

# AN7320

## 前置増幅回路/Pre-Amplifier Circuit

### ■ 概要

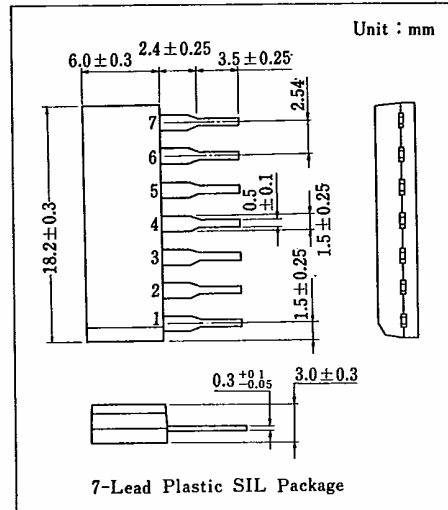
AN7320 は、低電圧動作のプリアンプ用半導体集積回路です。

### ■ 特徴

- 高利得・高出力で、低歪率・低雑音
- 動作電源電圧範囲が広い:  $V_{CC} = 2.2\text{ V} \sim 14.4\text{ V}$
- ALC 範囲が広い (Input:  $0.1\text{ mV} \sim 10\text{ mV}$ )

### ■ Features

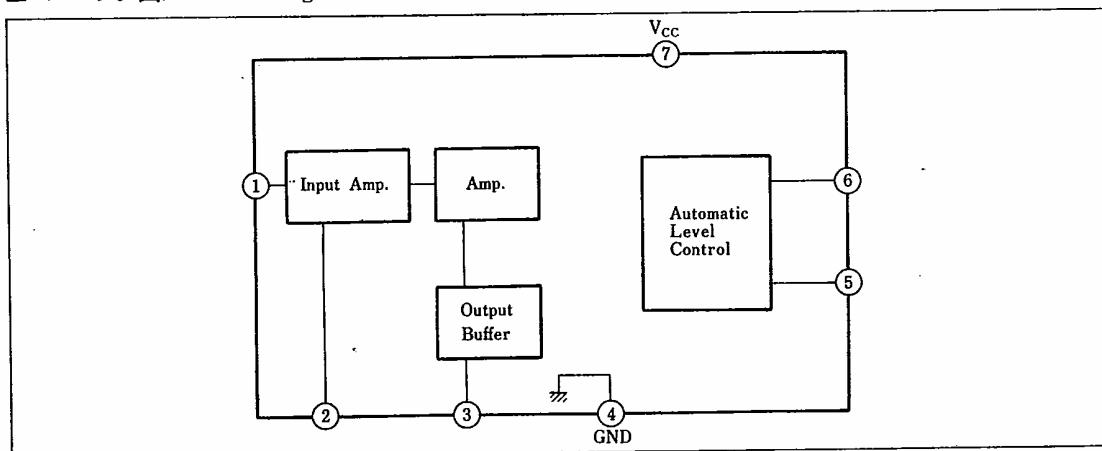
- High gain, high power, low distortion and low noise
- Wide supply voltage range ( $V_{CC} = 2.2\text{ V} \sim 14.4\text{ V}$ )
- Wide automatic level control (ALC)  
(Input:  $0.1\text{ mV} \sim 10\text{ mV}$ )



### ■ 端子名/Pin

Pin No.	端子名	Pin Name
1	入力	Input
2	負帰還	Neg. Feedback
3	出力	Output
4	アース	GND
5	ALC 出力	ALC Output
6	ALC 入力	ALC Input
7	電源電圧	V <sub>CC</sub>

### ■ ブロック図/Block Diagram



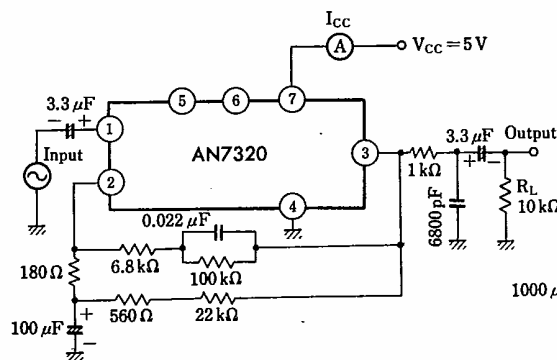
■ 絶対最大定格/Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Rating	Unit
電源電圧	V <sub>CC</sub>	14.4	V
電源電流	I <sub>CC</sub>	10	mA
回路電流	I <sub>S</sub>	80	mA
許容損失 (Ta=75°C)	P <sub>D</sub>	270	mW
動作周囲温度	T <sub>opr</sub>	-25 ~ +75	°C
保存温度	T <sub>stg</sub>	-55 ~ +150	°C

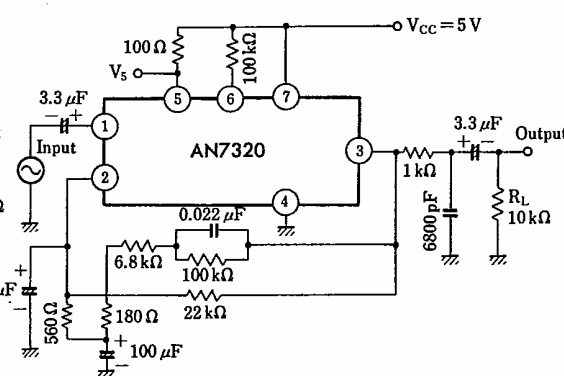
■ 電気的特性/Electrical Characteristics (V<sub>CC</sub>=5V, R<sub>L</sub>=10kΩ, f=1kHz, Ta=25°C)

Item	Symbol	Test Circuit	Condition	min.	typ.	max.	Unit
静止回路電流	I <sub>CO</sub>	1	V <sub>i</sub> =0 mV	0.9	1.5	2.2	mA
開回路電圧利得	G <sub>VO</sub>	2	V <sub>i</sub> =-80 dB		-70		dB
閉回路電圧利得	G <sub>VC</sub>	1	V <sub>i</sub> =-50 dB		33.5		dB
出力電圧	V <sub>O</sub>	1	THD=1%	0.7	1		V
入力抵抗	R <sub>i</sub>	1			100		kΩ
入力換算雑音電圧	V <sub>ni</sub>	1	R <sub>g</sub> =2.2 kΩ		1.2	2	μV
ALC Tr コレクタ電圧	V <sub>S</sub>	2	⑩-⑥ 100 kΩ, ⑦-⑤ 100Ω		0.7		V

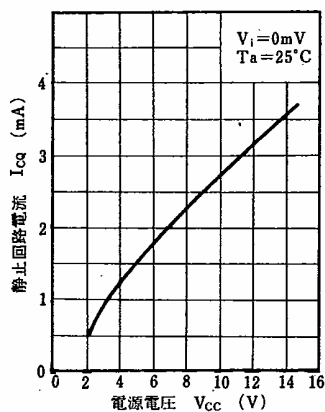
Test Circuit 1 (I<sub>CO</sub>, G<sub>VC</sub>, V<sub>O</sub>, R<sub>i</sub>, V<sub>ni</sub>)



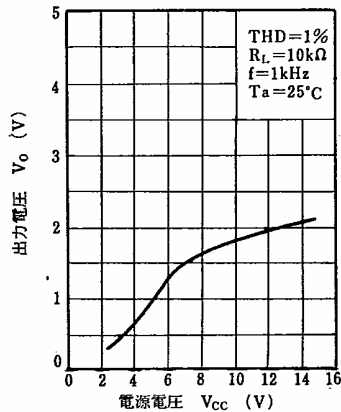
Test Circuit 2 (G<sub>VO</sub>, V<sub>S</sub>)



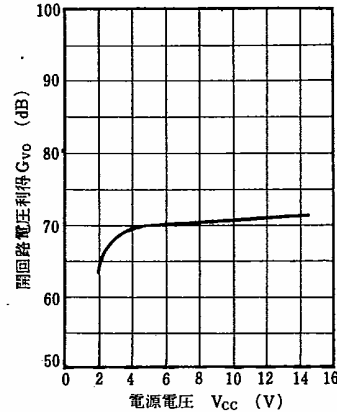
I<sub>CO</sub> - V<sub>CC</sub>

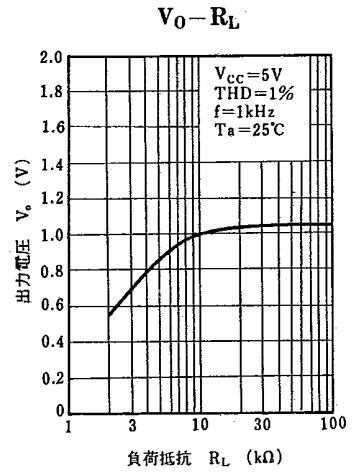
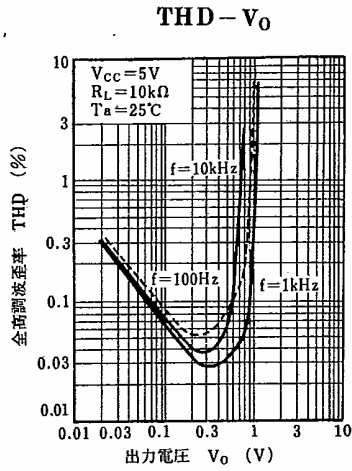
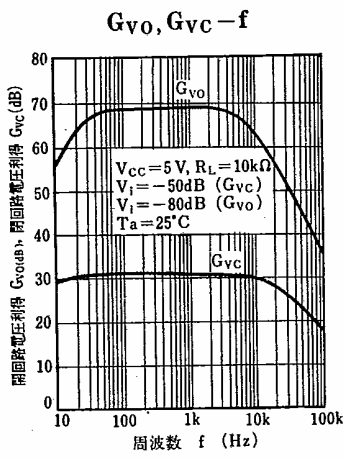


V<sub>O</sub> - V<sub>CC</sub>

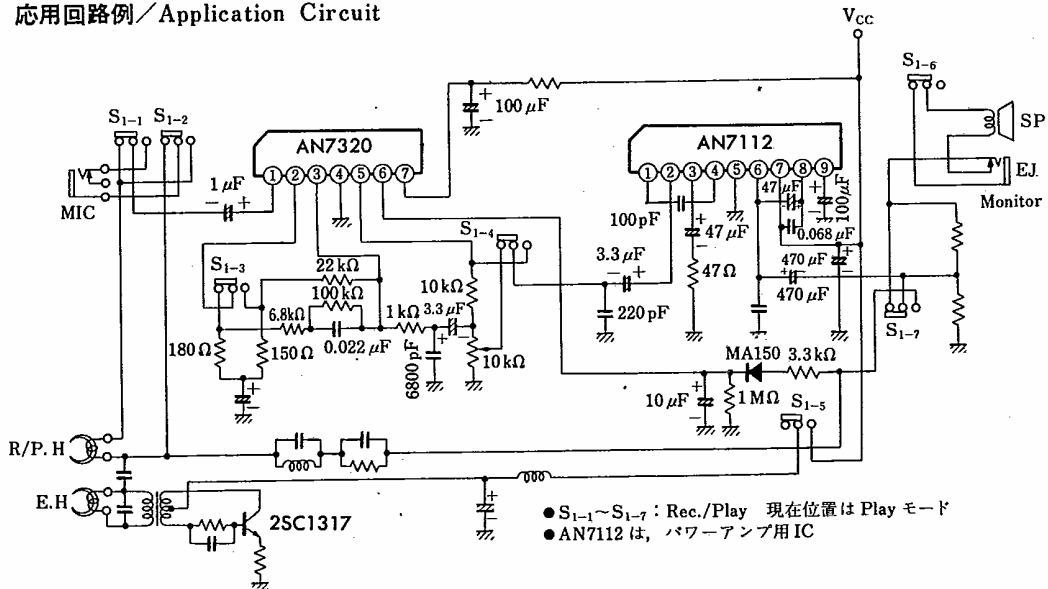


G<sub>VO</sub> - V<sub>CC</sub>

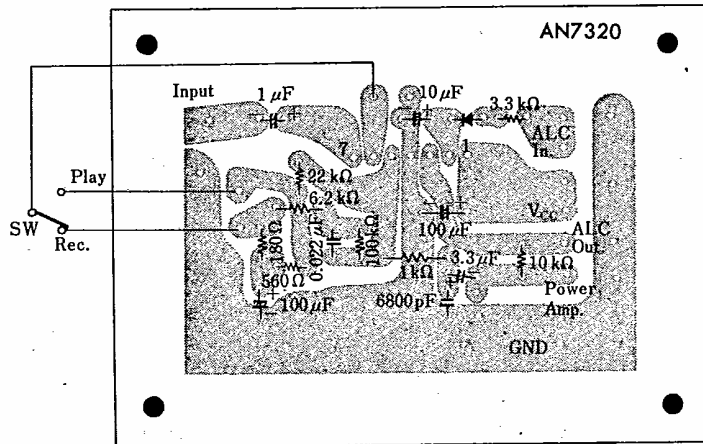




## ■ 応用回路例 / Application Circuit



## ■ プリント板パターン例 / Printed Circuit Board Layout



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