

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 Ω
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 _{rms}
		-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	ΔG_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

