

# AN5625N

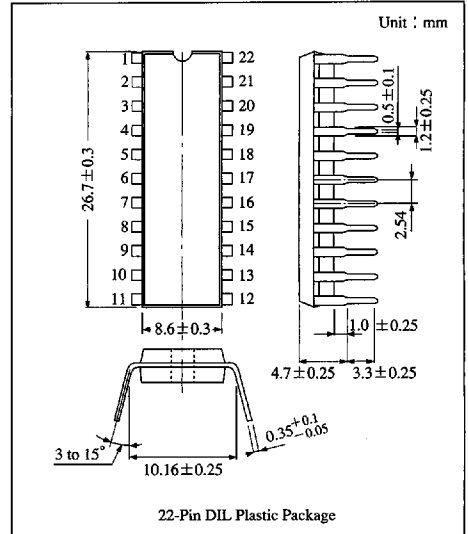
## TV PAL/NTSC/M-NTSC Chrominance-Signal Processing IC

### Overview

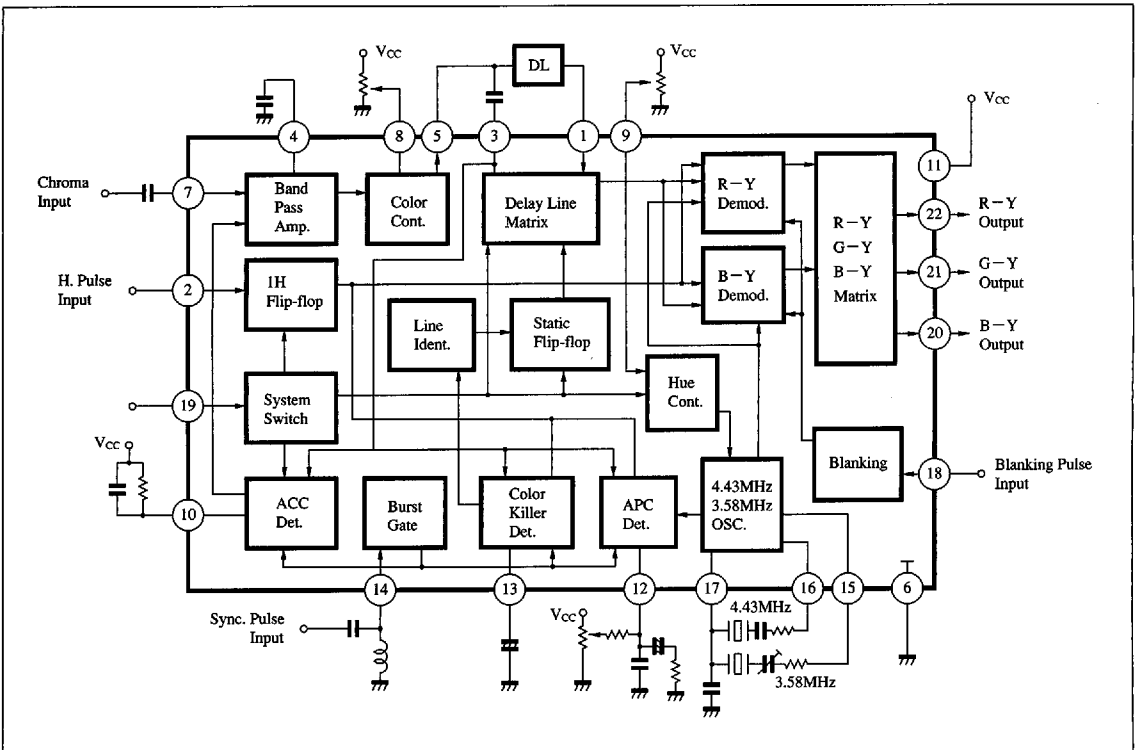
The AN5625N is an integrated circuit designed for color TV chrominance-signal processing circuit.

### Features

- A PAL/NTSC/M-NTSC system demodulator is possible in combination with the AN5615
- 4-system demodulator is possible in combination with the AN5615 and the AN5635N



### Block Diagram



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## Pin Descriptions

Pin No.	Pin name	Pin No.	Pin name
1	Chroma sig. input (DLIH)	12	APC filter
2	H. pulse input	13	Color killer filter
3	Chroma sig. input	14	Burst gate pulse input
4	Chroma by-pass	15	3.58MHz OSC
5	Chroma sig. output	16	4.43MHz OSC
6	GND	17	OSC input
7	Chroma sig. input	18	BLK pulse input
8	Color control	19	System SW.
9	Tint control	20	B-Y output
10	ACC filter	21	G-Y output
11	V <sub>CC</sub>	22	R-Y output

## Absolute Maximum Ratings (T<sub>a</sub> = 25°C)

Parameter	Symbol	Rating	Unit
Supply voltage	V <sub>CC</sub>	14.4	V
Circuit current	I <sub>CC</sub>	83	mA
Power dissipation	P <sub>D</sub>	1200	mW
Temperature	Operating ambient temperature	T <sub>opr</sub>	-20 to +70
	Storage Temperature	T <sub>stg</sub>	-55 to +150

ICs for TV

## Electrical Characteristics (T<sub>a</sub> = 25°C)

Parameter	Symbol	Condition	min	typ	max	Unit
Total circuit current	I <sub>tot</sub>	V <sub>CC</sub> = 12V	40	54	69	mA
Pin① voltage	V <sub>1-6</sub>	V <sub>CC</sub> = 12V	2.3	2.8	3.3	V
Pin③ voltage	V <sub>3-6</sub>	V <sub>CC</sub> = 12V	2.3	2.8	3.3	V
Pin⑤ voltage	V <sub>5-6</sub>	V <sub>CC</sub> = 12V	8.0	8.5	9.0	V
Pin⑦ voltage	V <sub>7-6</sub>	V <sub>CC</sub> = 12V	0.8	1.3	1.8	V
Max. output voltage (R-Y)	e <sub>o</sub>	Color bar input 150mV <sub>P-P</sub> , Color max. Pin⑩ = V <sub>CC</sub>	7.5	8.0	—	V <sub>P-P</sub>
Output voltage (R-Y)	e <sub>o2</sub>	Color bar input 150mV <sub>P-P</sub> , Color typ	2.25	3.0	3.75	V <sub>P-P</sub>
Ratio of demodulated signals (R-Y)/(B-Y)	R/B	⑦ = 4.43MHz 100mV <sub>P-P</sub> ⑰ = 4.44MHz 500mV <sub>P-P</sub>	0.72	0.83	0.9	times
Ratio of demodulated signals (G-Y)/(B-Y)	G/B	⑦ = 4.43MHz 100mV <sub>P-P</sub> ⑰ = 4.44MHz 500mV <sub>P-P</sub>	0.31	0.37	0.42	times
Phase difference between (R-Y) and (B-Y) signals	∠R	⑦ = 4.43MHz 100mV <sub>P-P</sub> ⑰ = 4.44MHz 500mV <sub>P-P</sub> ∠B = 0	86.5	90.0	93.5	deg.
Phase difference between (G-Y) and (B-Y) signals	∠G	⑦ = 4.43MHz 100mV <sub>P-P</sub> ⑰ = 4.44MHz 500mV <sub>P-P</sub> ∠B = 0	229	236	244	deg.
PAL color killer level	e <sub>K(PAL)</sub>	Color bar 150mV <sub>P-P</sub> , (=0dB) Color center	38	43	48	dB
NTSC color killer level	e <sub>K(NTSC)</sub>	Color bar 150mV <sub>P-P</sub> , (=0dB) Color center, Tint center	39	44	49	dB
DC output voltage	E <sub>C-Y</sub>	No signal input	6.9	7.35	7.8	V
Tint center	θ	Color bar 150mV <sub>P-P</sub> , Color typ, Tint typ	—	0	±7	deg.
Tint variable range	Δθ	Color typ, Tint max. to min.	±35	±45	±55	deg.

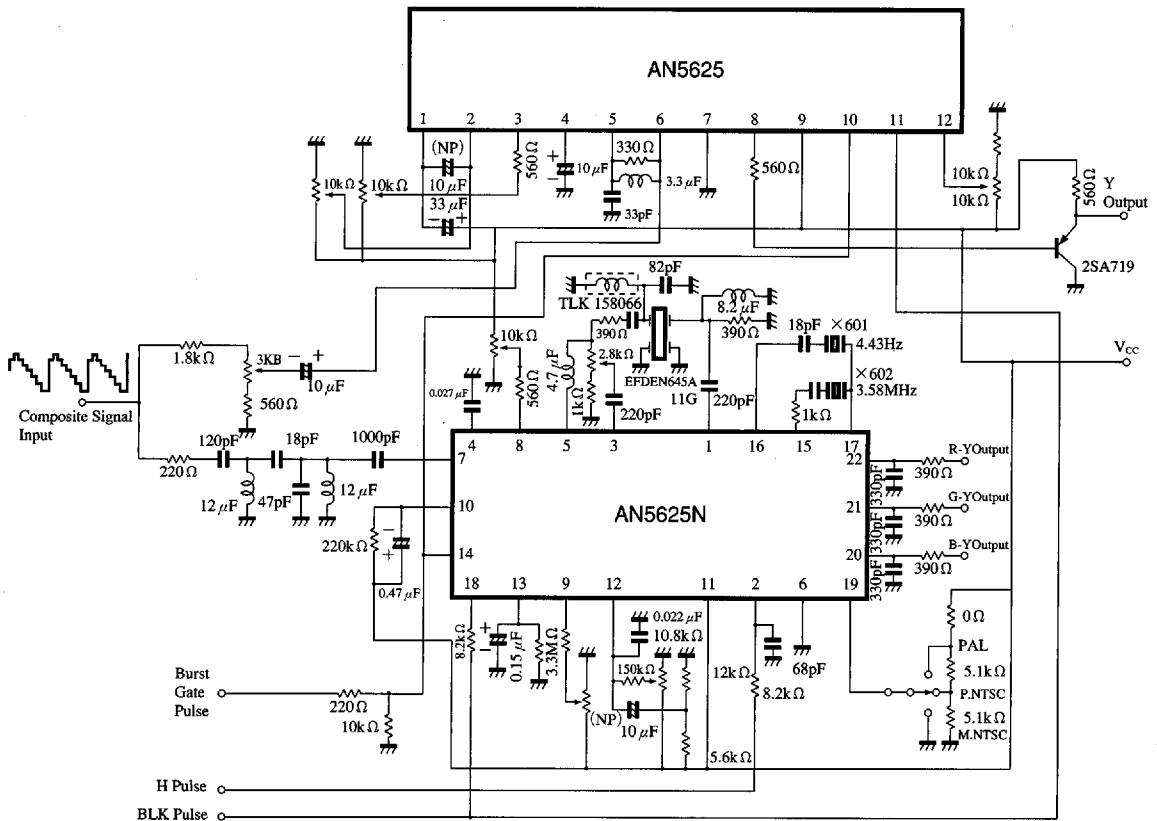
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■ Electrical Characteristics (cont.) (Ta=25°C)

Parameter	Symbol	Condition	min	typ	max	Unit
APC pull-in range	$f_{APC}$	Color bar 150mV <sub>P-P</sub> , burst frequency variable	±500	±800	—	Hz
Free-run frequency supply voltage dependency	$\Delta f_o/V_{CC}$	No input, Pin ⑫ for non connection, V <sub>CC</sub> = 12V ± 20%	—	—	120	Hz
Free-run frequency ambient temperature dependency	$\Delta f_o/T_a$	No input, Pin ⑫ for non connection, T <sub>a</sub> = -20 to +70°C	—	1.5	2.5	Hz/deg.
PAL/NTSC system changeover level	V <sub>19 PAL</sub>	Pin ⑨ control voltage	5.6	6.1	6.6	V
NTSC/M-NTSC system changeover level	V <sub>19 NTSC</sub>	Pin ⑨ control voltage	1.9	2.2	2.5	V

■ Application Circuit



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