



BA6220

LINEAR INTEGRATED CIRCUIT

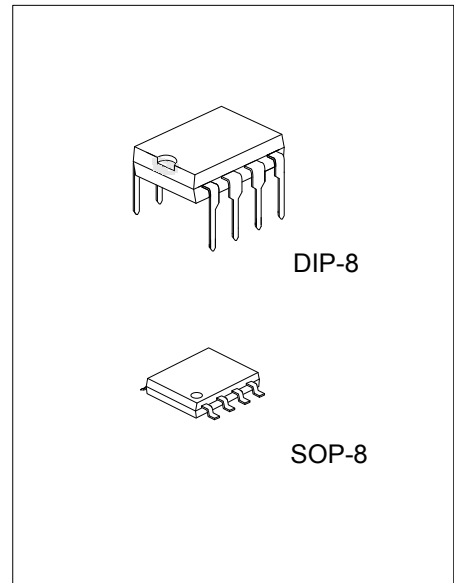
GENERAL USE ELECTRONIC GOVERNOR

■ 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

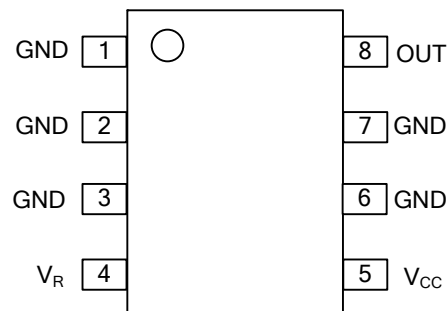
| Ordering Number | | Package | Packing |
|-----------------|---------------|---------|-----------|
| Lead Free | Halogen Free | | |
| BA6220L-D08-T | BA6220G-D08-T | DIP-8 | Tube |
| - | BA6220G-S08-R | SOP-8 | Tape Reel |

| | |
|---|---|
| <p>BA6220L-D08-T</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p> | <p>(1) T: Tube, R: Tape Reel (2) D08: DIP-8, S08: SOP-8 (3) L: Lead Free, G: Halogen Free and Lead Free</p> |
|---|---|

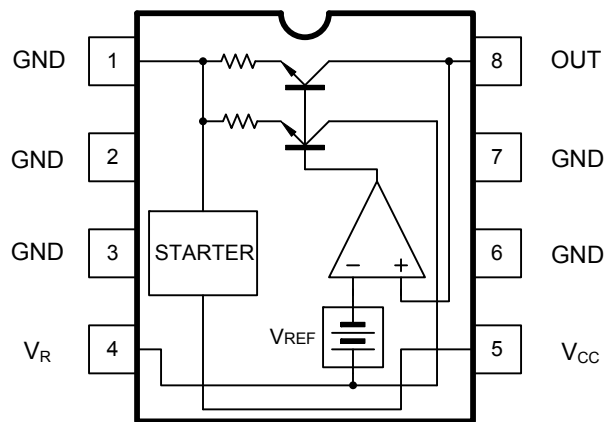
■ MARKING

| 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 | 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) 9cm², 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.

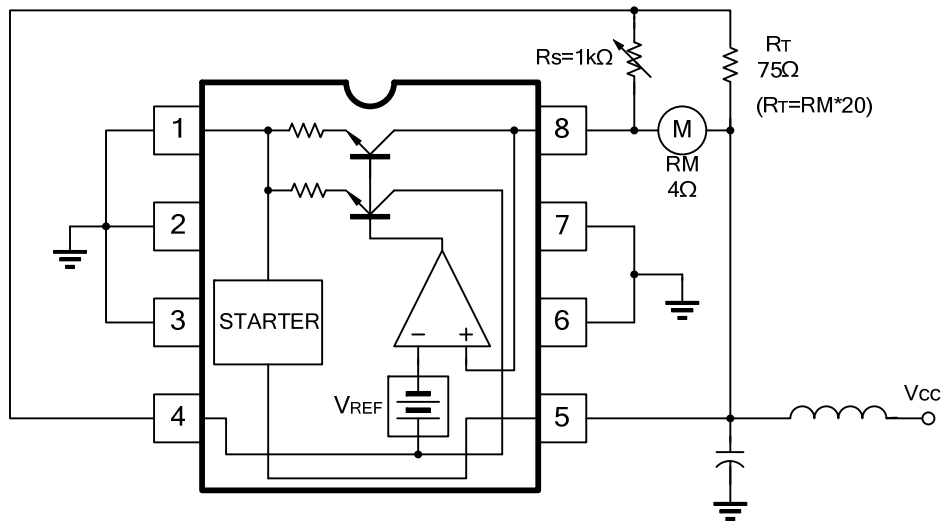
■ RECOMMENDED OPERATING CONDITIONS (T_A=25°C, unless otherwise specified.)

| 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°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 | 2.0 | 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 | ΔV _{REF} /V _{REF} /ΔV _{CC} | I _M =100mA, V _{CC} =6.3 - 16V (Fig.1) | | 0.06 | | %/V |
| Voltage Feature of Current Ratio | ΔK/K/ΔV _{CC} | I _M =100mA, V _{CC} =6.3 - 16V (Fig.2) | | 0.4 | | %/V |
| Bias Current | I _{BIAS} | R _M =180Ω (Fig.4) | 0.5 | 0.8 | 1.2 | mA |
| Current Feature of Reference Voltage | ΔV _{REF} /V _{REF} /ΔI _M | I _M =30 - 200mA (Fig.1) | | -0.02 | | %/mA |
| Current Feature of Current Ratio | ΔK/K/ΔI _M | I _M =30 - 200mA (Fig.2) | | -0.02 | | %/mA |
| Temperature Feature of Reference Voltage | ΔV _{REF} /V _{REF} /ΔT _A | I _M =100mA, T _A =-25 ~ 75°C (Fig.1) | | 0.01 | | %/°C |
| Temperature Feature of Current ratio | ΔK/K/ΔT _A | I _M =100mA, T _A =-25 ~ 75°C (Fig.2) | | 0.01 | | %/°C |

APPLICATION CIRCUIT



TEST CIRCUIT

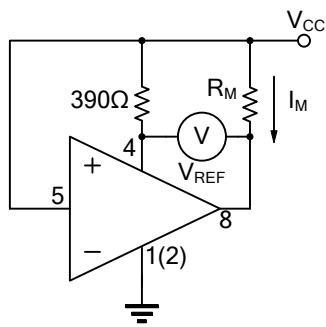


Fig. 1

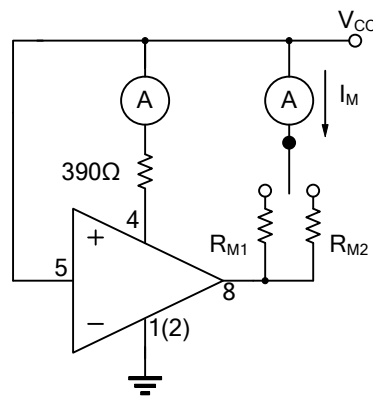


Fig. 2

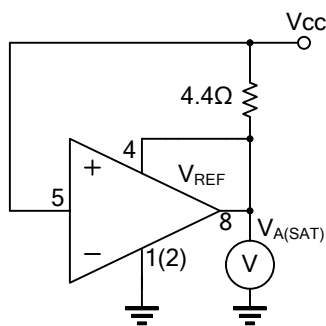


Fig. 3

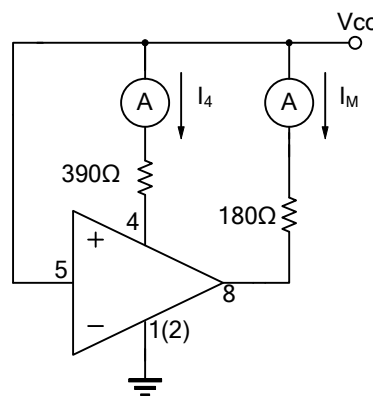


Fig. 4

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