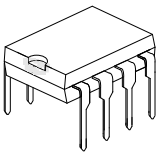
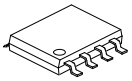
BA6220

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

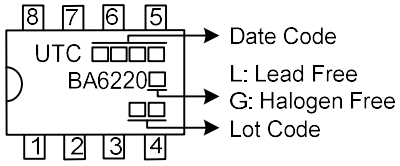
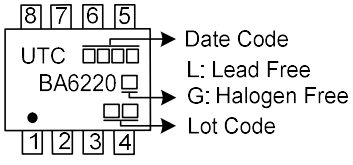
* Radio cassette tape recorders

■ ORDERING INFORMATION

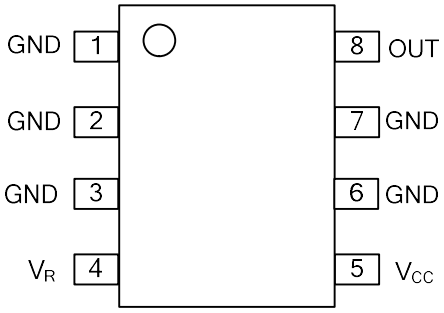
Ordering Number		Package	Packing
Lead Free	Halogen Free		
BA6220L-D08-T	BA6220G-D08-T	DIP-8	Tube
BA6220L-S08-R	BA6220G-S08-R	SOP-8	Tape Reel

BA6220G-D08-T (1)Packing Type (2)Package Type (3)Green Package	(1) T: Tube, R: Tape Reel (2) D08: DIP-8, S08: SOP-8 (3) G: Halogen Free and Lead Free, L: Lead Free

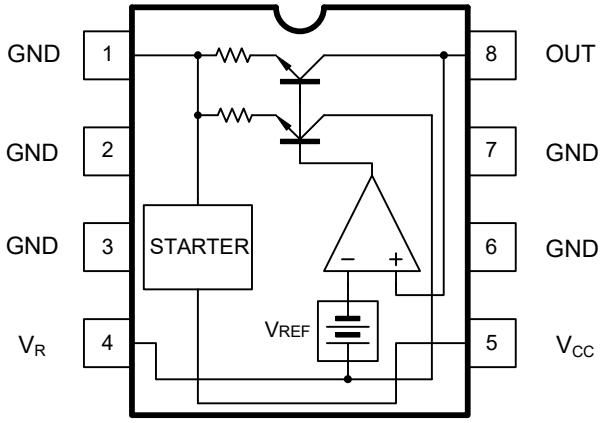
■ MARKING

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 2)	DIP-8	P_D	1.4	W
	SOP-8		0.8	W
Junction Temperature		T_J	+150	°C
Operating Temperature		T_{OPR}	-25 ~ +75	°C
Storage Temperature		T_{STG}	-55 ~ +150	°C

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

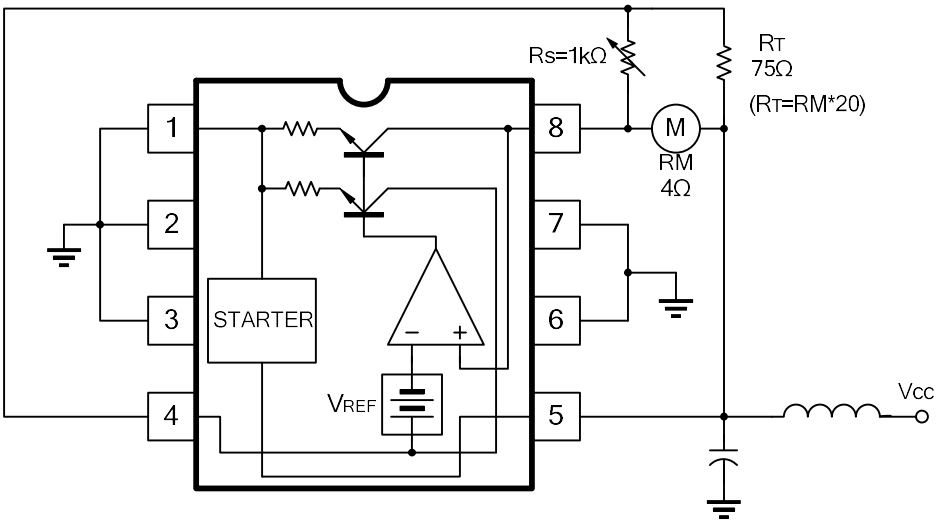
■ RECOMMENDED OPERATING CONDITIONS (T_A=25°C, unless otherwise specified.)

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°C, 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	2.3	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°C (Fig.1)		0.01		%/°C
Temperature Feature of Current ratio	$\Delta K/K/\Delta T_A$	I_M=100mA, T_A=-25 ~ 75°C (Fig.2)		0.01		%/°C

■ APPLICATION CIRCUIT



■ TEST CIRCUIT

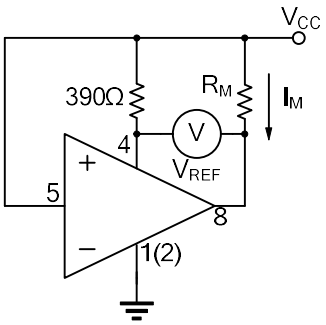


Fig. 1

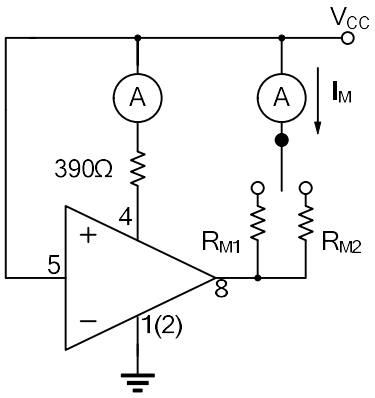


Fig. 2

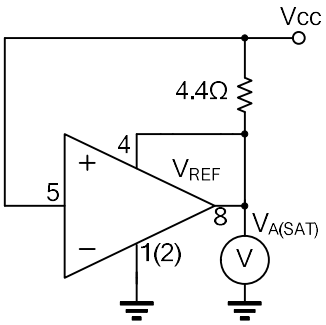


Fig. 3

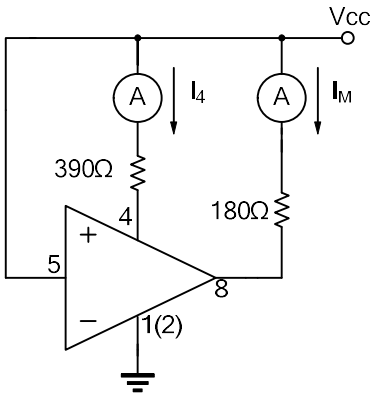


Fig. 4

■ TYPICAL CHARACTERISTICS