

## GENERAL USE ELECTRONIC GOVERNOR

### —YD6220

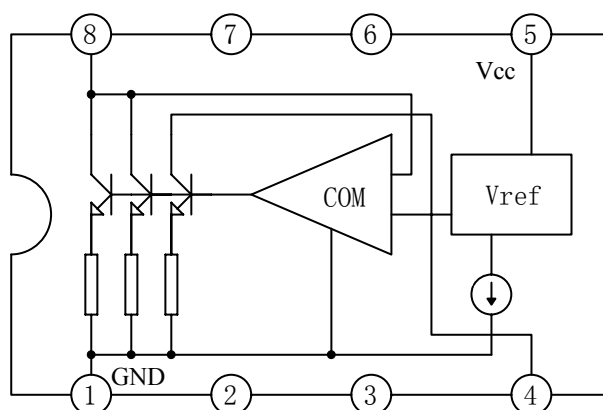
#### DESCRIPTION

The YD6220 is a monolithic IC developed for speed control of general use DC motors.

#### FEATURES

- \*Wide range of working power supply voltage range ( $V_{cc}=3.5V\sim 16V$ );
- \*Very large starting torque at low voltage;
- \*Large power dissipation allowable by using the PCB as a heat sink;
- \*Various DC motors can be driven by changing the external constants.

#### BLOCK DIAGRAM



NO.	1	4	5	8	2/3/6/7
SYMBOL	GND	CON	Vcc	OUT	NC

#### WuXi YouDa Electronics Co., Ltd

Add: No.5 Xijin Road, National Hi-Tech Industrial Development Zone, Wuxi Jiangsu China

Tel: 86-510-85205117 86-510-85205106 Fax: 86-510-85205110 Website: www.e-youda.com

SHENZHEN OFFICE Tel: 86-755-83740369 Fax: 86-755-83741418

# YOU DA INTEGRATED CIRCUIT

YD6220

## ABSOLUTE MAXIMUM RATINGS (Tamb=25°C)

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	V <sub>CC</sub>	18	V
Power Dissipation (Note)	P <sub>D</sub>	1.4	W
Operating Temperature	T <sub>opr</sub>	-25 to +75	°C
Storage Temperature	T <sub>stg</sub>	-55 to +125	°C

Note: PCB(Copper-surfaced)9cm<sup>2</sup>, T ≤ 1.0 Sec

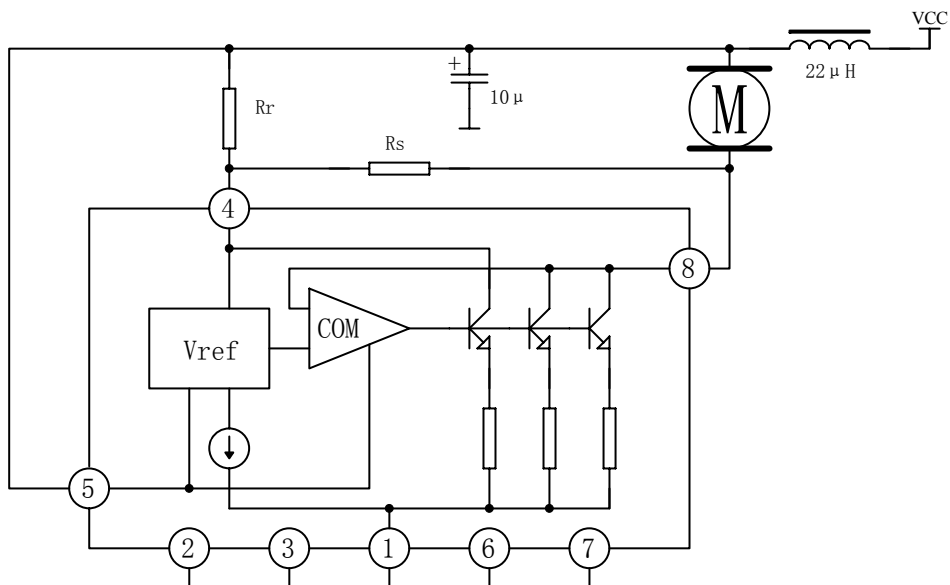
## ELECTRICAL CHARACTERISTICS

(Tamb=25°C, V<sub>CC</sub>=12V, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Supply Voltage	V <sub>CC</sub>	Load: 8g-cm	3.5	12	16	V
Bias Current	I <sub>B</sub>	R <sub>M</sub> =180 Ω	0.5	0.8	1.2	mA
Output Saturate Voltage	V <sub>sat</sub>	V <sub>CC</sub> =4.2V, R <sub>M</sub> =4.4 Ω		1.5	2.0	V
Reference Voltage	V <sub>ref</sub>	I <sub>M</sub> =10mA	1.10	1.27	1.40	V
Current Ratio	K	R <sub>M1</sub> =44 Ω, R <sub>M2</sub> =33 Ω	18	20	22	
Voltage Feature of Reference Voltage	$\frac{\Delta V_{ref}}{V_{ref}} / \Delta V_{CC}$	I <sub>M</sub> =100mA, V <sub>CC</sub> =6.3~16V		0.06		%/V
Voltage Feature of Current Ratio	$\frac{\Delta K}{K} / \Delta V_{CC}$	I <sub>M</sub> =100mA, V <sub>CC</sub> =6.3~16V		0.4		%/V
Current Feature of Reference Voltage	$\frac{\Delta V_{ref}}{V_{ref}} / \Delta I_M$	I <sub>M</sub> =30~200mA		-0.02		%/mA
Current Feature of Current Ratio	$\frac{\Delta K}{K} / \Delta I_M$	I <sub>M</sub> =30~200mA		-0.02		%/mA
Temperature Feature of Reference Voltage	$\frac{\Delta V_{ref}}{V_{ref}} / \Delta T_a$	I <sub>M</sub> =100mA, Tamb=-25~+75°C		0.01		%/°C
Temperature Feature of Current ratio	$\frac{\Delta K}{K} / \Delta T_a$	I <sub>M</sub> =100mA, Tamb=-25~+75°C		0.01		%/°C

APPLICATION CIRCUIT

$$R_r < R_m \times 20$$



OUTLINE DRAWING

DIP-8

unit:mm

