

TOY RADIO CONTROL ACTUATOR

The KA2303 is a monolithic integrated circuit having 3 functions (Forward, stop, Backward) designed for radio controlled toy car and other equipment.

FEATURES

- Includes Amplifier, Detector, Comparator, Latch, Voltage Regulator, Actuator.
- Wide power supply voltage range (2.5V ~ 10V)
- Very low quiescent circuit current (Stop: $I_{CC} = 5\text{mA}$).
- Capable of driving small DC motors in both directions.
- Minimum number of external parts required.

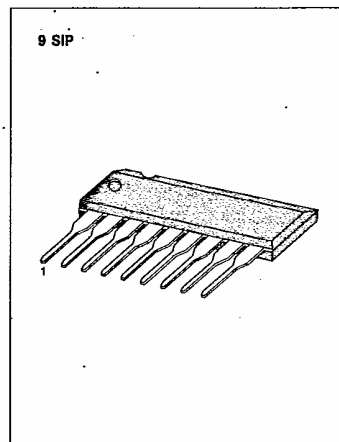
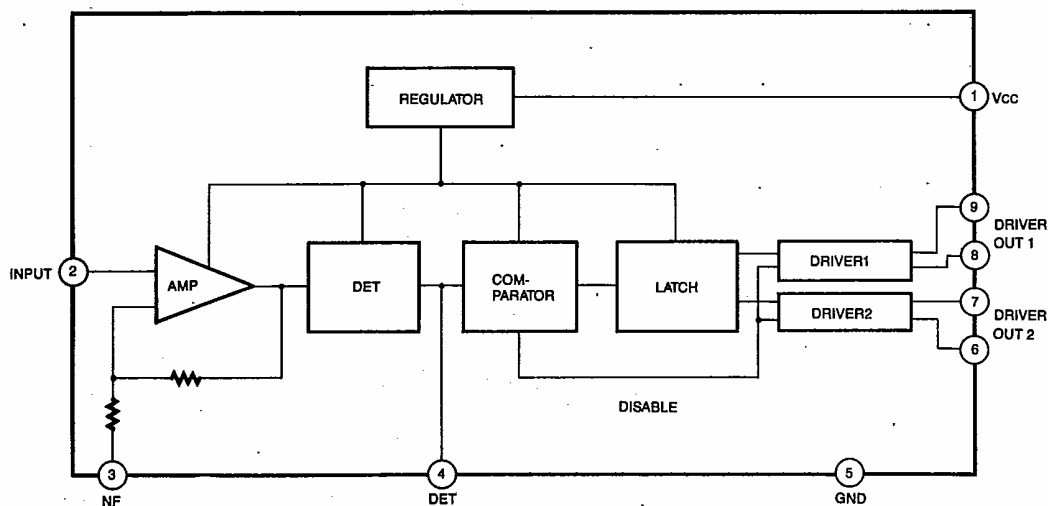
**BLOCK DIAGRAM**

Fig. 1

ABSOLUTE MAXIMUM RATINGS ($T_a = 25^\circ\text{C}$)

Characteristic	Symbol	Value	Unit
Supply Voltage	V_{CC}	11	V
Output Current (Continuous)	I_o (cont)	0.7	A
Output Current (Surge)	I_o (surge)	1.2	A
Power Dissipation	P_d	500	mW
Operating Temperature	T_{opr}	$-20 \sim +70$	$^\circ\text{C}$
Storage Temperature	T_{stg}	$-40 \sim +125$	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS

($T_a = 25^\circ\text{C}$, $V_{CC} = 5\text{V}$)

Characteristic	Symbol	Test Condition	Min	Typ	Max	Unit
Circuit Current	I_{CC1}	Without Load		40	50	mA
	I_{CC2}	Stop		5		mA
Input Impedance	R_i			10		$\text{K}\Omega$
Output Saturation Voltage	V_{SAT}	$I_o = 400\text{mA}$		0.25	0.45	V
Output Sink Current	I_{SINK}			10		mA
Sensitivity	V_i (sen)	$f = 1\text{KHz}$		3.5		mV
Comparator Hysteresis	HY			5		dB



TYPICAL APPLICATION CIRCUIT

1. Low Voltage Application Circuit

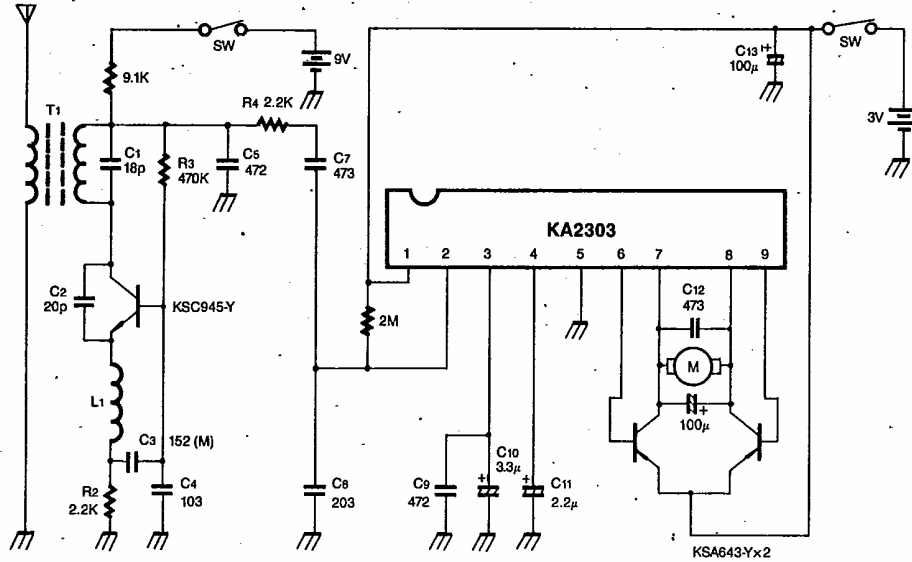


Fig. 2

2. High Voltage Application Circuit

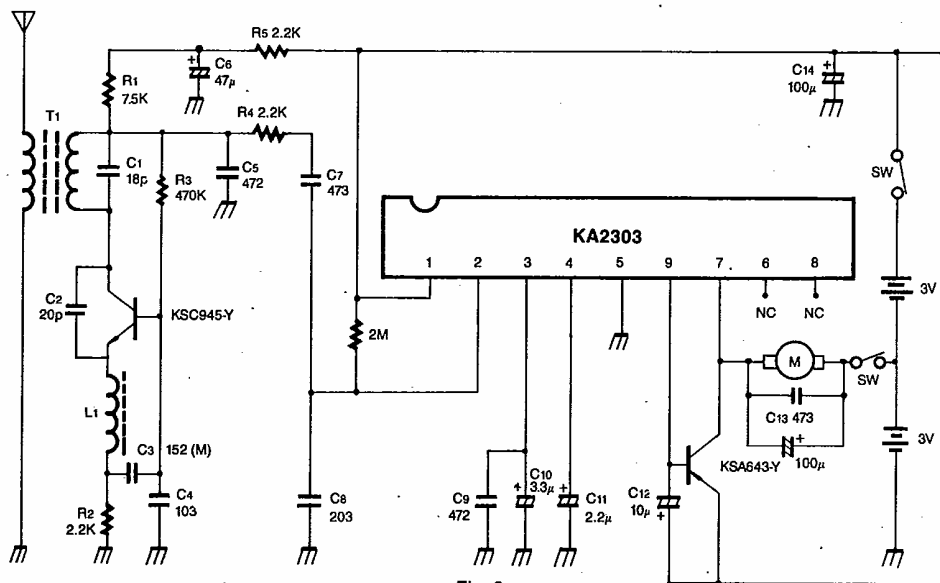


Fig. 3