

AN6300

VTR 記録映像信号処理回路 / VTR Recording Video Signal Processing Circuit

■ 概要 / Description

AN6300 は、VTR の記録映像信号処理用半導体集積回路です。

■ 特徴 / Features

- AN6300 は次の機能を有している

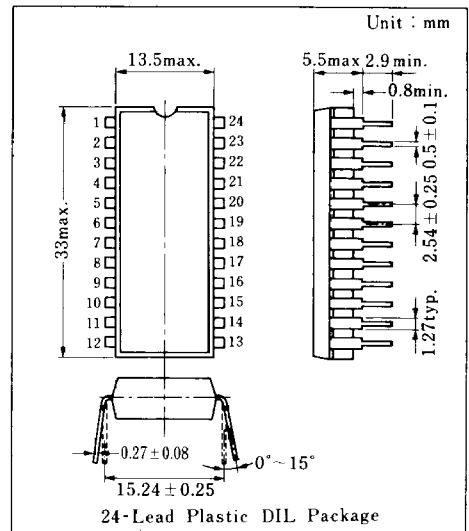
映像信号 AGC 回路
 プリエンファシス回路
 FM 変調回路
 同期分離回路
 ホワイト / ダーククリップ

- キード方式 AGC
- 電源電圧 9V および 12V の使用可能

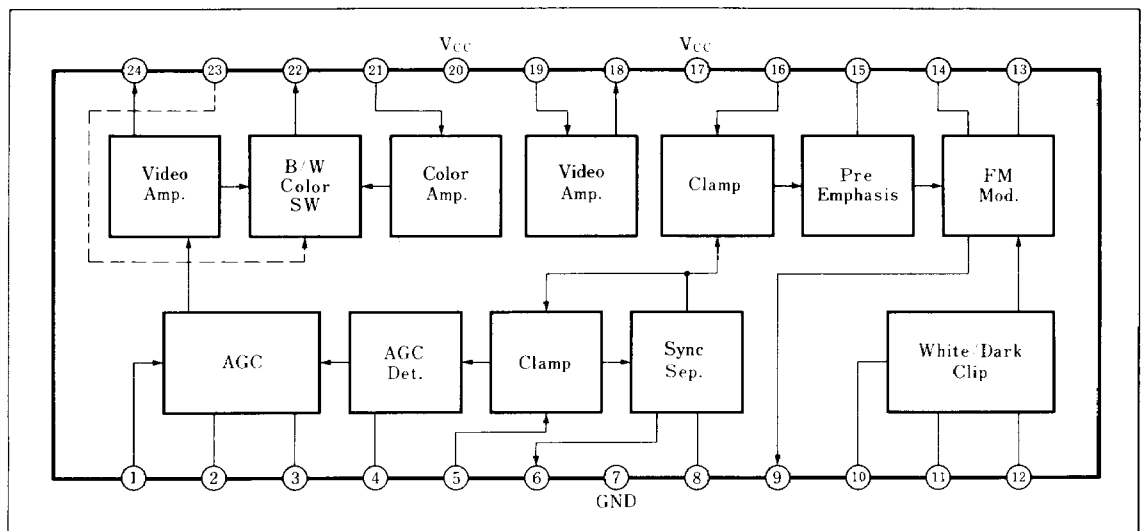
- The functions consist of;

Video signal AGC circuit
 Pre-emphasis circuit
 FM modulator
 Synchro separator
 White/dark clip

- Keyed AGC
- Supply voltage either 9V or 12V



■ ブロック図 / Block Diagram



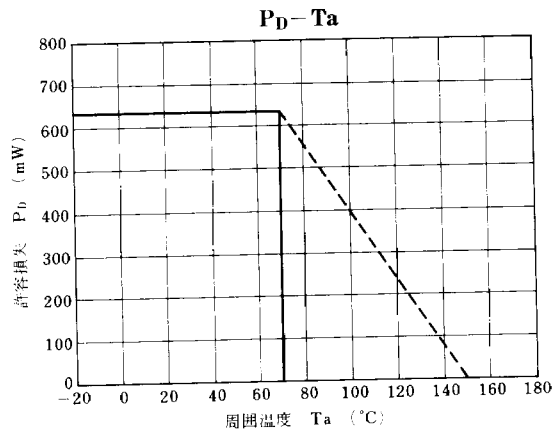
■ 絶対最大定格/Absolute Maximum Ratings (Ta=25°C)

Item		Symbol	Rating	Unit
電源電圧		V_{17-7}, V_{20-7}	14.4	V
許容損失		P_D	630	mW
温度	動作周囲温度	T_{opr}	-20 ~ +70	°C
	保存温度	T_{stg}	-40 ~ +150	°C

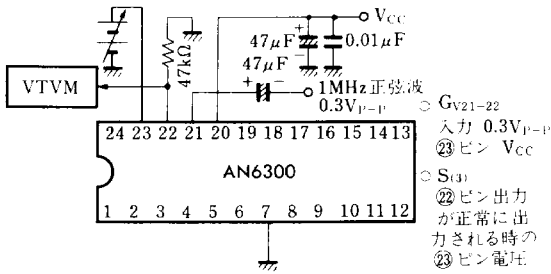
■ 電気的特性/Electrical Characteristics (Ta=25°C)

Item	Symbol	Test Circuit	Condition	min.	typ.	max.	Unit	
全回路電流	I_{tot}	1	$V_{CC} = 12V$	30		50	mA	
振 幅 (AGC Out)	$v_{(1)}$	2	$V_{CC} = 12V, V_i = 0.5V_{p-p}$	0.45		0.95	V_{p-p}	
感 度 (AGC Control)	$S_{(1)}$	2	$V_{CC} = 12V, V_i = 0.25 \sim 1V_{p-p}$			2	dB	
感 度 (S. Sync. Sep. In)	$S_{(2)}$	3	$V_{CC} = 12V$	0.4			V_{p-p}	
振 幅 (S. Sync. Sep. Out)	$v_{(2)}$	3	$V_{CC} = 12V$	5.7		6.7	V_{0-p}	
電圧利得 (Color Amp.)	G_{V21-22}	4	$V_{CC} = 12V, f = 1MHz, V_i = 0.3V_{p-p}$	6.5		9.5	dB	
感 度 (Color/BW Switch)	$S_{(3)}$	4	$V_{CC} = 12V$	4			V	
電圧利得 (Video Amp.)	G_{V19-18}	5	$V_{CC} = 12V, f = 1MHz, V_i = 0.3V_{p-p}$	10.5		13.5	dB	
発振周波数 (FM Mod.)	f_{osc}	6	$V_{CC} = 12V, C = 100pF$ $R = 2.2k\Omega$	3.3		4.1	MHz	
第二高調波歪率 (FM Mod. Osc)	D_{2f}	6					-40	dB
振 幅 (FM Mod. Out)	$v_{(3)}$	6			1.1		1.6	V_{p-p}
制御感度 (FM Mod.)	β	7			1.7		2.2	MHz/V

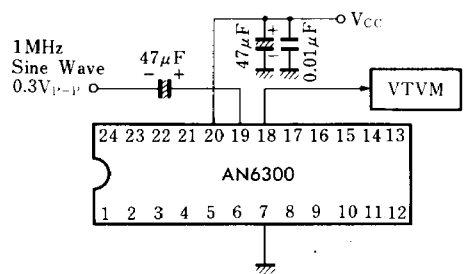
注) 動作電源電圧範囲 $V_{CC(oper)} = 8.8 \sim 13V$



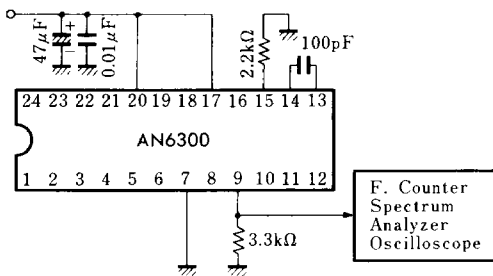
Test Circuit 1 (I_{tot})



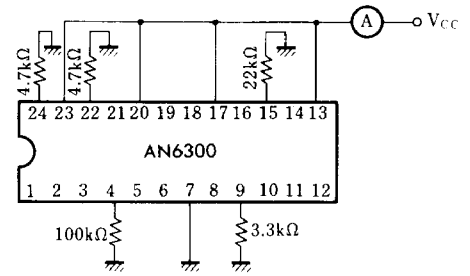
Test Circuit 2 ($v_{(1)}$, $S_{(1)}$)



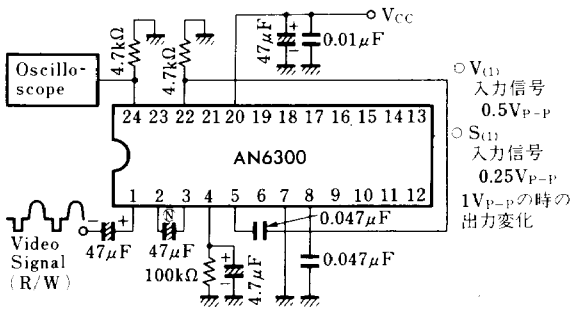
Test Circuit 3 ($S_{(2)}$, $v_{(2)}$)



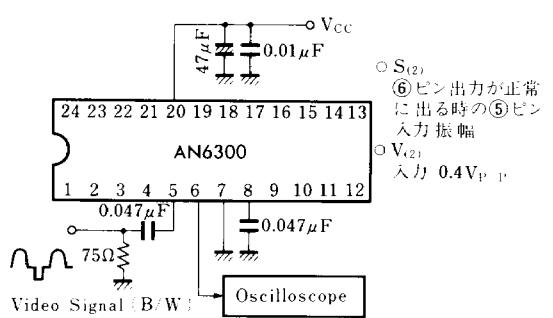
Test Circuit 4 (G_{V21-22} , $S_{(3)}$)



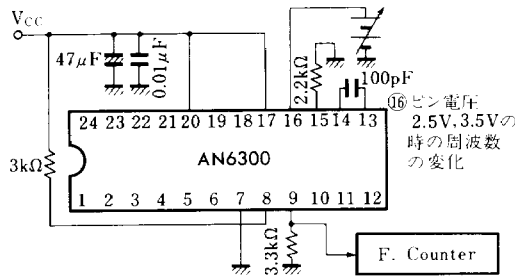
Test Circuit 5 (G_{V19-18})



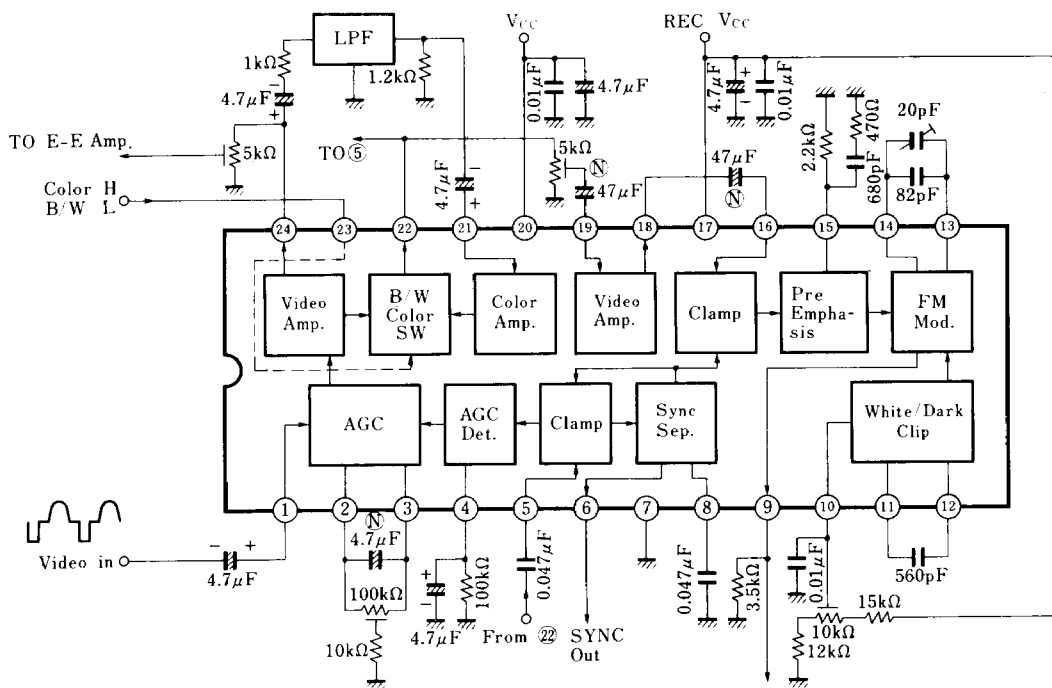
Test Circuit 6 (f_{osc} , D_{2f} , $v_{(3)}$)



Test Circuit 7 (β)



■ 応用回路例 / Application Circuit



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