TBA395-N

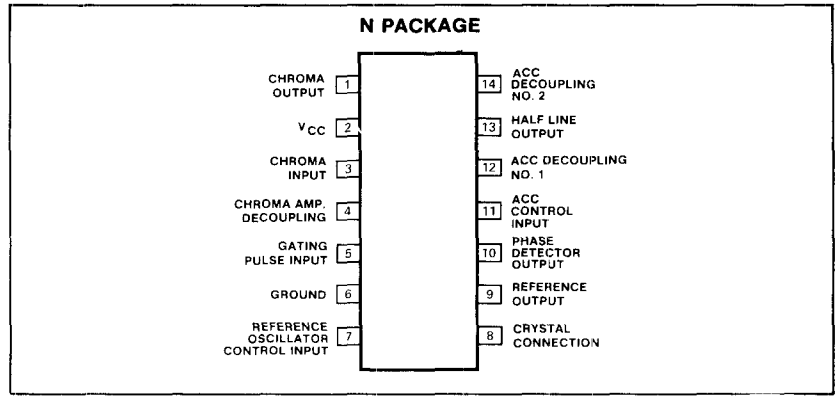
DESCRIPTION

Chrominance combination circuit for use in PAL television receivers.

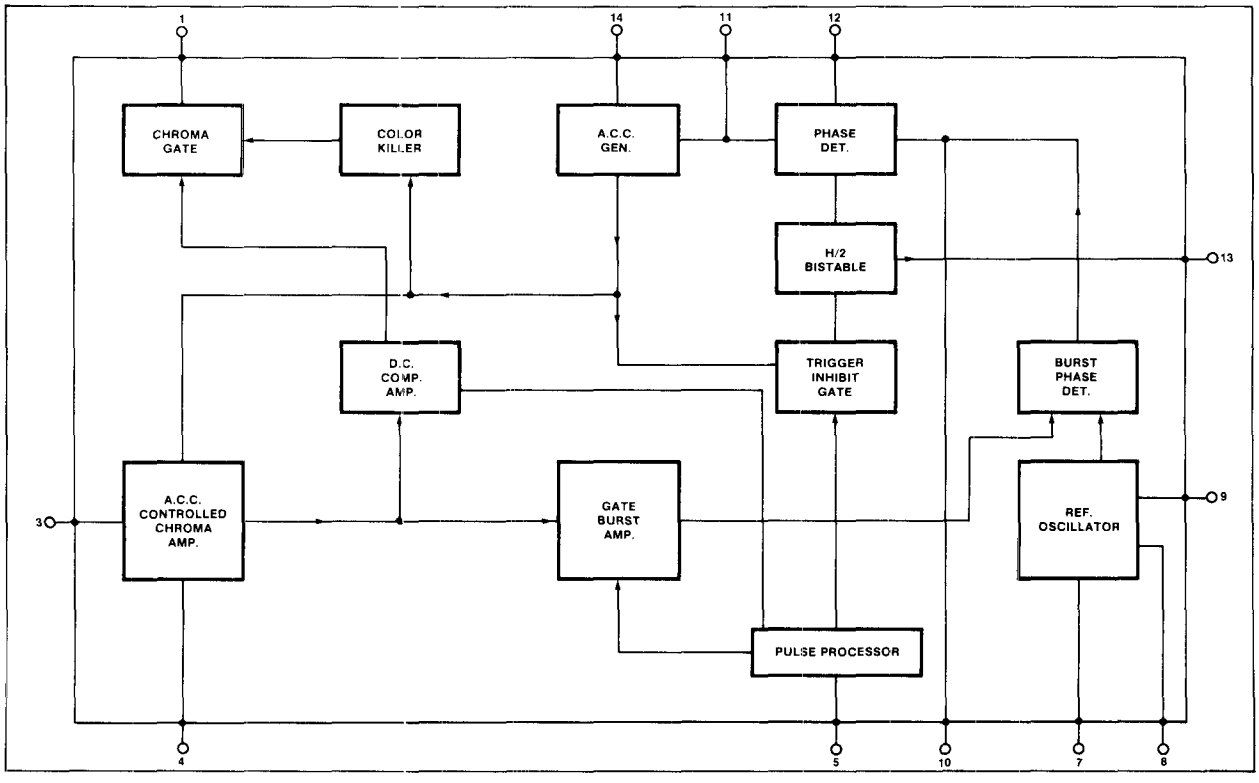
FEATURES

- **Internal supply line stabilization**
- **20dB ACC range—14dB + 6dB**
- **Low external component count**
- **Designed to be used in conjunction with TBA396 and TBA327/MC1327**

PIN CONFIGURATION



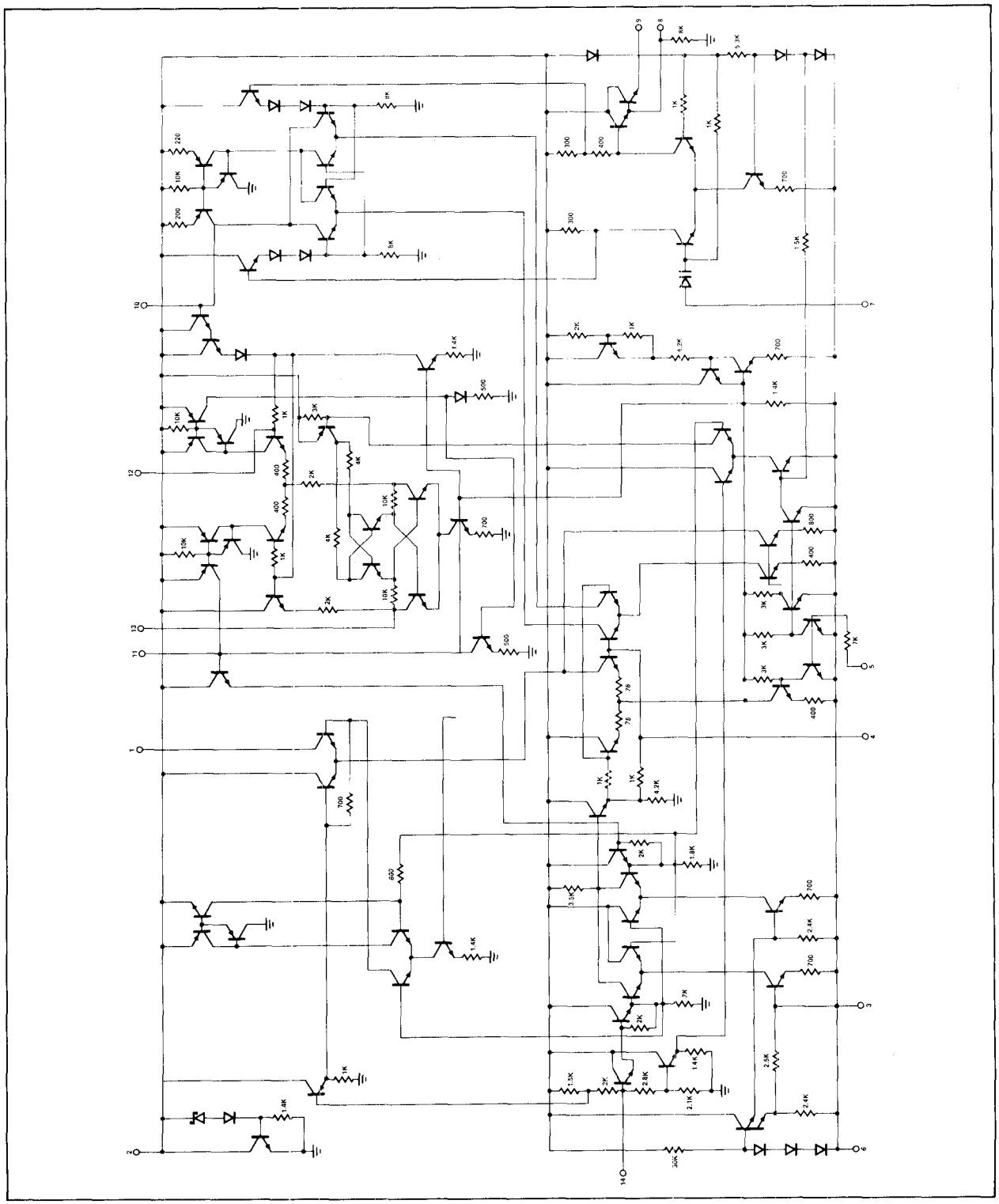
SYSTEM BLOCK DIAGRAM



ABSOLUTE MAXIMUM RATINGS

PARAMETER	RATING	UNIT
Power supply current	60	mA
dc current capability of reference output	4.0	mA
Chrominance input voltage	1.2	Vp-p
Operating temperature range	0 to +70	°C
Power dissipation (package limitation)	625	mW
Derate above T_A = +25°C	5.0	mW/°C
Storage temperature range	-65 to +150	°C

EQUIVALENT SCHEMATIC



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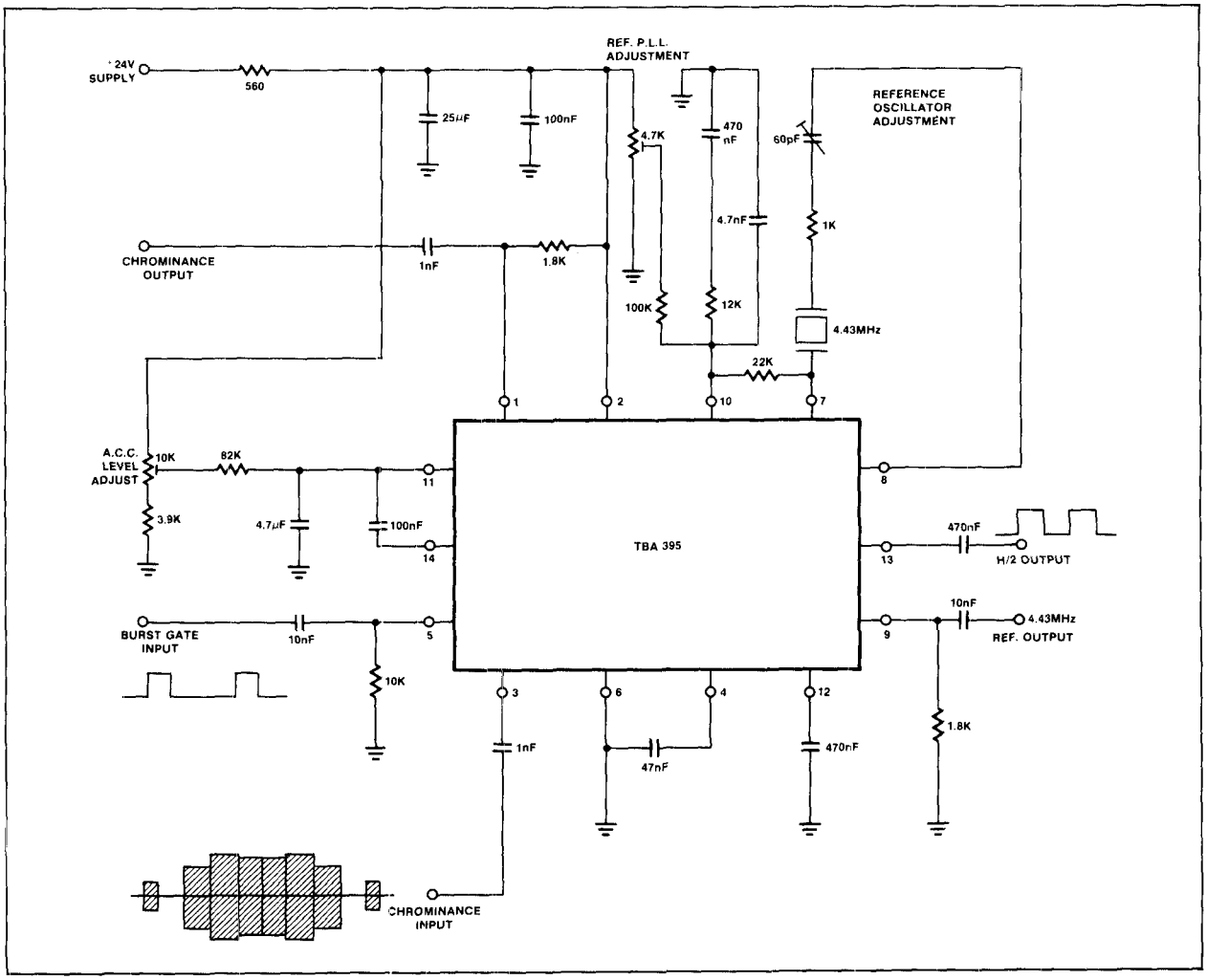
DC ELECTRICAL CHARACTERISTICS T_A = +25°C unless otherwise specified.

PARAMETER	TEST CONDITIONS	TBA395			UNIT
		Min	Typ	Max	
Supply voltage Burst gate operating voltage		7.5 2.0	8.4	9.5 5.0	Vdc V
Chrominance output dc current	Color killer operating Color killer off	 200		4.0	μA μA

AC ELECTRICAL CHARACTERISTICS T_A = +25°C unless otherwise specified.

PARAMETER	TEST CONDITIONS	LIMITS			UNIT
		Min	Typ	Max	
Forward transconductance	Chrominance output load = 560Ω f_{IN} = 4.43MHz	 6.4			 mmho
Chrominance input resistance Reference oscillator pull-in range		2.4 ±250	3.1	4.3	kΩ Hz
Reference output H/2 bistable output		400 1.3	700 1.6	 2.2	mV Vp-p

TYPICAL CIRCUIT CONFIGURATION



SETTING-UP NOTES

For subcarrier oscillator adjustment the chrominance input must be bypassed to ground via a 1nf capacitor. The ACC potentiometer is then set to 1.2 volts below pin 2 voltage using a high input impedance oscilloscope or Voltmeter ($>10m\Omega$). While the adjustment is made burst gate pulses must be applied to pin 5.

The oscillator free-running frequency can then be adjusted to sub-carrier value $\pm$10Hz. The loop will lock if a chrominance signal is re-connected.

With a peak to peak signal of 250mV (100% bars) the output on pin 1 should be adjusted to 400mV peak to peak using the ACC control potentiometer.

APPLICATION NOTES

1. Normal decoupling precautions must be taken. For example pin 2 (8.4 volt circuit supply point) must be decoupled closely to pin 6 (ground) thus preventing sub-carrier components leaking into sensitive areas of the circuit.
2. To prevent the radiation of sub-carrier harmonics, the connection from pin 9 (reference output) and pin 8 (crystal feedback) must be kept as short as possible.
3. The connection from pin 1 (chroma output) should be also as short as possible to prevent capacitive loading of the 1.8kΩ output resistor.