

## NTE1689 Integrated Circuit Head Amp Circuit for VCR

**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

**Absolute Maximum Ratings:** ( $T_A = +25^\circ\text{C}$  unless otherwise specified)

Supply Voltage,  $V_{CC}$  ..... 6V  
 Power Dissipation,  $P_D$  ..... 160mW  
 Operating Ambient Temperature Range,  $T_{opr}$  .....  $-20^\circ$  to  $+70^\circ\text{C}$   
 Storage Temperature Range,  $T_{stg}$  .....  $-40^\circ$  to  $+150^\circ\text{C}$

**Electrical Characteristics:** ( $V_{CC} = 5V$ ,  $T_A = +25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Circuit Current	$I_1$		8	–	20	mA
Channel 1 Gain	$G_{V4-10}$	$f = 1\text{MHz}$	52.5	–	62.5	dB
Channel 2 Gain	$G_{V8-10}$	$f = 1\text{MHz}$	52.5	–	62.5	dB
AGC Output Amplitude	$V_{o(AGC\bullet 12)}$	$f = 4\text{MHz}$	170	–	330	mV <sub>p-p</sub>
AGC Control Sensitivity	$\Delta V_{o(AGC\bullet 12)}$	$f = 4\text{MHz}$	–	–	2.5	dB
Output Amplifier Gain	$G_{V13-17}$	$f = 4\text{MHz}$	0.05	–	2.7	dB
DOC Amplifier Gain	$G_{V18-17}$	$f = 4\text{MHz}$	10.5	–	14.0	dB
DOC Sensitivity ON	$S_{13-1}$	$f = 4\text{MHz}$	–	–	–19	dB
DOC Sensitivity OFF	$S_{13-2}$	$f = 4\text{MHz}$	–10.8	–	–	dB
PG Input Sensitivity	$S_2$		–	–	3	V
Noise Voltage Referred to Input	$V_{ni1}$	1MHz BPF	–	–	1	$\mu\text{V}_{rms}$
	$V_{ni2}$	1MHz BPF	–	–	1	$\mu\text{V}_{rms}$

Note 1. Operating supply voltage range:  $V_{CCopr} = 4.5V$  to  $5.5V$ .

### Pin Connection Diagram

