NTE749
Integrated Circuit
TV Video IF Amp

Features:

- High Power Gain: 46dB (Typ) f = 58MHz
- 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°C . . . . 5.0mW/°C
Min. Load Resistance, R_L 4kΩ
Operating Temperature Range, T_{opr} . . . . −20° to +75°C
Storage Temperature Range, T_{stg} . . . . −55° to +150°C

Electrical Characteristics: (V_{CC} = 12V, T_A = +25°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 = 58MHz	42	46	–	dB
Noise Figure	N_F	f = 58MHz, $R_g = 50\Omega$	–	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°C unless otherwise specified)

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

Pin Connection Diagram

IF Input	1	14	IF AGC Filter
Bypass	2	13	RF AGC Delay Voltage
GND	3	12	RF AGC Output
GND	4	11	V_{CC}
Keyer Pulse	5	10	Video & Ref DC Inputs
Video & Ref DC Inputs	6	9	AGC Storage Capacitor
IF Output	7	8	IF Output

.785 (19.95) Max

.300 (7.62)

.200 (5.08) Max

.100 (2.45)

.099 (2.5) Min

.600 (15.24)