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NTE1845
Integrated Circuit
TV Video Processor

Description:

The NTE1845 is a small–sized multifunctional IC containing the “video, chroma, deflection” circuit of NTSC color TV in a shrink type 30–Lead DIP package. Besides being small–sized, it has such features as greately reduced number of parts and fewer adjustments required. The device contains a peak clip circuit and is well suited for use in small–sized sets.

Features:

- Small–Sized Package
- Minimum Number of Parts Required
- Fewer Adjustments Required
- Chroma V_{CO} (APC)
- Horizontal OSC (H–Hold)
- Vertical OSC (V–Hold)
- Multifunction

Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

Maximum Supply Voltage, $V_{16(max)}$ 14V
Maximum Supply Current, $I_{22(max)}$ 15.0mA
Allowable Power Dissipation ($T_A \le +65°C$), $P_{D(max)}$ 1100mW
Operating Temperature Range, T_{opg} . . . . . –20° to +85°C
Storage Temperature Range, T_{stg} . . . . . –55° to +125°C

Recommended Operating Conditions: (T_A = +25°C unless otherwise specified)

Recommended Supply Voltage, V_{16} 12V
Recommended Supply Current, I_{22} 10mA
Operating Voltage Range . . . . . 9 to 14V
Operating Current Range . . . . . 0.5 to 15.0mA

Electrical Characteristics: (T_A = +25°C, V_{16} = 12V, I_{22} = 10mA unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Chroma						
ACC Amplitude Characteristics	ACC1		–3	0	+3	dB
	ACC2		–7	0	+2	dB
ACC Phase Characteristics	ACC∅1		–	0	±3	deg
	ACC∅2		–	0	±7	deg
Maximum B–Y Demodulation Output	B–Y max		5.0	–	–	V_{P-P}
Unicolor Amplitude Characteristics	ΔGU		–	17	–	dB
Tint Change Range	ΔT		–	110	–	deg
APC Pull–In Range	f_{APC}		±300	–	–	
Color Difference Output DC Voltage	E_{RGB}		6.7	7.2	7.7	V
Color Difference DC Difference Voltage	$E_{\Delta RGB}$		–	–	±300	mV
R–Y Relative Demodulation Angle	∠R–Y/B–Y		–	104	–	deg
G–Y Relative Demodulation Angle	∠G–Y/B–Y		–	–122	–	deg
R–Y Demodulation Ratio	R–Y/B–Y		–	0.9	–	
G–Y Demodulation Ratio	G–Y/B–Y		–	0.3	–	
Video						
Video Tone Control Characteristics	$G_p$min		–5	–3	–1	dB
	$G_p$max		12	15	18	dB
Video Voltage Gain	VG		12	15	18	dB
Contrast Variable Range	ΔGC		–	18	–	B
Frequency Response	ΔGV	f = 5MHz	–5	–	–	dB
Synchronization, Deflection						
Sync Separation Input DC Level	$V_{S.S}$		–	9.3	–	V
Vertical Free–Running Frequency	f_V		–	f_H/296.5	–	Hz
Vertical Blanking Pulse Width	T_{BL}		–	19H	–	
Vertical Drive Stage Voltage Gain	VG		–	16	–	dB
Horizontal Free–Running Frequency	f_H		–	15.734	–	kHz
Horizontal Drive Output Pulse Width	T_H		–	24.5	–	µs
Horizontal Sync Pull–In Range	f_{PULL}		±400	–	–	Hz

Pin Connection Diagram