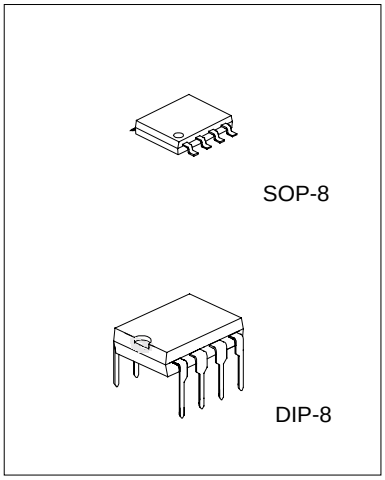
UTC AN6650 LINEAR INTEGRATED CIRCUIT

MOTOR SPEED CONTROL CIRCUIT



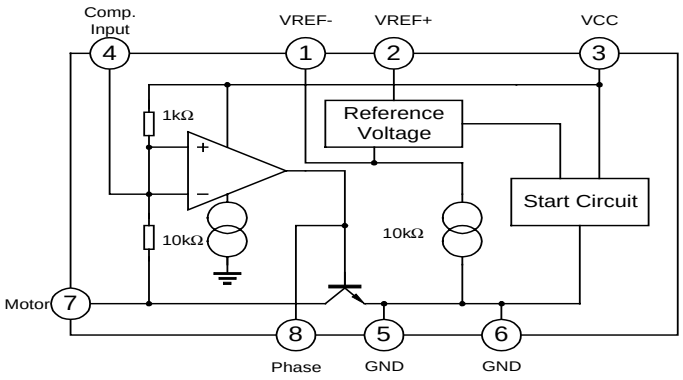
DESCRIPTION

The UTC AN6650 is a monolithic integrated circuit, designed for the tape recorder.

FEATURES

*Wide operating supply voltage: Vcc=1.8V-7V
*Few external components
*Easy speed control mode

BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	V_{CC}	7.5	V
Terminal Voltage	Vn(n=1,2,3,4)	-0.5 to 7.5	V
Terminal 8 Voltage	V_8	-0.5 to 1	V
Supply Current	I_{CC}*	1000	mA
Terminal 7 Current	I_7	1000	mA
Power Dissipation	PD		mW
DIP-8		750	
SOP-8		360	
Operating Temperature	T_{OPR}	-20 to 70	°C
Storage Temperature	T_{STG}	-40 to 150	°C

*Test Time<5μs

ELECTRICAL CHARACTERISTICS (Ta=25°C, Vcc=6V, f=1KHZ, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT	TEST CIRCUIT
Quiescent Circuit Current	ICC	VCC=3V		2	3	mA	1
Reference Voltage	VREF	VCC=3V，R2-1>10kΩ	1.20	1.28	1.35	V	4
Start Voltage	VCC(S)	30mAcurrent flow to Ra		1.0	1.2	V	2
Saturation Voltage	V(SAT)	VCC=1.8V,Ra=4.7Ω		0.2	0.5	V	2
Reference Voltage Characteristics	$\frac{\Delta VREF}{VREF} / \Delta VCC$	VCC=1.8V~7.0V	-1.25	0.1	1.25	%/V	1
Output Voltage Characteristics	$\frac{\Delta VA}{VA} / \Delta VCC$	VCC=1.8V~7.0V	-1.2	0.1	1.2	%/V	3
Reference Voltage Current Characteristics	$\frac{\Delta VREF}{VREF} / \Delta I7$	I7=1mA~20mA	-0.2	0.01	0.2	%/mA	4
Reference Voltage Temperature Characteristics	$\frac{\Delta VREF}{VREF} / \Delta TA$	TA=-20~+60°C,VCC=3.0V		0.01		%/°C	4

TEST CIRCUIT

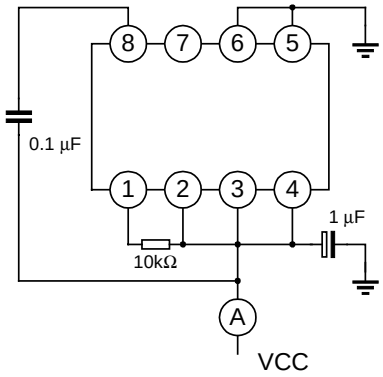


FIG.1 (Icc, $\frac{\Delta VREF}{VREF} / \Delta VCC$)

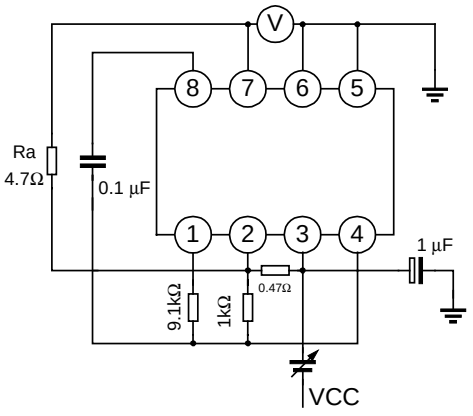


FIG 2 (Vcc(s),Vsat)

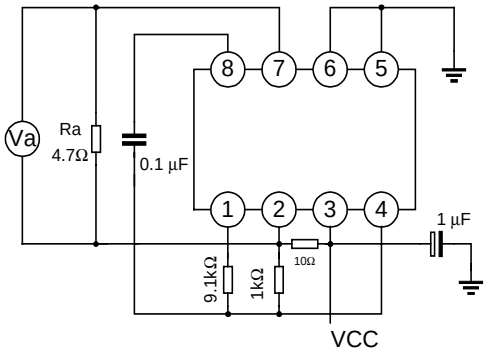

Va
Ra
4.7Ω
0.1 µF
8
7
6
5
1
2
3
4
1 µF
9.1kΩ
1kΩ
10Ω
VCC

FIG.3

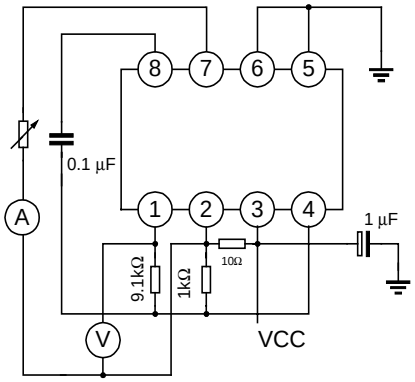

0.1 µF
A
8
7
6
5
1
2
3
4
1 µF
9.1kΩ
1kΩ
10Ω
V
VCC

FIG 4