

UTC6651

LINEAR INTEGRATED CIRCUIT

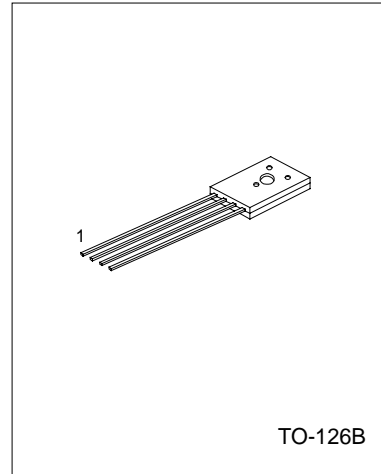
MOTOR SPEED CONTROL CIRCUIT

DESCRIPTION

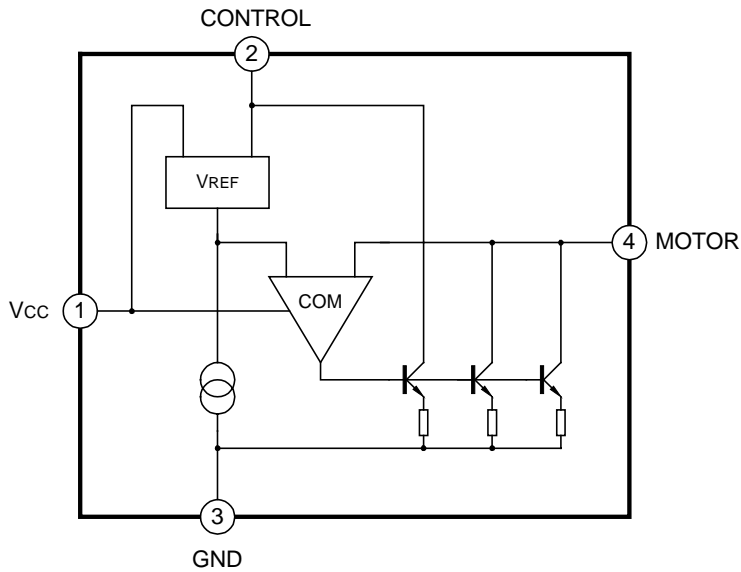
The UTC6651 is a monolithic integrated circuit designed for the rotating speed control of a compact DC motor which is used for a tape recorder, recoder player etc.

FEATURES

- * Wide operating supply voltage: $V_{cc}=3.5V-14.4V$
- * Small four-lead plastic package for compact motor.
- * Few external components
- * Stable low reference voltage(1.0V, typical),
- * Wide motor speed setting
- * Reverse voltage protection circuit built-in.
- *



BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS(Ta=25°C)

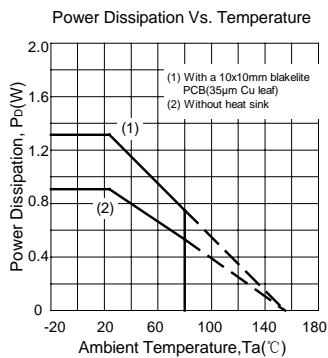
Characteristic	Symbol	Value	Unit
Supply Voltage	Vcc	14.4	V
Supply Current(note 1)	Icc	2000	mA
Power Dissipation(note 2)	Pd	1300	mW
Operating Temperature	Topr	-20 ~ +75	°C
Storage Temperature	Tstg	-40 ~ +150	°C

NOTE: 1. Ta=25°C, with a 10x10 mm bakelite PCB(3.5µm Cu leaf)
 2. Test time < 5seconds.

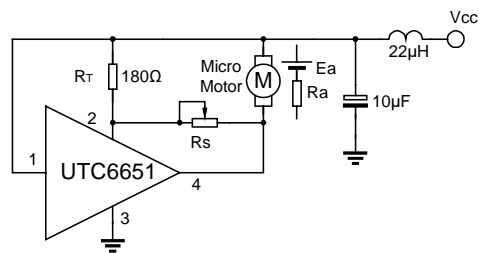
ELECTRICAL CHARACTERISTICS(Ta=25°C, unless otherwise specified)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Units
Reference Voltage	VREF	Vcc=6V, Ra=1kΩ	0.85	1.0	1.15	V
Bias Current	Ibias	Vcc=6V		0.8	1.8	mA
Current Proportional Constant	K	Vcc=6V, DI4=40mA	35	40	45	
Saturation Voltage	VSAT	Vcc=4.2V, Ra=5.0Ω		1.15	2	V
Voltage Characteristics 1	$\frac{\Delta V_{REF}}{V_{REF}} / V_{cc}$	Vcc=3.5V~14.0V, Ra=1kΩ		-0.1		%/V
Voltage Characteristics 2	$\frac{\Delta K}{K} / V_{cc}$	Vcc=3.5V~14.0V, DI4=40mA		0.2		%/V
Current Characteristics 1	$\frac{\Delta V_{REF}}{V_{REF}} / I_4$	I4=50mA~200mA		-0.02		%/mA
Current Characteristics 2	$\frac{\Delta K}{K} / I_4$	I4=50mA~200mA		-0.01		%/mA
Temperature Characteristics 1	$\frac{\Delta V_{REF}}{V_{REF}} / T_a$	TA=-20~+75°C, Vcc=6.0V Ra=1kΩ		0.01		%/°C
Temperature Characteristics 2	$\frac{\Delta K}{K} / T_a$	TA=-20~+75°C, Vcc=6.0V DI4=40mA		0.01		%/°C

CHARACTERISTICS CURVE



APPLICATION CIRCUIT



Motor Constant:
 Ka-- Electromotive force constant=1.1mV/rpm
 Ra-- Internal Resistor=5Ω
 KT=Torque Constant=100g.cm/A

Copyright © Each Manufacturing Company.

All Datasheets cannot be modified without permission.

This datasheet has been download from :

www.AllDataSheet.com

100% Free DataSheet Search Site.

Free Download.

No Register.

Fast Search System.

www.AllDataSheet.com