

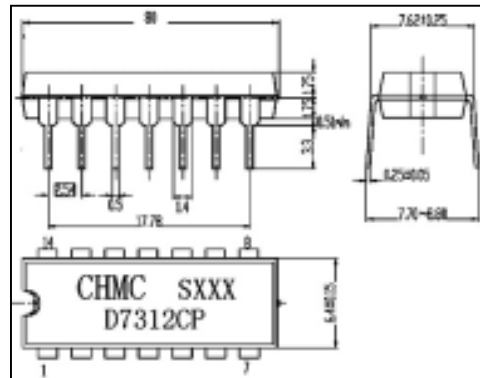


DUAL CHANNEL PRE-AMP. WITH ALC D7312CP

DESCRIPTION

The D7312CP is a monolithic integrated circuit designed for dual pre-amplifier circuit with ALC for record /playback amplifier of cassette tape recorder.

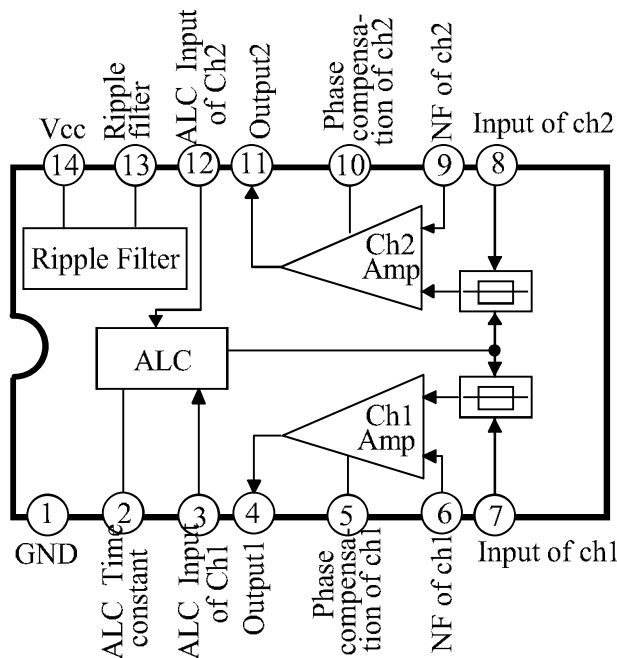
Outline Drawing



FEATURE

- High open loop gain
- Incorporates ALC detector circuit
- No input coupling condenser
- Low noise and current consumption
- Wide ALC range
- Wide operating voltage range: $V_{cc}=5V \sim 12V$
- Low Power ON shock noise DIP-14

BLOCK DIAGRAM AND PIN CONNECTION



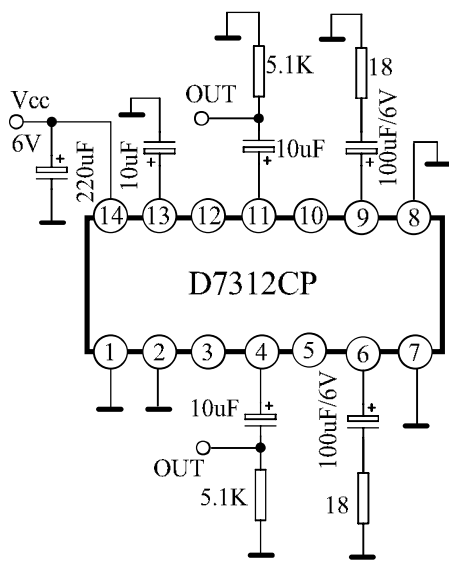
ABSOLUTE MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$)

Characteristic	Symbol	Value	Unit
Supply Voltage	V _{cc}	14	V
Supply Current	I _{cc}	50	mA
Power Dissipation	P _D	700	mW
Operating Temperature	T _{opr}	-55~125	°C
Storage Temperature	T _{stg}	-65~150	°C

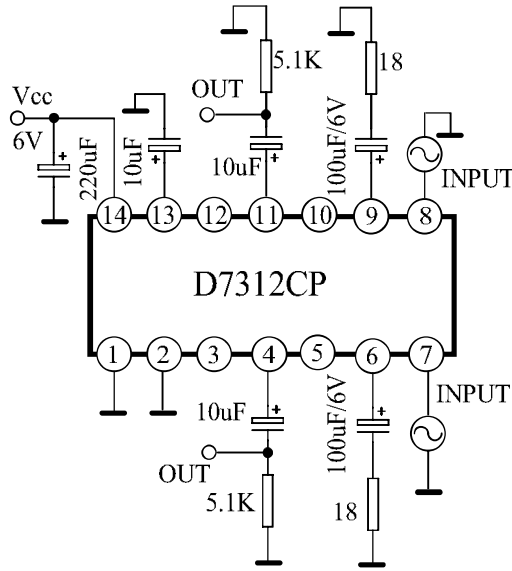
ELECTRICAL CHARACTERISTICS(unless otherwise specified: $T_a=25^{\circ}\text{C}$, $V_{cc}=6\text{V}$; $f=1\text{kHz}$, $R_L=5.1\text{k}\Omega$)

Characteristics	Test conditions	Symbol	Test Circuit	Min.	Typ.	Max.	Unit
Quiescent Current	V _{in} =0V	I _{cQ}	1	2.5	4.5	8.0	mA
Operating Voltage		V _{cc}	1	5.0		12.0	V
Closed-loop Voltage Gain	V _o =0.5V	G _v	2	66	69	72	dB
Total Harmonic Distortion	V _o =0.5V	THD	2		0.5	1.0	%
Output Voltage	THD=1%	V _{omax}	2	1.2	1.6		V
Output noise Voltage	R _g =0Ω	V _{NO}	1		2.0	5.0	mV
ALC Voltage	V _{in} =400μV	V _{ALC}	3	0.55	0.63	0.7	V
ALC Width	Beginning 0dB to 3dB	W _{ALC}	3	35	47		dB
Channel Valance	V _o =0.5V, CB=G _{v1} -G _{v2}	CB	2	-1.0	0	+1.0	dB

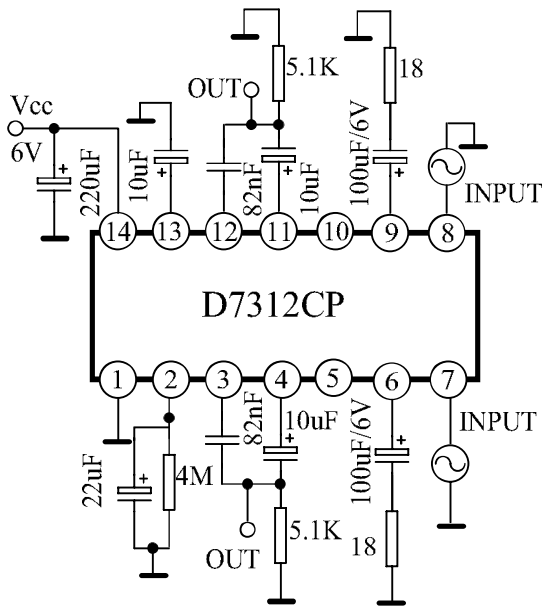
TEST CIRCUIT



Test circuit 1 (ICQ, Vcc, VNO)

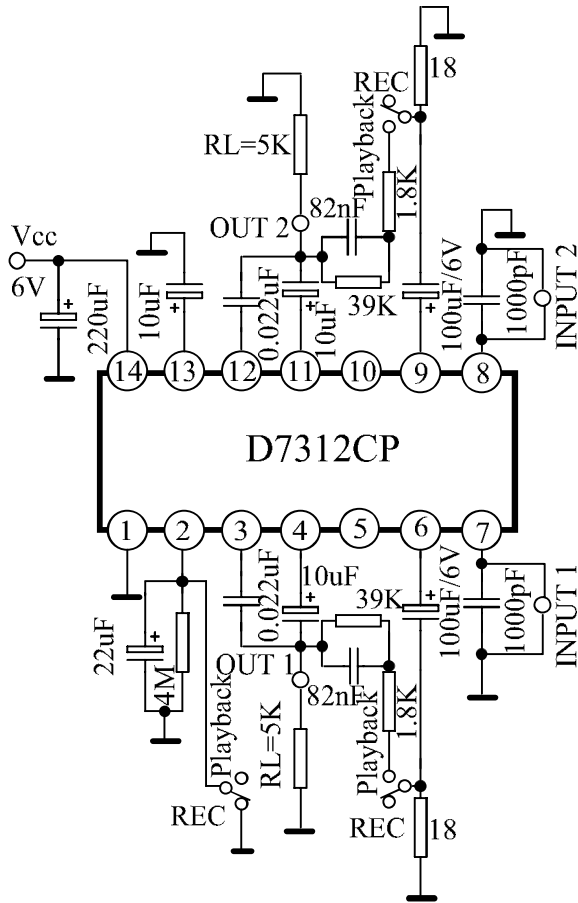


Test circuit 2 (Gv, THD, Vomax, CB)



Test circuit 3 (VALC, WALC)

APPLICATION CIRCUIT



CHARACTERISTIC CURVES

