

LA4140

monolithic integrated circuit

0.5W typ AF POWER AMP.
FOR RADIO OR TAPE RECORDER



Features

- 0.5W typ output power/ $V_{CC}=6V$, $R_L=8\Omega$, THD=10%.
- Small quiescent current.
- Wide operation supply voltage range.

MAXIMUM RATINGS / $T_a=25^\circ C$

			unit
Maximum Supply Voltage	V_{CCmax}	quiescent	14 V
		$R_L=16\text{ohm}$	14 V
		$R_L=8\text{ohm}$	12 V
Maximum Output Current	I_O		500 mA
Allowable Power Dissipation	P_{dmax}^*		750* mW
Operating Temperature	T_{opg}		-20 to +70 $^\circ C$
Storage Temperature	T_{stg}		-40 to +150 $^\circ C$

P_{dmax}^* : set on 50x50 mm² printed board.

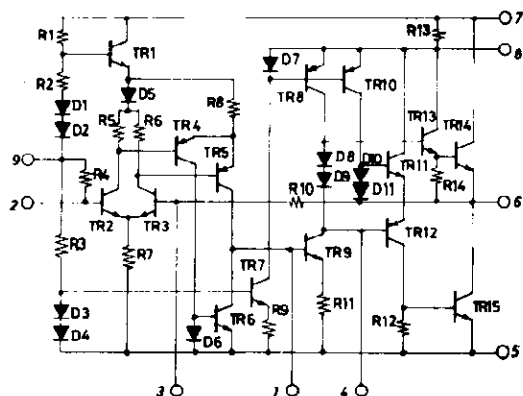
RECOMMENDED OPERATION CONDITION / $T_a=25^\circ C$

		unit
Recommended Supply Voltage	V_{CC}	6 V
Load Resistance	R_L	8 ohm

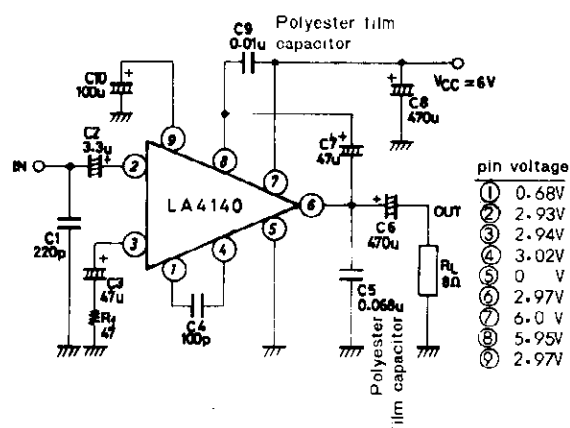
OPERATION CHARACTERISTICS / $T_a=25^\circ C$, $V_{CC}=6V$, $R_L=8\text{ohm}$, $R_g=600\text{ohm}$, $R_f=47\text{ohm}$, $f=1\text{kHz}$

			min	typ	max	unit
Quiescent Current	I_{CCO}			11		mA
Voltage Gain	VG		47	50	52	dB
Output Power	P_O	THD=10%	0.45	0.5		W
Total Harmonic Distortion	THD	$P_O=100\text{mW}$		0.3	1.0	%
Input Resistance	r_i			15k		ohm
Output Noise Voltage	V_{NO}	$R_g=10\text{kohm}$, with 50-20kHz filter		0.4	1.0	mV

EQUIVALENT CIRCUIT



APPLICATION: 500mW AF Power Amplifier



See the operation characteristics on this specification.