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 "vertic1 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.

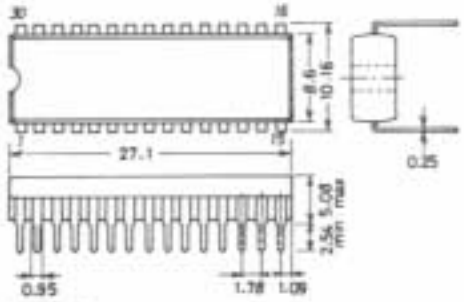
Maximum Ratings at Ta=25°C

				unit
Maxinum Supply Voltage	V_{16max}		14.0	V
Maximum Supply Current	I_{22max}		15.0	mA
Allowable Power Dissipation	Pdmax	Ta≦65°C	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)



These specifications are subject to change without notice

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Main Specifications at Ta=25°C,V16=12V,I22=10mA

[Chroma]			min	typ	max	unit
ACC Amplitude Characteristic	ACC1		-3	0	3	dB
	ACC2		-7	0	+2	dB
ACC Phase Characteristic	ACCø1			0	±3	deg
	ACCø2			0	±7	deg
Maximum B-Y Demodulation Output	B-Y max		5.0			Vpp
Unicolor Amplitude Characteristic	△GU			17		dB
Tint Change Range	△T			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	$E_{\triangle RGB}$				±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]			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	△GC			18		dB
Frequency Response	△GV	f=5MHz	-5			dB

[Synchronization, Deflection]		min	typ	max	unit
Sync Separation Input DC Level	Vs.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		us
Horizontal Sync Pull-in Range	f_{PULL}	±400			Hz

Equivalent Circuit Block Diagram and Sample Peripheral Circuit