

# AN6321

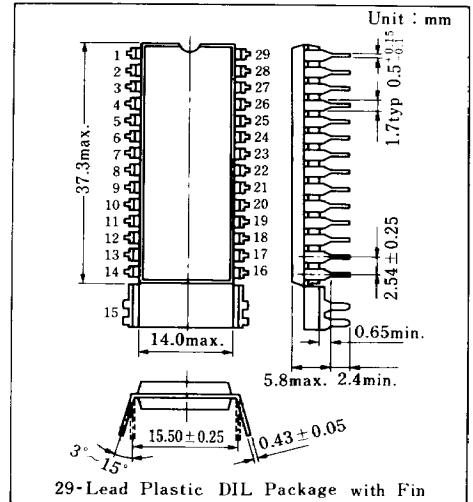
## VTR 再生映像信号処理回路 / VTR Playback Video Signal Processing Circuit

### ■ 概要 / Description

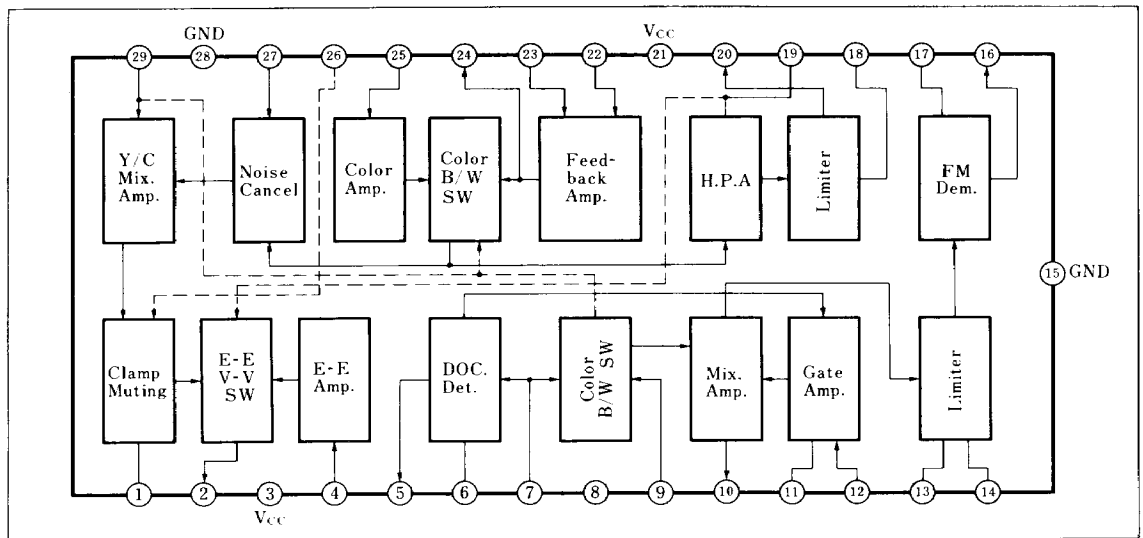
AN6321 は、VTR の再生映像信号処理用半導体集積回路です。

### ■ 特徴 / Features

- AN 6321 は次の機能を有している
  - ドロップアウト補償回路
  - FM復調回路
  - ノイズキャンセラ回路
  - ミキサ増幅回路
  - リミッタ回路
- 集積度が高く包含機能が多い
- 電源電圧 9V および 12V の使用可能
- The functions consist of ;
  - Drop-out compensation circuit
  - FM demodulator
  - Noise canceller circuit
  - Mixer amplifier circuit
  - Limiter circuit
- High density integration
- Supply voltage either 9V or 12V



### ■ ブロック図 / Block Diagram



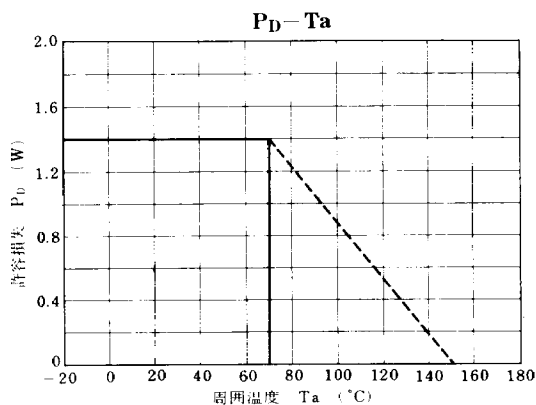
### ■ 絶対最大定格/Absolute Maximum Ratings (Ta=25°C)

Item	Symbol	Rating	Unit
電源電圧	V <sub>3 15, 28</sub>	14.4	V
	V <sub>21-15, 28</sub>	14.4	V
許容損失	P <sub>D</sub>	1.4	W
温度	動作周囲温度	-20 ~ +70	°C
	保存温度	-40 ~ +150	°C

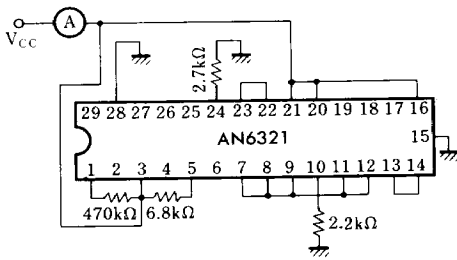
### ■ 電気的特性/Electrical Characteristics (Ta=25°C)

Item	Symbol	Test Circuit	Condition	min.	typ.	max.	Unit	
全回路電流	I <sub>tot</sub>	1	V <sub>CC</sub> =12V	60		104	mA	
電圧利得 (RF Amp.)	G <sub>V7 10</sub>	2	V <sub>CC</sub> =12V, f=4MHz, V <sub>i</sub> =0.5V <sub>p-p</sub>	3		6	dB	
電圧利得 (DOC Amp.)	G <sub>V12 10</sub>	3	V <sub>CC</sub> =12V, f=4MHz, V <sub>i</sub> =0.2V <sub>p-p</sub>	9		12	dB	
感 度	DOC Det. ON	S <sub>(1)</sub>	V <sub>CC</sub> =12V, 0dB=0.5V <sub>p-p</sub>	-25.5			dB	
	DOC Det. OFF	S <sub>(2)</sub>					-17	dB
	Demod	S <sub>(3)</sub>			5	V <sub>CC</sub> =12V, f=3.5~4.5MHz	270	
限界周波数 (Demod Det.)	f <sub>(lim)</sub>	5	V <sub>CC</sub> =12V, C=27pF, V <sub>i</sub> =0.5V <sub>p-p</sub>	6			MHz	
キャリアリーク (Demod)	CL	6	V <sub>CC</sub> =12V, f=4MHz, V <sub>i</sub> =0.5V <sub>p-p</sub>			-30	dB	
電圧利得	Video Amp. Color	G <sub>V25 2</sub>	V <sub>CC</sub> =12V, f=100kHz, V <sub>i</sub> =0.5V <sub>p-p</sub>	11		14	dB	
	Video Amp. B/W	G <sub>V22-2</sub>	V <sub>CC</sub> =12V, f=100kHz, V <sub>i</sub> =0.4V <sub>p-p</sub>	12.5		15.5	dB	
振 幅 (High Pass Amp.)	v	8	V <sub>CC</sub> =12V, f=3MHz, V <sub>i</sub> =0.5V <sub>p-p</sub>	0.25		0.6	V <sub>p-p</sub>	
電圧利得	High Pass Amp.	G <sub>V25-20</sub>	V <sub>CC</sub> =12V, f=3MHz, V <sub>i</sub> =10mV <sub>p-p</sub>	16		21.5	dB	
	Chroma Amp.	G <sub>V29 2</sub>	V <sub>CC</sub> =12V, f=3MHz, V <sub>i</sub> =0.3V <sub>p-p</sub>	9.5		12.5	dB	
	E-E Amp.	G <sub>V4 2</sub>	V <sub>CC</sub> =12V, f=100kHz, V <sub>i</sub> =0.5V <sub>p-p</sub>	11		14	dB	
感 度 (E-E/V-V SW)	1	S <sub>(4)</sub>	V <sub>CC</sub> =12V			4	V	
	2	S <sub>(5)</sub>			10		V	
感 度	Color/BW SW	S <sub>(6)</sub>				1	V	
	Muting	S <sub>(7)</sub>				1.5	V	
クロスト ーク	Color/BW	CT <sub>(1)</sub>				-40	dB	
	Muting	CT <sub>(2)</sub>		V <sub>CC</sub> =12V, f=3MHz			-40	dB
	E-E/V-V	CT <sub>(3)</sub>		V <sub>i</sub> =0.5V <sub>p-p</sub>			-40	dB
第二高調波歪 (Video Amp. Color)	D <sub>2f</sub>	7				-40	dB	

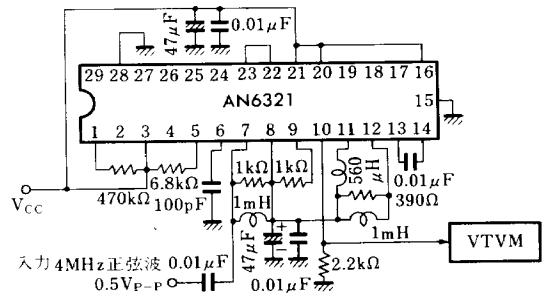
注) 動作電源電圧範囲 V<sub>CC(opr)</sub>=8.8~13V



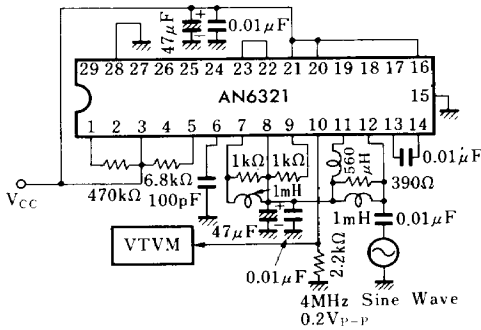
Test Circuit 1 ( $I_{tot}$ )



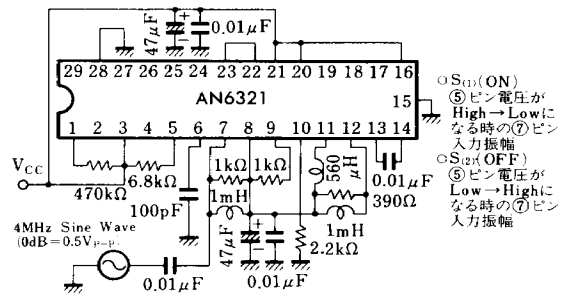
Test Circuit 2 ( $G_{V7-10}$ )



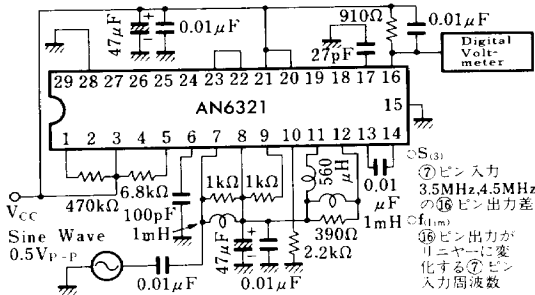
Test Circuit 3 ( $G_{V12-10}$ )



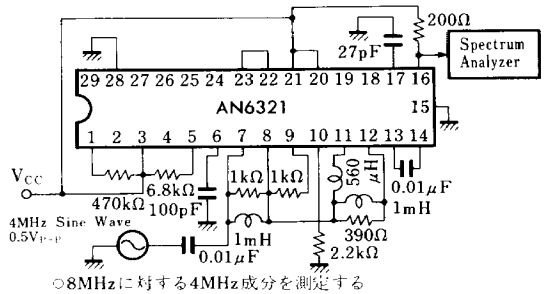
Test Circuit 4 ( $S_{(1)}$ ,  $S_{(2)}$ )



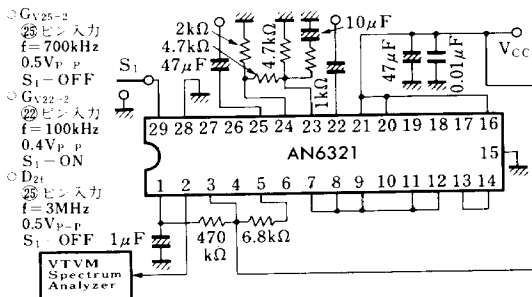
Test Circuit 5 ( $S_{(3)}$ ,  $f_{(lim)}$ )



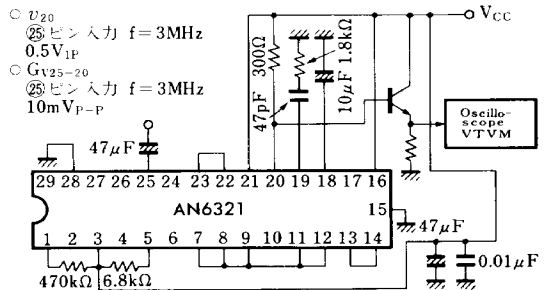
Test Circuit 6 (CL)



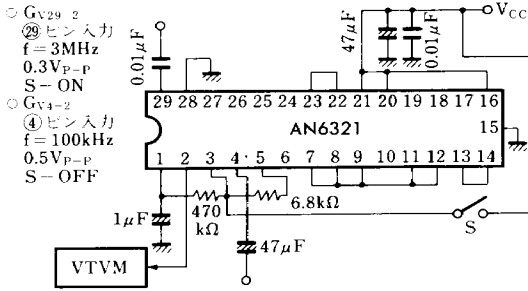
Test Circuit 7 ( $G_{V25-2}$ ,  $G_{V22-2}$ ,  $D_{2f}$ )



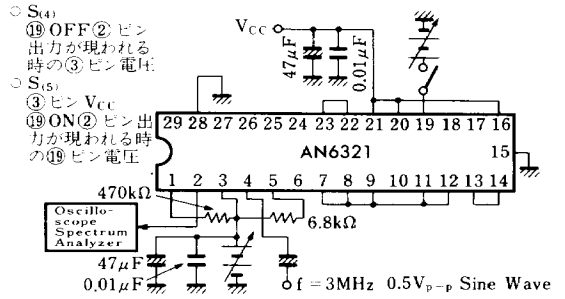
Test Circuit 8 ( $v$ ,  $G_{V25-20}$ )



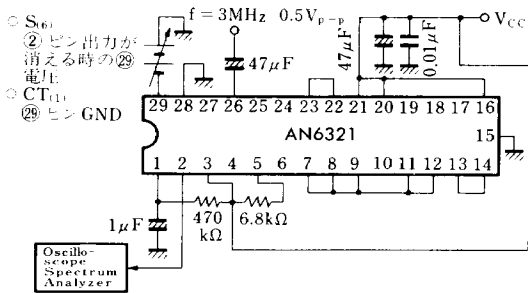
Test Circuit 9 (Gv<sub>29-2</sub>, Gv<sub>4-2</sub>)



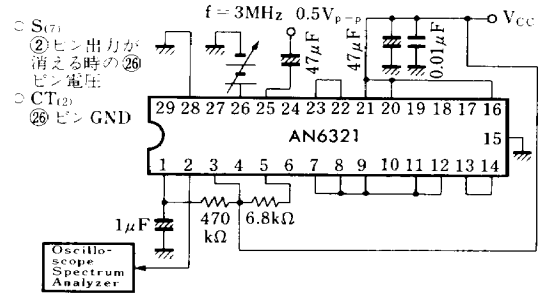
Test Circuit 10 (S<sub>(4)</sub>, S<sub>(5)</sub>, CT<sub>(3)</sub>)



Test Circuit 11 (S<sub>(6)</sub>, CT<sub>(1)</sub>)



Test Circuit 12 (S<sub>(7)</sub>, CT<sub>(2)</sub>)



■ 応用回路例 / Application Circuit

