

NTE1161 Integrated Circuit TV Video/Sound IF Amp, Detector

Features:

- Video IF Amplifier, Synchronous Detector
- Video Differential Amplifier
- AFT Carrier Amplifier
- Sound IF Amplifier
- FM Differential Peak Detector
- DC Sound Volume Control Circuit
- Sound Preamplifier Circuit

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

Supply Voltage (Note 1), V_{CC}	14.4V
Supply Current, I_{CC}	77mA
Power Dissipation, P_D	1.11W
Operating Ambient Temperature Range, T_{opr}	-20° to $+70^\circ\text{C}$
Storage Temperature Range, T_{stg}	-40° to $+150^\circ\text{C}$

Note 1. A continuous operation voltage must be set within a proper range so that the dissipation does not exceed 1.11W.

Electrical Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Circuit Current	I_{26}	$V_{26-4} = 12\text{V}$	24	30	36	mA
Video Circuit						
Max. Output Voltage Amplitude	$V_{O-N\bullet P}$	$f_o = 58.75\text{MHz}$	3.0	4.0	–	V_{P-P}
Output Signal Voltage	$V_{O-N\bullet P}$	$f_o = 58.75\text{MHz}, f_m = 400\text{Hz},$ $m = 40\%, V_i = 20\text{mV}_{rms}$	280	420	560	mV_{rms}
	V_{O-N}		5	20	80	mV_{rms}
Selection Circuit Capacitance	C_t	$f = 58.75\text{MHz}$	7	12	17	pF

Electrical Characteristics (Cont'd): ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
AFT Output Voltage	$V_{O(AFT)}$	$f_o = 58.75\text{MHz}$, $m = 40\%$, $V_i = 20\text{mV}_{\text{rms}}$	250	350	500	mV_{rms}
Sound Detection Output Voltage	$V_{O(S)}$		280	420	560	mV_{rms}
IF Amplifier						
Input Limiting Voltage	$V_{i(\text{lim})}$	$f_o = 4.5\text{MHz}$, $f_m = 400\text{Hz}$, $\Delta f = \pm 25\text{kHz}$		250	400	μV
AM Rejection Ratio	AMR	$f_o = 4.5\text{MHz}$, $f_m = 400\text{Hz}$, $m = 30\%$ (AM), $V_i = 100\text{mV}_{\text{rms}}$		50		dB
Total Detection Output	V_O	$f_o = 4.5\text{MHz}$, $f_m = 400\text{Hz}$, $\Delta f = \pm 25\text{kHz}$, $V_{17-9} = 0$, $V_1 = 100\text{mV}$	0.45	0.65	0.85	V_{rms}
Maximum Attenuation	G_R	$f_o = 4.5\text{MHz}$, $f_m = 400\text{Hz}$, $\Delta f = \pm 25\text{kHz}$, $V_i = 100\text{V}$	75			dB
Half Detection Output	$V_{O/2}$		0.22	0.32	0.42	V_{rms}
Audio Preamplifier						
Voltage Gain	G_V	$f = 400\text{Hz}$, $V_O = 1\text{V}_{\text{rms}}$	22.7	24.0	25.6	dB
Leak Signal Output	$V_{O(\text{leak})}$	$f_o = 4.5\text{MHz}$, $f_m = 400\text{Hz}$, $\Delta f = \pm 25\text{kHz}$, $V_i = 100\text{V}$			0.8	mV_{rms}
Output Noise Voltage	V_{no}	$V_{\text{in}} = 0$, Pin17-16 shorted			1	mV_{rms}

Pin Connection Diagram



