



No.1777A



# LA7620,7621

Monolithic Linear Integrated Circuit  
 COLOR TV VIDEO, CHROMA, DEFLECTION CIRCUIT

The LA7620/7621 are small-sized multifunctional IC containing the "video, chroma, deflection" circuit of NTSC color TV in the DIP30S (equivalent to the DIP22 package heretofore in use) of shrink type. Besides being small-sized, they have such features as greatly reduced number of parts and fewer adjustments required. The LA7620/7621 can be used in conjunction with the LA7520/7521 for "vertical output" use to perform all color TV signal processings. The LA7620 containing a peak clip circuit in the video circuit is well suited for use in small-sized sets. The LA7621 containing no peak clip circuit is well suited for use in large-sized sets.

### Features

- . Small-sized package.
- . Minimum number of parts required.
- . Fewer adjustments required (Non-adjusting of functions shown below).
  - . Chroma VCO (APC)
  - . Horizontal OSC (H-Hold).
  - . Vertical OSC (V-Hold).
- . Multifunction.

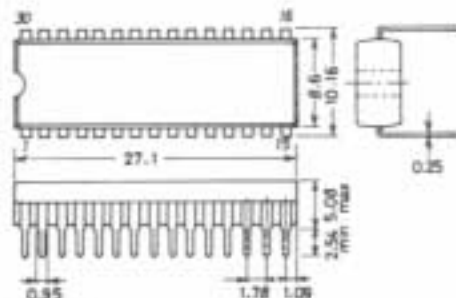
### Maximum Ratings at Ta=25°C

			unit
Maximum Supply Voltage	V16max	14.0	V
Maximum Supply Current	I22max	15.0	mA
Allowable Power Dissipation	Pdmax	1100	mW
Operating Temperature	Topg	-20 to +85	°C
Storage Temperature	Tstg	-55 to +125	°C

### Operating Conditions at Ta=25°C

			unit
Recommended Supply Voltage	V16	12.0	V
Recommended Supply Current	I22	10.0	mA
Operating Voltage Range		9.0 to 14.0	V
Operating Current Range		8.5 to 15.0	mA

### Case Outline 3061-D30SNIC (unit:mm)



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Main Specifications at  $T_a=25^{\circ}\text{C}$ ,  $V_{16}=12\text{V}$ ,  $I_{22}=10\text{mA}$ 

## [Chroma]

		min	typ	max	unit
ACC Amplitude Characteristic	ACC1	-3	0	3	dB
	ACC2	-7	0	+2	dB
ACC Phase Characteristic	ACC $\phi$ 1		0	$\pm 3$	deg
	ACC $\phi$ 2		0	$\pm 7$	deg
Maximum B-Y Demodulation Output	B-Y max	5.0			V <sub>pp</sub>
Unicolor Amplitude Characteristic	$\Delta\text{GU}$		17		dB
Tint Change Range	$\Delta\text{T}$		110		deg
APC Pull-in Range	$f_{\text{APC}}$	$\pm 300$			
Color Difference Output DC Voltage	$E_{\text{RGB}}$	6.7	7.2	7.7	V
Color Difference DC Difference Voltage	$E_{\Delta\text{RGB}}$			$\pm 300$	mV
R-Y Relative Demodulation Angle	$\angle\text{R-Y/B-Y}$		104		deg
G-Y Relative Demodulation Angle	$\angle\text{G-Y/B-Y}$		-122		deg
R-Y Demodulation Ratio	R-Y/B-Y		0.9		
G-Y Demodulation Ratio	G-Y/B-Y		0.3		

## [Video]

		min	typ	max	unit
Video Tone Control Characteristic	Gpmin	-5	-3	-1	dB
	Gpmax	12	15	18	dB
Video Voltage Gain	VG	12	15	18	dB
Contrast Variable Range	$\Delta\text{GC}$		18		dB
Frequency Response	$\Delta\text{GV}$ $f=5\text{MHz}$	-5			dB

## [Synchronization, Deflection]

		min	typ	max	unit
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	$T_{\text{BL}}$		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		us
Horizontal Sync Pull-in Range	$f_{\text{PULL}}$	$\pm 400$			Hz

Equivalent Circuit Block Diagram and Sample Peripheral Circuit

