BIPOLAR LINEAR INTEGRATED CIRCUIT
SILICON MONOLITHIC

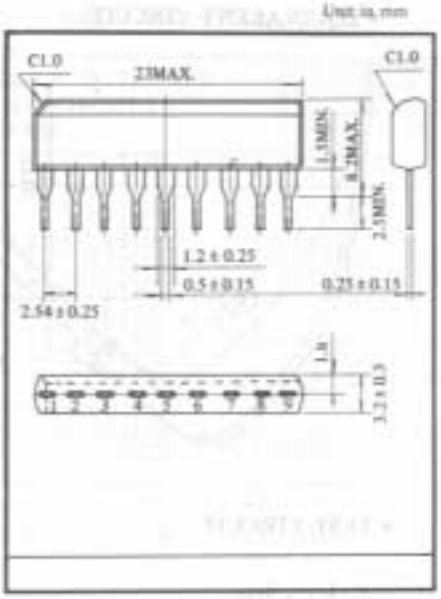
KIA 7137P
KIA 7137P - ST

APPLICATION

- Pre-Amplifier (Recording or Playing-Back) with ALC Transistor for Tape Recorder.

FEATURES

- Low Noise : V_{ni}=1.3μV_{rms}(Typ.)
- Wide ALC Range
- Wide Operating Supply Voltage Range : V_{CC}=3~15V
- KIA7137P-ST is Matched ALC Characteristic for Stereo Tape Recorder.



MAXIMUM RATINGS (Ta=25℃)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V_{CC}	15	V
Power Dissipation (Note)	P_D	200	mW

CHARACTERISTIC	SYMBOL	RATING	UNIT
Operating Temperature	T_{OPR}	-25~75	℃
Storage Temperature	T_{STG}	-55~125	℃

Note: Derated above Ta=25℃ in the proportion of 2mW/℃.

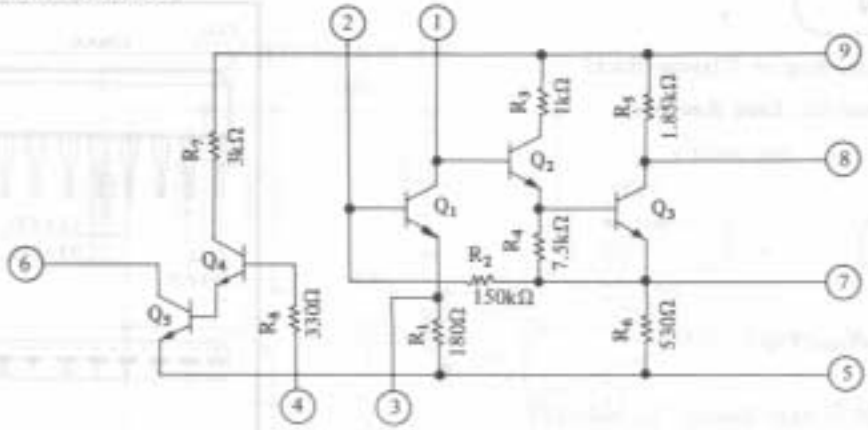
ELECTRICAL CHARACTERISTICS (V_{CC}=5V, Ta=25℃)

CHARACTERISTIC	SYMBOL	TEST CIR-CUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Supply Current	I_{CC}	1	V_{IN}=0, ALC off	-	1.3	1.75	mA
Voltage Gain (Open Loop)	G_{VO}	1	V_{IN}=-80dBm, f=1kHz	67	69	-	dB
Voltage Gain (Closed Loop) (Note)	G_V	2	V_{OUT}=0.7V_{rms}, f=1kHz	33	35	37	dB
Maximum Output Voltage	V_{OM}	2	f=1kHz, THD=1%	0.7	0.9	-	V_{rms}
Equivalent Input Noise Voltage	V_{ni}	3	NAB equalizer R_g=2.2kΩ, f=1kHz	-	1.3	2.5	μV_{rms}
Input Resistance	R_{IN}	-	f=1kHz	-	150	-	kΩ
Q_1 Saturation Voltage	$V_{SAT(1)}$	4	-	-	60	100	mV

Note: In regard to the value of voltage gain (closed loop voltage), it is possible to be classified.

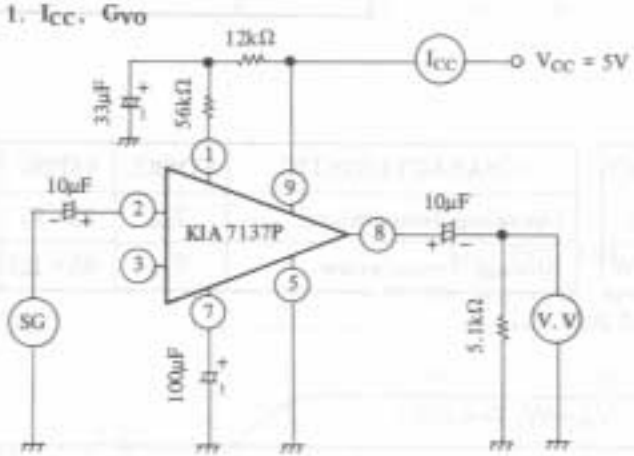
KEC

■ EQUIVALENT CIRCUIT

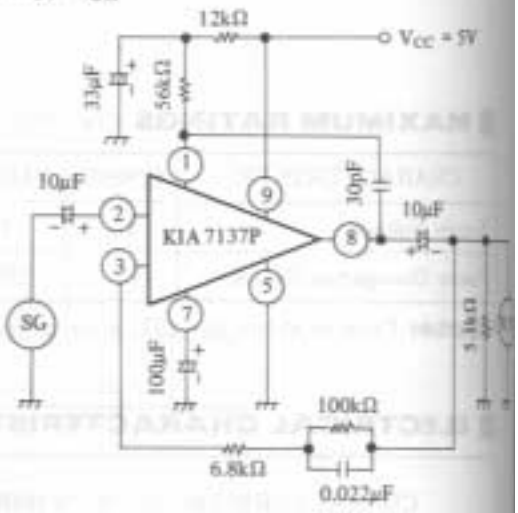


■ TEST CIRCUIT

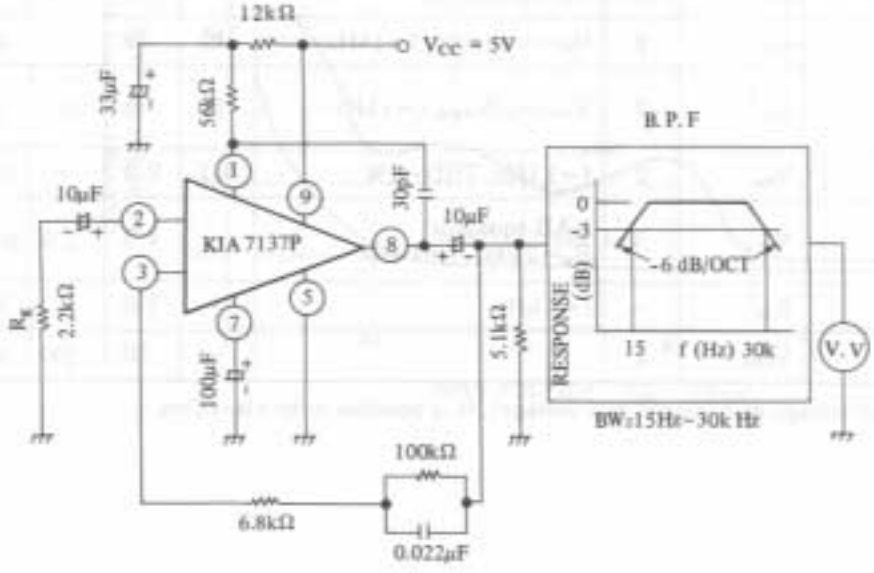
1. I_{CC}, G_{VO}



2. G_V, V_{OM}



3. V_{NI}



4. V_n (ON)