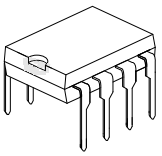
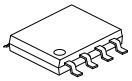
BA6220

LINEAR INTEGRATED CIRCUIT

GENERAL USE ELECTRONIC GOVERNOR



DIP-8



SOP-8

■ DESCRIPTION

The UTC **BA6220** is a monolithic integrated circuit, developed for speed control of general use DC motors.

■ FEATURES

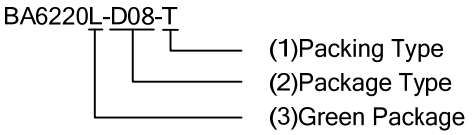
* Wide range of working power supply voltage range (V_{CC}= 3.5V - 16V).
* Very large starting torque at the low voltage.
* Large permissible loss due to effective utilization of substrate radiation.
* Usable for various DC motors by means of changing constants of the external components.

■ APPLICATION

* Radio cassette tape recorders

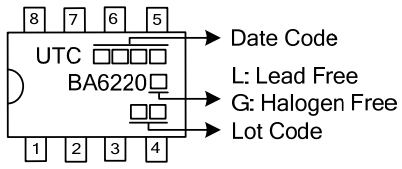
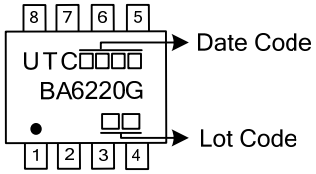
■ ORDERING INFORMATION

Ordering Number		Package	Packing
Lead Free	Halogen Free		
BA6220L-D08-T	BA6220G-D08-T	DIP-8	Tube
-	BA6220G-S08-R	SOP-8	Tape Reel

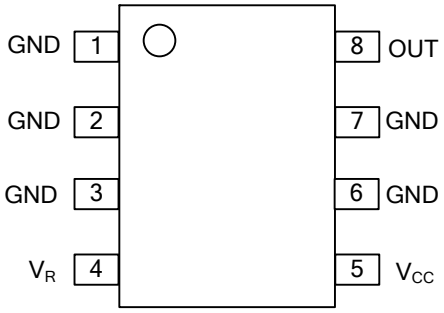


(1) T: Tube, R: Tape Reel
(2) D08: DIP-8, S08: SOP-8
(3) L: Lead Free, G: Halogen Free and Lead Free

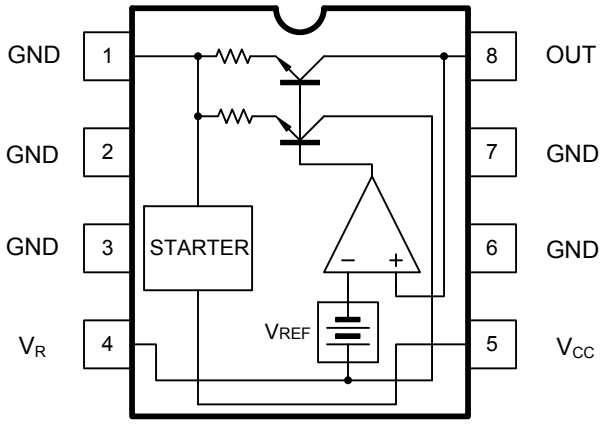
■ MARKING

DIP-8	SOP-8
	

■ PIN CONFIGURATION



■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified.)

PARAMETER		SYMBOL	RATINGS	UNIT
Supply Voltage		V_{CC}	18	V
Power Dissipation(Note 1)	DIP-8	P_D	1.4	W
	SOP-8		0.8	W
Operating Temperature		T_{OPR}	-25 ~ +75	°C
Storage Temperature		T_{STG}	-55 ~ +125	°C

Note 1. PCB (Copper-surfaced) 9cm^2, T 1.0mm.

2. Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

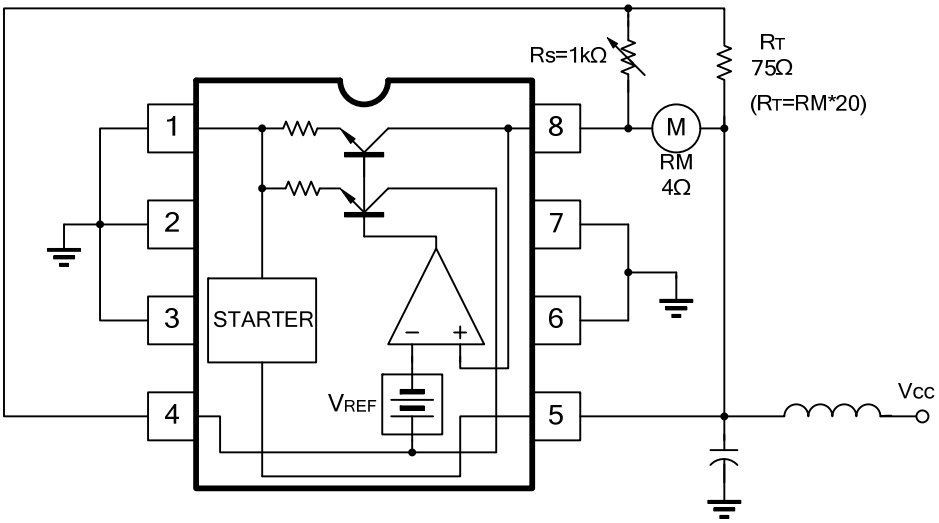
■ RECOMMENDED OPERATING CONDITIONS (T_A=25°C, unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Operating Supply Voltage	V_{CC}	Loader: 8g-cm	3.5		16	V

■ ELECTRICAL CHARACTERISTICS (T_A=25℃, V_{CC}=12V, unless otherwise specified.)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Output Saturate Voltage	V_{SAT}	V_{CC} =4.2V, R_M=4.4Ω (Fig.3)		1.5	2.0	V
Reference Voltage	V_{REF}	I_M=10Ma (Fig.1)	1.10	1.27	1.40	V
Current Ratio	K	R_M=33 - 44Ω (Fig.2)	18	20	22	
Voltage Feature of Reference Voltage	$\Delta V_{REF}/V_{REF}/\Delta V_{CC}$	I_M=100mA, V_{CC}=6.3 - 16V (Fig.1)		0.06		%/V
Voltage Feature of Current Ratio	$\Delta K/K/\Delta V_{CC}$	I_M=100mA, V_{CC}=6.3 - 16V (Fig.2)		0.4		%/V
Bias Current	IBIAS	R_M=180Ω (Fig.4)	0.5	0.8	1.2	mA
Current Feature of Reference Voltage	$\Delta V_{REF}/V_{REF}/\Delta I_M$	I_M=30 - 200mA (Fig.1)		-0.02		%/mA
Current Feature of Current Ratio	$\Delta K/K/\Delta I_M$	I_M=30 - 200mA (Fig.2)		-0.02		%/mA
Temperature Feature of Reference Voltage	$\Delta V_{REF}/V_{REF}/\Delta T_A$	I_M=100mA, T_A=-25 ~ 75℃ (Fig.1)		0.01		%/°C
Temperature Feature of Current ratio	$\Delta K/K/\Delta T_A$	I_M=100mA, T_A=-25 ~ 75℃ (Fig.2)		0.01		%/°C

■ APPLICATION CIRCUIT



■ TEST CIRCUIT

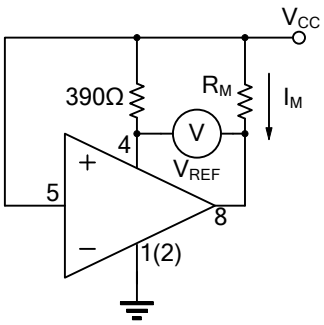


Fig. 1

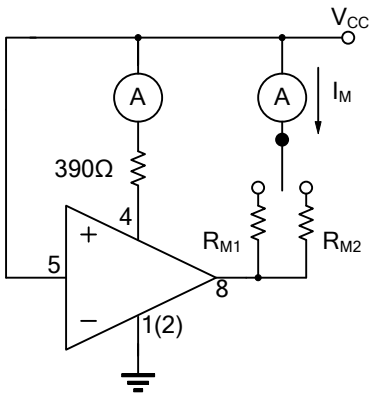


Fig. 2

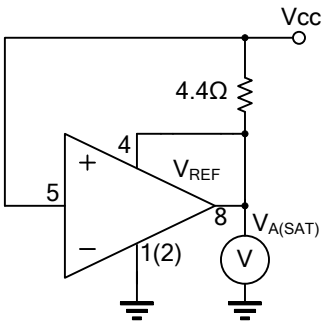


Fig. 3

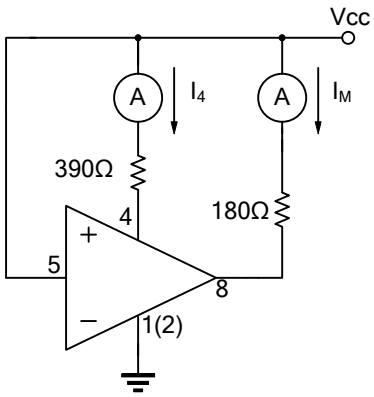


Fig. 4