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NTE822 Integrated Circuit Video/Chroma Processor

Description:

The NTE822 is a monolithic silicon integrated circuit that performs the luminance processing functions in color TV receivers. This circuit amplifies chroma signals, provides horizontal and vertical blanking, and automatically controls contrast, brightness, peaking and black and chroma levels.

Features:

- Automatic Black-Level Control
- Automatic Controls for Contrast and Peaking
- Automatic Color-Level Control
- Horizontal and Vertical Blanking
- Automatic Beam-Current Limiting
- Positive or Negative Vertical Blanking Pulses
- Internal Noise Protection for Automatic Functions

Absolute Maximum Ratings:

DC Supply Voltage 30V
 DC Supply Current 21mA
 Device Dissipation
 Up to $T_A = +25^\circ\text{C}$ 750mW
 Above $T_A = +25^\circ\text{C}$ Derate Linearly at 11.1 mW/ $^\circ\text{C}$
 Operating Ambient Temperature Range 0° to $+60^\circ\text{C}$
 Storage Ambient Temperature Range -55° to $+150^\circ\text{C}$
 Lead Temperature During Soldering (from case for 10 seconds max) $+265^\circ\text{C}$

Electrical Characteristics: ($T_A = +25^\circ\text{C}$, $V_+ = 24\text{V}$, unless otherwise specified)

Parameter	Test Conditions	Min	Typ	Max	Unit
Static Characteristics					
Total Supply Current		13	16	19	mA
Reference Bias Level (Pin 7)		-	5.25	-	V
Reference Level (Pin 2) $S_2 = 2$ (with 1mA into Pin 1) $S_3 = 2$		-	12.2	-	V

Electrical Characteristics (Cont'd): ($T_A = +25^\circ\text{C}$, $V_+ = 24\text{V}$, unless otherwise specified)

Parameter	Test Conditions	Min	Typ	Max	Unit
Dynamic Characteristics					
Max. Video Gain – Read e_o	$e_{in} = 1V_{p-p}$, $f = 100\text{KHz}$, S5 to Pos. 1	–	13.5	–	dB
Min. Video Gain – Read e_o	$e_{in} = 1V_{p-p}$, $f = 100\text{KHz}$, S5 to Pos. 2	–	-4.4	–	dB
Relative Freq. Response – Read e_o	$e_{in} = 1V_{p-p}$, $f = 3.58\text{MHz}$, S5 to Pos. 1	–	-0.2	–	dB
Contrast Gain Reduction – Read e_o	$e_{in} = 1V_{p-p}$, $f = 100\text{kHz}$, S5 to Pos. 2	–	-17.9	–	dB
Auto-Peaking Level – Read P ₃ to P ₁₃	$e_{in} = 1V_{p-p}$, S5 to Pos. 1	–	165	–	mV
	$e_{in} = 0.5V_{p-p}$, S5 to Pos. 1	–	115	–	mV
	$e_{in} = 0V_{p-p}$, S5 to Pos. 1	–	0	–	mV
Max. Chroma Out Level – Read P ₈ ($E_5 = 5\text{V}$)	$e_c = 1V_{p-p}$, $f = 3.58\text{MHz}$ S4 off	–	5	–	V
Min. Chroma Out Level – Read P ₈ ($E_5 = 5\text{V}$)	$e_c = 1V_{p-p}$, $f = 3.58\text{MHz}$ S4 on	–	10	–	V

Pin Connection Diagram

