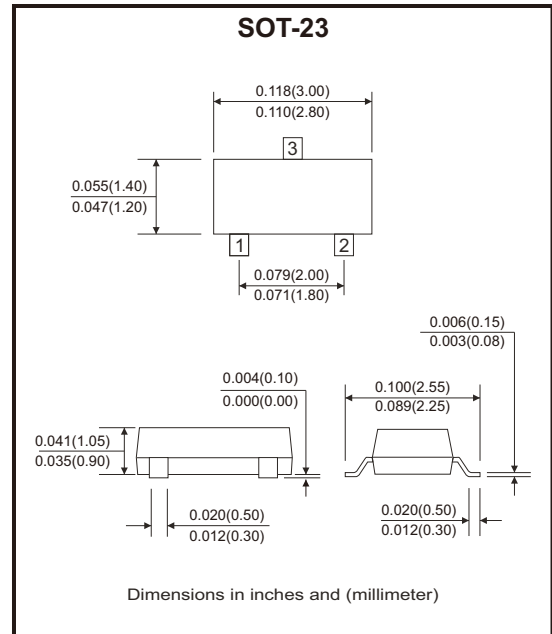
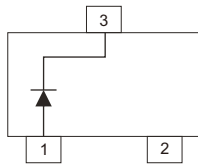
Features

- Low forward voltage: $V_F=0.9V$ (Typ.)
- Fast reverse recovery time: $t_{rr}=1.6nS$ (Typ.)

Mechanical data

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

Circuit Diagram



Maximum Ratings (at $T_a=25^{\circ}C$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Non-repetitive peak reverse voltage	V_{RM}	85	V
DC blocking voltage	V_R	80	V
Forward continuous current	I_{FM}	300	mA
Average rectified output current	I_O	100	mA
Non-repetitive peak forward surge current @ $t=8.3ms$	I_{FSM}	2	A
Power dissipation	P_D	150	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	833	$^{\circ}C/W$
Junction temperature	T_J	150	$^{\circ}C$
Storage temperature range	T_{STG}	-55 ~ +150	$^{\circ}C$

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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Reverse breakdown voltage	$I_R=100\mu A$	$V_{(BR)}$	80			V
Forward voltage	$I_F=1mA$	V_{F1}		0.60		V
	$I_F=10mA$	V_{F2}		0.72		V
	$I_F=100mA$	V_{F3}		0.90	1.2	V
Reverse current	$V_R=30V$	I_{R1}			0.1	μA
	$V_R=80V$	I_{R2}			0.5	μA
Capacitance between terminals	$V_R=0V, f=1MHz$	C_T		0.90	3.0	pF
Reverse recovery time	$I_F=I_R=10mA, I_{rr}=0.1 \times I_R$	t_{rr}		1.6	4.0	nS

Typical Rating and Characteristic Curves (CDST-193-G)

Fig.1 - Forward Characteristics

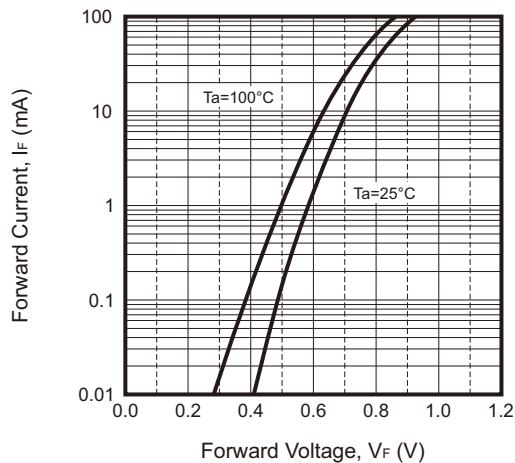


Fig.2 - Reverse Characteristics

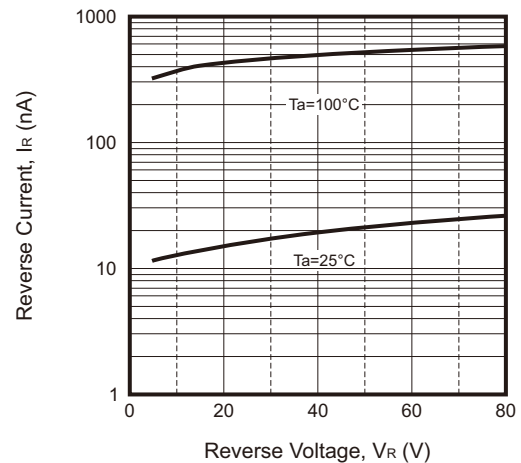


Fig.3 - Capacitance Characteristics

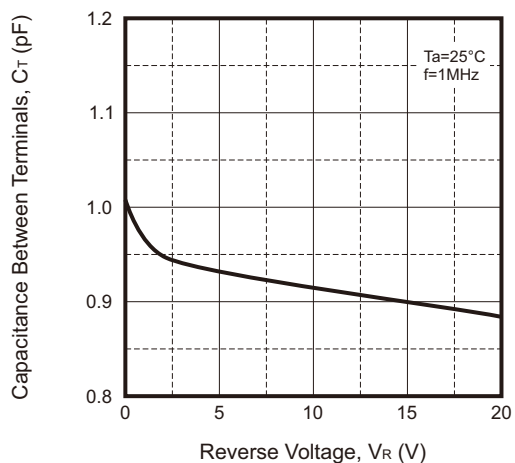
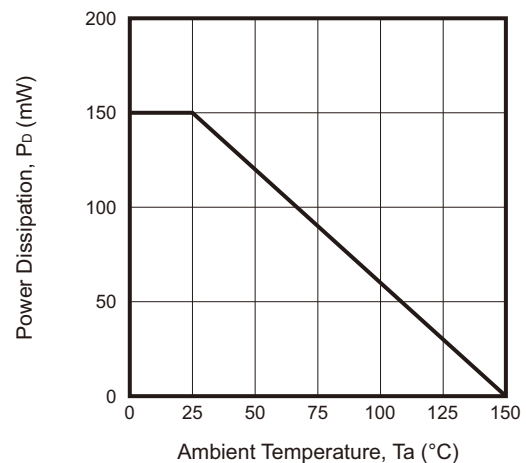
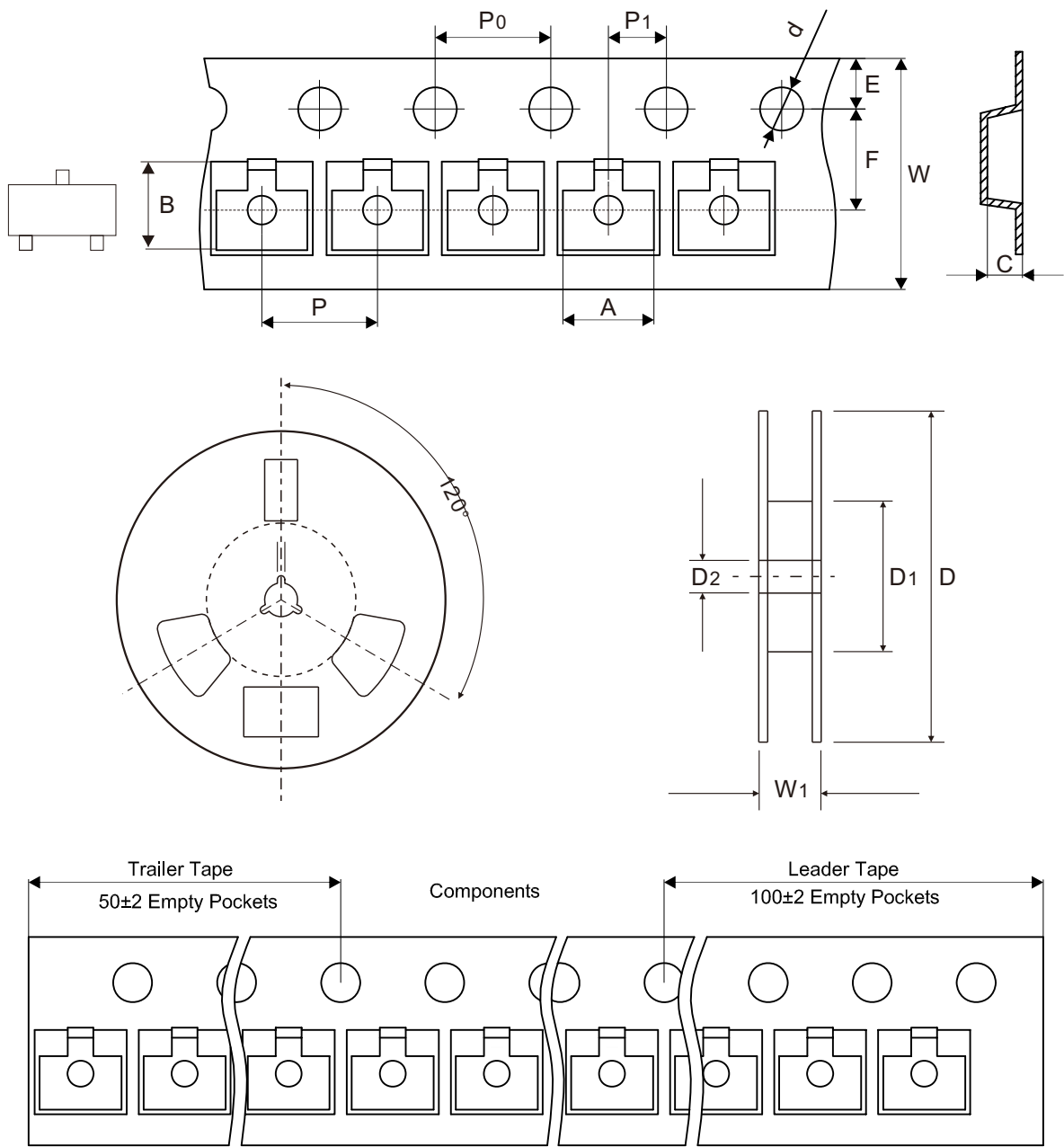


Fig.4 - Power Derating Curve



Reel Taping Specification

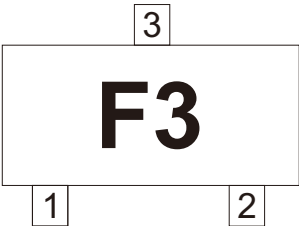


SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 ± 0.10	1.50 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

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

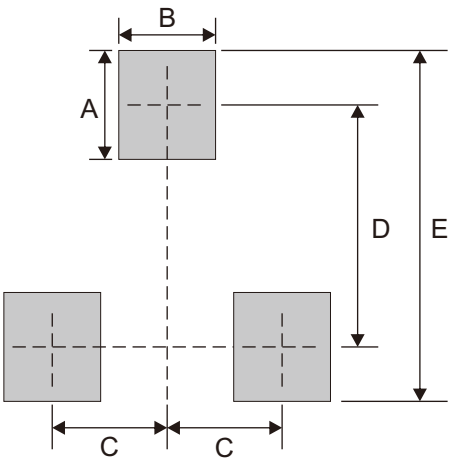
Marking Code

Part Number	Marking Code
CDST-193-G	F3



Suggested 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