No.1777C

LA7620, 7621

Monolithic Linear IC

Color TV Video, Chroma, Deflection Circuit

DISCONTINUED PRODUCT

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 "VIF.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

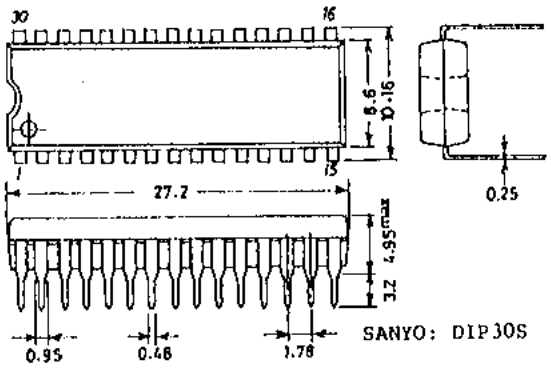
				unit
Maxinum Supply Voltage	V_{16max}		14.0	V
Maximum Supply Current	I_{22max}		15.0	mA
Allowable Power Dissipation	Pdmax	Ta≦65°C	1100	mW
Operating Temperature	Topg		-20 to +85	°C
Storage Temperature	Tstg		-55 to +125	°C

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

Information (including circuit diagrams and circuit parameters) herein is for example only; it is not guaranteed for volume production. SANYO believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringements of intellectual property rights or other rights of third parties.

Case Outline 3061-D30SIC
(unit:mm)



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	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		

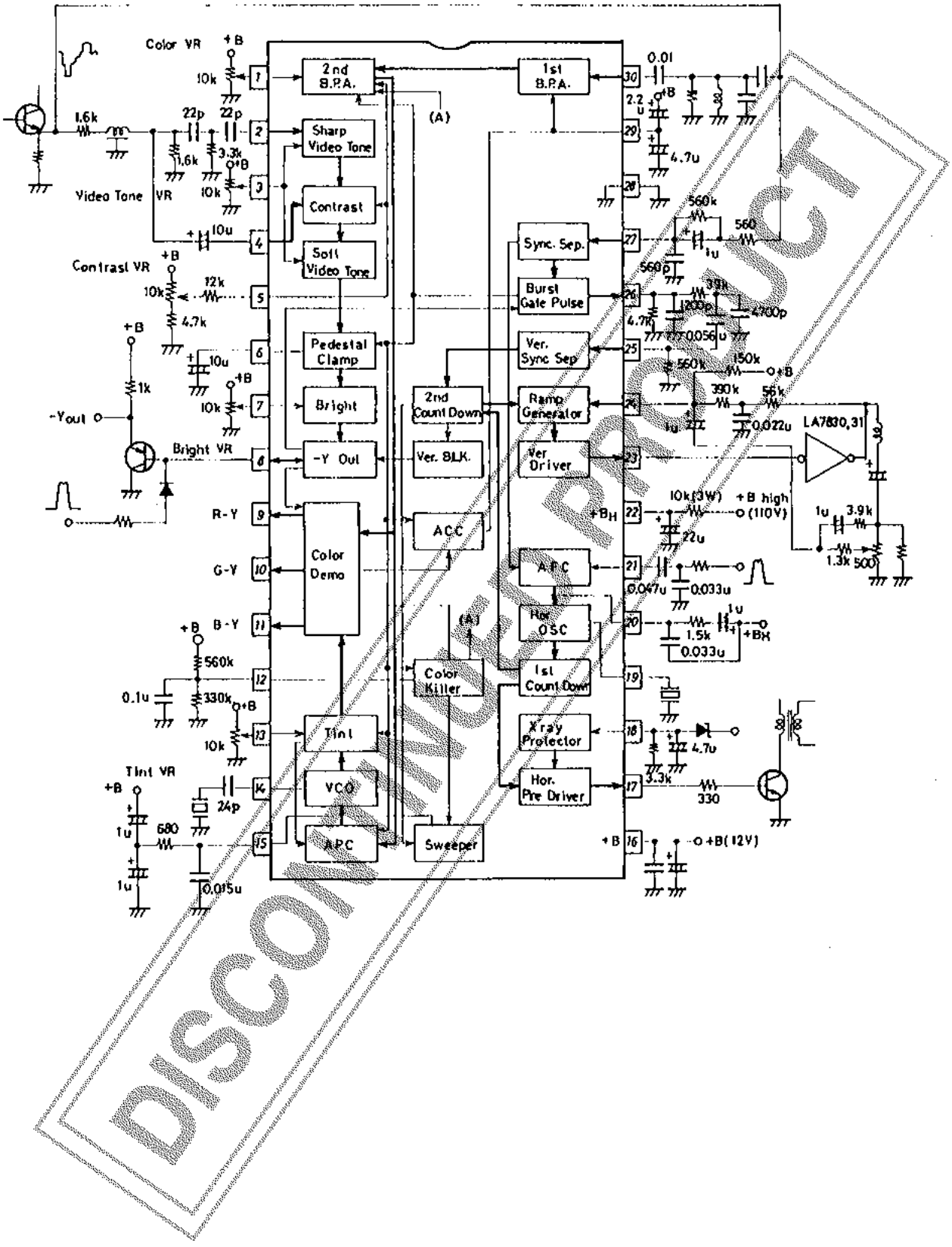
[Video]			min	typ	max	unit
Video Tone Control Characteristic	Gpmin		-5	-3	-1	dB
	Gpmax		12	15	18	dB
Video Voltage Gain	VG		12	15	18	dB
Contrast Variable Range	△GC			18		dB
Frequency Response	△GV	f=5MHz	-5			dB

[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

DISCONTINUED PRODUCT

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

Equivalent Circuit Block Diagram and Sample Peripheral Circuit