

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° to $+70^\circ\text{C}$
 Storage Temperature Range, T_{stg} -40° 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	–	Ω
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)

