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## NTE1620 Integrated Circuit B/W TV Video IF Amplifier, RF AGC Circuit

**Description:**

The NTE1620 is an integrated circuit in a 9-Lead SIP type package designed for use as a B/W TV video IF amplifier and RF AGC circuit. Typical applications included low voltage operation (6V) and small B/W TVs.

**Features:**

- Low Voltage Operation Video IF Circuit with Minimum Number of Peripheral Components
- A Wide Range of Gain Reduction and IF AGC

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

Supply Voltage,  $V_{CC}$  ..... 7.2V  
 Supply Current,  $I_{CC}$  ..... 20.5mA  
 Power Dissipation,  $P_D$  ..... 156mW  
 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:** ( $T_A = +25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Circuit Current	$I_{tot}$	$V_{CC} = 5.5V$	9.5	13.5	17.5	mA
Voltage Gain	$G_V$	$f = 58.75\text{MHz}$	23	28	32	dB
AGC Range	$H_{AGC}$	$f = 58.75\text{MHz}$	60	–	–	dB
Input Resistance	$R_i$	$f = 58.75\text{MHz}, v_i = 30\text{mV}_{rms}$	–	900	–	$\Omega$
Input Capacitance	$C_i$		–	5.5	–	pF
Output Capacitance	$C_o$		–	3.0	–	pF
Transfer Admittance	$ Y_{21} $	$f = 58.75\text{MHz}$	–	545	–	mS
Noise Figure	NF		–	9.5	–	dB
Voltage Gain (RF AGC)	$G_V$		87	100	113	times
Upper Voltage (RF AGC)	$V_{(Upper)}$	$V_{CC} = 5.5V, V_4 = 100\text{mV}$	4.0	4.4	4.8	V
Lower Voltage (RF AGC)	$V_{(Lower)}$	$V_{CC} = 5.5V, V_4 = 100\text{mV}$	–	–	0.1	V

**Pin Connection Diagram**  
(Front View)

