



AN6650 LINEAR INTEGRATED CIRCUIT

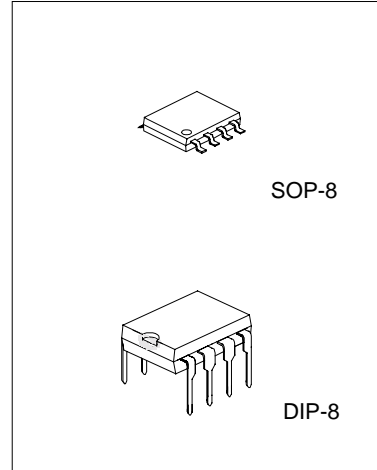
MOTOR SPEED CONTROL CIRCUIT

DESCRIPTION

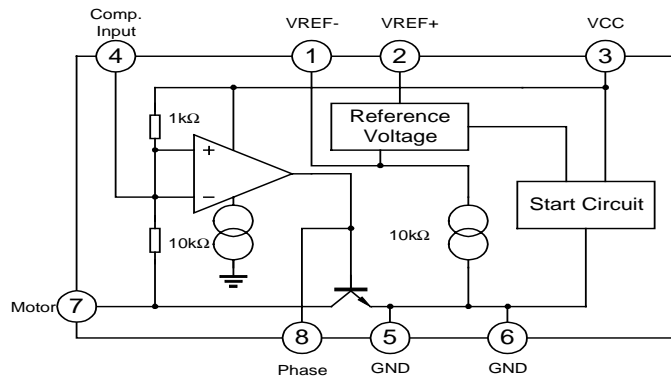
The AN6650 is a monolithic integrated circuit, designed for the tape recorder.

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		mW
	DIP-8	750	
	SOP-8	360	
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	V(SAT)	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

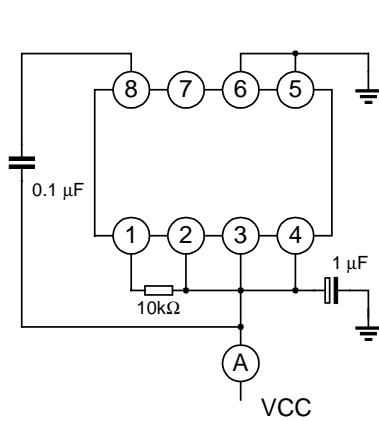


FIG.1 (Icc, $\frac{\Delta V_{REF}}{V_{REF}} / \Delta V_{CC}$)

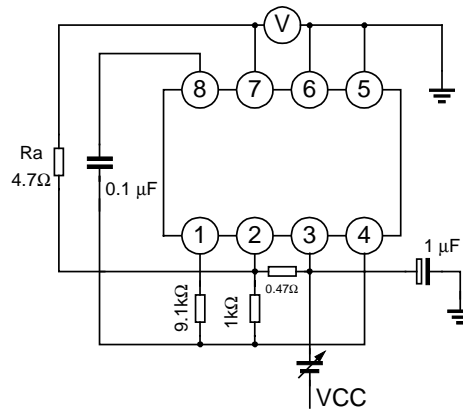


FIG 2 (Vcc(s), Vsat)

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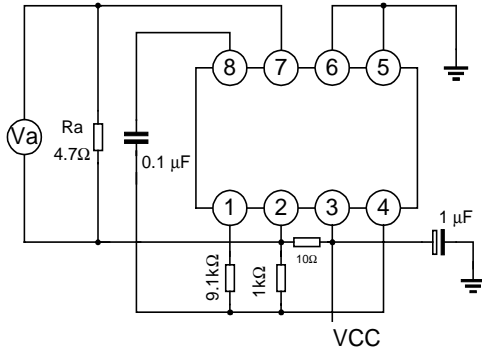


FIG.3

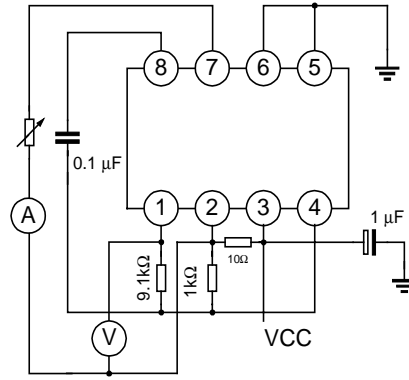


FIG 4
