

AN6612, AN6612S

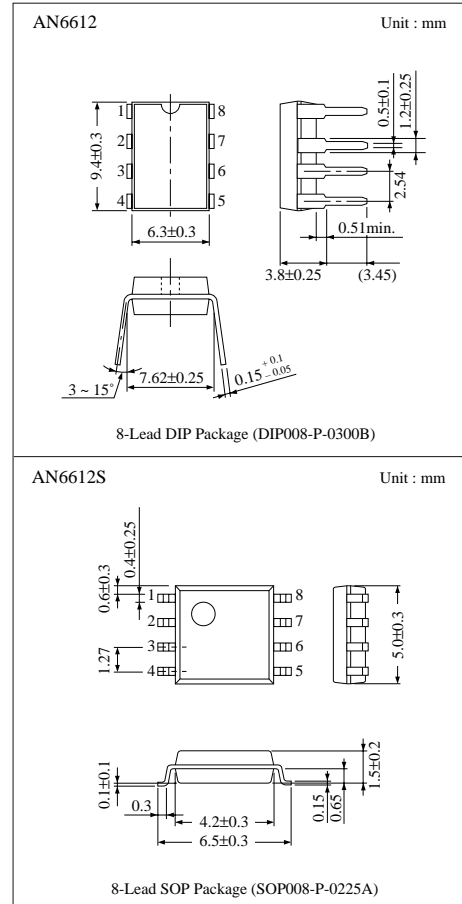
Motor Control Circuits

■ Overview

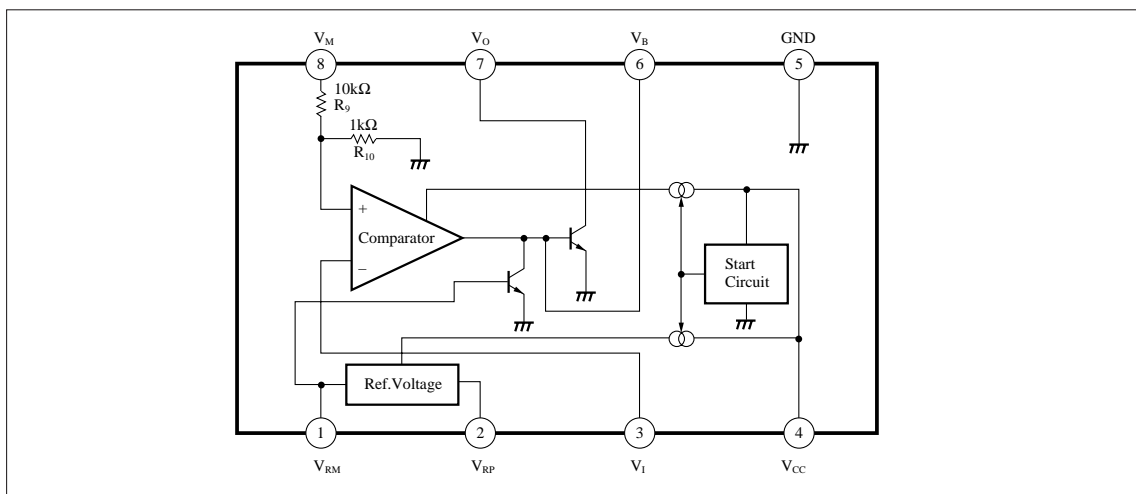
The AN6612 and the AN6612S are the electronic governor circuits suitable for the rotating speed control of a low voltage and compact DC motor which is used for a small tape recorder, etc.

■ Features

- Wide range of operating voltage : $V_{CC(opr)} = 1.8V \sim 8V$
- 2 package types
- Fewer external parts
- Speed control in steps with linear fine control
- Output current limiting circuit is built-in



■ Block Diagram



Pin Descriptions

Pin No.	Pin Name	Pin No.	Pin Name
1	Current Sensor	5	GND
2	Reference Voltage	6	Base
3	Control	7	Output Base
4	V _{CC}	8	Motor pin

Absolute Maximum Ratings (T_a = 25°C)

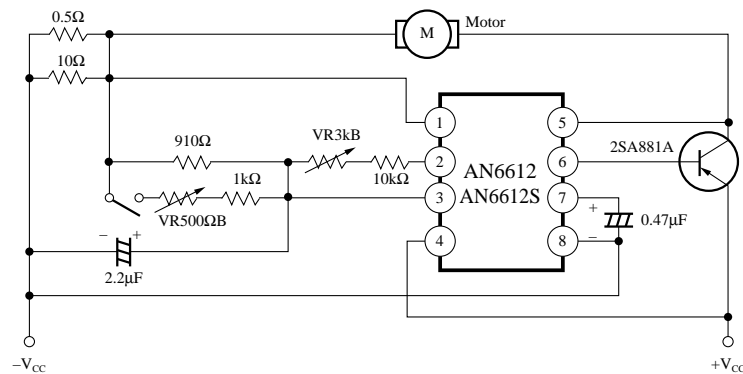
Parameter	Symbol	Rating	Unit
Supply Voltage	V _{CC}	10	V
Supply Current	I ₄	5	mA
Power Dissipation	AN6612	400	mW
	AN6612S	200	
Operating Ambient Temperature	T _{opr}	-20 ~ +75	°C
Storage Temperature	AN6612	-40 ~ +150	°C
	AN6612S	-40 ~ +125	

Electrical Characteristics (T_a = 25°C)

Parameter	Symbol	Condition	min.	typ.	max.	Unit
Supply Current	I ₄	V _{CC} = 3V	—	1.9	3	mA
Reference Voltage	V ₂₋₁	V _{CC} = 3V, R ₂₋₁ = 10kΩ	1.24	1.32	1.40	V
Starting Current	I _a	V _{CC} = 1.8V, R _a = 4.9Ω	250	—	—	mA
Voltage Variable Characteristics for Rotating Speed	ΔN _v	V _{CC} = 1.8V ~ 4V, I _L = 72mA (1.7g · cm)	—	—	10	rpm/V
Time Drift Characteristics for Rotating Speed	ΔN _T	V _{CC} = 3V, I _L = 72mA, t = 15s ~ 10min.	—	0.1	—	%
Temperature Variation Characteristics for Rotating Speed	ΔN _A *	V _{CC} = 3V, I _L = 72mA, T _a = -20°C ~ +60°C	—	-0.035	—	%/°C
Output Current Limit Voltage	V _{t(1-5)}	V _{CC} = 3V	0.6	0.7	0.8	V

* In case that only IC temperature is changed.

Application Circuit



Motor Constants

R_a : Internal resistor = 4.9Ω
 K_a : Electromotive force constant = 0.4mV/rpm
 K_T : Torque constant = 29g · cm/A



LittleDiode supplies new, hard to find or obsolete electronic components and semiconductors all over the world.

With over two million different components listed you are sure to find the part you need.

Feel free to visit us today at our online store:

LittleDiode.com

Looking forward to providing you with the best possible service.