

## NTE749 Integrated Circuit TV Video IF Amp

**Features:**

- High Power Gain: 46dB (Typ)  $f = 58\text{MHz}$
- Wide AGC Range: 60dB (Min)
- Low Reverse Transfer Admittance:  $y_r \leq -1.0\mu$  (Typ)
- Nearly Constant Input and Output Admittance over AGC Range
- Control Signal Available for Delayed Forward AGC of Tuner
- Control Signal Available for Delayed of FET Tuner
- Either Positive or Negative Going Video Signals

**Absolute Maximum Ratings:**

Supply Voltage, $V_{CC}$ .....	18V
Output Voltage, $V_7, V_8$ .....	18V
Input Voltage, $V_1, V_2$ .....	$10V_{p-p}$
AGC Input Voltage, $V_6, V_{10}$ .....	6V
Gate Input Voltage, $V_5$ .....	10, -20V
Power Dissipation, $P_D$ .....	625mW
Derated Above $T_A = 25^\circ\text{C}$ .....	5.0mW/ $^\circ\text{C}$
Min. Load Resistance, $R_L$ .....	4k $\Omega$
Operating Temperature Range, $T_{opr}$ .....	-20 $^\circ$ to +75 $^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	-55 $^\circ$ to +150 $^\circ\text{C}$

**Electrical Characteristics:** ( $V_{CC} = 12\text{V}$ ,  $T_A = +25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Current	$I_{CC}$		-	27	31	mA
Output Current	$I_{OUT}$		-	5.7	-	mA
Power Dissipation	$P_D$		-	324	372	mW
Power Gain	$G_p$	$f = 58\text{MHz}$	42	46	-	dB
Noise Figure	$N_F$	$f = 58\text{MHz}, R_g = 50\Omega$	-	8.5	-	dB
Maximum Output Voltage	$V_{OM}$	0dB AGC	350	-	-	mV <sub>rms</sub>
		-30dB AGC	200	-	-	

**Electrical Characteristics (Cont'd):** ( $V_{CC} = 12V$ ,  $T_A = +25^\circ C$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
AGC AGC Range	AGC		60	–	–	dB
$R_F$ -AGC	$V_{12}(\text{Max})$		–	8.2	–	V
	$V_{12}(\text{Min})$		–	0.2	–	
Power Gain Variations	$\Delta G_P$	$R_F$ -AGC At Operating Range	–	10	–	dB
Input Admittance	$g_i$	$f = 58\text{MHz}$	–	0.8	–	$m\Omega$
Input Acceptance	$b_i$		–	3.4	–	
Output Admittance	$g_o$	$f = 58\text{MHz}$	–	155	–	$\mu\Omega$
Output Acceptance	$b_o$		–	850	–	
Forward Transfer Admittance	$y_f$	$f = 58\text{MHz}$ 0dB AGC	–	220	–	$m\Omega$
			–	–135	–	deg
Phase Angle of Forward Transfer Admittance	$\angle y_f$	–30dB AGC	–	–95	–	deg
Reverse Transfer Admittance	$y_r$	$f = 58\text{MHz}$	–	<1.0	–	$\mu\Omega$

**Pin Connection Diagram**

