

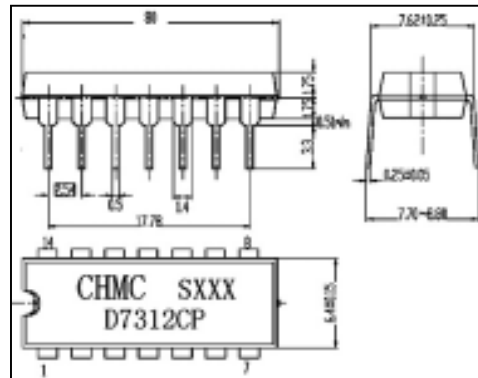


## DUAL CHANNEL PRE-AMP. WITH ALC D7312CP

### DESCRIPTION

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

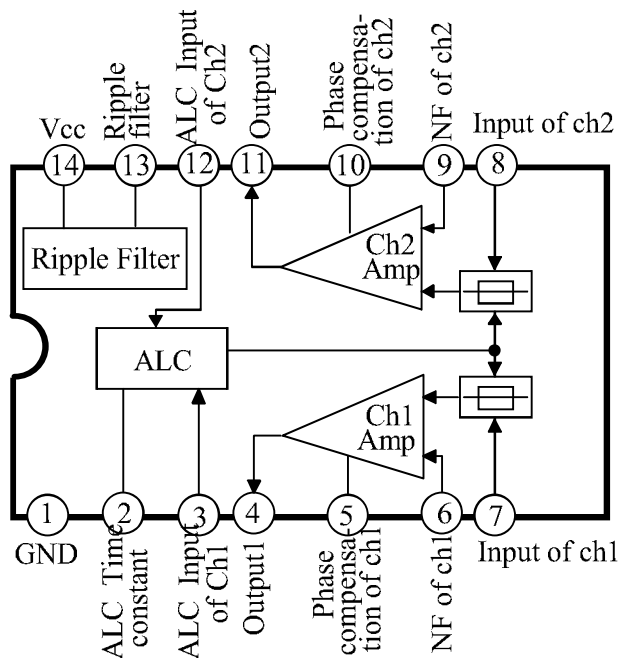
### Outline Drawing



### 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



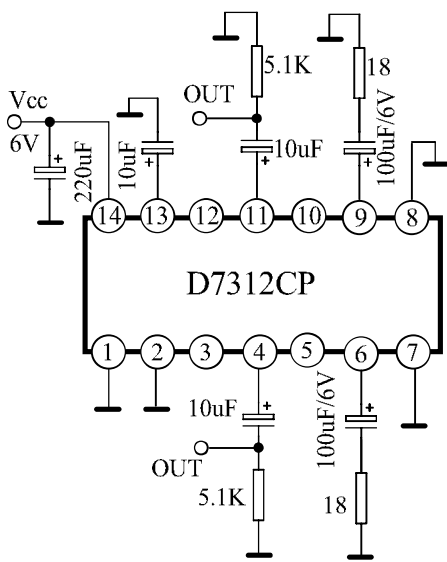
**ABSOLUTE MAXIMUM RATINGS** ( $T_a=25^{\circ}\text{C}$ )

Characteristic	Symbol	Value	Unit
Supply Voltage	V <sub>cc</sub>	14	V
Supply Current	I <sub>cc</sub>	50	mA
Power Dissipation	P <sub>D</sub>	700	mW
Operating Temperature	T <sub>opr</sub>	-55~125	°C
Storage Temperature	T <sub>stg</sub>	-65~150	°C

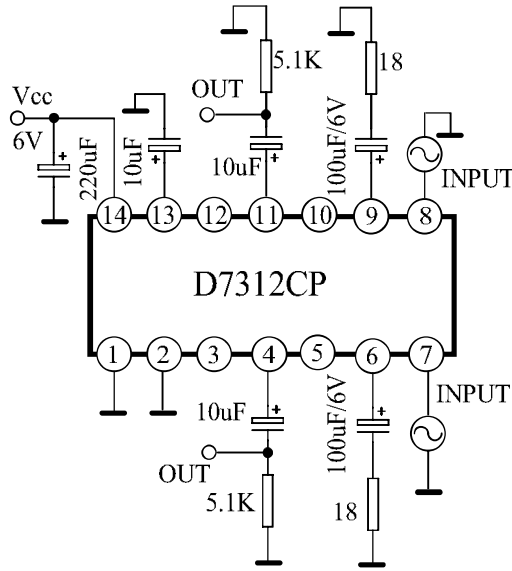
**ELECTRICAL CHARACTERISTICS**(unless otherwise specified:  $T_a=25^{\circ}\text{C}$ ,  $V_{cc}=6\text{V}$ ;  $f=1\text{kHz}$ ,  $R_L=5.1\text{k}\Omega$ )

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

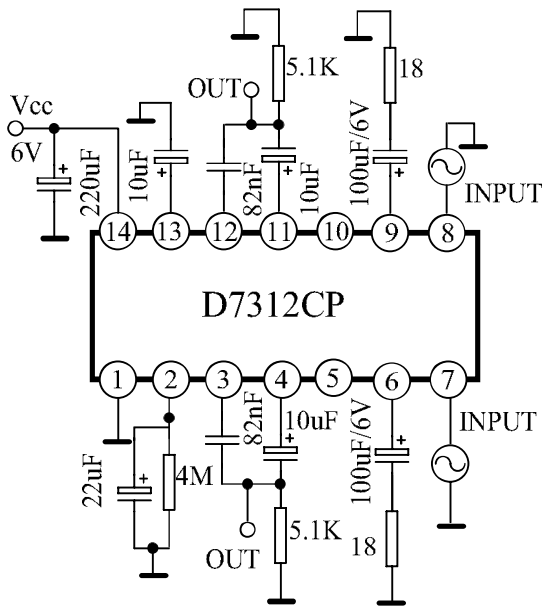
**TEST CIRCUIT**



Test circuit 1 (ICQ, Vcc, VNO)

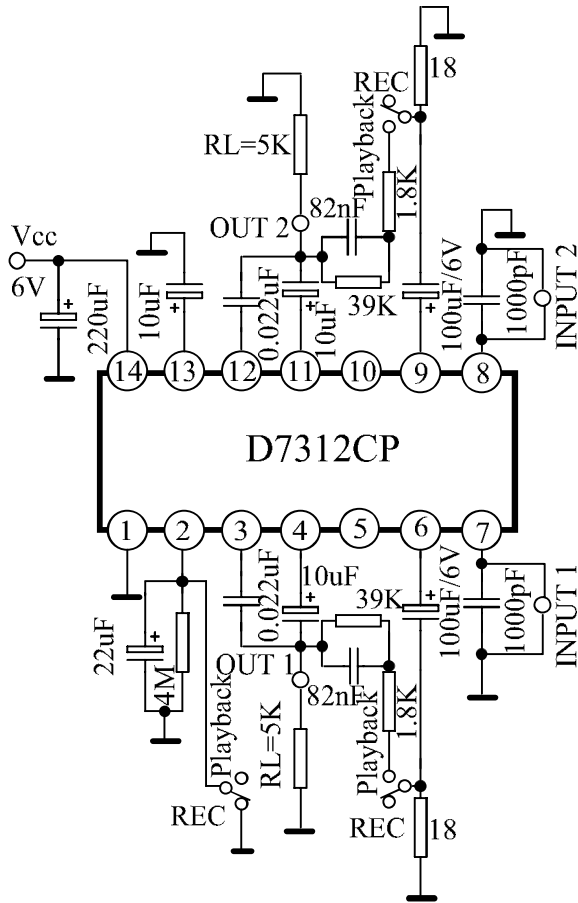


Test circuit 2 (Gv, THD, Vomax, CB)



Test circuit 3 (VALC, WALC)

APPLICATION CIRCUIT



CHARACTERISTIC CURVES

