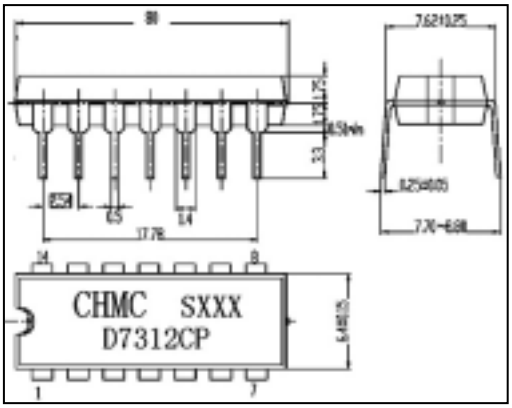
DUAL CHANNEL PRE-AMP. WITH ALC D7312CP

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

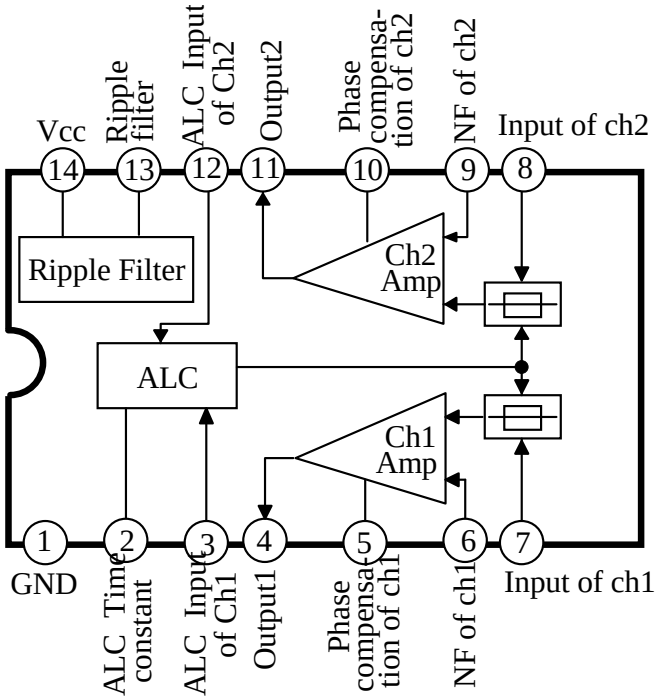


FEATURE

- High open loop gain
- Incorporates ALC detector circuit
- No input coupling condenser
- Low noise and current consumption
- Wide ALC range
- Wide operating voltage range: Vcc=5V ~ 12V

Low Power ON shock noise DIP-14

BLOCK DIAGRAM AND PIN CONNECTION



ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

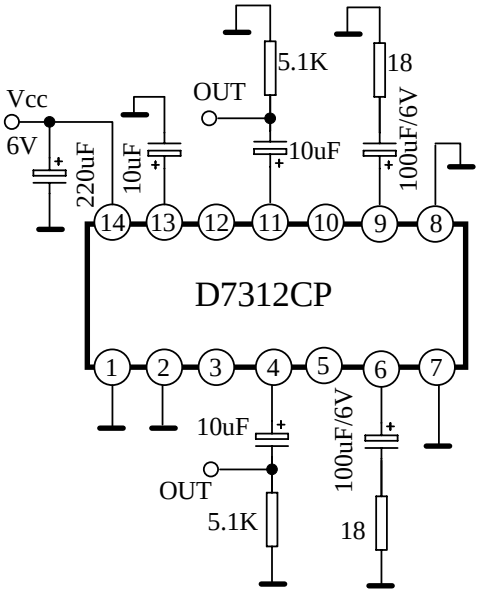
Characteristic	Symbol	Value	Unit
Supply Voltage	Vcc	14	V
Supply Current	Icc	50	mA
Power Dissipation	P_D	700	mW
Operating Temperature	Topr	-55~125	°C
Storage Temperature	Tstg	-65~150	°C

ELECTRICAL CHARACTERISTICS

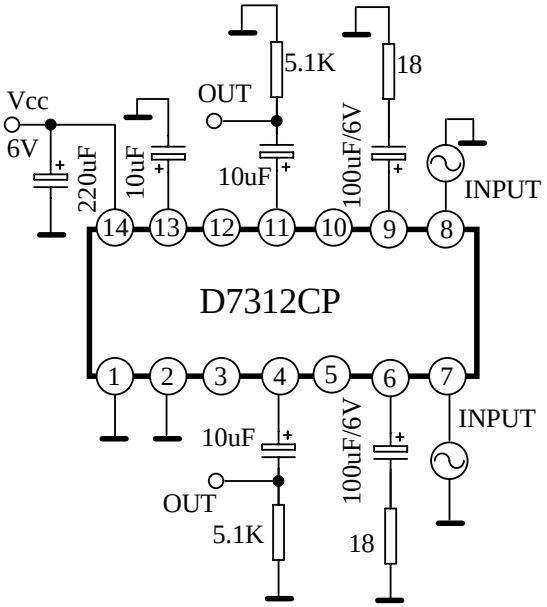
(unless otherwise specified: Ta=25°C, Vcc=6V; f=1kHz， R_L=5.1kΩ)

Characteristics	Test conditions	Symbol	Test Circuit	Min.	Typ.	Max.	Unit
Quiescent Current	Vin=0V	I_{CQ}	1	2.5	4.5	8.0	mA
Operating Voltage		Vcc	1	5.0		12.0	V
Closed-loop Voltage Gain	Vo=0.5V	Gv	2	66	69	72	dB
Total Harmonic Distortion	Vo=0.5V	THD	2		0.5	1.0	%
Output Voltage	THD=1%	Vomax	2	1.2	1.6		V
Output noise Voltage	Rg=0Ω	V_{NO}	1		2.0	5.0	mV
ALC Voltage	Vin=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	Vo=0.5V, CB=Gv1-Gv2	CB	2	-1.0	0	+1.0	dB

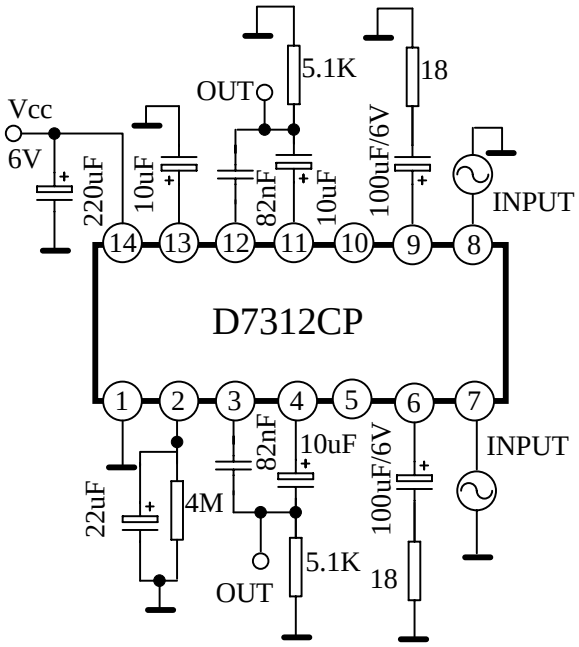
TEST CIRCUIT



Test circuit 1 （I_{CQ}, Vcc，V_{NO}）

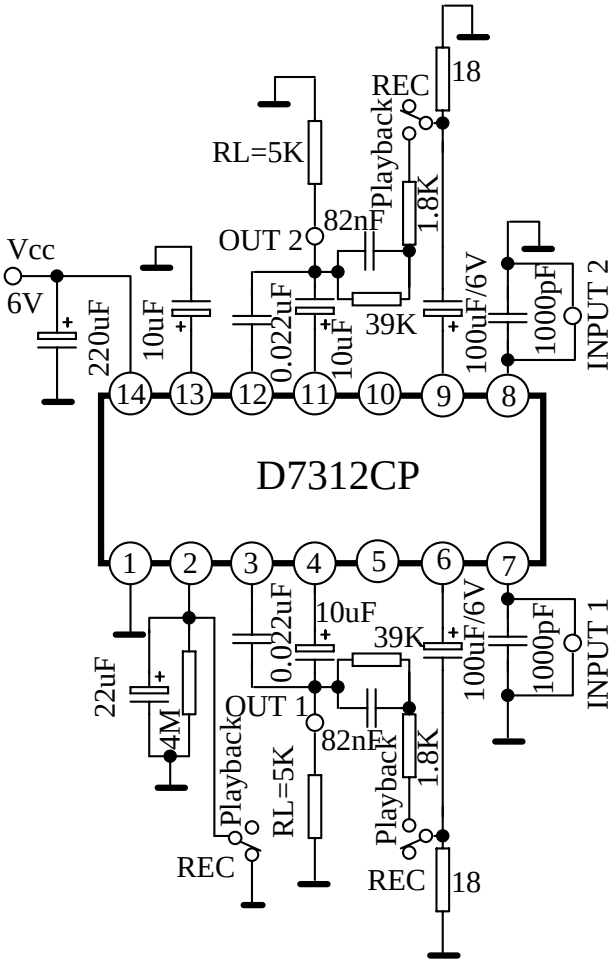


Test circuit 2 （Gv，THD，Vomax，CB）



Test circuit 3 （V_{ALC}，W_{ALC}）

APPLICATION CIRCUIT



CHARACTERISTIC CURVES