

# UTC AN6650 LINEAR INTEGRATED CIRCUIT

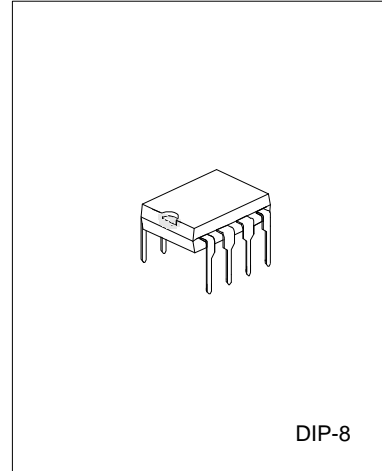
## MOTOR SPEED CONTROL CIRCUIT

### DESCRIPTION

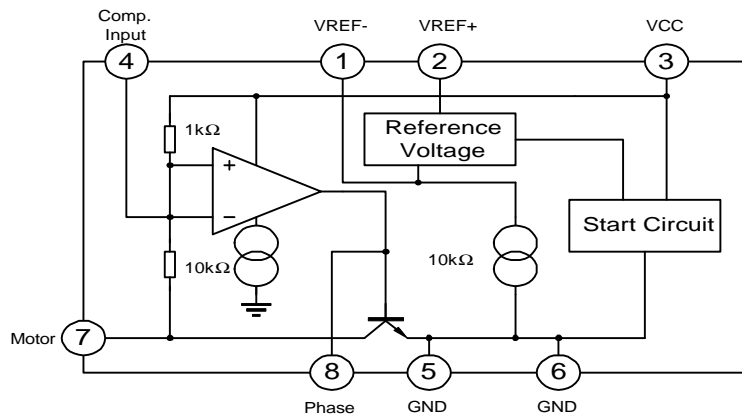
The UTC AN6650 is a monolithic integrated circuit, designed for the tape recorder.

### FEATURES

- \*Wide operating supply voltage:  $V_{CC}=1.8V-7V$
- \*Few external components
- \*Easy speed control mode



### BLOCK DIAGRAM



### ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ C$ )

PARAMETER	SYMBOL	VALUE	UNIT
Supply Voltage	$V_{CC}$	7.5	V
Terminal Voltage	$V_n(n=1,2,3,4)$	-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	750	mW
Operating Temperature	$T_{OPR}$	-20 to 70	$^\circ C$
Storage Temperature	$T_{STQ}$	-40 to 150	$^\circ C$

\*Test Time  $< 5\mu s$

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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)	30mA current flow to Ra		1.0	1.2	V	2
Saturation Voltage	VSAT	VCC=1.8V, Ra=4.7Ω		0.2	0.5	V	2
Reference Voltage Characteristics	$\frac{\Delta V_{REF}}{V_{REF}} / \Delta V_{CC}$	VCC=1.8V~7.0V	-1.25	0.1	1.25	%/V	1
Output Voltage Characteristics	$\frac{\Delta V_A}{V_A} / \Delta V_{CC}$	VCC=1.8V~7.0V	-1.2	0.1	1.2	%/V	3
Reference Voltage Current Characteristics	$\frac{\Delta V_{REF}}{V_{REF}} / \Delta I_7$	I7=1mA~20mA	-0.2	0.01	0.2	%/mA	4
Reference Voltage Temperature Characteristics	$\frac{\Delta V_{REF}}{V_{REF}} / \Delta T_A$	TA=-20~+60°C, VCC=3.0V		0.01		%/°C	4

## TEST CIRCUIT

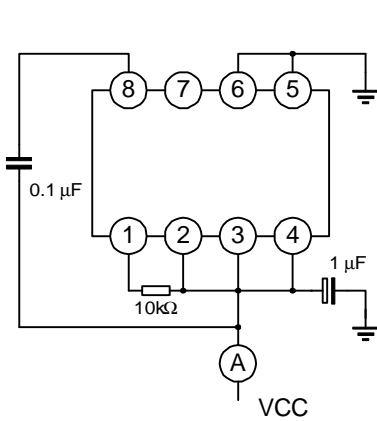


FIG.1 (ICC,  $\frac{\Delta V_{REF}}{V_{REF}} / \Delta V_{CC}$ )

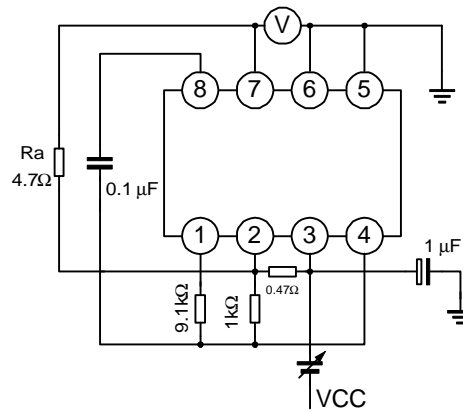


FIG 2 (Vcc(s), Vsat)

# UTC AN6650 LINEAR INTEGRATED CIRCUIT

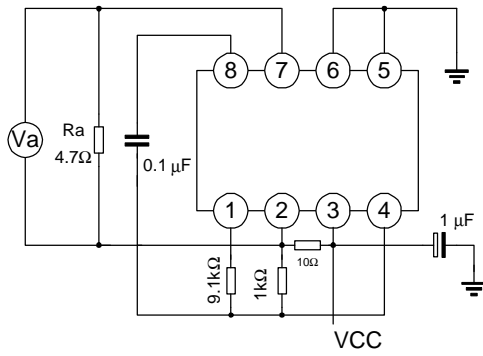


FIG.3

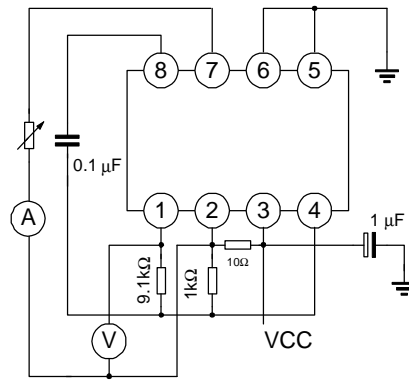


FIG.4