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NTE1593

Integrated Circuit

Colot TV VIR Processor

Description:

The NTE1593 is designed for automatic adjustment of the color saturation and tint of color television receiver.

Functions:

- Identification of line 19 and the detection of the presence of a VIR signal
- The development of dc color-controlling voltage by processing the VIR portion of the receiver's simulated blue drive signal
- The development of dc tint controlling voltage by processing the VIR portion of the receiver's demodulated R-Y signal

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

Supply Voltage, V_{CC} 14.4V
LED Drive Current, I_{LED} 20mA
Power Dissipation ($T_A = +65^\circ\text{C}$), P_T 600mW
Operating Temperature Range, T_{opt} -10° to $+65^\circ\text{C}$
Storage Temperature Range, T_{stg} -55° to $+125^\circ\text{C}$

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

Parameter	Symbol	Test Conditions		Min	Typ	Max	Unit
Current Drive	I_{CC}	LED OFF		–	21	35	mA
Output Voltage of Color Control Stage	V_{5H}	VIR: ON	High Level	10	11.2	–	V
	V_{5L}		Low Level	–	0.5	1.0	V
	V_{5H}	VIR: OFF, Manual	High Level	–	10.7	–	V
	V_{5L}		Low Level	–	0	–	V
Output Voltage of Tint Control Stage	V_{6H}	VIR: ON	High Level	10	11.4	–	V
	V_{6L}		Low Level	–	0.3	1.0	V
	V_{6H}	VIR: OFF, Manual	High Level	–	10.7	–	V
	V_{6L}		Low level	–	0	–	V
Differential Voltage Gain of Color Control Stage	G_{VD1}	VIR: ON $R_L = 10\text{k}\Omega$	Input: Pin 3 to Pin 4 Output: Pin 5	–	40	–	dB
Differential Voltage Gain of Tint Control Stage	G_{VD2}		Input: Pin 4 to Pin 9 Output: Pin 6	–	3.4	–	dB

Pin Connection Diagram

