

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	$V_{OD-N\bullet P}$	$f_o = 58.75\text{MHz}$	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 = 58.75MHz, m = 40%, V _i = 20mV _{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(lim)}	f _o = 4.5MHz, f _m = 400Hz, Δf = ±25kHz		250	400	μV
AM Rejection Ratio	AMR	f _o = 4.5MHz, f _m = 400Hz, m = 30% (AM), V _i = 100mV _{rms}		50		dB
Total Detection Output	V _O	f _o = 4.5MHz, f _m = 400Hz, Δf = ±25kHz, V ₁₇₋₉ = 0, V ₁ = 100mV	0.45	0.65	0.85	V _{rms}
Maximum Attenuation	G _R	f _o = 4.5MHz, f _m = 400Hz, Δf = ±25kHz, V _i = 100V	75			dB
Half Detection Output	V _{O/2}		0.22	0.32	0.42	V _{rms}
Audio Preamplifier						
Voltage Gain	G _V	f = 400Hz, V _O = 1V _{rms}	22.7	24.0	25.6	dB
Leak Signal Output	V _{O(leak)}	f _o = 4.5MHz, f _m = 400Hz, Δf = ±25kHz, V _i = 100V			0.8	mV _{rms}
Output Noise Voltage	V _{no}	V _{in} = 0, Pin17–16 shorted			1	mV _{rms}

Pin Connection Diagram



