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NTE1522 Integrated Circuit B/W Video IF

Description:

The NTE1522 is a silicon monolithic integrated circuit designed for VIF section in B/W television receivers. This IC has all functions including a video IF amplifier, video low-level detector, RF AGC, IF AGC and noise canceller. The IC is a 14 Pin Dual In-Line Package with a Heat tab.

Features:

- High Input Sensitivity: 30dB μ (Typ.)
- It can be used both of keyed type AGC and peak type AGC.
- It can be operated with the power supply voltage above 7V.
- Since the video detector has a wide bandwidth, it's suitable for the sound carrier frequency of 4.5, 5.5, 6.0 and 6.5MHz
- As input is in differential mode, it can be used with SAW filter.

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

Supply Voltage, V_7 15V
 Input Signal Voltage, V_8, V_9 3V $_{p-p}$
 Power Dissipation (Note 1), P_D 875mW
 Operating Temperature Range, T_{opr} -20° to $+75^\circ\text{C}$
 Storage Temperature Range, T_{stg} -40° to $+125^\circ\text{C}$

Note 1. $T_A = +75^\circ\text{C}$ Free Air

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $V_{CC} = 12\text{V}$, $f = 58.75\text{MHz}$, $f_M = 15.75\text{kHz}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Total Supply Current	I_{CC}	$I_7 + I_{12}$, RA = 150 Ω	40	50	60	mA
Input Sensitivity	$v_{i(sens)}$	MOD = 80%, $V_o = 1.4V_{p-p}$	-	30	35	dB μ
Max. Input Voltage	$v_{i(max)}$	MOD = 80%, -1dB Point	100	-	-	dB μ
Video Output Voltage	v_o	MOD = 80%, $V_i = 3_m V_{rms}$	1.0	1.4	1.7	V $_{p-p}$
Video Output DC Voltage	V_O	No Signal	3.3	3.8	4.3	V
Signal to Noise Ratio	S/N	MOD = 80% to 0%, $v_i = 3_m V_{rms}$	40	50	-	dB
RF AGC Voltage (High)	V_{6H}	$V_5 = 0\text{V}$	8	9	11	V
RF AGC Voltage (Low)	V_{6L}	$V_5 = 7\text{V}$	-	0	0.5	V
Differential Gain	DG	Stair Step $f_M = 3.58\text{MHz}$	-	-	10	%
Differential Phase	DP		-	-	10	deg.
Video Detector Bandwidth	BW	-3dB Point	5.5	-	-	MHz
Input Resistance	R_{IN}		-	1.5	-	k Ω
Input Capacitance	C_{IN}		-	3.3	-	pF

Pin Connection Diagram

