

# AN608P

## Wide bandwidth video amplifier IC (in-phase amplifier)

### Overview

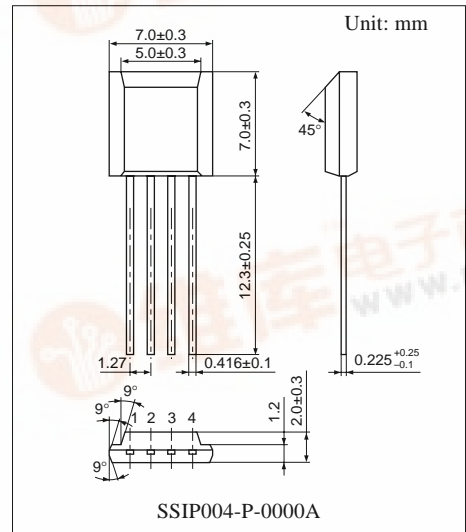
The AN608P is an amplifier IC with a 20 dB gain, a non-inverted output and a wide bandwidth (10MHz). It is best suited to video amplifier and sense amplifier.

### Features

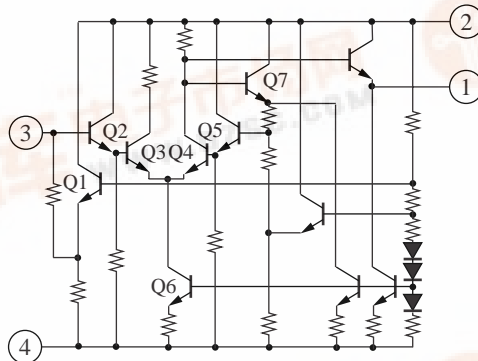
- Wide bandwidth (10 MHz)
- 20 dB non-inverting amplifier
- 4-pin SIP plastic package

### Applications

- Video amplifier, sense amplifier



### Equivalent Circuit



### Pin Descriptions

Pin No.	Description
1	Output
2	Supply voltage
3	Input
4	GND

### ■ Absolute Maximum Ratings at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Supply voltage	$V_{2-4}$	14.4	V
Circuit voltage	$V_{3-4}$	$V_{2-4}$ to $-1$	V
Total consumption current	$I_2$	11	mA
Circuit current	$I_3$	+1 to $-0.5$	mA
	$I_1$	0 to $-5$	
Total power dissipation	$P_{TOT}$	160	mW
Operating ambient temperature	$T_{opr}$	$-20$ to $+70$	$^\circ\text{C}$
Storage temperature	$T_{stg}$	$-40$ to $+125$	$^\circ\text{C}$

Note) Do not apply current and voltage to the pins not described. The mark '+' means the current flowing into the IC and the mark '-' means the current flowing out of the IC.

### ■ Electrical Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Circuit current	$I_2$	$V_{CC} = 12\text{ V}$	5.0		9.0	mA
Video signal output pin voltage	$V_{1-4}$	$V_{CC} = 12\text{ V}$	5.0		8.0	V
Video signal input pin voltage	$V_{3-4}$	$V_{CC} = 12\text{ V}$	1.9		3.5	V
Maximum output voltage	$V_{OM}$	$f = 10\text{ kHz}$ , $R_L = 1.5\text{ k}\Omega$	2			V[p-p]
Output voltage 1	$V_{O(1)}$	$f = 10\text{ kHz}$ , $V_I = 0.1\text{ V[p-p]}$	0.8		1.1	V[p-p]
Output voltage 2	$V_{O(2)}$	$V_I = 0.2\text{ V[p-p]}$	1.5		2.2	V[p-p]
Frequency characteristics	$\Delta V_{O(f1)}$	$V_I = 0.1\text{ V[p-p]}$ , $f = 1\text{ MHz to }5\text{ MHz}$	$-1$		$+1$	dB
Frequency characteristics	$\Delta V_{O(f2)}$	$V_I = 0.1\text{ V[p-p]}$ , $f = 1\text{ MHz to }10\text{ MHz}$	$-1$		$+2$	dB
Total harmonics distortion ratio	THD	$V_O = 1\text{ V[p-p]}$ , $f = 10\text{ kHz}$			1	%

### ■ Basic Circuit

