AN6326N

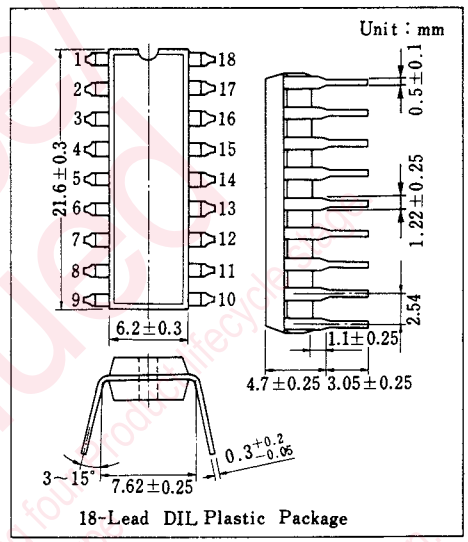
VTR Head Amplifier Circuit

■ Outline

The AN6326N is an integrated circuit designed for VTR'S head amplifier.

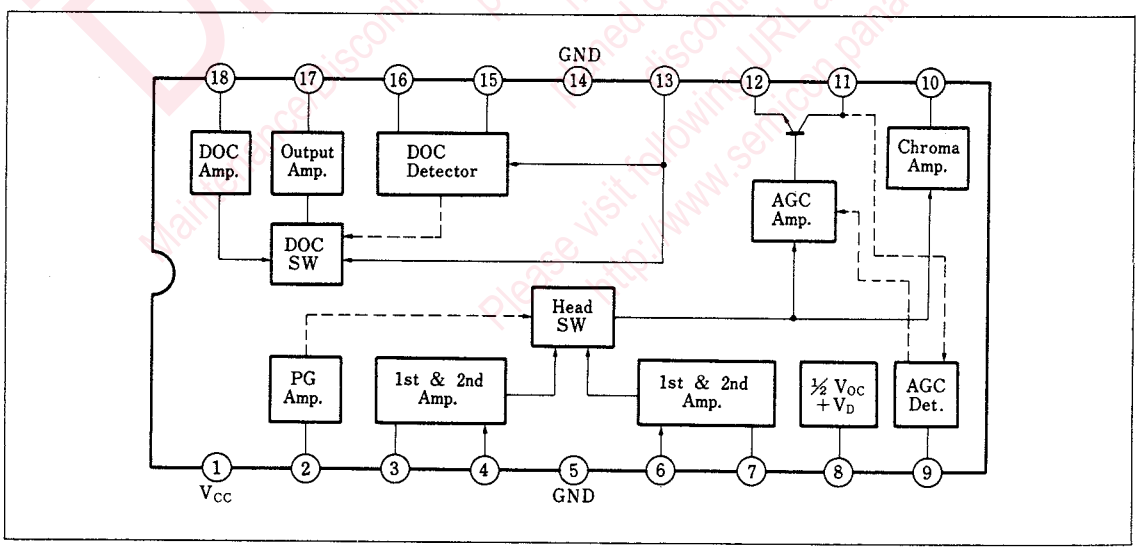
■ Features

- The function consist of:
  - Video signal pre-amplifier circuit
  - Head switchover circuit
  - Drop-out compensation circuit
  - RF AGC circuit
- Low-noise head amplifier
- Supply voltage: 5V



18-Lead DIL Plastic Package

■ Block Diagram



■ Pin

Pin No.	Pin Name	Pin No.	Pin Name
1	V_{CC}	10	Chroma Output
2	PG Input	11	FM Output
3	Damping (1)	12	FM Equalizer
4	FM Input (1)	13	DOC Input
5	GND	14	GND
6	FM Input (2)	15	DOC Pulse
7	Damping (2)	16	DOC Detect
8	Reference Voltage	17	FM Output
9	AGC Detect	18	DOC Amp. Input

■ Absolute Maximum Ratings (Ta=25℃)

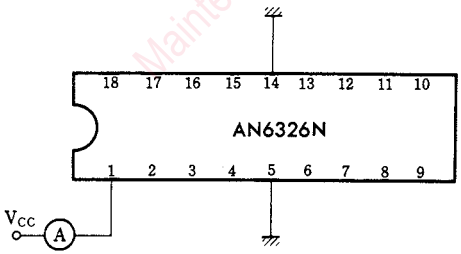
Item	Symbol	Rating	Unit
Supply voltage	V_{CC}	6.0	V
Power dissipation	P_D	160	mW
Operating ambient temperature	T_{opr}	−20～+70	℃
Storage temperature	T_{stg}	−40～+150	℃

■ Electrical Characteristics (V_{CC}= 5 V, Ta=25℃± 2 ℃)

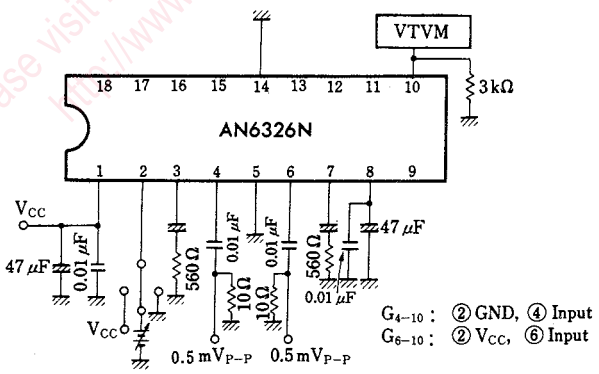
Item	Symbol	Test Circuit	Condition	min.	typ.	max.	Unit
Circuit current	I_1	1		8		20	mA
Ch. 1 gain	G_{V4-10}	2	f = 1 MHz	52.5		62.5	dB
Ch. 2 gain	G_{V6-10}	2	f = 1 MHz	52.5		62.5	dB
AGC output amplitude	$\upsilon_{O(AGC\cdot12)}$	3	f = 4 MHz	170		330	mV_{P-P}
AGC control sensitivity	$\Delta\upsilon_{O(AGC\cdot12)}$	3	f = 4 MHz			2.5	dB
Output amplifier gain	G_{V13-17}	4	f = 4 MHz	0.05		2.7	dB
DOC amplifier gain	G_{V18-17}	4	f = 4 MHz	10.5		14.0	dB
DOC sensitivity ON	S_{13-1}	4	f = 4 MHz			−19	dB
DOC sensitivity OFF	S_{13-2}	4	f = 4 MHz	−10.8			dB
PG input sensitivity	S_2	2				3	V
Noise voltage referred to input	V_{ni1}	5	1 MHz BPF			1	μV_{rms}
Noise voltage referred to input	V_{ni2}	5	1 MHz BPF			1	μV_{rms}

Note) Operating supply voltage range $V_{cc(opr.)}$ =4.5～5.5V

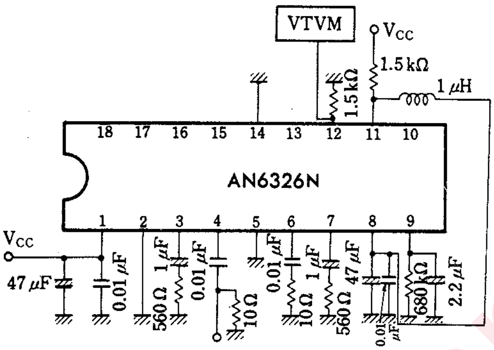
Test Circuit 1 (I_1)



Test Circuit 2 (G_{V4-10}, G_{V6-10}, S_2)

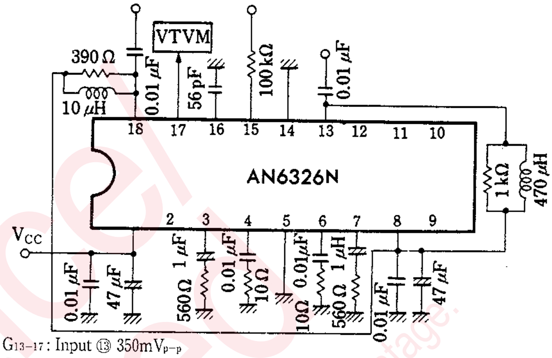


Test Circuit 3 ($v_{O(AGC\cdot12)}$, $\Delta v_{O(AGC\cdot12)}$)



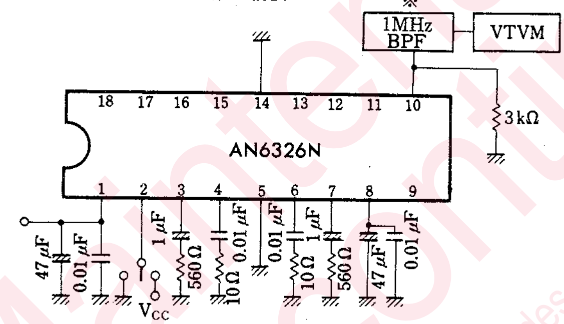
$v_{O(AGC\cdot12)}$: Input 0.3 V_{P-P}
$\Delta v_{O(AGC\cdot12)}$: Input 0.15～0.6 mV_{P-P}

Test Circuit 4 (G_{V13-17}, G_{V18-17}, S_{13-1}, S_{13-2})

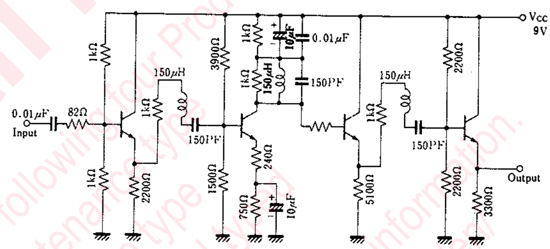


G_{13-17}: Input ⑬ 350mV_{p-p}
G_{18-17}: Input ⑱ 80mV_{p-p}
S_{13-1} : Decreasing input amplitude of Pin ⑬, measure input amplitude of Pin ⑬ when the electric potential of Pin ⑮ is switched from Hi to Lo.
S_{13-2} : Increasing input amplitude of Pin ⑬, measure input amplitude of Pin ⑬ when the electric potential of Pin ⑮ is switched from Lo to Hi.

Test Circuit 5 (V_{ni1}, V_{ni2})



※ 1MHz BPF



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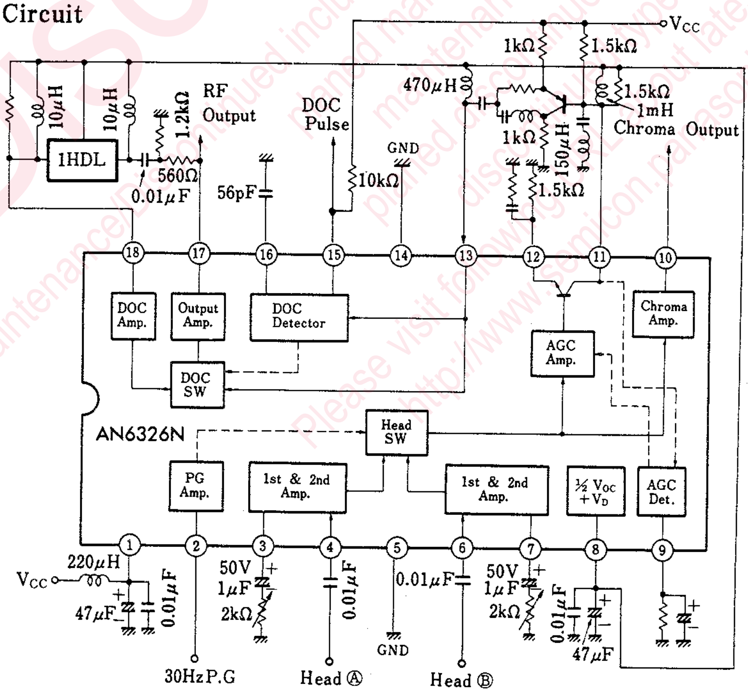
■ Application Circuit



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