

NTE1128 Integrated Circuit TV Video IF Amplifier

Features:

- High Power Gain: 48dB Typ @ $f = 58\text{MHz}$
- AGC Operating by External DC Control Voltage
- High Gain Reduction: 60dB Min @ $f = 58\text{MHz}$
- Low Reverse Transfer Admittance: $1.0\mu\text{mho}$ Typ @ $f = 58\text{MHz}$
- Nearly Constant Input and Output Admittance Over Entire AGC Range

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

Supply Voltage (V_5), V_{CC}	15V
Output Terminal Voltage, V_6 , V_7	18V
Gain Control Voltage, V_3	0V to V_{CC}
Input Terminal Voltage, V_1 , V_2	$10V_{P-P}$
Power Dissipation, P_D	400mW
Derate Above 25°C	$4\text{mW}/^\circ\text{C}$
Operating Temperature Range, T_{opr}	-20° to $+65^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+125^\circ\text{C}$

Electrical Characteristics: ($V_{CC} = 12\text{V}$, $f = 58\text{MHz}$, $T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Supply Voltage (V_5)	V_{CC}		10.8	12.0	13.2	V
Supply Current (I_5)	I_{CC}		9.0	11.0	15.0	mA
IF Input Terminal Voltage	V_1 , V_2		–	3.3	–	V
AGC Terminal Voltage	V_3	–30dB AGC	–	7.5	7.8	V
		0dB AGC	6.2	6.6	–	V
Output Stage Current ($I_6 + I_7$)	I_{OUT}		1.4	2.0	3.0	mA
AGC Range	AGC	$f = 58\text{MHz}$	60	70	–	dB
Power Gain	G_P	$f = 58\text{MHz}$	4.5	4.8	–	dB
Noise Figure	NF	$R_S = 50\Omega$, $f = 58\text{MHz}$	–	6.0	–	dB
Maximum Output Voltage	V_{OM}	V_6 , $V_7 = 15\text{V}$	150	–	–	mV _{P-P}
Total Power Dissipation	P_D		–	180	–	mW

Electrical Characteristics (Cont'd): ($V_{CC} = 12V$, $f = 58MHz$, $T_A = +25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Input Admittance Input Conductance	g_i	$f = 50MHz$	–	0.8	–	mmhos
Parallel Input Capacitance	C_{ip}		–	5.0	–	pF
Output Admittance Output Conductance	g_o	$f = 58MHz$	–	150	–	$\mu mhos$
Parallel Output Capacitance	C_{op}		–	2	–	pF
Reverse Transfer Admittance	y_r	$f = 58MHz$	–	< 1.0	–	$\mu mhos$
Forward Transfer Admittance	y_f	$f = 58MHz$	–	130	–	mmhos

