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## NTE1607 Integrated Circuit B/W TV Video Detector Amplifier, IF AGC Circuit

**Description:**

The NTE1607 is an integrated circuit in a 9-Lead SIP type package designed for use as a B/W TV video detector amplifier and IF AGC circuit.

**Features:**

- High Gain IF Signal to Video Signal Conversion (Detection) and Operates with Low Input Signal Level
- No Adjustment for IF AGC Detection Output Level Setting
- Provided with Video SIF, Sync Separation Output Pin for Easy Set Design

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

Supply Voltage,  $V_{CC}$  ..... 7.2V  
 Supply Current,  $I_{CC}$  ..... 31mA  
 Power Dissipation,  $P_D$  ..... 223mW  
 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	$I_{tot}$	$V_{CC} = 5.5\text{V}$	14.5	18.5	22.5	mA
Circuit Voltage	$V_{3-7}$	$V_{CC} = 5.5\text{V}$	2.4	2.7	3.0	V
	$V_{1-7}$	$V_{CC} = 5.5\text{V}$	2.45	2.75	3.05	V
Output Voltage, Pin4	$V_O$	$f_o = 58.75\text{MHz}$ , $AM = 75\%$ $f_m = 1\text{kHz}$ , $V_i = 30\text{mV}_{rms}$	300	400	500	$\text{mV}_{rms}$
Output Voltage, Pin3			300	400	500	$\text{mV}_{rms}$
Output Voltage, Pin1			300	400	500	$\text{mV}_{rms}$
Frequency Bandwidth (Det. Out)	B	$f_o = 58.75\text{MHz}$ , $AM = 40\%$ , $V_i = 30\text{mV}_{rms}$	–	4.5	–	MHz
Voltage Gain (IF AGC)	$G_V$		100	112	125	times
Upper Voltage (IF AGC)	$V_{(Upper)}$	$V_{CC} = 5.5\text{V}$ , $V_{5-7} = 3.9\text{V}$	5.05	5.23	5.35	V
Lower Voltage (IF AGC)	$V_{(Lower)}$	$V_{CC} = 5.5\text{V}$ , $V_{5-7} = 2.9\text{V}$	–	–	0.03	V

**Pin Connection Diagram**  
(Front View)

