ELECTRONICS, INC.
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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 Differenial Peak Detector
- DC Sound Volume Control Circuit
- Sound Preamplifier Circuit

Absoulte Maximum Ratings: (T_A = +25°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°C
Storage Temperature Range, T_{stg} . . . . . –40° to +150°C

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

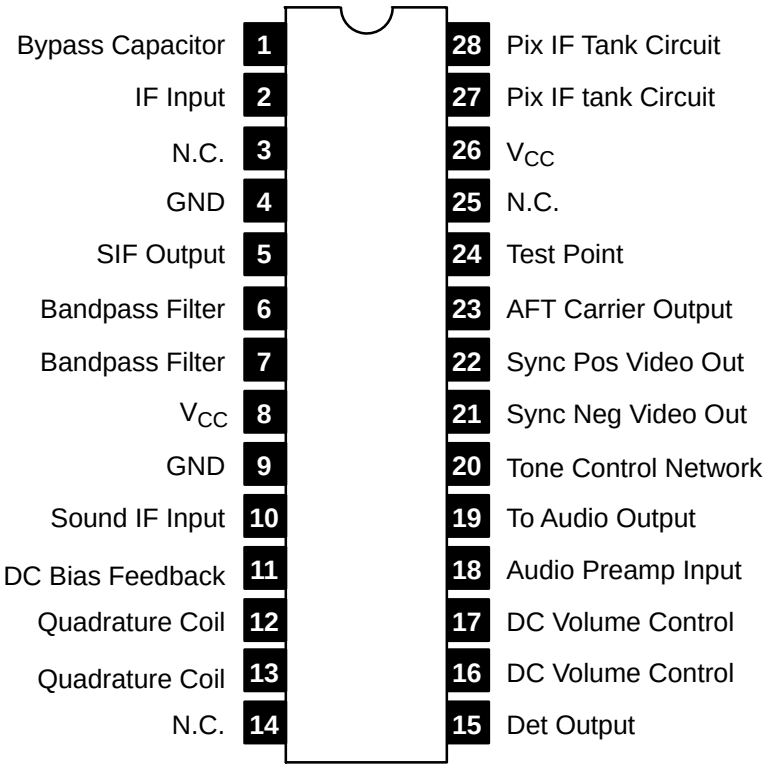
Electrical Characteristics: (T_A = +25°c unless otherwise specified)

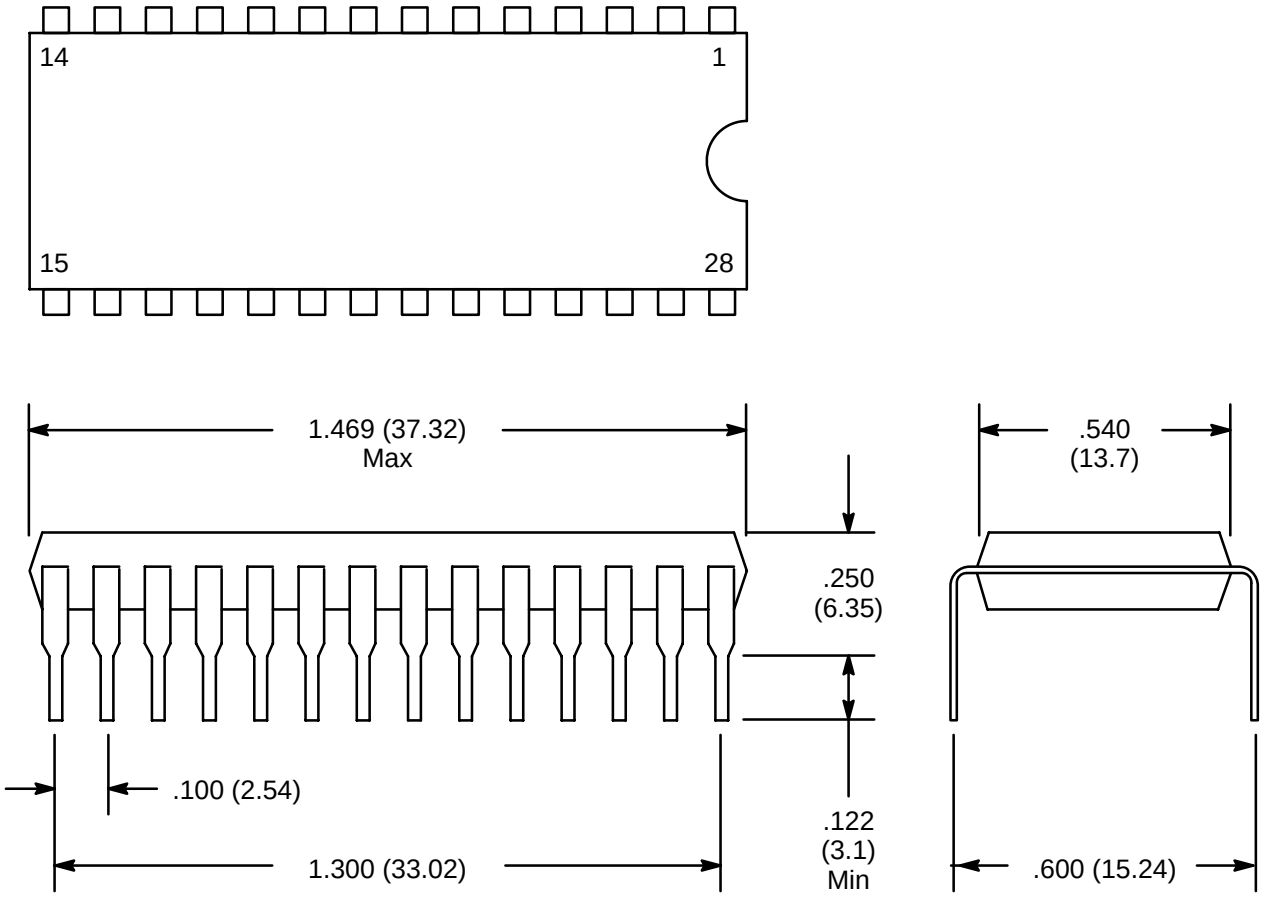
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Circuit Current	I_{26}	$V_{26–4}$ = 12V	24	30	36	mA
Video Circuit						
Max. Output Voltage Amplitude	$V_{OD–N•P}$	f_o = 58.75MHz	3.0	4.0	–	$V_{P–P}$
Output Signal Voltage	$V_{O–N•P}$	f_o = 58.75MHz, f_m = 400Hz, m = 40%, V_i = 20mV_{rms}	280	420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

Electrical Characteristics (Cont'd): (T_A = +25°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




14
1
15
28
1.469 (37.32)
Max
.250
(6.35)
.100 (2.54)
1.300 (33.02)
.122
(3.1)
Min
.540
(13.7)
.600 (15.24)