

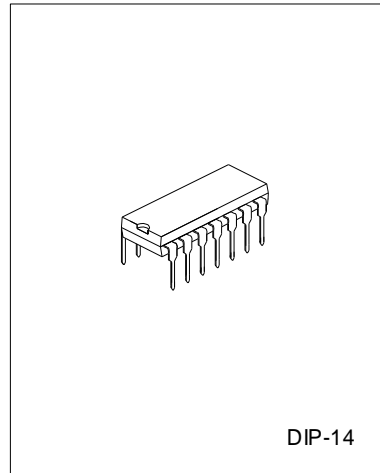
**DUAL  
RECORDING/PLAYBACK  
PRE-AMPLIFIER CIRCUIT  
WITH ALC**

**DESCRIPTION**

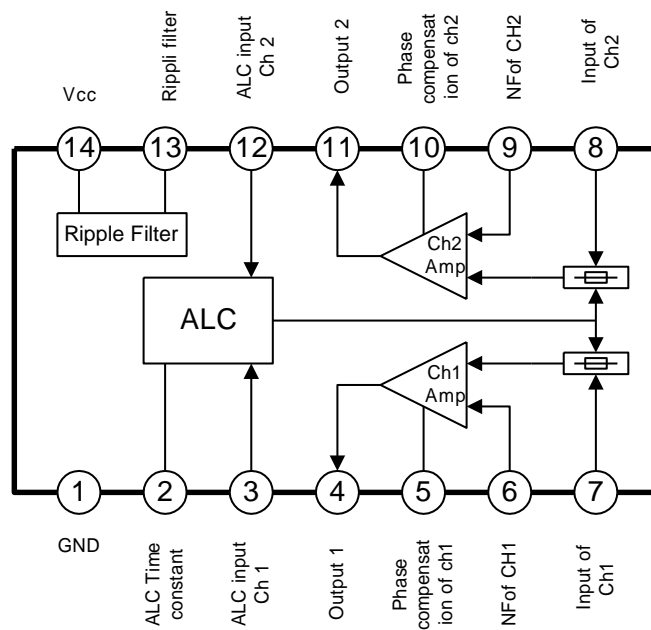
The UTC7312 is a monolithic integrated circuit designed for dual pre-amplifier circuit with ALC for record /playback amplifier of cassette tape recorder.

**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:  $V_{cc}=5V \sim 12V$
- \*Low Power ON shock noise



**BLOCK DIAGRAM**



# UTC7312

# LINEAR INTEGRATED CIRCUIT

## ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

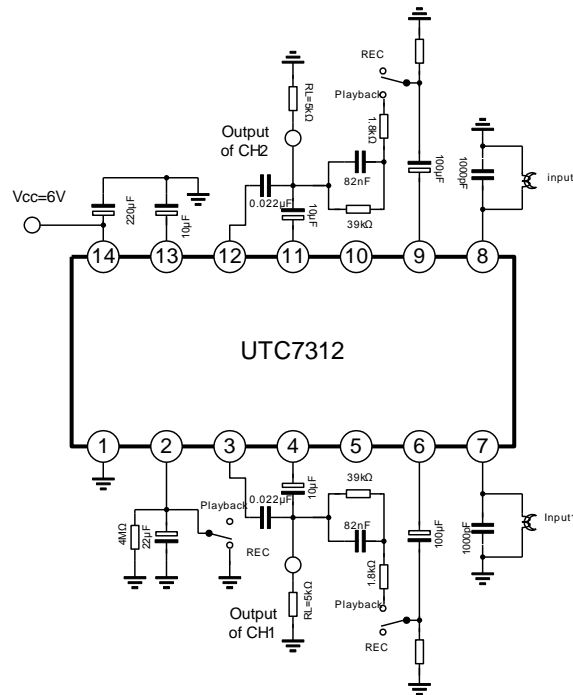
Characteristic	Symbol	Value	Unit
Supply Voltage	Vcc	14	V
Supply Current	Icc	50	mA
Power Dissipation	PD	700	mW
Operating Temperature	Topr	-55 to 125	°C
Storage Temperature	Tstr	-65 to 150	°C

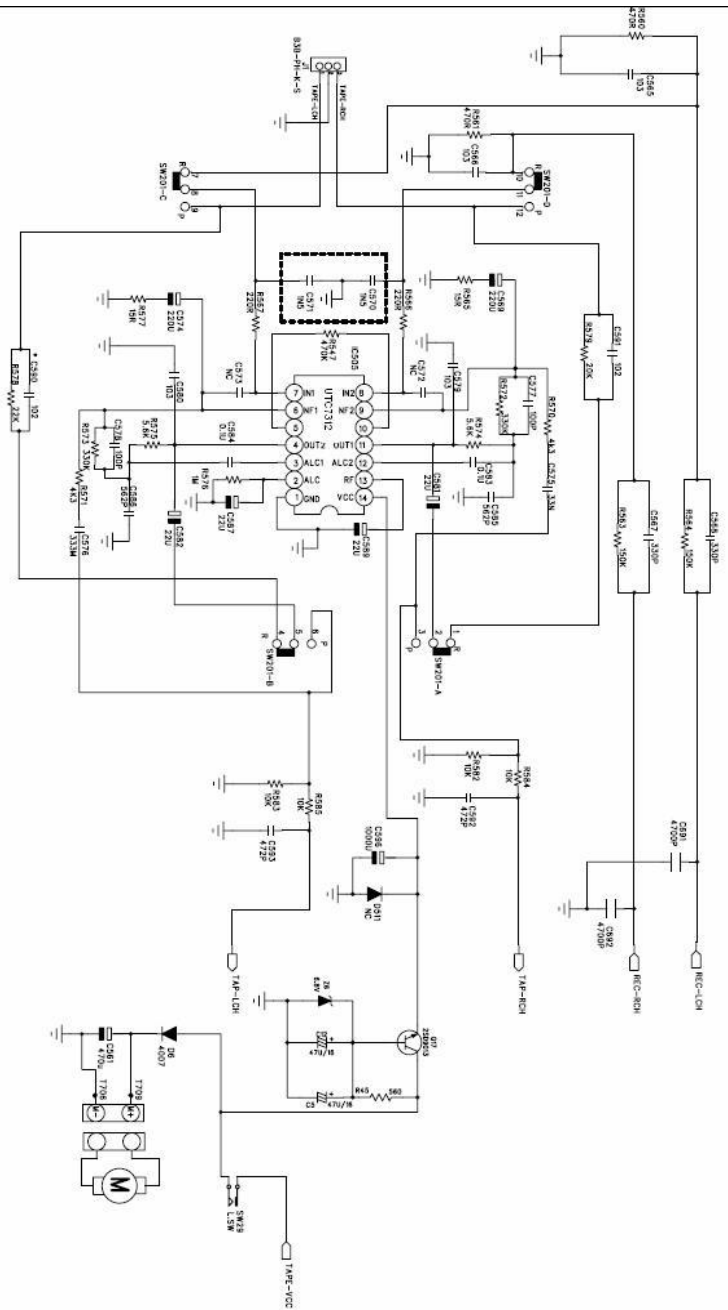
## ELECTRICAL CHARACTERISTICS

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

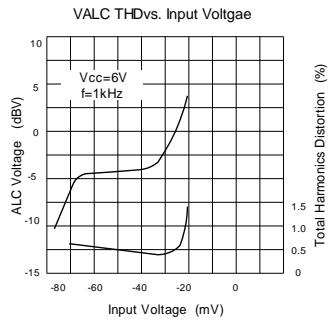
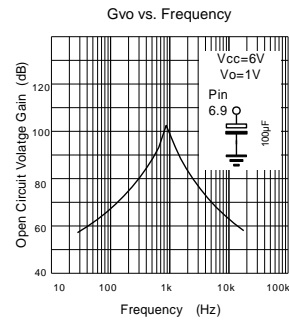
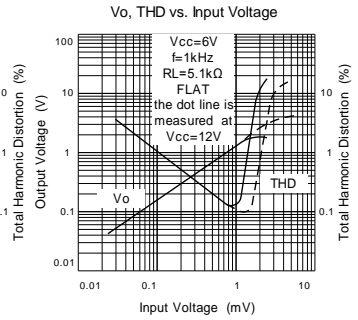
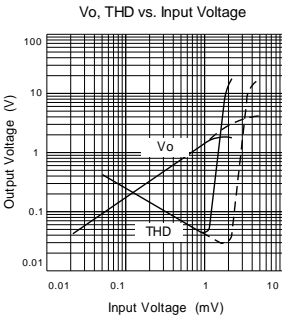
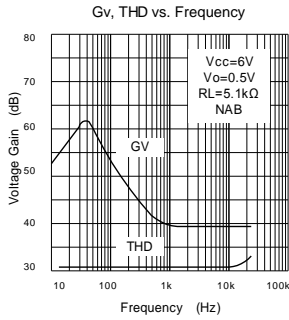
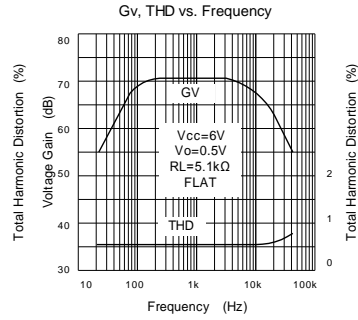
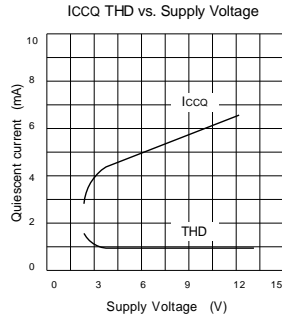
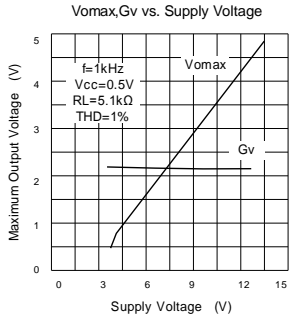
Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Quiescent current	IccQ	Vi=0	2.5	4.5	8.0	mA
Operating voltage	Vcc		5.0		12.0	V
Closed-Loop Voltage Gain	Gvc	Vo=0.5V	66	69	72	dB
Total Harmonic Distortion	THD	Vo=0.5V		0.5	1.0	%
Output Voltage	Vo	THD=1%	1.2	1.6		V
Output noise Voltage	Vno	Rg=0(internal resistance 1.5kΩ) DIN/Audio)		2.0	5.0	mV
ALC Voltage	VALC	Vin=400μV	0.55	0.63	0.7	V
ALC Width	WALC	Beginning 0dB to 3dB	35	47		dB
Channel Balance	CB	Vo=0.5V, CB=Gv1-Gv2	-1	0	+1	dB

## TYPICAL APPLICATION CIRCUIT





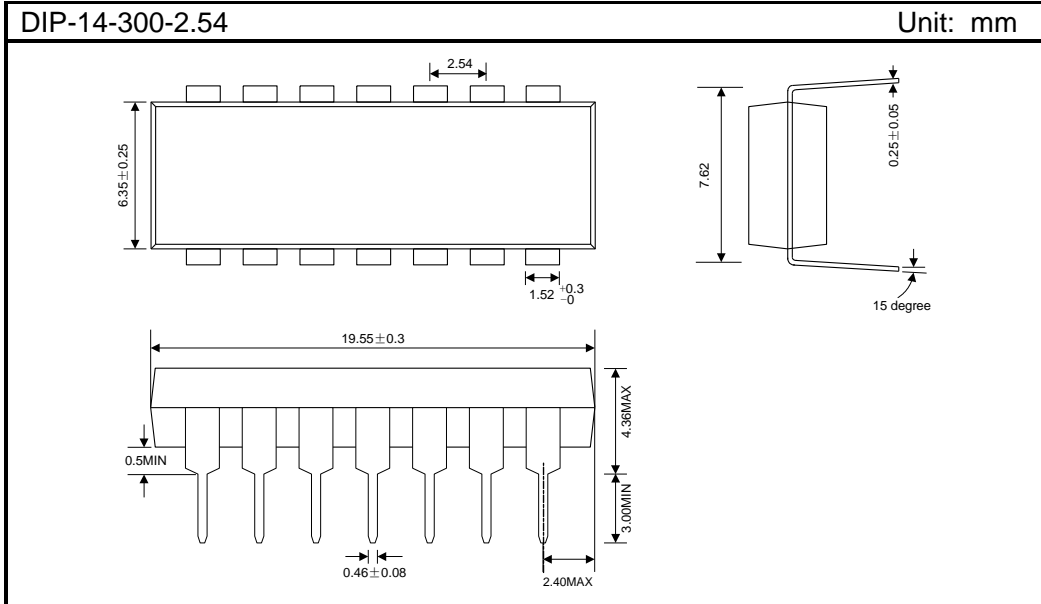
**TYPICAL PERFORMANCE CHARACTERISTICS**



UTC7312

LINEAR INTEGRATED CIRCUIT

**PACKAGE OUTLINE**



**ELECTROSTATIC DISCHARGE CAUTION**

These devices have limited built-in ESD protection. The leads should be shorted together or the device placed in conductive foam during storage handling to prevent electrostatic damage to the devices.

**NOTICE**

HANGZHOU YOUWANG ELECTRONICS CO.LTD assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all HANGZHOU YOUWANG ELECTRONICS CO.LTD's products described or contained herein. HANGZHOU YOUWANG ELECTRONICS CO.LTD's products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. The information presented in this document does not form part of any quotation or contract, is believed to be accurate and reliable and may be changed without notice.

**Attach****Revision History**

<b>Data</b>	<b>REV</b>	<b>Description</b>	<b>Page</b>
	1.0	Original	
2007.11.28	1.1	Add picture is on page third	3
2017.09.18	1.2	Add "Electrostatic Discharge Caution" and "NOTICE", and" PACKAGE OUTLINE"	