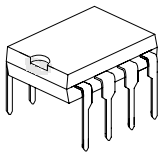
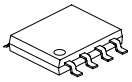
BA6220

LINEAR INTEGRATED CIRCUIT

GENERAL USE ELECTRONIC GOVERNOR



DIP-8



SOP-8

*Pb-free plating product number: BA6220L

■ 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

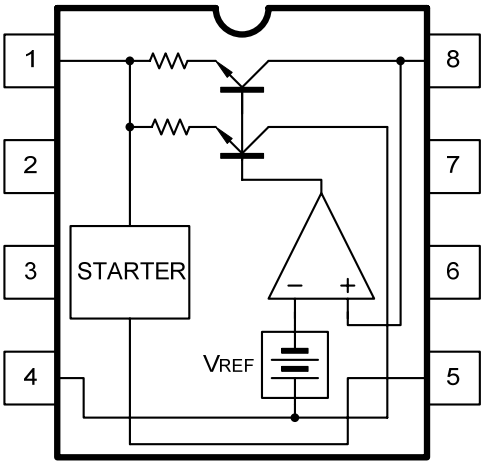
* Radio cassette tape recorders

■ ORDERING INFORMATION

Order Number		Package	Packing
Normal	Lead Free Plating		
BA6220-D08-T	BA6220L-D08-T	DIP-8	Tube
BA6220-S08-R	BA6220L-S08-R	SOP-8	Tape Reel
BA6220-S08-T	BA6220L-S08-T	SOP-8	Tube

BA6220L-D08-T (1)Packing Type (2)Package Type (3)Lead Plating	(1) T: Tube, R: Tape Reel (2) D08: DIP-8, S08: SOP-8 (3) L: Lead Free Plating, Blank: Pb/Sn

■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

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.

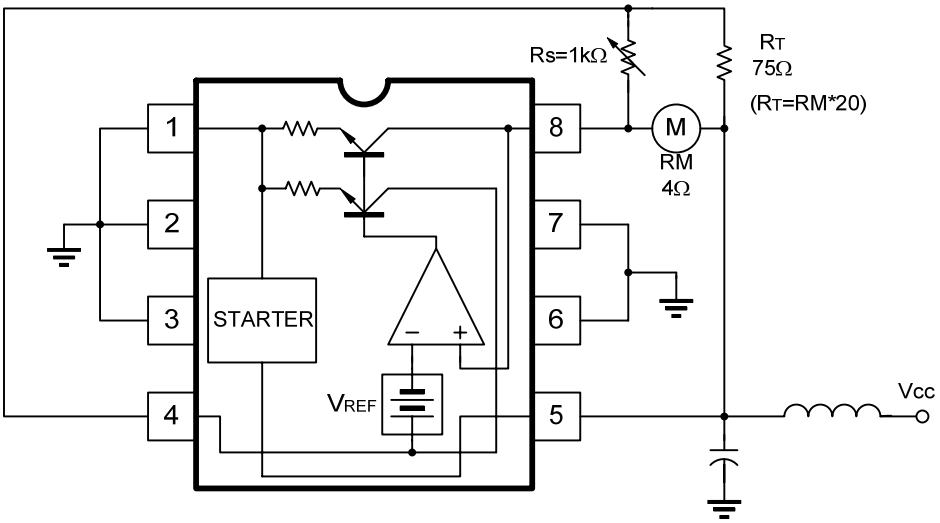
■ RECOMMENDED OPERATING CONDITIONS (Ta=25°C)

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

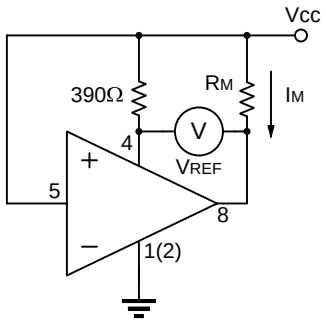
■ ELECTRICAL CHARACTERISTICS (Ta=25°C, V_{CC}=12V)

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

■ APPLICATION CIRCUIT



■ TEST CIRCUIT



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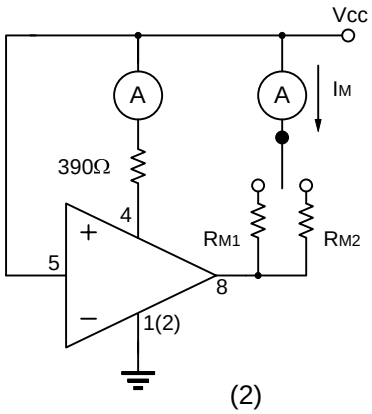

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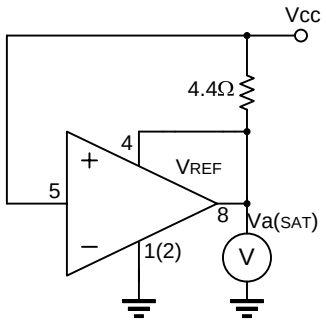

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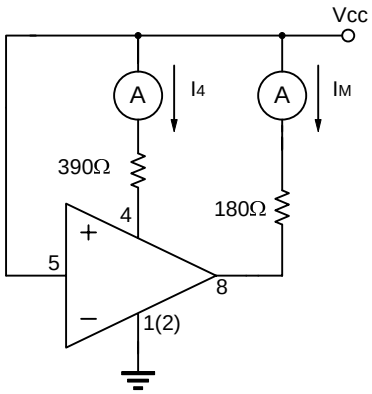

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