

CDST 914

Voltage: 100 Volts
Current: 200mA

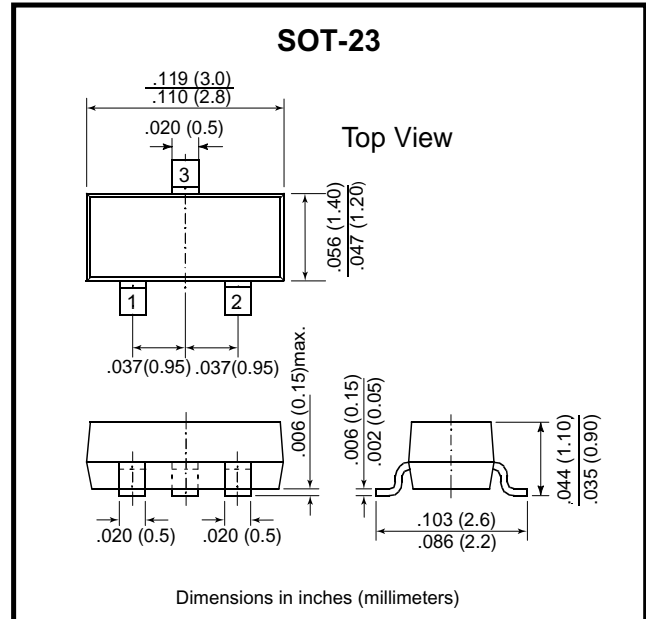
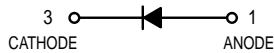


Features

- Fast Switching Speed
- Surface Mount Package Ideally Suite4d for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance

Mechanical Data

- Case: SOT -23, Plastic
- Terminals : Solderable per NIL-STD -202, Method 208
- Approx. Weight: 0.008 gram



Maximum Ratings

Rating	Symbol	Value	Units
Continuous Reverse Voltage	V_R	100	V _{DC}
Peak Forward Current	I_F	200	mAdc
Peak Forward Surge Current	$I_{FM}(\text{surge})$	500	mAdc

Thermal Characteristics

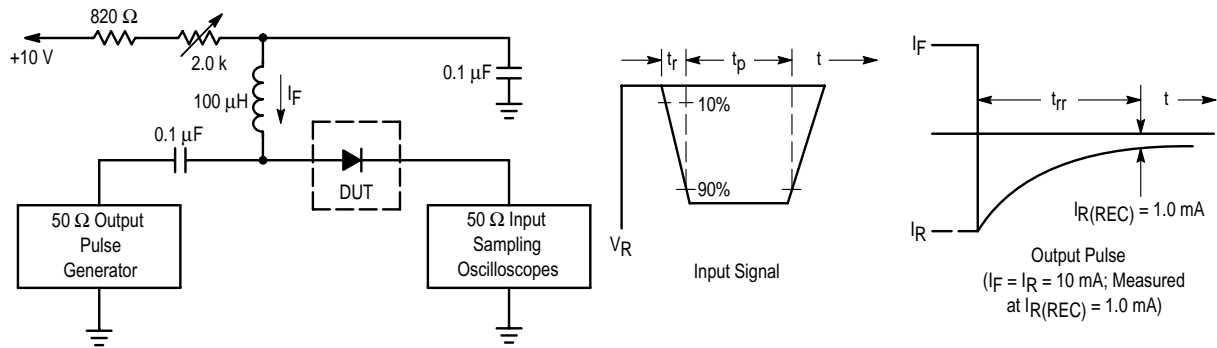
Characteristic	Symbol	Max	Units
Total Device Dissipation FR-5 Board(1) $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	225	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	556	°C/W
Total Device Dissipation Alumina Substrate,(2) $T_A = 25^\circ\text{C}$ Derate above 25°C	P_D	300	mW
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	417	°C/W
Junction and Storage Temperature	T_J, T_{stg}	-55 to +150	°C

Electrical Characteristics (TA = 25°C unless otherwise noted)

Characteristic (OFF CHARACTERISTICS)	Symbol	Min	Max	Units
Reverse Breakdown Voltage ($I_{BR} = 100 \mu\text{Adc}$)	$V_{(BR)}$	100	-	Vdc
Reverse Voltage Leakage Current $V_R = 20 \text{ Vdc}$ $V_R = 75 \text{ Vdc}$	I_R	-	25	nAdc
		-	50	uAdc
Diode Capacitance ($V_R = 0, f = 1.0 \text{ MHz}$)	C_T		4.0	pF
Forward Voltage $I_F = 10 \text{ mAdc}$	V_F	-	1.0	Vdc
Reverse Recovery Time ($I_F = I_R = 10 \text{ mAdc}$)	T_{rr}		4.0	nS

1.FR-5 = 1.0 X 0.75X 0.062 in. 2.Alumina = 0.4X 0.3X 0.024 in. 99.5% alumina.

RATING AND CHARACTERISTIC CURVES (CDST914)



- Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 10 mA.
 2. Input pulse is adjusted so $I_{R(\text{peak})}$ is equal to 10 mA.
 3. $t_p \gg t_{rr}$

Figure 1. Recovery Time Equivalent Test Circuit

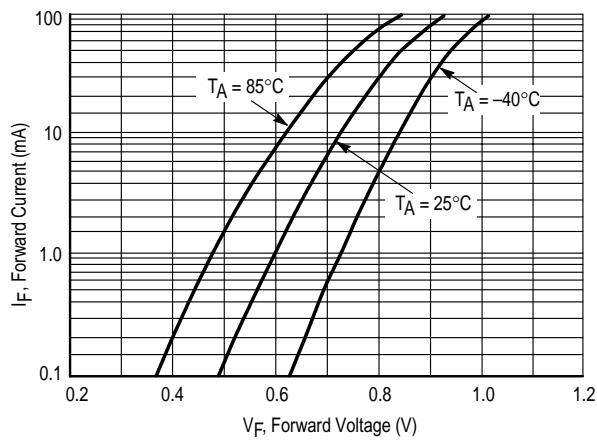


Figure 2. Forward Voltage

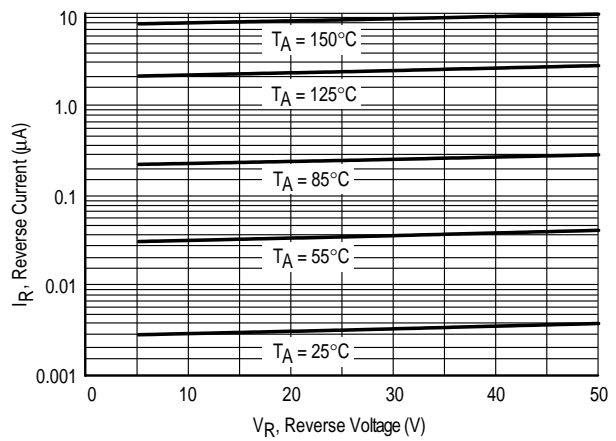


Figure 3. Leakage Current

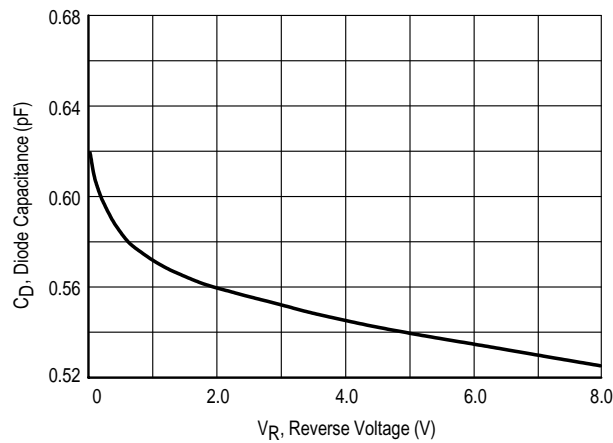


Figure 4. Capacitance