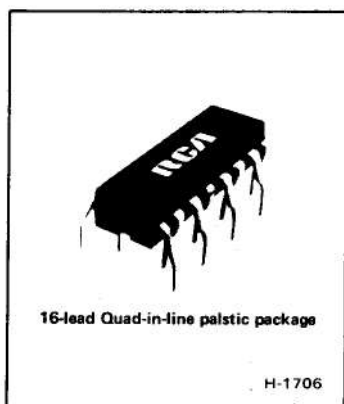


CA3128Q

TV Chroma Processor for PAL Systems



Features:

- Phase-locked subcarrier regeneration utilizes sample-and-hold techniques in the automatic frequency phase control (AFPC) servo loop
- Automatic chrominance control (ACC)/killer detector employs sample-and-hold techniques
- Supplementary ACC with an overload detector to prevent oversaturation of the picture tube
- Sinusoidal subcarrier output
- Keyed chroma output
- Emitter-follower buffered outputs for low output impedance
- Linear dc saturation control
- PAL identification output
- Only the initial crystal filter tuning is required . . . no killer and ACC adjustments required at any time
- Few external components required
- Compensation for temperature and supply variations
- All terminals protected against short circuits

The RCA-CA3128Q is a monolithic silicon integrated circuit designed primarily for PAL chroma processing applications in color TV receivers. For a circuit description of the

CA3128Q and an explanation of this device in PAL systems, refer to "A New Chroma Processing IC Using Sample-and-Hold Techniques" by L.A. Harwood (ST6144).

MAXIMUM RATINGS, Absolute-Maximum Values at $T_A = 25^\circ\text{C}$

DC SUPPLY VOLTAGE (Between Terms. 12 and 15) 13.2 V

DC VOLTAGE (Term. 9):

Positive Value +3 V

Negative Value -5 V

DEVICE DISSIPATION:

Up to $T_A = 55^\circ\text{C}$ 750 mW

Above $T_A = 55^\circ\text{C}$ derate linearly at 7.9 mW/ $^\circ\text{C}$

AMBIENT TEMPERATURE RANGE:

Operating -40 to $+85^\circ\text{C}$

Storage -65 to $+150^\circ\text{C}$

LEAD TEMPERATURE (DURING SOLDERING):

At a distance not less than 1/32" (0.79 mm) from case for 10 seconds max. $+265^\circ\text{C}$.

TYPICAL STATIC CHARACTERISTICS at $T_A = 25^\circ\text{C}$:

DC Supply Current (I_{12}) with $V_{12} = 11.2$ V dc 25 mA

TYPICAL DYNAMIC CHARACTERISTICS at $T_A = 25^\circ\text{C}$ with a Burst-to-Chroma Ratio of 46.5%:

100% Chroma Output Voltage at $V_{(p-p)} = 0.5$ V 3.5 V_{p-p}

Oscillator-Level Output Voltage 1 V_{p-p}

Killer Threshold Input Voltage 0.018 V_{p-p}

Pull-in Frequency 500 Hz

PAL Identification Output Voltage 1 V_{p-p}

Linear Integrated Circuits CA3128Q

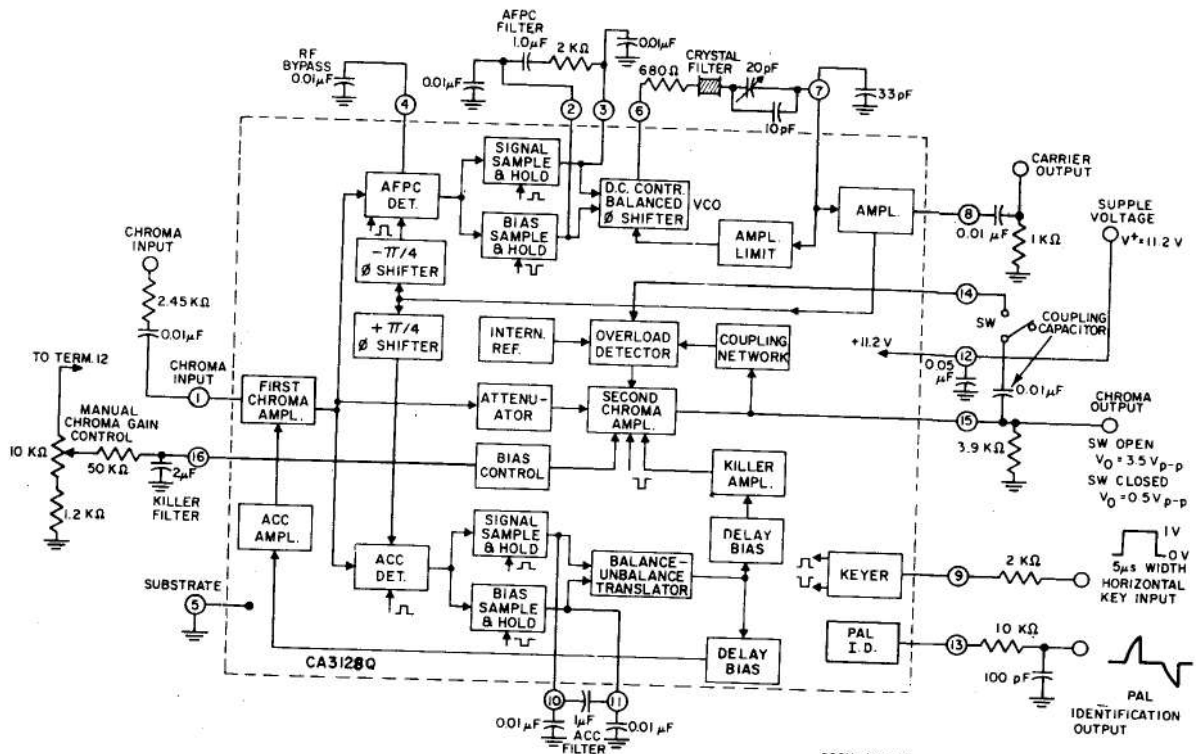


Fig. 1 - Block diagram of CA3128Q TV Chroma Processor.