

NTE984 Integrated Circuit TV Video IF System

Description:

The NTE984 is a monolithic integrated circuit in a 16-Lead DIP type package designed to perform IF amplification, video detection, and video-amplifier functions in color and monochrome TV receivers.

Features:

- Improved AGC, Fast Response, Sample and Hold Keyed
- High Gain Wideband IF Amplifiers
- Delayed AGC Output for Tuner
- Gain Reduction with Excellent Stability
- Linear Video Detector
- Video Amplifier
- Low Noise
- Internal Shunt Regulator
- For Color or Monochrome

Absolute Maximum Ratings:

DC Supply Voltage:

Between Pin15 and Pin4	16V
Between 470Ω Connected to Pin12 and Pin14	35V

DC Supply Current:

At Pin15	20mA
At Pin12	30mA

Device Dissipation ($T_A \leq +55^\circ\text{C}$), P_D	750mW
Derate Linearly Above $+55^\circ\text{C}$	7.9mW/ $^\circ\text{C}$

Operating Ambient Temperature Range, T_A -40° to $+85^\circ\text{C}$

Storage Temperature Range, T_{stg} -65° to $+150^\circ\text{C}$

Lead Temperature (During Soldering, 1/16" \pm 1/32" from case, 10sec max), T_L $+265^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Operating Supply Voltage	V_{15}	Note 1	12.0	–	14.2	V
Supply Current	I_{15}		3	–	15	mA
Shunt Regulator Voltage	V_{12}		10.9	–	13.0	V
Shunt Regulator Current	I_{12}	$V_{12} = 10.5\text{V}$	6	–	20	mA
Tuner AGC High Voltage	V_{10}		18.5	–	21.0	V
Tuner AGC Low Voltage	V_{10}		0.3	–	1.3	V
AGC Current	I_2	Non-Keyed	80	–	500	μA
AGC Peak Current	I_2	Keyed Source Current	0.7	–	3.0	mA
		Keyed Sink Current	150	–	680	μA
Horizontal Key Input		Through $100\text{k}\Omega$ connected to Pin1	25	–	35	V
Video Output High Voltage	V_{16}	At Zero Carrier	7	–	10	V
Video Output Low Voltage	V_{16}	At 30mV Input	0.9	–	2.0	V
Sensitivity Voltage	V_{16}	At $400\mu\text{V}$ Input	0.9	–	5.0	V
Noise			–	–	12	mV_{rms}
Chroma		45.75MHz , 10mV ; 42.17MHz , 3mV	0.7	–	1.6	V_{rms}
AFT Drive			35	–	85	mV_{rms}
Distortion		50kHz , 80% Modulated, Sync Tip Equiv. 30mV_{rms}	–	–	10	%
Delay Voltage		Through $15\text{k}\Omega$ connected to Pin7, Note 2	0	–	V_{15}	V

Note 1 V_{15} Min should be at least 0.6V above Terminal 12 potential. Lower voltage may cause some “white” compression.

Note 2 Zero voltage corresponds to maximum delay at signal input + $30\text{mV}_{(\text{RMS})}$.

Pin Connection Diagram

