AN7320

前置増幅回路／Pre-Amplifier Circuit

■ 概　要

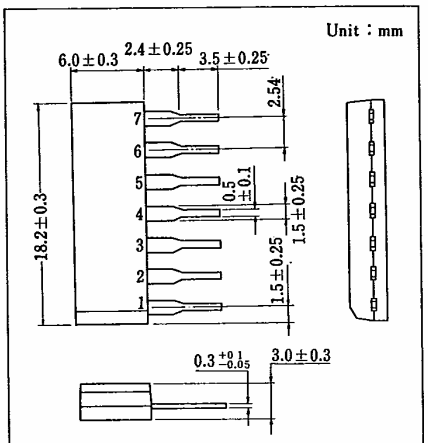
AN7320 は，低電圧動作のプリアンプ用半導体集積回路です。

■ 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：Vcc＝2.2 V～14.4 V
- ALC 範囲が広い（Input：0.1 mV～10 mV）

■ Features

- High gain, high power, low distortion and low noise
- Wide supply voltage range (Vcc＝2.2 V～14.4 V)
- Wide automatic level control (ALC)
  (Input：0.1 mV～10 mV)

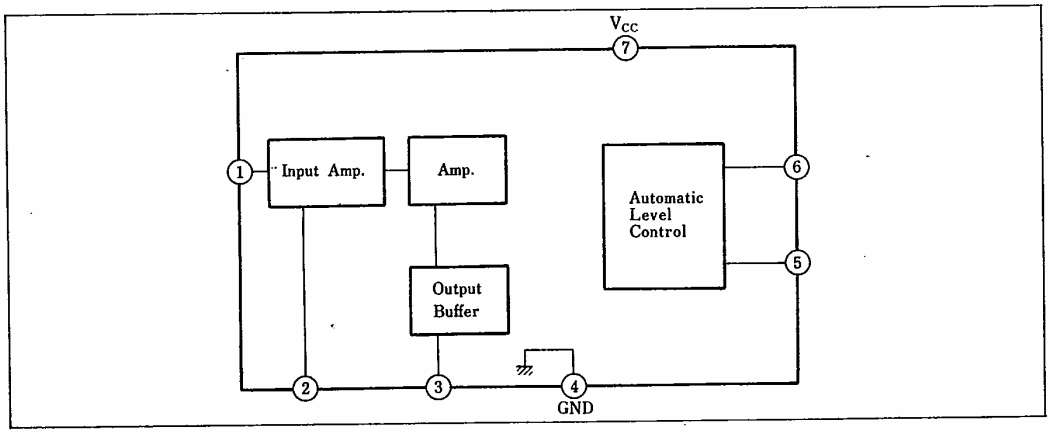


7-Lead Plastic SIL Package

■ 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	Vcc

■ ブロック図／Block Diagram



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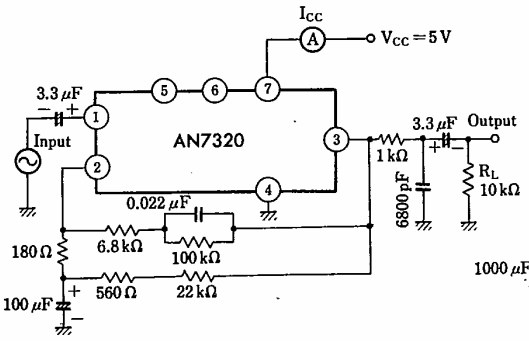
■ 絶対最大定格／Absolute Maximum Ratings（Ta＝25°C）

Item	Symbol	Rating	Unit
電源電圧	V_{CC}	14.4	V
電源電流	I_{CC}	10	mA
回路電流	I_5	80	mA
許容損失（Ta＝75°C）	P_D	270	mW
動作周囲温度	T_{opr}	−25～+75	°C
保存温度	T_{stg}	−55～+150	°C

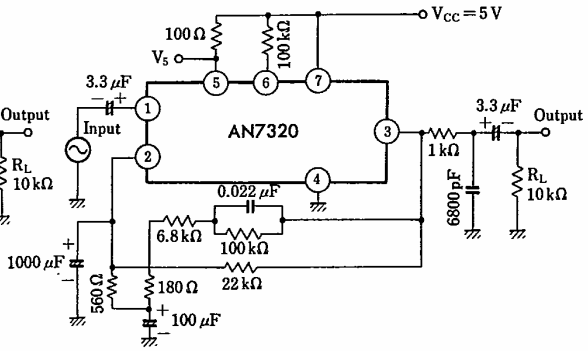
■ 電気的特性／Electrical Characteristics（V_{CC}＝5V, R_L＝10kΩ, f＝1kHz, Ta＝25°C）

Item	Symbol	Test Circuit	Condition	min.	typ.	max.	Unit
静止回路電流	I_{CQ}	1	V_i＝0 mV	0.9	1.5	2.2	mA
開回路電圧利得	G_{VO}	2	V_i＝−80 dB		−70		dB
閉回路電圧利得	G_{VC}	1	V_i＝−50 dB		33.5		dB
出力電圧	V_O	1	THD＝1％	0.7	1		V
入力抵抗	R_i	1			100		kΩ
入力換算雑音電圧	V_{ni}	1	R_g＝2.2 kΩ		1.2	2	μV
ALC Tr コレクタ電圧	V_5	2	⑪−⑥ 100 kΩ, ⑦−⑤ 100Ω		0.7		V

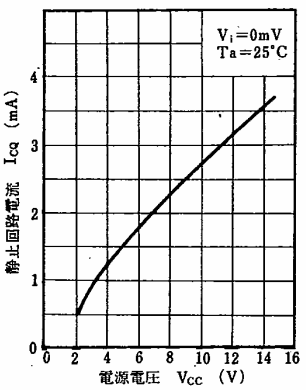
Test Circuit 1（I_{CQ}, G_{VC}, V_O, R_i, V_{ni}）



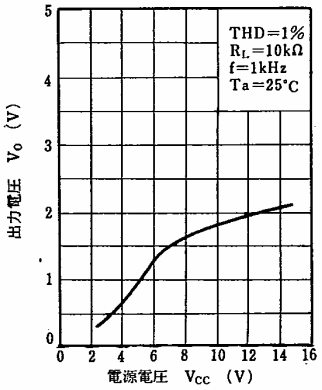
Test Circuit 2（G_{VO}, V_5）



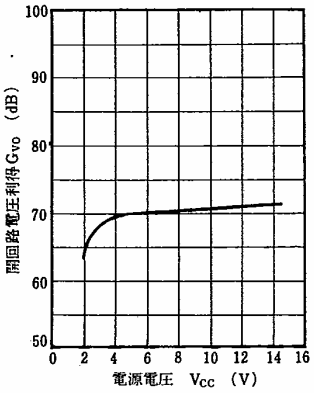
I_{CQ} − V_{CC}



V_O − V_{CC}



G_{VO} − V_{CC}



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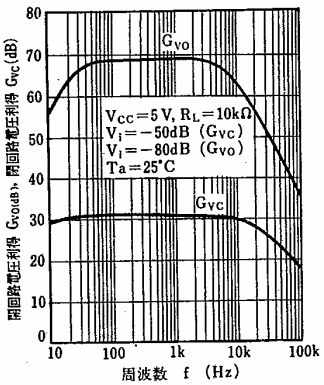
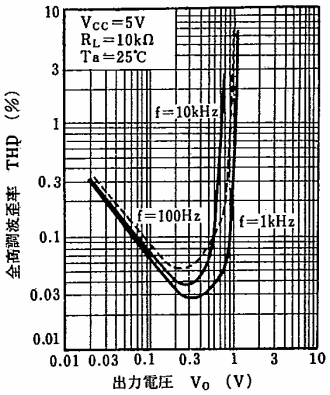
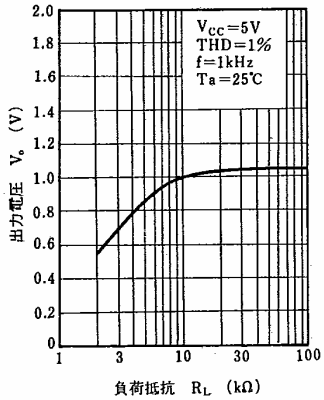
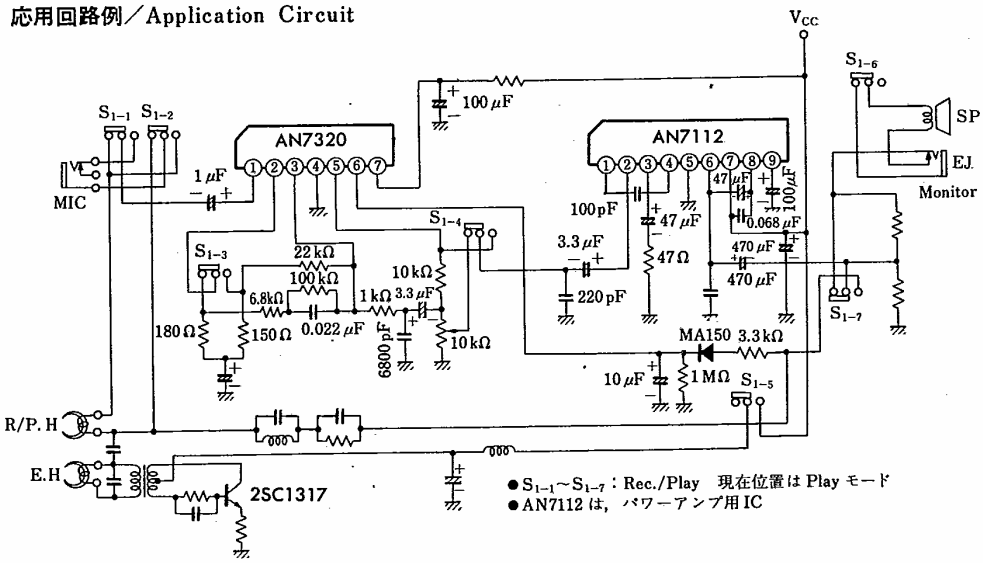


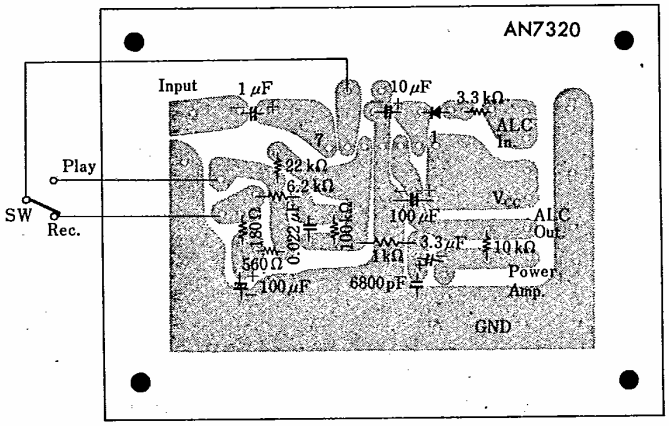




■ 応用回路例／Application Circuit



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



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