

	No.1777C	LA7620, 7621
	Monolithic Linear IC Color TV Video, Chroma, Deflection Circuit	

The LA7620/7621 are small-sized multifunctional ICs 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 "YIF.SIF" use and the LA7830/7831 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

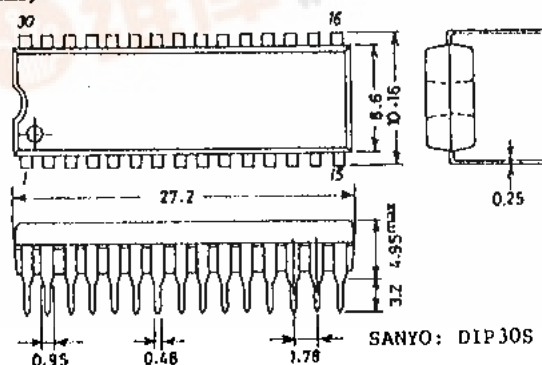
Maximum Supply Voltage	V _{16max}	14.0	unit	V
Maximum Supply Current	I _{22max}	15.0	unit	mA
Allowable Power Dissipation	P _{dmax}	1100	unit	mW
Operating Temperature	T _{opg}	-20 to +85	unit	°C
Storage Temperature	T _{stg}	-55 to +125	unit	°C

Operating Conditions at Ta=25°C

Recommended Supply Voltage	V ₁₆	12.0	unit	V
Recommended Supply Current	I ₂₂	10.0	unit	mA
Operating Voltage Range		9.0 to 14.0	unit	V
Operating Current Range		8.5 to 15.0	unit	mA

Case Outline 3061-D30SIC (unit:mm)

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Specifications and information herein are subject to change without notice.

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Operating Characteristics 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	ACC ϕ 1		0	± 3	deg
	ACC ϕ 2		0	± 7	deg
Maximum B-Y Demodulation Output	B-Y max	5.0			Vpp
Unicolor Amplitude Characteristic	Δ GU		17		dB
Tint Change Range	Δ T		110		deg
APC Pull-in Range	f _{APC}	± 300			Hz
Color Difference Output DC Voltage	E _{RGB}	6.7	7.2	7.7	V
Color Difference DC Difference Voltage	E Δ RGB			± 300	mV
R-Y Relative Demodulation Angle	$\angle$ R-Y/B-Y		104		deg
G-Y Relative Demodulation Angle	$\angle$ 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	Δ GC		18		dB
Frequency Response	Δ GV f=5MHz	-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 _{BL}		19H		
Vertical Drive Stage Voltage Gain	V _G		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

For "Y-Chroma-Deflection" ICs for NTSC CTV use, the following Type Nos. are available. Select the IC most suited for your intended CTV set.

Type No.	Peak clip	DC Restoration	Quadratic differentiation circuit input polarity	Video tone		Remarks
				Soft	Sharp	
LA7620	○	70%	Positive	○	○	
LA7621	×	70%	Positive	○	○	
LA7625	○	100%	Positive	○	○	
LA7626	×	100%	Positive	○	○	
LA7629	×	100%	*Negative	×	○	Video band 10MHz

* : Inverting amp required

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Equivalent Circuit Block Diagram and Sample Peripheral Circuit

