

## DUAL RECORDING/PLAYBACK PREAMPLIFIER CIRCUIT WITH ALC——YD7312

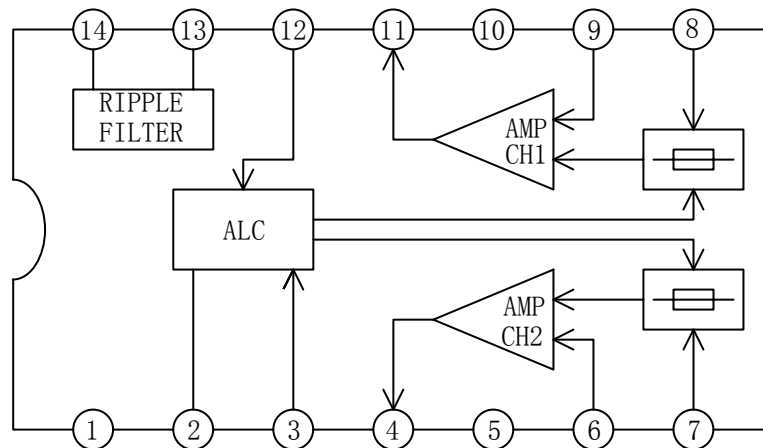
### DESCRIPTION

The YD7312 is a monolithic integrated circuit designed for dual pre-amplifier circuit with ALC for recording/playback amplifier of cassette tape recorder.

### FEATURES

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

### BLICK DIAGRAM



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**OUTLINE FUNCTION**

PIN	Name	Function	PIN	Name	Function
1	GND	GND	8	IN2	Input 2
2	T.C <sub>ALC</sub>	ALC Time Parameter	9	NF2	Feedback 2
3	IN <sub>ALC1</sub>	ALC Input 1	10	P <sub>COM</sub>	Phase Compensation 2
4	OUT1	Output 1	11	OUT2	Output 2
5	P <sub>COM</sub>	Phase Compensation 1	12	IN <sub>ALC2</sub>	ALC Input 2
6	NF1	Feedback 1	13	R.F.	Ripple Filter
7	IN1	Input 1	14	V <sub>cc</sub>	Voltage Supply

**ABSOLUTE MAXIMUM RATINGS (T<sub>amb</sub>=25°C)**

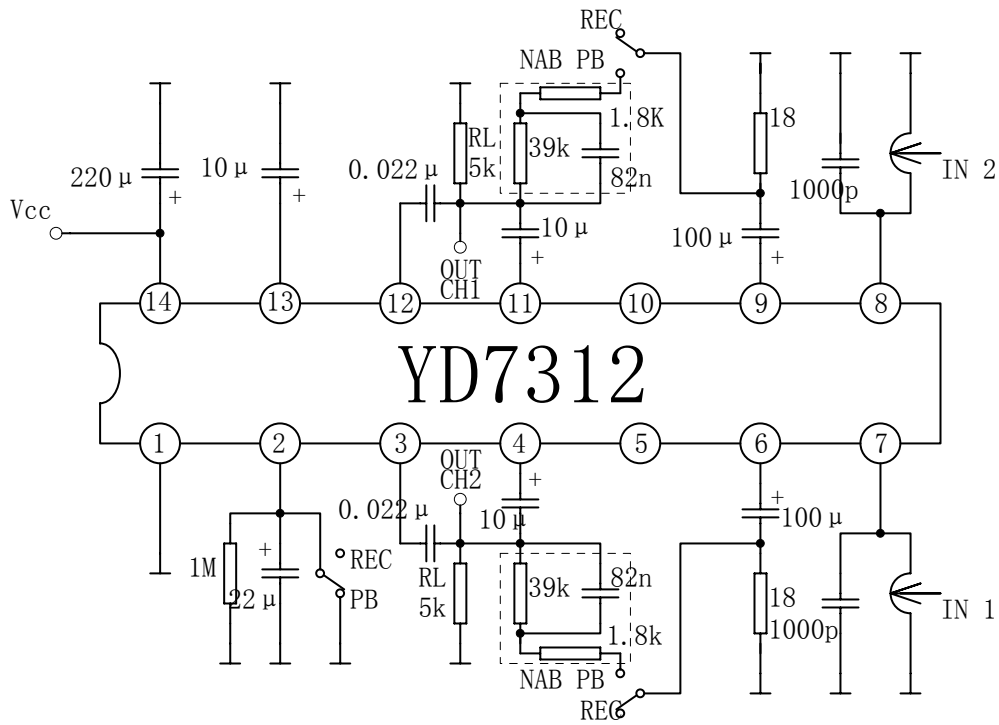
CHARACTERISTIC	SYMBOL	VALUE	UNIT
Supply Voltage	V <sub>cc</sub>	14	V
Supply Current	I <sub>cc</sub>	50	mA
Power Dissipation	P <sub>d</sub>	700	mW
Operating Temperature	T <sub>opr</sub>	-55 to +125	°C
Storage Temperature	T <sub>str</sub>	-65 to +150	°C

**ELECTRICAL CHARACTERISTICS**

(T<sub>amb</sub>=25°C, V<sub>cc</sub>=6V, f=1kHz, unless otherwise specified)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Quiescent Current	I <sub>ccq</sub>	V <sub>in</sub> =0	2.5	4.5	8.0	mA
Operating Voltage	V <sub>cc</sub>		5.0		12.0	V
Closed Loop Voltage Gain	G <sub>v</sub>	V <sub>o</sub> =0.5V	66	69	72	dB
Total Harmonic Distortion	THD	V <sub>o</sub> =0.5V		0.5	1.0	%
Output Voltage	V <sub>o</sub>	THD=1%	1.2	1.6		V
Output Noise Voltage	V <sub>NO</sub>	R <sub>g</sub> =0(internal resistance 1.5kΩ DIN/Audio)		2.0	5.0	mV
ALC Voltage	V <sub>ALC</sub>	V <sub>in</sub> =400μV	0.55	0.63	0.7	V
ALC Width	W <sub>ALC</sub>	Beginning 0dB to 3dB	35	47		dB
ALC Balance	ΔG <sub>v</sub>	V <sub>o</sub> =0.5V	-1	0	+1	dB

APPLICATION CIRCUIT



OUTLINE DRAWING

DIP-14

unit:mm

